

AIR HANDLING UNIT SCHEDULE

MARK	SERVING	SELECTION BASED ON		SUPPLY FAN				CHILLED WATER COOLING COIL										FILTRATION					ELECTRICAL				OPERATING WEIGHT	MAX WIDTH	NOTES					
		MANUFACTURER	MODEL	DESIGN CFM	EXTERNAL SP IN WC	TOTAL SP IN WC	HP	BHP	SENS CAPACITY MBH	TOTAL CAPACITY MBH	EAT				LAT		COIL DESIGN CFM	COIL FACE VELOCITY	GPM	EWT	LWT	WPD (ft-wg)	PRE-FILTER		FINAL FILTER					V	PH	HZ	FLA	
											DB	WB	DB	WB	APD (in-wg)	COIL VELOCITY							MERV RATING	CLEAN APD	DIRTY APD	MERV RATING								CLEAN APD
AHU-1	FIRST FLOOR	CARRIER	AERO 39MN-30T	8,600	2.50	5.87	15	12.2	213	266	78 F	65 F	54 F	54 F	0.75	8600	465	44.2	44 F	56 F	1.70	8	0.19	0.75	13	0.36	0.85	460	3	60	17.7	3319	7'-2"	1, 2, 3, 4, 5
AHU-2	FIRST FLOOR	CARRIER	AERO 39MN 14W	7,200	2.50	5.75	10	9.9	177	223	78 F	65 F	55 F	54 F	0.64	7200	458	34.6	44 F	56 F	3.60	8	0.17	0.75	13	0.32	0.85	460	3	60	12.5	2618	7'-2"	1, 2, 3, 4, 5
AHU-3	SECOND FLOOR	CARRIER	AERO 39MN 11T	5,400	1.50	4.52	7.5	5.5	120	146	78 F	65 F	56 F	55 F	0.46	5000	435	24.2	44 F	56 F	2.70	8	0.16	0.75	13	0.28	0.85	460	3	60	9.7	2316	7'-2"	1, 2, 3, 4, 5

- NOTES:
 1. PROVIDE CUSTOM MELAMINE FOAM OR FIBERGLASS CORE SOUND DAMPENING QUILTED CURTAIN, 2" THICKNESS WITH 2PSF VINYL NOISE BARRIER SEPTUM. MAXIMUM INSTALLED AND TESTED NOISE CRITERIA NC=60.
 2. PROVIDE MANUFACTURER WIRED VFD WITH SUPPLY FAN.
 3. PROVIDE SINGLE SIDE CONNECTIONS AND ACCESS DOORS AS NECESSARY TO ACCOMMODATE SPACE REQUIREMENTS.
 4. PROVIDE UNIT WITH ECONOMIZER CONTROLS.
 5. PROVIDE DOUBLE WALLED CONSTRUCTION WITH PERFORATED PANELS IN FAN SECTIONS.

UNIT HEATER SCHEDULE

MARK	SERVING	BASIS OF DESIGN		HEATING COIL							ELECTRICAL DATA							NOTES
		MANUFACTURER	MODEL	TYPE	CAPACITY (MBH)	CFM	EDB (°F)	GPM	EWT (°F)	LWT (°F)	V	PH	Hz	FLA				
UH-1	S102 STAIR 2	TRANE	FORCE FLO MODEL E	VERTICAL RECESSED	18.4	500	63.5	1.9	180	160	115	1	60	0.8				
UH-2	B100 VESTIBULE	TRANE	FORCE FLO MODEL E	VERTICAL RECESSED	8	245	63.5	0.8	180	160	115	1	60	0.8				
UH-3	B115 CIRCULATION	TRANE	UHS-36	HORIZONTAL	26.1	550	63.5	2.7	180	160	115	1	60	1.2				
UH-4	B115 CIRCULATION	TRANE	UHS-36	HORIZONTAL	26.1	550	63.5	2.7	180	160	115	1	60	1.2				
UH-5	B115 CIRCULATION	TRANE	UHS-36	HORIZONTAL	26.1	550	63.5	2.7	180	160	115	1	60	1.2				
UH-6	B115 CIRCULATION	TRANE	UHS-36	HORIZONTAL	26.1	550	63.5	2.7	180	160	115	1	60	1.2				
UH-7	B115 CIRCULATION	TRANE	UHS-48	HORIZONTAL	34.8	750	63.5	3.5	180	160	115	1	60	1.4				
UH-8	B116 CIRCULATION	TRANE	UHS-A18	HORIZONTAL	18.4	500	63.5	1.9	180	160	115	1	60	0.8				
UH-9	B116 CIRCULATION	TRANE	UHS-A18	HORIZONTAL	18.4	500	63.5	1.9	180	160	115	1	60	0.8				
UH-10	B116 CIRCULATION	TRANE	UHS-A18	HORIZONTAL	18.4	500	63.5	1.9	180	160	115	1	60	0.8				

