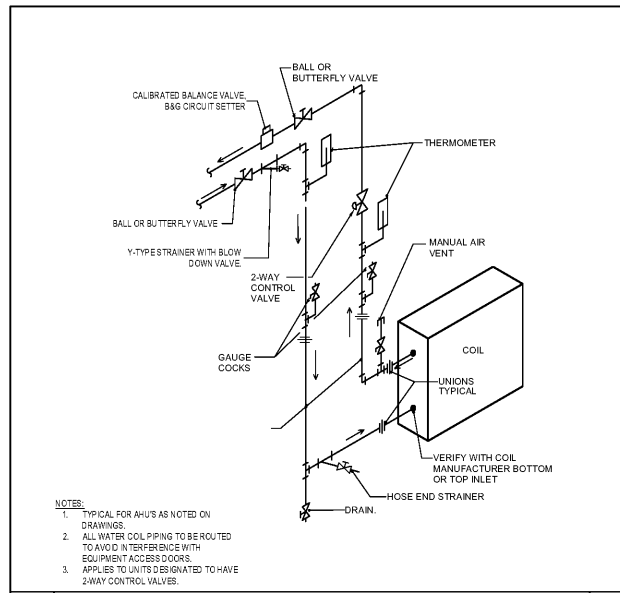
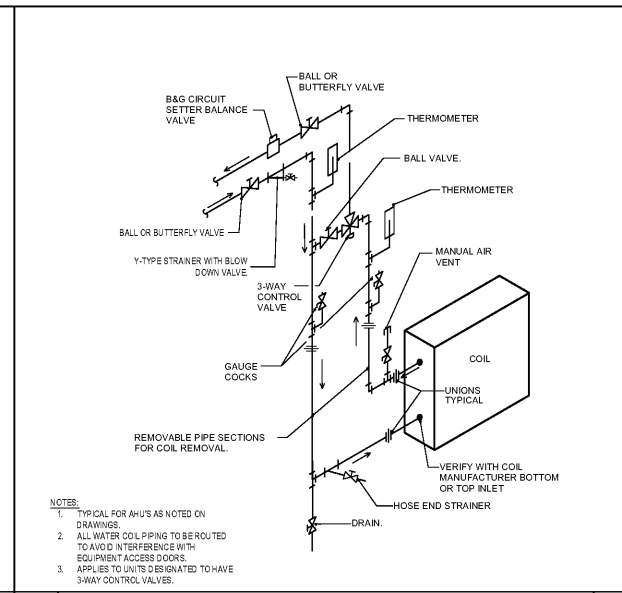


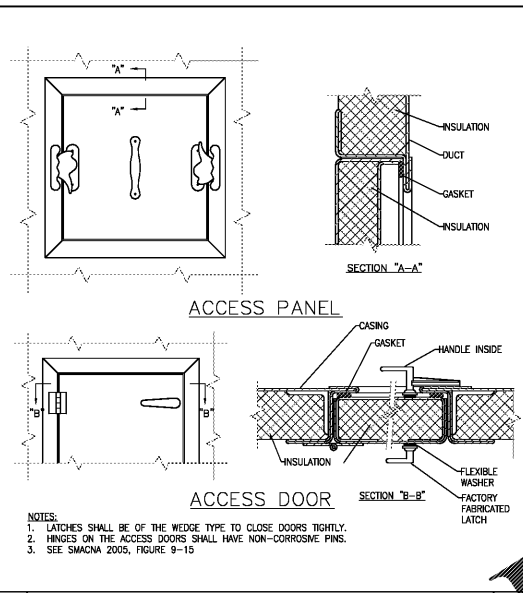
GRAPHIC SCALE 1/8"=1'-0" GRAPHIC SCALE 1/4"=1'-0" GRAPHIC SCALE 1/8"=1'-0" GRAPHIC SCALE 1/4"=1'-0"



