

## Round Structural Plate

Structure No.	Span (ft-in)	Area (ft <sup>2</sup> )
R-S-1	5-0	19.6
R-S-2	5-6	23.8
R-S-3	6-0	28.3
R-S-4	6-6	33.2
R-S-5	7-0	38.5
R-S-6	7-6	44.2
R-S-7	8-0	50.3
R-S-8	8-6	56.7
R-S-9	9-0	63.6
R-S-10	9-6	70.9
R-S-11	10-0	78.5
R-S-12	10-6	86.6
R-S-13	11-0	95.0
R-S-14	11-6	103.9
R-S-15	12-0	113.1

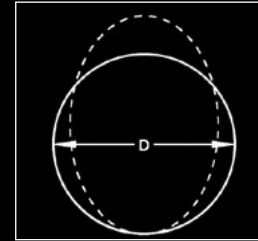
Structure No.	Span (ft-in)	Area (ft <sup>2</sup> )
R-S-16	12-6	122.7
R-S-17	13-0	132.7
R-S-18	13-6	143.1
R-S-19	14-0	153.9
R-S-20	14-6	165.1
R-S-21	15-0	176.7
R-S-22	15-6	188.7
R-S-23	16-0	201.1
R-S-24	16-6	213.8
R-S-25	17-0	227.0
R-S-26	17-6	240.5
R-S-27	18-0	254.5
R-S-28	18-6	268.8
R-S-29	19-0	283.5
R-S-30	19-6	298.6

Structure No.	Span (ft-in)	Area (ft <sup>2</sup> )
R-S-31	20-0	314.2
R-S-32	20-6	330.1
R-S-33	21-0	346.4
R-S-34	21-6	363.1
R-S-35	22-0	380.1
R-S-36	22-6	397.6
R-S-37	23-0	415.5
R-S-38	23-6	433.7
R-S-39	24-0	452.4
R-S-40	24-6	471.4
R-S-41	25-0	490.9
R-S-42	25-6	510.7
R-S-43	26-0	530.9



**Minimum 5' diameter with size increases in increments of 6"**

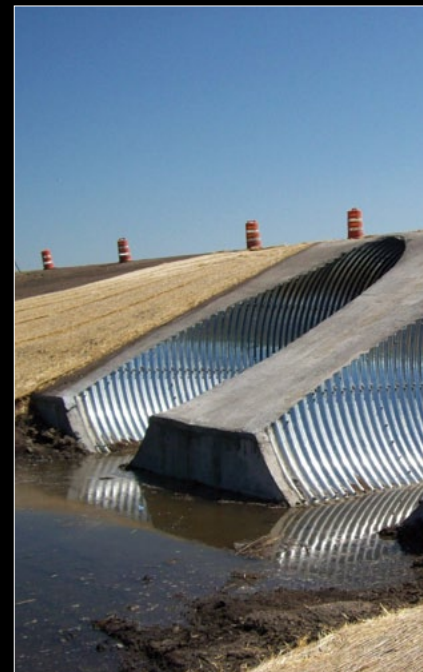
The structure can be fabricated with a vertical elongation to offset any planned or expected pipe deflections.



## Structural Plate Vertical Ellipse

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
VE-S-1	4-8	5-2	19
VE-S-2	5-2	5-8	23
VE-S-3	5-7	6-3	28
VE-S-4	6-1	6-9	32
VE-S-5	6-7	7-4	38
VE-S-6	7-1	7-10	43
VE-S-7	7-7	8-5	50
VE-S-8	8-1	8-11	55
VE-S-9	8-7	9-6	62
VE-S-10	9-1	10-0	70
VE-S-11	9-7	10-7	77
VE-S-12	10-0	11-1	85
VE-S-13	10-6	11-7	94
VE-S-14	11-0	12-2	102
VE-S-15	11-6	12-8	112
VE-S-16	11-10	13-1	124
VE-S-17	12-4	13-8	134
VE-S-18	12-10	14-2	144
VE-S-19	13-3	14-8	155
VE-S-20	13-9	15-3	167
VE-S-21	14-3	15-9	178
VE-S-22	14-9	16-3	191

