

ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATION

ADDENDUM NO. 2

DATE: March 14, 2024

ENGINEER: Gipe Associates
1220 East Joppa Road, Suite 223
Baltimore, Maryland 21286
Phone: (410) 832-2420

OWNER: Harford County Public Schools

PROJECT: Aberdeen Middle School
HVAC Systemic Renovation
111 Mt. Royal Avenue
Aberdeen, Maryland 21001
Gipe Project No. 23043

TO: All Prospective Bidders

The following revisions and responses to questions are made to the original bid documents, dated February 26, 2024. This addendum forms a part of the Contract Documents and modifies the Original Solicitation Documents accordingly and as noted below. Acknowledge receipt of this Addendum in the space provided on the "Addenda" form within the Form of Proposal.

A. CHANGES TO SPECIFICATIONS

1. TABLE OF CONTENTS
Change specification section 13 22 00 to be titled "MODULAR CLASSROOMS AND BATHROOMS".
2. 13 22 00 MODULAR CLASSROOMS AND BATHROOMS
See attached specification section 13 22 00.
3. 23 06 00 HEATING, VENTILATING & AIR CONDITIONING EQUIPMENT
Paragraph 3.1: Add the following
4. 23 06 00 HEATING, VENTILATING & AIR CONDITIONING EQUIPMENT
Paragraph 3.1: Add the following: P. All HVAC manufacturer equipment curbs shall be installed by Division 07.
5. 23 06 00 HEATING, VENTILATING & AIR CONDITIONING EQUIPMENT
Paragraph 2.13-M.1: Change MERV 8 to MERV9.
6. 23 06 00 HEATING, VENTILATING & AIR CONDITIONING EQUIPMENT
Add paragraphs 2.15 and 3.21 attached.
Add paragraphs 2.16 and 3.22 attached.
7. 23 06 00 HEATING, VENTILATING & AIR CONDITIONING EQUIPMENT
Paragraph 3.3.C: Add the following: Division 07 shall install the manufacturer's curb.
8. 23 06 00 HEATING, VENTILATING & AIR CONDITIONING EQUIPMENT
Paragraph 3.4.C: Add the following: Division 07 shall install the manufacturer's curb.

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9. 23 06 00 HEATING, VENTILATING & AIR CONDITIONING EQUIPMENT
Paragraph 3.5.C: Add the following: Division 07 shall install the manufacturer's curb.
10. 23 06 00 HEATING, VENTILATING & AIR CONDITIONING EQUIPMENT
Paragraph 3.11: Add the following: D. Division 07 shall install the manufacturer's curb.
11. 23 06 00 HEATING, VENTILATING & AIR CONDITIONING EQUIPMENT
Paragraph 3.14. F: Add the following: Division 07 shall install the manufacturer's curb.
12. 23 06 00 HEATING, VENTILATING & AIR CONDITIONING EQUIPMENT
Paragraph 3.15: Add the following: G. Division 07 shall install the manufacturer's curb.
13. 23 07 01 HVAC INSULATION
Delete paragraph 3.5.N.2.
14. 23 09 00 INSTRUMENTATION AND CONTROL FOR HVAC
Add the following to paragraph 1.7.F.: Obtain power for control panels from the nearest electrical panelboard with available space or circuits. If a breaker is required for a space, provide the breaker. All electrical work shall be in accordance with Division 26.

B. CHANGES TO DRAWINGS

1. **PH001- LOWER LEVEL PHASING Plan**
Add the following to General Notes:

6. Contractor shall provide (2) 20' sea containers for the duration of the project. The location will be discussed with the successful bidder.

7. HCPS will move furniture between the phases, but the contractor shall provide ample notice per the approved project schedule. Not every item will be moved by HCPS therefore any remaining items shall be protected during construction by the Contractor.
2. **M702 – DETAILS**
Detail #14: Provide an additional hose end connection on the HR piping connection to the coil.
3. **M705 – DETAILS**
Detail #13: Provide an additional hose end connection on the HR and CHR piping connections to the coils.
4. **M901- SCHEDULES**
AIR HANDLING UNIT/DOAS SCHEDULE: Change all Pre-Filters from MERV 8 to MERV 9.
5. **E001 - LOWER LEVEL ELECTRICAL PHASING PLAN**
See attached new drawing.
6. **E002 - UPPER LEVEL ELECTRICAL PHASING PLAN**
See attached new drawing.
7. **E101 - LOWER LEVEL AREA B - DEMOLITION**
See attached revised drawing.

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8. **E102** - LOWER LEVEL AREA C - DEMOLITION
See attached revised drawing.
9. **E103** - LOWER LEVEL AREA E - DEMOLITION
See attached revised drawing.
10. **E104** - LOWER LEVEL AREA F - DEMOLITION
See attached revised drawing.
11. **E105** - UPPER LEVEL AREA A - DEMOLITION
See attached revised drawing.
12. **E106** - UPPER LEVEL AREA B - DEMOLITION
See attached revised drawing.
13. **E107** - UPPER LEVEL AREA C - DEMOLITION
See attached revised drawing.
14. **E108** - UPPER LEVEL AREA D - DEMOLITION
See attached revised drawing.
15. **E109** - UPPER LEVEL AREA E - DEMOLITION
See attached revised drawing.
16. **E110** - UPPER LEVEL AREA F - DEMOLITION
See attached revised drawing.
17. **E201** - LOWER LEVEL AREA B - LIGHTING
See attached revised drawing.
18. **E202** - LOWER LEVEL AREA C - LIGHTING
See attached revised drawing.
19. **E203** - LOWER LEVEL AREA E - LIGHTING
See attached revised drawing.
20. **E204** - LOWER LEVEL AREA F - LIGHTING
See attached revised drawing.
21. **E205** - UPPER LEVEL AREA A - LIGHTING
See attached revised drawing.
22. **E206** - UPPER LEVEL AREA B - LIGHTING
See attached revised drawing.
23. **E207** - UPPER LEVEL AREA C - LIGHTING
See attached revised drawing.
24. **E208** - UPPER LEVEL AREA D - LIGHTING
See attached revised drawing.
25. **E209** - UPPER LEVEL AREA E - LIGHTING
See attached revised drawing.
26. **E210** - UPPER LEVEL AREA F - LIGHTING

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See attached revised drawing.

27. **E301** - LOWER LEVEL AREA B – POWER
See attached revised drawing.
28. **E302** - LOWER LEVEL AREA C – POWER
See attached revised drawing.
29. **E303** - LOWER LEVEL AREA E - POWER
See attached revised drawing.
30. **E304** - LOWER LEVEL AREA F - POWER
See attached revised drawing.
31. **E305** - UPPER LEVEL LEVEL AREA A – POWER
See attached revised drawing.
32. **E306** - UPPER LEVEL LEVEL AREA B – POWER
See attached revised drawing.
33. **E307** - UPPER LEVEL LEVEL AREA C - POWER
See attached revised drawing.
34. **E308** - UPPER LEVEL LEVEL AREA D - POWER
See attached revised drawing.
35. **E309** - UPPER LEVEL LEVEL AREA E - POWER
See attached revised drawing.
36. **E310** - UPPER LEVEL LEVEL AREA F - POWER
See attached revised drawing.
37. **E311** - ROOF PLAN - POWER
See attached revised drawing.
38. **E312** - ELECTRICAL PART PLANS
See attached revised drawing.
39. **E501** - PARTIAL SCHEMATIC POWER
See attached revised drawing.
40. **E601** - LIGHTING FIXTURE SCHEDULE
See attached revised drawing.
41. **E602** - SCHEDULES
See attached revised drawing.
42. **E603** - SCHEDULES
See attached revised drawing.
43. **E604** - SCHEDULES
See attached revised drawing.
44. **E605** - SCHEDULES
See attached revised drawing.

- 45. **E606 - SCHEDULES**
See attached revised drawing.
- 46. **E607 - SCHEDULES**
See attached revised drawing.
- 47. **E702 - DETAILS**
See attached revised drawing.

C. RFI QUESTIONS, ANSWERS AND CLARIFICATIONS

- 1. LP-L1,T1,LPU1 are not shown on the SWBD schedule . Just on the Riser. Please confirm feeder size and location.
Refer to Addendum for revised drawings. WT on the switchboard is LP-L1,T1,LPU1.
- 2. Many MP and RP panels shown on the Riser E501 are not shown on the plans. Please show on the drawings.
Refer to Addendum for revised drawings showing the panelboards.
- 3. Feeder tap LP-L1, T1, LPU1 show a feed going to the elevator motor. However it is already feed from ELP-L1. Please confirm feed.
Provide feeder as shown on plans.
- 4. ATS does not show the Load feeder on riser. Just the normal power and generator feeder. I believe the Load feeder(ELP-L1) is going to SWBD incorrectly. Per riser. Please advise.
Refer to Addendum for revised drawings showing correct feeder.
- 5. Can Existing feeder Raceways be re used?
No. Existing conduits do not include grounding conductor and may not be large enough.
- 6. There are 2 C2 fixtures shown on E204. They are not on the fixture schedule.
Refer to Addendum for revised drawings showing the revised fixture schedule.
- 7. There are 4 F2E fixtures shown E209 They are not shown on the fixture schedule.
There are F2 fixtures shown on the fixture schedule. The F2E fixture is the same with battery back-up.
- 8. The Remote head symbols are shown in rooms on E201. But that seems incorrect . Please verify.
Refer to Addendum for revised drawings.
- 9. The Emergency Back UP lights shown in symbols and drawings are not on the Fixture schedule.
Refer to Addendum for revised notes.
- 10. Who is responsible for the furniture move between phases?
Refer to addendum for additional notes.
- 11. Table of Contents lists Specification Section 13220- Modular Offices, Rooms and Enclosures but this specification doesn't exist. Please advise.
The Specification is included in this Addendum. Please note that the title has been changed per this Addendum.

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12. Table of Contents lists Specification Section 074243 – Composite Wall Panels, however, this specification section does not exist, and none are shown on the drawings. Please advise.
The specification section is included in the specification.
13. In reviewing the HVAC Insulation spec section 230701, we didn't find reference to Exterior Duct Insulation. Please confirm if the exterior duct work is to be insulated, and if so, provide an updated specification section.
All exterior ductwork is pre-insulated double wall ductwork with minimum R-8 insulation.
14. The contract drawings indicate that 30% Propylene Glycol should be used for the Geothermal Well Field Piping in Alternate-1. Given past projects with Gipe not using Glycol for this type of application, the expense for the product, and added steps required to maintain and work on a glycol system; please confirm water can be used as the fluid in the geothermal system as opposed to Glycol.
Bid as indicated.
15. Do they want us to also re-insulate existing plumbing piping?
The only plumbing piping required to be re-insulated is plumbing insulation that is damaged due to demolition or new work activities. The same applies to any existing HVAC piping that is indicated to remain.
16. Can you also see if they can clarify if the CD (CONDENSATE DRAIN LINE) gets insulation or not.
In the Piping Insulation Schedule in 23 07 01-3.9 it states that Drain Piping from Cooling Coils/Evaporators shall be insulated with Type A insulation, 1/2-inch thick.
17. The heavy lines in each room on the RCP's appear to indicate the FCU's corresponding with the mechanical drawings. Do these fit in standard 2'x4' grid or do they require a modification to the grid to accommodate them?
They are indicated as not fitting in the grid and the do not fit in the grid. Grid mods are required based on the RCP.
18. Please confirm that the GC is responsible for providing the temporary modular buildings as noted on C121, note C-3?
The modular structure(s) will be provided by a manufacturer like any other product for the Contractor. Note C-3 doesn't conflict with this. See the specification 13 22 00 in this addendum.

D. ATTACHMENTS

1. **E101** - LOWER LEVEL AREA B - DEMOLITION
2. **E102** - LOWER LEVEL AREA C - DEMOLITION
3. **E103** - LOWER LEVEL AREA E - DEMOLITION
4. **E104** - LOWER LEVEL AREA F - DEMOLITION
5. **E105** - UPPER LEVEL AREA A - DEMOLITION
6. **E106** - UPPER LEVEL AREA B - DEMOLITION
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15. **E205** - UPPER LEVEL AREA A – LIGHTING
16. **E206** - UPPER LEVEL AREA B - LIGHTING

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17. **E207** - UPPER LEVEL AREA C - LIGHTING
18. **E208** - UPPER LEVEL AREA D - LIGHTING
19. **E209** - UPPER LEVEL AREA E - LIGHTING
20. **E210** - UPPER LEVEL AREA F - LIGHTING
21. **E301** - LOWER LEVEL AREA B - POWER
22. **E302** - LOWER LEVEL AREA C - POWER
23. **E303** - LOWER-LEVEL AREA E - POWER
24. **E304** - LOWER LEVEL AREA F - POWER
25. **E305** - UPPER LEVEL LEVEL AREA A - POWER
26. **E306** - UPPER LEVEL LEVEL AREA B - POWER
27. **E307** - UPPER LEVEL LEVEL AREA C - POWER
28. **E308** - UPPER LEVEL LEVEL AREA D - POWER
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36. **E603** - SCHEDULES
37. **E604** - SCHEDULES
38. **E605** - SCHEDULES
39. **E606** - SCHEDULES
40. **E607** - SCHEDULES
41. **E702** - DETAILS
42. Specification Section 13 22 00 MODULAR CLASSROOMS AND BATHROOMS
43. Paragraphs 23 06 00-2.15 and 23 06 00-3.21.
44. Paragraphs 23 06 00-2.16 and 23 06 00-3.22.

END OF ADDENDUM NO. 2

2.15 FAN COIL UNITS

A. General

1. All fan coil units shall be manufactured in an ISO 9001 certified production facility. Units shall comply with ASHRAE 62.1 and 90.1, Section 6. Sound power levels shall be submitted for approval. Factory-packaged and -tested units rated to conform with UL1995 and shall bear either UL or ETL sticker.
2. Fan coil manufacturer shall submit under what duct configuration the manufacture certified the performance of particular unit.
3. Provide electrically commutated motors for fan coil units.

B. Ceiling-Mounted Cassette

1. Provide ceiling-mounted cassette fan coil unit of the size, capacity, and electrical characteristics as shown on the contract drawings.
2. Unit shall be configured for a four-pipe system and shall provide heating and cooling on demand.
3. Hydronic Coils.
 - a. All coils shall be made with copper pipes and corrugated or hydrophilic aluminum louvered fins, blocked by mechanical expansion of the pipes.
 - b. The coil shall always be equipped with an air vent valve and water drain valve positioned respectively in the highest and lowest points of the circuit.
4. Unit Base:
 - a. The support base shall be made of deep-drawn galvanized sheet steel. It shall have four lateral bulkheads in 12/10 galvanized sheet steel attached to it, equipped with anti-condensate felt covering on the external side and isolating material on the inside.
 - b. Galvanized steel fixing brackets, hydronic coils, motor, fan, condensate pump, attachment plates, terminal board unit and condensate drip play shall all be fixed to the base.
5. Fans:
 - a. The unit shall have antistatic plastic centrifugal fans with an impeller with wing-shaped fins.
 - b. The fans should have low sound emissions.
 - c. The fan will have 3 different speeds (low, medium and high) and controlled by a thermostat.

6. Motors:
 - a. Motors shall be 3 –speed, single phase, 60Hz permanent split capacitor, permanently lubricated, with sleeve bearings.
 - b. Motors shall have thermal overload protection with automatic reset.
7. The drain tray shall be realized in a unique piece of high density injected expanded polystyrene with the addition of flame retardants, collecting the condensate that forms on the surface of the coil.
8. Condensate drain device:
 - a. The condensate shall be collected in the integral tray and evacuated using an integral pump, whose maximum static pressure is 31.5 inches of water, connected to the unit.
 - b. The kit also includes a control circuit board, a non-return valve and 3 –level float valve.
 - c. When the level of the condensate in the tray reaches the maximum limit, the control board sends an alarm that blocks the flow of water to the coil and leaves just the fan operating.
 - d. Unit shall be provided with integral condensate pump.
9. Filters:
 - a. Filters shall be MERV 10 radial pleated disposable type made of synthetic blend.
 - b. It is supplied with the GLL range grill (mandatory accessory).
10. Intake/flow grill unit:
 - a. The intake and flow grill unit (GLL) should be supplied as a mandatory accessory.
 - b. It should include an air filter and electric box, equipped with bayonet joint to the connector present on the unit support structure.
 - c. The grill shall be made of plastic, color RAL9010.
11. Hydronic Coils: All coils shall have 1/2" copper tubes, manual air vents, and aluminum fins, 10 fins per inch spacing. Coil fins shall be mechanically bonded to copper tubes. 0.500" O.D. copper tubes must comply with ASTM B-75. Fin thickness shall be 0.0045" and tube thickness shall be 0.016". All coils shall be leak tested with air at 300 psig under water.
12. Fan and Motor: Removable.
 - a. Fan: Forward curved, double width, centrifugal; directly connected to motor. The fan assembly consists of an extremely compact and quiet tangential type fan with 3 speeds (low, medium and high).
 - b. Motor: Permanently lubricated, multispeed.

- c. Wiring Termination: Connect motor to chassis wiring with plug connection. Unit fan motor shall be equipped with integral motor protection.
- 13. Basic Unit Controls: Coordinate with Johnson Controls Incorporated:
 - a. The unit shall be provided with an internal interlock to shutdown the fan coil when the integral condensate pump becomes blocked.
 - b. Unit shall be controlled by Johnson Controls Metasys. Valves, thermostats, transformers, etc. shall be provided by Johnson Controls Incorporated.
 - c. Johnson Controls shall interlock the fan coil units with the associated field installed de-centralized condensate pumps located throughout the building. If water is detected in the condensate pump dike the BAS will shutdown the associated fab coil units and send an alarm.
- 14. Electrical Requirements: Standard unit shall operate on 277 V, single phase, 60 Hz electrical power, and all exposed wiring shall be in flexible conduit.
- 15. Fan coil units shall be model CCW as manufactured by Airedale, or approved equal.

PART 3. EXECUTION

3.21 FAN COIL UNITS

- A. Coordinate installation of all fan coil units with architectural, existing plumbing, fire protection and electrical work.
- B. Drawings are diagrammatic. Arrange unit so that electrical clearances are in compliance with the NEC. Piping installation shall not be within the required electrical code clearance.
- C. Connect drain pan to condensate drain.
- D. Mechanical Contractor shall provide two additional sets of MERV 13 filters to the Owner. Filters shall be equal to Airflow Products Company. Clean filters shall be used by during testing and balancing.
- E. Electrical: Connect units to wiring systems and to ground as indicated and instructed by manufacturer or as directed by the electrical drawings.
- F. Ground equipment
 - 1. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. Where manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

- G. After completing system installation, including outlet fittings and devices, inspect exposed finish. Remove burrs, dirt, and construction debris, and repair damaged finishes including chips, scratches, and abrasions.
- H. Lubricate bearings on fan.
- I. Check fan-wheel rotation for correct direction without vibration and binding.
- J. Start unit according to manufacturer's written instructions.
- K. Pipe Condensate as indicated on the drawings.
- L. Complete manufacturer's startup checks.
- M. After starting and performance test, change filters.
- N. Prior to installing all fan coil units provide mock-up for 1 unit. Installation shall be reviewed by Owner and Engineer of Record. Provide three (3) days' notice.

2.16 ELECTRICAL HEAT TRACE

A. General: Furnish and install a complete UL listed system of heaters, components, and controls to prevent pipelines from freezing.

B. Products:

1. The self-regulating heater shall consist of two (2) 16 AWG nickel-coated copper bus wires embedded in parallel in a self-regulating polymer core that varies its power output to respond to temperature all along its length, allowing the heater to be crossed over itself without overheating, to be used directly on plastic pipe, and to be cut to length in the field. The heater shall be covered by a radiation cross-linked modified polyolefin dielectric jacket.
2. In order to provide energy conservation and to prevent overheating, the heater shall have a self-regulating factor of at least 90 percent. The self-regulation factor is defined as the percentage reduction, without thermostatic control, of the heater output going from 40 deg F pipe temperature operation to 150 deg F pipe temperature operation.
3. The heater shall operate on line voltages of 277 volts without the use of transformers.
4. The heater shall be sized according to this table. The required heater output rating is in watts per foot at 50 deg F.

Pipe Size	Minimum Ambient -10 deg F
3 inches or less	5 watts
4 inches	7.5 watts

5. The heater shall be XL-Trace, as manufactured by Raychem Corporation, or as approved equal by Chromalox.
6. Power connection, end seal, splice and tee kit components shall be applied in the field.
7. The system shall be controlled by a bulb-sensing thermostat AMC-1B set at 40°F either directly, or through an appropriate contactor.

C. Execution:

1. Installation:

- a. Apply the heater linearly on the pipe after piping has been successfully pressure tested. Secure the heater to the piping with cable ties or fiberglass tape.
 - b. Apply "electric traced" signs to the outside of the thermal insulation.
2. Tests:
- a. After installation and before and after installing the thermal insulation, subject heat to testing using a 2500 VDC megger. Minimum insulation resistance should be 20 megohms regardless of length.
 - a. The installer shall test for both heating cable bus wires to verify the connection of any splices or tees.

PART 3 EXECUTION

3.22 ELECTRICAL HEAT TRACE

- A. Examine surfaces and substrates to receive heating cables for compliance with requirements for installation, tolerances, and other conditions affecting performance.
- B. Ensure surfaces and pipes in contact with electric heating cables are free of burrs and sharp protrusions.
- C. Ensure pipe testing is complete.
- D. Ensure surfaces and substrates are level and plumb.
- E. Test cables for electrical continuity before installing.
- F. Test cables for insulation resistance before installing.
- G. Proceed with installation only after unsatisfactory conditions have been corrected.
- H. Cut cable to length required.
- I. Install heater-to-cold lead connections in accessible locations.
- J. Electrical installation requirements are specified in Division 26 Sections. Drawings indicate general arrangement of wiring, conduit, and specialties.
- K. Connect heating cables and other components to wiring systems.

- L. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- M. Perform tests after installation but before application of coverings.
- N. Test cables for electrical continuity before energizing.
- O. Test cables for insulation resistance before energizing. Remove cables if measured resistance is less than 10 megohms to ground.
- P. Test cables to verify rating and power input. Energize and measure voltage and current simultaneously.
- Q. Repeat tests for continuity, insulation resistance, and input power after applying insulation and jacketing.
- R. Repair or replace malfunctioning units. Retest as specified above after repairs or replacements are made.
- S. Set field-adjustable switches and circuit-breaker trip ranges as indicated.
- T. Protect installed heating cables, including leads, from damage before Substantial Completion.

SECTION 13 22 00 – MODULAR CLASSROOMS AND BATHROOMS

PART 1. GENERAL

1.1 RELATED DIVISIONS AND SECTIONS

- A. The Conditions of the Contract and other General Requirements apply to the work specified in this section. All work under this section shall also be subject to the requirements of Division 00 and Division 01. The Conditions of the Contract and other General Requirements apply to the work specified in this section.
- B. DIVISION 01 – GENERAL REQUIREMENTS, GENERAL CONDITIONS AND SUPPLEMENTARY CONDITIONS.
- C. DIVISION 03 – CONCRETE
- D. DIVISION 04 - MASONRY
- E. DIVISION 05 – METALS
- F. DIVISION 07 – THERMAL AND MOISTURE PROTECTION
- G. DIVISION 08 – OPENINGS
- H. DIVISION 09 - FINISHES
- I. DIVISION 21 – FIRE SUPPRESSION
- J. DIVISION 22 – PLUMBING
- K. DIVISION 23 – MECHANICAL
- L. DIVISION 26 – ELECTRICAL
- M. DIVISION 27 – COMMUNICATIONS
- N. DIVISION 28 – FIRE ALARM SYSTEMS (ADDRESSABLE TYPE)
- O. DIVISION 31 – EARTHWORK
- P. DIVISION 32 – EXTERIOR IMPROVEMENTS
- Q. DIVISION 33 – UTILITIES

1.2 SUMMARY

- A. This specification covers the requirement for the Contractor to provide temporary modular facilities which is to function as swing-space for classroom during the phased renovation of the facility.
- B. Provide all labor, materials, equipment, maintenance and services necessary for and incidental to the complete installation, operation and removal of entire modular structure work.
- C. Unless otherwise specified, all submissions shall be made to, and acceptances and approvals by the Engineer and Harford County Public Schools.
- D. Conform to the requirements of all rules, regulations and codes of local, state and federal authorities having jurisdiction.
- E. Be responsible for all construction means, Delegated-Design, methods, techniques, procedures, and phasing sequences used in the work. Furnish all tools, equipment and materials necessary to properly perform the work in first class, substantial, and workmanlike manner, in accordance with the full intent and meaning of the contract documents.
- F. Contract Drawings are generally diagrammatic and all accessories are not necessarily shown. Furnish and install all such items as may be required to fit the work to the conditions encountered. Arrange piping, equipment, and other work generally as shown on the contract drawings, providing proper clearance and access. Where departures are proposed because of field conditions or other causes, prepare and submit detailed shop drawings for approval in accordance with "Submittals" specified below. The right is reserved to make reasonable changes in location of equipment, piping, electrical, etc. up to the time of rough-in or fabrication.
- G. Any substitution shall be submitted in accordance with Division 01.
- H. Manufacturer and Contractor shall coordinate all work with the Planning and Construction and the Engineer in setting up a work schedule during the term of this contract so as not to interfere with the normal operation of any school, or other regularly scheduled Board of Education activities at any site.
- I. Harford County Public Schools will occupy the site and the adjacent buildings during the entire work period. The manufacturer shall cooperate with Harford County Public Schools during the work to minimize conflicts and facilitate usage. The Award Bidder shall perform the work so as not to interfere with HCPS's operations

1.3 WARRANTY

- A. Contractor's attention is directed to warranty obligations contained in the GENERAL CONDITIONS.

- B. The contractor shall provide all materials and labor for the duration of the project that the modular structure is in operation at the Aberdeen Middle School Site.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store, protect and handle products to site under provisions of General Requirements. Comply with manufacturer's installation instructions for rigging, unloading and transporting equipment.
- B. Deliver pipe, empty conduits and tubes with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe end damage and to prevent entrance of dirt, debris, and moisture.

1.5 SUPERVISION AND COORDINATION

- A. Provide complete supervision, direction, scheduling, and coordination of all work under the Contract, including that of subcontractors.
- B. Coordinate all work associated with the related Divisions and Sections.
- C. Coordinate with other trades for the connection to site utilities as required.
- D. All equipment shall be installed in such a way that all components requiring access are so located and installed that they may be serviced, reset, replaced, recalibrated, etc., by manufacturer or contractor's service technicians in accordance with the Manufacturer's recommendations.

1.6 PERMITS AND FEES

- A. Obtain all permits and pay taxes, fees and other costs in connection with the work. Produce all necessary architectural and engineering plans, prepare documents, give proper notices and obtain necessary approvals. Deliver inspection and certificates of occupancy to Owner prior to final acceptance of the work.
- B. Use of a subcontractor does not relieve the manufacturer from the responsibility of performing any other provision of the works including obtaining permits and insurance.

1.7 EXAMINATION OF SITE

- A. Examine the site, determine all conditions and circumstances under which the work must be done, and make all necessary allowances for same. No additional cost to the Owner shall be permitted for Contractor's failure to do so.
- B. Examine and verify specific conditions described in individual specifications sections.

- C. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- D. The Manufacturer shall be prepared to have all modular structure(s) examined by Harford County Public Schools and the Engineer to determine suitability. Harford County Public Schools reserves the right to reject any units that it determines unfit for the intended use, using criteria developed by Harford County Public Schools and not necessarily industry standards.

1.8 CONTRACTOR QUALIFICATIONS

- A. Any Contractor or Subcontractor performing work under Division 13 shall be fully qualified and acceptable to the Engineers, Architect and Owner. Submit the following evidence if requested.
 - 1. A list of not less than five comparable projects that the Contractor completed.
 - 2. Letter of reference from not less than three registered professional engineers, Contractors or building owners.
 - 3. Local and/or State License, where required.
- B. A Contractor is any individual, partnership, or corporation, performing work by contract or subcontract on this project.
- C. Acceptance of a Contractor or Subcontractor will not relieve the Contractor or subcontractor of any contractual requirements or his responsibility to supervise and coordinate the work, of various trades.

1.9 MATERIALS AND EQUIPMENT

- A. Materials and equipment installed as part of the project shall be of the specified type and quality.
- B. All plumbing fixtures shall comply with National Sanitation Foundation (NSF) Standard 61 including Annex G and MD372 Contractor shall submit certificates proving compliance for each plumbing fixture for review.
- C. All in-line devices installed in the domestic water system and that is in contact with the domestic water intended for human ingestion shall comply with NSF 61 – Annex G, NSF 372, and all Maryland State “Lead Free” plumbing laws and guidelines.

1.10 FIRE SAFE MATERAILS

- A. Unless otherwise indicated, materials and equipment shall conform to UL, NFPA OR ASTM Standards for Fire Safety with Smoke and Fire Hazard Rating not exceeding flame spread of 25 and smoke developed of 50.

1.11 SUBMITTALS, REVIEW AND ACCEPTANCE

- A. Equipment, materials, installation, workmanship and arrangement of work are subject to review and acceptance.
- B. Thoroughly review and stamp all submittals to indicate compliance with contract requirements prior to submission. Coordinate installation requirements and any electrical requirements for equipment submitted. Contractor shall be responsible for correctness of all submittals. Each piece of equipment and its associated components (e.g., relays, fuses, disconnects, etc.) shall be clearly identified.
- C. Acceptance will not constitute waiver of contract requirements unless deviations are specifically indicated and clearly noted. Use only final or corrected submittals and data prior to fabrication and/or installation.
- D. For any submittal requiring more than two (2) reviews by the Engineer (including those caused by a change in sub-contractor or supplier) the Owner will withhold contractor's funds by a change order to the contract to cover the cost of additional reviews. One review is counted for each action including rejection or return of any reason.

1.12 SHOP DRAWINGS

- A. Prepare and submit shop drawings for the modular structure and accessories, all specially fabricated items, modifications to standard items, specially designed systems where detailed design is not shown on the contract drawings, or where the proposed installation differs from that shown on contract drawings.
- B. Prior to the start of work, submit for approval a site plan showing the locations and dimensions of modular structure(s) including proposed access and haul routes, temporary protection, and proposed staging.
- C. All permit documents shall be signed and sealed by a registered engineer of the State of Maryland.

1.13 INSTALLATION AND DEMOLITION

- A. Construct temporary access and haul routes necessary for proper execution of the work with suitable materials, grades and widths. Erect and maintain temporary barricades to limit public access to hazardous areas during construction, demolition/removal, and site restoration of work.
- B. Provide fencing along the construction site and at all open excavations and tunnels to control access by unauthorized personnel. Safety fencing must be highly visible to be seen by pedestrians and vehicular traffic.

- C. Provide water meter required by the AHJ or local utility including approved backflow preventers and test certificates.
- D. Remove construction debris, waste materials, packaging material and the like from the work site daily. Any dirt or mud which is tracked onto paved surfaces must be cleaned away daily.
- E. The Contractor shall provide a fully turn-key installation of the modular structure.
- F. The Contractor shall remove the modular structure, associated utilities, supporting structures and accessories at the end of the project. The Contractor shall restore the site to the original conditions including establishing grass at the structure and accessory's locations.
- G. The manufacturer shall be responsible for restoring the subgrade at all affected areas to the satisfaction of HCPS and the Engineer.
- H. Approved on-site soils in areas to receive seed shall be compacted to at least 90% of the Standard Proctor maximum dry density per ASTM D-698. Seed and straw area of disturbance. The Contractor shall provide all necessary water for the installation and maintenance of the seeded areas. The Contractor shall be responsible for the immediate repair of all washouts, dead areas or bare spots until those areas are acceptable. All grass areas shall be protected from foot and/or vehicle traffic damage by barricades, signs, or other appropriate means. Any damage occurring before acceptance of the areas shall be repaired at the contractor's expense. There may be tire tracks and grass disturbed due to the set-up and/or removal of any units. The repair of this damage shall be the responsibility of contractor.
- I. Spread the fill material in loose lifts not to exceed 8 inches in loose thickness.
- J. Water or aerate the fill material, as necessary, and thoroughly mix to obtain a moisture content which will permit proper compaction but remain within +/-2% of the optimum moisture content as determined by ASTM Specification D-698.
- K. Fill within the area to be paved (concrete and asphalt) shall consist of approved soils compacted to at least 95% of the Standard Proctor maximum dry density per ASTM D-698.
- L. Remove tongues and wheels and store under unit out of the way of any foundations and skirting.
- M. Axles will remain on the unit. The Contractor shall remove the tires / wheels and place under the unit.

1.14 SCOPE AND SERVICES

- A. The contractor shall provide Harford County Public Schools a swing space modular structure(s) within the area identified on the drawing and specified in the documents. The modular structure(s) including all accessories shall remain operational per approved schedule and/or as long as the swing space is needed for the completion of the project.

- B. Manufacturer's design shall meet or exceed all Federal, State and Local Authority Having Jurisdiction building codes and requirements.
- C. The contractor shall provide a full turn-key modular structure(s) complete with site work, plumbing, electrical, freeze protection heat trace, technology, fire alarm, fire protection, data, foundation, transportation of units to site and setting in place, assembly, and connection of units. Provide two ramps, walkways, railings, interior and exterior lighting, fees, permits, and licensing. Provide two ADA ramps, walkways and porches for each structure if more than one. All units shall be fully designed with necessary calculations and stamped drawings provided by engineers licensed in the state of Maryland and constructed in complete compliance with American's with Disabilities Act (ADA) and all Federal Codes, State Codes, Fire Department regulations and codes, NFPA Life Safety Codes, Energy Conservation code, Indoor Air Quality Requirements, and Local building codes for the Town of Aberdeen and Harford County for such use. Provide services in accordance with industry standards and/or manufacturer recommendations.
- D. The Contractor shall have the modular structure in place and operational prior to any construction involving educational spaces and per the approved schedule with ample time for Harford County Public Schools to move without educational disruption.
- E. The Contractor shall be responsible to produce and submit all documents for the building permit and all other permits required, including but not limited to, those for all trades and use and occupancy, as necessary for the and occupancy of modular buildings. The Award Bidder shall provide drawings and calculations stamped by a Professional Engineer registered in the state of Maryland as required by the AHJ
- F. Equipment Written & Verbal Instructions

All necessary written and verbal instructions relative to equipment and operation of the systems shall be provided so that the operators may become familiar with the requirements of successful operation and maintenance of the equipment and systems. Instructions shall be given in two, 4-hour periods at times designated by HCPS.
- G. Transportation shall be in accordance with federal, state and local authorities and shall also require the use of flag vehicles before and after. Include all permits and escort as required for delivery to the project site.
- H. Service calls shall be responded to within 24 hours. Space temperatures shall be between 68 degrees F and 74 degrees F.

PART 2. PRODUCTS

2.1. MODULAR STRUCTURE

The manufacturer shall be responsible for a delegated-design, transportation, installation and

removal for the modular structure. The requirements for the layout shall meet the specifications outlined below and any and all Applicable Codes Multiple unit layouts are acceptable but each unit shall be provided with two entrances/exits and associated ADA compliant ramps and porches. The Contractor shall be responsible for any and all pathways, ramps, stairs, and platforms to provide access to all units as well as any and all utility connections to serve plumbing, electrical, data, sprinkler, etc. Drainage from the structure(s) shall not undermine the structure(s) or grass.

2.2. Design Criteria

- A. Instructional Area: Unit shall include ten (10) classrooms. Each classroom must have One Teachers Closet - 4'x4' x 3' deep. Closet shall have shelving and a lockable door. Instructional areas are to be on exterior walls to provide natural light.
- B. Toilet rooms: Modular Complex shall have two (2) ADA accessible group restrooms centrally located; one male and one female. Male toilet rooms shall be equipped with one (1) accessible toilet stall, two (2) wall mounted urinals, three (3) lavatories. One (1) lavatory shall be fully accessible. Female toilet rooms shall be equipped with one (1) accessible toilet stall, two (2) other toilet stalls and three (3) lavatories. One (1) lavatory shall be fully accessible.

Toilet accessories and partitions are specified herein.

- C. Custodian closet: Unit shall include a custodian closet, approximately 8'x8'-64 square feet.
- Closet shall include a floor mounted mop basin with a wall mounted stainless steel mop holder to accommodate hanging three (3) mops oversink.
- D. Water/Fire Protection closet: Unit shall include a custodian closet, approximately 8'x8'-64 square feet.
- Closet shall include a water service, water heater, expansion tank and fire protection service and associated equipment compliant to AHJ requirements with backflow preventer.
- E. Electrical closet/technology wiring closet: Unit shall include service closets that will serve as a central location for electric and technology. Closet will be approximately 8'x8'-64 square feet. All walls inside closet shall receive 8' tall ¾" thick fire treated plywood. Electrical Closets are to be provided as needed to service complex. Electrical closets will be provided with minimum two (2) duplex outlets per wall. IDF must be climate controlled with an A/C split system. Each data rack must have a duplex, 20-amp, twist lock receptacle, located at the bottom of the rack. Ideally IDF should be centrally located within the structure to ensure no CAT 6 data run exceeds 300'. One 4" conduit with interduct for 50 pair copper cable and 6 strand, multi-mode, 50-micron OM3 fiber between (Aberdeen) MDF and modular complex IDF. 50pair cable shall be terminated on 110 blocks with surge protection on both ends. Fiber optic cable shall be terminated on

corresponding patch panels. IDF shall accommodate, at a minimum, one 19" data rack and one PA cabinet. The data rack and PA cabinet shall be provided by the Contractor. Electrical panels must be locked.

- F. Corridor: Corridor to be provided to meet applicable codes.
- G. Design Loads: Design loads to meet local jurisdictional code.
- H. Applicable Codes:
- Building Code:
 - 2021 International Building Code (IBC) with local amendments
 - Harford County Local Amendments Bill 15-009
 - 2021 International Mechanical Code with local amendments 2018 International Plumbing Code with local amendments
 - Harford County Local Amendments Bill 15-007 2018
 - National Electric Code with local amendments
 - Harford County Local Amendments Bill 14-005
 - 2021 International Energy Conservation Code with local amendments
 - Fire Prevention Code: State of Maryland Fire Prevention Code, COMAR 29.06.01 Life
 - Safety Code: 2018 NFPA 101 Handicapped Code
 - Maryland Accessibility Code COMAR 09.12.53
 - 1991 ADA Americans with Disabilities Act
- I. Design Valves:
- Exposed Walls - R-13 + R-7.5 ci min Ceiling/Roof R-30 minimum – Or as required to meet Applicable Codes.
 - Floor - R-30 minimum
 - Design temperature, summer: Outside, degrees: 95 DB 70 WB Inside , degrees: 78.
- J. Each unit must include appropriate air barriers to limit infiltration.
- K. Each unit will be constructed in a manner that provides protection against water damage through the use of proper roofing materials, exterior sheathing, water drainage systems and flashing.
- L. Ventilation shall be provided to meet all current applicable codes.
- M. Each unit must be constructed using building materials that contain low amounts of volatile organic compounds (VOC).
- N. Instructional Areas shall be a minimum of approx. 850 sq. ft. (+ or - 10%). All units shall be adequate for the intended use as determined by HCPS (not industry standards) by

the site and application of the unit (s).

- O. In addition to the plumbing fixtures and accessories described herein, one (1) High-Low Electric Water ADA Cooler with bottle filler that is NSF-61 compliant. Provide an electric water heater of capacity to allow continuous hot water for all fixtures in the modular unit. The manufacturer shall be responsible for all work associated with plumbing (water and sanitary) within the footprint of the modular structure to connect all plumbing fixtures and accessories. Provide location and install an approved water meter in the modular structure.
- P. The manufacturer shall provide a fully functioning sprinkler system within the modular structure as required by the Applicable Codes. The Contractor shall tie in a new water line from the mains indicated on the Civil drawings. Design and installation of the sprinkler system within the modular structure shall be the responsibility of the manufacturer. The Contractor shall connect to the structure's sprinkler inlet connection from the new water line on the Civil drawings. Contractor shall perform any necessary flushing of the system in order to achieve compliance with AHJ. The Contractor shall provide all necessary connections to the stand alone fire alarm system.
- Q. The HVAC system shall meet current Maryland Energy Conservation Codes and the anticipated Maryland Board of Public Works Relocatable Classroom Indoor Air Quality Requirements. All spaces shall have complete HVAC systems in accordance with all applicable sections. Both heating and air conditioning are required along with the proper exterior fresh air mix for the occupancy requirements. Electrical feed will be 120-208V. All equipment will either need to utilize this voltage or the manufacturer shall provide a transformer inside the electrical closet.
- R. Design and installation of HVAC shall be completed by the manufacturer and subject to Owner approval. Each classroom shall be provided with its own controllable HVAC unit capable of supplying heat and cooling as required.
- S. The HVAC unit shall be equipped with an easily accessible, replaceable, filter location that shall be changed by the Contractor. Filter media shall be installed by the manufacturer after the modular structure is set in place. Filters shall be a minimum of MERV 13. Provide filter changes at approximately every two months.
- T. Provisions in each classroom shall include, but not be limited to power, data, fire alarm, intercom. Manufacturer shall be responsible for complete and functional electrical systems as indicated herein and on the electrical drawings provided unless specifically noted otherwise.
- U. Electrical feed to each Module will be 120/208Volts, 1 phase, 3 wire which shall connect to a load center panelboard in the module with minimum 150 ampere main lugs only. All electrical loads within the module, including HVAC unit, lighting, receptacles, and other loads shall be served from the load center panel in that module. Provide all required branch circuit wiring.

- V. Module electrical feeders shall be balanced across a 120/208 volts, 3 phase, 4 wire, 800 ampere electric service entrance panelboard. Provide feeders from the service entrance panelboard to each load center panelboard with Type SER cable (3#1/0 + 1#6 ground). Make provisions for routing the Type SER feeder from the crawl space below the Modules up to the Load Center Panels.
- W. Interior illumination levels shall be 50 footcandles per room on the classroom desks with a workplane at 30" above floor. Lighting shall be LED using volumetric troffer style fixtures with correlated color temperature (CCT) of 3500K and minimum color rendering index (CRI) of 80.
- X. Interior lighting controls shall be Vacancy Sensors with manual override switches at the entrance door to the room. Automatic lighting controls shall meet the requirements of the International Energy Conservation Code, 2021 edition.
- Y. Exterior lighting fixtures shall be LED full cut-off style wall packs. Exterior lighting shall provide 1-foot candle 25' around the perimeter of the building. All fixtures shall come equipped with photocells.
- Z. Exit lights shall be as required by AHJ and have battery back-up.
- AA. Provide code compliant emergency lighting at all classrooms, egress corridors, and all other spaces.
- BB. Porch lights shall be located at each exit door and shall have photocells and battery backup.
- CC. Provide Tamper Proof 20-amp duplex receptacles, spaced every 12 linear feet of wall space to allow for devices to be plugged in within every 6 feet and two (2) duplex outlets per wall in the electrical closets.
- DD. Electronics – Low Voltage

Contractor shall be responsible for connection from existing Aberdeen Middle School MDF to the modular complex IDF's service connections. Low voltage shall be provided in a complete, functional, and tested system unless otherwise noted. Wire mold will be accepted in lieu of in-wall conduit. Instructional Spaces shall be provided with Teacher Wall Plate and Projector High Drop, provided by the manufacturer as indicated in the attached details within this section. HCPS has reserved short-throw projectors for this project. All low voltage cabling shall be plenum rated as required by Harford County Electrical Code.

1. Fire Alarm

Provide a complete, device addressable, code compliant Fire Alarm System throughout the modular Structure. The Fire Alarm System shall be with all required equipment for monitoring by the Harford County central station

monitoring service. System will contain a stand-alone cellular dialer approved by AHJ.

2. Intercom

All instructional spaces shall have a Quam System 3, surface mount PA speaker. Installation shall use 18-gauge, twisted pair shielded cable from each speaker to 110 blocks in IDF.

3. Data

Provide data drops as indicated in the attached drawings for each Instructional Area. Instructional spaces shall have one projector low drop, high/access point drop landed on Peerless CMJ-450 ceiling plate, one USB from interactive whiteboard to projector low drop.

Each classroom shall have the appropriate length drop pipe attached to Peerless ceiling plate. Ceiling height of 9' requires an 18" drop pipe. The Projectors shall be provided by Harford County Public Schools.

EE. Provide rough ins and prep work for electric card reader at all exterior doors. Provide rough in with CAT6 cabling to the IDF for installation of Security Cameras on the exterior at each corner of the modular structure as required.

FF. Each classroom shall be provided with two, magnetic dry erase white boards. The teaching wall location shall provide space and blocking for interactive whiteboard provided by Harford County Public Schools.

1. 8' x 4'

Classrooms shall contain (1) whiteboard 8' long x 4' high complete with aluminum frame (upper frame to have a 1" wide continuous tack strip, and lower frame marker/eraser tray.

2. 4' x 4'

Classrooms shall contain (1) whiteboard 4' long x 4' high complete with aluminum frame (upper frame to have a 1" wide continuous tack strip, and lower frame marker/eraser tray.

a. Track Boards

- i. Provide two 4' wide tack boards on each side of the interactive whiteboard for each classroom. Tack boards to be natural cork.

b. Coat Rack

- ii. Each classroom must have 10' long coat rack with a 12" shelf above; manufacturer shall supply and install 30 coat hooks. Coat rack must be installed on end wall next to the closet 48" above finished floor.

GG. Toilet Room Accessories

- 1. Provide stainless steel mirrors, soap dispensers, towel dispensers, grab bars, waste disposal containers and toilet paper towel holders that meet or exceed the requirements in the American with Disabilities Act Accessibility Guidelines in placement, mounting heights and type.
 - a. Mirror: Provide one (1) mirror over each lavatory.
 - b. Soap Dispenser: Harford County Public Schools shall furnish to the Contractor for the manufacturer to install.
 - c. Paper Towel Dispenser: Harford County Public Schools shall furnish to the Contractor for the manufacturer to install.
 - d. Toilet Tissue Dispenser: Harford County Public Schools shall furnish to the Contractor for the manufacturer to install.
 - e. Feminine Napkin Dispenser: Provide one, no cost, unit in each restroom.
 - f. Grab Bars: Provide each handicap accessible toilet stall with grab bars to meet Applicable Codes.
 - g. Toilet Seats: Heavy Duty.
 - h. Toilet Partitions: Toilet stall partition and urinal screen shall be uniform color, vandal resistant finish, floor supported-head rail braced; bottom of panels not less than 12" above finish floor and overall panel height not less than 55". Provide urinal screen with continuous floor to ceiling end brace for stability. Secure toilet partition and urinal screen to wall using continuous aluminum 'U' bracket with tamper resistant hardware. Provide 24" wide in-swing doors at standard stalls and 36" wide out-swinging door with continuous spring- loaded hinge at accessible stall. All doors to be provided with rubber cushioned strike, rubber bumper and coat hook. All fasteners used in panel fabrication, securing hardware, and fastening accessories shall be tamper resistant stainless steel.

GG. Provide VCT floor covering. All toilet and custodial, electrical, plumbing, IT rooms shall have vinyl composition floor tile (VCT). All areas shall receive 1/8" thick x 4" tall vinyl cove base.

HH. Provide a center strip (saddle) that is utilized to cover the floor mate line seam between

units. Center strip shall comply to ADA requirements and be aluminum and is to be anchored utilizing screws. No nailing of the center strip is authorized.

- II. All doors shall have the appropriate fire rating as required by AHJ and applicable codes.
- JJ. Provide two (2) points of egress from the main corridors for each structure. Each leaf to be provided with a 4" x 24" insulated glass vision panel. All exterior doors shall be provided with Heavy Duty exit devices, lever design exterior trim with removable core, threshold, 3 mortise hinges, and closer. Provide electronic hardware (exit device or strike) to coordinate with Harford County Public Schools' provided card reader. Exterior walls to include rough-in for Harford County Public School's card reader.
- KK. Exit devices shall be a heavy duty Touchbar Exit Device, meeting ADA requirements.
- LL. There shall be one (1) point of egress per classroom. Classroom doors shall have 4"x24" vision panels glazed per Applicable Codes. All other doors are to be flush. Interior Teachers Closet door lockset shall be ADA compliant lever handle with privacy lockset. Electrical closet door shall have ADA compliant lever handle with privacy lockset.
- MM. All exterior door hardware shall be able to accept Schlage Everest/Primes D Family, Level 9G cores furnished and installed by Harford County Public Schools. Provide temporary cores.

Interior Doors: Grandmaster Key is to be provided for all interior doors.

- 1. All classrooms shall be provided with classroom function with intrusion lock feature [two cylinders each lock]. Classrooms will all be keyed separately. Classroom Closets are to be keyed alike with the classrooms.
 - 2. All toilet rooms shall be provided with a deadbolt (keyed on both sides) and push and pull trim.
 - 3. All closets and service rooms shall be provided with functioning locksets.
 - 4. Keys shall be transmitted to HCPS with a key chart.
- NN. The roof shall lap at all match lines. Insulate roof with code acceptable rigid insulation.
 - OO. A continuous 5" (K) white aluminum gutter, which will empty into 2" X 3" downspouts, shall be installed on each side of the unit so that they will slope to both downspouts. Downspouts to be oriented to discharge water into swales away from pathways and under the building. The storm water shall be controlled as to not impact the structure(s) or access.
 - PP. Exterior walls shall be the best of quality and appearance meeting all codes and regulations for waterproof integrity. Interior surface of exterior walls shall receive 5/8-inch thick Type-X gypsum board with vinyl wall covering and batten strips. All exterior

walls to be insulated full height.

- QQ. Interior walls shall be constructed with 5/8-inch thick Type-X gypsum with vinyl wall covering and batten strips. All interior walls to be insulated full height for sound. Battens shall be sealed to the wall.
- RR. Provide 7/16" thick LP Building Products' Smart Panel skirting (or approved equal) from the belt line of the modular classroom structure to grade on all sides of the modular structures. Provide skirting panels in lengths as required to eliminate horizontal joints in panels. Contractor shall provide heavy duty mill finish aluminum louvers with insect screen secured to skirt framing to ventilate crawl space based on applicable code requirements. All skirts shall be secured to the adjacent structure.
- SS. Framing will be constructed per Applicable Codes and as required to support transportation and setting of the units.
- TT. Design of floor system, size, spacing, structural capacity, and other properties shall be by the manufacturer.
- UU. Each classroom shall be provided with windows with insect screen. Windows shall be solid vinyl construction, approx. 36" wide by 60" tall, with clear insulating low-emissivity glazing. Provide each exterior window with 1" horizontal vinyl slats and cords to control light, no plastic wand.
- VV. Suspended T-grid fissure with 2x4 lay-in panels at 9'-0" throughout all areas. Devices will be installed in ceiling tile. Coordinate grid layout and mate grid lines between unit sections.

2.3 FOUNDATIONS

- A. The manufacturer shall be responsible for providing the foundation to accommodate the unit(s) and site.
- B. The manufacturer shall be responsible to provide foundation design, sizes, location and required reinforcing. The Delegated-Design shall meet current Applicable Codes.

2.4 DECKS, PORCHES, RAMPS, STAIRS AND SIDEWALKS

- A. All decks, porches, ramps, and stairs shall receive skirting to fully enclose areas beneath. Skirting shall be Smart Panel by LP Building Products, 7/16" thick, 48" nominal width and provided in length as required to eliminate horizontal joints (or approved equal). Panels shall be pre-primed with grooves at 8" on center. Paint or stain skirting to match modular structure.
- B. Decks, Porches, Ramps and Stairs shall be constructed so that a clear dimension of 5' inside clear between vertical or horizontal members as provided. Aluminum handrails may encroach on this clear dimension or as required by code. Landings shall be not less

than 5' long. All access walkways are to be asphalt with 4" CR6 stone base and 4" asphalt. Locations of walkways are to be as required for layout of units being provided. Walkways are to be ADA Compliant, 5% max slope with 2% cross slope max. Minimal width 5'-0" Typical.

- C. Pressure treated lumber may be utilized in lieu of aluminum. If manufacturer chooses to utilize pressure treated lumber, all vertical supports must be anchored into the ground with footings below grade, all walking surfaces shall be non-slip. All handrails shall be either PVC or Aluminum and top rails shall be of a composite material.

