

THE SCHOOL DISTRICT OF PHILADELPHIA
Office of Capital Programs
440 North Broad Street, 3rd Floor – Suite 371
Philadelphia, PA 19130

TELEPHONE: (215) 400-4730

Addendum No. 02

Subject: Julia R. Masterman High School – Elevator
Replacement SDP Contract No. B-069C 2018/2019

Location: Julia R. Masterman High School
1645 Spring Garden Street
Philadelphia PA 19130

This Addendum dated February 24, 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.

Please Note: The bid opening has been postponed to Tuesday, March 23, 2021.

Question #1:

Detail 3 on Drawing E-103 calls to connect elevator recall modules to an existing fire alarm addressable loop. The fire alarm is not an addressable system, it is an old Couch, 120v system. The addressable modules and elevator recall cannot be connected to this system. Drawing notes tell us to verify existing lobby smoke detectors, elevator & machine room heat detectors, they do not exist. How do we proceed to get an elevator code compliant fire alarm system?

- **Response:** Provide an Elevator Recall Control and Supervisory Panel (ERCSP) and Integrate that panel with the existing Fire Alarm system. Provide fifteen (15) smoke detectors to support the new elevator system. Integrate these smoke detectors with the new ERCSP. Refer to attached sketches SK-1, SK-2, SK-2.1, and SK-2.2.

Question #2:

Detail 2 on drawing shows a 2 phase, five wire, 120/240v Main Distribution Panel with three pole breakers feeding elevators?? The existing elevator service is two phase (picture attached). How do we connect the two-phase service to the new three phase elevators?

- **Response:** Existing breakers are 4 pole. Provide (2) new Scott-T transformers. Connect existing elevator feeders to new Scott-T transformers; modify/extend existing feeder as required. Refer to attached sketch SK-3.

DRAWING:

E-101: Delete Keyed Demolition Note #2 and indicators from plans 1, 2, 3 & 4.

E-102: Add Keyed Note #11: "Provide (1) Elevator Recall Control and Supervisory Panel (ERCSP) in Battery & Switchboard Room. Integrate ERSCP with existing fire alarm control panel for Supervisory, Trouble, and Alarm Signals. Provide a total of fifteen (15) 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 plans #5 & #7. Add keynote indicator #11 at this smoke detectors.

E-102: Add keynote indicator #11 to plans #1, 2, 3 & 4.

E-103: Refer to attached sketches SK-2, SK-2.1, SK-2.2 and SK-3.

Specifications:

26 2200 Low Voltage Transformers: ADD Section (attached)

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

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 ERCSP and any other panel or devices as required to complete the system.

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.

SIGNAL LINE CIRCUITS

- A. The 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.

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.

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.

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.

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 $\frac{3}{4}$ " 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.

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.

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.

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 $\frac{3}{4}$ " 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.

END OF SECTION

End of Addendum

SECTION 26 2200

LOW-VOLTAGE TRANSFORMERS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.

1.02 SUMMARY

- A. Section Includes: The work specified in this Section consists of material for furnishing, installing, connecting, energizing, testing, cleaning and protecting transformers.

1.03 REFERENCES

- A. Institute of Electrical and Electronic Engineers/American National Standards Institute (IEEE/ANSI):
- | | | |
|----|---------------------|--|
| 1. | IEEE/ANSI C57.12.01 | General Requirements for Dry-type Distribution and Power Transformers |
| 2. | IEEE/ANSI C57.12.59 | Guide for Dry-type Transformer Through-Fault Current Duration |
| 3. | IEEE/ANSI C57.12.70 | Terminal Markings and Connections for Power and Distribution Transformers |
| 4. | IEEE/ANSI C57.12.80 | Standard Terminology for Power and Distribution Transformers |
| 5. | IEEE/ANSI C57.12.91 | Test Code for Power and Distribution Transformers |
| 6. | IEEE/ANSI C57.94 | Recommended Practice for Installation, Application, Operation, and Maintenance of Dry-Type General Purpose Distribution and Power Transformers |
| 7. | IEEE/ANSI C57.96 | Guide for Loading Dry-Type Distribution and Power Transformers. |
- B. National Electric Manufacturer's Association (NEMA):
- | | | |
|----|------------|--|
| 1. | NEMA ST 20 | Dry Type Transformers for General Applications |
| 2. | NEMA TR 1 | Transformers, Regulators, and Reactors. |
- C. Underwriter's Laboratory, Inc. (UL):
- | | | |
|----|---------|---|
| 1. | UL 1561 | Transformers, Dry-Type General Purpose and Power. |
|----|---------|---|
- D. National Fire Protection Association (NFPA):
- | | | |
|----|---------|---------------------------------|
| 1. | NFPA 70 | National Electrical Code (NEC). |
|----|---------|---------------------------------|

1.04 DEFINITIONS

- A. Definitions of terms are as indicated in NFPA 70, IEEE/ANSI C57.12.80 and NEMA ST 20 unless otherwise indicated, noted or specified.

