University of Kentucky
Procurement Services

INVITATION FOR BIDS

CCK-2874.00-3-25
New Environmental Quality Management Center
ADDENDUM #3
05/14/2025

IMPORTANT: BID AND ADDENDUM MUST BE RECEIVED BY: 05/20/2025 @ 3:00 P.M. LEXINGTON, KY TIME

Bidder must acknowledge receipt of this and any addendum as stated in the Invitation for Bids.

ITEM #1: CLARIFICATIONS AND MODIFICATIONS TO THE BID DOCUMENTS

- Refer to and incorporate within the offer the enclosed additional information and questions and answers (to date) from the project team.

Attachments:

1. CCK-2874.0-3-25 QR Log (Add03 5-13-25)
2. 01 2100 Allowances Add3
3. 00 24 13.13 TC17 Mechanical Scopes of Work Add3
4. 00 24 13.13 TC18 Electrical Scope of Work Add3
5. 2406 Addendum 3_Design Team

OFFICIAL APPROVAL
UNIVERSITY OF KENTUCKY

Corey W. Leslie / (859) 257-9102

SIGNATURE

Typed or Printed Name

University of Kentucky
Procurement Services
322 Peterson Service Building
Lexington, KY 40506-0005

A D D E N D U M #3

to Bid Package 02

project UK Environmental Quality Management Center

date May 13, 2025

This Addendum, issued prior to bidding, alters, amends, corrects, or clarifies the Proposal Documents to the extent stated herein and does thereby become a part of the Proposal Documents and will become part of the Contract Documents of the successful bidder(s).

ITEMS INCLUDED IN THIS ADDENDUM

Bidder Questions:

1. Refer to attached UK Environmental Quality Management Center BP01, Question and Response Log. "CCK-2874.0-3-25 QR Log (Add03 5-13-25)"

Construction Management:

1. Refer to Section 012100 ALLOWANCES, page 002100 – 2. Under line item 3.01-A-4, add the following line item:

   "Include an allowance of $10,000 for temporary construction security cameras with full service as directed by the CM."

2. Refer to Section 00 2413.13 Scope of Work – Trade Category **TC17 – MECHANICAL**, Page 00 2413.13 – 5. Under Line item 30, insert the following line items:

   "31. Provide Trench Drain Actuator Control Panel, including but not limited to control wiring, conduit, raceway, and j-boxes. In addition, provide controls interlock wiring to valve, regardless of line or low voltage between equipment.

   32. Provide Electrically Operated Flush Valve and all associated piping and fittings for exterior trench drain as indicated in contract documents. Reference Drawings C32.1 and E3.0."

3. Refer to Section 00 2413.13 Scope of Work – Trade Category **TC18 – ELECTRICAL**, Page 00 2413.13 – 7. Remove line item #1 under "ALLOWANCES" and replace with the following line item:

   "1. Include an allowance of $10,000 for temporary construction security cameras with full service as directed by the CM."

Design Team:

1. Refer to the attached pdf titled "2406 Addendum 3_Design Team" for the narrative on corrections and changes within the specifications, drawings, and details, including replacement drawings, from the design team.

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END OF ADDENDUM

CCK#2874.0-3-25

UK Environmental Quality Management Center BP02

Question and Response Log

Question Deadline 5/9/25

#	Date	From	Question	Responder	Response	Release
1	26-Apr	Billy Fraley - JCI	There are fire/smoke dampers in rooms H103E & H103F. Smoke detection is required to actuate these. Do you want to add explosionproof smoke detectors in these spaces?	CMTA	Refer to attached “2406 Addendum 1_Design Team” for official responses to Bidder Questions from the Design Team.	Addendum #1 - 5/1
2	26-Apr	Billy Fraley - JCI	The systems plans show firefighter phone jacks. These aren't typical for a building that isnt a high rise. Are we to provide these in our bid?	CMTA	Refer to attached “2406 Addendum 1_Design Team” for official responses to Bidder Questions from the Design Team.	Addendum #1 - 5/1
3	26-Apr	Billy Fraley - JCI	Do you have a preference for the color of the light on the horn/strobe units for the gas detection system?	CMTA	Refer to attached “2406 Addendum 1_Design Team” for official responses to Bidder Questions from the Design Team.	Addendum #1 - 5/1
4	26-Apr	Billy Fraley - JCI	Do you want the gas detection system to be monitored by the building fire alarm system?	CMTA	Refer to attached “2406 Addendum 1_Design Team” for official responses to Bidder Questions from the Design Team.	Addendum #1 - 5/1
5	26-Apr	Billy Fraley - JCI	All the spaces with gas detection show a horn/strobe outside the room above the door except room H103E. Do you want us to provide a gas detection horn/strobe at this location?	CMTA	Refer to attached “2406 Addendum 1_Design Team” for official responses to Bidder Questions from the Design Team.	Addendum #1 - 5/1
6	26-Apr	Billy Fraley - JCI	The fire alarm specification references "Smoke Evacuation". Does this building require smoke evac?	CMTA	Refer to attached “2406 Addendum 1_Design Team” for official responses to Bidder Questions from the Design Team.	Addendum #1 - 5/1
7	26-Apr	Billy Fraley - JCI	The fire alarm specification references to provide detection and interface relays for pre-action fire suppression system. I see that rooms H103E & H103F call for high pressure CO2 suppression system to be provided by the fire suppression vendor. Will this CO2 system be pre-action? If so, will they be providing the detection for the pre-action?	CMTA	Refer to attached “2406 Addendum 1_Design Team” for official responses to Bidder Questions from the Design Team.	Addendum #1 - 5/1
8	26-Apr	Billy Fraley - JCI	There are 2 fire alarm annunciators on this project. Are these to be voice command annunciators or the standard annunciator that is typically mounted on a 6 gang back box?	CMTA	Refer to attached “2406 Addendum 1_Design Team” for official responses to Bidder Questions from the Design Team.	Addendum #1 - 5/1
9	29-Apr	Ryan Fields - Fields Welding	In the decorative metals scope of work there is mention of all AESS steel being in this scope of work, please verify that includes the sunshade support steel at both levels.	Messer	TC23 - Decorative Metal does not include the AESS Sunshade Support Tube Beam steel noted as Framing Tag Note 10 on Structural Drawings S-2.2 & S-2.3. TC06 - Structural and Misc Steel subcontractor shall be responsible for that. However, all AESS that is labeled with spec section 051213 is the responsibility of TC23 - Decorative Metal.	Addendum #1 - 5/1
10	29-Apr	Coleman Stephens - Messer Construction	Please clarify scope for specifications 321216 Asphalt Paving and 329200 Turf and Grasses – Partial within TC05 General Trades. Does not appear to be specific scope description for either scope and I believe all asphalt was included in a previous bid package.	Messer	TC05 - General Trades shall not have responsibility of either spec section 321216 and 329200. Those spec sections will be removed from that scope of work	Addendum #1 - 5/1
11	29-Apr	Ryan Fields - Fields Welding	Please advise on primer extents on structural steel withing building envelope.	Omni / B&K	structural steel shall be all primed per Spec 051200-2.4 except steel surfaces per 051200-2.10-B.	Addendum #2 - 5/12
12	29-Apr	Ryan Fields - Fields Welding	Please verify which scope is responsible for the anchor bolt survey after anchor bolts are installed.	Messer	TC07 Concrete subcontractor shall provide an as-built anchor bolt survery after anchor bolts are installed. Keep in mind that TC06 Structural and Misc. Steel subcontractor shall adhere to part 17 of its scope for surveying for fabrication and installation purposes.	Addendum #2 - 5/12
13	29-Apr	Ryan Fields - Fields Welding	Can we substitute the blind bolts for the tube to bent plate connections shown to thru bolts instead? In our experience blind bolts are not a great solution for tube connections. Please advise.	Omni / B&K	Use galvanzied thru bolts instead of expansion bolts at details A/S-4.4, H/S-4.6 & K/S-4.6. Keep blind expansion bolts at Details S/S-4.4, T/S-4.4 & L/S-4.6.	Addendum #2 - 5/12
14	29-Apr	Samuel Looper - Conference Technologies, Inc.	Is a bid bond required for the audiovisual bid submittal?	Messer	1. Yes, a bid bond is required for trade category bids. 2. The audiovisual scope of the project is part of TC18 - Electrical.	Addendum #2 - 5/12
15	30-Apr	Billy Fraley - JCI	What are the flammable chemicals that will be present in the lab and reactive room? To be able to calculate a required amount of agent for these rooms we need to be able to determine a minimum concentration requirement. This requirement is based on the most flammable chemical that will be present inside these rooms at any time.	CMTA / UK	The exact chemicals and quantity of those chemicals in the Lab and Reactive room along with other storage spaces are always in fluctuation. The majority of UK’s lab waste processed in this facility and the chemicals received are dependent on those other campus functions.	Addendum #3 - 5/13
16	30-Apr	Billy Fraley - JCI	The 1st floor fire protection drawings show both rooms being supplied by the same agent supply. It is generally best practice to treat these rooms a separate hazards. The rooms can be separated into zones and controlled by the same fire suppression control panel but will actuate Co2 independently. Do we need to quote this job as we are treating these rooms as one hazard or as two?	CMTA	A CO2 FP System was added. One for each room required. These rooms shall be reated separtely.	Addendum #2 - 5/12
17	30-Apr	Billy Fraley - JCI	Under section 1.1 of the Carbon Dioxide specifications, it lists several fire suppression manufacturers (Kidde, Ansul, Chemetron) but in section 1.4 (B) it states that the system shall be supplied and installed by a Kidde Fire Systems distributor. What system manufacturer is allowable, just Kidde or any equivalent HP CO2 system manufacturer?	CMTA	Each of the listed system manufacturers is acceptable and additional manufacturers who meet the specifications will be accepted.	Addendum #3 - 5/13

18	30-Apr	Jody Bandy - Mechanical Refrigeration Equipment Services (MRES)	Will the lab air valve contractor supply their own BMS panel with Tier 1 building controller?	Messer / CMTA	The intent is the lab airflow control valve provides their own TIER 1 device. This is to be coordinated between the Mechanical Contractor, Controls Contractor, and their vendors.	Addendum #3 - 5/13
19	30-Apr	Jody Bandy - MRES	Will the lab air contractor be providing their own BACnet MSTP comm line to the lab air valves AND reheat?	Messer / CMTA	The Mechanical Contractor is responsible that this communications wiring and conduit is provided to deliver a complete and working system. This can be installed by either the Controls contractor or the Lab Airflow Control Valve installer. This is to be determined by the contractor.	Addendum #3 - 5/13
20	30-Apr	Jody Bandy - MRES	When will the SS be out for alternate on CU 2 and SS 3 or are the alternates accepted on this base?	Messer	Bidding contractors are to list out price for Alternates separately from base bid per spec section 012300 on Alternates. Reference each Trade Category's Form of Proposal as well.	Addendum #2 - 5/12
21	30-Apr	Jody Bandy - MRES	When will AHU 3 be out for alternate or rather, are alternates going to be accepted on this base?	Messer	Bidding contractors are to list out price for Alternates separately from base bid per spec section 012300 on Alternates. Reference each Trade Category's Form of Proposal as well.	Addendum #2 - 5/12
22	30-Apr	Jody Bandy - MRES	A58 on M2.1A what is the purpose of this temp sensor? Or is this a case of a room needing to control? When a wall mount temp probe is not feasable. Does this sensor pertain to lab air controls?	Messer / CMTA	A58 is used on M2,0. This room is rated space where electronic thermostats cannot be located in the room. The temp sensor is being located in the exhaust duct to monitor the space temperature wihtout being in the room.	Addendum #3 - 5/13
23	30-Apr	Jody Bandy - MRES	Is it possible to have locations noted for any diff. pressure sensor location for installation and control design paperwork for systems such as static 2/3 for ahu 1, 2 the lab exh. And the HWS, CWS?	CMTA	Final locations shall be determined in the BIM process. The approximate locations are outside of H103N in the SA duct for AHU-1, outside A120 for AHU2, and outside A222 for AHU3. The exhaust fan pressure sensor shall be outside H103N. Chilled and hote water are shown on the second floor mechanical room plan.	Addendum #3 - 5/13
24	30-Apr	Jody Bandy - MRES	Could we get the valve shedule for the HWS and CWS from the engineer for valve and actuator sizing on those systems as well as the unit heaters which are shown to be water?	CMTA	Pipe sizes are shown as well as flow rates for the equipment they serve. The contractor shall size the valves in their submittals.	Addendum #3 - 5/13
25	30-Apr	Jody Bandy - MRES	Is it the owners intent to have a VFD on the DHWS as shown on the prints?	CMTA / UK	There is not a VFD on the DHW system.	Addendum #3 - 5/13
26	30-Apr	Jody Bandy - MRES	Sequence describes freeze protection pump but diagram shows no pump. Will there be a pump?	CMTA	There is a freeze protection pump for AHU-1. Refer to M8,0 and M7.1. The pump shall run when the unit is in heating mode and the outside air temperature is below 40 degrees. Pump is constant speed.	Addendum #3 - 5/13
27	1-May	Rachel DeSoiza - Standard Textile	Are there any wage or labor requirements (prevailing, union, etc) associated with this project? Is this project taxable?	Messer	There are no wage requirements for the project and the project is taxable.	Addendum #2 - 5/12
28	2-May	Brandy Littrell - The Atlas Companies	Atlas would like to bid section 081113 hollow metal doors and frames on the above referenced project.	Messer	Spec section 081113 is in TC05 - General Trades. Please contact those bidding that trade category.	Addendum #2 - 5/12
29	2-May	Brandy Littrell - The Atlas Companies	See attached substitution request (including project resume, product data, etc.) for our preferred manufacturer De La Fontaine. Please let us know if you need anything else to approve this substitution.	OMNI / UK	See Item #2 under "Product Information" on Page 1 of "2406 Addendum 2_ Design Team" within Addendum 2 for official response.	Addendum #3 - 5/13
30	2-May	Coleman Stephens - Messer Construction	DFH RFIs from CIH-Inc: Hardware sets call for a Rockwood RM7720-6 offset pull, but there is no such number. Did they mean an RM7700 that is 20” long?	OMNI	Yes. RM7700 at 20	Addendum #2 - 5/12
31	2-May	Coleman Stephens - Messer Construction	DFH RFIs from CIH-Inc: Please verify that the closer in Sets CEKM02 and CEKM02A are to be chrome plated 652 in lieu of standard sprayed 689 finish.	OMNI	Provide closers in 689 finish	Addendum #2 - 5/12
32	2-May	Coleman Stephens - Messer Construction	DFH RFIs from CIH-Inc: Please verify that RX99EO panic in Set M01 is to be 626 in lieu of spec’d 630. That device doesn’t come in 630 finish; it would need to be a 98 series in lieu of 99.	OMNI	Provide panic in 626 finish	Addendum #2 - 5/12
33	2-May	Coleman Stephens - Messer Construction	DFH RFIs from CIH-Inc: Please verify what the “HL” is in a 99L-BE-F x HL. Cannot find this in the Von Duprin catalog.	OMNI	The “HL” is a hospital latch trim. This was requested by the Owner. It is on page 30 of their catalog.	Addendum #2 - 5/12
34	2-May	Coleman Stephens - Messer Construction	Enlarged plan on 3 / A-9.32 shows solid wall protection at MOP sink. It appears the size of the wall protection is corrupted in the file. Please clarify height of this wall protection.	OMNI	Height has been clarified in replacement drawing.	Addendum #2 - 5/12
35	2-May	Coleman Stephens - Messer Construction	Enlarged plan 3 / A-9.32 has keynote 6 inside of the janitor closet pointing to what appears to be a mop and broom holder with shelf. However keynote #6 is for a microwave. Please clarify if this truly is for a microwave inside the janitor closet or should be a mop and broom holder with shelf.	OMNI	This tag 6 should reference the Toilet Accessory Schedule, this is clarified in addendum drawing,	Addendum #2 - 5/12
36	2-May	Coleman Stephens - Messer Construction	Please clarify requirements for laundry systems within scope item #12 of General Trades under section E Miscellaneous Scopes.	Messer	Confirmed - There are no Laundry Systems within the project. This was corrected in Addendum #1.	Addendum #2 - 5/12
37	2-May	Braden Zehner - AMERESCO	1. On drawing IC1.6, there is a unit heater control points list/diagram. However, there is no unit heater schedule on M8.0 or M8.1? Please clarify if there are any unit heaters in this project?	CMTA	The schedule is being issued via addendum. These are the unit heaters for the base bid second floor.	Addendum #3 - 5/13
38	2-May	Braden Zehner - AMERESCO	2. On drawing IC1.3, there is an EF-3 referenced on the exhaust fan control diagram, however there is no EF-3 on the fan schedule on M8.? Please clarify if there is an EF-3.	CMTA	Correct, there should only be EF-1 and EF-2 in addition to the Lab exhaust fans.	Addendum #3 - 5/13

39	2-May	Braden Zehner - AMERESCO	3. On drawing IC1.4, the pump tags on the flow diagram don't match the pump tags on the points list?	CMTA	The points list names shall match the schematics and the equipment schedule name.	Addendum #3 - 5/13
40	2-May	Braden Zehner - AMERESCO	4. On drawing IC1.4, there are 2 flow meters on the points list, however only 1 is shown on the flow diagram? Please clarify how many should be provided.	CMTA	There shall be a flow meter on the system fill line and a flor meter as part of a BTU meter that uses the flow and supply and return temperature to calculate a building heating energy use.	Addendum #3 - 5/13
41	2-May	Braden Zehner - AMERESCO	5. On drawing IC1.4, there are 2 boiler control valves shown that are not listed on the points list? Please clarify if the valves are included?	CMTA	Control valves are to be provided per UK and included in the points list.	Addendum #3 - 5/13
42	2-May	Braden Zehner - AMERESCO	6. On drawing IC1.4, section 13 of the sequence references CV-2, however a CV-2 is not shown on the points list or on the flow diagram? Please clarify if CV-2 is included.	CMTA	A bypass valve shall be provided on the 3" mains in the second floor mechanica room with a 2 inch bypass and a control valve. This shall be opened only if the pump reaches minimum speed and the DP exceeds the setpoint.	Addendum #3 - 5/13
43	2-May	Braden Zehner - AMERESCO	7. On drawing IC1.5, the chilled water points list references CV-2, however the flow diagram shows CV-1? Please clarify what the correct tag is.	CMTA	CV-1 is the bypass shown on M4.0.	Addendum #3 - 5/13
44	2-May	Braden Zehner - AMERESCO	8. On drawing IC1.5, the sequence references chiller enable/disable command but neither are shown on the points list?	CMTA	Add these points to the points list.	Addendum #3 - 5/13
45	2-May	Braden Zehner - AMERESCO	9.On drawing IC1.6, the laboratory exhaust system shows LEF-1A & LEF-1B, however the exhaust fan schedule only shows a LEF-1? Please clarify.	CMTA	There are two identical fans shown on the roof- both are LEF-1.	Addendum #3 - 5/13
46	2-May	Braden Zehner - AMERESCO	10. On drawing IC1.6, the laboratory exhaust system points list shows EF-1 and EF-2, however neither of those are shown on the control diagram?	CMTA	The Lab exhaust fan is LEF-1A and LEF-1B	Addendum #3 - 5/13
47	2-May	Braden Zehner - AMERESCO	11. On drawing IC1.6, the laboratory exhaust system points list references 2 filter status', however neither of them are shown on the control diagram? Please clarify.	CMTA	There are no filters. Omit this reference.	Addendum #3 - 5/13
48	2-May	Braden Zehner - AMERESCO	12. On drawing IC1.6, the laboratory exhaust points lists references VFD's for 2 exhaust fans, however LEF-1 on the fan schedule isn't spec'd to have a VFD provided? Please clarify.	CMTA	The fan shall have a VFD.	Addendum #3 - 5/13
49	2-May	Braden Zehner - AMERESCO	13. On drawing IC1.6, the laboratory exhaust points list references 2 airflow measuring points, however there are none shown on the control diagram? Please clarify.	CMTA	The points list and the schematic work together. The points list may not identify all points required. Provide airflow stations on the both lab exhaust fans.	Addendum #3 - 5/13
50	2-May	Braden Zehner - AMERESCO	14. On drawing IC1.6, the laboratory exhaust diagram shows 4 control dampers, however only 2 dampers are referenced on the points list? Please clarify.	CMTA	The fan system has two make-up air dampers and two exhaust air dampers.	Addendum #3 - 5/13
51	2-May	Braden Zehner - AMERESCO	15. On drawing IC1.6, the laboratory exhaust sequence, section 1.2.2 references a bypass damper, however no bypass damper is shown on the control diagram or on the points list? Please clarify.	CMTA	The bypass is the make-up air which allows outside air direct into the system.	Addendum #3 - 5/13
52	2-May	Braden Zehner - AMERESCO	16. On drawing IC1.6, the laboratory exhaust point lists references 3 control points for an EF-3, however there is no EF-3 shown on the control diagram or on the fan schedule on drawing M8.1? Please clarify.	CMTA	There is no EF-3 included in the project scope.	Addendum #3 - 5/13
53	4-May	Josh Marrillia - Marrillia	Please confirm there are no Laundry Systems included in the Scope of Work as indicated in TC-05 General Trades, E. Miscellaneous Scope Items, Item 12.	Messer	Confirmed - There are no Laundry Systems within the project. This was corrected in Addendum #1.	Addendum #2 - 5/12
54	5-May	Kevin Brown - Nycom	1. Section 123553.13; 2.8.A.5. calls for epoxy resin color to be selected from manufacturers 'full range' of colors. Black is the standard color in the industry and the most economical. Providing "Premium" colors will add significant cost to the project. Do we need to provide premium colors within our bid?	OMNI	Epoxy to be Industry Standard Black. This has been clarified in addendum.	Addendum #2 - 5/12
55	5-May	Kevin Brown - Nycom	2. Section 123553.13; 1.6.B1-2 calls for a mock-up of cabinets, countertops, accessories and fittings. This will add significant cost to mobilize and freight given the relative size of the project. Please confirm if mockup is required for a project of this size?	OMNI	Mock-up requirement has been revised. See addendum.	Addendum #2 - 5/12
56	5-May	Kevin Brown - Nycom	3. Section 123553.13; 211.I2 calls for Horizontal Rails as well as Rail Covers for them. These horizontal rails are purely decorative and add a significant cost increase without increasing weight bearing or structure integrity. We would like to propose use of our shelving as installed throughout the UK campus with heavy duty standards.	OMNI	Horizontal Rails and Rail cover requirement has been deleted. See addendum.	Addendum #2 - 5/12
<	5-May	Eric Haag - Fastsigns Louisville	Spec Section 101419 on Dimensional Letter Signage, subsection 2.2-A-1 - No substitution - Requesting to be an approved supplier.	OMNI	Manufacturer has been referenced in addendum.	Addendum #2 - 5/12
58	6-May	Andrew Lee - Grayhawk	Is the interior side of exterior walls (of 2nd floor) for base bid finished with drywall?	OMNI	Yes, this is clarified on the Architectural finish floor plans. This clarification isn't necessary as an addendum item.	Addendum #2 - 5/12
59	6-May	George Tillery - Universal Piping Industries	How do we as a company get approved in the SDI program?	Messer	This is part of Messer's subcontractor pre-qualification process. To qualify as a subcontractor, reach out to Ted MacDonald or Mike Wedding with Messer for getting enrolled in Messer's system	Addendum #2 - 5/12
60	6-May	George Tillery - Universal Piping Industries	#2 How Much Of The Site Work Will Fall On TC-17 All Storm Work I Know The Sewer And Water So Is All Outside Storm On It To?	Messer	Site Utilities up to points of connection shown on MEP drawings are the TC01 Earthwork & Site Utilities contractor's responsibility. All utilities from points of connection shown on MEP drawings into the building are the MEP subcontractors' responsibility.	Addendum #2 - 5/12
61	6-May	Ilija Rokvic - RIW Ornamental Metal	Is a substitution request required for the steel decorative metal railings?	Messer	Bid according to the bid package specifications. Qualify substitutions as part of bid for the project.	Addendum #2 - 5/12
62	6-May	Andrew Lee - Grayhawk	The bigger linear metal ceilings upstairs should be in base bid as well?	Messer / OMNI	Yes, this is clarified on the Architectural reflected ceiling plans. This clarification isn't necessary as an addendum item.	Addendum #2 - 5/12

63	6-May	Brandon Ramirez - Ramirez Rod Buster LLC	How do you guys measure the rebar placement - by tons or sq ft?	Messer	The rebar supply was bid in Bid Package #1 according to tons. Please bid the rebar install with subcontractors bidding for TC05 - General Trades and TC07 - Concrete.	Addendum #2 - 5/12
64	6-May	Andrew Lee - Grayhawk	Can 2nd floor deck support electric lift?	B&K	This is construction means and methods. The concrete floor slabs on metal deck are designed for the live loads shown on General Notes on Sheet S-1.1, and it is up to the contractor to evaluate and decide based on the allowable live load.	Addendum #2 - 5/12
65	6-May	Donnie Martin - Central Kentucky Glass	Is the Determination of Responsibility required with the bid forms at bid time or to be turned in by apparent low bidders by noon the day after bid (May 21st at 12pm)?	Ken Scott - UK	The Determination of Responsibility is required with bid forms at bid time. This is a new UK policy so an apparent low bid will not be disqualified if the Determination of Responsibility is not included with the bid submittal.	Addendum #2 - 5/12
66	6-May	Andrew Lee - Grayhawk	Is the project to be CCIP?	Messer	The project does not require CCIP.	Addendum #2 - 5/12
67	6-May	Craig Lamoreaux - Scott Laboratory Solutions	12 3553.13; no manufacturer is listed for the laboratory casework, please confirm this is a performance specification. If not we request that Mott Manufacturing is approved as a manufacturer.	OMNI / CMTA	Manufacturer's have been added for this specification section via addendum.	Addendum #2 - 5/12
68	6-May	Craig Lamoreaux - Scott Laboratory Solutions	12 3553.13, 1.6, B Mock-up, this is a small Lab Casework project wanted to confirm a mock-up is required.	OMNI / CMTA	Mock-up requirement has been revised. See addendum.	Addendum #2 - 5/12
69	6-May	Kory Carr - Schiller Hardware	For the second floor bathrooms, are they to be considered part of the base bid or an alternate?	Messer / OMNI	Second Floor Restrooms are shown to be a part of Alternate 1, not base bid. This clarification isn't necessary as an addendum item.	Addendum #2 - 5/12
70	6-May	Melisa Nava - RIW Ornamental Metal	Spec Section 057300 on Decorative Metal Railings, subsection 2.6-A,B,C - No substitution - Requesting to be an approved supplier.	OMNI	Manufacturer has been referenced in addendum.	Addendum #2 - 5/12
71	7-May	Barry Hochstedler - Geiger & Peters	Please confirm that both Metal Pan stairs w/ Bar Grating Treads are required per Detail 8/A-5.04. I have never seen this type of design before usually it's either, Metal Pan Stairs with Concrete filled treads or Bar Grating Treads.	OMNI / Messer	Reference #24 on CORRECTION / CHANGES section of attachment 2406 Addendum 2_Design Team for official response. Messer deems that the Stair in question (Stair B) be bid as Metal Pan Stairs with Cast-in-Place concrete. Bidders shall bid accordingly.	Addendum #2 - 5/12
72	8-May	Christian Tipton - Stoermer-Anderson	AHU-1,2,3. Drawing M-8.0, Spec Section 230200 - We would like to have Dunham Bush listed as an acceptable manufacturer. Please see the attached submittal date.	CMTA	This manufacturer is not approved due to lack of experience with their product prior to the time of bid.	Addendum #3 - 5/13
73	8-May	Christian Tipton - Stoermer-Anderson	AHU-1,2,3. Spec Section 230200 - The specification 23 02 00 (26) Coils: 27) Cooney Coils or approved equal. Is this required on this project. If so please provide the freeze protection system as Cooney has a full control system that is proprietary to their coils, and it makes them sole sourced. There is other coil manufacture that provides freeze protection it is just a freeze plug that blows out and is then repairable. Is this style coil acceptable.	CMTA	The intent is a freeze protection coil, Cooney or approved equivalent. The full automated control system and integration is not required.	Addendum #3 - 5/13
74	8-May	Christian Tipton - Stoermer-Anderson	CH-1. Drawing M-8.0, Spec section 230200 - We would like to have Dunham Bush listed as an acceptable manufacture for the air cooled chiller. Please see the attached submittal information.	CMTA	This manufacturer is not approved due to lack of experience with their product prior to the time of bid.	Addendum #3 - 5/13
75	8-May	Christian Tipton - Stoermer-Anderson	CH-1. Drawing M-8.0 - Please confirm the cooling capacity, water flow and the temperatures as they do not correspond to the listed cooling capacity.	CMTA	The chiller nominal capacity is 170 tons. The temperature delate is 16 degrees and the pressure drop shall be 20 ft or less.	Addendum #3 - 5/13
76	8-May	Christian Tipton - Stoermer-Anderson	FCU-2. Drawing M-8.1, spec section 230200 - We would like to have Whalen Fan Coils listed as an acceptable manufacture	CMTA	Whalen is an approved fan coil manufacturer.	Addendum #3 - 5/13
77	5-May	Mark Cox - Grayhawk	Does this detail (6/A-6.50) apply to the transition between APC1 in the corridors on the 1st Floor Base Bid and 2nd Floor Alternate 1 where the ACT is adjacent the 10'-0" GWB soffit? If not, is there a section detailing the transition?	OMNI	Yes, the transition from the 10' GWB soffit on the east side of the corridor to the ACP in the corridor is detail 6/A-6.50.	Addendum #3 - 5/13

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provision of the Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

1.02 SUMMARY

A. Include all costs related to scheduled allowances in the project cost; allowance amounts below are for materials only, installation and freight amounts shall be included in the base bid.

