

**SALAMATOF HEIGHTS
BOILER ROOM REMODEL**
COOK INLET HOUSING AUTHORITY
9131 Centennial Circle, Anchorage, Alaska 99517

Revision Schedule		
No.	Description	Date

Drawn: NZS
Reviewed: ACT
Date: 06/27/2024
Job No: 2024.52.0

Sheet Contents
MECHANICAL SCHEDULES

Drawing No.
M1
1 of 5M
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MECHANICAL LEGEND

	DENOTES DEMOLITION
	COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER RECIRCULATED PIPING
	PIPING, SEE ABBREVIATIONS FOR MEDIA
	DIRECTION OF FLOW
	PIPE UP
	PIPE DOWN
	TEE UP
	TEE DOWN
	REDUCER / INCREASER
	CAP
	UNION
	ISOLATION VALVE
	BALANCE VALVE
	CHECK VALVE
	STRAINER WITH BLOWDOWN
	FLEXIBLE PIPING CONNECTOR
	2-WAY CONTROL VALVE
	3-WAY CONTROL VALVE
	PRESSURE REDUCING VALVE
	PRESSURE/TEMPERATURE RELIEF VALVE
	THERMOMETER
	PRESSURE GAUGE WITH ISOLATION COCK
	PUMP
	FLOOR DRAIN
	DUCT UP & DOWN (ROUND)
	THERMOSTAT OR SENSOR
	POINT OF CONNECTION TO EXISTING
	KEY NOTE
	DETAIL NUMBER
	SHEET LOCATED ON

EXPANSION TANK SCHEDULE

TAG	MFGR / MODEL	SERVICE	FLUID	TOTAL VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	DIMENSIONS	MATERIAL	LABEL	REMARKS
ET-1	AMTROL / EXTROL AX-144V	HYDRONIC EXPANSION	WATER	77	34	24"Ø x 52"	STEEL/BUTYL	ASME	PRECHARGE TO EXISTING COLD CHARGE, FIELD VERIFY EXISTING SYSTEM CHARGE PRESSURE
ET-2	AMTROL / THERM-X-TROL ST-80V	DOMESTIC HOT WATER EXPANSION	WATER	53	35	24"Ø x 37"	STEEL/BUTYL	ASME/NSF	PRECHARGE TO WATER SUPPLY STATIC PRESSURE

HOT WATER GENERATOR SCHEDULE

TAG	MFGR / MODEL	DOMESTIC HOT WATER				HEATING MEDIUM				LABEL	REMARKS	
		RECOVERY (GPH)	STORAGE (GALLONS)	EWT	LWT	FLUID	FLOW RATE (GPM)	WPD (FT HD)	EFT			LFT
HWG-1	TRIANGLE TUBE / SMART 316	360	119	40°F	140°F	WATER	30.0	3'	180°F	150°F	NSF	SCHEDULED RECOVERY BASED ON DESIGN CONDITIONS, TEMPERATURE AND PRESSURE RELIEF VALVE
HWG-2	TRIANGLE TUBE / SMART 316	360	119	40°F	140°F	WATER	30.0	3'	180°F	150°F	NSF	SCHEDULED RECOVERY BASED ON DESIGN CONDITIONS, TEMPERATURE AND PRESSURE RELIEF VALVE

TEMPERING VALVE SCHEDULE

TAG	MFGR / MODEL	INLETS SIZE	OUTLET SIZE	FLOW RATE AT 5 PSI (GPM)	CV	CONSTRUCTION	ELECTRICAL DATA		LABEL	REMARKS
							AMPS	VOLTS/PH		
TV-1	POWERS / LFIS150VL	1-1/2"	1-1/2"	50	22.5	STAINLESS STEEL	0.55 AMPS	120/1	ASSE 1017, NSF	SET OUTLET TEMPERATURE FOR 120°F, LEAD FREE, CONTROL MODULE, COLD WATER PROBE, HOT WATER PROBE AND MIX WATER PROBE

