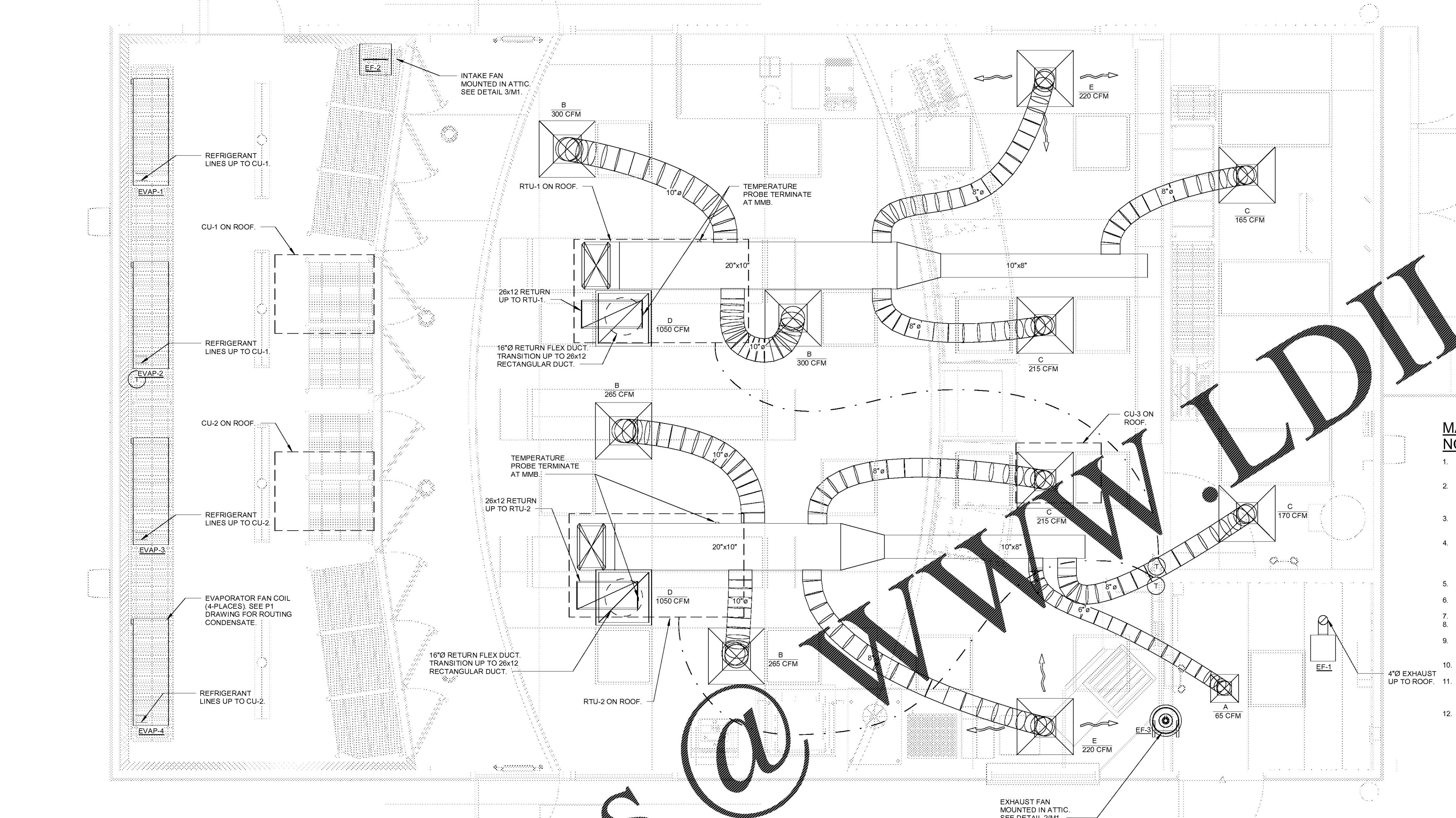
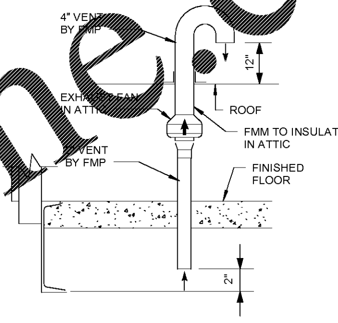


1 / M1 MECHANICAL PLAN
1/2" = 1'-0"

