



CHARLOTTESVILLE ALBEMARLE AIRPORT AUTHORITY MECHANICAL SYSTEMS UPGRADE

100 BOWEN LOOP, SUITE 200
CHARLOTTESVILLE, VA 22911

ISSUED FOR BID

05/10/24

AEC PROJECT NUMBER
20541812009

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VICINITY MAP
N.T.S.



LOCATION MAP
N.T.S.

RS&H

2600 Park Tower Dr. Suite 101
Vienna, Virginia 22180
Phone: 703-549-2472
www.rsandh.com
Virginia Registration Nos.
0407-003171 / 0411-000438

REVISIONS		
NO.	DESCRIPTION	DATE

NOT ISSUED FOR
CONSTRUCTION

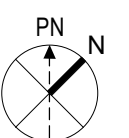
BUILDING ID: BLDG_ID

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20541812009
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SHEET ID:

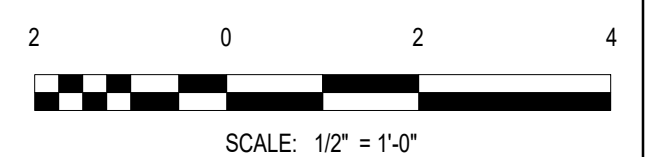
PROJECT STATUS:
ISSUED FOR BID



SCALE: 1/2" = 1'-0"

PUMP SCHEDULE											
MARK	NO.	LOCATION	SERVICES	TYPE	PUMP		PRESSURE DROP (FT)	MOTOR	EOM	UNIT WEIGHT	
					FLOW (GPM)	HP					
CP-1	164	BOILER ROOM	HEATING HOT WATER	CLOSE-COUPLED IN-LINE MOUNTED	85	15.0	DIRECT	0.75	1935	Yes	1.345
CP-2	164	BOILER ROOM	HEATING HOT WATER	CLOSE-COUPLED IN-LINE MOUNTED	85	15.0	DIRECT	0.75	1935	Yes	1.345
HW-1	163	MECHANICAL ROOM	HEATING HOT WATER	BASE-MOUNTED	195	15.0	DIRECT	5.00	1760	Yes	2.345
HW-2	163	MECHANICAL ROOM	HEATING HOT WATER	BASE-MOUNTED	195	15.0	DIRECT	5.00	1760	Yes	2.345

NOTES:
1. BASIS OF DESIGN: B&G MODEL 60
2. BASIS OF DESIGN: B&G MODEL #F10
3. INSTALL AS INDICATED PER MANUFACTURERS RECOMMENDATIONS PROVIDED. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
4. PROVIDE WITH VFD AND INVERTER RATED MOTOR.
5. PROVIDE STARTER/ DISCONNECT.







PROJECT TITLE:
MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS:
00 BOWEN LOOP, SUITE 200
CHARLOTTESVILLE, VA 22911

[illegible]

DATE ISSUED:	05/10/24
VIEWED BY:	SMB
AWN BY:	SMB
SIGNED BY:	SMB

PROJECT NUMBER:
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REAL:

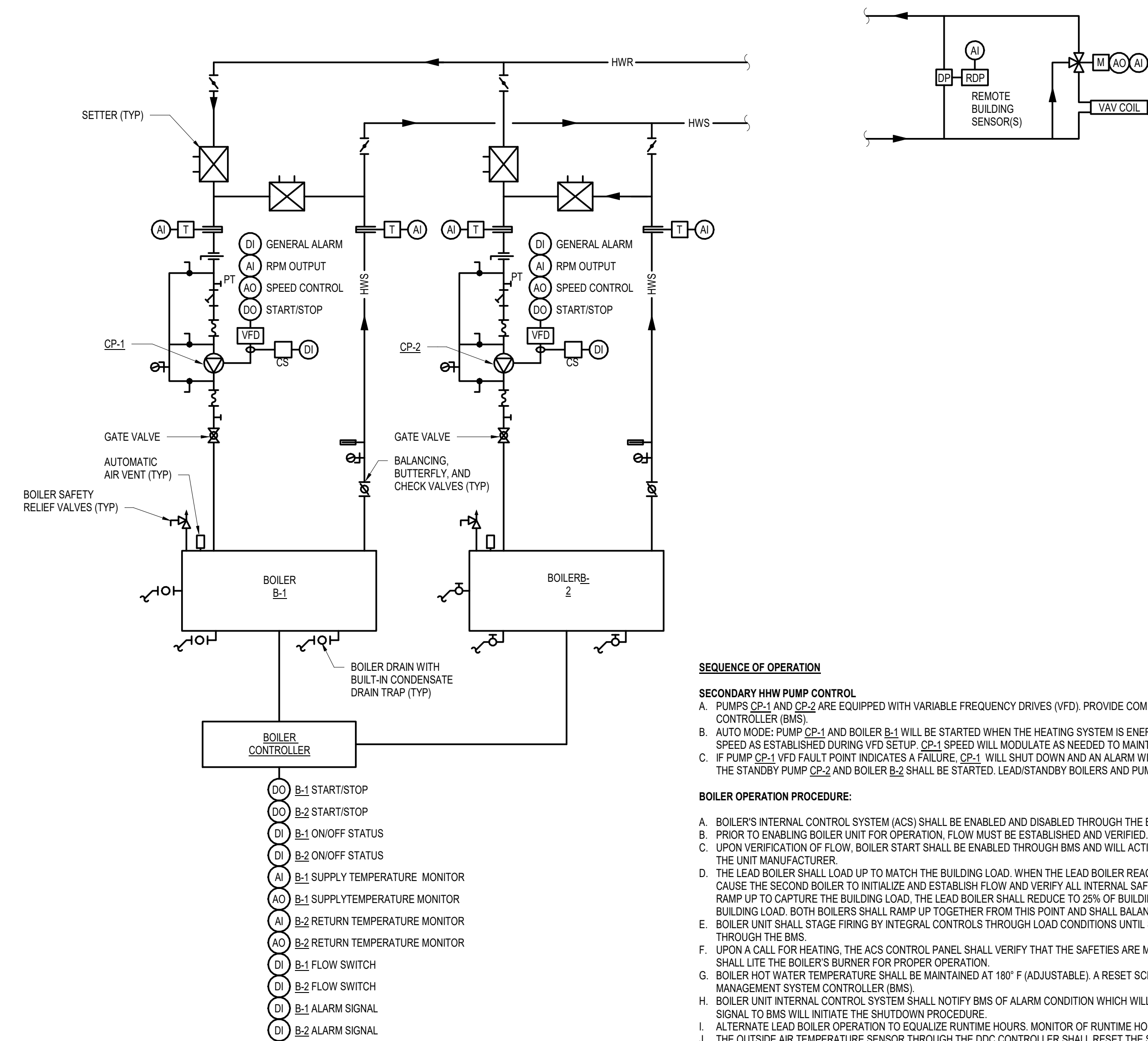
SHEET TITLE:

CONTROLS

SHEET ID:

M801

PROJECT STATUS:
ISSUED FOR BID



4.4 MT HOT WATER SYSTEM CONTROL DIAGRAM AND SEQUENCE OF OPERATION

SCALE: N.T.S.

ELECTRICAL ABBREVIATIONS			DEMOLITION LEGEND		ELECTRICAL SYMBOLS		ELECTRICAL SYMBOL NOTES		GENERAL NOTES	
A	AMPERS	HP	HORSE POWER	XD = EXISTING MUST BE REMOVED	⊖	SIMPLEX RECEPTACLE	EXIT LIGHTS: STEM INDICATES WALL MOUNTING. NO STEM INDICATES CEILING MOUNTING. SHADED AREA INDICATES ILLUMINATED FACE(S). ARROW INDICATES DIRECTIONAL ARROW ON ILLUMINATED FACE(S). THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER.	1. ALL ELECTRICAL WORK MUST COMPLY WITH NATIONAL ELECTRICAL CODE, NFPA 70, THE NATIONAL FIRE CODES, THE AMERICANS WITH DISABILITIES ACT, AND VIRGINIA BUILDING CODES.	1. ALL ELECTRICAL WORK MUST COMPLY WITH NATIONAL ELECTRICAL CODE, NFPA 70, THE NATIONAL FIRE CODES, THE AMERICANS WITH DISABILITIES ACT, AND VIRGINIA BUILDING CODES.	
	AIR CONDITIONING	HYAC	HEATING, VENTILATING & AIR CONDITIONING							
AC	ABOVE COUNTER	IC	INTERCOM	XM = EXISTING MUST BE MOVED TO NEW LOCATION	⊖	DUPLEX RECEPTACLE ABOVE COUNTER	DEVICES: THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. THE SWITCH DESIGNATION IS INDICATED BY A LOWER CASE LETTER.	2. THOROUGHLY REVIEW THE PROJECT TO ENSURE THAT ALL WORK MUST MEET OR EXCEED THE ABOVE REQUIREMENTS. ANY ALLEGED DISCREPANCIES MUST BE BROUGHT TO THE ENGINEER'S ATTENTION.	2. THOROUGHLY REVIEW THE PROJECT TO ENSURE THAT ALL WORK MUST MEET OR EXCEED THE ABOVE REQUIREMENTS. ANY ALLEGED DISCREPANCIES MUST BE BROUGHT TO THE ENGINEER'S ATTENTION.	
AC	AIR COMPRESSOR	IG	ISOLATED GROUND							
ACCU	AIR COOLED CONDENSER UNITING	IMC	INTERMEDIATE METAL CONDUIT	XN = EXISTING MUST BE REPLACED WITH NEW DEVICE IN NEW LOCATION	⊖	DUPLEX RECEPTACLE AUTOMATICALLY CONTROLLED		3. OBTAIN COPIES OF ALL RELATED PLANS, SPECIFICATIONS, SHOP DRAWINGS AND ADDENDA TO COORDINATE THE RELATED WORK AND SCHEDULING.	3. OBTAIN COPIES OF ALL RELATED PLANS, SPECIFICATIONS, SHOP DRAWINGS AND ADDENDA TO COORDINATE THE RELATED WORK AND SCHEDULING.	
ACT	ACOUSTIC CEILING TILE	IR	INFRARED							
ACU	AIR CONDITIONING UNIT	ITC	INTERCOM TERMINAL CABINET	XP = EXISTING IN RELOCATED POSITION	⊖	DUPLEX RECEPTACLE		4. THE ELECTRICAL SERVICE TO AND FOR MECHANICAL AND OTHER EQUIPMENT IS BASED ON EQUIPMENT DESIGN DATA. THE ACTUAL VALUES MAY DIFFER DEPENDING UPON THE EQUIPMENT TO BE FURNISHED. ANY MODIFICATION TO THE ELECTRICAL INSTALLATION, BASED UPON ACTUAL EQUIPMENT SELECTION, MUST RESULT IN NO ADDITIONAL COST TO THE OWNER.	4. THE ELECTRICAL SERVICE TO AND FOR MECHANICAL AND OTHER EQUIPMENT IS BASED ON EQUIPMENT DESIGN DATA. THE ACTUAL VALUES MAY DIFFER DEPENDING UPON THE EQUIPMENT TO BE FURNISHED. ANY MODIFICATION TO THE ELECTRICAL INSTALLATION, BASED UPON ACTUAL EQUIPMENT SELECTION, MUST RESULT IN NO ADDITIONAL COST TO THE OWNER.	
ADA	AMERICANS WITH DISABILITIES ACT	J	JUNCTION			DUPLEX GFIC RECEPTACLE		5. THOROUGHLY REVIEW THE ARCHITECTURAL AND MECHANICAL PLANS TO ASSURE THAT ELECTRICAL SERVICE FOR ALL ITEMS AND/OR EQUIPMENT REQUIRING ELECTRICAL SERVICE IS INCLUDED. ANY ITEM AND/OR EQUIPMENT NOT FURNISH AND INSTALLED WITH ELECTRICAL SERVICE, REQUIRING ELECTRICAL SERVICE, MUST BE BROUGHT TO THE ENGINEER'S ATTENTION.	5. THOROUGHLY REVIEW THE ARCHITECTURAL AND MECHANICAL PLANS TO ASSURE THAT ELECTRICAL SERVICE FOR ALL ITEMS AND/OR EQUIPMENT REQUIRING ELECTRICAL SERVICE IS INCLUDED. ANY ITEM AND/OR EQUIPMENT NOT FURNISH AND INSTALLED WITH ELECTRICAL SERVICE, REQUIRING ELECTRICAL SERVICE, MUST BE BROUGHT TO THE ENGINEER'S ATTENTION.	