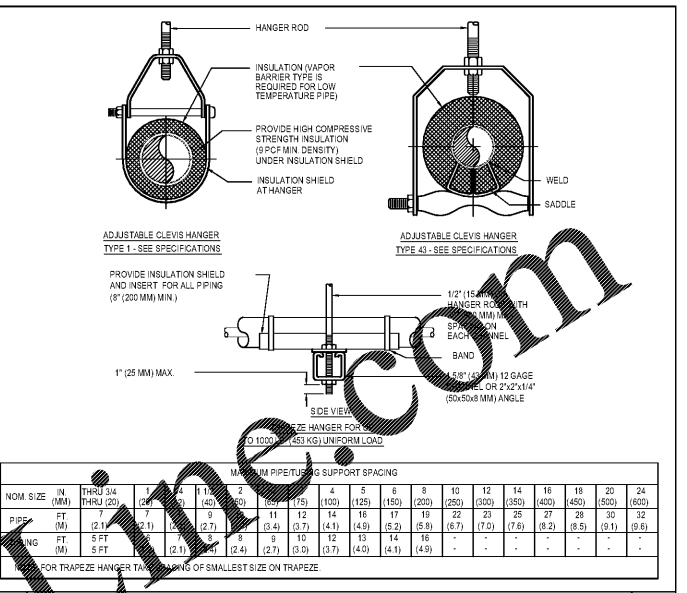
**NOTES:**  
 1. TYPICAL FOR AHU'S AS NOTED ON DRAWINGS.  
 2. ALL WATER COIL PIPING TO BE ROUTED TO AVOID INTERFERENCE WITH EQUIPMENT ACCESS DOORS.  
 3. APPLIES TO UNITS DESIGNATED TO HAVE 2-WAY CONTROL VALVES.



**NOTES:**  
 1. TYPICAL FOR AHU'S AS NOTED ON DRAWINGS.  
 2. ALL WATER COIL PIPING TO BE ROUTED TO AVOID INTERFERENCE WITH EQUIPMENT ACCESS DOORS.  
 3. APPLIES TO UNITS DESIGNATED TO HAVE 3-WAY CONTROL VALVES.



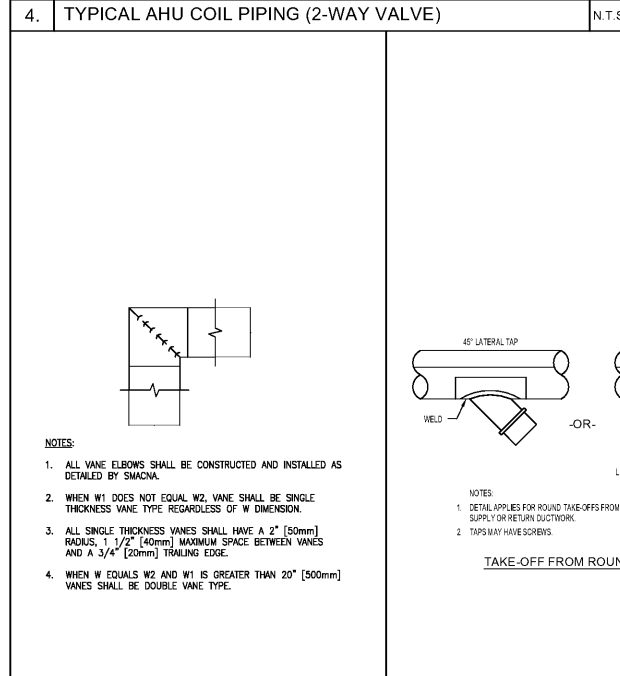
**NOTES:**  
 1. LATCHES SHALL BE OF THE WEDGE TYPE TO CLOSE DOORS TIGHTLY.  
 2. HINGES ON THE ACCESS DOORS SHALL HAVE NON-CORROSIVE FINISH.  
 3. SEE SMACNA 2005, FIGURE 9-15.



