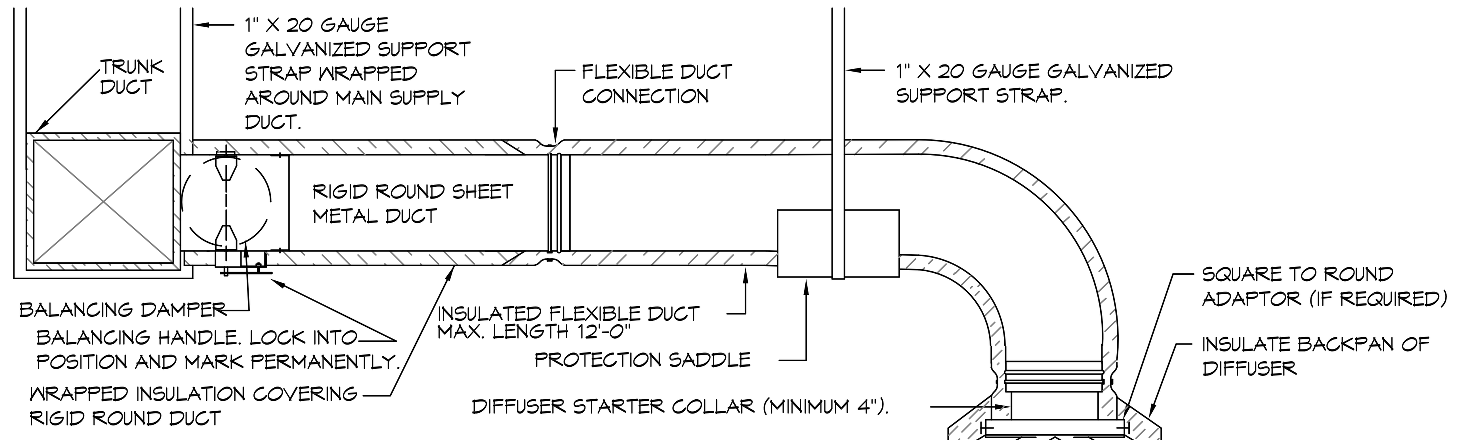
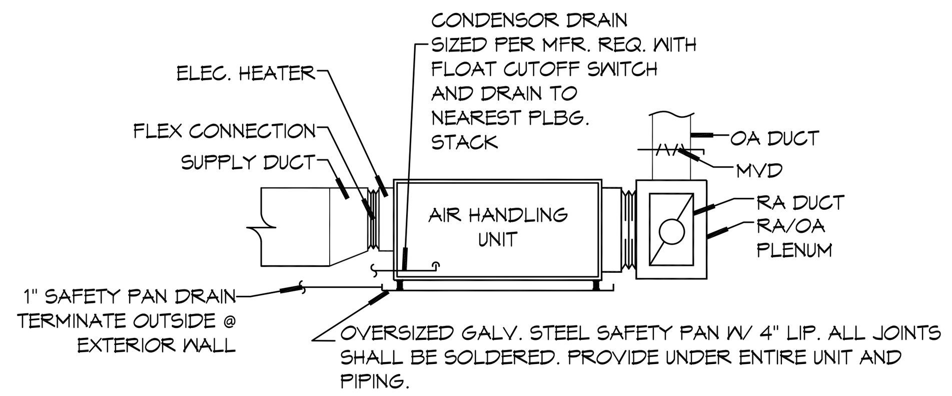
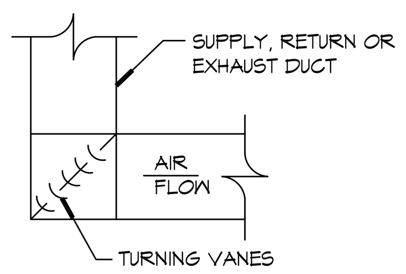
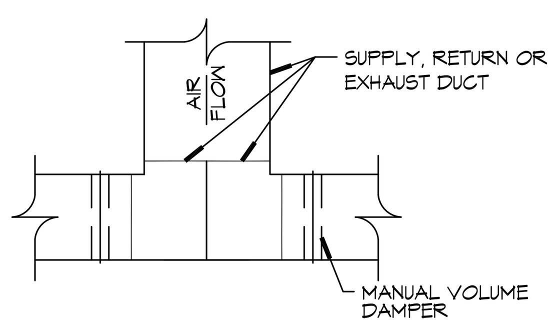
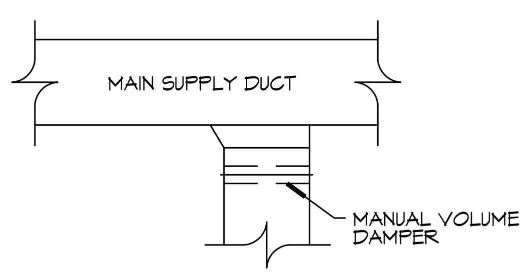


