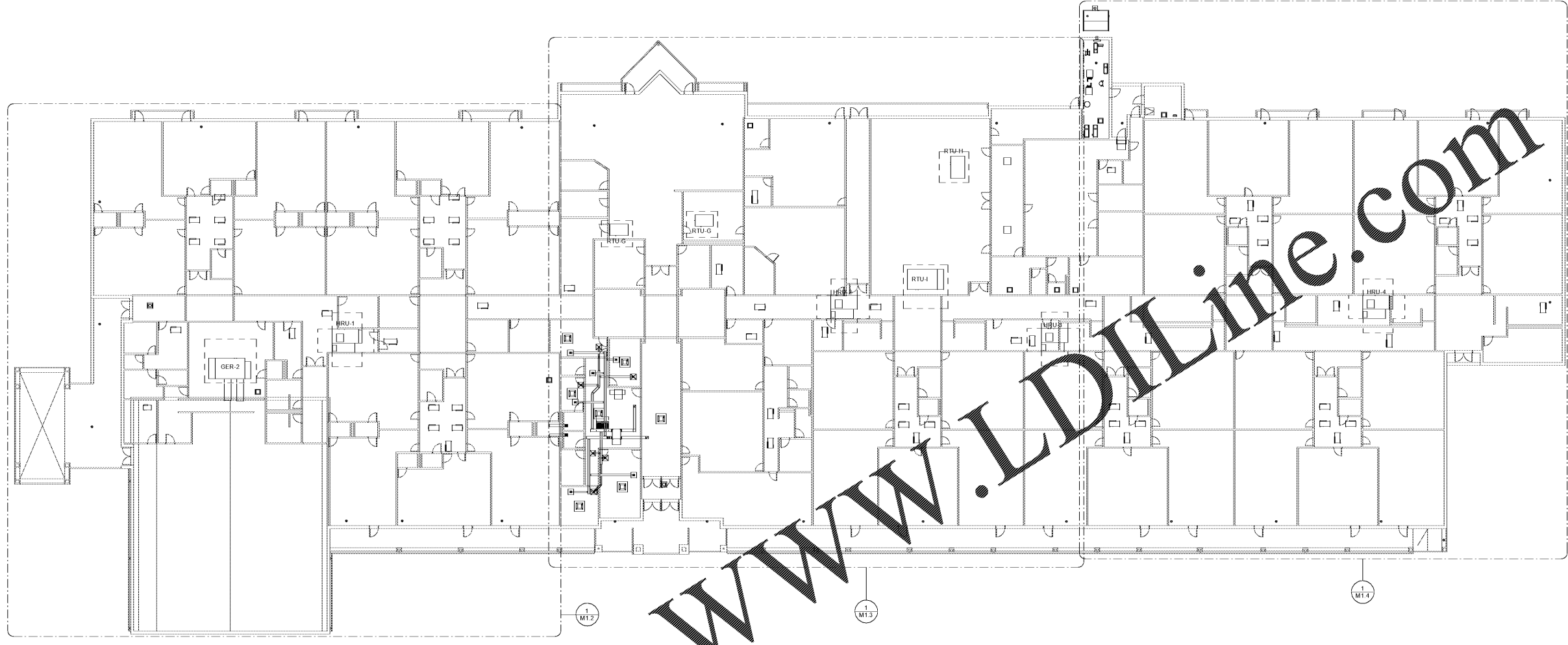


NOTE: PORTIONS OF THIS PROJECT ARE RENOVATIONS OF AN EXISTING FACILITY AND OF NECESSITY, PREVIOUS RECORD DRAWINGS FORM THE BASIS FOR MANY OF THESE DRAWINGS. IT IS THEREFORE EVEN MORE IMPORTANT THAN IN NEW CONSTRUCTION THAT ALL DIMENSIONS SHALL BE FIELD VERIFIED BEFORE FABRICATION OR PURCHASE OF DIMENSION CRITICAL EQUIPMENT, MATERIALS, AND ASSEMBLIES. THERE MAY EXIST FIELD CONDITIONS NOT ACCESSIBLE DURING DESIGN WHICH DIFFER FROM THOSE SHOWN ON THE DRAWINGS. ANY SUCH DEVIATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER FOR RESOLUTION BEFORE PROCEEDING WITH ANY CONSTRUCTION, FABRICATION, OR MATERIAL/EQUIPMENT PURCHASES WHICH WOULD BE UNUSABLE UNDER THOSE CIRCUMSTANCES.