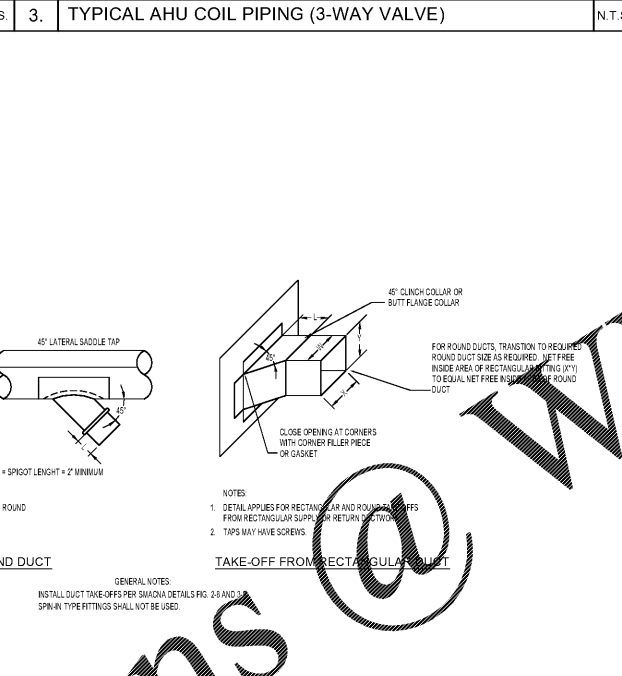
**MINIMUM PIPE/PIPE SUPPORT SPACING**

NOM SIZE	IN	THRU 3/4"	1"	1 1/2"	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
PIPE	FT	5 FT	7	9	11	12	14	16	17	19	22	23	25	27	28	30	32
	(M)	(2.1)	(2.1)	(2.7)	(2.7)	(3.4)	(3.7)	(4.1)	(4.9)	(5.2)	(5.8)	(6.7)	(7.6)	(8.2)	(8.5)	(9.1)	(9.8)
TRAPEZOIDAL HANGER	FT	5 FT	7	9	11	12	14	16	17	19	22	23	25	27	28	30	32
	(M)	(2.1)	(2.1)	(2.7)	(2.7)	(3.4)	(3.7)	(4.1)	(4.9)	(5.2)	(5.8)	(6.7)	(7.6)	(8.2)	(8.5)	(9.1)	(9.8)

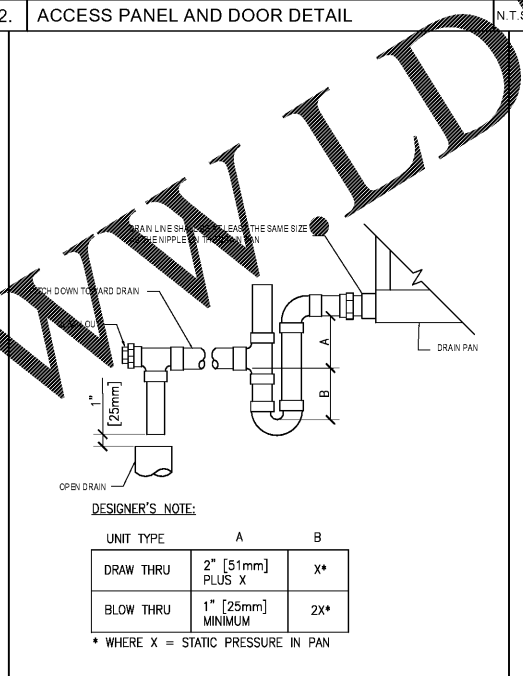
FOR TRAPEZOIDAL HANGERS, USE SPACING OF SMALLEST SIZE ON TRAPEZOID.



**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.



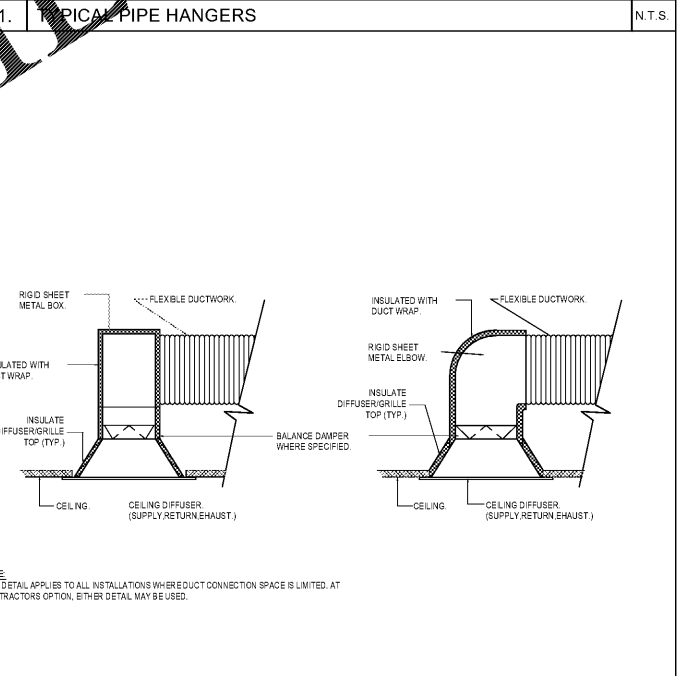
**NOTES:**  
 1. DETAIL APPLIES FOR ROUND TAKE-OFFS FROM SUPPLY OR RETURN DUCTWORK.  
 2. TAPS MAY HAVE SCREWS.  
 3. DETAIL APPLIES FOR RECTANGULAR AND ROUND TAKE-OFFS FROM RECTANGULAR SUPPLY OR RETURN DUCTWORK.  
 4. TAPS MAY HAVE SCREWS.



