

H.V.A.C GENERAL NOTES	
1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL AND EQUIPMENT FOR A COMPLETE HVAC SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE FLORIDA BUILDING CODE 2020 7TH EDITION OF THE FOLLOWING PUBLICATIONS: (A) ANS B9.1 MECHANICAL REFRIGERATION (B) NFPA Pamphlets 90A & 91 (C) SMACNA (D) ASHRAE.	9. PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS.
2. OBTAIN FULL INFORMATION REGARDING PECULIARITIES AND LIMITATIONS OF SPACE AVAILABLE FOR INSTALLATION OF THE EQUIPMENT AND MATERIALS UNDER CONTRACT AND PROVIDE READY ACCESSIBILITY TO DAMPERS, VALVES AND OTHER APPURTENANCES INCLUDING ANY PART OF THE SYSTEM REQUIRED TO BE REACHED FOR BALANCING, TESTING , MAINTENANCE AND OPERATION.	10. AIR CONDITIONING SYSTEM CONTROLS SHALL CONSIST PROGRAMMABLE THERMOSTAT FOR HEATING AND COOLING STAGES AS REQUIRED FOR EQUIPMENT. THERMOSTATS SHALL BE WALL MOUNTED UNLESS INDICATED OTHERWISE.
3. PLANS ARE GENERALLY DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, PLUMBING, ELECTRICAL AND STRUCTURAL PLANS AND ALL PLANS RELATED TO PROJECT 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 AS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.	11. ALL EQUIPMENT SHALL BE PROVIDED WITH VIBRATION ISOLATION IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS TO REDUCE/ELIMINATE NOISE AND VIBRATION FROM TRANSFERRING TO THE OCCUPIED SPACE.
4. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION AND IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS. WORK SHALL ALSO BE COORDINATED WITH STRUCTURE AND AVAILABLE SPACE TO ENSURE FIT AND PROPER CLEARANCES ARE BEING PROVIDED. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT – ENGINEER IMMEDIATELY.	12. IN COMPLIANCE WITH THE FLORIDA BUILDING CODE MECHANICAL 307.2.3, PROVIDE, INSTALL AND CONNECT AN APPROVED WATER LEVEL DETECTOR OR FLOAT SWITCH TO CONTROL OVERFLOW BY AUTOMATICALLY SHUTTING DOWN EQUIPMENT UPON ACTIVATION OF DEVICE.
5. CUT ALL OPENINGS AND CHASES REQUIRED TO ACCOMMODATE THE WORK UNDER THIS DIVISION, AND REPAIR ALL FLOORS, WALLS, ETC. DAMAGED BY WORK. ALL WORK PERFORMED UNDER THIS HEADING SHALL CONFORM IN EVERY RESPECT TO THE FINISH AND QUALITY OF MATERIALS AND WORKMANSHIP SPECIFIED UNDER APPROPRIATE SECTIONS FOR THE BUILDING.	13. PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT PRIOR TO STARTUP, AND REPLACE PRIOR TO FINAL ACCEPTANCE BY OWNER.
6. SUBMIT SHOP DRAWINGS OF ALL MATERIALS AND EQUIPMENT FOR APPROVAL PRIOR TO FABRICATION. DUCTWORK SHOP DRAWINGS SHALL BE SUBMITTED AT 1/4" = 1'-0" SCALE AND BE COORDINATED WITH OTHER TRADES.	14. THERMOSTAT LOCATION SHALL BE CONFIRMED AND APPROVED BY OWNER AND ARCHITECT/ENGINEER BEFORE INSTALLATION. DEVICES SHALL BE MOUNTED AT 48 INCHES ABOVE FINISHED FLOOR IN ACCORDANCE WITH A.D.A. REQUIREMENTS.
7. ALL EXHAUST DUCTWORK SHALL BE GALVANIZED STEEL WITH GAUGES, DUCT CONSTRUCTION, BRACING AND SUSPENSION IN ACCORDANCE WITH THE RECOMMENDATIONS SET FORTH IN THE LATEST EDITION OF THE A.S.H.R.A.E. GUIDE AND S.M.A.C.N.A. STANDARDS. DUCT SIZES INDICATED ON DRAWINGS ARE CLEAR "AIR SIDE" DIMENSIONS. VERY EXACT LOCATION OF DUCT WITH RESPECT TO STRUCTURE AND OTHER TRADES BEFORE FABRICATION,(APPLIABLE FOR WAREHOUSE AREA)	15. GUARANTEES: A. ALL COMPRESSOR MOTORS ON NEW EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL HAVE A 5 YEARS PRODUCT GUARANTEE FROM DATE OF START-UP. B. CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN A 1 YEAR FROM DATE OF ACCEPTANCE.
8. ALL AIR CONDITIONING DUCTWORK SUPPLY AND RETURN SHALL BE 1-1/2 " STANDARD DUTY FOIL REINFORCED FIBERGLASS (R-6) MANUFACTURED LOGO PRINTED ON THE VAPOR BARRIER WHEN IN UNCONDITIONED SPACE, AND 3/4 " STANDARD DUTY FOIL REINFORCED FIBERGLASS (R-4) MANUFACTURED LOGO PRINTED ON THE VAPOR BARRIER IN CONDITIONED SPACE OR RETURN PLENUM SPACE.	16. PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS.
	17. TESTING: A. BALANCE AIR SYSTEM TO DELIVER QUANTITIES AT EACH OUTLET WITHIN 5% USING A.A.B.C. PROCEDURES AND TESTS. SUBMIT AIR BALANCE TEST RESULTS FOR APPROVAL PRIOR TO FINAL INSPECTION.
	18. CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF RECORD DRAWINGS ON SITE INDICATING ANY MODIFICATIONS TO THE DESIGNED SYSTEM LAYOUT. SET SHALL CLEARLY INDICATE ACTUAL INSTALLED CONDITIONS AND LOCATION OF ALL EQUIPMENT, PIPING, DUCTWORK, CONTROL DEVICES, ETC. RECORD SET SHALL BE ACCURATELY UPDATED WEEKLY BY THE CONTRACTOR. ACCURATE "AS-BUILT" SET SHALL BE SUPPLIED TO THE ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.