AIR SEPARATOR SCHEDULE

TAG	MFGR / MODEL	SERVICE	FLUID	FLOW RATE (GPM)	WPD (FT HD)	INLET/OUTLET SIZE	DIMENSIONS	LABEL	REMARKS
AS-1	SPIROTHERM / VDT-600 M	HEATING SYSTEM	WATER	340	<3.0'	6"	41.7"H x 12.8"Ø	ASME	COMBINATION AIR AND DIRT SEPARATOR WITH AUTO AIR VENT AND MAGNETIC SEPARATOR

PUMP SCHEDULE

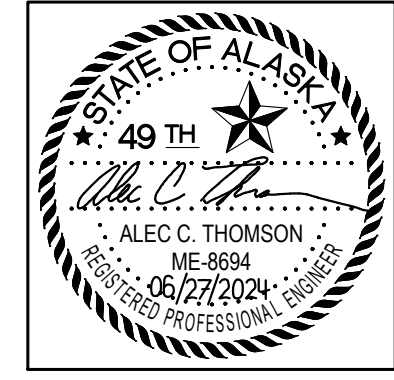
TAG	MFGR / MODEL	SERVICE	FLUID	FLOW RATE (GPM)	HEAD (FEET)	MOTOR DATA			REMARKS
						RPM	HP/W	VOLTS/PH	
BC-1	GRUNDFOS / MAGNA3 50-150	BLR-1 CIRCULATION	WATER	61	23'	4,600	598W	120/1	EC MOTOR, SPEED CONTROL BY BOILER
BC-2	GRUNDFOS / MAGNA3 50-150	BLR-2 CIRCULATION	WATER	61	23'	4,600	598W	120/1	EC MOTOR, SPEED CONTROL BY BOILER
BC-3	GRUNDFOS / MAGNA3 50-150	BLR-3 CIRCULATION	WATER	61	23'	4,600	598W	120/1	EC MOTOR, SPEED CONTROL BY BOILER
BC-4	GRUNDFOS / MAGNA3 50-150	BLR-4 CIRCULATION	WATER	61	23'	4,600	598W	120/1	EC MOTOR, SPEED CONTROL BY BOILER
BC-5	GRUNDFOS / MAGNA3 50-150	BLR-5 CIRCULATION	WATER	61	23'	4,600	598W	120/1	EC MOTOR, SPEED CONTROL BY BOILER
CP-1A	GRUNDFOS / TPE3 40-240	BUILDING A&B HEAT	WATER	80	65'	5,900	2 HP	208/1	PERMANENT MAGNET MOTOR, INTEGRAL CONTROLLER AND DRIVE
CP-1B	GRUNDFOS / TPE3 40-240	BUILDING A&B HEAT	WATER	80	65'	5,900	2 HP	208/1	LAG PUMP TO CP-1A, PERMANENT MAGNET MOTOR, INTEGRAL CONTROLLER AND DRIVE
CP-2A	GRUNDFOS / TPE3 40-240	BUILDING C HEAT	WATER	60	70'	5,900	2 HP	208/1	PERMANENT MAGNET MOTOR, INTEGRAL CONTROLLER AND DRIVE
CP-2B	GRUNDFOS / TPE3 40-240	BUILDING C HEAT	WATER	60	70'	5,900	2 HP	208/1	LAG PUMP TO CP-2A, PERMANENT MAGNET MOTOR, INTEGRAL CONTROLLER AND DRIVE
CP-3	GRUNDFOS / MAGNA3 40-120	HWG CIRCULATION	WATER	60	20'	4,000	448W	120/1	EC MOTOR, INTEGRAL SPEED CONTROLLER
DCP-1	UPS 26-99 SFC	DOMESTIC HOT WATER CIRCULATION	WATER	5.5	20'	3,380	197W	120/1	RATED FOR OPEN SYSTEMS, LEAD FREE, NSF LABELED

