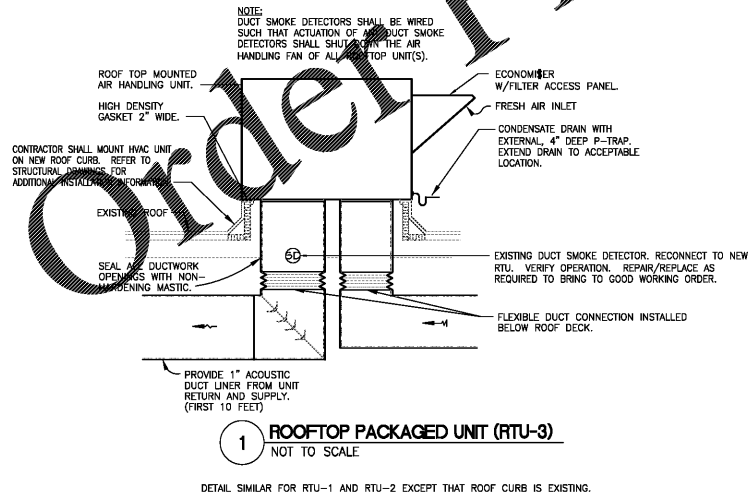


HVAC GENERAL NOTES	
1. THE CONTRACTOR SHALL PROVIDE ALL MATERIAL AND EQUIPMENT IN STRICT ACCORDANCE WITH APPLICABLE CODES AND STANDARDS, AND PER MANUFACTURER'S DIRECTIONS.	16. AS REQUIRED BY LOCAL CODES, CONTRACTOR SHALL PROVIDE U.L. LISTED FIRE DAMPERS WHERE REQUIRED FOR FIRE PROTECTION REQUIREMENTS OF THE HVAC SYSTEM & THE UL ASSEMBLY.
2. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS, LICENSE, INSPECTIONS, APPROVALS, AND FEES.	17. PROVIDE 1 YEAR WARRANTY ON ALL EQUIPMENT AND 5 YEAR WARRANTY ON ALL COMPRESSORS.
3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES BEFORE INSTALLATION OF ANY MATERIALS OR EQUIPMENT.	18. ALL ACTUATORS ON MOTORIZED DAMPERS, SMOKE DAMPERS, AND FIRE-SMOKE DAMPERS SHALL BE LOW VOLTAGE UNLESS OTHERWISE NOTED.
4. THESE DRAWINGS ARE DIAGNOSTIC AND SHOW GENERAL LOCATION AND ARRANGEMENT OF ALL MATERIALS AND EQUIPMENT. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS BUILDING CONSTRUCTION AND ALL OTHER WORK WILL PERMIT.	19. REFER TO APPENDIX B FOR SITE SEISMIC CLASSIFICATION. A COMPLETE SYSTEM OF SEISMIC RESTRAINTS SHALL BE DESIGNED BY MASON INDUSTRIES (OR EQUAL) AND SEALED BY THEIR REGISTERED ENGINEER AND INSTALLED BY THIS CONTRACTOR AS REQUIRED BY APPLICABLE CODES FOR THE LOCALITY OF THIS PROJECT. SEISMIC RESTRAINTS FOR SEISMIC CLASSES D, E, AND F SHALL BE SUBMITTED TO THE DESIGN PROFESSIONAL FOR REVIEW PRIOR TO INSTALLATION.
5. DO NOT SCALE DRAWINGS FOR MEASUREMENTS.	20. ALL MAIN DUCTWORK SHALL BE GALVANIZED SHEET METAL CONSTRUCTED IN ACCORDANCE WITH SMCA STANDARDS. RUNOUTS (CONCEALED ABOVE CEILING) FROM MAIN BRANCH DUCTS MAY BE FLEXIBLE DUCT CONFORMING TO THE REQUIREMENTS OF UL IN FOR CLASS I FLEXIBLE AIR DUCTS. MAXIMUM 12'-0" FLEX PER RUNOUT.
6. ALL DUCT DIMENSIONS SHOWN ARE INTERIOR DUCT DIMENSIONS.	21. THE CONTRACTOR SHALL PROVIDE LOW VOLTAGE CONTROL LINES TO THE PACKAGE UNIT. COORDINATE ROUTING AND INSTALLATION.