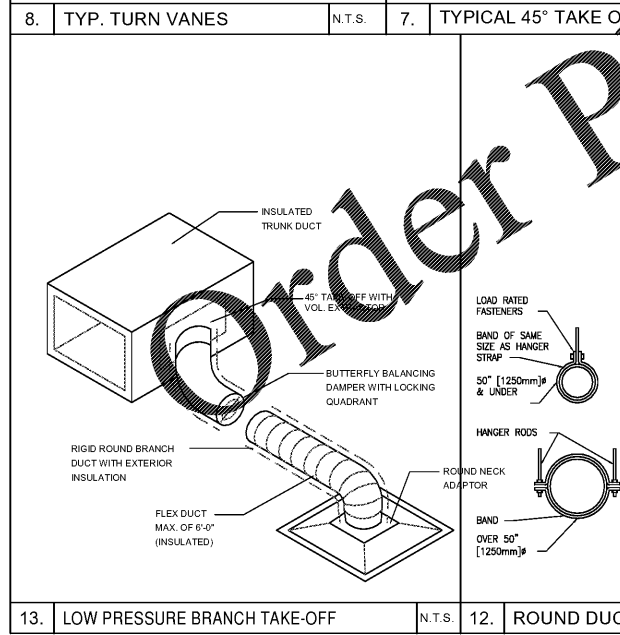
**DESIGNER'S NOTE:**

UNIT TYPE	A	B
DRAW THRU	2" [51mm] PLUS X	X*
BLOW THRU	1" [25mm] MINIMUM	2X*

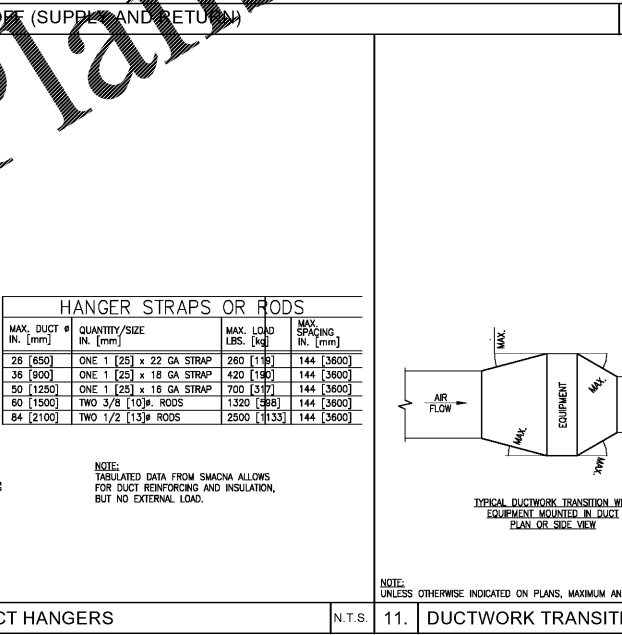
\* WHERE X = STATIC PRESSURE IN PAN



**NOTE:** THIS DETAIL APPLIES TO ALL INSTALLATIONS WHERE DUCT CONNECTION SPACE IS LIMITED. AT CONTRACTOR'S OPTION, EITHER DETAIL MAY BE USED.



