



**McLean County Unit District No. 5**  
**1809 W. Hovey Avenue**  
**Normal, IL 61761**

April 9, 2025

To: Board of Education

From: Joe Adelman – Executive Director of Operations  
Tom Rockwell - Director of Facilities, CPMM

CC: Dr. Kristen Weikle – Superintendent  
Martin Hickman - CFO

RE: Prairieland Elementary Modernization

Administration recommends the approval of \$301,411 for the implementation of Prairieland Elementary JCI Modernization proposal from Alpha Controls & Services under the OMNIA Partners Cooperative Purchasing Agreement.

Through the process of making the building more energy efficient, weaknesses in the existing temperature control system were realized. Many controllers are still from 1998 and have now outlived their rated 15-year life expectancy by over a decade. Conversely, by upgrading these controls we can reasonably expect at least another 15 years of useful life. As good stewards of the building, these modernizations allow for a more targeted approach to monitoring aging mechanical equipment.

Upgrading the remaining building controls from this era will begin to improve the comfort and productivity of occupants in the building and reduce maintenance costs in troubleshooting issues with the aging equipment. Newer controllers will also carry the latest in high efficiency programming and cybersecurity features.

Completing this project under the Omnia Partners Cooperative Purchasing Agreement will eliminate the need to use a life safety architect for the bid process, resulting in additional savings of \$30,100. The project will be paid for with life safety funds under amendment #15.

# PROPOSAL



Proposed By

**Dan Newkirk**

Director, Energy Engineering

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Proposal for Temperature Controls

**Unit 5 Prairieland Johnson Controls Replacement**

Proposal #: ACS23-5133

Proposal Date: 4/9/2025

## Executive Summary

The existing Building Automation System (BAS) at Prairieland Elementary School, originally installed in 1998, is currently well beyond its expected 15-year productive life. The scope of work below would replace the obsolete controls with state-of-the-art technology over the course of several phased projects. This will aid in mitigating the District's risk of system failures while protecting the original investment. It will also better align this facility with the District's long-term sustainability goals, implementing energy-focused sequences of operation for better comfort and building performance. **AHU-1 Controls Replacement**

This is an extension of the existing Schneider Electric control system by Alpha Controls & Services

### General Conditions

- Startup, checkout, Owner training, commissioning, and warranty as specified (1 year standard)
- Provide graphics, trends, and alarms for a browser-based control system that provides remote access to the building system including the following: Text alarms, historical trend data and click and drag scheduling of equipment for weekdays, holidays, and special events
- NOTE: Owner to maintain IT system to support browser-based graphics

### AHU-1 Controls

- Schneider Electric BACnet DDC controller in a field-wired local control panel
- Furnish and install conduit and cable from local control panel to equipment
- Provide communications cable to local control panel
- Reuse 120v power to local control panel, replace transformers and power supplies
- Rewire existing communication bus to bypass demoed controllers
- **New Devices**
  - Single point temperature sensor
  - Duct mounted relative humidity transmitter
  - Duct mounted CO2 sensor
- **Replace Existing Devices**
  - Single point temperature sensor
  - Averaging temperature sensor
  - Manual reset low limit thermostat (Typical of 2)
  - Thermostat with RH and CO2 options
  - Lockable clear plastic thermostat guard
  - Provide thermostat rough in
  - Start/stop relay and current switch
  - Relays for addressable smoke detectors
  - Modulating spring return 24v damper actuator (Typical of 3)
  - Exhaust fan start/stop relay and current switch
  - Exhaust fan two position spring return 24v damper actuator with end switches



- **Item(s) furnished and wired by Temperature Controls Contractor and installed by Heating Contractor**
- Hot water control valve
- Chilled water control valve

## AHU-3 Controls Replacement

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**This is an extension of the existing Schneider Electric control system by Alpha Controls & Services**

### General Conditions

- Startup, checkout, Owner training, commissioning, and warranty as specified (1 year standard)
- Provide graphics, trends, and alarms for a browser-based control system that provides remote access to the building system including the following: Text alarms, historical trend data and click and drag scheduling of equipment for weekdays, holidays, and special events
- NOTE: Owner to maintain IT system to support browser-based graphics

