BOILER SCHEDULE

NO.	LOCATION	MAKE	MODEL	CAPACITY BTUH (KW) INPUT	CAPACITY BTUH (KW) OUTPUT	OPERATING TEMP. °F (°C) MIN	OPERATING TEMP. °F (°C) MAX	THERMOFLUID Y/N	THERMOFLUID %	THERMOFLUID TYPE	WATER FLOW GPM (l/s)	EWT °F (°C)	LWT °F (°C)	GAS TRAIN INLET PRESSURE IN WC (kPa)	HP	UNIT WEIGHT LBS (kG)	CONTROLS INTERLOCK SUPPLY	CONTROLS INTERLOCK INSTALL	CONTROLS INTERLOCK WITH	CONTROLS DATA CONN.	CONTROLS NOTES	CONTROLS PANEL	FLA	MCA	MOCP	POWER EM	POWER V/ø	POWER FEEDER	POWER COND	POWER BRKR	POWER CCT	REMARKS
B-1	BASEMENT MECHANICAL ROOM	RAYPAK	XVERS 726L	725,000 (--)	705,000 (--)	100 (--)	200 (--)	NO			71 (68)	105 (40)	125 (51)	7 (--)		710 (322)	MECHANICAL	MECHANICAL	DDC SYSTEM / MUA-1	--	--		--	--	--	-- (--)		--		--	EXISTING CIRCUIT	REUSE EXISTING HOUSE KEEPING PAD AS PER ARCHITECTURAL LAYOUT. PROVIDE MASTER SLAVE CONTROL PANEL. COMPLETE WITH BACNET, IF MASTER PANEL FAILS, SLAVE TAKES OVER. MUA-1 AIRFLOW SHALL BE PROVEN FOR OPERATION.
B-2	BASEMENT MECHANICAL ROOM	RAYPAK	XVERS 726L	725,000 (--)	705,000 (--)	100 (--)	200 (--)	NO			71 (68)	105 (40)	125 (51)	7 (--)		710 (322)	MECHANICAL	MECHANICAL	DDC SYSTEM / MUA-1	--	--		--	--	--	-- (--)		--		--	EXISTING CIRCUIT	REUSE EXISTING HOUSE KEEPING PAD AS PER ARCHITECTURAL LAYOUT. PROVIDE MASTER SLAVE CONTROL PANEL. COMPLETE WITH BACNET, IF MASTER PANEL FAILS, SLAVE TAKES OVER. MUA-1 AIRFLOW SHALL BE PROVEN FOR OPERATION.

