

GENERAL NOTES

- A SEPARATE 8-1/2x11 BOOK SPECIFICATIONS SET SHALL FORM PART OF THIS WORK.
- ALL DUCTWORK AND CEILING PENETRATION SHALL BE COORDINATED WITH STRUCTURAL JOISTS AND BEAMS. PROVIDE OFFSETS IN PIPES AND DUCTS TO AVOID CUTTING OF BEAMS AND JOISTS.
- SYMBOL AND ABBREVIATION LISTS ARE COMPOSITE. ALL SYMBOLS AND ABBREVIATIONS MIGHT NOT BE USED ON THIS PROJECT.
- MAINTAIN CLEAR ACCESS TO SERVICE EQUIPMENT AND OTHER ACCESSORIES REQUIRING SERVICE, VISUAL INSPECTION OR HAND OPERATION. WHERE INDICATED OR REQUIRED, PROVIDE ACCESS PANELS OF THE TYPE SELECTED TO SUIT MATERIALS IN WHICH INSTALLED.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH LATEST APPLICABLE CODES AND REGULATIONS PER CALIFORNIA AND OTHER AUTHORITIES HAVING JURISDICTION.
- THE MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND SHOULD NOT BE SCALED TO ESTABLISH LOCATION OF WORK. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND MAKE ADJUSTMENTS TO DIMENSIONS AS NECESSARY TO COMPLETE THE WORK.
- CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND SHALL ARRANGE FOR ALL INSPECTIONS AS REQUIRED.
- CONTRACTOR SHALL THOROUGHLY EXAMINE PREMISES AND OBSERVE ALL CONDITIONS AND CIRCUMSTANCES UNDER WHICH THE WORK SHALL BE PERFORMED. NO ALLOWANCES WILL BE MADE FOR ERRORS OR NEGLIGENCE IN THIS RESPECT.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE IMPORTANCE OF PROPER SCHEDULING AND PHASING OF THE WORK SO AS TO CAUSE MINIMUM DISTURBANCE TO THE ACTIVITIES IN THE OTHER FLOORS AND AREAS WHICH REMAIN OCCUPIED THROUGHOUT THE DURATION OF THE CONTRACT. THE CONTRACTOR'S WORK SCHEDULE SHALL BE SUBMITTED TO AND APPROVED BY THE OWNER.
- CONTRACTOR SHALL PERFORM WORK ONLY AFTER THE GATHERING OF EXACT FIELD DIMENSIONS OF THE BUILDING STRUCTURE AND CEILINGS, ETC. WHICH MAY AFFECT THE INSTALLATION OF THE NEW SYSTEMS.
- THE CONTRACTOR SHALL FULLY COORDINATE ALL WORK WITH OTHER TRADES TO ASSURE ALL WORK CAN BE PROPERLY INSTALLED WITHOUT INTERFERENCE OR DELAY.
- CLEAN UP ALL WASTE AND DEBRIS AT THE END OF EACH WORKING DAY AND AT THE COMPLETION OF THE JOB.
- ALL SPECIFIED EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION, CMC CHAPTER 6, AND CBC SECTION 1632A.
- PROVIDE ONE YEAR WARRANTY FOR ALL WORKMANSHIP AND MATERIALS AFTER THE DATE OF FINAL ACCEPTANCE.
- PRIOR TO STARTING WORK, SUBMIT SHOP DRAWINGS FOR ALL MECHANICAL EQUIPMENT & DUCTWORK PER SPECIFICATIONS.
- EXACT LOCATIONS OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES SHALL BE COORDINATED WITH LIGHTING.
- ALL DUCTWORK SHALL BE GALVANIZED STEEL PER CMC CHAPTER 6 AND SMACNA GUIDELINES.
- ALL OPENINGS IN WALLS, CEILINGS, AND FLOORS RESULTING FROM DUCT DEMOLITION SHALL BE CLOSED AND FINISHED TO MATCH THE SURROUNDING.
- RUN ALL DUCTWORK AND PIPING AS HIGH AS POSSIBLE UNLESS OTHERWISE NOTED. PIPING SHALL BE ABOVE DUCTWORK.
- CONTRACTOR SHALL PROVIDE EXTERNAL TRAPS FOR CONDENSATE DRAIN LINES FOR ALL COOLING COILS.
- PROVIDE VOLUME DAMPERS AT EACH BRANCH TAKE-OFF FROM MAIN SUPPLY, RETURN, AND EXHAUST DUCT SERVING EACH AIR DEVICE AND AS INDICATED.
- CONTRACTOR SHALL FURNISH AND INSTALL DUCT AND PIPE SUPPORT AND BRACING PER SMACNA REQUIREMENT.
- ANY EQUIPMENT, DUCTWORK, OR PIPING INSTALLED MORE THAN 1 FT FROM THE LOCATION SHOWN ON THE DRAWINGS SHALL BE CLEARLY DOCUMENTED IN THE FIELD. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS IN AUTOCAD FORMAT TO CLEARLY SHOW THE LOCATION OF THE EQUIPMENT BEFORE COMPLETION OF THE PROJECT. ALL EXPENSE RELATING TO VERIFY THE RECORD DRAWINGS BY THE CLIENT OR ITS REPRESENTATIVE(S) DUE TO INACCURATE OR INCOMPLETE RECORDS SHALL BE BORN BY THE CONTRACTOR.
- ALL MECHANICAL WORK SHALL COMPLY WITH TITLE-24 PART 4 CMC 2007.
- NOTE THE CRITICAL SPACE AVAILABLE ABOVE CEILINGS. PROVIDE TRANSITION PIECES AT CROSSOVERS, UNDER BEAMS, OVER/UNDER PIPES AS REQUIRED TO ACCOMMODATE DUCTS WITHIN SPACE AVAILABLE, PROVIDING EQUIVALENT DUCT SIZE TO THE DIMENSION SHOWN. COORDINATE CLOSELY WITH OTHER SECTIONS TO MINIMIZE NECESSITY OF TRANSITIONS. NO ADDITIONAL COSTS WILL BE PAID FOR ANY REQUIRED TRANSITIONS OR OTHER SPECIAL CHANGE SHAPE PIECES.
- PROVIDE NEW THERMOSTATS WHERE SHOWN ON DRAWINGS.
- THERMOSTAT SHALL BE INSTALLED BETWEEN 36" AND 48" ABOVE FINISHED FLOOR.
- ALL MECHANICAL EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION CONFORMING TO ASCE 7-05 SECTION 13.3.1 AND TABLE 13.6-1.
- ALL PIPES AND DUCTS SHALL BE SUPPORTED AND BRACED PER SMACNA GUIDELINES, OSHPD PRE-APPROVAL #R0010, AND CMC CHAPTER 6.
- CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAILED IN THE DRAWINGS OR ACCEPTED BY THE ARCHITECT WITH THE APPROVAL OF DSA FIELD REPRESENTATIVE.

