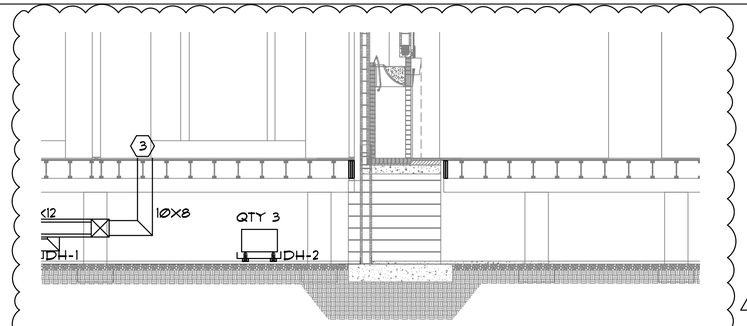


1

CRAWLSPACE DEHUMIFIERS

SCALE: 1/4" = 1'0"

HEAT PUMP SPLIT SYSTEM SCHEDULE

INDOOR UNIT DESIGNATION			AHU-1	AHU-2	AHU-3
OUTDOOR UNIT DESIGNATION			HP-1	HP-2	HP-3
AIR QUANTITIES					
	TOTAL SUPPLY AIR	CFM	1,200	1,100	600
	OUTSIDE AIR	CFM	45	45	20
HEATING AND COOLING CAPACITIES					
	TOTAL HEATING CAPACITY	BTUH	57,300	57,300	18,000
	SENSIBLE COOLING CAPACITY	BTUH	42,975	42,975	13,500
	TOTAL COOLING CAPACITY	BTUH	57,300	57,300	18,000
AIR TEMPERATURES					
	COOLING COIL ENTERING	°Fdb-°Fwb	80-67	80-67	80-67
	COOLING COIL LEAVING	°Fdb-°Fwb	55-54	55-54	55-54
	HEATING COIL ENTERING AND LEAVING	°Fdb-°Fdb	52-95	52-95	52-95
INDOOR UNIT DATA					
	EXTERNAL STATIC PRESSURE (INCL. FILTER)	IN. H2O	Ø.1	Ø.1	Ø.1
	BLOWER MOTOR	HP	3/4	3/4	3/4
	ELECTRICAL CHARACTERISTICS	V/PH	208-230/1	208-230/1	208-230/1
	CONDENSATE DRAIN SIZE	IN.	3/4"	3/4"	3/4"
	FILTER LOCATION		UNIT	UNIT	UNIT
ELECTRIC HEAT DATA					
	HEATING TYPE		ELECTRIC	ELECTRIC	ELECTRIC
	LOCATION		SUPPLY	SUPPLY	SUPPLY
	ACTUAL HEATING CAPACITY (NOMINAL CAP.)	KW	10	10	3
	VOLTAGE	V/PH	208-230/1	208-230/1	208-230/1
OUTDOOR UNIT DATA					
	NUMBER OF COMPRESSORS/NUMBER OF STAGES	NO.	1	1	1
	ELECTRICAL CHARACTERISTICS	V/PH	208-230/1	208-230/1	208-230/1
	MCA/MOCP	AMPS (EACH)	26.7/45	39.2/60	12.2/20
	UNIT WEIGHT	LBS.	325	325	154
REFRIGERANT TYPE			R-410A	R-410A	R-410A
REFRIGERANT SUCTION AND LIQUID LINE SIZES		IN.-IN.	MFG.	MFG.	MFG.
SEER/SEER2			14.3/15	14.3/15	14/11.5
COP (HEATING)			-	-	-
HSPF (HEATING)			8.5	8.5	8.5
MANUFACTURER			BOSCH	BOSCH	DAIKIN
MODEL NUMBER (INDOOR UNIT)			BVA036	BVA048	A5PT18D
MODEL NUMBER (OUTDOOR UNIT)			BOHA36H	BONA60H	DZ14SD18

NOTES:

1. ALL AHU'S TO BE VARIABLE SPEED WITH HUMIDITY CONTROL.
2. T'STAT TO BE HONEYWELL VISION PRO 8000 TYPE WITH HUMIDITY CONTROL.
3. PROVIDE SINGLE POINT OF POWER.
4. PROVIDE 2" FILTER & RACK.
5. MANUFACTURE TO PROVIDE TRANSFORMER FOR ELECTRIC HEATERS.
6. PROVIDE LONG LINE ACCESSORY FOR REFRIGERANT LINE IF NEEDED.
7. PROVIDE CONDENSATE PUMP FOR ALL AHU'S.
8. REFER TO MANUFACTURE FOR INSTALL AND SERVICE CLEARANCE.

MECHANICAL GENERAL NOTES

1. THE WORK DESCRIBED HEREINAFTER SHALL BE INSTALLED SUBJECT TO THE NON TECHNICAL SPECIFICATIONS. THIS SECTION APPLIES TO ALL AIR CONDITIONING, SHEETMETAL, PIPING, AND AUTOMATIC TEMPERATURE CONTROLS WORK.

2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE HIS WORK WITH THAT OF OTHER TRADES. SEE ARCHITECTURAL SECTIONS FOR A DESCRIPTION OF WORK AND SEQUENCE OF CONSTRUCTION. THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC IN NATURE. THEY ARE, HOWEVER, AS ACCURATE AS SCALE PERMITS AND THE CONTRACTOR SHALL FOLLOW THEM AS CLOSELY AS POSSIBLE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL CONDITIONS RELATING TO THE WORK IN THE FIELD PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL VERIFY ALL WALLS, PARTITIONS, AND STRUCTURAL SYSTEMS BEFORE INSTALLATION AND FABRICATION OF ANY DUCTWORK OR PIPING SYSTEMS. ALL OFFSETS REQUIRED FOR INSTALLATION OF DUCTWORK, OR PIPING SHALL BE INCLUDED IN THE SCOPE OF WORK AT NO ADDITIONAL COST TO THE OWNER. THE ENGINEER SHALL BE THE SOLE INTERPRETER OF THE DRAWINGS.

3. ALL MATERIALS SHALL BE NEW AND OF BEST QUALITY AND SHALL BE THE PRODUCTS OF REPUTABLE MANUFACTURERS. MATERIALS AND EQUIPMENT SHALL BE PROPERLY STORED AND PROTECTED FROM THE WEATHER AT ALL TIMES DURING CONSTRUCTION TO PREVENT UNNECESSARY CORROSION AND FOULING. ALL WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER BY SKILLED AND COMPETENT MECHANICS. ANY WORKER CONSIDERED INCOMPETENT OR UNFIT FOR WORK ON THIS CONSTRUCTION PROJECT SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR UNDER THE DIRECTION OF THE ENGINEER.

4. THE WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, ORDINANCES, ETC., WHETHER FEDERAL, STATE OR LOCAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ANY PERMITS AND PAYING ANY FEES REQUIRED IN ORDER TO PROCEED WITH THE WORK.