PUMP SCHEDULE

NO.	LOCATION	SERVING	MAKE	MODEL	PUMP SERVICE	PUMP TYPE	SIZE IN. X IN. X IN. (mm X mm X mm)	FLOW GPM (l/s)	HP	VFD	FLUID TYPE	THERMOFLUID Y/N	THERMOFLUID %	THERMOFLUID TYPE	HEAD FT (PSI)	SPEED RPM	UNIT WEIGHT LBS (kG)	CONTROLS INTERLOCK SUPPLY	CONTROLS INTERLOCK INSTALL	CONTROLS INTERLOCK WITH	CONTROLS F.A. SHUT DOWN	CONTROLS DATA CONN.	CONTROLS NOTES	CONTROLS PANEL	FLA	MCA	MOCP	POWER EM	POWER V/ø	POWER FEEDER	POWER COND	POWER BRKR	POWER CCT	STARTER TYPE	STARTER SUPPLY	STARTER INSTALL	STARTER FUNC	STARTER PL	STARTER PB	STARTER HOA	REMARKS
P-1A	BASEMENT MECHANICAL ROOM	HEATING LOOP FOR PERIMETER	BELL AND GOSSETT	E-90 SERIES	HOT WATER CIRCULATOR	IN-LINE CENTRIFUGAL	1.25AAB	35 (--)	1.5	Y	HEATING WATER	NO			38.2 (--)	2917	-- (--)	MECHANICAL	MECHANICAL	DDC	--	--	--		--	--	--	-- (--)	600V/3ø	3ø12 RW90	3/4" (21MM)	15A/3P	15A/3P	PANEL 100	VSD	MECHANICAL	M-MOUNTING E-WIRING					COMPLETE WITH VSD
P-1B	BASEMENT MECHANICAL ROOM	HEATING LOOP FOR PERIMETER	BELL AND GOSSETT	E-90 SERIES	HOT WATER CIRCULATOR	IN-LINE CENTRIFUGAL	1.25AAB	35 (--)	1.5	Y	HEATING WATER	NO			38.2 (--)	2917	-- (--)	MECHANICAL	MECHANICAL	DDC	--	--	--		--	--	--	-- (--)	600V/3ø	3ø12 RW90	3/4" (21MM)	15A/3P	15A/3P	PANEL 100	VSD	MECHANICAL	M-MOUNTING E-WIRING					COMPLETE WITH VSD
P-2A	BASEMENT MECHANICAL ROOM	PRIMARY HEATING LOOP FOR VENTILATION	BELL AND GOSSETT	E-90 SERIES	HOT WATER CIRCULATOR	BASE MOUNTED CENTRIFUGAL	2AAC	115 (--)	2	Y	HEATING WATER	NO			33.2 (--)	2884	-- (--)	MECHANICAL	MECHANICAL	DDC	--	--	--		--	--	--	-- (--)	600V/3ø	3ø12 RW90	3/4" (21MM)	15A/3P	15A/3P	PANEL 100	VSD	MECHANICAL	M-MOUNTING E-WIRING					COMPLETE WITH VSD
P-2B	BASEMENT MECHANICAL ROOM	PRIMARY HEATING LOOP FOR VENTILATION	BELL AND GOSSETT	E-90 SERIES	HOT WATER CIRCULATOR	BASE MOUNTED CENTRIFUGAL	2AAC	115 (--)	2	Y	HEATING WATER	NO			33.2 (--)	2884	-- (--)	MECHANICAL	MECHANICAL	DDC	--	--	--		--	--	--	-- (--)	600V/3ø	3ø12 RW90	3/4" (21MM)	15A/3P	15A/3P	PANEL 100	VSD	MECHANICAL	M-MOUNTING E-WIRING					COMPLETE WITH VSD
P-3A	BASEMENT MECHANICAL ROOM	SECONDARY HEATING LOOP FOR VENTILATION	BELL AND GOSSETT	E-90 SERIES	HOT WATER CIRCULATOR	BASE MOUNTED CENTRIFUGAL	2AAC	128 (--)	5	Y	HEATING WATER W/ THERMOFLUID	YES	50%	PG	73.8 (--)	3149	-- (--)	MECHANICAL	MECHANICAL	DDC	--	--	--		--	--	--	-- (--)	600V/3ø	3ø12 RW90	3/4" (21MM)	20A/3P	20A/3P	PANEL 100	VSD	MECHANICAL	M-MOUNTING E-WIRING					COMPLETE WITH VSD
P-3B	BASEMENT MECHANICAL ROOM	SECONDARY HEATING LOOP FOR VENTILATION	BELL AND GOSSETT	E-90 SERIES	HOT WATER CIRCULATOR	BASE MOUNTED CENTRIFUGAL	2AAC	128 (--)	5	Y	HEATING WATER W/ THERMOFLUID	YES	50%	PG	73.8 (--)	3149	-- (--)	MECHANICAL	MECHANICAL	DDC	--	--	--		--	--	--	-- (--)	600V/3ø	3ø12 RW90	3/4" (21MM)	20A/3P	20A/3P	PANEL 100	VSD	MECHANICAL	M-MOUNTING E-WIRING					COMPLETE WITH VSD
P-4	BASEMENT MECHANICAL ROOM	AHU-2 HEATING COIL	BELL AND GOSSETT	E-80 SERIES	HOT WATER CIRCULATOR	IN-LINE CENTRIFUGAL	1.5 X 1.5 X 7C (37 X37 X 175B)	28.6 (1.8)	1	N	HEATING WATER W/ THERMOFLUID	YES	50%	PG	30 (13)	1602	-- (--)	MECHANICAL	MECHANICAL	DDC	--	--	--		--	--	--	-- (--)	600V/3ø	3ø12 RW90	3/4" (21MM)	15A/3P	15A/3P	PANEL 100	MAGNETIC	ELECTRICAL	ELECTRICAL	FVNR	*		*	