GENERAL NOTES

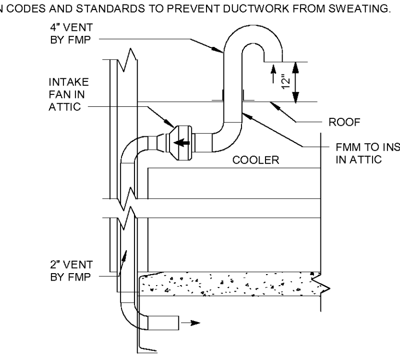
1. ALL MECHANICAL EQUIPMENT SHALL BEAR THE U.L. LABEL.
2. ALL EQUIPMENT IS TO BE STARTED UP AND RUN IN SHOP BEFORE BUILDING SHIPMENT.
3. HVAC EQUIPMENT SHALL BE TESTED IN ACCORDANCE WITH APPLICABLE MECHANICAL CODE (REF. SHEET CS1).
4. HVAC DUCTING MATERIAL IS TO BE GALVANIZED METAL OR INSULATED FLEX DUCT WITH A FLAME SPREAD INDEX NOT TO EXCEED 25 AND A SMOKE DEVELOPED INDEX OF NOT OVER 50.
5. REFERENCE SHEET EL1 FOR ELECTRICAL EQUIPMENT REQUIREMENTS.
6. ALL SUPPLY DIFFUSER TO HAVE VOLUME DAMPERS.
7. ALL SUPPLY AND RETURN GRILLES TO BE WHITE.
8. FLEX DUCTING TO BE 14'-0" LONG MAX.
9. HVAC RETURN AIR FILTERS IN UNIT ON ROOF.
10. ALL DUCT TAPE MUST CONFORM TO UL 181.
11. ALL SUPPLY DIFFUSER SHALL BE HAVE 4-WAY THROW UNLESS NOTED OTHERWISE ON PLAN.



2 / M1 UNDER FLOOR - EXHAUST
N.T.S.

MANUFACTURING PLANT INSTALLATION NOTES: (FMM)

1. FMM SHALL FURNISH AND INSTALL DUCTS, DIFFUSERS, EQUIPMENT, AND CONTROLS FOR THE COMPLETE H.V.A.C. AND REFRIGERATION SYSTEM AS SHOWN OR NOTED ON PLANS.
2. METAL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET STEEL WITH A MINIMUM THICKNESS AS SPECIFIED IN TABLE M-1. THE DUCTCONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARD, LATEST EDITION.
3. ALL DUCTWORK JOINTS AND SEAMS SHALL BE SECURELY FASTENED AND MADE SUBSTANTIALLY AIRTIGHT. WHERE TAPE IS USED FOR SEALING JOINTS, IT SHALL BE MORE COMBUSTIBLE THAN FLAMEPROOF FABRIC.
4. ALL DUCTWORK SHALL BE INSULATED WITH A MINIUMUM OF 2" THICK, 3/4 POUND DENSITY FOIL FACED FIBERGLASS INSULATION, OR 1" THICK, 1 1/2 POUND DENSITY LINER, HAVING A FLAMESPREAD RATING OF NOT OVER 25, A SMOKE DEVELOPED RATING NOT OVER 50, AND AN R-VALUE OF NOT LESS THAN 5.
5. METAL DUCTWORK SHALL BE SECURELY SUPPORTED, HUNG OR SUSPENDED BY METAL STRAPS AND HANGERS.
6. FLEXIBLE DUCTS AND CONNECTORS SHALL CONFORM TO THE REQUIREMENTS OF U.L. 181 AND BE LABELED AS CLASS 0 OR CLASS 1 FLEXIBLE AIR DUCT.
7. FLEXIBLE DUCTS SHALL BE LIMITED TO 14 FEET LENGTH.
8. FLEXIBLE DUCTS AND CONNECTORS SHALL NOT BE INSTALLED WITHIN 6 FEET OF A HEATING ELEMENT.
9. H.V.A.C. THERMOSTAT SHALL BE CAPABLE OF BEING SET FROM 56 DEGREES FAHRENHEIT TO 85 DEGREE FAHRENHEIT AND SHALL BE CAPABLE OF OPERATING THE SYSTEM HEATING AND COOLING IN SEQUENCE.
10. WHERE H.V.A.C. DUCTS CROSS MODULE LINE, FMM SHALL INSTALL 1/2 INCH THICK X 3/4 INCH WIDE FOAM RUBBER, ADHESIVE BACKED SEALING GASKET.
11. H.V.A.C. SYSTEM SHALL BE STARTED UP, BALANCED TO DESIGN SPECIFICATIONS AND OPERATED IN BOTH HEATING AND COOLING MODES. REFRIGERATION SYSTEMS SHALL BE STARTED UP AND BROUGHT DOWN TO DESIGN TEMPERATURE.
12. ALL DUCTWORK SHALL BE PROPERLY SEALED AND INSULATED PER THE LATEST EDITION CODES AND STANDARDS TO PREVENT DUCTWORK FROM SWEATING.



