PLUMBING FIXTURES

MARK		P1A	P1B	P2A	P3A	P3B	P3C	P3D	P3E	P4A	P4B	P4C	P4D	P4E	P4F	P4G	
DESCRIPTION	FIXTURE	WC	WC	URINAL	LAV	LAV	LAV	LAV	LAV	SINK	SINK	SINK	SINK	SINK	SINK	SINK	
	TYPE	FV	FV	FV	WALL	COUNTER	WALL	COUNTER	WALL	SINGLE	SINGLE	SINGLE	SINGLE	DOUBLE	DOUBLE	SINGLE	
ROUGH-IN	COLD WATER: IN	1 1/2	1 1/2	3/4	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	
	HOT WATER: IN	–	–	–	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	
	WASTE: IN	4	4	2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	2	2	2	2	2	2	2	
	VENT: IN	2	2	2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	
	NOTES	[1, 4, 10, 11]	[1, 4, 11]	[4]	[4]	[8]	[2, 4, 9]	[8, 9]	[4, 9]	[8]		[3, 8]	[2, 3, 8]	[3]	[12]		

MARK		P4H	P4J	P4K	P4L	P4M	P4N	P5A	P5B	P6A	P7A	P7B	P7C	P8A	P9A	P10	P11
DESCRIPTION	FIXTURE	SINK	SINK	SINK	SINK	SINK	SINK	SHOWER	SHOWER	WATER	HSKP	HSKP	HSKP	SINK	EYEWSH/SHWR	VALVE	VALVE BOX
	TYPE	SINGLE	SINGLE	DOUBLE	MECH RM	SINGLE	DOUBLE	WALL/HAND	PRE–FAB	COOLER	SERVICE SINK	SERVICE SINK	FAUCET	CLINIC	MECH RM	BOX	AND DRAIN
ROUGH-IN	COLD WATER: IN	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1	1 1/4	1/2	1/2
	HOT WATER: IN	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	–	1/2	1/2	1/2	3/4	1 1/4	–	–
	WASTE: IN	2	2	2	2	2	2	–	–	1 1/2	3	3	–	4	2	–	1 1/2
	VENT: IN	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	–	–	1 1/2	2	2	–	2	2	–	1 1/2
	NOTES	[8]	[2, 8]	[3, 12, 14]		[8]	[3, 8]	[4]	[4]	[4]	[4]	[4]	[4]	[3, 4, 7]	[13]		

NOTES

1. EXTRA HEAVY DUTY CARRIERS.
2. INTEGRATED EMERGENCY EYEWASH WITH THERMOSTATIC MIXING AND FAUCET.
3. FOOTPEDAL CONTROLS.
4. FOR MOUNTING HEIGHT, REFER TO ARCHITECTURAL.
5. NON–POTABLE WATER.
6. INSTA HOT.
7. EQUIPPED WITH BEDPAN WASHER.
8. INTEGRAL, REFER TO ARCHITECTURAL FOR SINK SPECIFICATION. PROVIDE DRAIN AND TAILPIECE; COORDINATE SIZE WITH COUNTERTOP DETAILS.
9. HARDWIRED ELECTRONIC CONTROLS.
10. EQUIPPED WITH COMBINATION JUVENILE AND ADULT SEAT.
11. DUAL OPTION FLUSH HANDLE.
12. 12" DEEP.
13. PROVIDE MIXING VALVE FOR 1–1/4" TEMPERED WATER OUTLET.
14. PROVIDE EMERGENCY EYEWASH WITH THERMOSTATIC MIXING VALVE.

HEAT EXCHANGER: STEAM TO WATER

MARK		HE-1	HE-2	
SERVICE		HW HTG	HW HTG	
LOCATION		MECH RM	MECH RM	
CAPACITY	MBH	9,382	9,382	
STEAM	PRESS: PSIG	2	2	
	LBS/HR	9,960	9,960	
FLUID	TYPE	WATER	WATER	
	LVG TEMP: F	180	180	
	ENT TEMP: F	160	160	
	FLOW – GPM	960	960	
	PD: FT	3	3	
	FOUL FACTOR	0.0005	0.0005	
BASIS OF DESIGN	MANUFACTURER	B&G	B&G	
	MODEL	SU18 6–2	SU18 6–2	
	NOTES			