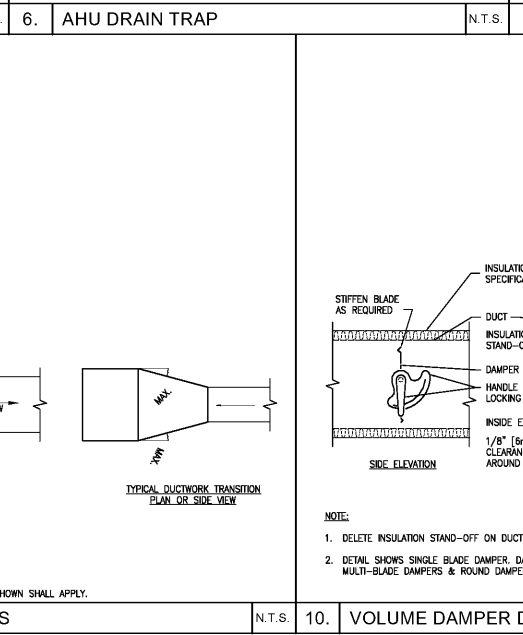
**NOTES:**  
 1. INSULATED TRUNK DUCT.  
 2. 45° TAKE-OFF WITH VOL. ELBOW.  
 3. BUTTERFLY BALANCING DAMPER WITH LOCKING QUADRANT.  
 4. RIGID ROUND BRANCH DUCT WITH EXTERIOR INSULATION.  
 5. FLEX DUCT MAX. OF 6'-0" (INSULATED).  
 6. ROUND NECK ADAPTOR.  
 7. HANGER RODS.  
 8. BAND OVER 50" [1250mm] STRAP.



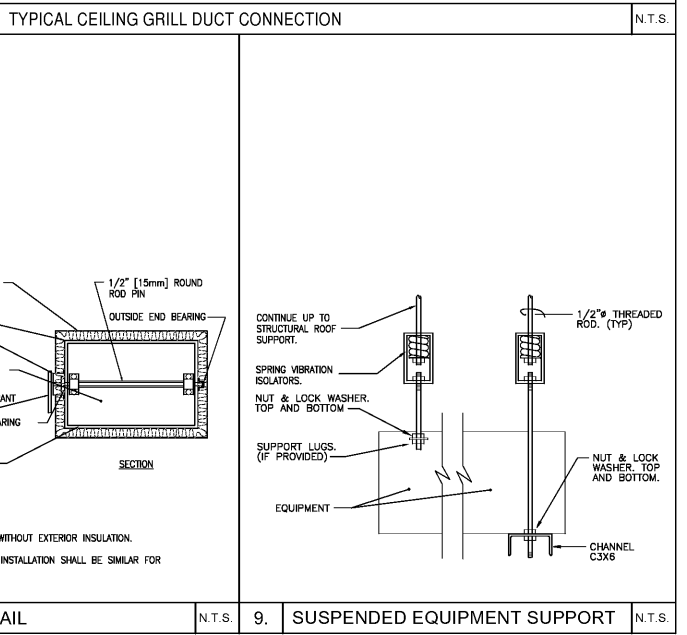
**HANGER STRAPS OR RODS**

MAX. DUCT IN. (mm)	# QUANTITY/SIZE IN. (mm)	MAX. LOAD LBS. (kg)	MAX. SPACING IN. (mm)
28 (650)	ONE 1 (25) x 22 GA STRAP	260 (118)	144 (3600)
36 (900)	ONE 1 (25) x 18 GA STRAP	420 (190)	144 (3600)
50 (1250)	ONE 1 (25) x 16 GA STRAP	700 (317)	144 (3600)
60 (1500)	TWO 3/8 (10) # RODS	1320 (598)	144 (3600)
84 (2100)	TWO 1/2 (13) # RODS	2500 (1133)	144 (3600)

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



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



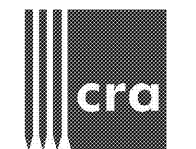
**NOTE:**  
 1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.  
 2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

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

12. ROUND DUCT HANGERS N.T.S.

11. DUCTWORK TRANSITIONS N.T.S.

10. VOLUME DAMPER DETAIL N.T.S.



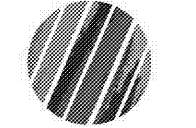
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Cedar Ridge High School  
 Classroom Addition  
 Orange County Schools  
 1125 New Grady Brown School Road  
 Hillsborough, North Carolina



no.	revisions

The use of these plans and specifications shall be restricted to the project and shall not be used for any other project without the written consent of the architect.

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 DMJ MRM  
 Mechanical  
 Details

sheet  
**M4.1**

project no. 1716

date 4/25/19