PER FAN (Hp)

3.4

2.5

7.2

BRAKE POWER | MOTOR POWER

PER FAN (Hp)

5.0

3.0

7.5

FINAL FILTER

CARTRIDGE

CARTRIDGE

PRE-FILTER

PLEATED MEDIA | 8

PLEATED MEDIA 8

MERV

ELECTRICAL

60

MERV VOLTAGE HZ PHASE

13 | 460 | 60 | 3

460

13

PLEATED MEDIA 8 460 60 3

NOTES

(1) (2) (3) (4) (5) (7) (8) (9)

(1) (2) (3) (4) (5) (7) (8) (9)

(1) (2) (3) (6) (7) (8) (9)

AHU-1
AHU-2
V⊓I13

SEE DRAWINGS FOR ARRANGEMENT

EXTERNAL STATIC PRESSURE INCLUDES FILTERS, DUCTWORK, AND COILS NOT IN AHU CASING

(CFM)

10,300

PROVIDE UNIT CAPABLE OF USE WITH VARIABLE SPEED DRIVE

SERVICE

DEDICATED OUTDOOR AIR SYSTEM

HIGH BAY MAKEUP AIR

DEDICATED OUTDOOR AIR SYSTEM | 6,355

SEE WATER COOLING COIL SCHEDULE FOR COOLING COIL PERFORMANCE

SEE HEATING WATER HEATING COIL SCHEDULE FOR HEATING COIL PERFORMANCE SEE GAS HEATING COIL SCHEDULE FOR GAS HEATING COIL PERFORMANCE

PERFORMANCE BASED ON DESIGN ALTITUDE OF 6,115 FT

PROVIDE 6 INCH EQUIPMENT PAD. EXTEND PAD 6 INCHES BEYOND EDGES OF EQUIPMENT

PROVIDE UNIT MOUNTED VARIABLE FREQUENCY DRIVE

										EN	IERGY '	WHEEL	. (EW)	SCHE	DULE									
A NI								SUPPLY								EXHAUST			MINIMUM	MINIMUM TOTAL	ELI	CTRIC/	\L	
	TYPE	SERVICE	AIRFLOW	MAX APD		SUM	MER			WIN	ITER		AIRFLOW	MAX APD	SUN	MMER	WIN	TER			VOLTAGE	⊔7	DUAGE	NOTES
ATION			(CFM)	(IN. W.G.)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	(CFM)	(IN. W.G.)	EAT DB (°F)	EAT WB (°F)	EAT DB (°F)	EAT WB (°F)	EFFICENCY (%)	LITIOLITO (70)	VOLTAGE	П	PHASE	
V-1 TOTA	TAL ENERGY WHEEL	AHU-1	6,355	0.9	87.3	57.6	80.3	62.2	3.1	2.0	48.8	38.1	5,530	8.0	78.0	64.0	68.0	50.0	83.7	76.0	460	60	3	(1) (2) (3) (4) (5) (6) (7)
V-2 TOTA	TAL ENERGY WHEEL	AHU-2	4,830	0.8	87.3	57.6	80.0	62.3	3.1	2.0	50.2	39.0	4,320	8.0	78.0	64.0	68.0	50.0	84.2	76.6	460	60	3	(1) (2) (3) (4) (5) (6) (7)
V-3 TOT.	TAL ENERGY WHEEL	AHU-3	10,000	0.9	87.3	57.6	94.6	62.0	3.1	2.0	43.1	27.7	10,500	0.9	97.3	63.7	60.0	37.5	68.4	68.4	460	60	3	(1) (2) (3) (4) (5) (6) (7)
	/-2 TO	V-1 TOTAL ENERGY WHEEL V-2 TOTAL ENERGY WHEEL V-3 TOTAL ENERGY WHEEL	IATION TOTAL ENERGY WHEEL AHU-1 I-2 TOTAL ENERGY WHEEL AHU-2 I-3 TOTAL ENERGY WHEEL AHU-3	IATION SERVICE AIRFLOW (CFM) V-1 TOTAL ENERGY WHEEL AHU-1 6,355 V-2 TOTAL ENERGY WHEEL AHU-2 4,830 V-3 TOTAL ENERGY WHEEL AHU-3 10,000	SERVICE	SERVICE AIRFLOW (CFM) (IN. W.G.) EAT DB (°F)	SERVICE AIRFLOW MAX APD SON (CFM) (IN. W.G.) EAT DB (°F) EAT WB (°F)	AN IATION TYPE SERVICE AIRFLOW (CFM) (IN. W.G.) EAT DB (°F) EAT WB (°F) LAT DB (°F)	AIRFLOW (CFM) (IN. W.G.) EAT DB (°F) EAT WB (°F) LAT DB (°F) LAT WB (°F)	AN	AN IATION TYPE SERVICE AIRFLOW (CFM) (IN. W.G.) (IN.	AN IATION TYPE SERVICE AIRFLOW (CFM) (CFM) (IN. W.G.) EAT DB (°F) (IN. W.G.) EAT DB (°F) (FM) (IN. W.G.) EAT DB (°F) (FM) (IN. W.G.) (IN.	AN AN IATION TYPE SERVICE AIRFLOW MAX APD (CFM) (IN. W.G.) EAT DB (°F) EAT WB (°F) LAT WB (°F) EAT WB (°F) EAT DB (°F) EAT WB (°F) LAT W	AN IATION TYPE SERVICE AIRFLOW MAX APD (CFM) (IN. W.G.) EAT DB (°F) EAT WB (°F) LAT DB (°F) EAT DB (°F)	AN AN IATION TYPE SERVICE AIRFLOW MAX APD (CFM) (IN. W.G.) EAT DB (°F) EAT WB (°F) LAT DB (°F) EAT DB (°F) EAT WB (°F) EAT WB (°F) EAT WB (°F) EAT WB (°F) LAT DB	AN AN IATION TYPE SERVICE AIRFLOW MAX APD (CFM) (IN. W.G.) EAT DB (°F) EAT WB (°F) LAT WB (°F) EAT DB (°F) EAT WB (°F) LAT DB	AN IATION HAT IATION HAT ION HAT IN HIS ION HAT IN HAT I	AN IATION TYPE SERVICE AIRFLOW (CFM) (IN. W.G.) MAX APD (IN. W.G.) EAT DB (°F) LAT DB (°F) LAT DB (°F) LAT DB (°F) EAT DB	AN AN IATION TYPE SERVICE AIRFLOW (CFM) (IN. W.G.) (IN. W.G.) (IN. W.G.) (EAT DB (°F) LAT DB (°F) LAT DB (°F) LAT WB (°F) LAT	AAN ATION ATION	AR AR AR AR AR AR AR AR	SERVICE AIRFLOW MAX APD SERVICE AIRFLOW MAX APD MAX	SERVICE SERVICE AIRFLOW MAX APD SERVICE SERVICE MINIMUM SERVICE SE	Service Serv

AIR HANDLING UNIT (AHU) SCHEDULE

(CFM) PRESSURE (IN. W.G.) QTY.

0.9

8.0

8.0

BRAKE POWER | MOTOR POWER | AIRFLOW | EXTERNAL STATIC | FAN

5,530

4,320

10,500

PER FAN (Hp)

7.5

5.0

10.0

RETURN/EXHAUST FAN

1 | 1668

1 | 1715 |

1

1684

SEE DRAWINGS FOR ARRANGEMENT

MOTORS SHALL BE POWERED THROUGH SINGLE POWER POINT CONNECTION FOR UNIT

ENERGY RECOVERY UNIT SHALL BE CERTIFIED PER AHRI 1060

OUTSIDE AIR CORRECTION FACTOR (OACF) SHALL NOT EXCEED 5% AT 1" W.G., AND 10% AT 3" W.G. PRESSURE DIFFERENTIAL

EXHAUST AIR TRANSFER RATION (EATR) SHALL NOT EXCEED 10% FOR CLASS 2 AIR AS DEFINED BY ASHRAE 62.1

PROVIDE PLEATED MEDIA MINIMUM MERV 8 FILTER AT RETURN INLET TO WHEEL AS SHOWN ON DRAWINGS

PERFORMANCE BASED ON DESIGN ALTITUDE OF 6,115 FT

						W	ATEF	R COO	LING	COIL	(WCC) SCI	HEDULE										
						All	RSIDE									V	/ATERS	IDE				
PLAN		DESIGN									MINIMUM TOTAL	MINIMUM SENSIBLE	WATER						MAX. P	RESSURE	DROP (FT)	
DESIGNATION	SERVICE	AIRFLOW	MINIMUM COIL AREA (FT²)	MAXIMUM FACE VELOCITY (FPM)	MAXIMUM APD (IN. W.G.)	MINIMUM ROWS	EAT DB (°F)	EAT WB	LAT DB (°F)	LAT WB	COOLING CAPACITY	COOLING CAPACITY	FLOWRATE	(°F)	LWT (°F)	ACV SIZE		COIL ACV ASSEMBLY	0011	401/	TOTAL	NOTES
		(CFM)	AREA (FI-)	VELOCITI (FPW)	(IIV. VV.G.)	ROWS	('')	()	()	('')	(MBh)	(MBh)	(GPM)	('')	()	(IIV)	Cv	SIZE	COIL	ACV	TOTAL	
WCC-1	AHU-1	6,355	20.2	315	0.16	6	80.3	62.2	54.0	53.7	149.4	146.7	18.6	44.0	60.0	1"	14	2"	0.8	4.3	5.1	(1) (2) (3)
WCC-2	AHU-2	4,830	12.9	374	0.27	6	80.0	62.3	54.0	53.8	117.7	117.0	14.7	44.0	60.0	1"	14	2"	0.8	2.7	3.5	(1) (2) (3)

