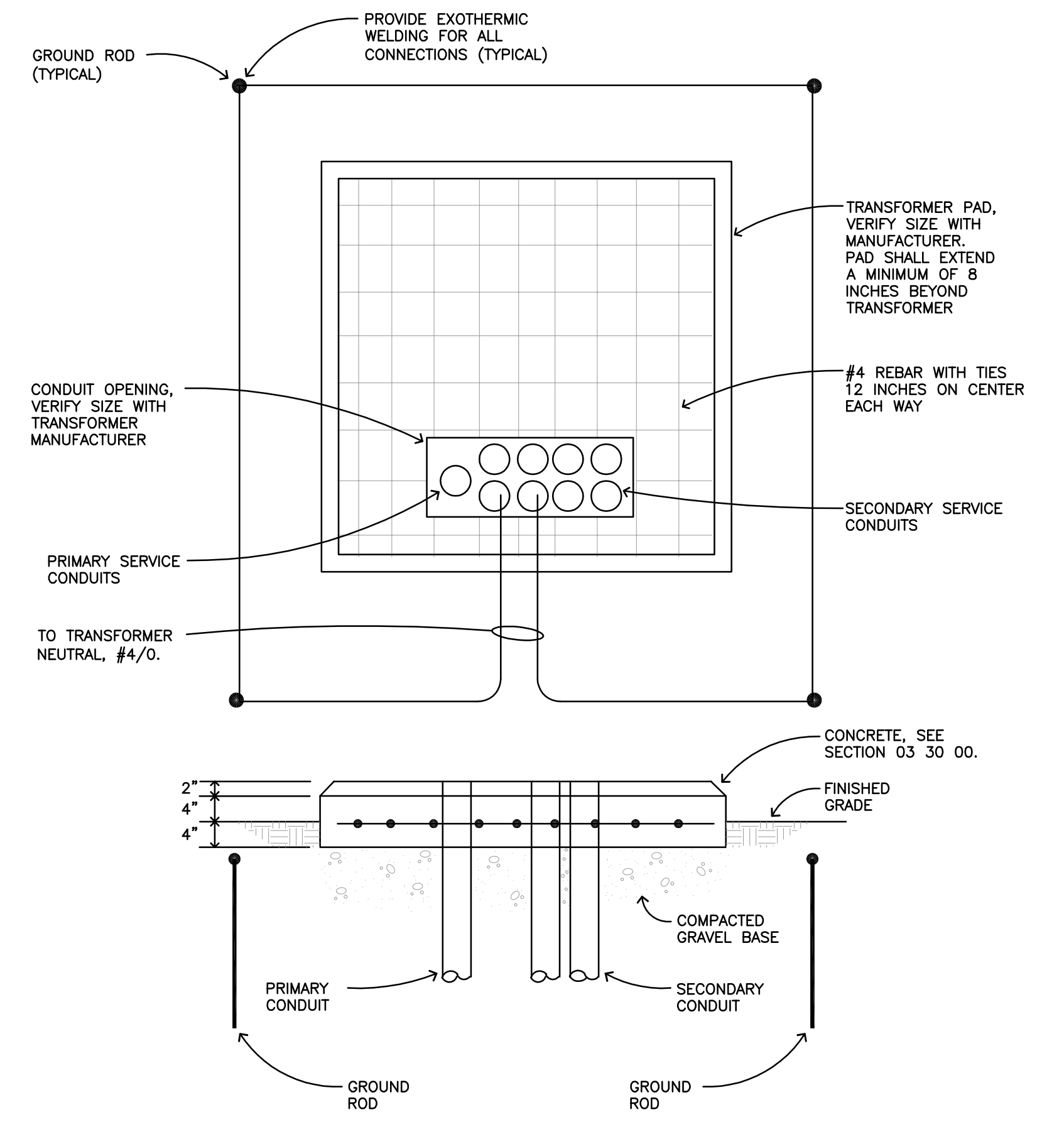
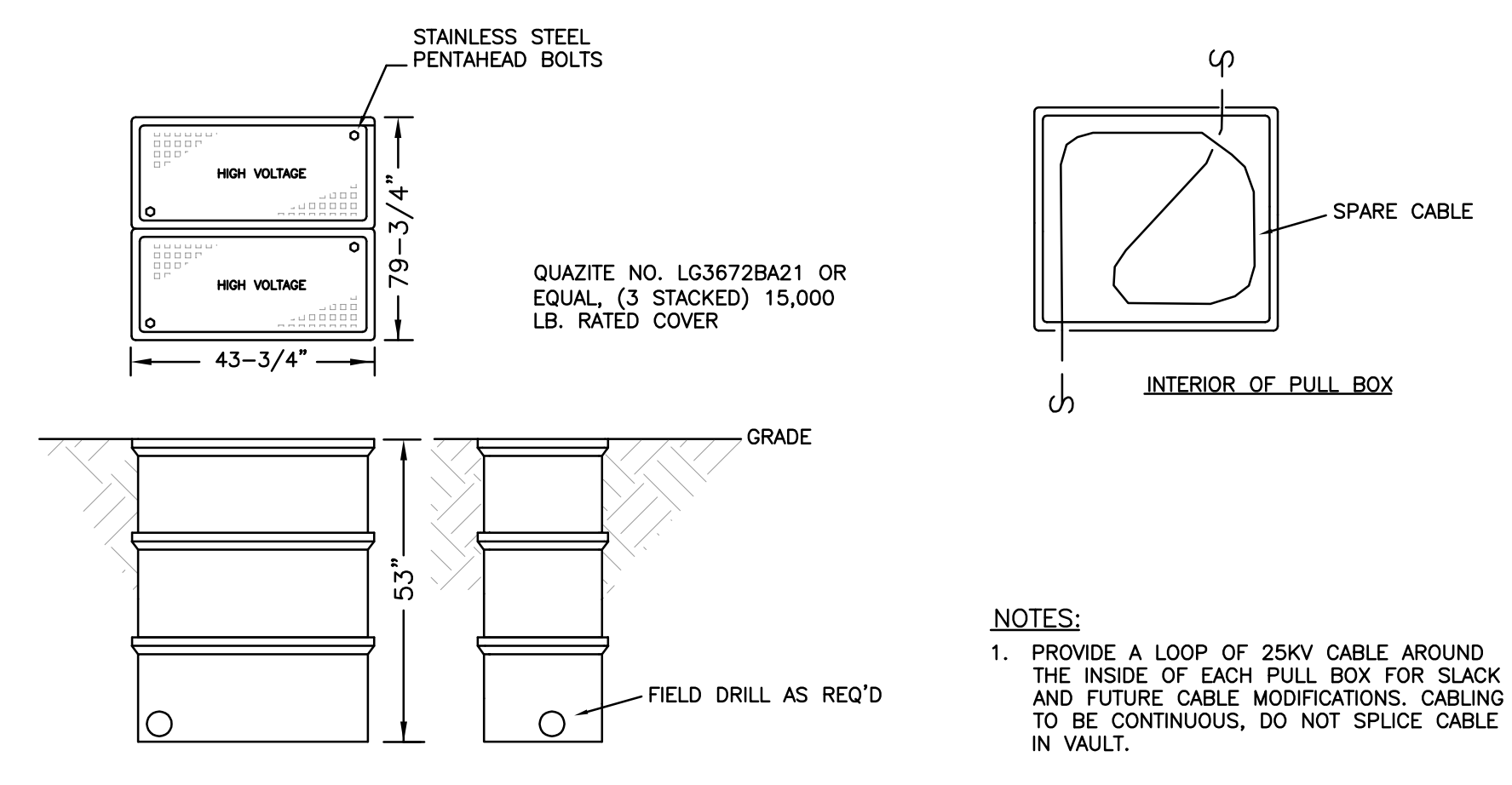


