

FILE NAME: K:\PROJECTS\SDCOE- 0293\21-1134-SDCOR BLDG. #3 1ST FL HEAT PUMP\DWGS\CAD\2020XX\MECH\21-0293-1134-G001.DWG PLOT DATE: 6/9/2022 3:52 PM PRINT BY: KEVIN RICE

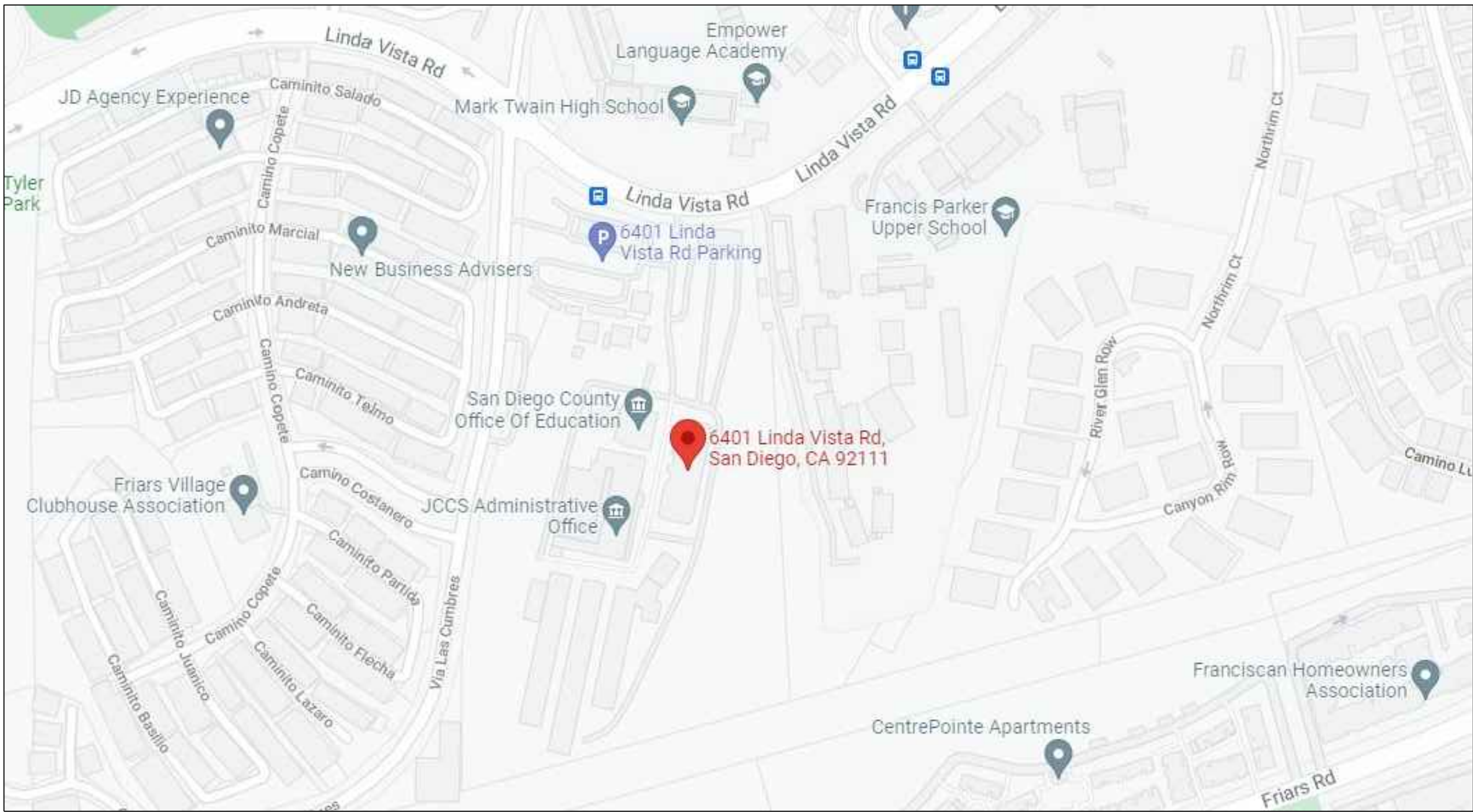
SDCOE BUILDING #3

1ST FLOOR HEAT PUMP REPLACEMENT

6401 LINDA VISTA RD
SAN DIEGO, CALIFORNIA 92111

SDCOE BLDG #3
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1ST FLOOR HEAT PUMP REPLACEMENT

VICINITY MAP



PROJECT SCOPE

PROJECT WILL REMOVE AND REPLACE (21) WATER SOURCE HEAT PUMPS ON THE FIRST FLOOR OF BUILDING 3.

APPLICABLE CODES

2019 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
2019 CALIFORNIA BUILDING CODE PART 2, TITLE 24, CCR (2018 IBC AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA ELECTRICAL CODE PART 3, TITLE 24, CCR (2018 NEC AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA MECHANICAL CODE PART 4, TITLE 24, CCR (2018 UMC AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA PLUMBING CODE PART 5, TITLE 24, CCR (2018 NEC AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA FIRE CODE PART 9, TITLE 24, CCR (2018IFC AND 2019 CALIFORNIA AMENDMENTS)

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY THE SITE BEFORE COMMENCING WORK. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOUND PRIOR TO THE START OF CONSTRUCTION.
2. LOCATION OF EXISTING UTILITIES SHOWN ON THESE DRAWINGS WERE OBTAINED FROM AVAILABLE DISTRICT RECORDS. THE CONTRACTOR IS ADVISED THAT THERE MAY EXIST UNDERGROUND UTILITIES NOT SHOWN ON THESE DRAWINGS. CONTRACTOR SHALL EXERCISE PRECAUTION TO PROTECT THESE UTILITIES IN PLACE.
3. CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES. CONTACT AT LEAST TWO (2) WORKING WEEKS PRIOR TO START WORK.

LOCATION MAP



SHEET LIST

SHEET NUMBER	SHEET TITLE
G001	COVER SHEET
E001	LEGENDS AND ABBREVIATIONS
E201	1ST FLOOR DEMOLITION PLAN
E202	1ST FLOOR RENOVATION PLAN
E601	SCHEDULES
E701	SINGLE LINE DIAGRAM
M001	LEGENDS, ABBREVIATIONS AND NOTES
M201	1ST FLOOR HVAC DEMOLITION PLAN
M202	1ST FLOOR PIPING DEMOLITION PLAN
M203	1ST FLOOR HVAC RENOVATION PLAN
M204	1ST FLOOR PIPING RENOVATION PLAN
M501	DETAILS
M502	DETAILS
M601	SCHEDULES
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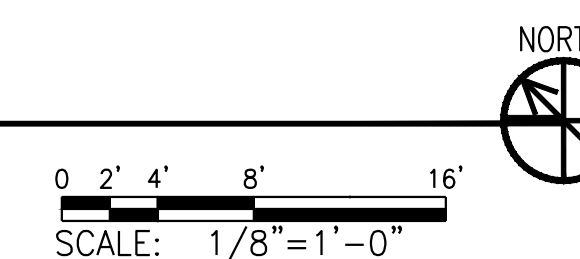
NO	DESCRIPTION	DATE
1	MP OWNER REVIEW	02/24/2022
2	100% CONSTRUCTION DWGS	06/09/2022

COVER SHEET

G001

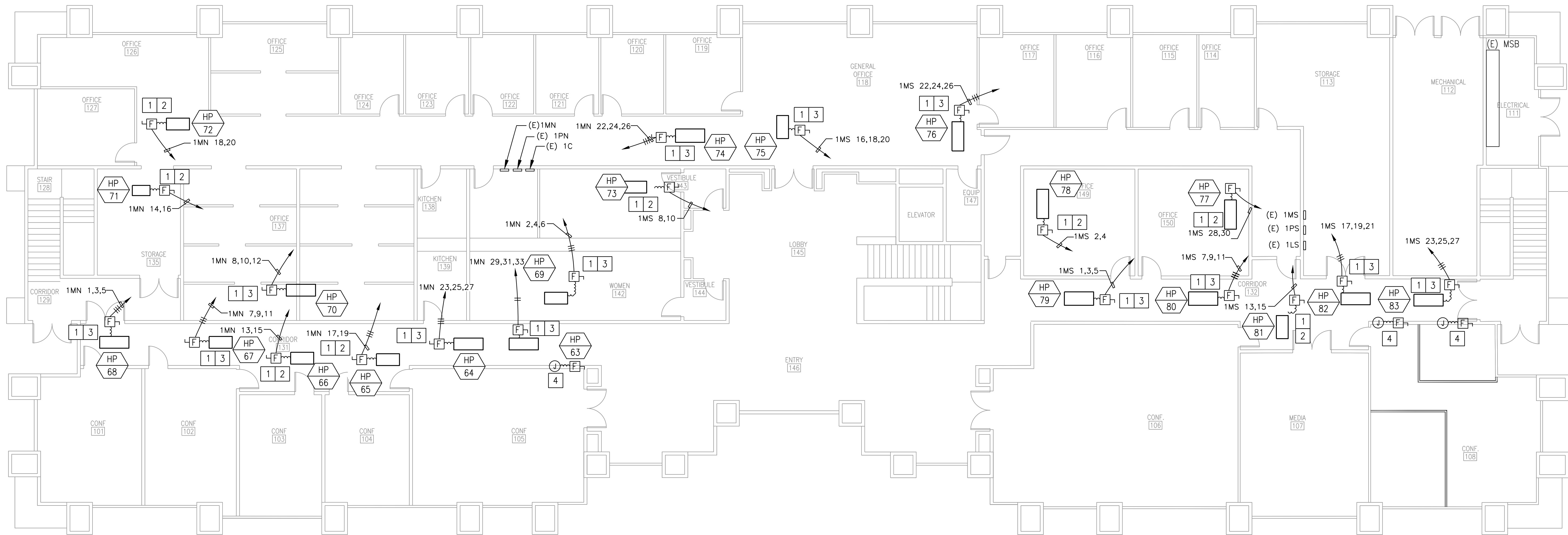
- ① DISCONNECT ELECTRICAL CONNECTIONS TO HEAT PUMP UNITS. EXISTING BRANCH CIRCUIT(S) TO BE REUSED FOR NEW EQUIPMENT.
- ② REMOVE EXISTING DISCONNECT SWITCH.

SDCOE BLDG #3
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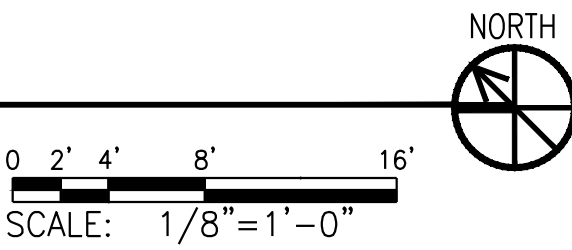
1ST FLOOR DEMOLITION PLAN

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1ST FLOOR RENOVATION PLAN



KEYNOTES

- 1 RE-CONNECT EXISTING ELECTRICAL CONNECTION TO HEAT PUMP UNITS.
- 2 PROVIDE NEW 30A/2P DISCONNECT SWITCH.
- 3 PROVIDE NEW 30A/3P DISCONNECT SWITCH.
- 4 PROVIDE POWER TO FIRE/SMOKE DAMPER, COORDINATE EXACT LOCATION WITH MECHANICAL.

