

1 HVAC FLOOR PLAN
1/4" = 1'-0"

3 HVAC SYMBOL SCHEDULE

	MECHANICAL EQUIPMENT DESIGNATION AH1, REFER TO MECHANICAL EQUIPMENT TYPES SCHEDULE		WALL-MOUNTED THERMOSTAT		TYPE "B" EXH GR. BALANCE TO CFM INDICATED, SEE EQUIPMENT SCHEDULE, OTHERS SIMILAR		REFRIGERANT SUCTION
	LINEAR SLOT CEILING DIFFUSER TYPE "K", BALANCE TO 200 CFM. SLOT DIFFUSER TAGS WITHOUT A CFM LISTED INDICATE DIFFUSER IS BEING UTILIZED FOR RETURN. FURNISH WITH FBRI RETURN HOOD, REFER TO MECHANICAL SCHEDULES FOR SIZE AND CONFIGURATION		WALL-MOUNTED REMOTE TEMPERATURE SENSOR		TYPE "B" CEILING DIFFUSER (4 WAY THROW UNLESS NOTED OTHERWISE BY SHADING.) BALANCE TO 200 CFM, SEE EQUIPMENT SCHEDULE, OTHERS SIMILAR.		VERIFY ON JOB
RA	RETURN AIR		WALL-MOUNTED REMOTE HUMIDITY SENSOR		DUCT TURNING VANE		DUCT STATIC PRESSURE SENSOR FOR VRF SYSTEM BY MECHANICAL.
SA	SUPPLY AIR		DAINTREE WALL TIMER TO CONTROL EXHAUST FAN, RE: ELECTRICAL		6"x6" RECTANGULAR DUCT		FIRE DAMPER. COORDINATE RATING WITH WALL TYPE.
EXH	EXHAUST AIR		IN-DUCT SMOKE DETECTOR TEST KEY SWITCHES BY MECHANICAL, HARDWIRE TO DETECTOR		12" DIAMETER ROUND DUCT		CLEANOUT
OA	OUTSIDE AIR		REFERENCE TO MECHANICAL KEYNOTE NUMBER 1.		MANUAL BALANCING DAMPER (MBD)		
			REFER TO DETAIL 2, SHEET M2.01		MOTORIZED CONTROL DAMPER (MCD)		
			RETURN AIR GRILLE IN CEILING, SEE EQUIPMENT SCHEDULE, OTHERS SIMILAR.		REFRIGERANT LIQUID		

GENERAL NOTES

- ALL WORK SHALL COMPLY WITH 2018 NORTH CAROLINA MECHANICAL CODE WITH ALL LOCAL AMENDMENTS AND ORDINANCES; HENCEFORTH REFERRED TO AS THE NCMC.
- ALL SUPPLY, RETURN, OUTSIDE, AND EXHAUST AIR DUCTWORK INSIDE BUILDING SHALL BE WRAPPED WITH 2" INSULATION (MIN. R-6 INSTALLED). SIZES SHOWN ARE SHEET METAL DIMENSIONS.
- LAY-IN RETURN GRILLES SHALL BE EQUIPPED WITH PRICE MODEL RAC RETURN AIR CANOPY OR APPROVED EQUAL PRODUCT.
- PROVIDE PERMANENT PRINTED LABELS FOR THERMOSTATS INDICATING AREA(S) SERVED.
- CEILING SPACE IS BEING UTILIZED AS AN RA PLENUM. MATERIALS WITHIN PLENUM SPACE SHALL BE RATED FOR SUCH USE. NO PLASTIC PIPING PERMITTED IN CEILING PLENUM.
- CONTROLS FOR VRF SYSTEMS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR. ALL OTHER HVAC EQUIPMENT SHALL BE CONTROLLED BY THE DAINTREE BMS PROVIDED BY ELECTRICAL. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ALL REQUIREMENTS. VRF CONTROLS SHALL TIE INTO DAINTREE FRONT END JACE PANEL.
- DAINTREE DEVICES ARE SHOWN ON MECHANICAL PLANS FOR COORDINATION PURPOSES AND TO SHOW SUGGESTED LOCATIONS. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ALL REQUIREMENTS.
- PROVIDE DAINTREE SUPPLY DUCT TEMPERATURE SENSOR IN ALL SUPPLY MAINS.
- AT EACH HVAC FAN MOTOR, PROVIDE DAINTREE CURRENT SENSOR WIRED TO WGA100 ADAPTER.
- PROVIDE DAINTREE OUTDOOR AIR TEMPERATURE SENSOR MOUNTED ON WALL ABOVE ELECTRIC METER/MAIN PANELS, UNLESS SHOWN OTHERWISE.
- COORDINATE EXACT HVAC SENSOR ROUGH-IN LOCATIONS IN FIELD WITH ARCHITECT/OWNER.
- TOP OF TEMPERATURE CONTROLS SHALL BE 40" A.F.F. UNLESS NOTED OTHERWISE.
- ALL AIR FLOWS SHALL BE BALANCED TO WITHIN +/- 10% OF SCHEDULED VALUES.
- PROVIDE A DUCT DETECTOR IN ALL RETURN AIR MAINS PER NCMC SECTION 606.2