HVAC - OVERALL NEW FLOOR PLAN
1/16" = 1'-0"

GENERAL MECHANICAL NOTES

- 1. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS' WRITTEN INSTRUCTIONS AND RECOMMENDATIONS. CONTRACTOR TO COORDINATE ALL CLEARANCES PRIOR TO INSTALLATION OF EQUIPMENT AND MATERIAL.
- 2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO RECEIVE, OFFLOAD, AND STORE ALL HVAC MATERIALS WHICH ARRIVE AT THE JOB SITE.
- 3. GENERAL CONTRACTOR IS TO PROVIDE ANY SCREENING, GUARD RAILS, ETC. FOR ROOF MOUNTED HVAC EQUIPMENT PER BID AND LOCAL CODES.
- 4. OBTAINING ALL REQUIRED PERMITS AND PAYING ALL ASSOCIATED FEES ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS, LOCAL CODES, AND NATIONAL CODES.
- 5. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, AND TOOLS TO COMPLETE ALL MECHANICAL WORK AS SHOWN, NOTED OR SCHEDULED FOR A COMPLETE INSTALLATION.
- 6. THE MECHANICAL DRAWINGS ARE DIAGNOSTIC AND SHOW RELATIONSHIP BETWEEN EQUIPMENT AND CONNECTIONS. DO NOT SCALE THE DRAWINGS FOR EXACT SIZE OR LOCATIONS. DIMENSION DIMENSIONS SHALL BE TAKEN FROM ARCH. PLANS AND EQUIPMENT DIMENSIONS SHALL BE TAKEN FROM FACTORY CATALOG DATA.
- 7. CONTRACTOR TO COORDINATE VOLTAGE AND PHASE OF EACH PIECE OF EQUIPMENT WITH ELECTRICAL CONTRACTOR BEFORE ORDERING EQUIPMENT.
- 8. LOCATION OF ALL EXTERIOR WALL PENETRATIONS SHALL BE COORDINATED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- 9. MECHANICAL CONTRACTOR TO COORDINATE WITH CONTROLS CONTRACTOR BEFORE INSTALLING CONTROLS-RELATED EQUIPMENT.
- 10. TESTING, ADJUSTING, AND BALANCING OF MECHANICAL SYSTEM SHALL BE PROVIDED BY CONTRACTOR. THE CONTRACTOR SHALL HIRE AN A.S.H.R.A. CERTIFIED, INDEPENDENT TEST AND BALANCE COMPANY TO CONDUCT A COMPLETE COMMISSIONING TEST AND BALANCE OF ALL HVAC EQUIPMENT AND PROVIDE A WRITTEN REPORT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MECHANICAL CONNECTIONS NECESSARY FOR COMPLETE AND FULLY FUNCTIONING SYSTEM INCLUDING SYSTEM STARTUP AND INSTALLATION OF NEW FILTERS.
- 11. ALL CONTRACTOR MUST COORDINATE EACH PIECE OF EQUIPMENT WITH ALL OTHER TRADES (GENERAL CONTRACTOR, PLUMBER, CONTRACTOR MECHANICAL CONTRACTOR, SPRINKLER CONTRACTOR, ELECTRICAL CONTRACTOR, ETC.) PRIOR TO ORDERING EQUIPMENT AND AGAIN PRIOR TO INSTALLATION (ROOF TOP EQUIPMENT PRIOR TO LIFTING ON ROOF). NO EXTRA COMPENSATION WILL BE APPROVED IF COORDINATION IS NOT PERFORMED BY EACH CONTRACTOR AND SUBCONTRACTOR.
- 12. OBSERVE ERRORS AND/OR OMISSIONS IN THE CONSTRUCTION DOCUMENTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION.
- 13. ANY MECHANICAL ITEMS IN QUESTION REGARDING REMOVAL/REUSE SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT/ENGINEER. CONTRACTOR SHALL SUBMIT A REQUEST FOR INFORMATION TO THE ARCHITECT/ENGINEER IN WRITING PRIOR TO REMOVAL OF ANY MECHANICAL ITEMS.
- 14. SEE MECHANICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 15. CONTRACTOR SHALL PATCH HOLES WEATHER TIGHT IN EXISTING WALL DUE TO REMOVAL/ADDITION OF MECHANICAL ITEMS.
- 16. CONTRACTOR SHALL LOCATE AND INSTALL ALL MECHANICAL EQUIPMENT MINIMUM 10FT FROM ROOF EDGE WHEN MINIMUM 42" HIGH PARAPETS ARE NOT PROVIDED FOR FALL PROTECTION.
- 17. ALL COSTS INCURRED BY ACCEPTANCE OF SUBSTITUTIONS SHALL BE BORNE BY CONTRACTOR. ANY ADDITIONAL COSTS/SERVICES RESULTING FROM PROPOSED SUBSTITUTE EQUIPMENT SHALL BE PROVIDED AT NO EXTRA COST TO THE OWNER.
- 18. EXACT LOCATION OF ALL CEILING DIFFUSERS TO BE COORDINATED WITH LIGHTING LAYOUT. CEILING CONTRACTOR TO PROVIDE ADEQUATE ACCESS TO CEILING GRID AT DIFFUSER/DAMPER LOCATIONS FOR PURPOSE OF AIR BALANCING.
- 19. TO PREVENT DIRT/DEBRIS FROM GETTING INSIDE THE HVAC EQUIPMENT DURING CONSTRUCTION, CONTRACTOR SHALL TAPE A MINIMUM 1" THICK FOAM FILTER TO THE BOTTOM OF ALL AIR RETURNS IN THE BUILDING. FILTERS SHALL BE CHANGED WEEKLY OR AS NEEDED BASED ON CONDITION UNTIL COMPLETION OF CONSTRUCTION.

