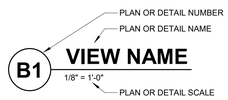
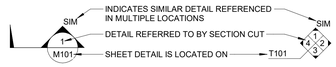
## VIEW KEY

NAME — LEVEL NAME
'0'-0" — HEIGHT ABOVE PROJECT 0'-0"

1 — INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL




LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
———— NEW
- - - - - - EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
— — — NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)
———— EXISTING
- - - - - - EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)
— — — EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E — TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

TAG-1 — UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

## FIRE / SMOKE BARRIER DESIGNATIONS

FLOOR PLANS SHOW LOCATIONS OF FIRE AND SMOKE BARRIER WALLS FOR THE CONVENIENCE OF THE CONTRACTOR. HOWEVER, THE CONTRACTOR SHALL CONFIRM ALL LOCATIONS WITH ARCHITECTURAL LIFE SAFETY PLANS, AS WELL AS REFER TO ARCHITECTURAL PLANS FOR LINE TYPE DESIGNATIONS. FURNISH ALL MATERIALS REQUIRED TO COMPLY WITH THOSE RATINGS WHETHER SHOWN OR NOT.

## APPLICABLE CODES

CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES AND LOCAL AMENDMENTS INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

| | |
|---|---|
| INFRASTRUCTURE STANDARD FOR TELECOMMUNICATIONS SPACES | V3.1, JULY 1, 2021 |
| VA FIRE PROTECTION DESIGN MANUAL: | 9TH ED., NOV 1, 2023 |
| VA PHYSICAL SECURITY AND RESILIENCY DESIGN MANUAL: | REV. JULY 1, 2022 |
| VA PLUMBING DESIGN MANUAL: | REV. JUNE 1, 2022 |
| VA HVAC DESIGN MANUAL: | REV. JAN 1, 2023 |
| VA SITE DESIGN MANUAL: | REV. APRIL 1, 2021 |
| NFPA 13 INSTALLATION OF SPRINKLER SYSTEMS: | 2022 EDITION |
| NFPA 70, NATIONAL ELECTRICAL CODE: | 2023 EDITION |
| NFPA 72 FIRE ALARM AND SIGNALING CODE: | 2022 EDITION |
| NFPA 75 FIRE PROTECTION OF IT EQUIPMENT: | 2020 EDITION |
| NFPA 99 HEALTHCARE FACILITIES CODE: | 2021 EDITION |
| NFPA 101 LIFE SAFETY CODE: | 2021 EDITION |
| NFPA 2001 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS: | 2022 EDITION |
| INTERNATIONAL BUILDING CODE: | 2021 EDITION |
| INTERNATIONAL MECHANICAL CODE: | 2021 EDITION |
| INTERNATIONAL PLUMBING CODE: | 2021 EDITION |

| | |
|---|---|
| **PROJECT ALTITUDE:** | **1204 FT. ABOVE SEA LEVEL** |

## FIRE PROTECTION SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

| SYMBOL: | DESCRIPTION: |
|---|---|
| CAF | CLEAN AGENT - FIRE PROTECTION |
| DFP | DRAIN |
| FP | FIRE PROTECTION |
| FPD | FIRE PROTECTION - DRY SYSTEM |
| | PIPE CAP |
| | PIPE DOWN |
| | PIPE UP OR UP/DOWN |
| | UNION/FLANGE |
| | DIRECTION OF FLOW IN PIPE |
| | ROUTE TO DRAIN |
| | SHUTOFF VALVE NORMALLY OPEN |
| | AUTOMATIC DRAIN VALVE |
| | AIR PRESSURE MAINTENANCE DEVICE |
| | AIR SUPERVISORY SWITCH |
| | ANGLE VALVE |
| | BUTTERFLY VALVE WITH MONITOR SWITCH |
| | CHECK VALVE |
| | BACKFLOW PREVENTER |
| | INSPECTOR TEST AND DRAIN VALVE |
| | OS&Y GATE VALVE |
| | OS&Y GATE VALVE WITH MONITOR SWITCH |
| F | FLOW SWITCH |
| P | PRESSURE SWITCH |
| P | PRESSURE GAUGE (FURNISHED WITH BALL VALVE) |
| | MONITOR SWITCH |
| | AREA BOUNDARY |
| | LIGHT HAZARD |
| | ORDINARY GROUP 1 |
| | DEMOLITION |

## FIRE PROTECTION ABBREVIATION KEY

| ABBR: | DESCRIPTION: |
|---|---|
| AD | ACCESS DOOR |
| AFF | ABOVE FINISHED FLOOR |
| BFP | BACKFLOW PREVENTER |
| I.E. | INVERT ELEVATION |
| N.C. | NORMALLY CLOSED |
| NIC | NOT IN CONTRACT |
| N.O. | NORMALLY OPEN |
| SCCR | SHORT CIRCUIT CURRENT RATING |
| TYP | TYPICAL |
| UON | UNLESS OTHERWISE NOTED |

## FIRE PUMP FLOW TEST DATA

TEST DATE: JUNE 22, 2023*

LOCATION: BUILDING #1 BASEMENT PUMP ROOM

FLOW DATA:

| | GPM | # OF | OUTLET/PITOT | NET PRESSURE |
|---|---|---|---|---|
| CHURN | 0 | - | - | 107 |
| 50% | 377 | 1 | 5 | 105 |
| 100% | 754 | 2 | 5 | 96 |
| 150% | 1066 | 2 | 10 | 92 |

*OBTAIN LATEST FIRE PUMP TEST DATA FOR HYDRAULIC CALCULATIONS. REFERENCE SPECIFICATION 21 13 13.

## FIRE PROTECTION GENERAL NOTES:

1. THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.
2. CENTER SPRINKLERS IN CEILING TILES IN BOTH DIRECTIONS IN ALL AREAS. IN AREAS WITH 2'X4' CEILING TILES CENTERING USING A 2'X2' CEILING PATTERN IS ACCEPTABLE. SPRINKLER HEADS SHALL BE ALIGNED WITH OTHER SPRINKLER HEADS, LIGHTING, DIFFUSERS, AND ANY OTHER FEATURES IN THE CEILING.
3. NEW SPRINKLERS SHALL BE QUICK RESPONSE TYPE, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL NOT MIX STANDARD RESPONSE SPRINKLERS WITH QUICK RESPONSE SPRINKLERS IN UNPARTITIONED SPACES.
4. PROVIDE COVERAGE ABOVE AND BELOW ALL EXPOSED DUCTWORK GREATER THAN 48" WIDE.
5. PROVIDE COVERAGE ABOVE (IF APPLICABLE) AND BELOW FLOATING CEILINGS, REFER TO ARCHITECTURAL PLANS.
6. PROVIDE COVERAGE ABOVE (IF APPLICABLE) AND BELOW PIPE DRIP PANS. REFER TO PLUMBING DRAWINGS.
7. FIRE PROTECTION PIPE ROUTING IS SHOWN FOR GENERAL LAYOUT. DETERMINE EXACT NUMBER OF SPRINKLERS, PIPE SIZING, AND PIPE ROUTING.
8. TELECOMMUNICATIONS ROOMS (TRS) SHALL BE PROVIDED WITH A CLEAN AGENT FIRE EXTINGUISHER FOR EACH TR, NO GREATER THAN 75 FT FROM THE REMOTE CORNER OF EACH TR, BUT NOT LOCATED WITHIN THE TR.
9. ALL BUILDING AREA SHALL BE FULLY SPRINKLERED INCLUDING CANOPIES, WALKWAYS, OVERHANGS, SOFFITS, AND BUILDING PROJECTIONS. ALL ACCESSIBLE COMBUSTIBLE CONCEALED SPACES SHALL BE FULLY PROTECTED BY THE SPRINKLER SYSTEM.
10. EACH ASSEMBLY SHALL INCLUDE BUTTERFLY CONTROL VALVE INDICATING "OPEN" OR "CLOSED" POSITION, TEST INSPECTION VALVE, FLOW SWITCH AND PRESSURE GAUGES.
11. WHERE FEASIBLE INSTALL PIPES HIGH AS POSSIBLE TO AVOID CONFLICT WITH OTHER DISCIPLINES, AND TO REDUCE THE AMOUNT OF REQUIRED ROD STIFFENER SUPPORTS.
12. INSTALL SYSTEM DRAINS AT LOW POCKET AREAS CONTAINING FIVE GALLONS OF WATER OR MORE, PROVIDE WITH ISOLATION VALVE AND THREADED HOSE CONNECTION.
13. FINAL HEAD LOCATION, TYPE AND FINISH SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT.
14. A GRAPHIC ANNUNCIATOR PANEL SHALL BE PROVIDED TO INCLUDE AREAS BEING PROVIDED WITH A PRE-ACTION OR CLEAN AGENT SYSTEM WHICH HAVE CONCEALED AREAS.
15. EXACT LOCATION OF ALL PANELS SHALL BE VERIFIED ON SITE AND COORDINATED WITH THE ELECTRICAL CONTRACTOR.
16. PAINT ALL EXPOSED PIPING RED PER SPECIFICATIONS.
17. COORDINATE EACH AND EVERY REQUIRED DRAINING AND RECHARGING OF THE SPRINKLER SYSTEM WITH COR MINIMUM 14 DAYS IN ADVANCE. CONTRACTOR SHALL NOT SHUT DOWN SPRINKLER SYSTEM. VA SHALL BE RESPONSIBLE FOR SHUTDOWN.
18. THE CONTRACTOR SHALL PREPARE A COORDINATED SET OF SHOP DRAWINGS AND SHALL OBTAIN APPROVAL FROM THE AUTHORITIES HAVING JURISDICTION AND THE COR.
19. WHERE PIPE PASSES THROUGH HOLES IN PLATFORMS, FOUNDATIONS, WALL, OR FLOORS, THE HOLES SHALL BE SIZED SUCH THAT DIAMETER OF THE HOLE IS NOMINALLY 2 INCHES LARGER THAN THE PIPE FOR 1" NOMINAL TO 3 ½" NOMINAL AND 4" LARGER THAN THE PIPE FOR PIPE 4" AND LARGER.
20. DRAWINGS SHOW LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC. AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
21. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.

## FIRE PROTECTION SHEET INDEX



| | |
|---|---|
| 00-FG000 | FIRE PROTECTION COVERSHEET |
| 00-FG500 | FIRE PROTECTION DETAILS |
| 01-FX099 | BASEMENT PLAN - FIRE PROTECTION |
| 01-FX100 | GROUND FLOOR PLAN - FIRE PROTECTION |
| 01-FX101 | FIRST FLOOR PLAN - FIRE PROTECTION |
| 01-FX102 | SECOND FLOOR PLAN - FIRE PROTECTION |
| 01-FX103 | THIRD FLOOR PLAN - FIRE PROTECTION |
| 01-FX104 | FOURTH FLOOR PLAN - FIRE PROTECTION |
| 01-FX105 | FIFTH FLOOR PLAN - FIRE PROTECTION |
| 01-FX106 | SIXTH FLOOR PLAN - FIRE PROTECTION |
| 01-FX107 | SEVENTH FLOOR PLAN - FIRE PROTECTION |
| 01-FX108 | EIGHTH FLOOR PLAN - FIRE PROTECTION |
| 01-FX109 | NINTH FLOOR PLAN - FIRE PROTECTION |
| 01-FX110 | TENTH FLOOR PLAN - FIRE PROTECTION |
| 01-FX111 | ELEVENTH FLOOR PLAN - FIRE PROTECTION |
| 01-FX400 | ENLARGED PLANS - FIRE PROTECTION |
| 05-FX101 | FIRST FLOOR PLAN - FIRE PROTECTION |
| 30-FX099 | BASEMENT PLAN - FIRE PROTECTION |
| 30-FX100 | GROUND FLOOR PLAN - FIRE PROTECTION |
| 30-FX101 | FIRST FLOOR PLAN - FIRE PROTECTION |
| 30-FX102 | SECOND FLOOR PLAN - FIRE PROTECTION |
| 33-FX101 | FIRST FLOOR PLAN - FIRE PROTECTION |
| GRAND TOTAL: 22 | |



## MECHANICAL GENERAL NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
3. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
4. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
5. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
6. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
10. SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.
11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
12. WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
13. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
14. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
15. MAINTAIN A MINIMUM WORKING CLEARANCE OF 3'-6" IN FRONT OF ALL ELECTRICAL EQUIPMENT REQUIRING MAINTENANCE, INSPECTION, AND TESTING INCLUDING BUT NOT LIMITED TO PANELS, DISTRIBUTION PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, EQUIPMENT DISCONNECTS AND STARTERS.
16. MAINTAIN THE DEDICATED ELECTRICAL EQUIPMENT SPACE DEFINED BY THE WIDTH / DEPTH OF ELECTRICAL EQUIPMENT MEASURED FROM THE FLOOR TO A HEIGHT 6'-0" ABOVE THE EQUIPMENT OR THE STRUCTURAL CEILING, WHICHEVER IS LOWER. SYSTEMS FOREIGN TO THE ELECTRICAL DISTRIBUTION SYSTEM ARE NOT ALLOWED IN THE DEDICATED ELECTRICAL SPACE INCLUDING: DUCTWORK, PIPING, ETC.
17. PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
18. DO NOT EXCEED 25 LBS PER HANGER AND A MINIMUM SPACING OF 2'-0" ON CENTER WHEN ATTACHING TO METAL ROOF DECKING (LIMITATION NOT REQUIRED WITH CONCRETE ON METAL DECK). THIS 25 LBS. LOAD AND 2'-0" SPACING INCLUDE ADJACENT ELECTRICAL AND ARCHITECTURAL ITEMS HANGING FROM DECK. IF THE HANGER RESTRICTIONS CANNOT BE ACHIEVED, SUPPLEMENTAL FRAMING OFF STEEL FRAMING SHALL BE ADDED. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

## MECHANICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
2. NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
4. EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF THEIR WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO THEIR AREA OF WORK.
5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CUTTING, REMOVAL AND PATCHING OF ROOFS, WALLS, AND FLOORS ASSOCIATED WITH WORK BY ALL CONTRACTORS. CONTRACTORS SHALL NOTIFY THE GC OF AFFECTED AREAS PRIOR TO BIDDING.
6. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO BIDDING.
7. WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.
8. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS THAT REMAIN ACTIVE.
9. OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED.
10. MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR TIE IN AND SWITCHOVER. DRAIN SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER BEFORE PARTIALLY OR COMPLETELY DRAINING SYSTEM. MAKE CHANGEOVER TO NEW SYSTEMS WITH MINIMUM OUTAGE.
11. DISCONNECT AND REMOVE MECHANICAL DEVICES AND EQUIPMENT SERVING EQUIPMENT THAT HAS BEEN REMOVED.

## MECHANICAL PHASING NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. REFER TO ARCHITECTURAL DRAWINGS FOR GENERAL DESCRIPTION OF PHASES. REFER TO ARCHITECT'S INSTRUCTIONS FOR MORE DETAILS AND PHASING SCHEDULES AND FOR CONCURRENT WORK. MECHANICAL, ELECTRICAL AND TECHNOLOGY DRAWINGS DEPICT THE INTENT OF THE FINAL DESIGN. THE MECHANICAL, ELECTRICAL, AND TECHNOLOGY DRAWINGS DO NOT DEPICT THE MEANS AND METHODS TO MEET THE REQUIREMENTS OF THE PHASING CRITERIA.
2. REVIEW PROJECT PHASING PLANS TO COORDINATE DEMOLITION WORK, OUTAGES, ETC. WITH AFFECTED ADJACENT AREAS.
3. PROVIDE TEMPORARY DUCTWORK, PIPING, SHUTOFF VALVES, ZONE VALVES, ZONE ALARMS, ETC. AS NEEDED TO MAINTAIN SERVICE TO ALL AREAS DURING ALL PHASES OF PROJECT.
4. INSTALL TEMPORARY DUCTWORK, PIPING, SHUTOFF VALVES, ETC. AS NECESSARY TO KEEP ALL OCCUPIED SPACES OPERATIONAL THROUGHOUT ALL PHASES OF THE PROJECT
5. PHASE DEMOLITION WORK TO MINIMIZE DOWNTIME.
6. COORDINATE PHASING IN MAIN COMPUTER ROOM WITH TELECOMMUNICATIONS PHASING PLANS.

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

AWEN SOLUTIONS GROUP
ARCHITECTURE | ENGINEERING | PLANNING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STAMP

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DOUGLAS SMITH — ENGINEER — POWER

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

| | |
|---|---|
| Drawing Title | FIRE PROTECTION COVERSHEET |
| Phase | FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 00-FG000 |
| | SHEET 217 of 797 |

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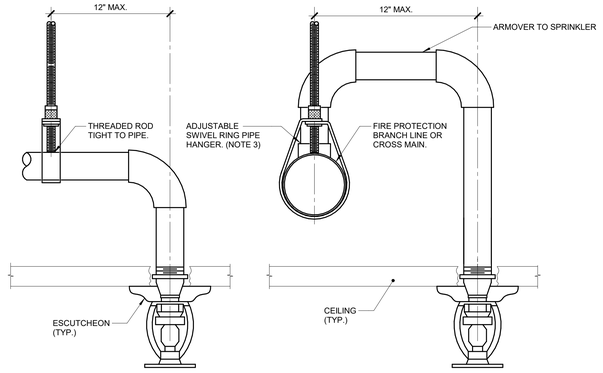


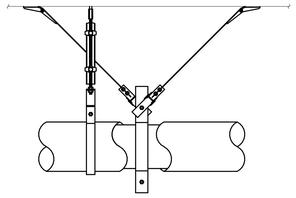

ARMOVER (>12" IN LENGTH) (NOTE 2)

ARMOVER (<12" IN LENGTH)

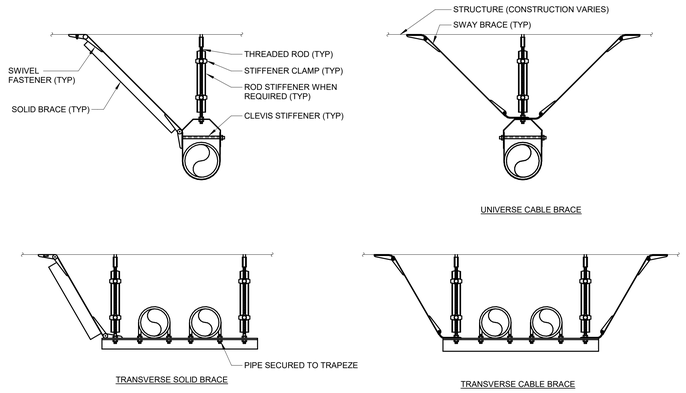
NOTES:

1. THIS DETAIL APPLIES TO SPRINKLER PIPES ABOVE CEILING THAT SUPPLY PENDENT SPRINKLERS BELOW CEILINGS WHERE THE WATER PRESSURE EXCEEDS 100 PSIG (STATIC OR RESIDUAL).
2. ALSO APPLIES TO ARMOVER WHERE CUMULATIVE HORIZONTAL LENGTH IS GREATER THAN 12".
3. CLEVIS HANGERS AND ADJUSTABLE SWIVEL RING HANGERS WITH SURGE SUPPRESSOR OR RESTRAINING CLIP ARE ALSO ACCEPTABLE, SEE NFPA 13.

## C1 SPRINKLER PIPE ARMOVER HANGER
NO SCALE



LONGITUDINAL BRACE




UNIVERSE CABLE BRACE

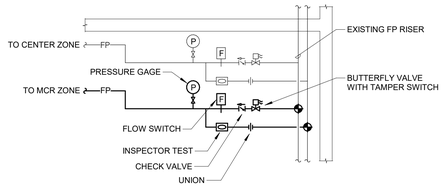
TRANSVERSE SOLID BRACE

TRANSVERSE CABLE BRACE

NOTES:

1. GENERAL REQUIREMENTS FOR TRANSVERSE AND LONGITUDINAL BRACING OF PIPES ARE SHOWN. SPECIFIC REQUIREMENTS, INCLUDING ATTACHMENT TO BUILDING STRUCTURE, SHALL BE DETERMINED BY THE SEISMIC RESTRAINT DESIGNER. REFER TO SPECIFICATION SECTION 21 05 50 FOR REQUIREMENTS.

## F1 SEISMIC SUPPORT - PIPING BRACING
NO SCALE




## B4 FIFTH FLOOR FIRE PROTECTION RISER DIAGRAM
NO SCALE

**WARNING!**

LEAVE AREA IMMEDIATELY
WHEN ALARM SOUNDS
NOVEC 1230
BEING RELEASED

NOTES:

1. REFER TO SPECIFICATION SECTION 10 14 00 AND VA SIGNAGE DESIGN MANUAL FOR ADDITIONAL REQUIREMENTS.

## B6 CLEAN AGENT SIGNAGE - INTERIOR OF ROOM
NO SCALE

**WARNING!**

THIS AREA IS PROTECTED BY A
NOVEC 1230 EXTINGUISHING
SYSTEM. DO NOT ENTER
WITHOUT AUTHORIZATION
DURING OR AFTER DISCHARGE.

NOTES:

1. REFER TO SPECIFICATION SECTION 10 14 00 AND VA SIGNAGE DESIGN MANUAL FOR ADDITIONAL REQUIREMENTS.

## C6 CLEAN AGENT SIGNAGE - EXTERIOR OF ROOM
NO SCALE

**CLEAN AGENT SYSTEM NOTES:**

1. THE CLEAN AGENT DETECTION, NOTIFICATION, AND SUPPRESSION SYSTEMS SHALL BE DESIGNED AND INSTALLED BY PROFESSIONALS CERTIFIED IN THE DESIGN AND INSTALLATION OF SUCH SYSTEMS.
2. THE DESIGN OF THE SYSTEM SHALL INCLUDE AN INPUT/OUTPUT MATRIX FOR THE CLEAN AGENT SYSTEM AND A RISER DIAGRAM WHICH INCLUDES INTEGRATION INTO THE EXISTING FIRE ALARM SYSTEM.
3. REFER TO SPECIFICATION SECTION 21 22 00 FOR ADDITIONAL INFORMATION.

BILL OF MATERIALS:

THE SYSTEM SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING ELEMENTS:

- CLEAN AGENT TANK AND VALVE ASSEMBLIES
- TANK AND VALVE ACCESSORIES INCLUDING MOUNTING BRACKETS, DISCHARGE HOSES, PILOT HOSES, HOSE ADAPTERS, ETC.
- CLEAN AGENT FLUID, FACTORY FILLED
- LOW PRESSURE SWITCH(ES)
- ELECTRIC ACTUATOR ASSEMBLIES
- HALOCARBON PLACEMENT INDICATOR
- PNEUMATIC ACTUATOR ASSEMBLIES
- LOCAL MANUAL ACTUATOR
- WARNING PLATE(S) FOR WITHIN THE ROOM
- WARNING PLATE(S) FOR OUTSIDE THE ROOM
- INTEGRATED CONTROLS SYSTEM
- MODULES FOR THE ISOLATION, CONTROL, NOTIFICATION, RELEASE, AND MONITORING OF THE SYSTEM AND DEVICES
- PHOTOELECTRIC, ANALOG ADDRESSABLE SMOKE DETECTORS AND BASES
- SUPPRESSION ACTIVATION PULL STATION(S)
- SUPPRESSION ABORT SWITCH(ES)
- KEYED MAINTENANCE SWITCH
- BELL(S)
- STROBE(S)
- HORN STROBE(S)
- BATTERY PACK(S)
- ANY OTHER DEVICES, APPURTENANCES AS REQUIRED BY THE SYSTEM MANUFACTURER AND NFPA 2001.

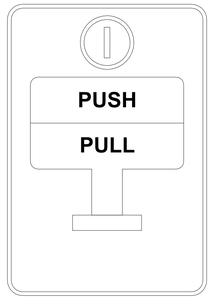
SYSTEM OUTPUTS:

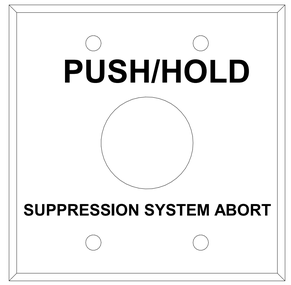
THE SYSTEM SHALL BE CAPABLE OF, BUT NOT BE LIMITED TO, THE FOLLOWING OUTPUTS:

- ACTUATE COMMON ALARM SIGNAL INDICATOR
- ACTUATE AUDIBLE ALARM SIGNAL
- ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR
- ACTUATE AUDIBLE SUPERVISORY SIGNAL
- ACTUATE COMMON TROUBLE SIGNAL INDICATOR
- ACTUATE AUDIBLE TROUBLE SIGNAL
- DISPLAY CHANGE OF STATUS
- TRANSMIT ALARM SIGNAL TO MAIN FACILITY FACP
- TRANSMIT SUPERVISORY SIGNAL TO MAIN FACILITY FACP
- TRANSMIT TROUBLE SIGNAL TO MAIN FACILITY FACP
- ACTUATE SUPPRESSION BELL
- ACTUATE SUPPRESSION HORN AT 120 BPM
- ACTUATE SUPPRESSION HORN AT STEADY TONE
- ACTUATE PRE-DISCHARGE STROBE
- ACTUATE SUPPRESSION STROBE
- BEGIN 30 SECOND COUNTDOWN
- AGENT RELEASE INTO ALL HAZARD SPACES
- BEGIN 10 SECOND AGENT RELEASE DELAY
- HVAC SHUTDOWN
- DAMPER CLOSURE
- SILENCE SUPPRESSION BELL
- STOP FIRE 2 30-SECOND COUNTDOWN

FIRE SUPPRESSION ABORT PUSH BUTTON AND HOLD

FIRE SUPPRESSION ABORT PUSH BUTTON AND HOLD




NOTES:

1. REFER TO SPECIFICATION SECTION 10 14 00 AND VA SIGNAGE DESIGN MANUAL FOR ADDITIONAL REQUIREMENTS.

## F6 CLEAN AGENT START/STOP STATIONS
NO SCALE

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DOUGLAS SMITH
ENGINEER
PE081525

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| Drawing Title: FIRE PROTECTION DETAILS | Phase: FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |

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| Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | Building Number: 1 |
| Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 00-FG500 |
| Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 218 of 797 |

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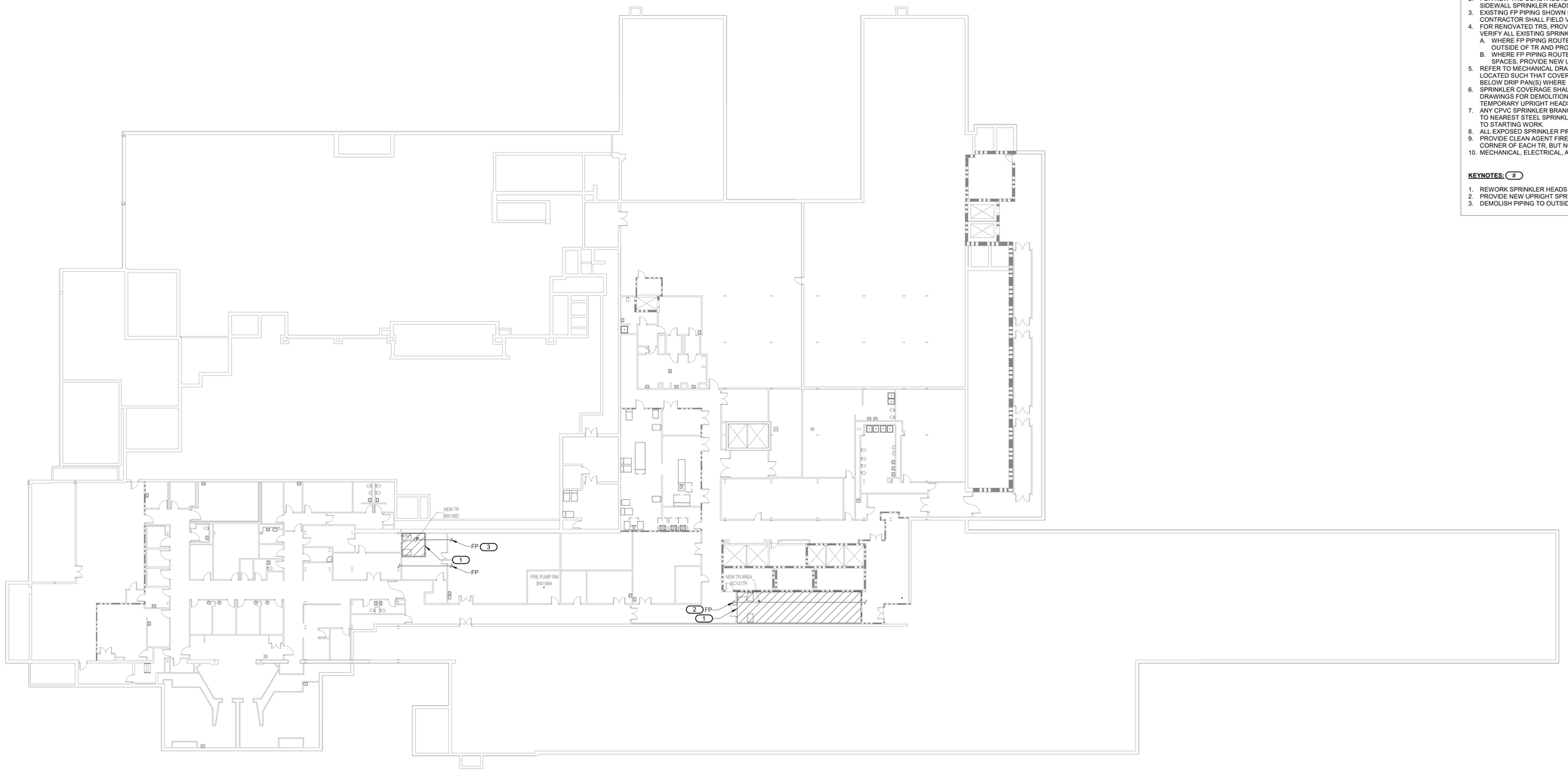


## NOTES:

**FIELD VERIFICATION NOTES:**

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**FIRE PROTECTION SHEET NOTES:**

1. TELECOMMUNICATIONS ROOMS (TRS) SHALL BE PROVIDED WITH FUSIBLE LINK-TYPE STANDARD RESPONSE SPRINKLER HEADS. SPRINKLERS SHALL BE UPRIGHT AND PROVIDED WITH PROTECTIVE CAGES. IN ALL OTHER SPACES WHERE SPRINKLER REWORK IS REQUIRED, PROVIDE QUICK RESPONSE SPRINKLER HEADS.
2. FOR NEW TRS CONSTRUCTED AS BUILDING ADDITIONS OR NEW ROOMS IN LARGER SPACES, PROVIDE SIDEWALL SPRINKLER HEADS.
3. EXISTING FP PIPING SHOWN IN TRS IS FROM EXISTING DRAWINGS AND LIMITED FIELD INVESTIGATION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SPRINKLER PIPING SERVING TRS.
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5. REFER TO MECHANICAL DRAWINGS FOR LAYOUT OF PIPE DRIP PAN SYSTEMS. SPRINKLER HEADS SHALL BE LOCATED SUCH THAT COVERAGE IS NOT IMPEDED BY DRIP PANS. PROVIDE SPRINKLER(S) ABOVE AND BELOW DRIP PAN(S) WHERE REQUIRED BY SIZE OF PANS.
6. SPRINKLER COVERAGE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. REFER TO ARCHITECTURAL DRAWINGS FOR DEMOLITION AND NEW WORK REFLECTED CEILING PLANS AND PHASING PLANS. PROVIDE TEMPORARY UPRIGHT HEADS AS REQUIRED TO PROTECT SPACES DURING CONSTRUCTION.
7. ANY CPVC SPRINKLER BRANCH PIPING LOCATED IN OR SERVING TR SPACES SHALL BE DEMOLISHED BACK TO NEAREST STEEL SPRINKLER MAIN AND REPLACED WITH STEEL PIPING. FIELD VERIFY CPVC PIPING PRIOR TO STARTING WORK.
8. ALL EXPOSED SPRINKLER PIPING (NEW AND EXISTING) IN TR SPACES SHALL BE FIELD PAINTED RED.
9. PROVIDE CLEAN AGENT FIRE EXTINGUISHERS FOR EACH TR, NO GREATER THAN 75 FT FROM THE REMOTE CORNER OF EACH TR, BUT NOT LOCATED WITHIN THE TR.
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**KEYNOTES:** (#)

1. REWORK SPRINKLER HEADS IN OUTLINED AREAS AS REQUIRED TO PROVIDE FULL COVERAGE PER NFPA 13.
2. PROVIDE NEW UPRIGHT SPRINKLER(S) IN NEW TR AREA. EXISTING BRANCH PIPING TO REMAIN.
3. DEMOLISH PIPING TO OUTSIDE OF ROOM AND PROVIDE NEW SIDEWALL SPRINKLER(S).

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| Drawing Title: BASEMENT PLAN - FIRE PROTECTION | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-FX099 |
| | | | SHEET 219 of 797 |


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# NOTES:

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| Drawing Title | GROUND FLOOR PLAN - FIRE PROTECTION |
| Approved: | |
| Phase | FINAL BID DOCUMENTS |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
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| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-FX100 |
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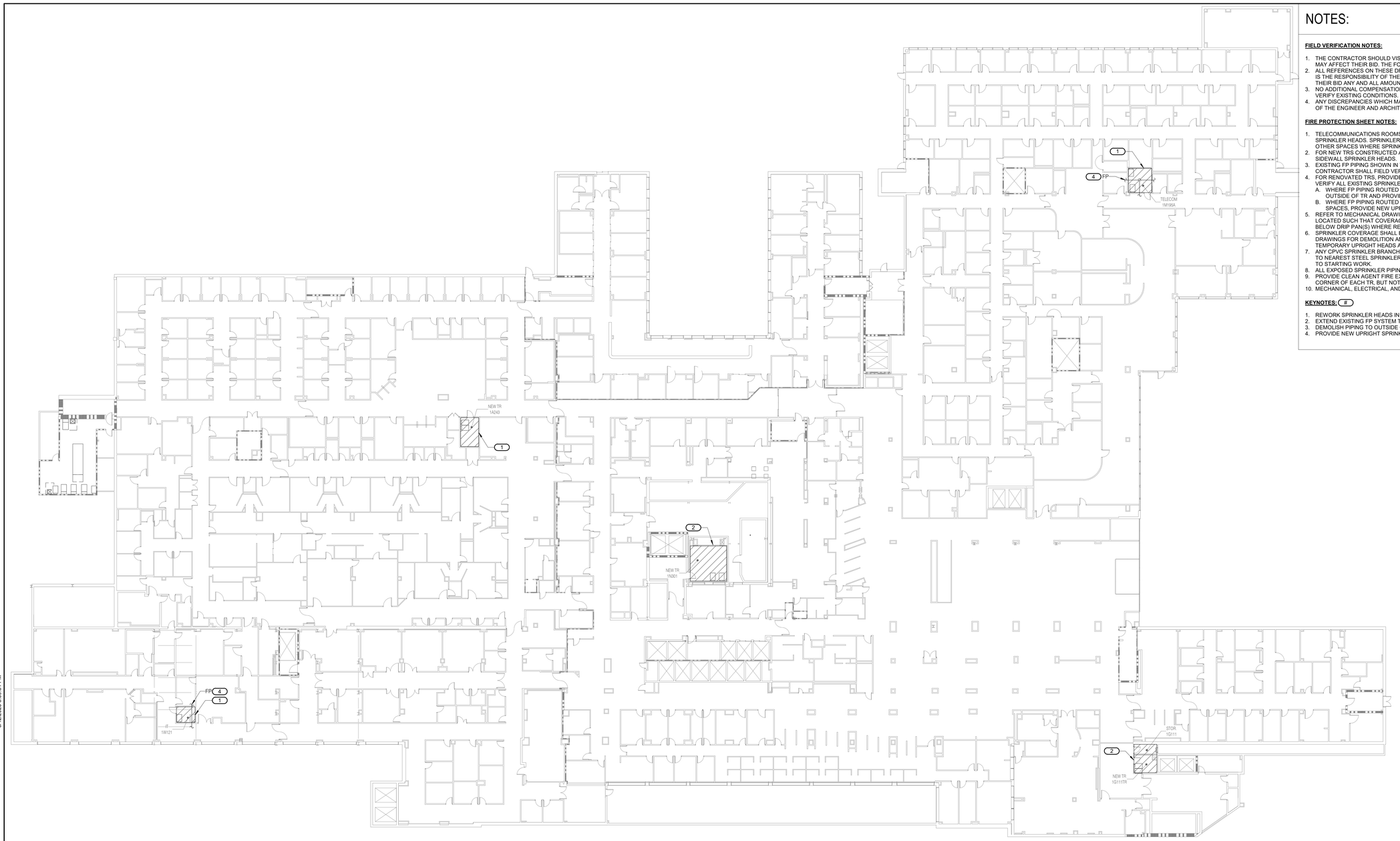


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| Drawing Title: FIRST FLOOR PLAN - FIRE PROTECTION | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
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| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
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| | | | SHEET 222 of 797 |

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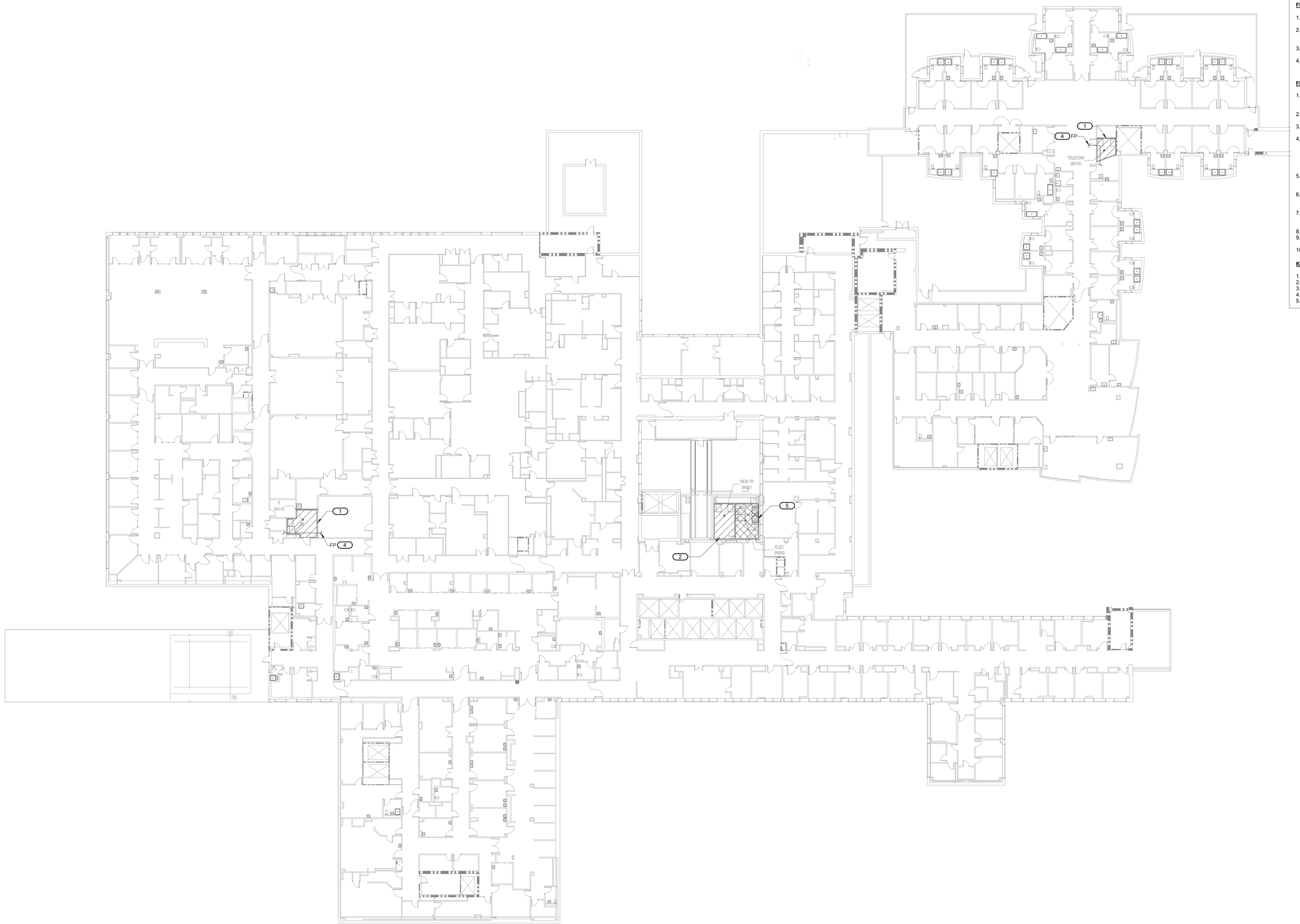


# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
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**FIRE PROTECTION SHEET NOTES:**

1. TELECOMMUNICATIONS ROOMS (TRS) SHALL BE PROVIDED WITH FUSIBLE LINK-TYPE STANDARD RESPONSE SPRINKLER HEADS. SPRINKLERS SHALL BE UPRIGHT AND PROVIDED WITH PROTECTIVE CAGES. IN ALL OTHER SPACES WHERE SPRINKLER REWORK IS REQUIRED, PROVIDE QUICK RESPONSE SPRINKLER HEADS.
2. FOR NEW TRS CONSTRUCTED AS BUILDING ADDITIONS OR NEW ROOMS IN LARGER SPACES, PROVIDE SIDEWALL SPRINKLER HEADS.
3. EXISTING FP PIPING SHOWN IN TRS IS FROM EXISTING DRAWINGS AND LIMITED FIELD INVESTIGATION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SPRINKLER PIPING SERVING TRS.
4. FOR RENOVATED TRS, PROVIDE SIDEWALL OR UPRIGHT SPRINKLER HEADS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SPRINKLER PIPING SERVING TRS.
   A. WHERE FP PIPING ROUTED OVER A TR IS BRANCH PIPING SERVING ONLY THE TR, DEMOLISH PIPING TO OUTSIDE OF TR AND PROVIDE NEW SIDEWALL SPRINKLER HEAD.
   B. WHERE FP PIPING ROUTED OVER A TR IS BRANCH PIPING SERVING THE TR AND OTHER DOWNSTREAM SPACES, PROVIDE NEW UPRIGHT SPRINKLER HEAD. BRANCH PIPING TO REMAIN.
5. REFER TO MECHANICAL DRAWINGS FOR LAYOUT OF PIPE DRIP PAN SYSTEMS. SPRINKLER HEADS SHALL BE LOCATED SUCH THAT COVERAGE IS NOT IMPEDED BY DRIP PANS. PROVIDE SPRINKLER(S) ABOVE AND BELOW DRIP PAN(S) WHERE REQUIRED BY SIZE OF PANS.
6. SPRINKLER COVERAGE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. REFER TO ARCHITECTURAL DRAWINGS FOR DEMOLITION AND NEW WORK REFLECTED CEILING PLANS AND PHASING PLANS. PROVIDE TEMPORARY UPRIGHT HEADS AS REQUIRED TO PROTECT SPACES DURING CONSTRUCTION.
7. ANY CPVC SPRINKLER BRANCH PIPING LOCATED IN OR SERVING TR SPACES SHALL BE DEMOLISHED BACK TO NEAREST STEEL SPRINKLER MAIN AND REPLACED WITH STEEL PIPING. FIELD VERIFY CPVC PIPING PRIOR TO STARTING WORK.
8. ALL EXPOSED SPRINKLER PIPING (NEW AND EXISTING) IN TR SPACES SHALL BE FIELD PAINTED RED.
9. PROVIDE CLEAN AGENT FIRE EXTINGUISHERS FOR EACH TR, NO GREATER THAN 75 FT FROM THE REMOTE CORNER OF EACH TR, BUT NOT LOCATED WITHIN THE TR.
10. MECHANICAL, ELECTRICAL, AND TELECOMMUNICATIONS EQUIPMENT IS SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** (#)

1. REWORK SPRINKLER HEADS IN OUTLINED AREAS AS REQUIRED TO PROVIDE FULL COVERAGE PER NFPA 13.
2. EXTEND EXISTING FP SYSTEM TO PROVIDE FULL COVERAGE PER NFPA 13.
3. DEMOLISH PIPING TO OUTSIDE OF ROOM AND PROVIDE NEW SIDEWALL SPRINKLER(S).
4. PROVIDE NEW UPRIGHT SPRINKLER(S). EXISTING BRANCH PIPING TO REMAIN.
5. PROVIDE QUICK RESPONSE SPRINKLERS IN ELECTRICAL ROOM.

PLAN NORTH

20 0 20 40
1" = 20'-0" SCALE FEET

| Revisions: | Date: |
|---|---|
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PROJECT #22002251.00

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COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER DOUGLAS SMITH PE081555

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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|---|---|---|---|
| Drawing Title: THIRD FLOOR PLAN - FIRE PROTECTION | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-FX103 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 223 of 797 |

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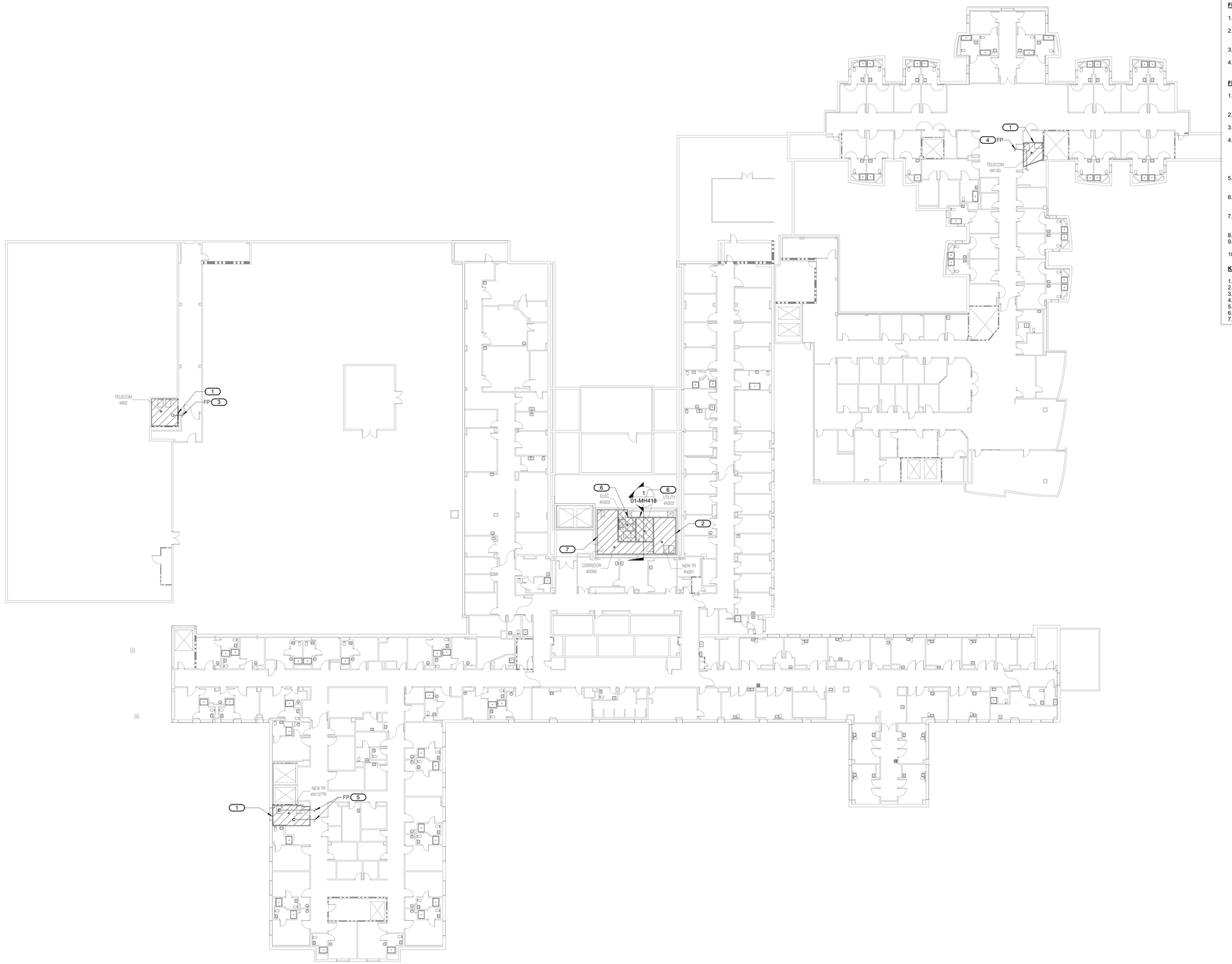


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2. FOR NEW TRS CONSTRUCTED AS BUILDING ADDITIONS OR NEW ROOMS IN LARGER SPACES, PROVIDE SIDEWALL SPRINKLER HEADS.
3. EXISTING FP PIPING SHOWN IN TRS IS FROM EXISTING DRAWINGS AND LIMITED FIELD INVESTIGATION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SPRINKLER PIPING SERVING TRS.
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5. REFER TO MECHANICAL DRAWINGS FOR LAYOUT OF PIPE DRIP PAN SYSTEMS. SPRINKLER HEADS SHALL BE LOCATED SUCH THAT COVERAGE IS NOT IMPEDED BY DRIP PANS. PROVIDE SPRINKLER(S) ABOVE AND BELOW DRIP PAN(S) WHERE REQUIRED BY SIZE OF PANS.
6. SPRINKLER COVERAGE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. REFER TO ARCHITECTURAL DRAWINGS FOR DEMOLITION AND NEW WORK REFLECTED CEILING PLANS AND PHASING PLANS. PROVIDE TEMPORARY UPRIGHT HEADS AS REQUIRED TO PROTECT SPACES DURING CONSTRUCTION.
7. ANY CPVC SPRINKLER BRANCH PIPING LOCATED IN OR SERVING TR SPACES SHALL BE DEMOLISHED BACK TO NEAREST STEEL SPRINKLER MAIN AND REPLACED WITH STEEL PIPING. FIELD VERIFY CPVC PIPING PRIOR TO STARTING WORK.
8. ALL EXPOSED SPRINKLER PIPING (NEW AND EXISTING) IN TR SPACES SHALL BE FIELD PAINTED RED.
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**KEYNOTES:** (#)

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3. DEMOLISH PIPING TO OUTSIDE OF ROOM AND PROVIDE NEW SIDEWALL SPRINKLER(S).
4. PROVIDE NEW UPRIGHT SPRINKLER(S). EXISTING BRANCH PIPING TO REMAIN.
5. DEMOLISH EXISTING CPVC PIPING AND PROVIDE NEW SPRINKLER(S).
6. PROVIDE QUICK RESPONSE SPRINKLER(S) IN ELECTRICAL ROOM AND UTILITY ROOM.
7. PROVIDE QUICK RESPONSE SPRINKLER(S) IN CORRIDOR AND UNASSIGNED ROOMS.

PLAN NORTH

1" = 20'-0" SCALE — 20 0 20 40 FEET

| Revisions: | Date: |
|---|---|
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Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

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|---|---|
| Drawing Title: FOURTH FLOOR PLAN - FIRE PROTECTION | Phase: FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |

| | |
|---|---|
| Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | Building Number: 1 |
| Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-FX104 |
| Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 224 of 797 |

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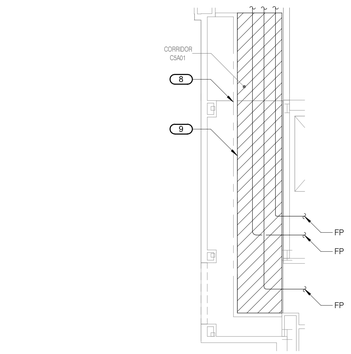
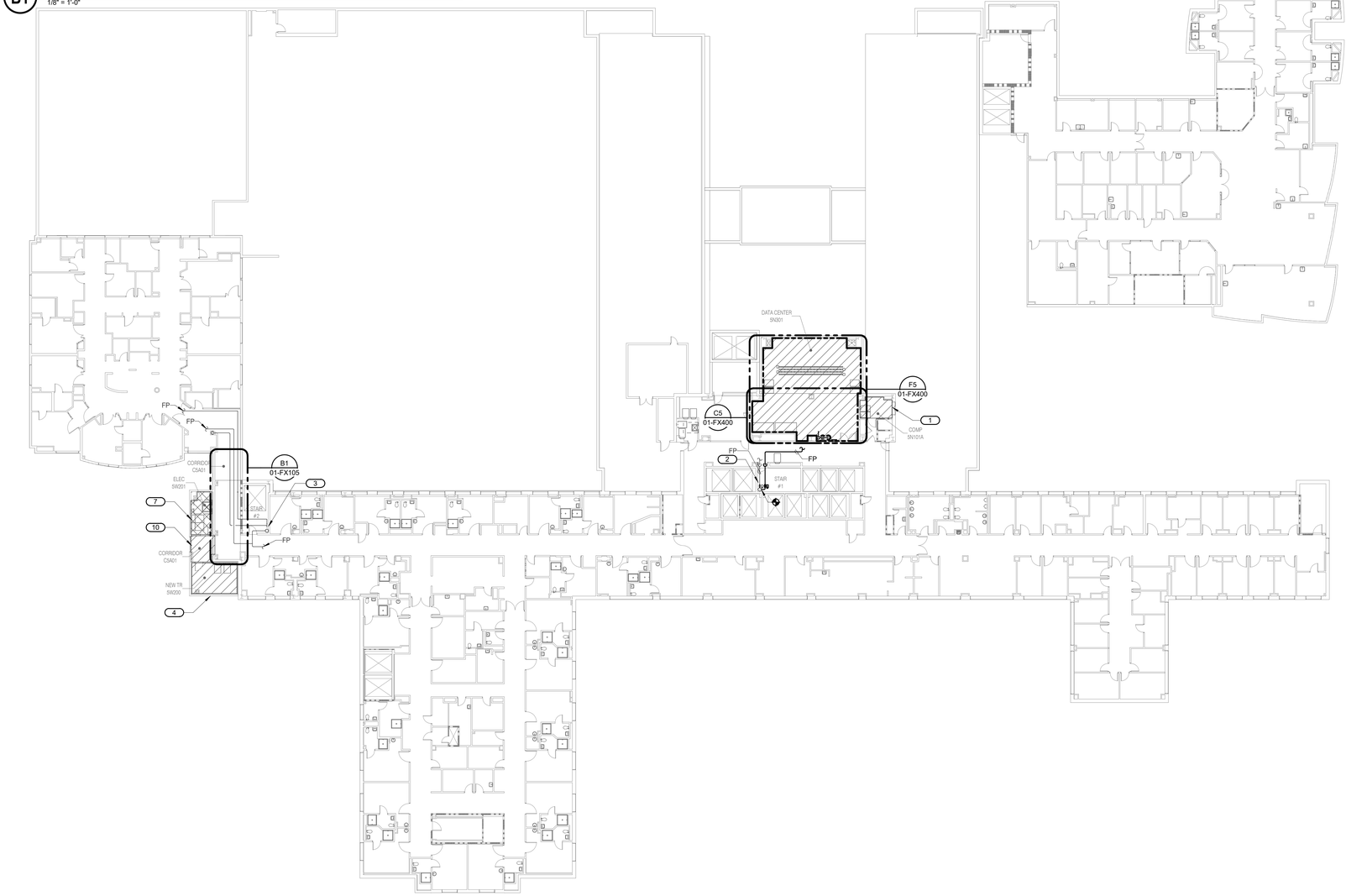
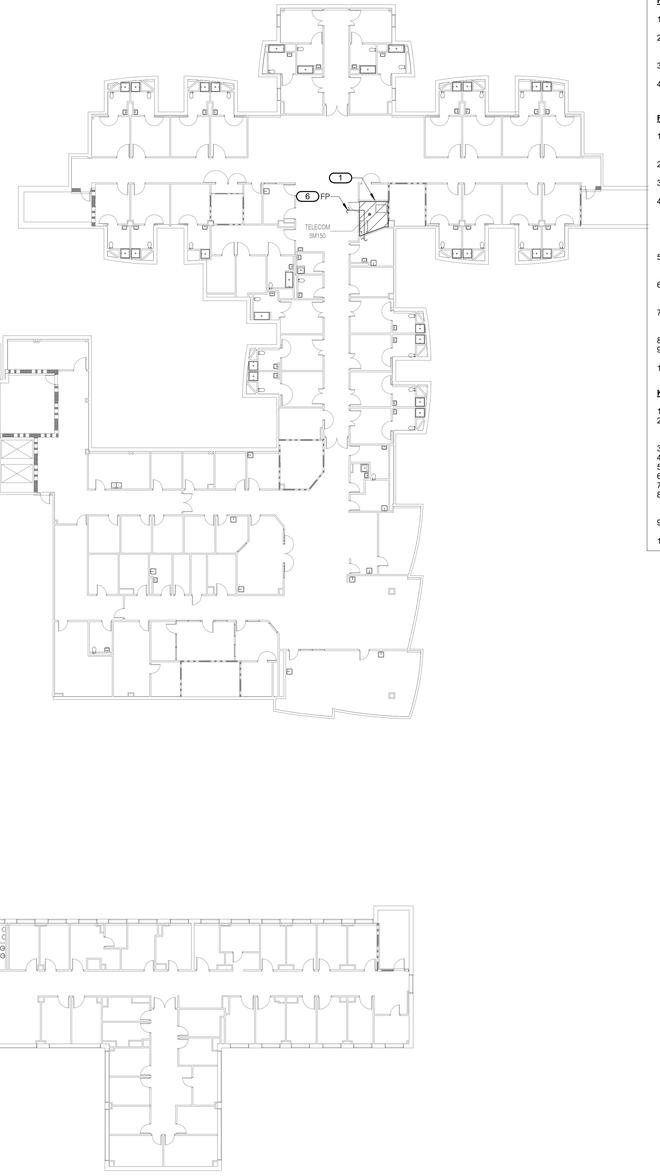



## B1 FIFTH FLOOR PLAN - TEMPORARY ENCLOSURE

1/8" = 1'-0"

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**KEYNOTES:** (#)

1. REWORK SPRINKLER HEADS IN OUTLINED AREAS AS REQUIRED TO PROVIDE FULL COVERAGE PER NFPA 13.
2. EXISTING STANDPIPE AND CENTER ZONE VALVE. CONNECT NEW FIRE MAIN PIPING TO EXISING FP RISER IN STAIRWELL. COORDINATE SHUTDOWN WITH COR PER GENERAL NOTES. PAINT EXPOSED PIPING RED. REFERENCE B4/00-FG500.
3. EXISTING STANDPIPE AND WEST & INTERSTITIAL ZONE VALVE.
4. EXTEND EXISTING FP SYSTEM TO PROVIDE FULL COVERAGE PER NFPA 13.
5. DEMOLISH PIPING TO OUTSIDE OF ROOM AND PROVIDE NEW SIDEWALL SPRINKLER(S).
6. PROVIDE NEW UPRIGHT SPRINKLER(S). EXISTING BRANCH PIPING TO REMAIN.
7. PROVIDE QUICK RESPONSE SPRINKLER(S) IN ELECTRICAL ROOM.
8. TEMPORARY CORRIDOR ENCLOSURE. REFER TO ARCHITECTURAL DRAWINGS. PROVIDE TEMPORARY CONNECTIONS THROUGH TEMPORARY CORRIDOR ENCLOSURE AS REQUIRED TO PROTECT SPACES DURING CONSTRUCTION.
9. PROVIDE TEMPORARY QUICK RESPONSE SPRINKLERS IN CORRIDOR AS REQUIRED TO MAINTAIN PROTECTION DURING CONSTRUCTION.
10. PROVIDE QUICK RESPONSE SPRINKLER(S) IN CORRIDOR.

PLAN NORTH

1" = 20'-0" SCALE — 20 0 20 40 FEET

| Revisions: | Date: |
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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

| | |
|---|---|
| Drawing Title | FIFTH FLOOR PLAN - FIRE PROTECTION |
| Phase | FINAL BID DOCUMENTS |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Approved: | |
| | FULLY SPRINKLERED |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Drawing Number | 01-FX105 |
| | SHEET 225 of 797 |


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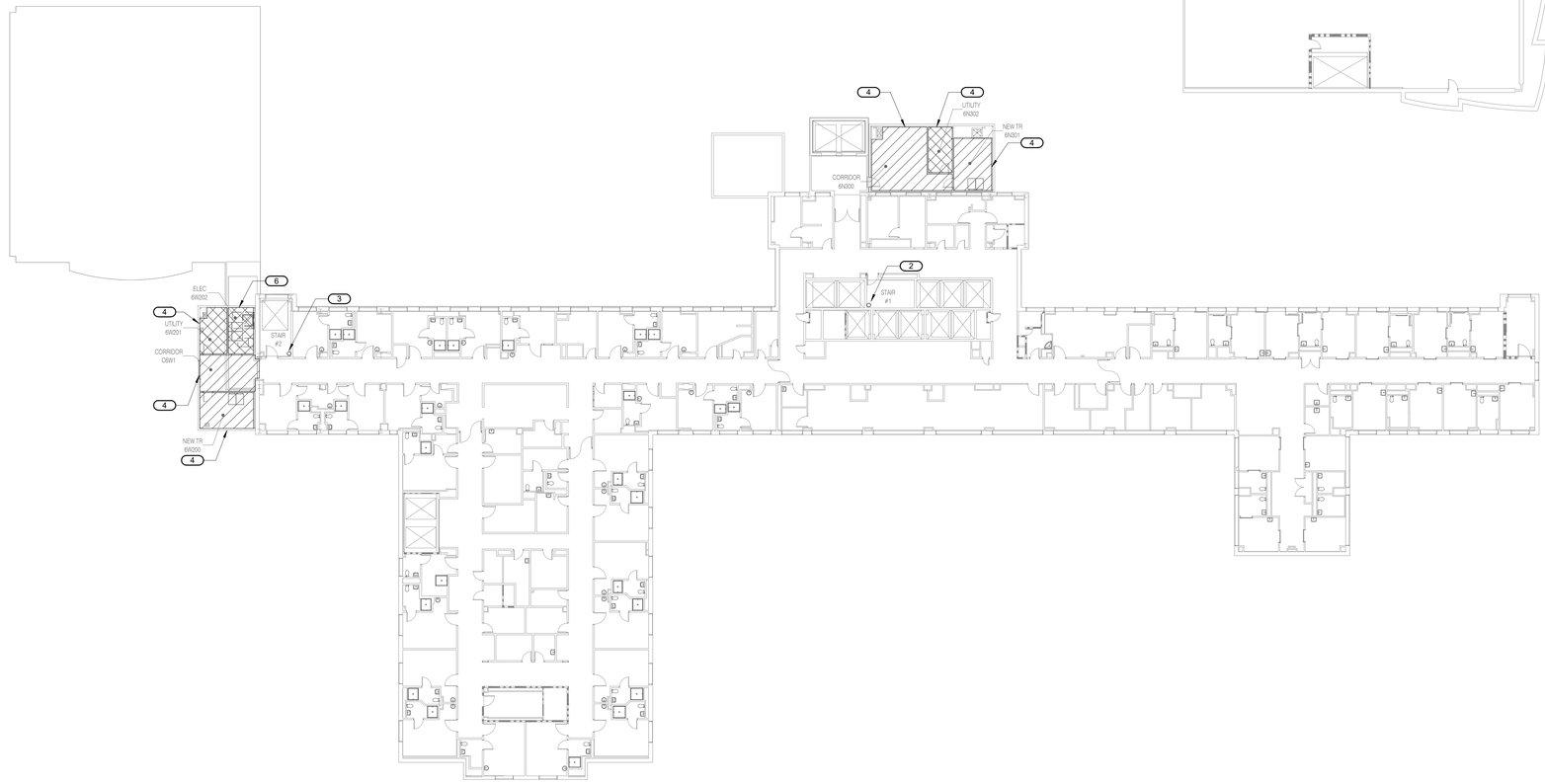


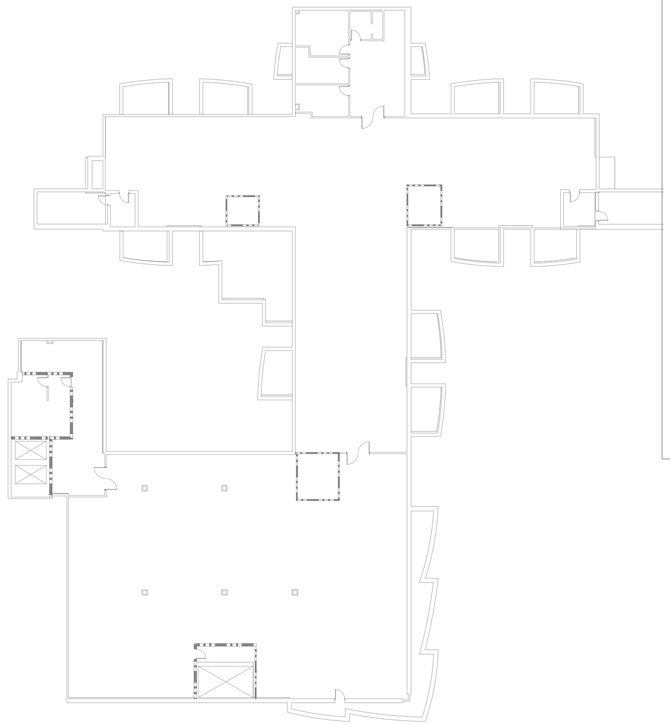

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PLAN NORTH

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| Revisions: | Date: |
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Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

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|---|---|
| Drawing Title | SIXTH FLOOR PLAN - FIRE PROTECTION |
| Approved: | |
| Phase | FINAL BID DOCUMENTS |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
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| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-FX106 |
| | SHEET 226 of 797 |


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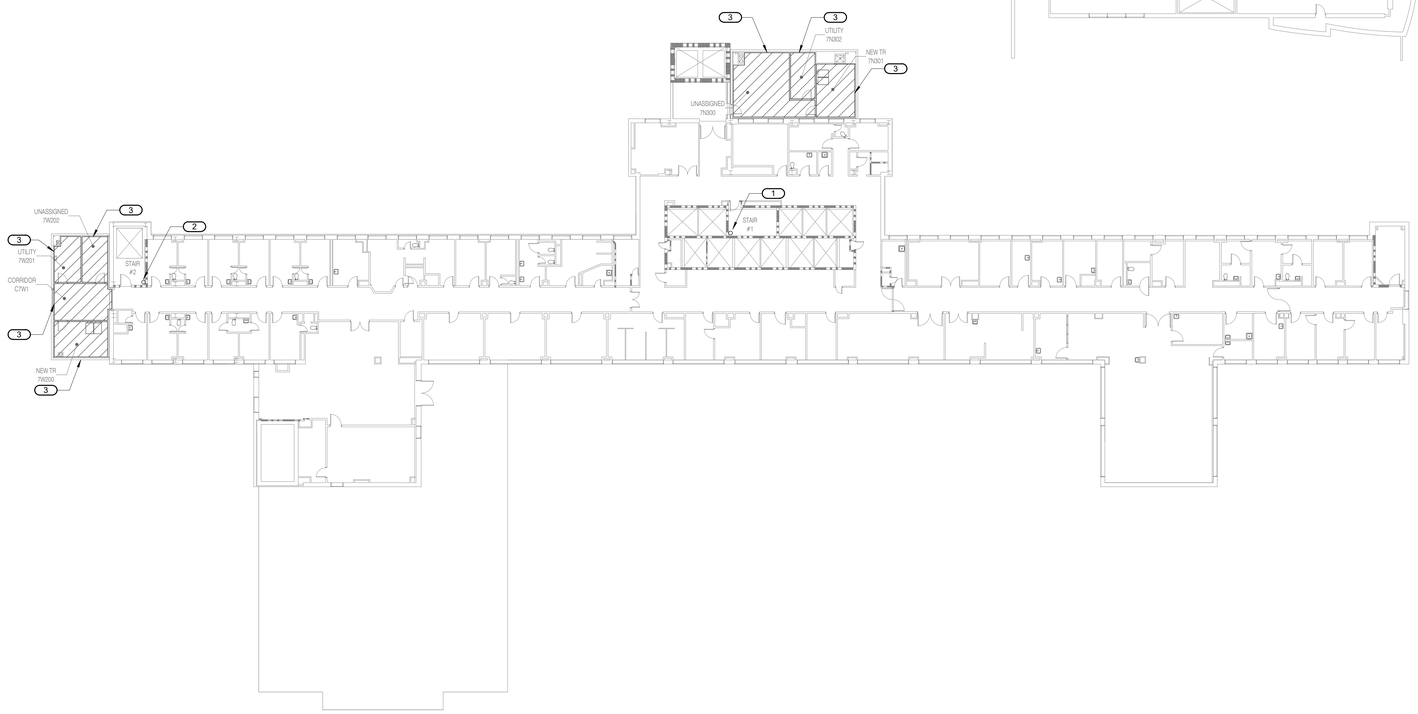


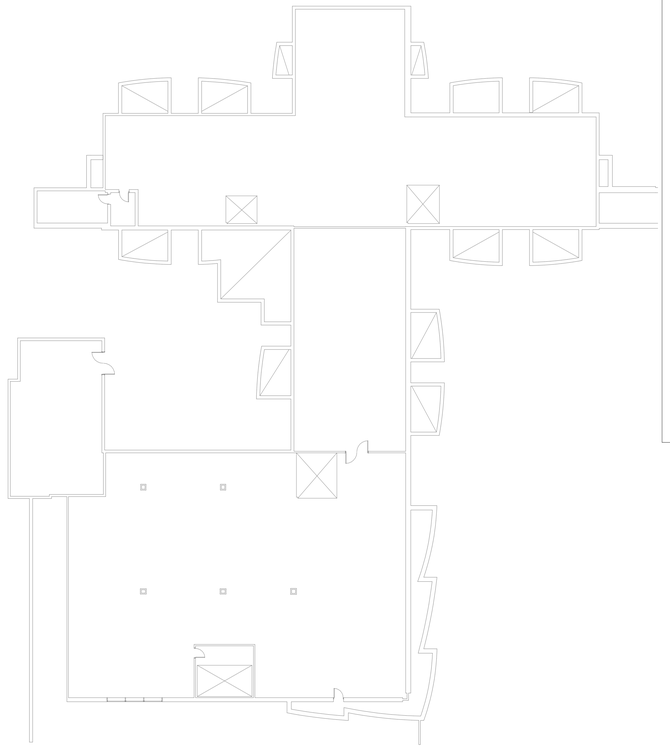

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2. FOR NEW TRS CONSTRUCTED AS BUILDING ADDITIONS OR NEW ROOMS IN LARGER SPACES, PROVIDE SIDEWALL SPRINKLER HEADS.
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DOUGLAS SMITH
ENGINEER
PE089556

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| Drawing Title: SEVENTH FLOOR PLAN - FIRE PROTECTION | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-FX107 |
| | | | SHEET 227 of 797 |

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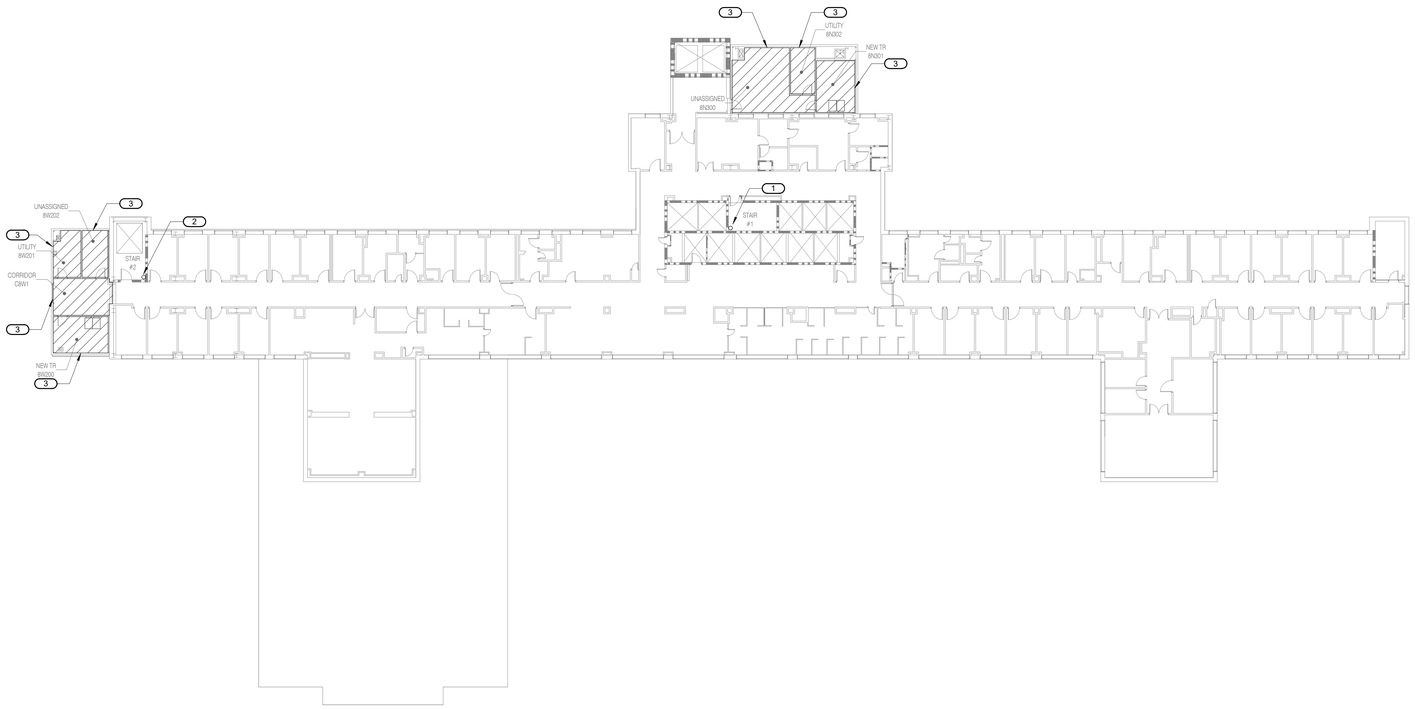


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| Drawing Title: EIGHTH FLOOR PLAN - FIRE PROTECTION | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-FX108 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 228 of 797 |

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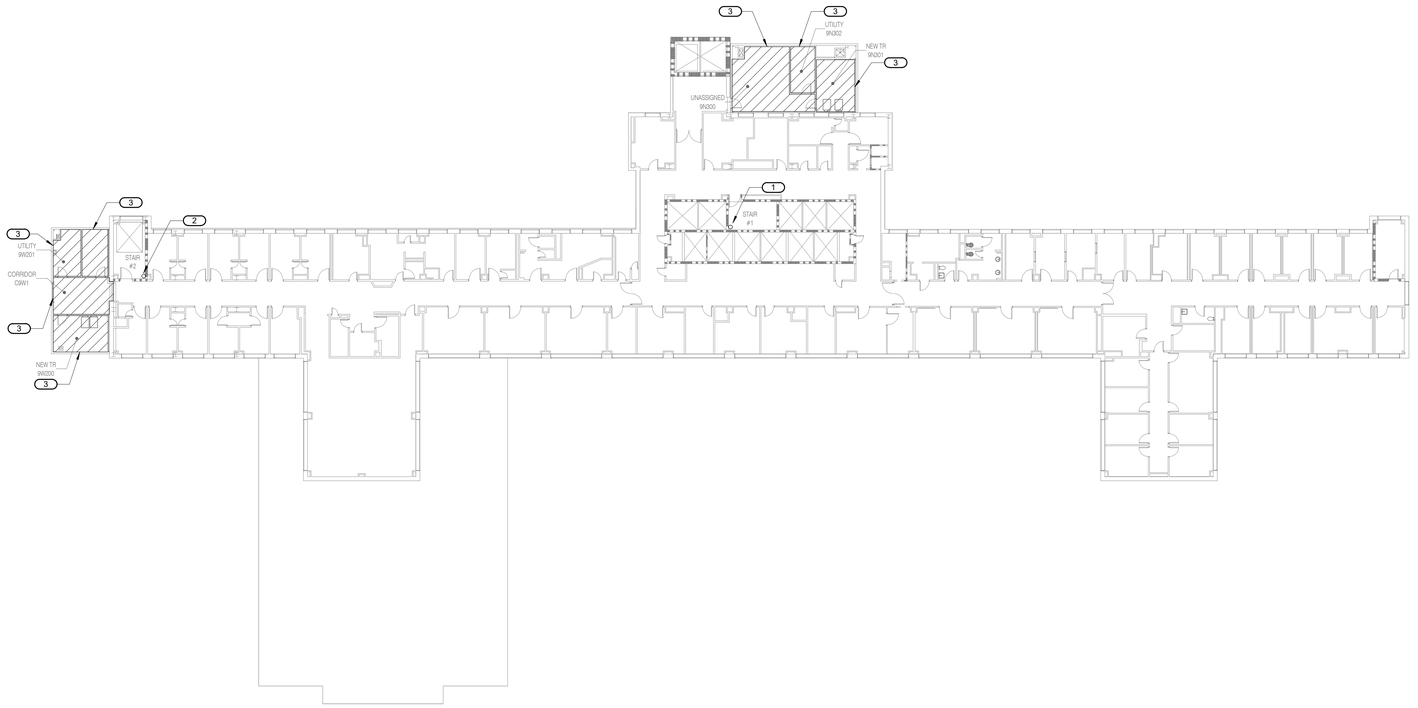


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| Approved: | |
| Phase | FINAL BID DOCUMENTS |
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| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
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| Project Number | 646-22-700 |
| Building Number | 1 |
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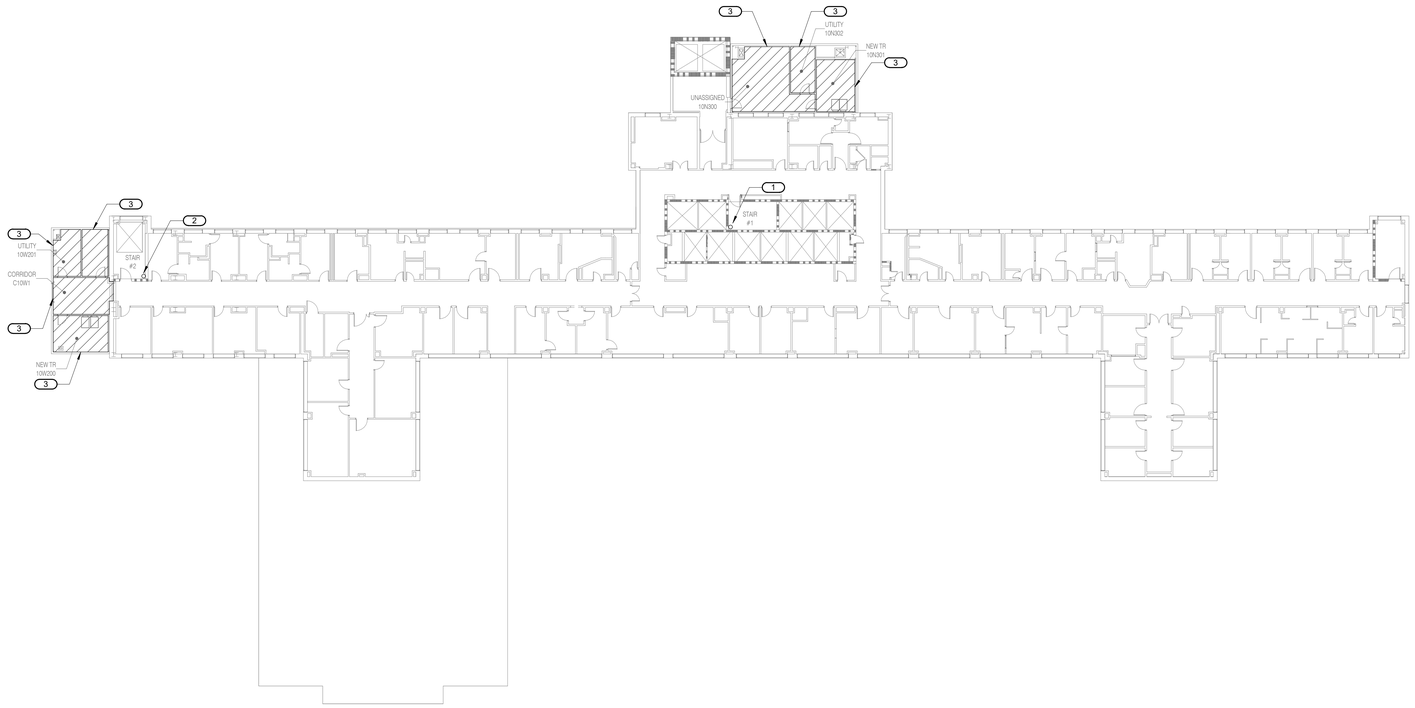


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| Approved: | FULLY SPRINKLERED |

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| Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | Building Number: 1 |
| Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-FX110 |
| Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 230 of 797 |


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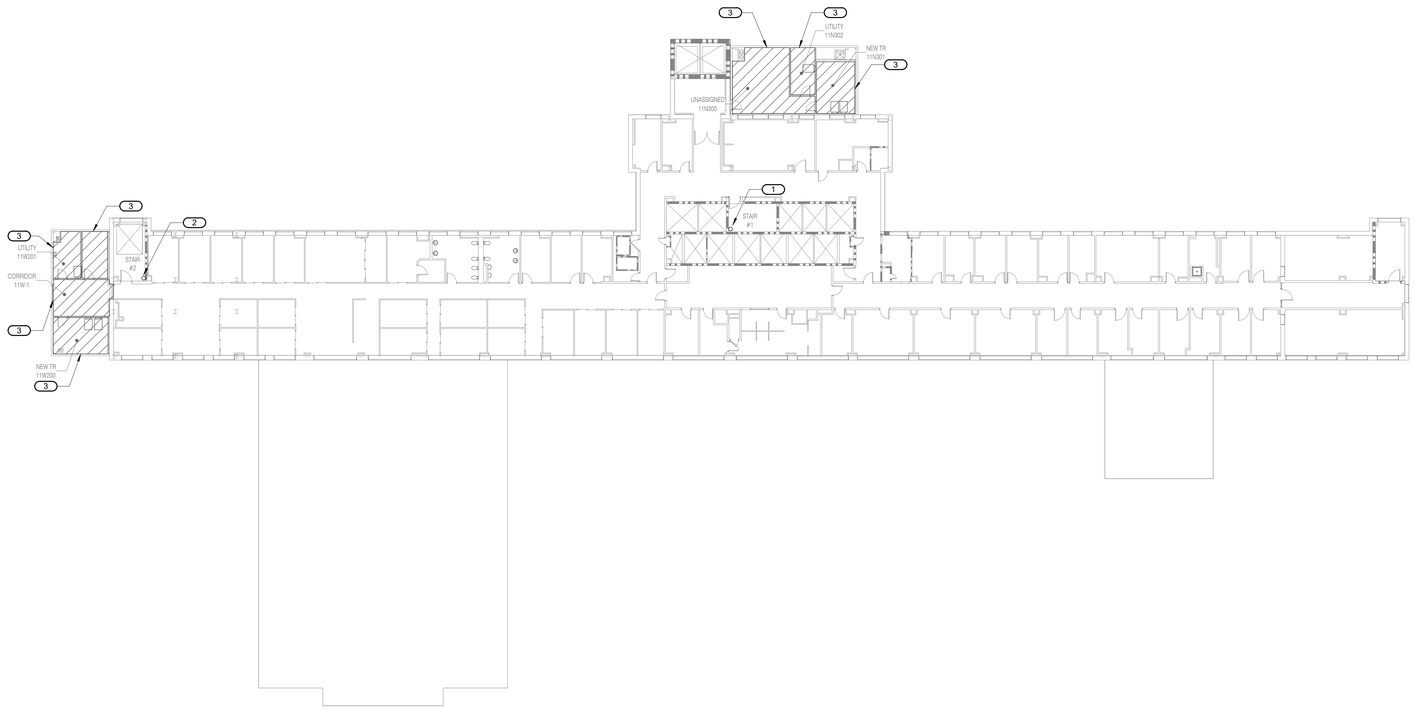


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| Drawing Title: ELEVENTH FLOOR PLAN - FIRE PROTECTION | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
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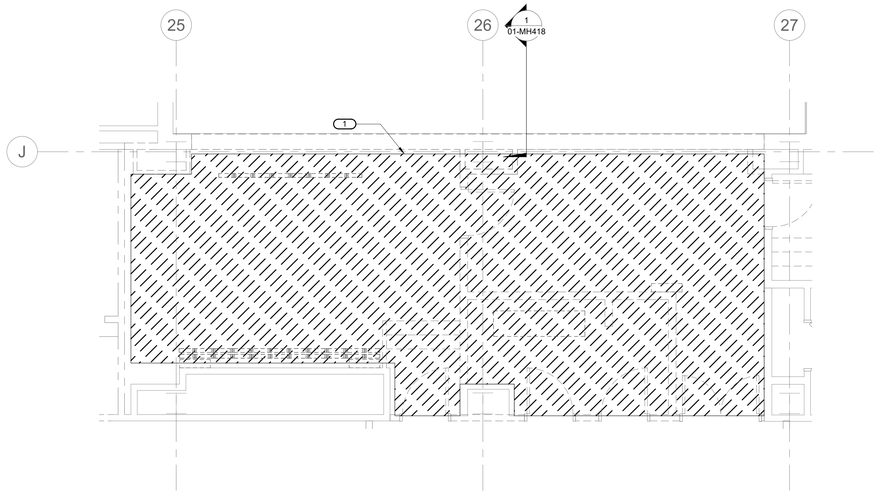
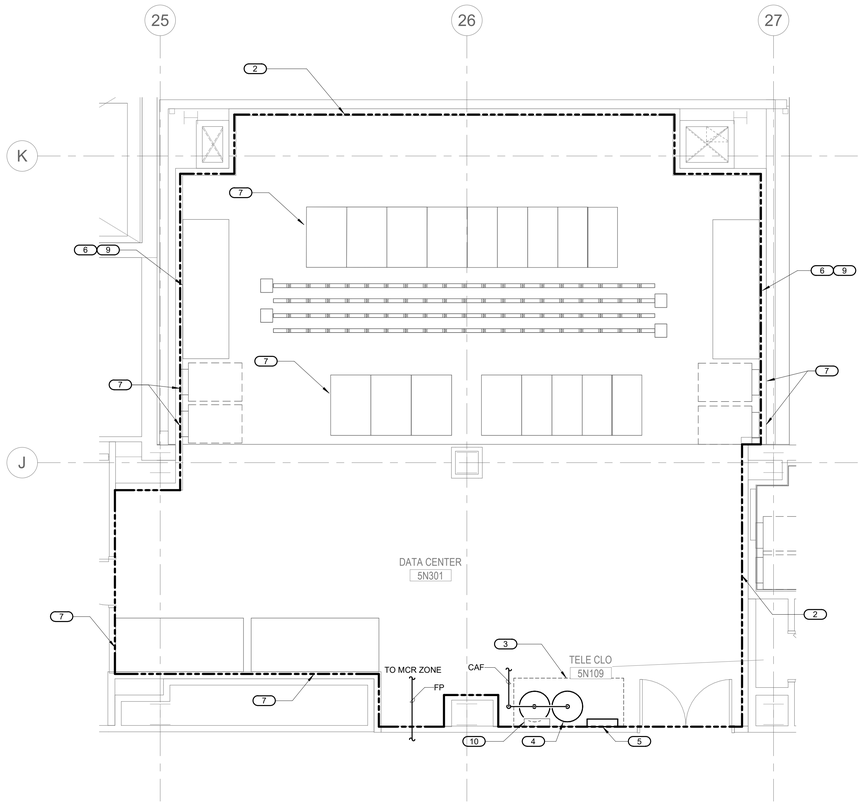



C5 **FIFTH FLOOR PLAN - DATA CENTER 5N301 - DEMOLITION**
1/4" = 1'-0"




F5 **FIFTH FLOOR PLAN - DATA CENTER 5N301 - FIRE PROTECTION**
1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**SHEET NOTES:**

1. MCR (DATA CENTER 5N301) SHALL BE PROVIDED WITH FUSIBLE LINK-TYPE STANDARD RESPONSE SPRINKLER HEADS. SPRINKLERS SHALL BE UPRIGHT AND PROVIDED WITH PROTECTIVE CAGES.
2. MCR SHALL BE PROTECTED AT ALL TIMES. COORDINATE DEMOLITION AND NEW WORK SCOPE ASSOCIATED SPRINKLER SYSTEM AND CLEAN AGENT SYSTEM WITH MCR PHASING PLAN.
3. ANY CPVC SPRINKLER BRANCH PIPING LOCATED IN OR SERVING THE MCR SHALL BE DEMOLISHED BACK TO NEAREST STEEL SPRINKLER MAIN AND REPLACED WITH STEEL PIPING. FIELD VERIFY CPVC PIPING PRIOR TO STARTING WORK.
4. ALL NEW SPRINKLER PIPING SHALL BE STEEL. REFER TO SPECIFICATIONS FOR DETAILS.
5. ALL EXPOSED FIRE PROTECTION PIPING SHALL BE FIELD PAINTED RED.
6. INSTALL ALL FIRE PROTECTION PIPING IN MCR AS HIGH AS POSSIBLE.
7. FIRE PROTECTION CONTRACTOR SHALL REVIEW THE LAYOUT OF PIPE DRAIN PAN SYSTEMS AND DUCT LAYOUT ON MECHANICAL DRAWINGS AND PROVIDE SPRINKLER COVERAGE BELOW OBSTRUCTIONS AS REQUIRED TO MAINTAIN FULL COVERAGE PER NFPA 13. SPRINKLER HEADS SHALL BE LOCATED SUCH THAT COVERAGE IS NOT IMPEDED BY GUTTERS OR DRAIN PANS.
8. REFER TO ARCHITECTURAL DRAWINGS FOR DEMOLITION AND NEW WORK REFLECTED CEILING PLANS.
9. REFERENCE SHEET 01-FX105 FOR MCR HAZARD CLASSIFICATION.

**CLEAN AGENT SYSTEM GENERAL NOTES:**

1. PROVIDE A NEW CLEAN AGENT (NOVEC 1230 FIRE SUPPRESSION SYSTEM THAT IS DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 2001, 2022 EDITION.
2. REFER TO SHEET 00-FG500 FOR ADDITIONAL REQUIREMENTS RELATED TO CLEAN AGENT SYSTEM. CONTRACTOR SHALL PROVIDE CLEAN AGENT SIGNAGE (INTERIOR AND EXTERIOR) AND PULL STATION(S) / SYSTEM ABORT CONTROLLER(S) AS REQUIRED BY NFPA 2001 AND PROJECT SPECIFICATIONS.
3. COORDINATE FIRE ALARM AND SMOKE DETECTION REQUIREMENTS WITH FIRE ALARM CONTRACTOR AND ELECTRICAL DRAWINGS.
4. CLEAN AGENT TO BE USED IS NOVEC 1230 (FK-5-1-12) AT DESIGN CONCENTRATION OF 4.5%, AS DIRECTED BY VA.
5. ALL PIPE AND FITTINGS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 2001.
6. ALL PIPE AND FITTINGS SHALL BE BLACK SCALE FREE STEEL CONFORMING TO ONE OF THE FOLLOWING REQUIREMENTS:
   A. ASTM A-106, SEAMLESS, GRADE A OR B SCHEDULE 40 THROUGH 8 INCHES.
   B. ASTM A-53, SEAMLESS, GRADE A OR B SCHEDULE 40 THROUGH 8 INCHES.
   C. ASTM A-53 ERW, GRADE A OR B SHALL NOT BE USED WITHOUT PRIOR WRITTEN APPROVAL FROM AHJ.
   D. ASTM A-53, CLASS F AND ASTM A-120 SHALL NOT BE USED.
7. STENCILED PIPE IDENTIFICATION SHALL NOT BE PAINTED OVER, CONCEALED OR REMOVED PRIOR TO APPROVAL BY AHJ.
8. ALL FITTINGS SHALL BE BLACK MALLEABLE IRON OR FORGED STEEL CONFORMING TO THE FOLLOWING REQUIREMENTS:
   A. CLASS 300 MALLEABLE IRON THROUGH 3 INCHES
   B. 1000# RATED FORGED STEEL GREATER THAN 3 INCHES
   C. ALL GROOVED FITTINGS MUST BE UL LISTED AND CONFORM TO THE PRESSURE REQUIREMENTS OUTLINED IN NFPA 2001.
   D. CAST IRON FITTINGS ARE NOT ACCEPTABLE.
9. ALL PIPE ENDS SHALL BE REAMED AFTER CUTTING.
10. EACH PIPE SECTION SHALL BE CLEANED INTERNALLY AFTER PREPARATION AND BEFORE ASSEMBLY BY SWABBING WITH A SUITABLE NONFLAMMABLE CLEANER.
11. TEFLON THREAD SEAL TAPE SHALL BE USED ON ALL MALE THREADED JOINTS ONLY. ALL GROOVED COUPLING GASKETS SHALL BE LUBRICATED PER THE MANUFACTURER'S SPECIFICATIONS.
12. ALL PIPING SHALL BE RIGIDLY AND SECURELY ANCHORED TO BUILDING STRUCTURE USING UL APPROVED HANGERS. REFER TO SEISMIC SUPPORT SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.
13. ALL STORAGE CONTAINERS SHALL BE MOUNTED PLUMB AND LEVEL AND SECURELY ANCHORED TO BUILDING STRUCTURE.
14. REFER TO ARCHITECTURAL SIGNAGE DETAILS AND SPECIFICATIONS FOR MATERIAL, FINISH COLOR, ETC. OF CLEAN AGENT SIGNAGE AND START/STOP STATIONS.

**KEYNOTES:** (#)

1. REMOVE ALL EXISTING FIRE PROTECTION SPRINKLER PIPING, HEADS, AND SUPPORTS
2. PROVIDE WET-PIPE SYSTEM WITH FULL SPRINKLER COVERAGE PER NFPA 13 AND NFPA 101 IN MCR. SYSTEM TO SERVE AS BACK-UP TO CLEAN AGENT SYSTEM. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. PROVIDE NEW CLEAN AGENT SUPPRESSION SYSTEM (BASIS OF DESIGN NOVEC 1230) PER NFPA 2001. SPOT-TYPE SMOKE DETECTION SYSTEM SHALL BE PROVIDED IN CONJUNCTION WITH CLEAN AGENT SYSTEM. PROVIDE ALL ASSOCIATED SIGNAGE, CONTROL PANELS, ALARMS, ETC. FOR FULLY FUNCTIONING SYSTEM. REFER TO SHEET 00-FG500 AND SPECIFICATION 21 22 00 FOR ADDITIONAL INFORMATION.
4. LOCATION OF CLEAN AGENT STORAGE TANKS.
5. LOCATION OF CLEAN AGENT CONTROL PANEL. COORDINATE WITH ELECTRICAL, FIRE ALARM, AND TEMPERATURE CONTROLS CONTRACTORS.
6. CRAC UNIT PROVIDED WITH INTEGRAL DUCT SMOKE DETECTOR.
7. DO NOT ROUTE SPRINKLER PIPING DIRECTLY ABOVE ELECTRICAL AND TECHNOLOGY EQUIPMENT.
8. LOCATION OF CLEAN AGENT FIRE EXTINGUISHER. REFER TO ARCHITECTURAL PLANS FOR MORE INFORMATION.
9. NEW MECHANICAL EQUIPMENT SHOWN FOR REFERENCE.
10. FIRE ALARM CONTROL PANEL LOCATION SHOWN FOR REFERENCE. EC TO WIRE ALARM AND TROUBLE FROM CLEAN AGENT SUPPRESSION PANEL TO BUILDING FIRE ALARM SYSTEM.

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

AWEN SOLUTIONS GROUP
ARCHITECTURE | ENGINEERING | PLANNING

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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|---|---|---|---|
| Drawing Title: ENLARGED PLANS - FIRE PROTECTION | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-FX400 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 232 of 797 |

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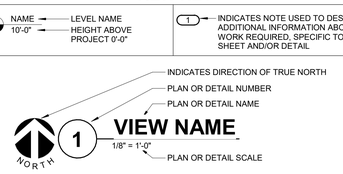


LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
- NEW
- EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
- NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)
- EXISTING
- EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)
- EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E — TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

TAG-1 — UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

## FIRE / SMOKE BARRIER DESIGNATIONS

FLOOR PLANS SHOW LOCATIONS OF FIRE AND SMOKE BARRIER WALLS FOR THE CONVENIENCE OF THE CONTRACTOR. HOWEVER, THE CONTRACTOR SHALL CONFIRM ALL LOCATIONS WITH ARCHITECTURAL LIFE SAFETY PLANS, AS WELL AS REFER TO ARCHITECTURAL PLANS FOR LINE TYPE DESIGNATIONS. FURNISH ALL MATERIALS REQUIRED TO COMPLY WITH THOSE RATINGS WHETHER SHOWN OR NOT.

## APPLICABLE CODES

CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES AND LOCAL AMENDMENTS INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

| | |
|---|---|
| INFRASTRUCTURE STANDARD FOR TELECOMMUNICATIONS SPACES | V3.1, JULY 1, 2021 |
| VA FIRE PROTECTION DESIGN MANUAL: | 9TH ED., NOV 1, 2023 |
| VA PHYSICAL SECURITY AND RESILIENCY DESIGN MANUAL: | REV. JULY 1, 2022 |
| VA PLUMBING DESIGN MANUAL: | REV. JUNE 1, 2022 |
| VA HVAC DESIGN MANUAL: | REV. JAN 1, 2023 |
| VA SITE DESIGN MANUAL: | REV. APRIL 1, 2021 |
| NFPA 13 INSTALLATION OF SPRINKLER SYSTEMS: | 2022 EDITION |
| NFPA 70, NATIONAL ELECTRICAL CODE: | 2023 EDITION |
| NFPA 72 FIRE ALARM AND SIGNALING CODE: | 2022 EDITION |
| NFPA 75 FIRE PROTECTION OF IT EQUIPMENT: | 2020 EDITION |
| NFPA 99 HEALTHCARE FACILITIES CODE: | 2021 EDITION |
| NFPA 101 LIFE SAFETY CODE: | 2021 EDITION |
| NFPA 2001 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS: | 2022 EDITION |
| INTERNATIONAL BUILDING CODE: | 2021 EDITION |
| INTERNATIONAL MECHANICAL CODE: | 2021 EDITION |
| INTERNATIONAL PLUMBING CODE: | 2021 EDITION |

## PLUMBING SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

| SYMBOL: | DESCRIPTION: |
|---|---|
| CW | COLD WATER - POTABLE |
| D | DRAIN |
| G | NATURAL GAS |
| HW | HOT WATER - POTABLE |
| HWC | HOT WATER CIRCULATING - POTABLE |
| PD | PUMPED DISCHARGE |
| SAN | SANITARY DRAINAGE |
| ST(1,000) | STORM DRAINAGE (ROOF SQUARE FOOTAGE) |
| | PIPE CONTINUATION |
| | PIPE CAP |
| | PIPE DOWN |
| | PIPE UP OR UP/DOWN |
| FD | PIPE SERVING FIXTURE ON FLOOR ABOVE (EXAMPLE: FD = FLOOR DRAIN) |
| | PITCH PIPE IN DIRECTION |
| | DIRECTION OF FLOW IN PIPE |
| | ROUTE TO DRAIN |
| RD-1 6"(1000) | ROOF DRAIN PROPERTIES SYMBOL SIZE (ROOF SQ. FT.) |
| | DIELECTRIC CONNECTION |
| | UNION/FLANGE |
| | SHUTOFF VALVE NORMALLY OPEN |
| | SHUTOFF VALVE NORMALLY CLOSED |
| GPM | BALANCING VALVE (NUMBER INDICATES GPM) |
| | CHECK VALVE |
| | BACKFLOW PREVENTER |
| | SOLENOID VALVE |
| | SAFETY/RELIEF VALVE |
| | VACUUM BREAKER |
| P | PRESSURE GAUGE (FURNISHED WITH BALL VALVE) |
| P | PRESSURE SENSOR (FURNISHED WITH BALL VALVE) |
| T | TEMPERATURE SENSOR WITH WELL |
| T | THERMOMETER WITH WELL (DIAL TYPE) |
| | THERMOMETER WITH WELL (FILLED TYPE) |
| | REDUCER - REFERENCE SPECIFICATION FOR CONCENTRIC/ECCENTRIC AND FOT/FOB |
| | PRESSURE REDUCING VALVE (LIQUID/GAS) |
| | PUMP |
| M | METER |

## PLUMBING SLOPE REQUIREMENTS:

**BASED ON PLUMBING CODE: IPC-2021**

| | |
|---|---|
| **INTERIOR:** | |
| **SANITARY WASTE:** | 1/4" PER FOOT |
| **GREASE WASTE:** | 1/4" PER FOOT |
| **STORM (GRAVITY):** | 1/8" PER FOOT |
| **CONDENSATE AND INDIRECT DRAINAGE:** | 1/8" PER FOOT |
| **SANITARY AND GREASE VENT:** | NO SPECIFIC PITCH, PITCH TO FIXTURES |
| **DOMESTIC WATER:** | NO SPECIFIC PITCH, PITCH TO FIXTURES |

| | |
|---|---|
| **PROJECT ALTITUDE:** | **1204 FT. ABOVE SEA LEVEL** |

## PLUMBING ABBREVIATION KEY

| ABBR: | DESCRIPTION: |
|---|---|
| AD | ACCESS DOOR |
| AFF | ABOVE FINISHED FLOOR |
| BFP | BACKFLOW PREVENTER |
| CO | CLEANOUT |
| E | EXISTING |
| FCO | FLOOR CLEANOUT |
| MB | MOP BASIN |
| NIC | NOT IN CONTRACT |
| RD | ROOF DRAIN |
| SCCR | SHORT CIRCUIT CURRENT RATING |
| TYP | TYPICAL |
| VTR | VENT THROUGH ROOF |
| WM | WATER METER |
| UB | UTILITY BOX |
| UON | UNLESS OTHERWISE NOTED |
| YCO | YARD CLEANOUT |

## PLUMBING SHEET INDEX



| | |
|---|---|
| 00-PG000 | PLUMBING COVERSHEET |
| 00-PG500 | PLUMBING DETAILS |
| 01-PD099 | BASEMENT DEMOLITION PLAN - PLUMBING |
| 01-PD100 | GROUND FLOOR DEMOLITION PLAN - PLUMBING |
| 01-PD101 | FIRST FLOOR DEMOLITION PLAN - PLUMBING |
| 01-PD102 | SECOND FLOOR DEMOLITION PLAN - PLUMBING |
| 01-PD103 | THIRD FLOOR DEMOLITION PLAN - PLUMBING |
| 01-PD104 | FOURTH FLOOR DEMOLITION PLAN - PLUMBING |
| 01-PD105 | FIFTH FLOOR DEMOLITION PLAN - PLUMBING |
| 01-PD106 | SIXTH FLOOR DEMOLITION PLAN - PLUMBING |
| 01-PP101 | FIRST FLOOR PLAN - PLUMBING |
| 01-PP102 | SECOND FLOOR PLAN - PLUMBING |
| 01-PP103 | THIRD FLOOR PLAN - PLUMBING |
| 01-PP104 | FOURTH FLOOR PLAN - PLUMBING |
| 01-PP105 | FIFTH FLOOR PLAN - PLUMBING |
| 01-PP106 | SIXTH FLOOR PLAN - PLUMBING |
| 01-PP107 | SEVENTH FLOOR PLAN - PLUMBING |
| 01-PP108 | EIGHTH FLOOR PLAN - PLUMBING |
| 01-PP109 | NINTH FLOOR PLAN - PLUMBING |
| 01-PP110 | TENTH FLOOR PLAN - PLUMBING |
| 01-PP111 | ELEVENTH FLOOR PLAN - PLUMBING |
| 01-PP112 | ROOF PLAN - PLUMBING |
| 30-PP099 | BASEMENT PLAN - PLUMBING |
| GRAND TOTAL: 23 | |



## MECHANICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
2. NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
4. EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF THEIR WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO THEIR AREA OF WORK.
5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CUTTING, REMOVAL AND PATCHING OF ROOFS, WALLS, AND FLOORS ASSOCIATED WITH WORK BY ALL CONTRACTORS. CONTRACTORS SHALL NOTIFY THE GC OF AFFECTED AREAS PRIOR TO BIDDING.
6. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO BIDDING.
7. WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.
8. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS THAT REMAIN ACTIVE.
9. OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED.
10. MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR TIE IN AND SWITCHOVER. DRAIN SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER BEFORE PARTIALLY OR COMPLETELY DRAINING SYSTEM. MAKE CHANGEOVER TO NEW SYSTEMS WITH MINIMUM OUTAGE.
11. DISCONNECT AND REMOVE MECHANICAL DEVICES AND EQUIPMENT SERVING EQUIPMENT THAT HAS BEEN REMOVED.

## MECHANICAL PHASING NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. REFER TO ARCHITECTURAL DRAWINGS FOR GENERAL DESCRIPTION OF PHASES. REFER TO ARCHITECT'S INSTRUCTIONS FOR MORE DETAILS AND PHASING SCHEDULES AND FOR CONCURRENT WORK. MECHANICAL, ELECTRICAL AND TECHNOLOGY DRAWINGS DEPICT THE INTENT OF THE FINAL DESIGN. THE MECHANICAL, ELECTRICAL, AND TECHNOLOGY DRAWINGS DO NOT DEPICT THE MEANS AND METHODS TO MEET THE REQUIREMENTS OF THE PHASING CRITERIA.
2. REVIEW PROJECT PHASING PLANS TO COORDINATE DEMOLITION WORK, OUTAGES, ETC. WITH AFFECTED ADJACENT AREAS.
3. PROVIDE TEMPORARY DUCTWORK, PIPING, SHUTOFF VALVES, ZONE VALVES, ZONE ALARMS, ETC. AS NEEDED TO MAINTAIN SERVICE TO ALL AREAS DURING ALL PHASES OF PROJECT.
4. INSTALL TEMPORARY DUCTWORK, PIPING, SHUTOFF VALVES, ETC. AS NECESSARY TO KEEP ALL OCCUPIED SPACES OPERATIONAL THROUGHOUT ALL PHASES OF THE PROJECT
5. PHASE DEMOLITION WORK TO MINIMIZE DOWNTIME.
6. COORDINATE PHASING IN MAIN COMPUTER ROOM WITH TELECOMMUNICATIONS PHASING PLANS.

