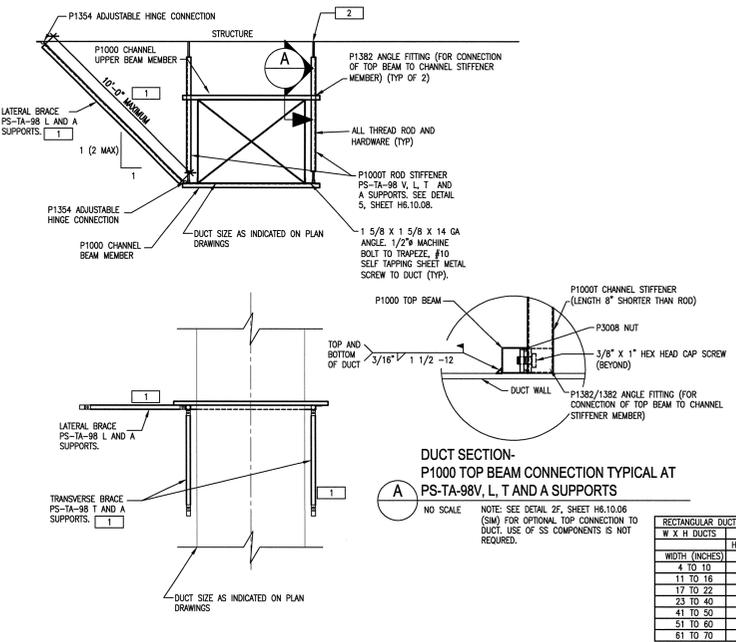


DETAIL KEYNOTES:

- 1 SEE DETAIL 8, SHEET H6.10.08 FOR LATERAL AND TRANSVERSE BRACING REQUIREMENTS.
- 2 SEE DETAIL 2, SHEET H6.10.08 FOR CONNECTION TO CONCRETE WHERE APPLICABLE.



MINIMUM BRACING REQUIREMENTS:
 ALL DUCTWORK TO BE SUPPORTED WITHIN 18" OF CHANGES IN DIRECTION.
 ALL PIPE TO BE SUPPORTED WITHIN 18" (EACH SIDE) OF DAMPERS, FLANGES, COILS AND FLOW METERS.
 ALL DUCTWORK TO BE SUPPORTED WITHIN 24" OF PENETRATIONS THROUGH WALLS.
 INSTALL TRANSVERSE BRACING AT EVERY OTHER SUPPORT LOCATION.
 INSTALL LATERAL BRACING AT MAXIMUM SPACING OF 20 FT.
 INSTALL VERTICAL BRACING AT ALL SUPPORT LOCATIONS.
 INSTALL VERTICAL LATERAL AND TRANSVERSE SUPPORTS AT ALL LOCATIONS OF BRANCHES, OR CHANGES OF DIRECTION.
 INSTALL LATERAL, LATERAL AND TRANSVERSE SUPPORTS WITHIN 36" OF ATTACHED EQUIPMENT.

RECTANGULAR DUCT MINIMUM HORIZONTAL SUPPORT SPACING REQUIREMENTS

W X H DUCTS	HEIGHT (INCHES)	4 TO 10	11 TO 16	17 TO 22	23 TO 30	40 TO 41	51 TO 50	61 TO 60	61 TO 70
4 TO 10	4	5	5	5	5	5	5	5	5
11 TO 16	6	6	6	6	6	6	6	6	6
17 TO 22	8	8	8	8	8	8	8	8	8
23 TO 30	10	10	10	10	10	10	10	10	10
41 TO 50	8	8	8	8	8	8	8	8	8
51 TO 60	6	6	6	6	6	6	6	6	6
61 TO 70	5	5	5	5	5	5	5	5	5

