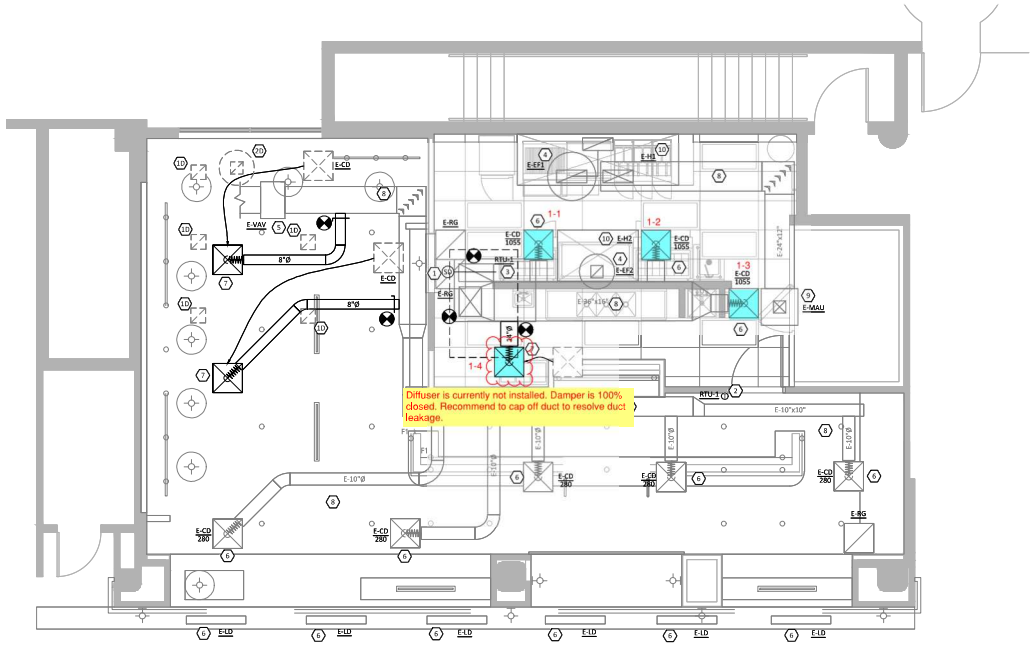

1 M1.0 **MECHANICAL PLAN**

1/4" = 1'-0"

N

0' 2' 4' 8' 16'

KEYED NOTES

1. IF NOT EXISTING, EC TO FURNISH DUCT MOUNTED SMOKE DETECTOR AND PROVIDE COMPATIBLE REMOTE ANNUNCIATOR/TEST SWITCH. MC TO INSTALL SMOKE DETECTOR IN RETURN DUCT, PRIOR TO ANY OUTDOOR AIR CONNECTIONS. MC TO PROVIDE INTERLOCK WIRING BETWEEN SMOKE DETECTOR AND UNIT TO SHUT DOWN UNIT UPON DETECTION OF SMOKE. EC SHALL PROVIDE WIRING FOR FINAL CONNECTION TO CENTRAL FIRE ALARM SYSTEM, IF APPLICABLE, AND WIRING TO REMOTE ANNUNCIATOR/TEST SWITCH.
2. EXISTING THERMOSTAT. FIELD VERIFY EXACT LOCATION.
3. REMOVE EXISTING ROOFTOP UNIT AND PROVIDE NEW ROOFTOP UNIT AND CURB ADAPTER ON EXISTING CURB. CONNECT EXISTING DUCTWORK FROM SUPPLY/RETURN DROPS TO NEW UNIT. CONNECT RTU TO EXISTING RTU CONTROLS IN SPACE. FIELD VERIFY EXACT LOCATIONS PRIOR TO BID. ROUTE CONDENSATE TO ROOF. BALANCE SUPPLY AND OUTSIDE AIRFLOW AS SCHEDULED. CONDENSATE DRAIN PIPING SHALL BE COPPER. CONDENSATE PIPING SHALL BE SUPPORTED WITH KCAB ACCEPTED ROOF HARDWARE.
4. EXISTING EXHAUST FAN TO REMAIN. MECHANICAL CONTRACTOR TO SERVICE FAN TO ASSURE IT IS OPERATING PROPERLY.
5. EXISTING VARIABLE AIR VOLUME BOX TO REMAIN. MECHANICAL CONTRACTOR TO FIELD VERIFY EXACT LOCATION PRIOR TO BID AND SERVICE UNIT TO ASSURE IT IS OPERATING PROPERLY.
6. EXISTING DIFFUSER TO REMAIN IN LOCATION INDICATED. MECHANICAL CONTRACTOR TO CLEAN DIFFUSER TO "LIKE NEW" CONDITION. REPLACE DIFFUSER WITH NEW IF NECESSARY. PROTECT DURING CONSTRUCTION.
7. MEASURE AIRFLOW OF EXISTING AIR DEVICE PRIOR TO BEGINNING WORK. RELOCATE EXISTING AIR DEVICE AND REBALANCE TO MEASURED CFM. CAP DUCTWORK WITH SHEET METAL, SAME GAUGE AS EXISTING DUCTWORK, AND SEAL PER SMACNA GUIDELINES.
8. EXISTING DUCTWORK TO REMAIN. MECHANICAL CONTRACTOR FIELD VERIFY EXACT SIZE AND LOCATION. PROTECT DURING CONSTRUCTION.
9. EXISTING MAKEUP AIR UNIT TO REMAIN. MECHANICAL CONTRACTOR TO FIELD VERIFY EXACT LOCATION PRIOR TO BID AND SERVICE UNIT TO ASSURE IT IS OPERATING PROPERLY.
10. EXISTING HOOD AND ASSOCIATED EXHAUST DUCTWORK TO REMAIN. HOOD AND DUCTWORK TO BE CLEANED BY PROFESSIONAL HAND CLEANERS AND ANY DAMAGED FIRE WRAP TO BE REPLACED NEW WITH 2 LAYERS OF 3M 615+ FIRE WRAP OR EQUIVALENT.