1.03 SELECTION AND PURCHASE

A. At earliest feasible date after award of Contract advise Architect/engineer of scheduled date when final selection and purchase of each product or system described by each allowance must be accomplished in order to avoid delays in performance of the work.

1. As requested by the Architect/Engineer, obtain and submit proposals for the work of each allowance for use in making final selections; include recommendations for selection which are relevant to the proper performance of the work.

2. Purchase products and systems as specifically selected (in writing) by the Architect/Engineer.

3. Submit proposals and recommendations for purchase of products or systems of allowances, in form specified for change orders.

1.04 CHANGE ORDER DATA

A. Where applicable, include in each change order proposal both the quantities of products being purchased and unit costs, along with total amount of purchases to be made. Where requested, furnish survey-of-requirements data to substantiate quantities. Indicate applicable taxes, delivery charges, and amounts of applicable trade discounts.

1. For unit-cost type allowances, submit a substantiated survey of quantities of materials and corresponding with change order quantities.

1.05 UNIT-COST ALLOWANCES

A. Each change order amount for unit-cost type allowance shall be based solely on the difference between the actual unit purchase amount and the unit allowance, multiplied by the final measure or count of work-in-place, with reasonable allowance, where applicable, for cutting losses, tolerances, mixing wastes, normal product imperfections and similar margins.

1. Installation costs shall not be included in unit cost allowances but shall be included in the base bid amount.

2. When requested, prepare explanations and documentation to substantiate the margins as claimed.
3. Prepare and submit substantiation of a change in the scope of work (if any) claimed in the change orders related to unit-cost type allowances.
4. The Owner reserves the right to establish the actual quantity of work-in-place by an independent quantity survey, measure or count.

PART 2 - PRODUCTS

Not applicable to this section.

PART 3 - EXECUTION

3.01 SCHEDULE

A. Lump Sum Allowances

1. Dumpsters Allowance $110,000.
2. Include an allowance of $5,000 for construction and/or safety signage as directed by the CM.
3. Include an allowance of $10,000 for repairs to, or additional fencing and silt/erosion protection as directed by the CM. The allowance does not apply to relocation required to complete the work included in this Subcontract or maintenance items.
4. Include an allowance of $15,000 for maintenance work, incidental work, or unforeseen temporary measures work that needs to take place as direct by the CM.
5. Include an allowance of $10,000 for temporary construction security cameras with full service as directed by the CM.

END OF SECTION 012100

SECTION 00 24 13.13 - SCOPES OF WORK (MULTIPLE CONTRACTS)

TRADE CATEGORY TC17 – MECHANICAL

The Scope of Work in Trade Category TC17- MECHANICAL includes all labor, material, tools, equipment, supervision, and all other necessary resources to complete all work specified herein, in accordance with the Contract Documents and as described below.
The Scope of Work shall include all work indicated in the Description of Trade Category TC17 - MECHANICAL, Division 00 Procurement and Contracting Requirements, and Division 01 General Requirements. This Scope of work includes, but is not necessarily limited to, the following Specification Sections:

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

076200	SHEET METAL FLASHING AND TRIM – PARTIAL
077200	ROOF ACCESSORIES – PARTIAL
078413	PENETRATION FIRESTOPPING – PARTIAL
079200	JOINT SEALANTS – PARTIAL

DIVISION 08 – OPENINGS

089119	FIXED LOUVERS AND PRESSURE-RELIEF PANELS

DIVISION 20 – MECHANICAL

22 0000	GENERAL PROVISIONS
20 0200	SCOPE OF MECHANICAL WORK
20 0300	SHOP DRAWINGS, DESCRIPTIVE LITERATURE, MAINTENANCE, MANUALS, PARTS LISTS, SPECIAL KEYS & TOOLS
20 0500	COORDINATION AMONG TRADES, SYSTEMS INTERFACING AND CONNECTION OF EQUIPMENT FURNISHED BY OTHERS
20 1100	SLEEVING, CUTTING, PATCHING AND REPAIRING
20 1200	EXCAVATION, TRENCHING, BACKFILLING AND GRADING
20 1300	PIPE, PIPE FITTINGS AND PIPE SUPPORT
20 1310	WELDING
20 2100	VALVES AND COCKS
20 2110	ACCESS TO VALVES, EQUIPMENT, FILTERS, ETC.
20 2200	INSULATION
20 2300	THERMOMETERS AND OTHERS, MONITORING INSTRUMENTS
20 2400	IDENTIFICATIONS, TAGS, CHARTS, ETC.
20 2500	HANGERS, CLAMPS, ATTACHMENTS, ETC.
20 3100	TESTING, BALANCING, LUBRICATION AND ADJUSTMENTS

DIVISION 22 – PLUMBING

22 0100	PLUMBING SPECIALTIES
22 0200	PLUMBING FIXTURES, FITTINGS AND TRIM
22 0300	PLUMBING EQUIPMENT

DIVISION 23 – HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)

23 0100	PUMPS
23 0200	HVAC EQUIPMENT AND HYDRONIC SPECIALTIES
23 0300	CONDENSATE DRAINAGE SYSTEM
23 0800	COMMISSIONING OF HVAC SYSTEM (PROVIDED BY COMMISSIONING AGENT)
23 1100	REGISTERS, GRILLES, DIFFUSERS & LOUVERS
23 1200	SHEET METAL AND FLEXIBLE DUCT

In addition to the listed specifications sections, the following items represent specific inclusions in this Trade Category TC17 – MECHANICAL. They are provided as a guide to aid in the assignment of work and in no way should be construed as being all inclusive. All work described or indicated in the respective specification sections or divisions listed above, and on the drawings, shall be included, unless specifically noted otherwise:

The Scope of Work intended to be included in this Trade Category TC17 – MECHANICAL includes, but is not necessarily limited to, the following outlined items. Some items may have listed plan sheet or specifications references. The meaning of 'provide' is to furnish and install and is applicable to all following items unless specified otherwise:

1. Include in the Work of this trade category all items of Specifications Section 002413, "Scope of Work Applicable to all Trade Categories", including temporary and conditional requirements.
2. Provide traffic control, including flagmen, traffic cones and barricades, as required to protect the public at all times as the work and material deliveries requires.
3. Complete shop drawings will be required for all work to allow coordination of MEPS items prior to rough in. A formal MEP Coordination process utilizing a 3D Virtual Construction Spatial Coordination Process (commonly referred to as BIM, Building Information Modeling) will be implemented. Refer to Section 011111, for responsibilities of this contractor with respect to the coordination drawing process.
4. TC17 scope of work shall include the Management of the MEPS Coordination Process. This subcontractor shall lead and manage the MEPS Coordination process in addition to preparing the Mechanical and Plumbing coordination drawings as specified in 011111. Management of the MEPS Coordination shall include, but is not limited to, developing and maintaining the MEPS coordination meeting schedule, meeting minutes for distribution between the MEPS trades, maintain the coordination model, pull in subcontractor models, run the clash detection, manage the clash conflict, issues population/generation, and run the coordination meeting. Coordination schedule & meeting minutes shall be submitted to the Construction Manager weekly.
5. This Contractor shall be responsible to review the existing conditions as they pertain to this scope of work and advise the CM, in writing, of any discrepancies prior to actual start of work.
6. Provide all design and engineering applicable to Division 22 and 23 Spec Sections and/or indicated in the specifications assigned to this trade category subcontractor. Where design by a professional engineer is required, this contractor shall provide the appropriate, supplemental insurance. Refer to Insurance Requirements.

7. Provide two new frost proof yard hydrants with a ¾" line buried to below frost depth to be utilized during construction. The hydrants will be placed at each construction gate. This contractor shall install wash-down hose systems so that it is available for construction use at all construction gates, final layout will be coordinated with General Trades and CM. (Confirm with logistics plan).
8. Provide water for pressure washing at site gate, including but not limited to hydrant connection, water meter, shut off valves and hose/piping to gate entrance for connection to pressure washer.
9. TC07 CONCRETE subcontractor will provide all concrete pads. This contractor is to coordinate with them to confirm size and locations.
10. This contractor will provide plumbing to CM trailer fixtures located onsite. Direct bury and extend a ¾" domestic water line, including but not limited to water meter and back flow preventer, fittings and valves. The CM office trailer Sanitary/Waste will be plumbed from the trailer fixtures to a septic tank purchased by General Trades/ (others). Heat trace and insulation will be required for all trailer plumbing. Demolition shall also be provided for plumbing related to CM trailer after project completion.
11. This contractor shall provide the building site sanitary from the building and from the dilution tank to the manhole onsite. Including, but not limited to utility fees, testing, excavation, piping, back fill, thrust block and tie into manhole. Reference C-50.1 Utility Plan for building site sanitary.
12. This contractor will provide the acid waste and acid vent from the building to the dilution tank on site. Including, but not limited to utility fees, testing, excavation, piping, back fill, thrust block. Reference C-50.1 Utility Plan for building acid waste/vent.
13. TC17 will provide all final connections for storm and roof leader piping located outside of building. This contractor is to coordinate with the site utilities contractor to provide a complete system connection for site storm piping and building roof leader piping. This contractor to include but not limited to, excavation, backfill, dewatering, piping tie-ins, permits, fees, testing and inspections for this scope of work.
14. TC17 shall provide the incoming domestic water entrance and making tap from the existing domestic water line onsite. This contractor shall coordinate with Kentucky American Water and provide all necessary materials and meet all install requirements needed to make a complete system connection. Including but not limited to, excavation, backfill, dewatering, piping, valves, backflow preventer, gauges, water meters, meter vault, tie-in, permits, fees, testing and inspections. Reference C-50.1 for site water.
15. Provide the natural gas system for the building starting at the utility provided meter and feeding equipment within building. This contractor will be responsible for coordinating with local utilities on provided equipment and assemblies needed. This contractor will Including but not limited to all equipment connections, regulators, fittings valves, piping, fees and/or inspections related to this scope of work.
16. Contractor to provide Chiller piping from unit to building underground reference detail #7 M6. This contractor is to include but not limited to, excavation, backfill, dewatering, piping, valves, backflow preventer, gauges, water meters, meter vault, tie-in, permits, fees, testing and inspections for this scope of work.
17. TC17 to provide Dilution Pit for acid waste system on project. Reference Detail#1 (P5.0), P2.0 & P3.0 for more details.

18. Provide angles or sleeves and fire-seal any duct or piping which penetrates rated walls, floors and ceilings.
19. Provide all fire and smoke dampers required to comply with building codes and fire rated assemblies. Reference both the mechanical and architectural drawings to determine wall, floor and ceiling types to quantify total number and sizes.
20. It is the intent that the location of valves, controls, equipment, etc. be accessible through a lay-in ceiling. If this intent is not possible, then it is this contractor's responsibility to provide access panels. The repair, installation, and replacement of damaged materials shall be the responsibility of this contractor.
21. This contractor shall provide all starters, VFDs, and motor controllers for equipment provided under this scope of work.
22. All roof curbs, blocking, flashing and counterflashing, equipment and pipe supports are included in this scope of work. All penetrations to the roof deck are to be coordinated and made prior to installation of roofing membrane. All penetrations of the roofing membrane are to be made solely by the roofing contractor. This contractor shall reimburse the Roofing Contractor for roof membrane penetrations made after the installation of the roof membrane. Reference spec sections 076200 on Sheet Metal Flashings and 077200 on Roof Accessories for what is required.
23. All ductwork open ends are to be covered, and the inside kept clean while being delivered, staged, and installed. The maintenance of these proactive covers is to be managed by this contractor.
24. It is this contractor's responsibility to clean, make oil free, prep for paint, any exposed ductwork, piping and/or equipment scheduled for painting. Labeling and stenciling is required to be by this contractor following painting. Painting of exposed ductwork as well as piping will be provided by TC15.
25. The authorized manufacturer's representative associated with relevant equipment warranties shall start up mechanical/electrical equipment. This start up shall be scheduled with the CM a minimum of two weeks prior to the beginning of work. A pencil copy of the startup report is to be submitted to the CM upon completion of startup and submit a full start-up report and O&M manuals as part of the close out documents.
26. Provide all Fixed Louvers and Pressure Relief Panels that are to be installed on exterior wall elevations, complete. This shall include all lintels, steel brackets, attachment angles and anchors, thermal insulation, joint sealant, backer rod, flashing, trim, and counterflashing to complete the Louver and Pressure Relief Panel systems in openings in exterior masonry brick or metal panel walls. Provide all design and engineering (also referred to as Delegated Design) applicable to the Fixed Louver and Pressure Relief Panels as indicated in the specifications. Where design by a professional engineer is required, this Subcontractor shall provide the appropriate, supplemental insurance (refer to applicable insurance sections). Reference spec section 089119 and architectural detail 10 on drawing A-8.10. Coordinate design and install of these louvers and panels with TC06 STRUCTURAL STEEL and TC08 MASONRY subcontractors.
27. This contractor shall include in this scope of work, the coordination and delivery of mechanical equipment with the manufacturer, provide all necessary hoisting/rigging needed to unload the equipment onsite and to set equipment into its final install location. This contractor will manage

the coordination of the mechanical equipment install through specified louver opening with CM and other trades.

28. This Contractor shall participate in Commissioning Activities, provide material and labor necessary to support the Commissioning of the Mechanical and Plumbing systems.
29. Provide DDC Controls, including a complete and operational integrated Building Automation System. This shall include coordination and management to ensure interlock and interface with Electrical, Emergency Power, Mechanical, Plumbing, Fire Protection, Security, Fire Alarm, etc. for a complete and operational system.
30. Provide Instrumentation and Control for HVAC complete and operation, including but not limited to control wiring, conduit, raceway, and j-boxes. In addition, provide controls interlock wiring, regardless of line or low voltage between equipment.
31. Provide Trench Drain Actuator Control Panel, including but not limited to control wiring, conduit, raceway, and j-boxes. In addition, provide controls interlock wiring to valve, regardless of line or low voltage between equipment.
32. Provide Electrically Operated Flush Valve and all associated piping and fittings for exterior trench drain as indicated in contract documents. Reference Drawings C32.1 and E3.0.
33. Provide TAB as described in the project documents and necessary for final inspection. Provide the necessary access to valves, ports, gauges and etcetera to test and balance the mechanical system.
34. This contractor is responsible to provide the sump pumps, associated discharge piping and tie-ins for all sump pits/pumps shown in the project documents.
35. This contractor TC17 shall provide and maintain temporary heating and air conditioning as defined by the following:
    a. The HVAC Contractor shall provide & install temporary heating to maintain a minimum ambient temperature of 55 deg. F. Heating by use of temporary equipment is required no later than November 1st, 2025 till end of April 2026.
    b. Temporary Heating shall consist of temporary propane indirect fired heaters/furnaces spaced though out the building providing evenly distributed heat to maintain 55 degrees throughout the building. Heaters are to be supplied from a central storage tank(s) located on the exterior of the building. Distribution piping shall meet or exceed applicable codes and is to be placed off the floor and in locations that will not impede construction activities or foot traffic. Provide circulation fans as required to ensure the building is heated evenly. The permanent HVAC ductwork or equipment shall not be used for the temporary heating. Fuel costs for temporary heating shall be metered and paid by this contractor, with the exception of Electrical Power.
    c. Temporary Air Conditioning shall be provided by the permanent HVAC system, set to maintain 75 deg @ 55% RH and be started no later than May 1st, 2026. If permanent equipment are unable to be utilized for conditioning by May 1st 2026 then this contractor will supply temporary conditioning means. This contractor shall pay all cost to extend all associated warranties as required for the Owner to receive warranty coverage from the date of Substantial Completion.

d. This contractor shall protect the permanent HVAC system included in this contract from dust, contaminants, abnormal usage, damage and/or abuse during construction. All ductwork not in use shall be protected from dust and contaminates throughout construction. Failure to adequately protect equipment, ductwork and devices and may result in full replacement at no cost to the Owner or CM.

e. Provide temporary maintenance and filters as required to protect the system during construction. Provide routine maintenance, filter inspection and filter changes. as necessary to ensure the filters are effective, complete, and not fully loaded. Remove temporary protection and change all filters prior balancing and Owner turnover. It is this contractor's responsibility to monitor, maintain and police the HVAC system and identify to the CM, activities that may jeopardize the integrity of the HVAC system.

f. This contractor shall include removal of all meters, equipment and material installed for temporary heating.

g. If permanent controls is not available at time of temporary air conditioning, provide temporary HVAC controls, monitoring and safeties, including but not limited to; duct smoke detector, duct static pressure sensors, supply and return air temperature, controllers, network cabling, switches & routers.

36. This subcontractor shall provide final connections to the Laboratory Fume Hood as indicated on contract documents. TC 24 – LAB CASEWORK AND EQUIPMENT subcontractor shall furnish and install the Laboratory Fume Hood prior to final connections being made by TC17 subcontractor. TC17 shall reference 115313 Laboratory Fume Hood specification, architectural, mechanical and plumbing drawings. This contractor is to review vendor submittal, equipment nameplate, coordinate with TC24, and provide any necessary mechanical material, controls, and final connections to service fittings to ensure is complete and operational.
37. TC17 will provide SAP List information and submit to Messer along with O&M documents.
38. This contractor shall provide caulking of the plumbing fixtures.
39. Provide testing on all water systems for legionnaires, E.coli, and coliform. Provide testing documentation to Messer Construction. Include any remediation efforts needed on these water systems to meet allowable limits.
40. Install hangers and other supports prior to fireproofing to eliminate removal of fireproofing material. If unable to install prior to fireproofing, remove minimal fireproofing to install supports. All patching of the fireproofing is to be made solely by the fireproofing contractor. This contractor shall reimburse the Fireproofing Contractor for repairing of fireproofing.

ALLOWANCES

Allowances are above and beyond what is listed in the scope description above and the drawings and specifications. Monthly progress payments will be made against actual invoice expenditures, based off approval from the CM/UK. All mark ups related to work performed against an allowance shall be included in the base bid. Allowance requests shall include only labor and material costs, authorized in writing by the CM. Any remaining funds in these allowances will be credited back to the project. (The following Allowances are to be included in the Base Bid Amount)

1. NA

ALTERNATES

1. Alternate 1-4

SECTION 00 24 13.13 - SCOPES OF WORK (MULTIPLE CONTRACTS)

TRADE CATEGORY TC18: ELECTRICAL

The Scope of Work in Trade Category TC18: ELECTRICAL includes all labor, material, tools, equipment, supervision, and all other necessary resources to complete all work specified herein, in accordance with the Contract Documents and as described below.

The Scope of Work shall include all work indicated in the Description of Trade Category 18 ELECTRICAL, Division 00 Procurement and Contracting Requirements, and Division 01 General Requirements. This Scope of work includes, but is not necessarily limited to, the following Specification Sections:

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS – COMPLETE

DIVISION 01 – GENERAL REQUIREMENTS – COMPLETE

DIVISION 26	**ELECTRICAL**
260501	GENERAL PROVISIONS (Partial)
260502	SCOPE OF THE ELECTRIC WORK
260503	SHOP DRAWINGS, LITERATURE, MANUALS, PARTS LIST, AND SPECIAL TOOLS
260504	SLEEVES, CUTTING, PATCHING AD REPAIRING
260505	DEMOLITION, RESTORATION AND SALVAGE
260506	LIGHTNING PROTECTION SYSTEM
260508	COORDINATION AMONG TRADES
260519	CONDUCTORS, IDENTIFICATION, SPLICING DEVICES AND CONNECTORS
260526	GROUNDING
260531	CABINETS, OUTLET BOXES AND PULL BOXES
260533	RACEWAYS AND FITTINGS
260543	UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS
260553	IDENTIFICATION
260573	ELECTRICAL STUDIES
260800	COMMISSIONING OF ELECTRICAL
260943	NETWORK LIGHTING CONTROLS
262200	LOW-VOLTAGE TRANSFORMERS
262413.01	LOW-VOLTAGE SWITCHBOARDS (PRE-PURCHASED EQUIPMENT INSTALLATION)
262416	PANELBOARDS
262726	WIRING DEVICES AND PLATES
262813	FUSES
262816	ENCLOSED SWITCHES AND CIRCUIT BREAKERS
263213	EMERGENCY GENERATOR (PRE-PURCHASED EQUIPMENT INSTALLATION)

264113	LIGHTNING PROTECTION FOR STRUCTURES
264313	SURGE SUPPRESSION SYSTEMS
265113	LED LIGHTING FIXTURES

DIVISION 27 – COMMUNICATION

270501	GENERAL PROVISIONS – TELECOMMUNICATIONS
270526	GROUNDING AND BONDING FOR COMMUNICATIONS SYSTEMS
270536	CABLE TRAYS FOR COMMUNICATION SYSTEMS
270610	VOIE/DATA COMMUNICATION SYSTEM
275300	AUDIO VISIUAL SYSTEM

DIVISION 28 - ELECTRONIC SAFETY AND SECURITY

280501	GENERAL PROVISIONS SAFETY AND SECURITY
281600	INTRUSION DETECTION
281643	PERIMETER SECURITY SAFETY
282300	VIDEO SURVEILLANCE
283100	FIRE ALARM SYSTEM
284200	GAS DETECTION

In addition to the listed specifications sections, the following items represent specific inclusions in this Trade Category TC18 – ELECTRICAL. They are provided as a guide to aid in the assignment of work and in no way should be construed as being all inclusive. All work described or indicated in the respective specification sections or divisions listed above, and on the drawings, shall be included, unless specifically noted otherwise:

The Scope of Work intended to be included in this Trade Category TC18 – ELECTRICAL includes, but is not necessarily limited to, the following outlined items. Some items may have listed plan sheet or specifications references. The meaning of 'provide' is to furnish and install and is applicable to all following items unless specified otherwise:

General Scope

1. Obtain and pay for all required permits for work on city streets, sidewalks, curbs and new driveway cuts. Include costs for lane closure permits, and for all mandated requirements of the permit, as needed to complete portions of the work. Provide and maintain required signage for lane and sidewalk closures.
2. Provide traffic control, including flagmen, traffic cones and barricades, as required to protect the public at all times as the work and material deliveries requires.
3. This subcontractor shall provide all surveying, surveying controls (line and grade), benchmarks and subsequent layout required to complete the scope of work.
4. This subcontractor shall assume full responsibility for the protection of all existing utilities located within the work areas associated with the scope of work. Once the utilities are located they shall be surveyed and an as-built provided to the CM to utilize in coordination.
5. Where details are referenced as an example, the noted (or exampled) work shall be provided at all similar, typical conditions or locations. References to specific work on specific drawings shall

not be interpreted to limit the included work to the referenced drawing only. All specified work included in this subcontract shall be provided at all instances and at all locations shown.

6. Where "Basis of Design" or proprietary products are indicated in the specifications, all proposed substitutions shall be submitted with the Technical Proposal for review by the Design Team. All proposed substitutions shall be submitted in accordance with Specification Section 01 25 00 – Substitution Procedures with all required documentation to facilitate a proper review and assessment.
7. TC18 will provide SAP List information and submit to Messer along with O&M documents.
8. The Emergency Generator, Automatic Transfer Switches, Annunciator Panel and 400A Generator Temp Connection Cabinet have been pre-purchased and is assigned to TC18 Electric contractor to coordinate, receive at the TC18 contractors place of business, deliver to project site, unload, set, assemble and complete, to labor and material necessary to install a complete and operational emergency power system. TC18-Electric shall review the Emergency Generator, Automatic Transfer Switches, Annunciator Panel and 400A Generator Temp Connection Cabinet submittal and provide the necessary labor and material necessary to ensure a complete and operational system.
9. The main electrical switchboard 1MSB1 has been pre-purchased and is assigned to TC18-Electric contractor to coordinate, receive at the TC18 contractor's place of business, deliver to project site, unload, set, assemble and complete, including but not limited to labor and material necessary to install a complete and operational emergency power system. TC18-Electric shall review the main electrical switchboard 1MSB1 submittal and provide the necessary labor and material necessary to ensure a complete and operational system.
10. This contractor shall provide onsite load bank testing of generators, including but not limited to, temporary electric feeders, load bank and fuel for emergency power system testing.
11. This contractor shall include the necessary manlift, boom lifts, scaffolding, hoisting and rigging necessary to perform this scope of work. Protection of the existing surfaces is the responsibility of this contractor.
12. Complete shop drawings will be required for all work to allow coordination of MEPS items prior to rough in. A formal MEP Coordination process utilizing a 3D Virtual Construction Spatial Coordination Process (commonly referred to as BIM, Building Information Modeling) will be implemented. Refer to Section 011111, for responsibilities of this contractor with respect to the coordination drawing process.
13. Provide all permits, certifications, required by the Contract Documents, inspections required by the State of Kentucky, University of Kentucky and from authorities having jurisdiction. Include all costs for all 'after normal business hours" Life Safety Inspections required by the inspection agency.
14. This contractor will be responsible for excavation, removal of spoils from site, backfilling with gravel, concrete encased duct banks, required but not shown on the drawings and hauling off spoils as it is associated within the work of this trade category. Any groundwater encountered during excavations is to be managed by this contractor including the necessary pumps and filtration bags as noted in the dewatering section of the general provisions. Include any utility markers and as-built drawings as required for complete installation.

15. Coordinate and set required sleeves, install floor boxes, including conduit and poke-thru in concrete floors and walls. These are to be done in concurrence with the coordination drawings and prior to slab placements. This contractor is to include protective means for the floor boxes to include temporary covers capable of supporting small man lifts during construction.
16. Cutting and patching as required to perform this work is to be included. Fire-seal penetrations in rated walls, floors and/or ceilings and provide identification of all thru penetration firestop as indicated in specifications.
17. Provide access panels that are required for this scope of work that are not shown on the documents. Coordinate the location of access panels with Drywall subcontractor to rough in openings.
18. All site lighting, including pole bases, concrete, reinforcing steel, excavation, backfill, conduit, light poles, fixtures, etc. is to be included in this scope of work.
19. Provide all electrical power connections for Plumbing, fire protection, HVAC, Lab Equipment, processing, owner furnished equipment, etc. Equipment necessary to make complete and operational.
20. Electrical shall provide permanent power to place heating/cooling systems in operation at various times in the project schedule. To facilitate this, permanent power to the control panels and equipment of those associated systems must be complete by the dates in the construction schedule.
21. During final cleanup of the building, clean all light fixtures, as well as all switchgear, panel boards, and any other equipment provided by, or provided to, this subcontractor.
22. Provide and install wood blocking / curbs, flashings & counter flashings for conduit penetrations of the roof to height required by roofing manufacturer. All roof membrane penetrations shall be performed by the Roofing Contractor, TC18 Electrical contractor shall reimburse the roofing contractor for penetrations made after roofing is completed.
23. The authorized manufacturer's representative associated with relevant equipment warranties shall start up mechanical/electrical equipment as required. This start up shall be scheduled with the CM a minimum of two weeks prior to the beginning of work. A pencil copy of the startup report is to be submitted to the CM upon completion of startup and submit a full start-up report and O&M manuals as part of the close out documents.
24. It is the intent that the location of controls, equipment, etc. be accessible through a lay-in ceiling. If this intent is not possible, then it is this contractor's responsibility to provide access panels. The repair, installation, and replacement of damaged materials shall be the responsibility of this contractor.
25. Provide a complete and functioning Perimeter Security System, including and not limited to, Security Management System, Controllers, Card Readers, Door Contacts, Motion Sensors, Access Control Locks, Power Supplies, Biometric Readers, Panic Switches, Cabling and raceway.
26. This contractor shall provide a complete and operating Video Surveillance system, including raceway, conduit, cabling, cameras, and video monitoring equipment.
27. Provide a complete and operation Audio Visual system including equipment and software. Audio visual system including, but not limited, to projectors, projector screens, system control

processor, av table box, av racks, av lectern, software, displays, televisions, mounts, mobile stands, speakers, cameras, microphones, amplifiers, connectivity devices, transmitter, switch, network switch, hub, wire and cable. Include all rough-in, raceway, cabling, devices, and equipment.

