

AIR-COOLED CHILLER SCHEDULE

DESIGNATION	LOCATION	SERVICE	CONFIGURATION	DESIGN AMBIENT TEMP. DB (°F)	NOMINAL COOLING CAPACITY (TONS)	COOLING CAPACITY AT DESIGN CONDITIONS (TONS)	TOTAL POWER (KW)	LEED EER (BTU / WH)	COOLING EER (BTU / WH)	LEED IPLV (BTU / WH)	REFRIGERATION SYSTEM DATA						WATERSIDE DATA						DIMENSIONS			OPERATING			ELECTRICAL DATA					MANUF.	MODEL	REMARKS		
											REFRIG. TYPE	COMPR. TYPE	NO. OF COMPR.	NO. OF REFRIG. CKTS.	CAPACITY CONTROL	NO. OF CONDENS. FANS	FLUID TYPE	MAX WORKING PRESSURE (PSIG)	FLOW (GPM)	E.W.T. (°F)	L.W.T. (°F)	EVAP. W.P.D. (FT)	STR. W.P.D. (FT)	HEIGHT (IN)	WIDTH (IN)	LENGTH (IN)	WEIGHT (LBS)	VOLTS	PH	Hz	BY E.C. OR MANUF.	DISCONNECT LOCATION	TYPE				ENCL.	EMER. PWR.
CH-AH-1	ROOF	CHILLED WATER FOR ELEMENTARY SCHOOL	OUTDOOR AIR-COOLED	95	160	135.1	165.05	10.373	9.885	17.009	R-454B	SCROLL	4	2	4-STAGE	8	35% PROPYLENE GLYCOL	190	290	54	42	10.4	5.5	98	88	229	7,897	208	3	60	E.C.	UNIT MTD.	NON-FUSED	NEMA 3R	NO	TRANE	ACS	SEE NOTES BELOW

NOTES:
1. PROVIDE THE FOLLOWING MANUFACTURER FEATURES AND OPTIONS:
1.1. MICROPROCESSOR CONTROLS.
1.2. BACNET OR BACNET IP COMMUNICATIONS ACCESSORY, OPTION PROVIDED TO BE COORDINATED WITH BMS VENDOR DURING SUBMITTALS.
1.3. TRANE FACTORY SUPPLIED "SUPERIOR" NOISE REDUCTION PACKAGE, OR EQUIVALENT PERFORMANCE.
2. PROVIDE THE FOLLOWING FIELD ACCESSORIES:
2.1. TIE-IN TO EXISTING BASE-BUILDING BMS.

PUMP SCHEDULE

DESIGNATION	LOCATION	SERVICE	STAGING	FLOW CONTROL	CONSTRUCTION DATA					FLUID DATA					MOTOR DATA					ELECTRICAL DATA					DIMENSIONS			WEIGHT (LBS)	MANUFACTURER	MODEL	REMARKS						
					TYPE	INLET SIZE (IN)	OUTLET SIZE (IN)	IMPELLER DIA (IN)	PRESSURE RATING (PSI)	TEMP. FOR PRESSURE RATING (°F)	FLUID TYPE	FLUID TEMP (°F)	GPM	TDH (FT)	NPSHR (FT)	EFF. AT DESIGN (%)	RPM	BHP	MOTOR HP	VOLTS	PH	Hz	BY E.C. OR MANUF.	DISCONNECT LOCATION	TYPE	ENCL. TYPE	BY M.C. E.C. OR MANUF.					STARTER LOCATION	TYPE	ENCL. TYPE	EMER. PWR. (Y/N)	LENGTH OR DEPTH (IN)	WIDTH (IN)
HWP-AH-1A, HWP-AH-1B	ELEMENTARY SCHOOL BOILER ROOM	ELEMENTARY SCHOOL BOILER PUMPS	DUTY / STANDBY	VARIABLE FLOW	IN-LINE	6	6	10.2	175	250	WATER	180	430	30	5.01	79.8	1,048	4.08	5	208	3	60	M.C.	AT STARTER	NON-FUSED	NEMA 1	M.C.	BOILER ROOM	VFD W/O BYPASS	NEMA 1	N	32	17	31.75	131	ARMSTRONG	4380
DTWP-AH-1A, DTWP-AH-1B	ELEMENTARY SCHOOL BOILER ROOM	ELEMENTARY SCHOOL DUAL TEMP LOOP	DUTY / STANDBY	VARIABLE FLOW	IN-LINE	3	3	5.0	175	250	WATER	44/140	300	70	15.2	81	3,354	6.90	10	208	3	60	M.C.	AT STARTER	NON-FUSED	NEMA 1	M.C.	BOILER ROOM	VFD W/O BYPASS	NEMA 1	N	14	17	27	131	ARMSTRONG	4380
GLWP-AH-1A, GLWP-AH-1B	ELEMENTARY SCHOOL BOILER ROOM	ELEMENTARY SCHOOL CHILLER GLYCOL LOOP	DUTY / STANDBY	CONSTANT FLOW	IN-LINE	3	3	5.0	175	250	35% PROPYLENE GLYCOL	42	330	70	16.9	82	3,346	7.20	10	208	3	60	M.C.	AT STARTER	NON-FUSED	NEMA 1	M.C.	BOILER ROOM	VFD W/O BYPASS	NEMA 1	N	14	17	27	131	ARMSTRONG	4380

