PUMP SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	SIZE	TYPE	CIRCULATING FLUID								MIN % EFF	ELECTRICAL MOTOR						REMARKS
						FLUID	FLOW		HEAD		NPSH NEEDED		TEMPERATURE	SP GR	NOMINAL POWER		TYPE	PHASE	VOLT	MAX RPM	SPEED CONTROL	
							GPM	[L/s]	FT	[kPa]	FT	[kPa]	°F [°C]		HP	[kW]						
HWP-1	BASEMENT	WHOLE BLDG	HEATING HOT WATER	2" x 1-1/4"	CLOSE-COUPLED END SUCTION	WATER	76	[5]	105	[1700]	10	[160]	170 [77]	1	65	5	3.7	TEFC	3	460	3500	VARIABLE	1
HWP-2	BASEMENT	WHOLE BLDG	HEATING HOT WATER	2" x 1-1/4"	CLOSE-COUPLED END SUCTION	WATER	76	[5]	105	[1700]	10	[160]	170 [77]	1	65	5	3.7	TEFC	3	460	3500	VARIABLE	1
CHP-1	BASEMENT	WHOLE BLDG	CHILLED WATER	2" x 1-1/4"	CLOSE-COUPLED END SUCTION	WATER+30% GLYCOL	65	[4]	66	[1100]	8	[130]	45 [7]	1.06	60	5	3.7	TEFC	3	460	3500	CONSTANT	1
CHP-2	BASEMENT	WHOLE BLDG	CHILLED WATER	2" x 1-1/4"	CLOSE-COUPLED END SUCTION	WATER+30% GLYCOL	65	[4]	66	[1100]	8	[130]	45 [7]	1.06	60	5	3.7	TEFC	3	460	3500	CONSTANT	1
RLP-1	BASEMENT	RUN-AROUND COILS	AHU-1	3/4" x 3/4"	FLANGED IN-LINE	WATER+30% GLYCOL	8	[1]	12	[190]	2	[32]	65 [18]	1.06	70	0.125	0.1	ODP	1	120	1760	CONSTANT	1

REMARKS:
1. INTEGRATE INTO NEW BAS FOR BUILDING 25.

WELD FUME EXTRACTOR UNIT

MARK	LOCATION	AREA OF BLDG SERVED	SERVES	CONN. SIZE	FAN CAPACITY		EXTRACTION FLOW		TSP		FILTER			SELF-CLEANING			FAN							REMARKS
																	TYPE	CLASS	ARRANGEMENT	DRIVE	FAN RPM	MOTOR		PHASE	VOLT	FLA	
				INCH	CFM	[L/s]	CFM	[L/s]	IN	[Pa]	MERV	SURFACE (SF)	TYPE	COMPR. AIR (PSI)	CONN. (INCH)	TYPE						HP	[kW]				
WFE-1	WALL	WELDING SHOP	SLOTTED HOOD	7	880	[420]	880	[420]	2	[500]	1/5	490	MEDIA	80	3/8	AUTO	CENTRIF	I	BOTT. INLET, SIDE DISCH.	DIRECT	3450	1	[1]	1	115	11.9	CABINET AND FAN ONLY, 1

REMARKS:
1. INTEGRATE INTO NEW BAS FOR BUILDING 25.