NOTES:
1) PROVIDE AT FLEXIBLE DUCT CONNECTION "PANDUIT" DRAWBAND ON THE INTERIOR FLEXIBLE DUCT HELIX.
2) PROVIDE MINIMUM 4" COLLARS FOR ATTACHMENT OF THE FLEXIBLE DUCT TO ROUND DUCT, DAMPERS AND DIFFUSERS.
3) BAND RIGID ROUND DUCT INSULATION TO DUCT AND PROVIDE TAPE FOR INSULATION OVERLAP.

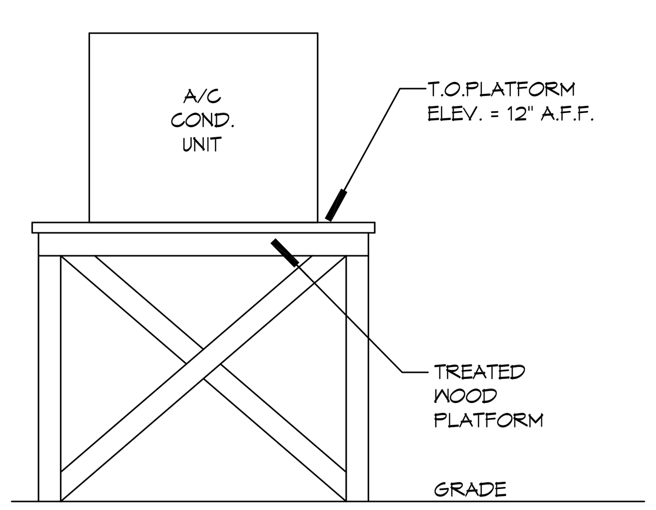








NOTE: INSTALL FIRE DAMPER AT ANY LOCATION WHERE DUCT PENETRATES A FIRE WALL.



DETAIL
SCALE: NTS
ELEVATED A/C PLATFORM

A/C CONDENSER UNIT SCHEDULE TOTAL HVAC TONS = 3 1/2						
NO.	TOTAL BTU	TOTAL TONNAGE	ELECTRICAL			MANUFACTURER
			VOLTAGE	MCA	CKT BRKR	
1	42,000	3-1/2 TON	120/240 1Φ	26	40A-2P	RHEEM OR EQUAL
		(12.31kw)				

A/C AIR HANDLING UNIT SCHEDULE TOTAL HVAC TONS = 3 1/2									
NO.	TOTAL BTU	CFM	STATIC PRESS	O.A.	HEAT ELEC.	ELECTRICAL			MANUFACTURER
						VOLTAGE	MCA	CKT BRKR	
1	42,000	1,400	0.50	84	9.6 kw	120/240 1Φ	53	60A-2P	RHEEM OR EQUAL

NOTE: ALL AIR HANDLING UNITS TO HAVE A SINGLE-POINT CONNECTION FOR THE BLOWER & HEATING ELEMENT.

