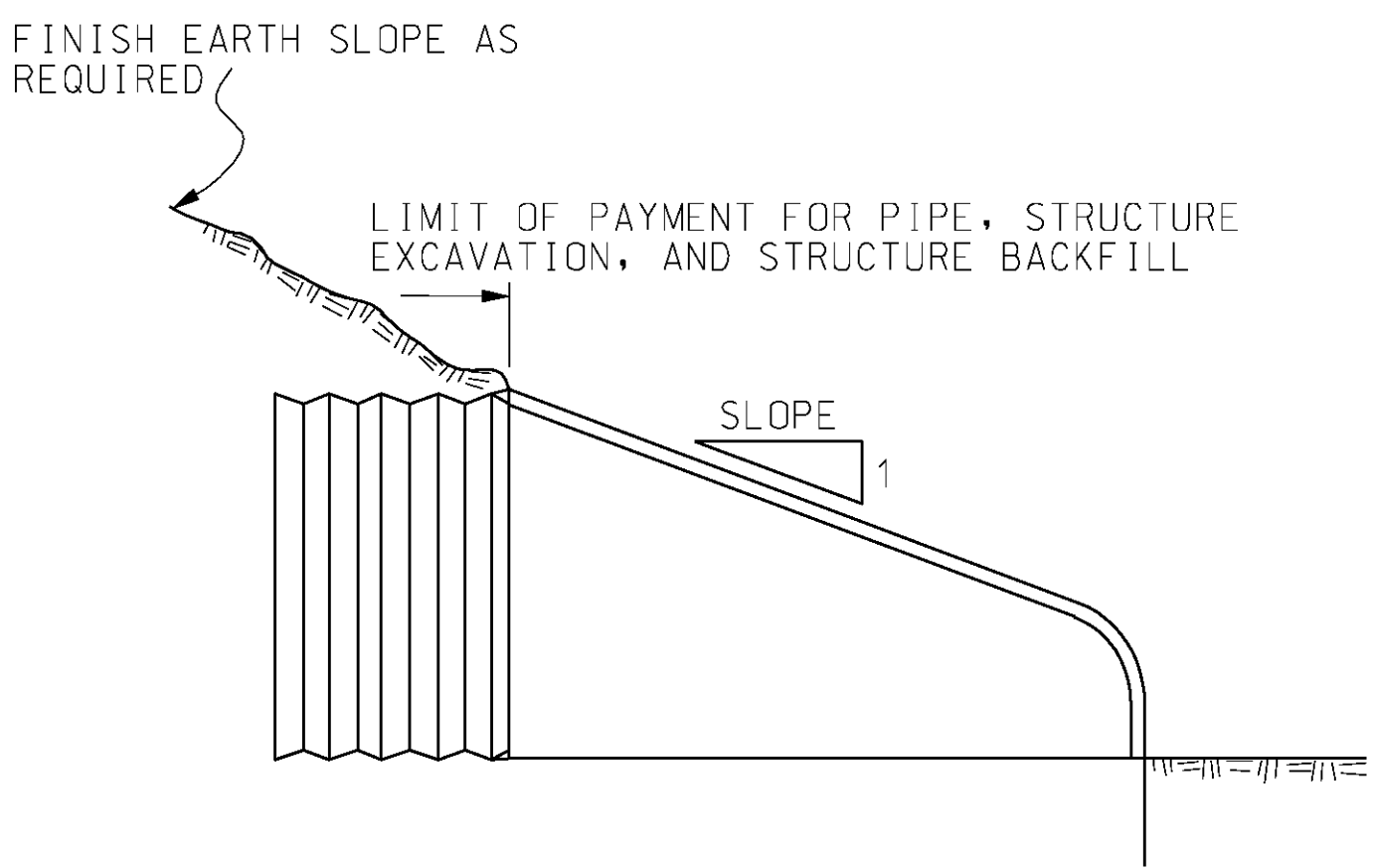
