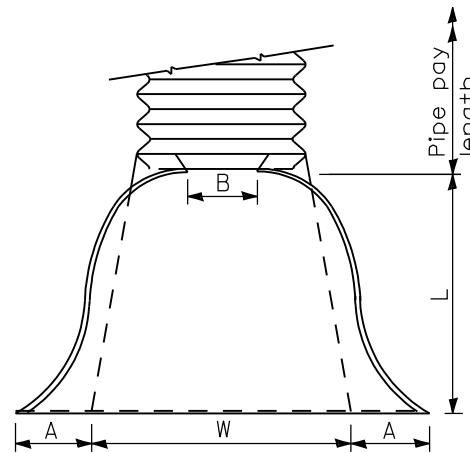
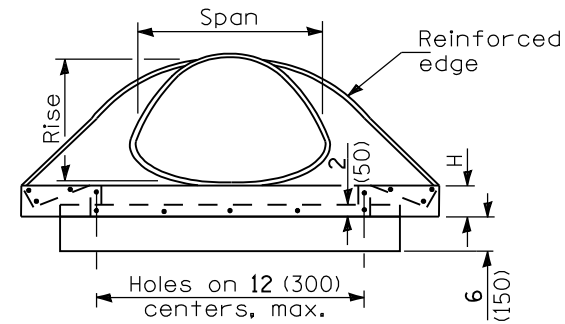


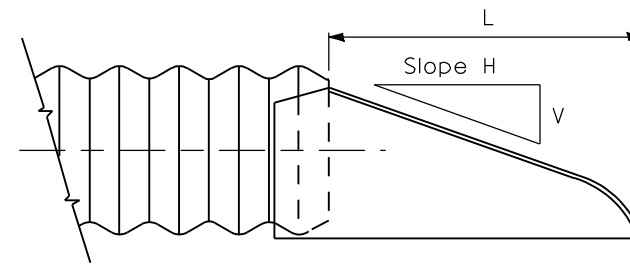
PIPE ARCH DIMENSIONS		THICKNESS	DIMENSIONS					SLOPE (Approx.) (V:H)	BODY
SPAN	RISE		A	B	H	L	W		
17 (432)	13 (330)	0.064 (1.63)	7 (180)	9 (230)	6 (150)	19 (485)	30 (760)	1:2 1/2	1 Pc.
21 (533)	15 (381)	0.064 (1.63)	7 (180)	10 (255)	6 (150)	23 (585)	36 (915)	1:2 1/2	1 Pc.
24 (610)	18 (457)	0.064 (1.63)	8 (205)	12 (305)	6 (150)	28 (710)	42 (1,065 m)	1:2 1/2	1 Pc.
28 (711)	20 (508)	0.064 (1.63)	9 (230)	14 (355)	6 (150)	32 (815)	48 (1,220 m)	1:2 1/2	1 Pc.
35 (889)	24 (610)	0.064 (1.63)	10 (255)	16 (405)	6 (150)	39 (990)	60 (1,525 m)	1:2 1/2	1 Pc.
42 (42)	29 (737)	0.064 (1.63)	12 (305)	18 (460)	8 (205)	53 (1,170 m)	75 (1,905 m)	1:2 1/2	1 Pc.
49 (1245)	33 (838)	0.109 (2.77)	13 (330)	21 (535)	9 (230)	46 (1,345 m)	85 (2,160 m)	1:2 1/2	2 Pc.
57 (1448)	38 (965)	0.109 (2.77)	18 (460)	26 (660)	12 (305)	63 (1,600 m)	90 (2,285 m)	1:2 1/2	2 Pc.
64 (1626)	43 (1092)	0.109 (2.77)	18 (460)	30 (760)	12 (305)	70 (1,780 m)	102 (2,590 m)	1:2 1/4	2 Pc.
71 (1803)	47 (1194)	0.109 (2.77)	18 (460)	33 (840)	12 (305)	77 (1,955 m)	114 (2,895 m)	1:2 1/4	3 Pc.
77 (1956)	52 (1321)	0.109 (2.77)	18 (460)	36 (915)	12 (305)	77 (1,955 m)	126 (3,200 m)	1:2	3 Pc.
83 (2108)	57 (1448)	0.109 (2.77)	18 (460)	39 (990)	12 (305)	77 (1,955 m)	138 (3,505 m)	1:2	3 Pc.



