

SHEET NAMING CONVENTION

M-001A

- 2 DIGIT DISCIPLINE DESIGNATOR (IF ONLY ONE LETTER IS USED, THE SECOND LETTER IS REPLACED WITH A DASH "-" AS A PLACEHOLDER)
1 DIGIT AREA DESIGNATOR (AREA DESIGNATOR ONLY USED WHEN PLANS ARE SUBDIVIDED INTO AREAS.)
1 DIGIT SHEET TYPE DESIGNATOR
0 - GENERAL
1 - PLANS
2 - ELEVATIONS
3 - SECTIONS
4 - ENLARGED PLANS
5 - DETAILS
6 - SCHEDULES AND DIAGRAMS
7 - VARIES
8 - VARIES
9 - 3D VIEWS (ISO, PERSPECTIVES)

HVAC DESIGN CRITERIA

PROJECT LOCATION: FULTON COUNTY AIRFIELD, GA
LATITUDE: 33.78 N
LONGITUDE: 84.52 W
ELEVATION: 840 FT.

STANDARD DESIGN CONDITIONS
WINTER DESIGN DRY BULB (99.0%): 25.2 °F
SUMMER DESIGN DRY BULB (1.0%): 91.5 °F
SUMMER DESIGN WET BULB (1.0%): 76.7 °F

DEHUMIDIFICATION DESIGN CONDITIONS
DEWPOINT (1.0%): 73.4°F
HUMIDITY RATIO (1.0%): 128
MEAN COINCIDENT DRY BULB (1.0%): 83.4 °F

INDOOR DESIGN CONDITIONS

Table with columns: SPACE CATEGORY, COOLING (OCC, UNOCC, OCC DP), HEATING (OCC, UNOCC). Rows include ADMINISTRATION SPACES, COMM ROOMS, HANGAR, MECHANICAL ROOMS.

