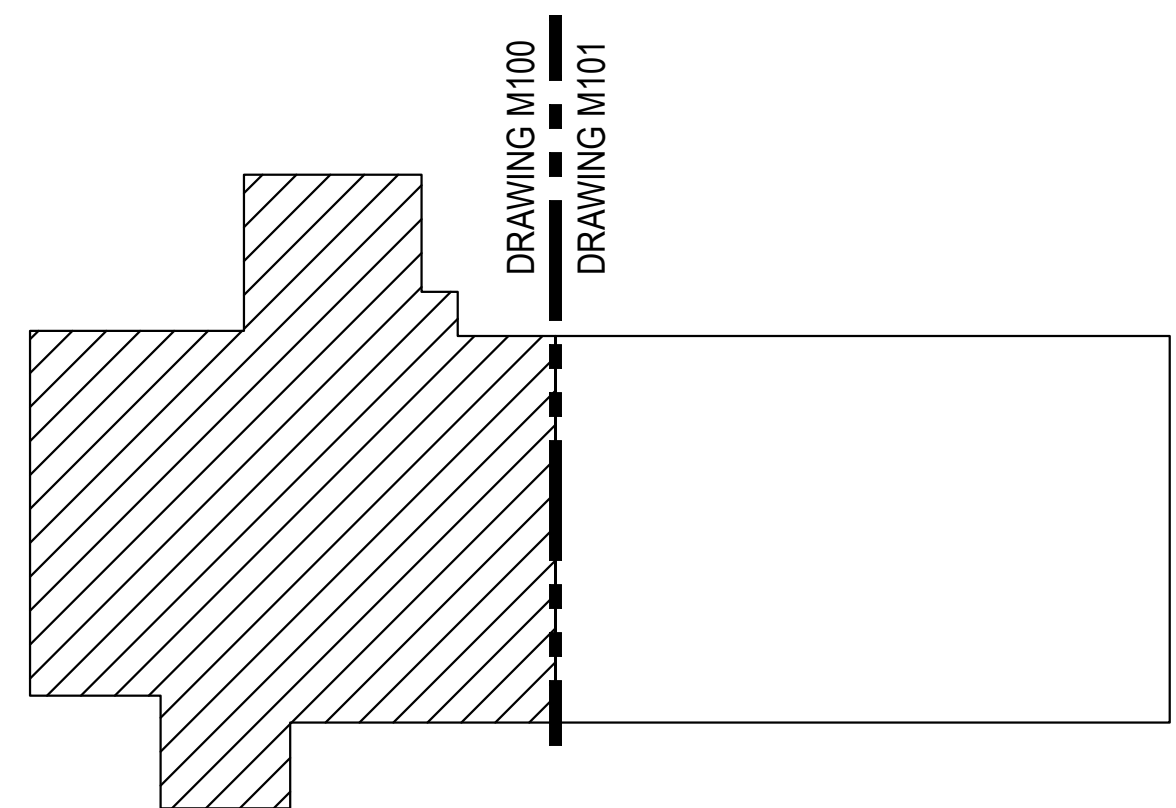


GENERAL NOTES

- DUCTWORK TO BE GALVANIZED, FABRICATED AND INSTALLED PER SMACNA AND SECTION M-603 OF THE 2017 OBC. DUCTWORK SHALL BE CONSTRUCTED WITH A MINIMUM THICKNESS AS SPECIFIED IN SMACNA HVAC, "DUCT CONSTRUCTION STANDARD - METAL AND FLEXIBLE," PER 2017 OBC-M603.4.
- UNLESS OTHERWISE NOTED ON THE MECHANICAL PLAN, DUCT DIMENSIONS INDICATE CLEAR INSIDE MEASUREMENTS. VERIFY EXACT ROUTING OF ALL DUCTWORK WITH EXISTING CONDITIONS AND MAINTAIN CLEAR INSIDE DIMENSIONS.
- COORDINATE EXACT LOCATION OF AIR DEVICES WITH REFLECTED CEILING PLAN, LIGHTING LAYOUT AND EXISTING CONDITIONS.
- BRANCH DUCT TO DIFFUSER TO BE SAME SIZE AS DIFFUSER NECK.
- COORDINATE EXACT LOCATION OF THERMOSTATS WITH FURNITURE PLAN AND OWNER.
- FOR PURPOSES OF CLARITY AND LEGIBILITY, DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC ALTHOUGH SIZE AND LOCATION OF EQUIPMENT ARE SHOWN TO SCALE WHEREVER POSSIBLE.
- ANY DISCREPANCIES OR EXISTING CONDITIONS DISCOVERED DURING CONSTRUCTION THAT PROHIBIT THE SUCCESSFUL COMPLETION OF WORK INDICATED ON THIS PLAN MUST BE REPORTED TO THE PROJECT MANAGER IMMEDIATELY.
- DUCTWORK INSULATION SHALL CONFORM WITH SECTION M-604 OF THE 2017 OBC. COVERINGS AND LININGS, INCLUDING ADHESIVES, SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX NOT MORE THAN 50 WHEN TESTED WITH ACCORDANCE WITH ASTM E 84, UL 723, ASTM E 2231 AND ASTM C 411. INTERNAL DUCT LINING SHALL BE DURABLE AND TESTED IN ACCORDANCE WITH UL161.
- ALL DUCT JOINTS, SEAMS & CONNECTIONS SHALL BE SEALED & FASTENED PER SECTION 603.9 2017 OMC.
- EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S GUIDELINES.
