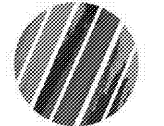


222 cloister court  
 chapel hill, nc 27514  
 919.401.8586  
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Renovation of  
 920 Corporate Drive  
 Orange County Schools  
 920 Corporate Drive  
 Hillsborough, North Carolina



no. revisions

The use of these plans and specifications shall be limited to the project and shall not be used for any other project without the written consent of the engineer. The engineer shall not be responsible for any errors or omissions in these plans and specifications. It is the responsibility of the contractor to verify all dimensions and quantities shown on these plans and specifications. The contractor shall be responsible for obtaining all necessary permits and approvals from the appropriate authorities. The contractor shall be responsible for obtaining all necessary insurance and bonding. The contractor shall be responsible for obtaining all necessary licenses and permits. The contractor shall be responsible for obtaining all necessary permits and approvals from the appropriate authorities. The contractor shall be responsible for obtaining all necessary insurance and bonding. The contractor shall be responsible for obtaining all necessary licenses and permits.

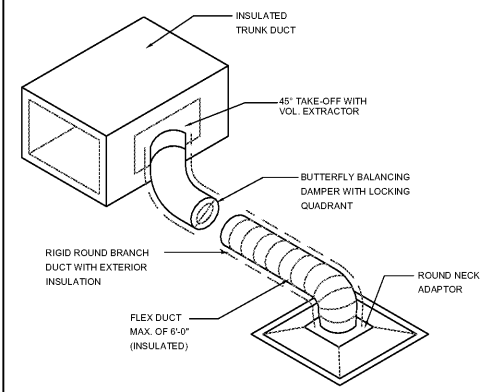
drawn DM checked RM  
 MECHANICAL DETAILS

sheet

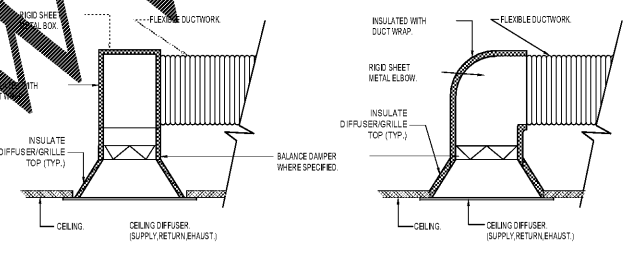
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project no. 2019016.00

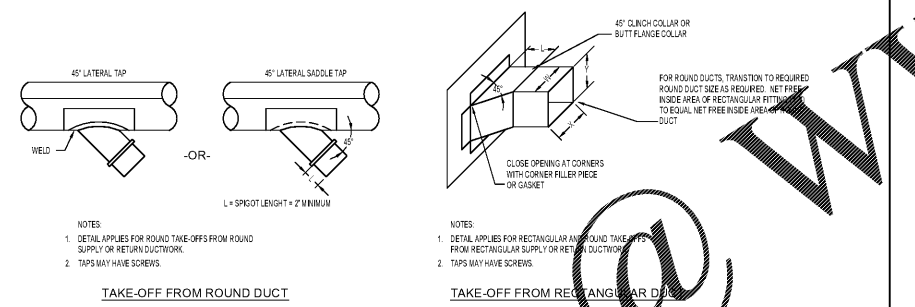
date 7.22.19



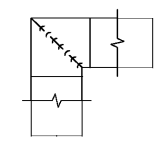
5. LOW PRESSURE BRANCH TAKE-OFF N.T.S.



6. TYPICAL CEILING GRILL DUCT CONNECTION N.T.S.

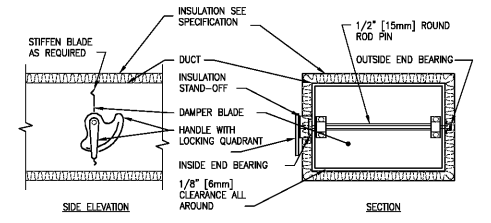


7. TYPICAL 45° TAKE OFF (SUPPLY AND RETURN) N.T.S.



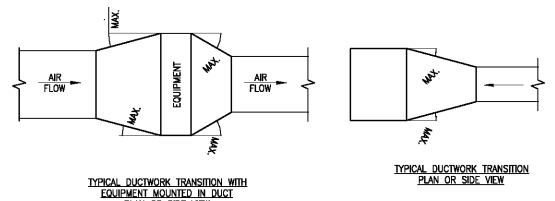
NOTES:  
 1. ALL VANE ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.  
 2. WHEN W1 DOES NOT EQUAL W2, VANE SHALL BE SINGLE THICKNESS VANE TYPE, REGARDLESS OF W DIMENSION.  
 3. ALL SINGLE THICKNESS VANES SHALL HAVE A 2" [50mm] RADIUS, 1 1/2" [40mm] MAXIMUM SPACE BETWEEN VANES AND A 3/4" [20mm] TRAILING EDGE.  
 4. WHEN W EQUALS W2 AND W1 IS GREATER THAN 20" [500mm] VANES SHALL BE DOUBLE VANE TYPE.

8. TYP. TURN VANES N.T.S.



NOTE:  
 1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.  
 2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

2. VOLUME DAMPER DETAIL N.T.S.



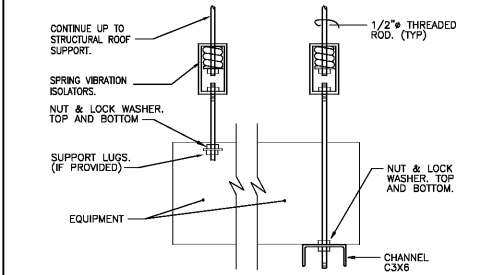
NOTE:  
 UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY.

3. DUCTWORK TRANSITIONS N.T.S.

HANGER TRAPS OR RODS			
MAX. DUCT IN. [mm]	QUANTITY/SPAN IN. [mm]	MAX. LOAD LBS. [kg]	MAX. SPACING IN. [mm]
8" [203]	ONE 1 1/2" x 22 GA STRAP	280 [119]	144 [3600]
10" [254]	ONE 1 1/2" x 18 GA STRAP	420 [190]	144 [3600]
12" [305]	TWO 3/8" x 18 GA STRAP	700 [317]	144 [3600]
14" [354]	TWO 3/8" x 18 GA STRAP	1320 [598]	144 [3600]
16" [406]	TWO 1/2" x 13# RODS	2500 [1133]	144 [3600]

NOTE:  
 TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.

4. ROUND DUCT HANGERS N.T.S.



1. SUSPENDED EQUIPMENT SUPPORT N.T.S.