A.H.U.'S SCHEDULE																
DESIGNATION	CFM	MBTUH		ENTERING F		ELECTRICAL DATA					MANUFAC.	REF. UNIT	DIMENSIONS (WxDxH)	OBS		
		TOTAL	SENSIBLE	WB	DB	VOLTS	PHASES	HNG KW	MCA	MOCF				LIQ.	SUC.	COND.
AHU-2	1600	48.0	36.0	67	80	230	1	10	55.0	60.0	RHEEM	RH2T4821MEACJA	24" x 22" x 55½"	3/8"	7/8"	3/4"
AHU-3,4 AND 5	800	24.0	17.4	67	80	230	1	5	29.0	30.0	RHEEM	RH2T2421MEACJA	17½" x 22" x 42½"	3/8"	7/8"	3/4"

+ LOAD AT 125% AS PER MANUFACT. SPECS.

CONDENSING UNIT SCHEDULE													
DESIGNATION	MBTUH	TEMP. ENT. CONDENSER	ELECTRICAL DATA				MANUFAC.	REF. UNIT	OBS OR SEER	WEIGHT (LBS)	DIMENSIONS (WxDxH)	AREA SERVED	
			VOLTS	PHASES	MCA	MOCP							
CU-2	48.0	95	230	1	32.0	50.0	RHEEM	RA1748AJ2CB	17.0	240	36"x36"x51"	SEE PLAN	
CU-3,4 AND 5	24.0	95	230	1	16.0	25.0	RHEEM	RA1724AJ2CB	17.0	142	33 ¾"x33 ¾"x27"	SEE PLAN	

