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GRAY'S CREEK ELEMENTARY HVAC & WINDOW
REPLACEMENT
CUMBERLAND COUNTY SCHOOLS
2964 School Rd, Hope Mills, NC 28348



Project Number:
2021-04088
Date:
12/23/2021
Designed by: BME Checked by: TBN
Revisions:
1 | ADDENDUM 1 | 1/19/22

Sheet Title:
SCHEDULES

Sheet Number:

H400

PACKAGED HEAT PUMP UNIT SCHEDULE

DESIGNATION	TYPE	SUPPLY FAN				COOLING										HEATING				ELECTRIC			
		TOTAL SA AIRFLOW (CFM)	OA AIRFLOW (CFM)	ESP (IN)	MOTOR SIZE (HP)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EAT (FDB)	EAT (FWB)	LAT (FDB)	LAT (FWB)	EFFICIENCY (EER/SEER)	AMBIENT TEMPERATURE (F)	No. OF COMPRESSORS	EAT (FDB)	LAT (FDB)	HP		AMBIENT TEMPERATURE (F)	CAPACITY (KW)	MCA	MOCP	VOLTAGE/ PHASE
																	CAPACITY (MBH)	EFFICIENCY (COP)					
HP-A2	ROOFTOP HEAT PUMP	1800	300	0.35	1	47	36	78	66	55	54	11.8 / 14.3	95	1	57	95	48	3.7	47	12.0	66.0	70	208/3
HP-ADM	ROOFTOP HEAT PUMP	1950	300	0.30	1	60	48	78	66	55	54	11.8 / 14.3	95	1	57	95	60	3.8	47	7.9	57.0	60	208/3
HP-B2	ROOFTOP HEAT PUMP	1800	300	0.40	1	60	48	78	66	55	54	11.8 / 14.3	95	1	57	95	60	3.8	47	7.9	57.0	60	208/3

- NOTES:
1 PROVIDE EXTERNALLY MOUNTED FUSED DISCONNECT SWITCH FOR SINGLE POINT OF CONNECTION.
2 COOLING DESIGN CONDITIONS - OA: 93.9 FDB/ 76 FWB; RA: 75 FDB
3 HEATING DESIGN CONDITIONS - OA: 16 FDB; RA: 70 FWB
4 PROVIDE ADAPTER CURB AS REQUIRED.
5 BASIS OF DESIGN: CARRIER. ACCEPTABLE MANUFACTURERS: TRANE, YORK.

SPLIT SYSTEM AIR HANDLING UNIT SCHEDULE

DESIGNATION	SERVICE	OA AIRFLOW (CFM)	SA AIRFLOW (CFM)	SUPPLY FAN ESP (IN)	SUPPLY FAN MOTOR SIZE (HP)	EAT (FDB)	EAT (FWB)	LAT (FDB)	LAT (FWB)	AUX. ELEC CAPACITY (KW)	ELEC			COOLING				HEATING				ELEC		
											MCA	MOCP	VOLTAGE/ PHASE	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EFFICIENCY (EER/SEER)	AMBIENT TEMPERATURE (F)	TOTAL CAPACITY (MBH)	EFFICIENCY (COP)	AMBIENT TEMPERATURE (F)	MCA	MOCP	VOLTAGE/ PHASE	
AHU-1	MEDIA CENTER	1800	4500	0.75	3	82.6	67.8	55.5	54.9	0.0	11.5	20	208/3	CU-1	184	135	12	95	215	3.5	47	61.8	80	208/3
AHU-D1	AUDITORIUM	600	3000	0.50	2	79.0	66.0	55.0	54.0	0.0	6.5	15	208/3	HP-D1	90	67.5	10.8	95	90	3.5	47	42.5	50	208/3
AHU-D2	AUDITORIUM	600	3000	0.50	2	79.0	66.0	55.0	54.0	0.0	6.5	15	208/3	HP-D2	90	67.5	10.8	95	90	3.5	47	42.5	50	208/3
AHU-TWK	TEACHER WORKROOM	1000	100	0.40	0.5	80.0	67.0	55.0	54.0	3.8	26.0	30	208/1	HP-TWK	30	23	- / 14	95	30	3.5	47	18.1	30	208/1

