EXHAUST FAN SCHEDULE

Tag	Manufacturer	Model	Type	Drive	CFM	E.S.P.	Motor					Sone	Weight	Furnished	Installed	Comments
						IN. W.C.	H.P.	Volts	PH.	Hz.	RPM	Level	lbs.	By	By	
EF-1	Captive-Aire	USBI18DD-RM	Utility	Direct	3200	1.2	2	208	3	60	1253	17.7	402	HS	GC	See Captive-Aire drawings for options & accessories.
EF-2	Captive-Aire	DR12HFA	Roof	Direct	150	0.45	.250	115	1	60	1282	7.10	49	HS	GC	See Captive-Aire drawings for options & accessories.

OUTDOOR AIR COOLED CONDENSING UNIT SCHEDULE

Unit ID	Nominal Cooling Capacity (Tons)	Manuf.	Model	Description	Refrig. Type	Refrig. Charge	Unit Electrical Data					Unit Installed Weight lbs.	Furnished By	Installed By	Comments
							Voltage	Phase	Hz.	FLA	MOCP				
CU-1	-	Manitowoc (Kolpak/Harford)	KPCL98MZOP-3E	Walk-in Cooler Remote CU	R-448A	10 lbs. 6.4 oz.	208	3	60	9.4	15	200	WCS	GC	Furnished with walk-in cooler
CU-2	-	-	-	Ice Maker Remote CU (low capacity)	R-404A	11 lbs. 7.4 oz.	120	1	60	-	-	100	KES	GC	Furnished with ice maker
CU-3	-	-	-	PUW Ice Maker Remote CU	R-404A	11 lbs. 7.4 oz.	120	1	60	-	-	100	KES	GC	Furnished with ice maker

MAKE-UP AIR UNIT SCHEDULE

Unit ID	Manuf.	Model	Orientation	Fan Performance				Heating Performance					Unit Electrical Data					Unit Installed Weight lbs.	Furnished By	Installed By	Comments
				Supply Air (CFM)	Total E.S.P. in. w.c.	Motor Nominal HP	RPM	Type	Input MBH	Output MBH	Temperature Rise °F D.B.	Efficiency AFUE %	Voltage	Phase	Hz.	MCA	MOCP				
MAU-1	Captive-Aire	A1-D.250-15D	Inline	1950	0.45	2	2038	Nat.Gas	92.790	85.367	41.0	92	208	3	60	7.7	15	593	HS	GC	See Captive-Aire drawings for options & accessories.

VENTILATION SCHEDULE

Space Served Name	Area (SQ.FT.)	Calculation of Minimum Outside Air (OA) Per 2017 DCMR 12E, DC Mechanical Code (2015 IMC) Classification	Based on Occupancy					Based on CFM / SQ.FT.		Based on Exhaust				OA CFM Required	OA CFM Provided	Ventilation System	Comments
			Persons Per 1000 SQ.FT.	Estimated Max. Occupant Load	Design Occupant Load	CFM Per Person	Total OA CFM	CFM Per SQ.FT.	Total OA CFM	Fixture Quantity	CFM Per Fixture	CFM Per SQ.FT.	Total Exhaust CFM				
101-Dining	791	Food and beverage service: Cafeteria, fast food	100	79	48	7.5	360	0.18	142					502	722	RTU-1	See Note 1
102-Utensil	83	Public spaces, Corridors and utilities						0.06	5					5	7	RTU-1	
103-Passage	44	Public spaces, Corridors and utilities						0.06	3					3	4	RTU-1	
105-Ordering	125	Food and beverage service: Cafeteria, fast food	100	13	13	7.5	93.75	0.18	23					116	167	RTU-1	See Note 1
111-Unisex R.R.	55	Public spaces: Toilet rooms - public							0	1	70		70	0	0	EF-2	
112-Unisex R.R.	59	Public spaces: Toilet rooms - public							0	1	70		70	0	0	EF-2	
Totals:	1157				61									626	900		
104-POS	123	Food and beverage service: Cafeteria, fast food	100	12	2	7.5	15	0.18	22					37	113	AHU-1	See Note 1
106-Serving	61	Food and beverage service: Cafeteria, fast food	100	6	4	7.5	30	0.18	11					41	125	AHU-1	See Note 1
107-Cooking	340	Food and beverage service: Kitchens (cooking)		0		7.5	0	0.12	41			0.7	238	41	125	EF-1	
108-Kitchen	402	Food and beverage service: Cafeteria, fast food	100	40	4	7.5	30	0.18	72					102	313	AHU-1	See Note 1
109-Office	47	Offices: Office spaces	5	0	1	5	5	0.06	3					8	24	AHU-1	
Totals:	973				11									229	700		