7. ALL PENETRATIONS THROUGH EXTERIOR WALLS SHALL BE FLASHED AND COUNTERFLASHED IN A WEATHERPROOF MANNER. (COLOR TO MATCH EXTERIOR).	22. CONTRACTOR SHALL VERIFY LOCATION OF ALL PENETRATIONS FOR HALL CAPS WITH ARCHITECT & OWNER PRIOR TO INSTALLATION.
8. SEAL ALL PENETRATIONS OF RATED WALLS WITH FIRE DAMPER, SEALANT MATERIAL APPROVED BY LOCAL CODE.	23. CONTRACTOR SHALL PAINT ALL VENT CAPS. CONFIRM COLOR WITH ARCHITECT & OWNER PRIOR TO INSTALLATION.
9. ALL SUSPENDED MATERIALS AND EQUIPMENT SHALL BE INDIVIDUALLY SUPPORTED FROM THE BUILDING STRUCTURE. DO NOT SUSPEND ITEMS FROM THE CEILING OR ITS SUPPORT SYSTEM.	24. PENETRATIONS OF RATED WALLS, PARTITIONS AND FLOORS OF NON-COMBUSTIBLE CONSTRUCTION SHALL BE FIRESTOPPED WITH NON-COMBUSTIBLE MATERIALS. PENETRATIONS OF MASONRY WALLS, PARTITIONS AND FLOOR OF COMBUSTIBLE CONSTRUCTION SHALL BE FIRESTOPPED WITH MATERIALS EQUIVALENT TO TWO INCHES OF WOOD. FIRESTOPPING SHALL COMPLY WITH ASTM E-84.
10. INSTALL ALL CONTROL DEVICES, INCLUDING THERMOSTATS AND SWITCHES, 4'-0" ABOVE FINISHED FLOOR. PROVIDE THE REQUIRED DEVICE(S) FOR ALL SYSTEMS WHETHER LOCATED ON THE PLANS OR NOT.	25. CONTRACTOR RESPONSIBLE FOR ALL CUTTING AND PATCHING OF WALLS AND FLOORS FOR MECHANICAL EQUIPMENT.
11. LOCATE CEILING DIFFUSERS IN ACCORDANCE WITH ARCHITECTURAL REFLECTED CEILING PLANS (IF PROVIDED).	
12. PROVIDE MANUFACTURER'S RECOMMENDED CLEARANCES AROUND MECHANICAL UNITS FOR MAINTENANCE AND FILTER REMOVAL.	
13. ALL PIPING AND DUCTWORK LOCATIONS SHALL BE COORDINATED WITH WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS, TO AVOID INTERFERENCE.	
14. REFER TO MECHANICAL DUCTWORK AND INSULATION NOTES ON MECHANICAL FLOOR PLAN FOR DUCTWORK INSULATION REQUIREMENTS.	
15. CERTIFIED TEST AND BALANCE CONTRACTOR SHALL BALANCE SYSTEM TO AIR QUANTITIES INDICATED ON PLANS AND PROVIDE OWNER'S REPRESENTATIVE AND TD PROJECT MANAGER WITH COMPLETE BALANCE REPORT. IF BALANCING DAMPERS ARE NOT PROVIDED IN RETURN DUCTWORK, CONTRACTOR SHALL BALANCE SUPPLY SIDE TO AIR QUANTITIES INDICATED ON PLANS AND SHALL BALANCE OUTSIDE AIR AND RETURN AIR FLOWS AT THE AIR HANDLER TO AIR QUANTITIES INDICATED IN THE SCHEDULE. PROVIDE NEW AIR FILTERS FOR EACH UNIT.	