PART 3 – EXECUTION

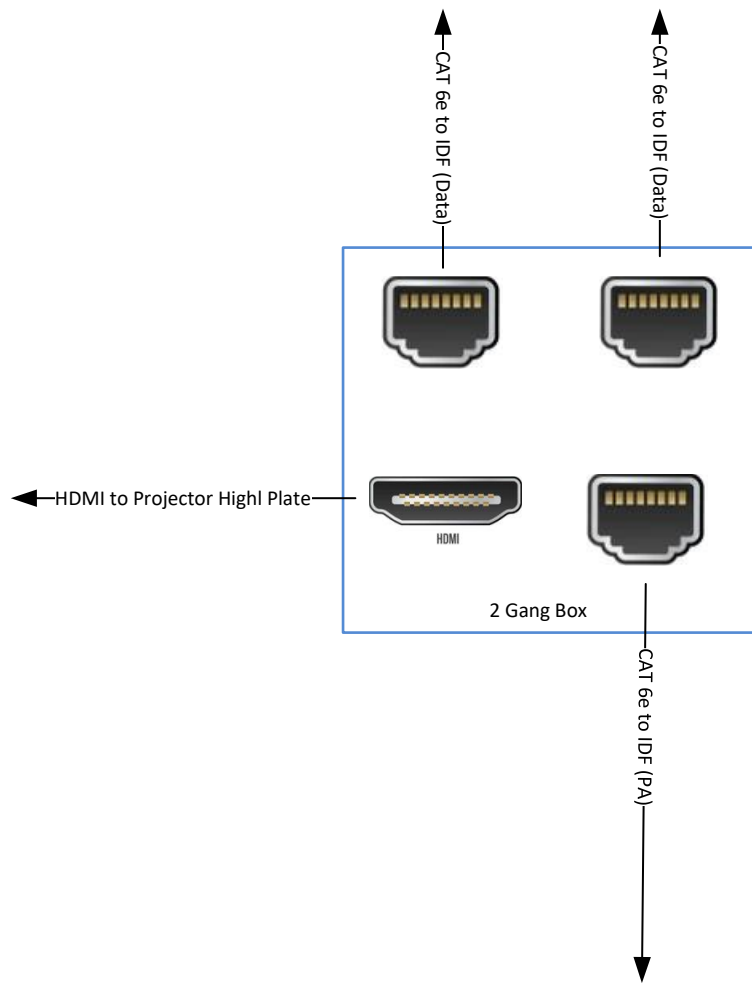
- 3.1 The manufacturer shall be responsible for applying for and obtaining all the necessary standard permits for the proper and legal transportation of the portable modular classrooms. The manufacturer shall submit a copy of all standard moving permits to the Engineer and Owner prior to moving each modular structure (s).
- 3.2 All truck and automobile traffic is to be confined to the routes and staging areas designated and approved by Harford County Public Schools. Every effort shall be made to keep noise, dust, vibration, and other activities to a minimum.
- 3.3 The manufacturer shall be responsible for all necessary permits and inspections required by local government codes and regulations. A copy of the approved inspection form shall be submitted to the engineer and HCPS. The manufacturer shall provide a letter signed and sealed by a Professional Engineer licensed in the state of Maryland and acceptable the AHJ in the event of inspections not taking place.
- 3.4 The Contractor shall examine the site to verify dimensions and existing conditions prior to transporting the modular structure. The Contractor shall notify the Engineer immediately, of any conditions which may vary from those specified in the contract documents.
- 3.5 The Contractor shall inspect each modular structure for any structural or other problems which may exist prior to transporting the structure. The manufacturer shall correct any issues prior to transporting the modular structure. The interior and exterior of the portable modular structure shall be fully protected for transport. The Contractor shall notify the Engineer when the structure is in place at the site so they can inspect the joints.
- 3.6 Properly brace and/or support the portable modular classroom being moved. Furnish and install temporary braces on the open side of each portable modular classroom to maintain the portable modular classrooms' structural stability, as needed, during transporting. After transporting, bracing furnished shall be removed and disposed of. Any damages caused to the portable modular classroom during transport shall be repaired immediately to the satisfaction of the HCPS Project Manager.

- 3.7 Provide a tarpaulin and covering the open side of each half of a portable modular classroom with the tarpaulin while in transit to the site.
- 3.8 The Contractor shall be responsible for rigging and placement of unit(s) on the foundation.
- 3.9 Install the modular structure on the required foundation piers. Structure shall be level and square and aligned for bolting the structure together.
- 3.10 Locate all active utilities traversing the site or areas of off-site work and determine the requirements for protection. Obtain utilities location verification from local "Miss Utility" service and private utility locator and provide whatever additional investigation is necessary to verify utility locations before starting any excavation.
- 3.11 Take all measures necessary to protect structures, utilities, power and utility poles, signs, fencing, curbs, paving, trees, and vegetation which are indicated to remain. Any damage shall be repaired to a "like new" condition or replaced at the Owner's discretion at no additional cost. Barricade open excavations and provide warning lights from dusk to dawn each day.
- 3.12 Assemble all modular structures to make them secure, complete, and fully functional for use, including but not limited to, siding, roofing, floor finishes, wall finishes, ceiling installation, interconnection of electrical. The manufacturer shall include drawings or specifications to include but not be limited to support blocks, structure, and size.
- 3.13 Contractor shall provide any required hurricane tie- downs per manufacturer's specifications and all local codes.
- 3.14 The manufacturer shall provide adequate protection and facilities to safeguard the modular structure(s), walks, grounds, roadways, etc. from damage and to safeguard all persons on or about the premises. Any damage to Harford County Public Schools property, building, walks, grounds, roadways, etc.) caused by the manufacturer or any of the their subcontractors shall be immediately and expertly repaired to the satisfaction of the Project Manager of The Office of Planning and Construction of Harford County Public Schools. All repairs shall be made at the manufacturer's expense.
- 3.15 The manufacturer shall be required to clean up their work area and any adjacent work areas at the end of each work shift. These areas shall be clean to the satisfaction of the Project Manager. The accumulation of debris in the modular structure(s) or on the surrounding grounds will not be permitted. All debris shall be disposed of offsite at the expense of the manufacturer.
- 3.16 Equipment maintenance and filter changes shall be the responsibility of the Contractor. The modular structure shall be maintained/cleaned by Harford County Public Schools throughout the project. However, it is also to be understood that the units will be used by students, teachers, and other HCPS personnel and "normal wear and tear" is to be expected. Any failure of a component shall be the responsibility of the manufacturer.
- 3.17 The modular structure(s) shall be inspected by the manufacturer, Owner and Engineer to mutually

agree upon the type of repairs needed to the structure(s). The manufacturer shall provide a copy of their inspection form that will be used for this inspection process to HCPS upon initial delivery of the unit to the site.

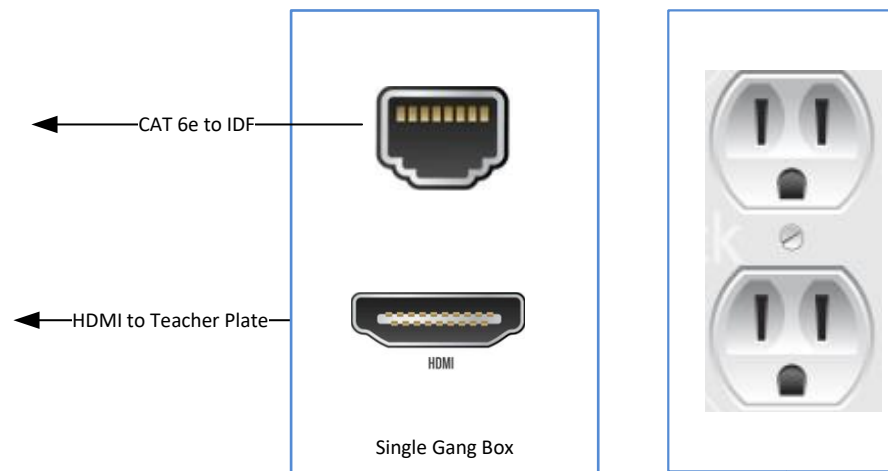
- 3.18 Manufacturer shall be responsible for the disassembly and removal of the structure(s) that includes, but is not limited to, removal of all skirting, reinstallation of tongues, reinstallation of all wheels and axels, disassembly of unit, preparation for transport, removal of unit from site, removal of piers, and structural encumbrances, clean up and removal of all debris, restoration of grounds, to the satisfaction of HCPS and the Engineer. Removal of inground foundations shall be by the Contractor. Utilities shall be removed back to their source.
- 3.19 The Contractor is required to achieve Type 1 U+O per milestones in approved schedule and per General Conditions.

END OF SECTION



Quad Electric

Teacher Wall Plate T



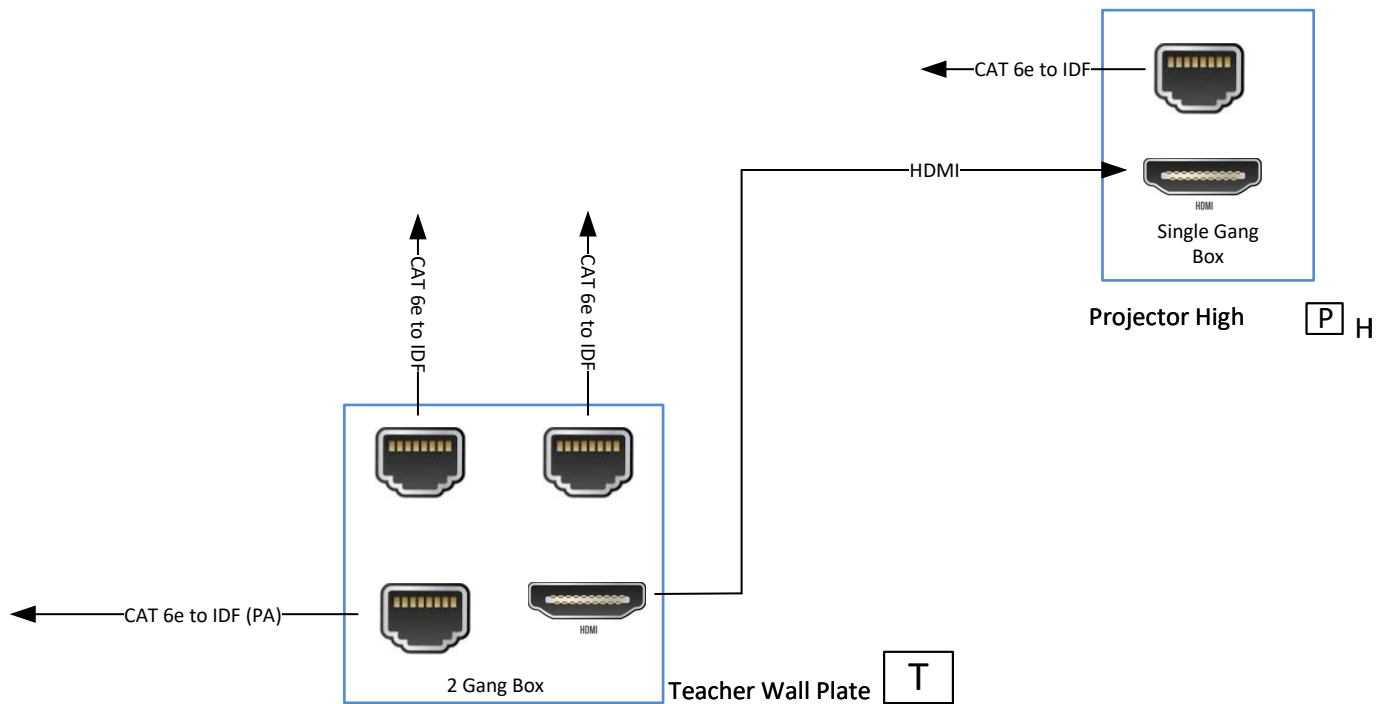
Duplex Electric

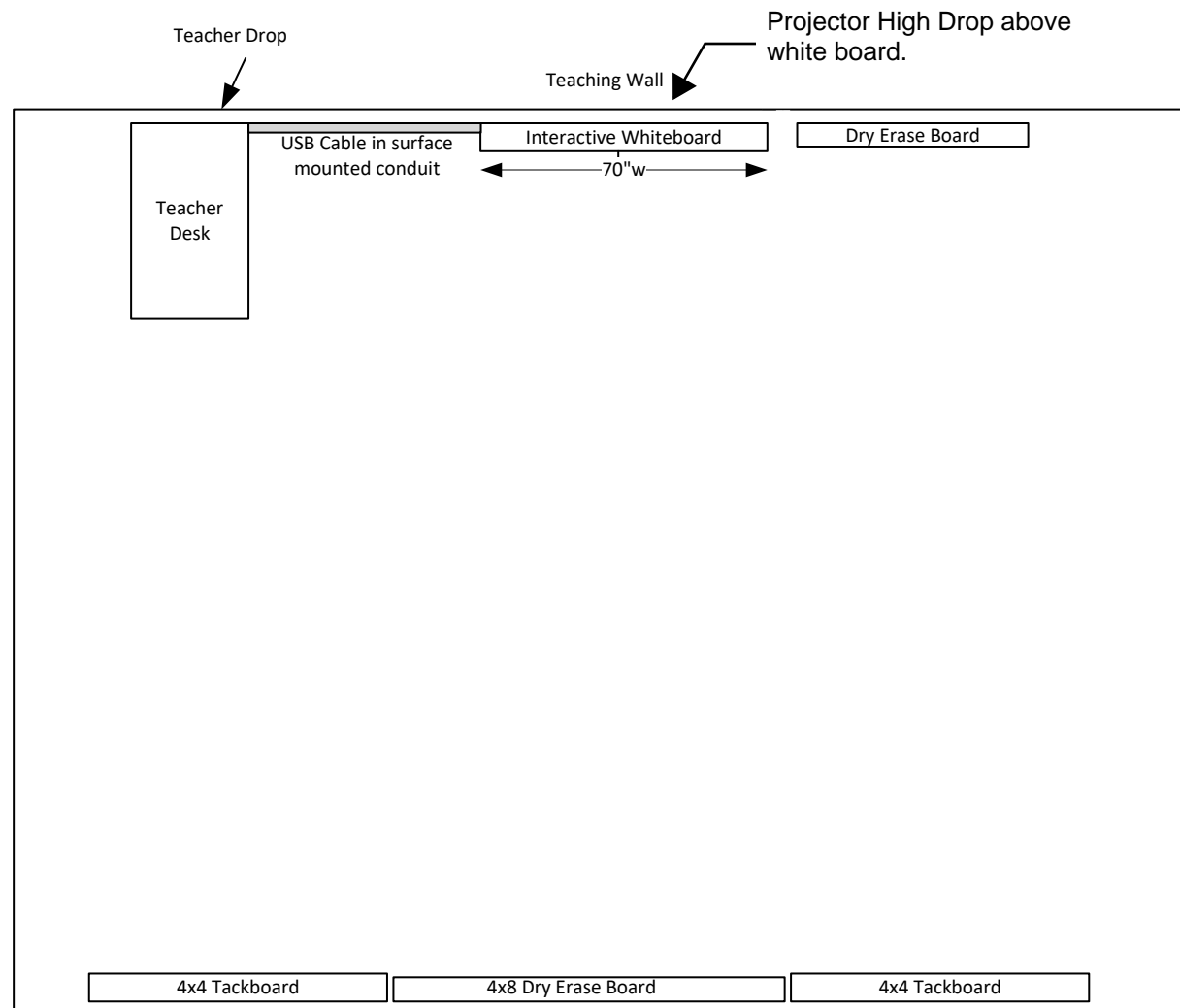
Projector high

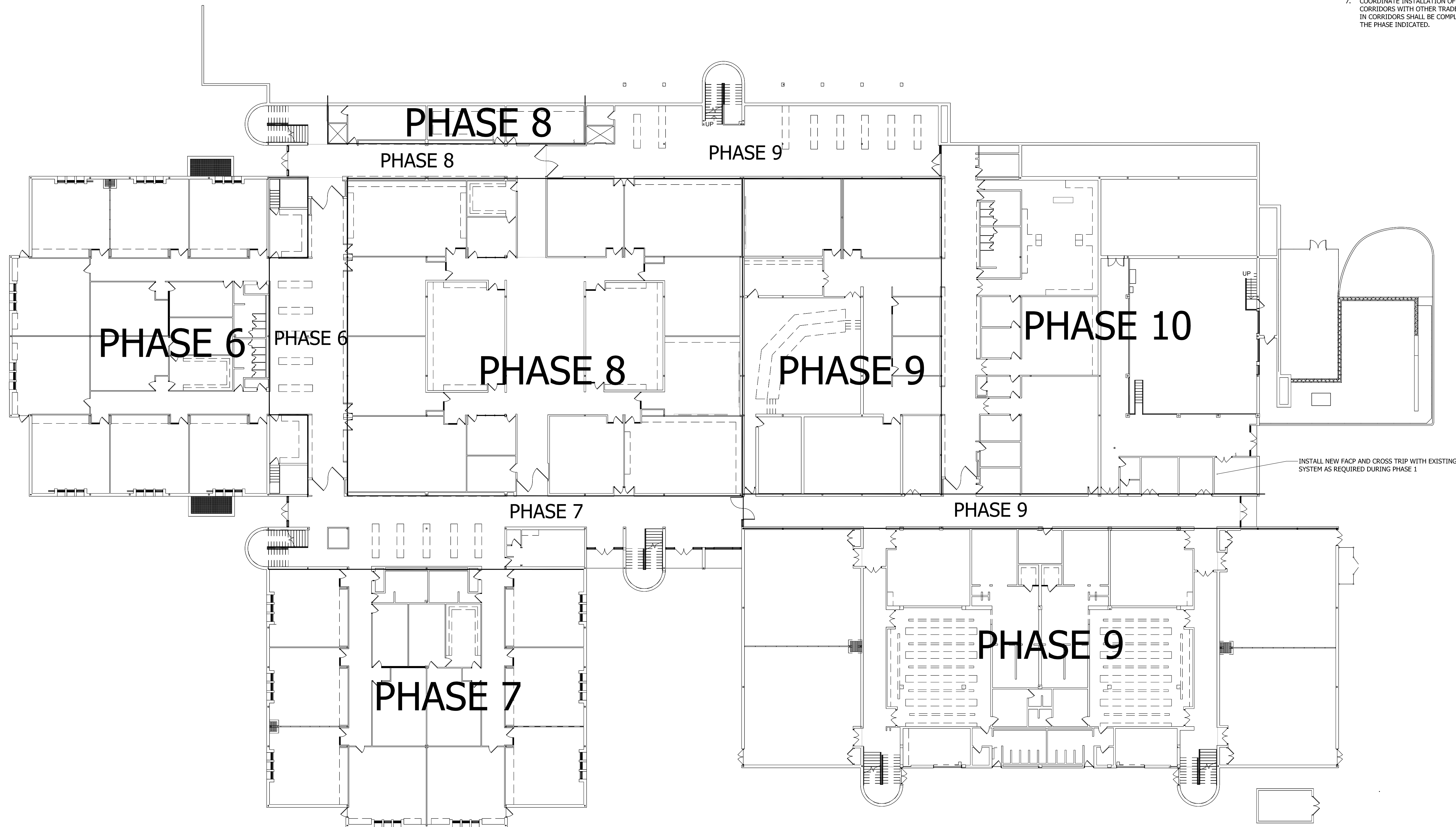
P

 H

Note: Proj high drop and electric installed on wall behind short throw projector/white board location.







GENERAL NOTES:

- PERFORM ALL ELECTRICAL WORK WITHIN THE PHASE CONSTRUCTION AREA INDICATED DURING THAT PHASE UON. ALL WORK REQUIRED TO BE ROUTED THROUGH CONSTRUCTION AREAS SERVING SUBSEQUENT PHASES SHALL BE INSTALLED DURING THE EARLIER PHASE AND CAPPED FOR FUTURE EXTENSION.
- ELECTRICAL WORK IN AREAS WHERE MECHANICAL AND ARCHITECTURAL WORK ARE TAKING PLACE SHALL BE PERFORMED AT THE SAME TIME. REFER TO MECHANICAL/ARCHITECTURAL DRAWINGS FOR SPECIFIC CONSTRUCTION PHASING INFORMATION.
- THE EXISTING FIRE ALARM SHALL REMAIN IN OPERATION DURING ALL PHASES OF CONSTRUCTION. REMOVE PORTIONS OF THE EX FIRE ALARM SYSTEM ONLY AFTER NEW SYSTEM IS INSTALLED AND TESTED AT THE END OF EACH PHASE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING, LOCATING AND TRACING ALL EXISTING CIRCUITS AND FEEDERS. CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING FEEDERS AND CIRCUITS DURING CONSTRUCTION. PROVIDE WIRING AND CONDUIT AS REQUIRED TO MAINTAIN ALL EXISTING FEEDERS AND CIRCUITS.
- ALL SERVICES (POWER, SECURITY, FIRE ALARM, TELE/DATA, ETC) SHALL REMAIN ACTIVE IN AREAS OF THE BUILDING OUTSIDE THE CONSTRUCTION AREA.
- SUITABLY SUPPORT ALL EXISTING ELECTRICAL, COMMUNICATIONS, FIRE ALARM WIRING AND DEVICES AS REQUIRED IN CORRIDORS WHERE CEILINGS ARE REMOVED TO ACCOMODATE CONSTRUCTION ACTIVITIES.
- COORDINATE INSTALLATION OF NEW WORK IN CORRIDORS WITH OTHER TRADES. ELECTRICAL WORK IN CORRIDORS SHALL BE COMPLETED AT THE END OF THE PHASE INDICATED.

REVISIONS			
NO.	DATE	DESCRIPTION	
1	3/7/24	ADDENDUM NO. 1	
2	3/14/24	ADDENDUM NO. 2	

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WO# 23043

PROJECT MANAGER EMP

DESIGNER EMP

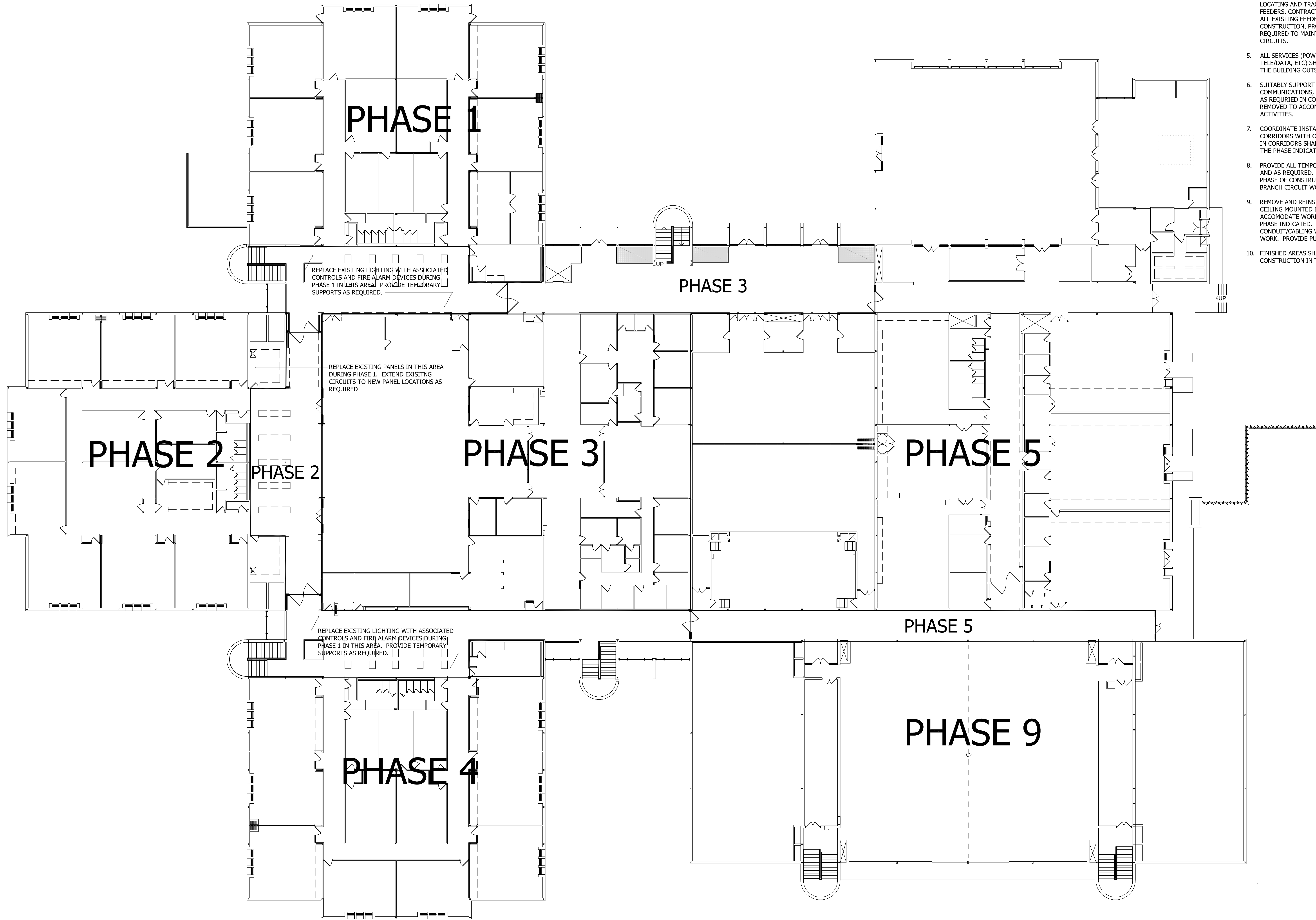
DATE 2/26/2024

LOWER LEVEL ELECTRICAL PHASING PLAN
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT. ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E001
PSC-12.006

1 LOWER LEVEL ELECTRICAL PHASING PLAN
E001 NO SCALE



GENERAL NOTES:

- PERFORM ALL ELECTRICAL WORK WITHIN THE PHASE CONSTRUCTION AREA INDICATED DURING THAT PHASE UNLESS OTHERWISE NOTED. ALL WORK REQUIRED TO BE ROUTED THROUGH CONSTRUCTION AREAS SERVING SUBSEQUENT PHASES SHALL BE INSTALLED DURING THE EARLIER PHASE AND CAPPED FOR FUTURE EXTENSION.
- ELECTRICAL WORK IN AREAS WHERE MECHANICAL AND ARCHITECTURAL WORK ARE TAKING PLACE SHALL BE PERFORMED AT THE SAME TIME. REFER TO MECHANICAL/ARCHITECTURAL DRAWINGS FOR SPECIFIC CONSTRUCTION PHASING INFORMATION.
- THE EXISTING FIRE ALARM SHALL REMAIN IN OPERATION DURING ALL PHASES OF CONSTRUCTION. REMOVE PORTIONS OF THE EX FIRE ALARM SYSTEM ONLY AFTER NEW SYSTEM IS INSTALLED AND TESTED AT THE END OF EACH PHASE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING, LOCATING AND TRACING ALL EXISTING CIRCUITS AND FEEDERS. CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING FEEDERS AND CIRCUITS DURING CONSTRUCTION. PROVIDE WIRING AND CONDUIT AS REQUIRED TO MAINTAIN ALL EXISTING FEEDERS AND CIRCUITS.
- ALL SERVICES (POWER, SECURITY, FIRE ALARM, TELEPHONE, ETC.) SHALL REMAIN ACTIVE IN AREAS OF THE BUILDING OUTSIDE THE CONSTRUCTION AREA.
- SUITABLY SUPPORT ALL EXISTING ELECTRICAL, COMMUNICATIONS, FIRE ALARM WIRING AND DEVICES AS REQUIRED IN CORRIDORS WHERE CEILINGS ARE REMOVED TO ACCOMMODATE CONSTRUCTION ACTIVITIES.
- COORDINATE INSTALLATION OF NEW WORK IN CORRIDORS WITH OTHER TRADES. ELECTRICAL WORK IN CORRIDORS SHALL BE COMPLETED AT THE END OF THE PHASE INDICATED.
- PROVIDE ALL TEMPORARY CONNECTIONS AS INDICATED AND AS REQUIRED. REMOVE DURING THE DESIGNATED PHASE OF CONSTRUCTION. TEMPORARY FEEDERS AND BRANCH CIRCUIT WORK MAY BE TYPE MC CABLE.
- REMOVE AND REINSTALL EXISTING CEILINGS AND CEILING MOUNTED DEVICES AS REQUIRED TO ACCOMMODATE WORK OUTSIDE THE CONSTRUCTION PHASE INDICATED. COORDINATE ROUTING OF CONDUIT/CABLING WITH EXISTING AND PROPOSED WORK. PROVIDE PULLBOXES, ETC. AS REQUIRED.
- FINISHED AREAS SHALL NOT BE DISTURBED AFTER CONSTRUCTION IN THAT PHASE IS COMPLETE.

REVISIONS		NO.	DATE	DESCRIPTION
1	2	1	3/7/24	ADDENDUM NO. 1
		2	3/14/24	ADDENDUM NO. 2

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WO# 23043
PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

UPPER LEVEL ELECTRICAL PHASING PLAN
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT. ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

1
E002
PSC-12.006

1 UPPER LEVEL - ELECTRICAL PHASING PLAN
E002 NO SCALE

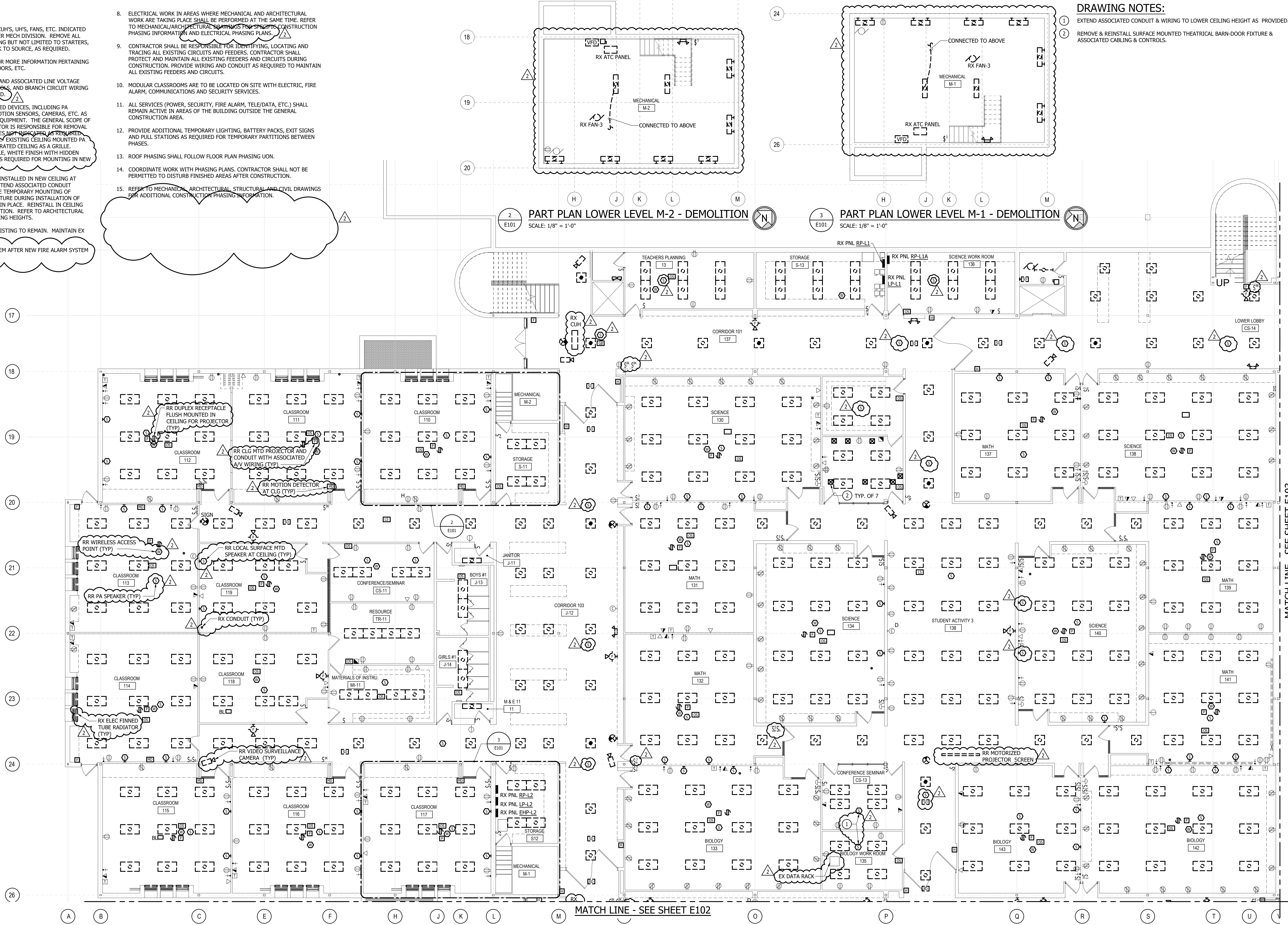
GENERAL NOTES:

- HVAC EQUIPMENT SUCH AS AHU'S, UV'S, CUH'S, UH'S, FANS, ETC. INDICATED TO BE REMOVED WILL BE REMOVED UNDER MECH DIVISION. REMOVE ALL ASSOCIATED ELECTRICAL WORK INCLUDING BUT NOT LIMITED TO STARTERS, DISCONNECTS, CONDUIT AND WIRE, BACK TO SOURCE, AS REQUIRED.
- REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION PERTAINING TO DEMOLITION OF CEILINGS, WALLS, DOORS, ETC.
- REMOVE ALL INTERIOR LIGHT FIXTURES, AND ASSOCIATED LINE VOLTAGE SWITCHES, AUTOMATIC LIGHTING CONTROLS, AND BRANCH CIRCUIT WIRING WITHIN ROOM UNLESS OTHERWISE NOTED.
- REMOVE AND REINSTALL CEILING MOUNTED DEVICES, INCLUDING PA SPEAKERS, WIRELESS ACCESS POINTS, MOTION SENSORS, CAMERAS, ETC. AS REQUIRED FOR INSTALLATION OF HVAC EQUIPMENT. THE GENERAL SCOPE OF CEILING WORK IS INDICATED. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND RELOCATION OF ADDITIONAL DEVICES NOT INDICATED AS REQUIRED FOR INSTALLATION OF HVAC EQUIPMENT. EXISTING CEILING MOUNTED PA SPEAKERS TYPICALLY UTILIZE THE PERFORATED CEILING AS A GRILLE. PROVIDE 8" ROUND STEEL SPEAKER GRILLE, WHITE FINISH WITH HIDDEN STUDS AND ALL MOUNTING HARDWARE AS REQUIRED FOR MOUNTING IN NEW LAY-IN CEILING.
- CEILING MOUNTED DEVICES SHALL BE REINSTALLED IN NEW CEILING AT LOWER HEIGHT IN AREAS INDICATED. EXTEND ASSOCIATED CONDUIT AND/OR WIRING AS REQUIRED. PROVIDE TEMPORARY MOUNTING OF DEVICES AT LOWER HEIGHT FROM STRUCTURE DURING INSTALLATION OF HVAC EQUIPMENT WHEN CEILING IS NOT IN PLACE. REINSTALL IN CEILING UPON COMPLETION OF CEILING INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING AND NEW CEILING HEIGHTS.
- EX EXTERIOR LIGHTING FIXTURES ARE EXISTING TO REMAIN. MAINTAIN EX BRANCH CIRCUIT AND CONTROLS.
- REMOVE THE EXISTING FIRE ALARM SYSTEM AFTER NEW FIRE ALARM SYSTEM IS INSTALLED AND FULLY FUNCTIONAL.

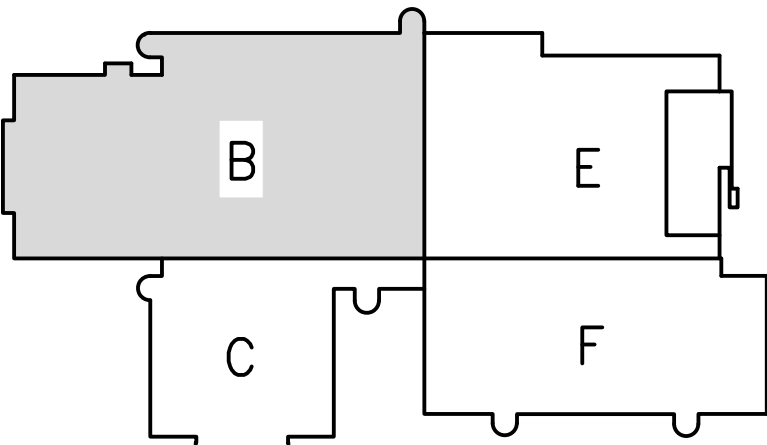
- ELECTRICAL WORK IN AREAS WHERE MECHANICAL AND ARCHITECTURAL WORK ARE TAKING PLACE SHALL BE PERFORMED AT THE SAME TIME. REFER TO MECHANICAL/ARCHITECTURAL DRAWINGS FOR CONSTRUCTION PHASING INFORMATION AND ELECTRICAL PHASING PLANS.
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- MODULAR CLASSROOMS ARE TO BE LOCATED ON SITE WITH ELECTRIC, FIRE ALARM, COMMUNICATIONS AND SECURITY SERVICES.
- ALL SERVICES (POWER, SECURITY, FIRE ALARM, TELE/DATA, ETC.) SHALL REMAIN ACTIVE IN AREAS OF THE BUILDING OUTSIDE THE GENERAL CONSTRUCTION AREA.
- PROVIDE ADDITIONAL TEMPORARY LIGHTING, BATTERY PACKS, EXIT SIGNS AND PULL STATIONS AS REQUIRED FOR TEMPORARY PARTITIONS BETWEEN PHASES.
- ROOF PHASING SHALL FOLLOW FLOOR PLAN PHASING UON.
- COORDINATE WORK WITH PHASING PLANS. CONTRACTOR SHALL NOT BE PERMITTED TO DISTURB FINISHED AREAS AFTER CONSTRUCTION.
- REFER TO MECHANICAL, ARCHITECTURAL, STRUCTURAL AND CIVIL DRAWINGS FOR ADDITIONAL CONSTRUCTION PHASING INFORMATION.

DRAWING NOTES:

- EXTEND ASSOCIATED CONDUIT & WIRING TO LOWER CEILING HEIGHT AS PROVIDED.
- REMOVE & REINSTALL SURFACE MOUNTED THEATRICAL BARN-DOOR FIXTURE & ASSOCIATED CABLEING & CONTROLS.



1 LOWER LEVEL AREA B - DEMOLITION
E101 SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

REVISIONS		DESCRIPTION
NO.	DATE	
1	3/7/24	ADDENDUM NO. 1
2	3/14/24	ADDENDUM NO. 2

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WO# 23043
PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

LOWER LEVEL AREA B - DEMOLITION
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

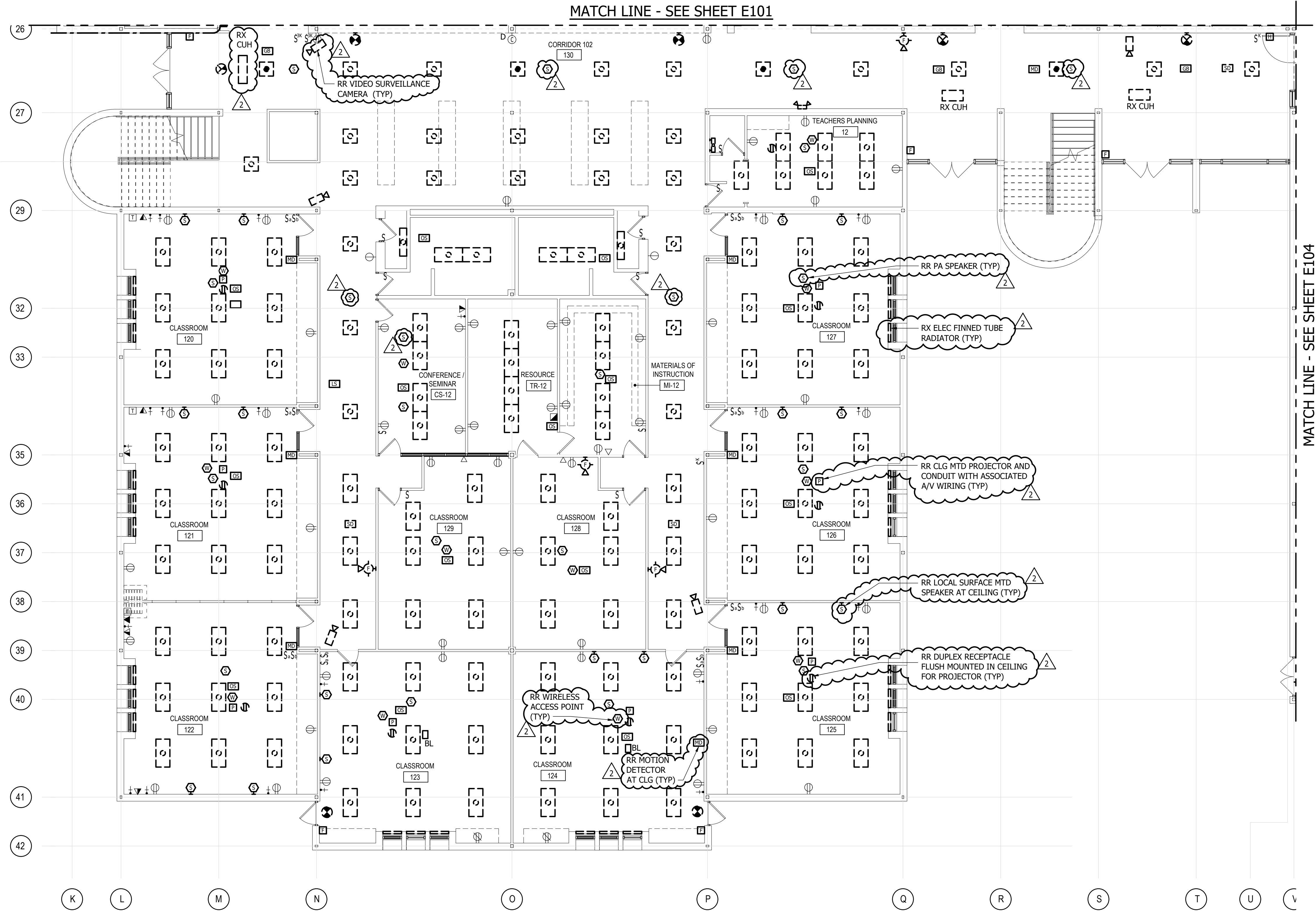
BID SUBMISSION

E101

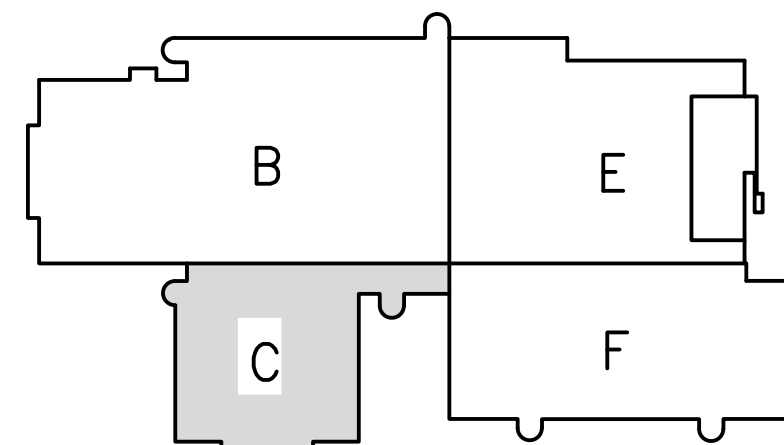
PSC-12.006

GENERAL NOTES:

- HVAC EQUIPMENT SUCH AS AHU'S, UV'S, CUH'S, UH'S, FANS, ETC. INDICATED TO BE REMOVED WILL BE REMOVED UNDER MECH DIVISION. REMOVE ALL ASSOCIATED ELECTRICAL WORK INCLUDING BUT NOT LIMITED TO STARTERS, DISCONNECTS, CONDUIT AND WIRE, BACK TO SOURCE, AS REQUIRED.
- REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION PERTAINING TO DEMOLITION OF CEILINGS, WALLS, DOORS, ETC.
- REMOVE ALL INTERIOR LIGHT FIXTURES, AND ASSOCIATED LINE VOLTAGE SWITCHES, AUTOMATIC SWITCHES, CONTROLS, AND BRANCH CIRCUIT WIRING WITHIN ROOM UNLESS OTHERWISE NOTED.
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- PROVIDE ADDITIONAL TEMPORARY LIGHTING, BATTERY PACKS, EXIT SIGNS AND PULL STATIONS AS REQUIRED FOR TEMPORARY PARTITIONS BETWEEN PHASES.
- ROOF PHASING SHALL FOLLOW FLOOR PLAN PHASING UON.
- COORDINATE WORK WITH PHASING PLANS. CONTRACTOR SHALL NOT BE PERMITTED TO DISTURB FINISHED AREAS AFTER CONSTRUCTION.
- REFER TO MECHANICAL, ARCHITECTURAL, STRUCTURAL AND CIVIL DRAWINGS FOR ADDITIONAL CONSTRUCTION PHASING INFORMATION.



1
E102
LOWER LEVEL AREA C - DEMOLITION
SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

REVISIONS		NO.	DATE	DESCRIPTION
1	A	1	3/7/24	ADDENDUM NO. 1
		2	3/14/24	ADDENDUM NO. 2

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WO# 23043
PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

LOWER LEVEL AREA C - DEMOLITION
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.


BID SUBMISSION

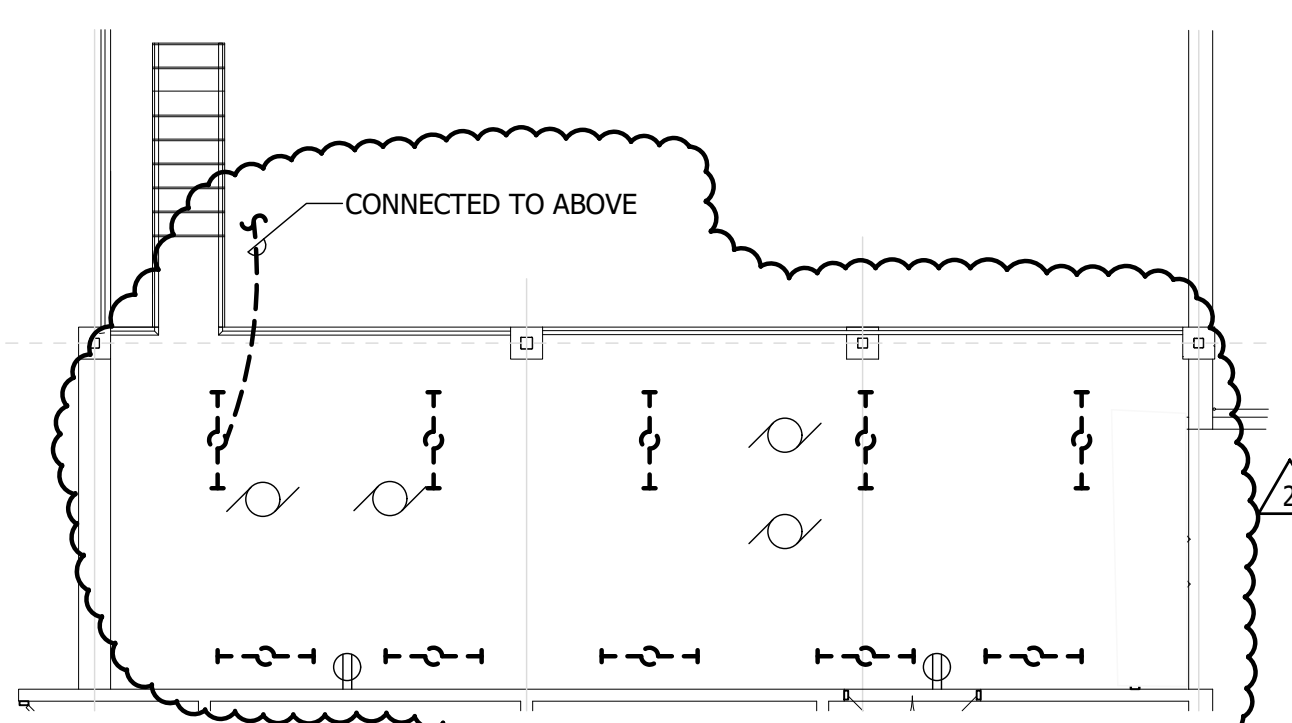
E102

PSC-12.006

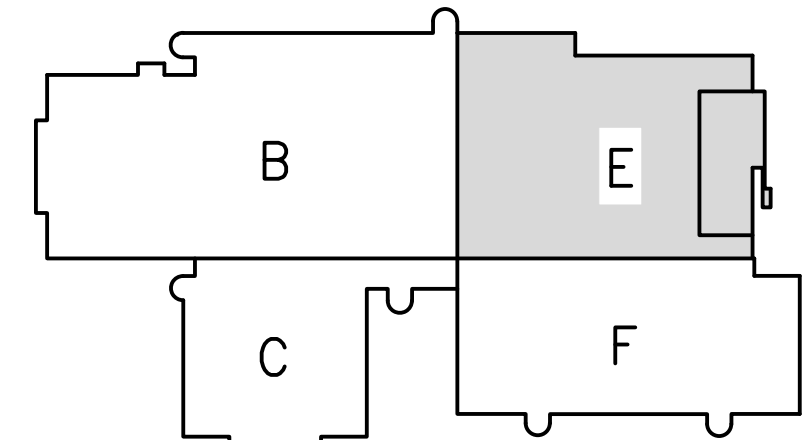
① RELOCATE PUMPS TEMPORARILY & REMOVE

1. HVAC EQUIPMENT SUCH AS AHU's, UV's, CHU's, UV's, FANS, ETC. INDICATED TO BE REMOVED WILL BE REMOVED UNDER MECH DIVISION. REMOVE ALL ASSOCIATED ELECTRICAL WORK INCLUDING BUT NOT LIMITED TO STARTERS, DISCONNECTS, CONDUIT AND WIRE, BACK TO SOURCE, AS REQUIRED.
2. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION PERTAINING TO DEMOLITION OF CEILINGS, WALLS, DOORS, ETC.
3. REMOVE ALL INTERIOR LIGHT FIXTURES, AND ASSOCIATED LINE VOLTAGE SWITCHES, AUTOMATIC LIGHTING CONTROLS, AND BRANCH CIRCUIT WIRING WITHIN ROOMS UNLESS OTHERWISE NOTED.
4. REMOVE AND REINSTALL CEILING MOUNTED DEVICES, INCLUDING PA SPEAKERS, WIRELESS ACCESS POINTS, MOTION SENSORS, CAMERAS, ETC. AS REQUIRED FOR INSTALLATION OF HVAC EQUIPMENT. THE GENERAL SCOPE OF CEILING WORK IS INDICATED. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REINSTALLATION OF ALL SUCH DEVICES NOT INDICATED AS TO BE REMOVED. FOR INSTALLATION OF ELECTRICAL WORK, EXISTING CEILING MOUNTED PA SPEAKERS SHOULD UTILIZE THE PERFORATED CEILING AS A GRILLE. PROVIDE 8" ROUND STEEL SPEAKER GRILLE, WHITE FINISH WITH HIDDEN STUDS AND ALL MOUNTING HARDWARE AS REQUIRED FOR MOUNTING IN NEW LAY-IN CEILING.
5. CEILING MOUNTED DEVICES SHALL BE REINSTALLED IN NEW CEILING AT LOWER HEIGHT IN AREAS INDICATED. EXTEND ASSOCIATED CONDUIT AND/OR WIRING AS REQUIRED. PROVIDE TEMPORARY MOUNTING OF DEVICES AT LOWER HEIGHT FROM STRUCTURE DURING INSTALLATION OF HVAC EQUIPMENT WHEN CEILING IS NOT IN PLACE. REINSTALL IN CEILING UPON COMPLETION OF CEILING INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING AND NEW CEILING HEIGHTS.
6. EX EXTERIOR LIGHTING FIXTURES ARE EXISTING TO REMAIN. MAINTAIN BRANCH CIRCUIT AND CONTROLS.
7. REMOVE THE EXISTING FIRE ALARM SYSTEM AFTER NEW FIRE ALARM SYSTEM IS INSTALLED AND FULLY FUNCTIONAL.

8. ELECTRICAL WORK IN AREAS WHERE MECHANICAL AND ARCHITECTURAL WORK ARE TAKING PLACE SHALL BE PERFORMED AT THE SAME TIME. REFER TO MECHANICAL/ARCHITECTURAL DRAWINGS FOR MECHANICAL PROTECTION PHASING INFORMATION AND ELECTRICAL PHASING PLANS. 
9. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING, LOCATING AND TRACING ALL EXISTING CIRCUITS AND FEEDERS. CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING FEEDERS AND CIRCUITS DURING CONSTRUCTION. PROVIDE WIRING AND CONDUIT AS REQUIRED TO MAINTAIN ALL EXISTING FEEDERS AND CIRCUITS.
10. MODULAR CLASSROOMS ARE TO BE LOCATED ON SITE WITH ELECTRIC, FIRE ALARM, COMMUNICATIONS AND SECURITY SERVICES.
11. ALL SERVICES (POWER, SECURITY, FIRE ALARM, TELE/DATA, ETC.) SHALL REMAIN ACTIVE IN AREAS OF THE BUILDING OUTSIDE THE GENERAL CONSTRUCTION AREA.
12. PROVIDE ADDITIONAL TEMPORARY LIGHTING, BATTERY PACKS, ECT SIGNS AND PULP STATIONS AS REQUIRED FOR TEMPORARY PARTITIONS BETWEEN PHASES.
13. ROOF PHASING SHALL FOLLOW FLOOR PLAN PHASING UON.
14. COORDINATE WORK WITH PHASING PLANS. CONTRACTOR SHALL NOT BE PERMITTED TO DISTURB FINISHED AREAS AFTER CONSTRUCTION.
15. REFER TO MECHANICAL, ARCHITECTURAL, STRUCTURAL AND CIVIL DRAWINGS FOR ADDITIONAL CONSTRUCTION PHASING INFORMATION.