## PLUMBING GENERAL NOTES:

1. THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.
2. CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR A COMPLETE DESCRIPTION OF MATERIAL ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL TAKES PRECEDENCE OVER THE CATALOG NUMBER.
3. EXISTING CONDITIONS ON DEMOLITION PLANS ARE PROVIDED TO INDICATE THE GENERAL SCOPE OF ITEMS TO BE REMOVED. REFER TO SPECIFICATION SECTION 22 05 11 FOR ADDITIONAL DEMOLITION INFORMATION.
4. PLUMBING CONTRACTOR SHALL CUT AND PATCH EXISTING AS REQUIRED FOR NEW OR DEMOLITION WORK UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION SECTION 22 05 05 FOR ADDITIONAL INFORMATION.

## MECHANICAL GENERAL NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
3. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
4. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
5. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
6. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
10. SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.
11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
12. WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
13. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
14. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
15. MAINTAIN A MINIMUM WORKING CLEARANCE OF 3'-6" IN FRONT OF ALL ELECTRICAL EQUIPMENT REQUIRING MAINTENANCE, INSPECTION, AND TESTING INCLUDING BUT NOT LIMITED TO PANELS, DISTRIBUTION PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, EQUIPMENT DISCONNECTS AND STARTERS.
16. MAINTAIN THE DEDICATED ELECTRICAL EQUIPMENT SPACE DEFINED BY THE WIDTH / DEPTH OF ELECTRICAL EQUIPMENT MEASURED FROM THE FLOOR TO A HEIGHT 6'-0" ABOVE THE EQUIPMENT OR THE STRUCTURAL CEILING, WHICHEVER IS LOWER. SYSTEMS FOREIGN TO THE ELECTRICAL DISTRIBUTION SYSTEM ARE NOT ALLOWED IN THE DEDICATED ELECTRICAL SPACE INCLUDING: DUCTWORK, PIPING, ETC.
17. PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
18. DO NOT EXCEED 25 LBS PER HANGER AND A MINIMUM SPACING OF 2'-0" ON CENTER WHEN ATTACHING TO METAL ROOF DECKING (LIMITATION NOT REQUIRED WITH CONCRETE ON METAL DECK). THIS 25 LBS. LOAD AND 2'-0" SPACING INCLUDE ADJACENT ELECTRICAL AND ARCHITECTURAL ITEMS HANGING FROM DECK. IF THE HANGER RESTRICTIONS CANNOT BE ACHIEVED, SUPPLEMENTAL FRAMING OFF STEEL FRAMING SHALL BE ADDED. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

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| Drawing Title: PLUMBING COVERSHEET | Phase: FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |

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| Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | Building Number: 1 |
| Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 00-PG000 |
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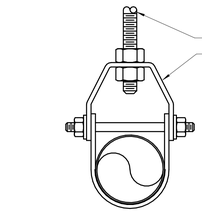
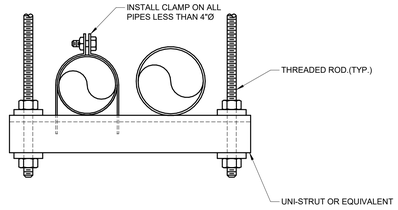
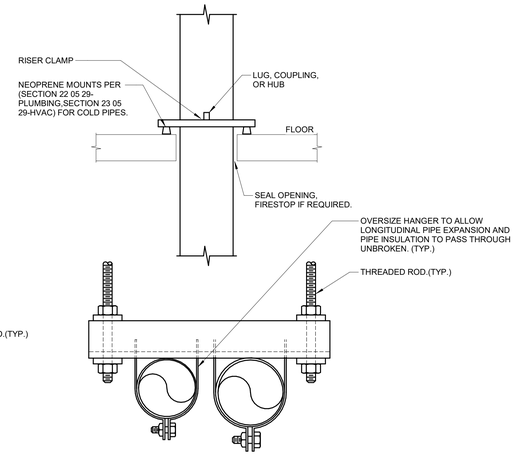



**CLEVIS HANGER**




**TRAPEZE HANGER**




**STRUCT CLAMP HANGERS**

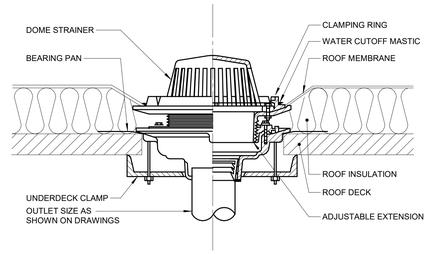
NOTES:

1. REFER TO SPECIFICATION SECTION 21 05 29.

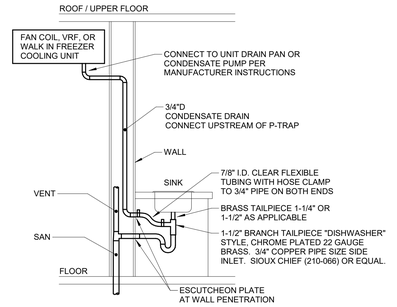
## C1 PIPE SUPPORT
NO SCALE

## PLUMBING MATERIAL LIST

| TAG NAME | DESCRIPTION | MANUFACTURER AND MODEL |
|---|---|---|
| BWV-1 | BACKWATER VALVE - EPOXY COATED CAST IRON BODY WITH NO-HUB CONNECTIONS, BRONZE OR STAINLESS STEEL FLAPPER AND SEAT, BOLTED REMOVABLE COVER FOR VALVE MAINTENANCE. | BACKWATER VALVE - WATTS (BV-200), JOSAM (67400), MIFAB (BV1000), JR SMITH (7012Y), ZURN (Z1090) |
| RD-1 | ROOF DRAIN - CAST IRON BODY DESIGNED FOR EFFICIENT FLOW, SECURED CAST IRON DOME, BOTTOM OUTLET, FLASHING CLAMP, GRAVEL STOP, UNDERDECK CLAMP, TOP SET DRAIN RISER BEARING PAN, ADJUSTABLE EXTENSION TO MATCH INSULATION THICKNESS, OUTLET SIZE AS LISTED ON DRAWINGS.<br><br>2", 3", AND 4" OUTLET, 12" DOME DIAMETER, 121 SQ IN DOME OPEN AREA.<br>6", AND 8" OUTLET, 15" DOME DIAMETER, 214 SQ IN DOME OPEN AREA. | ZURN (Z-100F SERIES), SMITH, WADE, JOSAM, WATTS, MIFAB, SUN. DRAINS BY ALTERNATE LISTED MANUFACTURERS ARE ACCEPTABLE WHEN MFR HYDRAULIC CALCS SHOW AN EQUIVALENT FLOW RATE. THE COST OF INCREASING DOWNSTREAM BRANCH PIPING SHALL BE INCLUDED WITH AN ALTERNATE DRAIN SUBMISSION. |




## C5 ROOF DRAIN
NO SCALE




## E5 CONDENSATE DRAIN TO SINK
NO SCALE

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| Approved: | |
| Phase | FINAL BID DOCUMENTS |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 00-PG500 |
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## NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
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4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**KEYNOTES:** (#)

1. PRIOR TO NEW WORK, CONFIRM FLOOR DRAIN IS PROPERLY FUNCTIONING. FLUSH AS REQUIRED AND SCOPE AS NECESSARY.
2. PRIOR TO NEW WORK, CONFIRM MOP BASIN DRAIN IS PROPERLY FUNCTIONING. FLUSH AS REQUIRED AND SCOPE AS NECESSARY. COORDINATE FINAL LOCATION WITH VA COR.
3. PRIOR TO NEW WORK, CONFIRM UTILITY SINK DRAIN IS PROPERLY FUNCTIONING. FLUSH AS REQUIRED AND SCOPE AS NECESSARY. COORDINATE FINAL LOCATION WITH VA COR.

PLAN NORTH

1" = 20'-0" SCALE — 20 0 20 40 FEET

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|---|---|---|---|
| Drawing Title: BASEMENT DEMOLITION PLAN - PLUMBING | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | | | Building Number: 1 |
| | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-PD099 |
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# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
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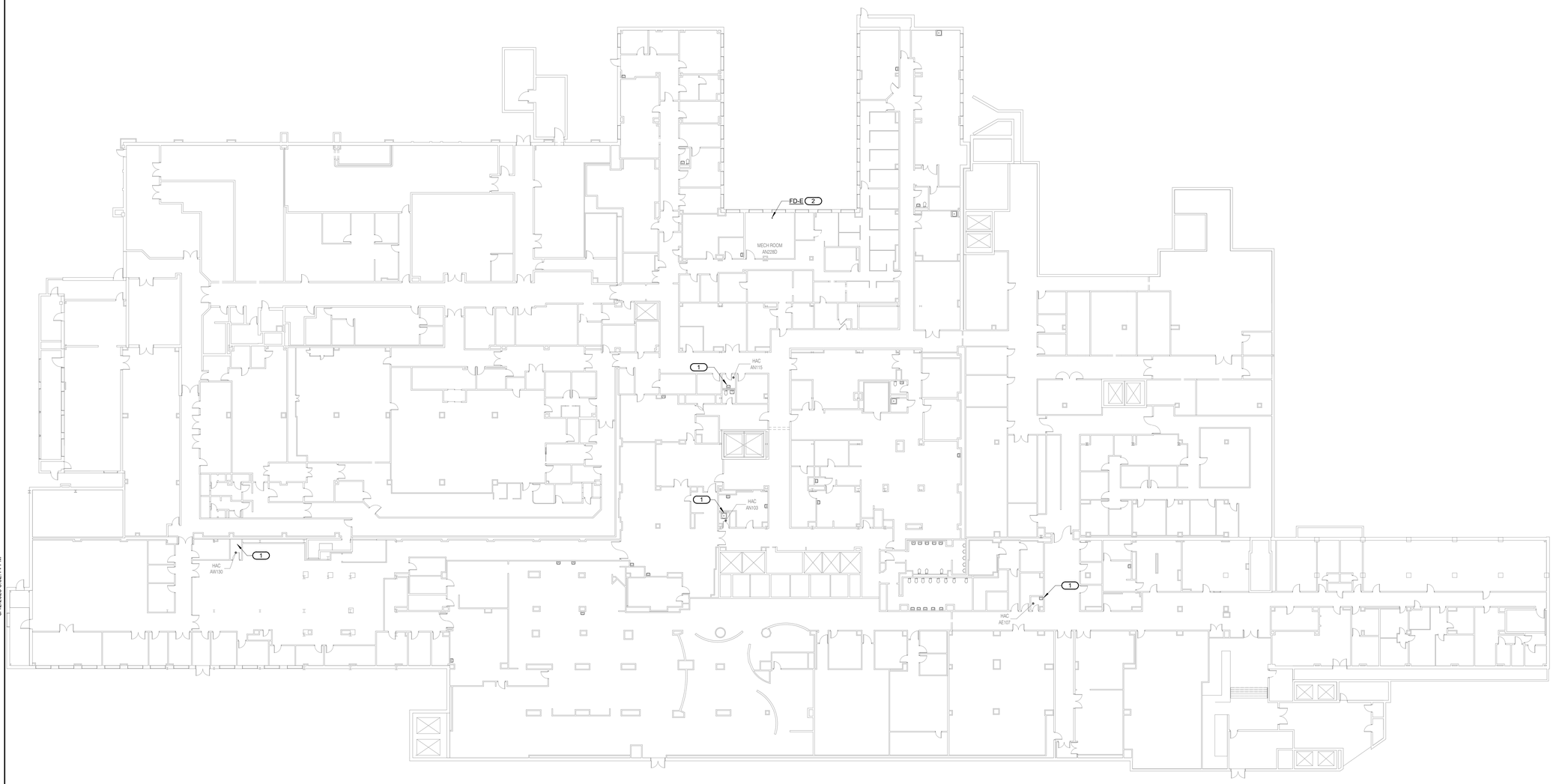
**KEYNOTES:** (#)

1. PRIOR TO NEW WORK, CONFIRM HAC DRAIN IS PROPERLY FUNCTIONING. FLUSH AS REQUIRED AND SCOPE AS NECESSARY. COORDINATE FINAL LOCATION WITH VA COR.
2. PRIOR TO NEW WORK, CONFIRM FLOOR DRAIN IS PROPERLY FUNCTIONING. FLUSH AS REQUIRED AND SCOPE AS NECESSARY.




PLAN NORTH

1" = 20'-0" SCALE — 20 0 20 40 FEET

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PE091525

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|---|---|
| Drawing Title | GROUND FLOOR DEMOLITION PLAN - PLUMBING |
| Phase | FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
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| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-PD100 |
| | SHEET 236 of 797 |

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# NOTES:

**FIELD VERIFICATION NOTES:**

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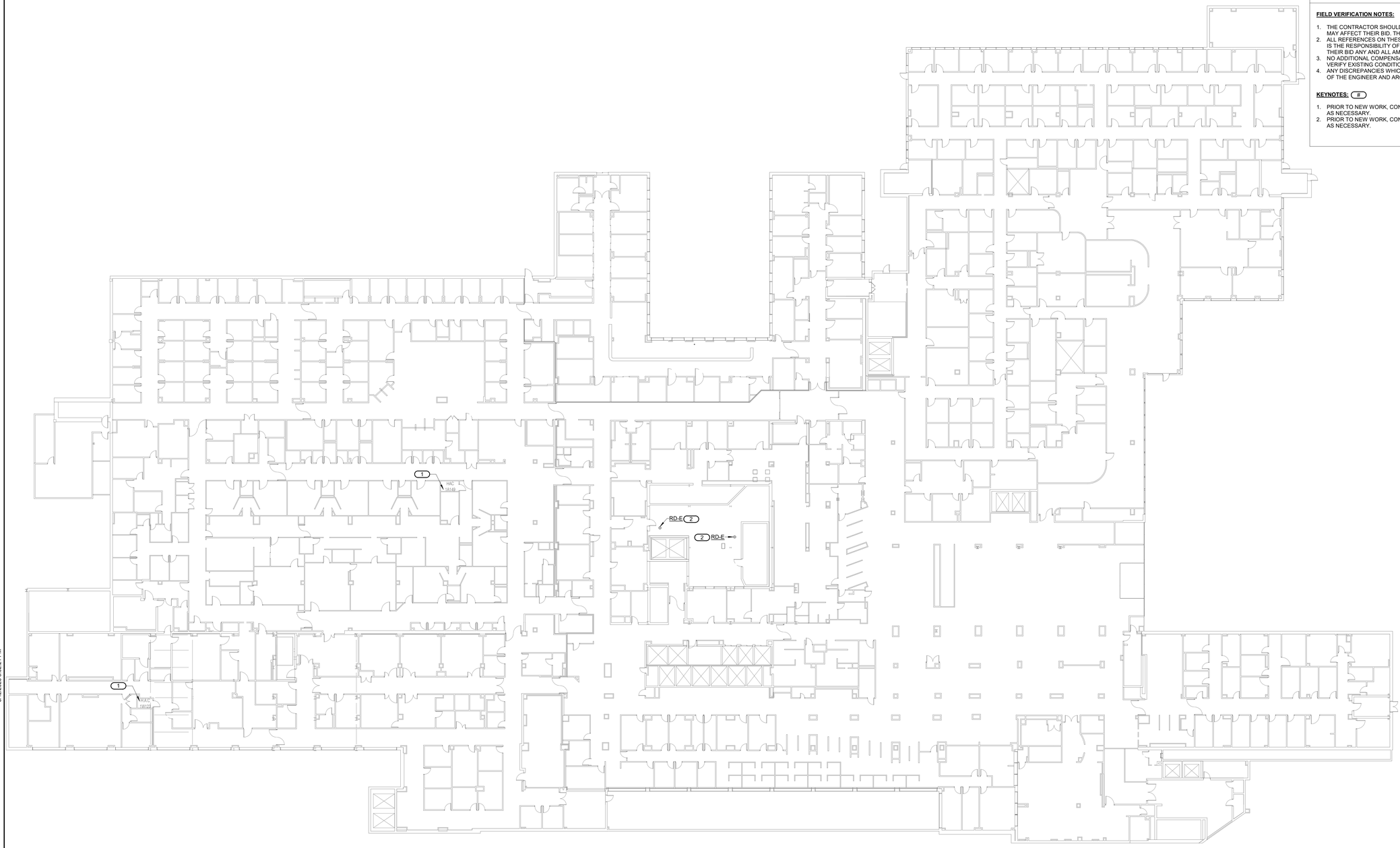
**KEYNOTES:** (#)

1. PRIOR TO NEW WORK, CONFIRM HAC DRAIN IS PROPERLY FUNCTIONING. FLUSH AS REQUIRED AND SCOPE AS NECESSARY.
2. PRIOR TO NEW WORK, CONFIRM ROOF DRAIN IS PROPERLY FUNCTIONING. FLUSH AS REQUIRED AND SCOPE AS NECESSARY.




PLAN NORTH

1" = 20'-0" SCALE — 20 0 20 40 FEET

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| Drawing Title: FIRST FLOOR DEMOLITION PLAN - PLUMBING | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-PD101 |
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## NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
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**KEYNOTES:** ( # )

1. PRIOR TO NEW WORK, CONFIRM HAC DRAIN IS PROPERLY FUNCTIONING. FLUSH AS REQUIRED AND SCOPE AS NECESSARY.

PLAN NORTH

20 0 20 40
1" = 20'-0" SCALE FEET

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| Phase | FINAL BID DOCUMENTS |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
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| Drawn | BMB |
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| Drawing Number | 01-PD102 |
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# NOTES:

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**KEYNOTES:** (#)

1. PRIOR TO NEW WORK, CONFIRM HAC DRAIN IS PROPERLY FUNCTIONING. FLUSH AS REQUIRED AND SCOPE AS NECESSARY.
2. DEMOLISH PIPING FROM EXISTING ROOF DRAIN TO NEAREST BRANCH OR RISER AND CAP. CAP OUTLET OF ROOF DRAIN AND FILL WITH CONCRETE.

PLAN NORTH

1" = 20'-0" SCALE — 20 0 20 40 FEET

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| Drawing Title: THIRD FLOOR DEMOLITION PLAN - PLUMBING | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-PD103 |
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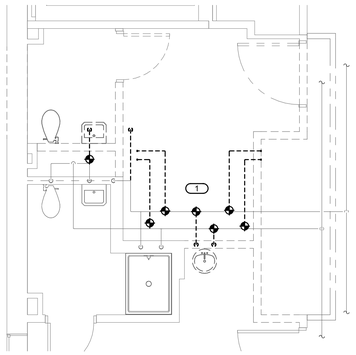

# B1 FOURTH FLOOR PLAN - TR 4W137 - DEMOLITION

1/4" = 1'-0"

## NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
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**KEYNOTES:** ( # )

1. DEMOLISH ALL ABANDONED PIPING IN 4W137, INCLUDING SANITARY AND VENT, AND CAP. DEMOLISH WATER PIPING TO MAIN AND CAP. NO DOMESTIC WATER DEAD LEGS ARE PERMITTED TO REMAIN. MAINTAIN SERVICE TO TLT 4W136A. COORDINATE DRIP PAN REQUIREMENTS FOR NEW TR 4W137 WITH MC.

PLAN NORTH

20 0 20 40
1" = 20'-0" SCALE FEET

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ENGINEER
PE091525

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VA U.S. Department of Veterans Affairs

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| Drawing Title: FOURTH FLOOR DEMOLITION PLAN - PLUMBING | Phase: FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |

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| Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
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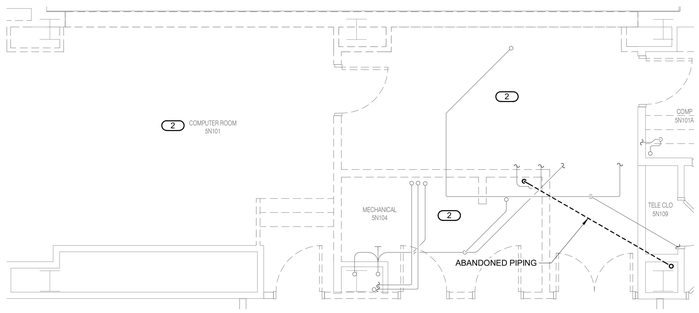
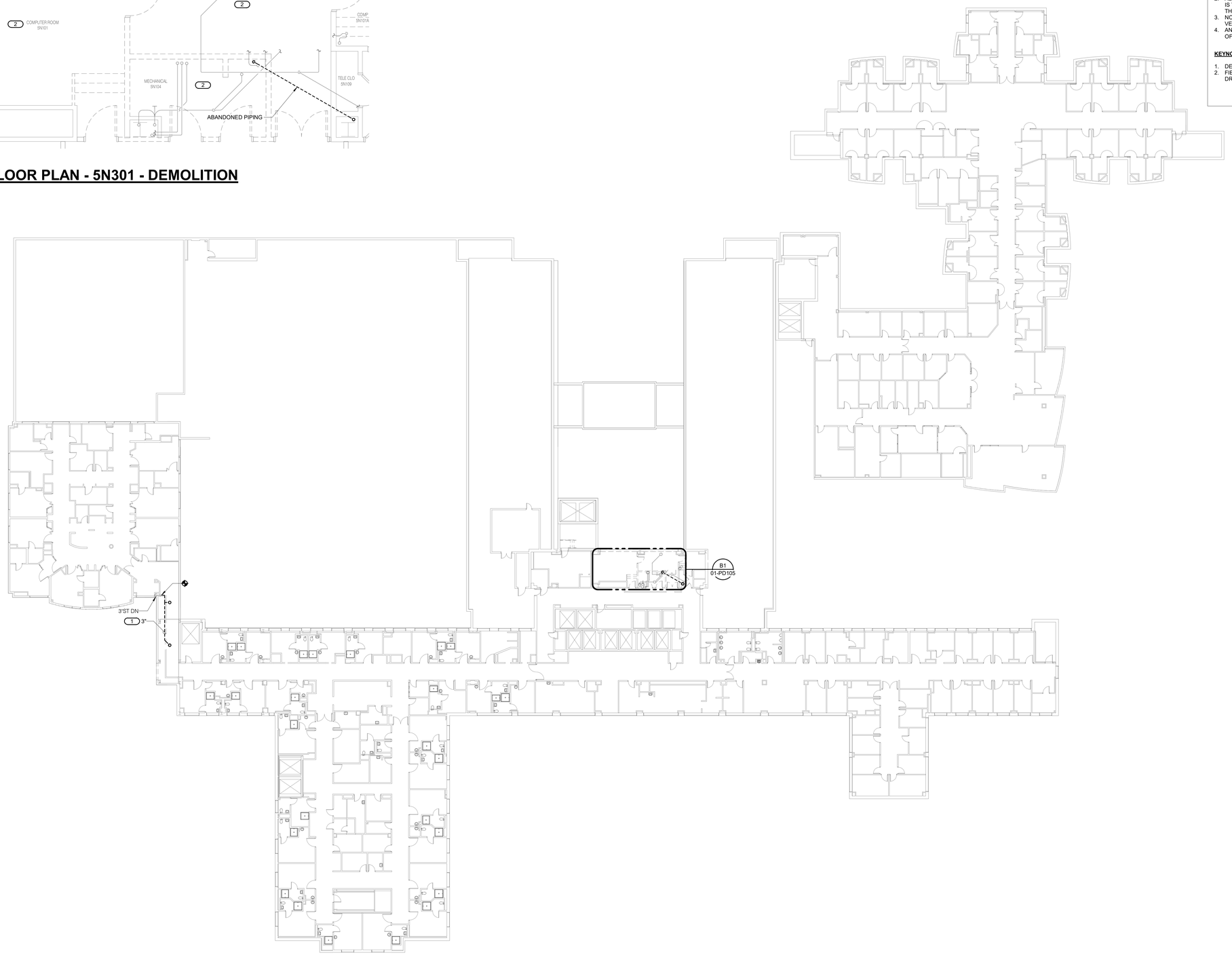



## B1 FIFTH FLOOR PLAN - 5N301 - DEMOLITION

1/4" = 1'-0"




## NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
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**KEYNOTES:** #

1. DEMOLISH EXISTING 3" ST PIPING AS SHOWN AND PREPARE FOR NEW CONNECTION.
2. FIELD VERIFY PLUMBING PIPING SERVICE IN THIS AREA AND DEMOLISH ABANDONED PIPING. COORDINATE DRIP PAN REQUIREMENTS WITH MC.

PLAN NORTH

1" = 20'-0" SCALE 20 0 20 40 FEET

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PROJECT #23002251.00


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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DOUGLAS SMITH
ENGINEER
PE081525

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

| Drawing Title | Phase | Project Title | Project Number |
|---|---|---|---|
| FIFTH FLOOR DEMOLITION PLAN - PLUMBING | FINAL BID DOCUMENTS | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-PD105 |

SHEET 241 of 797

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# NOTES:

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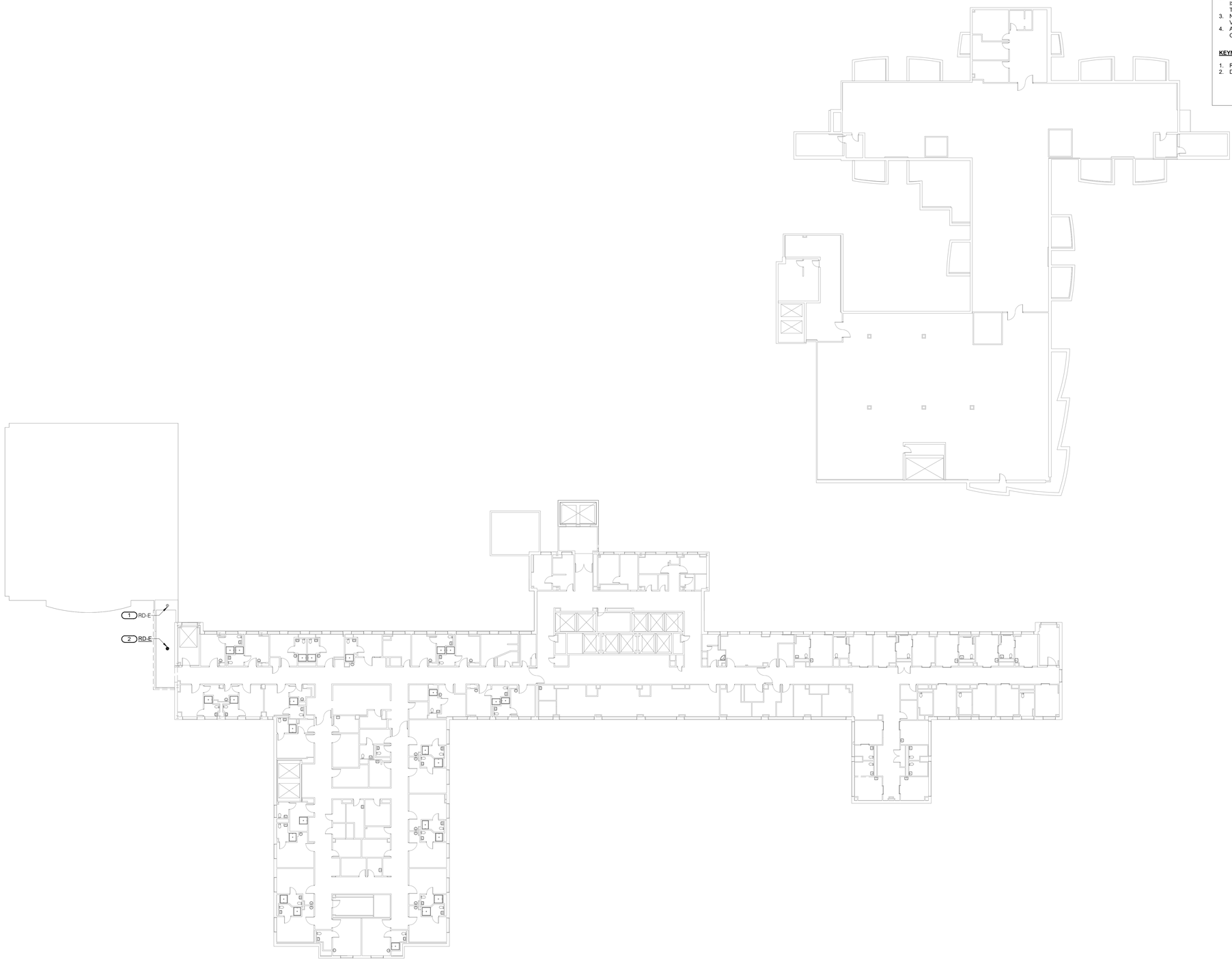
**KEYNOTES:** (#)

1. ROOF DRAIN EXISTING TO REMAIN.
2. DEMOLISH EXISTING ROOF DRAIN AND ASSOCIATED PIPING.




PLAN NORTH

1" = 20'-0" SCALE — 20 0 20 40 FEET

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|---|---|---|---|
| Drawing Title: SIXTH FLOOR DEMOLITION PLAN - PLUMBING | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-PD106 |
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# NOTES:

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**KEYNOTES:** ( # )

1. ROUTE 3" STORM DRAINAGE PIPING TO EXTERIOR AND DISCHARGE ON TO EXISTING ROOF. PROVIDE SPLASH BLOCK.

RD-E 1 RD-E

3"ST DN

PLAN NORTH

20 0 20 40
1" = 20'-0"
SCALE FEET

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| Drawing Title: FIRST FLOOR PLAN - PLUMBING | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-PP101 |
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# NOTES:

**FIELD VERIFICATION NOTES:**

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**KEYNOTES:** (#)

1. ROUTE 3" STORM DRAINAGE PIPING INSIDE PIPE CHASE. COORDINATE WITH MC.

3"ST (1)

PLAN NORTH

20 0 20 40
1" = 20'-0" SCALE FEET

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| Drawing Title: SECOND FLOOR PLAN - PLUMBING | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-PP102 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 244 of 797 |

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# NOTES:

**FIELD VERIFICATION NOTES:**

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**KEYNOTES:** (#)

1. ROUTE 3" STORM DRAINAGE PIPING INSIDE PIPE CHASE. COORDINATE WITH MC.
2. PROVIDE CONDENSATE DRAIN TO SINK FOR EXISTING BREAK ROOM SINK PER DETAIL E5/00PG-500. COORDINATE WITH MC.

3"ST DN

3"ST UP

PLAN NORTH

1" = 20'-0" SCALE

20 0 20 40 FEET

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| Drawing Title: THIRD FLOOR PLAN - PLUMBING | Phase: FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |

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| Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | Building Number: 1 |
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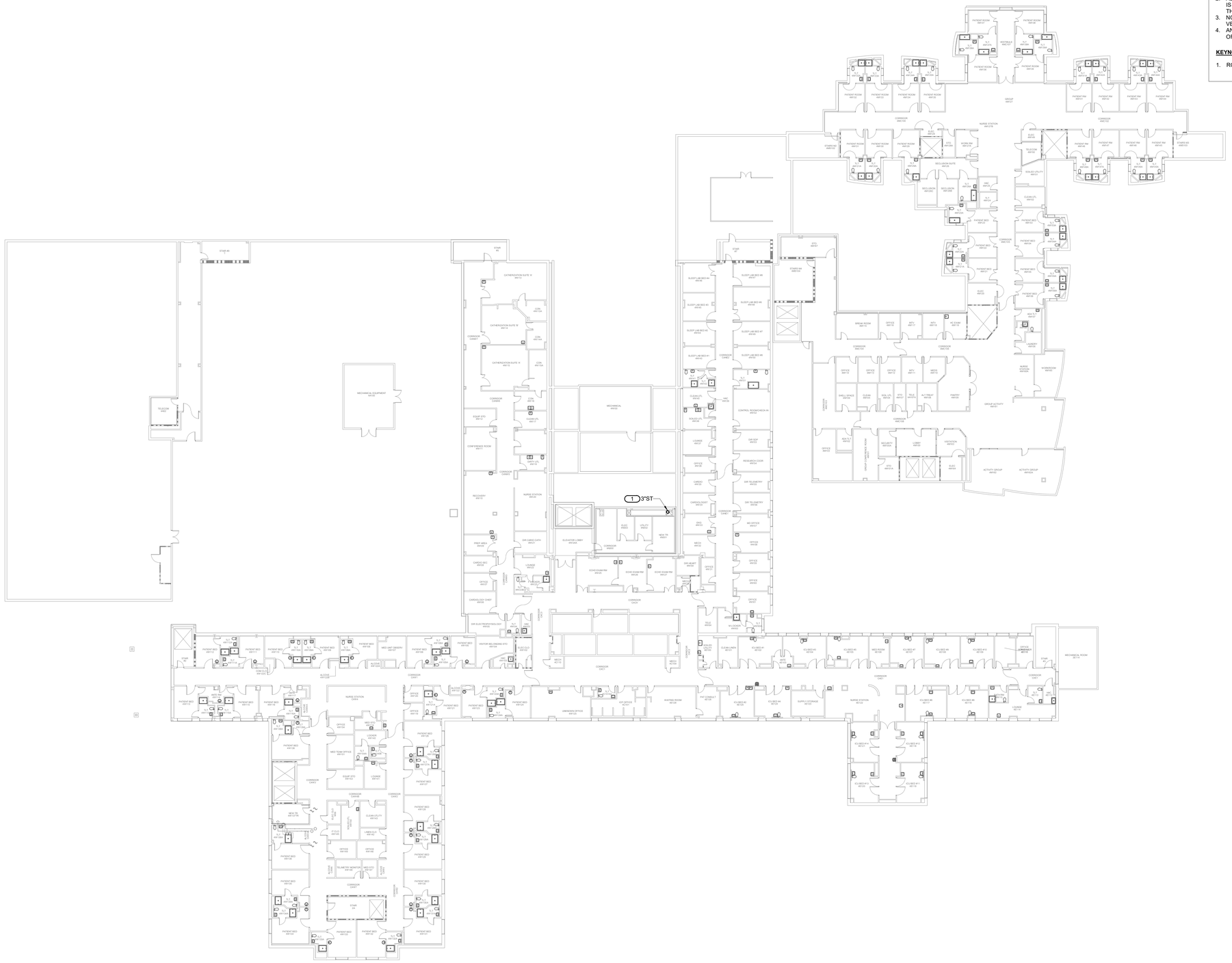


# NOTES:

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**KEYNOTES:** (#)

1. ROUTE 3" STORM DRAINAGE PIPING INSIDE PIPE CHASE. COORDINATE WITH MC.

PLAN NORTH

20 0 20 40
1" = 20'-0" SCALE FEET

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| Drawing Title: FOURTH FLOOR PLAN - PLUMBING | Phase: FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |

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|---|---|
| Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | Building Number: 1 |
| Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-PP104 |
| Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 246 of 797 |


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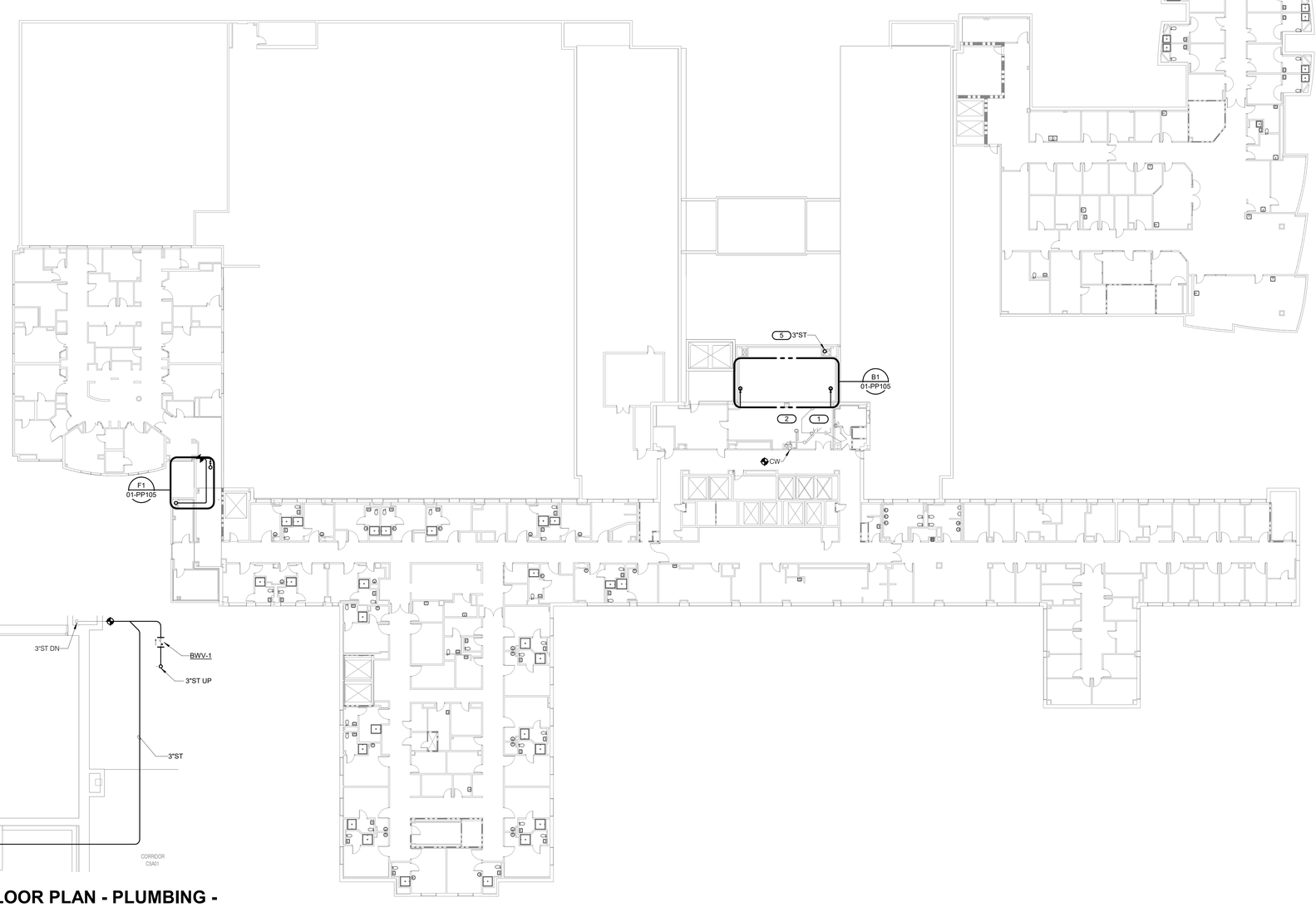
## B1 FIFTH FLOOR PLAN - PLUMBING - DATA CENTER 5N301

1/4" = 1'-0"




## F1 FIFTH FLOOR PLAN - PLUMBING - WEST TOWER

1/4" = 1'-0"

# NOTES:

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**KEYNOTES:** ( # )

1. ALL ABANDONED PIPING IN THE MCR (DATA CENTER 5N301) TO BE REMOVED DURING DEMOLITION PHASE. REFER TO SHEET 01-PD105.
2. MECHANICAL CONTRACTOR SHALL PROVIDE DRIP PANS BELOW ALL PIPING IN THE MCR. COORDINATE WITH THE M.C. AFTER FIELD VERIFYING PLUMBING PIPING SERVICE.
3. PROVIDE 3/4" CW PIPING TO CRU HUMIDIFIER CONNECTION. COORDINATE WITH MC.
4. ROUTE 3/4" CW PIPING TO NEAREST RISER OR MAIN AND CONNECT TO EXISTING. PROVIDE BACKFLOW PREVENTER. DO NOT ROUTE DIRECTLY OVER ELECTRICAL OR TECHNOLOGY EQUIPMENT.
5. ROUTE 3" STORM DRAINAGE PIPING INSIDE PIPE CHASE. COORDINATE WITH MC.

PLAN NORTH

20 0 20 40
1" = 20'-0" SCALE FEET

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| Drawing Title | FIFTH FLOOR PLAN - PLUMBING |
| Approved: | |
| Phase | FINAL BID DOCUMENTS |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-PP105 |
| | SHEET 247 of 797 |


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# NOTES:

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**KEYNOTES:** (#)

1. ROUTE 3" STORM DRAINAGE PIPING INSIDE PIPE CHASE. COORDINATE WITH MC.

PLAN NORTH

1" = 20'-0" SCALE — 20 0 20 40 FEET

| Revisions: | Date: |
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| **Drawing Title** | SIXTH FLOOR PLAN - PLUMBING |
| **Phase** | FINAL BID DOCUMENTS |
| **Approved:** | |
| | FULLY SPRINKLERED |
| **Project Title** | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| **Location** | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| **Issue Date** | 06.13.2025 |
| **Checked** | CAH |
| **Drawn** | BMB |
| **Project Number** | 646-22-700 |
| **Building Number** | 1 |
| **Drawing Number** | 01-PP106 |
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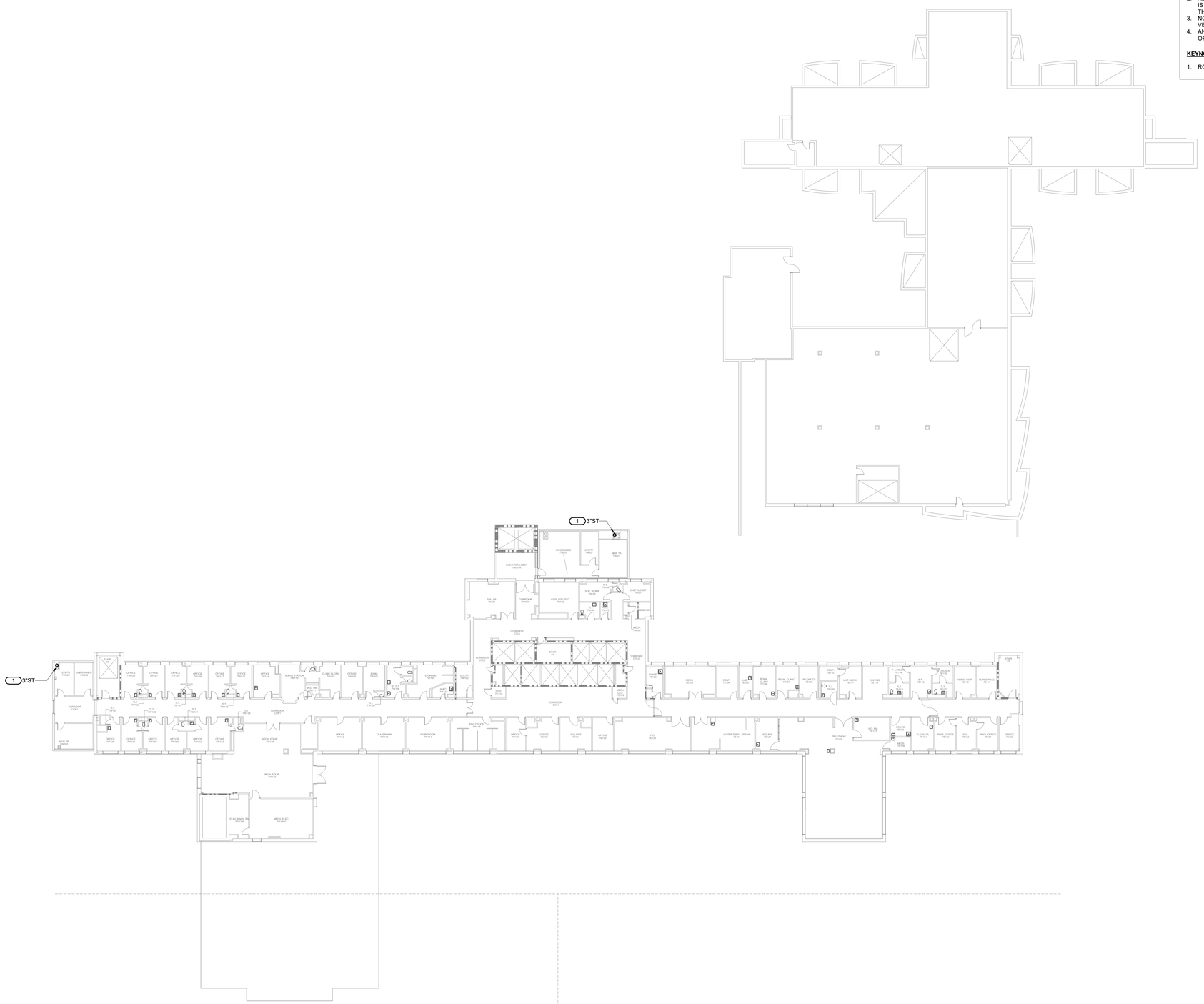
**KEYNOTES:** (#)

1. ROUTE 3" STORM DRAINAGE PIPING INSIDE PIPE CHASE. COORDINATE WITH MC.




PLAN NORTH

1" = 20'-0" SCALE — 20 0 20 40 FEET

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| Drawing Title: SEVENTH FLOOR PLAN - PLUMBING | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-PP107 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 249 of 797 |

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# NOTES:

**FIELD VERIFICATION NOTES:**

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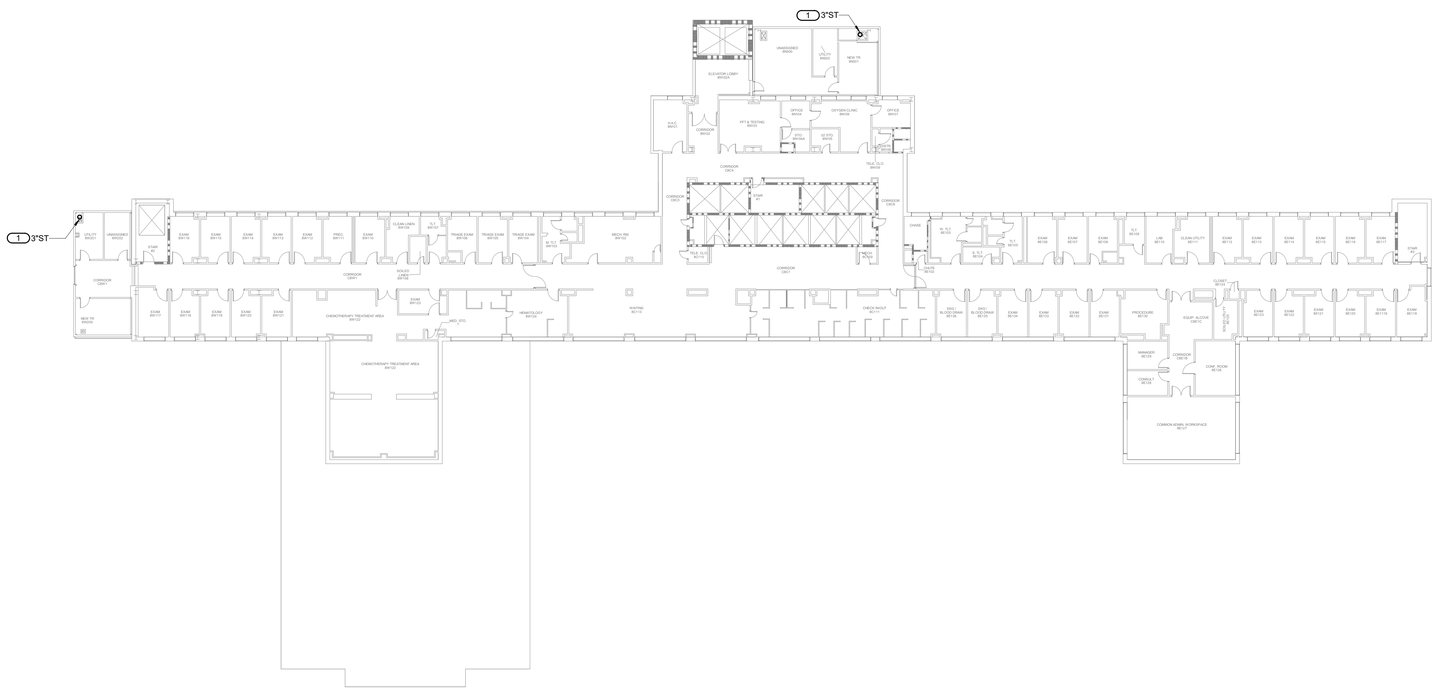
**KEYNOTES:** (#)

1. ROUTE 3" STORM DRAINAGE PIPING INSIDE PIPE CHASE. COORDINATE WITH MC.




PLAN NORTH

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1" = 20'-0"
SCALE FEET

| Revisions: | Date: |
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PROJECT #23002251.00

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DOUGLAS SMITH
ENGINEER
PE081525

Office of Construction and Facilities Management

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|---|---|---|---|
| Drawing Title: EIGHTH FLOOR PLAN - PLUMBING | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-PP108 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 250 of 797 |

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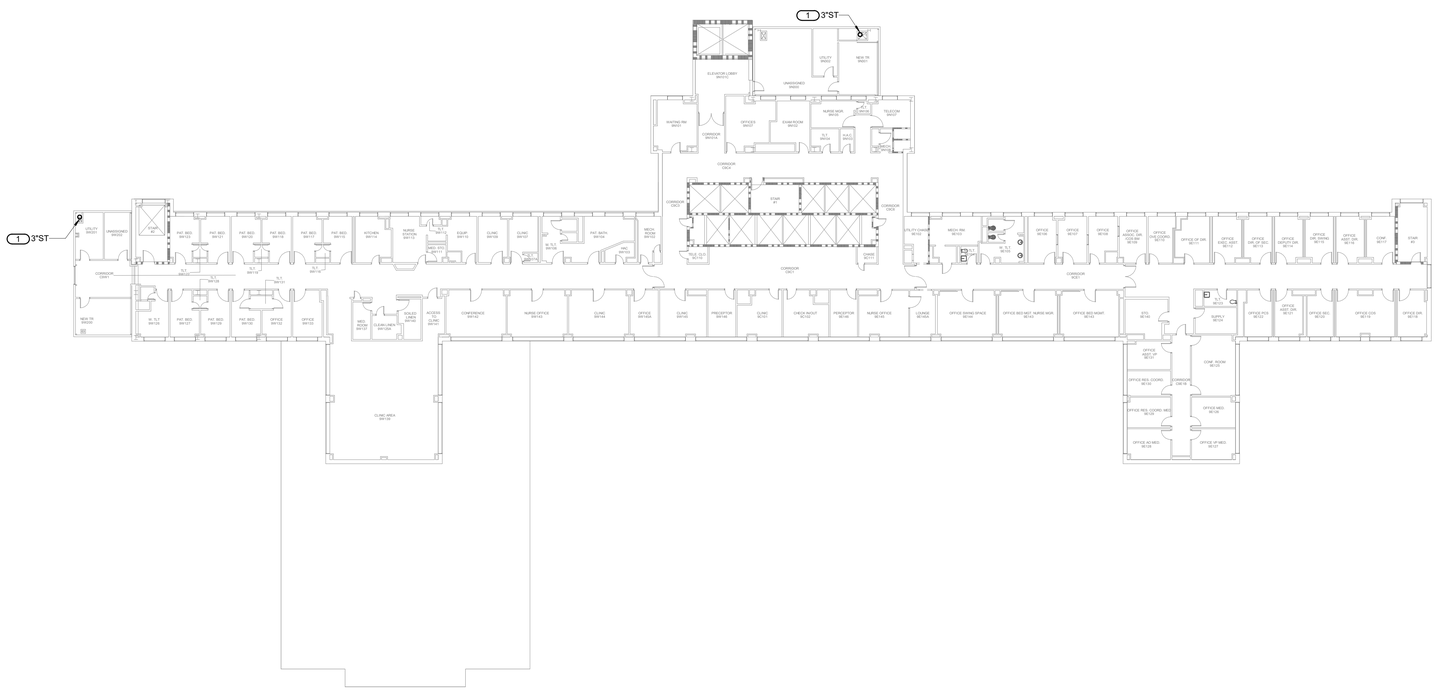


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1" = 20'-0"
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| | | | Building Number: 1 |
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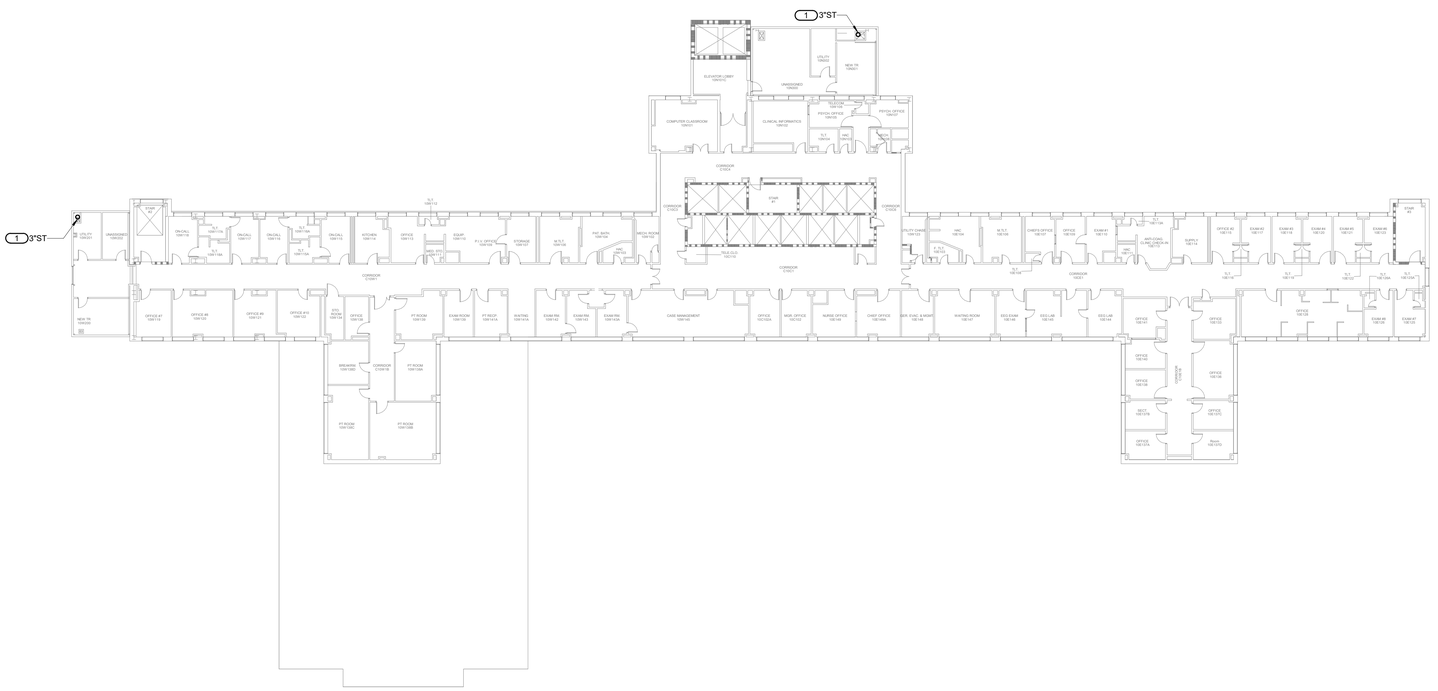


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SCALE FEET

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| Drawing Title: TENTH FLOOR PLAN - PLUMBING | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-PP110 SHEET 252 of 797 |

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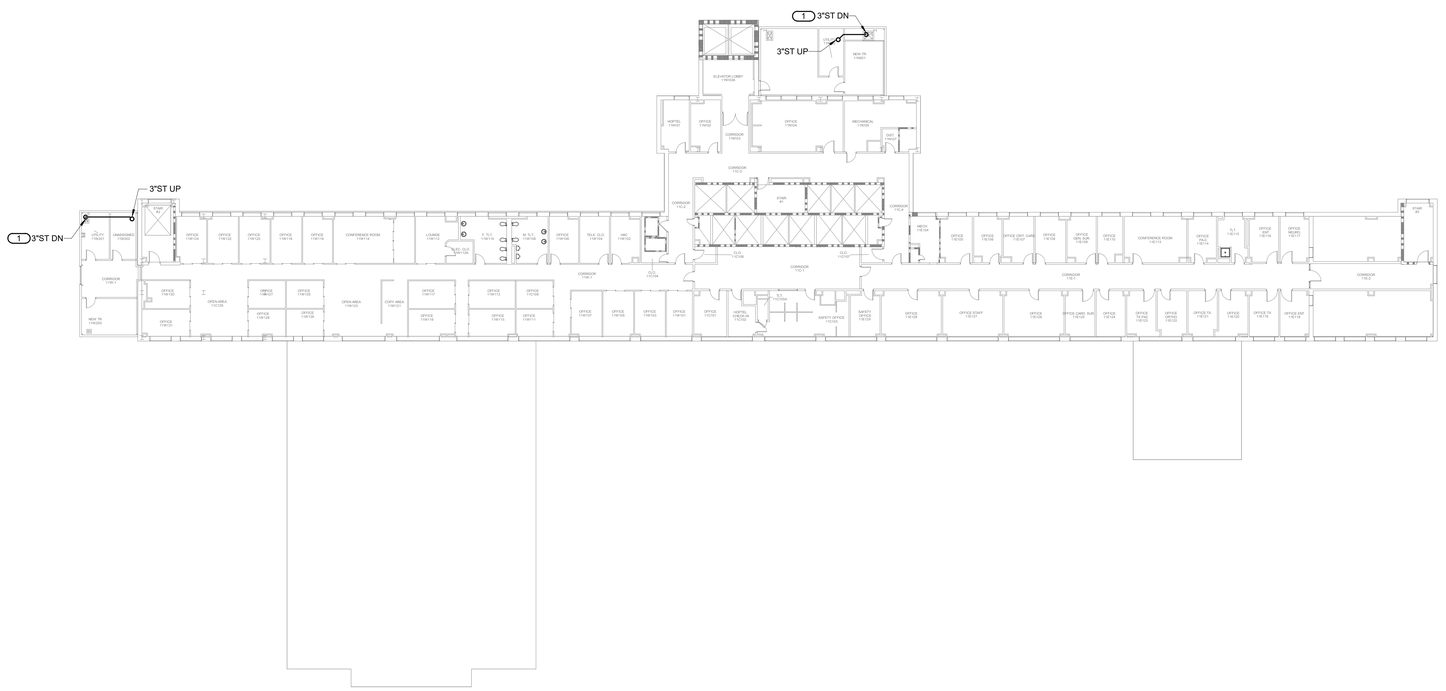


PLAN NORTH

1" = 20'-0" SCALE — 20 0 20 40 FEET

| Revisions: | Date: |
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| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-PP111 |
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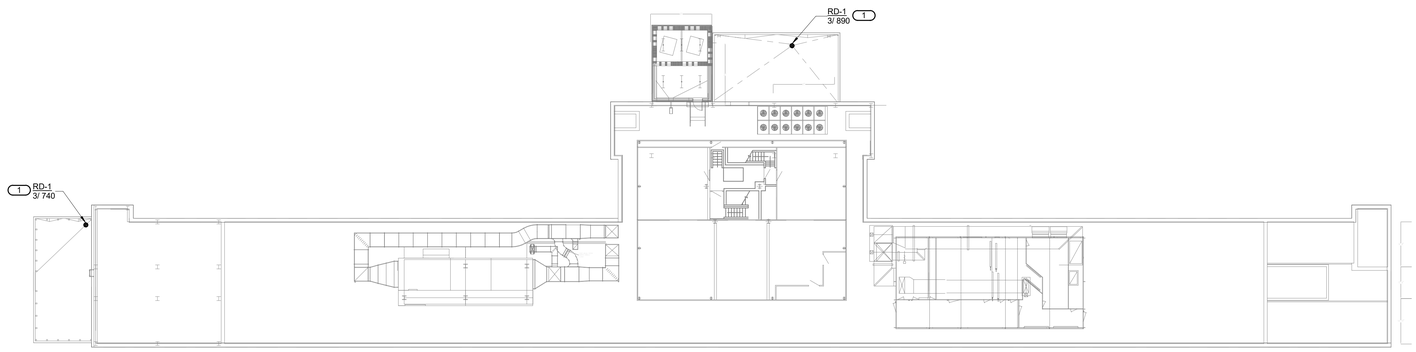


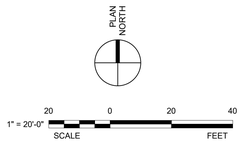


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| Drawing Title | Phase | Project Title | Project Number |
|---|---|---|---|
| ROOF PLAN - PLUMBING | FINAL BID DOCUMENTS | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | 646-22-700 |
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## VIEW KEY

NAME — LEVEL NAME
10'-0" — HEIGHT ABOVE PROJECT 0'-0"

1 — INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL

PLAN OR DETAIL NUMBER
PLAN OR DETAIL NAME
B1 **VIEW NAME**
1/8" = 1'-0"
PLAN OR DETAIL SCALE

SIM — INDICATES SIMILAR DETAIL REFERENCED IN MULTIPLE LOCATIONS
1 / M101 — DETAIL REFERRED TO BY SECTION CUT
SHEET DETAIL IS LOCATED ON — T101
SIM — 1 / 4 / 2 / 3

LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
NEW
EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)
EXISTING
EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)
EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E — TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

TAG-1 — UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

## FIRE / SMOKE BARRIER DESIGNATIONS

FLOOR PLANS SHOW LOCATIONS OF FIRE AND SMOKE BARRIER WALLS FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL CONFIRM ALL LOCATIONS WITH ARCHITECTURAL LIFE SAFETY PLANS, AS WELL AS REFER TO ARCHITECTURAL PLANS FOR LINE TYPE DESIGNATIONS. FURNISH ALL MATERIALS REQUIRED TO COMPLY WITH THOSE RATINGS WHETHER SHOWN OR NOT.

## APPLICABLE CODES

CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES AND LOCAL AMENDMENTS INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

| | |
|---|---|
| INFRASTRUCTURE STANDARD FOR TELECOMMUNICATIONS SPACES | V3.1, JULY 1, 2021 |
| VA FIRE PROTECTION DESIGN MANUAL: | 9TH ED., NOV 1, 2023 |
| VA PHYSICAL SECURITY AND RESILIENCY DESIGN MANUAL: | REV. JULY 1, 2022 |
| VA PLUMBING DESIGN MANUAL: | REV. JUNE 1, 2022 |
| VA HVAC DESIGN MANUAL: | REV. JAN 1, 2023 |
| VA SITE DESIGN MANUAL: | REV. APRIL 1, 2021 |
| NFPA 13 INSTALLATION OF SPRINKLER SYSTEMS: | 2022 EDITION |
| NFPA 70, NATIONAL ELECTRICAL CODE: | 2023 EDITION |
| NFPA 72 FIRE ALARM AND SIGNALING CODE: | 2022 EDITION |
| NFPA 75 FIRE PROTECTION OF IT EQUIPMENT: | 2020 EDITION |
| NFPA 99 HEALTHCARE FACILITIES CODE: | 2021 EDITION |
| NFPA 101 LIFE SAFETY CODE: | 2021 EDITION |
| NFPA 2001 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS: | 2022 EDITION |
| INTERNATIONAL BUILDING CODE: | 2021 EDITION |
| INTERNATIONAL MECHANICAL CODE: | 2021 EDITION |
| INTERNATIONAL PLUMBING CODE: | 2021 EDITION |

## MECHANICAL SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

| SYMBOL: | DESCRIPTION: |
|---|---|
| CWR | CHILLED WATER RETURN |
| CWS | CHILLED WATER SUPPLY |
| DPP | DRAIN |
| GWR | GLYCOL WATER RETURN |
| GWS | GLYCOL WATER SUPPLY |
| HWR | HEATING WATER RETURN |
| HWS | HEATING WATER SUPPLY |
| REF | REFRIGERANT |
| SV | SAFETY RELIEF VENT |
| | PIPE CAP |
| | PIPE DOWN |
| | PIPE UP OR UP/DOWN |
| | PITCH PIPE IN DIRECTION |
| | DIRECTION OF FLOW IN PIPE |
| | DIELECTRIC CONNECTION |
| | UNION/FLANGE |
| | SHUTOFF VALVE NORMALLY OPEN |
| | SHUTOFF VALVE NORMALLY CLOSED |
| | THROTTLING VALVE |
| | BALANCING VALVE (NUMBER INDICATES GPM) |
| | AUTOMATIC BALANCING VALVE |
| | MIXING VALVE |
| | CONTROL VALVE (THREE-WAY) |
| | CONTROL VALVE (TWO-WAY) |
| | SOLENOID VALVE |
| | CHECK VALVE |
| | SAFETY/RELIEF VALVE |
| | PRESSURE REDUCING VALVE (LIQUID/GAS) |
| | PRESSURE REDUCING VALVE (STEAM) |
| | TRIPLE DUTY VALVE (ANGLE TYPE) |
| | TRIPLE DUTY VALVE (IN-LINE TYPE) |
| | PUMP |
| | VACUUM BREAKER |
| | "WYE" - STRAINER |
| | "WYE" - STRAINER W/SHUTOFF VALVE AND HOSE CONNECTION WITH CAP |
| | BASKET STRAINER |
| | FLEXIBLE CONNECTION |
| | PRESSURE/TEMPERATURE TEST PLUG |
| | REDUCER - REFERENCE SPECIFICATION FOR CONCENTRIC/ECCENTRIC AND FOT/FOB |
| | SUCTION DIFFUSER WITH SUPPORT FOOT |
| | AUTOMATIC AIR VENT |
| | MANUAL AIR VENT |
| | DRAIN VALVE WITH HOSE CONNECTION AND CAP |
| P | PRESSURE SENSOR (FURNISHED WITH BALL VALVE) |
| (P) | PRESSURE GAUGE (FURNISHED WITH BALL VALVE) |

## MECHANICAL SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

| SYMBOL: | DESCRIPTION: |
|---|---|
| FM | FLOW METER |
| F | FLOW SWITCH |
| FS | FLOW SENSOR |
| M | METER |
| | DIRECTION OF AIR FLOW |
| | FLEXIBLE DUCT |
| | MANUAL VOLUME DAMPER |
| R | RISE IN DIRECTION OF AIR FLOW |
| D | DROP IN DIRECTION OF AIR FLOW |
| | DUCT CAP |
| | DUCT DOWN |
| | DUCT UP |
| | SUPPLY/OUTSIDE AIR DUCT SECTION |
| | RETURN AIR DUCT SECTION |
| | EXHAUST/RELIEF AIR DUCT SECTION |
| SD-1 6/115 | AIR TERMINAL PROPERTIES SYMBOL NECK SIZE/CFM |
| ### | TERMINAL AIR BOX (REFER TO SCHEDULE) |
| ### | TERMINAL AIR BOX w/REHEAT COIL (REFER TO SCHEDULE) |
| | FAN POWERED TERMINAL AIR BOX w/REHEAT COIL (REFER TO SCHEDULE) |
| H | HUMIDIFIER |
| | OPPOSED BLADE DAMPER (REFER TO SCHEDULE) |
| | PARALLEL BLADE DAMPER (REFER TO SCHEDULE) |
| H | HUMIDISTAT SENSOR |
| C | CARBON MONOXIDE SENSOR |
| O | OCCUPANCY SENSOR |
| P | PRESSURE SENSOR/MONITOR |
| T | THERMOSTAT/SENSOR |

## MECHANICAL ABBREVIATION KEY

| ABBR: | DESCRIPTION: |
|---|---|
| ACT | ACTUATOR |
| AD | ACCESS DOOR |
| AFF | ABOVE FINISHED FLOOR |
| C | COMMON |
| CO | CLEANOUT |
| CFSD | CONTROL/FIRE/SMOKE DAMPER |
| DPG (0-2") | DIFFERENTIAL PRESSURE GAUGE (RANGE) |
| DPS | DIFFERENTIAL PRESSURE SWITCH |
| EA | EXHAUST/RELIEF AIR |
| ECFSD | EXISTING CONTROL FIRE SMOKE DAMPER |
| FD | FIRE DAMPER |
| FSD | FIRE/SMOKE DAMPER |
| MA | MIXED AIR |
| MV | MIXING VALVE |
| N.C. | NORMALLY CLOSED |
| NIC | NOT IN CONTRACT |
| N.O. | NORMALLY OPEN |
| OA | OUTSIDE AIR |
| PS | PRESSURE SWITCH |
| RA | RETURN AIR |
| SA | SUPPLY AIR |
| SCCR | SHORT CIRCUIT CURRENT RATING |
| SD | SMOKE DAMPER |
| TAB | TERMINAL AIR BOX |
| TYP | TYPICAL |
| UON | UNLESS OTHERWISE NOTED |

## MECHANICAL DESIGN CONDITIONS:

**DESIGN CONDITIONS:** — **BASED ON VA HVAC DESIGN MANUAL (CHAPTER 7) GREATER PITTSBURGH INTL AP**

**SUMMER:** 89.7°F DRY BULB, 72.4°F WET BULB
**WINTER:** 5.2°F DRY BULB

**INDOOR DESIGN CONDITIONS:**

**TR - IT EQUIPMENT INLET:** 41-95°F DRY BULB, 8-80% RELATIVE HUMIDITY, <59°F DEW POINT
**MCR - IT EQUIPMENT INLET:** 72-80.6°F DRY BULB, 8-60% RELATIVE HUMIDITY, <59°F DEW POINT
**TR & MCR SPACES:** 64-80.6°F DRY BULB, 30-60% RELATIVE HUMIDITY, <59°F DEW POINT
**TE ENVIRONMENT:** 41-95°F DRY BULB, 8-60% RELATIVE HUMIDITY, <82.4°F DEW POINT

REFER TO CONTROL DIAGRAMS FOR ROOM SPECIFICS.

## PIPING GENERAL NOTES:

1. PIPE DRAIN LINES FROM EQUIPMENT TO NEAREST FLOOR DRAIN OR MOP SINK. WHERE CONDENSATE IS DISCHARGED TO EXTERIOR, PROVIDE SPLASH BLOCK.
2. INSTALL ALL REFRIGERANT LIQUID AND SUCTION PIPING SIZED PER EQUIPMENT MANUFACTURER RECOMMENDATIONS. REFRIGERANT PIPING SHOWN AS SINGLE LINE FOR CLARITY.

## VENTILATION GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, THE SIZE OF EACH BRANCH DUCT TO AN AIR TERMINAL SHALL MATCH THE INLET SIZE.
2. ALIGN TEMPERATURE SENSORS WITH LIGHT SWITCHES AND WHEN IN CLOSE PROXIMITY TO EACH OTHER.
3. PROVIDE ACCESS DOORS AT ALL DUCT MOUNTED EQUIPMENT.
4. EXISTING AIR INLET AND OUTLET CFM SHOWN ON DRAWINGS ARE FROM EXISTING DRAWINGS, AND ARE FOR REFERENCE ONLY. CONTRACTOR SHALL USE PRE-BALANCE VALUES, AND NOT EXISTING CFM SHOWN ON DRAWINGS.
5. CONTRACTOR MAY REUSE PORTIONS OF EXISTING DUCT PROVIDED SIZES AND PRESSURE CLASSES ARE CORRECT, DUCT IS THOROUGHLY CLEANED AND FREE OF DEFECTS, AND ALL TRANSVERSE JOINTS, LONGITUDINAL SEAMS, AND DUCT WALL PENETRATIONS ARE SEALED AS SPECIFIED FOR NEW DUCTWORK.

## MECHANICAL SHEET INDEX


| | |
|---|---|
| 00-MG000 | MECHANICAL COVERSHEET |
| 00-MG500 | MECHANICAL DETAILS |
| 00-MG501 | MECHANICAL DETAILS |
| 00-MG700 | MECHANICAL SCHEDULES |
| 00-MG800 | MECHANICAL CONTROLS |
| 00-MG801 | MECHANICAL CONTROLS |
| 01-MD099 | BASEMENT DEMOLITION PLAN - MECHANICAL |
| 01-MD100 | GROUND FLOOR DEMOLITION PLAN - MECHANICAL |
| 01-MD101 | FIRST FLOOR DEMOLITION PLAN - MECHANICAL |
| 01-MD102 | SECOND FLOOR DEMOLITION PLAN - MECHANICAL |
| 01-MD103 | THIRD FLOOR DEMOLITION PLAN - MECHANICAL |
| 01-MD104 | FOURTH FLOOR DEMOLITION PLAN - MECHANICAL |
| 01-MD105 | FIFTH FLOOR DEMOLITION PLAN - MECHANICAL |
| 01-MD108 | EIGHTH FLOOR DEMOLITION PLAN - MECHANICAL |
| 01-MD400 | ENLARGED DEMOLITION PLANS - MECHANICAL |
| 01-MD401 | ENLARGED DEMOLITION PLANS - MECHANICAL |
| 01-MH099 | BASEMENT PLAN - MECHANICAL |
| 01-MH100 | GROUND FLOOR PLAN - MECHANICAL |
| 01-MH101 | FIRST FLOOR PLAN - MECHANICAL |
| 01-MH102 | SECOND FLOOR PLAN - MECHANICAL |
| 01-MH103 | THIRD FLOOR PLAN - MECHANICAL |
| 01-MH104 | FOURTH FLOOR PLAN - MECHANICAL |
| 01-MH105 | FIFTH FLOOR PLAN - MECHANICAL |
| 01-MH106 | SIXTH FLOOR PLAN - MECHANICAL |
| 01-MH107 | SEVENTH FLOOR PLAN - MECHANICAL |
| 01-MH108 | EIGHTH FLOOR PLAN - MECHANICAL |
| 01-MH109 | NINTH FLOOR PLAN - MECHANICAL |
| 01-MH110 | TENTH FLOOR PLAN - MECHANICAL |
| 01-MH111 | ELEVENTH FLOOR PLAN - MECHANICAL |
| 01-MH112 | ROOF PLAN - MECHANICAL |
| 01-MH400 | BASEMENT ENLARGED PLANS - MECHANICAL |
| 01-MH401 | BASEMENT ENLARGED PLANS - MECHANICAL |
| 01-MH402 | GROUND FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH403 | GROUND FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH404 | GROUND FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH405 | FIRST FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH406 | FIRST FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH407 | FIRST FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH408 | SECOND FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH409 | SECOND FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH410 | THIRD FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH411 | THIRD FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH412 | FOURTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH413 | FOURTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH414 | FOURTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH415 | FIFTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH417 | FIFTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH418 | FIFTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH419 | FIFTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH420 | SIXTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH421 | SIXTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH422 | SEVENTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH423 | SEVENTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH424 | EIGHTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH425 | EIGHTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH426 | NINTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH427 | NINTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH428 | TENTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH429 | TENTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH430 | ELEVENTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH431 | ELEVENTH FLOOR ENLARGED PLANS - MECHANICAL |
| 01-MH432 | ROOF ENLARGED PLANS - MECHANICAL |
| 05-MD101 | FIRST FLOOR DEMOLITION PLAN - MECHANICAL |
| 05-MH101 | FIRST FLOOR PLAN - MECHANICAL |
| 30-MD099 | BASEMENT DEMOLITION PLAN - MECHANICAL |
| 30-MD100 | GROUND FLOOR DEMOLITION PLAN - MECHANICAL |
| 30-MD101 | FIRST FLOOR DEMOLITION PLAN - MECHANICAL |
| 30-MD102 | SECOND FLOOR DEMOLITION PLAN - MECHANICAL |
| 30-MH099 | BASEMENT PLAN - MECHANICAL |
| 30-MH100 | GROUND FLOOR PLAN - MECHANICAL |
| 30-MH101 | FIRST FLOOR PLAN - MECHANICAL |
| 30-MH102 | SECOND FLOOR PLAN - MECHANICAL |
| 30-MH103 | ROOF PLAN - MECHANICAL |
| 33-MH101 | FIRST FLOOR PLAN - MECHANICAL |
| 30-MH400 | ENLARGED PLANS - MECHANICAL |
| 30-MH401 | ENLARGED PLANS - MECHANICAL |
| GRAND TOTAL: 76 | |


## MECHANICAL GENERAL NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
3. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
4. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
5. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
6. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
10. SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.
11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
12. WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
13. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
14. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
15. MAINTAIN A MINIMUM WORKING CLEARANCE OF 3'-6" IN FRONT OF ALL ELECTRICAL EQUIPMENT REQUIRING MAINTENANCE, INSPECTION, AND TESTING INCLUDING BUT NOT LIMITED TO PANELS, DISTRIBUTION PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, EQUIPMENT DISCONNECTS AND STARTERS.
16. MAINTAIN THE DEDICATED ELECTRICAL EQUIPMENT SPACE DEFINED BY THE WIDTH / DEPTH OF ELECTRICAL EQUIPMENT MEASURED FROM THE FLOOR TO A HEIGHT 6'-0" ABOVE THE EQUIPMENT OR THE STRUCTURAL CEILING, WHICHEVER IS LOWER. SYSTEMS FOREIGN TO THE ELECTRICAL DISTRIBUTION SYSTEM ARE NOT ALLOWED IN THE DEDICATED ELECTRICAL SPACE INCLUDING: DUCTWORK, PIPING, ETC.
17. PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
18. DO NOT EXCEED 25 LBS PER HANGER AND A MINIMUM SPACING OF 2'-0" ON CENTER WHEN ATTACHING TO METAL ROOF DECKING (LIMITATION NOT REQUIRED WITH CONCRETE ON METAL DECK). THIS 25 LBS. LOAD AND 2'-0" SPACING INCLUDE ADJACENT ELECTRICAL AND ARCHITECTURAL ITEMS HANGING FROM DECK. IF THE HANGER RESTRICTIONS CANNOT BE ACHIEVED, SUPPLEMENTAL FRAMING OFF STEEL FRAMING SHALL BE ADDED. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

## MECHANICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
2. NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
4. EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF THEIR WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO THEIR AREA OF WORK.
5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CUTTING, REMOVAL AND PATCHING OF ROOFS, WALLS, AND FLOORS ASSOCIATED WITH WORK BY ALL CONTRACTORS. CONTRACTORS SHALL NOTIFY THE GC OF AFFECTED AREAS PRIOR TO BIDDING.
6. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO BIDDING.
7. WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.
8. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS THAT REMAIN ACTIVE.
9. OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED.
10. MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR TIE IN AND SWITCHOVER. DRAIN SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER BEFORE PARTIALLY OR COMPLETELY DRAINING SYSTEM. MAKE CHANGEOVER TO NEW SYSTEMS WITH MINIMUM OUTAGE.
11. DISCONNECT AND REMOVE MECHANICAL DEVICES AND EQUIPMENT SERVING EQUIPMENT THAT HAS BEEN REMOVED.

## MECHANICAL PHASING NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. REFER TO ARCHITECTURAL DRAWINGS FOR GENERAL DESCRIPTION OF PHASES. REFER TO ARCHITECT'S INSTRUCTIONS FOR MORE DETAILS AND PHASING SCHEDULES AND FOR CONCURRENT WORK. MECHANICAL, ELECTRICAL AND TECHNOLOGY DRAWINGS DEPICT THE INTENT OF THE FINAL DESIGN. THE MECHANICAL, ELECTRICAL AND TECHNOLOGY DRAWINGS DO NOT DEPICT THE MEANS AND METHODS TO MEET THE REQUIREMENTS OF THE PHASING CRITERIA.
2. REVIEW PROJECT PHASING PLANS TO COORDINATE DEMOLITION WORK, OUTAGES, ETC. WITH AFFECTED ADJACENT AREAS.
3. PROVIDE TEMPORARY DUCTWORK, PIPING, SHUTOFF VALVES, ZONE VALVES, ZONE ALARMS, ETC. AS NEEDED TO MAINTAIN SERVICE TO ALL AREAS DURING ALL PHASES OF PROJECT.
4. INSTALL TEMPORARY DUCTWORK, PIPING, SHUTOFF VALVES, ETC. AS NECESSARY TO KEEP ALL OCCUPIED SPACES OPERATIONAL THROUGHOUT ALL PHASES OF THE PROJECT
5. PHASE DEMOLITION WORK TO MINIMIZE DOWNTIME.
6. COORDINATE PHASING IN MAIN COMPUTER ROOM WITH TELECOMMUNICATIONS PHASING PLANS.

| Revisions: | Date: |
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| | |

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COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DOUGLAS SMITH — ENGINEER — PORTIER

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: MECHANICAL COVERSHEET
Phase: FINAL BID DOCUMENTS
Approved:
FULLY SPRINKLERED

Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS
Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240
Issue Date: 06.13.2025
Checked: CAH
Drawn: BMB

Project Number: 646-22-700
Building Number: 1
Drawing Number: 00-MG000
SHEET 255 of 797

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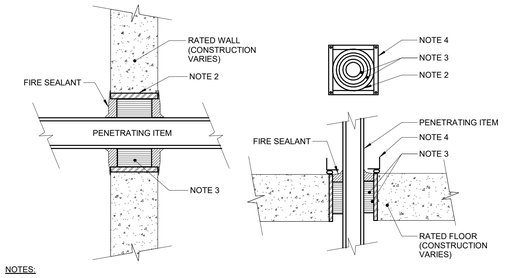
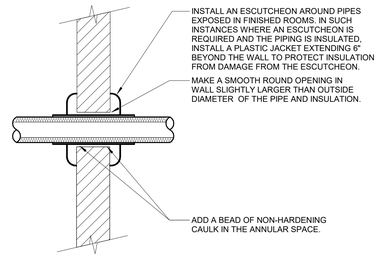



NOTES:

1. THIS GENERAL DETAIL APPLIES TO ALL ITEMS PENETRATING FIRE RATED WALLS OR FLOORS. THE INTENT IS TO MAINTAIN THE FIRE RATING AND TO ALLOW LONGITUDINAL MOVEMENT. REFER TO SPECIFICATION SECTION 07840 (07 84 00) (SECTION 21 05 03 - FIRE PROTECTION, SECTION 22 05 03 - PLUMBING , SECTION 23 05 03 - HVAC) FOR SELECTION OF THROUGH PENETRATION FIRE STOPPING.
2. SCHEDULE 5 PIPE SLEEVE EMBEDDED IN WALL OR FLOOR, OR SMOOTH CORE DRILL. EACH CONTRACTOR FURNISHES SLEEVE TO G.C., COORDINATES SLEEVE LOCATIONS AND DEBURS SLEEVE. G.C. BUILDS SLEEVE INTO WALL OR FLOOR ALLOWING NO GAP AROUND SLEEVE. IF SLEEVE IS NOT PROVIDED WHEN WALL OR FLOOR IS BUILT, CONTRACTOR SHALL INSTALL SLEEVE. SLEEVE SIZE SHALL ALLOW ANNULAR SPACE REQUIRED BY THE SELECTED FIRE STOP SYSTEM.
3. INSTALL BACKING MATERIAL, SUCH AS MINERAL WOOL SAFING, AS REQUIRED FOR FIRE STOP SYSTEM. INSTALL IN ACCORDANCE WITH FIRE STOP SYSTEM APPLICATION LISTING. SECURE TO WALL OR FLOOR TO ALLOW LONGITUDINAL MOVEMENT OF PENETRATING ITEM WITHOUT MOVEMENT OF FIRE BARRIER.
4. WATERTIGHT WELDED 1"x1" 20 GAUGE MINIMUM GALVANIZED SHEET METAL ANGLE FRAME, BY CONTRACTOR IN EQUIPMENT ROOMS FOR WATER STOP. PLACE A BEAD OF WATERPROOF SEALANT BETWEEN FLOOR AND BOTTOM OF ANGLE FRAME. SECURE TO FLOOR WITH MASONRY ANCHORS IN CORNERS AND ON 12" MAXIMUM CENTERS. MULTIPLE PENETRATING ITEMS MAY BE ENCLOSED IN ONE FRAME.

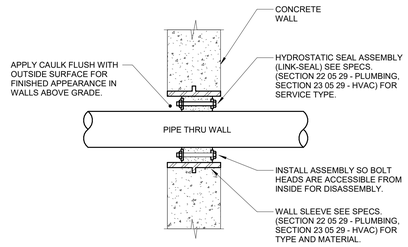
## B1 FLOOR/WALL PENETRATION - RATED FIRE BARRIER
NO SCALE




NOTES:

1. THIS DETAIL APPLIES TO ALL PIPES. THE INTENTION IS TO CONTINUE THE INSULATION AND VAPOR BARRIER THROUGH ALL PENETRATIONS. PERMIT THERMAL EXPANSION WITHOUT DAMAGING INSULATION, AND TO SEAL AIRTIGHT AROUND INSULATED AND UNINSULATED PIPES FOR NOISE TRANSMISSION CONTROL.
2. SEE SPECIFICATION SECTIONS (SECTION 22 05 29 - PLUMBING, SECTION 23 05 29 - HVAC) FOR ADDITIONAL INFORMATION.
3. FLOOR OPENINGS ARE SIMILAR, SEE SPECIFICATION SECTION (SECTION 22 05 29 - PLUMBING, SECTION 23 05 29 - HVAC) FOR DIFFERENCES BETWEEN FLOOR AND WALL PENETRATIONS.

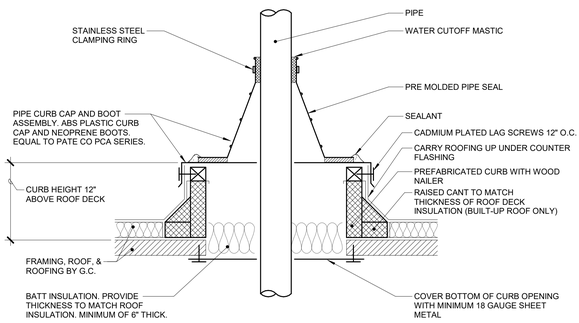
## B5 WALL PENETRATION - NON-FIRE RATED
NO SCALE



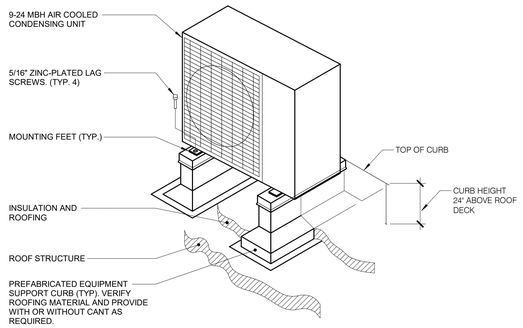

NOTES:

1. CONTRACTOR MAY FABRICATE PIPE SLEEVE.
2. SEAL SELECTION BASED ON O.D. OF PIPE THRU WALL AND I.D. OF SLEEVE.
3. SLEEVE NOT REQUIRED FOR CORE DRILLED PENETRATIONS.

## B8 WALL PENETRATION - EXTERIOR - PIPING
NO SCALE



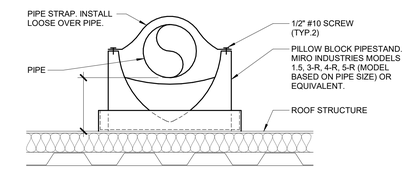

## D1 ROOF PENETRATION - INSULATED PIPE CURB
NO SCALE




NOTES:

1. VERIFY DIAMETER OF ANCHOR BOLT REQUIRED TO FIT WITHIN MOUNTING FEET ANCHOR HOLES.

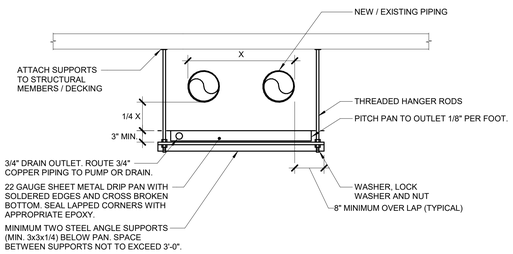
## D5 ROOF SUPPORT - EQUIPMENT RAIL
NO SCALE



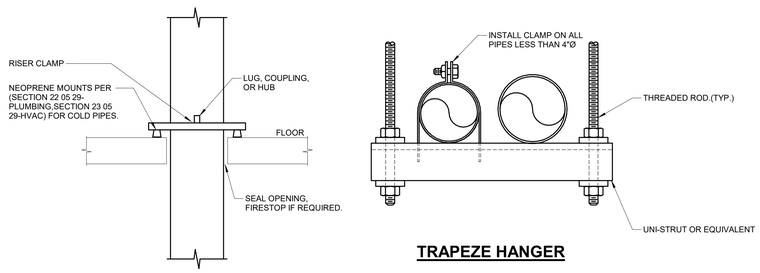

NOTES:

1. NON-PENETRATING ROOF SUPPORT FOR USE WITH REFRIGERANT PIPING.
2. SPACE STANDS AS REQUIRED TO MEET MANUFACTURERS RATED CAPACITIES.
3. COORDINATE PIPESTAND LOCATIONS WITH G.C.
4. PROVIDE EPDM PAD TO PROTECT ROOF IF REQUIRED BY ROOFING MANUFACTURER.

## D8 ROOF SUPPORT - EXPOSED PIPING PILLOW BLOCK
NO SCALE




## F1 DRIP PAN
NO SCALE




**TRAPEZE HANGER** | **STRUCT CLAMP HANGERS** | **CLEVIS HANGER**

NOTES:

1. REFER TO SPECIFICATION SECTION 23 05 29 & SECTION 23 07 19

## F5 PIPE SUPPORT
NO SCALE

| Revisions: | Date: |
|---|---|
| | |

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Office of Construction and Facilities Management

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| Drawing Title: MECHANICAL DETAILS | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 00-MG500 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 256 of 797 |

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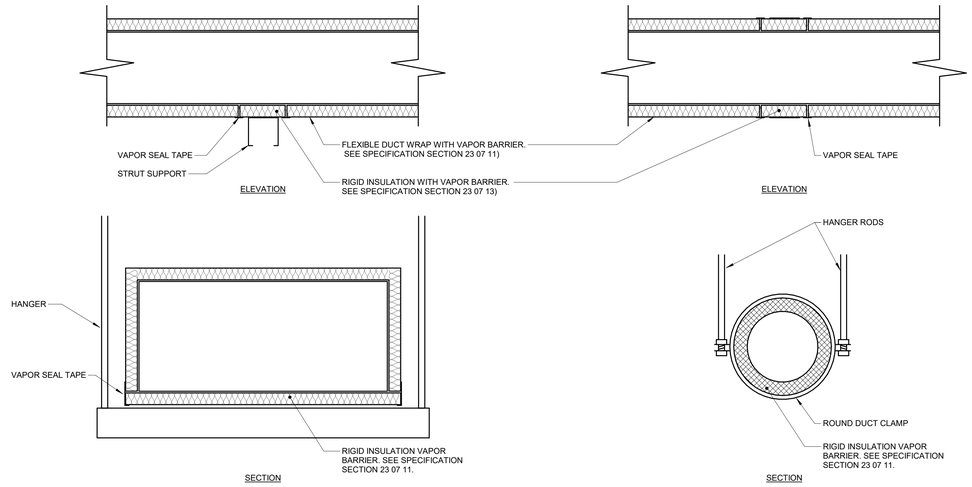
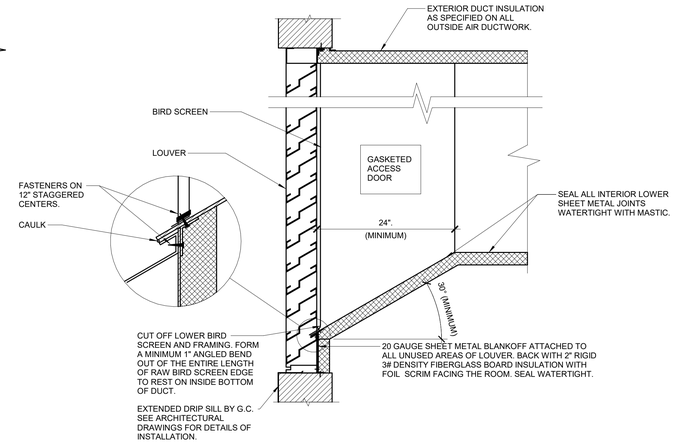



NOTES:

1. DETAIL FOR USE WHERE DUCTS REQUIRE TRAPEZE OR DOUBLE ROD HANGERS (36" DIA. OR EQUIVALENT)

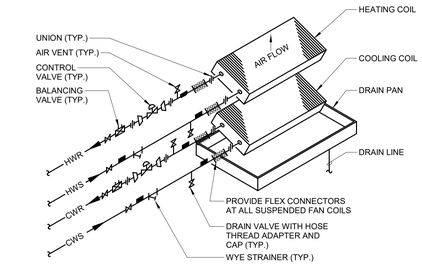
## C1 DUCT - HANGERS WRAPPED
NO SCALE



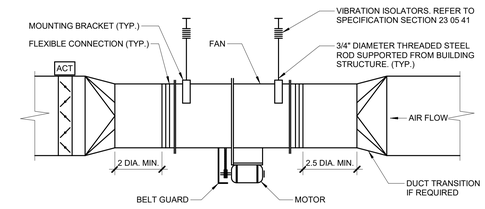

NOTES:

1. SEAL ALL JOINTS ON BOTTOM INTERIOR SURFACE OF DUCT WITHIN 6'-0" OF THE LOUVER WATER TIGHT.
2. CAULK SHEETMETAL SCREWS WHERE THEY PENETRATE METAL.

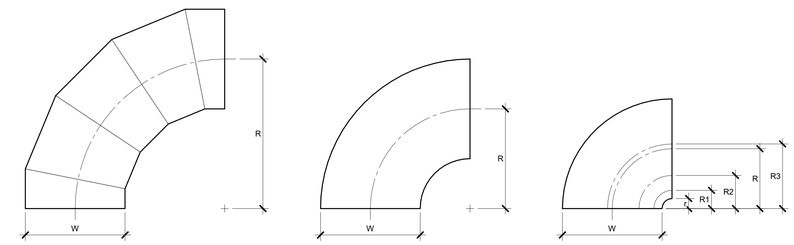
## C5 LOUVER CONNECTION
NO SCALE




## B8 FAN COIL UNIT - 4-PIPE PIPING DIAGRAM
NO SCALE



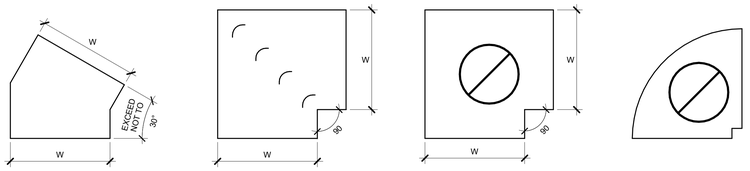

## C8 FAN - IN-LINE EXHAUST
NO SCALE




**OVAL / ROUND RADIUS ELBOW SMOOTH OR 5 GORE (MINIMUM)**
R/W = 1.5 (MINIMUM)

**RECTANGULAR RADIUS ELBOW TYPE RE1**
R/W = 1.0 (MINIMUM)
R/W < 1.0 SHALL BE TYPE RE3

**RECTANGULAR RADIUS ELBOW WITH VANES TYPE RE3**
REFER TO SMACNA HVAC SYSTEMS DUCT DESIGN MANUAL, FOURTH EDITION, SECTION 5.14 "SPLITTER VANES" AND SMACNA HVAC DUCT CONSTRUCTION STANDARDS, THIRD EDITION, FIGURES 4-2 AND 4-9 AND CHARTS 4-1 AND 4-1M. ELBOW SHALL HAVE THREE SPLITTER VANES AND r/W = 0.10 (R/W = 0.60) UNLESS NOTED OTHERWISE.




**RECTANGULAR MITERED ELBOW TYPE RE6**
USE ONLY AS PART OF OFFSETS AND TRANSITIONS PER FIGURE 4-7 TYPE 2 OR AS SHOWN ON DRAWINGS. OFFSETS ABOVE 30° SHALL BE TYPE RE1.

**RECTANGULAR MITERED ELBOW WITH VANES TYPE RE2**

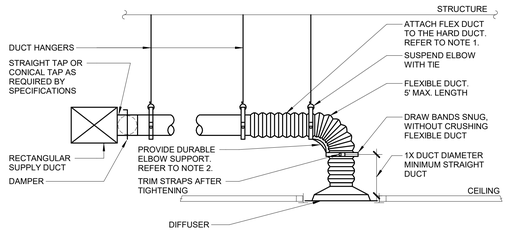
**RECTANGULAR / OVAL / ROUND MITERED ELBOW WITHOUT VANES TYPE RE4**
**NOT ALLOWED**

**RECTANGULAR RADIUS ELBOW WITH SQUARE THROAT**
**NOT ALLOWED**

NOTES:

1. BEAD, CROSSBREAK, AND REINFORCE FLAT SURFACES AS IN STRAIGHT DUCT.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. DEFAULT ELBOW SHALL BE TYPE "RE1".
4. ELBOW TYPES SHALL BE INSTALLED AS SHOWN AND NOT BE SUBSTITUTED WITHOUT PERMISSION. EXCEPTION: RE1 OR RE3 MAY BE SUBSTITUTED FOR RE2.

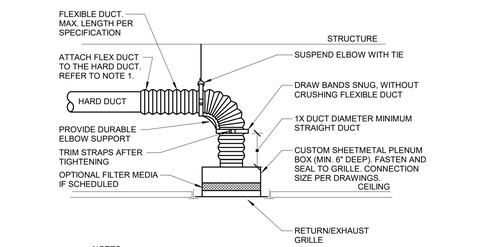
## F1 DUCT - ELBOW CONSTRUCTION
NO SCALE




NOTES:

1. TO ATTACH FLEX DUCT TO THE HARD DUCT, TAPE THE INNER LINER TO THE HARD DUCT THEN ATTACH WITH TWO NYLON TIE WRAPS; ONE FOR THE INNER LINER AND ONE FOR THE OUTER SHELL. FOLD THE OUTER SHELL INSIDE ITSELF SO IT HAS NEAT EDGES PRIOR TO TIE WRAPPING.
2. DURABLE ELBOW SUPPORT ACCEPTABLE MANUFACTURER AND MODEL: HART AND COOLEY - SMARTFLOW, THERMAFLEX - FLEXFLOW, TITUS - FLEXRIGHT, OR APPROVED EQUAL.