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1ST FLOOR
RENOVATION PLAN

1		2									
(E) 1MN											
ROOM MOUNTING SURFACE FED FROM (E) MSB NOTE			VOLTS 208Y/120V 3P 4W BUS AMPS 225 NEUTRAL 100%				AIC 10,000 MAIN BKR MLO LUGS STANDARD				
CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD VA			CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD VA		
			A	B	C				A	B	C
1	30/3	HP-68	956.7			2	30/3	HP-69	2,124		
3		HP-68		956.7		4		HP-69		2,124	
5		HP-68			956.7	6		HP-69			2,124
7	20/3	HP-67	1,284			8	30/3	HP-70	1,776		
9		HP-67		1,284		10		HP-70		1,776	
11		HP-67			1,284	12		HP-70			1,776
13	20/2	HP-66	1,050			14	15/2	HP-71	437		
15		HP-66		1,050		16		HP-71		437	
17	30/2	HP-65			1,435	18	20/2	HP-72			1,050
19		HP-65	1,435			20		HP-72	1,050		
21	20/1	SPARE		0		22	30/3	HP-74		2,124	
23	30/3	HP-64			1,524	24		HP-74	2,124		
25		HP-64	1,524			26		HP-74			2,124
27		HP-64		1,524		28	20/1	GARBAGE DISPOSAL		0	
29	30/3	HP-63			1,524	30	20/1	GARBAGE DISPOSAL			0
31		HP-63	1,524			32	-/1	SPACE	0		
33		HP-63		1,524		34	-/1	SPACE		0	
35	20/1	EF-2,3,4,5,6,7			1,040	36	-/1	SPACE			0
37	20/1	EF-10	265			38	50/3	WATER HEATER	0		
39	-/1	SPACE		0		40		-		0	
41	20/1	SMOKE/FIRE DAMPER			100	42		-			0
TOTAL CONNECTED KVA BY PHASE									15,550	12,800	14,940
			CONN VA	CALC VA					CALC VA		
CUSTOM LOAD			100	0		TOTAL LOAD			53,980		
CONTINUOUS			43,190	53,980		BALANCED 3-PHASE LOAD			149.8 A		
				(0%)							
				(125%)							

1		2									
(E) 1MS											
ROOM MOUNTING SURFACE FED FROM (E) MSB NOTE			VOLTS 208Y/120V 3P 4W BUS AMPS 200 NEUTRAL 100%			AIC 10,000 MAIN BKR MLO LUGS STANDARD					
CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD VA			CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD VA		
			A	B	C				A	B	C
1	30/3	HP-79	2,124			2	30/3	HP-78	1,524		
3		HP-79		2,124		4		HP-78		1,524	
5		HP-79			2,124	6		HP-78			1,524
7	30/3	HP-80	2,124			8	30/2	HP-73	0		
9		HP-80		2,124		10		HP-73		0	
11		HP-80			2,124	12	30/2	HP-79			1,435
13	30/2	HP-81	1,435			14		HP-79	1,435		
15		HP-81		1,435		16	20/3	HP-75		1,284	
17	30/3	HP-82			1,524	18		HP-75			1,284
19		HP-82	1,524			20		HP-75	1,284		
21		HP-82		1,524		22	30/3	HP-76		1,524	
23	30/3	HP-83			1,524	24		HP-76			1,524
25		HP-83	1,524			26		HP-76	1,524		
27		HP-83		1,524		28	30/2	HP-77		1,435	
29	20/1	SPARE			0	30		HP-77			1,435
31	50/2	ATM ROOM PANEL	0			32	20/1	EF-7(2),6,8	1,079		
33				0		34	20/1	SPARE		0	
35	-/1	SPACE ONLY			0	36	20/1	BOILER			0
37	-/1	SPACE ONLY	0			38	-/1	SPACE ONLY	0		
39	-/1	SPACE ONLY		0		40	-/1	SPACE ONLY		0	
41	-/1	SPACE ONLY			0	42	20/1	SMOKE/FIRE DAMPER			200
TOTAL CONNECTED KVA BY PHASE									15,580	14,500	14,700
			CONN VA	CALC VA					CALC VA		
CUSTOM LOAD			200	0 (0%)		TOTAL LOAD			55,720		
CONTINUOUS			44,570	55,720 (125%)		BALANCED 3-PHASE LOAD			154.7 A		

KEYNOTES

- 1
- EXISTING CIRCUIT BREAKERS TO BE RE-USED FOR NEW HVAC EQUIPMENT.
- 2
- NO INCREASE IN LOAD ON EXISTING PANEL.
- 3
- PROVIDE NEW BREAKER AS INDICATED.

SDCOE BLDG #3

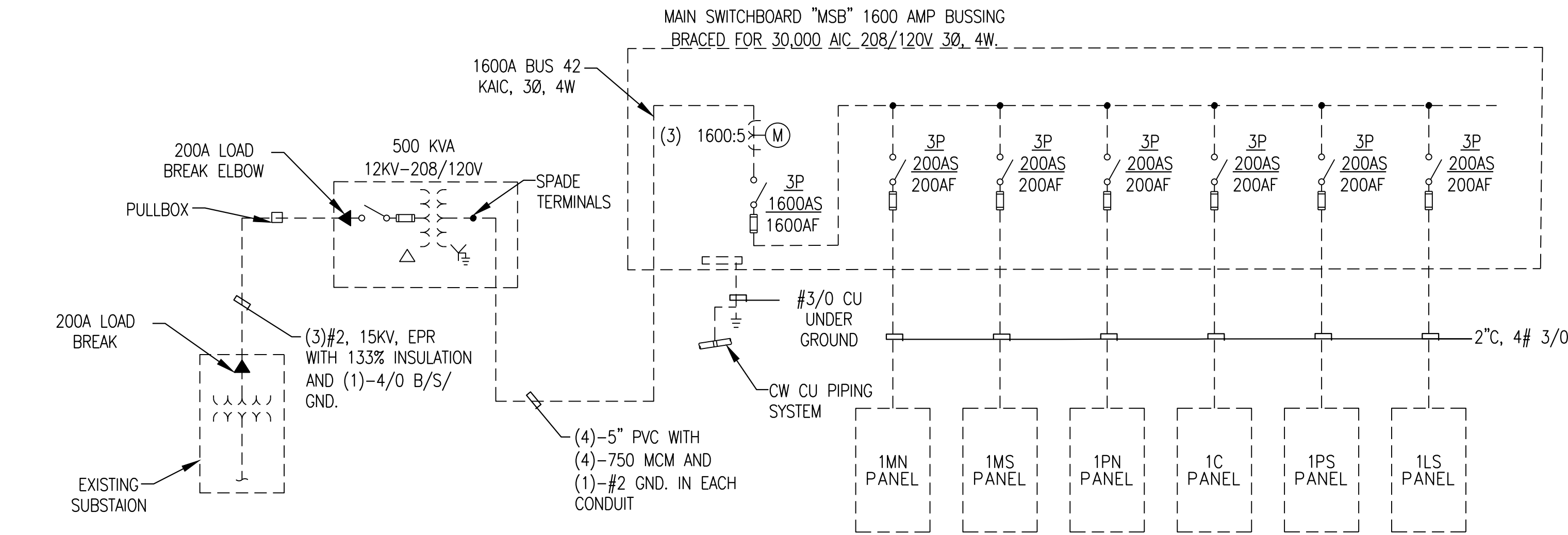
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SCHEDULES

