

DAMMON ENGINEERING, INC.

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ARCHITECTURE
ENGINEERING
STUDIES
PLANNING
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EXPERT WITNESS

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SLIDELL, LA

MECHANICAL PLAN

REV:

SCALE: AS NOTED

JOB#: 2132

DATE: 04-17-12

SHEET 6

OF 12

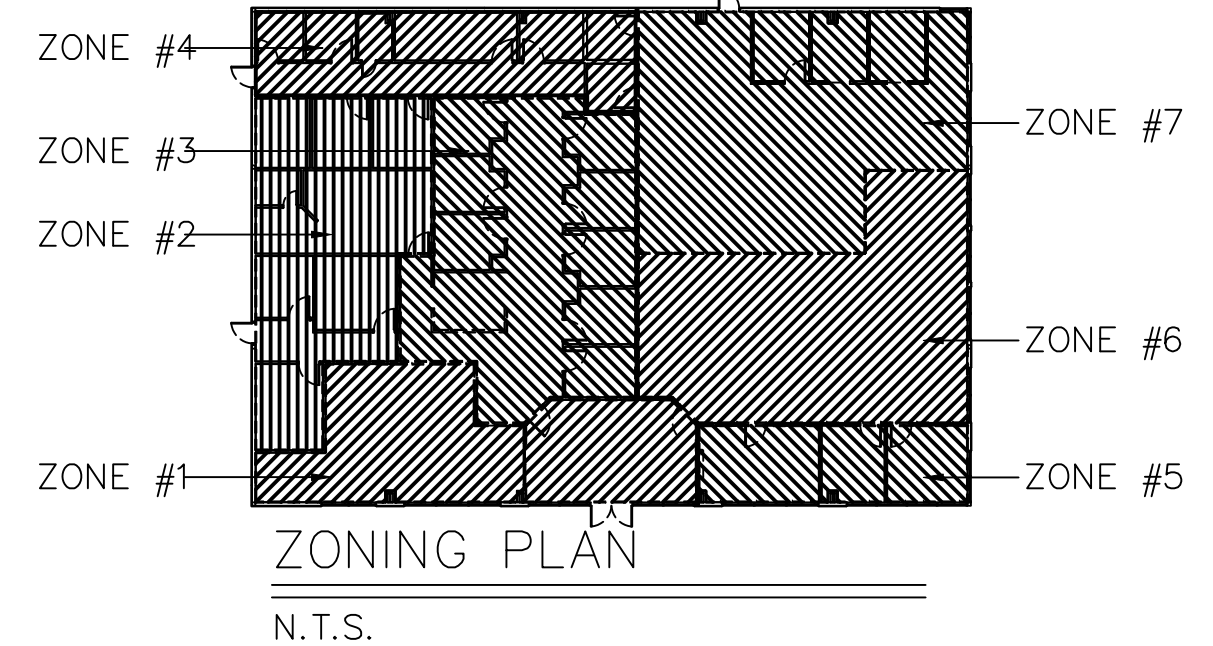
LEGEND

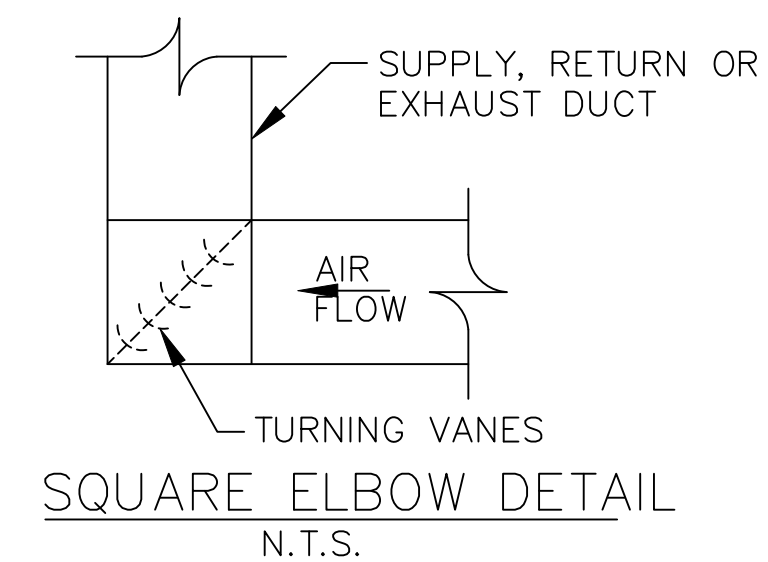
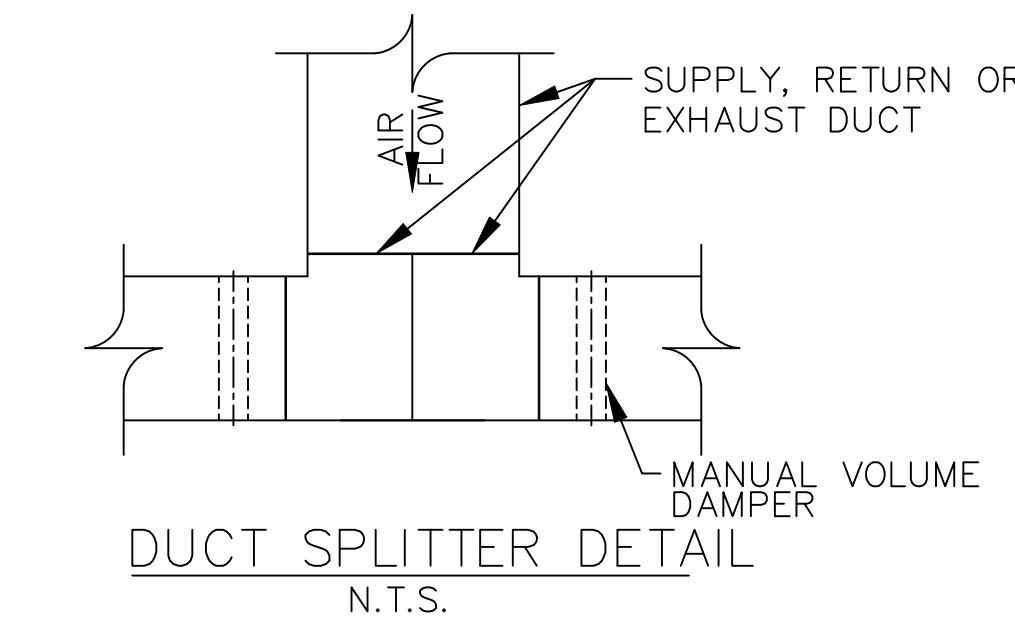
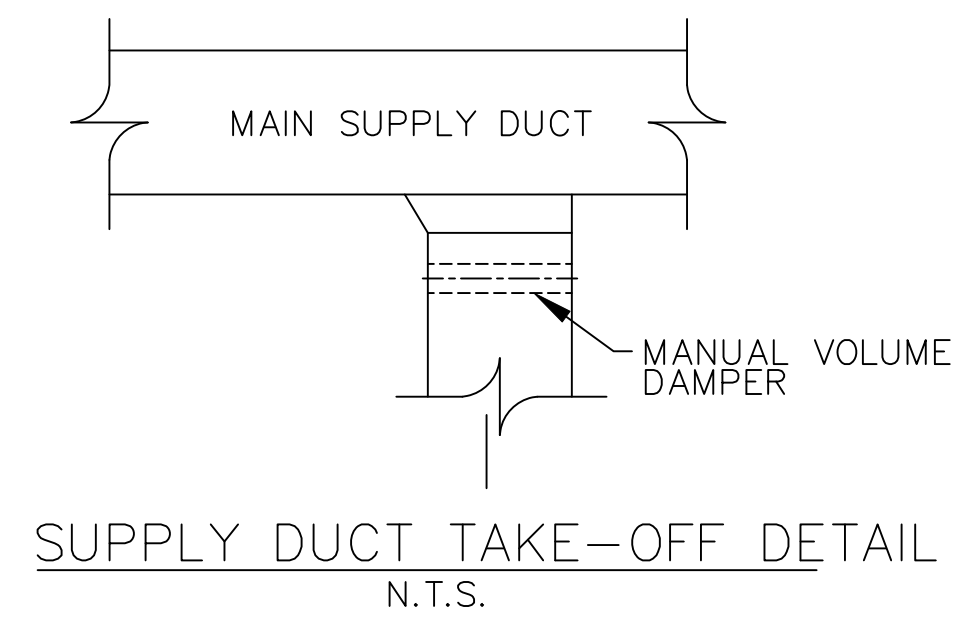
- ☒ - INDICATES NEW CEILING DIFFUSER - CFM AS NOTED - 24x24 UNLESS OTHERWISE NOTED.
- ☒ - INDICATES NEW RETURN AIR CEILING GRILLE OF SIZE INDICATED. TRANSFER DUCT TO RECTANGULAR AS INDICATED.
- ☐ - MECHANICAL VENT
- Ⓣ - ZONE SENSOR THERMOSTAT WITH OVERRIDE AND SETPOINT ADJUSTMENT EQUAL TO CARRIER T-59
- VVT# - SINGLE DUCT VVT TERMINAL
- INDICATES NEW SHEET METAL DUCTWORK FOR 3V SUPPLY AIR, SIZES INDICATED ARE SHEET METAL DIMENSIONS
- INDICATES NEW SHEET METAL DUCTWORK FOR RETURN AIR, SIZES INDICATED ARE SHEET METAL DIMENSIONS
- ROUND FLEX DUCT, MAX. LENGTH 14'-0", MIN. R-6 PROVIDE MAN. DAMPER AT DIFFUSER CONNECTIONS, SIZE AS INDICATED OR:
0-200 CFM, USE 6"φ
201-300 CFM, USE 8"φ
301-400 CFM, USE 9"φ
- VVT ZONING SYSTEM EQUAL TO CARRIER 3V CONTROL SYSTEM