28. This contractor shall provide a complete and operational Fire Alarm System, including installation and wiring of duct smoke detectors and fire smoke dampers. Coordinate with the fire protection, CO2 fire extinguishing system, Gas Detection and provide integration with the fire alarm system.
29. Electrical contractor shall provide communication system as indicated in the contract documents, including but not limited to, pathways, cabling, fiber, patch panels, racks, patch cables, cable tray, outlets, back boards and grounding.
30. TC18 Electrical shall provide electrical and communication work shown on EU100 and EU101 drawings.
31. TC18 shall provide the fiber optic cable shown on EU100 and EU101, including but not limited to, poles, fiber cabling, lashing, support strand, riser, transition cable, aerial fiber optic cable, overhead fiber cable, underground fiber cable, innerduct, investigation, bonding, connections, terminations and testing. Coordinate with UK and the utilities.
32. Provide a complete and operational Intrusion Detection system, including but not limited to, conduit, pathways, cable, wire, devices, PIR sensors, door switches, window switches, Microwave Intrusion Detectors, Microwave-Pir Sensors, Duress-Alarm switches, UPS, Control Unit, MCU, Monitoring Station, AV Alarm Devices, system integration, programing, commissioning and demonstration.
33. Provide a complete and operational Gas Detection system, including but not limited to, conduit, pathways, cable, wire, devices, gas monitors, flame detectors, controllers, programing, integration, commissioning and demonstration.
34. Provide electrical pedestrian and general lighting along the top rail of the perimeter of the construction site fence to provide a minimum illumination level of 1.5-foot candles. Pedestrian and perimeter fence lighting shall be installed in weatherproof fixtures, conduit, raceway, and/or pathway system properly supported to the perimeter fence. Open or flexible cabling will not be acceptable.
35. Install hangers and other supports prior to fireproofing to eliminate removal of fireproofing material. If unable to install prior to fireproofing, remove minimal fireproofing to install supports. All patching of the fireproofing is to be made solely by the fireproofing contractor. This contractor shall reimburse the Fireproofing Contractor for repairing of fireproofing.
36. This subcontractor shall provide electrical final connections to the Laboratory Fume Hood as indicated on contract documents. TC 24 – LAB CASEWORK AND EQUIPMENT subcontractor shall furnish and install the Laboratory Fume Hood prior to final connections being made by TC18 subcontractor. TC18 shall reference 115313 Laboratory Fume Hood specification, architectural, mechanical and plumbing drawings. This contractor is to review vendor submittal, equipment nameplate, coordinate with TC24, and provide any necessary electrical material and final connections to ensure system is complete and operational.

37. TEMPORARY ELECTRIC SYSTEM

This contractor shall provide the design, installation, maintenance, and demolition of temporary electric system needed for the construction of the building. It shall include KU Approved Metering that is removed at the completion of construction. The scope of Temporary Electric work includes, but is not limited to:

a. The sizing of the temporary electrical service shall be the responsibility of TC18-Electrical. Submit temporary electric design to CM for review prior to installation. Modify, expand or provide additional temporary electric & lighting as necessary to accommodate the phasing of temporary electric to the full project. Coordinate with KU for the temporary electric service.

b. TC18-Electrical contractor is responsible for all material and labor necessary for required temporary electric connection to the utility, including but not limited to electric pole(s), temporary meter, switch, transformer, raceways, conductors and coordination with KU.

c. Temporary meter shall be incompliance with KU meter standards.

d. Secure and maintain access and control of the temporary electrical distribution and equipment for the duration of this contract.

e. Provide and maintain temporary outdoor security lighting located on the project site and laydown area. These will need to be relocated or removed at the completion of the structure at the direction of the CM.

f. Provide a 208/120V distribution weatherproof panel for the temporary lighting and power.

g. Provide at 8 locations within the building, consisting of two 20amp quadplex GFCI weatherproof receptacles mounted on temporary support. Coordinate these locations with CM.

h. Provide temporary construction lighting throughout the building that meets or exceeds 7ft candles. Maintain temporary lighting daily, replacement bulbs and reattachment of wiring is included. Relocate lights to accommodate construction as required. Provide switching to turn lights on and off.

i. Properly balance the temporary electric loads to ensure no one phase is overloaded. Adjust loads as required for the duration the temporary electric is in use.

j. Provide temporary power to sump pumps.

k. Provide temporary electric for the temporary heating and cooling equipment. Temporary heat shall be energized by November 1, 2025.

l. This contractor is to install temporary lighting, power and electric. The existing building service can be utilized for temporary power. Metering and sub panels, approved by KU, is to be installed to monitor the consumption for this service.

m. TC18 Electrical provide temporary power to the CM double wide trailer, consisting of 2 each 240/120v 100-amp panels.

n. Provide temporary electric circuit for heat tracing on temporary water and sanitary lines to CM Trailer. Coordinate with TC18 Mechanical.

o. TC18 shall include the temporary electric power consumption from 5/1/25 through 5/1/26 for the CM trailer, site and building temporary power & lighting.

ALLOWANCES

Allowances are above and beyond what is listed in the scope description above and the drawings and specifications. Monthly progress payments will be made against actual invoice expenditures, based off approval from the CM/UK. All mark ups related to work performed against an allowance shall be included in the base bid. Allowance requests shall include only labor and material costs, authorized in writing by the CM. Any remaining funds in these allowances will be credited back to the project. (The following Allowances are to be included in the Base Bid Amount)

1. Include an allowance of $10,000 for temporary construction security cameras with full service as directed by the CM.

ALTERNATES

1. Alternate 1-4

ADDENDUM NUMBER THREE

Bidders shall conform to the following changes, as same shall become binding on the Contract to be issued in response to this Invitation to Bid.

QUESTIONS & CLARIFICATIONS

1. **Reference Sheet C-30.1 and C-31.1 and Specification 05 5000 Metal Fabrications and Specification 09 9123 Exterior Painting:** The exterior metal pipe bollards, pentagon detail legend item 8 on C-30.1 and detailed on 8/C-31.1 are specified in the 05 5000 Metal Fabrications Specification, and are to be painted per Specification 09 9123 Exterior Painting.
2. **Reference Sheets A-1.11 and E3.0, and Specifications 08 1113 Hollow Metal Doors and Frames, 08 3323 Overhead Coiling Doors, 08 3613 Sectional Doors, and 08 7100 Door Hardware:** Several architectural items are electrified in the H-2 portion of the project, ie Door Hardware, Access Control, electrified overhead coiling and sectional doors, etc. There are specific electrical requirements that must be followed based on the severity of hazardous materials being stored in each storage room. Reference sheet E3.0 and coded tag E4 and E5 for additional clarification required for all electrified elements in each room.
3. **Reference Sheets A-1.11 and E3.0, and Specifications 08 3323 Overhead Coiling Doors and 08 3613 Sectional Doors**: Both overhead coiling doors, H103J.2 and H102A.2, and the overhead section door H103.2 are to be connected to the back-up generator and operated off emergency power. The Manual override option shall still be included with all three doors in addition to being connected to the Generator for emergency power electrified operations.
4. **Reference Wall Section 1 on sheet A-4.02 Wall Sections:** Steel headers for the first and second floor curtain wall have been graphically updated to show the correct size steel angles to match the enlarged detail 1/A-8.06
5. **Reference wall section 1 on sheet A-4.05, detail 9/A-7.02 and attached ADD 03 A-0.1 for revised detail 9/A-7.02 "Roof Detail @ Brick to Stud":** Note the Continuous L4x3x5/16 angle and cold-formed connection clip shown on wall section 1/A-4.05 "Wall Section @ Mechanical Stair" has been added in the enlarged detail 9/A-7.02.
6. **Reference First Floor Door Schedule on sheet A-8.01 DOOR SCHEDULE:** Overhead door H102A.2 incorrectly referenced jamb detail 5/A-8.09 and head detail 4/A-8.09. Update the door schedule to show the correct detail references: Jamb detail: 5/A-8.10, Head detail: 4/A-8.10
7. **Reference First Floor Door Schedule on sheet A-8.01 DOOR SCHEDULE:** Overhead door H103J.2 incorrectly referenced jamb detail 5/A-8.09 and head detail 4/A-8.09. Update the door schedule to show the correct detail references: Jamb detail: 5/A-8.10, Head detail: 4/A-8.10
8. **Reference First Floor Door Schedule on sheet A-8.01 DOOR SCHEDULE:** Overhead door H103.2 incorrectly referenced jamb detail 5/A-8.09 and head detail 4/A-8.09. Update the door schedule to show the correct detail references: Jamb detail: 6/A-8.10, Head detail: 7/A-8.10

CORRECTION / CHANGES

1. **Reference Sheet S-4.4 detail A and detail E:** Remove L3x3x1/4 angle.
2. **Reference Sheet S-4.5 detail E:** Remove headed stud embedded in firewall. Delete "W/ ½"øx5" HEADED STUDS @ 24" O.C." from "CONT BENT PL 3/8x5x8 L.D.H…"
3. **Reference Sheet S-4.7 detail D:** Change 8 ½" dimension from beam center line to wall framing (bottom right of drawing) to be a 9" dimension.
4. **Reference Wall Section 2 on sheet A-4.03 WALL SECTION BETWEEN B & HC, and attached ADD 03 A-03:** See attached drawing ADD 03 A-03 for revised wall section. Reference detail 1/A-7.05 has been removed from this wall section. Structural steel tube/lintel support has been revised to align with structural detail D/S-4.6. The bottom of the linear metal panel ceiling has been revised to align with the bottom of the brick in this section. All structural members in this detail will receive exterior intumescent fireproofing. Provide joint sealant at joints between the flat steel plate and the rounded steel tube corner as noted on the drawing.

5. **Reference Detail 10 and 11 on sheet A-5.04 ENLARGED STAIR PLAN AND DETAILS, and attached ADD 03 A-02:** See attached drawing ADD 03 A-02 for revised detail 10 and 11. An additional elevation 15/A-5.04 "Elevation @ Loading Dock Rail" has been provided depicting the loading dock elevation where additional sections of removable galvanized guardrail have been added. Coordinate the guardrail width with the dock lever manufacturer's width.
6. **Reference Specification 05 5113 "Metal Pan Stairs and Railings", article 2.5 "Miscellaneous Materials":** See the additional article listed below:

   For removable railing posts, fabricate slip-fit sockets from steel tube or pipe whose ID is sized for a close fit with posts; limit movement of post without lateral load, measured at top, to not more than one-fortieth of post height. Provide socket covers designed and fabricated to resist being dislodged.

   1. Provide chain with eye, snap hook, and staple across gaps formed by removable railing sections at locations indicated. Fabricate from same metal as railings.

7. **Reference Specification 08 8000 Glazing article 3.9 C: Revise descriptor text to read the following: "Glass Type IG-3 (Clear): Low-E-coated, clear laminated vision outer assembly, laminated inner assembly."** This glass has an exterior laminated assembly that has the low-e coating located on the number 4 surface, which is the inside surface of the exterior laminated glass assembly. In addition to the clarification of the Glass type, the minimum 6mm thickness identified in article 3.9 C 4 pertains to the outer laminated assembly; the inner laminated assembly has a minimum thickness of 3mm.
8. **Reference attached MEP Addendum #3 for additional clarifications and revisions.**

END OF ADDENDUM NO. 3

ADDENDUM # 3 – MEP

Item #1 Refer to sheet attached sheet M4.0 and M8.0
- A. Provide VFDs in locations shown in the mechanical room on the second floor. Rename VFDs in the first-floor mechanical room as sheet M4.0 indicates. See VFD schedule on sheet M8.0.

Item #2 Refer to Addendum #2 MEP Item #11
- A. It shall read, "AHU manufacturer shall include fan motor removal rails in AHU-1 for each set of fans." AHU-2 and AHU-3 are not required to have removal rails.

Item #3 Refer to attached sheet M2.0
- A. Reroute the 30x26 RA duct. Move the SA duct, VAV, and reheat coil plan north.

Item #4 Refer to sheet M6.0
- A. Refer to the Chilled Water piping schematic on M6.0. The chilled water bypass minimum flow rate is 200 gpm. Confirm the minim flow rate with the provided chiller manufacturer. Pipe size shall be 4 inch minimum.

Item #5 Refer to attached sheet M8.0
- A. Refer to Hydronic Pump Schedule. P1A and P1B flow rate shall be 275 GPM and 65 Ft of Head. Pump shall be 10HP, Model e-1510 2.5BB .
- B. Refer to the AHU Schedule. Note that AHU 1 lists a chilled water flow rate of 217 GPM. This is the full flow rate of the coil. The current chiller cannot maintain the AHU-1, 2, and 3, all discharging 55 degrees on a 95/78 design day when AHU-1 is in emergency mode at 100% OA. The flow rate is expected to be 155 GPM of chilled water

Item #6 Refer attached sheet E2.0
- A. Added alternate manufacturers to luminaire schedule.

Item #7 Refer to attached sheets E3.0 and E3.2
- A. Added note E28 to clarify power for wall mounted displays.

Item #8 Refer to attached sheet E5.0
- A. Deleted transformer 1NT3 on plan south wall as it is no longer needed.
- B. Added new CT cabinet in previous location of 1NT3 and relocated data drop for metering of switchgear. Edited note E23 to reflect this.
- C. Boiler B-1B and associated disconnect have moved slightly.
- D. Adjusted dimensions of Generator Distribution Panel to match selected unit.

Item #9 Refer to attached sheet E6.3
- A. Added details 7 and 8 for control of trench valve actuator.

Item #10 Refer to attached sheet E7.0
- A. Changed wire and breaker size of P-1A and P-1B due to change in pump horsepower.

Item #11 Refer to attached sheet EU101
- A. Changed location of generator and some parking lot light fixtures.
- B. Called out distribution type in Site Luminaire Schedule.

Item #12 Refer to attached sheet P2.0
- A. Change acid waste piping serving floor drains in second floor mechanical room to sanitary piping. Revise layout on attached sheet.

Item #13 Refer to attached sheet P3.0
- A. Add ¾" hot water line to P-4A in room H103P1.
- B. Provide ¾" hot water and cold water to in chase down to P-4A sink in room H102A. Install pipes through wall to Mop Sink in Room H102C.
- C. Provide 2" vent pipes in chase down to P-4A sink in room H102A. Install vent pipe through wall to Mop Sink in Room H102C.
- D. Provide 2" sanitary pipe in chase down to P-4A sink in room H102A. Install 3" sanitary pipe through wall to Mop Sink in Room H102C.
- E. Provide ¾" check valves and ball valves to Mop Sink in Room H102C.
- F. Provide ball valves on water lines serving P-5 sink in room H103P1. Provide balancing valve and ball valve on RHW line.
- G. Change acid waste piping serving floor drains in second floor mechanical room to sanitary piping.
- H. Provide ¾" hot water piping with ball valve and check valve to P-7A mop sink in Jan. A112.
- I. Provide ½" hot water piping with ball valve to P-3A sink in room A114.
- J. Move 4" vent thru roof in room A114 to location indicated on attached drawing.
- K. Add ¾" recirc. hot water line with ball valve and balancing valve to P-4 in room A119K.

Item #14 Refer to attached sheet P3.1
- A. Revise location of acid vent through roof away from air intakes.
- B. Revise location of acid vent through roof away from air intakes.

C. Revise location of vent through roof at column line B5.
D. Change 2" acid vent through roof to 4" acid vent through roof.

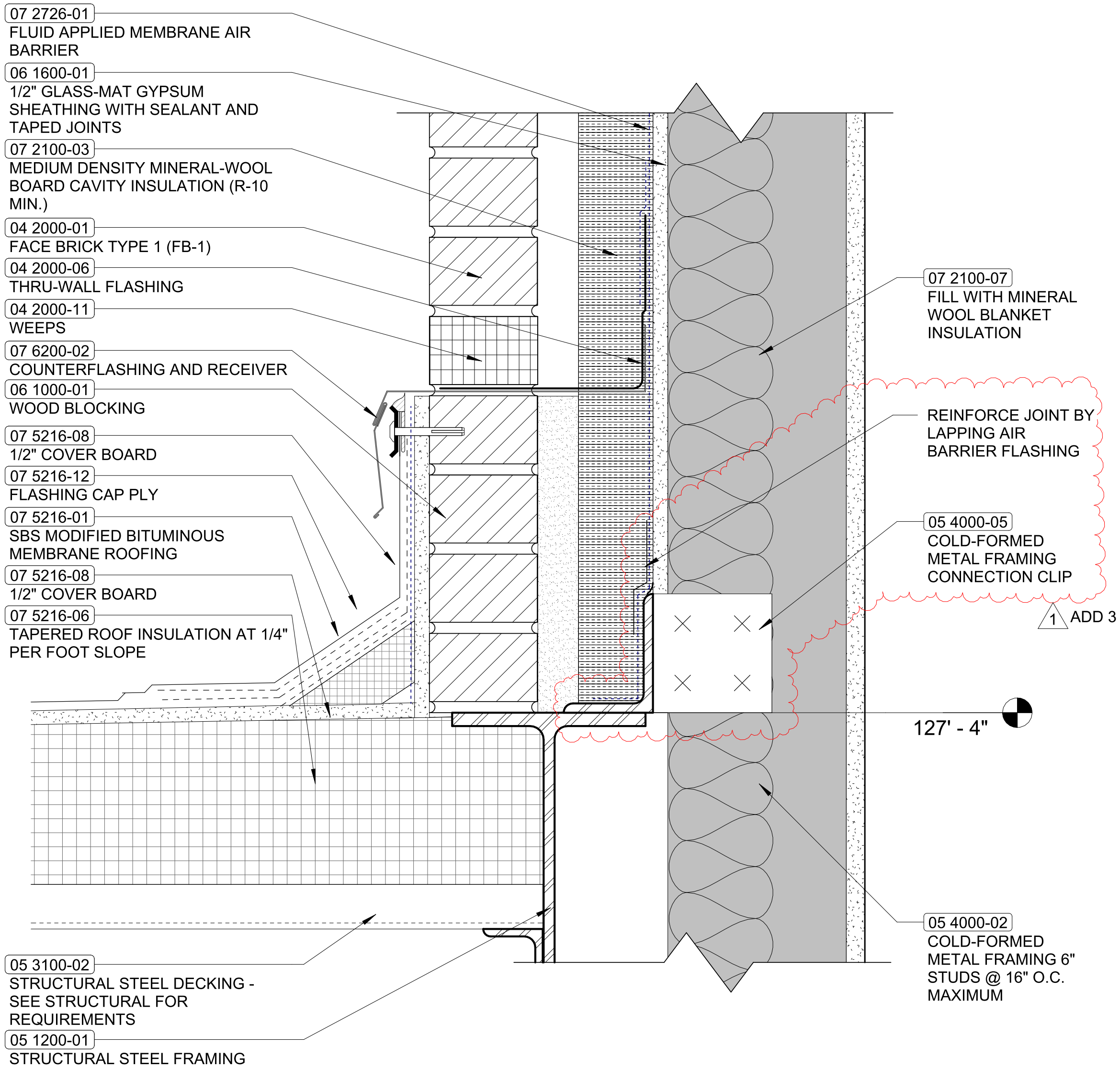
Item #15 Refer to sheet P3.1A

A. Provide ¾" RHW lines with ball valves and balancing valves to P-4 sinks in room A208.

Item #16 Refer to sheet P4.0

A. Provide 2" sanitary pipe, 2" vent pipe and ½" cold water line pipe to drinking fountains in Corridor A100B.
B. FD-1 floor drains shall be installed under ADA stall partitions. Omit the ones shown in the middle of the floor in rooms A109 and A111.
C. FD-1 floor drains shall be installed under ADA stall partitions. Omit the ones shown in the middle of the floor in rooms A209 and A211.
D. Provide ball valves on the fill lines to HVAC system.

END OF ADDENDA #3 - MEP



9
A-7.02

ROOF DETAIL @ BRICK TO STUD

3" = 1'-0"

ADDENDUM 03

05/12/2025

UK - ENVIRONMENTAL QUALITY MANAGEMENT CENTER

REF 9/A-7.02 ROOF DETAIL @ BRICK TO STUD

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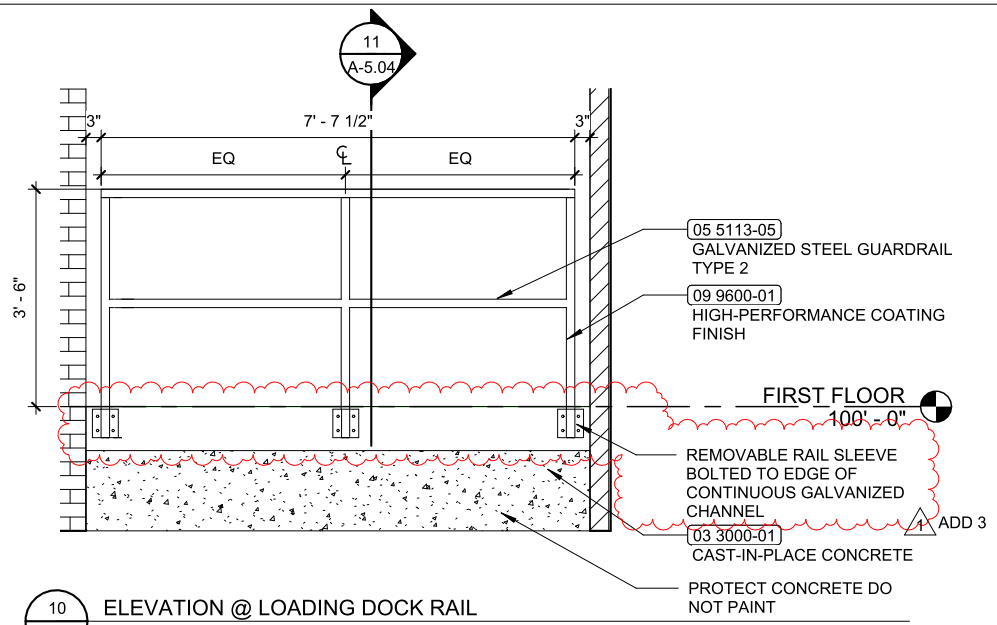
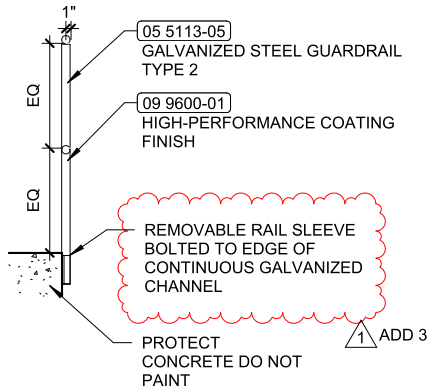
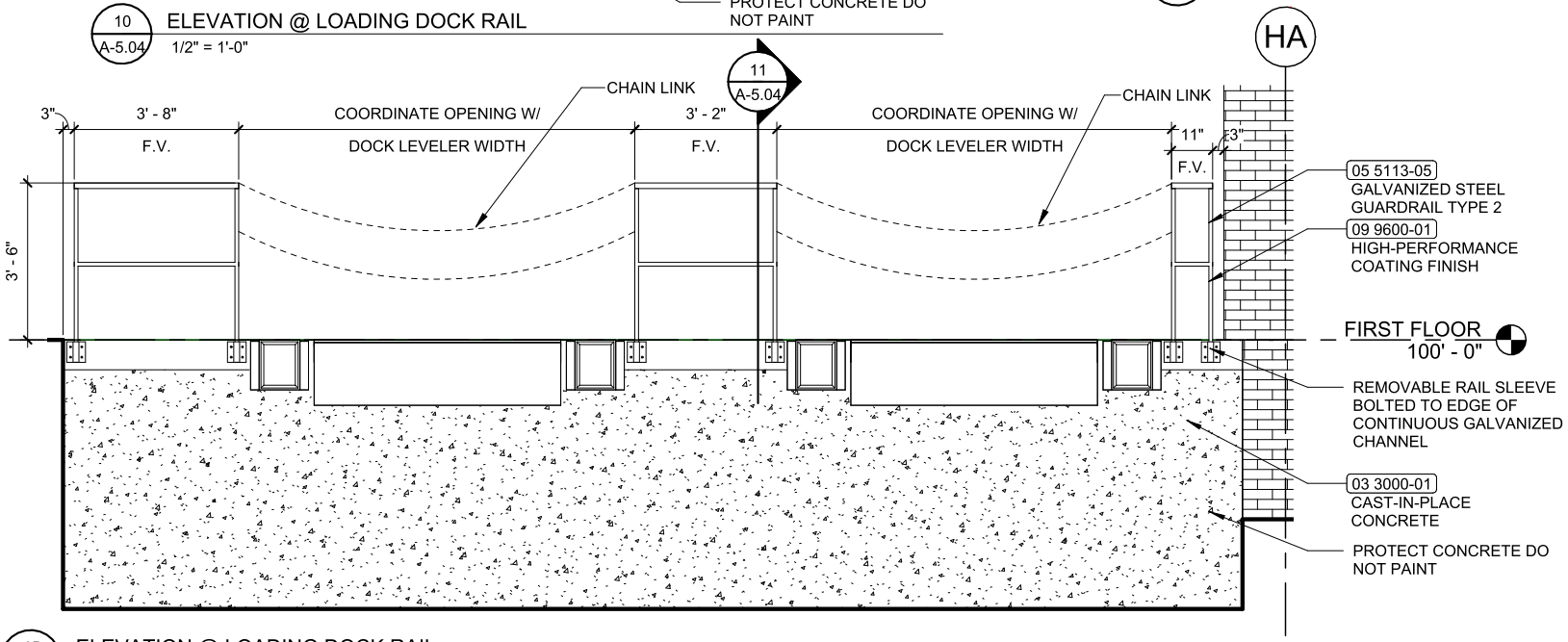
ADD 03 A-01



10 A-5.04 ELEVATION @ LOADING DOCK RAIL
1/2" = 1'-0"



11 A-5.04 SECTION @ LOADING DOCK RAIL
1/2" = 1'-0"



15 A-5.04 ELEVATION @ LOADING DOCK RAIL
3/8" = 1'-0"

ADDENDUM 03
05/12/2025

UK - ENVIRONMENTAL QUALITY MANAGEMENT CENTER
REF 10/A-5.04, 11/A5.04, 15/A5.04 ENLARGED STAIR PLAN AND DETAILS

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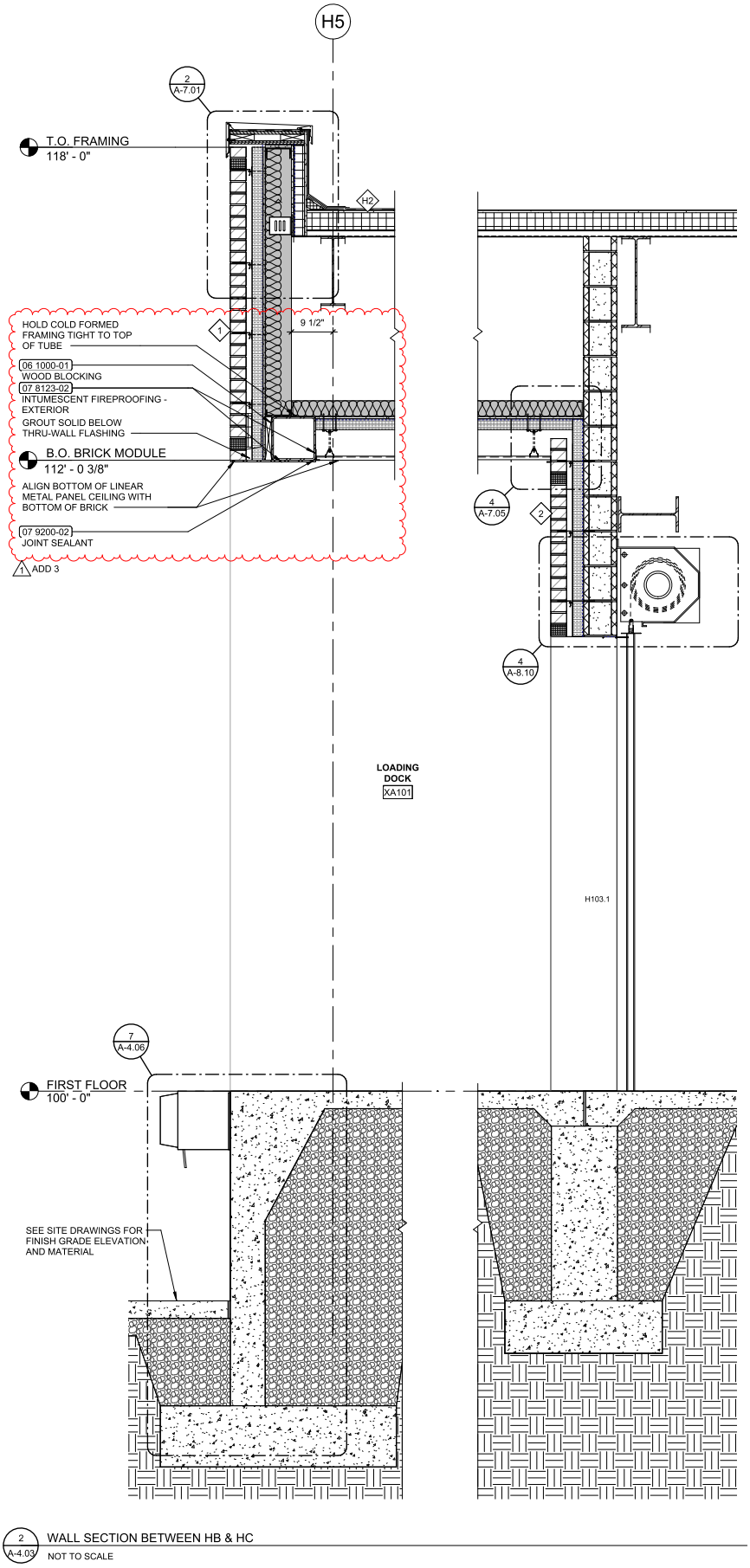
ADD 03 A-02



