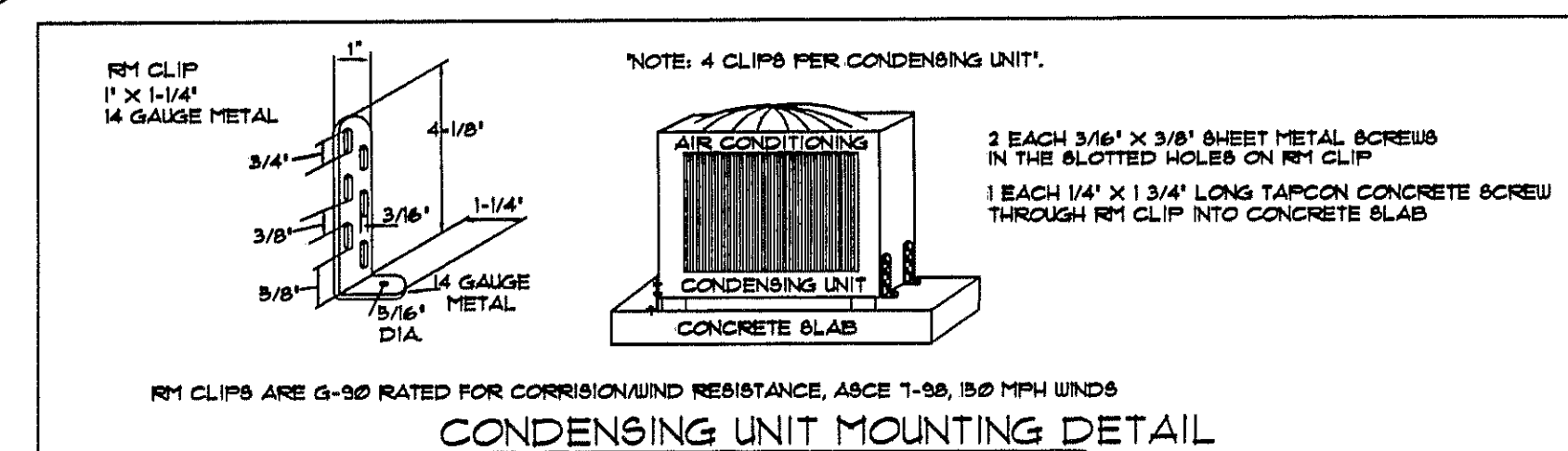
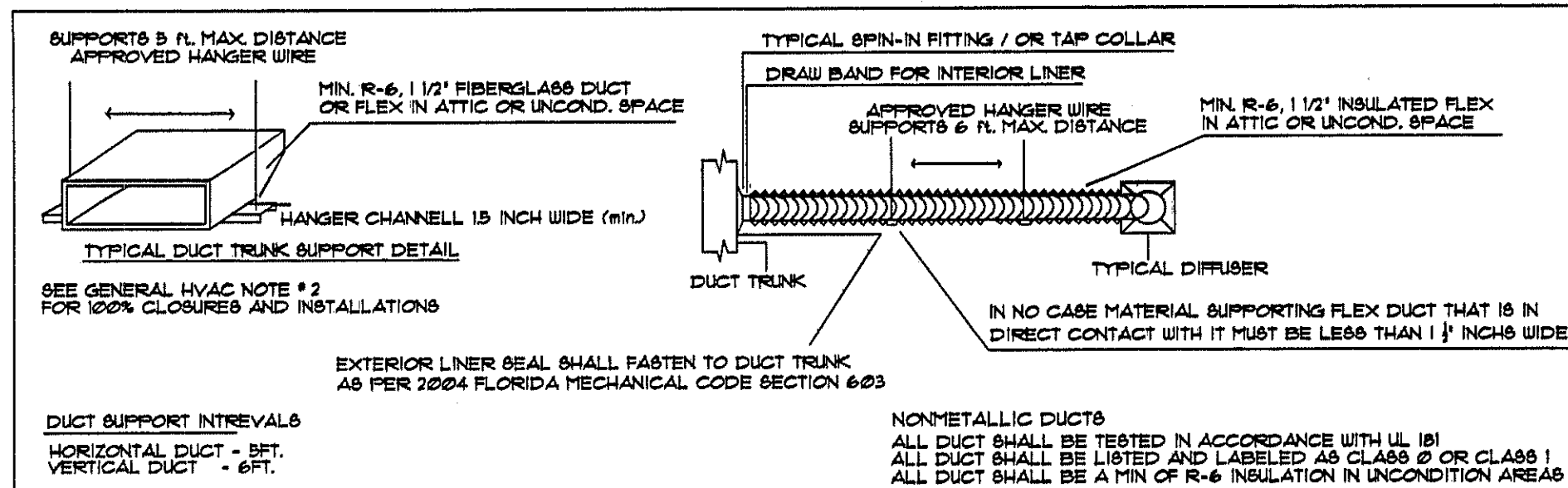