3 PS-TA-98 (V, T, L AND A) TYPICAL RECTANGULAR DUCT SUPPORT
 SCALE: NO SCALE

STEEL PIPE MINIMUM HORIZONTAL SUPPORT SPACING

SCHEDULE NUMBER	INSULATION THICKNESS (INCHES)	NOMINAL PIPE SIZE (INCHES)														
		1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18
10	0	-	-	14	16	17	17	20	21	24	26	28	29	-	-	-
	1	-	-	12	14	15	15	18	20	23	25	27	29	-	-	-
	1 1/2	-	-	11	13	14	14	17	19	22	24	26	28	-	-	-
	2	-	-	10	12	13	13	17	18	21	24	26	28	-	-	-
40	0	9	11	14	16	18	18	22	24	28	31	33	35	37	-	-
	1	8	10	12	15	16	16	20	23	27	29	33	34	37	-	-
	1 1/2	7	9	11	14	15	15	19	22	26	29	32	34	36	-	-
	2	7	8	10	13	14	14	19	22	26	29	31	34	36	-	-
60	0	-	-	8	10	11	11	15	17	20	23	25	27	-	-	-
	1	-	-	7	9	10	10	13	15	18	21	23	25	-	-	-
	1 1/2	-	-	6	8	9	9	11	13	16	19	21	23	-	-	-
	2	-	-	5	7	8	8	10	12	15	18	21	23	-	-	-

PLASTIC PIPE MINIMUM HORIZONTAL SPACING (POLYPROPYLENE, CPVC, HDPE)

INSULATION THICKNESS (INCHES)	NOMINAL PIPE SIZE (INCHES)														
	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18
0	3	3	3	4	5	5	6	7	8	10	11	12	13	14	15
1	3	3	3	4	5	5	6	7	8	10	11	12	13	14	15
1 1/2	-	-	-	-	3	3	4	5	6	7	8	10	11	12	13
2	-	-	-	-	-	-	-	-	-	4	5	6	7	8	10

COPPER TUBING MINIMUM HORIZONTAL SUPPORT SPACING

INSULATION THICKNESS (INCHES)	NOMINAL PIPE SIZE (INCHES)						
	1/2	3/4	1	1 1/2	2	2 1/2	3
0	6	6	6	10	10	10	10
1	5	5	5	10	10	10	10
1 1/2	-	-	-	5	10	10	10
2	-	-	-	-	10	10	10

MAXIMUM VERTICAL SUPPORT SPACING

PIPING MATERIAL	MAXIMUM DISTANCE BETWEEN VERTICAL SUPPORTS (FEET)
POLYPROPYLENE	4
CPVC	4
HDPE	4
ALUMINUM	15
COPPER	10
CAST IRON	15
STEEL (CARBON AND STAINLESS)	15

WHERE PIPES OF DIFFERING MATERIALS ARE COMBINED ON A SINGLE VERTICAL SUPPORT STRUCTURE, EACH PIPE SHALL BE SUPPORTED AS REQUIRED FOR THE SMALLEST MAXIMUM VERTICAL SUPPORT SPACING.

1 MAXIMUM DISTANCES BETWEEN HORIZONTAL AND VERTICAL PIPING SUPPORTS
 SCALE: NO SCALE

DETAIL KEYNOTES:

- 1 SEE DETAIL 8, SHEET H6.10.08 FOR LATERAL AND TRANSVERSE BRACING REQUIREMENTS (SM). USE STRUCTURAL STAINLESS STEEL MEMBERS AND HARDWARE.
- 2 SUBSTITUTE CONNECTIONS SIMILAR TO THAT SHOWN IN DETAIL 3, SHEET H6.10.08 IN PLACE OF LATERAL, SUPPORT AND VERTICAL, ROD AT LOCATIONS AT REINFORCED CONCRETE WALLS WHERE INDICATED ON THE PLAN DRAWINGS. USE ALL STAINLESS STEEL COMPONENTS AND HARDWARE.
- 3 SEE DETAIL 2, SHEET H6.10.08 (SIMILAR) FOR CONNECTION TO CONCRETE WHERE APPLICABLE. USE ALL STAINLESS STEEL COMPONENTS AND HARDWARE.
- 4 FOR SUPPORT AREA SINGLE LENGTH TYPE TRAPEZE SUPPORTS, USE STANDARD MATERIAL STRUT, RODS AND HARDWARE IN LEU OF STAINLESS STEEL MATERIAL COMPONENTS.
- 5 ALL COMPONENTS INDICATED ARE FOR STAINLESS STEEL ASSEMBLIES TO BE USED IN SHIELDED AREAS. USE STANDARD MATERIALS IN UNSHIELDED SUPPORT AREAS (PS-TA-99 SERIES SUPPORTS).

