

MECHANICAL GENERAL NOTES:

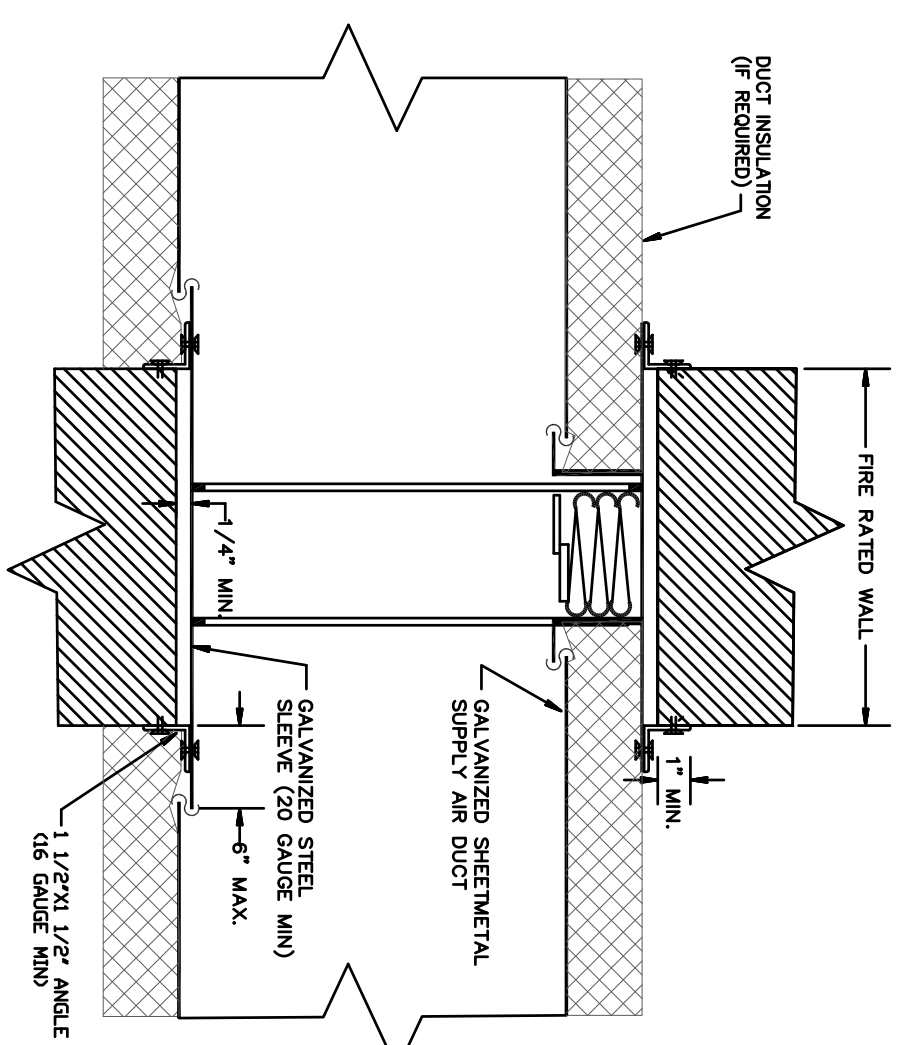
1. THESE DRAWINGS ARE DIAGRAMATIC. ALL OFFSETS, FITTINGS, TRANSITIONS AND ACCESSORIES ARE NOT SHOWN. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL ITEMS REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM. DO NOT SCALE DRAWINGS FOR INSTALLATION.
2. ALL WORK SHALL BE PERFORMED IN A FIRST CLASS WORKMANLIKE MANNER BY LICENSED CONTRACTORS.
3. THE CONTRACTOR SHALL OBTAIN AT HIS EXPENSE ALL NECESSARY FEES PERMITS, AND TESTS.
4. ALL WORK SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES. NO CONTRACTOR SHALL BID UNLESS FAMILIAR WITH THESE CODES.
5. CORRECTION OF DEFECTS TO THIS WORK SHALL BE MADE PROMPTLY WITHOUT CHARGE TO THE OWNER. REPAIR AND REPLACEMENT FOR DAMAGE CAUSED BY THIS CONTRACTOR SHALL BE MADE PROMPTLY WITHOUT CHARGE TO THE OWNER.
6. ALL WORK OF THIS TRADE SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID ANY INTERFERENCES THAT MAY DELAY PROGRESS OF CONSTRUCTION.
7. THE CONTRACTOR SHALL INCLUDE THE WORK OF ALL REQUIRED SUB-CONTRACTORS IN HIS BID. ALL WORK SHALL BE COMPLETED AND OPERATIONAL SYSTEM AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
8. EQUIPMENT SHALL BEAR A U.L. OR OTHER RECOGNIZED LABEL.
9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND ACCESSORIES TO BE READY ACCESSIBLE FOR SERVICING, TESTING, BALANCING, AND REPLACEMENT.
10. THE CONTRACTOR SHALL PROVIDE A WRITTEN GUARANTEE AGAINST DEFECTS IN ALL MATERIALS AND WORKMANSHIP FOR ONE YEAR FROM ACCEPTANCE, WITH FOUR ADDITIONAL YEARS OF WARRANTY ON COMPRESSORS.
11. THE CONTRACTOR SHALL PROVIDE THREE COPIES OF SUBMITTAL DATA SHEET DRAWINGS, AND AT COMPLETION OF THE PROJECT TWO SETS OF OPERATION AND MAINTENANCE MANUALS FOR ALL PROJECT ITEMS.