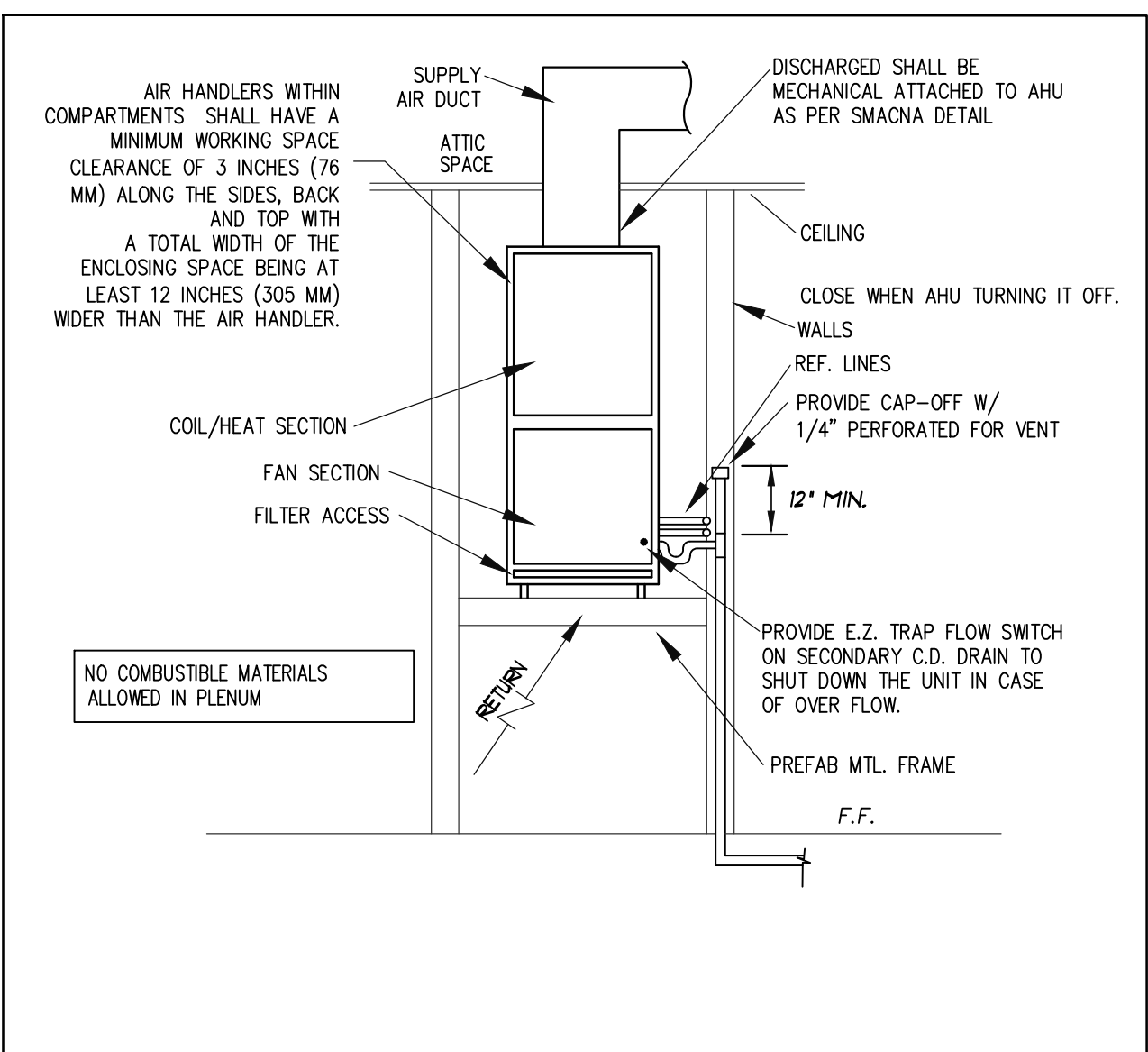
CONTRACTOR SHALL VERIFY IN FIELD TO COMPLY WITH THE MAXIMUM LENGTH OF REF. LINES AS PER MANUFACTURER SPECIFICATION. ANY DISCREPANCY SHALL CONTACT THE ENGINEER.

LEGEND:	
☒	CEILING DIFFUSER
☒	SIDE REGISTER
☒	RETURN AIR GRILL
Ⓣ	THERMOSTAT
☒	EXHAUST FAN
☒	FIRE DAMPER
☒	AIR FLOW DIRECTION (ARROWS DENOTE 1 WAY, 2 WAY, ETC., SEE PLANS)
☒	LINEAR DIFFUSER
G.V.D	GRAVITY DAMPER
M.V.D	MANUAL VOLUME DAMPER
R.A.G	RETURN AIR GRILL
H.P	HEAT PUMP
AHU	AIR HANDLER UNIT
CU	CONDENSING UNIT
EF	EXHAUST FAN
CFM	CUBIC FEET PER MINUTE
D/D	DUCT SMOKE DETECTOR
MVD	MANUAL VOLUME DAMPER
OAI	OUTSIDE AIR INTAKE
W.P.L	WEATHER PROOF LOUVER
B.D.D.	BACK DRAFT DAMPER
C.G	CEILING GRILLE
C.D	CEILING DIFFUSER
E.F	EXHAUST FAN
EXHD	EXHAUST DUCT
A.P	ACCESS PANEL
R.L	REFRIGERATION LINE