1.05 SYSTEM DESCRIPTION

- A. Design Criteria:
- | | |
|----|---|
| 1. | Provide transformers with ratings as indicated. |
|----|---|

2. Provide transformers designed for the following conditions:
 - a. 40 degrees C. maximum ambient temperature
 - b. -20 degrees C. minimum ambient
 - c. 1,000 feet (300m) above sea-level
 - d. Indoors unless otherwise indicated or specified.
- B. Provide transformers for connecting to systems with nominal voltages and operating ranges as indicated on the drawings and in accordance with IEEE/ANSI C84.1.
- C. Provide transformers for supplying systems with nominal voltages and operating ranges as indicated on the drawings and in accordance with IEEE/ANSI C84.1.
- D. Provide transformers for connecting to systems with a let-through fault capability up to the limits of IEEE/ANSI C57.12.59.

1.06 SUBMITTALS

- A. Testing Agency/Quality Verification: Provide with all product data evidence of testing agency/quality verification, listing, and labeling either by printed mark on the data or by a separate listing card. Provide from product manufacturers a written statement indicating why an item does not have a quality assurance verification. Such statements are subject to the approval of the Engineer.
- B. Product Data:
 1. List of transformers and accessories to be furnished and installed.
 2. Catalog cuts of all transformers and accessories.
- C. Shop Drawings: Provide shop drawings for the following:
 1. Complete outline drawing, showing overall length, width, and height and including ratings of equipment, impedance, and installation restrictions.
- D. Submit Operation and Maintenance Manual.

1.07 QUALITY ASSURANCE

- A. Provide products that are listed and labeled by Underwriters Laboratory, approved by Factory Mutual, or certified as meeting the standards of UL by the Electrical Testing Laboratory unless products meeting the requirements of these testing laboratories are not readily available or unless standards do not exist for the products. Provide products that are listed and labeled or approved as stated above for the location installed in and listed and labeled or approved as indicated and specified for the applications the items are intended for.
- B. Conform all work to NFPA 70, National Electrical Code.
- C. Install work under supervision of skilled licensed electricians.

PART 2 PRODUCTS

2.01 SECONDARY TRANSFORMERS

- A. Provide transformers of the general purpose, indoor, double-wound, ventilated, dry-type designed and tested in accordance with NEMA Standard ST 20 and ANSI Standard C57.12.01, Underwriter's Laboratories Standard UL-1561, and ANSI C57.12.91 of capacities

and mounting arrangements, (floor or wall) as indicated on the Drawings. Provide wall-mounted transformers with the wall bracket that is adequate for the supporting weight.

- B. Design transformers for continuous operation at rated KVA, 24 hours a day, 365 days a year, with normal life expectancy as defined in ANSI/IEEE C57.96. Provide a transformer which will make this performance obtainable without exceeding 150-degree C. average temperature rise by resistance or 180-degree C. hot spot temperature rise in a 40-degree C. maximum ambient and 30-degree C. average ambient. Do not exceed 220 degree C as the maximum coil hot spot temperature.
- C. Provide proven 220-degree C. insulation systems.
- D. Wind the coils with aluminum, which has insulated, proven, high temperature resistant, 220-degree C. materials.
- E. Use all materials in the transformer that are flame retardant and do not support combustion as defined in ASTM Standard Test Method D635.
- F. Totally immerse the transformer in an insulating varnish, which will maintain superior bond strength, high dielectric strength, and outstanding power factors at temperatures associated with the 220-degree C. system as a final insulation treatment. After immersion, cure the varnish at normal operating temperatures for such a period of time as to assure complete curing of the varnish and scouring of volatiles in the varnish solvent.
- G. Construct transformers with core materials of a high quality, low loss nature as to minimize exciting current, no-load losses, and interlaminar vibrations.
- H. The core and coil assembly shall be installed on vibration-absorbing pads.
- I. Transformer average sound levels shall not exceed the following ANSI and NEMA levels for self-cooled ratings:
 - 1. Up to 9 kVA: 40 db
 - 2. 10 to 50 kVA: 45 db
 - 3. 51 to 150 kVA: 50 db
 - 4. 151 to 300 kVA: 55 db
 - 5. 301 to 500 kVA: 60 db
 - 6. 501 to 700 kVA: 62 db.
- J. Design the core-coil assembly and mechanically brace to withstand short circuit tests as defined in ANSI C57.12.91 by the use of full-scale testing. The coil construction and mechanical bracing members shall be such as to prevent mechanical degradation of the insulation structures during short circuit.
- K. Provide single phase transformers 2 KVA and below without taps. Provide 3 KVA and 5 KVA with 2-2 ½ percent above nominal full capacity (ANFC) and 2-2 ½ percent below nominal full capacity (BNFC) taps. Provide 7-1/2 KVA and above with 2-2 ½ percent ANFC and 4-2 ½ percent BNFC taps.
- L. Provide transformers 7-1/2 KVA and above with two (2) 2 ½ percent above nominal full capacity (ANFC) and four (4) 2 ½ percent below nominal full capacity (BNFC) taps.
- M. Provide transformer with enclosures removable front and back panels. Ventilation openings shall be screened or grilled, designed to prevent accidental access to electrified parts.