1 25KV ONE LINE DIAGRAM - REVISED
E3.2 NO SCALE

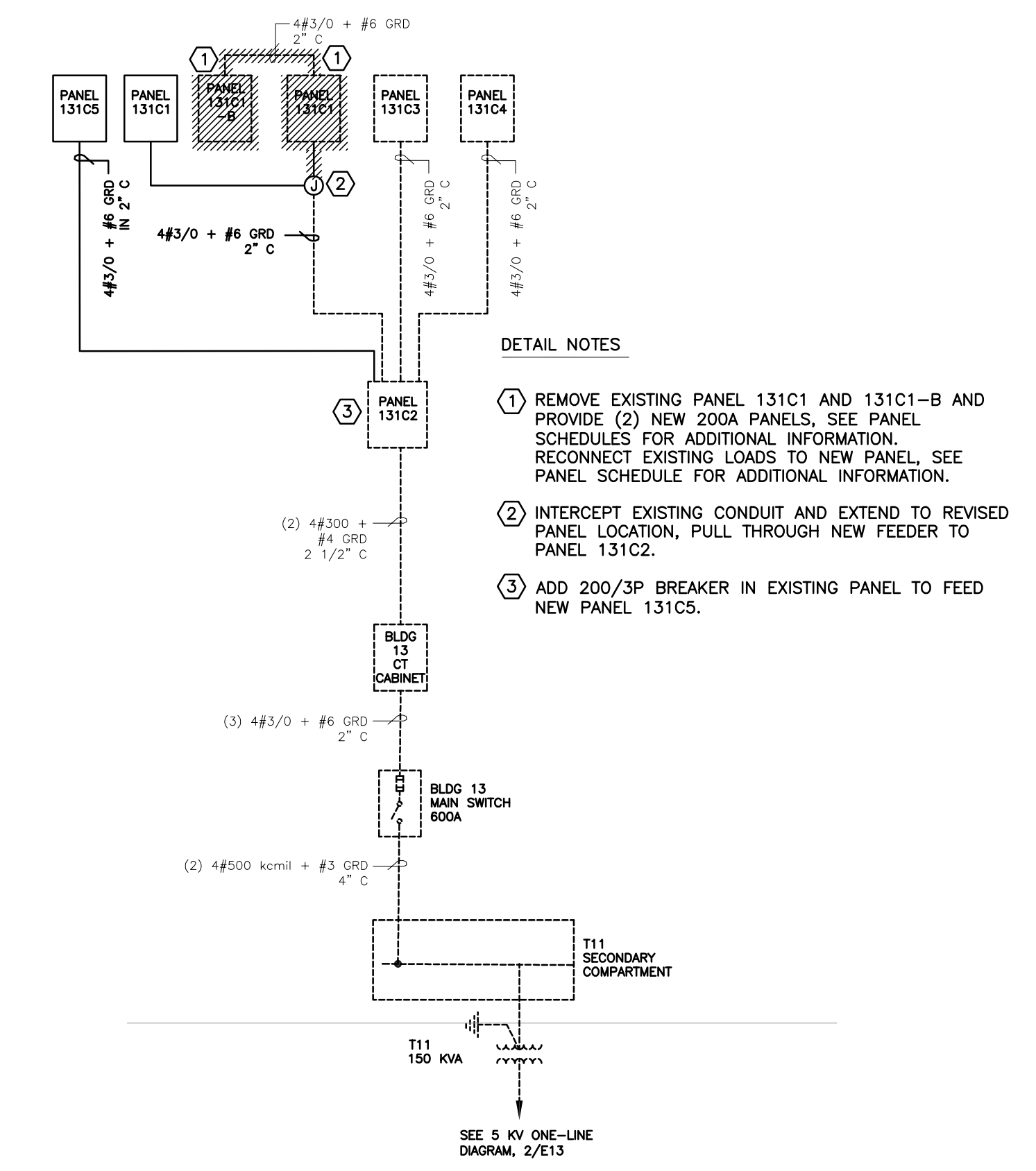


2 TRANSFORMER PAD AND GROUNDING DETAIL
E3.2 NO SCALE



3 MEDIUM VOLTAGE PULLBOX DETAIL
E3.2 NO SCALE

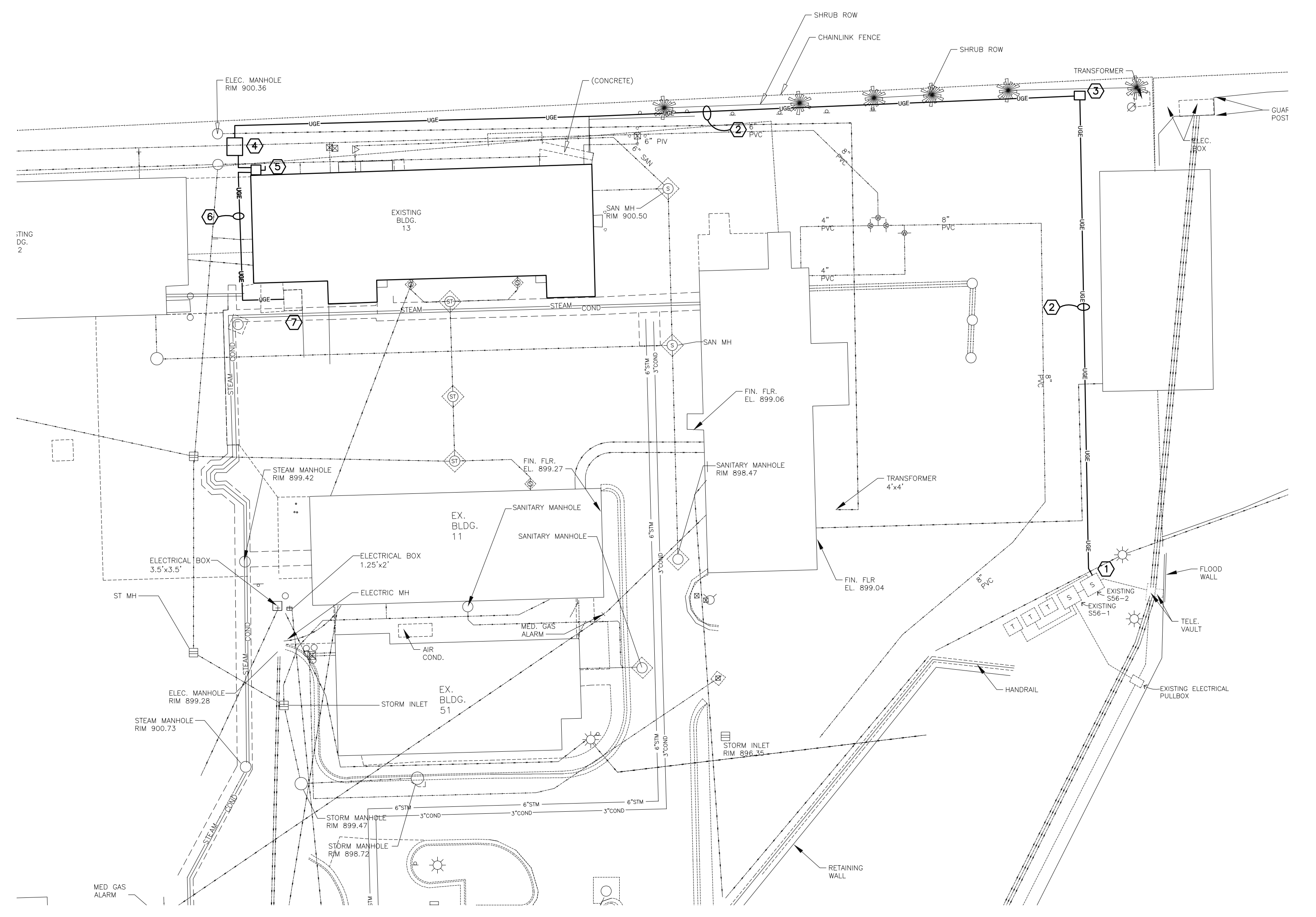
- DETAIL GENERAL NOTES:**
1. PROVIDE CONTINUOUS RUNS OF 25 KV WIRING, SPLICING IN VAULTS IS NOT ALLOWED.
- DETAIL NOTES:**
1. PROVIDE 4" PVC CONDUIT WITH (3) 1/0 25KV CU + #1/0 CU 600V NEUTRAL. SEE 5/E3.2 FOR ROUTING INFORMATION.
 2. EXISTING OWNER FURNISHED, CONTRACTOR INSTALLED 25KV TRANSFORMER, PROVIDE NEW ELBOW TYPE SURGE ARRESTORS ON TRANSFORMER. SEE 2/E3.2 FOR PAD REQUIREMENTS.
 3. PROVIDE 200A NEMA 3R FUSIBLE SERVICE DISCONNECT, SEE DRAWINGS FOR LOCATION.
 4. NEW BUILDING 13 CHILLER 13-ACCH-1 SEE SITE PLAN FOR LOCATION AND MOTOR AND EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
 5. PROVIDE (3) 3/0 + #6 GROUND IN 2" CONDUIT.