DUCTWORK NOTES

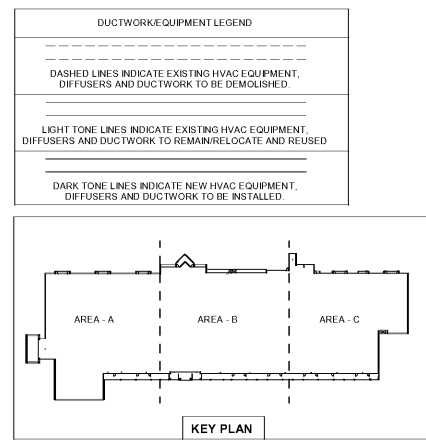
- 20. DUCT SIZES ARE SHOWN AS CLEARANCES. PROVIDE FLEXIBLE CONNECTIONS WHERE DUCTS CONNECT TO UNIT OR RISER. ALL DUCTWORK AS HIGH AS POSSIBLE TO AVOID INTERFERENCE OF INTERFERING DUCT. ALL DUCTWORK SHALL BE INDEPENDENTLY HUNG FROM STRUCTURAL MEMBERS. COORDINATE ELEVATION AND LOCATION WITH PLUMBING LEADERS, WATER PIPING, PLUMBING VENTS, AND MAJOR ELECTRICAL CONDUITS OR CABLE TRAY.
- 21. PAINTED FLAT BLACK.
- 22. ALL DUCTWORK SHALL BE GALVANIZED SHEET METAL AND SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARDS (LATEST ISSUE). DUCT HANGERS AND SUPPORTS SHALL BE IN ACCORDANCE WITH SMACNA RECOMMENDATIONS.
- 23. INSULATE ALL SUPPLY AND RETURN DUCT WITH MINIMUM R-6 INSTALLED FIBERGLASS, FOL. BACKED INSULATION OR RIGID BONDED WITH FIRE AND SMOKE RATING [25][50] TO PREVENT CONDENSATION. INSTALL DUCT LINER IN THE FIRST TEN FEET OF SUPPLY AND FULL LENGTH OF RETURN DUCTS UNLESS NOTED OTHERWISE. THE DUCT SIZE SHALL BE INCREASED TO COMPENSATE FOR LINER. ALL EXPOSED SPIRAL AND RECTANGULAR DUCT INSIDE THE BUILDING SHALL BE PRIMED, PAINT GRP WITH R-6 INSTALLED LINER WITHIN. ALL EXTERIOR DUCT OUTSIDE THE BUILDING SHALL BE PAINT GRP DOUBLE WALL WITH LINER WITHIN. ALL DUCTWORK DIMENSIONS ARE NET INSIDE DIMENSIONS.
- 24. SPIN-IN TAKE-OFF TO BE MADE WITH GENFLEX MODEL SM-1 DEL OR EQUIVALENT.
- 25. ALL FLEX DUCT SHALL BE FOL-BACKED, R-6 U.L. LISTED, CLASSIFIED AS A CLASS 1 AIR DUCT, AND MEET LOCAL CODE REQUIREMENTS. FLEXIBLE DUCT TAKE-OFF TO BE THERMAFLEX TYPE IN R6 OR EQUIVALENT. ALL FLEXIBLE DUCTWORK IN ACOUSTICAL CRITICAL AREAS (THEATER, STAGE BAND, CHORAL) TO BE FLEXMASTER U.S.A. TYPE 8M-INSULATED DUCTWORK OR EQUIVALENT.
- 26. MAXIMUM LENGTH OF FLEXIBLE DUCT IS NOT TO EXCEED 8'-0". BRANCH DUCT RUN OUTS TO DIFFUSERS SHALL BE SAME SIZE AS DIFFUSER NECK UNLESS OTHERWISE NOTED.
- 27. ALL FIRE DAMPERS SHALL BE "B" TYPE (CURTAIN OUT OF THE AIRSTREAM). SEE PLAN FOR LOCATION, SIZE, AND QUANTITY. METAL DUCTS WHICH PENETRATE RATED FIRE WALLS AND ARE LESS THAN 100 SQUARE INCHES SHALL EXTEND A MINIMUM OF 9 FEET ON BOTH SIDES OF THE WALL WITHOUT AN OPENING TO PRECLUDE THE REQUIREMENT OF A FIRE DAMPER. DUCTWORK SHALL IN NO CASE BE LIGHTER THAN 24 GAUGE STEEL.
- 28. PROVIDE BALANCING DAMPERS AT POINTS ON SUPPLY, RETURN AND EXHAUST SYSTEMS WHERE BRANCHES LEAD FROM LARGE DUCTS AS REQUIRED FOR AIR BALANCING. INSTALL AT A MINIMUM OF TWO DUCT WID THIS FROM BRANCH TAKEOFF. UNLESS OTHERWISE NOTED, EVERY SUPPLY TAP COLLAR SHALL HAVE A LOCKING MANUAL VOLUME DAMPER. ALL SURFACE MOUNTED DIFFUSERS AND GRILLES SHALL BE PROVIDED WITH DAMPER FOR AIR BALANCING. PROVIDE IDENTIFICATION OF THE LOCATION OF ALL FIRE AND BALANCING DAMPERS. IDENTIFICATION TAGS SHALL BE ATTACHED TO THE WALLS OR CEILING AND SHALL BE VISIBLE FROM THE OCCUPIED SPACE.
- 29. PROVIDE 2 1/2" ACCESS PANEL FOR BALANCING DAMPERS IN GYPSUM BOARD CEILING DIFFUSERS AND GRILLES. PAINT TO MATCH BACKGROUND.
- 30. PROVIDE TURNING VANES IN ALL RECTANGULAR 45, 60 & 90 DEGREE MITERED ELBOWS.