- N. The following factory tests shall be made on all transformers:
 - 1. Ratio tests at the rated voltage connection and at all tap connections
 - 2. Polarity and phase relation tests on the rated voltage connection
 - 3. Applied potential tests
 - 4. Induced potential tests
 - 5. No-load and excitation current at rated voltage on the rated voltage connection.
- O. Transformers shall be low loss type with minimum efficiencies per NEMA TP-1 when operated at 35% of full load capacity.
- P. Where indicated on the Drawings, provide transformers of the "Scott-T" design, arranged for a primary voltage of 240V, 2-phase, 4-wire.
 - 1. The secondary output voltage shall be 208V, 3-phase, 3-wire.
 - 2. If the windings of the Scott-T transformer include a neutral connection point, it shall not be connected.
- Q. Acceptable Manufacturers:
 - 1. Scott-T Design Dry-Type Transformers:
 - a. Power Magnetics, Inc.
 - b. Hammond Power Solutions
 - c. Or Approved Equal.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install, connect, and interconnect products where indicated, and in accordance with NEMA Standards, manufacturer's printed installation instructions, and this Section. Make connections in a manner, which will ensure electrical continuity and operability of the products.
- B. Protect the equipment against foreign matter and moisture during installation.
- C. Install floor mounted transformers on a 4-inch high concrete housekeeping pad. Housekeeping pads shall extend a minimum of 6 inches beyond the associated equipment in all directions.
- D. Install a 3-foot (1m) length of liquid-tight flexible metal conduit between transformer and fixed conduit system. Make power conductor connections in accordance with manufacturer's drawings, and as indicated on the Drawings.
- E. Ground in accordance with requirements of Section 26 0526. Provide ground bond for enclosure and neutral, minimum size #6 AWG, to nearest structural steel and nearest water pipes to conform with Section 26 0526 and the NEC.

3.02 CONCRETE PADS

- A. Provide 3-1/2" (9 cm) high concrete housekeeping pad for each floor mounted low-voltage transformer, extending 3 inches (8 cm) beyond the overall dimensions of the equipment. Conform concrete to requirements of Division 03.
 - 1. Provide a single, continuous pad in areas where floor mounted transformers are located adjacent to one another.

3.03 FIELD QUALITY CONTROL

- A. Dry out dry type transformers before they are energized.
- B. Check transformer for tightness of external structural members and mechanical joints in order to minimize audible sound levels. Check the ground connections.

Test transformer installations in accordance with requirements of Section 26 0500, industry accepted practice, and the equipment manufacturer's recommendations.

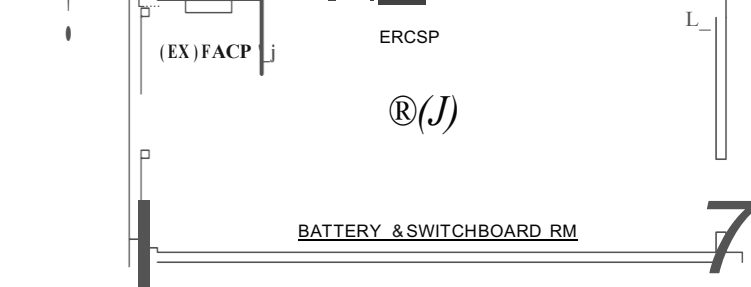
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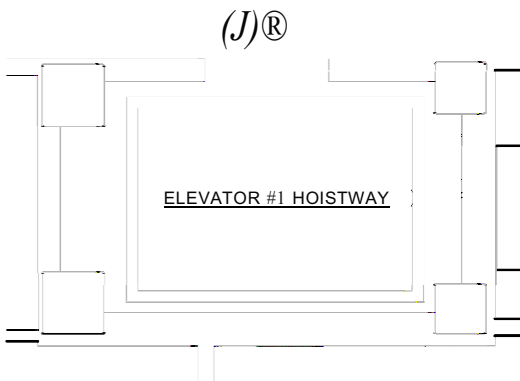
SKETCH KEYNOTES: @