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1 SINGLE LINE DIAGRAM

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SINGLE LINE
DIAGRAM

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MECHANICAL GENERAL NOTES		
1.	CONTRACTOR MUST CAREFULLY REVIEW THESE PLANS AND SPECIFICATIONS PRIOR TO BID. CONTRACTOR MUST ALSO REVIEW PLANS AND SPECIFICATIONS OF ALL OTHER RELATED TRADES PRIOR TO BID TO ENSURE AN ACCURATE UNDERSTANDING OF EXACT SCOPE OF WORK. ANY ITEMS REQUIRING CLARIFICATION MUST BE BROUGHT TO THE ATTENTION OF THE PRIME CONSULTANT IN SUFFICIENT TIME TO BE INCORPORATED INTO THE BID.	LONG-RADIUS ELBOWS AT DIFFUSER AND GRILLE CONNECTIONS.
2.	CONTRACTOR MUST 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.	21. FINAL CONNECTIONS TO DIFFUSERS USING FLEXIBLE DUCTWORK MUST BE NO LONGER THAN 5- FEET IN LENGTH (PER 2019 CMC 603.4.1), AND MUST NOT BE KINKED OR OTHERWISE OBSTRUCTED.
3.	CONTRACTOR MUST VERIFY ALL LOCATIONS, SIZES, P.O.C.'S, AND AVAILABILITY OF ALL EXISTING ITEMS (I.E.: OUTSIDE AIR, EXHAUST ETC.) PRIOR TO INSTALLATION OF ANY MATERIAL OR EQUIPMENT.	22. PENETRATIONS OF FIRE-RESISTIVE WALLS, FLOORS, CEILINGS AND ROOF CEILINGS MUST BE PROTECTED AS REQUIRED IN 2019 CBC SECTIONS 709, 710, 713, 714 AND 715.
4.	THE CONTRACTOR MUST VERIFY AND COORDINATE THE PATHWAY AND MEANS TO MOVE ALL EQUIPMENT WITH ASSOCIATED APPURTENANCES BEING BROUGHT INTO AND/OR REMOVED FROM THE AREA OF WORK, PRIOR TO PROJECT BIDDING.	23. AIR-MOVING SYSTEMS SUPPLYING AIR IN EXCESS OF 2,000 CUBIC FEET PER MINUTE TO ENCLOSED SPACES WITHIN BUILDINGS MUST BE EQUIPPED WITH AN AUTOMATIC SHUTOFF PER SECTION 608.1 OF THE 2019 CMC. AUTOMATIC SHUTOFF MUST BE ACCOMPLISHED UPON DETECTION OF SMOKE IN THE MAIN SUPPLY-AIR DUCT SERVED BY SUCH EQUIPMENT. SMOKE DETECTORS MUST BE TYPE APPROVED AND LISTED BY CALIFORNIA STATE FIRE MARSHAL AND COORDINATED WITH DIVISION 26, ELECTRICAL.
5.	THESE DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE ALL NECESSARY OFFSETS OF DUCTWORK AND PIPING. THE CONTRACTOR MUST INSTALL MATERIAL AND EQUIPMENT IN A MANNER AS TO CONFORM TO STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. ALL INSTALLATIONS MUST BE CONSISTENT WITH NORMALLY ACCEPTABLE INDUSTRY STANDARDS. THE CONTRACTOR MUST NOTIFY THE PRIME CONSULTANT IN WRITING OF ANY DISCREPANCIES OR CONFLICTS THAT WOULD AFFECT THE SYSTEM PERFORMANCE OR WHICH WOULD INCUR ADDITIONAL COSTS. THIS NOTIFICATION MUST BE MADE PRIOR TO THE INSTALLATION OF THE ITEMS CONCERNED.	24. PER NFPA 90A-6.4.2.1(2) PROVIDE A SMOKE DETECTOR AT EACH STORY PRIOR TO THE CONNECTION TO A COMMON RETURN AND PRIOR TO ANY RECIRCULATION OR FRESH AIR INLET CONNECTION IN AIR RETURN SYSTEMS HAVING A CAPACITY GREATER THAN 15,000-CFM AND SERVING MORE THAN ONE STORY.
6.	EQUIPMENT INDICATED ON THESE DRAWINGS ARE SHOWN IN APPROXIMATE POSITIONS. CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING EQUIPMENT LOCATIONS, P.O.C.'S AND STRUCTURAL MEMBERS PRIOR TO INSTALLATION. IN ALL CASES, ADEQUATE ACCESS (PER MANUFACTURER'S RECOMMENDATIONS AND CODE COMPLIANCE) FOR MAINTENANCE AND REPLACEMENT OF EQUIPMENT MUST BE PROVIDED.	25. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER MUST BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER [ENGINEER AND THE DISTRICT ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.]
7.	WORK MUST 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 ANY ITEM OR DEVICE SHOULD BE DONE CONTRARY TO THE MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE CODES AND REGULATIONS.	26. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER MUST BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL
8.	THE CONTRACTOR IS RESPONSIBLE TO INSURE THAT THE INSTALLATIONS AND CONNECTIONS OF ALL ITEMS AND DEVICES CONFORMS TO MANUFACTURERS INSTRUCTIONS AND TO ALL APPLICABLE CODES AND REGULATIONS.	27. CONTRACTOR MUST VERIFY ALL LOCATIONS, SIZES, P.O.C.'S, INVERT ELEVATIONS, AND COORDINATION OF ALL UTILITIES PRIOR TO INSTALLATION OF ANY MATERIAL OR EQUIPMENT.
9.	EQUIPMENT, MATERIALS, AND ALL CONNECTIONS THERETO MUST BE INSTALLED COMPLETE PER MANUFACTURER'S INSTRUCTIONS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL SYSTEM.	28. IF THE CONTRACTOR'S USE OF SUBSTITUTE MATERIALS, EQUIPMENT APPROVED BY THE ENGINEER 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 MUST BE THE RESPONSIBILITY OF THE CONTRACTOR INITIATING THE SUBSTITUTION.
10.	DUCT SIZES INDICATED ON DRAWINGS ARE INSIDE NET CLEARANCE DIMENSIONS.	29. WHERE NONMETALLIC PIPING PENETRATES AN AREA SEPARATION, 1 HOUR, OR 2 HOUR WALLS, THE PIPE SECTION PASSING THROUGH THE WALLS AND EXTENDING A DISTANCE OF 5 FEET ON EITHER SIDE THEREOF MUST BE OF METAL ONLY. WHERE NONMETALLIC PIPING PENETRATES AREA SEPARATION WALLS, THE PIPE SECTION PASSING THROUGH THE WALLS AND THE FIXTURE CONNECTIONS THERETO MUST BE OF METAL ONLY.
11.	ALL DUCTWORK MUST BE CONSTRUCTED, ERECTED, SUPPORTED, AND TESTED IN ACCORDANCE WITH THE MOST RESTRICTIVE OF PROCEDURES SPECIFIED. DETAILED IN THE ASHRAE HANDBOOK OF FUNDAMENTALS AND THE APPLICABLE STANDARDS ADOPTED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA), LATEST EDITION. A COPY OF THE SMACNA STANDARDS MUST BE KEPT AT THE JOB FOR REFERENCE BY THOSE REVIEWING THE WORK.	30. PROVIDE TESTING, ADJUSTING & BALANCING (TAB) OF ALL EXISTING SYSTEMS SERVING THE AREA OF WORK.
12.	DUCTWORK MUST BE LINED PER SPECIFICATIONS AND AS NOTED ON DRAWINGS. AT MINIMUM, ALL SUPPLY AND RETURN DUCTWORK 15"-0" FROM AIR HANDLING EQUIPMENT MUST BE INTERNALLY LINED. ALL SUPPLY AND RETURN DUCTWORK EXPOSED TO THE OUTDOOS MUST BE INTERNALLY LINED (R-8 MINIMUM). ALL DUCT JOINTS MUST BE SEALED. INSULATION MUST HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND A SMOKE DENSITY NOT EXCEEDING 50 PER 2019 CMC SECTION 605.0, SEE SPECIFICATIONS.	31. GAS METER MUST HAVE PERMANENTLY AFFIXED TAG WITH ADDRESS--ALSO ADD NOTE: ALL GAS PIPING MUST BE LABELED EVERY 20 FEET AND EVERY CHANGE OF DIRECTION.
13.	ALL DUCTS 6 SQ.FT. OR LESS AND PIPES MUST BE SUPPORTED PER SMACNA USING THE LATEST STANDARD AVAILABLE.	32. REFER TO PLUMBING DRAWINGS FOR THE SIZE AND ROUTING OF CONDENSATE DRAIN PIPING.
14.	SUPPLY, RETURN, AND EXHAUST (AIR DISTRIBUTION) GRILLES, REGISTERS, AND DIFFUSERS MUST HAVE A MAXIMUM NOISE "NC LEVEL" OF 25.	33. PRIOR TO PROCUREMENT, FABRICATION AND COMMENCEMENT OF ANY WORK, SUBMIT 1/4" = 1'-0" SCALED DETAILED LAYOUTS OF ALL EXPOSED DUCTWORK AND FITTINGS INCLUDING, BUT NOT LIMITED TO, DUCT SIZES, PROPOSED SUPPORT SYSTEMS, LOCATIONS AND ELEVATIONS.
15.	SUPPLY, RETURN, AND EXHAUST REGISTER CONNECTIONS TO DUCTWORK MUST BE PROVIDED WITH ACCESSIBLE MANUAL VOLUME DAMPERS. ALTERNATIVELY, ACCESSIBLE MANUAL VOLUME DAMPERS MAY BE PROVIDED IN DUCTWORK FEEDER LINES SERVING INDIVIDUAL REGISTERS. PROVIDE ACCESS DOORS AND PANELS AS REQUIRED.	34. CLASSROOM HVAC SYSTEMS DUCTWORK NOISE LEVELS MUST NOT EXCEED NC-30 UNDER FULL LOAD CONDITIONS.
16.	SUBMITTALS: APPROVAL OF SUBMITTALS DOES NOT RELEASE THE CONTRACTOR FROM OBLIGATIONS TO COMPLY WITH ALL REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS OR APPLICABLE CODE REGULATIONS.	35. 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 PRIME CONSULTANT PRIOR TO FIRE AND/OR SMOKE DAMPER, DETECTOR AND ACTUATOR INSTALLATION. B. CEILING FIRE DAMPERS TO BE ONE (1) HOUR U.L. AND C.S.F.M. APPROVED. C. ONE HOUR WALL MUST BE APPROVED WITH ONE HOUR FIRE DAMPERS BOTH U.L. AND C.S.F.M. APPROVED. D. SMOKE BARRIER WALLS MUST BE PROVIDED WITH U.L. AND C.S.F.M. APPROVED SMOKE/FIRE DAMPERS (EQUAL TO WALL RATING), MOTOR, ACTUATOR, AND SMOKE DETECTOR. E. PENETRATIONS OF ONE (1) HOUR CORRIDOR WALLS AND CEILINGS THAT WOULD REQUIRE THE INSTALLATION OF A FIRE DAMPER MUST 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.
17.	PROVIDE BALANCING DAMPERS ON ALL OUTSIDE AIR, EXHAUST AIR, SUPPLY AIR AND RETURN AIR SYSTEMS THROUGH OUT. ALL DAMPERS MAY NOT BE INDICATED ON PLANS BUT ARE REQUIRED AT ALL BRANCH TAKE-OFFS, SEE DETAILS.	36. EQUIPMENT, DUCTS, PIPING, AND OTHER DEVICES AND MATERIALS INSTALLED OUTSIDE OF THE BUILDING OR OTHERWISE EXPOSED TO THE WEATHER MUST BE COMPLETELY WEATHERPROOFED.
18.	PROVIDE DOUBLE WALL TURNING VANES ON ALL 90 DEGREE SUPPLY AIR SQUARE ELBOWS.	37. AIR FILTERS MUST BE A STATE FIRE MARSHALL APPROVED AND LISTED TYPE OF AIR FILTER. PREFORMED FILTERS HAVING COMBUSTIBLE FRAMING MUST BE TESTED AS A COMPLETE ASSEMBLY. AIR FILTERS IN ALL OCCUPANCIES MUST BE CLASS 2 OR BETTER (AS SHOWN IN THE STATE FIRE MARSHAL LISTING). AIR FILTERS MUST BE ACCESSIBLE FOR CLEANING AND REPLACEMENT.
19.	PROVIDE FLEXIBLE DUCT CONNECTIONS (WITH SUNSHIELD FOR OUTDOOR UNITS) AND MINIMUM 2" GAP ON THE SUPPLY AND RETURN DUCT CONNECTIONS ON ALL FANS.	
20.	DO NOT INSTALL FLEXIBLE DUCTS FOR EXPOSED CEILING INSTALLATIONS. PROVIDE HARD CONNECTED DUCTWORK USING	

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M001	LEGENDS, ABBREVIATIONS AND NOTES
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M501	DETAILS
M502	DETAILS
M601	SCHEDULES