### AHU-3 Controls

- Schneider Electric BACnet DDC controller in a field-wired local control panel
- Furnish and install conduit and cable from local control panel to equipment
- Provide communications cable to local control panel
- Reuse 120v power to local control panel, replace transformers and power supplies
- Rewire existing communication bus to bypass demoed controllers
- **New Devices**
  - Single point temperature sensor
  - Duct mounted relative humidity transmitter
  - Duct mounted CO2 sensor
- **Replace Existing Devices**
  - Single point temperature sensor
  - Averaging temperature sensor
  - Manual reset low limit thermostat (Typical of 2)
  - Thermostat with RH and CO2 options
  - Lockable clear plastic thermostat guard
  - Provide thermostat rough in
  - Start/stop relay and current switch
  - Relays for addressable smoke detectors
  - Modulating spring return 24v damper actuator (Typical of 3)
- **Item(s) furnished and wired by Temperature Controls Contractor and installed by Heating Contractor**
- Hot water control valve
- Chilled water control valve

## AHU-5 Controls Replacement

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**This is an extension of the existing Schneider Electric control system by Alpha Controls & Services**

### General Conditions

- Startup, checkout, Owner training, commissioning, and warranty as specified (1 year standard)

# PROPOSAL



- Provide graphics, trends, and alarms for a browser-based control system that provides remote access to the building system including the following: Text alarms, historical trend data and click and drag scheduling of equipment for weekdays, holidays, and special events
- NOTE: Owner to maintain IT system to support browser-based graphics

## AHU-5 Controls

- Schneider Electric BACnet DDC controller in a field-wired local control panel
- Furnish and install conduit and cable from local control panel to equipment
- Provide communications cable to local control panel
- Reuse 120v power to local control panel, replace transformers and power supplies
- Rewire existing communication bus to bypass demoed controllers
- **New Devices**
  - Single point temperature sensor
  - Duct mounted relative humidity transmitter
  - Duct mounted CO2 sensor
- **Replace Existing Devices**
  - Single point temperature sensor
  - Averaging temperature sensor
  - Manual reset low limit thermostat (Typical of 2)
  - Thermostat with RH and CO2 options
  - Lockable clear plastic thermostat guard
  - Provide thermostat rough in
  - Start/stop relay and current switch
  - Relays for addressable smoke detectors
  - Modulating spring return 24v damper actuator (Typical of 3)
  - Exhaust fan start/stop relay and current switch
  - Exhaust fan two position spring return 24v damper actuator with end switches
  - Exhaust fan EF-12 space temperature sensor
- **Item(s) furnished and wired by Temperature Controls Contractor and installed by Heating Contractor**
  - Hot water control valve
  - Chilled water control valve



# PROPOSAL



## AHU-2 Central VAV Controls (Qty 12)

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**This is an extension of the existing Schneider Electric control system by Alpha Controls & Services**

**For VAVs 100-106, 128, 141, 149, 163-164 (Qty 12)**

### General Conditions

- Startup, checkout, Owner training, commissioning, and warranty as specified (1 year standard)
- Provide graphics, trends, and alarms for a browser-based control system that provides remote access to the building system including the following: Text alarms, historical trend data and click and drag scheduling of equipment for weekdays, holidays, and special events
- NOTE: Owner to maintain IT system to support browser-based graphics

### VAV Controls (Qty 12)

- Schneider Electric BACnet air terminal unit controller (Typical of 12)
- Provide power & communication cable to controller (Typical of 12)
- Rewire existing communication bus to bypass demoed controllers (Typical of 12)
- **New Devices**
  - Discharge air temperature sensor (Typical of 12)
- **Replace Existing Devices**
  - Thermostat with push button user interface (Typical of 8)
  - Thermostat with RH and CO2 options (Typical of 4)
  - Lockable clear plastic thermostat guard (Typical of 4)
  - Provide thermostat rough in (Typical of 12)
  - **Item(s) furnished and wired by Temperature Controls Contractor and installed by Heating Contractor**
- Unitary control valve (Typical of 12)

### Exhaust Fan Controls EF-2 (Qty 1)

- Wire all controls to nearest VAV controller
- **New Devices**
  - Fan status
- **Replace Existing Devices**
  - Start/stop relay
  - Two position spring return 24v damper actuator with end switch

## AHU-2 Southwest VAV Controls (Qty 11)

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**This is an extension of the existing Schneider Electric control system by Alpha Controls & Services**

