

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

TELEPHONE: (215) 400-4730

Addendum No. 01

Subject: Andrew J. Morrison Elementary School – Fire Alarm System Replacement
SDP Contract No. B-009 (C) of 2017/18

Location: 5100 North 3rd Street
Philadelphia, Pennsylvania 19120

This Addendum 01, dated January 30, 2018 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.

Drawings

Drawing ED100A – Removed Keynote #6. Removed scope of work for AHU motor replacement.

Drawing ED100B – Removed Keynote #6. Removed scope of work for AHU motor replacement.

Drawing E100A – Revised Keynote #8, removed requirement for (2) copper telephone lines to FACP.

Removed Keynote #5 and #12. Removed scope of work for AHU motor replacement.

Drawing E100B – Revised Keynote #8, removed requirement for (2) copper telephone lines to FACP.

Removed Keynote #5 and #12. Removed scope of work for AHU motor replacement.

Drawing E601 – Revised the Fire Alarm System Riser, removed requirement for (2) copper telephone lines to FACP.

Drawing E602 – Removed Motor Schedule.

Specifications

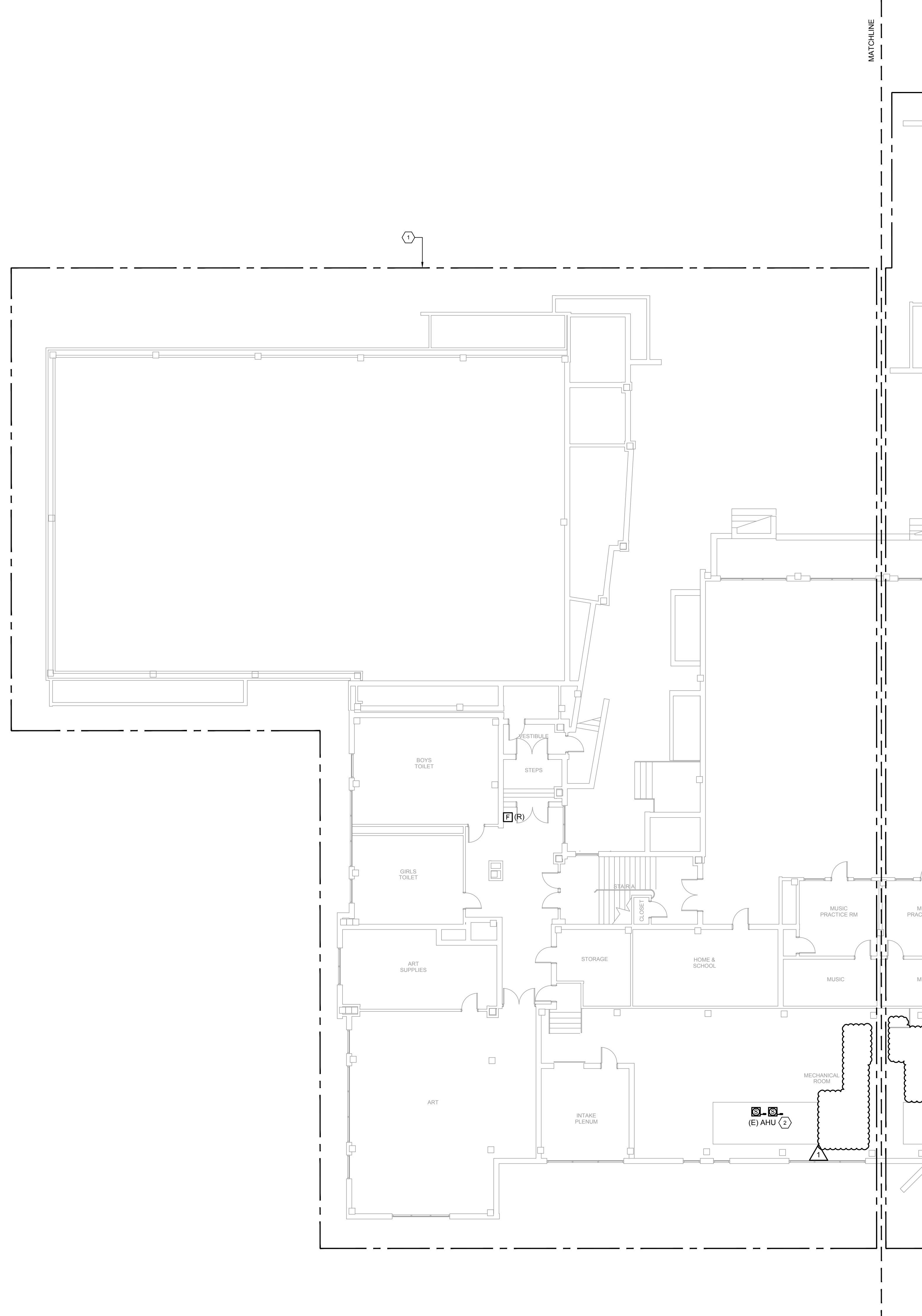
Section 230513 – Removed from project specifications.

Section 262913 – Removed from project specifications.

End of Addendum

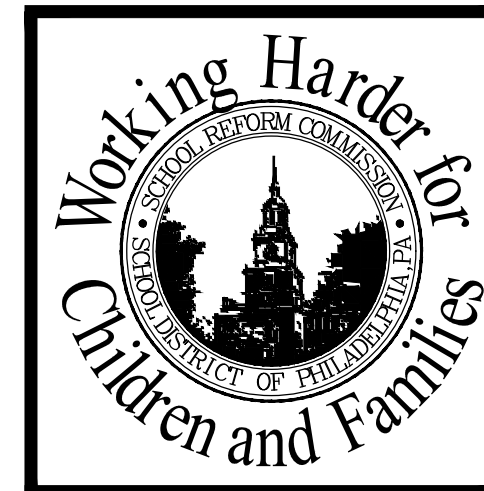
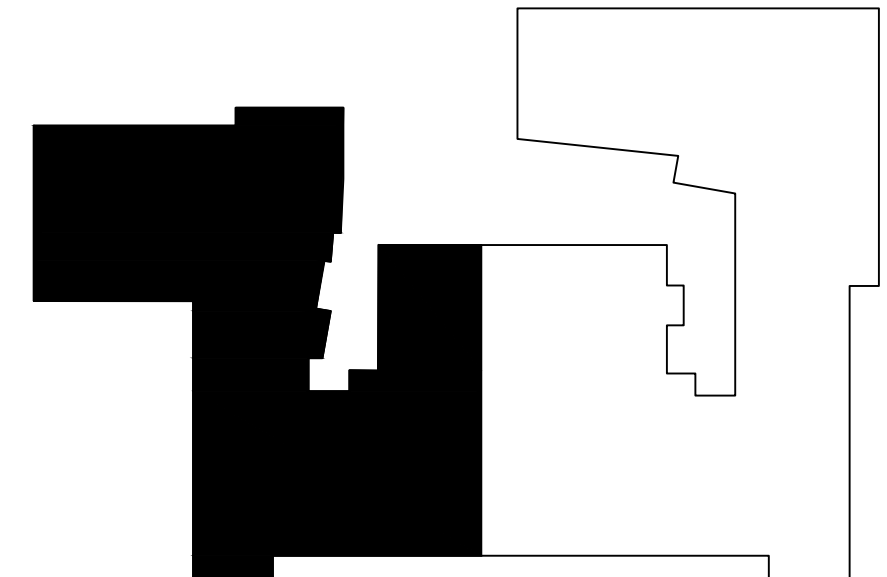
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- FIRE ALARM GENERAL NOTES**
- A. EXISTING FIRE ALARM SYSTEM SHALL BE REMOVED AND REPLACED WITH NEW. EXISTING FA SYSTEM SHALL REMAIN OPERABLE UNTIL NEW SYSTEM HAS BEEN INSTALLED, TESTED, APPROVED, AND UNDER OPERATION AS DIRECTED BY ENGINEER, FIRE MARSHALL, SDP, AND THE AUTHORITY HAVING JURISDICTION THAT THE NEW SYSTEM IS APPROVED AND THE EXISTING SYSTEM CAN BE REMOVED.
 - B. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO START OF WORK TO SURVEY THE EXISTING CONDITIONS OF THE BUILDING AND THE EXISTING FIRE ALARM SYSTEM TO BE DEMOLISHED.
 - C. FLOOR PLAN SHOWN IS FOR SCHEMATIC PURPOSES ONLY, UNLESS OTHERWISE NOTED. CONTRACTOR IS TO REMOVE ALL FIRE ALARM DEVICES, WIRING, JUNCTION BOXES, CONDUITS, AND ASSOCIATED APPURTENANCES WITH SCOPE OF DEMOLITION. CONTRACTOR SHALL REMOVE ALL FIRE ALARM CIRCUITRY BACK TO SOURCE, FOR ALL DEVICES TO BE REMOVED UNDER DEMOLITION. FIRE ALARM CIRCUITS DETERMINED TO BE ABANDONED SHALL BE REMOVED PER NEC 760.25. JUNCTION BOXES AND CONDUITS EMBEDDED IN CONCRETE OR WALL MAY REMAIN, CONDUIT MUST BE CUT AT WALL BOUNDARY AND SEALED. JUNCTION BOXES TO BE COVERED WITH METAL BLANK COVER PLATE. EXISTING RECESSED JUNCTION BOXES AND DEVICE BOXES SHALL BE COVERED WITH METAL COVER PLATES AND SHALL BE PAINTED TO MATCH ADJACENT FINISHED SURFACES.
 - D. LEGALLY DISPOSE OF DEVICES INDICATED TO BE REMOVED. OFFER EQUIPMENT TO OWNER AND DISPOSE OF EQUIPMENT THE OWNER DOES NOT WISH TO RETAIN.
 - E. ALL EXISTING 120VOLT, 20AMP CIRCUITS CURRENTLY UTILIZED FOR THE EXISTING FIRE ALARM SYSTEM TO BE REMOVED. REMOVE ALL CONDUIT AND WIRING BACK TO SOURCE PANEL BOARD.
 - F. PRIOR TO START OF THE FIRE ALARM SYSTEM SCOPE OF WORK, CONTRACTOR MUST REVIEW AND COMPLY WITH THE ASBESTOS INSPECTION REPORT (AIR) FOR ALL ASBESTOS CONTAINING AREAS AND BUILDING MATERIALS TO REMAIN AS IS. DEMOLITION OF EXISTING FIRE ALARM DEVICES & EQUIPMENT, AND CONDUITS SHALL BE COORDINATED WITH THE AIR TO AVOID ALL ASBESTOS CONTAINING WALLS, CEILINGS, AND FLOORS. THERE SHALL BE NO COST TO THE SCHOOL DISTRICT OF PHILADELPHIA FOR DEMOLITION OF DEVICES, EQUIPMENT, AND CONDUITS WHICH MUST BE COORDINATED TO AVOID ALL ASBESTOS CONTAINING WALLS, CEILINGS, AND FLOORS.

