VARIABLE DIMENSIONS AND QUANTITIES FOR TWIN 12 x 7 BARREL SECTIONS

DIMENSIONS											
FILL	S	H	A	B	C	D	E	U	W	X	Z
0	12	7	14.5	12	9	9	9	0'-3	7'-8	3'-4	6'-8
1	12	7	13.5	12	9	9	9	0'-8	7'-8	2'-5	6'-3
2	12	7	10.5	10.5	9	9	9	1'-11	7'-1	3'-0	4'-11
3	12	7	10.5	10.5	9	6	9	2'-3	6'-1	2'-8	4'-8
4	12	7	9.5	10	9	9	9	2'-9	5'-1	3'-0	4'-3
5-7	12	7	10	11.5	9	9	9	2'-11	4'-9	3'-4	4'-4
8-10	12	7	11.5	13.5	9	9	9	3'-1	4'-3	3'-1	4'-2
11-13	12	7	13	15	9	6	9	2'-10	4'-3	3'-0	4'-4
14-16	12	7	14.5	17	9	9	9	2'-5	4'-4	2'-5	4'-6
17-19	12	7	16.5	18.5	9	9	9	2'-1	4'-6	2'-2	4'-7
20-22	12	7	18	20.5	9	9	9	1'-11	4'-7	1'-9	4'-9
23-25	12	7	19.5	21.5	9	9	9	1'-4	4'-8	1'-6	4'-10

BAR LIST

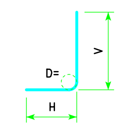
	a1			a2			b1			b2			e1			e2		
FILL	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	NO.	SIZE	SP.	NO.	SIZE	SP.	NO.	SIZE	SP.	NO.
0	4	12	9'-1	6	9	9'-1	4	6	28	4	6	15	4	12	22	5	17	20
1	4	12	9'-0	6	9	9'-0	4	6	28	4	6	15	4	12	22	4	17	20
2	5	12	8'-8	6	9	8'-8	4	6	28	4	6	15	5	12	22	4	17	20
3	4	6	8'-8	6	9	8'-8	4	6	28	4	6	15	4	12	22	4	17	20
4	5	12	8'-6	6	9	8'-6	4	6	28	4	6	15	4	12	22	4	17	20
5-7	4	12	8'-8	6	9	8'-8	4	6	28	4	6	15	4	12	22	4	17	20
8-10	4	12	9'-0	6	9	9'-0	4	6	28	4	6	15	4	12	22	4	17	20
11-13	4	6	9'-3	6	9	9'-3	4	6	28	4	6	15	4	12	22	4	17	20
14-16	5	12	9'-6	6	9	9'-6	4	6	28	4	6	15	4	12	22	4	17	20
17-19	5	12	9'-10	6	9	9'-10	4	6	28	4	6	15	4	12	22	4	17	20
20-22	5	12	10'-1	6	9	10'-1	4	6	28	4	6	15	4	12	22	4	17	20
23-25	4	9	10'-4	6	9	10'-4	4	6	28	4	6	15	4	12	22	4	17	20