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
VE-S-23	15-2	16-10	203
VE-S-24	15-9	17-5	216
VE-S-25	16-3	18-0	230
VE-S-26	16-9	18-6	244
VE-S-27	17-3	19-0	258
VE-S-28	17-8	19-7	272
VE-S-29	18-1	20-1	287
VE-S-30	18-8	20-7	302
VE-S-31	19-1	21-2	318
VE-S-32	19-8	21-9	336
VE-S-33	20-1	22-3	352
VE-S-34	20-7	22-10	370
VE-S-35	21-1	23-4	387
VE-S-36	21-7	23-11	405
VE-S-37	22-0	24-3	423
VE-S-38	22-7	24-11	442
VE-S-39	22-11	25-4	461
VE-S-40	23-7	26-0	480
VE-S-41	24-1	26-7	496
VE-S-42	24-6	27-1	516
VE-S-43	25-0	27-8	536





## Structural Plate Pipe-Arch

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
<b>with 18" corner radius</b>			
PA-S-1	6-1	4-7	22
PA-S-2	6-4	4-9	24
PA-S-3	6-9	4-11	26
PA-S-4	7-0	5-1	28
PA-S-5	7-3	5-3	31
PA-S-6	7-8	5-5	33
PA-S-7	7-11	5-7	35
PA-S-8	8-2	5-9	38
PA-S-9	8-7	5-11	40
PA-S-10	8-10	6-1	43
PA-S-11	9-4	6-3	46
PA-S-12	9-6	6-5	49
PA-S-13	9-9	6-7	52
PA-S-14	10-3	6-9	55
PA-S-15	10-8	6-11	58
PA-S-16	10-11	7-1	61
PA-S-17	11-5	7-3	64
PA-S-18	11-7	7-5	67
PA-S-19	11-10	7-7	71

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
PA-S-20	12-4	7-9	74
PA-S-21	12-6	7-11	78
PA-S-22	12-8	8-1	81
PA-S-23	12-10	8-4	85
PA-S-24	13-5	8-5	89
PA-S-25	13-11	8-7	93
PA-S-26	14-1	8-9	97
PA-S-27	14-3	8-11	101
PA-S-28	14-10	9-1	105
PA-S-29	15-4	9-3	109
PA-S-30	15-6	9-5	113
PA-S-31	15-8	9-7	118
PA-S-32	15-10	9-10	122
PA-S-33	16-5	9-11	126
PA-S-34	16-7	10-1	131
<b>with 31" corner radius</b>			
PA-S-35	13-3	9-4	97
PA-S-36	13-6	9-6	102
PA-S-37	14-0	9-8	105
PA-S-38	14-2	9-10	109

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
PA-S-39	14-5	10-0	114
PA-S-40	14-11	10-2	118
PA-S-41	15-4	10-4	123
PA-S-42	15-7	10-6	127
PA-S-43	15-10	10-8	132
PA-S-44	16-3	10-10	137
PA-S-45	16-6	11-0	142
PA-S-46	17-0	11-2	146
PA-S-47	17-2	11-4	151
PA-S-48	17-5	11-6	157
PA-S-49	17-11	11-8	161
PA-S-50	18-1	11-10	167
PA-S-51	18-7	12-0	172
PA-S-52	18-9	12-2	177
PA-S-53	19-3	12-4	182
PA-S-54	19-6	12-6	188
PA-S-55	19-8	12-8	194
PA-S-56	19-11	12-10	200
PA-S-57	20-5	13-0	205
PA-S-58	20-7	13-2	211



\*Where cover height allows for applications involving Structures No. 24-34, consideration should be given towards a comparable size from the 31-in corner radius table since the larger corner radius will produce a lower soil pressure in the corner region of the pipe.



