

BIDDING AND CONTRACT DOCUMENTS  
Section 00 21 15 – Addendum No. 2

DATE: February 17, 2023

Hurst-Rosche, Inc.  
200 N. Market  
Marion, Illinois 62959

TO: PROSPECTIVE BIDDERS

SUBJECT: ADDENDUM NO. 1 TO THE BIDDING DOCUMENTS FOR

New District Office  
Johnston City C.U.S.D. #1  
1113 Grand Avenue, Johnston City, Williamson County, Illinois 62951  
HR: 390-1202

This addendum forms a part of the bidding and contract documents and modifies the bidding documents dated February 1, 2023. Acknowledge receipt of this addendum in space provided on Bid Form.  
**FAILURE TO DO SO MAY SUBJECT BIDDER TO DISQUALIFICATION.**

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CLARIFICATIONS

1. The Bid Opening on February 21 is at 2:00 pm. Time incorrectly shown on Pre-Bid Minutes in Addendum #1.
2. Snow Guards shown on A-201, Drawing 2 – South Elevation – are to be glue-down, plastic type.
3. Install five (5) Owner-provided, wall-mounted fire extinguishers, locations to be determined.
4. At sheet E-101, add note below Legend stating: Wire all key fob devices and other wiring devices shown per manufacturer’s instructions, including any associated circuit(s) to branch circuit breakers in existing panelboard.
5. Furnish and install CAT-6 cable from all low voltage items to Room 117B as described on E-101 Communication Notes. This includes, but is not limited to, each telephone jack, each data jack, each key fob, each security camera location, each wireless access point, and each other device requiring a low-voltage connection.
6. All communications cable shall be new, provided by contractor.
7. At the Legend on E-101, the description, “Single Drop Wireless Access Point” should be adjacent to, and is a description of, the boxed “AP” symbol.

SPECIFICATIONS

- |    |          |                |                  |          |
|----|----------|----------------|------------------|----------|
| 1. | 26 27 26 | Wiring Devices | Section Modified | 10 pages |
|----|----------|----------------|------------------|----------|

DRAWINGS

1. None issued.

ADDITIONAL ITEMS

1. None issued.

This addendum **DOES NOT** alter the previously published bid due date of **February 21, 2023, 2:00 pm, at 200 East 12<sup>th</sup> Street, Johnston City, IL 62951.**

Respectfully submitted,

HURST-ROSCHE, INC.

Karl Tabor, AIA

cc: All plan-holders (including plan houses and contractors eligible to bid), Hurst-Rosche web site,  
Johnston City School District, Project File

RECEIVED BY:

\_\_\_\_\_  
Authorized Representative

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Date

## SECTION 26 27 26

### WIRING DEVICES

#### PART 1 - GENERAL

##### 1.1 SUMMARY

###### A. Section Includes:

1. General use switches and dimmer switches
2. Standard-grade receptacles, 125 V, 20 A.
3. GFCI receptacles, 125 V, 20 A.
4. Tamper-resistant duplex straight-blade Receptacle with USB outlet
5. Occupancy sensors.
6. Wall plates.
7. Electromechanical dial-time switches.
8. Outdoor photoelectric switches, solid state, flexible mounting.
9. Lighting contactors.

##### 1.2 DEFINITIONS

- A. AFCI: Arc-fault circuit interrupter.
- B. EMI: Electromagnetic interference.
- C. GFCI: Ground-fault circuit interrupter.
- D. Pigtail: Short lead used to connect a device to a branch-circuit conductor.
- E. RFI: Radio-frequency interference.
- F. UL 1472 Type I Dimmer: Dimmer in which air-gap switch is used to energize preset lighting levels.

##### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: List of legends and description of materials and process used for premarking wall plates.
- C. Samples: One for each type of device and wall plate specified, in each color specified.

## 1.4 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

## 1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing-label warnings and instruction manuals that include labeling conditions.

