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430 TBC WAY
PALM BEACH GARDENS
FLORIDA 33410

AIR BALANCE SCHEDULE

MARK	SERVICE	EXHAUST (CFM)	OUTSIDE AIR (CFM)	FRESH AIR (CFM)	PERCENT (%)
EF-1	SHOP	5500			
EF-4	STORAGE	1,400			
RTU-1	SHOP/STORAGE		4500		
SHOP ZONE TOTALS		6,900	4,500	-2,400	-35%
RTU-1	RETAIL SPACE		420		
EF-2	RESTROOM	110			
EF-2	RESTROOM	110			
EF-5	COMM. ROOM	150			
RETAIL ZONE TOTALS		370	420	50	14%

ROOFTOP AIR CONDITIONING (HEAT PUMP) SCHEDULE

UNIT	LOCATION SERVED	MANUFACTURER	MODEL	NOMINAL TONS	SUPPLY FAN DATA				COOLING DATA				HEATING DATA				ELECTRICAL DATA				OPERATING WEIGHT (LBS)	NOTES				
					AIRFLOW (CFM)	OUTSIDE AIR (CFM)	ESP (IN WG)	FAN SPEED (RPM)	EAT (HP)	LAT (HP)	DB (°F)	TOTAL CAPACITY (MBH)	SEER	INPUT (MBH)	OUTPUT (MBH)	COP (HI/LO)	AUXILIARY INPUT (KW)	AUXILIARY OUTPUT (MBH)	STAGES	VOLT			PH	MCA	M COP	
RTU-1	WAITING	CARRIER	50KCAQ6	5	2000	420	0.80	730	1	1.25	80/68	57/54	58	14.3	58/28.6	20	8.2	12.0	40.1	2	208	3	71	80	610	ALL

NOTES:
 1. 2" PLEATED MERV 7 STD. FILTER.
 2. SINGLE ENTHALPY ECONOMIZER.
 3. BAROMETRIC RELIEF DAMPER.
 4. UNIT DISCONNECT FACTORY INSTALLED.
 5. FACTORY INSTALLED GFCI.
 6. FURNISHED AND INSTALLED BY MECH CONTRACTOR.
 7. HALL GUARD.
 8. 2" PLEATED MERV 7 STD. FILTER.
 9. FULLY INSULATED DOWNFLOW ROOF CURB OR ADAPTOR CURB. FIELD VERIFY EXACT DIMENSIONS (SEE GENERAL NOTE 13 ON M1.0).
 10. SUPPLY AIR SMOKE DETECTOR FACTORY INSTALLED, WIRED BY ELECTRICAL CONTRACTOR. REMOTE TEST KEYED SWITCH WITH AUDIBLE AND VISUAL INDICATORS FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
 11. LABEL ROOFTOP UNIT WITH EQUIPMENT DESIGNATION, STORE NAME AND STORE NUMBER. REFER TO SPECIFICATIONS FOR DETAILS.

* MOTOR DATA BASED ON NAMEPLATE RATING *

* MUST PROVIDE FACTORY INSTALLED 2 SPEED FAN MOTOR WITH V.F.D. AND RTU OPEN CONTROLLER #OPNRTU2 (NO EXCEPTIONS), WIRED TO CARRIER PROGRAMMABLE CONTROLLER #SYSTI-4-CAR (NO EXCEPTIONS) FOR HUMIDITY CONTROL *

* NO EXCEPTIONS TO THESE CONTROLLERS WILL BE ALLOWED *

CONTRACTOR TO FURNISH AND INSTALL NEW CARRIER TOUCH-SCREEN PROGRAMMABLE THERMOSTAT #SYSTI-4-CAR (INTEGRATED WITH FACTORY INSTALLED ROOFTOP OPEN CONTROLLER #OPNRTU2 AND 2-SPEED FAN MOTOR WITH V.F.D. FOR HUMIDITY CONTROL)

* NO EXCEPTIONS TO THESE CONTROLLERS WILL BE ALLOWED *

VENTILATION SCHEDULE (PER ASHRAE 62.1)

Zone	System Primary Airflow	Average Outdoor Air Fraction	O.C.B.D.	Occupant Diversity	Zone Air Distribution Effectiveness	O.B.	Primary Air Fraction to Zone	Secondary Air Fraction to Zone		
Zone RETAIL	2,000 CFM	Xs	0.088	0	Er	0.8	Fp	Er		
Unconnected Air Intake:	198 CFM	System Ventilation Efficiency	0.888	Min. Outside Air Required: 200 CFM	Fraction of Supply Air to Zone from Outside Zone:	Fa	Fraction of Supply Air to Zone from Mixed Primary Air:	Fb	Fraction of Outdoor Air to Zone from Outside Zone:	Fc