4 ELECTRICAL ONE-LINE DIAGRAM REVISIONS- BUILDINGS 13
E3.2 NO SCALE

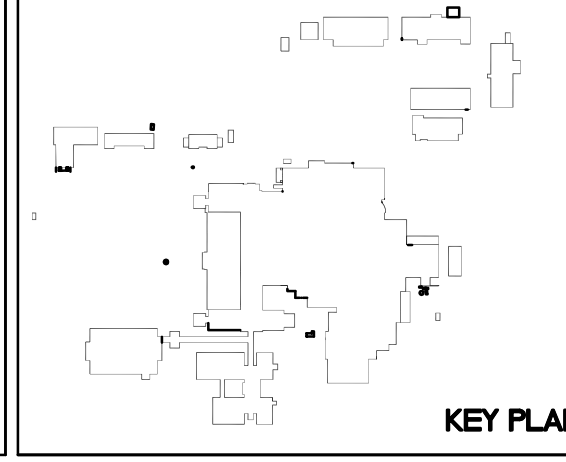
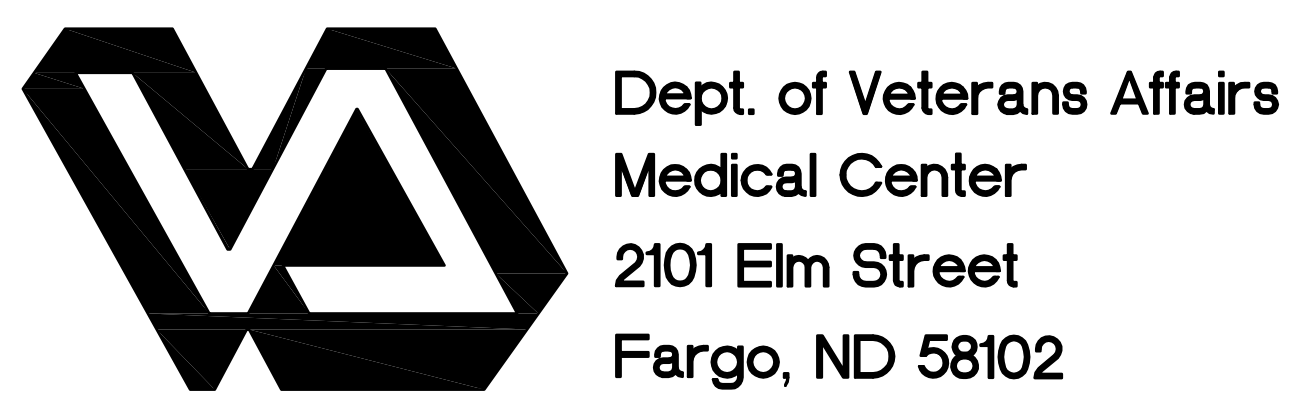
- PLAN NOTES:**
1. CONNECT NEW BLDG #13 CHILLER FEEDER TO EXISTING SPARE OUTPUT IN EXISTING SWITCH 552-2. SEE DETAIL 1/E3.2 FOR ADDITIONAL REQUIREMENTS.
 2. BORE UNDER EXISTING SURFACE WITH MINIMUM COVER OF 4 FT.
 3. PROVIDE IN GROUND PULLBOX, SEE DETAIL 2/E3.2. LOCATE IN GRASS AREA, FIELD COORDINATE EXACT LOCATION.
 4. SEE DETAIL 2/E3.2 FOR TRANSFORMER PAD REQUIREMENTS.
 5. PROVIDE 200A FUSED SERVICE DISCONNECT, SEE 4/E3.1.
 6. CUT/PATCH EXISTING PAVEMENT AS REQUIRED FOR INSTALLATION OF NEW CHILLER FEEDER.
 7. NEW CHILLER ACCH-1, SEE MOTOR AND EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.

- GENERAL NOTES:**
1. PHASING OF DEMOLITION OF EXISTING EQUIPMENT AND INSTALLATION OF NEW EQUIPMENT SHALL BE CLOSELY COORDINATED WITH THE OWNER AND THE MECHANICAL CONTRACTOR PRIOR TO BEGINNING WORK. SHUTDOWN OF EXISTING MECHANICAL EQUIPMENT AND SWITCHOVER TO NEW EQUIPMENT WORK WILL OCCUR AFTER REGULAR OPERATING HOURS AND ON WEEKENDS.
 2. TEMPORARY FAN CONNECTIONS FOR AIR HANDLING UNITS WILL BE REQUIRED AS NOTED ON THE DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL EXTEND EXISTING CIRCUITING OR PROVIDE NEW AS NECESSARY FOR TEMPORARY POWER, THEN REMOVE THE CONNECTION IN ITS ENTIRETY UPON INSTALLATION OF THE NEW EQUIPMENT.
 3. DEVICES SHOWN WITH HATCHING ON THIS PLAN SHALL BE DEMOLISHED AND WIRING REMOVED TO THEIR SOURCE UNLESS NOTED OTHERWISE. THIS INCLUDES ALL EXISTING WIRING, CONDUIT, STARTERS, DISCONNECTS, VFDs ETC.
 4. THE ELECTRICAL CONTRACTOR SHALL BE REQUIRED TO REMOVE AND REINSTALL EXISTING LIGHT FIXTURES, WIRELESS ACCESS POINTS, SPEAKERS, FIRE ALARM DEVICES, RTLS EQUIPMENT ETC WHERE CEILING ARE BEING REMOVED AND REINSTALLED TO ACCOMMODATE INSTALLATION OF NEW MECHANICAL AND ELECTRICAL PIPING, DUCTWORK, CONDUIT ETC. AREAS OF CEILING REMOVAL SHOWN ON THE DRAWINGS ARE BASED ON PLANNED ROUTING. ACTUAL ROUTING WILL BE COORDINATED WITH EXISTING FIELD CONDITIONS.
 5. PROVIDE TEMPORARY SUPPORT ANY WIRING SYSTEMS DISTURBED BY REMOVAL OF EXISTING CEILING.



