STEAM BOILER

Number	ASME PRESSURE RATING	RELIEF VALVE SETTING	OPERATING PRESSURE	OUTPUT: BOILER HP	OUTPUT: POUNDS PER HOUR	OUTPUT: PRESSURE	NO. PPM	INPUT: PRIMARY FUEL	INPUT: SECONDARY FUEL	INPUT: GAS: TYPE	INPUT: GAS: MBH	INPUT: GAS: PRESSURE PSIG	INPUT: GAS: QUANTITY OF GAS VENTS	INPUT: GAS: TURN DOWN RATIO	INPUT: OIL: TYPE	INPUT: OIL: GPH	INPUT: OIL: PRESSURE PSIG	INPUT: OIL: TURN DOWN RATIO	BURNER PUMP HP	FAN MOTOR HP	AIR COMPRESSOR HP	ACCESSORIES: CONTROL TRANSFORMER	ACCESSORIES: IRI GAS TRAIN	ACCESSORIES: SOOT BLOWER	ACCESSORIES: ECONOMIZER	ACCESSORIES: DC CONTROL TIE INTO AUTOMATION	ACCESSORIES: 16 S/S DRAFT CONTROL DAMPER	ACCESSORIES: DUAL LEVEL CONTROLLERS	ACCESSORIES: –	ACCESSORIES: –	ACCESSORIES: –	REMARKS	VOLTAGE	EMERGENCY POWER
B-1	–	–	75	400	13,390	75	30	GAS	OIL	NAT	163.3	–	–	5	No. 2	116.6	–	–	3/4	15	7.5	YES	YES	NO	NO	YES	NO	YES	–	–	–	BASED ON CLEAVER BROOKS CB-LE	480	YES
B-2	–	–	75	400	13,390	75	30	GAS	OIL	NAT	163.3	–	–	5	No. 2	116.6	–	–	3/4	15	7.5	YES	YES	NO	NO	YES	NO	YES	–	–	–	BASED ON CLEAVER BROOKS CB-LE	480	YES
B-3 FUTURE	–	–	–	400	–	–	–	GAS	OIL	NAT	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	BASED ON CLEAVER BROOKS CB-LE	480	YES
B-4 FUTURE	–	–	–	400	–	–	–	GAS	OIL	NAT	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	BASED ON CLEAVER BROOKS CB-LE	480	YES

NOTES:
1. BOILERS SHALL INCLUDE LOW NOX (30 PPM) BURNERS & CONTROLS.
2. PROVIDE SINGLE POINT POWER CONNECTION.
3. RELIEF VALVES: 3 REQUIRED, (1)2 1/2" & (2)2".
4. BASED ON 1000 BTUH CUBIC FEET OF GAS.
5. PROVIDE EACH BOILER W/ MODULATING DRAFT CONTROL

BOILER FEEDWATER/TRANSFER PUMP SCHEDULE

UNIT NO.	LOCATION	SERVICE	GPM	TOTAL HEAD FT. H_2O	MAX. N.P.S.H. FT. H_2O ABS	MOTOR: RPM	MOTOR: HP	MOTOR: V	MOTOR: PH	MOTOR: HZ	TANK CAPACITY	DIMENSIONS	RATING #STM./HR.	SELECTIONS BASED ON	EMERG. POWER
BFP-1	BOILER PLANT	BOILER #1	50	–	–	3450	7 1/2	460	3	60	900	–	–	TDH GRUNDFOS CR10-9	YES
BFP-2	BOILER PLANT	BOILER #2	50	–	–	3450	7 1/2	460	3	60	900	–	–	TDH GRUNDFOS CR10-9	YES
BFP-3 (FUTURE)	BOILER PLANT	FUTURE BOILER #3	70	–	–	3450	15	460	3	60	900	–	–	TDH GRUNDFOS CR15-7	YES
BFP-4 (FUTURE)	BOILER PLANT	FUTURE BOILER #4	70	–	–	3450	15	460	3	60	900	–	–	TDH GRUNDFOS CR15-7	YES
BFP-5 (FUTURE)	BOILER PLANT	BOILER #1 THRU #4	70	–	–	3450	15	460	3	60	900	–	–	TDH GRUNDFOS CR15-7	YES
TP-1	BOILER PLANT	SURGE TANK	105	–	–	3450	5	460	3	60	900	–	–	TDH GRUNDFOS CR20-2	YES
TP-2	BOILER PLANT	SURGE TANK	105	–	–	3450	5	460	3	60	900	–	–	TDH GRUNDFOS CR20-2	YES

NOTES:
1. BFP-2 100% STAND BY.
2. TP-2 100% STAND BY.
3. FUTURE BFP-5 100% STAND BY.

