MECHANICAL LEGEND

SYMBOL	DESCRIPTION
	CEILING MOUNT SUPPLY DIFFUSER
	CEILING MOUNT RETURN GRILLE
	CEILING MOUNT EXHAUST GRILLE
	SIDEWALL SUPPLY / RETURN GRILLE
	RIGID DUCT
	LINED DUCTWORK
	FLEXIBLE DUCT (7' MAX.)
	DUCT ELEVATION CHANGE
	DUCT PENETRATION THRU ROOF
	VOLUME DAMPER
	SMOKE DETECTOR
	FIRE/SMOKE DAMPER (FS/D)
	TWO HOUR FIRE/SMOKE DAMPER
T	THERMOSTAT
S	TEMPERATURE SENSOR
	UNDERCUT DOOR
	EQUIPMENT TAG
	3-WAY VALVE
HWS	HEATING WATER SUPPLY (HWS)
HWR	HEATING WATER RETURN (HWR)
	REFRIGERATION PIPING
	TEE UP
	ELBOW UP
	ELBOW DOWN
	TEE DOWN
	TEE UP

ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR	(E)	EXISTING TO REMAIN	O.S.A.	OUTSIDE AIR
A.F.G.	ABOVE FINISHED GRADE	ELEC.	ELECTRICAL	P.O.C.	POINT OF CONNECTION
ABV.	ABOVE	ELEV.	ELEVATION	S.O.V.	SHUT OFF VALVE
ARCH.	ARCHITECT(URAL)	FLR.	FLOOR	(R)	TO BE REMOVED
B/G	BELOW GRADE	FT.	FOOT OR FEET	RTU	ROOFTOP UNIT
BEL.	BELOW	MAX.	MAXIMUM	TYP.	TYPICAL
CLG.	CEILING	MFR.	MANUFACTURER	V.T.R.	VENT THRU ROOF
DIF	DIFFUSER	MIN.	MINIMUM	UTR	UP THROUGH ROOF

HEATING WATER BOILER SCHEDULE

SYMBOL	AREA LOCATED	MFG.	MODEL NUMBER	HEATING MBTU/HR INPUT	HEATING MBTU/HR OUTPUT	EFFICIENCY PERCENT	HEATING WATER GPM	WATER ENTERING DEGREE F	WATER LEAVING DEGREE F	WATER PRESSURE DROP	PIPE SIZE IN	PIPE SIZE OUT	INTEGRAL CIRCULATING PUMP	VOLTS / PHASE AMPS	MINIMUM CIRCUIT AMPS	MAX FUSE	WT. POUNDS	REMARKS:
B-1	ROOF	RAYPAK	XFYRE - TYPE H	500	470	94%	48	160	180	16 FT	1 1/2"	1 1/2"	1/2 HP	120 / 1	12	15	600	*1*2*3*4*5*6
B-2	ROOF	RAYPAK	XFYRE - TYPE H	500	470	94%	48	160	180	16 FT	1 1/2"	1 1/2"	1/2 HP	120 / 1	12	15	600	*1*2*3*4*5*6

*1 OUTDOOR BOILER CONSTRUCTION WITH REQUIRED CALIFORNIA CONTROLS.
*2 EACH BOILER IS DESIGNED TO HANDLE 50% OF THE HEATING CAPACITY OF THE SYSTEM.
*3 PROVIDE ALL STAINLESS STEEL CONSTRUCTION, ASME H STAMPED, 160 PSIG WORKING PRESSURE, TEMPERATURE AND PRESSURE GAUGE.
*4 PROVIDE DIGITAL OPERATING CONTROL WITH LCD DISPLAY, MULITIBOILER SYSTEM CONTROLLER WITH B-36 TEMPTRACKER MOD + DIGITAL CONTROLLER FOR 2 BOILERS AND OUTSIDE AIR RESET.
*5 PROVIDE 4" CPVC OUTDOOR VENT AND Z-12 CONDENSATE NEUTRALIZER KIT.
*6 PROVIDE CURB AND PLATFORM WITH GALVANIZED STEEL TOP FOR MOUNTING BOILER ON ROOF. PROVIDE MASON SUPER W VIBRATION ISOLATION PADS BETWEEN PLATFORM AND BOILER.

PUMP SCHEDULE - HEATING WATER

SYMBOL	AREA LOCATED	MFG.	MODEL NUMBER	WATER GPM	PRESSURE FEET HEAD	MOTOR HP	MOTOR RPM	VOLTS/ PHASE	WEIGHT POUNDS	REMARKS:
HWP-1	ROOF	ARMSTRONG	4030 B X 11/2 X 8	96	65	5	1,750	208 / 3	250	*1*2*3*4*5 PROVIDE VFD DRIVE
HWP-2	ROOF	ARMSTRONG	4030 B X 11/2 X 8	96	65	5	1,750	208 / 3	250	*1*2*3*4*5 PROVIDE VFD DRIVE

*1 MOTORS TO BE NON OVERLOADING TYPE.
*2 PROVIDE CURB AND PLATFORM WITH GALVANIZED STEEL TOP FOR MOUNTING PUMPS ON ROOF. PROVIDE MASON SUPER W VIBRATION ISOLATION PAD AT EACH CORNER OF PUMP BETWEEN PLATFORM AND PUMP.
*3 PROVIDE VARIABLE FREQUENCY DRIVE FOR PUMP OPERATION.
*4 PROVIDE SUCTION GUIDE AMSTRONG 5693 AND SUCTION AND DISCHARGE SHUT OFF VALVES.
*5 EACH PUMP IS DESIGNED TO HANDLE 100% OF GPM LOAD. DDC CONTROLS SHALL ALTERNATE EACH PUMP.