2 A-4.03 WALL SECTION BETWEEN HB & HC

NOT TO SCALE

ADD 03 A-03

UK - ENVIRONMENTAL QUALITY MANAGEMENT CENTER **ADDENDUM 03**

REF 2/A-4.03 WALL SECTION BETWEEN B & HC **05/12/2025**

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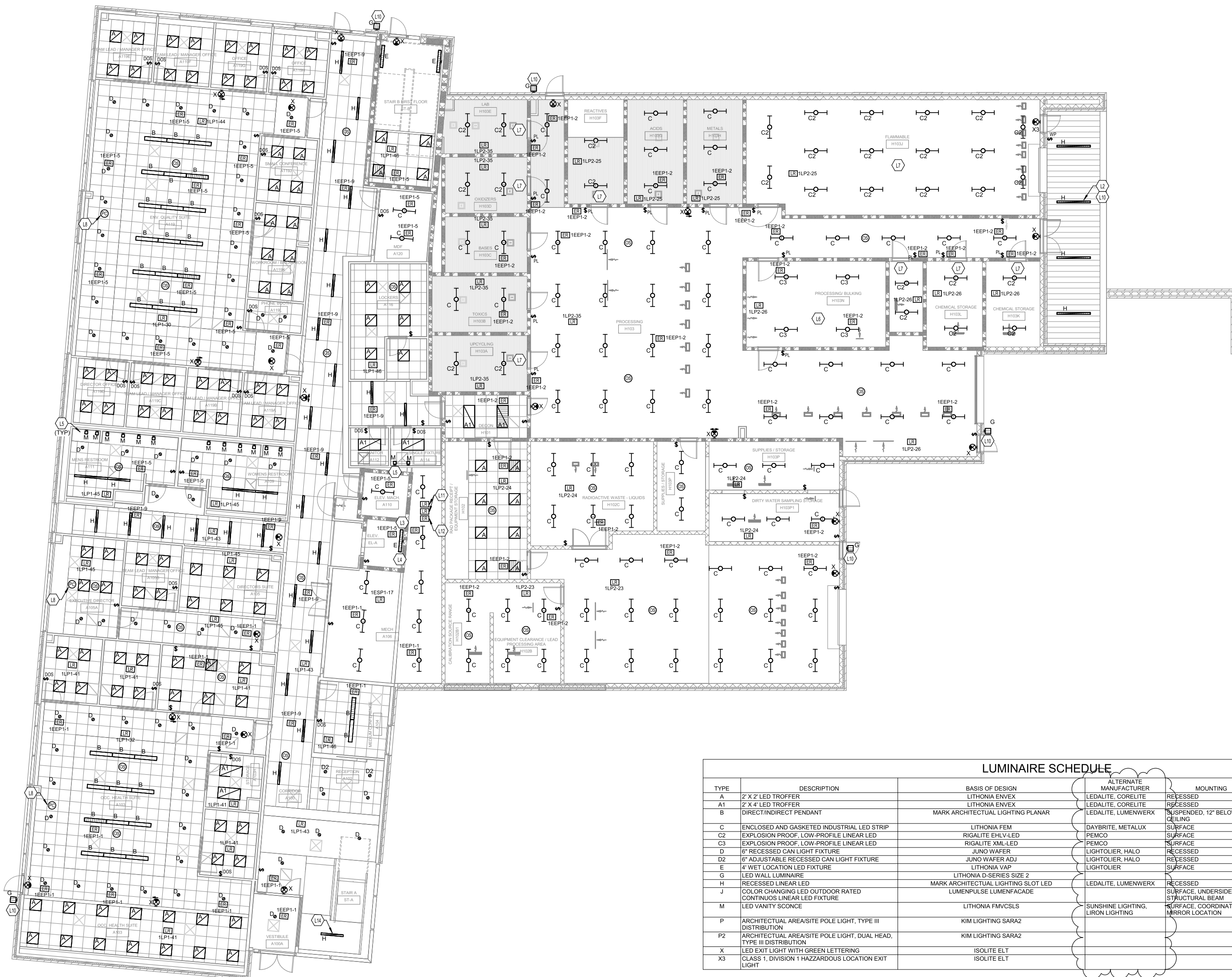
TAGGED NOTES

- L2 COORDINATE LOCATION AND FINISH OF LIGHT FIXTURE WITH METAL CEILING PANEL.
- L3 LIGHTING FIXTURES TO BE MOUNTED WITHIN THE ELEVATOR PIT. COORDINATE WITH THE ELEVATOR INSTALLER PRIOR TO ROUGH-IN.
- L4 CIRCUIT ELEVATOR PIT LIGHTING WITH RECEPTACLE SERVING ELEVATOR PIT.
- L5 COORDINATE LOCATION OF LIGHT FIXTURE WITH MIRROR.
- L6 ROOM IS CLASSIFIED AS A HAZARDOUS LOCATION, RATED CLASS 1, DIVISION. INSTALL DEVICES, WIRING, AND FIXTURES IN ACCORDANCE WITH ARTICLE 501 OF THE NEC. FIXTURES TO BE CONTROLLED BY SWITCH OUTSIDE ROOM. ALL PENETRATIONS INTO THIS ROOM SHALL BE PROVIDED WITH CONDUIT SEALING FITTINGS AND HAVE ANNULAR SPACES AROUND CONDUIT SEALED AIRTIGHT. SURFACE MOUNT CONDUIT AND DEVICES WITHIN THIS SPACE.
- L7 ROOM IS CLASSIFIED AS A HAZARDOUS LOCATION,RATED CLASS 1, DIVISION 2. INSTALL DEVICES, WIRING, AND FIXTURES IN ACCORDANCE WITH ARTICLE 501 OF THE NEC. FIXTURES TO BE CONTROLLED BY SWITCH AND EMERGENCY RELAY OUTSIDE ROOM. ALL PENETRATIONS INTO THIS ROOM SHALL BE PROVIDED WITH CONDUIT SEALING FITTINGS AND HAVE ANNULAR SPACES AROUND CONDUIT SEALED AIRTIGHT. SURFACE MOUNT CONDUIT AND DEVICES WITHIN THIS SPACE.
- L8 PROVIDE DAYLIGHTING CONTROL PER IECC.
- L10 ROUTE ALL BUILDING EXTERIOR FIXTURES THROUGH LIGHTING CONTROL RELAY AND EMERGENCY OVERRIDE RELAY LOCATED IN MAIN ELECTRICAL ROOM.
- L11 PROVIDE CONTROL RELAY AND BUILDING MANAGEMENT SYSTEM INTERFACE FOR BUILDING-MOUNTED EXTERIOR LIGHTS AND FOR PARKING AREA LIGHTS. LIGHTING OPERATION SHALL BE CONTROLLED REMOTELY THROUGH THE CENTRAL CAMPUS OPERATIONS CENTER.
- L12 PROVIDE EMERGENCY LIGHTING OVERRIDE RELAY FOR BUILDING-MOUNTED EXTERIOR LIGHTS. ALL BUILDING-MOUNTED EGRESS LIGHTING SHALL BE ENERGIZED UPON LOSS OF THE NORMAL POWER CIRCUIT.
- L14 MOUNT FIXTURE RECESSED IN GYPSUM CEILING UNDER STAIR LANDING.



LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	BASIS OF DESIGN	ALTERNATE MANUFACTURER	MOUNTING	VOLTAGE	MINIMUM LUMENS	REMARKS
A	2' X 2' LED TROFFER	LITHONIA ENVEX	LEDALITE, CORELITE	RECESSED	120V	4000	
A1	2' X 4' LED TROFFER	LITHONIA ENVEX	LEDALITE, CORELITE	RECESSED	120V	6000	
B	DIRECT/INDIRECT PENDANT	MARK ARCHITECTUAL LIGHTING PLANAR	LEDALITE, LUMENWERX	SUSPENDED, 12" BELOW CEILING	120V	5200	
C	ENCLOSED AND GASKETED INDUSTRIAL LED STRIP	LITHONIA FEM	DAYBRITE, METALUX	SURFACE	120V	4000	
C2	EXPLOSION PROOF, LOW-PROFILE LINEAR LED	RIGALITE EHLV-LED	PEMCO	SURFACE	120V	4000	
C3	EXPLOSION PROOF, LOW-PROFILE LINEAR LED	RIGALITE XML-LED	PEMCO	SURFACE	120V	4000	
D	6" RECESSED CAN LIGHT FIXTURE	JUNO WAFER	LIGHTOLIER, HALO	RECESSED	120V	1000	
D2	6" ADJUSTABLE RECESSED CAN LIGHT FIXTURE	JUNO WAFER ADJ	LIGHTOLIER, HALO	RECESSED	120V	1000	
E	4' WET LOCATION LED FIXTURE	LITHONIA VAP	LIGHTOLIER	SURFACE	120V	4500	
G	LED WALL LUMINAIRE	LITHONIA D-SERIES SIZE 2			120V	1200	
H	RECESSED LINEAR LED	MARK ARCHITECTUAL LIGHTING SLOT LED	LEDALITE, LUMENWERX	RECESSED	120V	3200	
J	COLOR CHANGING LED OUTDOOR RATED CONTINUOS LINEAR LED FIXTURE	LUMENPULSE LUMENFACADE		SURFACE, UNDERSIDE OF STRUCTURAL BEAM	120V	776	
M	LED VANITY SCONCE	LITHONIA FMVCSLS	SUNSHINE LIGHTING, LIRON LIGHTING	SURFACE, COORDINATE WITH MIRROR LOCATION	120V	1000	
P	ARCHITECTURAL AREA/SITE POLE LIGHT, TYPE III DISTRIBUTION	KIM LIGHTING SARA2			120V	4000	
P2	ARCHITECTURAL AREA/SITE POLE LIGHT, DUAL HEAD, TYPE III DISTRIBUTION	KIM LIGHTING SARA2			120V	8000	
X	LED EXIT LIGHT WITH GREEN LETTERING	ISOLITE ELT			120V		
X3	CLASS 1, DIVISION 1 HAZZARDOUS LOCATION EXIT LIGHT	ISOLITE ELT			120V		

1 ADD 03

1 E2.0 FIRST FLOOR LIGHTING PLAN
1/8" = 1'-0"

PRINT DATE: 5/12/2025 7:20:59 PM

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p. 859.252.6664
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BROWN+KUBICAN STRUCTURAL ENGINEERS

CMTA

Bell

ALAN R. ... 20166 STATE OF KENTUCKY LICENSED PROFESSIONAL ENGINEER

UNIVERSITY OF KENTUCKY ENVIRONMENTAL QUALITY MANAGEMENT CENTER
BID PACKAGE #2

UK PROJECT NUMBER 2874.0
OMNI PROJECT NUMBER 2406

DATE 04/15/2025
BP#2

REVISIONS
1 BID CHANGES 05-13-2025

FIRST FLOOR LIGHTING PLAN

E2.0

TAGGED NOTES

E1	PROVIDE WIREMOLD ABOVE COUNTER. REFER TO SPECIFICATIONS FOR MANUFACTURER AND MODEL DETAILS.
E2	XP DENOTES EXPLOSION PROOF TYPE RECEPTACLE.
E3	PROVIDE POWER TO FLOOR BOX TO SERVE FURNITURE. ROUTE POWER DOWN CENTER SPINE OF FURNITURE ASSEMBLY.
E4	ROOM IS RATED CLASS 1, DIVISION 1. INSTALL DEVICES AND WIRING IN ACCORDANCE WITH ARTICLE 501 OF THE NEC. ALL PENETRATIONS INTO THIS ROOM SHALL BE PROVIDED WITH CONDUIT SEALING FITTINGS AND HAVE ANNULAR SPACES AROUND CONDUIT SEALED AIRTIGHT. SURFACE MOUNT CONDUIT AND DEVICES WITHIN THIS SPACE.
E5	ROOM IS CLASSIFIED AS A HAZARDOUS LOCATION, RATED CLASS 1, DIVISION 2. INSTALL DEVICES AND WIRING IN ACCORDANCE WITH ARTICLE 501 OF THE NEC. ALL PENETRATIONS INTO THIS ROOM SHALL BE PROVIDED WITH CONDUIT SEALING FITTINGS AND HAVE ANNULAR SPACES AROUND CONDUIT SEALED AIRTIGHT. SURFACE MOUNT CONDUIT AND DEVICES WITHIN THIS SPACE.
E6	PROVIDE POWER FOR ELECTRICALLY OPERATED FLUSH VALVE.
E7	PROVIDE GROUNDING BAR AT PERIMETER OF ROOM.
E16	PROVIDE POWER FOR ELECTRIC ROLLER SHADE. REFER TO ARCHITECTUAL PLANS FOR ELEVATION AND DETAIL.
E17	PROVIDE POWER FOR SECURITY PANEL.
E18	PROVIDE POWER FOR RECESSED LED STRIP LIGHT. REFER TO ARCHITECTUAL PLANS FOR ELEVATION AND DETAIL.
E19	PROVIDE POWER TO CHILLER ACCORDING TO PANEL SCHEDULE. DISCONNECT PROVIDED BY OTHERS.
E20	PROVIDE POWER TO AUTOMATIC DOOR OPENER.
E22	MOUNT ELECTRICAL FIXTURE(S) IN CASEWORK.
E25	RECEPTACLES IN THIS ROOM TO BE MOUNTED WITHIN CMU WALL.
E28	PROVIDE POWER IN WALL BOX FOR WALL MOUNTED DISPLAY. REFER TO A/V PLANS.

1 ADD 03

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www.omniarchitects.com

BROWN+KUBICAN STRUCTURAL ENGINEERS

CMTA

Bell

STATE OF KENTUCKY
ALAN R. [illegible]
20166
LICENSED PROFESSIONAL ENGINEER

UNIVERSITY OF KENTUCKY ENVIRONMENTAL QUALITY MANAGEMENT CENTER
BID PACKAGE #2

UK PROJECT NUMBER	2874.0
OMNI PROJECT NUMBER	2406
DATE	04/15/2025
	BP#2
REVISIONS	
1 BID CHANGES	05-13-2025

FIRST FLOOR POWER PLAN

E3.0

1 / E3.0 **FIRST FLOOR POWER PLAN**
1/8" = 1'-0"

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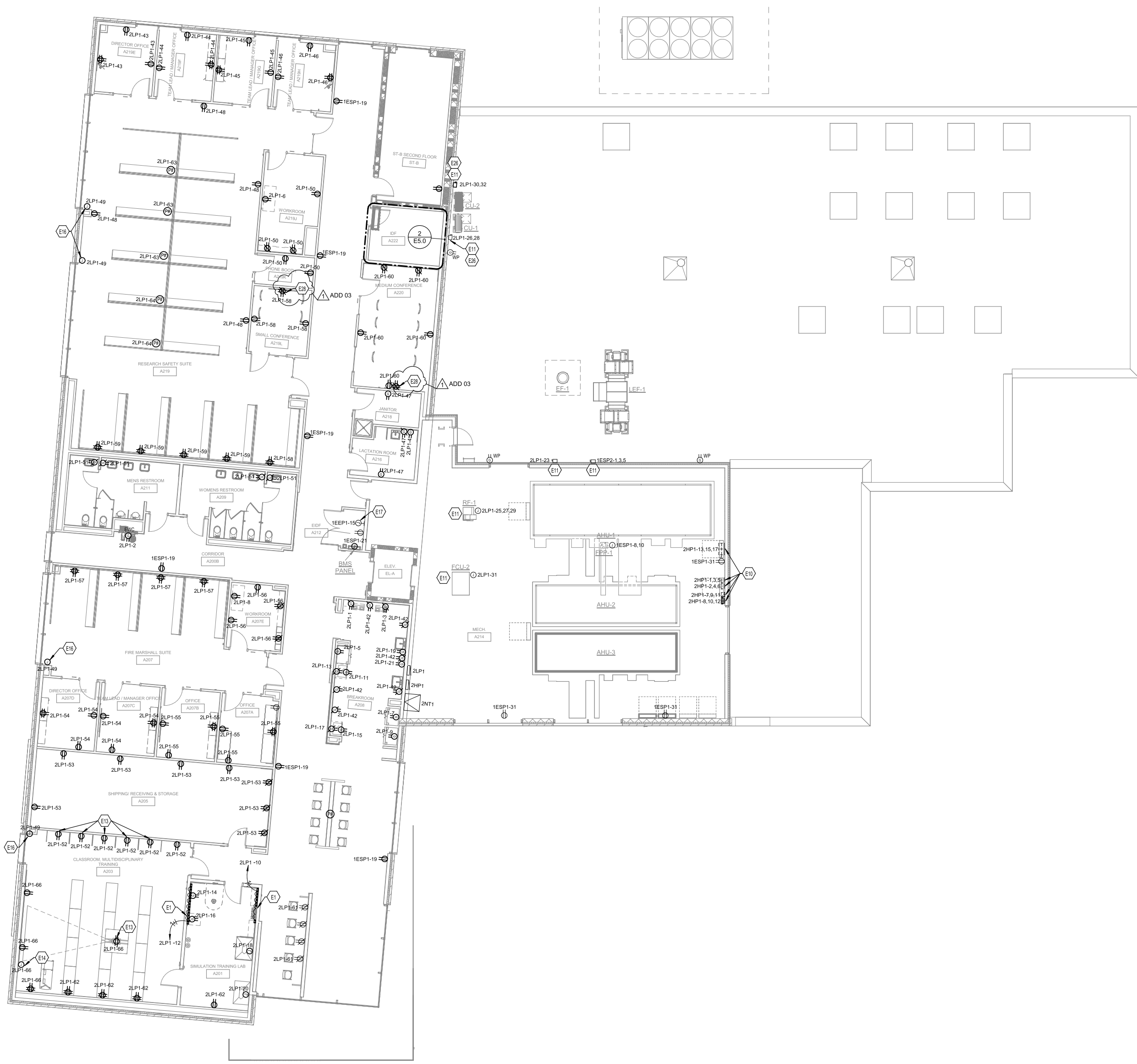

1 E3.2 **SECOND FLOOR POWER PLAN**
1/8" = 1'-0"

TAGGED NOTES

- E1 PROVIDE WIREMOLD ABOVE COUNTER. REFER TO SPECIFICATIONS FOR MANUFACTURER AND MODEL DETAILS.
- E10 PROVIDE POWER TO VFD SERVING AHU. MAKE FINAL CONNECTION FROM VFD TO CONNECTION POINT ON AHU. REFER TO MECHANICAL PLANS AND SPECIFICATIONS FOR EXACT LOCATION.
- E11 PROVIDE POWER TO CONNECTION TO MECHANICAL EQUIPMENT. MAKE FINAL CONNECTION FROM DISCONNECT TO EQUIPMENT AS NECESSARY.
- E13 COORDINATE LOCATION OF RECEPTACLE WITH OPENING IN CASEWORK. REFER TO ARCHITECTUAL PLANS FOR ELEVATION AND DETAIL.
- E14 PROVIDE POWER FOR CEILING MOUNTED PROJECTOR. PROVIDE 3/4" CONDUIT TO ABOVE CEILING FOR LOW VOLTAGE CONTROL CABLING AT LEFT SIDE OF PROJECTIN SCREEN HOUSING. COORDINATE INSTALLATION WITH PROJECTOR MOUNT.
- E16 PROVIDE POWER FOR ELECTRIC ROLLER SHADE. REFER TO ARCHITECTUAL PLANS FOR ELEVATION AND DETAIL.
- E17 PROVIDE POWER FOR SECURITY PANEL.
- E26 PROVIDE POWER TO INDOOR SPLIT SYSTEM UNIT PER MECHANICAL SCHEDULE.
- E28 PROVIDE POWER IN WALL BOX FOR WALL MOUNTED DISPLAY. REFER TO A/V PLANS.

1 ADD 03

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p. 859.252.6664
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ALAN R. KELLUM
20166
LICENSED PROFESSIONAL ENGINEER

UNIVERSITY OF KENTUCKY
ENVIRONMENTAL QUALITY MANAGEMENT CENTER
BID PACKAGE #2

UK PROJECT NUMBER	**2874.0**
OMNI PROJECT NUMBER	**2406**
DATE	**04/15/2025**
	BP#2
REVISIONS	
1 **BID CHANGES**	**05-13-2025**

SECOND FLOOR POWER PLAN - ALTERNATES

E3.2

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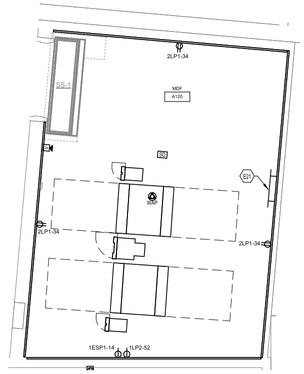
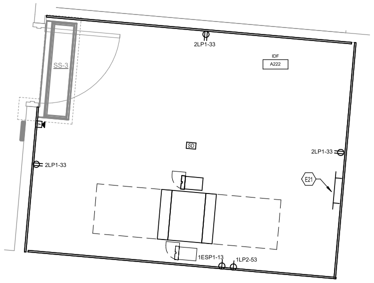
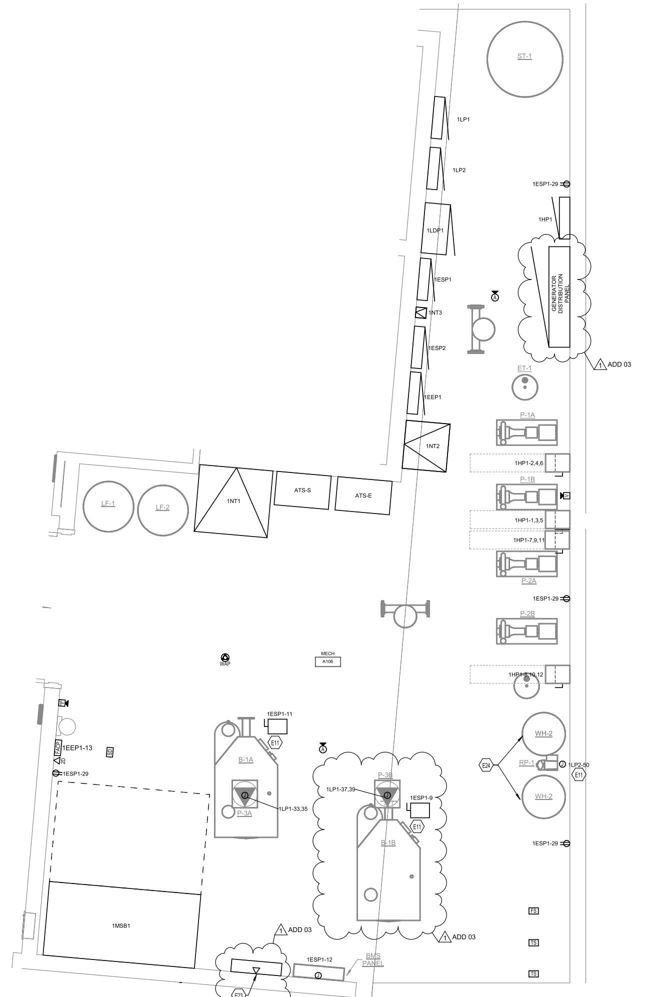


1 E5.0 **ENLARGED MDF PLAN**
1/2" = 1'-0"



2 E5.0 **ENLARGED IDF PLAN - ALTERNATE**
1/2" = 1'-0"



3 E5.0 **ENLARGED MECHANICAL ROOM PLAN**
1/2" = 1'-0"

TAGGED NOTES

E11	PROVIDE POWER TO CONNECTION TO MECHANICAL EQUIPMENT. MAKE FINAL CONNECTION FROM DISCONNECT TO EQUIPMENT AS NECESSARY.
E21	PROVIDE COPPER COMMUNICATIONS GROUND BAR (TGB) MOUNTED AT 6'-0" AFF. BOND ALL RACKS, TRAY, LADDER, SHIELDS, SLEEVES, EQUIPMENT, ETC. IN THIS ROOM TO TGB WITH #6 COPPER.
E23	PROVIDE CABINET FOR EXTERNAL POWER METER FOR MAIN SWITCHGEAR. CONTRACTOR TO INSTALL AND WIRE METER.
E24	REFER TO ONE-LINE DIAGRAM FOR CIRCUIT INFORMATION.

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ALAN R. BELLUCCI
20166
LICENSED PROFESSIONAL ENGINEER

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1	BID CHANGES	05-13-2025

ENLARGED ELECTRICAL VIEWS

E5.0

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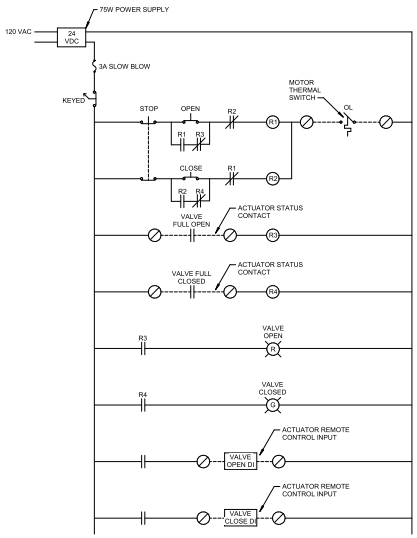
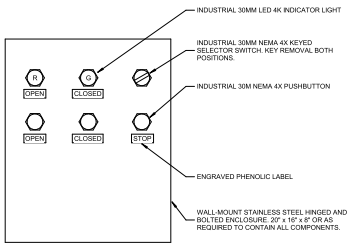
LEGEND

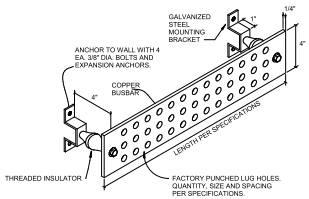
- (R) RELAY COIL
- NOMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- NORMALLY OPEN PUSH BUTTON
- NORMALLY CLOSED PUSH BUTTON
- SELECTOR SWITCH, 2 POSITION
- TERMINAL BLOCK
- FUSE AS INDICATED
- EXTERNAL INTERCONNECT WIRING



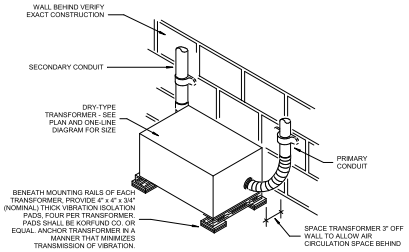
7 TRENCH DRAIN VALVE ACUTATOR CONTROL DIAGRAM
SCALE: NONE



8 TRENCH DRAIN VALVE ACUTATOR CONTROL PANEL
SCALE: NONE

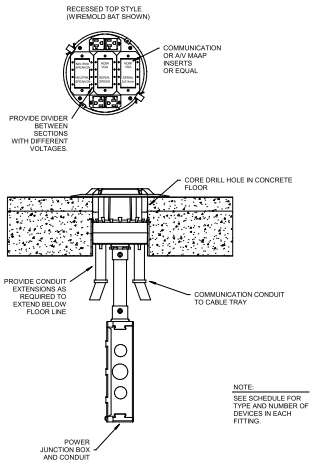


3 GROUND BUS BAR MOUNTING
SCALE: NONE



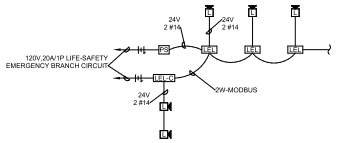
NOTES:
A. THE FINAL 12" TO 18" OF RACEWAY CONNECTION TO BOTH PRIMARY AND SECONDARY SIDES SHALL BE "SEALTITE" TYPE UA FLEXIBLE CONDUIT OR EQUAL, FOR VIBRATION ISOLATION.
B. ALL FLOOR - MOUNTED TRANSFORMERS 75KVA AND HIGHER TO HAVE A 4" HIGH REINFORCED CONCRETE PAD.

2 TYPICAL DRY-TYPE TRANSFORMER INSTALLATION
SCALE: NONE

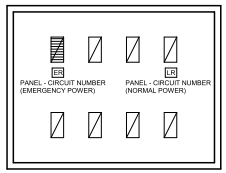


NOTE:
SEE SCHEDULE FOR TYPE AND NUMBER OF DEVICES IN EACH FITTING.

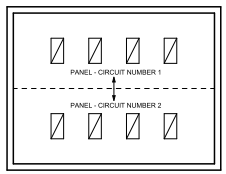
1 POKE-THRU DETAIL
SCALE: NONE



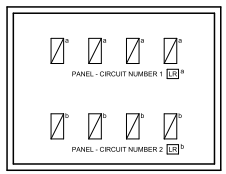
5 LEL BLOCK DIAGRAM
SCALE: NONE



LIGHTING CIRCUITING IN ROOMS WITH ONE CIRCUIT:
- IN SPACES WHERE ALL LIGHT FIXTURES ARE SERVED BY A SINGLE CIRCUIT, A CIRCUIT WILL BE INDICATED SOMEWHERE IN THAT SPACE. ALL LIGHTING DEVICES AND FIXTURES ARE TO BE POWERED FROM THIS CIRCUIT.
- FIXTURES ADJACENT TO AN EMERGENCY RELAY (ER) AND COLORED WITH A LIFE SAFETY HATCH ARE EMERGENCY EGRESS FIXTURES. THEY ARE TO BE NORMALLY POWERED FROM THE NORMAL POWER CIRCUIT SERVING THE SPACE. THEY ARE TO BE PROVIDED WITH AN EMERGENCY POWER CONNECTION FROM THE CIRCUIT INDICTED ADJACENT TO THE EMERGENCY RELAY.
- REFER TO PANEL SCHEDULES FOR CIRCUIT REQUIREMENTS.

