

IMPERIAL COUNTY NORTH COUNTY ADMINISTRATION/COURTHOUSE

220 MAIN STREET, BRAWLEY, CALIFORNIA
 COUNTY PROJECT NO. SR6650CFM

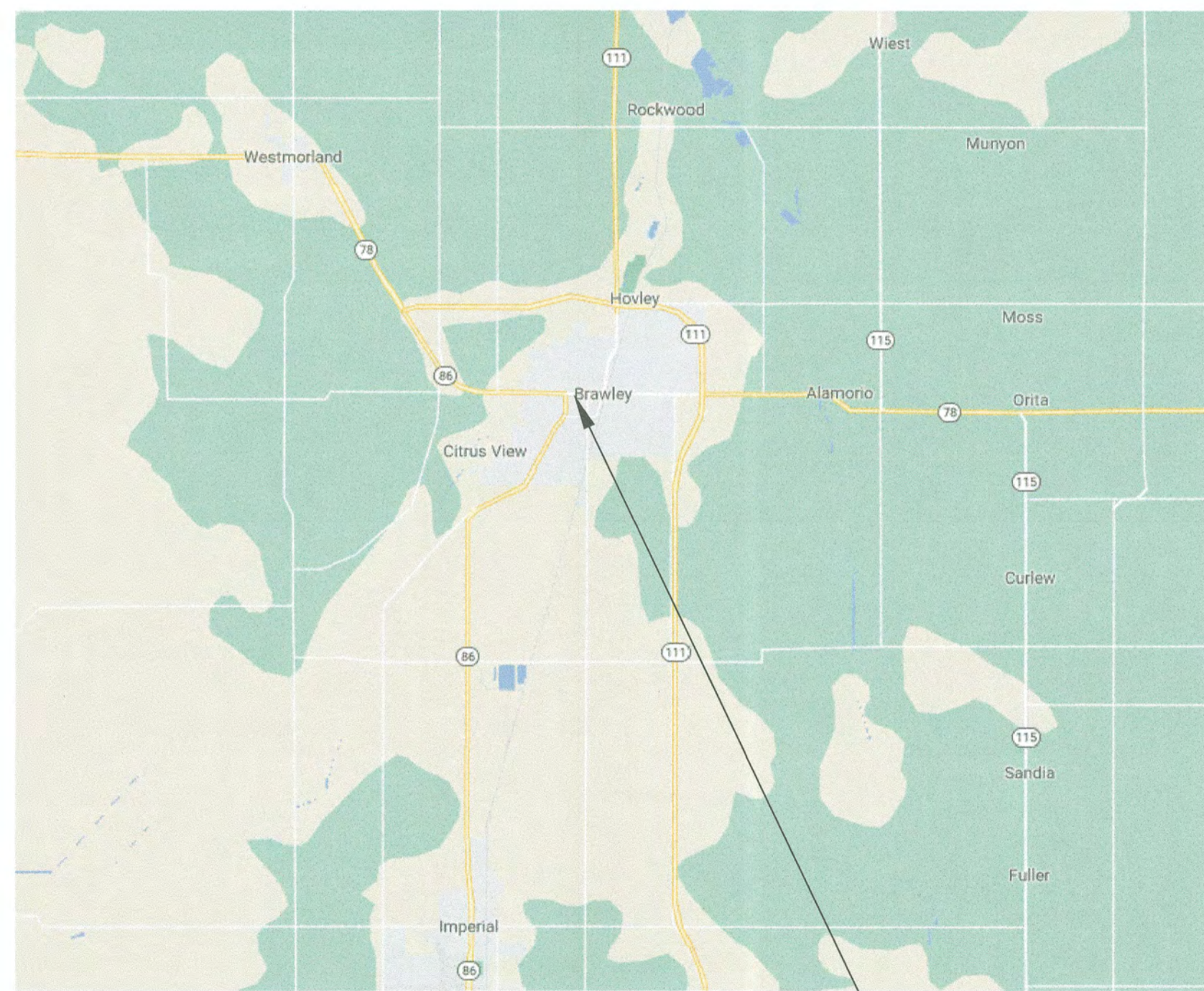
HVAC UPGRADE

SCOPE OF WORK

UPGRADE THE EXISTING HVAC SYSTEM AT IMPERIAL COUNTY COURTHOUSE. PROVIDE TEMPORARY POWER FOR PORTABLE AIR CONDITIONER.

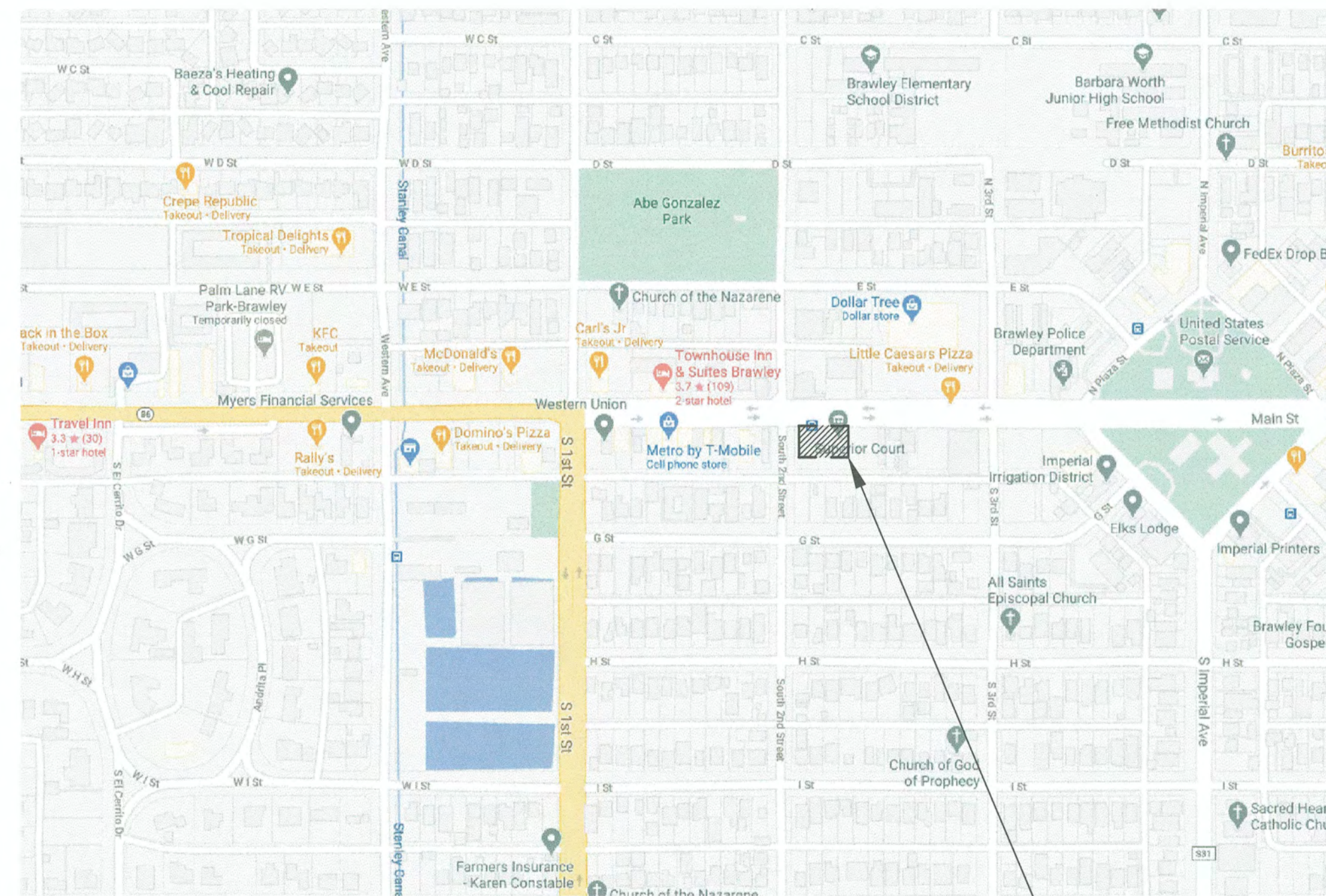
THIS PROJECT SHALL COMPLY WITH: THE 2019 CALIFORNIA BUILDING CODE, WHICH ADOPTS THE 2018 IBC, 2018 UMC, 2018 UPS AND THE 2017 NEC.

2019 CALIFORNIA MECHANICAL CODE, 2019 CALIFORNIA PLUMBING CODE, 2019 CALIFORNIA FIRE CODE, 2019 CALIFORNIA ELECTRICAL CODE.



PROJECT VICINITY

VICINITY MAP
 NOT TO SCALE



PROJECT ADDRESS:
 200 MAIN STREET,
 BRAWLEY, CALIFORNIA

LOCATION MAP
 SCALE: 1"=500'

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
T0.0	TITLE SHEET
M0.1	MECHANICAL LEGEND & NOTES
M0.2	MECHANICAL SCHEDULES
M1.1	MECHANICAL AHU ROOM DEMOLITION PLANS
M1.2	MECHANICAL DEMOLITION ROOF PLANS
M2.1	MECHANICAL FIRST FLOOR NEW WORK PLAN
M2.2	MECHANICAL SECOND FLOOR NEW WORK PLAN
M2.3	MECHANICAL AHU ROOM NEW WORK PLANS
M2.4	MECHANICAL AHU ROOM SECTION PLAN
M2.5	MECHANICAL NEW WORK ROOF PLAN
M3.1	MECHANICAL DETAILS
M3.2	MECHANICAL DETAILS
M4.1	MECHANICAL CONTROLS
M4.2	MECHANICAL CONTROLS
M4.3	MECHANICAL CONTROLS
M4.4	MECHANICAL CONTROLS
M5.1	T-24 COMPLIANCE
M5.2	T-24 COMPLIANCE
E1.0	ELECTRICAL SYMBOL, LEGEND & ABBREVIATION
E1.1	LOAD CALCULATIONS AND PANEL SCHEDULES
E1.2	ELECTRICAL SINGLE LINE DIAGRAM - DEMO
E1.3	ELECTRICAL SINGLE LINE DIAGRAM - NEW WORK
E2.1	ELECTRICAL PLAN - FIRST FLOOR (TEMPORARY POWER)
E2.2	ELECTRICAL PLAN - SECOND FLOOR
E2.3	ELECTRICAL PLAN - ROOF
E2.4	ELECTRICAL ENLARGED MECH. ROOM PLAN
E2.5	ELECTRICAL ENLARGED UPPER MECH. ROOM PLAN
E2.6	ELECTRICAL DETAILS
S-001	GENERAL NOTES & TYPICAL DETAILS
S-121	PARTIAL 2ND FLOOR FRAMING PLAN
S-131	PARTIAL ROOF FRAMING PLAN
S-801	FRAMING DETAILS

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IMPERIAL COUNTY NORTH COUNTY
 ADMINISTRATION/COURTHOUSE HVAC
 REPLACEMENT
 BRAWLEY, CALIFORNIA
 COUNTY PROJECT NO. SR6650CFM

BUILDING DEPARTMENT
 BRAWLEY, CALIFORNIA
 APPROVED
 DATE 1-7-22
 BY [Signature]

NO.	REVISION	DATE

SHEET: TITLE SHEET
 Received By: [Signature]
 REC'D 9 2021
 T0.0

20-03

MECHANICAL LEGEND (SYMBOLS) AND ABBREVIATIONS

VALVES AND FITTINGS	PIPING	SYMBOLS	ABBREVIATIONS
BALL VALVE	RL — REFRIGERANT LIQUID	SQUARE DIFFUSER / REGISTER A = DESIGNATION B = AIRFLOW	A/C AIR CONDITIONING
CHECK VALVE	RS — REFRIGERANT SUCTION	GRILLE A = DESIGNATION B = AIRFLOW C = SIZE	ABS ABSOLUTE
BACKFLOW PREVENTOR	RG — REFRIGERANT GAS	LINEAR DIFFUSER A = DESIGNATION B = AIRFLOW C = LENGTH (FEET) D = NUMBER OF SLOTS E = SLOT SIZE (INCHES)	AFF ABOVE FINISHED FLOOR
GATE VALE	HWS — HEATING HOT WATER SUPPLY	EQUIPMENT TAG A = TYPE B = EQUIPMENT NUMBER / UNIQUE IDENTIFIER	AFG ABOVE FINISHED GRADE
PRESSURE REDUCING VALVE	HWR — HEATING HOT WATER RETURN	SUPPLY DIFFUSER THROW DIRECTION AS INDICATED ON PLANS (4-WAY IF NONE INDICATED)	ALUM. ALUMINUM
CONTROL VALVE	PIPE DOWN	RETURN GRILLE	AMPS AMPERES
CALIBRATED BALANCING VALVE	PIPE UP	EXHAUST GRILLE	AP ACCESS PANEL
BUTTERFLY VALVE	PIPE DOWN	DETAIL/SHEET REFERENCE (DETAIL "A" ON DRAWING "B")	ATM. ATMOSPHERE
PLUG VALVE		SECTION OR ELEVATION REFERENCE (SECTION "A" ON DRAWING "B")	AUTO. AUTOMATIC
GLOBE VALVE		SUPPLY DUCT SECTION	BAS BUILDING AUTOMATION SYSTEM
AUTOMATIC FLOW CONTROL VALVE		RETURN DUCT SECTION	BHP BRAKE HORSE POWER
TRIPLE DUTY VALVE		EXHAUST DUCT SECTION	B/G BELOW GRADE
SOLENOID VALVE		REMOVE EXIST. EQUIP. OR PIPES SHOWN HATCHED	BTU BRITISH THERMAL UNIT
STEAM TRAP		DUCT RISE (IN DIRECTION OF ARROW)	CFM CUBIC FEET PER MINUTE
SMOKE DUCT DETECTOR		DUCT DROP (IN DIRECTION OF ARROW)	DB DRY BULB
BLIND FLANGE		DUCT WITH SOUND INSULATION/LINING	DDC DIRECT DIGITAL CONTROL
TRICLAMP		CONNECT TO EXISTING EQUIPMENT, DUCTWORK, PIPING	DN DOWN
PIPE CAP (THREADED)		LIMITS OF DUCTWORK, PIPING DISCONNECTION	DTR DOWN THROUGH ROOF
PIPE CAP (WELDED)		FIRE SMOKE DAMPER (FSD)	E OR (E) EXISTING
UNION		ROOM SENSOR (ASSOCIATED MECHANICAL UNIT)	EA EXHAUST AIR
REDUCER			EAT ENTERING AIR TEMPERATURE
STRAINER			EAT ENTERING AIR TEMPERATURE
THERMOMETER			EAT ENTERING AIR TEMPERATURE
PRESSURE GAUGE			EAT ENTERING AIR TEMPERATURE
RELIEF VALVE			EAT ENTERING AIR TEMPERATURE
AUTOMATIC AIR VENT			EAT ENTERING AIR TEMPERATURE
FLEXIBLE PIPE CONNECTION			EAT ENTERING AIR TEMPERATURE

MECHANICAL PLAN CHECK NOTES

- CALIFORNIA MECHANICAL CODE (CMC) 2019, CALIFORNIA PLUMBING CODE (CPC) 2019 AND 2019 TITLE 24 ENERGY STANDARDS ARE THE CODES/STANDARDS THAT ARE APPLICABLE TO THIS PROJECT.
- SEE TITLE 24 CALCULATION FORMS NRCC-ENV-E FOR INSULATION AND MATERIAL ASSEMBLY OF WALL, ROOF AND FLOOR. SEE ARCHITECTURAL DRAWINGS FOR MATERIAL ASSEMBLY SECTIONS ON PLANS.
- ALL INSULATION MATERIAL SHALL COMPLY WITH THE CMC SECTION 602.2. FLAME SPREAD-RATING OR 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS.
- HVAC PIPING AND DUCTWORK SYSTEMS SHALL BE INSULATED WITH MATERIALS CONSISTENT WITH THE REQUIREMENTS OF SECTIONS 110.8, 120.3, AND 120.4 OF THE CALIFORNIA ENERGY EFFICIENCY STANDARDS, AND 2019 CALIFORNIA MECHANICAL CODE (CMC) CHAPTER 6, TABLE 6-D. FLAME SPREAD-RATING OR 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS.
- ALL HVAC EQUIPMENT AND APPLIANCES SHALL MEET THE REQUIREMENTS PER SECTIONS 110.1-110.3, 110.5 AND 120.1-120.9 OF THE CALIFORNIA ENERGY EFFICIENCY STANDARDS.
- HVAC SYSTEMS AUTOMATIC CONTROLS SHALL COMPLY WITH THE CONTROL REQUIREMENTS PER SECTIONS 110.2 AND 120.2 OF THE CALIFORNIA ENERGY EFFICIENCY STANDARDS.
- ALL MATERIALS EXPOSED WITHIN DUCTS OR PLENUMS, FLEXIBLE DUCTS AND DUCT INSULATION SHALL COMPLY WITH CMC SECTION 602.2 AND SHALL HAVE A FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING OF NOT MORE THAN 50.
- ALL DOORS AND WINDOWS SHALL MEET THE MINIMUM INFILTRATION REQUIREMENTS PER SECTION 110.6 AND 110.7 OF THE CALIFORNIA ENERGY EFFICIENCY STANDARDS.
- AT THE TIME OF PERMIT ISSUANCE, THE PERMITEE WILL PROVIDE AN APPROVED COPY OF THE CERTIFICATE OF COMPLIANCE (MECH-1) TO THE JURISDICTION FOR FILING.
- PROVIDE SMOKE DETECTORS ON AIR MOVING SYSTEMS EXCEEDING 2000 CFM AT SUPPLY AIR DUCTS. (2019 CMC 608.1)
- FIRE AND/OR SMOKE DAMPER ASSEMBLIES, INCLUDING SLEEVES, AND INSTALLATION PROCEDURES SHALL BE APPROVED BY THE BUILDING INSPECTOR PRIOR TO INSTALLATION.
- ALL WATER HEATERS/ BOILERS SHALL BE STRAPPED OR ANCHORED PER SEC. 510.5 OF THE CPC TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION.
- AIR FILTERS SHALL BE A STATE FIRE MARSHALL APPROVED AND LISTED TYPE. PRE-FORMED FILTERS HAVING COMBUSTIBLE FRAMING SHALL BE TESTED AS A COMPLETE ASSEMBLY. AIR FILTERS IN ALL OCCUPANCIES SHALL BE CLASS 1 OR 2 (AS SHOWN IN THE STATE FIRE MARSHALL LISTING). AIR FILTERS SHALL BE ACCESSIBLE FOR CLEANING OR REPLACEMENT. (305.0 CMC)
- CERTIFICATE OF ACCEPTANCE AND ALL RELATED ACCEPTANCE DOCUMENTS SHALL BE SUBMITTED TO THE FIELD INSPECTOR DURING CONSTRUCTION. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL THESE FORMS ARE REVIEWED AND APPROVED.
- PENETRATIONS IN FIRE-RESISTIVE WALLS, PARTITIONS AND FLOORS WHERE PROTECTED OPENINGS ARE REQUIRED SHALL BE FIRE STOPPED USING APPROVED MATERIALS, SECURELY INSTALLED AND CAPABLE OF MAINTAINING THEIR INTEGRITY AND PREVENTING THE MOVEMENT OF HOT FLAMES OR GASES THROUGH THE VOID SPACES BETWEEN PENETRATING MATERIALS AND WALLS, PARTITIONS AND FLOORS WHEN TESTED IN ACCORDANCE WITH ASTM STANDARD E-814 OR UL STANDARD 1479.
- FACTORY-MADE FLEXIBLE AIR DUCTS AND CONNECTORS SHALL NOT BE MORE THAN 5 FEET IN LENGTH PER SECTION 603.4.1 CMC.
- ROOF ACCESS LADDER SHALL COMPLY WITH SECTION 304 CMC.

MECHANICAL CAL GREEN NOTES

- THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING OR AREAS OF ADDITION OR ALTERATION WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, RETURN AIR FILTERS WITH A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 8, BASED ON ASHRAE 52.2-1999, OR AN AVERAGE EFFICIENCY OF 30% BASED ON ASHRAE 52.1-1992 SHALL BE USED. ALL FILTERS SHALL BE REPLACED IMMEDIATELY PRIOR TO OCCUPANCY OR AT THE CONCLUSION OF CONSTRUCTION. (CAL GREEN SEC. 5.504.1.3)
- AT TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM. (CAL GREEN SEC. 5.504.3)
- IN MECHANICALLY VENTILATED BUILDINGS, REGULARLY OCCUPIED AREAS OF THE BUILDING SHALL BE PROVIDED WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR THAT PROVIDES AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 8. MERV 8 FILTERS SHALL BE INSTALLED PRIOR TO OCCUPANCY, AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUAL. (CAL GREEN SEC. 5.504.5.3)
- FOR ALL BUILDINGS EQUIPPED WITH DEMAND CONTROL VENTILATION, CO2 SENSORS AND VENTILATION CONTROLS SHALL BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF 2019 CALIFORNIA ENERGY CODE, SECTION 120(C)(4). (CAL GREEN SEC. 5.506.2)
- INSTALLATIONS OF HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL COMPLY WITH SECTIONS 5.508.1.1 AND 5.508.1.2. HVAC, REFRIGERATION, AND FIRE SUPPRESSION EQUIPMENT SHALL NOT CONTAIN CHLOROFLUOROCARBONS (CFCs) AND SHALL NOT CONTAIN HALONS. (SEC. 5.508.1)
- PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR, TITLE 8, SECTION 5142 AND OTHER RELATED REGULATIONS.
- PERFORM TESTING AND ADJUSTING PROCEDURES IN ACCORDANCE WITH INDUSTRY BEST PRACTICES AND APPLICABLE NATIONAL STANDARDS ON EACH SYSTEM. (CG 5.410.3). BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING OR SPACE IS OPERATED FOR NORMAL USE, THE SYSTEM SHALL BE BALANCED IN ACCORDANCE WITH THE PROCEDURES DEFINED BY THE TESTING, ADJUSTING AND BALANCING BUREAU NATIONAL STANDARDS; THE NATIONAL ENVIRONMENTAL BALANCING BUREAU PROCEDURAL STANDARDS; OR ASSOCIATED AIR BALANCE COUNCIL NATIONAL STANDARDS. (CG 5.410.4.3.1) AFTER COMPLETION OF TESTING, ADJUSTING AND BALANCING (TAB), PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES. (CG 5.410.4.4)

HVAC GENERAL NOTES

- CONTRACTOR SHALL CAREFULLY REVIEW THESE PLANS AND SPECIFICATIONS PRIOR TO BID. CONTRACTOR SHALL ALSO REVIEW PLANS AND SPECIFICATIONS OF OTHER RELATED TRADES (INCLUDING STRUCTURAL AND ELECTRICAL) PRIOR TO BID TO ENSURE AN ACCURATE UNDERSTANDING OF EXACT SCOPE OF WORK. ANY ITEMS REQUIRING CLARIFICATION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN SUFFICIENT TIME TO BE INCORPORATED INTO THE BID.
- CONTRACTOR SHALL VERIFY ALL EQUIPMENT MODEL NUMBERS, CAPACITIES, SIZES, VOLTAGES, AND ALL OTHER SCHEDULED INFORMATION WITH ALL OTHER APPLICABLE TRADES AND WITH THE MANUFACTURER PRIOR TO INSTALLATION.
- CONTRACTOR SHALL VERIFY ALL LOCATIONS, SIZES, POCs, AND AVAILABILITY OF ALL EXISTING ITEMS (I.E.: OUTSIDE AIR, EXHAUST ETC.) PRIOR TO INSTALLATION OF ANY MATERIAL OR EQUIPMENT.
- THESE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE ALL NECESSARY OFFSETS OF DUCTWORK AND PIPING. THE CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT IN A MANNER AS TO CONFORM TO STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. BACKGROUNDS WERE GENERATED FROM SCANNED IMAGES NOT TO SCALE. THE CONTRACTOR SHALL PROVIDE DETAILED AND COORDINATED DUCTWORK AND EQUIPMENT SHOP DRAWINGS BASED ON FIELD MEASUREMENTS AND ALL POINTS OF CONNECTION.
- ALL INSTALLATIONS SHALL BE CONSISTENT WITH NORMALLY ACCEPTABLE INDUSTRY STANDARDS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES OR CONFLICTS THAT WOULD AFFECT THE SYSTEM PERFORMANCE OR WHICH WOULD INCUR ADDITIONAL COSTS. THIS NOTIFICATION SHALL BE MADE PRIOR TO THE INSTALLATION OF THE ITEMS CONCERNED.
- NEW AND/OR EXISTING EQUIPMENT INDICATED ON THIS DRAWING IS SHOWN IN APPROXIMATE POSITION(S). CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING EQUIPMENT LOCATIONS, POCs AND STRUCTURAL MEMBERS PRIOR TO INSTALLATION. IN ALL CASES, ADEQUATE ACCESS (PER MANUFACTURER'S RECOMMENDATIONS AND CODE COMPLIANCE) FOR MAINTENANCE AND REPLACEMENT OF EQUIPMENT SHALL BE PROVIDED.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES. NOTHING SHOWN IN THE PLANS OR STATED IN THE SPECIFICATIONS IS INTENDED TO INDICATE THAT THE INSTALLATION OF CONNECTIONS OF ANY ITEM OR DEVICE SHOULD BE DONE CONTRARY TO THE MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE INSTALLATION AND CONNECTIONS OF ALL ITEMS AND DEVICES CONFORM TO MANUFACTURER'S INSTRUCTIONS AND TO ALL APPLICABLE CODES AND REGULATIONS.
- ALL HVAC EQUIPMENT, MATERIAL, AND ALL CONNECTION THERETO SHALL BE INSTALLED COMPLETE PER MANUFACTURER'S INSTRUCTIONS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL SYSTEM.
- DUCT SIZES INDICATED ON DRAWINGS ARE INSIDE NET CLEARANCE DIMENSIONS.
- CONTRACTOR MAY, AT HIS OPTION, REVISE DUCTWORK SIZING AND ROUTING TO ALLOW FOR INSTALLATION IN THE AVAILABLE SPACE. DUCTWORK THAT IS RESIZED MUST MAINTAIN THE SAME CROSS-SECTIONAL AREA.
- ALL NEW SUPPLY, RETURN, AND EXHAUST (AIR DISTRIBUTION) GRILLES, REGISTERS, AND DIFFUSERS SHALL MATCH (IF APPLICABLE) EXISTING, AND BE APPROVED BY ARCHITECT. THE MAXIMUM NOISE NC LEVEL SHALL BE 35.
- ALL SUPPLY, RETURN, AND EXHAUST REGISTER CONNECTIONS TO DUCTWORK SHALL BE PROVIDED WITH ACCESSIBLE MANUAL VOLUME DAMPERS. ALTERNATIVELY, ACCESSIBLE MANUAL VOLUME DAMPERS MAY BE PROVIDED IN DUCT WORK FEEDER LINES SERVING INDIVIDUAL REGISTERS.
- SUBSTITUTION OF HVAC EQUIPMENT WITH EFFICIENCIES LOWER THAN THOSE INDICATED ON THE PLANS MAY REQUIRE RECALCULATION OF TITLE 24 DOCUMENTS. IF THE CONTRACTOR CHOOSES TO UTILIZE SUCH EQUIPMENT, HE ASSUMES FULL RESPONSIBILITY FOR THE RECALCULATION AND JURISDICTIONAL APPROVAL OF TITLE 24 DOCUMENTS.
- IF THE CONTRACTOR'S USE OF SUBSTITUTE MATERIALS, EQUIPMENT, OR METHODS OF INSTALLATION REQUIRES ANY CHANGES IN OTHER TRADES' WORK FROM THAT SHOWN ON THE DRAWINGS, THE EXTRA COST OF THE OTHER TRADES WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INITIATING THE SUBSTITUTION.
- SUBMITTALS: APPROVAL OF SUBMITTALS DOES NOT RELEASE THE CONTRACTOR FROM OBLIGATIONS TO COMPLY WITH ALL REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS OR APPLICABLE CODE REGULATIONS.
- WHERE NONMETALLIC PIPING PENETRATES AREA SEPARATION WALLS, THE PIPE SECTION PASSING THROUGH THE WALLS AND THE FIXTURE CONNECTIONS THERETO SHALL BE OF METAL ONLY.
- NO RANGE HOODS, DRYER VENTS, COMBUSTION VENTS, OR HEATING DUCTS ARE PERMITTED IN AREA SEPARATION WALLS.
- A. CONTRACTOR TO VERIFY LOCATION OF FIRE AND FIRE/SMOKE BARRIER WALLS WITH ARCHITECT PRIOR TO FIRE AND/OR SMOKE DAMPER, DETECTOR AND ACTUATOR INSTALLATION.
B. ALL CEILING FIRE DAMPERS TO BE ONE (1) HOUR U.L. AND C.S.F.M. APPROVED.
C. ALL FIRE RATED WALLS SHALL BE PROVIDED WITH U.L. AND C.S.F.M. APPROVED SMOKE/FIRE DAMPERS (EQUAL TO WALL RATING), MOTOR, ACTUATOR, AND SMOKE DETECTOR.
D. ALL SMOKE BARRIER WALLS SHALL BE PROVIDED WITH U.L. AND C.S.F.M. APPROVED SMOKE/FIRE DAMPERS (EQUAL TO WALL RATING), MOTOR, ACTUATOR, AND SMOKE DETECTOR.
E. ALL PENETRATIONS OF ONE (1) HOUR CORRIDOR WALLS AND CEILINGS THAT WOULD REQUIRE THE INSTALLATION OF A FIRE DAMPER SHALL BE APPROVED WITH A U.L. AND C.S.F.M. APPROVED COMBINATION SMOKE/FIRE DAMPER, (EQUAL TO WALL RATING), MOTOR, ACTUATOR, AND SMOKE DETECTOR.
F. PROVIDE ALL FIRE & SMOKE DAMPERS WITH ACCESS DOORS AS NECESSARY.

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CLIENT:

IMPERIAL COUNTY NORTH COUNTY
ADMINISTRATION/COURTHOUSE HVAC
REPLACEMENT
BRAWLEY, CALIFORNIA
COUNTY PROJECT NO. SR6650CFM

NO.	REVISION	DATE

SHEET:
MECHANICAL LEGEND & NOTES

M0.1

AIR HANDLER UNIT SCHEDULE																							
PLAN MARK	MANUFACTURER & MODEL NO.	NOMINAL CAPACITY (TONS)	SUPPLY FAN			DX COOLING COIL					SUPPLY FAN ELECTRICAL DATA			AH-4 OPER. WT. (LBS.)	PLAN MARK	MANUFACTURER & MODEL NO.	RETURN FAN		RETURN FAN ELECTRICAL DATA			RF-5 OPER. WT. (LBS.)	REMARKS
			AIRFLOW (CFM)	ESP (IN WG)	MINIMUM OSA (CFM)	COOLING CAPACITY (MBH)		ENTERING AIR (DEG F)		EFFICIENCY SEER (EER)	HP	FLA	V/PH/HZ				AIRFLOW (CFM)	ESP (IN WG)	HP	FLA	V/PH/HZ		
AHU-4	DAIKIN CAHQ38GDGM	50	18,000	2.75	2,850	608.6	463.6	78	64	(9.5)	25	75.0	200/3/60	3,739	RF-5	DAIKIN CAHQ38GVGM	15,150	.5	10	29.5	200/3/60	1,837	1 2

REMARKS:

- 1 PROVIDE SMOKE DUCT DETECTOR IN BOTH SUPPLY & RETURN AIR STREAM AND INTERLOCK WITH BUILDING FIRE ALARM SYSTEM AND UNIT FOR SHUTDOWN PER 608 OF THE CALIFORNIA MECHANICAL CODE.
- 2 PROVIDE WITH MANUFACTURER'S VRV INTEGRATION KIT AND CONTROL BOXES FOR VRV AIR-HANDLERS. PROVIDE WITH MERV 8 PRE-FILTER AND MERV 13 FINAL FILTERS.

CONDENSING UNIT SCHEDULE												
PLAN MARK	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	NOMINAL CAPACITY (TONS)	DX COOLING			ELECTRICAL DATA			OPER. WT. (LBS.)	REMARKS
					COOLING CAPACITY (MBH)	AMBIENT AIR TEMP (DEG F)	EFFICIENCY SEER (EER)	MCA	MOCP	V/PH/HZ		
CU-1A	DAIKIN RXYQ168XATJA	ROOF	AHU-4	14	168.0	119	(9.5)	55.1	60	208/3/60	695	
CU-1B	DAIKIN RXYQ144XATJA	ROOF	AHU-4	12	144.0	119	(9.5)	55.1	60	208/3/60	695	
CU-1C	DAIKIN RXYQ96XATJA	ROOF	AHU-4	8	96.0	119	(9.5)	36.3	45	208/3/60	525	
CU-2A	DAIKIN RXYQ168XATJA	ROOF	AHU-4	14	168.0	119	(9.5)	55.1	60	208/3/60	695	
CU-2B	DAIKIN RXYQ144XATJA	ROOF	AHU-4	12	144.0	119	(9.5)	55.1	60	208/3/60	695	
CU-2C	DAIKIN RXYQ96XATJA	ROOF	AHU-4	8	96.0	119	(9.5)	36.3	45	208/3/60	525	

VARIABLE AIR VOLUME BOX SCHEDULE													
PLAN MARK	MANUFACTURER & MODEL NO.	SERVICE	INLET SIZE (DIA)	AIRFLOW (CFM)		HEATING AIRFLOW (CFM)	MIN HEATING CAPACITY (MBH)	EAT (DEG F)	LAT (DEG F)	EWT (DEG F)	WATER FLOW (GPM)	NUMBER OF ROWS	OPER. WT. (LBS.)
				MAXIMUM	MINIMUM								
VAV-1	PRICE SDV5	2ND FLOOR LOBBY	10	1,100	195	550	27.7	49	95.4	180	1.1	2L	30
VAV-2	PRICE SDV5	2ND FLOOR OFFICES	24x16	3,535	1,025	1,150	58.1	49	95.5	180	1.6	2L	93
VAV-3	PRICE SDV5	2ND FLOOR RESTROOMS	8	275	275	275	8.6	49	78.1	180	.2	2L	24
VAV-4	PRICE SDV5	CASE MGR #224	6	300	90	90	4.0	49	90.2	180	.1	2L	20
VAV-5	PRICE SDV5	NURSE #225	6	520	125	225	11.7	49	96.6	180	.5	2L	20
VAV-6	PRICE SDV5	CONF #221	12	1,310	410	900	45.3	49	95.4	180	2.0	2L	37
VAV-7	(OMITTED FROM BLDG)												
VAV-8	PRICE SDV5	1ST FLOOR LOBBY	14	2,450	720	1,250	63.7	49	96.0	180	2.7	2L	48
VAV-9	PRICE SDV5	JUDGES CHAMBERS	14	1,600	490	360	18.9	49	84.2	180	.5	2L	48
VAV-10	PRICE SDV5	DA OFFICES	24x16	3,535	985	1,200	61.5	49	96.2	180	1.8	2L	93
VAV-11	PRICE SDV5	PUB DEF/PROBATION	14	1,600	480	400	20.6	49	88.4	180	.5	2L	48

PUMP SCHEDULE										
PLAN MARK	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	TYPE	DESIGN CONDITIONS		MOTOR			REMARKS
					FLOWRATE (GPM)	HEAD (FT WG)	HP	RPM	V/PH/HZ	
P-1	WLO IPL-1.5	MECH ROOM	VAV REHEAT	IN-LINE	11	35	1.0	-	120/1/60	

HEATING HOT WATER BOILER													
PLAN MARK	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	CAPACITY		EWT (DEG F)	LWT (DEG F)	WATER FLOW (GPM)	PRESSURE DROP (FT WG)	ELECTRICAL DATA		OPER. WT. (LBS.)	REMARKS
				INPUT (MBH)	OUTPUT (MBH)					FLA	V/PH/HZ		
B-1	RBI DB0400	MECH ROOM	VAV REHEAT	399.0	339.0	160	180	32	.12	9.8	120/1/60	490	PROVIDE WITH MANUFACTURER'S INTEGRAL BOILER PUMP & 3-WAY VALVE

EXPANSION TANK SCHEDULE								
PLAN MARK	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	MINIMUM CAPACITY		CHARGE (PSIG)	OPER. WT. (LBS.)	REMARKS
				TANK VOLUME (GAL)	TANK ACCEPTANCE (GAL)			
ET-1	ELBI HTS-45	MECH ROOM	HHW	12	12	12	151	

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 BRAWLEY, CALIFORNIA
 COUNTY PROJECT NO. SR6650CFM

NO. REVISION DATE

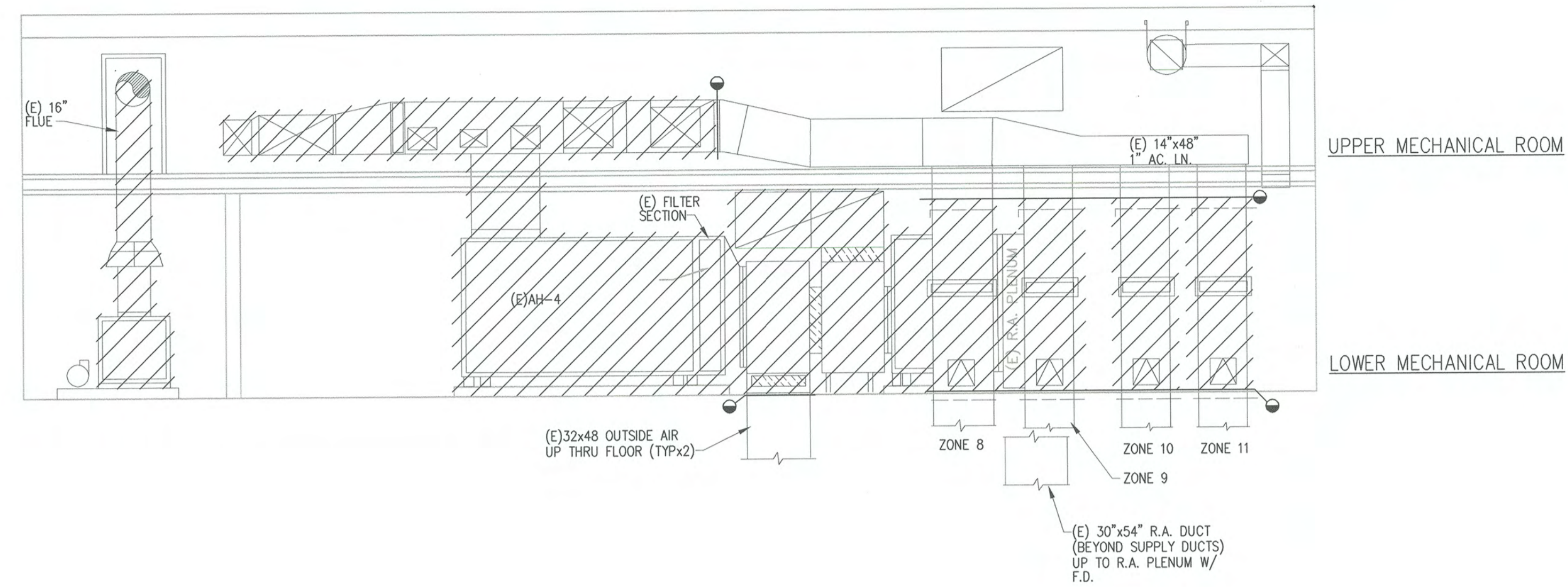
SHEET:

MECHANICAL SCHEDULES

M0.2

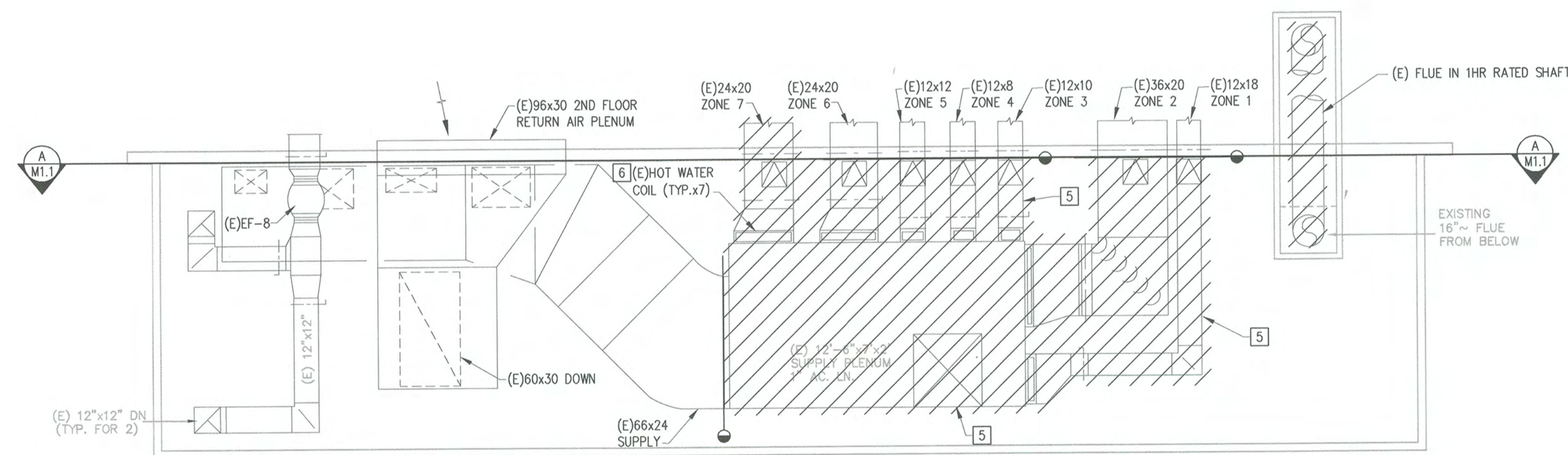
DEMOLITION NOTES

- 1 DISCONNECT AND REMOVE (E) AH-4, TO INCLUDE SUPPLY FAN, RETURN FAN, REFRIGERANT COILS, MIXING BOX SECTION, PLATFORMS AND ALL PIPING.
- 2 DISCONNECT AND REMOVE (E) DUCTWORK AND HEATING COILS IN VERTICAL RISER, SEE SECTION A.
- 3 DISCONNECT AND REMOVE EXISTING COOLING REFRIGERANT COMPRESSORS, EQUIPMENT PADS AND ALL PIPING.
- 4 DISCONNECT AND REMOVE HEATING HOT WATER BOILER, FLUE, PUMP, EXPANSION TANK, CHEMICAL POT FEEDER AND ALL HEATING HOT WATER PIPING.
- 5 DISCONNECT AND REMOVE EXISTING SUPPLY AIR PLENUM AND DUCTWORK.
- 6 DISCONNECT AND REMOVE EXISTING HEATING HOT WATER COILS, VALVES AND ALL ASSOCIATED PIPING.