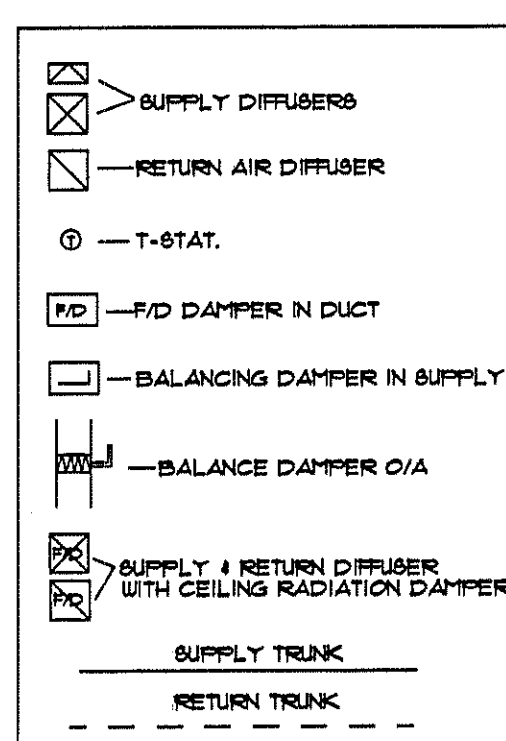
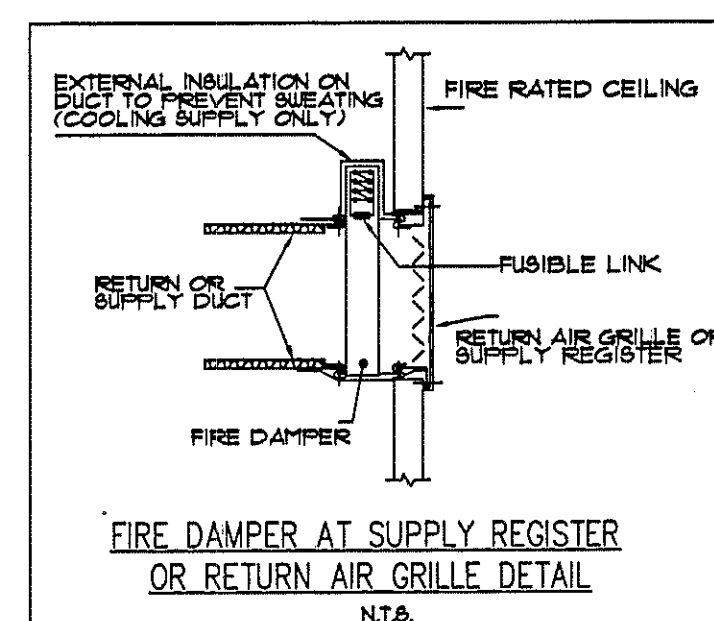
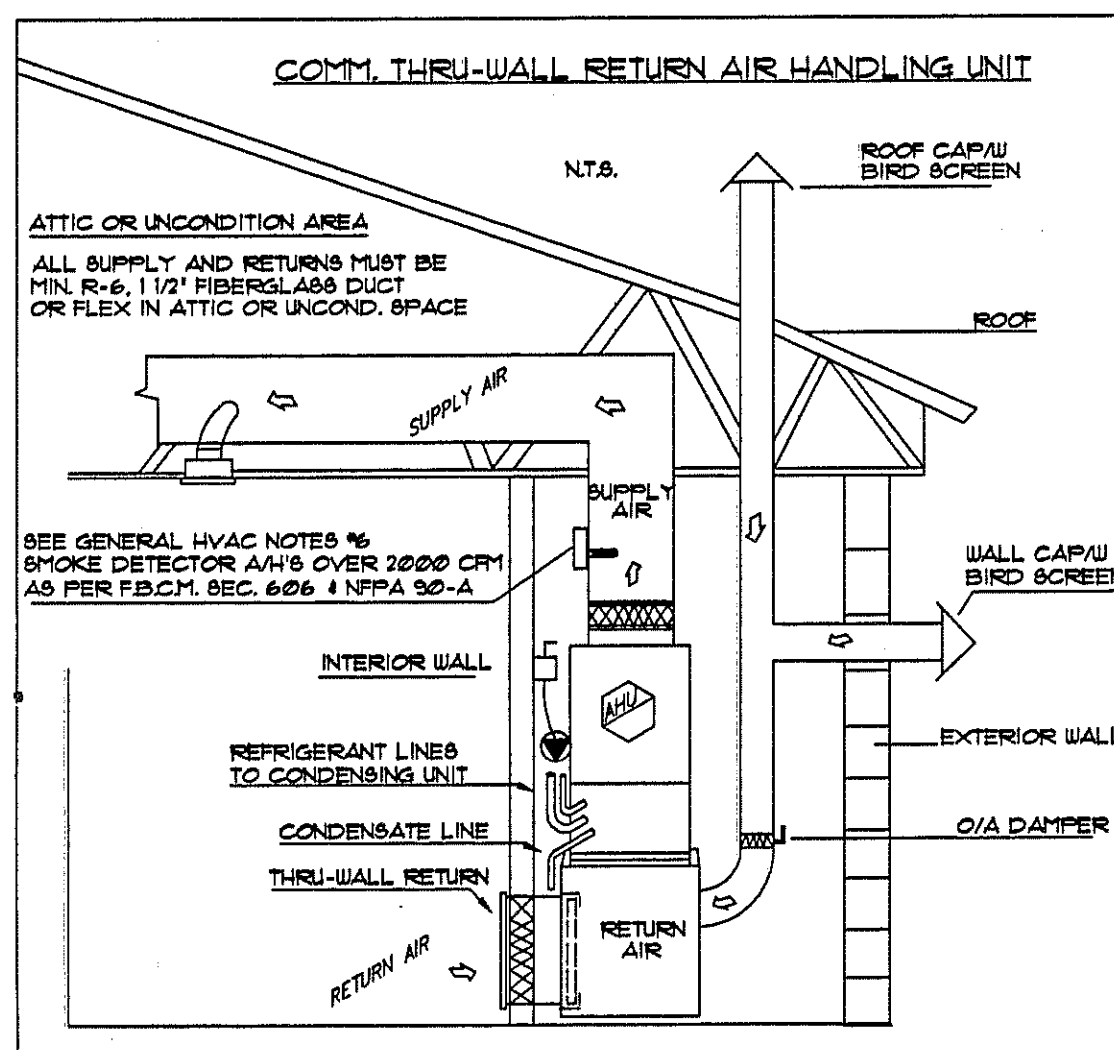
