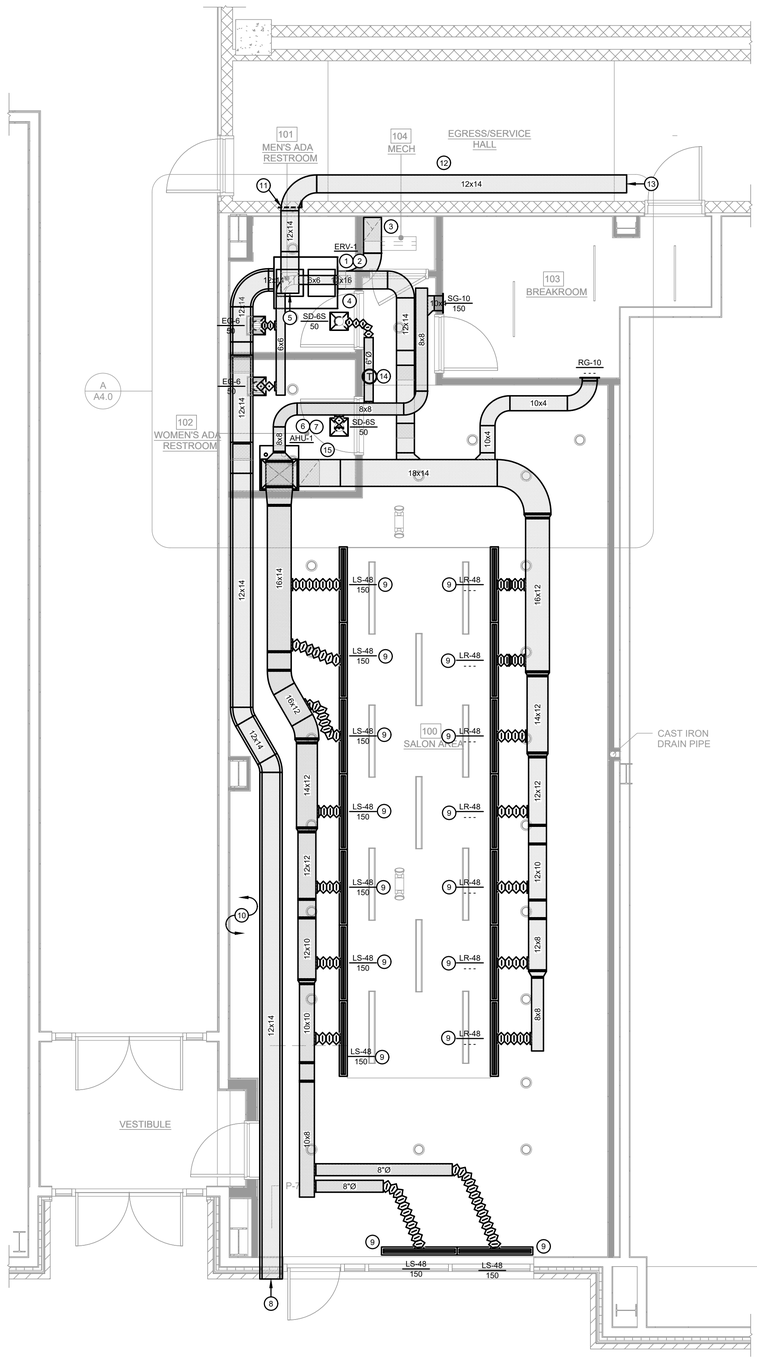


1 M-101 MECHANICAL PLAN

SCALE: 1/4" = 1'-0"

0' 2' 4' 8'

