

MECHANICAL GENERAL SPECIFICATION NOTES:

- 1. COORDINATE LOCATIONS WHERE DUCTWORK CROSSES LIGHTS, DUCTS, PIPING, CONDUITS, ETC. PROVIDE OFFSETS AS REQUIRED.
2. INSTALL FIRE DAMPERS AS REQUIRED WHENEVER NEW OR EXISTING DUCTWORK PASSES THROUGH FIRE RATED WALLS OR FLOORS. RETURN AIR OPENINGS IN FIRE RATED WALLS SHALL BE EQUIPPED WITH FIRE DAMPERS. SEE ARCHITECTURAL DRAWINGS FOR RATED WALLS.
3. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO BEGINNING WORK. NOTIFY ENGINEER WITH ANY DISCREPANCIES BETWEEN DRAWINGS AND EXISTING CONDITIONS.
4. COORDINATE EXACT LOCATIONS OF EQUIPMENT ON ROOF. PROVIDE DUCTED OUTSIDE AIR INTAKE DUCTS TO MAINTAIN 10"-0" CLEARANCE FROM ALL EXHAUST DUCTS AND VENTS.
5. KITCHEN HOODS AND EXHAUST FANS FURNISHED BY KITCHEN EQUIPMENT SUPPLIER, VERIFY REQUIREMENTS AND INSTALLED BY MECHANICAL CONTRACTOR PROVIDE GAS ELECTRICAL CONNECTIONS AS REQUIRED. EXHAUST DUCT TO BE PROTECTED BY 2 HOUR RATED FIRE INSULATED WRAP. HOOD SHALL BE EQUIPPED WITH ANSUL FIRE PROTECTION SYSTEM.
6. COORDINATE ALL WORK WITH ALL OTHER TRADES. RESOLVE CONFLICT PRIOR TO INSTALLATION OF EQUIPMENT. COORDINATE NEW DIFFUSER LOCATIONS WITH LIGHT FIXTURES, SPRINKLER HEADS AND PIPING, CEILING GRID LOCATION PRIOR TO INSTALLATION.
7. ALL HVAC EQUIPMENT INCLUDING FANS, RTU AND OAU SHALL BE PROPERLY SUPPORTED FROM THE STRUCTURE. MOUNT ALL ROOFTOP UNITS ON CURBS. PROVIDE VIBRATION ISOLATORS ON ALL EQUIPMENT. ALL EQUIPMENT SHALL BE APPROVED FOR INTENDED INSTALLATION.
8. DIFFUSERS SHALL BE PER SCHEDULE.
9. THERMOSTATS FOR ROOF UNITS SHALL BE PROGRAMMABLE STYLE WITH HUMIDITY CONTROL BY HONEYWELL. SUBMIT SHOP DRAWINGS AND VERIFY MODEL NUMBER PRIOR TO PURCHASE. THERMOSTAT TO BE MOUNTED 48" AFF.
10. PROVIDE ROOFTOP UNITS AS INDICATED ON DRAWINGS. VERIFY EXACT LOCATION WITH ROOF PLAN AND STRUCTURAL DRAWINGS. COORDINATE ELECTRICAL CONNECTION. MOUNT ALL UNITS ON ROOF CURBS.
11. COORDINATE GAS REQUIREMENTS WITH PLUMBING CONTRACTOR.
12. DUCTWORK FOR GRILL HOOD (TYPE I) SHALL BE 16 GAGE BLACK IRON, OR 18 GAGE STAINLESS STEEL. EXTERNALLY WELDED LIQUID TIGHT.
13. MINIMUM AIR VELOCITY IN HOOD EXHAUST DUCTWORK SHALL BE A MINIMUM OF 1500 FPM.
14. ROOFTOP UNITS SHALL BE ELECTRONICALLY INTERLOCKED WITH HOOD CONTROLS AND EXHAUST FAN. ROOFTOP UNIT SHALL SHUT DOWN WHEN HOOD FIRE PROTECTION SYSTEM IS ACTIVATED, EXHAUST FAN SHALL REMAIN ENERGIZED.
15. TYPE I EXHAUST FAN TO TERMINATE A MINIMUM OF 40" ABOVE ROOF.

HVAC NOTES:

DUCTWORK:

ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS AND ALL LOCAL BUILDING CODES. SUCCESSFUL BIDDER MUST HAVE AT LEAST FIVE (5) YEARS EXPERIENCE IN INSTALLATION OF HVAC SYSTEMS AND DUCTWORK.