EXHAUST FAN SCHEDULE							
TYPE	MANUF.	MODEL NUMBER	AIR DELIVERY	SOUND LEVEL	ELECTRICAL SERVICE	WATTS	DUCT
EF-1	NUTONE	AEN50	50 CFM	0.5 SONES	120V/1PH/60	0.2	6"
EF-2	NUTONE	XN110	110 CFM	0.3 SONES	120V/1PH/60	7.7	6"

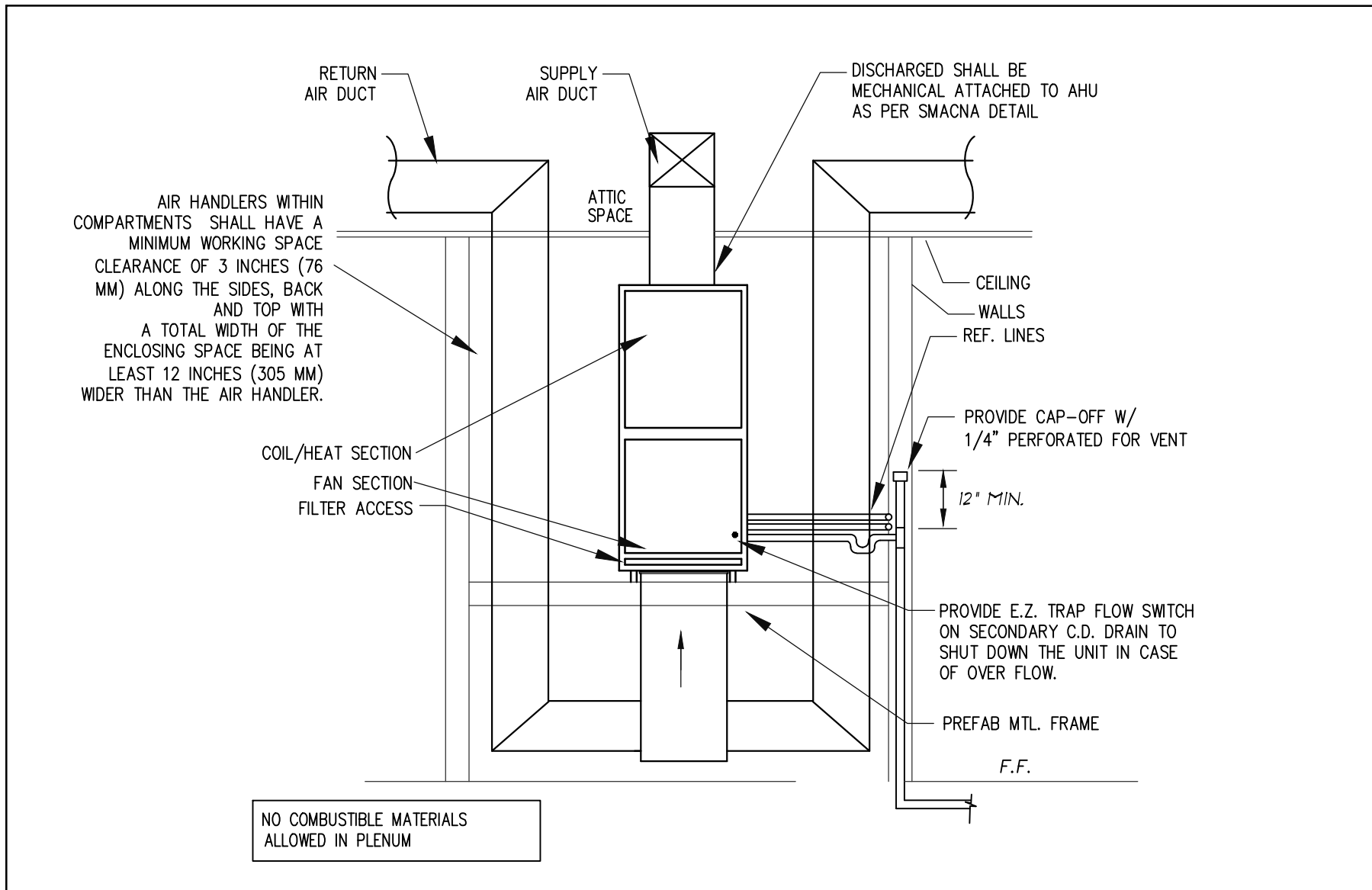
AIR DISTRIBUTION SCHEDULE					
TAG	MANUF. & MODEL	FACE SIZE	NECK SIZE	MATERIAL	AIR FLOW
C.G	CEILING GRILLE/TITUS/ 250-AA	SEE PLAN	SEE PLAN	ALUMINUM	SEE PLAN
R.A.G	RETURN AIR GRILLE/TITUS/ 4 FL	14"x14", 18"x16"	12"x12",16"x14"	ALUMINUM	SEE PLAN
L.D SUPPLY	LINEAR DIFFUSER/TITUS/ ML-39 2 SLOT 1"	2',3'	6",8"	ALUMINUM	SEE PLAN
GENERAL NOTES:					
1. REFER TO ARCHITECT PLANS FOR CEILING TYPE.					
2. FINAL COLOR SELECTION SUBJECT TO ARCHITECT APPROVAL.					
3. FLEX DUCT SIZE TO BE SAME AS DIFFUSER NECK SIZE.					
4. PROVIDE SPIN-IN COLLAR AT TRUNK TO FLEX DUCT CONNECTION (SEE DETAIL).					
5. PROVIDE TYPICAL 4-WAY DIFFUSION, 2-WAY OR 3-WAY ONLY WHERE INDICATED ON PLANS.					