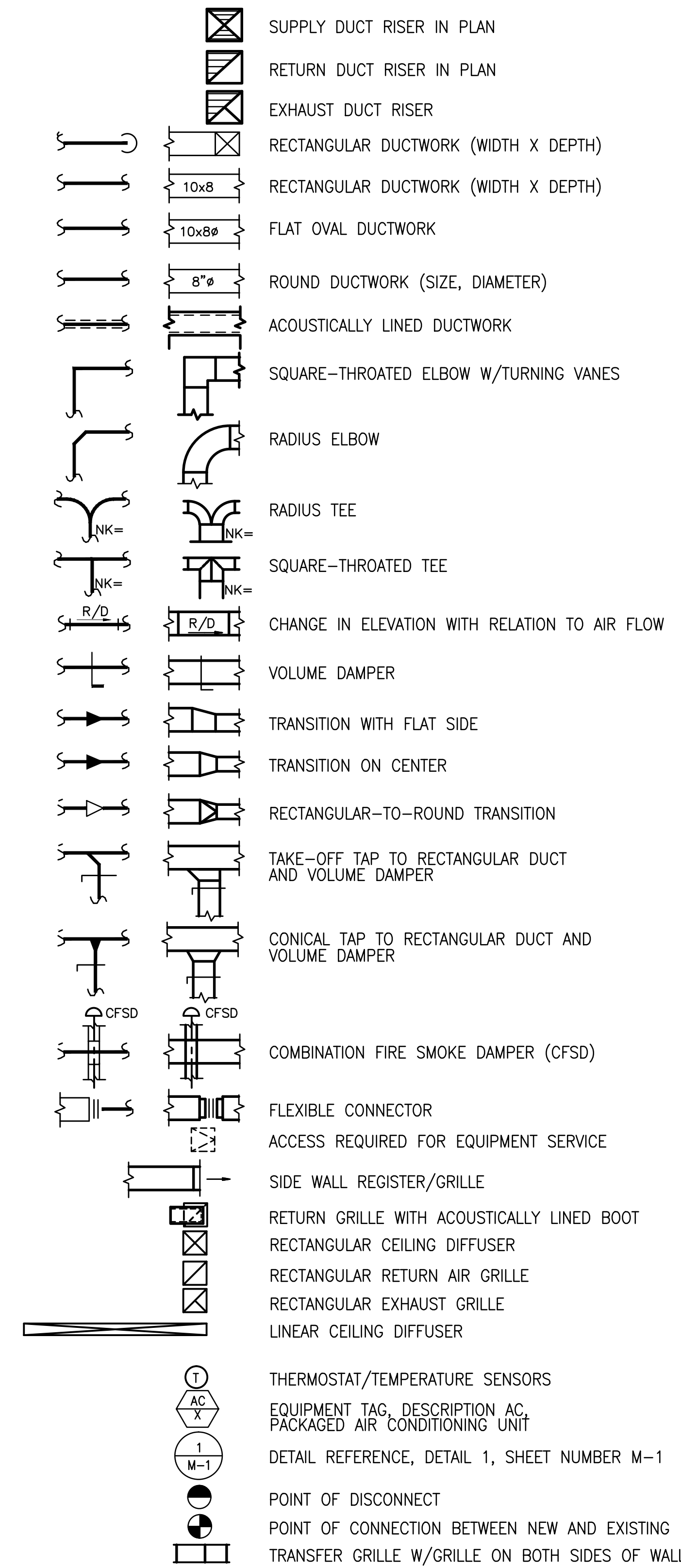
MECHANICAL EQUIPMENT BRACING AND ANCHORAGE

- THE SEISMIC BRACING OF DUCTS AND PIPING SHALL BE IN ACCORDANCE WITH THE "GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS" AS PUBLISHED BY SMACNA, LATEST EDITION, AND APPROVED BY DSA.
- WHERE BRACING AND ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT AND THE DSA FIELD ENGINEER.
- A COPY OF THE GUIDELINES PUBLISHED BY SMACNA SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB SITE AT ALL TIMES.

HVAC ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AC	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AF	AIR FILTER
AFF	ABOVE FINISHED FLOOR
AFM	AIR FLOW MEASURING DEVICE
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
BAS	BUILDING AUTOMATION SYSTEM
BDD	BACK DRAFT DAMPER (WEIGHTED)
BFP	BACKFLOW PREVENTER
CC	COOLING COIL
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CO	CLEAN OUT
COND	CONDENSATE, CONDENSER
CP	CONDENSATE PUMP
CU	CONDENSING UNIT
CSFD	COMBINATION FIRE/SMOKE DAMPER
DB	DECIBELS
DBT	DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DIA	DIAMETER
DN	DOWN
DPT	DEW POINT TEMPERATURE
EA	EACH, EXHAUST AIR
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
ESP	EXTERNAL STATIC PRESSURE
(E)	EXISTING
FAU	FORCED AIR UNIT
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FFM	FEET PER MINUTE
FT	FEET
FV	FACE VELOCITY
HZ	HERTZ
HPU	HEAT PUMP UNIT
HP	HORSE POWER, HEAT PUMP
ID	INSIDE DIAMETER
IN	INCHES
IN. W.C.	INCHES OF WATER COLUMN
IFM	INDOOR FAN MOTOR
LBS	POUNDS
LD	LINEAR DIFFUSER
LRA	LOCKED ROTOR AMPS
MAX	MAXIMUM
MBH	ONE THOUSAND BTUH
MCA	MINIMUM CIRCUIT AMPS
MOCP	MAXIMUM OVERCURRENT PROTECTION
MIN	MINIMUM
MISC	MISCELLANEOUS
MVD	MANUAL VOLUME DAMPER
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NK	NECK
NTS	NOT TO SCALE
OSA	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
(R)	RELOCATED
RA	RETURN AIR
RAG	RETURN AIR GRILLE
REFG	REFRIGERANT, ATION
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RLA	RATED LOAD AMPS
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER
SA	SUPPLY AIR
SD	SMOKE DAMPER
SF	SUPPLY AIR FAN
SHR	SENSIBLE HEAT RATIO
SG	SPECIFIC GRAVITY
SP	STATIC PRESSURE
SPEC	SPECIFICATIONS
SPS	STATIC PRESSURE SENSOR
SR	SUPPLY REGISTER
SUCT	SUCTION
TD	TEMPERATURE DIFFERENCE
TEMP	TEMPERATURE
TES	THERMAL ENERGY STORAGE
T	THERMOSTAT
TYP	TYPICAL
TSP	TOTAL STATIC PRESSURE
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
V	VOLT
VENT	VENTILATION, VENT
VERT	VERTICAL
VTR	VENT THROUGH ROOF
W	WITH
W	WATT
WBT	WET BULB TEMPERATURE
W.G.	WATER GAUGE