12. PROVIDE ALL CONTROLS, STARTERS, CONTROL WIRING, DISCONNECTS, AND OTHER ELECTRICAL EQUIPMENT AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
13. THE HVAC CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ON SITE A REGISTERED PROFESSIONAL ENGINEER'S SIGNATURE AND SEAL. THE CONTRACTOR IS TO PROVIDE A NEATLY DRAWN COMPREHENSIVE AS-BUILT SET OF PLANS UPON COMPLETION, WHICH ARE SUITABLE FOR SUBMISSION TO THE BUILDING DEPARTMENT AND TO THE OWNER.
14. PRIOR TO ACCEPTANCE BY THE OWNER THE SYSTEMS SHALL BE TESTED AND BALANCED BY THE CONTRACTOR. PROVIDE A WRITTEN REPORT.
15. SUPPLY AND INSTALL DUCT MOUNTED SMOKE DETECTORS AS REQUIRED.
16. COORDINATE LOCATION OF CEILING DIFFUSERS, GRILLES AND RESISTERS IN THE FIELD WITH LIGHTS AND ARCHITECTURAL ELEMENTS.
17. ALL GRILLES TO BE TITUS OR METALARE UNLESS OTHERWISE NOTED, SIZES AS SHOWN ON PLANS, ALUMINUM CONSTRUCTION.
18. ALL DUCT WORK SHALL BE BUILT AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS AND LOCAL BUILDING CODES.
19. ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.
20. ALL OUTSIDE AIR DUCTWORK SHALL BE SHEETMETAL WITH EXTERIOR R-6 INSULATION. PROVIDE BLANKET TYPE INSULATION IN CONCEALED SPACES, AND BOARD TYPE IN EXPOSED AREAS.
21. ALL EXHAUST AIR DUCT SHALL BE GALVANIZED SHEET METAL CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.
22. FLEXIBLE DUCT, WHERE SHOWN, SHALL BE U.L. CLASS 1, R-6 INSULATION.
23. LOW PRESSURE SUPPLY AND RETURN RECTANGULAR DUCTWORK IS RIGID DUCTBOARD, 1 IN. THICK, R-4.2 INSULATION.
24. PROVIDE ELBOW TURNING VANES IN ALL RECTANGULAR DUCTS WHERE TURNS ARE GREATER THAN 45 DEGREES.
25. PROVIDE BACKDRAFT DAMPERS FOR ALL EXHAUST FANS.
26. VERIFY ALL THERMOSTAT LOCATIONS WITH THE LANDLORD.
27. CONDENSATE DRAIN PIPING SHALL BE ABOVE GRADE COPPER DRAIN, WASTE AND VENT FITTINGS. INSULATE ALL CONDENSATE PIPING W/3/4" INCOA MCOOLK PIPE INSULATION.