DEDICATED OUTDOOR AIR SYSTEM SCHEDULE

MARK	SERVING	SELECTION BASED ON		SUPPLY FAN				EXHAUST FAN				ENTHALPY WHEEL				CHILLED WATER COOLING COIL										HOT WATER HEATING COIL					FILTRATION					ELECTRICAL				OPERATING WEIGHT	MAX WIDTH	NOTES													
		MANUFACTURER	MODEL	HP	BHP	CFM	EXTERNAL SP	TOTAL SP	HP	BHP	CFM	EXTERNAL SP	TOTAL SP	WHEEL TYPE	SUMMER OA		WINTER OA		TOTAL WHEEL EFFICIENCY %	SENS CAPACITY MBH	TOTAL CAPACITY MBH	EAT				LAT		COIL DESIGN CFM	COIL FACE VELOCITY	GPM	EWT	LWT	WPD (ft-wg)	HEATING CAPACITY (MBH)	EAT	LAT	AIRFLOW	APD	COIL FACE VELOCITY				GPM	WPD	EWT	LWT	SUPPLY AND EXHAUST PRE-FILTERS		SUPPLY FINAL FILTER			V	PH	HZ	FLA
															EAT DB	EAT WB	EAT DB	EAT WB				SENSIBLE (WINTER)	LATENT (SUMMER)	DB	WB	DB	WB																				APD (in-wg)	COIL VELOCITY	MERV RATING	CLEAN APD	DIRTY APD				
DOAS-1	AHU-1	CARRIER	39MN-14W	15	7.5	6,500	1.50	3.39	7.5	7.5	6,500	1.50	3.39	ENTHALPY WITH EXHAUST BYPASS	84 F	77 F	7 F	71.85	73.43	180.75	297.1	79 F	69 F	54 F	54 F	0.82	6800	474	49	44 F	56 F	17.50	103.2	53 F	84 F	3300	0.21	491	11	1.90	180 F	160 F	8	0.10	0.35	13	0.25	0.85	480	3	60	6563	7'-2"	1, 4, 5, 6, 7, 8, 9, 10	
DOAS-2	AHU-2	CARRIER	39MN-06W	7.5	6.2	3,300	2.50	7.33	5	4.0	3,300	1.50	3.31	ENTHALPY WITH EXHAUST BYPASS	84 F	77 F	7 F	70.57	73.73	83.79	145.63	79 F	69 F	52 F	52 F	1.04	3300	491	24	44 F	56 F	17.50	103.2	53 F	84 F	3300	0.21	491	11	1.90	180 F	160 F	8	0.10	0.35	13	0.25	0.85	480	3	60	6563	7'-2"	2, 4, 5, 6, 7, 8, 9, 11	
DOAS-3	AHU-3	CARRIER	39MN-06W	5	3.8	2,200	1.50	5.71	3	2.9	2,200	1.00	2.94	ENTHALPY WITH EXHAUST BYPASS	84 F	77 F	7 F	72.01	73.61	63.29	107.73	79 F	69 F	52 F	52 F	0.55	2200	373	18	44 F	56 F	8.20	86.3	52 F	87 F	2200	0.13	373	9	0.80	180 F	160 F	8	0.10	0.35	13	0.25	0.85	480	3	60	4149	7'-2"	3, 4, 5, 6, 7, 8, 9, 11	