GENERAL NOTES

A. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE. EXACT LOCATIONS OF DEVICES AND ROUTING OF DUCTWORK SHALL BE DETERMINED BY CONTRACTOR AFTER COORDINATION WITH ALL OTHER TRADES AND FIELD DETERMINATION OF FINAL CONSTRUCTION DETAILS. MINOR ADJUSTMENTS TO DUCT ROUTING AND CONFIGURATION TO AVOID CONFLICT WITH BUILDING STRUCTURE OR OTHER TRADES SHALL BE INCLUDED IN CONTRACTOR'S PRICE. CONTRACTOR SHALL OBTAIN ENGINEERS APPROVAL IN WRITING FOR ANY MODIFICATIONS TO SYSTEM DESIGN PRIOR TO INSTALLATION.

B. ALL EXPOSED MATERIALS AND EQUIPMENT SHALL BE INSTALLED AND SUPPORTED IN A FIRST-CLASS AND WORKMANLIKE FASHION. DUCTWORK SHALL RUN PARALLEL AND/ OR PERPENDICULAR TO MAIN BUILDING STRUCTURE. ANY WORK THAT IS NOT DONE IN A FIRST-CLASS OR WORKMANLIKE FASHION, IN THE ARCHITECTS OPINION, SHALL BE REDONE AT THE CONTRACTORS EXPENSE.

C. ALL DUCT JOINTS, SEAMS AND CONNECTIONS SHALL BE SECURELY FASTENED AND SEALED. DUCTS SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING TEN FEET. DUCT COVERINGS AND LININGS SHALL HAVE A FLAME-SPREAD INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX NOT MORE THAN 50.

D. PROVIDE VOLUME DAMPERS AT ALL ROUND BRANCH DUCT TAKE-OFFS THAT ARE ACCESSIBLE. PROVIDE TURNING VANES AT ALL 90 DEGREE SQUARE ELBOWS IN SUPPLY AIR DUCTS. PROVIDE 45 DEGREE HEEL AT ALL RECTANGULAR SUPPLY AND RETURN BRANCH DUCT TAKE-OFFS.

E. OUTDOOR AIR INTAKES SHALL BE 10'-0" MINIMUM AWAY FROM ANY EXHAUST AND PLUMBING VENT OUTLET.

F. WIRE UP ALL LOW VOLTAGE (24V) THERMOSTATS.

G. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PIPES, DUCTWORK, UNITS, ETC. WITH ALL OTHER TRADES AND SHIFT LOCATION OR OFFSET WHERE NECESSARY. PROVIDE TRANSITIONS IN DUCTWORK TO AVOID CONFLICT WITH EXISTING DUCTWORK AND OTHER STRUCTURES.

H. CONTRACTOR SHALL COORDINATE ALL AIR DEVICES WITH ELECTRICAL AND ARCHITECTURAL REFLECTED CEILING PLANS.

I. COORDINATE LOCATION OF ALL EXTERIOR LOUVER OR OUTLET WITH ARCHITECTURAL ELEVATION PLAN.

J. COORDINATE ROOF WORK WITH BUILDING OWNER'S ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED.

K. INSTALL DUCTWORK AS HIGH AS POSSIBLE.

L. EXHAUST AIR DUCTS SHALL BE EQUIPPED WITH BACKDRAFT DAMPERS.

M. ALL DUCT OPENINGS AND OTHER AIR DISTRIBUTION OPENINGS SHALL BE COVERED DURING CONSTRUCTION EXCEPT FOR TESTING AND INSPECTION.

N. PROVIDE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND WARRANTIES /WRITTEN GUARANTEE FOR EACH SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR TITLE 8 , SECTION 5142 AND OTHER RELATED REGULATIONS.