AIR TERMINAL UNIT SIZING SCHEDULE

TAG	AIR HANDLER	AREAS SERVED	MIN AIR FLOW		MAX AIR FLOW		DUCT INLET SIZE		TERMINAL STATIC DROP	SOUND RATING	HOT WATER HEATING COIL												REMARKS
											ROWS	EAT		LAT		HEATING CAPACITY		EWT		LWT		FLOW		MAX APD		MAX WPD		PIPE CONN. SIZE		
			CFM	[L/s]	CFM	[L/s]	IN	[mm]	IN WG	MAX NC	[quan]	°F	[°C]	°F	[°C]	(BTUH)	[WATTS]	°F	[°C]	°F	[°C]	GPM	[L/m]	INCHES	[mm]	FT	[kPa]	IN	[mm]	
VAV-1	AHU-1	MECH SHOP 113	810	[380]	1350	[640]	12	[300]	0.01	[3]	22	1	55	[13]	85	[29]	26,244	[7700]	170	[77]	150	[66]	2.6	[10]	0.09	[23]	1.1	[3]	0.75	[19]	1
VAV-2	AHU-1	WELD SHOP 113		[120]	430	[200]	7	[180]	0.07	[18]	20	1	55	[13]	85	[29]	8,424	[2500]	170	[77]	150	[66]	0.8	[3]	0.05	[13]	0.64	[2]	0.75	[19]	1
VAV-3	AHU-1	CORRIDOR 100, TOOLS 106, MECHANICAL 107	170	[80]	290	[140]	5	[130]	0.04	[10]	22	1	55	[13]	85	[29]	5,508	[1600]	170	[77]	150	[66]	0.6	[2]	0.02	[5]	0.48	[1]	0.75	[19]	1
VAV-4	AHU-1		330	[160]	540	[250]	7	[180]	0.1	[25]	22	1	55	[13]	90	[32]	12,474	[3700]	170	[77]	150	[66]	1.2	[5]	0.07	[18]	0.9	[3]	0.75	[19]	1
VAV-5	AHU-1	MEZZANINE 201	350	[170]	600	[280]	7	[180]	0.12	[30]	23	1	55	[13]	80	[27]	9,450	[2800]	170	[77]	150	[66]	0.9	[4]	0.07	[18]	0.64	[2]	0.75	[19]	1
VAV-6	AHU-2	ELECTRICAL SHOP 103, TOOLS 103A	450	[210]	760	[360]	8	[200]	0.02	[5]	23	2	55	[13]	90	[32]	17,010	[5000]	170	[77]	150	[66]	1.7	[7]	0.23	[58]	0.2	[1]	0.75	[19]	1
VAV-7	AHU-2	CORRIDOR 100, UNISEX RESTROOM 102	60	[28]	100	[47]	4	[100]	0.02	[5]	11	1	55	[13]	85	[29]	1,944	[570]	170	[77]	150	[66]	0.2	[1]	0.01	[3]	0.48	[1]	0.75	[19]	1
VAV-8	AHU-2	ELECTRICAL 104	150	[71]	250	[120]	5	[130]	0.03	[8]	20	1	55	[13]	80	[27]	4,050	[1200]	170	[77]	150	[66]	0.4	[2]	0.02	[5]	0.48	[1]	0.75	[19]	1
VAV-9	AHU-2	AC OFFICES/CONFERENCE 111	620	[290]	1045	[490]	10	[250]	0.01	[3]	23	2	55	[13]	90	[32]	23,436	[6900]	170	[77]	150	[66]	2.5	[10]	0.22	[55]	0.56	[2]	0.75	[19]	1
VAV-10	AHU-2	ELECTRICAL OFFICES/CONFERENCE 110	520	[250]	820	[390]	8	[200]	0.023	[6]	23	2	55	[13]	90	[32]	19,656	[5800]	170	[77]	150	[66]	2.1	[8]	0.23	[58]	0.29	[1]	0.75	[19]	1
VAV-11	AHU-2	SCHNEIDER OFFICE 108	50	[24]	100	[47]	4	[100]	0.02	[5]	11	1	55	[13]	80	[27]	1,350	[400]	170	[77]	150	[66]	0.1	[1]	0.01	[3]	0.56	[2]	0.75	[19]	1
VAV-12	AHU-2	BAS OFFICE 109	50	[24]	100	[47]	4	[100]	0.02	[5]	11	1	55	[13]	80	[27]	1,350	[400]	170	[77]	150	[66]	0.1	[1]	0.01	[3]	0.56	[2]	0.75	[19]	1
VAV-13	AHU-3	CLEAN LINEN STORAGE 126	650	[310]	1100	[520]	10	[250]	0.01	[3]	23	2	55	[13]	85	[29]	21,060	[6200]	170	[77]	150	[66]	2.1	[8]	0.22	[55]	0.47	[1]	0.75	[19]	1
VAV-14	AHU-3	ENVIRONMENTAL MGMT 124	550	[260]	930	[440]	9	[230]	0.06	[15]	20	1	55	[13]	85	[29]	17,820	[5200]	170	[77]	150	[66]	1.8	[7]	0.07	[18]	0.9	[3]	0.75	[19]	1
VAV-15	AHU-3	OFFICE 127	90	[42]	150	[71]	4	[100]	0.04	[10]	20	1	55	[13]	85	[29]	2,916	[850]	170	[77]	150	[66]	0.3	[1]	0.03	[8]	0.48	[1]	0.75	[19]	1
VAV-16	AHU-3	OFFICE 128	90	[42]	150	[71]	4	[100]	0.04	[10]	20	1	55	[13]	85	[29]	2,916	[850]	170	[77]	150	[66]	0.3	[1]	0.03	[8]	0.48	[1]	0.75	[19]	1
VAV-17	AHU-3	BREAK ROOM 125	190	[90]	330	[160]	6	[150]	0.01	[3]	20	1	55	[13]	90	[32]	7,182	[2100]	170	[77]	150	[66]	0.7	[3]	0.04	[10]	0.48	[1]	0.75	[19]	1
VAV-18	AHU-3	PEST CONTROL, SIGNAGE SHOP 118, CORRIDOR 117	180	[85]	300	[140]	6	[150]	0.07	[18]	16	1	55	[13]	85	[29]	5,832	[1700]	170	[77]	150	[66]	0.6	[2]	0.04	[10]	0.48	[1]	0.75	[19]	1
VAV-19	AHU-3	PAINT OFFICE 116	160	[76]	280	[130]	5	[130]	0.04	[10]	16	1	55	[13]	90	[32]	6,048	[1800]	170	[77]	150	[66]	0.6	[2]	0.04	[10]	0.48	[1]	0.75	[19]	1