- NOTES:
1 SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.
2 PROVIDE EXTERNAL DISCONNECT SWITCH AT OUTDOOR UNIT.
3 PROVIDE EXTERNAL DISCONNECT SWITCH AT INDOOR UNIT WITH ELECTRIC HEAT.
4 PROVIDE MOTOR RATED TOGGLE SWITCH AT INDOOR UNIT WITH FAN ONLY.
5 COOLING DESIGN CONDITIONS - OA: 93.9 FDB / 76 FWB; RA: 75 FDB
6 HEATING DESIGN CONDITIONS - OA: 16 FDB; RA: 70 FDB
7 AHU-1, D1, D2 BASIS OF DESIGN: CARRIER 39L SERIES. ACCEPTABLE MANUFACTURERS: TRANE, YORK.
8 AHU-TWK BASIS OF DESIGN: CARRIER PV4C. ACCEPTABLE MANUFACTURERS: TRANE, YORK.

WALL MOUNTED HEAT PUMP SCHEDULE

DESIGNATION	TYPE	SUPPLY FAN				COOLING										HEATING				ELECTRIC			
		TOTAL SA AIRFLOW (CFM)	OA AIRFLOW (CFM)	ESP (IN)	MOTOR SIZE (HP)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EAT (FDB)	EAT (FWB)	LAT (FDB)	LAT (FWB)	EFFICIENCY (EER/SEER)	AMBIENT TEMPERATURE (F)	No. OF COMPRESSORS	EAT (FDB)	LAT (FDB)	HP		AMBIENT TEMPERATURE (F)	CAPACITY (KW)	MCA	MOCP	VOLTAGE/ PHASE
																	CAPACITY (MBH)	EFFICIENCY (COP)					
HP-A1	WALL MOUNT	1400	250	0.20	0.5	41.5	32.6	79	67	55	54	11 / -	95	1	55	95	41.5	3.3	47	6.75	53.0	60	208/3
HP-A3	WALL MOUNT	1550	250	0.20	0.5	47	36	78	67	55	54	11 / -	95	1	55	95	47	3.3	47	6.75	54.0	60	208/3
HP-B1A	WALL MOUNT	1190	125	0.20	0.5	30	22.5	79	67	55	54	11 / -	95	1	55	95	30	3.3	47	4.50	37.0	40	208/3
HP-B1B	WALL MOUNT	1190	125	0.20	0.5	30	22.5	79	67	55	54	11 / -	95	1	55	95	30	3.3	47	4.50	37.0	40	208/3
HP-B3A	WALL MOUNT	885	125	0.20	0.5	30	22.5	79	67	55	54	11 / -	95	1	55	95	30	3.3	47	4.50	37.0	40	208/3
HP-B3B	WALL MOUNT	885	125	0.20	0.5	30	22.5	79	67	55	54	11 / -	95	1	55	95	30	3.3	47	4.50	37.0	40	208/3
HP-C1	WALL MOUNT	1375	250	0.00	0.5	42.4	32	81	68	55	54	11 / -	95	1	55	95	42	3.3	47	6.75	53.0	60	208/3
HP-C2	WALL MOUNT	1375	250	0.00	0.5	42.4	32	81	68	55	54	11 / -	95	1	55	95	42	3.3	47	6.75	53.0	60	208/3
HP-C3	WALL MOUNT	1375	250	0.00	0.5	42.4	32	81	68	55	54	11 / -	95	1	55	95	42	3.3	47	6.75	53.0	60	208/3
HP-C4	WALL MOUNT	1375	250	0.00	0.5	42.4	32	81	68	55	54	11 / -	95	1	55	95	42	3.3	47	6.75	53.0	60	208/3
HP-C5	WALL MOUNT	1375	250	0.00	0.5	42.4	32	81	68	55	54	11 / -	95	1	55	95	42	3.3	47	6.75	53.0	60	208/3
HP-C6	WALL MOUNT	1375	250	0.00	0.5	42.4	32	81	68	55	54	11 / -	95	1	55	95	42	3.3	47	6.75	53.0	60	208/3
HP-C7	WALL MOUNT	1375	250	0.00	0.5	42.4	32	81	68	55	54	11 / -	95	1	55	95	42	3.3	47	6.75	53.0	60	208/3
HP-C8	WALL MOUNT	1375	250	0.00	0.5	42.4	32	81	68	55	54	11 / -	95	1	55	95	42	3.3	47	6.75	53.0	60	208/3
HP-C9	WALL MOUNT	1375	250	0.00	0.5	42.4	32	81	68	55	54	11 / -	95	1	55	95	42	3.3	47	6.75	53.0	60	208/3
HP-C10	WALL MOUNT	1100	250	0.00	0.5	35.5	27	79	67	55	54	11 / -	95	1	55	95	35	3.3	47	6.75	49.0	50	208/3
HP-C11	WALL MOUNT	1100	250	0.00	0.5	35.5	27	79	67	55	54	11 / -	95	1	55	95	35	3.3	47	6.75	49.0	50	208/3
HP-C12	WALL MOUNT	1100	250	0.00	0.5	35.5	27	79	67	55	54	11 / -	95	1	55	95	35	3.3	47	6.75	49.0	50	208/3
HP-C13	WALL MOUNT	1100	250	0.00	0.5	35.5	27	79	67	55	54	11 / -	95	1	55	95	35	3.3	47	6.75	49.0	50	208/3
HP-C14	WALL MOUNT	1100	250	0.00	0.5	35.5	27	79	67	55	54	11 / -	95	1	55	95	35	3.3	47	6.75	49.0	50	208/3
HP-C15	WALL MOUNT	1100	250	0.00	0.5	35.5	27	79	67	55	54	11 / -	95	1	55	95	35	3.3	47	6.75	49.0	50	208/3
HP-C16	WALL MOUNT	1375	250	0.00	0.5	42.4	32	81	68	55	54	11 / -	95	1	55	95	42	3.3	47	6.75	53.0	60	208/3
HP-C17	WALL MOUNT	1400	250	0.20	0.75	45	33.75	79	67	55	54	11 / -	95	1	55	95	41	3.3	47	5.00	63.0	70	208/1