- FIRE ALARM KEY NOTES**
1. REMOVE ALL EXISTING NOTIFICATION AND INITIATION DEVICES (BELLS, SMOKE DETECTORS, HEAT DETECTORS, DUCTWORK MOUNTED SMOKE DETECTORS, MANUAL PULL STATIONS, ETC.). ALL EXISTING DEVICES MAY NOT BE IDENTIFIED ON PLANS, THE CONTRACTOR SHALL REMOVE EXISTING FIRE ALARM SYSTEM COMPLETELY INCLUDING DEVICES WHICH ARE NOT IDENTIFIED ON PLANS. REMOVE ALL CONDUIT AND FA WIRING BACK TO SOURCE FIRE ALARM CONTROL PANEL (FACP).
 2. REMOVE EXISTING DUCT MOUNTED SMOKE DETECTORS IN SUPPLY AND RETURN DUCTWORK AT HVAC UNIT. REMOVE INTERCONNECTING FIRE ALARM WIRING AND CONDUIT BACK TO SOURCE FIRE ALARM CONTROL PANEL AND SMOKE ALARM EQUIPMENT PANEL. REMOVE ALL ASSOCIATED CONTROL ALARM DEVICES, WIRING, AND CONDUIT TO MOTOR STARTER FOR HVAC UNIT SHUTDOWN.
 3. REMOVE EXISTING FIRE ALARM SYSTEM PANELS (MAIN FIRE ALARM CONTROLS, CONTROL PANEL, SMOKE DETECTOR ANNUNCIATORS, CODE TRANSMITTER) AND ALL ASSOCIATED EQUIPMENT AND DEVICES. FACP TO BE REPLACED WITH NEW ADDRESSABLE FACP. EXISTING 120VOLT, 20 AMP CIRCUIT FOR POWER AND TELEPHONE LINES TO EXISTING FACP TO BE DISCONNECTED AND REMOVED. REMOVE CONDUIT AND WIRING BACK FOR POWER AND TELEPHONE LINES TO SOURCE PANEL, AND/OR TO MAIN TELEPHONE TERMINAL EQUIPMENT. EXISTING FIRE ALARM SYSTEM SHALL REMAIN OPERATIONAL UNTIL NEW SYSTEM IS INSTALLED AND PUT INTO OPERATION.
 4. REMOVE WIRING FROM SPRINKLER SYSTEM FLOW/TAMPER SWITCHES AND FIRE PUMP MONITORING MODULES. DEVICES TO REMAIN AS IS. PREPARE FOR CONNECTION TO NEW FIRE ALARM SYSTEM.
 5. REMOVE WIRING FROM ELEVATOR MAIN AND ALTERNATE RECALL CONTROL MODULES. DEVICES TO REMAIN AS IS. PREPARE FOR CONNECTION TO NEW FIRE ALARM SYSTEM.



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ANDREW J. MORRISON ELEMENTARY SCHOOL
 500 NORTH 3RD STREET, PHILADELPHIA, PA 19120

PROJECT TITLE
FIRE ALARM SYSTEM REPLACEMENT

DRAWING TITLE
BASEMENT FIRE ALARM SYSTEM DEMOLITION PLAN - WEST SIDE

APPROVED BY

SCHOOL DISTRICT OF PHILADELPHIA
 THE SCHOOL REFORM COMMISSION

DEPARTMENT OF DESIGN AND CONSTRUCTION SERVICES
 PHILADELPHIA, PA 19107
 215-400-4230 FAX 215-400-4751
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CONTRACTOR TO VERIFY ALL CONDITIONS AND DIMENSIONS AT SITE

NO.	DATE	REVISION
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8		
7		
6		
5	01/30/18	ADDENDUM 01
4	12/21/17	BO SUBMISSION
3	12/21/17	BO SUBMISSION
2	11/22/17	BOC CD - SDP REVIEW
1	11/08/17	BOC CD - SDP REVIEW

SPEC NO.	DATE
B-009C OF 2017/18	12.21.17
SCALE	LOCATION NO.
NONE	7390
DRAWN BY	TYPE NO.
BAS	139
CHECKED BY	FILE NO.
NVP	131

DRAWING NO.
ED100A

B-009C OF 2017/18
 SHEET 2 OF 17

BASEMENT DEMOLITON PLAN - WEST SIDE
 3/32" = 1'-0" **1**

KEY PLAN
 NTS **2**

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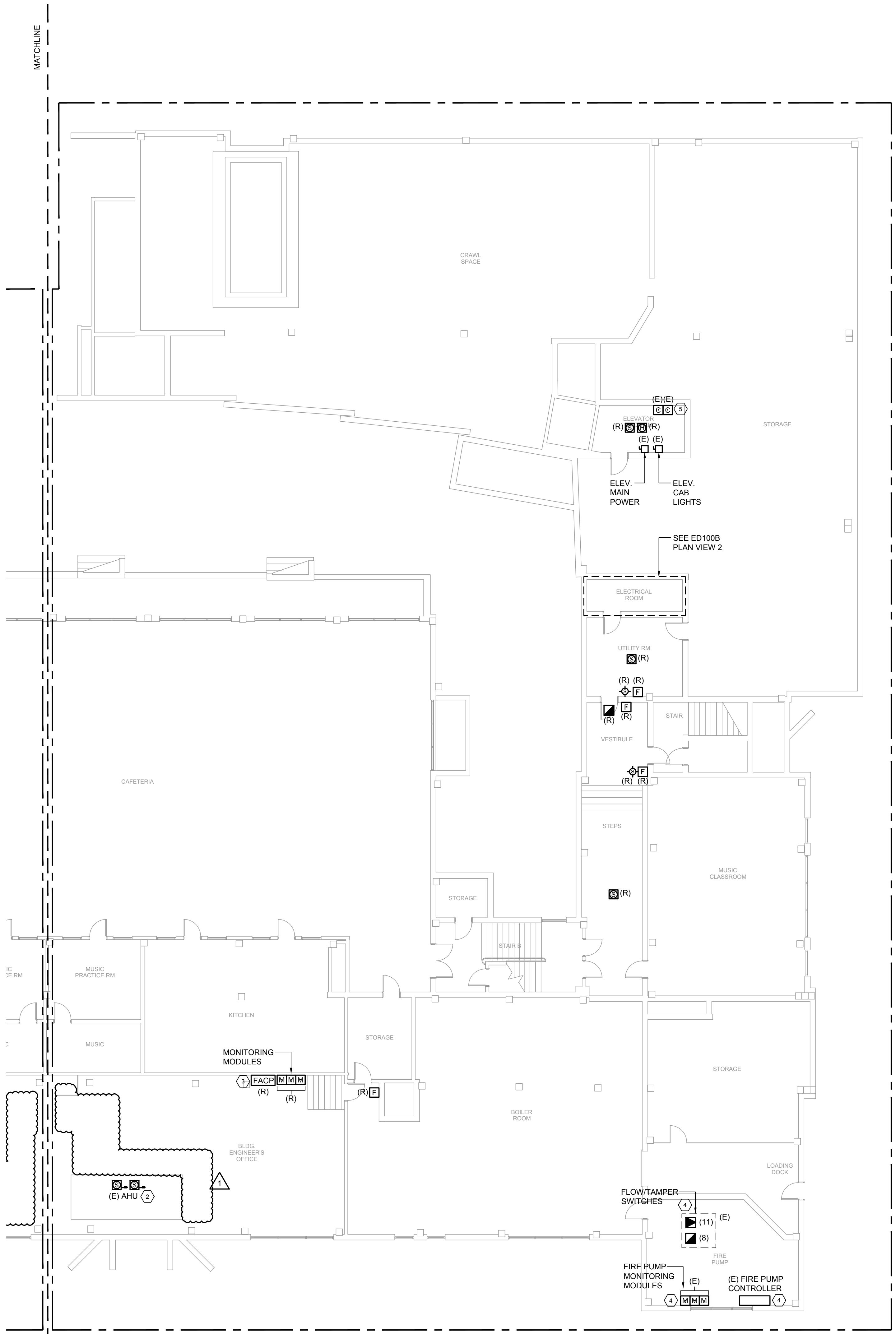
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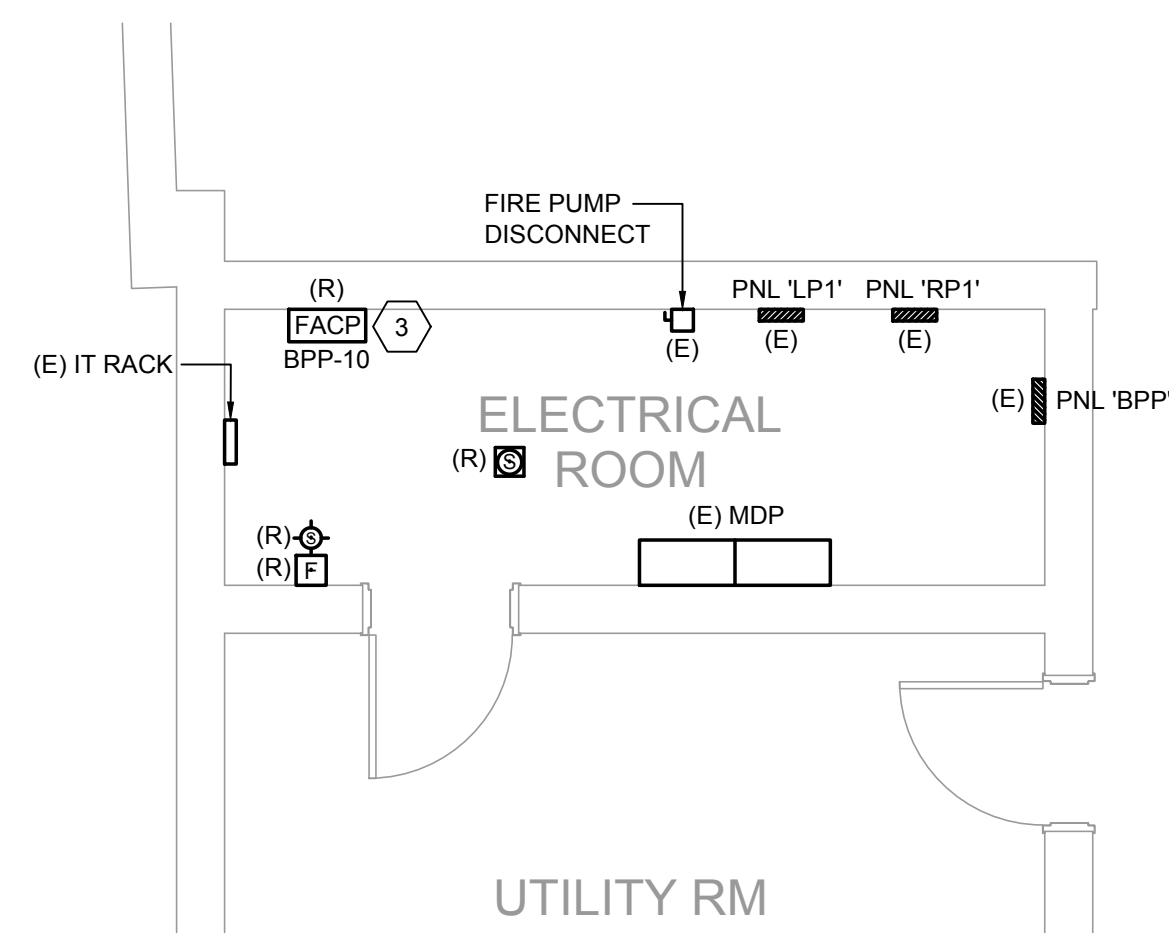
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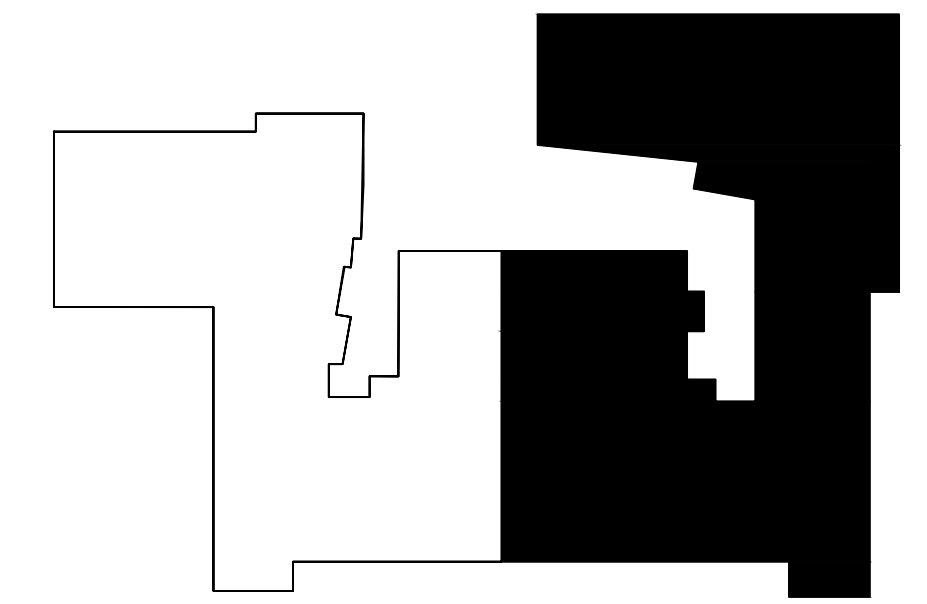
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BASEMENT DEMOLITION PLAN - EAST SIDE
3/32" = 1'-0" 1