Notes:

1. Classification of "Food and beverage service, Cafeteria, fast food" results in an estimated quantity of people on a square footage basis that is unrealistic with regard to the actual use of the space. The calculated number of people has been noted in the above calculation, but an alternative, reasonably conservative actual maximum occupancy (which is supported by the Owner's historical data) is utilized in the calculation for the Total Outside Air CFM required for the respective Zones. The code-mandated value of 7.5 cfm/person for "Food and beverage service, Cafeteria, fast food" is used in the calculation.

ROOFTOP UNIT SCHEDULE

Unit ID	Nominal Cooling Capacity Tons	Manuf.	Model	Area Served	Orientation	Fan Performance				Cooling Capacity						Heating Performance				Unit Electrical Data					Unit Installed Weight lbs.	Furnished By	Installed By	Accessories, Features & Options												Comments
						Air Balance		Motor	Total	Net Capacity		Efficiency	EAT (Deg. F)			Cond.	Type	Input	Output	Efficiency	Voltage	Phase	Hz.	MCA	MOCP				1	2	3	4	5	6	7	8	9	10	11	12	
						Supply CFM	Outdoor CFM	Hp	E.S.P. in. w.c.	Total MBH	Sensible MBH	(S)EER	DB	WB		EAT (Deg. F)		MBH	MBH	AFUE %																					
RTU-1	10	York	ZJ120	Dining Room	Downflow	4000	900	3	1.0	120.7	86.7	12.0	80.0	67.0	95.0	Nat.Gas	240	192	80	208	3	60	50.4	60	1420	HES	GC	X	X	X	X	X	X	X	X	X	X	X	X	

Notes that apply to all units:

1. Static pressure indicated above is the external static pressure which excludes any pressure drops within the unit.
2. Unit shall be complete with side outlet drain and access doors. Outside air campers shall be equipped with blade and jamb seals.
3. Contractor to ensure that outdoor air intakes are a minimum of 10'-0" away from any exhaust fan discharge, plumbing vent or other contaminant source.
4. Maximum air velocity through cooling coil shall not exceed 500 feet per min.
5. Provide 4 sided factory roof curb suitable for seismic conditions of project location.
6. Perform testing and balancing and submit reports to the engineer in accordance with specification.
7. Refer to roof framing plan for exact location of rooftop units.
8. Mechanical subcontractor shall affix unit designation decal on unit.
9. Unit to operate at 7 in. w.g. natural gas pressure. See Manufacturer's specifications for final connection size to unit.
10. Provide alternate bid to supply all rooftop units with coastal package (coated coils, painted rails, etc.) when site is located within 5 miles of the coast.

Accessories, Features & Options:

1. MERV-8 filters.
2. Roof curb - 14" high.
3. M.O.D.
4. Hail guard.
5. Unit mounted convenience receptacle.
6. R.A. smoke detector w/ remote keyed annunciator/reset.
7. Comp. enthalpy econ.
8. Barometric relief.
9. Toolless hinged access panels.
10. Unit shall be charged with refrigerant type R-410A
11. Disconnect.
12. Hi-static motor

HEAT PUMP SPLIT SYSTEM AIR HANDLER & CONDENSER UNIT SCHEDULE (AHU & ACC)

Tag	Manuf.	AHU model #	Orientation	ACC model #	Tonnage	Supply Fan					DX Cooling				Heating Performance							Electric-AHU			Electric-ACC			AHU Installed weight LBS	ACC Installed weight LBS	Accessories & Options								
						Design airflow CFM	Outdoor airflow CFM	ESP in H2O	Fan speed RPM	Fan HP	Cooling LDB F	Total capacity MBH	Sensible capacity MBH	(S)EER	Type	Net Capacity MBH @ 17°F D.B.	MBH @ 47°F D.B.	Auxiliary Electric Heat KW	Unit Discharge °F D.B.	Unit Discharge w/ Elec Heat °F D.B.	Efficiency COP @ 17°F D.B.	COP @ 47°F D.B.	Unit voltage	MCA	MOCP	Unit voltage	MCA	MOCP			1	2	3	4	5	6	7	8	9
AHU/ACC-1	York	NL120	Horizontal	PC120	10	4000	700	0.6	844	2.0	58.7	116.4	86.4	11.1	Heat pump	63.0	104.0	36	60.0	81.3	2.3	3.3	208/3/60	100.9	110	208/3/60	41.6	50	562	543	X	X	X	X	X	X	X	X	X