DUCTWORK SYMBOLS



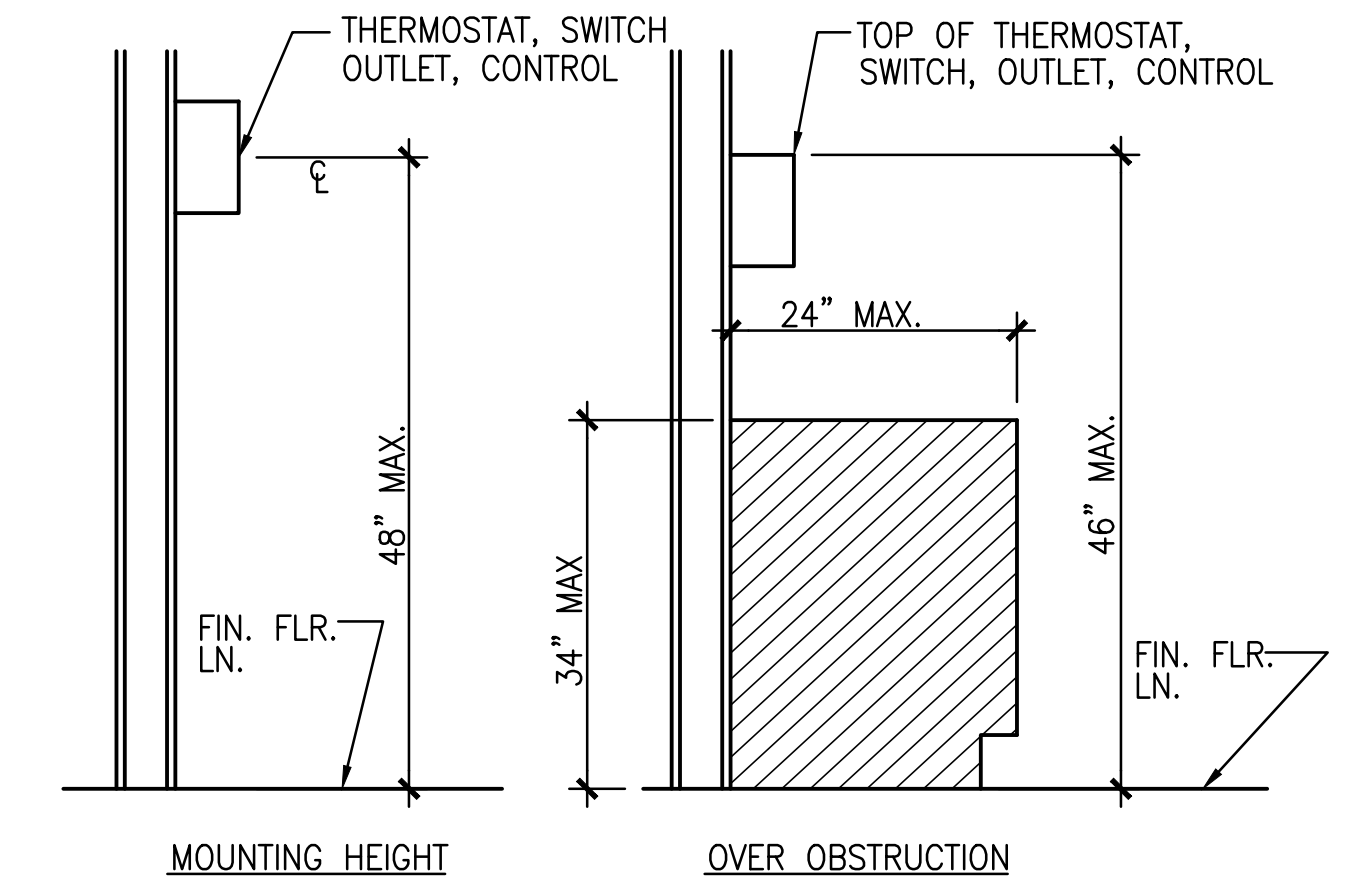
SHEET INDEX

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M2.01	ENLARGED PARKING LEVEL HVAC PLAN
M2.02	FIRST FLOOR HVAC PLAN
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M3.01	MECHANICAL DIAGRAMS

TITLE 24 NOTES

- ALL THERMOSTATS SHALL HAVE A DEADBAND BETWEEN HEATING AND COOLING, CAPABLE OF ADJUSTMENT UP TO 10°F.
- ALL EQUIPMENT DESIGNED TO BE FIXED IN POSITION SHALL BE SECURELY FIXED IN PLACE IN ACCORDANCE WITH SEISMIC REQUIREMENTS.
- REQUIRED ROUTINE MAINTENANCE ACTION SHALL BE CLEARLY STATED AND INCORPORATED ON A READILY ACCESSIBLE PERMANENT WEATHERPROOF LABEL. THE LABEL MAY BE LIMITED TO CROSS-REFERENCING THE MAINTENANCE MANUAL IF SUCH MAINTENANCE ACTION IS DESCRIBED THEREIN FOR THE LABELED ITEM.
- AIR-HANDLING DUCT SYSTEMS SHALL BE CONSTRUCTED, INSTALLED, SEALED, AND INSULATED AS PROVIDED IN THE LATEST EDITION OF THE UNIFORM MECHANICAL CODE CHAPTER 6 OR SMACNA GUIDELINES AS A MINIMUM.
- ALL EQUIPMENT SHALL CONFORM TO AND BE CERTIFIED IN ACCORDANCE WITH THE APPLICABLE STANDARDS AND THE REQUIREMENTS FOR SUCH DEVICES GIVEN IN THE PLANS AND SPECIFICATIONS APPROVED BY THE LOCAL ENFORCEMENT AGENCY.
- ALL EQUIPMENT SHALL BE LABELED AS TO FUNCTION AND SPACES SERVED (SEE SCHEDULE ON SHEET M0.02).

THERMOSTAT INSTALLATION ELEVATION



Job No. 10-027
Mechanical Electrical Plumbing Fire Alarm

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REGISTERED PROFESSIONAL ENGINEER
JAMES A. JORDAN
No. 25448
EXP. 09-30-10
MECHANICAL
STATE OF CALIFORNIA

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REGISTERED ARCHITECT
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EXP. 09-30-10
ARCHITECT
STATE OF CALIFORNIA

**VENTURA HOUSING AUTHORITY
SANTA CLARA APTS. "GREEN" RENOVATION**

1216 E. SANTA CLARA ST., VENTURA, CA 93001

NOTE: THIS SHEET IS ONE OF A SET OF DOCUMENTS WHICH INCLUDES, BUT IS NOT LIMITED TO, DRAWINGS AND SPECIFICATIONS ADDRESSING ALL TRADES. GENERAL CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL BIDDERS WITH A FULL SET OF CONSTRUCTION DOCUMENTS. ALL BIDDERS SHALL REVIEW THE ENTIRE SET OF DOCUMENTS. IF THERE IS A CONFLICT BETWEEN DISCIPLINES, THE MOST EXPENSIVE OPTION SHALL BE BID.

REVISIONS	DATE: 07/08/10
	DRAWN: AW
	CHECK: JJ
	JOB NO: 10-VHA-028
GENERAL NOTES, SYMBOLS & ABBREVIATIONS	M0.01

IF THIS SHEET IS NOT 42" X 30", IT IS NOT FULL SIZE. SCALE DIMENSIONS ACCORDINGLY.

FAN CONVECTOR SCHEDULE																	
TAG	Manufacturer & Model Number	Quantity	Supply Fan		WATER					AIR		Capacity (BTU/hr)		Electrical Power		Weight (lbs)	Remarks
			CFM	Power (W)	GPM	PD (FT)	EWI (°F)	LWT (°F)	EAT (°F)	LAT (°F)	Capacity	Capacity	V	PH			
FC-1	Myson 5000 RCU	40	53	25	1.0	0.8	180.0	170.0	65.0	147.5	4790.0	115	1	30	See Notes 1, 2		
FC-2	Myson 5000 RCU	8	53	25	3.0	4.9	180.0	176.2	65.0	158.7	5443.0	115	1	30	See Notes 1, 2		

1. Provide with 7-day programmable stand-alone thermostat.
2. Attach units to wall per manufacturer's instructions. Maintain all manufacturer-specified clearances.

GAS HOT WATER BOILER SCHEDULE																
TAG	Manufacturer & Model Number	Location	Type	Capacity			Water			Air Inlet	Flue Vent	Electrical Power			Weight (lbs)	Remarks
				Input (MBH)	Output (MBH)	Efficiency	PD (FT)	EWI (°F)	LWT (°F)			V	PH	FLA		
B-1	Lochinvar KBN400	Water Heater Room	Gas	399	372.0	93.3%	21.0	160.0	180.0	4"	4"	120	1	1.5	375	See Notes 1-4

1. Provide with Smart System digital controls. Program boiler for control by OSA temperature sensor, time clock, and system temperature sensor.
2. Boiler to be installed in primary/secondary piping configuration. See #1M3.01.
3. Provide boiler with condensate neutralization kit.
4. Provide boiler with concentric vent kit for direct venting.