- NOTES:
1 PROVIDE SINGLE POINT ELECTRICAL CONNECTION.
2 PROVIDE EXTERNALLY MOUNTED FUSED DISCONNECT.
3 PROVIDE ENERGY RECOVERY VENTILATOR OPTION. PROVIDE CO2 CONTROL.
4 PROVIDE MERV 8 FILTERS.
5 PROVIDE HOT GAS REHEAT FOR DEHUMIDIFICATION.
6 PROVIDE ADAPTER CURB AS REQUIRED.
7 BASIS OF DESIGN: BARD OR APPROVED EQUAL.

BOILER SCHEDULE

DESIGNATION	TYPE	NET OUTPUT (MBH)	HW				BURNER				VOLTAGE/ PHASE
			FLOW (GPM)	EWT (F)	LWT (F)	MAX WPD (FT)	PRIMARY FUEL	INPUT (MBH)	GROSS OUTPUT (MBH)	GAS PRESSURE (PSIG)	
B-1	NON-CONDENSING	1530	90	180	200	12.00	LP	1800	1530	0.50	120/1

- NOTES:
1 PROVIDE EXTERNAL DISCONNECT SWITCH FOR SINGLE POINT OF CONNECTION.
2 BASIS OF DESIGN: LOCHINVAR COPPER FIN II OR EQUAL.

