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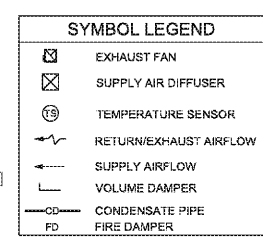


DG
DOLLAR GENERAL BUILDING
Prototype 9100 SF B
Store # 22718
 DG Woodstock
 Bells Ferry Rd.
 Woodstock, GA

CONSTRUCTION DOCUMENTS
 PROJECT NO.: 8095.97
 ISSUED: 01/15/2021

HVAC LAYOUT & SCHEDULES
M2.0

- ### 1. NOTES AND SPECIFICATIONS
- ALL MECHANICAL WORK SHALL BE DONE IN ACCORDANCE WITH ALL STATE AND LOCAL LAWS AND ORDINANCES AND IN A MANNER SATISFACTORY TO THE AUTHORITY HAVING JURISDICTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS, INSPECTIONS AND PAY ALL APPLICABLE FEES.
 - CARRIER OR YORK PACKAGED HVAC SYSTEMS ARE REQUIRED. SEE MANUFACTURER AND HEATING SOURCE REQUIREMENT BY REGION ON THIS SHEET.
 - MECHANICAL ENGINEER SHALL PERFORM COMPLETE LOAD CALCULATIONS BASED ON CURRENT ADOPTED ENERGY CODE REQUIREMENTS FOR BUILDING COMPONENTS.
 - HVAC UNIT QUANTITY AND SIZES SHALL BE DETERMINED BY ENGINEER HEATING AND COOLING LOAD CALCULATIONS, USING ASHRAE DATA AND DESIGN CRITERIA ON THIS PAGE. A FIFTH UNIT IS REQUIRED IF THE AVERAGE DAILY TEMPERATURE OF ANY ONE MONTH EXCEEDS 95°F.
 - ALL HVAC UNITS SHALL PROVIDE A MINIMUM DISCHARGE AIR TEMPERATURE OF 55°F DURING HEATING MODE. DEVELOPER IS TO COORDINATE ALL NECESSARY REQUIREMENTS WITH THE MANUFACTURER.
 - ELECTRIC UNITS REQUIRE A NOMINAL 15KW HEAT STRIP. MINIMUM PROVIDE NUMBER KW HEAT STRIPS REQUIRED, TO MEET MINIMUM DISCHARGE TEMPERATURE OF 90°F.
 - ALL UNITS REQUIRE ECONOMIZERS WITH BAROMETRIC RELIEF MOTOR AND DAMPERS WITH DUCT MOUNTED BAROMETRIC RELIEF. PROVIDE AS REQUIRED PER ADOPTED STATE AND LOCAL ENERGY CODES.
 - ALL UNITS GREATER THAN 2,000 CFM REQUIRE A DUCT MOUNTED SMOKE DETECTOR. VERIFY CURRENT ADOPTED STATE AND LOCAL CODE REQUIREMENTS FOR MOUNTING LOCATION OF SMOKE DETECTOR.
 - ALL HVAC EQUIPMENT SHALL BE INSTALLED IN SUCH A WAY AS TO REDUCE VIBRATION TRANSMISSION TO STRUCTURAL MEMBERS.
 - TESTING OF HVAC UNITS THROUGH PANEL IS ACCOMPLISHED BY WARMING UP OR COOLING DOWN A SPACE TEMPERATURE SENSOR AND WATCH THE FAN, HEAT AND COOL STAGES CYCLE ON AND OFF. THIS REQUIRES TWO PEOPLE AT THE UNIT. ONE TO WATCH THE SCREEN AND THE OTHER TO WATCH OPERATION OF THE AHU. WHEN COMPLETE, PRESS THE RETURN TO RETURN TO THE MAIN SCREEN.
 - COORDINATE SMOKE SENSORS LOCATIONS WITH SHEET EMS1.
 - POWER TO HVAC UNITS LISTED IN PREFERENCE ORDER.
 - PROVIDE DUCT MOUNTED EXHAUST FAN FOR RESTROOMS. INTERLOCK WITH RESTROOM LIGHTS. VENT THRU SIDE WALL, NOT THRU ROOF.



