

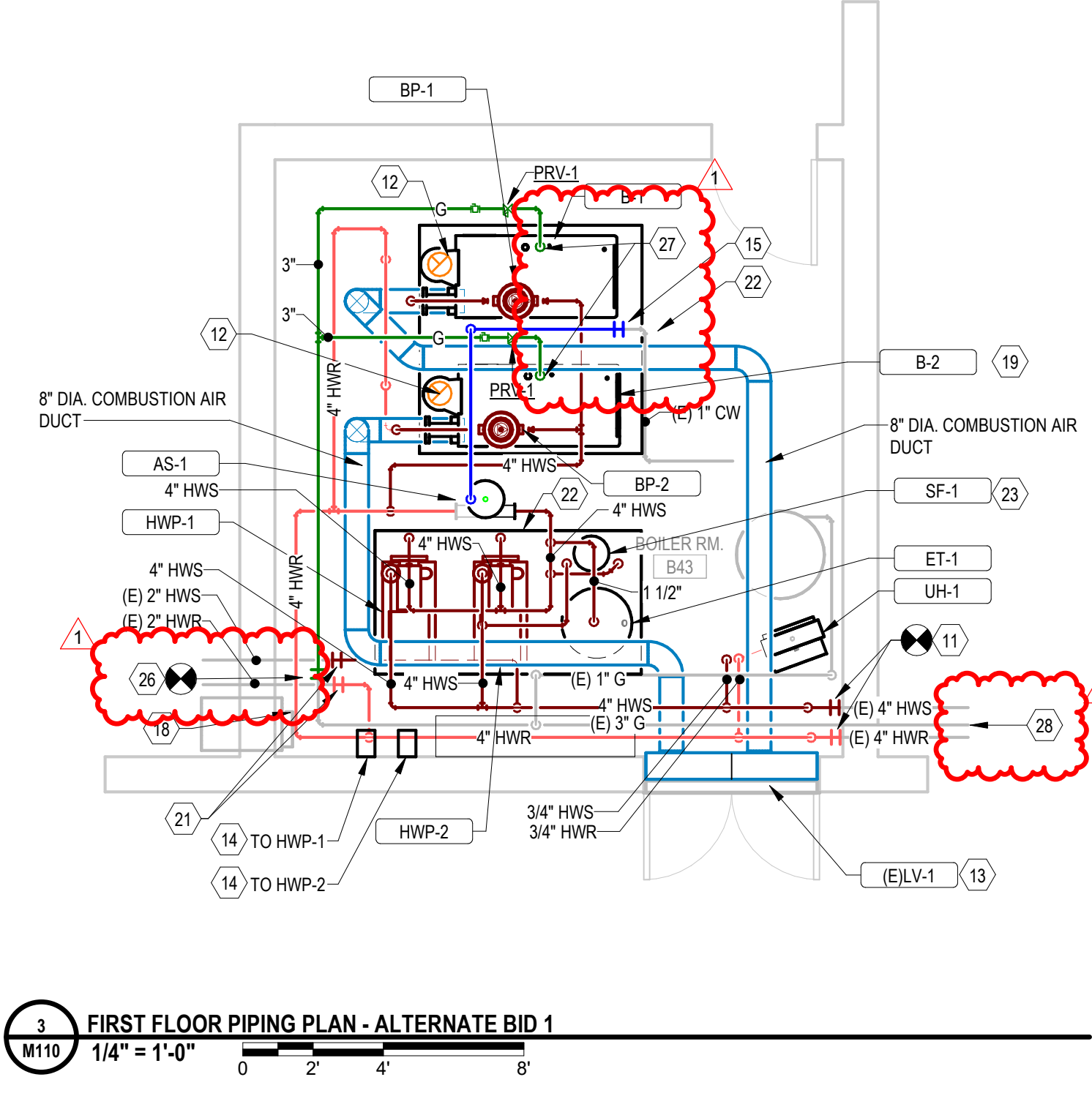