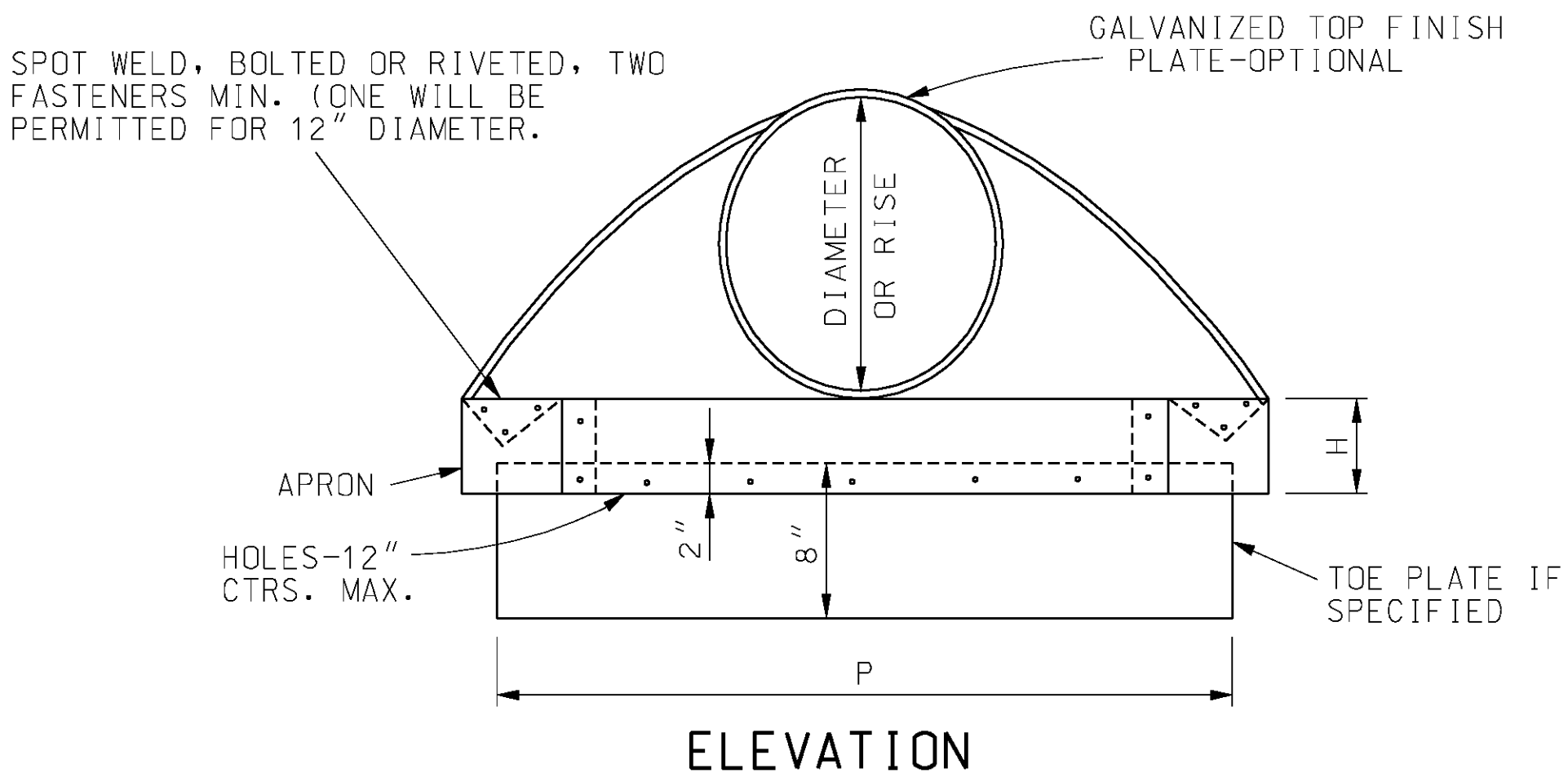