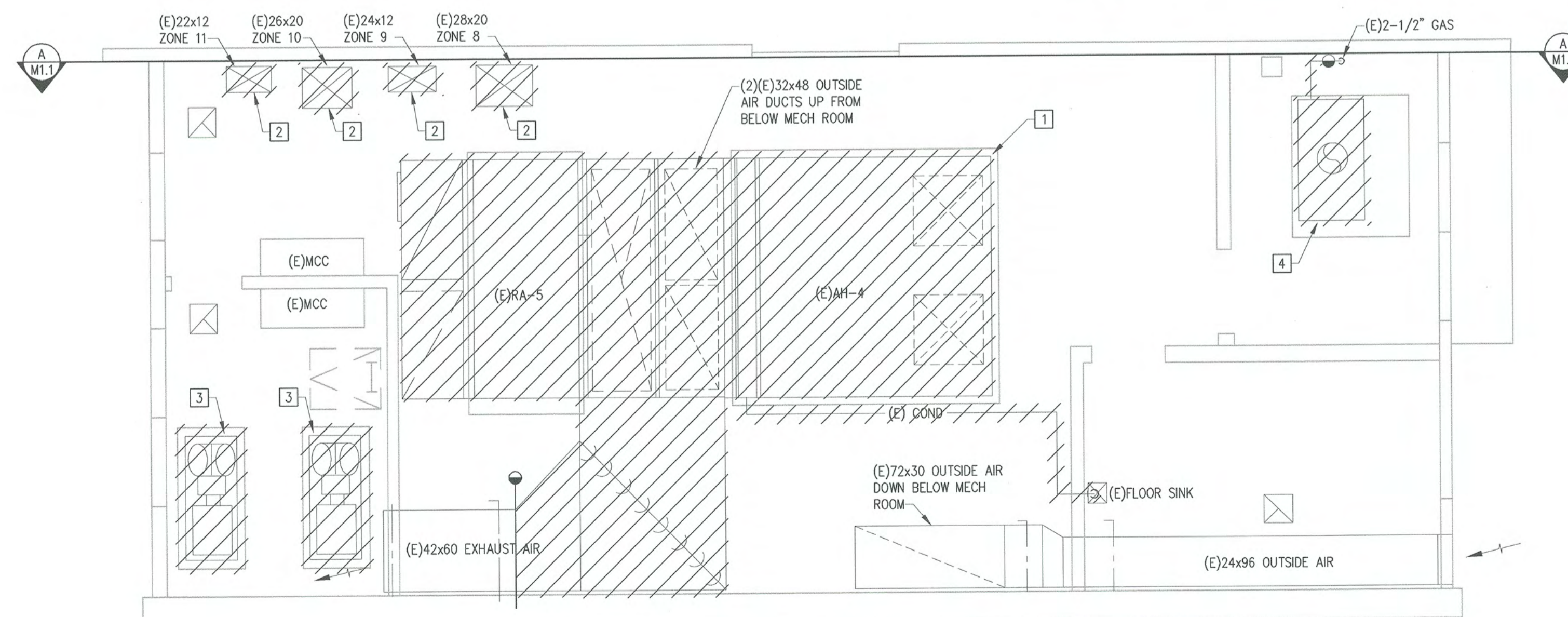
MECHANICAL AHU ROOM DEMOLITION SECTION

SCALE: 1/4" = 1'-0" (A M1.1)



MECHANICAL AHU ROOM DEMOLITION PLAN - UPPER

SCALE: 1/4" = 1'-0" (A M1.1)



MECHANICAL AHU ROOM DEMOLITION PLAN - LOWER

SCALE: 1/4" = 1'-0" (A M1.1)

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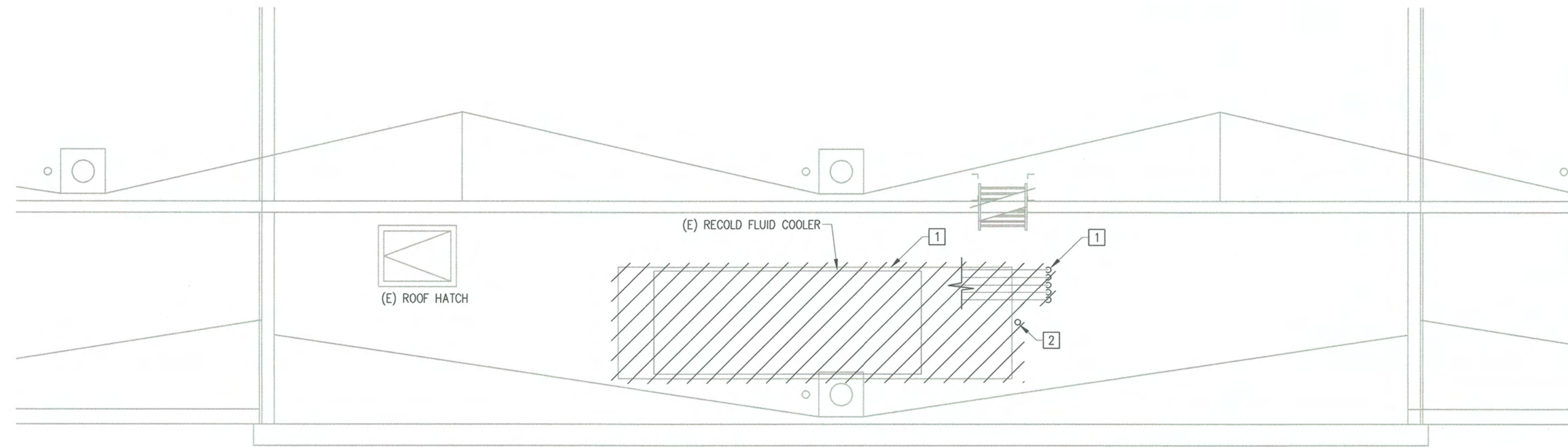
MECHANICAL AHU ROOM
DEMOLITION PLANS

M1.1

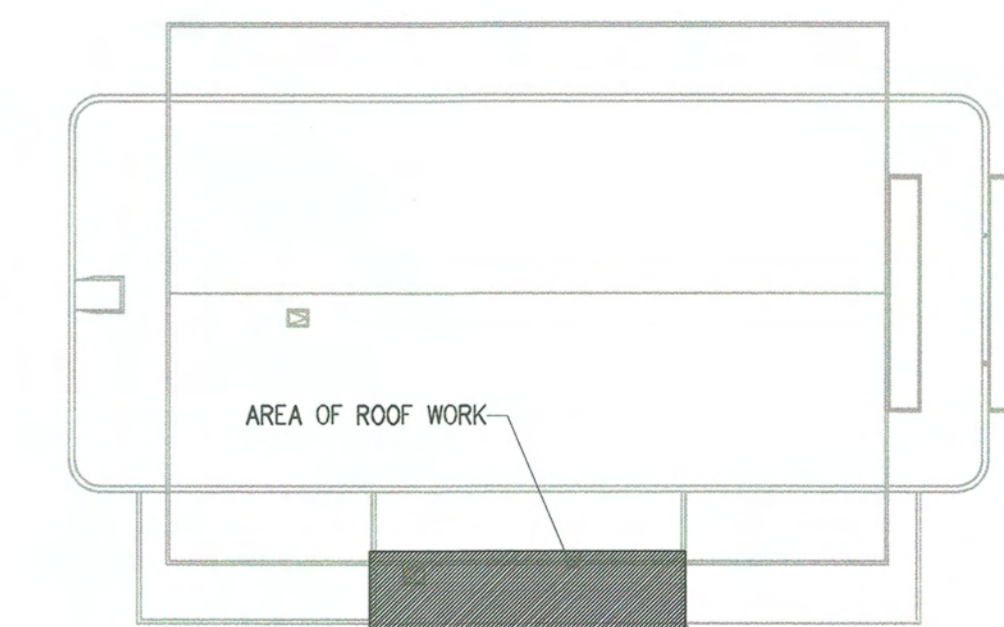
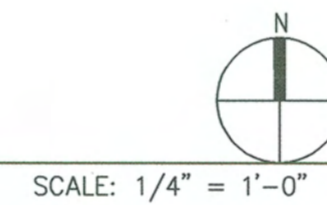
J&R Engineering & Consulting, Inc.
16769 Bernardo Center Drive, Suite 1 #768
San Diego, CA 92128

DEMOLITION NOTES

- 1 DISCONNECT AND REMOVE EXISTING FLUID COOLER, ROOF PLATFORM AND ALL ASSOCIATED REFRIGERANT PIPING. PATCH & REPAIR ROOF PER ARCHITECTURAL. DEMO MAKE-UP WATER SUPPLY TO BELOW ROOF AND EXTEND TO NEW LOCATION PER NEW WORK PLAN.
- 2 DISCONNECT AND REMOVE 1-1/2" PLUMBING VENT DOWN THROUGH ROOF AND EXTEND PER NEW WORK PLAN.



MECHANICAL DEMOLITION ROOF PLAN



KEY PLAN

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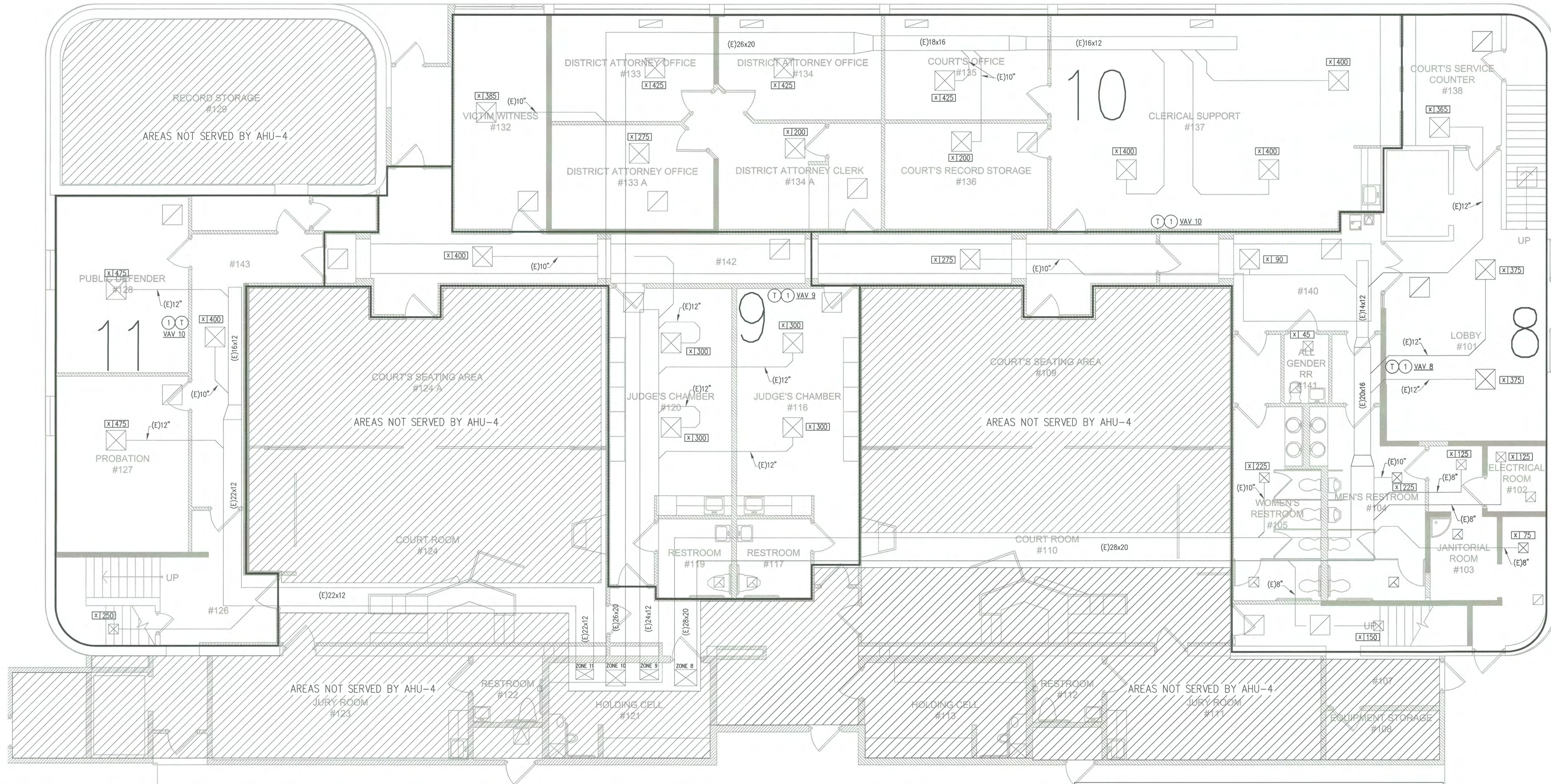
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SHEET:
 MECHANICAL DEMOLITION
 ROOF PLAN

M1.2

NEW WORK NOTES

- ① DISCONNECT AND REPLACE EXISTING ROOM TEMPERATURE SENSOR WITH NEW.



MECHANICAL 1ST FLOOR NEW WORK PLAN

SCALE: 3/16" = 1'-0"



GENERAL NOTES

- REBALANCE ALL SUPPLY DIFFUSERS TO CFM NOTED.
- CONTRACTOR TO PROVIDE DUCT LEAKAGE TESTING OF ALL EXISTING DUCTWORK UNDER ADD/ALT BID ITEM #1.
- CONTRACTOR TO PROVIDE DUCT CLEANING OF EXISTING AHU DUCT SYSTEM ADD/ALT BID ITEM #2.

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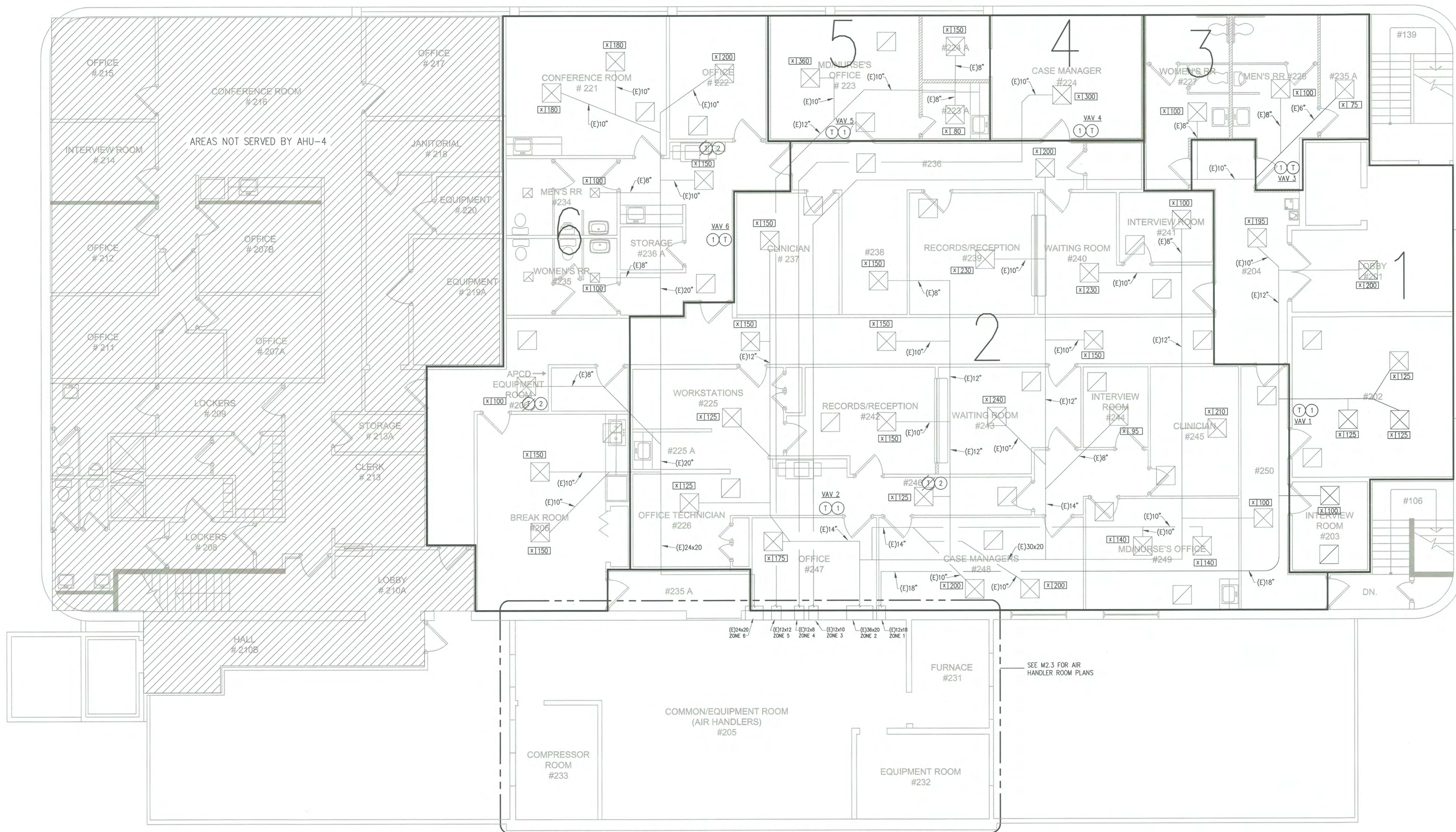
SHEET:
 MECHANICAL FIRST FLOOR NEW WORK PLAN

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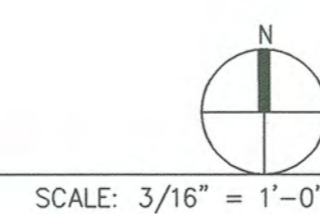
M2.1

NEW WORK NOTES

- ① DISCONNECT AND REPLACE EXISTING ROOM TEMPERATURE SENSOR WITH NEW.
- ② DISCONNECT, REMOVE EXISTING THERMOSTAT. PATCH/PAINT TO MATCH EXISTING FINISH.



MECHANICAL 2ND FLOOR NEW WORK PLAN



GENERAL NOTES

- 1. REBALANCE ALL SUPPLY DIFFUSERS TO CFM NOTED.
- 2. CONTRACTOR TO PROVIDE DUCT LEAKAGE TESTING OF ALL EXISTING DUCTWORK UNDER ADD/ALT BID ITEM #1.
- 3. CONTRACTOR TO PROVIDE DUCT CLEANING OF EXISTING AHU DUCT SYSTEM ADD/ALT BID ITEM #2.

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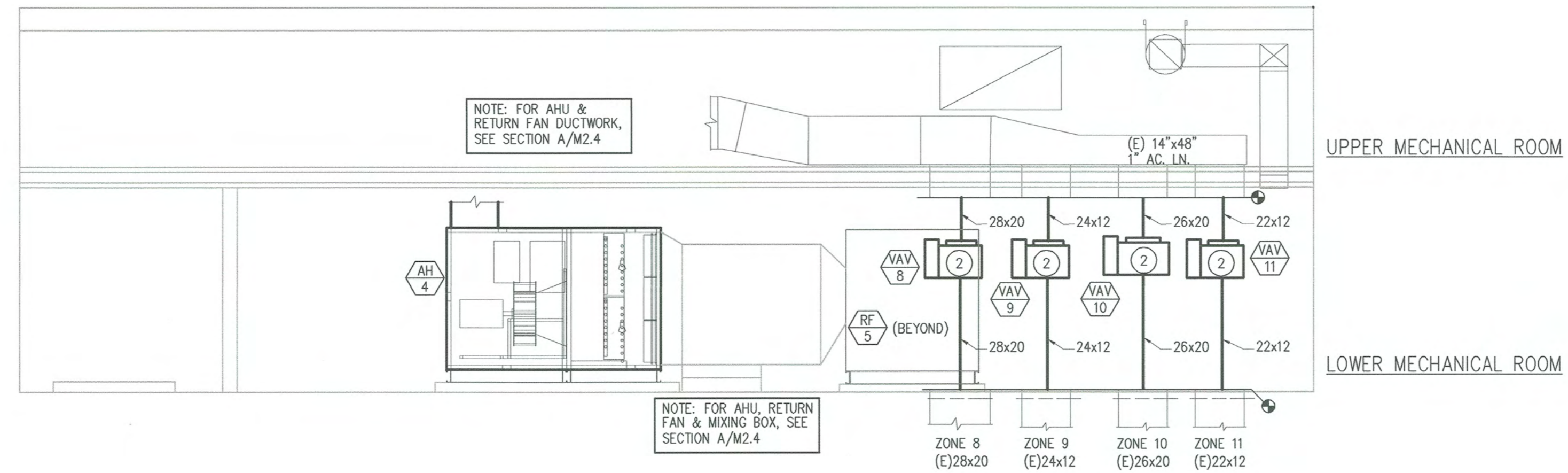
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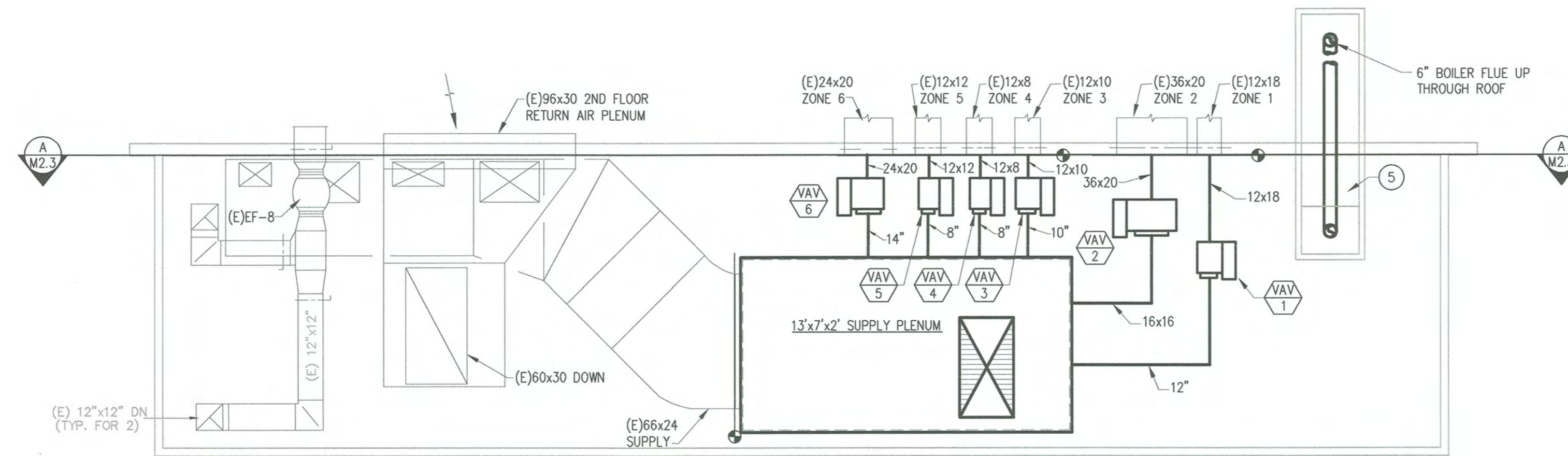
SHEET:
 MECHANICAL SECOND
 NEW WORK FLOOR PLAN

M2.2



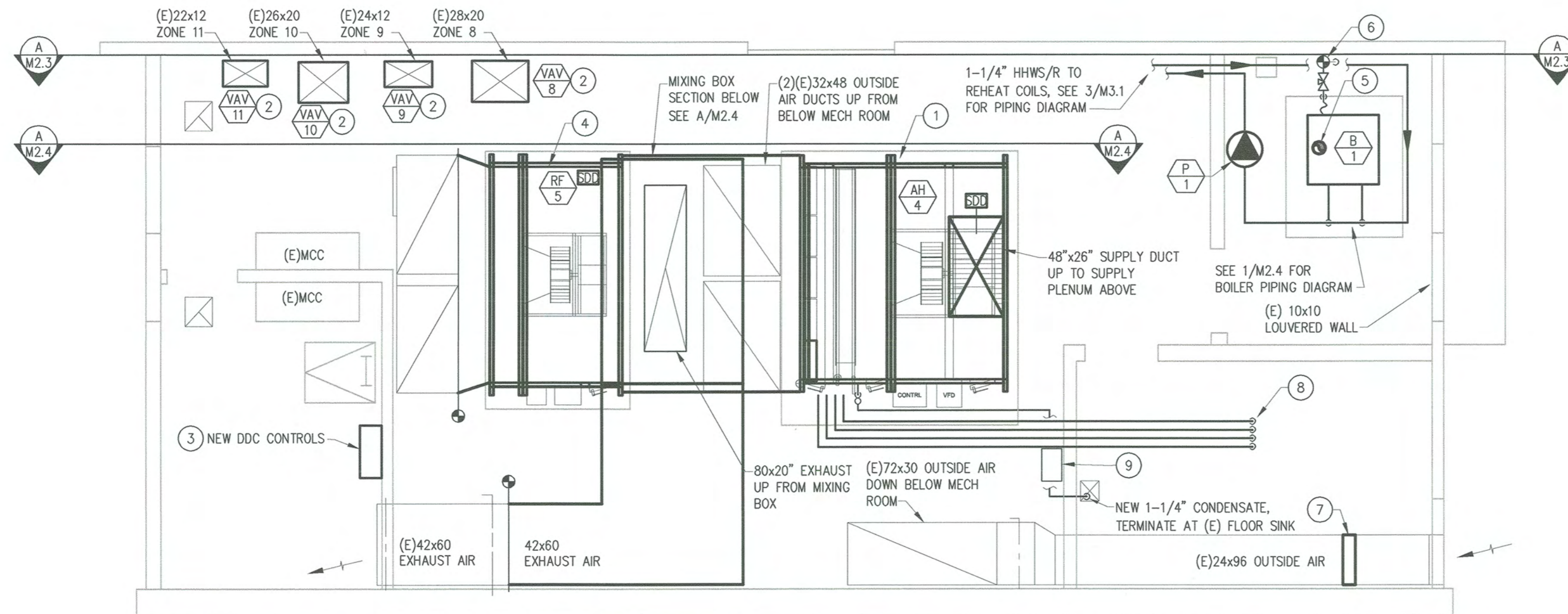
MECHANICAL AHU ROOM NEW WORK SECTION

SCALE: 1/4" = 1'-0" A M2.3



MECHANICAL AHU ROOM NEW WORK PLAN - UPPER

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



MECHANICAL AHU ROOM NEW WORK PLAN - LOWER

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

NEW WORK NOTES

- 1 NEW AH-4 SUPPLY FAN, COIL, FILTER SECTION & PLATFORM.
- 2 NEW VAV BOX WITH REHEAT IN VERTICAL DUCTWORK. TRANSITION EXISTING DUCTWORK TO VAV BOX AND FROM VAV BOX TO DOWNSTREAM DUCT SIZE.
- 3 NEW DDC CONTROLS PANEL IN NEMA 4 ENCLOSURE.
- 4 NEW RF-5 RETURN FAN SECTION & PLATFORM.
- 5 6" CAT III FLUE, UL LISTED 1738. PATCH/REPAIR OF EXISTING SHAFT ENCLOSURE AS NEEDED TO FACILITATE INSTALLATION.
- 6 POC OF NEW 2" GAS TO EXISTING.
- 7 NEW AIR FLOW MONITOR.
- 8 REFRIGERANT PIPING UP THROUGH ROOF. SEE 5/M3.1 FOR REFRIGERANT PIPING DIAGRAM.
- 9 MANUFACTURER'S REFRIGERANT CONTROL BOX (DAIKIN MODEL# EKEO), TYP x4. SEE 3/M4.2 FOR WIRING CONTROL DIAGRAM.



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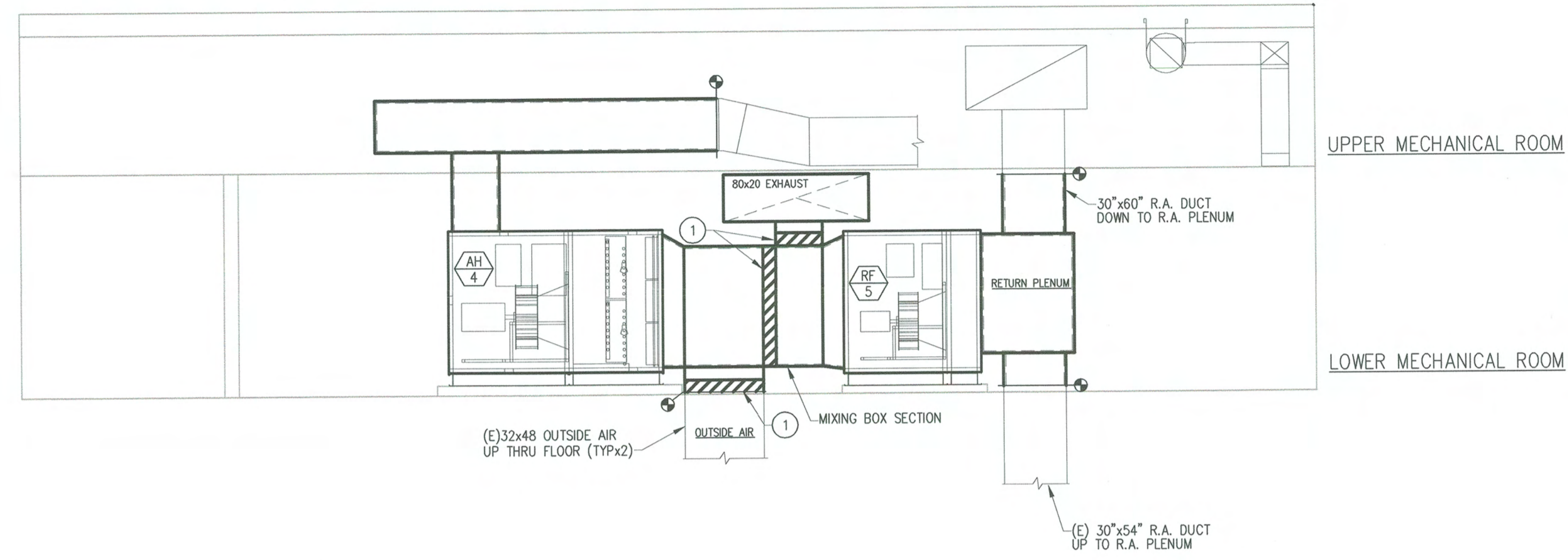
NO.	REVISION	DATE

SHEET:
MECHANICAL AHU ROOM
NEW WORK PLANS

M2.3

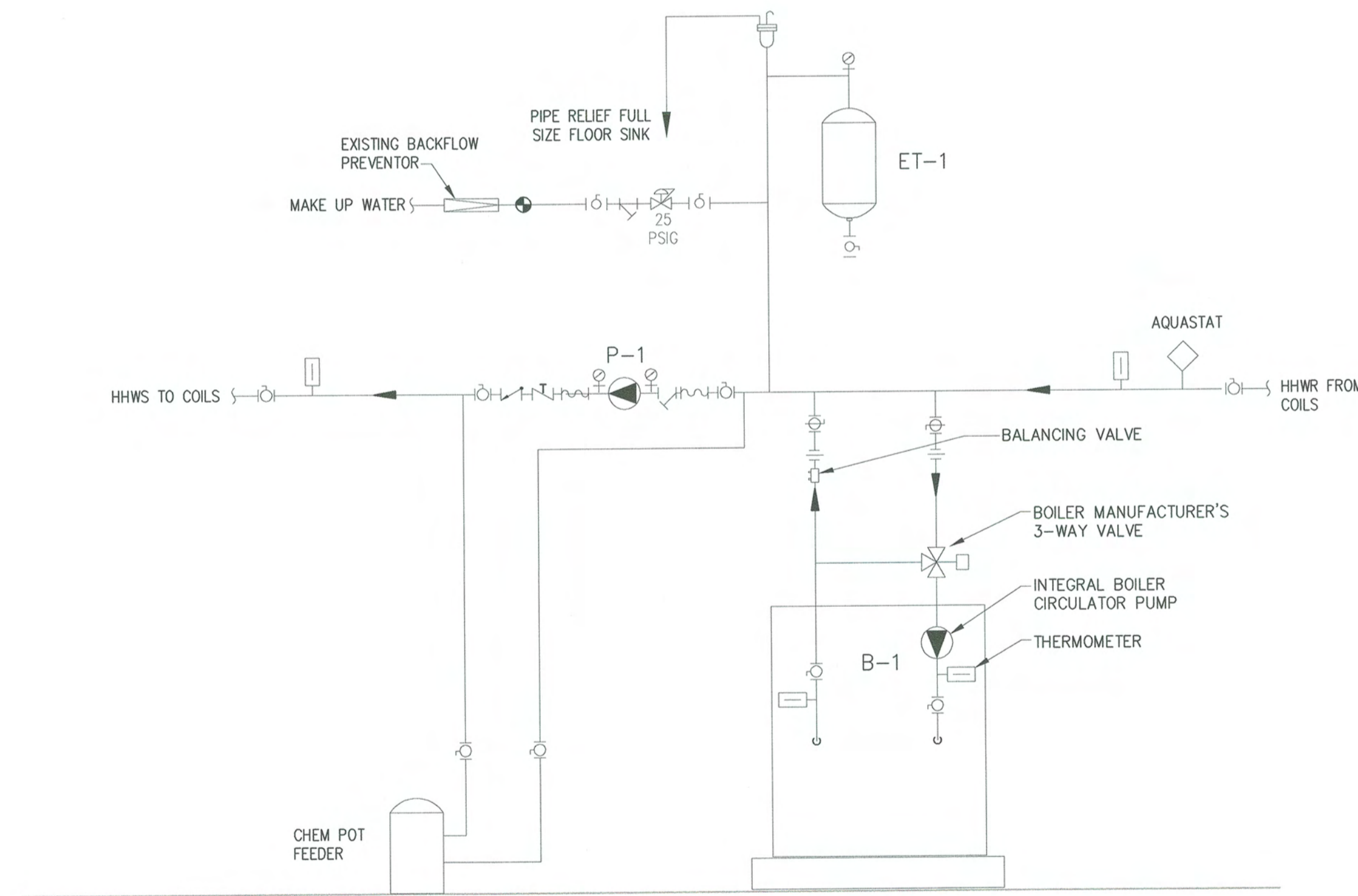
NEW WORK NOTES

- ① NEW MOTORIZED DAMPERS



MECHANICAL AHU ROOM NEW WORK SECTION

SCALE: 1/4" = 1'-0" M2.4



BOILER PIPING DIAGRAM

SCALE: NONE M2.4

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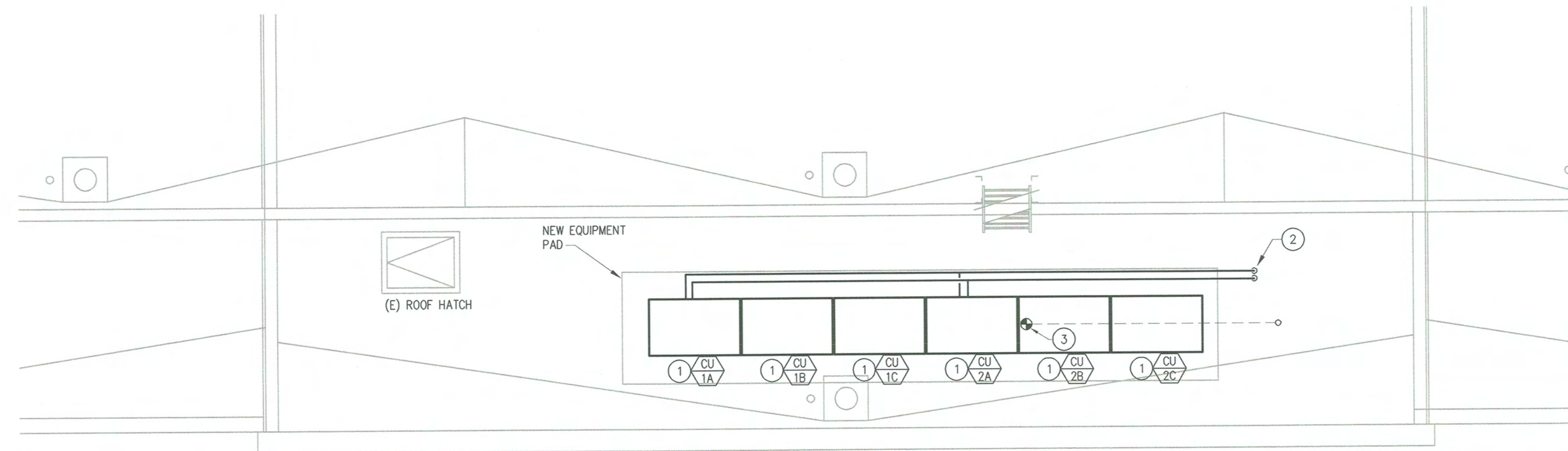
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SHEET:
 MECHANICAL AHU ROOM
 SECTION PLAN

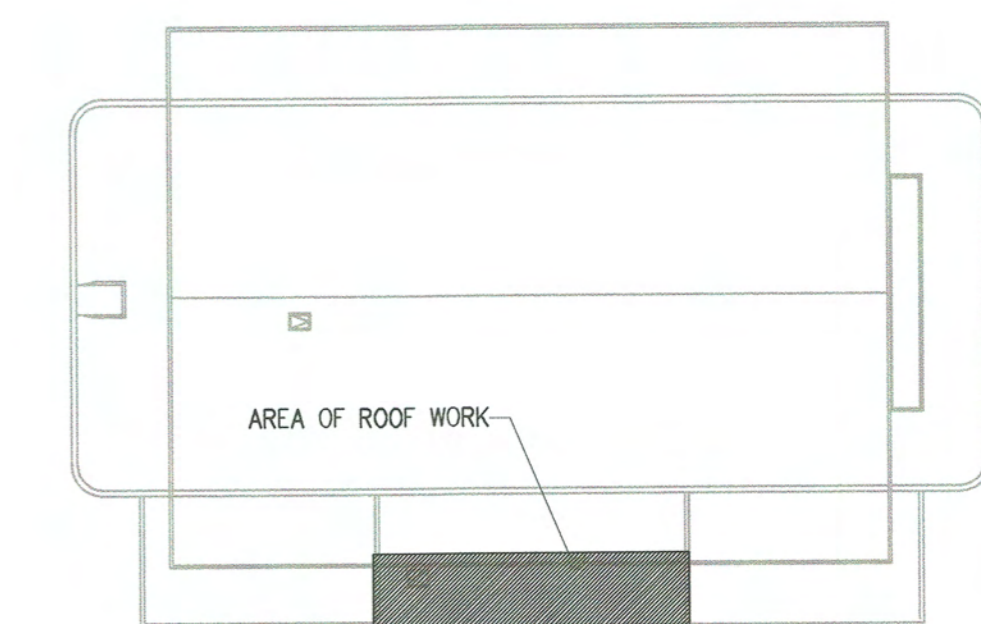
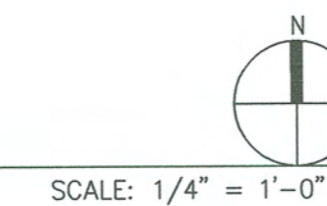
M2.4

NEW WORK NOTES

- ① NEW AIR-COOLED CONDENSERS ON NEW EQUIPMENT PAD.
- ② NEW REFRIGERANT PIPING DOWN TO AHU. SEE 5/M3.1 FOR CONDENSER PIPING DIAGRAM.
- ③ CONNECT AND EXTEND EXISTING 1-1/2" VENT BELOW ROOF IN MECH ROOM AND EXTEND UP THRU ROOF AS SHOWN.