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

MECHANICAL PLAN NOTES:

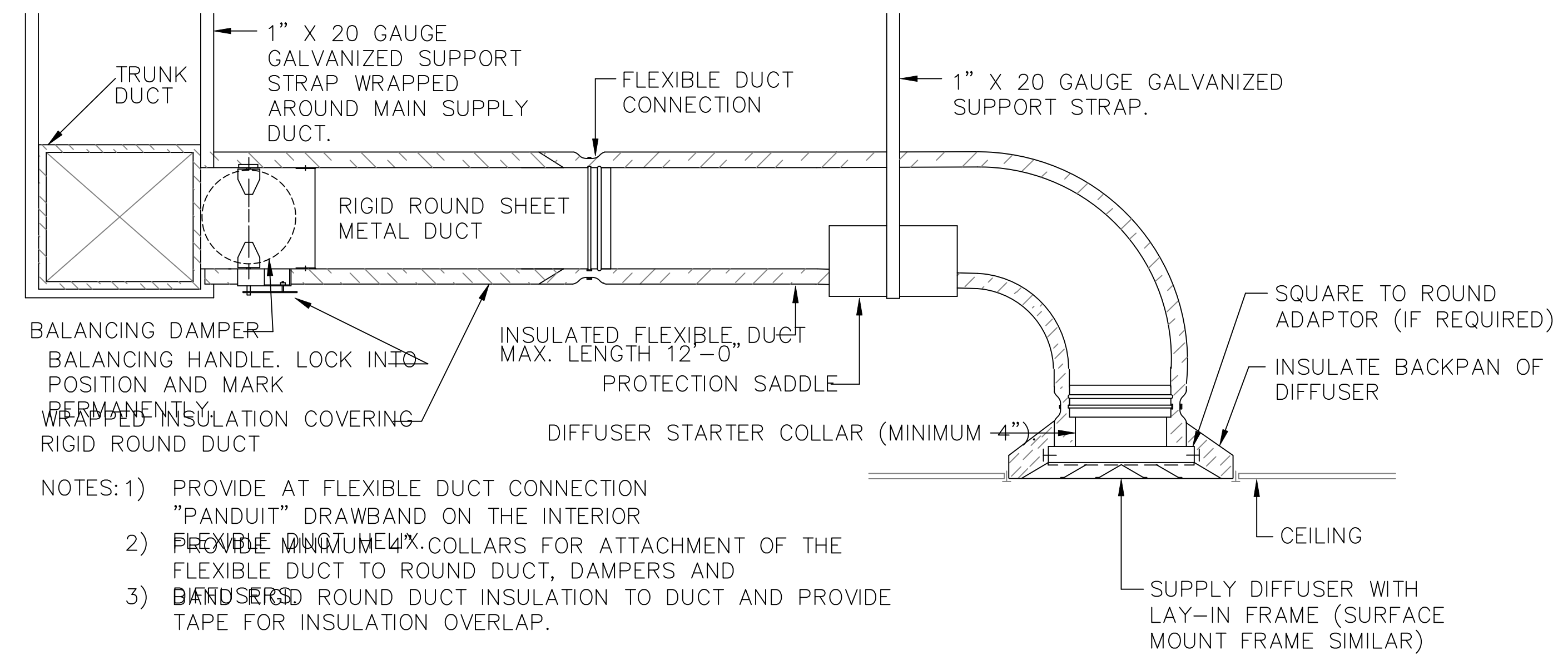
- ALL MECHANICAL EQUIPMENT IS SHOWN DIAGRAMMATICALLY AND SHALL BE FIELD VERIFIED AND ADJUSTED ACCORDINGLY. COORDINATE WITH ENGINEER.
- BYPASS DUCT AND DAMPER SHALL BE SIZED TO TRANSFER UP TO 80% OF MAXIMUM UNIT AIR VOLUME. DUCT SHALL BE NOMINAL 30x50. HOWEVER DUCT DIMENSIONS MAY BE ADJUSTED IN ORDER TO ACCOMMODATE FIELD CONDITIONS. COORDINATE WITH ENGINEER.