ADAAG	AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES	JB	JUNCTION BOX	XS = EXISTING MUST BE REPLACED WITH NEW DEVICE IN SAME LOCATION	⊖			6. MECHANICAL, FIRE PROTECTION AND ELECTRICAL EQUIPMENT HAVE BEEN LOCATED AND ARRANGED TO MINIMIZE THE INTERFERENCES OF EQUIPMENT AND STRUCTURE. THOROUGHLY FAMILIARIZE ONESELF WITH THE WORK TO BE PERFORMED BY OTHER TRADES AND THE PHYSICAL CHARACTERISTICS OF THE STRUCTURE IN ORDER TO SCHEDULE AND INSTALL EQUIPMENT AND TO MINIMIZE POSSIBLE INTERFERENCE. FAILURE TO PROPERLY COMMUNICATE AND SCHEDULE WORK WITH OTHER TRADES THAT RESULTS IN ADDITIONAL WORK AND MATERIAL MUST BE THE RESPONSIBILITY OF THE CONTRACTOR. THE MODIFICATIONS REQUIRED TO RESOLVE THE CONFLICT MUST BE DECIDED BY THE ENGINEER.		
AF	AMP FUSE	KAC	THOUSANDS OF CIRCULAR MILS		⊖	DUPLEX RECEPTACLE MOUNTED @ SPECIFIC HEIGHT		7. ALL PANELBOARDS MUST BE FURNISH AND INSTALLED WITH A TYPEWRITTEN SCHEDULE SHOWING CIRCUIT NUMBERS AND A COMPLETE DESCRIPTION OF EACH CIRCUIT, INCLUDING OFFICIAL ROOM NUMBER.	7. ALL PANELBOARDS MUST BE FURNISH AND INSTALLED WITH A TYPEWRITTEN SCHEDULE SHOWING CIRCUIT NUMBERS AND A COMPLETE DESCRIPTION OF EACH CIRCUIT, INCLUDING OFFICIAL ROOM NUMBER.	
AFD	ARC FAULT CIRCUIT INTERRUPTER	KO	KNOCK OUT	NOTE 1: EXISTING ITEMS NOT SHOWN MUST REMAIN.		DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT		8. ALL LIGHT SWITCHES AND DUPLEX RECEPTACLES MUST BE RATED FOR 20 AMPERES AT 120/277 VOLTS AC. WIRING DEVICES MUST BE SPECIFICATION GRADE.	8. ALL LIGHT SWITCHES AND DUPLEX RECEPTACLES MUST BE RATED FOR 20 AMPERES AT 120/277 VOLTS AC. WIRING DEVICES MUST BE SPECIFICATION GRADE.	
AFD	ADJUSTABLE FREQUENCY DRIVE	KVA	KILOVOLT-AMPERES	⊖	DOUBLE DUPLEX RECEPTACLE		9. ALL ELECTRICAL WIRING DEVICES INDICATED TO BE INSTALLED IN MASONRY WALLS OR FLOORS MUST BE FLUSH MOUNTED, INCLUDING BRANCH CIRCUIT PANELBOARDS, UNLESS THE CONDUITS TO ASSOCIATED ELECTRICAL EQUIPMENT MUST BE CONCEALED IN WALLS OR FLOOR.	9. ALL ELECTRICAL WIRING DEVICES INDICATED TO BE INSTALLED IN MASONRY WALLS OR FLOORS MUST BE FLUSH MOUNTED, INCLUDING BRANCH CIRCUIT PANELBOARDS, UNLESS THE CONDUITS TO ASSOCIATED ELECTRICAL EQUIPMENT MUST BE CONCEALED IN WALLS OR FLOOR.		
AFI	ADJUSTABLE FREQUENCY DRIVE	KW	KILOWATT		⊖	DOUBLE DUPLEX RECEPTACLE AUTOMATICALLY CONTROLLED		10. ALL CONDUIT RUNS MUST BE CONCEALED, UNLESS THE CONDUITS TO ASSOCIATED ELECTRICAL EQUIPMENT MUST BE CONCEALED IN WALLS OR FLOOR.	10. ALL CONDUIT RUNS MUST BE CONCEALED, UNLESS THE CONDUITS TO ASSOCIATED ELECTRICAL EQUIPMENT MUST BE CONCEALED IN WALLS OR FLOOR.	
AFG	ABOVE FINISHED GRADE	LBS	LOAD BREAK SWITCH		⊖	DOUBLE DUPLEX RECEPTACLE MOUNTED @ SPECIFIC HEIGHT & NEMA TYPE		11. FURNISH THE AIR CONDITIONING SUBCONTRACTOR AND THE CEILING SUBCONTRACTOR COPIES OF APPROVED LUMINAIRE SHOP DRAWINGS.	11. FURNISH THE AIR CONDITIONING SUBCONTRACTOR AND THE CEILING SUBCONTRACTOR COPIES OF APPROVED LUMINAIRE SHOP DRAWINGS.	
AHU	AIR HANDLING UNIT	LC	LIGHTING CONTACTOR			DUPLEX RECEPTACLE IN FLOOR BOX		12. ALL SPECIAL PURPOSE OUTLETS MUST BE FURNISHED AND INSTALLED TO MATCH EQUIPMENT TO BE SUPPLIED.	12. ALL SPECIAL PURPOSE OUTLETS MUST BE FURNISHED AND INSTALLED TO MATCH EQUIPMENT TO BE SUPPLIED.	
AIC	AMPS INTERRUPTING CURRENT	LED	LIGHT EMITTING DIODE	⊖	DOUBLE DUPLEX RECEPTACLE IN FLOOR BOX		13. ALL CONDUITS MUST INCLUDE A SEPARATE GREEN EQUIPMENT GROUNDING CONDUCTOR.	13. ALL CONDUITS MUST INCLUDE A SEPARATE GREEN EQUIPMENT GROUNDING CONDUCTOR.		
AIR	AMPERE INTERRUPTING RATING	LSI	LONG TIME, SHORT TIME, INSTANTANEOUS	⊖	DOUBLE DUPLEX RECEPTACLE CEILING MOUNTED		14. ANY EXISTING UTILITIES LOCATED IN THE AREA OF CONSTRUCTION THAT REQUIRE RELOCATION OR TIE-IN MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE. PROVIDE 72 HOUR ADVANCE NOTICE.	14. ANY EXISTING UTILITIES LOCATED IN THE AREA OF CONSTRUCTION THAT REQUIRE RELOCATION OR TIE-IN MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE. PROVIDE 72 HOUR ADVANCE NOTICE.		