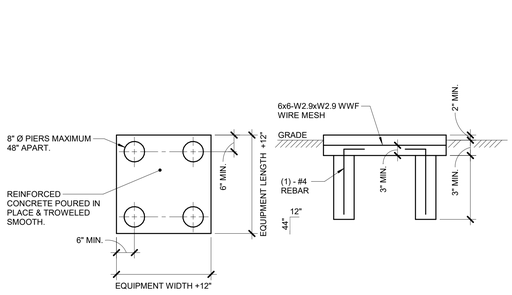
## E5 DIFFUSER CONNECTION DETAIL
NO SCALE



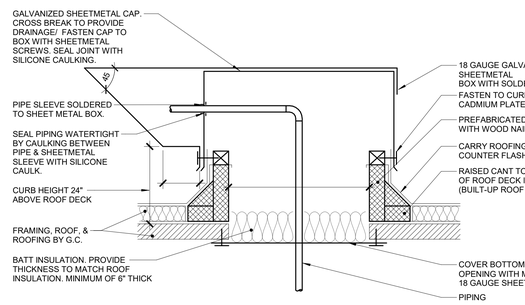

NOTES:

1. TO ATTACH FLEX DUCT TO THE HARD DUCT, TAPE THE INNER LINER TO THE HARD DUCT THEN ATTACH WITH TWO NYLON TIE WRAPS; ONE FOR THE INNER LINER AND ONE FOR THE OUTER SHELL. FOLD THE OUTER SHELL INSIDE ITSELF SO IT HAS NEAT EDGES PRIOR TO TIE WRAPPING.
2. DURABLE ELBOW SUPPORT ACCEPTABLE MANUFACTURER AND MODEL: HART AND COOLEY - SMARTFLOW, THERMAFLEX - FLEXFLOW, TITUS - FLEXRIGHT, OR APPROVED EQUAL

## E8 RETURN/EXHAUST GRILLE CONNECTION
NO SCALE




## F5 EQUIPMENT SUPPORT - EXTERIOR PAD
NO SCALE




## F8 ROOF PENETRATION - INSULATED PIPE HOUSING
NO SCALE

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

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VA U.S. Department of Veterans Affairs

| | |
|---|---|
| Drawing Title: MECHANICAL DETAILS | Phase: FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |

| | | |
|---|---|---|
| Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | | Project Number: 646-22-700 |
| | | Building Number: 1 |
| Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | | Drawing Number: 00-MG501 |
| Issue Date: 06.13.2025 | Checked: CAH / Drawn: BMB | SHEET 257 of 797 |

Autodesk Docs://University Drive VAMC EHRM_V26/646-22-700.SITE.M.PIT EHRM.rvt
6/12/2025 8:52:55 PM

## VRF MODULAR OUTDOOR UNIT SCHEDULE

NOTES:
1. COORDINATE ELECTRICAL CONNECTIONS WITH MANUFACTURER UNIT IS SUPPLIED AS MULTIPLE MODULES. EACH MODULE REQUIRES A SEPARATE ELECTRICAL CONNECTION AND DISCONNECT.
2. NOMINAL COOLING CAPACITY RATED AT: INDOOR TEMP = 80°FDB/67°FWB, OUTDOOR TEMP = 95°FDB.
3. DESIGN COOLING CAPACITY SHALL BE RATED AT: INDOOR TEMP = 74°FDB/61.7°FWB, OUTDOOR TEMP = 95°FDB. EFFECTS OF ESTIMATED REFRIGERANT LINE LENGTH SHALL BE INCLUDED IN COMPUTING DESIGN CAPACITY.
4. DESIGN HEATING CAPACITY SHALL BE RATED AT: INDOOR TEMP = 70°FDB, OUTDOOR TEMP = 14°FDB. EFFECTS OF ESTIMATED REFRIGERANT LINE LENGTHS AND DEFROSTING SHALL BE INCLUDED IN COMPUTING DESIGN CAPACITY.
5. REFER TO SPECIFICATION SECTION 23 81 45 FOR ADDITIONAL REQUIREMENTS.
6. INVERTER SCROLL HERMETIC COMPRESSOR.
7. THE SCHEDULED EQUIPMENT IS SUBJECT TO THE EPA-MANDATED REFRIGERANT PHASE OUT. ENGINEER OF RECORD WAS UNABLE TO OBTAIN MANUFACTURER'S PRODUCT DATA FOR EQUIPMENT THAT MEETS THE EPA-MANDATE. IT IS ANTICIPATED THAT PRODUCT DATA WILL BE MADE AVAILABLE DURING THE CONSTRUCTION PHASE.

| TAG NAME | REFRIGERANT | COOLING NOMINAL MBH (NOTE 3) | COOLING OPERATING RANGE °F DB | HEATING NOMINAL MBH (NOTE 5) | HEATING OPERATING RANGE °F DB | NUMBER OF CONNECTED INDOOR UNITS | CONNECTION RATIO % | ELECTRICAL VOLTAGE | PHASES | MCA | MOCP | SCCR | DISCONNECT BY (NOTE A) | DISCONNECT TYPE (NOTE B) | GENERATOR POWER | WEIGHT | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ODU-N1 | 410A | 120 | -10 to 123 | 135 | -13 to 60 | 6 | 105 | 208 | 3 | 55 | 90 | 65,000 A | EC | F | Yes | 668 | ALL |
| ODU-N2 | 410A | 72 | -10 to 123 | 80 | -13 to 60 | 7 | 77.8 | 208 | 3 | 55 | 90 | 65,000 A | EC | F | Yes | 644 | ALL |
| ODU-W1 | 410A | 72 | -10 to 123 | 80 | -13 to 60 | 6 | 66.7 | 208 | 3 | 55 | 90 | 65,000 A | EC | F | Yes | 644 | ALL |

## VRF INDOOR UNIT SCHEDULE

NOTES:
1. INDOOR UNITS SELECTED FOR SPACE PEAK LOADS.
2. PROVIDE 30% FILTERS FOR EACH UNIT. FILTER MAY BE INTEGRAL OR SUITABLE FOR FIELD INSTALLATION IN FABRICATED FILTER ANGLES. FILTER ANGLES PROVIDED BY M.C.
3. REFER TO SPECIFICATION 23 81 45 AND SHEET 00-MG800 FOR DESCRIPTION OF CONTROLS.
4. INDOOR UNIT CFM SELECTED AT HIGH CFM. INDOOR UNIT SHALL HAVE CAPABILITY TO ADJUST CFM FOR FINAL AIR BALANCING UP OR DOWN THROUGH FIELD ADJUSTMENT.
5. UNIT SHALL BE PROVIDED WITH INTEGRAL LIFT/PUMP FOR CONDENSATE REMOVAL. IF NOT PROVIDED INTEGRAL WITH UNIT, CONTRACTOR SHALL PROVIDE SEPARATE CONDENSATE PUMP. CONDENSATE PUMP SHALL BE POWERED BY UNIT. IF NOT, MECHANICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE POWER FOR CONDENSATE PUMP.
6. THE SCHEDULED EQUIPMENT IS SUBJECT TO THE EPA-MANDATED REFRIGERANT PHASE OUT. ENGINEER OF RECORD WAS UNABLE TO OBTAIN MANUFACTURER'S PRODUCT DATA FOR EQUIPMENT THAT MEETS THE EPA-MANDATE. IT IS ANTICIPATED THAT PRODUCT DATA WILL BE MADE AVAILABLE DURING THE CONSTRUCTION PHASE.

| TAG NAME | AREA SERVED | ASSOCIATED VRF HEAT PUMP | CONFIGURATION | MBH | CFM | REFRIGERANT TYPE | DESIGN COOLING TOTAL BTUH | SENSIBLE COOLING CAPACITY BTUH | ELECTRICAL VOLTAGE | PHASES | MCA | MOCP | DISCONNECT BY (NOTE A) | DISCONNECT TYPE (NOTE B) | SCCR | GENERATOR POWER | WEIGHT | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FC-1N301.A | BUILDING 01 - 1N301 | ODU-N1 | WALL MOUNTED | 24 | 920 | 410A | 22 | 19 | 208 | 1 | 0.63 | 15 A | EC | F | 5,000 A | Yes | 46 | ALL |
| FC-1N301.B | BUILDING 01 - 1N301 | ODU-N1 | WALL MOUNTED | 18 | 438 | 410A | 16 | 12 | 208 | 1 | 0.20 | 15 A | EC | F | 5,000 A | Yes | 46 | ALL |
| FC-2N301.A | BUILDING 01 - 2N301 | ODU-N1 | WALL MOUNTED | 24 | 920 | 410A | 22 | 19 | 208 | 1 | 0.63 | 15 A | EC | F | 5,000 A | Yes | 46 | ALL |
| FC-2N301.B | BUILDING 01 - 2N301 | ODU-N1 | WALL MOUNTED | 18 | 438 | 410A | 16 | 12 | 208 | 1 | 0.20 | 15 A | EC | F | 5,000 A | Yes | 46 | ALL |
| FC-3N301.A | BUILDING 01 - 3N301 | ODU-N1 | WALL MOUNTED | 24 | 920 | 410A | 22 | 19 | 208 | 1 | 0.63 | 15 A | EC | F | 5,000 A | Yes | 46 | ALL |
| FC-3N301.B | BUILDING 01 - 3N301 | ODU-N1 | WALL MOUNTED | 18 | 438 | 410A | 16 | 12 | 208 | 1 | 0.20 | 15 A | EC | F | 5,000 A | Yes | 46 | ALL |
| FC-4N302 | NORTH TOWER - FOURTH FLOOR | ODU-N2 | FLOOR MOUNTED | 8 | 940 | 410A | 8 | 6 | 208 | 1 | 3.00 | 15 A | EC | F | 5,000 A | Yes | 113 | ALL |
| FC-5W201 | WEST TOWER - FIFTH FLOOR | ODU-W1 | FLOOR MOUNTED | 8 | 940 | 410A | 8 | 6 | 208 | 1 | 3.00 | 15 A | EC | F | 5,000 A | Yes | 113 | ALL |
| FC-6N302 | NORTH TOWER - SIXTH FLOOR | ODU-N2 | FLOOR MOUNTED | 8 | 940 | 410A | 8 | 6 | 208 | 1 | 3.00 | 15 A | EC | F | 5,000 A | Yes | 113 | ALL |
| FC-7N302 | NORTH TOWER - SEVENTH FLOOR | ODU-N2 | FLOOR MOUNTED | 8 | 940 | 410A | 8 | 6 | 208 | 1 | 3.00 | 15 A | EC | F | 5,000 A | Yes | 113 | ALL |
| FC-7W201 | WEST TOWER - SEVENTH FLOOR | ODU-W1 | FLOOR MOUNTED | 8 | 940 | 410A | 8 | 6 | 208 | 1 | 3.00 | 15 A | EC | F | 5,000 A | Yes | 113 | ALL |
| FC-8N302 | NORTH TOWER - EIGHTH FLOOR | ODU-N2 | FLOOR MOUNTED | 8 | 940 | 410A | 8 | 6 | 208 | 1 | 3.00 | 15 A | EC | F | 5,000 A | Yes | 113 | ALL |
| FC-8W201 | WEST TOWER - EIGHTH FLOOR | ODU-W1 | FLOOR MOUNTED | 8 | 940 | 410A | 8 | 6 | 208 | 1 | 3.00 | 15 A | EC | F | 5,000 A | Yes | 113 | ALL |
| FC-9N302 | NORTH TOWER - NINTH FLOOR | ODU-N2 | FLOOR MOUNTED | 8 | 940 | 410A | 8 | 6 | 208 | 1 | 3.00 | 15 A | EC | F | 5,000 A | Yes | 113 | ALL |
| FC-9W201 | WEST TOWER - NINTH FLOOR | ODU-W1 | FLOOR MOUNTED | 8 | 940 | 410A | 8 | 6 | 208 | 1 | 3.00 | 15 A | EC | F | 5,000 A | Yes | 113 | ALL |
| FC-10N302 | NORTH TOWER - TENTH FLOOR | ODU-N2 | FLOOR MOUNTED | 8 | 940 | 410A | 8 | 6 | 208 | 1 | 3.00 | 15 A | EC | F | 5,000 A | Yes | 113 | ALL |
| FC-10W201 | WEST TOWER - TENTH FLOOR | ODU-W1 | FLOOR MOUNTED | 8 | 940 | 410A | 8 | 6 | 208 | 1 | 3.00 | 15 A | EC | F | 5,000 A | Yes | 113 | ALL |
| FC-11N302 | NORTH TOWER - ELEVENTH FLOOR | ODU-N2 | FLOOR MOUNTED | 8 | 940 | 410A | 8 | 6 | 208 | 1 | 3.00 | 15 A | EC | F | 5,000 A | Yes | 113 | ALL |
| FC-11W201 | WEST TOWER - ELEVENTH FLOOR | ODU-W1 | FLOOR MOUNTED | 8 | 940 | 410A | 8 | 6 | 208 | 1 | 3.00 | 15 A | EC | F | 5,000 A | Yes | 113 | ALL |

## FAN COIL UNIT SCHEDULE - HYDRONIC

NOTES:
1. PROVIDE 1" THROWAWAY MERV 8 FILTER FOR EACH FCU.
2. FACTORY CONTROLS WITH INTERFACE COMPATABILITY TO FMCS.
3. COORDINATE PIPING WITH APPROVED EQUIPMENT AND ADJUST AS REQUIRED.
4. COORDINATE NEW THERMOSTAT LOCATIONS WITH ALL OTHER TRADES.
5. WATER SENSOR SHALL BE PROVIDED IN CONDENSATE PAN. REFERENCE C3/00-MG801.
6. SLOPE CONDENSATE DRAIN PIPING 1/4" PER FT TOWARD RISER. IF GRAVITY DRAIN SLOPING IS NOT POSSIBLE, UNIT SHALL BE PROVIDED WITH LIFT/PUMP FOR CONDENSATE REMOVAL (CP-X). IF REQUIRED, MECHANICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE POWER FOR CONDENSATE PUMP. COORDINATE WITH ELECTRICAL CONTRACTOR.

| TAG NAME | AREA SERVED | CFM | EXT. S.P. IN W.C. | COOLING COIL TOTAL MBH | SENSIBLE MBH | GPM | EWT °F | LWT °F | W.P.D. FT. HD | HEATING COIL TOTAL MBH | GPM | EWT °F | LWT °F | W.P.D. FT. HD | ELECTRICAL HP (NOTE E) | VOLTAGE | PHASES | DISCONNECT BY (NOTE A) | DISCONNECT TYPE (NOTE B) | SCCR | EMERGENCY POWER | MAX. DIMENSIONS LENGTH | WIDTH | HEIGHT | WEIGHT OPERATING | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FCU-29.1M195A | BUILDING 29 - 1M195A | 1200 | 0.1 | 34.2 | 25.4 | 6.8 | 45 | 55 | 2.80 | 31.6 | 1.6 | 180 | 140 | 3.20 | 0.25 | 120 | 1 | EC | F | 5,000 A | Yes | 20 | 60 | 11 | 143 | ALL |
| FCU-29.2M275A | BUILDING 29 - 2M275A | 1400 | 0.1 | 42.6 | 31.2 | 8.5 | 45 | 55 | 2.80 | 31.6 | 3.4 | 180 | 140 | 0.80 | 0.5 | 120 | 1 | EC | F | 5,000 A | Yes | 47 | 44 | 19 | 143 | ALL |

## COMPUTER ROOM UNIT SCHEDULE - DIRECT EXPANSION

NOTES:
1. EQUIPMENT CONFIGURATION: DOWNFLOW COMPUTER ROOM AIR CONDITIONING (CRAC) UNIT WITH DUCTED RETURN AND FRONT SUPPLY. SPLIT-DIRECT EXPANSION (DX) COOLING WITH REMOTE CONDENSER.
2. PROVIDE WITH 3-STAGE ELECTRIC REHEAT, INFRARED HUMIDIFIER AND INTEGRAL SMOKE DETECTOR.
3. PROVIDE WITH FACTORY MICROPROCESSOR CONTROLLER AND 3RD PARTY SENSOR NETWORK CONTROL SYSTEM. REFER TO SHEET 00-MG800 FOR CONTROL REQUIREMENTS.
4. REFRIGERANT PIPING SHALL BE SIZED AND INSTALLED PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
5. PROVIDE CONDENSER COILS WITH ANTI CORROSION COATING.

| TAG NAME | AREA SERVED | CFM | EXT. S.P. IN. W.C. | REFRIGERANT TYPE | STAGES OF UNLOADING | EAT DB °F | EAT WB °F | COOLING - KW TOTAL | COOLING - KW SENSIBLE | REHEAT COIL TYPE | REHEAT COIL KW | HUMIDIFIER TYPE | HUMIDIFIER CAPACITY LB./HR | FILTER TYPE | ELECTRICAL (INDOOR UNIT) VOLTAGE | PHASES | FLA | MCA | MOCP AMPS | DISCONNECT BY (NOTE A) | DISCONNECT TYPE (NOTE B) | SCCR | GENERATOR POWER | ELECTRICAL (OUTDOOR UNIT) VOLTAGE | PHASES | FLA | MCA | MOCP AMPS | DISCONNECT BY (NOTE A) | DISCONNECT TYPE (NOTE B) | MAX. DIMENSIONS (INDOOR UNIT) LENGTH | WIDTH | HEIGHT | MAX. DIMENSIONS (OUTDOOR UNIT) LENGTH | WIDTH | HEIGHT | WEIGHT (OUTDOOR UNIT) OPERATING | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CRU-01.5N301.A | BUILDING 01 - 5N301 | 11000 | 0.20 | R407C | 4 | 85.0 | 64.4 | 79.2 | 78.7 | ELECTRIC | 15 | INFRARED | 22 | MERV-8 | 480 | 3 | 61 | 75 | 80 | EC | F | 65,000 A | Yes | 480 | 3 | 2.8 | 3.2 | 15 | EC | F | 9'-1" | 3' | 6'-4" | 8'-9 1/4" | 3'-10" | 3'-10" | 500 | ALL |
| CRU-01.5N301.B | BUILDING 01 - 5N301 | 11000 | 0.20 | R407C | 4 | 85.0 | 64.4 | 79.2 | 78.7 | ELECTRIC | 15 | INFRARED | 22 | MERV-8 | 480 | 3 | 61 | 75 | 80 | EC | F | 65,000 A | Yes | 480 | 3 | 2.8 | 3.2 | 15 | EC | F | 9'-1" | 3' | 6'-4" | 8'-9 1/4" | 3'-10" | 3'-10" | 500 | ALL |

## PIPE INSULATION SCHEDULE (HVAC)

GENERAL NOTES:
1. REFER TO THE SPECIFICATIONS FOR TYPE DESCRIPTIONS AND JACKETING REQUIREMENTS.
2. TYPE A INSULATION IS NOT ALLOWED IN NON-AIR CONDITIONED SPACES, SUCH AS MECHANICAL ROOMS, EXTERIOR, ATTICS, ETC.
3. TYPE B INSULATION GREATER THAN 1" THICK SHALL BE INSTALLED USING MULTIPLE LAYERS OF 3/4" OR 1" WITH STAGGERED SEAMS.
4. TYPE E IS NOT ALLOWED IN RETURN AIR PLENUMS, UNLESS LISTED AND LABELED AS 25/50 RATED PER ASTM E84/UL723
5. TYPE G 4" SHALL BE INSTALLED IN TWO (2) 2" LAYERS WITH STAGGERED SEAMS.
6. PROVIDE RIGID INSERT AT HANGERS, EITHER PRE-MANUFACTURED COUPLINGS (REFER TO PIPE HANGER AND SUPPORTS SPECIFICATIONS) OR TYPE C, D, OR E INSULATION. SEE SPEC. FOR MORE DETAILS.

| SYMBOL | PIPE SYSTEM | INSULATION TYPE | INSULATION THICKNESS PER NOMINAL PIPE OR TUBE SIZE < 1" | 1" TO < 1.5" | 1.5" TO < 4" | 4" TO < 8" | ≥ 8" | NOTES |
|---|---|---|---|---|---|---|---|---|
| 23 PIPING - COOLING WATER | | | | | | | | |
| CWR | CHILLED WATER RETURN | A (GlsFbr), B (Elasto), C (CelGla), E (Plyiso), F (Phenol) | 1/2" | 1/2" | 1" | 1" | 1" | |
| CWS | CHILLED WATER SUPPLY | A (GlsFbr), B (Elasto), C (CelGla), E (Plyiso), F (Phenol) | 1/2" | 1/2" | 1" | 1" | 1" | |
| DPP | DRAIN - PIPING | A (GlsFbr), B (Elasto), C (CelGla), E (Plyiso), F (Phenol) | 1/2" | 1/2" | 1" | 1" | 1" | APPLY INSULATION ONLY TO LOW TEMP DRAINS (55 DEG AND LOWER EG: COOLING COIL CONDENSATE) |
| 23 PIPING - HEATING WATER | | | | | | | | |
| HWR | HEATING WATER RETURN | A (GlsFbr), C (CelGla), E (Plyiso), F (Phenol) | 1 1/2" | 1 1/2" | 2" | 2" | 2" | |
| HWS | HEATING WATER SUPPLY | A (GlsFbr), C (CelGla), E (Plyiso), F (Phenol) | 1 1/2" | 1 1/2" | 2" | 2" | 2" | |
| 23 PIPING - REFRIGERANT | | | | | | | | |
| REF | REFRIGERANT | B (Elasto) | 1/2" | 1/2" | 1" | 1" | 1" | VERIFY MANUFACTURER'S REQUIREMENTS |

## SPLIT SYSTEM UNIT SCHEDULE

NOTES:
1. PROVIDE WITH WIND BAFFLE AND LOW AMBIENT COOLING OPERATION KIT (0°F).
2. PROVIDE WITH FACTORY CONDENSING UNIT HAIL GUARDS AND CONDENSER COIL CORROSION PROTECTION.
3. PROVIDE WITH MANUFACTURER'S REFRIGERANT LINE SET. 3-TON AND 2.5-TON UNITS SHALL BE RATED FOR OPERATION WITH 245' MAXIMUM EQUIVALENT PIPING LENGTH AND 100' MAXIMUM VERTICAL SEPARATION. 2-TON UNITS SHALL BE RATED FOR OPERATION WITH 225' MAXIMUM EQUIVALENT PIPING LENGTH AND 100' MAXIMUM VERTICAL SEPARATION. 1.5-TON UNITS SHALL BE RATED FOR OPERATION WITH 165' MAXIMUM EQUIVALENT PIPING LENGTH AND 100' MAXIMUM VERTICAL SEPARATION. COORDINATE MANUFACTURER'S REQUIREMENTS FOR PIPE SIZING, REFRIGERANT CHARGE, AND EQUIPMENT OPTIONS WHERE PIPE ROUTING EXCEEDS THESE PARAMETERS. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL REQUIRED DERATES ON SPLIT SYSTEM SUBMITTAL.
4. UNIT SHALL BE PROVIDED WITH INTEGRAL LIFT/PUMP FOR CONDENSATE REMOVAL. IF NOT PROVIDED INTEGRAL WITH UNIT, CONTRACTOR SHALL PROVIDE SEPARATE CONDENSATE PUMP. PUMP TO BE MOUNTED BELOW INDOOR UNIT AND POWERED FROM INDOOR UNIT. IF NOT, MECHANICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE POWER FOR CONDENSATE PUMP.
5. PROVIDE WITH TRAY SENSOR.
6. PROVIDE WITH BACNET COMPATIBLE CONTROLS. FACTORY CONDTROLS SHALL INCLUDE COOLING, HEATING, AND DEHUMIDIFICATION SEQUENCES. FACTORY CONTROLS SHALL INTERFACE WITH EXISTING FMCS.
7. PROVIDE WITH REMOTE MOUNTED THERMOSTAT AND HUMIDITY SENSOR.
8. INDOOR UNIT TO BE POWERED BY OUTDOOR UNIT. PROVIDE WITH FACTORY CONTROL / POWER WIRING KIT AS REQUIRED FOR A COMPLETE INSTALLATION.
9. THE SCHEDULED EQUIPMENT IS SUBJECT TO THE EPA-MANDATED REFRIGERANT PHASE OUT. ENGINEER OF RECORD WAS UNABLE TO OBTAIN MANUFACTURER'S PRODUCT DATA FOR EQUIPMENT THAT MEETS THE EPA-MANDATE. IT IS ANTICIPATED THAT PRODUCT DATA WILL BE MADE AVAILABLE DURING THE CONSTRUCTION PHASE.

| TAG NAME | AREA SERVED | INDOOR UNIT CFM | COOLING MBH | MIN SENSIBLE MBH | HEATING MBH | WEIGHT | OUTDOOR UNIT SEER | WEIGHT | ELECTRICAL VOLTAGE | PHASE | MCA | MOCP AMPS | DISCONNECT BY (NOTE A) | DISCONNECT TYPE (NOTE B) | SCCR | GENERATOR POWER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS-01.1A243 | BUILDING 01 - 1A243 | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.1G111 | BUILDING 01 - 1G111 | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.1W121 | BUILDING 01 - 1W121 | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.2W110D | BUILDING 01 - 2W110D | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.3A110.A | BUILDING 01 - 3A110 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.3A110.B | BUILDING 01 - 3A110 | 425 | 18 | 12.2 | 0 | 29 | 20.8 | 151 | 208 | 1 | 11.0 | 28 | EC | F | 5,000 A | Yes | ALL |
| SS-01.3N300 | BUILDING 01 - 3N300 | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.4A02 | BUILDING 01 - 4A02 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.4N301 | BUILDING 01 - 4N301 | 920 | 36 | 24.1 | 0 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.4N303 | BUILDING 01 - 4N303 | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.4W137 | BUILDING 01 - 4W137 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.5N101A | BUILDING 01 - 5N101A | 920 | 36 | 24.1 | 0 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.5W200 | BUILDING 01 - 5W200 | 920 | 36 | 24.1 | 0 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.5W201 | BUILDING 01 - 5W201 | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.6N301 | BUILDING 01 - 6N301 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.6W200 | BUILDING 01 - 6W200 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.6W202 | BUILDING 01 - 6W202 | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.7N301 | BUILDING 01 - 7N301 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.7W200 | BUILDING 01 - 7W200 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.8N301 | BUILDING 01 - 8N301 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.8W200 | BUILDING 01 - 8W200 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.9N301 | BUILDING 01 - 9N301 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.9W200 | BUILDING 01 - 9W200 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.10N301 | BUILDING 01 - 10N301 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.10W200 | BUILDING 01 - 10W200 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.11N301 | BUILDING 01 - 11N301 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.11W200 | BUILDING 01 - 11W200 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.AA162 | BUILDING 01 - AA162 | 920 | 36 | 24.1 | 0 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.AN306A | BUILDING 01 - AN306A | 920 | 36 | 24.1 | 0 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.BC101.A | BUILDING 01 - BC101 | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.BC101.B | BUILDING 01 - BC101 | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.BW106B | BUILDING 01 - BW106B | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | Yes | ALL |
| SS-01.CA224C | BUILDING 01 - CA224C | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-01.GG108 | BUILDING 01 - GG108 | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-05.BA101 | BUILDING 5 - BA101 | 920 | 36 | 24.1 | 40 | 86 | 19.1 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-30.1A134 | BUILDING 30 - 1A134 | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-30.2A134 | BUILDING 30 - 2A134 | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-30.BA007 | BUILDING 30 - BA007 | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-30.GA131 | BUILDING 30 - GA131 | 920 | 36 | 24.1 | 40 | 46 | 18.8 | 151 | 208 | 1 | 25.0 | 31 | EC | F | 5,000 A | Yes | ALL |
| SS-33.104 | BUILDING 33 - 104 | 775 | 24 | 17.6 | 0 | 46 | 21.4 | 151 | 208 | 1 | 19.0 | 26 | EC | F | 5,000 A | No | ALL |

## FAN SCHEDULE

NOTES:
1. PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 13.

| TAG NAME | AREA SERVED | CFM | S.P. IN. W.C. | FAN CLASS | WHEEL DIA. INCHES | FAN RPM (NOTE F) | DRIVE TYPE | MAX. AMCA SONES | BACKDRAFT DAMPER TYPE | ELECTRICAL (NOTE 1) BHP (NOTE E) | MHP (NOTE E) | VOLTAGE | PHASES | DISCONNECT BY (NOTE A) | DISCONNECT TYPE (NOTE B) | SCCR | WEIGHT | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EF-01.C2N1 | BUILDING 01 - C2N1A | 200 | 0.50 | I | 7.75 | 1258 | DIRECT | 2.2 | MOTORIZED | 0.05 | 0.06 | 120 | 1 | EC | F | 5,000 A | 24 | ALL |

## AIR TERMINAL SCHEDULE

NOTES:
1. CONTRACTOR SHALL DETERMINE PROPER BORDER TYPE TO MATCH CEILING CONSTRUCTION.
2. REFER TO DRAWINGS FOR NECK SIZE. ALL BRANCH DUCTWORK TO AIR TERMINALS SHALL BE NECK SIZE UNLESS NOTED OTHERWISE.

| TAG NAME | FACE SIZE (IN.) (NOTE 2) | TYPE | BORDER (NOTE 1) | MATERIAL | FINISH | VOLUME DAMPER REQUIRED | NOTES |
|---|---|---|---|---|---|---|---|
| RG-1 | 24x24 | FIXED BLADE | LAY-IN | ALUMINUM | WHITE | NO | ALL |
| RG-2 | INLET +2 | FIXED BLADE | 1-1/4" | ALUMINUM | WHITE | YES | ALL |
| SD-1 | 24x24 | SQUARE CONE DIFFUSER | LAY-IN | ALUMINUM | WHITE | NO | ALL |
| SG-1 | INLET +2 | DOUBLE DEFLECTION | 1-1/4" | ALUMINUM | WHITE | YES | ALL |

## LOUVER SCHEDULE

NOTES:
1. BAKED ENAMEL FINISH ON PRETREATED PRIME PAINT. STANDARD COLOR - SELECTION BY ARCHITECT.

| TAG NAME | CFM | SIZE (INCHES) WIDTH | SIZE (INCHES) HEIGHT | FREE AREA | S.P. IN. W.C. | NOTES |
|---|---|---|---|---|---|---|
| EL-1 | 200 | 14 | 12 | 0.300 | 0.08 | 1 |
| IL-1 | 50 | 14 | 8 | 0.179 | 0.01 | 1 |

## CONDENSATE PUMP SCHEDULE

NOTES:
1. AUTOMATIC CONDENSATE PUMP WITH AUTOMATIC START AND STOP OPERATION.
2. VERTICAL CENTRIFUGAL PUMP WITH COOLING FAN AND THERMALLY PROTECTED MOTOR.
3. FACTORY CHECK VALVE.
4. FACTORY WALL MOUNT BRACKET.
5. 6' FACTORY CORD WITH 120V PLUG.
6. INSTALLATION: INSTALL 6" BELOW SS INDOOR UNIT OR DRIP PAN.
7. PROVIDE CONDENSATE PUMP WHERE GRAVITY DRAINAGE IS NOT FEASIBLE. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING POWER REQUIREMENTS.

| TAG NAME | COLLECTION TANK VOLUME (GAL) | GPH (10' HEAD) | ELECTRICAL VOLTAGE | PHASE | FLA | HP | NOTES |
|---|---|---|---|---|---|---|---|
| CP-X | 1/2 | 48 | 120 V | 1 | 1.5 A | 1/30 | ALL |

## SCHEDULE GENERAL NOTES:

A. DISCONNECT AND CONTROLLER STARTER FURNISHED AND INSTALLED BY:
MFR = MANUFACTURER
EC = ELECTRICAL CONTRACTOR.
MC = FURNISHED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR.
MFR/EC = FURNISHED LOOSE BY MANUFACTURER INSTALLED BY ELECTRICAL CONTRACTOR.
TCC = TEMPERATURE CONTROL CONTRACTOR

B. DISCONNECT TYPE:
CB = CIRCUIT BREAKER
F = FUSED
NF = NON-FUSED

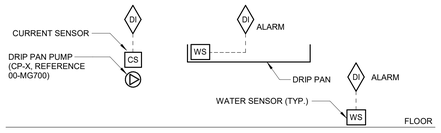
C. CONTROLLER STARTER TYPE:
FV = FULL VOLTAGE
WYE = WYE-DELTA
SS = SOLID STATE (SOFT START)
MS = MANUAL STARTER
VFD = VARIABLE FREQUENCY DRIVE
VFD/B = VARIABLE FREQUENCY DRIVE WITH BYPASS
YD = WYE - DELTA

D. FAN RPM SHALL NOT EXCEED 110% OF SCHEDULED VALUE, WITH THE SCHEDULED WHEEL TYPE. SUBSTITUTION OF BI OR BIA FANS FOR FC IS ACCEPTABLE IF EFFICIENCY IS NOT LOWER.

E. NO EQUIPMENT SHALL BE SELECTED ABOVE 90% OF MOTOR NAME PLATE RATING.

F. MUST BE WITHIN +/- 10% OF SCHEDULED RPM.

G. CURB TYPE:
MFR = STANDARD CURB BY MANUFACTURER
GC = BY GENERAL CONTRACTOR
SAC = SOUND ATTENUATOR CURB



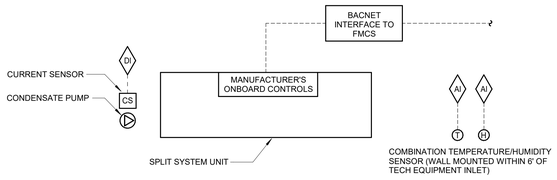

LEAK DETECTION MONITORING:

- AN ALARM SHALL BE SENT TO THE FMCS ON A DETECTION OF WATER AT INSTALLED WATER SENSORS. ALARM SHALL NOT BE ABLE TO BE RESET WITHOUT RESOLUTION OF WATER FAULT.
- TCC SHALL INSTALL A WATER SENSOR AT THE LOW POINT OF EACH DRIP PAN. REFER TO THE MECHANICAL DRAWINGS FOR THE LOCATION AND QUANTITY OF DRIP PANS.
- TCC TO PROVIDE MONITORING OF ALL DRIP PANS. COORDINATE WITH MC AND PC TO VERIFY IF ANY PANS ARE ADDED OUTSIDE OF THOSE SHOWN ON THE DRAWINGS.
- TCC SHALL INSTALL A FLOOR MOUNTED WATER SENSOR IN ANY TR THAT SHARES A WALL WITH A PLUMBING FIXTURE OR ANY TR THAT HAS CAPPED FIXTURE PIPING IN THE WALL. CONTRACTOR SHALL VERIFY AFFECTED ROOMS.

DRIP PAN PUMP SEQUENCE OF OPERATIONS:

OPERATION OF DRIP PAN PUMP SHALL BE CONTROLLED BY MANUFACTURER'S INTERNAL CONTROLS LOGIC. FMCS SHALL MONITOR THE STATUS (ON/OFF) OF THE DRIP PAN PUMP VIA A FIELD-INSTALLED CURRENT SENSOR.

## B1 DRIP PAN MONITORING
NO SCALE




SEQUENCE OF OPERATION:

FMCS SHALL INDICATE TEMPERATURE AND HUMIDITY OF ROOM SERVED BY SPLIT SYSTEM AND REPORT BACK. SPLIT SYSTEM SHALL BE SET TO MAINTAIN A ROOM TEMPERATURE OF 75°F (ADJ.) AND MAXIMUM RELATIVE HUMIDITY OF 60% RH (ADJ.). SPLIT SYSTEM UNITS SHALL BE CONTROLLED BY FMCS VIA ONBOARD CONTROLLER.

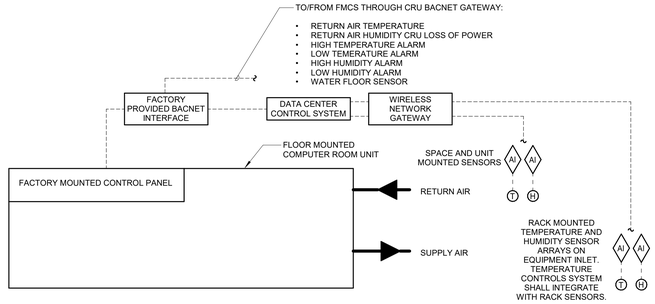
ALARMS, INTERLOCKS AND SAFETIES AT FMCS:

FMCS SHALL INDICATE AN ALARM TO THE FMCS OPERATOR WORKSTATION IN THE EVENT THAT THE FOLLOWING CONDITIONS ARE MET FOR MORE THAN FIVE (5) MINUTES (ADJ.):
- ROOM TEMPERATURE EXCEEDS 81°F (ADJ.)
- ROOM TEMPERATURE IS BELOW 55°F (ADJ.)
- ROOM RELATIVE HUMIDITY EXCEEDS 60% RH
- ROOM RELATIVE HUMIDITY IS BELOW 8% RH

CONDENSATE PUMP SEQUENCE OF OPERATIONS:

OPERATION OF CONDENSATE PUMP SHALL BE CONTROLLED BY MANUFACTURER'S INTERNAL CONTROLS LOGIC. FMCS SHALL MONITOR THE STATUS (ON/OFF) OF THE CONDENSATE PUMP.

## D1 SPLIT SYSTEM CONTROL - TR SPACES
NO SCALE




CRU SEQUENCE OF OPERATION GENERAL (CRU-01.5N301 A, CRU-01.5N301 B): (CONTROLS PROVIDED WITH UNIT OR FIELD INSTALLED CONTROL SYSTEM)

THE COMPUTER ROOM AIR CONDITIONING UNIT (CRAC) IS CONTROLLED BY A FACTORY ASSEMBLED AND MOUNTED MICROPROCESSOR BASED CONTROL SYSTEM (OR EQUAL FIELD INSTALLED SYSTEM CAPABLE OF MEETING REQUIREMENTS) AND CONNECTED TO THE FACILITY MANAGEMENT CONTROL SYSTEM (FMCS) FOR MONITORING PURPOSES.

DATA CENTER CONTROL SYSTEM:

THE MICROPROCESSOR CONTROL SYSTEM SHALL MONITOR THE AVERAGE AND MAXIMUM IT EQUIPMENT INLET TEMPERATURE AND HUMIDITY FROM THE RACK SENSOR ARRAYS. THE MICROPROCESSOR CONTROL SYSTEM SHALL AUTOMATICALLY HEAT, COOL, REHEAT, HUMIDIFY, AND DEHUMIDIFY AS REQUIRED TO MAINTAIN THE TEMPERATURE AND HUMIDITY SETPOINTS AT ALL EQUIPMENT. THE UNIT SHALL OPERATE WITH A SUPPLY/RETURN DELTA OF 20°F (ADJ.). THE SYSTEM SHALL NOT CONTROL BASED ON SPACE TEMPERATURE OR RETURN AIR TEMPERATURE.

THE EQUIPMENT INLET SETPOINTS ARE BETWEEN 72°F-80.6°F AND BETWEEN 8% - 60% RELATIVE HUMIDITY (ADJ.).

DURING NORMAL OPERATION, ALL CRAC UNITS WILL OPERATE CONCURRENTLY. THE CONTROLS SYSTEM SHALL MODULATE FAN SPEED AND SUPPLY TEMPERATURE AMONG OPERABLE UNITS PROPORTIONALLY TO MAINTAIN SETPOINTS WHILE USING THE LEAST AMOUNT OF COLLECTIVE ENERGY AS POSSIBLE. UNITS SHALL NOT OPERATE IN A LEAD/LAG CONFIGURATION.

WHEN A CRAC UNIT IS OFFLINE, THE CONTROL SYSTEM WILL RECOGNIZE THIS DOWNTIME AND AUTOMATICALLY ADJUST REMAINING OPERABLE UNIT TO MAINTAIN REQUIRED SYSTEM LOADING.

CRAC UNIT SHALL SHUTDOWN UPON DETECTION OF SMOKE AT THE INTERLOCKED SMOKE SENSOR.

ALARMS, INTERLOCKS, AND SAFETIES AT UNIT:

ACTIVATE AN AUDIBLE AND VISUAL ALARM UPON THE OCCURRENCE OF ANY OF THE FOLLOWING MICROPROCESSOR CONTROL SYSTEM ALARM CONDITIONS:

- HIGH TEMPERATURE
- LOW TEMPERATURE
- HIGH HUMIDITY
- LOW HUMIDITY
- WATER FLOOR SENSOR

MICROPROCESSOR CONTROL SYSTEM SHALL BE CAPABLE OF DISABLING ANY ALARM IF REQUIRED.

FMCS SEQUENCE OF OPERATION (CONTROLS PROVIDED BY TCC):

THE TCC SHALL EXTEND THE FMCS NETWORK TO THE CRU MICROPROCESSOR CONTROLLER PER THE PROTOCOL SPECIFIED IN SECTION 23 09 23. THE FMCS SHALL MONITOR THE OPERATING PARAMETERS AND ALARM CONDITIONS INDICATED BY THE CRU.

ALARMS, INTERLOCKS AND SAFETIES AT FMCS:

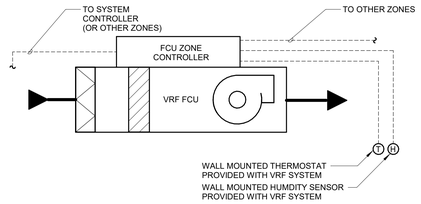
SEND AN ALARM TO THE FMCS OPERATOR INTERFACE UPON THE OCCURRENCE OF ANY OF THE FOLLOWING MICROPROCESSOR CONTROL SYSTEM ALARM CONDITIONS:

- LOSS OF POWER TO CRU
- HIGH TEMPERATURE
- LOW TEMPERATURE
- HIGH HUMIDITY
- LOW HUMIDITY
- WATER FLOOR SENSOR (REFER TO DETAIL B1/00-MG800)
- SMOKE DETECTION AT CRU

IN ADDITION TO THE MICROPROCESSOR CONTROL SYSTEM ALARMS, FMCS SHALL INDICATE AN ALARM TO THE FMCS OPERATOR WORKSTATION FOR THE FOLLOWING CONDITIONS:

- HIGH MAXIMUM IT EQUIPMENT INLET TEMPERATURE/HUMIDITY
- HIGH AVERAGE IT EQUIPMENT INLET TEMPERATURE/HUMIDITY
- LOW MINIMUM IT EQUIPMENT INLET TEMPERATURE/HUMIDITY
- LOW AVERAGE IT EQUIPMENT INLET TEMPERATURE/HUMIDITY

## D3 COMPUTER ROOM UNIT CONTROL
NO SCALE

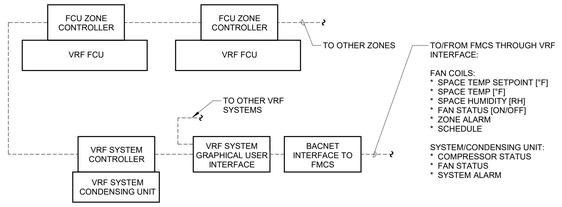



**VRF ZONE CONTROLS:**

SEQUENCE OF OPERATION:
THE FCU ZONE CONTROLLER SHALL CYCLE THE FAN AND MODULATE REFRIGERANT FLOW AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE AS MEASURED AT THE WALL MOUNTED THERMOSTAT.

DEHUMIDIFICATION SEQUENCE; IF SPACE HUMIDITY SENSOR EXCEEDS 55% RH (ADJ.), THE UNIT SHALL OPERATE IN DEHUMDIFICATION MODE.

INITIAL SET POINTS SHALL BE AS FOLLOWS:
- OCCUPIED FAN - ON CONTINUOUSLY (ADJ.)
- OCCUPIED COOLING - 75°F (ADJ.)
- OCCUPIED HEATING - 68°F (ADJ.)
- SPACE HUMIDITY - 55% RH (ADJ.)




**VRF SYSTEM CONTROLS:**

DESCRIPTION OF SYSTEM:
VARIABLE REFRIGERANT FLOW (VRF) CONDENSING UNITS AND FAN COIL UNITS SHALL BE CONTROLLED BY A MANUFACTURER PROVIDED CONTROLLER WITH BACNET BASED INTERFACE. INTERFACE SHALL BE CONNECTED TO THE FMCS.

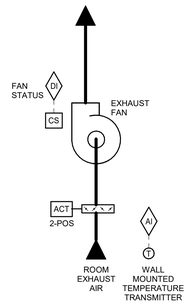
ALL VRF SYSTEM CONTROL COMPONETS, CONTROLLERS, THERMOSTAT/SENSORS AND CONTROL FEEDERS AND RACEWAY SHALL BE INSTALLED BY THE TCC.

SEQUENCE OF OPERATION:
THE SYSTEM SHALL BE ENABLED BY THE FMCS AT ALL TIMES.

THE VRF CONTROLLER SHALL OPERATE THE CONDENSING UNIT AS NEEDED TO MAINTAIN THE CONNECTED FAN COIL UNITS IN HEATING OR COOLING MODE AS REQUIRED BY THE ZONE SENSOR.

ALARMS, INTERLOCK & SAFETIES:
AN ALARM SHALL BE INDICATEAD AT THE FMCS WHEN THE FOLLOWING OCCUR:
* AN ALARM INDICATED AT ANY CONDENSING UNIT CONTROL PANEL.
* AN ALARM INDICATED AT ANY FAN COIL UNIT

## F1 VRF SYSTEM AND ZONE CONTROLS
NO SCALE




SEQUENCE OF OPERATION:
ROOM VENTILATION FAN SHALL OPERATE WHEN THE ROOM TEMPERATURE RISES ABOVE 75°F (ADJ). WHEN ROOM TEMPERATURE DROPS BELOW 72°F (ADJ.), FAN SHALL DE-ENERGIZE.

WHEN FAN IS INDEXED TO RUN THE FOLLOWING SHALL OCCUR:
- EXHAUST DAMPER SHALL FULLY OPEN

MECHANICAL CONTRACTOR SHALL WIRE DAMPER INLINE WITH FAN POWER TO FULLY OPEN WHEN FAN IS ENERGIZED. WHEN FAN IS DE-ENERGIZED, 2-POSITION DAMPER SHALL FULLY CLOSE.

ALARMS, INTERLOCKS AND SAFETIES:
AN ALARM SHALL BE GENERATED AT THE FMCS OPERATOR WORKSTATION IN THE FOLLOWING EVENTS:
- THE FMCS COMMANDS THE EXHAUST FAN TO OPERATE AND THE CURRENT SENSING RELAY DETECTS INSUFFICIENT CURRENT DRAW.

## F5 FAN - VENTILATION
NO SCALE

## CONTROL SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

| SYMBOL: | DESCRIPTION: |
|---|---|
| CHR | CHILLED/HEATING WATER RETURN |
| CHS | CHILLED/HEATING WATER SUPPLY |
| CR | CONDENSER WATER RETURN |
| CS | CONDENSER WATER SUPPLY |
| PC | PUMPED CONDENSATE |
| REF | REFRIGERANT |
| | CONTROL VALVE (THREE-WAY) |
| | CONTROL VALVE (TWO-WAY) |
| | SOLENOID VALVE |
| | CHECK VALVE |
| T | THERMOSTAT |
| T | THERMOSTAT/SENSOR WITH HEAVY DUTY ENCLOSURE |
| | TEMPERATURE SENSOR (DUCT MOUNTED) |
| T | TEMPERATURE SENSOR WITH WELL |
| T | THERMOMETER WITH WELL (DIAL TYPE) |
| T | THERMOMETER WITH WELL (FILLED TYPE) |
| T | AVERAGING TEMPERATURE SENSOR |
| T | LOW LIMIT TEMPERATURE SWITCH |
| T | PROBE TEMPERATURE SENSOR |
| P | PRESSURE SENSOR (FURNISHED WITH BALL VALVE) |
| P | PRESSURE GAUGE (FURNISHED WITH BALL VALVE) |
| | DIFFERENTIAL PRESSURE SENSOR |
| | PRESSURE SENSOR (DUCT MOUNTED) |
| SP | STATIC SWITCH |
| AI | ANALOG INPUT |
| AO | ANALOG OUTPUT |
| FM | FLOW METER |
| F | FLOW SWITCH |
| FS | FLOW SENSOR |
| FS | AIR FLOW SWITCH |
| FM | DUCT FLOW METER |
| H | HUMIDIFIER |
| DSD | DUCT SMOKE DETECTOR |
| | HEATING/ COOLING COIL |
| | AIR BLENDER |
| MTR | MANUAL MOTOR STARTER W/THERMAL OVERLOAD |
| | FAN |
| MTR | MOTOR |
| R | CONTACTOR |
| | PUMP |
| DI | DIGITAL INPUT |
| H | HUMIDISTAT SENSOR |
| | HUMIDISTAT / SENSOR |
| H | HUMIDITY SENSOR (DUCT MOUNTED) |
| C | CARBON MONOXIDE SENSOR |
| $C_2$ | CARBON DIOXIDE SENSOR |
| C | CARBON MONOXIDE SENSOR (DUCT MOUNTED) |
| $C_2$ | CARBON DIOXIDE SENSOR (DUCT MOUNTED) |
| | FILTER |
| | TERMINAL AIR BOX |
| | TERMINAL AIR BOX W/ REHEAT |
| O | OCCUPANCY SENSOR |
| S | SENSOR |
| | ACTUATOR |
| | DOOR SWITCH |
| | DIFFERENTIAL PRESSURE SWITCH |
| | CURRENT SWITCH |
| | VIBRATION SWITCH |
| | NORMALL CLOSED CONTACT |
| | NORMALLY OPEN CONTACT |
| | OPPOSED BLADE DAMPER |
| | PARALLEL BLADE DAMPER |

## TEMPERATURE CONTROL GENERAL NOTES:

1. REFER TO EQUIPMENT SCHEDULES TO CROSS REFERENCE WHICH CONTROL DIAGRAMS APPLY TO WHICH ITEMS OF EQUIPMENT.
2. EACH D.I., D.O., A.I. AND A.O. POINT SHOWN FOR ALL CONTROL DIAGRAMS SHALL BE DISCRETE FROM ALL OTHER POINTS EXCEPT AS SPECIFICALLY NOTED.
3. ALL WIRING, CONTROL COMPONENTS, DEVICES AND PROGRAMMING SHOWN ON THESE CONTROL DRAWINGS SHALL BE PROVIDED BY THE TCC UNLESS SPECIFICALLY NOTED OTHERWISE.
4. TEMPERATURE CONTROL CABLING, CONDUIT, BOXES, IDENTIFICATION: REFER TO THE SPECIFICATIONS FOR A COMPLETE LIST OF REQUIREMENTS.
5. ALL ACTUATORS SHALL BE OF THE ELECTRICAL TYPE FOR THIS PROJECT.
6. ALL MODULATING DAMPER AND VALVE ACTUATORS SHOWN WITH POSITION FEEDBACK SHALL HAVE THE VALVE POSITION DISPLAYED ON GRAPHICAL SCREEN ADJACENT TO THE DAMPER/VALVE COMMAND SIGNAL. DISPLAYED VALVE POSITION SHALL BE FROM THE FEEDBACK DEVICE/CIRCUIT (OUTPUT SIGNAL FROM THE FMCS TO THE ACTUATOR IS NOT ACCEPTABLE).
7. MODULATING SIGNALS SHALL BE DISPLAYED AS % OPEN (SIGNALS DISPLAYED AS % CLOSED ARE NOT ACCEPTABLE).
8. PRESSURE TRANSMITTERS WHOSE SIGNAL IS UTILIZED FOR MAINTAINING DUCT STATIC PRESSURE SHALL BE WIRED DIRECTLY TO THE CONTROLLER THAT MODULATES FAN SPEED. SIGNAL SHALL BE COMPLETELY INDEPENDENT OF THE FMCS NETWORK.
9. PRESSURE TRANSMITTERS WHOSE SIGNAL IS UTILIZED FOR MAINTAINING DIFFERENTIAL PRESSURE OF ANY PUMPED WATER SYSTEM (E.G. HEATING HOT WATER, CHILLED WATER AND THE LIKE) SHALL BE WIRED DIRECTLY TO THE CONTROLLER THAT MODULATES PUMP SPEED. SIGNAL SHALL BE COMPLETELY INDEPENDENT OF THE FMCS NETWORK.
10. ALL CONTROL COMPONENTS SUCH AS RELAYS, SWITCHES, DDC CONTROLLERS, ETC. SHALL BE MOUNTED IN STEEL ENCLOSURES WITH STEEL MOUNTING BACKPLATES PER SPECIFICATIONS.
11. EACH CONTROL PANEL SHALL HAVE A LAMINATED COPY OF THE APPLICABLE SEQUENCE OF OPERATION AND CONTROL DIAGRAM INDICATING THE POINTS, COMPONENTS AND OPERATION OF EQUIPMENT ASSOCIATED WITH EACH PANEL.
12. TCC SHALL PROVIDE POWER SUPPLIES FOR ALL 24VAC POWER REQUIREMENTS TO INCLUDE, BUT NOT LIMITED TO, TERMINAL AIR BOX AND FAN COIL UNIT CONTROLLERS, DAMPER AND VALVE ACTUATORS, BUILDING PRESSURE SENSORS, AND OTHER CONTROL COMPONENTS AND DEVICES. REFER TO CONTROLS SPECIFICATIONS FOR POWER SUPPLY REQUIREMENTS. REFER TO MECHANICAL FLOOR PLANS FOR POWER SUPPLY LOCATIONS. PROVIDE LOW VOLTAGE WIRING FROM POWER SUPPLIES TO ALL CONTROLLERS, MONITORS, COMPONENTS AND DEVICES REQUIRING 24 VAC POWER. ADDITIONAL POWER SUPPLIES NOT SHOWN AND REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM SHALL BE PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR. THE TEMPERATURE CONTROL CONTRACTOR SHALL PROVIDE FINANCIAL PROVISIONS WITHIN THEIR BID FOR THE ELECTRICAL CONTRACTOR TO PROVIDE BRANCH POWER TO THE ADDITIONAL POWER SUPPLIES. COORDINATE THE LOCATION OF ADDITIONAL POWER SUPPLY CABINET WITH THE ELECTRICAL CONTRACTOR.
13. TCC SHALL PROVIDE CONDUIT RUNS AS REQUIRED FOR OUTDOOR EQUIPMENT AND FOR EQUIPMENT INSTALLED REMOTELY FROM THE MAIN BUILDING THAT IS BEING MONITORED OR CONTROLLED BY THE FMCS.
14. TO PREVENT GENERATOR OVERLOADING, TCC SHALL PROGRAM A STAGGERED START TIME FOR ALL MECHANICAL EQUIPMENT THAT IS CONTROLLED BY FMCS TO INCLUDE, BUT NOT LIMITED TO, AIR HANDLERS, PUMPS, EXHAUST FANS, AND CHILLERS. THE FIRST EQUIPMENT SHALL START 2 MINUTES (ADJ.) FROM THE TIME THE FMCS RECEIVES THE SIGNAL THAT THE TRANSFER SWITCH CHANGED TO EMERGENCY POWER SOURCE WITH ALL EQUIPMENT BEING ENERGIZED WITHIN A 20 MINUTE (ADJ.) TIME SPAN. COORDINATE ORDER OF EQUIPMENT STAGING WITH OWNER'S REPRESENTATIVE.
15. CONTROL DIAGRAMS ARE SCHEMATIC IN NATURE AND DO NOT SHOW ALL REQUIRED CONTROL DEVICES AND COMPONENTS. REFER TO FLOOR PLANS, FLOW DIAGRAMS AND DETAILS FOR ADDITIONAL CONTROL DEVICES, COMPONENTS AND REQUIREMENTS NOT SHOWN ON THESE CONTROL DRAWINGS.
16. TCC SHALL PROVIDE ALL CONTROL COMPONENTS AND ACCESSORIES AS REQUIRED FOR EQUIPMENT TO BE CONTROLLED AS DESCRIBED IN THE SEQUENCE OF OPERATION REGARDLESS OF WHETHER ALL CONTROL COMPONENTS OR POINTS ARE SHOWN IN THE ASSOCIATED CONTROL DIAGRAM.
17. COORDINATE DDC CONTROL PANEL EMERGENCY POWER SUPPLY REQUIREMENT WITH ELECTRICAL CONTRACTOR. ALL CONTROLS ASSOCIATED WITH MECHANICAL SYSTEM REQUIRING EMERGENCY POWER SHALL BE CONNECTED TO THE EMERGENCY POWER SYSTEM.

## TEMPERATURE CONTROLS ABBREVIATION KEY

| ABBR: | DESCRIPTION: |
|---|---|
| ACT | ACTUATOR |
| EA | EXHAUST/RELIEF AIR |
| FMCS | FACILITY MANAGEMENT AND CONTROL SYSTEM |
| MA | MIXED AIR |
| MV | MIXING VALVE |
| N.C. | NORMALLY CLOSED |
| NIC | NOT IN CONTRACT |
| N.O. | NORMALLY OPEN |
| OA | OUTSIDE AIR |
| TYP | TYPICAL |
| RA | RETURN AIR |
| SA | SUPPLY AIR |
| UON | UNLESS OTHERWISE NOTED |

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|---|---|
| Drawing Title | MECHANICAL CONTROLS |
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| Phase | FINAL BID DOCUMENTS |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 00-MG800 |
| | SHEET 259 of 797 |

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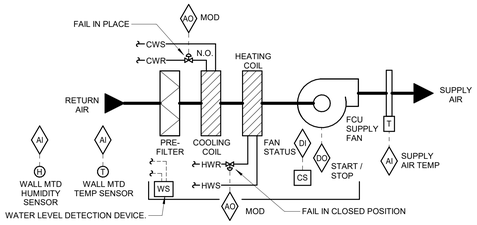



SEQUENCE OF OPERATION:
SUPPLY FAN OPERATION SHALL BE CONTROLLED BY THE FMCS THROUGH A CONTACTOR. THE UNIT SHALL MAINTAIN A ROOM AIR TEMPERATURE SETPOINT.

WHENEVER THE ROOM AIR TEMPERATURE IS 2°F (ADJ.) ABOVE THE SETPOINT, THE FOLLOWING SHALL OCCUR:
- THE HEATING COIL CONTROL VALVE SHALL BE CLOSED.
- THE CHILLED WATER CONTROL VALVE SHALL MODULATE OPEN TO MAINTAIN SPACE TEMPERATURE SETPOINT.

WHENEVER THE ROOM AIR TEMPERATURE IS 3°F (ADJ.) BELOW THE SETPOINT, THE FOLLOWING SHALL OCCUR:
- THE CHILLED COIL CONTROL VALVE SHALL BE CLOSED.
- THE HEATING WATER CONTROL VALVE SHALL MODULATE OPEN TO MAINTAIN SPACE TEMPERATURE SETPOINT.

IF ROOM AIR TEMPERATURE IS MAINTAINED AND BOTH THE HEATING AND COOLING COIL VALVES ARE CLOSED, THE SUPPLY FAN SHALL BE DE-ENERGIZED. IF EITHER OF THE COIL CONTROL VALVES OPEN, THE SUPPLY FAN SHALL BE ENERGIZED.

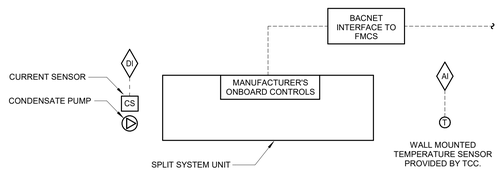
DEHUMIDIFICATION:
HUMIDITY SENSOR WITHIN SPACE SHALL OVERRIDE HEATING COIL CONTROL VALVE INCREMENTALLY OPEN AT (5%) STEPS COMPARED TO NORMAL SPACE TEMPERATURE CONTROL IF THE SPACE HUMIDITY SENSOR EXCEEDS 55% RH (ADJ.). IF SPACE HUMIDITY SENSOR IS BELOW 50% RH (ADJ.) DEHUMIDIFICATION SEQUENCE SHALL BE DISABLED.

ALARMS, INTERLOCKS & SAFETIES:
A WATER LEVEL DETECTION DEVICE SHALL CLOSE THE CHILLED WATER VALVE AND PREVENT SUPPLY FAN OPERATION UPON DETECTION OF HIGH WATER LEVEL AND SHALL INDICATE AN ALARM TO THE OPERATOR WORKSTATION. ALARM SHALL NOT BE ABLE TO BE RESET WITHOUT RESOLUTION OF WATER FAULT.

FMCS SHALL INDICATE AN ALARM TO THE FMCS OPERATOR WORKSTATION IF THE FMCS COMMANDS ANY SUPPLY FAN TO OPERATE AND THE FAN CURRENT RELAY DETECTS INSUFFICIENT CURRENT FLOW.

WHENEVER FCU IS SHUTDOWN THE FOLLOWING SHALL OCCUR:
- HEATING AND CHILLED WATER CONTROL VALVE SHALL CLOSE.
- SUPPLY FAN SHALL BE DE-ENERGIZED.

## C3 FAN COIL UNIT CONTROL WITH DEHUMIDIFICATION - FCU-X
NO SCALE




SEQUENCE OF OPERATION:

FMCS SHALL INDICATE TEMPERATURE OF ROOM SERVED BY SPLIT SYSTEM AND REPORT BACK. SPLIT SYSTEM SHALL BE SET TO MAINTAIN A ROOM TEMPERATURE OF 81°F (ADJ.). SPLIT SYSTEM UNITS SHALL BE CONTROLLED BY FMCS VIA ONBOARD CONTROLLER.

ALARMS, INTERLOCKS AND SAFETIES AT FMCS:

FMCS SHALL INDICATE AN ALARM TO THE FMCS OPERATOR WORKSTATION IN THE EVENT THAT THE FOLLOWING CONDITIONS ARE MET FOR MORE THAN FIVE (5) MINUTES (ADJ.):

• ROOM TEMPERATURE EXCEEDS 85°F (ADJ.)
• ROOM TEMPERATURE IS BELOW 45°F (ADJ.)

CONDENSATE PUMP SEQUENCE OF OPERATIONS:

OPERATION OF CONDENSATE PUMP SHALL BE CONTROLLED BY MANUFACTURER'S INTERNAL CONTROLS LOGIC. FMCS SHALL MONITOR THE STATUS (ON/OFF) OF THE CONDENSATE PUMP.

## E3 SPLIT SYSTEM CONTROL - ELECTRICAL ROOMS
NO SCALE

## CONTROL SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

| SYMBOL: | DESCRIPTION: |
|---|---|
| CHR | CHILLED/HEATING WATER RETURN |
| CHS | CHILLED/HEATING WATER SUPPLY |
| CR | CONDENSER WATER RETURN |
| CS | CONDENSER WATER SUPPLY |
| PC | PUMPED CONDENSATE |
| REF | REFRIGERANT |
| | CONTROL VALVE (THREE-WAY) |
| | CONTROL VALVE (TWO-WAY) |
| | SOLENOID VALVE |
| | CHECK VALVE |
| T | THERMOSTAT |
| T | THERMOSTAT/SENSOR WITH HEAVY DUTY ENCLOSURE |
| | TEMPERATURE SENSOR (DUCT MOUNTED) |
| T | TEMPERATURE SENSOR WITH WELL |
| T | THERMOMETER WITH WELL (DIAL TYPE) |
| | THERMOMETER WITH WELL (FILLED TYPE) |
| T | AVERAGING TEMPERATURE SENSOR |
| T | LOW LIMIT TEMPERATURE SWITCH |
| T | PROBE TEMPERATURE SENSOR |
| P | PRESSURE SENSOR (FURNISHED WITH BALL VALVE) |
| P | PRESSURE GAUGE (FURNISHED WITH BALL VALVE) |
| | DIFFERENTIAL PRESSURE SENSOR |
| | PRESSURE SENSOR (DUCT MOUNTED) |
| SP | STATIC SWITCH |
| AI | ANALOG INPUT |
| AO | ANALOG OUTPUT |
| FM | FLOW METER |
| F | FLOW SWITCH |
| FS | FLOW SENSOR |
| FS | AIR FLOW SWITCH |
| FM | DUCT FLOW METER |
| H | HUMIDIFIER |
| DSD | DUCT SMOKE DETECTOR |
| | HEATING/ COOLING COIL |
| | AIR BLENDER |
| | MANUAL MOTOR STARTER W/THERMAL OVERLOAD |
| | FAN |
| MTR | MOTOR |
| R | CONTACTOR |
| | PUMP |
| DI | DIGITAL INPUT |
| DO | DIGITAL OUTPUT |
| H | HUMIDISTAT SENSOR |
| | HUMIDISTAT / SENSOR |
| H | HUMIDITY SENSOR (DUCT MOUNTED) |
| C | CARBON MONOXIDE SENSOR |
| $C_2$ | CARBON DIOXIDE SENSOR |
| C | CARBON MONOXIDE SENSOR (DUCT MOUNTED) |
| $C_2$ | CARBON DIOXIDE SENSOR (DUCT MOUNTED) |
| | FILTER |
| | TERMINAL AIR BOX |
| | TERMINAL AIR BOX W/ REHEAT |
| O | OCCUPANCY SENSOR |
| S | SENSOR |
| | ACTUATOR |
| | DOOR SWITCH |
| | DIFFERENTIAL PRESSURE SWITCH |
| | CURRENT SWITCH |
| | VIBRATION SWITCH |
| | NORMALL CLOSED CONTACT |
| | NORMALLY OPEN CONTACT |
| | OPPOSED BLADE DAMPER |
| | PARALLEL BLADE DAMPER |

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| OA | OUTSIDE AIR |
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| RA | RETURN AIR |
| SA | SUPPLY AIR |
| UON | UNLESS OTHERWISE NOTED |

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REGISTERED PROFESSIONAL
DOUGLAS SMITH
ENGINEER
PE091525

Office of Construction and Facilities Management

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| Drawing Title: MECHANICAL CONTROLS | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 00-MG801 |
| | | | SHEET 260 of 797 |

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# NOTES:

**FIELD VERIFICATION NOTES:**

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   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
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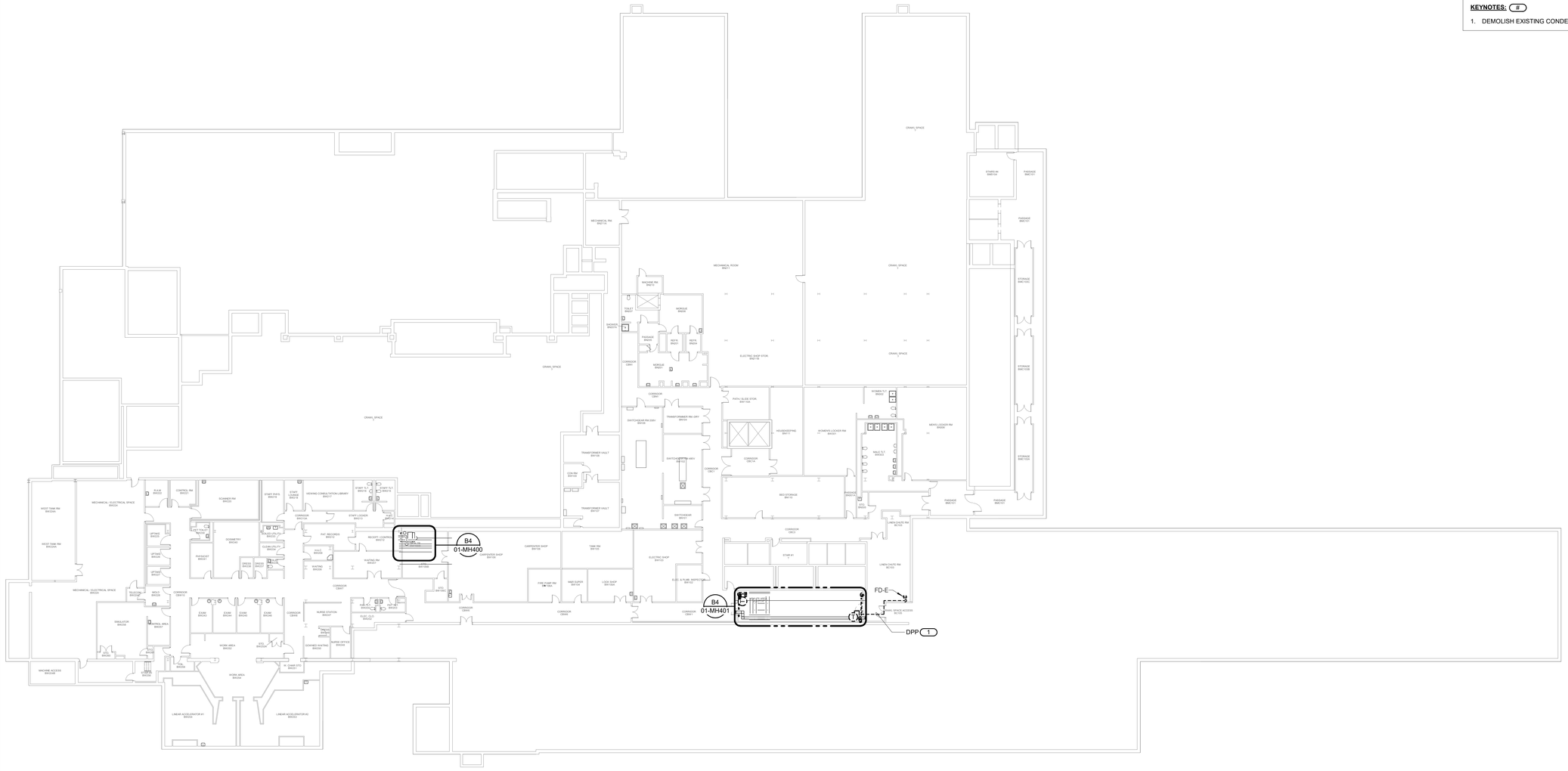
**KEYNOTES:** (#)

1. DEMOLISH EXISTING CONDENSATE PIPING.

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ENGINEER
PE081555

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| **Drawing Title** BASEMENT DEMOLITION PLAN - MECHANICAL | **Phase** FINAL BID DOCUMENTS | **Project Title** EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | **Project Number** 646-22-700 |
| **Approved:** | FULLY SPRINKLERED | **Location** UNIVERSITY DRIVE PITTSBURGH, PA 15240 | **Building Number** 1 |
| | | **Issue Date** 06.13.2025 / **Checked** CAH / **Drawn** BMB | **Drawing Number** 01-MD099 |
| | | | SHEET 261 of 797 |

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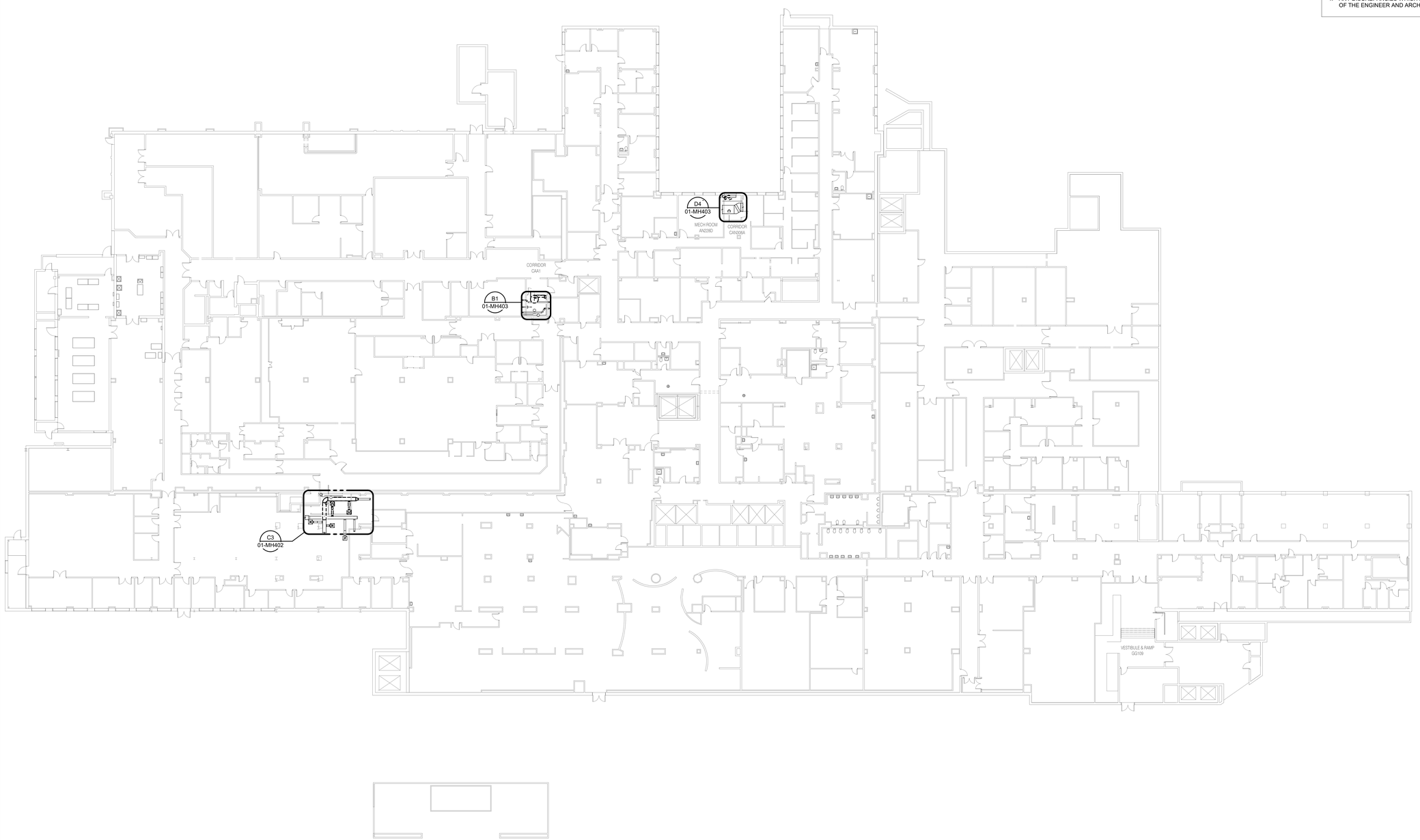


PLAN NORTH

1" = 20'-0" SCALE 20 0 20 40 FEET

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|---|---|---|---|
| GROUND FLOOR DEMOLITION PLAN - MECHANICAL | FINAL BID DOCUMENTS | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MD100 |

SHEET 262 of 797

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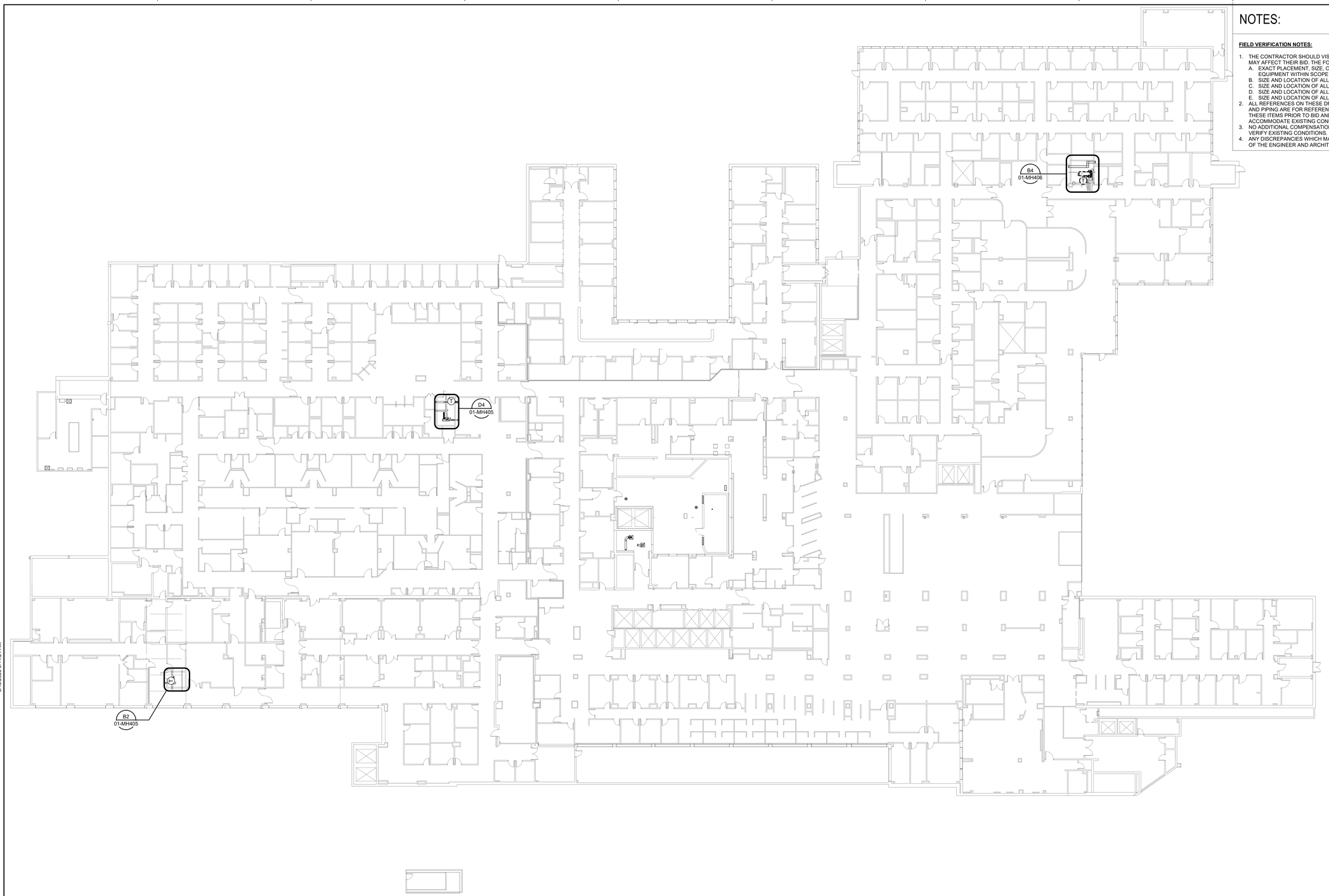


## NOTES:

**FIELD VERIFICATION NOTES:**

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   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
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PLAN NORTH

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1" = 20'-0" SCALE FEET

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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| Drawing Title: FIRST FLOOR DEMOLITION PLAN - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-MD101 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 263 of 797 |

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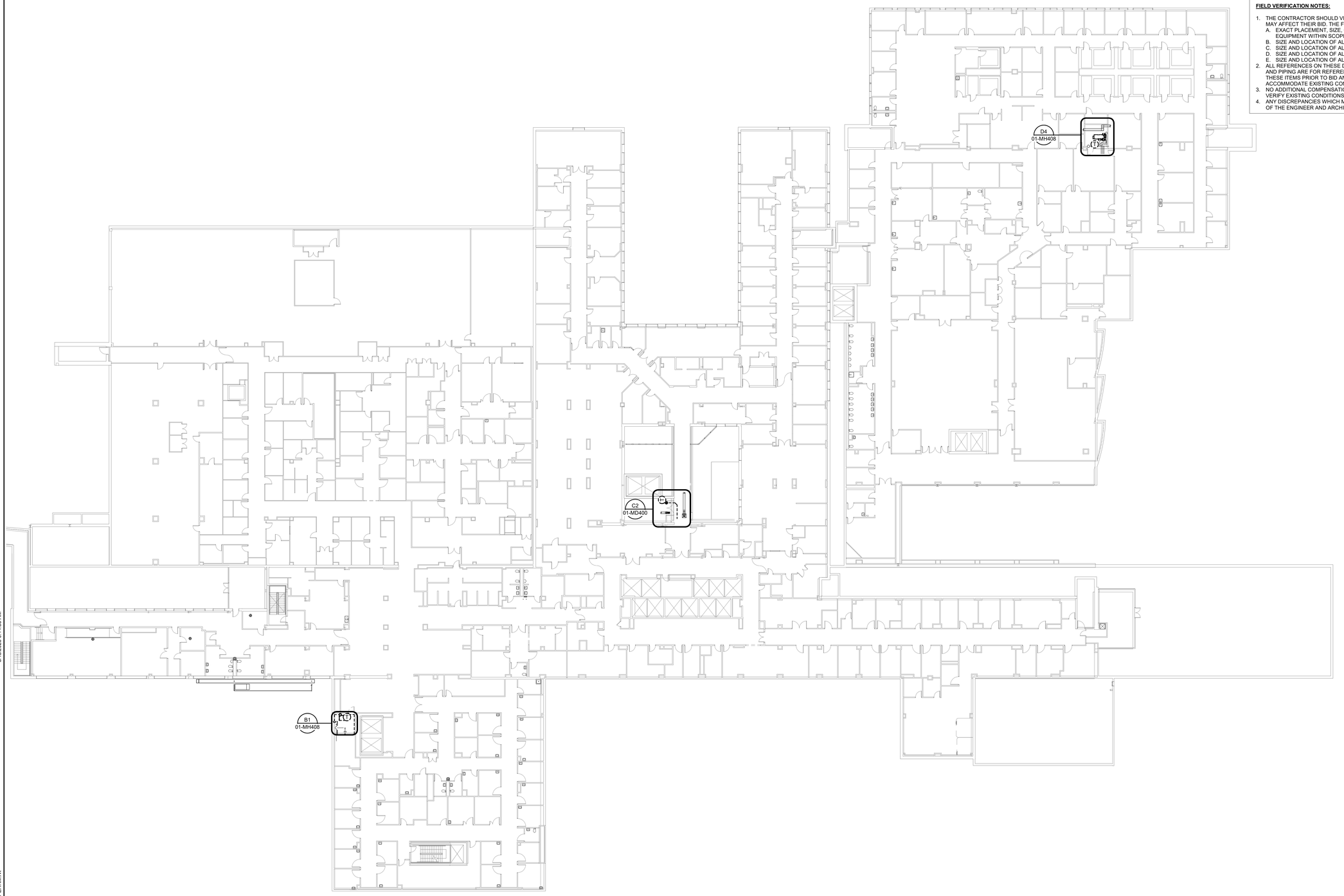


# NOTES:

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REGISTERED PROFESSIONAL
DOUGLAS SMITH
ENGINEER
PE081525

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

| Drawing Title | Phase | Project Title | Project Number |
|---|---|---|---|
| SECOND FLOOR DEMOLITION PLAN - MECHANICAL | FINAL BID DOCUMENTS | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MD102 |
| | | | SHEET 264 of 797 |

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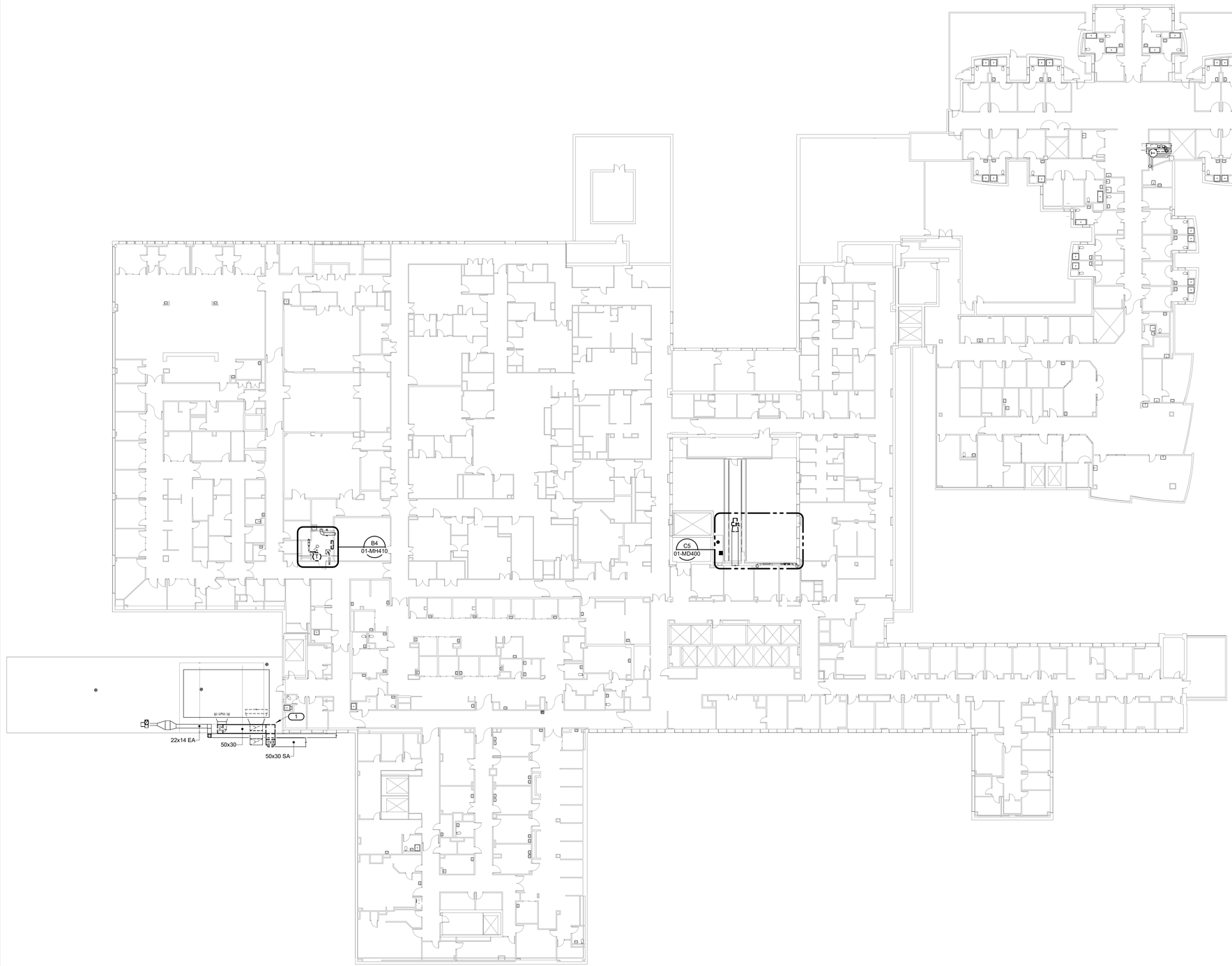


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**KEYNOTES:** (#)

1. DEMOLISH EXISTING SUPPLY DUCTWORK AND PREPARE FOR NEW CONNECTION. DEMOLITION AND NEW WORK TO BE COORDINATED IN THE SAME SYSTEM SHUTDOWN TO MINIMIZE DOWNTIME.

PLAN NORTH

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1" = 20'-0" SCALE FEET

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| Drawing Title | THIRD FLOOR DEMOLITION PLAN - MECHANICAL |
| Approved: | |
| Phase | FINAL BID DOCUMENTS |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-MD103 |
| | SHEET 265 of 797 |

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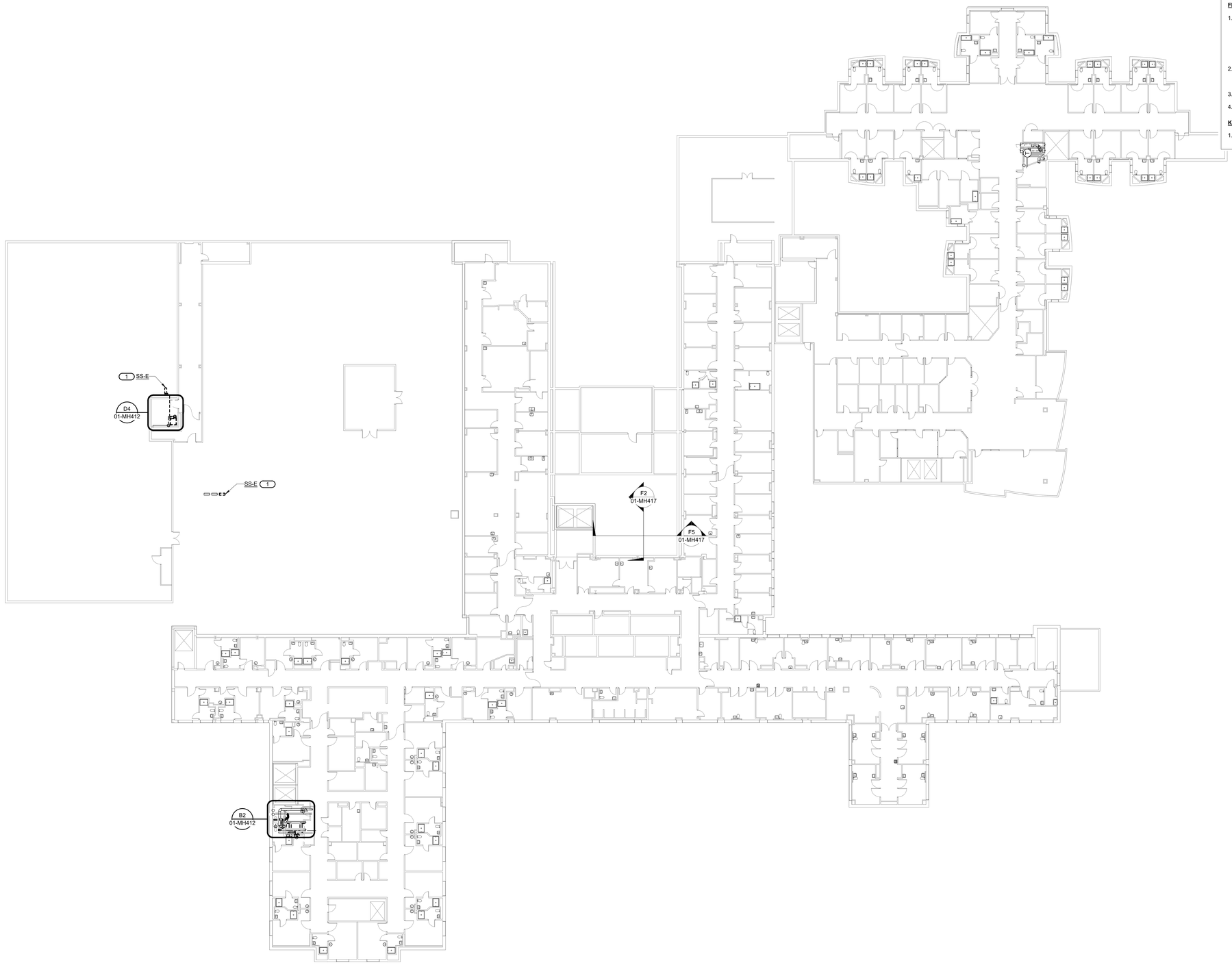


## NOTES:

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**KEYNOTES:** (#)

1. REMOVE EXISTING CONDENSING UNIT, ROOF SUPPORTS AND ALL ASSOCIATED PIPING AND CONTROLS. COORDINATE REPAIR AND PATCHING WITH GC TO MATCH ADJACENT SURFACES AND RATINGS.

PLAN NORTH

1" = 20'-0" SCALE: 20 0 20 40 FEET

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| Drawing Title: FOURTH FLOOR DEMOLITION PLAN - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-MD104 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 266 of 797 |

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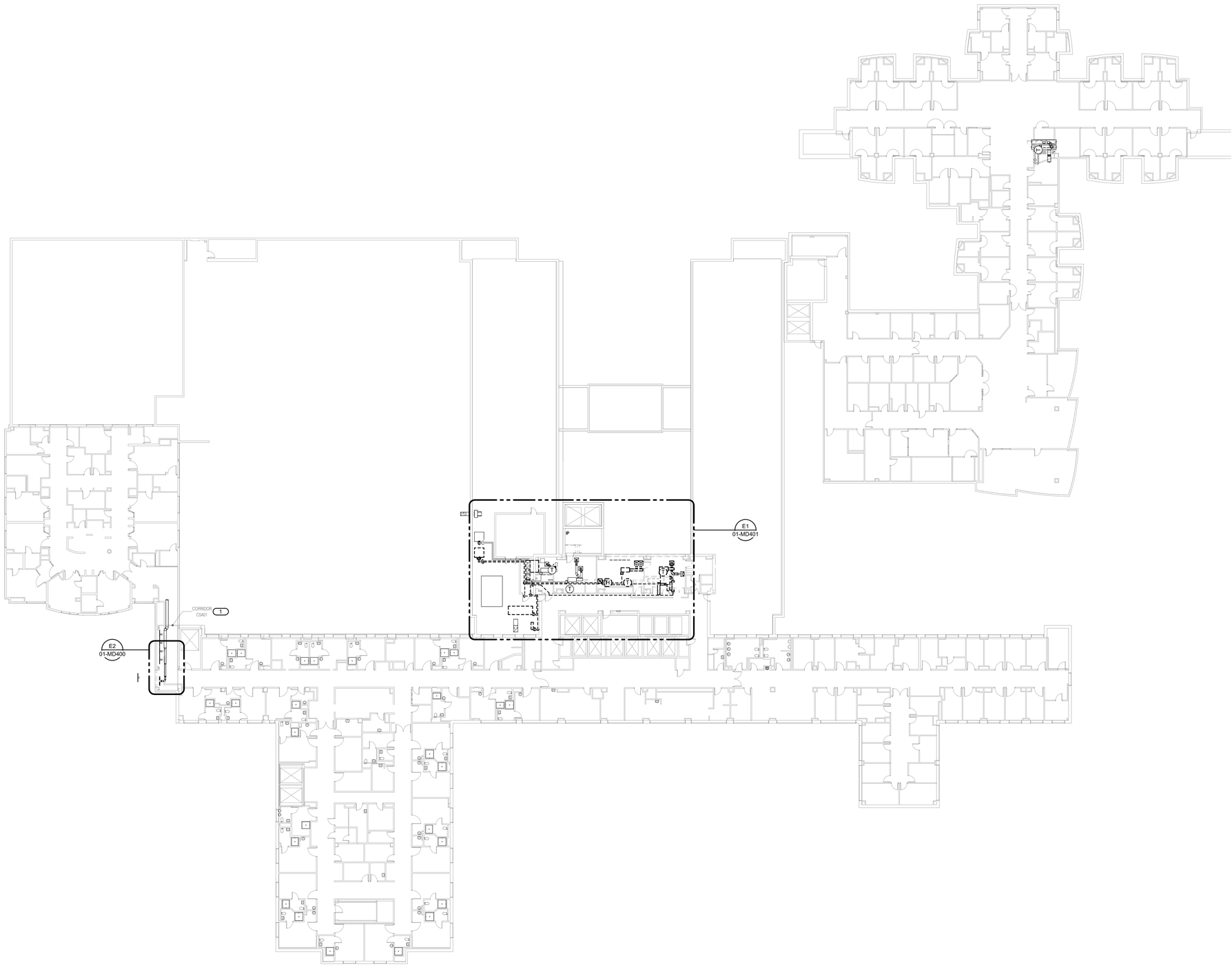


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**KEYNOTES:** (#)

1. REMOVE, STORE, AND PROTECT EXISTING DUCTWORK AND AIR DEVICES IN C5A01 AS REQUIRED DURING CONSTRUCTION. COORDINATE WITH ALL OTHER TRADES. TEMPORARY ENCLOSURE MUST REMAIN CONDITIONED DURING CONSTRUCTION. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN SERVICE. EXISTING DUCTWORK AND AIR DEVICES SHALL BE REINSTALLED AS PART OF NEW WORK. REFERENCE ENLARGED VENTILATION PLAN.

PLAN NORTH

1" = 20'-0" SCALE — 20 0 20 40 FEET

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| Drawing Title: FIFTH FLOOR DEMOLITION PLAN - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MD105 SHEET 267 of 797 |

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# NOTES:

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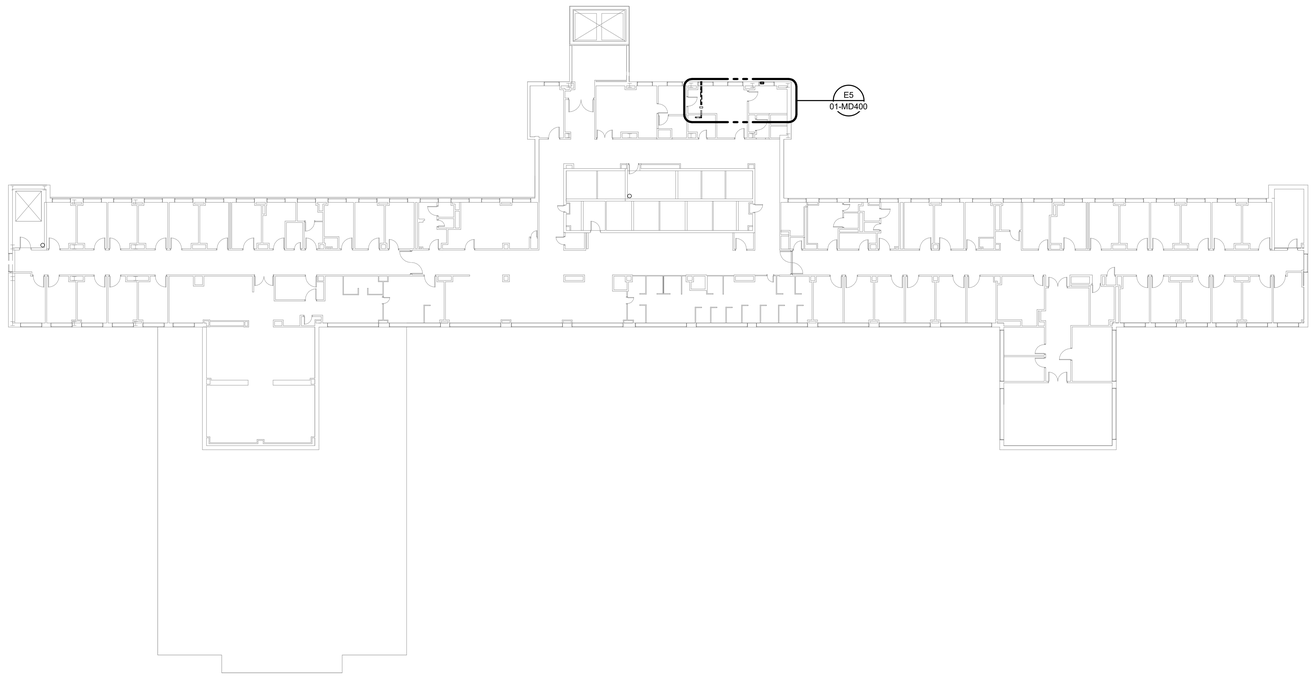


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| Drawing Title: EIGHTH FLOOR DEMOLITION PLAN - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MD108 |
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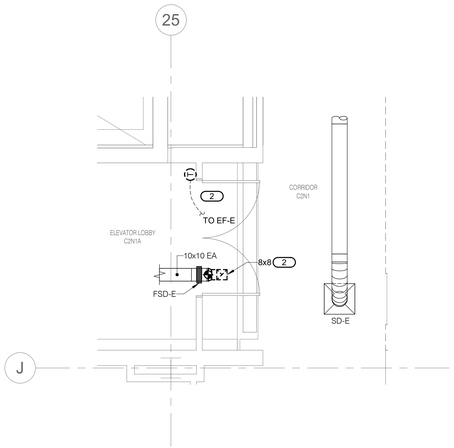
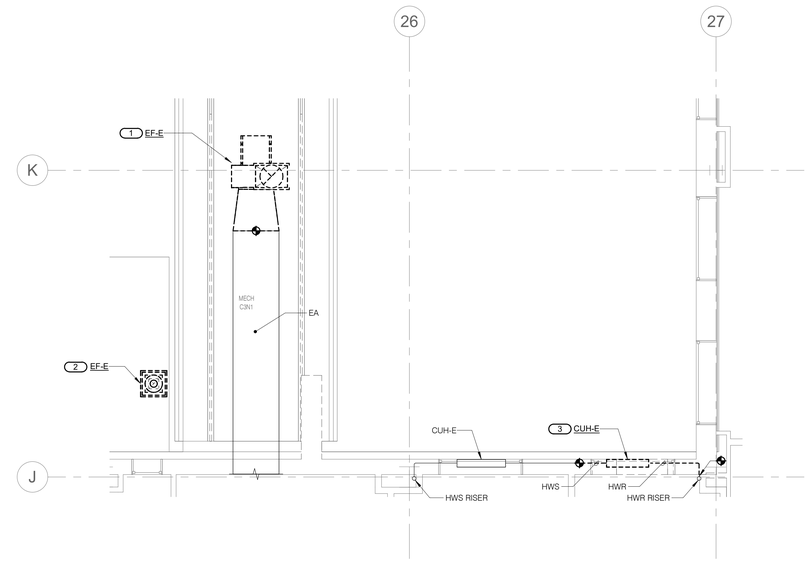
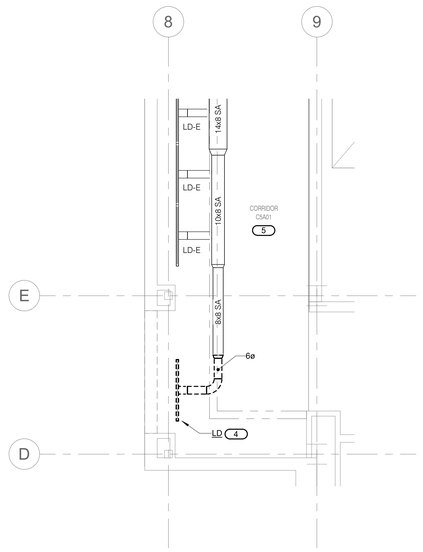


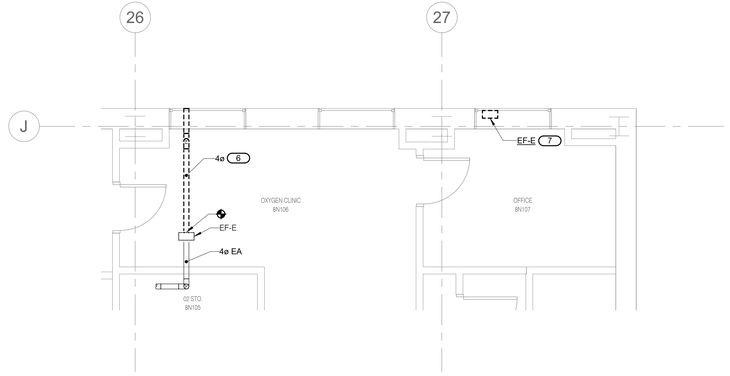

## C2 SECOND FLOOR PLAN - NORTH TOWER - DEMOLITION
1/4" = 1'-0"




## C5 THIRD FLOOR PLAN - NORTH TOWER - DEMOLITION
1/4" = 1'-0"




## E2 FIFTH FLOOR PLAN - WEST TOWER - DEMOLITION
1/4" = 1'-0"




## E5 EIGHTH FLOOR PLAN - NORTH TOWER - DEMOLITION
1/4" = 1'-0"

# NOTES:

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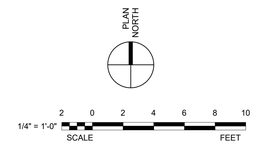
**KEYNOTES:** ( # )

1. EXISTING EXHAUST FAN TO BE RELOCATED AS PART OF NEW WORK. REMOVE, STORE, AND PROTECT. REMOVE DUCTWORK AS REQUIRED TO RELOCATE FAN AND PREPARE FOR NEW CONNECTION. REFER TO DETAIL C2/01-MH411 FOR NEW LOCATION.
2. REMOVE EXISTING EXHAUST FAN, ASSOCIATED CONTROLS, AND DUCTWORK AS SHOWN. PREPARE DUCTWORK FOR NEW CONNECTION.
3. REMOVE EXISTING CABINET UNIT HEATER AND PIPING AS INDICATED. PREPARE PIPING FOR NEW CONNECTION.
4. REMOVE EXISTING LINEAR DIFFUSER AND ASSOCIATED DUCTWORK AS SHOWN. REFER TO D3/01-MH415 FOR NEW WORK.
5. REMOVE, STORE, AND PROTECT EXISTING DUCTWORK AND AIR DEVICES IN C5A01 AS REQUIRED DURING CONSTRUCTION. COORDINATE WITH ALL OTHER TRADES. TEMPORARY ENCLOSURE MUST REMAIN CONDITIONED DURING CONSTRUCTION. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN SERVICE. EXISTING DUCTWORK AND AIR DEVICES SHALL BE REINSTALLED AS PART OF NEW WORK. REFER TO DETAIL D3/01-MH415 FOR NEW LOCATIONS.
6. REMOVE DUCTWORK AND ASSOCIATED WALL CAP. FAN TERMINATION TO BE REROUTED AS PART OF NEW WORK. MODIFY EXISTING OPENING AS REQUIRED FOR NEW WALL CAP. REFER TO DETAIL C1/01-MH423 FOR NEW WORK.

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REGISTERED PROFESSIONAL
DOUGLAS SMITH
ENGINEER
PE089556

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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| Drawing Title | ENLARGED DEMOLITION PLANS - MECHANICAL |
| Phase | FINAL BID DOCUMENTS |
| Approved: | |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-MD400 |
| | SHEET 269 of 797 |

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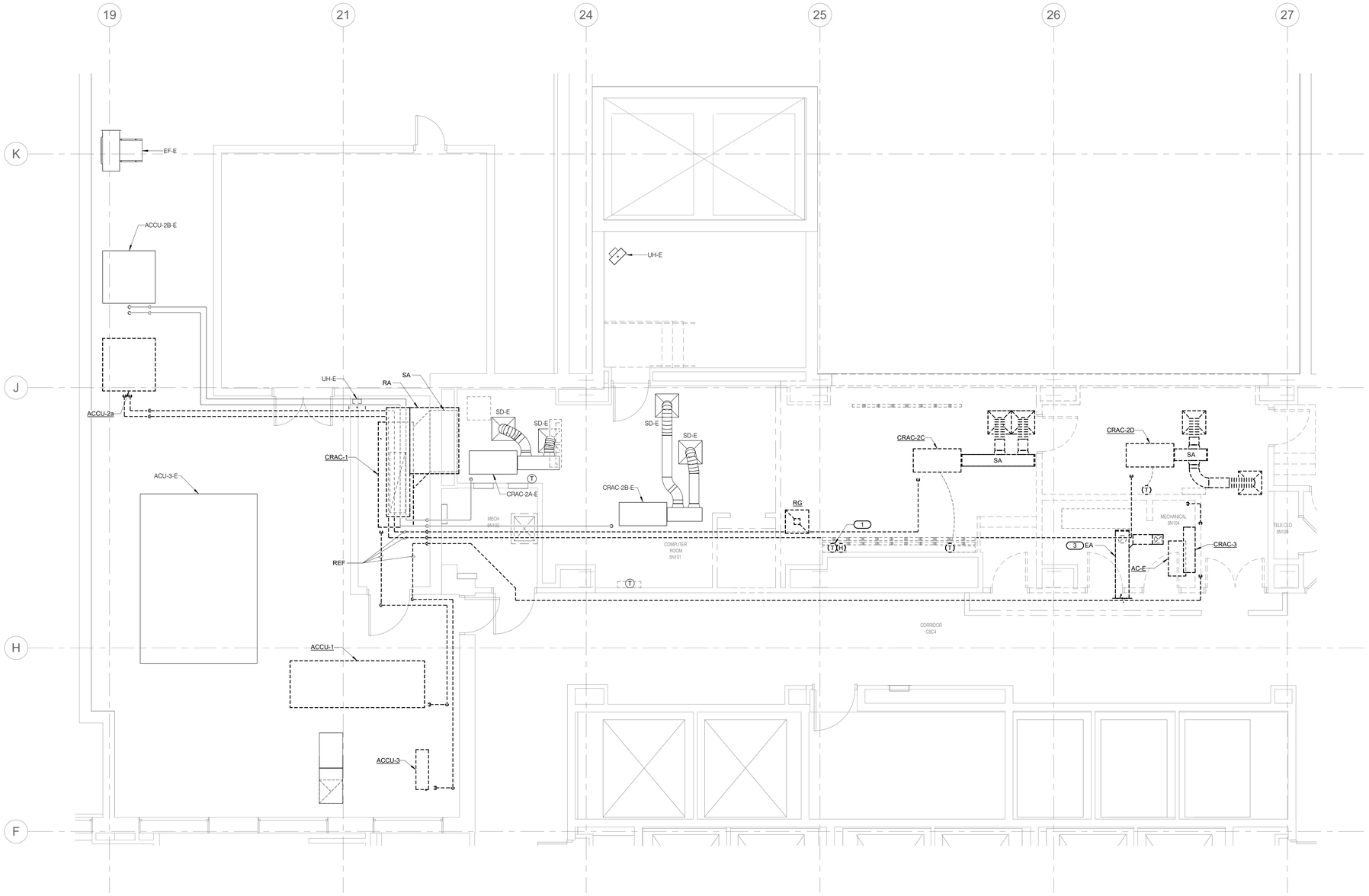


## E1 FIFTH FLOOR PLAN - DATA CENTER - DEMOLITION

1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
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**MECHANICAL SHEET NOTES:**

1. MECHANICAL DEMOLITION SCOPE IN EXISTING MCR (COMPUTER ROOM 5N101) SHALL BE CLOSELY COORDINATED WITH TECHNOLOGY PHASING SCOPE. REFER TO PHASING NOTES ON THIS SHEET AND TECHNOLOGY AND ELECTRICAL DRAWINGS FOR PHASING INFORMATION.
2. CONTRACTOR SHALL PROVIDE (3) 4-TON PORTABLE DX COOLING UNITS (I.E. SPOT COOLERS) TO KEEP MCR BETWEEN 72°F AND 80.6°F FOR DURATION PROJECT PRIOR TO THE INSTALLATION OF NEW CRAC UNITS AND TECHNOLOGY EQUIPMENT CHANGEOVER. QUANTITY AND CAPACITY OF PORTABLE DX COOLING UNITS BASED ON ASSUMED EXISTING EQUIPMENT HEAT OUTPUT. CONFIRM REQUIRED QUANTITY AND CAPACITY OF SPOT COOLERS BASED ON EXISTING EQUIPMENT HEAT OUTPUT.

**PHASING NOTES:**

**PHASE 1 – DEMOLITION**

1. REMOVE EXISTING DATA AIRE UNITS CRAC-2C AND CRAC-2D, ASSOCIATED OUTDOOR CONDENSING UNIT (ACCU-2a), SUPPORTS, AND ALL ASSOCIATED DUCTWORK, PIPING AND CONTROLS. COORDINATE REPAIR AND PATCHING WITH GC TO MATCH ADJACENT SURFACES AND RATINGS.
2. EXISTING CRAC-1, CRAC-2A, AND CRAC-2B IN COMPUTER ROOM 5N101 SHALL REMAIN OPERATIONAL.
3. REMOVE ALL SPRINKLER PIPING SERVING DATA CENTER 5N301.

**PHASE 1 – NEW WORK**

1. INSTALL NEW FIRE PROTECTION ZONE VALVE SERVING DATA CENTER 5N301 AND ALL ASSOCIATED SPRINKLER PIPING AND HEADS.
   A. PROVIDE NEW CLEAN AGENT FIRE PROTECTION SYSTEM SERVING DATA CENTER 5N301.
2. INSTALL NEW CRAC UNITS CRU-01.5N301.A AND CRU-01.5N301.B AND ASSOCIATED AIR COOLED CONDENSING UNITS.
3. INSTALL NEW OVERHEAD RETURN DUCT SYSTEM. CONNECT RETURN DUCTS TO IT RACK CHIMNEYS ONCE RACK INSTALLATION IS COMPLETE.
4. NEW CRAC UNITS SHALL BE STARTED UP, TEST AND BALANCE (TAB) SHALL BE COMPLETED PRIOR TO NEW IT AND ELECTRICAL EQUIPMENT START-UP IN DATA CENTER 5N301.
5. INSTALL NEW HVAC CONTROL PANEL IN DATA CENTER 5N301.
6. INSTALL NEW DRIP PANS AS REQUIRED IN DATA CENTER 5N301.

**PHASE 2 – DEMOLITION**

1. REMOVE EXISTING SANYO CRAC-3, ASSOCIATED OUTDOOR CONDENSING UNIT (ACCU-3), SUPPORTS, AND ALL ASSOCIATED DUCTWORK, PIPING AND CONTROLS. COORDINATE REPAIR AND PATCHING WITH GC TO MATCH ADJACENT SURFACES AND RATINGS.
2. REMOVE EXISTING UNITED COOLAIR AC-E, ASSOCIATED OUTDOOR CONDENSING UNIT, AND ALL ASSOCIATED PIPING AND CONTROLS.
3. REMOVE EXISTING DATA AIRE CRAC-1, ASSOCIATED OUTDOOR CONDENSING UNIT (ACCU-1), SUPPORTS, AND ALL ASSOCIATED DUCTWORK, PIPING AND CONTROLS. COORDINATE REPAIR AND PATCHING WITH GC TO MATCH ADJACENT SURFACES AND RATINGS.

**KEYNOTES:** (#)

1. RELOCATE EXISTING TEMPERATURE / HUMIDITY SENSOR FOR CRAC-1 AS REQUIRED TO MAINTAIN OPERATION THROUGHOUT CONSTRUCTION. MOUNT ON WALL IN COMPUTER ROOM 5N101.
2. DEMOLISH EXISTING EXHAUST DUCTWORK OUTSIDE TO OUTSIDE OF ROOM AND CAP.