PACKAGED ROOFTOP UNIT SCHEDULE (PART 1 OF 2)

DESIGNATION	LOCATION	AREA SERVED	NOMINAL COOLING CAPACITY (TONS)	DUCT CONNECTIONS		SUPPLY FAN DATA													DUCT-MOUNTED POWER EXHAUST FAN										DX COOLING DATA																							
				SUPPLY	RETURN	SUPPLY AIRFLOW (CFM)	MIN. OUTSIDE AIRFLOW WITH DCV DISABLED (CFM)	MIN. OUTSIDE AIRFLOW WITH DCV ENABLED (CFM)	ESP (IN W.C.)	NO. OF FANS	NO. OF MOTORS	HP (PER MOTOR)	BHP (PER MOTOR)	FAN TYPE	DRIVE TYPE	STARTER TYPE	STARTER LOCATION	SPEED CONTROL	EXHAUST AIRFLOW (CFM)	ESP (IN W.C.)	MOTOR HP	VOLTS	PH	Hz	FLA	DISCONNECT BY E.C. OR MANUF.	LOCATION	TYPE	ENCL. TYPE	EMER. PWR. (Y/N)	MANUFACTURER	MODEL	REFRIG. TYPE	HIGH AMBIENT LIMIT FOR COOLING DB (°F)	LOW AMBIENT LIMIT FOR COOLING DB (°F)	EER AT AHRI COND.	IEER AT AHRI COND.	DESIGN TEMP. DB (°F)	NO. OF COMPR.	NO. OF REFRIG. CKTS.	CAPACITY CONTROL	NO. OF FANS	GROSS MBH	NET MBH	NET MBH	NET MBH	E.A.T. DB (°F)	E.A.T. WB (°F)	COIL L.A.T. DB (°F)	COIL WB (°F)	UNIT L.A.T. DB (°F)	UNIT WB (°F)
RTU-AH-1	ROOF	GYMNASIUM	17.5	HORIZONTAL	HORIZONTAL	6,000	1,720	N/A	1.50	2	2	3	3.328	BC PLENUM	DIRECT	VFD	UNIT MTD.	SZ-VAV	5,000	0.3	1	208	3	60.00	1.70	E.C.	UNIT MTD.	NON-FUSED	NEMA 3R	N	PLENUMS INC.	PE2010F	R-410A	95	0	12.2	21.2	95	2	1	3-STAGE	2	213	152	204	143	80	67	56	55	58	56
RTU-AH-2	ROOF	AUDITORIUM	25	HORIZONTAL	HORIZONTAL	9,550	3,885	780	1.50	2	2	4.6	6.208	BC PLENUM	DIRECT	VFD	UNIT MTD.	SZ-VAV	5,000	0.3	1	208	3	60.00	1.70	E.C.	UNIT MTD.	NON-FUSED	NEMA 3R	N	PLENUMS INC.	PE2010F	R-410A	95	0	11.0	20.5	95	2	1	3-STAGE	2	279	203	266	190	80	67	59	57	61	58
RTU-AH-3	ROOF	CAFETERIA	15	HORIZONTAL	HORIZONTAL	5,100	2,025	515	1.50	2	2	3	2.638	BC PLENUM	DIRECT	VFD	UNIT MTD.	SZ-VAV	4,000	0.3	0.75	208	3	60.00	1.50	E.C.	UNIT MTD.	NON-FUSED	NEMA 3R	N	PLENUMS INC.	PE1811F	R-410A	95	0	12.7	24.8	95	1	1	3-STAGE	2	181	132	176	126	80	67	56	55	57	56

PACKAGED ROOFTOP UNIT SCHEDULE (PART 2 OF 2)

