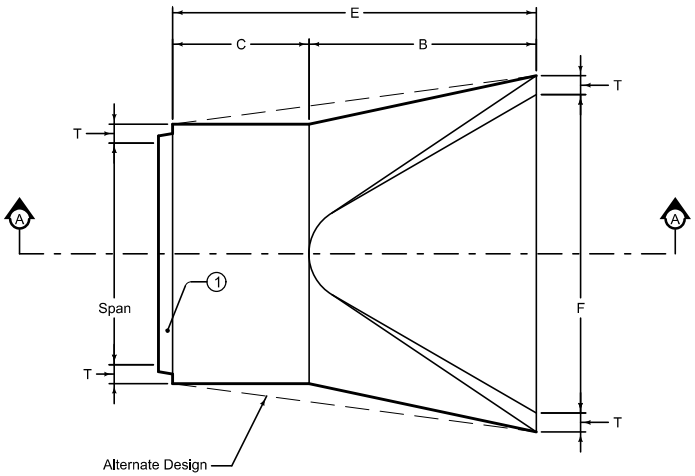
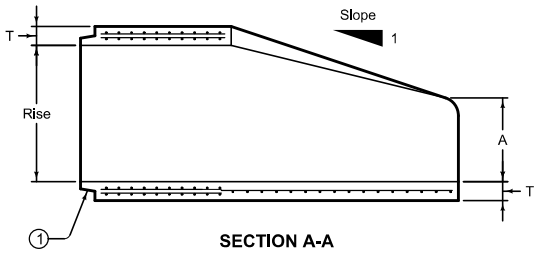
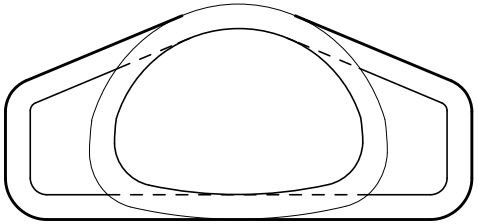


PLAN



SECTION A-A



END

Comply Apron Reinforcement with AASHTO M 206.

Dimension "E" shown is minimum and is considered the design length. Appropriately adjust for any difference between the actual length of concrete apron installed and the length indicated hereon for the length of concrete culvert pipe furnished.

(1) Tongue end on inlet end section. Groove end on outlet end section. (Inlet end section shown.)

NOMINAL DIMENSIONS SPAN X RISE Inches	EQUIVALENT DIAMETER Inches	WEIGHT PER SECTION Lbs.	SPAN Inches	RISE Inches	SLOPE	APPROXIMATE DIMENSIONS Inches					
						(T)	(A)	(B)	(C)	(E)	(F)
22 X 14	18	1090	22	$13\frac{1}{2}$	3:1	$2\frac{1}{2}$	7	27	45	72	36
29 X 18	24	1760	$28\frac{1}{2}$	18	3:1	3	$8\frac{1}{2}$	39	33	72	48
37 X 23	30	3280	$36\frac{1}{4}$	$22\frac{1}{2}$	3:1	$3\frac{1}{2}$	$9\frac{1}{2}$	50	46	96	60
44 X 27	36	4330	$43\frac{3}{4}$	$26\frac{5}{8}$	3:1	4	$11\frac{1}{8}$	60	36	96	72
52 X 32	42	5260	$51\frac{1}{8}$	$31\frac{5}{16}$	3:1	$4\frac{1}{2}$	$15\frac{13}{16}$	60	36	96	78
59 X 36	48	6380	$58\frac{1}{2}$	36	3:1	5	21	60	36	96	84
65 X 40	54	7860	65	40	3:1	$5\frac{1}{2}$	$25\frac{1}{2}$	60	36	96	90
73 X 45	60	9520	73	45	3:1	6	31	60	36	96	96
88 X 54	72	13550	88	54	2:1	7	31	60	39	99	120
102 X 62	84	17800	102	62	2:1	8	$21\frac{1}{2}$	83	19	102	144