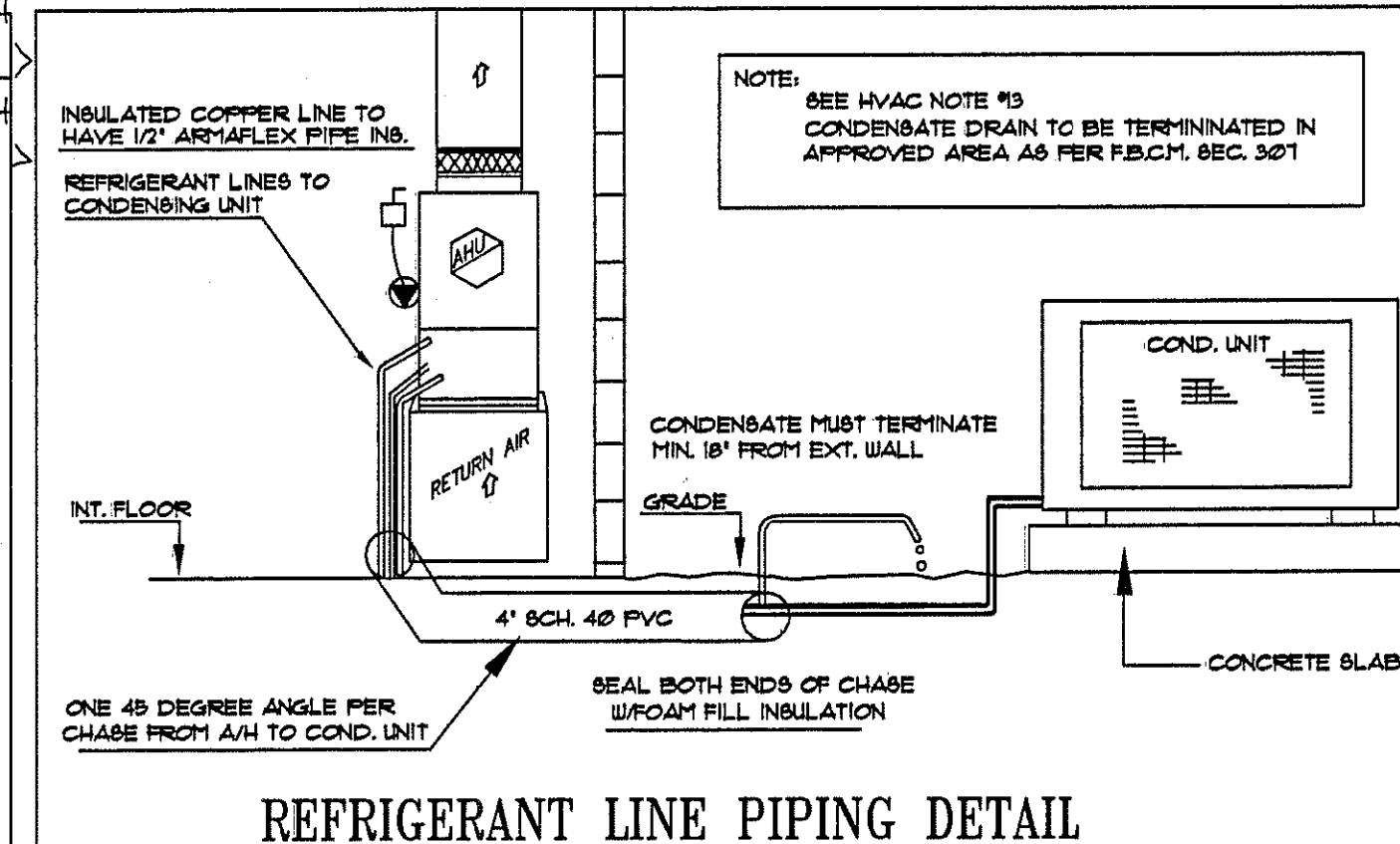
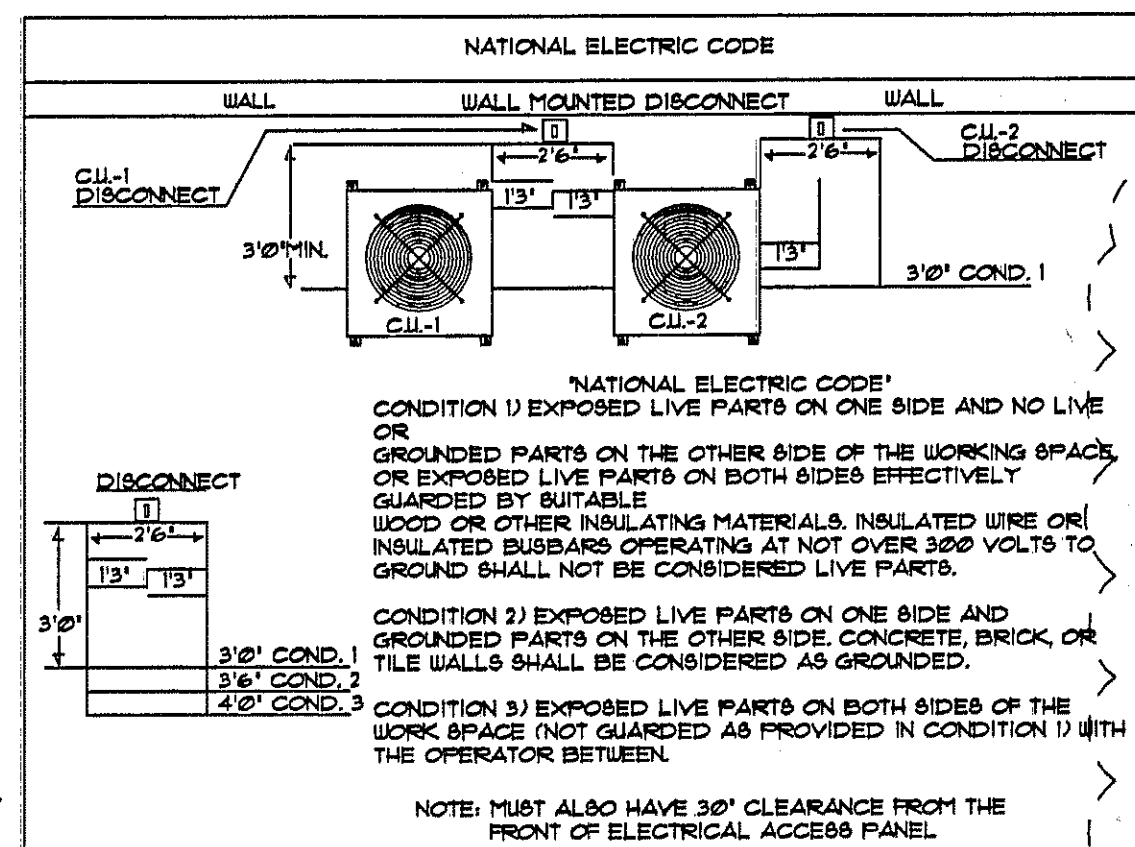
GENERAL HVAC NOTES ARE IN COMPLIANCE WITH 2004 F.B.C./2006 F.B.C. SUPPLEMENT