- DUCT SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING 10 FEET. (SECT. 603.10 2017 OMC)
- ALL FIELD-INSTALLED POWER AND CONTROL WIRING FOR ALL MECHANICAL EQUIPMENT AND APPLIANCES SHALL BE IN ACCORDANCE WITH NFPA-70 AND THE NATIONAL ELECTRICAL CODE.
- THESE DRAWINGS DO NOT ADDRESS OR IMPLY THE STATUS OF THE STRUCTURE AND ITS ABILITY TO SUPPORT ROOFTOP EQUIPMENT SHOWN. THE CINCINNATI AIR CONDITIONING COMPANY DOES NOT PERFORM ANY DESIGN, SPECIFICATION, INSPECTION, OR INSTALLATION OF STRUCTURAL REINFORCEMENTS TO SUPPORT ROOFTOP EQUIPMENT.

DRAWING NOTES

- NO WORK IN THIS AREA.
- DUCTWORK INSTALLED AS HIGH AS POSSIBLE BELOW BAR JOISTS.
- DUCTWORK INSTALLED BETWEEN BAR JOISTS.
- EXHAUST DUCT UP THROUGH ROOF WITH TALLCONE FLASHING, STORM COLLAR, AND CHINA CAP WITH BIRDSCREEN. ROOFING WORK BY OTHERS.
- EXHAUST DUCT UP THROUGH ROOF WITH DECKTITE FLASHING, STORM COLLAR, AND CHINA CAP WITH BIRDSCREEN. ROOFING WORK BY OTHERS.
- LINEAR SLOT DIFFUSERS ARE COLOR BLACK.
- RELOCATED, EXISTING RTU. REMOVED FOR BUILDING DEMOLITION, THEN REINSTALLED.
- DEMO EXISTING INFRARED TUBE HEATER. FIELD VERIFY ON SITE WITH G.C. TO DETERMINE IF C.A.C. OR ROOFER WILL CAP ABANDONED FLUES OR COMBUSTION AIR ROOF STACKS.
- SUPPLY AIR MAIN RUNNING NORTH / SOUTH BETWEEN BAR JOISTS. TOP OF DUCT IS ABOVE BOTTOM OF BAR JOISTS.
- INSTALL WIRE MESH OVER RETURN AIR DUCT OPENING.
- NO STRUCTURAL REINFORCEMENT REQUIRED PER STRUCTURAL ENGINEER'S LETTER.



1ST FLOOR SHOWROOM AND OFFICE AREAS HVAC PLAN
 SCALE: 1/8" = 1'-0"



KEY PLAN
SCALE: NTS



REVISIONS	
DATE	DESCRIPTION
12/08/23	ISSUE FOR PERMIT
02/15/24	ISSUED WITH REVISIONS CLOUED
02/23/24	ISSUED WITH REVISIONS CLOUED
05/06/24	ISSUED WITH REVISIONS CLOUED
09/25/24	GENERAL REVISIONS