1 INCH WIDE 0.109" THICK CONNECTOR STRAP OF COMMERCIAL QUALITY STEEL, GALVANIZED WITH SAME WEIGHT COATING AS PIPE, AND 6" x 1/2" GALVANIZED BAND BOLT AND NUT. USE AS ALTERNATE ON TYPE 1 CONNECTION ONLY

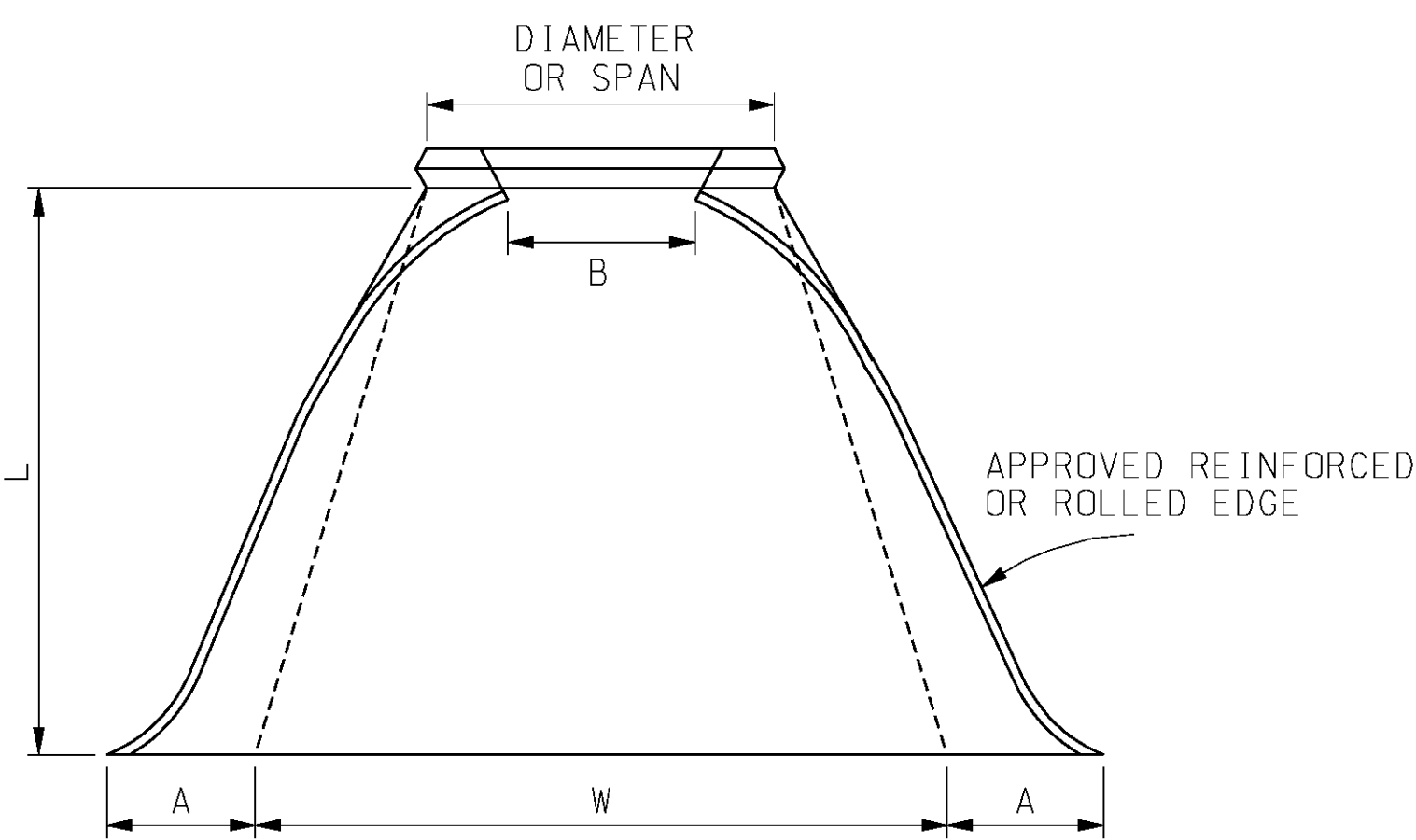
CONNECTOR STRAP