PLAN NOTES

1	PROVIDE AND INSTALL NEW ERV ABOVE FINISHED CEILING PER MANUFACTURERS INSTRUCTIONS. PROVIDE WITH MANUFACTURERS T.O.D. SCHEDULE, AND ALL REQUIRED MATERIALS AND ACCESSORIES TO MAKE COMPLETE. ERV TO OPERATE WHILE TENANT SPACE IS OCCUPIED. COORDINATE OPERATING HOURS WITH OWNER.
2	COORDINATE EXACT ELEVATION AND LOCATION OF NEW ERV WITH EXISTING CONDITIONS. MAINTAIN ALL REQUIRED CLEARANCES PER MANUFACTURERS INSTRUCTIONS.
3	EXTEND EXHAUST DUCT DOWN TO BELOW SLAB. SEE MECHANICAL FLOOR PLAN ON M-102 FOR CONTINUATION.
4	EXHAUST ERV INLET CONNECTION TO BE MADE AT ALTERNATE CONNECTION LOCATION LOCATED ON BOTTOM OF ERV. PROVIDE ALL REQUIRED MATERIALS AND ACCESSORIES TO MAKE COMPLETE.
5	EXHAUST ERV OUTLET CONNECTION TO BE MADE AT ALTERNATE CONNECTION LOCATION ON TOP OF ERV. PROVIDE ALL REQUIRED MATERIALS AND ACCESSORIES TO MAKE COMPLETE.
6	PROVIDE AND INSTALL NEW AIR HANDLER ABOVE CEILING IN VERTICAL POSITION. PROVIDE WITH ALL REQUIRED MOUNTING BRACKETS AND MATERIALS TO MAKE COMPLETE. EXTEND 3/4" CONDENSATE PIPING DOWN TO SERVICE SINK IN MECH 104.
7	EXTEND COMBUSTION AND RELIEF PIPING UP THROUGH PRECUT BORE HOLES IN CEILING UP TO CONCENTRIC VENT KIT ON ROOF. ALL COMBUSTION AND RELIEF PIPING SHALL BE INSTALLED AND SIZED PER MANUFACTURERS INSTRUCTIONS. COORDINATE EXACT SIZE WITH EXACT EQUIVALENT INSTALLATION LENGTH PRIOR TO COMMENCING ANY WORK.
8	EXTEND OUTDOOR AIR DUCT OUT THROUGH FINISHED WALL AND CAP WITH INTAKE AIR CAP. INTAKE CAP SHALL MATCH ADJACENT TENANT SPACE.
9	PROVIDE AND INSTALL LINEAR SLOT DIFFUSER TIGHT TO EDGE OF BULKHEAD. PROVIDE WITH DRYWALL MOUNTING FRAME, ALIGNMENT PLATES, AND ALL REQUIRED MATERIALS AND ACCESSORIES TO MAKE COMPLETE. LINEAR DIFFUSERS TO BE INSTALLED AS CONTINUOUS LINEAR SLOT.
10	ALL OUTDOOR AIR DUCT TO BE INSULATED WITH A MINIMUM OF R8 DUCT WRAP.
11	PROVIDE FIRE DAMPER WHERE DUCT PENETRATES RATED WALL. TYPICAL OF ALL LOCATIONS. COORDINATE ALL RATED WALL LOCATIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO COMMENCING ANY WORK.
12	EXTEND EXHAUST DUCT OUT ABOVE FINISHED CEILING IN COMMON EGRESS/SERVICE HALL. COORDINATE EXACT LOCATION AND ELEVATION WITH EXISTING CONDITIONS.
13	EXTEND EXHAUST DUCT OUT THROUGH PARKING GARAGE AND TERMINATE WITH SIDEWALL LOUVER. LOUVER TO BE EQUAL TO GREENHECK ESD-635 20X20. LOUVER TO BE SIZED FOR 900 CFM.
14	PROVIDE AND INSTALL NEW 7 DAY PROGRAMMABLE THERMOSTAT.
15	PROVIDE WITH ACOUSTICAL DUCT LINER IN FIRST 10' OF RETURN AIR DUCT.

E2M ENGINEERING, INC.
682 TUXEDO PLACE
CINCINNATI, OH 45206
TEL: 513.587.0050
www.e2m-eng.com

NEW TENANT CONSTRUCTION FOR:

VALENCIA NAIL STUDIO

9340 Montgomery Road - Suite 105
Montgomery, Ohio 45242

NO.	DATE	ISSUED FOR
#####	#####	#####

SEAL

SIGNATURE

DATE

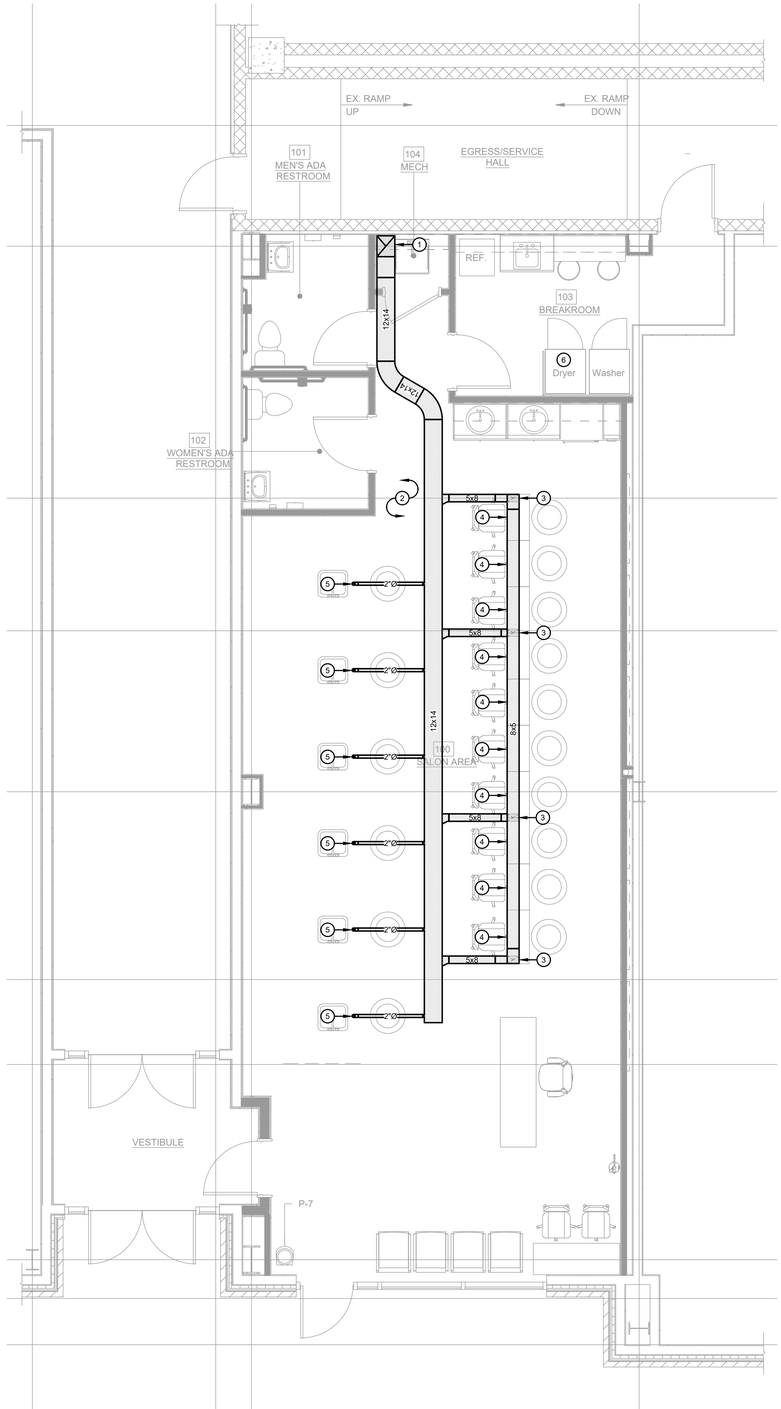
MECHANICAL PLAN

DRAWN BY:	AEG,
CHECKED BY:	KJR
SCALE:	AS NOTED
JOB NUMBER:	E2M: 25196
START DATE:	08/22/2025

M-101

PLOTTED BY ANDREA G ON Friday, August 22, 2025 4:25:08 PM FILE LOCATION: Z:\1 PROJECTS CURRENT\25196 VALENCIA NAILS\++WORKING FILES\VALENCIA NAILS\SHEETS\25196-M-101.DWG

PLOTTED BY ANDREA G ON Friday, August 22, 2025 4:25:08 PM FILE LOCATION: Z:\1 PROJECTS CURRENT\25196 VALENCIA NAILS\++WORKING FILES\VALENCIA NAILS\SHEETS\25196-M-101.DWG



1 M-102 MECHANICAL FLOOR PLAN

SCALE: 1/4" = 1'-0"

0' 2' 4' 8'

PLAN NOTES

1	EXHAUST DUCT DOWN TO BELOW SLAB FROM CEILING ABOVE. SEE MECHANICAL RCP ON M-101 FOR CONTINUATION.
2	ALL DUCT INSTALLED UNDER SLAB TO BE PROVIDED WITH DUCT SUPPORTS AND PVC DUCT WRAP.
3	EXTEND DUCT UP THROUGH CASEWORK LEGS. COORDINATE EXACT LOCATION WITH CASEWORK PRIOR TO COMMENCING ANY WORK.
4	EXHAUST INLET TO BE INCORPORATED IN CASEWORK. INLET TO BE SIZED FOR 50CFM AND LOCATED A MAXIMUM OF 12" FROM CENTER OF TABLE. COORDINATE EXACT INLET SIZE AND LOCATION WITH CASEWORK MANUFACTURER.
5	PROVIDE 2" EXHAUST STUB UP FOR OWNER PROVIDED PEDICURE CHAIRS. COORDINATE EXACT STUB UP LOCATION WITH EXACT CHAIR INSTALLATION LOCATION.
6	VENTLESS DRYER PROVIDED BY OWNER AND INSTALLED BY GC.