ENLARGED ELECTRICAL ROOM
1/4" = 1'-0" 2



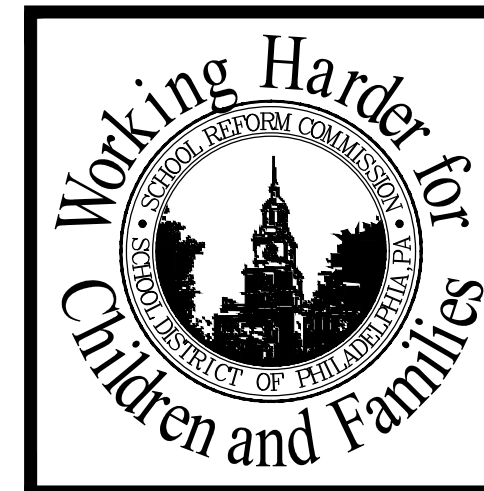
KEY PLAN
NTS 3

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PROJECT TITLE
FIRE ALARM SYSTEM REPLACEMENT

DRAWING TITLE
BASEMENT FIRE ALARM SYSTEM
- DEMOLITION PLAN - EAST SIDE

APPROVED BY

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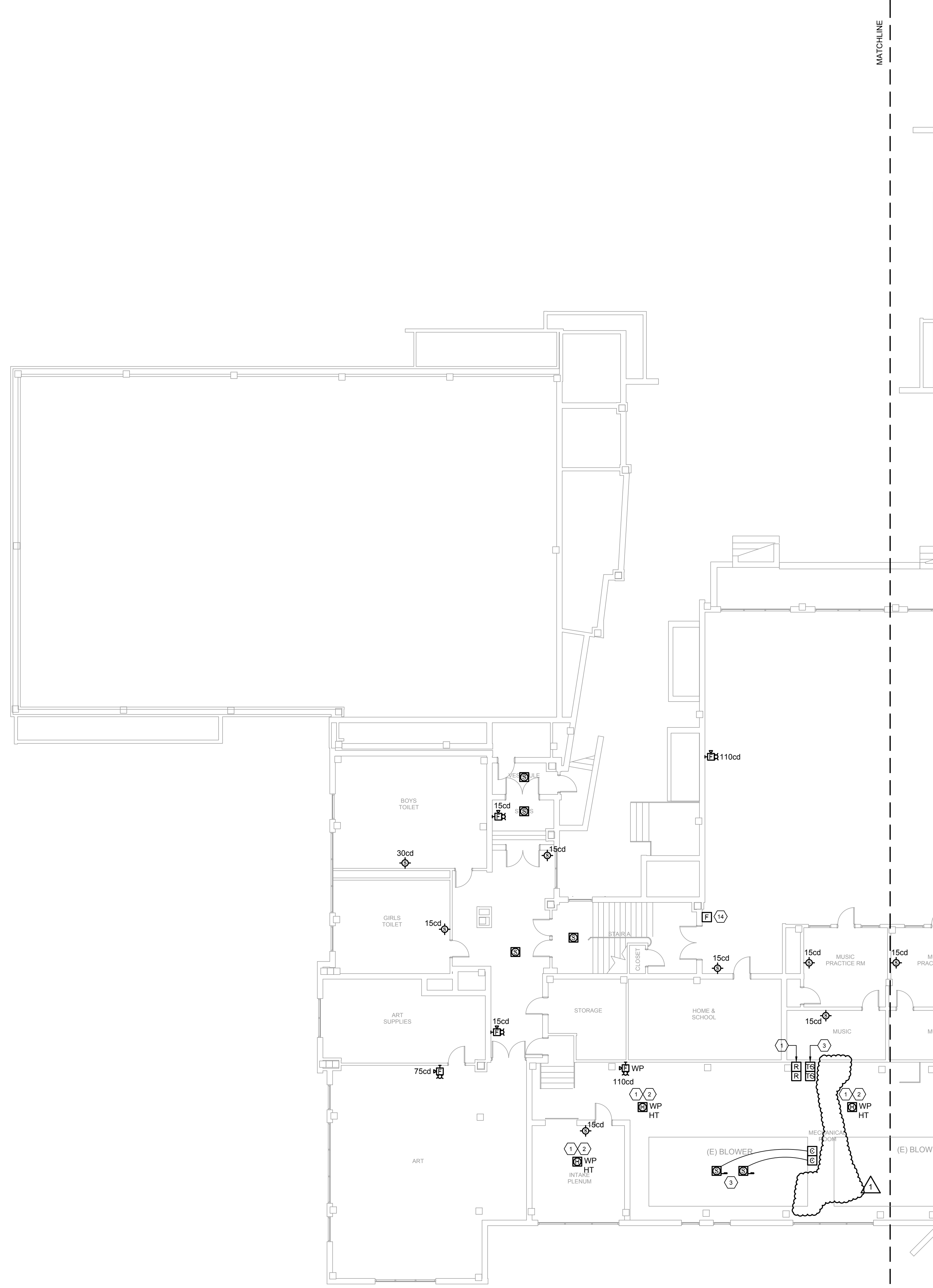
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4	01/30/18 ADDENDUM 01
3	12/21/17 100 SUBMISSION
2	11/22/17 50% CD - SDP REVIEW
1	11/08/17 30% CD - SDP REVIEW
	NO. / DATE REVISION

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SCALE	LOCATION NO.
NONE	7390
DRAWN BY	TYPE NO.
BAS	139
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NVP	132

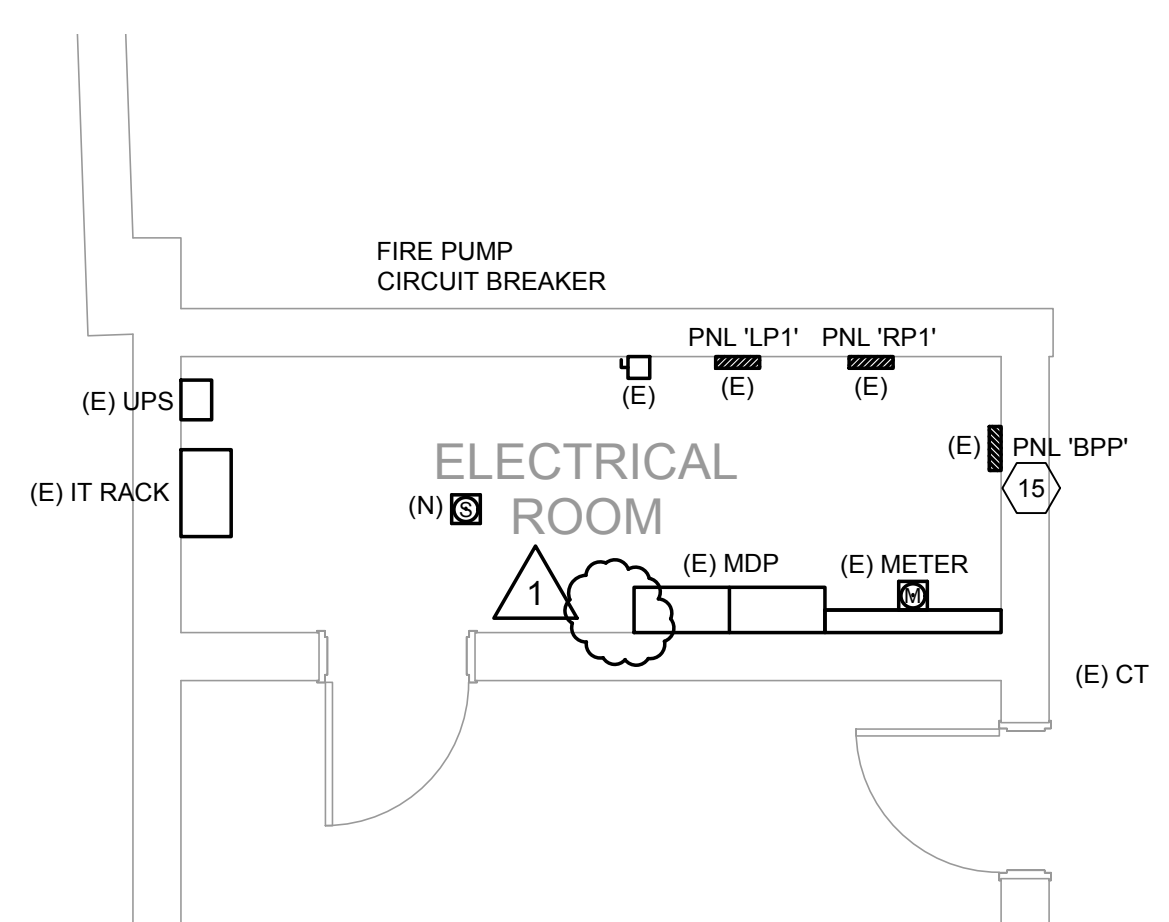
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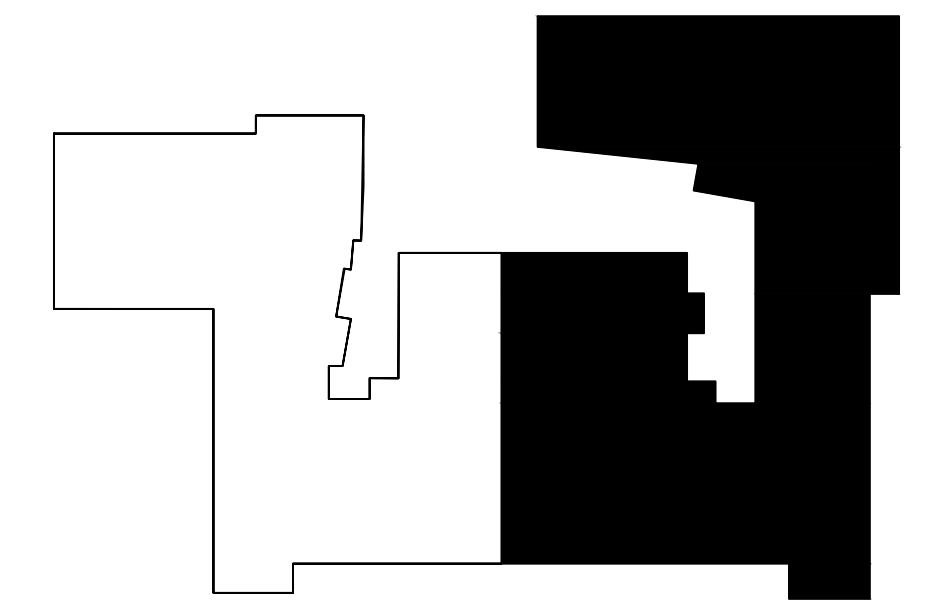