TYPICAL CROSS-SECTION

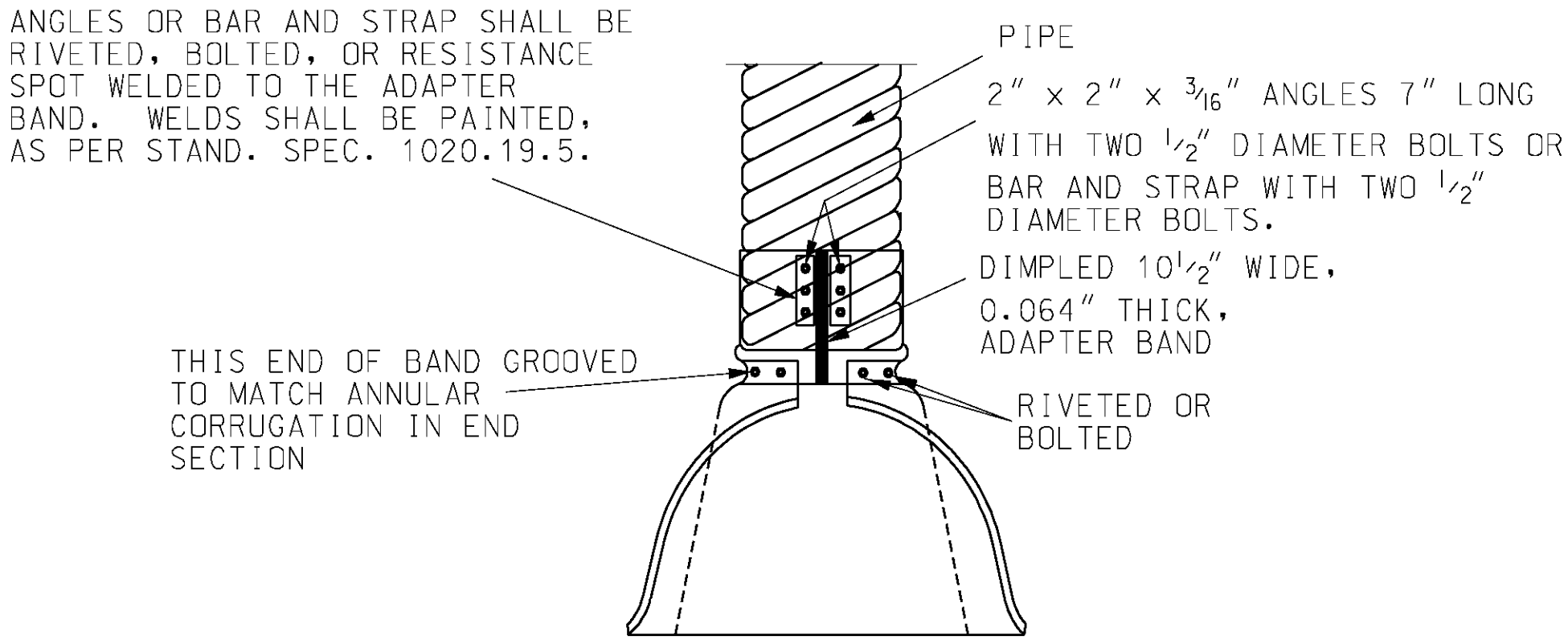


ELEVATION



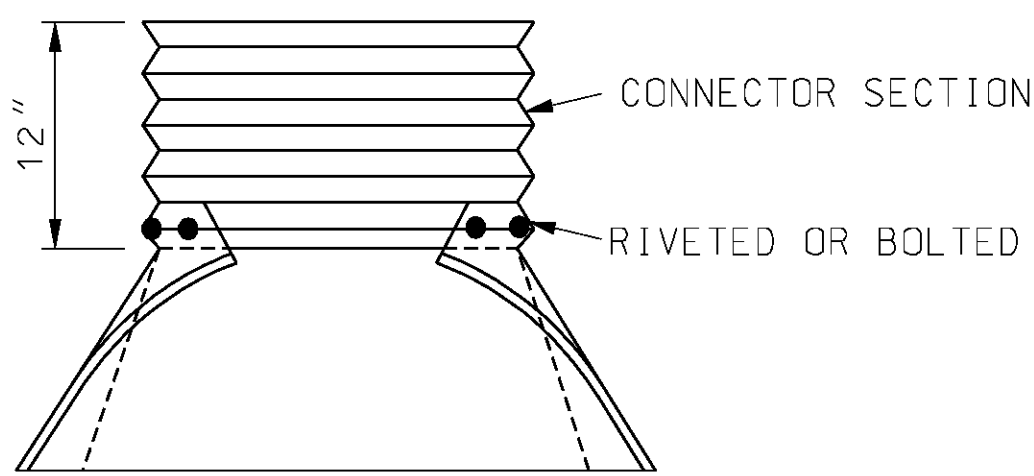
PLAN

END SECTION FOR PIPE AND PIPE ARCH



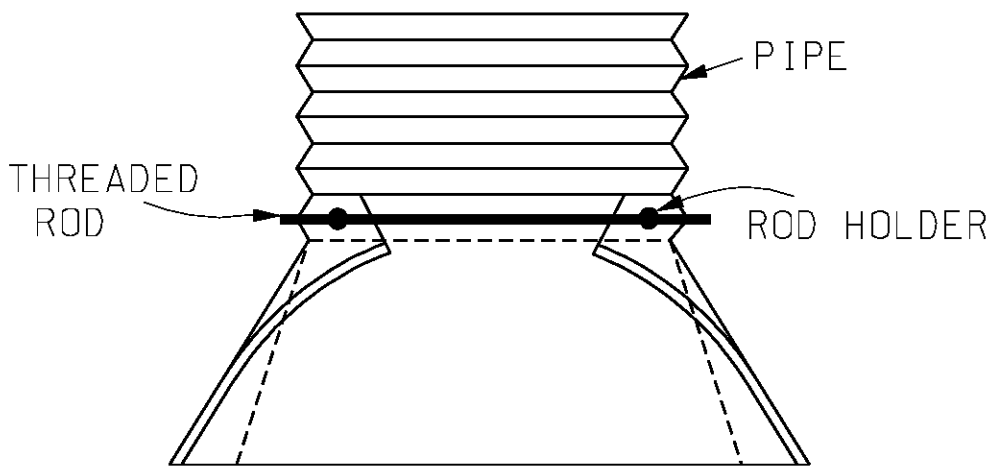
FOR 12" THRU 42" PIPE AND EQUIVALENT PIPE ARCH