BOILER SCHEDULE

TAG	MFGR / MODEL	TYPE	FLUID	FUEL	BURNER INPUT (MBH)	GROSS OUTPUT (MBH)	ELECTRICAL DATA		LABEL	REMARKS
							MCA	VOLTS/PH		
BLR-1	LOCHINVAR / KBX-800N	STAINLESS STEEL	WATER	NATURAL GAS	800	776	5.4	120/1	ASME	WITH TRIM PER INTERNATIONAL MECHANICAL CODE CHAPTER 10, 180°F OPERATING SETPOINT
BLR-2	LOCHINVAR / KBX-800N	STAINLESS STEEL	WATER	NATURAL GAS	800	776	5.4	120/1	ASME	WITH TRIM PER INTERNATIONAL MECHANICAL CODE CHAPTER 10, 180°F OPERATING SETPOINT
BLR-3	LOCHINVAR / KBX-800N	STAINLESS STEEL	WATER	NATURAL GAS	800	776	5.4	120/1	ASME	WITH TRIM PER INTERNATIONAL MECHANICAL CODE CHAPTER 10, 180°F OPERATING SETPOINT
BLR-4	LOCHINVAR / KBX-800N	STAINLESS STEEL	WATER	NATURAL GAS	800	776	5.4	120/1	ASME	WITH TRIM PER INTERNATIONAL MECHANICAL CODE CHAPTER 10, 180°F OPERATING SETPOINT
BLR-5	LOCHINVAR / KBX-800N	STAINLESS STEEL	WATER	NATURAL GAS	800	776	5.4	120/1	ASME	WITH TRIM PER INTERNATIONAL MECHANICAL CODE CHAPTER 10, 180°F OPERATING SETPOINT

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	DWG	DRAWING	GPM	GALLONS PER MINUTE	LFT	LEAVING FLUID TEMPERATURE	PH	PHASE
AMPS	AMPERES	(E)	EXISTING	H	HEIGHT	LWT	LEAVING WATER TEMPERATURE	PSI	POUNDS PER SQUARE INCH
APPROX	APPROXIMATE	EA	EACH	HD	HEAD	MAX	MAXIMUM	PSIG	POUNDS PER SQUARE INCH GAUGE
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	EFT	ENTERING FLUID TEMPERATURE	HR	HOUR	MBH	THOUSAND BTU PER HOUR	RPM	REVOLUTIONS PER MINUTE
BTU	BRITISH THERMAL UNIT	EWT	ENTERING WATER TEMPERATURE	HW	HOT WATER	MCA	MINIMUM CIRCUIT AMPACITY	SNGR	SNOWMELT GLYCOL RETURN
BTUH	BRITISH THERMAL UNIT PER HOUR	*F	DEGREES FAHRENHEIT	HWC	HOT WATER CIRCULATED	MFGR	MANUFACTURER	SNGS	SNOWMELT GLYCOL SUPPLY
COND	CONDENSATE	FLA	FULL LOAD AMPERES	HP	HORSEPOWER	MFS	MAXIMUM FUSE SIZE	SSTL	STAINLESS STEEL
CONN	CONNECTION	FPD	FLUID PRESSURE DROP	HWR	HEATING WATER RETURN	MIN	MINIMUM	TEMP	TEMPERATURE
Cu	COPPER	FPM	FEET PER MINUTE	HWS	HEATING WATER SUPPLY	MOP	MAXIMUM OVERCURRENT PROTECTION	TYP	TYPICAL
CW	COLD WATER	FT	FEET	ID	INSIDE DIAMETER	NSF	NATIONAL SANITARY FOUNDATION	UL	UNDERWRITERS LABORATORIES
Ø	DIAMETER	G	NATURAL GAS	IN	INCH	OD	OUTSIDE DIAMETER	UPC	UNIFORM PLUMBING CODE
DIA	DIAMETER	GA	GAUGE	IMC	INTERNATIONAL MECHANICAL CODE	OPD	OVERCURRENT PROTECTION DEVICE	WPD	WATER PRESSURE DROP
DEG	DEGREE	GPH	GALLONS PER HOUR	LBS	POUNDS	PD	PRESSURE DROP		