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

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REGISTERED PROFESSIONAL
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ENGINEER
PE081525

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

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|---|---|---|---|
| Drawing Title: ENLARGED DEMOLITION PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-MD401 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 270 of 797 |

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# NOTES:

**FIELD VERIFICATION NOTES:**

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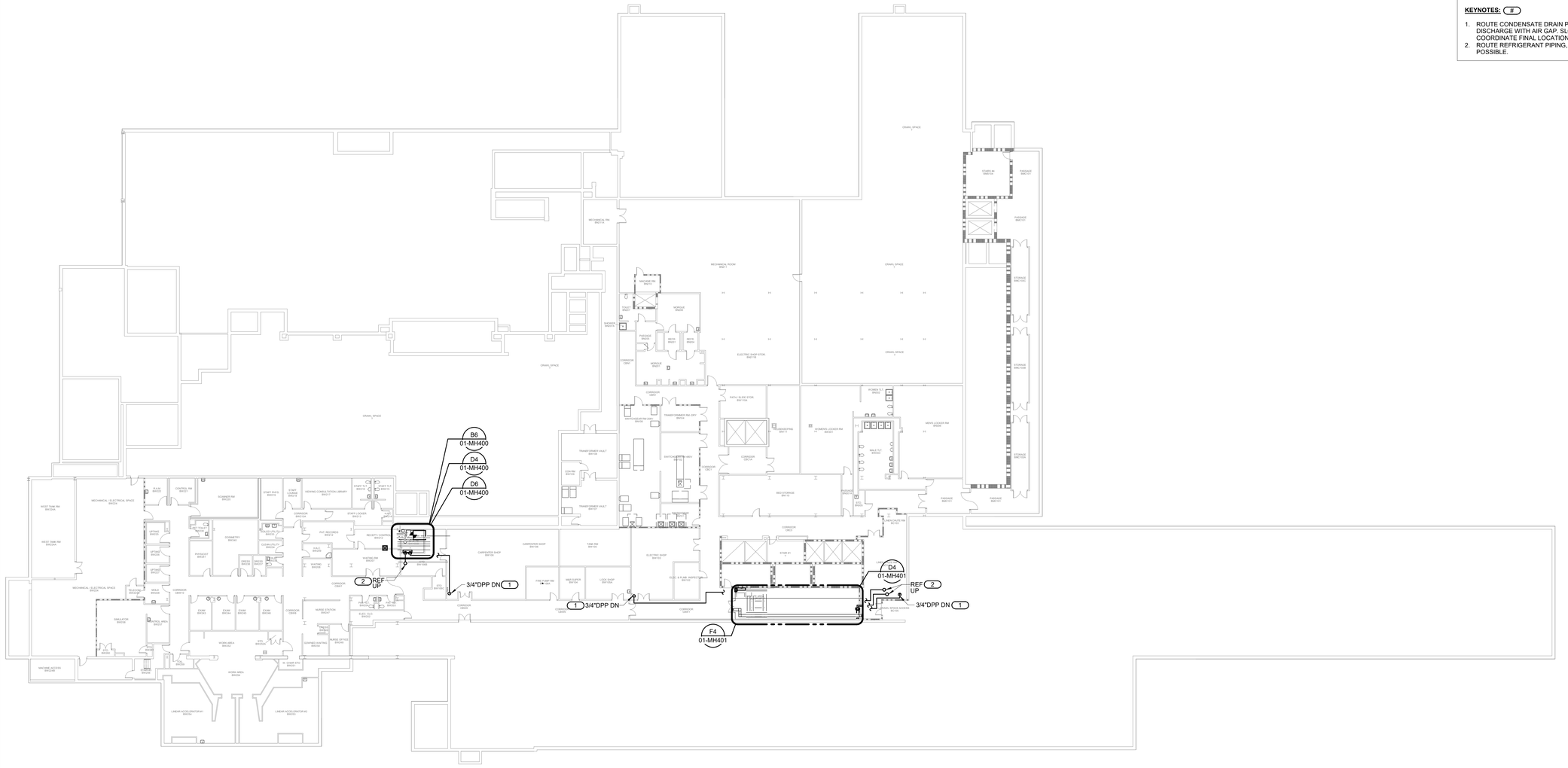
**KEYNOTES:** (#)

1. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK AND DISCHARGE WITH AIR GAP. SLOPE PIPING 1/8" PER FOOT. DO NOT ROUTE ABOVE ELECTRICAL EQUIPMENT. COORDINATE FINAL LOCATION WITH VA COR.
2. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, ABOVE CEILING WHERE POSSIBLE.




PLAN NORTH

1" = 20'-0" SCALE — 20 0 20 40 FEET

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| Drawing Title | BASEMENT PLAN - MECHANICAL |
| Phase | FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-MH099 |
| | SHEET 271 of 797 |

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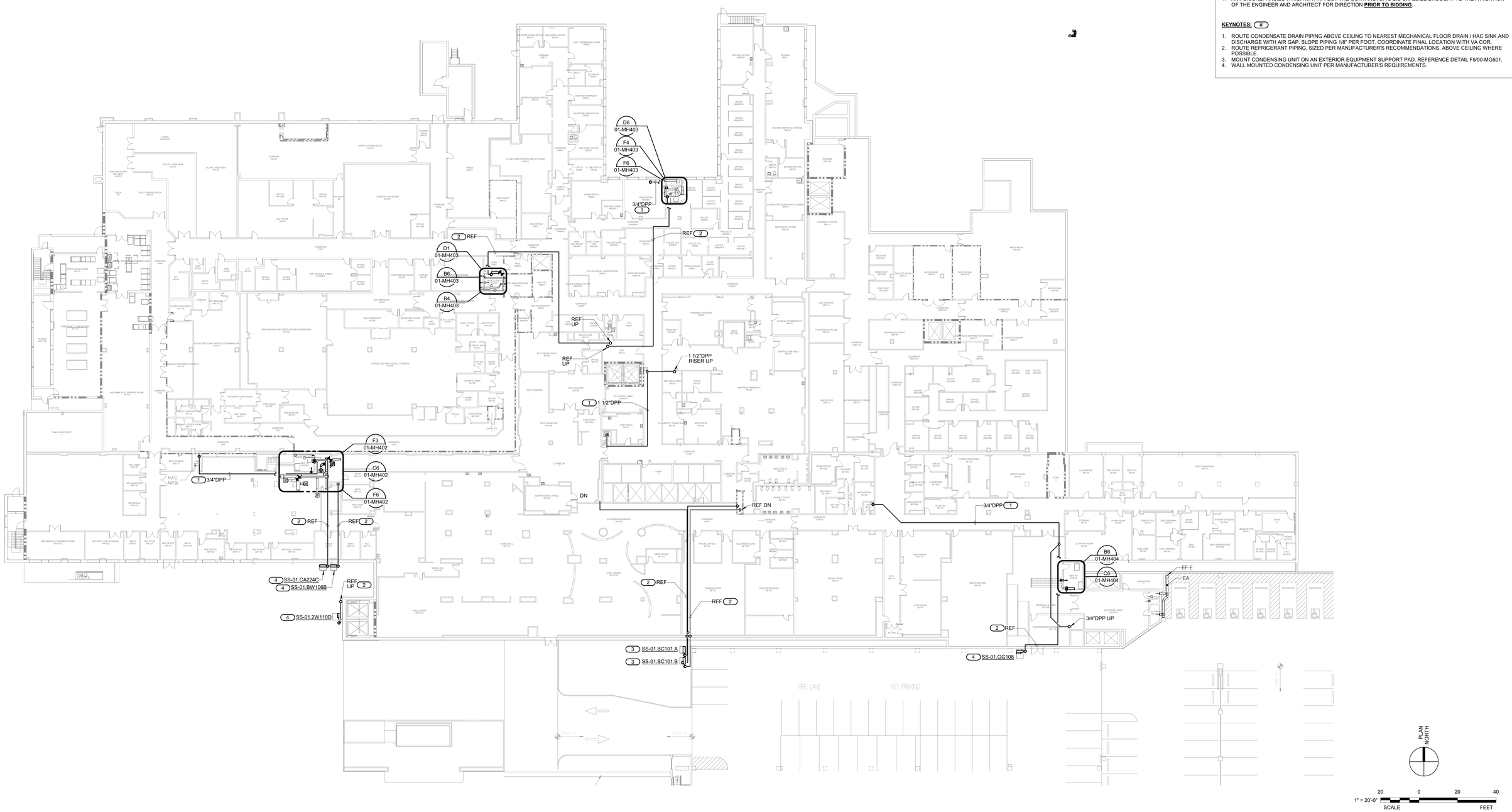


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**KEYNOTES:** #

1. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK AND DISCHARGE WITH AIR GAP. SLOPE PIPING 1/8" PER FOOT. COORDINATE FINAL LOCATION WITH VA COR.
2. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, ABOVE CEILING WHERE POSSIBLE.
3. MOUNT CONDENSING UNIT ON AN EXTERIOR EQUIPMENT SUPPORT PAD. REFERENCE DETAIL F5/00-MG501.
4. WALL MOUNTED CONDENSING UNIT PER MANUFACTURER'S REQUIREMENTS.

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PE061525

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| Drawing Title | Phase | Project Title | Project Number |
|---|---|---|---|
| GROUND FLOOR PLAN - MECHANICAL | FINAL BID DOCUMENTS | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH100 |
| | | | SHEET 272 of 797 |

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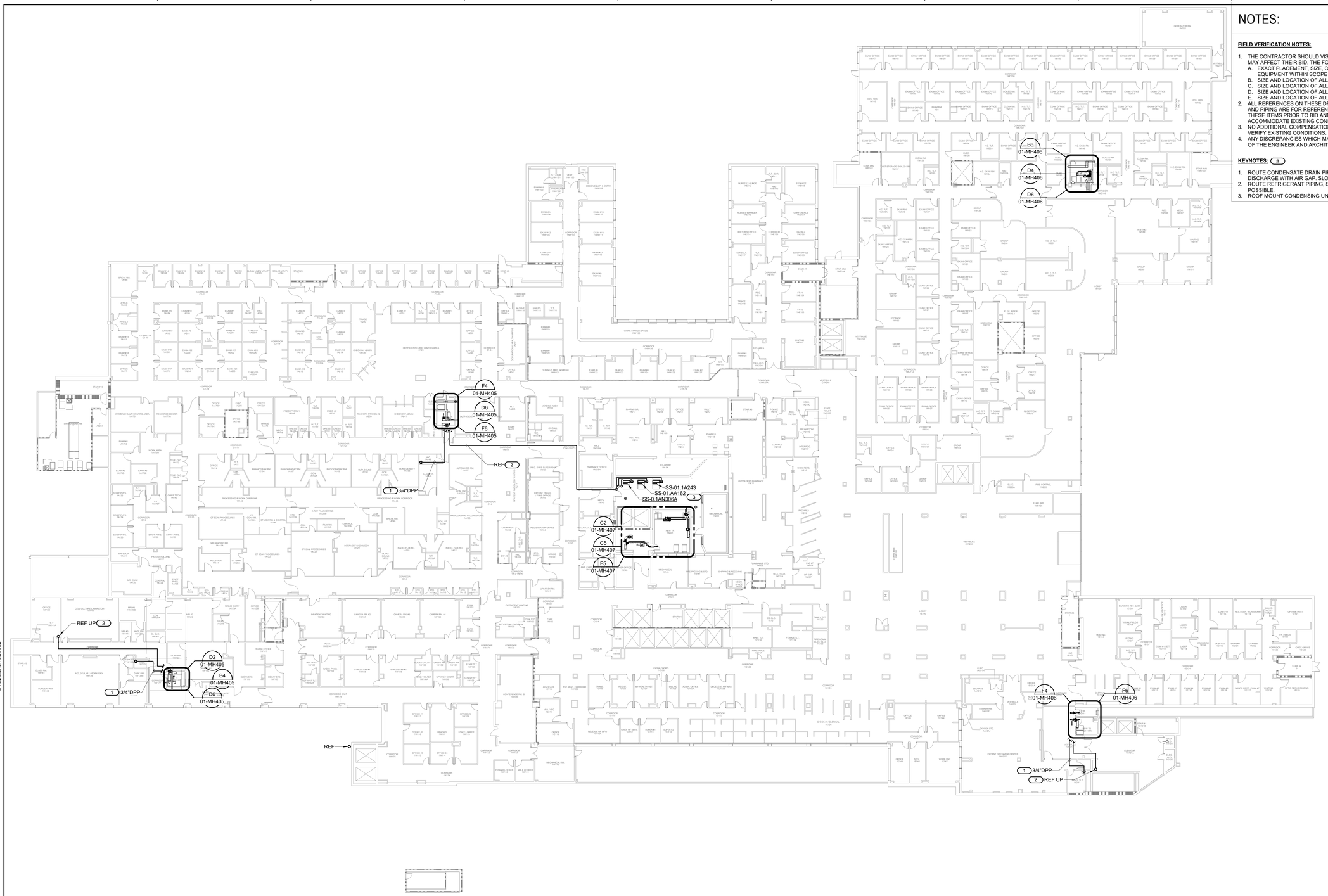


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**KEYNOTES:** (#)

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3. ROOF MOUNT CONDENSING UNITS PER MANUFACTURER'S REQUIREMENTS.

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| Drawing Title | Phase | Project Title | Project Number |
|---|---|---|---|
| FIRST FLOOR PLAN - MECHANICAL | FINAL BID DOCUMENTS | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH101 |
| | | | SHEET 273 of 797 |

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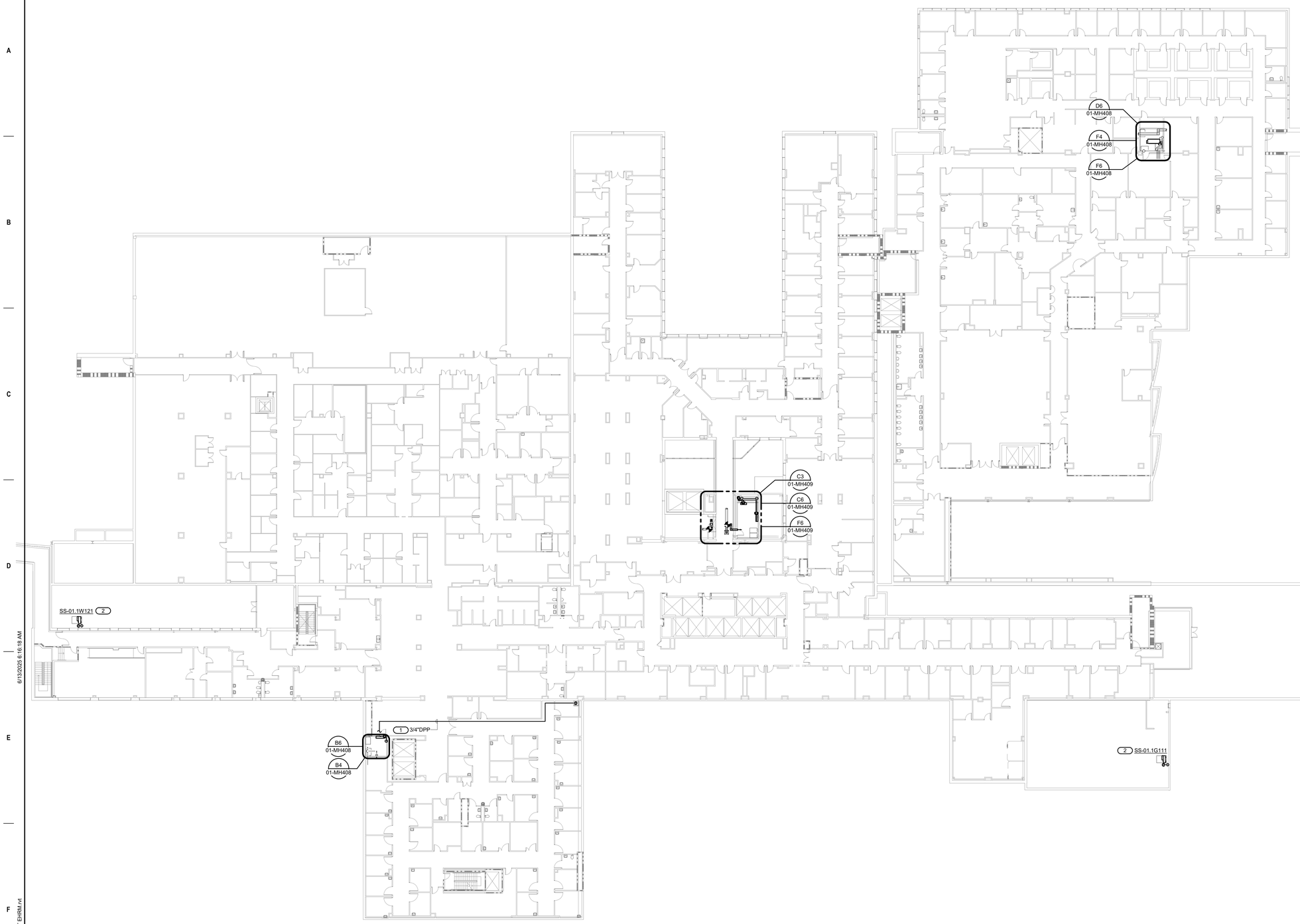


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2. ROOF MOUNT CONDENSING UNIT PER MANUFACTURER'S REQUIREMENTS.

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|---|---|---|---|
| SECOND FLOOR PLAN - MECHANICAL | FINAL BID DOCUMENTS | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH102 |
| | | | SHEET 274 of 797 |

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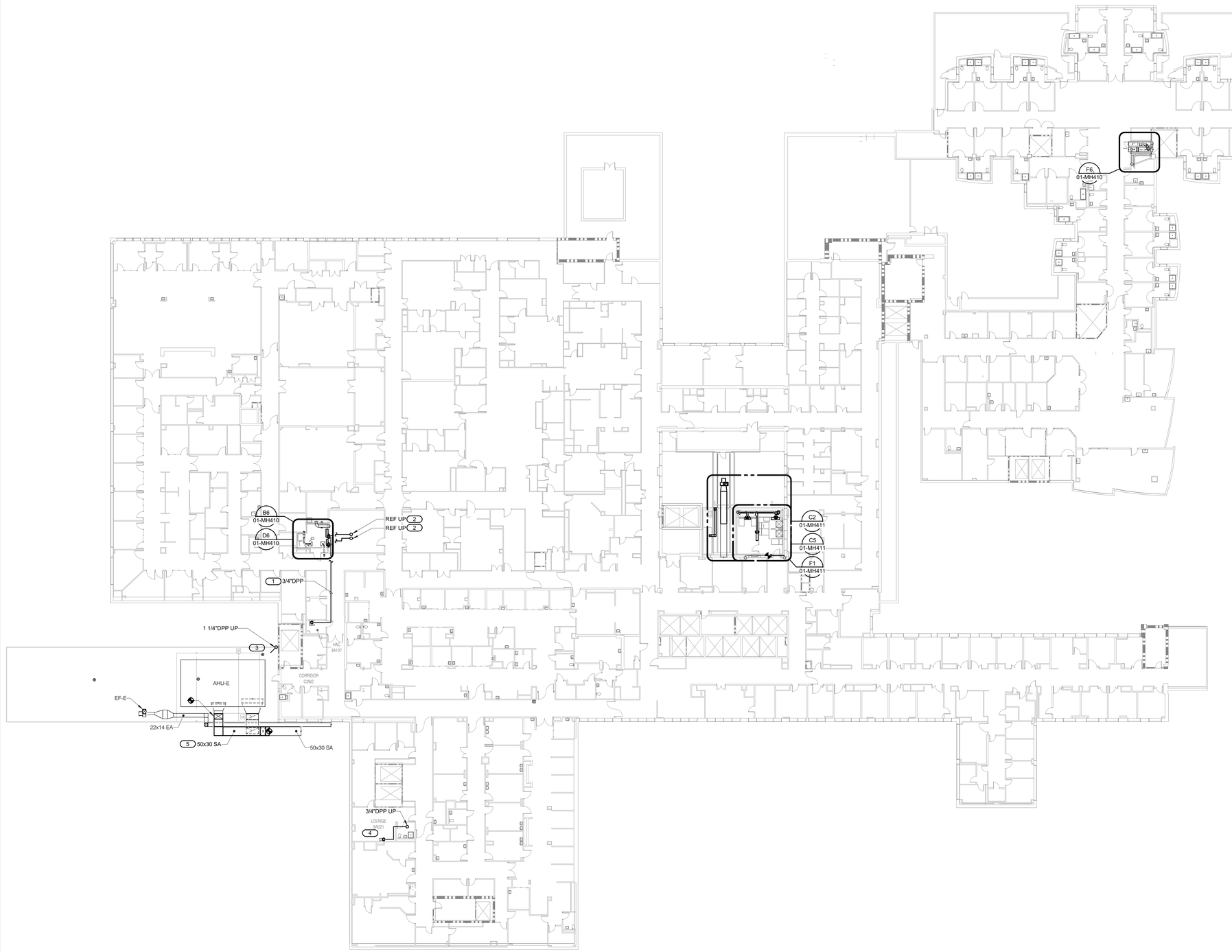


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**KEYNOTES:** ( # )

1. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK AND DISCHARGE WITH AIR GAP. SLOPE PIPING 1/8" PER FOOT.
2. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, ABOVE CEILING.
3. DIRECT CONDENSATE DISCHARGE TOWARD EXISTING ROOF DRAIN AND PROVIDE SPLASH BLOCK.
4. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO LOUNGE SINK. COORDINATE CONNECTION WITH PLUMBING CONTRACTOR.
5. DEMOLITION AND NEW WORK TO BE COORDINATED IN THE SAME SYSTEM SHUTDOWN TO MINIMIZE DOWNTIME. REFERENCE SHEET 01-MD103.

PLAN NORTH

1" = 20'-0" SCALE: 20 0 20 40 FEET

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PROJECT #23002251.00


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COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DOUGLAS SMITH — ENGINEER — PE081525

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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|---|---|---|---|
| Drawing Title: THIRD FLOOR PLAN - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-MH103 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 275 of 797 |


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# NOTES:

**FIELD VERIFICATION NOTES:**

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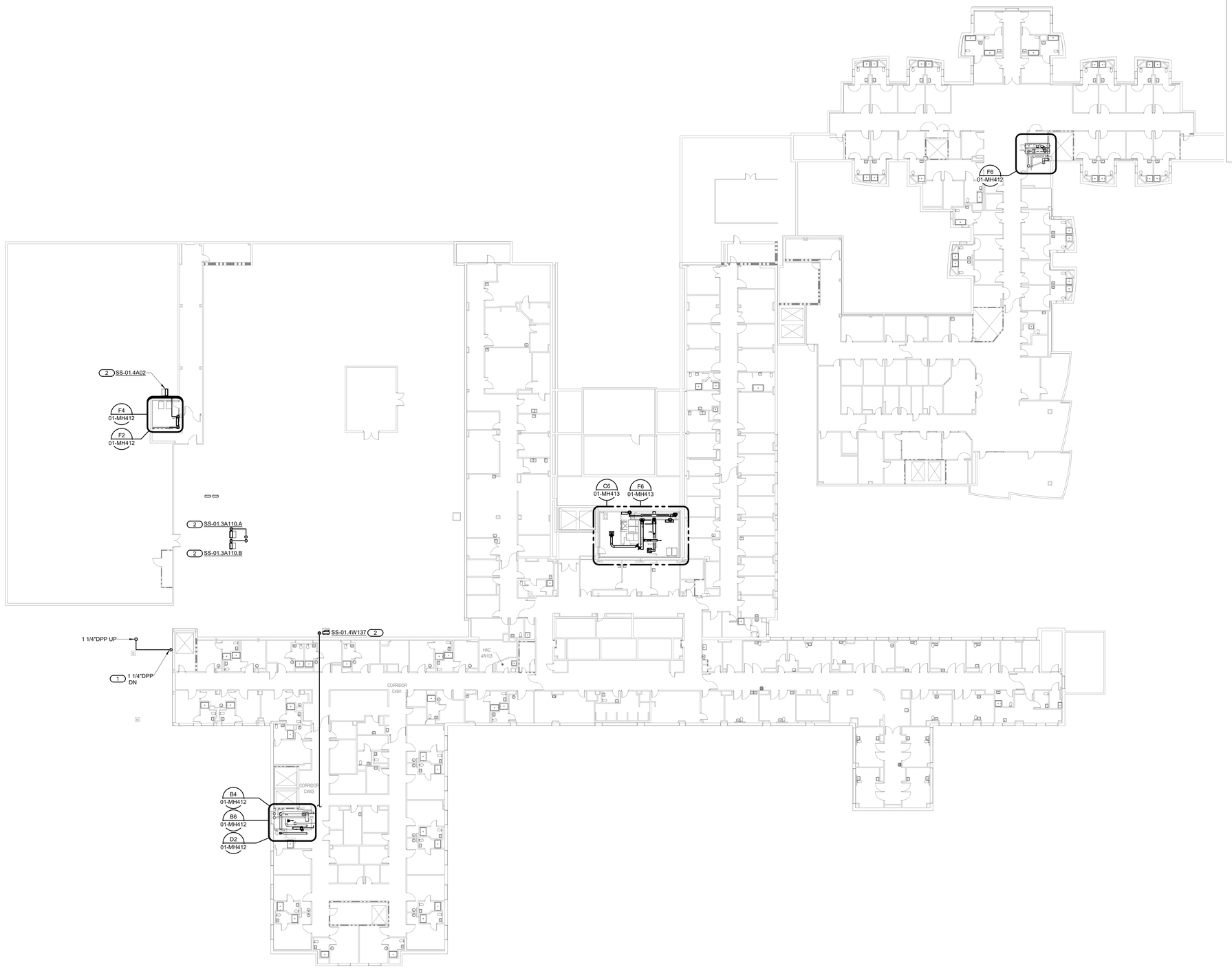
**KEYNOTES:** (#)

1. ROUTE CONDENSATE DRAIN PIPING TO EXTERIOR AND SPILL ON ROOF BELOW. PROVIDE SPLASH BLOCK.
2. ROOF MOUNT CONDENSING UNIT PER MANUFACTURER'S REQUIREMENTS.




PLAN NORTH

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|---|---|---|---|
| Drawing Title: FOURTH FLOOR PLAN - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-MH104 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 276 of 797 |

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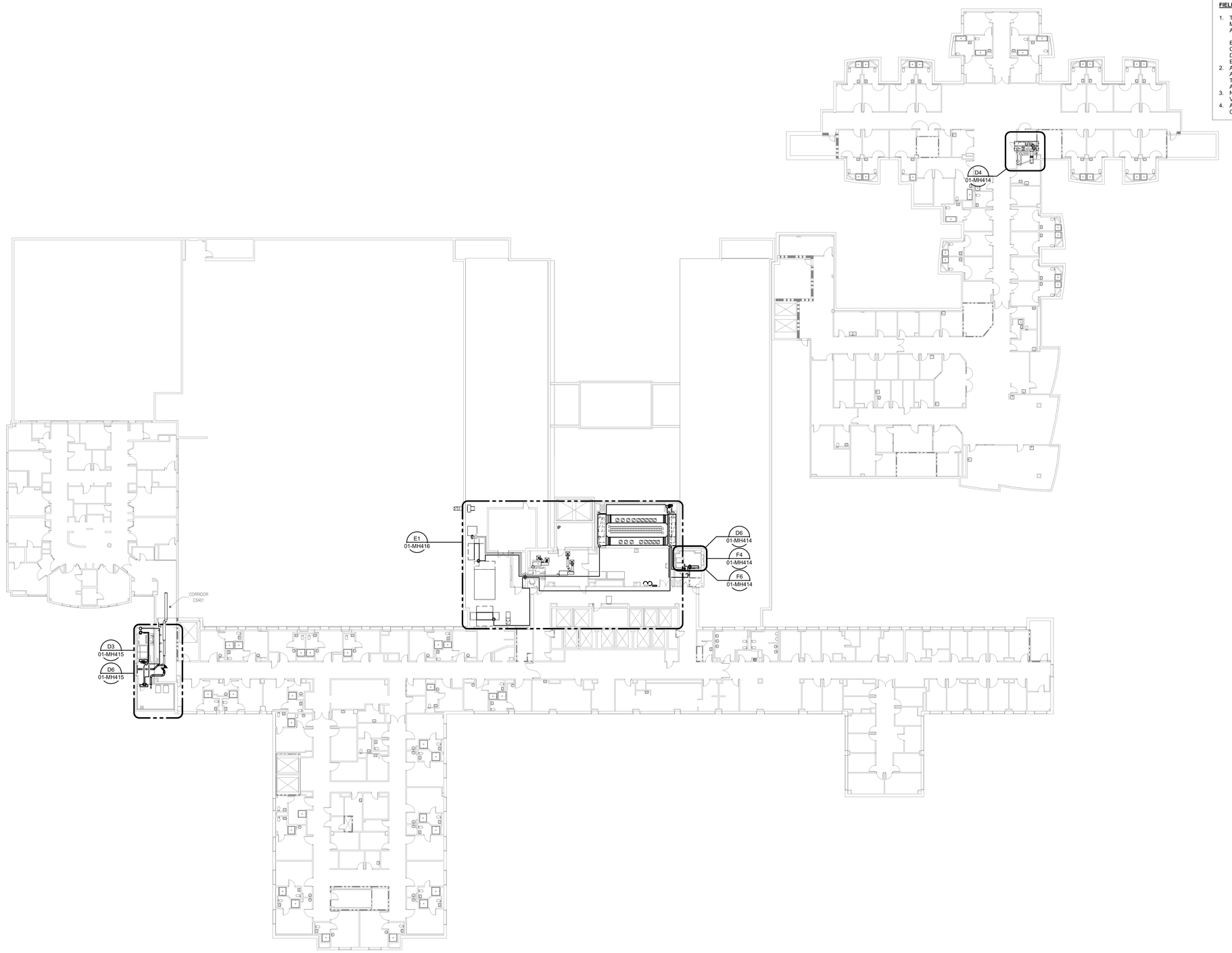


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PLAN NORTH

1" = 20'-0" SCALE — 20 0 20 40 FEET

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| | |
|---|---|
| Drawing Title | FIFTH FLOOR PLAN - MECHANICAL |
| Phase | FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-MH105 |
| | SHEET 277 of 797 |

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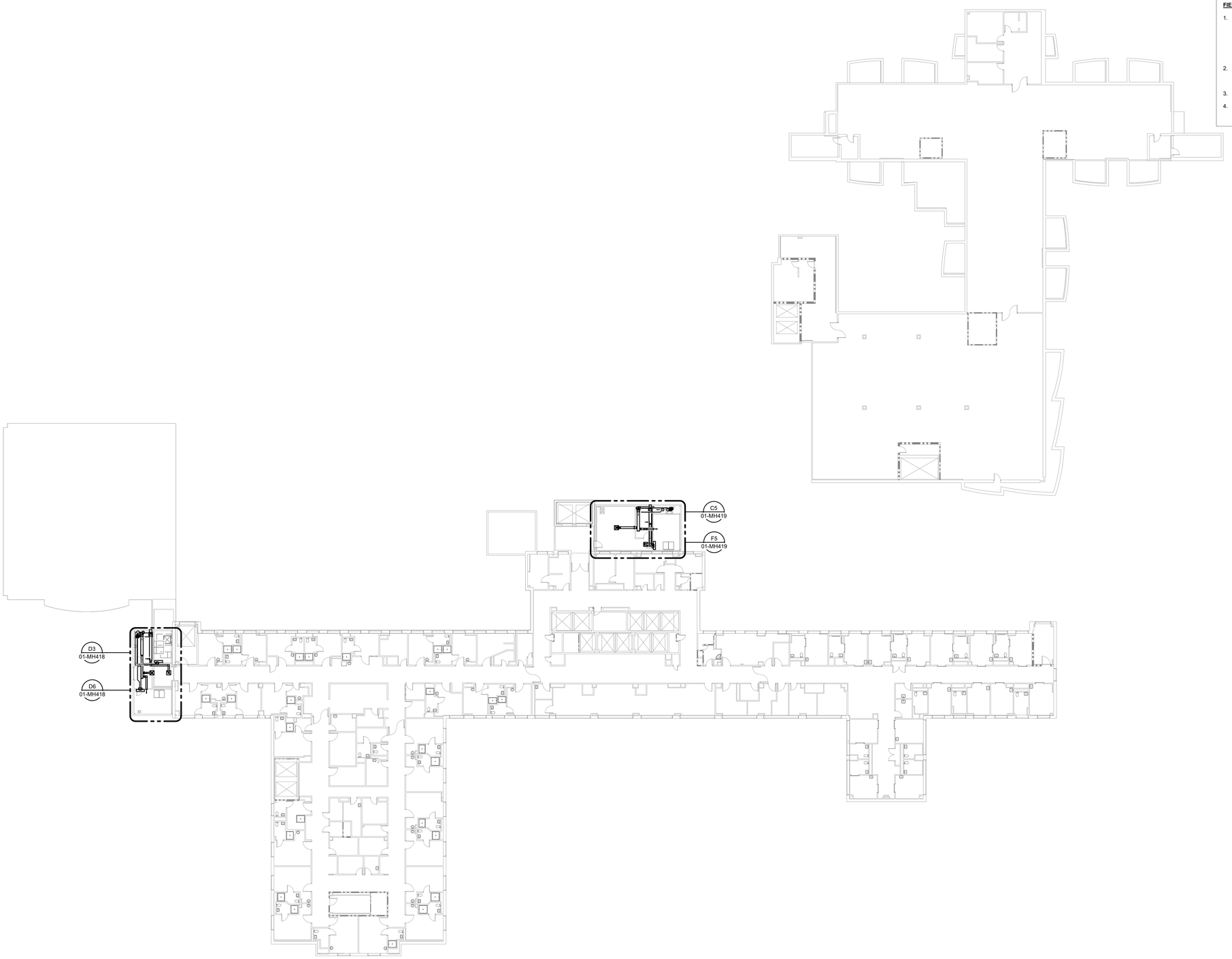


PLAN NORTH

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PE081525

Office of Construction and Facilities Management

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| Drawing Title | Phase | Project Title | Project Number |
|---|---|---|---|
| SIXTH FLOOR PLAN - MECHANICAL | FINAL BID DOCUMENTS | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH106 SHEET 278 of 797 |

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# NOTES:

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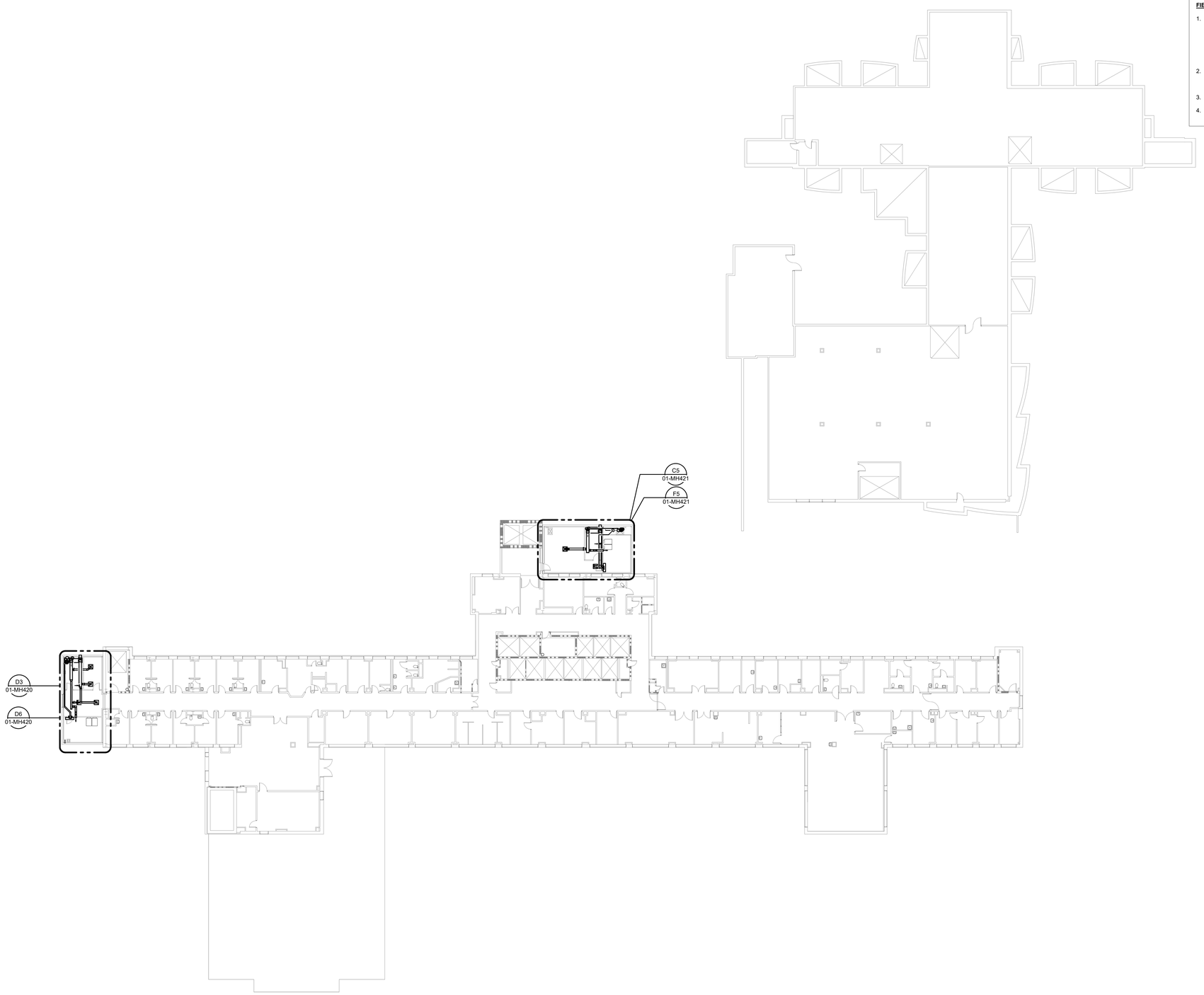


PLAN NORTH

1" = 20'-0" SCALE 20 0 20 40 FEET

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| Drawing Title | Phase | Project Title | Project Number |
|---|---|---|---|
| SEVENTH FLOOR PLAN - MECHANICAL | FINAL BID DOCUMENTS | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH107 |
| | | | SHEET 279 of 797 |

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# NOTES:

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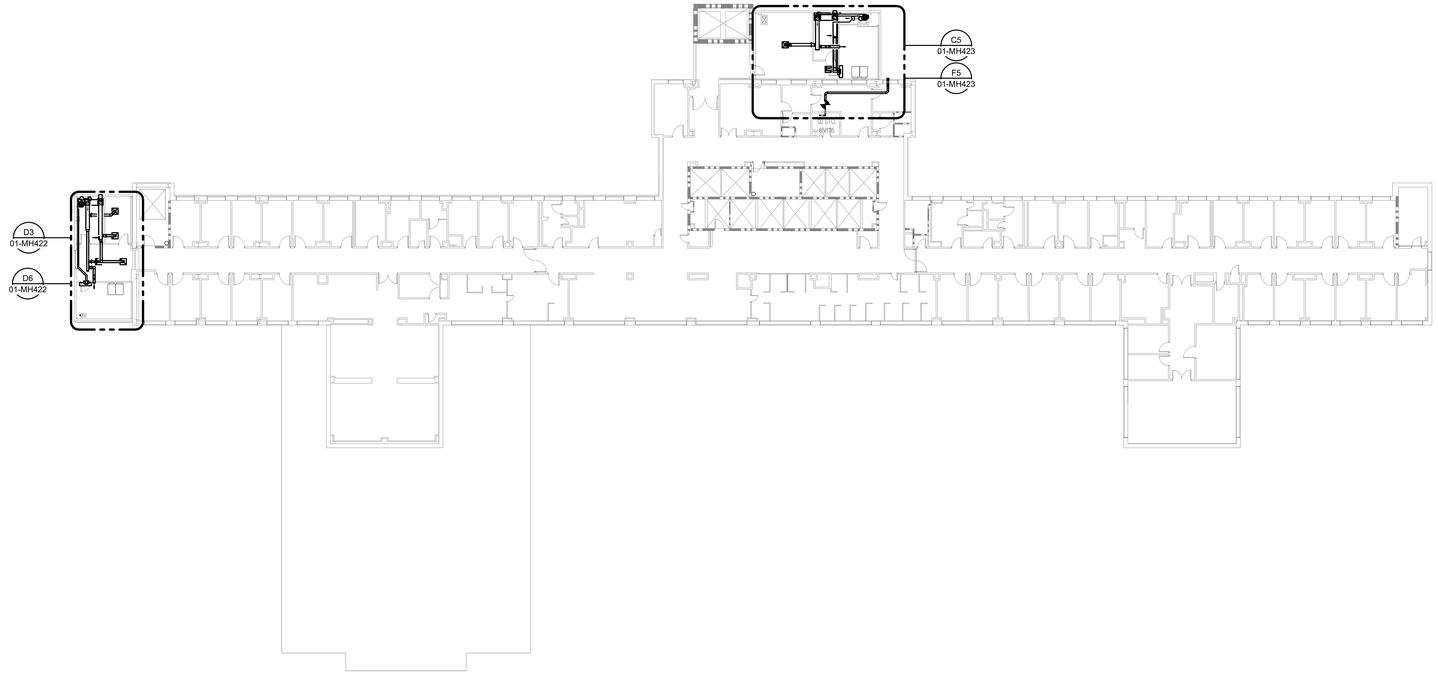


PLAN NORTH

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ENGINEER
PE081525

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|---|---|---|---|
| EIGHTH FLOOR PLAN - MECHANICAL | FINAL BID DOCUMENTS | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH108 |
| | | | SHEET 280 of 797 |

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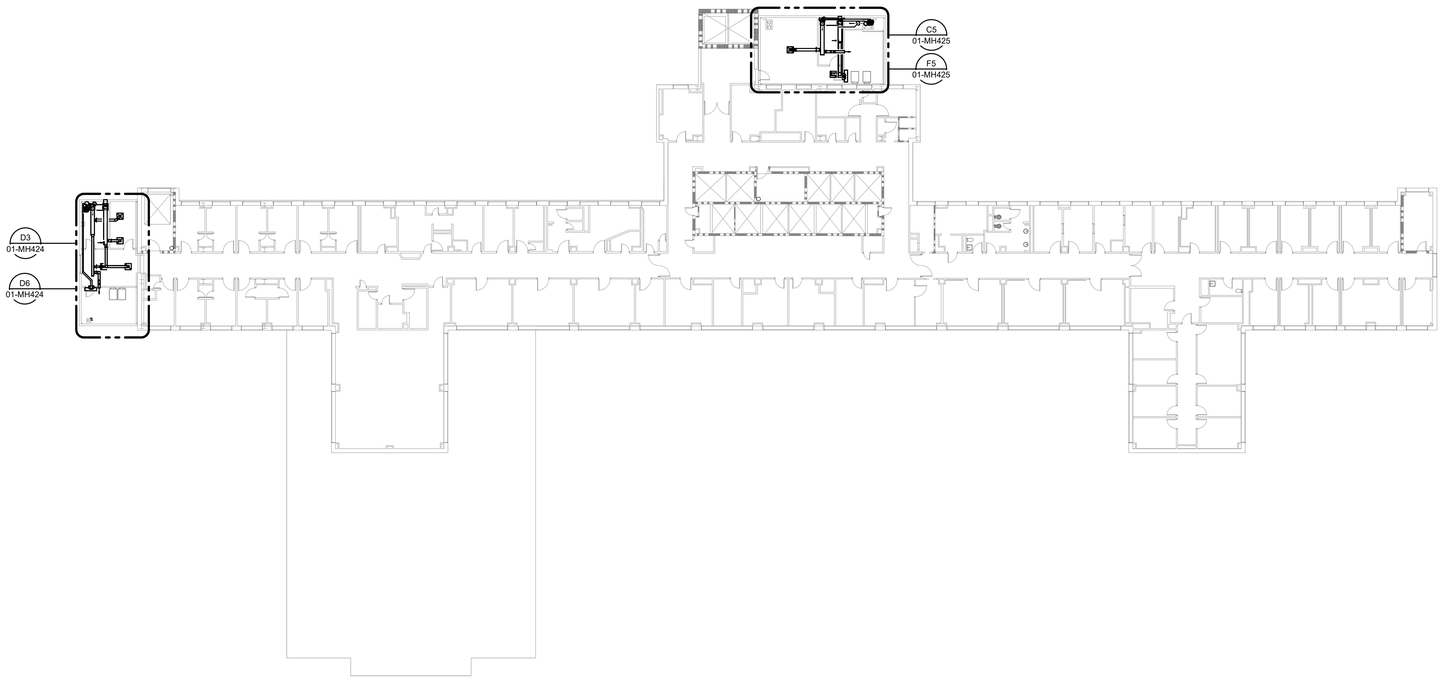


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| Drawing Title: NINTH FLOOR PLAN - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-MH109 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 281 of 797 |


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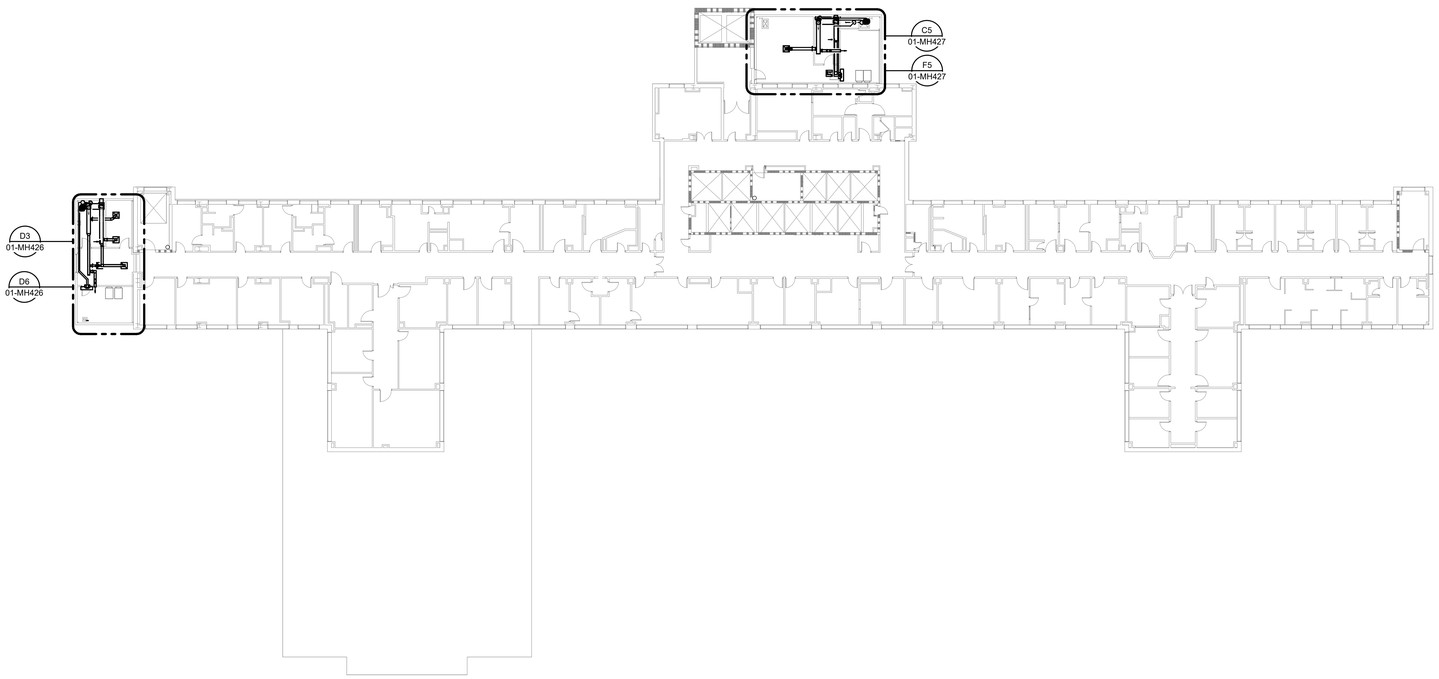


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DOUGLAS SMITH
ENGINEER
PE081525

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| Drawing Title: TENTH FLOOR PLAN - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH110 |
| | | | SHEET 282 of 797 |

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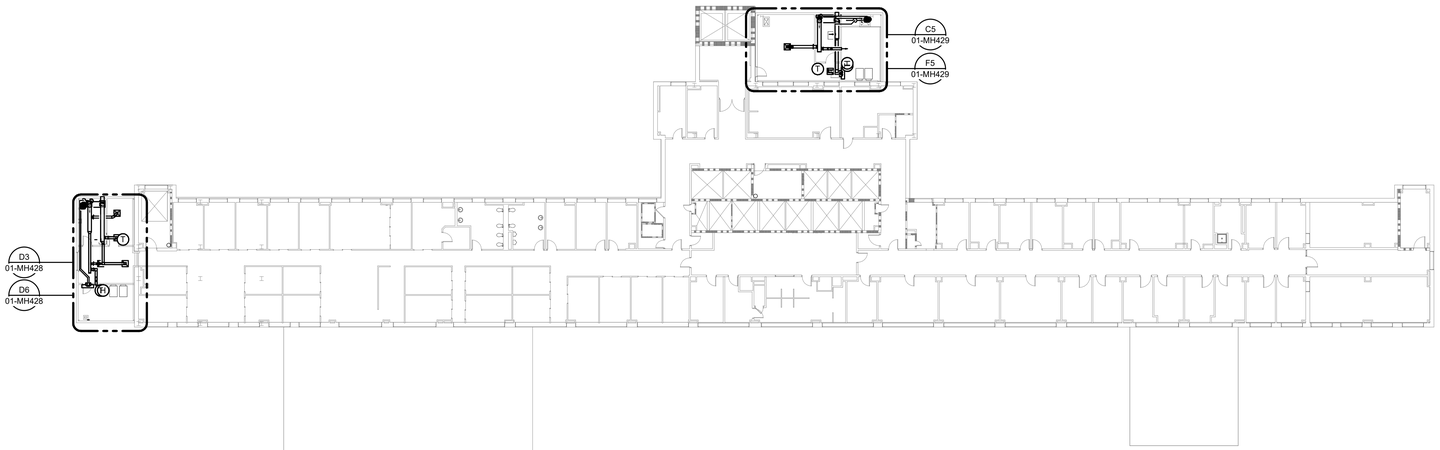
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.




PLAN NORTH

1" = 20'-0" SCALE — 20 0 20 40 FEET

| Revisions: | Date: |
|---|---|
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PROJECT #23002251.00

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

| | |
|---|---|
| Drawing Title | ELEVENTH FLOOR PLAN - MECHANICAL |
| Approved: | |
| Phase | FINAL BID DOCUMENTS |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-MH111 |
| | SHEET 283 of 797 |

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VA FORM 08 - 6231

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
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   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
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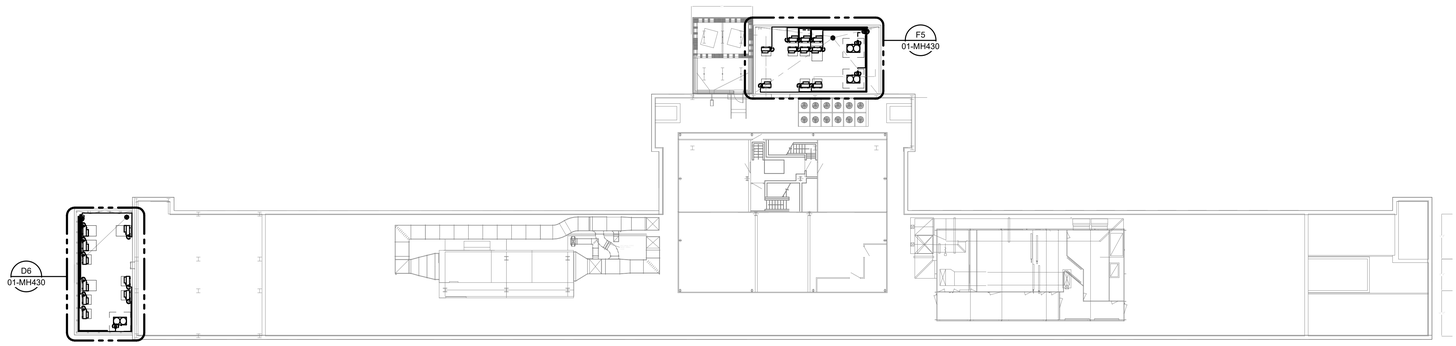


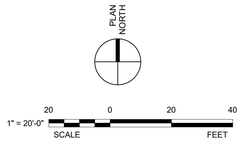


| Revisions: | Date: |
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REGISTERED PROFESSIONAL
DOUGLAS SMITH
ENGINEER
PE081525

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

| Drawing Title | Phase | Project Title | Project Number |
|---|---|---|---|
| ROOF PLAN - MECHANICAL | FINAL BID DOCUMENTS | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH112 |
| | | | SHEET 284 of 797 |

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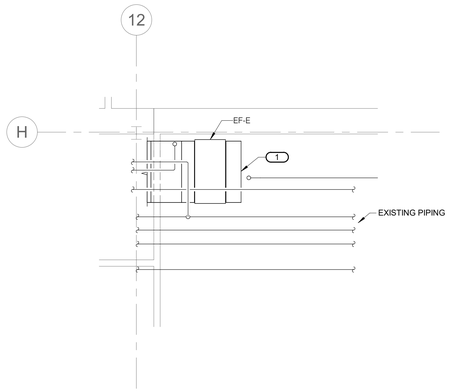
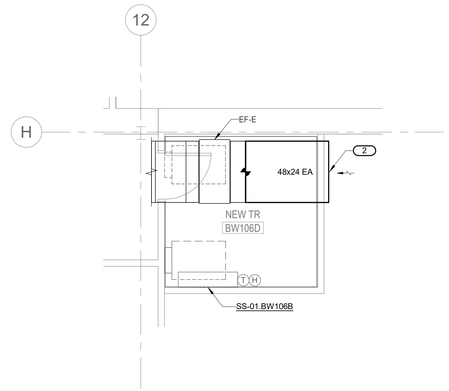


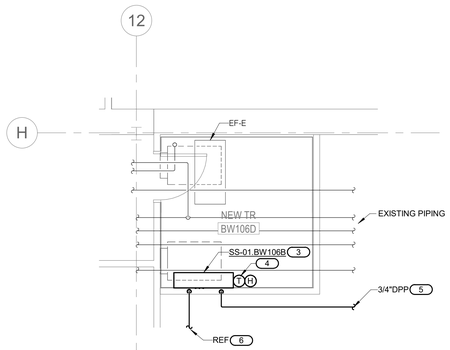

## B4 BASEMENT PLAN - BW106B - DEMOLITION

1/4" = 1'-0"



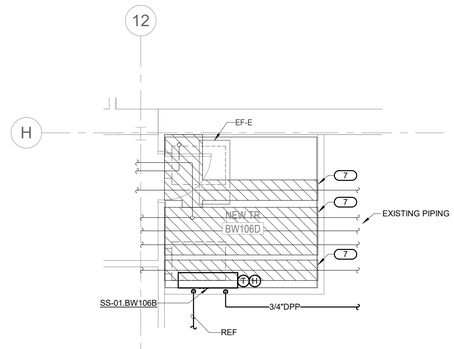

## B6 BASEMENT PLAN - BW106B - VENTILATION

1/4" = 1'-0"




## D4 BASEMENT PLAN - BW106B - PIPING

1/4" = 1'-0"




## D6 BASEMENT PLAN - BW106B - DRIP PANS

1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
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   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
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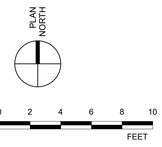
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/00-MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. DRIP PANS ARE SHOWN BASED ON INFORMATION OF EXISTING PIPING DETERMINED FROM EXISTING DRAWINGS AND LIMITED FIELD INVESTIGATIONS. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROVIDING ADDITIONAL DRIP PANS AS REQUIRED.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/00-MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN. IF GRAVITY DRAIN SLOPING IS NOT POSSIBLE, PROVIDE WITH LIFT/PUMP. IF REQUIRED, MECHANICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE POWER FOR PUMP. COORDINATE WITH ELECTRICAL CONTRACTOR. REFER TO 00-MG700 FOR CONDENSATE PUMP REQUIREMENTS.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** ( # )

1. PREPARE OPENING FOR NEW CONNECTION.
2. EXTEND EXHAUST DUCT THOUGH NEW WALL AND COVER OPENING WITH HEAVY DUTY WIRE MESH.
3. INSTALL NEW SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
4. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFER TO SHEET 00-MG800 FOR ADDITIONAL INFORMATION.
5. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK AND DISCHARGE WITH AIR GAP. REFERENCE OVERALL FLOOR PLAN FOR ROUTING.
6. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, ABOVE CEILING WHERE POSSIBLE.
7. PROVIDE DRIP PAN BELOW ALL EXISTING PIPING PER DETAIL F1/0O-MG500. ROUTE DRAIN TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK. PROVIDE DRIP PAN PUMP (CP-X) IF GRAVITY DRAINAGE IS NOT FEASIBLE.




| Revisions: | Date: |
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PROJECT #23002251.00

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REGISTERED PROFESSIONAL
DOUGLAS SMITH
ENGINEER
PE081525

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

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|---|---|
| Drawing Title: BASEMENT ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |

Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS
Location: UNIVERSITY DRIVE, PITTSBURGH, PA 15240
Issue Date: 06.13.2025 | Checked: CAH | Drawn: BMB

Project Number: 646-22-700
Building Number: 1
Drawing Number: 01-MH400
SHEET 285 of 797

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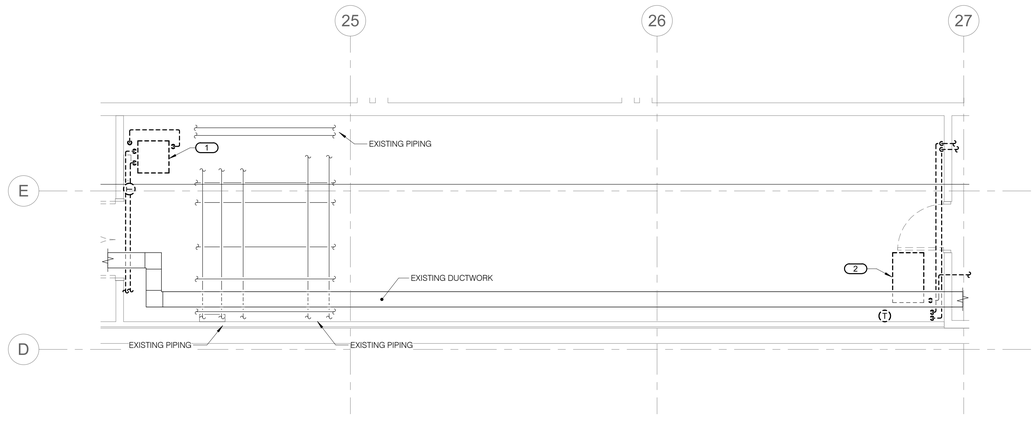
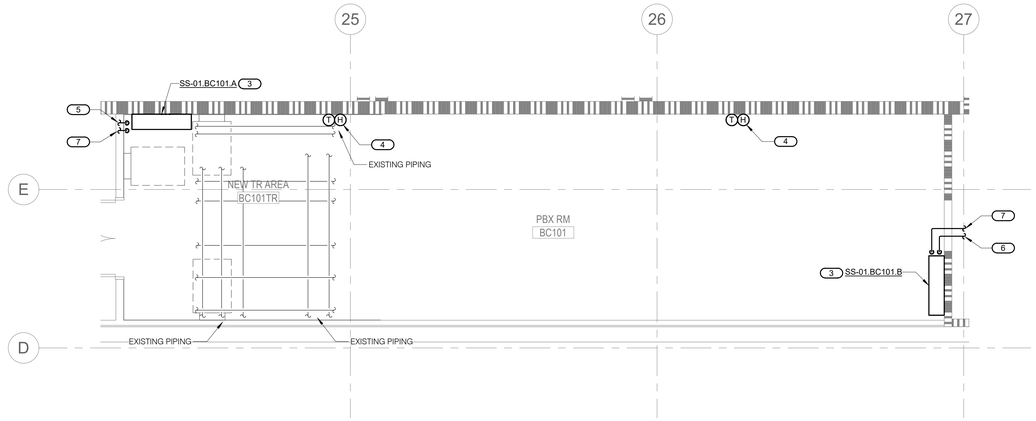


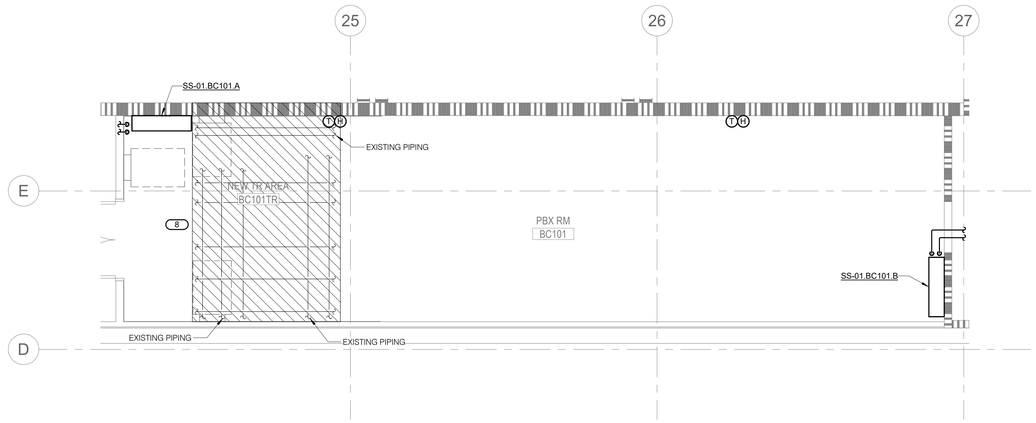

## B4 BASEMENT PLAN - PBX BC101 - DEMOLITION

1/4" = 1'-0"




## D4 BASEMENT PLAN - PBX BC101 - PIPING

1/4" = 1'-0"




## F4 BASEMENT PLAN - PBX BC101 - DRIP PANS

1/4" = 1'-0"

# NOTES:

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   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
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**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/00-MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. DRIP PANS ARE SHOWN BASED ON INFORMATION OF EXISTING PIPING DETERMINED FROM EXISTING DRAWINGS AND LIMITED FIELD INVESTIGATIONS. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROVIDING ADDITIONAL DRIP PANS AS REQUIRED.
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5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/00-MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN. IF GRAVITY DRAIN SLOPING IS NOT POSSIBLE, PROVIDE WITH LIFT/PUMP. IF REQUIRED, MECHANICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE POWER FOR PUMP. COORDINATE WITH ELECTRICAL CONTRACTOR.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** ( # )

1. REMOVE EXISTING GEOLOGIX UNIT, CONDENSATE PUMP, AND ALL ASSOCIATED PIPING AND CONTROLS.
2. REMOVE EXISTING UNITED COOLAIR UNIT, CONDENSATE PUMP, AND ALL ASSOCIATED PIPING AND CONTROLS.
3. INSTALL NEW SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
4. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFER TO SHEET 00-MG800 FOR ADDITIONAL INFORMATION.
5. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO SINK IN BW103. REFERENCE OVERALL FLOOR PLAN FOR ROUTING.
6. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO FLOOR DRAIN IN BC103. REFERENCE OVERALL FLOOR PLAN FOR ROUTING.
7. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, ABOVE CEILING WHERE POSSIBLE.
8. PROVIDE A DRIP PAN BELOW EXISTING PIPING LOCATED ABOVE BC101TR - NEW TR AREA PER DETAIL F1/00-MG500. ROUTE DRAIN TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK. PROVIDE DRIP PAN PUMP (CP-X) IF GRAVITY DRAINAGE IS NOT FEASIBLE.

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

| Revisions: | Date: |
|---|---|
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PROJECT #23002251.00


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Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

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|---|---|---|---|
| Drawing Title: BASEMENT ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-MH401 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 286 of 797 |


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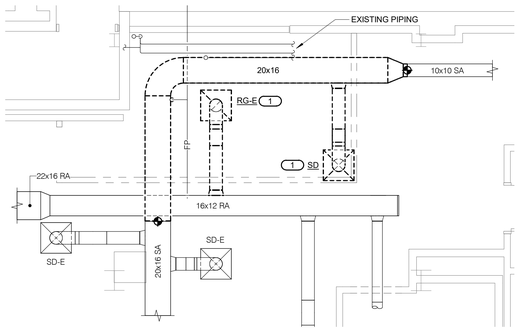
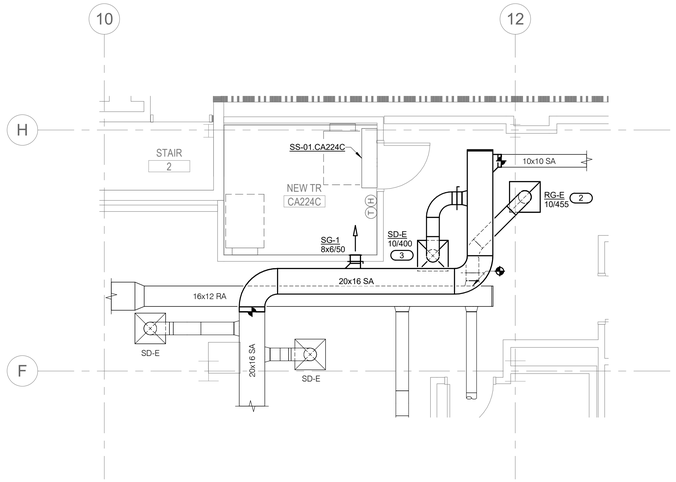
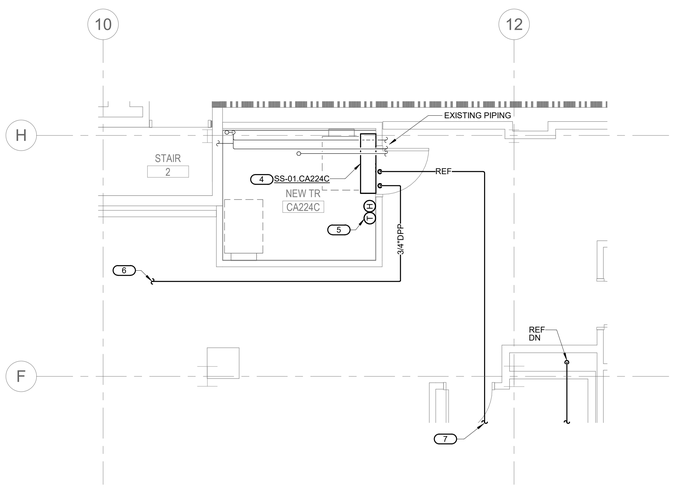


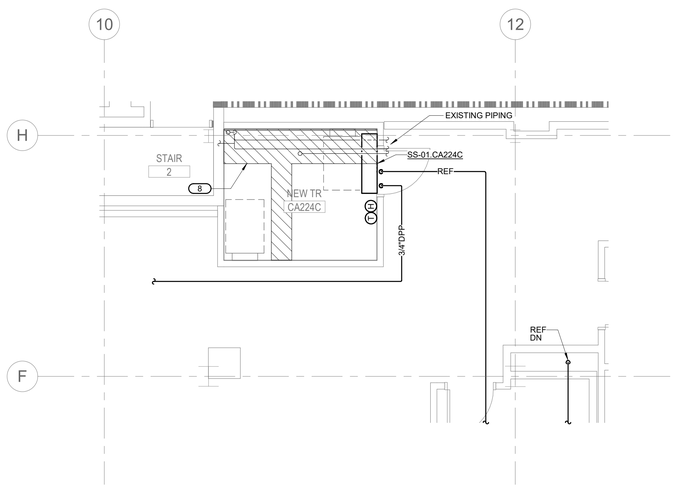

## C3 GROUND FLOOR PLAN - TR CA224C - DEMOLITION
1/4" = 1'-0"




## C6 GROUND FLOOR PLAN - TR CA224C - VENTILATION
1/4" = 1'-0"




## F3 GROUND FLOOR PLAN - TR CA224C - PIPING
1/4" = 1'-0"




## F6 GROUND FLOOR PLAN - TR CA224C - DRIP PANS
1/4" = 1'-0"

# NOTES:

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1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** ( # )

1. EXISTING AIR TERMINAL DEVICE TO BE RELOCATED AS PART OF NEW WORK. REMOVE, STORE, AND PROTECT. CAP DUCTWORK OUTSIDE OF NEW TR. REFERENCE VENTILATION PLAN FOR NEW LOCATION.
2. RELOCATED EXISTING AIR TERMINAL DEVICE. REBALANCE TO INDICATED CFM.
3. EXISTING AIR TERMINAL DEVICE. REBALANCE TO INDICATED CFM.
4. INSTALL NEW SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
5. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL, COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFER TO SHEET 00-MG800 FOR ADDITIONAL INFORMATION.
6. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK AND DISCHARGE WITH AIR GAP. REFERENCE OVERALL FLOOR PLAN FOR ROUTING.
7. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, ABOVE CEILING.
8. PROVIDE DRIP PAN BELOW EXISTING PIPING PER DETAIL F1/00-MG500. ROUTE DRAIN TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK. PROVIDE DRIP PAN PUMP (CP-X) IF GRAVITY DRAINAGE IS NOT FEASIBLE.

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

| Revisions: | Date: |
|---|---|
| | |

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DOUGLAS SMITH
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PE081525

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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|---|---|---|---|
| Drawing Title: GROUND FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-MH402 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 287 of 797 |

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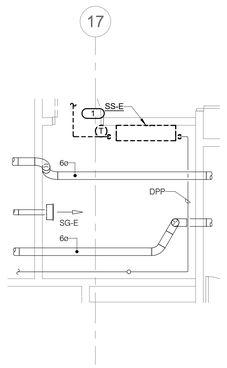
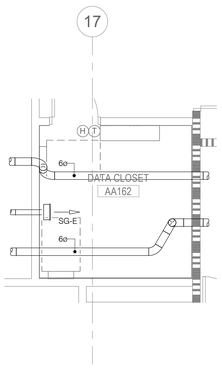
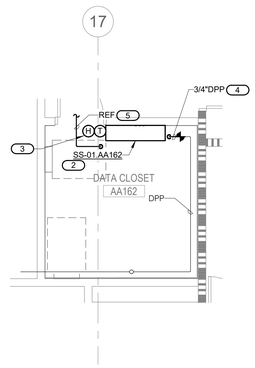


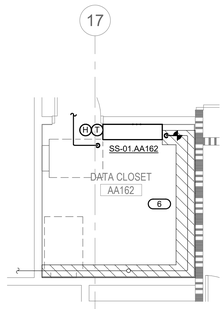

## B1 GROUND FLOOR PLAN - TR AA162 - DEMOLITION
1/4" = 1'-0"



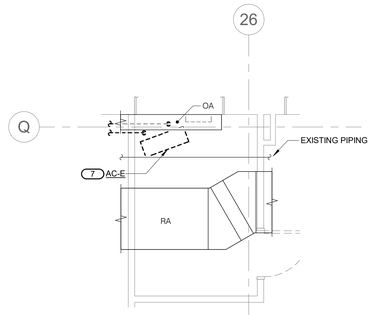

## B4 GROUND FLOOR PLAN - TR AA162 - VENTILATION
1/4" = 1'-0"



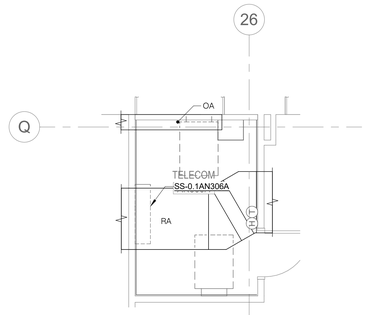

## B6 GROUND FLOOR PLAN - TR AA162 - PIPING
1/4" = 1'-0"



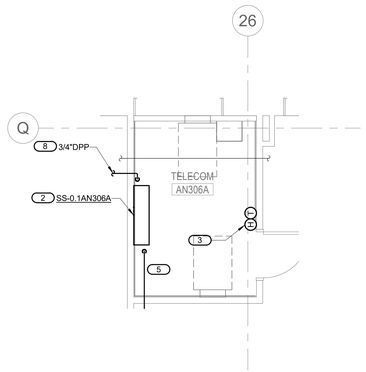

## D1 GROUND FLOOR PLAN - TR AA162 - DRIP PANS
1/4" = 1'-0"



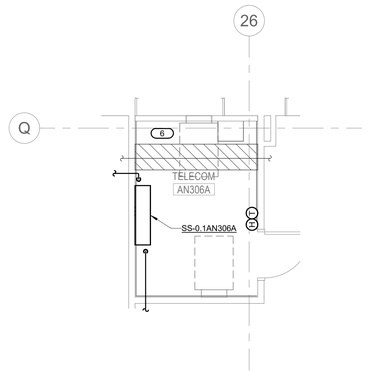

## D4 GROUND FLOOR PLAN - TR AN306A - DEMOLITION
1/4" = 1'-0"




## D6 GROUND FLOOR PLAN - TR AN306A - VENTILATION
1/4" = 1'-0"




## F4 GROUND FLOOR PLAN - TR AN306A - PIPING
1/4" = 1'-0"




## F6 GROUND FLOOR PLAN - TR AN306A - DRIP PANS
1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** (#)

1. REMOVE EXISTING SPLIT SYSTEM INDOOR UNIT, ASSOCIATED OUTDOOR UNIT, CONDENSATE PUMP, AND ALL ASSOCIATED REFRIGERANT PIPING AND CONTROLS.
2. INSTALL NEW SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
3. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFER TO SHEET 00-MG800 FOR ADDITIONAL INFORMATION.
4. CONNECT TO EXISTING CONDENSATE DRAIN PIPING.
5. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, ABOVE CEILING WHERE POSSIBLE.
6. PROVIDE DRIP PAN BELOW EXISTING PIPING PER DETAIL F1/00-MG500. ROUTE DRAIN TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK.
7. REMOVE EXISTING OCEANAIRE UNIT, CONDENSATE PUMP, AND ALL ASSOCIATED PIPING AND CONTROLS.
8. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK AND DISCHARGE WITH AIR GAP. REFERENCE OVERALL FLOOR PLAN FOR ROUTING.

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

| Revisions: | Date: |
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Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

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| Drawing Title: GROUND FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH403 |
| | | | SHEET 288 of 797 |

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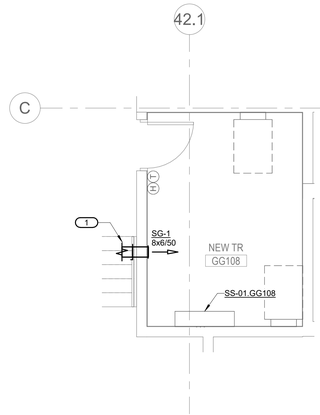
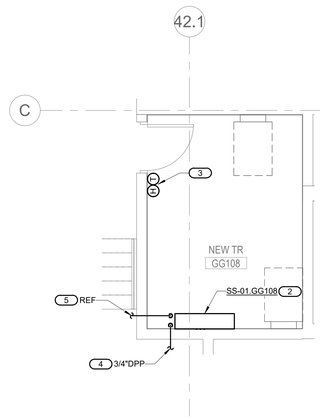



B6 **GROUND FLOOR PLAN - TR GG108 - VENTILATION**
1/4" = 1'-0"




C6 **GROUND FLOOR PLAN - TR GG108 - PIPING**
1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** ( # )

1. EXTEND TO NEAREST LOW PRESSURE SUPPLY AIR BRANCH DUCTWORK AND CONNECT TO EXISTING.
2. INSTALL NEW SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
3. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFER TO SHEET 00-MG800 FOR ADDITIONAL INFORMATION.
4. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK AND DISCHARGE WITH AIR GAP. REFERENCE OVERALL FLOOR PLAN FOR ROUTING.
5. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, ABOVE CEILING WHERE POSSIBLE.

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

| Revisions: | Date: |
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| Drawing Title: GROUND FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-MH404 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 289 of 797 |

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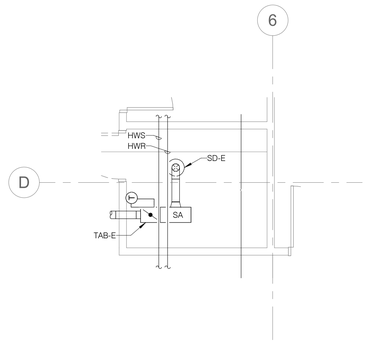
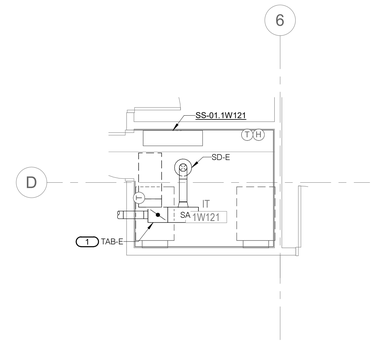
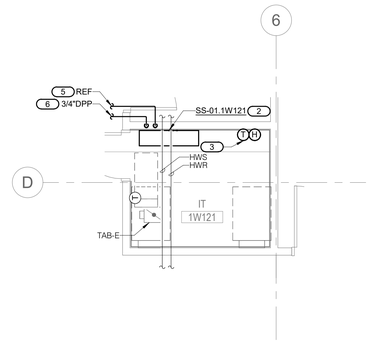


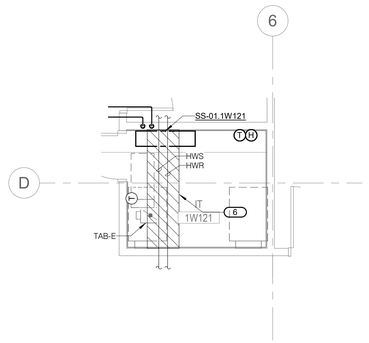

## B2 FIRST FLOOR PLAN - TR 1W121 - DEMOLITION
1/4" = 1'-0"



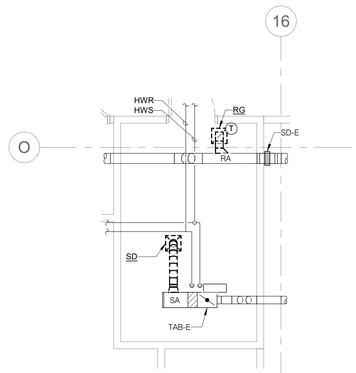

## B4 FIRST FLOOR PLAN - TR 1W121 - VENTILATION
1/4" = 1'-0"



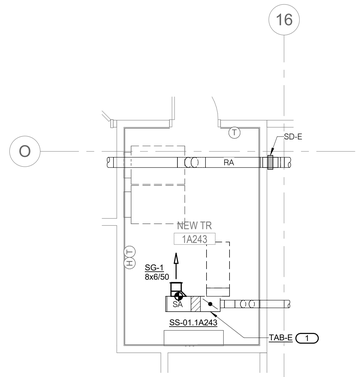

## B6 FIRST FLOOR PLAN - TR 1W212 - PIPING
1/4" = 1'-0"



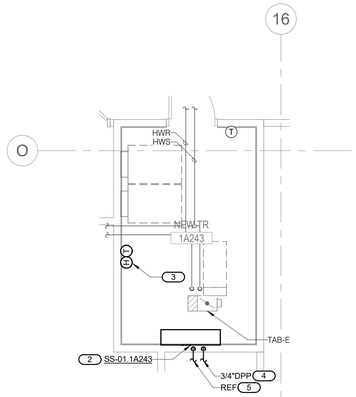

## D2 FIRST FLOOR PLAN - TR 1W121 - DRIP PANS
1/4" = 1'-0"



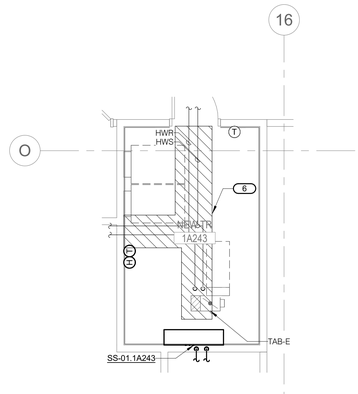

## D4 FIRST FLOOR PLAN - TR 1A243 - DEMOLITION
1/4" = 1'-0"




## D6 FIRST FLOOR PLAN - TR 1A243 - VENTILATION
1/4" = 1'-0"




## F4 FIRST FLOOR PLAN - TR 1A243 - PIPING
1/4" = 1'-0"




## F6 FIRST FLOOR PLAN - TR 1A243 - DRIP PANS
1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
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   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** ( # )

1. REBALANCE EXISTING TERMINAL AIR BOX TO 50 CFM CONSTANT VOLUME, COOLING ONLY.
2. INSTALL NEW SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
3. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFER TO SHEET MG800 FOR ADDITIONAL INFORMATION.
4. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK AND DISCHARGE WITH AIR GAP. REFERENCE OVERALL FLOOR PLAN FOR ROUTING.
5. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, ABOVE CEILING WHERE POSSIBLE.
6. PROVIDE DRIP PAN BELOW EXISTING PIPING PER DETAIL F1/MG500. ROUTE DRAIN TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK. PROVIDE DRIP PAN PUMP (CP-X) IF GRAVITY DRAINAGE IS NOT FEASIBLE.

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

| Revisions: | Date: |
|---|---|
| | |


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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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| Drawing Title | FIRST FLOOR ENLARGED PLANS - MECHANICAL |
| Approved: | |
| Phase | FINAL BID DOCUMENTS |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-MH405 |
| | SHEET 290 of 797 |


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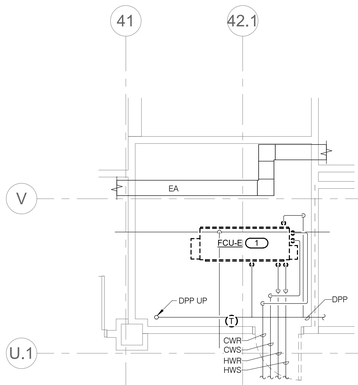
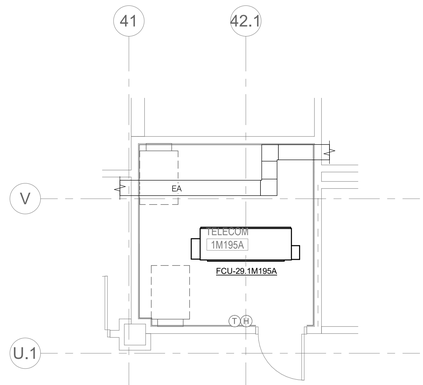


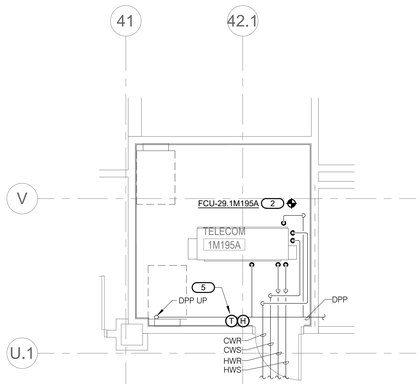

## B4 FIRST FLOOR PLAN - TR 1M195A - DEMOLITION

1/4" = 1'-0"



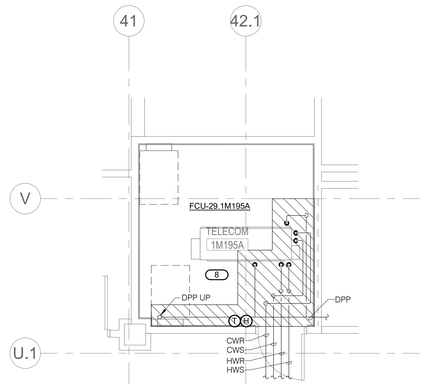

## B6 FIRST FLOOR PLAN - TR 1M195A - VENTILATION

1/4" = 1'-0"



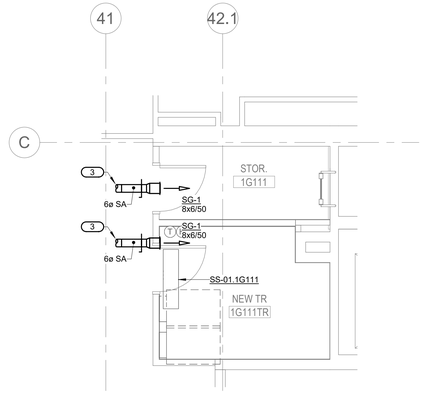

## D4 FIRST FLOOR PLAN - TR 1M195A - PIPING

1/4" = 1'-0"



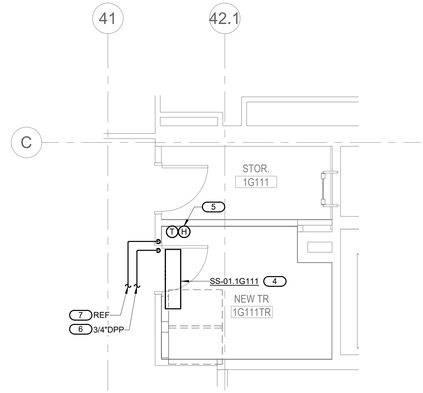

## D6 FIRST FLOOR PLAN - TR 1M195A - DRIP PANS

1/4" = 1'-0"




## F4 FIRST FLOOR PLAN - TR 1G111 - VENTILATION

1/4" = 1'-0"




## F6 FIRST FLOOR PLAN - TR 1G111 - PIPING

1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** ( # )

1. REMOVE EXISTING FAN COIL UNIT, ALL ASSOCIATED CONTROLS, AND AUXILIARY DRAIN PAN. REMOVE ASSOCIATED PIPING AND PIPING ACCESSORIES BACK TO EQUIPMENT SHUTOFF VALVES. PREPARE PIPING FOR NEW CONNECTION.
2. PROVIDE NEW FAN COIL UNIT, PIPING, PIPING ACCESSORIES, CONTROL VALVE, AND AUXILIARY DRAIN PAIN FOR FAN COIL UNIT PER DETAIL B8/MG501.
3. EXTEND TO NEAREST LOW PRESSURE SUPPLY AIRFLOW BRANCH DUCTWORK AND CONNECT TO EXISTING.
4. INSTALL NEW SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
5. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFER TO SHEET MG800 FOR ADDITIONAL INFORMATION.
6. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK AND DISCHARGE WITH AIR GAP. REFERENCE OVERALL FLOOR PLAN FOR ROUTING.
7. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, ABOVE CEILING WHERE POSSIBLE.
8. PROVIDE DRIP PAN BELOW EXISTING PIPING PER DETAIL F1/MG500. ROUTE DRAIN TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK. PROVIDE DRIP PAN PUMP (CP-X) IF GRAVITY DRAINAGE IS NOT FEASIBLE.

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

| Revisions: | Date: |
|---|---|
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Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

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| Drawing Title: FIRST FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH406 |
| | | | SHEET 291 of 797 |

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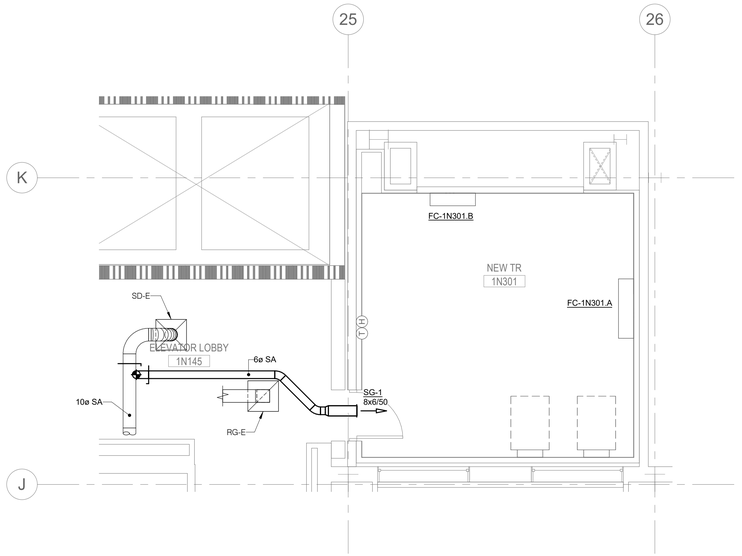
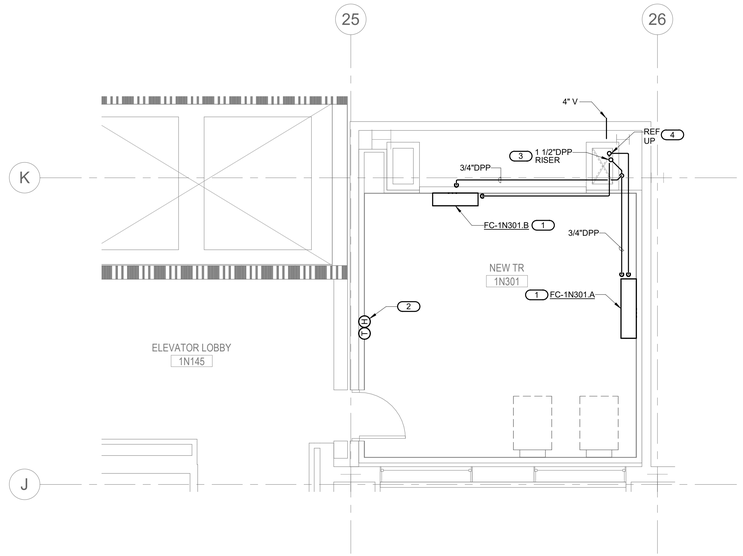


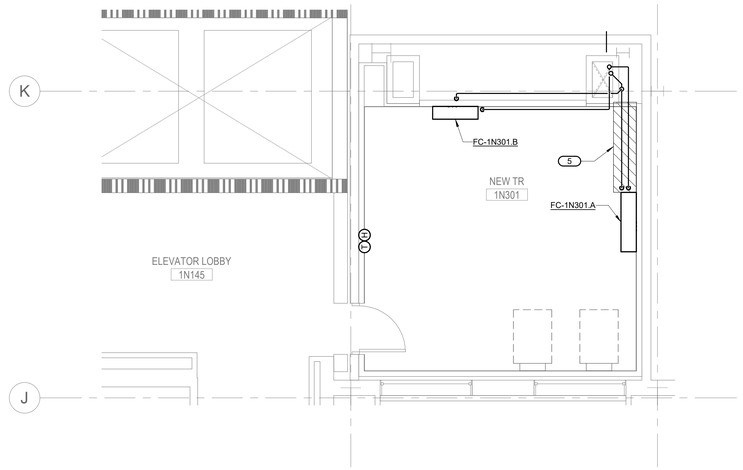

## C2 FIRST FLOOR PLAN - TR 1N301 - VENTILATION

1/4" = 1'-0"




## C5 FIRST FLOOR PLAN - TR 1N301 - PIPING

1/4" = 1'-0"




## F5 FIRST FLOOR PLAN - TR 1N301 - DRIP PANS

1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** ( # )

1. INSTALL NEW WALL MOUNTED VRF FAN COIL PER MANUFACTURER'S INSTRUCTIONS.
2. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFER TO SHEET MG800 FOR ADDITIONAL INFORMATION.
3. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEW RISER. DO NOT ROUTE DIRECTLY ABOVE ELECTRICAL OR TELECOMMUNICATIONS EQUIPMENT.
4. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, THROUGH PIPING CHASE UP TO OUTDOOR CONDENSING UNIT.
5. PROVIDE DRIP PAN BELOW PIPING PER DETAIL F1/MG500. ROUTE DRAIN TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK. PROVIDE DRIP PAN PUMP (CP-X) IF GRAVITY DRAINAGE IS NOT FEASIBLE.
6. PROVIDE 4" VENT PIPE AT LOWEST POINT OF NATURALLY VENTED REFRIGERANT PIPING SHAFT. PIPE SHALL BE LEVEL. SEAL PENETRATION WEATHERTIGHT.

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

| Revisions: | Date: |
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DOUGLAS SMITH
ENGINEER
PE081525

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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| Drawing Title: FIRST FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH407 |
| | | | SHEET 292 of 797 |

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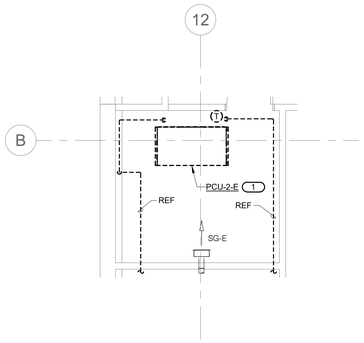
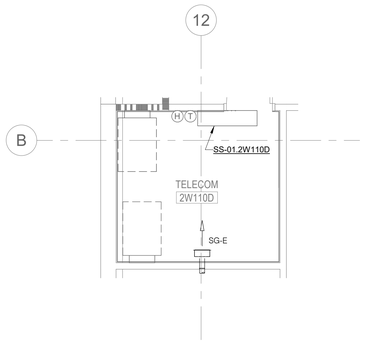
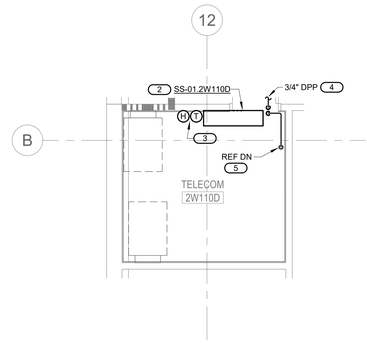


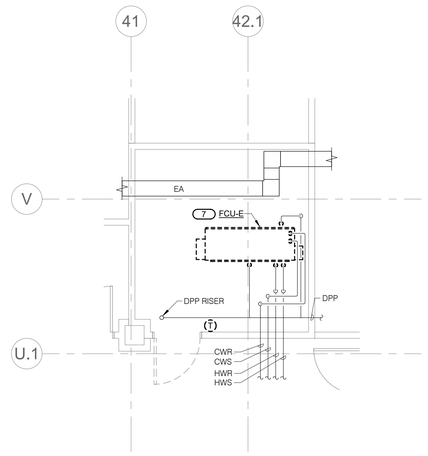

## B1 SECOND FLOOR PLAN - TR 2W110D - DEMOLITION
1/4" = 1'-0"



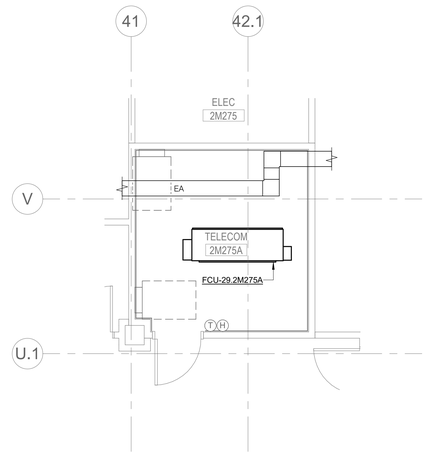

## B4 SECOND FLOOR PLAN - TR 1W110D - VENTILATION
1/4" = 1'-0"



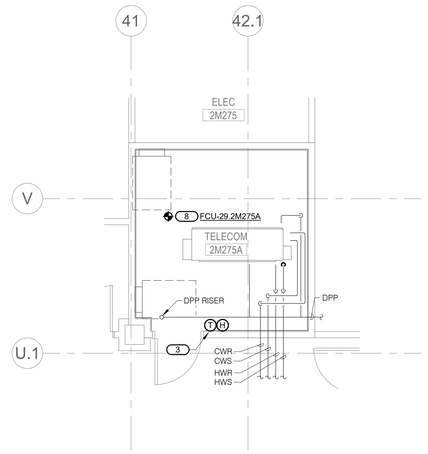

## B6 SECOND FLOOR PLAN - TR 2W110D - PIPING
1/4" = 1'-0"



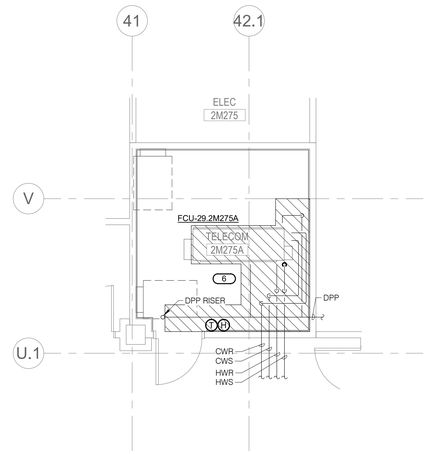

## D4 SECOND FLOOR PLAN - TR 2M275A - DEMOLITION
1/4" = 1'-0"




## D6 SECOND FLOOR PLAN - TR 2M275A - VENTILATION
1/4" = 1'-0"




## F4 SECOND FLOOR PLAN - TR 2M275A - PIPING
1/4" = 1'-0"




## F6 SECOND FLOOR PLAN - TR 2M275A - DRIP PANS
1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
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**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** (#)

1. REMOVE EXISTING PRECISION AIR UNIT, CONDENSATE PUMP, ALL ASSOCIATED PIPING, AND CONTROLS.
2. INSTALL NEW SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
3. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFER TO SHEET MG800 FOR ADDITIONAL INFORMATION.
4. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEW RISER. DO NOT ROUTE DIRECTLY ABOVE ELECTRICAL OR TELECOMMUNICATIONS EQUIPMENT.
5. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, DOWN THROUGH FLOOR TO OUTDOOR CONDENSING UNIT.
6. PROVIDE DRIP PAN BELOW EXISTING PIPING PER DETAIL F1/MG500. ROUTE DRAIN TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK.
7. REMOVE EXISTING FAN COIL UNIT, ALL ASSOCIATED CONTROLS, AND AUXILIARY DRAIN PAN. REMOVE ASSOCIATED PIPING AND PIPING ACCESSORIES BACK TO EQUIPMENT SHUTOFF VALVES. PREPARE PIPING FOR NEW CONNECTION.
8. PROVIDE NEW FAN COIL UNIT, PIPING, PIPING ACCESSORIES, CONTROL VALVE, AND AUXILIARY DRAIN PAIN FOR FAN COIL UNIT PER DETAIL B8/MG501.

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

| Revisions: | Date: |
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REGISTERED PROFESSIONAL
DOUGLAS SMITH
ENGINEER
PE081525

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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| Drawing Title | SECOND FLOOR ENLARGED PLANS - MECHANICAL |
| Phase | FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-MH408 |
| | SHEET 293 of 797 |

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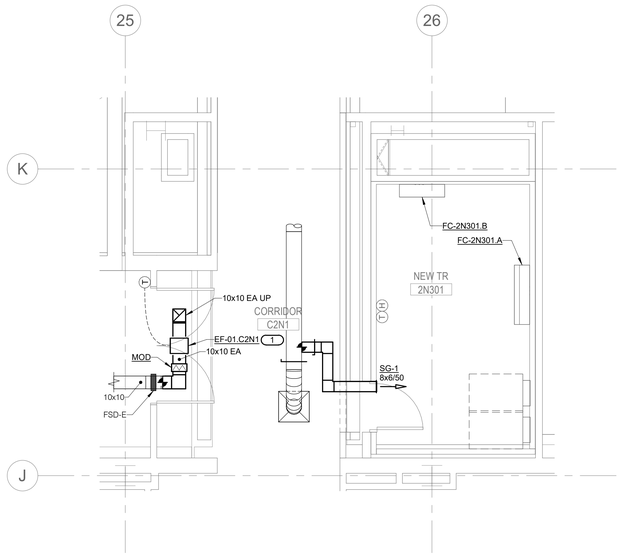
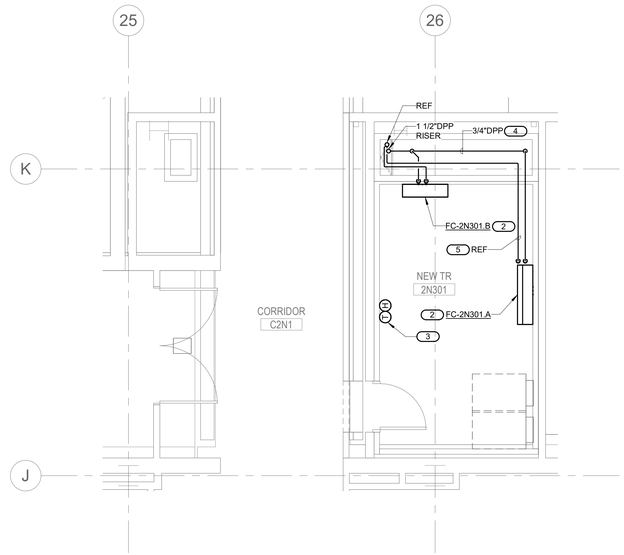


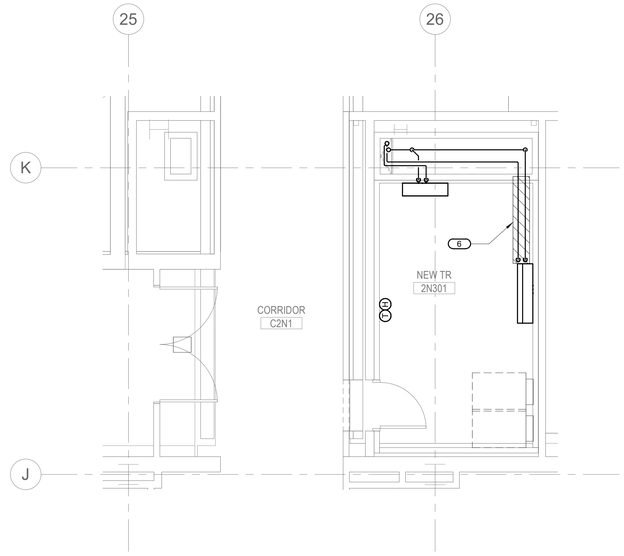

## C3 SECOND FLOOR PLAN - TR 2N301 - VENTILATION

1/4" = 1'-0"




## C6 SECOND FLOOR PLAN - TR 2N301 - PIPING

1/4" = 1'-0"




## F6 SECOND FLOOR PLAN - TR 2N301 - DRIP PANS

1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** (#)

1. MOUNT EXHAUST FAN PER DETAIL F8/00-MG500. CONNECT NEW EXHAUST DUCTWORK TO EXISTING AND ROUTE TO NEW LOUVER ON FLOOR ABOVE.
2. INSTALL NEW WALL MOUNTED VRF FAN COIL PER MANUFACTURER'S INSTRUCTIONS.
3. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFER TO SHEET MG800 FOR ADDITIONAL INFORMATION.
4. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEW RISER. DO NOT ROUTE DIRECTLY ABOVE ELECTRICAL OR TELECOMMUNICATIONS EQUIPMENT.
5. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, THROUGH PIPING CHASE UP TO OUTDOOR CONDENSING UNIT.
6. PROVIDE DRIP PAN BELOW PIPING PER DETAIL F1/MG500. ROUTE DRAIN TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK. PROVIDE DRIP PAN PUMP (CP-X) IF GRAVITY DRAINAGE IS NOT FEASIBLE.

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

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REGISTERED PROFESSIONAL
DOUGLAS SMITH
ENGINEER
PE081525

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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| Drawing Title: SECOND FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |

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| Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | Building Number: 1 |
| Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-MH409 |
| Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 294 of 797 |

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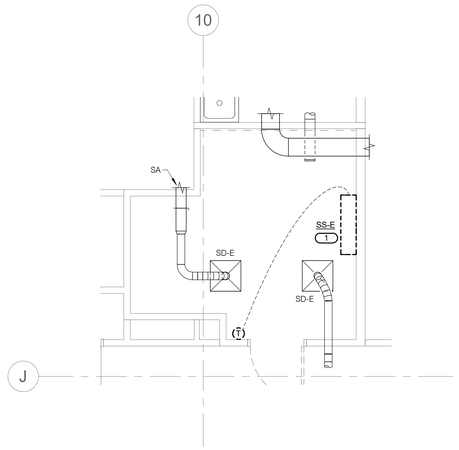
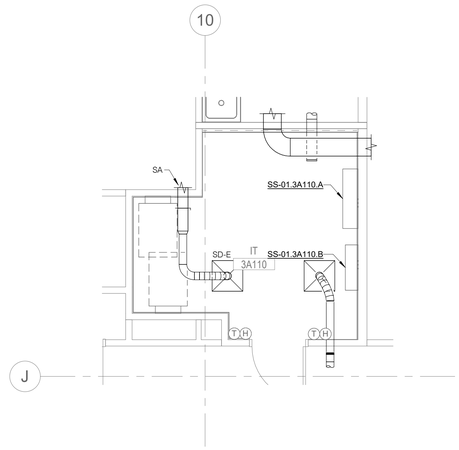
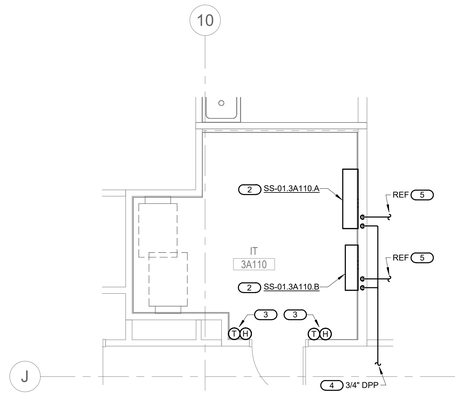


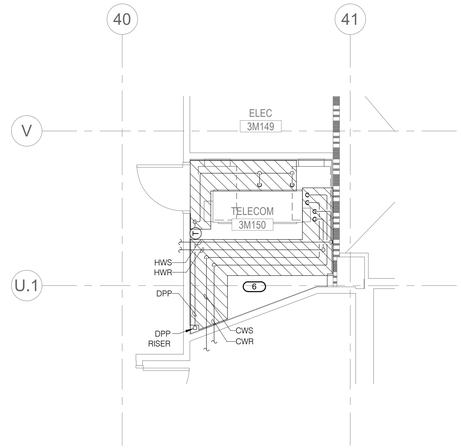

## B4 THIRD FLOOR PLAN - TR 3A110 - DEMOLITION
1/4" = 1'-0"




## B6 THIRD FLOOR PLAN - TR 3A110 - VENTILATION
1/4" = 1'-0"




## D6 THIRD FLOOR PLAN - TR 3A110 - PIPING
1/4" = 1'-0"




## F6 THIRD FLOOR PLAN - TR 3M150 - DRIP PANS
1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** ( # )

1. REMOVE EXISTING SPLIT SYSTEM INDOOR UNIT, ASSOCIATED OUTDOOR UNIT, CONDENSATE PUMP, AND ALL ASSOCIATED REFRIGERANT PIPING AND CONTROLS.
2. INSTALL NEW SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
3. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFER TO SHEET MG800 FOR ADDITIONAL INFORMATION.
4. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEW RISER. DO NOT ROUTE DIRECTLY ABOVE ELECTRICAL OR TELECOMMUNICATIONS EQUIPMENT.
5. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, ABOVE CEILING WHERE POSSIBLE.
6. PROVIDE DRIP PAN BELOW EXISTING PIPING PER DETAIL F1/MG500. ROUTE DRAIN TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK.

