

LOW PRESSURE STEAM BOILER SCHEDULE									
B #	COLUMBIA MODEL	GROSS OUTPUT	BOILER H.P.	GAS INPUT	BURNER GAS	WATER CAPACITY	FLUE	MIN. EFF.	EQUIPMENT WEIGHT (DRY)
B-1	WL-180	2.12 MBH	60	2.52 MBH	POWERFLAME MODEL C2-0-20A	287 GAL	14"φ	80%	3750

NOTE: SEE SPEC. SECTION 15640 FOR ADDITIONAL INFORMATION. BOILER TO BE INSTALLED IN EXISTING MECH. ROOM. BOILER SHALL BE STEEL I.E.R., FORCED DRAFT, SECTIONAL CONSTRUCTION, DESIGNED, CONSTRUCTED AND TESTED IN ACCORDANCE WITH ASME BOILER AND PRESSURE VESSEL CODE, TEMPERATURE AND PRESSURE GAUGES. UNIT SHALL HAVE ATTACHED PLATES AND/OR LABELS INDICATING A.G.A. CERTIFICATION, GAS POWER FLAME BURNER, FLANGE MOUNTED MEETING LATEST UL REQUIREMENTS. ELECTRIC IGNITION WITH GAS PILOT ON GAS SIDE. CONTROLS, TRIM, CITY OF SEATTLE LOW WATER CUTOFF AND INSULATION AND PAINTED. COLUMBIA OR APPROVED.

BLOWDOWN SEPARATOR					
BDS #	INLET SIZE	DRAIN SIZE	VENT SIZE	WATER SUPPLY SIZE	PENN MODEL
BDS-1	2"	4"	5"	1 1/4"	A20

BOILER CONTROLLER							
BC #	VOLTAGE	CYCLE LENGTH (MINUTES)	SENSORS				TEXMAR MODEL
BC-1	120/1/60	0-100	INDOOR 1	INDOOR 2	OUTDOOR	CONDENSATE	269-1

HEAT AND VENT UNITS: AIR HANDLING UNIT, LOW PRESSURE STEAM HEATING, CENTRIFUGAL FAN FOR SUPPLY FAN, IN ACCORDANCE WITH ARI TESTING PROCEDURES, FACTORY ASSEMBLED, INTERNALLY WIRED, U/L LISTED, INTERNALLY LINED CORROSION RESISTANT EXTERIOR CABINET, 2-INCH THROWAWAY PAPER 30/30 FILTER MOUNTED ON SIDES INTEGRAL TO UNIT, ADJUSTABLE V-BELT FAN/MOTOR DRIVE. PROVIDE EACH UNIT WITH THE FOLLOWING: DDC INTERFACE PANEL, UNIT DISCONNECT SWITCH, HIGH EFFICIENCY MOTORS, FAST WARM-UP THERMOSTAT, ACCESS DOORS, MICROPROCESSOR BASED, ENERGY MANAGEMENT CONTROL MODULE, WATER TIGHT CURB FOR DOWNFLOW APPLICATION. CAPACITY AND CHARACTERISTICS:															
HV #	FAN CAPACITY	FAN MOTOR	HEATING CAPACITY				ELECTRICAL DATA			MODEL NO.	EQUIPMENT WEIGHT (LBS) NET (GROSS)	NOTES			
HV #	CFM	FAN RPM	MOTOR HP	MOTOR HP	MIN. OA	(BTUH X 1000)	MAX. COIL FACE VELOCITY (FPM)	MIN. ROWS OF COIL	MINIMUM CIRCUIT AMPS	MAXIMUM FUSE SIZE	VOLTS/φ/Hz				
HV-1	5000	175	1317	4.34	5	3500	275.0	625	1	-	-	208-230/3/60	TRANE T-SERIES CLIMATE CHANGER, SIZE 10	APPROX. 2345	1,2,3,4
HV-2	3500	160	1787	3.78	5	2400	170.0	625	1	-	-	208-230/3/60	TRANE MODULAR CLIMATE CHANGER, SIZE 6	APPROX. 870	1,2,3,5
HV-3	3500	160	1787	3.78	5	2400	170.0	625	1	-	-	208-230/3/60	TRANE MODULAR CLIMATE CHANGER, SIZE 6	APPROX. 870	1,2,3,5
HV-4	3500	160	1787	3.78	5	2400	170.0	625	1	-	-	208-230/3/60	TRANE MODULAR CLIMATE CHANGER, SIZE 6	APPROX. 870	1,2,3,6