BASEMENT NEW WORK PLAN - WEST SIDE
3/32" = 1'-0" **1**



ENLARGED ELECTRICAL ROOM
1/4" = 1'-0" **2**

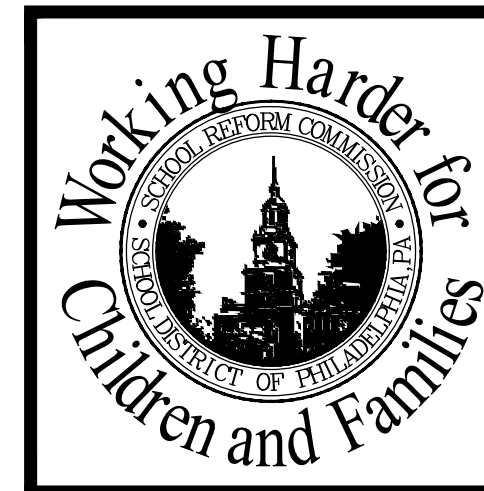
FIRE ALARM KEY NOTES	
1	PROVIDE WEATHERPROOF CONVENTIONAL TYPE FIRE ALARM DEVICES WITHIN MECHANICAL ROOM. PROVIDE A REMOTE RELAY MODULE FOR ALL CONVENTIONAL TYPE DEVICES WITHIN MECHANICAL ROOM.
2	FIELD COORDINATE EXACT LOCATIONS OF HEAT DETECTORS. DEVICES TO BE MOUNTED BELOW ALL DUCTWORK, PIPING, AND CONDUIT. DEVICES SHALL BE CLEAR OF ANY OBSTRUCTIONS. DEVICES SHALL BE MOUNTED TO UNISTRUT FRAMING, SECURELY FASTENED TO CEILING.
3	PROVIDE A DUCT MOUNTED SMOKE DETECTOR IN RETURN DUCT AND SUPPLY DUCT OF HVAC UNIT. EACH DUCT MOUNTED SMOKE DETECTOR SHALL HAVE REMOTE TEST SWITCH AND LED ALARM INDICATORS. REMOTE TEST SWITCH AND LED ALARM INDICATORS SHALL BE WALL MOUNTED AT 5FT 4" F.F. ADJACENT TO HVAC UNIT. PROVIDE AND CONNECT A CONTROL MODULE AT EACH HVAC UNIT'S EXISTING MOTOR STARTER TO SHUTDOWN HVAC UNIT; FIELD VERIFY LOCATION. DEVICES TO BE LOCATED WHERE ACCESSIBLE BY QUALIFIED PERSONNEL ONLY. PROVIDE (1) REMOTE TEST STATION FOR EACH DUCT MOUNTED SMOKE DETECTOR. SEE DRAWING E001, DETAIL #3 FOR CONTROL DIAGRAM.
4	NEW FIRE ALARM REMOTE BOOSTER POWER SUPPLY (NAC). PROVIDE 120V, 20AMP NORMAL POWER CIRCUIT FROM PANELBOARD IDENTIFIED FOR FIRE ALARM REMOTE BOOSTER POWER SUPPLIES (NAC). PROVIDE CIRCUIT (2) #12 + (1) #12 GND, IN 3/4" CONDUIT.
5	NOT USED.
6	REMOTE ANNUNCIATOR AND PULL STATION TO BE LOCATED IN BUILDING ENGINEER'S OFFICE.
7	NEW FACP. PROVIDE 120V, 20AMP POWER CIRCUIT FROM PANELBOARD IDENTIFIED FOR FACP. PROVIDE CIRCUIT WITH (2) #12 + (1) #12 GND, IN 3/4" CONDUIT.
8	PROVIDE FACP WITH DIGITAL ALARM COMMUNICATOR TRANSMITTER (DACT) FOR OFF-PREMISES MONITORING OF THE FAC'S ALARM POINTS. PROVIDE (2) CAT 6 CABLES FROM THE FACP TO THE SCHOOL'S MAIN IT RACK. COORDINATE CONNECTION TO PHONE SYSTEM WITH ISP IT DEPARTMENT.
9	PROVIDE A NEW 20V, 20AMP POWER CIRCUIT FROM PANELBOARD IDENTIFIED FOR FACP SYSTEM PRINTER RECEPTACLE. PROVIDE CIRCUIT WITH (2) #12 + (1) #12 GND, IN 3/4" CONDUIT.
10	SEE DETAIL #2 FOR ENLARGED ELECTRICAL ROOM
11	RECONNECT (1) EXISTING CONTROL RELAY FOR ELEVATOR RECALL AND (1) EXISTING CONTROL RELAY FOR ELEVATOR ALTERNATE RECALL TO NEW FIRE ALARM SYSTEM.
12	NOT USED.
13	RECONNECT EXISTING FIRE PUMP MONITORING MODULES AND SPRINKLER LOW AMPER SWITCHES CONTROL TO NEW FIRE ALARM SYSTEM.
14	PROVIDE PULL STATION WITH PROTECTIVE COVER AND ALARM.
15	EXISTING PANEL BPP 120/208V, 225A, 3-PHASE, 42-POLE (GE A SERIES PANELBOARD). PROVIDE NEW 20A, 1-POLE BREAKERS FOR NEW FIRE ALARM CIRCUITS IN POLE SPACE #37, #39, AND #41. PROVIDE A NEW TYPE WRITTEN CIRCUIT DIRECTORY.
16	EXISTING FIRE PUMP CONTROLLER TO REMAIN AS IS.
17	PROVIDE NEW SMOKE DETECTOR AND HEAT DETECTOR IN ELEVATOR MACHINE ROOM. HEAT DETECTOR TO BE LOCATED WITHIN 2FT OF SPRINKLER HEAD.



KEY PLAN
NTS **3**

FIRE ALARM GENERAL NOTES:

- A. PRIOR TO START OF THE FIRE ALARM SYSTEM SCOPE OF WORK, CONTRACTOR MUST REVIEW AND COMPLY WITH THE ASBESTOS INSPECTION REPORT (AIR) FOR ALL ASBESTOS CONTAINING AREAS AND BUILDING MATERIALS TO REMAIN AS IS. ALL FINAL DEVICE & EQUIPMENT LOCATIONS AND CONDUIT ROUTES SHALL BE COORDINATED WITH THE AIR AND EH DRAWINGS TO AVOID ALL ASBESTOS CONTAINING WALLS, CEILINGS, AND FLOORS. THERE SHALL BE NO COST TO THE SCHOOL DISTRICT OF PHILADELPHIA FOR DEVICES, EQUIPMENT AND CONDUIT WHICH MUST BE RELOCATED TO AVOID ALL ASBESTOS CONTAINING WALLS, CEILINGS, AND FLOORS.
- B. SEE DRAWING E001, FIRE ALARM SYSTEM RISER NOTES #13 FOR SPARE PARTS EQUIPMENT DEVICES REQUIREMENTS.
- C. FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, REFER TO DRAWING E001.
- D. ALL NEW FIRE ALARM DETECTION AND SUPPRESSION DEVICES SHALL BE INSTALLED, TESTED AND ACCEPTED PRIOR TO OCCUPANCY. THE LOCAL AUTHORITY HAVING JURISDICTION SHALL PERFORM ALL FINAL ACCEPTANCES.
- E. ALL FIRE ALARM POINTS MUST BE TRANSMITTED TO THE CENTRAL MONITORING STATION. EACH FIRE ALARM POINT MUST SEND THE CENTRAL MONITORING STATION A RESTORE CODE FOR EACH POINT.
- F. ALL DEVICES CONTAINING END OF LINE RESISTORS SHALL BE LABELED 'EOL'.
- G. PROVIDE SIGNAGE AT EACH MANUAL PULL STATION. SIGN MUST BE MOUNTED IMMEDIATELY ADJACENT TO THE MANUAL PULL STATION. THE SIGN SHALL READ "IN CASE OF FIRE: SOUND ALARM AND CALL THE FIRE DEPARTMENT".
- H. ALL FIRE ALARM WIRING SHALL BE IN METAL CONDUIT. PROVIDE GALVANIZED RIGID STEEL CONDUIT FOR ALL RISER CONDUITS AND ALL CONDUITS IN MECHANICAL, ELECTRICAL AND BOILER ROOMS. PAINT ALL JUNCTION BOXES WITH RED COLOR PAINT AND LABEL AS "FIRE ALARM".
- I. THE VENDOR/CONTRACTOR/MANUFACTURER TO RECOMMEND FOR APPROVAL THE QUANTITY AND LOCATION OF ALL NETWORK EXTENDER/DATA GATHERING PANELS WITHIN SHOP DRAWING SUBMITTALS. LOCATIONS SHOWN ON PLAN ARE BASED ON OWNER/ENGINEER PREFERRED LOCATIONS.
- J. ELECTRICAL CONTRACTOR SHALL USE CONDUIT SEALING FITTING WITH APPROVED SEALING COMPOUND ON ALL CONDUITS PASSING FROM INTERIORS TO EXTERIOR OF A BUILDING AND BETWEEN AREAS OF DIFFERENT TEMPERATURES. SEAL ALL CONDUIT PENETRATIONS THROUGH RATED WALLS AND FLOORS TO MAINTAIN FIRE RATING INTEGRITY.
- K. WIRING TO BE RUN IN EMT CONDUIT AND COMPLY WITH NEC ARTICLE 760. CONDUIT TO BE CONCEALED WHERE POSSIBLE. MINIMUM CONDUIT SIZE TO BE 3/4". ALL WIRING TO BE COPPER. ALL RISER CONDUIT AND CONDUIT IN MECHANICAL, ELECTRICAL, AND BOILER ROOM SHALL BE RIGID STEEL GALVANIZED CONDUIT. ALL CONDUIT AND WIRING ROUTING BETWEEN FLOORS TO BE ROUTED IN RIGID CONDUIT WITH SEAL FITTING BELOW THE CEILING BEFORE PENETRATING THE FLOOR SLAB. TYPE MC CABLE IS NOT ACCEPTABLE.
- L. HVAC UNIT/AIR HANDLING EQUIPMENT ITEMS
 - 1. PROVIDE ADDRESSABLE DUCT DETECTORS AND PERFORM HVAC UNIT SHUT DOWN LOCALLY.
 - 2. PROVIDE HVAC UNIT SHUTDOWN UPON FIRE ALARM SYSTEM ALARM CONDITIONS VIA CONTROL MODULES. WIRE OUTPUTS ON CONTROL MODULE TO HVAC UNIT STARTER CIRCUIT.
 - 3. FIRE ALARM CONTROL PANEL IS TO HAVE A FIREMAN'S "SHUT OFF" SWITCH FOR EACH HVAC UNIT IN THE BUILDING AND A SINGLE SWITCH TO TURN OFF ALL HVAC UNITS. SWITCHES TO BE CONNECTED TO FIRE ALARM CONTROL PANEL. CONTROL PANEL TO PERFORM HVAC UNIT SHUTDOWN VIA ADDRESSABLE CONTROL MODULE OUTPUT RELAYS LOCATED AT EACH HVAC UNIT.



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NEW WORK PLAN - WEST SIDE

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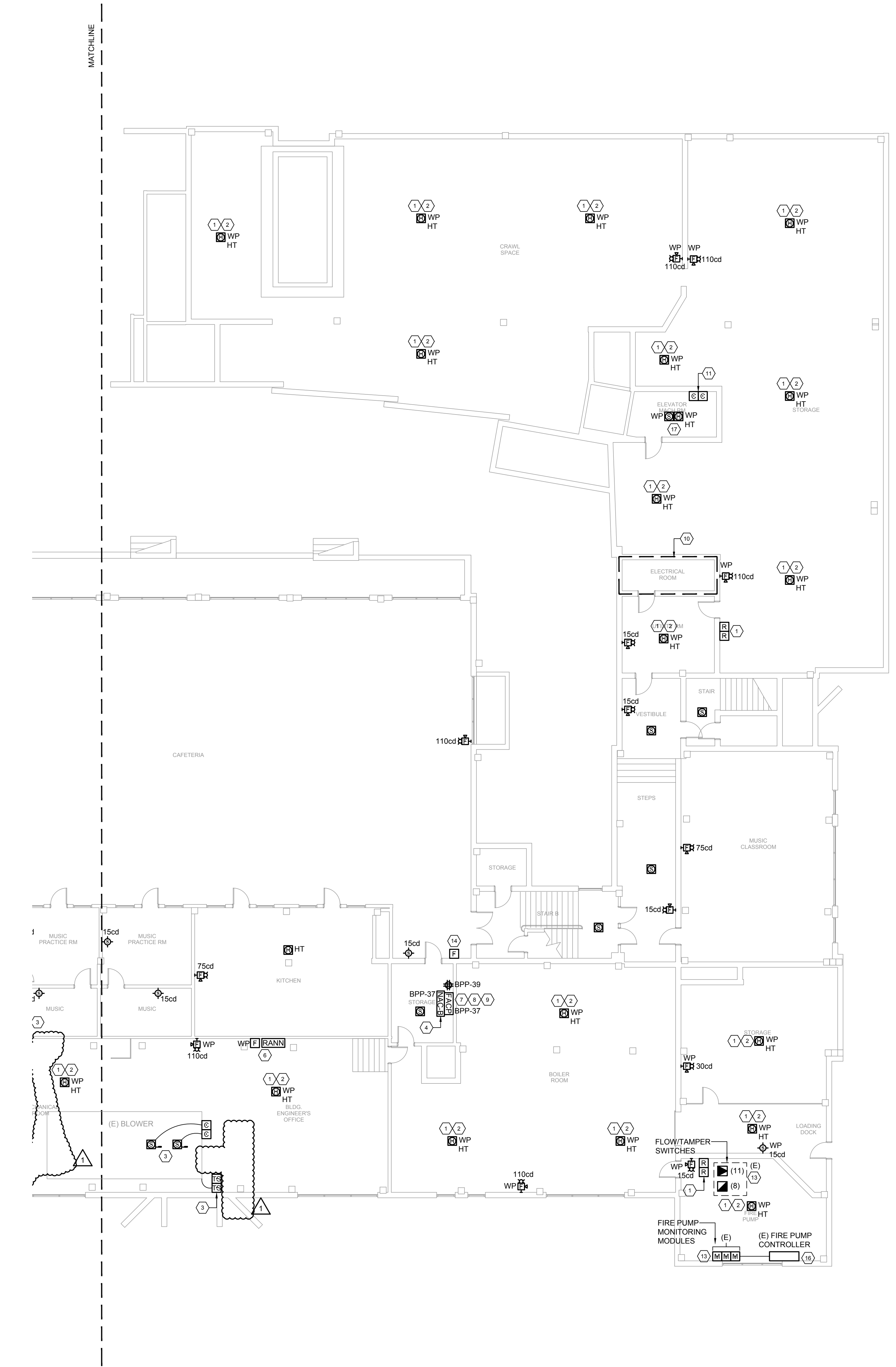
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DRAWING NO.
E100A