- NOTES:
 1. SUPPLY FAN FLA 18.1 AMP, EXHAUST FAN FLA 9.5 AMP, AND ERV WHEEL 0.4
 2. SUPPLY FAN FLA 9.5 AMP, EXHAUST FAN FLA 5.9 AMP, AND ERV WHEEL 0.7
 3. SUPPLY FAN FLA 6.6 AMP, EXHAUST FAN FLA 4.1 AMP, AND ERV WHEEL 0.4
 4. PROVIDE CUSTOM MELAMINE FOAM OR FIBERGLASS CORE SOUND DAMPENING QUILTED CURTAIN, 2" THICKNESS WITH 2 PSF NOISE BARRIER SEPTUM. MAXIMUM INSTALLED AND TESTED NOISE CRITERIA NC=60.
 5. PROVIDE UNIT WITH ENTHALPY WHEEL PREHEAT COILS OR OTHER EQUIPMENT TO ALLOW CONSTANT OPERATION IN SUBFREEZING TEMPERATURES.
 6. PROVIDE ULTRAVIOLET GERMICIDAL IRRADIATION (UVGI) WITH DOAS.
 7. PROVIDE MANUFACTURER WIRED VFD WITH EXHAUST AND SUPPLY FAN. LOCATE EXHAUST FAN VFD TO BE ACCESSIBLE FROM FLOOR.
 8. PROVIDE ONE-SIDED CONNECTIONS AND ACCESS AS NECESSARY TO ACCOMMODATE SPACE REQUIREMENTS.
 9. PROVIDE DOUBLE WALLED CONSTRUCTION WITH PERFORATED PANELS IN FAN SECTIONS.
 10. PROVIDE 6KW ENTHALPY WHEEL ELECTRIC PREHEAT OPERATING OFF OF 480/3/60 WITH SEPARATE DISCONNECT.
 11. PROVIDE 2KW ENTHALPY WHEEL ELECTRIC PREHEAT OPERATING OFF OF 480/3/60 WITH SEPARATE DISCONNECT.

COMPUTER ROOM AIR CONDITIONING UNIT SCHEDULE

MARK	LOCATION	BASIS OF DESIGN		SUPPLY FAN			COOLING DATA		HUMIDIFICATION CAPACITY (LB/H)		ELECTRICAL DATA				NOTES
		MANUFACTURER	MODEL	CFM	HP	ESP IN WC	TOTAL MBH	FLA	V	Ph	Hz				
AC-1	B139 TR	CARRIER	40MAQB24B	870	0.1	0.00	24	0.4	208	1	60	3			
AC-2	B226 ELECTRICAL	CARRIER	40MAQB24B	870	0.1	0.00	24	0.4	208	1	60	3			
AC-3	B164 ELEC EQUIP	CARRIER	40MAQB24B	870	0.1	0.00	24	0.4	208	1	60	3			
CRAC-1	B235 SERVER	LIEBERT	PX029	4300	4.15	1.00	95	7.7	34.8	460	3	60	1		
CRAC-2	B235 SERVER	LIEBERT	PX029	4300	4.15	1.00	95	7.7	34.8	460	3	60	1, 2		

- NOTES:
 1. FACTORY INSTALLED CONDENSATE PUMP
 2. ALTERNATE, REDUNDANT UNIT
 3. PROVIDE CONDENSATE PUMP (LITTLE GIANT VCMX-20UL, 60 GPH, 10' HEAD, 115V, 1/30 HP WITH PLUG IN).

RETURN AND EXHAUST AIR DEVICE SCHEDULE

MARK	BASIS OF DESIGN		DIFFUSER / SLOT		DAMPER	BORDER TYPE	NOTES
	MANUFACTURER	MODEL	MODULE SIZE	NECK SIZE			
E1	TITUS	PAR	24x24	SEE PLANS	QBD	LAY-IN	
E2	TITUS	350RS	SEE PLANS	SEE PLANS	-	SURFACE	
R1	TITUS	PAR	24x24	SEE PLANS	-	LAY-IN	
R2	TITUS	PAR-AA	12x12	SEE PLANS	-	SURFACE	
R3	TITUS	50FF	SEE PLANS	SEE PLANS	-	SURFACE	

- NOTES:
 1. PROVIDE GRILLE WITH ALL ALUMINUM CONSTRUCTION WHERE NOTED IN PARTIAL PLANS.

SUPPLY AIR DEVICE SCHEDULE

MARK	BASIS OF DESIGN		DIFFUSER / SLOT		DAMPER	BORDER TYPE	PATTERN	NOTES
	MANUFACTURER	MODEL	MODULE SIZE	NECK SIZE				
S1	TITUS	TMSA	24x24	SEE PLANS	-	LAY-IN	4-WAY	
S2	TITUS	TMRA	SEE PLANS	SEE PLANS	-	DUCT MT	4-WAY	
S3	TITUS	122RL	SEE PLANS	SEE PLANS	-	SURFACE	1-WAY	
S4	TITUS	ML-39	SEE PLANS	SEE PLANS	OBD	SURFACE	LINEAR SLOT	
S5	TITUS	PAS-AA	12x12	SEE PLANS	OBD	SURFACE	4-WAY	
S6	PRICE INDUSTRIES	FRFDC	SEE PLANS	SEE PLANS	-	DUCT MT	PERFORATED	2
S7	TITUS	DL - 18x6	18x6	18 5/8 x 6 7/16	OBD	DUCT MT	2-WAY	

- NOTES:
 1. PROVIDE DIFFUSER WITH ALL ALUMINUM CONSTRUCTION WHERE NOTED IN PARTIAL PLANS.
 2. FOR BASE BID CLEAN ROOM RELOCATE EXISTING AIR DEVICES. FOR ALTERNATE BID CLEAN ROOM PROVIDE NEW AIR DEVICES.