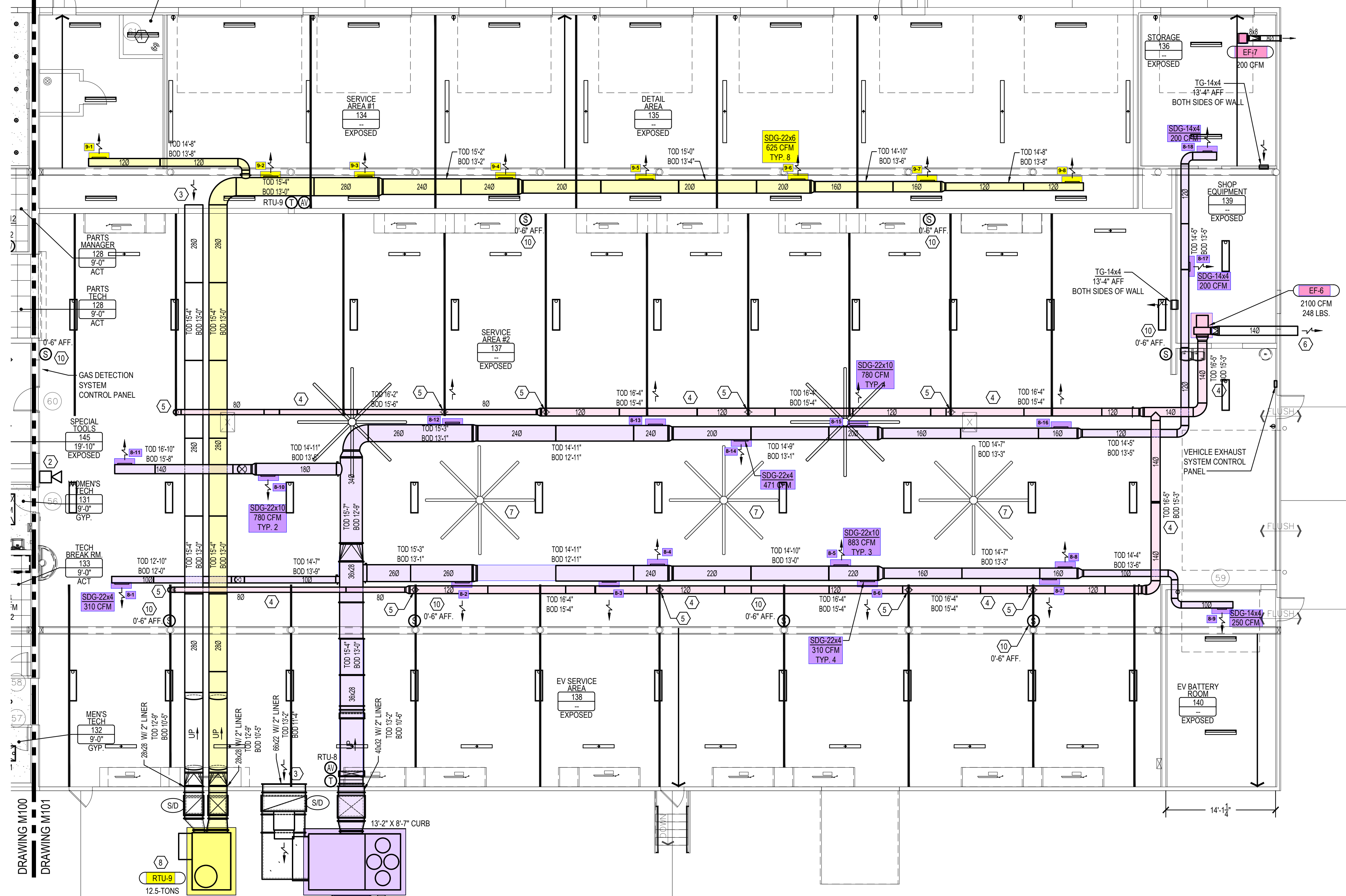
DATE: 12/08/23
 DESCRIPTION: ISSUE FOR PERMIT

The Cincinnati Air Conditioning Co.
 1818 BROADWAY, 1ST FLOOR, CINCINNATI, OHIO 45219
 Phone: 513-251-2422 Fax: 513-251-2424
 Since 1938