EXPANSION TANK SCHEDULE

DESIGNATION	SERVICE	TYPE	TOTAL VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	DIMENSIONS (DIA X HT)
XT-1	HEATING HOT WATER	BLADDER	57	57.00	20X64

- NOTES:
1 BASIS OF DESIGN: BELL AND GOSSETT. ACCEPTABLE MANUFACTURERS: TACO, ARMSTRONG

AIR SEPARATOR SCHEDULE

DESIGNATION	SERVICE	TYPE	FLOW (GPM)	MAX WPD (FT)	DIMENSIONS (DIA X HT)
AS-1	HEATING HOT WATER	COALESCING AIR/DIRT	100	5.00	12 X 25

- NOTES:
1 BASIS OF DESIGN: BELL AND GOSSETT. ACCEPTABLE MANUFACTURERS: TACO, ARMSTRONG

PUMP SCHEDULE

DESIGNATION	SERVICE	TYPE	FLOW (GPM)	HEAD (FT)	EFFICIENCY (%)	SPEED (RPM)	BRAKE MOTOR SIZE (BHP)	MOTOR SIZE (HP)	VOLTAGE/ PHASE	START/DISCONNECT MEANS
PHWP-1	HW PRIMARY LOOP	INLINE	90	20.00	76	1760	0.72	0.75	120/1	MS/D
SHWP-1	HW SECONDARY LOOP	END SUCTION	110	25.00	76	1760	0.92	1	208/3	VFD

- NOTES:
1 PROVIDE EXTERNAL STARTER/DISCONNECTING MEANS AS SCHEDULED. (VFD; MS/D; MRT)
2 BASIS OF DESIGN: B&G. ACCEPTABLE MANUFACTURERS: TACO, ARMSTRONG

PACKAGED AIR-COOLED UNIT SCHEDULE

DESIGNATION	TYPE	SUPPLY FAN				COOLING										ELECTRIC		
		TOTAL SA AIRFLOW (CFM)	OA AIRFLOW (CFM)	ESP (IN)	MOTOR SIZE (HP)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EAT (FDB)	EAT (FWB)	LAT (FDB)	LAT (FWB)	EFFICIENCY (EER/SEER)	AMBIENT TEMPERATURE (F)	No. OF COMPRESSORS	MCA	MOCP	VOLTAGE/ PHASE	
RTU-1	DX ROOFTOP COOLING ONLY	4000	1860	0.50	4	177.5	124.6	83.7	69.1	55	54	11.1	95	2	65.7	90	208/3	
RTU-2	DX ROOFTOP COOLING ONLY	8025	3690	0.50	5	341.6	243.5	83.7	69.1	55	54	10.5	95	2	127.4	150	208/3	

- NOTES:
1 PROVIDE SINGLE POINT ELECTRICAL CONNECTION.
2 PROVIDE HOT GAS REHEAT FOR DEHUMIDIFICATION.
3 PROVIDE ADAPTER CURB AS REQUIRED.
4 COOLING DESIGN CONDITIONS - OA: 93.9 FDB/ 76 FWB; RA: 75 FDB
5 HEATING DESIGN CONDITIONS - OA: 16 FDB; RA: 70 FDB
6 PROVIDE EXTERNALLY MOUNTED FUSED DISCONNECT SWITCH.
7 BASIS OF DESIGN: DAIKIN. ACCEPTABLE MANUFACTURERS: CARRIER, TRANE, YORK.

HW COIL SCHEDULE

SERVICE	TYPE	COIL SIZE	HEATING				HW						
			HEATING AIRFLOW (CFM)	CAPACITY (MBH)	EAT (FDB)	LAT (FDB)	MAX APD (IN)	MAX FACE VELOCITY (FPM)	FLOW (GPM)	EWT (F)	LWT (F)	MAX WPD (FT)	BRANCH PIPING SIZE (IN)
HWC-1	RTU-1	HOT WATER	4000	195	45	90	0.15	750	20	200	180	10.00	1 1/2"
HWC-2	RTU-2	HOT WATER	8025	390	45	90	0.15	750	39	200	180	10.00	2"

- NOTES:
1 COIL APDs SHALL BE CALCULATED BASED ON TOTAL AIRFLOW.
2 HEATING DESIGN CONDITIONS - OA: 16 FDB; RA: 70 FDB