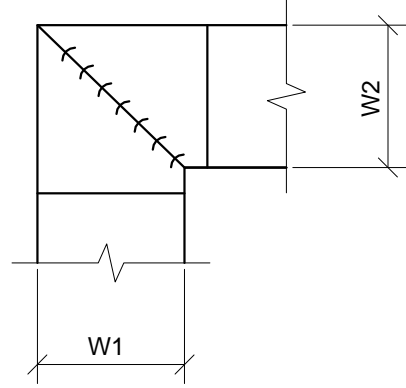


NOTES:

- THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
- ALL STANDARD ELBOWS CAN BE SUBSTITUTED WITH SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

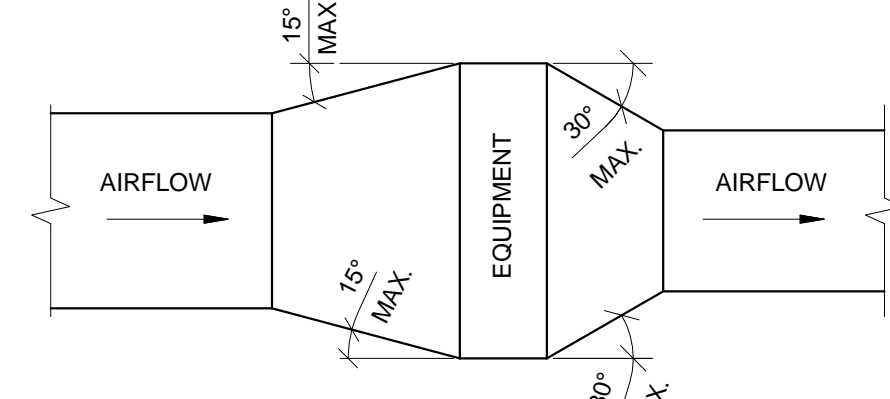
1 DUCTWORK RADIUS ELBOW
N.T.S.



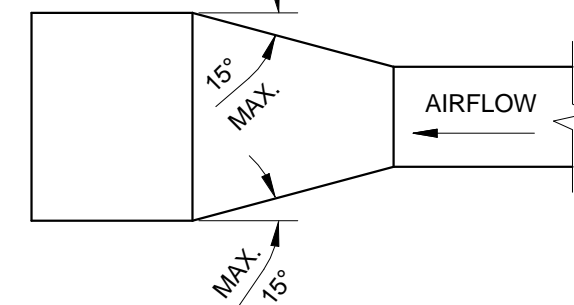
NOTES:

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

2 DUCTWORK SQUARE VANE ELBOWS
N.T.S.



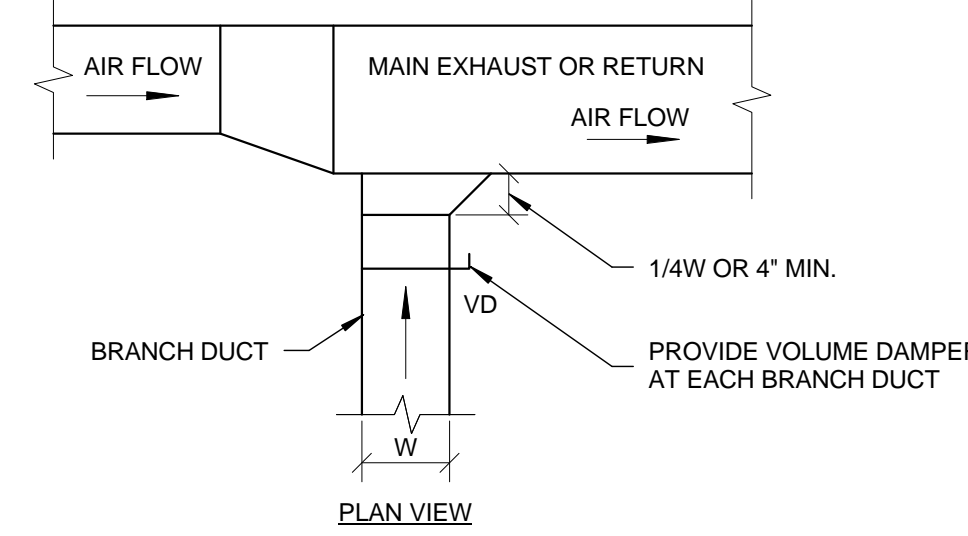
TYPICAL DUCTWORK TRANSITION WITH EQUIPMENT