PART PLAN BOILER ROOM
AREA BELOW GALLERY - DEMOLITION
SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

REVISIONS		
NO.	DATE	DESCRIPTION
1	3/7/24	ADDENDUM NO. 1
2	3/14/24	ADDENDUM NO. 2

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WO# 23043

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DESIGNER EMP

DATE 2/26/2024

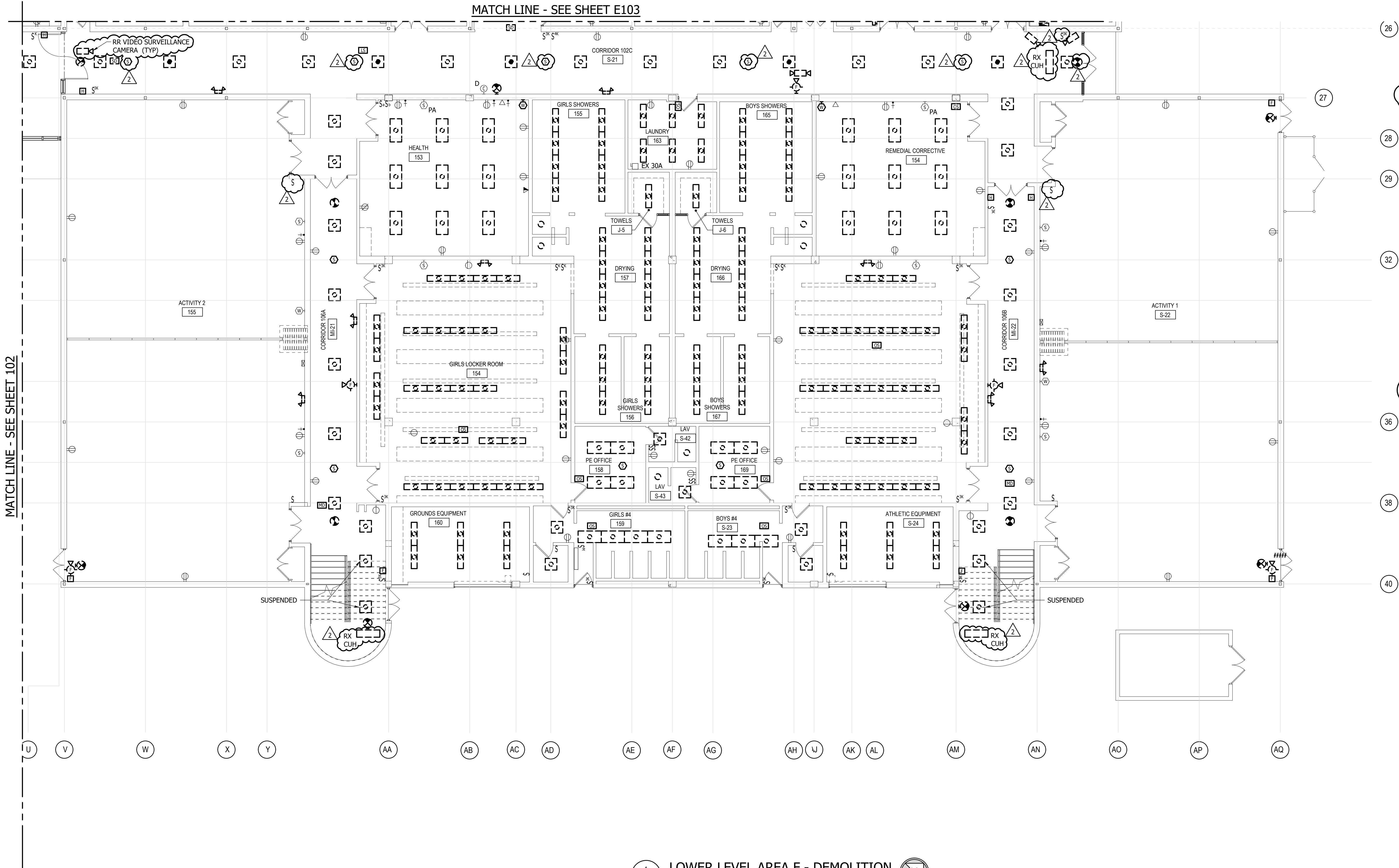
LOWER LEVEL AREA E - DEMOLITION

ABERFARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
11111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E103

PSC-12.006



1
E104
LOWER LEVEL AREA F - DEMOLITION
SCALE: 1/8" = 1'-0"

- GENERAL NOTES:**
1. HVAC EQUIPMENT SUCH AS AHU'S, UV'S, CUH'S, UH'S, FANS, ETC. INDICATED TO BE REMOVED WILL BE REMOVED UNDER MECH DIVISION. REMOVE ALL ASSOCIATED ELECTRICAL WORK INCLUDING BUT NOT LIMITED TO STARTERS, DISCONNECTS, CONDUIT AND WIRE, BACK TO SOURCE, AS REQUIRED.
 2. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION PERTAINING TO DEMOLITION OF CEILINGS, WALLS, DOORS, ETC.
 3. REMOVE ALL INTERIOR LIGHT FIXTURES, AND ASSOCIATED LINE VOLTAGE SWITCHES, AUTOMATIC LIGHTING CONTROLS, AND BRANCH CIRCUIT WIRING WITHIN ROOM UNLESS OTHERWISE NOTED.
 4. REMOVE AND REINSTALL CEILING MOUNTED DEVICES, INCLUDING PA SPEAKERS, WIRELESS ACCESS POINTS, MOTION SENSORS, CAMERAS, ETC. AS REQUIRED FOR INSTALLATION OF HVAC EQUIPMENT. THE GENERAL SCOPE OF CEILING WORK IS INDICATED. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND RELOCATION OF ADDITIONAL DEVICES NOT INDICATED AS REQUIRED. PROVIDE 6" ROUND STEEL SPEAKER GRILLE, WHITE FINISH WITH HIDDEN STUDS AND ALL MOUNTING HARDWARE AS REQUIRED FOR MOUNTING IN NEW LAY-IN CEILING.
 5. CEILING MOUNTED DEVICES SHALL BE REINSTALLED IN NEW CEILING AT LOWER HEIGHT IN AREAS INDICATED. EXTEND ASSOCIATED CONDUIT AND/OR WIRING AS REQUIRED. PROVIDE TEMPORARY MOUNTING OF DEVICES AT LOWER HEIGHT FROM STRUCTURE DURING INSTALLATION OF HVAC EQUIPMENT WHEN CEILING IS NOT IN PLACE. REINSTALL IN CEILING UPON COMPLETION OF CEILING INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING AND NEW CEILING HEIGHTS.
 6. EX EXTERIOR LIGHTING FIXTURES ARE EXISTING TO REMAIN. MAINTAIN EX BRANCH CIRCUIT AND CONTROLS.
 7. REMOVE THE EXISTING FIRE ALARM SYSTEM AFTER NEW FIRE ALARM SYSTEM IS INSTALLED AND FULLY FUNCTIONAL.
 8. ELECTRICAL WORK IN AREAS WHERE MECHANICAL AND ARCHITECTURAL WORK ARE TAKING PLACE SHALL BE PERFORMED AT THE SAME TIME. REFER TO MECHANICAL/ARCHITECTURAL DRAWINGS FOR SPECIFIC CONSTRUCTION PHASING INFORMATION AND ELECTRICAL PHASING PLANS.
 9. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING, LOCATING AND TRACING ALL EXISTING CIRCUITS AND FEEDERS. CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING FEEDERS AND CIRCUITS DURING CONSTRUCTION. PROVIDE WIRING AND CONDUIT AS REQUIRED TO MAINTAIN ALL EXISTING FEEDERS AND CIRCUITS.
 10. MODULAR CLASSROOMS ARE TO BE LOCATED ON SITE WITH ELECTRIC, FIRE ALARM, COMMUNICATIONS AND SECURITY SERVICES.
 11. ALL SERVICES (POWER, SECURITY, FIRE ALARM, TELE/DATA, ETC.) SHALL REMAIN ACTIVE IN AREAS OF THE BUILDING OUTSIDE THE GENERAL CONSTRUCTION AREA.
 12. PROVIDE ADDITIONAL TEMPORARY LIGHTING, BATTERY PACKS, EXIT SIGNS AND PULL STATIONS AS REQUIRED FOR TEMPORARY PARTITIONS BETWEEN PHASES.
 13. ROOF PHASING SHALL FOLLOW FLOOR PLAN PHASING UON.
 14. COORDINATE WORK WITH PHASING PLANS. CONTRACTOR SHALL NOT BE PERMITTED TO DISTURB FINISHED AREAS AFTER CONSTRUCTION.
 15. REFER TO MECHANICAL, ARCHITECTURAL, STRUCTURAL AND CIVIL DRAWINGS FOR ADDITIONAL CONSTRUCTION PHASING INFORMATION.

REVISIONS		DESCRIPTION	
NO.	DATE	ADDENDUM NO. 1	ADDENDUM NO. 2
1	3/7/24		
2	3/14/24		

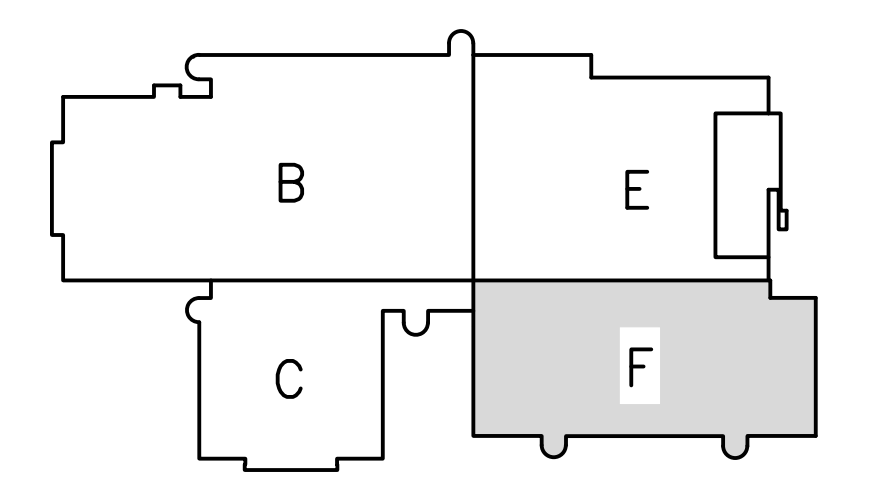
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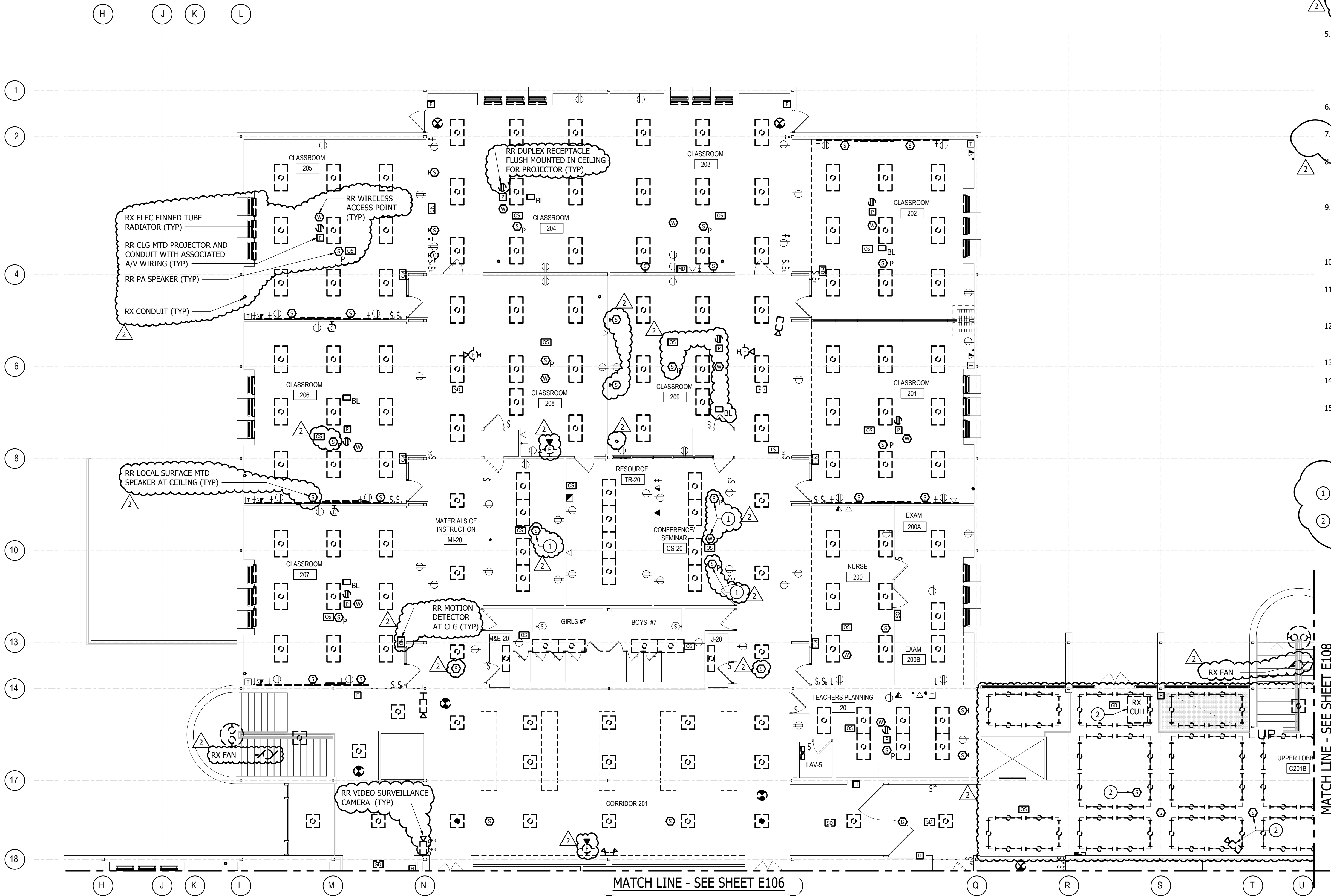
WO#	23043
PROJECT MANAGER	EMP
DESIGNER	EMP
DATE	2/26/2024

LOWER LEVEL AREA F - DEMOLITION
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

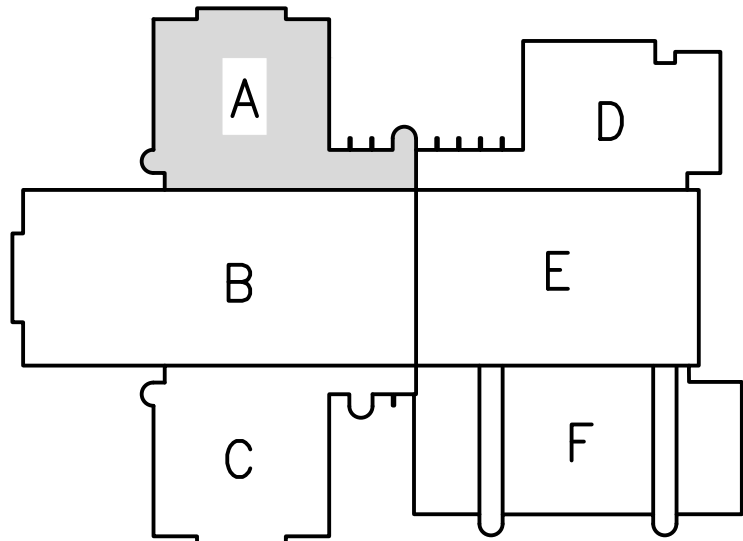
BID SUBMISSION



KEY PLAN
N.T.S.



1 UPPER LEVEL AREA A - DEMOLITION
E105 SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

GENERAL NOTES:

- HVAC EQUIPMENT SUCH AS AHU'S, UV'S, CUH'S, UH'S, FANS, ETC. INDICATED TO BE REMOVED WILL BE REMOVED UNDER MECH DIVISION. REMOVE ALL ASSOCIATED ELECTRICAL WORK INCLUDING BUT NOT LIMITED TO STARTERS, DISCONNECTS, CONDUIT AND WIRE, BACK TO SOURCE, AS REQUIRED.
- REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION PERTAINING TO DEMOLITION OF CEILINGS, WALLS, DOORS, ETC.
- REMOVE ALL INTERIOR LIGHT FIXTURES, AND ASSOCIATED LINE VOLTAGE SWITCHES, AUTOMATIC LIGHTING CONTROLS, AND BRANCH CIRCUIT WIRING WITHIN ROOM UNLESS OTHERWISE NOTED.
- REMOVE AND REINSTALL CEILING MOUNTED DEVICES, INCLUDING PA SPEAKERS, WIRELESS ACCESS POINTS, MOTION SENSORS, CAMERAS, ETC. AS REQUIRED FOR INSTALLATION OF HVAC EQUIPMENT. THE GENERAL SCOPE OF CEILING WORK IS INDICATED. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND RELOCATION OF ADDITIONAL DEVICES NOT INDICATED AS REQUIRED FOR INSTALLATION OF ELECTRICAL WORK. EXISTING CEILING MOUNTED PA SPEAKERS TYPICALLY UTILIZE THE PERFORATED CEILING AS A GRILLE. PROVIDE 8" ROUND STEEL SPEAKER GRILLE, WHITE FINISH WITH HIDDEN STUDS AND ALL MOUNTING HARDWARE AS REQUIRED FOR MOUNTING IN NEW LAY-IN CEILING.
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- REFER TO MECHANICAL, ARCHITECTURAL, STRUCTURAL AND CIVIL DRAWINGS FOR ADDITIONAL CONSTRUCTION PHASING INFORMATION.

DRAWING NOTES:

- EXTEND ASSOCIATED CONDUIT AND WIRING AS REQUIRED TO SUIT LOWER CEILING HEIGHT (8'-0").
- EXTEND ASSOCIATED CONDUIT AND WIRING AS REQUIRED TO SUIT LOWER CEILING HEIGHT (9'-4").

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2	3/14/24			

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WO# 23043
PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

UPPER LEVEL AREA A - DEMOLITION
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E105

PSC-12.006

GENERAL NOTES:

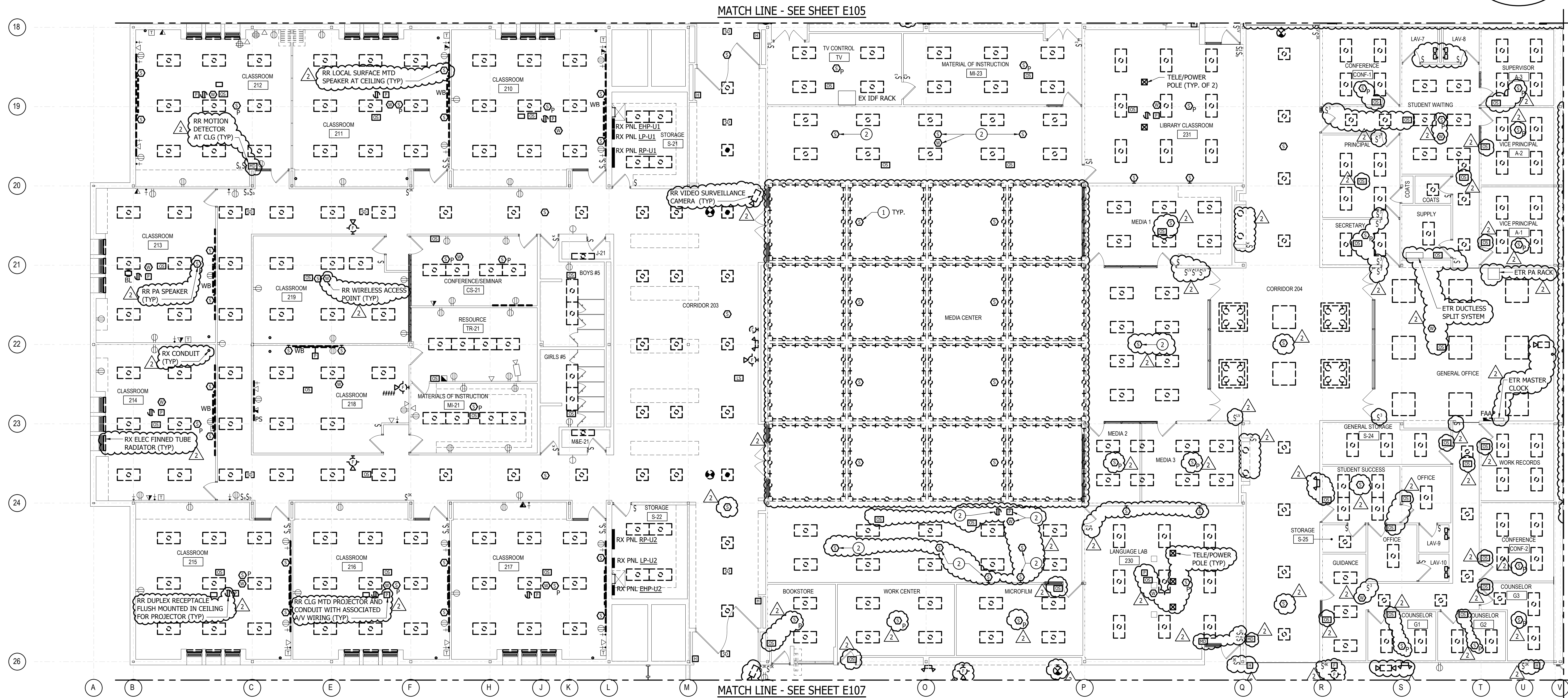
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5. CEILING MOUNTED DEVICES SHALL BE REINSTALLED IN NEW CEILING AT LOWER HEIGHT IN AREAS INDICATED. EXTEND ASSOCIATED CONDUIT AND/OR WIRING AS REQUIRED. PROVIDE TEMPORARY MOUNTING OF DEVICES AT LOWER HEIGHT FROM STRUCTURE DURING INSTALLATION OF HVAC EQUIPMENT WHEN CEILING IS NOT IN PLACE. REINSTALL IN CEILING UPON COMPLETION OF CEILING INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING AND NEW CEILING HEIGHTS.
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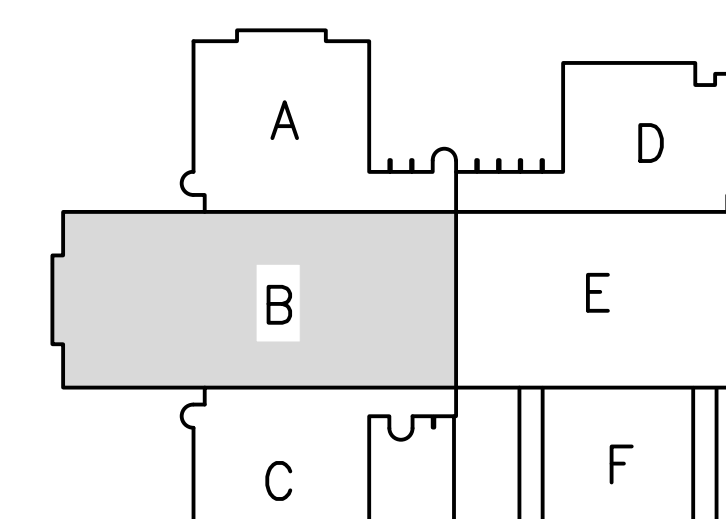
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DRAWING NOTES:

1. EXTEND ASSOCIATED CONDUIT AND WIRING AS REQUIRED TO SUIT LOWER CEILING HEIGHT (8'-0").
2. EXTEND ASSOCIATED CONDUIT AND WIRING AS REQUIRED TO SUIT LOWER CEILING HEIGHT (9'-4").



1 UPPER LEVEL AREA B - DEMOLITION
E106 SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

NO.	DATE	DESCRIPTION	ADDENDUM NO.	ADDENDUM NO.
1	3/7/24		1	2
2	3/14/24		2	

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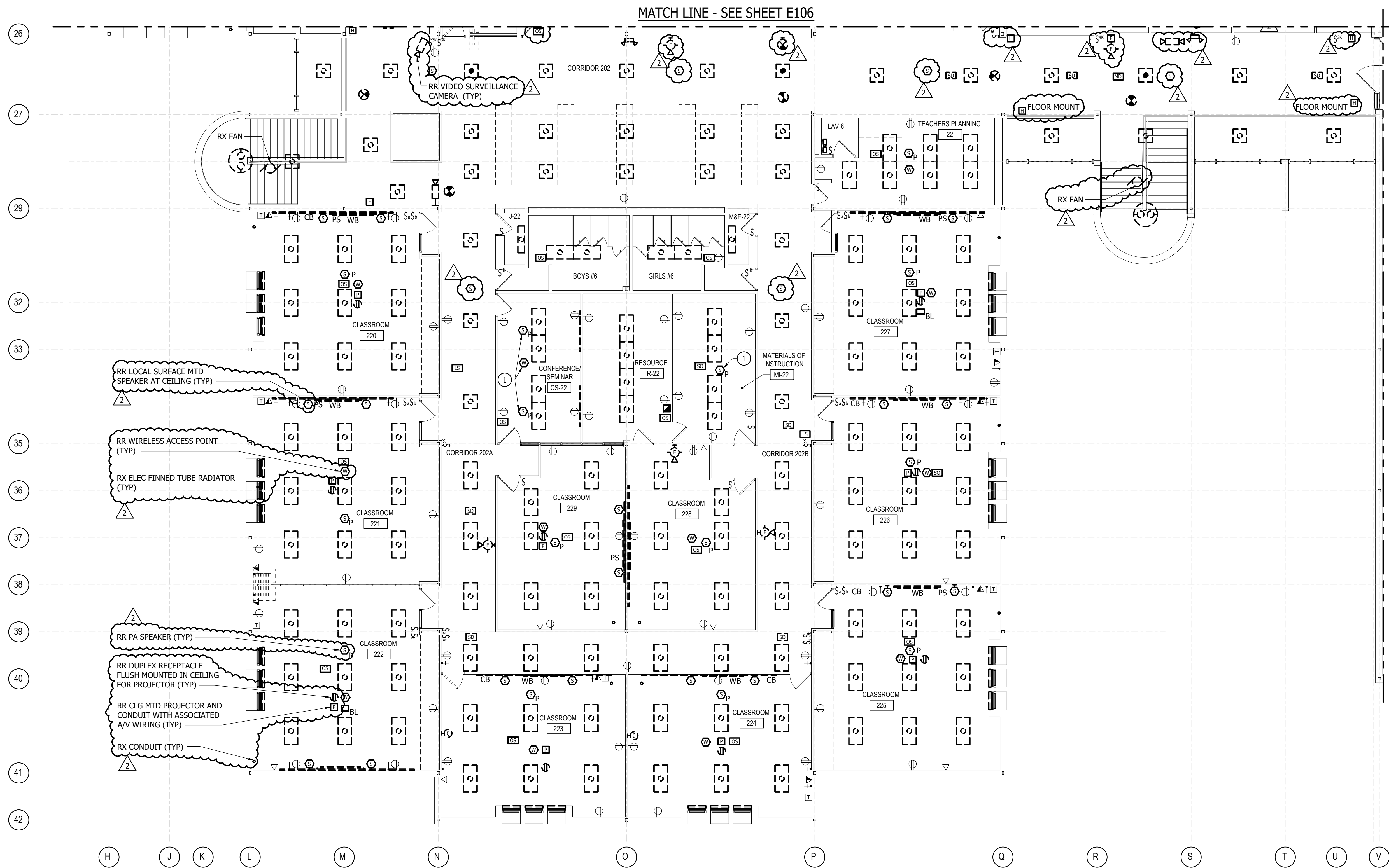
WO# 23043
PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

UPPER LEVEL AREA B - DEMOLITION
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E106

PSC-12.006



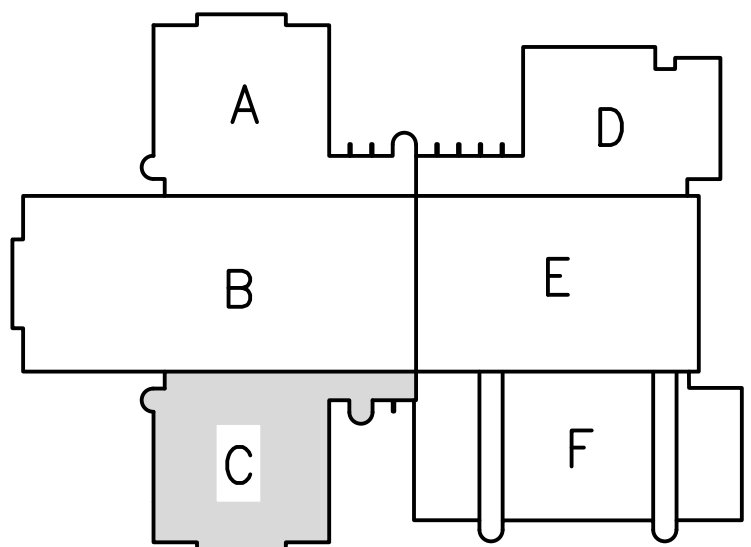
1
E107
UPPER LEVEL AREA C - DEMOLITION
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. HVAC EQUIPMENT SUCH AS AHU'S, UV'S, CUH'S, UH'S, FANS, ETC. INDICATED TO BE REMOVED WILL BE REMOVED UNDER MECH DIVISION. REMOVE ALL ASSOCIATED ELECTRICAL WORK INCLUDING BUT NOT LIMITED TO STARTERS, DISCONNECTS, CONDUIT AND WIRE, BACK TO SOURCE, AS REQUIRED.
2. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION PERTAINING TO DEMOLITION OF CEILINGS, WALLS, DOORS, ETC.
3. REMOVE ALL INTERIOR LIGHT FIXTURES, AND ASSOCIATED LINE VOLTAGE SWITCHES, AUTOMATIC LIGHTING CONTROLS, AND BRANCH CIRCUIT WIRING WITHIN ROOM (UNLESS OTHERWISE NOTED).
4. REMOVE AND REINSTALL CEILING MOUNTED DEVICES, INCLUDING PA SPEAKERS, WIRELESS ACCESS POINTS, MOTION SENSORS, CAMERAS, ETC. AS REQUIRED FOR INSTALLATION OF HVAC EQUIPMENT. THE GENERAL SCOPE OF CEILING WORK IS INDICATED. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND RELOCATION OF ADDITIONAL DEVICES NOT INDICATED AS REQUIRED. FOR INSTALLATION OF ELECTRICAL WORK, EXISTING CEILING MOUNTED PA SPEAKERS TYPICALLY UTILIZE THE PERFORATED CEILING AS A GRILLE. PROVIDE 8" ROUND STEEL SPEAKER GRILLE, WHITE FINISH WITH HIDDEN STUDS AND ALL MOUNTING HARDWARE AS REQUIRED FOR MOUNTING IN NEW LAY-IN CEILING.
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15. REFER TO MECHANICAL, ARCHITECTURAL, STRUCTURAL AND CIVIL DRAWINGS FOR ADDITIONAL CONSTRUCTION PHASING INFORMATION.

DRAWING NOTES:

1. EXTEND ASSOCIATED CONDUIT AND WIRING AS REQUIRED TO SUIT LOWER CEILING HEIGHT (8'-0").



KEY PLAN
N.T.S.

REVISIONS		DESCRIPTION
NO.	DATE	
1	3/7/24	ADDENDUM NO. 1
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WO# 23043
PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

UPPER LEVEL AREA C - DEMOLITION
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E107

PSC-12.006

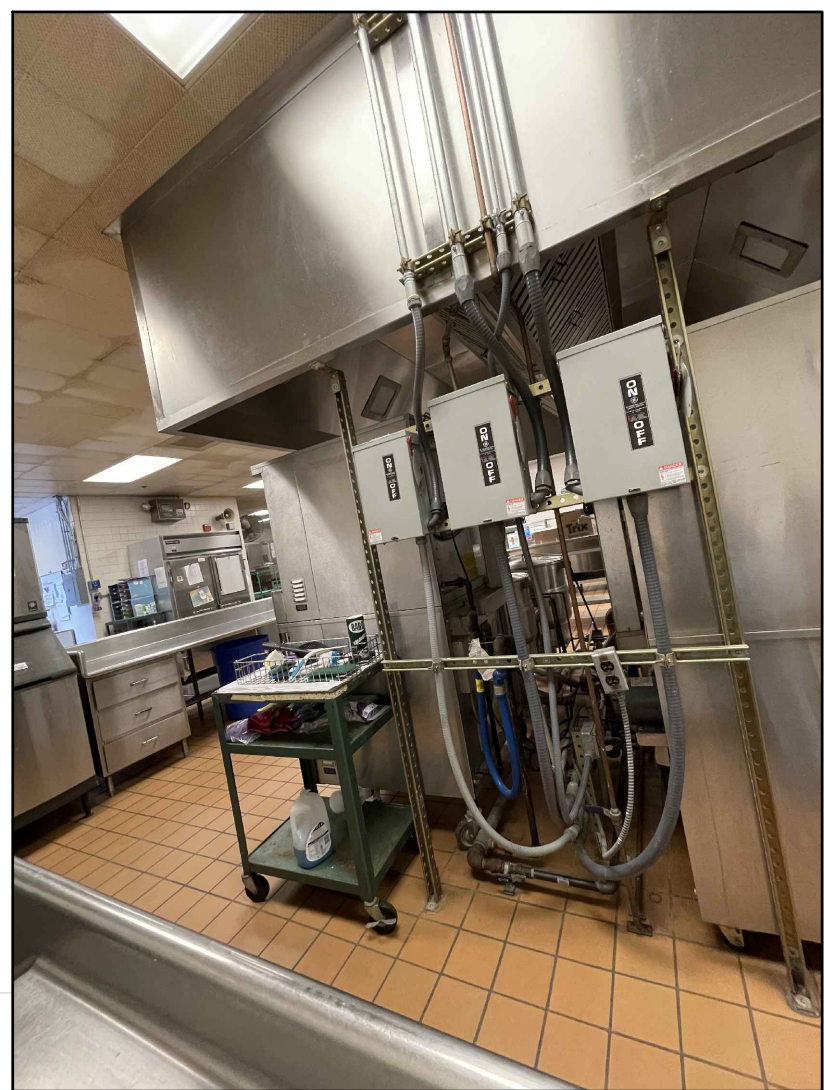


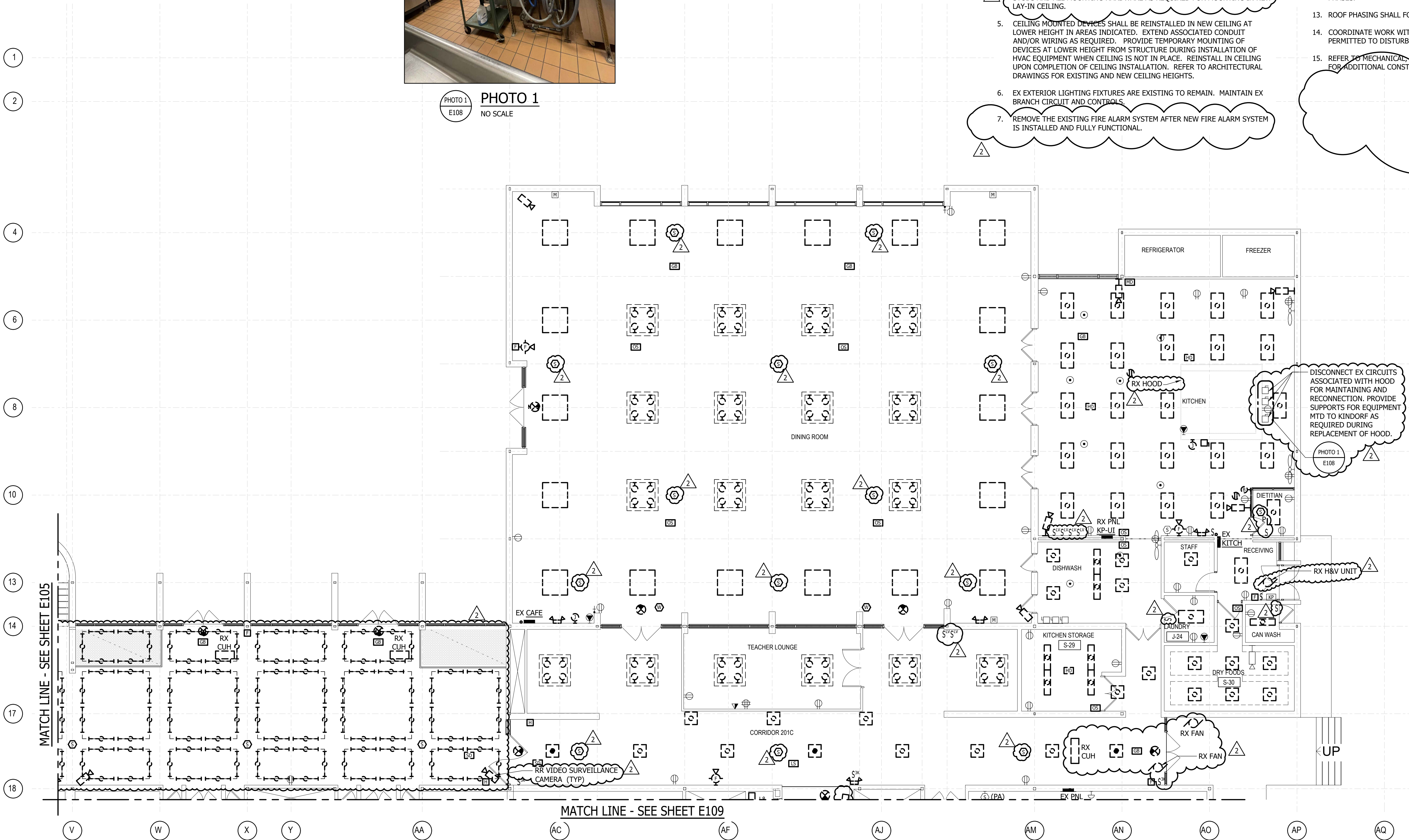
PHOTO 1
NO SCALE

DRAWING NOTES:

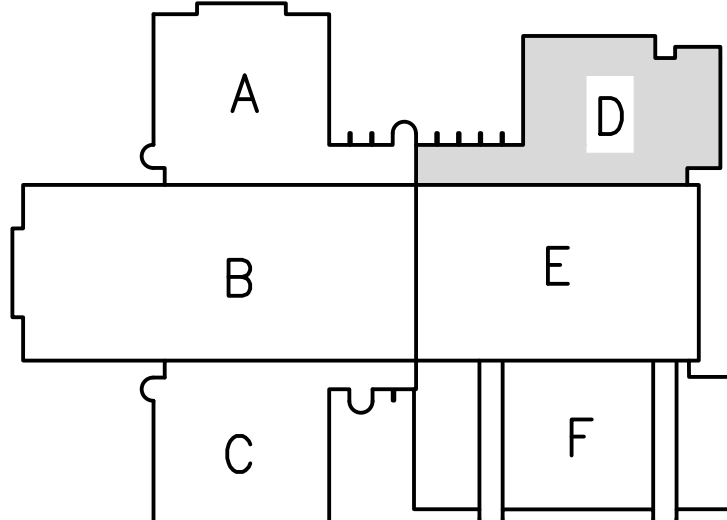
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1
E108
UPPER LEVEL AREA D - DEMOLITION
SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

REVISIONS		DESCRIPTION
NO.	DATE	
1	3/7/24	ADDITION NO. 1
2	3/14/24	ADDITION NO. 2

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WO# 23043

PROJECT MANAGER EMP

DESIGNER EMP

DATE 2/26/2024

UPPER LEVEL AREA D - DEMOLITION
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E108
PSC-12.006

DRAWING NOTES:

1. EXTEND ASSOCIATED CONDUIT & WIRING TO LOWER CEILING HEIGHT AS REQUIRED.

GENERAL NOTES:

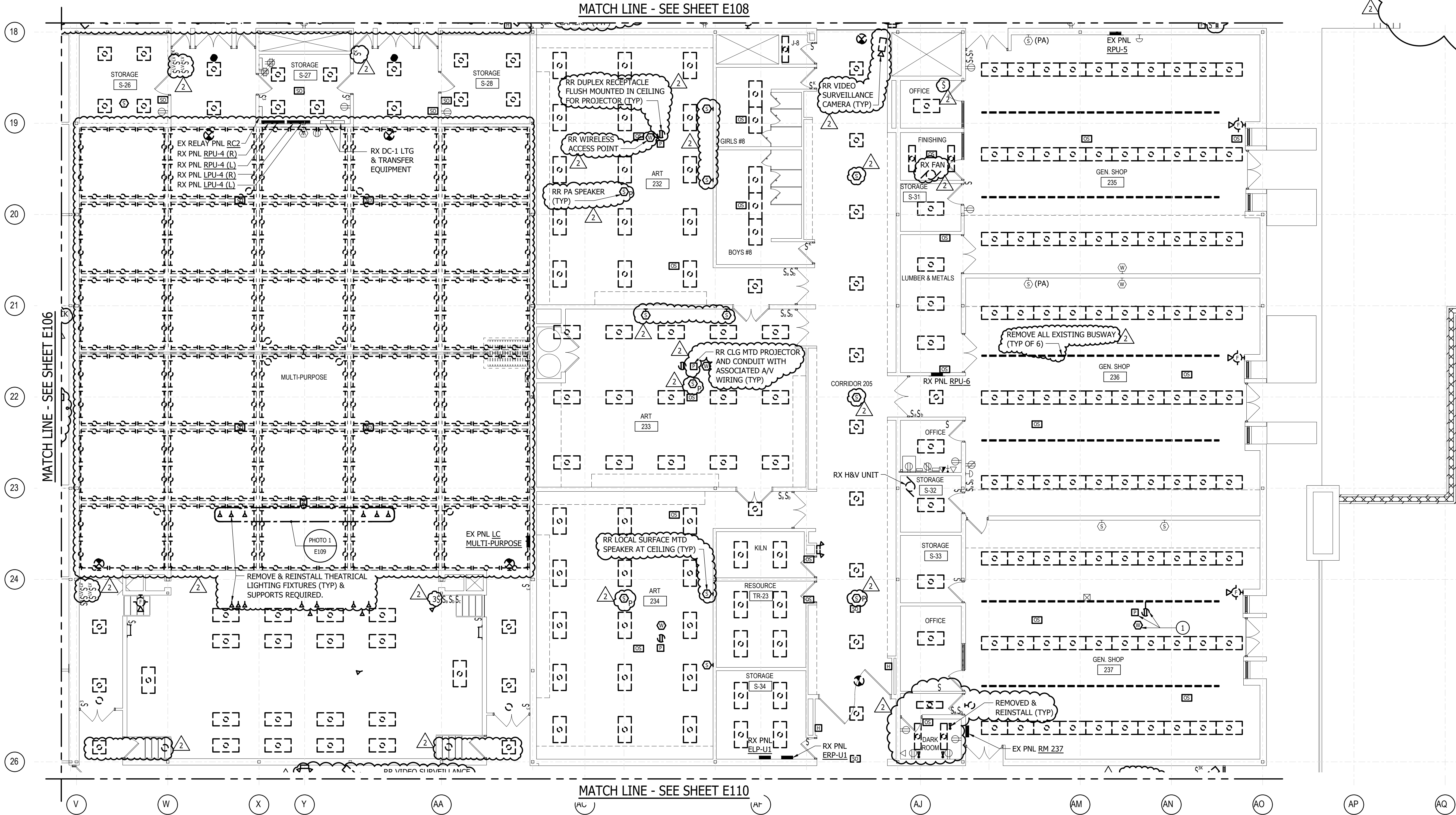
1. HVAC EQUIPMENT SUCH AS AHU'S, UV'S, CUH'S, UH'S, FANS, ETC. INDICATED TO BE REMOVED WILL BE REMOVED UNDER MECH DIVISION. REMOVE ALL ASSOCIATED ELECTRICAL WORK INCLUDING BUT NOT LIMITED TO STARTERS, DISCONNECTS, CONDUIT AND WIRE, BACK TO SOURCE, AS REQUIRED.
2. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION PERTAINING TO DEMOLITION OF CEILINGS, WALLS, DOORS, ETC.
3. REMOVE ALL INTERIOR LIGHT FIXTURES, AND ASSOCIATED LINE VOLTAGE SWITCHES, AUTOMATIC LIGHTING CONTROLS, AND BRANCH CIRCUIT WIRING WITHIN ROOM (UNLESS OTHERWISE NOTED).

4. REMOVE AND REINSTALL CEILING MOUNTED DEVICES, INCLUDING PA SPEAKERS, WIRELESS ACCESS POINTS, MOTION SENSORS, CAMERAS, ETC. AS REQUIRED FOR INSTALLATION OF HVAC EQUIPMENT. THE GENERAL SCOPE OF CEILING WORK IS INDICATED. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND RELOCATION OF ADDITIONAL DEVICES NOT INDICATED AS REQUIRED FOR INSTALLATION OF ELECTRICAL WORK. EXISTING CEILING MOUNTED PA SPEAKERS WILL BE RELOCATED TO THE PERFORATED CEILING AS A GRILLE. PROVIDE 8" ROUND STEEL SPEAKER GRILLE, WHITE FINISH WITH HIDDEN STUDS AND ALL MOUNTING HARDWARE AS REQUIRED FOR MOUNTING IN NEW LAY-IN CEILING.

5. CEILING MOUNTED DEVICES SHALL BE REINSTALLED IN NEW CEILING AT LOWER HEIGHT IN AREAS INDICATED. EXTEND ASSOCIATED CONDUIT AND/OR WIRING AS REQUIRED. PROVIDE TEMPORARY MOUNTING OF DEVICES AT LOWER HEIGHT FROM STRUCTURE DURING INSTALLATION OF HVAC EQUIPMENT WHEN CEILING IS NOT IN PLACE. REINSTALL IN CEILING UPON COMPLETION OF CEILING INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING AND NEW CEILING HEIGHTS.
6. EX EXTERIOR LIGHTING FIXTURES ARE EXISTING TO REMAIN. MAINTAIN EX BRANCH CIRCUIT AND CONTROLS.
7. REMOVE THE EXISTING FIRE ALARM SYSTEM AFTER NEW FIRE ALARM SYSTEM IS INSTALLED AND FULLY FUNCTIONAL.

8. ELECTRICAL WORK IN AREAS WHERE MECHANICAL AND ARCHITECTURAL WORK ARE TAKING PLACE SHALL BE PERFORMED AT THE SAME TIME. REFER TO MECHANICAL/ARCHITECTURAL DRAWINGS FOR SPECIFIC CONSTRUCTION PHASING INFORMATION AND ELECTRICAL PHASING PLANS.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING, LOCATING AND TRACING ALL EXISTING CIRCUITS AND FEEDERS. CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING FEEDERS AND CIRCUITS DURING CONSTRUCTION. PROVIDE WIRING AND CONDUIT AS REQUIRED TO MAINTAIN ALL EXISTING FEEDERS AND CIRCUITS.
10. MODULAR CLASSROOMS ARE TO BE LOCATED ON SITE WITH ELECTRIC, FIRE ALARM, COMMUNICATIONS AND SECURITY SERVICES.
11. ALL SERVICES (POWER, SECURITY, FIRE ALARM, TELE/DATA, ETC.) SHALL REMAIN ACTIVE IN AREAS OF THE BUILDING OUTSIDE THE GENERAL CONSTRUCTION AREA.

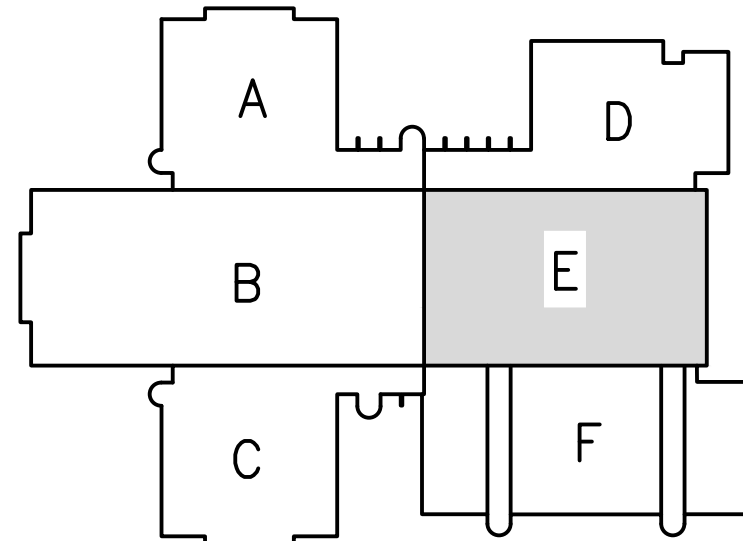
12. PROVIDE ADDITIONAL TEMPORARY LIGHTING, BATTERY PACKS, EXIT SIGNS AND PULL STATIONS AS REQUIRED FOR TEMPORARY PARTITIONS BETWEEN PHASES.
13. ROOF PHASING SHALL FOLLOW FLOOR PLAN PHASING UON.
14. COORDINATE WORK WITH PHASING PLANS. CONTRACTOR SHALL NOT BE PERMITTED TO DISTURB FINISHED AREAS AFTER CONSTRUCTION.
15. REFER TO MECHANICAL, ARCHITECTURAL, STRUCTURAL AND CIVIL DRAWINGS FOR ADDITIONAL CONSTRUCTION PHASING INFORMATION.



1 UPPER LEVEL AREA E - DEMOLITION
E109 SCALE: 1/8" = 1'-0"



PHOTO 1
E109 NO SCALE



KEY PLAN
N.T.S.

REVISIONS		NO.	DATE	DESCRIPTION
		1	3/7/24	ADDITION NO. 1
		2	3/14/24	ADDITION NO. 2

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WO# 23043
PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

UPPER LEVEL AREA E - DEMOLITION
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E109

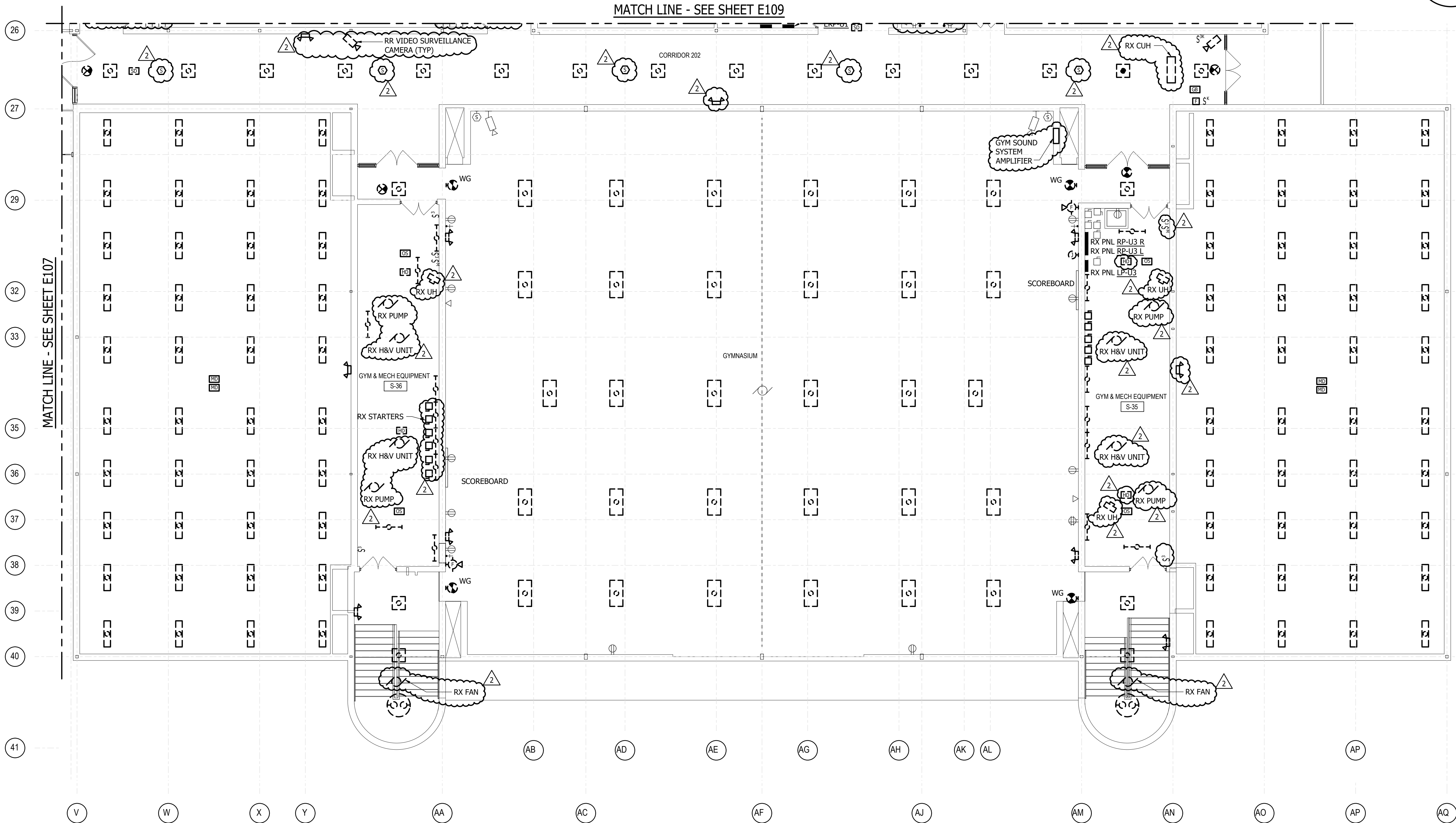
PSC-12.006

GENERAL NOTES:

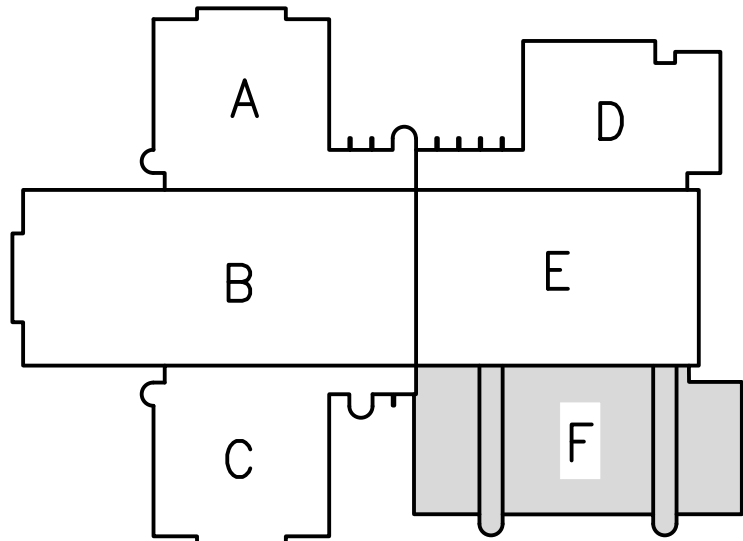
- HVAC EQUIPMENT SUCH AS AHU'S, UV'S, CUH'S, UH'S, FANS, ETC. INDICATED TO BE REMOVED WILL BE REMOVED UNDER MECH DIVISION. REMOVE ALL ASSOCIATED ELECTRICAL WORK INCLUDING BUT NOT LIMITED TO STARTERS, DISCONNECTS, CONDUIT AND WIRE, BACK TO SOURCE, AS REQUIRED.
- REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION PERTAINING TO DEMOLITION OF CEILINGS, WALLS, DOORS, ETC.
- REMOVE ALL INTERIOR LIGHT FIXTURES, AND ASSOCIATED LINE VOLTAGE SWITCHES, AUTOMATIC LIGHTING CONTROLS, AND BRANCH CIRCUIT WIRING WITHIN ROOM UNLESS OTHERWISE NOTED.
- REMOVE AND REINSTALL CEILING MOUNTED DEVICES, INCLUDING PA SPEAKERS, WIRELESS ACCESS POINTS, MOTION SENSORS, CAMERAS, ETC. AS REQUIRED FOR INSTALLATION OF HVAC EQUIPMENT. THE GENERAL SCOPE OF CEILING WORK IS INDICATED. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND RELOCATION OF ADDITIONAL DEVICES NOT INDICATED AS REQUIRED. FOR INSTALLATION OF ELECTRICAL WORK, EXISTING CEILING MOUNTED PA SPEAKERS TYPICALLY UTILIZE THE PERFORATED CEILING AS A GRILLE. PROVIDE 8" ROUND STEEL SPEAKER GRILLE, WHITE FINISH WITH HIDDEN STUDS AND ALL MOUNTING HARDWARE AS REQUIRED FOR MOUNTING IN NEW LAY-IN CEILING.
- CEILING MOUNTED DEVICES SHALL BE REINSTALLED IN NEW CEILING AT LOWER HEIGHT IN AREAS INDICATED. EXTEND ASSOCIATED CONDUIT AND/OR WIRING AS REQUIRED. PROVIDE TEMPORARY MOUNTING OF DEVICES AT LOWER HEIGHT FROM STRUCTURE DURING INSTALLATION OF HVAC EQUIPMENT WHEN CEILING IS NOT IN PLACE. REINSTALL IN CEILING UPON COMPLETION OF CEILING INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING AND NEW CEILING HEIGHTS.
- EX EXTERIOR LIGHTING FIXTURES ARE EXISTING TO REMAIN. MAINTAIN EX BRANCH CIRCUIT AND CONTROLS.
- REMOVE THE EXISTING FIRE ALARM SYSTEM AFTER NEW FIRE ALARM SYSTEM IS INSTALLED AND FULLY FUNCTIONAL.
- ELECTRICAL WORK IN AREAS WHERE MECHANICAL AND ARCHITECTURAL WORK ARE TAKING PLACE SHALL BE PERFORMED AT THE SAME TIME. REFER TO MECHANICAL/ARCHITECTURAL DRAWINGS FOR SPECIFIC CONSTRUCTION PHASING INFORMATION AND ELECTRICAL PHASING PLANS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING, LOCATING AND TRACING ALL EXISTING CIRCUITS AND FEEDERS. CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING FEEDERS AND CIRCUITS DURING CONSTRUCTION. PROVIDE WIRING AND CONDUIT AS REQUIRED TO MAINTAIN ALL EXISTING FEEDERS AND CIRCUITS.
- MODULAR CLASSROOMS ARE TO BE LOCATED ON SITE WITH ELECTRIC, FIRE ALARM, COMMUNICATIONS AND SECURITY SERVICES.
- ALL SERVICES (POWER, SECURITY, FIRE ALARM, TELE/DATA, ETC.) SHALL REMAIN ACTIVE IN AREAS OF THE BUILDING OUTSIDE THE GENERAL CONSTRUCTION AREA.
- PROVIDE ADDITIONAL TEMPORARY LIGHTING, BATTERY PACKS, EXIT SIGNS AND PULL STATIONS AS REQUIRED FOR TEMPORARY PARTITIONS BETWEEN PHASES.
- ROOF PHASING SHALL FOLLOW FLOOR PLAN PHASING UON.
- COORDINATE WORK WITH PHASING PLANS. CONTRACTOR SHALL NOT BE PERMITTED TO DISTURB FINISHED AREAS AFTER CONSTRUCTION.
- REFER TO MECHANICAL, ARCHITECTURAL, STRUCTURAL AND CIVIL DRAWINGS FOR ADDITIONAL CONSTRUCTION PHASING INFORMATION.