P-5	BASEMENT MECHANICAL ROOM	MUA-1 HEATING COIL	BELL AND GOSSETT	PL SERIES	HOT WATER CIRCULATOR	IN-LINE CENTRIFUGAL	PL-55 (--)	8.6 (--)	2/5	N	HEATING WATER W/ THERMOFLUID	YES	50%	PG	30 (13)	3250	-- (--)	MECHANICAL	MECHANICAL	DDC	--	--	--		--	--	--	-- (--)	120V/1ø	2ø12 RW90	3/4" (21MM)	15A/1P	15A/1P	N-60	MAGNETIC	ELECTRICAL	ELECTRICAL	FVNR	*		*	
P-6A	BASEMENT MECHANICAL ROOM	BOILER CIRCULATION PUMP	BELL AND GOSSETT	E-90 SERIES	HOT WATER CIRCULATOR	IN-LINE CENTRIFUGAL	2AB (--)	71 (--)	1.5	N	HEATING WATER	NO			31 (--)	1564	-- (--)	MECHANICAL	MECHANICAL	DDC	--	--	--		--	--	--	-- (--)	600V/3ø	3ø12 RW90	3/4" (21MM)	15A/3P	15A/3P	PANEL 100	MAGNETIC	ELECTRICAL	ELECTRICAL	FVNR	*		*	
P-6B	BASEMENT MECHANICAL ROOM	BOILER CIRCULATION PUMP	BELL AND GOSSETT	E-90 SERIES	HOT WATER CIRCULATOR	IN-LINE CENTRIFUGAL	2AB (--)	71 (--)	1.5	N	HEATING WATER	NO			31 (--)	1564	-- (--)	MECHANICAL	MECHANICAL	DDC	--	--	--		--	--	--	-- (--)	600V/3ø	3ø12 RW90	3/4" (21MM)	15A/3P	15A/3P	PANEL 100	MAGNETIC	ELECTRICAL	ELECTRICAL	FVNR	*		*	
P-7	BASEMENT MECHANICAL ROOM	DOMESTIC HOT WATER RECIRCULATION	BELL AND GOSSETT	PL SERIES	DOMESTIC HOT WATER RECIRCULATION	IN-LINE CENTRIFUGAL	PL-100 (--)	20 (7.57)	FRAC.	N	DOMESTIC HOT WATER	YES			15 (--)	--	-- (--)	MECHANICAL	MECHANICAL	DDC	--	--	--		--	--	--	-- (--)	120V/1ø	2ø12 RW90	3/4" (21MM)	15A/1P	15A/1P	N-59	MAGNETIC	ELECTRICAL	ELECTRICAL	FVNR	*		*	
P-8	AHU-1 POOL HEAT RECOVERY	CIRCULATION PUMP	BELL AND GOSSETT	E-90 SERIES	POOL CIRCULATOR	IN-LINE CENTRIFUGAL	2AB (--)	70 (--)	1.5	N	POOL WATER	NO			30 (--)	1539	-- (--)	MECHANICAL	ELECTRICAL	SWITCH	--	--	--		--	--	--	-- (--)	600V/3ø	3ø12 RW90	3/4" (21MM)	15A/3P	15A/3P	PANEL 100	MAGNETIC	ELECTRICAL	ELECTRICAL	FVNR	*		*	STAINLESS STEEL FITTED FOR POOL WATER
P-9	BASEMENT MECHANICAL ROOM	GLYCOL FEED PUMP	AXIOM	SF-100	GLYCOL FILL		-- (--)	1.0 (--)	FRAC	N	HEATING WATER W/ THERMOFLUID	YES	50%	PG	115 (--)	--	-- (--)	MECHANICAL	MECHANICAL	PRESSURE SWITCH	--	--	--		--	--	--	-- (--)	120V/1ø	2ø12 RW90	3/4" (21MM)	15A/1P	15A/1P	N-58	MANUAL	ELECTRICAL	ELECTRICAL		*	*		PLUG IN UNIT WITH LOW LEVEL ALARM
P-10	FAN ROOM	CONDENSATE PUMP	LITTLE GIANT	VCMA-20	CONDENSATE PUMP		-- (--)	1.3 (--)	FRAC	N	CONDENSATE	NO			-- (--)	--	-- (--)	MECHANICAL	MECHANICAL	--	--	--	--		--	--	--	-- (--)	120V/1ø	2ø12 RW90	3/4" (21MM)	15A/1P	15A/1P	N-57	MANUAL	ELECTRICAL	ELECTRICAL		*	*		PLUG IN UNIT
P-11A	BASEMENT MECH ROOM	HRV-1 HEATING COIL	BELL AND GOSSETT	E-90 SERIES	HOT WATER CIRCULATOR	IN-LINE CENTRIFUGAL	1.25AAB (--)	50 (--)	1.5	N	HEATING WATER W/ THERMOFLUID	YES	50%	PG	35.5 (--)	2984	-- (--)	MECHANICAL	MECHANICAL	DDC	--	--	--		--	--	--	-- (--)	600V/3ø	3ø12 RW90	3/4" (21MM)	15A/3P	15A/3P	PANEL 100	MAGNETIC	ELECTRICAL	ELECTRICAL	FVNR	*		*	
P-11B	BASEMENT MECH ROOM	HRV-1 HEATING COIL	BELL AND GOSSETT	E-90 SERIES	HOT WATER CIRCULATOR	IN-LINE CENTRIFUGAL	1.25AAB (--)	50 (--)	1.5	N	HEATING WATER W/ THERMOFLUID	YES	50%	PG	35.5 (--)	2984	-- (--)	MECHANICAL	MECHANICAL	DDC	--	--	--		--	--	--	-- (--)	600V/3ø	3ø12 RW90	3/4" (21MM)	15A/3P	15A/3P	PANEL 100	MAGNETIC	ELECTRICAL	ELECTRICAL	FVNR	*		*	