3 / M1 UNDER FLOOR - INTAKE
N.T.S.

OUTDOOR VENTILATION CALCULATION

ZONE	OCCUPANCY CATEGORY	AREA (net) Az (sf)	OCCUPANCY Rp	OCCUPANCY Ra (cfm/sf)	OCCUPANCY DENSITY	# OF PEOPLE Pz	# OF PEOPLE Pz Cal.	CFM Rp*Pz	CFM Ra*Az	TOTAL REQ. Vbz=Rp*Pz+Ra*Az	EFFECTIVENESS Ez	ZONE CFM Voz=Vbz/Ez	ZONE PRIMARY CFM Vpz	ZONE PRIMARY OUTDOOR Zp=Voz/Vpz	PROVIDED O/A CFM
Sales area	Gas station Sales	525	7.5	0.12	25	13.13	[illegible]	98.44	[illegible]	161.44	[illegible]	161.44	2000	0.08	250
Storage/prep	Storage/prep	140	7.5	0.12	8	1.12	1.12	8.4	[illegible]	[illegible]	1	25	335	0.08	50

RTU SCHEDULE

MARK	MANUFACTURER	MODEL	AIRFLOW	OA (Outside Air)	SA (Supply Air)	TOTAL (MBH)	ELECTRIC HEAT (KW)	MCA	MOCP	SEER	EER	NOTES
RTU-1	CARRIER	50HC-A04A0A3-0K0A0	1200 CFM	150 CFM	1200 CFM	[illegible]	10.5	65 A	70 A	15	13	ALL
RTU-2	CARRIER	50HC-A04A0A3-0K0A0	1200 CFM	[illegible]	1200 CFM	34.6	10.5	65 A	70 A	15	13	ALL

RTU SCHEDULE NOTES:
1. PROVIDE CARRIER MODELS AS SPECIFIED IN SCHEDULE.
2. COOLING CAPACITIES BASED ON 80 F DB / 67 F WB ENTERING COIL, 95 F DB ENTERING CONDENSER.
3. ROOF CURB INSTALLED BY FMS.
4. MECHANICAL CONTRACTOR SHALL PROVIDE A SECOND SET OF FILTERS TO BE INSTALLED PRIOR TO STORE OPENING.
5. UNIT SHALL USE R-410A REFRIGERANT (NO EXCEPTIONS).
6. INSTALLATION OF HVAC BY FMM.
7. HOOK UP AND START UP OF HVAC BY G.C.
8. PROVIDE CARRIER PROGRAMMABLE THERMOSTAT, MODEL [illegible]CSCPACHP-01 OR EQUAL, @ 48" AFF.

CONDENSING UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	VOLTS	PHASE	POWER (HP)	QUANTITY	NOTES
CU-1	RUSSELL	[illegible]	208-230	1	2	1	1-5
CU-2	RUSSELL	[illegible]	208-230	1	2	1	1-4,6
CU-3	FOLLETT	[illegible]	208-230	1	3	1	1-4,7

COOLER CONDENSING UNIT SCHEDULE NOTES:
1. PROVIDE MANUFACTURER AND MODEL AS SPECIFIED OR EQUAL.
2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE SUPPORTS. DO NOT MOUNT DIRECTLY TO ROOF.
4. UNIT INSTALLED ON ROOF. REFER TO M2 FOR LOCATION.
5. SERVES EVAPORATOR COILS 1 & 2.
6. SERVES EVAPORATOR COILS 3 & 4.
7. SERVES ICE MACHINE.

PFS APPROVED
DATE 5/8/18
PFS CORPORATION
Cottage Grove, WI

COOLER EVAPORATOR COIL SCHEDULE

MARK	MANUFACTURER	MODEL	CAPACITY (BTUH) TOTAL @ 10 DEGREE TD	CAPACITY (BTUH) TOTAL @ 12 DEGREE TD	AIRFLOW	VOLTS	PHASE	AMPS	QUANTITY	NOTES
EVAP-1	RUSSELL	AA26115B-AE	11,500	13,800	1,560	115	1	2.0 W	1	1,2,3,4
EVAP-2	RUSSELL	AA26115B-AE	11,500	13,800	1,560	115	1	2.0 W	1	1,2,3,4
EVAP-3	RUSSELL	AA26115B-AE	11,500	13,800	1,560	115	1	2.0 W	1	1,2,3,4
EVAP-4	RUSSELL	AA26115B-AE	11,500	13,800	1,560	115	1	2.0 W	1	1,2,3,4

COOLER EVAPORATOR COIL SCHEDULE NOTES:
1. PROVIDE MANUFACTURER AND MODEL AS SPECIFIED OR EQUAL.
2. MOUNT 1'-0" OFF OF FREEZER / COOLER WALL.
3. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
4. PROVIDED AND INSTALLED BY FREY-MOSS STRUCTURE.