AL	ALUMINUM	LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS, GROUND FAULT		⊖	SINGLE POLE MANUAL MOTOR SWITCH		15. ALL DISCONNECT SWITCHES MUST BE THE HEAVY DUTY TYPE, FUSED DISCONNECTS MUST HAVE LITTLE FUSE TIME DELAY, CLASS RK5 AND INDICATING CLASS RK5.	15. ALL DISCONNECT SWITCHES MUST BE THE HEAVY DUTY TYPE, FUSED DISCONNECTS MUST HAVE LITTLE FUSE TIME DELAY, CLASS RK5 AND INDICATING CLASS RK5.	
AMP	AMPERE	LT	LIGHT		⊖	SINGLE POLE THERMAL ELEMENT SWITCH		16. CHECK THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND/OR DIMENSIONS FOR INSTALLATION OF ALL ELECTRICAL ITEMS. ALL QUESTIONABLE LOCATIONS MUST BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.	16. CHECK THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND/OR DIMENSIONS FOR INSTALLATION OF ALL ELECTRICAL ITEMS. ALL QUESTIONABLE LOCATIONS MUST BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.	
AMS	ACCESS MANAGEMENT SYSTEM	LTG	LIGHTING		⊖	JUNCTION BOX CEILING MOUNTED		17. ALL EMPTY CONDUITS MUST CONTAIN JET LINE #232 POLYOLEFIN 200 LB. TEST PULL STRING.	17. ALL EMPTY CONDUITS MUST CONTAIN JET LINE #232 POLYOLEFIN 200 LB. TEST PULL STRING.	
AP	ACCESS PANEL	LTX	LIGHTING		⊖	JUNCTION BOX IN FLOOR		18. ALL WORK SHOWN ON THE ELECTRICAL PLANS MUST BE PERFORMED BY THE CONTRACTOR, UNLESS THE CONDUITS TO ASSOCIATED ELECTRICAL EQUIPMENT MUST BE CONCEALED IN WALLS OR FLOOR.	18. ALL WORK SHOWN ON THE ELECTRICAL PLANS MUST BE PERFORMED BY THE CONTRACTOR, UNLESS THE CONDUITS TO ASSOCIATED ELECTRICAL EQUIPMENT MUST BE CONCEALED IN WALLS OR FLOOR.	
APU	AUXILIARY POWER UNIT	LTX	LIGHTING		⊖	DISCONNECT SWITCH FUSED		19. ALL SURGE PROTECTED OUTLETS MUST BE EQUAL TO HUBBELL #532.	19. ALL SURGE PROTECTED OUTLETS MUST BE EQUAL TO HUBBELL #532.	
AS	AIR COOLED CONDENSER UNITING	MCA	MINIMUM CIRCUIT AMPACITY		⊖	DISCONNECT SWITCH NON-FUSED		20. EQUIPMENT INSTALLED WITHIN CONCEALED SPACES MUST HAVE REASONABLE ACCESS PANELS FURNISH AND INSTALLED NEARBY FOR INSPECTION, TESTING, AND SERVICE CONSIDERATIONS. LOCATION OF ACCESS PANELS PER APPROVAL OF ARCHITECT.	20. EQUIPMENT INSTALLED WITHIN CONCEALED SPACES MUST HAVE REASONABLE ACCESS PANELS FURNISH AND INSTALLED NEARBY FOR INSPECTION, TESTING, AND SERVICE CONSIDERATIONS. LOCATION OF ACCESS PANELS PER APPROVAL OF ARCHITECT.	
ATFP	ANTITERRORISM/FORCE PROTECTION	MCB	MAIN CIRCUIT BREAKER		⊖	COMBINATION MOTOR STARTER FUSED		21. WHERE CABLES OR CONDUITS ARE REQUIRED TO PASS THROUGH A FIRE RATED WALL, FLOOR, OR CEILING THEY MUST BE SEALED WITH FIRESTOP. THE APPROVED FIRESTOP METHOD MUST COMPLY WITH ARTICLES 300.21 OF NEC AND MUST BE UL LISTED UNDER "THROUGH-PENETRATION FIRESTOP SYSTEM (XHE27) IN UL FIRE RESISTANCE DIRECTORY. ALL UNSPRINKLED FACILITIES MUST BE CONSIDERED TO HAVE INTERIOR CORRIDORS WITH FIRE RATED WALLS, UNLESS ANY PENETRATION THROUGH THESE WALLS AND OTHER FIRE RATED WALLS MUST BE SEALED WITH FIRESTOP. FURNISH AND INSTALL MINIMUM 1" EMT THROUGH WALL PENETRATIONS.	21. WHERE CABLES OR CONDUITS ARE REQUIRED TO PASS THROUGH A FIRE RATED WALL, FLOOR, OR CEILING THEY MUST BE SEALED WITH FIRESTOP. THE APPROVED FIRESTOP METHOD MUST COMPLY WITH ARTICLES 300.21 OF NEC AND MUST BE UL LISTED UNDER "THROUGH-PENETRATION FIRESTOP SYSTEM (XHE27) IN UL FIRE RESISTANCE DIRECTORY. ALL UNSPRINKLED FACILITIES MUST BE CONSIDERED TO HAVE INTERIOR CORRIDORS WITH FIRE RATED WALLS, UNLESS ANY PENETRATION THROUGH THESE WALLS AND OTHER FIRE RATED WALLS MUST BE SEALED WITH FIRESTOP. FURNISH AND INSTALL MINIMUM 1" EMT THROUGH WALL PENETRATIONS.	