NOTES:  
1. HEATING CAPACITY SHALL BE RATED AT 50°F ENTERING AIR TEMPERATURE AT COIL, 5 PSI STEAM PRESSURE.  
2. EXTERNAL STATIC PRESSURE (EXCLUDES FILTER, COIL AND INTERNAL CABINET PRESSURE DROP.)  
3. GROSS WEIGHT INCLUDES WEIGHT OF CURB.  
4. ROOFTOP AIR HANDLING UNIT WITH DOWNFLOW SUPPLY AND FULLY MODULATING ECONOMIZER, INCLUDING 0-100% MOTOR AND DAMPERS.  
5. UNDER BID ALTERNATIVE NO. 3: INDOOR AIR HANDLING UNIT WITH FULLY MODULATING ECONOMIZER, INCLUDING 0-100% MOTOR AND DAMPERS.  
6. INDOOR AIR HANDLING UNIT.

ROOF HOOD SCHEDULE					
TAG	CURB SIZE (IN.)	THROAT SIZE (IN.)	THROAT AREA (SQ. FT.)	MAX. CFM @ +/- 500 FPM	MANUFACTURER/ MODEL NO.
RH-1	32X38	24X30	5.0	2400	GREENHECK FHI
RH-2	18X24	26X32	3.0	1500	GREENHECK FHR

AIR DEVICE SCHEDULE							
DEVICE NO.	MAX AIR QTY @ NC-30	DESCRIPTION	NECK SIZE	FACE SIZE	MANUF. MODEL NO.	NOTES	
CD-1	365	SURFACE MOUNT SUPPLY AIR DIFFUSER	12"φ	24X24	TITUS PCS-AA		
SR-1	1080	SURFACE MOUNT SIDEWALL SUPPLY AIR REGISTER	24X10	28X12	TITUS 300RS		
RG-1	380	SURFACE MOUNT RETURN AIR GRILLE	10X10	12X12	TITUS PAR-AA	4.	
RG-2	4215	SURFACE MOUNT RETURN AIR GRILLE	46X22	48X24	TITUS PAR-AA		
RG-3	905	SURFACE MOUNT RETURN AIR GRILLE	18φ	24X24	TITUS PAR-AA		

NOTES:  
1. PERFORATED FACE PLATE WITH SEISMIC CLIPS.  
2. PROVIDE OPPOSED BLADE VOLUME CONTROL DAMPERS.  
3. PROVIDE OFF-WHITE FINISH FOR FACE PLATES, FRAME AND LOUVER BARS.  
4. PROVIDE ROUND TO SQUARE ADAPTER AT DIFFUSER NECK.  
5. PROVIDE OFF-WHITE FINISH FROM FRAME AND FACE PLATE, FLAT BLACK FOR EXPOSED-TO-VIEW INTERNAL PARTS.

LOUVER SCHEDULE						
TAG	SIZE (IN.)	FREE AREA (SQ. FT.)	CFM	VELOCITY (FPM)	MANUFACTURER/ MODEL NO.	NOTES
L-1	30X18	1.70	825	485	RUSKIN ELF375DX	1.
L-2	48X24	4.02	2400	870	RUSKIN ELF375DX	

NOTES:  
1. MATCH COLOR TO ARCHITECTURAL FINISH.

LOW PRESSURE STEAM COIL SCHEDULE													
SC #	HEATING CAPACITY BTUH	Δ T	LBS PER HR	NO. ROWS	FINS PER INCH	TUBE OD	MAX PSIG	MAX TEMP	LOCATION	SIZE (INCHES)	HEATCRAFT MODEL	NOTES	
SC-1	300,000	60°	300	1	6	5/8"	150	360° F	BALCONY UNDERSIDE	48	24	5JA0601H	1,2.

