SINGLE PACKAGED AIR CONDITIONER ELECTRIC WITH HOT GAS REHEAT SCHEDULE (ROOFTOP)

MARK	LOCATION	AREA AND/OR BLDG SERVED	TYPE	TOTAL SUPPLY AIR FLOW		MIN. OUTSIDE AIR FLOW		EXT STATIC PRESSURE		COOLING CAPACITY: MIN TOTAL CAPACITY		MIN SENS CAPACITY		MIN EER	EAT Db		EAT Wb		OSA DESIGN TEMP		COMP Kw	HOT GAS REHEAT		HEATING CAPACITY: ELECTRIC HEATER		EAT Db		LAT Db		AIR FILTER MARK NO	ELECTRICAL DATA: INDOOR FAN			UNIT POWER CONNECTION			REMARKS
				CFM	[L/s]	CFM	[L/s]	IN	[Pa]	MBH	[kW]	MBH	[kW]		°F	[°C]	°F	[°C]	°F	[°C]		MBH	[kW]	MBH	[kW]	°F	[°C]	°F	[°C]		HP	[W]	CONTROL	MCA	PHASE	VOLT	
RTU-1	ROOF	TB ISOLATION	PACKAGED ROOFTOP	500	[420]	900	[420]	1.75	[440]	67	[230]	37.8	[11]	10.5	92.7	[34]	74.9	[24]	93	[34]	7.35	28.5	[8]	68.2	[20]	14	[-10]	83.9	[29]	PF-3	0.75	[560]	VFD	76.3	[208]	3	-----

NOTES
1. EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS MAINTAINING ALL REQUIRED CLEARANCES.
2. EQUIPMENT SHALL BE WEATHPROOF FROM THE FACTORY SUITABLE FOR INSTALLATION OUTSIDE.

HVAC DESIGN DATA

DESIGN CONDITIONS	SUMMER: TEMP		WET BULB TEMP		% HUMIDITY	WINTER: TEMP		DEWPOINT TEMP		% HUMIDITY	LOWEST AVERAGE ANNUAL DEWPOINT	
	°F	[°C]	°F	[°C]		°F	[°C]	°F	[°C]		°F	[°C]
OUTDOOR DESIGN CONDITIONS	93.2	[34]	75.4	[24]	46	12.6	[-11]	-0.4	[-18]	NA	-4.4	[-20]
INDOOR AREA DESIGN CONDITIONS												
TB ISOLATION ROOM	70	[21]	58.4	[15]	50	82	[28]	61.3	[16]	30		

ELECTRIC DUCT MOUNTED HEATER SCHEDULE

MARK	LOCATION	SYSTEM AND/OR SERVICE	TYPE	AIR FLOW		EAT		APD		DUCT SIZE: LENGTH		WIDTH		CAPACITY		POWER		CONTROL TYPE	REMARKS
				CFM	[L/s]	°F	[°C]	IN WG	[Pa]	IN	[mm]	IN	[mm]	BTUH	[W]	PHASE	VOLT		
EDH-1	218D	ISOLATION RM218D	FINNED TUBED RESISTANCE ELEMENTS	250	[120]	55	[13]	0.015	[4]	8	[200]	10	[250]	8532.5	[2500]	1	208	ON/OFF	PROVIDES REHEAT TEMPERATURE CONTROL ALLOWING ROOM 218D TO BE CONTROLLED TO A HIGHER TEMPERATURE THAN 218C.

AIR FILTER SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	MERV RATING	AIR FLOW		APD: INITIAL		APD: CHANGEOVER		HOUSING TYPE	CARTRIDGES: #	SIZE		ARRANGEMENT	REMARKS
					CFM	[L/s]	IN	[mm]	IN	[mm]			IN	[mm]		
PF-1	ROOF	TB ISOLATION	EF-1	8	1100	[520]	0.25	[6]	0.5	[13]	SIDE	1	24 x 24 x 2	[600 x 600 x 50]	1 WIDE BY 1 HIGH	-----
HPA-1	ROOF	TB ISOLATION	EF-1	17	1100	[520]	1	[25]	1.3	[33]	SIDE	1	24 x 24 x 12	[600 x 600 x 300]	1 WIDE BY 1 HIGH	BAG IN / BAG OUT
PF-2	ROOF	TB ISOLATION	RTU-1	8	900	[420]	0.25	[6]	0.5	[13]	SIDE	1	24 x 12 x 2	[600 x 300 x 50]	1 WIDE BY 1 HIGH	-----
HPA-2	ROOF	TB ISOLATION	RTU-1	17	900	[420]	1	[25]	1.3	[33]	SIDE	1	24 x 24 x 12	[600 x 600 x 300]	1 WIDE BY 1 HIGH	BAG IN / BAG OUT
PF-3	ROOF	TB ISOLATION	RTU-1	8	900	[420]	0.25	[6]	0.5	[13]	SIDE	1	----	----	1 WIDE BY 1 HIGH	OA INTAKE PREFILTER SIZE PER RTU-1 MANF. RECOMMENDATIONS

AIR DEVICE SCHEDULE (EXHAUST)

MARK	TYPE	AIR FLOW: MIN		MAX		MAX APD		MOUNTING	PANEL/FRAME SIZE		NECK SIZE		NC	DAMPER	FINISH	REMARKS
		CFM	[L/s]	CFM	[L/s]	IN WG	[Pa]		IN x IN	[mm x mm]	IN x IN	[mm x mm]				
E1	PERFORATED	775	[370]	1000	[470]	0.088	22.000	SIDE WALL	16 X 14	[406 X 356]	16 X 14	[406 X 356]	30	NONE	WHITE	-----
E2	PERFORATED	225	[110]	275	[130]	0.088	22.000	SIDE WALL	8 X 8	[200 X 200]	8 X 8	[200 X 200]	30	NONE	WHITE	-----
E3	PERFORATED	50	[24]	130	[61]	0.088	22.000	CEILING	8 X 4	[200 X 200]	8 X 4	[200 X 200]	-	NONE	WHITE	-----

NOTE
PROVIDE SQUARE TO ROUND ADAPTER.