ACV ASSEMBLY INCLUDES AUTOMATIC CONTROL VALVE, LINE SIZE BALANCING VALVE, STRAINER, 2 ISOLATION VALVES, AND 6 ACV SIZE ELBOW
COIL SHALL BE SELECTED BASED ON ENTERING AND LEAVING AIR TEMPERATURES. TOTAL AND SENSIBLE COOLING CAPACITY PROVIDED FOR REFERENCE ONLY

ROUTE 3/4" CONDENSATE DRAIN TO NEAREST FLOOR DRAIN PERFORMANCE BASED ON DESIGN ALTITUDE OF 6,115 FT

С		

				HE	ATING '	WA	TE	R COIL (H	IC) SCH	IEDI	ULE							
				AIRSIDE								Į.	NATER	SIDE				
PLAN	SERVICE	DESIGN AIRFLOW	MINIMUM COIL	MAXIMUM FACE	MAXIMUM			HEATING	WATER					ACV	MAX. PI	RESSURE	DROP (FT)	NOTES
DESIGNATION		(CFM)	AREA (FT²)	VELOCITY (FPM)	APD (IN. W.G.)	EAT (°F)	LAT (°F)	CAPACITY (MBh)	FLOWRATE (GPM)	EWT (°F)	LWT (°F)	ACV SIZE (IN)	Cv	ASSEMBLY SIZE (IN)	COIL	ACV	TOTAL	
HC-01	AHU-1 PREHEAT	6,355	21.0	303	0.05	3	55	283.9	26.2	110	86	1 1/2"	28	2"	1.7	2.7	4.4	(1) (2) (3) (4)
HC-02	AHU-2 PREHEAT	4,830	12.9	374	0.15	3	55	217.3	20.0	110	86	1 1/4"	20	2"	0.2	2.3	2.5	(1) (2) (3) (4)
HC-03	AHU-1 REHEAT	6,355	20.6	308	0.05	54	73	103.8	9.6	110	86	3/4"	7.5	1 1/4"	2.6	4.1	6.7	(1) (2) (3) (4)
HC-04	AHU-2 REHEAT	4,830	13.6	354	0.08	54	73	79.4	7.3	110	86	3/4"	5.5	1 1/4"	0.5	4.3	4.8	(1) (2) (3) (4)

SUPPLY FAN

QTY.

1 | 1776

1 | 1851

1 | 1701

PER FAN (Hp)

5.0

7.5

PRESSURE (IN. W.G.)

0.9

0.7

AIRFLOW | MINIMUM OUTDOOR | EXTERNAL STATIC | FAN

AIR (CFM)

6,355

4,830

10,000

ACV ASSEMBLY INCLUDES AUTOMATIC CONTROL VALVE, LINE SIZE BALANCING VALVE, STRAINER, 2 ISOLATION VALVES, AND 6 ACV SIZE ELBOW COIL SHALL BE SELECTED BASED ON ENTERING AND LEAVING AIR TEMPERATURES. HEATING CAPACITY PROVIDED FOR REFERENCE ONLY

CAPACITY BASED ON 40% PROPYLENE GLYCOL PERFORMANCE BASED ON DESIGN ALTITUDE OF 6,115 FT

		HE	ATING (COIL	- GAS	(HC-G) SCHEDUL	.E			
PLAN DESIGNATION	SERVICE	DESIGN AIRFLOW	MAXIMUM APD	EAT (°F)	LAT (°F)	GAS INPUT	GAS CAPACITY		CTRICAL	ı	NOTES
		(CFM)	(IN.W.G.)	, ,	' '	(CFH)	OUTPUT (MBH)	VOLTAGE	HZ	PHASE	
HC-G-01	AHU-3	7,875	0.61	3.1	70.6	731	584.8	115	60	1	(1) (2) (3)
NOTES:											