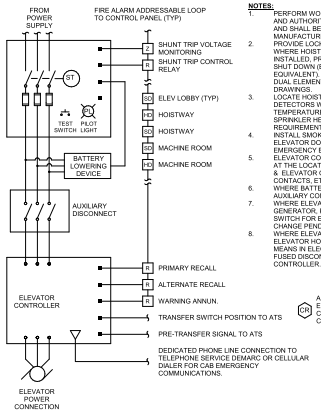


LIGHTING CIRCUITING IN LARGE SPACES:
- IN LARGE SPACES WHERE MULTIPLE LIGHTING CIRCUITS ARE REQUIRED, A HEAVY DASHED LINE WILL DEFINE WHICH FIXTURES ARE ON EACH CIRCUIT.
- FIXTURES AND DEVICES ENCLOSED BY THE HEAVY DASHED LINE AND THE BOUNDARIES OF THE SPACE WILL BE POWERED FROM THE CIRCUIT INDICATED BY THE ARROW ON THE DASHED LINE.
- REFER TO PANEL SCHEDULES FOR CIRCUIT REQUIREMENTS.



LIGHTING CIRCUITING IN SPACES WITH MULTIPLE CONTROL ZONES:
- IN SPACES WITH MULTIPLE ZONES OF LIGHTING CONTROLS, LOWER CASE LETTERS WILL DEFINE FIXTURES TO BE CONTROLLED TOGETHER.
- A CIRCUIT WILL BE INDICATED AT THE LIGHTING RELAY WITH A CORRESPONDING LETTER. ALL FIXTURES INDICATED ON A CONTROL ZONE SHALL BE POWERED FROM THIS CIRCUIT.
- REFER TO PANEL SCHEDULES FOR CIRCUIT REQUIREMENTS.

6 LIGHTING CIRCUITING KEY
SCALE: NONE



NOTES:
1. PERFORM WORK IN ACCORDANCE WITH ALL ADOPTED CODES AND AUTHORITY HAVING JURISDICTION (AHJ) REQUIREMENTS AND SHALL BE COORDINATED WITH ELEVATOR EQUIPMENT MANUFACTURER.
2. PROVIDE LOCKABLE ELEVATOR POWER FUSED DISCONNECT. WHERE HOISTWAY AND/OR MACHINE ROOM SPRINKLERS ARE INSTALLED, PROVIDE INTEGRAL SHUNT TRIP FOR ELEVATOR SHUT DOWN (BUSSMAN POWER MODULE SERIES OR EQUIVALENT). LOCATE IN ELEVATOR MACHINE ROOM. PROVIDE DUAL ELEMENT TIME DELAY FUSES PER ELEVATOR SHOP DRAWINGS.
3. LOCATE HOISTWAY AND MACHINE ROOM/SPACE HEAT DETECTORS WITHIN TWO FEET OF EACH SPRINKLER HEAD WITH TEMPERATURE SETTINGS CONFIGURED TO ALARM BEFORE SPRINKLER HEADS IN ACCORDANCE WITH NFPA REQUIREMENTS.
4. INSTALL SMOKE DETECTORS WITHIN 21 FEET OF EACH ELEVATOR DOOR CENTERLINE ON EACH FLOOR FOR EMERGENCY ELEVATOR RECALL.
5. ELEVATOR CONTROLLER - MAKE ALL REQUIRED CONNECTIONS AT THE LOCATIONS INDICATED BY ELEVATOR SHOP DRAWINGS & ELEVATOR CODE. PROVIDE ADDITIONAL RELAYS, DRY CONTACTS, ETC. AS REQUIRED FOR A COMPLETE SYSTEM.
6. WHERE BATTERY LOWERING DEVICE IS SPECIFIED, PROVIDE AUXILIARY CONTACT AND POWER WIRING.
7. WHERE ELEVATOR IS SUPPLIED FROM EMERGENCY GENERATOR, PROVIDE INTERFACE TO AUTOMATIC TRANSFER SWITCH FOR EMERGENCY POWER TRANSFER AND POWER CHANGE PENDING SIGNALS.
8. WHERE ELEVATOR CONTROLLER IS LOCATED AS PART OF THE ELEVATOR HOISTWAY, LOCATE ELEVATOR DISCONNECTING MEANS IN ELECTRICAL ROOM AND PROVIDE ADDITIONAL NON-FUSED DISCONNECT IN THE HOISTWAY WITHIN SIGHT OF THE CONTROLLER.

4 ELEVATOR CONNECTION DIAGRAM
SCALE: NONE

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UK PROJECT NUMBER	2874.0
OMNI PROJECT NUMBER	2406
DATE	04/15/2025
	BP#2

REVISIONS:
⚠ BID CHANGES	05-13-2025

ELECTRICAL DETAILS

E6.3

SWITCHBOARD AND WIRING SCHEDULE

SWITCHBOARD: 1MSB1 | **MAINS TYPE:** | **kAIC VALUE:**
VOLTAGE: 480Y/277V,3P,4W | **SPD:** No | **kAIC RATING:**
AMPERES: 1600 A | **MOUNTING:** FLOOR | **LOCATION:** MECH A106
SUPPLY FROM:

CKT	CIRCUIT DESCRIPTION	SETS	WIRE	GND	COND	POLES	FRAME	TRIP	Load	REMARKS
1	1HP1					3	400 A	100 A	4.0	
2	1NT2					3	400 A	225 A	67.3	
3	2NT1					3	400 A	200 A	44.1	
4	ATS-S					3	400 A	225 A	1.0	
5	ATS-E					3	400 A	60 A	4.0	
6	CH-1					3	400 A	400 A	1.0	
7	2HP1					3	400 A	400 A	5.0	
8	TVSS					3	400 A	60 A	0.5	
9	SPARE	--	--	--	--	1	400 A	20 A	0.0	
10	SPARE	--	--	--	--	1	400 A	20 A	0.0	
11	SPACE	--	--	--	--	1	--	--	--	
12	SPACE	--	--	--	--	1	--	--	--	

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	24580 VA	100.00%	24580 VA	TOTAL CONN. LOAD:	127 kVA
HVAC	3000 VA	100.00%	3000 VA	TOTAL EST. DEMAND:	94 kVA
LTNG	22838 VA	100.00%	22838 VA	TOTAL CONN. CURRENT:	153 A
REC	76510 VA	56.54%	43255 VA	TOTAL EST. DEMAND CURRENT:	113 A

NOTES:
THIS EQUIPMENT HAS BEEN PURCHASED IN A PRIOR BID PACKAGE.

PANELBOARD AND WIRING SCHEDULE

PANEL: 2HP1 | **MAINS TYPE:** MLO | **PANEL INTERRUPTING RATING:** 25K
VOLTAGE: 480Y/277V,3P,4W | **SPD:** No | **LOCATION:** MECH. A214
AMPERES: 400 A | **MOUNTING:** SURFACE | **SUPPLY FROM:** 1MSB1

NOTES	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A		B		C		CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	NOTES
					1	0.3	0.3					2					
	AHU-2 SF	3-#6, 1-#6, 1-#10	50	3	3			0.3	0.3			4	3	30	3-#10, 1-#10, 1-#10	AHU-2 RF	
					5					0.3	0.3	6					
					7	0.3	0.3					8					
	AHU-3 SF (ALTERNATE)	3-#6, 1-#6, 1-#10	50	3	9			0.3	0.3			10	3	30	3-#10, 1-#10, 1-#10	AHU-3 RF (ALTERNATE)	
					11					0.3	0.3	12					
					13	0.3	0.0					14					
	AHU-1	3-#2, 1-#2, 1-#8	90	3	15			0.3	0.0			16	3	30	--	SPARE	
					17					0.3	0.0	18					
	SPARE	--	20	1	19	0.0	0.0					20	1	20	--	SPARE	
	SPARE	--	20	1	21			0.0	0.0			22	1	20	--	SPARE	
	SPARE	--	20	1	23					0.0	0.0	24	1	20	--	SPARE	
	SPARE	--	20	1	25	0.0	0.0					26	1	20	--	SPARE	
	SPARE	--	20	1	27			0.0	0.0			28	1	20	--	SPARE	
	SPARE	--	20	1	29					0.0	0.0	30	1	20	--	SPARE	
	SPACE	--	--	1	31	--	--					32	1	--	--	SPACE	
	SPACE	--	--	1	33			--	--			34	1	--	--	SPACE	
	SPACE	--	--	1	35					--	--	36	1	--	--	SPACE	
	SPACE	--	--	1	37	--	--					38	1	--	--	SPACE	
GFI	SPACE	--	--	1	39			--	0.0			40	1	20	--	SPARE	GFI
GFI	SPACE	--	--	1	41					--	0.0	42	1	20	--	SPARE	GFI
						1.7 kVA		1.7 kVA		1.7 kVA							
						6 A		6 A		6 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	5000 VA	100.00%	5000 VA	TOTAL CONNECTED LOAD:	5000 VA
				TOTAL ESTIMATED DEMAND:	5000 VA
				TOTAL CONNECTED CURRENT:	6 A
				TOTAL ESTIMATED DEMAND CURRENT:	6 A
				25 % ADDITIONAL CAPACITY:	2 A
				TOTAL PANEL CURRENT:	8 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: 1HP1 | **MAINS TYPE:** MLO | **PANEL INTERRUPTING RATING:** 35K
VOLTAGE: 480Y/277V,3P,4W | **SPD:** No | **LOCATION:** MECH A106
AMPERES: 100 A | **MOUNTING:** SURFACE | **SUPPLY FROM:** 1MSB1

3 ADD 03

NOTES	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A		B		C		CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	NOTES
					1	0.3	0.3					2					
	P-1B	3-#10, 1-#10, 1-#10	25	3	3			0.3	0.3			4	3	25	3-#10, 1-#10, 1-#10	P-1A	
					5					0.3	0.3	6					
					7	0.3	0.3					8					
	P-2A	3-#12, 1-#12, 1-#12	20	3	9			0.3	0.3			10	3	20	3-#12, 1-#12, 1-#12	P-2B	
					11					0.3	0.3	12					
	SPARE	--	20	1	13	0.0	0.0					14					
	SPARE	--	20	1	15			0.0	0.0			16	3	20	--	SPARE	
	SPARE	--	20	1	17					0.0	0.0	18					
	SPARE	--	20	1	19	0.0	0.0					20	1	20	--	SPARE	
	SPACE	--	--	1	21			--	--			22	1	--	--	SPACE	
	SPACE	--	--	1	23					--	--	24	1	--	--	SPACE	
	SPACE	--	--	1	25	--	--					26	1	--	--	SPACE	
GFI	SPARE	--	20	1	27			0.0	0.0			28	1	20	--	SPARE	GFI
GFI	SPARE	--	20	1	29					0.0	0.0	30	1	20	--	SPARE	GFI
						1.3 kVA		1.3 kVA		1.3 kVA							
						5 A		5 A		5 A							

3 ADD 03

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	4000 VA	100.00%	4000 VA	TOTAL CONNECTED LOAD:	4000 VA
				TOTAL ESTIMATED DEMAND:	4000 VA
				TOTAL CONNECTED CURRENT:	5 A
				TOTAL ESTIMATED DEMAND CURRENT:	5 A
				25 % ADDITIONAL CAPACITY:	1 A
				TOTAL PANEL CURRENT:	6 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: 1LDP1 | **MAINS TYPE:** MCB | **PANEL INTERRUPTING RATING:** 25K
VOLTAGE: 208Y/120V,3P,4W | **SPD:** | **LOCATION:** MECH A106
AMPERES: 400 A | **MOUNTING:** SURFACE | **SUPPLY FROM:** 1NT1

NOTES	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A		B		C		CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	NOTES
					1	9.0	10.9					2					
	1LP1	3-#3/0, 1-#3/0, 1-#6	150	3	3			8.4	14.7			4	3	200	3-#250, 1-#250, 1-#6	1LP2	
					5					8.2	13.1	6					
	WH-2	1-#8, 1-#8, 1-#10	35	1	7	1.5	0.0					8	1	30	--	SPARE	
	WH-2	1-#8, 1-#8, 1-#10	35	1	9			1.5	--			10	1	--	--	SPACE	
	SPACE	--	--	1	11					--	--	12	1	--	--	SPACE	
						21.5 kVA		24.6 kVA		21.2 kVA							
						179 A		205 A		177 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	6500 VA	100.00%	6500 VA	TOTAL CONNECTED LOAD:	67320 VA
HVAC	3000 VA	100.00%	3000 VA	TOTAL ESTIMATED DEMAND:	49050 VA
LTNG	11280 VA	100.00%	11280 VA	TOTAL CONNECTED CURRENT:	187 A
REC	46540 VA	60.74%	28270 VA	TOTAL ESTIMATED DEMAND CURRENT:	136 A
				25 % ADDITIONAL CAPACITY:	34 A
				TOTAL PANEL CURRENT:	170 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: 1ESP1 | **MAINS TYPE:** MCB | **PANEL INTERRUPTING RATING:** 10K
VOLTAGE: 208Y/120V,3P,4W | **SPD:** No | **LOCATION:** MECH A106
AMPERES: 60 A | **MOUNTING:** SURFACE | **SUPPLY FROM:**

NOTES	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A		B		C		CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	NOTES
	EQUIP H103E LAB FUME HOOD	1-#12, 1-#12, 1-#12	20	1	1	0.2	0.5					2	1	20	1-#12, 1-#12, 1-#12	EQUIP H103N BULKING PHONE	
	EQUIP H103J ROLLING DOOR	1-#12, 1-#12, 1-#12	20	1	3			0.5	0.5			4	1	20	1-#12, 1-#12, 1-#12	EQUIP H103 ROLLING DOOR	
	REC H102C CHEST FREEZER(S)	1-#12, 1-#12, 1-#12	20	1	5					0.2	0.0	6	1	20	1-#12, 1-#12, 1-#12	EQUIP	
	FUME HOOD - BULKING	1-#12, 1-#12, 1-#12	20	1	7	0.2	0.1					8	2	20	2-#12, 1-#12, 1-#12	FPP-1	
	B-1B	1-#12, 1-#12, 1-#12	20	1	9			0.5	0.1			10					
	B-1A	1-#12, 1-#12, 1-#12	20	1	11					0.5	0.5	12	1	20	1-#12, 1-#12, 1-#12	BMS PANEL	
	IDF DATA RACK	1-#12, 1-#12, 1-#12	20	1	13	0.2	0.2					14	1	20	1-#12, 1-#12, 1-#12	MDF DATA RACK	
	EQUIP H102A ROLLING DOOR	1-#12, 1-#12, 1-#12	20	1	15			0.5	0.0			16	2	30	--	SPARE	
	LTNG	1-#12, 1-#12, 1-#12	20	1	17					0.3	0.0	18					
	REC CORRIDORS	1-#10, 1-#10, 1-#10	20	1	19	1.4	0.0					20	2	30	--	SPARE	
	BMS PANEL	1-#12, 1-#12, 1-#12	20	1	21			0.5	0.0			22					
	REC PROCESSING	1-#12, 1-#12, 1-#12	20	1	23					0.5	0.0	24	1	20	--	SPARE	
	EQUIP	1-#12, 1-#12, 1-#12	20	1	25	0.5	0.0					26	1	20	--	SPARE	
	SPARE	--	20	1	27			0.0	0.0			28	1	20	--	SPARE	
	REC	1-#12, 1-#12, 1-#12	20	1	29					0.7	0.0	30	1	20	--	SPARE	
	REC	1-#12, 1-#12, 1-#12	20	1	31	1.1	0.0					32	1	20	--	SPARE	
	AUTO DOORS	1-#8, 1-#8, 1-#8	20	1	33			1.5	--			34	1	--	--	SPACE	
	SPACE	--	--	1	35					--	--	36	1	--	--	SPACE	
	SPACE	--	--	1	37	--	--					38	1	--	--	SPACE	
GFI	SPARE	--	20	1	39			0.0	0.0			40	1	20	--	SPARE	GFI
GFI	SPARE	--	20	1	41					0.0	0.0	42	1	20	--	SPARE	GFI
						4.4 kVA		4.1 kVA		2.7 kVA							
						38 A		36 A		23 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	6600 VA	100.00%	6600 VA	TOTAL CONNECTED LOAD:	11208 VA
LTNG	288 VA	100.00%	288 VA	TOTAL ESTIMATED DEMAND:	11208 VA
REC	4320 VA	100.00%	4320 VA	TOTAL CONNECTED CURRENT:	31 A
				TOTAL ESTIMATED DEMAND CURRENT:	31 A
				25 % ADDITIONAL CAPACITY:	8 A
				TOTAL PANEL CURRENT:	39 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: 1ESP2 | **MAINS TYPE:** MLO | **PANEL INTERRUPTING RATING:** 25K
VOLTAGE: 480Y/277V,3P,4W | **SPD:** No | **LOCATION:** MECH A106
AMPERES: 225 A | **MOUNTING:** SURFACE | **SUPPLY FROM:** ATS-S

NOTES	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A		B		C		CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	NOTES
					1	0.3	0.0					2	1	20	--	SPARE	
	LEF-1	3-#2, 1-#2, 1-#8	90	3	3			0.3	0.0			4	1	20	--	SPARE	
					5					0.3	0.0	6	1	20	--	SPARE	
	SPARE	--	20	1	7	0.0	0.0					8	1	20	--	SPARE	
	SPARE	--	20	1	9			0.0	0.0			10	1	20	--	SPARE	
	SPARE	--	20	1	11					0.0	0.0	12	1	20	--	SPARE	
	SPARE	--	20	1	13	0.0	0.0					14	1	20	--	SPARE	
	SPARE	--	20	1	15			0.0	0.0			16	1	20	--	SPARE	
	SPARE	--	20	1	17					0.0	0.0	18	1	20	--	SPARE	
	SPARE	--	20	1	19	0.0	0.0					20	1	20	--	SPARE	
	SPARE	--	20	1	21			0.0	0.0			22	1	20	--	SPARE	
	SPARE	--	20	1	23					0.0	0.0	24	1	20	--	SPARE	
	SPARE	--	20	1	25	0.0	0.0					26	1	20	--	SPARE	
	SPARE	--	20	1	27			0.0	0.0			28	1	20	--	SPARE	
	SPARE	--	20	1	29					0.0	0.0	30	1	20	--	SPARE	
	SPARE	--	20	1	31	0.0	0.0					32	1	20	--	SPARE	
	SPARE	--	20	1	33			0.0	0.0			34	1	20	--	SPARE	
	SPARE	--	20	1	35					0.0	0.0	36	1	20	--	SPARE	
	SPARE	--	20	1	37	0.0	0.0					38	1	20	--	SPARE	
GFI	SPARE	--	20	1	39			0.0	0.0			40	1	20	--	SPARE	GFI
GFI	SPARE	--	20	1	41					0.0	0.0	42	1	20	--	SPARE	GFI
						0.3 kVA		0.3 kVA		0.3 kVA							
						1 A		1 A		1 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	1000 VA	100.00%	1000 VA	TOTAL CONNECTED LOAD:	1000 VA
				TOTAL ESTIMATED DEMAND:	1000 VA
				TOTAL CONNECTED CURRENT:	1 A
				TOTAL ESTIMATED DEMAND CURRENT:	1 A
				25 % ADDITIONAL CAPACITY:	0 A
				TOTAL PANEL CURRENT:	2 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: 1EEP1 | **MAINS TYPE:** MCB | **PANEL INTERRUPTING RATING:** 10K
VOLTAGE: 208Y/120V,3P,4W | **SPD:** | **LOCATION:** MECH A106
AMPERES: 100 A | **MOUNTING:** SURFACE | **SUPPLY FROM:** 1NT2

NOTES	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A		B		C		CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	NOTES
	FIRST FLOOR EMERGENCY...	1-#12, 1-#12, 1-#12	20	1	1	0.2	1.1					2	1	20	1-#8, 1-#8, 1-#8	FIRST FLOOR EMERGENCY...	
					3							4					
	FIRST FLOOR EMERGENCY...	1-#12, 1-#12, 1-#12	20	1	5					0.2	0.3	6	1	20	1-#12, 1-#12, 1-#12	SECOND FLOOR EMERGENCY...	
	SECOND FLOOR EMERGENCY...	1-#12, 1-#12, 1-#12	20	1	7	0.1	0.1					8	1	20	1-#12, 1-#12, 1-#12	SECOND FLOOR EMERGENCY...	
	LTNG	1-#12, 1-#12, 1-#12	20	1	9			0.3	0.0			10	1	20	1-#12, 1-#12, 1-#12	SECOND FLOOR EMERGENCY...	
	SECOND FLOOR EMERGENCY...	1-#12, 1-#12, 1-#12	20	1	11					0.0	0.5	12	1	20	1-#12, 1-#12, 1-#12	SEC-A	
	FACP	1-#12, 1-#12, 1-#12	20	1	13	0.5	0.5					14	1	20	1-#12, 1-#12, 1-#12	SEC-I	
	SEC-A	1-#12, 1-#12, 1-#12	20	1	15			0.2	0.0			16	1	20	--	SPARE	
	SPARE	--	20	1	17					0.0	0.0	18	1	20	--	SPARE	
	SPARE	--	20	1	19	0.0	0.0					20	1	20	--	SPARE	
	SPARE	--	20	1	21			0.0	0.0			22	1	20	--	SPARE	
	SPARE	--	20	1	23					0.0	0.0	24	1	20	--	SPARE	
	SPACE	--	--	1	25	--	--					26	1	--	--	SPACE	
	SPACE	--	--	1	27			--	--			28	1	--	--	SPACE	
	SPACE	--	--	1	29					--	--	30	1	--	--	SPACE	
	SPACE	--	--	1	31	--	--					32	1	--	--	SPACE	
	SPACE	--	--	1	33			--	--			34	1	--	--	SPACE	
	SPACE	--	--	1	35					--	--	36	1	--	--	SPACE	
	SPACE	--	--	1	37	--	--					38	1	--	--	SPACE	
GFI	SPARE	--	20	1	39			0.0	0.0			40	1	20	--	SPARE	GFI
GFI	SPARE	--	20	1	41					0.0	0.0	42	1	20	--	SPARE	GFI
						2.6 kVA		0.4 kVA		1.0 kVA							
						23 A		4 A		9 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	1500 VA	100.00%	1500 VA	TOTAL CONNECTED LOAD:	4016 VA
LTNG	2336 VA	100.00%	2336 VA	TOTAL ESTIMATED DEMAND:	4016 VA
REC	180 VA	100.00%	180 VA	TOTAL CONNECTED CURRENT:	11 A
				TOTAL ESTIMATED DEMAND CURRENT:	11 A
				25 % ADDITIONAL CAPACITY:	3 A
				TOTAL PANEL CURRENT:	14 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: 1LP1 | **MAINS TYPE:** MLO | **PANEL INTERRUPTING RATING:** 22K
VOLTAGE: 208Y/120V,3P,4W | **SPD:** No | **LOCATION:** MECH A106
AMPERES: 150 A | **MOUNTING:** SURFACE | **SUPPLY FROM:** 1LDP1

NOTES	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A		B		C		CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	NOTES
	REC A119D DIRECTOR OFFICE	1-#12, 1-#12, 1-#12	20	1	1	0.5	0.7					2	1	20	1-#12, 1-#12, 1-#12	REC A119C LEAD OFFICE	
	REC A119B LEAD OFFICE	1-#12, 1-#12, 1-#12	20	1	3			0.7	0.7			4	1	20	1-#12, 1-#12, 1-#12	REC A119A LEAD OFFICE	
	REC A119E LEAD OFFICE	1-#10, 1-#10, 1-#10	20	1	5					1.0	1.0	6	1	20	1-#10, 1-#10, 1-#10	REC A119F LEAD OFFICE	
	REC A119G OFFICE	1-#12, 1-#12, 1-#12	20	1	7	0.7	0.9					8	1	20	1-#12, 1-#12, 1-#12	REC A105A EXEC DIRECTOR	
	REC A105 DIRECTOR SUITE	1-#12, 1-#12, 1-#12	20	1	9			0.9	0.7			10	1	20	1-#12, 1-#12, 1-#12	REC A105B LEAD OFFICE	
	REC A119K WKRM COPIER	1-#12, 1-#12, 1-#12	20	1	11					0.4	0.7	12	1	20	1-#12, 1-#12, 1-#12	REC A103F LEAD OFFICE	
	REC A119K WKRM FRIDGE	1-#12, 1-#12, 1-#12	20	1	13	0.2	0.7					14	1	20	1-#12, 1-#12, 1-#12	REC A103E OFFICE	
	REC A119K WKRM MICROWAVE	1-#12, 1-#12, 1-#12	20	1	15			0.4	0.9			16	1	20	1-#12, 1-#12, 1-#12	REC A103J OFFICE	
	REC A119K WKRM DISHWASHER	1-#12, 1-#12, 1-#12	20	1	17					0.2	0.5	18	1	20	1-#12, 1-#12, 1-#12	EQUIP A100B COOR EWC	
	REC 199K WKRM	1-#12, 1-#12, 1-#12	20	1	19	0.2	0.9					20	1	20	1-#12, 1-#12, 1-#12	REC H102B WALLS	
	REC A103G WKRM COPIER	1-#12, 1-#12, 1-#12	20	1	21			0.2	1.1			22	1	20	1-#12, 1-#12, 1-#12	REC H102B1 WIRE MOLD	
	REC A103G WKRM FRIDGE	1-#12, 1-#12, 1-#12	20	1	23					0.2	0.7	24	1	20	1-#12, 1-#12, 1-#12	REC H102B WIRE MOLD	
	REC A103G WKRM MICROWAVE	1-#12, 1-#12, 1-#12	20	1	25	0.2	0.5					26	1	20	1-#12, 1-#12, 1-#12	REC A119H SML CONFERENCE	
	REC A103G WKRM COFFEE MAKER	1-#12, 1-#12, 1-#12	20	1	27			0.2	0.0			28	1	20	1-#12, 1-#12, 1-#12	PARKING LOT LIGHTING	
	REC A103G WKRM	1-#12, 1-#12, 1-#12	20	1	29					0.7	1.0	30	1	20	1-#10, 1-#10, 1-#10	LTNG ENV. QUALITY SUITE	
	REC H103N PROCESS/BULKING	1-#12, 1-#12, 1-#12	20	1	31	0.5	0.7					32	1	20	1-#12, 1-#12, 1-#12	LTNG OCC. HEALTH SUITE	
	P-3A	2-#12, 1-#12, 1-#12	20	2	33			0.3	0.1			34					
					35					0.3	0.1	36	3	50	3-#6, 1-#6, 1-#10	DRUM CRUSHER	
	P-3B	2-#12, 1-#12, 1-#12	20	2	37	0.3	0.1					38					
					39			0.3	0.2			40	1	30	1-#10, 1-#10, 1-#10	REC	
	LTNG OCC. HEALTH SUITE	1-#8, 1-#8, 1-#8	20	1	41					1.3	0.2	42	1	20	1-#12, 1-#12, 1-#12	REC A103G DISHWASHER	
	LTNG CORRIDOR A100	1-#12, 1-#12, 1-#12	20	1	43	0.9	1.0					44	1	20	1-#10, 1-#10, 1-#10	LTNG	
	LTNG	1-#10, 1-#10, 1-#10	20	1	45			1.3	0.6			46	1	20	1-#12, 1-#12, 1-#12	LTNG	
	SPARE	--	20	1	47					0.0	0.0	48	1	20	--	SPARE	
	SPARE	--	20	1	49	0.0	0.0					50	1	20	--	SPARE	
	SPARE	--	20	1	51			0.0	0.0			52	1	20	--	SPARE	
	SPARE	--	20	1	53					0.0	0.0	54	1	20	--	SPARE	
	SPARE	--	20	1	55	0.0	0.0					56	1	20	--	SPARE	
	SPARE	--	20	1	57			0.0	0.0			58	1	20	--	SPARE	
	SPACE	--	--	1	59					--	--	60	1	--	--	SPACE	
	SPACE	--	--	1	61	--	--					62	1	--	--	SPACE	
	SPACE	--	--	1	63			--	--			64	1	--	--	SPACE	
	SPACE	--	--	1	65					--	--	66	1	--	--	SPACE	
	SPACE	--	--	1	67	--	--					68	1	--	--	SPACE	
GFI	SPARE	--	20	1	69			0.0	0.0			70	1	20	--	SPARE	GFI
GFI	SPARE	--	20	1	71					0.0	0.0	72	1	20	--	SPARE	GFI
						9.0 kVA		8.4 kVA		8.2 kVA							
						76 A		71 A		68 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	2500 VA	100.00%	2500 VA	TOTAL CONNECTED LOAD:	25640 VA
LTNG	6760 VA	100.00%	6760 VA	TOTAL ESTIMATED DEMAND:	22450 VA
REC	16380 VA	80.53%	13190 VA	TOTAL CONNECTED CURRENT:	71 A
				TOTAL ESTIMATED DEMAND CURRENT:	62 A
				25 % ADDITIONAL CAPACITY:	16 A
				TOTAL PANEL CURRENT:	78 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: 1LP2 | **MAINS TYPE:** MLO | **PANEL INTERRUPTING RATING:** 22K
VOLTAGE: 208Y/120V,3P,4W | **SPD:** No | **LOCATION:** MECH A106
AMPERES: 200 A | **MOUNTING:** SURFACE | **SUPPLY FROM:** 1LDP1