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Drawn:	NZS
Reviewed:	ACT
Date:	06/27/2024
Job No:	2024.52.0

Sheet Contents
 BOILER ROOM
 DEMOLITION PLAN

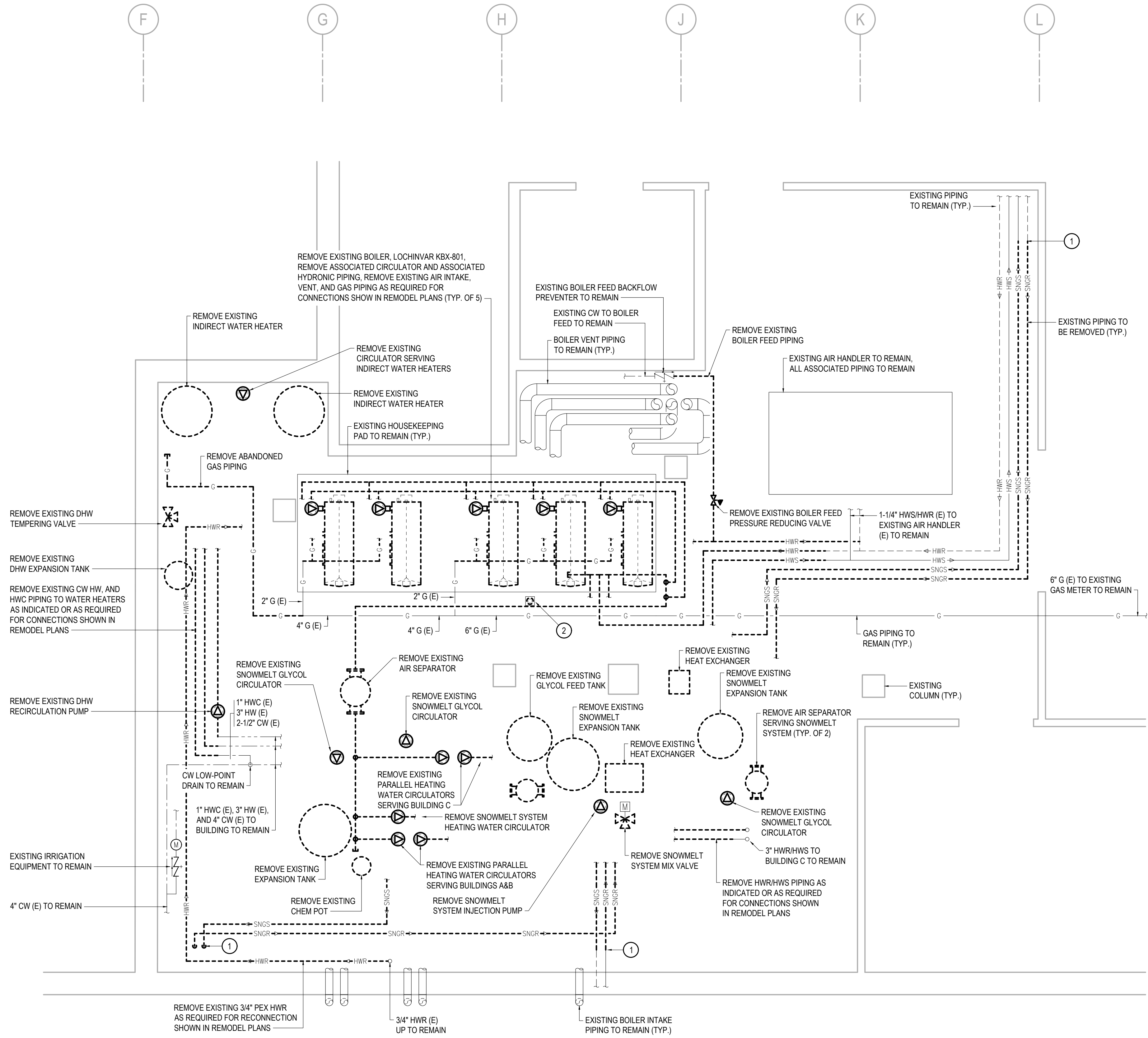
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SHEET NOTES