- ALL MECHANICAL EQUIPMENT SHALL BE PROVIDED WITH PROPER CLEARANCE. A MIN. OF 4 INCHES ON EACH SIDE IS SUFFICIENT. F.B.C. CHAPTER 13 SEC. 4101ABC3.03 4 F.B.C.M. SEC. 6.0313
- ALL DUCT SYSTEMS INSTALLED IN 'NON-CONDITIONED' AREAS SHALL BE CONSTRUCTED WITH APPROVED MATERIAL AND OF A VALUE OF NO LESS THAN R-6 RATINGS. ALL BRANCHES SHALL BE SEALED WITH GLASS FAB 'MASTIC' OR 'OR' OR UL 181A PART 1 FOR FLEX. ALL CLOSURES 100% AND INSTALLATIONS SHALL BE INSTALLED AS PER 2004 F.B.C. CHAPTER 6, SEC. 6.03 ALL THROUGH-FLOOR, FLOOR, & CEILING PENETRATIONS INTO THE DUCT SECTION SHALL CONTAIN A BRANCH DUCT FABRICATED OF RIGID FIBROUS GLASS DUCT BOARD OR RIGID METAL AND BE SEALED TO BOTH DUCT SECTION AND GRILLE SIDE WALL SURFACE. THE BRANCH DUCT SHALL BE SEALED, AND ATTACHED IN ACCORDANCE WITH M6033 OR M60342 RESPECTIVE TO THE DUCT TAPE USED. * DRAFT 2007 F.B.C. MECHANICAL VOLUME*
- ALL DUCT TRUNK 90 DEGREE TURNS OR TEE'S, SHALL HAVE TURNING VANES. 3 PIECE OR 45 DEGREE TURNS CAN BE USED IN PLACE OF 90 DEGREE TURNS AND DO NOT NEED TURNING VANES.
- ALL REGISTER, GRILLE & DIFFUSERS MUST BE TESTED IN ACCORDANCE WITH ASTM E 84, AND VOLUME DAMPERS OR OTHER MEANS OF SUPPLY AIR ADJUSTMENT SHALL BE PROVIDED IN DUCTS OR AT EACH INDIVIDUAL REGISTER, GRILLE OR DIFFUSER.
- AIR DISTRIBUTION SYSTEMS SHALL BE TESTED, ADJUSTED, AND BALANCED BY A LICENSED ENGINEER OF THIS STATE OR A CURRENT CERTIFIED ORGANIZATION. EXCEPTION: 1) BUILDINGS WITH CAPACITIES OF 15 TONS OR LESS 'PER SYSTEM' MAY BE TESTED AND BALANCED BY THE LICENSED MECH. CONTRACTOR. EXCEPTION: 2) BUILDINGS WITH CAPACITIES OF 65,000 BTU/H OR LESS 'PER SYSTEM' MAY BE TESTED AND BALANCED BY THE LICENSED MECH. CONTRACTOR. DOCUMENTS SHALL REQUIRE THAT ALL HVAC SYSTEMS BE BALANCED SERVING ZONES EXCEEDING 5000 SQFT. F.B.C. 2004 CHAP. 13, SEC. 4101ABC.01
- AIR HANDLERS COVER 2000 CFM SHALL HAVE A SMOKE DETECTOR INSTALLED IN THE SUPPLY. F.B.C.M. 2004 CHAPTER 6, SEC. 6.0621. WHEN TWO AIR HANDLERS SHARE A COMMON SUPPLY OR RETURN 'AIR DUCT' OR 'FLEEM' AND THE TOTAL CFM'S ARE GREATER THAN 2000, A SMOKE DETECTOR SHALL BE INSTALLED IN THE SUPPLY AND RETURN AS PER F.B.C.M. 2004 SEC. 6.0623 AND BE IN ACCORDANCE WITH NFPA 72 SMOKE DETECTOR TEST STATIONS SHALL HAVE A TROUBLE INDICATOR LIGHT, INDICATING ANY AIR DUCT TROUBLE. NFPA 92A 2002, CHAPTER 6 NOTE: A 'FLEEM' CAN NOT BE USED AS AN OCCUPANCY SPACE OR STORAGE AREA. AS PER NFPA-92A, SEC. 4.3.10.11
- FIRE DAMPERS, SMOKE DAMPERS, COMBINATION FIRE/SMOKE DAMPERS AND CEILING DAMPERS LOCATED WITHIN AIR DUCTS MUST BE INSTALLED BY MANUFACTURER'S SPECS. AND BE TESTED IN ACCORDANCE WITH UL 985, AND THE F.B.C.M. 2004 CHAPTER 6, SEC. 6.071 ALL DAMPERS LOCATED AT CEILING OR WALL PENETRATIONS MUST HAVE ACCESS DOORS TO RESET DAMPER. UNLESS THE DAMPER IS IN THE DIFFUSER THAN IT CAN BE RESET THRU THE DIFFUSER. SMOKE DAMPERS IN A DUCT MUST HAVE A DETECTOR WITHIN 5 FT. OF THE DAMPER WITH NO AIR INLETS OR OUTLETS BETWEEN THEM. FOR FIRE AND SMOKE DAMPER ACTUATION METHODS REFER TO F.B.C.M. 2004 CHAPTER 6, SEC. 6.0713.11 AND 6.0713.12