MECHANICAL NEW WORK ROOF PLAN



KEY PLAN

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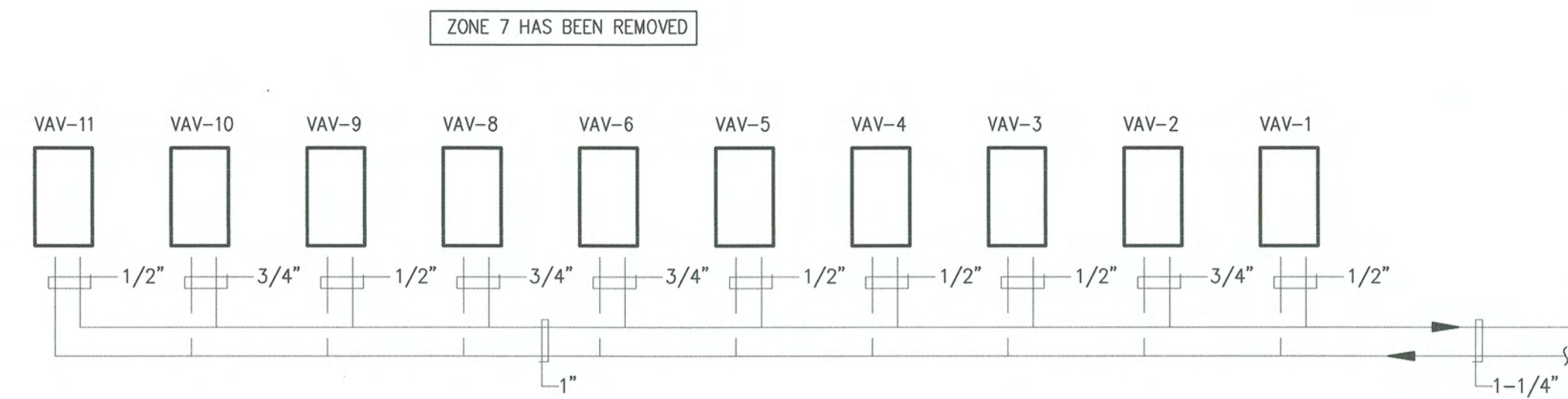
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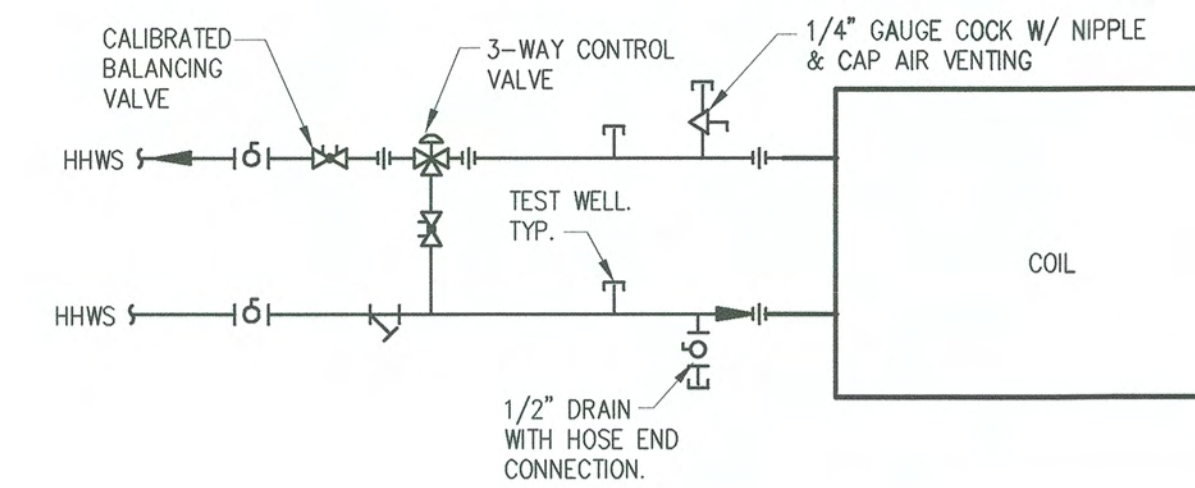
SHEET:
 MECHANICAL NEW WORK
 ROOF PLAN

M2.5



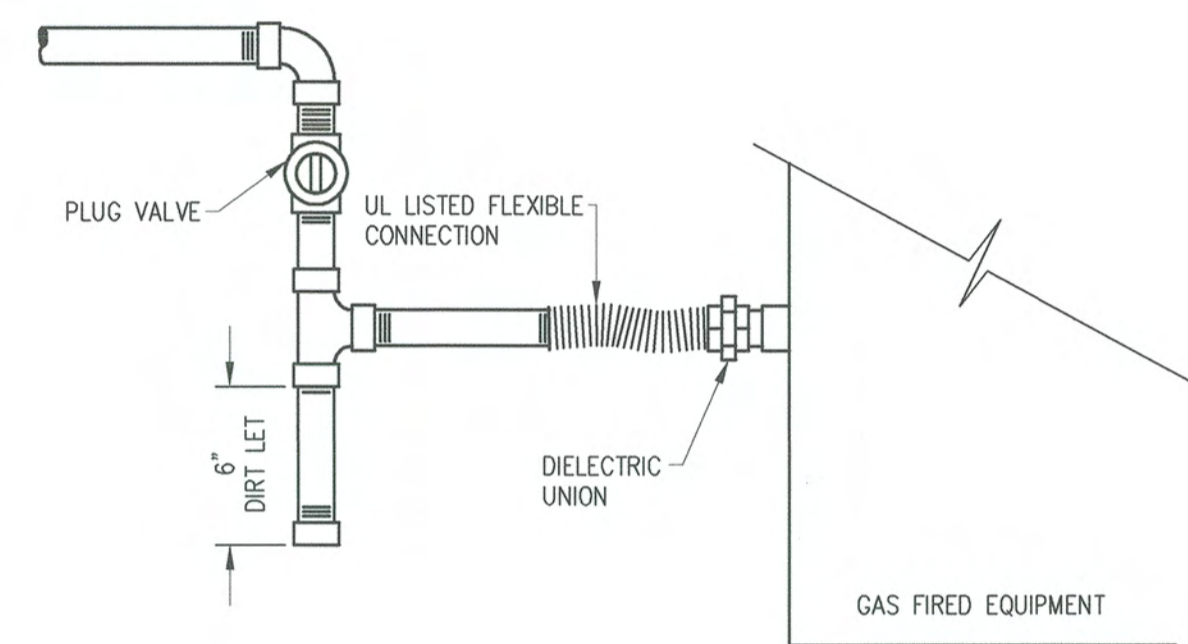
HHW PIPING DIAGRAM

SCALE: NONE 3



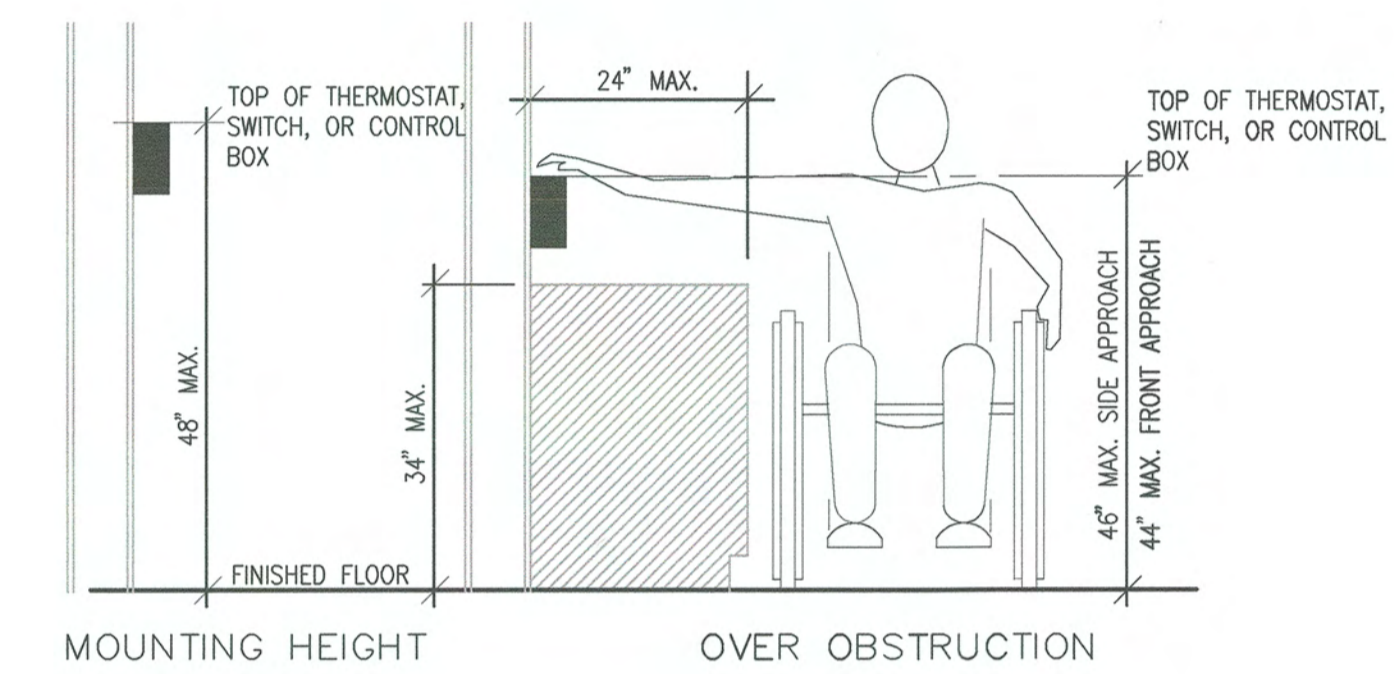
REHEAT COIL PIPING

SCALE: NONE 1



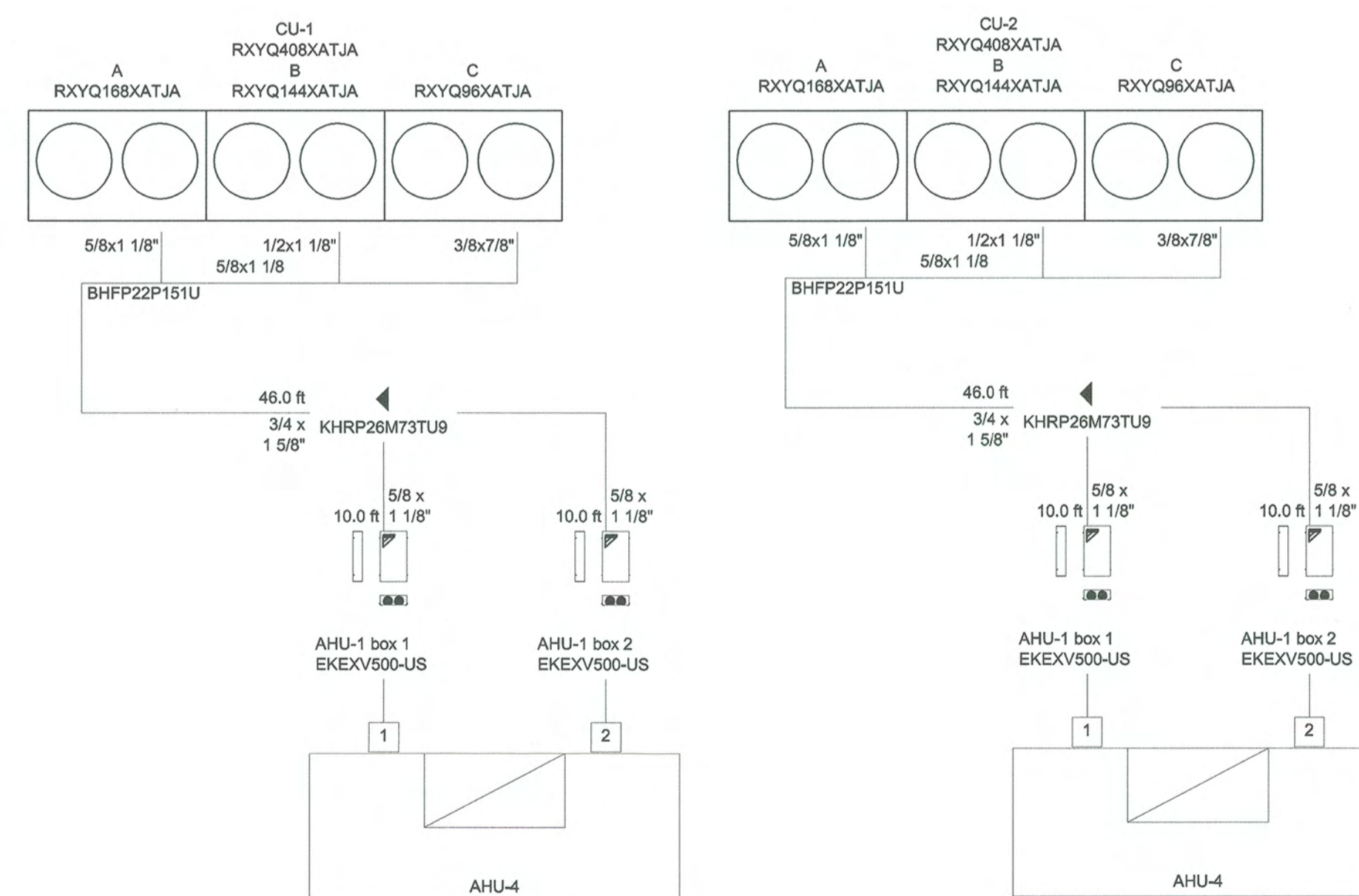
GAS PIPE CONNECTION DETAIL

SCALE: NONE 4



THERMOSTAT MOUNTING DETAIL

SCALE: NONE 2



PIPING NOTES:
 1. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED PIPE LENGTHS AND CONFIRM REQUIRED PIPE SIZES AND REFRIGERANT PIPING ACCESSORIES WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION. ALL REFRIGERANT PIPING SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.

CONDENSER PIPING DIAGRAM

SCALE: NONE 5

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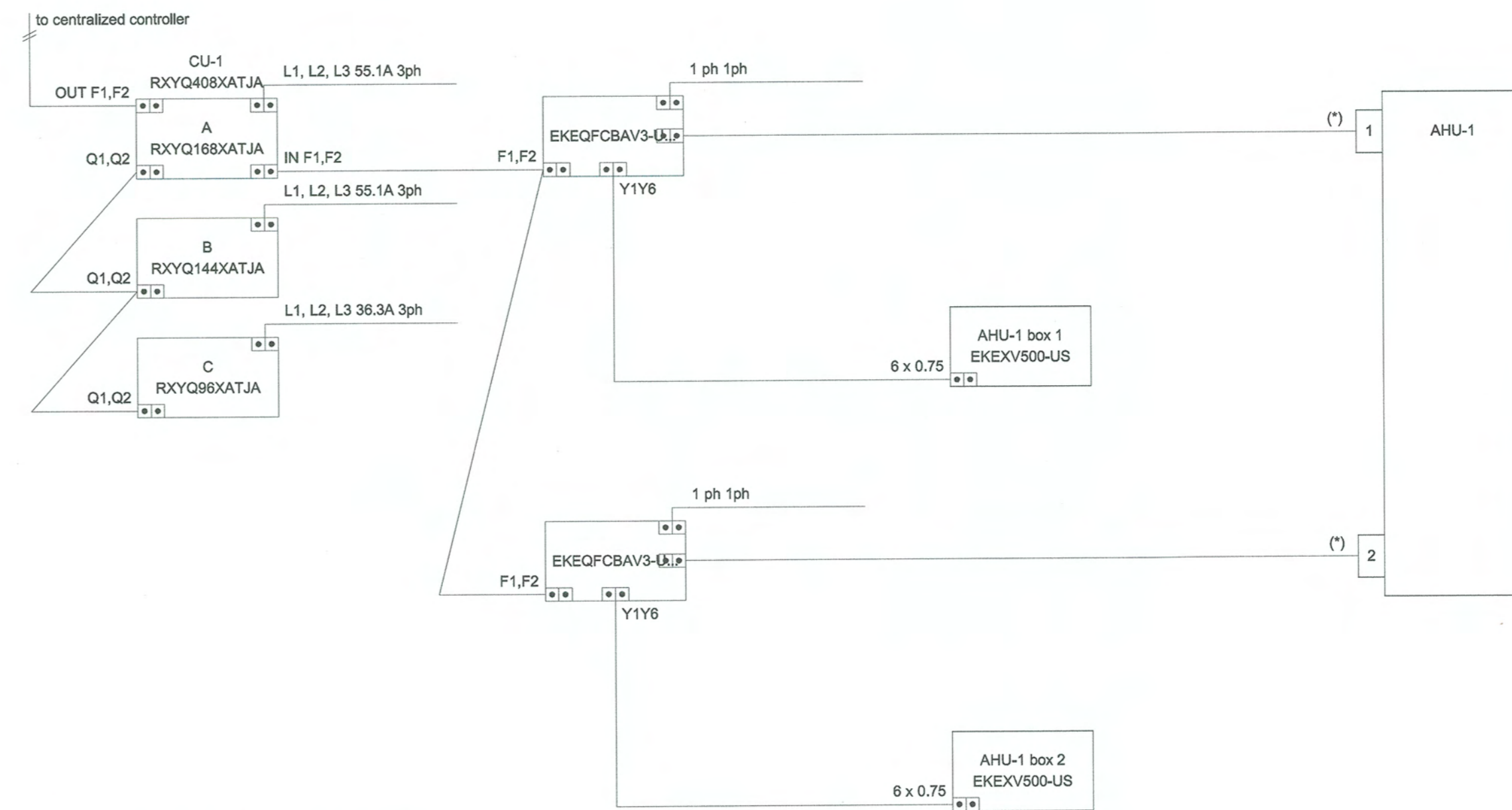
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SHEET:

MECHANICAL DETAILS

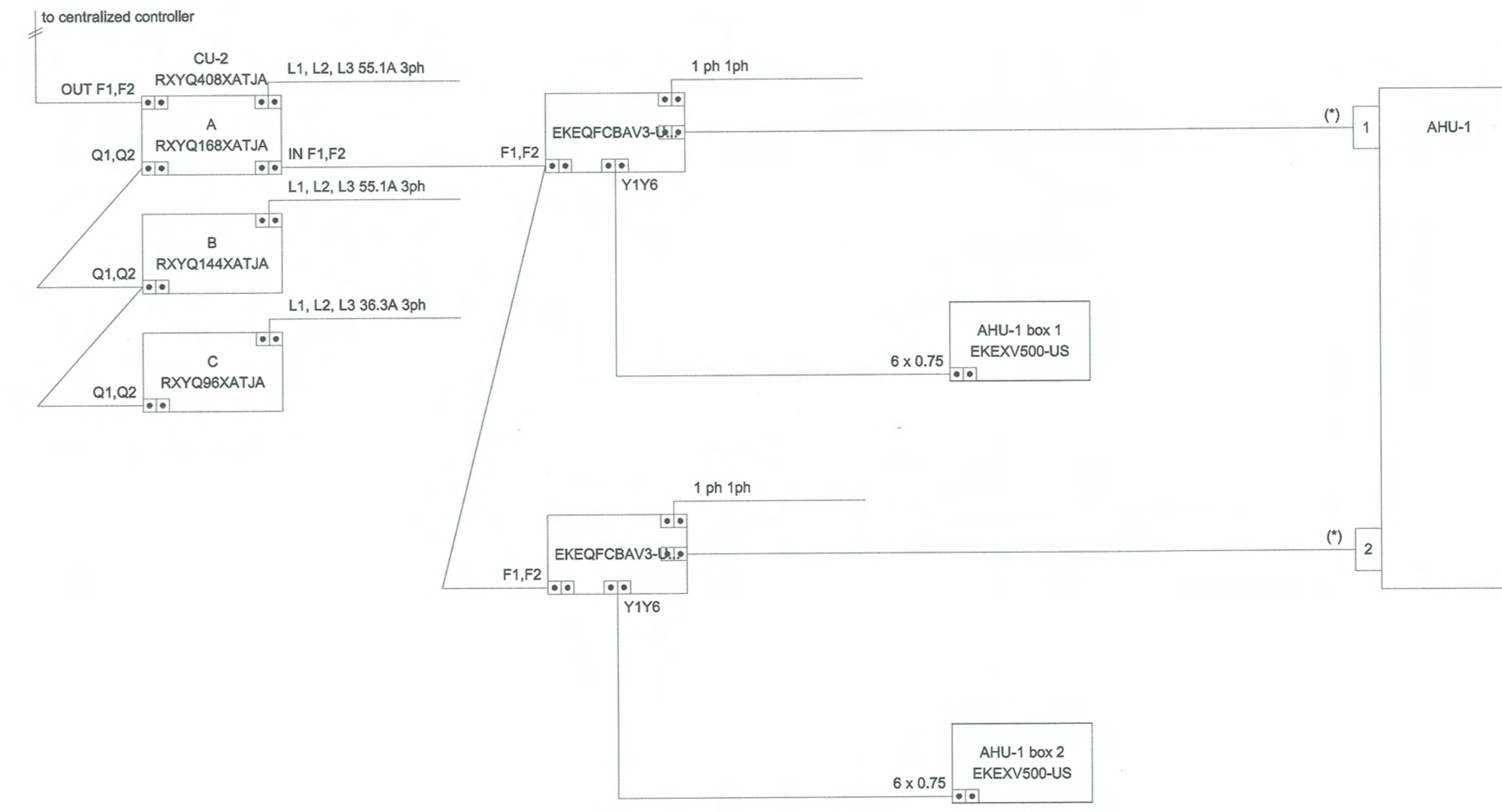
M3.1



EKEQ and EKEQV are built in the AHU and are pre-cabled.
 (*) For more details about wiring towards AHU, please refer to the installation manual.

CONDENSER #1 WIRING DIAGRAM

SCALE: NONE 1



EKEQ and EKEQV are built in the AHU and are pre-cabled.
 (*) For more details about wiring towards AHU, please refer to the installation manual.

CONDENSER #2 WIRING DIAGRAM

SCALE: NONE 2

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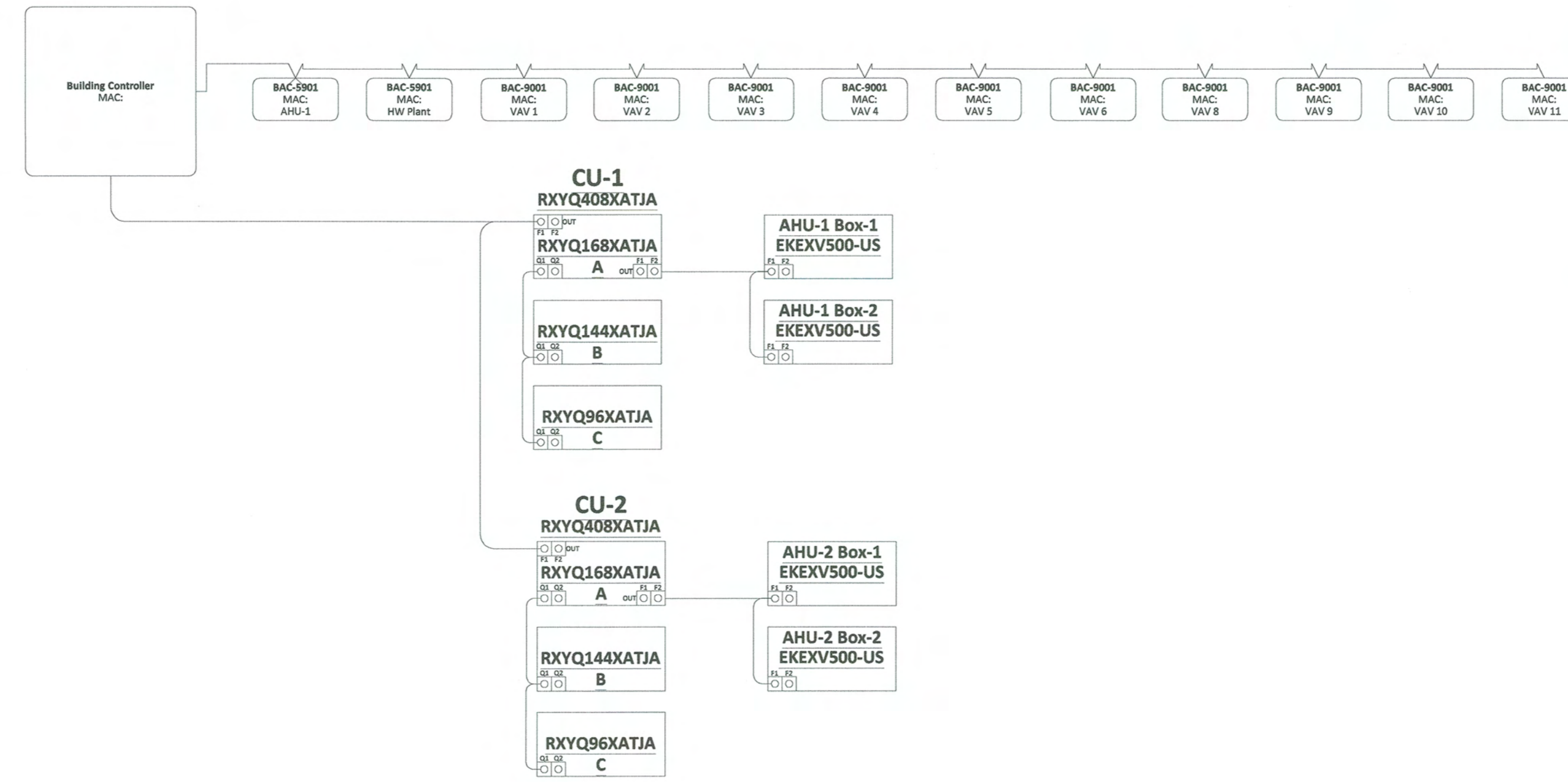
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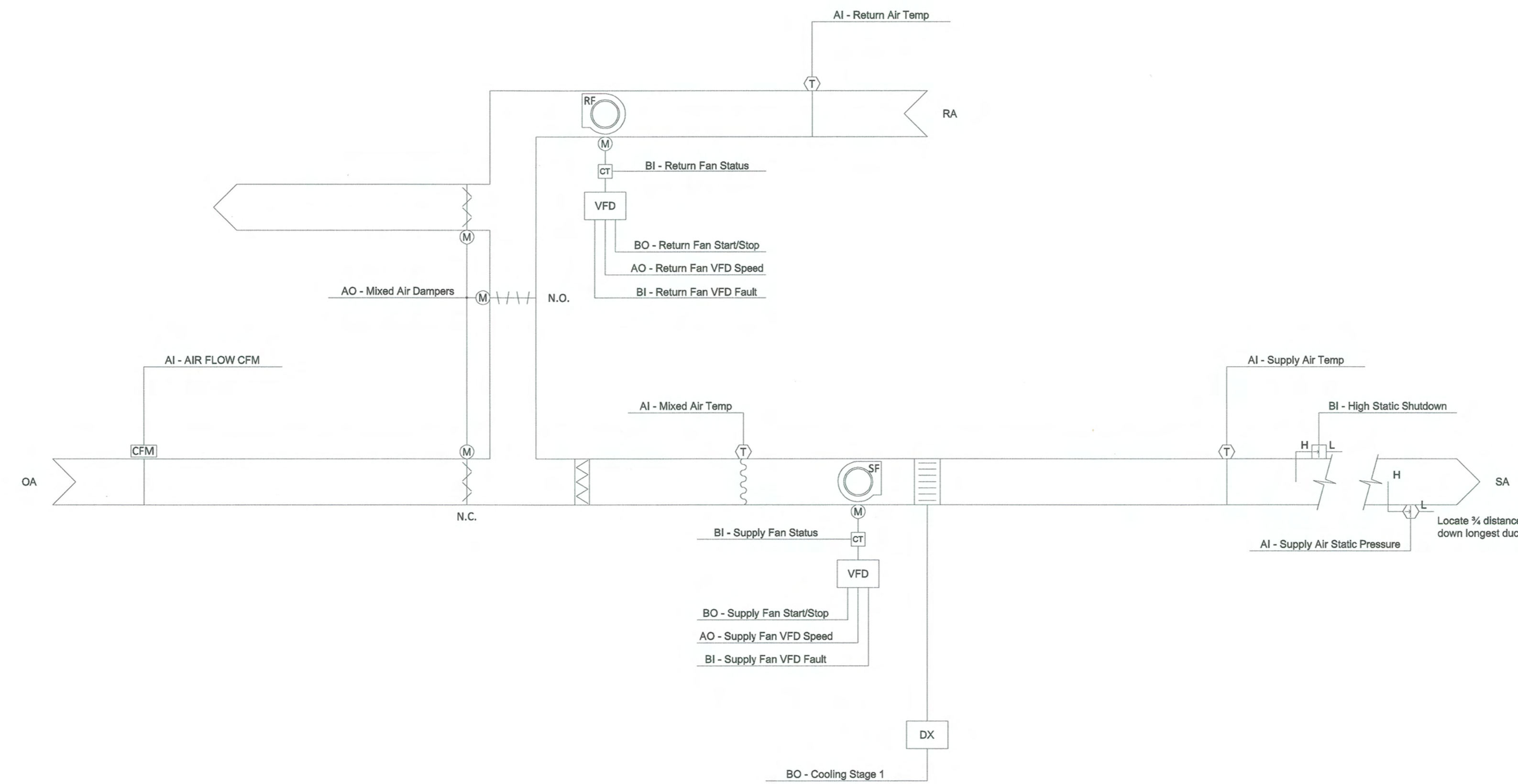
SHEET:
 MECHANICAL DETAILS

M3.2



NETWORK RISER

SCALE: NONE 1



AHU CONTROL DIAGRAM

SCALE: NONE 2

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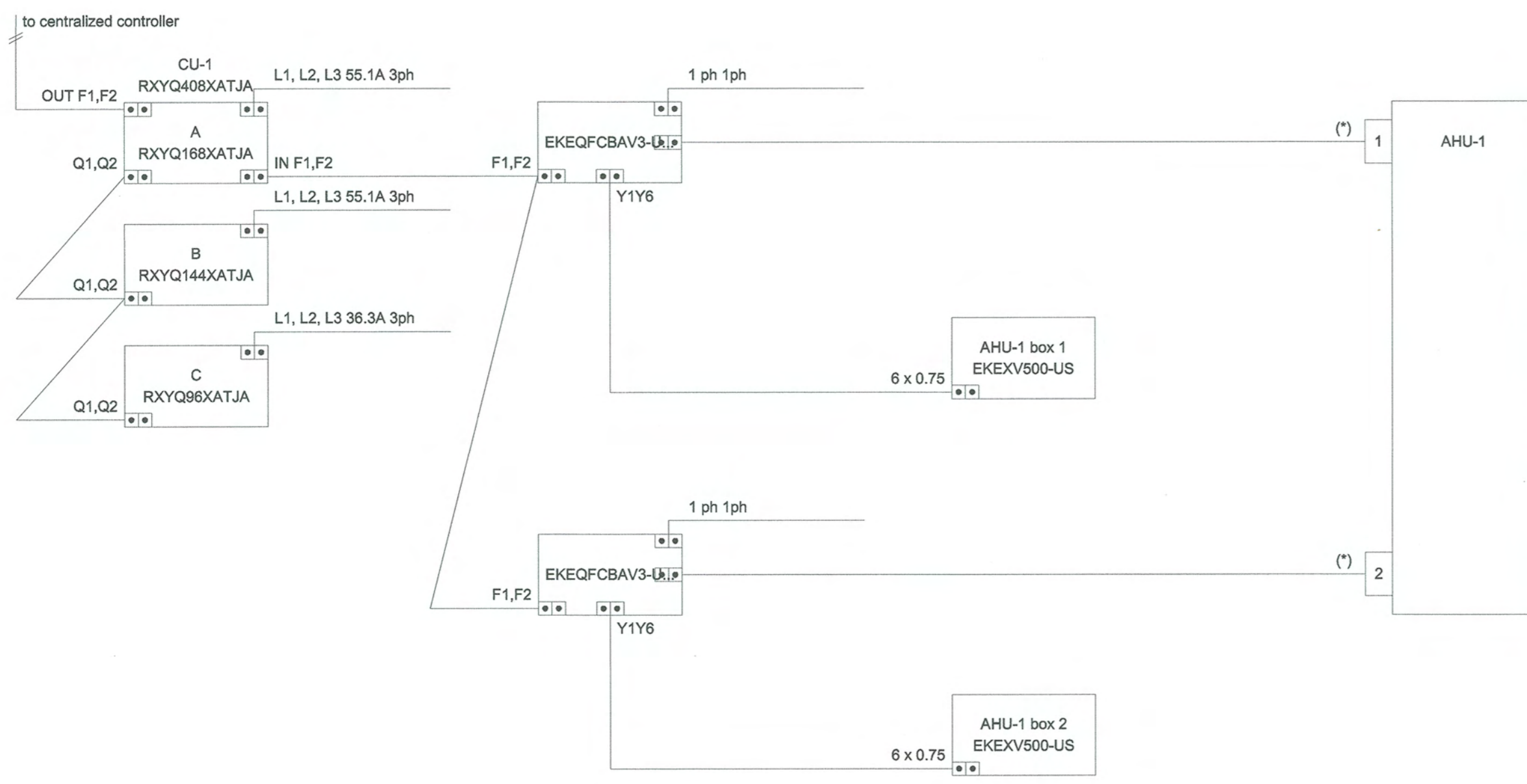
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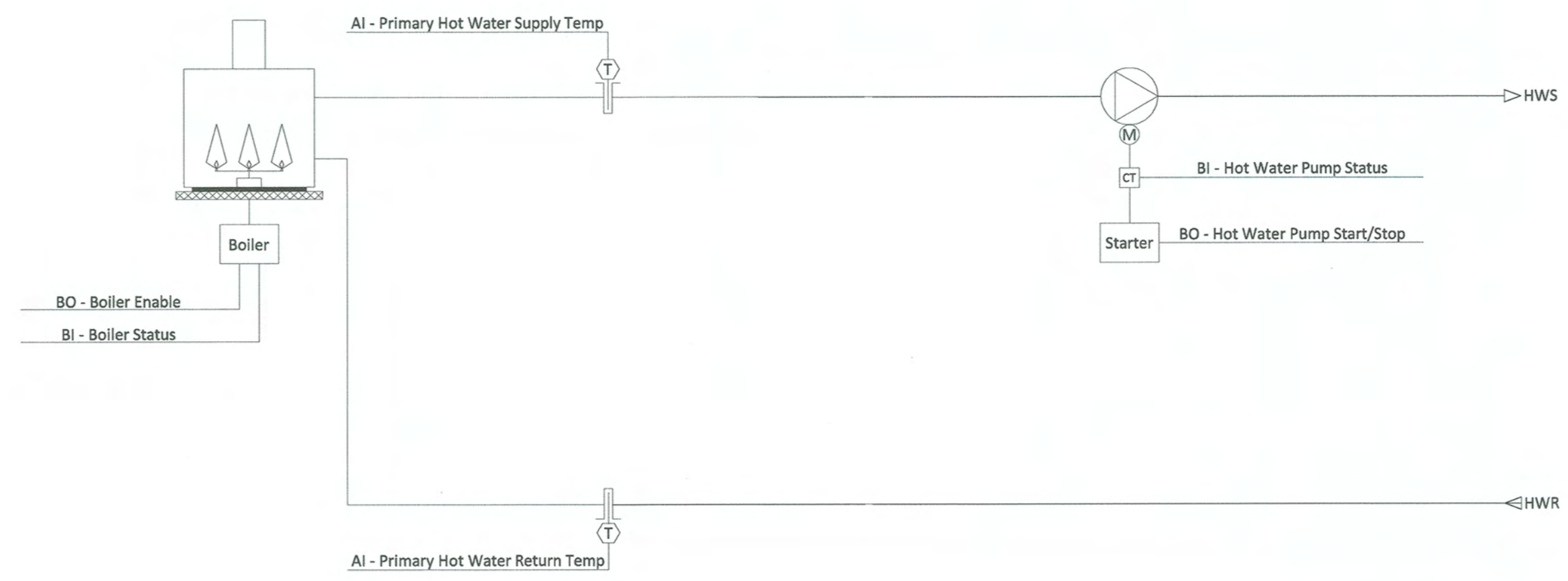
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SHEET:
 MECHANICAL CONTROLS

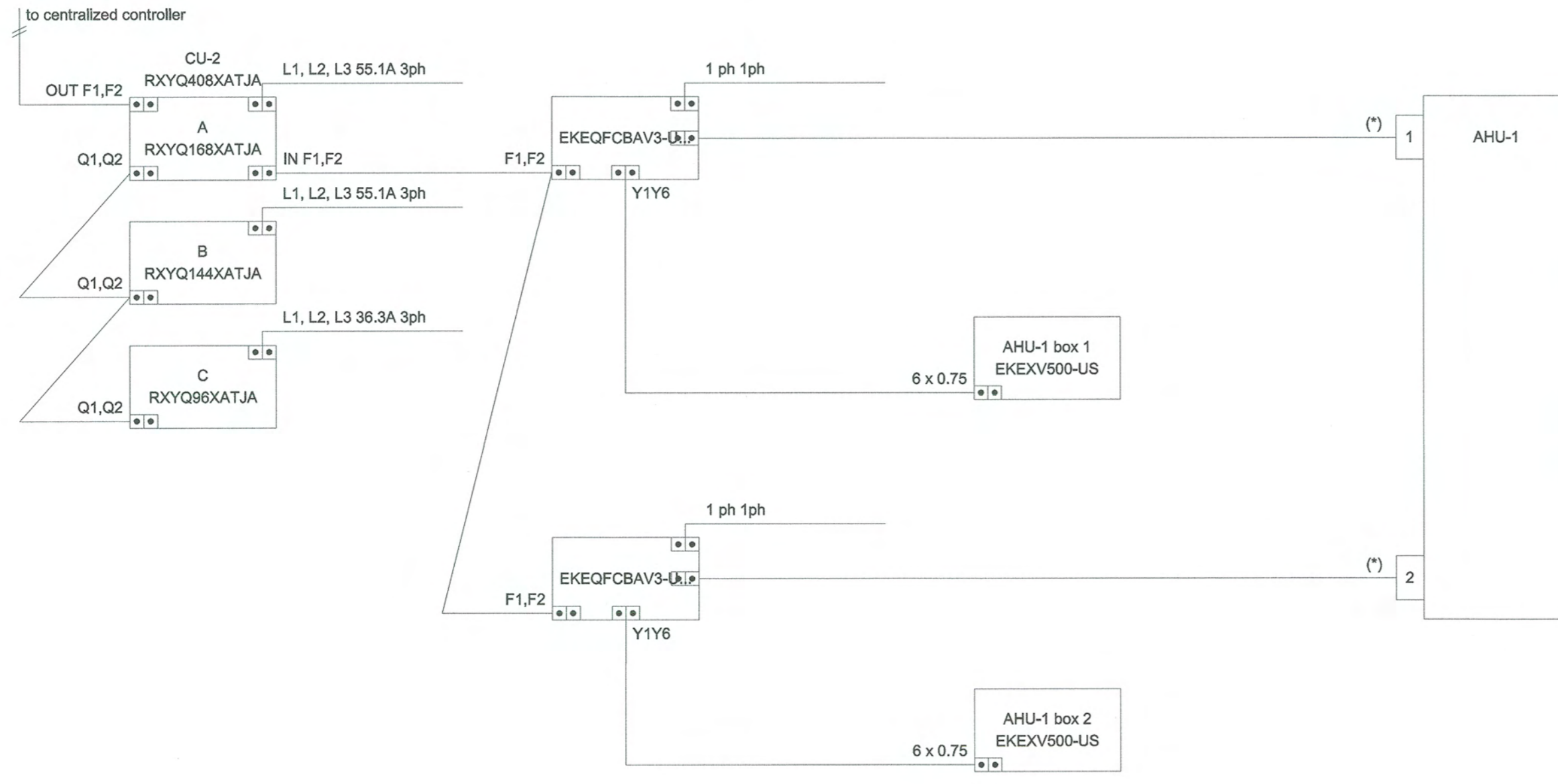
M4.1



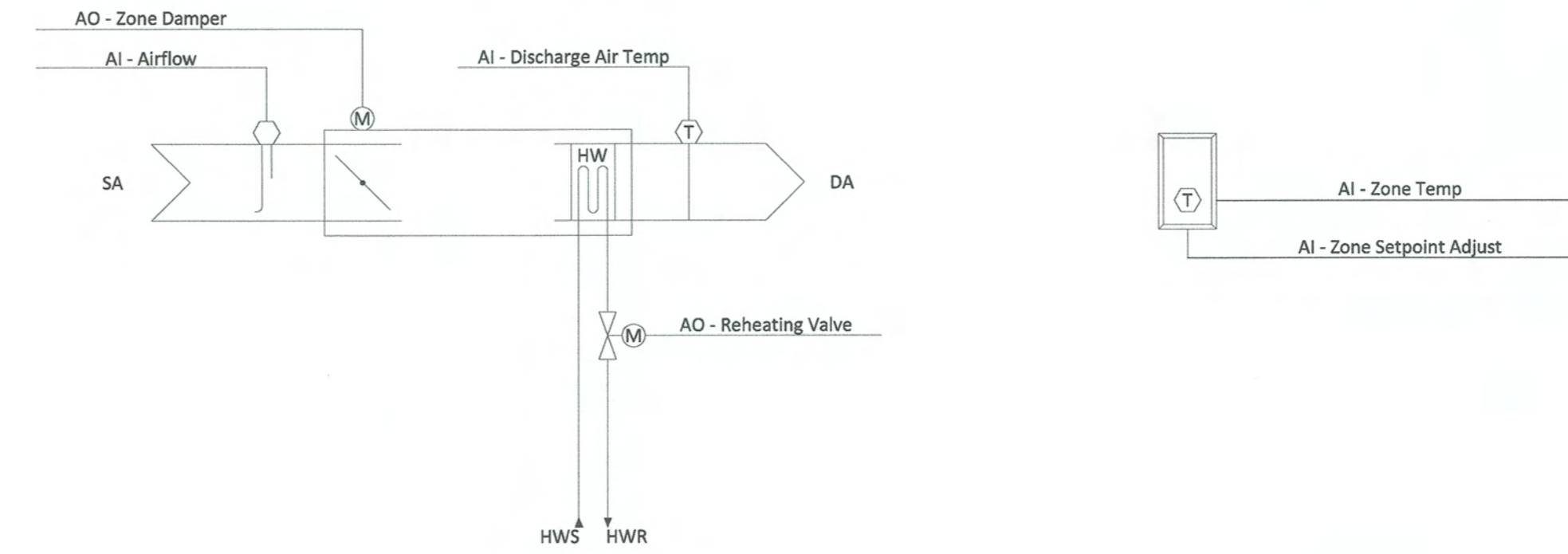
CU-1 CONTROL WIRING DIAGRAM SCALE: NONE 3



HEATING HOT WATER BOILER CONTROL DIAGRAM SCALE: NONE 1



CU-2 CONTROL WIRING DIAGRAM SCALE: NONE 4



VAV CONTROL DIAGRAM SCALE: NONE 2

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SHEET: MECHANICAL CONTROLS

M4.2

DIRECT DIGITAL CONTROL SYSTEM

General: Control functions within the building shall be performed by localized direct digital controls linked through a peer-to-peer network of building controllers. All controls shall be VRV equipment manufacturer. The system shall provide a web-based user interface and be designed to integrate multiple BACnet-based systems together, collect, store and display historical data.

An operator shall be able to logon to the system using a standard web browser & mobile device, without requiring system vendor-proprietary software installed on the user's PC to allow access to all appropriate data and control functions.

- A. Direct Digital Control (DDC) technology shall be used to provide the functions necessary for control of systems defined for control on this project.
- B. The control system shall accommodate simultaneous multiple user operation. Access to the control system data should be limited by operator password. An operator shall be able to log onto any workstation of the control system and have access to all designated data.
- C. The control system shall be designed such that each mechanical system will operate under stand-alone control. As such, in the event of a network communication failure, or the loss of other controllers, the control system shall continue to independently operate the unaffected equipment.
- D. Communication between the control panels and all workstations shall be over a high-speed network. All nodes on this network shall be peers. A network communications card shall be provided for each building control panel provided as part of the system installation.

System Graphics: The operator interface shall provide graphically-oriented web pages as designated. Provide a method for the operator to easily move between graphic displays on the screen.

The system must dynamically generate and serve web pages based on standard or custom web page templates in combination with content derived from the database in any building control panel. Dynamic points shall include analog and binary values, dynamic text, static text, and animation files. Graphics shall have the ability to show animation of equipment.