CIRCULATING PUMP SCHEDULE														
TAG	Manufacturer & Model Number	Location	Service	Capacity		Motor		Power			Weight (lbs)	Remarks		
				Flow (GPM)	Head (FT)	HP	RPM	V	PH	FLA				
CP-1	Taco 1400-70	Water Heater Room	Boiler Loop	37	21.0	0.5	3450	115	1	5	30			
CP-2	Taco C11206	Water Heater Room	System Loop	64	37.0	1.0	1760	115	1	16	30	See note 1		

1. Provide with VFD.

AIR SEPARATOR SCHEDULE							
TAG	Manufacturer & Model Number	Location	Service	Max Flow (gpm)	P.D. (ft. WC)	Oper. Weight (lbs)	Remarks
AS-1	Taco ACT025F-125	Water Heater Room	Hydronic Heating Loop	130	<1	128	See Note 1

1. ASME Section VIII construction with strainer.

EXPANSION TANK SCHEDULE						
TAG	Manufacturer & Model Number	Location	Service	Capacity (gal)	Weight (lbs)	Remarks
ET-1	Taco CBX-30	Water Heater Room	Hydronic Heating Loop	8	100	Bladder Type

CHEMICAL FEEDER SCHEDULE					
TAG	Manufacturer & Model Number	Location	Service	Capacity (gal)	Remarks
CSF-1	Chardon Labs Shot Feeder	Water Heater Room	Hydronic Heating Loop	2	

Job No. 10-027
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Fire Alarm

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	JOB NO: 10-VHA-028
MECHANICAL SCHEDULES	M0.02

IF THIS SHEET IS NOT 4" X 8", IT IS NOT FULL SIZE. SCALE DRAWINGS ACCORDINGLY.

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KEY NOTES

- ◇ (E) GRAVITY-VENTILATED WALL FURNACE TO BE REMOVED WITH ALL ACCESSORIES. REMOVE (E) FLUE VENT UP THROUGH ROOF. SAFE-OFF (E) GAS PIPING TO BE ABANDONED.
- ◇ (E) CEILING-MOUNTED EXHAUST FAN TO BE REMOVED WITH ALL ACCESSORIES. PROTECT (E) EA DUCT UP THROUGH ROOF TO REMAIN.
- ◇ (E) RANGE HOOD TO BE REMOVED WITH ALL ACCESSORIES. PROTECT (E) EA DUCT UP THROUGH ROOF TO REMAIN.

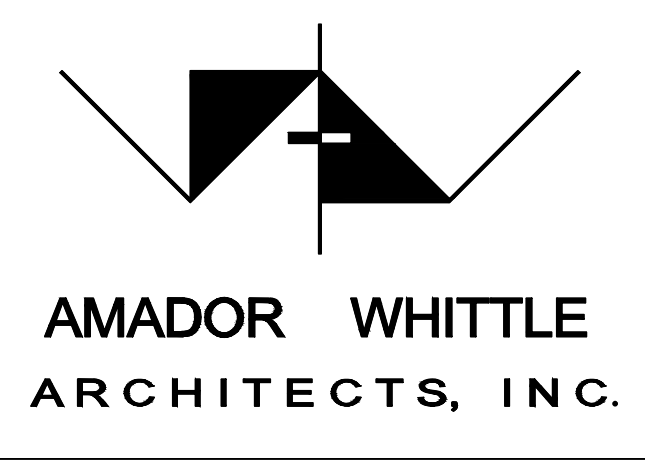


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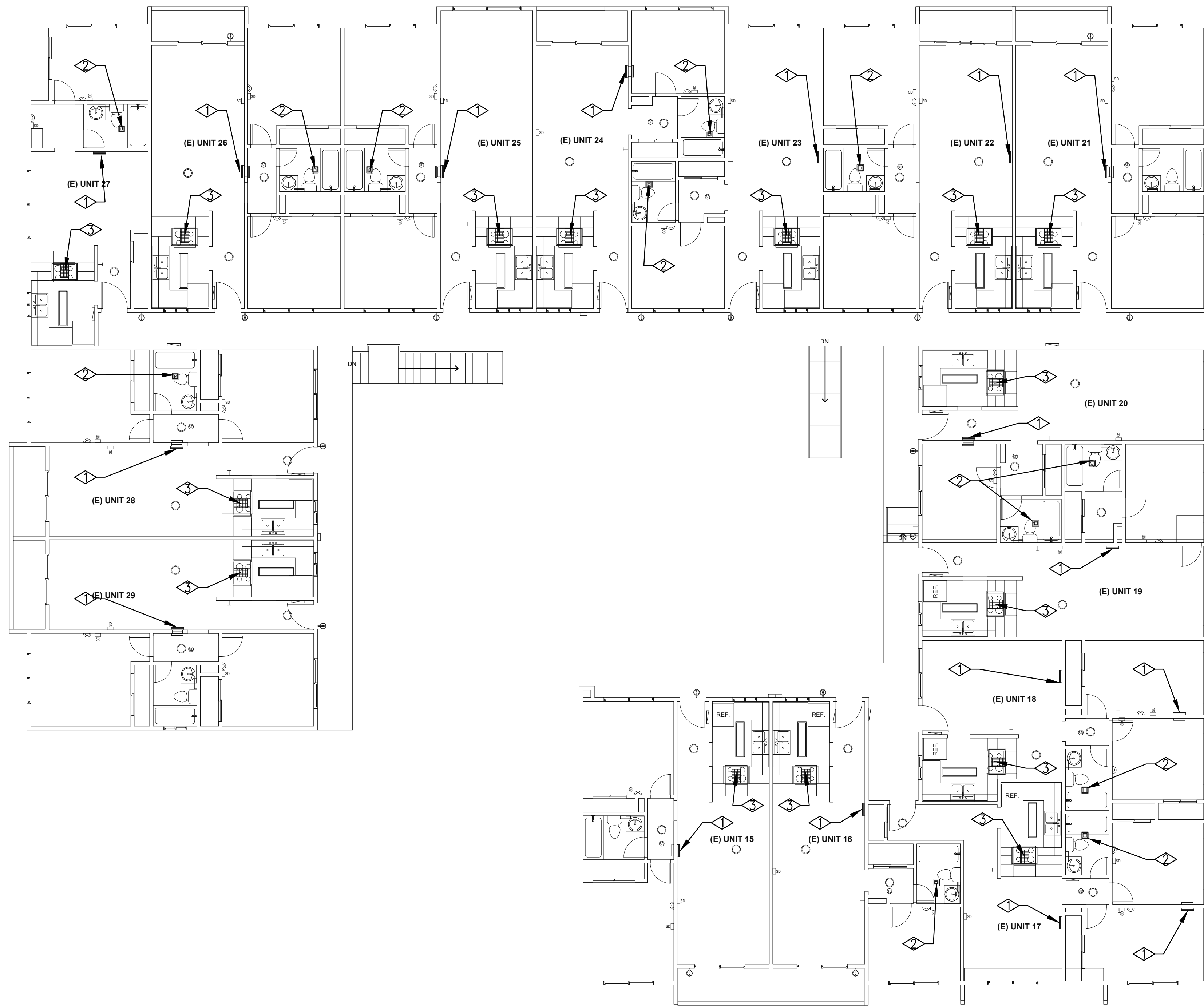
**FIRST FLOOR HVAC
 DEMOLITION PLAN**

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M1.02D

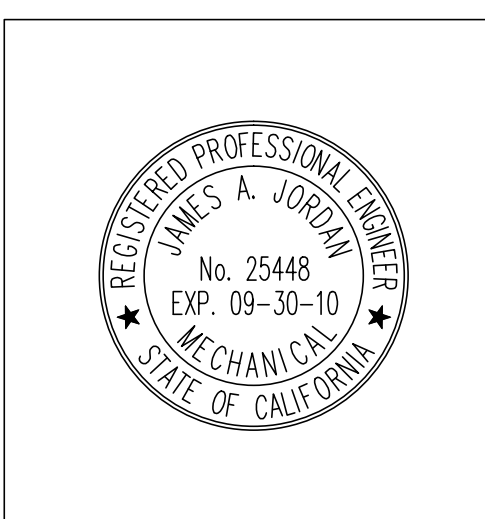
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BID SET/PLAN CHECK