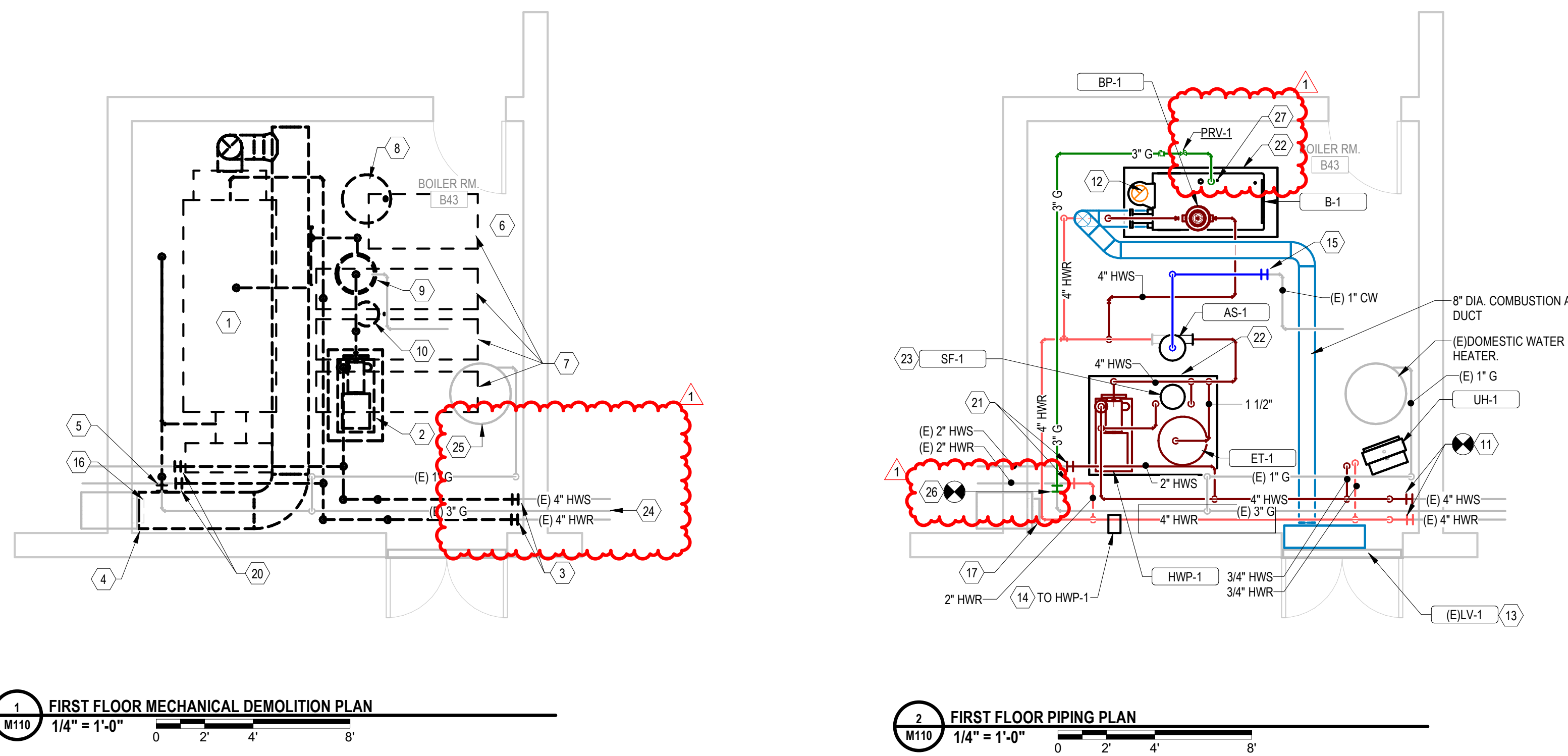
HVAC DEMOLITION GENERAL NOTES