Training: Provide a minimum of 4 classroom training sessions, 4 hours each, throughout the contract period for personnel designated by the Owner. Train the designated staff of Owner's representative and Owner to enable them to proficiently operate the system; create, modify and delete programming; add, remove and modify physical points for the system, and perform routine diagnostic and troubleshooting procedures.

Training shall be available in courses designed to meet objectives as divided into three logical groupings: participants may attend one or more of these, depending on the level of knowledge required:

- Day-to-day Operators
- Advanced Operators
- System Managers/Administrators

The instructor(s) shall provide one copy of training material per student. The instructor(s) shall be factory-trained instructors experienced in presenting this material. Classroom training shall be done using a network of working controllers representative of the installed hardware or at the customer's site.

SEQUENCE OF OPERATION

1. Variable Air Volume - AHU (typical of 1)

Run Conditions - Requested:
The unit shall run whenever:

- Any zone is occupied.
- OR a definable number of unoccupied zones need heating or cooling.

High Static Shutdown:
The unit shall shut down and generate an alarm upon receiving a high static shutdown signal.

Supply Fan:
The supply fan shall run anytime the unit is commanded to run, unless shutdown on safeties. To prevent short cycling, the supply fan shall have a user definable (adj.) minimum runtime.

Alarms shall be provided as follows:

- Supply Fan Failure: Commanded on, but the status is off.
- Supply Fan in Hand: Commanded off, but the status is on.
- Supply Fan Runtime Exceeded: Status runtime exceeds a user definable limit (adj.).

Supply Air Duct Static Pressure Control:
The controller shall measure duct static pressure and shall modulate the supply fan VFD

speed to maintain a duct static pressure setpoint of 1.5in H2O (adj.). The supply fan VFD speed shall not drop below 30% (adj.).

Alarms shall be provided as follows:

- High Supply Air Static Pressure: If the supply air static pressure is 25% (adj.) greater than setpoint.
- Low Supply Air Static Pressure: If the supply air static pressure is 25% (adj.) less than setpoint.
- Supply Fan VFD Fault.

Return Fan:
The return fan shall run whenever the supply fan runs.

Alarms shall be provided as follows:

- Return Fan Failure: Commanded on, but the status is off.
- Return Fan in Hand: Commanded off, but the status is on.
- Return Fan Runtime Exceeded: Status runtime exceeds a user definable limit (adj.).
- Return Fan VFD Fault.

Return Fan Tracking:
The return fan VFD shall modulate in unison with the supply fan VFD. The return fan VFD shall track the supply fan VFD at 80% (adj.) of the supply fan VFD speed. The return fan VFD speed shall not drop below 20% (adj.).

Supply Air Temperature Setpoint - Optimized:
The controller shall monitor the supply air temperature and shall maintain a supply air temperature setpoint reset based on zone cooling and heating requirements

The supply air temperature setpoint shall be reset for cooling based on zone cooling requirements as follows:

- The initial supply air temperature setpoint shall be 55°F (adj.).
- As cooling demand increases, the setpoint shall incrementally reset down to a minimum of 53°F (adj.).

- As cooling demand decreases, the setpoint shall incrementally reset up to a maximum of 72°F (adj.).

If more zones need heating than cooling, then the supply air temperature setpoint shall be reset for heating as follows:

- The initial supply air temperature setpoint shall be 82°F (adj.).
- As heating demand increases, the setpoint shall incrementally reset up to a maximum of 85°F (adj.).
- As heating demand decreases, the setpoint shall incrementally reset down to a minimum of 72°F (adj.).

Cooling Stage:
The controller shall measure the supply air temperature and stage the cooling to maintain its cooling setpoint. To prevent short cycling, the stage shall have a user definable (adj.) minimum runtime.

The cooling shall be enabled whenever:

- Outside air temperature is greater than 60°F (adj.).
- AND the economizer (if present) is disabled or fully open.
- AND the supply fan status is on.
- AND the heating (if present) is not active.

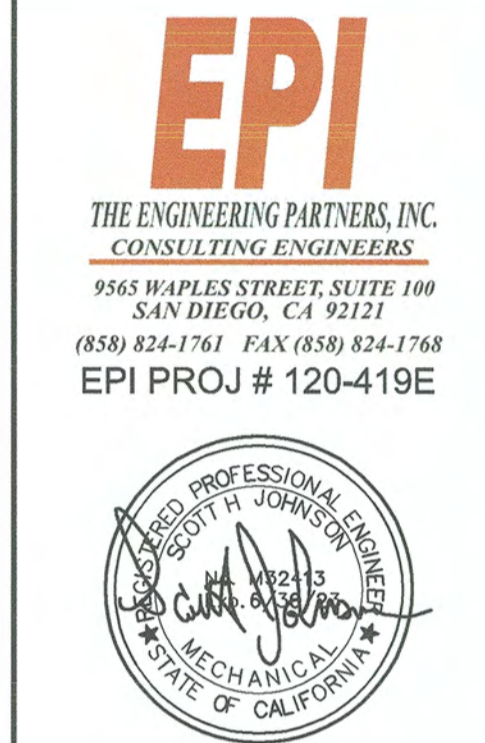
Alarms shall be provided as follows:

- High Supply Air Temp: If the supply air temperature is 5°F (adj.) greater than setpoint.

Heating Coil Valve:
The controller shall measure the supply air temperature and modulate the heating coil valve to maintain its heating setpoint.

The heating shall be enabled whenever:

- Outside air temperature is less than 65°F (adj.).
- AND the supply fan status is on.



CLIENT:

IMPERIAL COUNTY NORTH COUNTY
 ADMINISTRATION/COURTHOUSE HVAC
 REPLACEMENT
 BRAWLEY, CALIFORNIA
 COUNTY PROJECT NO. SR6650CFM

NO.	REVISION	DATE
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SHEET:
MECHANICAL CONTROLS

M4.3



- AND the cooling (if present) is not active.

The heating coil valve shall open whenever:

- Supply air temperature drops from 40°F to 35°F (adj.).
- OR the freestat (if present) is on.

Alarms shall be provided as follows:

- Low Supply Air Temp: If the supply air temperature is 5°F (adj.) less than setpoint.

Economizer:

The controller shall measure the mixed air temperature and modulate the economizer dampers in sequence to maintain a setpoint 2°F (adj.) less than the supply air temperature setpoint. The outside air dampers shall maintain a minimum adjustable position of 20% (adj.) open whenever occupied.

The economizer shall be enabled whenever:

- Outside air temperature is less than 65°F (adj.).
- AND the outside air temperature is less than the return air temperature.
- AND the supply fan status is on.

The economizer shall close whenever:

- Mixed air temperature drops from 40°F to 35°F (adj.).
- OR the freestat (if present) is on.
- OR on loss of supply fan status.

The outside and exhaust air dampers shall close and the return air damper shall open when the unit is off. If Optimal Start Up is available the mixed air damper shall operate as described in the occupied mode except that the outside air damper shall modulate to fully closed.

Mixed Air Temperature:

The controller shall monitor the mixed air temperature and use as required for economizer control (if present) or preheating control (if present).

Alarms shall be provided as follows:

- High Mixed Air Temp: If the mixed air temperature is greater than 90°F (adj.).
- Low Mixed Air Temp: If the mixed air temperature is less than 45°F (adj.).

Return Air Temperature:

The controller shall monitor the return air temperature and use as required for setpoint control or economizer control (if present).

Alarms shall be provided as follows:

- High Return Air Temp: If the return air temperature is greater than 90°F (adj.).
- Low Return Air Temp: If the return air temperature is less than 45°F (adj.).

Supply Air Temperature:

The controller shall monitor the supply air temperature.

Alarms shall be provided as follows:

- High Supply Air Temp: If the supply air temperature is greater than 120°F (adj.).
- Low Supply Air Temp: If the supply air temperature is less than 45°F (adj.).

Point Name	Hardware Points				Software Points							Show On Graphic
	AI	AO	BI	BO	AV	BV	Loop	Sched	Trend	Alarm		
Mixed Air Temp	x								x			x
Return Air Temp	x								x			x
Supply Air Static Pressure	x								x	x		x
Supply Air Temp	x								x			x
Heating Valve		x							x			x
Mixed Air Dampers		x							x			x
Return Fan VFD Speed		x							x			x
Supply Fan VFD Speed		x							x			x
High Static Shutdown			x						x	x		x
Return Fan Status				x					x			x
Return Fan VFD Fault				x					x			x
Supply Fan Status					x				x			x
Supply Fan VFD Fault						x			x			x

Point Name	Hardware Points				Software Points							Show On Graphic
	AI	AO	BI	BO	AV	BV	Loop	Sched	Trend	Alarm		
Cooling Stage 1			x						x			x
Return Fan Start/Stop			x						x			x
Supply Fan Start/Stop			x						x			x
Economizer Mixed Air Temp Setpoint					x				x			x
Supply Air Static Pressure Setpoint					x				x			x
Supply Air Temp Setpoint					x				x			x
Compressor Runtime Exceeded										x		
High Mixed Air Temp											x	
High Return Air Temp											x	
High Supply Air Static Pressure											x	
High Supply Air Temp											x	
High Supply Air Temp											x	
Low Mixed Air Temp											x	
Low Return Air Temp											x	
Low Supply Air Static Pressure											x	
Low Supply Air Temp											x	
Low Supply Air Temp											x	
Return Fan Failure											x	
Return Fan in Hand											x	
Return Fan Runtime Exceeded											x	
Supply Fan Failure											x	
Supply Fan in Hand											x	
Supply Fan Runtime Exceeded											x	
Totals	4	4	5	3	3	0	0	0	17	21	18	
Total Hardware (15)					Total Software (41)							

2. Variable Air Volume - Terminal Unit (typical of 10)

Run Conditions - Scheduled:
The unit shall run according to a user definable time schedule in the following modes:

- Occupied Mode: The unit shall maintain
 - A 75°F (adj.) cooling setpoint
 - A 70°F (adj.) heating setpoint.
- Unoccupied Mode (night setback): The unit shall maintain
 - A 85°F (adj.) cooling setpoint.
 - A 55°F (adj.) heating setpoint.

Alarms shall be provided as follows:

- High Zone Temp: If the zone temperature is greater than the cooling setpoint by a user definable amount (adj.).
- Low Zone Temp: If the zone temperature is less than the heating setpoint by a user definable amount (adj.).

Zone Setpoint Adjust:

The occupant shall be able to adjust the zone temperature heating and cooling setpoints at the zone sensor.

Reversing Variable Volume Terminal Unit - Flow Control:
The unit shall maintain zone setpoints by controlling the airflow through one of the following:

Occupied:

- When zone temperature is greater than its cooling setpoint, the zone damper shall modulate between the minimum occupied airflow (adj.) and the maximum cooling airflow (adj.) until the zone is satisfied.
- When the zone temperature is between the cooling setpoint and the heating setpoint, the zone damper shall maintain the minimum required zone ventilation (adj.).
- When zone temperature is less than its heating setpoint, the controller shall enable

heating to maintain the zone temperature at its heating setpoint. Additionally, if warm air is available from the AHU, the zone damper shall modulate between the minimum occupied airflow (adj.) and the maximum heating airflow (adj.) until the zone is satisfied.

Unoccupied:

- When the zone is unoccupied the zone damper shall control to its minimum unoccupied airflow (adj.).
- When the zone temperature is greater than its cooling setpoint, the zone damper shall modulate between the minimum unoccupied airflow (adj.) and the maximum cooling airflow (adj.) until the zone is satisfied.
- When zone temperature is less than its unoccupied heating setpoint, the controller shall enable heating to maintain the zone temperature at the setpoint. Additionally, if warm air is available from the AHU, the zone damper shall modulate between the minimum unoccupied airflow (adj.) and the auxiliary heating airflow (adj.) until the zone is satisfied.

Reheating Coil Valve:
The controller shall measure the zone temperature and modulate the reheating coil valve open on dropping temperature to maintain its heating setpoint.

When cold air is available from the AHU and there is no fan present in the box, the zone damper shall modulate to the minimum occupied airflow (adj.). If more heat is required, the zone damper shall modulate to the auxiliary heating airflow (adj.).

Discharge Air Temperature:
The controller shall monitor the discharge air temperature.

Alarms shall be provided as follows:

- High Discharge Air Temp: If the discharge air temperature is greater than 120°F (adj.).
- Low Discharge Air Temp: If the discharge air temperature is less than 40°F (adj.).

Point Name	Hardware Points				Software Points						Show On Graphic	
	AI	AO	BI	BO	AV	BV	Loop	Sched	Trend	Alarm		
Airflow	x									x		x
Discharge Air Temp	x									x		x
Zone Setpoint Adjust	x											x
Zone Temp	x									x		x
Reheating Valve		x								x		x
Zone Damper		x								x		x
Airflow Setpoint					x					x		x
Cooling Setpoint					x					x		x
Heating Setpoint					x					x		x
Heating Mode						x				x		
Schedule								x				
High Discharge Air Temp											x	
High Zone Temp											x	
Low Discharge Air Temp											x	
Low Zone Temp											x	
Totals	4	2	0	0	3	1	0	1	9	4	9	
	Total Hardware (6)				Total Software (18)							

3. Single Boiler System (typical of 1)

Boiler System Run Conditions:

The boiler system shall be enabled to run whenever:

- A definable number of hot water coils need heating.
- AND outside air temperature is less than 65°F (adj.).

To prevent short cycling, the boiler system shall run for and be off for minimum adjustable times (both user definable), unless shutdown on safeties or outside air conditions.

The boiler shall run subject to its own internal safeties and controls.

The boiler system shall also run for freeze protection whenever outside air temperature is less than 38°F (adj.).

Hot Water Pump:

The hot water pump shall run anytime the boiler is called to run and shall have a user definable delay (adj.) on stop.

Alarms shall be provided as follows:

- Hot Water Pump Failure: Commanded on, but the status is off.
- Hot Water Pump Running in Hand: Commanded off, but the status is on.
- Hot Water Pump Runtime Exceeded: Status runtime exceeds a user definable limit.

Boiler Enable:

The boiler shall be enabled when the boiler system is commanded on. The boiler shall be enabled after pump status is proven on and shall run subject to its own internal safeties and controls.

Alarms shall be provided as follows:

- Boiler Failure: Commanded on, but the status is off.
- Boiler Running in Hand: Commanded off, but the status is on.

- Boiler Runtime Exceeded: Status runtime exceeds a user definable limit.

Hot Water Supply Temperature Setpoint:
The boiler shall maintain a hot water supply temperature setpoint as determined by its own internal controls (provided by others).

Primary Hot Water Temperature Monitoring:
The following temperatures shall be monitored:

- Primary hot water supply.
- Primary hot water return.

Alarms shall be provided as follows:

- High Primary Hot Water Supply Temp: If greater than 200°F (adj.).
- Low Primary Hot Water Supply Temp: If less than 100°F (adj.).

Point Name	Hardware Points				Software Points						Show On Graphic	
	AI	AO	BI	BO	AV	BV	Loop	Sched	Trend	Alarm		
Primary Hot Water Return Temp	x									x		x
Primary Hot Water Supply Temp	x									x		x
Boiler Status			x							x		x
Hot Water Pump Status			x							x		x
Boiler Enable				x								x
Hot Water Pump Start/Stop				x						x		x
Outside Air Temp					x							x
Boiler Failure											x	
Boiler Running in Hand											x	
Boiler Runtime Exceeded											x	
High Primary Hot Water Supply Temp											x	
Hot Water Pump Failure											x	
Hot Water Pump Running in Hand											x	
Hot Water Pump Runtime Exceeded											x	
Low Primary Hot Water Supply Temp											x	
Totals	2	0	2	2	1	0	0	0	5	8	7	
	Total Hardware (6)				Total Software (14)							

CLIENT:

IMPERIAL COUNTY NORTH COUNTY
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M4.4

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
 This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2, for alterations.
 Project Name: Brawley Courthouse Report Page: (Page 1 of 11)
 Project Address: 220 Main Street Date Prepared: 8/11/2021

A. GENERAL INFORMATION

01 Project Location (city)	Brawley	04 Total Conditioned Floor Area	12436
02 Climate Zone	15	05 Total Unconditioned Floor Area	800
03 Occupancy Types Within Project:		06 # of Stories (Habitable Above Grade)	2
<input checked="" type="checkbox"/> Office (O)	<input type="checkbox"/> Retail (M)	<input type="checkbox"/> Non-refrigerated Warehouse (S)	
<input type="checkbox"/> Hotel/ Motel Guest Rooms (R-1)	<input type="checkbox"/> School (E)	<input type="checkbox"/> Healthcare Facility (F)	
<input type="checkbox"/> High-Rise Residential (R-2/R-3)	<input type="checkbox"/> Relocatable Class Bldg (E)	<input type="checkbox"/> Other (write in)	See Table J

B. PROJECT SCOPE
 This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2, for alterations.

01	02	03
Air System(s)	Wet System Components	Dry System Components
<input type="checkbox"/> Heating Air System	<input type="checkbox"/> Water Economizer	<input checked="" type="checkbox"/> Air Economizer
<input checked="" type="checkbox"/> Cooling Air System	<input checked="" type="checkbox"/> Pumps	<input type="checkbox"/> Electric Resistance Heat
Mechanical Controls	<input type="checkbox"/> System Piping	<input checked="" type="checkbox"/> Fan Systems
<input checked="" type="checkbox"/> Mechanical Controls (existing to remain, altered or new)	<input type="checkbox"/> Cooling Towers	<input type="checkbox"/> Ductwork (existing to remain, altered or new)
	<input type="checkbox"/> Chillers	<input checked="" type="checkbox"/> Ventilation
	<input checked="" type="checkbox"/> Boilers	<input checked="" type="checkbox"/> Zonal Systems/ Terminal Boxes

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20190401
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Mechanical Systems
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

C. COMPLIANCE RESULTS
 Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, or the table indicated as not compliant for guidance.

01	02	03	04	05	06	07	08	09
System Summary §110.1, §110.2, §140.4	Pumps §140.4(k)	Fans/Economizers §140.4(c), §140.4(a)	System Controls §110.2, §120.2, §140.4(f)	Ventilation §120.1	Terminal Box Controls §140.4(c)	Distribution §120.3, §140.4(f)	Cooling Towers §110.2(c)2	Compliance Results
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	(See Table M)	
Yes	AND Yes	AND Yes	AND Yes	AND Yes	AND Yes	AND Yes	AND Yes	COMPLIES

D. EXCEPTIONAL CONDITIONS
 This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
 This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20190401
 Report Generated: 2021-08-11 14:32:42

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
 This table is used to demonstrate compliance for mechanical equipment with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(f) or §141.0(b)2 for alterations.

01	02	03	04	05	06	07	08	09
Name or Item Tag	Equipment Type ¹	Qty	Rated Input Capacity (Btu/h) ^{1,2}	Rated Efficiency	Minimum Efficiency Required per §110.2	Efficiency Unit	Boiler Controls per §140.4(l)	Temperature Reset
RBI Dominator 400	Hot Water, Gas-Fired	1	300,000 to 500,000	0.85	0.82	TE	NA: only 1 boiler in plant	NA: <=500,00 Btu/h

¹ FOOTNOTES: Use NRCC-PLB to document compliance with domestic water heating equipment.
² Maximum capacity - minimum and maximum ratings as provided for and allowed by the unit's controls.
³ Includes oil-fired (residual)

G. PUMPS
 This table is used to demonstrate compliance with Prescriptive hydraulic system requirements found in §140.4(b) applicable to pumps < 5hp.

01	02	03	04	05	06	07	08
Name or Item Tag	Equipment Type	Qty	HP	Variable Flow	Hydronic Heat Pump Isolation	VSD on Pumps > 5HP	Differential Pressure Sensor
HW	Primary heating hot water	1	0.8	NA: <=3 control valves	NA: No hydronic heat pump	NA: Not serving variable flow system	

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20190401
 Report Generated: 2021-08-11 14:32:42

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

H. FAN SYSTEMS & AIR ECONOMIZERS
 This table is used to demonstrate compliance with prescriptive requirements found in §140.4(c), §140.4(e) and §140.4(m) for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name	AHU-New	Economizer ¹	Differential Temperature	Economizer Controls	Designed per §140.4(a) and (m)	System Fan Type	Variable Air Volume
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-b	Design Airflow through Device (CFM)
SF	Supply	1	18000	BHP	22.28		
RF	Return	1	15150	BHP	8.9		
Total System Design Supply Airflow (CFM):			18000	Total System Design (B)HP:	31.18	Maximum System Fan Power (B)HP:	23.4

¹ FOOTNOTES: Computer room economizers must meet requirements of §140.9(a) and will be documented on the NRCC-PRC-E document.
² The unit used for HP must be consistent for all fans within a system.

I. SYSTEM CONTROLS
 This table is used to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (n) or requirements in §141.0(b)2E for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft ²)	Thermostats §110.2(b) & (c)-§120.2(e) or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(e)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
AHU-New	Multi-zone w/ DDC to zone	<= 25,000 ft ²	EMCS	EMCS	EMCS	EMCS	Included	NA: No operable windows

¹ FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.
² Notes: Controls with a * require a note in the space below explaining how compliance is achieved. EX: system 1- SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20190401
 Report Generated: 2021-08-11 14:32:42

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

J. VENTILATION AND INDOOR AIR QUALITY
 This table is used to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(c)38 for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	02	03	04	05	06	07	
<input type="checkbox"/>	<input type="checkbox"/>	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Check this box if the project included Nonresidential or Hotel/Motel spaces					
<input type="checkbox"/>	<input type="checkbox"/>	Check this box if the project included new or altered high-rise residential dwelling units.					
<input type="checkbox"/>	<input type="checkbox"/>	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per §120.1(c)2.					

Nonresidential and Hotel/ Motel Ventilation Systems

System Name	AHU-New	System Design OA CFM Airflow ¹	2830	System Design Transfer Air CFM	0	Air Filtration per §120.1(c) and §141.0(b)2 ²
Space Name or Item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM ⁶
VAV-1	Office space	877			131.6	0
VAV-2	Office space	2941			441.1	0
VAV-3	Office space	405			60.8	0

DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3⁶

DCV: NA: Not required per §120.1(d)3
 Occ Sensor: NA: Not required space type

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20190401
 Report Generated: 2021-08-11 14:32:42

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

J. VENTILATION AND INDOOR AIR QUALITY

VAV	Space	Area	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	
VAV-4	Office space	239																		
VAV-5	Office space	344																		
VAV-6	Office space	1472																		
VAV-8	Office space	1851																		
VAV-9	Office space	1126																		
VAV-10	Office space	2190																		
VAV-11	Office space	991																		
17	Total System Required Min OA CFM																			

DCV: NA: Not required per §120.1(d)3
 Occ Sensor: NA: Not required space type

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20190401
 Report Generated: 2021-08-11 14:32:42

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 EPI PROJ # 120-419E

REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA
 MECHANICAL
 No. 12213
 Exp. 12/31/2024

CLIENT:
 IMPERIAL COUNTY NORTH COUNTY
 ADMINISTRATION/COURTHOUSE HVAC
 REPLACEMENT
 BRAWLEY, CALIFORNIA
 COUNTY PROJECT NO. SR6650CFM

NO.	REVISION	DATE

SHEET:
 T-24 COMPLIANCE

M5.1

STATE OF CALIFORNIA
Mechanical Systems
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CERTIFICATE OF COMPLIANCE
 Project Name: Brawley Courthouse Report Page: (Page 7 of 11)
 Project Address: 220 Main Street Date Prepared: 8/11/2021

J. VENTILATION AND INDOOR AIR QUALITY
 Air filtration requirements apply to the following three system types per §120.1(c)(1): space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.
 Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.
 For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.
 §120.2(c)(3) requires systems serving rooms that are required by §130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 2,500² or smaller; multipurpose rooms less than 1,000²; classrooms, conference rooms, restaurants, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §130.1(e).

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20190401
 Report Generated: 2021-08-11 14:32:42

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: Brawley Courthouse Report Page: (Page 8 of 11)
 Project Address: 220 Main Street Date Prepared: 8/11/2021

K. TERMINAL BOX CONTROLS
 This table is used to demonstrate compliance with prescriptive zone control requirements in §140.4(d).

01	02	03	04	05	06	07	08	09	10	11	12
Zone/System/VAV Box Name or Item Tag	Zonal Control Strategy per §140.4(d)	Design			Deadband Compliance			Reheated, Recooled, Mixed Air Compliance			Complies
		Peak Primary Airflow CFM	Primary Air In Deadband CFM	Reheated Recooled Mixed Airflow CFM	Outside Air CFM	20% (30% if no DDC) of Peak Primary Airflow CFM	Max Deadband Airflow CFM	50% of Peak Primary Airflow	1 st Stage Modulates <=95°F and Maintains DB Rate?	2 nd Stage Modulates from DB Flow to Heating Max Flow?	
VAV-1	VAV with DDC @ zone	1100	330	550	187.8	220	220	550	Yes	Yes	Yes
VAV-2	VAV with DDC @ zone	3535	1060.5	1150	600.8	707	707	1767.5	Yes	Yes	Yes
VAV-3	VAV with DDC @ zone	275	275	275	101.2	55	101.2	137.5	Yes	Yes	Yes
VAV-4	VAV with DDC @ zone	300	90	90	35.8	60	60	150	Yes	Yes	Yes
VAV-5	VAV with DDC @ zone	520	156	125	65.6	104	104	260	Yes	Yes	Yes
VAV-6	VAV with DDC @ zone	1310	393	900	475.8	262	475.8	655	Yes	Yes	Yes
VAV-8	VAV with DDC @ zone	2450	735	1250	514.6	490	514.6	1225	Yes	Yes	Yes
VAV-9	VAV with DDC @ zone	1600	480	360	337.8	320	337.8	800	Yes	Yes	Yes
VAV-10	VAV with DDC @ zone	1200	360	3535	328.5	240	328.5	600	Yes	Yes	Yes
VAV-11	VAV with DDC @ zone	1600	480	400	182.1	320	320	800	Yes	Yes	Yes

L. DISTRIBUTION (DUCTWORK AND PIPING)
 This section does not apply to this project.

M. COOLING TOWERS
 This section does not apply to this project.

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20190401
 Report Generated: 2021-08-11 14:32:42

STATE OF CALIFORNIA
Mechanical Systems
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: Brawley Courthouse Report Page: (Page 9 of 11)
 Project Address: 220 Main Street Date Prepared: 8/11/2021

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
 Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCC/

Yes	No	Form/Title	Field Inspector	
			Pass	Fail
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCC-MCH-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
 Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Yes	No	Form/Title	Field Inspector	
			Pass	Fail
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-04-A - Air Distribution Duct Leakage	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-05-A - Air Economizer Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)(3)) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO ₂) concentration setpoints.	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-07-A Supply Fan Variable Flow Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-08-A Valve Leakage Test	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-09-A Supply Water Temperature Reset Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-10-A Hydronic System Variable Flow Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-11-A Automatic Demand Shed Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	<input type="checkbox"/>	<input type="checkbox"/>

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Mechanical Systems
 NRCC-MCH-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: Brawley Courthouse Report Page: (Page 10 of 11)
 Project Address: 220 Main Street Date Prepared: 8/11/2021

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Yes	No	Form/Title	Field Inspector	
			Pass	Fail
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope permit applicant should move this form to "Yes".	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance NOTE: This form does not automatically move to "Yes". If Chilled water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-16-A Supply Air Temperature Reset Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-18-A Energy Management Control Systems	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-19-A Occupancy Sensor Controls	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-20 Multi-Family Ventilation	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-MCH-21 Multi-Family Envelope Leakage	<input type="checkbox"/>	<input type="checkbox"/>

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION
 Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Provider's registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCCV/

Yes	No	Form/Title	Field Inspector	
			Pass	Fail
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCCV-MCH-04-H Duct Leakage Test NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCCV-MCH-24 Enclosure Air Leakage Worksheet NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCCV-MCH-27 High-rise Residential NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCCV-MCH-32 Local Mechanical Exhaust NOTE: Must be completed by a HERS Rater	<input type="checkbox"/>	<input type="checkbox"/>

Q. MANDATORY MEASURES DOCUMENTATION LOCATION
 This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01	02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	Plan sheet or construction document location
Yes	M-Sheets

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
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STATE OF CALIFORNIA
Mechanical Systems
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CERTIFICATE OF COMPLIANCE
 Project Name: Brawley Courthouse Report Page: (Page 11 of 11)
 Project Address: 220 Main Street Date Prepared: 8/11/2021

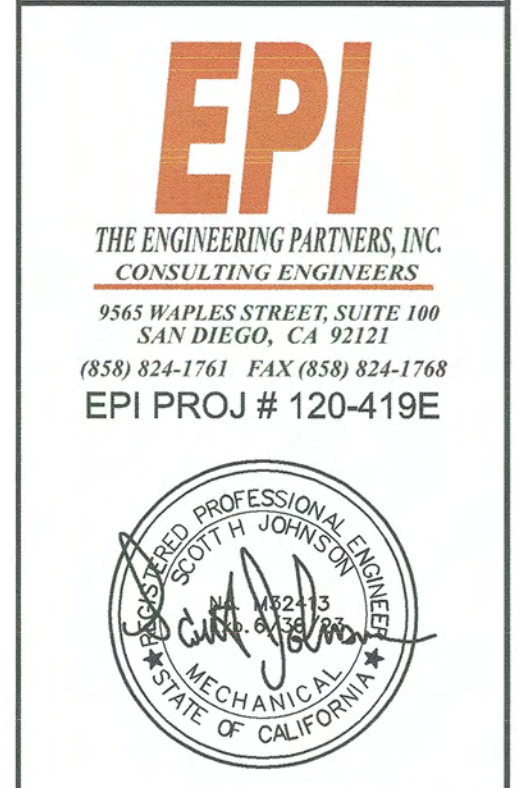
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
 I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Scott Johnson
 Signature Date: 2021-08-11
 Company: J&R Engineering & Consulting, Inc.
 Address: 16769 Bernardo Center Drive, Suite 1 #768
 City/State/Zip: San Diego CA 92128
 Phone: 858-746-9701

RESPONSIBLE PERSON'S DECLARATION STATEMENT
 I certify the following under penalty of perjury, under the laws of the State of California:
 1. The information provided on this Certificate of Compliance is true and correct.
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Scott Johnson
 Signature Date: 2021-08-11
 Company: J&R Engineering & Consulting, Inc.
 Address: 16885 West Bernardo Drive, Suite 118
 City/State/Zip: San Diego CA 92127
 Phone:

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
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CLIENT:

IMPERIAL COUNTY NORTH COUNTY ADMINISTRATION/COURTHOUSE HVAC REPLACEMENT BRAWLEY, CALIFORNIA COUNTY PROJECT NO. SR6650CFM

NO.	REVISION	DATE

SHEET:

T-24 COMPLIANCE

M5.2

ELECTRICAL SYMBOLS LEGEND & ABBREVIATIONS

GENERAL	
	SECTION LETTER DESIGNATION
	SHEET SECTION APPEARS ON
	DETAIL NUMBER DESIGNATION
	SHEET DETAIL APPEARS (ILLUSTRATED ON)
	NOTE REFERENCE

POWER	
+48"	INDICATES MOUNTING HEIGHT ABOVE FINISHED FLOOR
PH OR Ø	PHASE
	MOTOR CONNECTION WITH HP NOTED
	FUSED SAFETY DISCONNECT SWITCH. FUSES PER EQUIPMENT MANUFACTURER RECOMMENDATION OR AS OTHERWISE NOTED. SHALL NOT BE MTD. MORE THAN 72" AFF UON. PROVIDE LABEL WITH NAME, VOLTAGE, AND FED FROM CIRCUIT.
	VFD
	JUNCTION OF OUTLET BOX CEILING OR WALL MOUNTED AS INDICATED. LOCATE ABOVE ACCESSIBLE CEILING UON.
	DUPLEX RECEPTACLE, FLUSH MOUNTED, THE CENTER OF THE BOX SHALL BE INSTALLED NOT LESS THAN 18" MIN AFF UNLESS NOTED OTHERWISE.
	DUPLEX RECEPTACLE, SURFACE MOUNTED, THE CENTER OF THE BOX SHALL BE INSTALLED NOT LESS THAN 18" MIN AFF UNLESS NOTED OTHERWISE.
	SURFACE MOUNTED PANELBOARD
	DISTRIBUTION PANEL OR SWITCHBOARD
	TRANSFORMER, FLOOR MOUNTED TYPE (PLAN VIEW)
	POWER TRANSFORMER
	GROUND
	CUSTOMER METER
	DISCONNECT SWITCH "F" INDICATED FUSE TYPE
	NUMBER OF POLES FUSE SIZE SWITCH SIZE
	CIRCUIT BREAKER NUMBER OF POLES AMPS TRIP AMPS FRAME
	MOTOR RATED TOGGLE SWITCH
	EQUIPMENT TAG
	CONDUIT TURNING DOWNWARDS
	DEMOLITION
	ENCLOSED CIRCUIT BREAKER (SURFACE MOUNTED)
	EXISTING FUSE
	NUMBER OF POLES FUSE SIZE SWITCH SIZE
	COMBINATION OF MOTOR STARTER FUSED DISCONNECT SWITCH
	MOTOR STARTER INSIDE MCC (DEMOLITION)
	ENCLOSED CIRCUIT BREAKER
	DATA OUTLET

RACEWAYS	
	CONDUIT TERMINATED AND CAPPED
	WIRING OR CONDUIT CONCEALED IN WALL OR CEILING
	WIRING OR CONDUIT EXPOSED
	WIRING OR CONDUIT CONCEALED UNDERGROUND, OR IN FLOORS ABOVE GRADE LEVEL.
	FLEXIBLE CONDUIT
	CONDUIT HOMERUN TO PANELBOARD. TEXT INDICATES ELECTRICAL PANEL DESIGNATION AND CIRCUIT NUMBERS.
HASH MARKS ON CONDUIT RUNS INDICATE NUMBER OF #12 CURRENT CARRYING CONDUCTORS CONTAINED THEREIN. TWO #12 AND ONE #12 GROUND WIRE ARE INDICATED WHEN HASH MARKS ARE NOT SHOWN. NUMERALS ADJACENT TO HASH MARKS ON CONDUIT RUNS INDICATE SIZE OF CONDUCTORS IN LIEU OF #12. ALL CONDUITS SHALL CONTAIN ONE GROUND WIRE SIZED PER 2007 C.E.C. TABLE 250.122, BUT NOT SMALLER THAN #12. FOR EXAMPLE:	
	2#12, 3/4" C.
	3#12, 3/4" C.
	4#12, 3/4" C.
	5#12, 3/4" C.
	6#12, 3/4" C.
	7#12, 3/4" C.


ABBREVIATIONS			
A	AMPERE	MOC	MAXIMUM OVERCURRENT PROTECTION DEVICE
AC	ALTERNATING CURRENT	MSG	MAIN SWITCH GEAR
AF	AMP FRAME	N	NEW
AFF	ABOVE FINISHED FLOOR	NO.	NUMBER
AIC	AMPERE INTERRUPTING CAPACITY	NTS	NOT TO SCALE
AS	AMP SWITCH	RGS	RIGID GALV STEEL
C	CONDUCTOR, CONDUIT	RVS	REDUCED VOLTAGE STARTER
CKT	CIRCUIT	SWBD	SWITCHBOARD
CO	CONDUIT ONLY	TYP	TYPICAL
CU	COPPER	UL	UNDERWRITER'S LABORATORY
DWG	DRAWING	UNO	UNLESS NOTED OTHERWISE
(E)	EXISTING TO REMAIN	V	VOLTAGE
ELEC	ELECTRICAL	WP	WEATHERPROOF
GALV	GALVANIZED	W/	WITH
GFI	GROUND FAULT INTERRUPTER	XFMR	TRANSFORMER
GND, G	GROUND		
HP	HORSEPOWER		
INST	INSTANTANEOUS		
K	THOUSAND		
KCMIL	THOUSAND CIRCULAR MILS		
KV	KILOVOLTS		
KVA	KILOVOLT-AMPERE		
KW	KILOWATT		
LTG	LIGHTING		
LV	LOW VOLTAGE		
MTD	MOUNTED		
MCC	MOTOR CONTROL CENTER		
MCA	MINIMUM CIRCUIT AMPS		

GENERAL NOTES

- ELECTRICAL INSTALLATION, MATERIALS, AND METHODS SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES INCLUDING THE CURRENT CALIFORNIA ELECTRICAL CODE (CEC).
 - ANY PENETRATION THROUGH EXISTING RATINGS WILL REQUIRE PROTECTION USING AN APPROVED FIRE-STOPPING SYSTEM.
 - UNLESS OTHERWISE NOTED OR SHOWN, THESE DRAWINGS AND SPECIFICATIONS DO NOT INDICATE METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.
 - ALL EQUIPMENT SUCH AS ENCLOSURES, METALLIC CONDUITS, JUNCTION BOXES, FIXTURES, AND ALL OTHER APPARATUS SHALL BE PERMANENTLY AND EFFECTIVELY GROUNDED PER CEC ART. 250.
 - ALL EMPTY CONDUITS SHALL BE EQUIPPED WITH PULL ROPES.
 - ALL JUNCTION BOXES SHALL BE MOUNTED IN ACCESSIBLE LOCATIONS.
 - CONDUITS CROSSING STRUCTURAL SEPARATIONS SHALL BE CONSTRUCTED WITH FLEXIBLE CONNECTION AND ABLE TO ACCOMMODATE THE CALCULATED DIFFERENTIAL MOTION DURING EARTHQUAKES.
 - DRAWINGS WERE CREATED BASED ON SCANNED AS-BUILT COPIES. CONTRACTOR TO FIELD VERIFY EXACT DIMENSIONS.
 - COLOR CODING: CONDUCTORS AND CABLES SHALL BE COLOR CODED BY THE MANUFACTURER FOR THE ENTIRE LENGTH. WRAPPING COLOR TAPES ARE NOT PERMITTED. COLOR CODING SHALL BE AS FOLLOWS:

120/208V SYSTEM	
PHASE A:	BLACK
PHASE B:	RED
PHASE C:	BLUE
NEUTRAL:	WHITE
GROUND:	GREEN
- PROVIDE SEPARATE NEUTRAL WIRE FOR EACH BRANCH CIRCUIT. USE COLOR SPIRAL TO MATCH ASSOCIATED PHASE CONDUCTOR ON NEUTRAL WIRES.

EPI
THE ENGINEERING PARTNERS, INC.
CONSULTING ENGINEERS
9565 MAPLES STREET, SUITE 100
SAN DIEGO, CA 92121
(858) 834-1761 FAX (858) 834-1768
EPI PROJ # 120-419E



CLIENT:

IMPERIAL COUNTY NORTH COUNTY
 ADMINISTRATION/COURTHOUSE HVAC
 REPLACEMENT
 BRAWLEY, CALIFORNIA
 COUNTY PROJECT NO. SR6650CFM

NO.	REVISION	DATE

SHEET:
ELECTRICAL SYMBOL,
LEGEND & ABBREVIATION

E1.0

LOAD CALCULATION	
EXIST. PANELBOARD "MSB" 1200A, 208/120V, 3PH, 4W	
MAX ANNUAL DEMAND(01/2020 to 01/2021):	= 128.0 kVA
LOAD REMOVED	
MCC-A	= -45.4 kVA
MCC-B	= -102.0 kVA
NEW LOAD	
LOAD ADDED AT MCC-A	= 125.9 kVA
25% OF LARGEST MOTOR (AHU-4 AT MCC-A)	= 6.7 kVA
TOTAL	= 113.2 kVA
AT 208Y/120V, 3 PHASE, 4W = 314 AMPS	

LOAD CALCULATION	
EXIST. PANELBOARD "MCC-A 1200A, 208/120V, 3PH, 4W	
LOAD REMOVED	
SUPPLY FAN AHU-4 (62.0 AMPS)	= -22.3 kVA
RETURN AIR RA 5 (30 AMPS)	= -10.8 kVA
TOWER EVAPORATOR CONDENSING FAN (24.8 AMPS)	= -8.9 kVA
TOWER EVAPORATOR CONDENSING PUMP (3.0 AMPS)	= -1.1 kVA
HOT WATER PUMP (6.2 AMPS)	= -2.2 kVA
BOILER CONTROLS (1 AMP) [FED FROM PANEL L2]	= -0.1 kVA
NEW LOAD	
PANEL M	= 87.9 kVA
SUPPLY FAN AHU-4(75.0 AMPS)	= 25.9 kVA
RETURN FAN 5(29.5 AMPS)	= 10.2 kVA
PUMP P1 (16 AMPS)	= 1.9 kVA
25% OF LARGEST MOTOR (AHU-4 AT MCC-A)	= 6.7 kVA
TOTAL	= 87.2 kVA
AT 208Y/120V, 3 PHASE, 4W = 242 AMPS	

LOAD CALCULATION	
EXIST. PANELBOARD "MCC-B 1200A, 208/120V, 3PH, 4W	
LOAD REMOVED	
COMPRESSOR RC-1 (144 AMPS)	= -51.9 kVA
COMPRESSOR RC-2(139 AMPS)	= -50.1 kVA
TOTAL	= -102.0 kVA
AT 208Y/120V, 3 PHASE, 4W = -283 AMPS	

LOAD CALCULATION	
EXIST. PANEL L2 125A, 208/120V, 3PH, 4W	
EXISTING CONNECTED EXLOAD	35.3 Kva
LOAD REMOVED	
BOILER CONTROLS (1 AMP) [FED FROM PANEL L2-208V]	= -0.2 kVA
TOTAL	= 35.1 kVA
AT 208Y/120V, 3 PHASE, 4W = 97 AMPS	

- SHEET NOTES:
- DISCONNECT AND REMOVE BOILER ROOM CONTROLS.
 - PROVIDE DATED PRINTED PANEL SCHEDULE.