5. THE CONTRACTOR IS REQUIRED TO ATTEND ALL CONSTRUCTION CONFERENCES INCLUDING THE PRE-BID CONFERENCE, THE PRE-CONSTRUCTION CONFERENCE AND THE OWNER'S PROGRESS MEETINGS AS SCHEDULED BY THE ARCHITECT OR THE OWNER. FAILURE TO MAKE REFERENCES IN THE SPECIFICATIONS TO ANY ITEMS OF THE WORK SHOWN BY THE DRAWINGS, AND NECESSARY TO THE COMPLETION OF THE WORK SHALL NOT RELIEVE THE CONTRACTOR OF THE FULL RESPONSIBILITY TO FURNISH THE MATERIALS AND PERFORM THE WORK OF SUCH ITEMS, IN A MANNER COMPARABLE TO OTHER ITEMS OF SIMILAR NATURE FOR WHICH DETAILED SPECIFICATIONS ARE INCLUDED. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO CLEARLY SET FORTH ALL WORK, AND THE DETAILED DESCRIPTION IS ADDED TO ASSIST IN ESTABLISHING THE SCOPE AND THE LOCATION OF THE SEVERAL PARTS OF THE WORK. COLLECTIVELY, THEY SHALL GOVERN AND CONTROL THE SCOPE, CHARACTER AND DESIGN OF THE WORK, AND ANY ITEM CALLED FOR IN ANY ONE OF THE DOCUMENTS SHALL BE AS THOUGH REQUIRED IN ALL.

6. ALL CUTTING AND PATCHING SHALL BE DONE BY WORKMEN SKILLED IN THE TRADES INVOLVED. ALL CUTTING SHALL BE DONE IN SUCH A MANNER AS NOT TO ENDANGER OR DAMAGE FACILITIES. ALL PATCHING SHALL FINISH FLUSH AND SMOOTH AND SHALL MATCH EXISTING ADJOINING SURFACES.

7. SEE GENERAL REQUIREMENTS FOR ELECTRICITY AND WATER. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL FUEL REQUIRED FOR THE OPERATION OF HIS CONSTRUCTION EQUIPMENT.

8. ALL FINISHED FIELD INSTALLED PRESSURE PIPING SYSTEMS SHALL BE TESTED.

9. WORK CONSISTS OF FURNISHING ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, TRANSPORTATION, SCAFFOLDING, SERVICES, SUPERVISION, PLANT, AND PERFORMING ALL OPERATIONS REQUIRED TO PROPERLY COMPLETE ALL WORK IN ACCORDANCE WITH THESE SPECIFICATIONS AND AS INDICATED ON THE APPLICABLE DRAWINGS, SUBJECT TO TERMS AND CONDITIONS OF THE CONTRACT. THE CONTRACTOR IS REQUIRED TO HAVE A QUALIFIED AND EXPERIENCED GENERAL SUPERINTENDENT AND EXPERIENCED SUPERINTENDENT FOR EACH TRADE INVOLVED ON THE JOB WHEN ANY WORK IS IN PROGRESS. ALL WORK SHALL CONFORM WITH ALL LOCAL AND STATE ORDINANCES OR REGULATIONS GOVERNING THE INSTALLATION OF SUCH EQUIPMENT. IF WORK AS LAID OUT, INDICATED OR SPECIFIED IS RECOGNIZED TO BE CONTRARY TO OR CONFLICTING WITH LOCAL ORDINANCES OR REGULATIONS, THE CONTRACTOR SHALL REPORT SAME TO THE ENGINEER BEFORE SUBMITTING A BID. THE ENGINEER WILL THEN ISSUE INSTRUCTIONS AS TO PROCEDURE. IF CONTRACTOR FAILS TO NOTIFY THE ENGINEER OF CONFLICTS OR OMISSIONS NOTED ABOVE, ALL CHANGES REQUIRED TO COMPLY WITH ORDINANCES AND REGULATIONS SHALL BE MADE WITHOUT ADDITIONAL EXPENSE TO THE OWNER.

10. THE LATEST EDITIONS OF THE ESTABLISHED STANDARDS OF THE FOLLOWING ORGANIZATIONS, AND INDIVIDUAL STANDARDS NAMED SHALL BE FOLLOWED THE SAME AS IF THEY WERE FULLY WRITTEN HEREIN AND CONSTITUTE A PART OF THE SPECIFICATION REQUIREMENTS EXCEPT WHERE OTHERWISE SPECIFIED:

1. FLORIDA BUILDING CODE, 2023 8TH EDITION.
2. FLORIDA PLUMBING CODE, 2023 8TH EDITION.
3. FLORIDA MECHANICAL CODE, 2023 8TH EDITION.
4. NFPA 70, NATIONAL ELECTRICAL CODE
5. NFPA 101, LIFE SAFETY CODE
6. NFPA 90A, STANDARD FOR THE INSTALLATION OF AIR CONDITIONING AND VENTILATION SYSTEMS
7. NFPA 91, STANDARD FOR THE INSTALLATION OF BLOWER AND EXHAUST SYSTEMS
8. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS.

THE FOREGOING RULES, STANDARDS, REGULATIONS, SPECIFICATIONS, RECOMMENDATIONS AND REQUIREMENTS SHALL BE FOLLOWED BY THE CONTRACTOR AS MINIMUM REQUIREMENTS. THEY SHALL NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING HIGHER GRADES OF MATERIALS AND WORKMANSHIP WHICH ARE SPECIFIED HEREIN OR INDICATED ON THE DRAWINGS.

11. THE INTERIOR FACE OF DUCTWORK HOUSING SUPPLY, RETURN OR EXHAUST AIR DIFFUSERS, REGISTERS OR GRILLES SHALL BE PAINTED "FLAT-BLACK" SO WHEN VIEWED FROM BELOW AND ABOVE NOTHING BEYOND SURFACE OF AIR DEVICE IS VISIBLE.

12. THERMOSTAT/SENSOR WIRING TO BE RUN INSIDE WALLS/COLUMNS OR IN ATTIC SPACE. THE USE OF WIREMOLD OR EXTERNAL RACEWAY SHALL BE APPROVED BY THE ENGINEER.

13. A COMPLETE CERTIFIED TEST AND BALANCE REPORT SHALL BE SUPPLIED BY AN INDEPENDENT CERTIFIED TEST AND BALANCE AGENCY TO THE ENGINEER IN WRITING PER AABC TEST AND BALANCE REPORT MANUAL (LATEST EDITION)# PRIOR TO JOB ACCEPTANCE BY OWNER. THE REPORT SHALL BE SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF FLORIDA.

14. THE SUBMISSION OF A BID OR PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT THE CONTRACTOR HAS FAMILIARIZED HIMSELF/HERSELF WITH THE PLANS, SPECIFICATIONS AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND OR LABOR DUE TO DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED, UNLESS DIFFICULTIES COULD NOT HAVE BEEN FORESEEN EVEN THOUGH PROPER EXAMINATION HAD BEEN MADE.

15. ALL POWER WIRING, RELAYS, PANELS, TRANSFORMERS, DISCONNECT SWITCHES FOR HVAC EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. ALL CONTROL WIRING, RELAYS, PANELS SENSORS (OR THERMOSTATS) SHALL BE FURNISHED AND INSTALLED BY THE HVAC CONTRACTOR. ALL MOTOR STARTERS SHALL BE FURNISHED BY THE HVAC CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

16. ALL DUCTS TO HAVE AIR EXTRACTORS (ADJUSTABLE TYPE) ON SQUARE OR RECTANGULAR TAKEOFFS WITH SPIN-IN VOLUME DAMPERS ON ROUND OR OVAL TAKE-OFFS. SPIRAL DUCT TAKE-OFFS HAVE NO EXTRACTORS INSTALL FLEXIBLE DUCT CONNECTORS AT ALL FANS AND AIR HANDLING UNITS.