VENTILATION CALCULATIONS	
CALCULATIONS BASED ON THE 2015 INTERNATIONAL MECHANICAL CODE TABLE 403.3	
RTU-1 SERVING SALES FLOOR: SALES FLOOR (SUPERMARKET) = (3635 SQFT X 0.06 CFM/SQFT) + (3635 SQFT X 6 PERSON/1000 SF X 7.5 CFM/PERSON) = 436 CFM TOTAL = 436 CFM / 0.8 ZONE EFFECTIVENESS = 545 CFM 550 CFM OUTSIDE AIR SHALL BE PROVIDED FOR RTU-1.	
RTU-2 SERVING SALES FLOOR: SALES FLOOR (SUPERMARKET) = (4211 SQFT X 0.06 CFM/SQFT) + (4211 SQFT X 6 PERSON/1000 SF X 7.5 CFM/PERSON) = 505 CFM TOTAL = 505 CFM / 0.8 ZONE EFFECTIVENESS = 631 CFM 650 CFM OUTSIDE AIR SHALL BE PROVIDED FOR RTU-2.	
RTU-3 SERVING SALES FLOOR, STOCK ROOM, OFFICE AND HALL: SALES FLOOR (SUPERMARKET) = (1064 SQFT X 0.06 CFM/SQFT) + (1064 SQFT X 6 PERSON/1000 SF X 7.5 CFM/PERSON) = 128 CFM STOCK ROOM (RECEIVING) = (416 SQFT) X (0.12 CFM/SQFT) = 180 CFM HALL (CORRIDOR) = (50 SQFT) X (0.06 CFM/SQFT) = 5 CFM TOTAL = 313 CFM / 0.8 ZONE EFFECTIVENESS = 391 CFM 400 CFM OUTSIDE AIR SHALL BE PROVIDED FOR RTU-3.	



HVAC UNITS AND ACCESSORIES SHALL BE SUPPLIED BY FAMILY DOLLAR AND INSTALLED BY CONTRACTOR. REFER TO HVAC SCHEDULE NOTES FOR ADDITIONAL CONTRACTOR RESPONSIBILITIES.

UNIT NO.	SUPPLY - FAN DATA				HEATING CAPACITY			COOLING CAPACITY				ELECTRICAL DATA				CONTROL SCHEME	MANUFACTURER & MODEL	NOTES	HEIGHT (LBS)
	TOTAL CFM	O/A CFM	MIN. EXT. S.P. (IN. WG)	FAN RPM	MOTOR H.P.	INPUT MBH	OUTPUT MBH	EFF. %	TOTAL MBH	SENSIBLE MBH	SEER EER	VOLT./PH	MCA	MAX FUSE	FLA/LRA				
RTU-1 (10 TONS) (LO HEAT)	4000	550	0.8	866	3.7 BHP (BELT)	80/25	144/100	80.0	131.3	94.1	11.5 EER 14.0 EER	208/3Ø	51.7	60	55/315	THERMOSTAT	YORK ZYG2D	1 2 3 4 5 6 7 8 9 10 11 12 19	1164
RTU-2 (12.5 TONS) (MED HEAT)	4500	650	0.8	930	3.7 BHP (BELT)	220/76	176/141	80.0	149.1	106.2	10.8 EER 12.5 EER	208/3Ø	54.8	70	63/367	THERMOSTAT	YORK ZYG4E	1 2 3 4 5 6 7 8 9 10 11 12 19	1203
RTU-3 (7.5 TONS) (MED HEAT)	3000	400	0.8	795	2.4 BHP (BELT)	80/25	144/100	80.0	98.4	72.2	12.0 EER 14.0 EER	208/3Ø	42.2	50	45/244	THERMOSTAT	YORK ZYG2E	1 2 3 4 5 6 7 8 9 10 11 12 19 20	1136