FRESH AIR REQUIREMENTS PER IMC 2009 TABLE 403.3					
ROOM NAME	SF	OCC/ 1000 SF	CFM/ OCC	CFM/ SF	TOTAL OA
AHU- 3 1/2 TON					84
BUILDING	1400	5.6	15.0	-	84

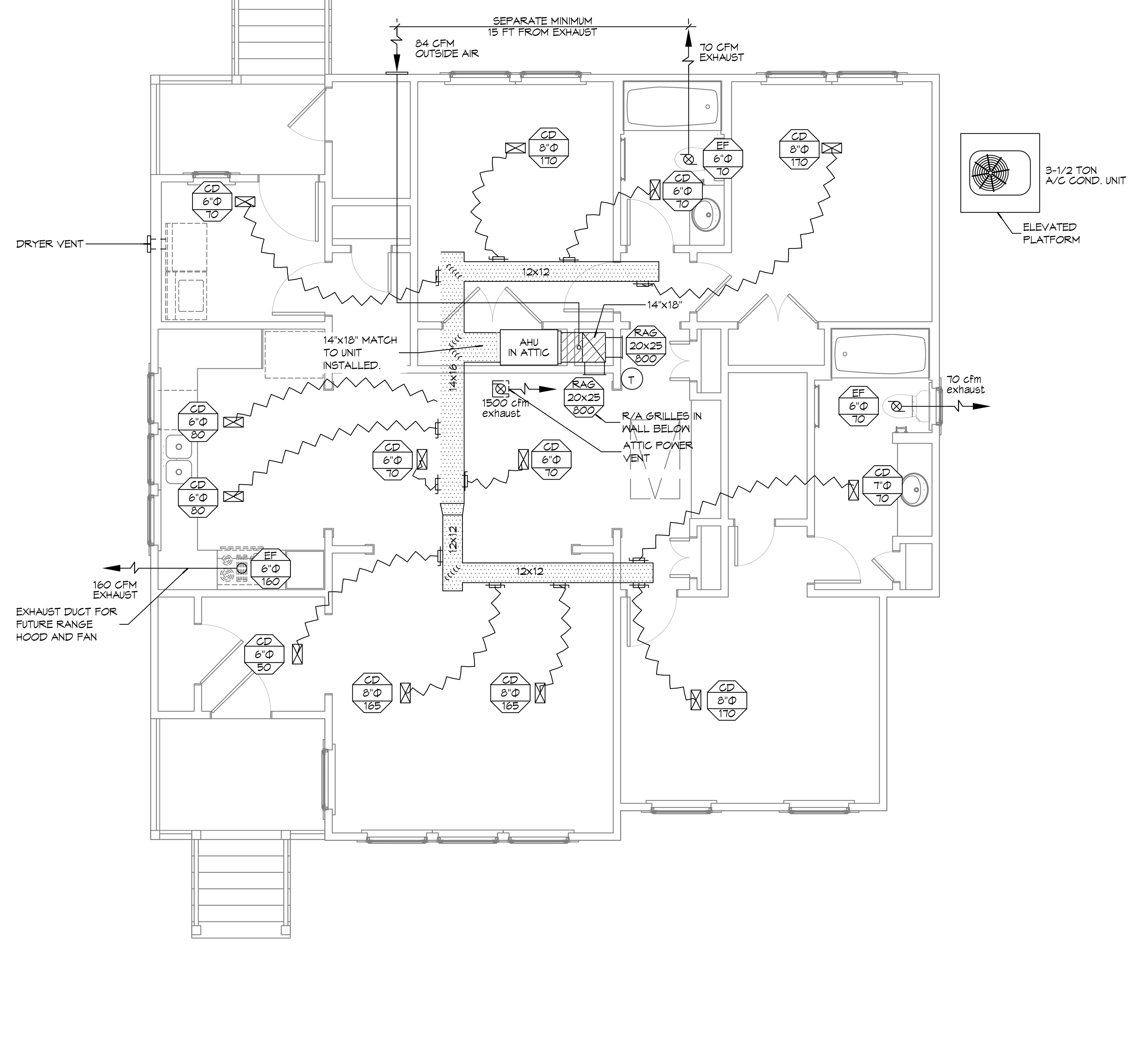
REFERENCE TO AIR DEVICE — CD / 10"Φ / 300 — AIR QUANTITY BY DEVICE IN CFM
NECK SIZE IN INCHES