- | KEY NOTES | |
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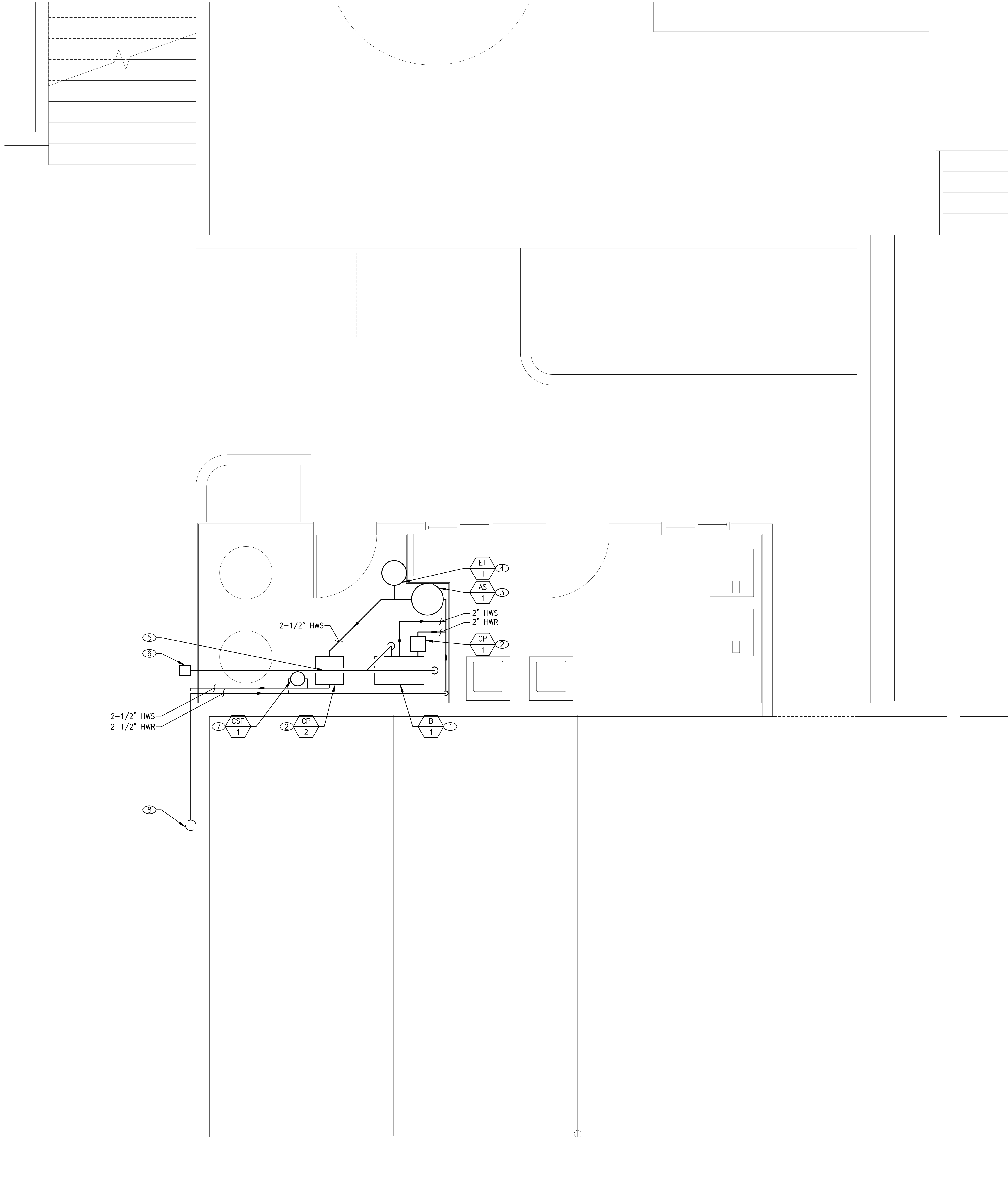
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SECOND FLOOR HVAC
DEMOLITION PLAN

M1.03
 OF

BID SET/PLAN CHECK

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- GENERAL NOTES**
1. THIS DRAWING IS DIAGRAMMATIC IN NATURE AND SHALL NOT BE SCALED TO DETERMINE THE EXACT LOCATION OF THE WORK. ALL LOCATIONS SHALL BE FIELD-VERIFIED PRIOR TO INSTALLATION.
 2. UNIT LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE WITH OTHER DISCIPLINES TO PROVIDE A COMPLETE AND WORKING INSTALLATION.
 3. PATCH AND PAINT EXISTING OPENINGS AND OTHER AREAS AFFECTED BY THE WORK IN ALL WALLS, FLOORS, OR CEILINGS TO MATCH EXISTING. COORDINATE PAINT AND FINISH WITH ARCHITECT.
 4. PROVIDE ALL WATER-SIDE CONNECTIONS WITH PIPE UNIONS AND ISOLATING VALVES FOR EASE OF MAINTENANCE.

- KEY NOTES**
- ① (N) HYDRONIC HEATING BOILER ON SLAB. INSTALL PER MANUFACTURER'S INSTRUCTION. SEE #2/M3.01.
 - ② (N) CIRCULATING PUMP IN HYDRONIC HEATING LOOP. INSTALL PER MANUFACTURER'S INSTRUCTION.
 - ③ (N) AIR SEPARATOR ON SLAB. SEE #1/M3.01.
 - ④ (N) EXPANSION TANK ON SLAB. SEE #1/M3.01.
 - ⑤ FACTORY-PROVIDED CONCENTRIC DIRECT VENT KIT.
 - ⑥ FACTORY-PROVIDED CONCENTRIC SIDEWALL TERMINATION KIT.
 - ⑦ (N) CHEMICAL FEEDER IN HYDRONIC HEATING LOOP. SEE #3/M3.01.
 - ⑧ 2-1/2" HWS&R UP ON EXTERIOR WALL TO SECOND FLOOR ATTIC. SEE M2.03.

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Fire Alarm

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	JOB NO: 10-VHA-028
ENLARGED PARKING LEVEL PLAN	M2.01
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- GENERAL NOTES**
1. THIS DRAWING IS DIAGRAMMATIC IN NATURE AND SHALL NOT BE SCALED TO DETERMINE THE EXACT LOCATION OF THE WORK. ALL LOCATIONS SHALL BE FIELD-VERIFIED PRIOR TO INSTALLATION.
 2. HVAC UNIT LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE INSTALLATION WITH EXISTING STUD BAYS.
 3. ALL EXISTING STRUCTURAL MEMBERS SHALL REMAIN IN PLACE AND INTACT.
 4. PATCH AND PAINT EXISTING OPENINGS AND OTHER AREAS AFFECTED BY THE WORK IN ALL WALLS AND CEILINGS TO MATCH EXISTING. COORDINATE PAINT AND FINISH WITH ARCHITECT.

- KEY NOTES**
- ① (N) FAN CONNECTOR IN WALL. PROVIDE (N) 3/4" HWS&R CONNECTIONS UP THROUGH WALL TO MAIN PIPING LOOP IN ATTIC (SEE M2.03).
 - ② (N) BATHROOM EXHAUST FAN, "BROAN" MODEL #QTXE080. RECONNECT EXISTING DUCT THROUGH ROOF AND POWER CONDUCTORS WHERE APPLICABLE. INTERLOCK FAN OPERATION WITH WALL SWITCH (SEE ELECTRICAL).
 - ③ (N) RANGE HOOD, "AMANA" MODEL #UXT4836AAS UNDER (E) CABINET. RECONNECT DUCT THROUGH ROOF AND POWER CONDUCTORS. COORDINATE FINISH AND INSTALLATION WITH ARCHITECT.
 - ④ (N) 6" EA DUCT UP IN WALL THROUGH ROOF TO (N) ROOF CAP. PROVIDE ROOF CAP WITH BACKDRAFT DAMPER.