TEMPORARY LOAD CALCULATION	
EXIST. PANELBOARD "MSB" 1200A, 208/120V, 3PH, 4W	
MAX ANNUAL DEMAND(01/2020 to 01/2021):	= 128.0 kVA
LOAD REMOVED	
MCC-A	= -45.4 kVA
MCC-B	= -102.0 kVA
TEMP LOAD	
TEMP PANEL T	= 26.6 kVA
TOTAL	= 7.2 kVA
AT 208Y/120V, 3 PHASE, 4W = 20 AMPS	

ELECTRICAL LOAD CALCULATIONS

SCALE: NONE

TEMPORARY LOAD CALCULATIONS

SCALE: NONE

(T) TEMP PANEL T		LOCATION: INTERIOR	Bus Rating: 100 AMPS	208Y/120V, 3ø, 4W MOUNTING: SURFACE									
		MAIN: 100 AMPS											
		A.I.C. RATING 10,000 A											
LOCATION	VOLTAMPS			VOLTAMPS			LOCATION						
	øA	øB	øC	øA	øB	øC							
PORT. AIR COND.(TEMP)	1265			1	20	*	20	2	1265			PORT. AIR COND.(TEMP)	
PORT. AIR COND.(TEMP)		1265		3	20	*		20	4	1265		PORT. AIR COND.(TEMP)	
PORT. AIR COND.(TEMP)			1265	5	20	*		20	6		1265	PORT. AIR COND.(TEMP)	
PORT. AIR COND.(TEMP)	1265			7	20	*		20	8	1265		PORT. AIR COND.(TEMP)	
PORT. AIR COND.(TEMP)		1265		9	20	*		20	10		1265	PORT. AIR COND.(TEMP)	
PORT. AIR COND.(TEMP)			1265	11	20	*		20	12		1265	PORT. AIR COND.(TEMP)	
PORT. AIR COND.(TEMP)	1265			13	20	*		20	14	1265		PORT. AIR COND.(TEMP)	
PORT. AIR COND.(TEMP)		1265		15	20	*		20	16		1265	PORT. AIR COND.(TEMP)	
PORT. AIR COND.(TEMP)			1265	17	20	*		20	18		1265	PORT. AIR COND.(TEMP)	
PORT. AIR COND.(TEMP)	1265			19	20	*		20	20			SPARE	
PORT. AIR COND.(TEMP)		1265		21	20	*		20	22			SPARE	
PORT. AIR COND.(TEMP)			1265	23	20	*		20	24			SPARE	
SPACE				25		*			26			SPACE	
SPACE				27		*			28			SPACE	
SPACE				29		*			30			SPACE	
		øA = 8855	øB = 8855	øC = 8855									
TOTAL CONNECTED VA =		26.6 KVA											
+ 25% LCL =		KVA											
TOTAL		26.6 KVA											
CONNECTED LOAD =		74 A											
MINIMUM FEEDER SIZE =		74 A											

TEMP PANEL T SCHEDULE

SCALE: NONE

(E) PANEL L2		LOCATION: INTERIOR	Bus Rating: 225 AMPS	208Y/120V, 3ø, 4W MOUNTING:									
		MAIN: 225 AMPS											
		A.I.C. RATING =											
LOCATION	VOLTAMPS			VOLTAMPS			LOCATION						
	øA	øB	øC	øA	øB	øC							
OFFICERS SPACE				1	100	*	20	2			OFFICERS SPACE		
				3		*		20	4		OFFICERS SPACE		
OFFICERS SPACE				5	20	*		20	6		OFFICERS SPACE		
WORK ROOM				7	20	*		20	8		STG. TELLERS, ELEV.		
LOAN INT. CONF ROOM				9	20	*		20	10		WORK ROOM		
MANAGER CUST LNG				11	20	*		20	12		FILE ROOM LOAN INT		
STAFF ROOM				13	20	*		20	14		RECORDS ROOM		
STAFF ROOM				15	20	*		20	16		SUPPLY ROOM		
2ND FLOOR OVERHANG				17	20	*		20	18		CUSTY TOILETS LOAN		
2ND FLOOR OVERHANG				19	20	*		20	20		ESCROW		
TOILETS				21	20	*		20	22		LOUNGE AREA		
EXHAUST FAN				23	20	*		20	24		CRANKCASE HTR		
CRANKCASE HTR				25	20	*		20	26		EQUIP ROOM		
EQUIP ROOM				27	20	*		20	28		WATER HEATER		
COINS AGRI BUSINESS				29	20	*		20	30		WATER HEATER		
				31	20	*		20	32		SPARE KRONO		
ROLM AC				33	20	*		20	34		COINS COMP ROOM		
COINS AGRI BUSINESS				35	20	*		20	36		COINS COMP ROOM		
				37		*		20	38		COINS APPRAISAL DPT		
NER ROOM AC				39	45	*		20	40		AC ENERCON		
				41		*		20	42		BOILER ROOM CONTROL		
		øA = 0	øB = 0	øC = 0									
TOTAL CONNECTED VA =		35 KVA											
+ 25% LCL =		KVA											
TOTAL		35 KVA											
CONNECTED LOAD =		98 A											
MINIMUM FEEDER SIZE =		98 A											

EXISTING PANEL L2 SCHEDULE


SCALE: NONE

(N) PANEL M		LOCATION: INTERIOR	Bus Rating: 400 AMPS	208Y/120V, 3ø, 4W MOUNTING: SURFACE									
		MAIN: 400 AMPS											
		A.I.C. RATING 22kA											
LOCATION	VOLTAMPS			VOLTAMPS			LOCATION						
	øA	øB	øC	øA	øB	øC							
TOWER(ROOM) RECEPT.	360			1	20	*	2	5293					
DDC CONTROLS PANEL		500		3	20	*	60	4	5293			CU 1A	
VAV 8,9,10,11-DDC CTRL.			500	5	20	*		6		5293			
VAV 1,2,3,4,5,6-DDC CTRL	750			7	20	*		8	5293				
AHU SMOKE DETECTOR		0.4		9	20	*	60	10	5293			CU 1B	
BOILER			1176	11	20	*		12		5293			
DAIKIN MECH CONTROLS	67			13	15	*		14	5293				
		67		15		*	60	16		5293		CU 2A	
SPARE				17	20	*		18		5293			
SPARE				19	20	*		20	5293				
SPARE				21	20	*	60	22		5293		CU 2B	
SPACE				23		*		24		5293			
SPACE				25		*		26	3487				
SPACE				27		*	45	28		3487		CU 1C	
SPACE				29		*		30		3487			
SPACE				31		*		32	3487			CU 2C	
SPACE				33		*	45	34		3487			
SPACE				35		*		36		3487			
SPACE				37		*		38				SPACE	
SPACE				39		*		40				SPACE	
SPACE				41		*		42				SPACE	
		øA = 29323	øB = 28713	øC = 29822									
TOTAL CONNECTED VA =		87.9 KVA											
+ 25% LCL =		KVA											
TOTAL		87.9 KVA											
CONNECTED LOAD =		244 A											
MINIMUM FEEDER SIZE =		244 A											

NEW PANEL M SCHEDULE

SCALE: NONE

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COUNTY PROJECT NO. SR6650CFM

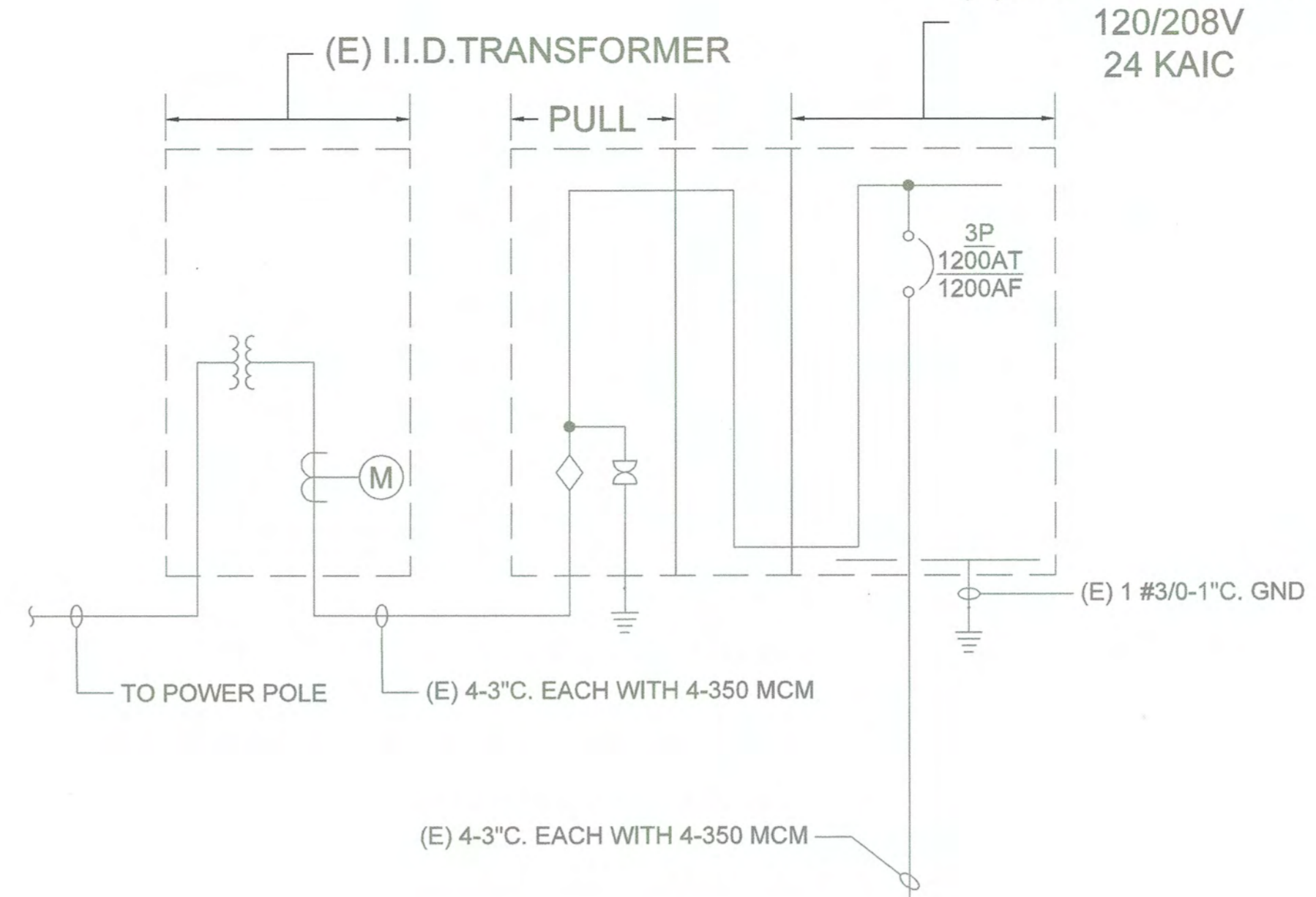
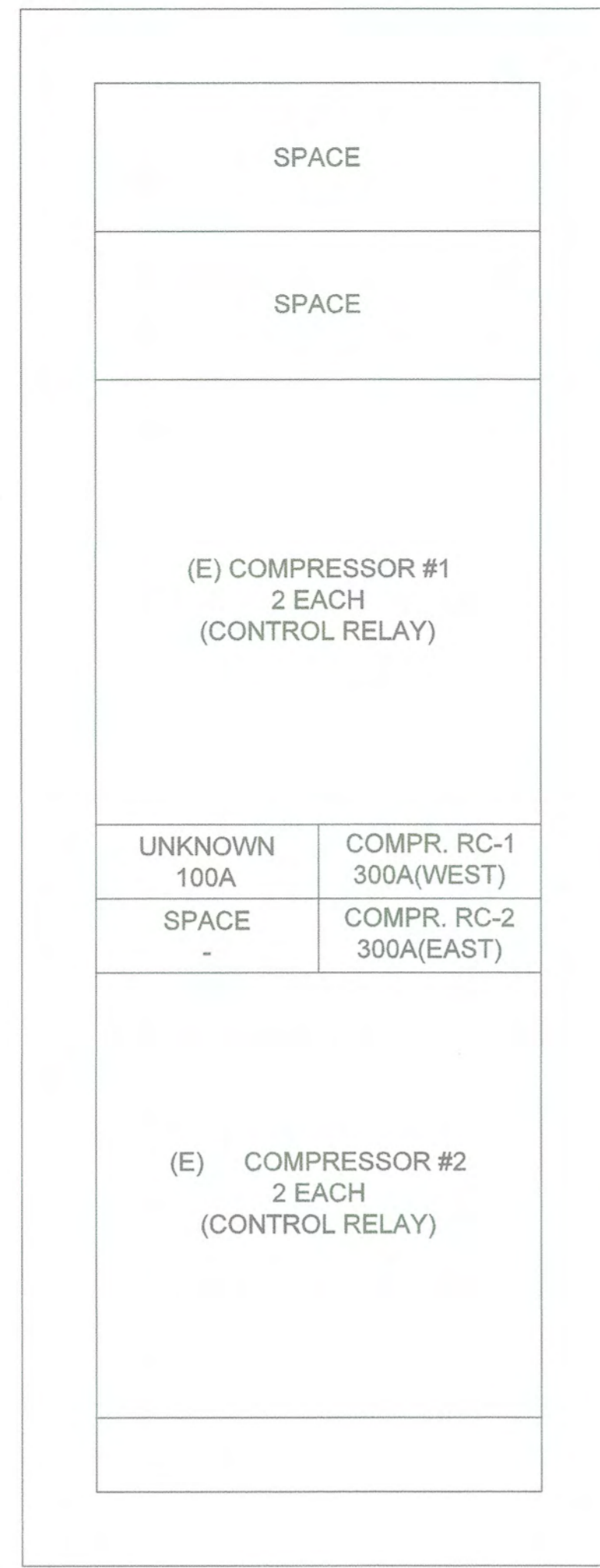
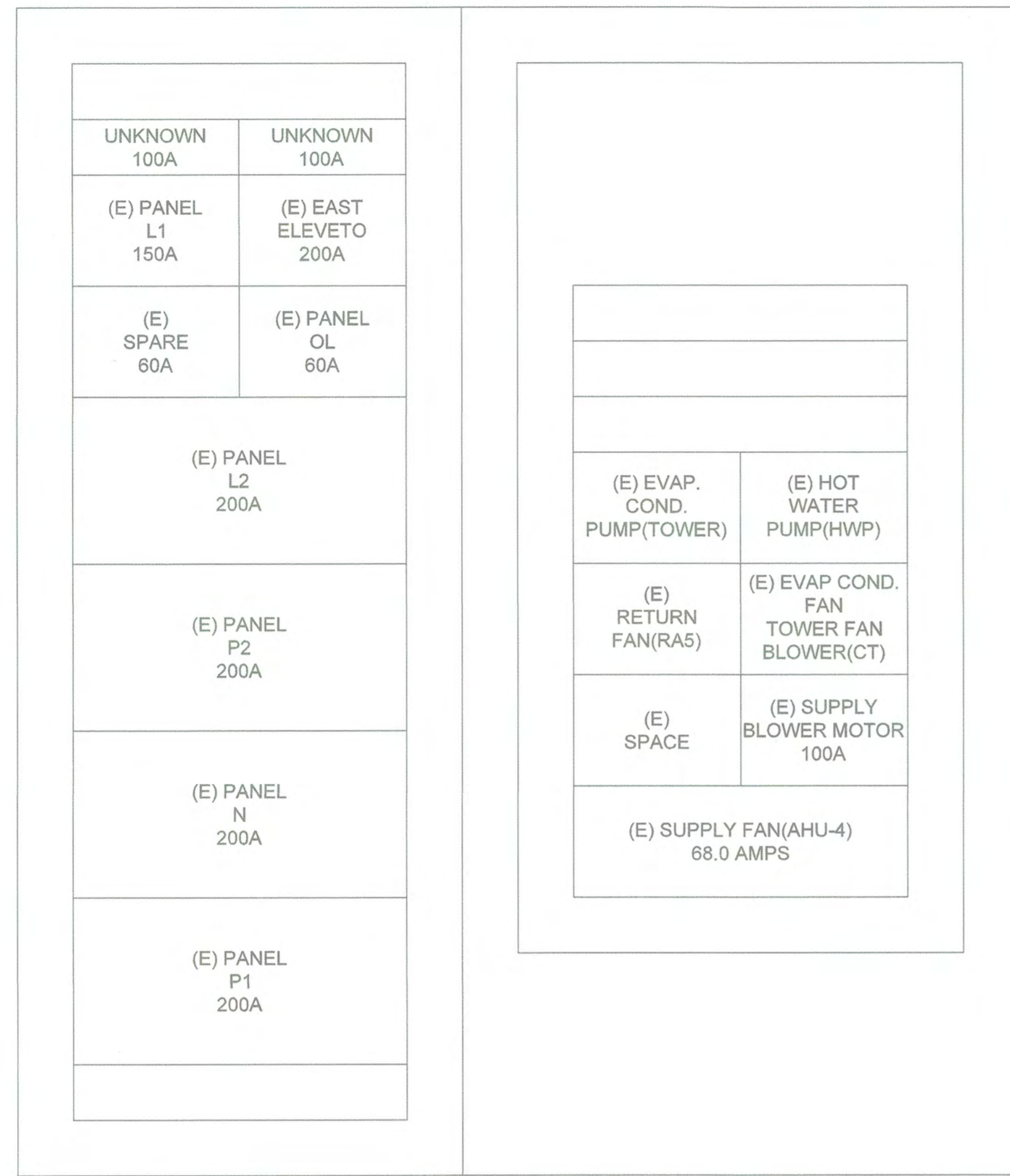
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LOAD CALCULATIONS AND PANEL SCHEDULES

(E) MCC-A

(E) MCC-B

(E) MAIN SWITCHBOARD



DEMOLITION NOTES

- 1 DISCONNECT AND REMOVE EXISTING CIRCUIT BREAKER, CONDUIT, CONDUCTORS, EXISTING STARTER, EXISTING COMPRESSOR CONTROLLERS AND WIRING.
- 2 DISCONNECT AND REMOVE EXISTING CONDUIT, CONDUCTORS, STARTER, EXISTING COMPRESSOR CONTROLLERS AND WIRING. BREAKERS TO REMAIN AS SPARE.

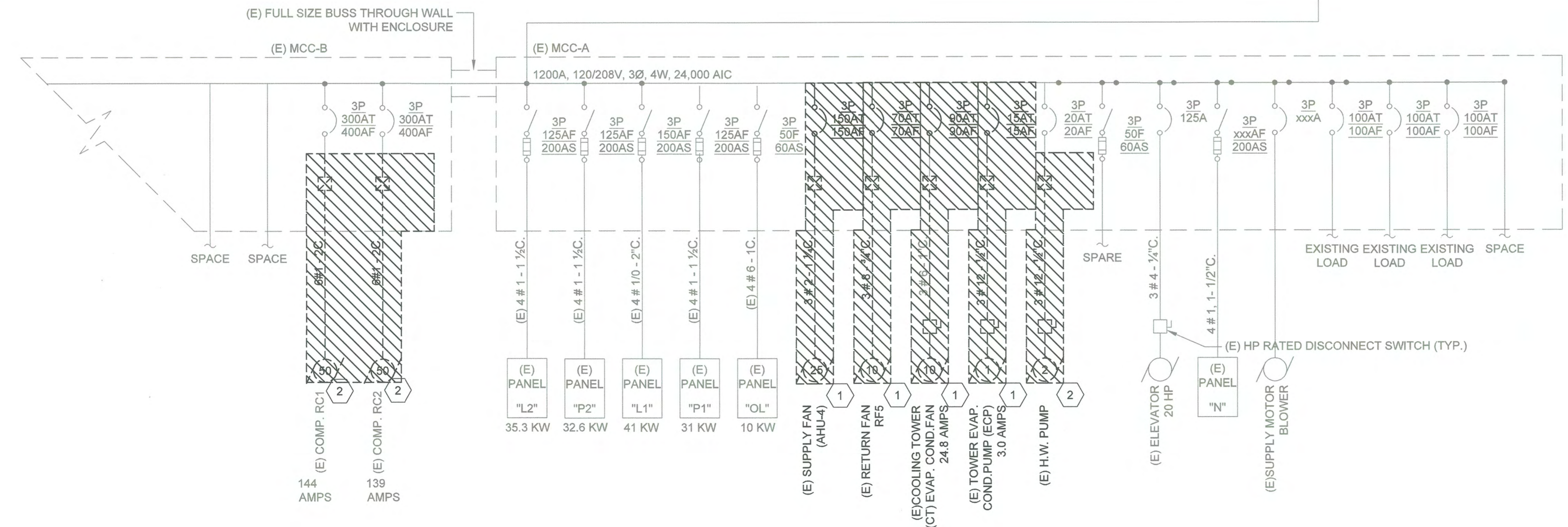
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CLIENT:

ELECTRICAL EQUIPMENT ELEVATIONS

SCALE: NONE



ELECTRICAL SINGLE LINE DIAGRAM - DEMO

SCALE: NONE

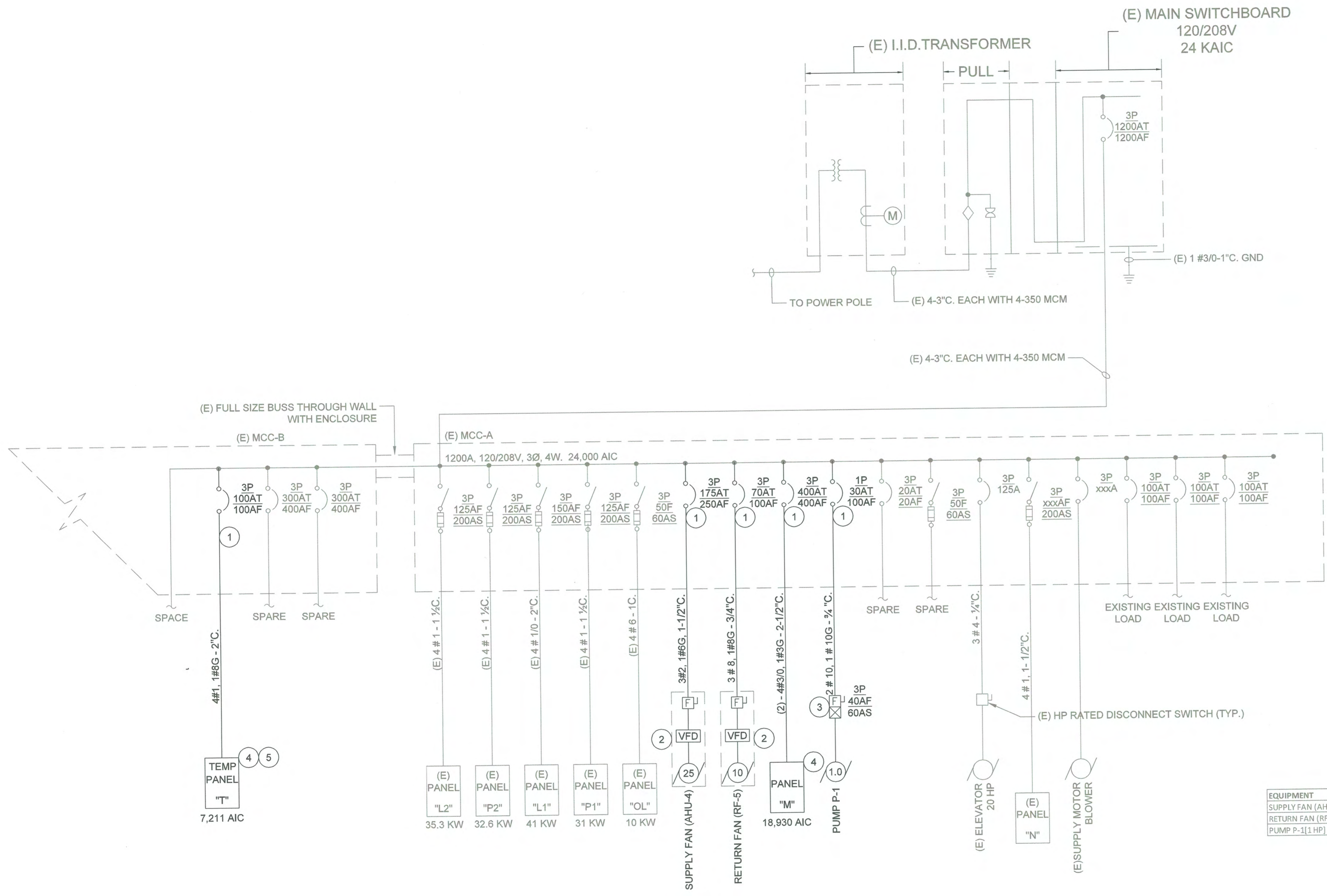
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SHEET: ELECTRICAL SINGLE LINE DIAGRAM - DEMO

E1.2

- SHEET NOTES:
- 1 PROVIDE CIRCUIT BREAKER. MATCH EXISTING AIC RATINGS AND SUPPORTING HARDWARE.
 - 2 FUSED DISCONNECT AND VFD INTEGRAL PART OF AIR UNIT.
 - 3 PROVIDE NEMA SIZE 0 STARTER.
 - 4 PROVIDE PANEL. SEE PANEL SCHEDULE SHEET E1.1.
 - 5 AFTER COMPLETION OF THE PROJECT, CONTRACTOR TO REMOVE ALL TEMPORARY EQUIPMENT, APPURTENANCES, CONDUIT, WIRE, AND RECEPTACLES.



EQUIPMENT	FLA	MOCP CALC PER TABLE 430.52	MOCP SELECTED
SUPPLY FAN (AHU-4)[25 HP]	75 AMPS	75 AMPS x 2.00% = 150.00 AMPS	150 AMPS
RETURN FAN (RF-5)[10 HP]	29.5 AMPS	29.5 AMPS x 2.25% = 66.375 AMPS	70 AMPS
PUMP P-1[1 HP]	16 AMPS (TABLE 430.248)	16 AMPS x 2.25% = 36 AMPS	40 AMPS

ELECTRICAL SINGLE LINE DIAGRAM - NEW WORK

SCALE: NONE

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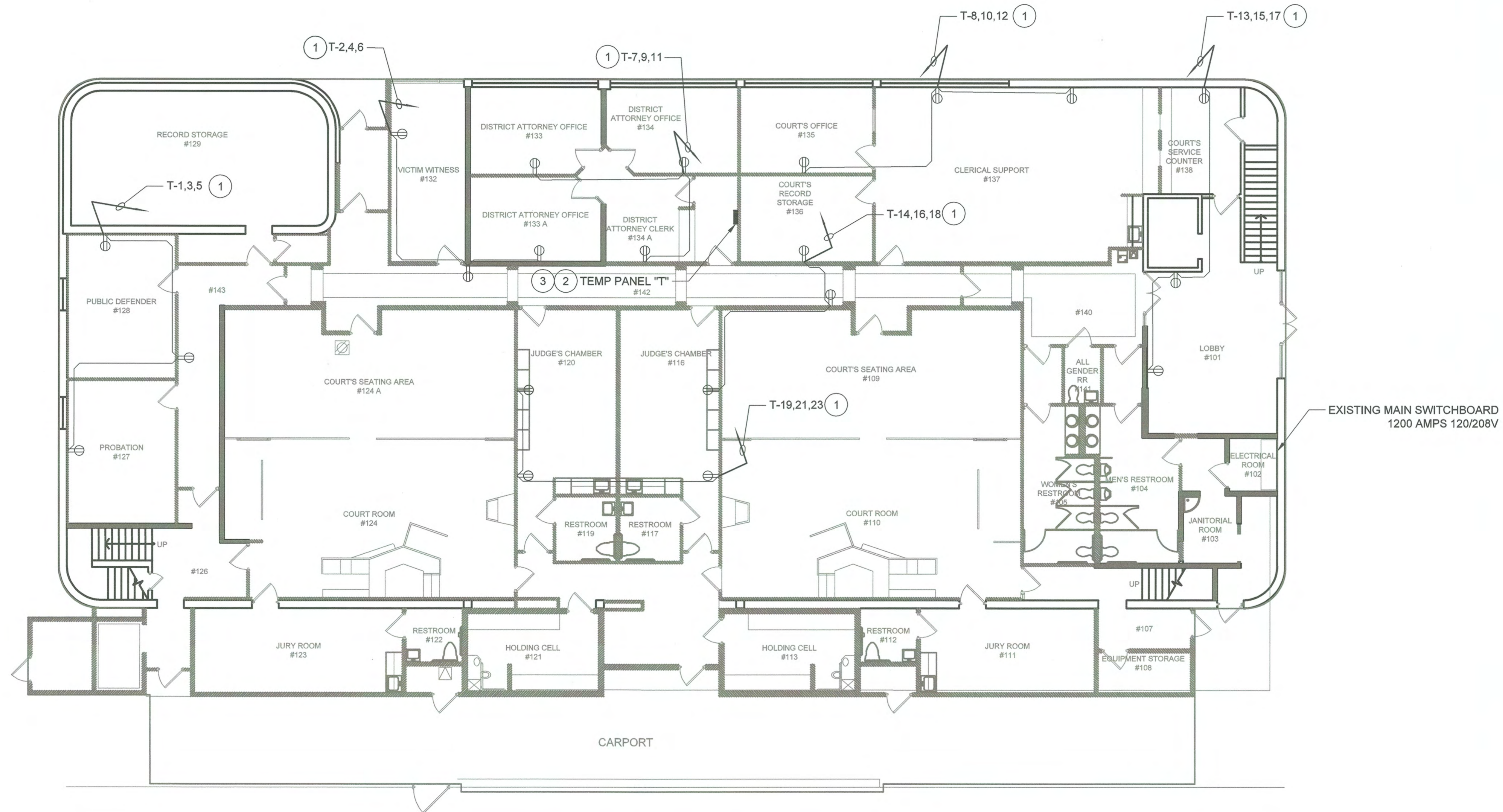
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SHEET:
 ELECTRICAL SINGLE LINE
 DIAGRAM - NEW WORK

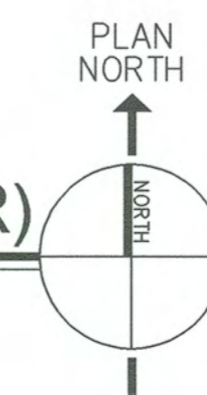
E1.3

- SHEET NOTES:
- 1 PROVIDE 6#12, 1#12 GND, 3/4" C. FOR TEMPORARY PORTABLE A/C UNITS.
 - 2 PROVIDE PANEL. SEE SINGLE LINE DRAWING E1.3.
 - 3 ALL TEMPORARY CONDUIT, CIRCUITS, RECEPTACLES, AND PANEL TO BE REMOVED AFTER COMPLETION OF WORK.



ELECTRICAL PLAN - FIRST FLOOR(TEMPORARY POWER)

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



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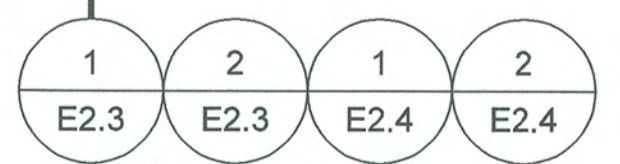
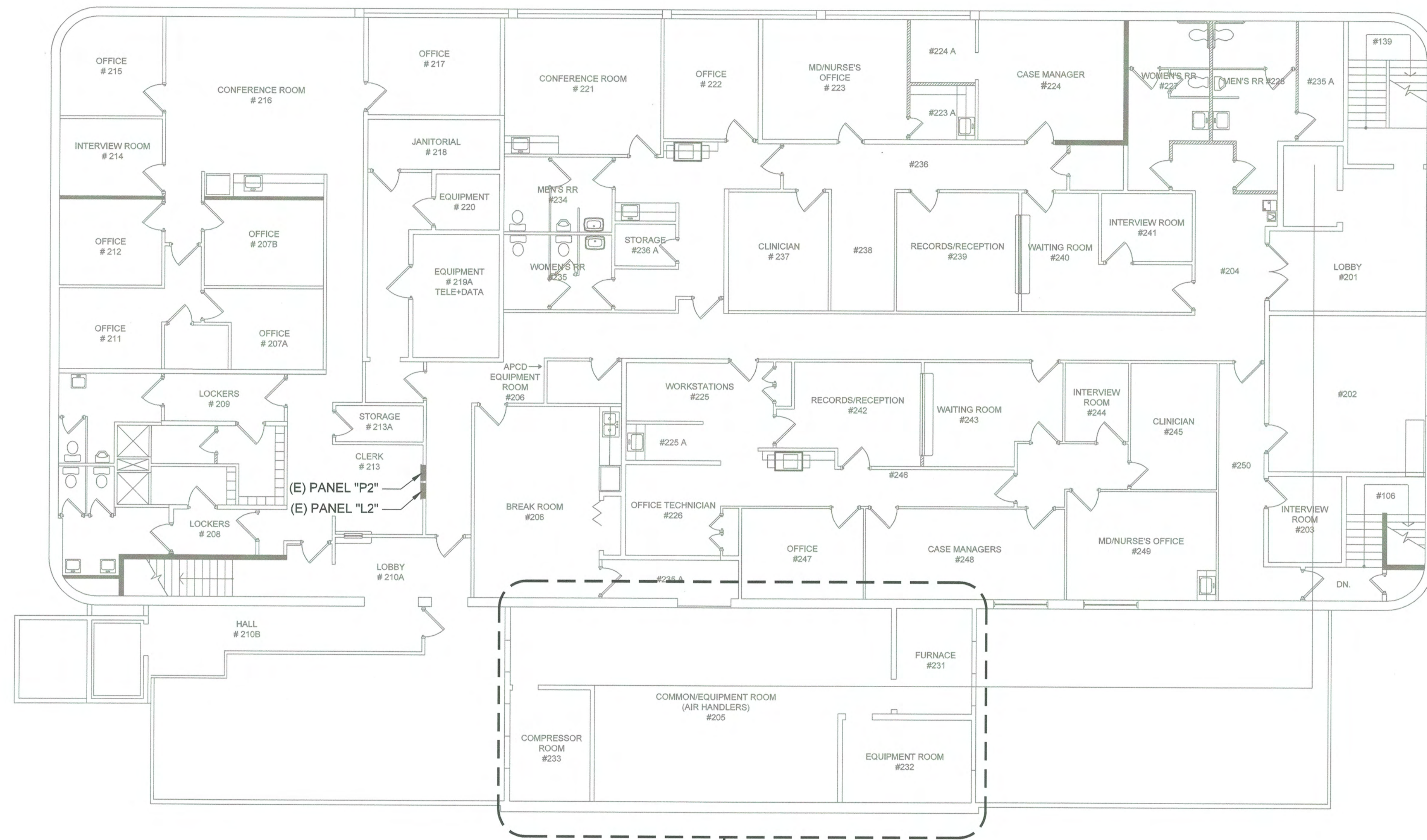
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SHEET:
 ELECTRICAL PLAN - FIRST
 FLOOR(TEMPORARY
 POWER)

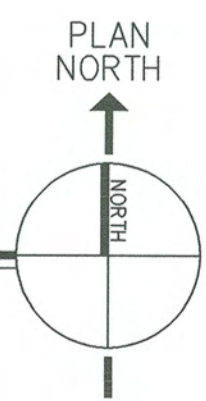
E2.1

GENERAL NOTES:
 1. DRAWING SHOWN FOR REFERENCE ONLY.



ELECTRICAL PLAN - SECOND FLOOR

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



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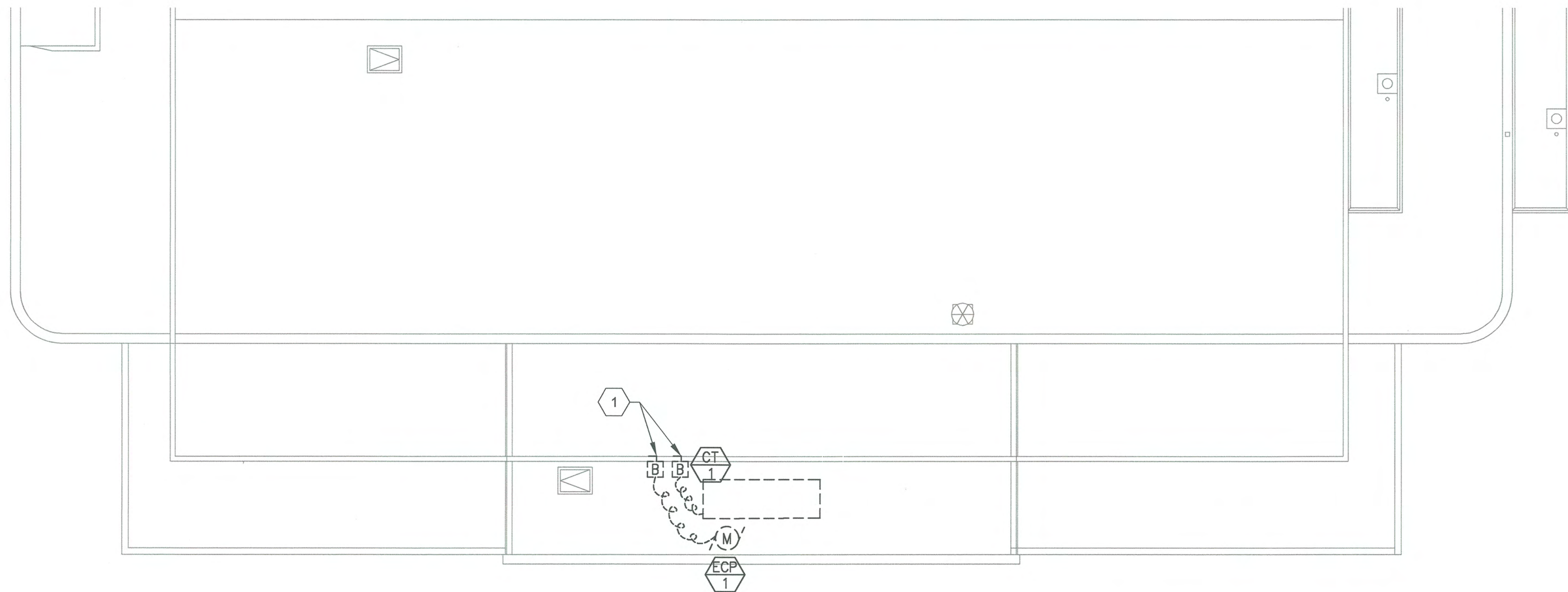
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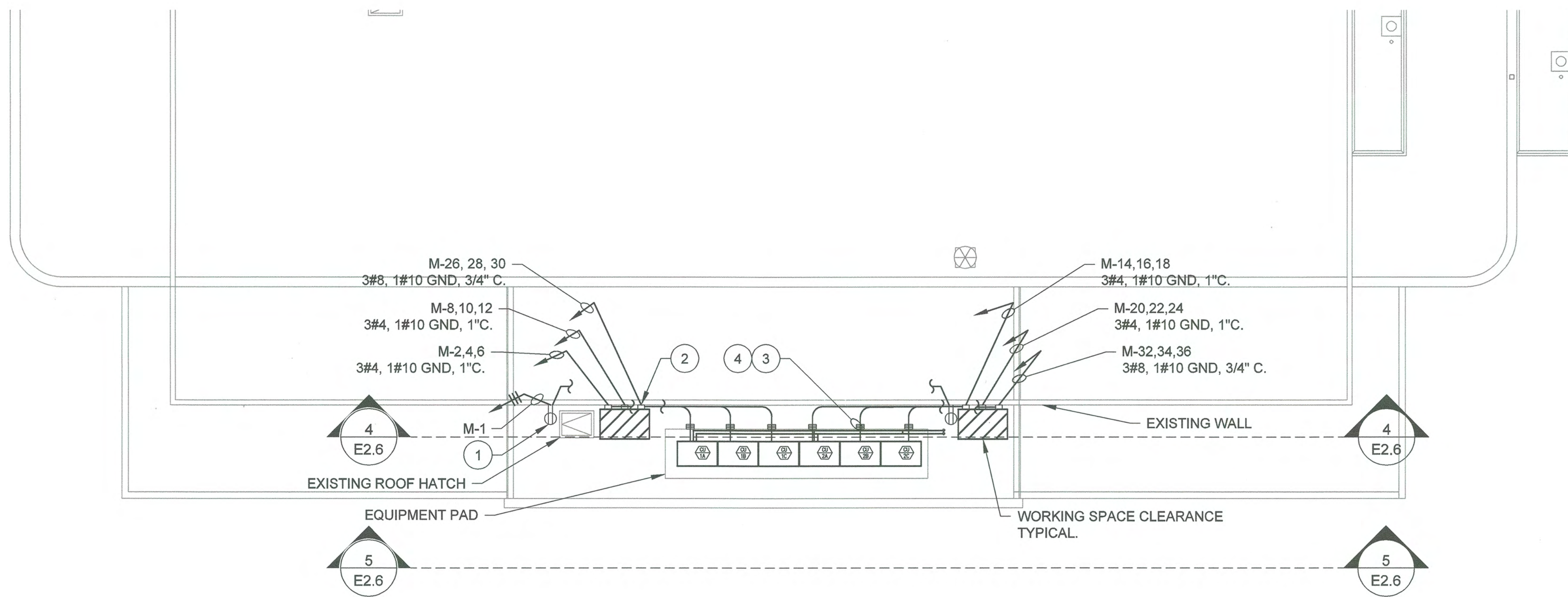
SHEET:
 ELECTRICAL PLAN -
 SECOND FLOOR

E2.2



2 ELECTRICAL PLAN - ROOF - DEMO

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



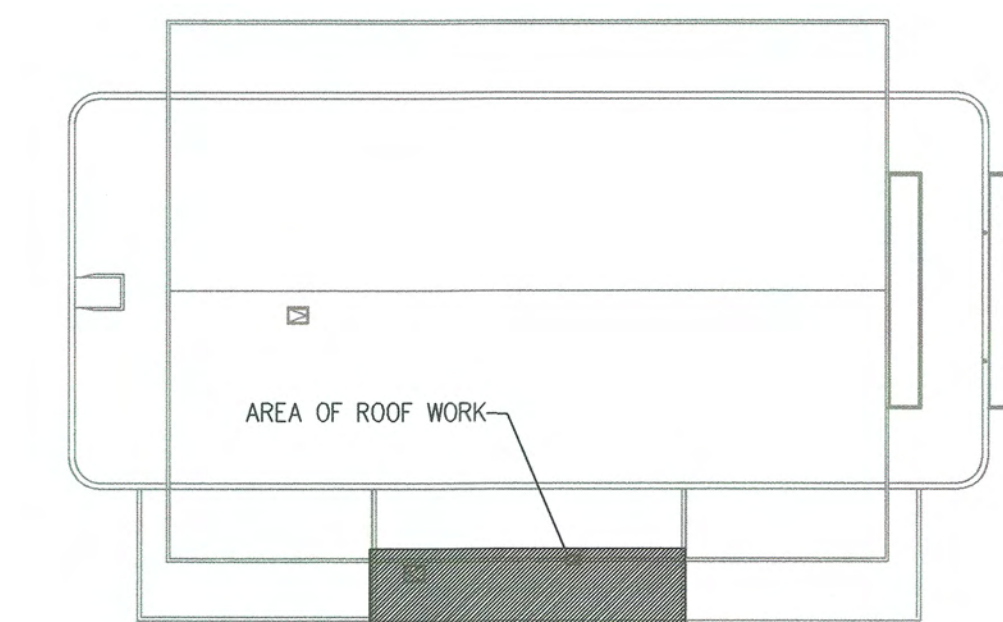
1 ELECTRICAL PLAN - ROOF - NEW

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



- DEMOLITION KEY NOTES:
- 1 DISCONNECT AND REMOVE CIRCUIT PER SINGLE LINE DIAGRAM.

