

**DETAIL NOTES**

- 18"x24" (UNO) 2"x4" SELF LEVELING EQUIPMENT SUPPORT RAIL.
- LAG SCREWS (#12-1") SHALL BE PROVIDED AT 12" O.C. ON ALL SIDES AND SECURED TO THE PERIMETER ANGLE PROVIDED BY OTHERS. NO. OF LAG SCREWS REQ'D AT EACH RAIL: 243 RAILS: - (2) LONG SIDE OF UNIT - (1) SHORT SIDE OF UNIT
- PROVIDE (2)-METAL TIE-DOWN STRAPS OR CABLES W/(2)-SIDE-BY-SIDE #12 SCREWS ON EACH STRAP SECURED TO THE EQUIPMENT RAILS.

**GENERAL NOTES**

- ALL ROOF/ROOFING WORK (FLASHING, SEALING, ETC.) TO BE PERFORMED BY THE ROOFING CONTRACTOR. COORDINATE AND FIELD VERIFY RAIL SPACING W/ ROOFING CONTRACTOR PRIOR TO ROUGH-IN WORK.
- EQUIPMENT INSTALLATION AND SECUREMENT SHALL BE IN COMPLIANCE FOR RESISTANCE TO HIGH WIND-PRESSURES FOR 3-SECOND WIND GUST SPEEDS OF 115 MPH (OBC CHAPTER 16) AND OMC 301.15 WIND RESISTANCE: MECHANICAL EQUIPMENT, APPLIANCES AND SUPPORTS THAT ARE EXPOSED TO TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH THE BUILDING CODE.
- EQUIPMENT ATTACHMENT INFORMATION IS BASED ON FEMA DOCUMENT: "ATTACHMENT OF ROOFTOP EQUIPMENT IN HIGH-WIND REGIONS."

**EQUIPMENT RAIL DETAIL**

SCALE: NONE

**COMcheck Software Version 4.1.5.5**  
**Mechanical Compliance Certificate**

**Project Information**

Energy Code: 90.1 (2019) Standard  
Project Title: Tobias Funeral Home-Far Hills Chapel  
Location: Kettering, Ohio  
Climate Zone: 5a  
Project Type: New Construction

Construction Site: 5471 Far Hills Ave Dayton, OH 45429

Owner/Agent:

Designer/Contractor: Detmer Mechanical Services 9181 N. Dixie Dr. Dayton, OH 45414 937-709-3877

**Mechanical Systems List**

Quantity	System Type & Description
9	F1/AC1 thru F9/AC9 (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 100 kBtu/h Proposed Efficiency = 92.00% Et, Required Efficiency: 80.00 % Et (or 78% AFUE) Cooling: 1 each - Split System, Capacity = 55 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: Low Operating Hours Proposed Efficiency = 13.00 SEER, Required Efficiency: 13.00 SEER Fan System: FAN SYSTEM 1   5 Ton Furnace Blower - Compliance (Motor nameplate HP method) - Passes Fans: FAN 1 Supply, Constant Volume, 1996 CFM, 1.0 motor nameplate hp, 0.0 fan efficiency grade

**Mechanical Compliance Statement**

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2019) Standard requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Theresa A. Root, P.E.-Mechanical Engineer Theresa A. Root, P.E. 1-20-25  
Name - Title Signature Date

**MECHANICAL EQUIPMENT SCHEDULE:**

**F1 thru F9**  
TRANE #S9X1C100USPSBA 95% AFUE 2 STAGE UPFLOW GAS-FIRED FURNACE  
1985 CFM @ .50 ESP / DIRECT DRIVE 2 SPEED 3" DIA. TYPE "PVC" COMB. AIR FLUE VENT  
GAS INPUT: 160 MBH INPUT - SINGLE STAGE - 1/2" GAS LINE CONNECTION  
ELECTRICAL: 120V / 1PH / 60HZ MCA 13.3 / MOCP 15  
UNIT DIMENSIONS: 28-3/4" DEEP X 21" WIDTH X 34" HGT. 145 LBS.  
ACCESS: #SPXCC009AS3HAA 5-TON UPFLOW CASED COIL - 21-3/4" X 21" W X 30-3/4" HGT. 73 LBS.  
#AY28X079 DIFEROST CONTROL - MNT'D ON EVAPORATOR COIL  
#E33-STAT5301 COBEE SMART PRO #7-7 DAY PROGRAMMABLE T-STAT.  
#3" DIA. - CONCENTRIC TERMINATION VENT KIT (THRU ROOF)  
NOTE: FILTER SIZE: (1) 20" X 25" X 2" MERV 8 (LOCATED AT BALANCE BOX)