PLAN



END VIEW



SIDE VIEW

END SECTION

NOTES

For the 77x52 (1956x1321) and 83x57 (2108x1448) sizes, reinforced edges shall be supplemented with 2x2x1/4 (51x51x6.4) stiffener angles. The angles shall be attached by 3/8 (M10) rivets or bolts.

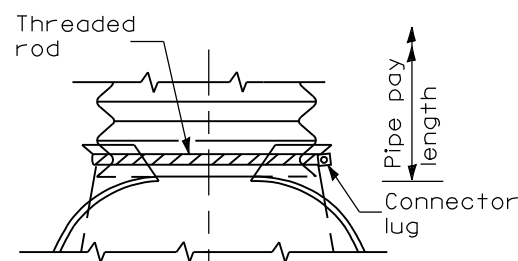
Angle reinforcement shall be placed under the center panel seams on the 77x52 (1956x1321) and 83x57 (2108x1448) sizes.

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

NOTES

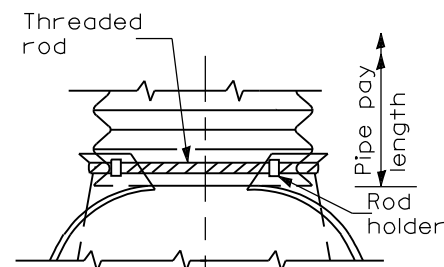
- Type 1 and 2 connection shall be used only with pipes with annular ends.
- Type 3 connection can be used with all pipe arch sizes and includes 12 (300) of the pipe length. The annular connector section shall be attached to the end section by rivets or bolts and shall be the same metal thickness as the end section. When coupling the type 3 end section to a pipe with helical ends, only the dimple type coupling band shall be used.
- Type 4 connection can be used with all pipe arch sizes. The end section band shall be either a dimple, hugger, or annular band and can be used with pipes having annular ends. For pipes having helical ends, only the dimple end section band will be allowed.

All dimensions are in inches (millimeters) unless otherwise shown.



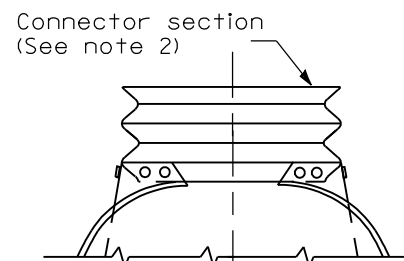
TYPE 1

For 17x13 (432x330) thru 28x20 (711x508) only (See Note 1)



TYPE 2

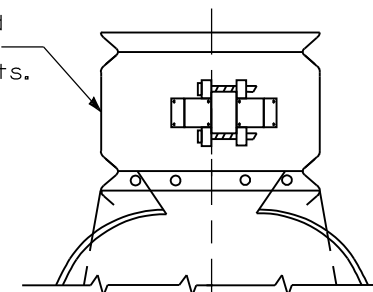
For 17x13 (432x330) thru 57x38 (1448x965) only (See Note 1)



TYPE 3

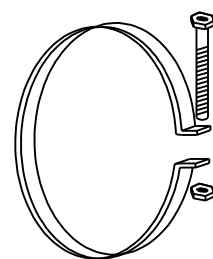
(See Note 2)

Band shop bolted to end section with 3/8 (M10) bolts.



TYPE 4

(See Note 3)



1 (25) wide, 0.109 (2.77) thick strap with standard 1/2x6 (M12x150) band bolt and nut.

ALTERNATE STRAP CONNECTOR

(For Type 1 only)

CONNECTIONS OF END SECTIONS

DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-97	Renum. Standard 2229-6.

METAL END SECTIONS FOR PIPE ARCHES

STANDARD 542406-01

Illinois Department of Transportation
 PASSED January 1, 2009
 ENGINEER OF POLICY AND PROCEDURES
 APPROVED January 1, 2009
 ENGINEER OF DESIGN AND ENVIRONMENT