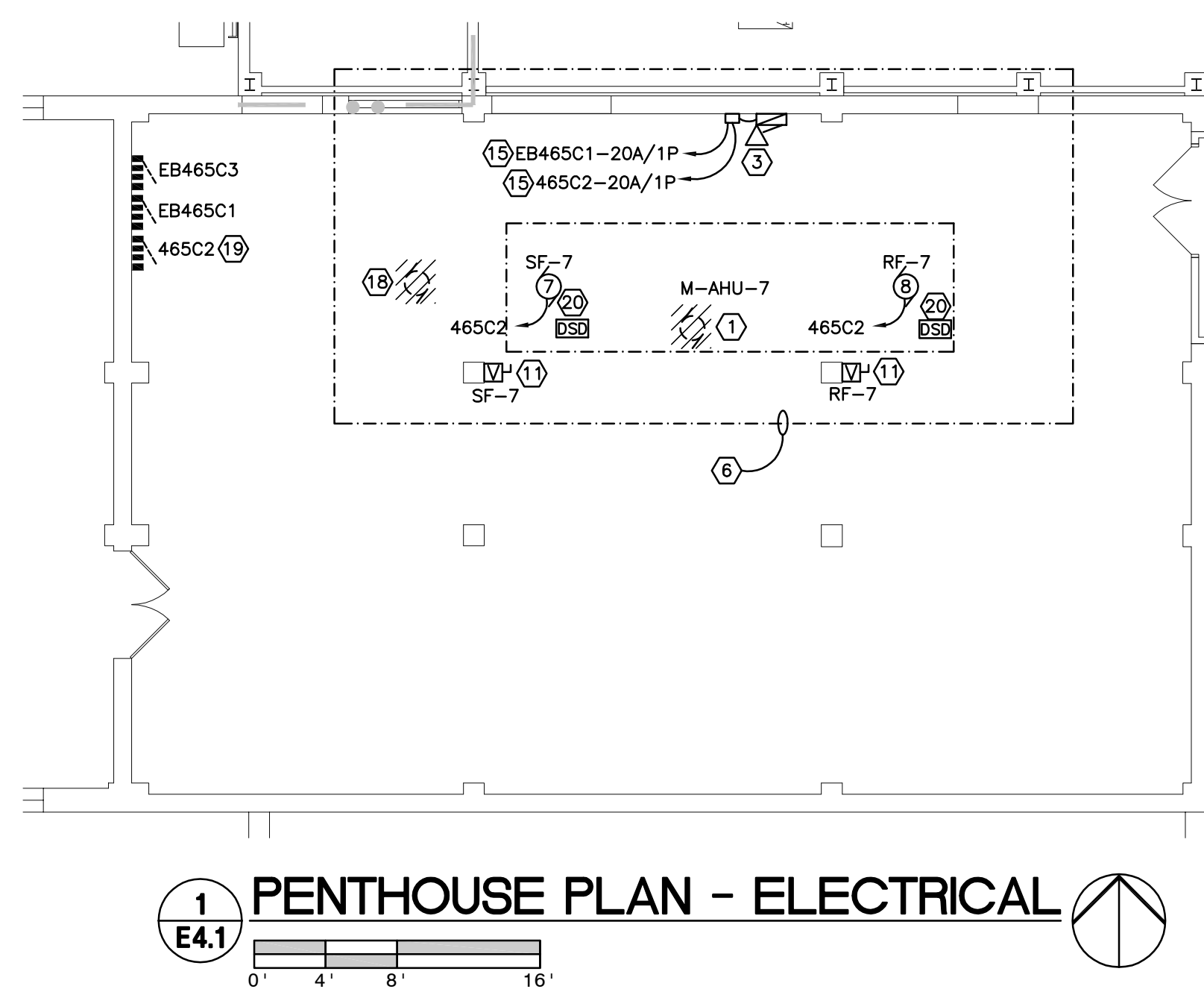
5 PARTIAL SITE PLAN - ELECTRICAL
E3.2

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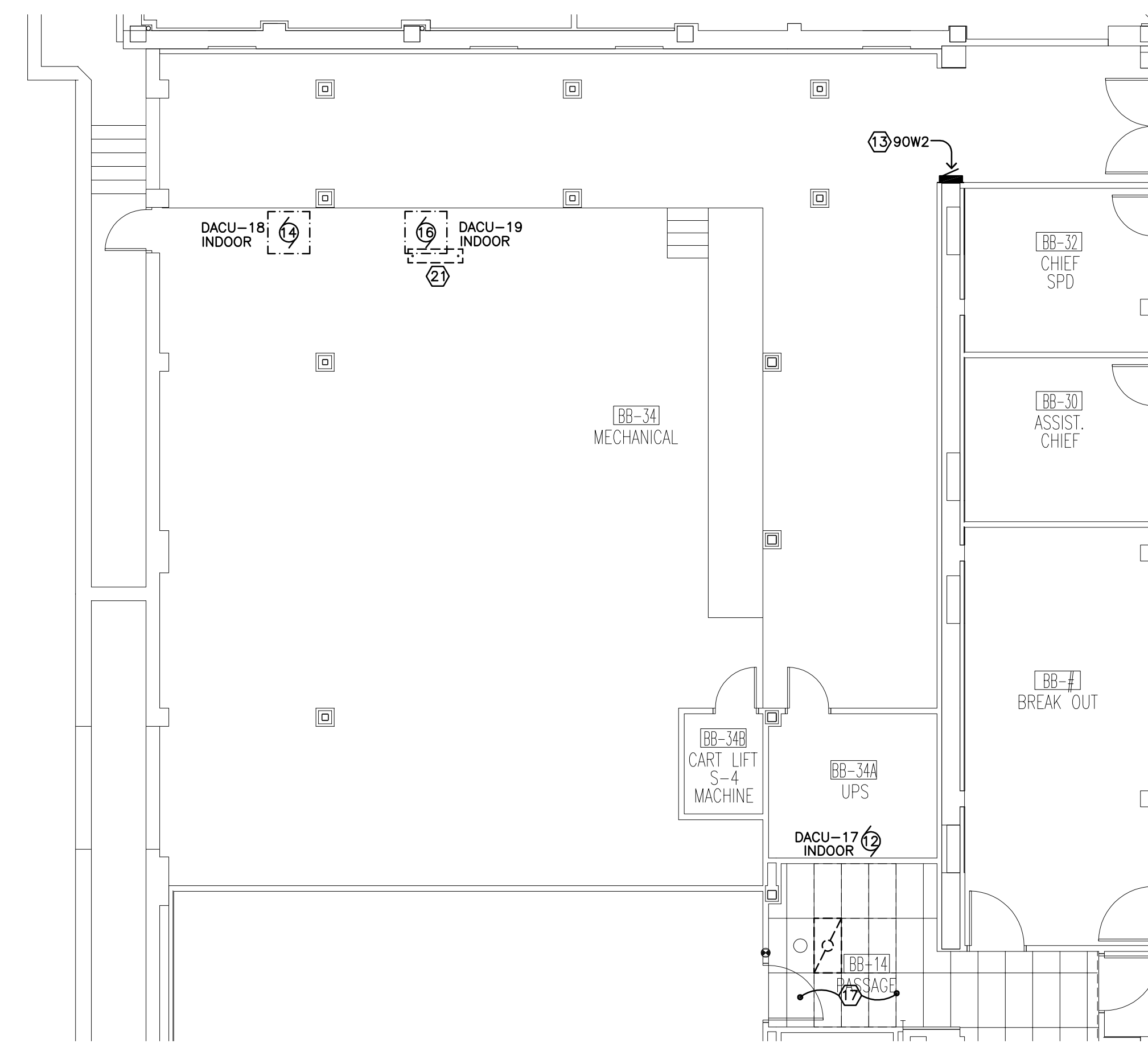


Drawing Title PARTIAL SITE PLAN, BLDG 13 ONE LINE DIAGRAMS AND DETAILS		Project Title REPLACE OR UPGRADE HVAC SYSTEM COMPONENTS		Date SEPT.14, 2016
Project Phase PHASE 3		Scale: AS NOTED		Drawing No. E3.2 Dwg. 61 of 66
VA Project No. 437-13-111	Contract No. VA263-P-1218	Designed By CH	Checked By MB	
Building No. VAMC CAMPUS	AutoCAD File Name 13-093 E3.1_3.2.dwg	Location FARGO VA HEALTHCARE SYSTEM FARGO, NORTH DAKOTA	Drawn By CH	