REMARKS:
1. INTEGRATE INTO NEW BAS FOR BUILDING 25.

FAN-POWERED AIR TERMINAL UNIT SCHEDULE

MARK	LOCATION	AREA/ROOM OR UNIT SERVED	SYSTEM SERVED	INLET SIZE (INCHES)	AIR FLOW-PRIMARY					HEATING AIR FLOW-FAN				FAN DATA				HEATING COIL									ADDITIONAL SOUND ATTUNATION	CONTROL TYPE	CONTROL SEQUENCE	REMARKS
					MAX		MIN		MIN * SP REQ'D	VOLUME		ESP		MOTOR		ELECTRICAL		EAT	LAT	CAPACITY	EWT	LWT	FLOW	WPD	APD	NUMBER OF ROWS				
					CFM	[L/s]	CFM	[L/s]		CFM	[L/s]	INCHES	[Pa]	HP	[Kw]	VOLT	FLA	F	F	BTUH	F	F	GPM	INCHES	INCHES					
FPB-1	ABOVE CEILING	MEN'S RESTROOM	SUPPLY AIR	6	250	[120]	150	[57]	0.015	500	[240]	.43	[110]	.167	0.10	120	3.6	55.0	85.0	15,150	170	150	1.5	0.60	0.03	1	NONE	VARIABLE	MODULATING	1

REMARKS:
1. INTEGRATE INTO NEW BAS FOR BUILDING 25.