## PART 2 - PRODUCTS

### 2.1 GENERAL WIRING-DEVICE REQUIREMENTS

- A. Wiring Devices, Components, and Accessories: Listed and labeled as defined in 2017 NFPA 70, by a qualified testing agency, and marked for intended location and use.
- B. Comply with 2017 NFPA 70.
- C. Comply with NEMA WD 1.
- D. Devices that are manufactured for use with modular plug-in connectors may be substituted under the following conditions:
  - 1. Connectors shall comply with UL 2459 and shall be made with stranding building wire.
  - 2. Devices shall comply with requirements in this Section.
- E. Devices for Using-Agency-Furnished Equipment:
  - 1. Receptacles: Match plug configurations.
  - 2. Cord and Plug Sets: Match equipment requirements.
- F. Device Color:
  - 1. Wiring Devices Connected to Normal Power System: As selected by Architect unless otherwise indicated or required by 2017 NFPA 70 or device listing.
  - 2. Wiring Devices Connected to Essential Electrical System: Red.
- G. Wall Plate Color: For plastic covers, match device color.
- H. Source Limitations: Obtain each type of wiring device and associated wall plate from single source from single manufacturer.

### 2.2 GENERAL-USE SWITCHES AND DIMMER SWITCHES

- A. Toggle Switch:

1. Manufacturers:
    - a. Arrow Hart, Wiring Devices; Eaton; Electrical Sector
    - b. Hubbell Wiring Device-Kellems; brand of Hubbell Electrical Solutions; Hubbell Incorporated
    - c. Leviton Manufacturing Co., Inc.
    - d. Pass & Seymour; Legrand North America, LLC
  2. Regulatory Requirements:
    - a. Listed and labeled in accordance with 2017 NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
  3. General Characteristics:
    - a. Reference Standards: UL CCN WMUZ and UL 20.
  4. Options:
    - a. Device Color: As determined by Using Agency.
    - b. Configuration:
      - 1) General-duty, 120-277 V, 20 A, single pole, three way or four way.
- B. Type I Dimmer Switch:
1. Manufacturers:
    - a. Arrow Hart, Wiring Devices; Eaton, Electrical Sector
    - b. GE Lighting; General Electric Company
    - c. Hubbell Wiring Device-Kellems; brand of Hubbell Electrical Solutions; Hubbell Incorporated
    - d. Leviton Manufacturing Co., Inc.
    - e. Lutron Electronics Co., Inc
    - f. Pass & Seymour; Legrand North America, LLC
  2. Regulatory Requirements:
    - a. Listed and labeled in accordance with 2017 NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
  3. General Characteristics:
    - a. Reference Standards: UL CCN EOYX and UL 1472 Type I dimmer.
  4. Options:

- a. Device Color: As determined by Using Agency.
- b. Switch Style: Toggle.
- c. Dimming Control Style: Slide.
- d. Configuration:
  - 1) General-duty, 120-277 V, 20 A, single pole, three way or four way.

## 2.3 STANDARD-GRADE RECEPTACLES, 125 V, 20 A

### A. Duplex Receptacles, 125 V, 20 A :

- 1. Manufacturers:
  - a. Arrow Hart, Wiring Devices; Eaton, Electrical Sector
  - b. Leviton Manufacturing Co., Inc.
  - c. Pass & Seymour; Legrand North America, LLC
  - d. Wiring Device-Kellems; Hubbell Incorporated, Commercial and Industrial
- 2. Description: Two pole, three wire, and self-grounding.
- 3. Configuration: NEMA WD 6, Configuration 5-20R.
- 4. Standards: Comply with UL 498 and FS W-C-596.

## 2.4 GFCI RECEPTACLES, 125 V, 20 A

### A. Duplex GFCI Receptacles, 125 V, 20 A:

- 1. Manufacturers:
  - a. Arrow Hart, Wiring Devices; Eaton, Electrical Sector
  - b. Leviton Manufacturing Co., Inc.
  - c. Pass & Seymour; Legrand North America, LLC
  - d. Wiring Device-Kellems; Hubbell Incorporated, Commercial and Industrial
- 2. Description: Integral GFCI with "Test" and "Reset" buttons and LED indicator light. Two pole, three wire, and self-grounding.
- 3. Configuration: NEMA WD 6, Configuration 5-20R.
- 4. Type: Feed through.
- 5. Standards: Comply with UL 498, UL 943 Class A, and FS W-C-596.