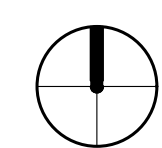
- EXISTING SYSTEMS SHOWN ON THE DRAWINGS ARE FROM RECORD DRAWINGS AND A NON-DESTRUCTIVE WALK THROUGH OF THE SPACE. ACTUAL SYSTEMS MAY VARY FROM THE INFORMATION INDICATED ON THE DRAWINGS. THE DRAWINGS MAY NOT SHOW ALL EXISTING SYSTEMS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, LOCATIONS, SERVICE, AND SIZES BEFORE START OF WORK.
- COORDINATE WITH BUILDING OWNER FOR ALL WORK TAKING PLACE IN OCCUPIED TENANT SPACES AND FOR WORK REQUIRING SHUT DOWN OF BUILDING SYSTEMS.
- REMOVE ALL ABANDONED HYDRONIC PIPING WITHIN MECHANICAL ROOM. CLEARLY MARK ANY REMAINING TERMINATIONS AS ABANDONED.
- CONTRACTOR TO FIELD VERIFY SIZE, LOCATION, AND SERVICE OF EXISTING SYSTEMS AND NOTIFY ENGINEER OF DISCREPANCIES.

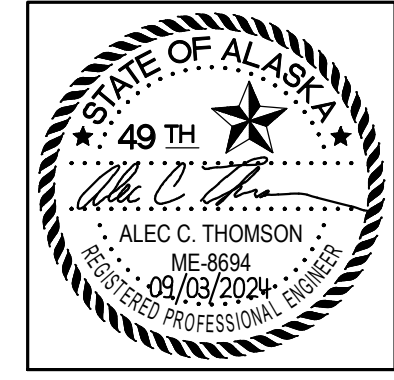
KEY NOTES

- REMOVE ALL SNOWMELT PIPING WITHIN THE MECHANICAL ROOM. DRAIN AND CAP ABANDONED PIPING. CLEARLY LABEL PIPING ABANDONED WITH SERVICE AND FLOW DIRECTION.
- EXISTING FLOOR DRAIN TO REMAIN. STRAINER TO BE REPLACED.



1 BOILER ROOM DEMOLITION PLAN
 SCALE: 3/8" = 1'-0"





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Revision Schedule		
No.	Description	Date
1	ALT HWG LOCATION	2024.09.03

