HVAC NOTES

1. GENERAL

   All mechanical systems are to be installed in accordance with all applicable sections of the NFPA Standards, ANSI standards, Florida Building Code 2020, the local building code, noise & height ordinances, plans and specifications.

   A. DRAWINGS: Refer to all drawings for coordination of the HVAC work.
   B. ARRANGE AND PAY for all permits licenses, inspections and tests. Obtain the required certificates and present to owner.
   C. GUARANTEE: The completed installation shall be fully guaranteed against defective materials and/or improper workmanship for a minimum of one year for material and labor. Compressors shall be guranteed for a period of five years.
   D. As built drawings shall be submitted to owner at the completion of project.

2. SHOP DRAWINGS: Contractors shall submit for approval, within 30 days after signing contract, a minimum of five copies of fully descriptive literature, including but not limited to: fans, air conditioning units, air outlets. No work shall proceed without approval of these submittals.

3. DESIGN PARAMETERS:
   A. Outdoor design temperature (Summer): 91°F DB and 79°F WB
   B. Outdoor design temperature (Winter): 45°F
   C. Indoor design temperature (Summer): 78°F DB
   D. Indoor design temperature (Winter): 72°F DB

4. ALL THERMOSTATS SHALL have heating mode maximum setting of 75 F, and cooling mode minimum setting of 70 F. The thermostat shall be arranged to prevent the simultaneous operation of heating and cooling.

5. ELECTRICAL CONTROLS AND POWER WIRING: Under electrical contract.

6. EQUIPMENT SPECIFIED BY manufacturer's number shall include all accessories, controls, etc., listed in the catalog as standard with the equipment. Optional or additional accessories shall be furnished as specified.

7. MATERIALS:
   A. REFRIGERANT PIPING: Shall be type L soft drawn, copper tubing, dehydrated for refrigerant use. Sized as shown on drawings or as per air conditioning equipment manufacturer's recommendations.
   B. INSULATION: Refrigerant suction piping shall be insulated with 1/2" thick foamed plastic insulation, fire retardant type. Insulation shall be installed in piping before assembly. No split insulation will be acceptable. Seal joints with manufacturer's approved adhesive and grey tape. The piping and fittings for Refrigerant vapor (suction) lines shall be insulated with insulation having a thermal resistivity of at least R-4 and having external surface permeance not exceeding 0.05 perm when tested in accordance with ASTM E96 to comply with FBCR Section M141.5.
   C. DUCTWORK:
      a. All supply air ductwork shall be fiberglass ductboard, fabricated and installed as per latest edition of SMACNA "Fibrous Glass Duct Manual", 1-1/2" thick R-6.0 in uncond. space. 1" thick R-4.2 in cond. space.
      b. All exhaust ductwork shall be galvanized sheet metal duct not lighter than 26 gage.
      c. All duct dimensions are clear inside dimensions.
      d. Flexible insulated ductwork with 1 1/2" thick fiberglass insulation with FRK vapor barrier, class I air duct, U.L. R-6.0 MIN.
      e. Dryer ductwork: 26 ga. min. galvanized steel, having a smooth interior surface with joints running in the direction of airflow and without sheet metal screws or other fasteners in the air stream. Maximun length shall not exceed 25 feet. wall caps shall be provided with backdraft damper. Dryer exhaust wall cap is not to be provided with a screen as required by the FBCR-1502.3
      f. Intake openings shall comply with 2020 Florida Mechanical Code Section 401.4.1 and the exhaust outlets comply with the Section 501.2.1.

8. Provide metal round fittings at all flexible duct connection to supply duct.

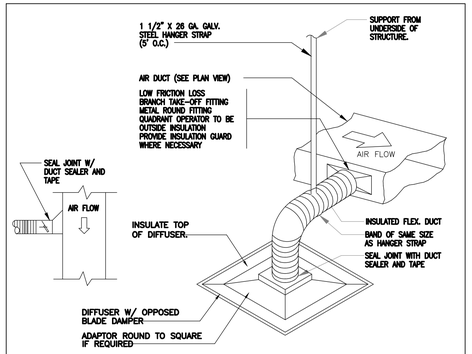
9. TEST AND BALANCE: Contractor shall test and balance all ventilation and air conditioning systems. Submit four copies of Test and Balance Report to owner for approval.

10. CONTROLS: Air conditioning units shall be started and stopped thru individual thermostat. Individual thermostats shall start/stop supply fans and activate cooling/heating systems as selected.

11. Mechanical plans in general, are diagrammatic in nature, and are to be read in conjuction with arch. Plumbing, electrical and structural plans and shall be considered as one set of documents. Duct and piping offsets, bends and transitions will be required to provide and install a complete functional system and shall be provided by the contractor at no additional cost to the owner.