MATERIALS:

STEEL DUCTS SHALL BE ASTM A525 GALVANIZED STEEL SHEETS, LOCK FORMING QUALITY, HAVING ZINC COATING OF 1.25 OZ PER SF ON EACH SIDE TO CONFORM WITH ASTM A90. KITCHEN EXHAUST DUCTWORK TO BE 16 GAGE BLACK IRON OR 18 GAGE STAINLESS STEEL (EXTERNALLY WELDED LIQUID TIGHT) IN ACCORDANCE WITH CODE.

LOW PRESSURE DUCTWORK:

CONSTRUCT BENDS WITH RADIUS OF NOT LESS THAN 1-1/2 TIMES THE WIDTH OF DUCT ON CENTERLINE. ALL CHANGES IN DIRECTION OF RECTANGULAR DUCT SHALL BE MADE WITH ELBOWS AND TURNING VANES. CHANGES IN DUCT SIZES SHALL BE MADE GRADUALLY, NOT EXCEEDING 15 DIVERGENCES. UPSTREAM OF EQUIPMENT, DIVERGENCE SHALL NOT EXCEED 30, CONVERGENCE SHALL NOT EXCEED 45. RUN OUTS TO DIFFUSERS MORE THAN 5 FEET IN LENGTH SHALL BE MADE WITH ROUND, RIGID SHEET METAL.

FLEXIBLE CONNECTION:

MAKE ALL CONNECTIONS BETWEEN METAL DUCTWORK AND FLEXIBLE DUCTWORK WITH STAINLESS STEEL DRAW BANDS. FLEXIBLE DUCTWORK SHALL MAINTAIN ITS FULL DIAMETER WITHOUT ANY KINKS OR SHARP BENDS. FLEXIBLE DUCTWORK SHALL NOT EXCEED 6"-0" IN LENGTH. FLEXIBLE DUCTWORK SHALL BE GENFLEX, UNITED MCGILL OR THERMOFLEX. FLEXIBLE DUCTWORK SHALL BE INSULATED WIRE MOLDED TYPE WITH 1" FOIL BACKED EXTERNAL FIBERGLASS INSULATION. ALL DUCTWORK SHALL BE SEALED PROPERLY.

INSULATION:

THE FIRST 10' OF RECTANGULAR SUPPLY DUCTS FROM THE RTU SHALL BE INTERNALLY LINED WITH 1" FIBERGLASS DUCT LINER. REMAINING SQUARE AND ROUND DUCTS SHALL BE INSULATED WITH 1" FOIL BACK FIBERGLASS ON OUTSIDE OF DUCT. KITCHEN HOOD EXHAUST DUCTWORK TO BE COVERED WITH 1 HR RATED FIRE INSULATION WRAP. ALL DUCTWORK SHALL BE INSULATED.

DAMPERS:

MANUALLY OPERATED VOLUME DAMPERS SHALL BE INSTALLED AT EACH SUPPLY BRANCH FROM MAIN DUCTWORK. INSTALL AS REQUIRED FOR PROPER BALANCING. ALL DAMPERS SHALL HAVE QUADRANT HANDLES AND BE ADJUSTABLE WITHOUT TOOLS.

HANGERS:

ALL DUCTWORK TO BE PROPERLY SUPPORTED WITH GALVANIZED BAND IRON HANGERS. PROPERLY ATTACH HANGERS TO STRUCTURE ABOVE.

GENERAL NOTES:

SCOPE:

THE CONTRACTOR/CONTRACTORS SHALL PROVIDE, INSTALL AND MAKE FUNCTIONAL ALL SYSTEMS, EQUIPMENT, DUCTWORK, ETC. AS SHOWN ON THESE DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING, BUT NOT LIMITED TO: COORDINATION, PIPING, DUCTWORK, EQUIPMENT, CONTROLS BALANCING, ETC.

SUBMITTALS:

THE CONTRACTOR SHALL SUBMIT CATALOG CUTS AND DATA SHEETS ON ALL MECHANICAL EQUIPMENT, AS SHOWN ON THESE DRAWINGS, TO ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

SHOP DRAWINGS:

THE CONTRACTOR SHALL PROVIDE DETAILED SHOP DRAWINGS FOR ALL WORK TO BE PERFORMED UNDER THIS PROJECT. DRAWINGS SHOULD BE DRAWN TO SCALE, DIMENSIONS, INCLUDE ALL ELEVATIONS, SIZES, EQUIPMENT LOCATIONS, OFFSETS, ETC. PROVIDE SECTIONS AS REQUIRED. SHOP DRAWINGS SHALL BE COORDINATED WITH ALL OTHER TRADES. DRAWINGS SHOULD BE SUBMITTED TO ENGINEER FOR REVIEW PRIOR TO INSTALLATION. ANY CHANGES TO THE LAYOUT OR SIZES MUST BE SUBMITTED TO ENGINEER FOR APPROVAL.