- NOTES:
- COOLING CAPACITIES ARE RATED IN ACCORDANCE WITH AHRI STANDARDS 210/240 (3-5 TON UNITS) AND 340/360 (6-12.5 TON UNITS) AT 95°F AMBIENT OUTDOOR AIR TEMP, 80°F DRY BULB, 67°F WET BULB ENTRANCE AIR TEMP, AND NOMINAL AIR QUANTITY LISTED.
 - CONTRACTOR SHALL PROVIDE NEW FILTERS IN EACH UNIT AT TURNOVER TO TENANT.
 - HVAC UNITS AND ACCESSORIES SHALL BE SUPPLIED BY FAMILY DOLLAR AND INSTALLED BY CONTRACTOR.
 - NOT USED.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR ALL STARTUP AND WARRANTY WORK. VERIFY ELECTRICAL POWER PRIOR TO INSTALLING UNITS. FAILURE TO DO SO SHALL RESULT IN CONTRACTOR FURNISHING CORRECT UNITS OR POWER AT NO ADDITIONAL COST TO TENANT.

- (ACCESSORIES/OPTIONS REQUIRED BY FD)
- PROVIDE FIELD INSTALLED DIFFERENTIAL ENTHALPY ECONOMIZER WITH 100% BAROMETRIC RELIEF CAPABILITY.
 - FACTORY INSTALLED DIFFERENTIAL ENTHALPY CONTROLS.
 - UNIT SHALL BE SUPPLIED WITH CONTROLS CAPABLE OF CO2 BASED DEMAND CONTROL VENTILATION.
 - PROVIDE FACTORY INSTALLED CONDENSER COIL LOW VOLT MAIL GUARDS.
 - PROVIDE FACTORY INSTALLED DISCONNECT SWITCH.
 - PROVIDE FACTORY INSTALLED NON-POWERED WEATHERPROOF GFCI CONVENIENCE OUTLET.
 - PROVIDE FIELD INSTALLED FLUE DISCHARGE DEFLECTOR WITH EXTENSION TO PROVIDE MINIMUM 3' VERTICAL SEPARATION BETWEEN TOP OF FLUE VENT DISCHARGE AND ADJACENT HVAC UNIT OUTSIDE AIR OPENING.

- (AS NOTED IN SCHEDULE OR AS RECOMMENDED BY MANUFACTURER FOR STORE LOCATION)
- PROVIDE FIELD INSTALLED PROPANE GAS CONVERSION KIT.
 - CONTRACTOR SHALL PROVIDE GAS PRESSURE REGULATOR. (2 PSI TO 1" M.C.)
 - PROVIDE FACTORY INSTALLED COATED EVAPORATOR AND CONDENSER COILS FOR COASTAL/CORROSIVE ENVIRONMENTS.
 - PROVIDE FACTORY INSTALLED STAINLESS STEEL GAS HEAT EXCHANGER FOR COASTAL/CORROSIVE ENVIRONMENTS.
 - PROVIDE FIELD INSTALLED GAS HEAT HIGH ALTITUDE CONVERSION KIT FOR ALTITUDES 2000 FT TO 6000 FT.
 - PROVIDE VARIABLE FREQUENCY DRIVE (VFD) ON SUPPLY AIR FAN.
 - PROVIDE FACTORY INSTALLED THRU-THE-BASE ELECTRICAL CONNECTION.
 - PROVIDE FACTORY ROOF CURB

FAN SCHEDULE											
UNIT NO.	SERVICE	AREA SERVED	CFM	S.P.	RPM	TYPE & ARRANGEMENT	HATS & VOLTAGE	MANUFACTURER & MODEL NO.	DRIVE	CONTROL SCHEME	NOTES
EF-1	EXHAUST	RESTROOMS	75 MIN.	0.25"	950	CEILING	19 HATS 120/1Ø	GREENHECK SP-AUG	DIRECT	A	1, 2, 3, 4, 5 CONTROL HV ROOM LIMITED