1. PROVIDE (1) ELEVATOR RECALL CONTROL AND SUPERVISORY PANEL (ERCSP) IN BUILDING ENGINEER'S OFFICE. INTEGRATE ERCSP WITH EXISTING FIRE ALARM CONTROL PANEL FOR SUPERVISORY, TROUBLE, AND ALARM SIGNALS. PROVIDE A TOTAL OF FIFTEEN (15) CEILING/WALL-MOUNTED (FIELD VERIFY) SMOKE DETECTORS-ONE AT EACH ELEVATOR LANDING, ONE IN EACH WITH BUILDING ENGINEER). PROVIDE ALL CONDUIT AND WIRE REQUIRED FOR THESE SYSTEMS. ELEVATOR

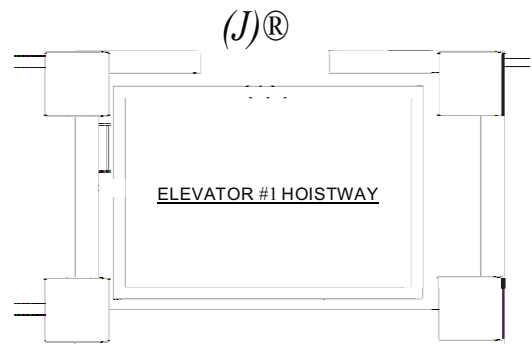
MACHINE ROOM, AND ONE AT THE ERCSP IN THE BATTERY & SWITCHBOARD ROOM (COORDINATE EXACT LOCATION



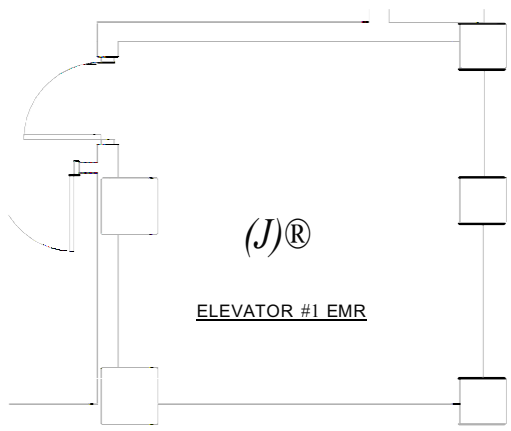
@ TIAL (BASEMENT) BATTERY & SWITCHBOARD ROOM FLOOR PLAN



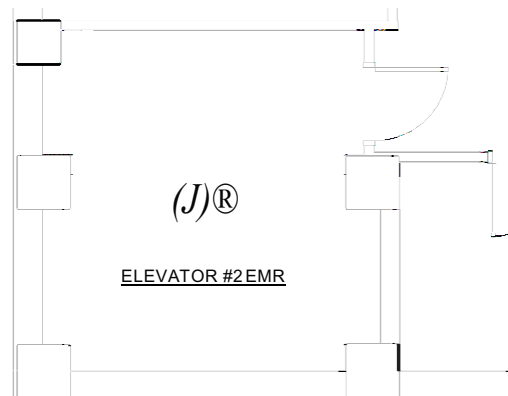
Partial (WEST) ELEV #1 FLOOR PLAN
SCALE NTS (TYPICAL AT EACH ELEVATOR LANDING)




Partial (EAST) ELEV #2 FLOOR PLAN
SCALE NTS (TYPICAL AT EACH ELEVATOR LANDING)