MOUNTED IN DUCT PLAN OR SIDE VIEW



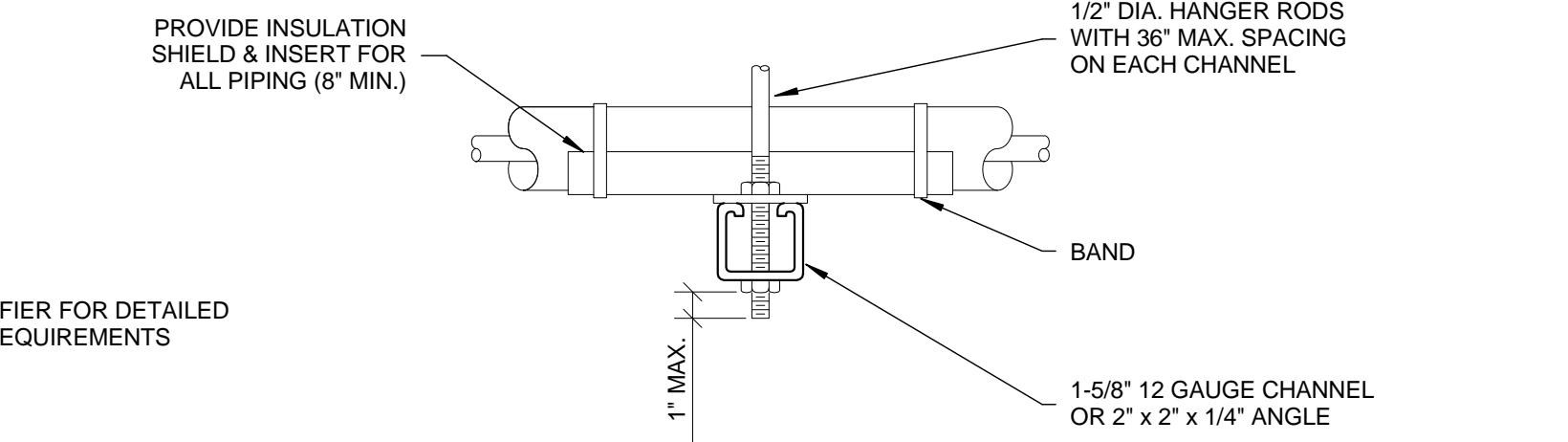
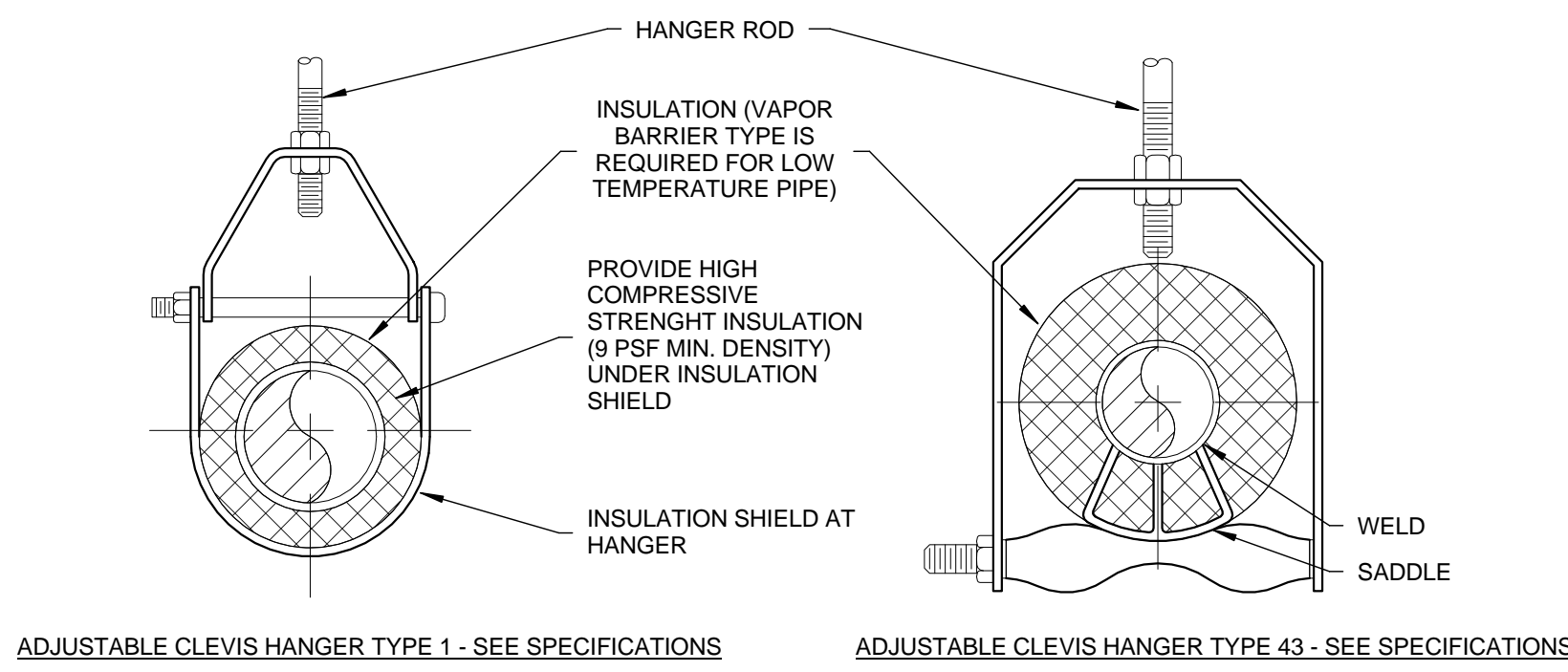
TYPICAL DUCTWORK TRANSITION
PLAN OR SIDE VIEW