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

| Revisions: | Date: |
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REGISTERED PROFESSIONAL
DOUGLAS SMITH
ENGINEER
PE081525

Office of Construction and Facilities Management

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| Drawing Title: THIRD FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-MH410 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 295 of 797 |


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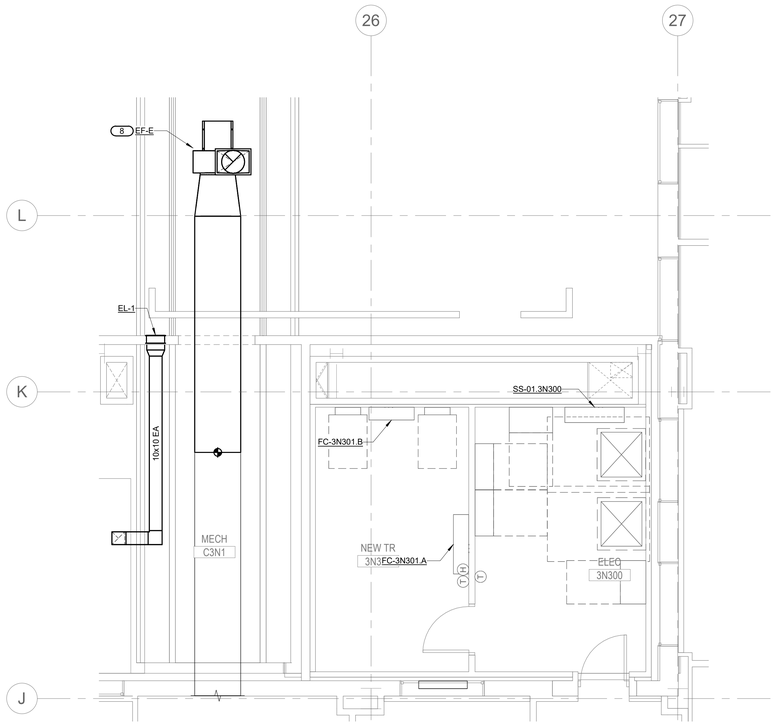
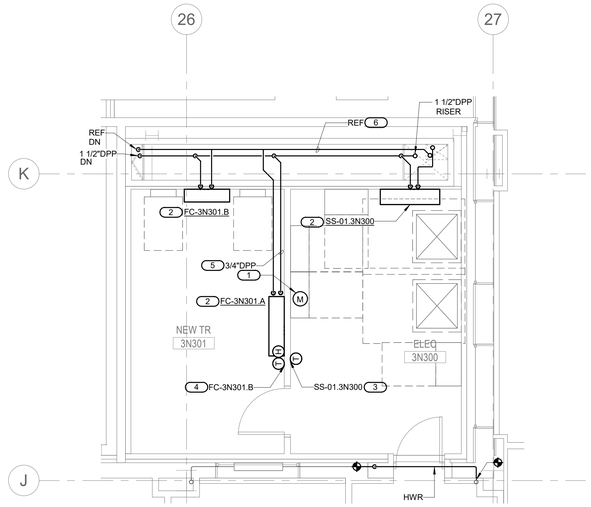


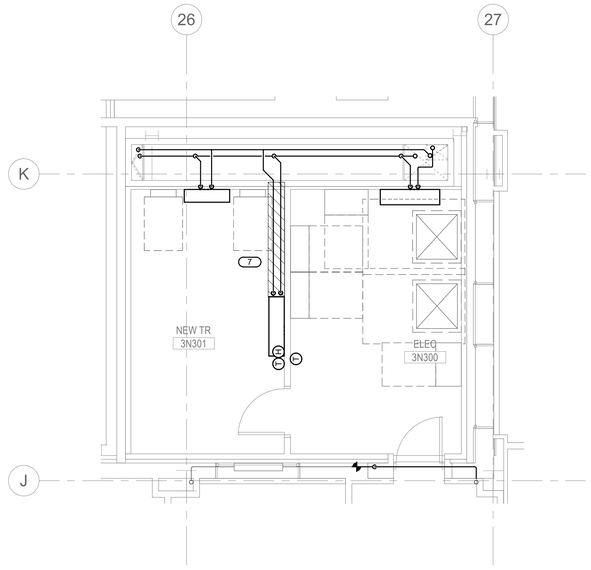

## C2 THIRD FLOOR PLAN - NORTH TOWER - VENTILATION

1/4" = 1'-0"




## C5 THIRD FLOOR PLAN - NORTH TOWER - PIPING

1/4" = 1'-0"




## F1 THIRD FLOOR PLAN - NORTH TOWER - DRIP PANS

1/4" = 1'-0"

## NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** ( # )

1. ELECTRICAL METER (BY EC). TCC TO PROVIDE FMCS INTEGRATION.
2. INSTALL NEW WALL MOUNTED AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
3. INSTALL NEW TEMPERATURE SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFERENCE F1/00-MG800 FOR ADDITIONAL INFORMATION.
4. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFERENCE D1/00-MG800 FOR ADDITIONAL INFORMATION.
5. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEW RISER. DO NOT ROUTE DIRECTLY ABOVE ELECTRICAL OR TELECOMMUNICATIONS EQUIPMENT.
6. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, THROUGH PIPING CHASE UP TO OUTDOOR CONDENSING UNIT.
7. PROVIDE DRIP PAN BELOW PIPING PER DETAIL F1/MG500. ROUTE DRAIN TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK. PROVIDE DRIP PAN PUMP (CP-X) IF GRAVITY DRAINAGE IS NOT FEASIBLE.
8. RELOCATE EXISTING FAN AS SHOW. EXTEND EXHAUST DUCTWORK, PROVIDE NEW EQUIPMENT SUPPORT RAILS, AND COORDINATE ELECTRICAL CONNECTION WITH EC.

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

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Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

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| Approved: | |
| Phase | FINAL BID DOCUMENTS |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-MH411 |
| | SHEET 296 of 797 |

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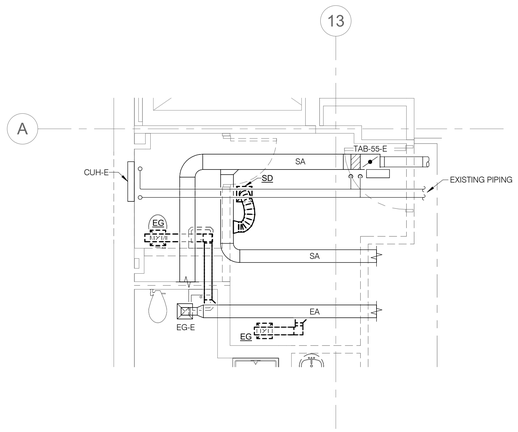
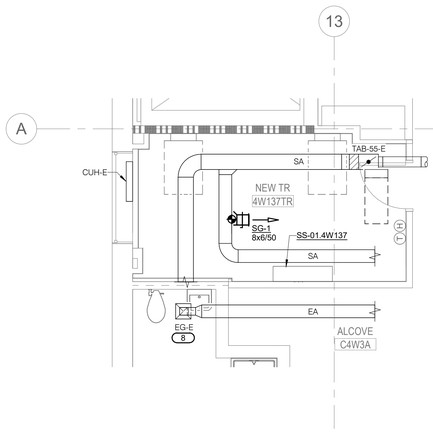
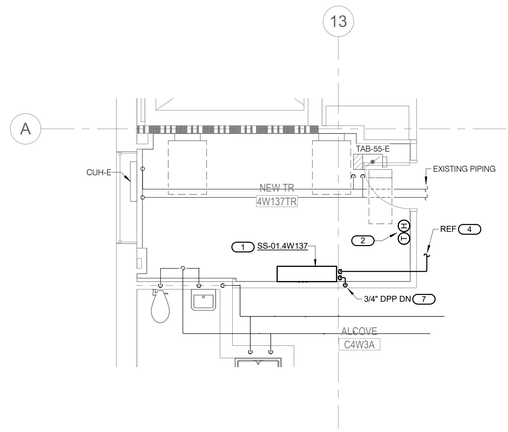


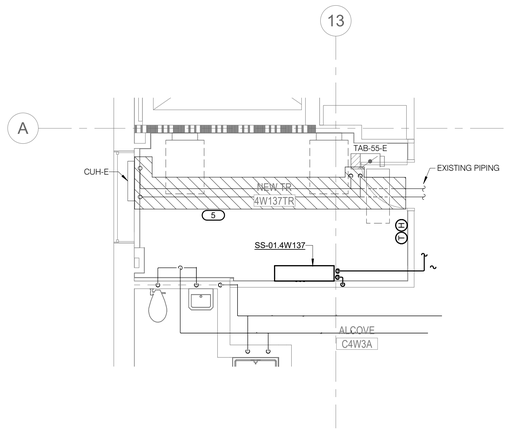

## B2 FOURTH FLOOR PLAN - TR 4W137 - DEMOLITION
1/4" = 1'-0"



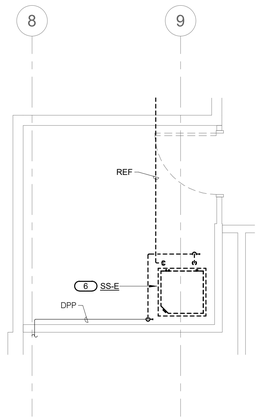

## B4 FOURTH FLOOR PLAN - TR 4W137 - VENTILATION
1/4" = 1'-0"



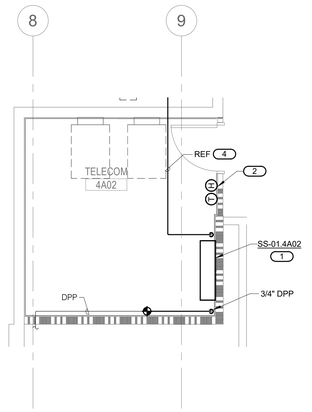

## B6 FOURTH FLOOR PLAN - TR 4W137 - PIPING
1/4" = 1'-0"



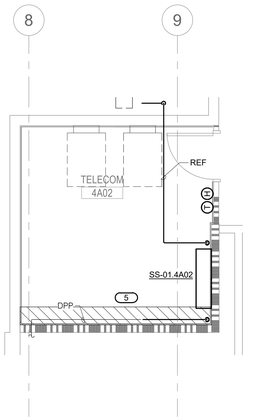

## D2 FOURTH FLOOR PLAN - TR 4W137 - DRIP PANS
1/4" = 1'-0"



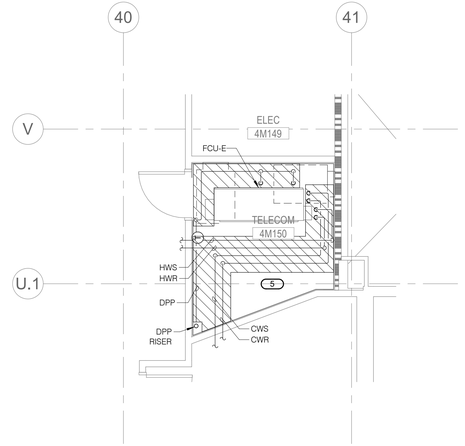

## D4 FOURTH FLOOR PLAN - TR 4A02 - DEMOLITION
1/4" = 1'-0"




## F2 FOURTH FLOOR PLAN- TR 4A02 - PIPING
1/4" = 1'-0"




## F4 FOURTH FLOOR PLAN- TR 4A02 - DRIP PANS
1/4" = 1'-0"




## F6 FOURTH FLOOR PLAN - TR 4M150 - DRIP PANS
1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.
9. TEST AND BALANCE CONTRACTOR SHALL MEASURE AND RECORD EXISTING AIRFLOWS FOR SYSTEMS PRIOR TO ANY SYSTEM MODIFICATIONS. UPON COMPLETION OF NEW INSTALLATION MODIFICATIONS, THE TEST AND BALANCE CONTRACTOR SHALL RESTORE THE ORIGINAL BALANCE OF THE UNALTERED PORTIONS, AS WELL AS BALANCE THE NEW WORK AS INDICATED ON THE DESIGN REQUIREMENTS.

**KEYNOTES:** ( # )

1. INSTALL NEW SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
2. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFER TO SHEET MG800 FOR ADDITIONAL INFORMATION.
3. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK AND DISCHARGE WITH AIR GAP. REFERENCE OVERALL FLOOR PLAN FOR ROUTING.
4. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, ABOVE CEILING WHERE POSSIBLE.
5. PROVIDE DRIP PAN BELOW EXISTING PIPING PER DETAIL F1/MG500. ROUTE DRAIN TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK. PROVIDE DRIP PAN PUMP (CP-X) IF GRAVITY DRAINAGE IS NOT FEASIBLE.
6. REMOVE EXISTING SPLIT SYSTEM INDOOR UNIT, ASSOCIATED OUTDOOR UNIT, CONDENSATE PUMP, AND ALL ASSOCIATED REFRIGERANT PIPING AND CONTROLS.
7. ROUTE CONDENSATE DRAIN PIPING DOWN AND CONNECT TO SINK IN LOUNGE. REFER TO SHEET 01-MH103. COORDINATE WITH PC.
8. REBALANCE TO EXISTING AIRFLOW.

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

| Revisions: | Date: |
|---|---|
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REGISTERED PROFESSIONAL
DOUGLAS SMITH
ENGINEER
PE089165

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

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| Drawing Title | FOURTH FLOOR ENLARGED PLANS - MECHANICAL |
| Approved: | |
| Phase | FINAL BID DOCUMENTS |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-MH412 |
| | SHEET 297 of 797 |

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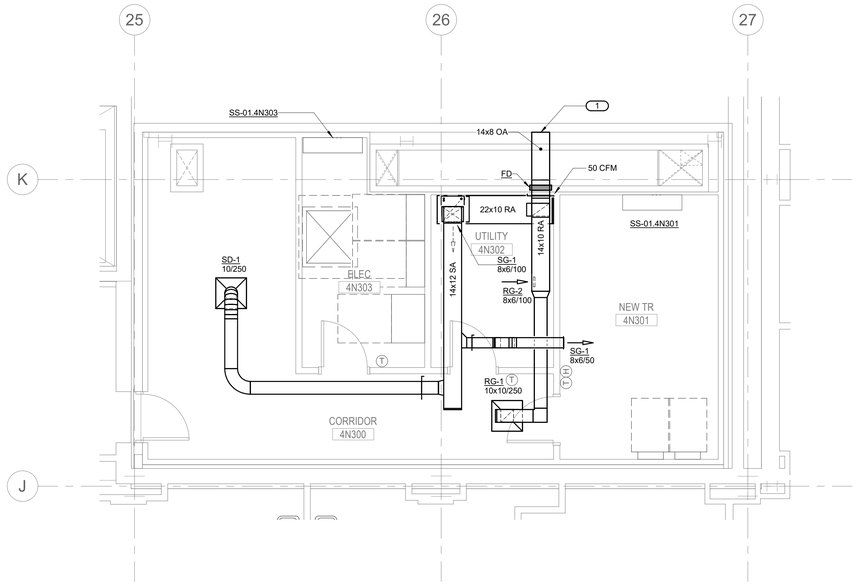
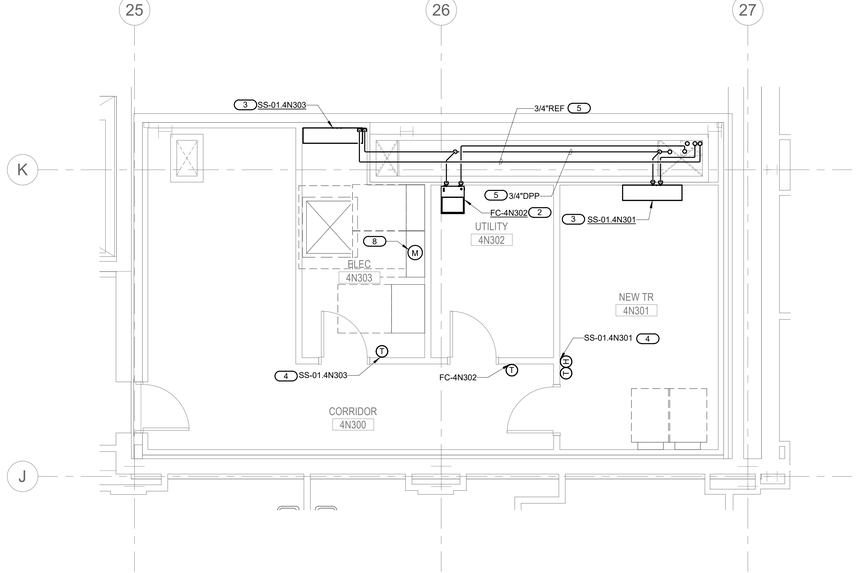



## C6 FOURTH FLOOR PLAN - NORTH TOWER - VENTILATION

1/4" = 1'-0"




## F6 FOURTH FLOOR PLAN - NORTH TOWER - PIPING

1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:**

1. CONNECT TO LOUVER (BY GC). REFERENCE C1/00-MG502.
2. INSTALL NEW FLOOR MOUNTED VRF INDOOR UNIT PER MANUFACTURER'S INSTRUCTIONS.
3. INSTALL NEW WALL MOUNTED SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
4. INSTALL NEW TEMPERATURE SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFERENCE F1/00-MG800 FOR ADDITIONAL INFORMATION.
5. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFERENCE D1/00-MG800 FOR ADDITIONAL INFORMATION.
6. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEW RISER. DO NOT ROUTE DIRECTLY ABOVE ELECTRICAL OR TELECOMMUNICATIONS EQUIPMENT.
7. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, TO PIPING CHASE AND UP TO OUTDOOR CONDENSING UNIT.
8. ELECTRICAL METER (BY EC). TCC TO PROVIDE FMCS INTEGRATION.

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

| Revisions: | Date: |
|---|---|
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ARCHITECT/ENGINEER OF RECORD

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REGISTERED PROFESSIONAL
DOUGLAS SMITH
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PE081525

Office of Construction and Facilities Management

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| Drawing Title: FOURTH FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH413 |
| | | | SHEET 298 of 797 |

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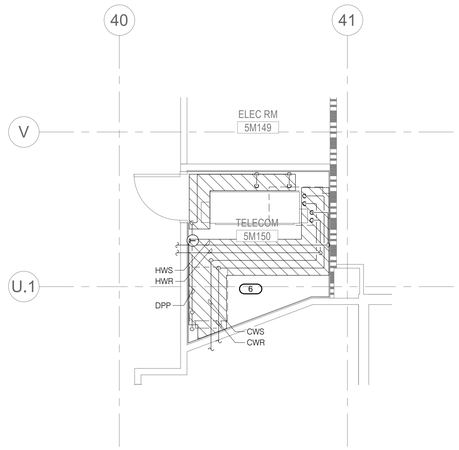
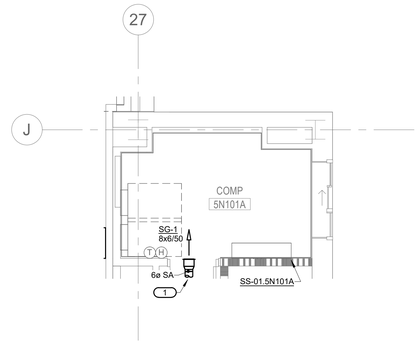
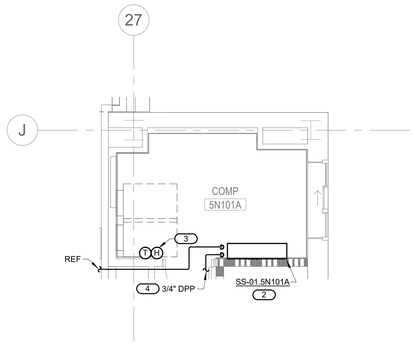


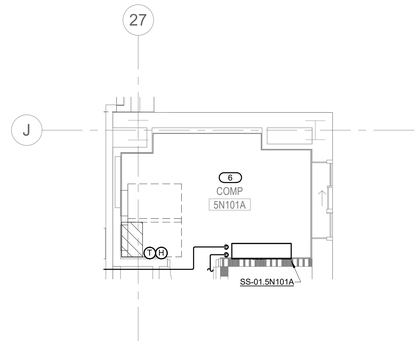

## D4 FIFTH FLOOR PLAN - TR 5M150 - DRIP PANS
1/4" = 1'-0"




## D6 FIFTH FLOOR PLAN - TR 5N101A - VENTILATION
1/4" = 1'-0"




## F4 FIFTH FLOOR PLAN - TR 5N101A - PIPING
1/4" = 1'-0"




## F6 FIFTH FLOOR PLAN - TR 5N101A - DRIP PANS
1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
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**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** (#)

1. EXTEND TO NEAREST LOW PRESSURE SUPPLY AIRFLOW BRANCH DUCTWORK AND CONNECT TO EXISTING LOW PRESSURE SUPPLY IN CORRIDOR.
2. INSTALL NEW SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
3. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFER TO SHEET MG800 FOR ADDITIONAL INFORMATION.
4. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEW RISER. DO NOT ROUTE DIRECTLY ABOVE ELECTRICAL OR TELECOMMUNICATIONS EQUIPMENT.
5. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, ABOVE CEILING WHERE POSSIBLE.
6. PROVIDE DRIP PAN BELOW EXISTING PIPING PER DETAIL F1/MG500. ROUTE DRAIN TO NEAREST MECHANICAL FLOOR DRAIN / HAC SINK. PROVIDE DRIP PAN PUMP (CP-X) IF GRAVITY DRAINAGE IS NOT FEASIBLE.

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

| Revisions: | Date: |
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DOUGLAS SMITH
ENGINEER
PE081525

Office of Construction and Facilities Management

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| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH414 |
| | | | SHEET 299 of 797 |

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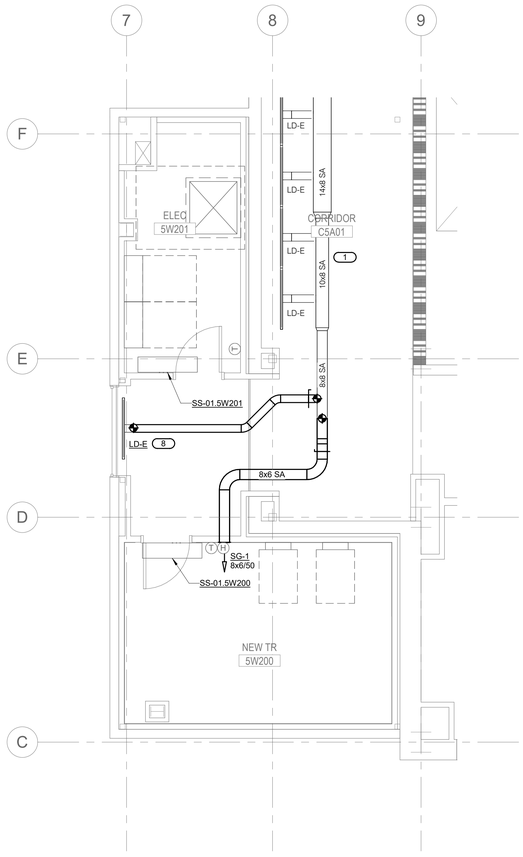
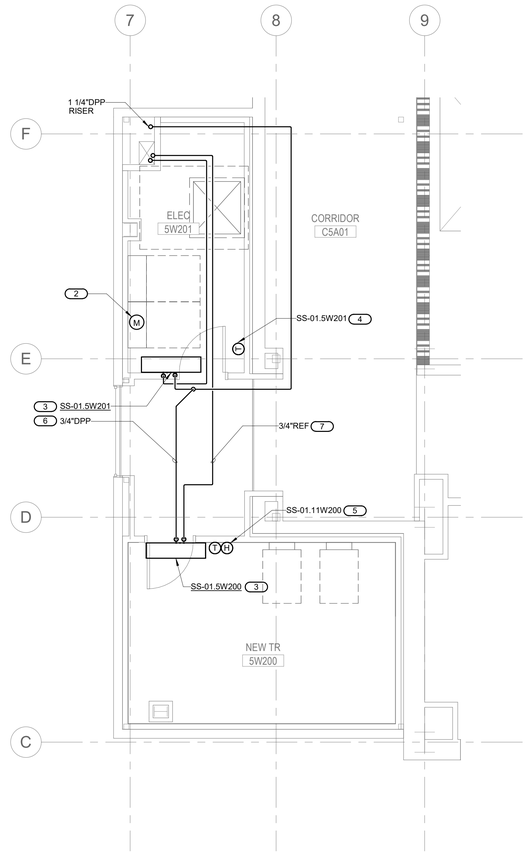



D3 **FIFTH FLOOR PLAN - WEST TOWER - VENTILATION**
1/4" = 1'-0"




D6 **FIFTH FLOOR PLAN - WEST TOWER - PIPING**
1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** ( # )

1. REPLACE / RE-INSTALL EXISTING DUCTWORK AND EXISTING AIR DEVICES IN CORRIDOR C5A01. REFER TO DEMOLITION PLANS. TEMPORARY CORRIDOR MUST REMAIN CONDITIONED DURING CONSTRUCTION. COORDINATE WITH ALL OTHER TRADES.
2. ELECTRICAL METER (BY EC). TCC TO PROVIDE FMCS INTEGRATION.
3. INSTALL NEW WALL MOUNTED SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
4. INSTALL NEW TEMPERATURE SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFERENCE F1/00-MG800 FOR ADDITIONAL INFORMATION.
5. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFERENCE D1/00-MG800 FOR ADDITIONAL INFORMATION.
6. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEW RISER. DO NOT ROUTE DIRECTLY ABOVE ELECTRICAL OR TELECOMMUNICATIONS EQUIPMENT.
7. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, TO PIPING CHASE AND UP TO OUTDOOR CONDENSING UNIT.
8. EXTEND SUPPLY DUCTWORK AND CONNECT TO RELOCATED EXISTING LINEAR DIFFUSER

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

| Revisions: | Date: |
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DOUGLAS SMITH
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PE081525

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| Drawing Title: FIFTH FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH415 |
| | | | SHEET 300 of 797 |

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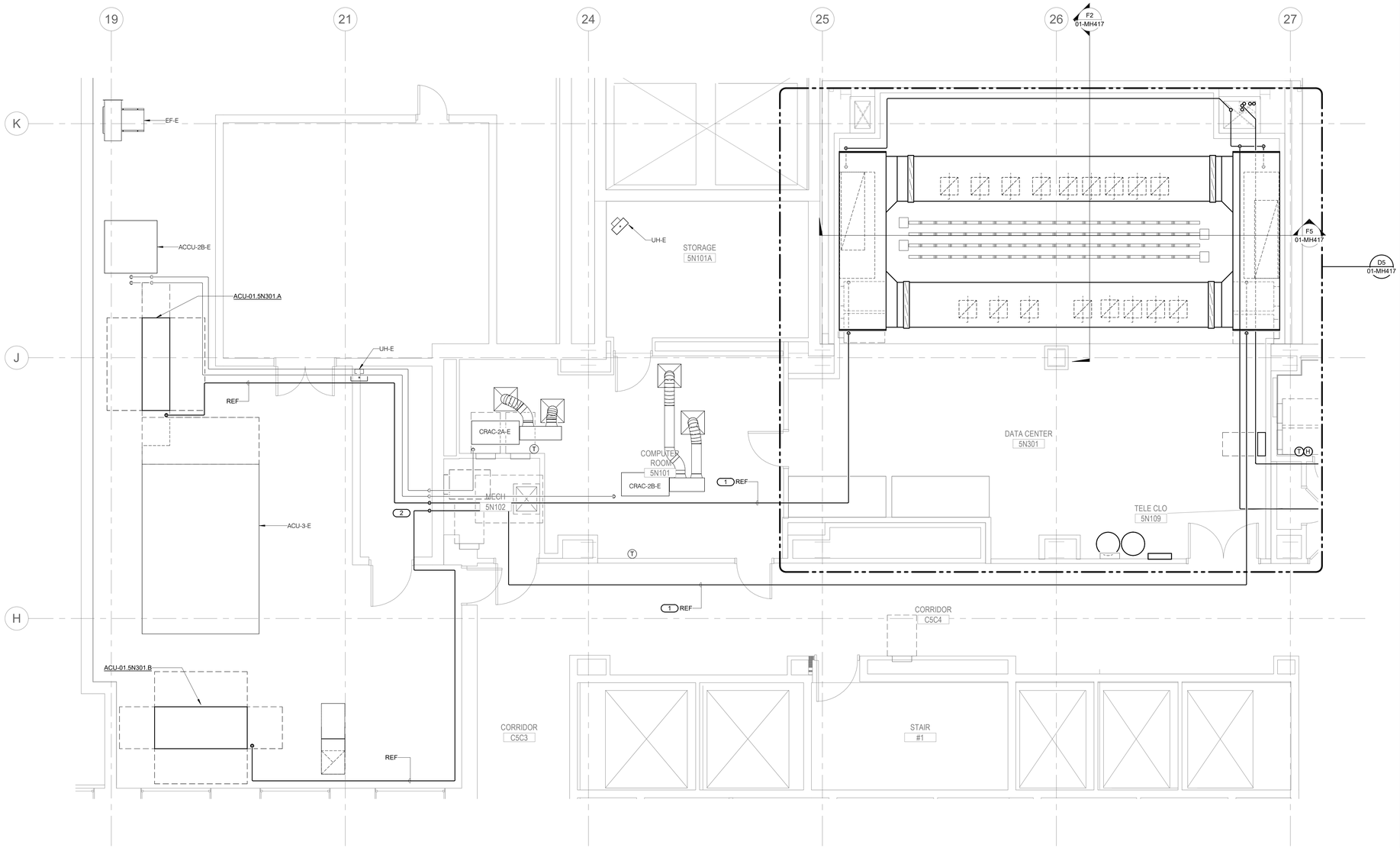


## E1 FIFTH FLOOR PLAN - DATA CENTER & ROOF - MECHANICAL

1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTORS BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. MECHANICAL DEMOLITION SCOPE IN EXISTING MCR (DATA CENTER 5N301) SHALL BE CLOSELY COORDINATED WITH TECHNOLOGY PHASING SCOPE. REFER TO PHASING NOTES ON THIS SHEET AND TECHNOLOGY AND ELECTRICAL DRAWINGS FOR PHASING INFORMATION.
2. CONTRACTOR SHALL PROVIDE (3) 4-TON PORTABLE DX COOLING UNITS (I.E. SPOT COOLERS) TO MAINTAIN SPACE TEMPERATURE IN EXISTING MCR BETWEEN 72°F AND 80.6°F FOR DURATION OF PROJECT PRIOR TO INSTALLATION OF NEW CRAC UNITS AND TECHNOLOGY EQUIPMENT CHANGEOVER. CONFIRM REQUIRED QUANTITY AND CAPACITY OF SPOT COOLERS BASED ON EXISTING EQUIPMENT HEAT OUTPUT.

**PHASING NOTES:**

**PHASE 1 – DEMOLITION**

1. REMOVE EXISTING DATA AIRE UNITS CRAC-2C AND CRAC-2D, ASSOCIATED OUTDOOR CONDENSING UNIT, AND ALL ASSOCIATED DUCTWORK, AIR TERMINAL DEVICES, PIPING AND CONTROLS.
2. EXISTING CRAC-1, CRAC-2A, AND CRAC-2B IN COMPUTER ROOM 5N101 SHALL REMAIN OPERATIONAL.
3. REMOVE ALL SPRINKLER PIPING SERVING DATA CENTER 5N301.

**PHASE 1 – NEW WORK**

1. INSTALL NEW FIRE PROTECTION ZONE VALVE SERVING DATA CENTER 5N301 AND ALL ASSOCIATED SPRINKLER PIPING AND HEADS.
   A. PROVIDE NEW CLEAN AGENT FIRE PROTECTION SYSTEM SERVING DATA CENTER 5N301.
2. INSTALL NEW CRAC UNITS CRU-01.5N301.A AND CRU-01.5N301.B AND ASSOCIATED AIR COOLED CONDENSING UNITS.
3. INSTALL NEW OVERHEAD RETURN DUCT SYSTEM. CONNECT RETURN DUCTS TO IT RACK CHIMNEYS ONCE RACK INSTALLATION IS COMPLETE.
4. NEW CRAC UNITS SHALL BE STARTED UP. TEST AND BALANCE (TAB) SHALL BE COMPLETED PRIOR TO NEW IT AND ELECTRICAL EQUIPMENT START-UP IN DATA CENTER 5N301.
5. INSTALL NEW HVAC CONTROL PANEL IN DATA CENTER 5N301.
6. INSTALL NEW DRIP PANS AS REQUIRED IN DATA CENTER 5N301.

**PHASE 2 – DEMOLITION**

1. REMOVE EXISTING SANYO CRAC-3, ASSOCIATED OUTDOOR CONDENSING UNIT, AND ALL ASSOCIATED PIPING AND CONTROLS.
2. REMOVE EXISTING UNITED COOLAIR AC-E, ASSOCIATED OUTDOOR CONDENSING UNIT, AND ALL ASSOCIATED PIPING AND CONTROLS.

**KEYNOTES:** ( # )

1. ROUTE REFRIGERANT PIPING ABOVE CEILING FROM CRAC UNITS TO OUTDOOR CONDENSING UNITS, SHOWN AS SINGLE LINE FOR CLARITY. INSTALL PER MANUFACTURER'S REQUIREMENTS.
2. EXTERIOR WALL PENETRATIONS. REFER TO DETAIL B8/000-MG500.

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

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| Drawing Title: FIFTH FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | FULLY SPRINKLERED | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH416 |
| | | | SHEET 301 of 797 |

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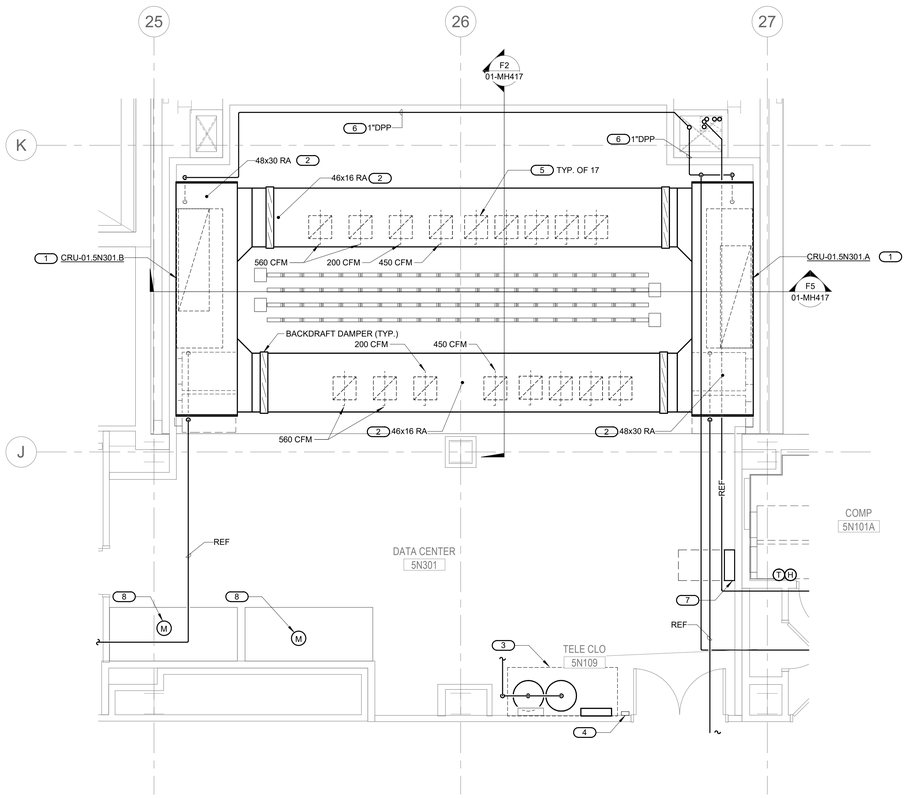
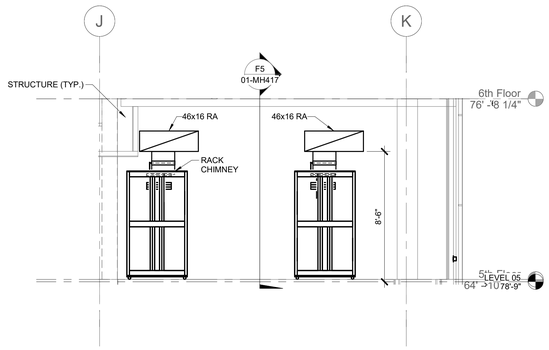


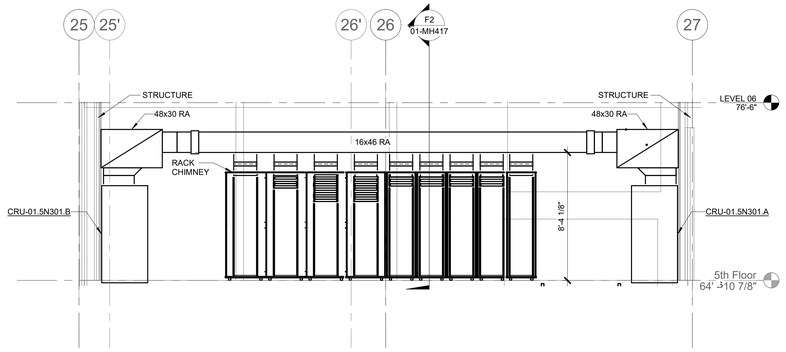

## D5 FIFTH FLOOR ENLARGED PLAN - DATA CENTER 5N301 - MECHANICAL

1/4" = 1'-0"




## F2 DATA CENTER - EW

1/4" = 1'-0"




## F5 DATA CENTER - NS

1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED.
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. MECHANICAL DEMOLITION SCOPE IN EXISTING MCR (DATA CENTER 5N301) SHALL BE CLOSELY COORDINATED WITH TECHNOLOGY PHASING SCOPE. REFER TO PHASING NOTES ON THIS SHEET AND TECHNOLOGY AND ELECTRICAL DRAWINGS FOR PHASING INFORMATION.
2. CONTRACTOR SHALL PROVIDE (3) 4-TON PORTABLE DX COOLING UNITS (I.E. SPOT COOLERS) TO KEEP MCR BETWEEN 72°F AND 80.6°F IN PERIODS WHERE MCR WILL REMAIN IN OPERATION (FULL OR PARTIAL CAPACITY) DURING THIS PROJECT PRIOR TO THE INSTALLATION OF NEW EQUIPMENT. CONFIRM REQUIRED QUANTITY AND CAPACITY OF SPOT COOLERS BASED ON EXISTING EQUIPMENT HEAT OUTPUT.

**PHASING NOTES:**

**PHASE 1 – DEMOLITION**

1. REMOVE EXISTING DATA AIRE UNITS CRAC-2C AND CRAC-2D, ASSOCIATED OUTDOOR CONDENSING UNIT (ACCU-2a), SUPPORTS, AND ALL ASSOCIATED DUCTWORK, PIPING AND CONTROLS. COORDINATE REPAIR AND PATCHING WITH GC TO MATCH ADJACENT SURFACES AND RATINGS.
2. EXISTING CRAC-1, CRAC-2A, AND CRAC-2B IN COMPUTER ROOM 5N101 SHALL REMAIN OPERATIONAL.
3. REMOVE ALL SPRINKLER PIPING SERVING DATA CENTER 5N301.

**PHASE 1 – NEW WORK**

1. INSTALL NEW FIRE PROTECTION ZONE VALVE SERVING DATA CENTER 5N301 AND ALL ASSOCIATED SPRINKLER PIPING AND HEADS.
   A. PROVIDE NEW CLEAN AGENT FIRE PROTECTION SYSTEM SERVING DATA CENTER 5N301.
2. INSTALL NEW CRAC UNITS CRU-01.5N301.A AND CRU-01.5N301.B AND ASSOCIATED AIR COOLED CONDENSING UNITS.
3. INSTALL NEW OVERHEAD RETURN DUCT SYSTEM. CONNECT RETURN DUCTS TO IT RACK CHIMNEYS ONCE RACK INSTALLATION IS COMPLETE.
4. NEW CRAC UNITS SHALL BE STARTED UP, TEST AND BALANCE (TAB) SHALL BE COMPLETED PRIOR TO NEW IT AND ELECTRICAL EQUIPMENT START-UP IN DATA CENTER 5N301.
5. INSTALL NEW HVAC CONTROL PANEL IN DATA CENTER 5N301.
6. INSTALL NEW DRIP PANS AS REQUIRED IN DATA CENTER 5N301.

**PHASE 2 – DEMOLITION**

1. REMOVE EXISTING SANYO CRAC-3, ASSOCIATED OUTDOOR CONDENSING UNIT (ACCU-3), SUPPORTS, AND ALL ASSOCIATED DUCTWORK, PIPING AND CONTROLS. COORDINATE REPAIR AND PATCHING WITH GC TO MATCH ADJACENT SURFACES AND RATINGS.
2. REMOVE EXISTING UNITED COOLAIR AC-E, ASSOCIATED OUTDOOR CONDENSING UNIT, AND ALL ASSOCIATED PIPING AND CONTROLS.
3. REMOVE EXISTING DATA AIRE CRAC-1, ASSOCIATED OUTDOOR CONDENSING UNIT (ACCU-1), SUPPORTS, AND ALL ASSOCIATED DUCTWORK, PIPING AND CONTROLS. COORDINATE REPAIR AND PATCHING WITH GC TO MATCH ADJACENT SURFACES AND RATINGS.

**KEYNOTES:** (#)

1. NEW 77 KW (22.5 TON) DOWNFLOW CRAC UNIT WITH DX COOLING, ELECTRIC REHEAT, INFRARED HUMIDIFICATION, AND FRONT DISCHARGE.
   A. UNIT SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
   B. UNITS SIZED TO PROVIDE N+1 REDUNDANCY PER OIT GUIDANCE.
   C. COORDINATE WIRING OF INTEGRAL, FACTORY INSTALLED SMOKE DETECTOR WITH FIRE SUPPRESSION AND FIRE ALARM CONTRACTORS.
2. OVERHEAD RETURN DUCT SYSTEM. RETURN DUCT SHALL MOUNTED TIGHT TO STRUCTURE.
3. CLEAN AGENT FIRE SUPPRESSION EQUIPMENT SHOWN FOR REFERENCE. COORDINATE CONTROLS REQUIREMENTS WITH FIRE SUPPRESSION AND FIRE ALARM CONTRACTORS.
4. EMERGENCY HVAC SHUT DOWN BUTTON (EPO) WITH CLEAR POLYCARBONATE HINGED COVER TO BE PROVIDED BY EC.
5. IT EQUIPMENT ENCLOSURES TO BE PROVIDED WITH EXHAUST CHIMNEYS. RETURN AIR DUCT SHALL BE FULL SIZE OF IT RACK CHIMNEY. COORDINATE EXACT ELEVATION AND REQUIRED LENGTH OF CHIMNEYS WITH TELECOMMUNICATIONS CONTRACTOR. RETURN DUCT RUN OUTS SHALL BE BALANCED TO 800 CFM UNLESS OTHERWISE NOTED. PROVIDE DUCT FLEXIBLE CONNECTOR AT EACH CONNECTION TO IT RACK CHIMNEY.
6. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEW RISER. DO NOT ROUTE DIRECTLY ABOVE ELECTRICAL OR TELECOMMUNICATIONS EQUIPMENT.
7. NEW CRU FACTORY CONTROL PANEL. COORDINATE INSTALLATION REQUIREMENTS WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
8. ELECTRICAL METER (BY EC). TCC TO PROVIDE FMCS INTEGRATION.

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

| Revisions: | Date: |
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| Drawing Title | FIFTH FLOOR ENLARGED PLANS - MECHANICAL |
| Phase | FINAL BID DOCUMENTS |
| Approved: | |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | CAH |
| Drawn | BMB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-MH417 |
| | SHEET 302 of 797 |

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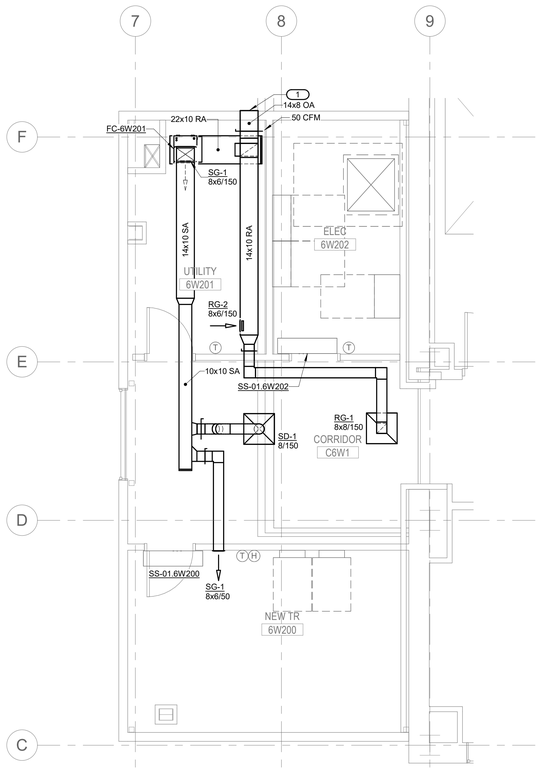
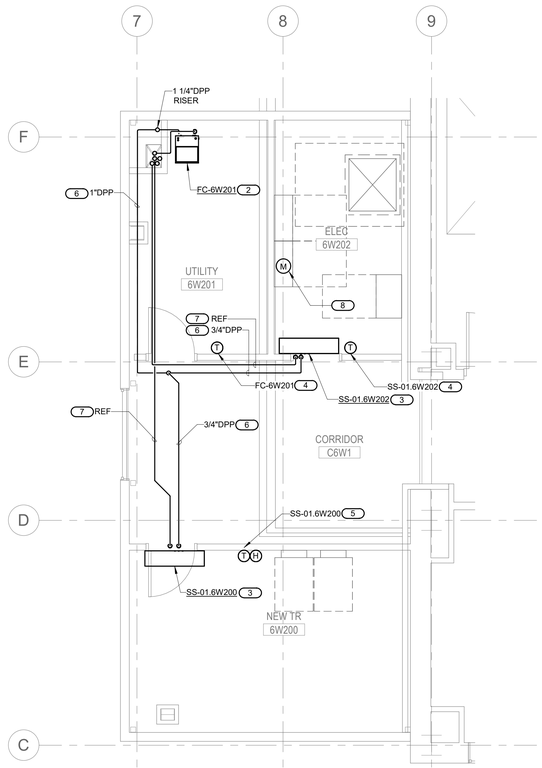



## D3 SIXTH FLOOR PLAN - WEST TOWER - VENTILATION

1/4" = 1'-0"




## D6 SIXTH FLOOR PLAN - WEST TOWER - PIPING

1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** (#)

1. CONNECT TO LOUVER (BY GC). REFERENCE C1/00-MG502.
2. INSTALL NEW FLOOR MOUNTED VRF INDOOR UNIT PER MANUFACTURER'S INSTRUCTIONS.
3. INSTALL NEW WALL MOUNTED SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
4. INSTALL NEW TEMPERATURE SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFERENCE F1/00-MG800 FOR ADDITIONAL INFORMATION.
5. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFERENCE D1/00-MG800 FOR ADDITIONAL INFORMATION.
6. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEW RISER. DO NOT ROUTE DIRECTLY ABOVE ELECTRICAL OR TELECOMMUNICATIONS EQUIPMENT.
7. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, TO PIPING CHASE AND UP TO OUTDOOR CONDENSING UNIT.

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

| Revisions: | Date: |
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DOUGLAS SMITH
ENGINEER
PE081525

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

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|---|---|---|---|
| Drawing Title: SIXTH FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH418 |
| | | | SHEET 303 of 797 |

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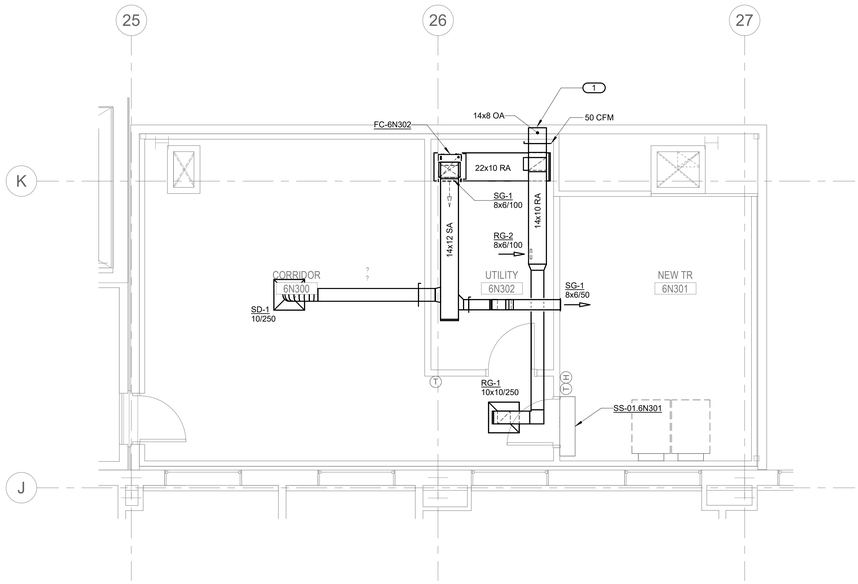
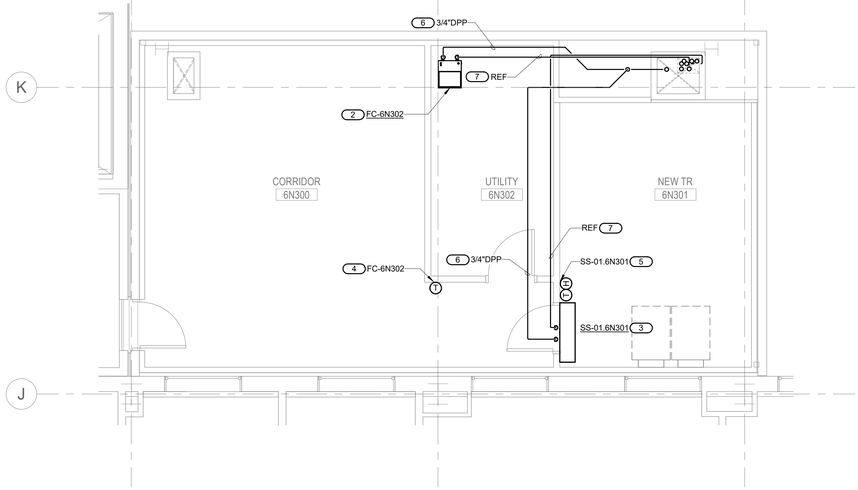



## C5 SIXTH FLOOR PLAN - NORTH TOWER - VENTILATION

1/4" = 1'-0"




## F5 SIXTH FLOOR PLAN - NORTH TOWER - PIPING

1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
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5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
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8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** (#)

1. CONNECT TO LOUVER (BY GC). REFERENCE C1/00-MG502.
2. INSTALL NEW FLOOR MOUNTED VRF INDOOR UNIT PER MANUFACTURER'S INSTRUCTIONS.
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PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

| Revisions: | Date: |
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| Drawing Title: SIXTH FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH419 |
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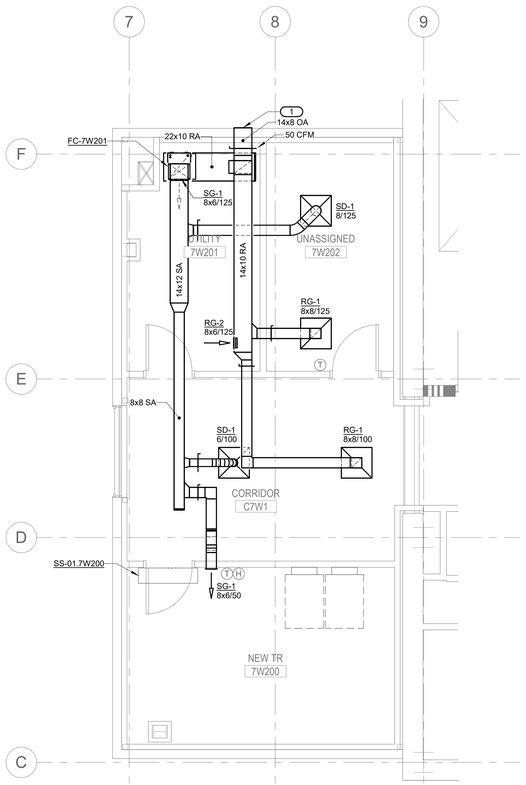
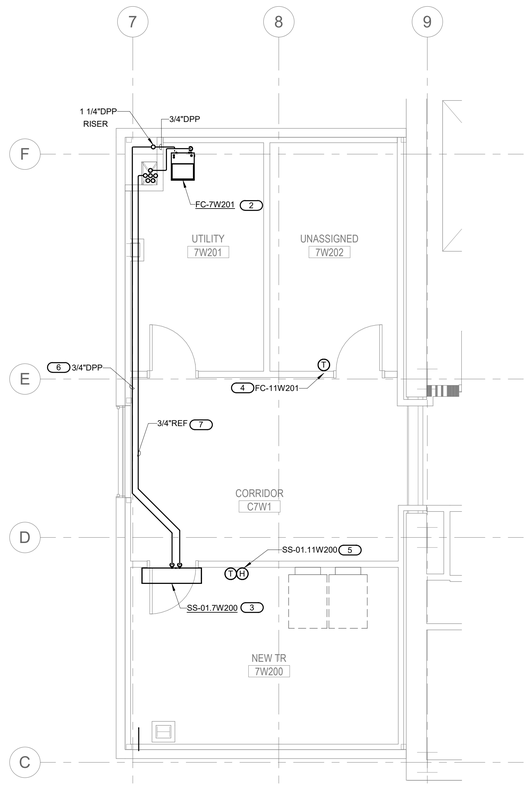



## D3 SEVENTH FLOOR PLAN - WEST TOWER - VENTILATION

1/4" = 1'-0"




## D6 SEVENTH FLOOR PLAN - WEST TOWER - PIPING

NO SCALE

# NOTES:

**FIELD VERIFICATION NOTES:**

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PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

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| Drawing Title: SEVENTH FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH420 SHEET 305 of 797 |

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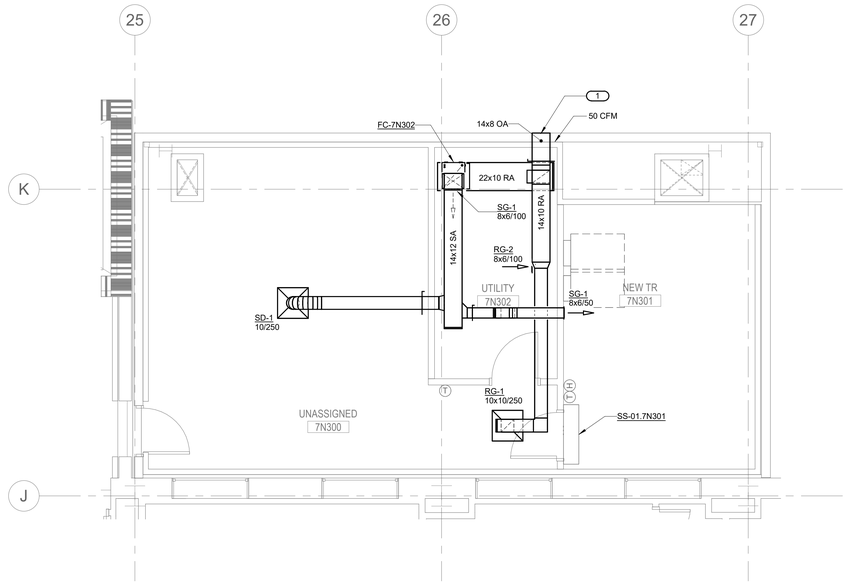
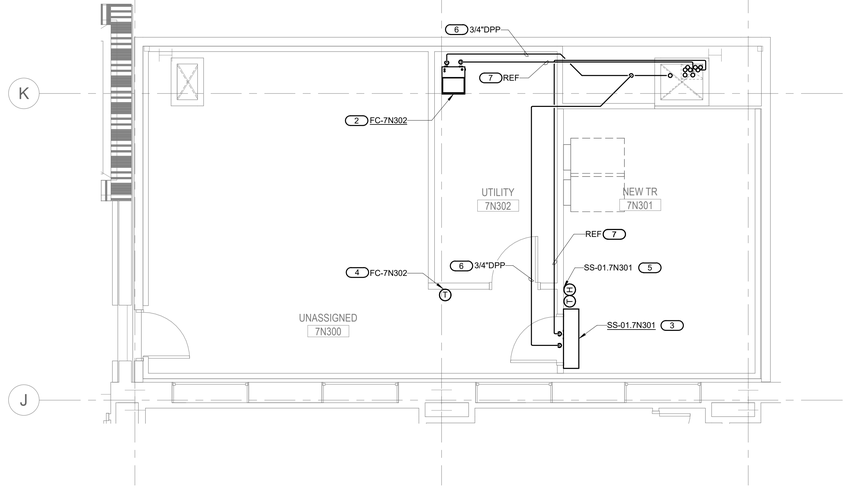



## C5 SEVENTH FLOOR PLAN - NORTH TOWER - VENTILATION

1/4" = 1'-0"




## F5 SEVENTH FLOOR PLAN - NORTH TOWER - PIPING

NO SCALE

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PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

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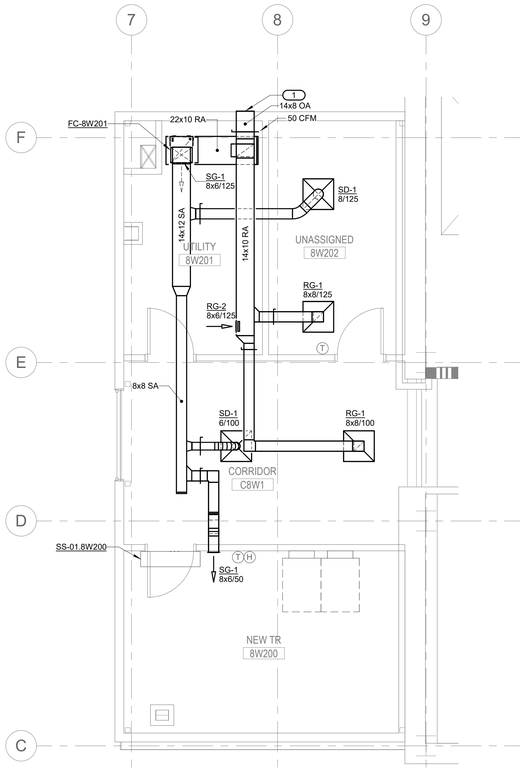
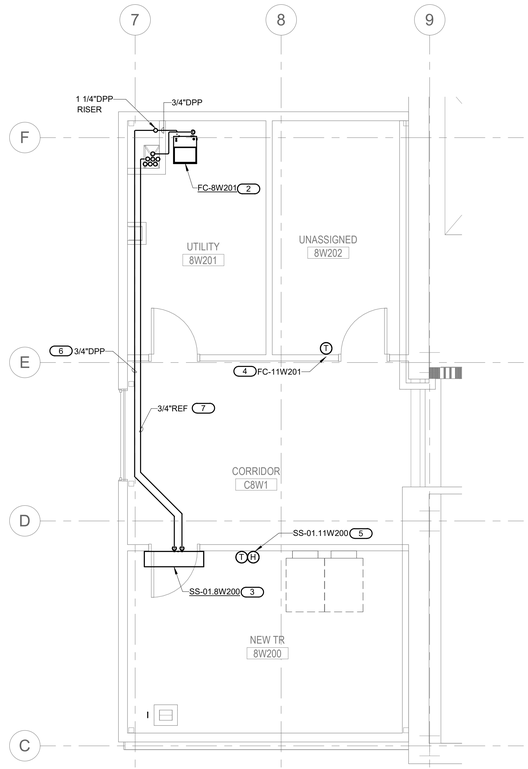



## D3 EIGHTH FLOOR PLAN - WEST TOWER - VENTILATION

1/4" = 1'-0"




## D6 EIGHTH FLOOR PLAN - WEST TOWER - PIPING

NO SCALE

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3. INSTALL NEW WALL MOUNTED SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
4. INSTALL NEW TEMPERATURE SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFERENCE F1/00-MG800 FOR ADDITIONAL INFORMATION.
5. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFERENCE D1/00-MG800 FOR ADDITIONAL INFORMATION.
6. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEW RISER. DO NOT ROUTE DIRECTLY ABOVE ELECTRICAL OR TELECOMMUNICATIONS EQUIPMENT.
7. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, TO PIPING CHASE AND UP TO OUTDOOR CONDENSING UNIT.

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

| Revisions: | Date: |
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DOUGLAS SMITH
ENGINEER
PE081525

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

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| Drawing Title: EIGHTH FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH422 SHEET 307 of 797 |

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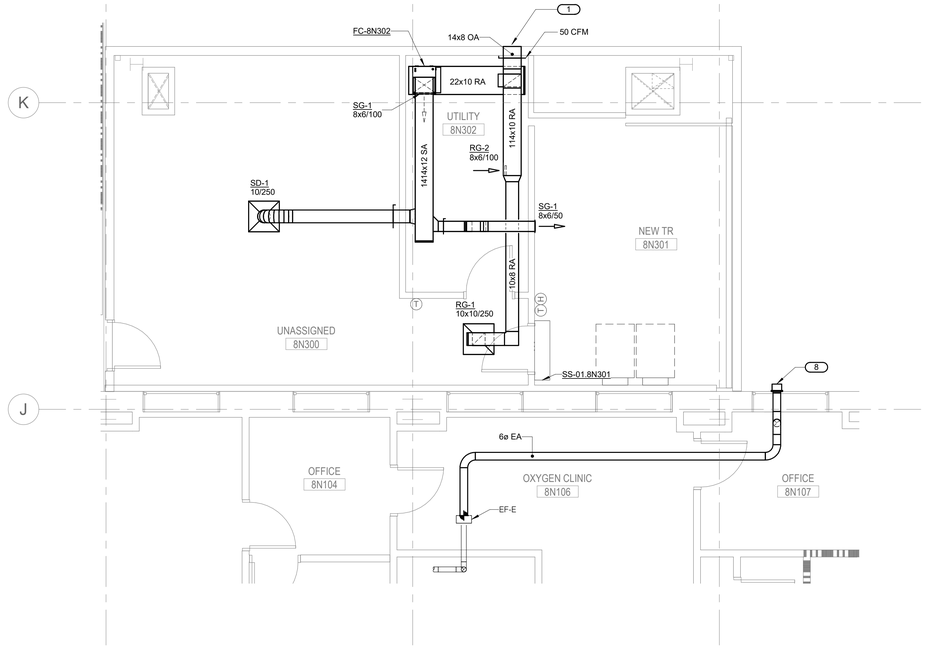
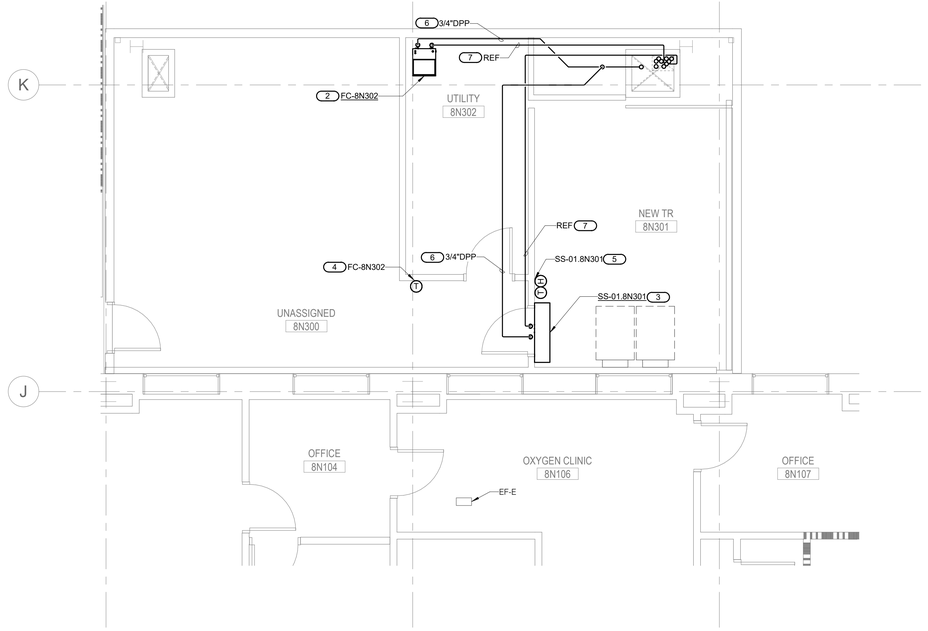



## C5 EIGHTH FLOOR PLAN - NORTH TOWER - VENTILATION

1/4" = 1'-0"




## F5 EIGHTH FLOOR PLAN - NORTH TOWER - PIPING

NO SCALE

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
   A. EXACT PLACEMENT, SIZE, CAPACITY, MANUFACTURER, AND CONDITION OF ALL EXISTING HVAC EQUIPMENT WITHIN SCOPE OF WORK, WHETHER EXPLICITLY SHOWN OR NOT.
   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
3. NO ADDITIONAL COMPENSATION WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS.
4. ANY DISCREPANCIES WHICH MAY AFFECT THE CONTRACTOR'S BID SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND ARCHITECT FOR DIRECTION **PRIOR TO BIDDING**.

**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
4. DRIP PANS SHALL NOT BE INSTALLED SUCH THAT SPRINKLER COVERAGE OF SPACE IS IMPEDED. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
5. TEMPERATURE CONTROLS CONTRACTOR SHALL COORDINATE LOCATION OF ALL DRIP PANS FOR LEAK DETECTION MONITORING. REFERENCE B1/MG800.
6. DRIP PANS SHALL BE PROVIDED WITH DRAIN OUTLETS. COMBINE ALL DRAIN PIPING AND ROUTE ONE (1) DRAIN PIPE TO NEAREST OPEN DRAIN.
7. TEMPERATURE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATION OF MONITORING OF ALL TEMPERATURE AND HUMIDITY SENSORS INTO EXISTING FACILITY CONTROLS SYSTEM.
8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** (#)

1. CONNECT TO LOUVER (BY GC). REFERENCE C1/00-MG502.
2. INSTALL NEW FLOOR MOUNTED VRF INDOOR UNIT PER MANUFACTURER'S INSTRUCTIONS.
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7. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, TO PIPING CHASE AND UP TO OUTDOOR CONDENSING UNIT.
8. PROVIDE NEW WALL CAP FOR CONTINUOUS EXHAUST FAN. MODIFY EXISTING OPENING AND SEAL WEATHERTIGHT.

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

| Revisions: | Date: |
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DOUGLAS SMITH
ENGINEER
PE089163

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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| Drawing Title: EIGHTH FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH423 |
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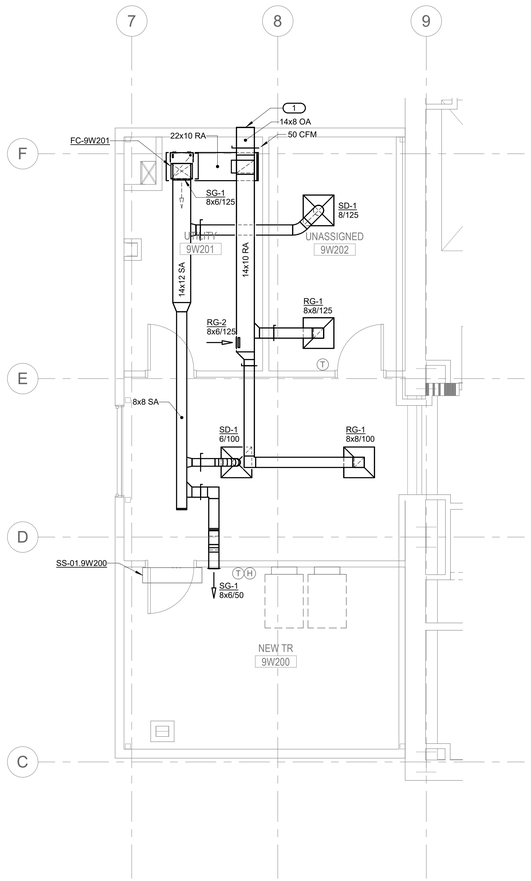
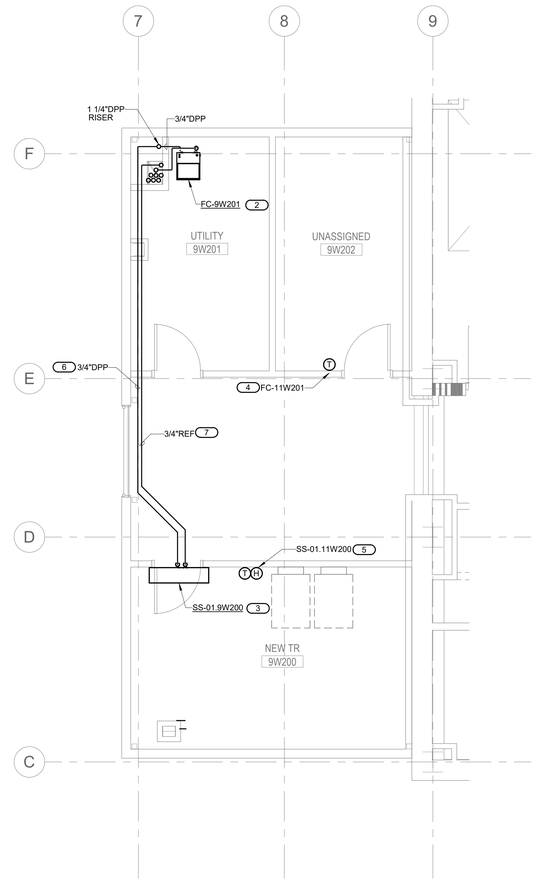



## D3 NINTH FLOOR PLAN - WEST TOWER - VENTILATION

NO SCALE




## D6 NINTH FLOOR PLAN - WEST TOWER - PIPING

NO SCALE

# NOTES:

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PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

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DOUGLAS SMITH
ENGINEER
PE081525

Office of Construction and Facilities Management

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| Drawing Title: NINTH FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-MH424 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 309 of 797 |


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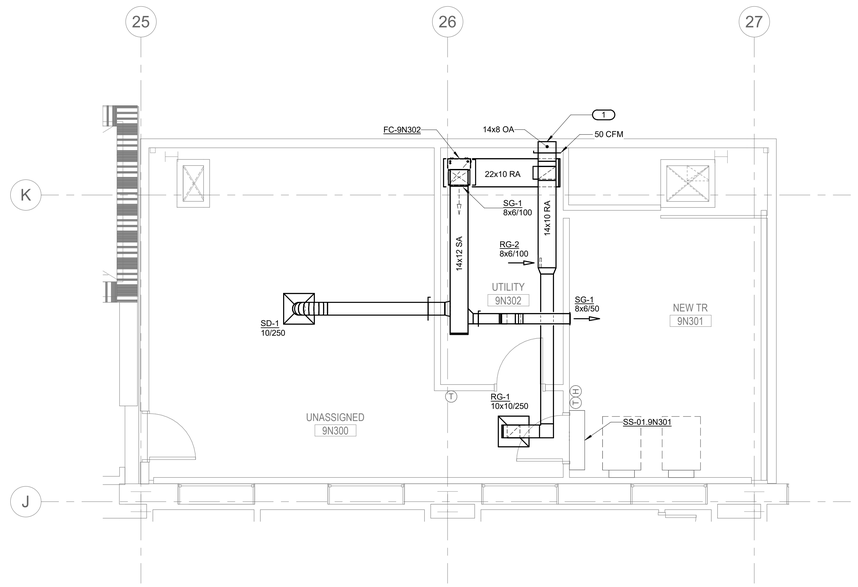
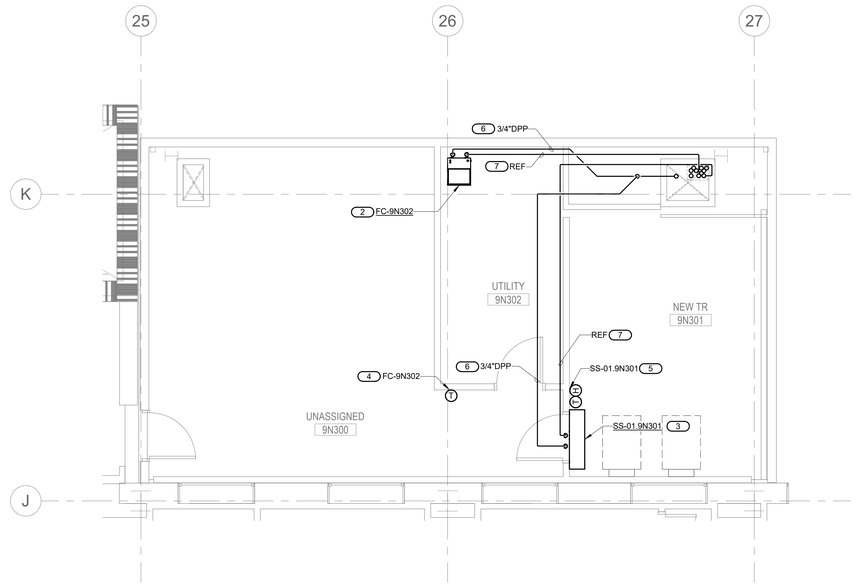



## C5 NINTH FLOOR PLAN - NORTH TOWER - VENTILATION

NO SCALE




## F5 NINTH FLOOR PLAN - NORTH TOWER - PIPING

NO SCALE

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PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

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| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
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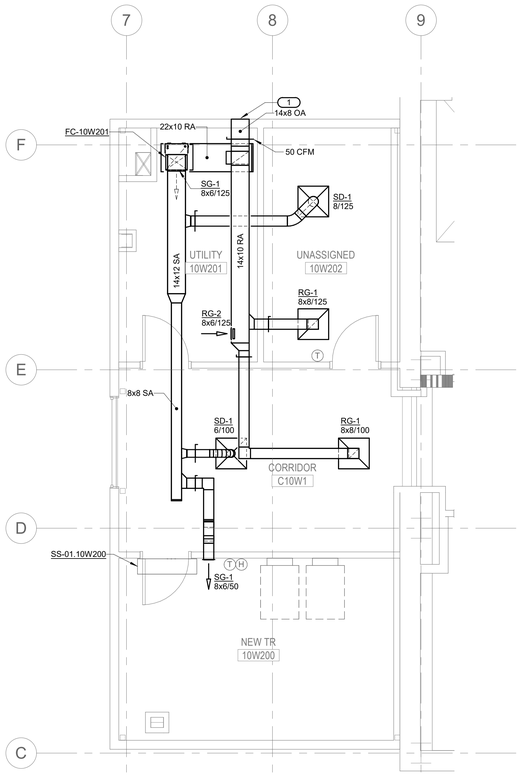
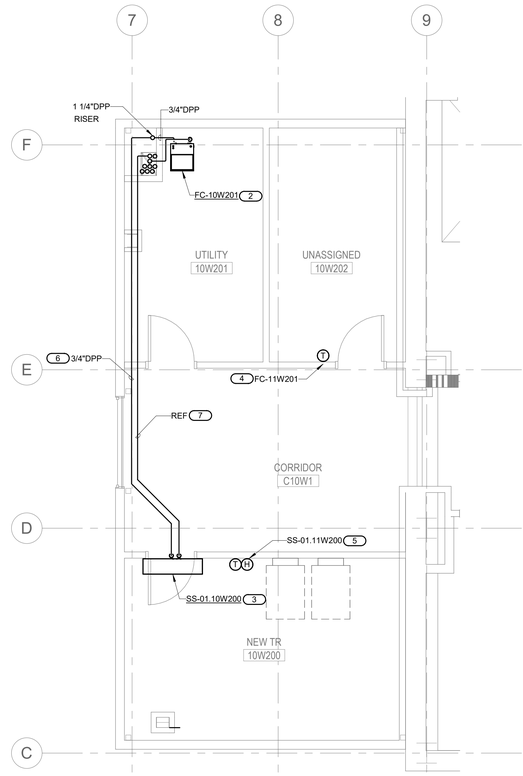



## D3 TENTH FLOOR PLAN - WEST TOWER - VENTILATION

1/4" = 1'-0"




## D6 TENTH FLOOR PLAN - WEST TOWER - PIPING

NO SCALE

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8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** (#)

1. CONNECT TO LOUVER (BY GC). REFERENCE C1/00-MG502.
2. INSTALL NEW FLOOR MOUNTED VRF INDOOR UNIT PER MANUFACTURER'S INSTRUCTIONS.
3. INSTALL NEW WALL MOUNTED SPLIT SYSTEM AC UNIT PER MANUFACTURER'S INSTRUCTIONS.
4. INSTALL NEW TEMPERATURE SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFERENCE F1/00-MG800 FOR ADDITIONAL INFORMATION.
5. INSTALL NEW COMBINATION TEMPERATURE/HUMIDITY SENSOR ON WALL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES. TCC TO INTEGRATE SENSOR INTO EXISTING FMCS. REFERENCE D1/00-MG800 FOR ADDITIONAL INFORMATION.
6. ROUTE CONDENSATE DRAIN PIPING ABOVE CEILING TO NEW RISER. DO NOT ROUTE DIRECTLY ABOVE ELECTRICAL OR TELECOMMUNICATIONS EQUIPMENT.
7. ROUTE REFRIGERANT PIPING, SIZED PER MANUFACTURER'S RECOMMENDATIONS, TO PIPING CHASE AND UP TO OUTDOOR CONDENSING UNIT.

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

| Revisions: | Date: |
|---|---|
| | |

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AWEN SOLUTIONS GROUP
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REGISTERED PROFESSIONAL
DOUGLAS SMITH
ENGINEER
PE081525

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

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|---|---|---|---|
| Drawing Title: TENTH FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-MH426 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 311 of 797 |

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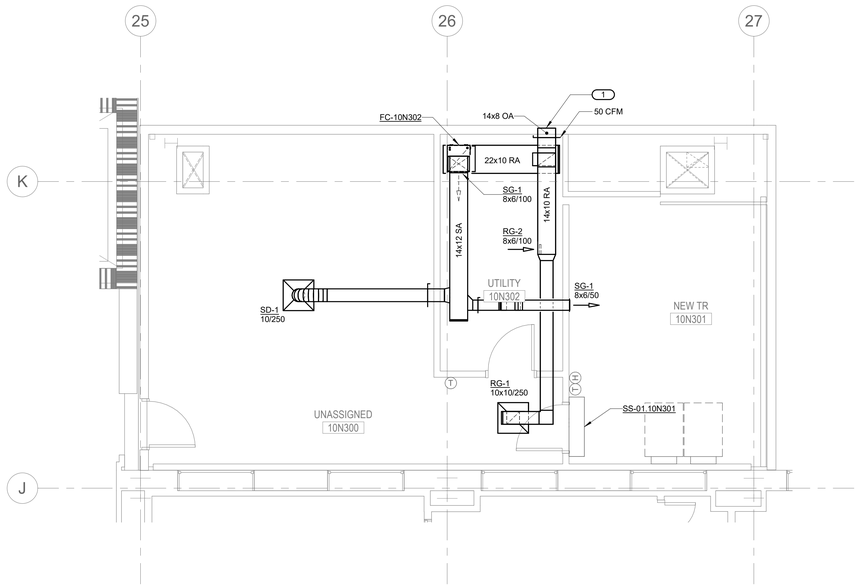
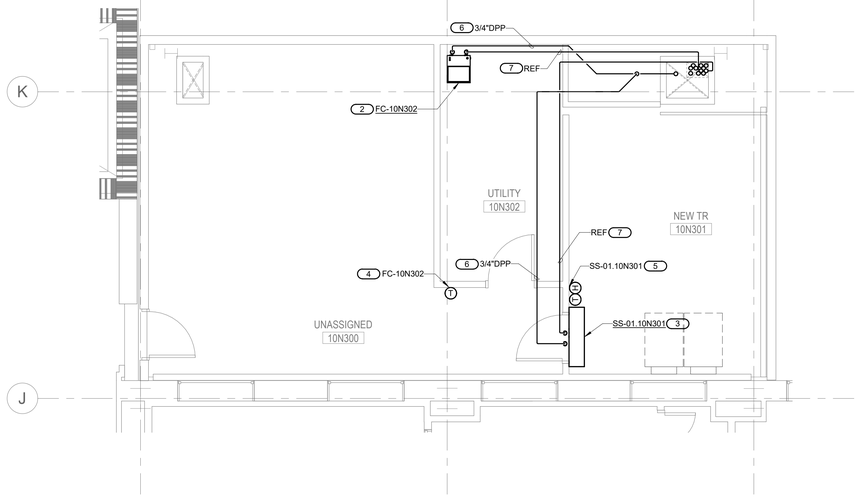



## C5 TENTH FLOOR PLAN - NORTH TOWER - VENTILATION

1/4" = 1'-0"




## F5 TENTH FLOOR PLAN - NORTH TOWER - PIPING

NO SCALE

# NOTES:

**FIELD VERIFICATION NOTES:**

1. THE CONTRACTOR SHOULD VISIT THE SITE **PRIOR TO BID** TO FIELD VERIFY ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID. THE FOLLOWING ITEMS SHALL BE VERIFIED:
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   B. SIZE AND LOCATION OF ALL EXISTING DUCTWORK.
   C. SIZE AND LOCATION OF ALL EXISTING GRILLES, REGISTERS, AND DIFFUSERS.
   D. SIZE AND LOCATION OF ALL EXISTING THERMOSTATIC CONTROL DEVICES.
   E. SIZE AND LOCATION OF ALL EXISTING PLUMBING AND HYDRONIC PIPING.
2. ALL REFERENCES ON THESE DRAWINGS TO EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, THERMOSTATS AND PIPING ARE FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL THESE ITEMS PRIOR TO BID AND INCLUDE IN THEIR BID ANY AND ALL AMOUNTS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS.
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**MECHANICAL SHEET NOTES:**

1. DRIP PANS TO BE PROVIDED UNDER ALL EXISTING HYDRONIC, PLUMBING, AND FIRE PROTECTION PIPING OVERHEAD IN TR / TE SPACES. MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW PIPING OVERHEAD ARE PROVIDED WITH DRIP PAN COVERAGE. REFERENCE F1/MG500.
2. DO NOT SPILL CONDENSATE PIPING INTO DRIP PANS OVER TR SPACES. COORDINATE INSTALLATION OF REFRIGERANT AND CONDENSATE PIPING WITH DRIP PAN LOCATIONS. AVOID PENETRATIONS OF NEW DRIP PANS. SEAL ANY NECESSARY PENETRATIONS WATER TIGHT.
3. FOR CLARITY, DRIP PANS ARE SHOWN IN A SEPARATE VIEW. NOT ALL EXISTING PIPING MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION OF ALL EXISTING PIPING AND PROTECTING TR SPACES ACCORDINGLY.
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8. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHOWN FOR REFERENCE ONLY.

**KEYNOTES:** (#)

1. CONNECT TO LOUVER (BY GC). REFERENCE C1/00-MG502.
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PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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| Drawing Title: TENTH FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH427 |
| | | | SHEET 312 of 797 |

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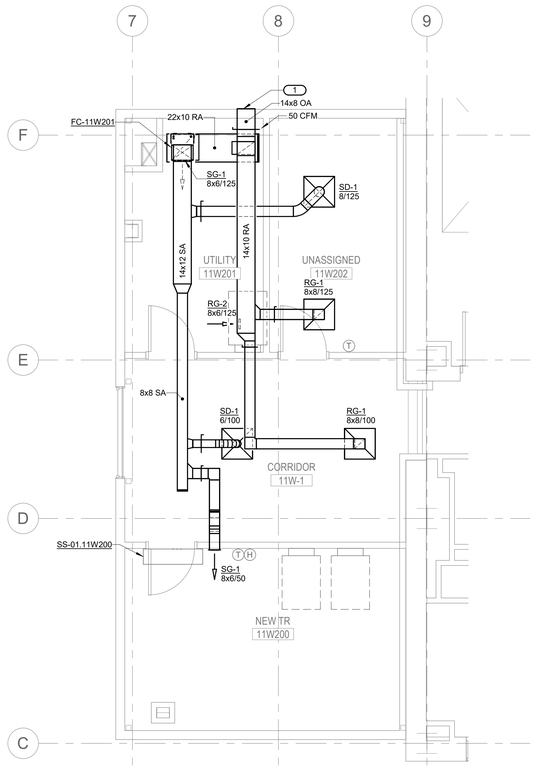
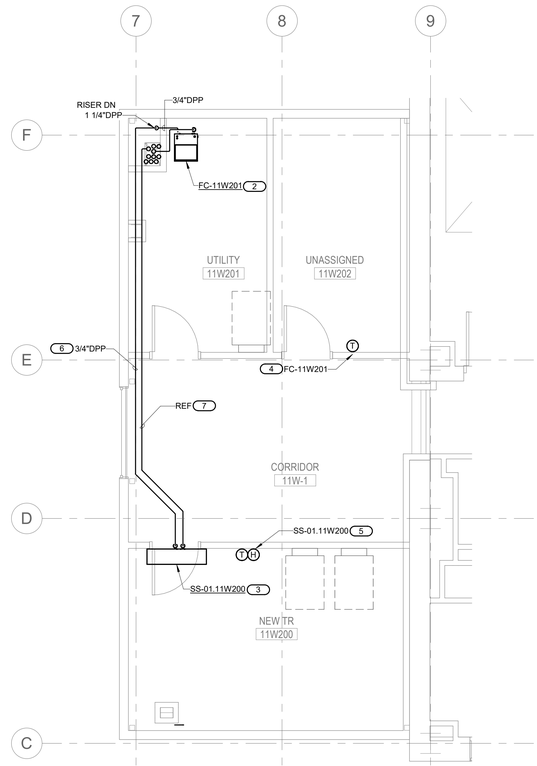



D3 **ELEVENTH FLOOR PLAN - WEST TOWER - VENTILATION**
1/4" = 1'-0"




D6 **ELEVENTH FLOOR PLAN - WEST TOWER - PIPING**
NO SCALE

# NOTES:

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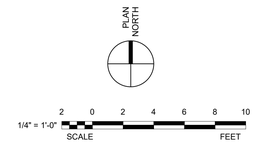


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DOUGLAS SMITH
ENGINEER
PE091525

Office of Construction and Facilities Management

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| Drawing Title: ELEVENTH FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-MH428 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | SHEET 313 of 797 |

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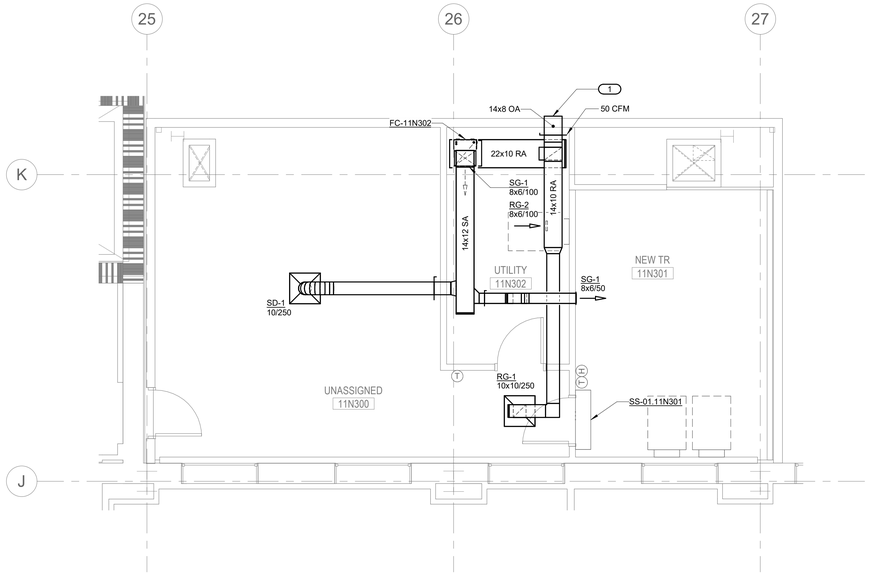
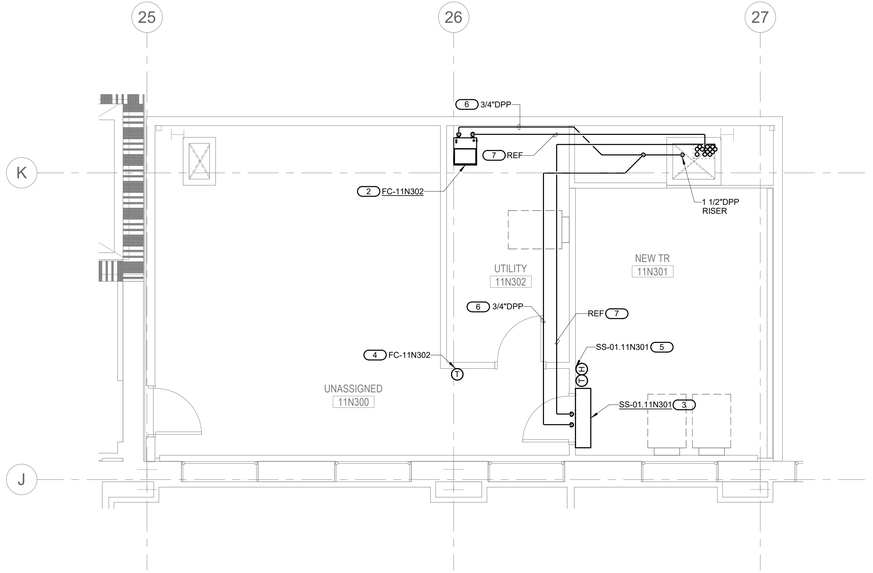



## C5 ELEVENTH FLOOR PLAN - NORTH TOWER - VENTILATION

1/4" = 1'-0"




## F5 ELEVENTH FLOOR PLAN - NORTH TOWER - PIPING

1/4" = 1'-0"

# NOTES:

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**MECHANICAL SHEET NOTES:**

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PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

| Revisions: | Date: |
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DOUGLAS SMITH
ENGINEER
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Office of Construction and Facilities Management

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| Drawing Title: ELEVENTH FLOOR ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
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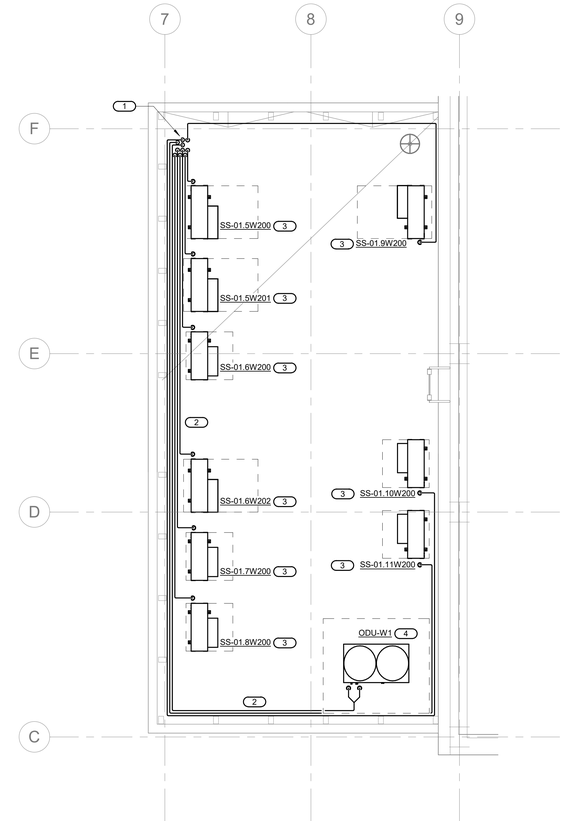
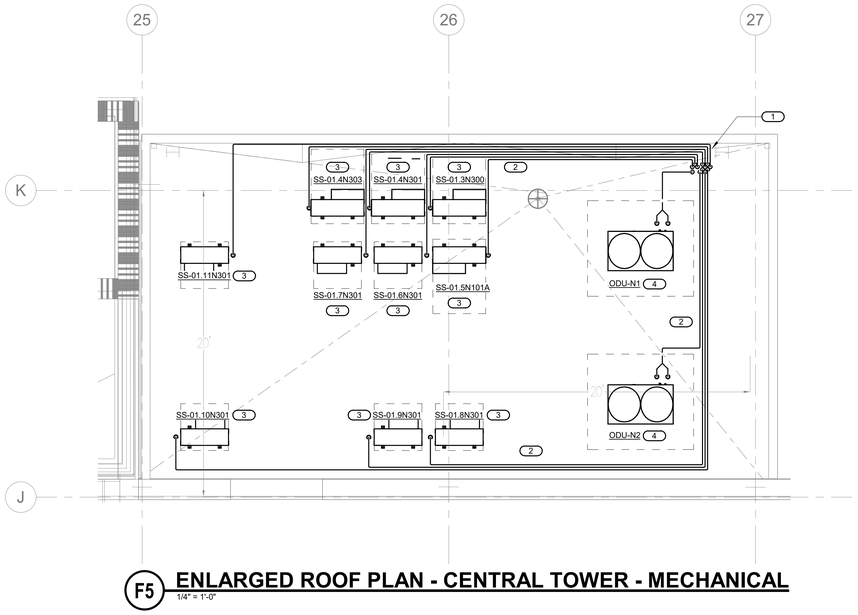



## D6 ENLARGED ROOF PLAN - WEST TOWER - MECHANICAL

1/4" = 1'-0"




## F5 ENLARGED ROOF PLAN - CENTRAL TOWER - MECHANICAL

1/4" = 1'-0"

# NOTES:

**FIELD VERIFICATION NOTES:**

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**KEYNOTES:** ( # )

1. PROVIDE INSULATED PIPE HOUSING FOR REFRIGERANT PIPING SHAFT. REFERENCE C8/00-MG501.
2. MOUNT REFRIGERANT PIPING ON NON-PENETRATING PIPE SUPPORTS PER MANUFACTURER'S REQUIREMENTS. REFERENCE D8/00-MG500.
3. MOUNT SPLIT SYSTEM CONDENSING UNIT PER DETAIL D5/MG-500.
4. MOUNT VRF OUTDOOR UNITS PER MANUFACTURER'S REQUIREMENTS.