DESIGNATION	LOCATION	AREA SERVED	ELECTRICAL DATA (RTU)				FILTERS			BASE		OPER. WEIGHT OF UNIT AND ROOF CURB (LBS)	MANUFACTURER	MODEL	REMARKS					
			VOLTS	PH	Hz	MCA	MOP	DISCONNECT BY E.C. OR MANUF.	LOCATION	TYPE	ENCL. TYPE					EMER. PWR. (Y/N)	PRE-FILTER	MAIN FILTER	DIMENSIONS (IN) WIDTH LENGTH OR DEPTH	
RTU-AH-1	ROOF	GYMNASIUM	208	3	60	100	125	MANUF.	UNIT MTD.	NON-FUSED	NEMA 3R	N	2" MERV-8	4" MERV-13	123	87	2206	TRANE	TZJ210A	SEE NOTES BELOW
RTU-AH-2	ROOF	AUDITORIUM	208	3	60	120	150	MANUF.	UNIT MTD.	NON-FUSED	NEMA 3R	N	2" MERV-8	4" MERV-13	123	87	2214	TRANE	TZJ300A	SEE NOTES BELOW
RTU-AH-3	ROOF	CAFETERIA	208	3	60	90	125	MANUF.	UNIT MTD.	NON-FUSED	NEMA 3R	N	2" MERV-8	4" MERV-13	123	87	2,106	TRANE	TZJ180A	SEE NOTES BELOW

NOTES:
1. PROVIDE THE FOLLOWING FACTORY SUPPLIED FEATURES AND OPTIONS FOR EACH UNIT:
1.1. UNIT (INCLUDING ACCESS DOORS) SHALL BE CONSTRUCTED TO WITHSTAND WIND SPEED OF 130 MPH IN ACCORDANCE WITH STANDARD ASCE 7.
1.2. DIGITAL PROGRAMMABLE CONTROLLER WITH BACNET COMMUNICATIONS INTERFACE FOR BMS TIE-IN.
1.3. DUAL ENTHALPY AIRSIDE ECONOMIZER WITH FULLY MODULATING OUTSIDE AIR / RETURN AIR DAMPERS.
1.4. HINGED ACCESS DOORS.
1.5. 2" FIXED DEFLECTION VIBRATION ISOLATION ROOF CURB, MINIMUM 20" HIGH INCLUDING VIBRATION ISOLATION RAILS AND CLIPS, CONSTRUCTED AND INSTALLED TO WITHSTAND A WIND SPEED OF 130 MPH IN ACCORDANCE STANDARD ASCE 7.
1.6. AIR INTAKE WEATHER HOOD WITH BIRDSCREEN TO FACILITATE AIRFLOW MEASURING STATION BY CONTROLS VENDOR.
1.7. EXHAUST WEATHER HOOD WITH BIRDSCREEN.
1.8. HOT GAS REHEAT.
1.9. POWER EXHAUST FAN WITH INTEGRAL DUCT CONNECTION FLANGE, STARTER, DISCONNECT, GRAVITY BACKDRAFT DAMPER, RAIN HOOD, AND BIRDSCREEN. FAN SHALL BE DUCT-MOUNTED, FACTORY-FURNISHED, FIELD-INSTALLED INCLUDING INTERCONNECTION CONTROL WIRING, WITH SEPARATE POWER FEED.

ELECTRIC CABINET UNIT HEATER SCHEDULE

DESIGNATION	MOUNTING TYPE (SURFACE/ RECESSED)	MOUNTING LOCATION (WALL/ CEILING)	LOCATION	HEATING CAPACITY (BTU/H)	AIRFLOW (CFM)	ELECTRICAL DATA					FINISH COLOR	T-STAT TYPE (REMOTE/ BUILT-IN)	DIMENSIONS					WEIGHT (LBS)	MANUF.	MODEL	REMARKS		
						WATTS	VOLTS	PH	Hz	DISC. BY E.C. OR MANUF.			EMER. PWR.	BACK BOX HEIGHT (IN)	BACK BOX WIDTH (IN)	BACK BOX DEPTH OR LENGTH (IN)	GRILLE HEIGHT (IN)					GRILLE WIDTH (IN)	GRILLE DEPTH OR LENGTH (IN)
CUH-A	SURFACE	WALL	RE-PLAN	5,100	65	1,500	120	1	60	MANUF.	N	WHITE	BUILT-IN	11	9	4	12	11	1	12	Q-MARK	CWH1151DSAF	SEE NOTES BELOW

NOTES:
1. PROVIDE THE FOLLOWING MANUFACTURER FEATURES AND OPTIONS FOR ALL UNITS:
1.1. HEAT PURGE FAN DELAY SWITCH.
1.2. BUILT-IN POWER ON/OFF SWITCH.
1.3. THERMAL CUTOFF.
2. ALL FINISH COLORS ARE SUBJECT TO APPROVAL BY THE ARCHITECT. SUBMIT COLOR CHART FOR REVIEW.
3. FOR ALL "WALL MOUNTED" UNITS, MOUNTING HEIGHT SHALL BE AS PER ARCHITECTURAL DRAWINGS. IF NO MOUNTING HEIGHT IS INDICATED ON ARCHITECTURAL DRAWINGS, MOUNT BOTTOM AT 12" AFF.
4. REFER TO PLANS FOR QUANTITIES AND LOCATIONS. SOME LETTER DESIGNATIONS IN THIS SCHEDULE MAY NOT BE APPLICABLE TO THIS SPECIFIC PROJECT.