GENERAL DEMOLITION NOTES

1. UNLESS OTHERWISE NOTED, ALL EQUIPMENT AND DUCTWORK IN THE PROJECT AREA, WHICH IS NOT INDICATED TO REMAIN, IS TO BE REMOVED. THE CONTRACTOR SHALL INVESTIGATE THE PROJECT AREA PRIOR TO BID TO DETERMINE ALL REQUIRED DEMOLITION.
2. EXISTING CONDITIONS SHOWN ON THESE DRAWINGS ARE TAKEN FROM ORIGINAL RECORD DRAWINGS AND FIELD CONDITIONS. ALL FIELD CONDITIONS MUST BE VERIFIED PRIOR TO BID. FIELD CONDITIONS SHALL GOVERN.
3. DEMOLITION WORK IS NOT SPECIFICALLY IDENTIFIED ON THESE PLANS, AND MAY BE DESCRIBED ON THE ARCHITECT'S PLANS. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED DEMOLITION WHETHER SHOWN ON THE PLANS OR NOT.
4. ALL MECHANICAL SYSTEMS SERVING OTHER SPACES OR FLOORS, THAT RUN THROUGH THE PROJECT AREA SHALL REMAIN ACTIVE DURING CONSTRUCTION, SO AS NOT TO CAUSE ANY DISRUPTION TO THESE OTHER SPACES.
5. ALL ITEMS REMOVED UNDER THIS PROJECT SHALL BE DISPOSED OF OR TURNED OVER TO THE OWNER AT THE OWNER'S DISCRETION.
6. PROPERLY REMOVE AND DISPOSE OF ALL HVAC DUCTWORK AND AIR DISTRIBUTION DEVICES WHICH ARE TO BE REMOVED. CONSULT WITH OWNER AND OBTAIN THE OWNER'S APPROVAL PRIOR TO DISPOSAL OF REMOVED MATERIAL.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL PIPING AND DUCTS, NEW OR EXISTING, WITHIN THE PROJECT AREA, ARE PROPERLY SUPPORTED.
8. ALL OCCUPIED SPACES ARE TO REMAIN OPERATIONAL DURING BUSINESS HOURS AS DESCRIBED IN THE ARCHITECT'S DOCUMENTS.

HVAC PROJECT SPECIFIC NOTES

CONTRACTOR IS TO INSPECT ALL EXISTING DUCTWORK SHOWN ON THESE PLANS AS REMAINING. REPAIR AS REQUIRED ANY DAMAGED DUCTWORK OR INSULATION, WHERE DUCTWORK IS SHOWN TO BE PARTIALLY REMOVED. CAP, SEAL, AND INSULATE TO MATCH EXISTING METHODS AND MATERIALS. EXISTING VAV UNITS WHICH ARE REMAINING ARE TO BE INSPECTED, ADJUSTED AND REPAIRED WHERE NECESSARY.



TYPE 'B' FIRE DAMPER WITH INTEGRAL SLEEVE
N.T.S.

FAN SCHEDULE

MARK	FAN #1
TYPE	CEILING CAB.
SERVICE	TOILETS/ELECT.
MANUFACTURER	GREENHECK
MODEL NO.	SP-A190
CFM	197
S.P.F.	0.1
HP	113 WATTS
VOLT-PH-HZ	120-1-60
DRIVE	D
MOTOR R.P.M.	-
FAN R.P.M.	1400
WEIGHT (LBS)	17
SONES	2.5
ROOF OPENING	-
NOTES	1

NOTES
PROVIDE WALL MOUNTED LINE VOLTAGE THERMOSTAT FOR CONTROL.