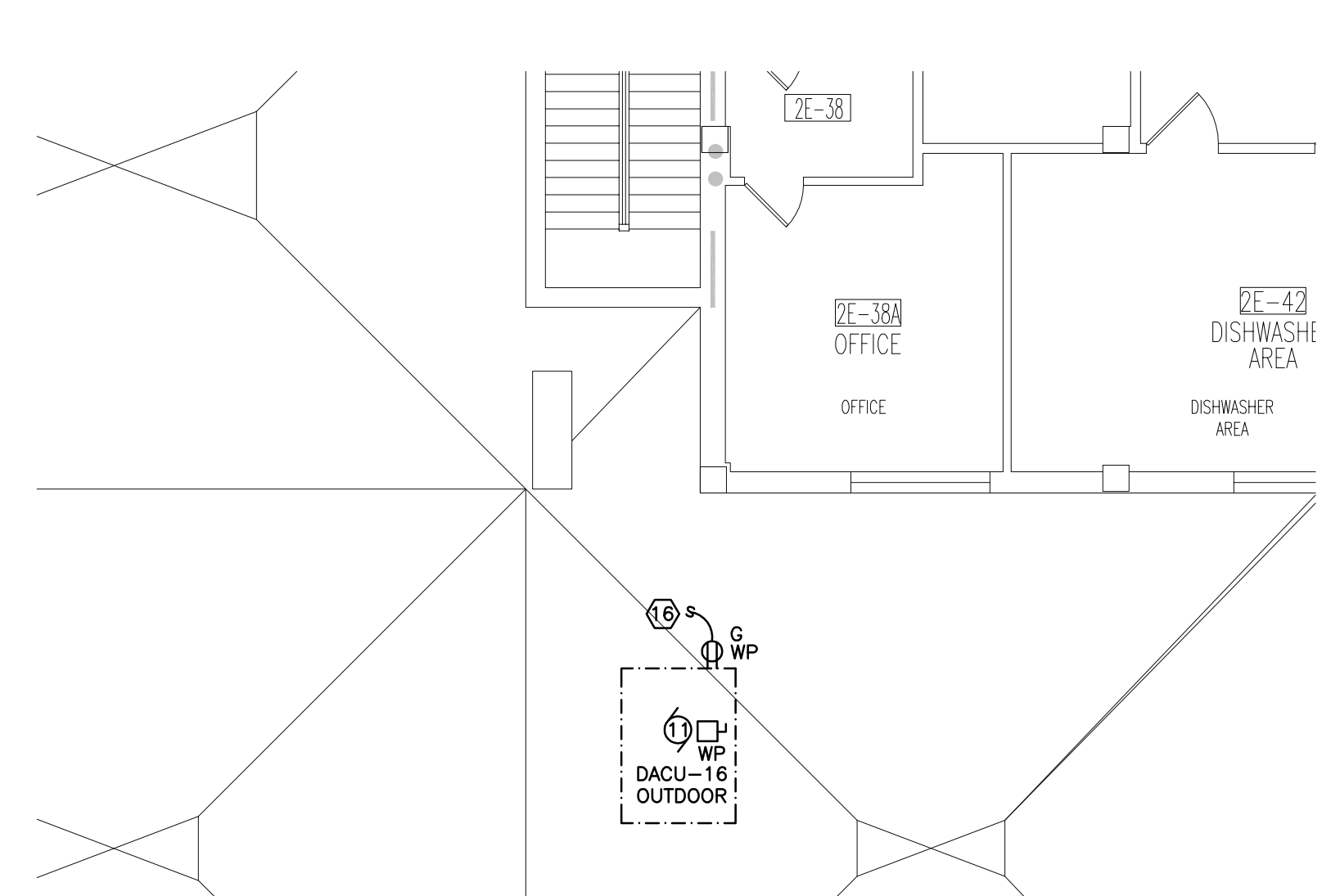
Department of Veterans Affairs



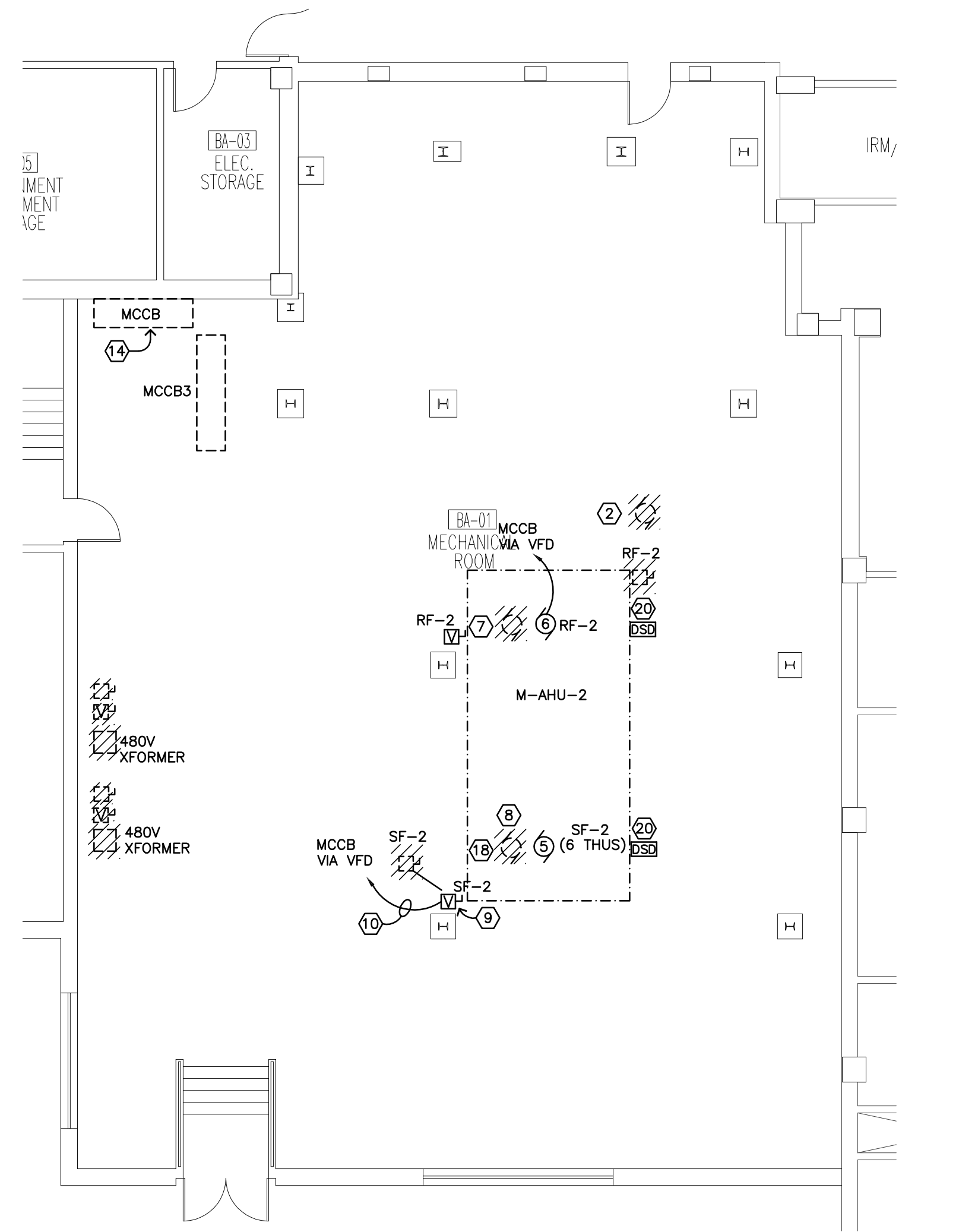
1 PENTHOUSE PLAN - ELECTRICAL
E4.1



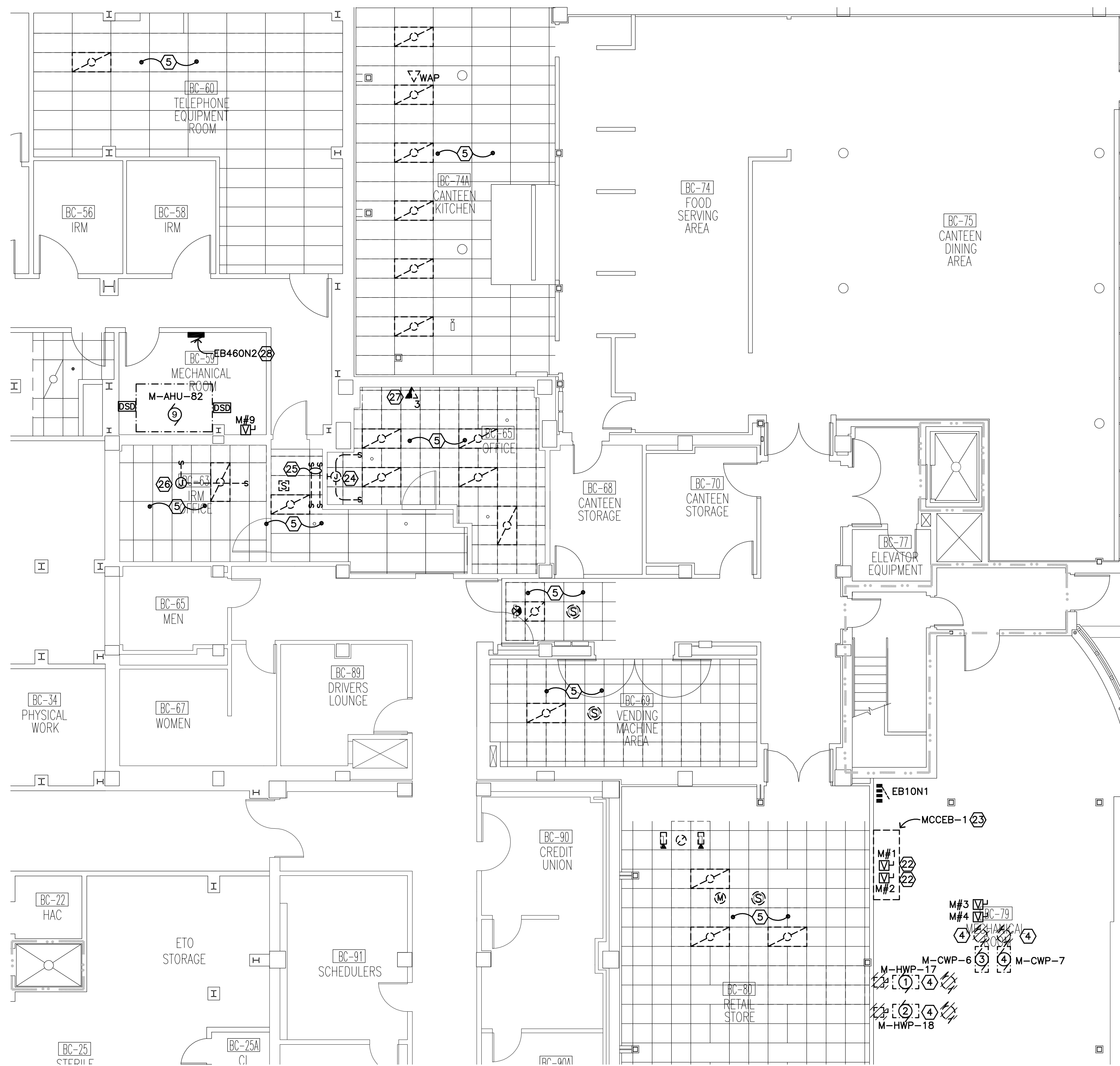
2 BB-34/BB34A FLOOR PLAN - ELECTRICAL
E4.1