KEYNOTES

- 10"x10" WRAPPED EXHAUST DUCT UP TO FAN ON ROOF.
- INDOOR UNIT SUSPENDED FROM ROOF STRUCTURE ABOVE CEILING, RE: 4M2.05 FOR DETAIL. RE: 1M2.02 FOR CONDENSATE DRAIN ROUTE.
- INDOOR UNIT MOUNTED ON WALL. RE: 1M2.02 CONDENSATE DRAIN ROUTE.
- DUCT RISE TO RUN ABOVE TRANSACTION VESTIBULE CEILING.
- BACKUP EXHAUST FAN INSTALLED INTO DATA ROOM, SUSPENDED FROM STRUCTURE ABOVE. ROUTE 12" DIA. EXHAUST DUCT THROUGH DATA ROOM WALL TO CEILING PLENUM. INSTALL 12" x 8" LOUVERED TRANSFER GRILLE IN WALL ADJACENT TO LOUNGE AS SHOWN. REFER TO BACK UP VENTILATION SYSTEM DETAIL, RE: 3M2.06.
- VRF BRANCH SELECTOR BOX, COORDINATE EXACT LOCATION IN FIELD TO MAINTAIN PROPER ACCESS.
- TRANSFER AIR DUCT TO PROVIDE RETURN AIR THROUGH UP TO DECK WALL. PROVIDE DUCTWORK IN CEILING SPACE.
- 16" x 16" WRAPPED OUTSIDE AIR DUCT UP TO INTAKE ON ROOF.
- PROVIDE REMOTE CABLE BALANCING CONTROL FOR THIS BRANCH DUCTWORK. DAMPER SHOWN FOR BRANCH SHALL BE YOUNG REGULATOR MODEL 5020CC2 OR EQUAL. PROVIDE YOUNG REGULATOR BOWDEN CABLE CONTROL SYSTEM MODEL 270-275-PH (PHILLIPS HEAD ADJUSTMENT TOOL) AND MOUNT OPERATOR ABOVE ACCESSIBLE CEILING AS SHOWN. SECURE OPERATOR TO WALL ABOVE CEILING AND PROVIDE PERMANENT LABEL FOR DAMPER DESCRIPTION.
- REMOTE CABLE CONTROL OPERATOR(S).
- OPEN END RA DUCT FOR PLENUM RETURN.
- DUCT TO RISE OVER ADJACENT HEAT PUMP UNIT.
- DUCT TO RISE AT A 45 DEGREE ANGLE.
- DUCT TO DROP AT A 45 DEGREE ANGLE.
- DUCT TO TURN AT A 90 DEGREE ANGLE TO AVOID BEAM.