AIR DEVICE LEGEND

AIR DEVICE SCHEDULE

MARK	DESCRIPTION	BASIS OF DESIGN	REMARKS
CD	CEILING DIFFUSER	TRUAIRE H103M	SURFACE MOUNT, OFF WHITE FINISH, ALL ALUMINUM CONST. ROUND NECK & RECTANGULAR FACE, PROVIDE WITH OPPOSED BLADE DAMPER. NECK SIZE, AND CFM AS INDICATED
EF	EXHAUST FAN	BROAN 684	SURFACE MOUNT, OFF WHITE FINISH, ALL ALUMINUM CONST. SIZE AND CFM AS INDICATED, LESS THAN 4.0 SONES.
RAG	RETURN AIR GRILLE	TRUAIRE H190	SIDE WALL MOUNT, OFF WHITE FINISH, ALL ALUMINUM CONST. SIZE AND CFM AS INDICATED.

(1) THROW PATTERNS FOR CEILING DIFFUSERS ARE 3-WAY UNLESS OTHERWISE INDICATED
(2) PROVIDE PLASTER FRAMES FOR LAY-IN DEVICES IN GYP. BOARD CEILINGS
(3) PROVIDE FILTER FOR ALL EXHAUST REGISTERS AND RETURN AIR GRILLES.



1 MECHANICAL PLAN - HVAC
SCALE: 1/4" = 1'-0"

GENERAL MECHANICAL NOTES

1. CONCEALED DUCTWORK SHALL BE FACED DUCTBOARD MIN R-6. INSTALLED PER SMACNA STANDARDS. DUCTBOARD SHALL BE EQUIVALENT TO JOHNS MANVILLE 800 SERIES SPIN-GLASS.
2. EXPOSED DUCTWORK SHALL BE GALVANIZED SHEET METAL LINED WITH FIBROUS GLASS DUCT LINER, 1" THICK, MIN R-6. INSTALLED PER SMACNA STANDARDS.
3. ROUND FLEXIBLE DUCT SHALL BE UL-181, CLASS 1, AIR DUCT MATERIALS. MAXIMUM EXTENDED LENGTH OF FLEXIBLE DUCT IS 14'-0".
4. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS.
5. IN ALL SYSTEMS OVER 2000 CFM AND LESS THAN 15,000 CFM, SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72E IN THE RETURN DUCT DOWNSTREAM OF THE AIR HANDLING UNIT AND ALL FILTERS TO AUTOMATICALLY STOP THE FAN.
6. PROVIDE U.L. LISTED 125 'F' FIRESTAT IN RETURN AIR OF EACH SYSTEM UNDER 2000 CFM TO SHUT DOWN THE FAN IN THE EVENT OF FIRE.
7. PROVIDE U.L. RATED FIRE DAMPERS WHERE REQUIRED AT ALL DUCT PENETRATIONS OF FIRE-RATED ASSEMBLIES AND WHERE REQUIRED BY CODE, INCLUDING OUTSIDE AIR INTAKES.
8. CONDENSATE DRAINS TO BE PVC PIPE RUN TO PLUMBERS P-TRAP WITHIN FIVE FEET OF AIR HANDLING UNITS.
9. ALL AIR HANDLING SYSTEMS TO BE BALANCED TO ASSURE PROPER AIR FLOWS PER PLANS.
10. ALL THERMOSTATS TO BE NON-PROGRAMABLE.
11. EXHAUST FAN EQUAL TO BROAN. FAN SHALL BE CONTROLLED BY A SWITCH ON THE WALL IN THE SAME LOCATION AS LIGHT SWITCH(S). PROVIDE BACK DRAFT DAMPER.
12. PROVIDE AND INSTALL WATER PROOF GRILLE VENT IN PROPER ROOF LOCATION FOR PLUMBING FIXTURE EXHAUST.
13. ALL SUPPLY AIR VENTS SHALL BE EQUIPPED WITH AIR CONTROL DAMPERS.
14. LOCATE OUTDOOR UNITS AS SHOWN ON ARCH. DWGS.
15. REFRIGERANT LINES SHALL BE SIZED BY UNIT MANUFACTURER AND INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
16. FRESH AIR SHALL BE SUPPLIED TO EACH AIR HANDLER THROUGH EXTERIOR WALL DUCT SUPPLIED WITH A CONTROL DAMPER.
17. ALL MECHANICAL SYMBOLS ARE DRAWN DIAGRAMATICALLY, CONTRACTOR TO VERIFY WITH ARCHITECT LOCATIONS OF VENTS, DAMPERS, REGISTERS, ETC.
18. FLEXIBLE DUCTWORK LENGTH NOT TO EXCEED 12'-0".
19. REFER TO REFLECTED CEILING PLAN FOR FINAL GRILLE AND DIFFUSER LOCATIONS AND COORDINATE AS REQUIRED.
20. PROVIDE AND INSTALL SMOKE DETECTORS AS APPROVED BY LOCAL AHJ'S. PLACE NEAR R/A AND S/A OPENINGS OF AHU AND PROVIDE, WITH ACCESS PANEL, WIRING BY ELECTRICAL CONTRACTOR.
21. FRESH AIR INTAKES ARE REQUIRED TO HAVE MOTORIZED OR GRAVITY DAMPERS TO SHUT OFF WHEN SYSTEM IS NOT RUNNING.