NOTES	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A		B		C		CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	NOTES
	REC A119L PHONE BOOTH	1-#12, 1-#12, 1-#12	20	1	1	0.7	0.7					2	1	20	1-#12, 1-#12, 1-#12	REC A100 CORRIDOR	
	REC A100C CORRIDOR	1-#12, 1-#12, 1-#12	20	1	3			0.5	0.9			4	1	20	1-#12, 1-#12, 1-#12	REC A119J SML CONFERENCE	
	REC A111, A109 RESTROOMS	1-#12, 1-#12, 1-#12	20	1	5					0.9	0.7	6	1	20	1-#12, 1-#12, 1-#12	REC A104 MED CONFERENCE	
	REC A103H STORAGE	1-#12, 1-#12, 1-#12	20	1	7	0.5	0.2					8	1	20	1-#12, 1-#12, 1-#12	REC ELEVATOR	
	REC A103H STORAGE FRIDGE	1-#12, 1-#12, 1-#12	20	1	9			0.2	1.2			10	1	20	1-#12, 1-#12, 1-#12	REC A108, A110	
	REC A103H STORAGE SHELVING	1-#12, 1-#12, 1-#12	20	1	11					1.1	0.7	12	1	20	1-#12, 1-#12, 1-#12	REC A112, A114, H101	
	REC H102 RAD STORAGE	1-#12, 1-#12, 1-#12	20	1	13	0.5	0.9					14	1	20	1-#12, 1-#12, 1-#12	REC H102C RAD WASTE - LIQUIDS	
	REC H102 WIRE MOLD	1-#12, 1-#12, 1-#12	20	1	15			1.7	0.5			16	1	20	1-#12, 1-#12, 1-#12	REC H102A RAD WASTE - SOLIDS	
	REC H102 WIRE MOLD	1-#12, 1-#12, 1-#12	20	1	17					1.7	0.7	18	1	20	1-#12, 1-#12, 1-#12	REC H102A RAD WASTE - SOLIDS	
	REC H102 FRIDGE	1-#12, 1-#12, 1-#12	20	1	19	0.2	0.2					20	1	20	1-#12, 1-#12, 1-#12	REC H103P SUPPLY ICE-MAKER	
	REC H103P SUPPLIES/STORAGE	1-#10, 1-#10, 1-#10	20	1	21			1.3	0.9			22	1	20	1-#12, 1-#12, 1-#12	REC H103P1 DIRTY WATER	
	LTNG	1-#12, 1-#12, 1-#12	20	1	23					0.9	0.8	24	1	20	1-#12, 1-#12, 1-#12	LTNG	
	LTNG	1-#10, 1-#10, 1-#10	20	1	25	0.9	0.9					26	1	20	1-#10, 1-#10, 1-#10	LTNG	
	REC H103E LAB	1-#12, 1-#12, 1-#12	20	1	27			1.1	0.7			28	1	20	1-#12, 1-#12, 1-#12	REC H103 PROCESSING	
	REC H103F REACTIVES	1-#12, 1-#12, 1-#12	20	1	29					0.2	0.9	30	1	20	1-#10, 1-#10, 1-#10	REC H103 PROCESSING	
	REC H103H METALS	1-#12, 1-#12, 1-#12	20	1	31	0.2	0.6					32	1	20	1-#12, 1-#12, 1-#12	REC H103 PROCESSING	
	REC H103G ACIDS	1-#12, 1-#12, 1-#12	20	1	33			0.2	0.9			34	1	20	1-#10, 1-#10, 1-#10	REC H103J FLAMMABLE	
	LTNG	1-#12, 1-#12, 1-#12	20	1	35					1.1	0.7	36	1	20	1-#12, 1-#12, 1-#12	REC OCC HEALTH SUITE QUADS	
	REC OCC HEALTH SUITE QUADS	1-#12, 1-#12, 1-#12	20	1	37	0.7	0.7					38	1	20	1-#12, 1-#12, 1-#12	REC OCC HEALTH SUITE QUADS	
	REC OCC HEALTH SUITE QUADS	1-#12, 1-#12, 1-#12	20	1	39			0.7	1.1			40	1	20	1-#10, 1-#10, 1-#10	REC OCC HEALTH SUITE QUADS	
	REC OCC HEALTH SUITE	1-#12, 1-#12, 1-#12	20	1	41					0.7	0.7	42	1	20	1-#12, 1-#12, 1-#12	REC ENV QUALITY SUITE QUADS	
	REC A102 RECEPTION	1-#12, 1-#12, 1-#12	20	1	43	1.1	0.7					44	1	20	1-#12, 1-#12, 1-#12	REC ENV QUALITY SUITE QUADS	
	REC ENV QUALITY SUITE	1-#12, 1-#12, 1-#12	20	1	45			0.9	0.7			46	1	20	1-#12, 1-#12, 1-#12	REC ENV QUALITY SUITE QUADS	
	REC LOCKERS	1-#12, 1-#12, 1-#12	20	1	47					0.4	0.7	48	1	20	1-#12, 1-#12, 1-#12	REC ENV QUALITY SUITE QUADS	
	REC PROCESSING QUADS	1-#12, 1-#12, 1-#12	20	1	49	0.7	0.5					50	1	15	1-#12, 1-#12, 1-#12	RP-1	
	ROLLER SHADES	1-#10, 1-#10, 1-#10	20	1	51			1.0	0.2			52	1	20	1-#12, 1-#12, 1-#12	MDF DATA RACK	
	IDF DATA RACK (ALTERNATE)	1-#12, 1-#12, 1-#12	20	1	53					0.2	0.0	54	1	20	--	SPARE	
	SPARE	--	20	1	55	0.0	0.0					56	1	20	--	SPARE	
	SPARE	--	20	1	57			0.0	0.0			58	1	20	--	SPARE	
	SPARE	--	20	1	59					0.0	0.0	60	1	20	--	SPARE	
	SPACE	--	--	1	61	--	--					62	1	--	--	SPACE	
	SPACE	--	--	1	63			--	--			64	1	--	--	SPACE	
	SPACE	--	--	1	65					--	--	66	1	--	--	SPACE	
	SPACE	--	--	1	67	--	--					68	1	--	--	SPACE	
GFI	SPARE	--	20	1	69			0.0	0.0			70	1	20	--	SPARE	GFI
GFI	SPARE	--	20	1	71					0.0	0.0	72	1	20	--	SPARE	GFI
						10.9 kVA		14.7 kVA		13.1 kVA							
						91 A		125 A		112 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	4000 VA	100.00%	4000 VA	TOTAL CONNECTED LOAD:	38680 VA
LTNG	4520 VA	100.00%	4520 VA	TOTAL ESTIMATED DEMAND:	28600 VA
REC	30160 VA	66.58%	20080 VA	TOTAL CONNECTED CURRENT:	107 A
				TOTAL ESTIMATED DEMAND CURRENT:	79 A
				25 % ADDITIONAL CAPACITY:	20 A
				TOTAL PANEL CURRENT:	99 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: 2LP1 | **MAINS TYPE:** MCB | **PANEL INTERRUPTING RATING:** 10K
VOLTAGE: 208Y/120V,3P,4W | **SPD:** No | **LOCATION:** MECH. A214
AMPERES: 225 A | **MOUNTING:** SURFACE | **SUPPLY FROM:** 2NT1

NOTES	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A		B		C		CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	NOTES
	REC A208 BRKRM DSGND CKT	1-#12, 1-#12, 1-#12	20	1	1	0.2	0.5					2	1	20	1-#12, 1-#12, 1-#12	EQUIP A200B CORR EWC	
	REC A208 BRKRM DSGND CKT	1-#12, 1-#12, 1-#12	20	1	3			0.2	0.2			4	1	20	1-#12, 1-#12, 1-#12	REC A216 LACT RM DSGND CKT	
	REC A208 BRKRM FRIDGE	1-#12, 1-#12, 1-#12	20	1	5					0.2	0.2	6	1	20	1-#12, 1-#12, 1-#12	REC A219J WKRM COPIER	
	REC A208 BRKRM FRIDGE	1-#12, 1-#12, 1-#12	20	1	7	0.2	0.2					8	1	20	1-#12, 1-#12, 1-#12	REC A207E WKRM COPIER	
	REC A208 BRKRM FRIDGE	1-#12, 1-#12, 1-#12	20	1	9			0.2	0.5			10	1	20	1-#12, 1-#12, 1-#12	REC A201 SIM LAB GFI RACEWAY	
	REC A208 BRKRM MICROWAVE	1-#12, 1-#12, 1-#12	20	1	11					0.2	0.6	12	1	20	1-#12, 1-#12, 1-#12	REC A201 SIM LAB GFI RACEWAY	
	REC A208 BRKRM MICROWAVE	1-#12, 1-#12, 1-#12	20	1	13	0.2	0.2					14	1	20	1-#12, 1-#12, 1-#12	REC A201 SIM LAB FRIDGE	
	REC A208 BRKRM MICROWAVE	1-#12, 1-#12, 1-#12	20	1	15			0.2	0.2			16	1	20	1-#12, 1-#12, 1-#12	REC A201 SIM LAB INCUBATOR	
	REC A208 BRKRM MICROWAVE	1-#12, 1-#12, 1-#12	20	1	17					0.2	0.2	18	1	20	1-#12, 1-#12, 1-#12	REC A201 SIM LAB JBOX	
	REC A208 BRKRM DISHWASHER	1-#12, 1-#12, 1-#12	20	1	19	0.2	0.2					20	1	20	1-#12, 1-#12, 1-#12	REC A201 SIM LAB JBOX	
	REC A208 BRKRM DISHWASHER	1-#12, 1-#12, 1-#12	20	1	21			0.2	0.6			22	1	20	1-#12, 1-#12, 1-#12	LTNG	
	EF-1	1-#12, 1-#12, 1-#12	20	1	23					1.0	0.6	24	1	20	1-#12, 1-#12, 1-#12	LTNG	
					25	0.1	0.5					26	2	30	2-#10, 1-#10, 1-#10	CU-1	
	RF-1	3-#12, 1-#12, 1-#12	20	3	27			0.1	0.5			28					
					29					0.1	0.5	30	2	30	2-#10, 1-#10, 1-#10	CU-2 (ALTERNATE)	
	FCU-2	1-#12, 1-#12, 1-#12	20	1	31	0.2	0.5					32					
	REC IDF A22 (ALTERNATE)	1-#12, 1-#12, 1-#12	20	1	33			0.5	0.5			34	1	20	1-#12, 1-#12, 1-#12	REC MDF A120	
	LTNG	1-#10, 1-#10, 1-#10	20	1	35					1.0	1.4	36	1	20	1-#10, 1-#10, 1-#10	LTNG	
	LTNG	1-#10, 1-#10, 1-#10	20	1	37	1.4	1.2					38	1	20	1-#10, 1-#10, 1-#10	LTNG	
	LTNG	1-#8, 1-#8, 1-#8	20	1	39			1.3	0.9			40	1	20	1-#12, 1-#12, 1-#12	LTNG	
	LTNG	1-#12, 1-#12, 1-#12	20	1	41					0.3	1.1	42	1	20	1-#12, 1-#12, 1-#12	REC BREAKROOM COUNTERS	
	REC DIRECTOR OFFICE	1-#10, 1-#10, 1-#10	20	1	43	0.7	0.7					44	1	20	1-#10, 1-#10, 1-#10	REC MANAGER OFFICE	
	REC MANAGER OFFICE	1-#12, 1-#12, 1-#12	20	1	45			0.7	0.7			46	1	20	1-#12, 1-#12, 1-#12	REC MANAGER OFFICE	
	REC LACTATION RM / JANITOR	1-#12, 1-#12, 1-#12	20	1	47					0.5	0.7	48	1	20	1-#12, 1-#12, 1-#12	REC RESEARCH SAFETY	
	ROLLER SHADES	1-#12, 1-#12, 1-#12	20	1	49	0.8	0.9					50	1	20	1-#12, 1-#12, 1-#12	REC	
	REC	1-#12, 1-#12, 1-#12	20	1	51			0.7	1.1			52	1	20	1-#12, 1-#12, 1-#12	REC	
	REC	1-#10, 1-#10, 1-#10	20	1	53					1.4	1.4	54	1	20	1-#10, 1-#10, 1-#10	REC	
	REC	1-#12, 1-#12, 1-#12	20	1	55	1.4	0.7					56	1	20	1-#12, 1-#12, 1-#12	REC	
	REC	1-#10, 1-#10, 1-#10	20	1	57			1.4	0.9			58	1	20	1-#12, 1-#12, 1-#12	REC	
	REC	1-#10, 1-#10, 1-#10	20	1	59					1.4	0.9	60	1	20	1-#12, 1-#12, 1-#12	REC	
	REC	1-#12, 1-#12, 1-#12	20	1	61	0.7	1.3					62	1	20	1-#10, 1-#10, 1-#10	REC	
	REC	1-#10, 1-#10, 1-#10	20	1	63			1.1	0.7			64	1	20	1-#12, 1-#12, 1-#12	REC	
	REC	1-#10, 1-#10, 1-#10	20	1	65					1.1	1.1	66	1	20	1-#10, 1-#10, 1-#10	EQUIP	
	REC	1-#10, 1-#10, 1-#10	20	1	67	1.1	0.6					68	1	20	1-#12, 1-#12, 1-#12	LTNG	
GFI	SPARE	--	20	1	69			0.0	0.0			70	1	20	--	SPARE	GFI
GFI	SPARE	--	20	1	71					0.0	0.0	72	1	20	--	SPARE	GFI
						14.6 kVA		13.4 kVA		16.2 kVA							
						123 A		111 A		136 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	5080 VA	100.00%	5080 VA	TOTAL CONNECTED LOAD:	44092 VA
LTNG	9222 VA	100.00%	9222 VA	TOTAL ESTIMATED DEMAND:	34197 VA
REC	29790 VA	66.78%	19895 VA	TOTAL CONNECTED CURRENT:	122 A
				TOTAL ESTIMATED DEMAND CURRENT:	95 A
				25 % ADDITIONAL CAPACITY:	24 A
				TOTAL PANEL CURRENT:	119 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.
CIRCUITS DESGINATED FOR ALTERNATE BID PACKAGE(S) SHALL BE LABELED AS SPARE IF BID PACKAGE(S) ARE NOT COSTRUCTED.

Omni ARCHITECTS
212 North Upper Street
Lexington, Kentucky 40507
p. 859.252.6664
www.omniarchitects.com

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STATE OF KENTUCKY
ALAN R.
LICENSED PROFESSIONAL ENGINEER

UNIVERSITY OF KENTUCKY ENVIRONMENTAL QUALITY MANAGEMENT CENTER
BID PACKAGE #2

UK PROJECT NUMBER	2874.0
OMNI PROJECT NUMBER	2406
DATE	04/15/2025
	BP#2

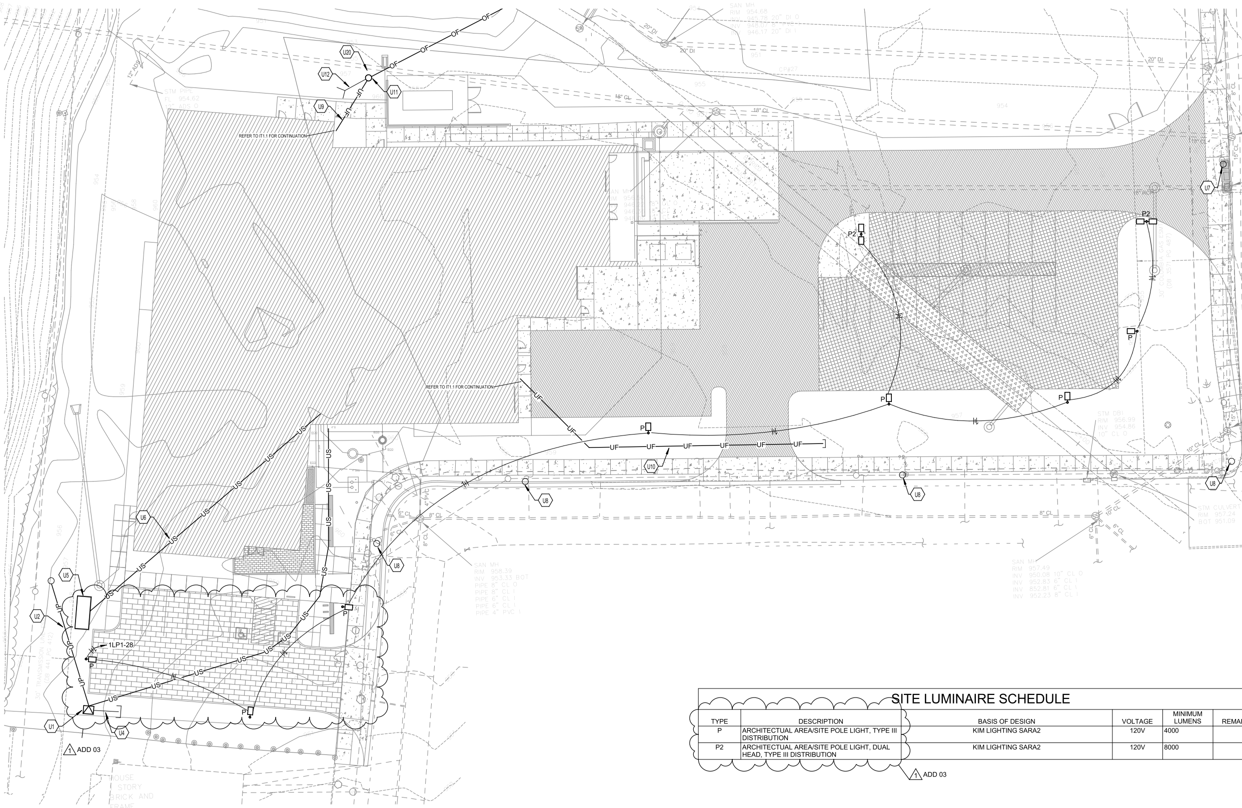
REVISIONS

1	BID CHANGES	05-13-2025

ELECTRICAL SCHEDULES

E7.0

PRINT DATE: 5/12/2025 7:21:13 PM



ELECTRICAL SITE BUILDING PLAN
1 / EU101 — 1" = 20'-0"

ELECTRICAL SITE NOTES

A DO NOT SCALE FROM MECHANICAL AND ELECTRICAL DRAWINGS. FIELD VERIFY REQUIRED DIMENSIONS AND COORDINATE WITH CIVIL DRAWINGS AND SURVEYS.
B REFER ALSO TO ALL OTHER PLANS AND THE SPECIFICATION, BUT ESPECIALLY TO: THE SITE SURVEY, THE ARCHITECTURAL SITE PLAN, THE SITE GRADING PLAN, THE PLANTING PLAN (WHERE AVAILABLE), FOUNDATION PLAN(S), APPROPRIATE MECHANICAL & ELECTRICAL FLOOR PLANS FOR SERVICE CONTINUATIONS, THE SITE UTILITY PLAN - MECHANICAL & ELECTRICAL. WHERE THERE ARE CONFLICTS AMONG THESE PLANS AND/OR RELATED SPECIFICATIONS, ADVISE THESE ENGINEERS AT LEAST TEN DAYS PRIOR TO SUBMISSION OF BIDS.
C ALL FEES AND ANY OTHER COSTS TO UTILITY COMPANIES, MUNICIPALITIES, INSPECTORS, REVIEWING AGENCIES, ETC. ARE TO BE INCLUDED AS A PART OF THIS CONTRACT.
D FEDERAL, STATE, LOCAL, MUNICIPALITY AND UTILITY COMPANY CODES, RULES, REGULATIONS AND REQUIREMENTS APPLY UNLESS EXCEEDED BY THIS DESIGN.
E WHEN INTERRUPTION OF AN EXISTING UTILITY OR SERVICE IS PLANNED OR OCCURS ACCIDENTALLY, THE CONTRACTOR(S) SHALL WORK CONTINUOUSLY AS NEEDED TO RESTORE SAME PROVIDING PREMIUM TIME AS NEEDED AT NO INCREASE IN THE CONTRACT PRICE.
F LOCATIONS, DEPTHS, MATERIAL TYPES, ELEVATIONS, ETC. OF ALL APPURTENANCES, LINES, BUILDINGS, ETC. INDICATED ON THESE DRAWINGS WERE TAKEN FROM VARIOUS SOURCES, ARE DIAGRAMMATIC ONLY AND ARE SUBJECT TO SUBSTANTIAL VARIATION FROM EXISTING CONDITIONS, EXISTING UTILITIES LOCATIONS MAY VARY. CONSEQUENTLY ALL CONTRACTORS SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO ENSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL FEDERAL, STATE, AND/OR LOCAL RULES, REGULATIONS, STANDARDS AND SAFETY REQUIREMENTS.
G PROVIDE LONG RADIUS ELBOWS FOR UNDERGROUND CONDUIT BENDS. WHERE SERVING A UTILITY OWNED TRANSFORMER, THE UTILTY STANDARDS SHALL TAKE PRECEDENCE.
H UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY. IF ANY VARIATION OCCURS, CONSULT THE ENGINEER. CONTRACTOR SHALL VISIT THE SITE AND FIELD VERIFY THE ROUTING OF ALL UTILITIES NEW AND EXISTING PRIOR TO SUBMISSION OF BIDS. SUBMISSION OF A BID PROPOSAL INDICATES THAT THE CONTRACTOR IS FULLY AWARE OF ALL OBSTRUCTIONS AND WILL INSTALL ALL OF THE NEW UTILITIES WITHOUT REQUESTS FOR ANY ADDITIONAL CHANGES.
I CONTRACTOR SHALL CONTACT ENGINEER FOR INSPECTION OF TRENCHES PRIOR TO INSTALLATION OF CONDUITS OR RACEWAYS. PROVIDE PHOTOS UPON REQUEST.
J CONTRACTOR SHALL CUT AND PATCH ALL PAVEMENT, CURBING, ETC. AS REQUIRED FOR WORK. CONTRACTOR SHALL REPAIR ALL LANDSCAPING THAT IS DAMAGED FOR WORK. FINISH GRADE, SEED AND STRAW ALL DISTURBED GREEN SPACES. ALL PATCH AND REPAIR WORK SHALL BE IN ACCORDANCE WITH BOTH CIVIL AND LANDSCAPE DRAWINGS AND SPECIFICATIONS.
K COORDINATE UNDERGROUND ELECTRICAL WITH ALL LANDSCAPING AND FENCING, ADJUST ELECTRICAL LINES TO AVOID CONFLICTS. REFER TO LANDSCAPING PLANS FOR FURTHER INFORMATION. AVOID ROUTING UNDERGROUND CONDUITS UNDER ROADWAYS OR PARKING LOTS, CROSS ROADWAYS WITH UNDERGROUND CONDUITS AT 90 ANGLES WHERE POSSIBLE.
L THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE DRAWINGS ARE APPROXIMATE ONLY.
M THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY EXCAVATION WORK REQUIRED TO LOCATE UNDERGROUND UTILITIES. THE CONTRACTOR IS ALSO REQUIRED TO NOTIFY ANY OTHER AFFECTED UTILITY OWNERS PRIOR TO DIGGING. IN THE EVENT OF ACCIDENTAL INTERRUPTION OF SERVICE, CONTRACTOR WILL IMMEDIATELY NOTIFY THE OTHER UTILITY OWNERS.
N THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD OTHER EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE OTHER UTILITIES. THE UTILITY WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT.
O CONTRACTOR SHALL PAY ALL TAP FEES, UTILITY COST, UTILITY CONNECTION COSTS, METER FEES, EXTENSION AND DEVELOPMENT CHARGES. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

TAGGED NOTES

##

U1 PROVIDE TRANSFORMER PAD, ,ETERING AND GROUNDING FOR NEW KENTUCKY UTILITIES TRANSFORMER. COORDINATE EXACT DETAILS AND LOCATION WITH UTILITY.
U2 PROVIDE TWO 4" PRIMARY CONDUITS FOR KENTUCKY UTILITIES USE. CONSTRUCT RISER ON POLE FOR ONE CONDUIT, TURN SPARE UP AT BASE OF POLE AND CAP WAERTIGHT. COORDINATE EXACT DETAILS AND LOCATION WITH UTILITY.
U4 PROVIDE SECONDARY SERVICE CONDUIT AND WIRE PER ONE-LINE DIAGRAM.
U5 PROVIDE PAD AND GROUNDING FOR GENERATOR. COORDINATE EXACT SIZE WITH EQUIPMENT INSTALLED. PROVIDE DATA OUTLET AT GENERATOR FOR BACNET CONTROL.
U6 PROVIDE EMERGENCY POWER FEEDERS AS NOTED ON ONE-LINE DIAGRAM. ROUTE BELOW BUILDING SLAB TO APPROPRIATE SWITCHES IN MAIN ELECTRICAL ROOM. PROVE 2" CONTROL CONDUIT AND 1" CONDUIT FOR BLOCK HEATER, BATTERY CHARGER, AND ENCLOSURE POWER AS REQUIRED. PROVIDE 1" CONDUIT FOR GENERATOR BACNET CONNECTION.
U7 COORDINATE WITH KENTUCKY UTILITIES FOR RELOCATION OF UTILITY-OWNED POLE AND STREET LIGHTING.
U8 UTILITY-OWNED LIGHTING TO REMAIN.
U9 PROVIDE THREE 4" CONDUITS ENCASED IN CONCRETE FROM BUILDING MDF TO NEW POLE. CONSTRUCT RISER ON POLE FOR ONE CONDUIT, TURN SPARE UP AT BASE OF POLE AND CAP WATERTIGHT. PROVIDE TWO 4-CELL 4" FABRIC MESH INNERDUCT IN EACH CONDUIT.
U10 PROVIDE THREE 4" CONDUITS ENCASED IN CONCRETE FROM BUILDING MDF TO LOCATION INDICATED WITH TWO 4-CELL 4" FABRIC MESH INNERDUCT IN EACH CONDUIT. CAP AND MARK CONDUIT FOR FUTURE USE.
U11 PROVIDE NEW 30' CLASS 3 WOOD POLE FOR AERIAL FIBER OPTIC CABLE. CONSTRUCT RISER AND TRANSITION CABLE TO OVERHEAD. PROVIDE BUTT GROUND FOR POLE.
U12 PROVIDE NEW 6000lb RATED GUY AND ANCHOR. BOND GUY TO POLE GROUND PER NESC.
U20 EXISTING UNDERGROUND SEWER LINE. POSITIVELY LOCATE AND COORDINATE LOCATION PRIOR TO INSTALLATION OF NEARBY UTLITY POLE.

SITE LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	BASIS OF DESIGN	VOLTAGE	MINIMUM LUMENS	REMARKS
P	ARCHITECTUAL AREA/SITE POLE LIGHT, TYPE III DISTRIBUTION	KIM LIGHTING SARA2	120V	4000	
P2	ARCHITECTUAL AREA/SITE POLE LIGHT, DUAL HEAD, TYPE III DISTRIBUTION	KIM LIGHTING SARA2	120V	8000	

1 ADD 03

SITE UTILITIES LEGEND

(symbols)	EXISTING, DEMOLITION, NEW WORK
S S S	SANITARY MANHOLE
(symbols)	FIRE HYDRANT
(symbols)	WATER VALVE
ECO D(ECO) ECO	EXTERIOR CLEANOUT
TB D(TB) TB	THRUST BLOCK
—XXX—	NEW PIPING - (XXX) DENOTES SYSTEM
-- D(XXX) --	PIPING TO BE DEMOLISHED - (XXX) DENOTES SYSTEM
—E(XXX)—	EXISTING PIPING - (XXX) DENOTES SYSTEM
—A(XXX)—	ABANDONED IN PLACE PIPING - (XXX) DENOTES SYSTEM
—OP—	OVERHEAD PRIMARY
—OS—	OVERHEAD SECONDARY
—OSL—	OVERHEAD STREET LIGHT
—OTS—	OVERHEAD TRAFFIC SIGNAL
—OT—	OVERHEAD TELECOMMUNICATIONS
—OF—	OVERHEAD FIBER OPTIC
—OTV—	OVERHEAD CATV
—UP—	UNDERGROUND PRIMARY
—US—	UNDERGROUND SECONDARY
—USL—	UNDERGROUND STREET LIGHT
—UTS—	UNDERGROUND TRAFFIC SIGNAL
—UT—	UNDERGROUND TELECOMMUNICATIONS
—UF—	UNDERGROUND FIBER OPTIC
—UTV—	UNDERGROUND CATV
—CHW—	CHILLED WATER
—W—	DOMESTIC WATER
—HPS/R—	HIGH PRESSURE SUPPLY/R
—PD—	PUMPED DISCHARGE RETURN
—SS—	SANITARY SEWER
—STORM—	STORM

BEFORE YOU DIG

THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL CONTACT "BUD (BEFORE YOU DIG)" AT 1-800-752-6007 TO OBTAIN UNDERGROUND UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION. ANY CONTRACTOR OR SUBCONTRACTOR PERFORMING ANY TYPE OF EXCAVATION ON THIS PROJECT SHALL CALL "BUD" TO OBTAIN AN AUTHORIZATION NUMBER.