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52 HARPER LANE

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TITLE:
HVAC FLOOR PLANS

SHEET:

M2.01



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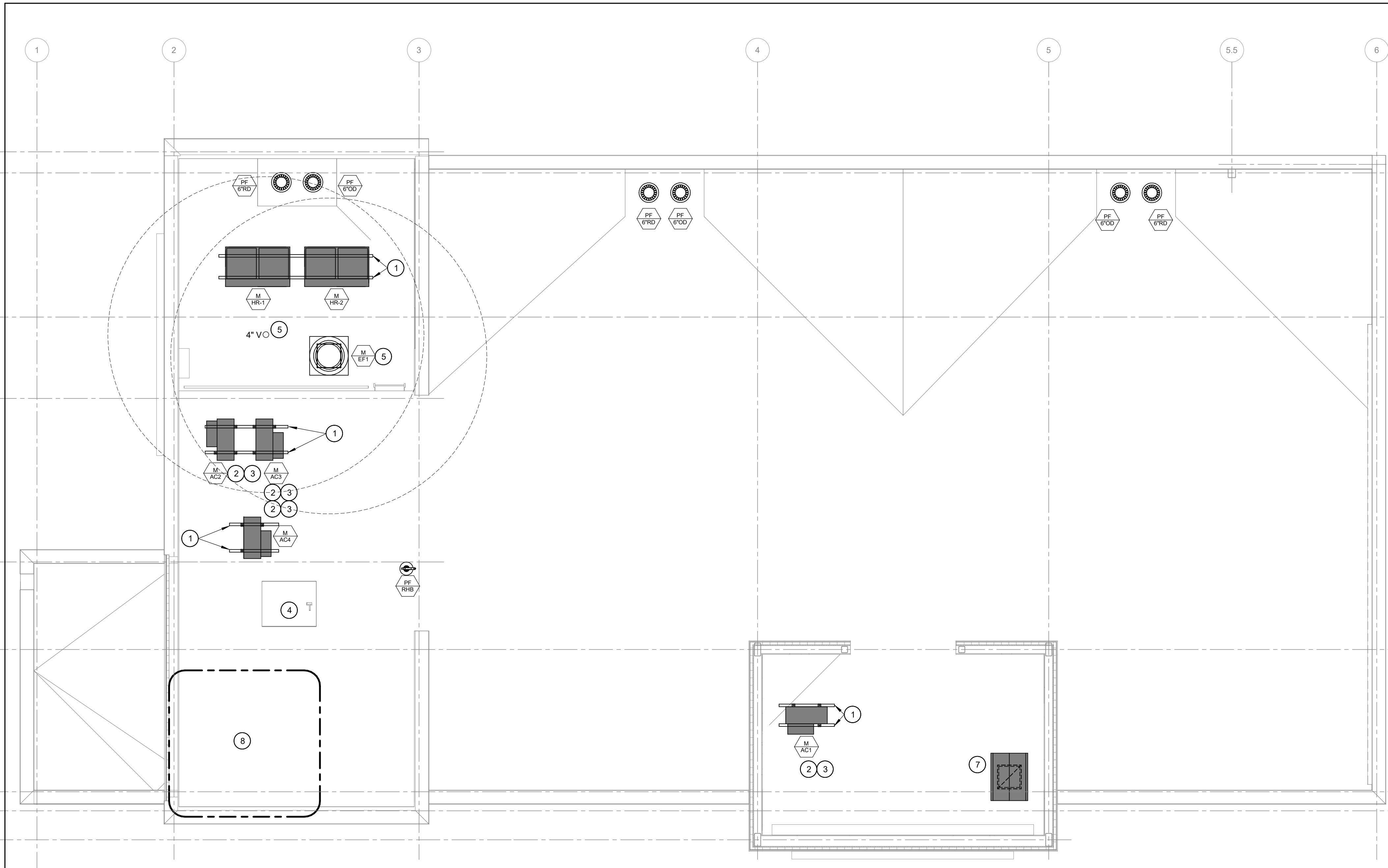