- ENCLOSED SUPPORT PLATFORMS SHALL BE CONSTRUCTED IN ACCORDANCE TO F.B.C.M. 2004 CHAPTER 6, SEC. 6.0310
- FRESH AIR INTAKES SHALL NOT BE LOCATED CLOSER THAN 10 FT. FROM ANY CHIMNEY OR VENT OUTLET, OR SANITARY SEWER VENT OUTLET.
- ALL EXHAUST DUCTS, SHALL BE CONSTRUCTED OF GALV. METAL. F.B.C.M. 2004 CHAPTER 5, SEC. 5.014
- BATHROOMS CONTAINING BATHTUBS, SHOWERS, SPAS AND SIMILAR BATHING FIXTURES SHALL BE MECHANICALLY VENTILATED. *EXCEPTION: RESIDENTIAL BATHROOMS HAVING NO LESS THAN 3 SQFT. OF OPEN SPACE. F.B.C.M. 2004 CHAPTER 4, SEC. 4.023.1
- ALL EXHAUSTED BATHROOMS, CLOSETS & STORAGE ROOMS SHALL HAVE UNDER CUT DOORS OR A METHOD FOR MAKE UP AIR TO BE RETURNED EQUAL TO THE AMOUNT OF CFM'S EXHAUSTED. F.B.C.M. 2004 CHAPTER 6, SEC. 6.014
- CONDENSATE FROM ALL COOLING COILS AND EVAPORATORS SHALL BE CONVEYED FROM THE DRAIN PAN OUTLET TO AN APPROVED PLACE OF DISPOSAL. CONDENSATE SHALL NOT DISCHARGE INTO A STREET, ALLEY OR OTHER AREA AS TO CAUSE A NUISANCE. MUST TERMINATE A MIN. OF 18" FROM EXT. WALL. PER AUTHORITY OVER JURISDICTION CONDENSATE DRAIN MAY DRAIN TO A STORM SYSTEM, UTILITY SINK, OR SEWER BY APPROVED MEANS. CONDENSATE DRAIN LINE SHALL NOT BE LESS THAN 3/4" INCH DIAMETER AND SHALL NOT DECREASE IN SIZE. F.B.C.M. CHAPTER 3, SEC. 3.0722
- ALL HORIZONTAL PRIMARY DRAIN LINE WITHIN UNCONDITIONED AREA SHALL BE INSULATED. AS PER F.B.C.M. 2004 CHAPTER 3, SEC. 3.0723
- AUXILIARY DRAIN PAN OR SECONDARY DRAIN LINE MAY BE REQUIRED WHERE DAMAGE TO ANY BUILDING MAY RESULT FROM OVERFLOW OR ANY STOPPAGE. AUXILIARY DRAIN PAN MUST HAVE A MIN. DEPTH OF 1/2 INCHES AND BE A MIN. 3 INCHES LARGER THAN UNIT OR COIL, AND HAVE SEPARATE DRAIN LINE AN AUXILIARY PAN WITHOUT SEPARATE DRAIN LINE SHALL BE EQUIPPED WITH WATER LEVEL DETECTION DEVICE FOR SHUT OFF PIPING TO OVERFLOW. METALLIC PAN MUST HAVE A MIN. THICKNESS 0.0216-INCH, NONMETALLIC 0.0275-INCHES. AS PER F.B.C.M. 2004 CHAPTER 3, SEC. 3.0723
- ALTERNATIVE TO SEPARATE DRAIN LINE: A WATER LEVEL DETECTION DEVICE THAT WILL SHUT EQUIPMENT PRIOR TO OVERFLOW OF PAN. WATER LEVEL DETECTION DEVICE SHALL CONNECT TO DRAIN PAN AT A HIGHER LEVEL THAN THE PRIMARY DRAIN CONNECTION.
- REFRIGERANT PIPING FOR REFRIGERANT LINES SHALL BE INSULATED TO A THERMAL RESISTIVITY OF AT LEAST R-4/HR. SUCTION LINE MUST BE INSULATED IN ACCORDANCE WITH ASTM E96. AS PER THE F.B.C.M. 2004 CHAPTER 14, SEC. M1414
- IF HVAC EQUIPMENT OTHER THAN SPECIFIED BY DESIGNER IS SUBSTITUTED, IT'S CAPABILITIES OF SENSIBLE AND LATENT HEAT REMOVAL MUST BE EQUAL TO OR GREATER THAN THE EQUIPMENT SPECIFIED BY THE HVAC DESIGNER UNLESS THE HVAC DESIGNER WILL NOT BE RESPONSIBLE FOR ANY SYSTEM NOT INSTALLED ACCORDING TO PLANS.