ATR	ALL THREADED ROD	MCC	MOTOR CONTROL CENTER		⊖	PUSH BUTTON		22. SPARE CONDUITS, WIREWAYS, AND CABLE TRAYS MUST BE SUPPORTED FROM BUILDING STRUCTURE AND NOT FROM OTHER PIPES, DUCTS, OR EXISTING RACKS, UNLESS THE CONDUITS TO ASSOCIATED ELECTRICAL EQUIPMENT MUST BE CONCEALED IN WALLS OR FLOOR.	22. SPARE CONDUITS, WIREWAYS, AND CABLE TRAYS MUST BE SUPPORTED FROM BUILDING STRUCTURE AND NOT FROM OTHER PIPES, DUCTS, OR EXISTING RACKS, UNLESS THE CONDUITS TO ASSOCIATED ELECTRICAL EQUIPMENT MUST BE CONCEALED IN WALLS OR FLOOR.	
ATS	AUTOMATIC TRANSFER SWITCH	MCH	MAIN HOLE		⊖	LIGHTING RELAY		23. EXTERIOR BURIED CONDUIT RUNS MUST BE MINIMUM 24" BELOW FINISHED GRADE. FURNISH AND INSTALL CAUTION TAPE 12" BELOW GRADE. FURNISH AND INSTALL (1) SPARE WITH EACH UNDERGROUND RUN. DUCT BANKS MUST BE CONCRETE ENCASED WITH LOCATION PLAQUES PLACED EVERY 50' AND BEFORE AND AFTER EVERY TURN, UNLESS THE CONDUITS TO ASSOCIATED ELECTRICAL EQUIPMENT MUST BE CONCEALED IN WALLS OR FLOOR.	23. EXTERIOR BURIED CONDUIT RUNS MUST BE MINIMUM 24" BELOW FINISHED GRADE. FURNISH AND INSTALL CAUTION TAPE 12" BELOW GRADE. FURNISH AND INSTALL (1) SPARE WITH EACH UNDERGROUND RUN. DUCT BANKS MUST BE CONCRETE ENCASED WITH LOCATION PLAQUES PLACED EVERY 50' AND BEFORE AND AFTER EVERY TURN, UNLESS THE CONDUITS TO ASSOCIATED ELECTRICAL EQUIPMENT MUST BE CONCEALED IN WALLS OR FLOOR.	
AWG	AMERICAN WIRE GAUGE	MN	MINIMUM		⊖	DISTRIBUTION TRANSFORMER		24. FURNISH AND INSTALL GROUND STRAP ACROSS ALL CABLE TRAY JOINTS. GROUND CABLE TRAY TO SERVICE GROUND WITH #10 AWG BARE COPPER.	24. FURNISH AND INSTALL GROUND STRAP ACROSS ALL CABLE TRAY JOINTS. GROUND CABLE TRAY TO SERVICE GROUND WITH #10 AWG BARE COPPER.	
BAS	BUILDING AUTOMATION SYSTEM	MLO	MAIN LUGS ONLY		⊖	AUTOMATIC TRANSFER SWITCH		25. DO NOT LOCATE ELECTRICAL OUTLETS AND DEVICES ON WALL PANEL JOINTS. REFER TO ARCHITECTURAL BUILDING ELEVATIONS FOR WALL PANEL LAYOUT AND PANEL JOINT LOCATIONS.	25. DO NOT LOCATE ELECTRICAL OUTLETS AND DEVICES ON WALL PANEL JOINTS. REFER TO ARCHITECTURAL BUILDING ELEVATIONS FOR WALL PANEL LAYOUT AND PANEL JOINT LOCATIONS.	
BCW	BARE COPPER WIRE	MNS	MASS NOTIFICATION SYSTEM		⊖	SURGE PROTECTIVE DEVICE		26. FURNISH AND INSTALL A SEPARATE NEUTRAL FOR EACH PHASE CONDUCTOR OF SINGLE POLE BRANCH CIRCUITS THAT SERVE HIGH HARMONIC LOADS, SUCH AS, BALLAST OR SWITCH MODE POWER SUPPLIES (I.E. PERSONAL COMPUTERS AND SERVERS).	26. FURNISH AND INSTALL A SEPARATE NEUTRAL FOR EACH PHASE CONDUCTOR OF SINGLE POLE BRANCH CIRCUITS THAT SERVE HIGH HARMONIC LOADS, SUCH AS, BALLAST OR SWITCH MODE POWER SUPPLIES (I.E. PERSONAL COMPUTERS AND SERVERS).	
BDCT	BUILDING DESIGN AND CONSTRUCTION TEAM	MTD	MOUNTED		⊖	ELECTRONIC WALL CLOCK		27. RACEWAYS INSTALLED IN OUTDOOR LOCATIONS MUST BE HOT DIPPED GALVANIZED, AT MINIMUM, FOR CORROSION RESISTANCE. FOR HIGHLY CORROSIVE ENVIRONMENTS, SUCH AS COASTAL AREAS, ALUMINUM, STAINLESS STEEL, OR PVC COATED RACEWAYS MUST BE REQUIRED.	27. RACEWAYS INSTALLED IN OUTDOOR LOCATIONS MUST BE HOT DIPPED GALVANIZED, AT MINIMUM, FOR CORROSION RESISTANCE. FOR HIGHLY CORROSIVE ENVIRONMENTS, SUCH AS COASTAL AREAS, ALUMINUM, STAINLESS STEEL, OR PVC COATED RACEWAYS MUST BE REQUIRED.	
BFG	BELOW FINISHED GRADE	MTS	MANUAL TRANSFER SWITCH		⊖	RECEPTACLE ON DROP CORD		28. POWER CHANGE EXPENSES RESULTING FROM EQUIPMENT SUBSTITUTIONS THAT DIFFER FROM ITEMS CALLED FOR IN DRAWINGS OR SPECIFICATIONS MUST BE BORNE BY THE CONTRACTOR OR THEIR SUB. THESE MUST INCLUDE CHANGES IN VOLTAGE OR FULL LOAD AMP RESULTING IN LARGER FEEDERS AND OR CIRCUIT BREAKERS.	28. POWER CHANGE EXPENSES RESULTING FROM EQUIPMENT SUBSTITUTIONS THAT DIFFER FROM ITEMS CALLED FOR IN DRAWINGS OR SPECIFICATIONS MUST BE BORNE BY THE CONTRACTOR OR THEIR SUB. THESE MUST INCLUDE CHANGES IN VOLTAGE OR FULL LOAD AMP RESULTING IN LARGER FEEDERS AND OR CIRCUIT BREAKERS.	
