

ROOFTOP UNIT SCHEDULE (ELECTRIC HEAT)

MARK	MANUFACTURER	MODEL	UNIT TYPE	SUPPLY FAN										RETURN-EXHAUST FAN										COOLING COIL																				NOTES
				TYPE	FANS QTY.	CFM TOTAL	RPM	BHP	MIN HP	ESP (IN)	TSP (IN)	VFD (Y/N)	TYPE	CFM	BHP	MIN HP	ESP (IN)	TSP (IN)	VFD (Y/N)	REFR. TYPE	TH (MBH)	SH (MBH)	EAT			LCT			LAT			MAX VEL (FPM)	MIN NO STAGES	MIN O/A CFM	ABS MIN O/A	MIN EER	IEER	MCA	MOCP	VPH	DISC TYPE	MAX WEIGHT LBS		
																							DB	WB	H Btu/Lb	DB	WB	H Btu/Lb	DB	WB	H Btu/Lb													
RTU-1	TRANE	INTELLIPAK - SXHLF004	VAV	DD PLENUM	2	18,000	1,840	16.9	20.0	2.0	3.52	Y	DD PLENUM	18,000	5.73	7.5	1.00	2.0	Y	R410	641.88	506.95	78.8	64.69	29.66	53.5	52.77	21.988	55	53.5	22.26	500	-	3500	3500	10.0	11.6	143.0	175.0	460/3	NF	12,000	1-15	

NOTES:

1

PROVIDE FIXED DRY-BULB ECONOMIZER WITH 0-100% MODULATING OA FLOW TRACKING DAMPER. PROVIDE A MINIMUM OF 3 COMPRESSOR STAGES AND TURNDOWN SHALL BE LESS THAN 35% OF TOTAL RATED CAPACITY.

2

EQUIPMENT SIZED FOR 105 F AMBIENT TEMPERATURE.

3

PROVIDE CARTRIDGE TYPE MERV 7 PREFILTERS AND MERV 13 FINAL FILTERS AIR FILTERS.

4

SPECIFIED FAN ESP ACCOUNTS FOR DUCT LOSSES EXTERNAL TO UNIT.

5

SPECIFIED FAN TSP INCLUDES EXTERNAL DUCT AND INTERNAL FILTER, COIL AND CASING LOSSES. FILTER LOSS IS AT MAXIMUM 400 FPM.

6

PROVIDE SLOPED CUSTOM INSULATED, SOUND ATTENUATING, WIND RESTRAINED ROOF CURB WITH MINIMUM HEIGHT OF 40" OR AS REQUIRED TO ACCOMMODATE DUCT TRANSITIONS AS SHOWN ON PLAN.

7

PROVIDE CONTROLS WITH BAGNET BAS COMMUNICATION INTERFACE COORDINATED WITH TEMPERATURE CONTROL CONTRACTOR AND IN COMPLIANCE WITH TEMPERATURE CONTROL DRAWINGS AND SPECIFICATIONS.

8

PROVIDE FACTORY INSTALLED SMOKE DETECTORS IN RETURN AIR AND SUPPLY AIR UNIT PLENUM[S].

9

PROVIDE FACTORY MOUNTED DISCONNECT.

10

PROVIDE A FACTORY MOUNTED VARIABLE FREQUENCY DRIVES IN COMPLIANCE WITH THE SPECIFICATIONS SEE SECTION 237413. PROVIDE (1) SPARE BACK UP VARIABLE SPEED DRIVE (SEE SPECIFICATION).

11

PROVIDE DUPLEX RECEPTACLE MOUNTED ON UNIT FOR FIELD WIRING.

12

SELECT EQUIPMENT FOR ELEVATION AT SEA LEVEL.

13

ABS. MIN. O/A IS THE ABSOLUTE MINIMUM OUTSIDE AIR CFM USING VENTILATION RESET OR DEMAND CONTROL VENTILATION.

14

PROVIDE GUARDS TO PROTECT CONDENSER COIL FROM HAIL OR OTHER DAMAGE.

15

PROVIDE SHAFT GROUNDING SYSTEM ON MOTOR. REFER TO SECTION 23 05 12 GENERAL MOTOR REQUIREMENTS FOR INVERTER DUTY MOTORS FOR USE WITH VARIABLE SPEED DRIVES.

