PACKAGED ENERGY RECOVERY ROOFTOP UNIT SCHEDULE

BASIS OF DESIGN: ANNEXAIR

SYMBOL	SUPPLY FAN DATA				EXHAUST FAN DATA				MODEL	ENERGY RECOVERY DATA							COOLING COIL (30% PROPYLENE GLYCOL)														PRE-HEAT COIL								UNIT WIRING			NOMINAL SIZE L" x W" x H"	MAXIMUM OPERATING WEIGHT	BRANCH PIPING SIZES		REMARKS	SYMBOL
	MAX. SUPPLY	E.S.P.	B.H.P.	RPM	EXHAUST	E.S.P.	B.H.P.	RPM		DESIGN OA (MIN.)	EXHAUST CFM	DESIGN O.A. E.A.T.		DESIGN EXH. E.A.T.		L.A.T. AT DESIGN		EADB (°F)	EAWB (°F)	LADB (°F)	LAWB (°F)	TOTAL MBH	SENS. MBH	ROWS	EWT (°F)	LWT (°F)	GPM	FV (FT./MIN.)	APD	WPD	EAT (°F)	LAT (°F)	MBH	ROWS	EWT (°F)	LWT (°F)	GPM	FV (FT./MIN.)	APD	WPD	ELEC	MCA	MOP			HEATING	COOLING		
												SUMMER D.B./W.B.	WINTER D.B.	SUMMER D.B./W.B.	WINTER D.B.	SUMMER D.B./W.B.	WINTER D.B.																														
AHU-1	6830	1.97"	8.51	2010	6255	.75"	5.97	2180	ERP-E-07-EW03-H-C-SS	3510	2935	93.0/75.0	5	74.0/61.7	72	80.0/67.3	48.2	77.1	64.7	54.0	52.7	244.1	183.6	6	42.0	54.0	43.0	482	1.07"	11.0'	59.8	75.0	126.6	1	150.0	120.0	8.6	482	0.06"	10.2'	480-3-60	30	45	225 x 92 x 84	6,725 LBS.	1-1/4"	2-1/2"		AHU-1
AHU-2	5350	1.84"	6.38	2221	4770	.75"	4.30	1942	ERP-E-05-EW03-H-C-SS	2855	2275	93.0/75.0	5	74.0/61.7	72	79.9/67.1	46.6	77.2	64.7	54.0	52.7	195.5	145.8	6	42.0	54.0	34.5	443	0.84"	14.1'	58.5	75.0	103.4	1	150.0	120.0	7.0	443'	0.05"	6.5'	480-3-60	20	30	214 x 88 x 84	5,525 LBS.	1-1/4"	2"		AHU-2
AHU-3	5200	1.84"	6.15	2197	4750	.75"	4.30	1941	ERP-E-05-EW03-H-C-SS	2875	2425	93.0/75.0	5	74.0/61.7	72	79.6/66.9	48.6	77.1	64.7	54.0	52.7	189.4	141.0	6	42.0	54.0	33.4	430	0.80"	13.3'	59.1	75.0	100.8	1	150.0	120.0	6.9	430'	0.05"	6.2'	480-3-60	20	30	214 x 88 x 84	5,525 LBS.	1-1/4"	2"		AHU-3
AHU-4	6250	1.97"	7.98	2386	5830	.75"	5.50	2119	ERP-E-05-EW03-H-C-SS	3510	2740	93.0/75.0	5	74.0/61.7	72	80.3/67.5	46.4	77.6	65.1	54.0	52.7	231.0	171.4	6	42.0	54.0	40.7	484	1.07"	12.6'	57.7	75.0	118.3	1	150.0	120.0	8.0	484'	0.06"	8.6'	480-3-60	24	35	214 x 88 x 84	5,525 LBS.	1-1/4"	2-1/2"		AHU-4