AIR COOLED CHILLER SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	FLUID	COMPRESSORS	NOMINAL CAPACITY		# OF COMP	MIN. CAPACITY STEP	FULL LOAD EER	IPLV	EVAPORATOR								CONDENSER			ELECTRICAL					REMARKS
											DESIGN FLOW		MAX FLOW		EWT		LWT		DESIGN WPD	FOULING FACTOR	AMBIENT OA TEMP		FANS		SINGLE POINT CONNECTION				
					TONS	[kW]					GPM	[L/s]	GPM	[L/s]	°F	[°C]	°F	[°C]	FT [kPa]		°F	[°C]	QUAN	TOTAL CFM	MCA	MOCP	FUSE	PHASE	VOLT	
CH-1	OUTDOORS-NORTH	WHOLE BLDG	WATER + 30% GLYCOL	SCROLLS-VARIABLE SPEED	35	[120]	4	8%	10.4	14.9	67	[4]	82.5	[5]	56	[13]	44	[7]	10.5 [31]	0.0001	93	[34]	3	29,600	82.4	100	90	3	460	12,000 AFC
NOTES																														
EFFICIENCIES LISTED ARE AT DESIGN CONDITIONS INDICATED, INCLUDES CONDENSER FANS.																														
INTEGRATE INTO NEW BAS FOR BUILDING 25.																														

ENERGY RECOVERY VENTILATION AIR UNIT

MARK	LOCATION	UNITS SERVED	UNIT MODULES (POSITIONS IN DIRECTION OF AIR FLOW)						SUPPLY AIR FLOW	SUPPLY FAN PERFORMANCE		SUPPLY FAN MOTOR			SUPPLY FAN ELECTRICAL				RETURN AIR FLOW	RETURN FAN PERFORMANCE		RETURN FAN MOTOR			RETURN FAN ELECTRICAL			
			POS 1	POS 2	POS 3	POS 4	POS 5	POS 6	CFM	ESP	TSP	RPM	BHP	RATED HP	VOLTS	PHASE	MCA	FUSE (AMPS)	CFM	ESP	TSP	RPM	BHP	RATED HP	VOLTS	PHASE	MCA	FUSE (AMPS)
ERV-1	MECHANICAL 107	AHU-1, AHU-2, AHU-3	OA DAMPER FILTERS - 2" MERV 8	ENTHALPY WHEEL	HOT WATER HEATING COIL	SUPPLY FAN	RA DAMPER FILTERS - 2" MERV 8	EXHAUST FAN - DAMPER	4070	2"	2.7"	1671	4.8	7.5	460	3	8.3	20	2,900	2"	4.7	2050	6.6	7.5	460	3	11.8	20

ENERGY RECOVERY VENTILATION AIR UNIT

MARK	ENTHALPY WHEEL OUTDOOR AIR-SUPPLY AIR						ENTHALPY WHEEL RETURN AIR-EXHAUST AIR						ROTOR MOTOR				HEATING COIL								REMARKS
	SEASON	AIR FLOW	MAX APD	EAT		LAT		AIR FLOW	APD	EAT		LAT		MCA	FUSE (AMPS)	VOLT	PHASE	AIR FLOW	EAT	LAT	CAPACITY	EWT	LWT	FLOW	
				Db	Wb	Db	Wb			Db	Wb	Db	Wb												
		CFM	IN	°F	°F	°F	°F	CFM	IN	°F	°F	°F	°F					CFM	DB-°F	DB-°F	MBTUH	°F	°F	GPM	PD-MAX (FT) MEDIUM	
ERV-1	WINTER	4,070	0.77	0	-2	38	30	2,900	0.4	70	53	15	14	.77	15	460	3	4,070	39	67	123.1	170	150	14.0	2.5 GLYCOL MIX	1
	SUMMER	4,070	0.77	92	74	82	68	2,900	0.4	75	64	88	72													

REMARKS:
1. INTEGRATE INTO NEW BAS FOR BUILDING 25.