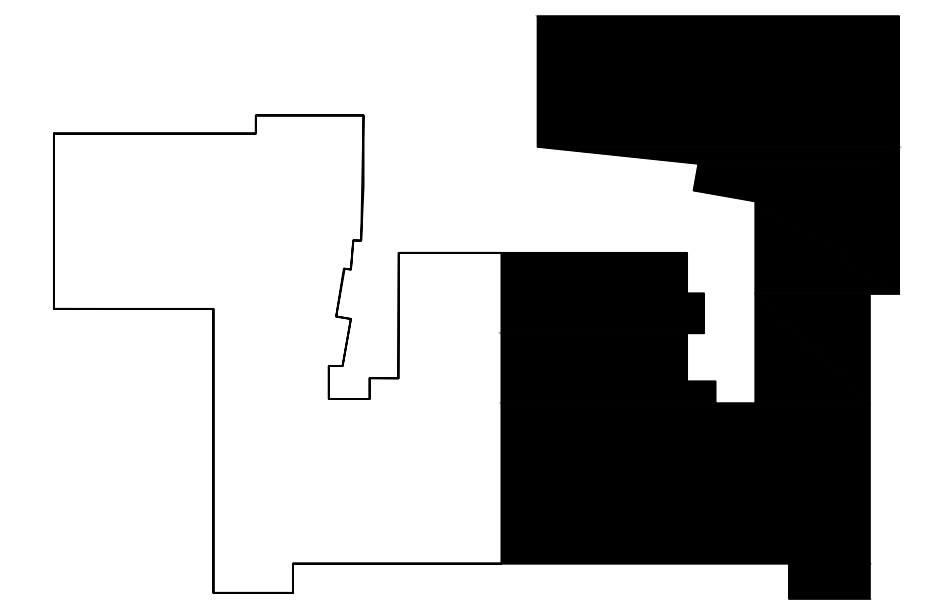
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FIRE ALARM GENERAL NOTES:

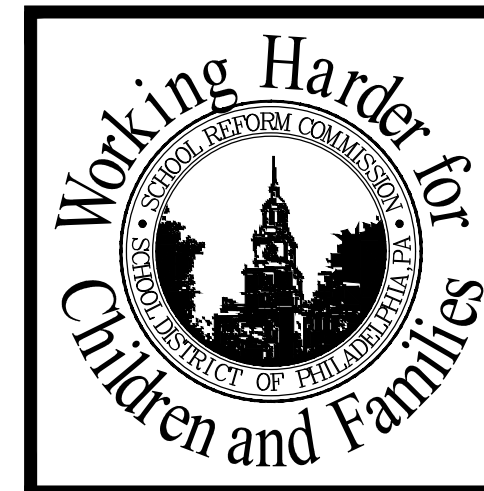
- A. PRIOR TO START OF THE FIRE ALARM SYSTEM SCOPE OF WORK, CONTRACTOR MUST REVIEW AND COMPLY WITH THE ASBESTOS INSPECTION REPORT (AIR) FOR ALL ASBESTOS CONTAINING AREAS AND BUILDING MATERIALS TO REMAIN AS IS. ALL FINAL DEVICE & EQUIPMENT LOCATIONS AND CONDUIT ROUTES SHALL BE COORDINATED WITH THE AIR AND EH DRAWINGS TO AVOID ALL ASBESTOS CONTAINING WALLS, CEILINGS, AND FLOORS. THERE SHALL BE NO COST TO THE SCHOOL DISTRICT OF PHILADELPHIA FOR DEVICES, EQUIPMENT AND CONDUIT WHICH MUST BE RELOCATED TO AVOID ALL ASBESTOS CONTAINING WALLS, CEILINGS, AND FLOORS.
- B. SEE DRAWING E601, FIRE ALARM SYSTEM RISER NOTES #13 FOR SPARE PARTS EQUIPMENT/DEVICES REQUIREMENTS.
- C. FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, REFER TO DRAWING E001.
- D. ALL NEW FIRE ALARM DETECTION AND SUPPRESSION DEVICES SHALL BE INSTALLED, TESTED AND ACCEPTED PRIOR TO OCCUPANCY. THE LOCAL AUTHORITY HAVING JURISDICTION SHALL PERFORM ALL FINAL ACCEPTANCES.
- E. ALL FIRE ALARM POINTS MUST BE TRANSMITTED TO THE CENTRAL MONITORING STATION. EACH FIRE ALARM POINT MUST SEND THE CENTRAL MONITORING STATION A RESTORE CODE FOR EACH POINT.
- F. ALL DEVICES CONTAINING END OF LINE RESISTORS SHALL BE LABELED 'EOL'.
- G. PROVIDE SIGNAGE AT EACH MANUAL PULL STATION. SIGN MUST BE MOUNTED IMMEDIATELY ADJACENT TO THE MANUAL PULL STATION. THE SIGN SHALL READ "IN CASE OF FIRE: SOUND ALARM AND CALL THE FIRE DEPARTMENT".
- H. ALL FIRE ALARM WIRING SHALL BE IN METAL CONDUIT. PROVIDE GALVANIZED RIGID STEEL CONDUIT FOR ALL RISER CONDUITS AND ALL CONDUITS IN MECHANICAL, ELECTRICAL AND BOILER ROOMS. PAINT ALL JUNCTION BOXES WITH RED COLOR PAINT AND LABEL AS "FIRE ALARM".
- I. THE VENDOR/CONTRACTOR/MANUFACTURER TO RECOMMEND FOR APPROVAL THE QUANTITY AND LOCATION OF ALL NETWORK EXTENDER/DATA GATHERING PANELS WITHIN SHOP DRAWING SUBMITTALS. LOCATIONS SHOWN ON PLAN ARE BASED ON OWNER/ENGINEER PREFERRED LOCATIONS.
- J. ELECTRICAL CONTRACTOR SHALL USE CONDUIT SEALING FITTING WITH APPROVED SEALING COMPOUND ON ALL CONDUITS PASSING FROM INTERIORS TO EXTERIORS OF A BUILDING AND BETWEEN AREAS OF DIFFERENT TEMPERATURES. SEAL ALL CONDUIT PENETRATIONS THROUGH RATED WALLS AND FLOORS TO MAINTAIN FIRE RATING INTEGRITY.
- K. WIRING TO BE RUN IN EMT CONDUIT AND COMPLY WITH NEC ARTICLE 760. CONDUIT TO BE CONCEALED WHERE POSSIBLE. MINIMUM CONDUIT SIZE TO BE 3/4". ALL WIRING TO BE COPPER. ALL RISER CONDUIT AND CONDUIT IN MECHANICAL, ELECTRICAL, AND BOILER ROOM SHALL BE RIGID STEEL GALVANIZED CONDUIT. ALL CONDUIT AND WIRING ROUTING BETWEEN FLOORS TO BE ROUTED IN RIGID CONDUIT WITH SEAL FITTING BELOW THE CEILING BEFORE PENETRATING THE FLOOR SLAB. TYPE "MC" CABLE IS NOT ACCEPTABLE.
- L. HVAC UNIT/AIR HANDLING EQUIPMENT ITEMS
 - 1. PROVIDE ADDRESSABLE DUCT DETECTORS AND PERFORM HVAC UNIT SHUT DOWN LOCALLY.
 - 2. PROVIDE HVAC UNIT SHUTDOWN UPON FIRE ALARM SYSTEM ALARM CONDITIONS VIA CONTROL MODULES. WIRE OUTPUTS ON CONTROL MODULE TO HVAC UNIT STARTER CIRCUIT.
 - 3. FIRE ALARM CONTROL PANEL IS TO HAVE A FIREMANS "SHUTOFF" SWITCH FOR EACH HVAC UNIT IN THE BUILDING AND A SINGLE SWITCH TO TURN OFF ALL HVAC UNITS. SWITCHES TO BE CONNECTED TO FIRE ALARM CONTROL PANEL. CONTROL PANEL TO PERFORM HVAC UNIT SHUTDOWN VIA ADDRESSABLE CONTROL MODULE OUTPUT RELAYS LOCATED AT EACH HVAC UNIT.

FIRE ALARM KEY NOTES	
1	PROVIDE WEATHERPROOF CONVENTIONAL TYPE FIRE ALARM DEVICES WITHIN MECHANICAL ROOM. PROVIDE A REMOTE RELAY MODULE FOR ALL CONVENTIONAL TYPE DEVICES WITHIN MECHANICAL ROOM.
2	FIELD COORDINATE EXACT LOCATIONS OF HEAT DETECTORS. DEVICES TO BE MOUNTED BELOW ALL DUCTWORK, PIPING, AND CONDUIT. DEVICES SHALL BE CLEAR OF ANY OBSTRUCTIONS. DEVICES SHALL BE MOUNTED TO UNISTRUT FRAMING, SECURELY FASTENED TO CEILING.
3	PROVIDE A DUCT MOUNTED SMOKE DETECTOR IN RETURN DUCT AND SUPPLY DUCT OF HVAC UNIT. EACH DUCT MOUNTED SMOKE DETECTOR SHALL HAVE REMOTE TEST SWITCH AND LED ALARM INDICATORS. REMOTE TEST SWITCH AND LED ALARM INDICATORS SHALL BE WALL MOUNTED AT 5FT 4" F.F. ADJACENT TO HVAC UNIT. PROVIDE AND CONNECT A CONTROL MODULE AT EACH HVAC UNITS EXISTING MOTOR STARTER TO SHUTDOWN HVAC UNIT; FIELD VERIFY LOCATION. DEVICES TO BE LOCATED WHERE ACCESSIBLE BY QUALIFIED PERSONNEL ONLY. PROVIDE (1) REMOTE TEST STATION FOR EACH DUCT MOUNTED SMOKE DETECTOR. SEE DRAWING E601, DETAIL #3 FOR CONTROL DIAGRAM.
4	NEW FIRE ALARM REMOTE BOOSTER POWER SUPPLY (INAC). PROVIDE 120V, 20AMP NORMAL POWER CIRCUIT FROM PANELBOARD IDENTIFIED FOR FIRE ALARM REMOTE BOOSTER POWER SUPPLIES (INAC). PROVIDE CIRCUIT (2) #12 + (1) #12 GND. IN 3/4" CONDUIT.
5	NOT USED.
6	REMOTE ANNUNCIATOR AND PULL STATION TO BE LOCATED IN BUILDING ENGINEER'S OFFICE.
7	NEW FACP. PROVIDE 120V, 20AMP POWER CIRCUIT FROM PANELBOARD IDENTIFIED FOR FACP. PROVIDE CIRCUIT WITH (2) #12 + (1) #12 GND. IN 3/4" CONDUIT.
8	PROVIDE FACP WITH DIGITAL ALARM COMMUNICATOR TRANSMITTER (DACT) FOR OFF-PREMISES MONITORING OF THE FACP ALARM POINTS. PROVIDE (2) CAT 6 CABLES FROM THE FACP TO THE SCHOOL'S MAIN IT RACK. COORDINATE CONNECTION TO PHONE SYSTEM WITH ISP IT DEPARTMENT.
9	PROVIDE A NEW 20V, 20AMP POWER CIRCUIT FROM PANELBOARD IDENTIFIED FOR FACP SYSTEM PRINTER RECEPTACLE. PROVIDE CIRCUIT WITH (2) #12 + (1) #12 GND. IN 3/4" CONDUIT.
10	SEE DETAIL #2 FOR ENLARGED ELECTRICAL ROOM
11	RECONNECT (1) EXISTING CONTROL RELAY FOR ELEVATOR RECALL AND (1) EXISTING CONTROL RELAY FOR ELEVATOR ALTERNATE RECALL TO NEW FIRE ALARM SYSTEM.
12	NOT USED.
13	RECONNECT EXISTING FIRE PUMP MONITORING MODULES AND SPRINKLER FLOW/TAMPER SWITCHES CONTROL TO NEW FIRE ALARM SYSTEM.
14	PROVIDE PULL STATION WITH PROTECTIVE COVER AND ALARM.
15	EXISTING PANEL BPP 12020BV, 225A, 3-PHASE, 42-POLE (GE A SERIES PANELBOARD). PROVIDE NEW 20A, 1-POLE BREAKERS FOR NEW FIRE ALARM CIRCUITS IN POLE SPACE #37, #39, AND #41. PROVIDE A NEW TYPE WRITTEN CIRCUIT DIRECTORY.
16	EXISTING FIRE PUMP CONTROLLER TO REMAIN AS IS.
17	PROVIDE NEW SMOKE DETECTOR AND HEAT DETECTOR IN ELEVATOR MACHINE ROOM. HEAT DETECTOR TO BE LOCATED WITHIN 2FT OF SPRINKLER HEAD.