"AS-BUILT" DRAWINGS:

UPON COMPLETION OF WORK, THE CONTRACTOR SHALL PROVIDE SCALED AS-BUILT DRAWINGS. DRAWINGS SHALL BE STAMPED BY CONTRACTOR AND SHOW LOCATION, SIZES AND TYPE OF ALL EQUIPMENT, DUCTWORK, PIPING, CONTROL EQUIPMENT, ETC. CONTRACTOR SHALL SUBMIT EACH DRAWING TO ENGINEER AND TURN ORIGINAL AS BUILT DRAWINGS OVER TO OWNER.

BIDS:

THE CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID. BID SHOULD INCLUDE PRICE FOR ALL WORK SHOWN ON DRAWINGS AND MENTIONED IN NOTES AND SPECIFICATIONS. QUESTIONS REGARDING SCOPE OF WORK SHOULD BE COMMUNICATED TO ENGINEER AND ARCHITECT PRIOR TO SUBMISSION OF BID. PROVIDE WRITTEN EXPLANATION OF ANY CHANGES TO WHICH CONTRACTOR WISHES TO MAKE ALONG WITH BID. CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING CONDITIONS PRIOR TO BID. CONTRACTOR'S BID SHALL INCLUDE ALL PROVISIONS NECESSARY TO COMPLETE WORK BASED ON EXISTING CONDITIONS. EXTRA SERVICES REQUIRED BY CONTRACTOR DUE TO A LACK OF VERIFICATION OF EXISTING CONDITIONS WILL BE THE FINANCIAL RESPONSIBILITY OF THE CONTRACTOR. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DRAWINGS AND SPECIFICATIONS WHICH WILL AFFECT WORK AND COST OF WORK SHALL BE COMMUNICATED TO ARCHITECT/ENGINEER FOR CLARIFICATION PRIOR TO SUBMISSION OF BID.

PERMITS:

ALL REQUIRED PERMITS, LICENSES, FEES, ETC. ARE TO BE OBTAINED BY CONTRACTOR AT CONTRACTOR'S EXPENSE.

CODE:

CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL PERTINENT WORK IN ACCORDANCE WITH LOCAL, STATE AND NATIONAL BUILDING CODES. WORK SHALL ALSO CONFORM TO ALL BUILDING STANDARDS.

WARRANTY:

CONTRACTOR SHALL WARRANTY ALL WORK, MATERIALS AND EQUIPMENT FOR A PERIOD OF ONE YEAR FROM DATE OF OWNER'S FINAL ACCEPTANCE OF WORK.

MECHANICAL NOTES:

COORDINATION:

CONTRACTORS SHALL COORDINATE THEIR WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION. SHOP DRAWING COORDINATION SHALL BE RESPONSIBILITY OF CONTRACTORS.

CUTTING & PATCHING:

CONTRACTOR SHALL PERFORM ALL THE REQUIRED CUTTING AND PATCHING AS REQUIRED TO ROUTE PIPING, DUCTWORK, CONDUIT, ETC. CONTRACTOR SHALL RESTORE WALL, FLOORS AND CEILINGS TO ORIGINAL CONDITION AFTER CUTTING. CUTTING OF STRUCTURAL MEMBERS IS NOT PERMITTED.

ACCESSIBILITY:

CONTRACTOR SHALL INSTALL ALL EQUIPMENT IN A MANNER SUCH THAT THE NECESSARY SERVICE AND REPAIR CAN BE PERFORMED. ACCESSIBILITY TO DAMPERS, VALVES, SWITCHES, FAN-MOTORS, COILS, THERMOSTATS, ETC. SHALL BE MAINTAINED AT ALL TIMES. MAINTAIN CLEARANCES AS REQUIRED BY CODES AND MANUFACTURER'S INSTRUCTIONS.

DRAWINGS:

DO NOT DIMENSION OR SCALE DRAWINGS FOR LOCATION OF EQUIPMENT, PIPING OR DUCTWORK. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND OF EXISTING EQUIPMENT, DUCTWORK, AND PIPING. ANY DISCREPANCY BETWEEN DRAWINGS OR BETWEEN DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT/ENGINEER PRIOR TO WORK BEING DONE. INTERPRETATION OF ARCHITECT/ENGINEER SHALL BE CONSIDERED FINAL.

RTU'S:

RTU'S FOR THIS PROJECT ARE FURNISHED AND INSTALLED UNDER BASE BUILDING BY THE MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL ALSO PROVIDE DUCTWORK, AIR DEVICES, CONTROL CONNECTIONS TO UNITS, ETC.