AIR SEPARATOR SCHEDULE - HEATING WATER

SYMBOL	AREA LOCATED	MFG.	MODEL NUMBER	GPM	PIPE SIZE INLET	PIPE SIZE OUTLET	RATED P.S.I.	WEIGHT POUNDS	REMARKS:
AS-1	ROOF	ARMSTRONG	VAS - 2 1/2	96	2.5"	2.5"	150	200	*1*2*3*4*5*6

*1 PROVIDE CURB AND PLATFORM WITH GALVANIZED STEEL TOP FOR MOUNTING AIR SEPARATOR ON ROOF.
*2 PROVIDE GALVANIZED STEEL UNISTRUT STAND FOR SUPPORT AND SEISMIC RESTRAINT.
*3 PROVIDE INLET AND OUTLET FLANGED CONNECTIONS WITH REQUIRED AND ASSOCIATED ACCESSORIES WITHOUT STRAINER.
*4 PROVIDE AIR VENT WITH REQUIRED AND ASSOCIATED ACCESSORIES.
*5 PROVIDE UNIT WITH HIGH GRADE RUST INHIBITIVE RED PRIMER..
*6 PROVIDE 2" THICK FIBERGLASS INSULATION WITH ALUMINUM JACKET AROUND AIR SEPARATOR.

EXPANSION TANK SCHEDULE - HEATING WATER

SYMBOL	AREA LOCATED	MFG.	MODEL NUMBER	TANK VOLUME GALLONS	PIPE SIZE CONNECTION	RATED P.S.I.	WEIGHT POUNDS	REMARKS:
ET-1	ROOF	ARMSTRONG	85-L PRE CHARGED	23	1"	300	500	*1*2*3*4

*1 PROVIDE CURB AND PLATFORM WITH GALVANIZED STEEL TOP FOR MOUNTING HORIZONTAL EXPANSION TANK ON ROOF.
*2 PROVIDE GALVANIZED STEEL UNISTRUT STAND FOR SUPPORT AND SEISMIC RESTRAINT.
*3 EXPANSION TANK SHALL BE PRE-CHARGED BLADDER TYPE.
*4 PROVIDE UNIT WITH HIGH GRADE RUST INHIBITIVE RED PRIMER AND FINAL WHITE FINISH PAINT.

EXHAUST FAN SCHEDULE

SYMBOL	AREA	MFG.	MODEL NUMBER	CFM	EXT. S.P. INCHES	FAN HP	RPM	VOLTS/ PHASE	WEIGHT POUNDS	REMARKS:
EF-1	CHEM. RM. 119	GREENHECK	H-CUBE-098-4	400	0.5	1/4	1,385	120/1	100	*1*2 INTERLOCK WITH AC-2
EF-2	RESTROOMS	GREENHECK	H-CUBE-141HP-4	800	0.75	1/4	1,321	120/1	150	*1*2 INTERLOCK WITH AC-1
EF-3	RESTROOMS	GREENHECK	H-CUBE-141HP-4	700	0.75	1/4	1,321	120/1	150	*1*2 INTERLOCK WITH AC-4
EF-4	CHEM. RM. 327	GREENHECK	H-CUBE-098-4	400	0.5	1/4	1,385	120/1	100	*1*2 INTERLOCK WITH AC-4
EF-5	ELEC. RM.	GREENHECK	H-CUBE-101-4	1,000	0.50	1/4	1,546	120/1	150	*1*2 INTERLOCK WITH AC-4
EF-6	DOG WARDS	GREENHECK	H-CUBE-220-HP-20	4,200	1.50	2.0	1,035	460/3	300	*1*2*3*5 INTERLOCK WITH AC-5
EF-7	EUTH. / SURGERY	GREENHECK	H-CUBE-180HP-10	2,800	1.25	1.0	1,335	460/3	250	*1*2*3*5 INTERLOCK WITH AC-7
EF-8	SALLY PORT	GREENHECK	H-CUBE-141HP-4	700	0.75	1/4	1,321	120/1	150	*1*4
EF-9	ANIMALS	GREENHECK	H-CUBE-200HP-20	3,650	1.50	2.0	1,335	460/3	300	*1*2*3*5 INTERLOCK WITH AC-6

EXHAUST FAN SHALL NOT BE SUBMITTED WITH RPMS HIGHER THAN THOSE LISTED FOR THE SPECIFIC CFM.
*1 FAN TO BE ROOF MOUNTED. PROVIDE A FACTORY ONE PIECE PITCHED ROOF CURB AND PROVIDE BACK DRAFT DAMPERS.
*2 PROVIDE CONDUIT AND WIRING FOR INTERLOCK OF EXHAUST FAN WITH ASSOCIATED HVAC UNIT.
*3 PROVIDE MOTOR STARTER FOR 460/3 FAN.
*4 PROVIDE 115 VOLT ON/OFF WALL SWITCH.
*5 EXHAUST FAN TO BE ON EMERGENCY POWER.