HYDRONIC WALL FIN TUBE SCHEDULE

MARK	SERVING	BASIS OF DESIGN			HEATING COIL										NOTES
		MANUFACTURER	MODEL	TYPE	MOUNTING HEIGHT (FT)	UNIT LENGTH (FT)	CAPACITY (MBH)	EDB (°F)	FINS PER FOOT	FIN THICKNESS (IN)	TUBE SIZE (IN)	GPM	EWT (°F)	LWT (°F)	
FT-1	B120 QUALITY CONTROL OPEN OFFICE	VULCAN	LINOVECTOR II	LV2T	1'-0"	19.1	12.0	68.0	50	0.014"	3/4"	5.1	180	160	2
FT-2	B120 QUALITY CONTROL OPEN OFFICE	VULCAN	LINOVECTOR II	LV2T	1'-0"	19.1	12.0	68.0	50	0.014"	3/4"	5.1	180	160	2
FT-3	B140 AIRCRAFT WIRE SHOP	VULCAN	LINOVECTOR II	LV2T	6'-0"	17.5	11.0	68.0	50	0.014"	3/4"	4.8	180	160	1
FT-4	B140 AIRCRAFT WIRE SHOP	VULCAN	LINOVECTOR II	LV2T	6'-0"	17.5	11.0	68.0	50	0.014"	3/4"	4.8	180	160	1
FT-5	B140 AIRCRAFT WIRE SHOP	VULCAN	LINOVECTOR II	LV2T	6'-0"	17.5	11.0	68.0	50	0.014"	3/4"	4.8	180	160	1
FT-6	B140 AIRCRAFT WIRE SHOP	VULCAN	LINOVECTOR II	LV2T	6'-0"	17.5	11.0	68.0	50	0.014"	3/4"	4.8	180	160	1
FT-7	B150 OPEN WORK AREA	VULCAN	LINOVECTOR II	LV2T	6'-0"	18.7	11.8	68.0	50	0.014"	3/4"	5.0	180	160	1
FT-8	B150 OPEN WORK AREA	VULCAN	LINOVECTOR II	LV2T	6'-0"	18.7	11.8	68.0	50	0.014"	3/4"	5.0	180	160	1
FT-9	B150 OPEN WORK AREA	VULCAN	LINOVECTOR II	LV2T	6'-0"	18.7	11.8	68.0	50	0.014"	3/4"	5.0	180	160	1
FT-10	B150 OPEN WORK AREA	VULCAN	LINOVECTOR II	LV2T	6'-0"	18.7	11.8	68.0	50	0.014"	3/4"	5.0	180	160	1
FT-11	B150 OPEN WORK AREA	VULCAN	LINOVECTOR II	LV2T	6'-0"	18.7	11.8	68.0	50	0.014"	3/4"	5.0	180	160	1

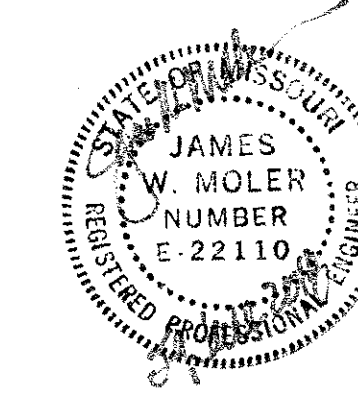
- NOTES:
 1. INSTALL UNITS AT 6'-8" AFF.
 2. INSTALL UNITS AT 1'-0" AFF.

GENERAL NOTES

1. COORDINATE ALL DISCONNECTS AND STARTERS WITH DIVISION 26 EQUIPMENT DATA SCHEDULE.



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REV	DESCRIPTION	DATE

AIR COOLED CONDENSER & CONDENSING UNIT SCHEDULE

MARK	SERVING	BASIS OF DESIGN		TOTAL COOLING (MBH)	AMB TEMP °F	ELECTRICAL			NOTES	
		MANUFACTURER	MODEL			FLA	V	Hz		
CU-1	CRAC-1	LIEBERT	MCS028E1	30.6	95.0	1.4 A	460	3	60	
CU-2	CRAC-2	LIEBERT								