HVAC DESIGN REQUIRE:	YES	NO
DUCT SMOKE DETECTOR		X
FIRE DAMPER(S)		X
SMOKE DAMPER(S)		X
FIRE RATE ENCLOSURE		X
FIRE RATED ROOF/FLOOR CEILING ASSEMBLY		X
FIRE STOPPING		X
SMOKE CONTROL		X
THERMOSTAT (PROGRAMMABLE)	X	



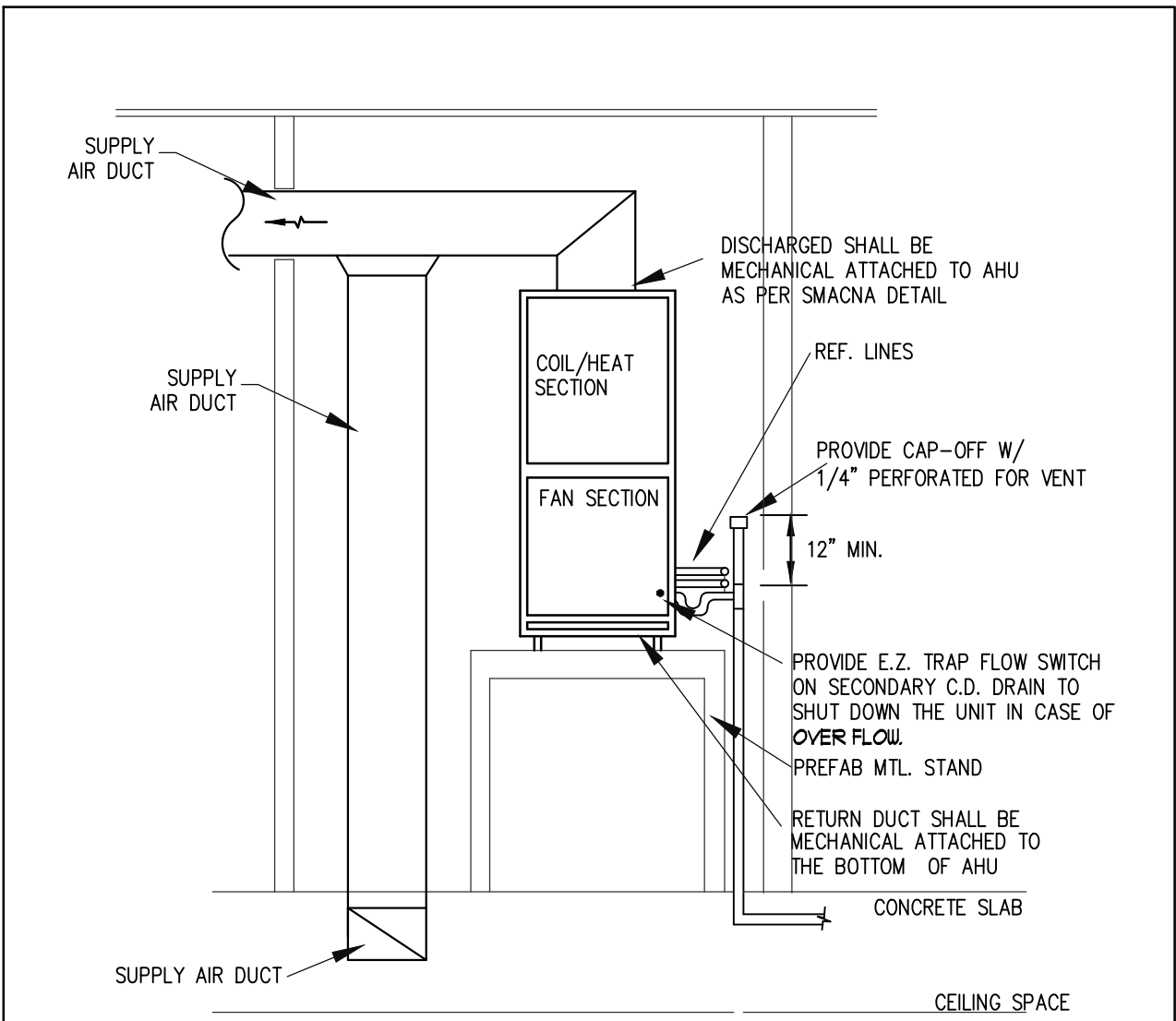
A.H.U-3 CLOSET INSTALLATION

N.T.S.