GRILLE - REGISTER - DIFFUSER/DAMPER SCHEDULE

MARK	FACE SIZE	NECK SIZE	DESCRIPTION/MATERIAL	MANUFACTURER	FINISH	OPTIONS
A	8 X 4	SEE MECH DRAWINGS	SUPPLY-CD/ALUMINUM	AIR GUIDE	WHITE	OR EQUIVALENT APPROVED DIFFUSER
B	10 X 6	SEE MECH DRAWINGS	SUPPLY-CD/STEEL	AIR GUIDE	WHITE	OR EQUIVALENT APPROVED DIFFUSER
C	8 X 8	SEE MECH DRAWINGS	SUPPLY-CD/STEEL	AIR GUIDE	WHITE	OR EQUIVALENT APPROVED DIFFUSER
D	8 X 12	SEE MECH DRAWINGS	SUPPLY-CD/STEEL	AIR GUIDE	WHITE	OR EQUIVALENT APPROVED DIFFUSER
E	14 X 14	SEE MECH DRAWINGS	SUPPLY-CD/STEEL	AIR VECTOR	WHITE	OR EQUIVALENT APPROVED DIFFUSER
F	14 X 14	R/D	SUPPLY-CD/STEEL	LOVERED DIFFUSER	WHITE	OR EQUIVALENT APPROVED DIFFUSER
G	24 X 24	SEE MECH DRAWINGS	SUPPLY-CD/STEEL	LOVERED DIFFUSER	WHITE	OR EQUIVALENT APPROVED DIFFUSER
H	24 X 24	SEE MECH DRAWINGS	RETURN-GRILLE/ALUMINUM	CEILING RADIATION DAMPER	WHITE	OR EQUIVALENT APPROVED DIFFUSER
I	24 X 24	SEE MECH DRAWINGS	RETURN-GRILLE/ALUMINUM	LOVERED GRILLE	WHITE	OR EQUIVALENT APPROVED DIFFUSER
J	18 X 18	R/D	RETURN-GRILLE/ALUMINUM	LOVERED GRILLE	WHITE	OR EQUIVALENT APPROVED DIFFUSER
K	18 X 18	SEE MECH DRAWINGS	RETURN-GRILLE/ALUMINUM	LOVERED GRILLE	WHITE	OR EQUIVALENT APPROVED DIFFUSER
L	18 X 18	SEE MECH DRAWINGS	RETURN-GRILLE/ALUMINUM	LOVERED GRILLE	WHITE	OR EQUIVALENT APPROVED DIFFUSER
M	24 X 24	SEE MECH DRAWINGS	RETURN-GRILLE/ALUMINUM	LOVERED GRILLE	WHITE	OR EQUIVALENT APPROVED DIFFUSER
N	24 X 24	SEE MECH DRAWINGS	RETURN-GRILLE/ALUMINUM	LOVERED GRILLE	WHITE	OR EQUIVALENT APPROVED DIFFUSER