- EXISTING SYSTEMS SHOWN ARE BASED ON EXISTING DRAWINGS AND FIELD VERIFIED TO THE EXTENT POSSIBLE. CONTRACTOR SHALL VERIFY THAT SERVICES INDICATED FOR REMOVAL DO NOT SERVE SPACES OUTSIDE THE PROJECT AREA. CONTRACTOR SHALL FIELD VERIFY THAT EXISTING SYSTEMS SHOWN ARE REPRESENTATIVE OF THE INSTALLED SYSTEMS AND REPORT MAJOR DISCREPANCIES TO ENGINEER OF RECORD.
- INACTIVE, ABANDONED SYSTEMS NOT SHOWN ARE TO BE REPORTED TO THE ENGINEER OF RECORD.
- CONTRACTOR IS TO COORDINATE ALL SERVICE INTERRUPTIONS WITH OWNER REPRESENTATIVES, MAINTENANCE STAFF, AND END-USERS. CONTRACTOR SHALL PROVIDE SUFFICIENT ADVANCE NOTICE TO ALL AFFECTED PARTIES OF IMPENDING OUTAGE.
- SYSTEMS INDICATED BY DASHED LINE ARE TO BE REMOVED IN THEIR ENTIRETY UNLESS OTHERWISE DESCRIBED BY PLAN NOTE(S). THIS INCLUDES THE REMOVAL OF EXISTING HANGERS, INSULATION, ASSOCIATED CONTROLS AND ACCESSORIES. ALL DUCTWORK AND PIPING TERMINATIONS NOT SHOWN AS BEING CAPPED SHALL BE CAPPED. CONTRACTOR SHALL PATCH INSULATION DAMAGED DURING DEMOLITION AND WHERE PIPING IS SHOWN TO BE CAPPED.
- WHEN EQUIPMENT REQUIRING ELECTRICAL POWER IS REMOVED, CONTRACTOR SHALL ALSO DEMOLISH EXISTING POWER WIRING AND CONDUIT. A LICENSED ELECTRICIAN SHALL BE RESPONSIBLE FOR REMOVING ALL POWER WIRING AND CONDUIT.
- WHERE REMAINING MECHANICAL, ELECTRICAL, PLUMBING, OR FIRE PROTECTION WORK PENETRATES EXISTING WALLS OR FLOORS, THE OPENING CREATED MUST BE REPAIRED TO MATCH THE EXISTING CONSTRUCTION AND FIRE RATING BY THE GENERAL CONTRACTOR TRADE SKILLED IN THE WORK TO BE PERFORMED.
- IF THE WORK OF OTHER TRADES IS CURRENTLY SUPPORTED BY WORK TO BE DEMOLISHED, CONTRACTOR SHALL FURNISH AND INSTALL NEW SUPPORTS.
- UNUSED HANGERS FOUND WITHIN THE PROJECT SCOPE AREA SHALL BE REMOVED. WHERE REQUIRED, PERFORM PRE-DEMOLITION SYSTEM TESTING (AIRFLOW, TEMPERATURE, ETC.) PRIOR TO BEGINNING ANY DEMOLITION.