MECHANICAL ABBREVIATIONS			
ABBREV	DESCRIPTION	ABBREV	DESCRIPTION
ABV	ABOVE	HSPF	HEATING SEASONAL PERFORMANCE FACTOR
AC	AIR CONDITIONER	HVAC	HEATING VENTILATION & AIR CONDITIONING
AFF	ABOVE FINISHED FLOOR	IN WG	INCHES WATER GAUGE
AFG	ABOVE FINISHED GRADE	KW	KILOWATT
AH	AIR HANDLER	LBS	POUNDS
AHU	AIR HANDLING UNIT	LDB	LEAVING DRY BULB
ARCH	ARCHITECT OR ARCHITECTURAL	LWT	LEAVING WATER TEMPERATURE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS	MA	MIXED AIR
B/F	BELOW FLOOR	MAX	MAXIMUM
B/G	BELOW GRADE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
B/S	BELOW SLAB	MCA	MINIMUM CIRCUIT AMPS
BD	BALANCING DAMPER	MECH	MECHANICAL
BHP	BRAKE HORSEPOWER	MERV	MINIMUM EFFICIENCY REPORTING VALUE
BLDG	BUILDING	MFGR	MANUFACTURER
BTU	BRITISH THERMAL UNITS	MFS	MASS FLOW SENSOR
BTUH	BRITISH THERMAL UNITS PER HOUR	MIN	MINIMUM
CD	CEILING DIFFUSER	MOCP	MAXIMUM OVERCURRENT PROTECTION
CD	CONDENSATE DRAIN	MTD	MOUNTED
CFM	CUBIC FEET PER MINUTE	NC	NORMALLY CLOSED
CI	CAST IRON	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CLG	CEILING	NIC	NOT IN CONTRACT
CLR	CLEARANCE	NO	NUMBER
CO2	CARBON DIOXIDE	NO	NORMALLY OPEN
CONC	CONCRETE	NTS	NOT TO SCALE
CONN	CONNECT OR CONNECTION	OA	OUTSIDE AIR
CONT	CONTINUATION	OBD	OPPOSED BLADE DAMPER
CONTR	CONTRACTOR	OPER	OPERATING
CU FT	CUBIC FEET	OSA	OUTSIDE AIR
DB	DRY BULB	PD	PRESSURE DROP
DEG	DEGREES	PLBG	PLUMBING
DIA	DIAMETER	POC	POINT OF CONNECTION
DIM	DIMENSION	PSI	POUNDS PER SQUARE INCH
DIV	DIVISION	PSIG	POUNDS PER SQUARE INCH GAUGE
DL	DOOR LOUVER	PVC	POLYVINYL CHLORIDE
DWGS	DRAWINGS	QTY	QUANTITY
DX	DIRECT EXPANSION	RA	RETURN AIR
EA	EACH	RAD	RETURN AIR DUCT
EA	EXHAUST AIR	RAG	RETURN AIR GRILLE
EAD	EXHAUST AIR DUCT	RAR	RETURN AIR REGISTER
EAG	EXHAUST AIR GRILLE	RCP	REFLECTIVE CEILING PLAN
EAR	EXHAUST AIR REGISTER	RDO	REMOTE DAMPER OPERATOR
EAT	ENTERING AIR TEMPERATURE	REAG	RELIEF AIR GRILLE
EDB	ENTERING DRY BULB	RECT	RECTANGULAR
EER	ENERGY EFFICIENT RATIO	RL	REFRIGERANT LIQUID
EF	EXHAUST FAN	RM	ROOM
ELEC	ELECTRICAL	RPM	REVOLUTIONS PER MINUTE
ELEV	ELEVATION	RS	REFRIGERANT SUCTION
EMS	ENERGY MANAGEMENT SYSTEM	SA	SUPPLY AIR
EO	EQUAL DISTANCE	SAD	SUPPLY AIR DUCT
EOPT	EQUIPMENT	SAG	SUPPLY AIR GRILLE
ESP	EXTERNAL STATIC PRESSURE	SAR	SUPPLY AIR REGISTER
EWT	ENTERING WATER TEMPERATURE	SEER	SEASONAL ENERGY EFFICIENCY RATIO
F	DEGREES FAHRENHEIT	SF	SQUARE FEET
FC	FAN COIL	SF	SUPPLY FAN
FC	FLEX CONNECTION	SHT	SHEET
FFE	FINISHED FLOOR ELEVATION	SPEC	SPECIFICATION
FIN	FINISH OR FINISHED	SQ FT	SQUARE FOOT/FEET
FLR	FLOOR	SS	STAINLESS STEEL
FTM	FEET PER MINUTE	STRUCT	STRUCTURAL
FT	FEET OR FOOT	TA	TRANSFER AIR
FT HD	FEET OF HEAD	TEMP	TEMPERATURE
GA	GAUGE	TSTAT	THERMOSTAT
GAL	GALLON	TYP	TYPICAL
GALV	GALVANIZED	UNO	UNLESS NOTED OTHERWISE
GPM	GALLONS PER MINUTE	UTR	UP THRU ROOF
GR	GRADE	V/PH/HZ	VOLTS/PHASE/HERTZ
GYP	GYPSUM	VFD	VARIABLE FREQUENCY DRIVE
HD	HEAD	VOL	VOLUME
HDR	HEADER	VTR	VENT THRU ROOF
HOA	HAND-OFF-AUTO	W/	WITH
HP	HEAT PUMP	WC	WATER COLUMN
HP	HORSEPOWER	WT	WEIGHT
HR	HOUR		

CALIFORNIA GREEN BUILDING CODE NOTES	
1.	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 SECTION: 5.504.1.3).
2.	AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE 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 SECTION: 5.504.3).
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 SECTION 5.504.5.3).
4.	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 (CFC'S) AND SHALL NOT CONTAIN HALONS (SECTION: 5.508.1).
5.	PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH THE 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.

MECHANICAL LEGEND					
SYMBOL	ABBREV	DESCRIPTION	SYMBOL	ABBREV	DESCRIPTION
	AD	ACCESS DOOR			SUPPLY AIR DIRECTION OF FLOW
	FD	FLEX DUCT			RETURN AIR DIRECTION OF FLOW
		SIDEWALL REGISTER			EXHAUST AIR DIRECTION OF FLOW
		CEILING REGISTERS/DIFFUSERS		T	THERMOSTAT
		DUCT SECTION - POSITIVE PRESSURE		CO2	CO2 SENSOR
		DUCT SECTION - NEGATIVE PRESSURE		PS	PRESSURE SENSOR
		DUCT SECTION - EXHAUST		SW	SWITCH
		NEW EQUIPMENT/DUCTWORK/PIPING		DL ↔	D/L DOOR LOUVER
		INTERNALLY LINED DUCTWORK (2" MINIMUM (R-8) THICKNESS)			PIPE TEE UP
		DUCT RISE/DUCT DROP			PIPE TEE DOWN
		DUCT FLEXIBLE CONNECTION			PIPE DOWN
		MECHANICAL EQUIPMENT FLEXIBLE CONNECTION			PIPE UP
	VD	MANUAL VOLUME DAMPER		RL →	RL REFRIGERANT LIQUID
	BD	BALANCING DAMPER		RS →	RS REFRIGERANT SUCTION
		CONTROL WIRING		POC	POINT OF CONNECT
		DEMOLITION HATCHING		POD	POINT OF DISCONNECT
		DIFFUSER/REGISTER OR GRILLE TYPE			
		TYPE AIR QUANTITY (CFM)			
			EQUIPMENT IDENTIFICATION SYMBOL		
			EQUIPMENT TYPE EQUIPMENT IDENTIFIER		

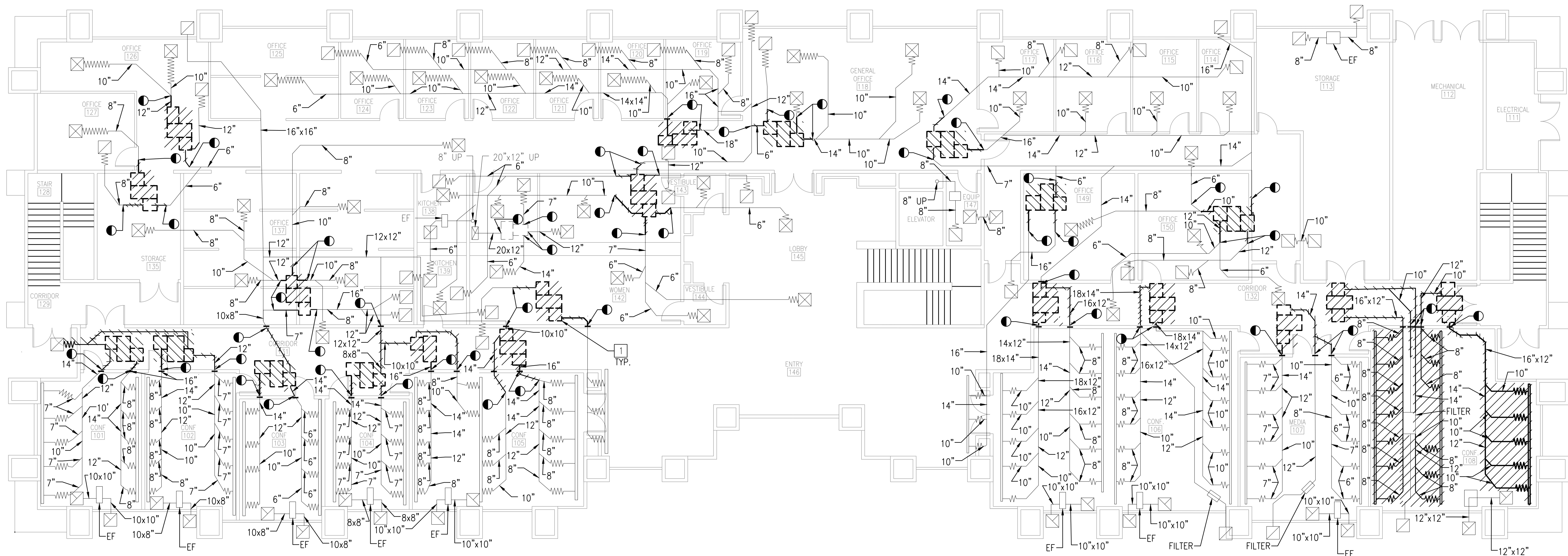
CALIFORNIA TITLE 24 ENERGY NOTES	
1.	ALL ENVELOPE AND MECHANICAL CERTIFICATE OF ACCEPTANCE FORMS AND ALL RELATED ACCEPTANCE DOCUMENTS SHALL BE SUBMITTED TO THE FIELD INSPECTOR DURING CONSTRUCTION. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL THESE FORMS ARE REVIEWED AND APPROVED.
2.	ALL HVAC SYSTEMS SHALL MEET THE CONTROL REQUIREMENTS PER 2016 CEC "ENERGY EFFICIENCY STANDARDS" SECTIONS 110.2 AND 120.2.
3.	BUILDING INSULATION MATERIAL SHALL MEET THE CALIFORNIA QUALITY STANDARD PER 2016 CEC "ENERGY EFFICIENCY STANDARDS" SECTION 110.8 AND THE CONTRACT SPECIFICATIONS.
4.	ALL PIPING AND DUCTWORK SHALL BE INSULATED CONSISTENT WITH THE MOST STRINGENT OF THE REQUIREMENTS IN THE 2016 CEC "ENERGY EFFICIENCY STANDARDS" SECTIONS 110.8, 120.3, 120.4 AND 2016 CMC SECTION 605 AND THE CONTRACT SPECIFICATIONS.
5.	ALL HVAC EQUIPMENT AND APPLIANCES SHALL MEET THE REQUIREMENTS PER 2016 CEC "ENERGY EFFICIENCY STANDARDS" SECTIONS 110.1-110.3, 110.5, 120.0-120.9 E.E.S. AND THE CONTRACT DRAWINGS AND SPECIFICATIONS.
6.	CERTIFICATE OF ACCEPTANCE (MECH-1-A) 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.
7.	MATERIALS EXPOSED WITHIN A NEW DUCT OR NEW PLENUM SHALL COMPLY WITH 2016 CMC SECTION 602.2.
8.	DOORS AND WINDOWS SHALL MEET MINIMUM INFILTRATION REQUIREMENTS PER 2016 CEC "ENERGY EFFICIENCY STANDARDS" SECTION 110.6.

PIPING, DUCTWORK, & ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE	
PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8, AND 2016 CBC, SECTIONS 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.1.26.	
THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.	
MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):	
MP ☒ MD ☒ PP ☒ E ☒ - OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.	
MP ☐ MD ☐ PP ☐ E ☐ - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #_____.	
MP ☐ MD ☐ PP ☐ - OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANY ADDENDA. FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL _____ AND CONNECTION LEVEL _____ FOR THE PROJECT AND CONDITIONS.	