AIR SEPARATOR SCHEDULE

NO.	LOCATION	MAKE	MODEL	SERVING	SIZE mm	UNIT WEIGHT KG	THERMOFLUID Y/N	THERMOFLUID %	THERMOFLUID TYPE	INLET CONNECTION mm	OUTLET CONECTION mm	DRAIN SIZE NPT	AIR OUTLET NPT	REMARKS
AS-1	BASEMENT MECHANICAL ROOM	CALEFFI	551 SERIES	AS-1 BOILER HEATING LOOP	406ø x819 HIGH	117	NO			150ø	150ø	1"	1.5"	ACCESSORIES – AUTOMATIC AIR VENT ON AIR OUTLET, REMOVABLE MAGNET & DRAIN CONNECTION
AS-2	BASEMENT MECHANICAL ROOM	CALEFFI	551 SERIES	AS-2 BOILER HEATING LOOP FOR HX-1	406ø x819 HIGH	117	NO			150ø	150ø	1"	1.5"	ACCESSORIES – AUTOMATIC AIR VENT ON AIR OUTLET, REMOVABLE MAGNET & DRAIN CONNECTION
AS-3	BASEMENT MECHANICAL ROOM	CALEFFI	551 SERIES	AS-3 GLYCOL HEATING LOOP	406ø x819 HIGH	117	YES	50%	PG	150ø	150ø	1"	1.5"	ACCESSORIES – AUTOMATIC AIR VENT ON AIR OUTLET, REMOVABLE MAGNET & DRAIN CONNECTION

POT FEEDER SCHEDULE

NO.	LOCATION	MAKE	MODEL	SERVING	FILTER TYPE	CAPACITY GALLONS (KG)	THERMOFLUID Y/N	THERMOFLUID %	THERMOFLUID TYPE	UNIT WEIGHT LBS (kG)	REMARKS
PF-1	BASEMENT MECHANICAL ROOM	--	--	PERIMETER HEATING HOT WATER CIRCULATION	MICRON	2 (0.9)	NO			23 (10.5)	PROVIDE 3 SPARE FILTER CARTRIDGES.
PF-2	BASEMENT MECHANICAL ROOM	--	--	SECONDARY HOT WATER CIRCULATION	MICRON	2 (0.9)	YES	50%	PG	23 (10.5)	PROVIDE 3 SPARE FILTER CARTRIDGES.