**AC1 thru AC9**

TRANE #5TTA4060A3000A (14 SEER) "R-454B" 5-TON OUTDOOR AIR CONDITIONER  
ELECTRICAL: 208-230V / 3PH / 60HZ MCA 20.9 AMPS / MOCP 35 AMPS  
ELECTRICAL: 208-230V / 1PH / 60HZ MCA 11.0 / 5.8" DRAIN LINE (NOTE: POWERED FROM OUTDOOR UNIT)  
REFRIGERANT LINESIZES: 7.8" SUCTION & 3.8" LIQUID - TYPE "ACR" COPPER  
W/BRAZED JOINTS & INSULATED SUCTION LINE W-1/2" WALL ARMAFLEX INSULATION  
ACCESS: #KIT17596 7.8" X 3.8" X 1.2" X 50'0" EZ-PULL PRE-INSULATED LINE SET (TBD) REQ'D.  
#DAYLOAM107 LOW AMBIENT CONTROL (O DEG) (F.L.D. INSTALLED)  
#FRANCE 36" LONG X 18" TALL - EQUIPMENT RAILS (2) REQ'D PER UNIT

**MS1**

MITSUBISHI #PKA-A36KAB (36K) WALL MOUNTED HEAT PUMP AIR HANDLER  
COOLING CAPACITY - 36,000 BTU/H - HEATING CAPACITY 40,000 BTU/H @ .13 F 30,400 BTU/H  
ELECTRICAL: 208-230V / 1PH / 60HZ MCA 11.0 / 5.8" DRAIN LINE (NOTE: POWERED FROM OUTDOOR UNIT)  
UNIT DIMENSIONS: 46-1/16" W X 11-5/8" D X 14-3/8" HGT. - 46 LBS.  
ACCESS: #PAC-YS3CRAU WALL MOUNTED SIMPLE MA CONTROLLER  
#R930 MINI-WHITE SILENT ASPEN CONDENSATE PUMP 110-250V  
#7.14P 14" ID GORILLA TUBE CLEAR VINYL TUBING

**MSHP1**

MITSUBISHI #PUZ-HA36KKA (10 HSP / 11.6 EER) (36K @ 18.4 SEER) (R-H10A) 3.0 TON OUTDOOR HYPER-HEAT HEAT PUMP  
UNIT DIMENSIONS: 41-5/16" W X 14-3/16" D X 52-11/16" HGT. - 261 LBS.  
ELECTRICAL: 208-230V / 1PH / 60HZ MCA 24 / MOCP 40 AMPS - RECOMMENDED FUSE/BREAKER 35 AMP  
ACCESS: #WB-PA3 WIND BAFFLES (2) REQ'D  
#FRANCE 24" LONG X 18" TALL - EQUIPMENT RAILS (2) REQ'D  
#10753908 14" JACKETED METAL CLAD MINI-SPLIT CONTROL WIRE X 50'0" (2) REQ'D (F.L.D. VERIFY)  
#DL06100800B 3-8" X 5-8" X 1/2" X 50'0" EZ-PULL PER-INSULATED LINE SET (2) REQ'D (F.L.D. VERIFY)  
#W1009 3/8" COPPER COUPLING  
#W1022 5/8" COPPER COUPLING

**EF1 (TYP. OF 2)**

BROAN #AE8110K CEILING MOUNTED REST ROOM EXHAUST FAN  
110 CFM @ 0.1 SP. / 4" DIA. EXHAUST DISCHARGE W/BACK DRAFT DAMPER  
ELECTRICAL: 120V / 1PH / 60HZ - 0.4 AMPS  
UNIT DIMENSIONS: 9-1/4" X 10" X 5-3/4" HGT. GRILLE: 12-1/4" X 12-1/4"  
NOTE: INTERLOCK W/OCCUPANCY SENSOR / SWITCH (BY ELECTRICAL CONTRACTOR)

**IEF1 (TYP. OF 2)**

SOLAR & PAU #SP-2008 IN-LINE MOUNTED "SILENT" LARGE REST ROOM EXHAUST FAN  
472333 CFM @ 0.125 SP. / 8" DIA. INTAKE & EXHAUST DISCHARGE  
ELECTRICAL: 120V / 1PH / 60HZ - 12 WATTS (9.2 LBS.)  
UNIT DIMENSIONS: 22-3/8" LONG X 10-3/8" TALL X 12-7/8" WIDE  
NOTE: INTERLOCK W/OCCUPANCY SENSOR / SWITCH (BY ELECTRICAL CONTRACTOR)  
ACCESS: #RSK8 8" DIA. BACK-DRAFT DAMPER  
#WCS1 VARIABLE SPEED CONTROLLER WITH ON/OFF SWITCH (ELECTRICAL CONTRACTOR TO WIRE IN CONTROLLER)

**EW11 (TYP. OF 2)**

QMARK #SH04008 (1800-4000 WATTS) SMART SERIES ELECTRIC WALL HEATER  
100 CFM (AIR MOVEMENT)  
ELECTRICAL: 208V / 1PH / 60HZ 8.7 - 19.2 AMPS (13650 BTU/H)  
W/BUILT-IN LCD CONTROL (THERMOSTAT RANGE 40-99 DEGREES F)  
ROUGH WALL OPENING DIMENSIONS: 14-3/8" WIDE X 18-1/4" TALL - 4" DEEP  
OUTSIDE FACE DIMENSIONS: 15-3/4" WIDE X 19-1/8" TALL X 1-3/8" DEEP  
NOTE: DO NOT INSTALL HEATER CLOSER THAN 12 INCHES TO THE FLOOR & 12 INCHES TO ADJACENT WALL