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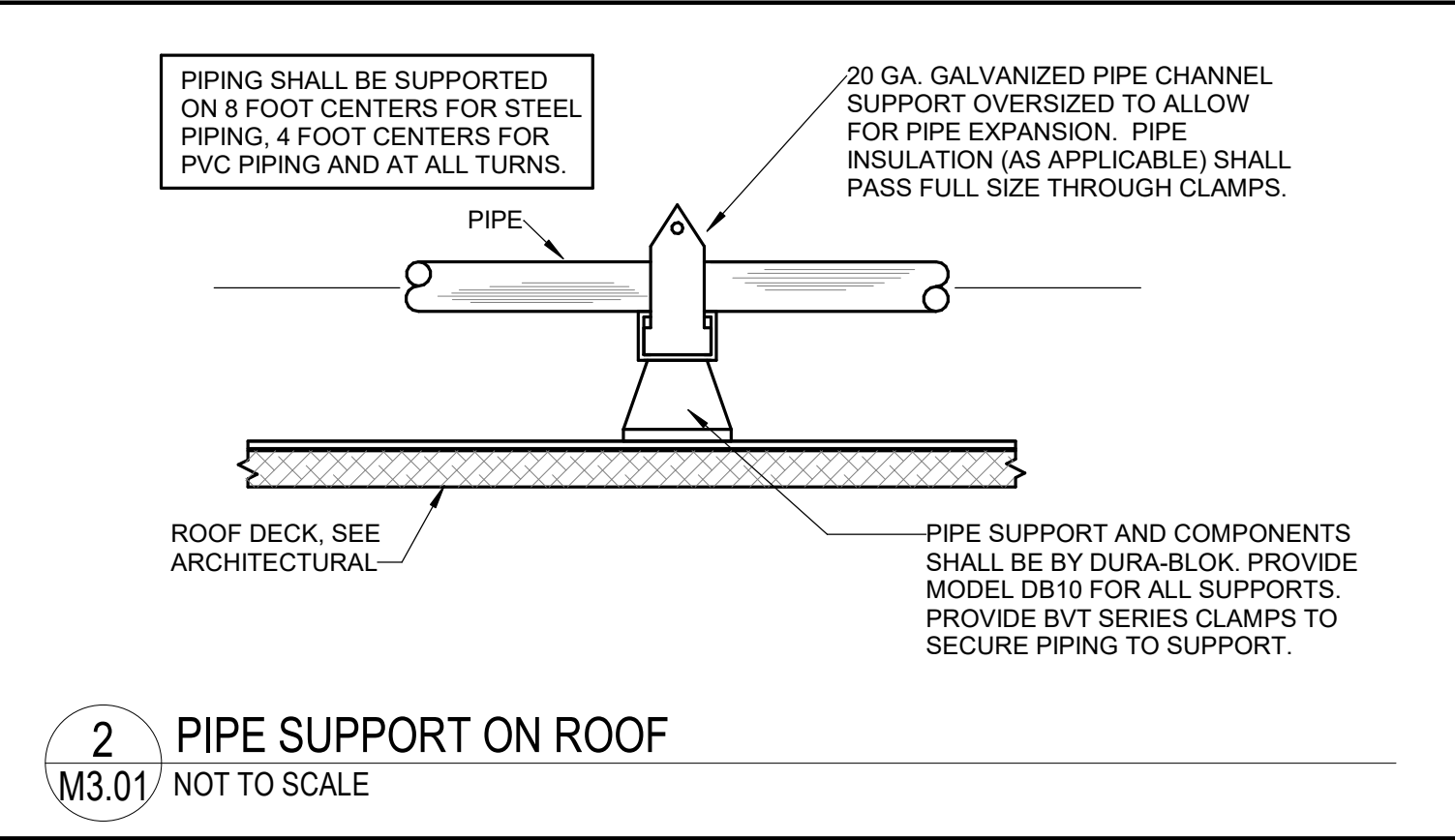
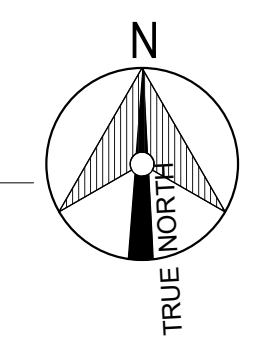
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M3.01