DRAWING NOTES:

- EXTEND ASSOCIATED CONDUIT AND WIRING AS REQUIRED TO SUIT LOWER CEILING HEIGHT (8'-0").
- EXTEND ASSOCIATED CONDUIT AND WIRING AS REQUIRED TO SUIT LOWER CEILING HEIGHT (9'-4").



1 UPPER LEVEL AREA F - DEMOLITION
E110 SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

REVISIONS		DESCRIPTION
NO.	DATE	
1	3/7/24	ADDITION NO. 1
2	3/14/24	ADDITION NO. 2

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WO# 23043
PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

UPPER LEVEL AREA F - DEMOLITION
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E110
PSC-12.006

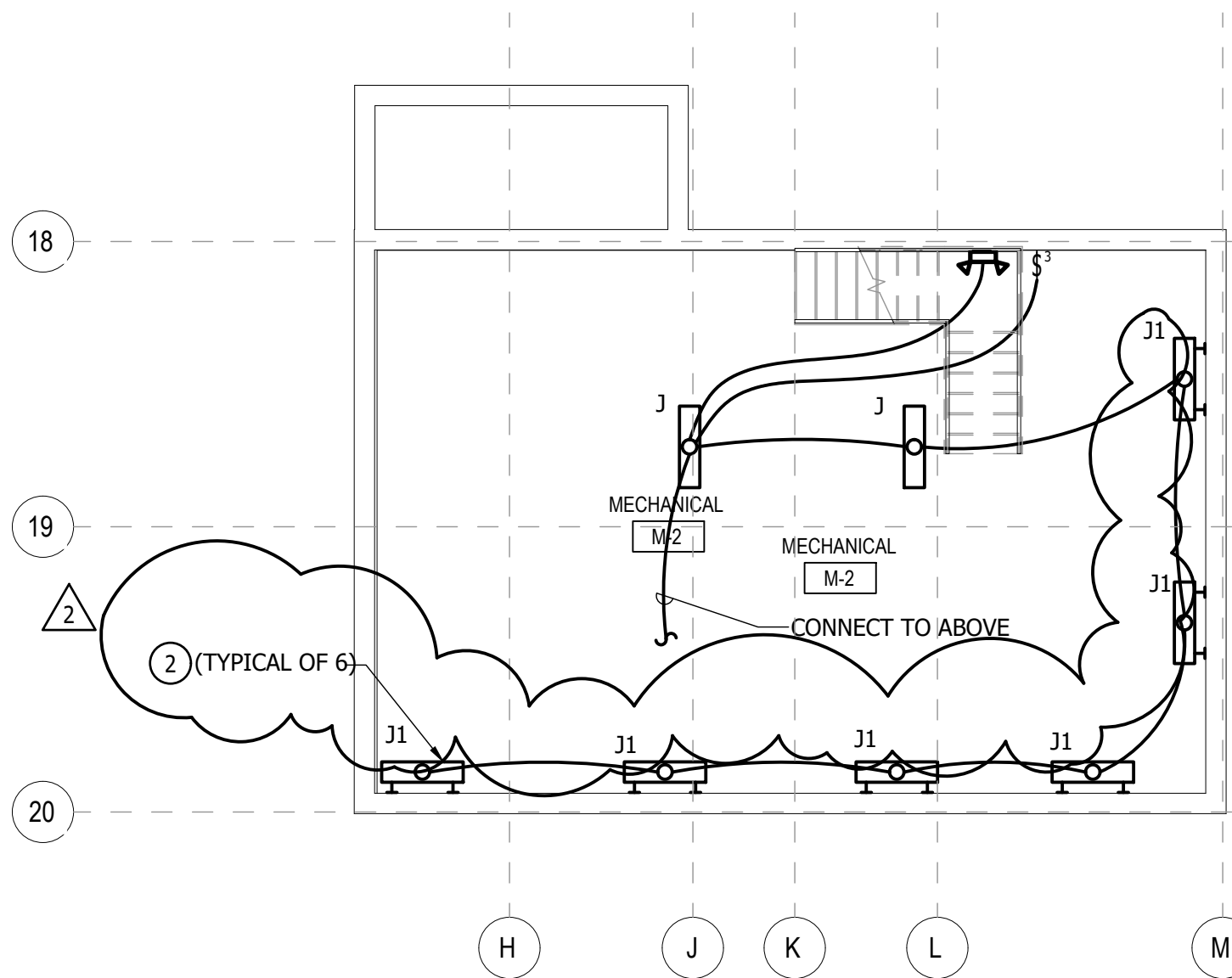
PSC-12,006

DRAWING NOTES:

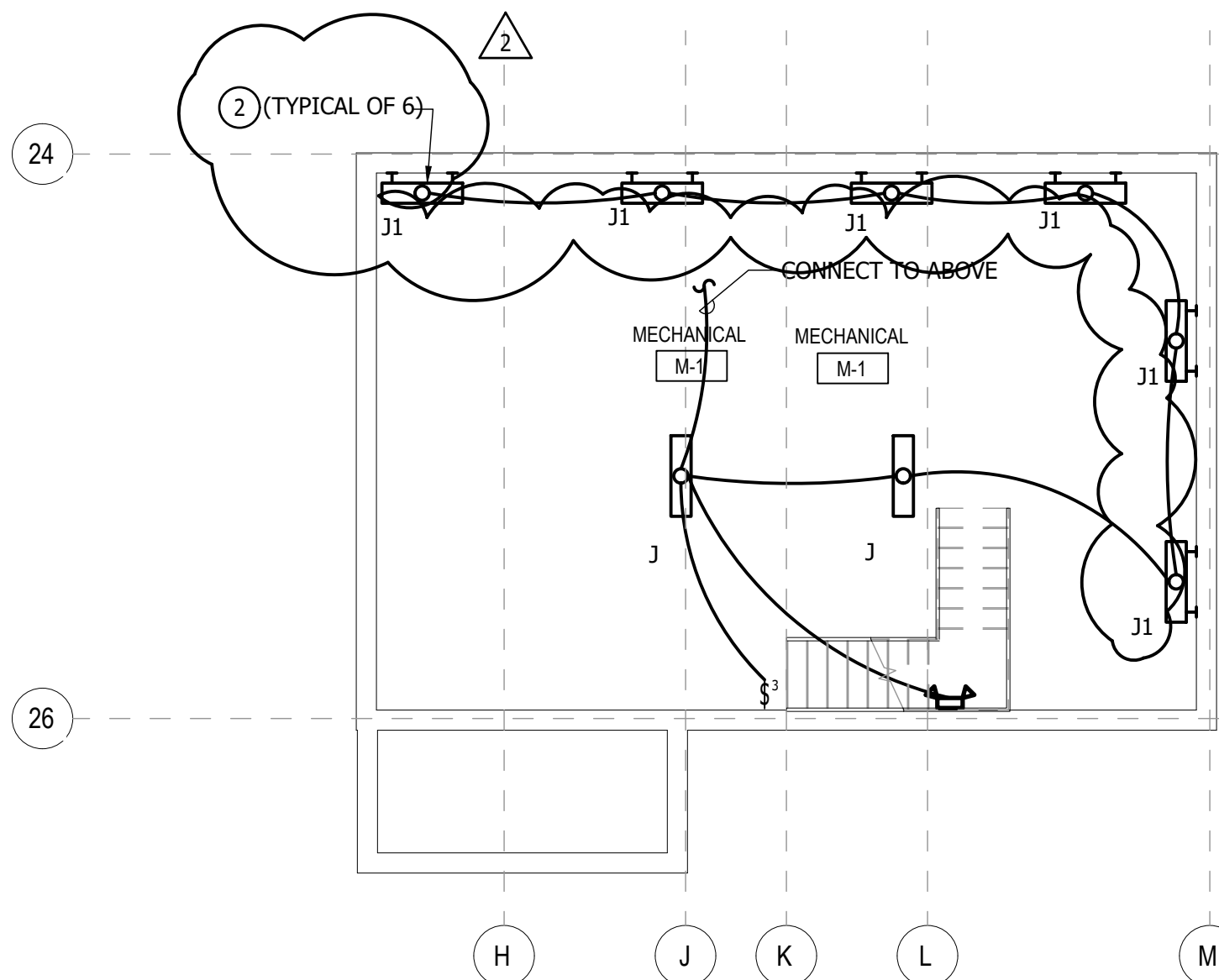
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2. WALL MOUNT 8'-0" AFF.

GENERAL NOTES:

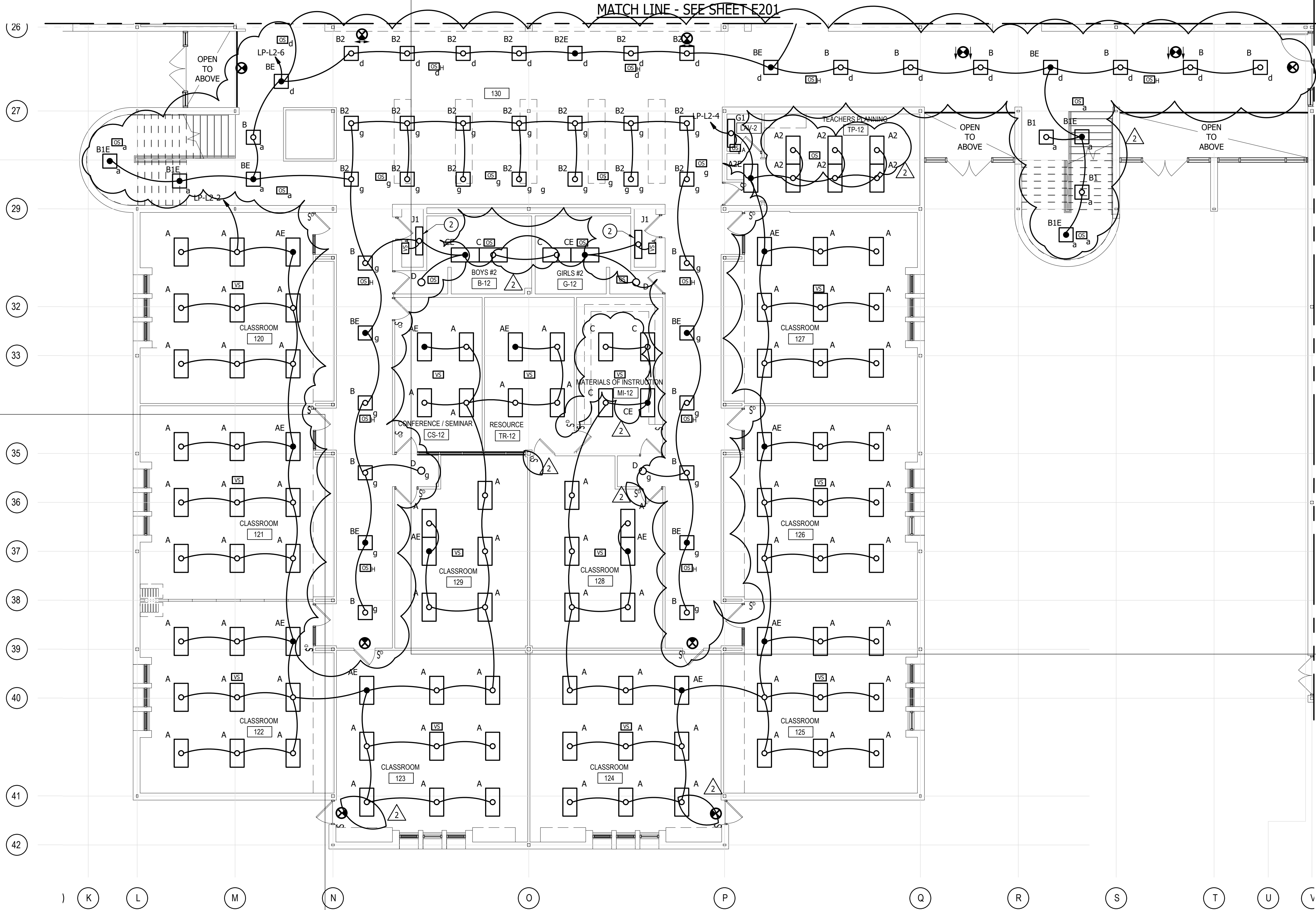
1. MAINTAIN EXISTING EXTERIOR LIGHTING BRANCH CIRCUITS AND CONTROLS.
2. CONNECT BATTERY PACKS AHEAD OF LOCAL SWITCHING.
3. CONNECT EXIT SIGNS TO CIRCUIT ELP-L1-9.
4. HOMERUN CIRCUIT NUMBERS ARE FOR REFERENCE ONLY. FIELD COORDINATE ACTUAL CIRCUIT NUMBER IN PANEL WITH PROJECT PHASING. MAKE CONNECTION TO CIRCUIT MADE SPARE BY DEMOLITION.



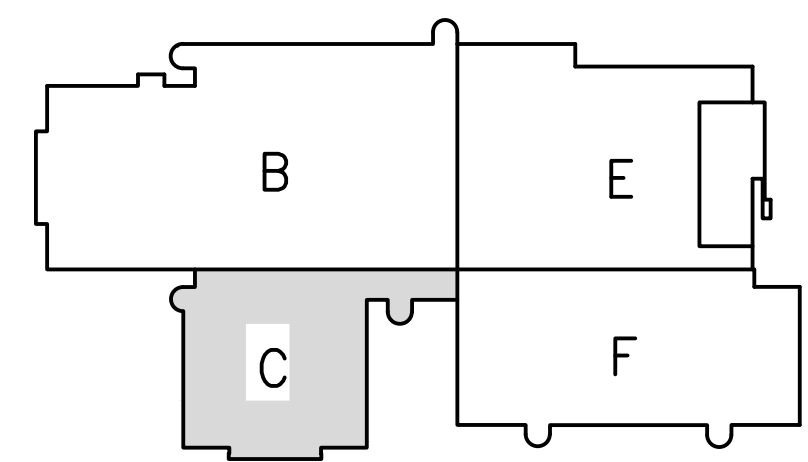
2 PART PLAN LOWER LEVEL M-2 - LIGHTING
SCALE: 1/8" = 1'-0"



3 PART PLAN LOWER LEVEL M-1 - LIGHTING
SCALE: 1/8" = 1'-0"



1 LOWER LEVEL AREA C - LIGHTING
SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

NO.	DATE	DESCRIPTION	ADDENDUM NO.	ADDENDUM NO.
1	3/7/24		1	
2	3/14/24		2	

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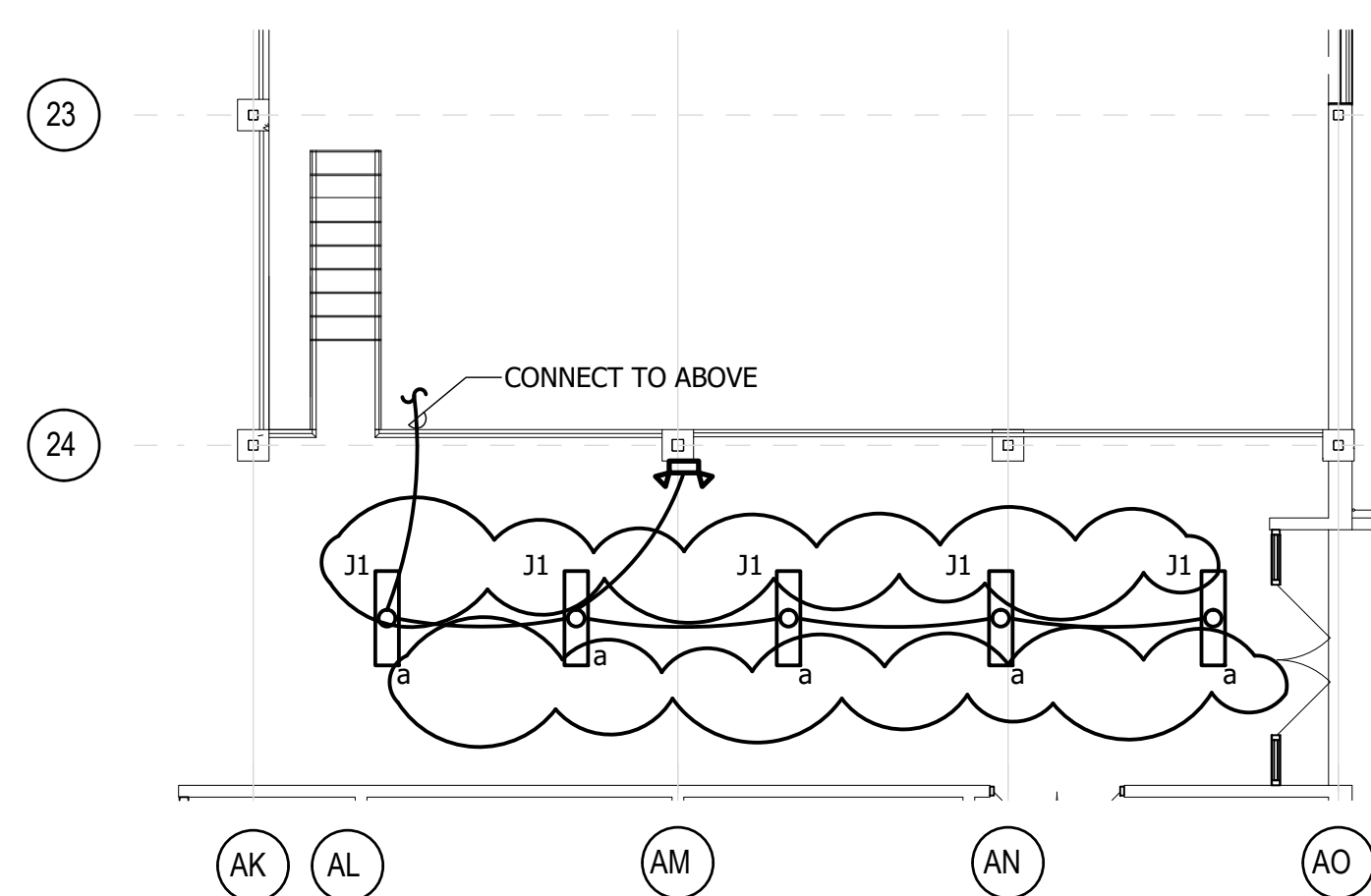
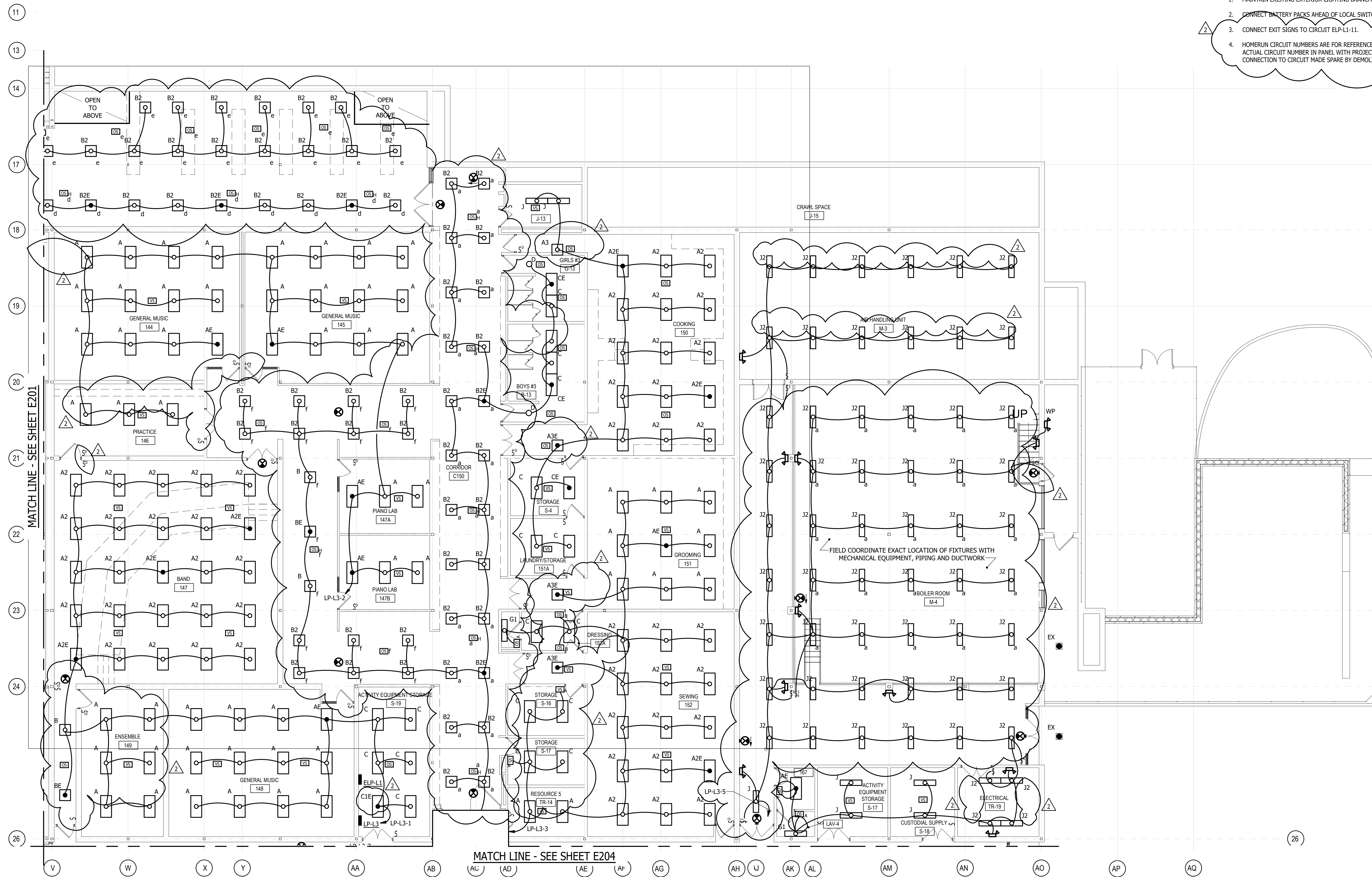
WO# 23043
PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

LOWER LEVEL AREA C - LIGHTING
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

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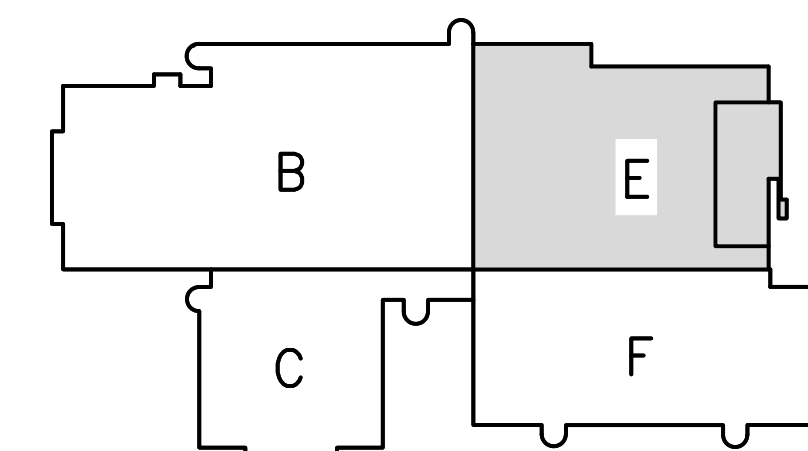
E202

PSC-12.006



2 LOWER LEVEL AREA E - LIGHTING
SCALE: 1/8" = 1'-0"

1 LOWER LEVEL AREA E - LIGHTING
SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

- GENERAL NOTES:**
1. MAINTAIN EXISTING EXTERIOR LIGHTING BRANCH CIRCUITS AND CONTROLS.
 2. CONNECT BATTERY PACKS AHEAD OF LOCAL SWITCHING.
 3. CONNECT EXIT SIGNS TO CIRCUIT ELP-L1-11.
 4. HOMERUN CIRCUIT NUMBERS ARE FOR REFERENCE ONLY. FIELD COORDINATE ACTUAL CIRCUIT NUMBER IN PANEL WITH PROJECT PHASING. MAKE CONNECTION TO CIRCUIT MADE SPARE BY DEMOLITION.

NO.	DATE	DESCRIPTION	ADDITION NO. 1	ADDITION NO. 2
1	3/7/24			
2	3/14/24			

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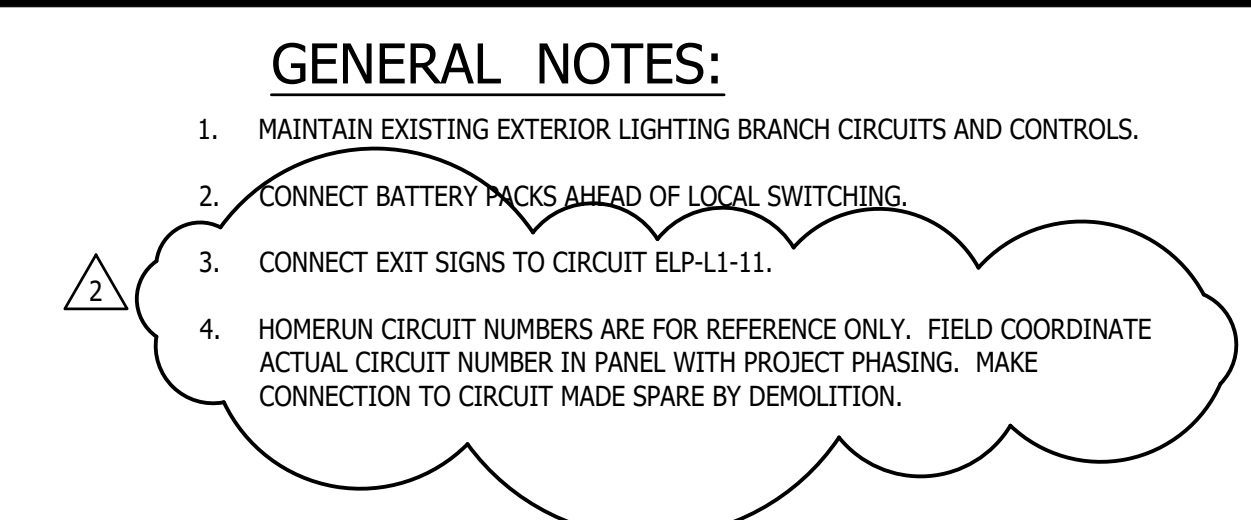
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WO# 23043
PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

LOWER LEVEL AREA E - LIGHTING
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E203
PSC-12.006



REVISIONS		
NO.	DATE	DESCRIPTION
①	3/7/24	ADDENDUM NO. 1
②	3/14/24	ADDENDUM NO. 2

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Rockville, MD 20850
phone: 410.822.4688
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WO# 23043

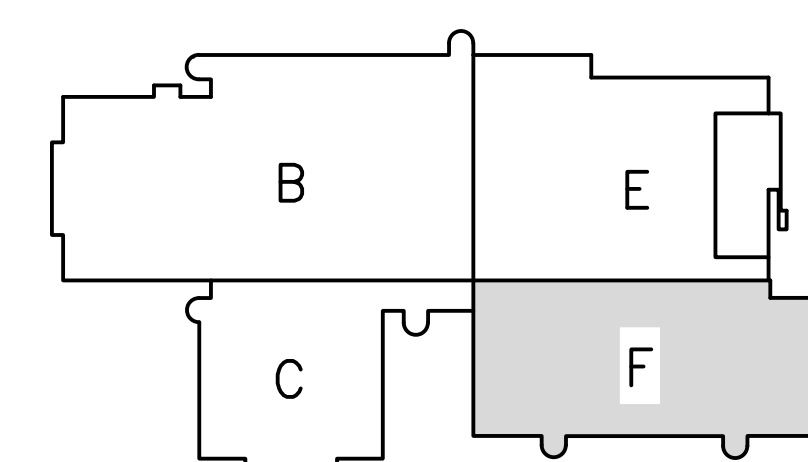
PROJECT MANAGER	EMP
DESIGNER	EMP
DATE	2/26/2024

LOWER LEVEL AREA F - LIGHTING

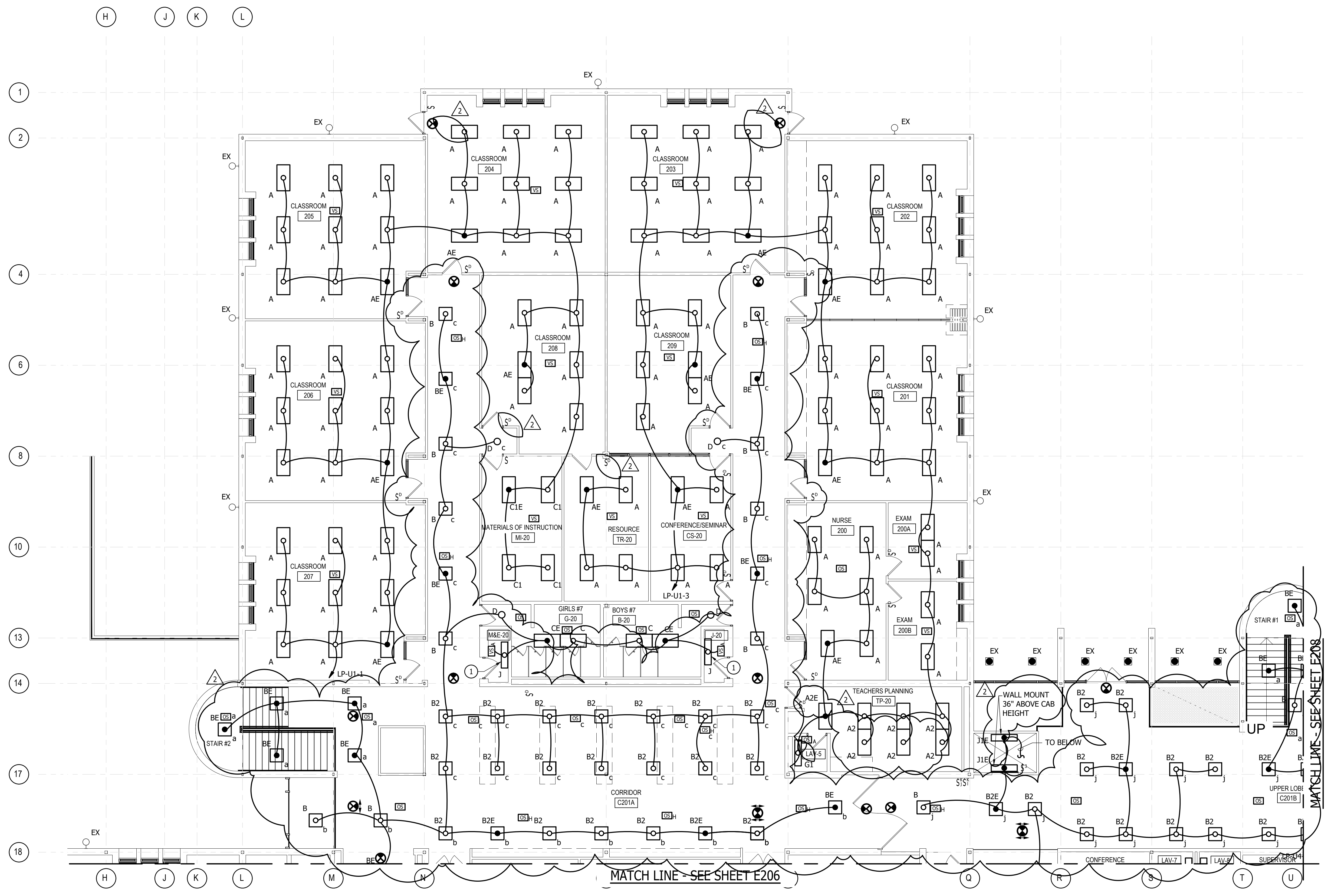
BID SUBMISSION

E204

PSC-12.006



KEY PLAN
N.T.S.



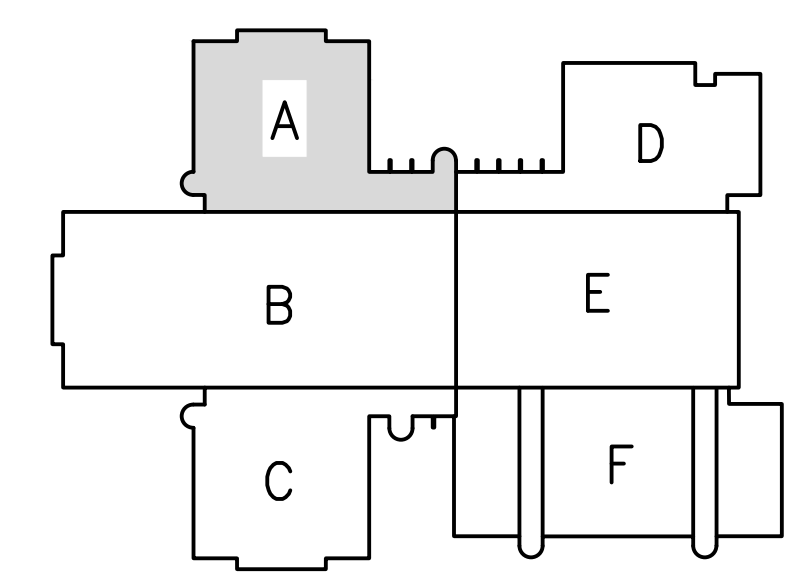
DRAWING NOTES:

1. WALL MOUNT 8'-0" AFF.

GENERAL NOTES:

1. MAINTAIN EXISTING EXTERIOR LIGHTING BRANCH CIRCUITS AND CONTROLS.
2. CONNECT BATTERY PACKS AHEAD OF LOCAL SWITCHING.
3. CONNECT EXIT SIGNS TO CIRCUIT ELP-U1-6.
4. HOMERUN CIRCUIT NUMBERS ARE FOR REFERENCE ONLY. FIELD COORDINATE ACTUAL CIRCUIT NUMBER IN PANEL WITH PROJECT PHASING. MAKE CONNECTION TO CIRCUIT MADE SPARE BY DEMOLITION.

1 UPPER LEVEL AREA A - LIGHTING
SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

REVISIONS		DESCRIPTION
NO.	DATE	
1	3/7/24	ADDENDUM NO. 1
2	3/14/24	ADDENDUM NO. 2

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WO# 23043

PROJECT MANAGER EMP

DESIGNER EMP

DATE 2/26/2024

UPPER LEVEL AREA A - LIGHTING
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E205

PSC-12.006

1. MAINTAIN EXISTING EXTERIOR LIGHTING BRANCH CIRCUITS AND CONTROLS.
2. CONNECT BATTERY PACKS AHEAD OF LOCAL SWITCHING.
3. CONNECT EXIT SIGNS TO CIRCUIT ELP-U1-6.
4. HOMERUN CIRCUIT NUMBERS ARE FOR REFERENCE ONLY. FIELD COORDINATE ACTUAL CIRCUIT NUMBER IN PANEL WITH PROJECT PHASING. MAKE CONNECTION TO CIRCUIT MADE SPARE BY DEMOLITION.

REVISIONS		
NO.	DATE	DESCRIPTION
1.	3/7/24	ADDENDUM NO. 1
2.	3/14/24	ADDENDUM NO. 2

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Easton, Maryland 21601
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WO# 23043

PROJECT MANAGER	EMP
--------------------	-----

DESIGNER	EMP
----------	-----

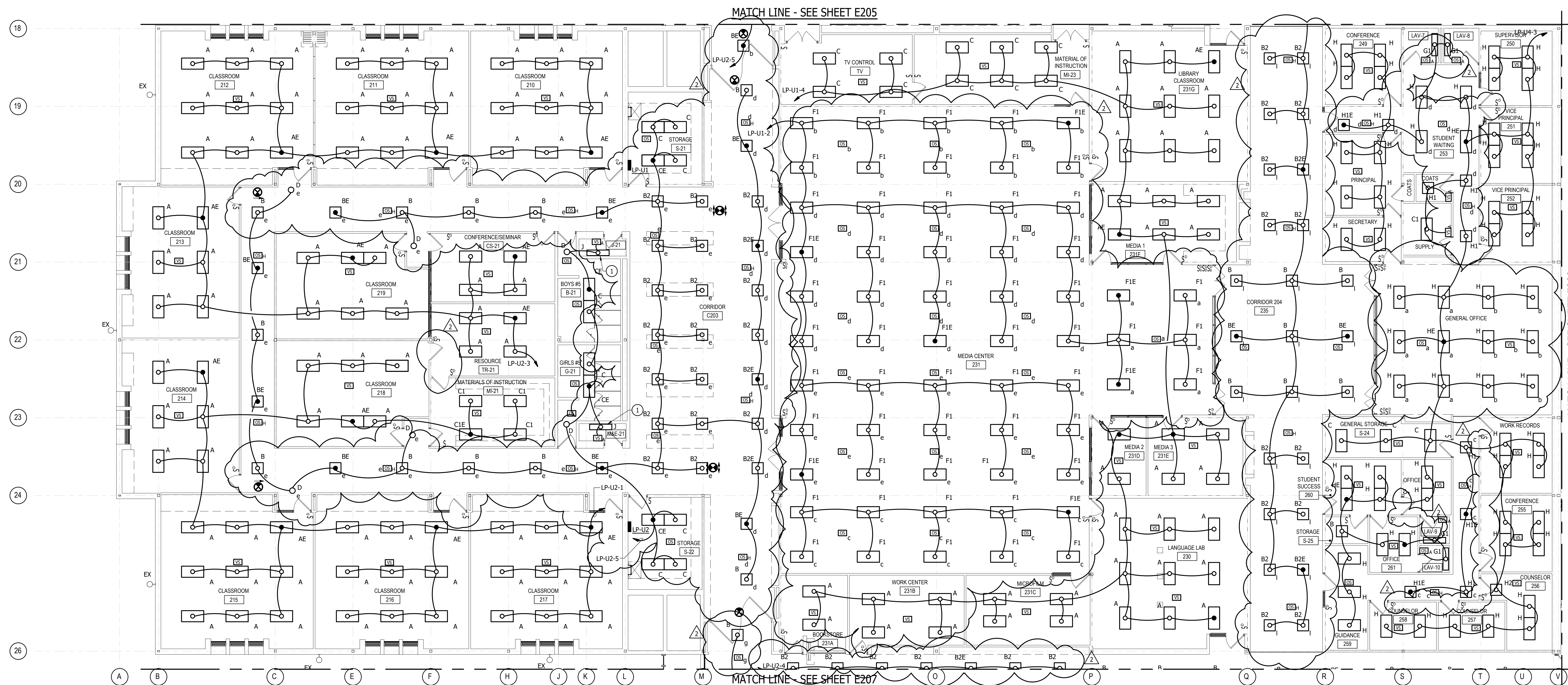
DATE 2/26/2024

UPPER LEVEL AREA B - LIGHTING

BID SUBMISSION

E206

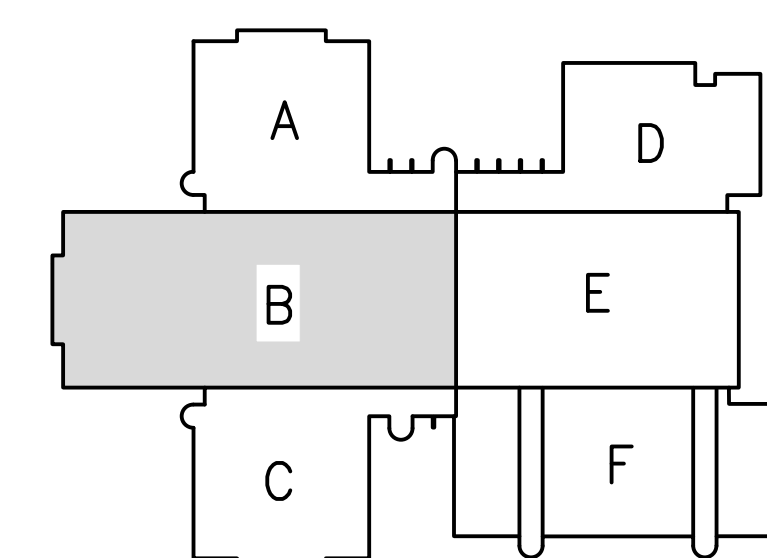
PSC-12.006



1
E206

UPPER LEVEL AREA B - LIGHTING

SCALE: 1/8" = 1'-0"



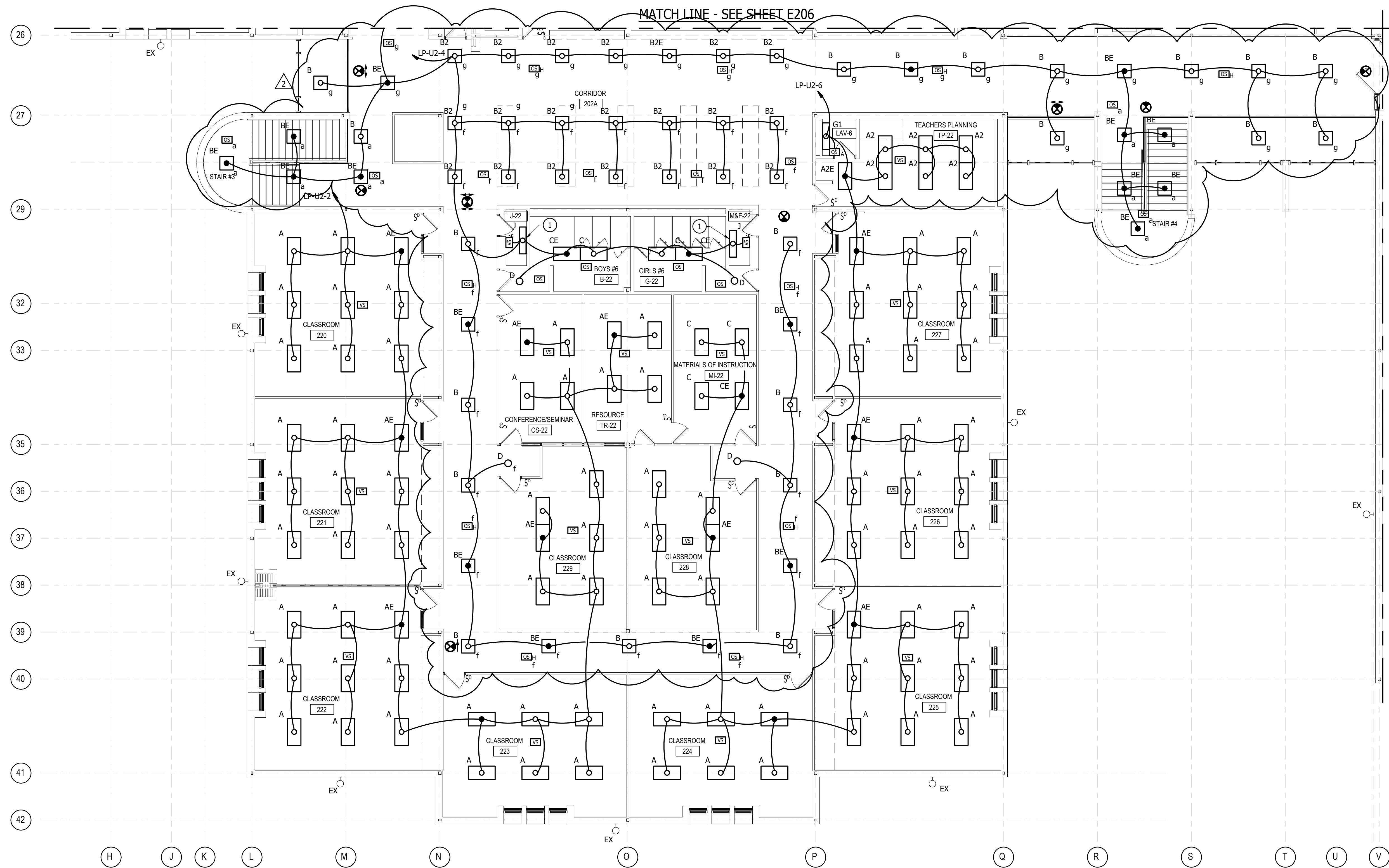
KEY PLAN
N.T.S.

DRAWING NOTES:

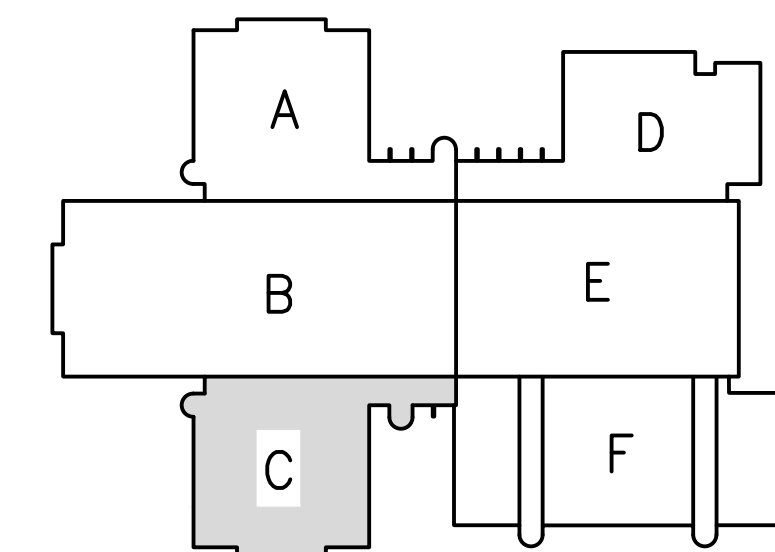
1. WALL MOUNT 8'-0" AFF.

GENERAL NOTES:

1. MAINTAIN EXISTING EXTERIOR LIGHTING BRANCH CIRCUITS AND CONTROLS.
2. CONNECT BATTERY PACKS AHEAD OF LOCAL SWITCHING.
3. CONNECT EXIT SIGNS TO CIRCUIT ELP-U1-6.
4. HOMERUN CIRCUIT NUMBERS ARE FOR REFERENCE ONLY. FIELD COORDINATE ACTUAL CIRCUIT NUMBER IN PANEL WITH PROJECT PHASING. MAKE CONNECTION TO CIRCUIT MADE SPARE BY DEMOLITION.



1
E207
UPPER LEVEL AREA C - LIGHTING
SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

UPPER LEVEL AREA C - LIGHTING

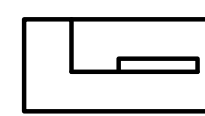
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001

BID SUBMISSION

E207

PSC-12.006

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WO# 23043

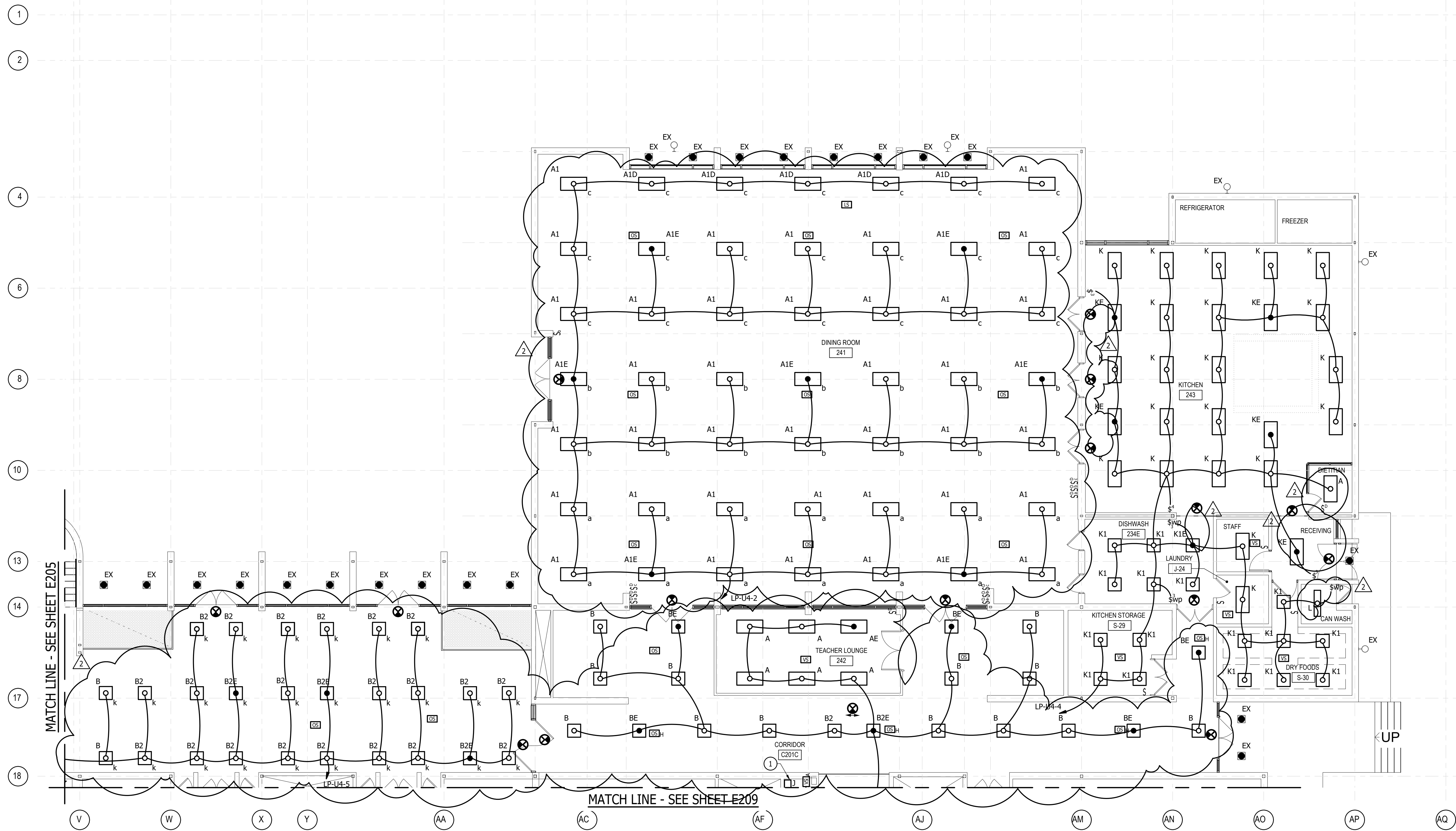
PROJECT
MANAGER EMP

DESIGNER EMP

DATE 2/26/2024

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Fax: 410.822.2618



DRAWING NOTES:

1. WALL MOUNT 8'-0" AFF.

GENERAL NOTES:

1. MAINTAIN EXISTING EXTERIOR LIGHTING BRANCH CIRCUITS AND CONTROLS.
2. CONNECT BATTERY PACKS AHEAD OF LOCAL SWITCHING.
3. CONNECT EXIT SIGNS TO CIRCUIT ELP-U1-8.
4. HOMERUN CIRCUIT NUMBERS ARE FOR REFERENCE ONLY. FIELD COORDINATE ACTUAL CIRCUIT NUMBER IN PANEL WITH PROJECT PHASING. MAKE CONNECTION TO CIRCUIT MADE SPARE BY DEMOLITION.

