



**1 MECHANICAL ROOF PLAN**  
SCALE: 1/4" = 1'-0"

ROOF TOP UNIT SCHEDULE																						
UNIT ID	MANUFACTURER	EFFICIENCY	MODEL	NOMINAL TONS	SUPPLY FAN			ELECTRIC HEAT		COOLING				ELECTRICAL				EER	IEER	OPERATING WEIGHT (LBS)	NOTES	
					TOTAL CFM	OUTSIDE AIR CFM	EXTERNAL STATIC PRESSURE (IN. W.G.)	KW	MBH	TOTAL MBH	SENSIBLE MBH	AMBIENT DB (F)	ENTERING DB / WB (F)	STAGES	VOLTS	PHASE	MCA(A)					MCB(A)
RTU-1(N)	TRANE	HIGH	THC120F3R	10	4000	750	1.0	27	92	117	89.6	95	80/67	2	208	3	104	110	12.4	14.7	1550	1-17
RTU-2(N)	TRANE	HIGH	THC120F3R	10	4000	750	1.0	27	92	117	89.6	95	80/67	2	208	3	104	110	12.4	14.7	1550	1-17

**NOTES / ACCESSORIES**

- ALL EQUIPMENT MUST BE HIGH EFFICIENT, MEETING OR EXCEEDING THE BRANDS MINIMUM REQUIREMENTS.
- ELECTRICAL CONNECTION TO BE SINGLE POINT AND TO BE THROUGH THE BOTTOM OF THE UNIT.
- DISCONNECT SWITCH AND AN UNPOWERED GFCI RECEPTACLE.
- 14" ROOF CURB - CONTRACTOR SHALL FIELD INSULATE. SHIP ASAP AHEAD OF THE UNIT.
- CONDENSATE DRAIN WITH 2" DEEP VENTED TRAP DISCHARGE TO SPLASH BLOCK ON ROOF.
- CABINET WITH 1/2" FIBERGLASS INSULATION.
- PROVIDE ENTHALPY TYPE ECONOMIZER WITH BAROMETRIC RELIEF / 25% MANUAL OUTSIDE AIR DAMPER ASSEMBLY WITH HOOD (ZONE 'E' ONLY).
- 8-WIRE, 24 VAC, AUTOMATIC CHANGEOVER, 2-STAGE HEAT / COOL, REMOTELY PROGRAMMABLE THERMOSTAT.
- REMOTE SENSORS SHALL BE PROVIDED IN SPACE WIRED BACK TO PROGRAMMABLE, 24 HOUR, 7 DAY, THERMOSTATS.
- ANTI SHORT CYCLE TIMER.
- THROWAWAY 2" FILTERS (MERV 8).
- WHERE REQUIRED, PROVIDE LOW AMBIENT COOLING CAPABILITY DOWN TO 0 DEGREES F.
- ALL COMPRESSORS WITH 5 YEAR WARRANTY.
- RETURN AND / OR SUPPLY AIR SMOKE DETECTOR - UNIT MOUNTED
- VFD SUPPLY FAN
- ELECTRIC REHEAT WITH ASSOCIATED CONTROLS AND SENSORS FOR DEHUMIDIFICATION CONTROL.
- PROVIDE POWER EXHAUST.

CALCULATED HEAT LOADS FOR STARBUCKS - BELLE HEIGHTS RICHMOND, VA			
AIR SYSTEM AREA SERVED	APPROXIMATE AREA OF SPACE (SQFT)	CODE REQUIRED EXHAUST AIR FLOW RATE (CFM)	CODE REQUIRED MINIMUM OCCUPIED OUTSIDE AIR FLOW RATE (CFM)
DINING	1700	NA	1199
KITCHEN	800	560	216
<b>TOTAL SENSIBLE COOLING LOADS (BTUH)</b>	<b>TOTAL LATENT COOLING LOADS (BTUH)</b>	<b>BUILDING TOTAL COOLING LOAD (BTUH)</b>	<b>HEATING LOAD (BTUH)</b>
1,07,900	79,800	1,87,700	1,60,917

**CALCULATION TABLE NOTES**

- CALCULATION IN ACCORDANCE WITH 2018 VIRGINIA MECHANICAL CODE (2018 IBC/IMC/IECC).
- CALCULATION BASED ON CLIMATIC WEATHER DATA FOR BELLE HEIGHTS, RICHMOND, VIRGINIA AREA, AND FOR 72° F HEATING AND 75° F COOLING DESIGN TEMPERATURES.
- LOADS DO NOT ACCOUNT FOR HEAT GAIN FROM EQUIPMENT. SYSTEM CAPACITY SHALL INCLUDE AN ALLOWANCE FOR EQUIPMENT.

FAN SCHEDULE															
UNIT ID	MANUFACTURER	APPLICATION	MODEL	CFM	TYPE	DRIVE	FAN RPM	E.S.P.			SERVICE	WEIGHT (LBS)	dBA	NOTES / ACCESSORIES	
								(IN. W.G.)	HP	VOLTS PHASE					
EF-1 (N)	GREENHECK	BUILDING EXHAUST	G-095-D	660	ROOF	DIRECT	1550	0.25	1/8	115	1	KITCHEN	31	57	1,2,3,4,5,6,7,8

**NOTES / ACCESSORIES:**

- BIRDSCREEN
- WEATHER PROOF DISCONNECT SWITCH
- VARIABLE SPEED CONTROL
- SPEED CONTROL SWITCH
- THERMAL OVERLOAD PROTECTION
- MOTORIZED DAMPER & GRAVITY DAMPER
- ROOF CURB
- AMCA SEAL & UL CERTIFIED

**GENERAL NOTES:**

- PROVIDE FULL RTU DISCHARGE AND INLET SIZE SUPPLY AND RETURN DUCT WITH TURNING VANES AND FLEXIBLE CONNECTION AT EQUIPMENT. FIELD VERIFY EXACT LOCATION CONTRACTOR TO COORDINATE ROOF PENETRATION AND CURB PLACEMENT WITH CONSTRUCTION MANAGER OR APPROVED ROOFING CONTRACTOR. PROVIDE ALL NECESSARY COMPONENTS FOR ROOF PENETRATION, ROOF PATCHING, ETC.
- MOUNT ICE MAKER REMOTE CONDENSING UNIT ON DURA-BLOK ROOF RAILS. PROVIDE DURA-BLOK ROOF PIPE CURB. TENANT SHALL USE LANDLORD ROOFING CONTRACTOR FOR ALL ROOFING PENETRATIONS. ROUTE REFRIGERANT PIPING THROUGH ROOF AND MAKE FINAL CONNECTION TO ICE MAKER. PROVIDE REFRIGERANT PIPING SIZING AND INSULATE IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- LOCATE FAN A CODE MINIMUM DISTANCE FROM OUTSIDE AIR INTAKES ON ROOF.
- REFER TO SHEET NUMBER CS1.1 FOR ADDITIONAL GENERAL MECHANICAL NOTES.

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