Omni ARCHITECTS
212 North Upper Street
Lexington, Kentucky 40507
p. 859.252.6664
www.omniarchitects.com

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ENVIRONMENTAL QUALITY
MANAGEMENT CENTER
BID PACKAGE #2

UK PROJECT NUMBER	2874.0
OMNI PROJECT NUMBER	2406
DATE	04/15/2025
	BP#2

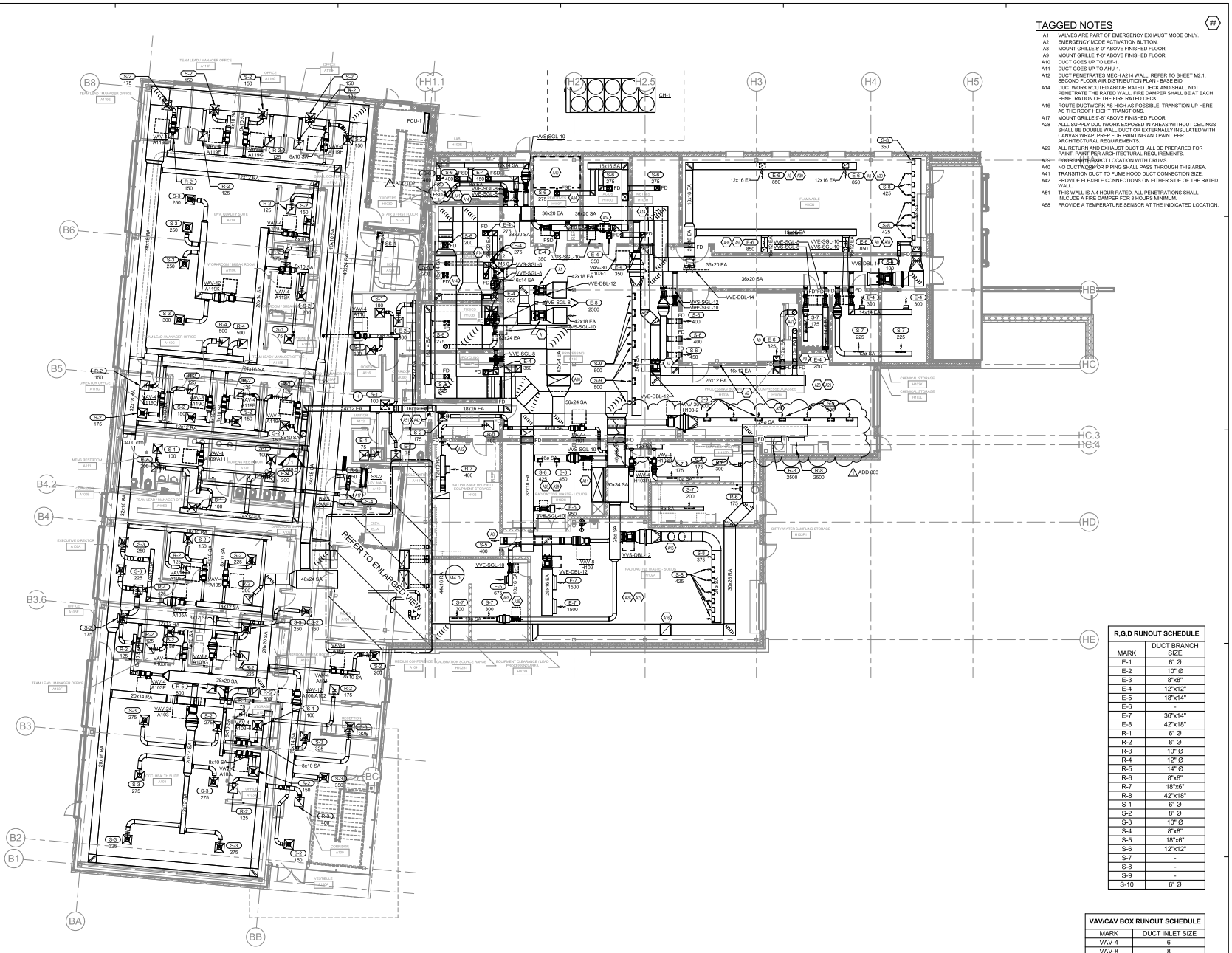
REVISIONS

1	BID CHANGES	05-13-2025

ELECTRICAL SITE UTILITY PLAN

EU101

PRINT DATE: 5/12/2025 7:21:14 PM



TAGGED NOTES

A1	VALVES ARE PART OF EMERGENCY EXHAUST MODE ONLY.
A2	EMERGENCY MODE ACTIVATION BUTTON.
A8	MOUNT GRILLE 8'-0" ABOVE FINISHED FLOOR.
A9	MOUNT GRILLE 1'-0" ABOVE FINISHED FLOOR.
A10	DUCT GOES UP TO LEF-1.
A11	DUCT GOES UP TO AHU-1.
A12	DUCT PENETRATES MECH A214 WALL. REFER TO SHEET M2.1, SECOND FLOOR AIR DISTRIBUTION PLAN - BASE BID.
A14	DUCTWORK ROUTED ABOVE RATED DECK AND SHALL NOT PENETRATE THE RATED WALL. FIRE DAMPER SHALL BE AT EACH PENETRATION OF THE FIRE RATED DECK.
A16	ROUTE DUCTWORK AS HIGH AS POSSIBLE. TRANSTION UP HERE AS THE ROOF HEIGHT TRANSTIONS.
A17	MOUNT GRILLE 9'-6" ABOVE FINISHED FLOOR.
A28	ALLL SUPPLY DUCTWORK EXPOSED IN AREAS WITHOUT CEILINGS SHALL BE DOUBLE WALL DUCT OR EXTERNALLY INSULATED WITH CANVAS WRAP. PREP FOR PAINTING AND PAINT PER ARCHITECTURAL REQUIREMENTS.
A29	ALL RETURN AND EXHAUST DUCT SHALL BE PREPARED FOR PAINT. PAINT PER ARCHITECTURAL REQUIREMENTS.
A39	COORDINATE EXACT LOCATION WITH DRUMS.
A40	NO DUCTWORK OR PIPING SHALL PASS THROUGH THIS AREA.
A41	TRANSITION DUCT TO FUME HOOD DUCT CONNECTION SIZE.
A42	PROVIDE FLEXIBLE CONNECTIONS ON EITHER SIDE OF THE RATED WALL.
A51	THIS WALL IS A 4 HOUR RATED. ALL PENETRATIONS SHALL INLCUDE A FIRE DAMPER FOR 3 HOURS MINIMUM.
A58	PROVIDE A TEMPERATURE SENSOR AT THE INIDICATED LOCATION.

R,G,D RUNOUT SCHEDULE	
MARK	DUCT BRANCH SIZE
E-1	6" Ø
E-2	10" Ø
E-3	8"x8"
E-4	12"x12"
E-5	18"x14"
E-6	-
E-7	36"x14"
E-8	42"x18"
R-1	6" Ø
R-2	8" Ø
R-3	10" Ø
R-4	12" Ø
R-5	14" Ø
R-6	8"x8"
R-7	18"x6"
R-8	42"x18"
S-1	6" Ø
S-2	8" Ø
S-3	10" Ø
S-4	8"x8"
S-5	18"x6"
S-6	12"x12"
S-7	-
S-8	-
S-9	-
S-10	6" Ø

VAV/CAV BOX RUNOUT SCHEDULE	
MARK	DUCT INLET SIZE
VAV-4	6
VAV-8	8
VAV-12	10
VAV-24	14
VAV-30	16

1 M2.0 **FIRST FLOOR AIR DISTRIBUTION PLAN**
1/8" = 1'-0"

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Omni ARCHITECTS
212 North Upper Street
Lexington, Kentucky 40507
p. 859.252.6664
www.omniarchitects.com

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ENVIRONMENTAL QUALITY MANAGEMENT CENTER
BID PACKAGE #2

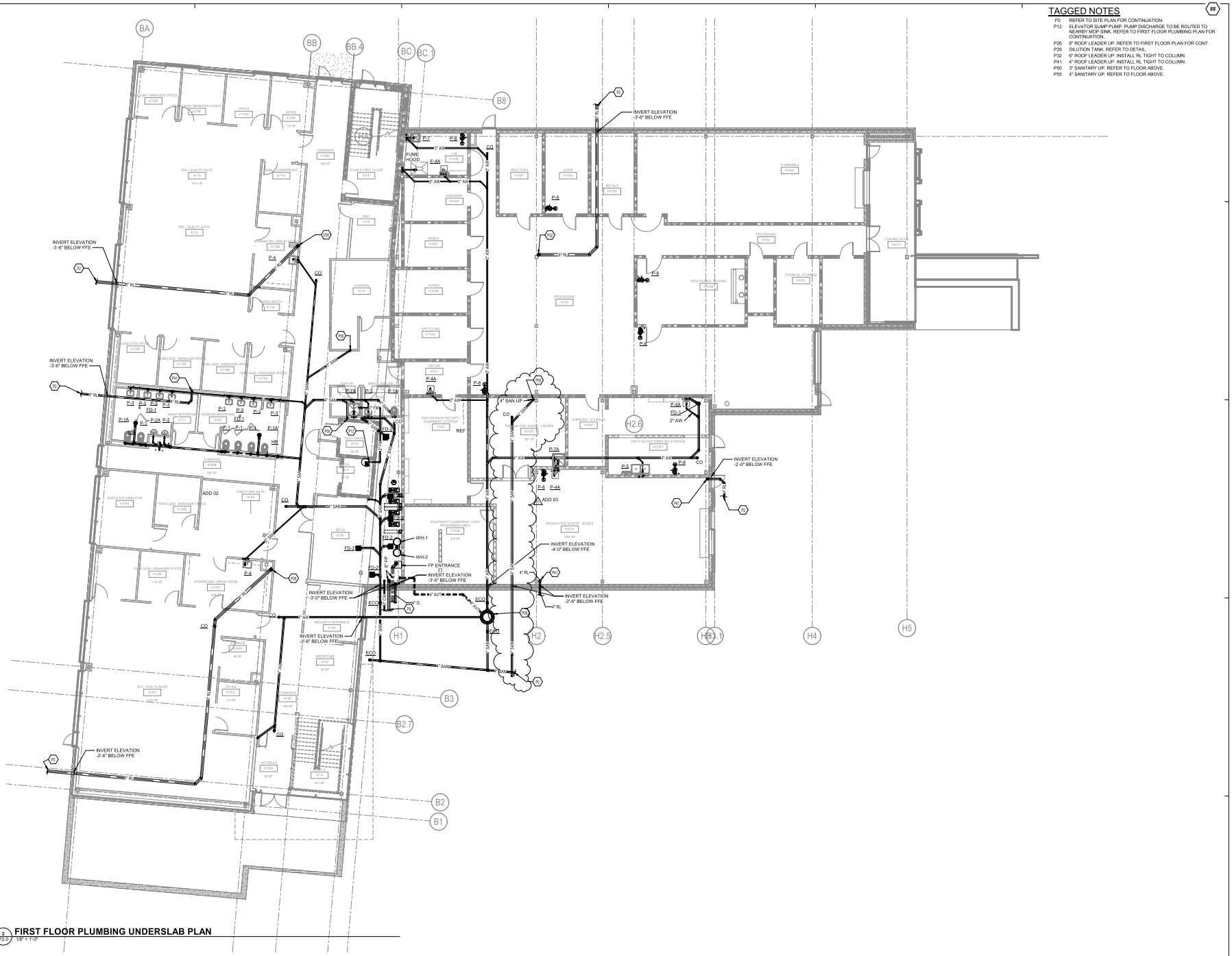
UK PROJECT NUMBER	2874.0
OMNI PROJECT NUMBER	2406
DATE	04/15/2025
	BP#2

REVISIONS:

BID CHANGES	05-13-2025

FIRST FLOOR AIR DISTRIBUTION PLAN

M2.0



TAGGED NOTES

- P2 REFER TO SITE PLAN FOR CONTINUATION.
- P12 ELEVATOR SUMP PUMP: PUMP DISCHARGE TO BE ROUTED TO NEARBY MOP SINK. REFER TO FIRST FLOOR PLUMBING PLAN FOR CONTINUATION.
- P26 6" ROOF LEADER UP. REFER TO FIRST FLOOR PLAN FOR CONT.
- P29 DILUTION TANK. REFER TO DETAIL.
- P32 6" ROOF LEADER UP. INSTALL RL TIGHT TO COLUMN.
- P41 4" ROOF LEADER UP. INSTALL RL TIGHT TO COLUMN.
- P50 3" SANITARY UP. REFER TO FLOOR ABOVE.
- P55 4" SANITARY UP. REFER TO FLOOR ABOVE.

FIRST FLOOR PLUMBING UNDERSLAB PLAN
1/8" = 1'-0"

PRINT DATE: 5/13/2025 12:32:18 AM

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212 North Upper Street
Lexington, Kentucky 40507
p. 859.252.6664
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BID PACKAGE #2

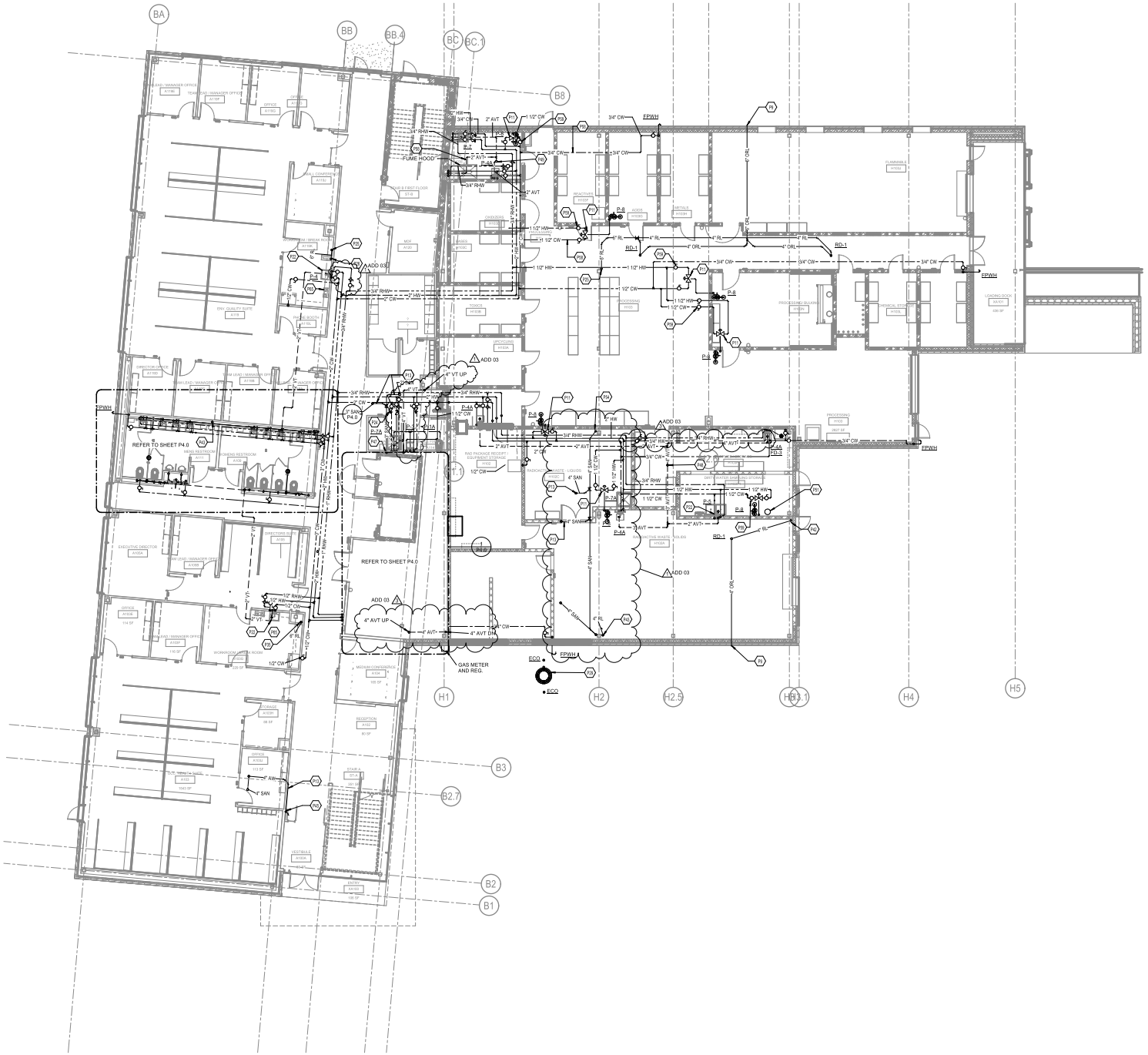
UK PROJECT NUMBER	2874.0
OMNI PROJECT NUMBER	2406
DATE	04/15/2025
	BP#2

REVISIONS:

1 BID CHANGES	05-13-2025

FIRST FLOOR PLUMBING UNDERSLAB

P2.0



TAGGED NOTES

P9	PROVIDE ZURN MODEL Z199 DOWNSPOUT NOZZLE WITH PIPE CONNECTION SIZE WITH STAINLESS STEEL SCREEN. COORDINATE MOUNTING ELEVATION WITH ARCHITECTURAL ELEVATIONS.
P11	GUARDIAN MIXING VALVE MODE G3800LF FOR EMERGENCY SHOWERS AND EYEWASHES. INSTALL CHECK VALVES ON WATER LINES SERVING THE MIXING VALVES.
P13	SANITARY PIPE ABOVE LOWER LEVEL CEILING SERVING PLUMBING FIXTURES ON FLOOR ABOVE.
P22	PROVIDE DISHWASHER CONNECTION WITH AIR GAP AND VENT FOR THIS SINK.
P24	PROVIDE SHUT-OFF AND CHECK VALVES ON BOTH COLD AND HOT WATER PIPING TO MOP BASIN.
P25	6" ROOF LEADER DOWN. REFER TO UNDER SLAB PLAN FOR CONT.
P26	6" ROOF LEADER UP. REFER TO FIRST FLOOR PLAN FOR CONT.
P29	DILUTION TANK. REFER TO DETAIL.
P35	6" ROOF LEADER UP AND DOWN.
P42	4" ROOF LEADER DOWN.
P43	4" ROOF LEADER UP AND DOWN.
P45	4" ACID WASTE DOWN. REFER TO FLOOR BELOW.
P47	3" SANITARY DOWN TO BELOW FLOOR SLAB. REFER TO UNDER SLAB PLAN FOR CONT.
P48	4" ACID VENT UP TO 4" VTR
P49	3" ACID VENT UP TO 3" VTR
P51	MILLI-Q OX 7010 PURE WATER PURIFICATION SYSTEM. MOUNT SYSTEM ON WALL WITH WITH PIPING PER MANUFACTURERS RECOMMENDATIONS.
P54	4" SANITARY DOWN TO BELOW SLAB.
P58	ALL PIPING SHALL BE INSTALLED ABOVE CONCRETE LID.
P59	ALL BALL VALVES SERVING EMERGENCY SHOWER/FACE/EYEWASH SHALL BE LOCKABLE. LOCKED TO OPEN AT ALL TIMES.
P65	PROVIDE UNDER COUNTER WATER LINE WITH GROMMETS FOR COFFEE MACHINE.

1 P3.0 **FIRST FLOOR PLUMBING PLAN**
1/8" = 1'-0"

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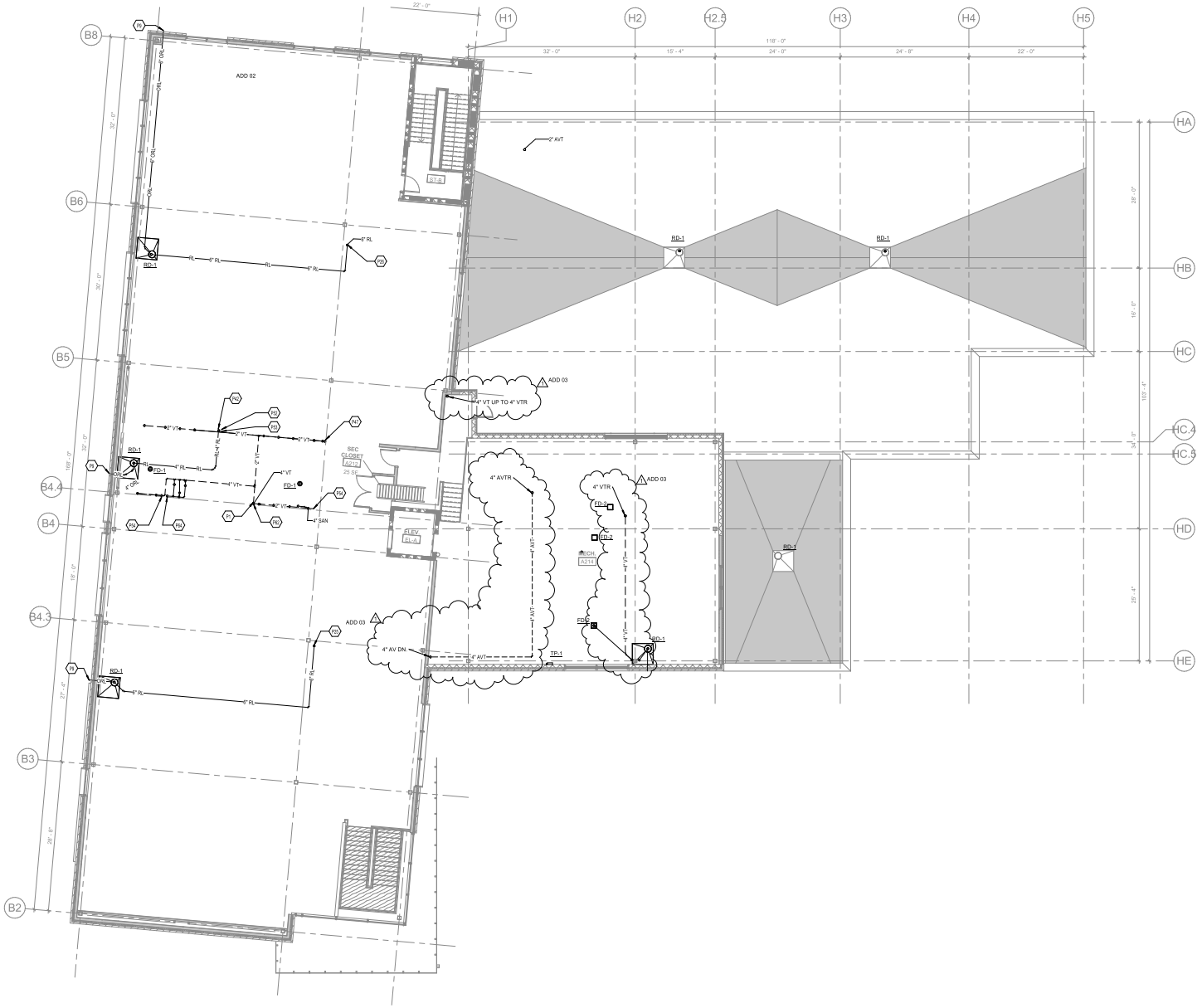
FIRST FLOOR PLUMBING PLAN

P3.0



TAGGED NOTES

P1	4" VENT UP TO 4" VTR.
P9	PROVIDE ZURN MODEL Z199 DOWNSPOUT NOZZLE WITH PIPE CONNECTION SIZE WITH STAINLESS STEEL SCREEN. COORDINATE MOUNTING ELEVATION WITH ARCHITECTURAL ELEVATIONS.
P25	6" ROOF LEADER DOWN. REFER TO UNDER SLAB PLAN FOR CONT.
P26	6" ROOF LEADER UP. REFER TO FIRST FLOOR PLAN FOR CONT.
P42	4" ROOF LEADER DOWN.
P47	3" SANITARY DOWN TO BELOW FLOOR SLAB. REFER TO UNDER SLAB PLAN FOR CONT.
P52	PROVIDE A 4" SANITARY AND VENT STUB-OUT THROUGH THE FLOOR SLAB FOR FUTURE CONNECTION.
P53	PROVIDE A 2 1/2" COLD, 2" HOT AND 3/4" HWR STUB-OUT THROUGH THE FLOOR FOR FUTURE CONNECTION.
P54	4" SANITARY DOWN TO BELOW SLAB.
P62	1 1/2" HOT WATER, 2" COLD WATER AND 3/4" RHW UP TO FLOOR ABOVE.
P64	2" SANITARY DOWN. REFER TO FLOOR BELOW FOR CONTINUATION.

1 SECOND FLOOR PLUMBING PLAN - BASE BID
P3.1 1/8" = 1'-0"

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BID PACKAGE #2

UK PROJECT NUMBER	2874.0
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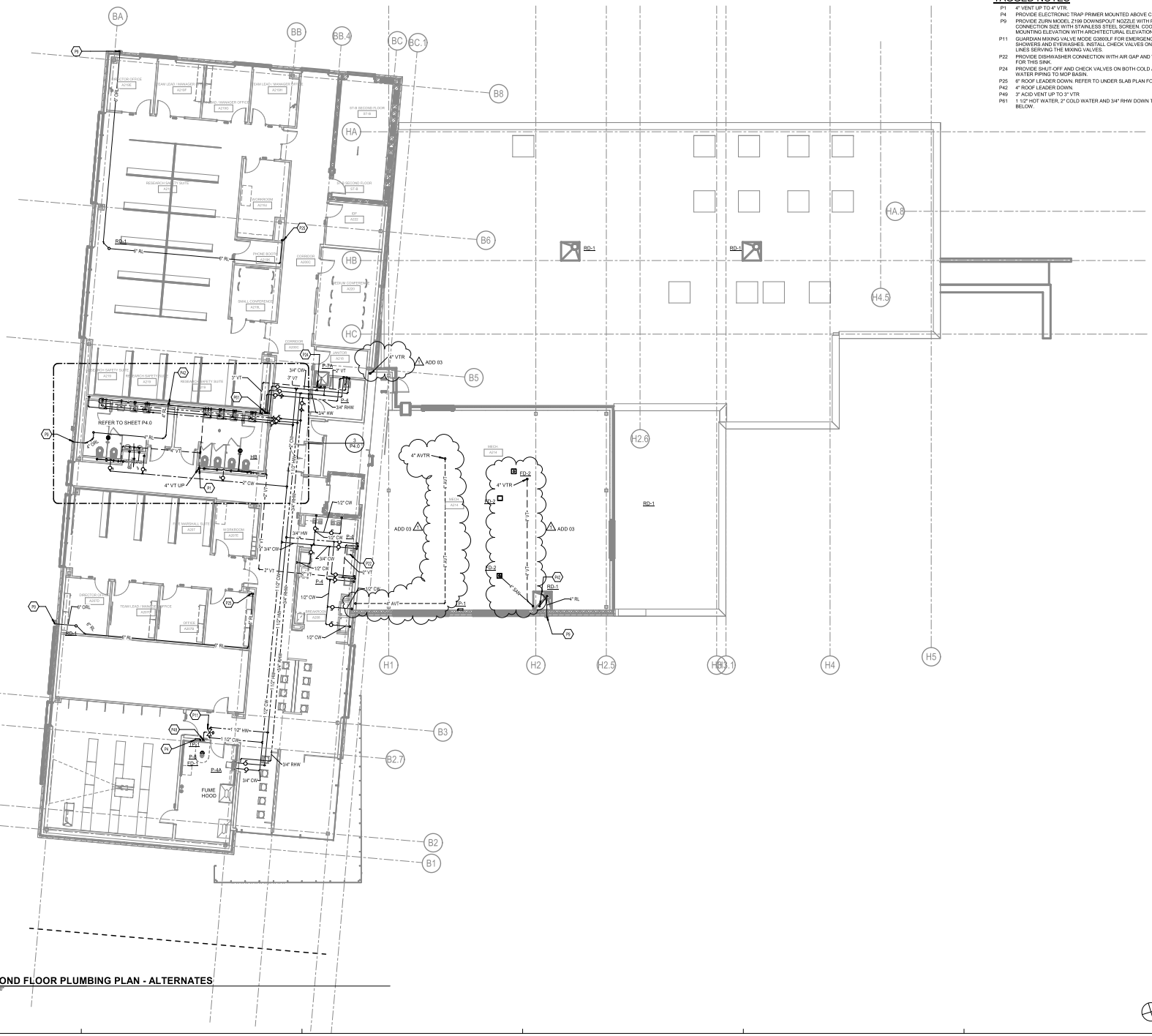
REVISIONS:

1 BID CHANGES	05-13-2025

SECOND FLOOR
PLUMBING PLAN - BASE
BID

P3.1



TAGGED NOTES

P1 4" VENT UP TO 4" VTR.
P4 PROVIDE ELECTRONIC TRAP PRIMER MOUNTED ABOVE CEILING.
P9 PROVIDE ZURN MODEL Z199 DOWNSPOUT NOZZLE WITH PIPE CONNECTION SIZE WITH STAINLESS STEEL SCREEN. COORDINATE MOUNTING ELEVATION WITH ARCHITECTURAL ELEVATIONS.
P11 GUARDIAN MIXING VALVE MODE G3809LF FOR EMERGENCY SHOWERS AND EYEWASHES. INSTALL CHECK VALVES ON WATER LINES SERVING THE MIXING VALVES.
P22 PROVIDE DISHWASHER CONNECTION WITH AIR GAP AND VENT FOR THIS SINK.
P24 PROVIDE SHUT-OFF AND CHECK VALVES ON BOTH COLD AND HOT WATER PIPING TO MOP BASIN.
P25 6" ROOF LEADER DOWN. REFER TO UNDER SLAB PLAN FOR CONT.
P42 4" ROOF LEADER DOWN.
P49 3" ACID VENT UP TO 3" VTR
P61 1 1/2" HOT WATER, 2" COLD WATER AND 3/4" RHW DOWN TO FLOOR BELOW.