	f1			f2			k1			k2			k4					k6			k7			k9		
FILL	SIZE	SP.	NO.	SIZE	SP.	NO.	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	H	V	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L
0	4	12	26	4	17	20	5	12	25'-11	5	12	12'-8	5	9	10'-5	7'-0	3'-5	5	18	25'-11	7	18	15'-4	7	4.5	25'-11
1	4	12	26	4	17	20	6	18	25'-11	6	18	12'-3	6	12	11'-0	7'-4	3'-8	5	18	25'-11	7	18	15'-4	7	4.5	25'-11
2	4	12	26	4	17	20	6	12	25'-11	5	12	10'-7	6	9	7'-2	3'-7	3'-7	5	18	25'-11	8	18	14'-2	8	4.5	25'-11
3	4	12	26	4	17	20	6	12	25'-11	5	12	9'-11	6	9	6'-8	3'-4	3'-4	4	12	25'-11	7	12	12'-2	7	4.5	25'-11
4	4	12	26	4	17	20	6	12	25'-11	5	12	8'-10	6	9	6'-8	3'-4	3'-4	4	9	25'-11	6	9	10'-2	6	4.5	25'-11
5-7	4	12	26	4	17	20	5	9	25'-11	4	9	8'-5	5	6	6'-4	3'-2	3'-2	5	12	25'-11	7	12	9'-6	7	4.5	25'-11
8-10	4	12	26	4	17	20	5	9	25'-11	4	9	8'-6	5	6	6'-2	3'-1	3'-1	5	9	25'-11	6	9	8'-6	6	4.5	25'-11
11-13	4	12	26	4	17	20	5	9	25'-11	4	9	9'-5	4	6	6'-0	2'-9	3'-3	4	9	25'-11	7	9	8'-6	7	4.5	25'-11
14-16	4	12	26	4	17	20	6	12	25'-11	5	12	10'-0	4	6	6'-2	2'-9	3'-5	5	12	25'-11	8	12	8'-8	8	4.5	25'-11
17-19	4	12	26	4	17	20	6	12	25'-11	5	12	10'-10	4	6	6'-4	2'-10	3'-6	5	12	25'-11	8	12	9'-0	8	4.5	25'-11
20-22	4	12	26	4	17	20	6	12	25'-11	5	12	11'-0	4	6	6'-6	2'-10	3'-8	5	9	25'-11	7	9	9'-2	7	4.5	25'-11
23-25	5	12	26	4	17	20	7	18	25'-11	7	18	11'-7	4	6	6'-8	2'-11	3'-9	5	9	25'-11	7	9	9'-4	7	4.5	25'-11

	BAR LIST																					QUANTITIES				
	m1			m2			m4					m6			m7			m9				CONCRETE (CY/FT)				STEEL
FILL	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	H	V	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L		SLAB	FLOOR	WALLS	TOTAL	(LB/FT)
0	5	9	26'-5	4	9	7'-11	6	9	14'-0	6'-7	7'-5	4	12	26'-5	6	12	13'-4	6	4.5	26'-5		1.232	1.050	0.549	2.831	403.39
1	5	12	26'-5	5	12	9'-4	7	12	13'-1	5'-8	7'-5	4	12	26'-5	6	12	12'-6	6	4.5	26'-5		1.151	1.050	0.549	2.750	394.03
2	5	9	26'-5	5	9	8'-4	6	9	11'-1	3'-9	7'-4	5	9	26'-5	5	9	9'-10	5	4.5	26'-5		0.907	0.926	0.549	2.382	431.03
3	5	9	26'-5	5	9	8'-8	6	9	10'-10	3'-6	7'-4	5	12	26'-5	7	12	9'-4	7	4.5	26'-5		0.907	0.926	0.549	2.382	420.13
4	5	9	26'-5	5	9	8'-0	6	9	10'-8	3'-5	7'-3	5	9	26'-5	6	9	8'-6	6	4.5	26'-5		0.826	0.885	0.549	2.260	415.18
5-7	6	12	26'-5	5	12	8'-1	5	6	10'-7	3'-2	7'-5	5	9	26'-5	6	9	8'-8	6	4.5	26'-5		0.867	1.008	0.549	2.424	404.76
8-10	5	9	26'-5	4	9	8'-7	5	6	10'-6	2'-11	7'-7	5	9	26'-5	6	9	8'-4	6	4.5	26'-5		0.989	1.174	0.549	2.712	403.26
11-13	6	12	26'-5	5	12	9'-2	4	6	10'-6	2'-10	7'-8	4	9	26'-5	7	9	8'-8	7	4.5	26'-5		1.110	1.297	0.549	2.956	389.95
14-16	6	12	26'-5	5	12	10'-6	4	6	10'-8	2'-10	7'-10	4	9	26'-5	7	9	9'-0	7	4.5	26'-5		1.232	1.463	0.549	3.244	404.34
17-19	6	12	26'-5	5	12	10'-10	4	6	10'-10	2'-10	8'-0	5	9	26'-5	7	9	9'-2	7	4.5	26'-5		1.394	1.586	0.549	3.529	422.97
20-22	6	12	26'-5	5	12	11'-3	4	6	11'-1	2'-11	8'-2	5	9	26'-5	7	9	9'-6	7	4.5	26'-5		1.515	1.752	0.549	3.816	434.87
23-25	7	18	26'-5	7	18	11'-6	4	6	11'-3	3'-0	8'-3	5	9	26'-5	7	9	9'-8	7	4.5	26'-5		1.637	1.834	0.549	4.020	456.18

