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KEY PLAN:

REVISIONS:	
Date	Description

**TERRACE MANOR
 ELEMENTARY
 SCHOOL ROOF AND
 HVAC**

FOR
 RICHMOND COUNTY BOARD OF EDUCATION
 RCBOE # B-18-012-4330
 3110 TATE ROAD AUGUSTA, GA

DRAWING TITLE		PROJECT NO.	20-14	DRAWING NO.
HVAC SCHEDULES, NOTES AND LEGEND		DATE	12/07/2020	M4.1
DRAWN BY		PAPER	24"x36"	
ISSUE		ISSUED FOR BID		

-- WALL MOUNT HEAT PUMP SCHEDULE --

ITEM	SUPPLY CFM	ESP (IN. WG)	OA CFM	EXHAUST CFM	COOLING CAP. TOTAL MBH (1)	EER MIN.	HEATING CAP. MBH (1)		COP (1)		AUX. HEAT (2)		BARD MODEL NO.	REMARKS
							HI	LO	HI	LO	KW	STAGES		
WHP-1	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-2	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-3	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-4	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-5	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-6	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-7	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-8	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-9	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-10	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-11	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-12	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-13	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-14	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-15	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-16	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-17	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-18	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-19	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-20	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-21	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-22	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-23	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-24	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-25	1150	0.3	200	--	36.0	11.1	33.0	--	3.3	--	9	--	W36HB	(3)
WHP-26	950	0.3	120	--	29.0	11.0	26.6	--	3.4	--	9	--	W30HB	(3)
WHP-27	950	0.3	120	--	29.0	11.0	26.6	--	3.4	--	9	--	W30HB	(3)
WHP-28	1550	0.3	200	--	47.5	11.0	42.5	25.0	3.3	2.1	9	--	W48HC	(3)

(1) RATINGS IN ACCORDANCE WITH A.R.I. STANDARD 240.
 (2) RATED AT 240 VOLTS.
 (3) UNITS SHALL HAVE INTEGRAL DISCONNECTS AND HOT GAS REHEAT DEHUMIDIFICATION SYSTEM WITH BIPOLAR IONIZATION UNIT SIZED FOR FULL UNIT AIRFLOW. FURNISH WALL ADAPTER CURB FOR INSTALLATION.

-- PACKAGED HEAT PUMP SCHEDULE --

ITEM	SUPPLY C.F.M.	EXT. S.P. W.C.	O.A. C.F.M.	COOLING CAP. BTUH (1)	E.E.R. MIN.	HEATING CAP. (1)		C.O.P. (1)		AUX. HEAT (2)		TRANE MODEL NO.
						HI	LO	HI	LO	K.W.	STAGES	
RTU-1	6000	0.5	450	177,000	10.6	170.0	90.0	3.2	2.1	18.0	1	WSH 188 (2)
RTU-2	1200	0.5	200	39,500	S.E.E.R. 14.3	36.0	20.6	3.5	2.2	0	1	WSC 096 (2)
RTU-3	2000	0.5	400	61,000	S.E.E.R. 14.3	59.0	35.0	3.5	2.3	12.0	1	WSC 060 (2)
RTU-4	2000	0.5	400	61,000	S.E.E.R. 14.3	59.0	35.0	3.5	2.3	12.0	1	WSC 060 (2)
RTU-5	2000	0.5	400	61,000	S.E.E.R. 14.3	59.0	35.0	3.5	2.3	12.0	1	WSC 060 (2)
RTU-6	2000	0.5	225	61,000	S.E.E.R. 14.3	59.0	35.0	3.5	2.3	12.0	1	WSC 060 (2)
RTU-7	3000	0.5	225	93,500	11.1	87.0	50.0	3.4	2.2	18.0	1	WSC 090 (2)
RTU-8	6000	0.5	450	177,000	10.6	170.0	90.0	3.2	2.1	18.0	1	WSD 180 (2)

(1) RATINGS IN ACCORDANCE WITH A.R.I. STANDARD 240.
 (2) COMPLETE WITH ROOF ADAPTER CURBS, HOT GAS REHEAT DEHUMIDIFICATION AND BIPOLAR IONIZATION UNIT SIZED FOR FULL UNIT AIRFLOW.

-- AIR DISTRIBUTION SCHEDULE --

MARK	TYPE	NECK CONNECTION (1)	FINISH	OSD	METAL* AIRE NO. UNLESS NOTED	REMARKS
E	SIDEWALL SUPPLY GRILLE	SEE PLANS	OFF WHITE	YES (3)	VHD	OSD NOT REQUIRED FOR WALL MTD H.P.
F	SIDEWALL RETURN GRILLE	SEE PLANS	OFF WHITE	NO	4538F	HEAVY DUTY

(1) DUCT RUNOUT SIZE SAME AS NECK CONNECTION SIZE, UNLESS NOTED OTHERWISE.