AIR FLOW MEASURING DEVICE SCHEDULE

MARK	LOCATION	SYSTEM AND/OR SERVICE	AIR FLOW: MIN		MAX		DUCT SIZE: WIDTH		HEIGHT		APD		REMARKS
			CFM	[L/s]	CFM	[L/s]	IN	[mm]	IN	[mm]	IN	[mm]	
AFMD-1	ROOF	RTU-1	800	[380]	1000	[470]	16	[400]	10	[250]	0.01	[ ]	USED TO MAINTAIN SUPPLY AIRFLOW AS FILTER PRESSURE DROP INCREASES.

AIR DEVICE SCHEDULE (SUPPLY)

MARK	TYPE	AIR FLOW: MIN		MAX		MAX APD		MOUNTING	PANEL/FRAME SIZE		NECK SIZE		NC	DAMPER	FINISH	REMARKS
		CFM	[L/s]	CFM	[L/s]	IN WG	[Pa]		IN x IN	[mm x mm]	IN	[mm]				
S1	LOUVERED FACE	470	[220]	700	[330]	0.080	[20]	CEILING	24 x 24	[600 x 600]	12 ø	[300 ø]	19	NONE	WHITE	----
S2	LOUVERED FACE	150	[71]	315	[150]	0.100	[25]	CEILING	24 x 24	[600 x 600]	8 ø	[150 ø]	--	NONE	WHITE	-----

NOTES
1. SEE FLOOR PLAN FOR THROW PATTERN.
2. SEE DETAIL FOR DAMPER IN BRANCH DUCT SERVING EACH DIFFUSER.
3. PROVIDE SQUARE TO ROUND ADAPTER.

FAN SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	AIR FLOW		TSP		FAN: TYPE	WHEEL	CLASS	ARRANGEMENT, ROTATION, AND DISCHARGE	DIAMETER		MIN % EFF	DRIVE	FAN MAX RPM	MOTOR ELECTRICAL: NOMINAL POWER			PHASE	VOLT	RPM	SPEED CONTROL	CONTROL SEQUENCE	REMARKS
				CFM	[L/s]	IN	[Pa]					IN	[mm]				BHP	HP	[kW]							
EF-1	ROOF	TB ISOLATION	TB EXHAUST	1100	[520]	2	[500]	UTILITY	BW	I	CCWBAU ROTATION, UPBLAST	11.125	[280]	75%	BELT	2665	0.61	0.75	[.6]	1	120	2267	VARIABLE	NEGATIVE PRESSURE	---

NOTES
1. ALL SELECTIONS ARE BASED ON AN ALTITUDE OF 331 FT.
2. INSTALL PER MANUFACTURER'S WRITEN REQUIREMENTS AND RECOMMENDATIONS MAINTAINING ALL REQUIRED CLEARANCES.
3. EQUIPMENT SHALL BE WEATHER PROOF FROM THE FACTORY SUITABLE FOR INSTALLATION OUTSIDE.

ROOM AIR BALANCE SCHEDULE

ROOM NO	ROOM NAME	AIR HANDLING UNIT NO	TERMINAL UNIT	INDIVIDUAL ROOM TEMP CONTROL	SUPPLY: ROOM AIR FLOW		# OF AIR DEVICES	AIR DEVICE MARK	SUPPLY FAN	RETURN OR EXHAUST: RETURN OR EXHAUST (R/E)	ROOM AIR FLOW		# OF AIR DEVICES	AIR DEVICE MARK	RETURN OR EXHAUST FAN	ROOM AIR FLOW		ROOM AIR BALANCE	NET INFILTRATION		NET EXFILTRATION		REMARKS
					CFM	L/S					CFM	L/S				CV	VAV		CFM	[L/s]	CFM	[L/s]	
218C	ISOLATION ROOM	RTU-1	----	Y	500	[240]	2	S1	RTU-1	E	850	[400]	2	E3	EF-1	X		-	0	[ ]	150	[71]	NEGATIVE ISOLATION ROOM WITH SPECIAL FILTERED EXHAUST. HUMIDITY CONTROLLED AS A GROUP.
218D	ISOLATION ROOM	RTU-1	----	Y (SPACE CAN ONLY BE HIGHER THAN 218C TEMP)	200	[94]	1	S2	RTU-1	E	250	[120]	1	E2	EF-1	X		-	0	[ ]	200	[94]	NEGATIVE ISOLATION ROOM WITH SPECIAL FILTERED EXHAUST. HUMIDITY CONTROLLED AS A GROUP.
218F	ANTE ROOM	RTU-1	----	N	200	[94]	1	S2	RTU-1	E	0	[ ]	0	----	----	X		-	0	[ ]	50	[24]	NEGATIVE ISOLATION ROOM WITH SPECIAL FILTERED EXHAUST. HUMIDITY CONTROLLED AS A GROUP.

NOTE
ROOMS OR AREAS DO NOT HAVE INDIVIDUAL HUMIDITY CONTROL UNLESS NOTED.

FINAL CONSTRUCTION DOCUMENTS

Revisions:	Date

ARCHITECT/ENGINEERS:

APOGEE Consulting Group, PA
www.acg-pa.com
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Dwg. 7 of 12

Office of Construction and Facilities Management

Coatesville VA Medical Center

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