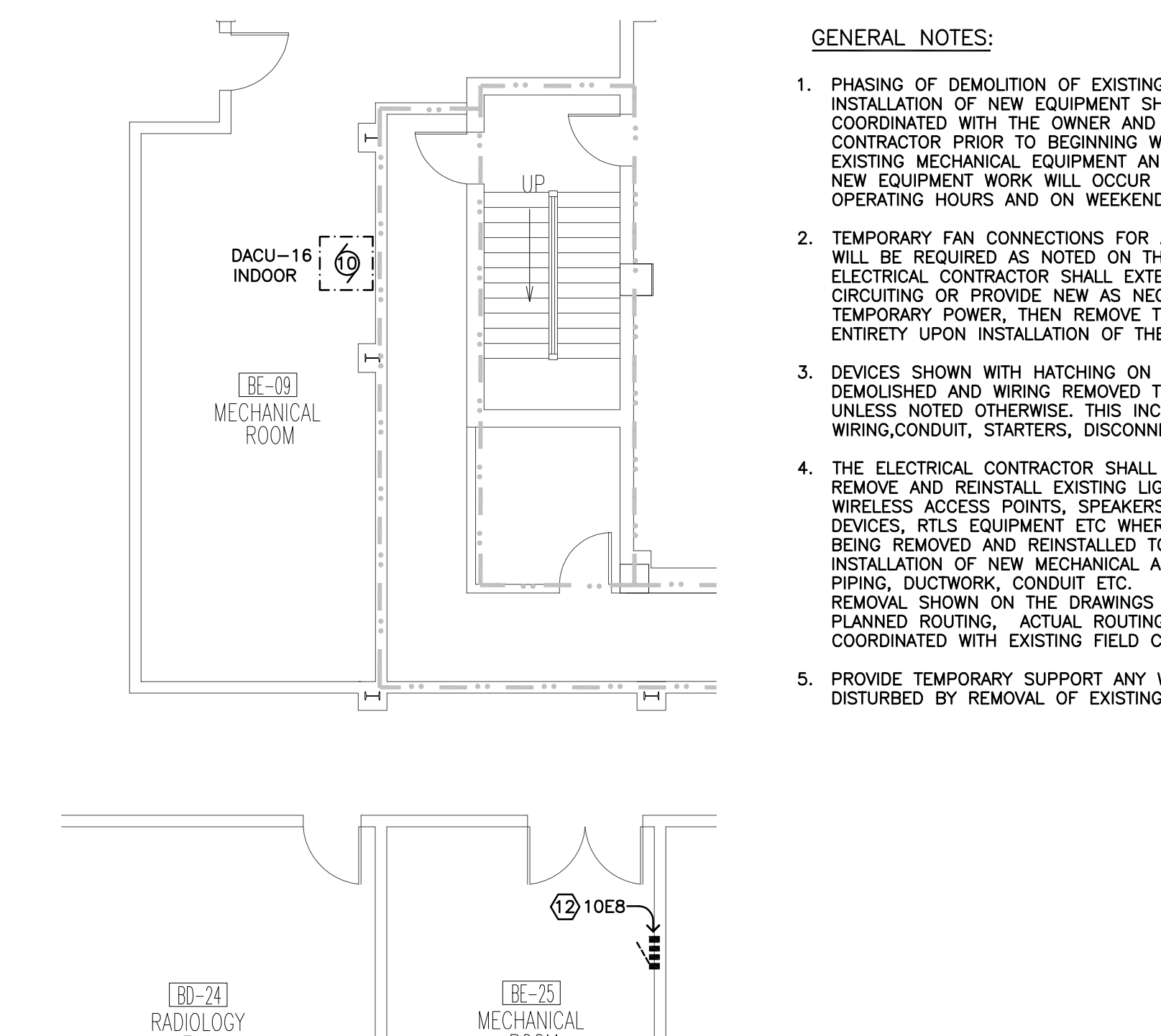
3 FIRST FLOOR ROOF - ELECTRICAL
E4.1



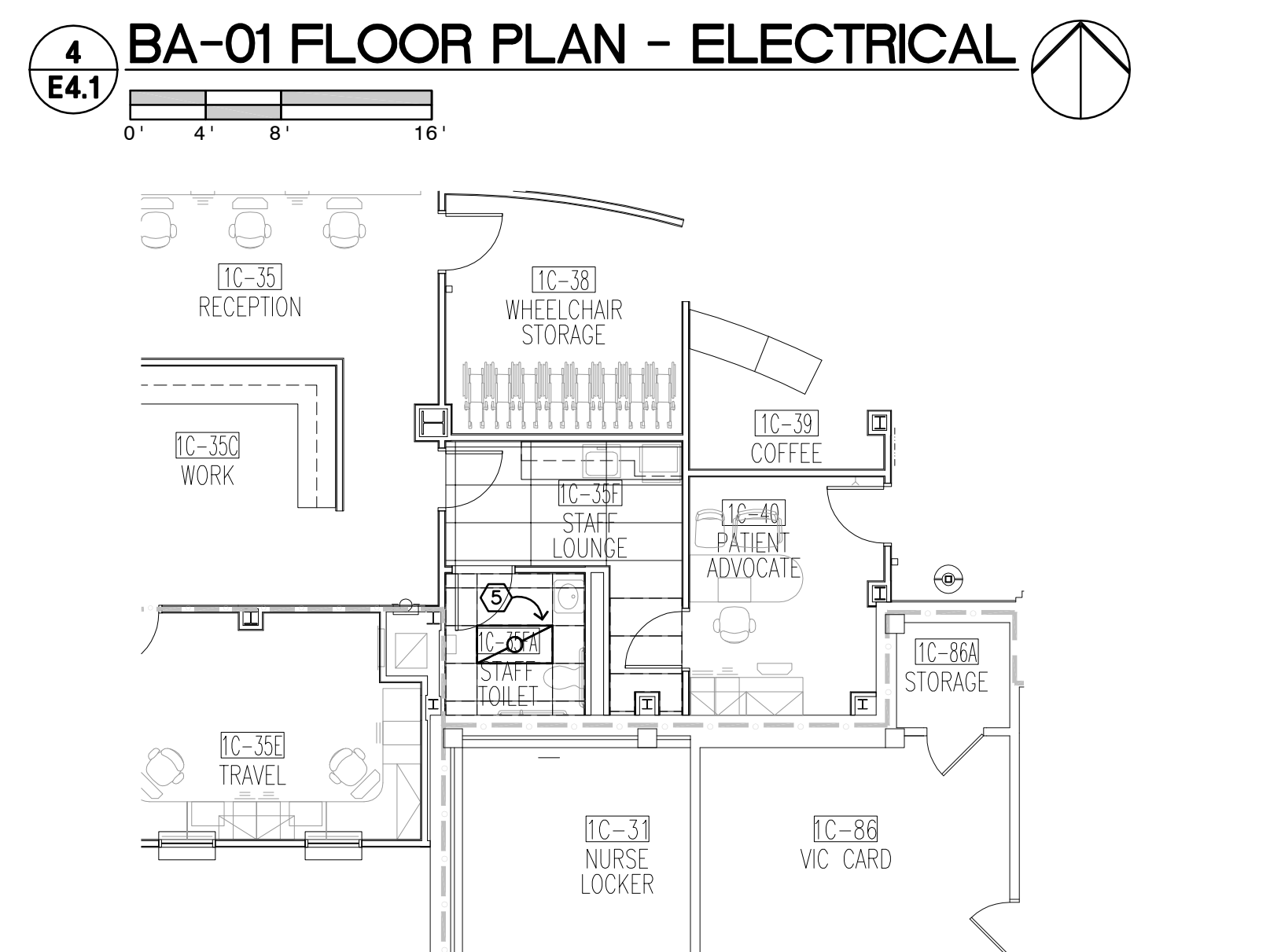
4 BA-01 FLOOR PLAN - ELECTRICAL
E4.1



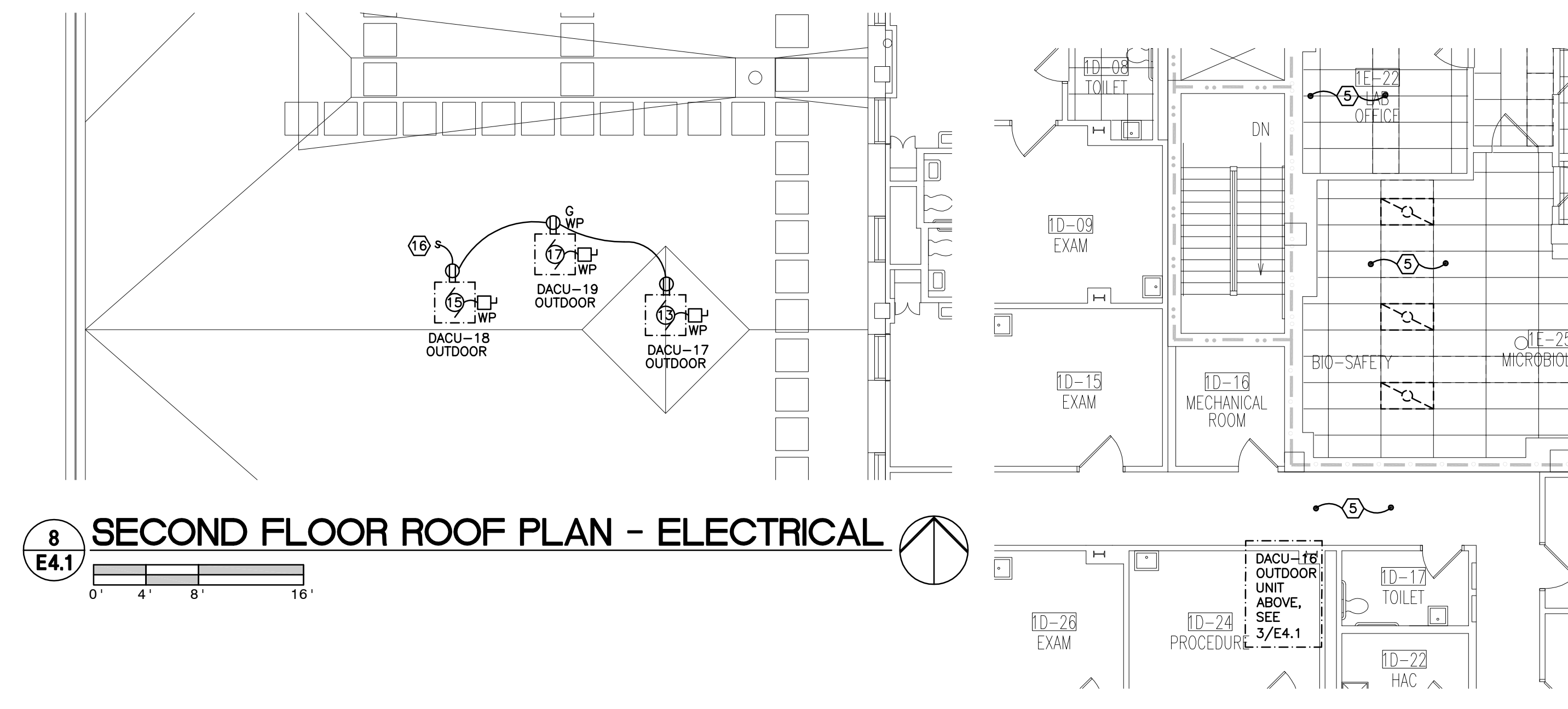
6 BC-59 AND BC-79 FLOOR PLAN - ELECTRICAL
E4.1