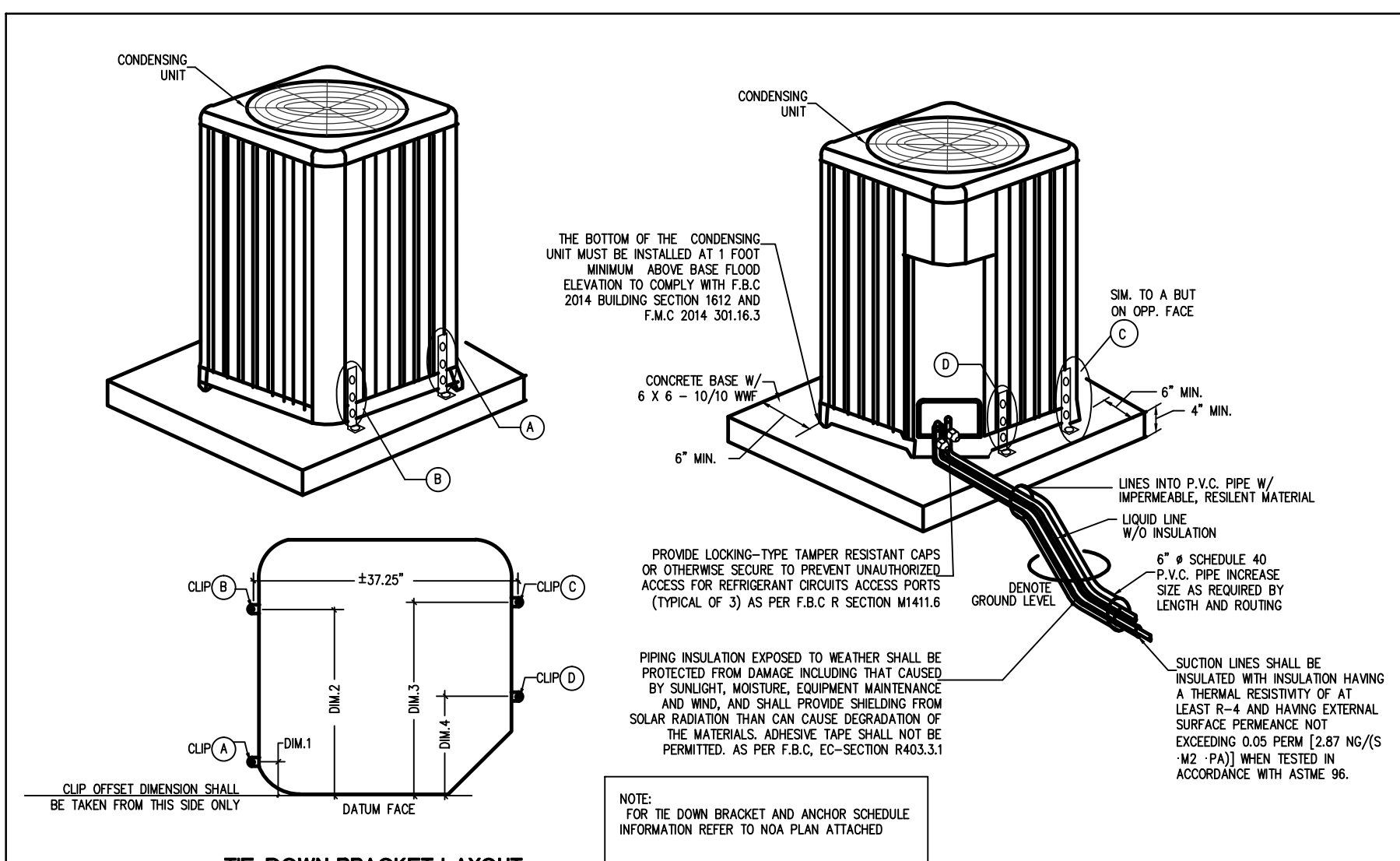
AHU-4,5 CLOSET INSTALLATION

N.T.S.