EXPANSION TANKS

MARK		ET-1	ET-2	ET-3	ET-4	ET-5	ET-6	ET-7	ET-8
LOCATION		LEVEL1	LEVEL 1	LEVEL 1	LEVEL 1	LEVEL 5	LEVEL 5	LEVEL 5	LEVEL 1
SERVES		HTG SYSTEM	CLG SYSTEM	WH–1, WH–2	WH–3, WH–4	HT RECLAIM	PROC CHW	GPS–1	PROC CHW
TYPE	DESCRIPTION	DIAPHRAGM	DIAPHRAGM	DIAPHRAGM	DIAPHRAGM	DIAPHRAGM	DIAPHRAGM	DIAPHRAGM	DIAPHRAGM
	TANK VOL: GAL	211	44.4	4	4	21.7	4.7	4	4
	ACCEPT VOL: GAL	105	22.6	0.9	0.9	11.3	2.3	0.9	0.9
CAPACITY	FLUID	WATER	WATER	WATER	WATER	PROP GLY	PROP GLY	PROP GLY	WATER
	MIN PRESS: PSIG	60	60	60	60	60	60	60	60
	MAX PRESS: PSIG [3]	110	110	100	100	110	110	100	110
	MIN TEMP: F	50	50	50	50	50	50	50	50
	MAX TEMP: F	180	90	120	120	90	140	120	90
BASIS OF DESIGN	MANUFACTURER	AMTROL	AMTROL	AMTROL	AMTROL	AMTROL	AMTROL	AMTROL	AMTROL
	MODEL	800–L	AX–80V	ST–5–C	ST–5–C	AX–40V	ST–15V	ST–5–C	ST–5–C
	OPERATING WEIGHT	1,300	400	30	30	220	220	30	30
	NOTES	[1, 2, 3]	[1, 2, 3]	[2, 3]	[2, 3]	[1, 2, 3]	[1, 2, 3]	[2, 3]	[2, 3]

NOTES:

1. FREE–STANDING UNIT.
2. PRE–CHARGE TANK TO MINIMUM SYSTEM PRESSURE.
3. PROVIDE 125 PSIG WORKING PRESSURE RATING.

DOMESTIC HOT WATER HEATER: STEAM TO WATER

MARK		DWH-1	DWH-2	FUT. DWH-3	FUT. DWH-4
SERVICE		LO LEVEL HW	LO LEVEL HW	HI LEVEL HW	HI LEVEL HW
LOCATION		FIRST FLR	FIRST FLR	FIRST FLR	FIRST FLR
CAPACITY	MBH	1,060	1,060	1,060	1,060
STEAM	PRESS: PSIG	2	2	2	2
	LBS/HR	1,100	1,100	1,100	1,100
FLUID	TYPE	DOM HW	DOM HW	DOM HW	DOM HW
	LVG TEMP: F	120	120	120	120
	ENT TEMP: F	50	50	50	50
	FLOW – GPM	35	35	20	20
	PD: FT	–	–	–	–
	FOUL FACTOR	0.0005	0.0005	0.0005	0.0005
BASIS OF DESIGN	MANUFACTURER	AERCO	AERCO	AERCO	AERCO
	MODEL	SWDW–24	SWDW–24	SWDW–24	SWDW–24
	NOTES	[1, 2, 3, 4]	[1, 2, 3, 4]	[1, 2, 3, 4, 5]	[1, 2, 3, 4, 5]

NOTES:

1. DOUBLE WALL HEAT EXCHANGER BUNDLE.
2. PROVIDE ELECTRONIC CONTROL VALVE WITH UNIT.
3. PROVIDE 120/1, 2.8 AMPS POWER CONNECTION TO UNIT.
4. UNIT ON EMERGENCY POWER.
5. UNIT SHALL BE INSTALLED WITH THE FUTURE 6TH AND 7TH FLOORS. INDICATED HERE FOR DESIGN INTENT ONLY.