## Structural Plate Underpass

Pedestrian



Vehicular



Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
U-S-1	5-8	5-9	27
U-S-2	5-8	6-1	29
U-S-3	5-9	6-6	32
U-S-4	5-9	7-0	32
U-S-5	5-9	7-4	36
U-S-6	5-10	7-8	38
U-S-7	5-10	8-2	41
U-S-8	8-6	8-6	58
U-S-9	8-8	8-8	62
U-S-10	8-11	8-11	65

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
U-S-11	9-8	9-4	73
U-S-12	10-10	9-6	81
U-S-13	11-5	10-3	93
U-S-14	12-2	11-0	107
U-S-15	12-11	11-2	116
U-S-16	13-2	11-10	126
U-S-17	13-10	12-2	136
U-S-18	14-1	12-10	147
U-S-19	14-6	13-5	158
U-S-20	14-10	14-0	169

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
U-S-21	15-6	14-4	180
U-S-22	15-8	15-0	192
U-S-23	16-4	15-5	204
U-S-24	16-5	16-0	217
U-S-25	16-9	16-3	224
U-S-26	17-3	17-0	239
U-S-27	18-4	16-11	252
U-S-28	19-1	17-2	266
U-S-29	19-6	17-7	280
U-S-30	20-4	17-9	295



## Structural Plate Horizontal Ellipse

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
HE-S-1	7-4	5-6	31.3
HE-S-2	8-1	5-9	36.4
HE-S-3	8-10	6-0	41.4
HE-S-4	9-2	6-9	48.2
HE-S-5	9-7	6-4	46.7
HE-S-6	9-11	7-0	54.0
HE-S-7	10-4	6-7	52.2
HE-S-8	10-8	7-3	60.1
HE-S-9	11-0	8-0	68.2

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
HE-S-10	11-1	6-10	58.1
HE-S-11	11-4	7-6	66.4
HE-S-12	11-8	8-3	75.1
HE-S-13	12-0	8-11	84.1
HE-S-14	11-9	7-1	64.2
HE-S-15	12-1	7-10	73.0
HE-S-16	12-5	8-6	82.2
HE-S-17	12-9	9-2	91.7
HE-S-18	12-6	7-4	70.5

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
HE-S-19	12-10	8-1	79.9
HE-S-20	13-2	8-9	89.6
HE-S-21	13-6	9-6	99.6
HE-S-22	13-7	8-4	87.1
HE-S-23	13-11	9-0	97.3
HE-S-24	14-3	9-9	107.8
HE-S-25	14-7	10-5	118.7
HE-S-26	14-11	11-2	129.9



