



PROJECT NO:	DATE:
481000	JULY 15, 2020
REVISIONS	
DATE	DESCRIPTION
12/11/20	ADDENDUM 7

GEOHERMAL HEAT PUMP CHILLER SCHEDULE																				
TAG	MANUFACTURER	MODEL NUMBER	LOCATION	TYPE	NOMINAL CAPACITY (TONS)	CONDENSER/ HEATER			EVAPORATOR/ CHILLER			ELECTRICAL DATA								
						EWI (°F)	LWT (°F)	FLOW RATE (GPM)	EWI (°F)	LWT (°F)	FLOW RATE (GPM)	PRESSURE DROP (FT WC)	MCA (A)	MOCP (A)	V	PH	HZ	WEIGHT (LBS)	NOTES	
CH1	MULTISTACK	MSG30(x3)	MECHANICAL ROOM	MODULAR	95	100	120	123.0	6.0	60	44	142.0	6.0	197	250	480	3	60	8255	

PUMP SCHEDULE																
TAG	MANUFACTURER	MODEL NUMBER	SERVING	TYPE	OPERATING DATA				ELECTRICAL DATA							
					FLOW (GPM)	HEAD (FT WC)	EFFICIENCY (%)	SUCTION SIZE (IN)	DISCHARGE SIZE (IN)	IMPELLER SIZE (IN)	MOTOR RPM	MOTOR (HP)	V	PH	HZ	NOTES
P-1	BELL & GOSSETT	2.5x2.5x6.5C	HOT WATER LOOP	VERTICAL INLINE	170.0	45	60.8	2.5	2.5	8.250	1600	5	480	3	60	
P-2	BELL & GOSSETT	2.5x2.5x6.5C	HOT WATER LOOP	VERTICAL INLINE	170.0	45	60.8	2.5	2.5	8.250	1600	5	480	3	60	
P-3	BELL & GOSSETT	2.5x2.5x7B	CHILLED WATER LOOP	VERTICAL INLINE	180.0	80	64.7	2.5	2.5	5.375	3334	7.5	480	3	60	
P-4	BELL & GOSSETT	2.5x2.5x7B	CHILLED WATER LOOP	VERTICAL INLINE	180.0	80	64.7	2.5	2.5	5.375	3334	7.5	480	3	60	
P-5	BELL & GOSSETT	2.5x2.5x7	CONDENSER WATER LOOP	VERTICAL INLINE	299.0	90	65.6	2.5	2.5	6.125	3600	15	480	3	60	
P-6	BELL & GOSSETT	2.5x2.5x7	CONDENSER WATER LOOP	VERTICAL INLINE	299.0	90	65.6	2.5	2.5	6.125	3600	15	480	3	60	

HOT WATER UNIT HEATER SCHEDULE																	
TAG	MANUFACTURER	MODEL NUMBER	LOCATION	TYPE	TOTAL CAPACITY (BTU/H)	AIR			HYDRONIC HEATING COIL			ELECTRICAL DATA					
						FLOW (CFM)	EAT (°F)	FLOW RATE (GPM)	FLOW RATE (GPM)	EWI (°F)	WATER PRESSURE DROP (FT WC)	MCA (A)	MOCP (A)	V	PH	HZ	WEIGHT (LBS)
UH-1	TRANE	S-A25	MECHANICAL ROOM EAST	CEILING	14,500	580	40	2.5	120	0.01	1.5	2.7	120	1	60	25	-
UH-2	TRANE	S-A25	MECHANICAL ROOM WEST	CEILING	14,500	580	40	2.5	120	0.01	1.5	2.7	120	1	60	25	-

AIR SEPARATOR SCHEDULE													
MARK	MANUFACTURER	MODEL NUMBER	SERVING	LOCATION	INLET SIZE (IN)	OUTLET	FLOW RATE (GPM)	WATER PRESSURE DROP (FT WC)	DRAIN SIZE (IN)	WEIGHT (LBS)	NOTES	SERVICE	
												V	PH
AS-1	BELL & GOSSETT	RL-3F	HW LOOP	MECHANICAL ROOM	3	3	120	1.00	1	130	-		
AS-2	BELL & GOSSETT	RL-4F	CHW LOOP	MECHANICAL ROOM	4	4	170	1.00	1	170	-		
AS-3	BELL & GOSSETT	RL-5F	CD LOOP	MECHANICAL ROOM	5	5	299	1.00	1	220	-		

EXPANSION TANK SCHEDULE													
TAG	MANUFACTURER	MODEL NUMBER	SERVING	LOCATION	TYPE	TANK VOLUME (GAL)	ACCEPTANCE (PSIG)	FILL PRESSURE (PSIG)	WEIGHT (LBS)	NOTES	SERVICE		
											V	PH	
ET-1	BELL & GOSSETT	B-165LA	HW LOOP	MECHANICAL ROOM	BLADDER	44	27	15	140	-			
ET-2	BELL & GOSSETT	B-165LA	CHW LOOP	MECHANICAL ROOM	BLADDER	44	27	15	140	-			
ET-3	BELL & GOSSETT	B-165LA	CD LOOP	MECHANICAL ROOM	BLADDER	44	27	15	140	-			