VAV SCHEDULE

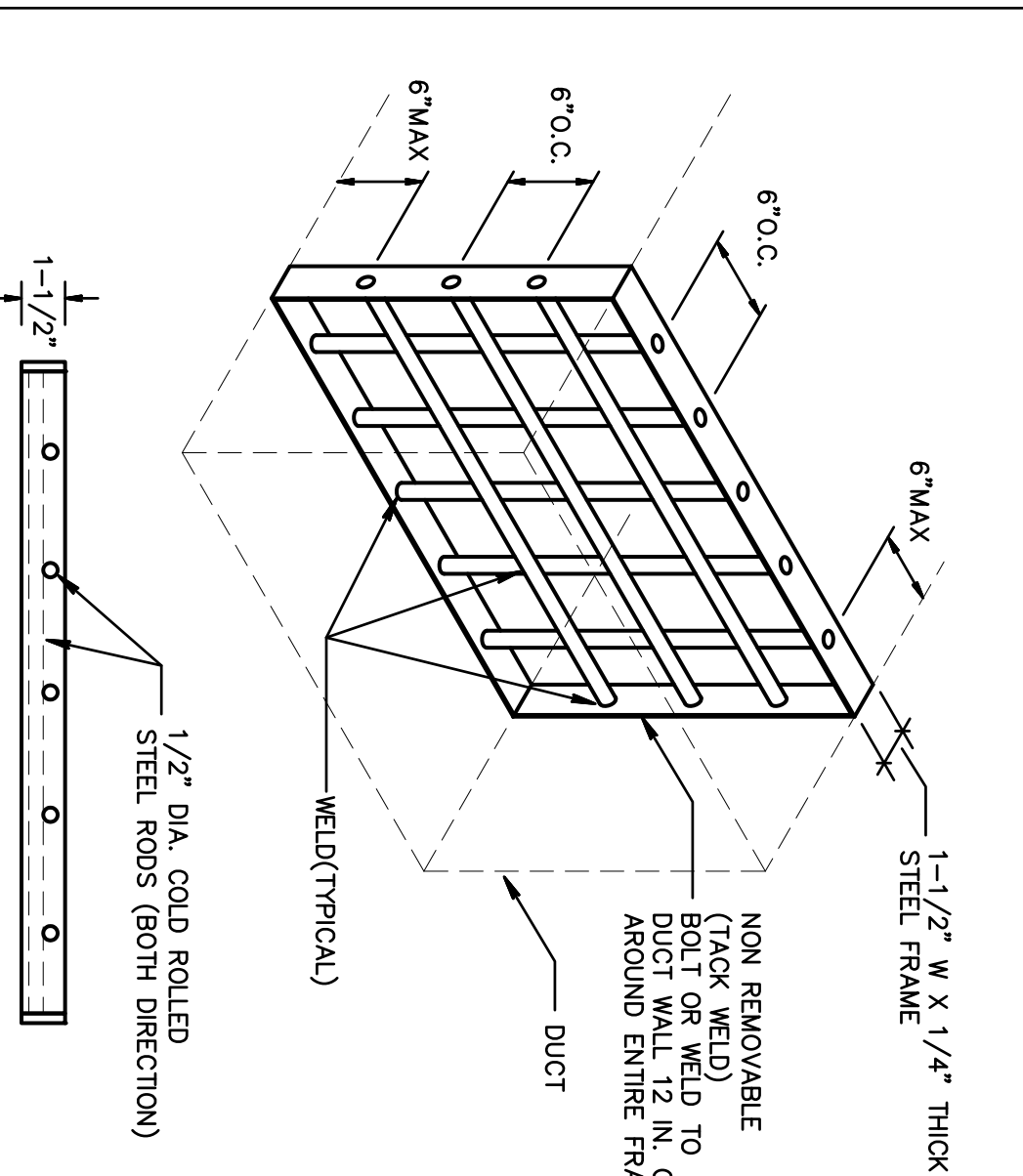
MARK	MANUF.	MODEL NO.	INLET SIZE	CFM MAX	CFM MIN	RW	HEAT STEP	VOL=PH-HZ	REMARKS
V-95	TRANE	VCEF	10	1375	550	3	1	208-1-60	NOTES 1 THRU 6
V-96	TRANE	VCEF	8	800	300	2	1	208-1-60	NOTES 1 THRU 6
V-97	TRANE	VCEF	6	400	200	1	1	208-1-60	NOTES 1 THRU 6

1. PROVIDE ROOM TEMPERATURE SENSOR WITH EXTERNAL SET POINT ADJUSTMENT.
 2. PROVIDE FACTORY MOUNTED DDC CONTROLLER.
 3. WITH OUTLET CONFIGURATION AS REQUIRED, COORDINATED BY CONTRACTOR.
 4. TRANSITION FROM INLET SIZE TO SUPPLY DUCT SIZE AS SHOWN ON FLOOR PLANS.
 5. WITH OPTIONAL 1" THICK MATT FACED INSULATION WITH 1/4\"/>
- PRIOR TO BID, CONTRACTOR IS TO VERIFY WITH OWNER IF THERE ARE ANY EXISTING SPARE VAV TERMINAL BOXES WHICH MAY BE RE-USED IN PLACE OF NEW BOXES SHOWN IN SCHEDULE ABOVE.