NOTE: PROVIDE CHECK, TEST & START-UP PER MANUFACTURERS INSTALLATION INSTRUCTIONS

**MECHANICAL PLAN DRAWING NOTES:**

ALL RECTANGULAR DUCTWORK - WITH IN MECHANICAL ROOMS TO BE GALV. METAL AS NOTED  
ALL RECTANGULAR DUCTWORK "SUPPLY/RETURN" PLENUMS TO BE GALV. METAL W/1" DUCT LINER  
ALL RECT DUCTWORK "SUPPLY AIR" DIST. TO BE OWENS CORNING #1400-2.0" THK FIBERGLASS BRD - IN ATTIC  
ALL RECT DUCTWORK "SUPPLY AIR" DIST. TO BE OWENS CORNING #800-1.5" THK FIBERGLASS BRD - ABOVE CLG.  
ALL RECT DUCTWORK "RETURN AIR" DIST. TO BE OWENS CORNING #1400 - 2.0 THK FIBERGLASS BRD - IN ATTIC  
ALL RECT DUCTWORK "RETURN AIR" DIST. TO BE OWENS CORNING #800-1.5" THK FIBERGLASS BRD - ABOVE CLG.  
ALL RECT DUCTWORK "EXHAUST AIR" DIST. TO BE OWENS CORNING #475 - 1.0" THK FIBERGLASS BRD  
ALL INSULATION REQUIREMENTS TO MEET DUCTWORK INSULATION CONSTRUCTION STANDARDS  
ALL INSULATION MATERIALS TO BE CLASS 1 25-50 SMOKE / FLAME DEV. RATINGS  
ALL ROUND / FLEXIBLE DUCTWORK "SUPPLY / RETURN / OUTSIDE AIR" TO BE "R-6.0" (CLASS 1 AIR DUCT) - IN ATTIC  
ALL ROUND / FLEXIBLE DUCTWORK "SUPPLY / RETURN / OUTSIDE AIR" TO BE "R-6.0" (CLASS 1 AIR DUCT) - ABOVE CLG.  
ALL ROUND / FLEXIBLE DUCTWORK "EXHAUST AIR" TO BE "R-4.2" (CLASS 1 AIR DUCT) IN ATTIC & ABOVE CLG.  
ALL ROUND / FLEXIBLE DUCTWORK "SUPPLY / RETURN" TO BE INSTALLED SUPPORTED ON 60" CENTERS  
ALL ROUND / FLEXIBLE DUCTWORK "SUPPLY / RETURN / OUTSIDE AIR & EXHAUST AIR" TO BE UNLIMITED LENGTH  
ALL DUCTWORK TO BE INSTALLED / SUPPORTED PER SMANCA STANDARDS - PER OMC 603  
ALL RECTANGULAR / ROUND DUCTWORK TO BE SEALED / PER OMC 603.9  
ALL OUTSIDE AIR TO MEET CHAP 4 PER OMC SEC. 403 & PARA 403.2 "EXCEPT" & TABLE 403.3/ASHRAE 62.1  
ALL OUTSIDE AIR TO THE 10'-0" CLEAR FROM EXHAUST / FLUE VENTS OR GREATER IN 36" OF HEIGHT.  
ALL INDOOR EQUIPMENT TO BE SUPPORTED / ISOLATED ON RUBBER N CORK ISO PADS  
ALL INDOOR EQUIPMENT / COIL TO DRAIN "CONDENSATE" TO THE NEAREST FLOOR DRAIN.  
ALL PVC COMB. AIR / FLUE VENTING TO BE OF SCHEDULE 40 / INSTALL PER MANUF. INSTRUCTIONS  
ALL ROOF CAPS TO BE BROAN BLACK POWDER COATED #636 FOR 4" DIA. / #634M FOR 6" DIA. & #634 FOR 8" DIA.  
ALL CONDENSATE DRAIN PIPING FROM INDOOR FURN. COIL TO DRAIN TO THE NEAREST INDOOR DRAIN - 3/4" PVC  
ALL REFRIG. PIPING LINES TO RUN EXPOSED & OUT OF REFRIGERANT PIPE SLEAKS  
ALL T-STATS TO BE MOUNTED @ 54" AFF USE OF 18.8 LOW-VOLTAGE CONTROL WIRING  
ALL LAY-IN MOUNTED "SUPPLY'S" - TO BE TITUS OR EQUAL TO "OMNI" 24" X 24" LAY-IN W/COLLAR & D-100 DAMPER  
ALL SURF. MOUNTED "SUPPLY'S" - TO BE TITUS OR EQUAL TO "OMNI" 20" X 20" W/PLASTER FRAME & D-100 DAMPER  
ALL SURF. MOUNTED "SUPPLY'S" - TO BE TITUS OR EQUAL TO "OMNI" 20" X 20" (AS NOTED ABOVE) + (3 WAY) BAFFLE)  
ALL SURF. MOUNTED "SUPPLY'S" - TO BE EQUAL TO #TBD-80 48" LONG INSULATED (4) 1-1/2" SLOT DIFFUSERS W/PP'S  
ALL LAY-IN MOUNTED "RETURN'S" - TO BE TITUS OR EQUAL TO #50F 24" X 24" X 12" + TRANSITION BOXES  
ALL SURF. MOUNTED "RETURN'S" - TO BE TITUS OR EQUAL TO #50F 18" X 18" W/PLASTER FRAME + TRANSITION BOXES  
ALL SURF. MOUNTED "RETURN'S" - TO BE TITUS OR EQUAL TO #50F 24" X 12" W/PLASTER FRAME + TRANSITION BOXES  
ALL LAY-IN SURF. MOUNTED AIR DEVICES TO BE INSTALLED & SIZED AS NOTED ON PLAN  
ALL AIR DEVICES TO BE BALANCED TO VOLUME AS INDICATED ON THE PLAN - 10%  
MECH. PLAN TO COMPLY W/OBC 106.106.1.1(3)-HVAC CONSTRUCTION DOCUMENT TO MATCH OHIO ARCH.PLAN