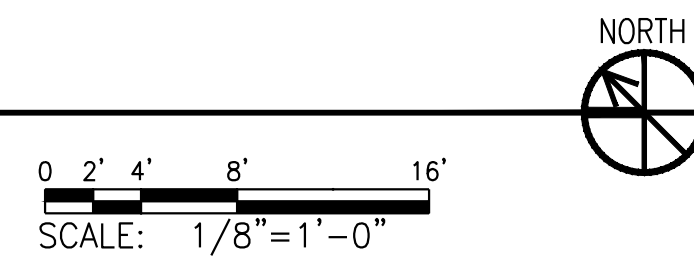
MEP COMPONENT ANCHORAGE NOTE	
ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS, WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.	
1. ALL PERMANENT EQUIPMENT AND COMPONENTS. 2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. 3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.	
THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.	
A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT. B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.	
FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.	

NO	DESCRIPTION	DATE
1	MP OWNER REVIEW	02/28/2022
2	100% CONSTRUCTION DWGS	06/09/2022

FILE NAME: K:\PROJECTS\SDCOE- 0293\21-1134-SDCOR BLDG. #3 1ST FL HEAT PUMP\DWGS\CAD\2020\MECH\21-0293-1134-M201.DWG PLOT DATE: 6/9/2022 3:52 PM PRINT BY: KEVIN RICE



1 1ST FLOOR HVAC DEMOLITION PLAN



KEYNOTES

1 DISCONNECT AND REMOVE HEATPUMPS AND ASSOCIATED DUCTWORK AS SHOWN.

BSE ENGINEERING, INC.
9908 BUSINESS PARK AVE #104
SAN DIEGO, CA 92131
TEL: 858.800.6000
FAX: 858.800.6001
QC BY: _____
BSE PROJECT NO.: 21-0293-1134

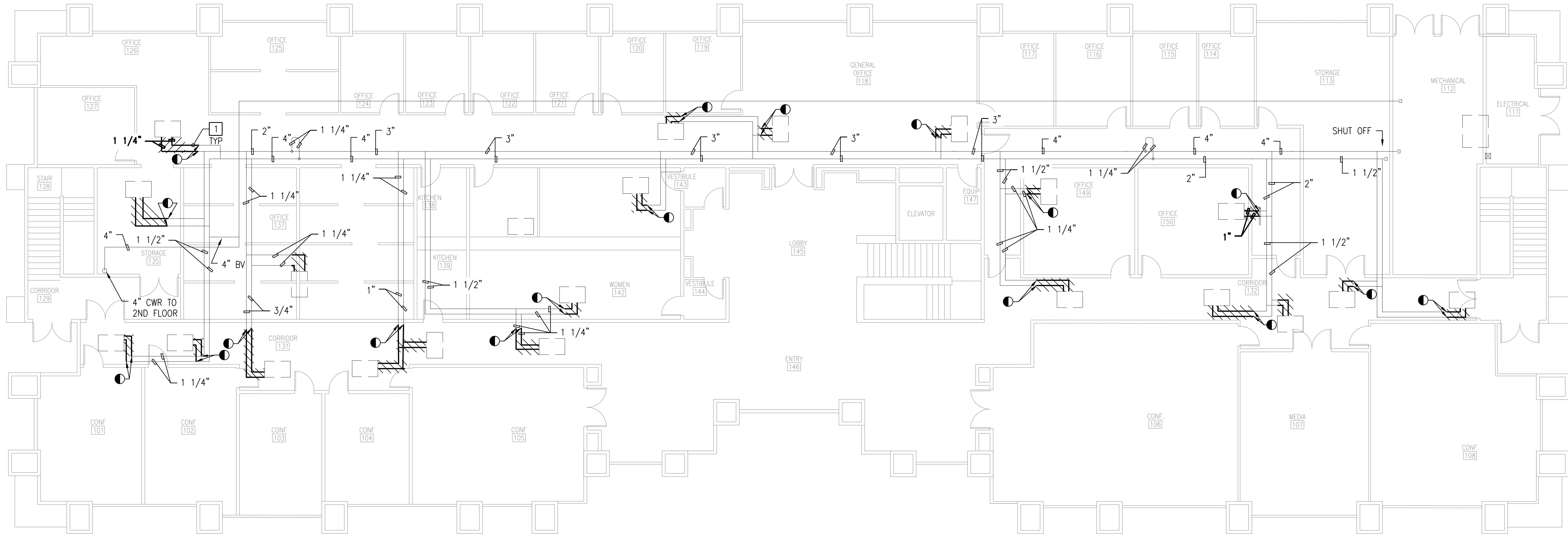
SDCOE BLDG #3
6401 LINDA VISTA RD,
SAN DIEGO, CA 92111
1ST FLOOR HEAT PUMP REPLACEMENT

NO	DESCRIPTION	DATE
1	MP OWNER REVIEW	02/24/2022
2	100% CONSTRUCTION DWGS	06/09/2022

1ST FLOOR HVAC
DEMOLITION PLAN

M201

FILE NAME: K:\PROJECTS\SDCOE- 0293\21-1134-SDCOR BLDG. #3 1ST FL HEAT PUMP\DWGS\CAD\20XX\MECH\21-0293-1134-M202.DWG PLOT DATE: 6/9/2022 3:53 PM PRINT BY: KEVIN RICE



1

1ST FLOOR PIPING DEMOLITION PLAN

0 2' 4' 8' 16'
SCALE: 1/8"=1'-0"



KEYNOTES

1 DISCONNECT AND REMOVE CONDENSER WATER PIPING AS SHOWN.



BSE ENGINEERING, INC.
9908 BUSINESS PARK AVE #104
SAN DIEGO, CA 92131
TEL: 858.800.6003
FAX: 858.800.6001

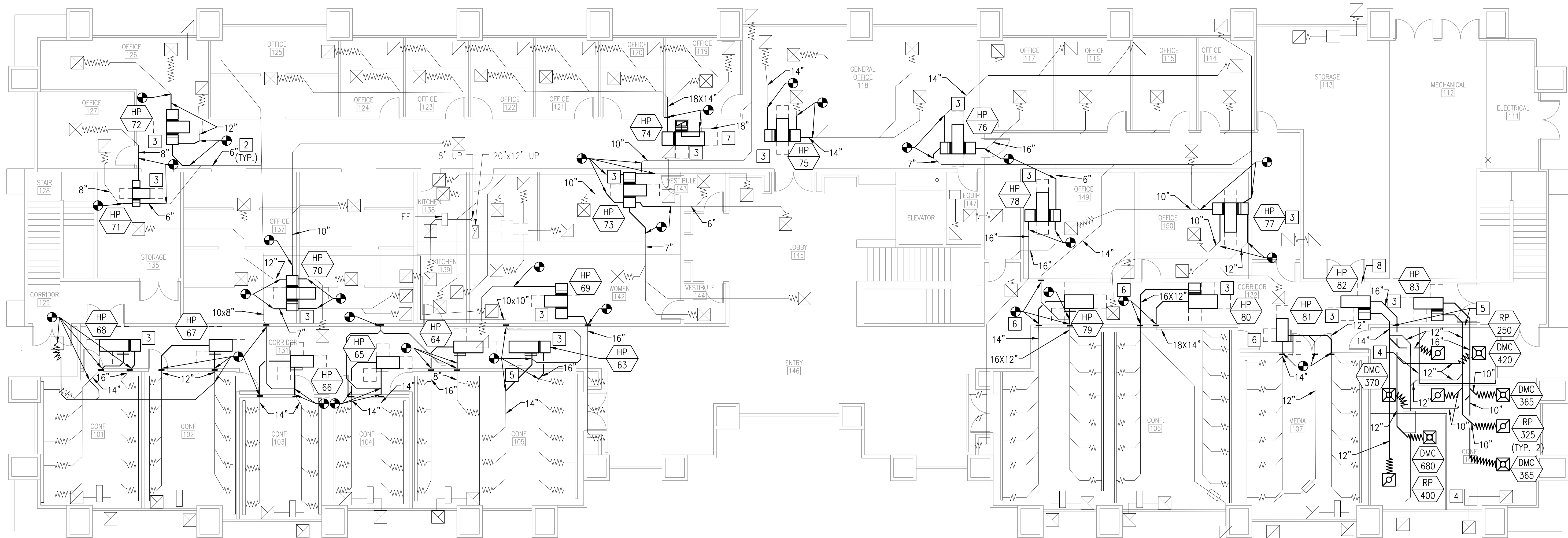
QC BY: _____
BSE PROJECT NO.: 21-0293-1134

SDCOE BLDG #3
6401 LINDA VISTA RD,
SAN DIEGO, CA 92111
1ST FLOOR HEAT PUMP REPLACEMENT

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1	MP OWNER REVIEW	02/24/2022
2	100% CONSTRUCTION DWGS	06/09/2022

1ST FLOOR PIPING
DEMOLITION PLAN

FILE NAME: K:\PROJECTS\SDCOE- 0293\21-1134-SDCOR BLDG. #3 1ST FL HEAT PUMP\DWGS\CAD\20XX\MECH\21-0293-1134-M203.DWG PLOT DATE: 6/9/2022 3:53 PM PRINT BY: KEVIN RICE



1

1ST FLOOR HVAC RENOVATION PLAN

0' 2' 4' 8' 16'
SCALE: 1/8"=1'-0"



KEYNOTES

- 1 CONTRACTOR TO VERIFY ALL SIZES/LOCATIONS OF ALL EXISTING DUCTS AND UTILITIES PRIOR TO CONSTRUCTION.
- 2 RECONNECT EXISTING DUCTWORK AND CONTROL WIRING TO NEW HEAT PUMP UNITS AS SHOWN.
- 3 PROVIDE WITH PLENUM MIXING BOX AS SHOWN.
- 4 PROVIDE AIR TRANSFER OPENING AS SHOWN.
- 5 PROVIDE FIRE/SMOKE DAMPERS AS SHOWN AND TIE INTO EXISTING BUILDING FIRE AND LIFE SAFETY SYSTEM.
- 6 EXISTING FIRE DAMPERS TO REMAIN.
- 7 MAINTENANCE CLEARANCE SHOWN PER MANUFACTURERS RECOMMENDATIONS. (TYP)
- 8 CEILING ACCESS PANEL (TYP).