E2M ENGINEERING, INC.
682 TUXEDO PLACE
CINCINNATI, OH 45206
TEL: 513.587.0050
www.e2m-eng.com

NEW TENANT CONSTRUCTION FOR:

VALENCIA NAIL STUDIO

9340 Montgomery Road - Suite 105
Montgomery, Ohio 45242

NO.	DATE	ISSUED FOR
#####	#####	#####

SEAL

SIGNATURE

DATE

MECHANICAL FLOOR PLAN

DRAWN BY:	AEG,
CHECKED BY:	KJR
SCALE:	AS NOTED
JOB NUMBER:	E2M: 25196
START DATE:	08/22/2025

M-102

PLOTTED BY ANDREA G ON Friday, August 22, 2025 4:25:14 PM FILE LOCATION: Z:\1. PROJECTS CURRENT\25196 VALENCIA NAILS\++WORKING FILES\VALENCIA NAILS\SHEETS\25196-M-102.DWG

PLOTTED BY ANDREA G ON Friday, August 22, 2025 4:25:14 PM FILE LOCATION: Z:\1. PROJECTS CURRENT\25196 VALENCIA NAILS\++WORKING FILES\VALENCIA NAILS\SHEETS\25196-M-102.DWG

SMACNA HVAC DUCTWORK SHEET METAL GAUGES

MAXIMUM DUCT DIMENSIONS	SMACNA PRESSURE CLASS											
	0.50 W.C.		1.00 W.C.		2.00 W.C.		3.00 W.C.		4.00 W.C.		6.00 W.C.		10.00 W.C.	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
4" - 8"	24	-	24	-	24	-	24	24	24	24	24	24	22	24
9" - 10"	24	-	24	-	24	-	24	24	22	24	22	24	20	22
11" - 12"	24	-	24	-	24	-	24	24	22	24	20	24	18	22
13" - 14"	24	-	24	-	24	24	22	24	20	24	20	22	18	20
15" - 16"	24	-	24	-	24	24	22	24	20	24	18	22	16	20
17" - 18"	24	-	24	24	22	24	20	24	18	24	18	22	16	20
19" - 20"	24	24	24	24	20	24	18	24	18	24	16	22	-	18
21" - 22"	22	24	22	24	18	24	18	24	18	24	16	22	-	18
23" - 24"	22	24	22	24	18	24	18	24	18	22	16	22	-	18
25" - 26"	20	24	20	24	18	24	18	24	16	22	-	20	-	18
27" - 28"	18	24	18	24	18	24	18	22	16	22	-	20	-	18
29" - 30"	18	24	18	24	18	24	18	22	16	22	-	18	-	18
31" - 36"	18	24	18	24	16	24	16	20	-	20	-	18	-	16
37" - 42"	16	24	16	24	-	22	-	20	-	18	-	16	-	16
43" - 48"	16	24	16	22	-	22	-	18	-	18	-	16	-	16
49" - 54"	-	24	-	22	-	20	-	18	-	18	-	16	-	16
55" - 60"	-	24	-	22	-	20	-	18	-	16	-	16	-	16
61" -72"	-	22	-	18	-	18	-	16	-	16	-	16	-	16
73" -84"	-	22	-	18	-	16	-	16	-	16	-	16	-	16
85" -96"	-	20	-	18	-	16	-	16	-	16	-	16	-	16
97" -108"	-	18	-	16	-	16	-	16	-	16	-	16	-	16
109" -120"	-	16	-	16	-	16	-	16	-	16	-	16	-	16

NOTES:
1. THIS TABLE IS BASED ON THE FOLLOWING:
   - 1.1. COLUMN A: DUCT GAUGE REQUIREMENT WITH NO REINFORCEMENT
   - 1.2. COLUMN B: DUCT GAUGE WITH REINFORCEMENT AS INDICATED BELOW
     - 1.2.1. 0.50" W.C. PRESSURE CLASS: 5 FEET REINFORCING SPACING FOR SPACING 19" - 120"
     - 1.2.2. 1.00" W.C. PRESSURE CLASS: 5 FEET REINFORCING SPACING FOR SPACING 17" - 108" AND 4 FEET SPACING FOR 109" - 120"
     - 1.2.3. 2.00" W.C. PRESSURE CLASS: 5 FEET REINFORCING SPACING FOR 13" - 84" AND 4 FEET SPACING FOR 85" - 108" AND 3 FEET SPACING FOR 109" - 120".
     - 1.2.4. 3.00" W.C. PRESSURE CLASS: 5 FEET REINFORCING SPACING FOR G 4" - 84", 4 FEET SPACING FOR 85" - 96" AND 3 FEET SPACING FOR 97" - 120".
     - 1.2.5. 4.00" W.C. PRESSURE CLASS: 5 FEET REINFORCING SPACING FOR 4" - 60", 4 FEET SPACING FOR 61" - 72" AND 3 FEET SPACING FOR 73" - 120".
     - 1.2.6. 6.00" W.C. PRESSURE CLASS: 5 FEET REINFORCING SPACING FOR 4" - 48", 4 FEET SPACING FOR 49" - 60" AND 3 FEET SPACING FOR 61" - 120".
     - 1.2.7. 10.00" W.C. PRESSURE CLASS: 5 FEET REINFORCING SPACING FOR 4" - 42", 4 FEET SPACING FOR 43" - 54", 3 FEET SPACING FOR 55" - 72" AND 2 FEET SPACING FOR 73" - 120".