ENERGY RECOVERY VENTILATION UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	SUPPLY FAN			EXHAUST FAN			SUMMER EXHAUST				SUMMER SUPPLY				WINTER EXHAUST				WINTER SUPPLY				ELECTRIC PREHEAT								ELECTRICAL				WEIGHT LBS	NOTES	
			CFM	ESP INWG	MIN. HP	CFM	ESP INWG	MIN. HP	EAT		LAT		OA		LAT		EAT		LAT		EAT		LAT		EAT DB	LAT DB	MBH	KW	NO. STAGES	FLA	V/PH	MCA	MOCP	V/PH	DISC. TYPE	STARTER TYPE			
									DB	WB	DB	WB	DB	WB	DB	WB	DB	WB	DB	WB																			
ERV-1	SEMCO	FV-5000	3,500	-0.1	1.5	2,600	0.5	1.5	75.0	61.1	92.9	76.1	95.1	77.6	82.3	67.8	68.0	56.8	33.2	30.0	29.1	26.1	53.9	47.4	16.0	29.0	49.1	15.0	SCR	18.0	480.0	27.8	35.0	460/3	FUSED	COMB.	1150	1-5	

NOTES:
1 DISCONNECT PROVIDED BY DIVISION 26.
2 STARTER(S) FURNISHED WITH UNIT BY DIVISION 236.
3 PROVIDE MINIMUM MERV 7 PLEATED AIR FILTERS IN EACH AIRSTREAM.
4 MOUNT UNIT ON CUSTOM RTU CURB. SEE RTU SCHEDULE AND SPECIFICATION FOR RELATED WORK.
5 PROVIDE DEFROST CONTROL AND AIRFLOW MEASURING SYSTEM FOR BALANCING AND CONTINUOUS MONITORING OF SUPPLY AIR.

VRF SPLIT SYSTEM FAN COIL UNIT SCHEDULE

MARK	SERVES	MANUFACTURER	MODEL	TYPE	MOUNTING	SUPPLY FAN		COOLING								HEATING				ELECTRICAL			WEIGHT LBS	NOTES
						CFM	REFR. TYPE	NOM. TONS	TH (MBH)	SH (MBH)	EAT		LAT		HEATING (MBH)	AMBIENT (DB)	EAT	LAT	MCA	MOCp	V/PH			
											DB	WB	DB	WB										
AC-1	203 STAIR #1	MITSUBISHI	PKA-A12HA7	DUCTLESS	WALL	364	R410	1.0	12.0	9.8	80.0	67.0	55.0	54.2	9.2	17	68.0	91.4	1.0	-	208/1	22	1-11	
AC-2	204 STAIR #2	MITSUBISHI	PKA-A12HA7	DUCTLESS	WALL	400	R410	1.0	12.0	10.8	80.0	67.0	55.0	54.2	9.2	17	68.0	89.3	1.0	-	208/1	22	1-11	
AC-3	123 ELEVATOR EQ RM	MITSUBISHI	PKA-24KA7	DUCTLESS	WALL	750	R410	2.0	22.5	20.3	80.0	67.0	55.0	54.2	-	-	-	-	1.0	-	208/1	22	1-11	
AC-4	115 ELECTRICAL RM	MITSUBISHI	PKA-A12HA7	DUCTLESS	WALL	400	R410	1.0	12.0	10.8	80.0	67.0	55.0	54.2	9.2	17	68.0	89.3	1.0	-	208/1	37	1-11	
AC-5	117 MECHANICAL RM	MITSUBISHI	PKA-A12HA7	DUCTLESS	WALL	400	R410	1.0	12.0	10.8	80.0	67.0	55.0	54.2	9.2	17	68.0	89.3	1.0	-	208/1	22	1-11	
AC-6	116 IT CLOSET	MITSUBISHI	PKA-A12HA7	DUCTLESS	WALL	400	R410	1.0	12.0	10.8	80.0	67.0	55.0	54.2	9.2	17	68.0	89.3	1.0	-	208/1	22	1-11	
AC-7	216 IT CLOSET	MITSUBISHI	PKA-A12HA7	DUCTLESS	WALL	400	R410	1.0	12.0	10.8	80.0	67.0	55.0	54.2	9.2	17	68.0	89.3	1.0	-	208/1	22	1-11	