NOTES:
1. MODEL NUMBERS ARE INDICATED FOR REFERENCE ONLY. THE DUTIES AND CAPACITIES ARE TO BE USED FOR FINAL UNIT SELECTION BY THE MANUFACTURER.
2. FURNISH EACH UNIT FACTORY PRE-WIRED FOR A SINGLE POINT POWER CONNECTION WITH A NON-FUSED DISCONNET SWITCH.
3. FURNISH EACH UNIT WITH A FULLY INSULATED, 24" HIGH PEAKED ROOF EQUIPMENT CURB. FIELD VERIFY ROOF SLOPE PRIOR TO ORDERING CURBS.
4. PROVIDE ALL UNITS WITH AN OUTSIDE AIR INTAKE AIR FLOW MONITORING STATION.
5. PROVIDE A VARIABLE FREQUENCY DRIVE WITH BYPASS ON EACH FAN.
6. EACH UNIT'S EXHAUST FAN MUST BE SIZED TO PROVIDE 100% RELIEF OF TOTAL SUPPLY AIR FLOW WHEN UNIT IS IN ECONOMIZER MODE.
7. EACH COIL SECTION IS PROVIDED WITH (2) COILS PER SECTION, H.C. MUST PROVIDE ALL PIPING TO BOTH COILS WITHIN THE UNIT HOUSING. PROVIDE ONE CONTROL VALVE TO EACH COIL SECTION AND PROVIDE FOLLOWING PIPE SIZES TO EACH OF THE COILS: PREHEAT: 1-1/2"; COOLING: 3"; REHEAT: 1-1/4"
8. PROVIDE AN AIR PURIFICATION SYSTEM IN EACH AIR HANDLER, PLASMA AIR 7000 SERIES.

MODULAR AIR HANDLING UNIT SCHEDULE

BASIS OF DESIGN: CARRIER

SYMBOL	SUPPLY FAN						EXHAUST FAN						MODEL	MIN. O.A. (CFM)	DESIGN O.A. (CFM)	ENERGY RECOVERY DATA										COOLING COIL (30% PROPYLENE GLYCOL)																PRE-HEAT COIL										PIPING CONNECTION SIZES		NOMINAL SIZE L"xW"xH"	MAX. OPERATING WEIGHT (LBS)	ELECTRICAL CONTROLS/ LIGHTS/OUTLETS		CONFIGURATION DETAIL	AREA SERVED	SYMBOL
	CFM	E.S.P	H.P.	RPM	ELECTRICAL		CFM	E.S.P	H.P.	RPM	ELECTRICAL					EXHAUST (CFM)	DESIGN OA E.A.T		DESIGN RETURN E.A.T		DESIGN L.A.T		HP	ELECTRICAL		E.A.T.		L.A.T.		GPM	EWT (°F)	LWT (°F)	ROWS	TOTAL CAPACITY MBH	SENSIBLE CAPACITY MBH	FV (FT/MIN.)	APD	WPD	E.A.T. (°F)	L.A.T. (°F)	CAPACITY MBH	GPM	EWT (°F)	LWT (°F)	ROWS	FV (FT/MIN)	APD	WPD	COOLING	HEATING								
					VOLTS/PHASE	FLA					VOLTS/PHASE	FLA					SUMMER D.B./W.B. (°F)	WINTER D.B. (°F)	SUMMER D.B./W.B. (°F)	WINTER D.B. (°F)	SUMMER D.B./W.B (°F)	WINTER D.B. (°F)		FLA	VOLTS/PHASE	DB (°F)	WB (°F)	DB (°F)	WB (°F)																														
AHU-5	4300	1.25"	5	2220	460-3ø	6.9	—						39MW SIZE 10W	480	1960	—										82.7	67.8	51.1	51.1	36.5	42.0	54.0	10	207.3	143.6	433.0	1.01"	9.7'	41.5	95.2	262.3	20.0	150.0	123.3	2	433.0	0.26"	4.3'	2"	2"	263x111x43	6,475	120-1-60	DETAIL 1	CAFETERIA	AHU-5
AHU-6	5775	1.72"	10	2767	460-3ø	13.8	5350	.75"	5	1435	460-3ø	8.1	39MW SIZE 12W	–	2750	2325	93/75	5	74/61.7	72	80.1/66.6	48.2	.17	0.4	460-3ø	76.9	64.1	52.7	52.6	35.0	42.0	53.4	8	188.4	149.2	456.9	0.97"	3.9'	60.7	75.7	94.6	6.4	150.0	120.0	1	456.9	0.17"	0.3'	2"	1-1/4"	356x111x96	10,800	120-1-60	DETAIL 2	AREA 'C' S. CLASSROOMS	AHU-6
AHU-7	9950	1.78"	15	1925	460-3ø	19.5	—						39MW SIZE 21W	1350	4205	—										82.0	67.3	52.8	52.7	74.6	42.0	54.0	8	423.3	307.5	464.1	0.93"	11.6'	43.7	93.0	554.4	40.0	150.0	121.8	2	464.1	0.27"	5.6'	3"	2-1/2"	304x123x64	8,950	120-1-60	DETAIL 1	MULTI-PURPOSE ROOM	AHU-7

