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WAVE ENGINEERING

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WAVE PROJECT # 18072

#ATL034
CONYERS, GA



3/22/18

ISSUED FOR
CONSTRUCTION
1447 Highway 138
Conyers, Georgia 30012
Rockdale County, Georgia

Revisions		
#	Date	Description

Project Number: 18028
Issued for: CONSTRUCTION
Issue Date: 03/22/18

DRAWING TITLE
**MECHANICAL
PLAN AND
SCHEDULES**

SHEET NUMBER
M100

TAG	MANUFACTURER & MODEL NO.	SUPPLY - FAN DATA			COOLING CAPACITY		HEATING CAPACITY		ELECTRICAL		EFF. EER (SEER)	AFUE	WEIGHT (LBS)	NOTES			
		TOTAL CFM	O.A. CFM	MIN. EXT. S.P.	MOTOR HP	TOTAL MBH	SENSIBLE MBH	TONNAGE	MBH OUTPUT	MBH INPUT					VOLTAGE	MCA	MOCP
RTU-1	CARRIER / 48HCRB07A1M5-0F2E0	2400 CFM	470	0.5	1	74.8	49.2	6	144	180	208/3	60 A	46 A	12.0	80	1020	1-12
RTU-2	CARRIER / 48HCEE14A1M5-0F2E0	5000 CFM	830	0.5	1	146.8	89.4	12.5	120	150	208/3	80 A	67 A	12.2	80	2920	1-12

- NOTES:
- COOLING CAPACITIES ARE RATED IN ACCORDANCE WITH ARI STANDARD 210/290 AT 95 DEGREE FARENHEIT AMBIENT OUTDOOR AIR TEMPERATURE, 80 DEGREE FARENHEIT DRY BULB, AND 67 DEGREE FARENHEIT WET BULB ENTERING AIR TEMPERATURE, AND NORMAL AIR QUANTITY LISTED.
 - PROVIDE NEW FILTER IN EACH UNIT AT TURNOVER TO OWNER.
 - PROVIDE MANUFACTURER'S 7-DAY PROGRAMMABLE AUTOMATIC CHANGEOVER HEAT/COOL THERMOSTAT CARRIER 33CS2PP2S-02. PROGRAM FAN SETTING TO BE IN "ON" POSITION DURING PERIODS OF OCCUPATION.
 - PROVIDE FACTORY ROOF CURB AND COMPARTIVE ENTHALPY AIR SIDE ECONOMIZER SECTION WITH BAROMETRIC RELIEF DAMPER FOR EACH UNIT.
 - PROVIDE FACTORY INSTALLED DIRTY FILTER SWITCH AND BLOWER PROVING SWITCH.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE SMOKE DETECTORS ON THE SUPPLY AND RETURN DUCT DISCHARGES TO BE INSTALLED BY MECHANICAL CONTRACTOR. IF BUILDING HAS FIRE ALARM SYSTEM, SMOKE DETECTORS SHALL BE BY FIRE ALARM CONTRACTOR.
 - PROVIDE 1 YEAR PARTS AND LABOR WARRANTY. PROVIDE 5 YEAR PARTS WARRANTY ON COMPRESSORS. PROVIDE 10 YEAR PARTS WARRANTY ON HEAT EXCHANGERS.
 - PROVIDE UNIT WITH THRU BASE PROVISION AND FACTORY FURNISHED NONFUSED DISCONNECT.
 - PROVIDE UNIT WITH TOOLLESS ACCESS PANELS AND HAIL GAUARDS.
 - HEATING CAPACITY BASED ON NATURAL GAS AT 1000 BTU PER CUBIC FOOT AND 0.6 SPECIFIC GRAVITY. PROVIDE PRESSURE REGULATOR TO REDUCE PRESSURE TO 7" W.C. AS NEEDED. PROVIDE WITH STAINLESS STEEL HEAT EXCHANGERS.
 - MECHANICAL CONTRACTOR SHALL PROVIDE A START UP CHECKLIST CONFIRMING ALL UNITS HAVE BEEN PROPERLY STARTED AND CONFIRMED RUNNING PROPERLY.
 - FOR LOCATIONS WITHIN 5 MILE OF COAST LINE PROVIDE EQUIPMENT WITH COASTAL COROSSION KIT.

