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ISSUE:

MARK	DATE	DESCRIPTION
09-15-09		DEVELOPER REVIEW
11-16-09		ISSUE FOR PERMIT
12-02-09		ISSUE FOR PERMIT

PROJECT NO:
09-529.a

**MECHANICAL
FLOOR PLAN**

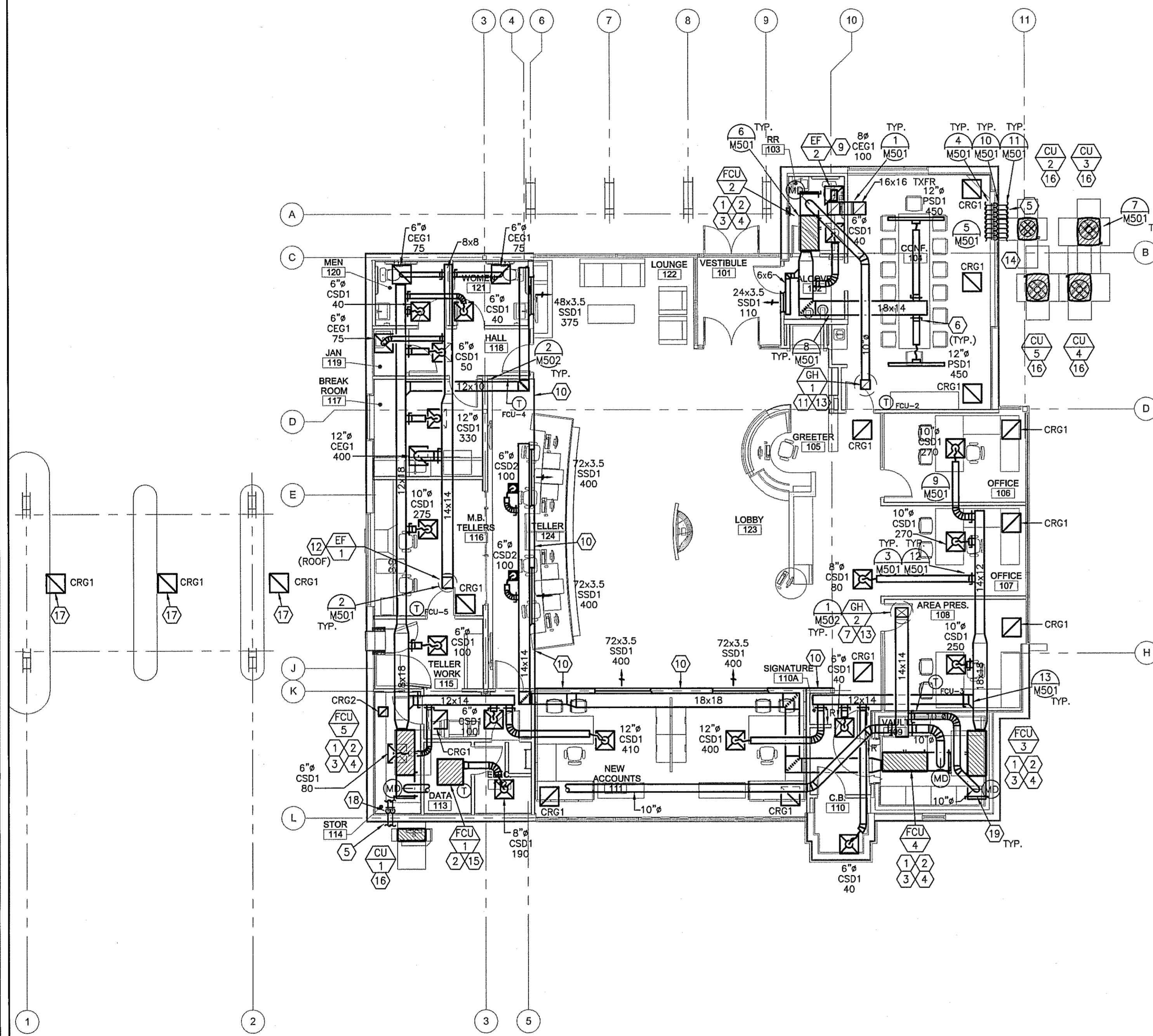
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MECHANICAL PLAN NOTES:

- LOCATE NEW FAN-COIL UNIT AS INDICATED. UNITS SHALL BE ACCESSIBLE FOR SERVICE FROM LAY-IN CEILING. SUSPEND UNITS FROM STRUCTURE PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE MOUNTING HEIGHT/LOCATION OF THE UNIT WITH OTHER BUILDING SYSTEMS TO ALLOW WORKING CLEARANCES AS REQUIRED BY CODE AND UNIT MANUFACTURER. RE:#4,6/M501. FAN-COIL UNIT FILTER SECTION TO BE ACCESSIBLE THROUGH LAY-IN CEILING. AT TIME OF CEILING INSTALLATION, DESIGNATE APPROPRIATE CEILING TILE FOR ACCESS TO FILTERS AND FRAME. ACOUSTICAL CEILING TILE WITH PAINTED METAL TO INCREASE DURABILITY OF TILE. FILTER CARTRIDGES TO BE ABLE TO BE INSTALLED IN GRID WITHOUT REMOVAL OR DAMAGE TO GRID SYSTEM. COORDINATE INSTALLATION OF UNIT SUPPORTS AND PIPING TO MAINTAIN ACCESS AND CLEARANCE FOR FILTER REPLACEMENT.
- REFER TO PLUMBING DRAWINGS FOR CONDENSATE DRAIN LINES.
- PROVIDE RETURN AIR PLENUM FULL SIZE OF UNIT CONNECTION BY 30" LONG WITH A BALANCING DAMPER AT PLENUM INLET OPENING. END OF PLENUM TO REMAIN OPEN.
- DIVISION 16 SHALL PROVIDE SMOKE DETECTORS IN THE RETURN DUCTWORK OF THE FAN-COIL UNITS. SMOKE DETECTORS SHALL BE ACCESSIBLE FROM THE LAY-IN CEILING. RE:#8/M501.
- ROUTE REFRIGERANT PIPING IN THE CEILING PLENUM FROM THE FAN-COIL UNITS OVER TO, DOWN THRU THE WALL, AND OVER TO THE GROUND-MOUNTED CONDENSING UNITS. RE: #5,10,11/M501.
- PROVIDE SPIN-IN CONNECTION WITH LOCKING QUADRANT DAMPER. TYPICAL ON ALL ROUND DUCTS TAPPED FROM RECTANGULAR BRANCH DUCTWORK LAY-IN CEILING, UNLESS OTHERWISE NOTED. RE:#3,12/M501.
- 14x14 OUTDOOR AIR DUCT. TRANSITION TO OUTDOOR AIR INTAKE HOOD CONNECTION ABOVE AS REQUIRED.
- BALANCE DAMPER TO AIRFLOW AS INDICATED IN THE FAN COIL UNIT SCHEDULE.
- ROUTE 8" EA DUCT FROM CEG1 TO EXHAUST FAN, EF-2, MOUNTED IN CEILING PLENUM. TRANSITION AS REQUIRED. ROUTE DUCT UP FROM FAN DISCHARGE AND TERMINATE AT PITCHED ROOF OR GREENROCK, MODEL RJ-6x3. PROVIDE ROOF CAP WITH BIRDSCREEN AND BACKDRAFT DAMPER.
- PROVIDE INACTIVE SECTION OF SAME WIDTH AS SUPPLY SECTION (MARK SSD1) TO PROVIDE CONTINUOUS LINEAR APPEARANCE. REFER TO ARCHITECTURAL ELEVATION FOR INSTALLATION HEIGHT AND LENGTHS. PROVIDE BLANK SHEET METAL BLANK-OFFS.
- 12x12 OUTDOOR AIR DUCT. TRANSITION TO OUTDOOR AIR INTAKE HOOD CONNECTION ABOVE AS REQUIRED.
- PROVIDE NEW ROOF-MOUNTED EXHAUST FAN WITH DUCT ROUTED TO NEW EXHAUST AIR DEVICES. TRANSITION DUCT TO FAN CONNECTION AS REQUIRED. LOCATE DISCHARGE A MINIMUM OF 10' FROM ALL BUILDING INTAKES. FIELD VERIFY EXACT LOCATION OF FAN. RE: #2/M501.
- PROVIDE NEW OUTDOOR AIR INTAKE HOOD AS SHOWN. FIELD VERIFY EXACT LOCATION IN ORDER TO MAINTAIN REQUIRED MANUFACTURER CLEARANCES AND 10' SEPARATION FROM BUILDING EXHAUST.
- ALL HORIZONTAL EXTERIOR REFRIGERANT PIPING RUNS SHALL BE SUPPORTED FROM WALLS OR SET ON WOOD BLOCKS TO BE KEPT OFF THE GROUND. PIPING SHALL BE INSTALLED PERPENDICULAR TO BUILDING LINES IN AN ORDERLY MANNER.
- PROVIDE CEILING-MOUNTED CASSETTE-TYPE AIR CONDITIONING UNIT. INSTALL UNIT PER MANUFACTURER'S RECOMMENDATIONS. TRANSITION SUPPLY DUCT AS REQUIRED TO CONNECT TO KNOCK-OUT PORTION OF UNIT.
- LOCATE NEW CONDENSING UNIT AS INDICATED. MOUNT UNIT ON EQUIPMENT PAD PER MANUFACTURER'S RECOMMENDATIONS WHILE MAINTAINING WORKING CLEARANCES AS REQUIRED BY CODE AND UNIT MANUFACTURER. RE: #7/M501.
- PROVIDE RETURN GRILLE AS SCHEDULED FOR VENTILATION OF AND ACCESS TO DRIVE THRU STRUCTURE. OMIT RETURN AIR LIGHT SHIELD.
- UTILIZE FURR-OUT LOCATED IN STORAGE #114 FOR REFRIGERANT PIPE ROUTING. REFER TO ARCHITECTURAL DRAWINGS.
- PROVIDE FULL SIZE SCREENED INLET FOR UNIT RETURN AIR OPENING.