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 BOILER ROOM
 REMODEL PLAN

Drawing No.
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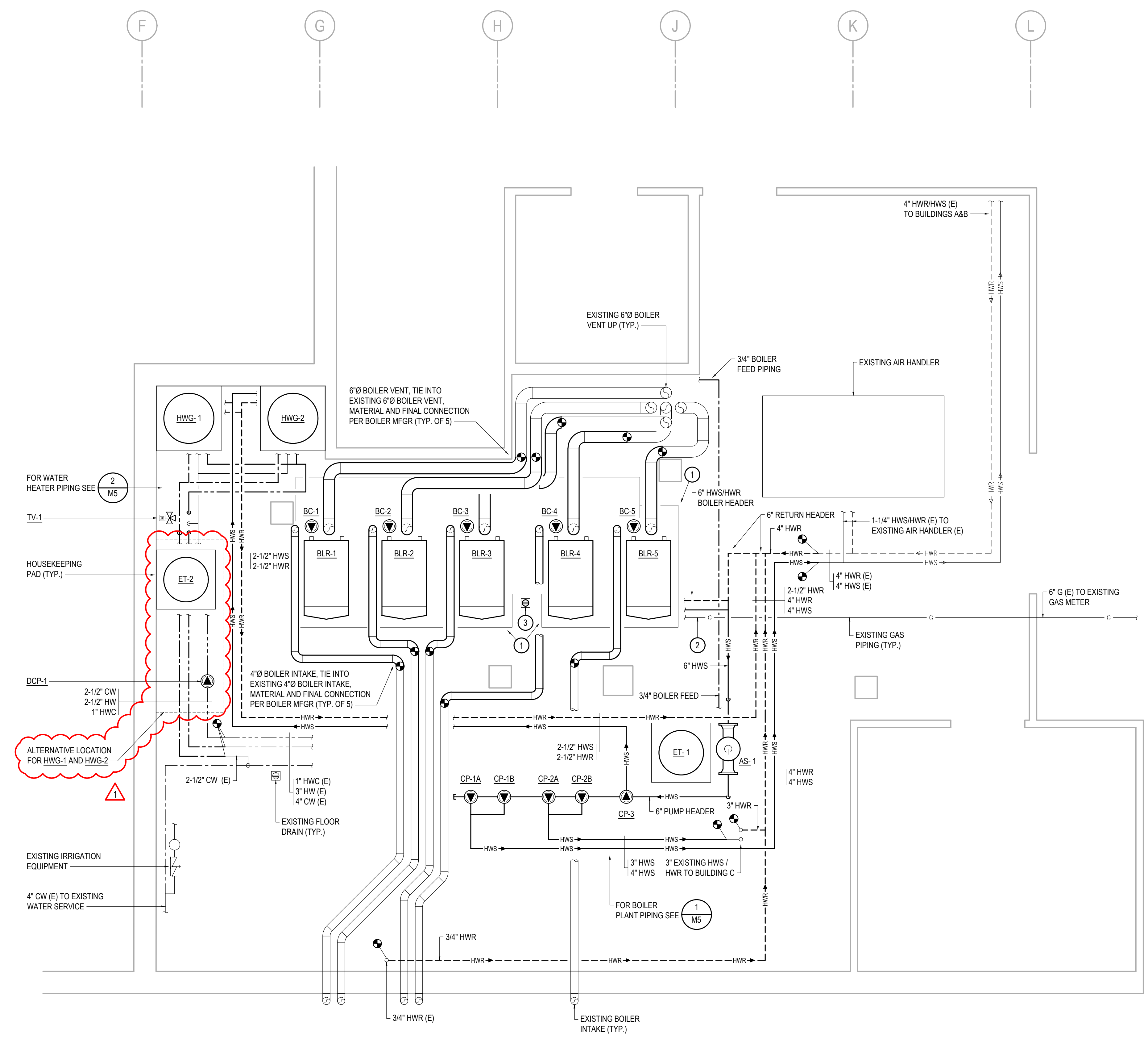
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- COORDINATE WITH BUILDING OWNER FOR ALL WORK TAKING PLACE IN OCCUPIED TENANT SPACES AND FOR WORK REQUIRING SHUT DOWN OF BUILDING SYSTEMS.
- AIR SEPARATORS ARE TO BE SUPPORTED AND RESTRAINED FOR UNIT WEIGHT AND FULL WATER CAPACITY.
- CONTRACTOR TO FIELD VERIFY SIZE, LOCATION, AND SERVICE OF EXISTING SYSTEMS WHERE MARKED FOR RECONNECTION AND NOTIFY ENGINEER OF DISCREPANCIES.

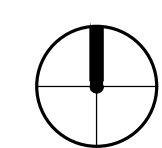
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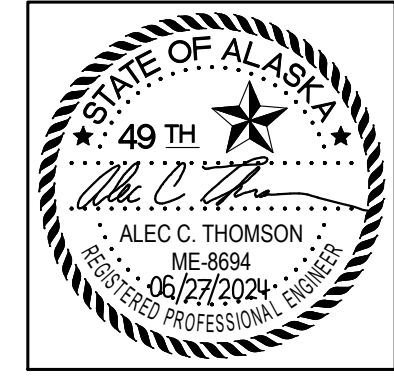
- EXTEND EXISTING HOUSEKEEPING PAD TO IMPROVE CLEARANCE BETWEEN AND BEHIND BOILERS. NOTCH EXTENSION AROUND EXISTING FLOOR DRAIN.
- 6" G (E). SEE 1/M5 FOR GAS PIPING TO BOILERS.
- EXISTING FLOOR DRAIN. REPLACE STRAINER.