AIR SEPARATORS

MARK		AS-1	AS-2	AS-3	AS-4	AS-5
LOCATION		LEVEL 1	LEVEL 1	LEVEL 5	LEVEL 5	LEVEL 1
SERVES		HTG SYSTEM	CLG SYSTEM	HT RECLAIM	PROC CHW	PROC CHW
DESCRIPTION	FLOW: GPM	1,000	1,200	365	200	50
	MAX PD: FT	10	10	10	5	2
	WORK PRESS PSIG	125	125	125	125	125
COMPONENTS	FITTINGS	FLANGE	FLANGE	FLANGE	FLANGE	FLANGE
	STRAINER	YES	YES	YES	YES	YES
BASIS OF DESIGN	MANUFACTURER	B&G	B&G	B&G	B&G	B&G
	MODEL	R–8	R–10	R–6	R–4	R–2 1/2
	OPERATING WEIGHT	1,500	2,500	600	300	150
	NOTES	[1]	[1]	[1]	[1]	[1]

NOTES:

1. PROVIDE SUPPORT BRACKETS.

MEDICAL GAS OUTLETS

MARK		A	B	C
LOCATION		WALL OUTLET	BOOM	WALL OUTLET 3
SERVES		–	2 –	–
OUTLET MODEL	OXYGEN (O2)	1	3	1
	VACUUM (MV)	1	3	1
	MED AIR (MA)	1	2	–
	VACUUM SLIDE	1	–	1
	EXH. GAS (ANESTHESIA)	–	–	–
	NITROUS OXIDE (N2O)	–	–	–
BASIS OF DESIGN	MANUFACTURER	BEACON MED	BEACON MED	BEACON MED
	NOTES	[1]		

NOTES:

1. PROVIDE MINIMUM 1" MV, 1/2" O2, AND 1/2" MA BRANCH TO SINGLE AND BACK–TO–BACK OUTLETS.

CONDENSATE PUMPS AND RECEIVER

MARK		CP-1	CP-2
LOCATION		MECH RM	MECH RM
SERVES		LP STEAM	LP STEAM
CAPACITY	FLOW: GPM	9	38
	HEAD: PSI	20	20
	EFFICIENCY %	–	–
DESCRIPTION	TYPE	CENT	CENT
	MOTOR: BHP	–	–
	MOTOR: HP	0.5	3/4
	RPM	3,500	3,500.00
	VOLTS/PHASE	460/3	460/3
	DISCH: IN	1.5	2
RECEIVER	CAPACITY: GAL	23	52
	INLET: IN	2	3
UNIT WEIGHT	WEIGHT: LBS	–	–
BASIS OF DESIGN	MANUFACTURER	ITT	ITT
	MODEL	23CBE9–20	52CBE45–20
	NOTES	[1, 2, 3]	[1, 2, 3]

NOTES:

1. DUPLEX PUMPS WITH CONTROL PANEL ON EMERGENCY POWER.
2. PROVIDE VALVE AT PUMP SUCTION.
3. PROVIDE STRAINER AT RECEIVER INLET.

COOLING TOWERS

MARK		CT-1	CT-2	CT-3	CT-4 (FUTURE)
LOCATION		ROOF	ROOF	ROOF	ROOF
SERVES		CH–1, 2, 3, 4	CH–1, 2, 3, 4	CH–1, 2, 3, 4	CH–1, 2, 3, 4
REJECTED HEAT	TONS	313	313	313	313
TYPE	NO. CELLS	1	1	1	1
	DISCHARGE	VERTICAL	VERTICAL	VERTICAL	VERTICAL
FLUID	EWT: F	90	90	90	90
	LWT: F	80	80	80	80
	FLOW: GPM	750	750	750	750
	AMBIENT WB: F	68	68	68	68
	NOZZLE PD: FT WG	15	15	15	15
	FLUID	WATER	WATER	WATER	WATER
FAN	NO. FANS	1	1	1	1
	AIRFLOW / FAN: CFM	79,900	79,900	79,900	79,900
	EXT. SP: IN WG	–	–	–	–
	NO. MAIN MOTORS	1	1	1	1
	MOTOR / FAN: HP	15	15	15	15
	VFD	YES	YES	YES	YES
	VOLTS/PHASE	460/3	460/3	460/3	460/3
BASIN HEATER	NO. OF HEATERS	1	1	1	1
	HEATER / CELL: KW	6	6	6	6
	VOLTS/PHASE	460/3	460/3	460/3	460/3
PIPE CONNECTION PER CELL	SUPPLY: IN.	8	8	8	8
	RETURN: IN.	(2) 6	(2) 6	(2) 6	(2) 6
	MAKE–UP: IN.	1 1/2	1 1/2	1 1/2	1 1/2
	EQUALIZING LEG: IN.	INTERNAL	INTERNAL	INTERNAL	INTERNAL
	DRAIN: IN.	2	2	2	2
	OVERFLOW: IN.	4	4	4	4
OPER. WEIGHT	WEIGHT / CELL: LBS	11,700	11,700	11,700	11,700
BASIS OF DESIGN	MANUFACTURER	MARLEY	MARLEY	MARLEY	MARLEY
	MODEL	NC 8302FL4	NC 8302FL4	NC 8302FL4	NC 8302FL4
	NOTES	[1, 2, 3]	[1, 2, 3]	[1, 2, 3]	[1, 2, 3]