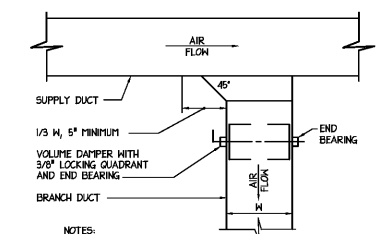
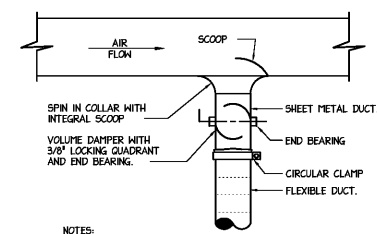
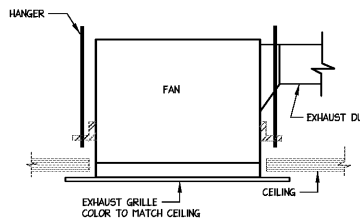
NOTES:

- INTEGRAL BACKDRAFT DAMPER.
- INTEGRAL DISCONNECT SWITCH
- SPEED CONTROLLER LOCATED ABOVE CEILING NEAR FAN
- MODEL RDC - ROUND DUCT CONNECTOR WITH DAMPER.
- NC - HOODED HALL GAP WITH BUILT-IN BROODGREEN AND BACKDRAFT DAMPER. SEAL AND CAULK. PAINT TO MATCH EXTERIOR.

DIFFUSER SCHEDULE											
SYMBOL	CFM	NECK SIZE	MODULE SIZE	FRAME TYPE	PATTERN	DAMPER	MATERIAL	SERIES	FINISH	MANUFACTURER	NOTES
(A)	SEE PLANS	SEE PLANS	12x12	SURFACE	4-WAY	YES	ALUMINUM	SUPPLY	WHITE	METALAIR® 5700	1
(B)	SEE PLANS	SEE PLANS	24x24	LAY-IN	4-WAY	YES	ALUMINUM	SUPPLY	WHITE	METALAIR® 5700	1
(C)	SEE PLANS	SEE PLANS	SEE PLANS	SURFACE	DOUBLE DEFLECTION	YES	ALUMINUM	SUPPLY	WHITE	METALAIR® V400D	1
(D)	SEE PLANS	SEE PLANS	SEE PLANS	LAY-IN	-	NO	ALUMINUM	RETURN	WHITE	METALAIR® GC1	1
(E)	SEE PLANS	SEE PLANS	SEE PLANS	SURFACE	-	NO	ALUMINUM	TRANSFER	WHITE	METALAIR® RH	1
(F)	SEE PLANS	SEE PLANS	SEE PLANS	DOOR	-	NO	ALUMINUM	TRANSFER	WHITE	METALAIR® DG DF	1

NOTES:

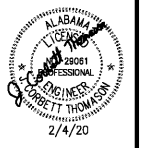
- DIFFUSER DESIGNATIONS ON PLANS FOLLOW: DIFFUSER OR NECK SIZE - DIFFUSER TYPE - AIR QUANTITY -



NOTE TO MEP CONTRACTORS

- RUN ALL ELECTRICAL CONDUITS, PLUMBING PIPING SO AS NOT TO INTERFERE WITH STORE FIXTURE EQUIPMENT LAYOUTS, OR ANY OTHER FAMILY DOLLAR EQUIPMENT.
- MEP CONTRACTORS TO ROUTE ALL CONDUITS, PLUMBING PIPING TIGHT TO STRUCTURE AND PERPENDICULAR TO HALL IN AN ORDERLY MANNER.

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revision	date	description

revision	date	designed	checked



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FAMILY DOLLAR
FAMILY DOLLAR STORE, FDS #791801
SEMA-A
MECHANICAL COVER SHEET

sheet
M-1