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

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ENGINEER
PE081525

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|---|---|---|---|
| Drawing Title: ROOF ENLARGED PLANS - MECHANICAL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: CAH / Drawn: BMB | Drawing Number: 01-MH430 |
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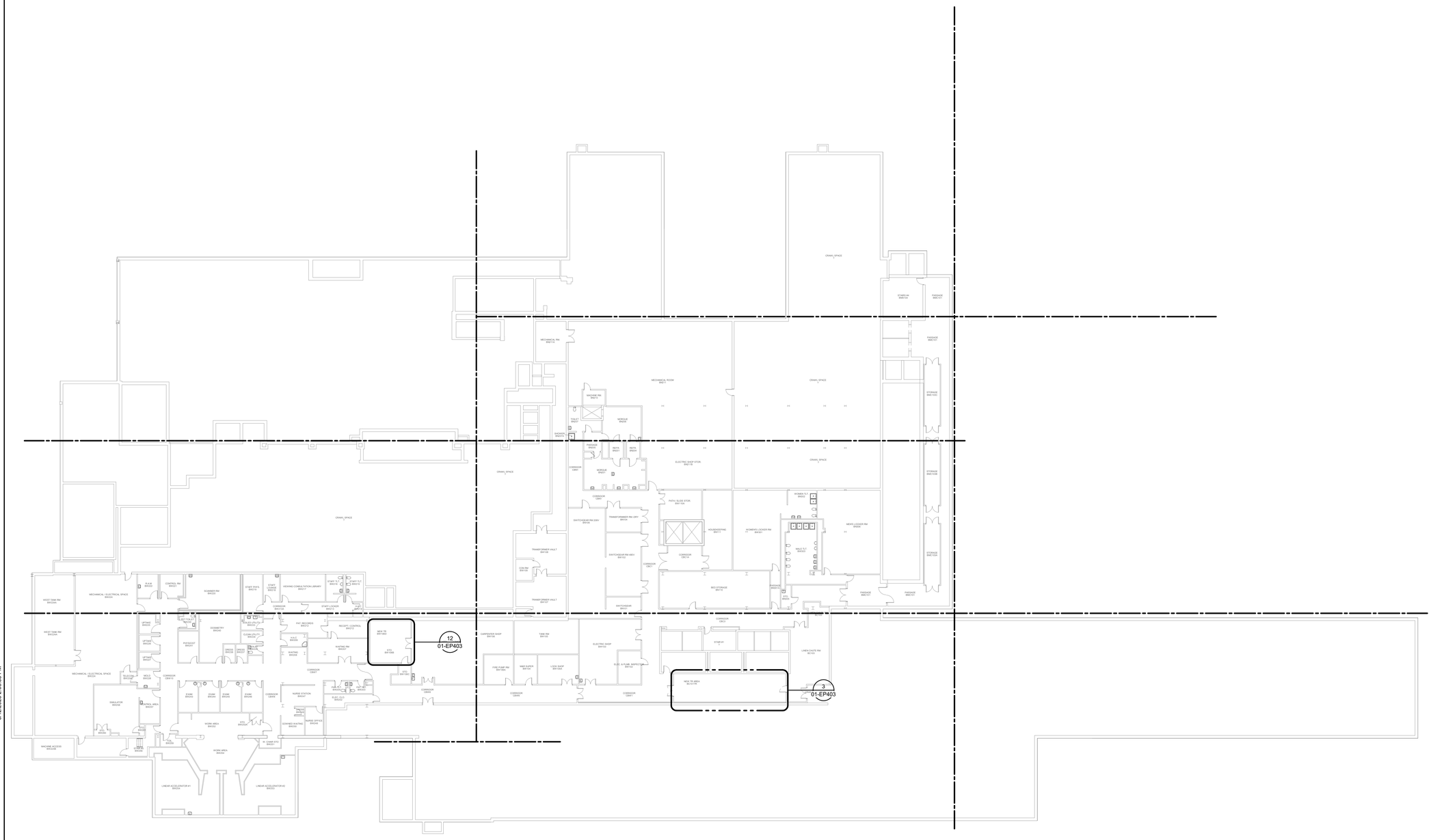


# 1 BASEMENT DEMOLITION PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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REGISTERED PROFESSIONAL ENGINEER
MICHAEL WALSH
PE076749

Office of Construction and Facilities Management

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| Drawing Title: BASEMENT DEMOLITION PLAN - ELECTRICAL - OVERALL | Phase: FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |

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| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | GJL |
| Drawn | HAB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-ED099 |
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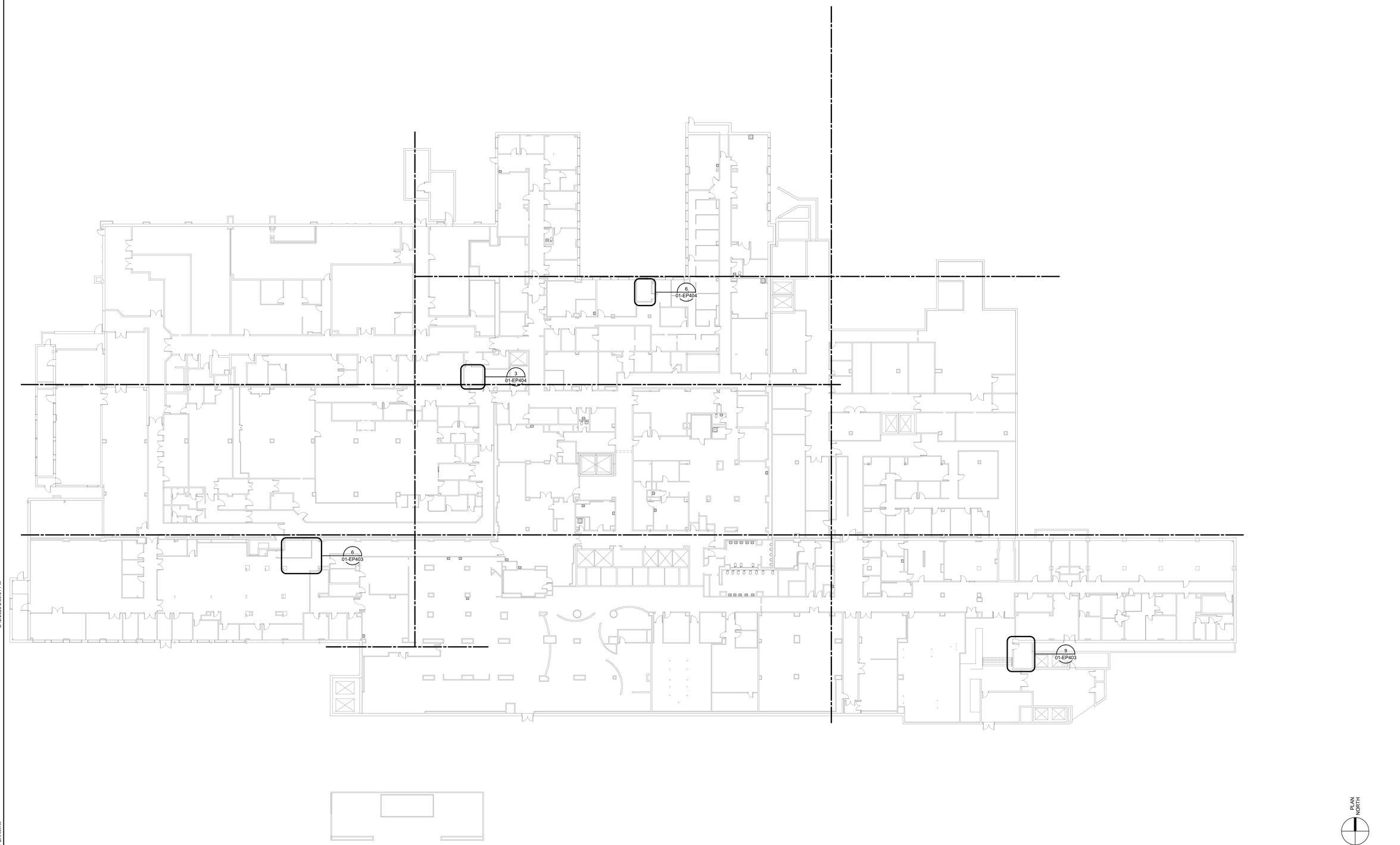


## 1 GROUND FLOOR DEMOLITION PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

PLAN NORTH

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| Drawing Title: GROUND FLOOR DEMOLITION PLAN - ELECTRICAL - OVERALL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
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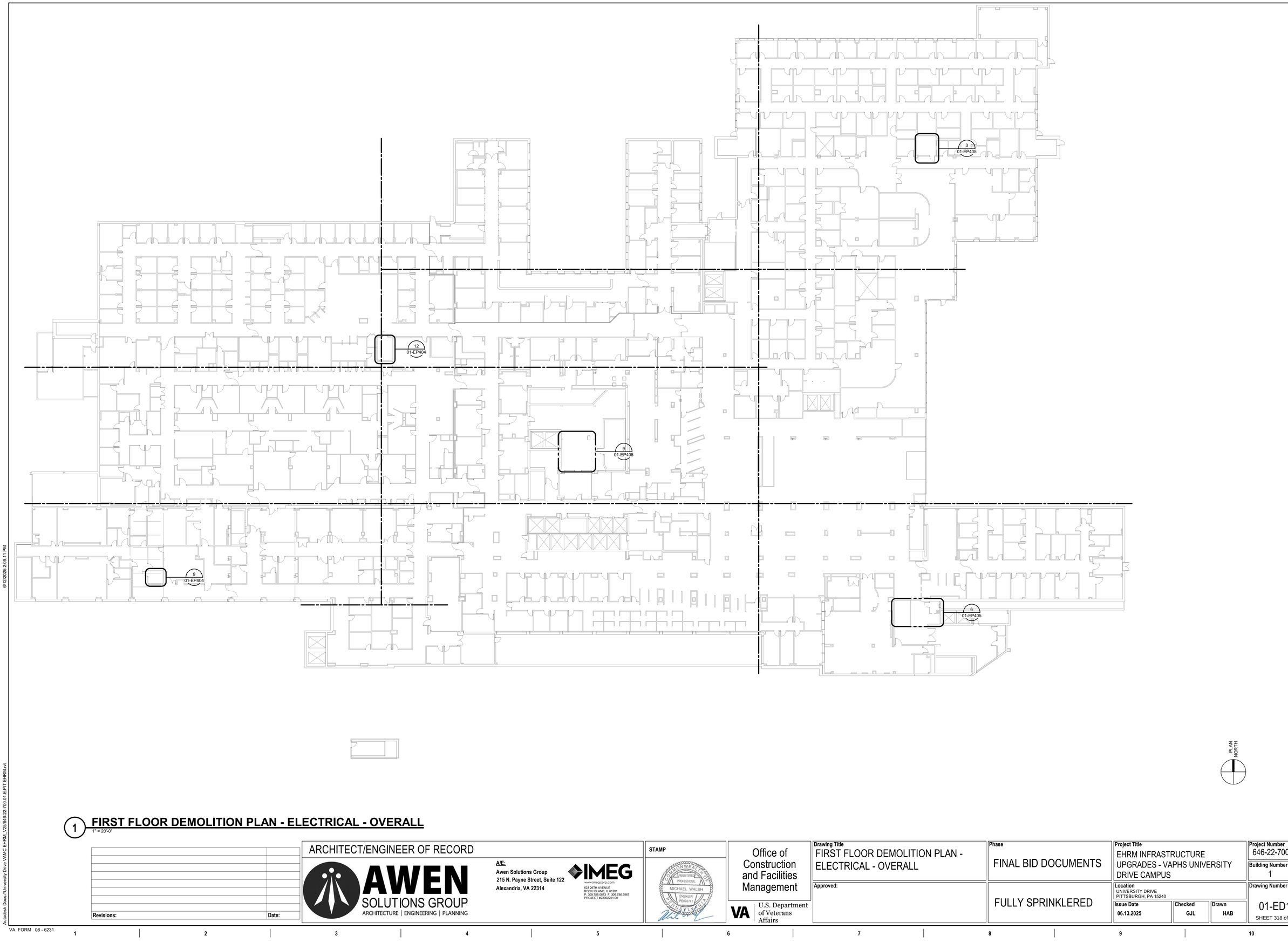


# 1 FIRST FLOOR DEMOLITION PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| Drawing Title: FIRST FLOOR DEMOLITION PLAN - ELECTRICAL - OVERALL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | Drawing Number: 01-ED101 |
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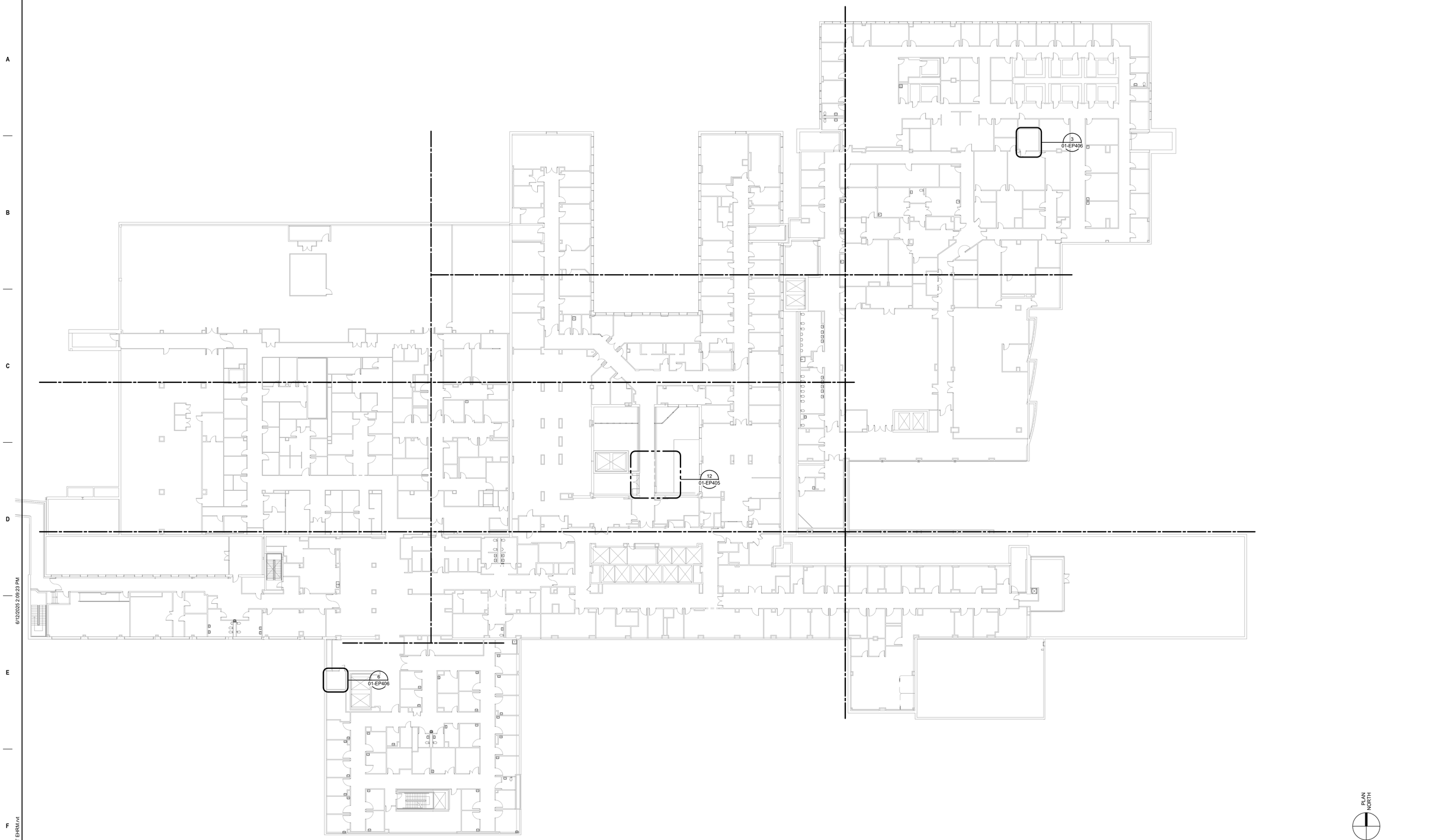


## 1 SECOND FLOOR DEMOLITION PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| Drawing Title: SECOND FLOOR DEMOLITION PLAN - ELECTRICAL - OVERALL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
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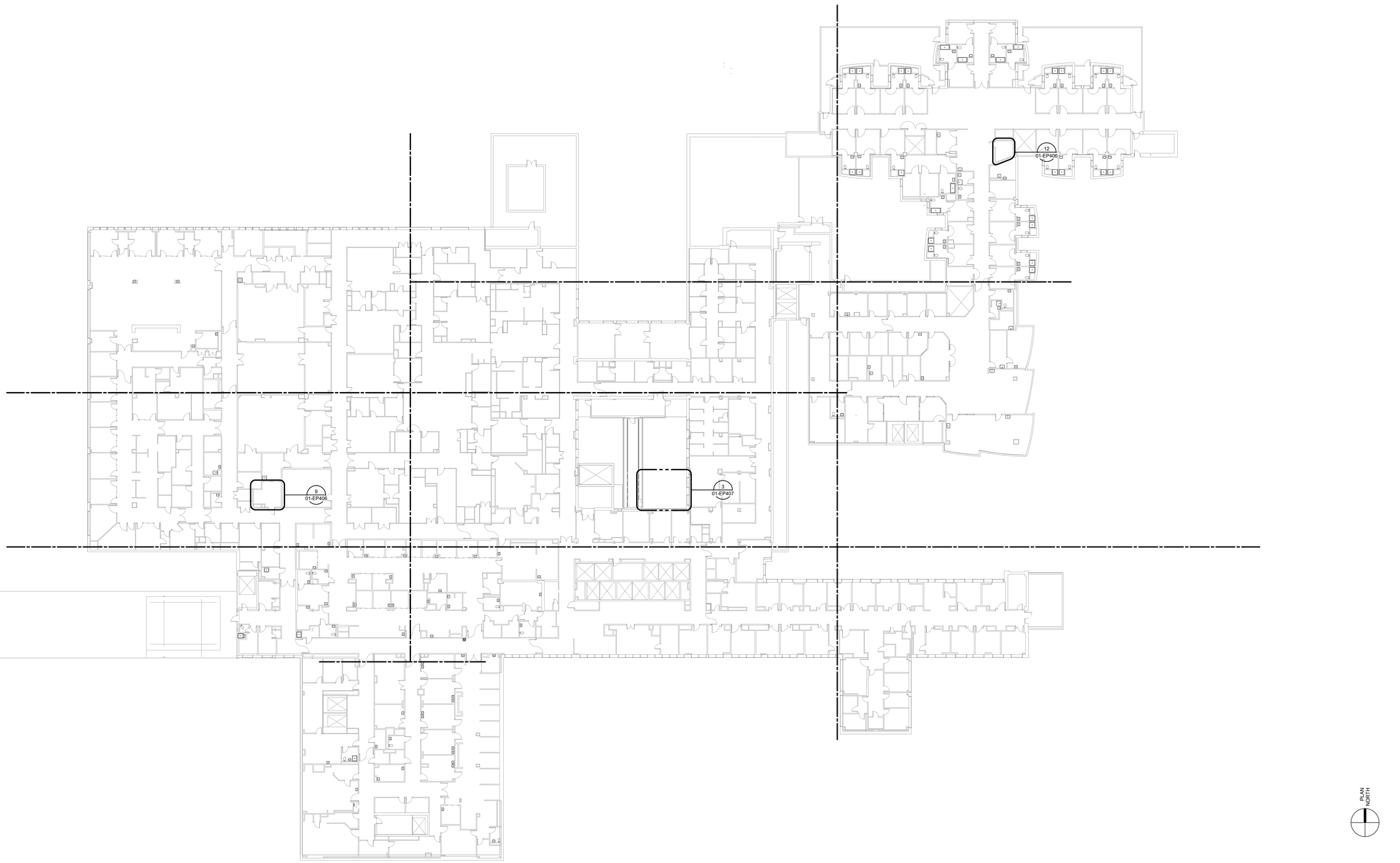


## 1 THIRD FLOOR DEMOLITION PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
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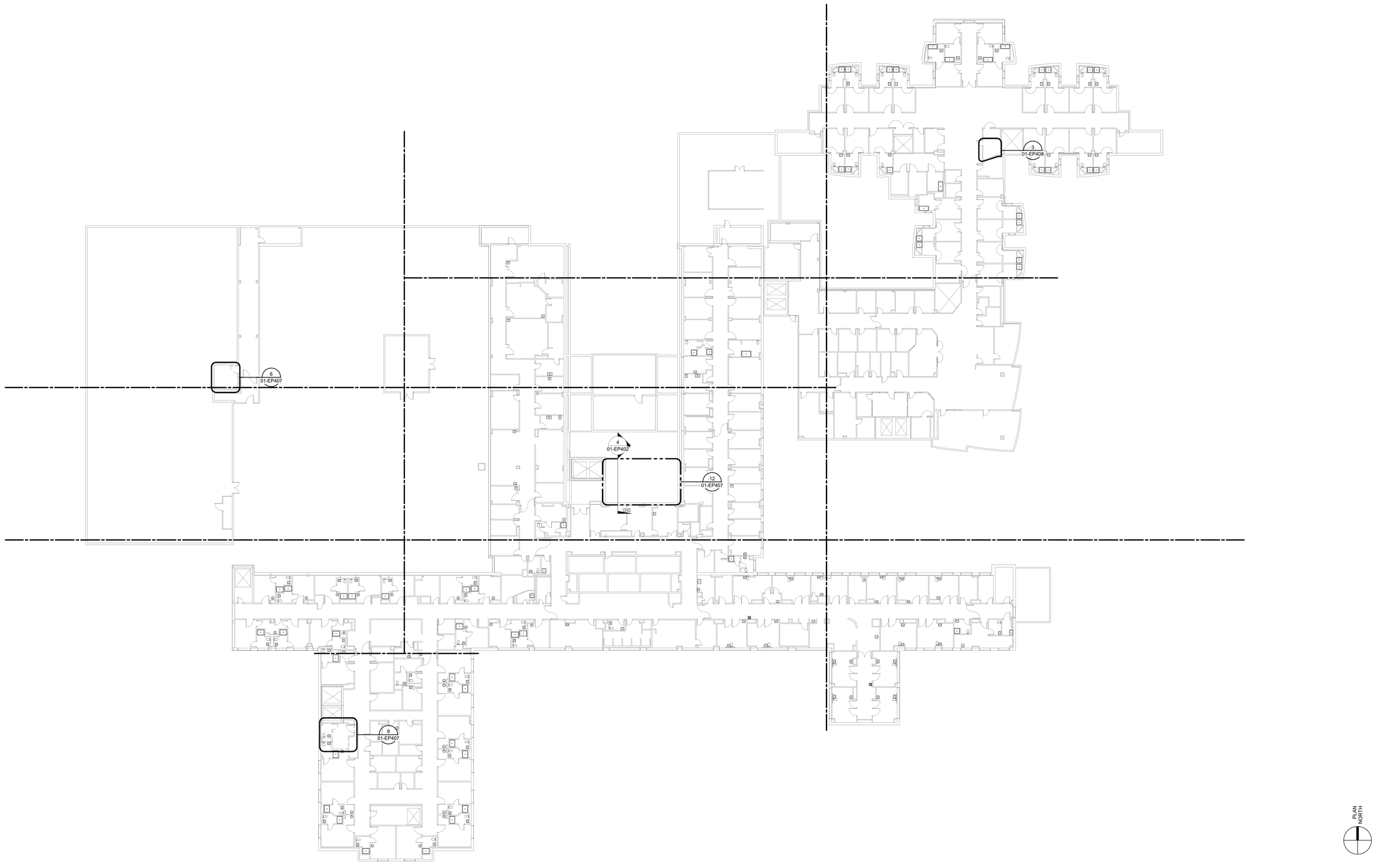


## 1 FOURTH FLOOR DEMOLITION PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| Drawing Title: FOURTH FLOOR DEMOLITION PLAN - ELECTRICAL - OVERALL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
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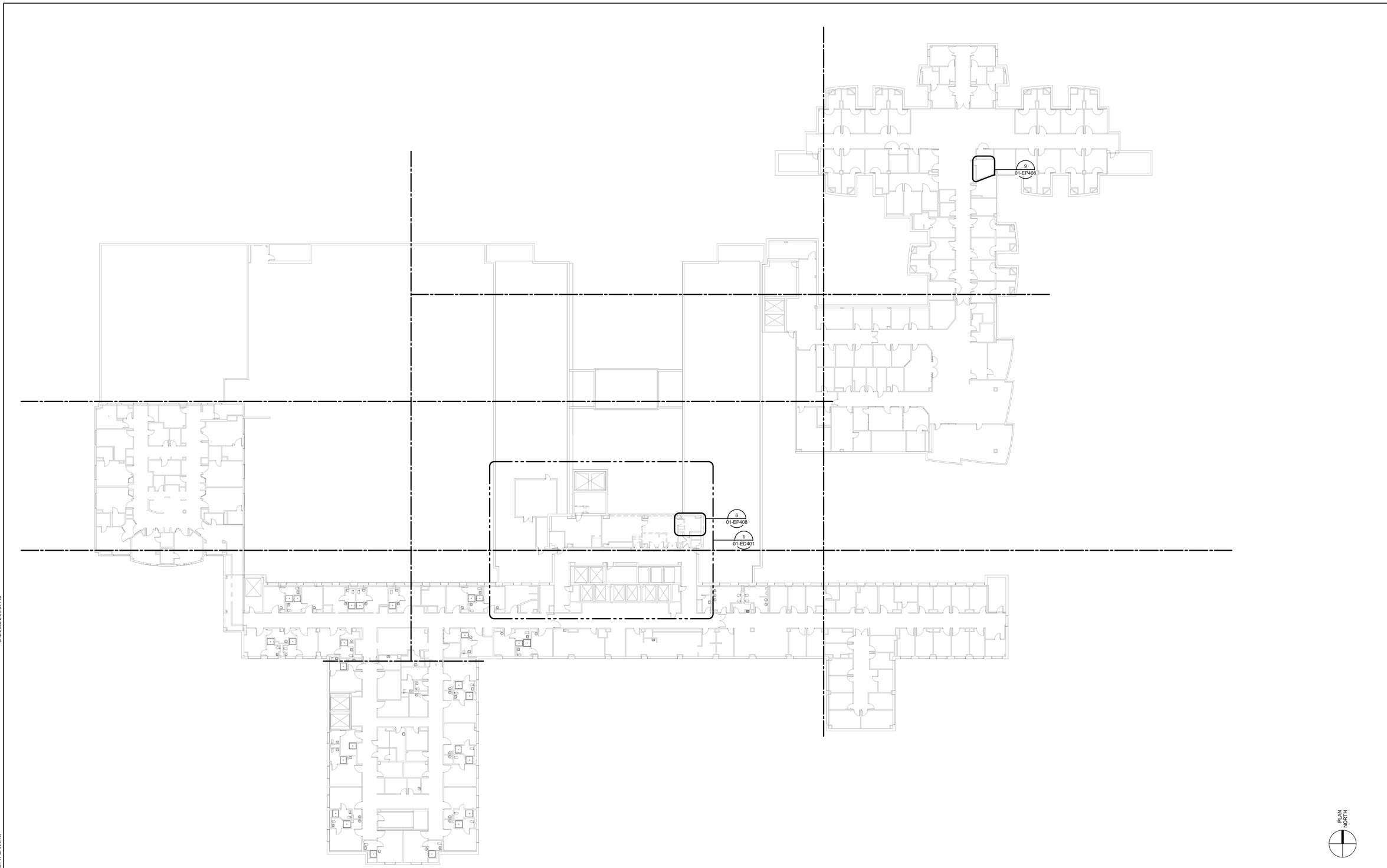


# 1 FIFTH FLOOR DEMOLITION PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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PE076747

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| Drawing Title: FIFTH FLOOR DEMOLITION PLAN - ELECTRICAL - OVERALL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
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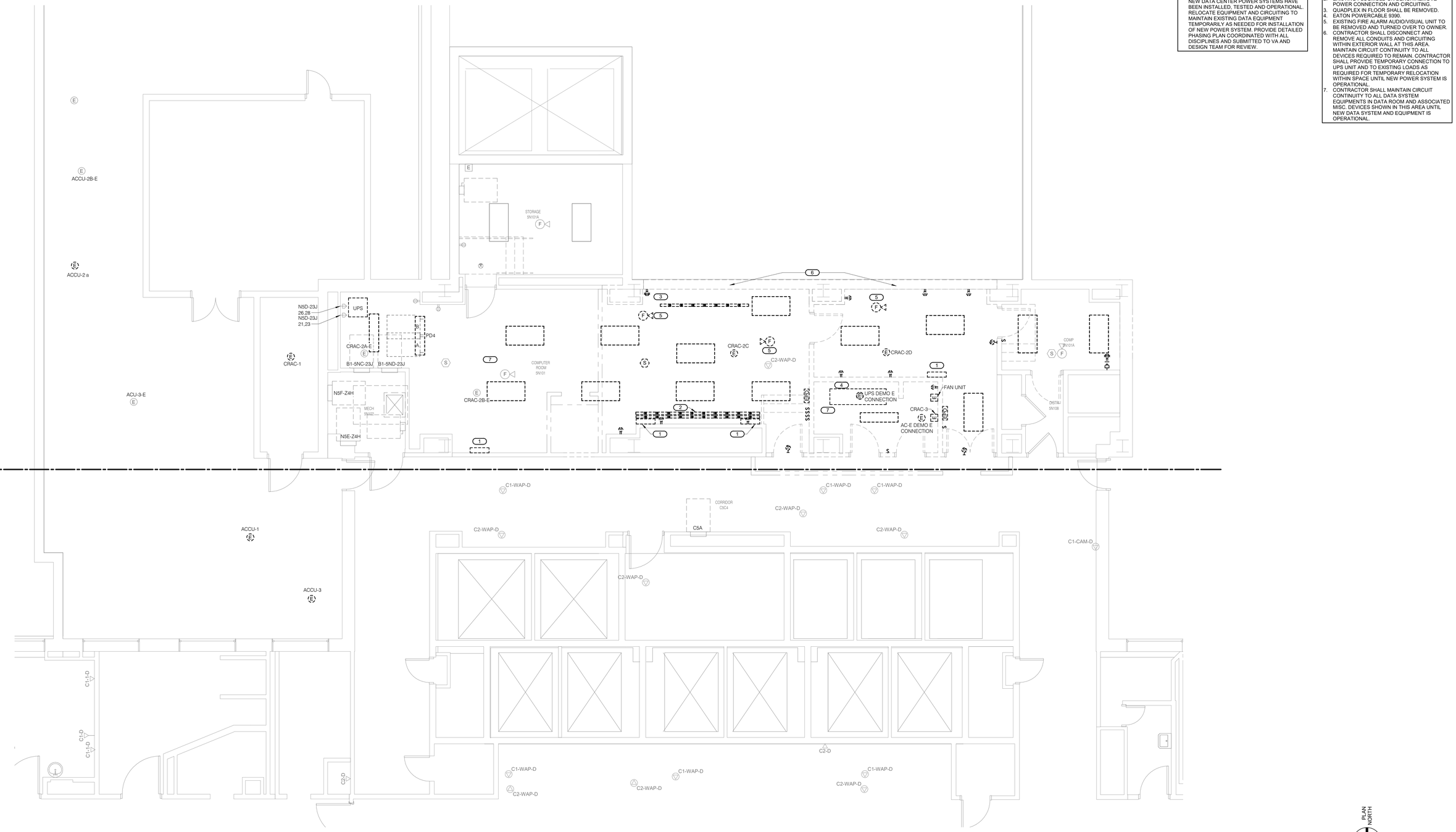
**CONSTRUCTION NOTES:**

1. IN GENERAL, EXISTING DATA CENTER POWER, SIGNAL AND LIGHTING SHALL REMAIN UNTIL NEW DATA CENTER POWER SYSTEMS HAVE BEEN INSTALLED, TESTED AND OPERATIONAL. RELOCATE EQUIPMENT AND CIRCUITING TO MAINTAIN EXISTING DATA EQUIPMENT TEMPORARILY AS NEEDED FOR INSTALLATION OF NEW POWER SYSTEM. PROVIDE DETAILED PHASING PLAN COORDINATED WITH ALL DISCIPLINES AND SUBMITTED TO VA AND DESIGN TEAM FOR REVIEW.

**KEYNOTES:** #

1. A/C CONTROLLER, REFER TO MECHANICAL DRAWINGS.
2. EXISTING PLUGMOLD ON BENCH.REMOVE POWER CONNECTION AND CIRCUITING.
3. QUADPLEX IN FLOOR SHALL BE REMOVED.
4. EATON POWERCABLE 9390.
5. EXISTING FIRE ALARM AUDIO/VISUAL UNIT TO BE REMOVED AND TURNED OVER TO OWNER.
6. CONTRACTOR SHALL DISCONNECT AND REMOVE ALL CONDUITS AND CIRCUITING WITHIN EXTERIOR WALL AT THIS AREA. MAINTAIN CIRCUIT CONTINUITY TO ALL DEVICES REQUIRED TO REMAIN. CONTRACTOR SHALL PROVIDE TEMPORARY CONNECTION TO UPS UNIT AND TO EXISTING LOADS AS REQUIRED FOR TEMPORARY RELOCATION WITHIN SPACE UNTIL NEW POWER SYSTEM IS OPERATIONAL.
7. CONTRACTOR SHALL MAINTAIN CIRCUIT CONTINUITY TO ALL DATA SYSTEM EQUIPMENTS IN DATA ROOM AND ASSOCIATED MISC. DEVICES SHOWN IN THIS AREA UNTIL NEW DATA SYSTEM AND EQUIPMENT IS OPERATIONAL.




## 1 FIFTH FLOOR COMPUTER ROOM AREA DEMOLITION

1/4" = 1'-0"

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PE076741

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

| Drawing Title | Phase | Project Title | Project Number |
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| FIFTH FLOOR DEMOLITION PLAN-ELECTRICAL ENLARGED | FINAL BID DOCUMENTS | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
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| | | | SHEET 323 of 797 |

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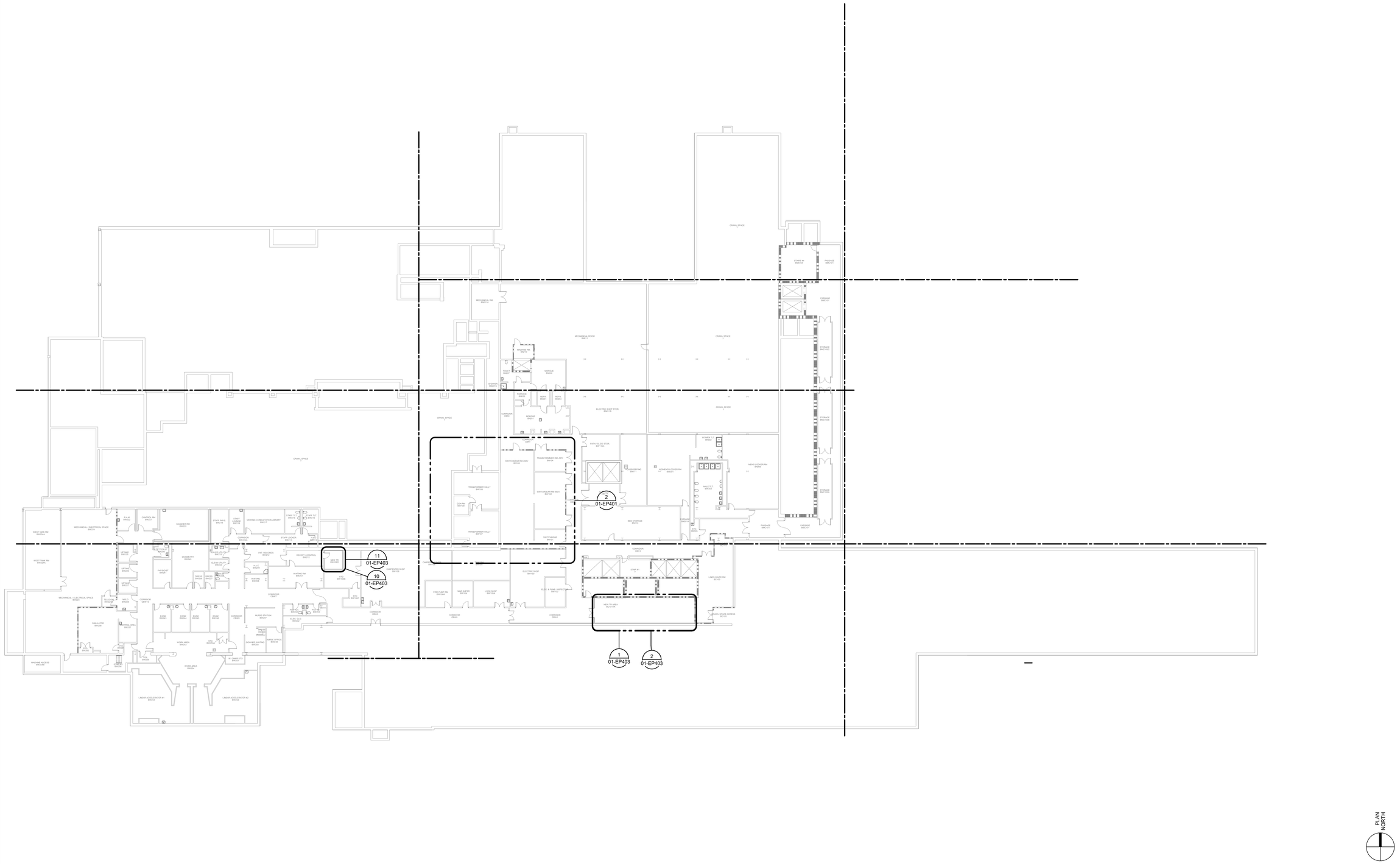


## 1 BASEMENT PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| BASEMENT PLAN - ELECTRICAL - OVERALL | FINAL BID DOCUMENTS | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
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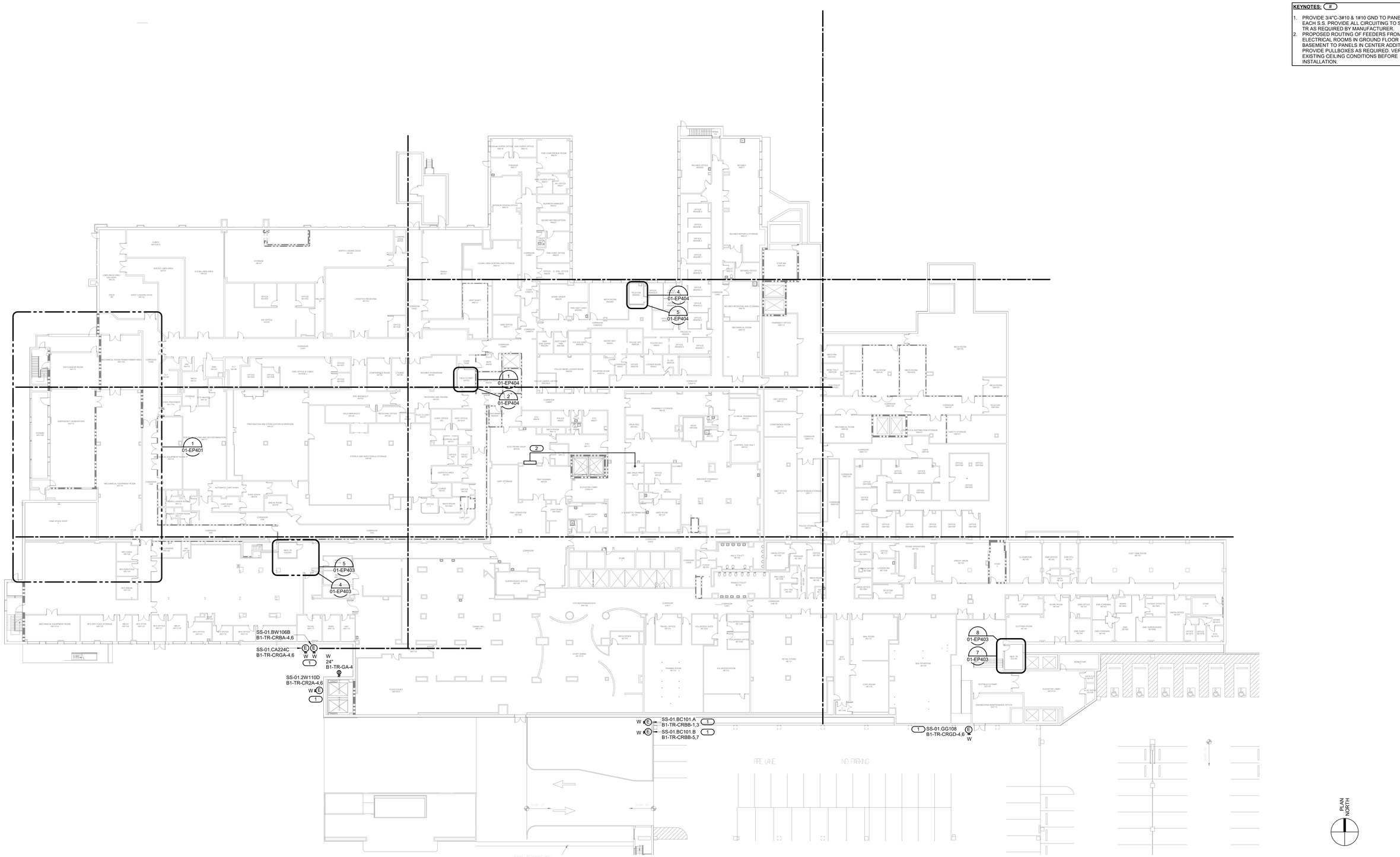
**KEYNOTES:** ( # )

1. PROVIDE 3/4"C-3#10 & 1#10 GND TO PANEL FOR EACH S.S. PROVIDE ALL CIRCUITING TO S.S. IN TR AS REQUIRED BY MANUFACTURER.
2. PROPOSED ROUTING OF FEEDERS FROM ELECTRICAL ROOMS IN GROUND FLOOR AND BASEMENT TO PANELS IN CENTER ADDITION. PROVIDE PULLBOXES AS REQUIRED. VERIFY EXISTING CEILING CONDITIONS BEFORE INSTALLATION.




## 1 GROUND FLOOR PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| Drawing Title: GROUND FLOOR PLAN - ELECTRICAL - OVERALL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-EP100 |
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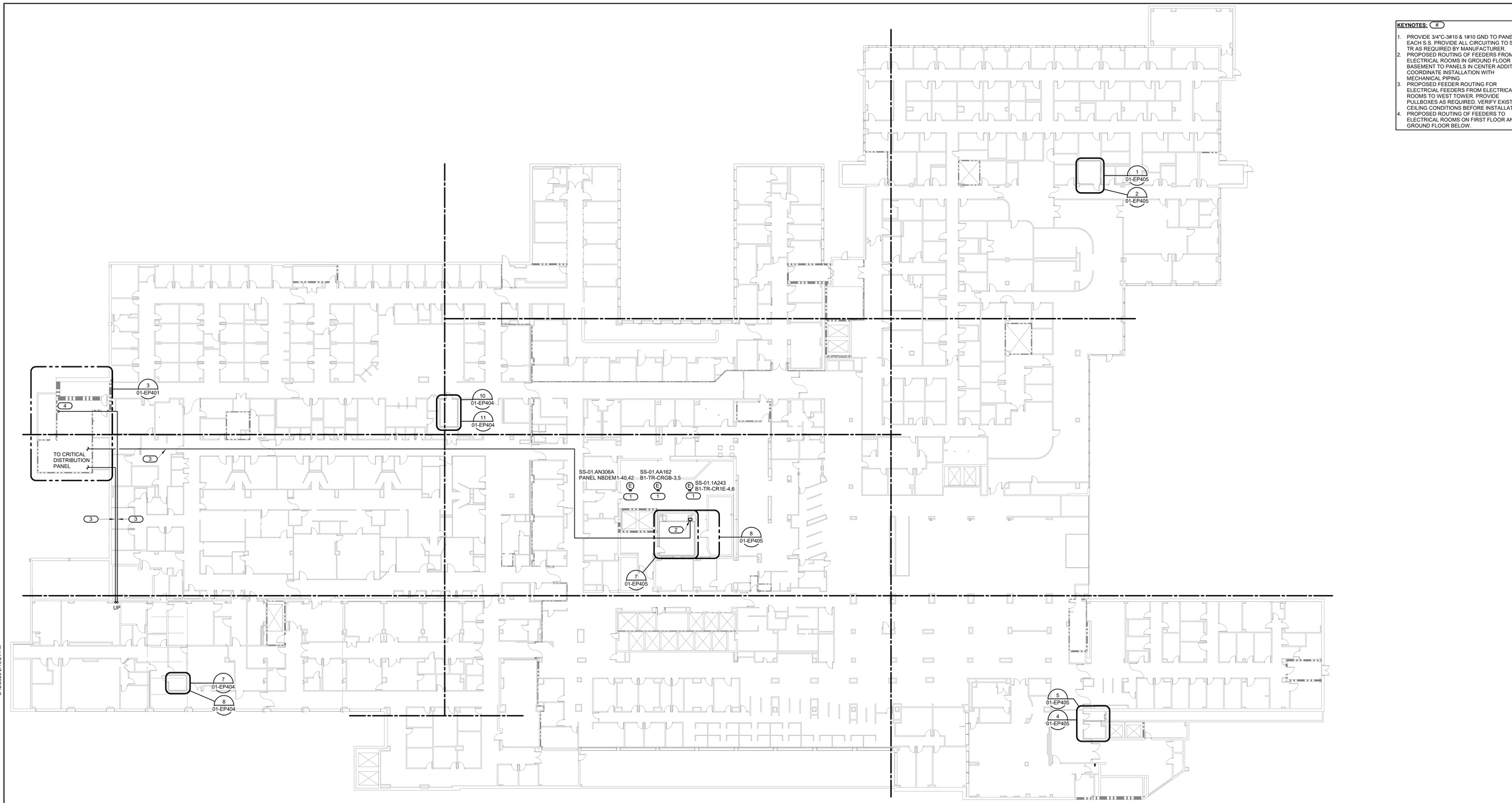
**KEYNOTES:** (#)

1. PROVIDE 3/4"C-3#10 & 1#10 GND TO PANEL FOR EACH S.S. PROVIDE ALL CIRCUITING TO S.S. IN TR AS REQUIRED BY MANUFACTURER.
2. PROPOSED ROUTING OF FEEDERS FROM ELECTRICAL ROOMS IN GROUND FLOOR AND BASEMENT TO PANELS IN CENTER ADDITION. COORDINATE INSTALLATION WITH MECHANICAL PIPING.
3. PROPOSED FEEDER ROUTING FOR ELECTRCIAL FEEDERS FROM ELECTRICAL ROOMS TO WEST TOWER. PROVIDE PULLBOXES AS REQUIRED. VERIFY EXISTING CEILING CONDITIONS BEFORE INSTALLATION.
4. PROPOSED ROUTING OF FEEDERS TO ELECTRICAL ROOMS ON FIRST FLOOR AND GROUND FLOOR BELOW.




## 1 FIRST FLOOR PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| Drawing Title: FIRST FLOOR PLAN - ELECTRICAL - OVERALL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
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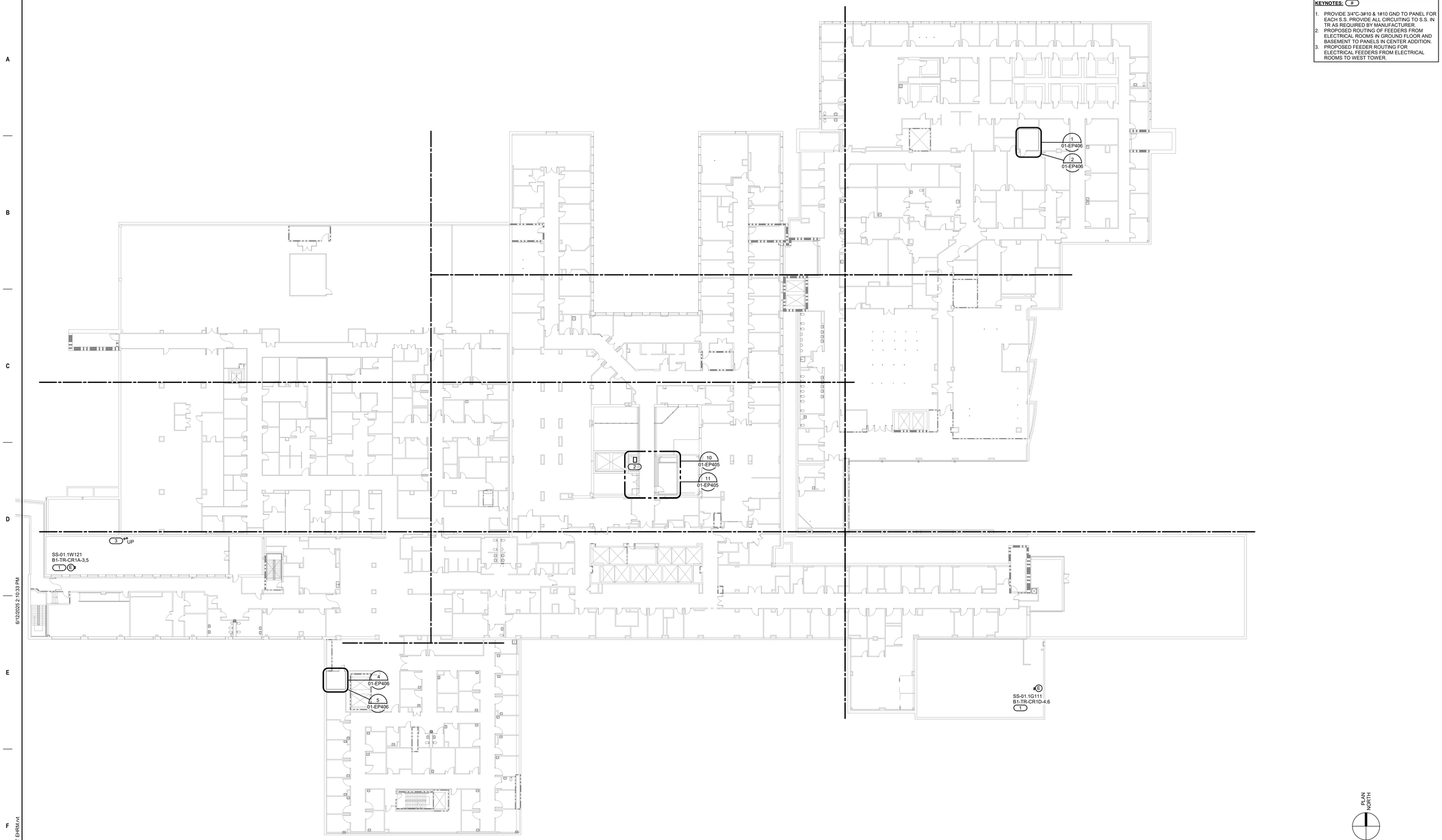
**KEYNOTES:** (#)

1. PROVIDE 3/4"C-3#10 & 1#10 GND TO PANEL FOR EACH S.S. PROVIDE ALL CIRCUITING TO S.S. IN TR AS REQUIRED BY MANUFACTURER.
2. PROPOSED ROUTING OF FEEDERS FROM ELECTRICAL ROOMS IN GROUND FLOOR AND BASEMENT TO PANELS IN CENTER ADDITION.
3. PROPOSED FEEDER ROUTING FOR ELECTRICAL FEEDERS FROM ELECTRICAL ROOMS TO WEST TOWER.




## 1 SECOND FLOOR PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

| Revisions: | Date: |
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ENGINEER
PE076741

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| Drawing Title: SECOND FLOOR PLAN - ELECTRICAL - OVERALL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-EP102 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | SHEET 327 of 797 |


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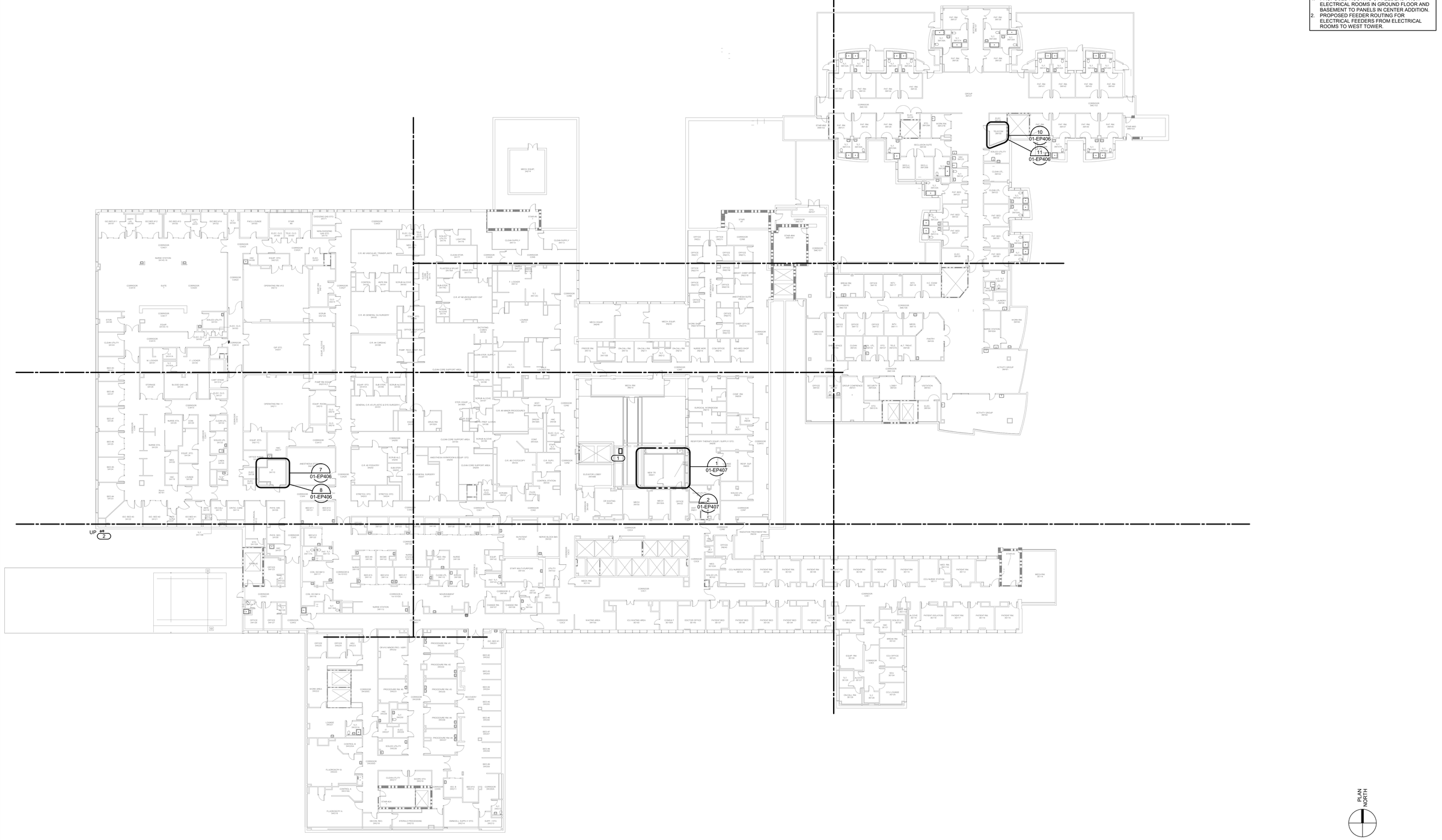
**KEYNOTES:** (#)

1. PROPOSED ROUTING OF FEEDERS FROM ELECTRICAL ROOMS IN GROUND FLOOR AND BASEMENT TO PANELS IN CENTER ADDITION.
2. PROPOSED FEEDER ROUTING FOR ELECTRICAL FEEDERS FROM ELECTRICAL ROOMS TO WEST TOWER.




## 1 THIRD FLOOR PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| Drawing Title: THIRD FLOOR PLAN - ELECTRICAL - OVERALL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | Drawing Number: 01-EP103 |
| | | | SHEET 328 of 797 |

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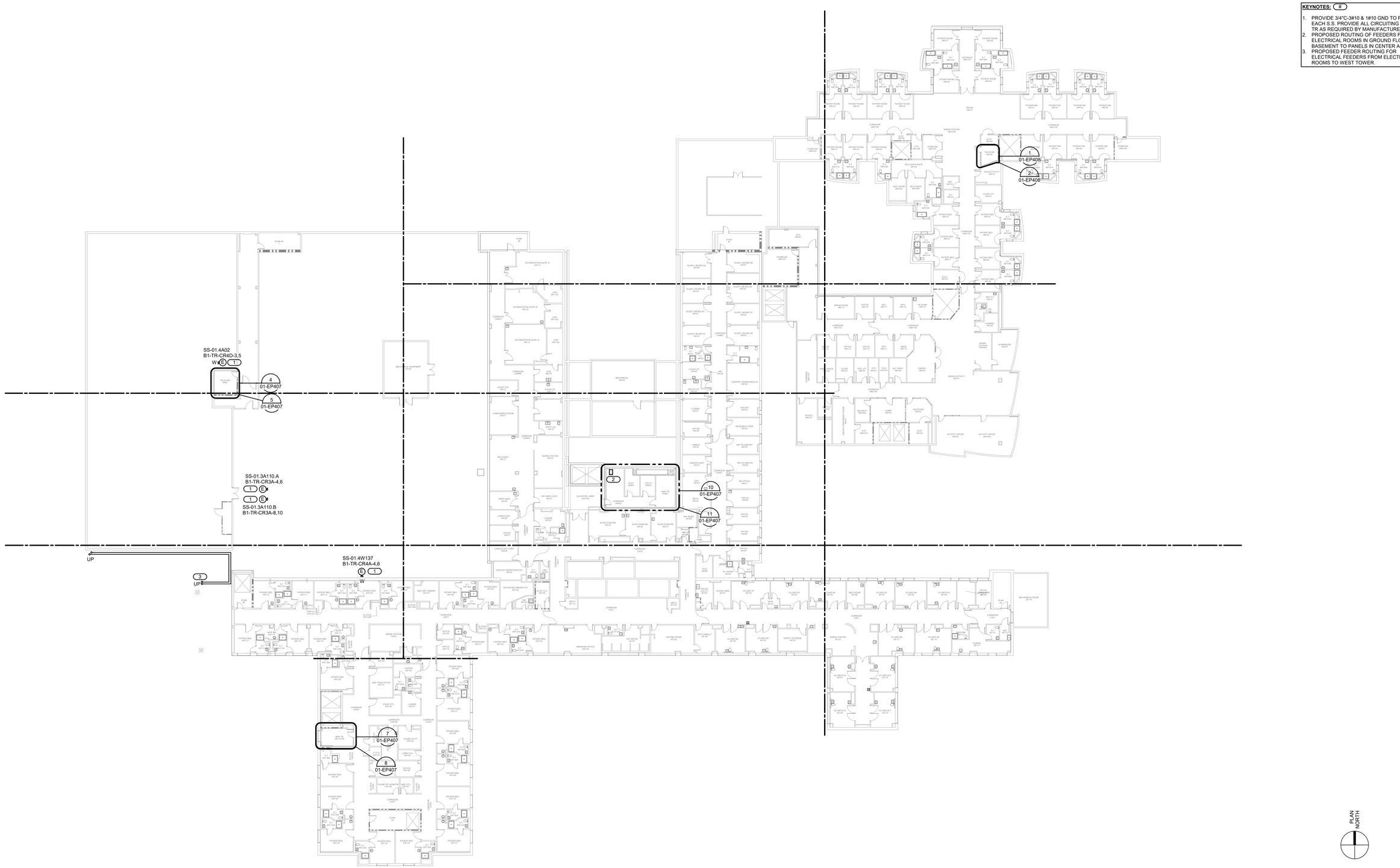
**KEYNOTES:** ( # )

1. PROVIDE 3/4"C-3#10 & 1#10 GND TO PANEL FOR EACH S.S. PROVIDE ALL CIRCUITING TO S.S. IN TR AS REQUIRED BY MANUFACTURER.
2. PROPOSED ROUTING OF FEEDERS FROM ELECTRICAL ROOMS IN GROUND FLOOR AND BASEMENT TO PANELS IN CENTER ADDITION.
3. PROPOSED FEEDER ROUTING FOR ELECTRICAL FEEDERS FROM ELECTRICAL ROOMS TO WEST TOWER.




## 1 FOURTH FLOOR PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| Drawing Title: FOURTH FLOOR PLAN - ELECTRICAL - OVERALL | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
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| | | | SHEET 329 of 797 |

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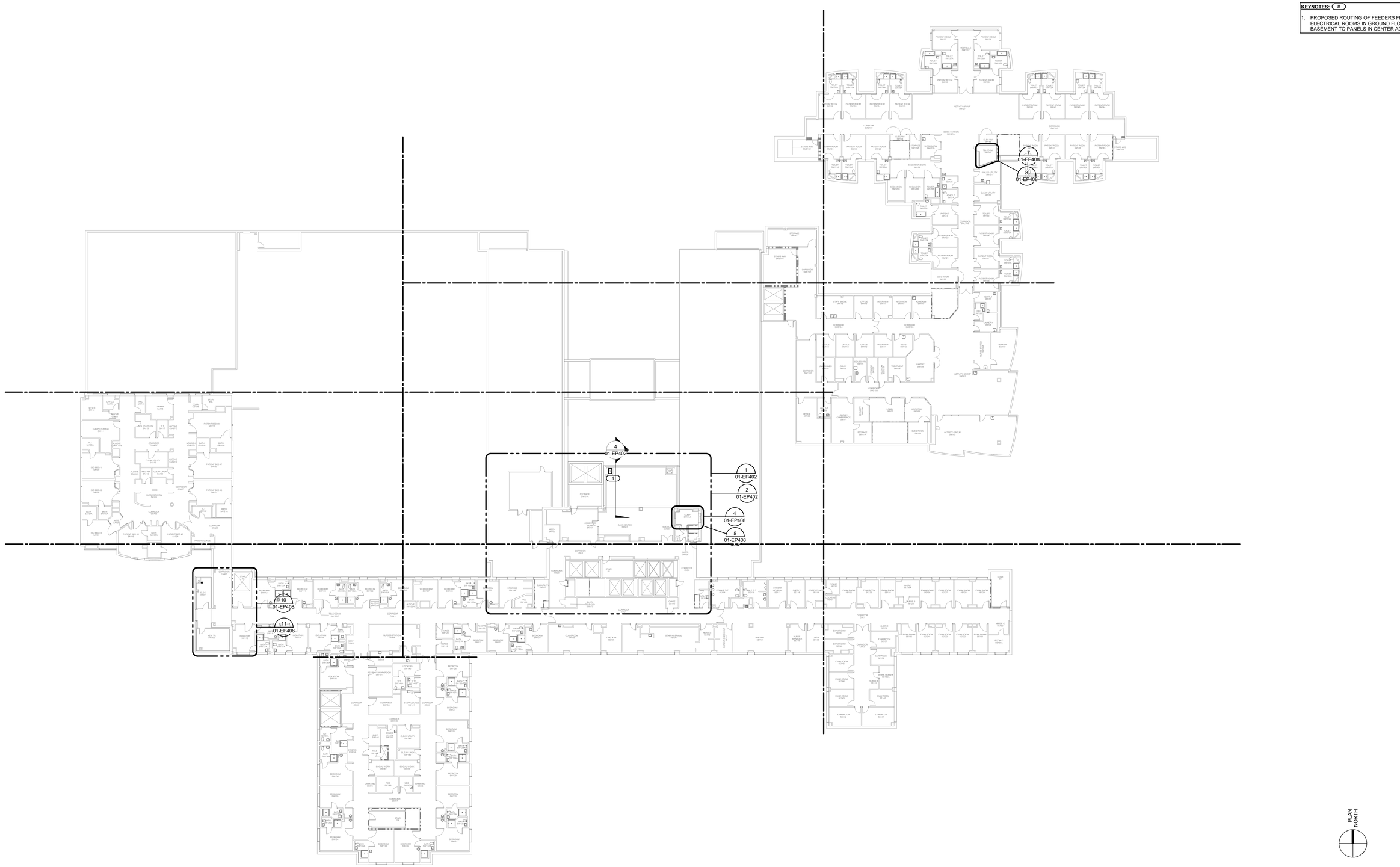
**KEYNOTES:** (#)

1. PROPOSED ROUTING OF FEEDERS FROM ELECTRICAL ROOMS IN GROUND FLOOR AND BASEMENT TO PANELS IN CENTER ADDITION.




## 1 FIFTH FLOOR PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| Drawing Title: FIFTH FLOOR PLAN - ELECTRICAL - OVERALL | Phase: FINAL BID DOCUMENTS |
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| Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | | Drawing Number: 01-EP105 |
| Issue Date: 06.13.2025 | Checked: GJL / Drawn: HAB | SHEET 330 of 797 |

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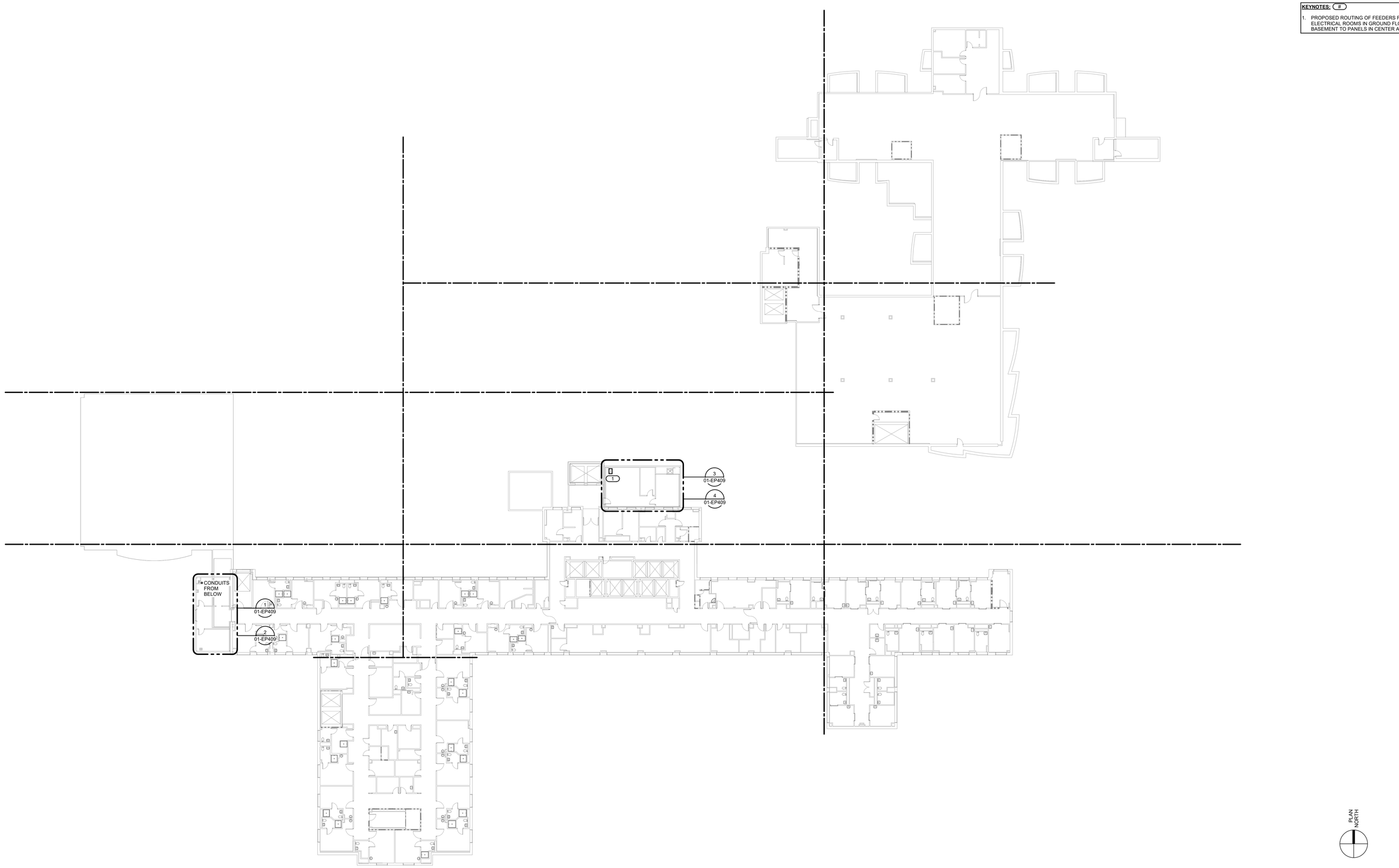
**KEYNOTES:** (#)

1. PROPOSED ROUTING OF FEEDERS FROM ELECTRICAL ROOMS IN GROUND FLOOR AND BASEMENT TO PANELS IN CENTER ADDITION.




## 1 SIXTH FLOOR PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
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| | | | SHEET 331 of 797 |

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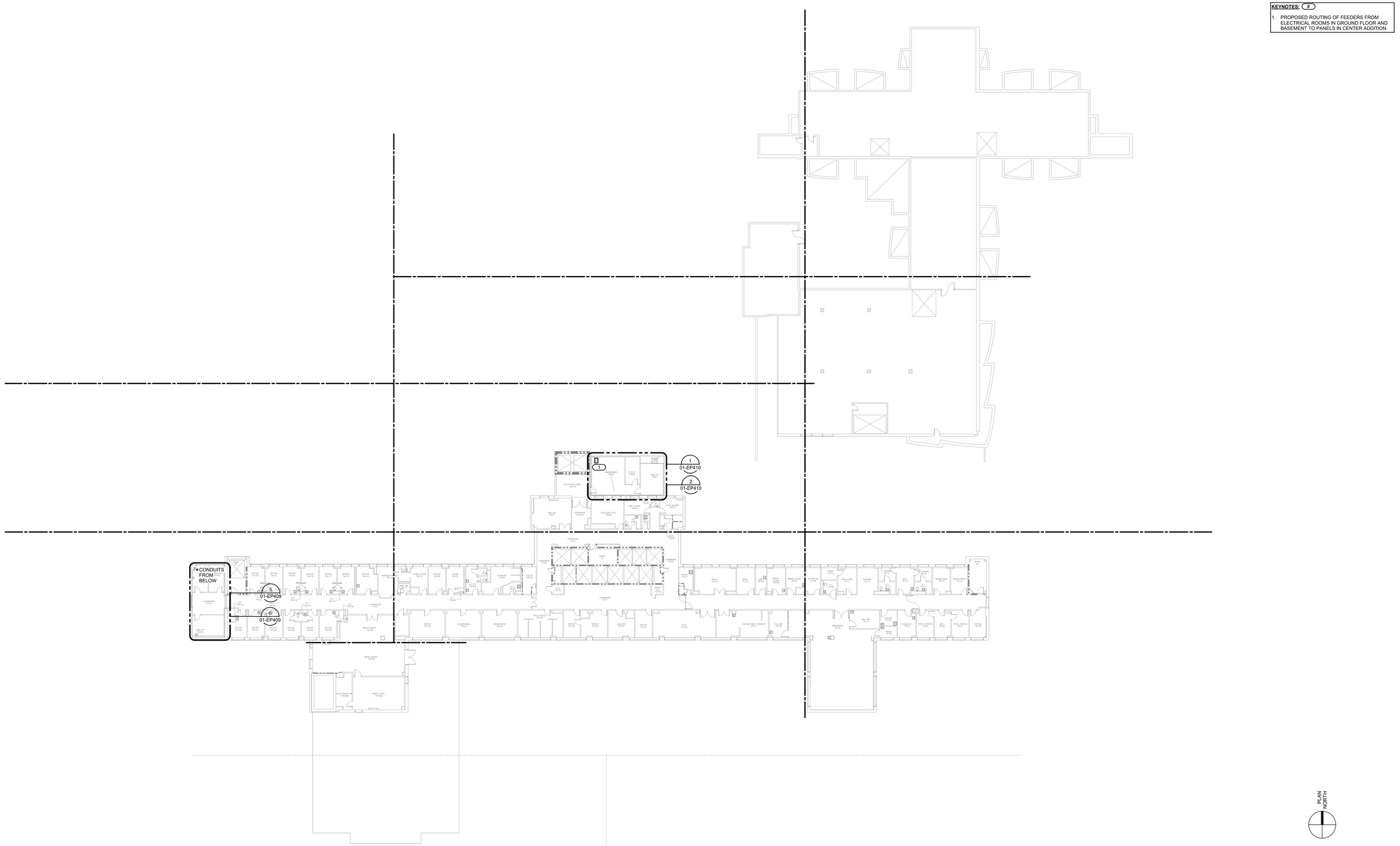
**KEYNOTES:** (#)

1. PROPOSED ROUTING OF FEEDERS FROM ELECTRICAL ROOMS IN GROUND FLOOR AND BASEMENT TO PANELS IN CENTER ADDITION.




## 1 SEVENTH FLOOR PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-EP107 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | SHEET 332 of 797 |

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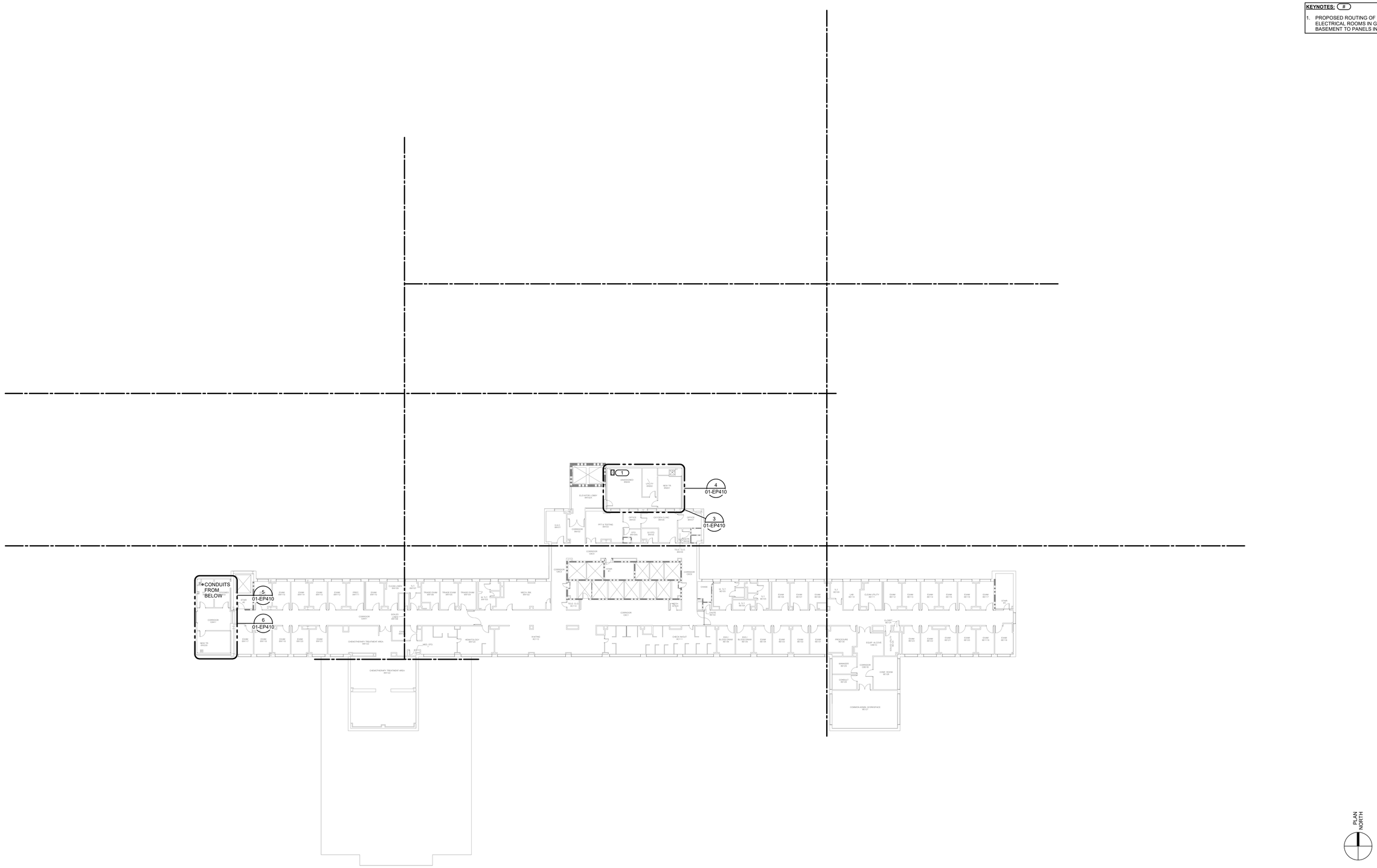
**KEYNOTES:** (#)

1. PROPOSED ROUTING OF FEEDERS FROM ELECTRICAL ROOMS IN GROUND FLOOR AND BASEMENT TO PANELS IN CENTER ADDITION.




## 1 EIGHTH FLOOR PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-EP108 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | SHEET 333 of 797 |

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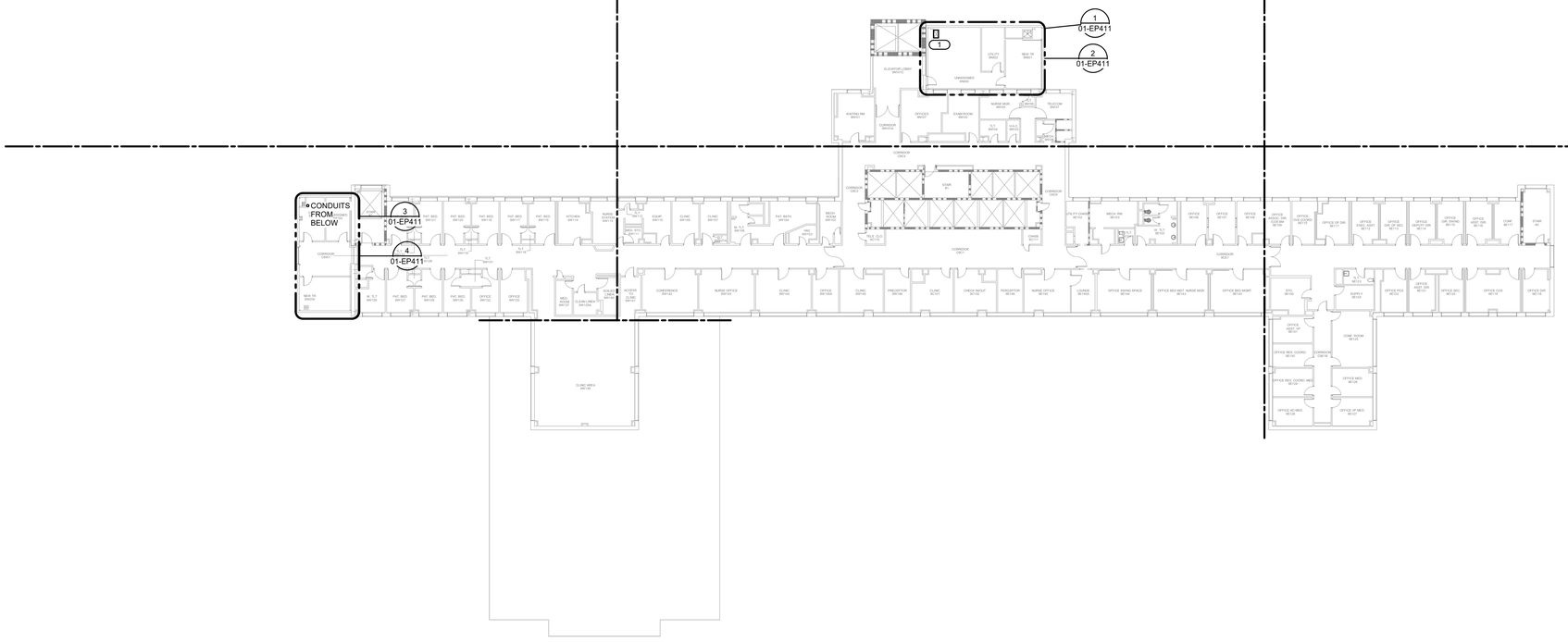
**KEYNOTES:** (#)

1. PROPOSED ROUTING OF FEEDERS FROM ELECTRICAL ROOMS IN GROUND FLOOR AND BASEMENT TO PANELS IN CENTER ADDITION.




## 1 NINTH FLOOR PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-EP109 |
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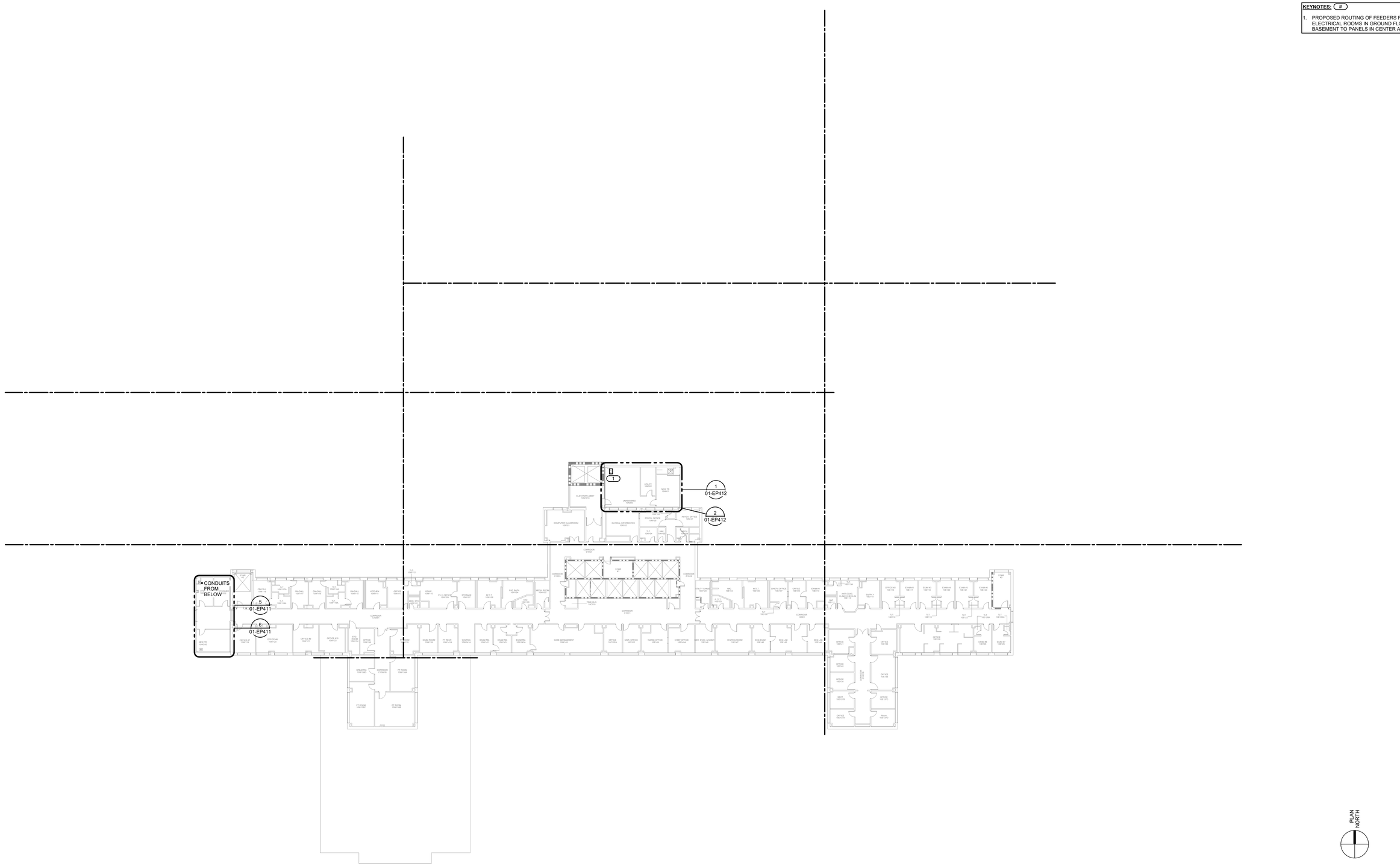
**KEYNOTES:** (#)

1. PROPOSED ROUTING OF FEEDERS FROM ELECTRICAL ROOMS IN GROUND FLOOR AND BASEMENT TO PANELS IN CENTER ADDITION.




## 1 TENTH FLOOR PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| **Approved:** | | | **Building Number** 1 |
| | FULLY SPRINKLERED | **Location** UNIVERSITY DRIVE PITTSBURGH, PA 15240 | **Drawing Number** 01-EP110 |
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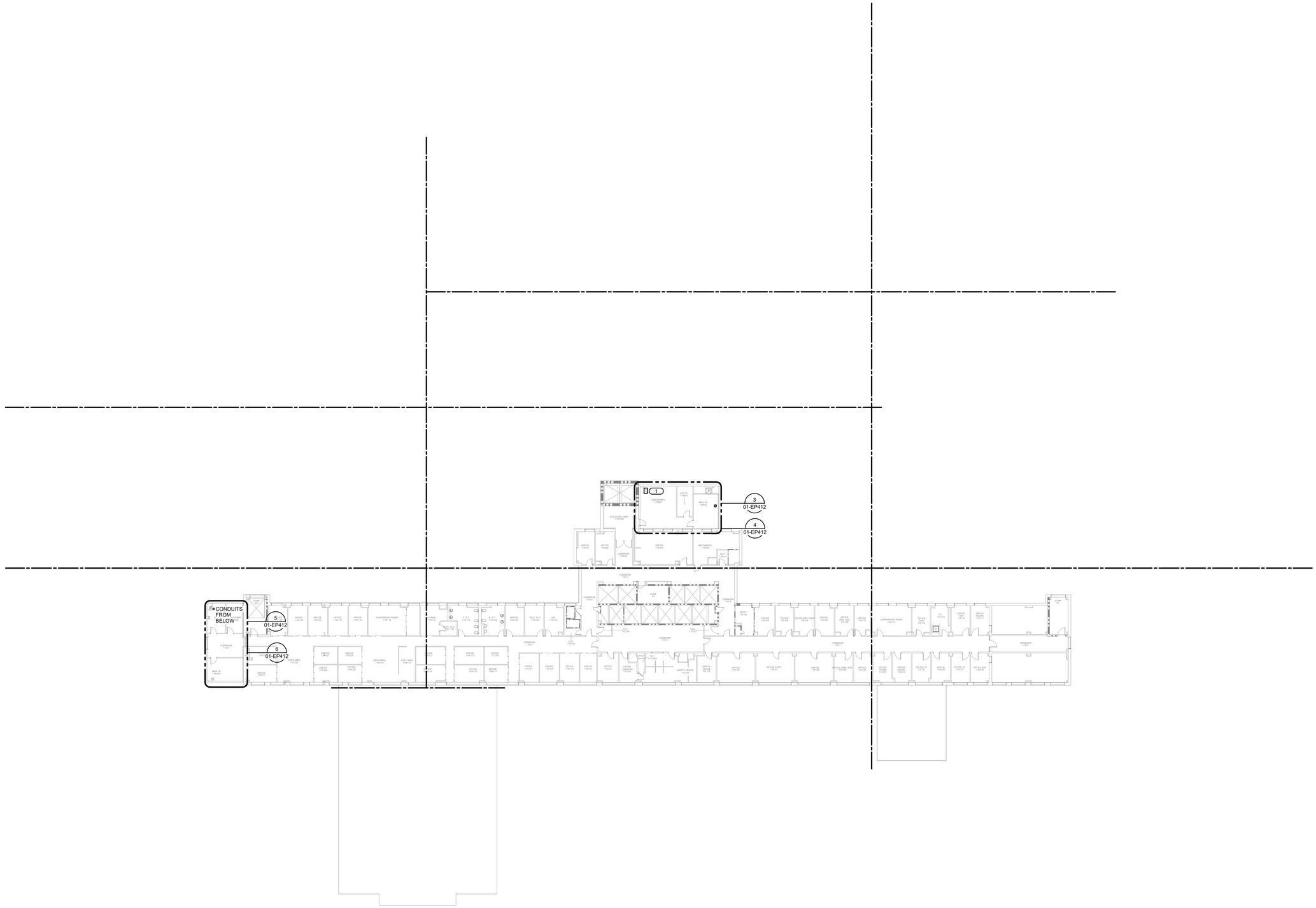
**KEYNOTES:** (#)

1. PROPOSED ROUTING OF FEEDERS FROM ELECTRICAL ROOMS IN GROUND FLOOR AND BASEMENT TO PANELS IN CENTER ADDITION.




PLAN NORTH

## 1 ELEVENTH FLOOR PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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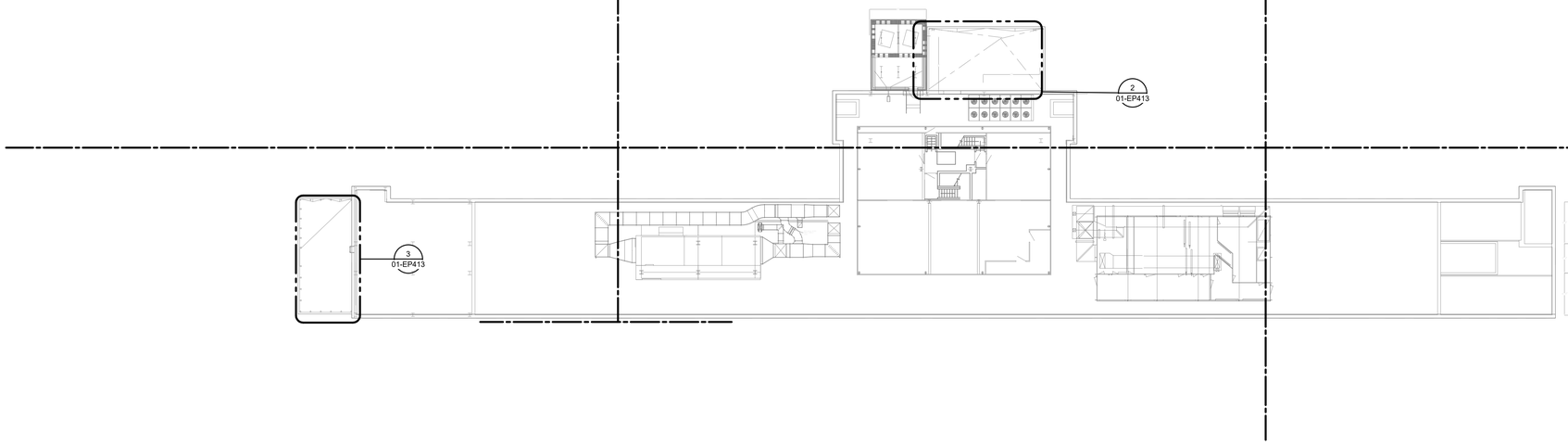


PLAN NORTH

## 1 ROOF PLAN - ELECTRICAL - OVERALL

1" = 20'-0"

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| | | | Building Number: 1 |
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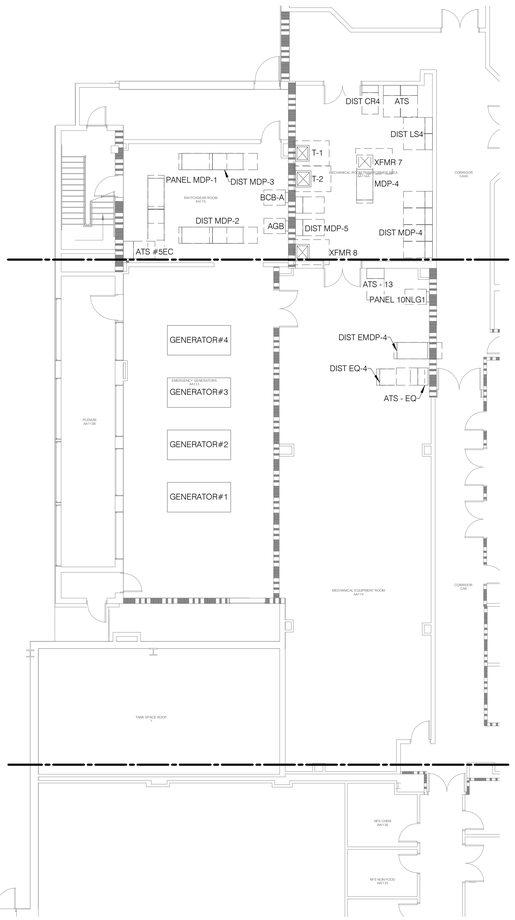
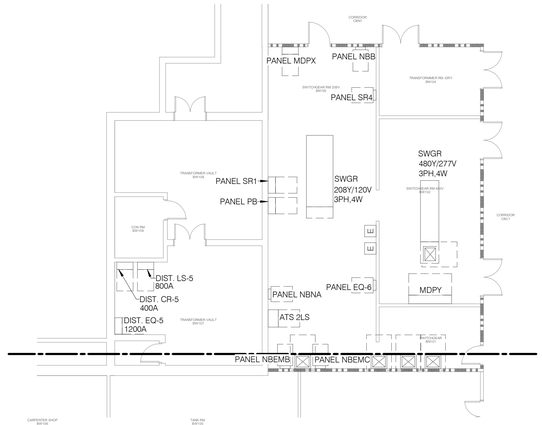


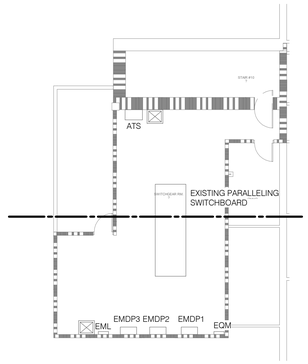

## EXISTING ELECTRICAL/GENERATOR ROOM - GROUND FLOOR BLDG 1

1 — 1" = 10'-0"




## EXISTING BASEMENT ELECTRICAL ROOM - BLDG 1

2 — 1" = 10'-0"




## EXISTING FIRST FLOOR ELECTRICAL ROOM - BLDG 1

3 — 1" = 10'-0"

PLAN NORTH

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|---|---|---|---|
| Drawing Title: BUILDING 1 - GROUND & BASEMENT ENLARGED PLAN | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-EP401 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | SHEET 338 of 797 |

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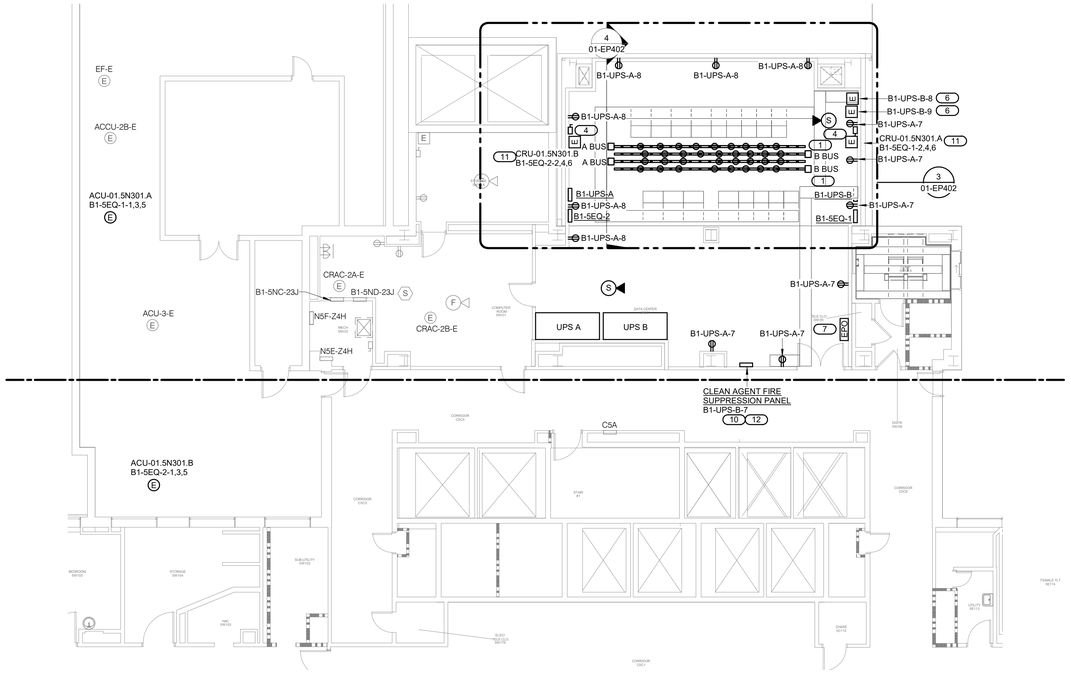
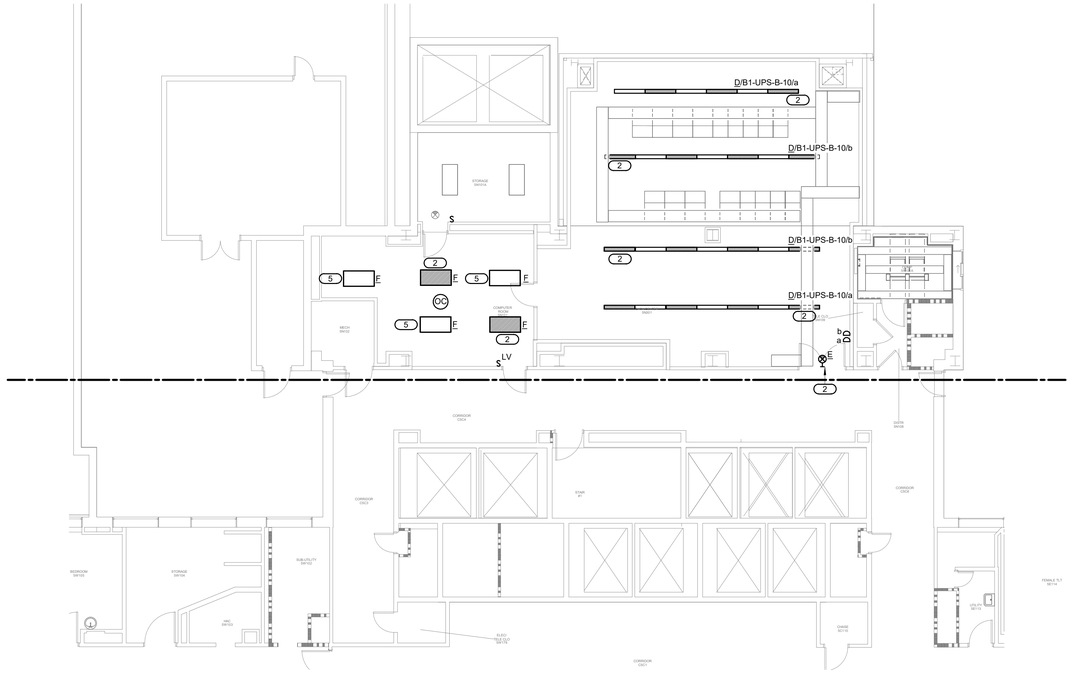



## 1 FIFTH FLOOR COMPUTER ROOM AREA POWER & SIGNAL

1/8" = 1'-0"

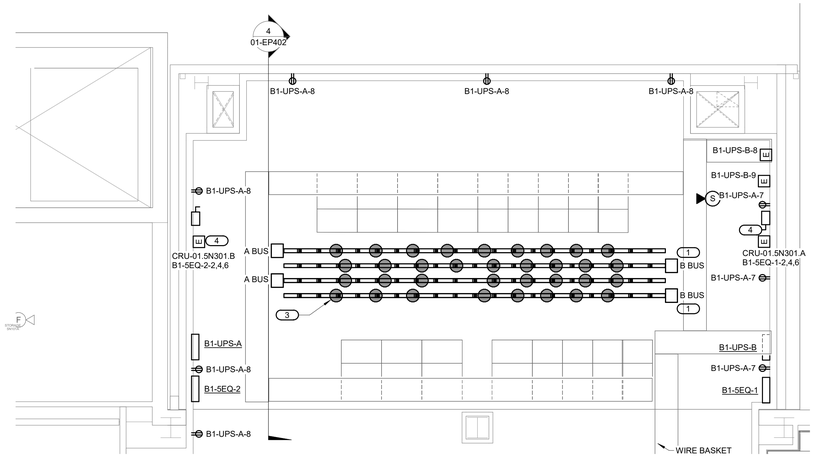



## 2 FIFTH FLOOR COMPUTER ROOM AREA LIGHTING

1/8" = 1'-0"

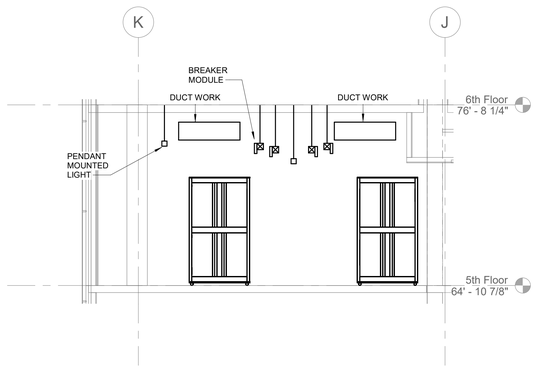
**KEYNOTES:** (#)

1. CONTRACTOR SHALL PROVIDE 208V, 3 PHASE , 4 WIRE, 225A PENDANT MOUNTED POWER BUSWAY AS SHOWN WITH PLUG-IN UNITS FOR EACH RECEPTACLE SHOWN. PLUG-IN UNITS SHALL HAVE 3' DROP CORD (WITH STRAIN RELIEF) WITH SIMPLEX L21-20R RECEPTACLE AT EACH OUTLET LOCATION. REFER TO DETAIL 1/01-EN312.
2. PROVIDE CONNECTION TO EXISTING EMERGENCY CIRCUIT IN THIS AREA. TYPICAL FOR ALL EMERGENCY LIGHTING IN ROOM. PROVIDE ALCR TO ALLOW SWITCHING OF EMERGENCY LIGHTING.
3. PROVIDE BUSWAY BREAKER MODULE TAP WITH TWO 20A/3P BREAKER AND TWO 4' DROP CORD WITH STRAIN RELIEF ON BOTH END, WITH L21-20R RECEPTACLE. TYPICAL FOR EACH.
4. PROVIDE CONNECTION FROM BUILDING FIRE ALARM SYSTEM TO UNIT SMOKE DETECTION IN CRU.
5. PROVIDE CONNECTION TO EXISTING LIGHTING CIRCUIT IN ROOM.
6. PROVIDE POWER TO ACCESS CONTROL PANEL. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH TECHNOLOGY DESIGNER.
7. EMERGENCY PUSHBUTTON OFF STATION WITH CLEAR COVER GUARD TO SHUT OFF POWER TO UPS SYSTEMS.
8. PROVIDE AND INSTALL RACK PDU ONTO TELECOM CABINET PER MANUFACTURER'S INSTRUCTION. PDU# APC AP8861 RPDU WITH L21-20R RECEPTACLE TO DISTRIBUTE POWER TO RECEPTACLES IN PDU. POWER CORD FROM BUSWAY WILL CONNECT TO L21-20R RECEPTACLE.
9. CIRCUIT BREAKER TYPE PLUG-IN UNIT WITH TWO CIRCUIT BREAKERS, ONE PER CORD/RECEPTACLE.
10. PROVIDE ALARM AND TROUBLE CONNECTION FROM CLEAN AGENT SUPPRESSION PANEL TO BUILDING FIRE ALARM SYSTEM.
11. CRAC UNITS SHALL SHUT DOWN FROM SIGNAL FROM FIRE SUPPRESSION SYSTEM IN DATA CENTER.
12. PROVIDE CONNECTION TO BUILDING FIRE ALARM SYSTEM.



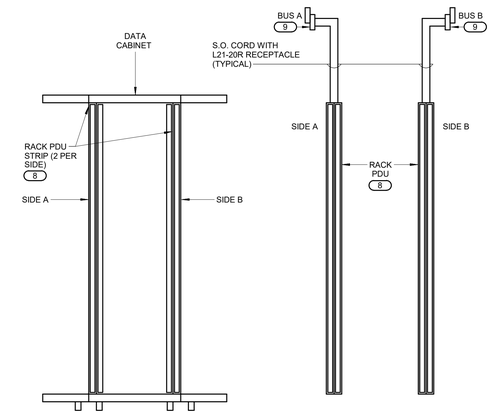

## 3 FIFTH FLOOR COMPUTER ROOM AREA

1/4" = 1'-0"




## 4 DATA CENTER - SECTION BETWEEN RACKS

1/4" = 1'-0"




## 5 TYPICAL DATA CABINET WIRING DETAIL

NO SCALE

PLAN NORTH

1/8" = 1'-0" SCALE 5 0 5 10 15 20 FEET

| Revisions: | Date: |
|---|---|

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|---|---|---|---|
| Drawing Title: BUILDING 1 - FIFTH FLOOR - ELECTRICAL ENLARGED | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-EP402 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | SHEET 339 of 797 |

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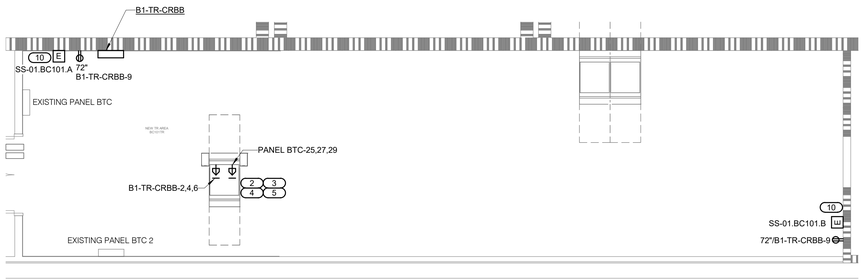
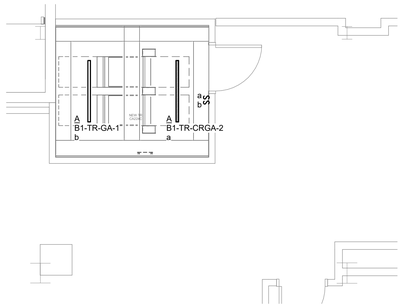
## 1 BASEMENT - LIGHTING - TR BC101-PBX
1/4" = 1'-0"

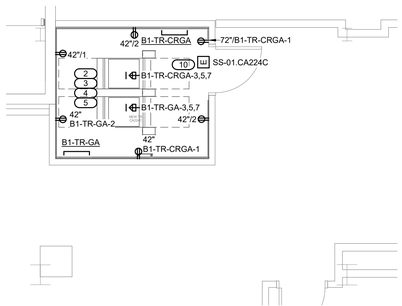



## 2 BASEMENT - ELECTRICAL POWER & SIGNAL - TR BC101-PBX
1/4" = 1'-0"

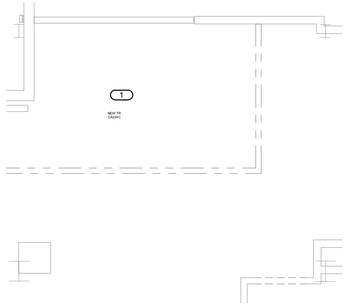
## 3 BASEMENT - DEMO PLAN - TR BC101-PBX
1/4" = 1'-0"



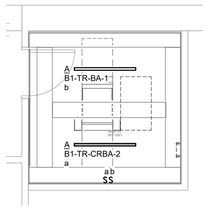

## 4 GROUND FLOOR PLAN - LIGHTING - TR CA224C
1/4" = 1'-0"



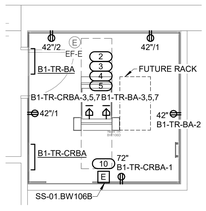

## 5 GROUND FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR CA224C
1/4" = 1'-0"



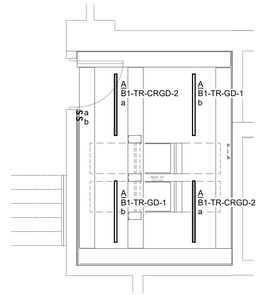

## 6 GROUND FLOOR - DEMO PLAN - TR CA224C
1/4" = 1'-0"



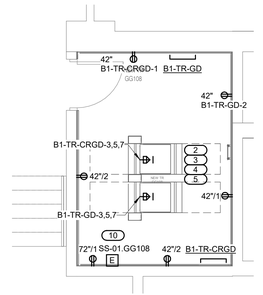

## 10 BASEMENT - LIGHTING - TR BW106B
1/4" = 1'-0"



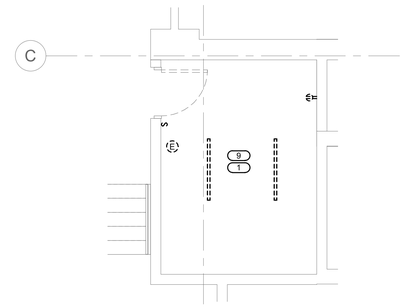

## 11 BASEMENT - ELECTRICAL POWER & SIGNAL - TR BW106B
1/4" = 1'-0"



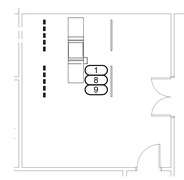

## 7 GROUND FLOOR PLAN - LIGHTING - TR GG108
1/4" = 1'-0"




## 8 GROUND FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR GG108
1/4" = 1'-0"




## 9 GROUND FLOOR - DEMO PLAN - TR GG108
1/4" = 1'-0"




## 12 BASEMENT - DEMO PLAN - TR BW106B
1/8" = 1'-0"

**CONSTRUCTION NOTES:**

1. REFER TO TECHNOLOGY PLANS FOR IT ROOM LAYOUT AND RACK LAYOUT/DETAILS.

**KEYNOTES: (#)**

1. DISCONNECT AND REMOVE LIGHTS AND RECEPTACLES IN AREA OF NEW IT ROOM. MAINTAIN CIRCUIT CONTINUITY TO ADJOINING SPACES. RELOCATE ALL EXISTING NON-TR BRANCH CIRCUITING OUT OF AREA FOR NEW TR.
2. COORDINATE FINAL LOCATION OF RECEPTACLE L21-30R INSIDE TELECOM CABINET WITH TELECOM CONTRACTOR. PROVIDE 3/4"C-4#10, 1#12 GND TO PANEL FOR EACH RECEPTACLE.
3. PROVIDE EATON BLADEUPS, 5KW, 120/208V, 3-PHASE, 4-WIRE RACK MOUNTED UPS FOR EACH RACK TOWER.
4. PROVIDE APC#AP8861 RPDU RACK PDU 2G WITH L21-20P CORD, (120/208V, 3-PHASE, 20A, ZERO U, 5.7 KW, 208V, (36) C13 (6) C19 (2) 5-20R OUTLETS. PROVIDE TWO PER RACK, MOUNTED PER MANUFACTURER'S REQUIREMENTS.
5. PROVIDE ONE RACK MOUNTED ZONE PDU UNIT, 30 AMP 3 PHASE, 120/208V, 5-WIRE WITH (4) L21-30R, (6) 5-20R AND TWO 10' POWER CORDS. ZONIT#ZPDS-208V-30A-L21-4L21-20R-CR.7.
6. PROVIDE TWO J-BOXES IN CEILING OVER THE CENTER RACK, IN LIEU OF RECEPTACLES . PROVIDE 1"C – 4#8, & 1#10 GND BACK TO A 60A/3P BREAKER IN THE PANEL FOR EACH J-BOX.
7. EXISTING LIGHTING AND CONTROL TO REMAIN.
8. MAINTAIN CIRCUIT CONTINUITY TO REMAINING DEVICES IN ROOM.
9. CONTRACTOR SHALL RELOCATE ALL CIRCUITING WITHIN EXISTING ROOM/AREA THAT DOES NOT FEED TR.
10. INDOOR UNIT TO BE POWERED BY OUTDOOR UNIT. PROVIDE SWITCH, POWER CONNECTION AND CONTROL WIRING COORDINATE EXACT LOCATION WITH M.C.

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

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|---|---|---|---|
| Drawing Title: BUILDING 1 - ELECTRICAL ENLARGED PLANS | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-EP403 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | SHEET 340 of 797 |

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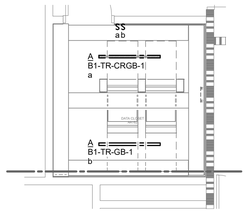
**CONSTRUCTION NOTES:**

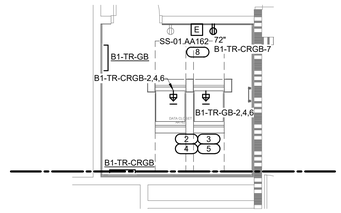
1. REFER TO TECHNOLOGY PLANS FOR IT ROOM LAYOUT AND RACK LAYOUT/DETAILS.

**KEYNOTES:** ( # )

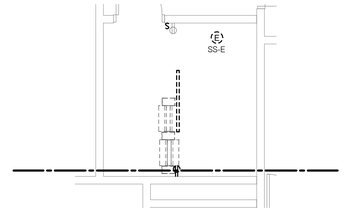
1. DISCONNECT AND REMOVE LIGHTS AND RECEPTACLES IN AREA OF NEW IT ROOM. MAINTAIN CIRCUIT CONTINUITY TO ADJOINING SPACES.
2. COORDINATE FINAL LOCATION OF RECEPTACLE L21-30R INSIDE TELECOM CABINET WITH TELECOM CONTRACTOR. PROVIDE 3/4"C-4#10, 1#12 GND TO PANEL FOR EACH RECEPTACLE.
3. PROVIDE EATON BLADEUPS, 5KW, 120/208V, 3-PHASE, 4-WIRE RACK MOUNTED UPS FOR EACH RACK TOWER.
4. PROVIDE APC#AP8861 RPDU RACK PDU 2G WITH L21-20P CORD. (120/208V, 3-PHASE, 20A, ZERO U, 5.7 KW, 208V, (36) C13 (6) C19 (2) 5-20R OUTLETS. PROVIDE TWO PER RACK, MOUNTED PER MANUFACTURER'S REQUIREMENTS.
5. PROVIDE ONE RACK MOUNTED ZONE PDU UNIT, 30 AMP 3 PHASE, 120/208V, 5-WIRE WITH (4) L21-30R, (6) 5-20R AND TWO 10' POWER CORDS. ZONIT#ZPDS-208V-30A-L21-4L21-20R-CR 7.
6. PROVIDE TWO J-BOXES IN CEILING OVER THE CENTER RACK, IN LIEU OF RECEPTACLES . PROVIDE 1"C – 4#6, & 1#10 GND BACK TO A 60A/3P BREAKER IN THE PANEL FOR EACH J-BOX.
7. EXISTING LIGHTING AND CONTROL TO REMAIN.
8. INDOOR UNIT TO BE POWERED BY OUTDOOR UNIT. PROVIDE SWITCH. POWER CONNECTION AND CONTROL WIRING COORDINATE EXACT LOCATION WITH M.C.



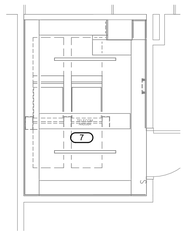

## 1 GROUND FLOOR PLAN - LIGHTING - TR AA162
1/4" = 1'-0"



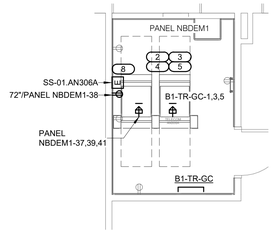

## 2 GROUND FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR AA162
1/4" = 1'-0"



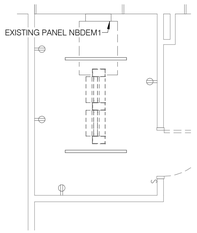

## 3 GROUND FLOOR - DEMO PLAN - TR AA162
1/4" = 1'-0"



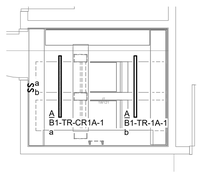

## 4 GROUND FLOOR PLAN - LIGHTING - TR AN306A
1/4" = 1'-0"

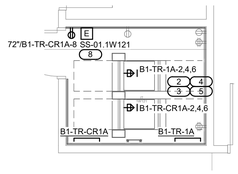


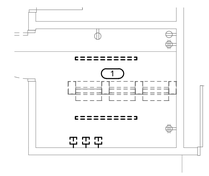

## 5 GROUND FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR AN306A
1/4" = 1'-0"




## 6 GROUND FLOOR - DEMO PLAN - TR AN306A
1/4" = 1'-0"



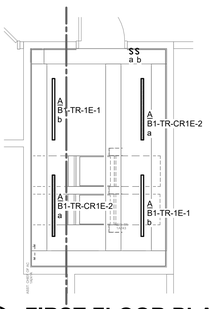



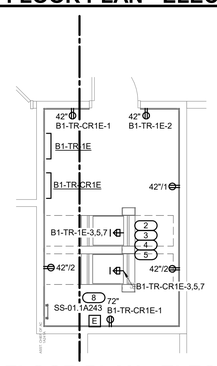

## 7 FIRST FLOOR PLAN - LIGHTING - TR 1W121
1/4" = 1'-0"

## 8 FIRST FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 1W121
1/4" = 1'-0"

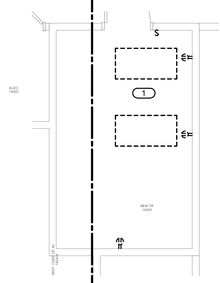
## 9 FIRST FLOOR - DEMO PLAN - TR 1W121
1/4" = 1'-0"



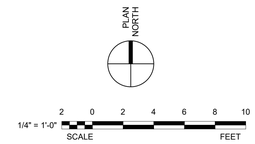

## 10 FIRST FLOOR PLAN - LIGHTING - TR 1A243
1/4" = 1'-0"




## 11 FIRST FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 1A243
1/4" = 1'-0"




## 12 FIRST FLOOR - DEMO PLAN - TR 1A243
1/4" = 1'-0"

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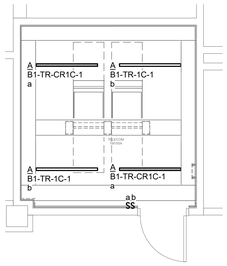
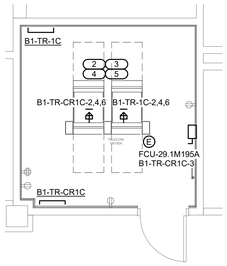
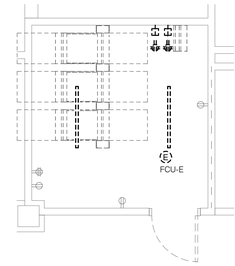



## 1 FIRST FLOOR PLAN - LIGHTING - TR 1M195A
1/4" = 1'-0"




## 2 FIRST FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 1M195A
1/4" = 1'-0"



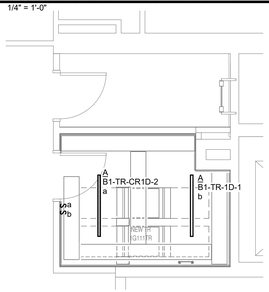

## 3 FIRST FLOOR - DEMO PLAN - TR 1M195A
1/4" = 1'-0"

**CONSTRUCTION NOTES:**

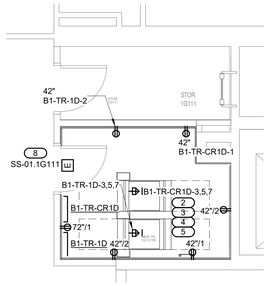
1. REFER TO TECHNOLOGY PLANS FOR IT ROOM LAYOUT AND RACK LAYOUT/DETAILS.