HVAC LEGEND

-SUPPLY AIR DIFFUSER
-EXHAUST FAN
-OUTSIDE AIR INTAKE DUCT
-THERMOSTAT
-LINE VOLTAGE THERMOSTAT, PROVIDED BY MECHANICAL CONTRACTOR
-DAMPER
-SUPPLY AIR DUCT; DIMENSIONS ARE SHOWN AS CLEAR INSIDE DEMINSIONS.
-RETURN AIR DUCT
-A/C CONDENSING UNIT
-AIR HANDLING UNIT
- ROUND FLEX DUCT, MAX. ENTENDED LENGTH 14'-0", MIN. R-6 INSULATION. PROVIDE MAN. DAMPER AT DIFFUSER CONNECTIONS, SIZE AS INDICATED OR:

20 CFM, USE 4"Φ
80 CFM, USE 6"Φ
120 CFM, USE 7"Φ
170 CFM, USE 8"Φ
230 CFM, USE 9"Φ
300 CFM, USE 10"Φ
500 CFM, USE 12" Φ

NOTE-1: MECHANICAL PLAN IS DRAWN DIAGRAMATIC. DUCT LOCATIONSARE FOR REFERENCE PURPOSES ONLY. FIELD LOCATE AS NEEDED BETWEENJOISTS OR TRUSSES. DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.

NOTE-2: COORDINATE LOCATION OF ALL SUPPLY AIR DIFFUSERS, RETURN AIR GRILLES, EXHAUST FANS, ETC... WITH LIGHTING PLAN. WHERE A CONFLICT SHOULD OCCUR CONTACT ARCHITECT FOR ADDITIONAL INSTRUCTIONS.

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BRIAN A. MISTICH
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10/4/2016
PROFESSIONAL ENGINEER

LOUISIANA ARMY NATIONAL GUARD
CAMP VILLERE
NEW HOME CONSTRUCTION
CAMP VILLERE, LOUISIANA
LA 14-A-037

JOB No: 2210 DATE: OCTOBER 8, 2014
DRAWN BY: KJK CHECKED BY: CKD

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SHEET TITLE:
MECHANICAL PLAN - HVAC, DETAILS AND NOTES

DRAWING NUMBER:
M1

SHEET No: 9 of 12