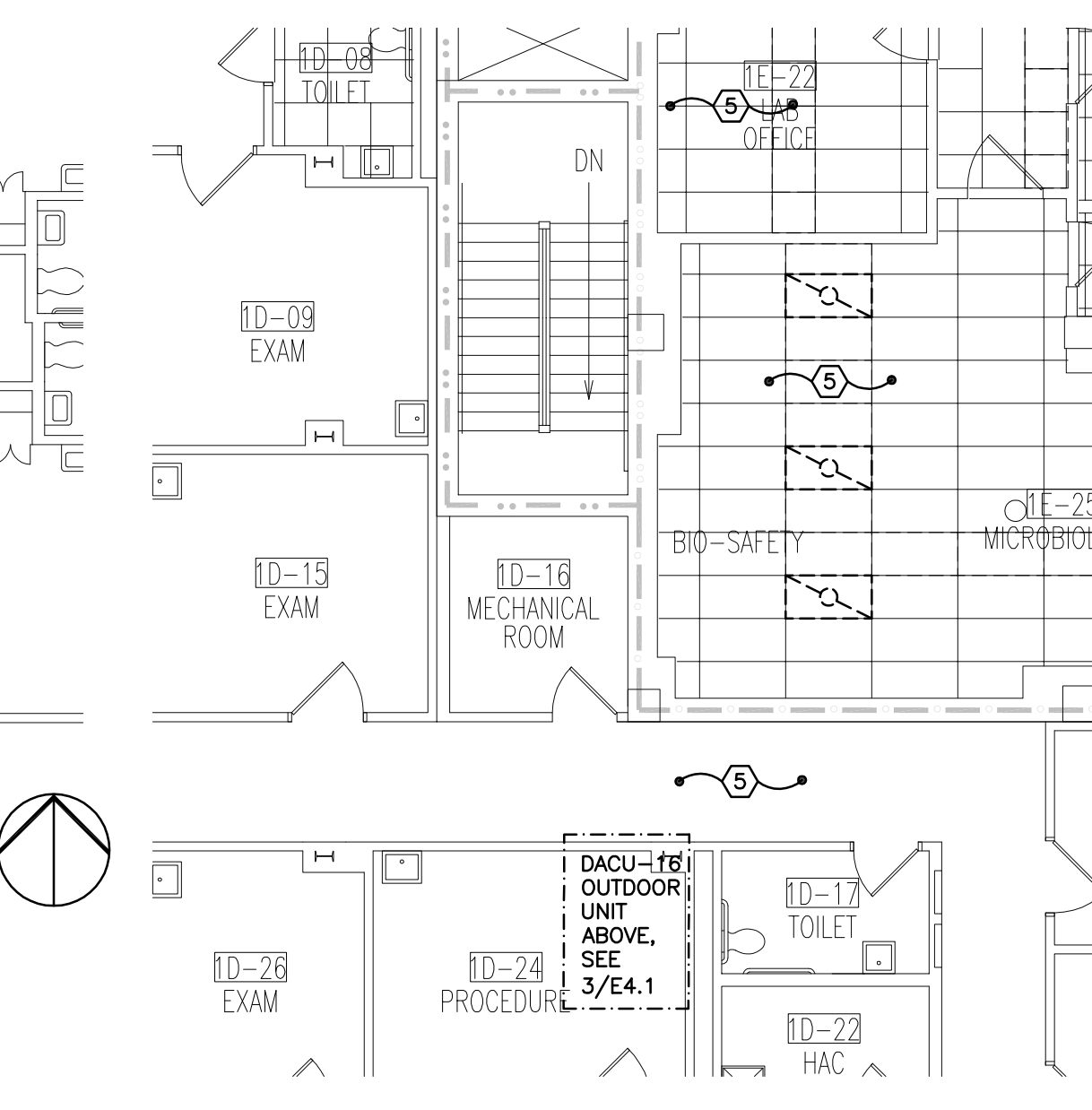
7 BE-09 FLOOR PLAN - ELECTRICAL
E4.1



5 FIRST FLOOR WORKROOM - ELECTRICAL
E4.1



8 SECOND FLOOR ROOF PLAN - ELECTRICAL
E4.1

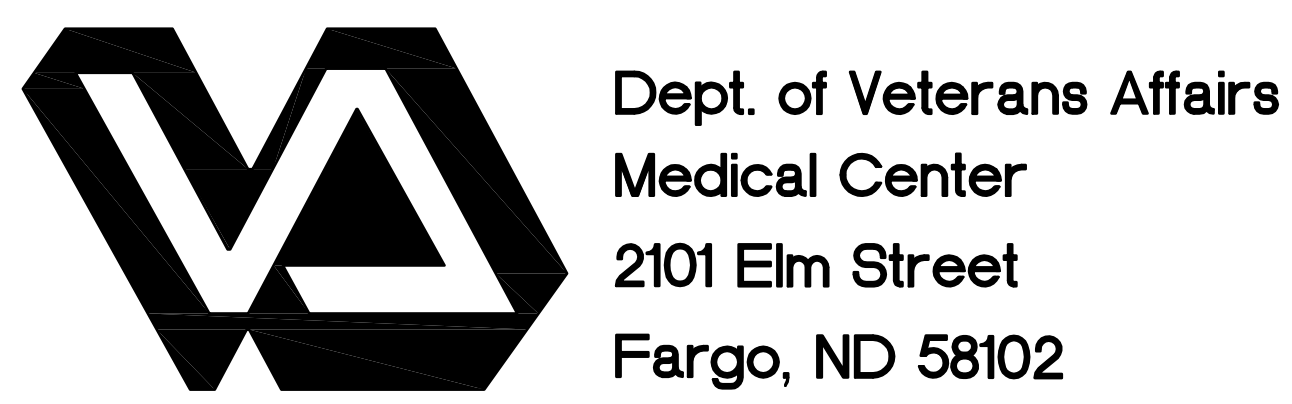


9 FIRST FLOOR LAB - ELECTRICAL
E4.1

- PLAN NOTES:**
- REMOVE CONNECTIONS TO EXISTING AHU AT THIS LOCATION. REMOVE EXISTING VFDs, STARTERS TRANSFORMERS, DISCONNECTS ETC AND ASSOCIATED WIRING.
 - REMOVE CONNECTIONS TO EXISTING FAN AT THIS LOCATION, INCLUDING ASSOCIATED DISCONNECTS, STARTERS ETC.
 - PROVIDE DATA JACK FOR DDC PANEL. ROUTE TO NEAREST IRM CLOSET AND TERMINATE.
 - REMOVE EXISTING PUMP AND ASSOCIATED DISCONNECTS, WIRING AND CONDUIT. REMOVE EXISTING STARTER MOUNTED IN MCCB-1.
 - REMOVE EXISTING LIGHT FIXTURES, SPEAKERS, ACCESS POINTS, FIRE ALARM DEVICES ETC AND REINSTALL AS REQUIRED TO ACCOMMODATE INSTALLATION OF NEW MECHANICAL EQUIPMENT IN THIS AREA. COORDINATE WITH MECHANICAL CONTRACTOR.
 - ALL WORK ASSOCIATED WITH REMOVAL OF EXISTING AHU #7 AND INSTALLATION OF NEW AHU #7 AND ASSOCIATED CONTROLS SHALL BE DELETED UNDER DEDUCT ALTERNATE.
 - REMOVE EXISTING CONNECTIONS TO AHU INCLUDING ALL ASSOCIATED STARTERS, DISCONNECTS, VFDs, AND 480V TRANSFORMERS. CONNECT NEW AHU SUPPLY FAN WALL TO SWBD VIA VFD WITH BREAKER SIZED AS INDICATED. SEE MOTOR AND EQUIPMENT SCHEDULE FOR OTHER REQUIREMENTS.
 - REMOVE EXISTING CONNECTIONS TO AHU INCLUDING ALL ASSOCIATED STARTERS, DISCONNECTS, VFDs, AND 480V TRANSFORMERS. CONNECT NEW AHU SUPPLY FAN WALL TO SWBD VIA VFD WITH BREAKER SIZED AS INDICATED. SEE MOTOR AND EQUIPMENT SCHEDULE FOR OTHER REQUIREMENTS.
 - NEW SUPPLY FAN FURNISHED WITH FACTORY INSTALLED VFD AND FACTORY WIRING BETWEEN FAN WALL AND VFD. ELECTRICAL CONTRACTOR SHALL PROVIDE SINGLE POINT CONNECTION TO UNIT.
 - PARALLEL RUNS WITH (3) 3/0 AND #3 GND IN 2" CONDUIT.
 - REMOVE EXISTING VFD, INSTALL NEW IN SAME LOCATION. EXTEND CONTROL WIRING AND CONDUIT AS REQUIRED.
 - ADD 80A/3P BREAKER IN 10EB FOR DACU-16 INDOOR UNIT CONNECTIONS, AND 30A/3P BREAKER FOR DACU-16 OUTDOOR UNIT CONNECTION.
 - ADD NEW 225A PANEL. SEE ELECTRICAL ONE LINE DIAGRAM AND PANEL SCHEDULE FOR ADDITIONAL INFORMATION. EXTEND EXISTING PLYWOOD BACKBOARD AS REQUIRED. PAINT TO MATCH.
 - ADD 400A/3P BREAKER AND 90A/3P BREAKER TO EXISTING MCC FOR AHU-2 CONNECTIONS.
 - PROVIDE NEW 20A/1P BREAKER FOR PANEL INDICATED.
 - TO NEAREST AVAILABLE 120V NORMAL POWER RECEPTACLE CIRCUIT.
 - REMOVE AND REINSTALL EXISTING LIGHTS, SPEAKERS, ACCESS POINTS, ETC FOR REMOVAL OF CEILING GRID AND INSTALLATION OF HVAC EQUIPMENT IN THIS AREA.
 - EXTEND EXISTING SUPPLY FAN WIRING AND CONDUIT AS REQUIRED FOR TEMPORARY FAN CONNECTION DURING CONSTRUCTION. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT PLACEMENT. REMOVE CONNECTION IN ITS ENTIRETY AFTER NEW UNIT IS INSTALLED.
 - ADD NEW 100A/3P BREAKER AND 50A/3P BREAKER TO EXISTING PANEL FOR AHU-7 FAN CONNECTIONS.
 - REMOVE EXISTING DUCT DETECTORS AND PROVIDE NEW DUCT SMOKE DETECTOR WITH FAN SHUTDOWN RELAY IN SUPPLY AND RETURN DUCT. FIELD COORDINATE EXACT MOUNTING LOCATION WITH MECHANICAL CONTRACTOR. EXTEND EXISTING FIRE ALARM WIRING AS REQUIRED FOR NEW DUCT DETECTOR INSTALLATION.