JEFF WILKINSON OF BEAVERCREEK
 2170 HELLER DR.
 DAYTON, OHIO 45424

DRAWING SCALE: AS NOTED
 DATE DRAWN: 12/08/23
 DRAWN BY: C. BLICKENSCHPER
 JOB # C-6297
 DRAWING # 6274
 SHEET # M100

DRAWING M100
DRAWING M101



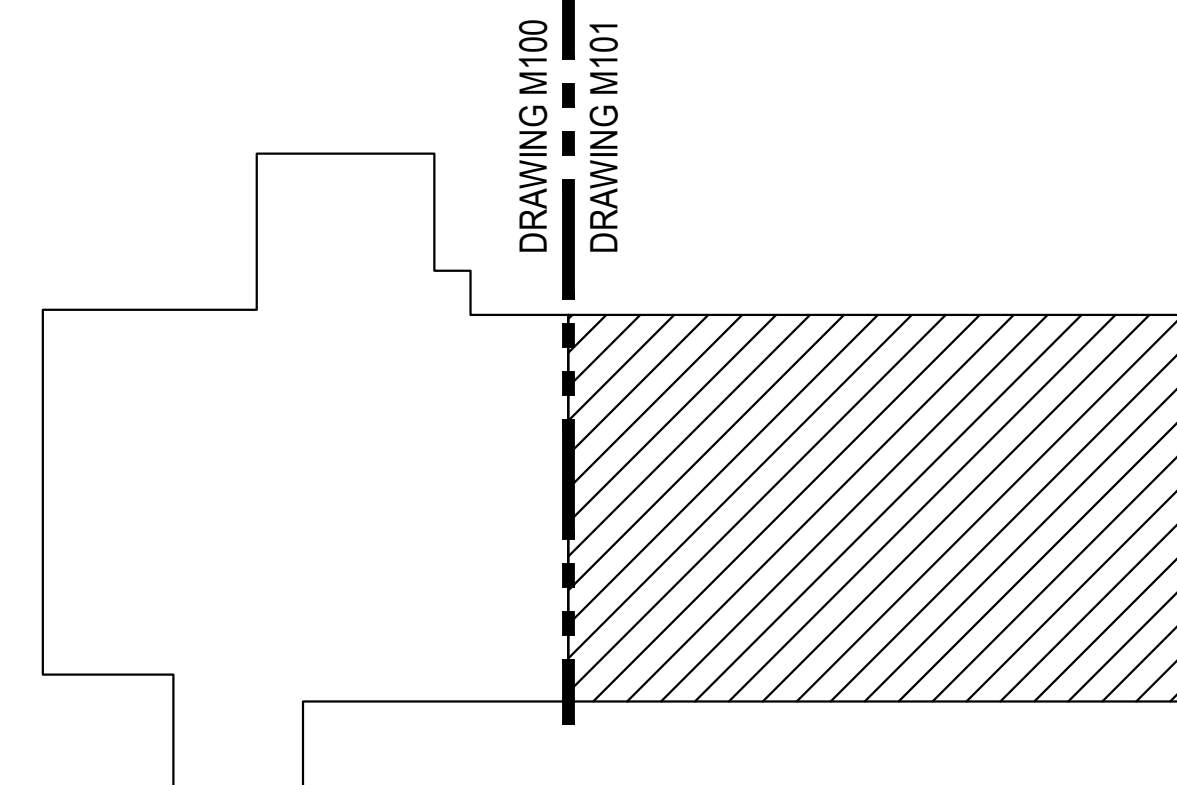
DRAWING M100
DRAWING M101

**1ST FLOOR SERVICE AREAS
HVAC PLAN**
SCALE: 1/8" = 1'-0"



GENERAL NOTES	
A.	PLEASE REFER TO SHEET M101 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.
B.	SERVICE AREAS ARE CLASSIFIED FROM FLOOR TO 18" AFF. OTHERWISE UNCLASSIFIED PER NEC 511