BHS	BAGGAGE HANDLING SYSTEM	MUFID	MULTI-USER FLIGHT INFORMATION DISPLAY		⊖	RECEPTACLE ON CORD REEL		29. COORDINATE FINAL ELECTRICAL DEVICE AND LUMINAIRE LOCATIONS WITH FINAL SPRINKLER HEAD LOCATIONS TO COMPLY WITH NFPA REQUIREMENTS.	29. COORDINATE FINAL ELECTRICAL DEVICE AND LUMINAIRE LOCATIONS WITH FINAL SPRINKLER HEAD LOCATIONS TO COMPLY WITH NFPA REQUIREMENTS.	
BID	BAGGAGE INFORMATION DISPLAY	N	NEUTRAL		⊖			30. ALL EXISTING ELECTRICAL DEVICES THAT ARE NOT SHOWN ARE EXISTING TO REMAIN, UNLESS THE CONDUITS TO ASSOCIATED ELECTRICAL EQUIPMENT MUST BE CONCEALED IN WALLS OR FLOOR.	30. ALL EXISTING ELECTRICAL DEVICES THAT ARE NOT SHOWN ARE EXISTING TO REMAIN, UNLESS THE CONDUITS TO ASSOCIATED ELECTRICAL EQUIPMENT MUST BE CONCEALED IN WALLS OR FLOOR.	
BTS	BEAM TRANSPORT SYSTEM	N	NORTH		⊖			31. COORDINATE WITH DIVISION 23 FOR DISCONNECT REQUIREMENTS ON MECHANICAL EQUIPMENT. REFER TO MECHANICAL EQUIPMENT SCHEDULES FOR INFORMATION. FURNISH AND INSTALL DISCONNECTS FOR THOSE DEVICES THAT DO NOT COME WITH FACTORY INSTALLED DISCONNECTS.	31. COORDINATE WITH DIVISION 23 FOR DISCONNECT REQUIREMENTS ON MECHANICAL EQUIPMENT. REFER TO MECHANICAL EQUIPMENT SCHEDULES FOR INFORMATION. FURNISH AND INSTALL DISCONNECTS FOR THOSE DEVICES THAT DO NOT COME WITH FACTORY INSTALLED DISCONNECTS.	
C	CONDUIT	N/A	NOT APPLICABLE		⊖			32. BEFORE INITIATING ANY UNDERGROUND WORK, LOCATE ALL UTILITIES.	32. BEFORE INITIATING ANY UNDERGROUND WORK, LOCATE ALL UTILITIES.	
CAT8	CATEGORY 8 ETHERNET CABLE	NAC	NOTIFICATION APPLIANCE CIRCUIT		⊖			33. RAMP LEVEL CONDUIT INSTALLED IN UNCONDITIONED AIR SPACE MUST BE RMC WITH COMPRESSION FITTINGS. CONDUIT LEAVING TENANT SPACE MUST BE 1" LABELED BEFORE AND AFTER THE WALL PENETRATED BY THE CONDUIT. 2) LABELED EVERY 50' OR ON EVERY 90 DEGREE TURN. LABEL MUST BE 1 1/2" LABEL TAPE IDENTIFYING THE ORIGIN AND DESTINATION (ROOM NAME AND NUMBER), CIRCUIT NUMBER AND SYSTEM NAME.	33. RAMP LEVEL CONDUIT INSTALLED IN UNCONDITIONED AIR SPACE MUST BE RMC WITH COMPRESSION FITTINGS. CONDUIT LEAVING TENANT SPACE MUST BE 1" LABELED BEFORE AND AFTER THE WALL PENETRATED BY THE CONDUIT. 2) LABELED EVERY 50' OR ON EVERY 90 DEGREE TURN. LABEL MUST BE 1 1/2" LABEL TAPE IDENTIFYING THE ORIGIN AND DESTINATION (ROOM NAME AND NUMBER), CIRCUIT NUMBER AND SYSTEM NAME.	
CATV	COMMUNITY ANTENNA TELEVISION	NE	NORTH ENTRANCE		⊖					
CB	CIRCUIT BREAKER	NEC	NATIONAL ELECTRICAL CODE		⊖					
CC	CRANE CONTROL	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC		⊖					
CCP	CONCRETE CAMERA POLE	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION		⊖					
CCTV	CLOSED CIRCUIT TELEVISION	NIC	NOT IN CONTRACT		⊖					
CE	COMMUNICATIONS ENCLOSURE	NL	NIGHT LIGHT		⊖					
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	NO	NUMBER		⊖					
CFL	COMPACT FLUORESCENT	NTS	NOT TO SCALE		⊖					
CH	CHILLER	O.C.	ON CENTER		⊖					
CHT	CIRCUIT	OAE	OR APPROVED EQUAL		⊖					
CLP	CONCRETE LIGHT POLE	QAHU	OUTSIDE AIR HANDLING UNIT		⊖					
CMH	COMMUNICATIONS MANHOLE	OH	OVERHEAD		⊖					
CMU	CONCRETE MASONRY UNIT	OS	OCCUPANCY SENSOR		⊖					
CMTRL	CONTROLLER	P	PHASE		⊖					
CO	CONDUIT ONLY	PBB	PASSENGER BOARDING BRIDGE		⊖					
COMM	COMMUNICATION	PBX	PRIVATE BRANCH EXCHANGE		⊖					
CONC	CONCRETE	PCHWP	PRIMARY CHILLED WATER PUMP		⊖					
CP	CONSOLIDATION POINT	PIV	POST INDICATOR VALVE		⊖					
CR	CARD READER	PNEU	PNEUMATIC		⊖					
CRU	COMPUTER ROOM UNIT	PNL	PANELBOARD		⊖					
CT	COOLING TOWER	PNL	PANEL		⊖					
CT	CURRENT TRANSFORMER	POE	POWER OVER ETHERNET		⊖					
CTWP	COOLING TOWER WATER PUMP	PP	POWER PANEL		⊖					
CJ	COPPER	PS	PRESSURE SWITCH		⊖					
CUB	CENTRAL UTILITIES BUILDING	PT	POTENTIAL TRANSFORMER							