ENERGY RECOVERY VENTILATOR SCHEDULE

MARK	LOCATION	SERVICE	MODE	SUPPLY AIR							EXHAUST AIR						SUPPLY FAN		EXHAUST FAN		ELECTRICAL			FILTERS	REMARKS
				SUPPLY AIR FLOW		ESP-SUPPLY		EAT			AIR FLOW		ESP-EXHAUST	EAT											
								Db		Wb				Db		Wb									
				CFM	[L/s]	IN	[Pa]	°F	[°C]	°F [°C]	ENERGY RECOVERY MINIMUM EFFECTIVENESS %	CFM	[L/s]	IN	[mm]	°F	[°C]	°F	[°C]	WATTS	MOTOR HP	WATTS	MOTOR HP	MCA	MOCP	SOURCE		
ERV-2	BASEMENT	SPACE VENTILATION	SUMMER	1470	[690]	0.47	[12]	93	[34]	76 [24]	51	1110	[520]	0.9	[23]	80	[27]	63	[17]	1380	1	1280	1.0	2.5	15	460/3/60	MERV 8	1
			WINTER	1470	[690]			1	[-17]	1 [-17]	65	1110	[520]			60	[16]	54	[12]									

REMARKS:
1. INTEGRATE INTO NEW BAS FOR BUILDING 25.

FAN SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	AIR FLOW		ESP		FAN					MOTOR ELECTRICAL						CONTROL SEQUENCE	REMARKS
								TYPE	WHEEL	DRIVE	FAN MAX RPM	HORSEPOWER		PHASE	VOLT	RPM	SPEED CONTROL		
				CFM	[L/s]	IN	[Pa]					RATED	BHP						
EF-1	ROOF	PAINT SHOP, PAINT STORAGE	DIRECT EXHAUST	720	[340]	0.63	[160]	DOWNBLAST	CENTRIFUGAL	DIRECT	1350	1/6	0.14	1	115	1350	CONSTANT		SCHEDULED	PROVIDE BACKDRAFT DAMPER, FACTORY ROOF CURB, 1
EF-2	IN-LINE	SOILED LINENS STORAGE	DIRECT EXHAUST	390	[170]	0.45	[110]	IN-LINE	CENTRIFUGAL	DIRECT	1550	1/10	0.07	1	115	1550	CONSTANT		SCHEDULED	PROVIDE BACKDRAFT DAMPER, 1
EF-3	ROOF	PAINT SHOP HOOD	DIRECT EXHAUST	750	[350]	0.75	[190]	DOWNBLAST	CENTRIFUGAL	DIRECT	1450	1/6	0.17	1	115	1450	CONSTANT		TIMED	PROVIDE BACKDRAFT DAMPER, FACTORY ROOF CURB, 1
EF-4	ROOF	MIXING ROOM-BASEMENT	DIRECT EXHAUST	360	[170]	0.7	[180]	DOWNBLAST	CENTRIFUGAL	DIRECT	1550	1/15	0.07	1	115	1550	CONSTANT		SCHEDULED	PROVIDE BACKDRAFT DAMPER, FACTORY ROOF CURB, 1

REMARKS:
1. INTEGRATE INTO NEW BAS FOR BUILDING 25.

CONSTANT VOLUME AIR TERMINAL UNIT SCHEDULE

MARK	AIR HANDLING UNIT	SIZE	DESIGN AIR FLOW		MAX SOUND RATING	UNIT PRESS LOSS	CONTROL SEQUENCE	REHEAT	REMARKS
		INCHES	CFM	[L/s]	NC	INCHES			
CAV-1	AHU-1	16	2790	[1300]	21	.03	CONSTANT	NONE	1
CAV-2	AHU-2	8	710	[340]	22	.02	CONSTANT	NONE	1
CAV-3	AHU-3	7	570	[270]	23	.1	CONSTANT	NONE	1

REMARKS:
1. INTEGRATE INTO NEW BAS FOR BUILDING 25.