NOTES:
1. MODEL NUMBERS ARE INDICATED FOR REFERENCE ONLY. THE DUTIES AND CAPACITIES ARE TO BE USED FOR FINAL UNIT SELECTION BY THE MANUFACTURER.
2. FURNISH EACH UNIT WITH AN OUTSIDE AIR INTAKE AIR FLOW MONITORING STATION.
3. FURNISH AHU-5 WITH A FULLY INSULATED PIPING ENCLOSURE WITH ACCESS DOOR(S) AND FULL PERIMETER FULLY INSULATED 24" HIGH PEAKED ROOF EQUIPMENT CURB. FIELD VERIFY ROOF SLOPE PRIOR TO ORDERING CURB.
4. FURNISH AHU-6 & 7 WITH A FULLY INSULATED PIPING ENCLOSURE WITH ACCESS DOOR(S) AND FULL PERIMETER FULLY INSULATED 24" HIGH EQUIPMENT CURB.
5. EXHAUST FAN IN AHU-6 MUST BE SIZED TO PROVIDE 100% RELIEF OF TOTAL SUPPLY AIR FLOW WHEN UNIT IS IN ECONOMIZER MODE.
6. PROVIDE A VARIABLE FREQUENCY DRIVE WITH BYPASS ON EACH FAN.
7. PROVIDE AN AIR PURIFICATION SYSTEM IN EACH AIR HANDLER, PLASMA AIR 7000 SERIES.

MODULAR AIR HANDLING UNIT SOUND DATA SCHEDULE

SYMBOL	DUCT DISCHARGE SOUND POWER (dB)								CASING RADIATED SOUND POWER (dB)								DUCT INLET SOUND POWER (dB)							
	63	125	250	500	1000	2000	4000	8000	63	125	250	500	1000	2000	4000	8000	63	125	250	500	1000	2000	4000	8000
AHU-5	88	88	89	89	81	80	75	72	77	78	85	86	72	67	67	64	78	79	87	88	74	69	70	67
AHU-6	92	94	92	98	88	86	82	78	81	83	84	92	81	74	74	72	82	84	86	94	83	76	77	75
AHU-7	95	93	98	94	88	86	81	78	83	82	92	83	76	74	74	71	84	84	94	86	77	77	77	73

PACKAGED AIR HANDLING UNIT SCHEDULE

BASIS OF DESIGN: CARRIER

SYMBOL	CFM		E.S.P.	FAN DATA				MODEL	COOLING COIL (30% PROPYLENE GLYCOL)										HEATING COIL (PREHEAT POSITION)							PIPING CONN. SIZES		FILTER/ MIXING BOX	MAXIMUM OPERATING WEIGHT	REMARKS
	TOTAL	MIN OA		H.P.	RPM	MCA	ELEC		EADB	EAWB	LADB	LAWB	GPM	EWT	ROWS	TOTAL MBH	SENSIBLE MBH	WPD	EAT	LAT	MBH	GPM	EWT	ROWS	WPD	COOLING	HEATING			
PAH-1	1000	430	.72"	1/2	1040	7.5	120-1-60	42BEH12	82.2	67.4	54.0	52.6	9.0	42.0	6	43.9	30.5	13.9'	43.2	98.1	59.9	4.0	150.0	2	6.1'	1-1/4"	1"	YES	500 LBS.	HORIZONTAL UNIT
PAH-2	1000	430	.72"	1/2	1040	7.5	120-1-60	42BEH12	82.2	67.4	54.0	52.6	9.0	42.0	6	43.9	30.5	13.9'	43.2	98.1	59.9	4.0	150.0	2	6.1'	1-1/4"	1"	YES	500 LBS.	HORIZONTAL UNIT
PAH-3	1000	430	.72"	1/2	1040	7.5	120-1-60	42BEH12	82.2	67.4	54.0	52.6	9.0	42.0	6	43.9	30.5	13.9'	43.2	98.1	59.9	4.0	150.0	2	6.1'	1-1/4"	1"	YES	500 LBS.	HORIZONTAL UNIT
PAH-4	1000	430	.72"	1/2	1040	7.5	120-1-60	42BEH12	82.2	67.4	54.0	52.6	9.0	42.0	6	43.9	30.5	13.9'	43.2	98.1	59.9	4.0	150.0	2	6.1'	1-1/4"	1"	YES	500 LBS.	HORIZONTAL UNIT
PAH-5	1000	430	.72"	1/2	1040	7.5	120-1-60	42BEH12	82.2	67.4	54.0	52.6	9.0	42.0	6	43.9	30.5	13.9'	43.2	98.1	59.9	4.0	150.0	2	6.1'	1-1/4"	1"	YES	500 LBS.	HORIZONTAL UNIT
PAH-6	1000	430	.72"	1/2	1040	7.5	120-1-60	42BEH12	82.2	67.4	54.0	52.6	9.0	42.0	6	43.9	30.5	13.9'	43.2	98.1	59.9	4.0	150.0	2	6.1'	1-1/4"	1"	YES	500 LBS.	HORIZONTAL UNIT
PAH-7	2750	630	1.75"	3	1458	4.9	460-3-60	39L SIZE 6	78.4	64.8	53.2	51.9	DX	42.0	6	104.1	75.8	N/A	—	—	—	—	—	—	—	N/A	N/A	NO	670 LBS.	VERTICAL UNIT WITH 2" FLAT FILTER RACK & SHIPPED LOOSE VFD
PAH-8	1450	745	0.69"	1.5	1122	2.6	460-3-60	39L SIZE 6	83.8	68.5	53.6	53.5	10.7	42.0	6	83.8	68.5	0.9'	37.6	92.8	92.4	9.4	150.0	2	1.5'	1-1/4"	1-1/4"	YES	750 LBS.	HORIZONTAL UNIT WITH FACTORY MOUNTED VFD