BSE ENGINEERING, INC.
9908 BUSINESS PARK AVE #104
SAN DIEGO, CA 92131
TEL: 858.800.6003
FAX: 858.800.6001
QC BY: _____
BSE PROJECT NO.: 21-0293-1134

SDCOE BLDG #3

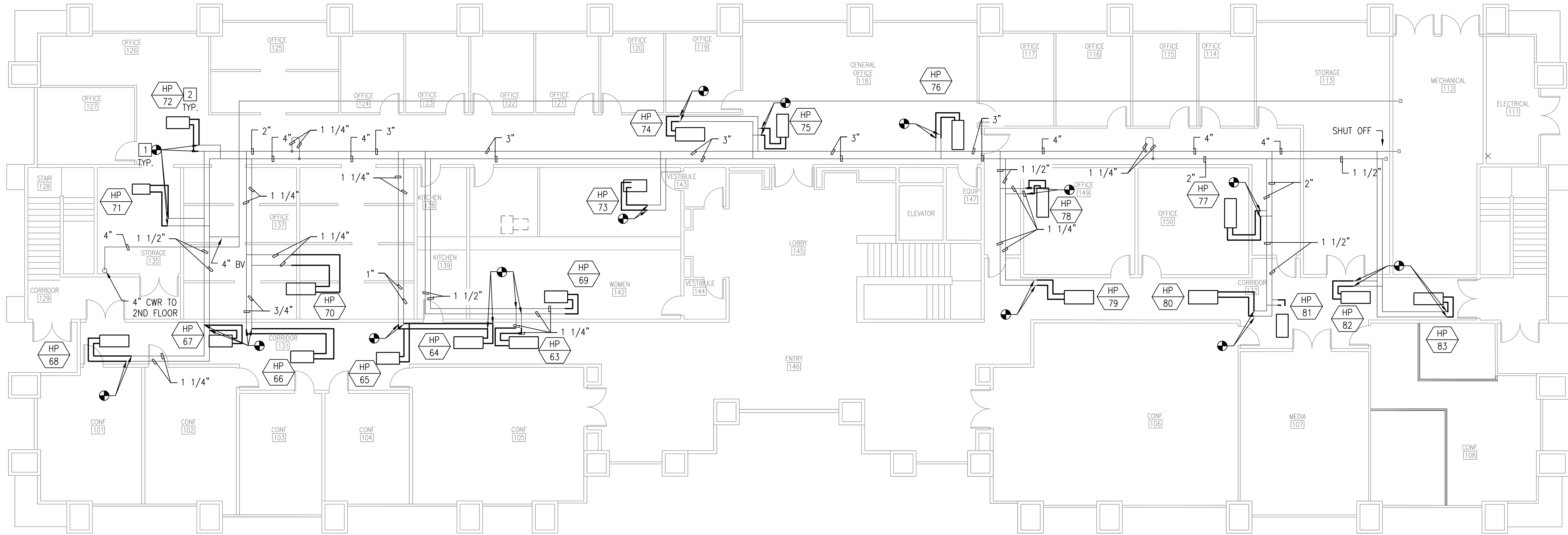
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SAN DIEGO, CA 92111

1ST FLOOR HEAT PUMP REPLACEMENT

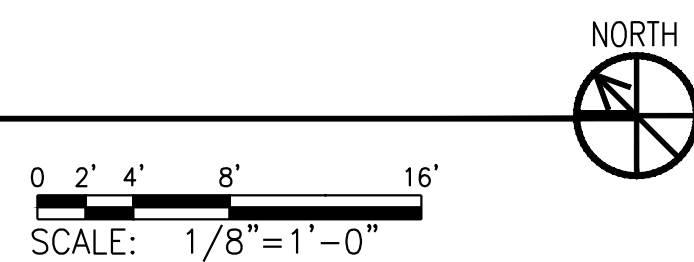
NO	DESCRIPTION	DATE
1	MP OWNER REVIEW	02/24/2022
2	100% CONSTRUCTION DWGS	06/09/2022

1ST FLOOR HVAC
RENOVATION PLAN

FILE NAME: K:\PROJECTS\SDCOE- 0293\21-1134-SDCOR BLDG. #3 1ST FL HEAT PUMP\DWGS\CAD\20XX\MECH\M204.DWG PLOT DATE: 6/9/2022 3:53 PM PRINT BY: KEVIN RICE



1 1ST FLOOR PIPING RENOVATION PLAN



KEYNOTES

- 1 CONTRACTOR TO VERIFY ALL SIZES/LOCATIONS OF ALL EXISTING DUCTS AND UTILITIES PRIOR TO CONSTRUCTION.
- 2 RECONNECT EXISTING PIPING TO HEAT PUMP UNITS AS SHOWN.

BSE ENGINEERING, INC.
9908 BUSINESS PARK AVE #104
SAN DIEGO, CA 92131
TEL: 858.800.6000
FAX: 858.800.6001
QC BY: _____
BSE PROJECT NO.: 21-0293-1134

SDCOE BLDG #3
6401 LINDA VISTA RD,
SAN DIEGO, CA 92111
1ST FLOOR HEAT PUMP REPLACEMENT

NO	DESCRIPTION	DATE
1	MP OWNER REVIEW	02/24/2022
2	100% CONSTRUCTION DWGS	06/09/2022

1ST FLOOR PIPING
RENOVATION PLAN

FILE NAME: K:\PROJECTS\SDCOE-0293\21-1134-SDCOR BLDG. #3 1ST FL HEAT PUMP\DWGS\CAD\20XX\MECH\21-0293-1134-M502.DWG PLOT DATE: 6/9/2022 3:53 PM PRINT BY: KEVIN RICE

SMOKE & FIRE DAMPER WALL INSTALATION DETAIL

SCALE

NONE

1

PLAIN 'S' SLIP DUCT CONNECTOR

HOT ROLLED SLEEVE, GAUGE PER CMC

SMOKE/FIRE DAMPER

AIR DUCT

10 GA. HOT ROLLED STEEL RETAINING WALL FOUR SIDES OF ANGLE ON ALL

FIRE RATED WALL STRUCTURE

MAX. 6" O.C. TO SLEEVE @ ANGLE BOLT 10 GA. STEEL

NOTE: SMOKE DETECTOR INSTALLED BY DIV 23, POWERED BY DIV 26 AND CONNECTED BY FIRE ALARM.

ACCESS DOOR

FLEX. CONDUIT

DAMPER ACTUATOR BY ELECT. CONTR.

120V/1Ø

GYP. BOARD CEILING ACCESS DOOR AT

3"

DETAIL NOTES:

1

VENT

2

SLOPE 1/8" PER FOOT DOWN TOWARDS DRAIN

3

THREADED PLUG (CLEANOUT) (TYP.)

4

DRAIN PAN

5

UNION

6

INSULATION AT INTERIOR CONDENSATE DRAIN

7

TRAP

DRAIN LINE SHALL BE SIZED AS FOLLOWS: *

0-20 TONS3/4"

21-40 TONS1"

41-90 TONS1-1/2"

* BUT NOT LESS THAN FULL SIZE EQUIP. CONN.

CONDENSATE NOTES:

1. ALL CONDENSATE PIPES SHALL BE TYPE "M" COPPER.

2. SEE PLANS FOR PIPE SIZES, BUT IN NO CASE SHALL BE SMALLER THAN UNIT CONNECTION.

3. VERIFY UNIT CONNECTION SIZE AND LOCATION OF VENT AND CLEANOUTS WITH UNIT MANUFACTURER.

CONDENSATE DRAIN DETAIL

SCALE

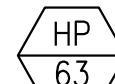
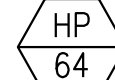
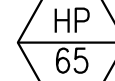
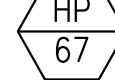
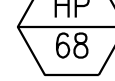
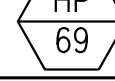
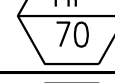
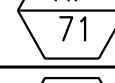
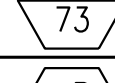
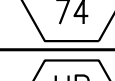
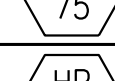
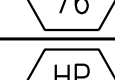
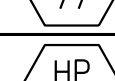
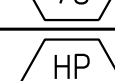
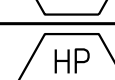
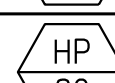
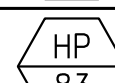
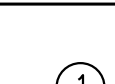
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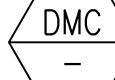
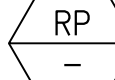
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NO	DESCRIPTION	DATE
1	MP OWNER REVIEW	02/24/2022
2	100% CONSTRUCTION DWGS	06/09/2022

DETAILS

FILE NAME: K:\PROJECTS\SDCOE- 0293\21-1134\SDCOR BLDG. #3 1ST FL HEAT PUMP\DWGS\CAD\20XX\MECH\21-0293-1134-M601.DWG PLOT DATE: 6/9/2022 3:53 PM PRINT BY: KEVIN RICE

WATER SOURCE HEAT PUMP SCHEDULE																													
MARK	MANUFACTURER	PART #	SIZE (TONS)	CFM	O.A. CFM	EXT. S.P. (IN WG)	ELECTRICAL DATA							HEATING					COOLING							GPM	WPD (FT WG)	WEIGHT (LBS.)	REMARKS
							COMP RLA (AMPS)	FAN FLA (AMPS)	MCA (AMPS)	MOCP (AMPS)	VOLT	PHASE	CYCLE (HZ)	TOT MBH	ENT AIR (F)	E.W.T. (F)	MIN C.O.P.	TOT MBH	SENS MBH	ENT DB (F)	ENT WB (F)	E.W.T (F)	MIN EER						
	CARRIER	50PCH036NCC5ECC1	3	1100	400	.57	10.4	4.1	17	25	208/230	3	60	41.3	68	70	4.6	35.9	27.2	80	67	90	12.7	9	12.5	225	①		
	CARRIER	50PCH036NCC5ECC1	3	1100	400	.57	10.4	4.1	17	25	208/230	3	60	41.3	68	70	4.6	35.9	27.2	80	67	90	12.7	9	12.5	225	①		
	CARRIER	50PCH024NCC3ECC1	2	800	275	.50	13.5	2.8	20	30	208/230	1	60	28.8	68	70	4.7	23.8	18.3	80	67	90	12.6	6	13.4	180	①		
	CARRIER	50PCH018NCC3ECC1	1.5	650	330	.54	7.4	2.8	12	15	208/230	1	60	21.6	68	70	4.7	17.9	14.4	80	68	90	12.7	4.5	7.6	175	①		
	CARRIER	50PCH030NCC5ECC1	2.5	1000	400	.35	8.3	2.8	13	20	208/230	3	60	34.6	68	70	4.8	26.7	21.5	80	67	90	13	7	12.7	190	①		
	CARRIER	50PCH036NCC5ECC1	3	1100	450	.57	10.4	4.1	17	25	208/230	3	60	41.3	68	70	4.6	35.9	27.2	80	67	90	12.7	9	12.5	225	①		
	CARRIER	50PCH036NCC5ECC1	3	1100	0	.57	10.4	4.1	17	25	208/230	3	60	41.3	68	70	4.6	35.9	27.2	80	67	90	12.7	9	12.5	225	①		
	CARRIER	50PCH042NCC5ECC1	3.5	1345	325	.69	11.2	6	20	30	208/230	3	60	50.7	68	70	4.4	40.4	30.7	80	67	90	12.8	10.5	17.4	231	①		
	CARRIER	50PCH007ZCC3ECC1	0.5	205	40	.50	2.6	.96	4	15	208/230	1	60	8.4	68	70	4.8	6.1	5.5	80	67	90	10.9	1.9	2.4	95	①		
	CARRIER	50PCH030NCC5ECC1	1.5	650	50	.35	8.3	2.8	12	15	208/230	3	60	34.6	68	70	4.8	26.7	21.5	80	67	90	13	7	12.7	190	①		
	CARRIER	50PCH024NCC3ECC1	2	800	350	.50	13.5	2.8	20	30	208/230	1	60	28.8	68	70	4.7	23.8	18.3	80	67	90	12.6	6	13.4	180	①		
	CARRIER	50PCH042NCC5ECC1	3.5	1345	220	.69	11.2	6	20	30	208/230	3	60	50.7	68	70	4.4	40.4	30.7	80	67	90	12.8	10.5	17.4	231	①		
	CARRIER	50PCH030NCC5ECC1	2.5	1000	100	.35	8.3	2.8	13	20	208/230	3	60	34.6	68	70	4.8	26.7	21.5	80	67	90	13	7	12.7	190	①		
	CARRIER	50PCH036NCC5ECC1	3	1100	130	.57	10.4	4.1	17	25	208/230	3	60	41.3	68	70	4.6	35.9	27.2	80	67	90	12.7	9	12.5	230	①		
	CARRIER	50PCH024NCC3ECC1	2	800	300	.50	13.5	2.8	20	30	208/230	1	60	28.8	68	70	4.7	23.8	18.3	80	67	90	12.6	6	13.4	180	①		
	CARRIER	50PCH036NCC5ECC1	3	1100	90	.57	10.4	4.1	17	25	208/230	3	60	41.3	68	70	4.6	35.9	27.2	80	67	90	12.7	9	12.5	230	①		
	CARRIER	50PCH042NCC5ECC1	3.5	1345	600	.69	11.2	6	20	30	208/230	3	60	50.7	68	70	4.4	40.4	30.7	80	67	90	12.8	10.5	17.4	231	①		
	CARRIER	50PCH042NCC5ECC1	3.5	1345	600	.69	11.2	6	20	30	208/230	3	60	50.7	68	70	4.4	40.4	30.7	80	67	90	12.8	10.5	17.4	231	①		
	CARRIER	50PCH024NCC3ECC1	2	800	450	.50	13.5	2.8	20	30	208/230	1	60	28.8	68	70	4.7	23.8	18.3	80	67	90	12.6	6	13.4	180	①		
	CARRIER	50PCH036NCC5ECC1	3	1100	400	.57	10.4	4.1	17	25	208/230	3	60	41.3	68	70	4.6	35.9	27.2	80	67	90	12.7	9	12.5	225	①		
	CARRIER	50PCH036NCC5ECC1	3	1100	400	.57	10.4	4.1	17	25	208/230	3	60	41.3	68	70	4.6	35.9	27.2	80	67	90	12.7	9	12.5	225	①		
① PROVIDE W/MERV-13 FILTERS.																													