- GENERAL NOTES:
- ALL HWSR PIPING SHALL BE A MINIMUM OF 3/4" UNLESS NOTED OTHERWISE.
 - ALL ABOVE FINISH FLOOR (A.F.F.) DIMENSIONS ARE TO BE MEASURED TO BOTTOM OF EQUIPMENT, DUCTWORK OR PIPING, UNLESS NOTED OTHERWISE.

PLAN NOTES

#	NOTE
1	REMOVE EXISTING HEATING WATER BOILER AND RELATED HEATING WATER PIPING, GAS LINE, DRAIN LINES, 12" DIA. FLUE, CONTROLS AND ACCESSORIES COMPLETE.
2	REMOVE EXISTING HEATING WATER PUMP, HEATING PIPING, CONCRETE PAD, CONTROLS AND ACCESSORIES COMPLETE.
3	REMOVE EXISTING 4" HEATING WATER SUPPLY AND RETURN LINES TO THIS POINT COMPLETE. PREPARE EXISTING HEATING WATER SUPPLY AND RETURN LINES FOR RECONNECTION AS REQUIRED. SEE PLANS THIS SHEET FOR NEW WORK.
4	REMOVE EXISTING 18" DIA. BOILER FLUE TO THIS POINT COMPLETE AND CAP AIRTIGHT AS REQUIRED.
5	REMOVE EXISTING 3" GAS LINE TO THIS POINT COMPLETE. PREPARE FOR RECONNECTION AS REQUIRED. SEE PLANS THIS SHEET FOR NEW WORK.
6	REMOVE EXISTING 1" COLD WATER MAKE-UP LINE TO THIS POINT COMPLETE AND PREPARE FOR RECONNECTION. SEE PLANS THIS SHEET FOR WORK.
7	REMOVE EXISTING ABANDONED HEATING WATER SUPPLY AND DOMESTIC WATER HORIZONTAL EXPANSION TANKS, PIPING, STRUCTURAL SUPPORTS AND ACCESSORIES COMPLETE. CUT STRUCTURAL BEAMS FLUSH WITH EXISTING WALLS.
8	REMOVE EXISTING EXPANSION TANK, PIPING AND ACCESSORIES COMPLETE.
9	REMOVE EXISTING HEATING WATER AIR SEPARATOR AND RELATED HEATING WATER LINES COMPLETE. SEE PLANS THIS SHEET FOR NEW WORK.
10	REMOVE EXISTING HEATING WATER SYSTEM CHEMICAL FEEDER AND PIPING COMPLETE.
11	CONNECT NEW 4" HEATING WATER SUPPLY AND RETURN LINES TO EXISTING 4" HEATING WATER SUPPLY AND RETURN LINES AS REQUIRED.
12	NEW 8" DIA. FLUE DUCT FROM BOILER UP THROUGH EXISTING ROOF. TERMINATE WITH WEATHERPROOF CAP PER MANUFACTURER'S RECOMMENDATIONS. CUT AND PATCH ROOF AS REQUIRED TO MATCH EXISTING ROOF AND INSTALL FLUE DUCT. SEE DETAIL 21800 AND 61800.
13	CONNECT NEW 8" DIA. COMBUSTION AIR DUCT FROM BOILER TO EXISTING 6x3 COMBUSTION LOUVER WITH PLENUM AS REQUIRED. LEAVING PORTION OF LOUVER OPEN TO THE BOILER ROOM FOR WATER HEATER COMBUSTION AIR.
14	NEW PUMP VARIABLE FREQUENCY DRIVE. MOUNT ON UNISTRUT AND SECURED TO EXISTING BLOCK WALL AS REQUIRED.
15	CONNECT NEW 1" COLD WATER MAKE-UP LINE TO EXISTING 1" COLD WATER MAKE-UP LINE AS REQUIRED.
16	REMOVE EXISTING SIEMENS CONTROLLER. THE EXISTING PANEL IS TO REMAIN. PREPARE FOR RECONNECTION. SEE PLANS THIS SHEET FOR NEW WORK. CONTRACTOR HAS THE OPTION TO REPLACE THE EXISTING PANEL.
17	BASE BID: TIE IN NEW BOILER, BOILER PUMP AND PUMP VFD TO NEW SIEMENS CONTROLLER IN EXISTING PANEL. CONTRACTOR HAS THE OPTION TO REPLACE THE EXISTING PANEL.
18	ALTERNATE BID #1: TIE IN NEW BOILERS, BOILER PUMPS, PUMP VFDs TO NEW SIEMENS CONTROLLER IN EXISTING PANEL. CONTRACTOR HAS THE OPTION TO REPLACE THE EXISTING PANEL.
19	FOR ALTERNATE BID #1 PROVIDE STAND-BY BOILER B-2 AND ASSOCIATED HEATING WATER PUMP HWP-2, BOILER PUMP BP-2, ADDED PIPING, COMBUSTION AIR DUCT, FLUE DUCT, GAS PIPING AND ASSOCIATED CONTROL POINTS.
20	REMOVE EXISTING 2" HEATING WATER SUPPLY AND RETURN LINES TO THIS POINT COMPLETE. PREPARE EXISTING HEATING WATER SUPPLY AND RETURN LINES FOR RECONNECTION AS REQUIRED. SEE PLANS THIS SHEET FOR NEW WORK.
21	CONNECT NEW 2" HEATING WATER SUPPLY AND RETURN LINES TO EXISTING 2" HEATING WATER SUPPLY AND RETURN LINES AS REQUIRED.
22	NEW 4" CONCRETE PAD, SEE DETAIL SHEET M200.
23	SYSTEM BY-PASS FILTER FEEDER WITH 20 MICRON BAG FILTERS AND MINIMUM 5 GALLON LUBE OIL RESERVE. SEE DETAIL SHEET M200.
24	EXISTING 3" GAS MAIN TO REMAIN.
25	EXISTING DOMESTIC WATER HEATER AND ALL ASSOCIATED PIPING AND ACCESSORIES TO REMAIN.
26	CONNECT NEW 3" GAS TO EXISTING GAS. CONTRACTOR TO VERIFY EXACT SIZE AND LOCATION IN FIELD.
27	CONNECT NEW 3" GAS TO BOILER (2,500 MBH).
28	CONTRACTOR TO VERIFY AND COORDINATE ALL EXISTING AND NEW GAS LOAD CAPACITIES PRIOR TO START OF CONSTRUCTION. IF GAS LOAD CAPACITIES EXCEED THE EXISTING SYSTEM AND METER CAPACITIES, THE CONTRACTOR SHALL COORDINATE REPLACEMENT OR UPGRADE OF EXISTING GAS SYSTEM OR METER WITH GAS UTILITY COMPANY. EXISTING GAS METER LOCATION IS APPROXIMATELY 225' AWAY FROM THIS LOCATION.