WATER PUMP SCHEDULE

UNIT NUMBER	LOCATION	SERVICE	TYPE	GPM	TOTAL HEAD FT. H_2O	MAX NPSH	MOTOR DATA @ 60 HZ: BHP	MHP	RPM	VOLTS	PHASE	SIMILAR TO	NOTES SEE BELOW	EMER POWER
HWP-1	GROUND MER	HOT WATER	END SUCTION	400	70	–	–	20	1750	460	3	B&G 1510 3BC	2	YES
HWP-2	GROUND MER	HOT WATER	END SUCTION	400	70	–	–	20	1750	460	3	B&G 1510 3BC	1,2	YES
CHP-1	GROUND MER	CHILLED WATER	DOUBLE SUCTION SPLIT CASE	1,000	80	–	24.6	30	1750	460	3	B&G VSX-VSC 5x6x10-1/2	2	NO
CHP-2	GROUND MER	CHILLED WATER	DOUBLE SUCTION SPLIT CASE	1,000	80	–	24.6	30	1750	460	3	B&G VSX-VSC 5x6x10-1/2	1,2	NO
CHP-3 FUTURE	GROUND MER	CHILLED WATER	DOUBLE SUCTION SPLIT CASE	1,000	–	–	–	–	–	–	–	B&G		
CWP-1	GROUND MER	CONDENSER	DOUBLE SUCTION SPLIT CASE	1,625	80	–	43.0	50	1750	460	3	B&G VSX-VSH 6x8x10-1/2	–	NO
CWP-2	GROUND MER	CONDENSER	DOUBLE SUCTION SPLIT CASE	1,625	80	–	43.0	50	1750	460	3	B&G VSX-VSH 6x8x10-1/2	1	NO
CWP-3 FUTURE	GROUND MER	CONDENSER	DOUBLE SUCTION SPLIT CASE	–	–	–	–	–	–	–	–	B&G		
SMP-1	PLUMBING ROOM	SNOW MELT	IN-LINE	60	40	–	1.12	2.0	1750	120	1	B&G SERIES 80	–	NO

NOTES:
1. 100% STAND-BY
2. PROVIDE VARIABLE FREQUENCY DRIVE

CABINET & UNIT HEATER SCHEDULE

UNIT NUMBER	LOCATION	FAN: SPEED SETTING	FAN: MBH	FAN: RPM	FAN: EXT SP	FAN: CFM	MOTOR DATA @ 60 HZ: HP	RPM	VOLTS	PHASE	HOT WATER COIL: EWT °F	LWT °F	GPM	ΔPRESS FT. H_2O	STEAM COIL: INLET PSIG	#/HR	ELECTRIC COIL: VOLTS	KW	SIMILAR TO	NOTES SEE BELOW	EMER POWER
CUH-1	SEE PLANS	L	57.0	1315	–	894	1/10	1315	120	1	190	160	–	–	–	–	–	–	TRANE FFC	4	YES
CUH-2	SEE PLANS	L	45.0	1285	–	725	1/4	1285	120	1	190	160	–	–	–	–	–	–	TRANE FFD	5	YES
CUH-3	SEE PLANS	L	45.0	1285	–	725	1/4	1285	120	1	190	160	–	–	–	–	–	–	TRANE FFM	6	YES
UH-1	SEE PLANS	L	27.4	1550	–	815	1/20	1550	120	1	190	160	–	–	–	–	–	–	TRANE	–	YES
UH-2	SEE PLANS	L	50.8	1550	–	1535	1/8	1550	120	1	190	160	–	–	–	–	–	–	TRANE	–	YES
EUH-1	SEE PLANS	L	–	–	–	–	–	–	–	–	–	–	–	–	–	–	460	5	QMARK	–	YES
EUH-2	SEE PLANS	L	–	–	–	–	–	–	–	–	–	–	–	–	–	–	460	10	QMARK	–	YES

NOTES:
1. ALL UNITS SIMILAR TO TRANE
2. HIGH STATIC MOTOR REQUIRED.
3. PERFORMANCE DATA BASED ON CONDITIONS STATED ABOVE.
4. HORIZONTAL CONCEALED
5. HORIZONTAL SURFACE MOUNT
6. VERITCAL WALL MOUNT

CONDENSATE PUMP SCHEDULE

UNIT NUMBER	LOCATION	SQ. FT. EDR	MIN. REGEN. CAPACITY (GAL)	MIN. VENT CONNECT SIZE (IN.)	GPM	NPSH MAX. FT. H_2O	SUCTION TEMP.	DISCH. PRES. PSIG	NO. OF PUMPS	MOTOR DATA @ 60 HZ: MHP EA.	RPM	VOLTS	PHASE	SIMILAR TO	NOTES SEE BELOW	EMER POWER
CP-1	BOILER ROOM	75,000	75	2 1/2	75	–	–	30	2	3	–	460	3	B&G DOMESTIC CB	–	YES
CP-2	BOILER RM-SNOW MELT	12,000	23	2	12	–	–	30	2	1 1/2	–	460	3	B&G DOMESTIC CB	–	YES