12. Contractor shall verify job conditions prior to ordering, fabrication or installation of materials or equipment. Notify architect/engineer of any conflicts before fabrication.

13. Provision must be taken to prevent HVAC duct surface contact with the Foam insulation, either during application of after the foam dried up to prevent a voided listing of the A/C ductworks (both flexible and fiberglass duct board).



FLEXIBLE DUCT CONNECTION DETAIL
N.T.S.

FAN SCHEDULE

UNIT DESIGNATION	EF-1	EF-2
AREA SERVED	BATHROOMS	BATHROOMS
MANUFACTURER	GREENHECK	GREENHECK
MODEL NO.	SP-B50	SP-B110
TYPE	CLG. CABINET	CLG. CABINET
TOTAL AIR, CFM	50	110
TOTAL STATIC PRESSURE, IN OF H2O	0.125"	0.125"
DRIVE TYPE	DIRECT	DIRECT
SPEED, RPM	625	950
FAN MOTOR H.P. (WATTS)	(15)	(80)
SONES / (NC)	1.4	2.2
ELECTRICAL SERVICE	115/1/60	115/1/60
OPERATING WEIGHT, LBS.	9	10
DIMENSIONS WXLXH (IN)	14 X 12 X 7	14 X 12 X 7
OPENING, WXH (IN)	---	---
REMARKS / ACCESORIES	(1), (2)	(1), (2)

NOTES:
1. INTERLOCK WITH LIGHT SWITCH
2. BACKDRAFT DAMPER

SPLIT AC UNIT SCHEDULE

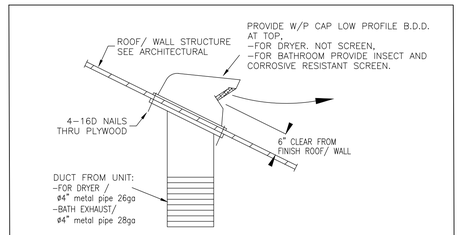
	UNIT DESIGNATION	AHU-1,2,3,5,6	AHU-4
	AREA SERVED	-	-
	LOCATION	A/C CLOSET	A/C CLOSET
	OPERATING WEIGHT, LBS	207	207
	DESIGN MANUFACTURER	CARRIER	CARRIER
	MODEL NUMBER	FE4ANB006	FE4ANB006
	SEER / SEER 2	20/20	17.5/17.5
FAN SECTION	TOTAL AIR, CFM	2000	1,200
	VENT AIR, CFM		
	EXTERNAL STATIC PRESSURE, IN OF WATER	0.5	0.5
	FAN MOTOR HP. (NON-OVERLOAD)	3/4-6.8 FLA	3/4-6.8 FLA
	ELECTRICAL SERVICE AVAILABLE	230/1/60	230/1/60
	MIN. CIRC. AMP	53.8	44.7
	MAX. CIRC. PROT.	60	45
CLG. COIL	FACE VELOCITY - FPM	---	---
	DESIGN AIR ACROSS COIL, CFM.	2000	1,200
	GRAN TOTAL CAPACITY, BTU/HR	57000	35,600
	TOTAL SENSIBLE CAPACITY, BTU/HR	48450	29,270
	ENTERING AIR TEMP., F°DB/WB	80/67	80/67
	COIL MODEL NO.	--	--
FILTER	TYPE & THICKNESS	CLEANABLE 1"	CLEANABLE 1"
	QUANTITY AND SIZE	1-21.5 X 23.3	1-21.5 X 23.3
	FACE VELOCITY FPM. MAX.		
HEATER	HEAT COIL TYPE	ELECT.	ELECT.
	ELECTRICAL SERVICE AVAILABLE	230/1/60	230/1/60
	AUXILIARY ELECTRIC HEAT, KW	10	8
	STAGES & KW PER STAGE	1/10	1/8
AIR COOLED CONDENSING UNIT	UNIT DESIGNATION	SAME AS AHU	SAME AS AHU
	TYPE OF FAN	PROP.	PROP.
	NO. OF FANS AND AMPS	1/1.4	1/ 3.2
	AMBIENT AIR TEMP. °F DB	95	95
	CONDENSING TEMP. °F DB	---	---
	NO. OF COMPRESSORS/ TYPE	1/SCROLL	1/SCROLL
	COMPRESSORS F.L.A./L.R.A. EACH	25.4/42	15.1/24
	CAPACITY REDUCTION.	VARIABLE	VARIABLE
	MIN. CIRC. AMP	35	24.4
	MAX. CIRC. PROT.	50	40
	ELECTRICAL SERVICE AVAILABLE	230/1/60	230/1/60
	OPERATING WEIGHT, LBS	241	351
	DESIGN MANUFACTURER	CARRIER	CARRIER
	MODEL NUMBER	24VNA660A	24VNA936
	REFRIGERANT PIPE SIZE, SUCTION/LIQUID	1-1/8" - 3/8"	7/8" - 3/8"

