

THE SCHOOL DISTRICT OF PHILADELPHIA
Office of Capital Programs
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Addendum No. 03

Subject: John H. Webster Elementary School – Elevator
Replacement SDP Contract No. B-059C
2018/2019

Location: John H. Webster School
3400 Frankford Avenue
Philadelphia PA 19134

This Addendum dated February 4, 2021 shall modify and become part of the Contract Documents for the work of this project. Any items not mentioned herein, or affected by, shall be performed strictly in accordance with the original documents.

Question #1:

Due to the limited scope of work on this project, can the MBE/WBE Ranges be reduced?

Response:

The MBE/WBE goal is changed to a best effort because the Elevator Replacement Work is highly specialized and performed by a single vendor, the Elevator Company; and the Electrical Work is usually incidental to the Elevator Work and limited in scope.

Question #2:

Please provide a complete AIR Report, and a completed list of all materials to be removed?

Response:

See attached AIR Report.

Question #3:

Detail 1 on Drawing E-103 shows connecting to addressable loop. The fire alarm is not an addressable system, it is an old Couch System. The addressable modules and elevator recall cannot be connected to this system. How do we connect the elevator code required recall?

Response: Provide an Elevator Recall Control and Supervisory Panel (ERCSP) and Integrate that panel with the existing Fire Alarm system.

Question #4:

Drawing E-101, Keyed Note 2. Note states to test existing elevator lobby smoke detectors. There are no smoke detectors in the entire building or can be connected to this fire alarm system. How do we proceed?

Response: Provide six (6) smoke detectors to support the new elevator system. Integrate these smoke detectors with the new ERCSP. Refer to attached sketches SK-1, SK-2 and SK-2.1.

DRAWING:

E-101: Delete Keyed Demolition Note #2 and indicators from plans 1 & 2.

E-102: Add Keyed Note #9: “Provide (1) Elevator Recall Control and Supervisory Panel (ERCSP) in Basement mechanical room. Integrate ERSCP with existing fire alarm control panel at mechanical room entrance from corridor for Supervisory, Trouble, and Alarm Signals. Provide a total of six (6) ceiling-mounted smoke detectors – one at each elevator landing, one in the elevator machine room, and one at the ERCSP. Provide all conduit and wire required for these systems.”

E-102: Add smoke detector to elevator machine room on plan #4. Add keynote indicator #9 at this smoke detector.

E-102: Add keynote indicator #9 to plan #1.

Specifications:

28 31 00 Fire Detection and Alarm: ADD the following paragraphs

2.12 Elevator Recall Control and Supervisory Panel (ERCSP)

- A.** The ERCSP shall be a “dedicated function” fire alarm control unit, in accordance with NFPA 72 Article 21.3.2, installed to operate/monitor the detection devices used to initiate fire fighters’ service recall of the elevator (aka, elevator recall) and to interface with the elevator controller and the Owner’s existing fire alarm system.
- B.** The ERCSP shall be installed where indicated on drawings. It shall contain a microprocessor based central processing unit (CPU) and power supply, in a red equipment enclosure. The CPU shall be capable of communicating with and controlling the following types of equipment: intelligent, addressable smoke and thermal (heat) detectors, addressable modules, system printers, annunciators, and other system-controlled devices.
- C.** The control panel shall have a distinct tone and indicator lights for alarm, trouble, and supervisory conditions. Additional indicator lights shall be provided for indication of system silenced and system power on.
- D.** The system shall include a full featured operator interface control and annunciation panel that shall include a backlit Liquid Crystal Display (LCD), individual color coded system status LEDs, and an alphanumeric keypad with easy touch rubber keys for the field programming and control of the fire detection system.

- E. The 80-character display keypad shall be an easy-to-use QWERTY type keypad, similar to a PC keyboard. This shall be part of the standard system and have the capability to command all system functions, entry of any alphabetic or numeric information, and field programming. Two different password levels shall be provided to prevent unauthorized system control or programming.
- F. The system shall be programmable, configurable, and expandable in the field without the need for special tools, PROM programmers or PC based programmers. It shall not require replacement of memory ICs to facilitate programming changes.
- G. The fire alarm control panel shall include a walk-test feature. It shall include the ability to test initiating device circuits from the field without returning to the panel to reset the system.
- H. The system shall be programmable, configurable, and expandable in the field without the need for special tools, PROM programmers or PC based programmers. It shall not require replacement of memory ICs to facilitate programming changes.
 - 1. Programming shall be performed on site by an Authorized Manufacturer's Representative.
- I. For flexibility and to ensure program validity, an optional Windows (TM) based program utility shall be available. This program shall be used to off-line program the system with batch upload/download and shall have the ability to upgrade the manufacturers (FLASH) system code changes. This program shall also have a verification utility, which scans the program files, identifying possible errors. It shall also have the ability to compare old program files to new ones, identifying differences in the two files to allow complete testing of any system operating changes. This shall comply with the NFPA 72 requirements for testing after system modification.
 - 1. This utility shall provide the ability to create and print NFPA-style Test and Inspection reports.
 - 2. This utility shall provide the ability to create and print Device Maintenance information.
- I. The system shall include two (2) serial EIA-232 interfaces. Each interface shall be a means of connecting UL Listed Information Technology Equipment (ITE) peripherals, allowing for future connection of an optional UL-Listed 40- or 80-column printer to the system.
- J. The system shall include a minimum of two (2) EIA-485 ports for the serial connection of optional annunciators and remote LCD displays and allow for future network connection to a proprietary-receiving unit.
- K. Contractor shall provide 120-volt power to the new fire alarm system main panel and any other panel or devices as required to complete the system.