A/C 1 FRESH AIR AS PER ASHRAE 62.1

SPACE	OCCUPANTS	CFM'S
BATHROOMS	50 CFM PER WATER CLOSET	300
OFFICES	26 CFM X 181 SQFT. = 45 15 CFM X 3 OCC. = 45	61
LOBBY	26 CFM X 844 SQFT. = 50 15 CFM X 25 OCC. = 188	238
TOTAL		606

A/C 2 FRESH AIR AS PER ASHRAE 62.1

SPACE	OCCUPANTS	CFM'S
FORMAL DINING	26 CFM X 1068 SQFT. = 64 15 CFM X 42 OCC. = 315	379
TOTAL		379

A/C 3 FRESH AIR AS PER ASHRAE 62.1

SPACE	OCCUPANTS	CFM'S
BATHROOMS	50 CFM PER WATER CLOSET	50
STUDIO-B	26 CFM X 924 SQFT. = 55 15 CFM X 31 OCC. = 218	333
STORAGE	12 CFM X 865 SQFT. = 104	104
SOUND ROOM	26 CFM X 96 SQFT. = 9 15 CFM X 2 OCC. = 15	24
MECH. RM.	26 CFM X 110 SQFT. = 9	9
TOTAL		520

A/C 4 FRESH AIR AS PER ASHRAE 62.1

SPACE	OCCUPANTS	CFM'S
STUDIO - C & D	26 CFM X 1426 SQFT. = 86 15 CFM X 28 OCC. = 420	506
CORR.	26 CFM X 164 SQFT. = 10	10
TOTAL		516

A/C 5 FRESH AIR AS PER ASHRAE 62.1

SPACE	OCCUPANTS	CFM'S
BATHROOMS	50 CFM PER WATER CLOSET	50
STUDIO - A	26 CFM X 578 SQFT. = 56 15 CFM X 31 OCC. = 218	334
TOTAL		384

A/C 6 FRESH AIR AS PER ASHRAE 62.1

SPACE	OCCUPANTS	CFM'S
GALLERY A/B	26 CFM X 938 SQFT. = 56 15 CFM X 16 OCC. = 120	176
ASSEMBLY AREA	26 CFM X 550 SQFT. = 33 15 CFM X 50 OCC. = 315	408
TOTAL		584

A/C 7 FRESH AIR AS PER ASHRAE 62.1

SPACE	OCCUPANTS	CFM'S
GALLERY C & D	26 CFM X 938 SQFT. = 56 15 CFM X 16 OCC. = 120	176
ASSEMBLY AREA	26 CFM X 550 SQFT. = 33 15 CFM X 50 OCC. = 315	408
TOTAL		584