- ### MECHANICAL KEYED NOTES
- RTU 1&2: PROVIDE AND INSTALL NEW LENNOX PACKAGE ROOF TOP UNIT WITH APPROVED MANUFACTURER ROOF CURB. SEE SCHEDULE FOR UNIT INFORMATION.
 - SMOKE DETECTOR TO BE INSTALLED IN SUPPLY AIR DUCTWORK FOR ROOFTOP UNIT. FIELD COORDINATE WITH FIRE ALARM SYSTEM USED AND LOCAL CODES.
 - INSTALL CURBS PLUS, INC. CONCENTRIC DROP DIFFUSER SYSTEM WITH FACTORY TRANSITION ADAPTER AT RTU AS SPECIFIED BY RTU MANUFACTURER. COORDINATE WITH LIGHT FIXTURES.
 - SUPPLY REGISTER MOUNTED ON DUCTWORK. BALANCE AT 5000 CFM EACH.
 - EXHAUST FAN TO BE MTD. ON CEILING W/ DUCTWORK ROUTED TO SIDEWALL. PROVIDE STORM PROOF WALL CAP W/ BACKDRAFT DAMPER (TYPICAL)
 - 8" EXHAUST DUCT TO WALL CAP
 - WALL CAP W/ BACKDRAFT DAMPER

REQUIRED CARRIER OR LENNOX UNITS

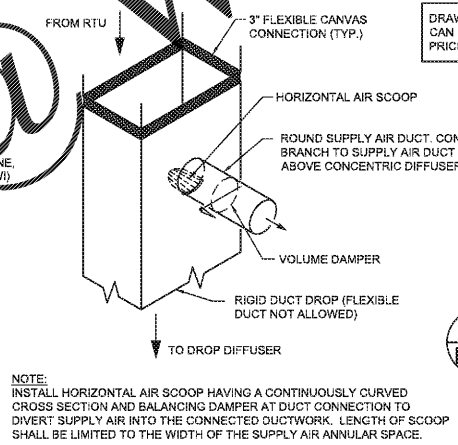
AREA	MFG	STANDARD	UPGRADE	TONnage	HEAT	MODEL NUMBER
-	-	-	-	-	-	-
SOUTH	LENNOX	2	-	12.5 Ton	Electric	ZCA190S4BJ1Y
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

LENNOX PHONE# 972-497-6249 dollargeneral@lennoxind.com

- NOTE:**
 THE TABLE ABOVE IS TO SPECIFY THE MINIMUM REQUIREMENTS OF UNITS TO BE USED. ACTUAL TONNAGE AND INSTALLED ACCESSORIES IS TO BE DETERMINED BY THE DESIGN ENGINEER AND DOLLAR GENERAL. MECHANICAL ENGINEER SHALL PERFORM COMPLETE LOAD CALCULATIONS BASED ON CURRENT STATE AND LOCAL ADOPTED ENERGY CODE REQUIREMENTS AND INFORMATION PROVIDED ON BUILDING ENVELOPE.
- PROVIDE EACH HVAC UNIT WITH:**
- FACTORY INSTALLED:**
- THRU THE ROOF CONNECTIONS
 - LOW / HIGH, HEAT AS REQUIRED (GAS FIRED UNITS).
 - BELT DRIVE W/ STANDARD STATIC OPTION.
 - COATED COILS. (WHEN LOCATED WITHIN 10 MILES FROM SHORELINE).
- FIELD INSTALLED:**
- DISCONNECT
 - CONVENIENCE OUTLET.
 - DUCT SMOKE DETECTOR. (VERIFY LOCATION OF DUCT MOUNTED SMOKE DETECTOR).
 - ELECTRIC HEAT WITH SINGLE POINT CONNECTION KIT, AS SPECIFIED IN SCHEDULE - (ELECTRIC UNITS)
 - ECONOMIZER WITH BAROMETRIC RELIEF (WHERE REQUIRED) / MOTORIZED O.A. DAMPER WITH DUCT MOUNTED BAROMETRIC RELIEF DAMPER AND HOOD KIT (WHEN ECONOMIZER IS NOT REQUIRED).
 - DUAL AIR ENTHALPHY SENSOR (FOR UNITS WITH ECONOMIZER).
 - TWO (2) ADDITIONAL SETS OF FILTERS (POST CONSTRUCTION/PRE TEST AND BALANCE, AND ONE SET TO OWNER FOR FUTURE USE).