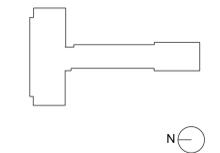
EQUIPMENT NOTES

- GLYCOL AUTO-FILL UNITS (GLF-AH-1):
SHALL BE ARMSTRONG MODEL GLA-U-HP-2 WITH 53 GALLON TANK CAPACITY, ADJUSTABLE 2-80 PSI FILL PRESSURE, 150 PSI MAXIMUM WORKING PRESSURE, DUAL 3/4" PUMPS (1 DUTY, 1 STANDBY) WITH CHANGE OVER UPON PUMP TRIP, 120V/1-Ø/60 Hz ELECTRICAL CONNECTION. PROVIDE THE FOLLOWING FEATURES & OPTIONS:
- LOW LEVEL CUT-OUT FLOAT SWITCH.
 - PUMP SUCTION ISOLATION VALVE.
 - PUMP SUCTION STRAINER.
 - POWER ON LAMP.
 - SYSTEM PRESSURE GAUGE.
 - AUTO BK VALVE.
 - PUMP DISCHARGE ISOLATION VALVE.
 - HIGH LEVEL WARNING FLOAT SWITCH.
 - LOW LEVEL WARNING FLOAT SWITCH.
 - CONTACTS FOR REMOTE ANNUNCIATION OF HIGH LEVEL, LOW LEVEL, & PUMP RUN.
 - AUTO ALTERNATING PUMP CONTROLLER.
 - PUMP H-O-A SWITCHES.
 - STARTER & DISCONNECT SWITCH FOR EACH PUMP, TO BE FURNISHED BY MECHANICAL CONTRACTOR & INSTALLED BY ELECTRICAL CONTRACTOR.

LOUVERS - FOR UNIT VENTILATORS AND FAN COIL UNITS:
INTAKE AND EXHAUST LOUVERS SHALL BE GREENHECK MODEL ESD-202 OR APPROVED EQUAL. STATIONARY DRAINABLE BLADE TYPE. FRAME SHALL BE EXTRUDED 6063-T3 ALUMINUM, 2 INCH DEEP X 0.063 INCH THICK. BLADES SHALL BE EXTRUDED 6063-T3 ALUMINUM, 0.063 INCH THICK, POSITIONED AT 45 DEGREE ANGLE ON APPROXIMATELY 3 INCH CENTERS. BIRDSCREEN SHALL BE 3/4 INCH X 0.051 INCH FLATTENED ALUMINUM. MINIMUM SIZE SHALL BE 6" WIDE BY 6" HIGH. MAXIMUM SIZE FOR A SINGLE SECTION SHALL BE 120" WIDE X 120" HIGH. WITH MULTIPLE SECTIONS PROVIDED WHERE LARGER DIMENSIONS ARE INDICATED ON THE DRAWINGS. FINISH SHALL BE MILL. FINISH COLOR SHALL BE INTEGRAL COLOR ANODIZED. WITH COLOR CHART SUBMITTED TO THE ARCHITECT FOR COLOR SELECTION PRIOR TO FABRICATION. FOR LOUVER TEST SECTION SIZE 48" WIDE X 48" HIGH, NET FREE AREA SHALL BE AT LEAST 38% OF GROSS AREA. POINT OF WATER PENETRATION SHALL BE AT LEAST 1,058 FEET PER MINUTE THROUGH THE NET FREE AREA PER AMCA TEST PROCEDURE. AND STATIC PRESSURE DROP SHALL NOT EXCEED 0.10 INCHES OF WATER COLUMN AT AN AIR VELOCITY OF 825 FEET PER MINUTE THROUGH THE NET FREE AREA. LOUVERS SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR - REFER TO SPEC SECTION 098000 FOR ADDITIONAL INFORMATION AND INSTALLATION INSTRUCTIONS.

ISSUED FOR BID 11/08/2024
ISSUE DATE

KEY PLAN



PROJECT NO. 66-03-01-03-0-001-024
MEMASI PROJECT NO. 102-2301

MECHANICAL SCHEDULES

AH M601