2.13 PRODUCTS

- A. Basis of Design: Notifier by Honeywell, Model NFS-320R microprocessor based Addressable Elevator Recall Control and Supervisory Panel, with Notifier addressable devices as specified herein.

2.14 SIGNAL LINE CIRCUITS

- A. The Fire Alarm system control panel shall support one (1) signal line circuit (SLC). The SLC interface shall provide power to and communicate with up to 159 intelligent modules (monitor, relay, releasing), for a loop capacity of 318 intelligent / addressable devices.
- B. The CPU shall receive analog information from all intelligent detectors to be processed to determine whether normal, alarm, pre-alarm, or trouble conditions exist for each detector. The software shall automatically maintain the detector's desired sensitivity level by adjusting for the effects of environmental factors, including the accumulation of dust in each detector. The analog information shall also be used for automatic detector testing and for the automatic determination of detector maintenance requirements.

2.15 BATTERY BACKUP AND PANEL

- A. The system shall have a backup battery system. The battery back-up power supply shall be capable of operating the system under normal load for a period of at least twenty-four hours (24 hrs.) followed immediately by a period of five minutes (5 min.) in 'alarm' condition.
- B. The battery charger shall be capable of recharging the batteries in a 48-hour period as required by NFPA 72.
- C. Backup batteries shall be marked with the month and year of manufacture and be of the type that only requires annual charger and discharge tests as required by NFPA 72.
- D. If a cabinet separate from the alarm control panel is required, the panel should be located below the FACP. This panel shall be painted to match the FACP and provided with a cabinet type lock that is keyed the same as the alarm control panel.

2.16 OUTPUT RELAY MODULE

- A. Furnish and install Fire Alarm Relay Modules to initiate elevator recall functions and fire-hat operation as indicated on the Drawings.
- B. Relay Modules shall be NOTIFIER model # FRM-1, or manufacturer's recommended equivalent, UL Listed and FM Approved for use with the Fire Alarm control panel.
- C. Each Relay Module shall be mounted in a 4-inch square box and located such that the unsupervised wiring between the module and the connected equipment does not exceed three feet (3 ft).
- D. Furnish and install all conduit and wiring from the output relay module to the connected equipment and make all wiring terminations. Coordinate installation with the Elevator Equipment installer.

2.17 SURGE PROTECTION MODULES

- A. Furnish and install surge protection for the incoming power to the fire alarm main panel and all remote power supply panels. Protection devices shall be accessible from the ground and mounted adjacent (2 feet or less) to the fire alarm panel, not to exceed 6 feet from floor.
 - 1. Locating surge protection modules at the electrical distribution panel serving the fire alarm panel(s) shall not be acceptable.
- B. Provide surge protection for panel communication and SLC circuits.
- C. The surge protection for the incoming fire alarm panel power circuit shall be a Ditek Model DTK-120SR module (or equivalent).
- D. The surge protection for all communication and SLC circuits shall be Ditek Model 2MHLP36B-WB modules and bases (or equivalent).
- E. Surge protector ground wires shall be run as straight as possible and have a minimum separation distance of 3 feet from the FACP.
- F. Surge protection shall be UL 497B Listed and be compatible with the FACP.
- G. Surge protection shall be installed in accordance with Manufacturer's installation instructions.
- H. Wire connections shall utilize screw type terminal connections only.