## Structural Plate Arch

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )	Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )	Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
A-S-1	5-0	2-7½	10.5	A-S-61	16-0	8-3	104.6	A-S-118	22-0	11-4½	198.4
A-S-2		2-2½	8.4	A-S-62		7-10½	98.5	A-S-119		10-11½	189.2
A-S-3		1-9½	6.5	A-S-63		7-5½	92.0	A-S-120		10-7	181.0
A-S-4	6-0	3-1½	14.9	A-S-64		7-0½	85.7	A-S-121		10-2	172.1
A-S-5		2-9	12.7	A-S-65		6-7½	79.6	A-S-122		9-9	163.4
A-S-6		2-4	10.4	A-S-66		6-2	73.0	A-S-123		9-3½	154.1
A-S-7		1-10	7.9	A-S-67		5-8½	66.7	A-S-124		8-10½	145.8
A-S-8	7-0	3-8	20.4	A-S-68		5-2½	60.0	A-S-125		8-5	136.9
A-S-9		3-3	17.5	A-S-69	8-9½	118.5	A-S-126	7-11		127.4	
A-S-10		2-10	14.8	A-S-70	8-4½	111.4	A-S-127	7-5		118.1	
A-S-11		2-4½	12.0	A-S-71	8-0	105.1	A-S-128	6-11		109.1	
A-S-12	8-0	4-2	26.5	A-S-72	17-0	7-7	98.4	A-S-129		11-6	207.7
A-S-13		3-9	22.5	A-S-73		7-1½	91.2	A-S-130	11-1	198.3	
A-S-14		3-4	20.0	A-S-74		6-8½	84.8	A-S-131	10-8	189.0	
A-S-15		2-11	17.1	A-S-75		6-2½	77.4	A-S-132	10-3	179.9	
A-S-16	9-0	2-5	13.8	A-S-76	5-9	70.8	A-S-133	9-10	170.9		
A-S-17		4-8	33.3	A-S-77	5-2½	63.2	A-S-134	9-4½	161.4		
A-S-18		4-3½	30.0	A-S-78	9-3½	132.5	A-S-135	8-11	152.0		
A-S-19		3-10½	26.4	A-S-79	8-11	125.7	A-S-136	8-5½	142.8		
A-S-20	10-0	3-5	22.7	A-S-80	8-6	118.4	A-S-137	7-11½	133.0		
A-S-21		2-11½	19.2	A-S-81	8-1	111.2	A-S-138	7-5½	123.5		
A-S-22		5-2½	41.4	A-S-82	7-8	104.2	A-S-139	6-11	113.4		
A-S-23		4-9½	37.2	A-S-83	7-2½	96.8	A-S-140	12-0	226.2		
A-S-24	11-0	4-4½	33.2	A-S-84	6-9	89.5	A-S-141	11-7	216.3		
A-S-25		3-11½	29.4	A-S-85	6-3½	82.4	A-S-142	11-2	206.6		
A-S-26		3-5½	25.1	A-S-86	5-9	74.3	A-S-143	10-9	197.1		
A-S-27		2-11½	21.0	A-S-87	9-9½	147.4	A-S-144	10-4	187.7		
A-S-28	12-0	5-8½	49.8	A-S-88	9-5	140.2	A-S-145	9-11	178.6		
A-S-29		5-3½	45.2	A-S-89	9-0	132.4	A-S-146	9-5½	168.7		
A-S-30		4-11	41.3	A-S-90	8-7½	125.6	A-S-147	9-0	159.1		
A-S-31		4-5½	36.7	A-S-91	8-2	117.4	A-S-148	8-6	148.8		
A-S-32	13-0	4-0	32.2	A-S-92	7-9	110.2	A-S-149	8-0	138.7		
A-S-33		3-6	27.6	A-S-93	7-3½	102.5	A-S-150	7-5½	128.1		
A-S-34		6-2½	59.1	A-S-94	6-9½	94.3	A-S-151	12-6	245.4		
A-S-35		5-10	54.6	A-S-95	6-3½	86.3	A-S-152	12-1½	236.1		
A-S-36	14-0	5-5	49.7	A-S-96	5-9½	78.6	A-S-153	11-8½	226.0		
A-S-37		5-0	45.1	A-S-97	10-4	163.8	A-S-154	11-3½	216.0		
A-S-38		4-6½	40.2	A-S-98	9-11	155.4	A-S-155	10-10	205.3		
A-S-39		4-0½	35.1	A-S-99	9-6½	148.0	A-S-156	10-5	195.8		
A-S-40	15-0	6-9	69.7	A-S-100	9-1½	140.0	A-S-157	10-0	186.4		
A-S-41		6-4	64.2	A-S-101	8-8½	132.2	A-S-158	9-6	175.3		
A-S-42		5-11	59.0	A-S-102	8-3	123.8	A-S-159	9-0½	165.5		
A-S-43		5-6	53.9	A-S-103	7-9½	115.6	A-S-160	8-6½	154.9		
A-S-44	16-0	5-0½	48.6	A-S-104	7-4	107.6	A-S-161	8-0	143.7		
A-S-45		4-7	43.4	A-S-105	6-10	99.1	A-S-162	7-6	133.6		
A-S-46		7-3	80.5	A-S-106	6-4	90.9	A-S-163	13-0	265.5		
A-S-47		6-10	74.7	A-S-107	10-10	180.2	A-S-164	12-7½	255.8		
A-S-48	17-0	6-5½	69.6	A-S-108	10-5½	172.3	A-S-165	12-2½	245.2		
A-S-49		6-0	63.5	A-S-109	10-0½	163.7	A-S-166	11-9½	234.9		
A-S-50		5-7	58.2	A-S-110	9-7½	155.2	A-S-167	11-4½	224.7		
A-S-51		5-1½	52.6	A-S-111	9-2½	147.0	A-S-168	10-11	213.7		
A-S-52	18-0	4-7½	46.7	A-S-112	8-9½	138.9	A-S-169	10-6	203.9		
A-S-53		7-9	92.1	A-S-113	8-4	130.3	A-S-170	10-0½	193.3		
A-S-54		7-4½	86.5	A-S-114	7-10½	121.8	A-S-171	9-7	183.0		
A-S-55		6-11½	80.4	A-S-115	7-4½	112.8	A-S-172	9-1	171.9		
A-S-56	19-0	6-6½	74.5	A-S-116	6-10½	104.1	A-S-173	8-7	161.0		
A-S-57		6-1½	68.8	A-S-117	6-4	94.8	A-S-174	8-0½	149.5		
A-S-58		5-8	62.7								
A-S-59		5-2	56.3								
A-S-60	4-7½	49.6									