EXPANSION/COMPRESSION TANK SCHEDULE

UNIT NUMBER	LOCATION	SYSTEM SERVED	INITIAL CHARGE (PSIG)	TANK CAPACITY (GALLONS)	STYLE	TANK LENGTH (IN.) X DIA. (IN.)	TANK FITTING	RELIEF VALVE SETTING	REDUCING VALVE SETTING	REMARKS
TK-1	BOILER RM	HOT WATER	40	106	HORIZ	64.75 x 24ø	–	PSIG	PSIG	–
TK-2	BOILER RM	HOT WATER	40	106	HORIZ	64.75 x 24ø	–	PSIG	PSIG	–
TK-3	CHILLER RM	CHILLED	40	106	HORIZ	64.75 x 24ø	–	PSIG	PSIG	–
TK-4	CHILLER RM	CHILLED	40	106	HORIZ	64.75 x 24ø	–	PSIG	PSIG	–
TK-5	BOILER RM	SNOW MELT	40	10	VERT	37.31 X10ø	–	PSIG	PSIG	–

HEAT EXCHANGER (STEAM-WATER) SCHEDULE

UNIT NUMBER	LOCATION	TUBE LENGTH	SHELL DIAMETER	NO. OF PASSES	WATER SIDE (TUBE): EWT °F	LWT °F	GPM	ΔPRESS. FT. H_2O	MIN. MBH	FOULING FACTOR	PRES. RATING	STEAM SIDE (SHELL): OPER. PRES.	#'S PER HR.	PRES. RATING	SIMILAR TO	NOTES SEE BELOW
HE-1	BOILER RM	–	20"	4	160	190	–	2.1	4,000	0.001	–	5	6100	–	B&G	–
HE-2	BOILER RM	–	20"	4	160	190	–	2.1	4,000	0.001	–	5	6100	–	B&G	1
HE-3	BOILER RM	–	8"	2	120	140	60	–	560	0.001	–	5	582	–	B&G QSU 82-4	2

NOTES:
1. 100% STAND-BY
2. SERVES SNOW MELT SYSTEM, 40% ETHYLENE GLYCOL

FINNED TUBE RADIATION

TYPE	MIN BTUH PER FT.	AVERG. T °F	Δ T	EAT °F	ELEMENT: QTY	PIPE SIZE INCHES	TYPE	FIN SIZE	MAX. FPF	ENCLOSURE: HEIGHT	DEPTH	TYPE	MOUNTING HEIGHT	REMARKS
A	1050	175	–	65	1	1"	ALUM	4 3/4X4 3/4	40	10"	6"	–	(3)	SIMILAR TO VULCAN DURAVANE

NOTES:
1. FIN TUBE RADIATION BASED ON FLOOR-MOUNTED, ONE ROW WIDE ENCLOSURE TO BE THREE-SIDED W/ GRILLE ON TOP
2. ENCLOSURE COVER TO BE COORDINATED W/ ARCHITECT.
3. ENCLOSURE TO BE MOUNTED MINIMUM 3" ABOVE FLOOR & 2" FROM WINDOW.

RADIANT PANEL (HEATING)

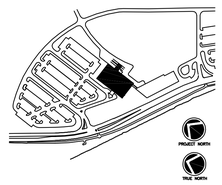
TYPE	MIN BTUH PER FT.	AVERG. T °F	Δ T	PANEL: WIDTH	LENGTH	PASSES	MOUNTING HEIGHT	REMARKS	PIPPING CONNECTIONS: SUPPLY SIZE	RETURN SIZE	MAX. PRESSURE DROP	LOCATIOINS	REMARKS
A	225	175	30'	12	(1)	2	–	–	3/4"	3/4"	14	SAME END	SIMILAR TO AIRTEX HEF-2

NOTES:
1. REFER TO PLANS FOR PANEL LENGTHS.

AIR ELIMINATOR SCHEDULE

UNIT NUMBER	LOCATION	SYSTEM	FLOW (GPM)	SIZE (IN)	ΔPRESS FT. H_2O	STRAINER	SIMILAR TO	REMARKS
AEL-1	BOILER RM	HOT WATER	400	5	8	YES	B&G AIRTROL R-5	–
AEL-2	BOILER RM	SNOW MELT	60	2 1/2	2	YES	B&G AIRTROL R-2-1/2	–

Revisions



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It is the responsibility of the Construction Manager/General Contractor and all Sub-Contractors to verify all dimensions and accept conditions of prior work by related trades before proceeding with any work.

Date
11/10/06 Final-Issued for Construction

Drawn By
EPV

Scale
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Project Title

Mercy Health Care System of Maine

FORE RIVER SHORT STAY HOSPITAL

MERCY

Project Number
F05-4898

Drawing Title and Number
HVAC SCHEDULES

H0.02

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