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

3 DUCTWORK TRANSITIONS (WITH EQUIPMENT MOUNTED IN DUCT)
N.T.S.



4 EXHAUST OR RETURN BRANCH DUCTWORK
N.T.S.

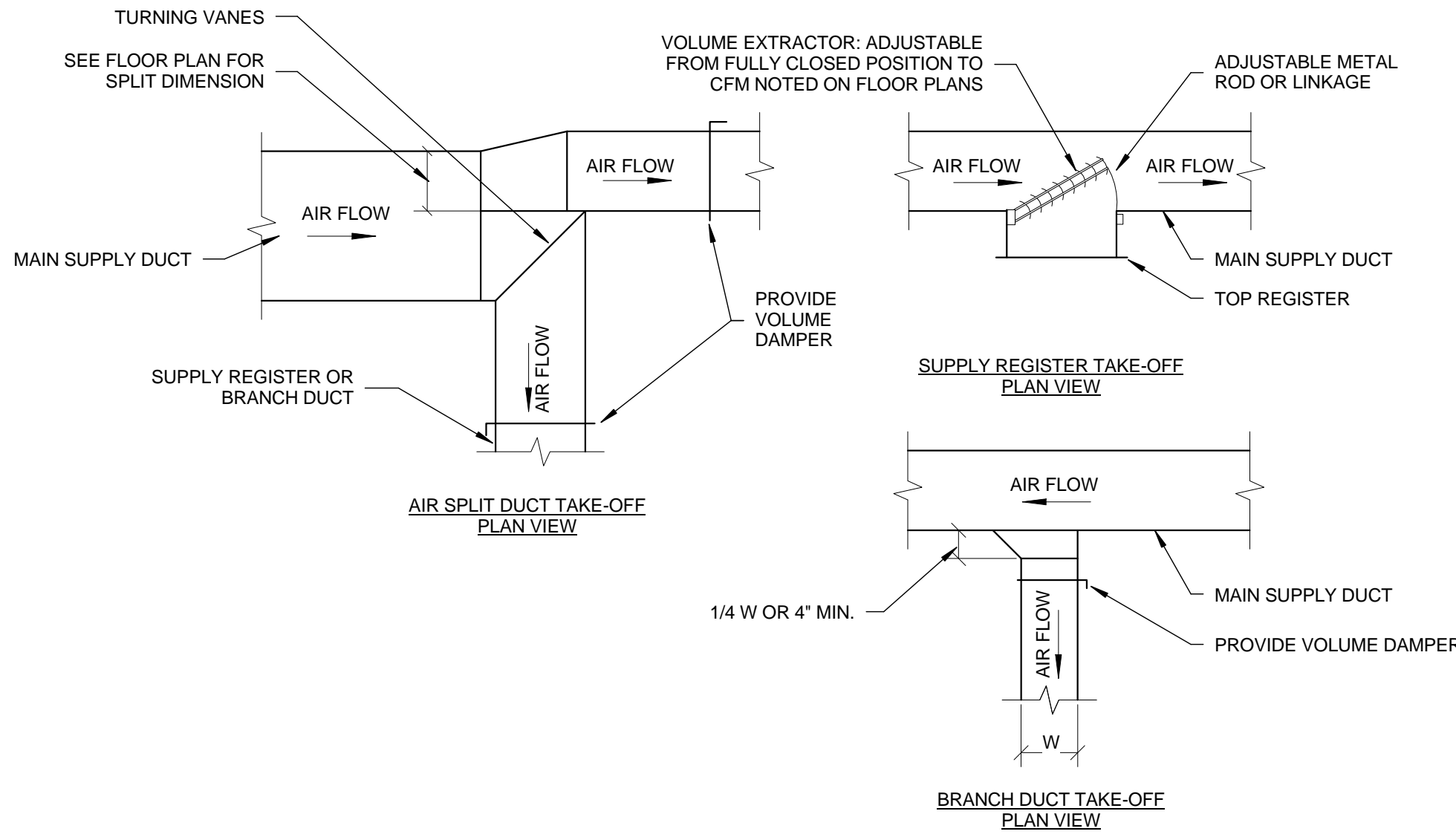


SIDE VIEW TRAPEZE HANGER FOR
UP TO 1000 LB. UNIFORM LOAD

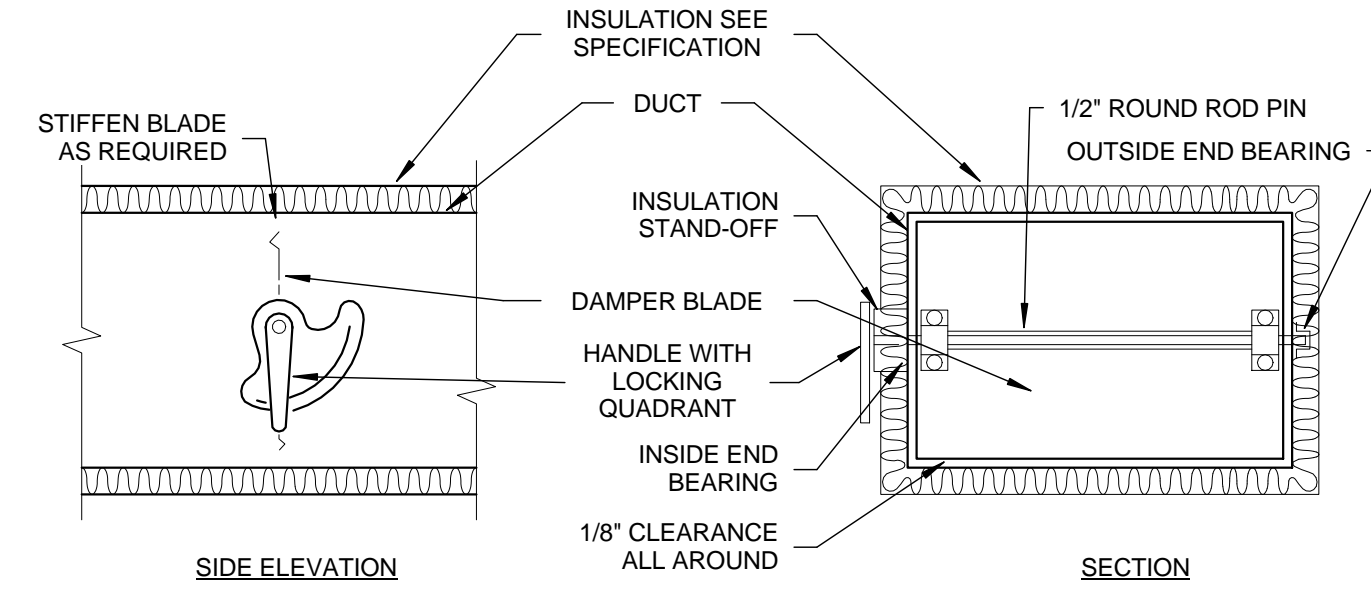
MAXIMUM PIPE/TUBING SUPPORT SPACING																							
NOM. SIZE (IN.)	THRU 3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24					
PIPE (FT.)	7	7	7	9	10	11	12	14	16	17	19	22	23	25	27	28	30	32					
TUBING (FT.)	5 FT	6	7	8	8	9	10	12	13	14	16	-	-	-	-	-	-	-					

NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE

5 PIPE HANGER
N.T.S.



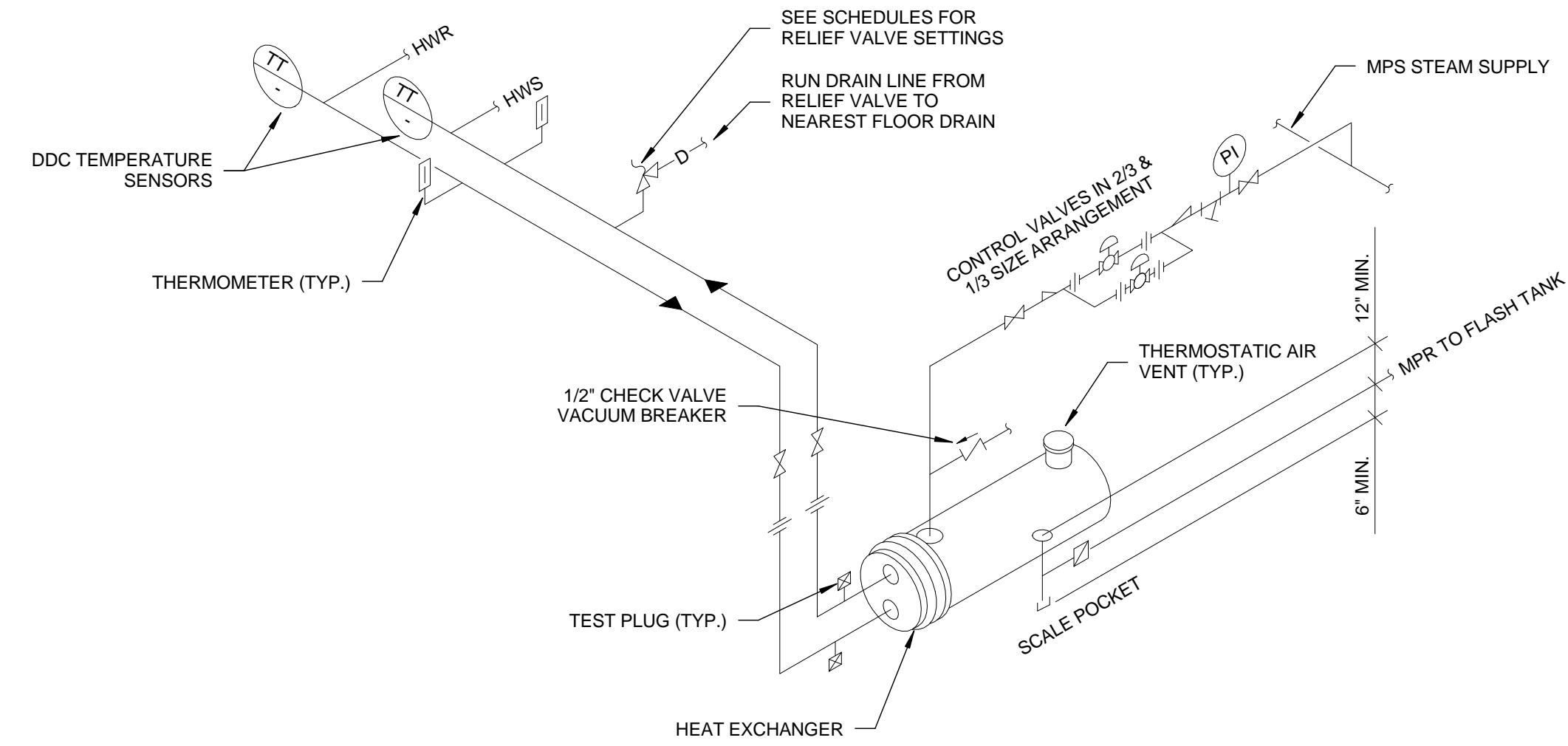
6 SUPPLY DUCT TAKE-OFFS
N.T.S.