PROVIDE STRUCTURAL AND SEISMIC CALCULATIONS PLUS FASTENING DETAILS FOR BOILERS AND TANKS INCLUDING THE ENGINEER'S STAMP AND SIGNATURE. FOR STRUCTURAL REVIEW ON A DEFERRED SUBMITTAL BASIS. REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS.



1 BOILER ROOM REMODEL PLAN
 SCALE: 3/8" = 1'-0"





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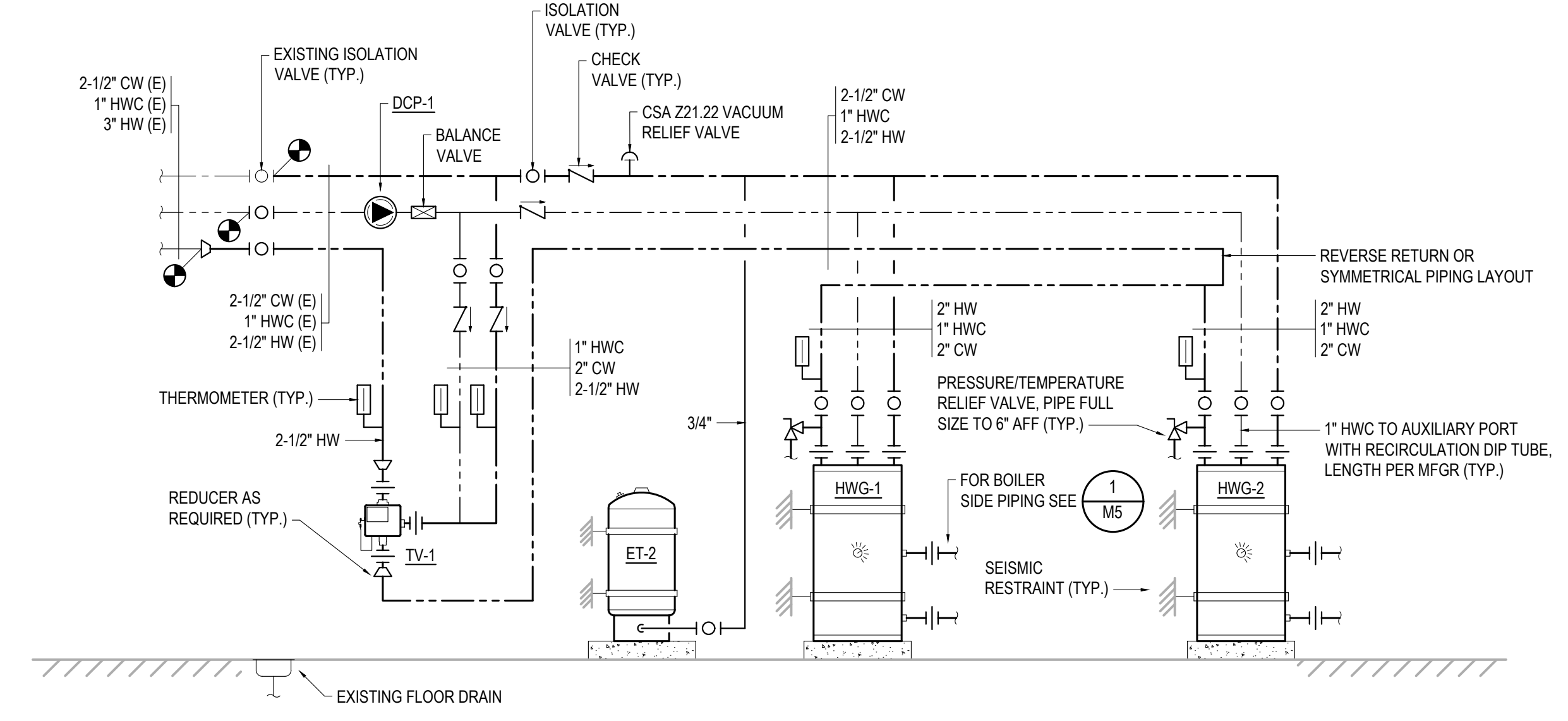
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Sheet Contents
 MECHANICAL DIAGRAMS