PROVIDE MINIMUM BURNER TURNDOWN RATIO OF 10:1

PERFORMANCE BASED ON DESIGN ALTITUDE OF 6,115 FT

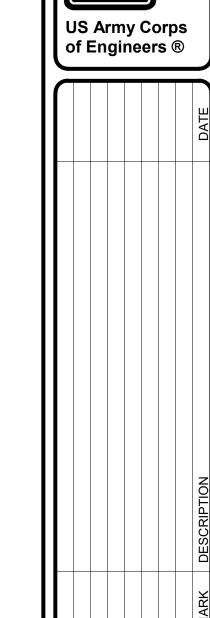
GAS INPUT BASED ON 1,000 BTU/FT³

Plot Date: 3/14/2025 1:57:34 PM

READY TO ADVERTISE (RTA) SUBMITTAL

CUI

of Engineers ®



CU	

					I	FOUF	R-PIP	E FA	AN CO	IL UN	IT (F	CU)	SCH	EDUL	E.														
				SUPPLY FA	AN					WATER C	COOLING	COIL							WATER H	HEATING	COIL			FILTER		ELECTF	₹ICAL		
TYPE	ASSOCIATED UNITS	UNIT ARRANGEMENT	AIRFLOW (CFM)	EXTERNAL STATION PRESSURE (IN.W.G.)	BRAKE POWER (Hp)	MOTOR I POWER (Hp)	EAT EAT DB WB (°F) (°F)	LAT DB (°F)	LAT WB (°F) FLOWF (GPI	RATE EWT (°F)	LWT SIZE	V E Cv A	ACV ASSEMBLY SIZE	MAX. PRI DROP	P (FT)	EAT LA		E EWT L	LWT SIZE	Cv	ACV ASSEMBLY SIZE	DRO	RESSURE OP (FT) OV TOTAL	TYPE	MERV V	OLTAGE H	IZ PHASI	<u>:</u>	NOTES
1	FCU-110, FCU-116, FCU-157, FCU-161, FCU-162, FCU-167, FCU-168, FCU-169, FCU-172, FCU-173, FCU-174, FCU-207, FCU-208, FCU-209, FCU-212, FCU-216, FCU-222, FCU-223, FCU-224, FCU-234, FCU-236, FCU-242, FCU-246, FCU-253, FCU-257, FCU-260, FCU-261, FCU-263, FCU-279	HORIZONTAL CONCEALED	200	0.4	0.1	0.1 7	78.0 64.0	61.2	58.1 0.5	5 44.0	57.2 1/2"	0.4	1/2"	5.0 3.6	8.6	68.0 80.	0 0.5	110	101 1/2	0.4	1/2"	5.0 3.	6 8.6	PLEATED MEDIA	8	115 6	60 1	(1) (2) (3)	8) (4) (5) (6) (7) (8) (9)
2	FCU-126, FCU-127, FCU-128, FCU-132, FCU-152, FCU-153, FCU-164, FCU-165, FCU-204, FCU-220, FCU-240, FCU-241, FCU-247, FCU-250, FCU-255, FCU-264, FCU-265, FCU-266, FCU-267, FCU-268, FCU-269, FCU-285	HORIZONTAL CONCEALED	300	0.4	0.1	0.2	78.0 64.0	57.5	56.3 1.	44.0	55.6 1/2"	" 1.3	3/4"	5.0 1.4	4 6.4	68.0 79.	6 0.8	110	102 1/2	1.3	1/2"	5.0 1.	4 6.4	PLEATED MEDIA	8	115 6	0 1	(1) (2) (3)	8) (4) (5) (6) (7) (8) (9)
3	FCU-117, FCU-118, FCU-120, FCU-214, FCU-273, FCU-274	HORIZONTAL CONCEALED	1050	0.4	0.3	0.5	78.0 64.0	60.3	58.0 2.8	3 44.0	57.0 1/2"	" 2.2	3/4"	5.0 4.3	9.3	68.0 80.	1 1.4	110	92 1/2	" 1.3	3/4"	14.3 3.	1 17.4	PLEATED MEDIA	8	115 6	1 0ذ	(1) (2) (3	3) (4) (5) (6) (7) (8) (9)
4	FCU-112, FCU-146, FCU-154, FCU-163, FCU-166, FCU-176, FCU-211, FCU-228, FCU-229, FCU-231, FCU-252, FCU-254, FCU-256, FCU-277	HORIZONTAL CONCEALED	550	0.4	0.2	0.2	78.0 64.0	60.1	57.6 1.6	6 44.0	56.5 1/2"	" 1.3	3/4"	5.0 4.2	9.2	68.0 78.	5 0.8	110	96 1/2	1.3	3/4"	5.0 1.	4 6.4	PLEATED MEDIA	8	115 6	0 1	(1) (2) (3)	3) (4) (5) (6) (7) (8) (9)
6	FCU-218	HORIZONTAL CONCEALED	500	0.4	0.1	0.2	78.0 64.0	60.7	58.2 1.2	2 44.0	58.0 1/2"	" 1.3	3/4"	5.0 2.1	7.1	68.0 92.	3 3.1	110	103 1/2	" 2.2	3/4"	13.5 4.	3 17.8	PLEATED MEDIA	8	115 6	60 1	(1) (2) (3	3) (4) (5) (6) (7) (8) (9)
7	FCU-171, FCU-187, FCU-276	HORIZONTAL CONCEALED	350	0.4	0.1	0.2	78.0 64.0	62.5	60.1 0.5	44.0	59.8 1/2"	" 0.4	1/2"	5.0 3.6	8.6	68.0 87.	8 1.5	110	101 1/2	" 1.3	3/4"	5.0 3.	1 8.1	PLEATED MEDIA	8	115 6	60 1	(1) (2) (3	8) (4) (5) (6) (7) (8) (9)
8	FCU-156, FCU-158	HORIZONTAL CONCEALED	600	0.4	0.2	0.3	78.0 64.0	68.2	61.1 0.5	44.0	64.6 1/2"	" 0.4	1/2"	5.0 3.6	8.6	68.0 83.	4 1.3	110	96 1/2	" 1.3	3/4"	5.0 3.	1 8.1	PLEATED MEDIA	8	115 6	60 1	(1) (2) (3	8) (4) (5) (6) (7) (8) (9)
9	FCU-137, FCU-219, FCU-283	HORIZONTAL CONCEALED	350	0.4	0.1	0.2	78.0 64.0	63.3	59.6 0.6	44.0	59.4 1/2"	" 0.4	1/2"	5.0 8.1	1 13.1	68.0 82.	9 0.6	110	94 1/2	" 0.4	1/2"	5.0 8.	1 13.1	PLEATED MEDIA	8	115 6	1 0د	(1) (2) (3	3) (4) (5) (6) (7) (8) (9)
10	FCU-235	HORIZONTAL CONCEALED	750	0.4	0.2	0.3	78.0 64.0	61.2	58.9 1.9	44.0	55.3 1/2"	" 1.3	3/4"	5.0 5.5	5 10.5	68.0 74.	7 0.5	110	87 1/2	" 0.4	1/2"	5.0 3.	6 8.6	PLEATED MEDIA	8	115 6	1 0ز	(1) (2) (3)	3) (4) (5) (6) (7) (8) (9)
11	FCU-226	HORIZONTAL CONCEALED	350	0.4	0.1	0.2	78.0 64.0	62.8	59.0 0.7	44.0	58.0 1/2"	" 0.4	1/2"	5.0 8.1	1 13.1	68.0 80.	6 0.5	110	92 1/2	" 0.4	1/2"	5.0 3.	6 8.6	PLEATED MEDIA	8	115 6	60 1	(1) (2) (3	3) (4) (5) (6) (7) (8) (9)
12	FCU-102A, FCU-102B, FCU-227, FCU-233	HORIZONTAL CONCEALED	550	0.4	0.2	0.2	78.0 64.0	61.8	59.3 0.9	44.0	59.9 1/2"	" 1.3	3/4"	5.0 1.4	4 6.4	68.0 78.	5 0.5	110	86 1/2	" 0.4	1/2"	5.0 3.	6 8.6	PLEATED MEDIA	8	115 6	60 1	(1) (2) (3)	3) (4) (5) (6) (7) (8) (9)
15	FCU-100, FCU-115, FCU-202	HORIZONTAL CONCEALED	600	0.4	0.2	0.3										68.0 83.	8 1.3	110	96 1/2	" 1.3	3/4"	5.0 3.	1 8.1	PLEATED MEDIA	8	115	1 ا0ز	(1) (2)	2) (3) (5) (6) (7) (9)

- PROVIDE LOCKABLE, FUSIBLE DISCONNECT. SIZE FUSE AT 1.75 X FLA OF UNIT
- EXTERNAL STATIC PRESSURE INCLUDES FILTER, AND DUCTWORK NOT IN CASING
- ACV ASSEMBLY INCLUDES AUTOMATIC CONTROL VALVE, LINE SIZE BALANCING VALVE, STRAINER, 2 ISOLATION VALVES, AND 6 ACV SIZE ELBOWS
- COOLING COIL SHALL BE SELECTED BASED ON ENTERING AND LEAVING AIR TEMPERATURES
- PROVIDE FACTORY PROGRAMMED ECM FAN MOTOR
- PERFORMANCE BASED ON DESIGN ALTITUDE OF 6,115 FT
- COOLING COIL PERFORMANCE BASED ON 100% WATER
- HEATING COIL PERFORMANCE BASED ON 40% PROPYLENE GLYCOL MIXTURE