NOTES:  
1. SEE STEAM COIL DETAIL 2/M301.  
2. PROVIDE DUCT TRANSITIONS TO FIT NEW COIL INTO EXISTING DUCTWORK.

EXHAUST FAN SCHEDULE										
EF #	EXHAUST CAPACITY CFM	EXT. S.P.	FAN MOTOR DATA RPM	115V/1φ/60HZ AMPS	115V/1φ/60HZ WATTS	MAX SONES	GREENHECK MODEL	WEIGHT (LBS)	LOCATION	TYPE
EF-1	350	0.25	1300	1.50	150	3.2	CSP-228	23	WOMENS RR MAIN LEVEL	2,3
EF-2	350	0.25	1300	1.50	150	3.2	CSP-228	23	MENS RR MAIN LEVEL	2,3
EF-3	75	0.25	1500	.750	40	3.4	SP-6	6	JANITORS RM MAIN LEVEL	1,3

FAN TYPE:  
1. CENTRIFUGAL CABINET TYPE, CEILING MOUNT, INTEGRAL BACK DRAFT DAMPER AND QUICK DISCONNECT PLUG, INSULATED HOUSING, RUBBER-IN-SHEAR VIBRATION ISOLATION.  
2. CENTRIFUGAL CABINET TYPE, IN-LINE, INTEGRAL BACK DRAFT DAMPER AND QUICK DISCONNECT PLUG, INSULATED HOUSING, RUBBER-IN-SHEAR VIBRATION ISOLATION.  
3. CONTROL FROM LIGHT SWITCH/EMCS SYSTEM

PLUMBING FIXTURE SCHEDULE									
P-#	PLUMBING FIXTURE/TRIM DESCRIPTION	PLUMBING CONNECTIONS				NOTES			
P-#		CW	HW	WASTE	VENT				
P-1	URINAL: AMERICAN STANDARD "WASHBROOK" 1.0 #6501.010, VITREOUS CHINA, FLUSHING RIM, WASHOUT FLUSH ACTION, STAINLESS STEEL STRAINER, WALL HANGER, ADA COMPLIANT WHEN MOUNTED SO TOP OF RIM IS 17" AFF, SLOAN ROYAL FLUSHMETER #186-1 W/CHROME FINISH.	3/4"	-	2"	1 1/2"	1,2,3.			
P-2	LAVATORY: AMERICAN STANDARD "AQUALYN" 476.028 OVAL VITREOUS CHINA, 20"X17" OVERALL, SELF-RIMMING LAVATORY, 4" CENTERS, DELTA MODEL #501 FAUCET WITH PERFORATED SS DRAIN ASSEMBLY, HW, CW SUPPLIES WITH STOP, ABS P-TRAP, ADA COMPLIANT	1/2"	1/2"	2"	1 1/2"	1,2,3.			
P-3	FLOOR DRAIN: JAY R. SMITH - MODEL #2005(A) ROUND TOP 6" DIA. NO HUB OUTLET, DUO CAST IRON BODY W/NICKLE BRONZE STRAINER HEAD. PROVIDE & INSTALL TRAP PRIMER.	-	-	-	1 1/2"	3.			
P-4	WATER CLOSET: AMERICAN STANDARD "AFWALL", EL 1.6, 2257.103 VITREOUS CHINA, FLUSH VALVE, ELONGATED BOWL, TOP SPRUD, WATER CLOSET, WALL MOUNTED, DIRECT SIPHON JET ACTION, BOLT CAPS, OLSONITE # 95 SOLID PLASTIC SEAT WITH OPEN FRONT, WITH SLOAN ROYAL FLUSHMETER # 111 W/CHROME FINISH, ADA COMPLIANT WHEN MOUNTED W/TOP OF RIM @18" AFF.	1 1/4"	-	3"	2"	1,2,3.			
P-5	JANITORS SINK: AMERICAN STANDARD "FLORWELL" 7741.00, ENAMELED CAST IRON, 28"X28" SERVICE SINK, CORNER MOUNT WITH #7745.811 VINYL RIM GUARD, DELTA MODEL #2818063 CHROME SERVICE SINK FAUCET.	1/2"	1/2"	3"	1 1/2"	1,2,3.			
P-6	DRINKING FOUNTAIN: ELKAY EDPP-117-C TWO LEVEL DRINKING FOUNTAIN, NO REMOTE CHILLER-CW ONLY, STAINLESS STEEL FINISH, WALL MOUNT, ADA COMPLIANT, FLOW REGULATOR, CHROME BUBBLER, FRONT PUSH BUTTON.	1/2"	-	1 1/2"	1 1/2"	2,3.			
P-7	BAR SINK: ELKAY LR-1918, OVERALL 18"X19"X7"-1/2" DEEP INSIDE, 18 GAUGE, TYPE 302 STAINLESS STEEL SINK, 3-HOLE PUNCHING, CHICAGO NO. 1100-HAB, 8" CENTERS, 8" SPOUT, 1000 HANDLES, E12 AERATOR, ELKAY LK-99 DUO STRAINER, KOHLER K-7605 3/8" ANGLE SUPPLIES WITH STOPS.	1/2"	1/2"	2"	1 1/2"	2,3.			
P-8	SINK: ELKAY LR-2521, OVERALL 25"X21"X8" DEEP INSIDE, 18 GAUGE, TYPE 302 STAINLESS STEEL SINK, 3-HOLE PUNCHING, CHICAGO NO. 1100-HAB, 8" CENTERS, 8" SPOUT, 1000 HANDLES, E12 AERATOR, ELKAY LK-99 DUO STRAINER, KOHLER K-7605 3/8" ANGLE SUPPLIES WITH STOPS.	1/2"	1/2"	2"	1 1/2"	2,3.			
P-9	DRINKING FOUNTAIN/CUSPIDOR: ELKAY EDPC-211-C STAINLESS STEEL, SEMI-RECESSED, FLEXI-GUARD, SAFETY BUBBLER, PERFORATED DOME STRAINER AND TAILPIECES, OPTIONAL BOTTOM COVER PLATE.	1/2"	-	2"	1 1/2"	3.			
P-10	DRINKING FOUNTAIN: ELKAY EDPPW-114-C, STAINLESS STEEL, ADA FRONT PUSH BAR, WALL MOUNTED.	1/2"	-	2"	1 1/2"	3.			