**MECHANICAL PLAN - WORK BY OTHERS:**

NECESSARY HIGH VOLTAGE WIRING / INCLUDING DISCONNECT SWITCHES (GFI'S)  
NECESSARY LINE VOLTAGE INTERLOCK WIRING / OCCUPANCY SENSOR - EXHAUST FANS  
NECESSARY LINE VOLTAGE SPEED CONTROLLER WIRING - IN-LINE EXHAUST FANS  
NECESSARY DRAIN FOR AIR CONDITIONING CONDENSATE (FLOOR DRAIN / MOP SINK)  
NECESSARY FRAMED WALL OPENINGS / HEADERS FOR RECTANGULAR DUCTWORK  
NECESSARY ROOF FLASHING & RESEALING OF ROOF CURBS & EQUIPMENT RAILS  
NECESSARY GAS LINE RECONNECTIONS & ETC. (SEE NOTE)

NOTE: DESIGN SIZING OF GAS LINE PER 2021 IFGC / ANSI Z223.1  
5 PSIG GAS PRESSURE / PRESSURE DROP OF 3 W.G.  
MAX. GAS PRESSURE TO EQUIPMENT IS 14" W.G. / 3.5" W.G. MIN.

**LEGEND**

- LOW VELOCITY DUCTWORK
- SA - SUPPLY AIR DUCTWORK
- RA - RETURN AIR DUCTWORK
- EA - EXHAUST AIR DUCTWORK
- OA - OUTSIDE AIR DUCTWORK
- AP - SUPPLY AIR DEVICE
- AR - RETURN AIR DEVICE
- EA - EXHAUST AIR DEVICE
- AD - ACCESS DOOR (AD) OR PANEL (AP)
- SD - SMOKE DETECTOR
- MD - MANUAL BALANCE DAMPER W/LOCKING QUAD.
- DWV - DOUBLE WALL TURNING VANES
- RE - RADIUS ELBOW
- RT - RECTANGULAR TO ROUND TRANSITION
- AS - SUPPLY AIRFLOW SYMBOL
- AR - RETURN/EXHAUST AIRFLOW SYMBOL
- UC - DOOR UNDERCUT BY G.C. (3/4" MAX. FOR RATED DOORS-W/FA 80-SECTION 6.3.1.7.1)
- F1 - THERMOSTAT/ZONE DAMPER CTRL.
- F1 - REMOTE AVERAGING SENSOR
- D - CONDENSATE DRAIN LINE (SCH 40 PVC)
- DG-18x12 - DOOR GRILLE BY G.C. - NUMBER INDICATES GRILLE SIZE