**KEYNOTES:** ( # )

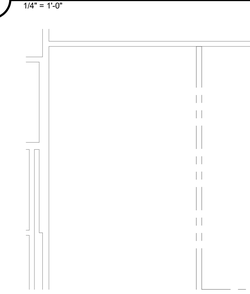
1. DISCONNECT AND REMOVE LIGHTS AND RECEPTACLES IN AREA OF NEW IT ROOM. MAINTAIN CIRCUIT CONTINUITY TO ADJOINING SPACES.
2. COORDINATE FINAL LOCATION OF RECEPTACLE L21-30R INSIDE TELECOM CABINET WITH TELECOM CONTRACTOR. PROVIDE 3/4"C-4#10, 1#12 GND TO PANEL FOR EACH RECEPTACLE.
3. PROVIDE EATON BLADEUPS, 5KW, 120/208V, 3-PHASE, 4-WIRE RACK MOUNTED UPS FOR EACH RACK TOWER.
4. PROVIDE APCHAP8861 RPDU RACK PDU 2G WITH L21-20P CORD. (120/208V, 3-PHASE, 20A, ZERO U, 5.7 KW, 208V, (36) C13 (6) C19 (2) 5-20R OUTLETS. PROVIDE TWO PER RACK, MOUNTED PER MANUFACTURER'S REQUIREMENTS.
5. PROVIDE ONE RACK MOUNTED ZONE PDU UNIT. 30 AMP 3 PHASE, 120/208V, 5-WIRE WITH (4) L21-30R, (6) 5-20R AND TWO 10' POWER CORDS. ZONIT#ZPDS-208V-30A-L21-4L21-20R-CR 7.
6. PROVIDE TWO J-BOXES IN CEILING OVER THE CENTER RACK, IN LIEU OF RECEPTACLES . PROVIDE 1"C – 4#6, & 1#10 GND BACK TO A 60A/3P BREAKER IN THE PANEL FOR EACH J-BOX.
7. CONTRACTOR SHALL REROUTE/EXTEND ALL CIRCUITING IN CONFLICT WITH NEW DOOR OPENING.
8. INDOOR UNIT TO BE POWERED BY OUTDOOR UNIT. PROVIDE SWITCH, POWER CONNECTION AND CONTROL WIRING COORDINATE EXACT LOCATION WITH M.C.



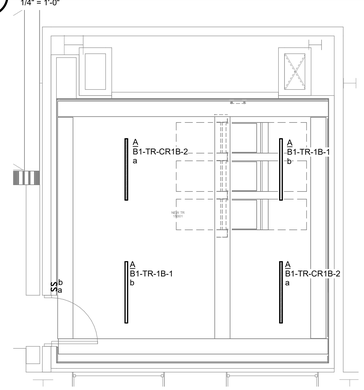

## 4 FIRST FLOOR PLAN - LIGHTING - TR 1G111
1/4" = 1'-0"



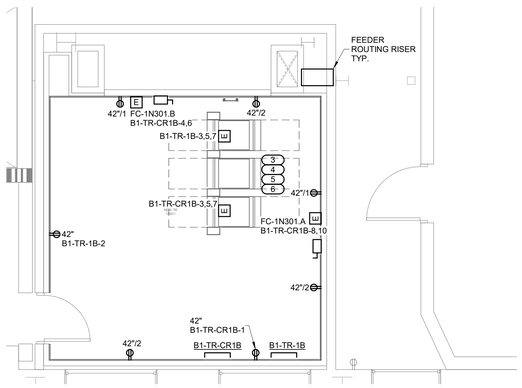

## 5 FIRST FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 1G111
1/4" = 1'-0"



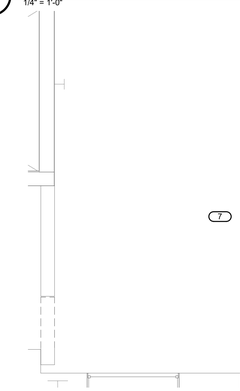

## 6 FIRST FLOOR - DEMO PLAN - TR 1M195A
1/4" = 1'-0"



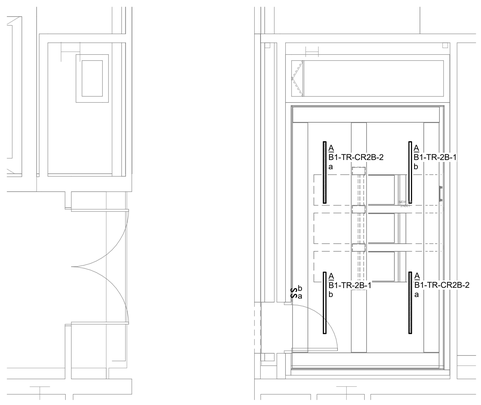

## 7 FIRST FLOOR PLAN - LIGHTING - TR 1N301
1/4" = 1'-0"



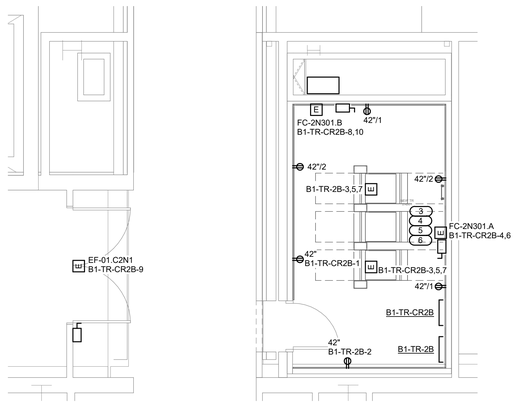

## 8 FIRST FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 1N301
1/4" = 1'-0"



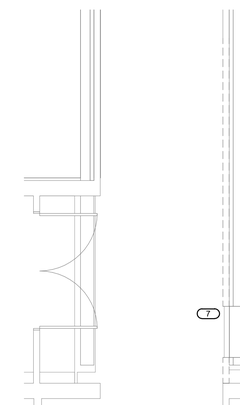

## 9 FIRST FLOOR - DEMO PLAN - TR 1N301
1/4" = 1'-0"




## 10 SECOND FLOOR PLAN - LIGHTING - TR 2N301
1/4" = 1'-0"




## 11 SECOND FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 2N301
1/4" = 1'-0"




## 12 SECOND FLOOR - DEMO PLAN - TR 2N301
1/4" = 1'-0"

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0"
SCALE FEET

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

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ENGINEER
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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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|---|---|---|---|
| Drawing Title: BUILDING 1 - ELECTRICAL ENLARGED PLANS | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-EP405 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | SHEET 342 of 797 |

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**CONSTRUCTION NOTES:**

1. REFER TO TECHNOLOGY PLANS FOR IT ROOM LAYOUT AND RACK LAYOUT/DETAILS.

**KEYNOTES:** ( # )

1. DISCONNECT AND REMOVE LIGHTS AND RECEPTACLES IN AREA OF NEW IT ROOM. MAINTAIN CIRCUIT CONTINUITY TO ADJOINING SPACES.
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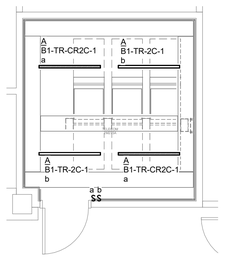
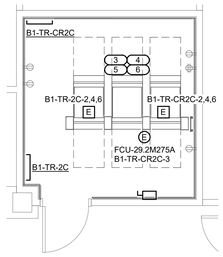
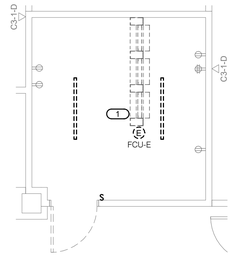
7. INDOOR UNIT TO BE POWERED BY OUTDOOR UNIT. PROVIDE SWITCH, POWER CONNECTION AND CONTROL WIRING COORDINATE EXACT LOCATION WITH M.C.



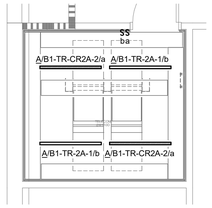

## 1 SECOND FLOOR PLAN - LIGHTING - TR 2M275A
1/4" = 1'-0"



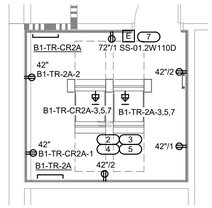

## 2 SECOND FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 2M275A
1/4" = 1'-0"



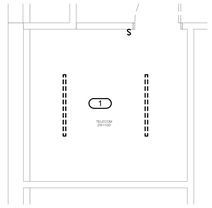

## 3 SECOND FLOOR - DEMO PLAN - TR 2M275A
1/4" = 1'-0"



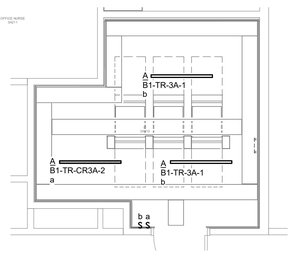

## 4 SECOND FLOOR PLAN - LIGHTING - TR 2W110D
1/4" = 1'-0"



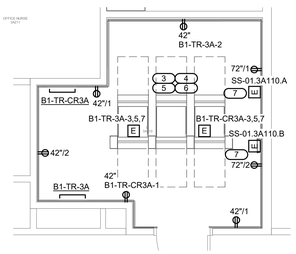

## 5 SECOND FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 2W110D
1/4" = 1'-0"



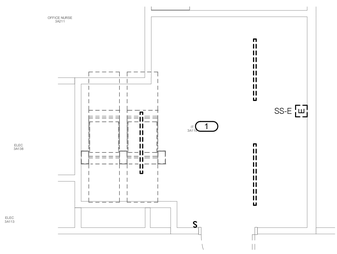

## 6 SECOND FLOOR - DEMO PLAN - TR 2W1100D
1/4" = 1'-0"



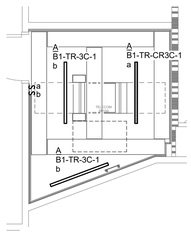

## 7 THIRD FLOOR PLAN - LIGHTING - TR 3A110
1/4" = 1'-0"



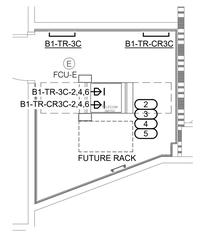

## 8 THIRD FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 3A110
1/4" = 1'-0"



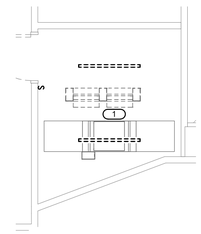

## 9 THIRD FLOOR - DEMO PLAN - TR 3A110
1/4" = 1'-0"




## 10 THIRD FLOOR PLAN - LIGHTING- TR 3M150
1/4" = 1'-0"




## 11 THIRD FLOOR PLAN - ELECTRICAL POWER & SIGNAL- TR 3M150
1/4" = 1'-0"




## 12 THIRD FLOOR - DEMO PLAN- TR 3M150
1/4" = 1'-0"

PLAN NORTH

1/4" = 1'-0" SCALE — 2 0 2 4 6 8 10 FEET

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|---|---|---|---|
| Drawing Title: BUILDING 1 - ELECTRICAL ENLARGED PLANS | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | Drawing Number: 01-EP406 |
| | | | SHEET 343 of 797 |

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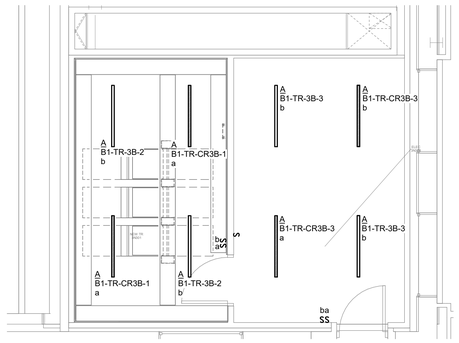
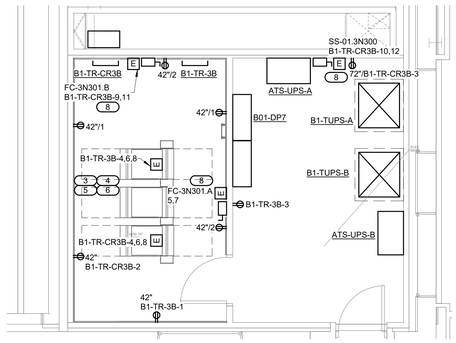
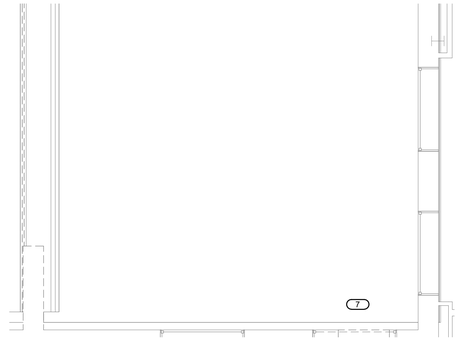



## 1 THIRD FLOOR PLAN - LIGHTING - TR 3N301
1/4" = 1'-0"




## 2 THIRD FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 3N301
1/4" = 1'-0"




## 3 THIRD FLOOR - DEMO PLAN - TR 3N101
1/4" = 1'-0"

**CONSTRUCTION NOTES:**

1. REFER TO TECHNOLOGY PLANS FOR IT ROOM LAYOUT AND RACK LAYOUT/DETAILS.

**KEYNOTES: ( # )**

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3. PROVIDE EATON BLADEUPS, 5KW, 120/208V, 3-PHASE, 4-WIRE RACK MOUNTED UPS FOR EACH RACK TOWER.
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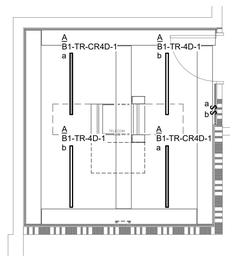
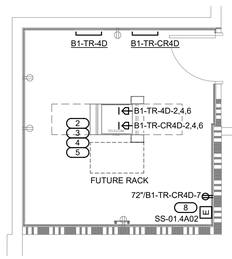
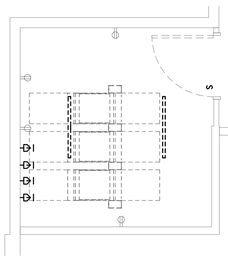


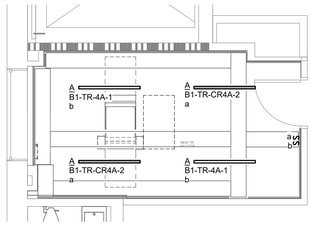

## 4 FOURTH FLOOR PLAN - LIGHTING - TR 4A02
1/4" = 1'-0"



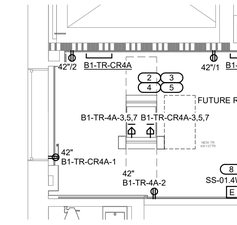

## 5 FOURTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 4A02
1/4" = 1'-0"



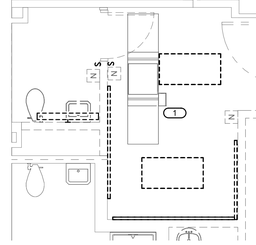

## 6 FOURTH FLOOR - DEMO PLAN - TR 4A02
1/4" = 1'-0"



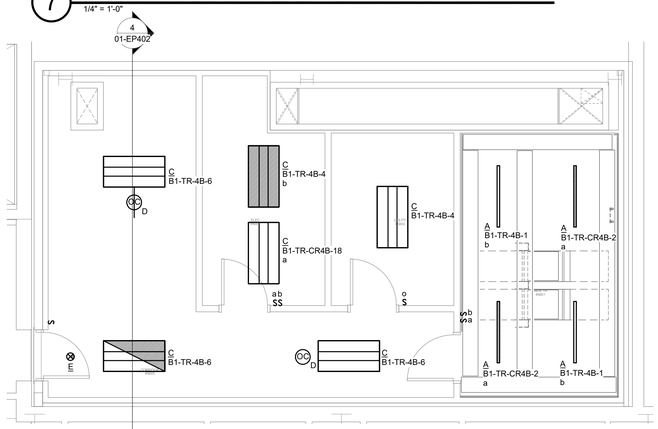

## 7 FOURTH FLOOR PLAN - LIGHTING - TR 4W137
1/4" = 1'-0"



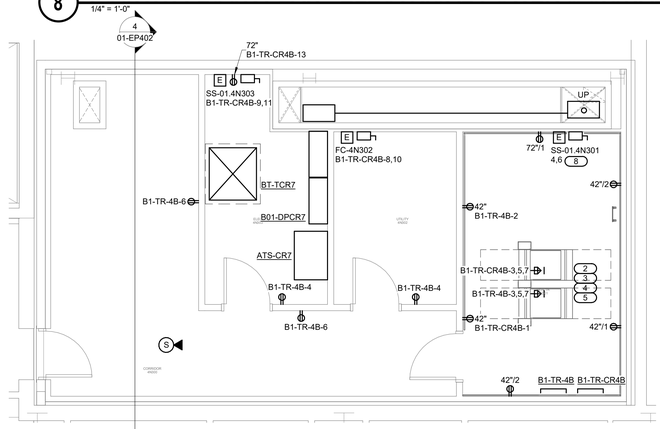

## 8 FOURTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 4W137
1/4" = 1'-0"




## 9 FOURTH FLOOR - DEMO PLAN - TR 4W137
1/4" = 1'-0"




## 10 FOURTH FLOOR PLAN - LIGHTING - TR 4N301
1/4" = 1'-0"




## 11 FOURTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 4N301
1/4" = 1'-0"

## 12 FOURTH FLOOR - DEMO PLAN - TR 4N301
1/4" = 1'-0"

| Revisions: | Date: |
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ARCHITECT/ENGINEER OF RECORD

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MICHAEL WALSH
ENGINEER
PE076741

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

| | | | |
|---|---|---|---|
| **Drawing Title** BUILDING 1 - ELECTRICAL ENLARGED PLANS | **Phase** FINAL BID DOCUMENTS | **Project Title** EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | **Project Number** 646-22-700 |
| **Approved:** | FULLY SPRINKLERED | **Location** UNIVERSITY DRIVE PITTSBURGH, PA 15240 | **Building Number** 1 |
| | | **Issue Date** 06.13.2025 / **Checked** GJL / **Drawn** HAB | **Drawing Number** 01-EP407 SHEET 344 of 797 |

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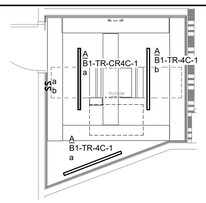
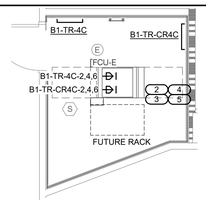


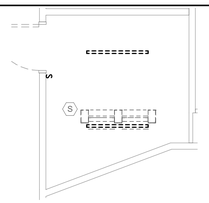

## 1 FOURTH FLOOR PLAN - LIGHTING - TR 4M150

1/4" = 1'-0"



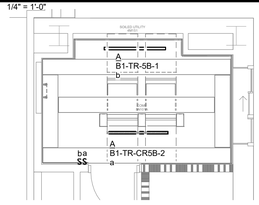

## 2 FOURTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 4M150

1/4" = 1'-0"



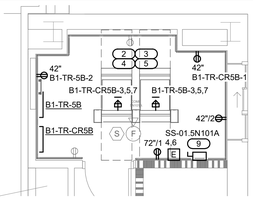

## 3 FOURTH FLOOR - DEMO PLAN - TR 4M150

1/4" = 1'-0"



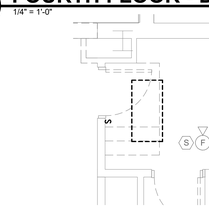

## 4 FIFTH FLOOR PLAN - LIGHTING - TR 5N101A

1/4" = 1'-0"



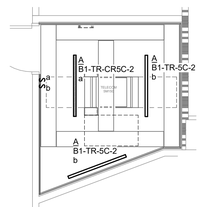

## 5 FIFTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 5N101A

1/4" = 1'-0"



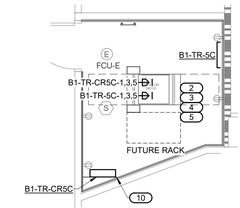

## 6 FIFTH FLOOR - DEMO PLAN - TR 5N101A

1/4" = 1'-0"



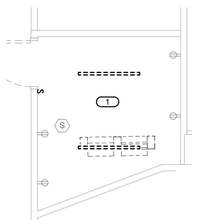

## 7 FIFTH FLOOR PLAN - LIGHTING - TR 5M150

1/4" = 1'-0"



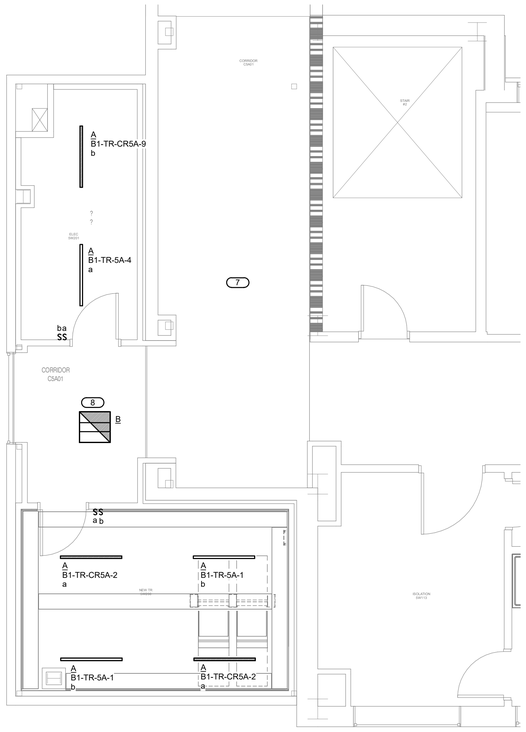

## 8 FIFTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 5M150

1/4" = 1'-0"



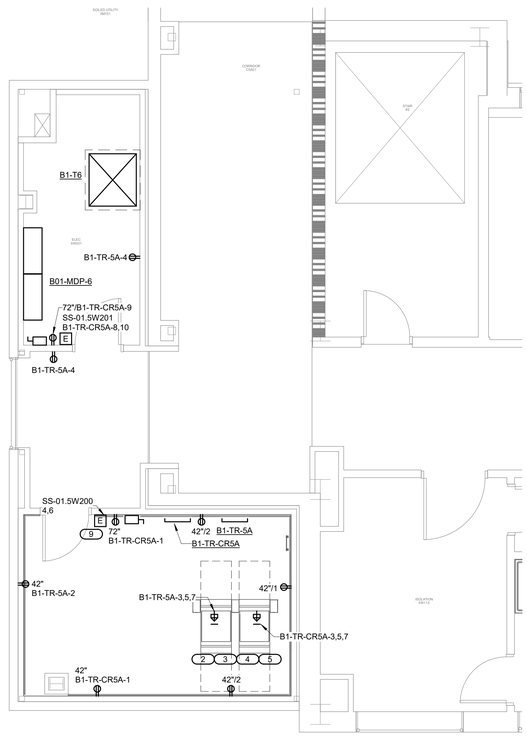

## 9 FIFTH FLOOR - DEMO PLAN - TR 5M150

1/4" = 1'-0"




## 10 FIFTH FLOOR PLAN - LIGHTING - TR 5W200

1/4" = 1'-0"




## 11 FIFTH FLOOR PLAN - ELECTRICAL POWER & SYSTEM - TR 5W200

1/4" = 1'-0"

**CONSTRUCTION NOTES:**

1. REFER TO TECHNOLOGY PLANS FOR IT ROOM LAYOUT AND RACK LAYOUT/DETAILS.

**KEYNOTES: ( # )**

1. DISCONNECT AND REMOVE LIGHTS AND RECEPTACLES IN AREA OF NEW IT ROOM. MAINTAIN CIRCUIT CONTINUITY TO ADJOINING SPACES.
2. COORDINATE FINAL LOCATION OF RECEPTACLE L21-30R INSIDE TELECOM CABINET WITH TELECOM CONTRACTOR. PROVIDE 3/4"C-4#10, 1#12 GND TO PANEL FOR EACH RECEPTACLE.
3. PROVIDE EATON BLADEUPS, 5KW, 120/208V, 3-PHASE, 4-WIRE RACK MOUNTED UPS FOR EACH RACK TOWER.
4. PROVIDE APC#AP8861 RPDU RACK PDU 2G WITH L21-20P CORD. (120/208V, 3-PHASE, 20A, ZERO U, 5.7 KW, 208V, (36) C13 (6) C19 (2) 5-20R OUTLETS. PROVIDE TWO PER RACK, MOUNTED PER MANUFACTURER'S REQUIREMENTS.
5. PROVIDE ONE RACK MOUNTED ZONE PDU UNIT. 30 AMP 3 PHASE, 120/208V, 5-WIRE WITH (4) L21-30R, (6) 5-20R AND TWO 10' POWER CORDS. ZONIT#ZPDS-208V-30A-L21-4L21-20R-CR 7.
6. PROVIDE TWO J-BOXES IN CEILING OVER THE CENTER RACK, IN LIEU OF RECEPTACLES . PROVIDE 1"C – 4#6, & 1#10 GND BACK TO A 60A/3P BREAKER IN THE PANEL FOR EACH J-BOX.
7. EXISTING LIGHTING TO REMAIN IN THIS AREA.
8. PROVIDE CONNECTION TO CORRIDOR EMERGENCY LIGHTING CIRCUIT.
9. INDOOR UNIT TO BE POWERED BY OUTDOOR UNIT. PROVIDE SWITCH, POWER CONNECTION AND CONTROL WIRING COORDINATE EXACT LOCATION WITH M.C.
10. PROVIDE UNISTRUT FOR MOUNTING OF PANEL.

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

| Revisions: | Date: |
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Office of Construction and Facilities Management

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| Drawing Title: BUILDING 1 - ELECTRICAL ENLARGED PLANS | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-EP408 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | SHEET 345 of 797 |


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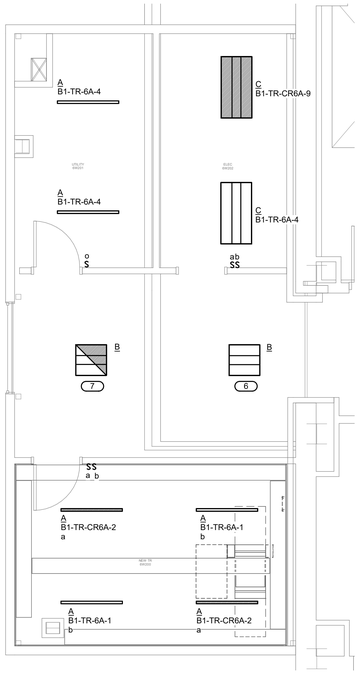
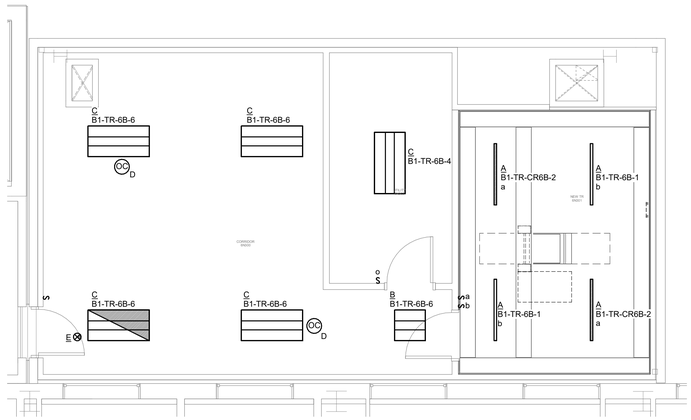
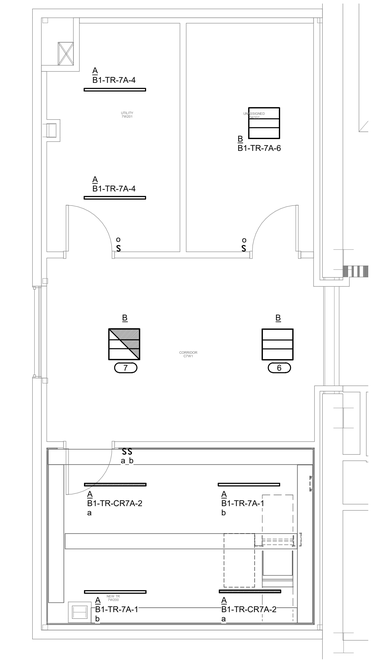



## 1 SIXTH FLOOR PLAN - LIGHTING - TR 6W200
1/4" = 1'-0"




## 3 SIXTH FLOOR PLAN - LIGHTING - TR 6N301
1/4" = 1'-0"




## 5 SEVENTH FLOOR PLAN - LIGHTING - TR 7W200
1/4" = 1'-0"

**CONSTRUCTION NOTES:**

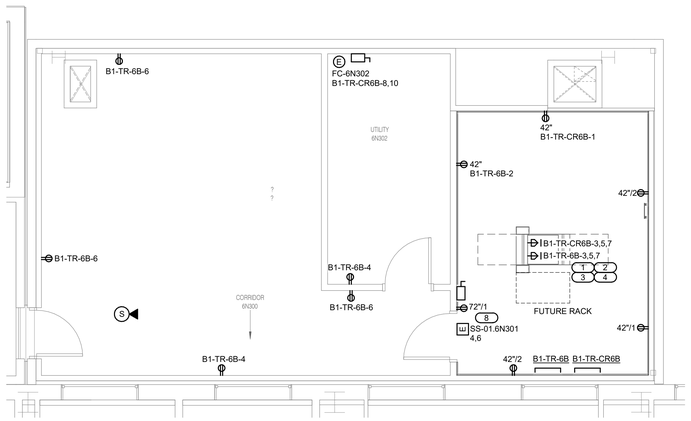
1. REFER TO TECHNOLOGY PLANS FOR IT ROOM LAYOUT AND RACK LAYOUT/DETAILS.

**KEYNOTES:** ( # )

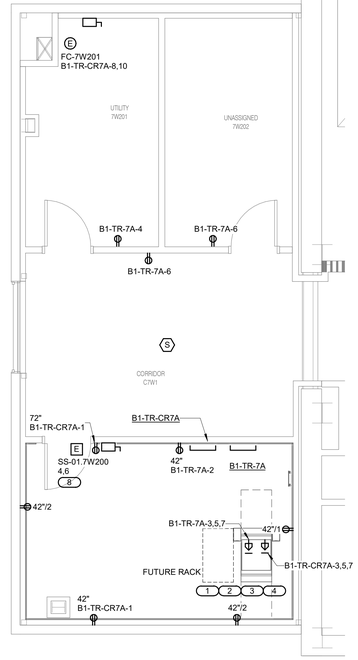
1. COORDINATE FINAL LOCATION OF RECEPTACLE L21-30R INSIDE TELECOM CABINET WITH TELECOM CONTRACTOR. PROVIDE 3/4"C-4#10, 1#12 GND TO PANEL FOR EACH RECEPTACLE.
2. PROVIDE EATON BLADEUPS, 5KW, 120/208V, 3-PHASE, 4-WIRE RACK MOUNTED UPS FOR EACH RACK TOWER.
3. PROVIDE APC#AP8861 RPDU RACK PDU 2G WITH L21-20P CORD. ( 120/208V, 3-PHASE, 20A, ZERO U, 5.7 KW, 208V, (36) C13 (6) C19 (2) 5-20R OUTLETS. PROVIDE TWO PER RACK, MOUNTED PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE ONE RACK MOUNTED ZONE PDU UNIT. 30 AMP 3 PHASE, 120/208V, 5-WIRE WITH (4) L21-30R, (6) 5-20R AND TWO 10' POWER CORDS. ZONIT#ZPDS-208V-30A-L21-4L21-20R-CR.7.
5. PROVIDE TWO J-BOXES IN CEILING OVER THE CENTER RACK, IN LIEU OF RECEPTACLES . PROVIDE 1"C – 4#8, & 1#10 GND BACK TO A 60A/3P BREAKER IN THE PANEL FOR EACH J-BOX.
6. PROVIDE CONNECTION TO EXISTING CORRIDOR LIGHTING AND CONTROL CIRCUIT.
7. PROVIDE CONNECTION TO CORRIDOR EMERGENCY LIGHTING CIRCUIT.
8. INDOOR UNIT TO BE POWERED BY OUTDOOR UNIT. PROVIDE SWITCH, POWER CONNECTION AND CONTROL WIRING COORDINATE EXACT LOCATION WITH M.C.




## 2 SIXTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 6W200
1/4" = 1'-0"




## 4 SIXTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 6N301
1/4" = 1'-0"




## 6 SEVENTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 7W200
1/4" = 1'-0"

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

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|---|---|---|---|
| Drawing Title: BUILDING 1 - ELECTRICAL ENLARGED PLANS | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-EP409 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | SHEET 346 of 797 |

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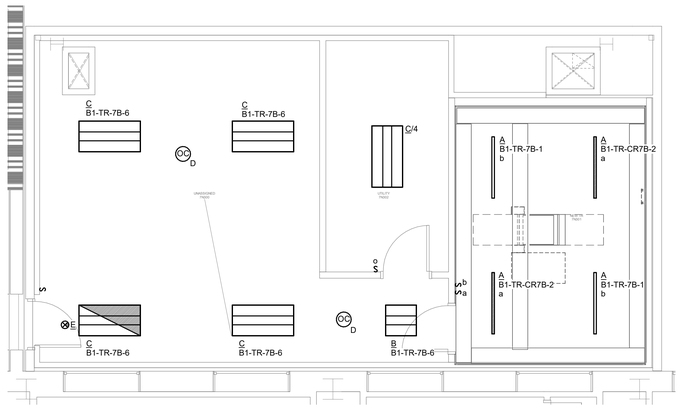
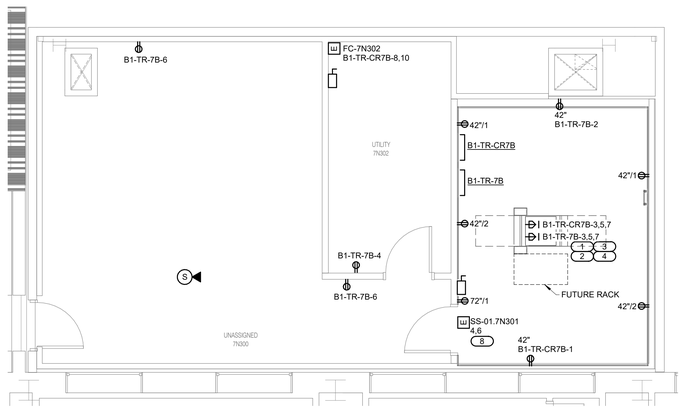


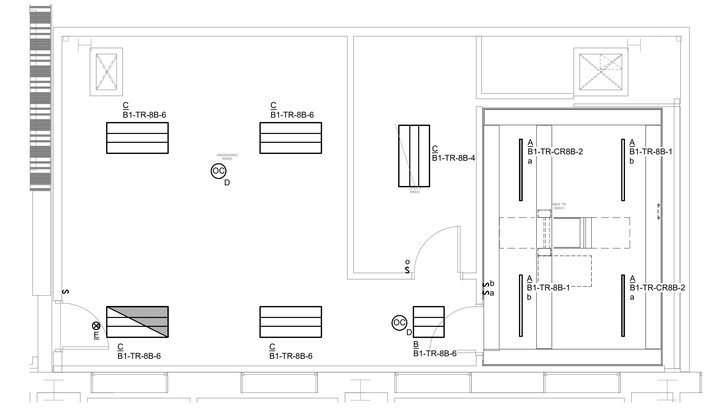

## 1 SEVENTH FLOOR PLAN - LIGHTING - TR 7N301

1/4" = 1'-0"



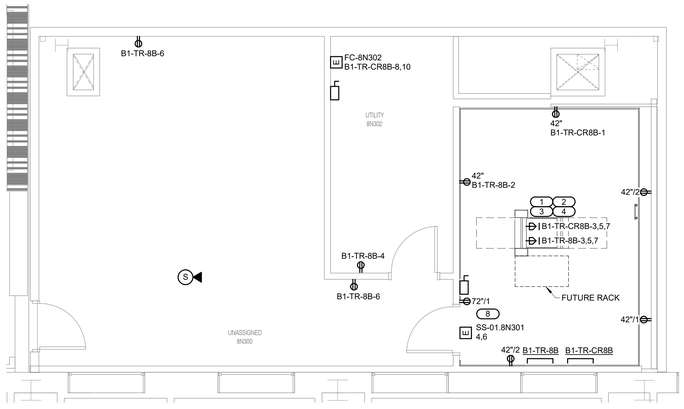

## 2 SEVENTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 7N301

1/4" = 1'-0"



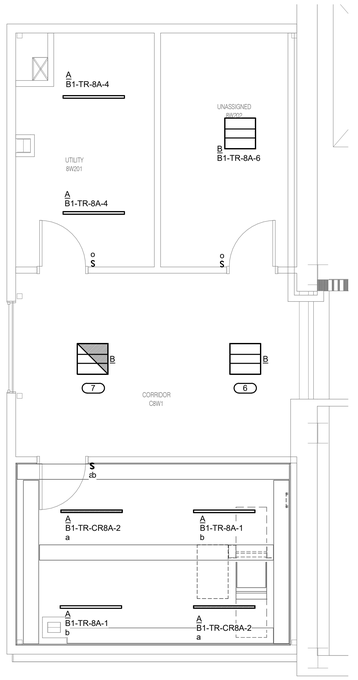

## 3 EIGHTH FLOOR PLAN - LIGHTING - TR 8N301

1/4" = 1'-0"



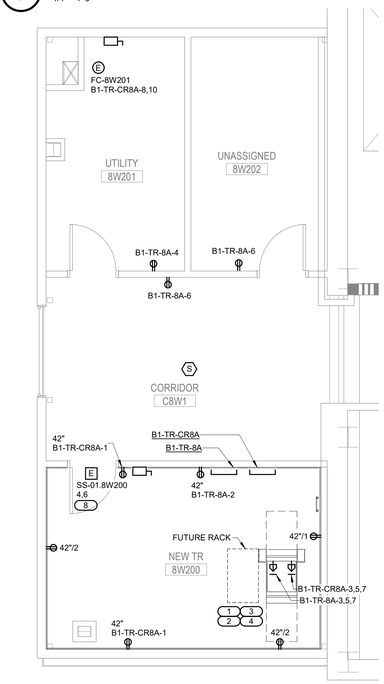

## 4 EIGHTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 8N301

1/4" = 1'-0"




## 5 EIGHTH FLOOR PLAN - LIGHTING- TR 8W200

1/4" = 1'-0"




## 6 EIGHTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 8W200

1/4" = 1'-0"

**CONSTRUCTION NOTES:**

1. REFER TO TECHNOLOGY PLANS FOR IT ROOM LAYOUT AND RACK LAYOUT/DETAILS.

**KEYNOTES:** (#)

1. COORDINATE FINAL LOCATION OF RECEPTACLE L21-30R INSIDE TELECOM CABINET WITH TELECOM CONTRACTOR. PROVIDE 3/4"C-4#10, 1#12 GND TO PANEL FOR EACH RECEPTACLE.
2. PROVIDE EATON BLADEUPS, 5KW, 120/208V, 3-PHASE, 4-WIRE RACK MOUNTED UPS FOR EACH RACK TOWER.
3. PROVIDE APC#AP8861 RPDU RACK PDU 2G WITH L21-20P CORD. (120/208V, 3-PHASE, 20A, ZERO U, 5.7 KW, 208V, (36) C13 (6) C19 (2) 5-20R OUTLETS. PROVIDE TWO PER RACK, MOUNTED PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE ONE RACK MOUNTED ZONE PDU UNIT, 30 AMP 3 PHASE, 120/208V, 5-WIRE WITH (4) L21-30R, (6) 5-20R AND TWO 10' POWER CORDS. ZONIT#ZPDS-208V-30A-L21-4L21-20R-CR.7.
5. PROVIDE TWO J-BOXES IN CEILING OVER THE CENTER RACK, IN LIEU OF RECEPTACLES . PROVIDE 1"C – 4#8, & 1#10 GND BACK TO A 60A/3P BREAKER IN THE PANEL FOR EACH J-BOX.
6. PROVIDE CONNECTION TO EXISTING CORRIDOR LIGHTING AND CONTROL CIRCUIT.
7. PROVIDE CONNECTION TO CORRIDOR EMERGENCY LIGHTING CIRCUIT.
8. INDOOR UNIT TO BE POWERED BY OUTDOOR UNIT. PROVIDE SWITCH, POWER CONNECTION AND CONTROL WIRING COORDINATE EXACT LOCATION WITH M.C.

PLAN NORTH

1/4" = 1'-0" SCALE 2 0 2 4 6 8 10 FEET

| Revisions: | Date: |
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REGISTERED PROFESSIONAL
MICHAEL WALSH
ENGINEER
PE070749

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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|---|---|
| Drawing Title: BUILDING 1 - ELECTRICAL ENLARGED PLANS | Phase: FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |

| | | |
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| Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | | Project Number: 646-22-700 |
| | | Building Number: 1 |
| Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | | Drawing Number: 01-EP410 |
| Issue Date: 06.13.2025 | Checked: GJL / Drawn: HAB | SHEET 347 of 797 |

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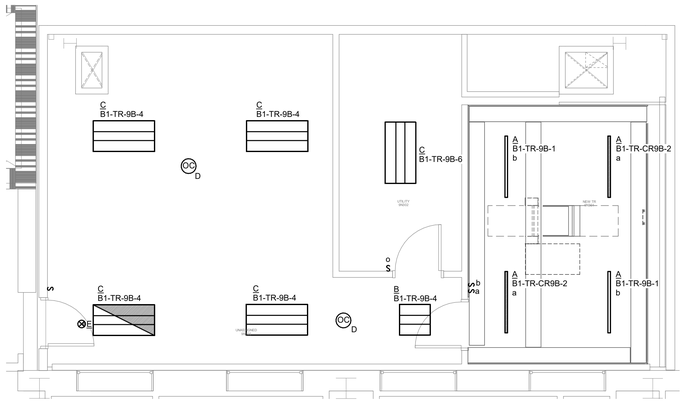
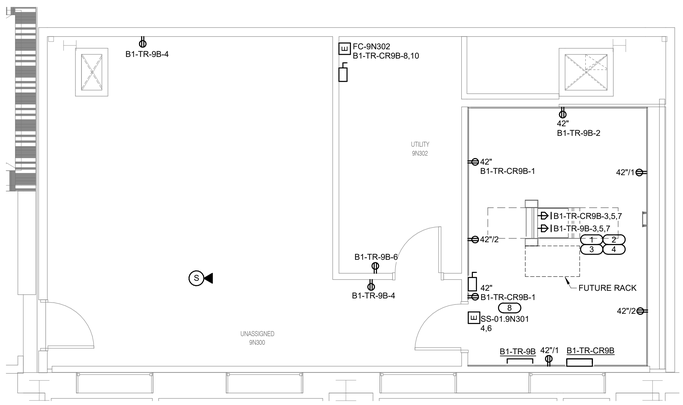
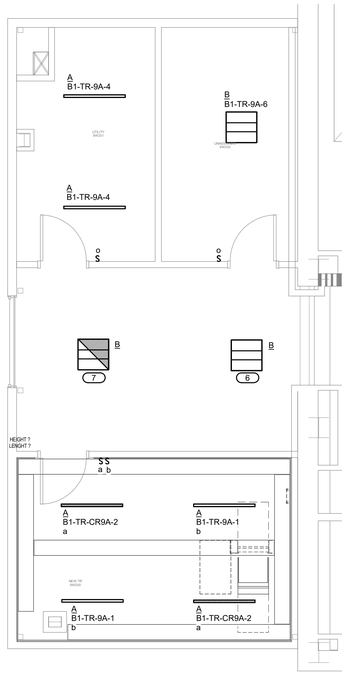


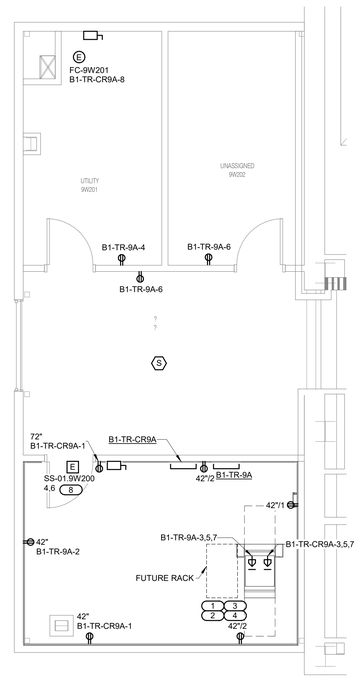

## 1 NINTH FLOOR PLAN - LIGHTING - TR 9N301
1/4" = 1'-0"



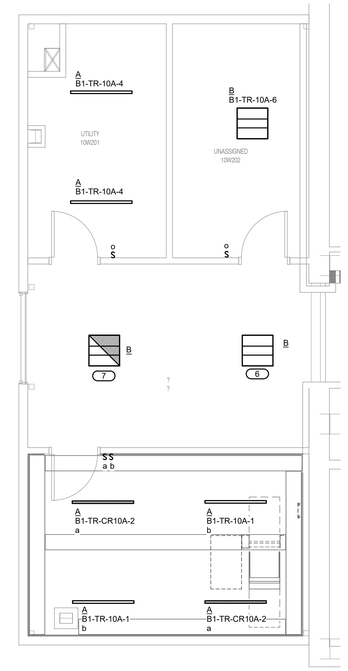

## 2 NINTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 9N301
1/4" = 1'-0"



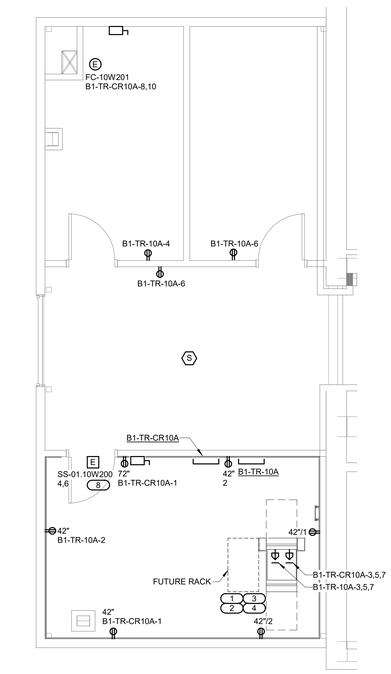

## 3 NINTH FLOOR PLAN - LIGHTING - TR 9W200
1/4" = 1'-0"




## 4 NINTH FLOOR PLAN - ELECTRICAL POWER & SYSTEM - TR 9W200
1/4" = 1'-0"




## 5 TENTH FLOOR PLAN - LIGHTING - TR 10W200
1/4" = 1'-0"




## 6 TENTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 10W200
1/4" = 1'-0"

**CONSTRUCTION NOTES:**

1. REFER TO TECHNOLOGY PLANS FOR IT ROOM LAYOUT AND RACK LAYOUT/DETAILS.

**KEYNOTES: (#)**

1. COORDINATE FINAL LOCATION OF RECEPTACLE L21-30R INSIDE TELECOM CABINET WITH TELECOM CONTRACTOR. PROVIDE 3/4"C-4#10, 1#12 GND TO PANEL FOR EACH RECEPTACLE.
2. PROVIDE EATON BLADEUPS, 5KW, 120/208V, 3-PHASE, 4-WIRE RACK MOUNTED UPS FOR EACH RACK TOWER.
3. PROVIDE APC#AP8861 RPDU RACK PDU 2G WITH L21-20P CORD. ( 120/208V, 3-PHASE, 20A, ZERO U, 5.7 KW, 208V, (36) C13 (6) C19 (2) 5-20R OUTLETS. PROVIDE TWO PER RACK, MOUNTED PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE ONE RACK MOUNTED ZONE PDU UNIT, 30 AMP 3 PHASE, 120/208V, 5-WIRE WITH (4) L21-30R, (6) 5-20R AND TWO 10' POWER CORDS. ZONIT#ZPDS-208V-30A-L21-4L21-20R-CR.7.
5. PROVIDE TWO J-BOXES IN CEILING OVER THE CENTER RACK, IN LIEU OF RECEPTACLES . PROVIDE 1"C – 4#8, & 1#10 GND BACK TO A 60A/3P BREAKER IN THE PANEL FOR EACH J-BOX.
6. PROVIDE CONNECTION TO EXISTING CORRIDOR LIGHTING AND CONTROL CIRCUIT.
7. PROVIDE CONNECTION TO CORRIDOR EMERGENCY LIGHTING CIRCUIT.
8. INDOOR UNIT TO BE POWERED BY OUTDOOR UNIT. PROVIDE SWITCH, POWER CONNECTION AND CONTROL WIRING COORDINATE EXACT LOCATION WITH M.C.

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

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|---|---|---|---|
| Drawing Title: BUILDING 1 - ELECTRICAL ENLARGED PLANS | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | FULLY SPRINKLERED | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | Drawing Number: 01-EP411 |
| | | | SHEET 348 of 797 |

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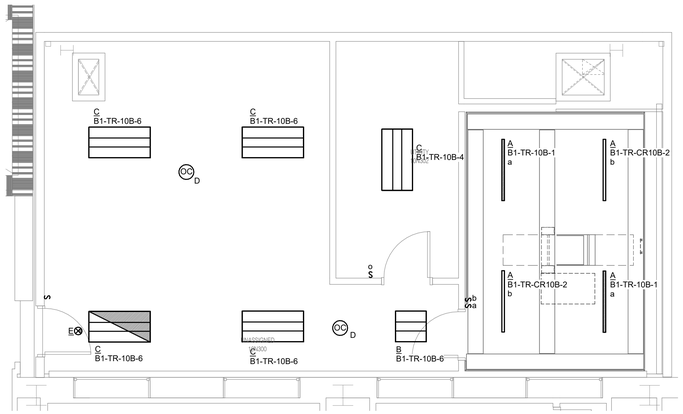
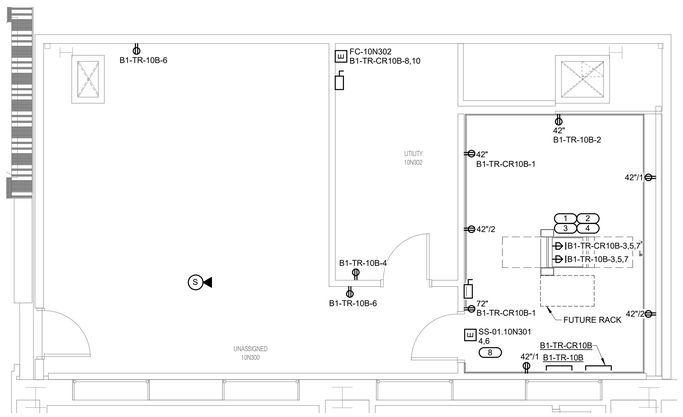


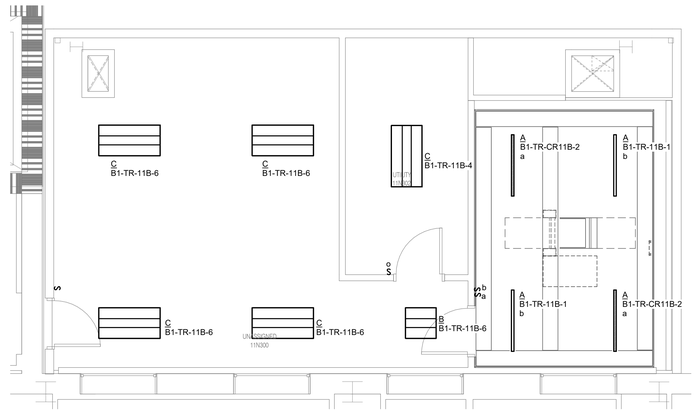

## 1 TENTH FLOOR PLAN - LIGHTING - TR 10N301

1/4" = 1'-0"



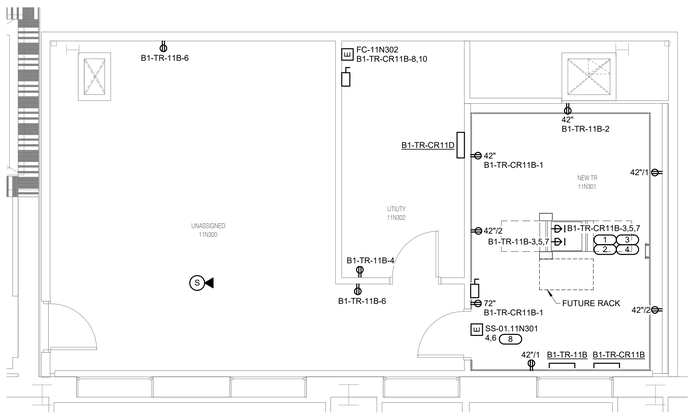

## 2 TENTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 10N301

1/4" = 1'-0"




## 3 ELEVENTH FLOOR PLAN - LIGHTING - TR 11N301

1/4" = 1'-0"




## 4 ELEVENTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 11N301

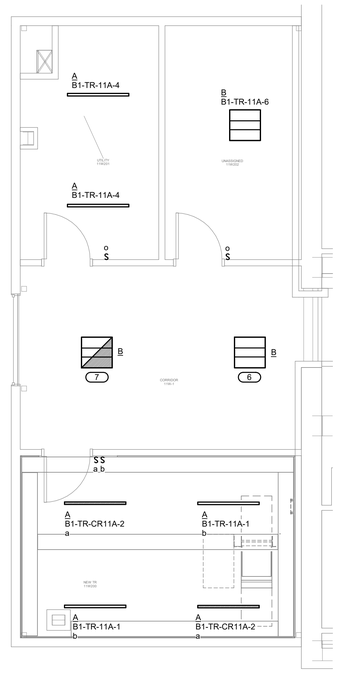
1/4" = 1'-0"

**CONSTRUCTION NOTES:**

1. REFER TO TECHNOLOGY PLANS FOR IT ROOM LAYOUT AND RACK LAYOUT/DETAILS.

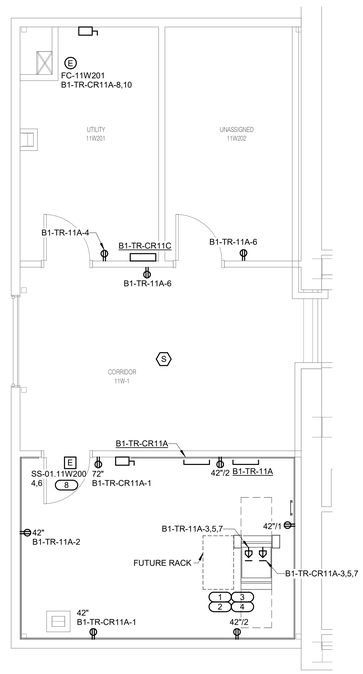
**KEYNOTES: ( # )**

1. COORDINATE FINAL LOCATION OF RECEPTACLE L21-30R INSIDE TELECOM CABINET WITH TELECOM CONTRACTOR. PROVIDE 3/4"C-4#10, 1#12 GND TO PANEL FOR EACH RECEPTACLE.
2. PROVIDE EATON BLADEUPS, 5KW, 120/208V, 3-PHASE, 4-WIRE RACK MOUNTED UPS FOR EACH RACK TOWER.
3. PROVIDE APC#AP8861 RPDU RACK PDU 2G WITH L21-20P CORD. ( 120/208V, 3-PHASE, 20A, ZERO U, 5.7 KW, 208V, (36) C13 (6) C19 (2) 5-20R OUTLETS. PROVIDE TWO PER RACK, MOUNTED PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE ONE RACK MOUNTED ZONE PDU UNIT, 30 AMP 3 PHASE, 120/208V, 5-WIRE WITH (4) L21-30R, (6) 5-20R AND TWO 10' POWER CORDS. ZONIT#ZPDS-208V-30A-L21-4L21-20R-CR.7.
5. PROVIDE TWO J-BOXES IN CEILING OVER THE CENTER RACK, IN LIEU OF RECEPTACLES . PROVIDE 1"C – 4#8, & 1#10 GND BACK TO A 60A/3P BREAKER IN THE PANEL FOR EACH J-BOX.
6. PROVIDE CONNECTION TO EXISTING CORRIDOR LIGHTING AND CONTROL CIRCUIT.
7. PROVIDE CONNECTION TO CORRIDOR EMERGENCY LIGHTING CIRCUIT.
8. INDOOR UNIT TO BE POWERED BY OUTDOOR UNIT. PROVIDE SWITCH, POWER CONNECTION AND CONTROL WIRING COORDINATE EXACT LOCATION WITH M.C.




## 5 ELEVENTH FLOOR PLAN - LIGHTING - TR 11W200

1/4" = 1'-0"




## 6 ELEVENTH FLOOR PLAN - ELECTRICAL POWER & SIGNAL - TR 11W200

1/4" = 1'-0"

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Approved:

Drawing Title: BUILDING 1 - ELECTRICAL ENLARGED PLANS

Phase: FINAL BID DOCUMENTS

FULLY SPRINKLERED

Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS

Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240

Issue Date: 06.13.2025 | Checked: GJL | Drawn: HAB

Project Number: 646-22-700

Building Number: 1

Drawing Number: 01-EP412

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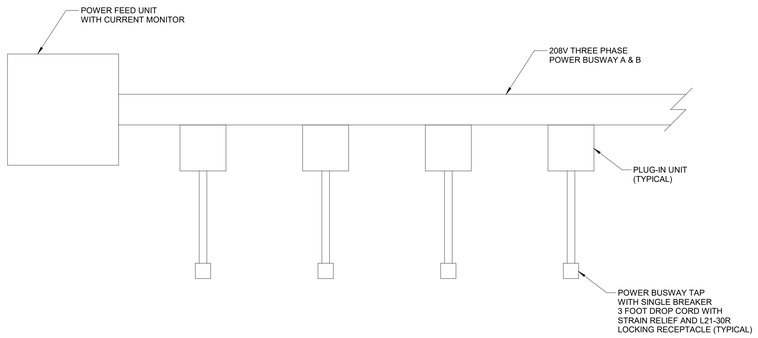
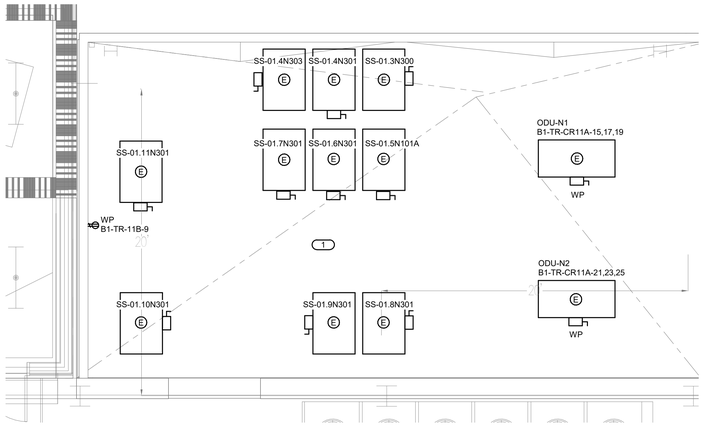



**NOTE**: CONTRACTOR SHALL PROVIDE ALL ACCESSORIES FOR A COMPLETE AND FUNCTIONAL SYSTEM INCLUDING MOUNTING HARDWARE.

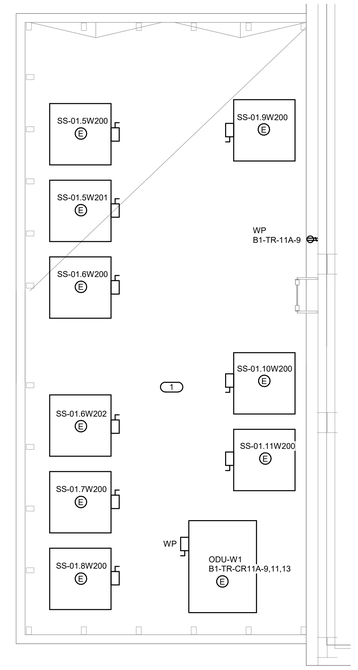
## 1 SERVER ROOM POWER BUSWAY CABINETS DETAIL(TYPICAL FOR BUSWAY A & B)
NO SCALE




## 2 ENLARGED ROOF PLAN - CENTRAL TOWER - ELECTRICAL
1/4" = 1'-0"

**KEYNOTES:** (#)

1. PROVIDE 3/4"C-3#10 & 1#10 GND TO PANEL FOR EACH S.S. PROVIDE ALL CIRCUITING TO S.S. IN TR AS REQUIRED BY MANUFACTURER.




## 3 ENLARGED ROOF PLAN - WEST TOWER - ELECTRICAL
1/4" = 1'-0"

PLAN NORTH

2 0 2 4 6 8 10
1/4" = 1'-0" SCALE FEET

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|---|---|---|---|
| Drawing Title: BUILDING 1 - ELECTRICAL ENLARGED PLANS | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-EP413 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | SHEET 350 of 797 |

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## EXISTING ELECTRICAL DISTRIBUTION - ADDITIONAL LOAD

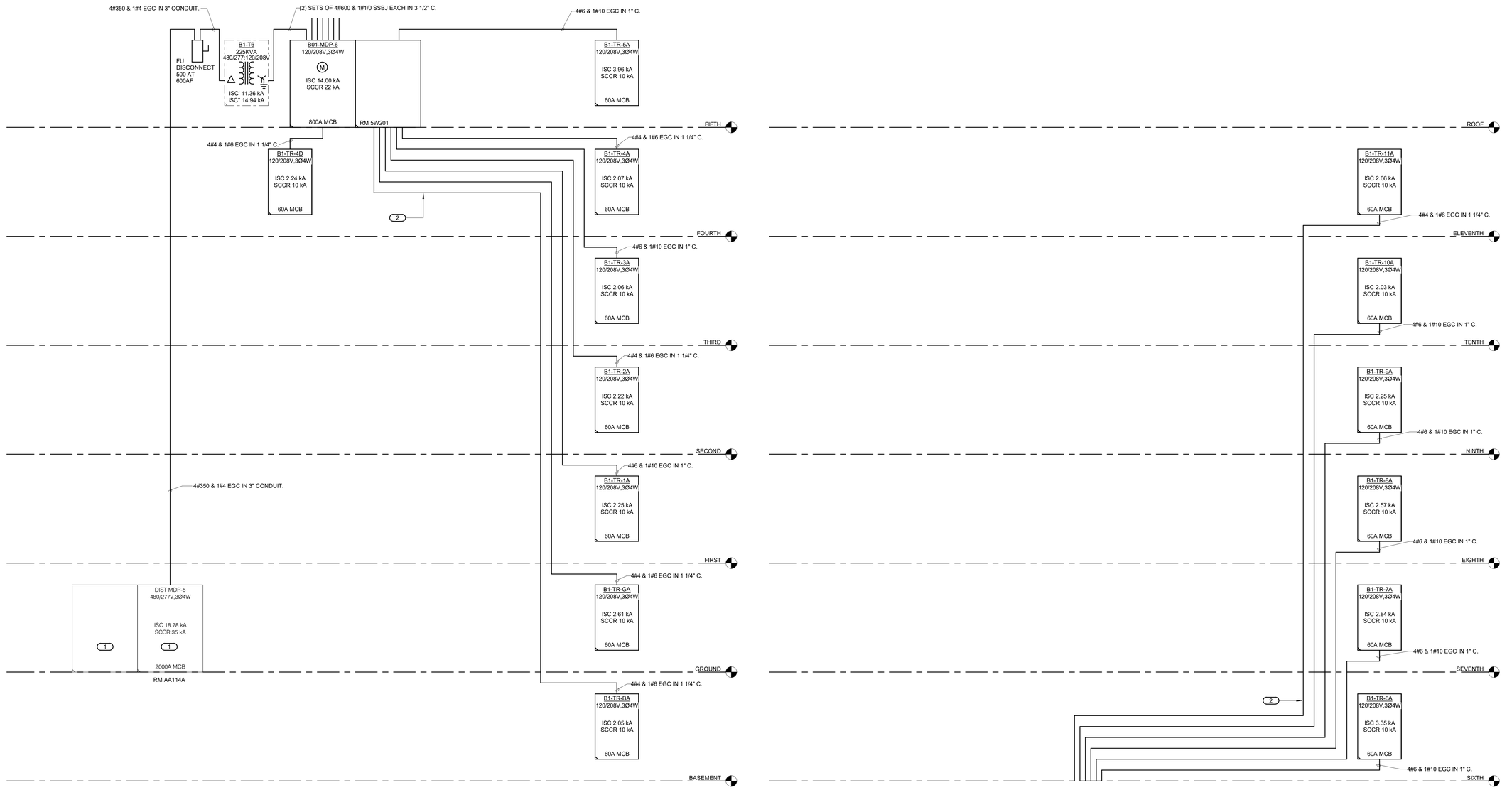
| ITEM | VOLTAGE | CONNECTED LOAD | ESTIMATED DEMAND LOAD | CONNECTED CURRENT | ESTIMATED DEMAND CURRENT |
|---|---|---|---|---|---|
| DIST MDP-5 | 480/277V, 3Ø4W | 304.39 kVA | 300.66 kVA | 366.1 A | 361.6 A |
| SWGR | 120/208V, 3Ø4W | 397.93 kVA | 392.31 kVA | 1,104.5 A | 1,088.9 A |
| DIST. EQ-5 | 480/277V, 3Ø4W | 104.81 kVA | 104.81 kVA | 126.1 A | 126.1 A |

## EXISTING EMERGENCY ELECTRICAL DISTRIBUTION - ADDITIONAL LOAD

| ITEM | VOLTAGE | CONNECTED LOAD | ESTIMATED DEMAND LOAD | CONNECTED CURRENT | ESTIMATED DEMAND CURRENT |
|---|---|---|---|---|---|
| EMDP2 | 480/277V, 3Ø4W | 202.25 kVA | 202.25 kVA | 243.3 A | 243.3 A |
| EMDP1 | 480/277V, 3Ø4W | 227 kVA | 227.00 kVA | 273 A | 273 A |

**KEYNOTES:** (#)

1. PROVIDE NEW 200 AMP BREAKER IN PANEL TO MATCH EXISTING TYPE AND AIC RATING.
2. ROUTE FEEDERS UP THROUGH EXISTING STACKED ELECTRICAL AND/OR UTILITY ROOMS. COORDINATE EXACT LOCATION WITH MECHANICAL AND TECHNOLOGY EQUIPMENT.




## 1 NORMAL POWER RISER DIAGRAM WEST TOWER

NO SCALE

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|---|---|---|---|
| Drawing Title: ELECTRICAL RISER DIAGRAM | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-EP601 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | SHEET 351 of 797 |


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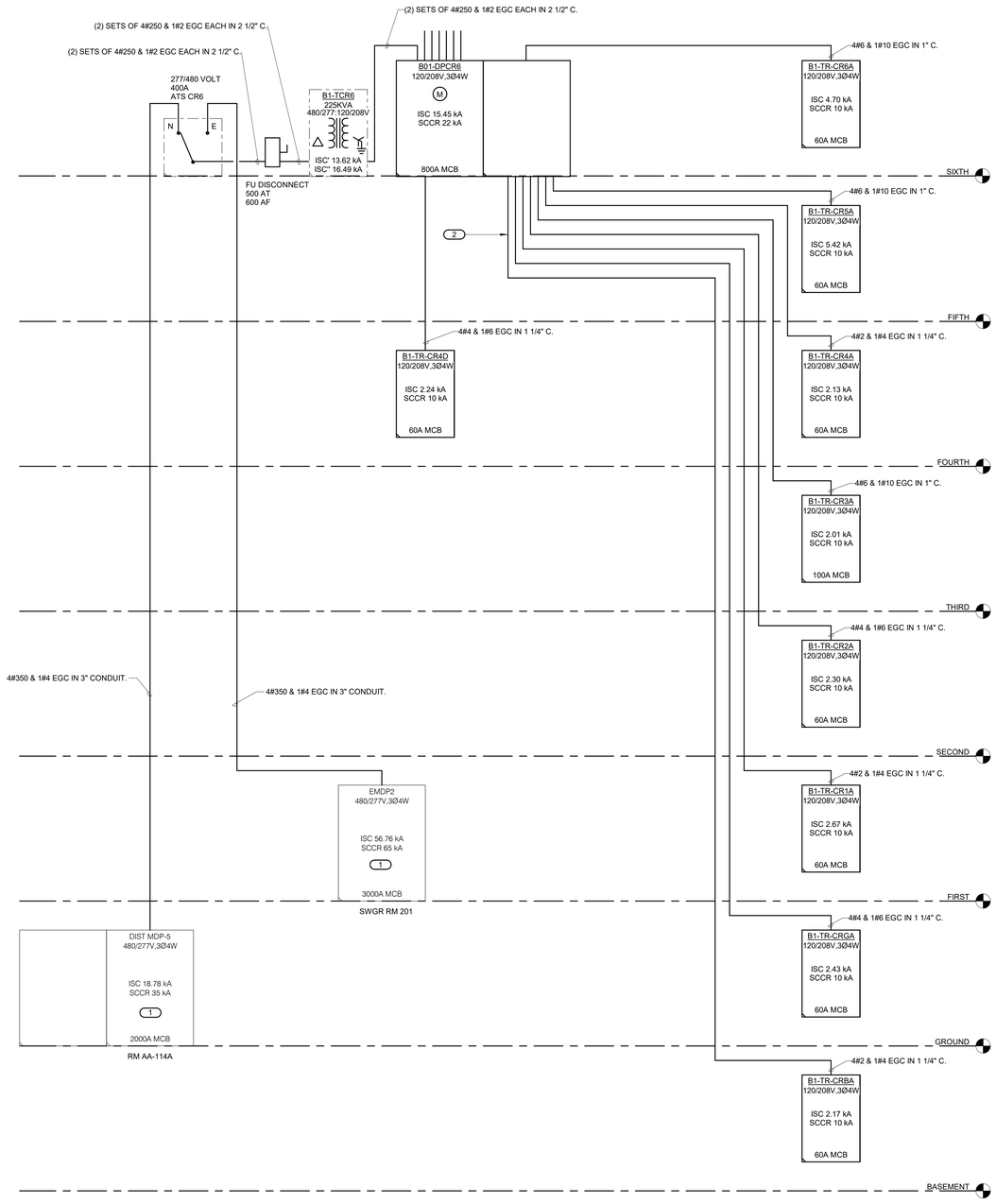
**KEYNOTES:** (#)

1. PROVIDE NEW 300 AMP BREAKER IN PANEL TO MATCH EXISTING TYPE AND AIC RATING.
2. ROUTE FEEDERS UP THROUGH EXISTING STACKED ELECTRICAL AND/OR UTILITY ROOMS. COORDINATE EXACT LOCATION WITH MECHANICAL AND TECHNOLOGY EQUIPMENT.




## 1 CRITICAL POWER RISER DIAGRAM WEST TOWER

NO SCALE

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| Drawing Title: ELECTRICAL RISER DIAGRAM | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | Drawing Number: 01-EP602 |
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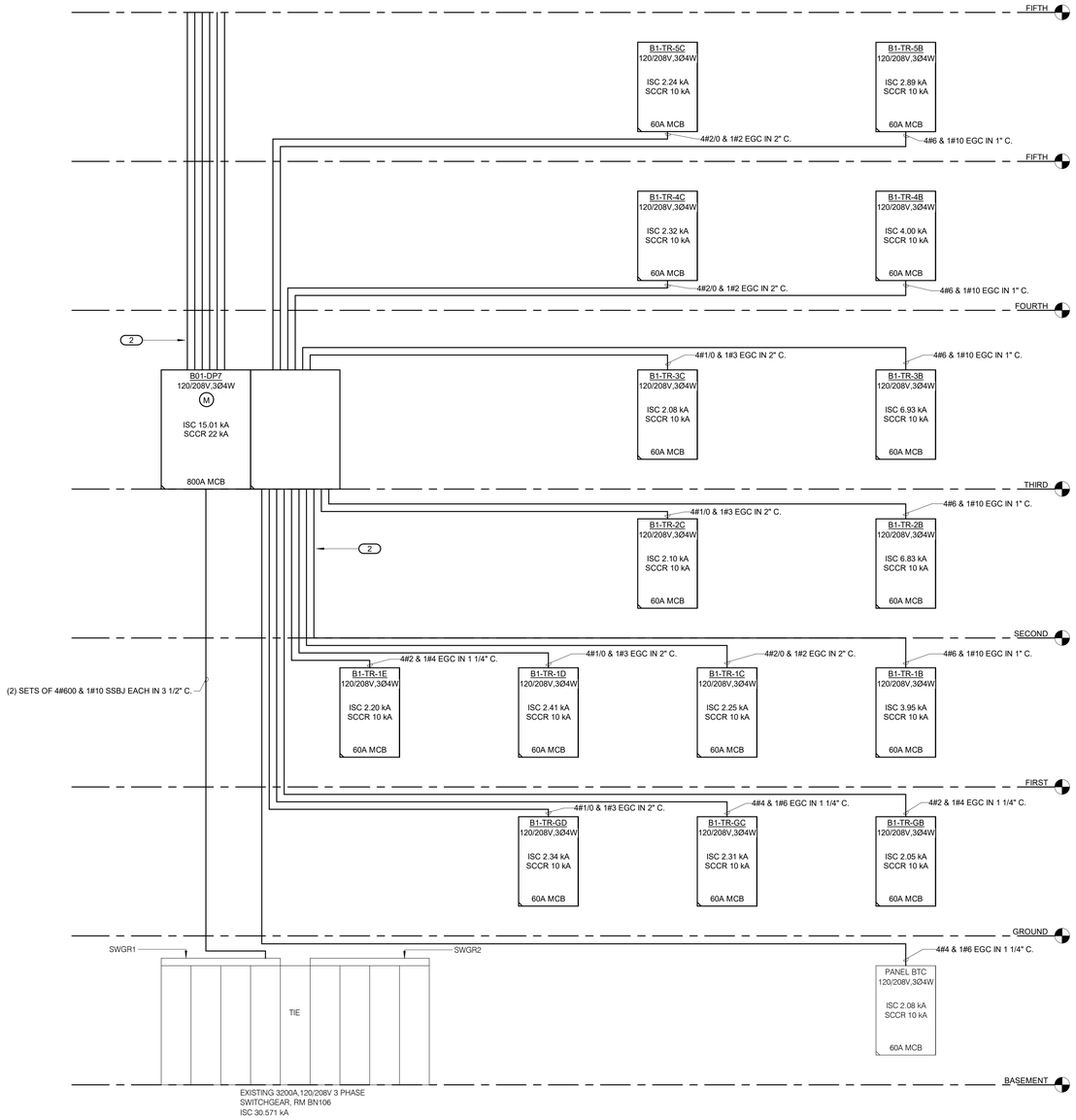
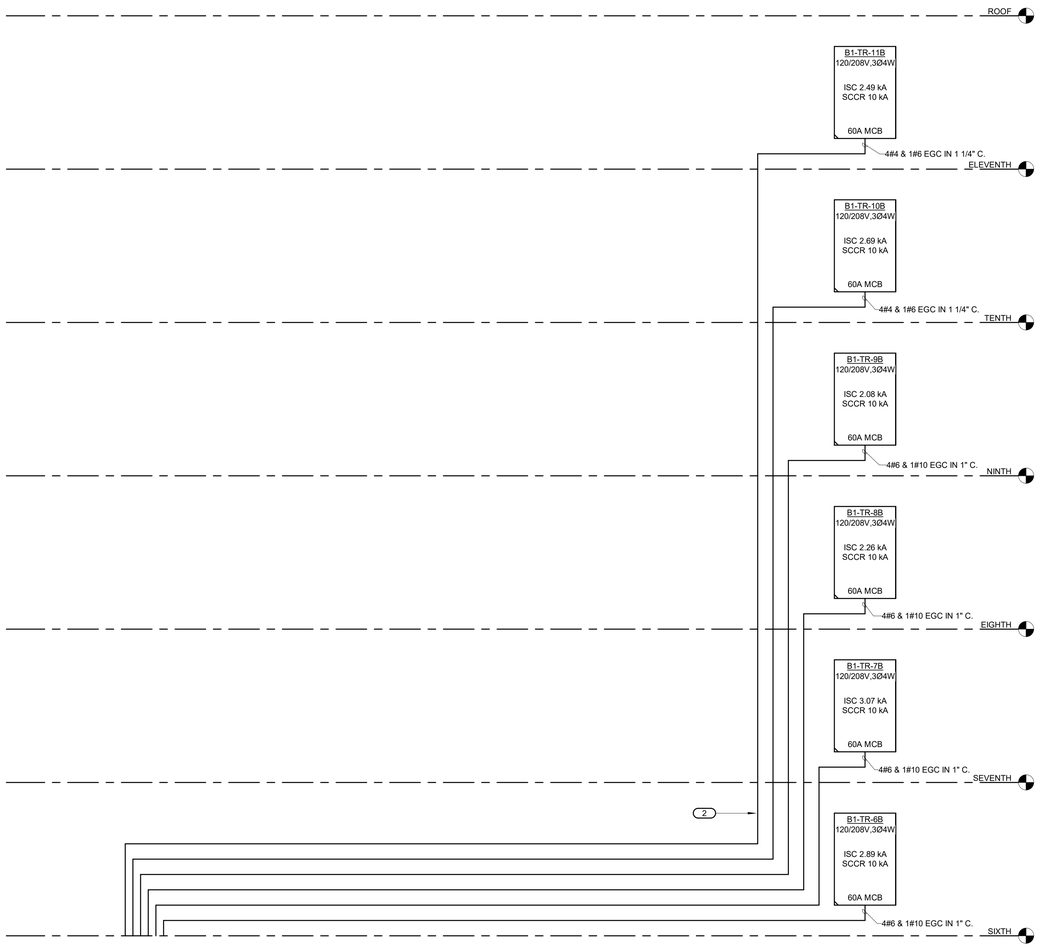
**KEYNOTES:** (#)

1. PROVIDE NEW DRAW OUT CIRCUIT BREAKER, SQUARE D, TO MATCH EXISTING 1600 AMP FRAME, 800 AMP TRIP.
2. ROUTE FEEDERS UP THROUGH EXISTING STACKED ELECTRICAL AND/OR UTILITY ROOMS. COORDINATE EXACT LOCATION WITH MECHANICAL AND TECHNOLOGY EQUIPMENT.




## 1 NORMAL POWER RISER DIAGRAM CENTER TOWER

NO SCALE

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| Approved: | |
| Phase | FINAL BID DOCUMENTS |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | GJL |
| Drawn | HAB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-EP603 |
| | SHEET 353 of 797 |

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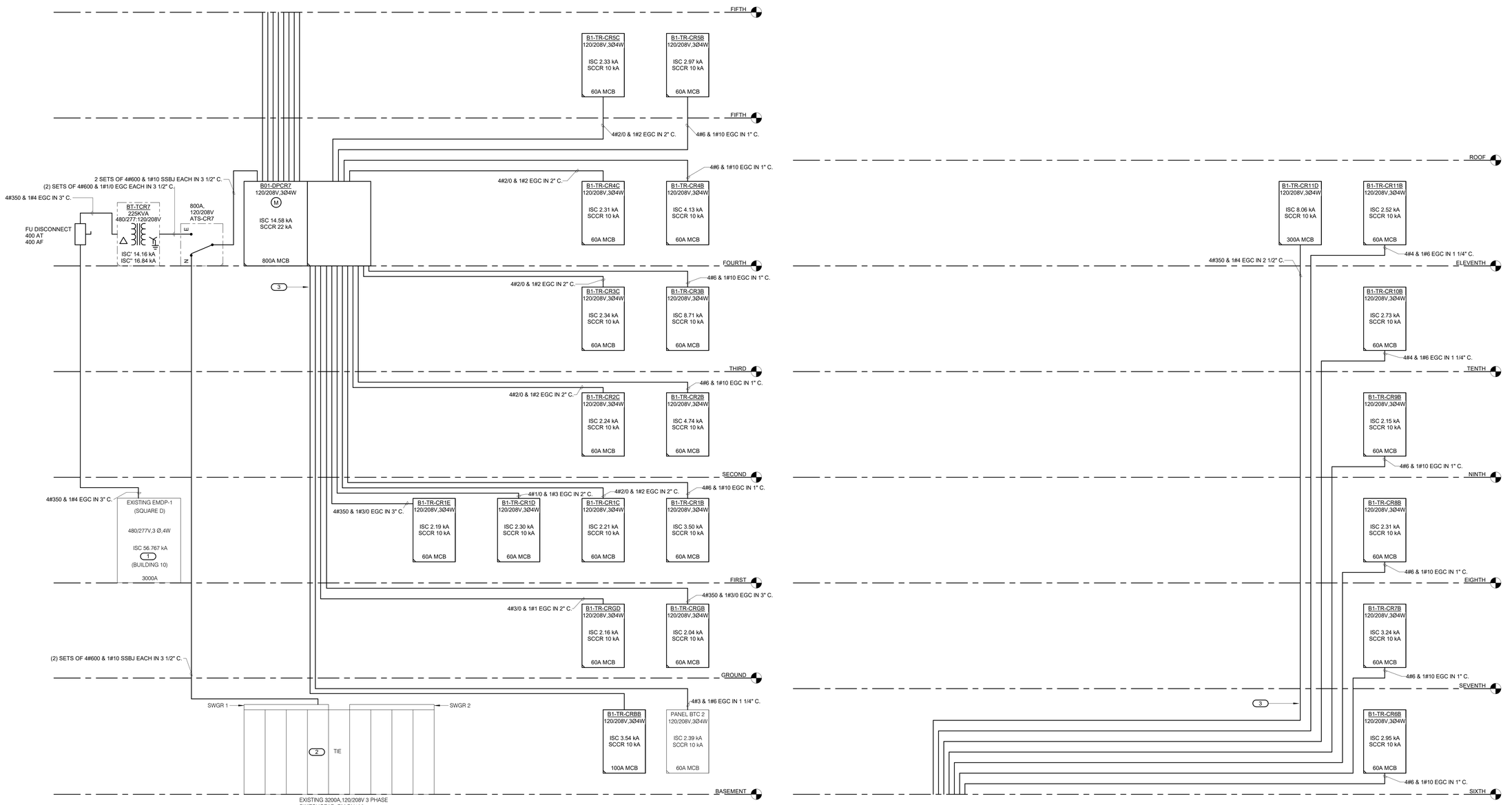
**KEYNOTES:** (#)

1. PROVIDE NEW 300A/3P BREAKER IN EXISTING PANEL TO MATCH EXISTING TYPE AND AIC RATING.
2. PROVIDE NEW DRAWOUT CIRCUIT BREAKER, SQUARE D, TO MATCH EXISTING 1600 AMP FRAME, 800 AMP TRIP.
3. ROUTE FEEDERS UP THROUGH EXISTING STACKED ELECTRICAL AND/OR UTILITY ROOMS. COORDINATE EXACT LOCATION WITH MECHANICAL AND TECHNOLOGY EQUIPMENT.




## 1 CRITICAL POWER RISER DIAGRAM CENTER TOWER

NO SCALE

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|---|---|---|---|
| Drawing Title: ELECTRICAL RISER DIAGRAM | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | Drawing Number: 01-EP604 |
| | | | SHEET 354 of 797 |


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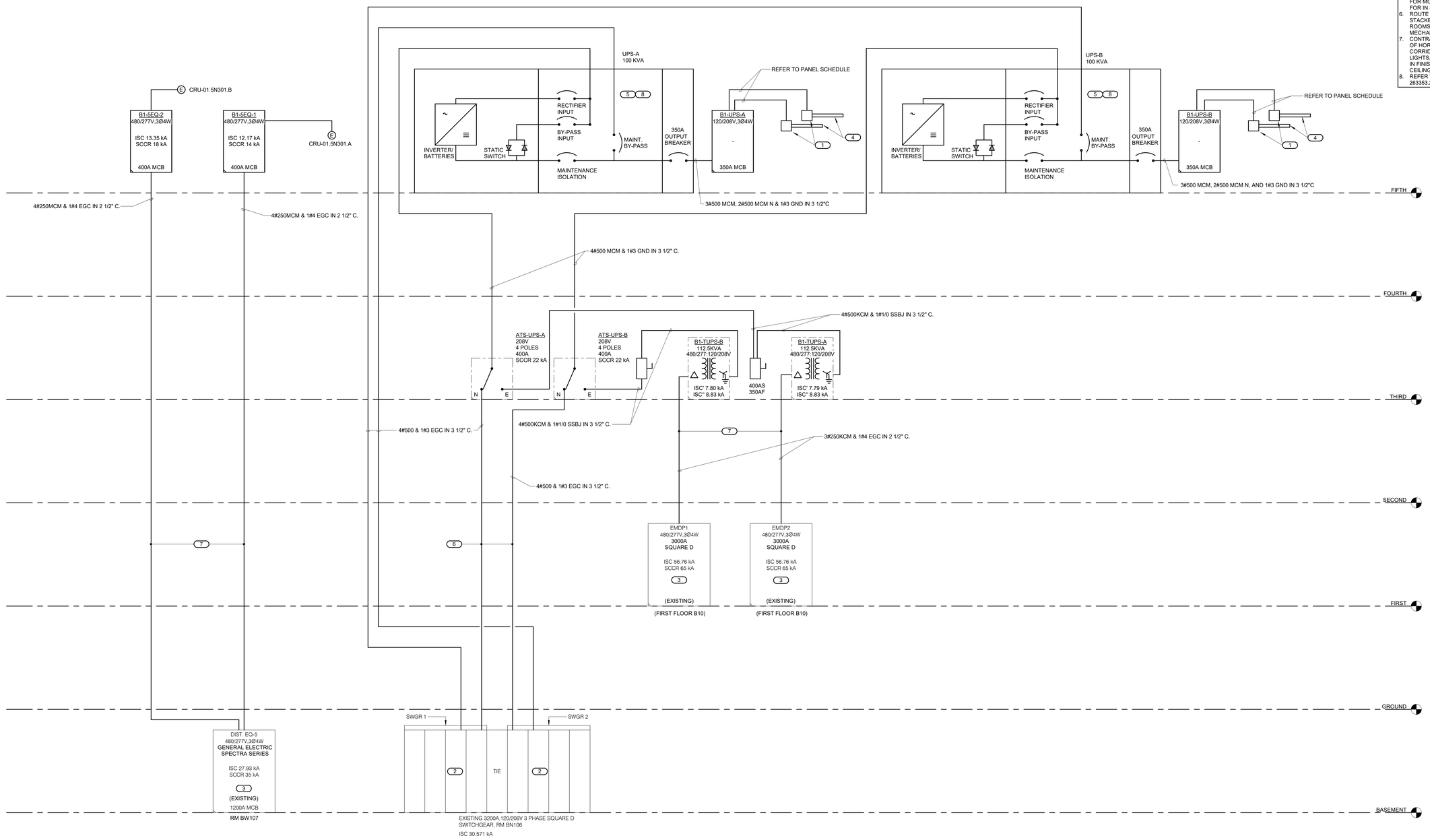
**CONSTRUCTION NOTES:**

1. CONTRACTOR SHALL COORDINATE WITH OWNER WHEN ROUTING FEEDERS THROUGH PATIENT CORRIDORS. ALL FEEDERS SHALL BE LOCATED ABOVE CEILINGS IN FINISH AREAS OF BUILDING.

**KEYNOTES:** (#)

1. BUSWAY POWER FEED UNIT.
2. PROVIDE NEW DRAWOUT CIRCUIT BREAKER(S) SQUARE D. TO MATCH EXISTING 1600 AMP FRAME 350 AMP TRIP. PROVIDE ALL MODIFICATIONS AND HARDWARE REQUIRED TO ADD NEW DRAWOUT BREAKER.
3. PROVIDE 125 AMP BREAKER IN PANEL TO MATCH EXISTING TYPE AND AIC RATING. MODIFY BUSSING TO ALLOW NEW BREAKER AS REQUIRED. PROVIDE NEW TAPS AND CONNECTION HARDWARE.
4. 250A, 208/120V, 3 PHASE, 4 WIRE DATA CENTER PLUG-IN BUSWAY.
5. PROVIDE CONNECTION FROM UPS MODULE CONTROL PANEL TO BUILDING BAS SYSTEM FOR MONITORING OF FUNCTIONS CALLED OUT FOR IN SPECIFICATIONS.
6. ROUTE FEEDERS UP THROUGH EXISTING STACKED ELECTRICAL AND/OR UTILITY ROOMS. COORDINATE EXACT LOCATION WITH MECHANICAL AND TECHNOLOGY EQUIPMENT.
7. CONTRACTOR SHALL COORDINATE ROUTING OF HORIZONTAL FEEDERS THROUGH EXISTING CORRIDORS WITH EXISTING DUCTWORK, LIGHTS, AND CABLE TRAY. LOCATE FEEDERS IN FINISHED SPACES ABOVE ACCESIBLE CEILINGS.
8. REFER TO SPECIFICATION SECTION 263353.2.6.A.1 FOR METERING REQUIREMENTS.




## 1 FIFTH FLOOR DATA CENTER POWER RISER DIAGRAM

NO SCALE

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

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VA | U.S. Department of Veterans Affairs

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|---|---|
| Drawing Title: ELECTRICAL RISER DIAGRAM | Phase: FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |

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|---|---|
| Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| | Building Number: 1 |
| Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Drawing Number: 01-EP605 |
| Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | SHEET 355 of 797 |


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VA FORM 08 - 6231

# ELECTRICAL CONNECTION SCHEDULE

| ITEM | LOCATION | VOLTAGE | LOAD CLASS. | MOTOR | MOTORS QTY | @ | HP | APPARENT LOAD | FLA | MCA | MOCP | OCPD | REQ GEN POWER | CIRCUIT NUMBER | WIRE AND RACEWAY | ISC | SCCR | DISCONNECT BY | DISCONNECT TYPE | CONTROLLER / STARTER BY | CONTROLLER / STARTER TYPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B1-5EQ-1 | | | | | | | | | | | | | | | | | | | | | |
| ACU-01.5N301.A | | 480 V, 3Ø | Power | No | 0 | - | 0 | 1.69 kVA | 3.5 A | 4.4 A | 15 A | 15 A | No | 1,3,5 | 3#12 & 1#12 EGC IN 3/4" C. | 1,210.1 A | 5,000 A | MFR | NF | EC | |
| CRU-01.5N301.A | | 480 V, 3Ø | Power | No | 0 | - | 0 | 50.71 kVA | 61 A | 75 A | 80 A | 80 A | Yes | 2,4,6 | 3#3 & 1#8 EGC IN 1" C. | 9,838.3 A | 22,000 A | EC | F | | |
| B1-5EQ-2 | | | | | | | | | | | | | | | | | | | | | |
| ACU-01.5N301.B | | 480 V, 3Ø | Power | No | 0 | - | 0 | 1.69 kVA | 3.5 A | 4.4 A | 15 A | 15 A | No | 1,3,5 | 3#12 & 1#12 EGC IN 3/4" C. | 1,319.6 A | 5,000 A | MFR | NF | EC | |
| CRU-01.5N301.B | | 480 V, 3Ø | Power | No | 0 | - | 0 | 50.71 kVA | 61 A | 75 A | 80 A | 80 A | Yes | 2,4,6 | 3#3 & 1#8 EGC IN 1" C. | 10,606.7 A | 22,000 A | EC | F | | |
| B1-TR-CR1A | | | | | | | | | | | | | | | | | | | | | |
| SS-01.1W121 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 3,5 | 2#10 & 1#10 EGC IN 3/4" C. | 611.8 A | 5,000 A | EC | F | | |
| B1-TR-CR1B | | | | | | | | | | | | | | | | | | | | | |
| FC-1N301.A | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.11 kVA | 0.5 A | 0.6 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 1,251.6 A | 5,000 A | EC | F | | |
| FC-1N301.B | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.04 kVA | 0.2 A | 0.2 A | 15 A | 15 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 1,087.1 A | 5,000 A | EC | F | | |
| B1-TR-CR1C | | | | | | | | | | | | | | | | | | | | | |
| FCU-29.1M195A | | 120 V, 1Ø | Power | No | 0 | - | 0 | 0.70 kVA | 5.8 A | 7.3 A | 15 A | 15 A | Yes | 3 | 2#12 & 1#12 EGC IN 3/4" C. | 873.3 A | 5,000 A | EC | F | | |
| B1-TR-CR1D | | | | | | | | | | | | | | | | | | | | | |
| SS-01.1G111 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 4,6 | 2#10 & 1#10 EGC IN 3/4" C. | 1,024.1 A | 5,000 A | EC | F | | |
| B1-TR-CR1E | | | | | | | | | | | | | | | | | | | | | |
| SS-01.1A243 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 4,6 | 2#8 & 1#8 EGC IN 3/4" C. | 581.2 A | 5,000 A | EC | F | | |
| B1-TR-CR2A | | | | | | | | | | | | | | | | | | | | | |
| SS-01.2W110D | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 4,6 | 2#10 & 1#10 EGC IN 3/4" C. | 1,185.8 A | 5,000 A | EC | F | | |
| B1-TR-CR2B | | | | | | | | | | | | | | | | | | | | | |
| EF-01.C2N1 | | 120 V, 1Ø | Power | Yes | 1 | @ | 0.06 | 0.51 kVA | 4.4 A | 5.5 A | 15 A | 15 A | Yes | 9 | 2#12 & 1#12 EGC IN 3/4" C. | 698.3 A | 5,000 A | EC | F | | |
| FC-2N301.A | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.11 kVA | 0.5 A | 0.6 A | 15 A | 15 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 1,910 A | 5,000 A | EC | F | | |
| FC-2N301.B | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.04 kVA | 0.2 A | 0.2 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 1,189.2 A | 5,000 A | EC | F | | |
| B1-TR-CR2C | | | | | | | | | | | | | | | | | | | | | |
| FCU-29.2M275A | | 120 V, 1Ø | Power | No | 0 | - | 0 | 0.70 kVA | 5.8 A | 7.3 A | 15 A | 15 A | Yes | 3 | 2#12 & 1#12 EGC IN 3/4" C. | 805.7 A | 5,000 A | EC | F | | |
| B1-TR-CR3A | | | | | | | | | | | | | | | | | | | | | |
| SS-01.3A110.A | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 25 A | 25 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 979.8 A | 5,000 A | EC | F | | |
| SS-01.3A110.B | | 208 V, 1Ø | Power | No | 0 | - | 0 | 1.83 kVA | 8.8 A | 11 A | 25 A | 25 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 887.8 A | 5,000 A | EC | F | | |
| B1-TR-CR3B | | | | | | | | | | | | | | | | | | | | | |
| FC-3N301.A | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.11 kVA | 0.5 A | 0.6 A | 15 A | 15 A | Yes | 5,7 | 2#12 & 1#12 EGC IN 3/4" C. | 1,538.3 A | 5,000 A | EC | F | | |
| FC-3N301.B | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.04 kVA | 0.2 A | 0.2 A | 15 A | 15 A | Yes | 9,11 | 2#12 & 1#12 EGC IN 3/4" C. | 2,696.5 A | 5,000 A | EC | F | | |
| SS-01.3N300 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 10,12 | 2#10 & 1#10 EGC IN 3/4" C. | 2,374.8 A | 5,000 A | EC | F | | |
| B1-TR-CR4A | | | | | | | | | | | | | | | | | | | | | |
| SS-01.4W137 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 4,6 | 2#10 & 1#10 EGC IN 3/4" C. | 562.7 A | 5,000 A | EC | F | | |
| B1-TR-CR4B | | | | | | | | | | | | | | | | | | | | | |
| FC-4N302 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.50 kVA | 2.4 A | 3 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 962.9 A | 5,000 A | EC | F | | |
| SS-01.4N301 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 4,6 | 2#10 & 1#10 EGC IN 3/4" C. | 1,692.8 A | 5,000 A | EC | F | | |
| SS-01.4N303 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 9,11 | 2#10 & 1#10 EGC IN 3/4" C. | 1,163.3 A | 5,000 A | EC | F | | |
| B1-TR-CR4D | | | | | | | | | | | | | | | | | | | | | |
| SS-01.4A02 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 3,5 | 2#12 & 1#12 EGC IN 3/4" C. | 1,297.7 A | 5,000 A | EC | F | | |
| B1-TR-CR5A | | | | | | | | | | | | | | | | | | | | | |
| SS-01.5W200 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 4,6 | 2#10 & 1#10 EGC IN 3/4" C. | 2,857.1 A | 5,000 A | EC | F | | |
| SS-01.5W201 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.50 kVA | 2.4 A | 3 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 1,407.1 A | 5,000 A | EC | F | | |
| B1-TR-CR5B | | | | | | | | | | | | | | | | | | | | | |
| SS-01.5N101A | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 4,6 | 2#10 & 1#10 EGC IN 3/4" C. | 1,782.5 A | 5,000 A | EC | F | | |
| B1-TR-CR6A | | | | | | | | | | | | | | | | | | | | | |
| FC-6W201 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.50 kVA | 2.4 A | 3 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 936.2 A | 5,000 A | EC | F | | |
| SS-01.6W200 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 1,893.6 A | 5,000 A | EC | F | | |
| SS-01.6W202 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 12,14 | 2#10 & 1#10 EGC IN 3/4" C. | 1,973.3 A | 5,000 A | EC | F | | |
| B1-TR-CR6B | | | | | | | | | | | | | | | | | | | | | |
| FC-6N302 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.50 kVA | 2.4 A | 3 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 810.4 A | 5,000 A | EC | F | | |
| SS-01.6N301 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 1,293.3 A | 5,000 A | EC | F | | |
| B1-TR-CR7A | | | | | | | | | | | | | | | | | | | | | |
| FC-7W201 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.50 kVA | 2.4 A | 3 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 870.9 A | 5,000 A | EC | F | | |
| SS-01.7W200 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 1,654.7 A | 5,000 A | EC | F | | |
| B1-TR-CR7B | | | | | | | | | | | | | | | | | | | | | |
| FC-7N302 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.50 kVA | 2.4 A | 3 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 1,162.2 A | 5,000 A | EC | F | | |
| SS-01.7N301 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 1,348.9 A | 5,000 A | EC | F | | |
| B1-TR-CR8A | | | | | | | | | | | | | | | | | | | | | |
| FC-8W201 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.50 kVA | 2.4 A | 3 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 803.1 A | 5,000 A | EC | F | | |
| SS-01.8W200 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 1,390.9 A | 5,000 A | EC | F | | |
| B1-TR-CR8B | | | | | | | | | | | | | | | | | | | | | |
| FC-8N302 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.50 kVA | 2.4 A | 3 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 781.4 A | 5,000 A | EC | F | | |
| SS-01.8N301 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 1,168.2 A | 5,000 A | EC | F | | |
| B1-TR-CR9A | | | | | | | | | | | | | | | | | | | | | |
| FC-9W201 | | 120 V, 1Ø | Power | No | 0 | - | 0 | 0.50 kVA | 2.4 A | 3 A | 15 A | 15 A | Yes | 8 | 2#12 & 1#12 EGC IN 3/4" C. | 545 A | 5,000 A | EC | F | | |
| SS-01.9W200 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 1,475.4 A | 5,000 A | EC | F | | |
| B1-TR-CR9B | | | | | | | | | | | | | | | | | | | | | |
| FC-9N302 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.50 kVA | 2.4 A | 3 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 778.9 A | 5,000 A | EC | F | | |
| SS-01.9N301 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 1,309.4 A | 5,000 A | EC | F | | |
| B1-TR-CR10A | | | | | | | | | | | | | | | | | | | | | |
| FC-10W201 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.50 kVA | 2.4 A | 3 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 799.2 A | 5,000 A | EC | F | | |
| SS-01.10W200 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 1,334.7 A | 5,000 A | EC | F | | |
| B1-TR-CR10B | | | | | | | | | | | | | | | | | | | | | |
| FC-10N302 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.50 kVA | 2.4 A | 3 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 776.1 A | 5,000 A | EC | F | | |
| SS-01.10N301 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 1,321.4 A | 5,000 A | EC | F | | |
| B1-TR-CR11A | | | | | | | | | | | | | | | | | | | | | |
| FC-11W201 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.50 kVA | 2.4 A | 3 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 755.4 A | 5,000 A | EC | F | | |
| ODU-N1 | | 208 V, 3Ø | Power | No | 0 | - | 0 | 15.85 kVA | 44 A | 55 A | 90 A | 90 A | Yes | 15,17,19 | 3#2 & 1#3 EGC IN 1 1/4" C. | 964.7 A | 5,000 A | EC | F | | |
| ODU-N2 | | 208 V, 3Ø | Power | No | 0 | - | 0 | 15.85 kVA | 44 A | 55 A | 90 A | 90 A | Yes | 21,23,25 | 3#2 & 1#3 EGC IN 1 1/4" C. | 867.5 A | 5,000 A | EC | F | | |
| ODU-W1 | | 208 V, 3Ø | Power | No | 0 | - | 0 | 15.85 kVA | 44 A | 55 A | 90 A | 90 A | Yes | 9,11,13 | 3#6 & 1#8 EGC IN 3/4" C. | 1,830.5 A | 5,000 A | EC | F | | |
| SS-01.11W200 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 1,220.4 A | 5,000 A | EC | F | | |
| B1-TR-CR11B | | | | | | | | | | | | | | | | | | | | | |
| FC-11N302 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 0.50 kVA | 2.4 A | 3 A | 15 A | 15 A | Yes | 8,10 | 2#12 & 1#12 EGC IN 3/4" C. | 757.3 A | 5,000 A | EC | F | | |
| SS-01.11N301 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 1,241 A | 5,000 A | EC | F | | |
| B1-TR-CR8A | | | | | | | | | | | | | | | | | | | | | |
| SS-01.BW106B | | 208 V, 1Ø | Power | No | 0 | - | 0 | 3.16 kVA | 15.2 A | 19 A | 26 A | 25 A | Yes | 4,6 | 2#12 & 1#12 EGC IN 3/4" C. | 532.8 A | 5,000 A | EC | F | | |
| B1-TR-CR8B | | | | | | | | | | | | | | | | | | | | | |
| SS-01.BC101.A | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 1,3 | 2#8 & 1#8 EGC IN 3/4" C. | 583 A | 5,000 A | EC | F | | |
| SS-01.BC101.B | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 5,7 | 2#8 & 1#8 EGC IN 3/4" C. | 563.8 A | 5,000 A | EC | F | | |
| B1-TR-CR6A | | | | | | | | | | | | | | | | | | | | | |
| SS-01.CA224C | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 4,6 | 2#10 & 1#10 EGC IN 3/4" C. | 786.1 A | 5,000 A | EC | F | | |
| B1-TR-CR6B | | | | | | | | | | | | | | | | | | | | | |
| SS-01.AA162 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 3,5 | 2#8 & 1#8 EGC IN 3/4" C. | 508.1 A | 5,000 A | EC | F | | |
| B1-TR-CR6D | | | | | | | | | | | | | | | | | | | | | |
| SS-01.GG108 | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 4,6 | 2#10 & 1#10 EGC IN 3/4" C. | 795.5 A | 5,000 A | EC | F | | |
| PANEL NBDEM1 | | | | | | | | | | | | | | | | | | | | | |
| SS-01.AN306A | | 208 V, 1Ø | Power | No | 0 | - | 0 | 4.16 kVA | 20 A | 25 A | 30 A | 30 A | Yes | 40,42 | 2#10 & 1#10 EGC IN 3/4" C. | 0 A | 5,000 A | EC | F | | |

# DISCONNECT AND STARTER SCHEDULE

**NOTE: ALL DISCONNECTS (EXCEPT MANUAL STARTERS) SHALL BE HEAVY DUTY TYPE.**

| DISCONNECT TYPE: | ACCESSORIES & OPTIONS | |
|---|---|---|
| FU - FUSED | SA - STANDARD ACCESSORIES (INCLUDES *... | PF - PHASE LOSS PROTECTION (5 HP OR GREATER, 3... |
| NF - NON-FUSED | *CT - CONTROL TRANSFORMER, FUSED 120V | TO - MELTING THERMAL OVERLOADS (1 PHASE) |
| CB - CIRCUIT BREAKER | *EO - ELECTRONIC OVERLOAD (3 PHASE... | TS - 2 SPEED SELECTOR SWITCH IN DOOR |
| | *HA - HAND-OFF-AUTO IN DOOR | GP - GREEN (OFF) PILOT LIGHT IN DOOR |
| **STARTER TYPE:** | *RP - RED (RUN) PILOT LIGHT IN DOOR | FA - 4-CONVERTIBLE AUXILIARY CONTACTS |
| FV - FULL VOLTAGE | *TA - TWO CONVERTIBLE AUXILIARY CONTACTS | EI - ELECTRICAL INTERLOCK (2)-N.O. & (2)-N.C. |
| YD - WYE - DELTA | S/N - INSULATED NEUTRAL ASSEMBLY | SS - START-STOP PUSHBUTTON IN DOOR |
| RE - REVERSING | | HL - HANDLE PADLOCK HASP |
| TW - 2 SPEED, 2 WINDING | | |
| SW - 2 SPEED, 1 WINDING | | |
| RV - REDUCED VOLTAGE AUTOXFMR | | |
| SS - SOLID STATE | | |
| MS - MANUAL STARTER | | |
| MX - MANUAL SWITCH | | |
| FS - FUSED SWITCH | | |
| AMS-ASSEMBLED MOTOR STARTER | | |

| ITEM | DISCONNECT TYPE & RATING TYPE | RATING | TRIP RATING | VOLTAGE | POLES | ENCLOSURE | REQUIRED ACCESSORIES & OPTIONS | COMMENTS |
|---|---|---|---|---|---|---|---|---|
| FDS-SS-01.2W110D | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.CA224C | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.BW106B | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.BC101.A | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.BC101.B | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.GG108 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.AN306A | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.AA162 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.1A243 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.1W121 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.1G111 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.4W137 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.4A02 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.3A110.A | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.3A110.B | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-EF-01.C2N1 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-1N301.A | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-1N301.B | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-2N301.A | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-3N301.B | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-3N301.A | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-4N302 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-5W201 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-6N302 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-6W201 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-7W201 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-7N302 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-8W201 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-8N302 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-9W201 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-9N302 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-10W201 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-10N302 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-11W201 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FC-11N302 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FCU-29.2M275A | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-FCU-29.1M195A | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.11N301 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.11W200 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.10N301 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.10W200 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.9N301 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.9W200 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.8N301 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.8W200 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.7N301 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.7W200 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.6N301 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.6W200 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.6W202 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.5N101A | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.5W200 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.4N301 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.3N300 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-SS-01.4N303 | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-CRU-01.5N301.A | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-CRU-01.5N301.B | FU | 30 A | 30 A | 208 V | 3 | NEMA 1 | | |
| FDS-ODU-N2 | FU | 100 A | 100 A | 208 V | 3 | NEMA 1 | | |
| FDS-ODU-N1 | FU | 100 A | 100 A | 208 V | 3 | NEMA 1 | | |
| FDS-ODU-W1 | FU | 100 A | 100 A | 208 V | 3 | NEMA 1 | | |

# TRANSFORMER SCHEDULE

| TYPE: | | ACCESSORIES & OPTIONS |
|---|---|---|
| K1 - DOE 2016 DRY TYPE | AUT - AUTOTRANSFORMER | AL - ALUMINUM WINDINGS |
| K4 - K4 RATED DRY TYPE | BB - BUCK BOOST | CU - COPPER WINDINGS |
| K13 - K13 RATED DRY TYPE | LIQ - LIQUID FILLED | RS - EPOXY RESIN ENCAPSULATED |
| HM - HARMONIC MITIGATING | | FL - FILTERED |
| PE - NEMA PREMIUM EFFICIENCY | | NV - NON-VENTILATED |
| | | NL - 200% RATED NEUTRAL |
| | | EL - ELECTROSTATIC SHIELD |

| ITEM | KVA RATING | TYPE | ENCLOSURE | MAX. TEMP. RISE C. | PRIMARY VOLTS | PRIMARY PH | SECONDARY VOLTS | SECONDARY PH | REQUIRED ACCESSORIES & OPTIONS | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| B1-T6 | 225 kVA | K-1 | NEMA 1 | 115 | 480 | 3 | 120/208 | 3 | AL, CU | |
| B1-TCR6 | 225 kVA | K-1 | NEMA 1 | 115 | 480 | 3 | 120/208 | 3 | AL, CU | |
| B1-TUPS-A | 112.5 kVA | K-1 | NEMA 1 | 115 | 480 | 3 | 120/208 | 3 | AL, CU | |
| B1-TUPS-B | 112.5 kVA | K-1 | NEMA 1 | 115 | 480 | 3 | 120/208 | 3 | AL, CU | |
| BT-TCR7 | 225 kVA | K-1 | NEMA 1 | 115 | 480 | 3 | 120/208 | 3 | AL, CU | |

# TRANSFER SWITCH SCHEDULE

| SWITCH TYPE: | ACCESSORIES & OPTIONS |
|---|---|
| AUTO - AUTOMATIC | EE - ENGINE EXERCISER |
| B/I - AUTOMATIC WITH BYPASS ISOLATION | IM - IN-PHASE MONITOR |
| MAN - MANUAL OPERATION | SH - STRIP HEATER WITH THERMOSTAT |
| PGLB - PORTABLE GENERATOR & LOAD BANK CABINET | RM - REMOTE ANNUNCIATOR |
| STAT - STATIC SOLID STATE | RC - REMOTE CONTROL CIRCUITS |
| **SWITCH CONFIGURATION (CONFIG):** | EL - ELEVATOR EMERGENCY TO NORMAL PRESIGNAL |
| CT - CLOSED TRANSITION | SP - SERIAL COMMUNICATIONS PORT |
| DT - DELAYED TRANSITION - CENTER OFF | PM - POWER MONITORING METER |
| 30 - 30 CYCLE WITHSTAND RATING | RTC - REMOTE TRANSFER CONTROL FROM FIRE COMMAND CENTER |
| SE - SERVICE ENTRANCE LISTED | RMC - REMOTE ANNUNCIATION AT FIRE COMMAND CENTER |
| SN - SWITCHED NEUTRAL | TI - TRANSFER INHIBIT |
| ON - OVERLAPPING SWITCHED NEUTRAL | LS - LOAD SHED (PROVIDE DELAYED TRANSISTION - CENTER OFF... |
| DN - SOLID NEUTRAL | |

| ITEM | SWITCH TYPE AND CONFIG | VOLTAGE | POLES | AMPS | SCCR | ENCLOSURE | REQUIRED ACCESSORIES & OPTIONS | PRIORITY GROUP | BRANCH |
|---|---|---|---|---|---|---|---|---|---|
| ATS-CR6 | AUTO, ON | 480 V | 4 | 400 A | 18 kA | NEMA 1 | EE, RM | 1 | EMERGENCY |
| ATS-CR7 | AUTO, ON | 208 V | 4 | 800 A | 22 kA | NEMA 1 | EE, RM | 1 | EMERGENCY |
| ATS-UPS-A | AUTO, ON | 208 V | 4 | 400 A | 22 kA | NEMA 1 | EE, RM | 3 | OPTIONAL STANDBY |
| ATS-UPS-B | AUTO, ON | 208 V | 4 | 400 A | 22 kA | NEMA 1 | EE, RM | 3 | OPTIONAL STANDBY |

| Revisions: | Date: |
|---|---|
| | |
| | |
| | |
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|---|---|---|---|
| Drawing Title: ELECTRICAL SCHEDULES | Phase: FINAL BID DOCUMENTS | Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | Project Number: 646-22-700 |
| Approved: | | Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | Building Number: 1 |
| | FULLY SPRINKLERED | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | Drawing Number: 01-EP701 |
| | | | SHEET 356 of 797 |

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VA FORM 08 - 6231

**PANELBOARD SCHEDULE NOTES:**

A. BOLD TEXT INDICATES NEW LOADS BEING ADDED TO EXISTING PANELS. UTIIZE EXISTING SPACES AND PROVIDE NEW BREAKERS. REARANGE EXISTING BREAKERS IF REQUIRED TO FIT NEW BREAKERS IN EXISTING SPACES.
B. ITALICS INDICATES EXISTING LOADS TO REMAIN.