17. FLEXIBLE DUCTS MUST COMPLY WITH UL 181 AND SHALL NOT EXCEED EIGHT FEET IN LENGTH REMAINING BRANCH LINE SHALL BE GALVANIZED METAL WITH 2" EXTERNAL INSULATION. FLEXIBLE DUCTS SHALL HAVE FOIL BACKING (FSK TYPE).

18. ANY CONDENSATION ON SURFACES OF HVAC EQUIPMENT, DUCTWORK OR PIPING WILL BE CORRECTED BY THE CONTRACTOR. WRAP WITH INSULATING TAPE OR EXTERNAL INSULATION HAVING A VAPOR BARRIER.

19. INSULATION OUTSIDE OF THE BUILDING SHALL BE WRAPPED WITH ALUMINUM. INSIDE ALL SUPPLY, RETURN, EXHAUST AND FRESH AIR DUCTS SHALL BE GALVANIZED METAL, COMPLETELY SEALED, FINISHED WITH 2" EXTERNAL INSULATION HAVING VAPOR, RETARDING JACKET (FSK TYPE). INSULATION SHALL COMPLY WITH UL 181 AND MUST HAVE FLAME SPREAD RATING OF 25 AND A SMOKE DEVELOPED RATING NO HIGHER THAN 50.

20. ROOM SENSORS OR THERMOSTATS SHALL BE MOUNTED AT 48 INCHES ABOVE FINISHED FLOOR.

21. THERMOSTATS TO BE 7 DAY PROGRAMMABLE WITH DIGITAL DISPLAY. PROVIDE AND INSTALL A LOCK BOX FOR ALL THERMOSTATS.

22. SMOKE DETECTORS (SEE DRAWINGS) SHALL BE IONIZATION TYPE AS APPROVED BY THE ENGINEER. COORDINATE THE INSTALLATION WITH THE ELECTRICAL CONTRACTOR. CONTRACTOR SHALL VERIFY THAT DETECTORS ARE COMPATIBLE WITH FIRE ALARM SYSTEMS. IF UNIT SELECTION IS NOT COMPATIBLE THE CONTRACTOR SHALL PURCHASE AND INSTALL PROPER UNIT TO INSURE LIFE SAFETY PROTECTION. SMOKE DETECTORS SHALL AUTOMATICALLY SOUND AUDIBLE ALARM AND TURNOFF FANS.

23. FURNISH AND INSTALL ACCESS DOORS(18"x18" MINIMUM) IN ALL DRYWALL CEILINGS FOR ACCESS TO MECHANICAL EQUIPMENT.

24. COORDINATE THE INSTALLATION OF ALL AUX. COND. DRAINS LOCATED IN WALLS WITH THE GENERAL CONTRACTOR. COORDINATE THE INSTALLATION OF ALL MAIN COND. DRAINS LOCATED IN WALLS AND CHASES WITH THE PLUMBING CONTRACTOR.

25. THE CONTRACTOR SHALL NOT FABRICATE ANY AIR DISTRIBUTION DUCTWORK UNTIL IT HAS BEEN VERIFIED THAT SUFFICIENT CLEARANCES ARE AVAILABLE FOR THE INSTALLATION OF HVAC SYSTEMS CONSIDERING REQUIREMENTS FOR PIPING, LIGHT FIXTURES, CEILING SYSTEMS, FLOOR SYSTEMS, FOUNDATIONS, AND STRUCTURES. IF A CONFLICT ARISES CONTACT THE ENGINEER FOR PERMISSION IT REROUTE SYSTEM. ALL DUCTWORK SHALL BE ROUTED AT THE EXPENSE OF THE CONTRACTOR.

26. DEVIATION FROM MATERIALS, METHODS, AND PROCEDURES SET FORTH HEREIN MUST BE APPROVED IN WRITING BY THE ENGINEER. APPROVAL WILL NOT BE GIVEN UNLESS THE ENGINEER IS SATISFIED THAT THE PROPOSED SYSTEMS ARE SUPERIOR IN PERFORMANCE, DURABILITY, LONGEVITY, AND RELIABILITY TO THAT SPECIFIED.

27. APPROVALS OF EQUIPMENT OR SYSTEMS OTHER THAN THAT SHOWN MUST BE WITHIN TEN (10) WORKING DAYS PRIOR TO BID DATE.

28. ALL DUCT AND PIPE SIZES SHOWN ARE CLEAR NET INSIDE DIMENSIONS.

29. ALL AIR DISTRIBUTION DUCTWORK SHALL BE AIR TIGHT AND FREE OF LEAKS, AND SHALL BE INSPECTED FOR LEAKS PRIOR TO INSTALLATION OF FAN UNITS OR FINISHED FLOOR/CEILING SYSTEM. DUCTWORK SHALL BE SEALED WITH AIR DUCT SEALER PER SMACNA STANDARDS AND UL RATING.

30. EQUIPMENT, DUCTWORK, DAMPERS, LOUVERS, GRILLES, REGISTERS, DIFFUSERS, OTHER AIR DISTRIBUTIONS EQUIPMENT AND MATERIALS SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING:

(A) ASHRAE
(B) SBCCI
(C) SMACNA
(D) NFPA
(E) AMCA STANDARD HANDBOOK 99
(F) AIR DIFFUSION COUNCIL TEST CODE 1062R3
(G) SBCCI STANDARD MECHANICAL CODE
(I) ANSI
(J) ASME
(K) AGA
(L) UL/FIRE RESISTANCE DIRECTORY

31. INSULATE ALL REFRIGERANT LINES WITH 3/4" ARMAFLEX OR EQUIVALENT INSULATION. PROVIDE WITH WEATHERPROOF ALUMINUM JACKET ON LINES OUTSIDE.

32. ALL MATERIALS SHALL BE LISTED BY THE UNDERWRITERS LABORATORIES (UL) OR NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA).

33. REFRIGERANT PIPING SHALL BE SIZED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR LIQUID, VAPOR HORIZONTAL AND VAPOR RISERS.

34. TUBING SHALL BE INSTALLED WITH MOISTURE INDICATOR SIGHT GLASS LOCATED IN THE LIQUID LINE ADJACENT TO THE OUTDOOR UNIT.

35. THOROUGHLY CLEAN REFRIGERANT PIPE FITTINGS BEFORE ASSEMBLY. ALL JOINTS ARE TO BE MADE WITH SILVER ALLOY BRAZE MELTING ABOVE 1100 DEGREES F. NO ACID FLUX IS TO BE USED ON ANY JOINT.

36. ALL CONDENSATE DRAINS SHALL TERMINATE INTO ROOF GUTTER. SECURE TO ROOF SEAMS WITH APPROVED CLIP.

37. ALL WORK AND MATERIALS SHALL BE WARRANTED (PARTS AND LABOR) FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY OWNER. AN ADDITIONAL WARRANTY (PARTS ONLY) SHALL INCLUDE 4 YEARS ON ALL COMPRESSORS, WITH NINE YEARS ON ALL HEAT EXCHANGERS.

38. CONTRACTOR SHALL SUPPLY, TO THE ENGINEER, 6 SETS OF SUBMITTALS ON THE FOLLOWING ITEMS:

A. AIR DISTRIBUTION (DIFFUSER, GRILLE AND REGISTERS)
B. HEATING/AIR CONDITIONING EQUIPMENT
C. DAMPERS
D. FANS
E. INSULATION MATERIALS
F. CONTROLS
G. PIPING

NOTE: THESE ITEMS MUST BE APPROVED BY THE ENGINEER PRIOR TO CONTRACTOR ORDERING.