Footing Options for Structural Plate Arches



1. concrete, 2. plate footer, 3. full plate invert



# Structural Plate Box Culvert

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
BC-S-1	9-8	2-7	20.2
BC-S-2	10-1	3-4	27.9
BC-S-3	10-7	4-2	35.9
BC-S-4	11-0	4-11	44.2
BC-S-5	11-5	5-8	53.0
BC-S-6	11-10	6-5	61.9
BC-S-7	12-3	7-3	71.2
BC-S-8	12-8	8-0	80.9
BC-S-9	10-5	2-8	23.1
BC-S-10	10-10	3-5	31.2
BC-S-11	11-2	4-3	39.7
BC-S-12	11-7	5-0	48.4
BC-S-13	12-0	5-9	57.7
BC-S-14	12-5	6-7	67.0
BC-S-15	12-10	7-4	76.9
BC-S-16	13-3	8-2	85.1
BC-S-17	11-1	2-9	25.1
BC-S-18	11-6	3-6	34.0
BC-S-19	11-10	4-4	43.1
BC-S-20	12-3	5-1	52.5
BC-S-21	12-7	5-10	62.3
BC-S-22	13-0	6-8	72.3
BC-S-23	13-5	7-5	82.6
BC-S-24	13-9	8-2	93.2
BC-S-25	11-10	2-10	28.0
BC-S-26	12-2	3-8	37.4
BC-S-27	12-6	4-5	47.0
BC-S-28	12-10	5-2	57.0
BC-S-29	13-3	6-0	67.1
BC-S-30	13-7	6-9	77.6
BC-S-31	13-11	7-6	88.2
BC-S-32	14-3	8-4	97.5
BC-S-33	12-6	2-11	30.6
BC-S-34	12-10	3-9	40.6
BC-S-35	13-2	4-6	50.8
BC-S-36	13-6	5-4	61.4
BC-S-37	13-10	6-1	72.2
BC-S-38	14-2	6-10	83.1
BC-S-39	14-6	7-8	94.4
BC-S-40	14-10	8-5	105.9
BC-S-41	13-3	3-1	33.8
BC-S-42	13-6	3-10	44.3
BC-S-43	13-10	4-8	55.1
BC-S-44	14-1	5-5	66.0

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
BC-S-45	14-5	6-2	77.2
BC-S-46	14-9	7-0	88.8
BC-S-47	15-0	7-9	100.5
BC-S-48	15-4	8-7	110.1
BC-S-49	13-11	3-2	36.6
BC-S-50	14-2	3-11	47.8
BC-S-51	14-6	4-9	59.1
BC-S-52	14-9	5-6	70.7
BC-S-53	15-0	6-4	82.4
BC-S-54	15-4	7-1	94.5
BC-S-55	15-7	7-11	106.8
BC-S-56	15-10	8-8	119.2
BC-S-57	14-7	3-3	40.2
BC-S-58	14-10	4-1	51.8
BC-S-59	15-1	4-10	63.6
BC-S-60	15-4	5-8	75.6
BC-S-61	15-7	6-5	88.0
BC-S-62	15-10	7-3	100.3
BC-S-63	16-1	8-0	113.0
BC-S-64	16-4	8-10	123.0
BC-S-65	15-3	3-5	43.3
BC-S-66	15-6	4-2	55.9
BC-S-67	15-9	5-0	68.1
BC-S-68	16-0	5-9	80.7
BC-S-69	16-2	6-7	93.2
BC-S-70	16-5	7-4	106.5
BC-S-71	16-8	8-2	119.7
BC-S-72	16-10	8-11	133.0
BC-S-73	16-0	3-6	47.1
BC-S-74	16-2	4-4	59.9
BC-S-75	16-4	5-1	72.8
BC-S-76	16-7	5-11	85.8
BC-S-77	16-9	6-9	99.1
BC-S-78	17-0	7-6	112.4
BC-S-79	17-2	8-4	126.0
BC-S-80	17-5	9-1	137.0
BC-S-81	16-8	3-8	50.7
BC-S-82	16-10	4-6	64.1
BC-S-83	17-0	5-3	77.6
BC-S-84	17-2	6-1	91.3
BC-S-85	17-4	6-10	105.1
BC-S-86	17-6	7-8	119.1
BC-S-87	17-8	8-5	133.2
BC-S-88	17-10	9-3	147.4