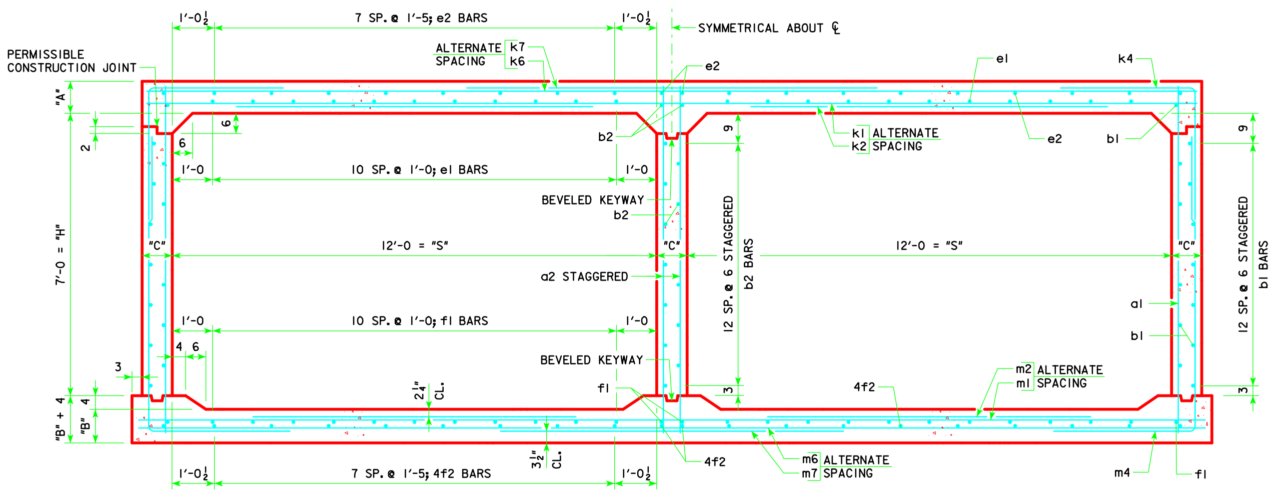
BENT BAR DETAIL

BARS	D
4	3
5	$3\frac{3}{4}$
6	$4\frac{1}{2}$
7	$5\frac{1}{4}$



k4 & m4

NOTE:
ALL DIMENSIONS ARE OUT TO OUT.
D = PIN DIAMETER.



TWIN 12 x 7 BARREL SECTION

NOTES:

1. DIMENSIONS LISTED ON THIS SHEET TO BE USED IN CONJUNCTION WITH SHEET TWRCB G2-12.
2. DIMENSIONS "A", "B", "C", "D", "E", AND "SP." LISTED IN THE BAR LIST ARE IN INCHES.

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN
TWIN REINFORCED CONCRETE BOX CULVERTS
APRIL, 2012

CULVERT BARREL DETAILS
12 x 7 BARREL SECTIONS

TWRCB 12-7-12

ENGLISH\RFDSIGNED\TWINCULVERTS.DGN - TWRCB 12-7-12 - THIS SHEET ISSUED 04-12.