AIR DISTRIBUTION SCHEDULE											
MARK	SERVICE	BASIS OF DESIGN		PERFORMANCE				PHYSICAL			REMARKS
		MAKE	MODEL	FACE SIZE	NECK SIZE	CFM RANGE	MAX NC	TYPE	MOUNTING	MATERIAL	
	SUPPLY	TITUS	MCD	24x24	8x8	0-300	25	MODULAR CORE, SQUARE CEILING DIFFUSER	LAY-IN/T-BAR CEILING	STEEL (USE ALUMINUM IN MOIST LOCATIONS)	①②
					10x10	301-400					
					12x12	401-500					
					14x14	501-610					
					16x16	611-710					
					18x18	711-835					
	RETURN/ EXHAUST	TITUS	PAR	24x24	8x8	0-290	25	PERFORATED FACE CEILING GRILLE	LAY-IN/T-BAR CEILING	STEEL (USE ALUMINUM IN MOIST LOCATIONS)	②
					10x10	291-400					
					12x12	401-500					
					15x15	501-740					
					18x18	741-960					
					22x22	961-1340					
① PROVIDE W/MODULAR CORE, 4-WAY ADJUSTABLE THROW PATTERN.											
② FOR SQUARE NECK DIFFUSERS/REGISTERS/GRILLES, CONTRACTOR TO PROVIDE SQUARE TO ROUND TRANSITION.											

NO	DESCRIPTION	DATE
1	MP OWNER REVIEW	02/24/2022
2	100% CONSTRUCTION DWGS	06/09/2022

FILE NAME: K:\PROJECTS\SDCOE- 0293\21-1134-SDCOR BLDG. #3 1ST FL HEAT PUMP\DWGS\CAD\20XX\PLUMB\21-0293-1134-P001.DWG PLOT DATE: 6/9/2022 3:53 PM PRINT BY: KEVIN RICE

PIPING, DUCTWORK, & ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8, AND 2016 CBC, SECTIONS 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP ☒ MD ☒ PP ☒ E ☒

-

OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP ☐ MD ☐ PP ☐ E ☐

-

OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #_____.

MP ☐ MD ☐ PP ☐

-

OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANY ADDENDA, FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL _____ AND CONNECTION LEVEL _____ FOR THE PROJECT AND CONDITIONS.

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.

1.

ALL PERMANENT EQUIPMENT AND COMPONENTS.

2.

TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.

3.

MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.

A.

COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

B.

COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PLUMBING GENERAL NOTES

1.

CONTRACTOR SHALL CAREFULLY REVIEW THESE PLANS AND SPECIFICATIONS PRIOR TO BID. CONTRACTOR SHALL ALSO REVIEW PLANS AND SPECIFICATIONS OF OTHER RELATED TRADES (INCLUDING MECHANICAL, CIVIL, STRUCTURAL, AND ELECTRICAL) PRIOR TO BID TO ENSURE AN ACCURATE UNDERSTANDING OF EXACT SCOPE OF WORK. ANY ITEMS REQUIRING DESCRIPTION OR CLARIFICATION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN SUFFICIENT TIME TO BE INCORPORATED INTO THE BID.

2.

CONTRACTOR SHALL VERIFY ALL EQUIPMENT MODEL NUMBERS, CAPACITIES, SIZES, VOLTAGES, AND ALL OTHER SCHEDULED INFORMATION WITH OTHER APPLICABLE TRADES AND WITH THE MANUFACTURER PRIOR TO INSTALLATION.

3.

CONTRACTOR SHALL VERIFY ALL LOCATIONS, SIZES, P.O.C.'S, INVERT ELEVATIONS, AND COORDINATION OF ALL UTILITIES PRIOR TO INSTALLATION OF ANY MATERIAL OR EQUIPMENT.

4.

THESE DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE ALL DETAILS AND NECESSARY OFFSETS OF 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. ALL INSTALLATIONS SHALL BE CONSISTENT WITH NORMALLY ACCEPTABLE INDUSTRY STANDARDS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES OR CONFLICTS THAT WOULD EFFECT THE SYSTEM PERFORMANCE OR INCUR ADDITIONAL COSTS. THIS NOTIFICATION SHALL BE SUBMITTED PRIOR TO INSTALLATION OF THE ITEMS CONCERNED.

5.

ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES. NOTHING SHOWN ON THE PLANS OR STATED IN THE SPECIFICATIONS IS INTENDED TO INDICATE THAT THE INSTALLATIONS OR CONNECTIONS OF ANY ITEM OR DEVICE SHOULD BE DONE CONTRARY TO MANUFACTURERS INSTRUCTIONS AND ALL APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR IS RESPONSIBLE TO INSURE THAT THE INSTALLATIONS AND CONNECTIONS OF ALL ITEMS AND DEVICES CONFORMS TO MANUFACTURERS INSTRUCTIONS AND TO ALL APPLICABLE CODES AND REGULATIONS.

6.

ALL PLUMBING EQUIPMENT, MATERIAL, AND ALL CONNECTIONS THERETO SHALL BE INSTALLED COMPLETELY PER MANUFACTURERS INSTRUCTIONS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL SYSTEM.

7.

ALL PLUMBING SOLDER SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 605.3.4.

8.

ALL PIPE, PLUMBING AND PIPE FITTING OR FIXTURE INTENDED TO CONVEY OR DISPENSE WATER FOR DRINKING OR COOKING SHALL BE LEAD-FREE (CONTAINING LESS THAN 0.25% LEAD) IN COMPLIANCE WITH SECTION 116875 HEALTH AND SAFETY CODE.

9.

IF THE CONTRACTOR'S USE OF SUBSTITUTE MATERIALS, EQUIPMENT APPROVED BY THE PLUMBING ENGINEER 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.

10.

SUBMITTALS: APPROVAL OF THE SUBMITTALS DOES NOT RELEASE THE CONTRACTOR FROM OBLIGATIONS TO FULLY COMPLY WITH ALL REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS OR APPLICABLE CODE REGULATIONS.

11.

CONDENSATE DRAIN PIPING FROM EQUIPMENT WITHIN BUILDING SHALL BE TYPE "M" COPPER WITH WROUGHT COPPER OR CAST BRASS FITTINGS AND SHALL BE INSULATED FROM SAID EQUIPMENT AND UP TO POINT OF DISCHARGE. INTERIOR ONLY.

12.

WHERE NONMETALLIC PIPING PENETRATES AN AREA SEPARATION, 1 HOUR, OR 2 HOUR WALLS, THE PIPE SECTION PASSING THROUGH THE WALLS AND EXTENDING A DISTANCE OF 5 FEET ON EITHER SIDE THEREOF SHALL BE OF METAL ONLY. WHERE NONMETALLIC PIPING PENETRATES AREA SEPARATION WALLS, THE PIPE SECTION PASSING THROUGH THE WALLS AND THE FIXTURE CONNECTIONS THERETO SHALL BE OF METAL ONLY.

13.

ALL INSULATING MATERIALS INSTALLED MUST BE CERTIFIED BY CALIFORNIA ENERGY COMMISSION TO MEET C.E.C. ENERGY EFFICIENCY STANDARDS (E.E.S.) SECTION 118, 123 AND 124.

14.

CROSS CONNECTION PROTECTION SHALL BE PROVIDED AT ALL POTABLE WATER SUPPLIED APPLIANCES AND EQUIPMENT.

15.

CONTRACTOR TO PROVIDE ALL ACCESS PANELS AND GYPROC MOUNTED ARCHITECTURAL ACCESS DOORS AS REQUIRED TO PROVIDE ACCESS TO ALL MAINTENANCE POINTS SUCH AS SHUT OFF VALVES (SOV), WATER HAMMER ARRESTORS (WHA), AND TRAP PRIMER VALVES (TP). PROVIDE SIZE APPROPRIATE FOR MAINTENANCE PURPOSES. SEE ARCHITECTURAL DRAWINGS FOR CONSTRUCTION AND FINISH TYPES THAT ARE TO RECEIVE THESE PANELS AND DOORS.

16.

PLUMBING PIPING SYSTEMS SHALL BE INSULATED PER BUILDING ENERGY EFFICIENCY STANDARDS (E.E.S.) SECTION 120.3. PLUMBING EQUIPMENT SHALL BE CERTIFIED BY AND COMPLY WITH THE STATE OF CALIFORNIA ENERGY CONSERVATION STANDARDS (E.E.S.) SECTION 110.3. COMPLIANCE CERTIFICATES SHALL BE PROVIDED WITH EQUIPMENT SUBMITTALS.

17.

CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND OPERATION OF ALL EXISTING SYSTEMS.

18.

ALL EXPOSED PIPES AND SUPPORTS SHALL BE PRIMED & PAINTED WITH COLOR SELECTED BY ARCHITECT.