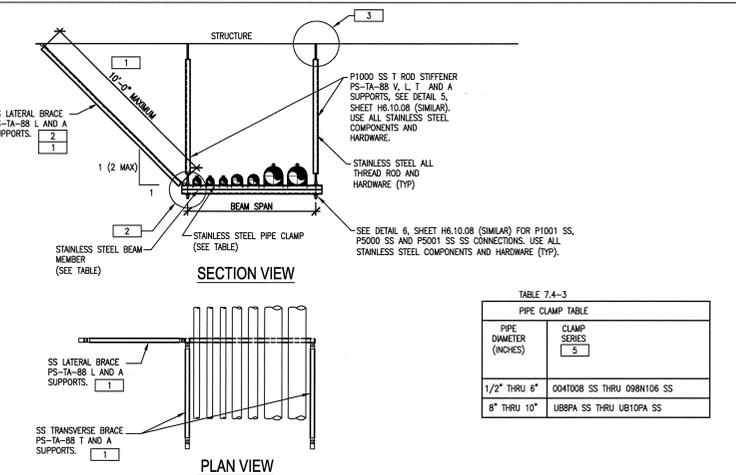


TABLE 7.4-3 PIPE CLAMP TABLE

PIPE DIAMETER (INCHES)	CLAMP SERIES
1/2" THRU 4"	004T09 SS THRU 09B1106 SS
8" THRU 10"	UBBPA SS THRU UB10PA SS

TABLE 7.4-1 SPAN LESS THAN OR EQUAL TO 4'-0"

LARGEST PIPE DIAMETER (INCHES)	MAXIMUM NUMBER OF PIPES	MINIMUM ALL THREAD ROD DIAMETER (INCHES)	MINIMUM BEAM MEMBER	MAXIMUM PIPING + WATER WEIGHT (LBS)	MAXIMUM HORIZONTAL SPACING (FEET)
1	10	3/8" - 16	P1000 SS	103	5
2	10	3/8" - 16	P1000 SS	510	10
3	8	1/2" - 13	P1001 SS AW	862	10
4	7	1/2" - 13	P1001 SS AW	1256	10
6	6	5/8" - 11	P1001 SS AW	1888	10
8	5	5/8" - 11	P5001 SS AW	2508	10
10	4	3/4" - 10	P5001 SS AW	2993	10

TABLE 7.4-2 SPAN LESS THAN OR EQUAL TO 6'-0"

LARGEST PIPE DIAMETER (INCHES)	MAXIMUM NUMBER OF PIPES	MINIMUM ALL THREAD ROD DIAMETER (INCHES)	MINIMUM BEAM MEMBER	MAXIMUM PIPING + WATER WEIGHT (LBS)	MAXIMUM HORIZONTAL SPACING (FEET)
1	15	3/8" - 16	P1000 SS	154	5
2	15	3/8" - 16	P1001 SS AW	765	10
3	12	1/2" - 13	P1001 SS AW	1294	10
4	11	5/8" - 11	P5000 SS	1793	10
6	8	5/8" - 11	P5001 SS AW	2517	10
8	7	3/4" - 10	P5001 SS AW	3511	10
10	5	3/4" - 10	P5001 SS AW	3729	10

MINIMUM BRACING REQUIREMENTS:
 BEAM MEMBER AND ROD TO BE SIZED BASED ON SPAN AND LARGEST PIPE SIZE ON TRAPEZE. SUPPORT SPACING TO BE AS REQUIRED FOR SMALLEST PIPE SIZE ON TRAPEZE. MAXIMUM HORIZONTAL SUPPORT SPACING SHALL NOT EXCEED THE VALUES INDICATED IN TABLES 7.4-1 AND 7.4-2.
 ALL PIPE TO BE SUPPORTED WITHIN 18" OF CHANGES IN DIRECTION.
 ALL PIPE TO BE SUPPORTED WITHIN 24" OF PENETRATIONS THROUGH WALLS.
 INSTALL TRANSVERSE BRACING AT EVERY OTHER SUPPORT LOCATION.
 INSTALL LATERAL BRACING AT MAXIMUM SPACING OF 20 FT.
 INSTALL VERTICAL BRACING AT ALL SUPPORT LOCATIONS.
 INSTALL VERTICAL LATERAL AND TRANSVERSE SUPPORTS AT OPPOSING ENDS OF STRAIGHT RUNS, AND AT CHANGES OF DIRECTION.
 INSTALL LATERAL, LATERAL AND TRANSVERSE SUPPORTS WITHIN 36" OF CONNECTIONS TO EQUIPMENT.