SPLIT SYSTEM SCHEDULE

EQUIPMENT MARK	AHU-1	CU-1
MANUFACTURER	CARRIER	CARRIER
MODEL #	59TP6C100V21	26TPA848W003
COOLING COIL MODEL#	CVAVA4521XMA	
ENERGY EFFICIENCY RATIO (SEER2)		18
INDOOR FAN H.P.	1	
DESIGN CFM	1600	
EXTERNAL STATIC PRESSURE IN H2O	0 - 1	
CONDENSER AMBIENT CONDITIONS		
TEMPERATURE °F		95°F
COOLING DATA		
ENTERING AIR TEMP. db / wb °F	80/67	
TOTAL COOLING CAPACITY IN M.B.H.	48.22	48.22
SENSIBLE COOLING CAPACITY IN M.B.H.	33.90	33.90
REFRIGERANT TYPE	R-454B	R-454B
GAS INPUT IN M.B.H. H/L	100/65	
GAS OUTPUT IN M.B.H. H/L	97/63	
HEATING EFFICIENCY (AFUE %)	96%	
STAGES	2	
ELECTRICAL DATA		
VOLTS / PHASE/ HERTZ	120/1/60	208/1/60
MINIMUM CIRCUIT AMPS	13.2	25.5
MAX OVERCURRENT PROTECTION IN AMPS	20.0	40
PHYSICAL DATA		
UNIT WEIGHT IN POUNDS	156.0	226.0
ACCESSORIES	SEE BELOW	- - -

A. TRANSFORMER
B. THERMAL EXPANSION VALVE.
C. SIDE RETURN FILTER RACK.
D. INSULATED PLENUM COOLING COIL.
E. REFRIGERANT FILTER/ DRIER.
F. COMPRESSOR SHORT CYCLE CONTROL.
G. FURNANCE MOUNTING PAD
H. REFRIGERANT LINE SET
I. RETURN AIR PLENUM
J. PROGRAMMABLE PERFORMANCE SERIES EDGE THERMOSTAT MODEL #T6-PRH01-A

NOTES:
1. CONDENSING UNIT SHALL BE MOUNTED ON 4" CONCRETE BASE OR PREFORMED MANUFACTURER'S PAD.
2. AIR HANDLING UNIT TO HAVE ONE (1) 3/4" PVC CONDENSATE DRAIN LINES PIPED TO NEAREST FLOOR DRAIN.
3. INSTALL SYSTEMS PER MANUFACTURER'S INSTRUCTIONS.
4. OR EQUAL.

PROJECT GENERAL NOTES

1. THE DRAWINGS ARE DIAGRAMMATIC ONLY AND INDICATE THE GENERAL ARRANGEMENT OF THE SYSTEMS AND ARE TO BE FOLLOWED INSOFAR AS POSSIBLE. IF DEVIATIONS FROM THE LAYOUTS ARE NECESSITATED BY FIELD CONDITIONS, DETAILED LAYOUTS OF THE PROPOSED DEPARTURES SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW BEFORE PROCEEDING WITH THE WORK.
2. THE MECHANICAL CONTRACTOR SHALL REVIEW ALL DRAWINGS IN DETAIL AS THEY MAY RELATE TO THEIR WORK.
3. EACH CONTRACTOR SHALL INSPECT THE SITE ON WHICH THE WORK IS TO BE PERFORMED, AND THE OBSTACLES THAT MAY BE ENCOUNTERED, AND ALL RELEVANT MATTERS CONCERNING THE WORK.
4. THE CONTRACTOR SHALL FILE ALL NECESSARY NOTICES, OBTAIN AND PAY FOR ALL PERMITS, FEES, AND OTHER COSTS INCLUDING UTILITY CONNECTIONS OR EXTENSION, IN CONNECTION WITH HIS WORK. AS NECESSARY, HE SHALL FILE ALL REQUIRED PLANS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL UTILITY AND GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION.
5. IGNORANCE OF CODES, RULES, AND REGULATIONS, UTILITY COMPANY REQUIREMENTS, LAWS, ETC. SHALL NOT DIMINISH OR ABSOLVE CONTRACTOR'S RESPONSIBILITIES TO PROVIDE AND COMPLETE ALL WORK IN COMPLIANCE WITH SUCH.
6. ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH THE CURRENT EDITION OF THE INDIANA MECHANICAL CODES, NATIONAL FIRE CODES OF THE NATIONAL FIRE PROTECTION ASSOCIATION AND WITH THE REQUIREMENTS OF ALL GOVERNMENTAL AGENCIES OR DEPARTMENTS HAVING JURISDICTION.