39. ALL FEES, PERMITS, TAPS, LICENSE, INSURANCE, AND BONDS SHALL BE PAID BY THIS CONTRACTOR FOR ALL RELATED WORK.

40. ROUTE REFRIGERANT PIPING AS SHOWN ON DRAWINGS. MANUFACTURE TO SIZE REFRIGERANT PIPING.

41. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED UNLESS EMBOSSED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ELECTRONIC COPIES.

DH-1

PERFORMANCE

Water Removal	@ 80°F and 60%RH	@ 73°F and 60%RH
	70 Pints / 8.75 Gallons	55 Pints / 6.875 Gallons
Efficiency	5.0 Pints/kWh	4.79 Pints/kWh
Energy Factor	2.4 L/kWh	2.27 L/kWh
Blower	150 CFM @ 0.0" WG 140 CFM @ 0.2" WG 130 CFM @ 0.4" WG	
Fan	70 Watts	
Operating Temperature	49°F Min., 95°F Max.	
Sizing	Up to 1,800 Sq. Ft. / 18,000 Cu. Ft.	

ELECTRICAL

Power	580 watts @ 80°F and 60% RH
Supply Voltage	115 volt – 1 phase – 60 Hz
Current Draw	5.1 amps
Power Cord	9', 115 VAC, Ground Plug Type B (USA, MEX, CAN, JPN)
Circuit Requirement	15 Amps

SPECIFICATIONS

Duct Connections	8" Round Inlet, 8" Round Outlet
Drain Connection	3/4" Threaded Female NPT
Refrigerant	R410A, 15 oz.
Unit Dimensions	12"W x 12"H x 28"D
Unit Weight	55 lbs.

SPECIFICATIONS DH-2

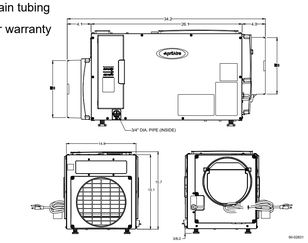
Capacity	@ 80°F/60%RH @ 73°F/60% RH	80 ppd 65 ppd
Energy Factor kW-h	@ 80°F/60% RH @ 73°F/60% RH	2.8 L/KW-h 2.35 L/KW-h
Airflow @ varying E.S.P. (external static pressure - dry coil)	0.0" w.c. 0.2" w.c. 0.4" w.c.	185 CFM 135 CFM 85 CFM
Voltage, phase, frequency	120 VAC, 1 phase, 60 Hz	
Current draw([1]	4.8 Amps	
Noise	45 dBA ducted	
Dimensions (cabinet only)([2]	Width: 14", Height: 15", Length: 26"	
Unit Weight **Shipping Weight**	63 lbs. 81 lbs.	
Inlet air operating conditions during	Dehumidification:	50°F–104°F, 40°F dew point min.
	Ventilation:	40°F–140°F, 0%–99% RH (non-condensing)

[1] Rated capacity, energy factor and current draw measured at 80°F/60% RH inlet air at 0.0 ESP.
[2] Height does not include adjustable feet. The width excludes the filter doors and length excludes the duct collars.

Model E080CS

FEATURES

- Built-in digital control with top or front mounting options
- 40' crawlspace alert cable with LED light
- ½" EPS cabinet insulation
- Top or end air discharge orientation
- Washable MERV 8 filter (part number 5881) and 10" diameter inlet/outlet duct collars
- R32 refrigerant
- Corrosion-resistant aluminum coils
- 8' power cord (plug type); field-configurable hardwire option is available
- 10°F-30°F discharge air temperature rise
- ¾" PVC adapters for drain connection with adapters for threaded connection or plastic hose included
- 10' drain tubing
- 5-year warranty



Winton Engineering, P.A
Robin Winton, P.E.
2207 WOODBINE DR.
TALLAHASSEE, FL 32309 850-894-5376
FL 56206

ROBIN WINTON, STATE OF FLORIDA, PROFESSIONAL ENGINEER. LICENSE NO. 56206. THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY ROBIN WINTON ON THE DATE INDICATED HERE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

MARTHA'S RETREAT MAIN HOUSE

2023-101 Drawn By: RPW
Project # Checked By: RPW

2 MAY 2024
Date

1

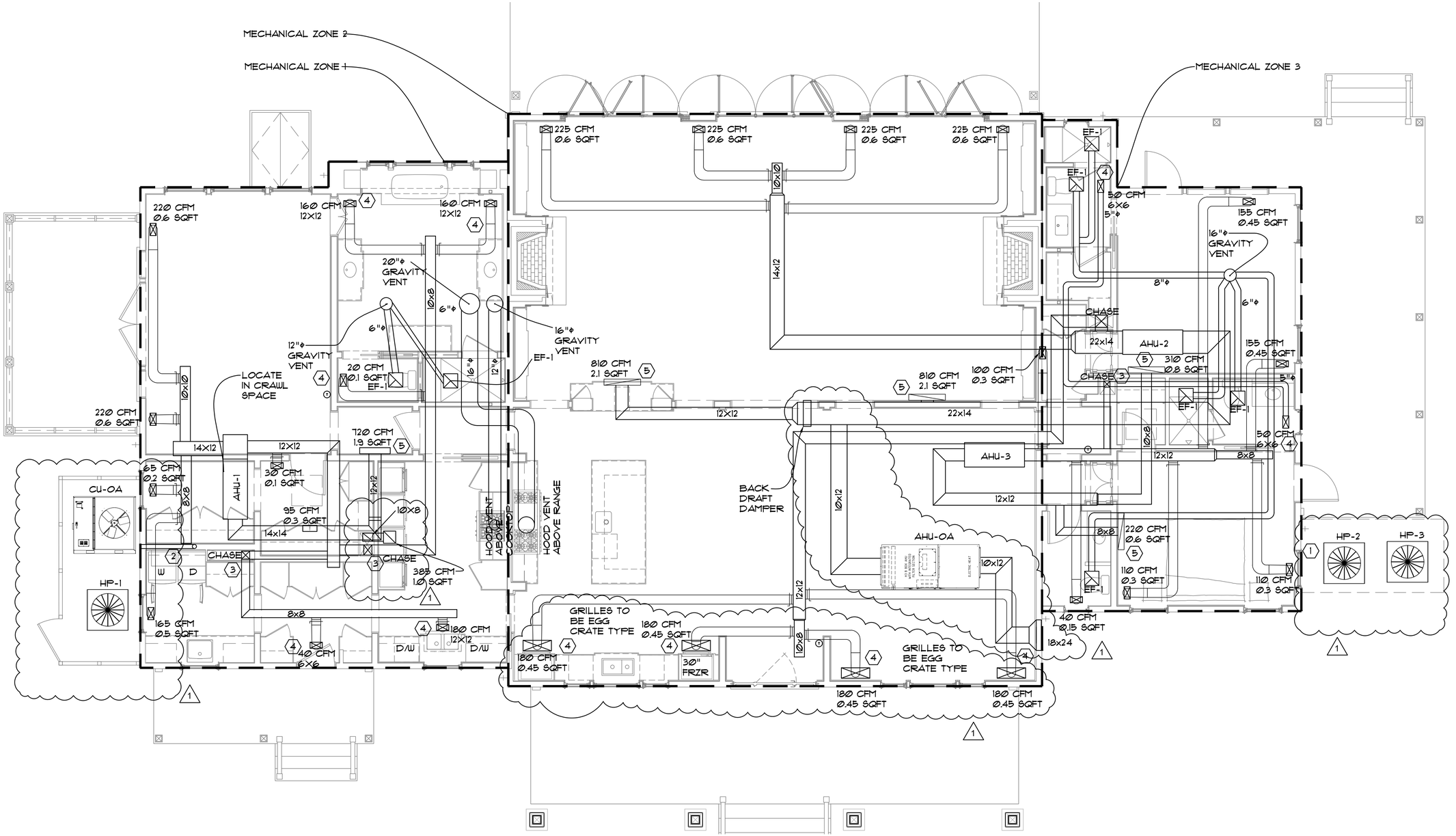
Revisions
1 2/11/25 CHANGES

MECHANICAL NOTES

Tallahassee Florida

M1.0

2207 WOODBINE DR, TALLAHASSEE, FL 32309
Phone 850 567-2019



SEQUENCE OF OPERATIONS FOR MAKE UP AIR UNIT.