ROOF HOOD SCHEDULE

MARK	LOCATION	SYSTEM SERVED	TYPE	APPLICATION	UNIT OUTSIDE DIMENSIONS				THROAT SIZE		AIR FLOW		APD		DAMPER	REMARKS
					FOOTPRINT (inches)	[mm]	HEIGHT (inches)	[mm]	INCHES	[mm]	CFM	[L/s]	IN	[Pa]		
IRH-1	ROOF	ERV-1	INTAKE	DUCTED-LOUVERED	32 x 56	[821 x 1422]	20	[508]	24 x 48	[610 x 1220]	4070	[1900]	0.047	[12]	BACKDRAFT	1
ERH-1	ROOF	ERV-1	EXHAUST	DUCTED-LOUVERED	32 x 38	[812 x 914]	16	[406]	24 x 30	[610 x 762]	2900	[1400]	0.055	[14]	BACKDRAFT	1

REMARKS:
1. INTEGRATE INTO NEW BAS FOR BUILDING 25.

STEAM TO WATER HEAT EXCHANGER SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	TYPE	WATER CONDITIONS								STEAM PRESSURE				REMARKS
					FLOW		EWT		LWT		WPD		ENT CONTROL VALVE		ENT HTX		
					GPM	[L/s]	°F	[°C]	°F	[°C]	FT	[kPa]	PSIG	[kPa]	PSIG	[kPa]	
HTX-1	MECHANICAL ROOM 003	BLDG 25	HEATING HOT WATER	SHELL & TUBE	76	[5]	150	[66]	170	[77]	3.3	[10]	20	[138]	15	[103]	---

EXPANSION TANK SCHEDULE

MARK	LOCATION	SYSTEM AND/OR SERVICE	TYPE	APPROX SYSTEM VOLUME		SYSTEM TEMP RANGE				INITIAL PRESSURE IN TANK		MAX OPERATING PRESSURE		FILL PRESSURE AT TANK				MIN VOLUME TANK		MIN BLADDER VOLUME		PIPE SIZE TO TANK		MAKE-UP WATER FILL SIZE			REMARKS
						MIN		MAX						RELIEF VALVE		AT TANK											
				GAL	[L]	°F	[°C]	°F	[°C]	PSIG	[kPa]	PSIG	[kPa]	PSIG	[kPa]	PSIG	[kPa]	GAL	[L]	GAL	[L]	IN	[mm]	IN	[mm]		
ET-2	MECHANICAL ROOM 003	HEATING WATER	VERTICAL DIAPHRAGM	150	[570]	150	[66]	170	[77]	12	[83]	46	[320]	126	[870]	10	[69]	21.7	[82]	11.3	[43]	0.5	[13]	0.5	[13]	---	
ET-3	MECHANICAL ROOM 003	CHILLED WATER	VERTICAL DIAPHRAGM	113	[430]	44	[7]	56	[13]	12	[83]	30	[210]	126	[870]	10	[69]	8	[30]	2.4	[43]	0.5	[13]	0.5	[13]	---	

AIR SEPARATOR SCHEDULE

MARK	LOCATION	SYSTEM AND/OR SERVICE	TYPE	AIR SEPARATOR							REMARKS
				SIZE IN		FLOW		WPD		BUILT-IN STRAINER REQ'D	
				IN	[mm]	GPM	[L/s]	FT	[kPa]		
AS-1	MECHANICAL ROOM 003	HEATING HOT WATER	FULL FLOW TANGENTIAL	3	[75]	76	[5]	0.94	[3]	YES	---
AS-2	MECHANICAL ROOM 003	CHILLED WATER	FULL FLOW TANGENTIAL	3	[75]	65	[5]	0.69	[2]	YES	---

2

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CONSULTANTS:

CHAMPLIN ARCHITECTURE
T 513.241.4474 F 513.241.0081
720 E Pete Rose Way, Cincinnati, OH 45202
THINK CREATE REALIZE

STATE OF OHIO — CLINT W. WEEKLEY, L.A. — E-7578 — REGISTERED PROFESSIONAL ENGINEER
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