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
BC-S-89	17-4	3-10	55.0
BC-S-90	17-6	4-7	68.8
BC-S-91	17-7	5-5	82.8
BC-S-92	17-9	6-2	96.8
BC-S-93	17-11	7-0	111.1
BC-S-94	18-1	7-9	125.4
BC-S-95	18-3	8-7	139.8
BC-S-96	18-5	9-4	151.2
BC-S-97	18-0	3-11	58.8
BC-S-98	18-1	4-9	73.3
BC-S-99	18-3	5-7	87.9
BC-S-100	18-4	6-4	102.6
BC-S-101	18-6	7-2	117.3
BC-S-102	18-7	7-11	132.3
BC-S-103	18-9	8-9	147.3
BC-S-104	18-10	9-6	162.4
BC-S-105	18-8	4-1	63.4
BC-S-106	18-9	4-11	78.4
BC-S-107	18-10	5-8	93.4
BC-S-108	18-11	6-6	108.5
BC-S-109	19-1	7-4	123.6
BC-S-110	19-2	8-1	138.9
BC-S-111	19-3	8-11	154.2
BC-S-112	19-4	9-8	166.0
BC-S-113	19-4	4-3	67.7
BC-S-114	19-5	5-1	83.3
BC-S-115	19-6	5-10	98.9
BC-S-116	19-6	6-8	114.6
BC-S-117	19-7	7-5	126.6
BC-S-118	19-8	8-3	146.2
BC-S-119	19-9	9-1	162.0
BC-S-120	19-10	9-10	178.0
BC-S-121	20-8	4-7	77.5
BC-S-122	20-8	5-5	94.1
BC-S-123	20-8	6-2	110.7
BC-S-124	20-8	7-0	127.4
BC-S-125	20-9	7-10	143.3
BC-S-126	20-9	8-7	160.7
BC-S-127	20-9	9-5	177.4
BC-S-128	20-9	10-2	194.2



**Footing Options  
for Structural Plate  
Box Culverts**



1. concrete, 2. plate footer, 3. full plate invert

# STEEL STRUCTURAL PLATE PRODUCTS

## Long Span Horizontal Ellipse



Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
LSHE-S-1	19-4	12-9	191
LSHE-S-2	20-1	13-0	202
LSHE-S-3	20-2	11-11	183
LSHE-S-4	20-10	12-2	194
LSHE-S-5	21-0	15-2	248
LSHE-S-6	21-11	13-1	221
LSHE-S-7	22-6	15-8	274
LSHE-S-8	23-0	14-1	249
LSHE-S-9	23-3	15-11	288
LSHE-S-10	24-4	16-11	320
LSHE-S-11	24-6	14-8	274
LSHE-S-12	25-2	14-11	287
LSHE-S-13	25-5	16-9	330
LSHE-S-14	26-1	18-2	369

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
LSHE-S-15	26-3	15-10	320
LSHE-S-16	27-0	16-2	334
LSHE-S-17	27-2	19-1	405
LSHE-S-18	27-11	19-5	421
LSHE-S-19	28-1	17-1	369
LSHE-S-20	28-10	17-5	384
LSHE-S-21	29-5	19-11	455
LSHE-S-22	30-1	20-2	472
LSHE-S-23	30-3	17-11	415
LSHE-S-24	31-2	21-2	513
LSHE-S-25	31-4	18-11	454
LSHE-S-26	32-1	19-2	471
LSHE-S-27	32-3	22-2	555
LSHE-S-28	33-0	22-5	574