							BL	OW	ER C	COIL	(BCAI	H) SCH	IEDUL	.E													
				SUPPLY FAN							WATER CO	OLING COIL						W	ATER HEATI	NG COIL			FILTER		ELECTRICAL	_	
TYPE	ASSOCIATED UNITS	UNIT ARRANGEMENT	AIRFLOW (CFM)	EXTERNAL STATIC PRESSURE (IN. W.G.)	BRAKE POWER (Hp)	MOTO POWE (Hp)	R EAT R DB (°F)	EAT L WB [(°F) ('	AT LAT DB WB °F) (°F)	FLOWR/	ATE EWT LW	ACV SIZE CV (IN)	ACV ASSEMBLY SIZE	MAX. PRE DROP	(FT)	EAT LAT (°F)	FLOWRATE (GPM)	EWT LW (°F)	T SIZE CV	ACV ASSEMBLY		RESSURE P (FT) V TOTAL	ТҮРЕ	MERV	VOLTAGE HZ F	HASE	NOTES
1	BCAH-124, BCAH-125, BCAH-138, BCAH-150B	HORIZONTAL CONCEALED	800	0.5	0.6	1.0	78.0	64.0 5	9.3 57.2	2.19	44.0 60	.0 1/2" 1.3	3/4"	5.0 6.9	11.9	68.0 90.3	1.9	110 94	1/2" 1.3	3/4"	5.0 5.5	5 10.5	PLEATED MEDIA	8	115 60	1 (*	(1) (2) (3) (4) (5) (6) (7) (8)
2	BCAH-230A, BCAH-230B	HORIZONTAL CONCEALED	2300	0.5	1.4	1.5	78.0	64.0 5	8.2 56.2	9.60	44.0 55	.4 3/4" 5.5	1 1/4"	5.0 7.6	12.6	68.0 74.7	1.3	110 95	5 1/2" 1.3	3/4"	5.0 3.	1 8.1	PLEATED MEDIA	8	460 60	3 (1	(1) (2) (3) (4) (5) (6) (7) (8)
3	BCAH-104, BCAH-179, BCAH-180, BCAH-181, BCAH-182	HORIZONTAL CONCEALED	950	0.5	0.9	0.9	78.0	64.0 5	8.7 56.1	3.46	6 44.0 58	.1 1/2" 2.2	3/4"	5.0 5.8	10.8	68.0 85.3	1.1	110 88	3 1/2" 1.3	3/4"	5.0 1.4	4 6.4	PLEATED MEDIA	8	115 60	1 (1	(1) (2) (3) (4) (5) (6) (7) (8)
4	BCAH-106, BCAH-119, BCAH-143, BCAH-188	HORIZONTAL CONCEALED	1200	0.5	0.6	1.0	78.0	64.0 5	9.9 57.8	3 2.95	44.0 60	.0 1/2" 2.2	3/4"	5.0 4.3	9.3	68.0 75.9	8.0	110 94	1/2" 0.4	1/2"	5.0 8.	1 13.1	PLEATED MEDIA	8	115 60	1 (1	(1) (2) (3) (4) (5) (6) (7) (8)
5	BCAH-135, BCAH-136, BCAH-139, BCAH-140A, BCAH-140B	HORIZONTAL CONCEALED	1600	0.5	0.7	1.0	78.0	64.0 5	8.0 56.7	5.09	44.0 58	.0 3/4" 5.5	1"	5.0 1.9	6.9	68.0 86.8	5.0	110 100	0 3/4" 5.5	5 1"	5.0 1.9	6.9	PLEATED MEDIA	8	115 60	1 (1	(1) (2) (3) (4) (5) (6) (7) (8)
6	BCAH-147, BCAH-150A, BCAH-155	HORIZONTAL CONCEALED	1200	0.5	0.6	1.0	78.0	64.0 5	8.4 56.4	4.08	3 44.0 57	.9 1/2" 2.2	1"	5.0 7.6	12.6	68.0 75.1	0.6	110 90	1/2" 0.4	1/2"	5.0 8.	1 13.1	PLEATED MEDIA	8	115 60	1 (1	(1) (2) (3) (4) (5) (6) (7) (8)
7	BCAH-108A, BCAH-108B, BCAH-108C, BCAH-131, BCAH-217, BCAH-271, BCAH-272	HORIZONTAL CONCEALED	1900	0.5	0.9	1.0	78.0	64.0 5	9.2 57.2	2 4.26	6 44.0 62	.7 1/2" 5.5	1"	5.0 9.7	14.7	68.0 74.0	0.9	110 94	1/2" 1.3	3/4"	5.0 1.4	6.4	PLEATED MEDIA	8	115 60	1 (1	(1) (2) (3) (4) (5) (6) (7) (8)
8	BCAH-160, BCAH-210	HORIZONTAL CONCEALED	1200	0.5	0.6	1.0	78.0	64.0 6	0.6 58.6	2.49	44.0 61	.0 1/2" 1.3	3/4"	5.0 8.5	13.5	68.0 79.2	2.0	110 100	0 1/2" 1.3	3/4"	5.0 5.5	5 10.5	PLEATED MEDIA	8	115 60	1 (1	(1) (2) (3) (4) (5) (6) (7) (8)
9	BCAH-109A, BCAH-109B, BCAH-213, BCAH-237, BCAH-239A, BCAH-239B	HORIZONTAL CONCEALED	1600	0.5	0.7	1.0	78.0	64.0 5	9.3 58.0	3.75	44.0 60	.0 1/2" 2.2	1"	5.0 7.6	12.6	68.0 77.3	0.9	110 85	5 1/2" 1.3	3/4"	5.0 1.4	6.4	PLEATED MEDIA	8	115 60	1 (1	(1) (2) (3) (4) (5) (6) (7) (8)
10	BCAH-177, BCAH-206	HORIZONTAL CONCEALED	700	0.5	0.4	0.5	78.0	64.0 5	8.9 57.2	1.89	44.0 60	.0 1/2" 1.3	1/2"	5.0 5.5	10.5	68.0 79.7	0.5	110 85	5 1/2" 0.4	1/2"	5.0 3.6	8.6	PLEATED MEDIA	8	115 60	1 (*	(1) (2) (3) (4) (5) (6) (7) (8)
11	BCAH-105, BCAH-115, BCAH-175, BCAH-238A, BCAH-238B, BCAH-113C	HORIZONTAL CONCEALED	800	0.5	0.5	1.0	78.0	64.0 6	1.8 59.7	7 1.00	44.0 68	.0 1/2" 1.3	1/2"	5.0 1.4	6.4	68.0 90.8	2.0	110 95	5 1/2" 1.3	3/4"	5.0 5.5	5 10.5	PLEATED MEDIA	8	115 60	1 (*	(1) (2) (3) (4) (5) (6) (7) (8)
12	BCAH-170	HORIZONTAL CONCEALED	1800	0.5	0.9	1.0	78.0	64.0 5	8.2 56.7	7 5.72	2 44.0 58	.2 3/4" 5.5	1"	5.0 2.7	7.7	68.0 79.2	1.8	110 92	2 1/2" 1.3	3/4"	5.0 5.5	5 10.5	PLEATED MEDIA	8	115 60		(1) (2) (3) (4) (5) (6) (7) (8)
13	BCAH-111A, BCAH-111B, BCAH-114A, BCAH-114B	HORIZONTAL CONCEALED	1200	0.5	0.6	1.0	78.0	64.0 5	9.9 57.8	3 2.95	5 44.0 60	.0 1/2" 2.2	3/4"	5.0 4.3	9.3	68.0 74.9	0.5	110 89	1/2" 0.4	1/2"	5.0 3.6	8.6	PLEATED MEDIA	8	115 60		(1) (2) (3) (4) (5) (6) (7) (8)
14	BCAH-112A, BCAH-112B, BCAH-113A, BCAH-113B	HORIZONTAL CONCEALED	2650	0.5	1.0	1.0	88.0	58.0 5	5.6 46.0	9.33	3 44.0 60	.0 3/4" 7.5	1 1/4"	5.0 4.1	9.1	3.0 56.3	9.3	110 82	2 3/4" 7.5	5 1 1/4"	5.0 4.1	9.1	PLEATED MEDIA	8	460 60		(1) (2) (3) (4) (5) (6) (7) (8)

EXTERNAL STATIC PRESSURE INCLUDES FILTER, AND DUCTWORK NOT IN CASING

- ACV ASSEMBLY INCLUDES AUTOMATIC CONTROL VALVE, LINE SIZE BALANCING VALVE, STRAINER, 2 ISOLATION VALVES, AND 6 ACV SIZE ELBOWS
- COIL SHALL BE SELECTED BASED ON ENTERING AND LEAVING AIR TEMPERATURES.
- PROVIDE FACTORY PROGRAMMED ECM FAN MOTOR
- PERFORMANCE BASED ON DESIGN ALTITUDE OF 6,115 FT COOLING COIL PERFORMANCE BASED ON 100% WATER
- HEATING COIL PERFORMANCE BASED ON 40% PROPYLENE GLYCOL MIXTURE
- PROVIDE LOCKABLE DISCONNECT

						AIR C	OOLED CH	HILLEI	R (CH) SC	HEDULE							
PLAN				EVAPORATOR			AMBIENT	CIRCUIT		MAX. REFRIGERANT	EER		E	LECTRICAL			
DESIGNATION	TYPE	FLOWRATE (GPM)	SUPPLY TEMPERATURE (°F)	RETURN TEMPERATURE (°F)	MAX. PRESSURE DROP (FT W.G.)	MODULE QTY	TEMPERATURE (°F)	QTY. PER MODULE	REFRIGERANT	QTY. PER MODULE (LBS)	(AHRI)	MCA (A)	MOCP (A)	VOLTAGE	HZ	PHASE	NOTES
CH-1	MODULAR SCROLL	300.4	42	57	8.3	4	95	2	R-454B	67.0	10.2	365	400	460	60	3	(1) (2) (3) (4) (5) (6)
CH-2	MODULAR SCROLL	409.4	48	60	25.0	4	95	2	R-454B	67.0	10.09	392	450	460	60	3	(1) (2) (3) (4) (5) (6) (7)

- PROVIDE TRANE WATER CHILLER PRODUCT
- PROVIDE SINGLE POINT CONNECTION
- PROVIDE LOCKABLE UNIT MOUNTED DISCONNECT
- CAPACITY BASED ON 40% PROPYLENE GLYCOL/WATER SOLUTION IN EVAPORATOR
- PROVIDE UNIT SUITABLE FOR LOW AMBIENT OPERATION TO 0°F
- PERFORMANCE BASED ON DESIGN ALTITUDE OF 6,115 FT PROVIDE INTEGRAL FREE COOLING. SCHEDULED PRESSURE DROP INCLUDES 11.7 FT OF PRESSURE DROP FOR FREE COOLING OPERATION

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								FOUR	PIPE HEAT	PUM	P (AWHP) S	CHE	DULE										
PLAN DESIGNATION	ТҮРЕ	FLOWRATE (GPM)	EVAP SUPPLY TEMPERATURE (°F)	ORATOR - COOLING MO RETURN TEMPERATURE (°F)	WPD (FT W.G.)	AMBIENT TEMPERATURE (°F)	FLOWRATE (GPM)	CON RETURN TEMPERATURE (°F)	DENSER - HEATING MOD SUPPLY TEMPERATURE (°F)	WPD (FT	AMBIENT TEMPERATURE (°F)	MODULE QTY	COMPRESSOR QTY PER MODULE	REFRIGERANT	MAX. REFRIGERANT QTY. PER MODULE (LBS)	EER (AHRI)	СОР	MCA (A)		ELECTRICAL VOLTAGE	HZ	PHASE	NOTES
AWHP-1	MODULAR FOUR PIPE SCROLL	92.3	42	57	6.0	95	60.1	90.0	110.0	4.3	30.0	2	2	R-454B	100.00	9.828	2.966	147	200	460	60	3	(1) (2) (3) (4) (5)
NOTES:																							