BASEMENT NEW WORK PLAN - EAST SIDE 1
3/32" = 1'-0"

KEY PLAN 2
NTS



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PROJECT TITLE
FIRE ALARM SYSTEM REPLACEMENT

DRAWING TITLE
BASEMENT FIRE ALARM SYSTEM
- NEW WORK PLAN - EAST SIDE

APPROVED BY

SCHOOL DISTRICT OF PHILADELPHIA
THE SCHOOL REFORM COMMISSION

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CONTRACTOR TO VERIFY ALL CONDITIONS AND DIMENSIONS AT SITE

NO.	DATE	REVISION
1	11/08/17	ISSUED FOR REVIEW
2	11/22/17	ISSUED FOR REVIEW
3	12/21/17	ISSUED FOR REVIEW
4	01/30/18	ADDITION OF

SPEC. NO.	DATE
B-009C OF 2017/18	12.21.17

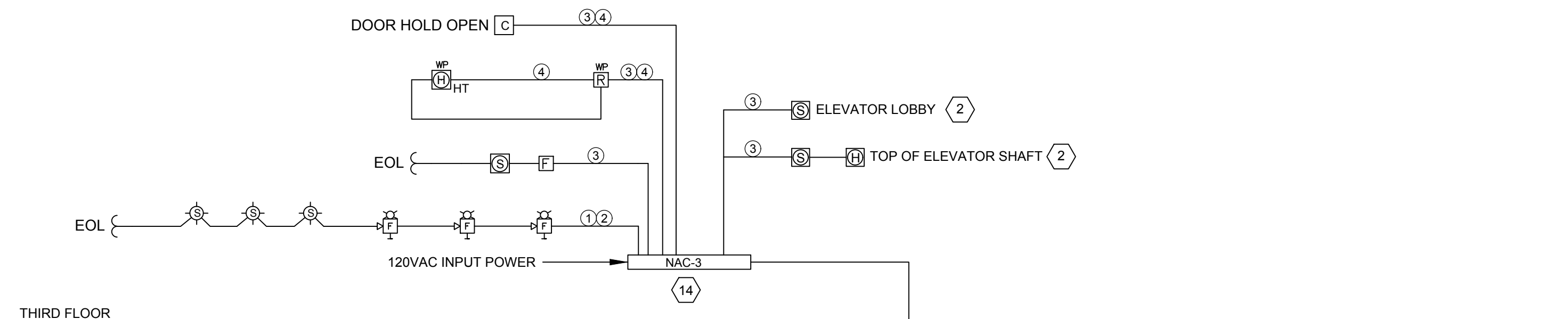
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NONE	7390

DRAWN BY	TYPE NO.
BAS	139

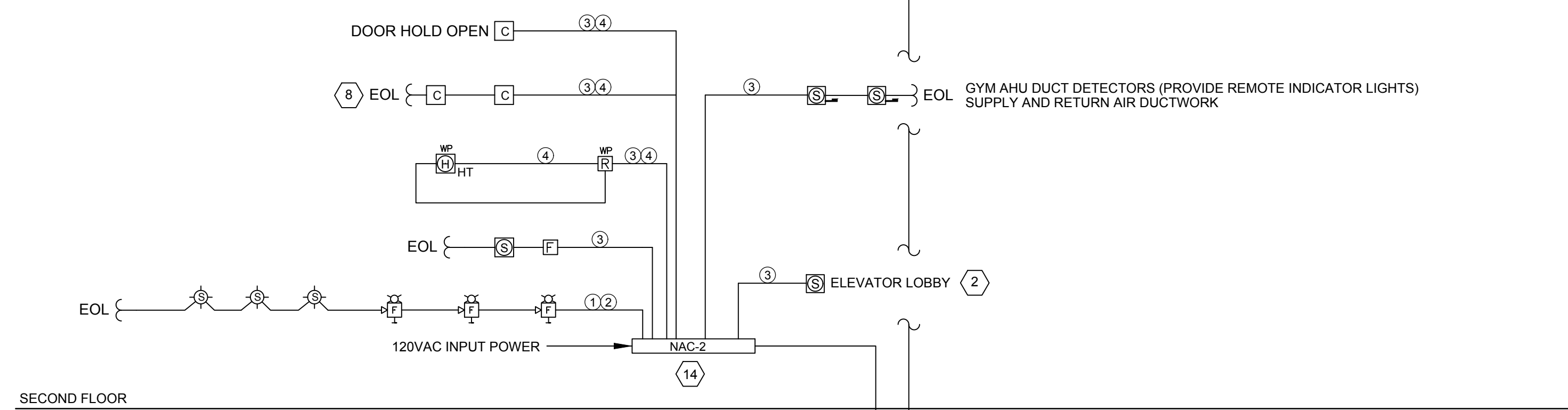
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NVP	139

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E100B

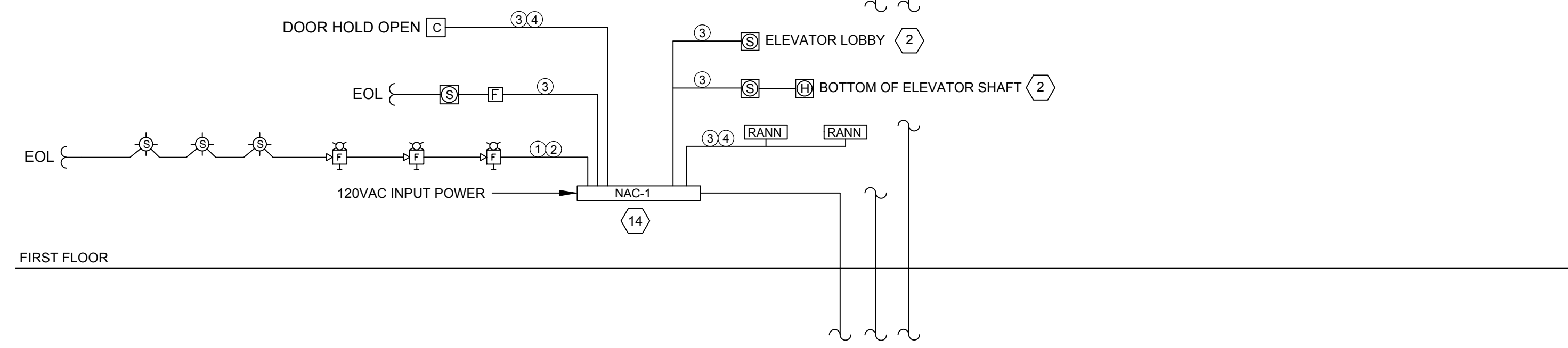
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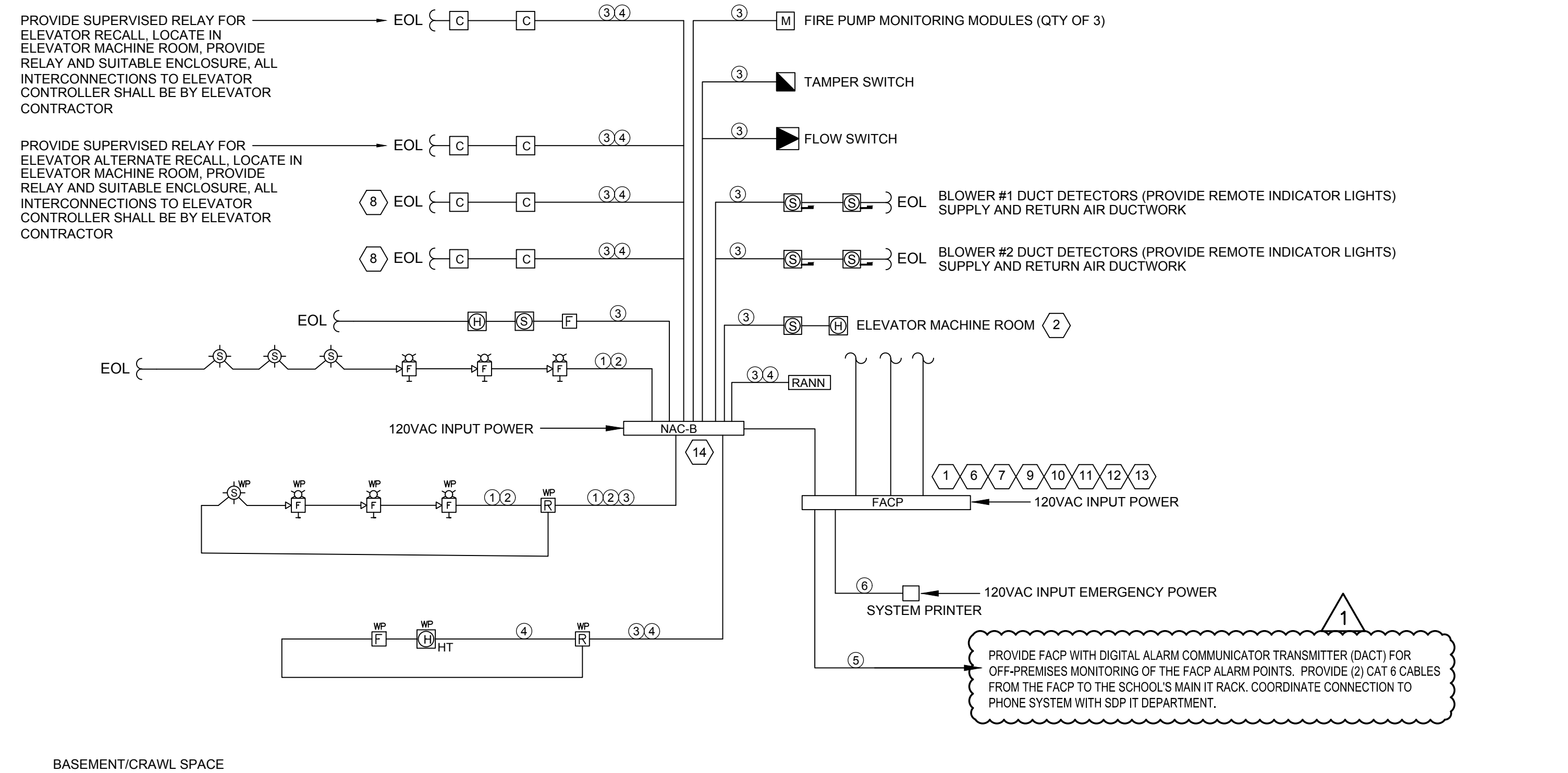
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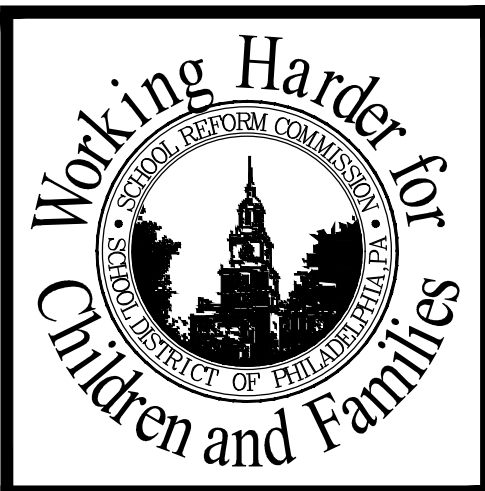
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FIRE ALARM SYSTEM RISER NOTES:

- ① THE SCHEMATIC FIRE ALARM RISER IS INTENDED TO INDICATE THE MAJOR FIRE ALARM COMPONENTS AND GENERAL SEPARATION OF INDICATING, INITIATING, COMMUNICATIONS, AND ANNUNCIATION CIRCUITS AS REQUIRED BY THE PROJECT. WIRING IS TO BE PROVIDED AS REQUIRED BY THE FIRE ALARM EQUIPMENT MANUFACTURER. THE RISER DIAGRAM IS A GENERAL INDICATION OF EQUIPMENT TO BE PROVIDED AND DOES NOT NECESSARILY INDICATE ALL ITEMS OR APPURTENANCES WHICH MAY BE REQUIRED TO PROVIDE A FULLY OPERATIONAL SYSTEM. ALL SUCH ITEMS ARE TO BE PROVIDED AS INDICATED IN THE SPECIFICATIONS AND AS REQUIRED FOR OPERATION OF THE SYSTEM.
- ② ACTIVATION OF SMOKE DETECTOR AT TOP OF ELEVATOR SHAFT, IN LOBBIES OR IN ELEVATOR MACHINE ROOM SHALL INITIATE RECALL SEQUENCE. ACTIVATION OF HEAT DETECTOR IN ELEVATOR SHAFT OR ELEVATOR MACHINE ROOM SHALL INITIATE SHUNT TRIP OF ELEVATOR MAIN POWER AND GAS LIGHTS.
- ③ ACTIVATION OF ANY COMMON AREA SMOKE DETECTOR, OR PULL STATION SHALL INITIATE A GENERAL ALARM FOR THE ENTIRE BUILDING.
- ④ PROVIDE FULLY ADDRESSABLE SYSTEM CAPABLE OF ADDRESSING EACH DEVICE.
- ⑤ ALL CONCEALED INITIATING DEVICES SHOULD HAVE A REMOTE INDICATING LIGHT LOCATED IN AN ACCESSIBLE LOCATION.
- ⑥ FACP SHALL BE SUPPLIED WITH BATTERY BACKUP TO COMPLY WITH NFPA 72. ALSO PROVIDE THE APPROPRIATE DIALER TO NOTIFY A CENTRAL MONITORING LOCATION OR CENTRAL STATION.
- ⑦ THE INSTALLING ELECTRICAL CONTRACTOR SHOULD BE ADVISED TO PREPARE THE FOLLOWING DOCUMENTATION AT THE PROJECT CLOSE-OUT:
 - 1. SET OF 'AS-BUILT' DRAWINGS AS APPROVED BY THE FIRE MARSHALL.
 - 2. RECORD OF COMPLETION (A DOCUMENT THAT ACKNOWLEDGES THE FEATURES OF INSTALLATION, OPERATION (PERFORMANCE), SERVICE AND EQUIPMENT).
 - 3. MANUAL CONTAINING A 'SEQUENCE OF ALARM' AND A MANUFACTURERS SHEET FOR EACH DEVICE INSTALLED IN THE FIRE ALARM SYSTEM INCLUDING THE MAIN CONSOLE.
- ⑧ PROVIDE SUPERVISED RELAYS LOCATED ADJACENT TO HVAC UNIT MOTOR STARTER TO SHUT DOWN HVAC UNITS UPON ACTIVATION OF FIRE ALARM SYSTEM. RELAY AND SUITABLE ENCLOSURE (WEATHERPROOF IF LOCATED ON ROOF) SHALL BE FURNISHED AND INSTALLED BY E.C.. ALL INTERCONNECTIONS BETWEEN RELAY AND HVAC EQUIPMENT SHALL BE BY E.C.. VERIFY AND COORDINATE HVAC UNITS CONTROL VOLTAGES.
- ⑨ FIRE ALARM SYSTEM RISER SHOWN ON THIS DRAWING IS SCHEMATIC PURPOSES ONLY AND IT MAY NOT INDICATE ALL PERIPHERAL DEVICES; REFER TO THE FLOOR PLANS FOR DEVICE/EQUIPMENT LOCATIONS AND QUANTITIES OF ALL PERIPHERAL DEVICES. PLANS AND FIRE ALARM SYSTEM RISER MAY NOT INDICATE ALL REQUIRED NETWORK EXTENDER/DATA GATHERING PANELS REQUIRED FOR A COMPLETE AND FUNCTIONAL OPERATING SYSTEM. THE CONTRACTOR/VENDOR/MANUFACTURER IS REQUIRED PROVIDE AND INSTALL ALL WIRING AND NETWORK EXTENDER/DATA GATHERING PANELS NEEDED FOR A COMPLETE AND FUNCTIONAL SYSTEM, INCLUDING ALL REQUIRED HARDWARE AND SOFTWARE. PROVIDE BATTERY CALCULATIONS FOR ALL FACP AND DATA GATHERING PANELS, PROVIDE VOLTAGE DROP CALCULATIONS.
- ⑩ ALL NEW WORK TO BE DONE IN ACCORDANCE WITH:
 - 1. THE 2011 NATIONAL ELECTRIC CODE
 - 2. NFPA 72 NATIONAL FIRE ALARM CODE, LATEST EDITION
 - 3. REQUIREMENTS OF AUTHORITY HAVING JURISDICTION (AJU)
 - 4. 2012 IBC CODE
 - 5. CITY OF PHILADELPHIA 2009 FIRE ALARM CODE
 - 6. ALL FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.
- ⑪ CONTRACTOR IS RESPONSIBLE SCHEDULE/ARRANGE, AND PAY FOR ALL PERMITS AND INSPECTIONS.
- ⑫ THE NEW FIRE ALARM SYSTEM IS TO BE ACCEPTABLE BY FIRE MARSHALL BEFORE THE REMOVAL OF THE EXISTING FIRE ALARM SYSTEM.
- ⑬ CONTRACTOR SHALL PROVIDE THE FOLLOWING SPARE EQUIPMENT/DEVICES TO FURNISH AND INSTALLATION DEVICES/EQUIPMENT AT ADDITIONAL LOCATIONS IF REQUESTED BY OWNER AND/OR ENGINEER. CONTRACTOR SHALL INCLUDE THE COST OF INSTALLATION AND WIRING FOR ALL SPARE DEVICES/EQUIPMENT IN THE BASE BID.
 - 1. (5) SMOKE DETECTORS
 - 2. (5) HEAT DETECTORS, ADDRESSABLE COMBINATION TYPE
 - 3. (2) HEAT DETECTORS, CONVENTIONAL COMBINATION TYPE (FOR HIGH CEILING AREAS)
 - 4. (1) HEAT DETECTORS, CONVENTIONAL TYPE FIXED HIGH TEMPERATURE SENSOR TYPE 190F DEG. RATED
 - 5. (2) MANUAL PULL STATIONS WITH PROTECTIVE COVER AND ALARM
 - 6. (5) COMBINATION HORNS/STROBE NOTIFICATION DEVICE
 - 7. (5) VISUAL STROBE NOTIFICATION DEVICE
 - 8. (3) WEATHER PROOF HEAT DETECTORS (CONVENTIONAL TYPE, FIXED TEMP)
- ⑭ THE QUANTITY OF FIRE ALARM NAC EXTENDER POWER SUPPLY PANELS SHOWN ON THESE DRAWINGS AND THE RISER DIAGRAM ARE FOR SCHEMATIC PURPOSES ONLY. THE CONTRACTOR AND FIRE ALARM VENDOR SHALL DETERMINE THE EXACT QUANTITY OF NAC PANELS REQUIRED BASED ON THE MANUFACTURER'S NAC PANEL FUNCTION AND SPECIFICATIONS. THE CONTRACTOR SHALL PROVIDE THE QUANTITY OF NAC PANELS REQUIRED TO SUPPORT THE ENTIRE FIRE ALARM SYSTEM BASED ON THE QUANTITY OF DEVICES SHOWN ON PLAN. TOTAL POWER NEEDED TO SUPPORT THE DEVICES, VOLTAGE DROP CALCULATIONS FOR EACH CIRCUIT, BATTERY CALCULATIONS, SIZE OF BUILDING, ETC. THE CONTRACTOR SHALL PROVIDE 120V, 20A CIRCUITS FOR ALL NAC PANELS THAT ARE INSTALLED BASED ON THE FIRE ALARM VENDOR'S CALCULATIONS AT NO ADDITIONAL COST TO SDP.

FIRE ALARM RISER WIRING LEGEND:

- ① 1 PAIR #16 AWG UNSHIELDED STROBE POWER 24V DC
- ② 1 PAIR #16 AWG UNSHIELDED HORN POWER 24V DC
- ③ 1 PAIR #16 AWG SHIELDED ADDRESSABLE DATA LOOP
- ④ 1 PAIR #16 AWG UNSHIELDED 24V POWER
- ⑤ (2) CAT 6 DATA CABLES WITH RJ-45 TERMINATION
- ⑥ (1) RS-232 PRINTER DATA COMMUNICATIONS CABLE



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PROJECT TITLE
FIRE ALARM SYSTEM REPLACEMENT

DRAWING TITLE
SCHEDULES AND DIAGRAMS

APPROVED BY

SCHOOL DISTRICT OF PHILADELPHIA
THE SCHOOL REFORM COMMISSION

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CONTRACTOR TO VERIFY ALL CONDITIONS AND DIMENSIONS AT SITE

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3	12/21/17
2	11/22/17
1	11/08/17

SPEC NO.	B-009C OF 2017/18	DATE	12.21.17
SCALE	NONE	LOCATION NO.	7390
DRAWN BY	BAS	TYPE NO.	139
CHECKED BY	NVP	FILE NO.	145

DRAWING NO.
E601

PANEL: (E) BPP		Voltage: 208Y/120V 3 Phase 4W		BUS: 225A, AMPS 14000 AIC					
LOCATION: ADDITION ELEC. ROOM		MOUNTING SURFACE: FLUSH		LUGS ONLY					
FED FROM: (E) MDP		DENOTES ARC FAULT INTERRUPTER C.B.		MCB AMPS					
		DENOTES GFI C.B. RECD		COPPER BUS ONLY					
CIR #	EQUIPMENT SERVED	FEEDER SIZE Wire GND LG. Amps Poles	Breaker	LOAD KVA C B A B A B C	Breaker	FEEDER SIZE Wire GND LG.	EQUIPMENT SERVED	CIR #	
1	(E) UNIT HEATERS	20	1	A		20	1	(E) UNIT HEATERS	2
3	(E) BLVY RT	20	1	B		20	1	(E) FC 3-1 MUSCOL	4
5	(E) COND PUMP	20	1	C		20	1	(E) FC 3-2 MUSCOL	6
7	(E) MUSIC CLASS	20	1	A		20	1	(E) MUSIC CLASS	8
9	(E) BFC 1-2	20	3	B		20	1	SPARE (N)	10
11				C		20	3		12
13				A				(E) BFC 2-1	14
15	(E) BFC 1-1	20	3	B		20	1		16
17				C					18
19				A		20	1	(E) LOAD	20
21	(E) RECEPT	20	1	A		20	1	(E) ATC PANEL	22
23	(E) LOAD	20	1	B		20	1	(E) ATC PANEL	24
25	(E) WATER COOLER	20	1	A		20	1	(E) MUSIC CLASS LITS	26
27	(E) MUSIC CLASS	20	1	B		20	1	(E) MUSIC CLASS LITS	28
29	(E) LOAD	20	1	C		20	1	(E) MUSIC CLASS	30
31	(E) WATER PUMP	20	3	A		20	3	(E) WATER PUMP	32
33				B					34
35				C					36
37	(N) FACP	20	1	0.8 A		20	1	SPARE	38
39	(N) PA PRINTER	20	1	0.4 B		20	1	SPARE	40
41	(N) NAC-1	20	1	0.5 C		20	1	SPARE	42
Remarks:		LINE TOTAL		0.5 0.4 0.8		0.0 0.0 0.0		PANEL SHALL BE EQUIPPED WITH BUSES FOR ALL CIRCS AND SPACES SHOWN	
		TOTAL CONN. KVA		1.7				200% NEUTRAL BUS	
		TOTAL CONN. AMPS		4.7				ISOLATED GROUND BUS	
								GROUND BUS	