- SHEET NOTES:
- 1 PROVIDE WP GFI RECEPTACLE WITH WHILE-IN-USE COVER. TYPICAL OF 2.
 - 2 PROVIDE 60A FUSED DISCONNECT SWITCH IN NEMA 3R ENCLOSURE. PROVIDE 60A FUSES FOR CU-1A, CU-1B, CU-2A, CU-2B. PROVIDE 45A FUSES FOR CU-1C, CU-2C. MAINTAIN CLEARANCE PER NEC. MOUNT PER DETAIL 3 ON SHEET E2.6 TYPICAL.
 - 3 PROVIDE DURABLOCK SUPPORT OR APPROVED EQUAL FOR CONDUITS ON ROOF TOP. TYPICAL. SEE DETAIL 1 ON SHEET E2.6.
 - 4 PROVIDE RGS CONDUITS ON ROOF TOP. TYPICAL.



KEY PLAN

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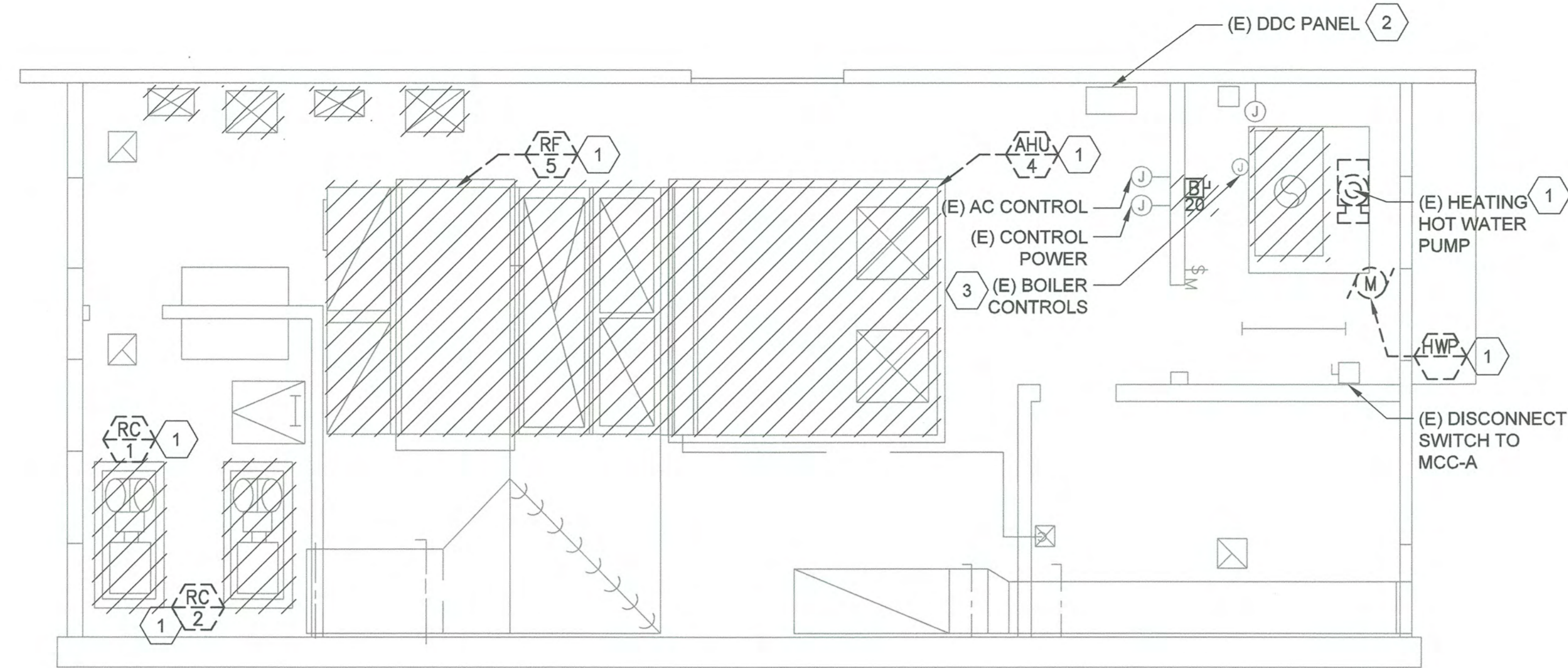
CLIENT:

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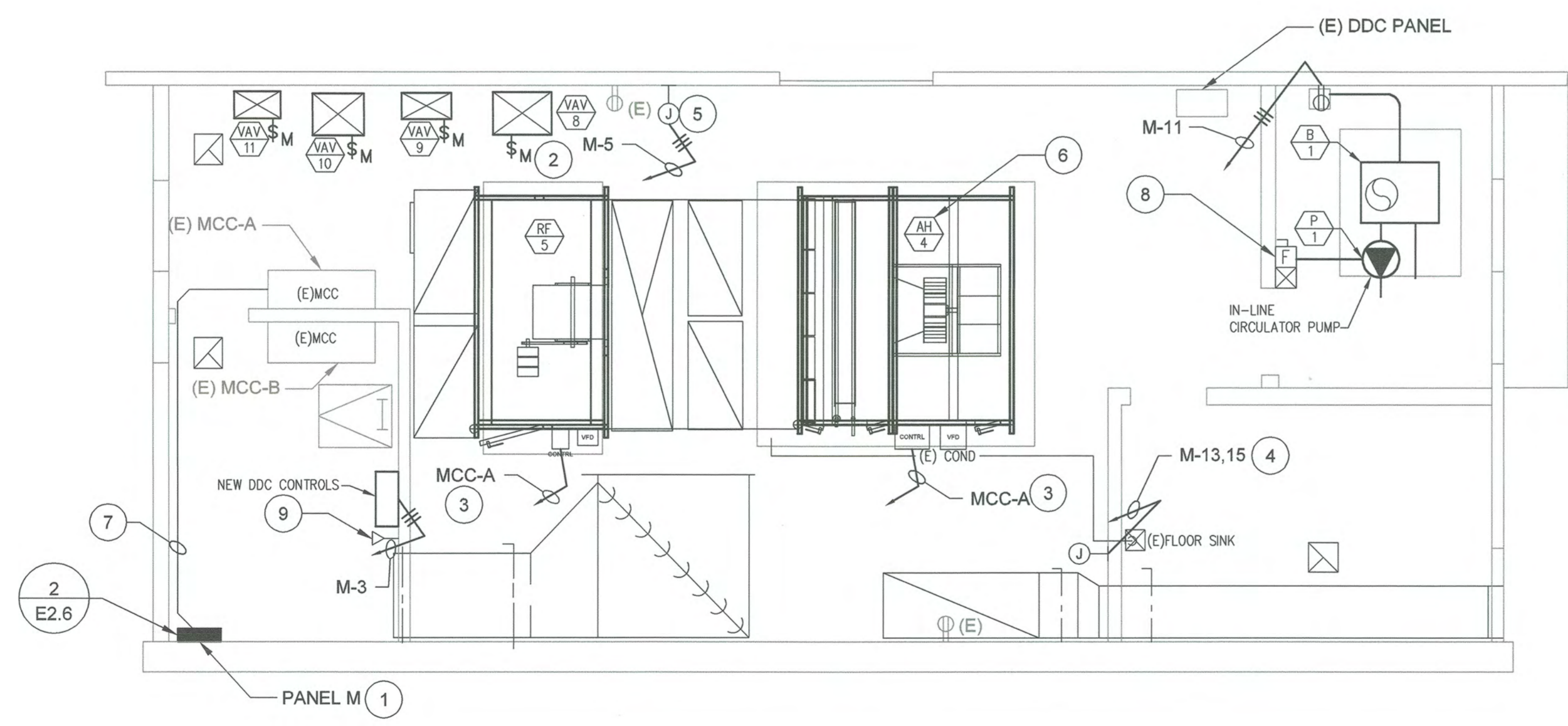
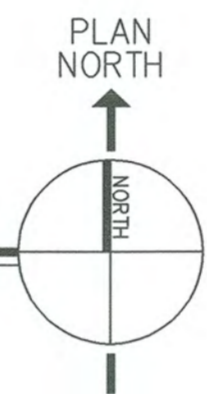
SHEET:
 ELECTRICAL PLAN - ROOF

E2.3



- DEMO WORK SHEET NOTES:
- 1 DISCONNECT AND REMOVE CIRCUIT PER SINGLE LINE DIAGRAM.
 - 2 EXISTING DDC PANEL TO REMAIN.
 - 3 INTERCEPT CIRCUIT AND SAFE-OFF CIRCUIT. PREPARE FOR FUTURE USE.

2 SECOND FLOOR ENLARGED PLAN - MECHANICAL ROOM - DEMO
SCALE: N.T.S.



- SHEET NOTES:
- 1 PROVIDE NEMA 3R PANEL. SEE SINGLE LINE DIAGRAM. MOUNT PER DETAIL 3, E2.6.
 - 2 CONTROL AND POWER CONDUCTORS, MOTOR RATED SWITCH, AND CONDUIT BY DDC CONTRACTOR FOR VAV BOXES.
 - 3 REFER TO SINGLE LINE DIAGRAM FOR CONDUIT AND WIRE SIZES.
 - 4 PROVIDE JUNCTION BOX TO DAIKIN MECH CONTROLS. 4 MECHANICAL CONTROL PANELS STACKED VERTICALLY.
 - 5 PROVIDE JUNCTION BOX WITH 120V POWER FOR VAV'S. DDC WILL CONNECT TO 24V TRANSFORMER TO POWER THE VAV BOXES. LOW VOLTAGE 24V TRANSFORMER PER DDC CONTROLLER.
 - 6 PROVIDE 2#12, 1#12 GND, 3/4" C FOR SMOKE DETECTOR IN AIR SUPPLY STREAM. CIRCUIT M-9. EXACT LOCATION TO BE FIELD COORDINATED.
 - 7 REFER TO SINGLE LINE DRAWING E1.3 FOR CONDUIT AND FEEDER SIZES.
 - 8 PROVIDE COMBINATION MOTOR STARTER FUSED DISCONNECT SWITCH PER SINGLE LINE DRAWINGS.
 - 9 PROVIDE DATA OUTLET FOR DDC CONTROLS. PROVIDE CAT 6E TO ROOM 219. REFER TO SHEET E2.2.

1 SECOND FLOOR LOWER ENLARGED PLAN - MECHANICAL ROOM - NEW
SCALE: 1/4"=1'-0"



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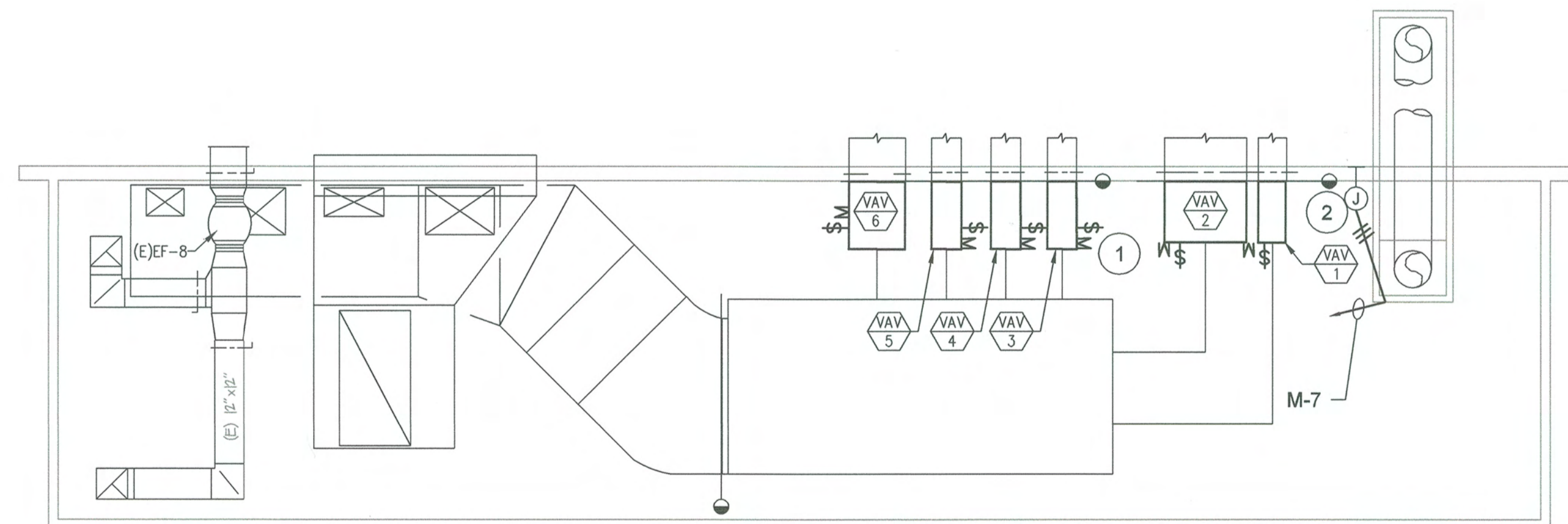
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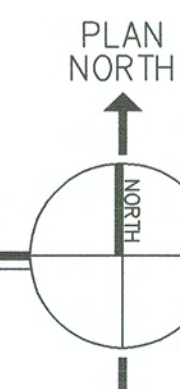
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SHEET:
ELECTRICAL ENLARGED
LOWER MECH. ROOM PLAN

E2.4



A SECOND FLOOR UPPER ENLARGED PLAN - MECHANICAL ROOM - NEW
 SCALE: 1/4"=1'-0"



- SHEET NOTES:
- 1 CONTROL AND POWER CONDUCTORS, MOTOR RATED SWITCH, AND CONDUIT BY DDC CONTRACTOR FOR VAV BOXES.
 - 2 PROVIDE JUNCTION BOX WITH 120V POWER FOR VAV'S. DDC WILL CONNECT TO 24V TRANSFORMER TO POWER THE VAV BOXES. LOW VOLTAGE 24V TRANSFORMER PER DDC CONTROLLER.

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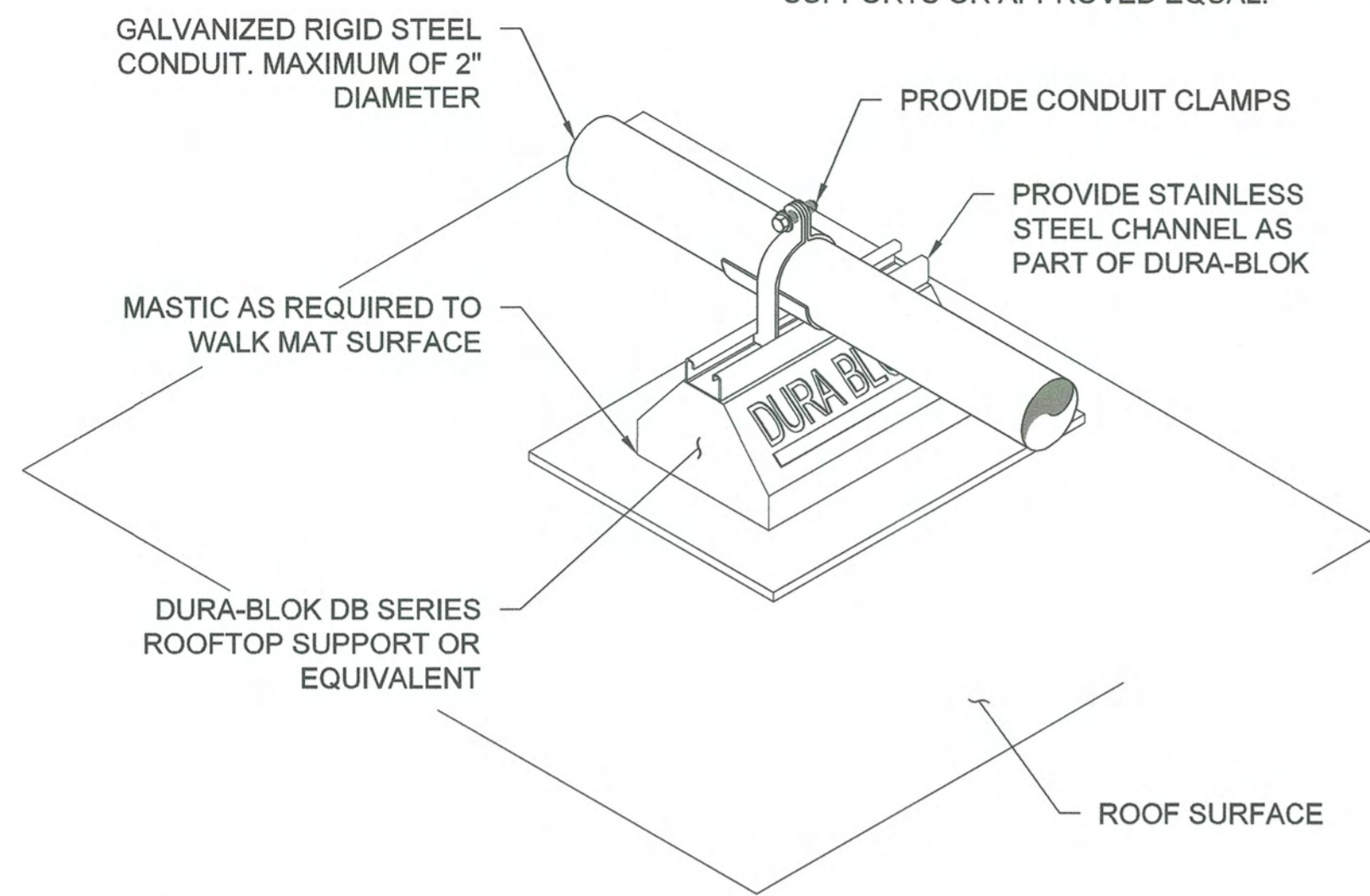
NO.	REVISION	DATE

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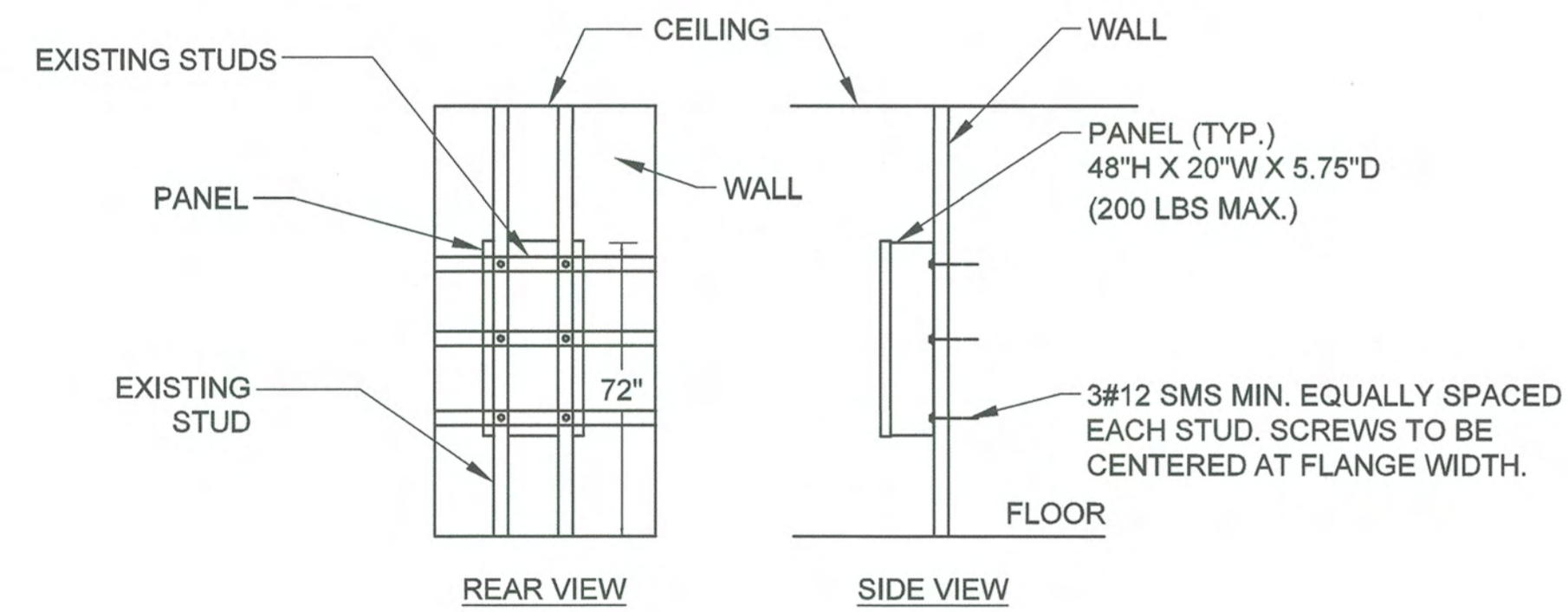
ELECTRICAL ENLARGED
 UPPER MECH. ROOM PLAN

E2.5

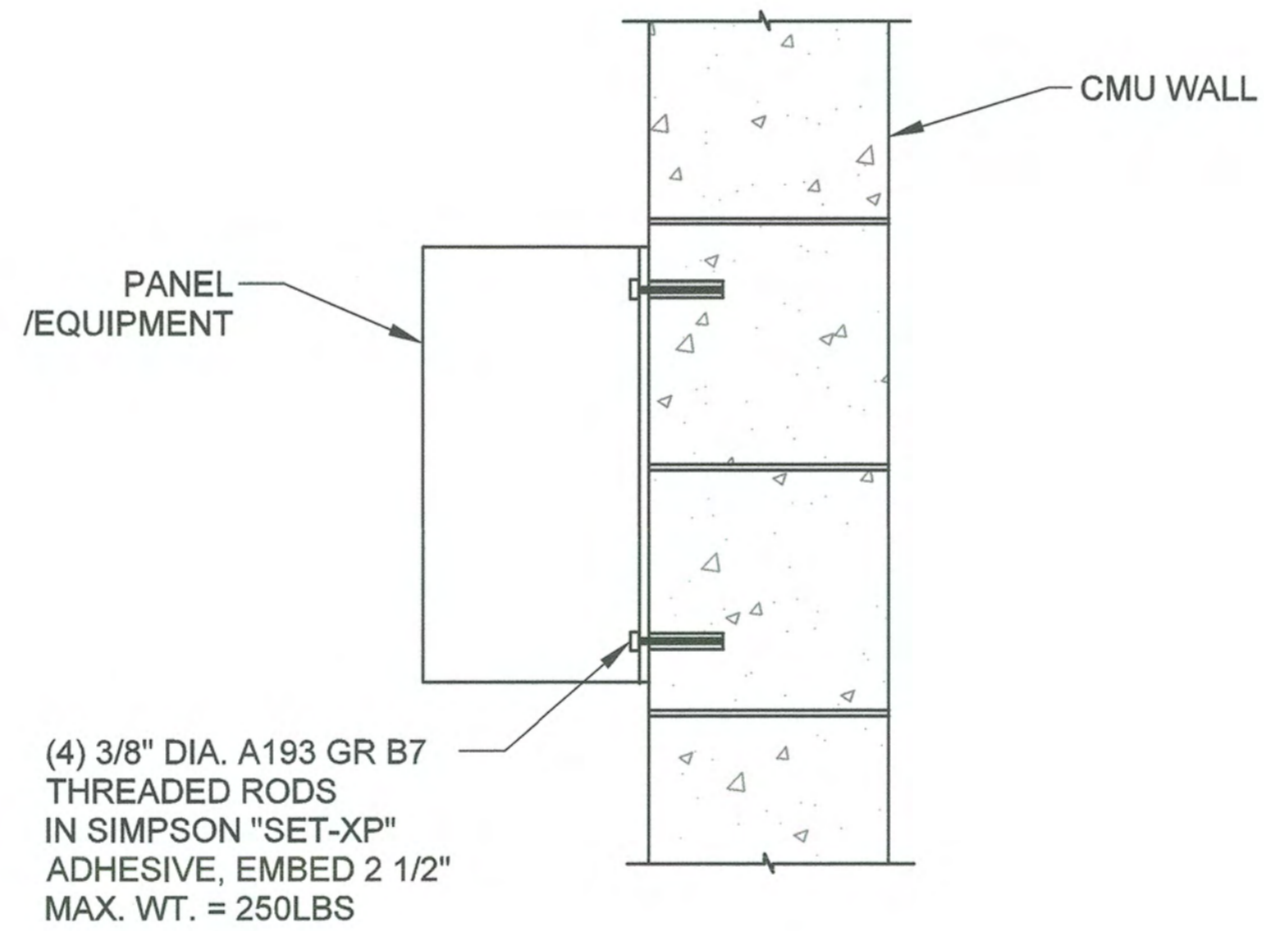
GENERAL NOTES:
 1. ROOFTOP CONDUIT SHALL BE RGS AND SUPPORTED AT 6'-0" CENTERS ON DURA-BLOK SUPPORTS OR APPROVED EQUAL.



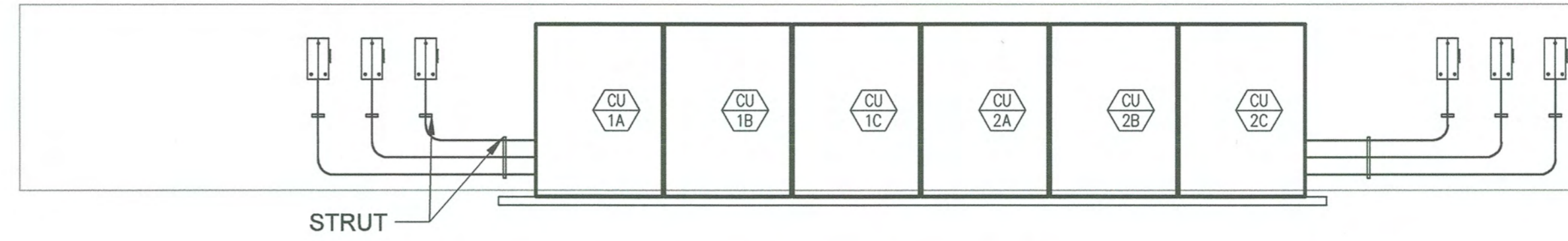
1 ROOFTOP CONDUIT SUPPORT -DURA BLOCK
 SCALE: NTS



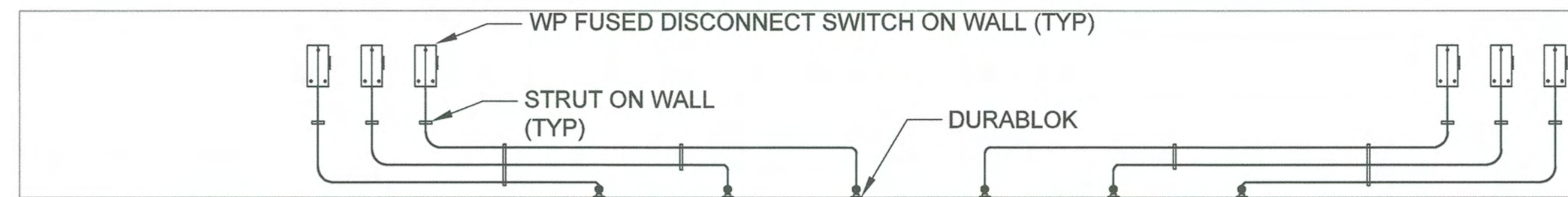
2 WALL-MOUNTED EQUIPMENT DETAIL
 SCALE: NTS



3 MASONRY WALL-MOUNTED EQUIPMENT DETAIL
 SCALE: NTS



5 EQUIPMENT ELEVATION
 SCALE: NTS



4 EQUIPMENT ELEVATION
 SCALE: NTS

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NO.	REVISION	DATE

SHEET:

ELECTRICAL DETAILS

E2.6

GENERAL:

- ALL MATERIALS, WORKMANSHIP, DESIGN AND CONSTRUCTION SHALL CONFORM TO MINIMUM STANDARDS OF THE 2019 EDITION OF THE CALIFORNIA BUILDING CODE (CBC) AND ANY OTHER REGULATORY AGENCIES WHO MAY HAVE AUTHORITY OVER ANY PORTION OF THE WORK.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS PRIOR TO THE START OF CONSTRUCTION AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR INCONSISTENCIES THAT ARE FOUND. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS.
- WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK THE DETAILS USED SHALL BE THE SAME AS FOR THE OTHER SIMILAR WORK.
- WHEN A DETAIL IS IDENTIFIED AS TYPICAL, THE CONTRACTOR IS TO APPLY THIS DETAIL IN ESTIMATING AND CONSTRUCTION TO EVERY LIKE CONDITION WHETHER OR NOT THE REFERENCE IS REPEATED IN EVERY INSTANCE.
- CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AND SHORING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED.
- WORK PERFORMED IN CONFLICT WITH THE STRUCTURAL DRAWINGS OR APPLICABLE BUILDING CODE REQUIREMENTS SHALL BE CORRECTED AT THE EXPENSE OF THE CONTRACTOR.

STRUCTURAL DESIGN CRITERIA:

1. LOADS: DEAD LOADS = D.L. FLOOR ROOF LIVE LOAD = L.L. PARTITION LOAD = P.L.

	FLOOR	ROOF
D.L.	15.0 PSF	14.0 PSF
L.L.	50.0 PSF	20.0 PSF
P.L.	00.0 PSF	00.0 PSF

2. SEISMIC PARAMETERS:

RISK CATEGORY: II
SEISMIC DESIGN CATEGORY: D
SITE CLASS: D
SEISMIC GROUND MOTION VALUES:
MAPPED ACCELERATION PARAMETERS:
SITE COEFFICIENTS:
DESIGN SPECTRAL ACCELERATION PARAMETERS:
IMPORTANCE FACTOR, I = 1.0
SEISMIC COEFFICIENT FOR MECHANICAL COMPONENTS:

S_{D1}	= 1.618	S_{D2}	= 0.600
S_{D3}	= 1.942	S_{D4}	= 1.020
S_{D5}	= 1.000	S_{D6}	= 0.680

EQUIPMENT	R_p	R_f
HVAC	2.5	6.0
BOILER	1.0	2.5

- COMPONENT IMPORTANCE FACTOR, $I_p = 1.0$
3. WIND: 100 MPH, EXPOSURE: C, ENCLOSED BUILDING
INTERNAL GUST PRESSURE COEFFICIENT = 0.18

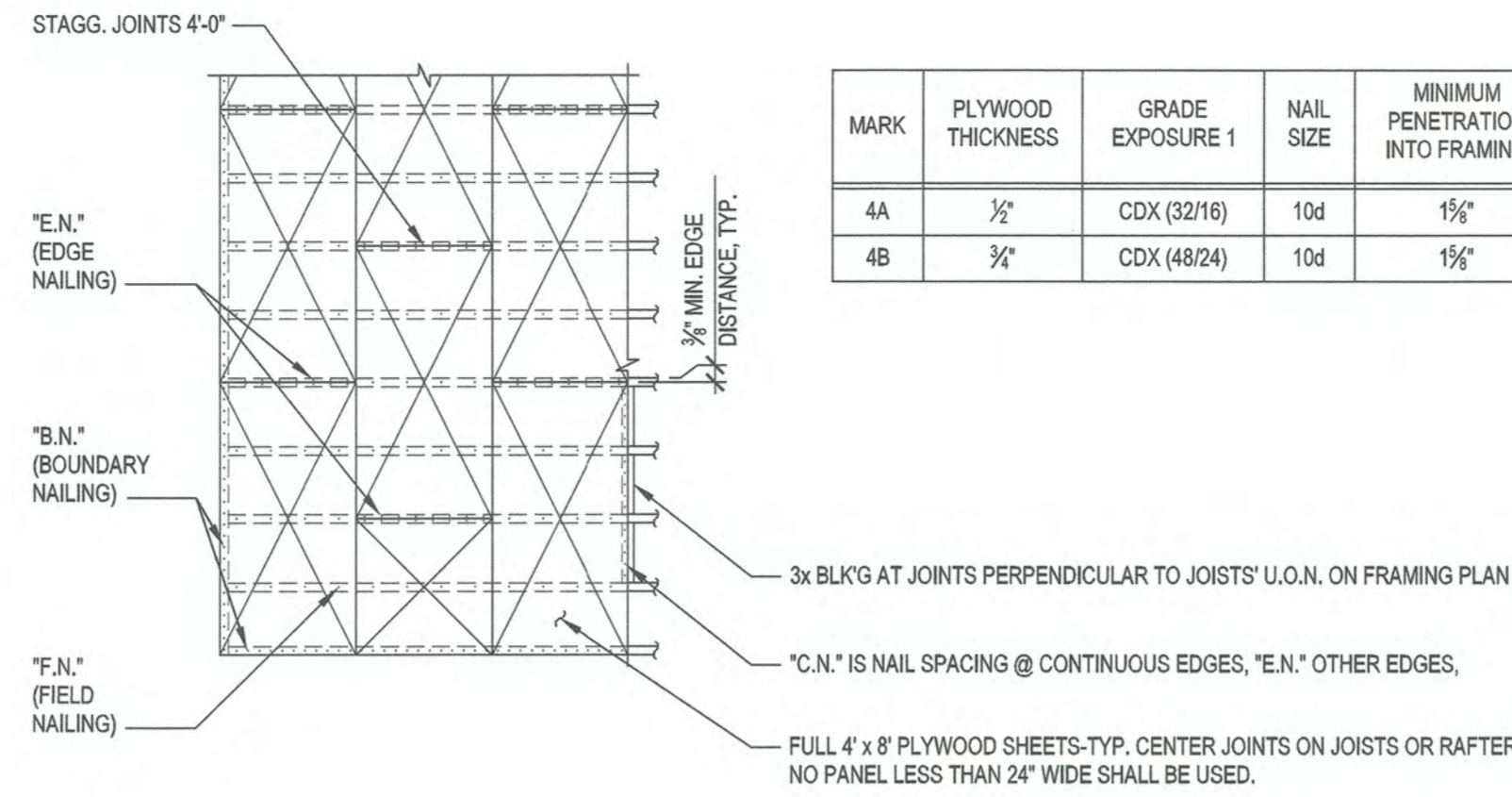
TIMBER:

- ALL FRAMING LUMBER SHALL BE GRADE DOUGLAS FIR-LARCH MARKED AS FOLLOWS, UNLESS OTHERWISE NOTED:
LIGHT FRAMING, NON-BEARING STUDS - "STANDARD" AND "STUD"
POSTS & BEAMS - "NO. 1"
BEARING STUDS - "NO. 1"
JOIST, RAFTERS, PLATES - "NO. 1"
- CUTS AND HOLES IN PRESSURE TREATED LUMBER SHALL BE TREATED PER AWPA M4.
- ALL LUMBER WITH A LEAST DIMENSION OF 2" (NOMINAL) SHALL BE STAMPED SURFACE-DRY AND SHALL HAVE A MOISTURE CONTENT WHEN SURFACED AND WHEN INSTALLED OF NOT MORE THAN 19%. LUMBER WITH A LEAST DIMENSION OF 4" (NOMINAL) OR GREATER SHALL BE STAMPED SURFACE-GREEN AND AIR DRIED TO A MOISTURE CONTENT OF NOT MORE THAN 16% PRIOR TO ITS USE IN THE STRUCTURE.
- ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE 2019 CALIFORNIA BUILDING CODE (CBC), MINIMUM NAILING SHALL CONFORM TO CBC TABLE 2304.10.1.
- ROOF JOISTS OR RAFTERS OF MORE THAN 8" DEPTH AND FLOOR JOISTS OF MORE THAN 4" DEPTH SHALL BE PROVIDED WITH BRIDGING TO DISTRIBUTE SUPERIMPOSED LOADS. FLOOR JOISTS SHALL BE BRIDGED EVERY 8'-0". ROOF JOISTS OR RAFTERS EVERY 10'-0" BY SOLID BLOCKING 2" THICK AND THE FULL DEPTH OF THE JOIST OR RAFTER, OR NAILED METAL CROSS BRIDGING OF EQUAL STRENGTH. WHERE CROSS BRIDGING IS USED, THE LOWER ENDS OF SUCH CROSS BRIDGING SHALL BE DRIVEN UP AND NAILED AFTER THE FLOOR, SUBFLOOR OR ROOF HAS BEEN NAILED.
- BOLTS SHALL HAVE 7 DIAMETER MINIMUM END DISTANCE AND 4 DIAMETER MINIMUM EDGE DISTANCE.
- ALL BOLTS HEADS AND NUTS BEARING ON WOOD SHALL BE FITTED WITH STANDARD CUT WASHERS. BOLT HOLES IN WOOD SHALL BE BORED WITH A BIT $\frac{1}{32}$ " TO $\frac{1}{16}$ " LARGER THAN THE NOMINAL BOLT DIAMETER.
- STEEL FRAMING CONNECTORS SHALL BE MANUFACTURED BY THE "SIMPSON STRONG-TIE COMPANY, INC.", CATALOG # C-C-2021.
- PLYWOOD FLOOR SHEATHING SHALL BE GLUED TO ALL FRAMING MEMBERS WITH AN A.P.A. APPROVED ADHESIVE.
- NAILS CONNECTED TO PRESSURE TREATED MATERIAL OR FIRE RETARDANT WOOD, SUCH AS PLYWOOD SILL NAILING STUD NAILING, ETC. AND NAILS EXPOSED TO THE EXTERIOR SHALL BE CORROSION RESISTANT AND SHALL HAVE A HOT-DIPPED ZINC GALVANIZED COATING OF NOT LESS THAN 1.0 OUNCES OF ZINC PER SQUARE FOOT OR SHALL BE FABRICATED OF STAINLESS STEEL. THE PRESSURE TREATMENT CHEMICALS SHALL BE COMPATIBLE WITH THE HOT-DIPPED GALVANIZED OR STAINLESS STEEL NAILS. ANCHOR BOLTS AND PLATE WASHERS MAY BE OF PLAIN CARBON STEEL IN SBX/DOT AND ZINC BORATE PRESERVATIVE-TREATED WOOD IN DRY, INTERIOR ENVIRONMENT. FASTENERS OTHER THAN NAILS, TIMBER RIVETS, WOOD SCREWS, AND LAG SCREWS MAY BE MECHANICALLY DEPOSITED ZINC-COATED STEEL AND ASTM B695, CLASS 55 MIN. (CBC 2304.10.5.1).
- UNLESS OTHERWISE NOTED ON THE PLANS, ROOF & FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED WITH 16d NAILS @ 6" O.C. TO FRAMED PANEL EDGES AND OVER STUD WALLS SHOWN ON PLANS, AND AT 12" O.C. TO INTERMEDIATE SUPPORTS. FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE-AND-GROOVE JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. TOE NAIL BLOCKING TO SUPPORTS WITH 16d NAILS, UNLESS OTHERWISE NOTED.
- SHEATHING NAILS SHALL BE DRIVEN SO THEIR HEAD IS FLUSH WITH, BUT SHALL NOT FRACTURE, THE SURFACE OF THE SHEATHING.
- CUTTING, NOTCHING, OR DRILLING OF JOISTS OR BEAMS SHALL BE PERMITTED ONLY AS DETAILED OR SPECIFICALLY APPROVED BY THE ENGINEER AND/OR PER CBC SECTION 2308.4.2.4, 2308.5.8, 2308.5.9, 2308.5.10 AND 2308.7.4.
- PROVIDE BACKING AS REQUIRED FOR HANDRAILS, DRYWALL, ETC. AS REQUIRED BY OTHER TRADES. SEE ARCHITECTURAL DRAWINGS.
- AT PRE-BORED HOLES FOR LAG SCREWS, THE CLEARANCE HOLE FOR THE SHANK, SHOULD HAVE THE SAME DIAMETER AS THE SHANK AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF UNTHREADED SHANK. THE LEAD HOLE FOR THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 40% TO 70% OF THE SHANK DIAMETER. THE HIGHER PERCENTAGE APPLIES TO LAG SCREWS OF LARGER DIAMETERS.
- DIAPHRAGM SHEATHING NAILS OR OTHER APPROVED SHEATHING CONNECTORS SHALL BE DRIVEN SO THAT THEIR HEAD OR CROWN IS FLUSH WITH THE SURFACE OF THE SHEATHING.