DUCTLESS SPLIT SYSTEM FAN COIL UNIT SCHEDULE - COOLING ONLY

SYMBOL	AREA LOCATED	MFG.	MODEL NUMBER	NOMINAL TONS	COOLING TOTAL MBTU/HR	SEER	SUPPLY CFM	VOLTS/ PHASE	MINIMUM CIRCUIT AMPS	MOCP AMPS	WEIGHT POUNDS	REMARKS:
FC-1	DATA ROOM	MITSUBISHI	MSY-GA24NA	2.0	22.0	17.5	600	208 / 1	1.00	15.0	75	*1*2*3*4*5*6
FC-2	TEL/COMM. ROOM	MITSUBISHI	MSY-GE18NA	1.5	17.0	19.2	400	208 / 1	1.00	15.0	75	*1*2*3*4*5*6

MOCP = MAXIMUM OVER CURRENT PROTECTION.
COOLING CAPACITIES BASE ON CONDITIONS OF 95 DEGREES OUTSIDE DRY BULB AND 67 DEGREES WET BULB ENTERING AIR TO COIL.
*1 PROVIDE REFRIGERANT R-410A PURON (NON HCFC REFRIGERANT).
*2 PROVIDE A REFRIGERATION PIPING (SUCTION AND LIQUID COPPER TYPE L TUBING) AND INSULATION WITH ALUMINUM JACKET ON SUCTION PIPING.
*3 PROVIDE A REFRIGERATION PIPING SHUT OFF VALVES AT FAN COIL UNIT.
*4 PROVIDE REFRIGERATION PIPING, CONTROL METAL CONDUIT AND THERMOSTAT WIRE FROM FAN COIL UNIT TO CONDENSING UNIT.
*5 PROVIDE HARD SHUT OFF TXV VALVE AT FAN COIL UNIT
*6 PROVIDE 7 DAY ELECTRONIC NIGHT SET BACK THERMOSTAT SET AT 48" ABOVE FINISH FLOOR.

DUCTLESS SPLIT SYSTEM CONDENSING UNIT SCHEDULE - COOLING ONLY

SYMBOL	AREA LOCATED	MFG.	MODEL NUMBER	NOMINAL TONS	COOLING TOTAL MBTU/HR	SEER	VOLTS / PHASE	MINIMUM CIRCUIT AMPS	MOCP AMPS	WEIGHT POUNDS	REMARKS:
CU-1	ROOF	MITSUBISHI	MUY-GA24NA	2.0	22.0	17.5	208 / 1	17.0	20	250	*1*2*3*4*5*6
CU-2	ROOF	MITSUBISHI	MUY-GE18NA	1.5	17.0	19.2	208 / 1	14.0	15	250	*1*2*3*4*5*6

MOCP = MAXIMUM OVER CURRENT PROTECTION.
*1 PROVIDE REFRIGERANT R-410A PURON (NON HCFC REFRIGERANT).
*2 PROVIDE STRUCTURALLY CALCULATED SINGLE PIECE PITCHED ROOF CURB WITH PLATFORM AND SEISMIC HOLD DOWNS.
*3 PROVIDE REFRIGERATION PIPING (SUCTION AND LIQUID COPPER TYPE ACR L TUBING) AND INSULATION WITH ALUMINUM JACKET ON SUCTION PIPING.
*4 PROVIDE A REFRIGERATION PIPING SHUT OFF VALVES AT CONDENSING UNIT. PROVIDE SUCTION LINE FILTER AND ACCUMULATOR.
*5 PROVIDE REFRIGERATION PIPING, CONTROL METAL CONDUIT AND THERMOSTAT WIRE FROM FAN COIL UNIT TO CONDENSING UNIT.
*6 PROVIDE FACTORY INSTALLED LOW-AMBIENT CONTROLLER, HARD SHUT OFF TXV, CRANKCASE HEATER AND PRESSURE SWITCH THAT CYCLES OUTDOOR FAN.

JAN 19 2010

BID SET

PREVAILING WAGE JOB

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CITY OF PALM SPRINGS
PROJECT NO. CP. 07-24

APN: 680-020-010

Issue

Rev	Date	By	Description
1	8/18/09	TH	DD SET
2	10/8/09	BL	PROGRESS SET
3	11/23/09	BL	Bldg. Permit Set
4	01/04/10	BL	Bldg. Permit Re-Submittal
5	01/18/10	BL	Bid Set

NOT FOR CONSTRUCTION

Drawn By	RO
Checked By	DM
Job No.	0903
Issue Date	01/18/10
Scale	1/8"=1'-0"

Reference North

Drawing Title

MECHANICAL SCHEDULE

M1.1

Sheet

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