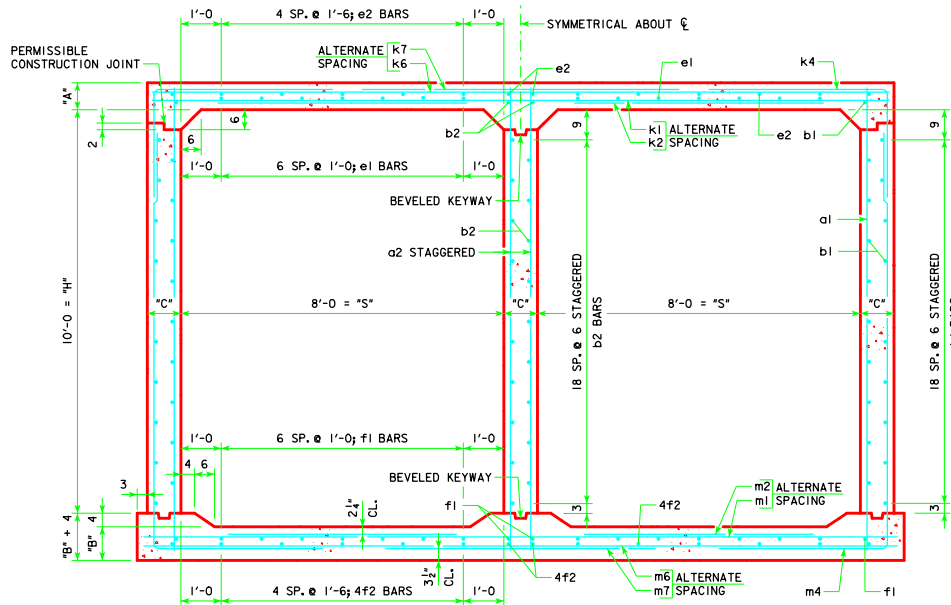


VARIABLE DIMENSIONS AND QUANTITIES FOR TWIN 8 x 10 BARREL SECTIONS

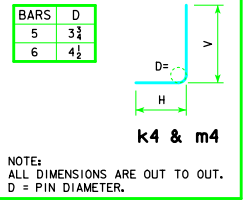
DIMENSIONS												BAR LIST																																											
FILL	S	H	A	B	C	D	E	U	W	X	Z	a1		a2		b1		b2		e1		e2		f1		f2		k1		k2		k4		k6		k7		k9																	
												SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L											
0	8	10	13	11	10	6	9	0'-0	5'-4	1'-10	5'-6	4	6	11'-11	7	9	11'-11	4	6	40	4	6	21	5	12	14	4	18	14	4	12	18	4	18	14	6	18	18'-2	6	18	9'-1	5	9	8'-9	5'-6	3'-3	4	12	18'-2	4	12	10'-8	4	4.5	18'-2
1	8	10	11.5	11	10	6	9	0'-8	5'-4	1'-10	5'-4	4	6	11'-9	7	9	11'-9	4	6	40	4	6	21	4	12	14	4	18	14	4	12	18	4	18	14	5	12	18'-2	4	12	8'-5	5	9	8'-8	5'-6	3'-2	4	12	10'-8	4	4.5	18'-2			
2	8	10	8	10	10	6	9	0'-8	5'-6	1'-9	4'-2	4	6	11'-5	7	9	11'-5	4	6	40	4	6	21	5	12	14	4	18	14	4	12	18	4	18	14	6	18	18'-2	6	18	8'-1	5	9	8'-2	5'-4	2'-10	5	18	18'-2	6	18	11'-0	6	4.5	18'-2
3	8	10	8	10	10	6	9	1'-5	5'-6	1'-7	3'-7	4	6	11'-5	7	9	11'-5	4	6	40	4	6	21	4	12	14	4	18	14	4	12	18	4	18	14	5	12	18'-2	4	12	6'-7	5	9	8'-2	5'-4	2'-10	5	18	18'-2	6	18	11'-0	6	4.5	18'-2
4	8	10	8	10	10	9	9	1'-9	3'-11	2'-2	3'-4	5	12	11'-5	7	9	11'-5	4	6	40	4	6	21	4	12	14	4	18	14	4	12	18	4	18	14	6	18	18'-2	5	18	6'-2	5	9	7'-3	4'-5	2'-10	5	18	18'-2	6	18	7'-10	6	4.5	18'-2
5-7	8	10	8	10	10	9	9	2'-0	3'-4	2'-3	2'-11	4	12	11'-5	7	9	11'-5	4	6	40	4	6	21	4	12	14	4	18	14	4	12	18	4	18	14	6	18	18'-2	5	18	5'-7	6	9	7'-6	4'-4	3'-2	4	12	18'-2	5	12	6'-8	5	4.5	18'-2
8-10	8	10	8	10	10	9	9	2'-0	2'-11	2'-3	2'-11	4	9	11'-5	7	9	11'-5	4	6	40	4	6	21	4	12	14	4	18	14	4	12	18	4	18	14	6	18	18'-2	5	18	5'-10	6	9	7'-0	3'-10	3'-2	5	12	18'-2	5	12	5'-10	5	4.5	18'-2
11-13	8	10	8.5	11	10	9	9	2'-0	2'-10	1'-9	3'-3	4	9	11'-6	7	9	11'-6	4	6	40	4	6	21	4	12	14	4	18	14	4	12	18	4	18	14	5	12	18'-2	4	12	5'-9	5	6	6'-5	3'-6	2'-11	4	9	18'-2	5	9	5'-8	5	4.5	18'-2
14-16	8	10	9	12	10.5	9	9	1'-8	3'-0	1'-7	3'-3	5	12	11'-8	7	9	11'-8	4	6	40	4	6	21	4	12	14	4	18	14	4	12	18	4	18	14	4	9	18'-3	4	9	6'-7	5	6	6'-4	3'-5	2'-11	5	12	18'-3	6	12	6'-0	6	4.5	18'-3
17-19	8	10	10	13	10.5	9	9	1'-9	2'-11	1'-9	3'-3	4	9	11'-10	7	9	11'-10	4	6	40	4	6	21	4	12	14	4	18	14	4	12	18	4	18	14	5	12	18'-3	4	12	6'-3	5	6	6'-6	3'-3	3'-3	5	12	18'-3	6	12	5'-10	6	4.5	18'-3
20-22	8	10	11	14	11.5	9	9	1'-5	2'-11	1'-5	3'-3	5	12	12'-0	7	9	12'-0	4	6	40	4	6	21	4	12	14	4	18	14	4	12	18	4	18	14	4	9	18'-6	4	9	7'-1	5	6	6'-8	3'-4	3'-4	5	12	18'-6	6	12	5'-10	6	4.5	18'-6
23-25	8	10	13.5	15.5	12	9	9	1'-2	3'-1	1'-3	3'-3	5	12	12'-4	7	9	12'-4	4	6	40	4	6	21	4	12	14	4	18	14	4	12	18	4	18	14	6	18	7'-10	6	9	7'-4	3'-8	3'-8	4	12	18'-8	6	12	6'-2	6	4.5	18'-8			