NOTES:

1. PROVIDE VIBRATION CUTOUT SWITCH.
2. INCLUDES STATIC HEAD OF TOWER.
3. UNIT SERVED BY EMERGENCY POWER.

SCREW WATER CHILLERS

MARK		CH-1	CH-2	CH-3	CH-4-FUT.
LOCATION		CHILLER RM	CHILLER RM	CHILLER RM	CHILLER RM
SERVES		ED	ED	ED	ED
CAPACITY	TONS	267	267	267	267
REFRIGERANT	TYPE	134a	134a	134a	134a
COMPRESSOR	DRIVE TYPE	GEAR	GEAR	GEAR	GEAR
	VOLTS/PHASE	460/3	460/3	460/3	460/3
	MAX INPUT KW	176	176	176	176
	VFD: UNIT MOUNTED	NO	NO	NO	NO
EVAPORATOR	EWT: F	58	58	58	58
	LWT: F	42	42	42	42
	FLOW: GPM	400	400	400	400
	PD: FT WG	10	10	10	10
	FOULING FACTOR	0.0001	0.0001	0.0001	0.0001
CONDENSER	EWT: F	80	80	80	80
	LWT: F	90	90	90	90
	FLOW: GPM	750	750	750	750
	PD: FT WG	25	25	25	25
	FOULING FACTOR	0.00025	0.00025	0.00025	0.00025
PART LOAD	NPLV	0.542	0.542	0.542	0.542
	KW/TON – 100%	0.669	0.669	0.669	0.669
	KW/TON – 70%	0.607	0.607	0.607	0.607
	KW/TON – 50%	0.509	0.509	0.509	0.509
	KW/TON – 30%	0.47	0.47	0.47	0.47
ELECTRICAL	MOTOR LRA	216	216	216	216
	PRIMARY FLA	–	–	–	–
	MCA	335	335	335	335
	MOCP	400	400	400	400
OPER. WEIGHT	WEIGHT: LBS	11,100	11,100	11,100	11,100
BASIS OF DESIGN	MANUFACTURER	CARRIER	CARRIER	CARRIER	CARRIER
	MODEL	30HXC 271	30HXC 271	30HXC 271	30HXC 271
	NOTES	[1]	[1]	[1]	[1]

NOTES:

1. UNIT SERVED BY EMERGENCY POWER.

MEDICAL GAS ZONE VALVE BOXES

MARK		ZVB-1	ZVB-2	ZVB-3	ZVB-4	ZVB-5	ZVB-6	ZVB-7	ZVB-8
LOCATION		CORR1084	CORR 2079	CORR 2112	CORR 2263	CORR 3071	CORR 3126	CORR 4095	CORR 4095
DRAWING		M3.11	M3.12	M3.12	M3.22	M3.13	M3.13	M3.14	M3.14
VALVES SIZE: IN.	OXYGEN (O2)	3/4	3/4	3/4	1	3/4	3/4	3/4	3/4
	MED AIR (MA)	3/4	3/4	3/4	1	1 3/4	3/4	3/4	3/4
	MED VACUUM (MV)	1 1/2	2	2 1	2	1 1/2	1 1/2	1 1/2	1 1/4
BASIS OF DESIGN	MANUFACTURER	BEACON MED	BEACON MED	BEACON MED	BEACON MED	BEACON MED	BEACON MED	BEACON MED	BEACON MED
	NOTES								

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