GENERAL MECHANICAL NOTES

- 1. INSTALLATION OF HVAC WORK SHALL BE COORDINATED WITH OTHER TRADES BEFORE ANY INSTALLATION IS MADE. DUCTWORK SHOWN ON PLANS IS SCHEMATIC. DUCTWORK SHALL BE INSTALLED TIGHT TO STRUCTURE. ALL TRANSITIONS, ELBOWS, ETC. REQUIRED TO AVOID CONFLICTS & MAXIMIZE CEILING HEIGHTS. EQUIPMENT, PIPING OR DUCTWORK INTERFERING WITH OTHER TRADES SHALL BE RELOCATED AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
2. COORDINATE MECHANICAL AND ELECTRICAL SUCH THAT MECHANICAL PIPING, DUCTWORK AND EQUIPMENT IS NOT LOCATED OVER OR ABOVE ANY ELECTRICAL, COMMUNICATIONS, OR DATA EQUIPMENT.
3. AT START OF CONSTRUCTION PREPARE TYPED LISTS OF EQUIPMENT THAT ARE SUPPLIED REQUIRING ELECTRICAL WORK, AND SEND LISTS TO THE ELECTRICAL CONTRACTOR FOR REVIEW AND COORDINATION.
4. WRITTEN DIMENSIONS ON DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.
5. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S APPROVED CLEARANCE, UNIFIED FACILITIES CRITERIA, AND INTERNATIONAL BUILDING CODE / INTERNATIONAL MECHANICAL CODE.
6. INSTALLATION OF EQUIPMENT SHALL PERMIT ACCESSIBILITY FOR SERVICE AND/OR REPLACEMENT WITHOUT NECESSITATING REMOVAL OR MODIFICATION TO OTHER PIPING, WIRING, OR EQUIPMENT.
7. CEILING-MOUNTED EQUIPMENT SHALL BE INSTALLED IN SUCH A MANNER THAT LIGHTS, PIPING, DUCTWORK, ETC., DO NOT BLOCK ACCESS TO EQUIPMENT AND RELATED ACCESSORIES.
8. COORDINATE WALL, FLOOR AND ROOF PENETRATIONS WITH THE GENERAL CONTRACTOR.
9. CAULK WITH SILICONE ALL GAPS BETWEEN WALL, CEILING AND FLOOR OPENINGS AND HVAC EQUIPMENT PENETRATIONS. PATCH LARGE GAPS BEFORE CAULKING IS APPLIED.
10. SUPPLEMENTAL STEEL MEMBERS REQUIRED TO SUPPORT HVAC EQUIPMENT FROM MAIN STRUCTURE SHALL BE PROVIDED BY THE HVAC CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE. REFER TO STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR CONSTRUCTION TYPES. PROCURE AND INSTALL UPON APPROVAL FROM GENERAL CONTRACTOR. PROVIDE STRUCTURAL STEEL SUPPORT SUBMITTAL TO ENGINEER OF RECORD FOR REVIEW.
11. DUCTWORK AIR DISTRIBUTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS AND THE PRESSURE CLASSIFICATION OF EACH INDIVIDUAL DUCTWORK SYSTEM.
12. VOLUME DAMPERS SHALL BE PROVIDED AT EACH NEW MAIN BRANCH TAKE-OFF AND IN SUCH OTHER LOCATIONS WHERE REQUIRED TO PROPERLY BALANCE THE SYSTEM.
13. INSTRUMENT TEST HOLES SHALL BE PROVIDED IN AIR DISTRIBUTION SYSTEMS WHEREVER VOLUME DAMPERS ARE INSTALLED.
14. SQUARE ELBOWS SHALL ONLY BE USED WHERE SPACE LIMITATIONS PREVENT USE OF 1.5 RADIUS ELBOW AND ONLY UPON APPROVAL OF GENERAL CONTRACTOR. PROVIDE TURNING VANES IN ALL 45° AND 90° SQUARE ELBOWS. TURNING VANES SHALL BE SINGLE THICKNESS TYPE WITHOUT RAILING EDGE. TURNING VANES LONGER THAN 36 INCHES SHALL BE DOUBLE THICKNESS TYPE.
15. DUCTWORK RUNOUTS TO AIR DISTRIBUTION DEVICES SHALL BE SAME DIAMETER AS AIR DISTRIBUTION DEVICE INLET CONNECTION UNLESS OTHERWISE NOTED ON THE DRAWINGS.
16. FLEXIBLE DUCTWORK RUNOUTS FROM MAIN BRANCH DUCTS TO AIR DISTRIBUTION DEVICES SHALL NOT EXCEED 5 FEET IN LENGTH. BENDS IN FLEXIBLE DUCTWORK SHALL NOT EXCEED A MAXIMUM OF 45 DEGREE CHANGE OF DIRECTION AND BE SUPPORTED SUCH THAT THE BEND RADIUS IS NOT RESTRICTIVE TO AIR FLOW THROUGH THE DUCT. FLEXIBLE DUCTWORK SHALL NOT BE CRUSHED OR DISTORTED IN ITS FINAL CONFIGURATION.
17. ROUND DUCTWORK CONNECTIONS BETWEEN MAIN DUCT AND TERMINAL UNITS SHALL BE RIGID DUCT OF THE SAME DIAMETER AS TERMINAL UNIT INLET CONNECTION UNLESS OTHERWISE NOTED ON THE DRAWINGS.