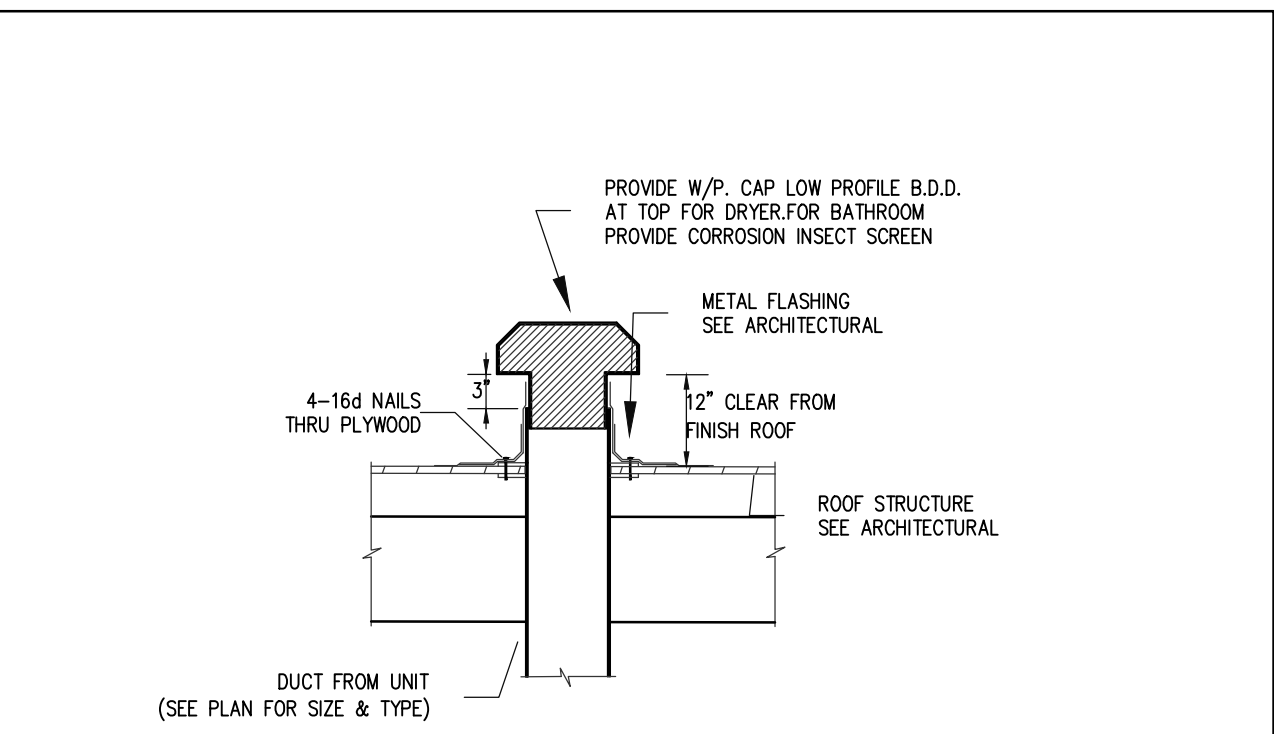
AHU-2 CLOSET INSTALLATION

N.T.S.