NOTES: 1. ALL THERMOSTATS SHALL BE CARRIER MANUFACTURER PROGRAMMABLE TYPE WITH HUMIDITY CONTROL.
2. ALL FAN COIL UNITS SHALL BE PROVIDED WITH FACTORY INSTALLED CIRCUIT BREAKER.
3. PROVIDE SEACOAST PROTECTION ON COIL AND CASE.
4. REFER TO MANUFACTURER SPECS FOR REFRIGERANT LINES REQUIRED SIZE AND ACCESSORIES.
CARRIER SALES ENGINEER REPRESENTATIVE: GILBERTO CATANO PH:1-954-599-1100
EMAIL: gilberto.catano@carrierenterprise.com

AIR DISTRIBUTION SCHEDULE

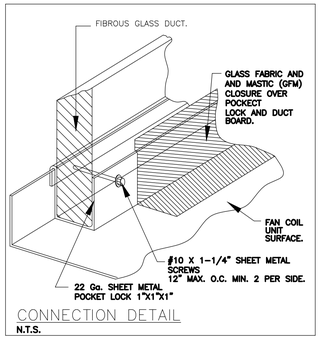
SIMBOL	USE	TYPE	ACCESORIES	DESIGN MANUFACTURER & MODEL Mo.
A	SUPPLY AIR	LINEAR DIFFUSER	O.B.D.	TITUS FL-15 (1 SLOT)
B	RETURN AIR	LINEAR BAR	---	TITUS CT-481 (4" WIDE)
C	RETURN AIR	LINEAR BAR	---	TITUS CT-481 (6" WIDE)
D	SUPPLY AIR	LINEAR DIFFUSER	O.B.D.	TITUS FL-15 (2 SLOT)

NOTES:
1. ALL AIR DISTRIBUTION DEVICES SHALL BE ALL ALUMINUM CONSTRUCTION.
2. COORDINATE COLOR FINISH WITH ARCHITECT, WHITE BAKED ENAMEL STANDARD.
3. UNLESS OTHERWISE SPECIFIED ALL LINEAR DIFFUSER ARE SINGLE SLOT WITH HIGHTHROW FLOW PATTERN
4. PROVIDE REMOTE YOUNG CONTROL ON ALL GRILLES FOR AIR BALANCE.

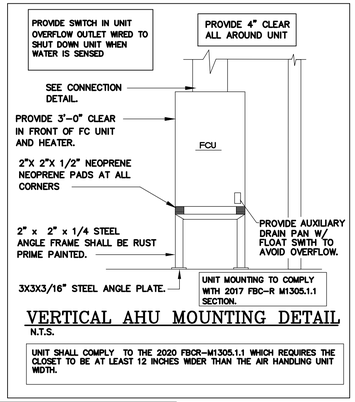


TYPICAL ROOF/ WALL CAP DETAIL
@ DRYER AND/OR TOILET EXH.
NOTE: HORIZONTAL DESHAGE 3' MIN AWAY FROM ANY OPENING N.T.S.

HVAC DESIGN REQUIRES:	YES	NO
DUCT SMOKE DETECTOR	-	X
FIRE DAMPER(S)	-	X
SMOKE DAMPER(S)	-	X
FIRE RATED ENCLOSURE	-	X
FIRE RATED ROOF/FLOOR CEILING ASSEMBLY	-	X
FIRE STOPPING	-	X
SMOKE CONTROL	-	X



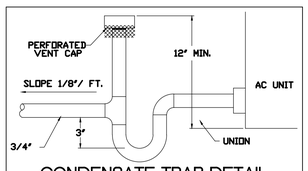
CONNECTION DETAIL
N.T.S.



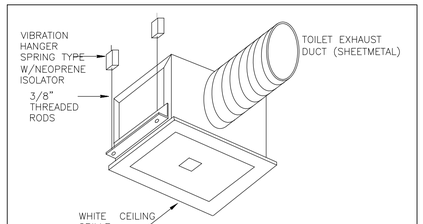
VERTICAL AHU MOUNTING DETAIL
N.T.S.