REGISTERED PROFESSIONAL ENGINEER
JAMES A. JORDAN
No. 25448
EXP. 09-30-10
MECHANICAL
STATE OF CALIFORNIA

Job No. 10-027
Mechanical
Electrical
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**VENTURA HOUSING AUTHORITY
SANTA CLARA APTS. "GREEN" RENOVATION**

1216 E. SANTA CLARA ST., VENTURA, CA 93001

NOTE: THIS SHEET IS ONE OF A SET OF DOCUMENTS WHICH INCLUDES, BUT IS NOT LIMITED TO, DRAWINGS AND SPECIFICATIONS ADDRESSING ALL TRADES. GENERAL CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL BIDDERS WITH A FULL SET OF CONSTRUCTION DOCUMENTS. ALL BIDDERS SHALL REVIEW THE ENTIRE SET OF DOCUMENTS. IF THERE IS A CONFLICT BETWEEN DISCIPLINES, THE MOST EXPENSIVE OPTION SHALL BE BID.

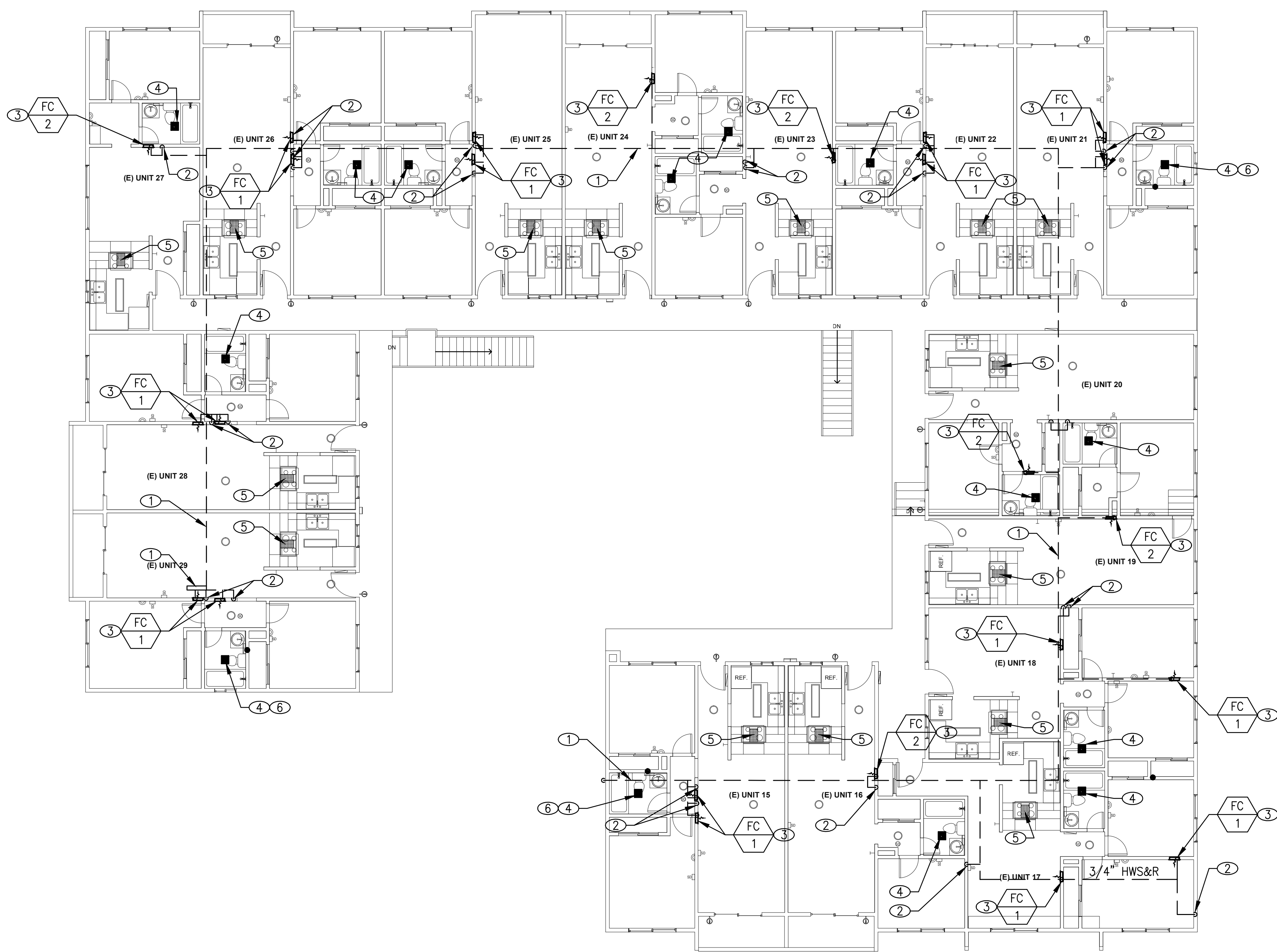
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	JOB NO: 10-VHA-028

FIRST FLOOR PLAN **M2.02**

IF THIS SHEET IS NOT 42" X 30", IT IS NOT FULL SIZE. SCALE DRAWINGS ACCORDINGLY.

BID SET/PLAN CHECK

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- KEY NOTES**
- ① (N) 2-1/2" HEATING HOT WATER SUPPLY AND RETURN LOOP PIPING IN SECOND FLOOR ATTIC.
 - ② (N) 3/4" HWS&R DOWN TO FAN CONVECTOR ON FIRST FLOOR.
 - ③ (N) FAN CONVECTOR IN WALL. PROVIDE (N) 3/4" HWS&R CONNECTIONS TO MAIN PIPING IN ATTIC.
 - ④ (N) BATHROOM EXHAUST FAN, "BROAN" MODEL #QTXE080. RECONNECT EXISTING DUCT THROUGH ROOF AND POWER CONDUCTORS WHERE APPLICABLE. INTERLOCK FAN OPERATION WITH WALL SWITCH (SEE ELECTRICAL).
 - ⑤ (N) RANGE HOOD, "AMANA" MODEL #UXT4836AAS UNDER (E) CABINET. RECONNECT DUCT THROUGH ROOF AND POWER CONDUCTORS. COORDINATE FINISH AND INSTALLATION WITH ARCHITECT.
 - ⑥ (N) 6" EA DUCT UP THROUGH ROOF TO (N) ROOF CAP. PROVIDE ROOF CAP WITH BACKDRAFT DAMPER.