NOTES:

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

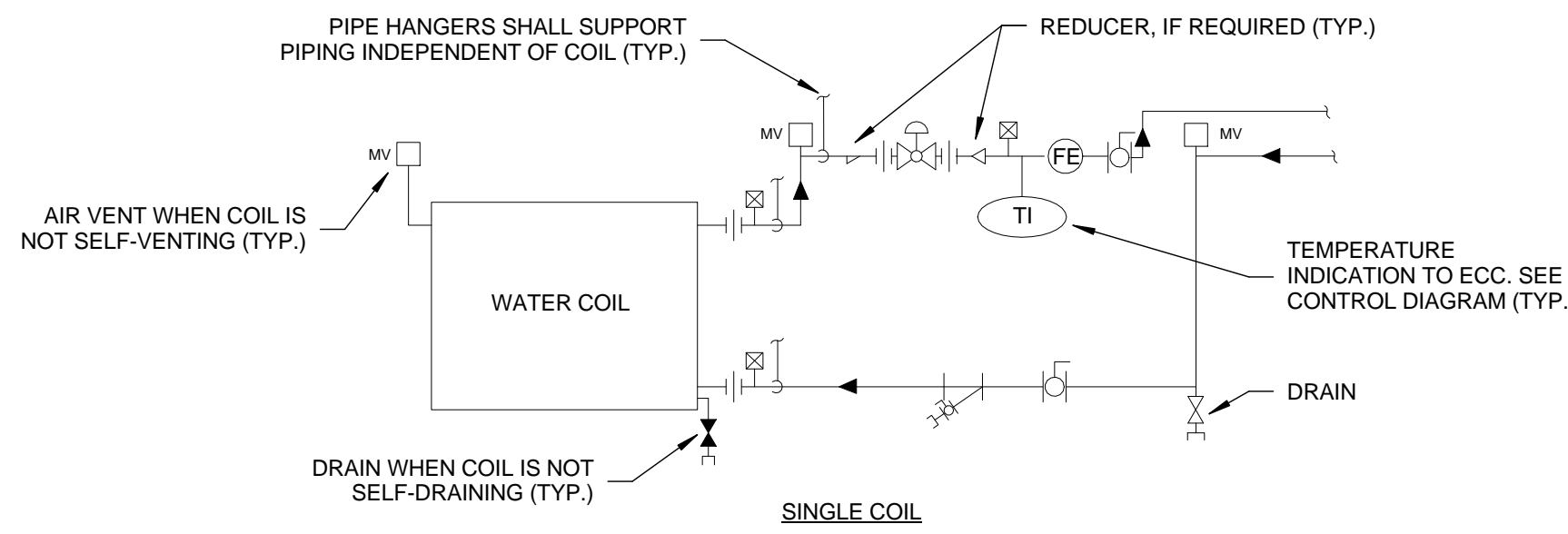
7 VOLUME DAMPER DETAIL
N.T.S.



NOTES:

- PROVIDE SADDLE SUPPORTS AND LEGS OR HANGERS FOR HEAT EXCHANGER. MOUNTING HEIGHT TO SHALL BE ADJUSTED TO FACILITATE GRAVITY RETURN OR STEAM CONDENSATE.
- MAKE THE BYPASS THE SAME SIZE AS THE CONNECTIONS TO THE CONTROL VALVES.
- CONTROL VALVES SHALL BE IN A 1/3 AND 2/3 SIZE ARRANGEMENT.