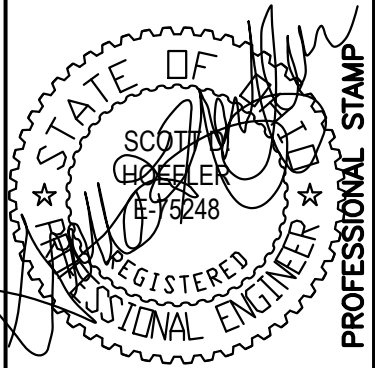
- DRAWING NOTES**
- NO WORK IN THIS AREA.
 - HORN / STROBE FOR GAS DETECTION SYSTEM. INSTALL AT 8'-0" AFF.
 - INSTALL WIRE MESH OVER RETURN AIR DUCT OPENING.
 - INSTALL DUCTWORK FOR VEHICLE EXHAUST SYSTEM AS HIGH AS POSSIBLE.
 - DUCT CONNECTION FOR VEHICLE EXHAUST HOSE. SEE DRAWING M103 FOR VEHICLE EXHAUST SYSTEM DETAILS.
 - CUT DISCHARGE END OF VEHICLE EXHAUST DUCT AT A 45° ANGLE. COVER OPENING WITH BIRDSCREEN.
 - RELOCATED HVLV FAN. COORDINATE LOCATION AND ELEVATION WITH LIGHTING.
 - MAKE DUCT CONNECTIONS TO SIDE OF ROOFTOP UNIT. SUPPLY AND RETURN AIR DUCTS SHALL PENETRATE BUILDING WALL AS HIGH AS POSSIBLE. COORDINATE WITH EXISTING STRUCTURAL CONDITIONS. ALL EXTERIOR DUCTWORK SHALL HAVE 2" LINER. DUCT SIZE SHOWN IS EXTERIOR DUCT DIMENSIONS. CONCRETE PAD FOR ROOFTOP UNIT BY OTHERS.
 - MAKE DUCT CONNECTIONS TO SIDE OF ROOFTOP UNIT. INSTALL POWER EXHAUST UNIT ON RETURN AIR DUCT RISER AND SUPPORT WITH UNISTRUT LEGS. SUPPLY AND RETURN AIR DUCTS SHALL PENETRATE BUILDING WALL AS HIGH AS POSSIBLE. COORDINATE WITH EXISTING STRUCTURAL CONDITIONS. ALL EXTERIOR DUCTWORK SHALL HAVE 2" LINER. DUCT SIZE SHOWN IS EXTERIOR DUCT DIMENSIONS. CONCRETE PAD FOR ROOFTOP UNIT BY OTHERS.
 - RTU-8'S POWER EXHAUST ACCESSORY IS CAPABLE OF PROVIDING EXHAUST (10,000 CFM) IN EXCESS OF THE REQUIRED GENERAL EXHAUST FOR VEHICLE REPAIR GARAGES (11,069 SQFT. x 0.75 CFM/SQFT. = 8,302 CFM). RTU-8 IS ALSO CAPABLE OF PROVIDING 10,000 CFM OF 100% OUTSIDE AIR INTO THE SUPPLY DUCTWORK (VIA THE MANUFACTURER'S ECONOMIZER ACCESSORY) SIMULTANEOUSLY WITH POWER EXHAUST OPERATION AS PART OF AN ALTERNATE ENGINEERED DESIGN PER OMC SECTION 106.5. FOR ENERGY CONSERVATION, RTU-8 SHALL ONLY OPERATE ITS POWER EXHAUST ACCESSORY IF A CO2 SENSOR DETECTS 25 PPM CO₂, 0.3 PPM OF NO₂, OR IF OUTDOOR CONDITIONS ARE SUITABLE FOR "FREE NON-MECHANICAL" COOLING. IN EITHER OF THESE CASES THE RTU-8 ECONOMIZER PROVIDES MAKE-UP AIR COMPRISED OF 100% OUTDOOR AIR. THE 25 PPM CO₂ THRESHOLD IS BASED UPON THE EXPOSURE LIMIT REFERENCED BY THE AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH) AND OSHA (THRESHOLD LIMIT VALUE (TLV): 25 PPM, 29 MG/M3 TWA). THESE TWO ORGANIZATIONS HAVE THE MOST CONSERVATIVE THRESHOLD LIMIT VALUE OF THE MAJOR GOVERNMENT AGENCIES WHO LIST CO₂ THRESHOLDS (OSHA = 25 PPM, NIOSH = 35PPM, ACGIH = 25 PPM). THE 0.3 PPM NO₂ THRESHOLD IS BASED UPON REFERENCING THE MOST STRINGENT EXPOSURE LIMIT REFERENCED BY THE ACGIH, NIOSH AND OSHA (OSHA = 1 PPM, NIOSH = 1 PPM, ACGIH = 0.2 PPM) WHILE ALSO TAKING INTO ACCOUNT THE RESOLUTION OF THE SENSORS (0.1 PPM). AN AUDIO VISUAL ALARM WILL BE INSTALLED TO ALARM AT EITHER A SUSTAINED ABOVE THRESHOLD PPM VALUE OR A VALUE BEYOND THE THRESHOLD VALUE DEPENDING UP ON OUTPUT TYPE AVAILABLE ON SENSOR SYSTEM.



KEY PLAN
SCALE: NTS



DATE:	DESCRIPTION:
02/15/24	ISSUED WITH REVISIONS CLOURED
02/23/24	ISSUED WITH REVISIONS CLOURED
05/06/24	ISSUED WITH REVISIONS CLOURED
10/08/24	REVISION SET (M800 M100 M102 RE-USED)



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 Since 1938
 288 Northmont Ave., Cincinnati, Ohio 45211

JEFF WILKER MINOR OF BEAVERCREK
 2170 HELLER DR.
 DAYTON, OHIO 45454
 SERVICE AREAS HVAC PLAN

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DRAWN BY:	C. BLICKENSCHPER
JOB #	C-6297
DRAWING #	6274
SHEET #	M101