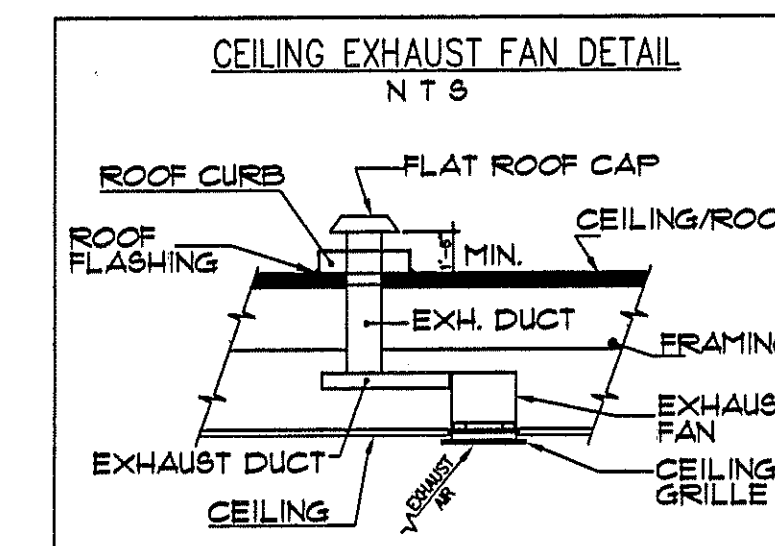
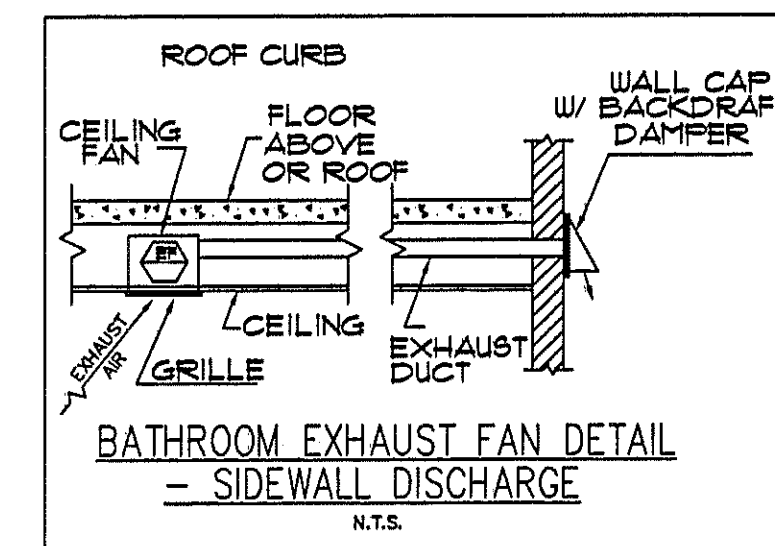
A/C 8 FRESH AIR AS PER ASHRAE 62.1

SPACE	OCCUPANTS	CFM'S
BATHROOMS	50 CFM PER WATER CLOSET	400
TOTAL		400

NOTE: ALL ROOF PENETRATIONS MUST BE DONE BY A LICENSE ROOFER AS PER F.B.C. 2004

FAN SCHEDULE

FAN#	MFG.	TYPE	CFM	VOLTS	PART#	DUCT DIA.
1-4	BROAN	CEILING EXH. FAN	50	120	688	4 INCHES
5 & 6	BROAN	CEILING EXH. FAN	100	120	L-100	6 INCHES
7 & 8	BROAN	CEILING EXH. FAN	200	120	L-200	8 INCHES



H.V.A.C. EQUIPMENT SCHEDULE

A/C	MFG.	MODEL NO.	SENSIBLE	LATENT	TOTAL BTU/H COOLING/HEATING	EER/SEER	VOLTAGE	R.L.A.	M.C.A.	MAX. BREAKER	CFM	O/A CFM'S	DIA. O/A DUCT	
1	CARRIER	FV4ENF006 25HCAS360A003	44800	14610	5 TONS 59500	6.0880	14	230/1160	46.8 28.1	65.3 35.4	60 50	1750	606	10"
2	CARRIER	FV4ENF006 25HCAS360A003	44800	14610	5 TONS 59500	6.0880	14	230/1160	46.8 28.1	65.3 35.4	60 50	1750	379	9"
3	CARRIER	FV4ENF006 25HCAS360A003	44800	14610	5 TONS 59500	6.0880	14	230/1160	46.8 28.1	65.3 35.4	60 50	1750	520	10"
4	CARRIER	FV4ENF006 25HCAS360A003	44800	14610	5 TONS 59500	6.0880	14	230/1160	46.8 28.1	65.3 35.4	60 50	1750	516	10"
5	CARRIER	FV4ENF006 25HCAS360A003	30640	9860	3.5 TONS 40500	6.0880	14	230/1160	44.3 21.1	62.9 26	60 40	1225	384	9"
6	CARRIER	FV4ENF006 25HCAS360A003	35350	1150	4 TONS 46500	6.0880	15	230/1160	46.8 23	65.3 34.1	60 50	1400	584	10"
7	CARRIER	FV4ENF006 25HCAS360A003	35350	1150	4 TONS 46500	6.0880	15	230/1160	46.8 23	65.3 34.1	60 50	1400	584	10"
8	DAIKIN	(2) FXPQ21MVJ1 18MVJ1 RXTM26MVJ1	TOTAL COOLING - 1212000	TOTAL COOLING MAX = 36000	HEAT 40000		13	230/1160	25/126	26/127	15	460/570	200/1200	8' 1"

THIS HVAC SYSTEM AS DESIGNED IS IN COMPLIANCE WITH 2004 F.B.C.M. AND 2006 SUPPLEMENT

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REVISIONS
04/09/2008

PROJECT NO.: 08CA104M2
DATE: 26 MAR 2008
DRAWN BY: JTR

SHEET NO.: M-2

Ver. 10

Arts

Gateway Center for the Arts
DEBARY, FLORIDA

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