PLUMBING SHEET LIST	
SHEET NO	DESCRIPTION
P001	LEGEND, ABBREVIATIONS AND NOTES
P201	FIRST FLOOR DEMOLITION
P202	FIRST FLOOR RENOVATION

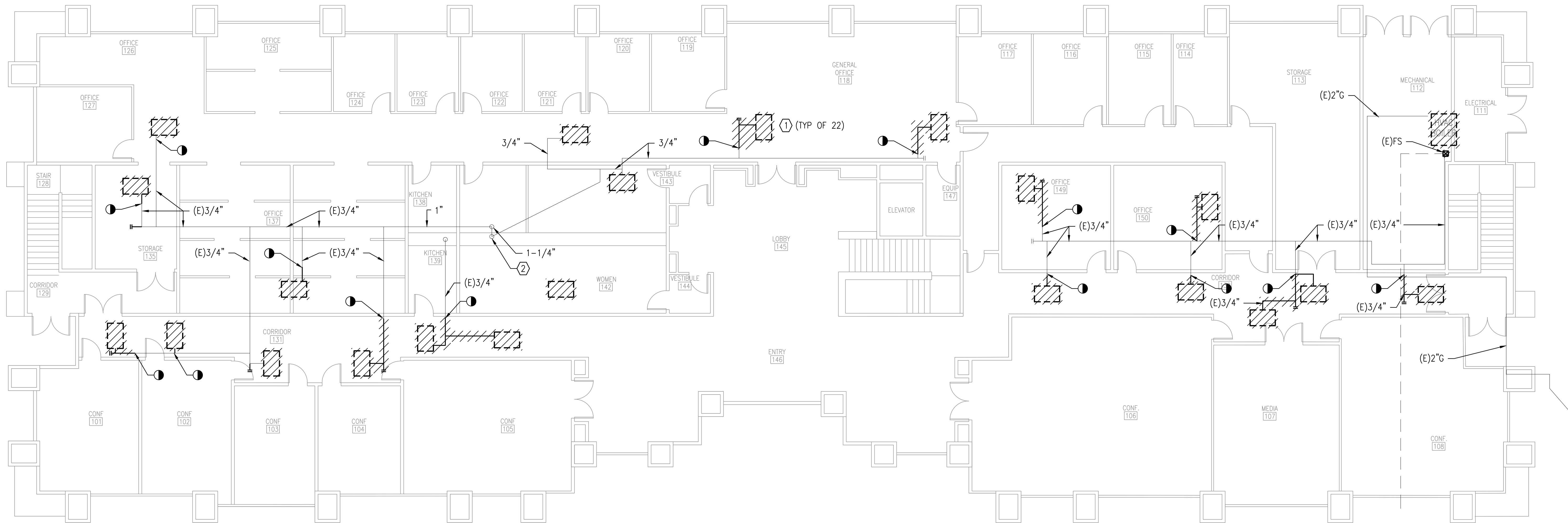
PLUMBING LEGEND		
SYMBOL	ABBREV	DESCRIPTION
	POD	POINT OF DISCONNECT
	POC	POINT OF CONNECTION
		PIPING ABOVE GRADE
		PIPING BELOW GRADE
	CD	CONDENSATE DRAIN
		PIPE TEE UP
		PIPE TEE DOWN
		PIPE DOWN
		PIPE UP
		PIPE BRANCH - TOP CONNECTION
		PIPE BRANCH - BOTTOM CONNECTION
		PIPE BRANCH - SIDE CONNECTION
		PIPE CAP
		PIPE BREAK
		PIPE SIZE TRANSITION
	SOV	SHUT-OFF VALVE
	U	UNION
	FC	FLEXIBLE PIPE CONNECTION
FIXTURE IDENTIFICATION SYMBOL		EQUIPMENT IDENTIFICATION SYMBOL
FIXTURE TYPE FIXTURE IDENTIFIER		EQUIPMENT TYPE EQUIPMENT IDENTIFIER

APPLICABLE CODES	
PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2019*	
2019 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.*	
2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. (2018 INTERNATIONAL BUILDING CODE VOLUMES 1-2 AND 2018 CALIFORNIA AMENDMENTS)	
2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (NFPA 70, 2017 CALIFORNIA AMENDMENTS)	
2019 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R. (2012 UNIFORM MECHANICAL CODE AND 2016 CALIFORNIA AMENDMENTS)	
2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (2015 UNIFORM PLUMBING CODE AND 2016 CALIFORNIA AMENDMENTS)	
2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.*	
2019 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (2015 INTERNATIONAL FIRE CODE AND 2016 CALIFORNIA AMENDMENTS)	
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 C.C.R.	
2019 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.	
TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.	

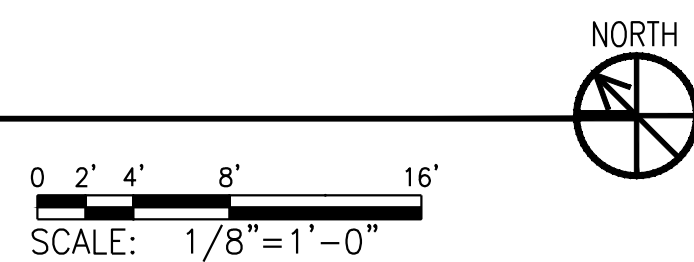
NO	DESCRIPTION	DATE
1	MP OWNER REVIEW	02/24/2023
2	100% CONSTRUCTION DWGS	06/09/2022

LEGENDS,
ABBREVIATIONS AND
NOTES

FILE NAME: K:\PROJECTS\SDCOE-0293\21-1134-SDCOR BLDG. #3 1ST FL HEAT PUMP\DWGS\CAD\20XX\PLUMB\21-0293-1134-P201.DWG PLOT DATE: 6/9/2022 3:53 PM PRINT BY: KEVIN RICE



1 1ST FLOOR DEMOLITION PLAN



KEYNOTES

- ① DISCONNECT AND REMOVE HEATPUMPS AND ASSOCIATED PIPING AS SHOWN.
- ② 1-1/2"CD DN TO FLOOR SINK & 1-1/4"CD UP TO 2ND FLOOR.



BSE ENGINEERING, INC.
9903 BUSINESS PARK AVE #104
SAN DIEGO, CA 92131
TEL: 858.800.6000
FAX: 858.800.6001

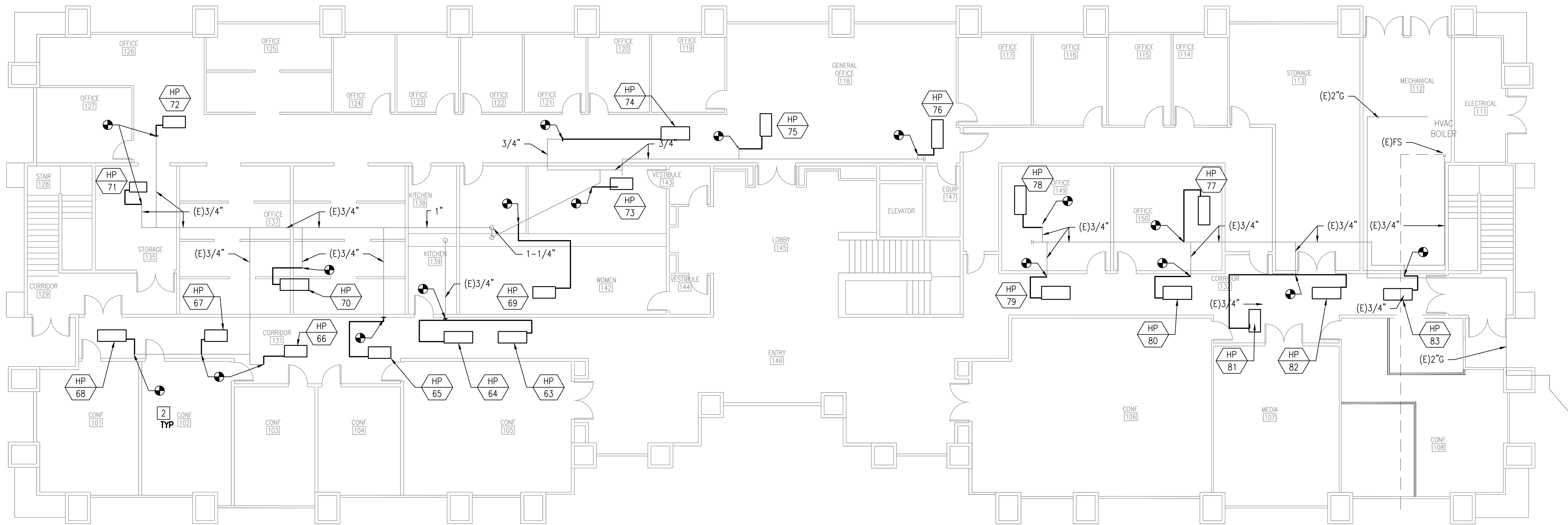
QC BY: _____
BSE PROJECT NO.: 21-0293-1134

SDCOE BLDG #3
6401 LINDA VISTA RD,
SAN DIEGO, CA 92111
1ST FLOOR HEAT PUMP REPLACEMENT

NO	DESCRIPTION	DATE
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2	100% CONSTRUCTION DWGS	06/09/2022

1ST FLOOR
DEMOLITION PLAN

FILE NAME: K:\PROJECTS\SDCOE-0293\21-1134-SDCOR BLDG. #3 1ST FL HEAT PUMP\DWGS\CAD\20XX\PLUMB\21-0293-1134-P202.DWG PLOT DATE: 6/9/2022 3:53 PM PRINT BY: KEVIN RICE



KEYNOTES

1

CONTRACTOR TO VERIFY ALL SIZES/LOCATIONS OF ALL EXISTING DUCTS AND UTILITIES PRIOR TO CONSTRUCTION.

2

RECONNECT EXISTING PIPING TO NEW HEATPUMP UNITS AS SHOWN.



BSE ENGINEERING, INC.
9908 BUSINESS PARK AVE #104
SAN DIEGO, CA 92131
TEL: 858.600.6000
FAX: 858.600.6001

QC BY: _____
BSE PROJECT NO.: 21-0293-1134

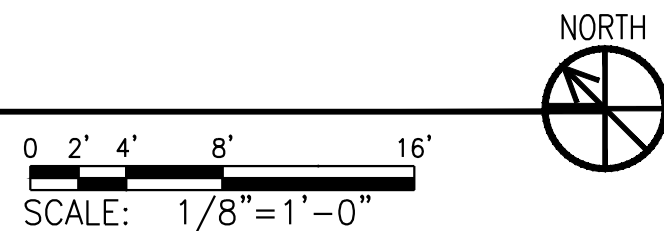
SDCOE BLDG #3

6401 LINDA VISTA RD,
SAN DIEGO, CA 92111

1ST FLOOR HEAT PUMP REPLACEMENT

1

1ST FLOOR PLUMBING RENOVATION



NO	DESCRIPTION	DATE
1	MP OWNER REVIEW	02/24/2022
2	100% CONSTRUCTION DWGS	06/09/2022

1ST FLOOR
RENOVATION PLAN