## 2.5 TAMPER-RESISTANT DUPLEX STRAIGHT-BLADE RECEPTACLE WITH USB OUTLET TO POWER CLASS 2 EQUIPMENT

### A. Straight Blade Receptacle with USB Outlet

- 1. Manufacturers:
  - a. Arrow Hart, Wiring Devices; Eaton, Electrical Sector
  - b. Hubbell Wiring Device-Kellems; brand of Hubbell Electrical Solutions; Hubbell Incorporated

- c. Leviton Manufacturing Co., Inc.
  - d. Pass & Seymour; Legrand North America, LLC
2. Regulatory Requirements:
- a. Listed and labeled in accordance with 2017 NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
3. General Characteristics:
- a. Reference Standards: UL CCN RTRT and UL 498.
4. Options:
- a. Device Color: As selected by Architect unless otherwise indicated or required by 2017 NFPA 70 or device listing.
  - b. Configuration:
    - 1) General-duty, NEMA 5-20R; two USB-A ports.
5. Accessories:
- a. Cover Plate: 0.060 inch thick, high-impact thermoplastic (nylon) with smooth finish and color matching wiring device; from same manufacturer as wiring device.
  - b. Securing Screws for Cover Plate: Metal with head color matching wallplate finish.

## 2.6 OCCUPANCY SENSORS

- A. Ceiling Switch Sensor Light Switch, Dual Technology:
- 1. Manufacturers:
    - a. Arrow Hart, Wiring Devices; Eaton, Electrical Sector
    - b. Leviton Manufacturing Co., Inc.
    - c. Pass & Seymour; Legrand North America, LLC
    - d. Wiring Device-Kellems; Hubbell Incorporated, Commercial and Industrial
  - 2. Description: Ceiling-mounted, combination lighting-control sensor and conventional switch lighting-control unit using dual (ultrasonic and passive infrared) technology.
  - 3. Standards: Comply with UL 20.
  - 4. Rated 960 W at 120 V ac for tungsten lighting, 10 A at 120 V ac or 10 A at 277 V ac for fluorescent or LED lighting, and 1/4 hp at 120 V ac.
  - 5. Adjustable time delay of 20 minutes.

## 2.7 WALL PLATES

- A. Single Source: Obtain wall plates from same manufacturer of wiring devices.

B. Single and combination types shall match corresponding wiring devices.

1. Plate-Securing Screws: Metal with head color to match plate finish.
2. Material for Finished Spaces: Smooth, high-impact thermoplastic.

C. Antimicrobial Cover Plates:

1. Contact surfaces treated with a coating that kills 99.9 percent of certain common bacteria within two hours when regularly and properly cleaned.
2. Tarnish resistant.

## 2.8 ELECTROMECHANICAL DIAL-TIME SWITCHES

A. Manufacturers:

1. Cooper Industries, Inc.
2. Intermatic, Inc
3. Invensys Controls
4. Leviton Manufacturing Co., Inc.
5. NSi Industries LLC
6. TE Connectivity Ltd.

B. Electromechanical-Dial Time Switches: Comply with UL 917.

1. Listed and labeled in accordance with 2017 NFPA 70, by a qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Contact Configuration: DPST.
3. Contact Rating: 30 A inductive or resistive, 240 V(ac).
4. Circuitry: Allows connection of a photoelectric relay as a substitute for the on-off function of a program.
5. Astronomic time dial.
6. Eight-Day Program: Uniquely programmable for each weekday and holidays.
7. Skip-a-day mode.
8. Wound-spring reserve carryover mechanism to keep time during power failures, minimum of 16 hours.

## 2.9 OUTDOOR PHOTOELECTRIC SWITCHES, SOLID STATE, FLEXIBLE MOUNTING

A. Manufacturers:

1. Cooper Industries, Inc.
2. Intermatic, Inc.
3. Leviton Manufacturing Co., Inc.
4. NSi Industries LLC
5. TE Connectivity Ltd.