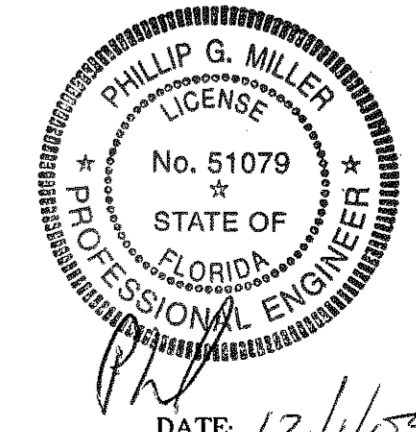
MECHANICAL GENERAL NOTES:

- PRIOR TO SUBMITTING BID, THE CONTRACTOR AND SUBCONTRACTORS SHALL VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR REVIEWING THE GENERAL NOTES, SPECIFICATIONS AND ALL OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. DUCTWORK AND PIPING SHALL BE ROUTED TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC.
- TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT DURING WORK. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED DURING CONSTRUCTION AT NO EXTRA COST TO THE OWNER.
- PROVIDE ALL MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS UNLESS OTHERWISE NOTED.
- NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING IS SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. FIELD VERIFY FINAL EQUIPMENT LOCATIONS TO INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. CHASES AND PENETRATIONS INTENDED FOR DUCTWORK AND PIPING ROUTINGS SHALL BE VERIFIED WITH ARCHITECT.
- INSTALL ALL DUCTWORK AND PIPING PARALLEL TO BUILDING COLUMN LINES UNLESS OTHERWISE SHOWN OR NOTED.
- SEAL ALL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. FIREPROOF ALL PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.
- COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS, AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL AND DUCT INSTALLATION REQUIREMENTS.
- ADJUST LOCATION OF CEILING DIFFUSERS, REGISTERS, AND GRILLES AS REQUIRED TO ACCOMMODATE FINAL CEILING GRID AND LIGHTING LOCATIONS.
- LOCATE, WIRE AND SET THERMOSTATS/TEMPERATURE SENSORS. VERIFY EXACT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION. MOUNTING HEIGHTS SHALL BE 48" AFF TO MEET ADA REQUIREMENTS UNLESS NOTED OTHERWISE ON PLANS.
- RIGID DUCTWORK INSULATION: PROVIDE 2" THICK, 3/4 LB DENSITY (R-6) INSULATION WRAP ON ALL RIGID ROUND AND RECTANGULAR CONCEALED SUPPLY AIR DUCTS AND ON ALL OUTSIDE AIR DUCTS (ALL THAT ARE NOT LINED). PROVIDE 1-1/2" THICK, 3 LB DENSITY (R-6) INTERNAL DUCT LINER ON THE FIRST 15 FEET OF RECTANGULAR SUPPLY AND RETURN AIR DUCTS FROM THE CONNECTION TO THE EQUIPMENT. ALSO PROVIDE INTERNAL DUCT LINER ON ALL EXPOSED DUCTWORK. SIZES ON MECHANICAL PLANS INDICATE CLEAR INSIDE AIRFLOW DIMENSIONS; INCREASE SHEETMETAL SIZES ACCORDINGLY.
- FLEXIBLE DUCTWORK SHALL BE THERMAFLEX TYPE MKE, FLEXMASTER TYPE BM, OR APPROVED EQUAL. SHALL BE LISTED UNDER U.L. 181 AS CLASS 1 AIR DUCT AND SHALL BE PROVIDED WITH INTEGRAL 2" THICK, 3/4 LB DENSITY (R-6) FIBERGLASS INSULATION. FLEXIBLE DUCTWORK NOT TO EXCEED 5'-0" IN LENGTH. INSTALL AND SUPPORT TO AVOID SHARP BENDS AND SAGGING.
- PROVIDE A NEW SET OF AIR FILTERS IN ALL UNITS JUST BEFORE TURNING SYSTEMS OVER TO OWNER.
- MOTORIZED DAMPERS SHALL BE DRIVEN BY TWO-POSITION, 120-VOLT ACTUATORS. PROVIDE 24-VOLT RELAY AND CONNECT TO FAN WIRING FROM THERMOSTAT. REFER TO ELECTRICAL PLANS FOR 120-VOLT WIRING.



1 MECHANICAL PLAN
SCALE: 1/8"=1'-0"

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DATE: 12/1/09

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