REVISIONS		NO.	DATE	DESCRIPTION
		1	3/7/24	ADDENDUM NO. 1
		2	3/14/24	ADDENDUM NO. 2

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WO# 23043
PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

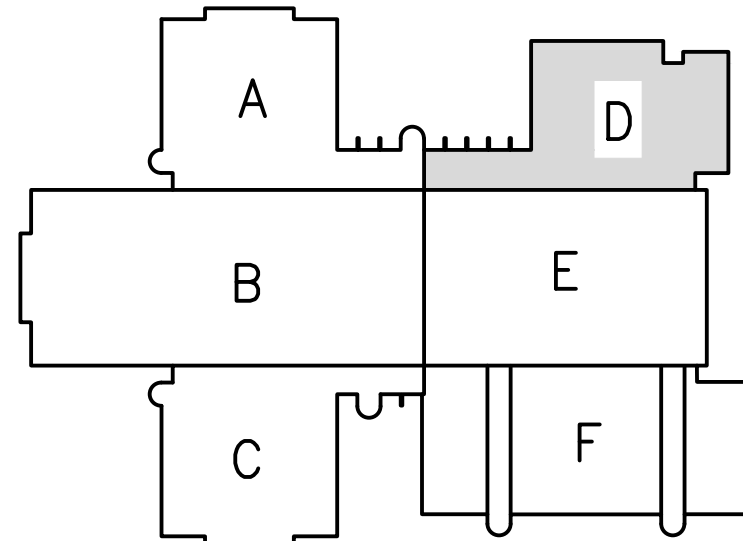
UPPER LEVEL AREA D - LIGHTING
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E208

PSC-12.006

1 UPPER LEVEL AREA D - LIGHTING
E208 SCALE: 1/8" = 1'-0"



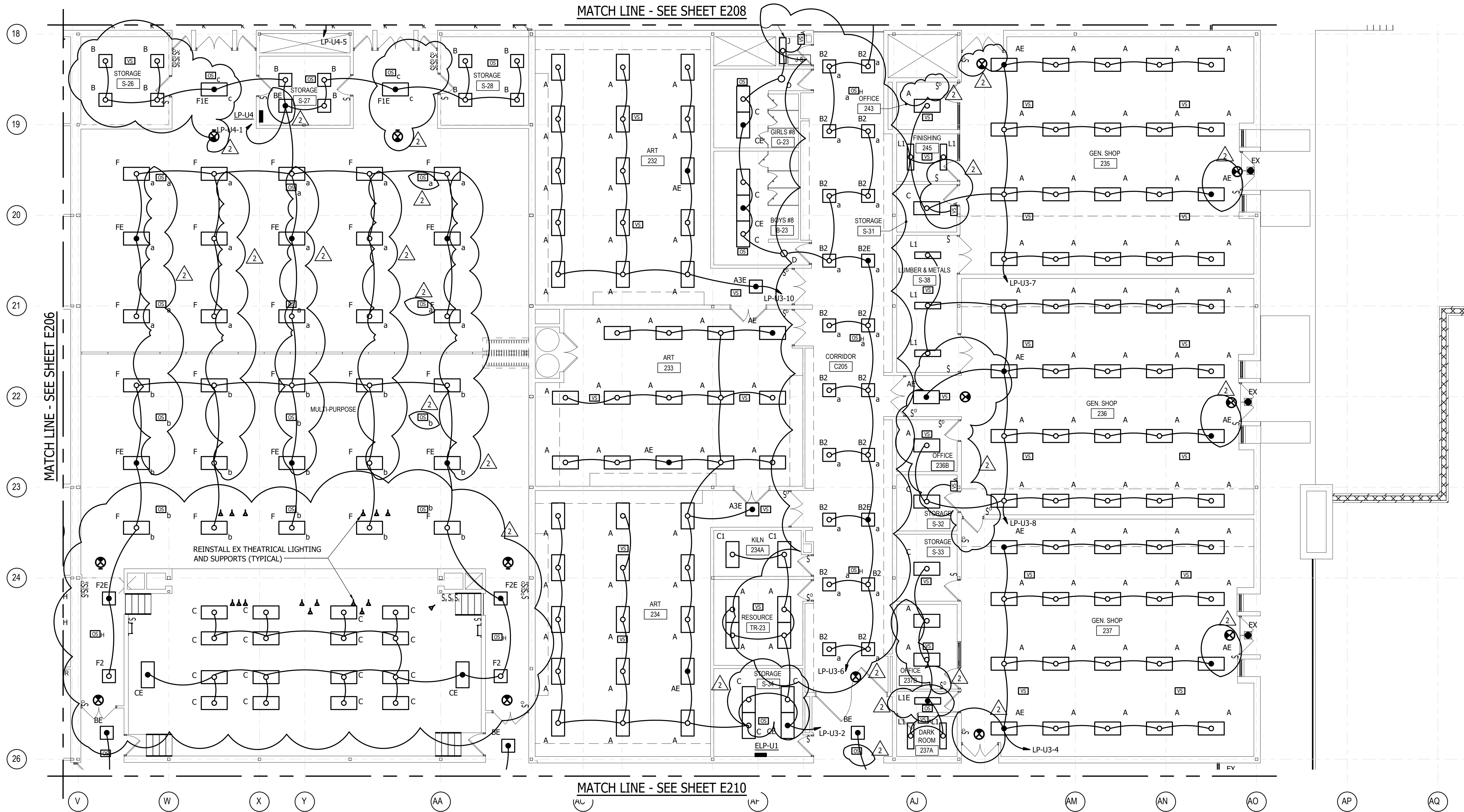
KEY PLAN
N.T.S.

DRAWING NOTES:

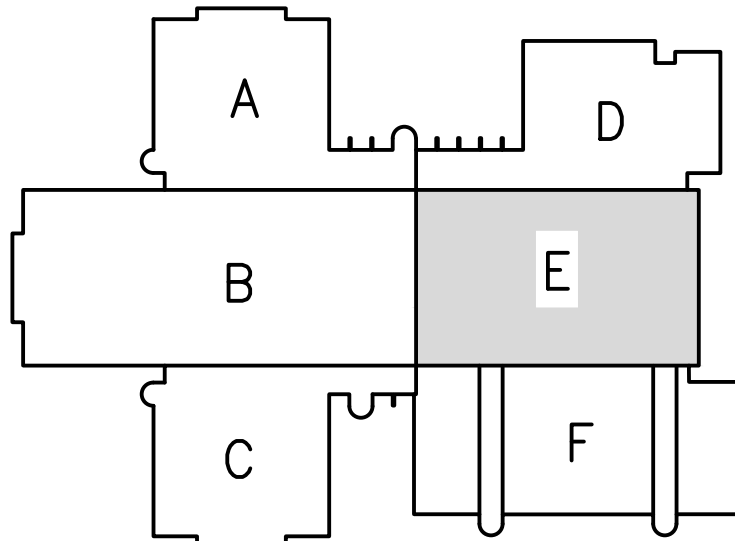
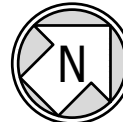
1. WALL MOUNT 8'-0" AFF.

GENERAL NOTES:

1. MAINTAIN EXISTING EXTERIOR LIGHTING BRANCH CIRCUITS AND CONTROLS.
2. CONNECT BATTERY PACKS AHEAD OF LOCAL SWITCHING.
3. CONNECT EXIT SIGNS TO CIRCUIT ELP-U1-8.
4. HOMERUN CIRCUIT NUMBERS ARE FOR REFERENCE ONLY. FIELD COORDINATE ACTUAL CIRCUIT NUMBER IN PANEL WITH PROJECT PHASING. MAKE CONNECTION TO CIRCUIT MADE SPARE BY DEMOLITION.



1
E209
UPPER LEVEL AREA E - LIGHTING
SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

NO.	DATE	DESCRIPTION	ADDITION NO. 1	ADDITION NO. 2
1	3/7/24			
2	3/14/24			

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WO# 23043
PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

UPPER LEVEL AREA E - LIGHTING
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

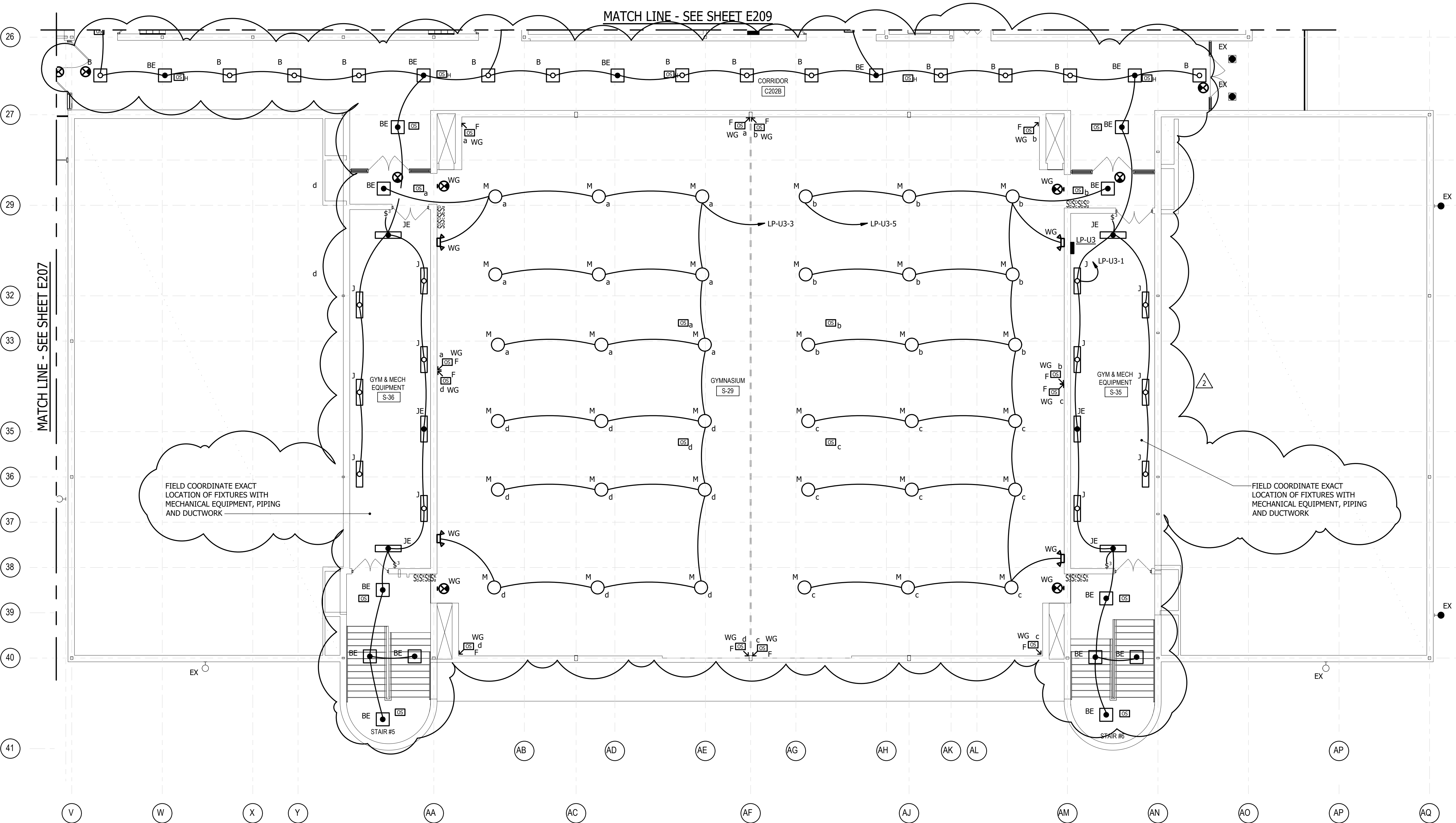
E209
PSC-12.006

DRAWING NOTES:

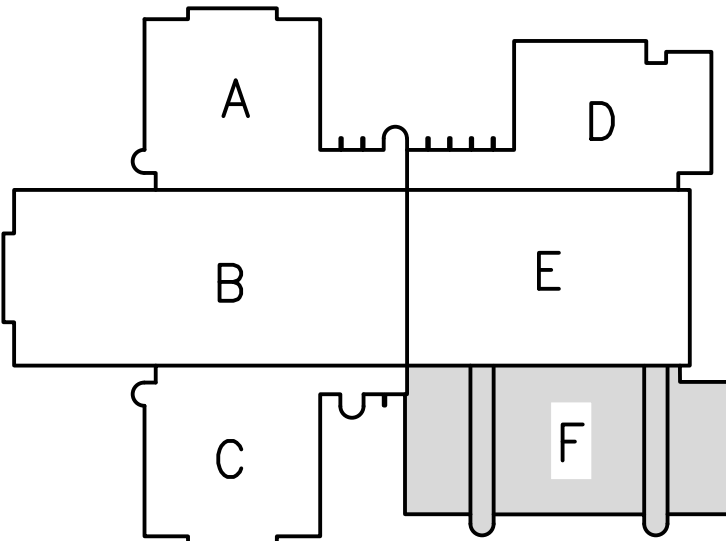
1. WALL MOUNT 8'-0" AFF.

GENERAL NOTES:

1. MAINTAIN EXISTING EXTERIOR LIGHTING BRANCH CIRCUITS AND CONTROLS.
2. CONNECT BATTERY PACKS AHEAD OF LOCAL SWITCHING.
3. CONNECT EXIT SIGNS TO CIRCUIT ELP-U1-8.
4. HOMERUN CIRCUIT NUMBERS ARE FOR REFERENCE ONLY. FIELD COORDINATE ACTUAL CIRCUIT NUMBER IN PANEL WITH PROJECT PHASING. MAKE CONNECTION TO CIRCUIT MADE SPARE BY DEMOLITION.



1 UPPER LEVEL AREA F - LIGHTING
E210 SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

REVISIONS		DESCRIPTION
NO.	DATE	
1	3/7/24	ADDITION NO. 1
2	3/14/24	ADDITION NO. 2

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WO# 23043

PROJECT MANAGER EMP

DESIGNER EMP

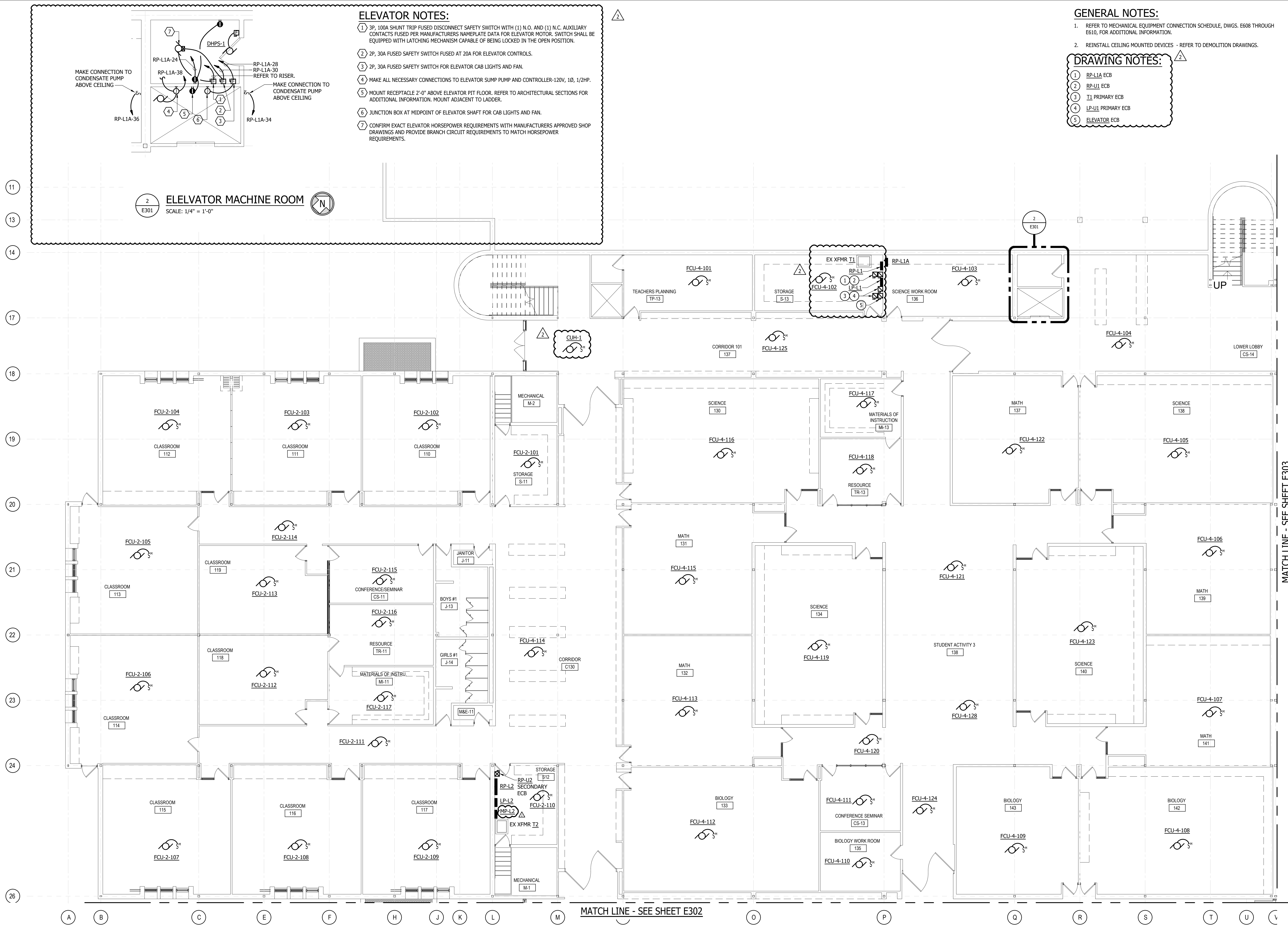
DATE 2/26/2024

UPPER LEVEL AREA F - LIGHTING
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E210

PSC-12.006



ELEVATOR NOTES:

- 1) 3P, 100A SHUNT TRIP FUSED DISCONNECT SAFETY SWITCH WITH (1) N.O. AND (1) N.C. AUXILIARY CONTACTS FUSED PER MANUFACTURERS NAMEPLATE DATA FOR ELEVATOR MOTOR. SWITCH SHALL BE EQUIPPED WITH LATCHING MECHANISM CAPABLE OF BEING LOCKED IN THE OPEN POSITION.
- 2) 2P, 30A FUSED SAFETY SWITCH FUSED AT 20A FOR ELEVATOR CONTROLS.
- 3) 2P, 30A FUSED SAFETY SWITCH FOR ELEVATOR CAB LIGHTS AND FAN.
- 4) MAKE ALL NECESSARY CONNECTIONS TO ELEVATOR SUMP PUMP AND CONTROLLER-120V, 1Ø, 1/2HP.
- 5) MOUNT RECEPTACLE 2'-0" ABOVE ELEVATOR PIT FLOOR. REFER TO ARCHITECTURAL SECTIONS FOR ADDITIONAL INFORMATION. MOUNT ADJACENT TO LADDER.
- 6) JUNCTION BOX AT MIDPOINT OF ELEVATOR SHAFT FOR CAB LIGHTS AND FAN.
- 7) CONFIRM EXACT ELEVATOR HORSEPOWER REQUIREMENTS WITH MANUFACTURERS APPROVED SHOP DRAWINGS AND PROVIDE BRANCH CIRCUIT REQUIREMENTS TO MATCH HORSEPOWER REQUIREMENTS.

GENERAL NOTES:

1. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE, DWGS. E608 THROUGH E610, FOR ADDITIONAL INFORMATION.
2. REINSTALL CEILING MOUNTED DEVICES - REFER TO DEMOLITION DRAWINGS.

DRAWING NOTES:

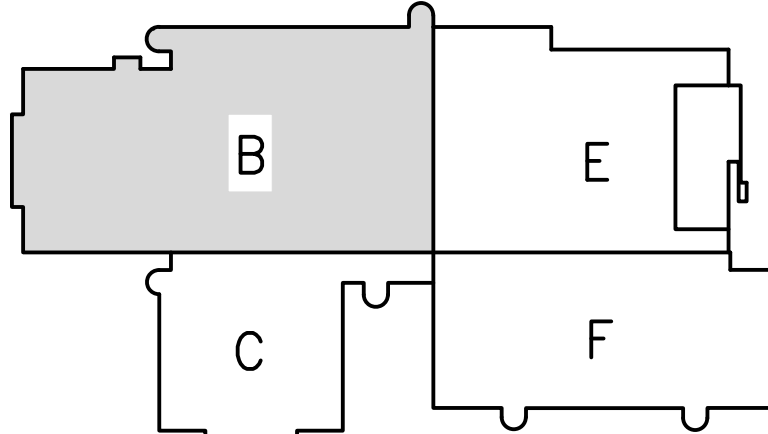
- 1 RP-L1A ECB
- 2 RP-L1J ECB
- 3 T1 PRIMARY ECB
- 4 LP-L1J PRIMARY ECB
- 5 ELEVATOR ECB

ELEVATOR MACHINE ROOM

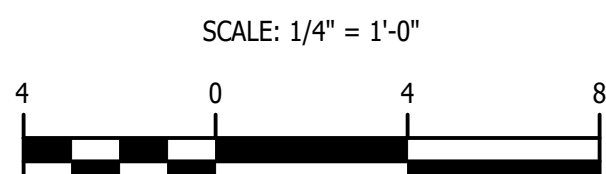
SCALE: 1/4" = 1'-0"

LOWER LEVEL AREA B - POWER

SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.



NO.	DATE	DESCRIPTION	ADDENDUM NO.	ADDENDUM NO.
1	3/7/24		1	
2	3/14/24		2	

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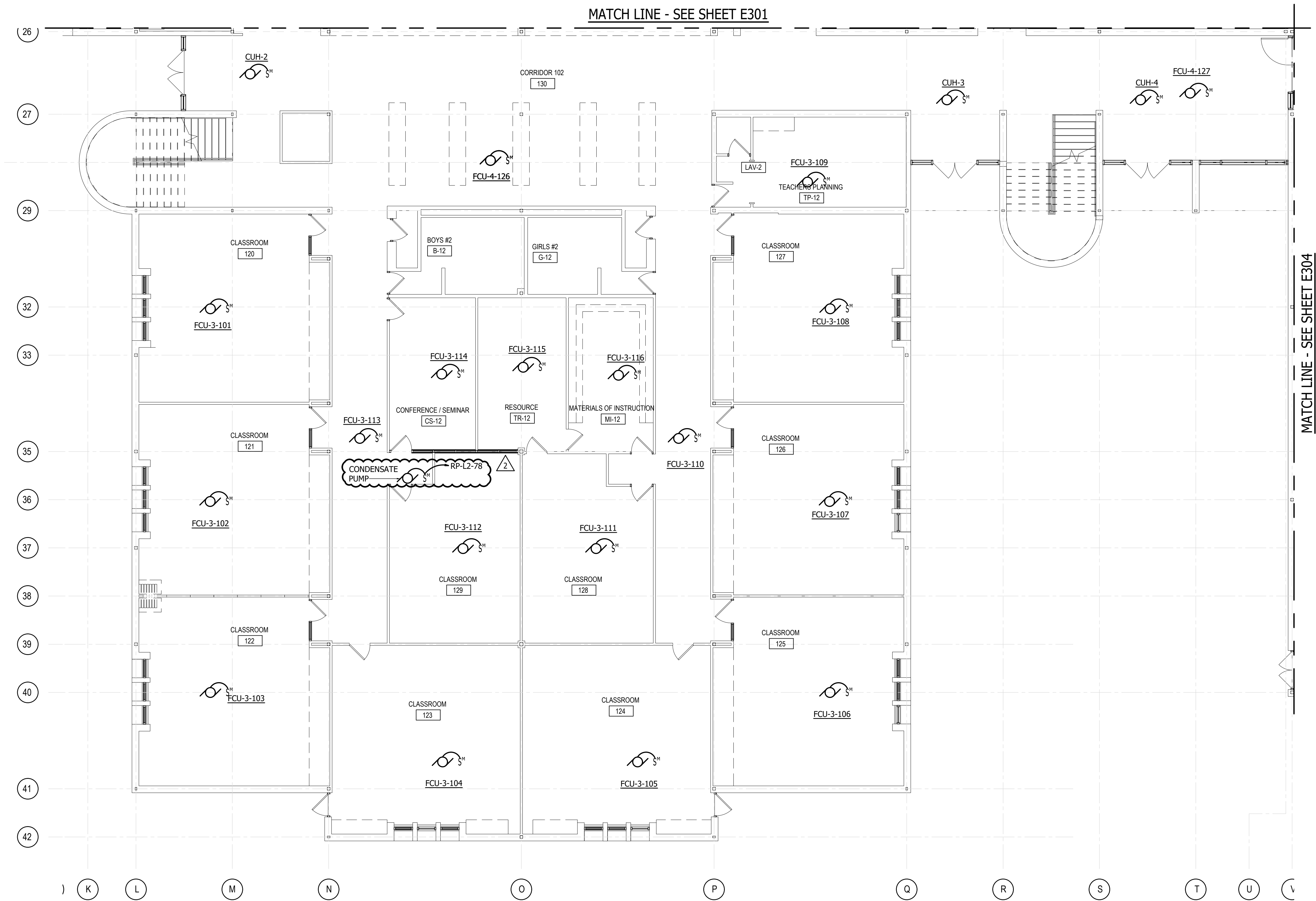
WO# 23043
PROJECT MANAGER: EMP
DESIGNER: EMP
DATE: 2/26/2024

LOWER LEVEL AREA B - POWER
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

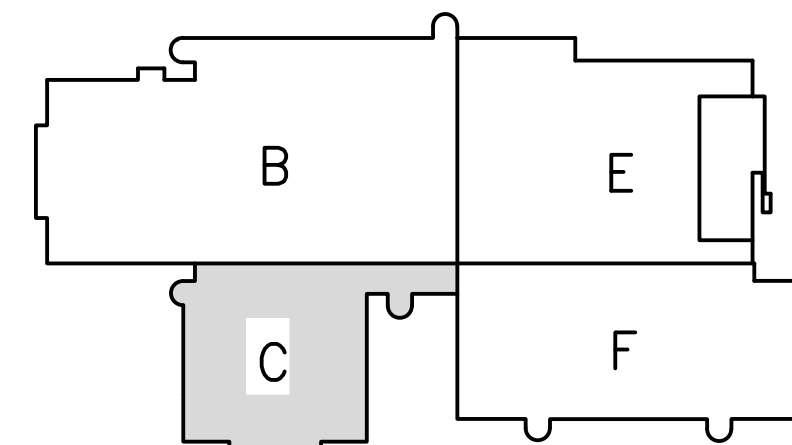
BID SUBMISSION

E301

PSC-12.006



1
E302
LOWER LEVEL AREA C - POWER
SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

GENERAL NOTES:

1. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE, DWGS. E608 THROUGH E610, FOR ADDITIONAL INFORMATION.
2. REINSTALL CEILING MOUNTED DEVICES - REFER TO DEMOLITION DRAWINGS.

REVISIONS		NO.	DATE	DESCRIPTION
1	A	1	3/7/24	ADDENDUM NO. 1
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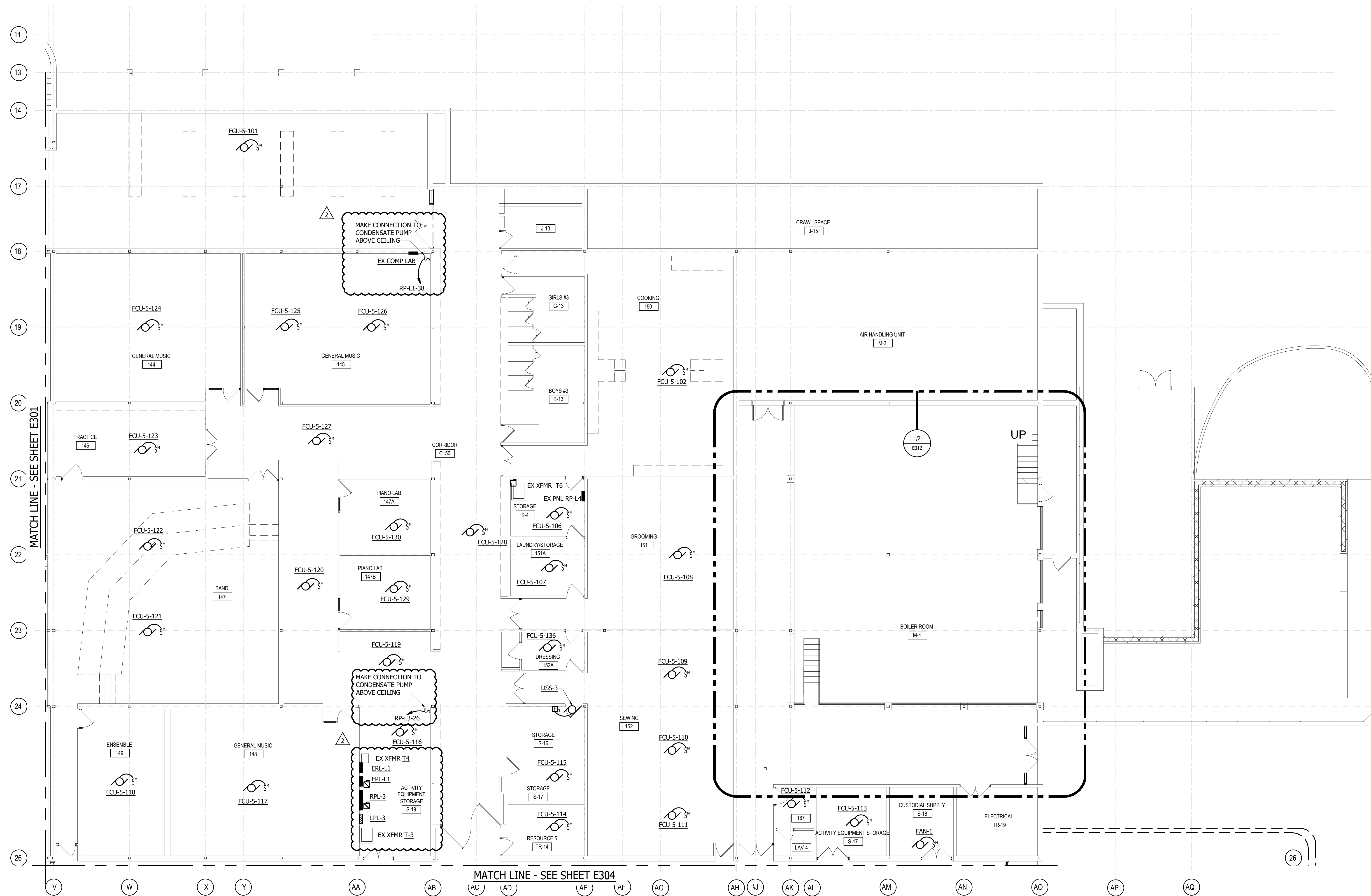
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PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

LOWER LEVEL AREA C - POWER
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

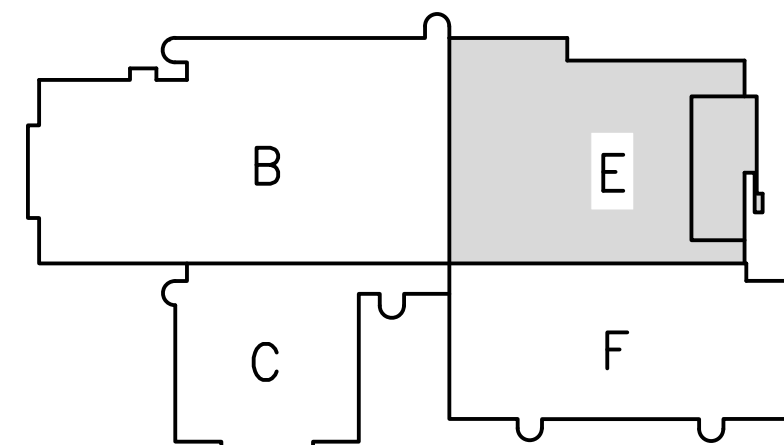
BID SUBMISSION

E302

PSC-12.006



1
E303
LOWER LEVEL AREA E - POWER
SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

GENERAL NOTES:

1. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE, DWGS. E608 THROUGH E610, FOR ADDITIONAL INFORMATION.
2. REINSTALL CEILING MOUNTED DEVICES - REFER TO DEMOLITION DRAWINGS.

REVISIONS		NO.	DATE	DESCRIPTION
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DESIGNER EMP

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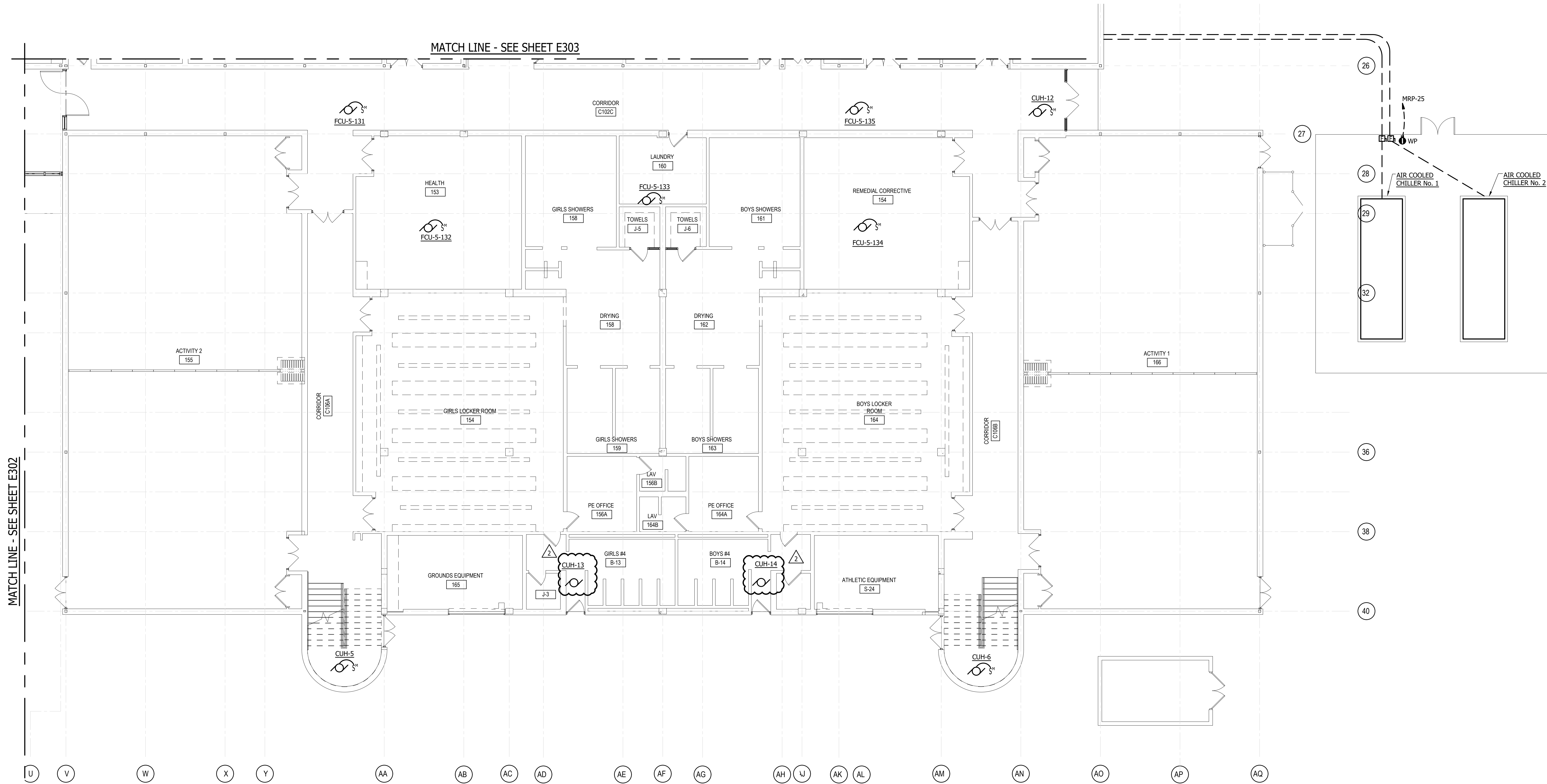
LOWER LEVEL AREA E - POWER
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

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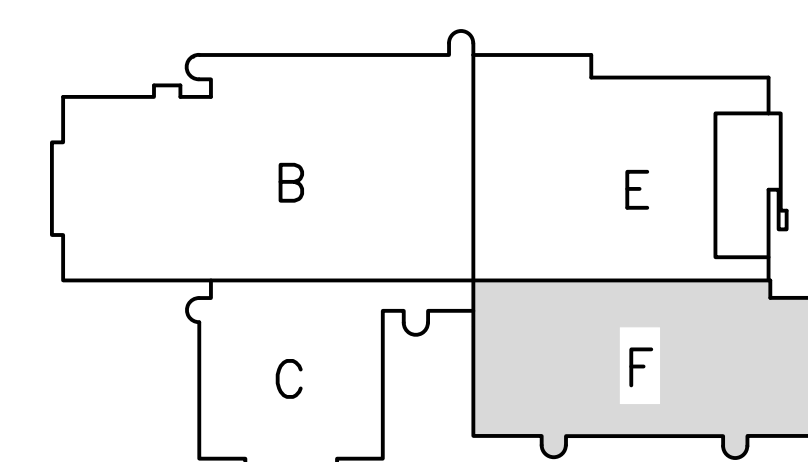
E303

PSC-12.006

MATCH LINE - SEE SHEET E302



1
E304 LOWER LEVEL AREA F - POWER
SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

GENERAL NOTES:

1. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE, DWGS. E608 THROUGH E610, FOR ADDITIONAL INFORMATION.
2. REINSTALL CEILING MOUNTED DEVICES - REFER TO DEMOLITION DRAWINGS.

REVISIONS			
NO.	DATE	DESCRIPTION	
1	3/7/24	ADDENDUM NO. 1	
2	3/14/24	ADDENDUM NO. 2	

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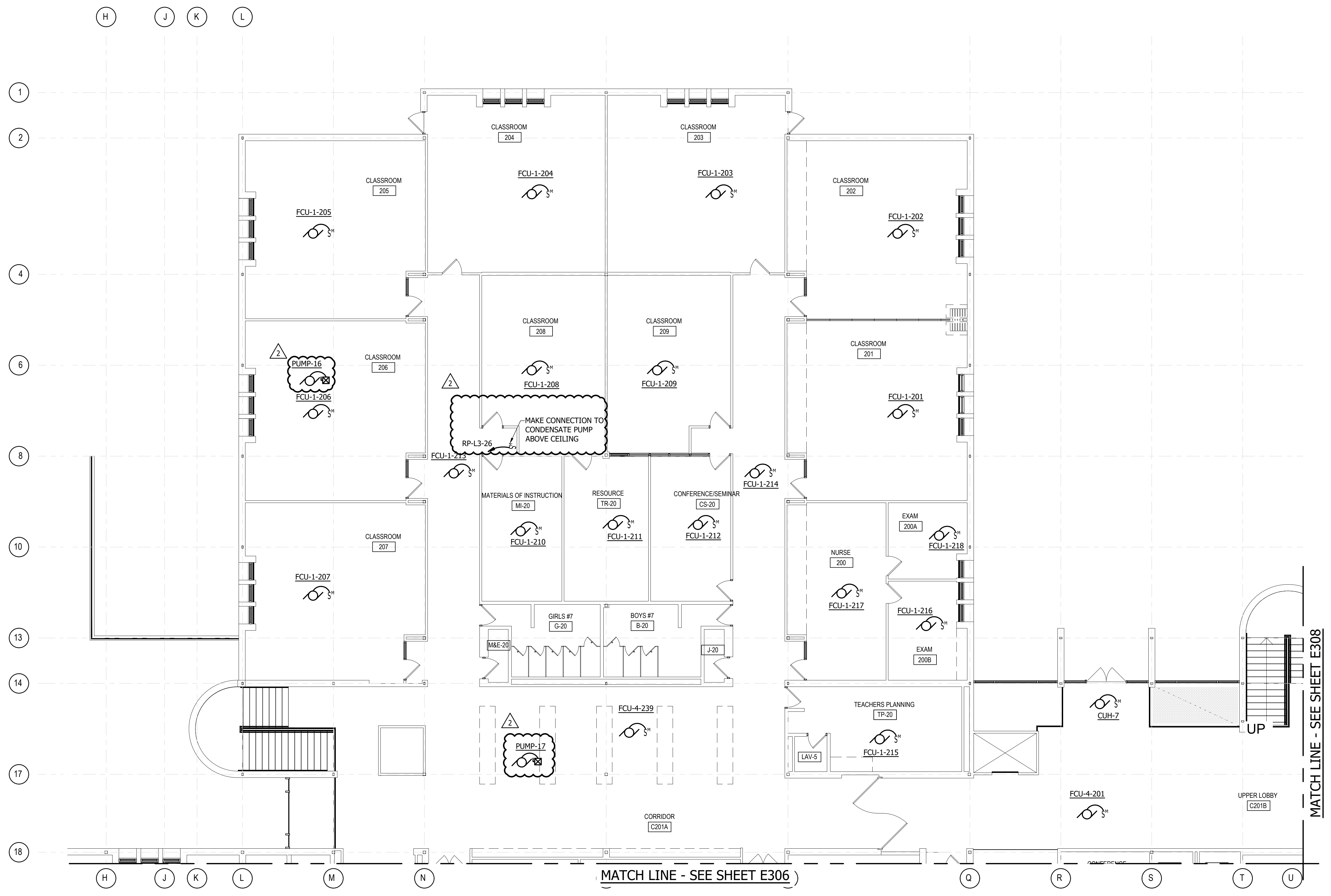
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PROJECT MANAGER	EMP
DESIGNER	EMP
DATE	2/26/2024

LOWER LEVEL AREA F - POWER
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

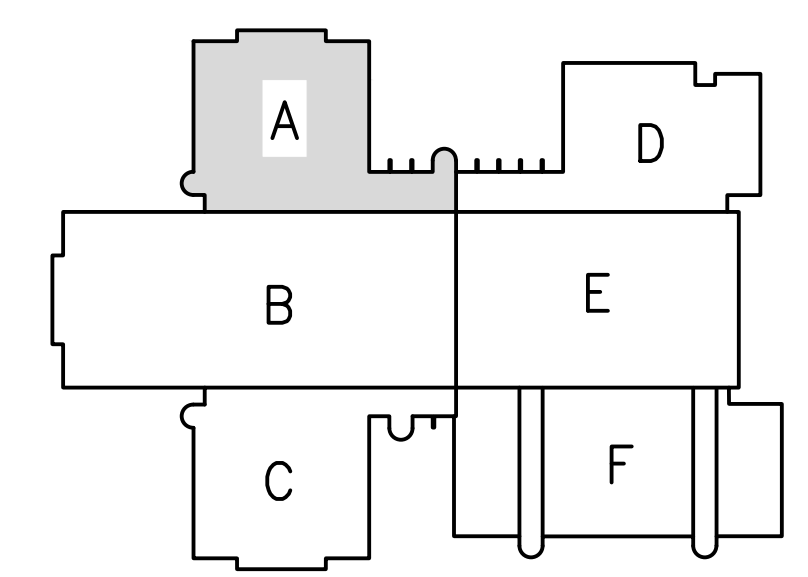
BID SUBMISSION

E304

PSC-12.006



1
E305
UPPER LEVEL AREA A - POWER
SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

- GENERAL NOTES:**
- REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE, DWGS. E608 THROUGH E610, FOR ADDITIONAL INFORMATION.
 - REINSTALL CEILING MOUNTED DEVICES - REFER TO DEMOLITION DRAWINGS.

REVISIONS		DESCRIPTION
NO.	DATE	
1	3/7/24	ADDENDUM NO. 1
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PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

UPPER LEVEL AREA A - POWER
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E305
PSC-12.006

GENERAL NOTES:

- REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE, DWGS. E608 THROUGH E610, FOR ADDITIONAL INFORMATION.
- REINSTALL CEILING MOUNTED DEVICES - REFER TO DEMOLITION DRAWINGS.

DRAWING NOTES:

- INTERCEPT EX BRANCH CIRCUITS ABOVE CEILING, AND PROVIDE JB'S, SIZED PER NEC. EXTEND EXISTING BRANCH CIRCUITS TO NEW PANEL LOCATION AS REQUIRED.

NO.	DATE	DESCRIPTION	ADDENDUM NO.	ADDENDUM NO.
1	3/7/24		1	
2	3/14/24		2	

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PROJECT MANAGER EMP

DESIGNER EMP

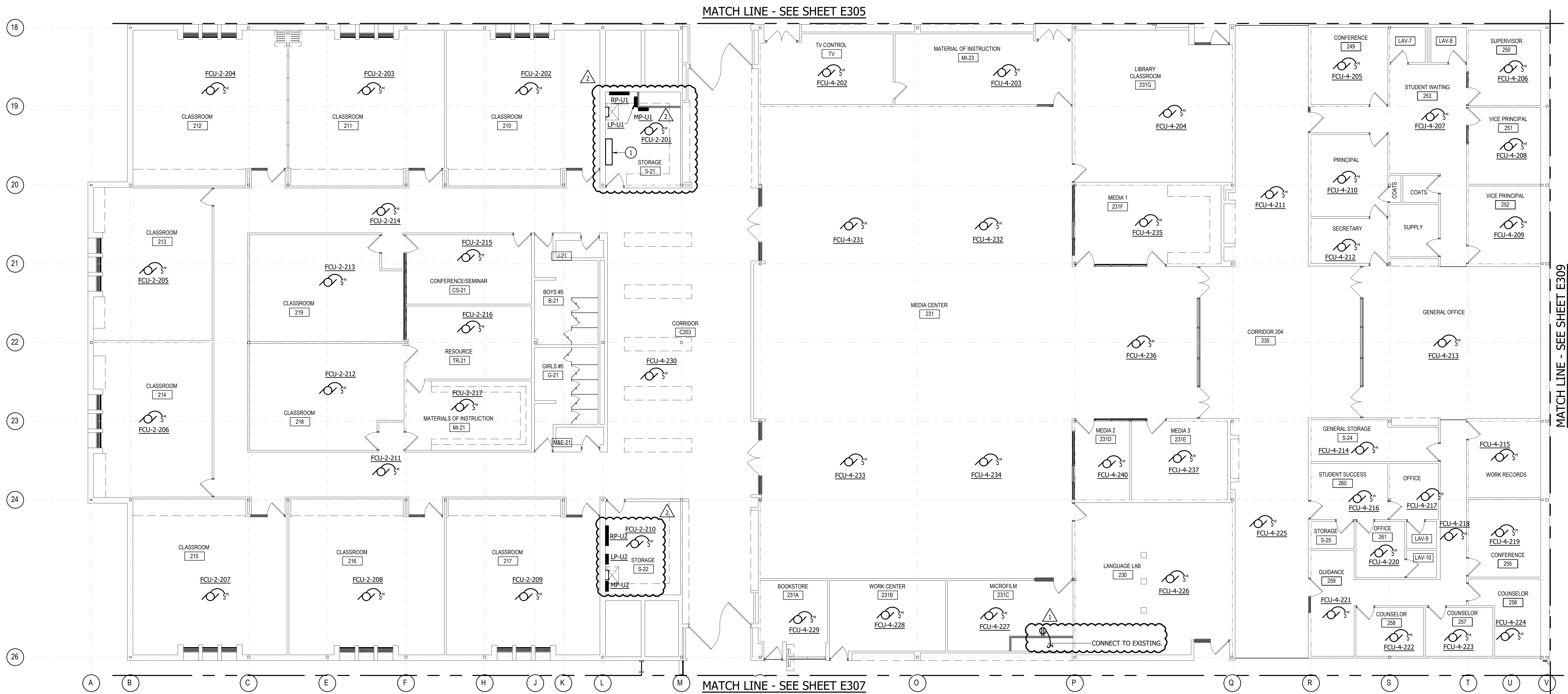
DATE 2/26/2024

UPPER LEVEL AREA B - POWER
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

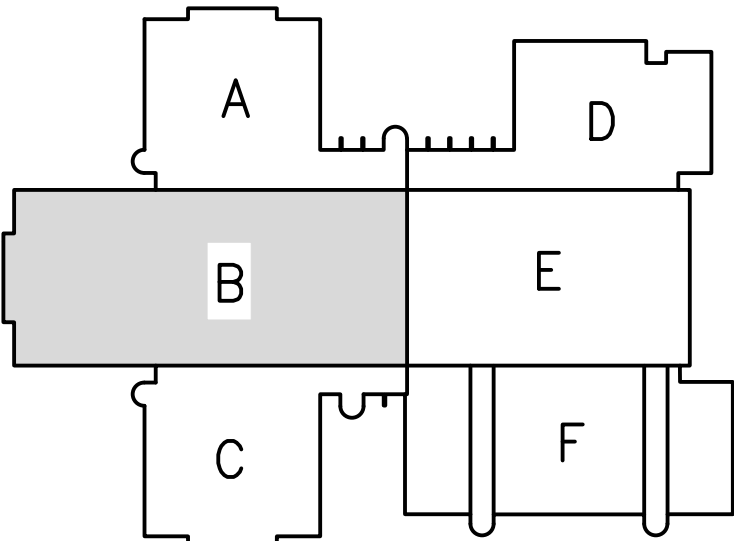
BID SUBMISSION

E306

PSC-12.006



1 UPPER LEVEL AREA B - POWER
E306 SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

- GENERAL NOTES:
- REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE, DWGS. E608 THROUGH E610, FOR ADDITIONAL INFORMATION.
 - REINSTALL CEILING MOUNTED DEVICES - REFER TO DEMOLITION DRAWINGS.

REVISIONS		NO.	DATE	DESCRIPTION
		1	3/7/24	ADDENDUM NO. 1
		2	3/14/24	ADDENDUM NO. 2

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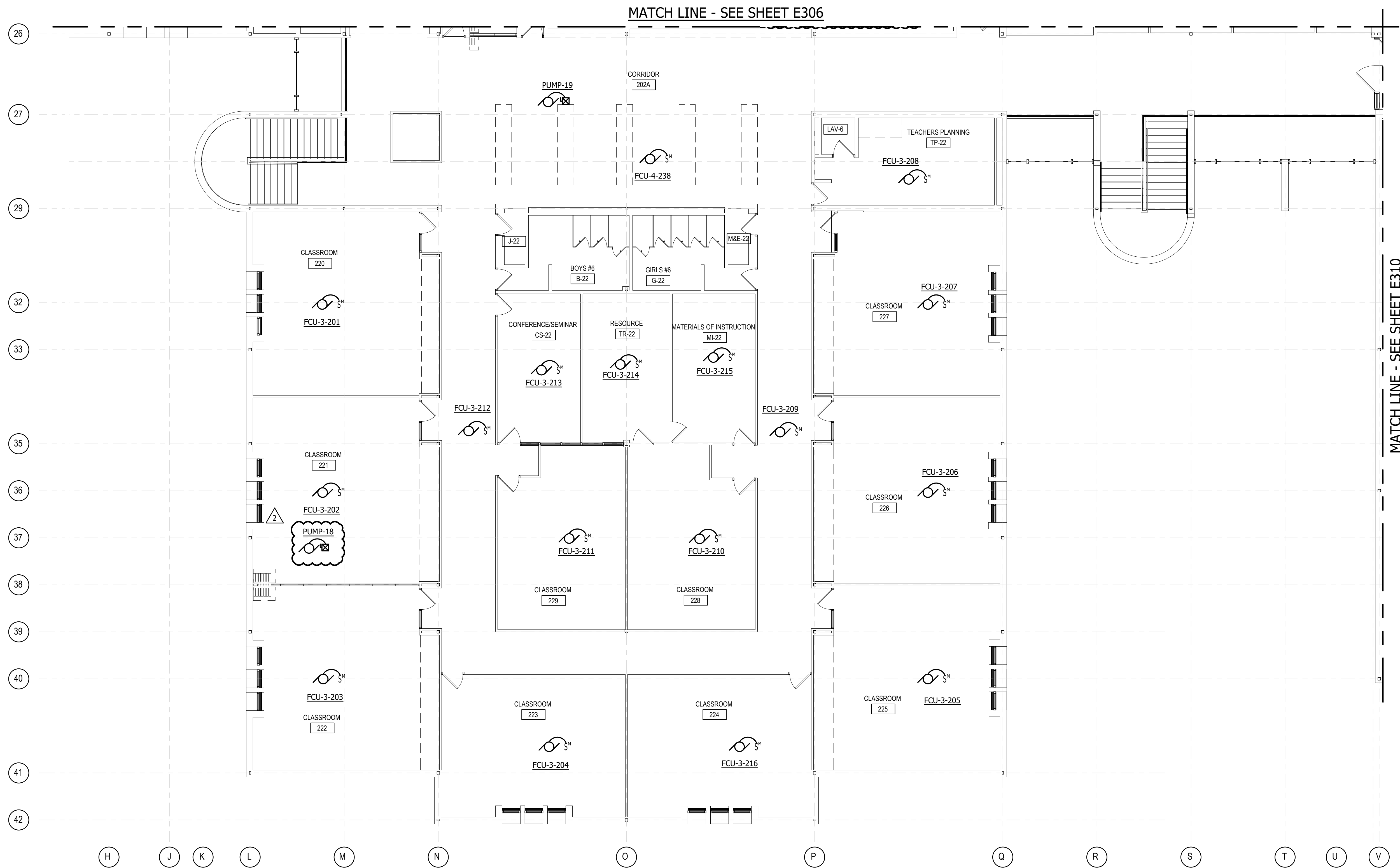
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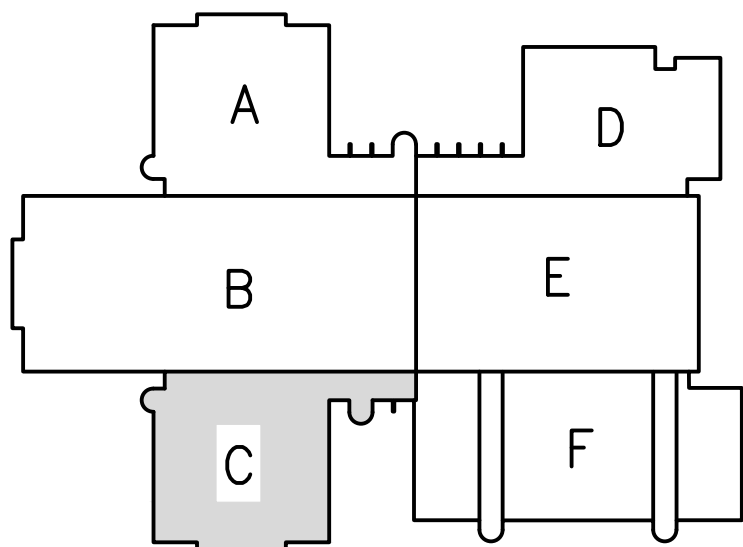
UPPER LEVEL AREA C - POWER
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E307
PSC-12.006



1
E307
UPPER LEVEL AREA C - POWER
SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

- GENERAL NOTES:
- REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE, DWGS. E608 THROUGH E610, FOR ADDITIONAL INFORMATION.
 - REINSTALL CEILING MOUNTED DEVICES - REFER TO DEMOLITION DRAWINGS.