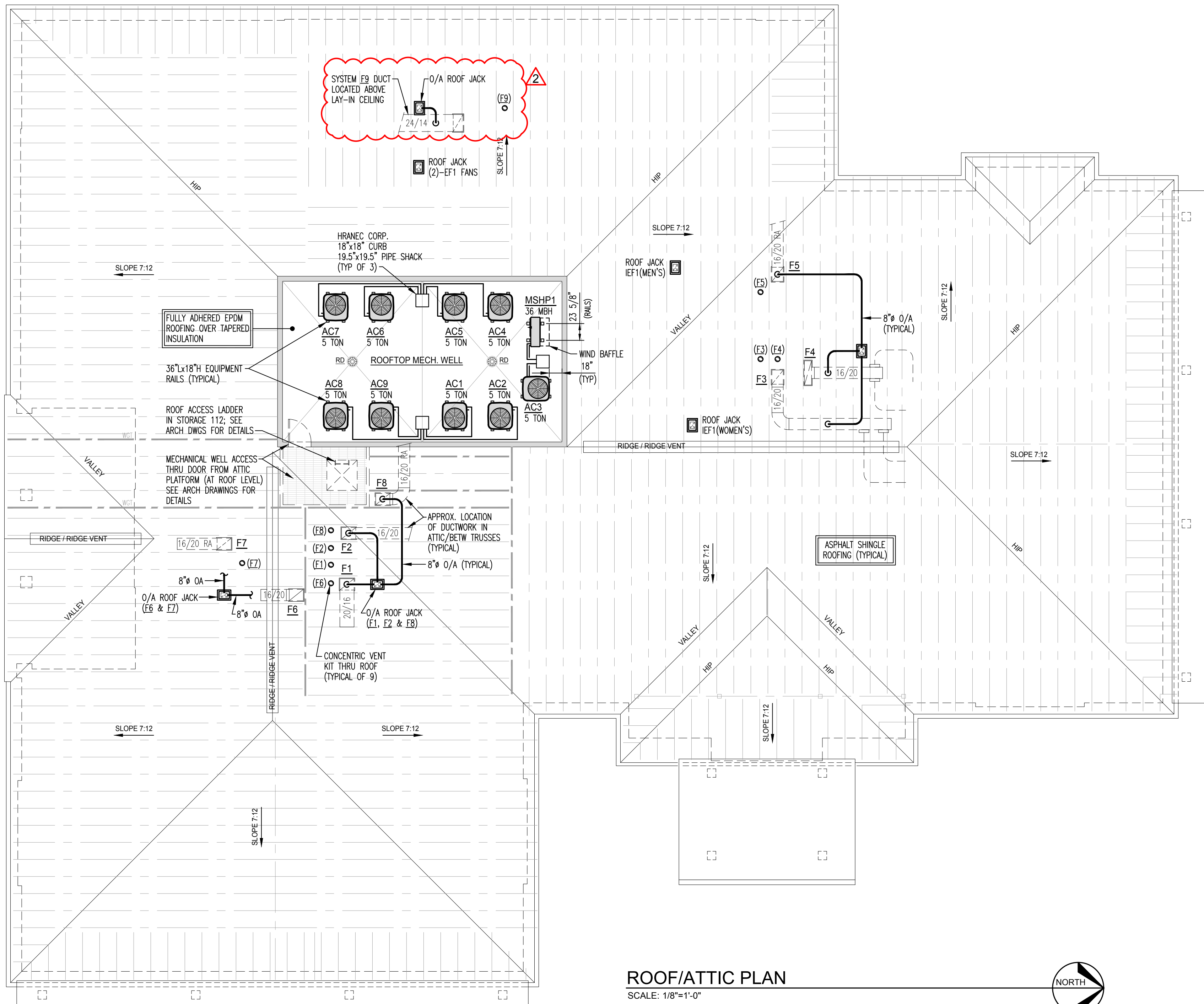
**ABBREVIATIONS**

ACH	AMP
AD/AP	AIR CHANGES PER HOUR
AF	ACCESS DOOR/PANEL
AFUE	ABOVE FINISH FLOOR
ARI	ANNUAL FUEL UTILIZATION EFFICIENCY
AJAS	AIR CONDITIONING & REFRIG. INSTITUTE
ASHRAE	AVERAGING SENSOR
	AMERICAN SOCIETY OF HEATING, REFRIG. AND AIR-CONDITIONING ENGINEERS, INC.
BTUH	BRITISH THERMAL UNIT PER HOUR
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
DA	DAMPER
E.C.	ELECTRICAL CONTRACTOR
E.S.P.	EXTERNAL STATIC PRESSURE
EER	ENERGY EFFICIENCY RATIO
FLA	FULL LOAD AMPS
G.C.	GENERAL CONTRACTOR
GF	GROUND FAULT INTERRUPTER
HP	HORSEPOWER
HVAC	HEATING, VENTILATING & AIR CONDITIONING
M.C.	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MERV	MINIMUM EFFICIENCY REPORTING VALUE
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
NEC	NATIONAL ELECTRIC CODE
O.C.	ON CENTER
OBC	OHIO BUILDING CODE
OMC	OHIO MECHANICAL CODE
P.C.	PLUMBING CONTRACTOR
PVC	POLYVINYL CHLORIDE PLASTIC
RLA	RATED LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
S.P.	STATIC PRESSURE
SCH	SCHEDULE
SEER	SEASONAL ENERGY EFFICIENCY RATING
SF	SQUARE FEET
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORY
UNO	UNLESS NOTED OTHERWISE
VTR	VENT THRU ROOF

**APPLICABLE CODES**

APPLICABLE CODES AND EDITION YEAR SHOWN BELOW FOR THIS PROJECT INCLUDE:

- 2024 OHIO BUILDING CODE (OBC)
- 2024 OHIO MECHANICAL CODE (OMC)
- 2024 OHIO PLUMBING CODE (OPC)
- 2021 INTERNATIONAL FUEL GAS CODE (IFGC)
- 2019 ANSI/ASHRAE/IES STANDARD 90.1 "ENERGY STANDARD FOR BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS"
- 2019 ANSI/ASHRAE STANDARD 62.1 "VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY"



**ROOF/ATTIC PLAN**

SCALE: 1/8"=1'-0"



**DETMER**  
MECHANICAL SERVICES  
9181 N. Dixie Dr., Dayton, OH 45414  
T: (937) 709-3877

SEAL:   
Theresa A. Root  
Professional Engineer  
License No. E88169, Exp. Date 12-31-25

DATE	NO.	REVISIONS
1-21-25	1	ISSUED FOR PERMIT
4-2-25	2	PLAN REVIEW CLARIFICATIONS
4-22-25	3	PLAN REVISIONS

General Contractor:  
**DRYDEN BUILDERS**  
1741 Thomas Paine Parkway  
Centerville, OH 45459  
T: (937) 439-2728  
www.DrydenBuilders.com