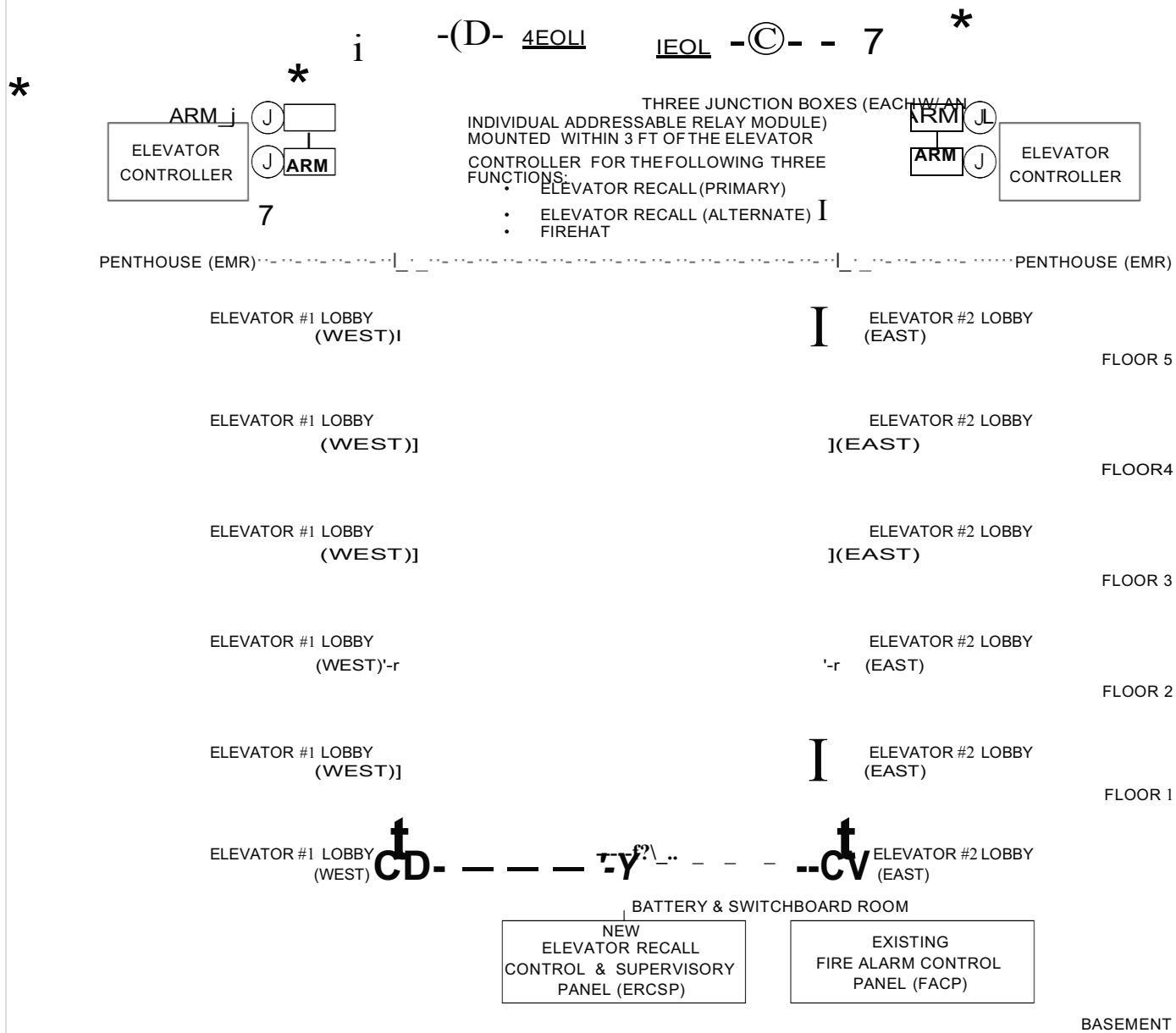


@ TIAL (WEST) EMR FLOOR PLAN



Partial (EAST) EMR FLOOR PLAN

NO.	DATE	REVISIONS	INT.	SCHOOL DISTRICT OF PHILADELPHIA MASTERMAN HIGH SCHOOL				TITLE: ELEVATOR REPLACEMENT		
								JOB:	DRAWN BY:	CHECKED BY:
								B-069 C	FJR	BAM
				VALLEY FORGE, PENNSYLVANIA				DATE:	REF. DWG.	DRAWING NO.
								02.24.2021	E-102	SK-1