REVISIONS				
	NO.	DATE	DESCRIPTION	
	1	3/7/24	ADDENDUM NO. 1	
	2	3/14/24	ADDENDUM NO. 2	

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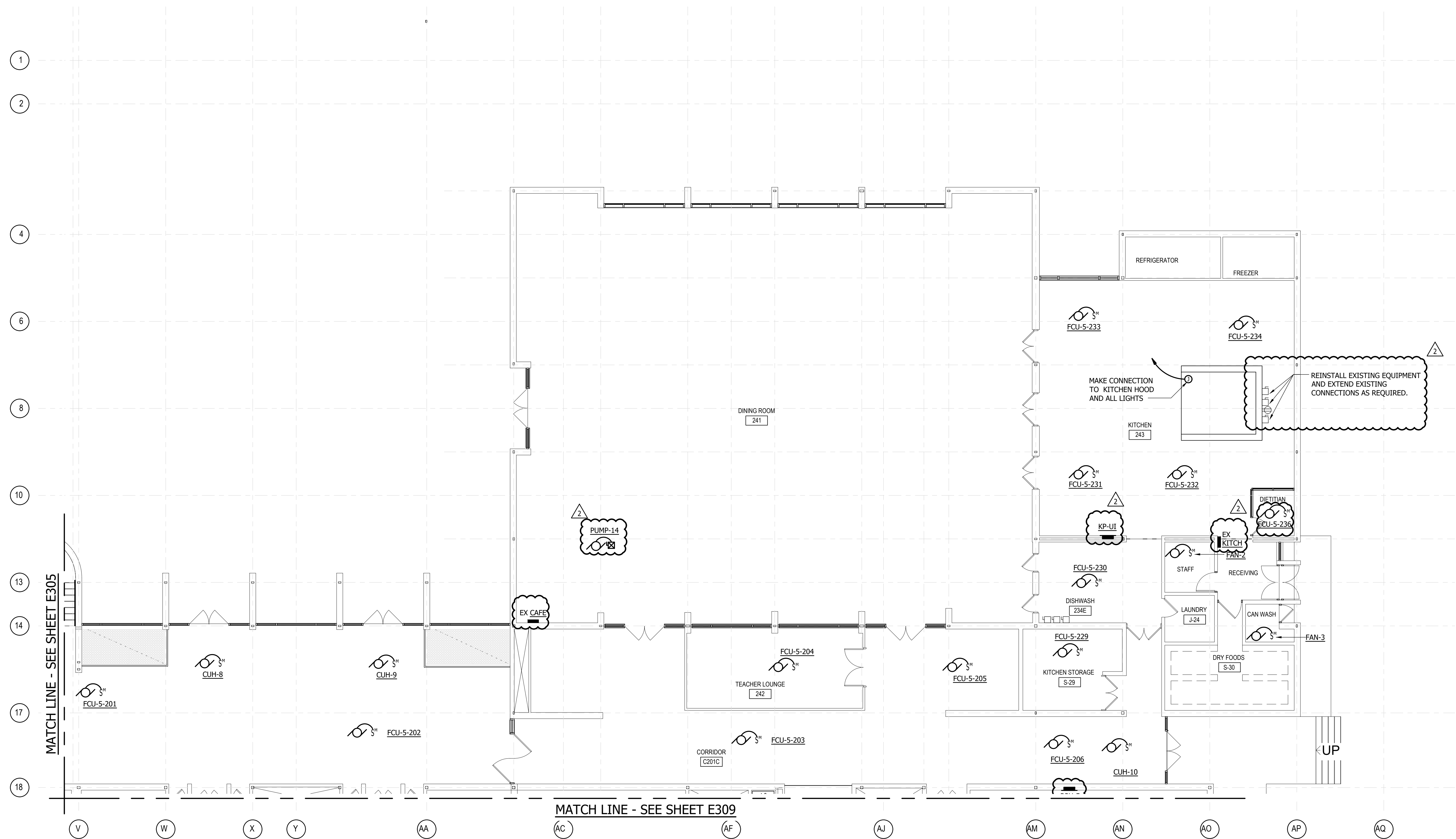
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DESIGNER EMP
DATE 2/26/2024

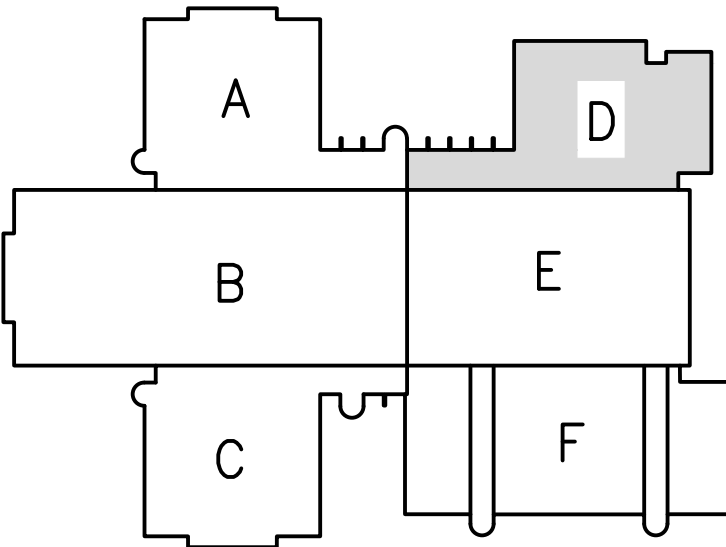
UPPER LEVEL AREA D - POWER
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E308
PSC-12.006



1 UPPER LEVEL AREA D - POWER
E308 SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.

- GENERAL NOTES:
1. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE, DWGS. E608 THROUGH E610, FOR ADDITIONAL INFORMATION.
 2. REINSTALL CEILING MOUNTED DEVICES - REFER TO DEMOLITION DRAWINGS.

REVISIONS		NO.	DATE	DESCRIPTION
1	A	1	3/7/24	ADDENDUM NO. 1
		2	3/14/24	ADDENDUM NO. 2

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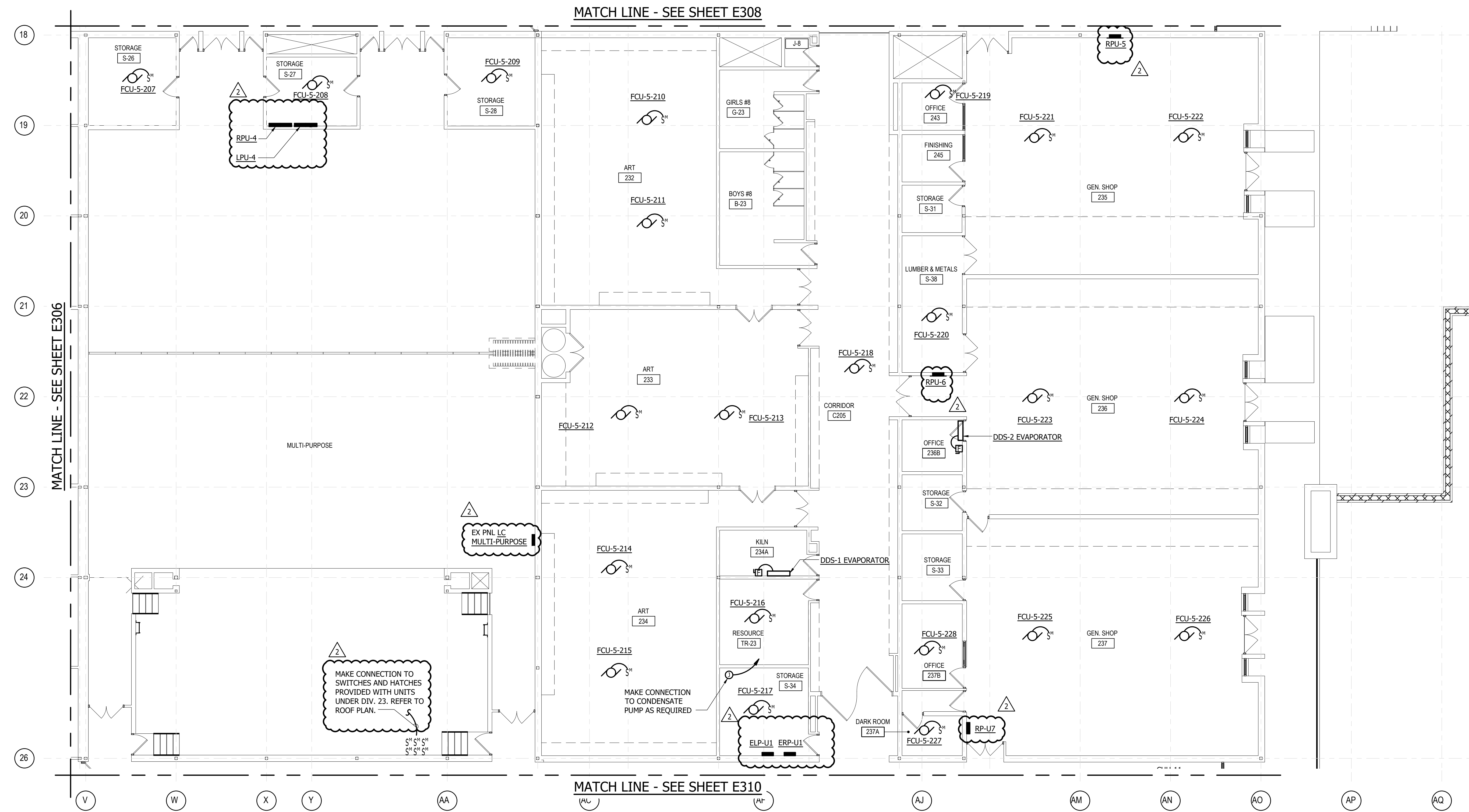
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DESIGNER EMP
DATE 2/26/2024

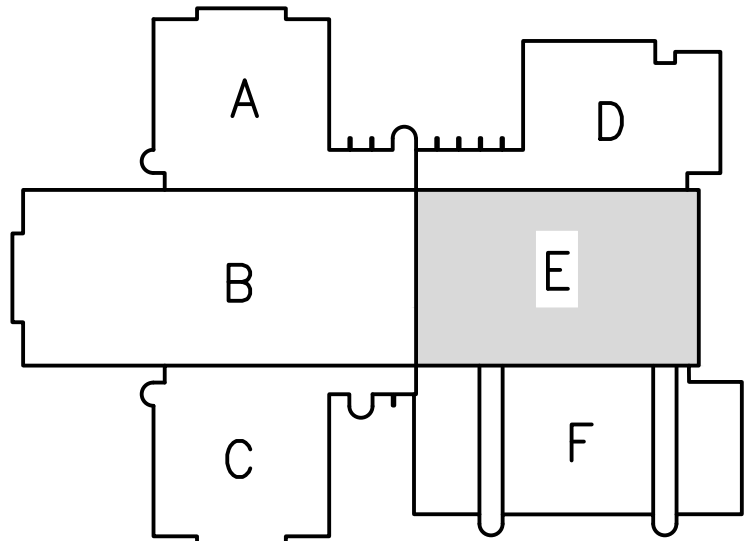
UPPER LEVEL AREA E - POWER
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

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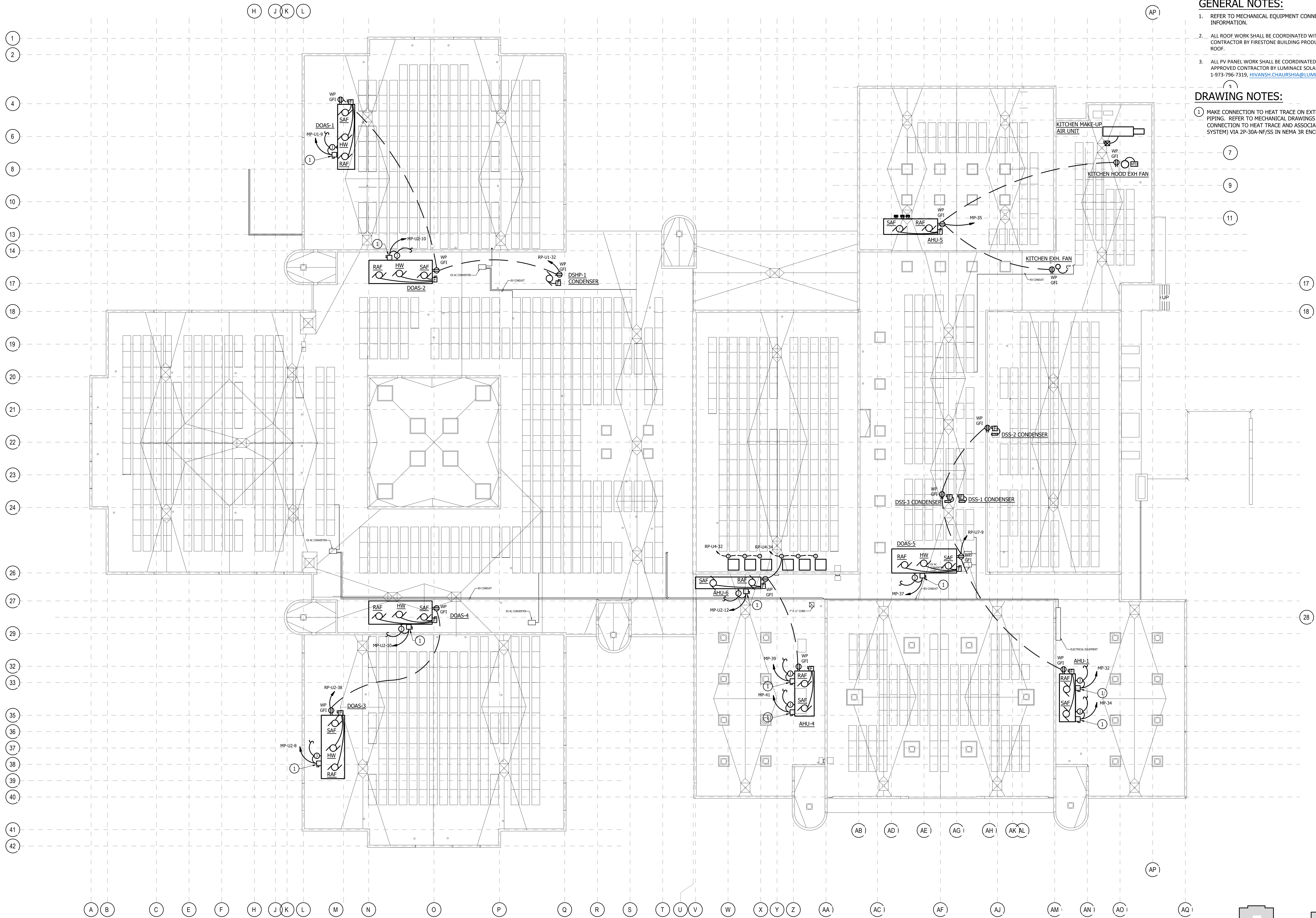
E309
PSC-12.006



1
E309
UPPER LEVEL AREA E - POWER
SCALE: 1/8" = 1'-0"



KEY PLAN
N.T.S.



GENERAL NOTES:

1. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE FOR ADDITIONAL INFORMATION.
2. ALL ROOF WORK SHALL BE COORDINATED WITH AND PERFORMED BY THE APPROVED CONTRACTOR BY FIRESTONE BUILDING PRODUCTS, THE WARRANTY HOLDER OF THE ROOF.
3. ALL PV PANEL WORK SHALL BE COORDINATED WITH AND PERFORMED BY THE APPROVED CONTRACTOR BY LUMINACE SOLAR OPERATIONS. SHIVANSH CHAURUSHAI, 1-973-796-7319, HIVANSH.CHAURSHAI@LUMINACE.COM

DRAWING NOTES:

1. MAKE CONNECTION TO HEAT TRACE ON EXTERIOR WATER SUPPLY AND RETURN PIPING. REFER TO MECHANICAL DRAWINGS FOR PIPING LAYOUT. MAKE CONNECTION TO HEAT TRACE AND ASSOCIATED CONTROLLER (FURNISHED WITH SYSTEM) VIA 2P-30A-NF/SS IN NEMA 3R ENCLOSURE, AS REQUIRED.

REVISIONS		
NO.	DATE	DESCRIPTION
1	3/7/24	ADDENDUM NO. 1
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WO#	23043
PROJECT MANAGER	EMP
DESIGNER	SED
DATE	2/26/2024

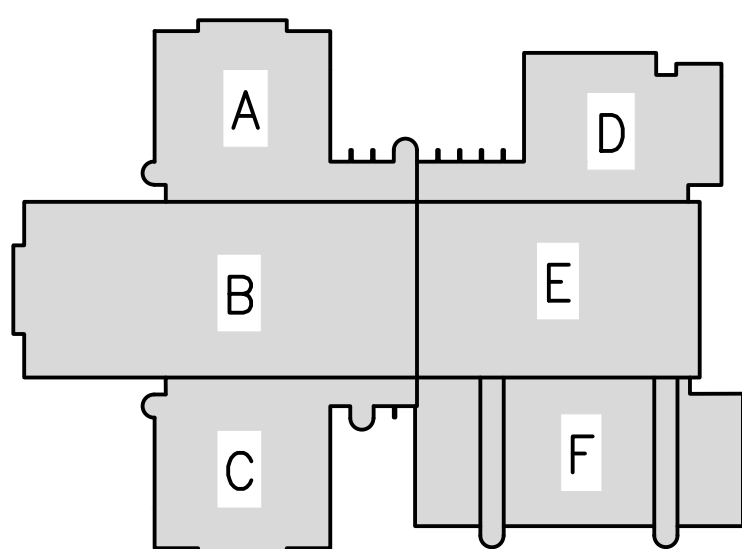
ROOF PLAN - POWER
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

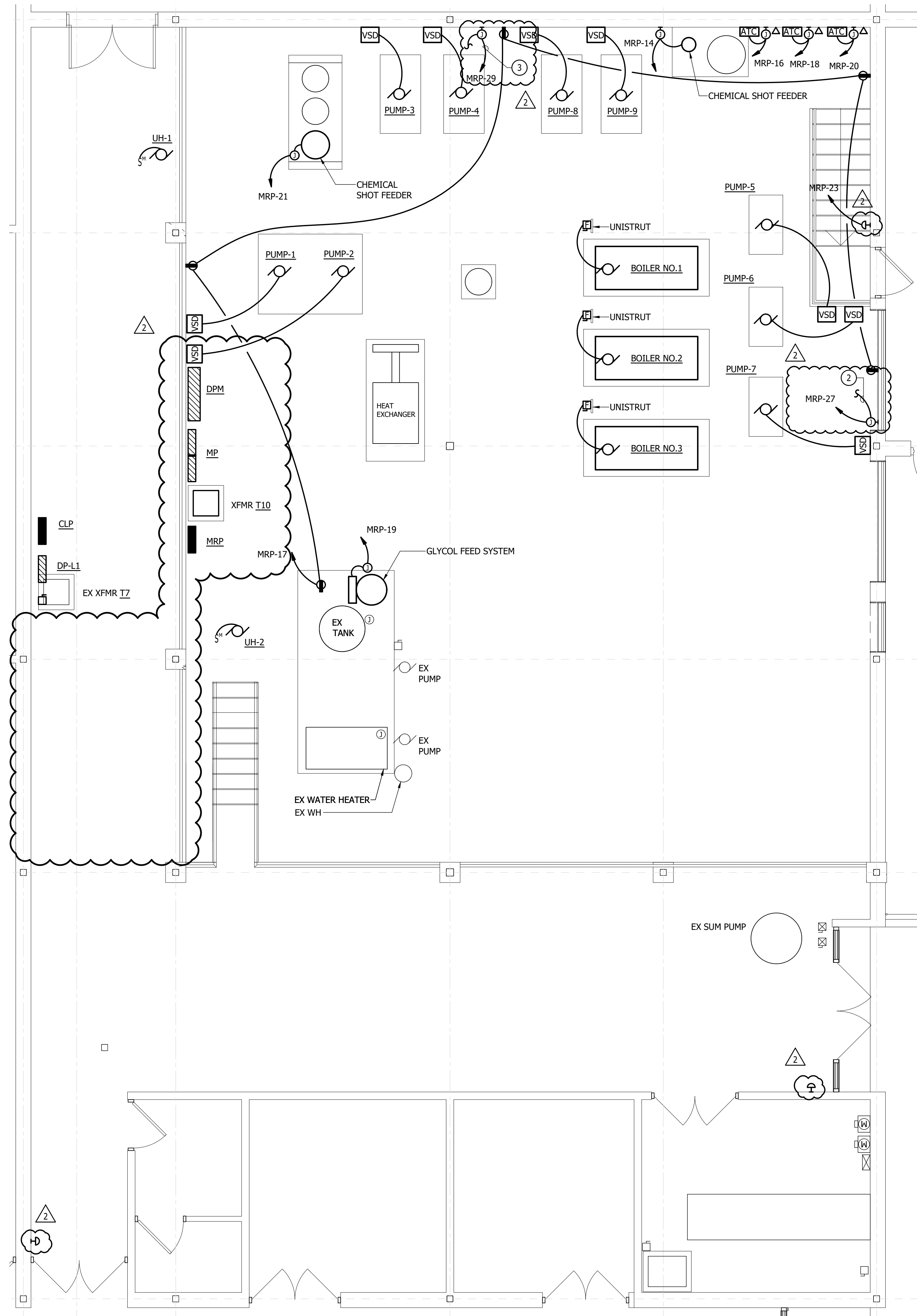
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E311
PSC-12.006

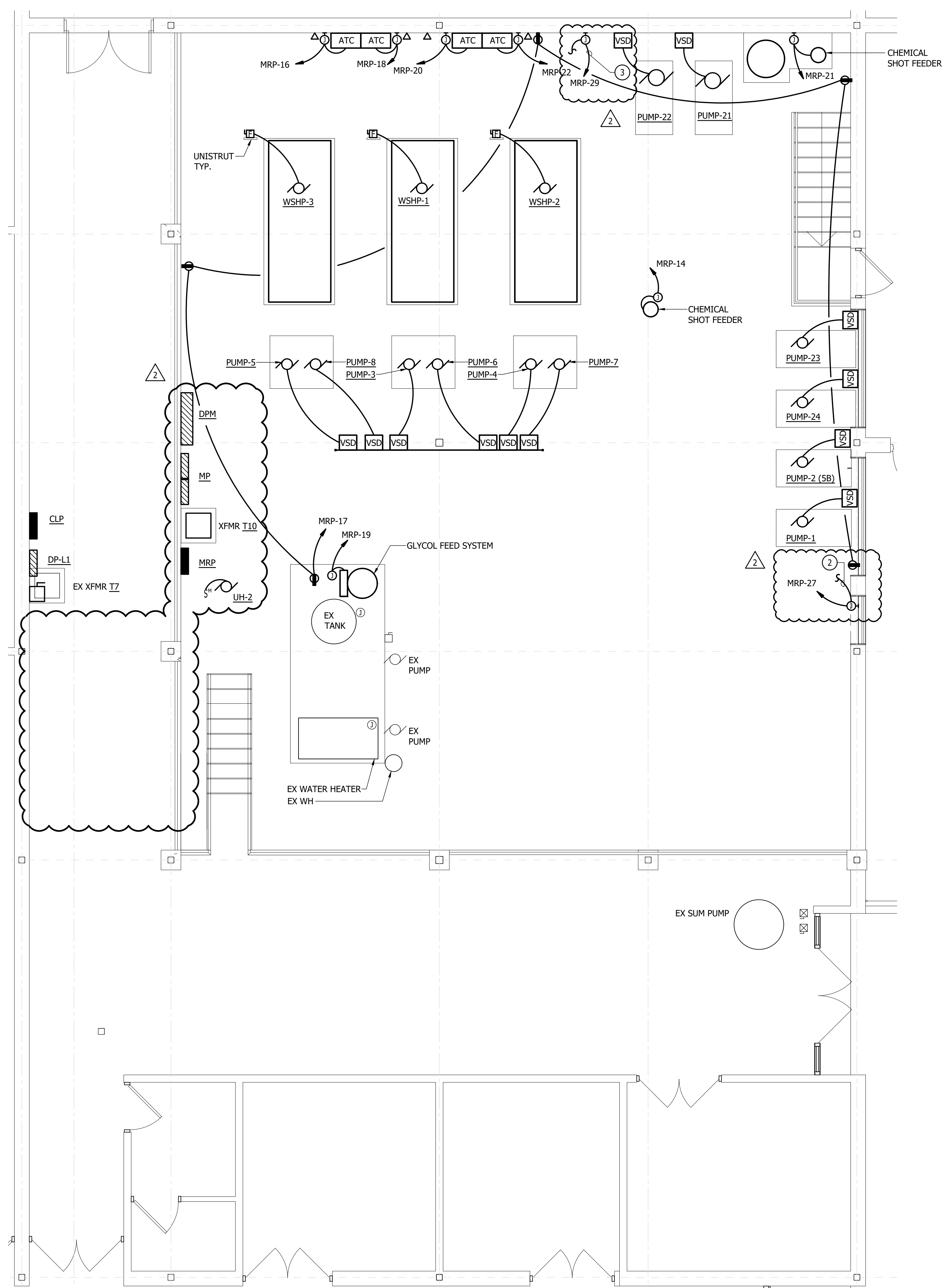
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E311
ROOF PLAN - POWER
SCALE: 1/16" = 1'-0"

KEY PLAN
N.T.S.

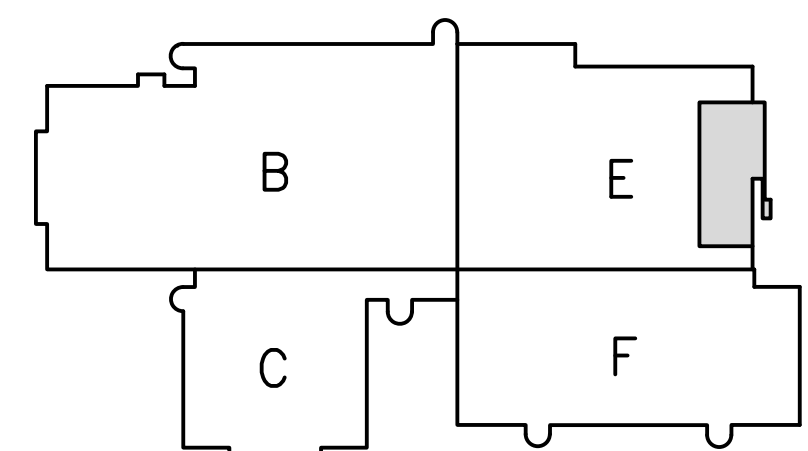




1 ELECTRICAL PART PLAN - MECHANICAL ROOM - BASE BID
SCALE: 1/4" = 1'-0"



2 ELECTRICAL PART PLAN - MECHANICAL ROOM - ALTERNATE NO.1
SCALE: 1/4" = 1'-0"



KEY PLAN
N.T.S.

GENERAL NOTES:

1. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE, DWGS. E608 THROUGH E610, FOR ADDITIONAL INFORMATION.
2. REINSTALL CEILING MOUNTED DEVICES - REFER TO DEMOLITION DRAWINGS.

DRAWING NOTES:

1. BOILER AND WATER HEATER SHUT-DOWN SWITCH. TYPICAL OF THREE LOCATIONS.
2. MAKE CONNECTION TO HEATER WATER FLOW METER. TYPICAL OF 3 METERS.
3. MAKE CONNECTION TO CHILLED WATER FLOW METER. TYPICAL OF 3 METERS.

NO.	DATE	DESCRIPTION	ADDENDUM NO. 1	ADDENDUM NO. 2
1	3/7/24			
2	3/14/24			

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WO# 23043
PROJECT MANAGER EMP
DESIGNER EMP
DATE 2/26/2024

ELECTRICAL PART PLANS
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT. ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E312
PSC-12.006

EX SWITCHBOARD SWBD										GENERAL ELECTRIC													
MOUNTING: FLOOR					A.I.C. RATING: 100,000					LOCATION: MAIN ELEC RM													
VOLTAGE: 480/277, 3PHASE, 4 WIRE					4000 AMPERE MAIN BUS					3000 AMPERE MCB W/ ST, GFP													
DISTRIBUTION SECTION																							
FDR NO		SERVES		CIRCUIT BREAKER			WIRING						REMARKS			CONN KVA							
P		FRAME		TRIP			SETS			NO			SIZE			GND			C				
TAP		FACP VIA T8					1			2			12						3/4				
1		KP-U1 VIA T9		3			200			125			1			3			1			1 1/2	
2		DISHWASHER		3			200			150			1			3			1			1 1/2	
3		LP2, LPU2		3			400			350			1			4			400KCMIL			3 1/2	
4		WT LP-U3, T5		3			400			350			1			4			400KCMIL			3 1/2	
5		CHILLER-2		3			800			800			3			3			300KCMIL			1/0 2 1/2	
6		MCC-1		3			1200			1000			3			3			350KCMIL			3	
7		CHILLER-1		3			800			800			3			3			300KCMIL			1/0 2 1/2	
8		DLP1		3			400			300			1			4			300KCMIL			3	
9		LP-L3, LP-L4		3			400			300			1			4			350KCMIL			3 1/2	
10		WT (LP-L1, T1, LPU1)		3			400			300			1			4			300KCMIL			3	
11		T6		2			200			200			1			3			3/0			2	
12		ELP-L1, ELP-U1 (VIA ATS)		3			100			100			1			4			2			2	
13		SPACE		3			100																
TOTAL CONNECTED LOAD																				0 KVA			

EX SWITCHBOARD SWBD (MODIFIED) ALT #1												
GENERAL ELECTRIC												
MOUNTING: FLOOR			A.I.C. RATING: 100,000					LOCATION: MAIN ELEC RM				
VOLTAGE: 480/277, 3PHASE, 4 WIRE			4000 AMPERE MAIN BUS					3000 AMPERE MCB W/ ST, GFP				
DISTRIBUTION SECTION												
FDR NO	SERVES	CIRCUIT BREAKER	WIRING					REMARKS			CONN	
		P / FRAME	TRIP	SETS	NO	SIZE	GND	C			KVA	
TAP	FACP VIA T8			REFER TO XFMR SCHEDULE								
1	KP-U1 VIA T9	3	200	125								
2	DISHWASHER	3	200	150	1	3	1	6	1 1/2			
3	LP2, LPU2	3	400	350	1	4	400KCMIL	3	3 1/2			
4	WT LP-U3, T5	3	400	350	1	4	400KCMIL	3	3 1/2			
5	WSHPS 1, 2, 3	3	1200	1200	4	3	350KCMIL	3/0	3			
6	DPM	3	1200	1000	3	3	350KCMIL	2/0	3			
7	SPARE	3	800	800								
8	DLP1	3	400	300	1	4	300KCMIL	4	3			
9	LP-L3, LP-U4	3	400	300	1	4	350KCMIL	4	3 1/2			
10	WT (LP-L1, T1, LP-U1)	3	400	300	1	4	300KCMIL	4	3			
11	T6	2	200	200	REFER TO XFMR SCHEDULE							
12	ELP-L1, ELP-U1 (VIA ATS)	3	100	100	1	4	2	8	2			
13	SPACE	3	100									
TOTAL CONNECTED LOAD:											0 KVA	

EX SWITCHBOARD SWBD (MODIFIED)												
GENERAL ELECTRIC												
MOUNTING: FLOOR			A.I.C. RATING: 100,000					LOCATION: MAIN ELEC RM				
VOLTAGE: 480/277, 3PHASE, 4 WIRE			4000 AMPERE MAIN BUS					3000 AMPERE MCB W/ ST, GFP				
DISTRIBUTION SECTION												
FDR NO	SERVES	CIRCUIT BREAKER	WIRING							REMARKS	CONN KVA	
			P	FRAME	TRIP	SETS	NO	SIZE	GND			C
TAP	FACP VIA T8						REFER TO XFMR SCHEDULE					
1	KP-U1 VIA T9	3	200	125			1	3	1	6	1 1/2	
2	DISHWASHER	3	200	150			1	4	400KCMIL	3	3 1/2	
3	LP2, LPU2	3	400	350			1	4	400KCMIL	3	3 1/2	
4	WT LP-U3, T5	3	400	350			1	4	400KCMIL	3	3 1/2	
5	CHILLER-2	3	800	600	2	3	350KCMIL		2	3		421.0
6	DPM	3	1200	1000	3	3	350KCMIL		3			
7	CHILLER-1	3	800	600	2	3	350KCMIL		1/0	2 1/2		421.0
8	DLP1	3	400	300	1	4	300KCMIL		4	3		
9	LP-L3, LP-U4	3	400	300	1	4	350KCMIL		4	3 1/2		
10	WT (LP-L1, T1, LP-U1)	3	400	300	1	4	300KCMIL		4	3		
11	T6	2	200	200			REFER TO XFMR SCHEDULE					
12	ELP-L1, ELP-U1 (VIA ATS)	3	100	100	1	4	2	8	2			
13	SPACE	3	100									
TOTAL CONNECTED LOAD												842 KVA

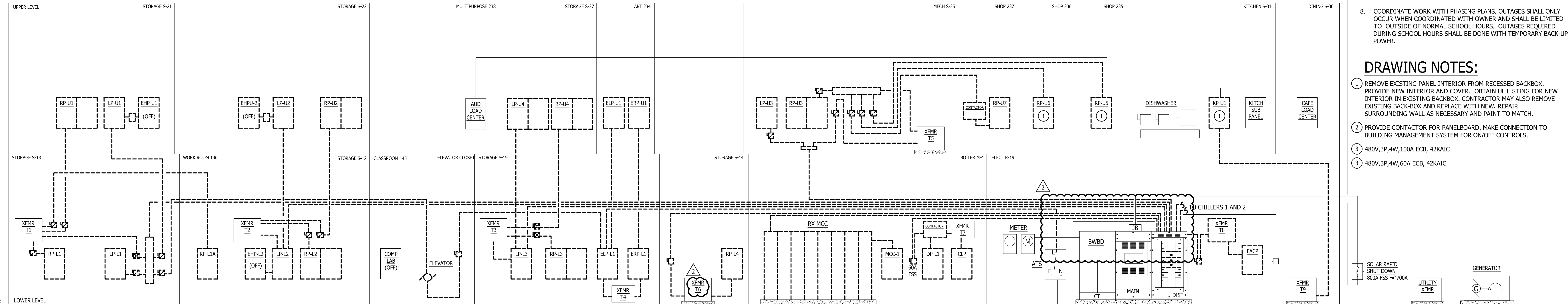
DRY TYPE TRANSFORMER SCHEDULE												
XFMR	KVA	PRIMARY Ø	VOLTS	WIRING	PRIMARY CB	SECONDARY Ø	VOLTS	WIRING	SECONDARY CB	NEUTRAL & CASE GRD	MOUNTING	NOTES
T1	75	3	480	3#1/0+8GW-1 1/2"C	125	3	208/120	5-300KCMIL+84GW-3"C				EXISTING
								4#2+8GW-1 1/2"C	100			RP-L1
								4#1+8GW-1 1/2"C	125			RP-U1
								4#4+8GW-1 1/4"C	70			RP-L1A
T2	45	3	480	3#1+8GW-1 1/4"C	70	3	208/120	4#1/0+8GW-2"C	150			EXISTING
								4#1/0+8GW-2"C	150			RP-L2
								4#1/0+8GW-2"C	150			RP-U2
								4#1/0+8GW-2"C				EXISTING
T3	45	3	480	3#1+8GW-1 1/4"C	70	3	208/120	4#1/0+8GW-2"C	150			RP-L3
								4#2+8GW-1 1/2"C	100			RP-U4
								4#4+8GW-1 1/4"C	60			EXISTING
T4	15	3	480	3#10+810GW-3/4"C	30	3	208/120	2 SETS(4-250KCMIL-3"C)				EXISTING
T5	150	3	480	3-350KCMIL+84GW-2 1/2"C	225	3	208/120	4#1/0-2"C	150			RP-U3
								4-500KCMIL-3 1/2"C	350			RP-U5
								4-350KCMIL-3"C	300			RP-U6
								4#2+8GW-1 1/2"C	100			RP-U7
T6	75	1	480	2#3/0+8GW-2"C	200	1	120/240	3-500KCMIL+83GW-3"C	400			EXISTING
T7	30	3	480	3#4+810GW-1"C	50	3	208/120	4#3+8GW-1 1/4"C	100			EXISTING
T8	5	1	480	2#12+812GW-3/4"C	20	1	120/240	3#10+810GW-3/4"C	30			EXISTING
T9	75	3	480	3#1/0+8GW-1 1/2"C	125	3	208/120	4-250KCMIL+84GW-3"C	250			EXISTING
T10	30	3	480	3#4+810GW-1"C	60	3	208/120	4#3+8GW-1 1/4"C	100	#6	FLOOR	EXISTING

GENERAL NOTES:

- REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
- CONTRACTOR SHALL REDUCE FEEDER SIZE (IF REQUIRED) WITHIN 5'-0" OF EQUIPMENT TO ACCOMMODATE LUG SIZES.
- PROVIDE NEW BREAKERS (SHOWN BOLD) WHERE INDICATED IN EXISTING PANELBOARDS. NEW BREAKERS SHALL MATCH EXISTING.
- WHERE PANELBOARDS ARE INDICATED TO BE REMOVED, DISCONNECT EXISTING BRANCH CIRCUIT WIRING AND MAINTAIN FOR RECONNECTION TO NEW PANEL. RECONNECT ALL EXISTING TO REMAIN BRANCH CIRCUITS TO NEW BREAKERS AS REQUIRED.
- INTERCEPT EXISTING BRANCH CIRCUIT CONDUITS AS REQUIRED FOR INSTALLATION OF NEW SURFACE MOUNTED PANELBOARDS AND PROVIDE WIRETROUGH OR RACEWAY AS REQUIRED.
- PROVIDE NEW FEEDERS FOR EXISTING TRANSFORMERS AS SCHEDULED IN DRY TYPE TRANSFORMER SCHEDULE.
- COORDINATE SERVICE ENTRANCE WORK WITH UTILITY AND OWNER. OUTAGES SHALL NOT OCCUR DURING REGULAR BUILDING OCCUPIED HOURS.
- COORDINATE WORK WITH PHASING PLANS, OUTAGES SHALL ONLY OCCUR WHEN COORDINATED WITH OWNER AND SHALL BE LIMITED TO OUTSIDE OF NORMAL SCHOOL HOURS. OUTAGES REQUIRED DURING SCHOOL HOURS SHALL BE DONE WITH TEMPORARY BACK-UP POWER.

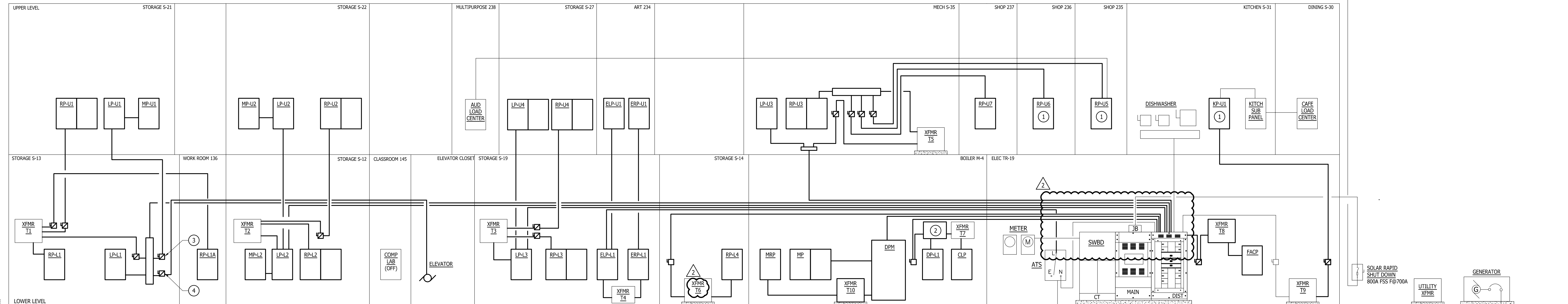
DRAWING NOTES:

- REMOVE EXISTING PANEL INTERIOR FROM RECESSED BACKBOX. PROVIDE NEW INTERIOR AND COVER. OBTAIN UL LISTING FOR NEW INTERIOR IN EXISTING BACKBOX. CONTRACTOR MAY ALSO REMOVE EXISTING BACK-BOX AND REPLACE WITH NEW. REPAIR SURROUNDING WALL AS NECESSARY AND PAINT TO MATCH.
- PROVIDE CONTACTOR FOR PANELBOARD. MAKE CONNECTION TO BUILDING MANAGEMENT SYSTEM FOR ON/OFF CONTROLS.
- 480V,3P,4W,100A ECB, 42KAIC
- 480V,3P,4W,60A ECB, 42KAIC



PARTIAL SCHEMATIC POWER RISER DIAGRAM - DEMOLITION

SCALE: NONE



PARTIAL SCHEMATIC POWER RISER DIAGRAM - NEW WORK

SCALE: NONE

REVISIONS		DESCRIPTION	DATE
NO.	DATE	DESCRIPTION	DATE
1	3/7/24	ADDENDUM NO. 1	3/7/24
2	3/14/24	ADDENDUM NO. 2	3/14/24

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PROJECT MANAGER EMP

DESIGNER EMP

DATE 2/26/2024

PARTIAL SCHEMATIC POWER RISER DIAGRAMS
HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEM RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E501

PSC-12.006

LIGHTING FIXTURE SCHEDULE								
TYPE	DESCRIPTION	VOLTS	EQUAL OF MANUFACTURER	EQUAL OF CATALOG NO.	LED	NOMINAL WATTAGE	MOUNTING	REMARKS
A	2x4' LED FLAT PANEL TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MIN. 90% FIXTURE EFFICIENCY, 0-10V 1% DIMMING	277	LITHONIA	CPX-2X4-4000LM-E-80CRI-40K-SWL-MIN1-ZT-MVOLT-(E10WLCP)	LED 4000K 4910 LUMENS	34.8	RECESSED	MAXIMUM 2" DEPTH
A1	2x4' LED FLAT PANEL TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MIN. 90% FIXTURE EFFICIENCY, 0-10V 1% DIMMING	277	LITHONIA	CPX-2X4-4000LM-E-80CRI-40K-SWL-MIN1-ZT-MVOLT-(E10WLCP)	LED 4000K 4910 LUMENS	34.8	RECESSED	MAXIMUM 2" DEPTH
A2	2x4' LED TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MIN. 90% FIXTURE EFFICIENCY, 0-10V 1% DIMMING	277	LITHONIA	CPX-2X4-4000LM-E-80CRI-40K-SWL-MIN1-ZT-MVOLT-(E10WLCP)	LED 4000K 4910 LUMENS	34.8	RECESSED	MAXIMUM 2" DEPTH
A3	2x2' LED FLAT PANEL TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MIN. 90% FIXTURE EFFICIENCY, 0-10V 1% DIMMING	277	LITHONIA	CPX-2X2-4000LM-E-80CRI-40K-SWL-MIN1-ZT-MVOLT-(E10WLCP)	LED 4000K 4505 LUMENS	34.5	RECESSED	MAXIMUM 2" DEPTH
A4	2x4' LED FLAT PANEL TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MIN. 90% FIXTURE EFFICIENCY, 0-10V 1% DIMMING	277	LITHONIA	CPX-2X4-6000LM-80CRI-40K-SWL-MIN1-ZT-MVOLT-2X4SMKSH-(E10WLCP)	LED 4000K 6091 LUMENS	41.8	PENDANT 9-4" AFF	
B	2x2' LED FLAT PANEL TROFFER ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MINIMUM 90% FIXTURE EFFICIENCY 0-10V 10% DIMMING DRIVER	277	LITHONIA	CPX-2X2-3200LM-E-80CRI-40K-SWL-MIN10-ZT-MVOLT-(E10WLCP)	LED 4000K 3593 LUMENS	27.9	RECESSED	
B1	2x2' LED FLAT PANEL TROFFER ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MINIMUM 90% FIXTURE EFFICIENCY 0-10V 10% DIMMING DRIVER	277	LITHONIA	CPX-2X2-4000LM-E-80CRI-40K-SWL-MIN10-ZT-MVOLT-2X2SMKSH-(E10WLCP)	LED 4000K 4505 LUMENS	36.2	SURFACE	PROVIDE SUPPORTS AS REQUIRED FOR MOUNTING LEVEL
B2	2x2' LED FLAT PANEL TROFFER ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MINIMUM 90% FIXTURE EFFICIENCY 0-10V 10% DIMMING DRIVER	277	LITHONIA	CPX-2X2-2000LM-80CRI-40K-SWL-MIN10-ZT-MVOLT-(E10WLCP)	LED 4000K 2122 LUMENS	15.6	RECESSED	
C	2x4' LED TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MIN. 90% FIXTURE EFFICIENCY, 0-10V	277	LITHONIA	CPX-2X4-4000LM-E-80CRI-40K-SWL-ZT-MVOLT-(E10WLCP)	LED 4000K 5075 LUMENS	34.8	RECESSED	MAXIMUM 2" DEPTH
C1	2x4' LED FLAT PANEL TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MIN. 90% FIXTURE EFFICIENCY, 0-10V	277	LITHONIA	CPX-2X4-3000LM-80CRI-40K-SWL-ZT-MVOLT-(E10WLCP)	LED 4000K 3528 LUMENS	24.6	RECESSED	MAXIMUM 2" DEPTH
C2	2x2' LED FLAT PANEL TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MIN. 90% FIXTURE EFFICIENCY, 0-10V, FLANGE	277	LITHONIA	CPX-2X2-2000LM-80CRI-40K-SWL-MVOLT-(E10WLCP)	LED 4000K 2206 LUMENS	15.6	RECESSED	MAXIMUM 2" DEPTH
C3	2x4' LED FLAT PANEL TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MIN. 90% FIXTURE EFFICIENCY, 0-10V, FLANGE	277	LITHONIA	CPX-2X4-4000LM-E-80CRI-40K-SWL-ZT-MVOLT-DGA24-(E10WLCP)	LED 4000K 5075 LUMENS	34.8	RECESSED	MAXIMUM 2" DEPTH
D	6" LED OPEN DOWNLIGHT, LED RATED L70 @ 50,000 HRS; WHITE FINISH, WHITE TRIM MINIMUM 90% FIXTURE EFFICIENCY, 0-10V	277	INDY	LLP4-17LM-40K-MVOLT-GR-80CRI-ZT-HW-WH	LED 4000K 1901 LUMENS	17.9	RECESSED	MAXIMUM 2" DEPTH
D1	6" LED DOWNLIGHT, 0-10V LED RATED L70 @ 50,000 HRS; WHITE FINISH, WHITE TRIM, WET LISTED MINIMUM 90% FIXTURE EFFICIENCY, 0-10V DIMMING	277	INDY	LLPRM4-17LM-40K-MVOLT-GR-80CRI-ZT-P-WH-WET-FM	LED 4000K 1901 LUMENS	17.9	RECESSED	MAXIMUM 2" DEPTH
EXIT	RED EXIT SIGN WITH DIE CAST ALUMINUM HOUSING, RED STENCIL LETTERS, WHITE FINISH NICKEL-CADMIUM BATTERY, SELF-DIAGNOSTICS	277	LITHONIA	LES-W-*,R-120/277-ELN-SD (WITH ELA -WG1 WIREGUARD WHERE INDICATED)	LED	1.4	UNIVERSAL	PROVIDE SINGLE OR DOUBLE FACED, WITH OR WITHOUT DIRECTIONAL CHEVRONS AS INDICATED
EXIT WP	LED EXIT SIGN WITH POLYCARBONATE HOUSING, RED STENCIL LETTERS, WHITE FINISH NICKEL-CADMIUM BATTERY, SELF-DIAGNOSTICS WET LOCATION, TAMPER RESISTANT HARDWARE	277	LITHONIA	WLTE-W-*,R-EL-SD-TR	LED	2.7	UNIVERSAL	PROVIDE SINGLE OR DOUBLE FACED, WITH OR WITHOUT DIRECTIONAL CHEVRONS AS INDICATED

LIGHTING CONTROL MATRIX								
	AUTO ON	MANUAL ON	AUTO OFF	DELAY TIME	DIMMING	TIME SCHEDULE ON	TIME SCHEDULE OFF	SPECIAL COMMENTS
MEDIA CENTER	Y		Y	20	Y			DIMMING PER ZONE, ACTIVATION OF FIRE ALARM SYSTEM SHALL TURN ON LIGHTING TO 100%
DINNING ROOM	Y		Y	20	Y			ACTIVATION OF FIRE ALARM SYSTEM SHALL TURN ON LIGHTING TO 100%
CLASSROOMS		Y	Y	20	Y			
LOBBIES	Y		Y	20				ACTIVATION OF FIRE ALARM SYSTEM SHALL TURN ON LIGHTING TO 100%
CORRIDORS/MEANS OF EGRESS	Y		Y	20				ACTIVATION OF FIRE ALARM SYSTEM SHALL TURN ON LIGHTING TO 100%
LOCKER ROOMS	Y		Y	20				ACTIVATION OF FIRE ALARM SYSTEM SHALL TURN ON LIGHTING TO 100%
GYM AND ACTIVITY ROOMS	Y		Y	20	Y AUTO-ON TO 50%			DIMMING PER ZONE, ACTIVATION OF FIRE ALARM SYSTEM SHALL TURN ON LIGHTING TO 100%
STAIRWELLS	Y		Y	20	Y	6:00 AM	10:00 PM	50% UNOCCUPIED - 100% OCCUPIED UNTIL SCHEDULED OFF TIME. ONCE OFF TIME HAS FUNCTIONED THEN AUTO ON/AUTO OFF IS ACTIVATED. ACTIVATION OF FIRE ALARM SYSTEM SHALL TURN ON LIGHTING TO 100%
STORAGE ROOMS		Y	Y	10	N			
MECHANICAL/ ELECTRICAL/ TELECOM RMS		Y			N			LIGHTED TOGGLE SWITCHES
OFFICES/LOUNGES		Y	Y	15	Y			DIMMING PER ZONE. DESKS SHALL HAVE 100% MINOR MOTION COVERAGE
RESTROOMS (SINGLE)		Y	Y	15	N			
RESTROOMS (GANG)	Y		Y	15	N			
EXTERIOR BUILDING MOUNTED LIGHTS					N			MAINTAIN EX CONTROLS
EXTERIOR POLE MOUNTED LIGHTS					N			MAINTAIN EX CONTROLS

LIGHTING FIXTURE SCHEDULE								
TYPE	DESCRIPTION	VOLTS	EQUAL OF MANUFACTURER	EQUAL OF CATALOG NO.	LED	NOMINAL WATTAGE	MOUNTING	REMARKS
EMER	EMERGENCY LIGHT WITH FLAME-RATED, POLYCARBONATE BODY, WHITE FINISH, HIGH OUTPUT LED, TYP 6.6 WATT LAMPS, NICKEL CADMIUM BATTERY	277	LITHONIA	ELM4L (WITH VPVS SHIELD FOR WET LOCATIONS)	LED 640 LUMENS PER LAMP	13.2	SURFACE	
F	2x4' LED CENTER ELEMENT TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MIN. 90% FIXTURE EFFICIENCY, 0-10V 1% DIMMING	277	LITHONIA	STAKP-2X4-6000LM-80CRI-40K-COL-MIN1-ZT-MVOLT-(E10WLCP)	LED 4000K 6522 LUMENS	45.7	RECESSED	MAXIMUM 2" DEPTH
F1	2x4' LED CENTER ELEMENT TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MIN. 90% FIXTURE EFFICIENCY, 0-10V 1% DIMMING	277	LITHONIA	STAKP-2X4-5000LM-80CRI-40K-COL-MIN1-ZT-MVOLT-(E10WLCP)	LED 4000K 5587 LUMENS	38.5	RECESSED	MAXIMUM 2" DEPTH
F2	2x2' LED CENTER ELEMENT TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MIN. 90% FIXTURE EFFICIENCY, 0-10V 1% DIMMING	277	LITHONIA	STAKP-2X2-3000LM-80CRI-40K-COL-MIN1-ZT-MVOLT-(E10WLCP)	LED 4000K 3262 LUMENS	22.7	RECESSED	MAXIMUM 2" DEPTH
G1	5' X 2' LED VANTY LUMINAIRE WITH PEARLESCENT WHITE POWDERCOAT FINISH, ELECTRONIC DRIVER, UL DAMP LOCATION LISTED	277	KENALL	MLH5-24-RV-MW-PP-1-25L50K-DCC-1-DV	LED 4000K 2531 LUMENS	25	SURFACE/WALL ABOVE MIRROR	
H	2x4' LED CENTER ELEMENT TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MIN. 90% FIXTURE EFFICIENCY, 0-10V 1% DIMMING	277	LITHONIA	STAKP-2X4-3000LM-80CRI-40K-COL-MIN1-ZT-MVOLT-(E10WLCP)	LED 4000K 3267 LUMENS	22.7	RECESSED	MAXIMUM 2" DEPTH
H1	2x2' LED CENTER ELEMENT TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MINIMUM 90% FIXTURE EFFICIENCY	277	LITHONIA	STAKP-2X2-3000LM-80CRI-40K-COL-ZT-MVOLT-(E10WLCP)	LED 4000K 3267 LUMENS	22.7	RECESSED	MAXIMUM 2" DEPTH
H2	2x2' LED CENTER ELEMENT TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MINIMUM 90% FIXTURE EFFICIENCY, 0-10V 1% DIMMING	277	LITHONIA	STAKP-2X2-2000LM-80CRI-40K-COL-MIN1-ZT-MVOLT-(E10WLCP)	LED 4000K 2332 LUMENS	15.8	RECESSED	MAXIMUM 2" DEPTH
H3	2x4' LED CENTER ELEMENT TROFFER MOLDED LINEAR PRISM ACRYLIC LENS, DIE-FORMED CODE GAUGE STEEL CONSTRUCTION, HIGH GLOSS WHITE FINISH, ALL PARTS PAF, MIN. 90% FIXTURE EFF. , 0-10V 1% DIMMING, FLANGE	277	LITHONIA	STAKP-2X4-4000LM-80CRI-40K-COL-MIN1-ZT-MVOLT-DGA24-(E10WLCP)	LED 4000K 4321 LUMENS	30.3	RECESSED	MAXIMUM 2" DEPTH
J	4' LONG ROUND LENS LED STRIPLIGHT WITH DIE FORMED CRS HOUSING, WHITE POWDERCOAT FINISH, LINEAR RIBBED DIFFUSE ACRYLIC LENS, ELECTRONIC DRIVER	277	H.E.WILLIAMS	76R-4-L30/840-(EM/10W)-SWS-12-DRV-UNV	LED 4000K 3067 LUMENS	20.3	SUSPENDED 9'-0" AFF. UON	
J1	4' LONG ROUND LENS LED STRIPLIGHT WITH DIE FORMED CRS HOUSING, WHITE POWDERCOAT FINISH, LINEAR RIBBED DIFFUSE ACRYLIC LENS, ELECTRONIC DRIVER	277	H.E.WILLIAMS	76R-4-L52/840-(EM/10W)-SMH-76R-DRV-UNV	LED 4000K, 80 CRI, 5261 LUMENS	35.8	SURFACE	
J2	4' LONG ROUND LENS LED STRIPLIGHT WITH DIE FORMED CRS HOUSING, WHITE POWDERCOAT FINISH, LINEAR RIBBED DIFFUSE ACRYLIC LENS, ELECTRONIC DRIVER	277	H.E.WILLIAMS	76R-4-L52/840-(EM/10W)-SWS-12-DRV-UNV	LED 4000K 5261 LUMENS	35.8	SUSPENDED 9'-0" AFF. UON	
K	2X4' LED SEALED TROFFER WITH 20 GAUGE CRS HOUSING, PRISMATIC ACRYLIC, 125" THICK LENS, SILICONE GASKETED INSET DOORFRAME, POWDERCOAT FINISH, ELECTRONIC 0-10V DRIVER, WET LOCATION	277	NEW STAR	SCR24-HCIC-L2-40-1C-A-UN	LED 4000K, 80 CRI, 6250 LUMENS	50	RECESSED/ CEILING	
K1	2X2' LED SEALED TROFFER WITH 20 GAUGE CRS HOUSING, PRISMATIC ACRYLIC, 125" THICK LENS, SILICONE GASKETED INSET DOORFRAME, POWDERCOAT FINISH, ELECTRONIC 0-10V 10% DRIVER, WET LOCATION	277	NEW STAR	SCR22-HCIC-L2-40-1C-A-UN	LED 4000K, 80 CRI, 6250 LUMENS	50	RECESSED/ CEILING	
L	4' LONG X 4" DEEP LINEAR INDUSTRIAL VAPORTIGHT LED WITH FIBERGLASS AND STEEL HOUSING, ACRYLIC LENS, ELECTRONIC DRIVER, WET LOCATION, IP65 RATED	277	COLUMBIA	LXEN-4-40-X2-RFA-E-U	LED 4000K 2000 LUMENS	15	SUSPENDED 9'-0" AFF. UON	
M	16" DIAMETER HIGH BAY WITH MARINE GRADE FORGED ALUMINUM HOUSING, CLEAR PRISMATIC UV-STABILIZED POLYCARBONATE REFRACTOR, INJECTION MOLDED POLYCARBONATE DIFFUSER SEALED TO HOUSING WITH CONTINUOUS SILICONE GASKET, MATTE WHITE POWDERCOAT FINISH, WIRE GUARD, RIGID STEM, SAFETY CABLES, 0-10V 10% ELECTRONIC DIMMING DRIVER	277	LITHONIA	CPRB 18000LM MVOLT 40K 80CRI DWH	LED 4000K 19,303 LUMENS	132	SUSPENDED WITH BOTTOM OF FIXTURE LEVEL WITH BOTTOM OF STRUCTURE	

LIGHTING FIXTURE SCHEDULE NOTES

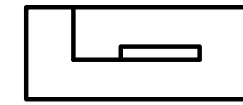
- COORDINATE LIGHTING FIXTURES INDICATED ON DRAWINGS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATIONS FOR EXACT LOCATIONS. VERIFY CEILING CONSTRUCTION IN ALL AREAS WITH ARCHITECTURAL DRAWINGS AND PROVIDE ALL MOUNTING FRAMES AND HARDWARE AS REQUIRED FOR A COMPLETE INSTALLATION, SUITABLE FOR THE CEILING TYPE AND CONFIGURATION.
- REFER TO LIGHTING SPECIFICATIONS FOR ADDITIONAL FIXTURE AND DRIVER INFORMATION. PROVIDE DRIVERS FOR VOLTAGE AS INDICATED.
- FIRST NAMED PRODUCT IS BASIS OF DESIGN. PROVIDE PRODUCTS WHICH INCLUDE ALL FEATURES AND ACCESSORIES AS INDICATED IN THE DESCRIPTION AND MODEL NUMBER OF THE BASIS OF DESIGN PRODUCT.
- ALTERNATE MANUFACTURERS INCLUDE, BUT ARE NOT LIMITED TO, THOSE LISTED BELOW. BEING LISTED DOES NOT GUARANTEE APPROVAL OF SUBMITTED FIXTURES; FIXTURE MUST COMPLY WITH PROJECT REQUIREMENTS AND MEET OR EXCEED BASIS OF DESIGN FIXTURE PERFORMANCE.
- FIXTURES WITH "D" SUFFIX SHALL BE CONTROLLED BY LIGHT LEVEL SENSOR FOR DAYLIGHT HARVESTING.
- ALL FINISH SELECTIONS SHALL BE AS APPROVED BY THE ARCHITECT. COLOR TO BE SELECTED FROM THE MANUFACTURER'S FULL RANGE, INCLUDING CUSTOM COLOR AS NOTED.
- MOUNTING HEIGHTS ARE TO THE BOTTOM OF THE FIXTURE UNLESS OTHERWISE NOTED.
- PROVIDE EMERGENCY BATTERY BACKUP FOR FIXTURES INDICATED ON DRAWINGS (SUBSCRIPT 'E')

REVISIONS		DESCRIPTION	NO.	DATE
		ADDENDUM NO. 1	1	3/7/24
		ADDENDUM NO. 2	2	3/14/24

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WO# 23043

PROJECT MANAGER EMP

DESIGNER EMP

DATE 2/26/2024

LIGHTING FIXTURE SCHEDULE

HARFORD COUNTY PUBLIC SCHOOLS - ABERDEEN MIDDLE SCHOOL
HVAC SYSTEMIC RENOVATIONS
111 MT ROYAL AVE, ABERDEEN, MARYLAND 21001.

