

General Notes:

- All 3pc. bodies to have 0.105" thick sides and 0.135" thick center panels. Width of center panels to be greater than 20% of the pipe periphery. Multiple panel bodies to have lap seams which are to be tightly joint by  $\frac{3}{8}$ " stainless steel rivets or bolts.
- Reinforced edges to be supplemented with zinc coated stiffener angles for the 60" thru 84" round, 77"x52" and 83"x57" pipe-arch sizes. The angles will be 2"x2"x $\frac{1}{4}$ " for the 60" thru 72" round, 77"x52" and 83"x57" pipe-arch sizes and 2 $\frac{1}{2}$ "x2 $\frac{1}{2}$ "x $\frac{1}{4}$ " for 78" and 84" round. The angles to be attached by  $\frac{3}{8}$ " stainless steel nuts and bolts.
- Angle reinforcement will be placed under the center panel seams on the 77"x52" and 83"x57" pipe-arch sizes.
- Aluminum toe plate to be available as an accessory when specified.
- End of pipe to be finished with annular corrugations to conform to flared end so that no leakage results from the connection. Other designs may be used with approval of the Engineer.
- Corrugated Aluminum Pipe (CAP) culvert shall conform to AASHTO M196-92 (ASTM B745/B)

TYPICAL CROSS-SECTION

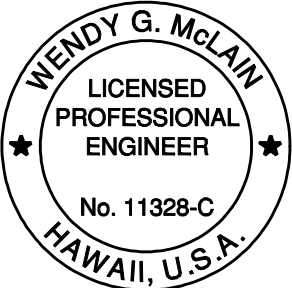
CIRCULAR PIPES						PIPE-ARCHES							
INCHES	DIMENSIONS-INCHES					INCHES	DIMENSIONS-INCHES						
	A	B	H	L	W		A	B	H	L	W		
PIPE DIA.	1±	MAX.	1±	1/2±	2±	SPAN	RISE	1±	MAX.	1±	1/2±	2±	
12	6	6	6	21	24	21	15	7	10	6	23	36	
15	7	8	6	28	30	24	18	8	12	6	28	42	
18	8	10	6	31	36	28	20	9	14	6	32	48	
21	9	12	6	36	42	35	24	10	16	8	39	60	
24	10	13	6	41	48	42	29	12	18	9	46	75	
30	12	16	8	51	60	49	33	13	21	12	53	85	
36	14	19	9	60	72	57	38	18	26	12	63	90	
42	16	22	11	69	84	64	43	18	30	12	70	102	
48	18	27	12	78	90	71	47	18	33	12	77	114	
54	18	30	12	84	102	77	52	18	36	12	77	126	
60	18	33	12	87	114	83	57	18	39	12	77	138	
66	18	36	12	87	120								
72	18	39	12	87	126								
78	18	42	12	87	132								
84	18	45	12	87	138								

FLARED END SECTIONS FOR C.A.P. CULVERTS

00/00/00	X	
DATE	REVISION	APP'D.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**STANDARD PLAN H-25**  
**FLARED END SECTION**  
**FOR CULVERTS**

STANDARD PLAN H-25 05/31/07

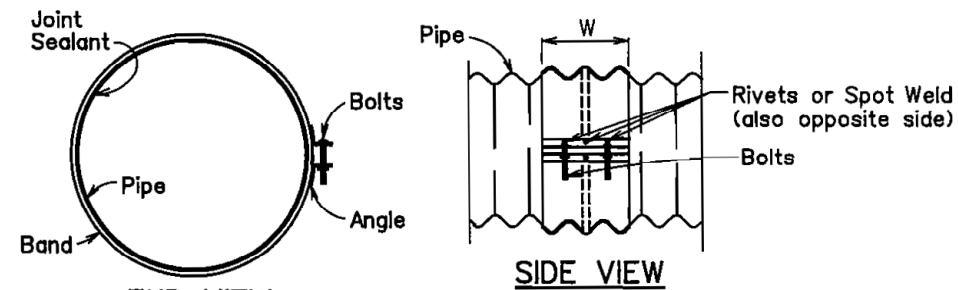


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EXPIRATION DATE OF THE LICENSE

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
FEDERAL LANDS HIGHWAY  
U.S. CUSTOMARY SPECIAL  
**(HDOT STD H-25)**  
**FLARED END SECTION**  
**FOR CULVERTS**