HVAC NOTES

1. CONCEALED DUCTWORK TO BE GALVANIZED SHEET METAL LINED WITH FIBROUS GLASS DUCT LINER, 1" THICK, MIN R-6. INSTALLED PER SMACNA STANDARDS.
2. EXPOSED DUCTWORK TO BE GALVANIZED SHEET METAL LINED WITH FIBROUS GLASS DUCT LINER, 1" THICK, MIN R-6. INSTALLED PER SMACNA STANDARDS.
3. ROUND FLEXIBLE DUCT TO BE UL-181, CLASS 1, AIR DUCT MATERIALS.
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 AUTOMATIC CHANGEOVER WITH HEAT SWITCH.
11. EXHAUST FAN EQUAL TO BROAN MODEL NO. 100 CF. OR EQUAL. 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. INSTALL FIRE DAMPER WHERE S.A. & R.A. DUCTS PENETRATE 1 HOUR RATED CEILINGS.
18. ALL ELECTRICAL, MECHANICAL, AND PLUMBING PENETRATING FIRE WALLS SHALL BE FIRE CAULKED. (PENETRATIONS THROUGH RATED CONSTRUCTION SHALL BE SEALED WITH A MATERIAL CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASES WHEN TESTED IN ACCORDANCE WITH ASTM-E8-14).
19. ALL MECHANICAL SYMBOLS ARE DRAWN DIAGRAMATICALLY, CONTRACTOR TO VERIFY WITH OWNER LOCATIONS OF VENTS, DAMPERS, REGISTERS, ETC.
20. FLEXIBLE DUCTWORK LENGTH NOT TO EXCEED 12'-0".
21. REFER TO REFLECTED CEILING PLAN FOR FINAL GRILLE AND DIFFUSER LOCATIONS AND COORDINATE AS REQUIRED.
22. FINAL LOCATION OF TEMPERATURE CONTROLS TO BE COORDINATED WITH OWNER AT JOB SITE.
23. 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.
24. FRESH AIR INTAKES ARE REQUIRED TO HAVE MOTORIZED OR GRAVITY DAMPERS TO SHUT OFF WHEN SYSTEM IS NOT RUNNING. ALL THERMOSTATS MUST BE PROGRAMABLE. SEE SECTIONS 502.4.4 OR 503.2.4.3 OF THE 2006 INTERNATIONAL ENERGY CODE.



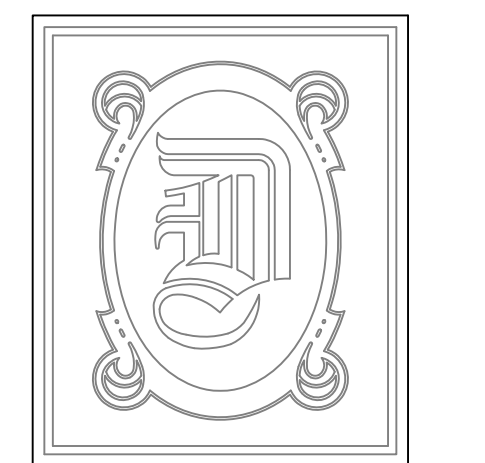
DIFFUSER CONNECTION DETAIL - FLEX DUCT
N.T.S.

EXHAUST FAN SCHEDULE				
FAN No.	CFM	VOLTAGE	TYPE	MANF.
EF-1	70	120	VENT ONLY	SELECT BY OWNER

HVAC UNIT SCHEDULE						
TOTAL HVAC TONS = 25						
NO.	TOTAL BTU	CFM	O.A.	GAS HEAT BTU	ELEC VOLTAGE	COMMENTS
1	300,000 25 TON	10,000	640	251,000	208V, 3Ø	VVT SYSTEM W/ BYPASS DAMPER

FRESH AIR REQUIREMENTS					
PER IMC 2009 TABLE 403.3					
ROOM NAME	SF	OCC/1000 SF	CFM/OCC	CFM/SF	TOTAL OA
RTU #1					640
SUITE #1	4100	5	5	0.06	350
SUITE #2	3400	5	5	0.06	290

SINGLE DUCT TERMINAL BOX SCHEDULE (WITH RE-HEAT)							
Tag	Inlet Size	Primary CFM	Inlet SP wg	kW Heat	Sq. Ft. Coverage	Min. Ventilation CFM	% Min. CFM
VVT#1	14	1800	0.5	5.0	935	80	4.5
VVT#2	14	1450	0.5	5.0	1015	86	5.9
VVT#3	14	1450	0.5	5.0	1312	112	7.7
VVT#4	14	1200	0.5	4.0	680	58	4.8
VVT#5	12	825	0.5	3.5	430	37	4.5
VVT#6	14	1575	0.5	5.0	1320	112	7.1
VVT#7	14	1650	0.5	5.0	1480	126	7.6



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