- PROVIDE SINGLE POINT CONNECTION
- PROVIDE LOCKABLE UNIT MOUNTED DISCONNECT
- CAPACITY BASED ON 40% PROPYLENE GLYCOL/WATER SOLUTION IN EVAPORATOR
- CAPACITY BASED ON 40% PROPYLENE GLYCOL/WATER SOLUTION IN CONDENSER
- PERFORMANCE BASED ON DESIGN ALTITUDE OF 6,115 FT

		E	EXPANSION	N TANK H	/AC (ET-H) SCHEDUL	.E				
PLAN DESIGNATION	SERVICE	ТҮРЕ	MIN TANK VOLUME (GAL)	MIN ACCEPTANCE VOLUME (GAL)	TANK RATED PRESSURE (PSIG)	MIN SYSTEM TEMPERATURE (°F)	MAX SYSTEM TEMPERATURE (°F)	MIN SYSTEM PRESSURE (PSIG)	MAX SYSTEM PRESSURE (PSIG)	SET PRESSURE (PSIG)	NOTES
ET-CHW-01	CHILLED WATER COMFORT PRIMARY	ASME DIAPHRAGM TYPE	35.0	28.0	150.0	44.0	92.0	22.3	112.5	22.3	(1) (2) (3) (4)
ET-CHW-02	CHILLED WATER IT PRIMARY	ASME DIAPHRAGM TYPE	35.0	28.0	150.0	44.0	92.0	22.3	112.5	22.3	(1) (2) (3) (4)
ET-CHW-03	CHILLED WATER IT SECONDARY	ASME DIAPHRAGM TYPE	11.0	8.8	150.0	44.0	92.0	22.3	112.5	22.3	(1) (2) (3)
ET-CHW-04	CHILLED WATER COMFORT SECONDARY	ASME DIAPHRAGM TYPE	11.0	8.8	150.0	44.0	92.0	22.3	112.5	22.3	(1) (2) (3)
ET-H-01	HEATING WATER	ASME DIAPHRAGM TYPE	60.0	48.5	150.0	50.0	110.0	22.3	112.5	22.3	(1) (2) (3) (4)
L NOTES											,

- CONSTRUCTED IN ACCORDANCE WITH ASME SECTION VIII DIVISION 1
- ROUTE DRAINS TO NEAREST FLOOR DRAIN
- PROVIDE 6" CONCRETE EQUIPMENT PAD. EXTEND PAD 6 INCHES BEYOND EDGES OF EQUIPMENT
- TANK SIZE BASED ON 40% PROPYLENE GLYCOL

	AIR SEPARATOR	(AS) SEPAF	RATOR	SCHED	ULE	
PLAN DESIGNATION	DESCRIPTION	SYSTEM SERVED	FLOWRATE (GPM)	PIPE SIZE (IN.)	MAX. PRESSURE DROP (FT)	NOTES
AS-01	CENTRIFUGAL WITHOUT STRAINER	CHILLED WATER	341.6	5"	0.8	(1) (2) (3
AS-02	CENTRIFUGAL WITHOUT STRAINER	CHILLED WATER	342.3	6"	0.8	(1) (2) (3
AS-03	CENTRIFUGAL WITHOUT STRAINER	HEATING WATER	261.0	5"	0.5	(1) (2) (3)
AS-04	CENTRIFUGAL WITHOUT STRAINER	CHILLED WATER	409.4	5"	1.2	(1) (2) (3)
AS-05	CENTRIFUGAL WITHOUT STRAINER	CHILLED WATER	392.0	5"	1.1	(1) (2) (3)

- PROVIDE BLOWDOWN CONNECTION ON BOTTOM OF VESSEL
- PROVIDE AIR VENT CONNECTION ON TOP OF VESSEL
- PROVIDE LIFTING LUGS
- PERFORMANCE BASED ON 40% PROPYLENE GLYCOL/WATER SOLUTION

				HUMID	IFIER -	ELECT	RIC STEAM	(HUM-E)	SC	HED	ULE				
PLAN	SERVICE HUMIDIFIER TYPE NOTES														
DESIGNATION	CEDVIPE UIIMINICIED TVDE STATEMENT SECTION SEC														
HUM-01	AHU-1	ELECTRODE STEAM	107.0	6,355	2' - 8"	2' - 0"	0.02	6	42	60	460	60	3	(1) (2) (3) (4) (5) (6)	
HUM-02	AHU-2	ELECTRODE STEAM	113.0	4,830	2' - 2"	2' - 0"	0.02	6	42	60	460	60	3	(1) (2) (3) (4) (5) (6)	

- PERFORMANCE BASED ON DESIGN ALTITUDE OF 6,115 FT
- PROVIDE CONDENSATE PUMP, CONDENSATE TEMPERING DEVICE, SAFETY SWITCH, AND MODULATING CONTROL
- PROVIDE HARD PIPE KIT, FILL CUP EXTENSION, AND INSULATED TUBES FOR DISPERSION
- PROVIDE BACNET NETWORK COMMUNICATIONS
- DUCT SIZE INDICATED IS INSIDE DUCT DIAMETER PROVIDE LOCKABLE DISCONNECT

	HE	AT EXC	CHA	NC	SER - W	ATER (HX) SCHE	DULE					
					PRIMARY SI	IDE			SEC	ONDARY SIDE		
TYPE	SYSTEM SERVED	FLOW RATE	EWT	LWT	CONNECTION	MAXIMUM PRESSURE DROP (FT)	FLOW RATE	EWT	LWT	MAX. PRESSURE DROP	CONNECTION	NOTES
		(GPM)	(°F)	(°F)	SIZE (IN.)	COIL	(GPM)	(°F	(°F)	(FT)	SIZE (IN.)	
GASKETED PLATE	COMFORT CHILLED WATER	371.3	42	57	6"	13.7	341.6	59	44	9.8	6"	(1) (2) (3)
GASKETED PLATE	IT CHILLED WATER	376.0	48	60	6"	10.0	342.3	62	50	5.5	6"	(1) (2) (3)
	GASKETED PLATE	TYPE SYSTEM SERVED GASKETED PLATE COMFORT CHILLED WATER	TYPE SYSTEM SERVED FLOW RATE (GPM) GASKETED PLATE COMFORT CHILLED WATER 371.3	TYPE SYSTEM SERVED FLOW RATE (GPM) (°F) GASKETED PLATE COMFORT CHILLED WATER 371.3 42	TYPE SYSTEM SERVED FLOW RATE (GPM) (°F) (°F) GASKETED PLATE COMFORT CHILLED WATER 371.3 42 57	TYPE SYSTEM SERVED FLOW RATE (GPM) (°F) (°F) CONNECTION SIZE (IN.) GASKETED PLATE COMFORT CHILLED WATER 371.3 42 57 6"	TYPE SYSTEM SERVED FLOW RATE (GPM) (°F) (°F) UWT CONNECTION SIZE (IN.) COIL GASKETED PLATE COMFORT CHILLED WATER 371.3 42 57 6" 13.7	TYPE SYSTEM SERVED FLOW RATE (GPM) (°F) (°F) SIZE (IN.) MAXIMUM PRESSURE DROP (FT) (GPM) GASKETED PLATE COMFORT CHILLED WATER 371.3 42 57 6" 13.7 341.6	TYPE SYSTEM SERVED FLOW RATE (GPM) (°F) (°F) (°F) SIZE (IN.) COIL (GPM) (°F) (°F) SIZE (IN.) COIL (GPM) (°F) (°F) SIZE (IN.) (GPM) (°F) SIZE (IN.) TOIL (GPM) (°F) (°F) SIZE (IN.) (GPM) (GPM) (°F) SIZE (IN.) (GPM) (GP	TYPE SYSTEM SERVED FLOW RATE (GPM) LWT (°F) CONNECTION SIZE (IN.) MAXIMUM PRESSURE DROP (FT) FLOW RATE (GPM) EWT (°F) LWT (°F) GASKETED PLATE COMFORT CHILLED WATER 371.3 42 57 6" 13.7 341.6 59 44	TYPE SYSTEM SERVED FLOW RATE (GPM) (°F) (°F) (°F) SIZE (IN.) CONNECTION SIZE (IN.) COIL (GPM) (°F) (°F) (°F) (°F) SIZE (IN.) COIL (GPM) (°F) (°F) (°F) (°F) (°F) (°F) (°F) (°F	TYPE SYSTEM SERVED FLOW RATE (GPM) (°F) (°F) (°F) (°F) (°F) SIZE (IN.) COIL (GPM) (°F) (°F) (°F) (°F) (°F) (°F) (°F) (°F