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
LSHE-S-29	33-2	20-1	512
LSHE-S-30	34-1	23-4	619
LSHE-S-31	34-7	20-8	548
LSHE-S-32	34-11	21-4	574
LSHE-S-33	35-1	24-4	665
LSHE-S-34	35-9	25-9	718
LSHE-S-35	36-0	22-4	619
LSHE-S-36	36-11	25-7	735
LSHE-S-37	37-2	22-2	631
LSHE-S-38	38-0	26-7	785
LSHE-S-39	38-8	27-11	843
LSHE-S-40	40-0	29-7	927



## Long Span Low Profile Arch



Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
LSLPA-S-1	19-5	6-9	105
LSLPA-S-2	20-1	7-6	120
LSLPA-S-3	21-6	7-9	133
LSLPA-S-4	22-3	7-11	140
LSLPA-S-5	23-0	8-0	147
LSLPA-S-6	23-9	8-2	154
LSLPA-S-7	24-6	8-3	161
LSLPA-S-8	25-2	8-5	168
LSLPA-S-9	25-11	8-7	176
LSLPA-S-10	27-3	10-0	217
LSLPA-S-11	28-1	9-6	212
LSLPA-S-12	28-9	10-3	234
LSLPA-S-13	28-10	9-8	220
LSLPA-S-14	30-3	9-11	237

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
LSLPA-S-15	30-11	10-8	261
LSLPA-S-16	31-7	12-1	309
LSLPA-S-17	31-0	10-1	246
LSLPA-S-18	32-4	12-3	319
LSLPA-S-19	31-9	10-2	255
LSLPA-S-20	33-1	12-5	330
LSLPA-S-21	33-2	11-1	289
LSLPA-S-22	34-5	13-3	367
LSLPA-S-23	34-7	11-4	308
LSLPA-S-24	37-11	15-7	477
LSLPA-S-25	35-4	11-5	318
LSLPA-S-26	38-8	15-9	490
LSLPA-S-27	40-1	12-9	398
LSLPA-S-28	40-4	18-2	597

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
LSLPA-S-29	40-6	11-7	359
LSLPA-S-30	41-4	11-9	369
LSLPA-S-31	42-7	12-7	411
LSLPA-S-32	43-0	13-10	464
LSLPA-S-33	43-2	19-5	689
LSLPA-S-34	44-0	15-4	530
LSLPA-S-35	45-3	16-5	592
LSLPA-S-36	46-1	18-5	685
LSLPA-S-37	47-0	20-1	772
LSLPA-S-38	49-0	18-2	709
LSLPA-S-39	50-7	19-7	786
LSLPA-S-40	50-8	22-6	927
LSLPA-S-41	51-7	24-2	1024



Shapes identified as "Long Span" take the designation from AASHTO for certain structural plate structures that require shape monitoring measures during the backfill operation. The designation is not to be confused with Lane's Long Span Bridge & Culvert division (Pages 4 and 5), which is not limited to these shapes or services.



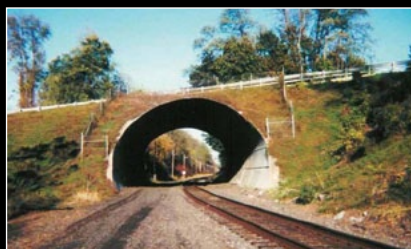
## Long Span High Profile Arch



Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
LSHPA-S-1	20-1	9-1	152
LSHPA-S-2	20-8	12-1	214
LSHPA-S-3	21-6	11-8	215
LSHPA-S-4	22-10	14-6	284
LSHPA-S-5	22-3	11-10	224
LSHPA-S-6	22-11	14-0	275
LSHPA-S-7	23-0	11-11	234
LSHPA-S-8	24-4	14-10	309
LSHPA-S-9	23-9	12-1	244
LSHPA-S-10	24-6	13-9	288
LSHPA-S-11	25-9	15-1	334
LSHPA-S-12	25-2	13-1	283

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
LSHPA-S-13	26-6	15-3	347
LSHPA-S-14	25-11	13-3	294
LSHPA-S-15	27-3	15-5	360
LSHPA-S-16	27-5	13-6	317
LSHPA-S-17	29-5	16-5	412
LSHPA-S-18	28-2	14-5	348
LSHPA-S-19	30-1	18-0	466
LSHPA-S-20	30-3	15-5	399
LSHPA-S-21	31-7	18-4	496
LSHPA-S-22	31-0	15-7	412
LSHPA-S-23	31-8	17-9	483
LSHPA-S-24	32-4	19-11	553