SEQUENCE OF OPERATION

STARTUP: AN HOUR BEFORE OPENING, THE THERMOSTATS SHALL GO INTO OCCUPIED MODE AND THE OUTSIDE AIR DAMPER SHALL OPEN TO A PREDETERMINED SET POINT. IN HEATING MODE THE THERMOSTAT SHALL BE SET TO 71 DEGREES AND IN COOLING MODE IT SHALL BE SET TO 72 DEGREES. COORDINATE THE HOURS OF OPERATION WITH THE INDIVIDUAL BRANCH, OR BRANCH MANAGER.

OCCUPIED HOURS: DURING OCCUPIED HOURS THE THERMOSTAT SET POINT SHALL REMAIN AT 71 DEGREES IN HEATING MODE AND 72 DEGREES IN COOLING MODE. THE OUTSIDE AIR DAMPER SHALL BE OPEN AND SHALL MAINTAIN THE REQUIRED MINIMUM OUTSIDE AIR TO THE SPACE.

NIGHT SETBACK: DURING UNOCCUPIED HOURS THE RTU SHALL GO INTO FAIL SAFE POSITION. FAIL SAFE POSITION IS DEFINED BY THE FOLLOWING: THE SUPPLY FAN IS OFF, THE OUTSIDE AIR DAMPER IS CLOSED, THE HEATING IS OFF AND THE MECHANICAL COOLING IS OFF. THE SUPPLY FAN SHALL CYCLE IN CONJUNCTION WITH EITHER THE HEATING OR COOLING SYSTEM TO MAINTAIN 65 DEGREES IN HEATING AND 78 DEGREES IN COOLING.