4 PS-TA-88 (V, T, L AND A) TYPICAL STAINLESS STEEL (SHIELDED AREAS) AND PS-TA-99 (V, T, L AND A) TYPICAL PIPING TRAPEZE SUPPORT (SUPPORT AREAS) SINGLE LENGTH PIPING TRAPEZE SUPPORT
 SCALE: NO SCALE

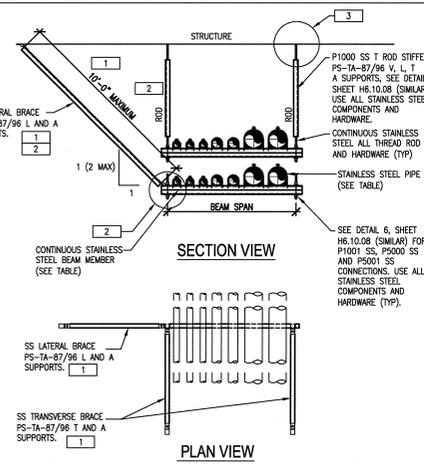


TABLE 7.2-1 BEAM MINIMUM SIZING TABLE FOR SPAN LESS THAN OR EQUAL TO 4'-0"

LARGEST PIPE DIAMETER (INCHES)	MAXIMUM NUMBER OF PIPES	MINIMUM BEAM MEMBER	MAXIMUM PIPING + WATER WEIGHT (LBS)	MAXIMUM HORIZONTAL SPACING (FEET)
1	10	P1000 SS	103	5
2	10	P1000 SS	510	10
3	8	P1001 SS AW	862	10
4	7	P1001 SS AW	1256	10
* 6	6	P1001 SS AW	1878	10
* 8	5	P5001 SS AW	2508	10
* 10	4	P5001 SS AW	2993	10

TABLE 7.2-2 BEAM MINIMUM SIZING TABLE FOR SPAN GREATER THAN 4'-0" AND LESS THAN OR EQUAL TO 6'-0"

LARGEST PIPE DIAMETER (INCHES)	MAXIMUM NUMBER OF PIPES	MINIMUM BEAM MEMBER	MAXIMUM PIPING + WATER WEIGHT (LBS)	MAXIMUM HORIZONTAL SPACING (FEET)
1	15	P1000 SS	154	5
2	15	P1001 SS AW	765	10
3	12	P1001 SS AW	1294	10
* 4	11	P5000 SS	1793	10
* 6	8	P5001 SS AW	2517	10
* 8	7	P5001 SS AW	3511	10
* 10	5	P5001 SS AW	3729	10

DETAIL KEYNOTES:

- 1 SEE DETAIL 8, SHEET H6.10.08 FOR LATERAL AND TRANSVERSE BRACING REQUIREMENTS (SM). USE STRUCTURAL STAINLESS STEEL MEMBERS AND HARDWARE.
- 2 SUBSTITUTE CONNECTIONS SIMILAR TO THAT SHOWN IN DETAIL 2, SHEET H6.10.08 IN PLACE OF LATERAL, SUPPORT AND VERTICAL, ROD AT LOCATIONS AT REINFORCED CONCRETE & CMU WALLS WHERE INDICATED ON THE PLAN DRAWINGS. USE ALL STAINLESS STEEL COMPONENTS AND HARDWARE.
- 3 SEE DETAIL 2, SHEET H6.10.08 (SIMILAR) FOR CONNECTION TO CONCRETE WHERE APPLICABLE. USE ALL STAINLESS STEEL COMPONENTS AND HARDWARE.
- 4 FOR SUPPORT AREA DOUBLE HEIGHT TYPE TRAPEZE SUPPORTS, USE STANDARD MATERIALS IN UNSHIELDED SUPPORT AREAS (PS-TA-96 SERIES SUPPORTS).
- 5 ALL COMPONENTS INDICATED ARE FOR STAINLESS STEEL ASSEMBLIES TO BE USED IN SHIELDED AREAS. USE STANDARD MATERIALS IN UNSHIELDED SUPPORT AREAS (PS-TA-96 SERIES SUPPORTS).