Possible Contract Item:
Concrete Arch Apron

Possible Tabulations:
104-3
104-4

Iowa Department of Transportation

REVISION 5 10-18-11

STANDARD ROAD PLAN

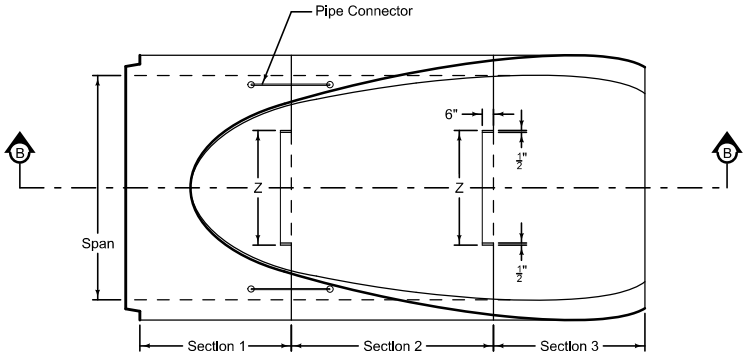
RF-42

SHEET 1 of 2

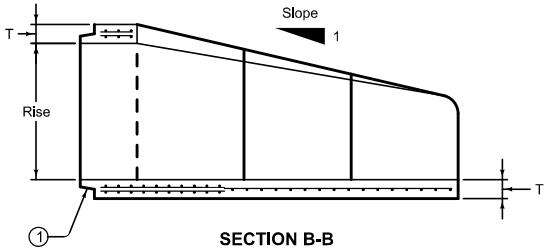
REVISIONS: Removed circle note 2 and replaced with 2 foot dimension. Modified 102x62 'A' dimension. Changed RF-41 ref. to AASHTO M 206 and 'T' values.

Deanna Maifield
APPROVED BY DESIGN METHODS ENGINEER

CONCRETE ARCH APRONS



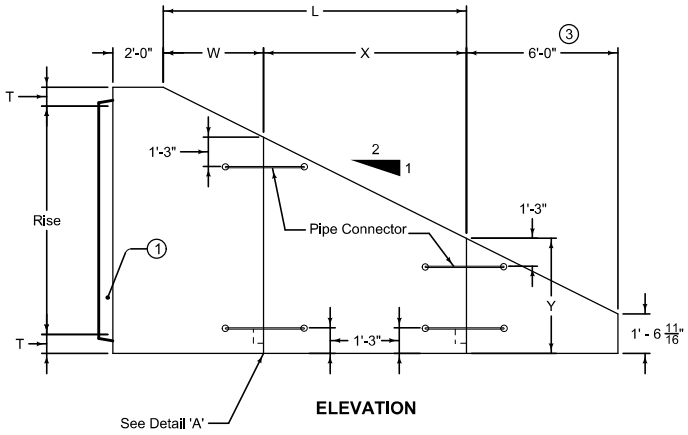
PLAN



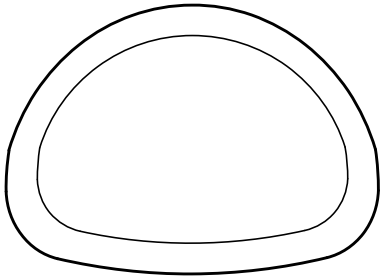
SECTION B-B

(1) Tongue end on inlet end section. Groove end on outlet end section. (Inlet end section shown.)

(3) 132" size is a three-piece end section.



ELEVATION



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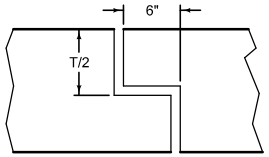

DETAIL 'A'

NOMINAL DIMENSIONS SPAN X RISE Inches	EQUIVALENT DIAMETER Inches	WEIGHT PER SECTION Lbs. (Approx.)			SPAN Inches	RISE Inches	APPROXIMATE DIMENSIONS Inches					
		Section 1	Section 2	Section 3			Ⓣ	Ⓛ	Ⓦ	Ⓧ	Ⓨ	Ⓩ
115 X 72	90	19100	3950		$115\frac{1}{2}$	72	$8\frac{1}{2}$	$102\frac{1}{4}$	72	$30\frac{1}{4}$	$37\frac{7}{8}$	48
122 X 78	96	22000	6050		$122\frac{3}{8}$	78	9	$112\frac{1}{2}$	72	$40\frac{1}{2}$	39	54
138 X 88	108	23000	15800		$138\frac{1}{2}$	88	10	$129\frac{1}{2}$	48	$81\frac{1}{2}$	$42\frac{3}{8}$	66
154 X 97	120	27000	24600		154	$96\frac{7}{8}$	11	144	48	96	$46\frac{7}{8}$	78
169 X 107	132 (3)	27950	25260	13640	$168\frac{3}{4}$	$106\frac{1}{2}$	10	144	48	96	$54\frac{5}{8}$	90

Iowa Department of Transportation

REVISION 5 10-18-11

STANDARD ROAD PLAN

RF-42

SHEET 2 of 2

REVISIONS: Removed circle note 2 and replaced with 2 foot dimension. Modified 102x62 'A' dimension. Changed RF-41 ref. to AASHTO M 206 and 'T' values.

Deanna Maifield

APPROVED BY DESIGN METHODS ENGINEER

CONCRETE ARCH APRONS