TYPE 4 CONNECTION



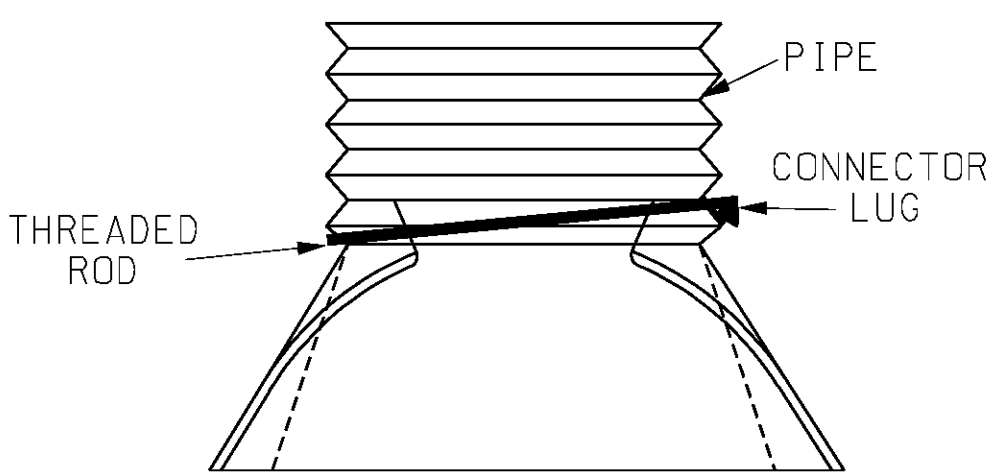
PERMISSIBLE FOR ALL SIZES THRU 84" PIPE AND B-12 OR B-12A PIPE ARCH

TYPE 3 CONNECTION



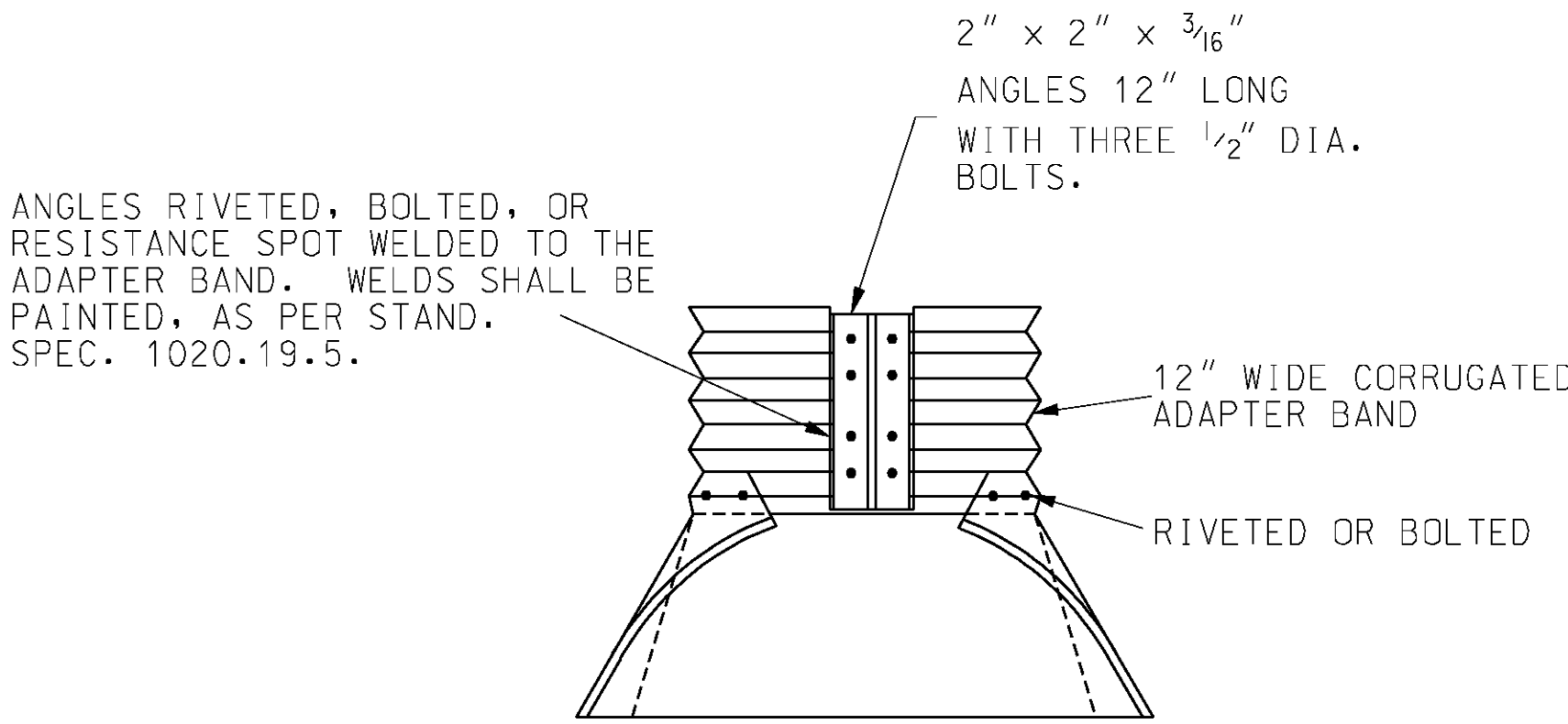
FOR 30" THRU 48" PIPE AND EQUIVALENT PIPE ARCH

TYPE 2 CONNECTION



FOR 12" THRU 24" ROUND PIPE ONLY

TYPE 1 CONNECTION



PERMISSIBLE FOR ALL SIZES THRU 84" PIPE AND B-12 OR B-12A PIPE ARCH

TYPE 5 CONNECTION

END SECTIONS FOR ARCH PIPE										
TYPE	ARCH DIMENSIONS SPAN X RISE	DIAM. EQUIVALENT ROUND PIPE IN.	GALV. SHEET THICK IN.	DIMENSIONS (IN)				APPROXIMATE SLOPE (V:H) (1:SLOPE)	TOE PLATE IF SPECIFIED P. IN.	
				A 1" TOL.	B MAX.	H 1" TOL.	L 1-1/2" TOL.			W 2" TOL.
B5	SEE STANDARD SPECIFICATIONS, SECTION 1020	30	.079	10	16	6	39	60	2-1/2	70
B6 or B6A		36	.079	12	18	8	46	75	2-1/2	85
B7 or B7A		42	.109	13	21	9	53	85	2-1/2	107
B8 or B8A		48	.109	18	26	12	63	90	2-1/2	112
B9 or B9A		54	.109	18	30	12	70	102	2 or 2-1/4	124
B10 or B10A		60	.109	18	33	12	77	114	1-1/2 or 2-1/4	136
B11 or B11A		66	.109	18	36	12	77	126	1-1/2 or 2	148
B12 or B12A		72	.109	18	39	12	77	138	1-1/2 or 2	160