ONCE HOOD IS ENGAGED THEN AHU-2 WILL BE SHUT OFF AND OA-1 WILL BE TURNED ON AND WILL OPERATE UNTIL HOOD IS TURNED OFF. A SEPARATE THERMOSTAT FOR THE OA UNIT WILL BE USED TO MAINTAIN TEMPERATURE IN THE SPACE UNTIL THE HOOD IS TURNED OFF.

THE OA UNIT WILL USE THE SAME DUCTWORK AS AHU-2 TO DISTRIBUTE THE AIRFLOW TO THE SPACES.

1

GENERAL NOTES:

WOOD FLOOR DIFFUSERS SHALL HAVE A NECK VELOCITY OF 400 FPM. DIFFUSERS SHOULD HAVE OPEN AREA TO ALLOW FOR MAXIMUM OF 400 FPM DISCHARGE.

RETURN GRILLES SHALL HAVE A MAXIMUM FACE VELOCITY OF 400 FPM. SIZE FREE ARE TO ALLOW FOR 400 FPM.

ALL DIFFUSERS LOCATED UNDER OR ABOVE WINDOWS TO BE CENTERED ON WINDOWS, TYPICAL FOR ALL DIFFUSERS.

PROVIDE CONDENSATE PUMPS FOR ALL AHU'S AND DFU'S IF REQUIRED DUE TO GRAVITY DRAIN NOT BEING AVAILABLE.

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KEYNOTES:

1. CONDENSERS LOCATED IN SERVICE YARD. PROVIDE CONCRETE PADS.
2. DRYER BOX AND WALL VENT REFER TO DETAIL.
3. ROUTE DUCTWORK UP INTO ATTIC THROUGH CHASE,
4. SUPPLIES IN CEILINGS
5. BASEBOARD OR TOE KICK RETURNS, COORDINATE WITH ARCHITECT FOR TYPE.

Winton Engineering, P.A
Robin Winton, P.E.
2207 WOODBINE DR.
TALLAHASSEE, FL 32309 850-894-5376
FL #56206

MARTHA'S
RETREAT
MAIN HOUSE

2023-101 Project #
Drawn By: RPW
Checked By: RPW

2 MAY 2024
Date

1

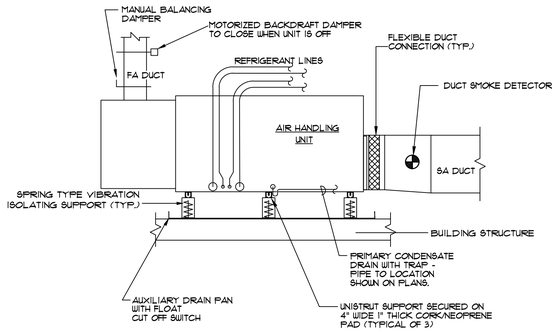
Revisions
1 2/11/25 CHANGES

MECHANICAL
PLAN

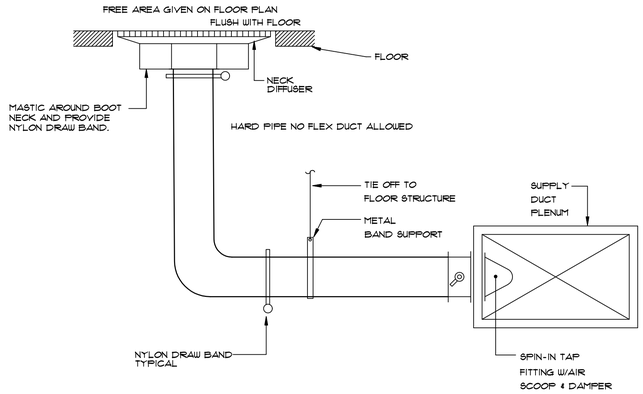
Tallahassee Florida

M2.0

2207 WOODBINE DR, TALLAHAASEE, FL 32309
Phone 850 567-2019

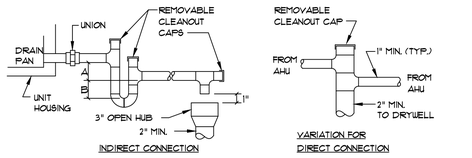


HORIZONTAL AIR HANDLING UNIT
N.T.S.



NOTE:
FOR EXACT TAKE OFF SIZES REFER TO SCHEDULE

SUPPLY AIR DIFFUSER DETAIL
N.T.S.



INDIRECT CONNECTION

VARIATION FOR DIRECT CONNECTION

NOTES:

DRAIN LINE SHALL BE AT LEAST THE SAME SIZE AS THE CONNECTION ON THE DRAIN PAN (1" MIN.)

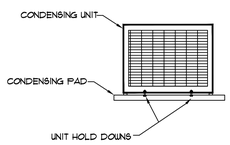
DRAIN LINE SHALL SLOPE 1/8" PER FOOT (MIN.)

SEE SPECIFICATIONS FOR PIPE AND INSULATION MATERIALS.

UNIT TYPE	A	B
DRAW-THRU	X PLUS 2"	X
BLOW-THRU	1" MIN.	2X

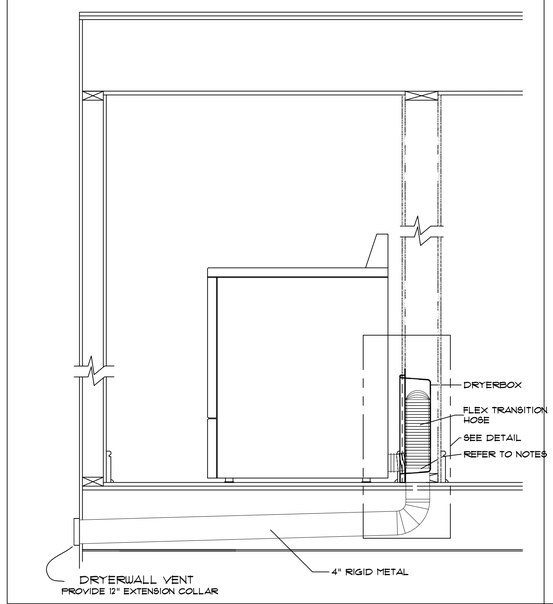
WHERE X=STATIC PRESSURE IN PAN

CONDENSATE DRAIN DETAIL
N.T.S.



NOTES:
UNIT HOLD DOWNS TO BE SECURED TO CONDENSING PAD WITH BOLTS THRU BOTTOM OF CONDENSING UNIT THRU PAD. TYPICAL OF 4, ONE ON EACH CORNER OF UNIT

CONDENSING UNIT DETAIL WITH HOLD DOWNS
N.T.S.