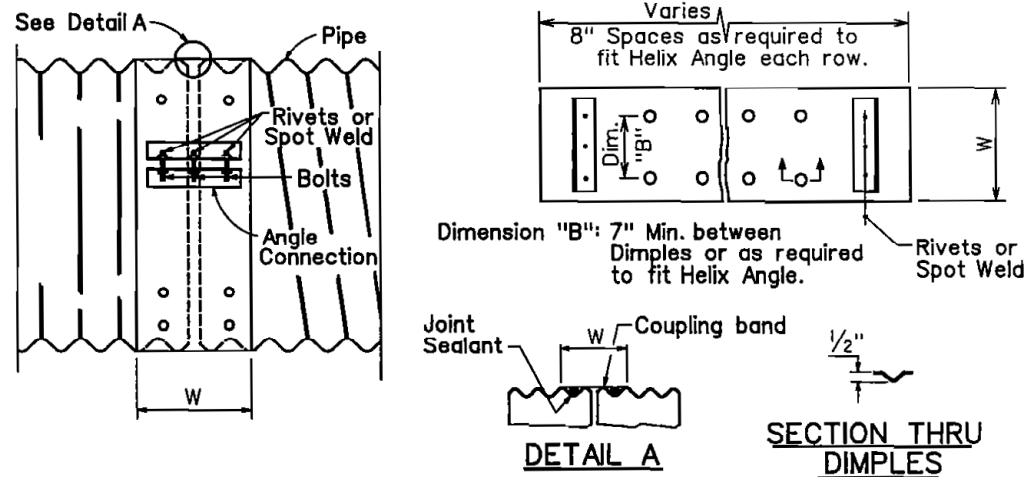
SPECIAL  
602-A

NO SCALE



END VIEW  
ANNULAR COUPLING BAND

Not to Scale



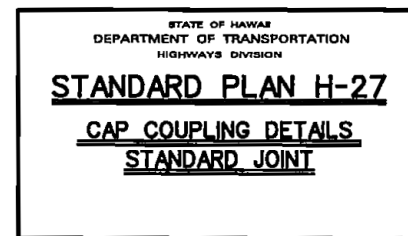
UNIVERSAL COUPLING BAND ANGLE CONNECTION

COUPLING TYPE	CORRUGATION	PIPE SIZE	W	PIPE WALL THICKNESS	ANGLE CONNECTIONS- QUANTITIES PER CONNECTION			
					DIMENSIONS	BOLTS	RIVETS	SPOT WELD
UNIVERSAL	2 2/3 x 1/2	12-36	10 1/2	0.075-0.138	2-2x2x3/16x7	2-1/2x6	3-3/8	3-1/2
		42-60	16 1/2	0.164-0.168	2-2x2x3/16x12	3-1/2x6	4-3/8	5-1/2
		66-84	16 1/2	0.164-0.168	2-2x2x3/16x12	3-1/2x6	4-3/8	5-1/2
ANNULAR	3X1	36-72	10 1/2	0.075-0.138	2-2x2x3/16x7	2-1/2x6	3-3/8	3-1/2
		78-120	16 1/2	0.075-0.138	2-2x2x3/16x12	3-1/2x6	4-3/8	5-1/2
		12-36	7	0.075-0.138	2-2x2x3/16x7	2-1/2x6	3-3/8	3-1/2
	2 2/3 x 1/2	42-72	12	0.075-0.138	2-2x2x3/16x12	3-1/2x6	4-3/8	5-1/2
		78-84	12	0.075-0.168	2-2x2x3/16x12	3-1/2x6	4-3/8	5-1/2
		36-42	14	0.075-0.109	2-2x2x3/16x12	3-1/2x6	4-3/8	5-1/2
	3X1	48-84	14	0.075-0.109	2-2x2x3/16x12	3-1/2x6	4-3/8	5-1/2
		90-120	14	0.075-0.109	2-2x2x3/16x12	3-1/2x6	4-3/8	5-1/2

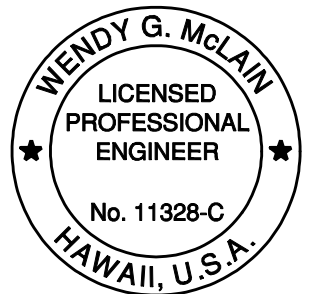
General Notes:

1. All coupling band connection hardware shall be stainless steel in accordance with Standard Specifications.
2. For pipe arches use same width band as for round pipe of same periphery.
3. Two pieces band required for pipe greater than 48" diameter.
4. Fillet welds of equivalent strengths may be substituted for spot welds or rivets.
5. Dimensions and thickness shown are in inches and are nominal.

00/00/00 X		
DATE	REVISION	APP'D.



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U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
U.S. CUSTOMARY SPECIAL <b>(HDOT STD H-27)</b> <b>CAP COUPLING DETAILS</b>	
	SPECIAL 602-B

NO SCALE