-- INDOOR HEAT PUMP SCHEDULE --

ITEM	SUPPLY CFM	ESP (IN. WG)	OA CFM	FAN HP	DRIVE	COOLING CAP. MBH (1)		AUX. HEAT		MANUFACTURER MODEL NO.	REMARKS
						SENSIBLE	TOTAL	KW	STGS.		
IHP-1	215	--	--	1.0 A	DIRECT	--	12,000	--	--	mitsubishi MSZ-GE12NA	(2)
IHP-2	215	--	--	1.0 A	DIRECT	--	12,000	--	--	mitsubishi MSZ-GE12NA	--
IHP-3	6000	0.5	600	3	BELT	131,600	181,700	14.96	1	TWE180	--

(1) RATINGS IN ACCORDANCE WITH A.R.I. STANDARD 240.
 (2) UNIT PART OF BID ALTERNATE. SEE BID FORM FOR ALTERNATES.

-- OUTDOOR HEAT PUMP SCHEDULE --

ITEM	COOLING CAP. MBH (1)	EER MIN.	HEATING CAP. MBH (1)		COP (1)		MANUFACTURER MODEL NO.
			HI	LO	HI	LO	
OHP-1	12,000	20.5 SEER	14.4	8.8	10 HSPF	--	mitsubishi MUZ-GE12NA (3)
OHP-2	12,000	20.5 SEER	14.4	8.8	10 HSPF	--	mitsubishi MUZ-GE12NA
OHP-3	181,700	10.0	168.2	106.7	3.0	2.2	TWA180 (2)

(1) RATINGS IN ACCORDANCE WITH A.R.I. STANDARD 240.
 (2) FURNISH DUAL COMPRESSOR UNIT WITH INDEPENDENT REFRIGERATION CIRCUITS. IF NOT AVAILABLE, FURNISH TWO SINGLE COMPRESSOR UNITS AND ASSOCIATED ELECTRICAL MODIFICATIONS.
 (3) UNIT PART OF BID ALTERNATE. SEE BID FORM FOR ALTERNATES.

-- REFRIGERATION PIPE SCHEDULE --

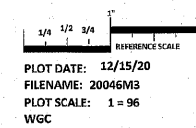
ITEM	SUCTION LINE OD	LIQUID LINE OD	REMARKS
IHP-1/OHP-1	3/8"	1/4"	(1)
IHP-2/OHP-2	3/8"	1/4"	(1)
IHP-3/OHP-3	2 - 1 1/8"	2 - 5/8"	(1)

(1) REFRIGERANT PIPE SIZES INDICATED ARE FOR ESTIMATING PURPOSES ONLY. EXACT SIZES AND ACCESSORIES REQUIRED SHALL BE DETERMINED BY EQUIPMENT MANUFACTURER FROM FIELD OBTAINED DIMENSIONS.

H.V.A.C. LEGEND

SYMBOL	DESCRIPTION
— SL —	REFRIGERANT SUCTION / LIQUID
--- D ---	CONDENSATE DRAIN
⊕	THERMOSTAT 4"-6" A.F.
⊠	A.D. ACCESS DOOR
◀ FD	FIRE DAMPER
◀ F/SD	FIRE / SMOKE DAMPER
◀ SD	SMOKE DAMPER
1/M-1	DETAIL NO. 1/M-1 SHEET NO.
⊠ or MVD	MANUAL VOLUME DAMPER
⊠	FLEXIBLE DUCT CONNECTION
⊠	LINED DUCT (SIZE SHOWN IS METAL SIZE)
TYP.	TYPICAL

HVAC NOTES:
 NOT ALL EXISTING WORK IS SHOWN, AND THAT SHOWN IS IN ITS APPROXIMATE LOCATION AND ARRANGEMENT. EXACT LOCATION, ARRANGEMENT, AND SIZES SHALL BE VERIFIED ON THE JOB BEFORE STARTING ANY NEW WORK.
 INSTALL PIPING AND DUCTWORK IN EQUIPMENT ROOMS ADJACENT TO WALLS AND CEILINGS WHERE POSSIBLE TO PROVIDE MAXIMUM ROOM CLEARANCE.
 COORDINATE THE INSTALLATION OF WORK UNDER THIS DIVISION WITH THAT OF OTHER TRADES TO PROVIDE THE BEST ARRANGEMENT OF PIPING, DUCTWORK, AND EQUIPMENT.
 PIPING, DUCTWORK, AND EQUIPMENT IS SHOWN IN ITS GENERAL LOCATION UNLESS DIMENSIONED.
 ARRANGE PIPING AND DUCTWORK TO CLEAR STRUCTURAL MEMBERS, PIPING AND LIGHT FIXTURES.
 EXACT LOCATION OF GRILLES AND CEILING OUTLETS SHALL BE DETERMINED ON THE JOBSITE. COORDINATE WITH LIGHTS, SPRINKLER HEADS, AND OTHER CEILING APPURTENANCES TO PROVIDE A UNIFORM AND SYMMETRICAL APPEARANCE. REFER TO ARCHITECTURAL AND ELECTRICAL DRAWINGS AND DETAILS.
 ALL PIPING SHALL BE CONCEALED, UNLESS NOTED OTHERWISE.
 PROVIDE FLEXIBLE DUCT CONNECTIONS TO ALL AIR HANDLING EQUIPMENT.
 PROVIDE ACCESS DOORS IN DUCTWORK FOR ALL FIRE AND SMOKE DAMPERS, DUCT-MOUNTED COILS, AND CONTROL DEVICES.
 SLOPE DRAIN LINES TOWARD DRAIN WITH A MINIMUM SLOPE OF 1/4" PER FOOT.



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 AUGUSTA, GA 30901 (706) 722-3559