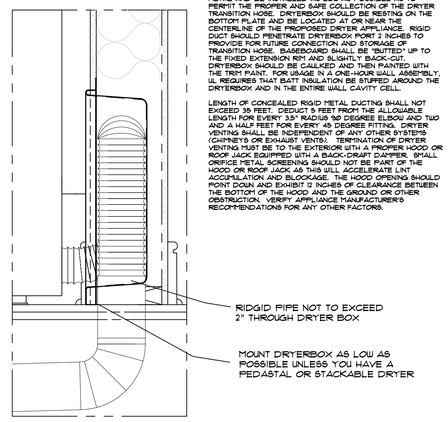


DRYERBOX INSTALLATION

DRYER VENTING: MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RUNNING ALL DUCTWORK FOR THE DRYER EXHAUST SYSTEM. ALL CONCEALED DRYER DUCTING MUST BE RIGID METAL (GALVANIZED OR ALUMINUM) MINIMUM OF 4" IN DIAMETER, SMOOTH 30 GA. CLEAN, UNOBSTRUCTED, FRICTIONLESS DUCTS (NO FLEXIBLE DUCT ALLOWED IN CONCEALED AREAS). SEAL ALL JOINTS WITH FOIL BACKED PRESSURE SENSITIVE DUCT TAPE MEETING THE REQUIREMENTS OF UL 181. DUCT JOINTS SHALL BE INSTALLED SO THAT THE MALE END OF THE DUCT POINTS IN THE DIRECTION OF THE AIRFLOW. DO NOT USE RIVETS OR SCREWS IN THE JOINTS OR ANYWHERE ELSE IN THE DUCT AS THESE WILL ENCOURAGE LINT COLLECTION.

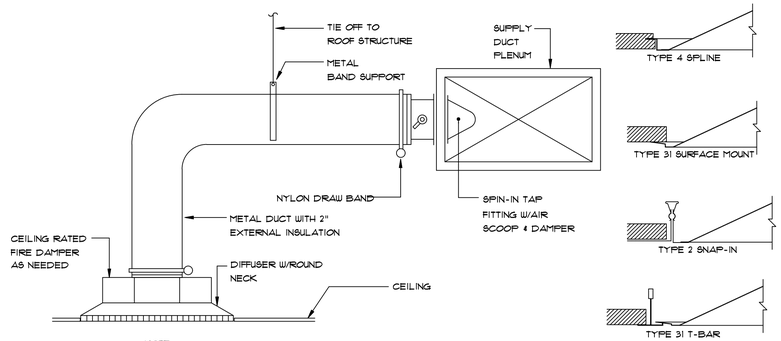
DRYERBOX® RECEPTACLE (WWW.DRYERBOX.COM) SHALL BE METAL AND BE INSTALLED AS LOW AS POSSIBLE AS TO PERMIT THE PROPER AND SAFE COLLECTION OF THE DRYER TRANSITION HOSE. DRYERBOX SHOULD BE RESTING ON THE BOTTOM PLATE AND BE LOCATED AT OR NEAR THE CENTERLINE OF THE PROPOSED DRYER APPLIANCE. RIGID DUCT SHOULD PENETRATE DRYERBOX FOR 2 INCHES TO PROVIDE FOR FUTURE CONNECTION AND STORAGE OF TRANSITION HOSE. BASEBOARD SHALL BE "BUTTED" UP TO THE FIXED EXTENSION RIM AND SLIGHTLY BACK-CUT. DRYERBOX SHOULD BE CAULKED AND THEN PAINTED WITH THE TRIM PAINT. FOR USAGE IN A ONE-HOUR WALL ASSEMBLY, UL REQUIRES THAT BATT INSULATION BE STUFFED AROUND THE DRYERBOX AND IN THE ENTIRE WALL CAVITY CELL.

LENGTH OF CONCEALED RIGID METAL DUCTING SHALL NOT EXCEED 35 FEET. DEDUCT 5 FEET FROM THE ALLOWABLE LENGTH FOR EVERY 33" RADIUS 90 DEGREE ELBOW AND TWO AND A HALF FEET FOR EVERY 45 DEGREE FITTING. DRYER VENTING SHALL BE INDEPENDENT OF ANY OTHER SYSTEMS (CHIMNEYS OR EXHAUST VENTS). TERMINATION OF DRYER VENTING MUST BE TO THE EXTERIOR WITH A PROPER HOOD OR ROOF JACK EQUIPPED WITH A BACK-DRAFT DAMPER. SMALL ORIFICE METAL SCREENING SHOULD NOT BE PART OF THE HOOD OR ROOF JACK AS THIS WILL ACCELERATE LINT ACCUMULATION AND BLOCKAGE. THE HOOD OPENING SHOULD POINT DOWN AND EXHIBIT 12 INCHES OF CLEARANCE BETWEEN THE BOTTOM OF THE HOOD AND THE GROUND OR OTHER OBSTRUCTION. VERIFY APPLIANCE MANUFACTURER'S RECOMMENDATIONS FOR ANY OTHER FACTORS.



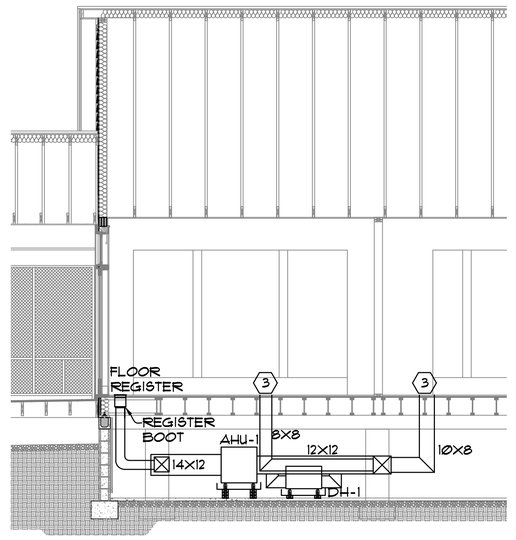
DRYERBOX DETAIL

MANUFACTURED BY: In-O-Vate Technologies, Inc. 810 Saturn Street, Suite 21 Jupiter, FL 33477 USA (888) 443.7937 www.dryerbox.com	PRODUCT: DRYERBOX MODEL 4D
	INSTALLATION: DETAILS FOR 6" STUD WALL
	MATERIAL: 22GA. ALUMINIZED STEEL 0.018



NOTE:
FOR EXACT CEILING CONNECTION REFER TO CEILING TYPE DETAIL.

SUPPLY AIR DIFFUSER DETAIL
N.T.S.



MECHANICAL CRAWLSPACE PLAN(TYP)
SCALE 1/4" = 1'0"

NOTES:
1. INSULATE SUCTION LINE.
2. PITCH ALL HORIZONTAL SUCTION PIPING A MINIMUM OF 1/2" IN 10 FEET IN DIRECTION OF FLOW.
3. EQUIPMENT MANUFACTURER SHALL DETERMINE THE REFRIGERANT PIPE SIZES. PROVIDE SOLENOID VALVE, ACCUMULATOR AND OTHER REFRIGERANT SPECIALTIES AS RECOMMENDED BY THE MANUFACTURER.
4. WHERE REFRIGERANT PIPING IS NOT SHOWN, ROUTE AS DIRECTLY AS POSSIBLE FROM OUTDOOR UNIT ABOVE GRADE THRU WALL OF MECHANICAL ROOM TO AHU.