PLATE & FRAME HEAT EXCHANGER SCHEDULE

NO.	LOCATION	MAKE	MODEL	PRIMARY FLOW GPM (l/s)	PRIMARY THERMOFLUID Y/N	PRIMARY THERMOFLUID %	PRIMARY THERMOFLUID TYPE	PRIMARY EWT °F (°C)	PRIMARY LWT °F (°C)	PRIMARY PRESSURE DROP PSI (kPa)	SECONDARY FLOW GPM (l/s)	SECONDARY THERMOFLUID Y/N	SECONDARY THERMOFLUID %	SECONDARY THERMOFLUID TYPE	SECONDARY EWT °F (°C)	SECONDARY LWT °F (°C)	SECONDARY PRESSURE DROP FT. H_2O (kPa)	CAPACITY BTUH (kW)	FOULING FACTOR	UNIT WEIGHT LBS (kG)	REMARKS
HEX-1	MECH RM. BASEMENT	BELL AND GOSSETT	BP433-116	115 (--)	NO			125 (51)	105 (40)	14.6 (--)	128 (--)	YES	50%	PG	100 (37.7)	120 (48.8)	19.2 (--)	1,140,000 (--)	0.0005	932 (--)	BRAZED PLATE

GLYCOL TANK SCHEDULE

NO.	LOCATION	MAKE	MODEL	TYPE	FLUID TYPE	TANK CAPACITY GAL. (L)	DIMENSIONS IN. (mm) H	DIMENSIONS IN. (mm) DIA(ø)	UNIT FULL WEIGHT LBS (kG)	REMARKS
GT-1	BASEMENT MECHANICAL ROOM	AXIOM	--	GYLCOL TANK	PROPYLENE GLYCOL	55 (208)	49 (1245)	24 (610)	492 (223)	TANK IS TO BE COMPLETE WITH A FEEDER PUMP, PRESSURE REGULATOR AND AUTOMATIC SYSTEM FILL CONTROLS. REFER TO P-9.

* PROVIDE 20 GALLONS OF 50% PROPYLENE GLYCOL PREMIX FOR FUTURE USE.

** LABEL EACH GLYCOL TANK WITH THE MIX % OF PROPYLENE GLYCOL REQUIRED.

EXPANSION TANK SCHEDULE

NO.	LOCATION	MAKE	MODEL	TYPE	FLUID TYPE	TANK CAPACITY GAL. (L)	MINIMUM ACCEPTANCE CAPACITY GAL. (L)	MINIMUM OPERATING PRESSURE PSI (pa)	MAXIMUM OPERATING PRESSURE PSI (pa)	DESIGN PRESSURE IN. H_2O (pa)	DIMENSIONS IN. (mm) L	DIMENSIONS IN. (mm) DIA(ø)	UNIT WEIGHT LBS (kG)	REMARKS
ET-1	BASEMENT MECHANICAL ROOM	AMTROL	AX-40V	HYDRONIC EXPANSION	WATER	44.4 (--)	22.6 (--)	0 (0)	125 (861,844)	100 (689,475)	29 (--)	24 (--)	153 (--)	--
ET-2	BASEMENT MECHANICAL ROOM	AMTROL	AX-40V	HYDRONIC EXPANSION	35% PROPYLENE GLYCOL	23 (87)	11.3 (42)	0 (0)	125 (861,844)	100 (689,475)	22 (550)	15 (375)	66 (29)	
ET-3	BASEMENT MECHANICAL ROOM	AMTROL	ST-12C-DD	THERMAL EXPANSION	WATER	6.4 (24)	3.2 (12)	0 (0)	125 (861,844)	100 (689,475)	18 (450)	12 (300)	-- (--)	--

ENGINEERS GEOSCIENTISTS MANITOBA
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13600

No.	Date	Issue / Revision	By
0	22/12/2023	ISSUED FOR CONSTRUCTION	DG/JVL

Drawn By: EJ
Printing Date: 22/12/2023

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MECHANICAL AND ELECTRICAL SCHEDULES

Comm. No.: 2129 Sheet: **ME1.2**