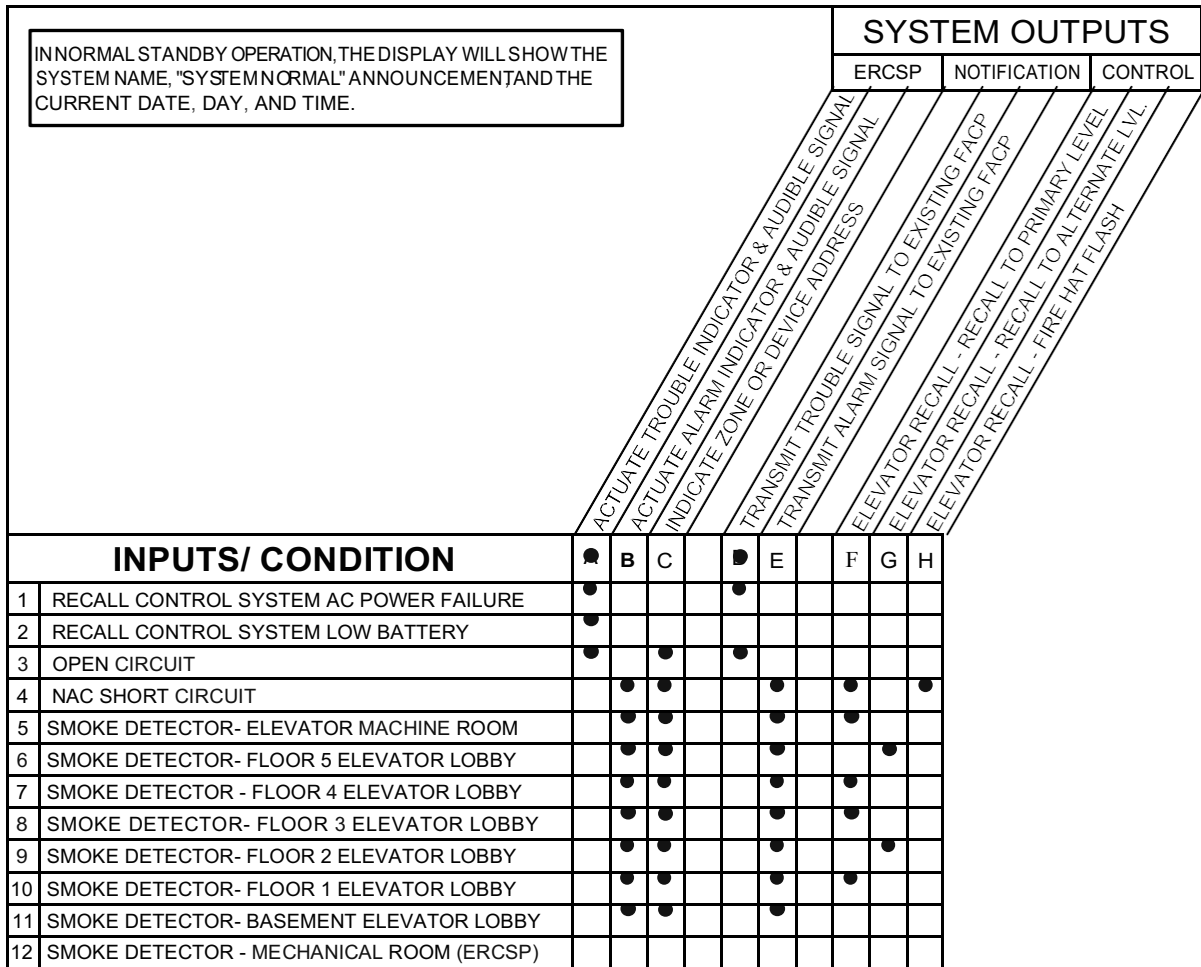
1 FIRE ALARM RISER DIAGRAM

SK-2 SCALE: NTS

NOTES:

- THE ELEVATOR RECALL CONTROL AND SUPERVISORY PANEL IS A "DEDICATED FUNCTION" CONTROL UNIT AND IS INSTALLED ONLY TO PROVIDE ELEVATOR RECALL FUNCTIONALITY.
- LABEL THE CONTROL PANEL, "ELEVATOR RECALL CONTROL AND SUPERVISORY PANEL- THIS PANEL IS NOT MONITORED BY AN ALARM COMPANY".
- REFER TO SPEC. SECTION 28 31 00 FOR ADDITIONAL REQUIREMENTS AND COMPLETE SPECIFICATIONS.
- PROVIDE OUTPUT CONTACTS IN ERCSP FOR INDICATION OF SYSTEM ALARM, TROUBLE, AND SUPERVISORY CONDITIONS; WIRE THESE OUTPUTS INTO THE EXISTING FACP. MODIFY EXISTING FACP AS REQUIRED TO ACCEPT THESE SIGNALS/MONITOR THE NEW ERCSP.