2.18 FIRE ALARM SYSTEM POWER, RACEWAY, AND WIRING

- A. Design must provide for the complete labeling of the raceway as "FIRE ALARM SYSTEM". Red Label with White text must be waterproof (peel-off type). These labels shall be placed on every connection box. Connection box labels should be octagon shaped and measure 3" across. Conduit shall be labeled a minimum of every 20 feet; shorter lengths of conduit between connection boxes should be labeled at the midway point. Conduit labels should be rectangular shaped and measure $\frac{3}{4}$ " wide by 5 $\frac{1}{2}$ " long. The raceway shall be installed in a manner that considers the effects of electrical and Radio Frequency noise to prevent or minimize induced or electromagnetic interference.
- B. Conduits and/or wiring shall not be installed less than 12 inches from any conduit or exposed electrical bus work and/or distribution panel containing 480Volt or higher voltage electrical conductors.
- C. Cast boxes (not sheet metal) shall be used for surface mounting of devices to walls, slabs, or exposed support beams/overhead structure.
- D. Existing conduits and/or suspended ceiling support systems cannot be used to mount or support new conduits or device boxes.
- E. The distance between pull boxes for the Fire Alarm system should not exceed 100 feet.
- F. Fire Alarm conduit shall be a minimum of 3/4" and appropriately sized for the cable it will carry, plus an additional 25% for expansion. Non-fire alarm cable shall not be installed in any fire alarm conduit.
- G. Junction boxes used within close proximity to any area susceptible to water damage or in NEMA 4X locations (including the elevator pit) must be waterproof.
- H. Fire Alarm system initiating circuit wiring shall be sized in accordance with the manufacturer's recommendations; 16-gauge, minimum.

- I. Conductors and Wiring material and methods shall meet all NFPA, NEC, and local code requirements.
- J. Wires shall be color-coded and labeled to allow zone identification at terminal and junction locations. Zone identification labels must be of high quality and equal to the 3M Scotch Code Wire Marking Tape.

2.19 FIRE ALARM ACTIVATION SEQUENCE

- A. Elevator Recall and Fire-hat device relays shall respond to the activation of the respective hoist way, lobby, and/or machine room detection device(s).
- B. Provide a fire alarm activation matrix in the as-built documentation describing the activation of any/all input devices with respect to all the fire alarm output devices.

2.20 FIRE ALARM SYSTEM IDENTIFICATION

- A. All the below required system identification techniques shall be incorporated into the shop drawings.
- B. Design must provide for the complete labeling (with waterproof labels) of all Fire Alarm system devices (detectors, pull stations, relays, etc.) with an address.
- C. Field devices shall be labeled with their address both on the device and on the back box and/or mounting plate. Address labels must be easily seen without the use of a ladder (e.g. SLC 33-002).
- D. Device address labels are to be typed letters (P-Touched), not handwritten, and must be legible from the ground level.

2.21 FIRE ALARM SYSTEM FUNCTIONAL TESTS

- A. General Testing Requirements: Ensure notification to the Owner's Representative in writing of the scheduled date and time of all fire alarm system testing. This notification must be at least two (2) weeks prior to each test, such that the Owner or his authorized representative may witness the test, at the Owner's option.
- B. The Fire Alarm system shall be functionally tested in accordance with NFPA 72.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Scope:
 - 2. The system shall electrically supervise all wiring between the control panel and all initiating and indicating devices.
 - 3. The system shall be capable of differentiating between a system trouble condition and the activation of a supervisory device.

C. WIRING INSTALLATION

5. No splicing of wires is permitted except on terminal blocks in control panels or properly labeled terminal cabinets.
 - a. The use of wire nuts or similar type devices is not permitted.
 - b. All devices shall have terminals for each wiring connection.
 - c. No splicing of any type shall be permitted in pull boxes, to include crimp terminals.
6. All wires shall be labeled at both ends with 3/4" x 1-3/9" ScotchCode SWD Write-On Tape and SMP Write-On Marking Pen only.
7. Use plastic wire ties and wire tie mounts to ensure a neat quality appearance.

3.2 TESTS

- C. A factory-trained technician from the equipment manufacturer/supplier shall inspect, test, and adjust the complete Fire Alarm System according to NFPA 72, including, but not limited to, the following:
1. Visual inspection of all equipment.
 2. Verification of alarm, supervisory, and trouble signals at the control panel.
 3. Test each alarm initiation device for alarm and correct annunciation.
 4. Test the sensitivity of each smoke detector with a manufacturer's detector test set (the fire alarm control panel shall be UL listed for this purpose). Retain a printed recorded of all firing voltages. Correlate firing voltage records to the device addresses as shown on the as-built drawings.
 5. Test each addressable relay module (control relay) for proper operation.
 6. Check all end of line devices for proper installation and polarity.
- D. All smoke detector sensitivity adjustments and tests shall be performed:
1. From the Fire Alarm Control Panel, with each detector in its exact operating location and not at some convenient place.
 2. Only under normal ambient conditions, with and air conditioning, heating, and ventilation systems operating properly.
 3. Submit a complete printout showing all sensitivity readings.

3.5 GROUNDING

- A. Comply with requirements of NEC Articles 250, 770, and 800, as applicable, for respective grounding methods.

14 2100 GEARED TRACTION ELEVATOR MODERNIZATION: ADD the following paragraph:

2.01.C.5 Smartrise Engineering

END OF SECTION

End of Addendum