AIR DISTRIBUTION SCHEDULE

MARK	MAKE	MODEL	SIZE	NECK	MATERIAL	BORER TYPE	MOUNTING TYPE	DAMPER	THROW	FINISH
A	TTUS	PAS-AA	24X24	6"	ALUMINUM	3	LAY-IN	AG-100	4 WAY	WHITE
A1	TTUS	PAS-AA	12X12	6"	ALUMINUM	1	SURFACE	AG-100	4 WAY	WHITE
B	TTUS	PAS-AA	24X24	8"	ALUMINUM	3	LAY-IN	AG-100	4 WAY	WHITE
C	TTUS	PAS-AA	24X24	10"	ALUMINUM	3	LAY-IN	AG-100	4 WAY	WHITE
RA	TTUS	PAS-AA	24X24	22X22	ALUMINUM	3	LAY-IN	-	-	WHITE

PROVIDE INTEGRAL VOLUME DAMPERS WHERE SHOWN ON PLAN OR WHERE DAMPER IN DUCTWORK IS NOT ACCESSIBLE ABOVE CEILING. PROVIDE SQUARE TO ROUND ADAPTERS WHERE REQUIRED FOR ROUND DUCT CONNECTION. PROVIDE SAMPLE WITH OFF-WHITE FINISH TO ARCHITECT FOR APPROVAL. PROVIDE FLEXIBLE DUCT SIZED TO MATCH 5/8\"/>