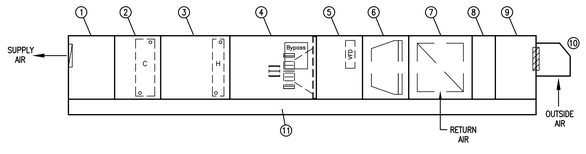
NOTES:
1. MODEL NUMBERS ARE INDICATED FOR REFERENCE ONLY. THE DUTIES AND CAPACITIES ARE TO BE USED FOR FINAL UNIT SELECTION BY THE MANUFACTURER.
2. REFER TO PLANS FOR UNIT CONFIGURATIONS. UNITS WITH THE SAME SYMBOL NUMBER MAY HAVE LEFT OR RIGHT HAND CONNECTIONS AND/OR REQUIRE DIFFERENT CONFIGURATIONS.
3. PROVIDE ALL UNITS WITH BIPOLAR IONIZATION AIR PURIFICATION SYSTEM. PLASMA AIR MODEL PA660, OR EQUIVALENT.
4. PROVIDE EACH UNIT WITH A CONDENSATE DRAIN PAN HIGH WATER LEVEL SENSOR, UPON DETECTION OF HIGH WATER LEVEL UNIT SHALL SHUT-DOWN AND REQUIRE A MANUAL RESET.

ELECTRIC WALL HEATER SCHEDULE

BASIS OF DESIGN: QMARK

SYMBOL	FAN DATA				KW	MOUNTING	FRONT PANEL WIDTH x HEIGHT	WALL OPENING WIDTH x HEIGHT	RECESS DEPTH	CABINET FINISH	MODEL	REMARKS
	CFM	RPM	H.P.	ELECTRICAL								
EWH-1	65	–	–	277/1/60	1.0	SURFACE	10.62"x12.13"	–	–	STANDARD BRONZE	CWH	PROVIDE W/ SURFACE MOUNTING FRAME, INTEGRAL THERMOSTAT AND DISCONNECT SWITCH
EWH-2	65	–	–	277/1/60	2.0	SURFACE	10.62"x12.13"	–	–	STANDARD BRONZE	CWH	PROVIDE W/ SURFACE MOUNTING FRAME, INTEGRAL THERMOSTAT AND DISCONNECT SWITCH

NOTES:
1. MODEL NUMBERS ARE INDICATED FOR REFERENCE ONLY. THE DUTIES AND CAPACITIES ARE TO BE USED FOR FINAL UNIT SELECTION BY THE MANUFACTURER.
2. DIMENSIONS ARE FOR REFERENCE ONLY. REFER TO VENDOR'S SHOP DRAWINGS FOR ACTUAL CONSTRUCTION DIMENSIONS.