18. PROVIDE SHEETMETAL TRANSITIONS AT AIR HANDLING UNITS, HEAT PUMP UNITS, FANS, AND OTHER SIMILAR MAG EQUIPMENT. TRANSITION TO FULL SIZE OF CONNECTION ON UNIT. FLEXIBLE DUCT CONNECTORS SHALL BE USED ON FINAL CONNECTION TO AIR HANDLING EQUIPMENT.
19. OPEN-ENDED AIR TRANSFER DUCTS AND OPEN-ENDED RETURN AIR DUCTS IN THE CEILING PLENUM SHALL BE UNOBSTRUCTED FOR A MINIMUM DISTANCE OF 24 INCHES FROM THE OPENING TO ALLOW FOR FREE AIRFLOW. OPEN-ENDED AIR TRANSFER DUCTS AND OPEN-ENDED RETURN AIR DUCTS IN THE CEILING PLENUM SHALL HAVE WIRE MESH SCREENS. MESH SCREENS SHALL BE ALUMINUM WITH 1/8" SQUARE HOLES. SIZE FOR MAXIMUM VELOCITY OF 500 FPM.
20. TRANSFER DUCTS SHALL BE SIZED FOR MAX VELOCITY ALLOWED OF 500 FPM. OPEN-ENDED TRANSFER DUCTS SHALL HAVE DUCT 90° ELBOW FOR SOUND ATTENUATION.
21. LOUVERED SUPPLY AIR DIFFUSERS SHALL BE 4-WAY BLOW UNLESS OTHERWISE SHOWN BY FLOW ARROWS ON THE DRAWINGS. LINEAR DIFFUSERS SHALL BE ADJUSTABLE 2-WAY FLOW. PROVIDE BATT INSULATION ON DIFFUSER AND GRILLES THAT ARE EXPOSED TO CEILING PLENUM.
22. DIMENSIONS SHOWN FOR DIFFUSERS AND GRILLES ARE NECK DIMENSIONS.
23. EXACT LOCATION OF CEILING DIFFUSERS, GRILLES AND REGISTERS SHALL BE DETERMINED BY ARCHITECTURAL REFLECTED CEILING PLAN.
24. BLANK OFF AND INSULATE INACTIVE PORTIONS OF LOUVERS. ENTIRE LOUVERS NOT UTILIZED SHALL BE BLANKED OFF AND INSULATED BY THE LOUVER MANUFACTURER. REFER TO ARCHITECTURAL DRAWINGS FOR LOUVER LOCATIONS AND HVAC DRAWINGS FOR HVAC EQUIPMENT CONNECTIONS.
25. LOUVER PLENUMS SHALL BE PITCHED DOWN TOWARD THE BOTTOM OF THE LOUVER. WHERE THIS IS NOT POSSIBLE, PROVIDE 3/4" DRAIN PIPING WITH P-TRAP FROM BOTTOM OF LOUVER TO NO MORE THAN 6" ABOVE NEAREST SANITARY DRAIN. DRAIN LINE SHALL SLOPE DOWN TOWARDS DISCHARGE LOCATION AT A MINIMUM OF 1/8" PER LINEAR FOOT.
26. PROVIDE ACCESS PANELS TO ACCESS DAMPERS, EQUIPMENT, AND VALVES LOCATED ABOVE HARD CEILINGS OR IN WALLS. ACTUAL LOCATIONS SHALL BE FIELD DETERMINED.
27. EXACT LOCATIONS OF THERMOSTATS, CO2 SENSORS, AND EMCS SENSORS SHALL BE COORDINATED WITH FINAL LOCATIONS OF WALL-MOUNTED ARCHITECTURAL AND ELECTRICAL EQUIPMENT. MOUNT THERMOSTATS AND CO2 SENSORS MINIMUM 48" AFF.
28. ALL AIR HANDLING UNITS SHALL HAVE MINIMUM MERV 8 FILTERS. FILTERS SHALL BE INDUSTRY STANDARD SIZE. FILTERS SHALL NOT CREATE PRESSURE DROP EXCEEDING 10% OF EXTERNAL STATIC PRESSURE (ESP) CAPACITY LISTED IN EQUIPMENT SCHEDULE.
29. SUPPLY, RETURN, AND OUTDOOR AIR DUCTWORK SHALL BE INSULATED TO MEET OR EXCEED ASHRAE 90.1. EXTERIOR SUPPLY AND RETURN AIR DUCTWORK SHALL BE PROVIDED WITH WEATHER-PROOF COVER.
30. SIZE REFRIGERANT LINES PER MANUFACTURER'S INSTRUCTIONS FOR ACTUAL LINE LENGTHS AND EQUIPMENT ELEVATIONS INSTALLED. USE OF HCFC AND CFC REFRIGERANTS IS PROHIBITED. EXTERIOR REFRIGERANT LINES SHALL BE INSULATED AND HAVE ALUMINUM JACKETING.
31. PIPING CONTAINING WATER SHALL BE INSULATED AND HEAT-TRACED WHERE EXPOSED TO FREEZING TEMPERATURES.
32. COORDINATE LOCATIONS OF CONDENSATE DRAIN PIPING. PROVIDE CONDENSATE PUMPS AS REQUIRED WHERE SUFFICIENT SLOPE IS NOT AVAILABLE FOR STANDARD GRAVITY DRAIN, WITH OVERRIDE SWITCH TO POWER DOWN THE ASSOCIATED AIR HANDLING EQUIPMENT IN CASE OF CONDENSATE PUMP FAILURE. CONDENSATE DRAIN LINE SHALL SLOPE DOWN TOWARDS DISCHARGE LOCATION AT A MINIMUM OF 1/8" PER LINEAR FOOT. INSULATE INDOOR CONDENSATE PIPING WITH 3/4" CLOSED CELL FOAM INSULATION.