NO.	DATE	REVISIONS	INT.	SCHOOL DISTRICT OF PHILADELPHIA MASTERMAN HIGH SCHOOL			TITLE: ELEVATOR REPLACEMENT		
							JOB:	DRAWN BY:	CHECKED BY:
							B-069 C	FJR	BAM
				VALLEY FORGE, PENNSYLVANIA			DATE:	REF. DWG.	DRAWING NO.
							02.24.2021	E-103	SK-2

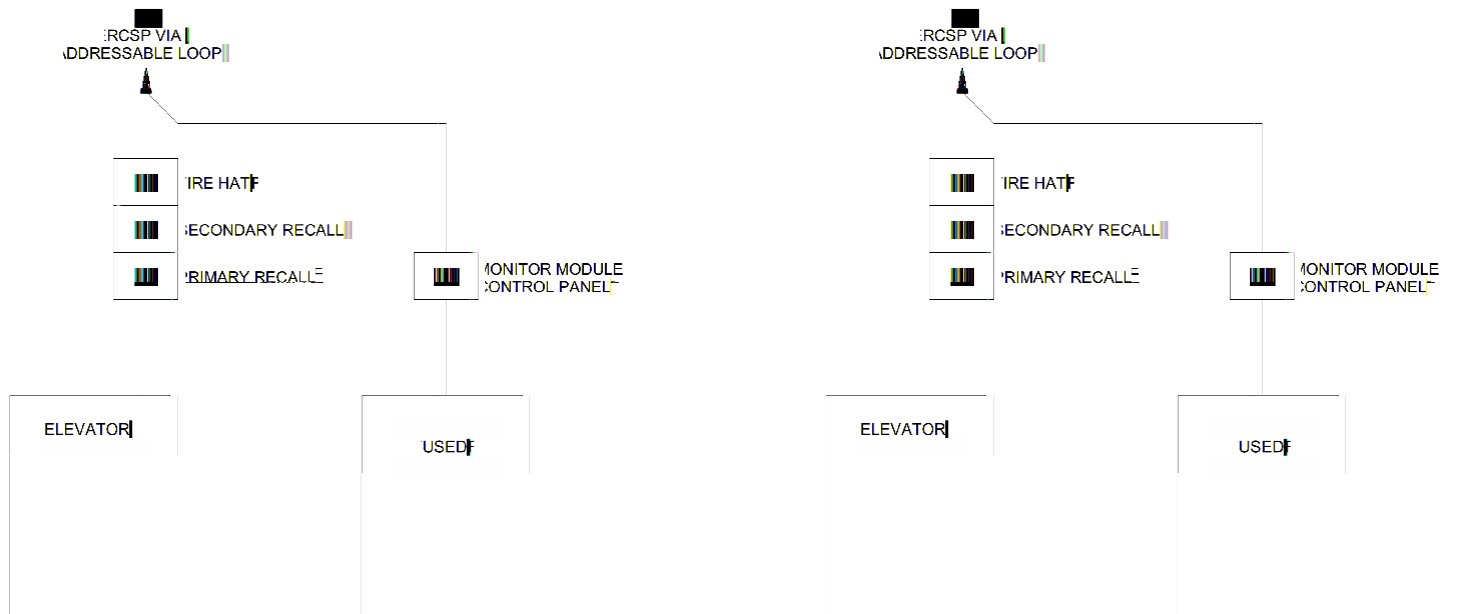


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ERCSP ACTIVATION MATRIX

SK-2.1 SCALE : NTS

NO.	DATE	REVISIONS	INT.	SCHOOL DISTRICT OF PHILADELPHIA MASTERMAN HIGH SCHOOL	TITLE: ELEVATOR REPLACEMENT		
				 Garrett	JOB:	DRAWN BY:	CHECKED BY:
					B-069 C	FJR	BAM
				VALLEY FORGE, PENNSYLVANIA	DATE:	REF. DWG.	DRAWING NO.
					02.24.2021	E-103	SK-2.1



NOTES:

- FIRE ALARM MODULES SHALL BE LOCATED WITHIN 3'-0" OF ELEVATOR CONTROLLER OR SHUNT TRIP UNIT IT SERVES.
- ALL FIRE ALARM CABLING SHALL BE AS RECOMMENDED BY FIRE ALARM MANUFACTURER. ALL CABLING SHALL BE IN 3/4" CONDUIT.