**For VAVs 138-139, 165, 167, 169-175 (Qty 11)**

### General Conditions

- Startup, checkout, Owner training, commissioning, and warranty as specified (1 year standard)
- Provide graphics, trends, and alarms for a browser-based control system that provides remote access to the building system including the following: Text alarms, historical trend data and click and drag scheduling of equipment for weekdays, holidays, and special events
- NOTE: Owner to maintain IT system to support browser-based graphics

## VAV Controls (Qty 11)

- Schneider Electric BACnet air terminal unit controller (Typical of 11)
- Provide power & communication cable to controller (Typical of 11)
- Rewire existing communication bus to bypass demoed controllers (Typical of 11)
- **New Devices**
  - Discharge air temperature sensor (Typical of 11)
- **Replace Existing Devices**
  - Thermostat with push button user interface (Typical of 7)
  - Thermostat with RH and CO2 options (Typical of 4)
  - Lockable clear plastic thermostat guard (Typical of 2)
  - Provide thermostat rough in (Typical of 11)
- **Item(s) furnished and wired by Temperature Controls Contractor and installed by Heating Contractor**
  - Unitary control valve (Typical of 11)

## Exhaust Fan EF-13, EF-14 Controls (Qty 2)

- Wire all controls to nearest VAV controller (Typical of 2)
- **New Devices**
  - Fan status (Typical of 2)
- **Replace Existing Devices**
  - Start/stop relay (Typical of 2)
  - Two position spring return 24v damper actuator with end switch (Typical of 2)

## AHU-4 Northeast VAV Controls (Qty 12)

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**This is an extension of the existing Schneider Electric control system by Alpha Controls & Services**

### **For VAVs 116, 118-124, 131, 152, 161-162 (Qty 12)**

#### **General Conditions**

- Startup, checkout, Owner training, commissioning, and warranty as specified (1 year standard)
- Provide graphics, trends, and alarms for a browser-based control system that provides remote access to the building system including the following: Text alarms, historical trend data and click and drag scheduling of equipment for weekdays, holidays, and special events
- NOTE: Owner to maintain IT system to support browser-based graphics

## VAV Controls (Qty 12)

- Schneider Electric BACnet air terminal unit controller (Typical of 12)
- Provide power & communication cable to controller (Typical of 12)
- Rewire existing communication bus to bypass demoed controllers (Typical of 12)
- **New Devices**
  - Discharge air temperature sensor (Typical of 12)
- **Replace Existing Devices**
  - Thermostat with push button user interface (Typical of 8)
  - Thermostat with RH and CO2 options (Typical of 4)
  - Lockable clear plastic thermostat guard (Typical of 4)
  - Provide thermostat rough in (Typical of 12)



# PROPOSAL



- **Item(s) furnished and wired by Temperature Controls Contractor and installed by Heating Contractor**
- Unitary control valve (Typical of 12)

## **Exhaust Fan EF-8 Controls (Qty 1)**

- Wire all controls to nearest VAV controller
- **New Devices**
  - Fan status
- **Replace Existing Devices**
  - Start/stop relay
  - Two position spring return 24v damper actuator with end switch

## **AHU-4 Southeast VAV Controls (Qty 11)**

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**This is an extension of the existing Schneider Electric control system by Alpha Controls & Services**

**For VAVs 107-113, 113A, 114-115, 160 (Qty 11)**

### **General Conditions**

- Startup, checkout, Owner training, commissioning, and warranty as specified (1 year standard)
- Provide graphics, trends, and alarms for a browser-based control system that provides remote access to the building system including the following: Text alarms, historical trend data and click and drag scheduling of equipment for weekdays, holidays, and special events
- NOTE: Owner to maintain IT system to support browser-based graphics

### **VAV Controls (Qty 11)**

- Schneider Electric BACnet air terminal unit controller (Typical of 11)
- Provide power & communication cable to controller (Typical of 11)
- Rewire existing communication bus to bypass demoed controllers (Typical of 11)
- **New Devices**
  - Discharge air temperature sensor (Typical of 11)
- **Replace Existing Devices**
  - Thermostat with push button user interface (Typical of 7)
  - Thermostat with RH and CO2 options (Typical of 4)
  - Lockable clear plastic thermostat guard
  - Provide thermostat rough in (Typical of 11)
- **Item(s) furnished and wired by Temperature Controls Contractor and installed by Heating Contractor**
- Unitary control valve (Typical of 11)