- PRIMARY SIDE PERFORMANCE BASED ON 40% PROPYLENE GLYCOL/WATER SOLUTION
- SECONDARY SIDE PERFORMANCE BASED ON 100% WATER SOLUTION
 PROVIDE 6 INCH CONCRETE EQUIPMENT PAD. EXTEND PAD 6 INCHES BEYOND EDGES OF EQUIPMENT

					BOILE	R - GAS	(BLR-G) SC	HE	DULE						
PI AN	PLAN LOCATION SERVICE INPUT CAPACITY OUTPUT CAPACITY WATER CONTENT MINIMUM FLOW RATE EWT LWT MAXIMUM WATER ELECTRICAL WEIGHT NOTES															
DESIGNATION	LOCATION	SERVICE	(MBH)	CAPACITY (MBH)	(GAL)	EFFICENCY (%)	(GPM)	(°F)	(°F)	PRESSURE DROP (FT.)	FLA	VOLTAGE	HZ	PHASE	(LB)	NOTES
BLR-1	108 MECHANICAL ROOM	BUILDING HEATING	1600	1537	21.0	96.1	154	90	110	2.17	9	460	60	3	2690	(1) (2) (3) (4) (5) (6) (7) (8)
BLR-2	108 MECHANICAL ROOM	BUILDING HEATING	1600	1537	21.0	96.1	154	90	110	2.17	9	460	60	3	2690	(1) (2) (3) (4) (5) (6) (7) (8)
NOTES:																

- PROVIDE COMBUSTION AIR WITH 180 DEGREE BEND AND BIRDSCREEN. TERMINATE COMBUSTION AIR 12 INCHES MINIMUM ABOVE ROOF TERMINATE VENT 12 INCHES ABOVE COMBUSTION AIR
- PROVIDE CONDENSATE NEUTRALIZATION KIT
- PROVIDE ASME RELIEF VALVE
- PROVIDE BACNET BMS GATEWAY
- PROVIDE UNIT EQUIPPED TO OPERATE AT HIGH ALTITUDE. PERFORMANCE BASED ON DESIGN ALTITUDE OF 6,115 FT
- PROVIDE LOCKABLE DISCONNECT
 PROVIDE 6 INCH CONCRETE EQUIPMENT PAD. EXTEND PAD 6 INCHES BEYOND THE EDGES OF THE EQUIPMENT PROVIDE MINIMUM 10: TURNDOWN RATIO

of Engineers ®

MH603

READY TO ADVERTISE (RTA) SUBMITTAL

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DIFFUSER, GRILLE, OR REGISTER SHALL BE SUITABLE FOR INSTALLATION IN A T-BAR CEILING SYSTEM SUPPORTED INDEPENDENTLY OF CEILING GRID

- DIFFUSER, GRILLE, OR REGISTER SHALL BE SUITABLE FOR SURFACE MOUNTING
- SEE PLANS FOR DUCT CONNECTION SIZE
- DIFFUSER, GRILLE, OR REGISTER SHALL BE SUITABLE FOR DUCT MOUNTING
- PROVIDE RETURN GRILLE WITH INTEGRAL PLENUM BOX OR FIELD FABRICATED ADAPTER TO REDUCE FROM 22"X22" GRILLE NECK SIZE TO DUCT CONNECTION SIZE AS INDICATED ON DRAWINGS

								EN	ERG	Y RE	CO	VER'	Y UN	IT (E	RU) S	CHE	EDUL	E										
								SUPPLY										EXHAU	ST						ELE	CTRICA	L	
PLAN					FAN	FAN		SUMI	MER			WIN	TER			ESP	FAN	FAN	SUM	MER	WIN	ITER	MINIMUM	MINIMUM				
DESIGNATION	TYPE	SERVICE	AIRFLOW	,	BRAKE	MOTOR	EAT DB	EAT WB	LAT DB	LAT WB	EAT DB	EAT WB	LAT DB	LAT WB	AIRFLOW	(IN.	BRAKE	MOTOR	EAT DB	EAT WB	EAT DB	EAT WB	SENSIBLE EFFICENCY (%)	TOTAL EFFICENCY (%)	VOLTAGE	HZ	PHASE	NOTES
			(CFM)	W.G.)	POWER (Hp)	POWER (Hp)	(°F)	(CFM)	W.G.)	POWER (Hp)	POWER (Hp)	(°F)	(°F)	(°F)	(°F)	EFFICENCY (%)	EFFICENCY (%)											
ERU-1	FIXED PLATE AIR TO AIR	PECS EXHAUST SYSTEM	1,000	0.5	1.0	1	87.3	57.6	80.7	57.9	3.1	1.4	49.5	33.4	1,000	0.5	0.9	1	78.0	64.1	68.0	43.2	71.5	70.8	460	60	3	(1) (2) (3) (4) (5) (6) (7) (8)
ERU-2	FIXED PLATE AIR TO AIR	PECS EXHAUST SYSTEM	1,000	0.5	1.0	1	87.3	57.6	80.7	57.9	3.1	1.4	49.5	33.4	1,000	0.5	0.9	1	78.0	64.1	68.0	43.2	71.5	70.8	460	60	3	(1) (2) (3) (4) (5) (6) (7) (8)

- SEE DRAWINGS FOR ARRANGEMENT
- MOTORS SHALL BE POWERED THROUGH SINGLE POWER POINT CONNECTION FOR UNIT
- PROVIDE LOCKABLE DISCONNECT
- ENERGY RECOVERY UNIT SHALL BE CERTIFIED PER AHRI 1060
- PROVIDE MERV 8 FILTER OPTION FOR OA AND RA AIRSTREAMS
- OUTSIDE AIR CORRECTION FACTOR (OACF) SHALL NOT EXCEED 5% AT 1" W.G., AND 10% AT 3" W.G. PRESSURE DIFFERENTIAL
- ADJUST OUTDOOR AIR AS NECESSARY TO PROVIDE SCHEDULED VENTILATION FLOW RATE TO SPACE
- EXHAUST AIR TRANSFER RATION (EATR) SHALL NOT EXCEED 10% FOR CLASS 2 AIR AS DEFINED BY ASHRAE 62.1

				HVA	C PUMI	P (P) SC	HEDUL	.E								
PLAN	TYPE	SYSTEM	FLOW RATE	OPERATING	MAX. NPSHR	EFFICENCY	IMPELLER	PUMP	BRAKE	MOTOR	ELE	CTRICAL	-	DISCHARGE	SUCTION SIZE	NOTES
DESIGNATION	1112	OTOTEM	(GPM)	HEAD (FT)	(FT)	LITIOLINOT	DIA. (IN)	SPEED	POWER (Hp)	POWER (Hp)	VOLTAGE	HZ	PHASE	SIZE (IN)	(IN)	NOTES
CHWP-1	INLINE CENTRIFUGAL	CH-1 PRIMARY CHW	300	40	6.9	76.1	7	1750	4.1	5.0	460	60	3	4"	4"	(1) (2) (3) (4) (5)
CHWP-2A	INLINE CENTRIFUGAL	IT CHW PRIMARY SYSTEM	205	55	8.1	68.0	8	1750	4.5	7.5	460	60	3	3"	3"	(1) (2) (3) (4) (5)
CHWP-2B	INLINE CENTRIFUGAL	IT CHW PRIMARY SYSTEM	205	55	8.1	68.0	8	1750	4.5	7.5	460	60	3	3"	3"	(1) (2) (3) (4) (5)
CHWP-3	CENTRIFUGAL IN-LINE	AWHP-1 COMFORT COOLING	118	40	8.9	67.8	6.63	1725	1.5	2.0	460	60	3	2"	2"	(1) (2) (3) (4) (5)
CHWP-4A	BASE MOUNTED END SUCTION	COMFORT COOLING CHW SECONDARY	171	70	4.8	74.2	8.75	1750	4.2	7.5	460	60	3	2"	2 1/2"	(1) (2) (4) (5)
CHWP-4B	BASE MOUNTED END SUCTION	COMFORT COOLING CHW SECONDARY	171	70	4.8	74.2	8.75	1750	4.2	7.5	460	60	3	2"	2 1/2"	(1) (2) (4) (5)
CHWP-5A	BASE MOUNTED END SUCTION	IT CHW SECONDARY SYSTEM	171	45	7.5	72.9	10.75	1170	2.7	5.0	460	60	3	2"	3"	(1) (2) (4) (5)
CHWP-5B	BASE MOUNTED END SUCTION	IT CHW SECONDARY SYSTEM	171	45	7.5	72.9	10.75	1170	2.7	5.0	460	60	3	2"	3"	(1) (2) (4) (5)
HWP-1A	BASE MOUNTED END SUCTION	SECONDARY HEATING WATER	261	50	7.5	72.4	8	1750	4.9	7.5	480	60	3	2 1/2"	3"	(1) (2) (3) (4) (5)
HWP-1B	BASE MOUNTED END SUCTION	SECONDARY HEATING WATER	261	50	7.5	72.4	8	1750	4.9	7.5	480	60	3	2 1/2"	3"	(1) (2) (3) (4) (5)
HWP-02	INLINE CENTRIFUGAL	AWHP-1 HEATING WATER	92	20	6.7	71.8	4.75	1725	0.7	1.0	460	60	3	2"	2"	(1) (2) (3) (4) (5)
HWP-03	INLINE CENTRIFUGAL	BLR-2 HEATING WATER	154	10	23.3	56.9	4.5	1725	0.7	1.0	460	60	3	3"	3"	(1) (2) (3) (4) (5)
HWP-04	INLINE CENTRIFUGAL	BLR-1 HEATING WATER	154	10	23.3	56.9	4.5	1725	0.7	1.0	460	60	3	3"	3"	(1) (2) (3) (4) (5)