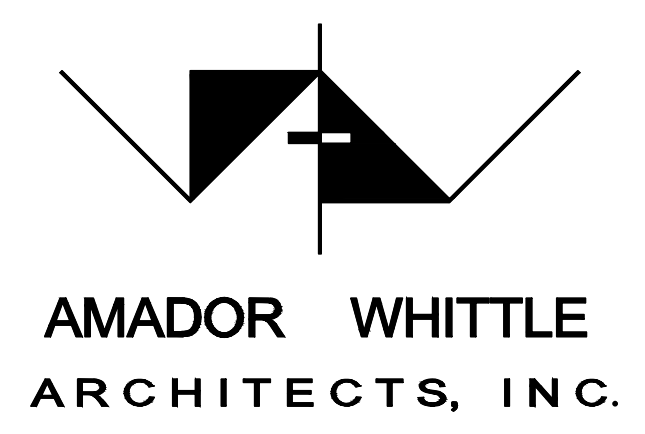


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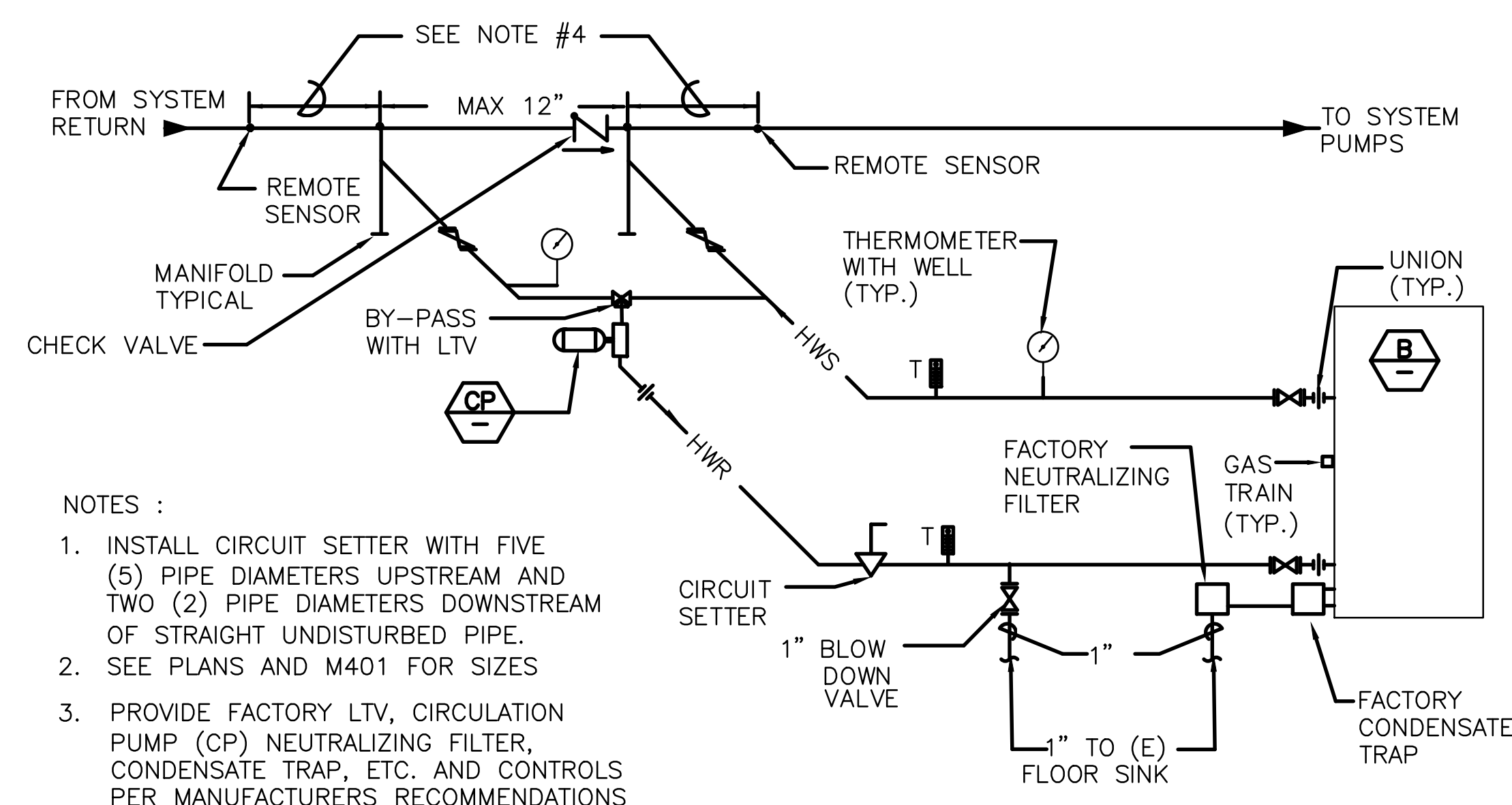
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SECOND FLOOR PLAN M2.03

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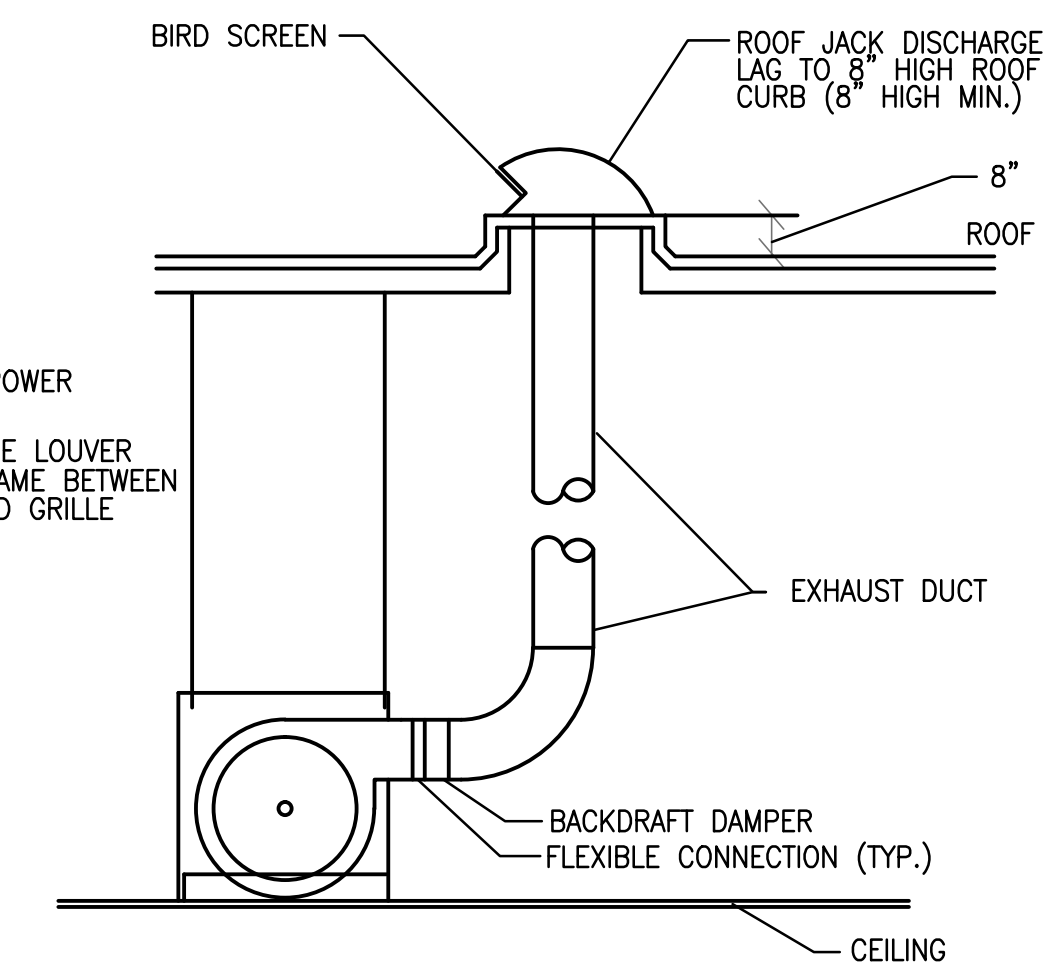
BID SET/PLAN CHECK



- NOTES :
1. INSTALL CIRCUIT SETTER WITH FIVE (5) PIPE DIAMETERS UPSTREAM AND TWO (2) PIPE DIAMETERS DOWNSTREAM OF STRAIGHT UNDISTURBED PIPE.
 2. SEE PLANS AND M401 FOR SIZES
 3. PROVIDE FACTORY LTV, CIRCULATION PUMP (CP) NEUTRALIZING FILTER, CONDENSATE TRAP, ETC. AND CONTROLS PER MANUFACTURERS RECOMMENDATIONS
 4. INSTALL REMOTE SENSOR MIN. TEN (10) PIPE DIAMETERS.