HVAC NOTES

1. SCOPE OF WORK
   - 1.1. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
   - 1.2. ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH THE INTERNATIONAL MECHANICAL CODE 2009, ALL LOCAL CODES AND ALL OTHER REGULATION GOVERNING WORK OF THIS NATURE.
   - 1.3. THE CONTRACTOR SHALL, BEFORE SUBMITTING ANY PROPOSAL, EXAMINE THE PROPOSED SITE AND SHALL DETERMINE FOR HIMSELF THE CONDITIONS THAT MAY EFFECT THE WORK. NO ALLOWANCE SHALL BE MADE IF THE CONTRACTOR FAILS TO MAKE SUCH EXAMINATIONS.
   - 1.4. ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED EQUAL" BY THE ENGINEER OR ARCHITECT.
   - 1.5. CONTRACTOR SHALL INCLUDE ALL NECESSARY CONCRETE PADS, CRAC STANDS, TURNING VANES, AND OTHER NECESSARY EQUIPMENT SHOWN ON THE DRAWINGS.
2. PERMITS
   - 2.1. THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES.
3. SHOP DRAWINGS
   - 3.1. SUBMIT MATERIAL LIST AND SHOP DRAWINGS FOR MAJOR EQUIPMENT TO THE ARCHITECT/ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL SUBMIT FIVE SETS OF SHOP DRAWINGS AND THEY SHALL BE CLEARLY LABELED.
4. FLEXIBLE TYPE DUCT
   - 4.1. SHALL BE OF TWO ELEMENT SPIRAL CONSTRUCTION COMPOSED OF A CORROSION RESISTANT METAL SUPPORTING SPIRAL AND COATED FABRIC WITH A MINERAL BASE. FLEXIBLE DUCT CONNECTORS SHALL BE LISTED BY U.L., CLASS 1 DUCTS, AND SHALL HAVE A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED RATING NOT EXCEEDING 50. USE OF FLEXIBLE DUCTWORK SHALL BE LIMITED TO NO MORE THAN 5 LINEAR FEET PER RUN. CONTRACTOR SHALL BE CAREFUL SO AS NOT TO KINK OR COLLAPSE FLEXIBLE DUCT.
5. REFRIGERANT PIPING
   - 5.1. CONTRACTOR SHALL PROVIDE AND INSTALL REFRIGERANT PIPING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND IN SUCH A WAY AS TO BE INCONSPICUOUS AND FREE FROM ANY POSSIBLE CONDENSATION. INSULATE REFRIGERANT LINES WITH ARMOUR-FLEX TYPE INSULATION.
   - 5.2. SHALL BE TYPE "K" COPPER TUBING, WITH WROUGHT COPPER SOLDER TYPE FITTINGS SUITABLE FOR CONNECTION WITH SILVER SOLDER DUCTWORK.
6. SHEET METAL DUCT WORK
   - 6.1. THE DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "SMACNA" APPLICABLE MANUALS. ALL DUCTWORK SHALL BE THE LOW VELOCITY TYPE, UNLESS SPECIFIED OTHERWISE.
   - 6.2. CONTRACTOR SHALL PROVIDE AND INSTALL APPROVED FIRE DAMPERS AND ACCESS PANELS IN ANY AND ALL DUCTWORK WHICH PENETRATES A HORIZONTAL OR VERTICAL FIRE PARTITION, OR AS OTHERWISE SHOWN ON DRAWINGS.
   - 6.3. ALL BRANCH DUCTS TO HAVE VOLUME DAMPERS.
   - 6.4. SMOOTH TURN RADIUS DUCTWORK OR TURNING VANES SHALL BE USED THROUGHOUT WHERE FLOW EXCEEDS 150 CFM.
   - 6.5. ALL DUCT JOINTS TO BE SEALED IN ACCORDANCE WITH "SMACNA" STANDARDS AND ACCEPTED GOOD PRACTICE.
   - 6.6. ALL DUCT DIMENSIONS SHOWN ARE NET INSIDE VALUES. DIMENSIONS MAY BE CHANGED SO LONG AS THE NET FREE FACE AREA IS MAINTAINED.
   - 6.7. ALL CONCEALED DUCTWORK SHALL BE INSULATED WITH 1-1/2" FIBERGLASS INSULATING BLANKET WITH ALUMINUM FOIL FACING.
   - 6.8. ALL SUPPLY AND RETURN DUCTWORK 15 FEET DOWNSTREAM OF THE HVAC UNIT SHALL BE INTERNALLY LINED WITH A 1/2" ACOUSTICAL DUCT LINER.
7. DRAINAGE PIPING (CONDENSATE)
   - 7.1. SHALL BE SCHEDULE 40 PVC PIPE WITH SOLVENT JOINTS. PITCH HORIZONTAL LINES 1" IN 10'-0". CONDENSATE DRAINS SHALL BE ROUTED TO FLOOR DRAIN OR INDIRECT WASTE DRAIN.
8. HVAC CONTROLS
   - 8.1. CONTRACTOR TO SUPPLY AND INSTALL ALL CONTROL WIRING AND THERMOSTATS AS REQUIRED.
9. ELECTRICAL
   - 9.1. CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR FOR LOCATION OF WIRING FOR EACH HVAC UNIT.
10. PIPE SUPPORTS
    - 10.1. ALL PIPE SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN A NEAT AND WORKMANLIKE MANNER. THE USE OF WIRE OR METAL STRAP TO SUPPORT PIPES WILL NOT BE PERMITTED. SPACING OF PIPE SUPPORTS SHALL NOT EXCEED 8 FEET FOR ALL PIPING. PLASTIC PIPING TO BE SUPPORTED EVERY 4 FEET.
11. GAS PIPING
    - 11.1. SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH MALLEABLE IRON FITTINGS. WHERE GAS PIPE CONNECTS TO EQUIPMENT, IT SHALL BE PROVIDED WITH A DRIP LEG THE FULL SIZE OF THE RUN OUT, A 100% SHUT-OFF VALVE AND A UNION. GAS PIPING CONTAINING PRESSURE GREATER THAN 9" W.G. SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH WELDED JOINTS.
12. MISCELLANEOUS
    - 12.1. ALL EXTERIOR OPENINGS TO BE PROPERLY CAULKED AND SEALED WITH A SEALANT OF HIGH QUALITY AND LONG LIFE, TO PREVENT INFILTRATION OF OUTSIDE AIR INTO CONDITIONED SPACE.
    - 12.2. COORDINATE INSTALLATION OF ALL ROOF FLASHING AT ROOF PENETRATION.
    - 12.3. DO NOT SCALE THIS DRAWING FOR EXACT DIMENSIONS. VERIFY ALL FIGURES, CONDITIONS, AND DIMENSIONS AT THE JOB SITE.
    - 12.4. THE MECHANICAL PLANS ARE INTENDED TO BE DIAGRAMMATIC AND ARE BASED ON ONE MANUFACTURE'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT. THE CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO ENSURE THAT THE EQUIPMENT WILL FIT IN THE AVAILABLE SPACE.
    - 12.5. ALL AIR FILTERS SHALL CONFORM TO SECTION 605 OF THE INTERNATIONAL MECHANICAL CODE.
13. TESTING AND BALANCING
    - 13.1. THE HVAC SYSTEM SHALL BE TESTED AND AND BALANCED BY AN INDEPENDENT AGENCY, UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER. A SEALED TYPE WRITTEN REPORT SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL.
14. GUARANTEE
    - 14.1. MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE(1) YEAR FROM DATE OF ACCEPTANCE. DEFECTS WHICH APPEAR DURING THAT PERIOD SHALL BE CORRECTED AT THIS CONTRACTOR'S EXPENSE.
    - 14.2. FOR THE SAME PERIOD, THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED BY HIM.