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
LSHPA-S-25	31-9	17-2	469
LSHPA-S-26	33-1	20-1	570
LSHPA-S-27	32-6	17-4	484
LSHPA-S-28	33-10	20-3	587
LSHPA-S-29	34-0	17-8	513
LSHPA-S-30	34-7	19-10	590
LSHPA-S-31	34-8	17-10	529
LSHPA-S-32	35-3	21-3	645
LSHPA-S-33	35-4	20-0	608
LSHPA-S-34	36-0	21-5	663
LSHPA-S-35	37-3	23-5	747
LSHPA-S-36	38-0	23-6	767



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## Round Structural Plate

Structure No.	Span (ft-in)	Area (ft <sup>2</sup> )
R-A-1	5-0	19.6
R-A-2	5-6	23.8
R-A-3	6-0	28.3
R-A-4	6-6	33.2
R-A-5	7-0	38.5
R-A-6	7-6	44.2
R-A-7	8-0	50.3
R-A-8	8-6	56.7
R-A-9	9-0	63.6
R-A-10	9-6	70.9
R-A-11	10-0	78.5

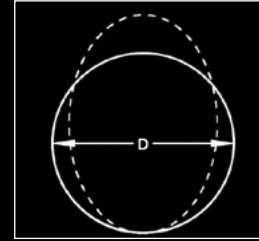
Structure No.	Span (ft-in)	Area (ft <sup>2</sup> )
R-A-12	10-6	86.6
R-A-13	11-0	95.0
R-A-14	11-6	103.9
R-A-15	12-0	113.1
R-A-16	12-6	122.7
R-A-17	13-0	132.7
R-A-18	13-6	143.1
R-A-19	14-0	153.9
R-A-20	14-6	165.1
R-A-21	15-0	176.7
R-A-22	15-6	188.7

Structure No.	Span (ft-in)	Area (ft <sup>2</sup> )
R-A-23	16-0	201.1
R-A-24	16-6	213.8
R-A-25	17-0	227.0
R-A-26	17-6	240.5
R-A-27	18-0	254.5
R-A-28	18-6	268.8
R-A-29	19-0	283.5
R-A-30	19-6	298.6
R-A-31	20-0	314.2
R-A-32	20-6	330.1
R-A-33	21-0	346.4



**Minimum 5' diameter with size increases in increments of 6"**

The structure can be fabricated with a vertical elongation to offset any planned or expected pipe deflections.



## Structural Plate Vertical Ellipse

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
VE-A-1	4-8	5-2	18.8
VE-A-2	5-2	5-8	22.9
VE-A-3	5-7	6-3	27.5
VE-A-4	6-1	6-9	32.4
VE-A-5	6-7	7-4	37.8
VE-A-6	7-1	7-10	43.6
VE-A-7	7-7	8-5	49.7
VE-A-8	8-1	8-11	56.3
VE-A-9	8-7	9-6	63.3
VE-A-10	9-1	10-0	70.7
VE-A-11	9-7	10-7	78.5
VE-A-12	10-0	11-1	86.7
VE-A-13	10-6	11-7	95.4
VE-A-14	11-0	12-2	104.4
VE-A-15	11-6	12-8	113.9
VE-A-16	11-10	13-1	123.7
VE-A-17	12-4	13-8	134.0

Structure No.	Span (ft-in)	Rise (ft-in)	Area (ft <sup>2</sup> )
VE-A-18	12-9	14-2	144.7
VE-A-19	13-3	14-8	155.7
VE-A-20	13-9	15-3	167.2
VE-A-21	14-3	15-9	179.1
VE-A-22	14-9	16-3	191.4
VE-A-23	15-2	16-10	204.2
VE-A-24	15-9	17-5	217.3
VE-A-25	16-3	17-11	230.8
VE-A-26	16-8	18-6	244.8
VE-A-27	17-2	19-0	259.1
VE-A-28	17-8	19-7	273.9
VE-A-29	18-1	20-1	289.1
VE-A-30	18-8	20-7	304.7
VE-A-31	19-1	21-2	321.0
VE-A-32	19-7	21-8	337.0
VE-A-33	20-1	22-3	354.0