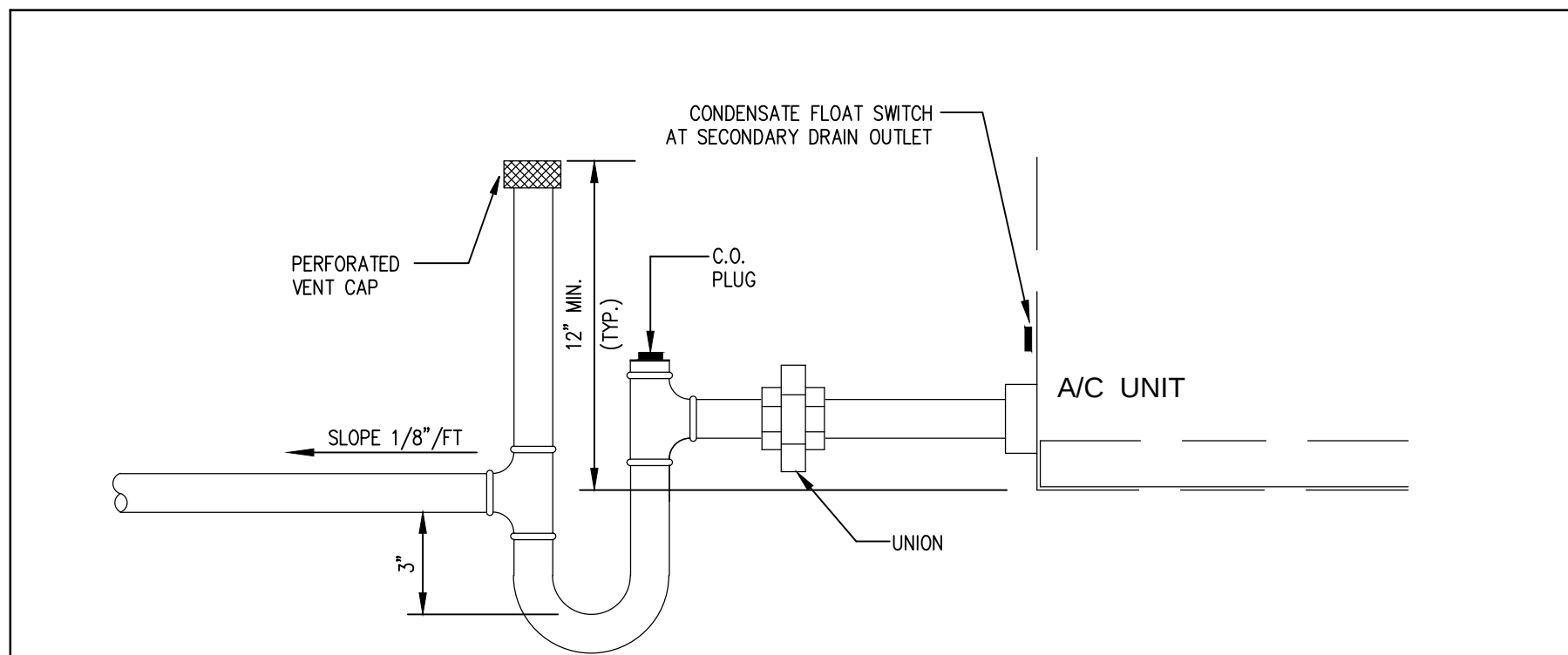
CU'S MOUNTING DETAIL

N.T.S.



TYPICAL FLAT ROOF CAP FOR EXH. FAN

N.T.S.



CONDENSATE TRAP DETAIL

N.T.S.

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CIVIL ENGINEER: _____

LANDSCAPE ARCHITECT: _____

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KEY PLAN:



COMM. NO.: 17-117 NO: REVISION: DATE:

DATE: JANUARY, 2022

DRAWN BY: _____

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