O. ALL DUCT ELBOWS SHALL BE LONG RADIUS OR MITERED.

ROOF WORK

COORDINATE ALL ROOF WORK WITH BUILDING OWNER'S ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED. ROOF WORK MUST BE PERFORMED BY AN APPROVED CONTRACTOR SERVICES PROVIDER, BY THE ROOF MATERIAL MANUFACTURER

CVG NOTES

A. ENSURE THE AHU-5 RETURN AIR DUCT IS RAN FROM THE VENTILATION SHAFT TO THE EAST WALL OF THIS SPACE, WITHOUT BEING REDUCED IN SIZE AND DRAWS RETURN AIR FROM THE A-14 HOLDING AREA.

B. THE EXISTING PNEUMATIC VAV AND SPACE SENSORS ARE OBSOLETE. CVG FACILITIES WILL REPLACE THE EXISTING SYSTEM WITH KCAB AUTOMATED LOGIC DIGITAL SYSTEM. THIS NOTE INCLUDED FOR COORDINATION PURPOSES ONLY.

HVAC LEGEND

1	DRAWING NOTE SYMBOL
26x16	NEW RECTANGULAR DUCTWORK AND SIZE
10"ø	NEW ROUND DUCTWORK AND SIZE
CMVM	BALANCING/VOLUME DAMPER
CMVM	FLEX DUCT
T	THERMOSTAT
CD-1 280	NEW SUPPLY AIR DIFFUSER AND CFM
	EXISTING EXHAUST GRILLE TO REMAIN
	EXISTING EXHAUST GRILLE TO BE REMOVED
	NEW EXHAUST FAN
	SUPPLY DUCT UP THROUGH ROOF
	RETURN/EXHAUST DUCT UP THROUGH ROOF
	CONNECT TO EXISTING

GENERAL DEMOLITION NOTES

A. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK. DUCT SIZES INDICATED ARE FOR REFERENCE ONLY. MECHANICAL CONTRACTOR SHALL VERIFY EXISTING DUCT SIZES THAT ARE AFFECTED BY THIS WORK, PRIOR TO BEGINNING WORK OR FABRICATING NEW DUCTWORK. DRAWINGS ARE ILLUSTRATIVE AND MAY NOT REFLECT EXACT CONDITIONS OR DIMENSIONS.

B. THE DEMOLITION DRAWINGS ARE INTENDED TO SHOW THE GENERAL INTENT OF THE EXISTING HEATING AND VENTILATION SYSTEM DEMOLITION WORK. THESE DRAWINGS WERE CREATED BY USING EXISTING DRAWINGS AND BY CASUAL SITE VISITS. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE ALL EXISTING PIPING, DUCTWORK, AND MISCELLANEOUS HARDWARE ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE REMOVED UNLESS OTHERWISE INDICATED.

C. THE HVAC CONTRACTOR SHALL TURN OVER TO OWNER OR DISPOSE OF OFF SITE ACCORDING TO OWNERS DIRECTIONS ANY MECHANICAL ITEMS BEING REMOVED.

D. ANY OPENING IN WALLS OR ROOF LEFT WITH VOID SPACES BY THE REMOVAL OF ANY MECHANICAL EQUIPMENT, THE HVAC CONTRACTOR SHALL PATCH THEM TO MATCH ADJACENT SURFACES. ALL PATCHING & FINISHING SHALL BE DONE BY SKILLED WORKMEN IN THE TRADE.

E. NOTIFY THE OWNER IN WRITING AND FIELD VERIFY CONDITIONS BEFORE PERFORMING ANY SAW CUTTING, TRENCHING, CORING OR ANY OTHER STRUCTURAL MODIFICATIONS. INSURE THAT NO ADVERSE EFFECT TO THE BUILDING'S STRUCTURAL INTEGRITY WILL OCCUR.

F. ANY EXISTING CONDITION DISCOVERED DURING THE DEMOLITION OR CONSTRUCTION PROCESS WHICH, BY GENERALLY ACCEPTED CONSTRUCTION PRACTICES, SHOULD BE REMEDIED, SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER/ARCHITECT IMMEDIATELY IN WRITING.

G. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEAN-UP AND TO REPAIR OR REPLACE ANYTHING DAMAGED DURING CONSTRUCTION ACTIVITIES. PROVIDE 1-YEAR WARRANTY FOR ALL REPAIR WORK.

H. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FLOOR PROTECTION TO PREVENT DAMAGE TO FLOORING DURING CONSTRUCTION ACTIVITIES.

DEMOLITION KEYED NOTES

1. REMOVE EXISTING EXHAUST GRILLE AND ALL ASSOCIATED DUCTWORK. CAP DUCTWORK WITH SHEET METAL, SAME GAUGE AS EXISTING DUCTWORK, AND SEAL PER SMACNA GUIDELINES.
2. ABANDON EXISTING ROOFTOP EXHAUST FAN AND CURB IN PLACE.

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Hebron, Kentucky

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MECHANICAL PLAN

6 January 2023 | *Revision 3 - Airport 100% Review Comments*