PROJECT TITLE:
MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS:
100 BOWEN LOOP, SUITE 200
CHARLOTTESVILLE, VA 22911

REVISIONS

[illegible]

TE ISSUED: 05/10/2024

VIEWED BY: SVS

DRAWN BY: STS

SIGNED BY: _____ STS _____

PROJECT NUMBER:

20541812009
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SEAL:

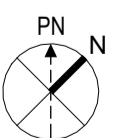
SHEET TITLE:

OVERALL FIRST
FLOOR ELECTRICAL
DEMOLITION PLAN

SHEET ID:

ED101

PROJECT STATUS:
ISSUED FOR BID



1

OVERALL FIRST FOOR ELECTRICAL DEMOLITION PLAN

SCALE: 1/16" = 1'-0"



SCALE: 1" = 1'-0"



PROJECT TITLE:
MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS:
100 BOWEN LOOP, SUITE 200
CHARLOTTESVILLE, VA 22911

REVISIONS

[illegible]

TE ISSUED: 05/10/2024

VIEWED BY: SVS

DRAWN BY: STS

SIGNED BY: _____ STS

PROJECT NUMBER:
20541812009
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SEAL:

SHEET TITLE:

ENLARGED FIRST
FLOOR ELECTRICAL
DEMOLITION PLAN

SHEET ID:

ED401

PROJECT STATUS:
ISSUED FOR BID

DEMOLITION LEGEND

XD = EXISTING MUST BE REMOVED

XM = EXISTING MUST BE MOVED TO NEW LOCATION

XN = EXISTING MUST BE REPLACED WITH NEW DEVICE IN NEW LOCATION

XP = EXISTING IN RELOCATED POSITION

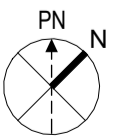
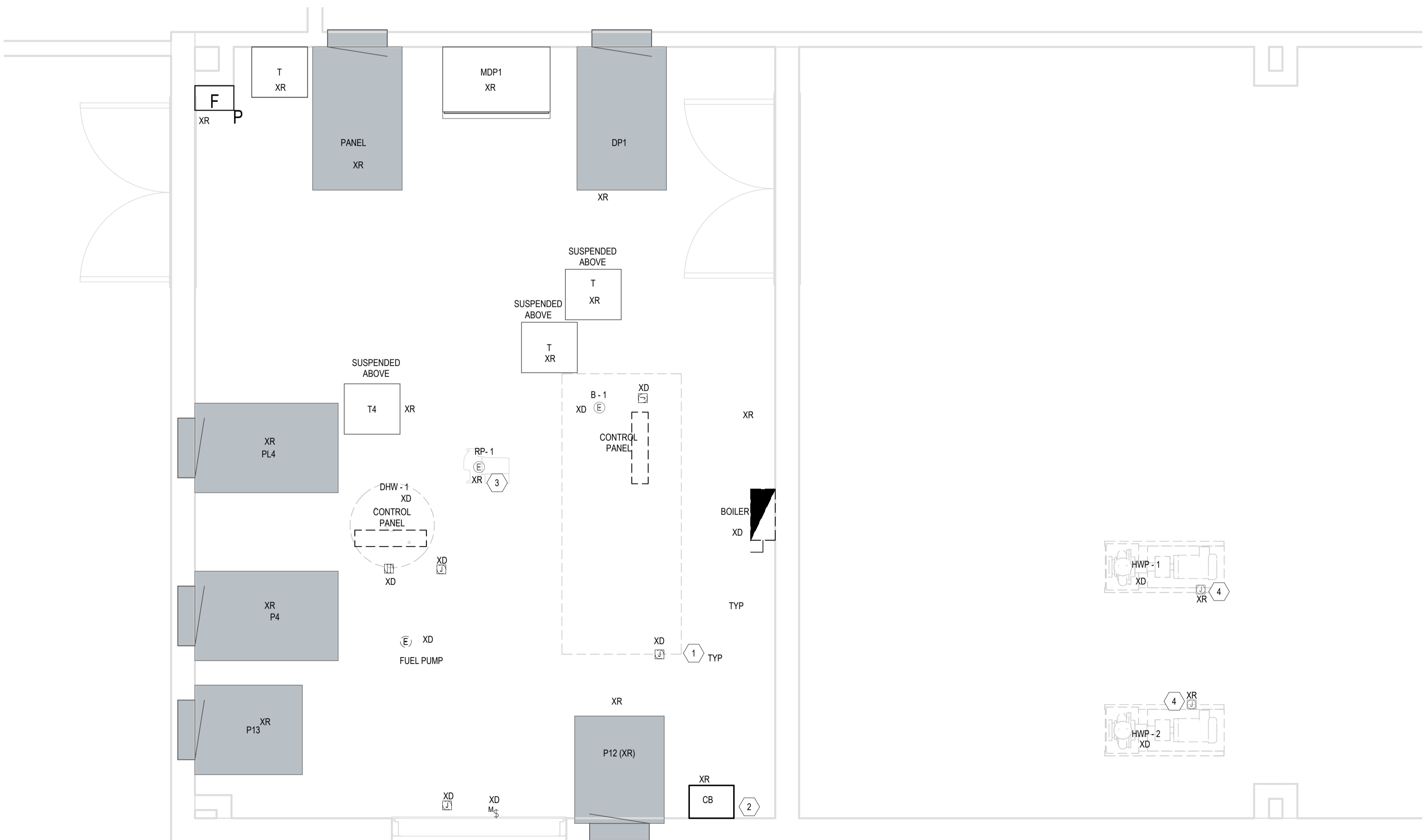
XR = EXISTING MUST REMAIN

XS = EXISTING MUST BE REPLACED WITH NEW DEVICE IN SAME LOCATION

NOTE 1: EXISTING ITEMS NOT SHOWN MUST REMAIN.