FANS:

RESTROOM EXHAUST FANS TO BE COOK, GREENHECK OR APPROVED EQUAL. FAN TO BE APPROVED FOR INTENDED INSTALLATION. ROOF MOUNTED FANS TO BE MOUNTED ON INSULATED CURBS. PROVIDE DUCTWORK EXTENSIONS ON ROOF TO MAINTAIN SEPARATION FROM OUTDOOR AIR INTAKES. COORDINATE ELECTRICAL CONNECTION AND VOLTAGE WITH ELECTRICAL CONTRACTOR. CONTROLS FOR FAN AS INDICATED ON DRAWINGS. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO PURCHASE.

DIFFUSERS:

SUPPLY DIFFUSERS SHALL BE INSTALLED AS SHOWN ON DRAWINGS. DIFFUSER LOCATIONS SHALL BE COORDINATED AND ALIGNED WITH CEILING GRID. SIZES AS SHOWN ON DRAWINGS.

RETURN AIR GRILLES:

RETURN AIR GRILLES SHALL BE INSTALLED AS SHOWN ON DRAWINGS. COORDINATE EXACT LOCATION WITH ARCHITECTURAL ELEVATIONS.

CONNECTIONS:

CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND PROVISION OF ALL NECESSARY WIRING, CONNECTIONS AND TESTING OF CONTROLS AND EQUIPMENT.

TESTING AND BALANCING:

TEST AND BALANCE SHALL BE PERFORMED BY A THIRD PARTY NEBB OR AABC CERTIFIED CORPORATION - HIRED BY CONTRACTOR AND APPROVED BY OWNER.

CONTROLS:

HVAC CONTRACTOR IS RESPONSIBLE FOR ALL CONTROLS. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER AND CONDUIT REQUIREMENTS.

PACKAGE ROOFTOP UNIT SCHEDULE table with columns: UNIT DESIGNATION, MANUFACTURER/MODEL #, RATED COOLING (MBH/TONS), COOLING STAGES (CHECK ONE), NOMINAL SUPPLY CFM (H/M/L)/FAN H.P., CONDENSER E.A.T. (d.b.), EVAPORATOR E.A.T. (d.b./w.b.), COOLING EFFICIENCY (E.E.R.), HEATING (INPUT/OUTPUT MBH), ELECTRIC HEAT KW STATE(S)/ V-P-Hz, COMPRESSOR WARRANTY, HEAT EXCHANGER WARRANTY, UNIT ELEC. V/P/MCA/MOCP, TOTAL UNIT WEIGHT (AS SPECIFIED), STANDARD EQUIPMENT, OPTIONS AND ACCESSORIES.

AIR CURTAIN FAN SCHEDULE table with columns: TAG, MARS, MODEL, TYPE, SERVES, NOZZLE, MOTOR, MTR QTY, HEATER KW, UNIT, FAN, FAN.

DIFFUSER SCHEDULE table with columns: SYMBOL, CFM, MODULE SIZE, FRAME TYPE, MATERIAL, SERVICE, MANUFACTURER & MODEL No., NOTES.

OUTDOOR AIR CALCULATIONS table showing calculations for DINING, CORR, VEST, KITCHEN, COOK, STOR, and RTU-1 & 2.

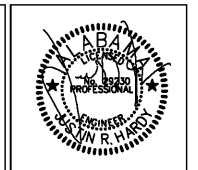
AIR BALANCE SCHEDULE table with columns: UNIT, OUTSIDE AIR, RETURN AIR, SUPPLY AIR, EXHAUST AIR, PRESSURE.

MINIMUM DUCT SEAL LEVEL table with columns: DUCT LOCATION, SUPPLY, EXHAUST, RETURN.

DUCT SEAL CLASSES table with columns: DUCT SEAL CLASS, SEALING REQUIREMENTS.

FAN SCHEDULE table with columns: UNIT DESIG., SERVICE, AREA SERVED, MANUFACTURER & MODEL #, FAN TYPE & ARRANGEMENT, CFM, S.P., DRIVE TYPE, ELECTRICAL DATA, WT, NOTES.

DUCT SEAL CHARTS table with columns: UNIT DESIG., SERVICE, AREA SERVED, MANUFACTURER & MODEL #, FAN TYPE & ARRANGEMENT, CFM, S.P., DRIVE TYPE, ELECTRICAL DATA, WT, NOTES.



JOB NO. L1908

NORWOOD ARCHITECTS, 807 Corporate Blvd, Franklin, AL 35053. Phone: 678-921-0302. Website: www.norwoodarchitects.com

HUDDLE HOUSE, EVO 2000 RESTAURANT, US HWY 43 RUSSELLVILLE, AL FRANKLIN CO. 35653

Table with columns: NO., ISSUE DATE, PERMIT SET / 2019

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MECHANICAL SPECIFICATIONS