NOTES:
1 PROVIDE COOLING CAPACITY SCHEDULED AT 100 F AMBIENT CONDENSING TEMPERATURE.
2 PROVIDE TOTAL INTEGRATED HEATING OUTPUT CAPACITY AS SCHEDULED AT AMBIENT HEATING TEMPERATURE.
3 PROVIDE EQUIPMENT TO MEET SCHEDULED CAPACITY WITH ALLOWANCES FOR AMBIENT CONDITIONS, PIPING LENGTH, CONNECTED LOAD AND DEFROST DERATES.
4 DISCONNECT PROVIDED WITH UNIT BY DIVISION 23.
5 INDOOR FAN COIL POWERED FROM OUTDOOR CONDENSING UNIT.
6 TEMPERATURE CONTROL - PROVIDE COMMUNICATING WALL THERMOSTAT INTERFACE FOR BAS PROVIDE COMMUNICATING THERMOSTAT WITH COMMUNICATION WITH BAS. SEE CONTROL DRAWINGS FOR RELATED INFORMATION.
7 PROVIDE NECESSARY MOUNTING BRACKET AND ACCESSORIES FOR SPECIFIED MOUNTING.
8 PROVIDE ALL MOUNTING HARDWARE REQUIRED FOR UNIT TYPE SUBJECT TO MANUFACTURERS INSTALLATION INSTRUCTIONS.
9 PROVIDE CONDENSATE PUMP AND OVERFLOW SHUTOFF SWITCH WITH UNIT.
10 PROVIDE SEPARATE CONDENSATE PUMP WHEN NOT A FACTORY FURNISHED ITEM. SEE CONDENSATE PUMP SCHEDULE FOR RELATED INFORMATION.
11 PROVIDE STANDARD FACTORY FURNISHED WASHABLE FILTERS.

VRF SPLIT SYSTEM CONDENSING UNIT SCHEDULE

MARK	LOCATION	SERVES	MANUFACTURER	MODEL	REFR. TYPE	COOLING CAPACITY		HEATING CAPACITY			ELECTRICAL			WEIGHT LBS	NOTES
						TOTAL (MBH)	MIN EFF SEER	HEAT PUMP (MBH)	AMBIENT (DB)	MIN EFF HSPF	MCA	MOCp	V/PH		
CU-1	ROOF	AC-1	mitsubishi	PUZ-A12NKA7-BS	410A	12.0	13.0	9.2	17	7.7	11.0	28	208/1	77	1-7
CU-2	ROOF	AC-2	mitsubishi	PUZ-A12NKA7-BS	410A	12.0	13.0	9.2	17	7.7	11.0	28	208/1	77	1-7
CU-3	ROOF	AC-3	mitsubishi	PUZ-A12NKA7-BS	410A	12.0	13.0	9.2	17	7.7	11.0	28	208/1	119	1-7
CU-4	ROOF	AC-4	mitsubishi	PUZ-A12NKA7-BS	410A	12.0	13.0	9.2	17	7.7	11.0	28	208/1	77	1-7
CU-5	ROOF	AC-5	mitsubishi	PUZ-A12NKA7-BS	410A	12.0	13.0	9.2	17	7.7	11.0	28	208/1	77	1-7
CU-6	ROOF	AC-6	mitsubishi	PUZ-A12NKA7-BS	410A	12.0	13.0	9.2	17	7.7	11.0	28	208/1	77	1-7
CU-7	ROOF	AC-7	mitsubishi	PUZ-A12NKA7-BS	410A	12.0	13.0	9.2	17	7.7	11.0	28	208/1	77	1-7

NOTES:
1 EQUIPMENT SIZED FOR 100 F COOLING(AND 17F AMBIENT TEMPERATURE.
2 DISCONNECT SWITCH FURNISHED BY DIVISION 26 CONTRACTOR.
3 STARTERS FOR ALL MOTORS SHALL BE FURNISHED INTEGRAL WITH UNIT.
4 INDOOR FAN COIL POWERED FROM OUTDOOR CONDENSING UNIT.
5 COORDINATE SIZE OF CONDUCTOR TERMINATION LUGS WITH CONDUCTOR SIZES SHOWN ON ELECTRICAL DRAWINGS.
6 CONTRACTOR SHALL COORDINATE REFRIGERANT PIPE CONFIGURATION, SIZE AND ROUTING AS RECOMMENDED BY MANUFACTUERER.
7 PROVIDE SLOPED ROOF CURBS FOR EQUIPMENT MOUNTING SUPPORTS WITH 14" MINIMUM HEIGHT ABOVE FINISHED GRADE AS RECOMMENDED BY MANUFACTURER. COORDINATE CURB HEIGHT WITH ROOF INSULATION.

CONSULTANTS

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APPROVED: ASSOCIATE DIRECTOR

APPROVED: ASSISTANT DIRECTOR

APPROVED: CHIEF ENGINEER

SHEET TITLE
MECHANICAL SCHEDULES

APPROVED: CHIEF ENGINEER

PROJECT TITLE
NEW ADMINISTRATION BUILDING

PROJECT LOCATION	2002 HOLCOMBE BOULEVARD, HOUSTON, TX 77030
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DATE _____

CHECKED

DRAWN

VA PROJECT NUMBER
580-CS|-110

BUILDING NUMBER

DRAWING NUMBER

M-601

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