### **Exhaust Fan EF-1, EF-9 Controls (Qty 2)**

- Wire all controls to nearest VAV controller (Typical of 2)
- **New Devices**
  - Fan status (Typical of 2)
- **Replace Existing Devices**
  - Start/stop relay (Typical of 2)
  - Two position spring return 24v damper actuator with end switch (Typical of 2)

### **Exclusions (All Bid Sections)**

# PROPOSAL



- Fire and/or fire/smoke dampers, life safety products and/or electrical or sheet metal installation labor
- Access doors, patching and/or painting
- Overtime and/or Shift/Premium Time
- Bonding and Permits
- Federal, State and Local Taxes
- Smoke detectors and/or modifications to fire alarm system
- Draining, cleaning, and/or flushing piping systems
- Emergency Power
- Any/all liquidated damages
- BIM Modeling
- This proposal is valid for 30 days and assumes completion in 2025

**Total Controls:** \$301,411

(Sales tax not included, all sections.)

(Estimated material & labor escalations included through end of 2025, all sections.)

The standard terms and conditions of sale are attached and are a part hereof:

**Proposed By**

**Accepted By**

Name Dan Newkirk

Name \_\_\_\_\_

Title Director, Energy Engineering

Title \_\_\_\_\_

Company Alpha Controls & Services, LLC.

Company \_\_\_\_\_

Date 4/9/2025

Date \_\_\_\_\_

NOTWITHSTANDING ANY INCONSISTENT OR ADDITIONAL TERMS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER, SELLER WILL ACCEPT YOUR ORDER SUBJECT ONLY TO THE TERMS OF THE WRITTEN CONTRACT BETWEEN US UNDER WHICH YOUR ORDER IS PLACED. IF NO SUCH CONTRACT EXISTS SELLER WILL ACCEPT YOUR ORDER ONLY ON THE EXPRESS CONDITION THAT YOU ASSENT TO THE TERMS AND CONDITIONS CONTAINED ABOVE AND ON THE REVERS SIDE HEREOF; AND YOUR ACCEPTANCE AND RECEIPT OF THE GOODS SHIPPED HEREUNDER SHALL CONSTITUTE ASSENT TO SUCH TERMS AND CONDITIONS



# PROPOSAL



All goods, services, and Firmware furnished by Alpha Controls & Services ("Supplier") are governed by these standard terms and conditions, and every agreement or other undertaking by Supplier is expressly conditioned on assent hereto by the buyer, and any end user with whom Supplier undertakes to deal, of Supplier's goods, services, and Firmware ("Customer"). These standard terms and conditions supersede all inconsistent printed terms submitted by Customer prior to Supplier's order acknowledgment. They may be varied only by a typed or legibly handwritten notation on the face of Supplier's quotation or order acknowledgment, Customer's purchase order form, or similar documents. Product and sales policy sheets and the like published from time to time by Supplier shall supplement but not supersede these standard terms and conditions. SUPPLIER IS NOT BOUND TO FURNISH ITS GOODS, SERVICES OR FIRMWARE EXCEPT IN ACCORDANCE WITH THE TERMS OF ITS ORDER ACKNOWLEDGMENT, FIRM QUOTATION, OR OTHER SIMILAR DOCUMENT ISSUED OVER THE SIGNATURE OF AN AUTHORIZED EMPLOYEE OF SUPPLIER. SUPPLIER'S REPRESENTATIVES, DISTRIBUTORS, DEALERS AND OTHER NON-EMPLOYEES HAVE NO AUTHORITY TO BIND SUPPLIER.

1. **Firmware.** The terms "goods" as used herein shall include Firmware which shall mean the set of instructions, consisting of symbolic language, processes, logic, routines, and programmed information in the form of firm or soft media relating to any of the goods and all revisions and modifications thereof.

2. **Price/Delivery Terms.** Unless otherwise provided on Supplier's order acknowledgment, price and delivery terms are FOB Supplier's plant and do not include sales, use, or other taxes. Supplier may, at its option, make partial shipments and invoice for same.

3. **Payment/Credit/Security.** Payment terms for buyers with a credit standing deemed adequate by Supplier are net 30 days from date of invoice. Supplier shall be entitled to charge interest thereafter at a rate permitted by law, but in no event to exceed 1½% per month. Whenever Supplier in good faith deems itself insecure, Supplier may cancel any outstanding contracts with Customer, revoke its extension of credit to Customer, reduce any unpaid debt by enforcing its security interest, created hereby, in all goods (and proceeds therefrom) furnished by Supplier to Customer, and take any other steps necessary or desirable to secure Supplier with respect to Customer's payment for goods and services furnished or to be furnished by Supplier.