AIR BALANCE ANALYSIS

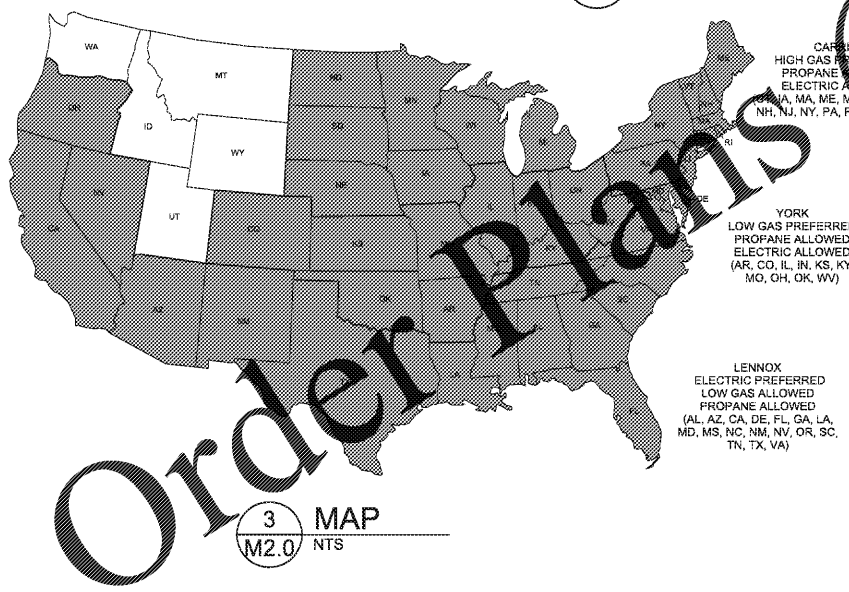
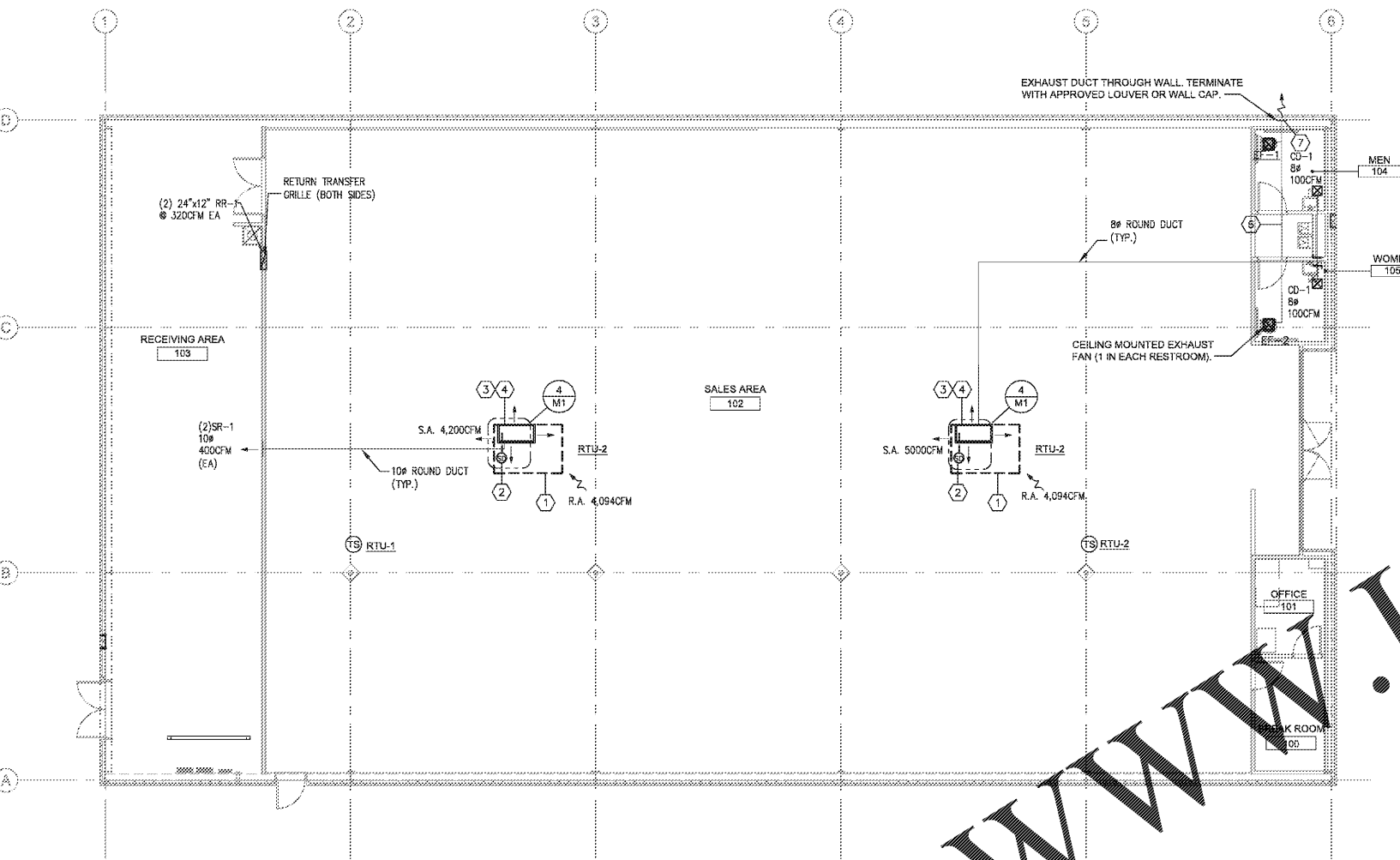
MARK	SUPPLY AIR	OSA INTAKE	RETURN AIR	EXHAUST AIR	BLG. PRESS.
RTU-1	5,000	906	4,094	--	--
RTU-2	5,000	906	4,094	--	--
EF-1	--	--	--	50	-50
EF-2	--	--	--	50	-50
TOTAL	10,000	1,812	8,188	100	+1,712