@ Ls; ALARM CONNECTIONS TO ELEVATOR - CONTROLLERS & SHUNT TRIP UNITS

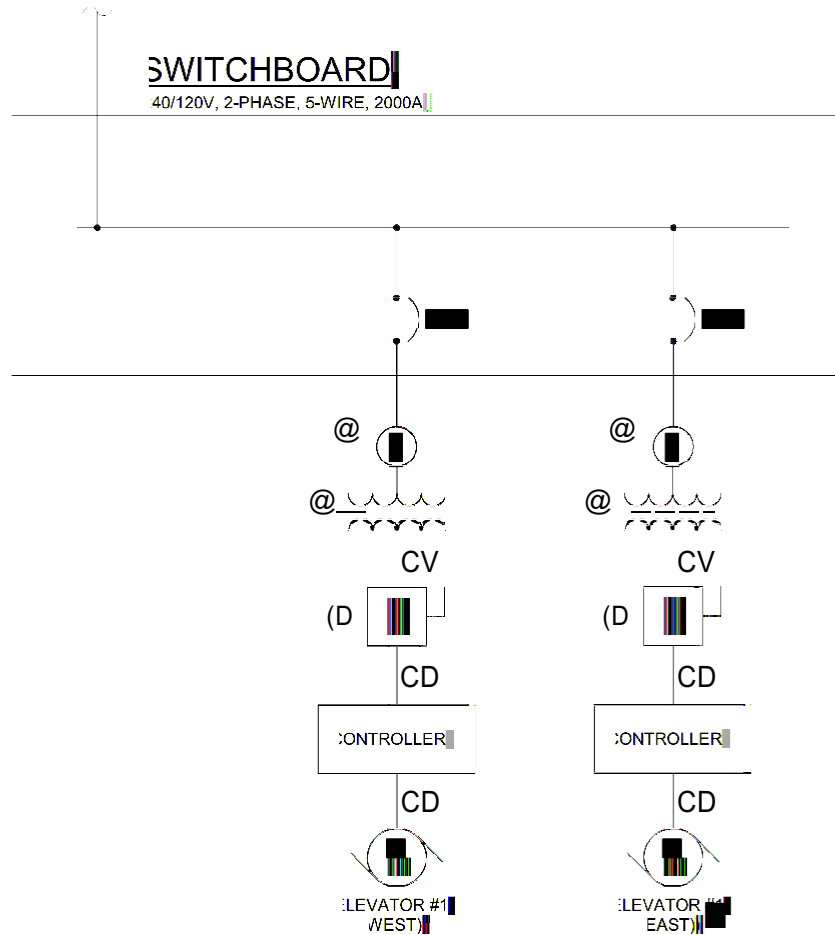
NO.	DATE	REVISIONS	INT.	SCHOOL DISTRICT OF PHILADELPHIA MASTERMAN HIGH SCHOOL				TITLE: ELEVATOR REPLACEMENT		
								JOB:	DRAWN BY:	CHECKED BY:
								B-069 C	FJR	BAM
				VALLEY FORGE, PENNSYLVANIA				DATE	REF. DWG.	DRAWING NO.
								02.24.2021	E-103	SK-2.2

FEEDER LEGEND: @


1. CONDUCTORS/CONDUIT BY ELEVATOR CONTRACTOR.
2. 3 #2, 1 #8 GRD, IN 1-1/2" C.

SHEET NOTES: @

1. 100A, 240V, 3 POLE SHUNT TRIP FUSED DISCONNECT SWITCH PER SPECIFICATION SECTION 26 28 16.17.
2. CONNECT EXISTING ELEVATOR FEEDER TO NEW "SCOTT-T" TRANSFORMER; MODIFY/EXTEND EXISTING FEEDER AS REQUIRED, NEW WIRING TYPE/SIZE TO MATCH EXISTING.
3. PROVIDE NEW "SCOTT-T" TRANSFORMER: 37.5 KVA, 240V, 2 PH, 4W PRIMARY X 240V, 3PH, 3W SECONDARY.



@.  TRICAL ONE LINE DIAGRAM - NEW WORK

NO.	DATE	REVISIONS	INT.	SCHOOL DISTRICT OF PHILADELPHIA MASTERMAN HIGH SCHOOL		TITLE: ELEVATOR REPLACEMENT		
				 Garrett		JOB:	DRAWN BY:	CHECKED BY:
						B-069 C	FJR	BAM
				VALLEY FORGE, PENNSYLVANIA		DATE:	REF. DWG.	DRAWINGNO.
						02.24.2021	E-103	SK-3