CONDENSING BOILER SCHEDULE

REMARKS:
1. PROVIDE CONDENSATE TRAP AND CONDENSATION NEUTRALIZATION KIT. ROUTE 1" STAINLESS STEEL PIPE TO DRAIN. PROVIDE REMOVABLE UNION FITTINGS TO ALLOW FOR MAINTENANCE.
2. PROVIDE DOUBLE-WALLED STAINLESS STEEL VENT AND DOUBLE-WALLED GALVANIZED STEEL COMBUSTION AIR KIT.
3. BOILER DIMENSIONS SHALL BE SIMILAR TO 78" X 28" W X 55" D.
4. PROVIDE EMERGENCY STOP SWITCH FOR GAS AND ELECTRIC.
5. ALTERNATE BID #1.

MARK	LOCATION	NAME	NO.	TYPE	GAS BURNER		WATERSIDE										DESIGN REFERENCE		REMARKS				
					CAP (MBH)	INPUT (MBH)	FUEL TYPE	PRESS AVAIL ("WC)	FLUID	FLOW (GPM)	EWT (°F)	LWT (°F)	TURNDOWN RATIO	MAX PD (FTH2O)	VOL (GAL)	HW CONNECTION	THERMAL EFF	Equipment Weight (LB)		FLA	VOLTS/PHASE/HERTZ	EMERGENCY POWER	MANUFACTURER
B-1	BOILER RM.	B43	CONDENSING	2175	2500	NG	14.0	WATER	145.0	150	180	15:1	7.0	16.3	4"	87%	2200	10.0	208/60/3	No	AERCO BENCHMARK	2500	1 THRU 4
B-2	BOILER RM.	B43	CONDENSING	2175	2500	NG	14.0	WATER	145.0	150	180	15:1	7.0	16.3	4"	87%	2200	10.0	208/60/3	No	AERCO BENCHMARK	2500	1 THRU 5

UNIT HEATER SCHEDULE

REMARKS:
1. PROVIDE WITH FAN GUARD AND HORIZONTAL/VERTICAL LOUVERS FOR 4-WAY AIR CONTROL.
2. PROVIDE LINE VOLTAGE THERMOSTAT WITH AUTO/OFF/FAN SWITCH OPTIONS.

MARK	LOCATION	NAME	NO.	MANUFACTURER	MODEL NO.	CFM	AIRSIDE		HEATING COIL			MOTOR			REMARKS	
							EAT(°F)	LAT(°F)	GPM	EWT (°F)	LWT (°F)	WPD (FTH2O)	FLA	VOLT		PH
UH-1	BOILER RM.	B43	TRANE	HS-25	580	55.0	95.0	2.5	180	150	0.0	1.2	120	1	60	1.2

PUMP SCHEDULE

REMARKS:
1. PROVIDE VFD BY PUMP MANUFACTURER.
2. BOILER PUMP BY BOILER MANUFACTURER.
3. ALTERNATE BID #1.