PIPE DIA. IN.	GALV. SHEET THICK IN.	DIMENSIONS (IN)					APPROXIMATE SLOPE (V:H) (1:SLOPE)	TOE PLATE IF SPECIFIED P. IN.
		A	B	H	L	W		
		1" TOL.	MAX.	1" TOL.	1-1/2" TOL.	2" TOL.		
12	.064	6	6	6	21	24	2-1/2	34
15	.064	7	8	6	26	30	2-1/2	40
18	.064	8	10	6	31	36	2-1/2	46
21	.064	9	12	6	36	42	2-1/2	52
24	.064	10	13	6	41	48	2-1/2	58
30	.079	12	16	8	51	60	2-1/2	70
36	.079	14	19	9	60	72	2-1/2	94
42	.109	16	22	11	69	84	2-1/2	106
48	.109	18	27	12	78	90	2-1/2	112
54	.109	18	30	12	84	102	2 or 2-1/4	124
60	.109	18	33	12	87	114	1-3/4 or 2	136
66	.109	18	36	12	87	120	1-1/2 or 2	144
72	.109	18	39	12	87	126	1-1/3 or 2	148
78	.109	18	42	12	87	132	1-1/4 or 1-1/2	154
84	.109	18	45	12	87	138	1-1/6 or 1-1/2	160

GENERAL NOTES:

MINOR VARIATIONS OF DETAIL AND DIMENSIONS WILL BE ACCEPTED TO PERMIT THE USE OF A MANUFACTURER'S STANDARD METHODS OF FABRICATION.

END SECTIONS FABRICATED FROM THICKER METAL THAN INDICATED WILL BE ACCEPTED.

ALL BOLTS SHALL BE 3/8" DIAMETER AND GALVANIZED, UNLESS OTHERWISE SHOWN.

TOE PLATES, IF SPECIFIED, SHALL BE PUNCHED TO MATCH HOLES IN THE APRON.

SKIRT SECTION IS DEFINED AS THE FLARED PORTION OF THE END SECTION INCLUDING SIDE AND BOTTOM (CENTER) PANELS AND APRON.

SKIRT SECTION FOR 12" THRU 24" PIPES SHALL BE MADE IN ONE PIECE.

SKIRT SECTIONS FOR 30" AND LARGER PIPES AND B5 AND LARGER PIPE ARCHES MAY BE MADE FROM UP TO 2 SHEETS JOINED BY RIVETING OR BOLTING ON CENTERLINE.

SKIRT SECTIONS FROM 48" AND LARGER PIPES AND B8 OR LARGER PIPE ARCHES MAY BE MADE FROM UP TO 3 SHEETS JOINED BY RIVETING OR BOLTING EQUAL DISTANCE FROM CENTERLINE.

SKIRT SECTIONS FOR 72" AND LARGER PIPES MAY BE MADE FROM UP TO 4 SHEETS JOINED BY RIVETING AND BOLTING. THE BOTTOM PANEL SHALL BE 2 EQUAL WIDTH SHEETS JOINED ON CENTERLINE.

ALL 3 PIECE AND 4 PIECE SKIRTS FOR 60" OR LARGER PIPES AND B10 AND LARGER PIPE ARCHES SHALL HAVE 0.109" THICK SIDES AND 0.138" THICK BOTTOM (CENTER) PANELS. WIDTH OF BOTTOM PANELS SHALL BE GREATER THAN 20% OF THE PIPE PERIPHERY.

CONNECTOR SECTIONS, CORNER PLATES AND TOE PLATES SHALL BE GALVANIZED AND OF THE SAME OR GREATER THICKNESS AS THE SKIRT.

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION			
FLARED END SECTION METAL			
DATE: _____	EFFECTIVE: 10-01-1998	732.00M	2/2