ELECTRICAL MECHANICAL NOTES

- 31. ALL FANS 1/2 HP. AND ABOVE SHALL HAVE FUSED DISCONNECT SWITCHES MOUNTED AT THE FAN. IF APPROVED BY LOCAL AUTHORITIES, NON-FUSED DISCONNECT SWITCHES MAY BE USED. DISCONNECTS PROVIDED BY ELECTRICAL CONTRACTOR.
- 32. CONTRACTOR TO PROVIDE JUNCTION BOX & 3/4" EMPTY CONDUIT FOR EACH THERMOSTAT LOCATION PER PLANS. JUNCTION BOX LOCATION & ORIENTATION TO BE COORDINATED WITH EMS SUPPLIER. SEE SPECIALTY OUTLET MOUNTING DETAILS ON SHEET M1.1. INSTALL PER DIVISION 26 SPECIFICATIONS.
- 33. ELECTRICAL ROOM. CONTRACTOR SHALL NOT ROUTE DUCTWORK ABOVE ELECTRICAL EQUIPMENT AND PANELS.
- 34. ALL CONTROL WIRING SHALL BE RUN INSIDE WALLS OR ABOVE CEILING IN UNFINISHED AREAS, ROUTE CONTROL WIRING INSIDE CONDUIT IN JOIST SPACE. CONTRACTOR IS TO MAKE ALL LOW-VOLTAGE WIRING FINAL CONNECTIONS FOR ALL HVAC EQUIPMENT INCLUDING SENSORS, THERMOSTATS, AUDIO-VISUAL ANNUNCIATORS, ROOF-TOP UNITS, SMOKE DETECTORS, CONTACTOR PANEL, AND CONTROL PANEL.
- 35. MOUNT ALL SENSORS 6" AFF UNLESS NOTED OTHERWISE. ANY SENSORS LOCATED ON AN EXTERIOR WALL SHALL BE MOUNTED ON AN INSULATED BASE. PROVIDE LOCK BOX.