BID SUBMISSION

E601

PSC-12.006

EX PANEL KP-U1 VOLTAGE: 208/120V, 3PH, 4W 400 AMPERE BUS								BACKBOX				MOUNTING: RECESSED LOCATION: KITCHEN								22,000 A.I.C.			
CONN KVA		DESCRIPTION		BREAKER P / AMPS		CIRCUIT WIRING NO SIZE GND C		CONN KVA		DESCRIPTION		BREAKER P / AMPS		CIRCUIT WIRING NO SIZE GND C		CONN KVA							
1	REFRIGERATOR	1	20					2	MILK DISPENSER	1	20												
3	REFRIGERATOR	1	20					4	CONVECTION OVEN	1	20												
5	SLICER	1	20					6	CONVECTION OVEN	1	20												
7	CASHER	1	20					8	FOOD CLUTTER	1	20												
9	ICE CREAM	1	20					10	REFRIGERATOR WALL	1	20												
11	MILK DISPENSER	1	20					12	RECP	1	20												
13	CASHER	1	20					14	RECP	1	20												
15	ICE CREAM	1	20					16	WALK-IN REFRIGERATOR	1	20												
17	MILK DISPENSER	1	20					18	WASHER	1	20												
19	DRYER	2	30					20	FREEZER LT	1	20												
21	-	-	-					22	SPARE	1	40												
23	HOT FOOD WARMER	2	30					24	HOT FOOD WARMER	2	20												
25	-	-	-					26	-	-	-												
27	HOT FOOD WARMER	2	20					28	WALK-IN LT/RECP	1	20												
29	-	-	-					30	WALK-IN LT/RECP	1	20												
31	GARBAGE DISPOSAL	3	20					32	REFRIGERATOR	3	20												
33	-	-	-					34	COMPRESSOR	-	-												
35	-	-	-					36	-	-	-												
37	WALK-IN FREEZER	3						38	SUBPANEL	3	100												
39	-	-	-					40	-	-	-												
41	-	-	-					42	-	-	-												
TOTAL CONNECTED LOAD				0 KVA				KVA PER PHASE:				A 0 B 0 C 0											

PANEL KP-U1								MOUNTING: RECESSED												
VOLTAGE: 208/250V, 3PH, 4W								LOCATION: KITCHEN												
400 AMPERE BUS				400A MLO				100% RATED NEUTRAL BUS				22,000 A.I.C.								
CONN KVA	CKT	DESCRIPTION	BREAKER F/ AMPS	NO	CIRCUIT WIRING SIZE	GND	C	CKT	DESCRIPTION	BREAKER F/ AMPS	NO	CIRCUIT WIRING SIZE	GND	C	CONN KVA					
	1	REFRIGERATOR	1	20GFI				2	MILK DISPENSER	1	20GFI									
	2	REFRIGERATOR	1	20GFI				6	CONVECTION OVEN	1	20GFI									
	3	SUCER	1	20GFI				7	CONVECTION OVEN	1	20GFI									
	7	CASHER	1	20GFI				8	FOOD CUTTER	1	20GFI									
	9	ICE CREAM	1	20GFI				10	REFRIGERATOR WALL	1	20GFI									
	11	MILK DISPENSER	1	20GFI				12	RECP	1	20GFI									
	13	CASHER	1	20GFI				14	RECP	1	20GFI									
	15	ICE CREAM	1	20GFI				16	WALK-IN REFRIGERATOR	1	20GFI									
	17	MILK DISPENSER	1	20GFI				18	WASHER	1	20GFI									
	19	DRYER	2	30GFI				20	FREEZER LT	1	20									
	21	-	-	-				22	SPARE	1	40									
	23	HOT FOOD WARMER	2	30GFI				24	HOT FOOD WARMER	2	20GFI									
	25	-	-	-				26	-	-	-									
	27	HOT FOOD WARMER	2	20GFI				28	WALK-IN LT/RECP	1	20GFI									
	29	-	-	-				30	WALK-IN LT/RECP	1	20GFI									
	31	GARBAGE DISPOSAL	3	20				32	REFRIGERATOR	3	20									
	33	-	-	-				34	COMPRESSOR	-	-									
	35	-	-	-				36	-	-	-									
	37	WALK-IN FREEZER	3					38	SUBPANEL	3	100									
	39	-	-	-				40	-	-	-									
	41	-	-	-				42	-	-	-									
TOTAL CONNECTED LOAD			0 KVA			KVA PER PHASE:			A			0 B			0 C			0		

[illegible]

MOTOR STARTER AUXILIARY DEVICES

A	120 VOLT CONTROL POWER TRANSFORMER
B	RED "ON" INDICATING LIGHT
C	GREEN "OFF" INDICATING LIGHT
D	HAND-OFF-AUTOMATIC SELECTOR SWITCH
E	2-NO. 2-NC AUXILIARY CONTACTS

EX DISTRIBUTION PANEL MCC1												
MOUNTING: SURFACE				A.I.C. RATING: A MAIN BUS					LOCATION: MECHANICAL ROOM A MCB			
VOLTAGE: 480/277, 3 PHASE, 4 WIRE												
DISTRIBUTION SECTION												
FDR NO	SERVES	CIRCUIT BREAKER			WIRING					REMARKS	CONN KVA	
		P	FRAME	TRIP	SETS	NO	SIZE	GND	C			
1	OIL PUMP			15								
2	SPARE			15								
3	SPARE			15								
4	SPARE			15								
5	SPARE			20								
6	SPARE			15								
7	?			20								
8	SPARE			20								
9	SPARE			20								
10	SPARE			20								
11	SPARE			20								
12	SPARE			20								
13	SPARE			50								
14	?			20								
15	HWP-20&21, EF-10, AHJ-5, AHJ-6, EF-8			50								
16	BOILER-2			30								
17	EF-9, AHL-4, AHL-9, HWP-1&19			60								
18	COMPRESSOR			30								
19	?			60								
20	BOILER-1			30								
					TOTAL CONNECTED LOAD					0.0 KVA		

DISTRIBUTION PANEL DPM											
MOUNTING: SURFACE			A.I.C. RATING: 65,000				LOCATION: MECHANICAL ROOM				
VOLTAGE: 480/277, 3 PHASE, 4 WIRE			1200A MAIN BUS				1000A MCB				
DISTRIBUTION SECTION											
FDR NO	SERVICES	CIRCUIT BREAKER			WIRING					REMARKS	CONN KVA
		P	FRAME	TRIP	SETS	NO	SIZE	GND	C		
1	PUMP-1	3	60	40	1	3	8	10	3/4		17.4
2	PUMP-2	3	60	40	1	3	8	10	3/4		17.4
3	PUMP-3	3	125	125	1	3	2	6	1 1/4		54.0
4	PUMP-4	3	125	125	1	3	2	6	1 1/4	STANDBY	0.0
5	PUMP-5	3	30	15	1	3	12	12	3/4		6.3
6	PUMP-6	3	30	15	1	3	12	12	3/4		6.3
7	PUMP-7	3	30	15	1	3	12	12	3/4	STANDBY	0.0
8	PUMP-8	3	100	70	1	3	6	8	3/4		28.2
9	PUMP-9	3	100	70	1	3	6	8	3/4	STANDBY	0.0
10	PANEL MP	3	225	225	1	3	4/0	4	2		130.3
11	DOAS-1	3	60	35	1	3	8	10	1		13.7
12	DOAS-2	3	100	80	1	3	2	8	1-1/2		33.2
13	DOAS-3	3	100	80	1	3	2	8	1-1/2		33.2
14	DOAS-4	3	100	70	1	3	3	8	1-1/4		25.3
15	DOAS-5	3	100	80	1	3	2	8	1-1/2		33.2
16	AHL-1	3	60	60	1	3	4	10	1-1/4		24.5
17	AHL-4	3	60	50	1	3	8	10	1		20.4
18	AHL-5	3	30	40	1	3	6	10	1		13.3
19	AHL-6	3	30	40	1	3	6	10	1		12.9
20											
21											
22											
23											
24											
25											
26											
27											
28											
TOTAL CONNECTED LOAD											469.8 KVA

PANEL MP		*OFEP TYPE										MOUNTING: SURFACE											
VOLTAGE: 480/277, 3PH, 4W												LOCATION: MECHANICAL RM											
225 AMPERE BUS		225A MCB										100% RATED NEUTRAL BUS										42K A.I.C.	
CONN KVA	CKT	DESCRIPTION	FUSE P	AMPS N	CIRCUIT WIRING SIZE	GND	C	CKT	DESCRIPTION	FUSE P	AMPS N	NO	CIRCUIT WIRING SIZE	GND	C	CONN KVA							
3.3	1	BOILER-1	3	30	3	10	10	3/4	2	BOILER-2	3	30	3	10	10	3/4	3.3						
3.3	3	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	3.3						
3.3	5	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	3.3						
0.0	7	BOILER-3	3	30	3	10	10	3/4	8	AHU-2 SAF	3	20	3	10	10	3/4	3.0						
0.0	9	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	3.0						
0.0	11	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	3.0						
3.0	13	AHU-3 SAF	3	20	3	10	10	3/4	14	AHU-2 RAF	3	15	3	10	10	3/4	1.9						
3.0	15	-	-	-	-	-	-	-	16	-	-	-	-	-	-	-	1.9						
3.0	17	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-	1.9						
1.9	19	AHU-3 RAF	3	15	3	10	10	3/4	20	PUMPS 10, 11, 12, 13, 14, 15, 20	3	15	3	10	10	3/4	2.7						
1.9	21	-	-	-	-	-	-	-	22	-	-	-	-	-	-	-	2.7						
1.9	23	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	2.7						
3.9	25	FCU-5-101 THRU FCU-5-110	1	15	2	12	12	3/4	26	FCU-5-201 THRU FCU-5-210	1	15	2	12	12	3/4	3.9						
3.9	27	FCU-5-111 THRU FCU-5-120	1	15	2	12	12	3/4	28	FCU-5-211 THRU FCU-5-220	1	15	2	12	12	3/4	3.9						
3.5	29	FCU-5-121 THRU FCU-5-129	1	15	2	12	12	3/4	30	FCU-5-221 THRU FCU-5-229	1	15	2	12	12	3/4	3.5						
1.9	31	FCU-5-130 THRU FCU-5-134	1	15	2	12	12	3/4	32	HEAT TRACE	1	20*	2	10	10	1	2.0						
1.5	33	FCU-5-230 THRU FCU-5-235	1	15	2	12	12	3/4	34	HEAT TRACE	1	20*	2	10	10	1	2.0						
2.0	35	HEAT TRACE	1	20*	2	10	10	1	36	SPARE	1	20*											
2.0	37	HEAT TRACE	1	20*	2	10	10	1	38	PANEL MRP	3	125											
2.0	39	HEAT TRACE	1	20*	2	10	10	1	40	VIA XFMR T10	-	-	-	-	-	-	11.6						
2.0	41	HEAT TRACE	1	20*	2	10	10	1	42	-	-	-	-	-	-	-	11.5						
TOTAL CONNECTED LOAD			130.3 KVA						KVA PER PHASE						A 44.8 B 43.956 C 41.535								

PANEL MRP										MOUNTING SURFACE											
VOLTAGE: 208/120V, 3PH, 4W										LOCATION: MECHANICAL ROOM											
100 AMPERE BUS										100% RATED NEUTRAL BUS										10,000 A.I.C.	
250 A MCB																					
CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	CIRCUIT WIRING SIZE	GND	C	CKT	DESCRIPTION	BREAKER P	AMPS	NO	CIRCUIT WIRING SIZE	GND	C	CONN KVA				
0.2	1	FAN-1	1	15	2	12	12	3/4	4	KITCHEN EXHAUST FAN	3	30	4	8	10	1	2.1				
0.4	3	UH-1 AND UH-2	1	15	2	12	12	3/4	8								2.1				
1.2	5	DSS-1	2	15	3	12	12	3/4	6								5.0				
1.2	7	--							8	KITCHEN MAKE-UP UNIT	3	60	4	4	10	1-1/4	5.0				
1.2	9	DSS-2	2	15	3	12	12	3/4	10								5.0				
1.2	11	--							12								5.0				
1.2	13	DSS-3	2	15	3	12	12	3/4	14	CHEMICAL SHOT	1	20	2	12	12	3/4	0.5				
1.2	15	--							16	ATC PANEL	1	20	2	12	12	3/4	0.5				
1.0	17	RECEPTACLE	1	20	2	12	12	3/4	18	ATC PANEL	1	20	2	12	12	3/4	0.5				
1.0	19	GLYCOL FEED	1	20	2	12	12	3/4	20	ATC PANEL	1	20	2	12	12	3/4	0.5				
1.0	21	CHEMICAL SHOT	1	20	2	12	12	3/4	22	SPACE											
0.5	23	BOILER SHUT-DOWN	1	20	2	12	12	3/4	24	SPACE											
0.2	25	RECEPTACLE	1	20	2	12	12	3/4	26	SPACE											
0.2	27	FLOW METERS	1	20	2	12	12	3/4	28	SPACE											
	29	SPARE	1	20					30	SPACE											
	31	SPARE	1	20					32	SPACE											
	33	SPARE	1	20					34	SPACE											
	35	SPARE	1	20					36	SPACE											
	37	SPARE	1	20					38	SPACE											
	39	SPARE	1	20					40	SPACE											
	41	SPARE	1	20					42	SPACE											
TOTAL CONNECTED LOAD			35 KVA							KVA PER PHASE:							A 11.9 B 11.6 C 11.454				

DISTRIBUTION PANEL DPM (ALT 1)												
MOUNTING: SURFACE VOLTAGE: 480/277, 3 PHASE, 4 WIRE				A.I.C. RATING: 65,000 1200A MAIN BUS				LOCATION: MECHANICAL ROOM 1000A MCB				
DISTRIBUTION SECTION												
FDR NO	SERVES	CIRCUIT BREAKER			WIRING					REMARKS	CONN KVA	
		P	FRAME	TRIP	SETS	NO	SIZE	GND	C			
1	PUMP-1	3	100	100	1	3	3	8	1-1/4		54.0	
2	PUMP-2	3	100	100	1	3	3	8	1-1/4		54.0	
3	PUMP-3	3	60	40	1	3	8	10	3/4		17.5	
4	PUMP-4	3	60	40	1	3	8	10	3/4		17.5	
5	PUMP-5	3	60	40	1	3	8	10	3/4		17.5	
6	PUMP-6	3	30	25	1	3	10	10	3/4		11.8	
7	PUMP-7	3	30	25	1	3	10	10	3/4		11.8	
8	PUMP-8	3	30	25	1	3	10	10	3/4		11.8	
9	SPACE	3	100									
10	PANEL MP	3	225	225	1	3	4/0	4	2		99.3	
11	DOAS-1	3	60	35	1	3	8	10	1		13.7	
12	DOAS-2	3	100	80	1	3	2	8	1-1/2		33.2	
13	DOAS-3	3	100	80	1	3	2	8	1-1/2		33.2	
14	DOAS-4	3	100	70	1	3	3	8	1-1/4		25.3	
15	DOAS-5	3	100	80	1	3	2	8	1-1/2		33.2	
16	AHU-1	3	60	40	1	3	8	10	1		24.5	
17	AHU-4	3	60	40	1	3	8	10	1		20.4	
18	AHU-5	3	30	30	1	3	8	10	1		13.3	
19	AHU-6	3	30	30	1	3	8	10	1		12.9	
20												
21												
22												
23												
24												
25												
26												
27												
28												
TOTAL CONNECTED LOAD											504.6 KVA	

PANEL MP (ALT 1)										MOUNTING: SURFACE									
VOLTAGE: 480/277, 3PH, 4W										LOCATION: MECHANICAL RM									
225A AMPERE BUS					225A MCB					100% RATED NEUTRAL BUS					42K A.I.C.				
KVA	CKT	DESCRIPTION	P	AMPS	NO	SIZE	GND	C	CKT	DESCRIPTION	P	AMPS	NO	SIZE	GND	C	KVA		
	1	SPACE							2	SPACE									
	3	SPACE							4	SPACE									
	5	SPACE							6	SPACE									
	7	SPACE							8	AHU-2 SAF	3	20	3	10	10	3/4	3.0		
	9	SPACE							10	-	-	-	-	-	-	-	3.0		
	11	SPACE							12	-	-	-	-	-	-	-	3.0		
3.0	13	AHU-3 SAF	3	20	3	10	10	3/4	14	AHU-2 RAF	3	15	3	10	10	3/4	1.9		
3.0	15	-	-	-	-	-	-	-	16	-	-	-	-	-	-	-	1.9		
3.0	17	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-	1.9		
1.9	19	AHU-3 RAF	3	15	3	10	10	3/4	20	PUMPS 10, 11, 12, 13, 14, 15, 3	15	3	10	10	10	3/4	2.7		
1.9	21	-	-	-	-	-	-	-	22	-	-	-	-	-	-	-	2.7		
1.9	23	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	2.7		
3.0	25	FCU-5-101 THRU FCU-5-110	1	15	2	12	12	3/4	26	FCU-5-201 THRU FCU-5-210	1	15	2	12	12	3/4	3.0		
3.5	27	FCU-5-111 THRU FCU-5-120	1	15	2	12	12	3/4	28	FCU-5-211 THRU FCU-5-220	1	1	2	12	12	3/4	2.7		
3.5	29	FCU-5-121 THRU FCU-5-129	1	15	2	12	12	3/4	30	FCU-5-221 THRU FCU-5-229	1	15	2	12	12	3/4	3.5		
1.9	31	FCU-5-130 THRU FCU-5-134	1	15	2	12	12	3/4	32	SPACE									
2.3	33	FCU-5-230 THRU FCU-5-235	1	15	2	12	12	3/4	34	SPACE									
	35	SPARE	1	20					36	SPACE									
	37	SPARE	1	20					38	PANEL MRP	3	125					11.9		
	39	SPARE	1	20					40	VIA XFMR T10							11.6		
	41	SPARE	1	20					42	-							11.5		
TOTAL CONNECTED LOAD			99.3 KVA							KVA PER PHASE:			A 34.2 B 34.156 C 30.935						

PANEL MRP (ALT 1)										MOUNTING: SURFACE														
VOLTAGE: 208/120V, 3PH, 4W										LOCATION: MECHANICAL ROOM														
100 AMPERE BUS										250 A MCB					100% RATED NEUTRAL BUS					10,000 A.I.C.				
CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS A	NO	CIRCUIT WIRING SIZE	GND	C	CKT	DESCRIPTION	BREAKER P	AMPS A	NO	CIRCUIT WIRING SIZE	GND	C	CONN KVA							
0.2	1	FAN-1	1	15	2	12	12	3/4	2	KITCHEN EXHAUST FAN	3	30	4	8	10	1	2.1							
0.4	3	UH-1 AND UH-2	1	15	2	12	12	3/4	4								2.1							
1.2	5	DSS-1	2	15	3	12	12	3/4	6								5.0							
1.2	7	--							8	KITCHEN MAKE-UP UNIT	3	60	4	4	10	1-1/4	5.0							
1.2	9	DSS-2	2	15	3	12	12	3/4	10								5.0							
1.2	11	--							12								5.0							
1.2	13	DSS-3	2	15	3	12	12	3/4	14	CHEMICAL SHOT	1	20	2	12	12	3/4	0.5							
1.2	15	--							16	ATC PANEL	1	20	2	12	12	3/4	0.5							
1.0	17	RECEPTACLE	1	20	2	12	12	3/4	18	ATC PANEL	1	20	2	12	12	3/4	0.5							
1.0	19	GLYCOL FEED	1	20	2	12	12	3/4	20	ATC PANEL	1	20	2	12	12	3/4	0.5							
1.0	21	CHEMICAL SHOT	1	20	2	12	12	3/4	22	ATC PANEL	1	20	2	12	12	3/4	0.5							
	23	SPARE		1	20				24	SPACE														
	25	SPARE		1	20				26	SPACE														
	27	SPARE		1	20				28	SPACE														
	29	SPARE		1	20				30	SPACE														
	31	SPARE		1	20				32	SPACE														
	33	SPARE		1	20				34	SPACE														
	35	SPARE		1	20				36	SPACE														
	37	SPARE		1	20				38	SPACE														
	39	SPARE		1	20				40	SPACE														
	41	SPARE		1	20				42	SPACE														
TOTAL CONNECTED LOAD			35 KVA						KVA PER PHASE:			A 11.7 B 11.9 C 10.954												

REVISIONS		
NO.	DATE	DESCRIPTION
1	3/7/24	ADDENDUM NO. 1
2	3/14/24	ADDENDUM NO. 2

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Consulting Engineers



WO# 23043

PROJECT MANAGER	EM
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DATE 2/26/2024

SCHEDULES

BID SUBMISSION

E602

PSC-12.006

EX PANEL RP-U1 (LEFT - SECTION I)										MOUNTING: SURFACE LOCATION: S-21									
VOLTAGE: 208/120, 3PH, 4W										1000 A.I.C.									
100 AMPERE BUS										100A MLO									
CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	SIZE	GND	C		CKT	DESCRIPTION	BREAKER P	AMPS	NO	SIZE	GND	C		CONN KVA
	1	RECP		1	20					2	RECP		1	20					
	3	RECP		1	20					4	RECP		1	20					
	5	RECP		1	20					6	RECP		1	20					
	7	RECP		1	20					8	RECP		1	20					
	9	RECP		1	20					10	RECP		1	20					
	11	RECP		1	20					12	RECP		1	20					
	13	FREEZERS		1	20					14	LT		1	20					
	15	RECP		1	20					16	RECP		1	20					
	17	RECP		1	20					18	RECP		1	20					
	19	RECP		1	20					20	RECP		1	20					
	21	RECP		1	20					22	RECP		1	20					
	23	RECP		1	20					24	SPARE		1	20					
	25	RECP		1	20					26	SPARE		1	20					
	27	RECP		1	20					28	RECP		1	20					
	29	RECP		1	20					30	PROJECTOR		1	20					
CONNECTED LOAD (SECTION I)										0.0 KVA									
										KVA PER PHASE: A 0.0 B 0.0 C 0.0									

EX PANEL RP-U1 (RIGHT - SECTION II)										MOUNTING: SURFACE LOCATION: S-21									
VOLTAGE: 208/120, 3PH, 4W										10,000 A.I.C.									
100 AMPERE BUS										100A MLO									
CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	SIZE	GND	C		CKT	DESCRIPTION	BREAKER P	AMPS	NO	SIZE	GND	C		CONN KVA
	1	PROJECTORS		1	20					2	RECP		1	20					
	3	ELEC HEAT CONTACT CTRL		1	20					4	RECP		1	20					
	5	RECP		1	20					6	RECP		1	20					
	7	RECP		1	20					8	RECP		1	20					
	9	RECP		1	20					10	RECP		1	20					
	11	RECP		1	20					12	RECP		1	20					
	13	RECP		1	20					14	RECP		1	20					
	15	RECP		1	20					16	RECP		1	20					
	17	WC-13 & 14		1	20					18	RECP		1	20					
	19	RECP		1	20					20	RECP		1	20					
	21	RECP		1	20					22	RECP		1	20					
	23	RECP		1	20					24	RECP		1	20					
	25	RECP		1	20					26	RECP		1	20					
	27	RECP		1	20					28	RECP		1	20					
	29	RECP		1	20					30	RECP		1	20					
CONNECTED LOAD (SECTION II)										0 KVA									
										KVA PER PHASE: A 0.0 B 0.0 C 0.0									
TOTAL CONNECTED LOAD										0 KVA									
										KVA PER PHASE: A 0 B 0 C 0									

PANEL RP-U1 (LEFT - SECTION I)										MOUNTING: SURFACE LOCATION: S-21									
VOLTAGE: 208/120, 3PH, 4W										10,000 A.I.C.									
125 AMPERE BUS										125 A MLO									
CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	SIZE	GND	C		CKT	DESCRIPTION	BREAKER P	AMPS	NO	SIZE	GND	C		CONN KVA
	1	RECP		1	20					2	RECP		1	20					
	3	RECP		1	20					4	RECP		1	20					
	5	RECP		1	20					6	RECP		1	20					
	7	RECP		1	20					8	RECP		1	20					
	9	RECP		1	20					10	RECP		1	20					
	11	RECP		1	20					12	RECP		1	20					
	13	FREEZERS		1	20					14	LT		1	20					
	15	RECP		1	20					16	RECP		1	20					
	17	RECP		1	20					18	RECP		1	20					
	19	RECP		1	20					20	RECP		1	20					
	21	RECP		1	20					22	RECP		1	20					
	23	RECP		1	20					24	SPARE		1	20					
	25	RECP		1	20					26	SPARE		1	20					
	27	RECP		1	20					28	RECP		1	20					
	29	RECP		1	20					30	PROJECTOR		1	20					
	31	SPARE		1	20					32	ROOFTOP		1	20	2	10	10	1	0.4
	33	SPARE		1	20					34	SPARE		1	20					
	35	SPARE		1	20					36	SPARE		1	20					
	37	SPARE		1	20					38	SPARE		1	20					
	39	SPARE		1	20					40	SPARE		1	20					
	41	SPARE		1	20					42	SPARE		1	20					
CONNECTED LOAD (SECTION I)										0.4 KVA									
										KVA PER PHASE: A 0.4 B 0 C 0									

PANEL RP-U1 VOLTAGE: 208/120, 3PH, 4W 125 AMPERE BUS										(SECTION II)										MOUNTING: SURFACE LOCATION: S-21																			
										125 A MLO										100% RATED NEUTRAL BUS										10,000 A.I.C.									
CONN KVA		CKT		DESCRIPTION		BREAKER P AMPS		CIRCUIT WIRING NO SIZE GND C		CKT		DESCRIPTION		BREAKER P AMPS		CIRCUIT WIRING NO SIZE GND C		CONN KVA																					
				43	PROJECTORS	1	20					44	RECP	1	20																								
				45	ELEC HEAT CONTACT CTRL	1	20					46	RECP	1	20																								
				47	RECP	1	20					48	RECP	1	20																								
				49	RECP	1	20					50	RECP	1	20																								
				51	RECP	1	20					52	RECP	1	20																								
				53	RECP	1	20					54	RECP	1	20																								
				55	RECP	1	20					56	RECP	1	20																								
				57	RECP	1	20					58	RECP	1	20																								
				59	WC-13 & 14	1	20					60	RECP	1	20																								
				61	RECP	1	20					62	RECP	1	20																								
				63	RECP	1	20					64	RECP	1	20																								
				65	RECP	1	20					66	RECP	1	20																								
				67	RECP	1	20					68	RECP	1	20																								
				69	RECP	1	20					70	RECP	1	20																								
				71	RECP	1	20					72	RECP	1	20																								
				73	SPARE	1	20					74	SPACE	1																									
				75	SPARE	1	20					76	SPACE	1																									
				77	SPARE	1	20					78	SPACE	1																									
				79	SPARE	1	20					80	SPD	3	30	4	6	8	1																				
				81	SPARE	1	20					82	-	-	-	-	-	-	-																				
				83	SPARE	1	20					84	-	-	-	-	-	-	-																				
CONNECTED LOAD (SECTION II)										0 KVA										KVA PER PHASE										A 0 B 0 C 0									
TOTAL CONNECTED LOAD										0.4 KVA										KVA PER PHASE										A 0.4 B 0 C 0									

EX PANEL RP-12 VOLTAGE: 208/120V, 3PH, 4W 225 AMPERE BUS										(LEFT - SECTION I)										MOUNTING: SURFACE LOCATION: S-22																			
										225A MLO										100% RATED NEUTRAL BUS										10,000 A.I.C.									
CONN KVA		CKT	DESCRIPTION	BREAKER P / AMPS	NO.	CIRCUIT WIRING SIZE	GND	C	CKT	DESCRIPTION	BREAKER P / AMPS	NO.	CIRCUIT WIRING SIZE	GND	C	CONN KVA																							
		1	RECP	1	20				2	RECP	1	20																											
		3	RECP	1	20				4	RECP	1	20																											
		5	RECP	1	20				6	RECP	1	20																											
		7	RECP	1	20				8	RECP	1	20																											
		9	RECP	1	20				10	RECP	1	20																											
		11	RECP	1	20				12	RECP	1	20																											
		13	WC-9 & 10	1	20				14	RECP	1	20																											
		15	RECP	1	20				16	RECP	1	20																											
		17	RECP	1	20				18	RECP	1	20																											
		19	RECP	1	20				20	RECP	1	20																											
		21	RECP	1	20				22	WC-11 & 12	1	20																											
		23	RECP	1	20				24	RECP	1	20																											
		25	RECP	1	20				26	RECP	1	20																											
		27	RECP	1	20				28	RECP	1	20																											
		29	RECP	1	20				30	RECP	1	20																											
		31	RECP	1	20				32	RECP	1	20																											
		33	RECP	1	20				34	RECP	1	20																											
		35	RECP	1	20				36	RECP	1	20																											
CONNECTED LOAD (SECTION I)										0.0 KVA										KVA PER PHASE										A	0	B	0	C	0				

EX PANEL RP-U2 VOLTAGE: 208/120V, 3PH, 4W 225 AMPERE BUS							(RIGHT - SECTION II)							MOUNTING: SURFACE LOCATION: S-22												
225A MLO							100% RATED NEUTRAL BUS							10,000 A.I.C.												
CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	CIRCUIT WIRING SIZE GND C	CKT	DESCRIPTION	BREAKER P	AMPS	NO	CIRCUIT WIRING SIZE GND C	CONN KVA													
	1	RECP	1	20			2	RECP	1	20																
	3	RECP	1	20			4	RECP	1	20																
	5	RECP	1	20			6	PROJECTOR	1	20																
	7	RECP	1	20			8	PROJECTOR	1	20																
	9	RECP	1	20			10	PROJECTORS	1	20																
	11	RECP	1	20			12	PROJECTORS	1	20																
	13	RECP	1	20			14	BOYS HAND DRYER	1	20																
	15	RECP	1	20			16	GRLS HAND DRYER	1	20																
	17	RECP	1	20			18	BOYS HAND DRYER	1	20																
	19	RECP	1	20			20	GRLS HAND DRYER	1	20																
	21	ELEC HEAT CONACT CTRL	1	20			22	RECP	1	20																
	25	SPACE	1				26	BOYS HAND DRYER	1	20																
	27	SPACE	1				28	GRLS HAND DRYER	1	20																
	29	SPACE	1				30	SPACE	1																	
	31	SPACE	1				32	SPACE	1																	
	33	SPACE	1				34	SPACE	1																	
	35	SPACE	1				36	SPACE	1																	
	37	SPACE	1				38	SPACE	1																	
	39	SPACE	1				40	SPACE	1																	
	41	SPACE	1				42	SPACE	1																	
CONNECTED LOAD (SECTION II)							0 KVA							KVA PER PHASE							A	0	B	0	C	0
TOTAL CONNECTED LOAD							0 KVA							KVA PER PHASE							A	0	B	0	C	0

PANEL RP-U2 VOLTAGE: 208/120, 3PH, 4W 225 AMPERE BUS										(LEFT - SECTION I)										MOUNTING: SURFACE LOCATION: S-21									
										150 A MCB					100% RATED NEUTRAL BUS										10,000 A I.C.				
CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	CIRCUIT WIRING SIZE	GND	C	CKT	DESCRIPTION	BREAKER P	AMPS	NO	CIRCUIT WIRING SIZE	GND	C	CONN KVA												
	1	RECP	1	20					2	RECP	1	20																	
	3	RECP	1	20					4	RECP	1	20																	
	5	RECP	1	20					6	RECP	1	20																	
	7	RECP	1	20					8	RECP	1	20																	
	9	RECP	1	20					10	RECP	1	20																	
	11	RECP	1	20					12	RECP	1	20																	
	13	WC-9 & 10	1	20					14	RECP	1	20																	
	15	RECP	1	20					16	RECP	1	20																	
	17	RECP	1	20					18	RECP	1	20																	
	19	RECP	1	20					20	RECP	1	20																	
	21	RECP	1	20					22	WC-11 & 12	1	20																	
	23	RECP	1	20					24	RECP	1	20																	
	25	RECP	1	20					26	RECP	1	20																	
	27	RECP	1	20					28	RECP	1	20																	
	29	RECP	1	20					30	RECP	1	20																	
	31	RECP	1	20					32	RECP	1	20																	
	33	RECP	1	20					34	RECP	1	20																	
	35	RECP	1	20					36	RECP	1	20																	
	37	SPARE	1	20					38	ROOFTOP RECEPTACLE	1	20	2	10	10	1	0.4												
	39	SPARE	1	20					40	SPARE	1	20																	
	41	SPARE	1	20					42	SPARE	1	20																	
CONNECTED LOAD (SECTION I)										0.4 KVA										KVA PER PHASE: A 0.4 B 0 C 0									

PANEL RP-U2 VOLTAGE: 208/120, 3PH, 4W 225 AMPERE BUS									(SECTION II)				MOUNTING: SURFACE LOCATION: S-21									10,000 A.I.C.			
CONN KVA			CKT	DESCRIPTION	BREAKER		CIRCUIT WIRING			CKT	DESCRIPTION	BREAKER		CIRCUIT WIRING			CONN KVA								
P	AMPS	NO.			SIZE	GN'D	C	P	AMPS			NO.	SIZE	GN'D	C										
		43	RECP	1	20					44	RECP	1	20												
		45	RECP	1	20					46	RECP	1	20												
		47	RECP	1	20					48	PROJECTOR	1	20												
		49	RECP	1	20					50	PROJECTOR	1	20												
		51	RECP	1	20					52	PROJECTORS	1	20												
		53	RECP	1	20					54	PROJECTORS	1	20												
		55	RECP	1	20					56	BOYS HAND DRYER	1	20												
		57	RECP	1	20					58	GIRLS HAND DRYER	1	20												
		59	RECP	1	20					60	BOYS HAND DRYER	1	20												
		61	RECP	1	20					62	GIRLS HAND DRYER	1	20												
		63	RECP	1	20					64	RECP	1	20												
		65	ELEC HEAT CONACT CTRL	1	20					66	RECP	1	20												
		67	SPACE	1						68	BOYS HAND DRYER	1	20												
		69	SPACE	1						70	GIRLS HAND DRYER	1	20												
		71	SPACE	1						72	SPACE	1													
		73	SPACE	1						74	SPACE	1													
		75	SPACE	1						76	SPACE	1													
		77	SPACE	1						78	SPACE	1													
		79	SPACE	1						80	SFD	3	30	4	6	8	1								
		81	SPACE	1						82	-	-	-	-	-	-	-								
		83	SPACE	1						84	-	-	-	-	-	-	-								
CONNECTED LOAD (SECTION II)				0 KVA				KVA PER PHASE				A 0 B 0 C 0				0									
TOTAL CONNECTED LOAD				0.4 KVA				KVA PER PHASE				A 0.4 B 0 C 0				0									

EX PANEL EHP-U2										MOUNTING: SURFACE									
VOLTAGE: 480/277V, 3PH, 4W										LOCATION: S-22									
100 AMPERE BUS										100A MLO									
										100% RATED NEUTRAL BUS									
										22,000 A.I.C.									
CONN	CKT	DESCRIPTION	BREAKER	P	AMPS	NO	SIZE	GND	C	CKT	DESCRIPTION	BREAKER	P	AMPS	NO	SIZE	GND	C	CONN
	1	ELUH-39A-C, 40A-C, 41A-C	1	20						2	SPARE	1	20						
	3	ELUH-36A-C, 37A-C, 38A-C	1	20						4	SPARE	1	20						
	5	ELUH-34A-C, 35A-C	1	20						6	SPARE	1	20						
	7	ELUH-42A-C, 43A-C, 44A-C	1	20						8	SPARE	1	20						
	9	ELUH-45A-C, 46A-C, 47A-C	1	20						10	SPARE	1	20						
	11	ELUH-48A-C, 49A-C	1	20						12	SPARE	1	20						
TOTAL CONNECTED LOAD										0 KVA									
										KVA PER PHASE: A 0 B 0 C 0									

EX PANEL RP-12 L					(LEFT - SECTION I)					MOUNTING: SURFACE									
VOLTAGE: 208/120V, 3PH, 4W										LOCATION: 5-12									
225 AMPERE BUS					225A MLO					100% RATED NEUTRAL BUS					10,000 A.I.C.				
CONN KVA	CKT	DESCRIPTION	BREAKER P / AMPS	CIRCUIT WIRING NO SIZE GND C	CKT	DESCRIPTION	BREAKER P / AMPS	NO	CIRCUIT WIRING SIZE GND C	CONN KVA									
	1	RECP	1	20	2	RECP	1	20											
	3	RECP	1	20	4	RECP	1	20											
	5	RECP	1	20	6	RECP	1	20											
	7	RECP	1	20	8	RECP	1	20											
	9	RECP	1	20	10	RECP	1	20											
	11	RECP	1	20	12	RECP	1	20											
	13	WC-24 & 25	1	20	14	RECP	1	20											
	15	RECP	1	20	16	RECP	1	20											
	17	RECP	1	20	18	RECP	1	20											
	19	RECP	1	20	20	RECP	1	20											
	21	RECP	1	20	22	RECP	1	20											
	23	RECP	1	20	24	RECP	1	20											
	25	RECP	1	20	26	RECP	1	20											
	27	RECP	1	20	28	WC-26 & 27	1	20											
	29	RECP	1	20	30	SPACE	1	20											
	31	SPACE	1		32	SPACE	1												
	33	SPACE	1		34	SPACE	1												
	35	SPACE	1		36	SPACE	1												
	37	SPACE	1		38	SPACE	1												
	39	SPACE	1		40	SPACE	1												
	41	SPACE	1		42	SPACE	1												
CONNECTED LOAD (SECTION I)					0.0 KVA					KVA PER PHASE:					A 0 B 0 C 0				

EX RP-U2 R		(RIGHT - SECTION II)										MOUNTING SURFACE																			
VOLTAGE: 208/120V, 3PH, 4W												LOCATION: S-12																			
225 AMPERE BUS		225A MLO										100% RATED NEUTRAL BUS										10,000 A.I.C.									
CONN KVA	CKT	DESCRIPTION	BREAKER P / AMPS	NO	CIRCUIT WIRING SIZE	GND	C	CKT	DESCRIPTION	BREAKER P / AMPS	NO	CIRCUIT WIRING SIZE	GND	C	CONN KVA																
	1	RECP	1	20				2	CUH-14&15	1	20																				
	3	RECP	1	20				4	RECP	1	20																				
	5	RECP	1	20				6	RECP	1	20																				
	7	RECP	1	20				8	RECP	1	20																				
	9	RECP	1	20				10	AHJ-3 LTS	1	20																				
	11	RECP	1	20				12	AHJ-3 RECP/JCI	1	20																				
	13	RECP	1	20				14	AHJ-2 RECP	1	20																				
	15	RECP	1	20				16	AHJ-2 LTS	1	20																				
	17	RECP	1	20				18	PROJECTOR	1	20																				
	19	RECP	1	20				20	PROJECTOR	1	20																				
	21	RECP	1	20				22	PROJECTOR	1	20																				
	23	RECP	1	20				24	PROJECTORS	1	20																				
	25	RECP	1	20				26	PROJECTORS	1	20																				
	27	RECP	1	20				28	PROJECTORS	1	20																				
	29	CUH-24&33	1	20				30	BOYS HAND DRYER	1	20																				
	31	ELEC HEAT CONTACT CTRL	1	20				32	GIRLS HAND DRYER	1	20																				
	33	BOYS HAND DRYER	1	20				34	GIRLS HAND DRYER	1	20																				
	35	SPACE	1					36	SPACE	1																					
CONNECTED LOAD (SECTION II)			0 KVA				KVA PER PHASE		A		0		B		0		C		0												
TOTAL CONNECTED LOAD			0 KVA				KVA PER PHASE		A		0		B		0		C		0												

PANEL RP-12

VOLTAGE: 208/120, 3PH, 4W

225 AMPERE BUS

(LEFT - SECTION I)

MOUNTING: SURFACE

LOCATION: S-12

100% RATED NEUTRAL BUS

10,000 A L/C

CONN KVA	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING				CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING				CONN KVA		
				I	NO	SIZE	GND	C				I	NO	SIZE	GND	C	
	1	RECP	1	20					2	RECP	1	20					
	3	RECP	1	20					4	RECP	1	20					
	5	RECP	1	20					6	RECP	1	20					
	7	RECP	1	20					8	RECP	1	20					
	9	RECP	1	20					10	RECP	1	20					
	11	RECP	1	20					12	RECP	1	20					
	13	WC-24 & 25	1	20					14	RECP	1	20					
	15	RECP	1	20					16	RECP	1	20					
	17	RECP	1	20					18	RECP	1	20					
	19	RECP	1	20					20	RECP	1	20					
	21	RECP	1	20					22	RECP	1	20					
	23	RECP	1	20					24	RECP	1	20					
	25	RECP	1	20					26	RECP	1	20					
	27	RECP	1	20					28	WC-26 & 27	1	20					
	29	RECP	1	20					30	SPACE	1	20					
	31	SPACE	1						32	SPACE	1						
	33	SPACE	1						34	SPACE	1						
	35	SPACE	1						36	SPACE	1						
	37	SPACE	1						38	SPACE	1						
	39	SPACE	1						40	SPACE	1						
	41	SPACE	1						42	SPACE	1						

CONNECTED LOAD (SECTION I)

0.0 KVA

KVA PER PHASE:

A0B0C0

PANEL RP-L2 VOLTAGE: 208/120, 3PH, 4W 225 AMPERE BUS										(SECTION II)										MOUNTING: SURFACE LOCATION: S-12										10,000 A.I.C.									
CONN KVA		CKT	DESCRIPTION	BREAKER P AMPS	NO	SIZE	GND	C		CKT	DESCRIPTION	BREAKER P AMPS	NO	SIZE	GND	C		CIRCUIT WIRING		CONN KVA																			
43	RECP			1	20					2	CUH-1&1S	1	20																										
45	RECP			1	20					4	RECP																												
47	RECP			1	20					6	RECP																												
49	RECP			1	20					8	RECP	1	20																										
51	RECP			1	20					10	AHU-3 LTS	1	20																										
53	RECP			1	20					12	AHU-3 RECP/JCI	1	20																										
55	RECP			1	20					14	AHU-2 RECP	1	20																										
57	RECP			1	20					16	AHU-2 LTS	1	20																										
59	RECP			1	20					18	PROJECTOR	1	20																										
61	RECP			1	20					20	PROJECTOR	1	20																										
63	RECP			1	20					22	PROJECTOR	1	20																										
65	RECP			1	20					24	PROJECTORS	1	20																										
67	RECP			1	20					26	PROJECTORS	1	20																										
69	RECP			1	20					28	PROJECTORS	1	20																										
71	CUH-1 THRU CUH-4			1	20	2	12	12	3/4	72	BOYS HAND DRYER	1	20																										
73	ELEC HEAT CONTACT CTRL			1	20					74	GRLS HAND DRYER	1	20																										
75	BOYS HAND DRYER			1	20					76	GRLS HAND DRYER	1	20																										
77	SPARE			1	20					78	CONDENSATE PUMP	1	20	2	12	12	3/4																						
79	SPARE			1	20					80	SPD	3	30	4	6	8	1																						
81	SPARE			1	20					82		-	-	-	-	-	-																						
83	SPARE			1	20					84		-	-	-	-	-	-																						
CONNECTED LOAD (SECTION II)										KVA PER PHASE										A	B	O	C	O															
TOTAL CONNECT/FLOAD										KVA PER PHASE										A	B	O	C	O															

PANEL MP-U2										*GFEP TYPE										MOUNTING: SURFACE																			
VOLTAGE: 480/277V, 3PH, 4W																				LOCATION: S-22																			
100 AMPERE BUS										100A MLO										100% RATED NEUTRAL BUS										22,000 A									
CONN KVA	CKT	DESCRIPTION	BREAKER P / AMPS	NO	CIRCUIT WIRING SIZE	GND	C	CKT	DESCRIPTION	BREAKER P / AMPS	NO	CIRCUIT WIRING SIZE	GND	C	CONN KVA																								
3.1	1	FCU-3-201 THRU FCU-3-208	1	15	2	12	12	3/4	2	PUMP 18 AND 19	3	15	3	12	12	3/4	0.4																						
2.7	3	FCU-3-209 THRU FCU-3-215	1	15	2	12	12	3/4	4	---							0.4																						
2.5	5	FCU-2-214 THRU FCU-2-219	1	15	2	12	12	3/4	6	---							0.4																						
2.3	7	FCU-2-220 THRU FCU-2-226	1	15	2	12	12	3/4	8	HEAT TRACE	1	20*	2	10	10	1	2.0																						
2.3	9	FCU-4-227 THRU FCU-4-233	1	15	2	12	12	3/4	10	HEAT TRACE	1	20*	2	10	10	1	2.0																						
2.3	11	FCU-4-234 THRU FCU-4-240	1	15	2	12	12	3/4	12	HEAT TRACE	1	20*	2	10	10	1	2.0																						
TOTAL CONNECTED LOAD			22 KVA		KVA PER PHASE:										A		B		C		0																		

EX PANEL LP-L2										MOUNTING SURFACE																			
VOLTAGE: 480/277V, 3PH, 4W										LOCATION: S-12																			
175 AMPERE BUS										100% RATED NEUTRAL BUS										22,000 A.I.C.									
175A MCB																													
CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	SIZE	GND	C	CKT	DESCRIPTION	BREAKER P	AMPS	NO	SIZE	GND	C	CONN KVA												
	1	LTG		1	20				2	LTG		1	20																
	3	LTG		1	20				4	LTG		1	20																
	5	LTG		1	20				6	LTG		1	20																
	7	LTG		1	20				8	SPARE		1	20																
	9	LTG		1	20				10	SPARE		1	20																
	11	LTG		1	20				12	SPARE		1	20																
	13	LTG		1	20				14	SPARE		1	20																
	15	LTG		1	20				16	SPARE		1	20																
	17	LTG		1	20				18	SPARE		1	20																
	19	LTG		1	20				20	SPARE		1	20																
	21	LTG		1	20				22	SPARE		1	20																
	23	LTG		1	20				24	SPARE		1	20																
	25	ELEC HEAT SUBPANEL		3	50				26	TRANSFORMER T2		3	70																
	27	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	-												
	29	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-												
TOTAL CONNECTED LOAD										0 KVA										KVA PER PHASE:									
																				A 0 B 0 C 0									