UNIT SHALL COMPLY TO THE 2020 FBCR-M1305.1.1 WHICH REQUIRES THE CLOSET TO BE AT LEAST 12 INCHES WIDER THAN THE AIR HANDLING UNIT WIDTH.

CALCULATIONS ARE BASED ON:	
WINDOWS	U FACTOR: 0.66 / SHGC: 0.32
CEILING	R-30
CMU EXT WALL	R-5

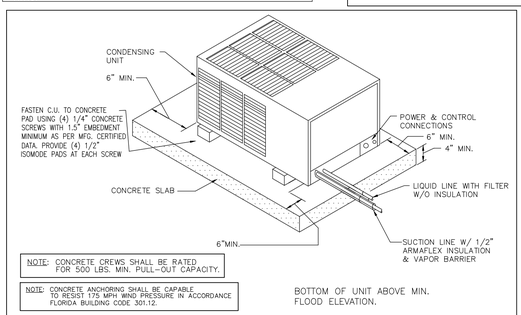


CONDENSATE TRAP DETAIL



NOTES:
1.- PROVIDE BACKDRAFT DAMPER W/ BIRDSCREEN
2.- FLASH & SEAL WALL AND ROOF CAP
3.- PROVIDE INTERNAL ISOLATION AND SOUND INSULATION
4.- SUPPORT FAN FROM STRUCTURE

TYP. CABINET EXHAUST FAN DETAIL

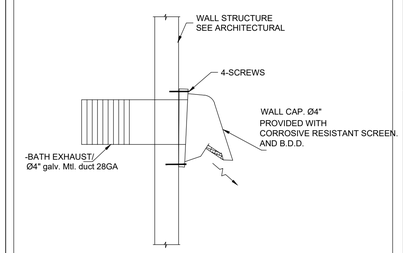


NOTE: CONCRETE CREWS SHALL BE RATED FOR 500 LBS. MIN. PULL-OUT CAPACITY.

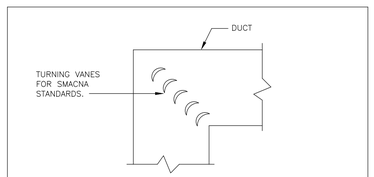
NOTE: CONCRETE ANCHORING SHALL BE CAPABLE TO RESIST 175 MPH WIND PRESSURE IN ACCORDANCE FLORIDA BUILDING CODE 301.12.

BOTTOM OF UNIT ABOVE MIN. FLOOD ELEVATION.

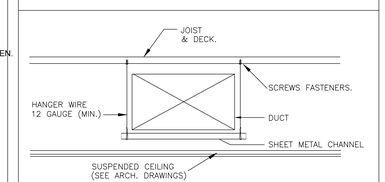
CONDENSING UNIT MOUNTING DETAIL
N.T.S.



TYPICAL WALL CAP DETAIL
@ BATHS EXHAUST SCALE: N.T.S.
NOTE: SHALL BE DESHAGE 3' MIN AWAY FROM ANY OPENING



TYPICAL 90-DEGREE VANED ELBOW DETAIL.



DUCT HANGER DETAIL
N.T.S.

MECHANICAL NOTES AND DETAILS
M-1.2 N.T.S.

REVISIONS

Rev.	Date	Description
1	10/24/23	B.D.C

FIDANZA'S FAMILY HOUSE
NEW CONSTRUCTION
11041 SW 77TH AVE, PINECREST, FL 33156

Corporation Licence #AA0003589

Architectural Seal

JORGE L VILLAVICENCIO NO. AR0012110

VILLA & ASSOCIATES INC.
ARCHITECTURE - PLANNING - INTERIOR DESIGN
5801 SW 69 AVENUE - MIAMI, FLORIDA 33155
TEL. 305-613-0865 - E-Mail Jvillarchitect@gmail.com

CONSULTANT : ARCHI-TEK STUDIO CORP.
TEL. 305-799-8016 - E-Mail magullar@architekstudio.com

Eduardo A Barreto
Digitally signed by Eduardo A Barreto
DN: c=US, o=Florida, dnQualifier=A01410C0000018998AF54FC0000DXEC6, cn=Eduardo A Barreto
Date: 2023.11.05 13:05:06 -05'00'

EDUARDO A BARRETO
P.E. No. 69677
PH: (786) 239-1808
EMAIL: eabservices@gmail.com

EDUARDO A BARRETO, PROFESSIONAL ENGINEER, STATE OF FLORIDA, LICENSE NO. 69677
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY EDUARDO A BARRETO, PE, ON DAY AS APPEAR ON SEAL.
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

DATE:	SCALE:
10-20-2022	AS SHOWN

PROJECT NO: Unnamed

DRAWING NO : M-1.2