ADDITIONAL MECHANICAL NOTES

- 36. PROVIDE DEEP SEAL TRAP AT CONDENSATE DRAIN FROM DX COIL AT ALL UNITS. INSULATE ALL CONDENSATE DRAIN PIPING INSIDE THE BUILDING WITH MINIMUM R-3 AP ARMAFLEX TYPE INSULATION. ALL CONDENSATE PIPING SHALL BE INSTALLED WATER TIGHT, SECURED AND CLAMPED ON SUPPORT FOR THE ENTIRE LENGTH OF RUN ABOVE AND BELOW ROOF. ROUTE CONDENSATE FROM ALL OUTDOOR UNITS IN SCHEDULE 40 PVC PIPE TO SLASHBLOCK MINIMUM 5FT AWAY FROM UNIT ON ROOF. CONDENSATE FROM ALL INDOOR DX COIL UNITS SHALL BE TYPE "L" COPPER, ROUTED TO NEAREST WALL BOX OR HOP SINK AS INDICATED ON THE HVAC PLUMBING FLOOR PLANS. ROUTE CONDENSATE TO ROOF WITH EXTERNAL CONDENSATE PUMP IF NO LOCATION IS SPECIFIED CONDENSATE LINE SIZE SHALL BE FULL SIZE OF UNIT CONNECTION AND NOT LESS THAN 3/4" INTERNAL DIAMETER. CONDENSATE PIPING SHALL NOT DECREASE IN SIZE FROM THE UNIT CONNECTION TO THE PLACE OF CONDENSATE DISPOSAL. THE PIPING SHALL HAVE AN ADEQUATE AIR SEAL TRAP AT EACH UNIT CONNECTION WITH A VENT DOWNSTREAM OF THE TRAP. CONTRACTOR TO RUN ALL CONDENSATE PIPING IN WALL AND CONCEALED FROM VIEW AS MUCH AS POSSIBLE.
- 38. IN AIR SYSTEMS GREATER THAN 2000 CFM SMOKE DETECTORS SHALL BE LOCATED IN THE SUPPLY AIR STREAM DOWNSTREAM OF THE AIR FILTERS AND AHEAD OF ANY BRANCH CONNECTIONS. UPON ACTIVATION, SMOKE DETECTOR SHALL SHUT DOWN THE UNIT AND ACTIVATE A VISIBLE AND AUDIBLE SENSORY SIGNAL.
- 39. ALL FANS WITH MORE THAN 2000 CFM CAPACITY SHOULD HAVE A MEANS OF AUTOMATIC SHUTDOWN. RECIRCULATING AIR SYSTEMS WITH A FAN CAPACITY LESS THAN 2,000 CFM BUT SERVING AN AREA FOR EGRESS SHALL HAVE A SMOKE DETECTOR AS MEANS OF AUTOMATIC SHUTDOWN LOCATED IN THE SUPPLY.
- 40. CONTRACTOR SHALL VISIT SITE BEFORE SUBMITTING BID AND MAKE ALL NECESSARY OBSERVATIONS, MEASUREMENTS, AND NOTE CONDITIONS UNDER WHICH HIS WORK IS TO BE PERFORMED. NO EXTRA COMPENSATION WILL BE ALLOWED FOR FAILURE TO DO SO. THIS CONTRACT INVOLVES REMODELING OF EXISTING BUILDING AND THEREFORE SHALL FIELD LOCATE EXISTING DUCTWORK, PIPING, AIR TERMINAL DEVICES, ETC. BEFORE STARTING WORK.
- 41. CONTRACTOR SHALL INSULATE LIQUID AND SUCTION REFRIGERANT LINES BETWEEN INDOOR EVAPORATOR AND OUTDOOR CONDENSER UNIT. ALL REFRIGERANT PIPING SHALL BE UL LISTED FOR THE APPLICATION. PIPING SHALL BE SUPPORTED ADEQUATELY EVERY 18FT TO AVOID SAGGING.



ROBERTSON LOJA ROOF ARCHITECTS & ENGINEERS
3460 Preston Ridge Road, Suite 275, Alpharetta, GA, 30005
770.674.2800 / www.rlrc.com



Blacks Mill Elementary School
HVAC Replacement and Reroof
Dawsonville, Georgia 30534
Dawson County Schools
Overall Renovation Square Footage = 77,219 SF (Existing)
F.T.E. = 750 (Existing)

Table with 2 columns: REVISIONS, and empty rows for revision tracking.

HVAC - OVERALL NEW FLOOR PLAN
DATE: 12-06-2019
PROJECT NUMBER: 19-309
SHEET NUMBER: M1.1