Room	Room Type	People	Area	Rate	Area	Rate	Area	Rate	Area	Rate	Area	Rate	Area
Room	Room Type	Rate (CFM/person)	People	Rate (CFM/ft ²)	Area (ft ²)	Rate (CFM/ft ²)	Area (ft ²)	Rate (CFM/ft ²)	Area (ft ²)	Rate (CFM/ft ²)	Area (ft ²)	Rate (CFM/ft ²)	Area (ft ²)
BREAK	General-BreakRoom	5	1	5	0.06	76.3	5	1.0	1.3	1.33	0.0977		
LOBBY	Office-Main Entry Lobby	5	5	25	0.06	40.1	25	50	63	329	0.076	1.02	
OFFICE	Office-Office	5	1	5	0.06	64.2	4	9	11	1.5	0.087		
RETAIL	Retail-General Sales	7.5	6	45	0.12	366	44	59	11.1	795	0.14	0.988	
RR 1	General-RestRooms	0	0	0	0	66.5	0	0	0	0	0	1.1	
RR 2	General-RestRooms	0	0	0	0	62.2	0	0	0	0	0	1.1	

FAN SCHEDULE

UNIT	LOCATION	MANUFACTURER	MODEL	SERVICE	FAN DATA				MOTOR DATA				ELECTRICAL DATA				NOTES
					AIRFLOW (CFM)	ESP (IN WG)	DRIVE TYPE	BHP	HP	SONES	CONTROL	VOLT	PH	FLA			
EF-1	SERVICE	GREENHECK	SBE-3R24-15	SERVICE	5,500	0.25	1,740	DRCT	1.13	10	26.0	NOTE 7	115	1	20.0	1,346.7	
EF-2	TOILETS	GREENHECK	SP-110-10	EMPLOYEE TOILET	110	0.25	94	DRCT	-	8.4W	1.4	NOTE 8	115	1	0.2	5.8	
EF-3	TOILETS	GREENHECK	SP-140-10	TOILET	110	0.25	94	DRCT	-	8.4W	1.4	NOTE 8	115	1	0.2	5.8	
EF-4	STORAGE	GREENHECK	SO-120-V5	STORAGE	1,400	0.25	1,433	DRCT	0.25	1/2	9.7	NOTE 9	115	1	6.2	25.6	
EF-5	COMM	GREENHECK	SO-65-V5	COMM	150	0.25	1,642	DRCT	0.03	1/10	4.6	NOTE 9	115	1	2.6	925.6	

NOTES:
 1. WALL MOUNTED EXHAUST FAN. PROVIDE ALL HOUSING. FIELD VERIFY MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 2. IN-LINE FAN MOUNTED FROM STRUCTURE WITH SPRING VENTILATOR.
 3. VARGREEN MOTOR WITH FACTORY INSTALLED MOTOR-MOUNTED DISCONNECT SWITCH.
 4. BALANCE FAN WITH FLOWMETER FURNISHED AND INSTALLED BY MECH CONTRACTOR.
 5. VARGREEN MOTOR WITH FACTORY INSTALLED MOTOR-MOUNTED VARI-GREEN VALVE.
 6. PROVIDE WITH BACKDRAFT DAMPER.
 7. INTERLOCK WITH EMS RELAY.
 8. INTERLOCK WITH RET ROOM LIGHTS.
 9. PROVIDE THERMOSTAT TO ENERGY FAN ON TEMPERATURE RISE IN SPACE.

* MOTOR DATA BASED ON NAMEPLATE RATING *

GRAVITY VENTILATOR SCHEDULE

UNIT	LOCATION	MANUFACTURER	MODEL	SERVICE	TYPE	AIRFLOW (CFM)	VELOCITY (FPM)	MAX PRESS DROP (IN WG)	OVERALL SIZE W x L x H (IN)	THROAT SIZE W x L (IN)	CURB HEIGHT (IN)	NOTES
RTU-1	ROOF	GREENHECK	FGI	INTAKE	GRAVITY	4,500	326	0.028	88x108x25	44x72	12	ALL

NOTES:
 1. INTEGRAL BIRD SCREEN.
 2. 12" INSULATED ROOF CURB.