REFRIGERANT PIPING SCHEMATIC- SPLIT SYSTEM HEAT PUMP
N.T.S.

GENERAL NOTES:

WOOD FLOOR DIFFUSERS SHALL HAVE A NECK VELOCITY OF 400 FPM. DIFFUSERS SHOULD HAVE OPEN AREA TO ALLOW FOR MAXIMUM OF 400 FPM DISCHARGE.

RETURN GRILLES SHALL HAVE A MAXIMUM FACE VELOCITY OF 400 FPM. SIZE FREE ARE TO ALLOW FOR 400 FPM.

ALL DIFFUSERS LOCATED UNDER OR ABOVE WINDOWS TO BE CENTERED ON WINDOWS, TYPICAL FOR ALL DIFFUSERS.

Winton Engineering, P.A
Robin Winton, P.E.
2207 WOODBINE DR.
TALLAHASSEE, FL 32309 850-894-5376
FL 56206

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MARTHA'S RETREAT
MAIN HOUSE

2023-101 Project #
Drawn By: RPW
Checked By: RPW
2 MAY 2024 Date

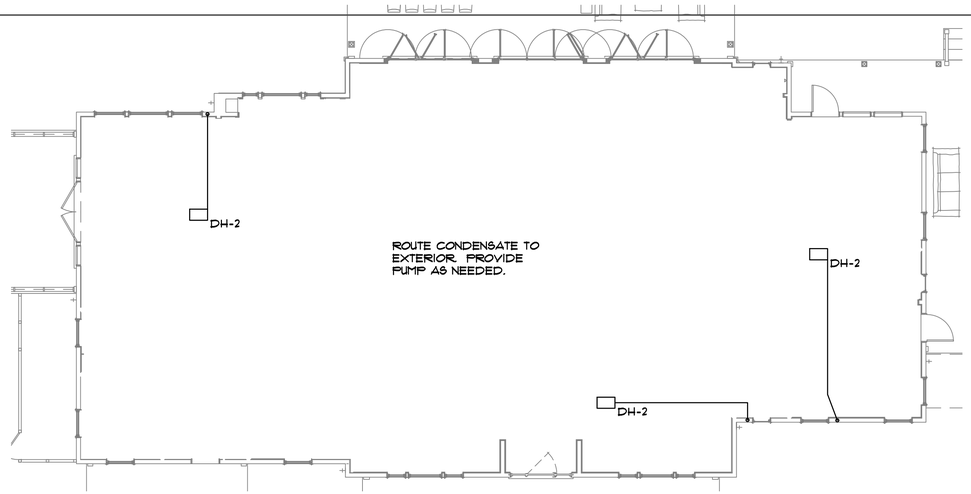
Revisions

MECHANICAL DETAILS

Tallahassee Florida

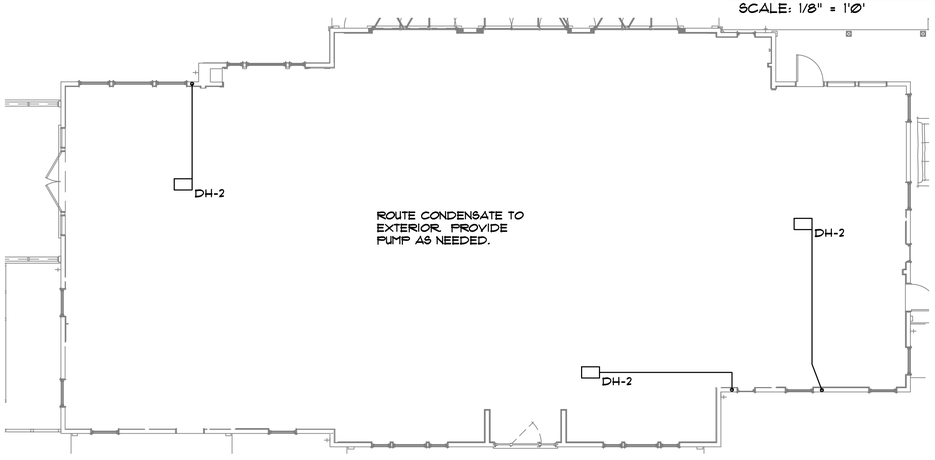
M3.0

2207 WOODBINE DR, TALLAHAASEE, FL 32309
Phone 850 567-2019



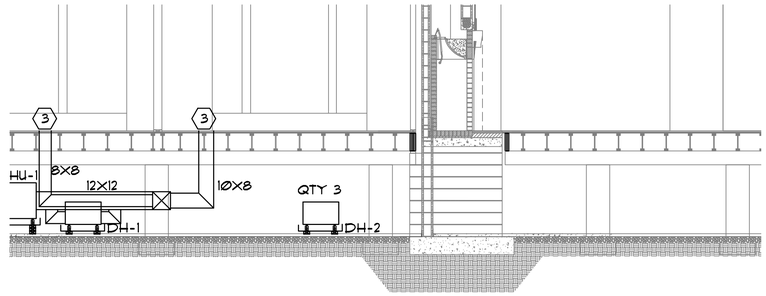
CRAWLSPACE DEHUMIIFIERS

SCALE: 1/8" = 1'Ø'



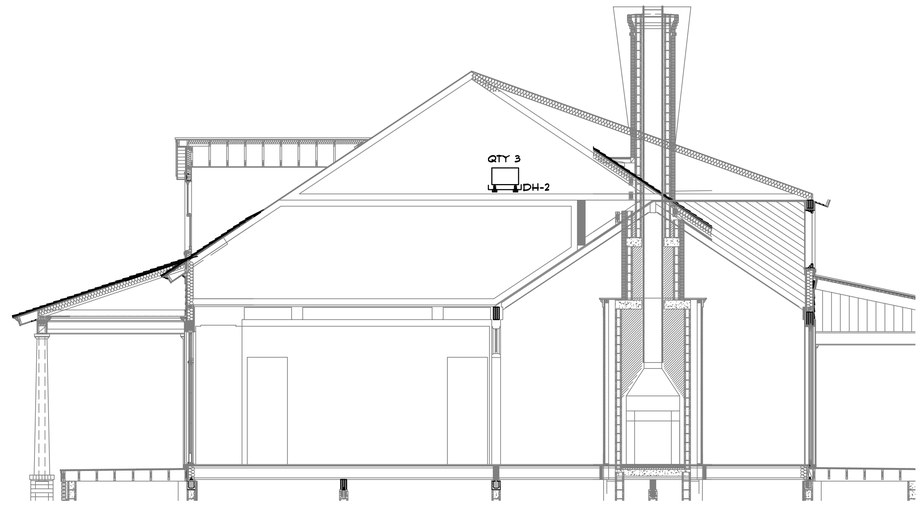
ATTIC DEHUMIIFIERS

SCALE: 1/8" = 1'Ø'



CRAWLSPACE DEHUMIIFIERS

SCALE: 1/4" = 1'Ø'



ATTIC DEHUMIIFIERS

SCALE: 1/4" = 1'Ø'

Unit Rating

A1 A2 A3 A4 B1 B2 B3 1A 1B 1C 1D 2 3 4 5A 5B 5C 6A 6B 6C 7 8 9 10 11 12 13 14A 14B 15 16 17 18 19 20 21 22 23

H3-BRB-9-0-4 6 2 C-7 B 1 : E F 1 C-H 0 H-0 0 0-0 A 0-0 0 A 0 0 C 0-0 0-0 0 0 0 0 0 D 0 0

Tag:AHU-OA

****Refer to the IOM for more information about A2L safety requirements*

Job Information

Job Name:	*Marthas Plantation*
Job Number:	*Job 108*
Site Altitude:	*0 ft*
Refrigerant:	*R-454B*
Indoor Coil Volume***:	*1 @ 305.2 in³ Ea.*
Reheat Coil Volume***:	*1 @ 95.8 in³ Ea.*
System Volumes*** (in³):	*258.6 / 142.4*