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER	MODEL	AIRFLOW	EXTERNAL STATIC	VOLTS	PHASE	AMPS	NOISE LEVEL	QUANTITY	NOTES
EF-1	BROAN	676	110	0.1	120	1	1.3 W	4.0 SONES	1	1,4
EF-2	FAN TECH	FR110	133	0.6	115	1	80.0 W	-	1	2,5
EF-3	FAN TECH	FR110	133	0.6	115	1	80.0 W	-	1	3,5

EXHAUST FAN SCHEDULE NOTES:
1. CEILING MOUNTED RESTROOM FAN. PROVIDE WHITE METAL GRILLE KIT. 6" DUCT CONNECTION.
2. INLINE INTAKE FAN. MOUNTED IN ATTIC. REFER TO 2/M1.
3. INLINE EXHAUST FAN. MOUNTED IN ATTIC. REFER TO 3/M1.
4. FAN TO BE INTERLOCKED WITH LIGHTS.
5. FAN TO RUN CONTINUOUSLY.

AIR TERMINAL SCHEDULE

MARK	DESCRIPTION	QUANTITY
A	12" X 12" GRILLE WITH 4-WAY THROW 6" NECK DIFFUSER & ADJUSTABLE VOLUME DAMPER	1
B	24" X 24" GRILLE WITH 4-WAY THROW 10" NECK DIFFUSER & ADJUSTABLE VOLUME DAMPER	4
C	24" X 24" GRILLE WITH 4-WAY THROW 8" NECK DIFFUSER & ADJUSTABLE VOLUME DAMPER	4
D	24" X 24" RETURN AIR GRILLE WITH HINGED FRAME FOR ACCESS TO FIRESTAT.	2
E	24" X 24" GRILLE WITH 3-WAY THROW 8" NECK DIFFUSER & ADJUSTABLE VOLUME DAMPER	2

AIR TERMINAL SCHEDULE NOTES:
1. REFER TO MECHANICAL PLAN FOR NECK SIZES.

TABLE M-1

DUCT CONSTRUCTION MINIMUM SHEET METAL GAGES

RECTANGULAR DUCTS

MAX. SIDE (INCHES)	STEEL (MIN. GALV. SHT. GAGE)	ALUMINUM (MIN. B&S GAGE)
THRU 12	26 (0.022")	24 (0.020")
13 THRU 30	24 (0.028")	22 (0.025")
31 THRU 54	22 (0.034")	20 (0.032")
55 THRU 84	20 (0.040")	18 (0.040")
OVER 84	18 (0.052")	16 (0.051")

ROUND DUCTS

DIAMETER (INCHES)	STEEL (MIN. GALV. SHT. GAGE) SPIRAL SEAM DUCT	LONGITUDINAL SEAM DUCT	FITTINGS
THRU 12	28 (0.019")	26 (0.022")	26 (0.022")
13 THRU 18	26 (0.022")	24 (0.028")	24 (0.028")
19 THRU 28	24 (0.028")	22 (0.034")	22 (0.034")
29 THRU 36	22 (0.034")	20 (0.040")	20 (0.040")
37 THRU 52	20 (0.040")	18 (0.052")	18 (0.052")

GreenbergFarrow
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Atlanta, GA 30309
t: 404.601.4000

ISSUE RECORD

DATE	REV. DESCRIPTION
03/29/2018	PERMIT SUBMISSION SET

PROFESSIONAL SEAL
SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No.31307 ERIC MICHAEL WOLF
SOUTH CAROLINA GREENBERG FARROW ARCHITECTURE INCOPORATED No.C01494 CERTIFICATE OF AUTHORIZATION
03/29/2018

PROFESSIONAL IN CHARGE
ERIC WOLF
PROJECT MANAGER
ERIC WONG
QUALITY CONTROL
ERIC WONG
DRAWN BY
AVERY LANE

PROJECT NAME
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MURPHY OIL CONVENIENCE STORE
508 SC - 72
GREENWOOD , SC 29646

FREY-MOSS STRUCTURE
1801 Rockdale Industrial Blvd.
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Fax: (770) 483-6037
FMS JOB NUMBER
G18MU00025
FMS MODEL NUMBER
XXXXXX

PROJECT NUMBER
20170844.0

SHEET TITLE
MECHANICAL PLAN

SHEET NUMBER
M1

PROTO V3.0 01/03/2017