 - EXISTING SUSPENDED FIXTURE APPROXIMATELY 3 FEET TO ACCOMMODATE INSTALLATION OF NEW COOLING UNIT. EXTEND EXISTING WIRING AND CONDUIT AS REQUIRED. REATTACH TO STRUCTURE ABOVE. FIELD COORDINATE FINAL LOCATION WITH EXISTING EQUIPMENT, STRUCTURE ETC.
 - NEW 5 HP VFDs WITH INTEGRAL DISCONNECT SHALL BE MOUNTED IN EXISTING MCC. REMOVE EXISTING SPARE BUCKETS AND EXISTING STARTERS AS REQUIRED FOR INSTALLATION. DIVISION 26 TO FURNISH AND INSTALL THESE VFDs.
 - EXISTING ALLEN-BRADLEY CENTERLINE SERIES MCC. ADD (2) 40A/3P BREAKERS IN EXISTING MCC FOR NEW PUMPS M-CWP-6 AND M-CWP-7. REMOVE EXISTING SPARE BUCKETS AS REQUIRED.
 - RELOCATE EXISTING WALL MOUNTED JUNCTION BOX AND ASSOCIATED BRANCH CIRCUIT WIRING AND CONDUIT TO ACCOMMODATE NEW DUCT INSTALLATION.
 - RELOCATE (2) EXISTING 3/4" CONDUITS AND ASSOCIATED ELECTRICAL WIRING TO ACCOMMODATE NEW DUCT INSTALLATION.
 - RELOCATE EXISTING CEILING MOUNTED JUNCTION BOX APPROXIMATELY 3 FEET TO ACCOMMODATE NEW DUCT. REROUTE AND EXTEND EXISTING WIRING AS REQUIRED.
 - 3/4" CONDUIT STUBBED INTO CEILING FROM EXISTING DATA JACK TO BE SHORTENED TO ALLOW INSTALLATION OF NEW DUCT. REMOVE AND REINSTALL DATA CABLING AS NECESSARY.
 - PROVIDE NEW 400A PANEL. SEE ONE LINE DIAGRAM AND PANEL SCHEDULES FOR ADDITIONAL INFORMATION.

GENERAL NOTES:

- PHASING OF DEMOLITION OF EXISTING EQUIPMENT AND INSTALLATION OF NEW EQUIPMENT SHALL BE CLOSELY COORDINATED WITH THE OWNER AND THE MECHANICAL CONTRACTOR PRIOR TO BEGINNING WORK. SHUTDOWN OF EXISTING MECHANICAL EQUIPMENT AND SWITCHOVER TO NEW EQUIPMENT WORK WILL OCCUR AFTER REGULAR OPERATING HOURS AND ON WEEKENDS.
- TEMPORARY FAN CONNECTIONS FOR AIR HANDLING UNITS WILL BE REQUIRED AS NOTED ON THE DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL EXTEND EXISTING CIRCUITRY OR PROVIDE NEW AS NECESSARY FOR TEMPORARY POWER. THEN REMOVE THE CONNECTION IN ITS ENTIRETY UPON INSTALLATION OF THE NEW EQUIPMENT.
- DEVICES SHOWN WITH HATCHING ON THIS PLAN SHALL BE DEMOLISHED AND WIRING REMOVED TO THEIR SOURCE UNLESS NOTED OTHERWISE. THIS INCLUDES ALL EXISTING WIRING, CONDUIT, STARTERS, DISCONNECTS, VFDs ETC.
- THE ELECTRICAL CONTRACTOR SHALL BE REQUIRED TO REMOVE AND REINSTALL EXISTING LIGHT FIXTURES, WIRELESS ACCESS POINTS, SPEAKERS, FIRE ALARM DEVICES, RTLS EQUIPMENT ETC WHERE CEILINGS ARE BEING REMOVED AND REINSTALLED TO ACCOMMODATE INSTALLATION OF NEW MECHANICAL AND ELECTRICAL PIPING, DUCTWORK, CONDUIT ETC. AREAS OF CEILING REMOVAL SHOWN ON THE DRAWINGS ARE BASED ON PLANNED ROUTING. ACTUAL ROUTING WILL BE COORDINATED WITH EXISTING FIELD CONDITIONS.
- PROVIDE TEMPORARY SUPPORT AMY WIRING SYSTEMS DISTURBED BY REMOVAL OF EXISTING CEILINGS.



Drawing Title BASEMENT, PENTHOUSE AND ROOF FLOOR PLANS		Project Title REPLACE OR UPGRADE HVAC SYSTEM COMPONENTS		Date SEPT. 14, 2016
Project Phase PHASE 4		Designed By CH		Checked By MB
VA Project No. 437-13-111	Contract No. VA263-P-1218	AutoCAD File Name VA263-C-	Location FARGO VA HEALTHCARE SYSTEM FARGO, NORTH DAKOTA	Scale AS NOTED
Building No. VAMC CAMPUS	AutoCAD File Name 13-080 EALDWO	Location FARGO VA HEALTHCARE SYSTEM FARGO, NORTH DAKOTA	Drawn By CH	Drawing No. E4.1
KEY PLAN				Dwg. 62 of 66

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