- PROVIDE BRONZE FITTED PUMP
- PROVIDE PUMP WITH INVERTER DUTY MOTOR FOR USE WITH VARIABLE SPEED DRIVE
- FLUID PUMPED IS 40% PROPYLENE GLYCOL
- PROVIDE LOCKABLE DISCONNECT
- PROVIDE 6 INCH CONCRETE EQUIPMENT PAD. EXTEND PAD 6" BEYOND EDGES OF EQUIPMENT

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)	NOTES (1) (2)													
)	(1) (2)													
	(1) (2)													
EF-03 EXHAUST FAN HIGH BAY VEHICLE EXHAUST 240 5.0 3450 DIRECT 0.75 460 60 3 46 (1) (2)														
	(1) (2)													
	(1) (2)													
	(1) (2)													
	(1) (2)													
	(1) (2)													
(A) (C)	(1) (3)													
(A) (B)	(1)													
6 6 6 6	6													

ACCESSORIES:

A. PROVIDE HANGING VIBRATION ISOLATORS.

PROVIDE FLEXIBLE DUCT CONNECTOR

C. PROVIDE SPEED CONTROLLER FOR BALANCING

PROVIDE LOCKABLE DISCONNECT

PROVIDE UNIT SUITABLE FOR ENGINE EXHAUST APPLICATIONS

PROVIDE LOCKABLE, FUSIBLE DISCONNECT. SIZE FUSE FOR 1.75 X FLA OF UNIT

				\/ED /\\/D\ 0	01150111				
			LOU	IVER (LVR) S	CHEDUL	E			
PLAN DESIGNATION	SERVICE	TYPE	DESIGN AIRFLOW (CFM)	MAXIMUM FREE AREA VELOCITY (FPM)	MINIMUM FREE AREA (FT²)	MAXIMUM AIR PRESSURE DROP (IN. W.G.)	FACE WIDTH (IN)	FACE HEIGHT (IN)	NOTES
LVR-01	AHU-1 EXHAUST AIR	STATIONARY	5,530	900	6.1	0.1	84"	24"	(1) (2) (3)
LVR-02	AHU-2 EXHAUST AIR	STATIONARY	4,320	900	4.8	0.1	60"	24"	(1) (2) (3)
LVR-03	AHU-3 OUTDOOR AIR	STATIONARY	10,000	500	17.2	0.1	84"	60"	(1) (2) (3)
LVR-04	AHU-3 EXHAUST AIR	STATIONARY	10,500	900	11.7	0.1	60"	54"	(1) (2) (3)
LVR-05	238 EXHAUST AIR	STATIONARY	4,000	900	4.4	0.1	48"	30"	(1) (2) (3)
LVR-06	112 EXHAUST AIR	STATIONARY	1,000	900	1.1	0.1	30"	18"	(1) (2) (3)
LVR-07	112 GEN EXHAUST AIR	STATIONARY	7,925	900	8.8	0.1	36"	66"	(1) (2) (3)
LVR-08	113 GEN EXHAUST AIR	STATIONARY	7,925	900	8.8	0.1	36"	66"	(1) (2) (3)
LVR-09	113 EXHAUST AIR	STATIONARY	1,000	900	1.1	0.1	30"	18"	(1) (2) (3)
LVR-10	214 EXHAUST AIR	STATIONARY	65	300	0.2	0.1	12"	12"	(1) (2) (3)

PROVIDE BIRD SCREEN

PERFORMANCE HAS NOT BEEN CORRECTED FOR ALTITUDE

COLOR SELECTED BY ARCHITECT

		JNIT HEA	TER - (GAS (UF	I-G) S	CHED	ULE						
PLAN DESIGNATION		LOCATION	GAS INPUT	HEATING	AIRFLOW	FLUE SIZE	COMBUSTION	MOTOR POWER	RPM	ELE	CTRIC	AL	NOTES
PLAN DESIGNATION	ITE	LOCATION	FLOW (CFH)	OUTPUT (MBH)	(CFM)	(IN.)	AIR SIZE (IN.)	(HP)	KPIVI	VOLTAGE	HZ	PHASE	NOTES
UH-G-01	SEPERATED COMBUSTION PROPELLER FAN TYPE	121 HIGH BAY	60	49.8	769	4"	4"	0.03	1550	115	60	1	(1) (2) (3)
UH-G-02	SEPERATED COMBUSTION PROPELLER FAN TYPE	121 HIGH BAY	60	49.8	769	4"	4"	0.03	1550	115	60	1	(1) (2) (3)
UH-G-03	SEPERATED COMBUSTION PROPELLER FAN TYPE	121 HIGH BAY	60	49.8	769	4"	4"	0.03	1550	115	60	1	(1) (2) (3)
UH-G-04	SEPERATED COMBUSTION PROPELLER FAN TYPE	121 HIGH BAY	60	49.8	769	4"	4"	0.03	1550	115	60	1	(1) (2) (3)

NOTES:

1. PROVIDE UNIT MOUNTED THERMOSTAT

	GLYCOL FEED SYSTEM (GFS) SCHEDULE													
PLAN DESIGNATION	T\/DE	OVOTEM	FLOW RATE	CUT IN	CUT OUT	TANK	MOTOR POWER	ELE						
	TYPE	SYSTEM	(GPM)	PRESSURE (PSI)	PRESSURE (PSI)	VOLUME (GAL)	(Нр)	VOLTAGE	HZ	PHASE	NOTES			
GMU-1	SIMPLEX	COMFORT CHILLED WATER PRIMARY	1.70	40.0	65.0	50	0.33	115	60	1	(1) (2) (3) (4)			
GMU-2	SIMPLEX	IT CHILLED WATER PRIMARY	1.70	40.0	65.0	50	0.33	115	60	1	(1) (2) (3) (4)			
GMU-3	SIMPLEX	HEATING WATER	1.70	40.0	65.0	50	0.33	115	60	1	(1) (2) (3) (4)			
NOTES:						_		_						

PROVIDE LOCKABLE, FUSIBLE DISCONNECT. SIZE FUSE FOR 1.75 X FLA OF UNIT INPUT CAPACITY BASED ON NATURAL GAS HEAT CONTENT OF 1000 BTU/FT³ PROVIDE COMPLETE GLYCOL FEED SYSTEM INCLUDING TANK WITH COVER, CONTROL PANEL, TANK STAND, GLYCOL PUMP, PRESSURE SWITCH, PRESSURE RELIEF VALVE PROVIDE LOCKABLE FUSIBLE DISCONNECT. SIZE FUSE FOR 1.75 X FLA OF UNIT 40% PROPYLENE GLYCOL SOLUTION PROVIDE 6 INCH CONCRETE EQUIPMENT PAD. EXTEND PAD 6" BEYOND EDGES OF EQUIPMENT CUI

	FUEL OIL STORAGE TANK (ST) SCHEDULE												
PLAN DESIGNATION	TYPE	DESCRIPTION	MINIMUM VOLUME (GAL)	NOTES									
ST-1	ABOVEGROUND	DOUBLE WALLED, U/L LISTED WITH FUEL LEVEL GAUGE AND INTERIOR EPOXY COATING	150	(1) (2) (3) (4) (5) (6									