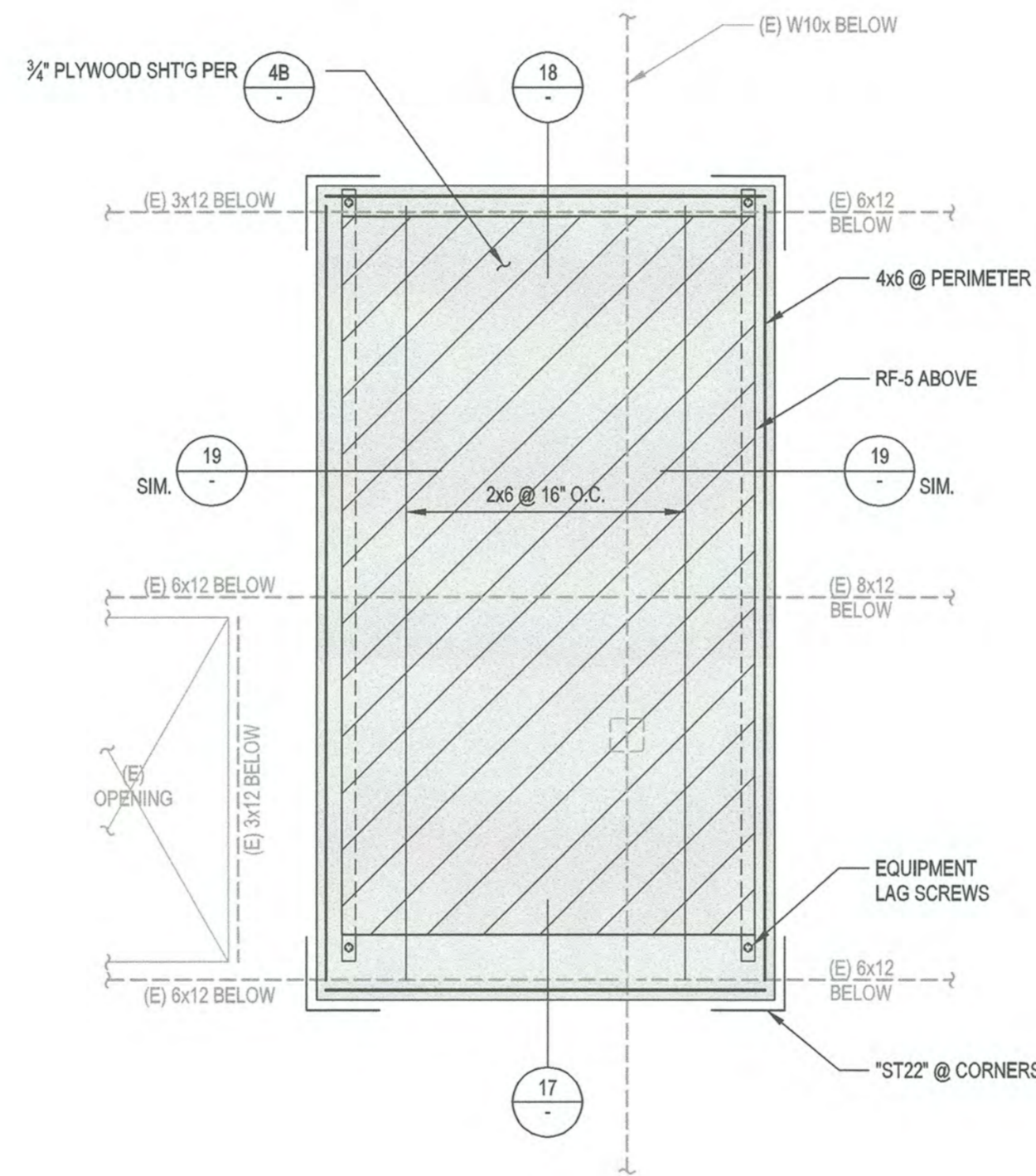
MICROLAM LVL (LAMINATED VENEER LUMBER):

- REDLAM LVL MEMBERS SHALL HAVE THE FOLLOWING ALLOWABLE DESIGN STRESSES, ESR 2993:
SHEAR MODULUS OF ELASTICITY, G 125,000 PSI
MODULUS OF ELASTICITY, E 2.0×10^6 PSI
FLEXURAL STRESS, F_b 2,900 PSI⁽¹⁾
TENSION STRESS, F_t 1,860 PSI⁽²⁾
COMPRESSION PERPENDICULAR TO GRAIN, $F_{c \perp}$ 750 PSI⁽³⁾
COMPRESSION PARALLEL TO GRAIN, F_c 2,835 PSI
HORIZONTAL SHEAR PARALLEL TO GRAIN, F_v 285 PSI

(1) FOR 12" DEPTH. FOR OTHERS, MULTIPLY BY $\left[\frac{12}{d} \right]^{0.158}$
(2) F_t HAS BEEN REDUCED TO REFLECT THE VOLUME EFFECTS OF LENGTH, WIDTH, AND THICKNESS.
(3) $F_{c \perp}$ SHALL NOT BE INCREASED FOR DURATION OF LOAD.
(4) SEE XXIS-XX FOR ALLOWABLE HOLES IN LVL MEMBERS.

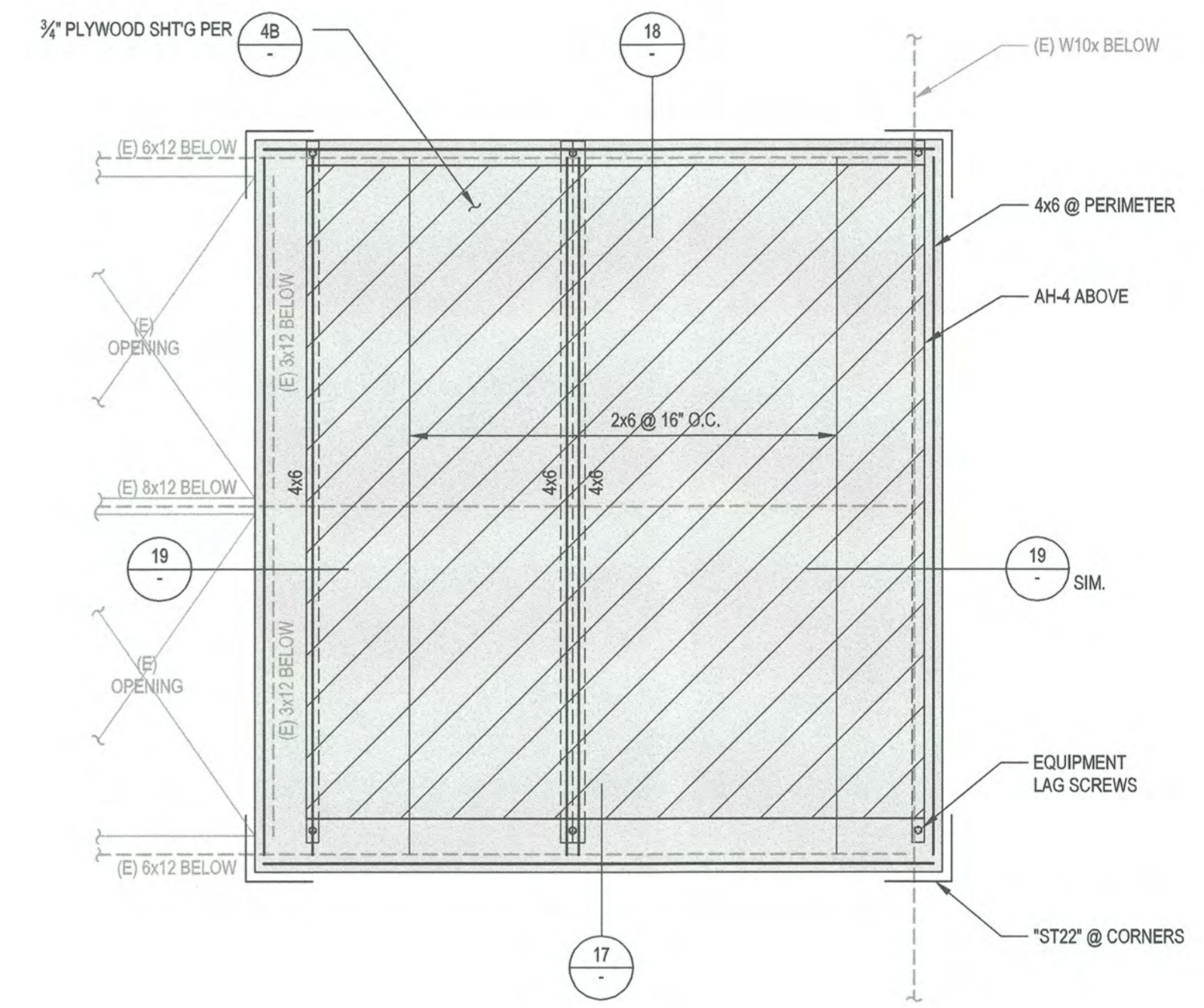


PLYWOOD ROOF SHEATHING SCHEDULE



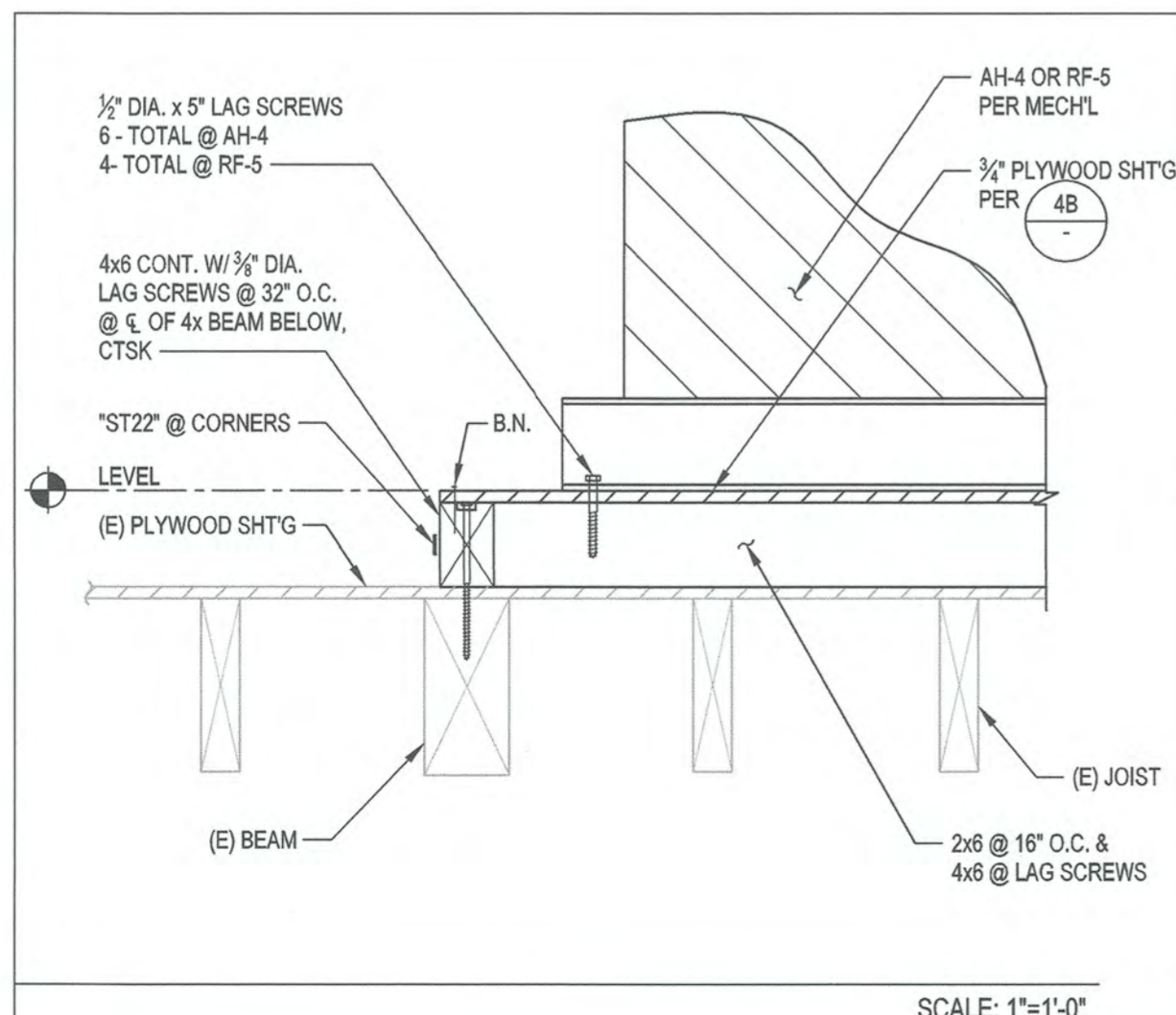
RF-5 - PLATFORM FRAMING PLAN

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

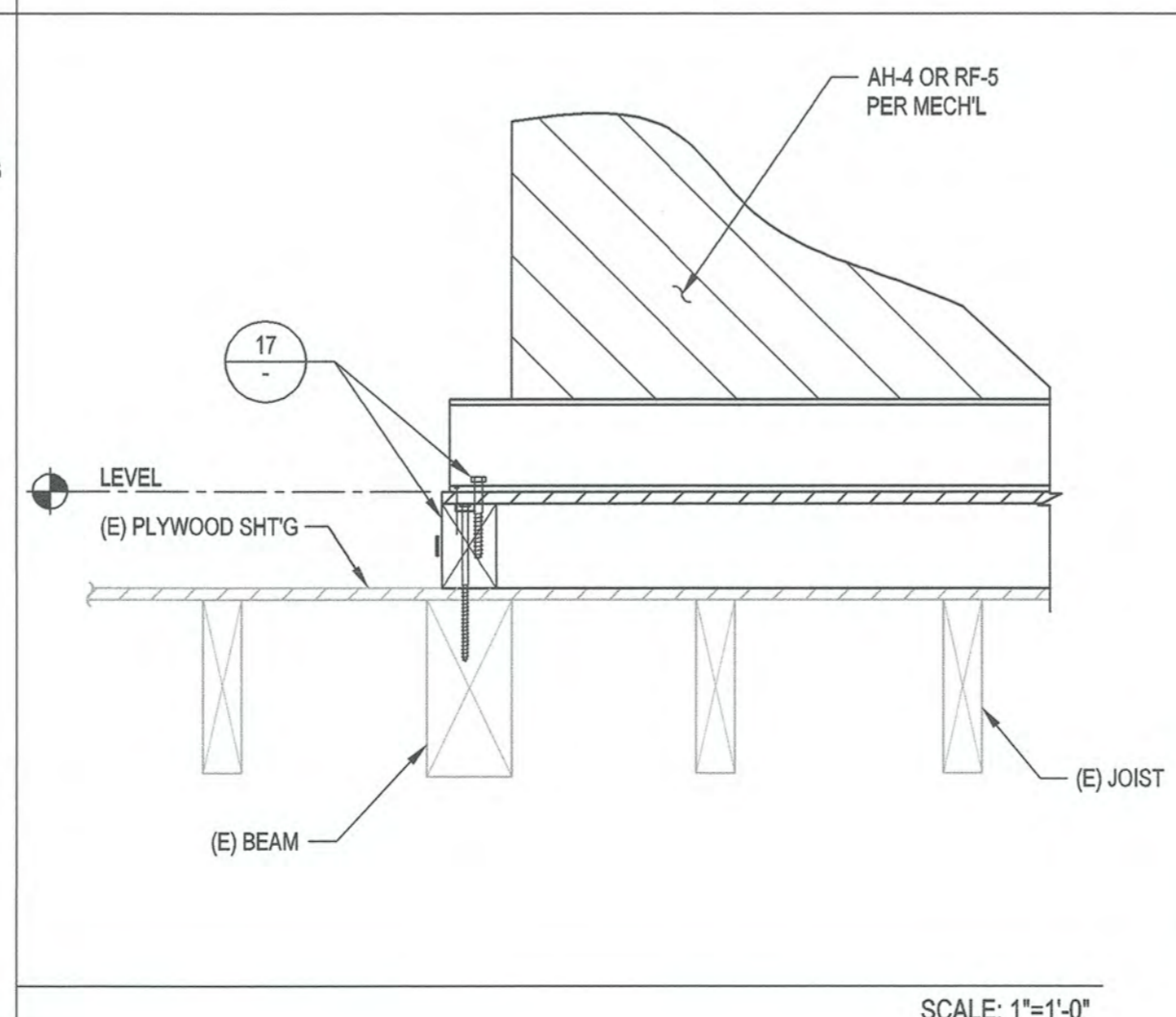


AH-4 - PLATFORM FRAMING PLAN

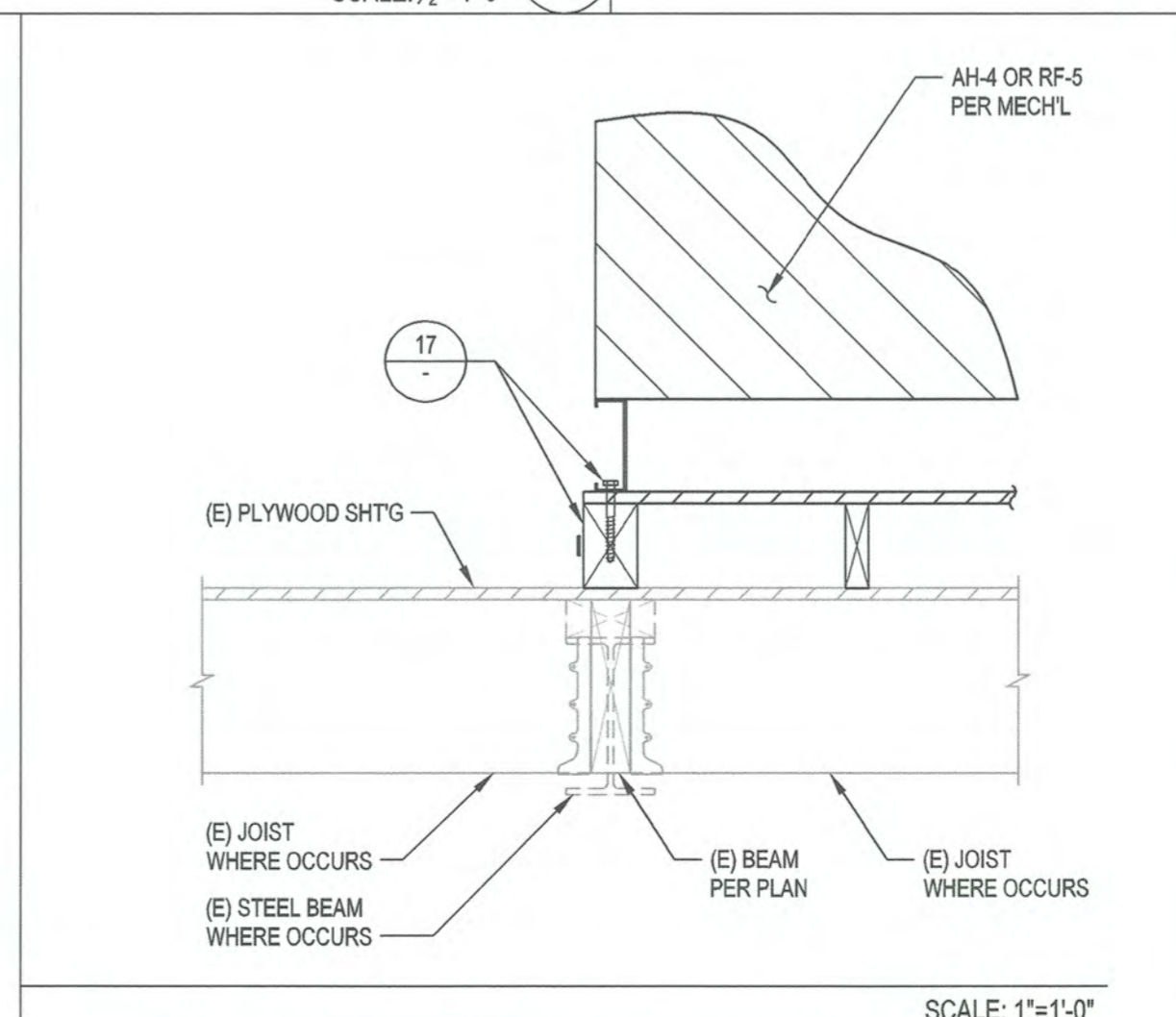
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SCALE: 1"=1'-0"



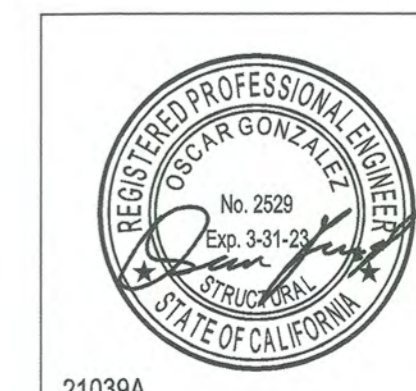
SCALE: 1"=1'-0"



SCALE: 1"=1'-0"



16769 Bernardo Center Drive, Suite 1 #768
San Diego, CA 92128



21039A

CLIENT:

IMPERIAL COUNTY NORTH COUNTY
ADMINISTRATION/COURTHOUSE HVAC
REPLACEMENT
BRAWLEY, CALIFORNIA
COUNTY PROJECT NO. SR6650CFM

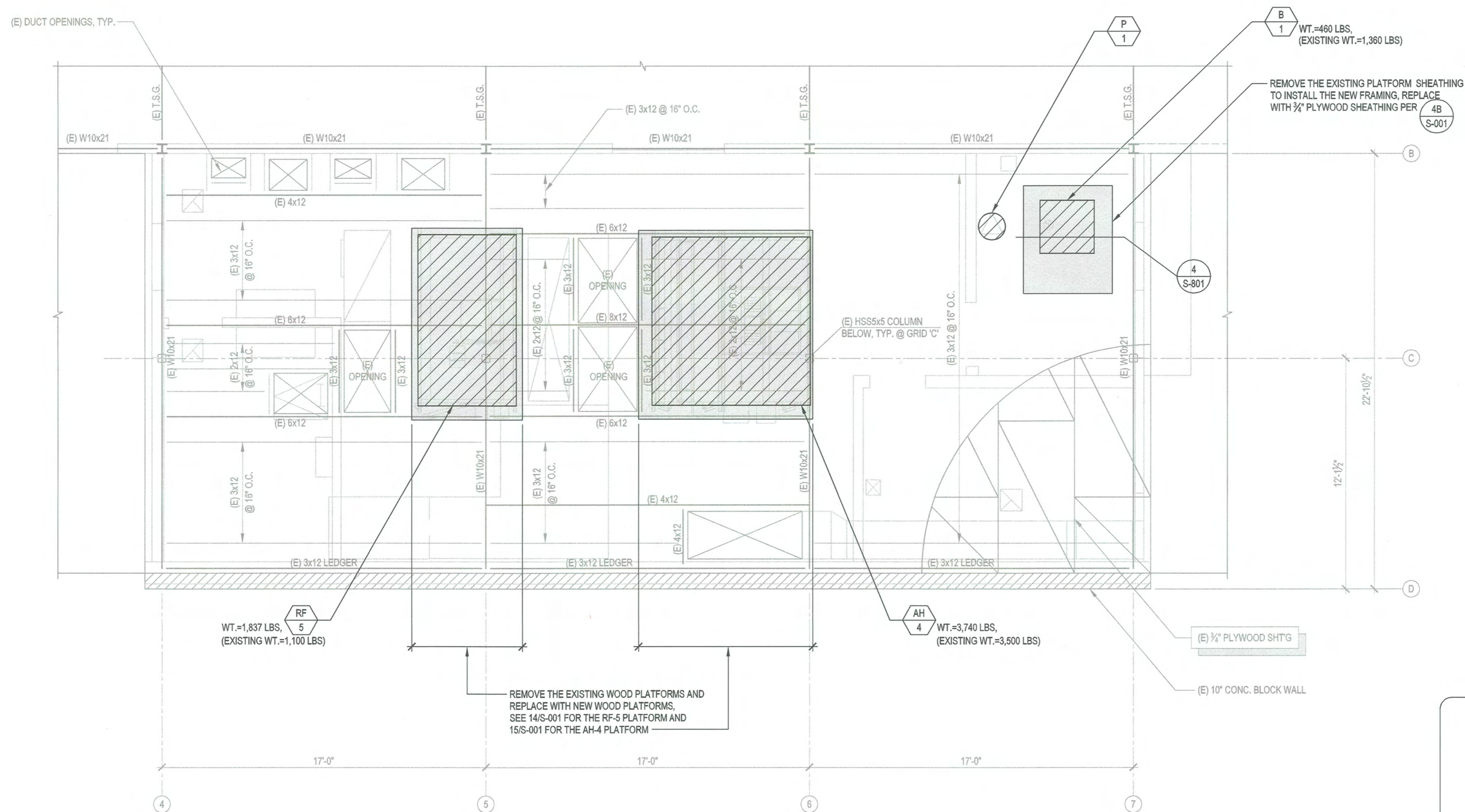
NO. REVISION DATE

SHEET:

GENERAL NOTES &
TYPICAL DETAILS

S-001

EPI
THE ENGINEERING PARTNERS, INC.
CONSULTING ENGINEERS
9565 WAPLES STREET, SUITE 100
SAN DIEGO, CA 92121
(858) 834-1761 FAX (858) 834-1768
EPI PROJ # 120-419E



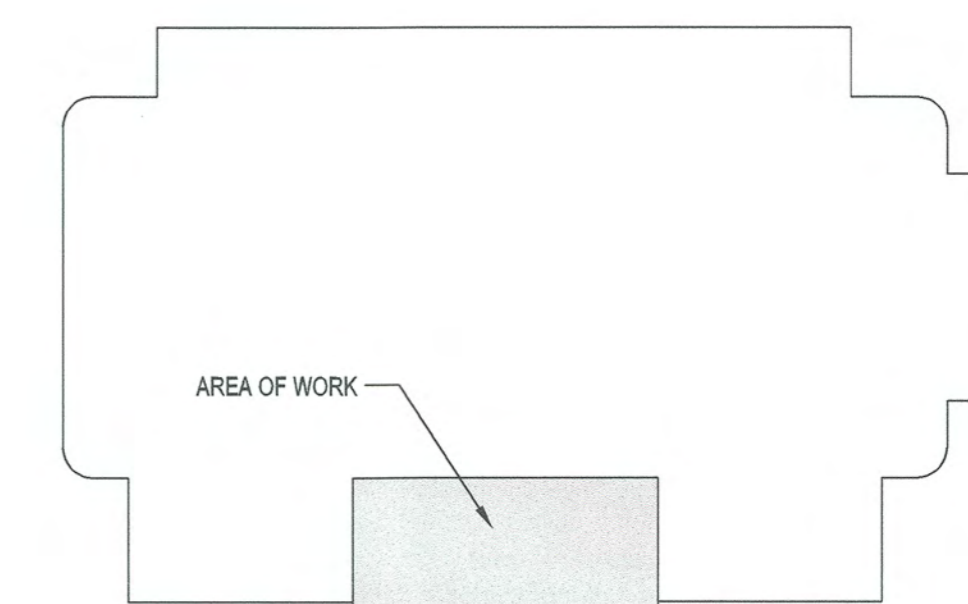
PARTIAL SECOND FLOOR FRAMING PLAN

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



KEY PLAN

SCALE: NONE



EPI
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 CONSULTING ENGINEERS
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 SAN DIEGO, CA 92121
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 EPI PROJ # 120-419E

CLIENT:

**IMPERIAL COUNTY NORTH COUNTY
 ADMINISTRATION/COURTHOUSE HVAC
 REPLACEMENT
 BRAWLEY, CALIFORNIA
 COUNTY PROJECT NO. SR6650CFM**

JG
 16769 Bernardo Center Drive, Suite 1 #768
 San Diego, CA 92128



OGONZALEZ, INC.
 ENGINEERS
 3708 VIEWVERDE
 BONITA, CA 91902
 TEL: 619-871-5344

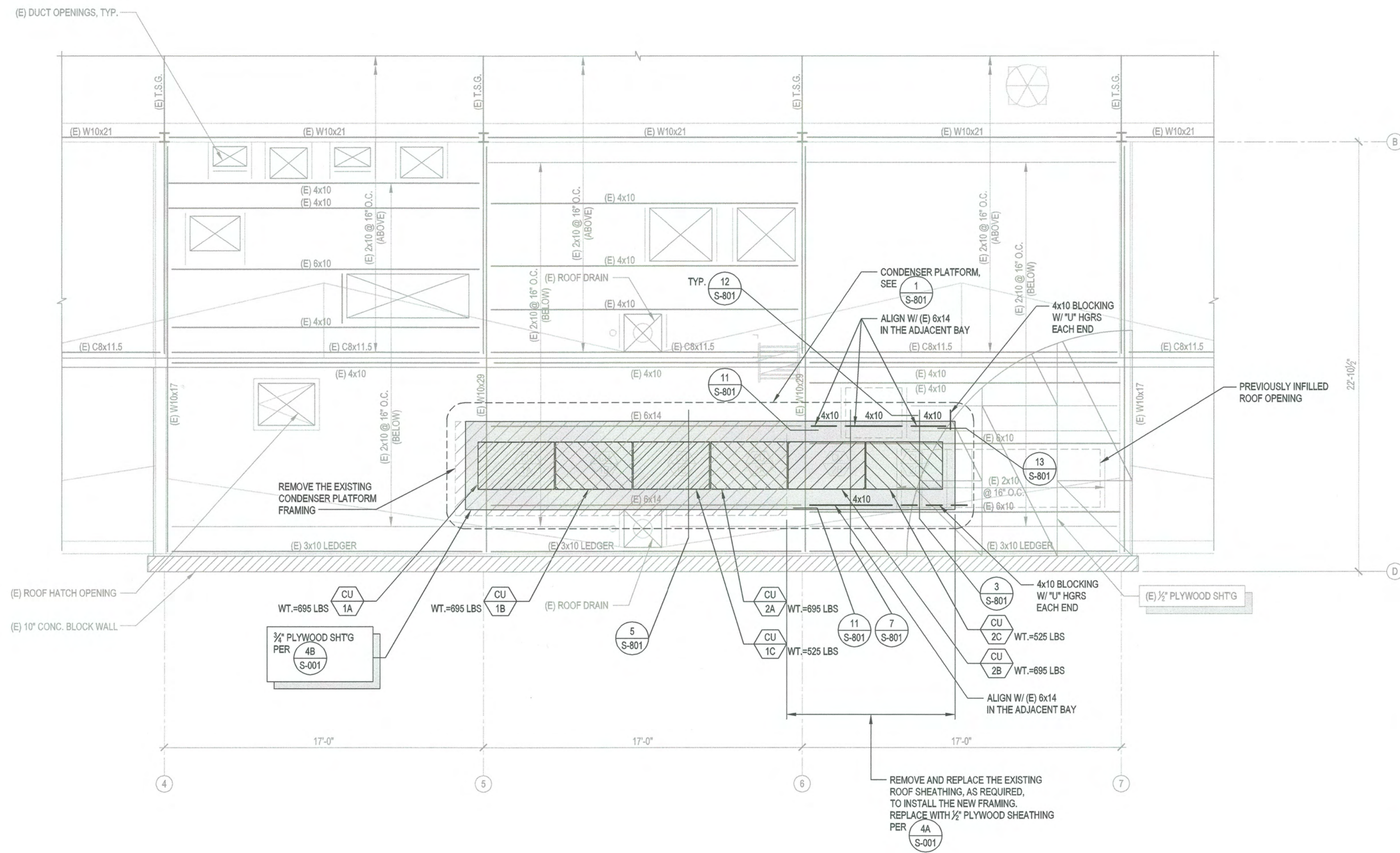
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NO.	REVISION	DATE

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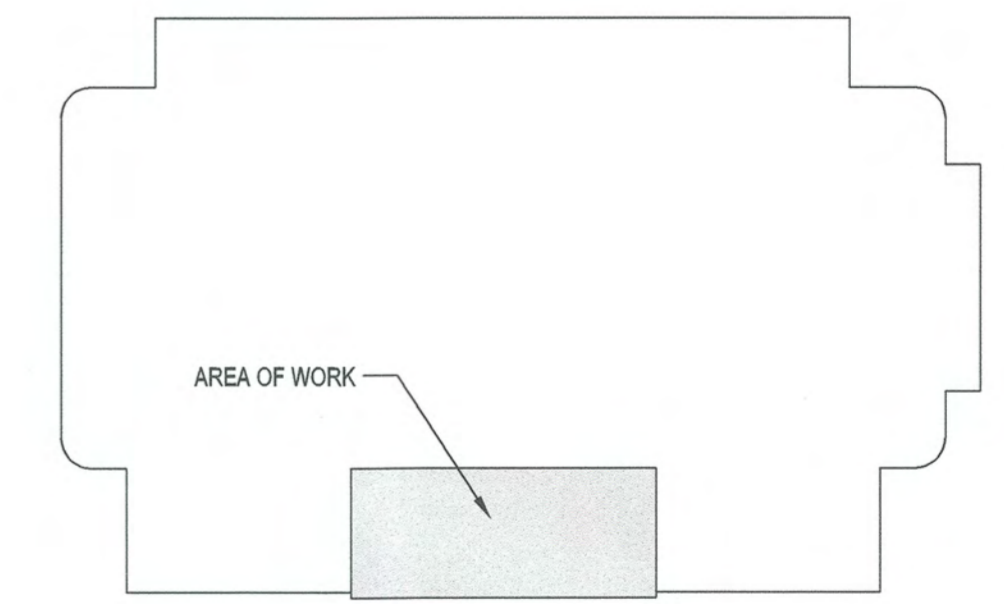
PARTIAL SECOND FLOOR FRAMING PLAN