33. PROVIDE SUPPORTS FOR PIPING AND DUCTWORK IN ACCORDANCE WITH SPECIFICATIONS.
34. PROVIDE A MANUFACTURED EXPANSION DEVICE OR FABRICATED EXPANSION LOOP ON ALL DUCTWORK AND PIPING SYSTEMS CROSSING BUILDING EXPANSION JOINTS.
35. PROVIDE EXPANSION JOISTS OR APPROVED FLEXIBLE PIPE EXPANSION DEVICES FOR PIPING SYSTEMS WITH OPERATING TEMPERATURES ABOVE 70°F OR BELOW 50°F. PIPE SUPPORTS FOR PIPING SYSTEMS WITH EXPANSION DEVICES OR EXPANSION LOOPS SHALL HAVE ROLLER SUPPORTS.
36. PROVIDE AUTOMATIC AIR VENTS AT HIGH POINTS OF HYDRONIC PIPING SYSTEMS. PROVIDE DRAIN VALVES AT THE LOW POINTS IN HYDRONIC PIPING SYSTEMS FOR DRAINAGE.
37. PROVIDE HOUSEKEEPING PADS FOR MECHANICAL EQUIPMENT. COORDINATE WITH STRUCTURAL.
38. PROVIDE SHUT-OFF VALVES AND FLEXIBLE CONNECTIONS AT PIPE CONNECTIONS TO HVAC EQUIPMENT.
39. FOR WALL, FLOOR, AND SLAB PENETRATIONS SEAL AND PATCH ALL UNUSED PENETRATION SPACE TO MATCH EXISTING OR AS SHOWN ON MECHANICAL DETAILS SHEET.
40. INSTALL EXPOSED CONTROL WIRING IN CONDUIT. SEE DIVISION 26 SPECIFICATIONS FOR REQUIREMENTS.
41. BRANCH VALVES AND DRAINS SHALL BE PROVIDED TO ENABLE ISOLATING A SECTION FOR MAINTENANCE WITHOUT SHUTTING DOWN ENTIRE SYSTEM.
42. MANUFACTURER NAME AND MODEL NUMBERS ARE BASIS OF DESIGN AND ARE SHOWN FOR INFORMATION ONLY. REFER TO SPECIFICATIONS FOR COMPLETE REQUIREMENTS.
43. PIPING INSULATION SHALL BE PROVIDED ON ALL PIPING SYSTEMS INCLUDING (BUT NOT LIMITED TO) CHILLED WATER, HEATING HOT WATER, CONDENSER WATER, REFRIGERANT, AND CONDENSATE DRAIN IN ACCORDANCE WITH ASHRAE 90.1.
44. ALL EQUIPMENT WITH NATURAL GAS COMBUSTION ARE TO BE VENTED PER THE APPLICABLE CODES.
45. SPECIFICATIONS TAKE PRECEDENCE OVER DRAWINGS. HOWEVER, ITEMS SHOWN ON DRAWING BUT NOT IN THE SPECIFICATIONS ARE REQUIRED WITHIN THE PROJECT SCOPE. IN ADDITION, SPECIFIC ITEMS SHOWN ON THE DRAWINGS TAKE PRECEDENCE OVER SPECIFICATIONS IN CASES WHERE THE SPECIFICATION HAS OPTIONS.
46. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S APPROVED PUBLISHED LITERATURE.
47. DUCT SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS.
48. EXPOSED DUCTWORK, WITH THE EXCEPTION OF DUCTWORK IN MECHANICAL ROOMS SHALL BE DOUBLE-WALL, SPIRAL DUCTWORK WITH COATING.
49. IF ASBESTOS IS FOUND, STOP WORK IMMEDIATELY AND NOTIFY OWNER AND GENERAL CONTRACTOR. OWNER IS RESPONSIBLE FOR ABATEMENT OF ASBESTOS.
50. NOT ALL MECHANICAL ABBREVIATIONS SHOWN WILL BE USED FOR THIS PROJECT.

COMcheck Software Version 4.1.4.0 Mechanical Compliance Certificate

Project Information
Energy Code: 90.1 (2013) Standard
Project Title:
Location: Atlanta, Georgia
Climate Zone:
Project Type: New Construction
Construction Site: Owner Agent Designer/Contractor

Mechanical Systems List table with columns: Quantity, System Type & Description, Fan System, Fan, Heating, Cooling, Dehumidification, and Fan System.

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Mechanical Compliance Statement
Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2013) Standard requirements in COMcheck Version 4.1.4.0 and to comply with any applicable mandatory requirements listed in the program's Checklists.
Brendan Frazier - ME
Date: 7/9/2020

Order Plans

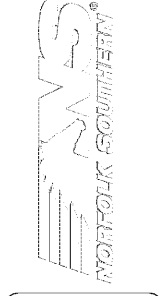


Table with columns: DATE, DESCRIPTION, MARK

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MECHANICAL GENERAL NOTES AND DESIGN CRITERIA
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M-001