REGISTER, DIFFUSER AND GRILLE SCHEDULE

MARK	SD-6S	LS-48	SG-10	LR-48	RG-10	EG-6
MANUFACTURER	PRICE	PRICE	PRICE	PRICE	PRICE	PRICE
MODEL NUMBER	SPD	SDS75/2/2/XX/B12	510/F/L/A/B12	SDR75/2/2/XX/B12	535/F/L/A/B12	80/F/A/B12
TYPE	FLAT PLAQUE	LINEAR SLOT	LOUVERED	LINEAR SLOT	LOUVERED	EGG CRATE
DIRECTION	4-WAY	1-WAY	1-WAY	1-WAY	1-WAY	4-WAY
MOUNTING	LAY-IN	DRYWALL	WALL	CEILING	WALL	CEILING
G / R / D	D	D	D	G	D	G
CFM	AS NOTED	AS NOTED	- - -	- - -	- - -	- - -
NECK SIZE	6"	8"	10" X 4"	8"	10" X 4"	6"
PANEL SIZE	12" X 12"	48" X 4-1/2"	11-3/4" X 5-3/4"	48" X 4-1/2"	11-3/4" X 5-3/4"	12" X 12"
MATERIAL	STEEL	ALUMINUM	STEEL	ALUMINUM	STEEL	STEEL
FINISH	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE
DAMPER	NO	YES	YES	YES	YES	YES
SOUND (NC)	<20	<20	<20	<20	<20	<20
REMARKS / NOTES	1,2	1,2,3	1,2	1,2	1,2,3	1,2

1. DIFFUSERS SHALL BE 4-WAY FLOW UNLESS OTHERWISE NOTED
2. PROVIDE WITH DRYWALL WALL MOUNTING FRAME WHERE REQUIRED.
3. PROVIDE WITH FACTORY APPROVED PLENUM.

Outdoor Air Calculations Per ASHRAE Standard 62.1

Room Number	Room Name	Room Area	System Number	Occupancy Category (Table 6.1)	Exhaust Occupancy Category (Table 6.4)	Minimum Ventilation Known Occupancy			Minimum Ventilation Default Values				Minimum Exhaust Rate (Table 6.4)	Total Exhaust Rate	Breathing Zone Outdoor Air	Primary Outdoor Air Fraction (Zp)	System #1	Max Zp: 0.12
						CFM Per Person (Rp)	CFM per 1,000 Ft² (Ra)	No. of People (Pz)	People per 1,000 Ft² (Pz)	CFM per 1,000 Ft² (Ra)	CFM Per Person	Number of People					Supply	Outdoor Air
100A	SALON AREA	236 Ft²	1	Retail - Beauty and Nail Salons	Beauty and Nail Salons								0.60	141.60			300	
100B	SALON AREA	658 Ft²	1	Retail - Beauty and Nail Salons	Beauty and Nail Salons								0.60	394.80			800	
100C	SALON AREA	116 Ft²	1	Retail - Beauty and Nail Salons	Beauty and Nail Salons								0.60	69.60			200	
101	MEN'S REST	58 Ft²	1	Not A pplicable - Exhaust Only	Toilets - Public									70.00			70	
102	WOMEN'S REST	58 Ft²	1	Not A pplicable - Exhaust Only	Toilets - Public									70.00			70	
103	BREAKROOM	118 Ft²	1	Office Buildings - Breakrooms		5.00	0.12	1.00							19.16	0.12	200	24
104	MECH/JANITOR	14 Ft²	1	Not A pplicable - Exhaust Only	Janitor Trash Recycle								1.00	14.00			50	
Notes																	5.0 Ton System 1% Outdoor Air People: 1 System Efficiency: 1.00 Occupant Diversity: 1.00 24 CFM O.A. Required	

E2M ENGINEERING, INC.
682 TUXEDO PLACE
CINCINNATI, OH 45206
TEL: 513.587.0050
www.e2m-eng.com

NEW TENANT CONSTRUCTION FOR:

VALENCIA NAIL STUDIO
9340 Montgomery Road - Suite 105
Montgomery, Ohio 45242

NO.	DATE	ISSUED FOR
#####	#####	#####

SEAL

SIGNATURE

DATE

MECHANICAL SCHEDULES

DRAWN BY:	AEG,
CHECKED BY:	KJR
SCALE:	AS NOTED
JOB NUMBER:	E2M: 25196
START DATE:	08/22/2025

M-501

PLOTTED BY ANDREA G ON Friday, August 22, 2025 4:25:20 PM. FILE LOCATION: Z:\1. PROJECTS CURRENT\25196 VALENCIA NAILS\++WORKING FILES\VALENCIA NAILS\SHEETS\25196-M-501.DWG

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