1 P3.1A SECOND FLOOR PLUMBING PLAN - ALTERNATES 1/8" = 1'-0"

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REVISIONS:

1 BID CHANGES	05-13-2025

SECOND FLOOR PLUMBING PLAN - ALTERNATES

P3.1A

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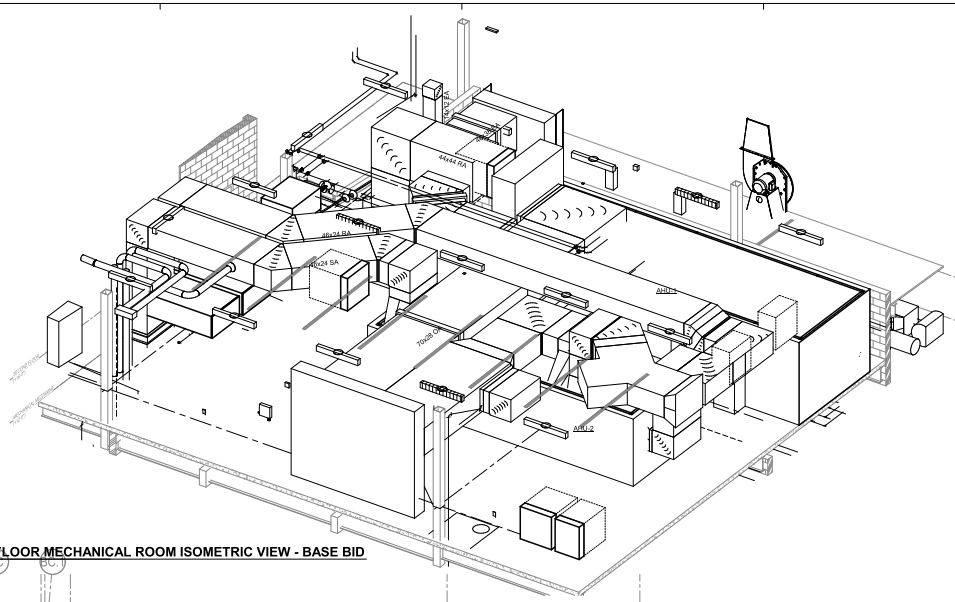
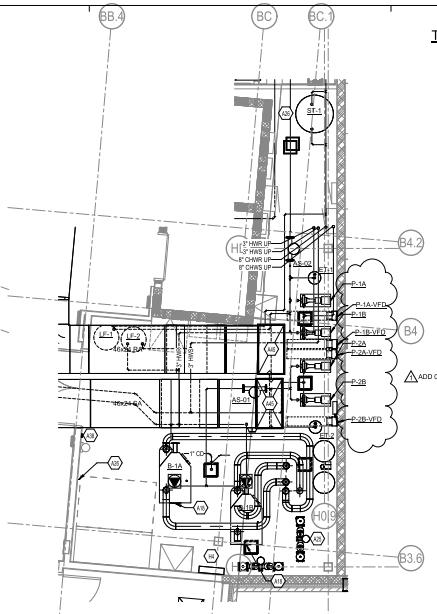
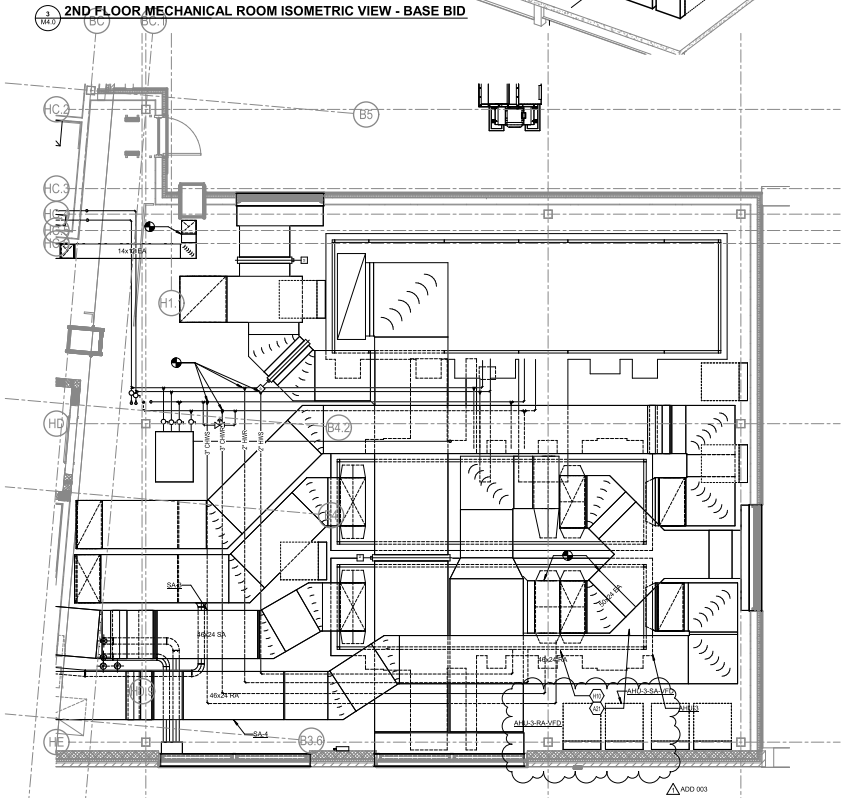


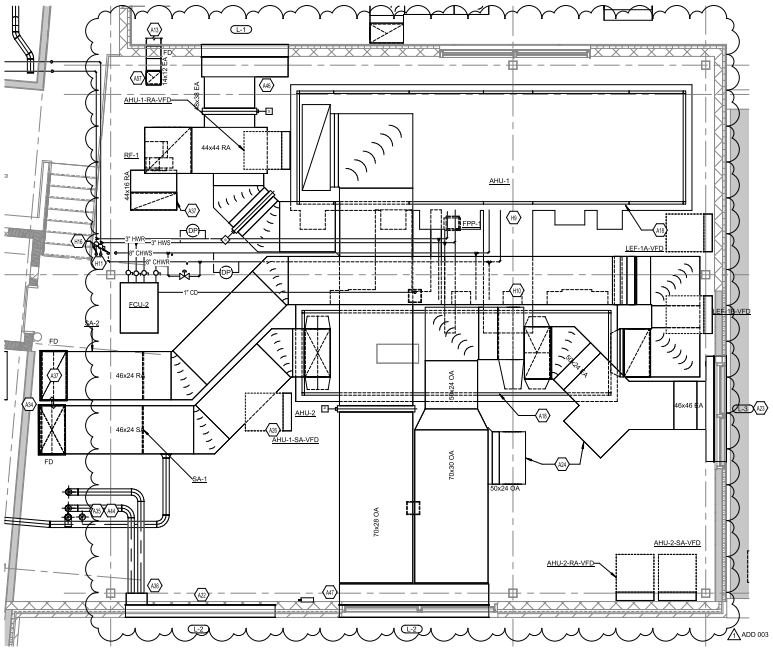
1 M4.0 **2ND FLOOR MECHANICAL ROOM ISOMETRIC VIEW - BASE BID**



1 M4.0 **FIRST FLOOR ENLARGED MECHANICAL ROOM**
1/4" = 1'-0"



4 M4.0 **SECOND FLOOR ENLARGED MECHANICAL ROOM - ALTERNATE**
1/4" = 1'-0"



2 M4.0 **SECOND FLOOR ENLARGED MECHANICAL ROOM - BASE BID**
1/4" = 1'-0"

TAGGED NOTES

A13	DUCT PENETRATES DECON H101 WALL. REFER TO SHEET M2.0, FIRST FLOOR AIR DISTRIBUTION PLAN, FOR CONTINUATION.
A18	EQUIPMENT SHALL BE INSTALLED ON 4" CONCRETE PADS.
A21	AHU-3 SHALL BE BID AS AN ALTERNATE.
A22	ANY UNUSED PORTIONS OF THIS LOUVER SHALL BE COVERED WITH TWO LAYERS OF ONE INCH RIGID INSULATION BETWEEN TWO LAYERS OF SHEET METAL SEALED AIR TIGHT.
A23	INSTALL A 1 FOOT DEEP PLENUM ON BACK OF LOUVER.
A24	EXTENT OF DUCT INCLUDED IN BASE BID. CAP AND SEAL AIR TIGHT.
A25	REFER TO PLUMBING PLANS. EQUIPMENT SHOWN FOR REFERENCE.
A26	NO DUCTWORK OR PIPING SHALL PASS OVER ELECTRICAL GEAR, PANELS, OR TRANSFORMERS.
A34	DUCTS DOWN TO FLOOR BELOW. SURROUND PENETRATION WITH CONCRETE CURB. SEAL AIR TIGHT AROUND DUCT.
A35	BOILER FLUE UP THROUGH ROOF. PROVIDE ROOF CURB. TERMINATE FLUE PER MANUFACTURERS REQUIREMENTS.
A36	BOILER INTAKE. CONNECT TO PLENUM ON BACK OF LOUVER. 3'X3'X3' PLENUM BOX. INSULATE SIMILAR TO SA DUCT.
A37	RETURN AIR DUCT DOWN TO FIRST FLOOR. PROVIDE CONCRETE CURB AROUND PENETRATION.
A38	EMERGENCY BOILER SHUTOFF.
A44	PROVIDE CONCRETE CURB SURROUNDING FLUE PENETRATIONS.
A45	DUCTS UP TO THE SECOND FLOOR MECHANICAL ROOM.
A46	INSULATE UP TO THE MOTORIZED DAMPER SIMILAR TO OA DUCT.
A47	18" DEPTH PLENUM BOX.
A57	EXHAUST DUCT WILL BE EXTENDED IN ALTERNATE #1. DUCT SHALL BE 5' ABOVE FINISHED FLOOR.
H4	BMS PANEL LOCATION.
H9	SPILL 2" CONDENSATE TO FLOOR DRAIN.
H10	SPILL 1-1/2" CONDENSATE TO FLOOR DRAIN.
H11	PIPING DOWN TO FLOOR BELOW. PROVIDE CONCRETE CURB AROUND PIPE PENETRATIONS.
H16	PROVIDE MANUAL AIR VENTS AT TOPS OF RISER.

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REVISIONS

BID CHANGES	05-13-2025

ENLARGED MECHANICAL ROOM

M4.0

PRINT DATE: 5/12/2025 3:01:16 PM

AIR HANDLING UNIT SCHEDULE

ADD 002

MARK	MANUFACTURER	MODEL #	UNIT CONFIGURATION	SERVICE	LOCATION	PHYSICAL DATA				SUPPLY FAN											RETURN FAN										REMARKS
						WIDTH (IN.)	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LBS)	TOTAL SA CFM	MIN. OA CFM	FAN MOTOR TYPE	# OF FANS	FAN RPM	E.S.P. (" WC)	T.S.P. (" WC)	RATED H.P. (PER FAN)	B.H.P. (PER FAN)	VOLT.	PH.	MCA	MOCP	VFD	TOTAL RA CFM	FAN MOTOR TYPE	# OF FANS	FAN RPM	E.S.P. (" WC)	T.S.P. (" WC)	RATED H.P. PER FAN)	B.H.P. (PER FAN)	VOLT.	PH.	MCA	MOCP	VFD	
AHU-1	YORK/JCI	XTI-84x108	DRAW THRU	STORAGE	MECH RM	115	353	92	12710	22000	15000	DIRECT	4	2328	2.00	6.04	15	8.00	460 V	3	72.40 A		Yes													1,2,4,5
AHU-2	YORK/JCI	XTI-69x81	DRAW THRU	OFFICE-1	MECH RM	89	295	75	7900	12500	2750	DIRECT	2	2632	3.00	6.57	15	9.53	460 V	3	40.95 A		Yes	12500	DIRECT	2	2386	2.00	2.99	7.5	4.950	480 V	3	22.05 A		Yes	1,2
AHU-3	YORK/JCI	XTI-69x81	DRAW THRU	OFFICE-2	MECH RM	89	295	75	7900	12500	2750	DIRECT	2	2632	3.00	6.57	15	9.53	460 V	3	40.95 A		Yes	12500	DIRECT	2	2386	2.00	2.99	7.5	4.950	480 V	3	22.05 A		Yes	1,2,3

AIR HANDLING UNIT SCHEDULE - CHILLED WATER COIL

MARK	CHILLED WATER COIL														
	FACE AND BYPASS	COOLING CAPACITY (MBH)	COOLING CAPACITY SENSIBLE (MBH)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	MAX. FACE VELOCITY (FPM)	MAX. AIR PRESSURE DROP (IN. WG)	EWT (°F)	LWT (°F)	WATER FLOW RATE (GPM)	MAX. WATER PRESSURE DROP (FT)	MAX. COIL ROWS	NO. OF COILS	MAX. FIN SPACING (FINS/IN)
AHU-1	No	1755.0	972	92	76	52.7	52.4	400	1.15	44	60	217	8.7	8	2	12
AHU-2	No	481.0	355	78	65	52.6	52.0	454	0.75	44	60	60	8.1	8	1	10
AHU-3	No	481.0	355	11	1	52.6	52.0	454	0.75	44	60	60	8.1	8	1	10

AIR HANDLING UNIT SCHEDULE - HOT WATER COIL

MARK	HOT WATER COIL										
	TOTAL HEATING CAP (MBH)	EAT (°F)	LAT (°F)	MAX. FACE VELOCITY (FPM)	MAX. AIR PRESSURE DROP (IN WG)	EWT (°F)	LWT (°F)	WATER FLOW RATE (GPM)	MAX. WATER PRESSURE DROP (FT)	MAX COIL ROWS	NO OF COILS	MAX. FIN SPACING (FINS/IN)
AHU-1	1872.0	11.0	89.7	550	0.21	140	100	96.5	8	3	2	8
AHU-2	383.0	58.8	87.0	454	0.04	140	100	20.0	5	1	1	8
AHU-3	383.0	58.8	87.0	454	0.04	140	100	20.0	5	1	1	8

REMARKS:
1. PROVIDE WITH MERV 13 FILTERS.
2. SHIPPING SPLITS SHALL BE COORDINATED TO FIT THROUGH THE OA LOUVER.
3. AHU-3 SHALL BE BID AS AN ALTERNATE.
4. AHU-1 SHALL HAVE STAGGERED CHILLED AND HOT WATER COILS
5. AHU-1 HOT WATER COIL SHALL BE A COONEY COIL OR APPROVED EQUIVALENT "FREEZE PROOF" COIL.

SPLIT SYSTEM INDOOR UNIT SCHEDULE

MARK	MODEL #	MANUF.	DIMENSIONS (IN.)			WEIGHT (LBS)	AIRFLOW (CFM)	ELECTRICAL		REMARKS
			LENGTH	WIDTH	HEIGHT			VOLTAGE	PHASE	
SS-1	KNUAB121A	LG	33	8	13	20	750	208 V	1	1,2,3,4
SS-2	KNUAB121A	LG	33	8	13	20	750	208 V	1	1,2,3,4
SS-3	KNUAB121A	LG	33	8	13	20	750	208 V	1	1,2,3,4,8

SPLIT SYSTEM OUTDOOR UNIT SCHEDULE

MARK	MANUF.	MODEL #	DIMENSIONS (IN.)			WEIGHT (LBS)	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	HEATING CAPACITY (MBH)	MINIMUM SEER	ELECTRICAL				REMARKS
			LENGTH	WIDTH	HEIGHT						MCA	MOCP	VOLTAGE	PHASE	
CU-1	LG	ZRUN024GSS0	38	16	33	148	24.0	7.5	27.0	20.05	26 A	30	208 V	1	5,6,7,10
CU-2	LG	ZRUN024GSS0	38	16	33	148	24.0	7.5	27.0	20.05	26 A	30	208 V	1	5,6,7,9

REMARKS:
1. SIZE ALL PIPING PER MANUFACTURERS REQUIREMENTS.
2. PROVIDE WITH BACNET INTEGRATION.
3. PROVIDE WITH FACTORY DISCONNECT.
4. INDOOR UNIT POWERED BY THE OUTDOOR UNIT. ALL WIRING AND CONDUIT BY THE ELECATRICAL CONTRACTOR.
5. PROVIDE WITH EQUIPMENT RAILS THAT PROVIDES MINIMUM 12" CLEARANCE BETWEEN ROOF SURFACE AND EQUIPMENT.
6. PROVIDE WITH LOW AMBIENT COOLING CONTROLS.
7. PROVIDE WITH HAIL GUARD.
8. SS-3 IS AN ALTERNATE.
9. CU-2 IS AN ALTERNATE AND WILL SERVE SS-3 ON THE SECOND FLOOR.
10. CU-1 IS BASE BID AND WILL SERVE SS-1 AND SS-2.

SILENCER SCHEDULE

MARK	MANUF.	MODEL #	DIMENSIONS			AIRFLOW MAX. (CFM)	VELOCITY MAX. (FPM)	SILENCER PD (IN WG)	PD INCL. SYS. EFF. (IN WG)	DYNAMIC INSERTION LOSS, dB								REMARKS
			HEIGHT (IN)	LENGTH (IN)	WIDTH (IN)					63 HZ	125 HZ	250 HZ	500 HZ	1000 HZ	2000 HZ	4000 HZ	8000 HZ	
SA-1	VIBRO-ACOUSTICS	RED-HV-32655	46	96	24	12500	1630	0.19	0.24	9	14	14	24	29	28	22	18	ALL
SA-2	VIBRO-ACOUSTICS	RED-HV-32655	46	96	24	12500	1630	0.11	0.20	9	14	11	18	24	25	21	17	ALL
SA-3	VIBRO-ACOUSTICS	RD-HV-32655	24	96	46	12500	1630	0.13	0.17	6	16	24	23	20	12	11	9	ALL
SA-4	VIBRO-ACOUSTICS	RD-HV-32655	24	96	46	12500	1630	0.19	0.25	7	16	24	39	35	23	14	10	ALL

REMARKS:
1. TYPE: R-RECTANGULAR, RE- RECTANGULAR ELBOW, D-DISSIPATIVE.
2. IDEAL PRESSURE DROP IS DETERMINED PER ASTM E477-20 IN A NVLAP-ACCREDITED ACOUSTICAL LABRATORY.
3. MINIMUM DYNAMIC INSERTION LOSS DETERMINED PER ASTM E477-20 IN A NVLAP-ACCREDITED ACOUSTICAL LABRATORY.
4. FOR A NON-BASIS OF DESIGN PRODUCT SUPPLIED, CONTRACTOR IS FINANCIALLY RESPONSIBLE TO ENSURE NOISE CONTROL SOLUTION IS DELIVERED TO ACHIEVE SPECIFIED NC LEVEL IN SPACES.
5. SOUND ATTENUATORS SHALL BE FIELD INSULATED. TRANSITION DUCT TO AND FROM SOUND ATTENUATOR.
6. FLAMESPREAD <25, SMOKE DEVELOPMENT <50.
7. 22 GAUGE GALVANIZED CONSTRUCTION, 8 IN WG PRESSURE RATING.
8. ACOUSTIC GRADE FIBER GLASS WITH MEDIA PROTECTION. FILM LINED.

LOOP FILTER SCHEDULE

MARK	MANUFACTURER	MODEL #	SERVICE	INLET PIPE SIZE	OUTLET PIPE SIZE	WATER FLOW RATE (GPM)	WATER PRESSURE DROP (FT HD)	REMARKS
LF-1	HARMSCO	WB40SC	HOT WATER LOOP	2"	2"	15	1.00	ALL
LF-2	HARMSCO	WB40SC	CHILLED WATER LOOP	2"	2"	15	1.00	ALL

REMARKS:
1. INSTALL ON CONCRETE PAD.
2. PROVIDE FOUR ADDITIONAL SETS OF FILTERS.

BOILER SCHEDULE

MARK	MANUFACTURER	MODEL #	TYPE	FUEL	EWT (°F)	LWT (°F)	WATER FLOW (GPM)	INPUT (MBH)	GROSS OUTPUT (MBH)	GAS INLET PRESSURE (IN)	WATER PRESSURE DROP (FT HD)	VOLTAGE	PHASE	FLA	HZ	REMARKS
B-1A	LOCHINVAR	FCB1000	CONDENSING GAS BOILER	GAS	100	140	50	999.0	961.0		8.10	120 V	1	16 A	60	ALL
B-1B	LOCHINVAR	FCB1000	CONDENSING GAS BOILER	GAS	100	140	50	999.0	961.0	4-14	8.10	120 V	1	16 A	60	ALL

REMARKS:
1. PROVIDE WITH CONDENSATE NEUTRALIZATION KIT.
2. AERCO AND PATTERSON-KELLEY ARE ACCEPTABLE MANUFACTURERS
3. BOILER MANUFACTURER SHALL REVIEW AND APPROVE LAYOUT AND SIZING
4. PROVIDE WITH BACNET IP INTEGRATION.

AIR SEPARATOR SCHEDULE

MARK	MANUFACTURER	MODEL #	SERVICE	MOUNTING	INLET PIPE SIZE	OUTLET PIPE SIZE	WATER FLOW RATE (GPM)	WATER PRESSURE DROP (FT HD)	REMARKS
AS-01	BELL & GOSSETT	RL-F	CHILLED WATER	FLASK	6	6	225	3.00	ALL
AS-02	BELL & GOSSETT	RL-F	HOT WATER	INLINE	3	3	100	3.00	ALL

REMARKS:
1. NO STRAINER
2. PIPE DRAIN TO NEAREST FLOOR DRAIN, PROVIDE BALL VALVE

EXPANSION TANK SCHEDULE

MARK	MANUFACTURER	MODEL #	TYPE	SERVICE	G DIAMETER	PHYSICAL SIZE (IN)	CAPACITY			REMARKS
						HEIGHT	TANK VOLUME (GALS)	ACCEPTANCE VOLUME (GALS)	AIR CHARGE PRESSURE	
ET-1	WESSELS	NLAP-60	BLADDER	CHILLED WATER	14 in	28	15.0	15.00	30.00	ALL
ET-2	WESSELS	NLAP-60	BLADDER	HOT WATER	14 in	28	15.0	15.00	30.00	ALL

REMARKS:
1. INSTALL ON 4 INCH CONCRETE PAD
2. ASME RATED

VARIABLE FREQUENCY DRIVE SCHEDULE

MARK	MANUFACTURER	MODEL #	SERVICE	HP	ELECTRICAL			BYPASS	REDUNDANT DRIVE	REMARKS
					VOLTAGE	PHASE	HZ			
AHU-1-RA-VFD	ABB	ACH580	AHU-1 RETURN FAN	3.0	460 V	3	60	YES	NO	2
AHU-1-SA-VFD	ABB	ACH580	AHU-1 SUPPLY FAN	60.0	460 V	3	60	NO	YES	1
AHU-2-RA-VFD	ABB	ACH580	AHU-2 RETURN FAN	15.0	460 V	3	60	YES	NO	4
AHU-2-SA-VFD	ABB	ACH580	AHU-2 SUPPLY FAN	30.0	460 V	3	60	YES	NO	3
AHU-3-RA-VFD	ABB	ACH580	AHU-3 RETURN FAN	15.0	460 V	3	60	YES	NO	4
AHU-3-SA-VFD	ABB	ACH580	AHU-3 SUPPLY FAN	30.0	460 V	3	60	YES	NO	3
LEF-1A-VFD	ABB	ACH580	LAB EXHUAST FAN	40.0	460 V	3	60	YES	NO	5
LEF-1B-VFD	ABB	ACH580	LAB EXHUAST FAN	40.0	460 V	3	60	YES	NO	5
P-1A-VFD	ABB	ACH580	CHILLED WATER PUMP	10.0	460 V	3	60	NO	NO	6
P-1B-VFD	ABB	ACH580	CHILLED WATER PUMP	10.0	460 V	3	60	NO	NO	6
P-2A-VFD	ABB	ACH580	HEATING WATER PUMP	7.5	460 V	3	60	NO	NO	6
P-2B-VFD	ABB	ACH580	HEATING WATER PUMP	7.5	460 V	3	60	NO	NO	6

REMARKS:
1. VFD CONNECTED TO (4) 15 HP FAN MOTORS. REFER TO AIR HANDLING UNIT SCHEDULE AND FINAL AHU SELECTIONS.
2. VFD CONNECTED TO (1) 3 HP FAN MOTORS. REFER TO FAN SCHEDULE AND FINAL FAN SELECTIONS.
3. VFD CONNECTED TO (2) 15 HP FAN MOTORS. REFER TO AIR HANDLING UNIT SCHEDULE AND FINAL AHU SELECTIONS.
4. VFD CONNECTED TO (2) 7.5 HP FAN MOTORS. REFER TO AIR HANDLING UNIT SCHEDULE AND FINAL AHU SELECTIONS.
5. VFD CONNECTED TO (1) 40 HP FAN MOTORS. REFER TO FAN SCHEDULE AND FINAL FAN SELECTIONS.
6. VFD CONNECTED TO A SINGLE PUMP MOTOR. REFER TO HYDRONIC PUMP SCHEDULE AND FINAL HYDRONIC PUMP SELECTIONS.

ADD 003

HYDRONIC PUMP SCHEDULE

MARK	MANUFACTURER	MODEL	TYPE	SERVICE	GPM	PRESSURE (FEET HEAD)	IMPELLER DIAMETER (IN)	VFD	MINIMUM EFFICIENCY (%)	RPM	ELECTRICAL DATA					REMARKS
											HZ	HP	BRAKE HP	VOLTAGE	PHASE	
FPR-1	BELL & GOSSETT	e-90 ESM-2 2AAC	IN-LINE	AHU-1 HOT WATER	96	13.00		No	73	3600	60	1	0.60	208 V	1	1,2,4,5
P-1A	BELL & GOSSETT	E-1510 2.5BB	BASE MOUNTED	CHWS/R	275	65.00	9.25	Yes	77.3	1800	60	10	6.98	480 V	3	1,6,7,8
P-1B	BELL & GOSSETT	E-1510 2.5BB	BASE MOUNTED	CHWS/R	275	65.00	9.25	Yes	77.3	1800	60	10	6.98	480 V	3	1,6,7,8
P-2A	BELL & GOSSETT	E-1510 1.5AD	BASE MOUNTED	HWS/R	90	72.00	5.25	Yes	68.3	3600	60	7.5	4.32	480 V	3	7,8
P-2B	BELL & GOSSETT	E-1510 1.5AD	BASE MOUNTED	HWS/R	90	72.00	5.25	Yes	68.3	3600	60	7.5	4.32	480 V	3	7,8
P-3A	BELL & GOSSETT	E-90 2AAC	IN-LINE	BOILER LOOP	90	10.00	4.50	No	66	1800	60	0.5	0.34	208 V	1	1
P-3B	BELL & GOSSETT	E-90 2AAC	IN-LINE	BOILER LOOP	90	10.00	4.50	No	66	1800	60	0.5	0.34	208 V	1	1

ADD 003

REMARKS:
1. PROVIDE WITH STARTER/DISCONNECT.
2. PROVIDE DISCONNECT AND SINGLE POINT POWER CONNECTION.
3. PROVIDE SUCTION DIFFUSER, CHECK VALVE, AND ISOLATION VALVES.
4. PROVIDE PUMP SPEED CONTROLLER.
5. INSTALL AND SUPPORT PUMP PER MANUFACTURERS SPECIFICATIONS.
6. RATED FOR 250 PSI SERVICE.
7. PUMPS SHALL NOT USE MORE THAN 90% OF FULL IMPELLER.
8. LESS EFFICIENT PUMPS WILL NOT BE ACCEPTED.

CHILLER - AIR COOLED SCHEDULE

MARK	TYPE	MANUFACTURER	MODEL #	SERVICE	DIMENSIONS (IN)			WEIGHT (LBS)	FLUID TYPE	COOLING CAPACITY (MBH)	IPLV	STARTER	EWT (°F)	LWT (°F)	GPM	FLUID PD (FT HD)	FOULING FACTOR	NO OF COMPRESSORS	REFRIGERANT	VOLTAGE	PHASE	MCA	MOCP	REMARKS
					LENGTH	WIDTH	HEIGHT																	
CH-1	AIR COOLED	YORK	YLAA0170	BUILDING COOLING	232	88	94	8494	WATER	167.6	17.49	Yes	60	44	190	48.90	0.0001	6	R454B	460 V	3	372 A	400	

REMARKS:
1. EVAPORATOR HEATER TO BE ON 120V STANDALONE CIRCUIT.
2. PROVIDE WITH DISCONNECT
3. SCROLL COMPRESSOR
4. AMBIENT AIR TEMP 95 DEGREES FARENHEIT
5. MINIMUM FLOW RATE 155 GPM
6. HEAT TRACE ON THE CHILLER SHALL BE FED FROM SEPERATE 120V CIRCUIT WHICH SHALL BE ON EMERGENCY POWER.

Omni ARCHITECTS
212 North Upper Street
Lexington, Kentucky 40507
p. 859.252.6664
www.omniarchitects.com

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UNIVERSITY OF KENTUCKY
ENVIRONMENTAL QUALITY MANAGEMENT CENTER
BID PACKAGE #2

UK PROJECT NUMBER 2874.0
OMNI PROJECT NUMBER 2406
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BID CHANGES 05-13-2025

MECHANICAL SCHEDULES

M8.0

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