- PROVIDE LEAK DETECTION OF DOUBLE WALL SPACE. PROVIDE AUXILIARY CONTACT TO ALARM TO DDC SYSTEM
- PROVIDE REMOTE FILL STATION SUITABLE FOR EXTERIOR ON WALL INSTALLATION. PROVIDE VISUAL AND AUDIBLE ALARM FOR HIGH AND CRITICALLY HIGH TANK FILL LEVEL. PROVIDE FUEL LEVEL GAUGE AND SOLENOID VALVE FOR OVERFILL PROTECTION.
- PROVIDE TWO, 2 GPM, 1/3 HP 120V, SINGLE PHASE PUMPS SUITABLE FOR FUEL OIL APPLICATIONS
- PROVIDE FUEL STRAINER IN SUCTION LINE FOR EACH PUMP
- PROVIDE FUEL LEVEL GAUGE
- 6. PROVIDE LOCAL CONTROL PANEL FOR MANUAL OPERATION OF PUMPS

	HVAC SILENCER (SIL) SCHEDULE														
PLAN	AIRFLOW	MAXIMUM PRESSURE	OCTAVE BAND (Hz)												
DESIGNATION	(CFM)	DROP (IN. W.G.)	63	125	250	500	1000	2000	4000	8000	WIDTH	HEIGHT	LENGTH	NOTES	
S-01	1005	0.15	18	28	36	55	55	55	55	39	24"	12"	120"	(1) (2) (3) (4)	
S-02	1020	0.20	18	28	36	55	54	55	55	39	16"	16"	120"	(1) (2) (3) (4)	
S-03	565	0.14	18	28	36	55	55	55	55	39	12"	14"	120"	(1) (2) (3) (4)	
S-04	605	0.16	18	28	36	55	55	55	55	39	14"	12"	120"	(1) (2) (3) (4)	
S-05	525	0.17	18	28	36	55	55	55	55	39	12"	12"	120"	(1) (2) (3) (4)	
S-06	675	0.15	18	28	36	55	55	55	55	39	14"	14"	120"	(1) (2) (3) (4)	
S-07	515	0.17	18	28	36	55	55	55	55	39	14"	10"	120"	(1) (2) (3) (4)	
S-08	150	0.05	18	29	37	55	55	55	55	38	9"	8"	120"	(1) (2) (3) (4)	
S-09	175	0.07	18	29	37	55	55	55	55	38	9"	8"	120"	(1) (2) (3) (4)	
S-10	345	0.16	18	28	36	55	55	55	55	39	12"	8"	120"	(1) (2) (3) (4)	

- NOTES:

 1. PERFORMANCE BASED ON FOWARD FLOW

 PASED ON REVERSE FLOW
- PROVIDE UNIT TO ACHIEVE STC 50 ACCORDING TO ASTM E413
- WIDTH AND HEIGHT DIMENSIONS LISTED ARE INSIDE DUCT DIMENSIONS

BUFFER TANK (BT) SCHEDULE												
PLAN DESIGNATION	SERVICE	TYPE	MIN TANK VOLUME (GAL)	MAX SYSTEM PRESSURE (PSIG)	NOTES							
BT-1	HEATING WATER	VERTICAL, HIGH CONNECTION	850.0	125.0	(1) (2) (3) (4)							
BT-2	IT CHILLED WATER	VERTICAL, HIGH CONNECTION	850.0	125.0	(1) (2) (3) (4)							
BT-3	COMFORT CHILLED WATER	VERTICAL, HIGH CONNECTION	850.0	125.0	(1) (2) (3) (4)							

- CONSTRUCTED IN ACCORDANCE WITH ASME SECTION VIII DIVISION 1
- PROVIDE DRAIN VALVE WITH HOSE CONNECTION AND CAP.
- PROVIDE 6 INCH CONCRETE EQUIPMENT PAD. EXTEND PAD 6" BEYOND EDGES OF EQUIPMENT
- PROVIDE UNISULATED TANK. PROVIDE FIELD APPLIED INSULATION UPON INSTALLATION. INSULATION TYPE AND
- THICKNESS SHALL BE AS SPECIFIED IN 23 07 00 THERMAL INSULATION FOR MECHANICAL SYSTEMS

DUCT PRESSURE, SEAL, AND LEAKAGE CLASS SCHEDULE											
DUCT SYSTEM TYPE	DUCT PRESSURE MODE	DUCT PRESSURE CLASS	DUCT SEAL CLASS	DUCT LEAKAGE CLASS							
ROUND/OVAL SUPPLY DUCT DOWNSTREAM OF TERMINAL UNIT(VAV BOX, FAN COIL UNIT, ETC.)	POS	2	Α	2							
RECTANGULAR SUPPLY DUCT DOWNSTREAM OF TERMINAL UNIT (VAV BOX, FAN COIL UNIT, ETC.)	POS	2	Α	4							
ROUND/OVAL CONSTANT VOLUME SUPPLY DUCT DOWNSTREAM OF AIR HANDLING UNIT (AHU, MAU, ETC.)	POS	6	А	2							
RECTANGULAR CONSTANT VOLUME SUPPLY DUCT DOWNSTREAM OF AIR HANDLING UNIT (AHU, MAU, ETC.)	POS	6	A	4							
GENERAL EXHAUST DUCT	NEG	2	А	4							
VEHICLE EXHAUST DUCT	NEG	10	А	2							
GENERAL RETURN DUCT	NEG	2	А	4							
TRANSFER AIR DUCT	NEG	1	Α	4							
OUTDOOR AIR DUCT FROM INTAKE TO AIR HANDLING DEVICE (AHU, FAN, ETC.)	NEG	2	А	4							

- DUCT PRESSURE CLASS PER SMACNA DUCT CONSTRUCTION MANUAL
- DUCT LEAKAGE CLASS PER SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL
- DUCT SEAL CLASS PER SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL AND ASHRAE 90.1-2013
- TEST IN ACCORDANCE WITH SPECIFICATION 23 05 93, HVAC TESTING, ADJUSTING, AND BALANCING AND THE PROCEDURES IN SMACNA HVAC AIR DUCT LEAKAGE MANUAL

SNOW MELT ZONE (SMZ) SCHEDULE														
DIAN	TUBING OFFITED ACT		MAX. PI	RESSURE	DROP (FT)									
PLAN DESIGNATION	AREA SERVED	SNOW MELT AREA (FT ²)	WATER FLOWRATE	EWT	LWT	CENTER DISTANCE	MIN. NUMBER	ACV SIZE		ACV ASSEMBLY				NOTES
			(GPM)	(°F)	(°F)	(IN.)	OF CIRCUITS	(IN)	Cv	SIZE (IN)	LOOP	ACV	TOTAL	
SM-1	HIGH BAY ENTRANCE	200	2.7	110	90	6	2	1/2"	2.2	3/4"	5.0	3.6	8.6	(1) (2) (3)
SM-2	HIGH BAY ENTRANCE	200	2.7	110	90	6	2	1/2"	2.2	3/4"	5.0	3.6	8.6	(1) (2) (3)
NOTEC.											•			

- LOCATE MANIFOLD INSIDE BUILDING
- PERFORMANCE BASED ON 40% PROPYLENE GLYCOL/WATER MIXTURE
- PROVIDE SNOW/ICE SENSORS AND SLAB TEMPERATURE SENSOR FOR EACH ZONE

	IN FLOOR HEATING (RAD) SCHEDULE														
DI 411			\\\\ TED			TUBING				4.01/	MAX. PF	RESSURE	DROP (FT)		
PLAN DESIGNATION	AREA SERVED	HEATED FLOOR AREA (FT²)	WATER FLOWRATE	EWT	LWT	CENTER DISTANCE	MIN. NUMBER	ACV SIZE		ACV ASSEMBLY				NOTES	
		, ,	(GPM)	(°F)	(°F)	(IN.)	OF CIRCUITS	(IN)	Cv	SIZE (IN)	LOOP	ACV	TOTAL		
RAD-1	HIGH BAY	2,600	2.7	110	90	12	10	1/2"	2.2	3/4"	5.0	3.6	8.6	(1) (2) (3)	
RAD-2	HIGH BAY	2,600	2.7	110	90	12	10	1/2"	2.2	3/4"	5.0	3.6	8.6	(1) (2) (3)	
RAD-3	HIGH BAY	2,600	2.7	110	90	12	10	1/2"	2.2	3/4"	5.0	3.6	8.6	(1) (2) (3)	
NOTEC:				·							·				

- PERFORMANCE BASED ON 40% PROPYLENE GLYCOL/WATER MIXTURE
- PROVIDE THERMOSTAT SUITABLE FOR RADIANT FLOOR APPLICATIONS
 PROVIDE SLAB TEMPERATURE SENSOR. PLACE TEMPERATURE SENSOR AT SAME DEPTH AS TUBING. LOCATE TEMPERATURE SENSOR EQUIDISTANT BETWEEN TWO ADJACENT ROWS OF TUBING AND AS CLOSE TO THE MIDPOINT BETWEEN MANIFOLD AND EXTENT OF TUBING LOOP

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