AIR BALANCE			
EQUIPMENT TAG	OUTSIDE AIR	EXHAUST AIR	
EF-1	-	1800	
EF-2	-	1700	
EF-3	-	1400	
EF-4	-	140	
MAU-1	3934	-	
RTU-1	470	-	
RTU-2	830	-	
TOTALS	5234	5040	
POSITIVE PRESSURE +194 CFM			

MECHANICAL LEGEND

SCHEDULE NUMBER
DIFFUSER DESIGNATION AND CFM

TYP. OF ... NUMBER OF SIMILAR DEVICES

- G- NATURAL GAS PIPING
- CD- CONDENSATE PIPING
- MD- MANUAL VOLUME DAMPER
- BI- MOTORIZED DAMPER
- T- THERMOSTAT
- CO- CARBON MONOXIDE SENSOR
- H- HUMIDITY SENSOR
- SD- STANDARD 4-WAY BLOW SUPPLY DIFFUSER
- 3-WAY BLOW SUPPLY DIFFUSER
- 2-WAY BLOW SUPPLY DIFFUSER
- 1-WAY BLOW SUPPLY DIFFUSER
- LINEAR DIFFUSER
- DIFFUSER BLANK OFF PANEL

MAIN TRUNK AND BRANCH DUCT TAKEOFF, WITH VOLUME DAMPER

ROOF EXHAUST FAN

RETURN OR TRANSFER GRILLE

EXHAUST GRILLE

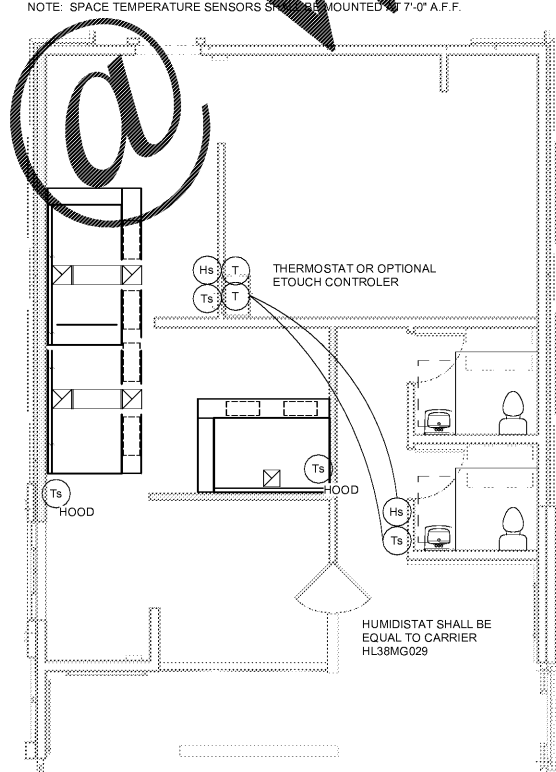
FIRE DAMPER

1" DOOR UNDER CURTAIN

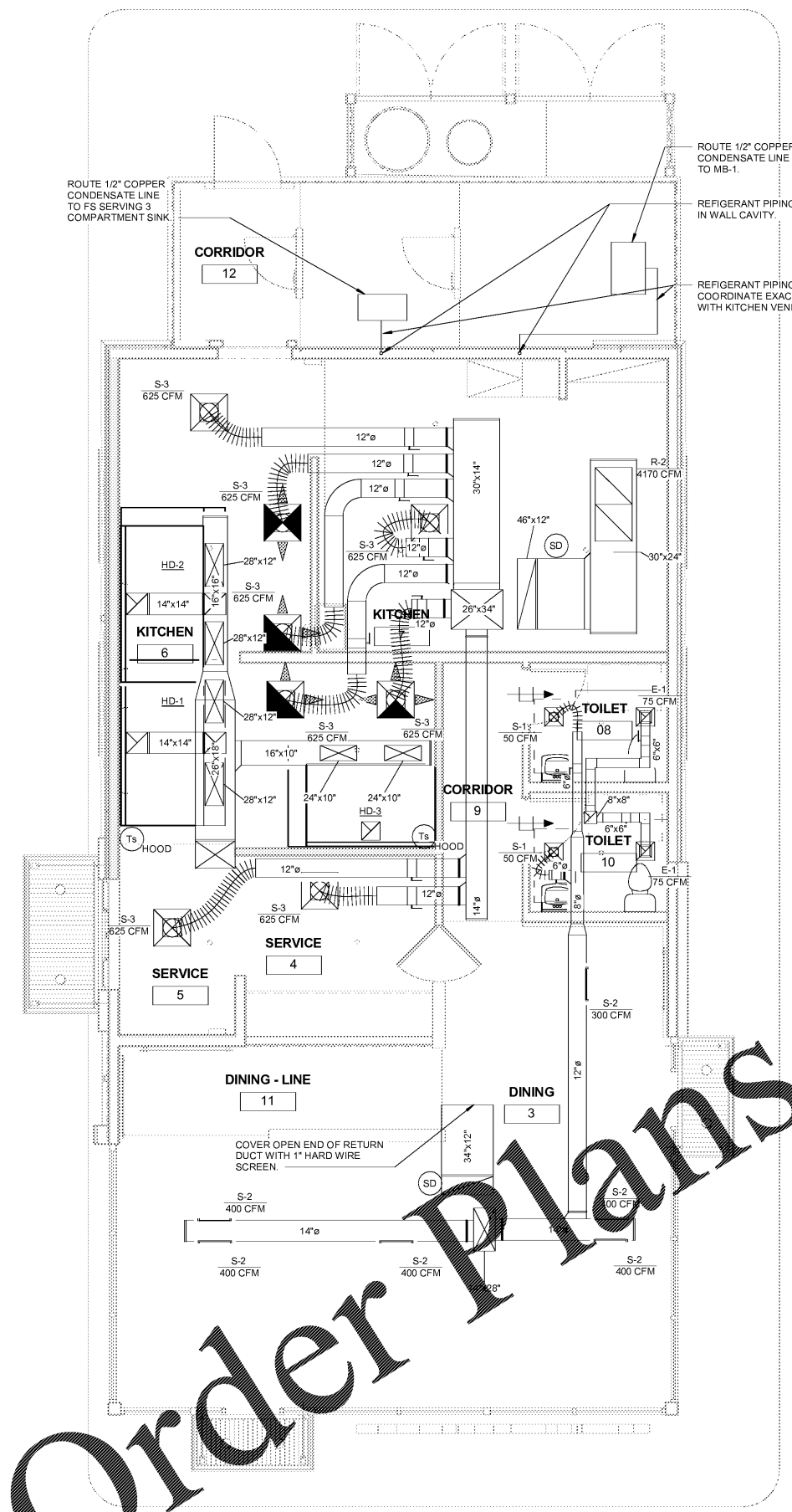
DUCT MODIFIED SMOKE DETECTOR WITH ACCESS DOOR

NOTE: DUCT MAINS SHALL BE INSTALLED TO STRUCTURE. ROUTE BRANCH DUCTWORK THRU AND BETWEEN JOISTS AS MUCH AS POSSIBLE AND AVOID RUNNING ABOVE JOISTS AS MUCH AS POSSIBLE. MAXIMUM OVERHEAD DUCTWORK IS PERMITTED WITH ONLY ONE 90 DEGREE ELBOW PERMITTED. ALL DUCTWORK SHALL BE PERMITTED WITH ONLY ONE 90 DEGREE ELBOW DOWN TO AIR DEVICE SHALL BE HARD PIPED. PROVIDE LOCKING CLAMP AND VOLUME DAMPER IN EACH DUCT SERVING AN AIR DEVICE.

NOTE: SPACE TEMPERATURE SENSORS SHALL BE MOUNTED AT 7'-0" A.F.F.