MARK	LOCATION	NAME	NO.	SYSTEM	FLOW (GPM)	DESIGN HEAD (FT. HD.)	MAX SHUT OFF HEAD (FT. HD.)	EFFICIENCY (%)	PUMP TYPE	FLUID TYPE	TEMP (°F)	MOTOR			PUMP SIZE		DESIGN REFERENCE		REMARKS		
												HP	RPM	VOLT	PH	VSC	SUCTION (IN.)	DISCHARGE (IN.)		MANUFACTURER	MODEL NO.
HWP-1	BOILER RM.	B43	HEATING WATER	HEATING WATER	145	80	85	71.0	BASE MOUNTED END SUCTION	WATER	180	7.5	1800	208	3	YES	2.5	2	B&G	E-1510 2BD	1
HWP-2	BOILER RM.	B43	HEATING WATER	HEATING WATER	145	80	85	71.0	BASE MOUNTED END SUCTION	WATER	180	7.5	1800	208	3	YES	2.5	2	B&G	E-1510 2BD	1.3
BP-1	BOILER RM.	B43	BOILER PUMP	BOILER PUMP	145	25	30	72.0	INLINE	WATER	180	1.5	1800	208	3	NO	3	3	B&G	E80-3X3X7C	2
BP-2	BOILER RM.	B43	BOILER PUMP	BOILER PUMP	145	25	30	72.0	INLINE	WATER	180	1.5	1800	208	3	NO	3	3	B&G	E80-3X3X7C	2.3

EXPANSION TANK SCHEDULE

REMARKS:
1. FILL PRESSURE SHALL BE FIELD ADJUSTABLE AND SET EQUAL TO DOMESTIC WATER MAKE UP PRESSURE REDUCING VALVE.

MARK	LOCATION	NAME	NO.	SYSTEM	UNIT DIMENSIONS		SYSTEM TEMP RANGE		PRV FILL PESS. AT TANK (PSIG)	PRESSURE RANGE		MIN ACCEPTANCE VOLUME	DESIGN REFERENCE		REMARKS
					HEIGHT	DIAMETER	MIN (°F)	MAX (°F)		RELIEF VALVE (PSIG)	MAX. AT TANK (PSIG)		MANUFACTURER	MODEL	
ET-1	BOILER	B43	HEATING WATER	HEATING WATER	43"	24"	40	180	20	100	125	53.0 gal	B&G	6200	1

AIR SEPARATOR SCHEDULE

REMARKS:
1. ASME CERTIFIED.

MARK	LOCATION	NAME	NO.	SYSTEM SERVED	CAPACITY (GPM)	CONNECTION SIZE	MAX W.P.D. (FT. HD.)	BUILT-IN STRAINER REQUIRED	DESIGN REFERENCE		REMARKS
									MANUFACTURER	MODEL	
AS-1	BOILER RM.	B43	HEATING WATER	HEATING WATER	175.0	4"	4.0	Yes	BELL & GOSSETT	R-4F	1



CONTROL PANEL PICTURES

HEATING WATER SYSTEM TAB DEMOLITION NOTE:

- PRIOR TO DEMOLITION, TAKE EXISTING PUMP FLOW PRE-READING. NOTIFY THE ENGINEER OF DISCREPANCIES BETWEEN ACTUAL OPERATION AND SCHEDULED OPERATION FROM EXISTING HEATING CHILLED WATER GPMS SCHEDULED.

CHEMICAL TREATMENT:

- PROVIDE HEATING CHEMICAL ANALYSIS BY THE OWNERS NORMAL SUPPLIER PRIOR TO CONSTRUCTION. RESTORE CHEMICAL LEVEL AT COMPLETION OF PIPING WITH WRITTEN VERIFICATION BY THE SUPPLIER.

HEATING WATER SYSTEM TAB NOTE:

- BALANCE HEATING WATER PUMP FLOW TO MATCH EXISTING PRE-READING PUMP FLOW.

CHEMICAL TREATMENT:

- PROVIDE HEATING WATER SYSTEM CHEMICAL ANALYSIS BY THE OWNERS NORMAL SUPPLIER PRIOR TO CONSTRUCTION. RESTORE CHEMICAL LEVEL AT COMPLETION OF PIPING WITH WRITTEN VERIFICATION BY THE SUPPLIER.