KEYNOTES

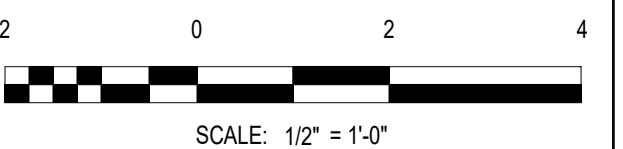
- 1 UON , REMOVE JUNCTION BOX, DISCONNECT SWITCH AND ASSOCIATED CONDUIT AND WIRE BACK TO THE
2 SOURCE (PANEL P12). TYP
3 CIRCUITBREAKER TO PANEL PM
4 MAINTAIN EXISTING BRANCH CIRCUIT TO RP - 1.
5 DISCONNECT THE EXISTING BRANCH CIRCUIT. REUSE FOR NEW PUMP.



A1

MAIN TERMINAL BOILER ROOM DEMO PLAN

SCALE: 1/2" = 1'-0"





PROJECT TITLE:
MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS:
100 BOWEN LOOP, SUITE 200
CHARLOTTESVILLE, VA 22911

REVISIONS

[illegible]

TE ISSUED: 05/10/2024

VIEWED BY: SVS

DRAWN BY: STS

SIGNED BY: _____ STS _____

PROJECT NUMBER:

20541812009
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SEAL:

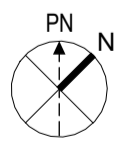
SHEET TITLE:

**OVERALL FIRST
FLOOR ELECTRICAL
PLAN**

SHEET ID:

EP111

PROJECT STATUS:
ISSUED FOR BID



1

OVERALL FIRST FLOOR ELECTRICAL PLAN

SCALE: 1/16" = 1'-0"



SCALE: 1" = 1'-0"



PROJECT TITLE:
MECHANICAL SYSTEMS UPGRADE

PROJECT ADDRESS:
100 BOWEN LOOP, SUITE 200
CHARLOTTESVILLE, VA 22911

REVISIONS

[illegible]

TE ISSUED: 05/10/2024

VIEWED BY: SVS

DRAWN BY: STS

SIGNED BY: _____ STS _____

PROJECT NUMBER:
20541812009
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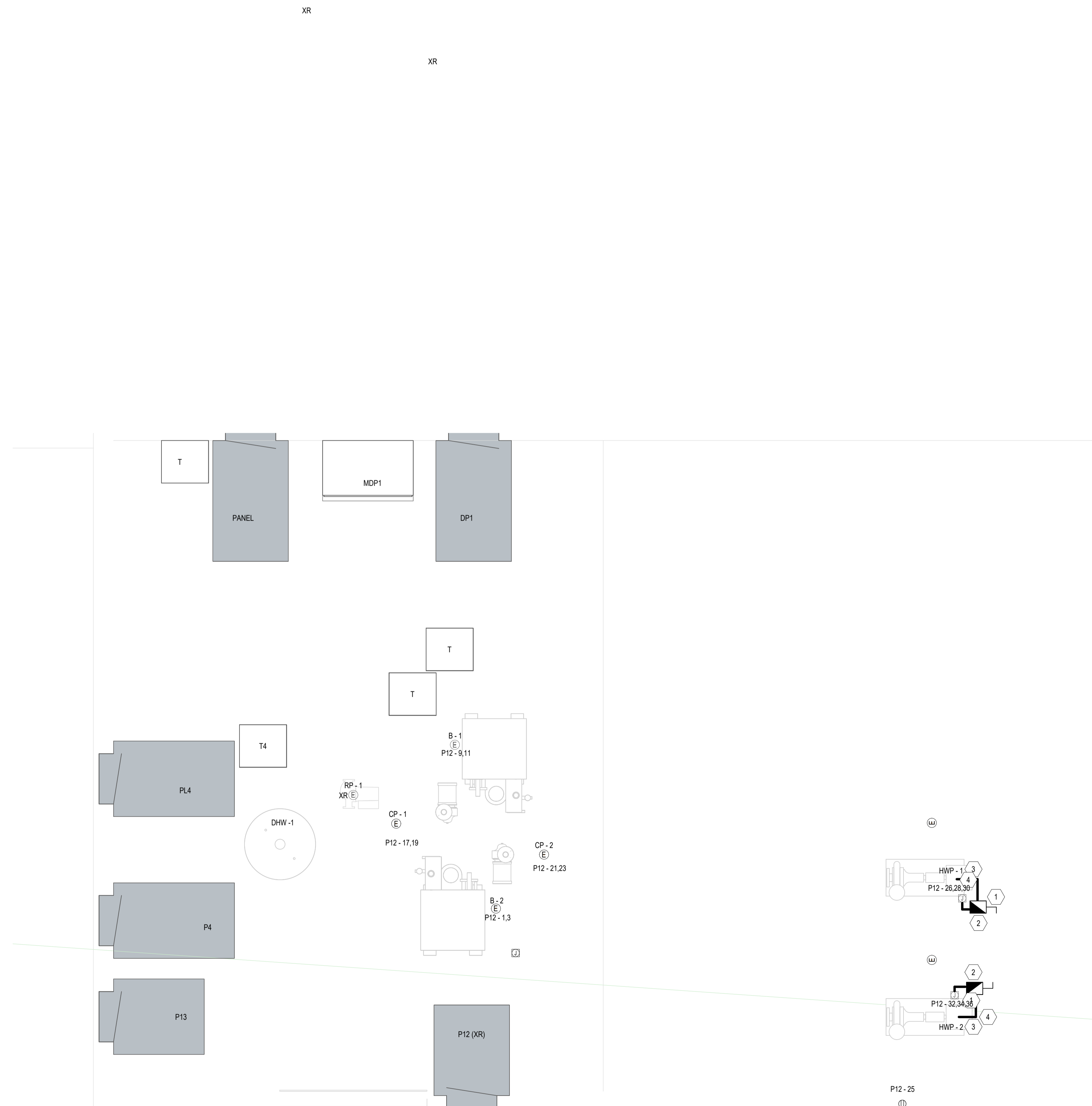
SEAL:

SHEET TITLE:
**ENLARGED FIRST
FLOOR ELECTRICAL
PLAN**

EET ID:

EP401

PROJECT STATUS:
ISSUED FOR BID



A circle with a vertical dashed line passing through its center, labeled 'PN' at the top. A radius is drawn from the center to the upper right edge, labeled 'N'.

A1

MAIN TERMINAL BOILER ROOM ELECTRICAL PLAN

SCALE: 1/2" = 1'-0"