PANEL LP-12										MOUNTING: SURFACE																			
VOLTAGE: 480/277V, 3PH, 4W										LOCATION: S-12																			
175 AMPERE BUS										100% RATED NEUTRAL BUS										22,000 A.I.C.									
175A MCB																													
CONN		BREAKER		CIRCUIT WIRING						CONN		BREAKER		CIRCUIT WIRING						CONN									
R/O	CKT	DESCRIPTION	P	AMPS	NO	SIZE	COND	C	CKT	DESCRIPTION	P	AMPS	NO	SIZE	COND	C	CKT	DESCRIPTION	P	AMPS	NO	SIZE	COND	C					
3.0	1	LTS	1	20	2	12	12	3/4	2	LTS	1	20	2	12	12	3/4	2.7												
3.1	3	LTS	1	20	2	12	12	3/4	4	LTS	1	20	2	12	12	3/4	2.8												
2.0	5	LTS	1	20	2	12	12	3/4	6	LTS	1	20	2	12	12	3/4													
7	LTS	1	20						8	SPARE	1	20																	
9	LTG	1	20						10	SPARE	1	20																	
11	LTG	1	20						12	SPARE	1	20																	
13	LTG	1	20						14	SPARE	1	20																	
15	LTG	1	20						16	SPARE	1	20																	
17	LTG	1	20						18	SPARE	1	20																	
19	LTG	1	20						20	SPARE	1	20																	
21	LTG	1	20						22	SPARE	1	20																	
23	LTG	1	20						24	SPARE	1	20																	
25	MP-L2	3	60	4	4	10	1-1/4		26	TRANSFORMER T2	3	70																	
27	-	-	-	-	-	-	-		28	-	-	-	-	-	-														
29	-	-	-	-	-	-	-		30	-	-	-	-	-	-														
TOTAL CONNECTED LOAD										11 KVA										KVA PER PHASE									
																				A 0 B 0 C 0									

EX PANEL EHP-1.2													MOUNTING: SURFACE						
VOLTAGE: 480/277V, 3PH, 4W													LOCATION: S-12						
100 AMPERE BUS													100% RATED NEUTRAL BUS					22,000 A.I.C.	
CONN KVA		CKT	DESCRIPTION	BREAKER P	AMPS	NO	CIRCUIT WIRING			CKT	DESCRIPTION	BREAKER P	AMPS	NO	CIRCUIT WIRING			CONN KVA	
							SIZE	GND	C						SIZE	GND	C		
	1	1	ELUH-21A-C, 22A-C, 23A-C	1	20					2	ELUH-25A-C, 28A-C, 27A-C	1	20						
	3	1	ELUH-18A-C, 19A-C, 20A-C	1	20					4	ELUH-28A-C, 29A-C, 30A-C	1	20						
	5	1	ELUH-16A-C, 17A-C	1	20					6	ELUH-31A-C, 32A-C	1	20						
	7		SPARE	1	20					8	SPARE	1	20						
	9		SPARE	1	20					10	SPARE	1	20						
	11		SPARE	1	20					12	SPARE	1	20						
TOTAL CONNECTED LOAD				0 KVA				KVA PER PHASE:				A 0 B 0 C 0							

PANEL MP-1.2										MOUNTING: SURFACE											
VOLTAGE: 480/277V, 3PH, 4W										LOCATION: S-12											
100 AMPER BUS										100% RATED NEUTRAL BUS										22,000 A.I.C.	
CONN VOLT		DESCRIPTION		BREAKER P AMPS NO		CIRCUIT WIRING SIZE GND C				CKT		DESCRIPTION		BREAKER P AMPS NO		CIRCUIT WIRING SIZE GND C		A.I.C.			
2.8	1	FCU-2-101 THRU FCU-2-110	1	15	2	12	3/4			2	FCU-3-101 THRU FCU-3-108	1	15	2	12	3/4			2.2		
2.2	3	FCU-2-111 THRU FCU-2-118	1	15	2	12	3/4			4	FCU-3-109 THRU FCU-3-116	1	15	2	12	3/4			2.2		
2.7	5	FCU-4-101 THRU FCU-4-107	1	15	2	12	3/4			6	SPARE	1	20								
2.7	7	FCU-4-108 THRU FCU-4-115	1	15	2	12	3/4			8	SPARE	1	20								
2.7	9	FCU-4-116 THRU FCU-4-123	1	15	2	12	3/4			10	SPARE	1	20								
1.9	11	FCU-4-124 THRU FCU-4-128	1	15	2	12	3/4			12	SPARE	1	20								
TOTAL CONNECTED LOAD				19 KVA				KVA PER PHASE:				A				0 B 0 C 0					

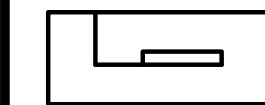
EX PANEL LP-U2										MOUNTING: SURFACE																
VOLTAGE: 480/277V, 3PH, 4W										LOCATION: S-22																
125 AMPERE BUS										125A MCB																
										100% RATED NEUTRAL BUS																
										22,000 A.I.C.																
CONN KVA		CKT	DESCRIPTION	BREAKER P AMPS	NO	SIZE	GND	C		CKT	DESCRIPTION	BREAKER P AMPS	NO	SIZE	GND	C	CONN KVA									
		1	LTG	1	20					2	LTG	1	20													
		3	LTG	1	20					4	LTG	1	20													
		5	LTG	1	20					6	LTG	1	20													
		7	LTG	1	20					8	LTG	1	20													
		9	LTG	1	20					10	LTG	1	20													
		11	LTG	1	20					12	SPARE	1	20													
		13	LTG	1	20					14	SPARE	1	20													
		15	LTG	1	20					16	SPARE	1	20													
		17	LTG	1	20					18	SPARE	1	20													
		19	LTG	1	20					20	SPARE	1	20													
		21	LTG	1	20					22	SPARE	1	20													
		23	LTG	1	20					24	SPARE	1	20													
		25	SPARE	1	20					26	ELEC HEAT SUBPANEL	3	50													
		27	SPACE	1						28	-	-	-	-	-	-										
		28	SPACE	1						30	-	-	-	-	-	-										
TOTAL CONNECTED LOAD										0 KVA	KVA PER PHASE:										A	0	B	0	C	0

PANEL LP-U2										MOUNTING: SURFACE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
VOLTAGE: 480/277V, 3PH, 4W										LOCATION: S-22																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
125 AMPERE BUS										125A MCB																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
100% RATED NEUTRAL BUS										22,000 A.I.C.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
CONN	KVA	CKT	DESCRIPTION	BREAKER	P LAMPS	NO.	SIZE	1/2	1/4	1/8	1/16	1/32	1/64	1/128	1/256	1/512	1/1024	1/2048	1/4096	1/8192	1/16384	1/32768	1/65536	1/131072	1/262144	1/524288	1/1048576	1/2097152	1/4194304	1/8388608	1/16777216	1/33554432	1/67108864	1/134217728	1/268435456	1/536870912	1/1073741824	1/2147483648	1/4294967296	1/8589934592	1/17179869184	1/34359738368	1/68719476736	1/137438953472	1/274877906944	1/549755813888	1/1099511627776	1/2199023255552	1/4398046511104	1/8796093022208	1/17592186044416	1/35184372088832	1/70368744177664	1/140737488355328	1/281474976710656	1/562949953421312	1/1125899906842624	1/2251799813685248	1/4503599627370496	1/9007199254740992	1/18014398509481984	1/36028797018963968	1/72057594037927936	1/144115188075855872	1/288230376151711744	1/576460752303423488	1/1152921504606846976	1/2305843009213693952	1/4611686018427387904	1/9223372036854775808	1/18446744073709551616	1/36893488147419103232	1/73786976294838206464	1/147573952589676412928	1/295147905179352825856	1/590295810358705651712	1/1180591620717411303424	1/2361183241434822606848	1/4722366482869645213696	1/9444732965739290427392	1/18889465931478580854784	1/37778931862957161709568	1/75557863725914323419136	1/151115727451828646838272	1/302231454903657293676544	1/604462909807314587353088	1/1208925819614629174706176	1/2417851639229258349412352	1/4835703278458516698824704	1/9671406556917033397649408	1/19342813113834066795298816	1/38685626227668133590597632	1/77371252455336267181195264	1/154742504910672534362390528	1/309485009821345068724781056	1/618970019642690137449562112	1/1237940039285380274899124224	1/2475880078570760549798248448	1/4951760157141521099596496896	1/9903520314283042199192993792	1/19807040628566084398385987584	1/39614081257132168796771975168	1/79228162514264337593543950336	1/158456325028528675187087900672	1/316912650057057350374175801344	1/633825300114114700748351602688	1/1267650600228229401496703205376	1/2535301200456458802993406410752	1/5070602400912917605986812821504	1/10141204801825835211973625643008	1/20282409603651670423947251286016	1/40564819207303340847894502572032	1/81129638414606681695789005144064	1/162259276829213363391578010288128	1/324518553658426726783156020576256	1/649037107316853453566312041152512	1/1298074214633706907132624082305024	1/2596148429267413814265248164610048	1/5192296858534827628530496329220096	1/10384593717069655257060992658440192	1/20769187434139310514121985316880384	1/41538374868278621028243970633760768	1/83076749736557242056487941267521536	1/166153499473114484112975882535043072	1/332306998946228968225951765070086144	1/664613997892457936451903530140172288	1/1329227995784915872903807060280344576	1/2658455991569831745807614120560689152	1/5316911983139663491615228241121378304	1/10633823966279326983230456482242756608	1/21267647932558653966460912964485513216	1/42535295865117307932921825928971026432	1/85070591730234615865843651857942052864	1/170141183460469231731687303715884105728	1/340282366920938463463374607431768211456	1/680564733841876926926749214863536422912	1/1361129467683753853853498429727072845824	1/2722258935367507707706996859454145691648	1/5444517870735015415413993718908291383296	1/10889035741470030830827987437816582766592	1/21778071482940061661655974875																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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REVISIONS		
NO.	DATE	DESCRIPTION
1	3/7/24	ADDENDUM NO. 1
2	3/14/24	ADDENDUM NO. 2

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Consulting Engineers



WO# 23043

PROJECT
MANAGER EM

DESIGNER EM

DATE 2/26/2024

SCHEDULES

BID SUBMISSION

E604

PSC-12.006

EX PANEL DP-L1													MOUNTING: SURFACE						
VOLTAGE: 480/277V, 3PH, 4W													LOCATION: BOILER ROOM						
100 AMPERE BUS					100A MLO					100% RATED NEUTRAL BUS							10,000 A.I.C.		
CONN KVA		CKT	DESCRIPTION	BREAKER P	AMPS	NO	CIRCUIT WIRING SIZE	GND	C	CKT	DESCRIPTION	BREAKER P	AMPS	NO	CIRCUIT WIRING SIZE	GND	C	CONN KVA	
		1	OUTSIDE LIGHTING	1	20					2	SPACE	1							
		3	OUTSIDE LIGHTING	1	20					4	SPACE	1							
		5	OUTSIDE LIGHTING	1	20					6	SPACE	1							
		7	OUTSIDE LIGHTING	1	20					8	SPACE	1							
		9	OUTSIDE LIGHTING	1	20					10	SPACE	1							
		11	OUTSIDE LIGHTING	1	20					12	SPACE	1							
TOTAL CONNECTED LOAD					0	1	KVA PER PHASE:					A	0	B	0	C	0		

PANEL DP-L1													MOUNTING: SURFACE						
VOLTAGE: 480/277V, 3PH, 4W													LOCATION: BOILER ROOM						
100 AMPERE BUS					100A MLO					100% RATED NEUTRAL BUS					10,000 A.I.C.				
CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	SIZE	GND	C	CKT	DESCRIPTION	BREAKER P	AMPS	NO	SIZE	GND	C	CONN KVA		
	1	OUTSIDE LIGHTING	1	20					2	SPACE	1								
	3	OUTSIDE LIGHTING	1	20					4	SPACE	1								
	5	OUTSIDE LIGHTING	1	20					6	SPACE	1								
	7	OUTSIDE LIGHTING	1	20					8	SPACE	1								
	9	OUTSIDE LIGHTING	1	20					10	SPACE	1								
	11	OUTSIDE LIGHTING	1	20					12	SPACE	1								
TOTAL CONNECTED LOAD				0	1	KVA PER PHASE:							A	0	B	0	C	0	

EX KITCHEN SUB PANEL										MOUNTING: SURFACE										
VOLTAGE: 240/120V, 3PH, 4W										LOCATION: KITCHEN										
100 AMPERE BUS					100A MCB					100% RATED NEUTRAL BUS					10,000 A.I.C.					
CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS NO	CIRCUIT WIRING SIZE	GND	C	CKT	DESCRIPTION	BREAKER P	AMPS NO	CIRCUIT WIRING SIZE	GND	C	CONN KVA					
		1 SPARE	1	15				2	OVEN	2	20									
		3 OVEN	2	20				4	-	-	-									
		5	-	-				6	DISH ROOM FAN	1	20									
		7 FAN	1	15				8	ICE MACHINE	1	20									
		9 CAFÉ PANEL	2	60				10	HAND DRYER	1	20									
		11	-	-				12	HAND DRYER	1	20									
		13 SPACE						14	SPACE											
		15 SPACE						16	SPACE											
TOTAL CONNECTED LOAD			0 KVA			KVA PER PHASE:			A			0 B			0 C			0		

EX KITCHEN SUB PANEL (MODIFIED)										MOUNTING: SURFACE																
VOLTAGE: 240/120V, 3PH, 4W										LOCATION: KITCHEN																
100 AMPERE BUS										100% RATED NEUTRAL BUS								10,000 A.I.C.								
CONN KVA		CKT	DESCRIPTION	BREAKER	P	AMPS	NO	CIRCUIT WIRING			CKT	DESCRIPTION	BREAKER	P	AMPS	NO	CIRCUIT WIRING			CONN KVA						
				SIZE				GND	C	SIZE			GND				C									
		1	SPARE	1	15						2	OVEN	2	20												
		3	OVEN	2	20						4		-	-												
		5	-	-	-						6	DISH ROOM FAN	1	20	2	12	12	3/4								
		7	FAN	1	15						8	ICE MACHINE	1	20												
		9	CAFÉ PANEL	2	60						10	HAND DRYER	1	20												
		11	-	-	-						12	HAND DRYER	1	20												
1.0		13	HOOD CONTROLS	1	20	2	12	12	3/4		14	FANS 2 AND 3	1	20	2	12	12	3/4								
		15	SPACE								16	SPACE														
TOTAL CONNECTED LOAD				1 KVA			KVA PER PHASE:														A	0	B	0	C	0

EX CR 145 SUB PANEL										FOR REFERENCE ONLY										MOUNTING: SURFACE																			
VOLTAGE: 240/120V, 1PH, 4W																				LOCATION: CR 145																			
125 AMPERE BUS										125A MLO										100% RATED NEUTRAL BUS										10,000 A.I.C.									
CONN KVA		CKT	DESCRIPTION	BREAKER		CIRCUIT WIRING				CKT	DESCRIPTION	BREAKER		CIRCUIT WIRING				CONN KV																					
				P	AMPS	NO	SIZE	GND	C			P	AMPS	NO	SIZE	GND	C																						
		1	COMP	1	20					2	COMP	1	20																										
		3	COMP	1	20					4	COMP	1	20																										
		5	COMP	1	20					6	COMP	1	20																										
		7	COMP	1	20					8	COMP	1	20																										
		9	SPACE							10	HAND DRYER	2	20																										
		11	SPACE							12	HAND DRYER																												
		13	SPACE							14	SPACE																												
		15	SPACE							16	SPACE																												
TOTAL CONNECTED LOAD				0 KVA				KVA PER PHASE:				A				0				B				0				C				0							

EX PANEL CLP										MOUNTING: SURFACE										
VOLTAGE: 208/120V, 3PH, 4W										LOCATION: BOILER ROOM										
100 AMPERE BUS					100A MLO					100% RATED NEUTRAL BUS					10,000 A.I.C.					
CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	CIRCUIT WIRING SIZE	GND	C		CKT	DESCRIPTION	BREAKER P	AMPS	NO	CIRCUIT WIRING SIZE	GND	C	CONN KVA		
	1	CANOPY LTS STAIR 1	1	20						2	CANOPY LTS BOILER RM	1	20							
	3	CANOPY LTS STAIR 2	1	20						4	CANOPY LTS GYM	1	20							
	5	CANOPY LTS STAIR 2	1	20						6	SPARE	1	20							
	7	SHOP CANOPY LTS	1	20						8	PARKING LOT POLE LTS	1	20							
	9	CANOPY LTS STAIR 1	1	20						10	CANOPY LTS CAFETERIA	1	20							
	11	CANOPY LTS STAIR 2&3	1	20						12	CANOPY LTS FRONT	1	20							
	13	DOM HOT WATER HEATER	1	20						14	SPARE	1	20							
	15	SPARE	2	20						16	SPARE	2	20							
	17	-	-	-						18	-	-	-							
	19	SPARE	2	20						20	SPACE	2	20							
	21	-	-	-						22	-	-	-							
	23	SPARE	2	20						24	SPACE	2	20							
	25	-	-	-						26	-	-	-							
	27	SPACE	1							28	SPACE	1								
	29	SPACE	1							30	SPACE	1								
TOTAL CONNECTED LOAD			0 KVA		KVA PER PHASE:										A	0	B	0	C	0

PANEL CLP										MOUNTING: SURFACE																					
VOLTAGE: 208/120V, 3PH, 4W										LOCATION: BOILER ROOM																					
100 AMPERE BUS										100 A MCB								100% RATED NEUTRAL BUS								10,000 A.I.C.					
CONN KVA	CKT	DESCRIPTION	BREAKER P	AMPS	NO	CIRCUIT WIRING SIZE	GND	C		CKT	DESCRIPTION	BREAKER P	AMPS	NO	CIRCUIT WIRING SIZE	GND	C	CONN KVA													
	1	CANOPY LTS STAIR 1	1	20						2	CANOPY LTS BOILER RM	1	20																		
	3	CANOPY LTS STAIR 2	1	20						4	CANOPY LTS GYM	1	20																		
	5	CANOPY LTS STAIR 2	1	20						6	SPARE	1	20																		
	7	SHOP CANOPY LTS	1	20						8	PARKING LOT POLE LTS	1	20																		
	9	CANOPY LTS STAIR 1	1	20						10	CANOPY LTS CAFETERIA	1	20																		
	11	CANOPY LTS STAIR 2&3	1	20						12	CANOPY LTS FRONT	1	20																		
	13	DOM HOT WATER HEATER	1	20						14	SPARE	1	20																		
	15	SPARE	2	20						16	SPARE	2	20																		
	17	-	-	-						18	-	-	-																		
	19	SPARE	2	20						20	SPARE	2	20																		
	21	-	-	-						22	-	-	-																		
	23	SPARE	2	20						24	SPARE	2	20																		
	25	-	-	-						26	-	-	-																		
	27	SPACE	1	-						28	SPACE	1	-																		
	29	SPACE	1	-						30	SPACE	1	-																		
TOTAL CONNECTED LOAD										0 KVA		KVA PER PHASE:								A		0		B		0		C		0	

EX PANEL ELP-U1									
MOUNTING: SURFACE									
VOLTAGE: 480/277V, 3PH, 4W									
100 AMPERE BUS									
		100A MCB				100% RATED NEUTRAL BUS			
CONN KVA	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING NO SIZE GND C	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING NO SIZE GND C	CONN KVA
	1	SPARE	1	20		2	SPARE	1	20
	3	EXIT LIGHTS	1	20		4	STAIRWELL LIGHTS	1	20
	5	CORRIDOR EM LTGS	1	20		6	SPARE	1	20
	7	SPARE	1	20		8	SPARE	1	20
	9	SPACE				10	SPACE		
	11	SPACE				12	SPACE		
TOTAL CONNECTED LOAD		0 KVA				KVA PER PHASE: A 0 B 0 C 0			

FUSIBLE PANEL ELP-U1									
MOUNTING: SURFACE									
VOLTAGE: 480/277V, 3PH, 4W									
100 AMPERE BUS									
		100A MAIN FUSE				100% RATED NEUTRAL BUS			
CONN KVA	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING NO SIZE GND C	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING NO SIZE GND C	CONN KVA
	1		1	20		2		1	20
	3		1	20		4		1	20
	5		1	20		6	EXIT SIGNS	1	20
	7		1	20		8	EXIT SIGNS	1	20
	9		1	20		10		1	20
	11		1	20		12		1	20
	13	SPACE	1			14	SPD	3	30
	15	SPACE	1			16	-	-	-
	17	SPACE	1			18	-	-	-
TOTAL CONNECTED LOAD		0.0 KVA				KVA PER PHASE: A 0.0 B 0.0 C 0.0			

EX PANEL ERP-U1									
MOUNTING: SURFACE									
VOLTAGE: 480/277V, 3PH, 4W									
100 AMPERE BUS									
		100A MCB				100% RATED NEUTRAL BUS			
CONN KVA	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING NO SIZE GND C	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING NO SIZE GND C	CONN KVA
	1	BATTERY LIGHTS	1	20		2	BATTERY LIGHTS	1	20
	3	SKYLIGHT LIGHTS IN STAIR	1	20		4	SKYLIGHT LIGHTS IN STAIR	1	20
	5	SPARE	1	20		6	SPARE	1	20
	7	DAS SYSTEM	1	20		8	SPARE	1	20
	9	SPACE				10	SPACE		
	11	SPACE				12	SPACE		
TOTAL CONNECTED LOAD		0 KVA				KVA PER PHASE: A 0 B 0 C 0			

FUSIBLE PANEL ERP-U1									
MOUNTING: SURFACE									
VOLTAGE: 208/120V, 3PH, 4W									
100 AMPERE BUS									
		100 A MAIN FUSE				100% RATED NEUTRAL BUS			
CONN KVA	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING NO SIZE GND C	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING NO SIZE GND C	CONN KVA
	1	SPARE	1	20		2	SPARE	1	20
	3	SPARE	1	20		4	SPARE	1	20
	5	SPARE	1	20		6	SPARE	1	20
	7	SPARE	1	20		8	SPARE	1	20
	9	SPARE	1	20		10	SPARE	1	20
	11	SPACE	1			12	SPACE	1	20
	13	SPACE	1			14	SPD	3	30
	15	SPACE	1			16	-	-	-
	17	SPACE	1			18	-	-	-
TOTAL CONNECTED LOAD		0.0 KVA				KVA PER PHASE: A 0.0 B 0.0 C 0.0			

EX PANEL RP-L4									
MOUNTING: SURFACE									
VOLTAGE: 120/240V, 1 PH, 3W									
400 AMPERE BUS									
		200A MCB				100% RATED NEUTRAL BUS			
CONN KVA	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING NO SIZE GND C	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING NO SIZE GND C	CONN KVA
	1	WATER HEATER	1	20		2	WASHER	1	20
	3	GENERATOR	1	20		4		2	50
	5	GENERATOR	1	20		6			
	7	RECEPTACLE	1	20		8		1	20
	9	OVEN	2	30		10	DRYER	2	30
	11					12			
	13	STOVE	2	50		14	OVEN	2	50
	15					16			
	17	STOVE	2	50		18	OVEN	2	50
	19					20			
	21	STOVE	2	50		22	SPACE		
	23					24	SPACE		
TOTAL CONNECTED LOAD		0 KVA				KVA PER PHASE: A 0.0 B 0.0			

PANEL RP-L4									
MOUNTING: SURFACE									
VOLTAGE: 120/240V, 1 PH, 3W									
400 AMPERE BUS									
		30 A MCB				100% RATED NEUTRAL BUS			
CONN KVA	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING NO SIZE GND C	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING NO SIZE GND C	CONN KVA
	1	WATER HEATER	1	20		2	WASHER	1	20
	3	GENERATOR	1	20		4		2	50
	5	GENERATOR	1	20		6			
	7	RECEPTACLE	1	20		8		1	20
	9	OVEN	2	30		10	DRYER	2	30
	11					12			
	13	STOVE	2	50		14	OVEN	2	50
	15					16			
	17	STOVE	2	50		18	OVEN	2	50
	19					20			
	21	STOVE	2	50		22	SPACE		
	23					24	SPACE		
TOTAL CONNECTED LOAD		0 KVA				KVA PER PHASE: A 0.0 B 0.0			

EX PANEL RP-U4									
MOUNTING: SURFACE									
VOLTAGE: 208/120V, 3PH, 4W									
100 AMPERE BUS									
		100A MLO				200% RATED NEUTRAL BUS			
CONN KVA	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING NO SIZE GND C	CKT	DESCRIPTION	BREAKER P AMPS	CIRCUIT WIRING NO SIZE GND C	CONN KVA
	1	LTS	1	20		2	LTS	1	20
	3	LTS	1	20		4	LTS	1	20
	5	LTS	1	20		6	LTS	1	20
	7	LTS	1	20		8	LTS	1	20
	9	KITCHEN EXH FANHOOD LT	1	20		10	RECP	1	20
	11	RECP	1	20		12	RECP	1	20
	13	EF-14	1	20		14	CUH-61	1	20
	15	RECP	1	20		16	RECP	1	20
	17	MOTORIZED SCREEN	1	20		18	RECP	1	20
	19	RECP	1	20		20	RECP	1	20
	21	RECP	1	20		22	RECP	1	20
	23	RECP	1	20		24	RECP	1	20
	25	WC-1 & 2	1	20		26	RECP	1	20
	27	RECP	1	20		28	RECP	1	20
	29	RECP	1	20		30	RECP	1	20
CONNECTED LOAD (SECTION I)		0.0 KVA				KVA PER PHASE: A 0.0 B 0.0 C 0.0			

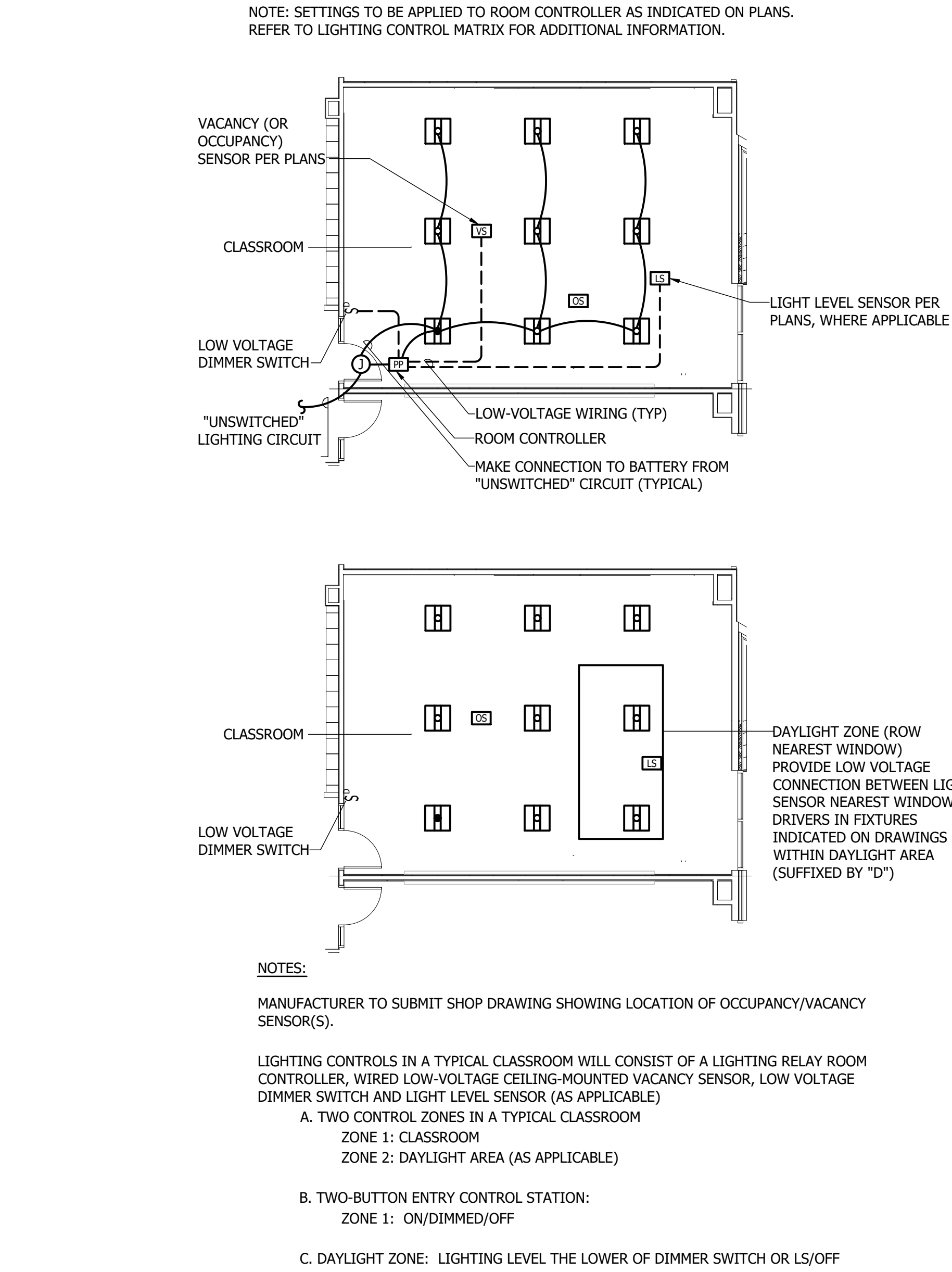
EX PANEL RP-U4										(RIGHT - SECTION II)										MOUNTING: SURFACE																			
VOLTAGE: 208/120V, 3PH, 4W																				LOCATION: S-27																			
100 AMPERE BUS										100A MLO										200% RATED NEUTRAL BUS										10,000 A.I.C.									
CONN KVA		CKT	DESCRIPTION	BREAKER P AMPS		CIRCUIT WIRING NO SIZE GND C				CKT		DESCRIPTION	BREAKER P AMPS		CIRCUIT WIRING NO SIZE GND C				CONN KVA																				
		1	RECP	1	20						2	RECP	1	20																									
		3	RECP	1	20						4	RECP	1	20																									
		5	RECP	1	20						6	RECP	1	20																									
		7	RECP	1	20						8	RECP	1	20																									
		9	RECP	1	20						10	RECP	1	20																									
		11	RECP	1	20						12	CUHS	1	20																									
		13	RECP	1	20						14	ALARM	1	20																									
		15	RECP	1	20						16	RECP	1	20																									
		17	RECP	1	20						18	CURTAIN	1	20																									
		19	RECP	1	20						20	CURTAIN	1	20																									
		21	RECP	1	20						22	CURTAIN	1	20																									
		23	SPACE	1							24	SPACE	1																										
CONNECTED LOAD (SECTION II)										0 KVA										KVA PER PHASE:										A 0.0 B 0.0 C 0.0									
TOTAL CONNECTED LOAD										0 KVA										KVA PER PHASE:										A 0.0 B 0.0 C 0.0									

EX PANEL RPU-5										MOUNTING: RECESSED											
VOLTAGE: 208/120V, 3PH, 4W										LOCATION: ROOM 235											
400 AMPERE BUS										100% RATED NEUTRAL BUS										22,000 A.I.C.	
			BREAKER										CIRCUIT WIRING								
CONN KVA	CKT	DESCRIPTION	P AMPS	NO	SIZE	GND	C	CKT	DESCRIPTION	BREAKER P AMPS	NO	SIZE	GND	C	CONN KVA						
	1	BUS DUCT	3	100				2	SPACE	1											
	3	-	-	-				4	SPACE	1											
	5	-	-	-				6	SPACE	1											
	7	PERSONNEL PANEL	1	20				8	?	3	70										
	9	RECP	1	20				10	-	-	-										
	11	-	1	20				12	-	-	-										
	13	FORGE	1	20				14	?	3	40										
	15	MELTING	1	20				16	-	-	-										
	17	METAL LATHE	1	20				18	-	-	-										
	19	-	1	20				20	?	3	70										
	21	BAND SAW	1	20				22	-	-	-										
	23	RECP	1	20				24	-	-	-										
	25	RECP	1	20				26	BUFFER	3	15										
	27	GRINDER	1	20				28	-	-	-										
	29	RECP	1	20				30	-	-	-										
	31	ARC WELDER	1	20				32	SANDER	1	20										
	33	-	1					34	METAL BAND SAW	1	20										
	35	-	1					36	SPOT WELDER	1	20										
	37	DUCT #1/JOINTER	3	100				38	SPACE	1											
	39	-	-	-				40	SPACE	1											
	41	-	-	-				42	SPACE	1											
TOTAL CONNECTED LOAD			0 KVA				KVA PER PHASE:			A			0 B 0 C 0			0					

PANEL RPU-5										MOUNTING: RECESSED									
VOLTAGE: 208/120V, 3PH, 4W										LOCATION: ROOM 235									
400 AMPERE BUS										100% RATED NEUTRAL BUS									
										22,000 A.I.C.									
CONN KVA	CKT	DESCRIPTION	BREAKER P AMPS	NO	CIRCUIT WIRING SIZE GND C	CKT	DESCRIPTION	BREAKER P AMPS	NO	CIRCUIT WIRING SIZE GND C	CONN KVA								
	1	BUS DUCT	3	100		2	SPACE	1											
	3	-	-	-		4	SPACE	1											
	5	-	-	-		6	SPACE	1											
	7	PERSONNEL PANEL	1	20		8	?	3	70										
	9	RECP	1	20		10	-	-	-										
	11	-	1	20		12	-	-	-										
	13	FORGE	1	20		14	?	3	40										
	15	MELTING	1	20		16	-	-	-										
	17	METAL LATHE	1	20		18	-	-	-										
	19	-	1	20		20	?	3	70										
	21	BAND SAW	1	20		22	-	-	-										
	23	RECP	1	20		24	-	-	-										
	25	RECP	1	20		26	BUFFER	3	15										
	27	GRINDER	1	20		28	-	-	-										
	29	RECP	1	20		30	-	-	-										
	31	ARC WELDER	1	20		32	SANDER	1	20										
	33	-	1			34	METAL BAND SAW	1	20										
	35	-	1			36	SPOT WELDER	1	20										
	37	DUCT #1/JOINTER	3	100		38	ROOFTOP RECEPT	1	20	2	10	10	1						
	39	-	-	-		40	SPACE	1											
	41	-	-	-		42	SPACE	1											
TOTAL CONNECTED LOAD			0 KVA			KVA PER PHASE:			A 0 B 0 C 0										

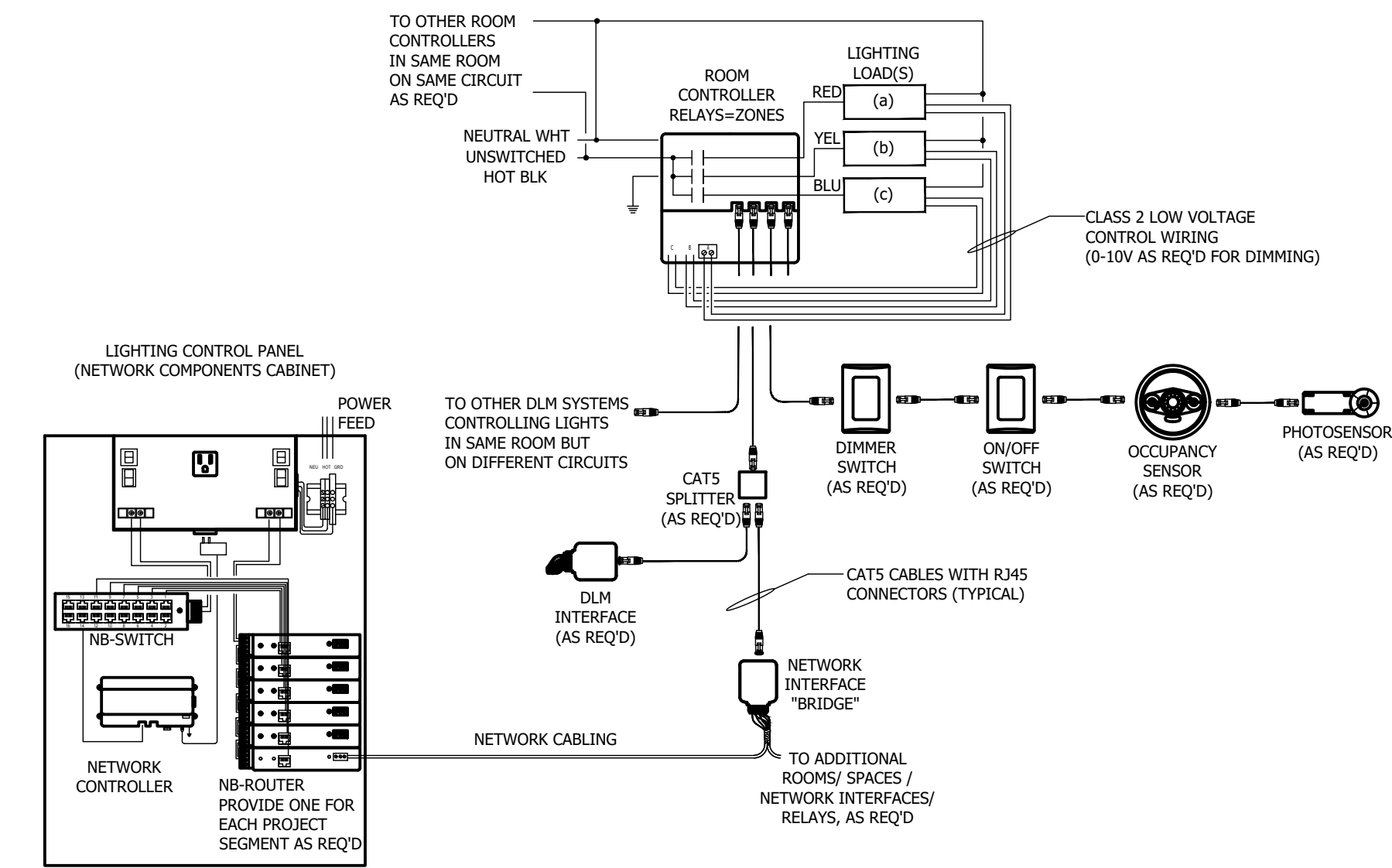
EX PANEL RPU-6										MOUNTING: RECESSED														
VOLTAGE: 208/120V, 3PH, 4W										LOCATION: ROOM 236														
400 AMPERE BUS					300A MCB					100% RATED NEUTRAL BUS										22,000 A.I.C.				
CONN KVA	CKT	DESCRIPTION	BREAKER P AMPS	NO	SIZE	GND	C	CKT	DESCRIPTION	BREAKER P AMPS	NO	SIZE	GND	C	CONN KVA									
	1	RECEPT	1	20				2	RECEPT	1	20													
	3	RECEPT	1	20				4	RECEPT	1	20													
	5	RECEPT	1	20				6	RECEPT	1	20													
	7	RECEPT	1	20				8	RECEPT	1	20													
	9	RECEPT	1	20				10	RECEPT	1	20													
	11	RECEPT	1	20				12	RECEPT	1	20													
	13	RECEPT	1	20				14	RECEPT	1	20													
	15	RECEPT	1	20				16	RECEPT	1	20													
	17	RECEPT	1	20				18	RECEPT	1	30													
	19	SPACE	1					20		1	20													
	21	SPACE	1					22		1	20													
	23	SPACE	1					24		1	40													
	25	SPACE	1					28	SPACE	1														
	27	SPACE	1					28	SPACE	1														
	29	SPACE	1					30	SPACE	1														
	31	MULTIPURPOSE ROOM	3	100				32	SPACE	1														
	33							34	SPACE	1														
	35							36	SPACE	1														
	37	BUS DUCT	3	100				38	SPACE	1														
	39							40	SPACE	1														
	41							42	SPACE	1														
TOTAL CONNECTED LOAD			0 KVA				KVA PER PHASE:				A 0 B 0 C 0													

PANEL RPU-6										MOUNTING: RECESSED									
VOLTAGE: 208/120V, 3PH, 4W										LOCATION: ROOM 236									
400 AMPERE BUS					300A MCB					100% RATED NEUTRAL BUS					22,000 A.I.C.				
CONN KVA	CKT	DESCRIPTION	BREAKER P AMPS	NO	SIZE	GND	C	CKT	DESCRIPTION	BREAKER P AMPS	NO	SIZE	GND	C	CONN KVA				
	1	RECEPT	1	20				2	RECEPT	1	20								
	3	RECEPT	1	20				4	RECEPT	1	20								
	5	RECEPT	1	20				6	RECEPT	1	20								
	7	RECEPT	1	20				8	RECEPT	1	20								
	9	RECEPT	1	20				10	RECEPT	1	20								
	11	RECEPT	1	20				12	RECEPT	1	20								
	13	RECEPT	1	20				14	RECEPT	1	20								
	15	RECEPT	1	20				16	RECEPT	1	20								
	17	RECEPT	1	20				18	RECEPT	1	30								
	19	SPACE	1					20		1	20								
	21	SPACE	1					22		1	20								
	23	SPACE	1					24		1	40								
	25	SPACE	1					28	SPACE	1									
	27	SPACE	1					28	SPACE	1									
	29	SPACE	1					30	SPACE	1									
	31	MULTIPURPOSE ROOM	3	100				32	SPACE	1									
	33							34	SPACE	1									
	35							36	SPACE	1									
	37	BUS DUCT	3	100				38	SPACE	1									
	39							40	SPACE	1									
	41							42	SPACE	1									
TOTAL CONNECTED LOAD			0 KVA				KVA PER PHASE:				A	0	B	0	C	0			

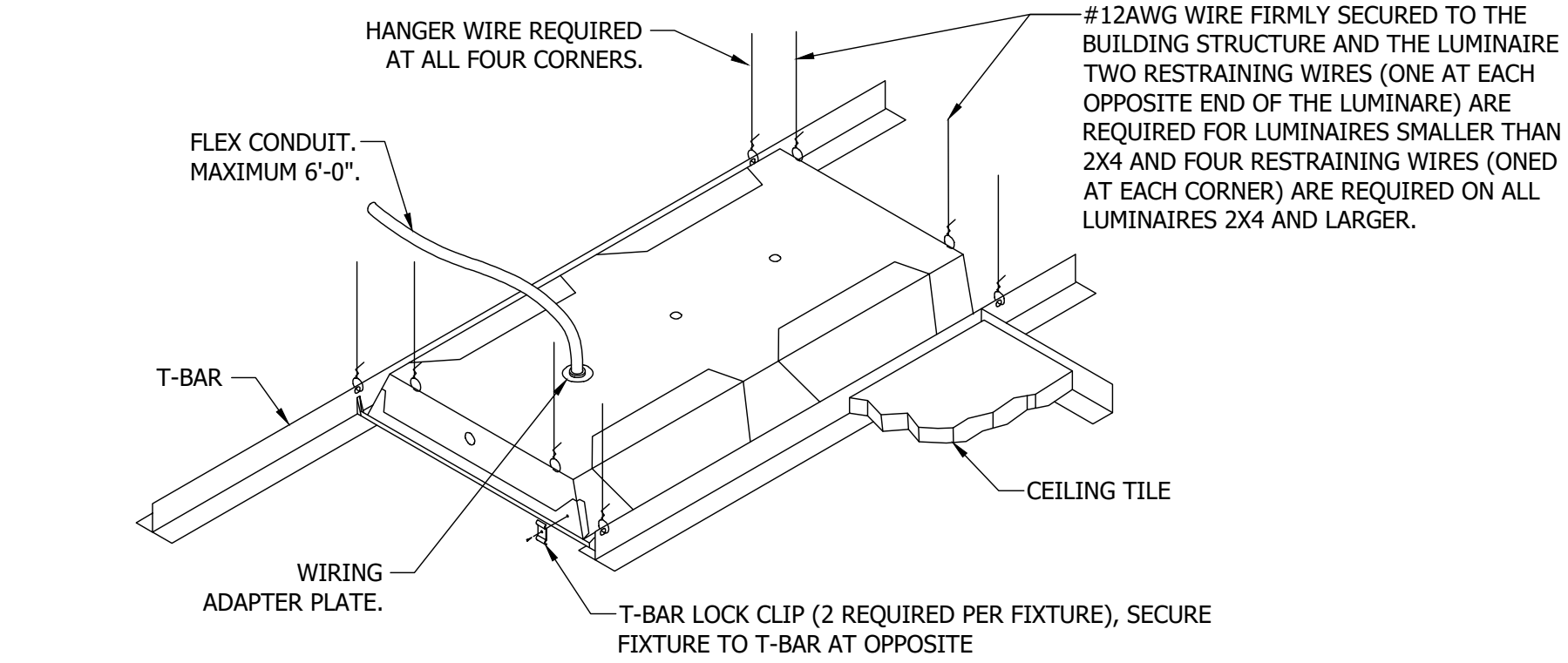


1 TYPICAL CLASSROOM LIGHTING CONTROL

SCALE: NONE



3 LOW VOLTAGE DIGITAL LIGHTIGN CONTROL SCHEMATIC



GENERAL NOTES:

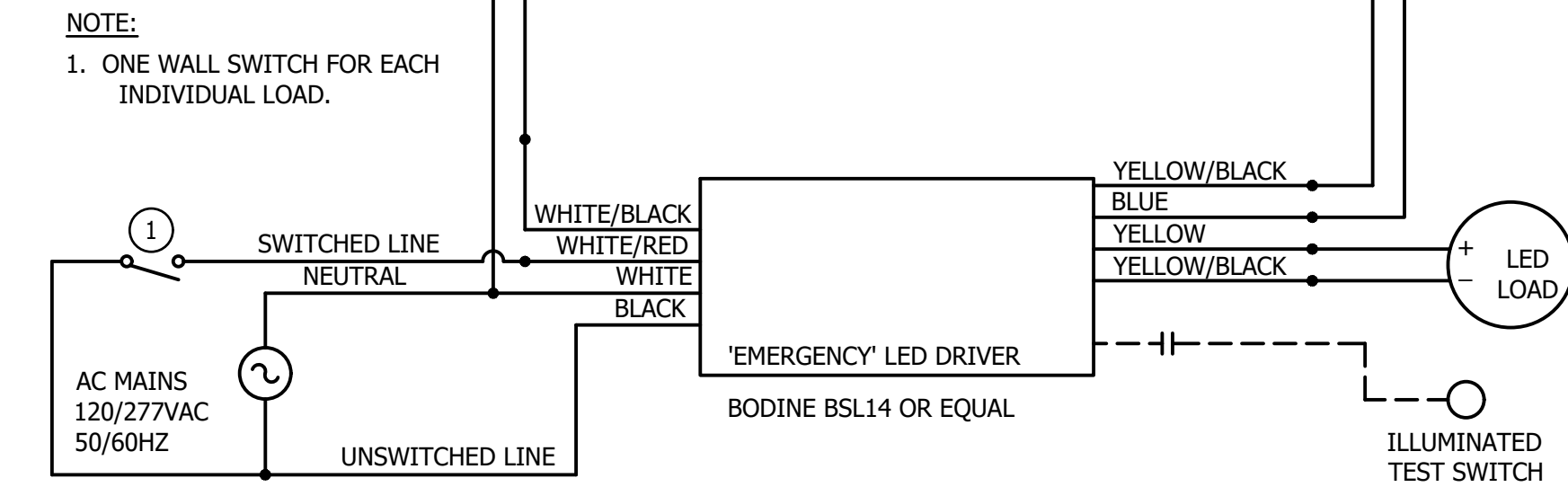
1. SECURE FLEX CONDUIT WITH UL APPROVED ATTACHMENTS PER NEC. NO CABLE TIES.

7 TYPICAL LUMINAIRE INSTALLATION DETAIL

SCALE: NONE

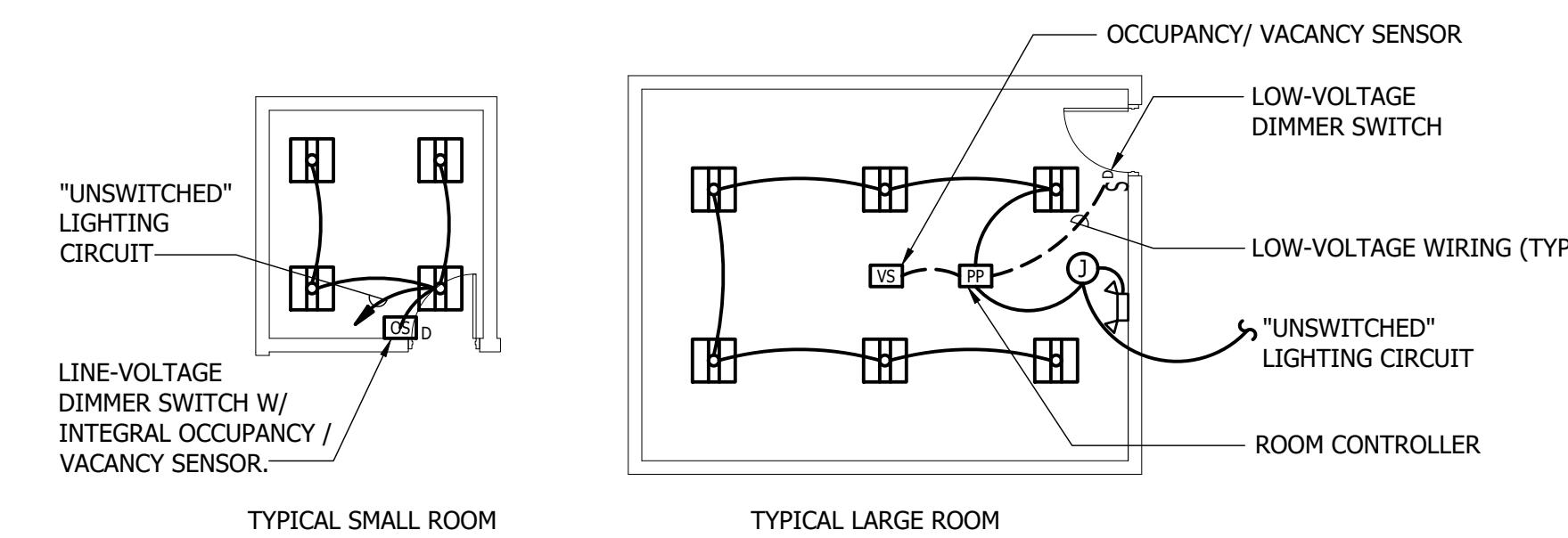
8 NOT USED

SCALE: NONE



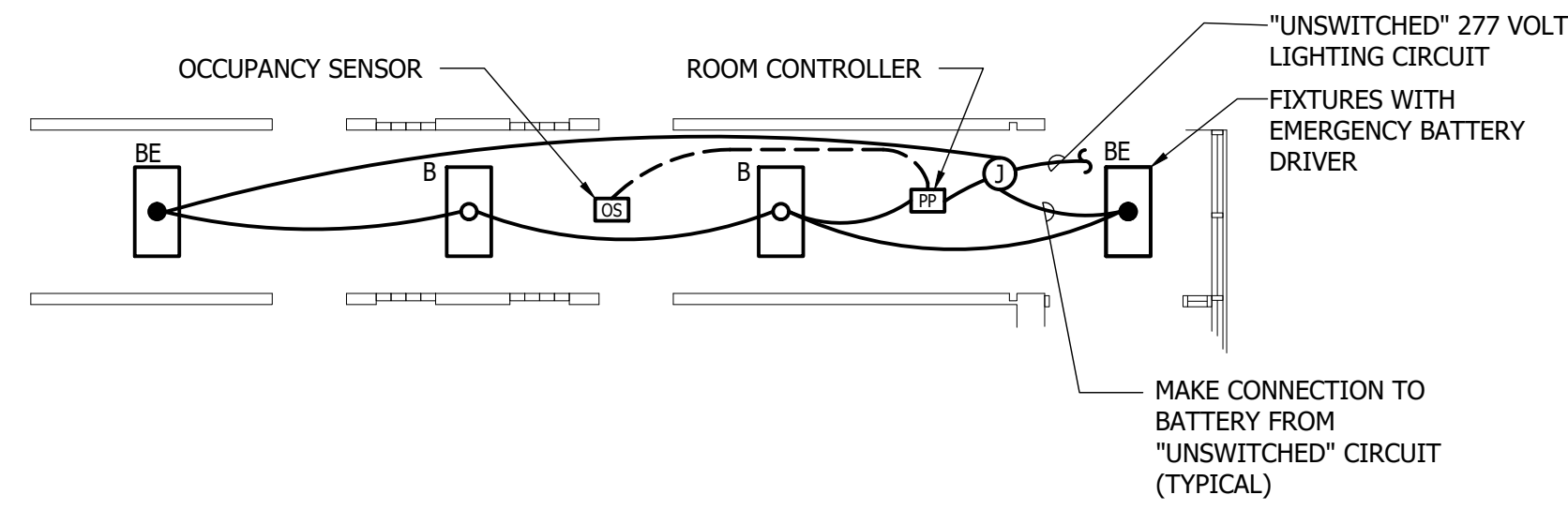
NOTE: PROVIDE BATTERY BACK-UP FOR FIXTURES WITH "E" DESIGNATION

4 INTERNAL EMERGENCY DRIVER WIRING DIAGRAM



NOTE: SETTINGS TO BE APPLIED TO ROOM CONTROLLER AS INDICATED ON PLANS.
REFER TO LIGHTING CONTROL MATRIX FOR ADDITIONAL INFORMATION.

5 TYPICAL ROOM SENSOR WIRING DIAGRAMS



NOTES:

1. SETTINGS TO BE APPLIED TO ROOM CONTROLLER FOR AUTOMATIC ON, AUTOMATIC-OFF.

2. MAKE ALL CONNECTIONS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

6 TYPICAL CORRIDOR SENSOR WIRING DIAGRAM

9 NOT USED

SCALE: NONE

10 NOT USED

SCALE: 1/4" = 1'-0"

REVISIONS		DESCRIPTION
NO.	DATE	
1	3/7/24	ADDENDUM NO. 1
2	3/14/24	ADDENDUM NO. 2

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WO# 23043

PROJECT MANAGER EMP

DESIGNER EMP

DATE 2/26/2024

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BID SUBMISSION

E702

PSC-12.006