S-121



PARTIAL ROOF FRAMING PLAN

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



KEY PLAN

SCALE: NONE



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REPLACEMENT
BRAWLEY, CALIFORNIA
COUNTY PROJECT NO. SR6650CFM

16769 Bernardo Center Drive, Suite 1 #768
San Diego, CA 92128



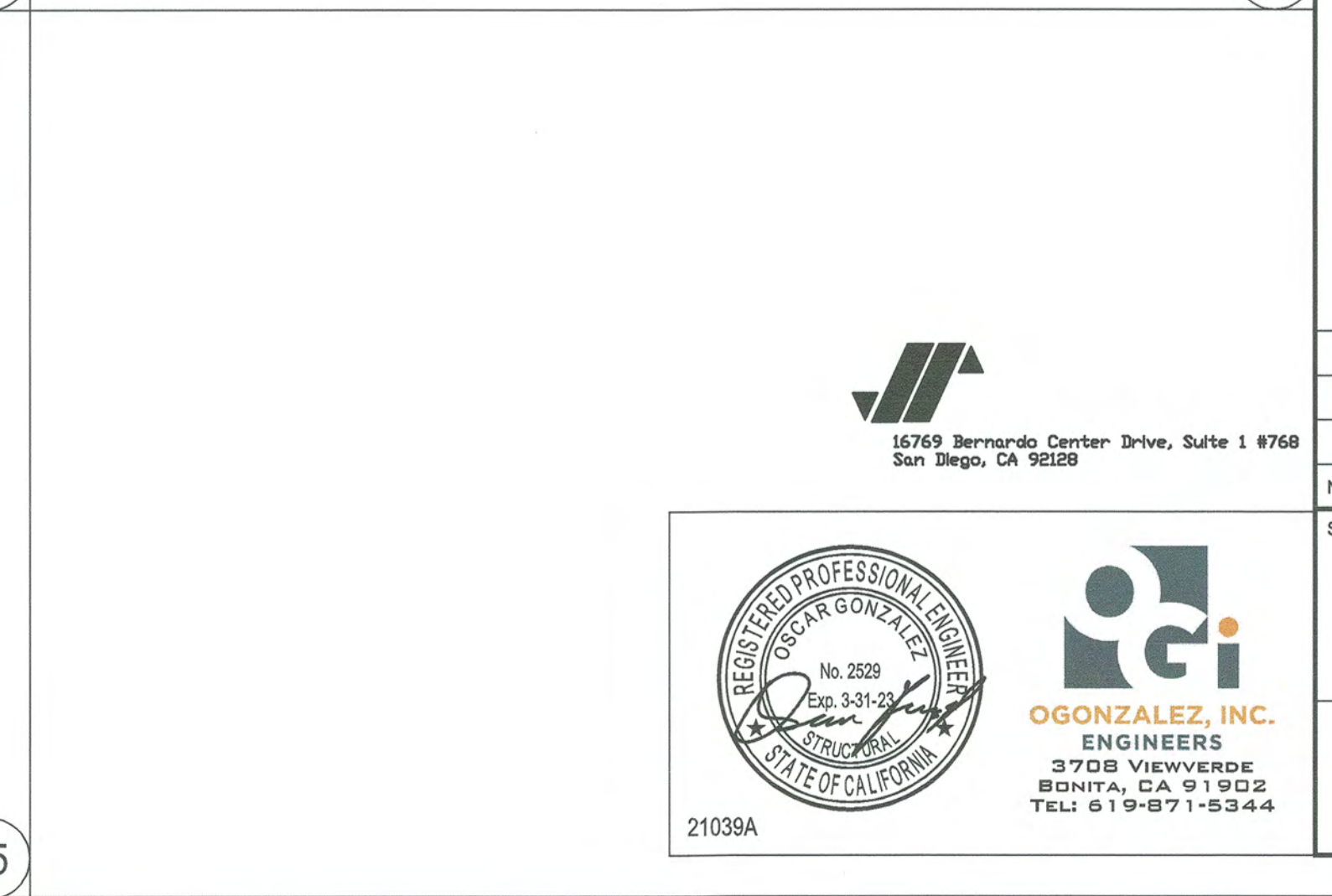
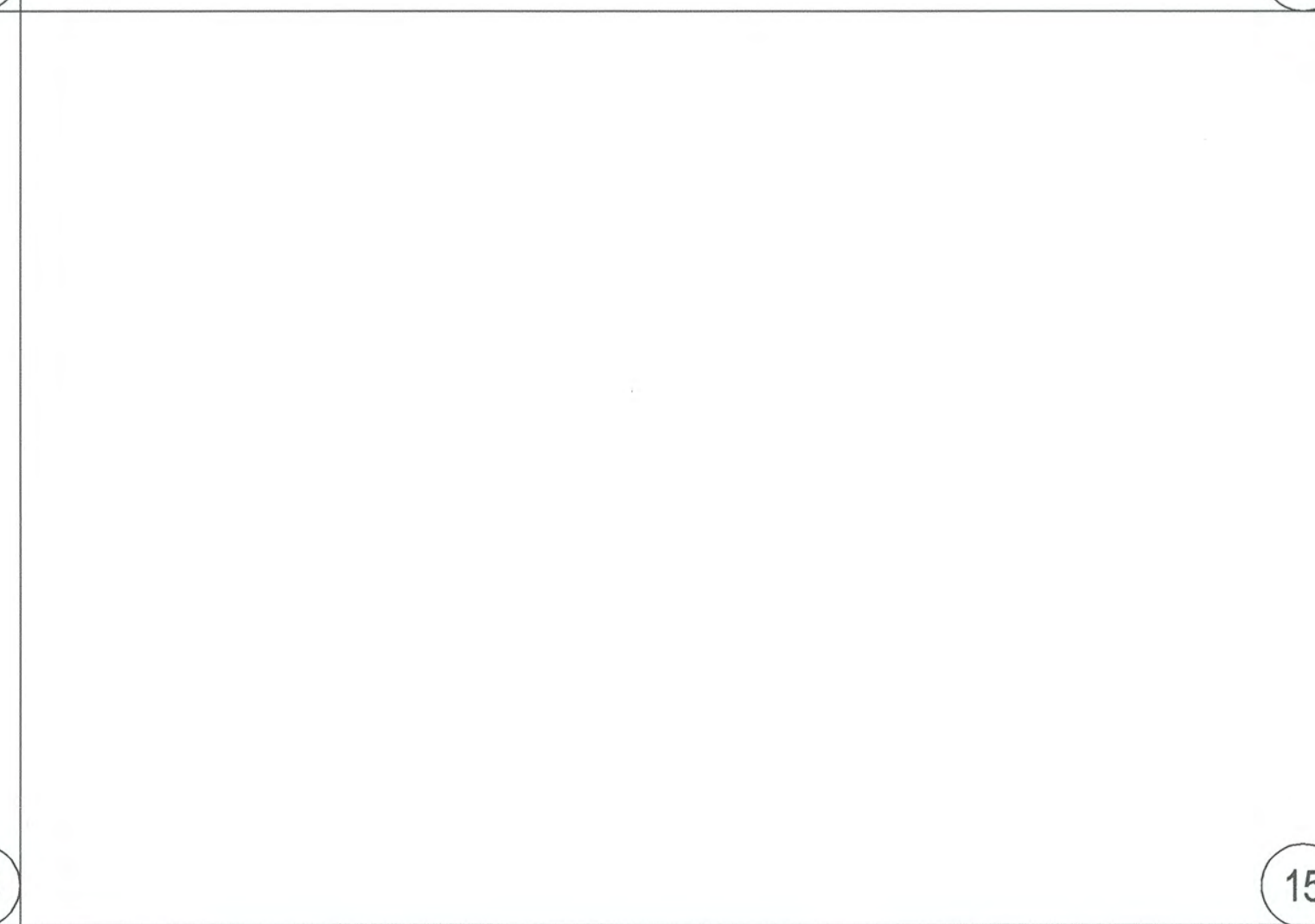
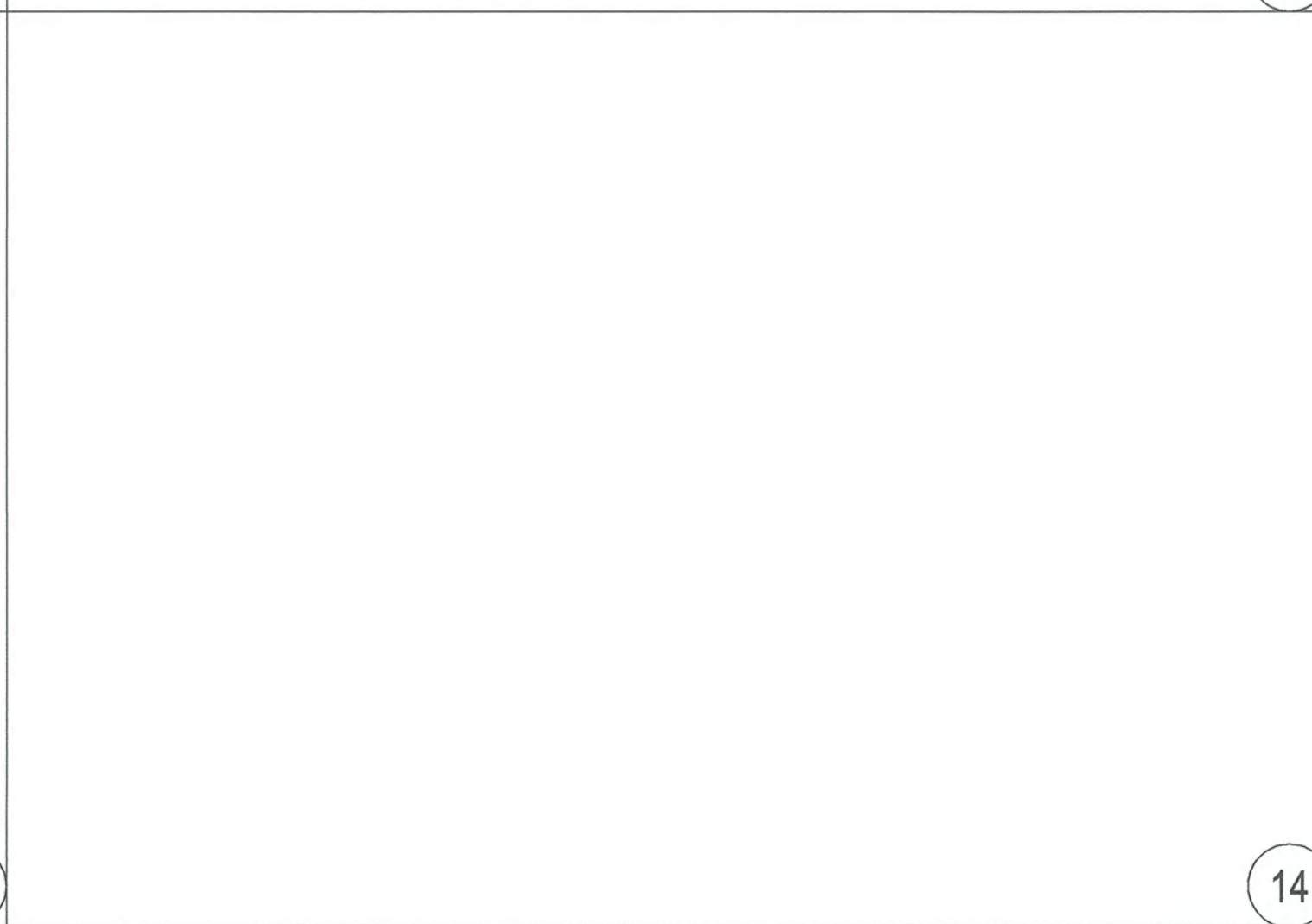
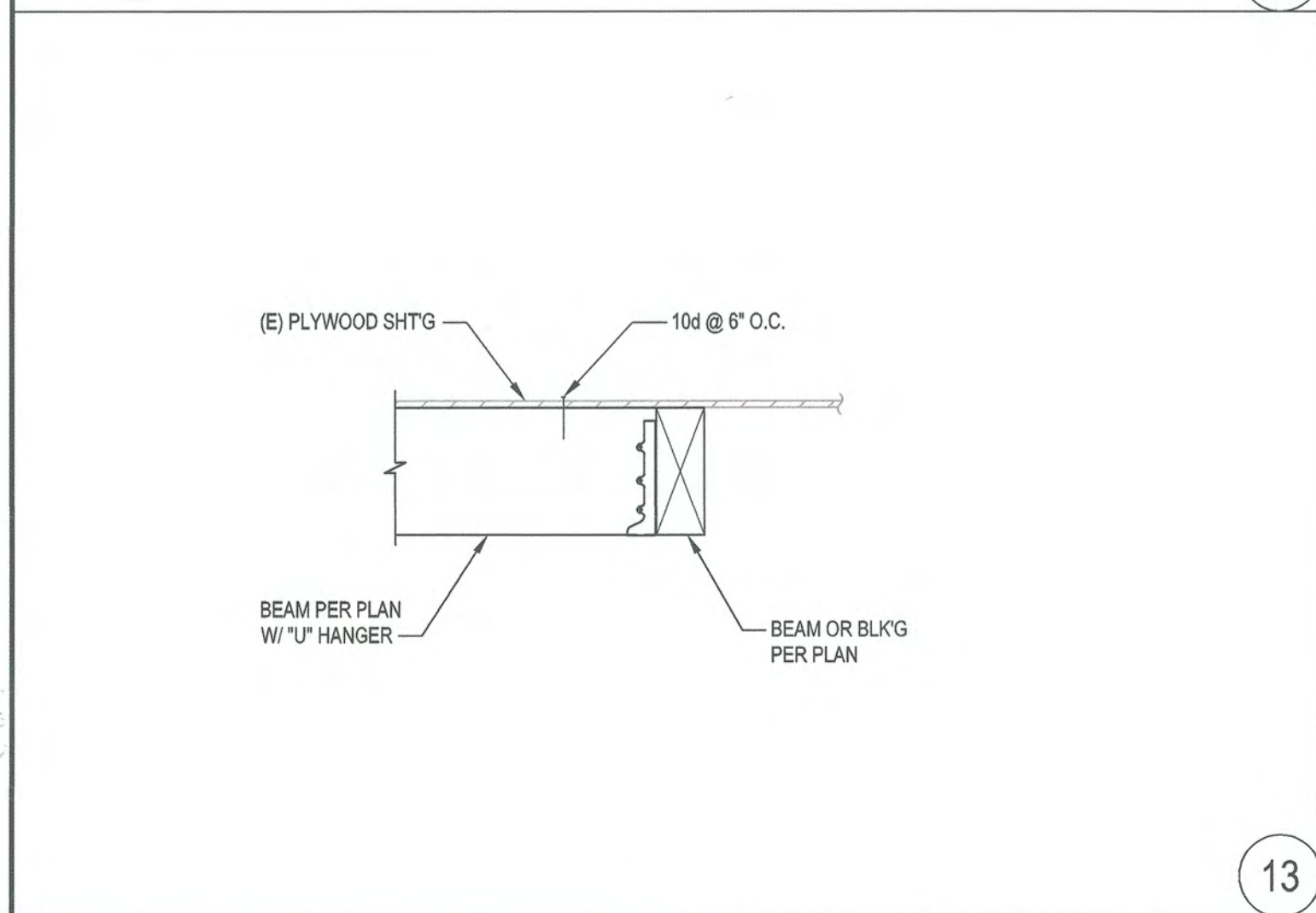
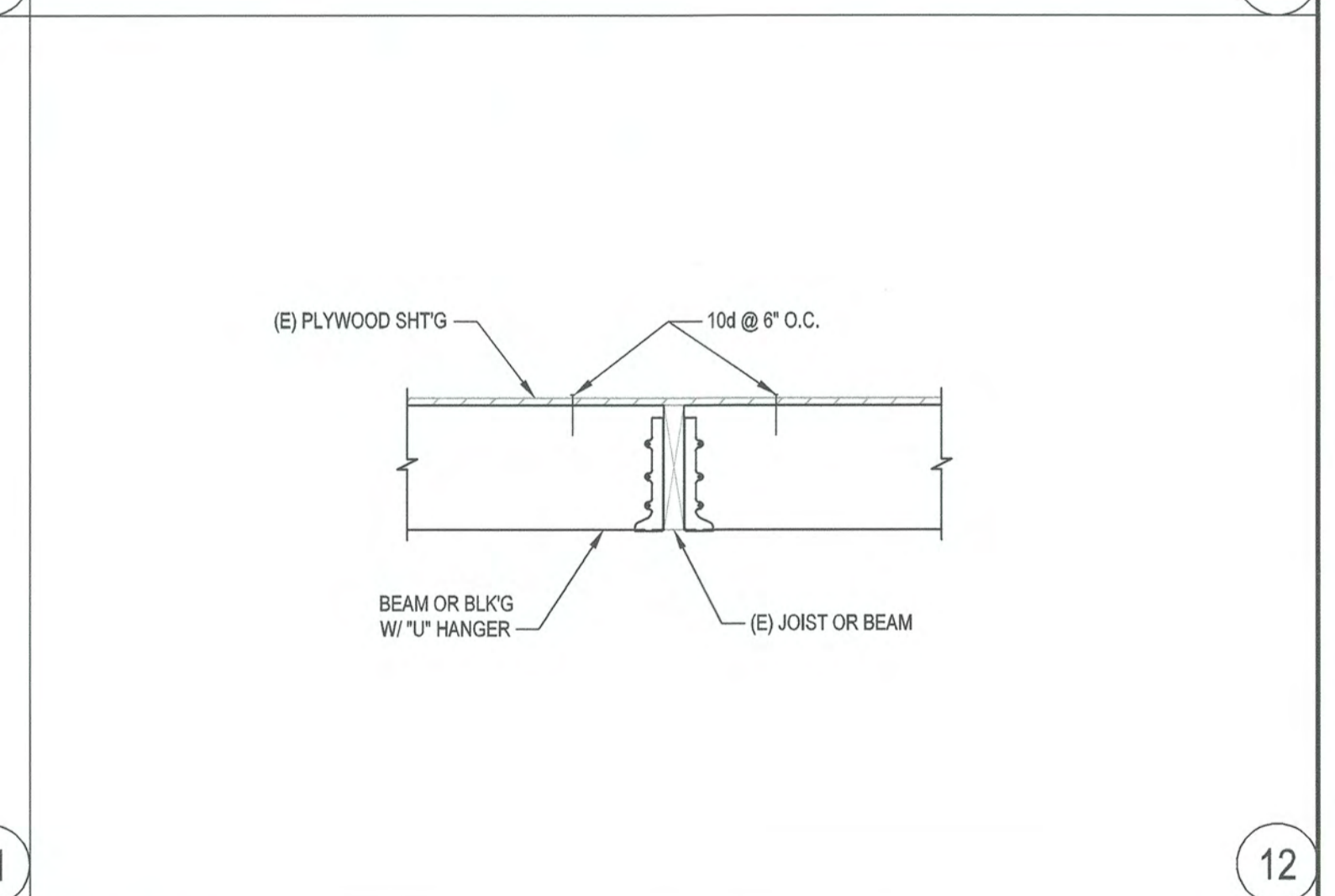
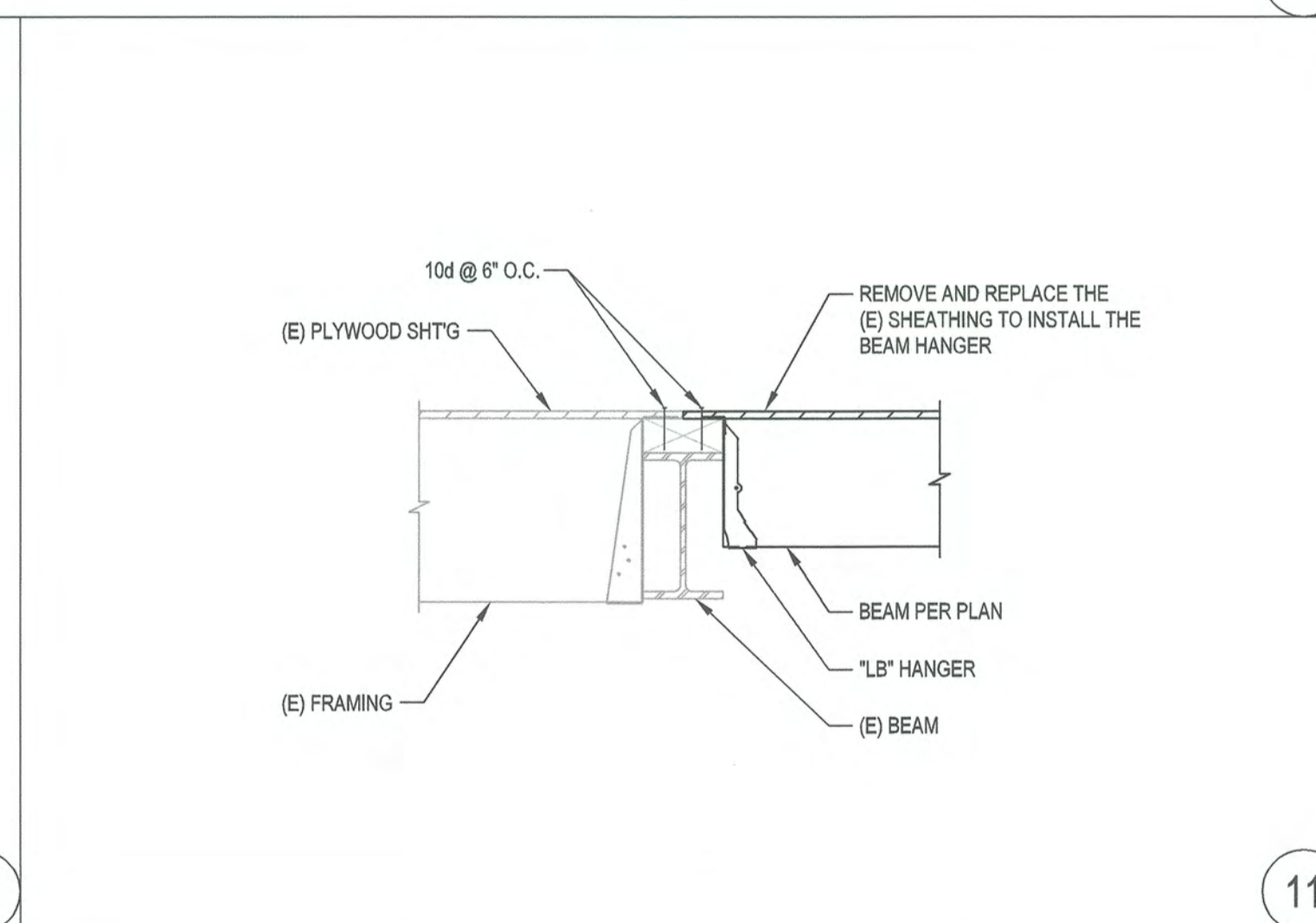
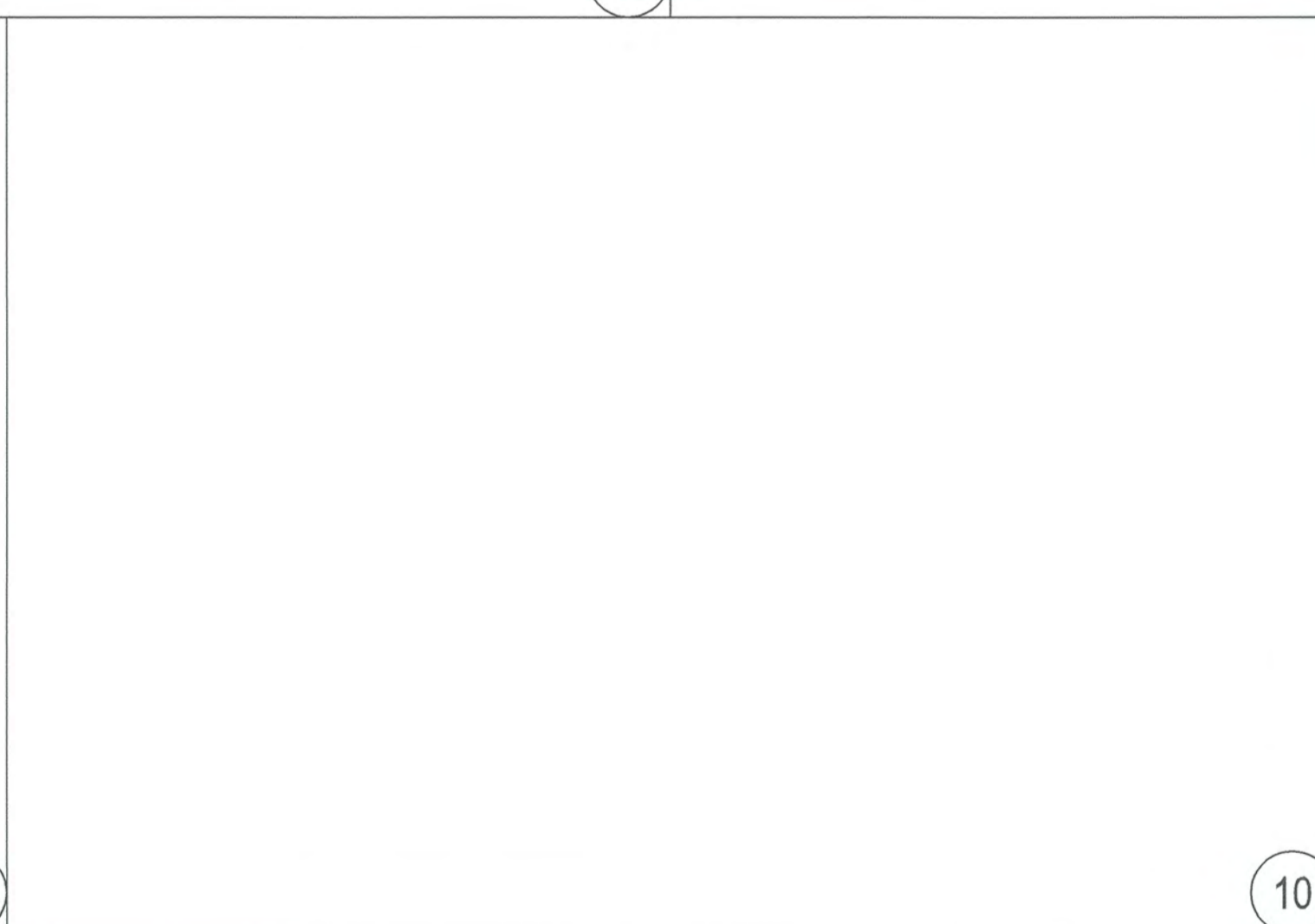
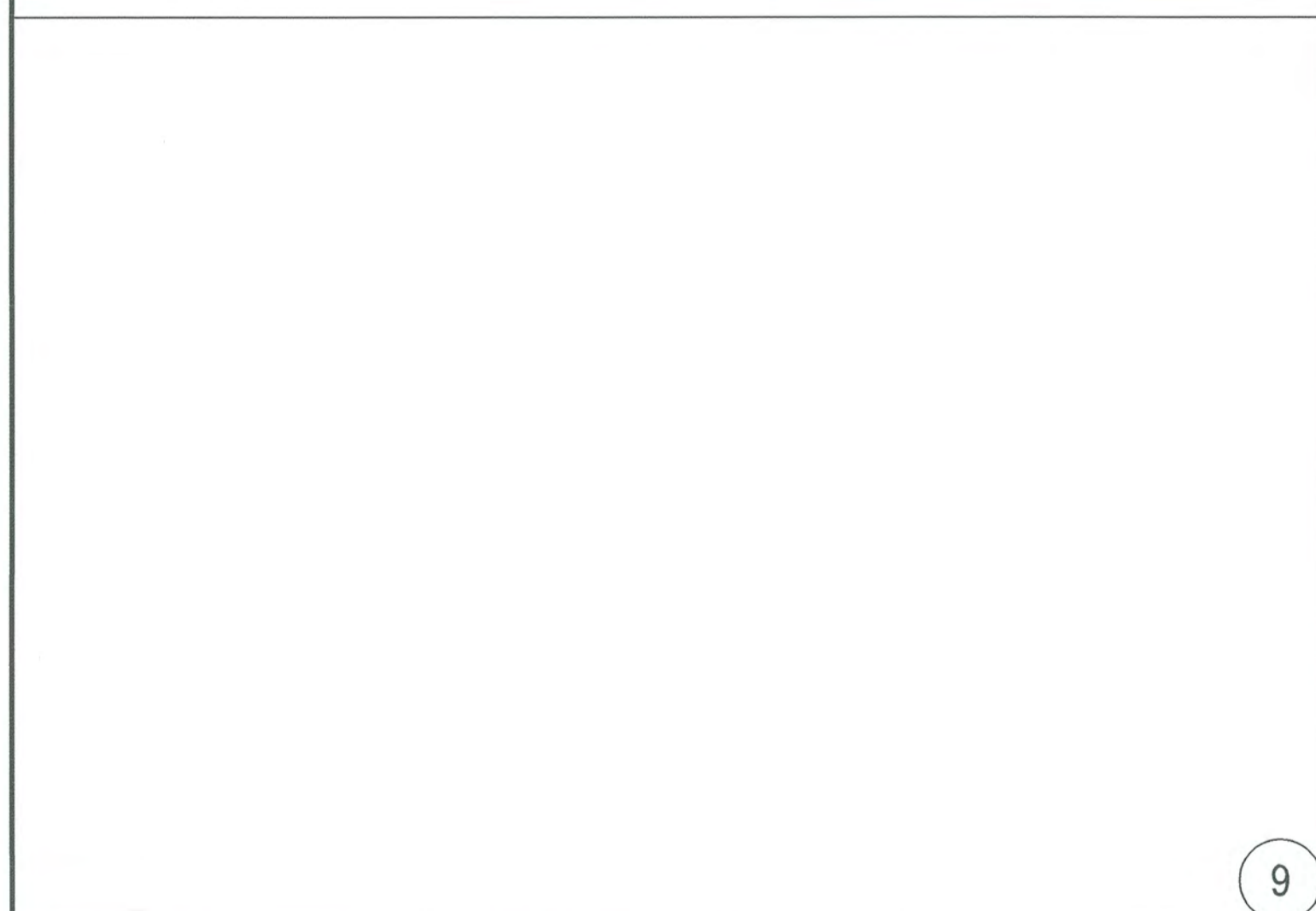
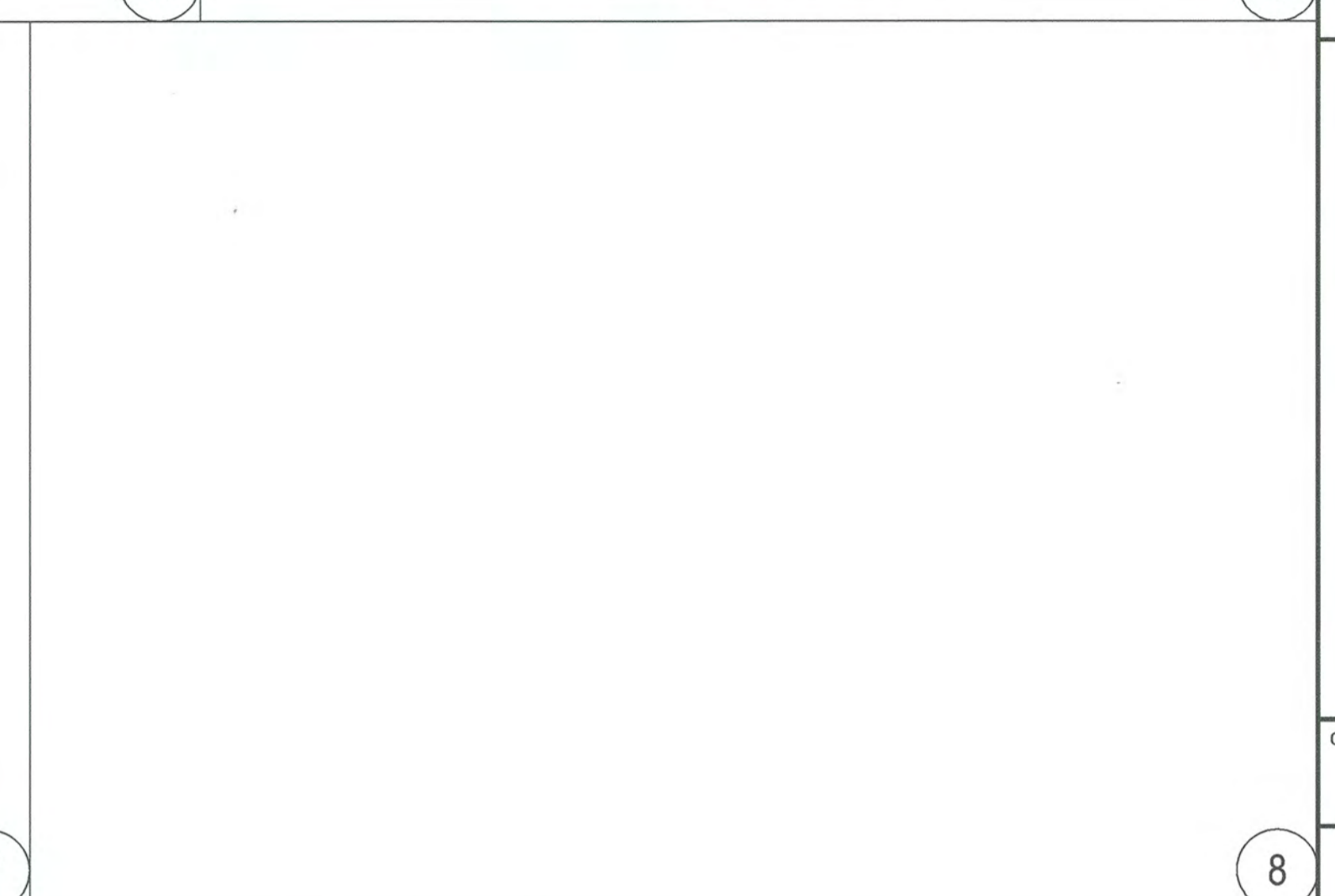
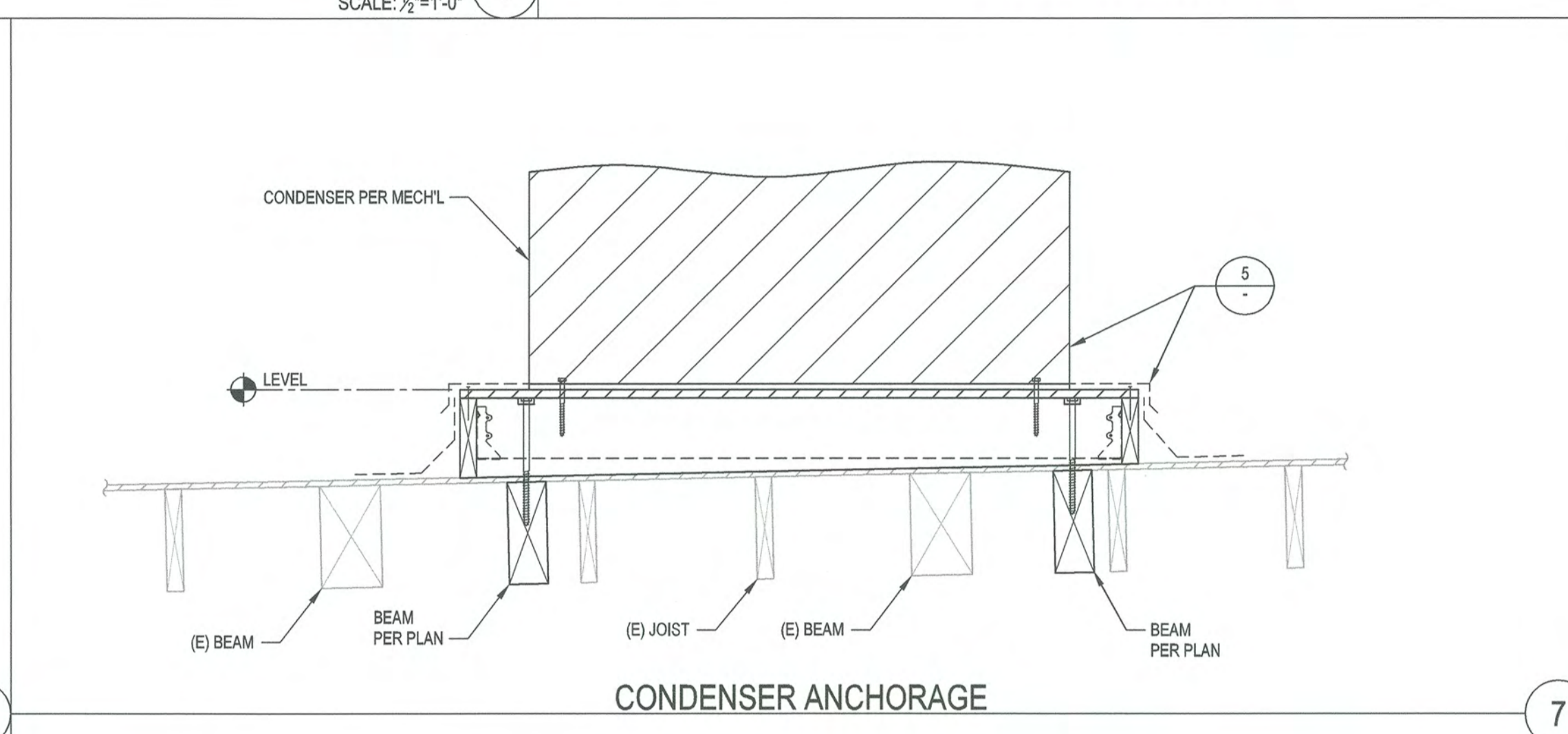
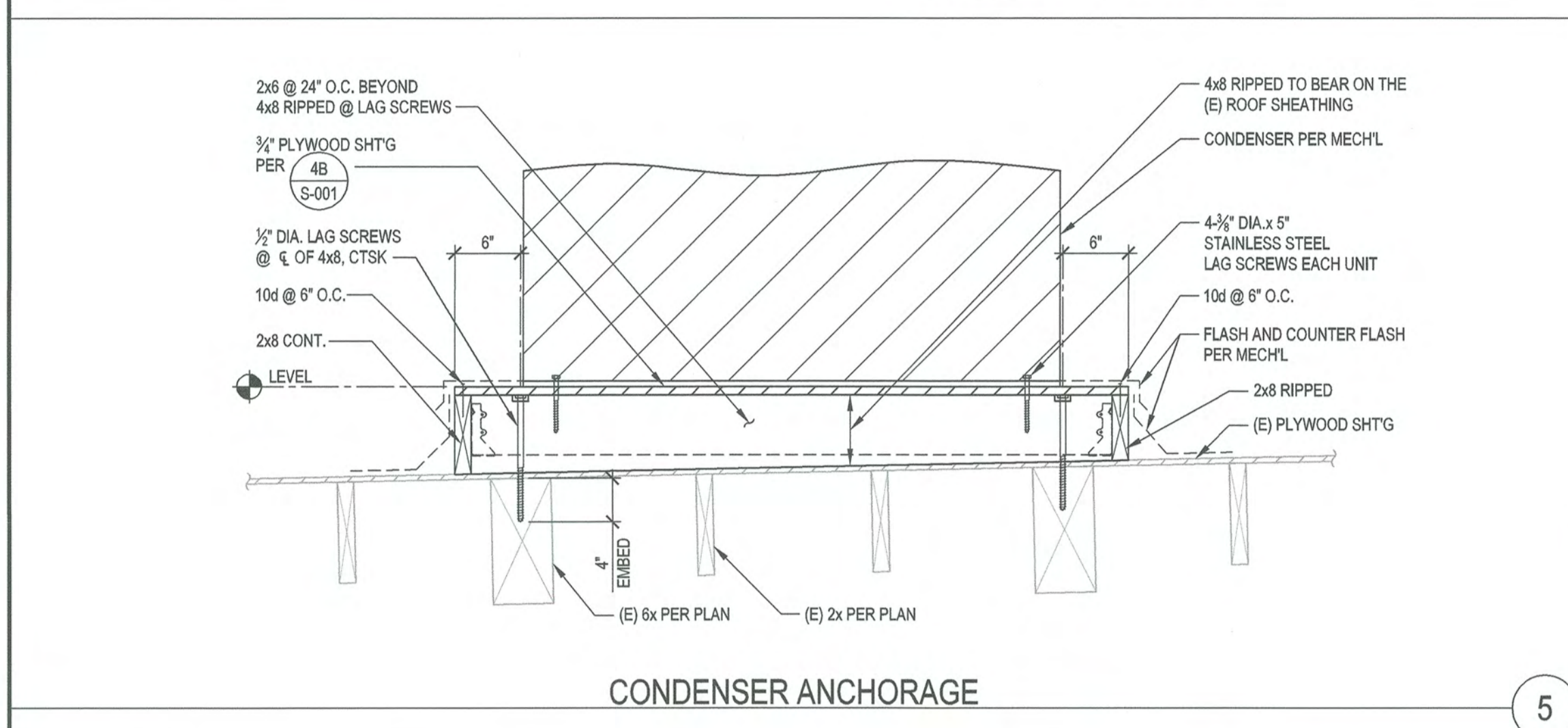
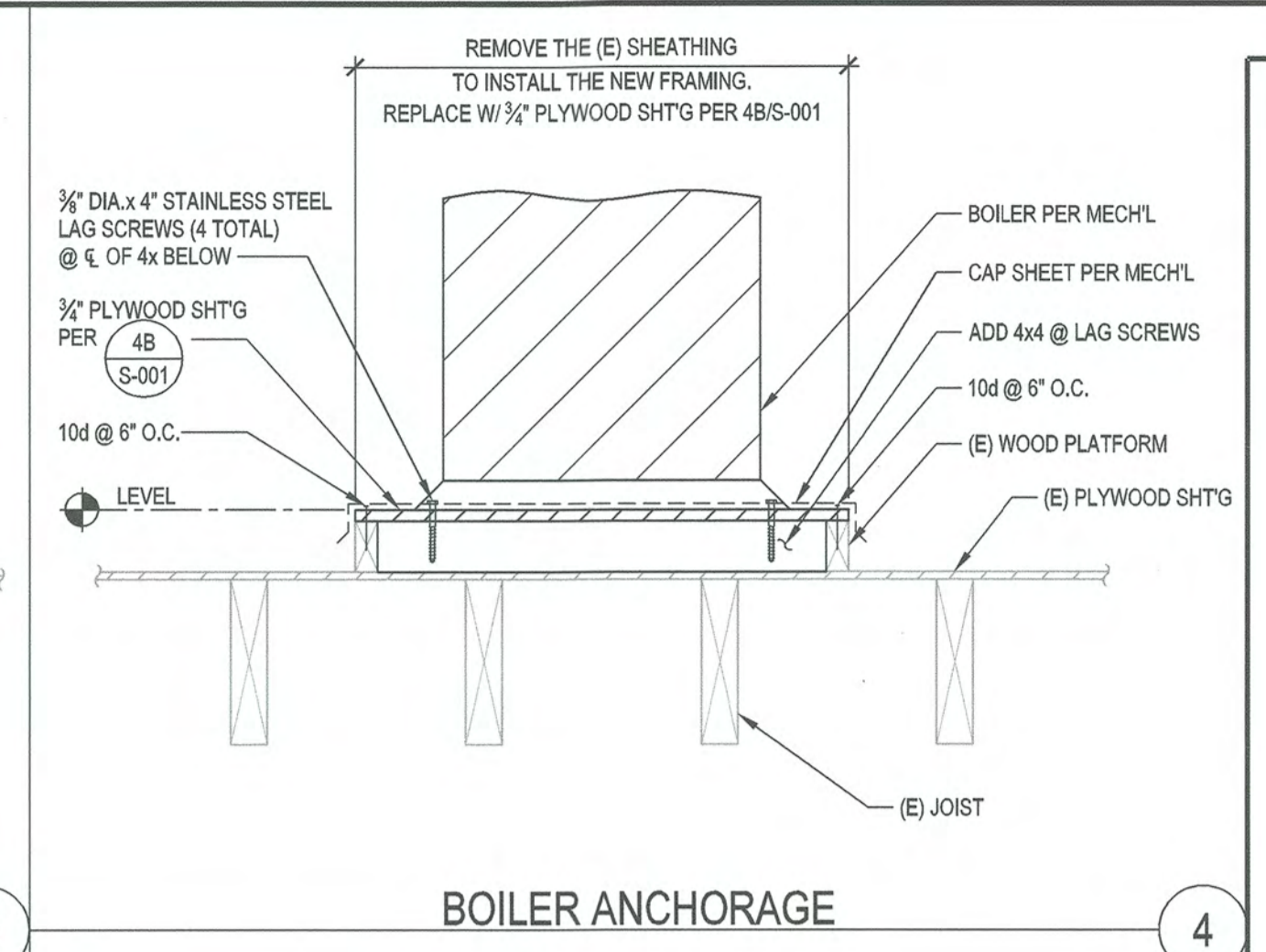
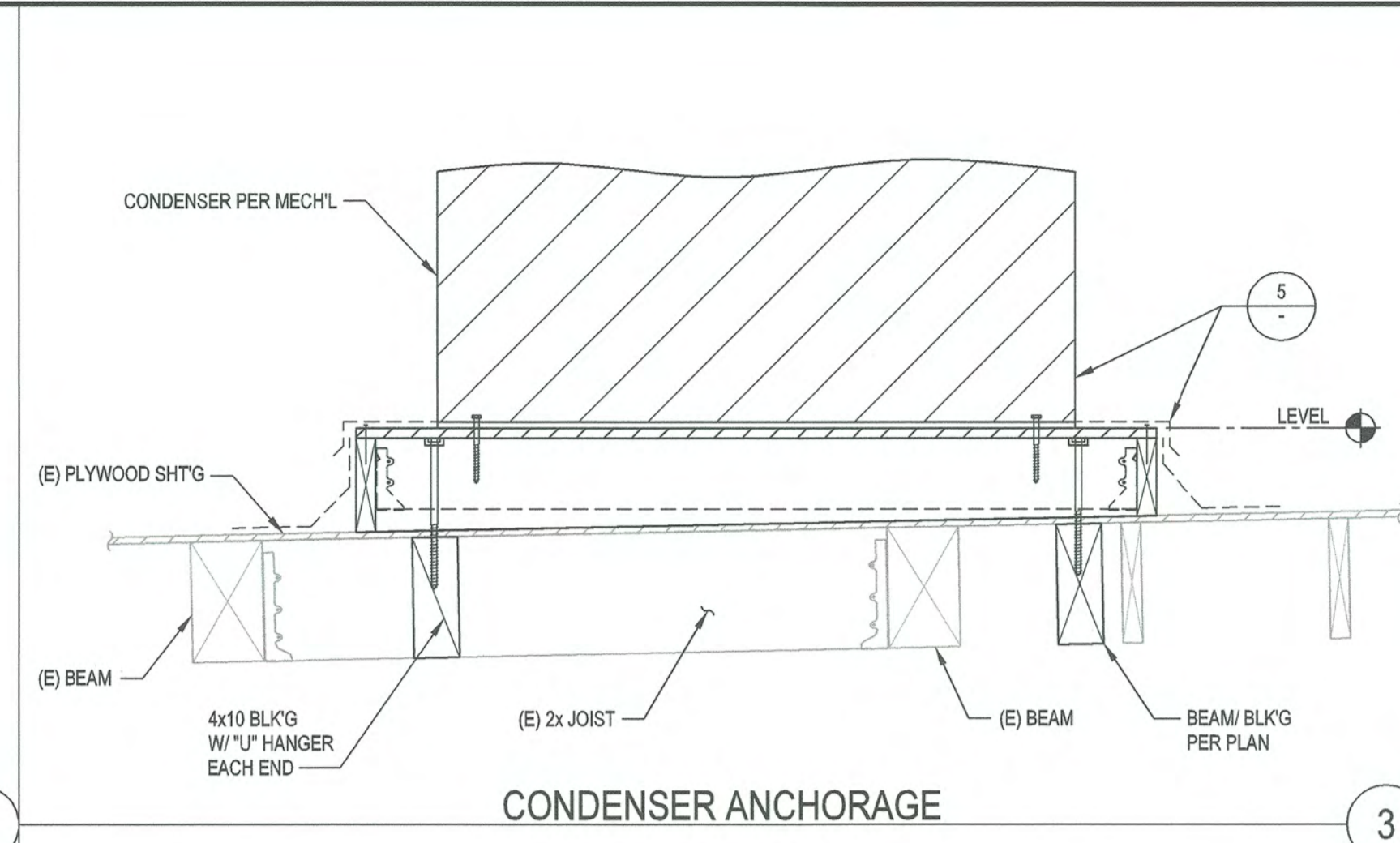
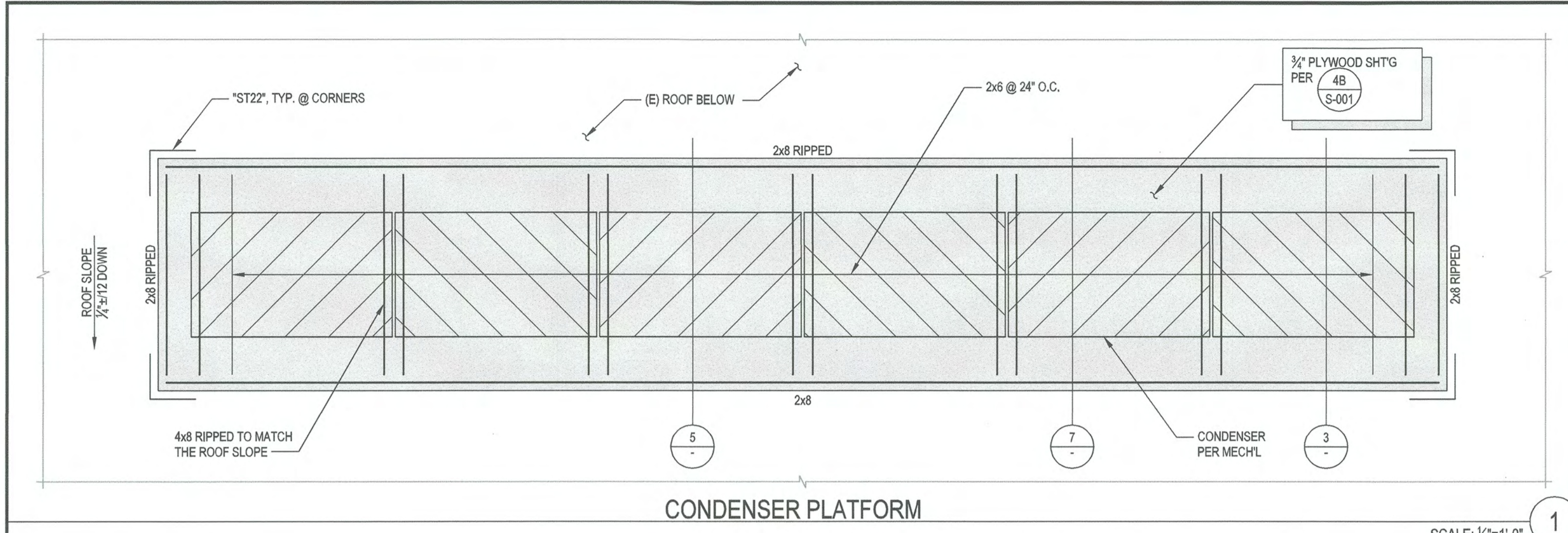
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NO.	REVISION	DATE

SHEET:

PARTIAL ROOF FRAMING PLAN

S-131



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 THE ENGINEERING PARTNERS, INC.
 CONSULTING ENGINEERS
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 (858) 824-1761 FAX (858) 824-1768
 EPI PROJ # 120-419E

CLIENT:

IMPERIAL COUNTY NORTH COUNTY
 ADMINISTRATION/COURTHOUSE HVAC
 REPLACEMENT
 BRAWLEY, CALIFORNIA
 COUNTY PROJECT NO. SR6650CFM

NO.	REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER
 OSCAR GONZALEZ
 No. 2529
 Exp. 3-31-23
 STATE OF CALIFORNIA

OGONZALEZ, INC.
 ENGINEERS
 3708 VIEWVERDE
 BONITA, CA 91902
 TEL: 619-871-5344

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SHEET: FRAMING DETAILS

S-801