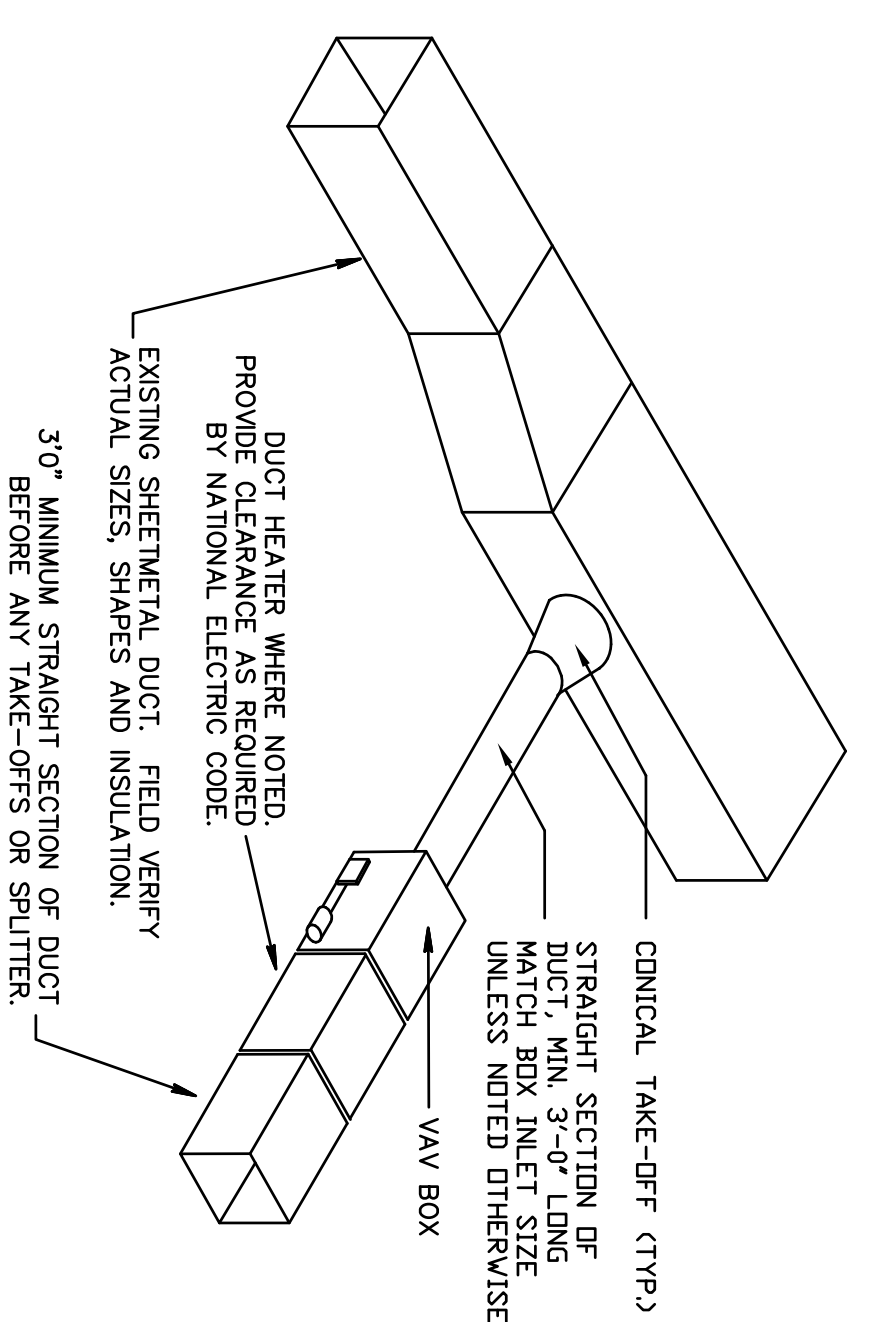


SECURITY BARRIER DETAIL
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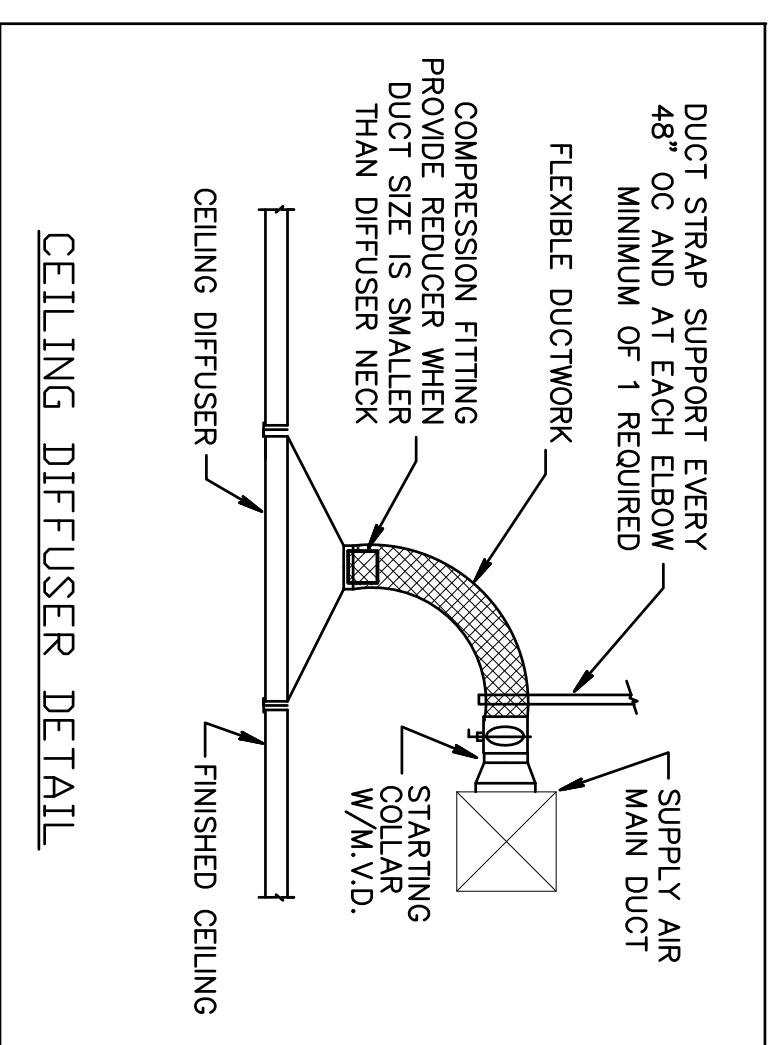
HVAC CONTROLS NOTE

AIR CONDITIONING CONTRACTOR SHALL PROVIDE OR CAUSE TO BE PROVIDED ALL CONTROLS, CONTROL WIRING & CONDUIT, POWER WIRING & CONDUIT, AND ALL OTHER ITEMS NECESSARY FOR INSTALLATION AND CONTROL OF VARIABLE AIR VOLUME TERMINAL UNITS. IN ADDITION CONTRACTOR SHALL PROVIDE INTERFACE WITH THE EXISTING EMS SYSTEM OR CONTRACTOR SHALL PROVIDE MECHANICAL INTERFACE TO EXISTING PROGRAM DESIGNED TO CALCULATE TENANT OVERTIME USAGE OF THE AIR CONDITIONING SYSTEMS. CONTRACTOR SHALL PROVIDE OVERVIEW USAGE CONTRACTOR THERMAL CONCEPTS AT 1-800-853-2503 (NEIL CARROLL) FOR OPERATIONS AND DESIGN. COMPLETE AND OPERATIONAL CONTROL SYSTEM IS TO BE PROVIDED TO THE OWNER. ALL ADDITIONAL DETAILS WHICH MUST BE INCLUDED, PRIOR TO BID.

CONTRACTOR IS TO PROVIDE CONTROLS AS NOTED ABOVE FOR ALL VAV TERMINAL BOXES SHOWN ON THESE PLANS, INCLUDING ANY EXISTING BOXES.



TYPICAL V.A.V. BOX DETAIL
N.T.S.



CEILING DIFFUSER DETAIL