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1 HVAC ROOF PLAN
M3.01 1/4" = 1'-0"



GENERAL NOTES

- CONTRACTOR SHALL COORDINATE ALL EQUIPMENT DIMENSIONS WITH BUILDING STRUCTURE PRIOR TO FABRICATING DUCTWORK. CONTRACTOR SHALL NOTIFY ARCHITECT AND ENGINEER REGARDING ANY DISCREPANCIES/CONFLICTS THAT WILL INCUR ADDITIONAL COSTS PRIOR TO CONTINUING WORK.
- COORDINATE EXACT ROOF DRAIN LOCATIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- PIPING INSULATION FOR REFRIGERANT LINES EXPOSED ON ROOF SHALL BE PROTECTED WITH A LAYER OF POLYGUARD ALUMAGUARD OR OTHER APPROVED JACKETING. JACKETING SHALL BE APPLIED WITHIN 72 HOURS OF PIPING INSTALLATION TO PREVENT PERMANENT UV DAMAGE TO INSULATION.
- REFER TO ARCHITECTURAL DRAWINGS FOR APPROVED ROOF PENETRATION METHODS AND MATERIALS.
- ACCESS TO EQUIPMENT SHALL BE MAINTAINED TO MEET MANUFACTURER AND CODE REQUIREMENTS.
- ALL ROOFTOP EQUIPMENT SHALL BE ANCHORED PER NCMC 301.15 AND 2018 NORTH CAROLINA BUILDING CODE 1609.1 TO MEET WIND RATING OF 125 MPH.
- CONTROLS WIRING FROM OUTDOOR UNITS TO INDOOR UNITS SHALL BE INSTALLED IN CONDUIT.

KEYNOTES

- RE: 1M2.05 FOR SUPPORT RAIL DETAIL.
- PROVIDE PIPE SUPPORTS FOR ALL EXPOSED REFRIGERANT LINES, CONDENSATE DRAINS, CONDUITS, ETC. RE: 2M3.01.
- ROUTE REFRIGERANT LINES AND CONTROLS CONDUITS TO INDOOR UNITS. RE: ARCH DRAWINGS FOR APPROVED ROOF PENETRATION METHODS.
- ROOF ACCESS HATCH (BY OTHERS). MAINTAIN REQUIRED CLEARANCES.
- LOCATE EXHAUST FAN AND VENT NO LESS THAN 10'-0" FROM FRESH AIR INTAKES.
- FOR UNIT CONTROLS, PROVIDE FAN PROOF CT WIRED, VIA LOW VOLTAGE, TO DAINTREE ADAPTER. PROVIDE SUPPLY DUCT PROBE TEMPERATURE SENSOR FOR UNIT AND CONNECT TO DAINTREE ADAPTER.
- OA INTAKE SHALL BE GREENHECK FGI SERIES, NOMINAL 36"x28" OVERALL SIZE WITH 18"x18" THROAT. INTAKE AND CURB SHALL BE HIGH WIND RATED FOR 125 MPH. PROVIDE 16" TALL ROOF CURB. INTAKE BASE HEIGHT SHALL BE 5". PROVIDE ALUMINUM BIRD SCREEN, "PERMATECTOR" COATING ON INTAKE AND CURB (COLOR BY ARCHITECT), FOAM APPLIED CURB SEAL, 1" FACTORY HOOD INSULATION, AND TIE DOWN POINTS. CURB SHALL BE INSULATED, DOUBLE-WALL WITH NO EXPOSED INSULATED MATERIAL.
- AREA ABOVE DATA ROOM SHALL BE FREE OF MECHANICAL EQUIPMENT AND THERE SHALL BE NO ROOFTOP PENETRATIONS ABOVE THIS AREA.



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