NOTES:  
1. FIXTURE TO BE WHITE.  
2. PROVIDE ANGLE COMPRESSION STOP AND CHROME PLATED BRASS OR COPPER SUPPLY FOR WATER FIXTURES. PROVIDE CHROME-PLATED BRASS P-TRAP AND WASTE ARM FOR EXPOSED WASTE PIPING AT SINKS.  
3. PLUMBING CONNECTION SIZES ON SCHEDULE MAY REQUIRE TRANSITION TO FIXTURE/TRIM PIPE SIZES. ALL SIZES ON SCHEDULE ARE TO BE PROVIDED INSIDE PLUMBING WALLS.

BOILER FEED PUMP							
BFP #	PUMP GPM	NO. PUMPS	PUMP MOTOR HP (EACH)	DISCHARGE PRESSURE (PSI)	RECEIVER CAPACITY (GAL)	WT LBS	STERLING MODEL
BFP-1	10	2	1/2	20	124	335	4124-GDF

PUMP SCHEDULE						
HWCP #	DESCRIPTION					
HWCP-1	TACO RED BARON IN-LINE CIRCULATOR # 112 10 GPM, 20 FT. HD, 1/3HP, 3450 RPM, 115V/1φ/60HZ, 125 PSI, ALL BRONZE CONSTRUCTION					

LOW PRESSURE STEAM RADIATOR SCHEDULE									
R #	HEATING CAPACITY BTUH	SIZE (INCHES)			NO. SECTIONS	BURNHAM MODEL	WEIGHT (LBS)	LOCATION	NOTES
R-1	10800	L	H	D	20	20X520LC	225	MEZZANINE	1,2.