Proposed HVAC for  
**Tobias Funeral Home**  
**New Far Hills Chapel**

5471 Far Hills Ave.  
Dayton, OH 45429

Project No.:	131609195
Date:	1-21-25 (Permit)
Scale:	AS NOTED

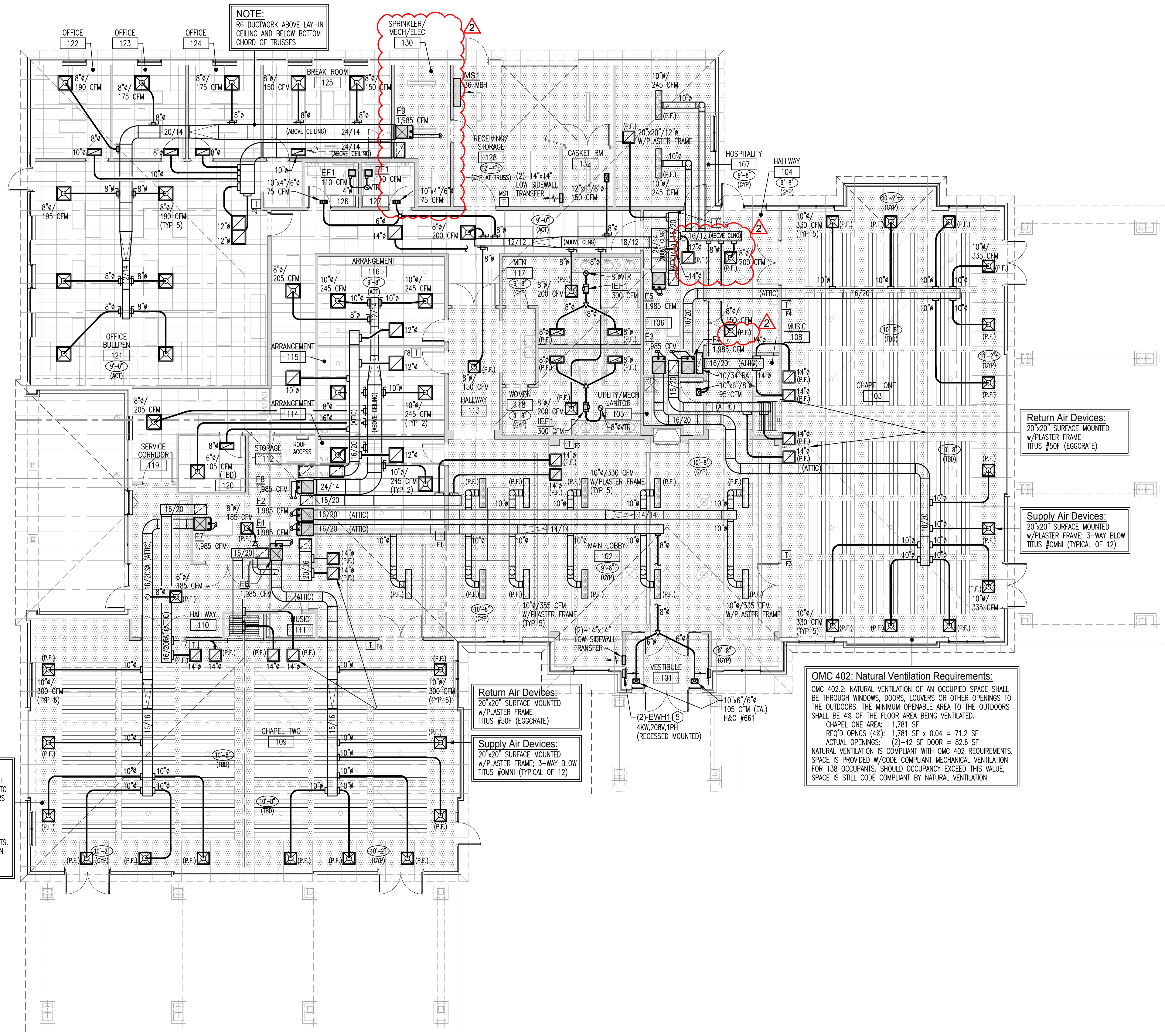
Sheet Title:  
**MECHANICAL SPEC'S & DETAILS, ROOF/ATTIC PLAN**