## PANEL B1-UPS-A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** UPS A
**LOCATION:** DATA CENTER 5N301

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 350 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 42 kA
**ISC UNKNOWN** 0.00 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | A | B | B | C | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | BUS A SOUTH | 250 A | 3 | 250 | -- | 4 | 0 | 0 | | | | | 4 | -- | 250 | 3 | 250 A | BUS A NORTH | 2 | |
| -- | 3 | -- | -- | -- | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | -- | -- | -- | 6 | -- |
| | 7 | RECEPTS RM 5N301 | 20 A | 1 | 12 | 12 | 12 | 1.08 | 1.08 | | | | | 12 | 12 | 12 | 1 | 20 A | RECEPTS RM 5N301 | 8 | |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | 1 | 20 A | SPARE | 12 | -- |
| -- | 13 | SPARE | 250 A | 3 | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | 3 | 250 A | SPARE | 14 | -- |
| -- | 15 | -- | -- | -- | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | -- | -- | -- | 16 | -- |
| -- | 17 | -- | -- | -- | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | -- | -- | -- | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |

| | A | B | C |
|---|---|---|---|
| Total Load: | 2.16 kVA | 0.00 kVA | 0.00 kVA |
| Total Amps: | 18.00 | 0.00 | 0.00 |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Power | 0 kVA | 0.00% | 0 kVA | | |
| Receptacles | 2.16 kVA | 100.00% | 2.16 kVA | TOTAL CONNECTED LOAD: | 2.16 kVA |
| | | | | TOTAL ESTIMATED DEMAND LOAD: | 2.16 kVA |
| | | | | TOTAL CONNECTED AMPS: | 6.00 A |
| | | | | TOTAL ESTIMATED DEMAND AMPS: | 6 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-UPS-B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** UPS B
**LOCATION:** DATA CENTER 5N301

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 350 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 42 kA
**ISC UNKNOWN** 0.00 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | A | B | B | C | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | BUS B SOUTH | 250 A | 3 | 250 | -- | 4 | 0 | 0 | | | | | 4 | -- | 250 | 3 | 250 A | BUS B NORTH | 2 | |
| -- | 3 | -- | -- | -- | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | -- | -- | -- | 6 | -- |
| | 7 | CLEAN AGENT FIRE SUPPRESSION PANEL | 20 A | 1 | 12 | 12 | 12 | 0.2 | 0.2 | | | | | 12 | 12 | 12 | 1 | 15 A | ACCESS CONTROL PANEL | 8 | |
| | 9 | ACCESS CONTROL PANEL | 15 A | 1 | 12 | 12 | 12 | | | 0.2 | 1.5 | | | 10 | 10 | 10 | 1 | 20 A | LIGHTING RM 5N301 | 10 | |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | 1 | 20 A | SPARE | 12 | -- |
| -- | 13 | SPARE | 20 A | 1 | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 14 | -- |
| -- | 15 | SPARE | 250 A | 3 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 3 | 250 A | SPARE | 16 | -- |
| -- | 17 | -- | -- | -- | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | -- | -- | -- | 18 | -- |
| -- | 19 | -- | -- | -- | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | -- | -- | -- | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |

| | A | B | C |
|---|---|---|---|
| Total Load: | 0.40 kVA | 1.70 kVA | 0.00 kVA |
| Total Amps: | 3.85 | 14.68 | 0.00 |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 1.5 kVA | 100.00% | 1.5 kVA | | |
| Other | 0.2 kVA | 100.00% | 0.2 kVA | TOTAL CONNECTED LOAD: | 2.10 kVA |
| Power | 0.4 kVA | 100.00% | 0.4 kVA | TOTAL ESTIMATED DEMAND LOAD: | 2.1 kVA |
| | | | | TOTAL CONNECTED AMPS: | 5.83 A |
| | | | | TOTAL ESTIMATED DEMAND AMPS: | 5.8 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-5EQ-1

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 400 A/3P @ DIST. EQ-5
**LOCATION:** DATA CENTER 5N301

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 400 A MCB
**VOLTS:** 480/277 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 14 kA
**ISC:** 12.17 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | A | B | B | C | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | ACU-01.5N301.A | 15 A | 3 | 12 | -- | 12 | 0.56 | 16.9 | | | | | 8 | -- | 3 | 3 | 80 A | CRU-01.5N301.A | 2 | |
| -- | 3 | -- | -- | -- | -- | -- | -- | | | 0.56 | 16.9 | | | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 0.56 | 16.9 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |

| | A | B | C |
|---|---|---|---|
| Total Load: | 17.47 kVA | 17.47 kVA | 17.47 kVA |
| Total Amps: | 63.06 | 63.06 | 63.06 |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Power | 52.404 kVA | 100.00% | 52.404 kVA | | |
| | | | | TOTAL CONNECTED LOAD: | 52.40 kVA |
| | | | | TOTAL ESTIMATED DEMAND LOAD: | 52.404 kVA |
| | | | | TOTAL CONNECTED AMPS: | 63.03 A |
| | | | | TOTAL ESTIMATED DEMAND AMPS: | 63 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-BA

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-MDP-6
**LOCATION:** NEW TR BW106D

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.05 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | A | B | B | C | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.18 | 0.36 | | | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 | 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 1.67 | 0 | -- | -- | -- | 1 | 20 A | SPARE | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 30 A | 3 | -- | -- | -- | | | 0 | -- | | | -- | -- | -- | 1 | -- | SPACE | 10 | -- |
| -- | 11 | -- | -- | -- | -- | -- | -- | | | | | 0 | -- | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | -- | -- | -- | -- | -- | -- | 0 | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |

| | A | B | C |
|---|---|---|---|
| Total Load: | 2.21 kVA | 1.67 kVA | 1.67 kVA |
| Total Amps: | 18.41 | 13.89 | 13.89 |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA | | |
| Power | 5 kVA | 100.00% | 5 kVA | TOTAL CONNECTED LOAD: | 5.54 kVA |
| Receptacles | 0.36 kVA | 100.00% | 0.36 kVA | TOTAL ESTIMATED DEMAND LOAD: | 5.542 kVA |
| | | | | TOTAL CONNECTED AMPS: | 15.38 A |
| | | | | TOTAL ESTIMATED DEMAND AMPS: | 15.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CRBA

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR6
**LOCATION:** NEW TR BW106D

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.17 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | A | B | B | C | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.18 | | | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 | 1.58 | | | 12 | -- | 12 | 2 | 25 A | SS-01.BW106B | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 1.67 | 1.58 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | 0 | | | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |

| | A | B | C |
|---|---|---|---|
| Total Load: | 2.39 kVA | 3.25 kVA | 3.25 kVA |
| Total Amps: | 19.91 | 28.16 | 28.16 |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA | | |
| Power | 8.16 kVA | 100.00% | 8.16 kVA | TOTAL CONNECTED LOAD: | 8.88 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | TOTAL ESTIMATED DEMAND LOAD: | 8.882 kVA |
| | | | | TOTAL CONNECTED AMPS: | 24.65 A |
| | | | | TOTAL ESTIMATED DEMAND AMPS: | 24.7 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## EXISTING PANEL BTC

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** PBX RM BC101

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.08 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | A | B | B | C | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -- | 1 | EXISTING LOAD | 20 A | 1 | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 2 | -- |
| -- | 3 | EXISTING LOAD | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 4 | -- |
| -- | 5 | EXISTING LOAD | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 6 | -- |
| -- | 7 | EXISTING LOAD | 20 A | 1 | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 8 | -- |
| -- | 9 | EXISTING LOAD | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 10 | -- |
| -- | 11 | EXISTING LOAD | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 12 | -- |
| -- | 13 | EXISTING LOAD | 20 A | 1 | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 14 | -- |
| -- | 15 | EXISTING LOAD | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 16 | -- |
| -- | 17 | EXISTING LOAD | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 18 | -- |
| -- | 19 | EXISTING LOAD | 20 A | 1 | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 20 | -- |
| -- | 21 | EXISTING LOAD | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 22 | -- |
| -- | 23 | EXISTING LOAD | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 24 | -- |
| | 25 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | 1.67 | 0 | | | | | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 26 | -- |
| -- | 27 | -- | -- | -- | -- | -- | -- | | | 1.67 | 0 | | | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 28 | -- |
| -- | 29 | -- | -- | -- | -- | -- | -- | | | | | 1.67 | 0 | -- | -- | -- | 1 | 20 A | EXISTING LOAD | 30 | -- |

| | A | B | C |
|---|---|---|---|
| Total Load: | 1.67 kVA | 1.67 kVA | 1.67 kVA |
| Total Amps: | 13.89 | 13.89 | 13.89 |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Power | 5 kVA | 100.00% | 5 kVA | | |
| | | | | TOTAL CONNECTED LOAD: | 5.00 kVA |
| | | | | TOTAL ESTIMATED DEMAND LOAD: | 5 kVA |
| | | | | TOTAL CONNECTED AMPS: | 13.88 A |
| | | | | TOTAL ESTIMATED DEMAND AMPS: | 13.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

PANELBOARD LOCATION MATRIX

| | | |
|---|---|---|
| B1-UPS-A | B1-UPS-B | B1-5EQ-1 |
| B1-TR-BA | B1-TR-CRBA | BTC |
| | | |

| Revisions: | Date: |
|---|---|

ARCHITECT/ENGINEER OF RECORD

AWEN SOLUTIONS GROUP
ARCHITECTURE | ENGINEERING | PLANNING

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MICHAEL WALSH
ENGINEER
PE076741

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

| Drawing Title | Phase | Project Title | Project Number |
|---|---|---|---|
| ELECTRICAL PANEL SCHEDULES | FINAL BID DOCUMENTS | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | 646-22-700 |
| | | | Building Number: 1 |
| Approved: | FULLY SPRINKLERED | Location: UNIVERSITY DRIVE, PITTSBURGH, PA 15240 | Drawing Number: 01-EP702 |
| | | Issue Date: 06.13.2025 / Checked: GJL / Drawn: HAB | SHEET 357 of 797 |



6/12/2025 2:15:45 PM
Autodesk Docs://University Drive VAMC EHRM_V25/646-22-700.01.E.PIT EHRM.rvt

## PANEL B1-TR-CRBB

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 100 A/3P @ B01-DPCR7
**LOCATION:** NEW TR AREA BC101TR

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 100 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 3.54 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | SS-01.BC101.A | 30 A | 2 | 8 | -- | 8 | 2.08 | 1.67 | | 12 | 12 | 12 | 3 | 20 A | TR RACK RECEPT. | 2 | |
| -- | 3 | -- | -- | -- | -- | -- | -- | | | 2.08 | 1.67 | | | -- | -- | -- | -- | -- |
| | 5 | SS-01.BC101.B | 30 A | 2 | 8 | -- | 8 | | | | | 2.08 | 1.67 | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 2.08 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| | 9 | TR RM RECEPT. | 20 A | 1 | 12 | 12 | 12 | | | 0.36 | 0 | | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | 20 A | 1 | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 5.83 kVA | | 4.11 kVA | | | | | | 3.75 kVA | | |
| | | **Total Amps:** | | | | | | 49.02 | | 34.68 | | | | | | 31.22 | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Power | 13.32 kVA | 100.00% | 13.32 kVA |
| Receptacles | 0.36 kVA | 100.00% | 0.36 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 13.68 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 13.68 kVA |
| **TOTAL CONNECTED AMPS:** | 37.97 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 38 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-GA

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-MDP-6
**LOCATION:** NEW TR CA224C

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.61 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.18 | 0.54 | | | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 30 A | 3 | 10 | 10 | 10 | | | 1.67 | 0.18 | | | 12 | 12 | 12 | 1 | 20 A | OUTDOOR RECEPTACLE | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 1.67 | 0 | -- | -- | -- | 1 | 20 A | SPARE | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0 | | | | | -- | -- | -- | 3 | 30 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPACE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.39 kVA | | 1.85 kVA | | | | | | 1.67 kVA | | |
| | | **Total Amps:** | | | | | | 20.14 | | 15.62 | | | | | | 13.89 | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |
| Receptacles | 0.72 kVA | 100.00% | 0.72 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 5.90 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 5.902 kVA |
| **TOTAL CONNECTED AMPS:** | 16.38 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 16.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CRGA

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR6
**LOCATION:** NEW TR CA224C

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.43 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.18 | | | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 30 A | 3 | 10 | 10 | 10 | | | 1.67 | 2.08 | | | 10 | -- | 10 | 2 | 30 A | SS-01.CA224C | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 1.67 | 2.08 | -- | -- | -- | 6 | -- | | | |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | 0 | | | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.39 kVA | | 3.75 kVA | | | | | | 3.75 kVA | | |
| | | **Total Amps:** | | | | | | 19.91 | | 32.96 | | | | | | 32.96 | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA |
| Power | 9.16 kVA | 100.00% | 9.16 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 9.88 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 9.882 kVA |
| **TOTAL CONNECTED AMPS:** | 27.43 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 27.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-GD

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** NEW TR GG108

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.34 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 30 A | 3 | 10 | 10 | 10 | | | 1.67 | | | | | | | | | | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | 1.67 | 0 | -- | -- | -- | 1 | 20 A | SPARE | 6 | -- | |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0 | | | | | -- | -- | -- | 3 | 30 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | | 1.67 kVA | | | | | | 1.67 kVA | | |
| | | **Total Amps:** | | | | | | 21.43 | | 13.89 | | | | | | 13.89 | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 5.90 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 5.904 kVA |
| **TOTAL CONNECTED AMPS:** | 16.39 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 16.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CRGD

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** NEW TR GG108

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.16 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT | 30 A | 3 | 10 | 10 | 10 | | | 1.67 | 2.08 | | | 10 | -- | 10 | 2 | 30 A | SS-01.GG108 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 1.67 | 2.08 | -- | -- | -- | 6 | -- | | | |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | 0 | | | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | | 3.75 kVA | | | | | | 3.75 kVA | | |
| | | **Total Amps:** | | | | | | 21.43 | | 32.73 | | | | | | 32.73 | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA |
| Power | 9.16 kVA | 100.00% | 9.16 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 10.06 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 10.064 kVA |
| **TOTAL CONNECTED AMPS:** | 27.94 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 27.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-6B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** NEW TR 6N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.89 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 | 0.4 | | | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LIGHTING RM 6N302,6N303 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 1.67 | 0.73 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LIGHTING 6N300 | 6 | |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | 0 | | | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | | 2.07 kVA | | | | | | 2.39 kVA | | |
| | | **Total Amps:** | | | | | | 21.84 | | 17.24 | | | | | | 20.36 | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.593 kVA | 100.00% | 0.593 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |
| Receptacles | 1.44 kVA | 100.00% | 1.44 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 7.03 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 7.033 kVA |
| **TOTAL CONNECTED AMPS:** | 19.52 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 19.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

PANELBOARD LOCATION MATRIX

| | | |
|---|---|---|
| B1-TR-CRBB | B1-TR-GA | B1-TR-CRGA |
| B1-TR-GD | B1-TR-CRGD | B1-TR-6B |
| | | |

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

AWEN SOLUTIONS GROUP
ARCHITECTURE | ENGINEERING | PLANNING


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PROJECT #23002251.00


**STAMP**

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MICHAEL WALSH ENGINEER PE076741

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

**Drawing Title:** ELECTRICAL PANEL SCHEDULES
**Approved:**
**Phase:** FINAL BID DOCUMENTS
FULLY SPRINKLERED
**Project Title:** EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS
**Location:** UNIVERSITY DRIVE PITTSBURGH, PA 15240
**Issue Date:** 06.13.2025
**Checked:** GJL
**Drawn:** HAB
**Project Number:** 646-22-700
**Building Number:** 1
**Drawing Number:** 01-EP703
SHEET 358 of 797

6/12/2025 2:15:48 PM
Autodesk Docs://University Drive VAMC EHRM_V25/646-22-700.01-E PIT EHRM.rvt
VA FORM 08 - 6231

## PANEL B1-TR-CR6B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** NEW TR 6N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.95 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 1.58 | 12 | -- | 12 | 2 | 25 A | SS-01.6N301 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 1.58 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0.25 | | | 12 | -- | 12 | 2 | 15 A | FC-6N302 | 8 | |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0.25 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 30 A | 3 | -- | -- | -- | | | 0 0 | -- | -- | -- | 1 | 20 A | SPARE | 12 | -- |
| -- | 13 | -- | -- | -- | -- | -- | -- | 0 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 14 | -- |
| -- | 15 | -- | -- | -- | -- | -- | -- | | 0 -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.82 kVA | 3.50 kVA | 3.25 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 23.51 | 29.68 | 27.60 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 8.659 kVA | 100.00% | 8.659 kVA | **TOTAL CONNECTED LOAD:** | 9.56 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 9.563 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 26.55 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 26.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-GC

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** TELECOM AN306A

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.31 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR RACK RECEPT. | 30 A | 3 | 10 | 10 | 10 | 1.67 | -- | | -- | -- | -- | 1 | -- | SPACE | 2 | -- |
| -- | 3 | -- | -- | -- | -- | -- | -- | | 1.67 -- | | -- | -- | -- | 1 | -- | SPACE | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 -- | -- | -- | -- | 1 | -- | SPACE | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 -- | | | -- | -- | -- | 1 | -- | SPACE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 -- | | -- | -- | -- | 1 | -- | SPACE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 -- | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPARE | 30 A | 3 | -- | -- | -- | 0 -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | -- | -- | -- | -- | -- | -- | | 0 -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | -- | -- | -- | -- | -- | -- | | | 0 -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 1.67 kVA | 1.67 kVA | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 13.89 | 13.89 | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Power | 5 kVA | 100.00% | 5 kVA | | |
| | | | | **TOTAL CONNECTED LOAD:** | 5.00 kVA |
| | | | | **TOTAL ESTIMATED DEMAND LOAD:** | 5 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 13.88 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 13.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-1A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-MDP-6
**LOCATION:** IT 1W121

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.25 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.18 | 0 | | 10 | 10 | 10 | 3 | 30 A | TR RACK. RECEPT | 2 | |
| -- | 3 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0 | | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | 1 | -- | SPACE | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 -- | | | -- | -- | -- | 1 | -- | SPACE | 8 | -- |
| -- | 9 | SPARE | 30 A | 3 | -- | -- | -- | | 0 -- | | -- | -- | -- | 1 | -- | SPACE | 10 | -- |
| -- | 11 | -- | -- | -- | -- | -- | -- | | | 0 -- | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | -- | -- | -- | -- | -- | -- | 0 -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 0.18 kVA | 0.00 kVA | 0.00 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 1.52 | 0.00 | 0.00 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA | | |
| Power | 0 kVA | 0.00% | 0 kVA | **TOTAL CONNECTED LOAD:** | 0.18 kVA |
| | | | | **TOTAL ESTIMATED DEMAND LOAD:** | 0.182 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 0.51 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 0.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CR1A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR6
**LOCATION:** IT 1W121

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.67 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.18 | 0 | | 10 | 10 | 10 | 3 | 30 A | TR RACK. RECEPT | 2 | |
| | 3 | SS-01.1W121 | 30 A | 2 | 10 | -- | 10 | | | 2.08 0 | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 2.08 0 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 0.18 | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPT. | 8 | |
| -- | 9 | SPARE | 30 A | 3 | -- | -- | -- | | 0 0 | | -- | -- | -- | 1 | 20 A | SPARE | 10 | -- |
| -- | 11 | -- | -- | -- | -- | -- | -- | | | 0 0 | -- | -- | -- | 1 | 20 A | SPARE | 12 | -- |
| -- | 13 | -- | -- | -- | -- | -- | -- | 0 -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 0.36 kVA | 2.08 kVA | 2.08 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 3.02 | 19.54 | 19.54 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA | | |
| Power | 4.16 kVA | 100.00% | 4.16 kVA | **TOTAL CONNECTED LOAD:** | 4.52 kVA |
| Receptacles | 0.18 kVA | 100.00% | 0.18 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 4.522 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 12.55 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 12.6 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-1E

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** NEW TR 1A243

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.20 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT | 30 A | 3 | 10 | 10 | 10 | | | 1.67 0 | -- | -- | -- | 1 | 20 A | SPARE | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 0 | -- | -- | -- | 1 | 20 A | SPARE | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPACE | -- | 1 | -- | -- | -- | | -- 0 | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- 0 | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 1.67 kVA | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.43 | 13.89 | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 5 kVA | 100.00% | 5 kVA | **TOTAL CONNECTED LOAD:** | 5.90 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 5.904 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 16.39 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 16.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CR1E

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** NEW TR 1A243

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.19 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT | 30 A | 3 | 10 | 10 | 10 | | | 1.67 2.08 | | | 8 | -- | 8 | 2 | 30 A | SS-01.1A243 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 2.08 | -- | -- | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0 | | -- | -- | -- | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- 0 | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 3.75 kVA | 3.75 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.43 | 32.73 | 32.73 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 9.16 kVA | 100.00% | 9.16 kVA | **TOTAL CONNECTED LOAD:** | 10.06 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 10.064 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 27.94 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 27.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

PANELBOARD LOCATION MATRIX

| | | |
|---|---|---|
| B1-TR-CR6B | B1-TR-GC | B1-TR-1A |
| B1-TR-CR1A | B1-TR-1E | B1-TR-CR1E |
| | | |

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

AWEN SOLUTIONS GROUP
ARCHITECTURE | ENGINEERING | PLANNING

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Alexandria, VA 22314

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PROJECT #23002251.00

**STAMP**

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MICHAEL WALSH ENGINEER PE076741

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

**Drawing Title:** ELECTRICAL PANEL SCHEDULES
**Approved:**
**Phase:** FINAL BID DOCUMENTS
FULLY SPRINKLERED
**Project Title:** EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS
**Location:** UNIVERSITY DRIVE PITTSBURGH, PA 15240
**Issue Date:** 06.13.2025
**Checked:** GJL
**Drawn:** HAB
**Project Number:** 646-22-700
**Building Number:** 1
**Drawing Number:** 01-EP704
SHEET 359 of 797

Autodesk Docs://University Drive VAMC EHRM_V25/646-22-700.01 E.PIT EHRM.rvt
6/12/2025 2:15:51 PM

VA FORM 08 - 6231

## PANEL B1-TR-1C

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** TELECOM 1M195A

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.25 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 1.67 | | 10 | 10 | 10 | 3 | 30 A | TR RACK RECEPT. | 2 | |
| -- | 3 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 1.67 | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 1.67 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 0 | | | -- | -- | -- | 3 | 30 A | SPARE | 8 | -- |
| -- | 9 | SPACE | -- | 1 | -- | -- | -- | | -- 0 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.03 kVA | 1.67 kVA | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 16.93 | 13.89 | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 5 kVA | 100.00% | 5 kVA | **TOTAL CONNECTED LOAD:** | 5.36 kVA |
| | | | | **TOTAL ESTIMATED DEMAND LOAD:** | 5.364 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 14.89 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 14.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CR1C

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** TELECOM 1M195A

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.21 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 1.67 | | 10 | 10 | 10 | 3 | 30 A | TR RACK RECEPT. | 2 | |
| | 3 | FCU-29.1M195A | 15 A | 1 | 12 | 12 | 12 | | | 0.7 1.67 | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 1.67 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 0 | | | -- | -- | -- | 3 | 30 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.03 kVA | 2.37 kVA | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 17.39 | 20.19 | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 5.7 kVA | 100.00% | 5.7 kVA | **TOTAL CONNECTED LOAD:** | 6.06 kVA |
| | | | | **TOTAL ESTIMATED DEMAND LOAD:** | 6.064 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 16.83 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 16.8 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-1D

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** NEW TR 1G111TR

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.41 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.18 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 30 A | 3 | 10 | 10 | 10 | | | 1.67 0 | | -- | -- | 1 | 20 A | SPARE | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 0 | -- | -- | -- | 1 | 20 A | SPARE | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPACE | -- | 1 | -- | -- | -- | | -- 0 | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- 0 | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.39 kVA | 1.67 kVA | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 19.91 | 13.89 | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA | | |
| Power | 5 kVA | 100.00% | 5 kVA | **TOTAL CONNECTED LOAD:** | 5.72 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 5.722 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 15.88 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 15.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CR1D

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** NEW TR 1G111TR

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.30 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.18 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 30 A | 3 | 10 | 10 | 10 | | | 1.67 2.08 | 10 | -- | 10 | 2 | 30 A | SS-01.1G111 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 2.08 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0 | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- 0 | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.39 kVA | 0.36 | 3.75 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 19.91 | 32.96 | 32.96 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA | | |
| Power | 9.16 kVA | 100.00% | 9.16 kVA | **TOTAL CONNECTED LOAD:** | 9.88 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 9.882 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 27.43 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 27.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-1B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** NEW TR 1N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 3.95 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.72 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK E CONNECTION | 60 A | 3 | 4 | -- | 10 | | | 5 0 | -- | -- | -- | 1 | 20 A | SPARE | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 5 0 | -- | -- | -- | 1 | 20 A | SPARE | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 5 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPACE | -- | 1 | -- | -- | -- | | -- 0 | | -- | -- | -- | 3 | 60 A | SPARE | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- 0 | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 6.08 kVA | 5.00 kVA | 5.00 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 50.70 | 41.67 | 41.67 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 15 kVA | 100.00% | 15 kVA | **TOTAL CONNECTED LOAD:** | 16.08 kVA |
| Receptacles | 0.72 kVA | 100.00% | 0.72 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 16.084 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 44.65 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 44.6 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CR1B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** NEW TR 1N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 3.50 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR LIGHTING | 2 | |
| | 3 | TR RACK E CONNECTION | 60 A | 3 | 4 | -- | 10 | | | 5 0.02 | 12 | -- | 12 | 2 | 15 A | FC-1N301.B | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 5 0.02 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 5 0.05 | | | 12 | -- | 12 | 2 | 15 A | FC-1N301.A | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0.05 | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | 3 | 60 A | SPARE | 12 | -- |
| -- | 13 | SPARE | 20 A | 1 | -- | -- | -- | 0 0 | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- 0 | | -- | -- | -- | -- | -- | -- | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 5.96 kVA | 5.07 kVA | 5.02 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 49.71 | 42.34 | 41.83 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 15.145 kVA | 100.00% | 15.145 kVA | **TOTAL CONNECTED LOAD:** | 16.05 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 16.049 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 44.55 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 44.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

PANELBOARD LOCATION MATRIX

| | | |
|---|---|---|
| B1-TR-1C | B1-TR-CR1C | B1-TR-1D |
| B1-TR-CR1D | B1-TR-1B | B1-TR-CR1B |
| | | |

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

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PROJECT #23002251.00


**STAMP**

COMMONWEALTH OF VIRGINIA
REGISTERED
PROFESSIONAL
MICHAEL WALSH
ENGINEER
PE076741

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

**Drawing Title:** ELECTRICAL PANEL SCHEDULES
**Phase:** FINAL BID DOCUMENTS
**Approved:**
**Project Title:** EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS
**Location:** UNIVERSITY DRIVE PITTSBURGH, PA 15240
**Project Number:** 646-22-700
**Building Number:** 1
**Drawing Number:** 01-EP705
SHEET 360 of 797
**Issue Date:** 06.13.2025
**Checked:** GJL
**Drawn:** HAB

FULLY SPRINKLERED

6/12/2025 2:15:54 PM
Autodesk Docs://University Drive VAMC EHRM_V26/646-22-700.01 E PIT EHRM.rvt

VA FORM 08 - 6231

# PANEL B1-TR-2B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** TR 2N301

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 6.83 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LUMINAIRES | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK E CONNECTION | 60 A | 3 | 4 | 4 | 10 | | | 5 0 | -- | -- | -- | 1 | 20 A | SPARE | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 5 0 | -- | -- | -- | 1 | 20 A | SPARE | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 5 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPACE | -- | 1 | -- | -- | -- | | -- 0 | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- 0 | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 5.92 kVA | 5.00 kVA | 5.00 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 49.20 | 41.67 | 41.67 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 15 kVA | 100.00% | 15 kVA | **TOTAL CONNECTED LOAD:** | 15.90 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 15.904 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 44.15 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 44.1 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR2B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** TR 2N301

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 4.74 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK E CONNECTION | 60 A | 3 | 4 | 4 | 10 | | | 5 0.05 | 12 | -- | 12 | 2 | 15 A | FC-2N301.A | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 5 0.05 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 5 0.02 | | | 12 | -- | 12 | 2 | 15 A | FC-2N301.B | 8 | |
| | 9 | EF-01.C2N1 | 15 A | 1 | 12 | 12 | 12 | | 0.51 0.02 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | 3 | 30 A | SPARE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- 0 | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- 0 | | -- | -- | -- | -- | -- | -- | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 5.42 kVA | 5.58 kVA | 5.05 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 50.05 | 47.20 | 42.10 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 15.655 kVA | 100.00% | 15.655 kVA | **TOTAL CONNECTED LOAD:** | 16.56 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 16.559 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 45.96 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 46 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-2C

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** TELECOM 2M275A

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.10 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 5 | | 10 | -- | 4 | 3 | 60 A | TR RACK RECEPT. | 2 | |
| -- | 3 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 5 | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 5 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 0 | | | -- | -- | -- | 3 | 60 A | SPARE | 8 | -- |
| -- | 9 | SPACE | -- | 1 | -- | -- | -- | | -- 0 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 5.36 kVA | 5.00 kVA | 5.00 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 44.70 | 41.67 | 41.67 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 15 kVA | 100.00% | 15 kVA | **TOTAL CONNECTED LOAD:** | 15.36 kVA |
| | | | | **TOTAL ESTIMATED DEMAND LOAD:** | 15.364 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 42.65 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 42.6 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR2C

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** TELECOM 2M275A

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.24 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LUMINAIRES | 20 A | 1 | 12 | 12 | 12 | 0.36 | 5 | | 10 | -- | 4 | 3 | 60 A | TR RACK RECEPT. | 2 | |
| | 3 | FCU-29.2M275A | 15 A | 1 | 12 | 12 | 12 | | | 0.7 5 | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 5 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 0 | | | -- | -- | -- | 3 | 60 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 5.36 kVA | 5.70 kVA | 5.00 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 45.17 | 47.97 | 41.67 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 15.7 kVA | 100.00% | 15.7 kVA | **TOTAL CONNECTED LOAD:** | 16.06 kVA |
| | | | | **TOTAL ESTIMATED DEMAND LOAD:** | 16.064 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 44.59 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 44.6 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-2A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-MDP-6
**LOCATION:** TELECOM 2W110D

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.22 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LUMINAIRES | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 30 A | 3 | 10 | 10 | 10 | | | 1.67 0 | -- | -- | -- | 1 | 20 A | SPARE | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 0 | -- | -- | -- | 1 | 20 A | SPARE | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPACE | -- | 1 | -- | -- | -- | | -- 0 | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- 0 | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 1.67 kVA | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.43 | 13.89 | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 5 kVA | 100.00% | 5 kVA | **TOTAL CONNECTED LOAD:** | 5.90 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 5.904 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 16.39 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 16.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR2A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR6
**LOCATION:** TELECOM 2W110D

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.30 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 30 A | 3 | 10 | 10 | 10 | | | 1.67 2.08 | 10 | -- | 10 | 2 | 30 A | SS-01.2W110D | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 2.08 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | 3 | 30 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPARE | 20 A | 1 | -- | -- | -- | 0 -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 3.75 kVA | 3.75 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.43 | 32.73 | 32.73 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 9.16 kVA | 100.00% | 9.16 kVA | **TOTAL CONNECTED LOAD:** | 10.06 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 10.064 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 27.94 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 27.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

PANELBOARD LOCATION MATRIX

| | | |
|---|---|---|
| B1-TR-2B | B1-TR-CR2B | B1-TR-2C |
| B1-TR-CR2C | B1-TR-2A | B1-TR-CR2A |
| | | |

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MICHAEL WALSH
ENGINEER
PE076749

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

**Drawing Title:** ELECTRICAL PANEL SCHEDULES
**Phase:** FINAL BID DOCUMENTS
**Approved:**
FULLY SPRINKLERED

**Project Title:** EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS
**Location:** UNIVERSITY DRIVE PITTSBURGH, PA 15240
**Issue Date:** 06.13.2025
**Checked:** GJL
**Drawn:** HAB

**Project Number:** 646-22-700
**Building Number:** 1
**Drawing Number:** 01-EP706
SHEET 361 of 797


Autodesk Docs://University Drive VAMC EHRM_V25/646-22-700.01 E PIT EHRM.rvt
6/12/2025 2:15:37 PM

## PANEL B1-TR-3A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-MDP-6
**LOCATION:** IT 3A110

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.06 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK E CONNECTION | 60 A | 3 | 4 | -- | 10 | | | 5 0 | -- | -- | -- | 1 | 20 A | SPARE | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 5 0 | -- | -- | -- | 1 | 20 A | SPARE | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | 5 | 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 60 A | 3 | -- | -- | -- | | | 0 -- | -- | -- | -- | 1 | -- | SPACE | 10 | -- |
| -- | 11 | -- | -- | -- | -- | -- | -- | | | 0 -- | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | -- | -- | -- | -- | -- | 0 | -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 5.90 kVA | 5.00 kVA | 5.00 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 49.20 | 41.67 | 41.67 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA |
| Power | 15 kVA | 100.00% | 15 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 15.90 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 15.904 kVA |
| **TOTAL CONNECTED AMPS:** | 44.15 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 44.1 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CR3A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR6
**LOCATION:** IT 3A110

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 100 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.01 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.72 | 0.18 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK E CONNECTION | 60 A | 3 | 4 | -- | 10 | | | 5 1.58 | 12 | -- | 12 | 2 | 25 A | SS-01.3A110.A | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 5 1.58 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | 5 | 0.92 | | | 12 | -- | 12 | 2 | 25 A | SS-01.3A110.B | 8 | |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0.92 | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | 3 | 60 A | SPARE | 12 | -- |
| -- | 13 | SPARE | 20 A | 1 | -- | -- | -- | 0 | 0 | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 6.82 kVA | 7.50 kVA | 6.58 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 57.11 | 62.76 | 54.83 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA |
| Power | 19.99 kVA | 100.00% | 19.99 kVA |
| Receptacles | 0.72 kVA | 100.00% | 0.72 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 20.89 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 20.892 kVA |
| **TOTAL CONNECTED AMPS:** | 57.99 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 58 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-3C

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** TELECOM 3M150

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.08 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 1.67 | | 12 | 12 | 12 | 3 | 20 A | TR RACK RECEPT. | 2 | |
| -- | 3 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 1.67 | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 1.67 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 | 0 | | -- | -- | -- | 3 | 60 A | SPARE | 8 | -- |
| -- | 9 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.03 kVA | 1.67 kVA | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 16.93 | 13.89 | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 5.36 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 5.364 kVA |
| **TOTAL CONNECTED AMPS:** | 14.89 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 14.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CR3C

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** TELECOM 3M150

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.34 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.18 | 1.67 | | 12 | 12 | 12 | 3 | 20 A | TR RACK RECEPT. | 2 | |
| -- | 3 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 1.67 | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 1.67 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 | 0 | | -- | -- | -- | 3 | 30 A | SPARE | 8 | -- |
| -- | 9 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 1.85 kVA | 1.67 kVA | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 15.41 | 13.89 | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 5.18 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 5.182 kVA |
| **TOTAL CONNECTED AMPS:** | 14.38 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 14.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-3B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** NEW TR 3N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 6.93 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | LIGHTING & RECEPT RM. 3N300 | 20 A | 1 | 12 | 12 | 12 | | 0.54 | 5 | 10 | 4 | 4 | 3 | 60 A | TR RACK E CONNECTION | 4 | |
| -- | 5 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 5 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 | 5 | | -- | -- | -- | -- | -- | -- | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | 0 | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 5.90 kVA | 5.54 kVA | 5.00 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 49.90 | 46.90 | 41.67 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.729 kVA | 100.00% | 0.729 kVA |
| Power | 15 kVA | 100.00% | 15 kVA |
| Receptacles | 0.72 kVA | 100.00% | 0.72 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 16.45 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 16.449 kVA |
| **TOTAL CONNECTED AMPS:** | 45.66 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 45.7 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CR3B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** NEW TR 3N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 8.71 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | LIGHTING & RECEPT RM. 3N300 | 20 A | 1 | 12 | 12 | 12 | | | 0.54 5 | 10 | 4 | 4 | 3 | 60 A | TR RACK E CONNECTION | 4 | |
| | 5 | FC-3N301.A | 15 A | 2 | 12 | -- | 12 | | | 0.05 5 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 0.05 | 5 | | -- | -- | -- | -- | -- | -- | 8 | -- |
| | 9 | FC-3N301.B | 15 A | 2 | 12 | -- | 12 | | | 0.02 2.08 | | | 10 | -- | 10 | 2 | 30 A | SS-01.3N300 | 10 | |
| -- | 11 | -- | -- | -- | -- | -- | -- | | | 0.02 2.08 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPARE | 20 A | 1 | -- | -- | -- | 0 | 0 | | -- | -- | -- | 3 | 30 A | SPARE | 14 | -- |
| -- | 15 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | 16 | -- |
| -- | 17 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 5.96 kVA | 7.64 kVA | 7.15 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 49.64 | 65.23 | 61.13 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.729 kVA | 100.00% | 0.729 kVA |
| Power | 19.305 kVA | 100.00% | 19.305 kVA |
| Receptacles | 0.72 kVA | 100.00% | 0.72 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 20.75 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 20.753 kVA |
| **TOTAL CONNECTED AMPS:** | 57.61 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 57.6 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

PANELBOARD LOCATION MATRIX

| | | |
|---|---|---|
| B1-TR-3A | B1-TR-CR3A | B1-TR-3C |
| B1-TR-CR3C | B1-TR-3B | B1-TR-CR3B |
| | | |

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD


AWEN SOLUTIONS GROUP
ARCHITECTURE | ENGINEERING | PLANNING

**A/E:**
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STAMP

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MICHAEL WALSH ENGINEER PE076741

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

| | |
|---|---|
| Drawing Title | ELECTRICAL PANEL SCHEDULES |
| Phase | FINAL BID DOCUMENTS |
| Approved: | |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | GJL |
| Drawn | HAB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-EP707 |
| | SHEET 362 of 797 |

VA FORM 08 - 6231

6/12/2025 2:16:00 PM

Autodesk Docs://University Drive VAMC EHRM_V25/646-22-700.01 E.PIT EHRM.rvt

# PANEL B1-TR-4D

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-MDP-6
**LOCATION:** TELECOM 4A02

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.24 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 5 | | 10 | 4 | 4 | 3 | 60 A | TR RACK RECEPT. | 2 | |
| -- | 3 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 5 | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 5 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 0 | | | -- | -- | -- | 3 | 60 A | SPARE | 8 | -- |
| -- | 9 | SPACE | -- | 1 | -- | -- | -- | | -- 0 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 5.36 kVA | 5.00 kVA | 5.00 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 44.70 | 41.67 | 41.67 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA |
| Power | 15 kVA | 100.00% | 15 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 15.36 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 15.364 kVA |
| **TOTAL CONNECTED AMPS:** | 42.65 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 42.6 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR4D

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR6
**LOCATION:** TELECOM 4A02

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.24 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 5 | | 10 | 4 | 4 | 3 | 60 A | TR RACK RECEPT. | 2 | |
| | 3 | SS-01.4A02 | 25 A | 2 | 12 | -- | 12 | | 1.58 | 5 | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.58 5 | -- | -- | -- | -- | -- | -- | 6 | -- |
| | 7 | TR ROOM RECEPT. | 20 A | 1 | 12 | 12 | 12 | 0.18 | 0 | | -- | -- | -- | 3 | 60 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | 0 | -- | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 5.54 kVA | 6.58 kVA | 6.58 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 46.20 | 56.16 | 56.16 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA |
| Power | 18.16 kVA | 100.00% | 18.16 kVA |
| Receptacles | 0.18 kVA | 100.00% | 0.18 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 18.70 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 18.704 kVA |
| **TOTAL CONNECTED AMPS:** | 51.92 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 51.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-4A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-MDP-6
**LOCATION:** NEW TR 4W137TR

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.07 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPTACLE | 20 A | 3 | 12 | 12 | 12 | | | 1.67 0 | | -- | -- | 1 | 20 A | SPARE | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 0 | -- | -- | -- | 1 | 20 A | SPARE | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPACE | -- | 1 | -- | -- | -- | | -- 0 | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- 0 | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 1.67 kVA | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.43 | 13.89 | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 5.90 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 5.904 kVA |
| **TOTAL CONNECTED AMPS:** | 16.39 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 16.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR4A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR6
**LOCATION:** NEW TR 4W137TR

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.13 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPTACLE | 20 A | 3 | 12 | 12 | 12 | | 1.67 | 1.58 | 10 | -- | 10 | 2 | 25 A | SS-01.4W137 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 1.58 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | -- | | -- | -- | -- | 1 | -- | SPACE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 | -- | -- | -- | -- | 1 | -- | SPACE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 -- | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPARE | 20 A | 1 | -- | -- | -- | 0 | -- | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPARE | 20 A | 1 | -- | -- | -- | | 0 | -- | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 3.25 kVA | 3.25 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.43 | 27.92 | 27.92 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA |
| Power | 8.16 kVA | 100.00% | 8.16 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 9.06 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 9.064 kVA |
| **TOTAL CONNECTED AMPS:** | 25.16 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 25.2 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-4B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** NEW TR 4N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 4.00 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 30 A | 3 | 10 | 10 | 10 | | 1.67 | 0.44 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LIGHTING RM 4N302,4N303 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 0.49 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LIGHTING RM 4N300 | 6 | |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0 | | -- | -- | -- | 3 | 30 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPARE | 20 A | 1 | -- | -- | -- | 0 | -- | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 2.11 kVA | 2.15 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.48 | 17.59 | 18.00 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.576 kVA | 100.00% | 0.576 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |
| Receptacles | 1.26 kVA | 100.00% | 1.26 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 6.84 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 6.836 kVA |
| **TOTAL CONNECTED AMPS:** | 18.97 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 19 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR4B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** NEW TR 4N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 4.13 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 30 A | 3 | 10 | 10 | 10 | | | 1.67 2.08 | | 10 | -- | 10 | 2 | 30 A | SS-01.4N301 | 4 |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 2.08 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0.25 | | | | 12 | -- | 12 | 2 | 15 A | FC-4N302 | 8 |
| | 9 | SS-01.4N303 | 30 A | 2 | 10 | 10 | | | | 2.08 0.25 | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | -- | -- | -- | -- | -- | -- | | | 2.08 0 | -- | -- | -- | 3 | 30 A | SPARE | 12 | -- |
| | 13 | RECEPT RM 4N303 | 20 A | 1 | 12 | 12 | 12 | 0.18 | 0 | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPARE | 20 A | 1 | -- | -- | -- | | 0 | 0 | -- | -- | -- | -- | -- | -- | 16 | -- |
| -- | 17 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0.04 | 12 | 12 | 12 | 1 | 20 A | LIGHTING RM 4N303 | 18 | |
| -- | 19 | SPACE | 20 A | 1 | -- | -- | -- | 0 | -- | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | -- | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- | -- -- | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 3.00 kVA | 6.08 kVA | 5.87 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 25.01 | 54.31 | 52.58 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.407 kVA | 100.00% | 0.407 kVA |
| Power | 13.819 kVA | 100.00% | 13.819 kVA |
| Receptacles | 0.72 kVA | 100.00% | 0.72 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 14.95 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 14.946 kVA |
| **TOTAL CONNECTED AMPS:** | 41.49 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 41.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

PANELBOARD LOCATION MATRIX

| | | |
|---|---|---|
| B1-TR-4D | B1-TR-CR4D | B1-TR-4A |
| B1-TR-CR4A | B1-TR-4B | B1-TR-CR4B |
| | | |

| Revisions: | Date: |
|---|---|
| | |

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**STAMP**

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MICHAEL WALSH
ENGINEER
PE076741

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

**Drawing Title:** ELECTRICAL PANEL SCHEDULES
**Approved:**
**Phase:** FINAL BID DOCUMENTS
FULLY SPRINKLERED
**Project Title:** EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS
**Location:** UNIVERSITY DRIVE PITTSBURGH, PA 15240
**Issue Date:** 06.13.2025
**Checked:** GJL
**Drawn:** HAB
**Project Number:** 646-22-700
**Building Number:** 1
**Drawing Number:** 01-EP708
SHEET 363 of 797

VA FORM 08 - 6231

6/12/2025 2:16:03 PM
Autodesk Docs://University Drive VAMC EHRM_V25/646-22-700.01 E P IT EHRM.rvt

# PANEL B1-TR-4C

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** TELECOM 4M150

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.32 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 1.67 | | | 12 | 12 | 12 | 3 | 20 A | TR RACK RECEPT. | 2 | |
| -- | 3 | SPARE | 20 A | 1 | -- | -- | -- | | 0 1.67 | | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 1.67 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 0 | | | -- | -- | -- | 3 | 30 A | SPARE | 8 | -- |
| -- | 9 | SPACE | -- | 1 | -- | -- | -- | | -- 0 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | 2.03 kVA | | | | | 1.67 kVA | | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | 16.93 | | | | | 13.89 | | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 5.36 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 5.364 kVA |
| **TOTAL CONNECTED AMPS:** | 14.89 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 14.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR4C

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** TELECOM 4M150

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.31 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.18 1.67 | | | 12 | 12 | 12 | 3 | 20 A | TR RACK RECEPT. | 2 | |
| | 3 | | | | | | | | 1.67 | | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 1.67 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 0 | | | -- | -- | -- | 3 | 30 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | -- 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | 1.85 kVA | | | | | 1.67 kVA | | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | 15.41 | | | | | 13.89 | | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 5.18 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 5.182 kVA |
| **TOTAL CONNECTED AMPS:** | 14.38 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 14.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-5A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-MDP-6
**LOCATION:** NEW TR 5W200

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 3.96 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 0.54 | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 30 A | 3 | 10 | 10 | 10 | | 1.67 0.54 | | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LIGHTING RM 5W201,C5A01 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 0 | -- | -- | -- | 3 | 30 A | SPARE | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | -- | -- | -- | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 -- | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | 0 -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | 2.57 kVA | | | | | 2.21 kVA | | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | 22.12 | | | | | 19.10 | | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.547 kVA | 100.00% | 0.547 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |
| Receptacles | 0.9 kVA | 100.00% | 0.9 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 6.45 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 6.447 kVA |
| **TOTAL CONNECTED AMPS:** | 17.89 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 17.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR5A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR6
**LOCATION:** NEW TR 5W200

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 5.42 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 0.36 | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 30 A | 3 | 10 | 10 | 10 | | 1.67 2.08 | | 10 | -- | 10 | 2 | 30 A | SS-01.5W200 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 2.08 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0.25 | | | 12 | -- | 12 | 2 | 15 A | FC-5W201 | 8 | |
| | 9 | RECEPTS. & LIGHTING RM 5W201 | 20 A | 1 | 12 | 12 | 12 | | 0.36 0.25 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | 3 | 30 A | SPARE | 12 | -- |
| -- | 13 | SPARE | 20 A | 1 | -- | -- | -- | 0 0 | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0 | | -- | -- | -- | -- | -- | -- | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | 2.82 kVA | | | | | 4.36 kVA | | 3.75 kVA | | | | | | | | |
| | | **Total Amps:** | 23.51 | | | | | 37.51 | | 32.41 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.547 kVA | 100.00% | 0.547 kVA |
| Power | 9.66 kVA | 100.00% | 9.66 kVA |
| Receptacles | 0.72 kVA | 100.00% | 0.72 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 10.93 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 10.927 kVA |
| **TOTAL CONNECTED AMPS:** | 30.33 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 30.3 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-5B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** COMP 5N101A

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.89 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.18 0.36 | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 30 A | 3 | 10 | 10 | 10 | | 1.67 0 | | -- | -- | -- | 1 | 20 A | SPARE | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 0 | -- | -- | -- | 1 | 20 A | SPARE | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 30 A | 3 | -- | -- | -- | | 0 -- | | -- | -- | -- | 1 | -- | SPACE | 10 | -- |
| -- | 11 | -- | -- | -- | -- | -- | -- | | | 0 -- | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | -- | -- | -- | -- | -- | -- | 0 -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| -- | 31 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 32 | -- |
| -- | 33 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 34 | -- |
| -- | 35 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 36 | -- |
| -- | 37 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 38 | -- |
| -- | 39 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 40 | -- |
| -- | 41 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 42 | -- |
| | | **Total Load:** | 2.21 kVA | | | | | 1.67 kVA | | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | 18.41 | | | | | 13.89 | | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |
| Receptacles | 0.36 kVA | 100.00% | 0.36 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 5.54 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 5.542 kVA |
| **TOTAL CONNECTED AMPS:** | 15.38 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 15.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR5B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** COMP 5N101A

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.97 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.36 0.18 | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 30 A | 3 | 10 | 10 | 10 | | 1.67 2.08 | | 10 | -- | 10 | 2 | 30 A | SS-01.5N101B | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 2.08 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0 | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- 0 | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| -- | 31 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 32 | -- |
| -- | 33 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 34 | -- |
| -- | 35 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 36 | -- |
| -- | 37 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 38 | -- |
| -- | 39 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 40 | -- |
| -- | 41 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 42 | -- |
| | | **Total Load:** | 2.21 kVA | | | | | 3.75 kVA | | 3.75 kVA | | | | | | | | |
| | | **Total Amps:** | 18.41 | | | | | 33.19 | | 33.19 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA |
| Power | 9.16 kVA | 100.00% | 9.16 kVA |
| Receptacles | 0.36 kVA | 100.00% | 0.36 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 9.70 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 9.702 kVA |
| **TOTAL CONNECTED AMPS:** | 26.93 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 26.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

PANELBOARD LOCATION MATRIX

| | | |
|---|---|---|
| B1-TR-4C | B1-TR-CR4C | B1-TR-5A |
| B1-TR-CR5A | B1-TR-5B | B1-TR-CR5B |
| | | |

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

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REGISTERED PROFESSIONAL
MICHAEL WALSH
ENGINEER
PE076741

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

| | |
|---|---|
| **Drawing Title** | ELECTRICAL PANEL SCHEDULES |
| **Phase** | FINAL BID DOCUMENTS |
| **Approved:** | FULLY SPRINKLERED |
| **Project Title** | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| **Location** | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| **Issue Date** | 06.13.2025 |
| **Checked** | GJL |
| **Drawn** | HAB |
| **Project Number** | 646-22-700 |
| **Building Number** | 1 |
| **Drawing Number** | 01-EP709 |
| | SHEET 364 of 797 |


Autodesk Docs://University Drive VAMC EHRM_V25/646-22-700.01 E PIT EHRM.rvt
6/12/2025 2:16:06 PM

# PANEL B1-TR-5C

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** TELECOM 5M150

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.24 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | 1.67 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| -- | 3 | -- | -- | -- | -- | -- | -- | | 1.67 | 0 | -- | -- | -- | 1 | 20 A | SPARE | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 | 0 | -- | -- | 1 | 20 A | SPARE | 6 | -- |
| -- | 7 | SPARE | 30 A | 3 | -- | -- | -- | 0 | 0 | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | -- | -- | -- | -- | -- | -- | | 0 | -- | -- | -- | -- | 1 | -- | SPACE | 10 | -- |
| -- | 11 | -- | -- | -- | -- | -- | -- | | | 0 | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | -- | | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.03 kVA | 1.67 kVA | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 16.93 | 13.89 | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 5.36 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 5.364 kVA |
| **TOTAL CONNECTED AMPS:** | 14.89 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 14.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR5C

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** TELECOM 5M150

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.33 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | 1.67 | 0.18 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| -- | 3 | -- | -- | -- | -- | -- | -- | | | 1.67 | 0 | -- | -- | 1 | 20 A | SPARE | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | 1.67 | 0 | -- | 3 | 30 A | SPARE | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 | 0 | | -- | -- | -- | -- | -- | -- | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | -- | | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 1.85 kVA | 1.67 kVA | 1.67 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 15.41 | 13.89 | 13.89 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 5.18 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 5.182 kVA |
| **TOTAL CONNECTED AMPS:** | 14.38 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 14.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-6A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-MDP-6
**LOCATION:** NEW TR 6W200

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 3.35 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 | 0.59 | | | 12 | 12 | 12 | 1 | 20 A | RECEPTS & LIGHTING RM6W201 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 1.67 | 0.18 | 12 | 12 | 12 | 1 | 20 A | RECEPTS & LIGHTING RM6W202,C6W1 | 6 | |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPACE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | 0 | | | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | -- | -- | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | -- | -- | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | -- | -- | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 2.25 kVA | 1.85 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.95 | 19.30 | 15.39 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.771 kVA | 100.00% | 0.771 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |
| Receptacles | 0.9 kVA | 100.00% | 0.9 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 6.67 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 6.671 kVA |
| **TOTAL CONNECTED AMPS:** | 18.52 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 18.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR6A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR6
**LOCATION:** NEW TR 6W200

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 4.70 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | 1.67 | 1.58 | 12 | -- | 12 | 2 | 25 A | SS-01.6W200 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 | 1.58 | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0.25 | | 12 | -- | 12 | 2 | 15 A | FC-6W201 | 8 | |
| | 9 | RECEPTS & LIGHTING RM6W202 | 20 A | 1 | 12 | 12 | 12 | | 0.22 | 0.25 | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 30 A | 3 | -- | -- | -- | | | 0 | 2.08 | 10 | -- | 10 | 2 | 30 A | SS-01.6W202 | 12 | |
| -- | 13 | -- | -- | -- | -- | -- | -- | 0 | 2.08 | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | -- | -- | -- | -- | -- | -- | | 0 | 0 | -- | -- | -- | 1 | 20 A | SPARE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- | 0 | -- | -- | 1 | 20 A | SPARE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | 0 | | -- | -- | -- | 1 | 20 A | SPARE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | -- | | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 4.90 kVA | 3.72 kVA | 5.33 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 42.35 | 30.99 | 45.90 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.407 kVA | 100.00% | 0.407 kVA |
| Power | 12.819 kVA | 100.00% | 12.819 kVA |
| Receptacles | 0.72 kVA | 100.00% | 0.72 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 13.95 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 13.946 kVA |
| **TOTAL CONNECTED AMPS:** | 38.71 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 38.7 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-6B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** NEW TR 6N301

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.89 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | 1.67 | 0.4 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LIGHTING RM 6N302,6N303 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 | 0.73 | 12 | 12 | 1 | 20 A | RECEPTS. & LIGHTING 6N300 | 6 | |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0 | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 | 0 | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | 0 | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | -- | | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 2.07 kVA | 2.39 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.84 | 17.24 | 20.36 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.593 kVA | 100.00% | 0.593 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |
| Receptacles | 1.44 kVA | 100.00% | 1.44 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 7.03 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 7.033 kVA |
| **TOTAL CONNECTED AMPS:** | 19.52 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 19.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR6B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** NEW TR 6N301

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.95 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 | 1.58 | | | 12 | -- | 12 | 2 | 25 A | SS-01.6N301 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 1.67 | 1.58 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0.25 | | | | | 12 | -- | 12 | 2 | 15 A | FC-6N302 | 8 | |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0.25 | | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 30 A | 3 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | 1 | 20 A | SPARE | 12 | -- |
| -- | 13 | -- | -- | -- | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 14 | -- |
| -- | 15 | -- | -- | -- | -- | -- | -- | | | 0 | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | -- | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.82 kVA | 3.50 kVA | 3.25 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 23.51 | 29.68 | 27.60 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA |
| Power | 8.659 kVA | 100.00% | 8.659 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 9.56 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 9.563 kVA |
| **TOTAL CONNECTED AMPS:** | 26.55 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 26.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

PANELBOARD LOCATION MATRIX

| | | |
|---|---|---|
| B1-TR-5C | B1-TR-CR5C | B1-TR-6A |
| B1-TR-CR6A | B1-TR-6B | B1-TR-CR6B |
| | | |

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

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STAMP

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MICHAEL WALSH ENGINEER PE076741

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

**Drawing Title:** ELECTRICAL PANEL SCHEDULES
**Phase:** FINAL BID DOCUMENTS
**Approved:**
FULLY SPRINKLERED

**Project Title:** EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS
**Location:** UNIVERSITY DRIVE PITTSBURGH, PA 15240
**Issue Date:** 06.13.2025
**Checked:** GJL
**Drawn:** HAB

**Project Number:** 646-22-700
**Building Number:** 1
**Drawing Number:** 01-EP710
SHEET 365 of 797


Autodesk Docs://University Drive VAMC EHRM_Y25/646-22-700.01 E PIT EHRM.rvt
6/12/2025 2:16:09 PM


VA FORM 08 - 6231

# PANEL B1-TR-7A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-MDP-6
**LOCATION:** NEW TR 7W200

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.84 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 0.54 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LTG. ROOM 7W201 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 0.38 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LTG. ROOM 7W202,C7W1 | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0 | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- 0 | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 2.21 kVA | 2.04 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.64 | 18.64 | 17.04 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.747 kVA | 100.00% | 0.747 kVA | | |
| Power | 5 kVA | 100.00% | 5 kVA | **TOTAL CONNECTED LOAD:** | 6.83 kVA |
| Receptacles | 1.08 kVA | 100.00% | 1.08 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 6.827 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 18.95 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 18.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR7A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR6
**LOCATION:** NEW TR 7W200

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 3.76 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 1.58 | 12 | -- | 12 | 2 | 25 A | SS-01.7W200 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 1.58 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0.25 | | | 12 | -- | 12 | 2 | 15 A | FC-7W201 | 8 | |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0 | | -- | -- | -- | 1 | 20 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 30 A | 3 | -- | -- | -- | | | 0 0 | -- | -- | -- | 1 | 20 A | SPARE | 12 | -- |
| -- | 13 | -- | -- | -- | -- | -- | -- | 0 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 14 | -- |
| -- | 15 | -- | -- | -- | -- | -- | -- | | 0 -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.82 kVA | 3.50 kVA | 3.25 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 23.51 | 29.17 | 27.08 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 8.659 kVA | 100.00% | 8.659 kVA | **TOTAL CONNECTED LOAD:** | 9.56 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 9.563 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 26.55 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 26.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-7B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** NEW TR 7N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 3.07 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 0.22 | | | | 1 | 25 A | RECEPTS. & LIGHTING RM 7N302 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 0.55 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LIGHTING RM 7N300 | 6 | |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0 | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- 0 | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 1.89 kVA | 2.21 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.84 | 15.74 | 18.86 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.593 kVA | 100.00% | 0.593 kVA | | |
| Power | 5 kVA | 100.00% | 5 kVA | **TOTAL CONNECTED LOAD:** | 6.67 kVA |
| Receptacles | 1.08 kVA | 100.00% | 1.08 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 6.673 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 18.52 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 18.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR7B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** NEW TR 7N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 3.24 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.72 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 1.58 | 12 | -- | 12 | 2 | 25 A | SS-01.7N301 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 1.58 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0.25 | | | 12 | -- | 12 | 2 | 15 A | FC-7N302 | 8 | |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0.25 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 30 A | 3 | -- | -- | -- | | | 0 0 | -- | -- | -- | 1 | 20 A | SPARE | 12 | -- |
| -- | 13 | -- | -- | -- | -- | -- | -- | 0 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 14 | -- |
| -- | 15 | -- | -- | -- | -- | -- | -- | | 0 -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 3.00 kVA | 3.50 kVA | 3.25 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 25.01 | 29.45 | 27.37 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 8.659 kVA | 100.00% | 8.659 kVA | **TOTAL CONNECTED LOAD:** | 9.74 kVA |
| Receptacles | 0.72 kVA | 100.00% | 0.72 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 9.743 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 27.05 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 27 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-8A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-MDP-6
**LOCATION:** NEW TR 8W200

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.57 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTS. | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 0.54 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LTG RM 8W201 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 0.38 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LTG RM 8W202,C8W1 | 6 | |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0 | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- 0 | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 2.21 kVA | 2.04 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.64 | 18.64 | 17.04 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.747 kVA | 100.00% | 0.747 kVA | | |
| Power | 5 kVA | 100.00% | 5 kVA | **TOTAL CONNECTED LOAD:** | 6.83 kVA |
| Receptacles | 1.08 kVA | 100.00% | 1.08 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 6.827 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 18.95 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 18.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR8A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR6
**LOCATION:** NEW TR 8W200

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 3.09 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTS. | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 1.58 | | | | 1 | 25 A | SS-01.8W200 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 1.58 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0.25 | | | 12 | -- | 12 | 2 | 15 A | FC-8W201 | 8 | |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0.25 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 30 A | 3 | -- | -- | -- | | | 0 0 | -- | -- | -- | 1 | 20 A | SPARE | 12 | -- |
| -- | 13 | -- | -- | -- | -- | -- | -- | 0 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 14 | -- |
| -- | 15 | -- | -- | -- | -- | -- | -- | | 0 -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.82 kVA | 3.50 kVA | 3.25 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 23.51 | 29.68 | 27.60 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 8.659 kVA | 100.00% | 8.659 kVA | **TOTAL CONNECTED LOAD:** | 9.56 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 9.563 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 26.55 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 26.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

PANELBOARD LOCATION MATRIX

| | | |
|---|---|---|
| B1-TR-7A | B1-TR-CR7A | B1-TR-7B |
| B1-TR-CR7B | B1-TR-8A | B1-TR-CR8A |
| | | |

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

AWEN SOLUTIONS GROUP
ARCHITECTURE | ENGINEERING | PLANNING


**A/E:**
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PROJECT #23002251.00


**STAMP**

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MICHAEL WALSH
ENGINEER
PE037431

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

**Drawing Title:** ELECTRICAL PANEL SCHEDULES
**Approved:**
**Phase:** FINAL BID DOCUMENTS
FULLY SPRINKLERED
**Project Title:** EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS
**Location:** UNIVERSITY DRIVE PITTSBURGH, PA 15240
**Issue Date:** 06.13.2025
**Checked:** GJL
**Drawn:** HAB
**Project Number:** 646-22-700
**Building Number:** 1
**Drawing Number:** 01-EP711
SHEET 366 of 797

6/12/2025 2:16:12 PM
Autodesk Docs://University Drive VAMC EHRM_V25/646-22-700.01.E PIT EHRM.rvt

VA FORM 08 - 6231

## PANEL B1-TR-8B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** NEW TR 8N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.26 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 | 0.22 | | 12 | 12 | 1 | 20 A | RECEPTS & LIGHTING RM 8N302 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | 1.67 | 0.55 | 12 | 12 | 1 | 20 A | RECEPTS & LIGHTING RM 8N300 | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0 | | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | 0 | | | | | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 1.89 kVA | 2.21 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.84 | 15.74 | 18.86 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.593 kVA | 100.00% | 0.593 kVA | | |
| Power | 5 kVA | 100.00% | 5 kVA | **TOTAL CONNECTED LOAD:** | 6.67 kVA |
| Receptacles | 1.08 kVA | 100.00% | 1.08 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 6.673 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 18.52 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 18.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CR8B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** NEW TR 8N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.31 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 | 1.58 | | 12 | -- | 12 | 2 | 25 A | SS-01.8N301 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | 1.67 | 1.58 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0.25 | | | | 12 | -- | 12 | 2 | 15 A | FC-8N302 | 8 | |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0.25 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 30 A | 3 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | 1 | 20 A | SPARE | 12 | -- |
| -- | 13 | -- | -- | -- | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 14 | -- |
| -- | 15 | -- | -- | -- | -- | -- | -- | | | 0 | -- | | | -- | -- | -- | -- | -- | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.82 kVA | 3.50 kVA | 3.25 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 23.51 | 29.68 | 27.60 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 8.659 kVA | 100.00% | 8.659 kVA | **TOTAL CONNECTED LOAD:** | 9.56 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 9.563 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 26.55 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 26.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-9A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-MDP-6
**LOCATION:** NEW TR 9W200

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.25 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 | 0.54 | | | | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LTG ROOM 9W201 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 1.67 | 0.38 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LTG ROOM 9W202,C9W1 | 6 | |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | 0 | | | | | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 2.21 kVA | 2.04 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.64 | 18.64 | 17.04 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.747 kVA | 100.00% | 0.747 kVA | | |
| Power | 5 kVA | 100.00% | 5 kVA | **TOTAL CONNECTED LOAD:** | 6.83 kVA |
| Receptacles | 1.08 kVA | 100.00% | 1.08 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 6.827 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 18.95 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 18.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CR9A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR6
**LOCATION:** NEW TR 9W200

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.80 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 | 1.58 | | 12 | -- | 12 | 2 | 25 A | SS-01.9W200 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | 1.67 | 1.58 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0.5 | | | | 12 | 12 | 12 | 1 | 15 A | FC-8N302 | 8 | |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | -- | -- | -- | 1 | 20 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | 3 | 30 A | SPARE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | 0 | | | | | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | 0 | | | -- | -- | -- | -- | -- | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 3.07 kVA | 3.25 kVA | 3.25 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 25.58 | 27.28 | 27.28 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 8.659 kVA | 100.00% | 8.659 kVA | **TOTAL CONNECTED LOAD:** | 9.56 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 9.563 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 26.55 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 26.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-9B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** NEW TR 9N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.08 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 | 0.55 | | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LIGHTING 9N300 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 1.67 | 0.22 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LIGHTING 9N302 | 6 | |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | 0 | | | | | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 2.21 kVA | 1.89 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.84 | 18.86 | 15.74 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.593 kVA | 100.00% | 0.593 kVA | | |
| Power | 5 kVA | 100.00% | 5 kVA | **TOTAL CONNECTED LOAD:** | 6.67 kVA |
| Receptacles | 1.08 kVA | 100.00% | 1.08 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 6.673 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 18.52 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 18.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CR9B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** NEW TR 9N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.15 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.72 | 0.36 | | | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 | 1.58 | | 12 | -- | 12 | 2 | 25 A | SS-01.9N301 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 1.67 | 1.58 | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0.25 | | | | | 12 | -- | 12 | 2 | 15 A | FC-9N302 | 8 | |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0.25 | | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 30 A | 3 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | 1 | 20 A | SPARE | 12 | -- |
| -- | 13 | -- | -- | -- | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 14 | -- |
| -- | 15 | -- | -- | -- | -- | -- | -- | | | 0 | -- | | | -- | -- | -- | -- | -- | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 3.00 kVA | 3.50 kVA | 3.25 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 25.01 | 29.45 | 27.37 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 8.659 kVA | 100.00% | 8.659 kVA | **TOTAL CONNECTED LOAD:** | 9.74 kVA |
| Receptacles | 0.72 kVA | 100.00% | 0.72 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 9.743 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 27.05 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 27 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

PANELBOARD LOCATION MATRIX

| | | |
|---|---|---|
| B1-TR-8B | B1-TR-CR8B | B1-TR-9A |
| B1-TR-CR9A | B1-TR-9B | B1-TR-CR9B |
| | | |

| Revisions: | Date: |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |

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STAMP

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MICHAEL WALSH ENGINEER PE037741

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

| | |
|---|---|
| Drawing Title: ELECTRICAL PANEL SCHEDULES | Phase: FINAL BID DOCUMENTS |
| Approved: | FULLY SPRINKLERED |

| | | |
|---|---|---|
| Project Title: EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS | | Project Number: 646-22-700 |
| | | Building Number: 1 |
| Location: UNIVERSITY DRIVE PITTSBURGH, PA 15240 | | Drawing Number: 01-EP712 |
| Issue Date: 06.13.2025 | Checked: GJL / Drawn: HAB | SHEET 367 of 797 |


Autodesk Docs://University Drive VAMC EHRM_V25/646-22-700.01.E PIT EHRM.rvt
6/12/2025 2:16:15 PM

## PANEL B1-TR-10A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-MDP-6
**LOCATION:** NEW TR 10W200

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.03 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 0.54 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LTG RM 10W201 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 0.38 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LTG RM 10W202,C10W1 | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | 3 | 30 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | 0 0 | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPACE | 20 A | 1 | -- | -- | -- | 0 -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 2.21 kVA | 2.04 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.64 | 18.64 | 17.04 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.747 kVA | 100.00% | 0.747 kVA | | |
| Power | 5 kVA | 100.00% | 5 kVA | **TOTAL CONNECTED LOAD:** | 6.83 kVA |
| Receptacles | 1.08 kVA | 100.00% | 1.08 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 6.827 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 18.95 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 18.9 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CR10A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR6
**LOCATION:** NEW TR 10W200

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.46 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 1.58 | 12 | -- | 12 | 2 | 25 A | SS-01.10W200 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 1.58 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0.25 | | | 12 | -- | 12 | 2 | 15 A | FC-10W201 | 8 | |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0.25 | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | 3 | 30 A | SPARE | 12 | -- |
| -- | 13 | SPARE | 20 A | 1 | -- | -- | -- | 0 0 | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.82 kVA | 3.50 kVA | 3.25 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 23.51 | 29.68 | 27.60 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 8.659 kVA | 100.00% | 8.659 kVA | **TOTAL CONNECTED LOAD:** | 9.56 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 9.563 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 26.55 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 26.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-10B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** NEW TR 10N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.69 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 0.22 | | | | 1 | 20 A | RECEPTS. & LIGHTING RM 10N302 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | 1.67 | 0.55 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LIGHTING RM 10N300 | 6 | |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | -- | -- | 3 | 30 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPARE | 20 A | 1 | -- | -- | -- | 0 -- | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 1.89 kVA | 2.21 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.84 | 15.74 | 18.86 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.593 kVA | 100.00% | 0.593 kVA | | |
| Power | 5 kVA | 100.00% | 5 kVA | **TOTAL CONNECTED LOAD:** | 6.67 kVA |
| Receptacles | 1.08 kVA | 100.00% | 1.08 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 6.673 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 18.52 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 18.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CR10B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** NEW TR 10N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.73 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.72 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 1.58 | 12 | -- | 12 | 2 | 25 A | SS-01.10N301 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 1.58 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0.25 | | | 12 | -- | 12 | 2 | 15 A | FC-10N302 | 8 | |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0.25 | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | 3 | 30 A | SPARE | 12 | -- |
| -- | 13 | SPARE | 20 A | 1 | -- | -- | -- | 0 0 | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- 0 | | -- | -- | -- | -- | -- | -- | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 3.00 kVA | 3.50 kVA | 3.25 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 25.01 | 29.45 | 27.37 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 8.659 kVA | 100.00% | 8.659 kVA | **TOTAL CONNECTED LOAD:** | 9.74 kVA |
| Receptacles | 0.72 kVA | 100.00% | 0.72 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 9.743 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 27.05 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 27 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-11A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-MDP-6
**LOCATION:** NEW TR 11W200

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.66 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 0.54 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LTG RM 11W201 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 0.38 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LTG RM 11W202,11W-1 | 6 | |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | ROOF WEST TOWER WP RECEPTACLE | 20 A | 1 | 12 | 12 | 12 | | 0.18 0 | | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 0 | -- | -- | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPARE | 20 A | 1 | -- | -- | -- | 0 0 | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- -- | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | 2.39 kVA | 2.04 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 21.87 | 20.37 | 17.04 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.747 kVA | 100.00% | 0.747 kVA | | |
| Power | 5 kVA | 100.00% | 5 kVA | **TOTAL CONNECTED LOAD:** | 7.01 kVA |
| Receptacles | 1.26 kVA | 100.00% | 1.26 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 7.007 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 19.45 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 19.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

## PANEL B1-TR-CR11A

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR6
**LOCATION:** NEW TR 11W200

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.18 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.54 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 1.58 | 12 | -- | 12 | 2 | 25 A | SS-01.11W200 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 1.58 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 0.25 | | | 12 | -- | 12 | 2 | 15 A | FC-11W201 | 8 | |
| -- | 9 | ODU-W1 | 90 A | 3 | 6 | -- | 8 | | | 5.28 0.25 | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | -- | -- | -- | -- | -- | -- | | | 5.28 0 | -- | -- | -- | -- | 3 | 30 A | SPARE | 12 | -- |
| -- | 13 | -- | -- | -- | -- | -- | -- | 5.28 0 | | | -- | -- | -- | -- | -- | -- | 14 | -- |
| -- | 15 | ODU-N1 | 90 A | 3 | 2 | -- | 3 | | | 5.28 0 | -- | -- | -- | -- | -- | -- | 16 | -- |
| -- | 17 | -- | -- | -- | -- | -- | -- | | | 5.28 0 | -- | -- | -- | -- | 1 | 20 A | SPARE | 18 | -- |
| -- | 19 | -- | -- | -- | -- | -- | -- | 5.28 0 | | | -- | -- | -- | -- | 1 | 20 A | SPARE | 20 | -- |
| | 21 | ODU-N2 | 90 A | 3 | 2 | -- | 3 | | 5.28 0 | | -- | -- | -- | -- | 1 | 20 A | SPARE | 22 | -- |
| -- | 23 | -- | -- | -- | -- | -- | -- | | | 5.28 -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | -- | -- | -- | -- | -- | -- | 5.28 -- | | | -- | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | -- -- | | -- | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | -- -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 18.67 kVA | 19.35 kVA | 19.10 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 155.59 | 161.77 | 159.69 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | TOTALS* | |
|---|---|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA | | |
| Power | 56.211 kVA | 100.00% | 56.211 kVA | **TOTAL CONNECTED LOAD:** | 57.12 kVA |
| Receptacles | 0.54 kVA | 100.00% | 0.54 kVA | **TOTAL ESTIMATED DEMAND LOAD:** | 57.115 kVA |
| | | | | **TOTAL CONNECTED AMPS:** | 158.54 A |
| | | | | **TOTAL ESTIMATED DEMAND AMPS:** | 158.5 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

**PANELBOARD SCHEDULE NOTES:**

A. BOLD TEXT INDICATES NEW LOADS BEING ADDED TO EXISTING PANELS. UTILIZE EXISTING SPACES AND PROVIDE NEW BREAKERS. REARANGE EXISTING BREAKERS IF REQUIRED TO FIT NEW BREAKERS IN EXISTING SPACES.
B. ITALICS INDICATES EXISTING LOADS TO REMAIN.

PANELBOARD LOCATION MATRIX

| | | |
|---|---|---|
| B1-TR-10A | B1-TR-CR10A | B1-TR-10B |
| B1-TR-CR10B | B1-TR-11A | B1-TR-CR11A |
| | | |

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

AWEN SOLUTIONS GROUP
ARCHITECTURE | ENGINEERING | PLANNING


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**STAMP**

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MICHAEL WALSH ENGINEER PE070741

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

**Drawing Title:** ELECTRICAL PANEL SCHEDULES
**Approved:**
**Phase:** FINAL BID DOCUMENTS
FULLY SPRINKLERED
**Project Title:** EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS
**Location:** UNIVERSITY DRIVE PITTSBURGH, PA 15240
**Issue Date:** 06.13.2025
**Checked:** GJL
**Drawn:** HAB
**Project Number:** 646-22-700
**Building Number:** 1
**Drawing Number:** 01-EP713
SHEET 368 of 797

6/12/2025 2:16:18 PM
Autodesk Docs://University Drive VAMC EHRM_V25/646-22-700.01 E PIT EHRM.rvt

VA FORM 08 - 6231

# PANEL B1-TR-11B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** NEW TR 11N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.49 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.36 | 0.54 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM RECEPTACLES | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | 1.67 | 0.22 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LIGHTING RM 11N302 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | 1.67 | 0.55 | 12 | 12 | 12 | 1 | 20 A | RECEPTS. & LIGHTING RM 11N300 | 6 | |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| | 9 | ROOF CENTRAL TOWER WP RECEPTACLE | 20 A | 1 | 12 | 12 | 12 | | | 0.18 | 0 | -- | -- | -- | 3 | 30 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | -- | 12 | -- |
| -- | 13 | SPARE | 20 A | 1 | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | -- | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.57 kVA | | 2.07 kVA | | | | | | 2.21 kVA | | | |
| | | **Total Amps:** | | | | | | 21.61 | | 17.24 | | | | | | 18.63 | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.593 kVA | 100.00% | 0.593 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |
| Receptacles | 1.26 kVA | 100.00% | 1.26 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 6.85 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 6.853 kVA |
| **TOTAL CONNECTED AMPS:** | 19.02 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 19 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR11B

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** NEW TR 11N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.52 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM RECEPTACLES | 20 A | 1 | 12 | 12 | 12 | 0.72 | 0.36 | | 12 | 12 | 12 | 1 | 20 A | TR ROOM LIGHTING | 2 | |
| | 3 | TR RACK RECEPT. | 20 A | 3 | 12 | 12 | 12 | | | 1.67 | 1.58 | | | 12 | -- | 12 | 2 | 25 A | SS-01.11N301 | 4 | |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 1.67 | 1.58 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | -- | -- | -- | -- | -- | -- | 1.67 | 0.25 | | | | | 12 | -- | 12 | 2 | 15 A | FC-11N302 | 8 | |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0.25 | | | -- | -- | -- | -- | -- | -- | 10 | -- |
| -- | 11 | SPARE | 30 A | 3 | -- | -- | -- | | | | | 0 | 0 | -- | -- | -- | 1 | 20 A | SPARE | 12 | -- |
| -- | 13 | -- | -- | -- | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 14 | -- |
| -- | 15 | -- | -- | -- | -- | -- | -- | | | 0 | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 3.00 kVA | | 3.50 kVA | | | | | | 3.25 kVA | | | |
| | | **Total Amps:** | | | | | | 25.01 | | 29.45 | | | | | | 27.37 | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.364 kVA | 100.00% | 0.364 kVA |
| Power | 8.659 kVA | 100.00% | 8.659 kVA |
| Receptacles | 0.72 kVA | 100.00% | 0.72 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 9.74 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 9.743 kVA |
| **TOTAL CONNECTED AMPS:** | 27.05 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 27 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-5EQ-2

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 400 A/3P @ DIST. EQ-5
**LOCATION:** DATA CENTER 5N301

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 400 A MCB
**VOLTS:** 480/277 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 18 kA
**ISC:** 13.35 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -- | 1 | ACU-01.5N301.B | 15 A | 3 | 12 | -- | 12 | 0.56 | 16.9 | | | | | 8 | -- | 3 | 3 | 80 A | CRU-01.5N301.B | 2 | |
| -- | 3 | -- | -- | -- | -- | -- | -- | | | 0.56 | 16.9 | | | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 0.56 | 16.9 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 17.47 kVA | | 17.47 kVA | | | | | | 17.47 kVA | | | |
| | | **Total Amps:** | | | | | | 63.06 | | 63.06 | | | | | | 63.06 | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Power | 52.404 kVA | 100.00% | 52.404 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 52.40 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 52.404 kVA |
| **TOTAL CONNECTED AMPS:** | 63.03 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 63 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-GB

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DP7
**LOCATION:** DATA CLOSET AA162

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.05 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.18 | 1.67 | | 10 | 10 | 10 | 3 | 30 A | TR RACK RECEPT. | 2 | |
| -- | 3 | SPARE | 20 A | 1 | -- | -- | -- | | | 0 | 1.67 | | | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | 1.67 | -- | -- | -- | -- | -- | -- | 6 | -- |
| -- | 7 | SPARE | 20 A | 1 | -- | -- | -- | 0 | 0 | | | | | -- | -- | -- | 1 | -- | SPACE | 8 | -- |
| -- | 9 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 10 | -- |
| -- | 11 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 1.85 kVA | | 1.67 kVA | | | | | | 1.67 kVA | | | |
| | | **Total Amps:** | | | | | | 15.41 | | 13.89 | | | | | | 13.89 | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA |
| Power | 5 kVA | 100.00% | 5 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 5.18 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 5.182 kVA |
| **TOTAL CONNECTED AMPS:** | 14.38 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 14.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CRGB

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 60 A/3P @ B01-DPCR7
**LOCATION:** DATA CLOSET AA162

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 60 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 2.04 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | TR ROOM LIGHTING | 20 A | 1 | 12 | 12 | 12 | 0.18 | 1.67 | | 10 | 10 | 10 | 3 | 30 A | TR RACK RECEPT. | 2 | |
| | 3 | SS-01.AA162 | 30 A | 2 | 8 | -- | 8 | | | 2.08 | 1.67 | | | -- | -- | -- | -- | -- | -- | 4 | -- |
| -- | 5 | -- | -- | -- | -- | -- | -- | | | | | 2.08 | 1.67 | -- | -- | -- | -- | -- | -- | 6 | -- |
| | 7 | TR ROOM RECEPT. | 20 A | 1 | 12 | 12 | 12 | 0.18 | 0 | | | | | -- | -- | -- | 1 | 20 A | SPARE | 8 | -- |
| -- | 9 | SPACE | 20 A | 1 | -- | -- | -- | | | 0 | 0 | | | -- | -- | -- | 1 | 20 A | SPARE | 10 | -- |
| -- | 11 | SPARE | 20 A | 1 | -- | -- | -- | | | | | 0 | -- | -- | -- | -- | 1 | -- | SPACE | 12 | -- |
| -- | 13 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 14 | -- |
| -- | 15 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 16 | -- |
| -- | 17 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 18 | -- |
| -- | 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 20 | -- |
| -- | 21 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 22 | -- |
| -- | 23 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 24 | -- |
| -- | 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | | | | | -- | -- | -- | 1 | -- | SPACE | 26 | -- |
| -- | 27 | SPACE | -- | 1 | -- | -- | -- | | | -- | -- | | | -- | -- | -- | 1 | -- | SPACE | 28 | -- |
| -- | 29 | SPACE | -- | 1 | -- | -- | -- | | | | | -- | -- | -- | -- | -- | 1 | -- | SPACE | 30 | -- |
| | | **Total Load:** | | | | | | 2.03 kVA | | 3.75 kVA | | | | | | 3.75 kVA | | | |
| | | **Total Amps:** | | | | | | 16.91 | | 33.42 | | | | | | 33.42 | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 0.182 kVA | 100.00% | 0.182 kVA |
| Power | 9.16 kVA | 100.00% | 9.16 kVA |
| Receptacles | 0.18 kVA | 100.00% | 0.18 kVA |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 9.52 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 9.522 kVA |
| **TOTAL CONNECTED AMPS:** | 26.43 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 26.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# PANEL B1-TR-CR11C

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 400 A/3P @ B01-DPCR6
**LOCATION:** UTILITY 11W201

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 300 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 22 kA
**ISC:** 9.85 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | N | G | A | B | C | WIRE SIZE G | N | H | P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | | | | | | | | | | | | | | | 2 | |
| | 3 | | | | | | | | | | | | | | | | 4 | |
| | 5 | | | | | | | | | | | | | | | | 6 | |
| | 7 | | | | | | | | | | | | | | | | 8 | |
| | 9 | | | | | | | | | | | | | | | | 10 | |
| | 11 | | | | | | | | | | | | | | | | 12 | |
| | 13 | | | | | | | | | | | | | | | | 14 | |
| | 15 | | | | | | | | | | | | | | | | 16 | |
| | 17 | | | | | | | | | | | | | | | | 18 | |
| | 19 | | | | | | | | | | | | | | | | 20 | |
| | 21 | | | | | | | | | | | | | | | | 22 | |
| | 23 | | | | | | | | | | | | | | | | 24 | |
| | 25 | | | | | | | | | | | | | | | | 26 | |
| | 27 | | | | | | | | | | | | | | | | 28 | |
| | 29 | | | | | | | | | | | | | | | | 30 | |
| | | **Total Load:** | | | | | | 0.00 kVA | | 0.00 kVA | | | | | | 0.00 kVA | | |
| | | **Total Amps:** | | | | | | 0.00 | | 0.00 | | | | | | 0.00 | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 0.00 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 0 kVA |
| **TOTAL CONNECTED AMPS:** | 0.00 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 0 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

**PANELBOARD SCHEDULE NOTES:**

A. BOLD TEXT INDICATES NEW LOADS BEING ADDED TO EXISTING PANELS. UTILIZE EXISTING SPACES AND PROVIDE NEW BREAKERS. REARANGE EXISTING BREAKERS IF REQUIRED TO FIT NEW BREAKERS IN EXISTING SPACES.
B. ITALICS INDICATES EXISTING LOADS TO REMAIN.

PANELBOARD LOCATION MATRIX

| | | |
|---|---|---|
| B1-TR-11B | B1-TR-CR11B | B1-5EQ-2 |
| B1-TR-GB | B1-TR-CRGB | B1-TR-CR11C |
| | | |

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

AWEN SOLUTIONS GROUP
ARCHITECTURE | ENGINEERING | PLANNING

**A/E:**
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STAMP

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MICHAEL WALSH
ENGINEER
PE076741

Office of Construction and Facilities Management

VA | U.S. Department of Veterans Affairs

| | |
|---|---|
| Drawing Title | ELECTRICAL PANEL SCHEDULES |
| Phase | FINAL BID DOCUMENTS |
| Approved: | |
| | FULLY SPRINKLERED |
| Project Title | EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS |
| Location | UNIVERSITY DRIVE PITTSBURGH, PA 15240 |
| Issue Date | 06.13.2025 |
| Checked | GJL |
| Drawn | HAB |
| Project Number | 646-22-700 |
| Building Number | 1 |
| Drawing Number | 01-EP714 |
| | SHEET 369 of 797 |

6/12/2025 2:16:21 PM
Autodesk Docs://University Drive VAMC EHRM_V25/646-22-700.01-E PIT EHRM.rvt

VA FORM 08 - 6231

# PANEL B1-TR-CR11D

**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1
**FED FROM:** 300 A/3P @ B01-DPCR7
**LOCATION:** UTILITY 11N302

**SINGLE TUB**
**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 300 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 10 kA
**ISC:** 8.06 kA

**NOTES:**

| KEY | CKT NO. | LOAD DESCRIPTION | OCPD AMPS | P | WIRE SIZE H | WIRE SIZE N | WIRE SIZE G | A | B | C | WIRE SIZE G | WIRE SIZE N | WIRE SIZE H | OCPD P | OCPD AMPS | LOAD DESCRIPTION | CKT NO. | KEY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | | | | | | | | | | | | | | | 2 | |
| | 3 | | | | | | | | | | | | | | | | 4 | |
| | 5 | | | | | | | | | | | | | | | | 6 | |
| | 7 | | | | | | | | | | | | | | | | 8 | |
| | 9 | | | | | | | | | | | | | | | | 10 | |
| | 11 | | | | | | | | | | | | | | | | 12 | |
| | 13 | | | | | | | | | | | | | | | | 14 | |
| | 15 | | | | | | | | | | | | | | | | 16 | |
| | 17 | | | | | | | | | | | | | | | | 18 | |
| | 19 | | | | | | | | | | | | | | | | 20 | |
| | 21 | | | | | | | | | | | | | | | | 22 | |
| | 23 | | | | | | | | | | | | | | | | 24 | |
| | 25 | | | | | | | | | | | | | | | | 26 | |
| | 27 | | | | | | | | | | | | | | | | 28 | |
| | 29 | | | | | | | | | | | | | | | | 30 | |
| | | **Total Load:** | | | | | | 0.00 kVA | 0.00 kVA | 0.00 kVA | | | | | | | | |
| | | **Total Amps:** | | | | | | 0.00 | 0.00 | 0.00 | | | | | | | | |

**LOAD SUMMARY**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 0.00 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 0 kVA |
| **TOTAL CONNECTED AMPS:** | 0.00 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 0 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# DISTRIBUTION PANEL B01-DP7

**ENCLOSURE:** NEMA 1
**FED FROM:** 800 A/3P @ SWGR
**LOCATION:** ELEC 3N300

**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 800 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 22 kA
**ISC:** 15,007.8 A

**NOTES:**

| CKT | LOAD DESCRIPTION | Load | POLES | FRAME | TRIP | TYPE | ACC. | WIRE AND RACEWAY | CIRCUIT KEY |
|---|---|---|---|---|---|---|---|---|---|
| 1 | PANEL BTC | 5 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 2 | B1-TR-GB | 5.18 kVA | 3 | 60 A | 60 A | | | 4#2 & 1#4 EGC IN 1 1/4" C. | |
| 3 | B1-TR-GC | 5 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 4 | B1-TR-GD | 5.9 kVA | 3 | 60 A | 60 A | | | 4#1/0 & 1#3 EGC IN 2" C. | |
| 5 | B1-TR-1B | 16.08 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 6 | B1-TR-1C | 5.36 kVA | 3 | 60 A | 60 A | | | 4#2/0 & 1#2 EGC IN 2" C. | |
| 7 | B1-TR-1D | 5.72 kVA | 3 | 60 A | 60 A | | | 4#1/0 & 1#3 EGC IN 2" C. | |
| 8 | B1-TR-1E | 5.9 kVA | 3 | 60 A | 60 A | | | 4#2 & 1#4 EGC IN 1 1/4" C. | |
| 9 | B1-TR-2B | 15.9 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 10 | B1-TR-2C | 15.36 kVA | 3 | 60 A | 60 A | | | 4#1/0 & 1#3 EGC IN 2" C. | |
| 11 | B1-TR-3B | 16.45 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 12 | B1-TR-3C | 5.36 kVA | 3 | 60 A | 60 A | | | 4#1/0 & 1#3 EGC IN 2" C. | |
| 13 | B1-TR-4B | 6.84 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 14 | B1-TR-4C | 5.36 kVA | 3 | 60 A | 60 A | | | 4#2/0 & 1#2 EGC IN 2" C. | |
| 15 | B1-TR-5B | 5.54 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 16 | B1-TR-5C | 5.36 kVA | 3 | 60 A | 60 A | | | 4#2/0 & 1#2 EGC IN 2" C. | |
| 17 | B1-TR-6B | 7.03 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 18 | B1-TR-7B | 6.67 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 19 | B1-TR-8B | 6.67 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 20 | B1-TR-9B | 6.67 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 21 | B1-TR-10B | 6.67 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 22 | B1-TR-11B | 6.85 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 23 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 24 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 26 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 27 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 28 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 29 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 30 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 31 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 32 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |

**LOAD SUMMARY (INCLUDES ALL TUBS IN THIS PANEL)**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 8.691 kVA | 100.00% | 8.691 kVA |
| Power | 150 kVA | 100.00% | 150 kVA |
| Receptacles | 12.24 kVA | 90.85% | 11.12 kVA |
| | | | |
| | | | |
| | | | |
| | | | |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 170.93 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 169.811 kVA |
| **TOTAL CONNECTED AMPS:** | 474.46 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 471.3 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# DISTRIBUTION PANEL B01-DPCR6

**ENCLOSURE:** NEMA 1
**FED FROM:** 800 A/3P @ B1-TCR6
**LOCATION:** ELEC 6W202

**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 800 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 22 kA
**ISC:** 15,453.2 A

**NOTES:**

| CKT | LOAD DESCRIPTION | Load | POLES | FRAME | TRIP | TYPE | ACC. | WIRE AND RACEWAY | CIRCUIT KEY |
|---|---|---|---|---|---|---|---|---|---|
| 1 | B1-TR-CR6A | 13.95 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 2 | B1-TR-CR5A | 10.93 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 3 | B1-TR-CR4A | 9.06 kVA | 3 | 60 A | 60 A | | | 4#2 & 1#4 EGC IN 1 1/4" C. | |
| 4 | B1-TR-CR3A | 20.89 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 5 | B1-TR-CR2A | 10.06 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 6 | B1-TR-CR1A | 4.52 kVA | 3 | 60 A | 60 A | | | 4#2 & 1#4 EGC IN 1 1/4" C. | |
| 7 | B1-TR-CRGA | 9.88 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 8 | B1-TR-CRBA | 8.88 kVA | 3 | 60 A | 60 A | | | 4#2 & 1#4 EGC IN 1 1/4" C. | |
| 9 | B1-TR-CR11A | 57.12 kVA | 3 | 60 A | 60 A | | | 4#2 & 1#4 EGC IN 1 1/4" C. | |
| 10 | B1-TR-CR10A | 9.56 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 11 | B1-TR-CR9A | 9.56 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 12 | B1-TR-CR8A | 9.56 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 13 | B1-TR-CR7A | 9.56 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 14 | B1-TR-CR4D | 18.7 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 15 | B1-TR-CR11C | 0 kVA | 3 | 400 A | 400 A | | | 4#600 & 1#3 EGC IN 3 1/2" C. | |
| 16 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 17 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 18 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 20 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 21 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 22 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 23 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 24 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 26 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 27 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 28 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 29 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 30 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 31 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 32 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |

**LOAD SUMMARY (INCLUDES ALL TUBS IN THIS PANEL)**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 4.598 kVA | 100.00% | 4.598 kVA |
| Power | 190.276 kVA | 100.00% | 190.276 kVA |
| Receptacles | 7.38 kVA | 100.00% | 7.38 kVA |
| | | | |
| | | | |
| | | | |
| | | | |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 202.25 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 202.254 kVA |
| **TOTAL CONNECTED AMPS:** | 561.40 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 561.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# DISTRIBUTION PANEL B01-DPCR7

**ENCLOSURE:** NEMA 1
**FED FROM:** 800 A/3P @ ATS-CR7
**LOCATION:** ELEC 4N303

**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 800 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 22 kA
**ISC:** 14,584 A

**NOTES:**

| CKT | LOAD DESCRIPTION | Load | POLES | FRAME | TRIP | TYPE | ACC. | WIRE AND RACEWAY | CIRCUIT KEY |
|---|---|---|---|---|---|---|---|---|---|
| 1 | PANEL BTC 2 | 0 kVA | 3 | 60 A | 60 A | | | 4#3 & 1#6 EGC IN 1 1/4" C. | |
| 2 | B1-TR-CRGB | 9.52 kVA | 3 | 60 A | 60 A | | | 4#350 & 1#3/0 EGC IN 3" C. | |
| 3 | B1-TR-CRGD | 10.06 kVA | 3 | 60 A | 60 A | | | 4#3/0 & 1#1 EGC IN 2" C. | |
| 4 | B1-TR-CR1B | 16.05 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 5 | B1-TR-CR1C | 6.06 kVA | 3 | 60 A | 60 A | | | 4#2/0 & 1#2 EGC IN 2" C. | |
| 6 | B1-TR-CR1D | 9.88 kVA | 3 | 60 A | 60 A | | | 4#1/0 & 1#3 EGC IN 2" C. | |
| 7 | B1-TR-CR1E | 10.06 kVA | 3 | 60 A | 60 A | | | 4#350 & 1#3/0 EGC IN 3" C. | |
| 8 | B1-TR-CR2B | 16.56 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 9 | B1-TR-CR2C | 16.06 kVA | 3 | 60 A | 60 A | | | 4#2/0 & 1#2 EGC IN 2" C. | |
| 10 | B1-TR-CR3B | 20.75 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 11 | B1-TR-CR3C | 5.18 kVA | 3 | 60 A | 60 A | | | 4#2/0 & 1#2 EGC IN 2" C. | |
| 12 | B1-TR-CR4B | 14.95 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 13 | B1-TR-CR4C | 5.18 kVA | 3 | 60 A | 60 A | | | 4#2/0 & 1#2 EGC IN 2" C. | |
| 14 | B1-TR-CR5B | 9.7 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 15 | B1-TR-CR5C | 5.18 kVA | 3 | 60 A | 60 A | | | 4#2/0 & 1#2 EGC IN 2" C. | |
| 16 | B1-TR-CR6B | 9.56 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 17 | B1-TR-CR7B | 9.74 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 18 | B1-TR-CR8B | 9.56 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 19 | B1-TR-CR9B | 9.74 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 20 | B1-TR-CR10B | 9.74 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 21 | B1-TR-CR11B | 9.74 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 22 | B1-TR-CR11D | 0 kVA | 3 | 300 A | 300 A | | | 4#350 & 1#4 EGC IN 2 1/2" C. | |
| 23 | B1-TR-CRBB | 13.68 kVA | 3 | 100 A | 100 A | | | 4#4/0 & 1#1 EGC IN 2 1/2" C. | |
| 24 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 26 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 27 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 28 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 29 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 30 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 31 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 32 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |

**LOAD SUMMARY (INCLUDES ALL TUBS IN THIS PANEL)**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 6.602 kVA | 100.00% | 6.602 kVA |
| Power | 211.398 kVA | 100.00% | 211.398 kVA |
| Receptacles | 9 kVA | 100.00% | 9 kVA |
| | | | |
| | | | |
| | | | |
| | | | |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 227.00 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 227 kVA |
| **TOTAL CONNECTED AMPS:** | 630.09 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 630.1 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

# DISTRIBUTION PANEL B01-MDP-6

**ENCLOSURE:** NEMA 1
**FED FROM:** 800 A/3P @ B1-T6
**LOCATION:** ELEC 5W201

**SOLID NEUTRAL**
**GROUND BUS**

**MAIN:** 800 A MCB
**VOLTS:** 120/208 Wye
**PHASE:** 3
**WIRE:** 4
**SCCR:** 22 kA
**ISC:** 14,000 A

**NOTES:**

| CKT | LOAD DESCRIPTION | Load | POLES | FRAME | TRIP | TYPE | ACC. | WIRE AND RACEWAY | CIRCUIT KEY |
|---|---|---|---|---|---|---|---|---|---|
| 1 | B1-TR-5A | 6.45 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 2 | B1-TR-8A | 5.54 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 3 | B1-TR-GA | 5.9 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 4 | B1-TR-1A | 0.18 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 5 | B1-TR-2A | 5.9 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 6 | B1-TR-3A | 15.9 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 7 | B1-TR-4A | 5.9 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 8 | B1-TR-6A | 6.67 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 9 | B1-TR-7A | 6.83 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 10 | B1-TR-4D | 15.36 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 11 | B1-TR-8A | 6.83 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 12 | B1-TR-9A | 6.83 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 13 | B1-TR-10A | 6.83 kVA | 3 | 60 A | 60 A | | | 4#6 & 1#10 EGC IN 1" C. | |
| 14 | B1-TR-11A | 7.01 kVA | 3 | 60 A | 60 A | | | 4#4 & 1#6 EGC IN 1 1/4" C. | |
| 15 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 16 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 17 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 18 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 19 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 20 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 21 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 22 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 23 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 24 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 25 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 26 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 27 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 28 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 29 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 30 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 31 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |
| 32 | SPACE | -- | 1 | -- | -- | -- | -- | -- | -- |

**LOAD SUMMARY (INCLUDES ALL TUBS IN THIS PANEL)**

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND |
|---|---|---|---|
| Lighting | 7.056 kVA | 100.00% | 7.056 kVA |
| Power | 85 kVA | 100.00% | 85 kVA |
| Receptacles | 10.08 kVA | 99.60% | 10.04 kVA |
| | | | |
| | | | |
| | | | |
| | | | |

| TOTALS* | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 102.14 kVA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 102.096 kVA |
| **TOTAL CONNECTED AMPS:** | 283.50 A |
| **TOTAL ESTIMATED DEMAND AMPS:** | 283.4 A |

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

**CIRCUIT KEY NOTES:**

**PANELBOARD SCHEDULE NOTES:**

A. BOLD TEXT INDICATES NEW LOADS BEING ADDED TO EXISTING PANELS. UTILIZE EXISTING SPACES AND PROVIDE NEW BREAKERS. REARANGE EXISTING BREAKERS IF REQUIRED TO FIT NEW BREAKERS IN EXISTING SPACES.
B. ITALICS INDICATES EXISTING LOADS TO REMAIN.

PANELBOARD LOCATION MATRIX

| | | |
|---|---|---|
| B1-TR-CR11D | B01-DP7 | B01-DPCR6 |
| B1-DPCR7 | B01-MDP-6 | |
| | | |

| Revisions: | Date: |
|---|---|
| | |

ARCHITECT/ENGINEER OF RECORD

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

**Drawing Title:** ELECTRICAL PANEL SCHEDULES
**Phase:** FINAL BID DOCUMENTS
**Approved:**
**Project Title:** EHRM INFRASTRUCTURE UPGRADES - VAPHS UNIVERSITY DRIVE CAMPUS
**Project Number:** 646-22-700
**Building Number:** 1
**Location:** UNIVERSITY DRIVE PITTSBURGH, PA 15240
**Drawing Number:** 01-EP715
**Issue Date:** 06.13.2025
**Checked:** GJL
**Drawn:** HAB
FULLY SPRINKLERED
SHEET 370 of 797

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