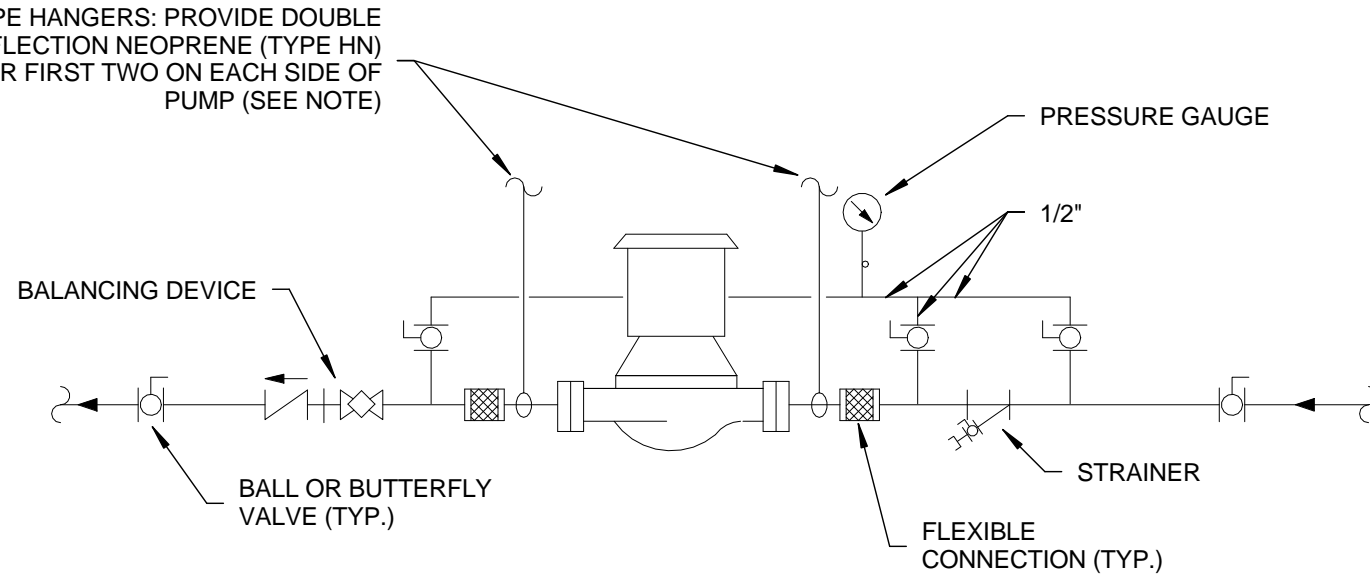
9 HEAT EXCHANGER - STEAM TO HOT WATER
N.T.S.



NOTES:

- WHEN COIL IS INCLUDED IN CASING MOUNTED ON VIBRATION ISOLATORS THE FIRST TWO HANGERS FOR EACH PIPE SHALL BE SPRING & NEOPRENE TYPE, TYPE "H" 4" DIA. PIPE & SMALLER, TYPE "H-P" FOR 5" DIA. PIPE & LARGER.
- PIPING SHALL BE INSTALLED IN SUCH A MANNER THAT IT WILL NOT BLOCK THE SWING OR USE OF ACCESS DOORS OR PANELS; NEITHER SHALL IT BLOCK THE SERVICING OF FILTERS, VALVES, OR EQUIPMENT.
- THE FLOW ELEMENT MAY BE INSTALLED IN THE SUPPLY PIPING REQUIRED MINIMUM UPSTREAM AND DOWNSTREAM DIMENSIONS CANNOT BE OBTAINED IN THE RETURN PIPING.

8 WATER COILS - PIPING CONNECTIONS
N.T.S.



NOTE:

SUPPORT PUMP FROM PIPING ONLY. DO NOT SUPPORT PUMP FROM MOTOR.

10 INLINE PUMP CONNECTIONS
N.T.S.

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3627

Scale
N.T.S.

Drawing Title
MECHANICAL DETAILS

Approved: Project Director

Project Title
RENOVATE BUILDING 69

Location
1400 Black Horse Hill, Coatesville, PA

Date
1/22/2014

Checked
DJR

Drawn
ORD

VA Project Number
542-CSI-203

Building Number
69

Drawing Number
MH501

Dwg. 48 of 86

Office of Facilities Management

Department of Veterans Affairs

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