ADDENDUM 7

FIRE ALARM / SMOKE CONTROL MATRIX									
EVENT ZONE	SMOKE DETECTOR SYSTEM ID TAG(S)	DUCT SMOKE DETECTOR SYSTEM ID TAG(S)	FLOW SWITCH SYSTEM ID TAG(S)	DAMPER		EQUIPMENT			
				FAN SMOKE DAMPERS OPEN	SMOKE DAMPERS CLOSE	ON	OFF	AHU1 & RTU-4	RTU-1
SMOKE ZONE 1	SD1-01 THRU SD1-xx	DSD-1A, DSD-1B	FS1-1	D-SSF-1A,B,E,F,G, D-SEF-1A,B,E,F,G, D-F2	-	SEF-1A,B,E,F,G & SSF-1A,B,E,F,G, F-2*			
SMOKE ZONE 2	SD2-01 THRU SD2-xx	DSD-2	FS2-1	D-SSF-1H, D-SEF-1H	-	SEF-1H & SSF-1H			

GENERAL NOTES:
 A. THIS MATRIX IS ONLY FOR SMOKE CONTROL. REFER TO FIRE ALARM INPUT-OUTPUT MATRIX FOR COMPLETE OPERATION REQUIREMENTS.
 B. DIV 28 SHALL PROVIDE EACH SMOKE SYSTEM FAN WITH FIRE ALARM CONTROL MODULE(S) TO ALLOW 'ON' AND 'OFF' CONTROL.
 C. DIV 23 SHALL PROVIDE EACH SMOKE SYSTEM FAN WITH PRESSURE DIFFERENTIAL SWITCH. DIV 28 SHALL PROVIDE A MONITOR MODULE FOR THE DIFFERENTIAL PRESSURE SWITCH TO CONFIRM OPERATION. FAILURE SHALL CAUSE SUPERVISE CONDITION FOR DEVICE AND ZONE WHEN IN SMOKE MANAGEMENT MODE.
 D. PROVIDE EACH SMOKE SYSTEM FAN AND SMOKE CONTROL DAMPER WITH POWER DISCONNECTING MEANS (DIV 26), VOLTAGE SENSING RELAY (DIV 26), AND TO CONFIRM POWER AVAILABLE. LOSS OF POWER SHALL CAUSE SUPERVISE CONDITION FOR DEVICE/EQUIPMENT AND SUPERVISE CONDITION FOR DEVICE AND ZONE AT ANY TIME.
 E. DIV 28 SHALL PROVIDE EACH CONTROL DAMPER WITH FIRE ALARM CONTROL MODULE. FAIL TO INDICATED POSITION.
 F. DIV 23 SHALL PROVIDE EACH CONTROL DAMPER WITH LIMIT SWITCH. DIV 28 SHALL PROVIDE MONITOR MODULE TO CONFIRM POSITION. FAILURE SHALL CAUSE SUPERVISE CONDITION FOR DEVICE AND ZONE WHEN IN SMOKE MANAGEMENT MODE.
 G. DIV 28 SHALL PROVIDE MECH EQUIPMENT IN THE 'OFF' COLUMN WITH FIRE ALARM CONTROL MODULE TO SHUT DOWN EQUIPMENT.
 H. DIV 28 SHALL PROVIDE MECH EQUIPMENT IN THE 'OFF' COLUMN WITH CURRENT SENSING RELAY AT LAST DISCONNECT MEANS, AND FIRE ALARM MONITOR MODULE TO CONFIRM CURRENT IS NOT FLOWING TO EQUIPMENT. PRESENCE OF CURRENT SHALL CAUSE TROUBLE CONDITION FOR EQUIPMENT AND ZONE DURING SMOKE CONTROL MODE.
 I. FIREFIGHTERS MANUAL OVERRIDE PANEL SHALL CAUSE SMOKE CONTROL SYSTEM OPERATION AS INDICATED FOR A SMOKE DETECTOR IN THE AFFECTED ZONE, BUT SHALL NOT CAUSE ALARM CONDITION TO OCCUR. SUPERVISORY CONDITION SHALL OCCUR IN MANUAL OR OFF MODES.
 J. MEASURE AND RECORD THE PRESSURE DIFFERENCE ACROSS EACH DOOR THAT SEPARATES THE SMOKE ZONE FROM ADJACENT ZONES. ADJUST SMOKE CONTROL FANS AS NECESSARY TO ACHIEVE THE FOLLOWING PRESSURE DIFFERENTIAL ACROSS THE BOUNDARIES:
 MIN PRESSURE DIFFERENTIAL: +0.05 IN. W.C. MAX PRESSURE DIFFERENTIAL: +0.08 IN. W.C.
 K. DURING SMOKE CONTROL MODE, SMOKE FANS SHALL BE DELAYED 15 SECONDS SO THAT SMOKE CONTROL DAMPERS ARE SUFFICIENTLY OPEN TO PREVENT DEADHEADING OF FANS, TEST THIS OPERATION AND ADJUST DELAY AS REQUIRED.
 *F-2 SHALL ALWAYS BE ON AND SET TO AIRFLOW ON SHEET M2.1.1. WHEN DSD-1A OR DSD-1B IS ACTIVATED FAN SHALL RAMP UP TO 100%.