BOILER PIPING DIAGRAM

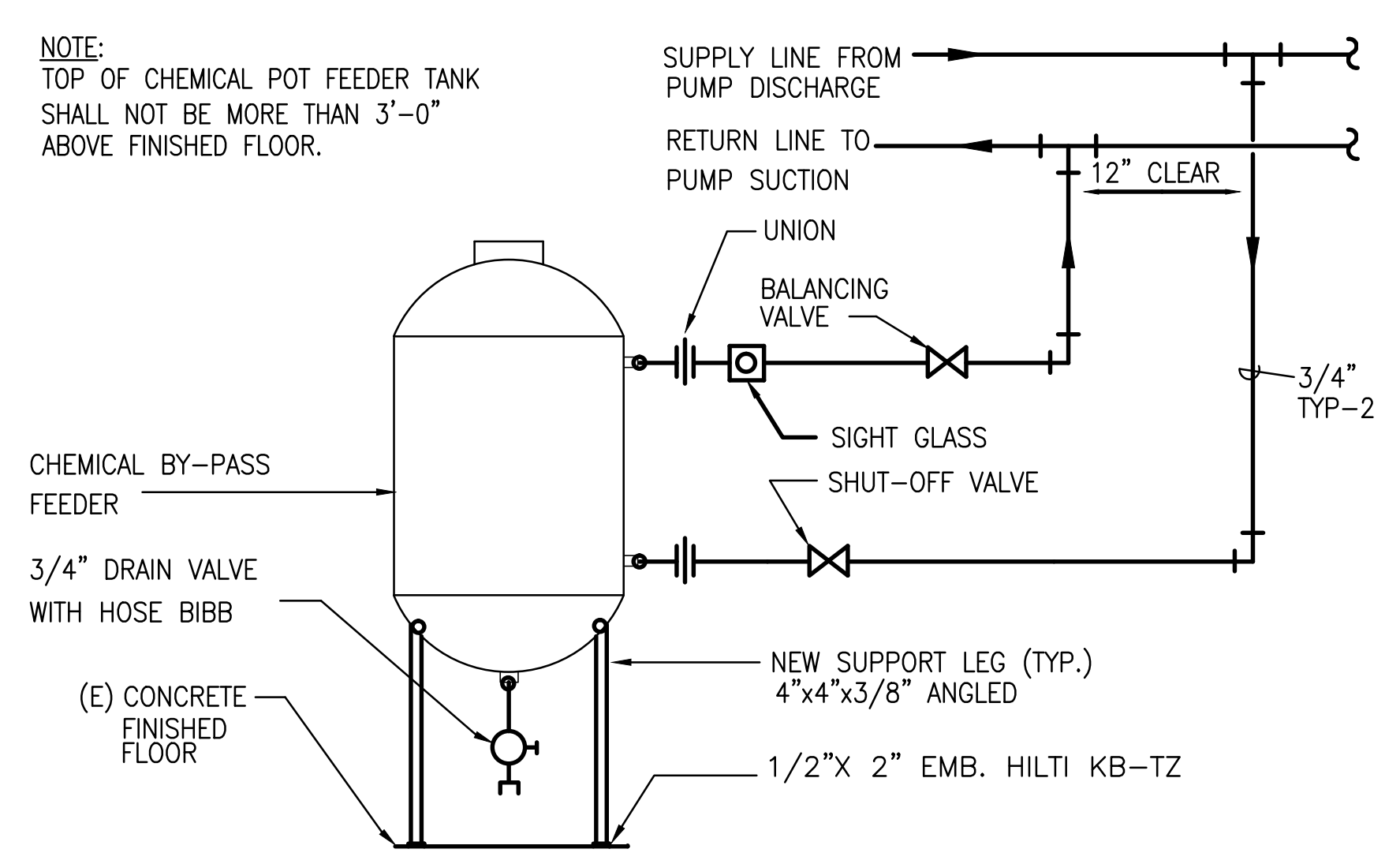
SCALE NONE 2



- NOTES:
1. PROVIDE LOCAL POWER DISCONNECT
 2. PROVIDE THIN LINE LOUVER WITH FLANGE FRAME BETWEEN CABINET FAN AND GRILLE

CEILING MOUNTED EXHAUST FAN DIAGRAM

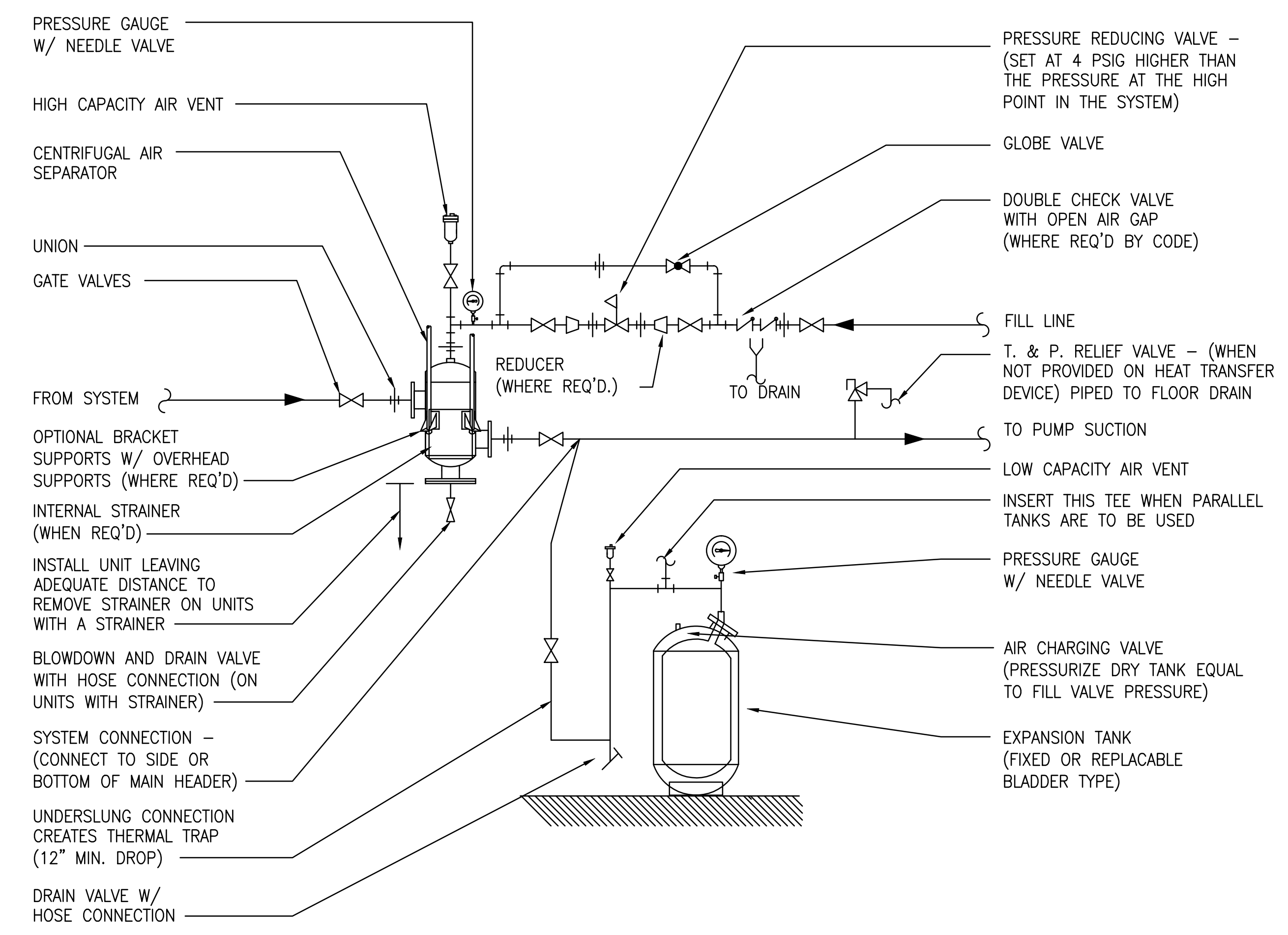
SCALE NONE



NOTE: TOP OF CHEMICAL POT FEEDER TANK SHALL NOT BE MORE THAN 3'-0" ABOVE FINISHED FLOOR.

CHEMICAL BYPASS FEEDER PIPING DIAGRAM

SCALE NONE 3



AIR SEPARATOR AND EXPANSION TANK PIPING DIAGRAM

SCALE NONE 1



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MECHANICAL DIAGRAMS **M3.01**

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BID SET/PLAN CHECK

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