PANEL BPP SCHEDULE 3

PANEL: (E) PPP3		Voltage: 208Y/120V 3 Phase 4W		BUS: 225A, AMPS 14000 AIC					
LOCATION: 3RD FL. MECH. ROOM		MOUNTING SURFACE: FLUSH		LUGS ONLY					
FED FROM:		DENOTES ARC FAULT INTERRUPTER C.B.		MCB AMPS					
		DENOTES GFI C.B. RECD		COPPER BUS ONLY					
CIR #	EQUIPMENT SERVED	FEEDER SIZE Wire GND LG. Amps Poles	Breaker	LOAD KVA C B A B A B C	Breaker	FEEDER SIZE Wire GND LG.	EQUIPMENT SERVED	CIR #	
1	(E) RT1	45	3	A		45	3	(E) RT2	2
3				B					4
5				C					6
7	SPARE	30	3	A		30	3	(E) RT3	8
9				B					10
11				C					12
13	(E) MR1	60	2	A		30	2	(E) AC OUTLET LIBRARY	14
15				B		30	2	(E) AC OUTLET LIBRARY	16
17	SPARE	20	2	C		30	2	(E) AC OUTLET LIBRARY	18
19				A					20
21	SPARE	20	2	B		30	2	(E) AC OUTLET LIBRARY	22
23				C					24
25	(E) FC 314	20	1	A		20	1	(E) BF-5	26
27	(E) LV 316	20	1	B		20	1	(E) BF-4	28
29	(E) LV 315	20	1	C		20	1	(E) GFI ROOF	30
31	(E) ATC	20	1	A		20	1	(E) HEAT MECH RM	32
33	SPARE	20	1	B		20	1	(E) HOT WATER PUMP	34
35	SPARE	20	1	C		20	1	SPARE	36
37	(N) NAC-2, NAC-3	20	1	A		20	1	SPARE	38
39	SPARE	20	1	B		20	1	SPARE	40
41	SPARE	20	1	C		20	1	SPARE	42
Remarks:		LINE TOTAL		0.0 0.0 0.0		0.0 0.0 0.0		PANEL SHALL BE EQUIPPED WITH BUSES FOR ALL CIRCS AND SPACES SHOWN	
		TOTAL CONN. KVA		0.0				200% NEUTRAL BUS	
		TOTAL CONN. AMPS		0.0				ISOLATED GROUND BUS	
								GROUND BUS	

PANEL PPP3 SCHEDULE 4

SYSTEM INPUTS

- AREA SMOKE DETECTOR
- AREA HEAT DETECTOR
- DUCT MOUNTED SMOKE DETECTOR (@ AC & HV UNITS)
- MANUAL PULL STATION
- EL. LOBBY/RECALL SMOKE DETECTOR
- EL. SHAFT SMOKE DETECTOR (TOP & BOTTOM)
- EL. MACHINE ROOM SMOKE DETECTOR
- EL. SHAFT HEAT DETECTOR (TOP & BOTTOM)
- EL. MACHINE ROOM HEAT DETECTOR
- SPRINKLER SYSTEM FLOW SWITCH
- SPRINKLER SYSTEM TAMPER SWITCH
- FIRE PUMP MONITORING POINTS
- FIRE ALARM POWER FAILURE
- FIRE ALARM LOW BATTERY
- OPEN CIRCUIT
- GROUND FAULT
- NOTIFIC. APPLIANCE SHORT

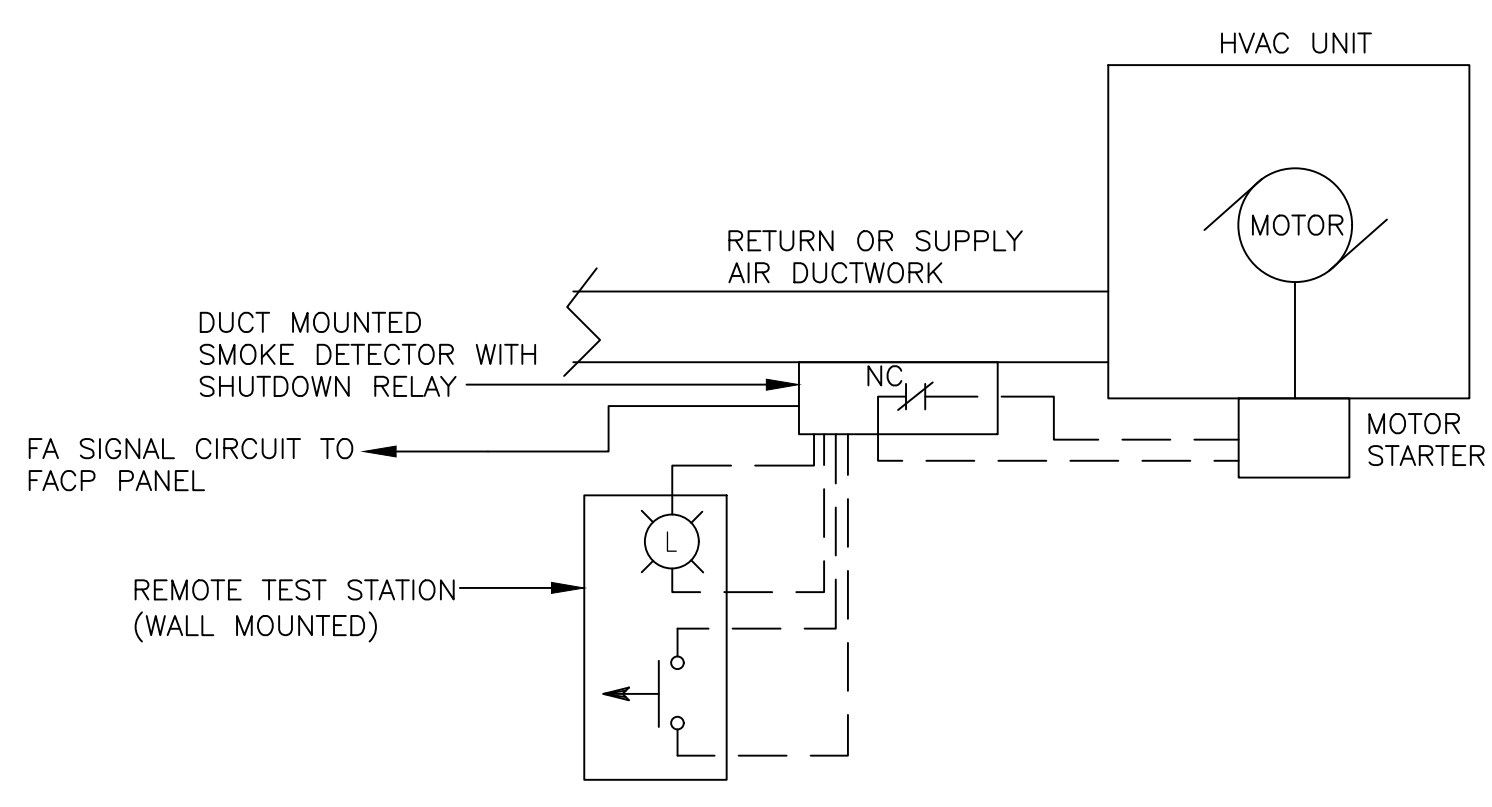
NOTE: SCHOOL DISTRICTS REQUIREMENTS MAY BE DIFFERENT THAN INDICATED IN EVENT MATRIX. BEFORE PROGRAMMING THE FIRE ALARM CONTROL PANEL, THE CONTRACTOR SHALL VERIFY EVENT MATRIX WITH SCHOOL DISTRICT MAINTENANCE STAFF.

SYSTEM OUTPUTS	'FACP' & REMOTE ANNUN.		NOTIFICATION				FIRE SAFETY CONTROL				
	A	B	C	D	E	F	G	H	I	J	K
SOUND A PULSING AUDIBLE AND FLASH THE GENERAL ALARM LED											
SOUND A PULSING AUDIBLE AND FLASH THE GENERAL SUPERVISORY LED											
SOUND A PULSING AUDIBLE AND FLASH THE GENERAL TROUBLE LED											
VISUALLY ANNUNCIATE ZONE, LOCATION & THE TIME OF INITIATION											
RECORD EVENT AND PRINT TO SYSTEM PRINTER											
ACTUATE ALL VISUAL APPLIANCES (STROBES) TO FLASH											
ACTUATE ALL AUDIBLE APPLIANCES (HORNS) TO SOUND ALARM											
TRANSMIT 'SMOKE DETECTION ALARM' SIGNAL TO CENTRAL STATION (SDP MAIN OFFICE)											
TRANSMIT 'HEAT DETECTION ALARM' SIGNAL TO CENTRAL STATION (SDP MAIN OFFICE)											
TRANSMIT 'PULL STATION ALARM' SIGNAL TO CENTRAL STATION (SDP MAIN OFFICE)											
TRANSMIT 'FLOW SWITCH ACTIVATED' SIGNAL TO CENTRAL STATION (SDP MAIN OFFICE)											
TRANSMIT 'TAMPER SWITCH ACTIVATED' SIGNAL TO CENTRAL STATION (SDP MAIN OFFICE)											
TRANSMIT FIRE PUMP STATUS SIGNAL TO CENTRAL STATION (SDP MAIN OFFICE)											
SHUTDOWN ALL HVAC UNITS, 2,000 CFM AND LARGER.											
SHUTDOWN LOCAL HVAC UNIT											
RECALL RESPECTIVE ELEVATORS PRIMARY											
RECALL RESPECTIVE ELEVATORS ALTERNATE											
SHUNT TRIP ELEVATOR MAIN POWER AND CAB LIGHTS											

FIRE ALARM SYSTEM INPUT/OUTPUT EVENT MATRIX 1



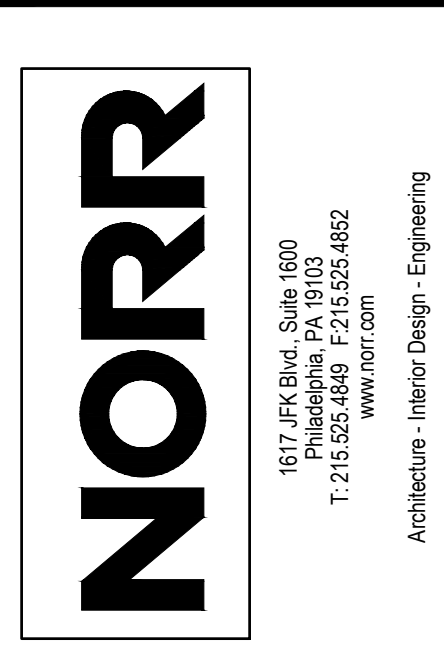
MOTOR SCHEDULE 3



HVAC UNIT SHUTDOWN CONTROL DIAGRAM 2



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 500 NORTH 3RD STREET, PHILADELPHIA, PA 19120
 PROJECT TITLE
 FIRE ALARM SYSTEM REPLACEMENT
 DRAWING TITLE
 SCHEDULES AND DIAGRAMS
 APPROVED BY

SCHOOL DISTRICT OF PHILADELPHIA
 THE SCHOOL REFORM COMMISSION
 DEPARTMENT OF DESIGN AND CONSTRUCTION SERVICES
 PHILADELPHIA, PA 19107-0015
 215-400-4230 FAX 215-400-4751
 www.phis.dps.edu
 CONTRACTOR TO VERIFY ALL CONDITIONS AND DIMENSIONS AT SITE

NO.	DATE	REVISION
1	11/08/17	ISSUED FOR PERMIT REVIEW
2	11/22/17	ISSUED FOR CONSTRUCTION REVIEW
3	12/21/17	ISSUED FOR SUBMISSION
4	01/30/18	ADDENDUM 01

SPEC NO. B-009C OF 2017/18
 DATE 12.21.17
 SCALE NONE
 LOCATION NO. 7390
 DRAWN BY BAS
 TYPE NO. 139
 CHECKED BY NVP
 FILE NO. 146

DRAWING NO.
E602

B-009C OF 2017/18
 SHEET 17 OF 17