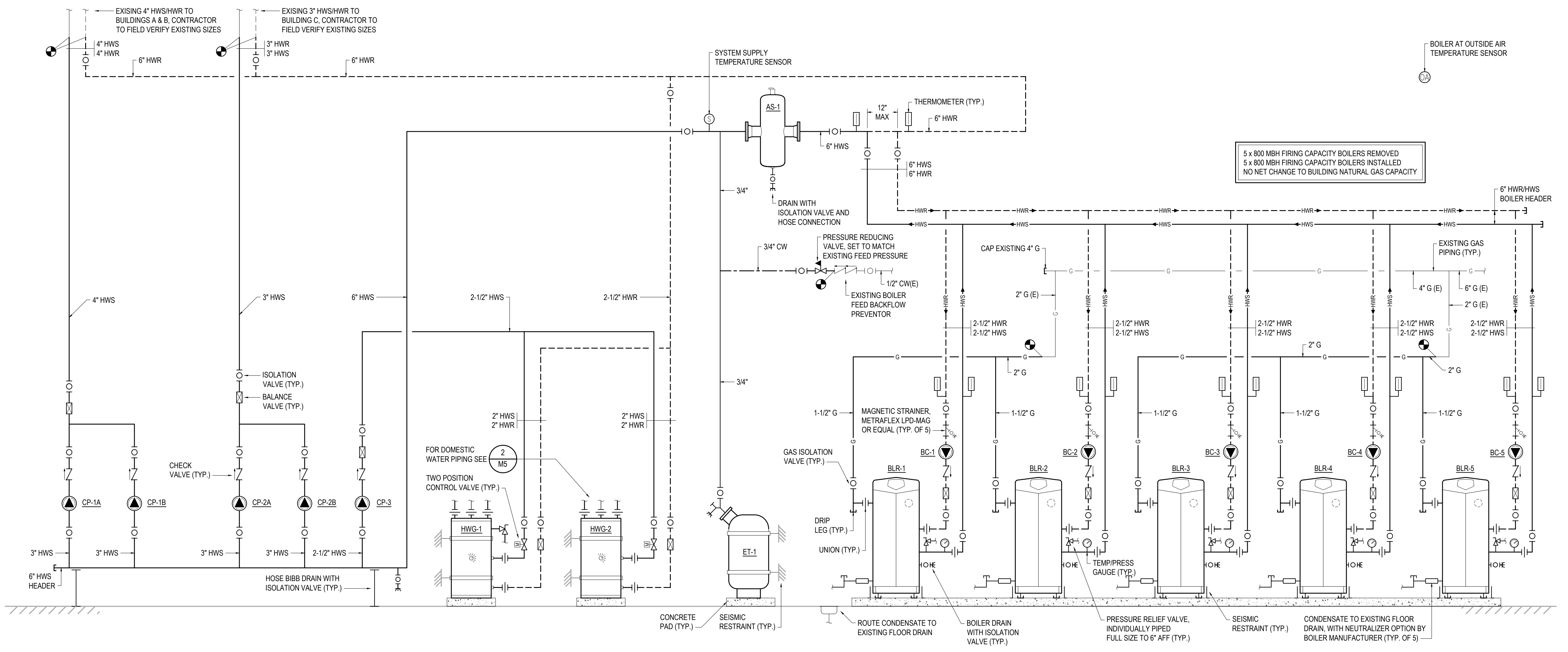
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2 WATER HEATER DOMESTIC WATER PIPING DIAGRAM
 SCALE: NONE



1 BOILER PIPING DIAGRAM
 SCALE: NONE