Sheet No.:  
**M1**

**OUTDOOR AIR SCHEDULE**

ROOM NUMBER	ROOM DESIGNATION	ROOM AREA (SQ. FT.)	NO. OF PEOPLE	ASHRAE 62.1-2019 / 2013 HEALTH CARE GUIDELINE REQ.		AIR DISTRIBUTION				
				EST. MAX OCCUPANCY (P/1000 SQ. FT.)	CA CFM / PERSON	CA CFM - CODE MINIMUM	CA CFM - DESIGN	SUPPLY AIRFLOW (CFM)	RETURN AIRFLOW (CFM)	EXHAUST AIRFLOW (CFM)
<b>F1/AC1 &amp; F2/AC2: MAIN LOBBY</b>										
O/A Damper @ 10%										
101	VESTIBULE	79			.06	5	21	210	210	
102	MAIN LOBBY	1,558	50		.06	344	376	3,760	3,760	
SYSTEM TOTALS =						348	397	3,970	3,970	
<b>SYSTEM SUMMARY:</b>										
CONDITIONED AREA: 1,637 SF    MIN. O/A REQ'D: 348 CFM    MINIMUM COMBINED OUTDOOR AIR RATE PER ASHRAE 62.1-2019, TABLE 6-1, IS 5.0 CFM PER PERSON FOR LOBBIES.										
DESIGN AIRFLOW: 3,970 CFM    DESIGN O/A: 397 CFM										
DESIGN CFM/SF: 2.43 CFM/SF    CA CFM / PERSON: 8.0 CFM/PERSON, 0.24 CFM/SF										
EST. OCCUPANCY: 50 PEOPLE										
<b>F3/AC3 &amp; F4/AC4: CHAPEL ONE</b>										
O/A Damper @ 21%										
103	CHAPEL ONE	1,781	138		.06	797	834	3,970	3,970	
(MAX. OCC IS 189-OMC 402.2 NAT. VENT. IS CODE COMPLIANT)						SYSTEM TOTALS =				
SYSTEM TOTALS =						797	834	3,970	3,970	
<b>SYSTEM SUMMARY:</b>										
CONDITIONED AREA: 1,781 SF    MIN. O/A REQ'D: 797 CFM    MINIMUM COMBINED OUTDOOR AIR RATE PER ASHRAE 62.1-2019, TABLE 6-1, IS 6.0 CFM PER PERSON FOR PLACES OF RELIGIOUS WORSHIP.										
DESIGN AIRFLOW: 3,970 CFM    DESIGN O/A: 834 CFM										
DESIGN CFM/SF: 2.23 CFM/SF    CA CFM / PERSON: 6.0 CFM/PERSON, 0.47 CFM/SF										
EST. OCCUPANCY: 138 PEOPLE										
<b>F5/AC5</b>										
O/A Damper @ 17.55%										
104	HALLWAY	336			.06	20	61	350	350	
105	UTILITY/MECH/JANITOR	57			.12	7	17	95	95	
107	HOSPITALITY	253	10		.06	80	86	490	490	
113	HALLWAY	175			.06	10	26	150	150	
117	MEN'S RESTROOM	200	4		.06	30	200	300	300	
118	WOMEN'S RESTROOM	200	4		.06	30	200	300	300	
119	SERVICE CORRIDOR	331			.06	20	35	200	200	
126	TOILET	45	1		.06	13	75	110	110	
127	TOILET	45	1		.06	13	75	110	110	
132	CASKET ROOM	54			.12	6	26	150	150	
SYSTEM TOTALS =						144	347	1,985	1,435	820
<b>SYSTEM SUMMARY:</b>										
CONDITIONED AREA: 1,696 SF    MIN. O/A REQ'D: 144 CFM    MINIMUM COMBINED OUTDOOR AIR RATE PER ASHRAE 62.1-2019, TABLE 6-1, IS 6.0 CFM PER PERSON FOR PLACES OF RELIGIOUS WORSHIP.										
DESIGN AIRFLOW: 1,985 CFM    DESIGN O/A: 347 CFM										
DESIGN CFM/SF: 1.17 CFM/SF    CA CFM / PERSON: 34.7 CFM/PERSON, 0.20 CFM/SF										
EST. OCCUPANCY: 10 PEOPLE										
<b>F6/AC6 &amp; F7/AC7: CHAPEL TWO</b>										
O/A Damper @ 23%										
109	CHAPEL TWO	1,824	152		.06	869	828	3,600	3,600	
(MAX. OCC IS 96 FOR CATERED GATHERING-OMC 402.2 NAT. VENT. IS CODE COMPLIANT)						SYSTEM TOTALS =				
SYSTEM TOTALS =						914	913	3,970	3,970	
<b>SYSTEM SUMMARY:</b>										
CONDITIONED AREA: 2,342 SF    MIN. O/A REQ'D: 914 CFM    MINIMUM COMBINED OUTDOOR AIR RATE PER ASHRAE 62.1-2019, TABLE 6-1, IS 6.0 CFM PER PERSON FOR PLACES OF RELIGIOUS WORSHIP.										
DESIGN AIRFLOW: 3,970 CFM    DESIGN O/A: 913 CFM										
DESIGN CFM/SF: 1.70 CFM/SF    CA CFM / PERSON: 6.0 CFM/PERSON, 0.39 CFM/SF										
EST. OCCUPANCY: 152 PEOPLE										
<b>F8/AC8</b>										
O/A Damper @ 12.5%										
114	ARRANGEMENT	212	8		.06	53	61	490	490	
115	ARRANGEMENT	212	8		.06	53	61	490	490	
116	ARRANGEMENT	212	8		.06	53	61	490	490	
119	SERVICE CORRIDOR	320			.06	19	51	410	410	
120	TBD	70			.12	8	13	105	105	
SYSTEM TOTALS =						186	248	1,985	1,985	
<b>SYSTEM SUMMARY:</b>										
CONDITIONED AREA: 1,027 SF    MIN. O/A REQ'D: 186 CFM    MINIMUM COMBINED OUTDOOR AIR RATE PER ASHRAE 62.1-2019, TABLE 6-1, IS 6.0 CFM PER PERSON FOR MEETING SPACES.										
DESIGN AIRFLOW: 1,985 CFM    DESIGN O/A: 248 CFM										
DESIGN CFM/SF: 1.93 CFM/SF    CA CFM / PERSON: 6.0 CFM/PERSON, 0.24 CFM/SF										
EST. OCCUPANCY: 24 PEOPLE										
<b>F9/AC9: OFFICES</b>										
O/A Damper @ 20%										
121	OFFICE BULLPEN	1,014	4		.06	81	229	1,145	1,145	
122	OFFICE	132	1		.06	13	38	190	190	
123	OFFICE	127	1		.06	13	35	175	175	
124	OFFICE	127	1		.06	13	35	175	175	
125	BREAK ROOM	225	6		.12	57	60	300	300	
SYSTEM TOTALS =						176	397	1,985	1,985	
<b>SYSTEM SUMMARY:</b>										
CONDITIONED AREA: 1,625 SF    MIN. O/A REQ'D: 176 CFM    MINIMUM COMBINED OUTDOOR AIR RATE PER ASHRAE 62.1-2019, TABLE 6-1, IS 17.0 CFM PER PERSON FOR OFFICES.										
DESIGN AIRFLOW: 1,985 CFM    DESIGN O/A: 397 CFM										
DESIGN CFM/SF: 1.22 CFM/SF    CA CFM / PERSON: 30.5 CFM/PERSON, 0.24 CFM/SF										
EST. OCCUPANCY: 13 PEOPLE										