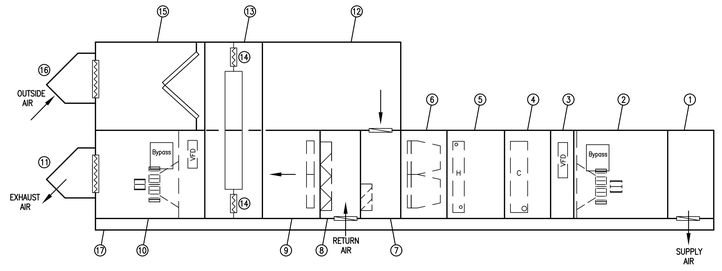


ELEVATION VIEW

1. BLOW THRU DISCHARGE PLENUM WITH ACCESS DOOR
2. COOLING COIL SECTION AND INSULATED PIPE CHASE WITH ACCESS DOOR
3. PRE-HEAT COIL SECTION WITH ACCESS DOOR AND INSULATED PIPE CHASE WITH ACCESS DOOR
4. BLOW THRU SUPPLY FAN SECTION WITH DIRECT DRIVE PLENUM FAN, V.F.D., BYPASS AND ACCESS DOOR
5. PLENUM SECTION WITH ACCESS DOORS ON BOTH SIDES
6. FILTER SECTION WITH MERV 13 CARTRIDGE FILTER(S) AND MERV 8 PRE-FILTER(S) WITH ACCESS DOOR
7. MIXING BOX WITH MOTORIZED DAMPER AND ACCESS DOOR
8. PLENUM SECTION
9. MIXING BOX WITH MOTORIZED DAMPER, AIRFLOW MONITORING STATION AND ACCCESS DOOR
10. OUTSIDE AIR INTAKE HOOD
11. ROOF CURB

NOTE: REFER TO HVAC ROOF PLAN SHOWN ON DWG. H-10 FOR REQUIRED RETURN AIR DUCT CONNECTION AND PIPING ENCLOSURE LOCATION(S), PROVIDE MAJORITY OF ACCESS DOOR(S), VFD AND BYPASS ON OPPOSITE SIDE OF RETURN AIR DUCT CONNECTION.

1 AIR HANDLING UNIT CONFIGURATION DETAIL 1
NO SCALE



ELEVATION VIEW

NOTE: REFER TO HVAC ROOF PLAN SHOWN ON DWG. H-10 FOR REQUIRED PIPING ENCLOSURE LOCATION.

1. BLOW THRU DISCHARGE PLENUM WITH ACCESS DOOR
2. BLOW THRU SUPPLY FAN SECTION WITH DIRECT DRIVE PLENUM FAN, BYPASS AND ACCESS DOOR
3. PLENUM (WITH SUPPLY FAN V.F.D.) AND ACCESS DOORS ON EACH SIDE
4. COOLING COIL SECTION AND INSULATED PIPE CHASE WITH ACCESS DOOR
5. PRE-HEAT COIL SECTION WITH ACCESS DOOR AND INSULATED PIPE CHASE WITH ACCESS DOOR
6. FILTER SECTION WITH MERV 13 CARTRIDGE FILTER(S) AND MERV 8 PRE-FILTER(S) WITH ACCESS DOOR
7. SUPPLY MIXING BOX SECTION WITH MOTOR OPERATED DAMPER AND ACCESS DOOR
8. EXHAUST/RETURN INTAKE SECTION WITH MOTOR OPERATED DAMPER AND ACCESS DOOR
9. FLAT FILTER SECTION WITH MERV 8 FILTER(S) AND ACCESS DOOR
10. EXHAUST FAN SECTION WITH DIRECT DRIVE PLENUM FAN, V.F.D., BYPASSS AND ACCESS DOOR
11. EXHAUST HOOD WITH BACKDRAFT DAMPER
12. TURNING SECTION
13. ENERGY RECOVERY SECTION WITH ENERGY RECOVERY WHEEL
14. MOTORIZED BYPASS DAMPER
15. OUTSIDE AIR INTAKE SECTION WITH MERV 8 ANGLED FILTERS AND ACCESS DOOR
16. OUTSIDE AIR INTAKE HOOD WITH MOTOR OPERATED DAMPER AND AIRFLOW MEASURING STATION
17. ROOF CURB

2 AIR HANDLING UNIT CONFIGURATION DETAIL 2
NO SCALE

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ADAM NICHOLAS MOSER
ENGINEER
No. PE074309

AEM ARCHITECTS INC.
3700 PERKIOMEN AVENUE, READING, PA 19606-2795
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HVAC SCHEDULES - SHEET 1

RENOVATIONS TO THE REAMSTOWN ELEMENTARY SCHOOL
COCALICO SCHOOL DISTRICT
SOUTH REAMSTOWN ROAD, REAMSTOWN, PENNSYLVANIA, LANCASTER COUNTY, PA

All DIMENSIONS and EXISTING CONDITIONS shall be CHECKED and VERIFIED by the CONTRACTOR at the SITE.

JOB NO.: 22011.00
DRAWN BY: RLC
DATE: 04.14.23

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