Notes that apply to all units:

1. Maximum air velocity through cooling coil shall not exceed 500 feet per min.
2. Contractor to ensure that outdoor air intakes are a minimum of 10'-0" away from any exhaust fan discharge, plumbing vent or other contaminant source.
3. Mechanical subcontractor shall affix unit designation decal on unit.
4. Perform testing and balancing and submit reports to the engineer in accordance with specification.
5. Indoor and outdoor units shall be by the same manufacturer.
6. Refrigerant piping to be sized and installed per manufacturer's specifications.

Accessories & Options:

1. 2" Pleated MERV 8 Filter
2. Hail guards (ACC)
3. Mixing box
4. Provide condensate drain pan.
5. Provided manufacturer's electrical disconnect (ACC & AHU).
6. Provide Little Giant VCC-20 Series or equal (if cannot drain via gravity).
7. Service outlets (GFCI type, provided by factory, field wired by EC).
8. R.A. smoke detector w/ remote keyed annunciator/reset.
9. Factory installed economizer (IAQ ready) with differential enthalpy control and hood.

GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE

Tag	Description	Size	Material	Finish	Mounting	Furnished By	Installed By	Manufacturer	Model	Notes
BS-1	Bathroom Air Purification Unit		Stainless Steel	Stainless Steel	Surface Mount	TUV	GC	RGF Environmental Group	BRU Assembly	See electrical sheets for connection information
CD-1	Perforated ceiling diffuser	Face: 24"x24" Neck: Varies	Aluminum	White	Lay-in ceiling	GC	GC	Nailor	4320A Type L	Provide with integral OBD
CD-2	Perforated ceiling diffuser	Face: 12"x12" Neck: Varies	Aluminum	White	Surface Mount	GC	GC	Nailor	4320A Type S	Provide with integral OBP
CD-3	Perforated ceiling diffuser	Face: 20"x20" Neck: Varies	Aluminum	White	Surface Mount	GC	GC	Nailor	4320A Type S	Provide with integral OBD
ER-1	Perforated ceiling exhaust	Face: 12"x12" Neck: Varies	Aluminum	White	Surface Mount	GC	GC	Nailor	4330R Type S	Provide integral OBD
RG-1	Perforated ceiling return	Face: 24"x24" Neck: Varies	Aluminum	White	Lay-in ceiling	GC	GC	Nailor	4330R Type L	
RG-2	0 deg. fixed blade return grille	Neck: Varies	Aluminum	Mill	Duct	GC	GC	Nailor	51FH	
SR-2	Double-deflection supply register	Neck: Varies	Aluminum	Mill	Duct	GC	GC	Nailor	51DH	Provide integral OBD

CONTROL FUNCTIONS

A. THE MAIN COOKING EXHAUST FAN AND MAKE-UP AIR UNIT SHALL BE INTERLOCKED TO OPERATE TOGETHER. THIS CONTROL CIRCUIT IS ACTIVATED BY A SWITCH AND INCLUDES A FIRE PROTECTION OVERRIDE.

B. THE TEMPERATURE IN EACH ZONE IS CONTROLLED BY SPACE TEMPERATURE SENSORS CONNECTED TO THE THERMOSTATS LOCATED IN THE OFFICE. ALL ZONES SHALL OPERATE WITH CONTINUOUS FAN OPERATION DURING OCCUPIED TIMES AND INTERMITTENLY AS NEEDED TO MAINTAIN SET POINTS DURING UNOCCUPIED TIMES. OUTSIDE AIR DAMPERS SHALL BE OPEN CONTINUOUSLY WHEN EITHER IN OCCUPIED MODE OR WHEN HOOD SYSTEM IS ON AND SHALL BE CLOSED DURING UNOCCUPIED PERIODS.

C. THE THERMOSTATS SHALL DETERMINE OCCUPIED/UNOCCUPIED STATUS BASED ON THE SCHEDULE IN THE ENERGY MANAGEMENT SYSTEM.

2021-DB#6/P#1-4

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SHEET TITLE:
HVAC SCHEDULES

SHEET NUMBER:
M-600