**OMC 402: Natural Ventilation Requirements:**  
 OMC 402.2: NATURAL VENTILATION OF AN OCCUPIED SPACE SHALL BE THROUGH WINDOWS, DOORS, LOUVERS OR OTHER OPENINGS TO THE OUTDOORS. THE MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE 4% OF THE FLOOR AREA BEING VENTILATED.  
 CHAPEL TWO AREA: 1,824 SF  
 REQ'D OPNGS (4%): 1,824 SF x 0.04 = 73.0 SF  
 ACTUAL OPNINGS: (5)-21 SF DOOR = 105.0 SF  
 NATURAL VENTILATION IS COMPLIANT WITH OMC 402 REQUIREMENTS. SPACE IS PROVIDED W/CODE COMPLIANT MECHANICAL VENTILATION FOR 152 OCCUPANTS. SHOULD OCCUPANCY EXCEED THIS VALUE, SPACE IS STILL CODE COMPLIANT BY NATURAL VENTILATION.



**NOTE:**  
 R6 DUCTWORK ABOVE LAY-IN CEILING AND BELOW BOTTOM CHORD OF TRUSSES

**Return Air Devices:**  
 20"x20" SURFACE MOUNTED  
 W/PLASTER FRAME  
 TITUS #50F (EGGCRATE)

**Supply Air Devices:**  
 20"x20" SURFACE MOUNTED  
 W/PLASTER FRAME; 3-WAY BLOW  
 TITUS #0MN (TYPICAL OF 12)

**OMC 402: Natural Ventilation Requirements:**  
 OMC 402.2: NATURAL VENTILATION OF AN OCCUPIED SPACE SHALL BE THROUGH WINDOWS, DOORS, LOUVERS OR OTHER OPENINGS TO THE OUTDOORS. THE MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE 4% OF THE FLOOR AREA BEING VENTILATED.  
 CHAPEL ONE AREA: 1,781 SF  
 REQ'D OPNGS (4%): 1,781 SF x 0.04 = 71.2 SF  
 ACTUAL OPNINGS: (2)-42 SF DOOR = 82.6 SF  
 NATURAL VENTILATION IS COMPLIANT WITH OMC 402 REQUIREMENTS. SPACE IS PROVIDED W/CODE COMPLIANT MECHANICAL VENTILATION FOR 138 OCCUPANTS. SHOULD OCCUPANCY EXCEED THIS VALUE, SPACE IS STILL CODE COMPLIANT BY NATURAL VENTILATION.

**MECHANICAL PLAN**  
 SCALE: 1/8"=1'-0"



**DEIMER**  
 MECHANICAL SERVICES  
 9181 N. Dixie Dr., Dayton, OH 45414  
 T: (937) 709-3877

SEAL:  
 STATE OF OHIO  
 THERESA A. ROOT  
 E88169  
 REGISTERED PROFESSIONAL ENGINEER  
 Theresa A. Root  
 Digitally signed by Theresa A. Root  
 License No. E88169, Exp. Date 12-31-25

DATE	NO.	REVISIONS
1-21-25		ISSUED FOR PERMIT
4-2-25		PLAN REVIEW CLARIFICATIONS
4-22-25		PLAN REVISIONS

General Contractor:  
  
 1741 Thomas Paine Parkway  
 Centerville, OH 45459  
 T: (937) 439-2728  
 www.DrydenBuilders.com

Proposed HVAC for  
**Tobias Funeral Home**  
**New Far Hills Chapel**  
 5471 Far Hills Ave.  
 Dayton, OH 45429

Project No.:	131609195
Date:	1-21-25 (Permit)
Scale:	AS NOTED
Sheet Title:	MECHANICAL PLAN & DETAILS
Sheet No.:	

**M2**