NOTE:  
1. RADIATORS: BURNHAM CAST IRON, FREE STANDING.  
2. MAXIMUM STEAM PRESSURE: 15 PSI

LOW PRESSURE STEAM CONVECTOR SCHEDULE								
C #	HEATING CAPACITY BTUH	SIZE (INCHES)			QTY	STERLING MODEL	LOCATION	NOTES
C-1	16000	L	H	D	6.25	632	STAGE	1,2.

NOTE:  
1. MAXIMUM STEAM PRESSURE: 15 PSI  
2. FIELD VERIFY EXACT SIZE, COORDINATE LOCATION WITH ARCHITECT

CONTROL SYSTEM POINT LIST

SYSTEM DESCRIPTION	EQUIP.	POINT DESCRIPTION	EMCS OUTPUT				EMCS INPUT				EMCS ALARM		EMCS APPLICATION/FUNCTION		REMARKS			
			DIGITAL		ANALOG		DIGITAL		ANALOG									
			SCHEMATICS	PRIORITY	QUANTITY	UNIT	SCHEMATICS	PRIORITY	QUANTITY	UNIT	CONTACT CLOSURE	CONTACT OPEN	START/STOP	START/STOP		START/STOP	START/STOP	
HV 1,2,3,4	EACH SYSTEM	SUPPLY FAN	0	4	0	0	0	0	0	0	0	0	0	0	0	0		
		SUPPLY AIR	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
		RETURN AIR	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
		OUTSIDE AIR	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
		FILTER	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
		STEAM HEAT	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
		SMOKE DETECTORS	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	PROVIDE MODULATING STEAM CONTROL VALVE
		MIXING DAMPERS	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
		EXHAUST FANS	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
		B-1	STEAM BOILER NO. 1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
SP-1	SUMP PUMP 1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	PROVIDE ENCAPSULATED MERCURY SWITCH HIGH LEVEL ALARM	
HWCP-1	DOMESTIC CIRC. PUMP	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		
SC-1	STEAM COIL NO. 1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		

GENERAL NOTES--THIS SHEET

- ALL MECHANICAL EQUIPMENT TO BE UL OR ETL LISTED FOR ITS INTENDED USE.

GENERAL PLUMBING ENERGY NOTES

- LAVATORY FAUCETS SHALL HAVE A MAXIMUM FLOW OF 0.5 GPM.
- INSULATION THICKNESS FOR ALL HOT WATER PIPING SHALL BE AS FOLLOWS:

PIPE SIZE	1" & LESS	2" & LESS	4" & LESS	6" & LESS
INSUL. THK.	1"	1"	1 1/2"	1 1/2"

NOTE: FOR PIPES IN UNHEATED SPACES, ADD 1/2" THICKNESS TO PIPE INSULATION SCHEDULED ABOVE.

**ARAI/JACKSON**  
Architects & Planners  
1601 East John • Seattle, WA 98112  
Tel: 206-325-8800 Fax: 206-325-8518

CONSTRUCTION DOCUMENTS  
BID SET

EXPIRES: 7/8/04

REVIEWED: *J. Johnson* 11/5/03  
DATE: 11/5/03

REVISION - AS BUILT

NO. 1 12/11/02  
NO. 2 7/15/02

DESIGNED: KWB DATE: JULY 23, 2002  
DRAWN: CEA DESIGN REVIEW  
CHECKED: TEP

ORDINANCE NO. 119812 & 119887 SHEET 52 OF 76  
CONTRACT NO. 1616  
SCALE: NO SCALE

**PATH ENGINEERS, LLC**

17928 BOTHELL EVERETT HWY SE, SUITE H  
BOTHELL, WASHINGTON 98012  
(425) 481-7735 FAX (425) 481-7692

CONTACT: MIKE HENABY  
JOB NUMBER: 023261

SAND POINT  
MAGNUSON PARK  
COMMUNITY RECREATION CENTER  
BUILDING 47

MECHANICAL SCHEDULES

DESIGNED: KWB DATE: JULY 23, 2002  
DRAWN: CEA DESIGN REVIEW  
CHECKED: TEP

ORDINANCE NO. 119812 & 119887 SHEET 52 OF 76  
CONTRACT NO. 1616  
SCALE: NO SCALE