- B. Description: Solid state, with SPST dry contacts rated for 1000 W incandescent or 1800 VA inductive, to operate connected relay, contactor coils, or microprocessor input; complying with UL 773A, and compatible with ballasts and LED lamps.
  - 1. Listed and labeled in accordance with 2017 NFPA 70, by a qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
  - 2. Light-Level Monitoring Range: 1.5 to 10 fc, with an adjustment for turn-on and turn-off levels within that range, and a directional lens in front of the photocell to prevent fixed light sources from causing turn-off.
  - 3. Time Delay: Fifteen-second minimum, to prevent false operation.
  - 4. Surge Protection: Metal-oxide varistor.
  - 5. Mounting: Twist lock complies with ANSI C136.10, with base-and-stem mounting or stem-and-swivel mounting accessories as required to direct sensor to the north sky exposure from same source and manufacturer as switch.
  - 6. Failure Mode: Luminaire stays ON.

## 2.10 LIGHTING CONTACTORS

### A. Manufacturers:

- 1. ABB, Electrification Business
- 2. Allen-Bradley/Rockwell Automation
- 3. ASCO Power Technologies
- 4. Eaton
- 5. Leviton Manufacturing Co., Inc.
- 6. Square D; Schneider Electric USA

- B. Description: Electrically operated and mechanically held, combination-type lighting contactors with nonfused disconnect, complying with NEMA ICS 2 and UL 508.
  - 1. Current Rating for Switching: Listing or rating consistent with type of load served, including tungsten filament, inductive, and high-inrush ballast (ballast with 15 percent or less THD of normal load current).
  - 2. Fault Current Withstand Rating: Equal to or exceeding the available fault current at the point of installation.
  - 3. Enclosure: Comply with NEMA 250.
  - 4. Provide with control and pilot devices as indicated on Drawings, matching the NEMA type specified for the enclosure.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Comply with NECA 1, including mounting heights listed in that standard, unless otherwise indicated.

B. Coordination with Other Trades:

1. Protect installed devices and their boxes. Do not place wall finish materials over device boxes, and do not cut holes for boxes with routers that are guided by riding against outside of boxes.
2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
3. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall.
4. Install wiring devices after all wall preparation, including painting, is complete.

C. Conductors:

1. Do not strip insulation from conductors until right before they are spliced or terminated on devices.
2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
3. The length of free conductors at outlets for devices shall comply with 2017 NFPA 70, Article 300, without pigtails.
4. Existing Conductors:
  - a. Cut back and pigtail, or replace all damaged conductors.
  - b. Straighten conductors that remain and remove corrosion and foreign matter.
  - c. Pigtailing existing conductors is permitted, provided the outlet box is large enough.

D. Device Installation:

1. Replace devices that have been in temporary use during construction and that were installed before building finishing operations were complete.
2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
4. Connect devices to branch circuits using pigtails that are not less than 6 inches in length.
5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, two-thirds to three-fourths of the way around terminal screw.
6. Use a torque screwdriver when a torque is recommended or required by manufacturer.
7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
8. Tighten unused terminal screws on the device.
9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device-mounting screws in yokes, allowing metal-to-metal contact.

- E. Receptacle Orientation:
  - 1. Install ground pin of vertically mounted receptacles down.
- F. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.
- G. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

### 3.2 GFCI RECEPTACLES

- A. Install non-feed-through GFCI receptacles where protection of downstream receptacles is not required.

### 3.3 IDENTIFICATION

- A. Comply with Section 26 05 53 "Identification for Electrical Systems."

### 3.4 FIELD QUALITY CONTROL

- A. Test Instruments: Use instruments that comply with UL 1436.
- B. Test Instrument for Receptacles: Digital wiring analyzer with digital readout or illuminated digital-display indicators of measurement.
- C. Perform the following tests and inspections:
  - 1. Test Instruments: Use instruments that comply with UL 1436.
  - 2. Test Instrument for Receptacles: Digital wiring analyzer with digital readout or illuminated digital-display indicators of measurement.
- D. Tests for Receptacles:
  - 1. Line Voltage: Acceptable range is 105 to 132 V.
  - 2. Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is unacceptable.
  - 3. Ground Impedance: Values of up to 2 ohms are acceptable.
  - 4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
  - 5. Using the test plug, verify that the device and its outlet box are securely mounted.
  - 6. Tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault-current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.

- E. Test straight-blade for the retention force of the grounding blade according to NFPA 99. Retention force shall be not less than 4 oz.
- F. Wiring device will be considered defective if it does not pass tests and inspections.
- G. Prepare test and inspection reports.

END 26 27 26.