TABLE 7.2-4 ROD SIZING TABLE FOR SPAN OF 4'-0" OR LESS

TOP BEAM LARGEST PIPE DIAMETER (INCHES)	BOTTOM BEAM LARGEST PIPE DIAMETER (INCHES)									
	1	2	3	4	6	8	10	12	14	16
1	3/8" - 16	3/8" - 16	1/2" - 13	1/2" - 13	5/8" - 11	5/8" - 11	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10
2	3/8" - 16	1/2" - 13	1/2" - 13	1/2" - 13	5/8" - 11	5/8" - 11	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10
3	1/2" - 13	1/2" - 13	5/8" - 11	5/8" - 11	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10
4	1/2" - 13	1/2" - 13	5/8" - 11	5/8" - 11	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10
6	5/8" - 11	5/8" - 11	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10
8	5/8" - 11	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10
10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10

TABLE 7.2-5 ROD SIZING TABLE FOR SPAN LARGER THAN 4'-0" AND LESS THAN 6'-0"

TOP BEAM LARGEST PIPE DIAMETER (INCHES)	BOTTOM BEAM LARGEST PIPE DIAMETER (INCHES)									
	1	2	3	4	6	8	10	12	14	16
1	3/8" - 16	1/2" - 13	5/8" - 11	5/8" - 11	5/8" - 11	7/8" - 9	7/8" - 9	7/8" - 9	7/8" - 9	7/8" - 9
2	1/2" - 13	5/8" - 11	5/8" - 11	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10
3	5/8" - 11	5/8" - 11	5/8" - 11	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10
4	5/8" - 11	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10
6	5/8" - 11	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10	3/4" - 10
8	7/8" - 9	NOT ALLOWED								
10	7/8" - 9	NOT ALLOWED								

TABLE 7.2-3 PIPE CLAMP TABLE

PIPE DIAMETER (INCHES)	CLAMP SERIES
1/2" THRU 6"	004T09 SS THRU 09B1106 SS
8" THRU 10"	UBBPA SS THRU UB10PA SS

MINIMUM BRACING REQUIREMENTS:
 BEAM MEMBER AND ROD TO BE SIZED BASED ON SPAN AND LARGEST PIPE SIZE ON TRAPEZE. SUPPORT SPACING TO BE AS REQUIRED FOR SMALLEST PIPE SIZE ON TRAPEZE. MAXIMUM HORIZONTAL SUPPORT SPACING SHALL NOT EXCEED THE VALUES INDICATED IN TABLES 7.2-1 AND 7.2-2.
 ALL PIPE TO BE SUPPORTED WITHIN 18" OF CHANGES IN DIRECTION.
 ALL PIPE TO BE SUPPORTED WITHIN 24" OF PENETRATIONS THROUGH WALLS.
 INSTALL TRANSVERSE BRACING AT EVERY OTHER SUPPORT LOCATION.
 INSTALL LATERAL BRACING AT MAXIMUM SPACING OF 20 FT.
 INSTALL VERTICAL BRACING AT ALL SUPPORT LOCATIONS.
 INSTALL VERTICAL LATERAL AND TRANSVERSE SUPPORTS AT OPPOSING ENDS OF STRAIGHT RUNS, AND AT CHANGES OF DIRECTION.
 INSTALL LATERAL, LATERAL AND TRANSVERSE SUPPORTS WITHIN 36" OF CONNECTIONS TO EQUIPMENT.

5 PS-TA-87 (V, T, L AND A) TYPICAL STAINLESS STEEL DOUBLE HEIGHT PIPING TRAPEZE SUPPORT (SHIELDED AREAS) AND PS-TA-96 (V, T, L AND A) TYPICAL DOUBLE HEIGHT PIPING TRAPEZE SUPPORT (SUPPORT AREAS)