DIFFUSER, REGISTER & GRILLE SCHEDULE

MARK	MANUFACTURER	MODEL	SERVICE	TYPE	DESCRIPTION	LOCATION	DAMPER	MATERIAL	FINISH	NOTES
A	TITUS	TMS	SUPPLY	DIFFUSER	24"X24", NECK SIZE ON PLAN	CEILING	YES	STEEL	NOTE 4	ALL
B	TITUS	50"	RETURN	EGG CRATE	SIZE ON PLAN	CEILING	NO	ALUM	NOTE 4	1
C	TITUS	50"	EXHAUST	EGG CRATE	SIZE ON PLAN	CEILING	NO	ALUM	NOTE 4	1

NOTES:
 1. CONTRACTOR IS RESPONSIBLE TO VERIFY LOCATIONS, INSTALLATION METHODS, AND QUANTITIES PRIOR TO ORDERING MATERIALS.
 2. VERIFY FRAME TYPE: PLASTER OR LAY-IN FRAME.
 3. PROVIDE WITH OPPOSED BLADE DAMPERS
 4. COORDINATE PAINT COLOR WITH ARCHITECTURAL TO MATCH CEILING COLOR.

VENTILATION - OUTDOOR AIR

NAME	AREA (SQ. FT.)	PEOPLE	EXHAUST RATE (CFM/SQ.FT.)	EXHAUST REQUIRED	EXHAUST INSTALLED	AREA RATE (CFM/SQ.FT.)	O.A. CODE (CFM)	O.A. INSTALLED (CFM)
SALES/WAITING	993	17	-	-	-	5/PERS + 0.12/SQFT	204	300
SERVICE	3,605	8	1.5	5,408	5,500	10/PERS + 0.06/SQFT	296	5,500
BREAKROOM	136	4	-	-	-	5/PERS + 0.06/SQFT	28	50
STORAGE	1,814	-	0.75	1,361	1,400	5/PERS + 0.06/SQFT	109	1,400
TOILET	80	-	-	50	100	-	5	15
EMPLOYEE TOILET	85	-	-	50	100	-	5	15
TOTALS	6,716	29	-	6,868	7,100	-	-	7,280

UNIT HEATER - GAS FIRED SCHEDULE

UNIT	LOCATION	MANUFACTURER	MODEL	FAN DATA				HEATER DATA				ELECTRICAL DATA				NOTES
				NOMINAL AIRFLOW (CFM)	FAN SPEED (RPM)	MOTOR (HP)	EAT (HP)	INPUT (MBH)	OUTPUT (MBH)	VENT SIZE (IN)	VENT MATERIAL	VOLT	PH	FLA		
GH-1	STORAGE	MOORE	HD-30	505	1,550	1/15	70"	1	3	PVC	115	1	3.7	ALL		
GH-2	STORAGE	MOORE	HD-30	505	1,550	1/15	70"	1	3	PVC	115	1	3.7	ALL		

NOTES:
 1. SUSPEND FROM STRUCTURE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 2. PROVIDED WITH SAFETY LIMIT SWITCH
 3. BUILT IN DISCONNECT SWITCH
 4. FLAME ROLL-OUT SWITCH

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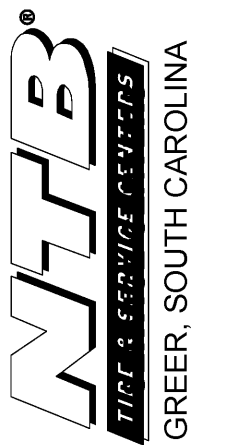
RADIANT TUBULAR HEATERS - GAS FIRED

UNIT	LOCATION	MANUFACTURER	MODEL	LENGTH (FT.)	INPUT (MBH)	OUTPUT (MBH)	VENT SIZE (IN)	VENT MATERIAL	ELECTRICAL DATA	WEIGHT	NOTES		
UNIT	LOCATION	MANUFACTURER	MODEL	LENGTH (FT.)	INPUT (MBH)	OUTPUT (MBH)	VENT SIZE (IN)	VENT MATERIAL	VOLT	PH	AMPS		
IR-1	SERVICE	DETROIT RADIANT	DET3-30-100	17	65/100	52/80	4"	METAL	120	1	1.7	160	ALL
IR-2	SERVICE	DETROIT RADIANT	DET3-30-100	17	65/100	52/80	4"	METAL	120	1	1.7	160	ALL
IR-3	SERVICE	DETROIT RADIANT	DET3-30-100	17	65/100	52/80	4"	METAL	120	1	1.7	160	ALL

NOTES:
 1. MODEL SHOWN IS FOR DESIGN TEMPERATURES FROM 50°F TO 100°F.
 2. PROVIDE ROOFTOP RADIANT PACKAGE.
 3. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

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PROJECT INFORMATION:



SEAL:



PROJECT NO.: 20150211
 DRAWN BY: AC
 CHECKED BY: PK

ISSUE: DATE:
 ISSUED FOR PREPARI: 10/10/2015

REVISION: DATE:

SHEET TITLE:
MECHANICAL SCHEDULES

SHEET NUMBER:
M-2