2 CONTROLS PLAN
3/16" = 1'-0"



1 MECHANICAL SUPPLY / RETURN PLAN
1/4" = 1'-0"

DIFFUSER SCHEDULE

TAG	MANUFACTURER & MODEL NO.	MODULE SIZE	LINE TYPE	PATTERN	DAMPER	MATERIAL	SERVICE	FINISH	NOTES
E-1	TITUS / 50R	12x12	SURFACE	-	YES	ALUMINUM	Exhaust Air	OFF WHITE	1,2
R-2	TITUS / 350R	12x12	LAY-IN	-	-	ALUMINUM	Return Air	OFF WHITE	2
S-1	TITUS / TMS	12x12	SURFACE	4-WAY	YES	ALUMINUM	Supply Air	OFF WHITE	1,2
S-2	TITUS / S300	24x6	DUCT	DBL DEF	YES	ALUMINUM	Supply Air	PAINT GRIP	1,2
S-3	TITUS / TMS	24x24	DUCT	4-WAY	YES	ALUMINUM	Supply Air	OFF WHITE	1,2

- NOTES:
- PROVIDE OPPOSED BLIND DAMPERS IN NECK OF DIFFUSER OR REGISTER, WITH ACCESS TO DAMPER THROUGH FACE OF DIFFUSER OR REGISTER.
 - SUPPLY AIR DEVICES SHALL BE INSULATED WITH INSULATION SEALED TO NECK OF DIFFUSER OR REGISTER TO PREVENT AIR LEAKAGE.

VENTILATION CALCULATIONS BASED ON TABLE 403.3

Name	Area	CFM/SQFT	OCCUPANT DENSITY #/1000 S.F.	OCCUPANCY	CFM/PERSON	OUTDOOR AIR REQUIRED	EFFECTIVENESS	TOTAL OUTDOOR AIR REQUIRED	TOTAL OUTDOOR AIR PROVIDED
KITCHEN	600 SF	0.18	100	60	7.5	558	0.8	697	700
CORRIDOR	61 SF	0.06	0	0	0	4	0.8	5	0
DINING - LINE	85 SF	0.18	100	8	7.5	79	0.8	96	100
TOTALS								800	810

EXHAUST AIR REQUIREMENTS
KITCHEN
643.8 SQ.FT. x 0.7 CFM/SQ.FT. = 450 CFM EXHAUST REQUIRED PER CODE 4900 CFM EXHAUST PROVIDED

TOILETS
70 CFM/FIXTURE x 2 FIXTURES = 140 CFM 140 CFM EXHAUST PROVIDED

Order Plans