Static Pressure

External:	*1.00 in. w.g.*
Cooling Coil:	*0.15 in. w.g.*
Filters Clean:	*0.06 in. w.g.*
Dirt Allowance:	*0.15 in. w.g.*

Cooling Section

	Gross	Net
Total Capacity:	*48.4 MBH*	*47.7 MBH*
Sensible Capacity:	*26.1 MBH*	*25.4 MBH*
Latent Capacity:	*22.3 MBH*	
Circuit Total Gross Capacities:	*25.8 MBH / 22.6 MBH*	
Mixed Air Temp (DB/WB):	*95.0 °F / 78.0 °F*	
Entering Air Temp (DB/WB):	*95.0 °F / 78.0 °F*	
Lv Air Temp (Coil) (DB/WB):	*53.3 °F / 53.3 °F*	
Lv Air Temp (Unit) (DB/WB):	*54.4 °F / 53.7 °F*	
Supply Air Fan:	*1 x RN135D70 @ 0.26 BHP Ea.*	
SA Fan RPM / Width:	*1654 RPM / 2.124 in*	
SA Fan FEI:	*1.87*	
Evaporator Suction Temp:	*48.5 °F*	

Rating Information

Electrical Data

Circuit 1

Rating:	*208V/1Ø/60Hz*			*Minimum Circuit Amp:*		*68*		
Unit FLA:	*54*			*Maximum Overcurrent:*		*70*		
SCCR:	*5 KAIC*							
	Qty	*HP*	*VAC*	*Phase*	*RPM*	*FLA*	*RLA*	
Supply Fan:	*1*	*1.00*	*208*	*3*	*1760*	*2.3*		

*Cabinet Sound Power Levels**

Octave Bands:	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
Discharge LW (dB):	*70*	*69*	*62*	*58*	*53*	*52*	*50*	*45*
Return LW (dB):	*64*	*65*	*69*	*65*	*58*	*55*	*52*	*45*

**Sound power levels are given for informational purposes only. The sound levels are not guaranteed.*

Unit Information

Approx. Op./Ship Weights:	*575 lbs / 575 lbs (±5%)*
Ambient Temperature (DB/WB):	*95.0 °F / 78.0 °F*
Coil Filter FV / Qty:	*135.0 fpm / 2*
Supply Airflow/ESP:	*600 SCFM / 1.00 in. w.g.*
Outside Airflow:	*600 SCFM*
Return Temperature (DB/WB):	*75.0 °F / 62.0 °F*
Heating:	*0.02 in. w.g.*
Cabinet:	*0.00 in. w.g.*
Total:	*1.38 in. w.g.*

Heating Section

Preheat Type:	*Std (No Preheat)*
Auxiliary Heating Type:	*Electric Heat*
Heating Airflow:	*600 SCFM*
Total Capacity:	*35.8 MBH*
Entering Air Temp (DB/WB):	*30.0 °F / 25.0 °F*
Leaving Air Temp (DB/WB):	*85.1 °F / 53.9 °F*
Input:	*10.5 kW*
Electric Heat FLA:	*50.5*

13.5" STAR Plenum

JOB INFORMATION:

Job Name:	*Marthas Plantation*
Job Tag:	*AHU-OA*
Date:	*12/10/2024 12:00:00 AM*

OPERATING CONDITIONS

Air Flow:	*600*
Fan Energy Index (FEI):	*1.87*
Static Pressure:	*1.38 in. Wg*
Relief Dampers DP:	*0 in. Wg*
TSP:	*1.38 in. Wg*
Site Altitude	*0 ft*
TSP @ Sea Level:	*1.38 in. Wg*

FAN PERFORMANCE:

RPM:	*1654*
BHP:	*0.26*
Efficiency:	*50.20%*
Max Duct SP with Blocked Airway:	*0 in. Wg @1654 RPM*

Max Duct SP with Blocked Airway:

WHEEL SPECIFICATION:

Max RPM:	*2600*
Diameter x Qty:	*13.5 in. x 1*
CFM:	*600*
Inertia:	*3WR²*

MOTOR SELECTION

Rated HP / Bypass:	*1 x 1 / No*
Frame Size:	*143T*
Nominal RPM:	*1760*
VAC/PH/HZ:	*208V/3Ø/60Hz*
Enclosure Type:	*TEFC*
Max Inertial Load:	*0 WR²*

FAN SOUND POWER (Inlet/Outlet)

Octave Band:				(Re 10^-12 watts)			
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
70	69	72	68	63	62	60	54
70	69	72	68	63	62	60	54

SOUND POWER A-Weighted: 54 dB

Unit Rating

A1 A2 A3 A4 A5 1 2A 2B 3A 3B 4 5 6A 6B 6C 7 8A 8B 9 10 11 12 13 14 15 16 17 18 19 20 21 22

CFA-004-A-A-9-J A 0 0 G : A -0 0 -E 0 -A 0 -0 0 0 -1 -F E 0 A -0 0 E 0 G 0 0 -0 A 0 0 D B

Tag:CU-OA

****Refer to the IOM for more information about A2L safety requirements*

Job Information

Job Name:	*Marthas Plantation*
Job Number:	*Job 108*
Site Altitude:	*0 ft*
Refrigerant:	*R-454B*
Design System Charge*** (oz):	*101*

Unit Information

Approx. Op./Ship Weights:	*404 lbs / 404 lbs (±5%)*
Ambient Temperature (DB/WB):	*95.0 °F / 78.0 °F*

Cooling Section

	Capacity (MBH)	
Suction Temp:	*Total Unit:*	Circuit 1:
Design (46.5 °F)	*48.7 MBH*	48.7 MBH
35.0 °F	*39.7 MBH*	39.7 MBH
40.0 °F	*43.5 MBH*	43.5 MBH
45.0 °F	*47.5 MBH*	47.5 MBH
50.0 °F	*51.7 MBH*	51.7 MBH

Rating Information

Application EER @ Op. Conditions:	*14.8 BTU/h·W*

Electrical Data

Circuit 1

Rating:	*208V/1Ø/60Hz*			*Minimum Circuit Amp:*		*26*		
Unit FLA:	*21*			*Maximum Overcurrent:*		*40*		
SCCR:	*5 KAIC*							
	Qty	*HP*	*VAC*	*Phase*	*RPM*	*FLA*	*RLA*	
Compressor 1:	*1*		*208*	*1*			*18.3*	
Condenser Fan:	*1*	*0.33*	*208*	*1*	*1140*	*2.8*		

Winton Engineering, P.A
Robin Winton, P.E.
2207 WOODBINE DR.
TALLAHASSEE, FL 32309 850-894-5376
FL 56206

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MARTHA'S
RETREAT
MAIN HOUSE

2023-101 Drawn By: RPW
Project # Checked By: RPW

2 MAY 2024
Date

Revisions
1 2/11/25 CHANGES

MECHANICAL
DE-HUMIDIFIERS

1

Tallahassee Florida

M4.0

2207 WOODBINE DR, TALLAHAASEE, FL 32309
Phone 850 567-2019