BAR LIST												QUANTITIES													
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	STEEL
0	5	12	18'-8	4	12	6'-3	5	9	15'-8	5'-4	10'-4	4	18	18'-8	6	18	11'-0	6	4.5	18'-8	0.803	0.707	0.887	2.397	329.29
1	5	12	18'-8	4	12	6'-3	5	9	15'-10	5'-6	10'-4	5	18	18'-8	5	18	10'-8	5	4.5	18'-8	0.718	0.707	0.887	2.312	316.79
2	5	12	18'-8	5	12	6'-6	5	9	16'-11	6'-8	10'-3	5	18	18'-8	6	18	8'-4	6	4.5	18'-8	0.518	0.649	0.887	2.054	339.53
3	4	9	18'-8	4	9	6'-7	5	9	14'-7	4'-4	10'-3	5	18	18'-8	6	18	7'-2	6	4.5	18'-8	0.518	0.649	0.887	2.054	313.71
4	5	12	18'-8	4	12	5'-6	5	9	14'-5	4'-2	10'-3	5	18	18'-8	6	18	6'-8	6	4.5	18'-8	0.518	0.649	0.887	2.054	300.66
5-7	5	12	18'-8	4	12	5'-3	6	9	14'-4	4'-1	10'-3	4	9	18'-8	4	9	5'-10	4	4.5	18'-8	0.518	0.649	0.887	2.054	317.08
8-10	5	12	18'-8	4	12	5'-7	6	9	14'-0	3'-9	10'-3	4	9	18'-8	5	9	5'-10	5	4.5	18'-8	0.518	0.649	0.887	2.054	328.45
11-13	4	9	18'-8	4	9	6'-7	5	6	13'-11	3'-7	10'-4	5	18	18'-8	8	18	6'-6	8	4.5	18'-8	0.546	0.707	0.887	2.140	328.61
14-16	5	12	18'-9	5	12	6'-11	5	6	14'-0	3'-7	10'-5	5	18	18'-9	8	18	6'-6	8	4.5	18'-9	0.580	0.770	0.934	2.284	344.92
17-19	5	12	18'-9	4	12	6'-9	5	6	13'-11	3'-5	10'-6	5	18	18'-9	8	18	6'-6	8	4.5	18'-9	0.638	0.829	0.934	2.401	336.97
20-22	6	18	19'-0	6	18	7'-8	5	6	14'-2	3'-7	10'-7	5	18	19'-0	8	18	6'-6	8	4.5	19'-0	0.708	0.902	1.022	2.632	351.61
23-25	6	18	19'-2	6	18	7'-10	6	9	14'-5	3'-8	10'-9	4	9	19'-2	5	9	6'-6	5	4.5	19'-2	0.861	0.999	1.067	2.927	355.55



TWIN 8 x 10 BARREL SECTION

BENT BAR DETAIL



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	 IOWA DEPARTMENT OF TRANSPORTATION Highway Division	STANDARD DESIGN TWIN REINFORCED CONCRETE BOX CULVERTS APRIL, 2012 CULVERT BARREL DETAILS 8 x 10 BARREL SECTIONS	TWRCB 8-10-12
APPROVED BY BRIDGE ENGINEER	 APPROVED BY BRIDGE ENGINEER		