In the event Customer for any reason withholds payment of any amount due Supplier, Supplier may declare itself insecure and suspend further shipment to Customer until Customer places the withheld amount in escrow and gives adequate security for further shipment or until Customer satisfies Supplier that Customer was entitled to withhold such amount. Supplier shall be entitled to recover from Customer all costs, including reasonable attorney's fees, incurred by Supplier in connection with the collection of any amount due Supplier.

4. **Cancellation by Customer.**

(a). Except as provided in sub-paragraph (b) below, Customer's wrongful non-acceptance or repudiation of a contract to purchase Supplier's goods or services shall entitle Supplier to recover the price or, where an action for the price is not permitted by law, damages, as provided by law, including Supplier's lost profits. In this connection all goods purchased and all services furnished by Supplier in complete or partial fulfillment of a special order from Customer shall be deemed identified to the contract between Supplier and Customer.

(b). Customer's wrongful non-acceptance or repudiation of a contract to purchase from Supplier goods which Supplier generally carries in inventory as stock items (or which are otherwise readily resalable by Supplier at a reasonable price) shall entitle Supplier to recover damages, as provided by law, including Supplier's lost profits.

5. **Warranty.** Supplier warrants that all new and unused goods furnished by Supplier are free from defect in workmanship and material as of the time and place of delivery by Supplier. Except for goods and services furnished by Supplier through its employees arising out of orders solicited by Supplier's Representatives and duly accepted by Supplier, Supplier does not warrant, and shall not be liable for, the quality of any goods or services furnished or to be furnished by representatives, distributors, dealers or other non-employees of Supplier.

As a matter of general warranty policy, Supplier honors an original buyer's warranty claim in the event of failure, within 12 months from the day of delivery by Supplier to the site for Alpha Controls & Services equipment and for Building Management Systems goods, which have been installed and operated under normal conditions and in accordance with generally accepted industry practices. This general warranty policy may be expanded or limited for particular categories of products or customers by information sheets published by Supplier from time to time:

The express warranties provided above are in lieu of all other warranties, express or implied. IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES ARE EXCLUDED WITH RESPECT TO ANY AND ALL GOODS AND SERVICES FURNISHED BY SUPPLIER.

In case of Supplier's breach of warranty or any other duty with respect to the quality of any goods, the sole and exclusive remedies therefore shall be, at Supplier's option, (1) repair, (2) replacement, or (3) payment of or credit for the purchase price (less reasonable depreciation based upon actual use) upon return of the non-conforming goods or parts.

Return authorization must be obtained from Supplier prior to the return of any defective material. All unauthorized returns will be sent back, freight collect, to the Customer. All returns must be made with transportation prepaid by the Customer. Supplier's examination of the units must disclose to its satisfaction that defects exist and have not been caused by misuse, neglect, improper installation, repair, alteration or accident before replacement is made or credit issued.

6. **Force Majeure.** Supplier and Customer assume the non-occurrence of the following contingencies which, without limitation, might render performance by Supplier impractical: strike, riots, fires, war, late or non-delivery by suppliers to Supplier, and all other contingencies beyond the reasonable control of supplier.

7. **No Consequential Damages.** Under no circumstances shall Supplier be liable to any person (including distributor) for loss of use, income, or profit or for incidental, special or consequential or other similar damages, arising, directly or indirectly out of or occasioned by the sale, operation, use, installation, repair or replacement of the goods or services, whether such damages are based on a claim of breach of express or implied warranties (including merchantability or fitness for a particular purpose), tortious conduct (including negligence and strict liability) or any other cause of action, except only in the case of personal injury where applicable law requires such liability.

8. **Governing Law.** The law of the State of Illinois shall govern all transactions to which these standard terms and conditions apply.

9. **Prices** in this quotation remain in effect for 30 days from date of issue.

**Corporate HQ:**  
4104 Charles Street  
Rockford, IL 61108

**Springfield Office:**  
2867 Via Verde  
Springfield, IL 62703

**Champaign Office:**  
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Champaign, IL 61822

**Wisconsin Office:**  
8845 S. Greenview Drive #2  
Middleton, WI 53562