OUTDOOR AIR CALCULATION

ROOM#	ROOM NAME	PEOPLE OUTDOOR AIR RATE		AREA OUTDOOR RATE (NET AREA)		Vbz		
		Rp	Pz(#PEOP./1000SQFT) (Rp)(Pz)	Ra	Az		(Ra)(Az)	(Rp)(Pz)+(Ra)(Az)
100	BREAKROOM	5	1	5	.06	88	5	10
101	OFFICE	5	1	5	.06	88	5	10
102	SALES AREA	7.5	115	863	.12	7430	692	1,795
103	RECEIVING	--	--	--	.06	925	56	56
TOTAL	--	--	--	--	--	8,531	--	1,811

TABLE NOTES:
 1. BASED ON 2012 IBC TABLE 403.3.



EQUIPMENT LABEL SPECS

- ALL HVAC EQUIPMENT SHALL BE FURNISHED WITH BLACK LAMINATED PLASTIC LABEL W/ WHITE ENGRAVED LETTERING & FASTENED MECHANICALLY TO EQUIPMENT.
- LABEL SHALL HAVE THE FOLLOWING INFORMATION W/ 1/2" LETTERING: EQUIPMENT # SUITE/SPACE #

SMOKE DETECTOR DRAWING NOTE

- THE DUCT SMOKE DETECTORS SHALL BE INSTALLED TO STOP THE FAN IN THE HVAC DUCT SYSTEM OVER 2000CFM PER NFPA 90A:6.4.2(1)
- THE ACTIVATION OF A DUCT SMOKE DETECTOR SHALL ACTIVATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL AT A CONSTANTLY ATTENDED LOCATION.
- SMOKE DETECTOR TROUBLE CONDITION SHALL BE INDICATED VISUALLY OR AUDIBLY IN A NORMALLY OCCUPIED AREA AND SHALL BE IDENTIFIED AS AIR DUCT DETECTOR TROUBLE.
- PROVIDE A REMOTE ALARM INDICATOR, ANNUNCIATOR IN ACCORDANCE WITH NFPA 72:6.10.2.

403.3.1.1.1 Breathing zone outdoor airflow. The outdoor airflow rate required in the breathing zone (Vbz) of the occupiable space or spaces in a zone shall be determined in accordance with Equation 4-1.

$$V_{bz} = R_p P_z + R_a A_z$$

where:
 Vbz = Breathing zone outdoor airflow rate (cfm) required for the space or spaces in the zone
 Rp = Base population factor (number of people in the space or spaces in the zone)
 Pz = Breathing zone outdoor air rate (cfm/person) required per person (see Table 403.3.1.1)
 Ra = Base outdoor air rate (cfm/sq ft) required per square foot (see Table 403.3.1.1)
 Az = Base outdoor air rate (cfm/sq ft) required per square foot (see Table 403.3.1.1)

DESIGNER GENERAL NOTE:
 THE DESIGNER SHALL BE RESPONSIBLE FOR CHECKING THE DESIGNER'S DRAWINGS FOR CONFORMANCE WITH ALL CITY, STATE, FEDERAL, AND LOCAL CODES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL DESIGN CONDITIONS PRIOR TO CONSTRUCTION WITH THE WORK. MATERIALS, METHODS, WORKMANSHIP, ETC. ANY DISCREPANCIES BETWEEN THESE DOCUMENTS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ANY WORK BEING DONE. ANY REQUIRED ENGINEERING CHANGES TO MATCH THE EXISTING SITE CONDITIONS SHALL BE TREATED AS ADDITIONAL SERVICES.