

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					
EF-1	Captive-Aire	DU240HFA	Roof	Direct	3200	1.2	3	208	3	60	776	12.3	304	HS	GC	See Captive-Aire drawings for options & accessories.	
EF-2	Captive-Aire	DR12HFA	Roof	Direct	150	0.6	25	115	1	60	1282	6.1	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 (Harford)	PCL99MOP-3	Walk-in Cooler Remote CU	R-404A	-	208	3	60	6.5	15	200	WCS	GC	Furnished with walk-in cooler
CU-2	-	-	-	Ice Maker Remote CU	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

AIR DOOR SCHEDULE									
ID	Manufacturer	Model	Airflow			Electrical			Remarks
			Max FPM	Avg FPM	CFM	KW	V/PH	FLA	
AD-1	Bemer	ALC081072E	3600	2058	2072	11.2	208/3/60	32.8	
AD-2	Bemer	ALC081036E	3600	2116	1036	5.6	208/1/60	28.6	

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
				Design Supply (CFM)	Min Supply 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-G10	Downflow	1950	1000	0.50	2	2040	Nat Gas	139.650	128.478	62.0	92	208	3	60	7.7	15	510	HS	GC	See Captive-Aire drawings for options & accessories.

VENTILATION SCHEDULE																										
Space Served Name	Area (SQ. FT.)	Classification	Calculation of Minimum Outside Air (OA) Per IMC 2018					Based on Occupancy					Based on CFM / SQ. FT.					Based on Exhaust					OA CFM Required	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	728	Food and beverage service: Cafeteria, fast food	100	73	45	7.5	337.5	0.18	131										469	824	RTU-2	See Note 1				
102-Utilensil	75	Public spaces, Corridors and utilities						0.06	5										5	8	RTU-2					
103-Passage	83	Public spaces, Corridors and utilities						0.06	5										5	9	RTU-2					
105-Ordering	36	Food and beverage service: Cafeteria, fast food	100	4	4	7.5	27	0.18	6									33	59	RTU-2	See Note 1					
111-Unisex 1	62	Public spaces: Toilet rooms - public						0	1										70	0	EF-2					
112-Unisex 2	62	Public spaces: Toilet rooms - public						0	1										70	0	EF-2					
Totals:	1046				49														512	900						
104-POS	239	Food and beverage service: Cafeteria, fast food	100	24	2	7.5	15	0.18	43										58	157	RTU-1	See Note 1				
106-Serving	78	Food and beverage service: Cafeteria, fast food	100	8	4	7.5	30	0.18	14										44	119	RTU-1	See Note 1				
107-Cooking	319	Food and beverage service: Kitchens (cooking)	20	6	2	7.5	15	0.12	38									0.7	223	53	144	EF-1				
108-Kitchen	327	Food and beverage service: Cafeteria, fast food	100	33	4	7.5	30	0.18	59										89	240	RTU-1	See Note 1				
109-Office	44	Offices: Office spaces	5	0	1	5	5	0.06	3										8	21	RTU-1					
Totals:	1007				13														252	680						

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	Comments
						Air Balance	Motor	Total	Net Capacity	Efficiency	EAT (Deg F)	Cond.	Type	Input	Output	Efficiency	Voltage	Phase	Hz	MCA	MOCP								
						Supply CFM	Outdoor CFM	Hp	E.S.P. in. w.c.	Total MBH	Sensible MBH	(S)EER	DB	WB	EAT (Def. F)	MBH	MBH	AFUE %											
RTU-1	8.5	Carrier	48HCE09	Kitchen	Downflow	3400	680	3	1.0	103.6	81.0	12.0	80.0	67.0	95.0	Nat Gas	180	148	82	208	3	60	45.0	50	1308	HES	GC	X X X X X X X X X X X X	
RTU-2	10	Carrier	48DCE11	Dining Room	Downflow	4000	900	3	1.0	119.8	92.5	12.0	80.0	67.0	95.0	Nat Gas	224	184	82	208	3	60	57.0	70	1328	HES	GC	X X X X X X X X X X X X	

Notes that apply to all units:

- Static pressure indicated above is the external static pressure which excludes any pressure drops within the unit.
- Unit shall be complete with side outlet drain and access doors. Outside air dampers shall be equipped with blade and jamb seals.
- 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.
- Maximum air velocity through cooling coil shall not exceed 500 feet per min.
- Provide 4 sided factory roof curb suitable for seismic conditions of project location.
- Perform testing and balancing and submit reports to the engineer in accordance with specification.
- Refer to roof framing plan for exact location of rooftop units.
- Mechanical subcontractor shall affix unit designation decal on unit.
- Unit to operate at 7 in. w.g. natural gas pressure. See Manufacturer's specifications for final connection size to unit.
- 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:

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

GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE										
Tag	Description	Face Size / Neck Size	Material	Finish	Mounting	Furnished By	Installed By	Manufacturer	Model	Notes
BS-1	Bathroom Air Purification Unit	Face: 5.44"x16"	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: 24"x12" Neck: Varies	Aluminum	White	Lay-in ceiling	GC	GC	Nailor	4320A Type L	Provide with integral OBP Remove 4-way deflectors
ER-1	Perforated ceiling exhaust	Face: 12"x12" Neck: Varies	Aluminum	White	Surface mount	GC	GC	Nailor	4330R Type S	Provide with integral OBD
RG-1	Perforated ceiling return	Face: 48"x24" Neck: Varies	Aluminum	White	Lay-in ceiling	GC	GC	Nailor	4330R Type L	
RG-2	Perforated ceiling return	Face: 48"x24" Neck: Varies	Aluminum	White	Surface mount	GC	GC	Nailor	4330R Type S	
SR-1	Adjustable turbo nozzle	Neck: Varies	Aluminum	White	Wall	GC	GC	Air Concepts	ANR-14	Provide with concealed mounting and integral OBD
SR-2	Double-deflection supply register	Neck: Varies	Aluminum	White	Wall	GC	GC	Nailor	51DH	Provide with integral OBD

VIROGUARD SCHEDULE							
TAG	QUANTITY	DESCRIPTION	DUCT CONNECTION SIZE	FAN	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN MANUFACTURER
VG-1	1	VIROGUARD HOOD EXHAUST FAN ROOFTOP CONTAINMENT SYSTEM	18"x18"	Captive-Aire DU240HFA	TDC	GC	ENVIROMATIC

AIR BALANCE CALCULATIONS					
System	Supply Air CFM	Return Air CFM	Outdoor Air CFM	Exhaust Air CFM	Pressure CFM
RTU-1	3400	2720	680		680
RTU-2	4000	3100	900		900
MAU-1	1950	0	1950		1950
EF-1				3200	-3200
EF-2				150	-150
Total	9350	5820	3530	3350	180

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 INTERMITTENTLY 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.

2022-DB#3/P#1-4

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