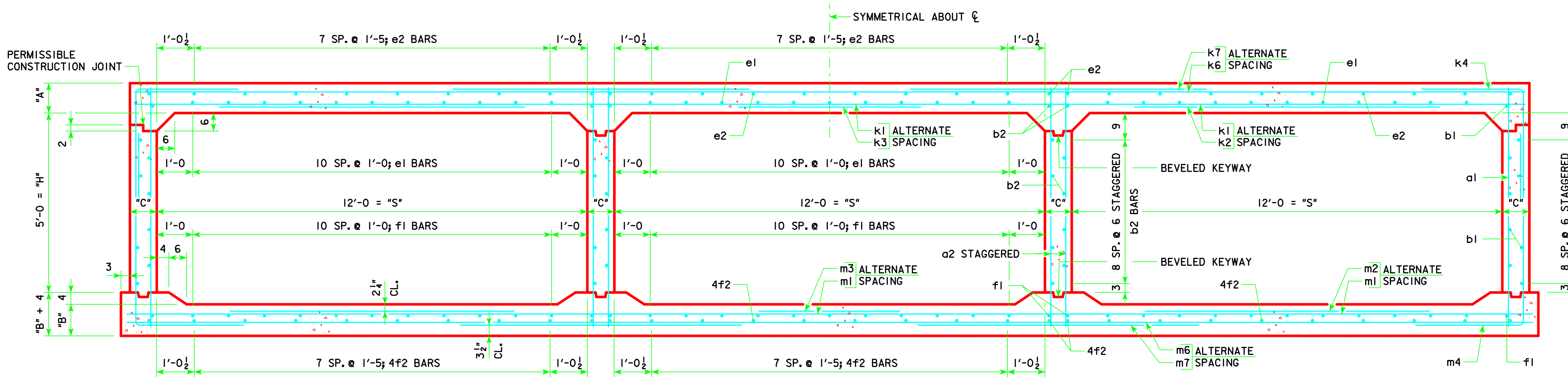
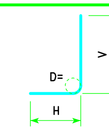


TRIPLE 12 x 5 BARREL SECTION

BENT BAR DETAIL

BARS	D
4	3
5	3¾
6	4½
7	5¼



k4 & m4

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

NOTES:

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

VARIABLE DIMENSIONS AND QUANTITIES FOR TRIPLE 12 x 5 BARREL SECTIONS

	DIMENSIONS													BAR LIST														
														a1			a2			b1			b2			e1		
FILL	S	H	A	B	C	D	E	R	T	U	W	X	Z	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	NO.	SIZE	SP.	NO.	SIZE	SP.	NO.
0	12	5	14	11.5	9	9	9	0′-1	0′-0	7′-3	3′-0	5′-4	4′-4	4	12	7′-0	6	9	7′-0	4	6	20	4	6	22	4	12	33
1	12	5	13.5	11	9	9	9	0′-7	0′-3	6′-11	2′-8	4′-1	4′-3	4	12	6′-11	6	9	6′-11	4	6	20	4	6	22	4	12	33
2	12	5	10	10	9	9	9	2′-5	2′-0	5′-9	3′-7	5′-4	4′-1	4	9	6′-7	7	9	6′-7	4	6	20	4	6	22	4	12	33
3-6	12	5	10	10.5	9	9	9	2′-5	2′-0	5′-0	3′-4	4′-5	4′-2	4	9	6′-7	7	9	6′-7	4	6	20	4	6	22	4	12	33
7-8	12	5	10	11	9	9	9	3′-10	2′-9	3′-11	3′-0	4′-5	3′-10	4	9	6′-8	6	9	6′-8	4	6	20	4	6	22	4	12	33
9-10	12	5	11	13	9	9	9	3′-11	2′-7	4′-0	2′-11	4′-9	3′-9	4	12	6′-11	6	9	6′-11	4	6	20	4	6	22	4	12	33
11-12	12	5	12	14	9	9	9	4′-2	2′-8	3′-11	2′-9	4′-9	3′-9	4	12	7′-1	6	9	7′-1	4	6	20	4	6	22	4	12	33
13-15	12	5	13.5	15.5	9	6	9	4′-2	2′-3	3′-10	2′-3	4′-5	3′-10	4	6	7′-4	6	9	7′-4	4	6	20	4	6	22	4	12	33
16-17	12	5	14.5	16.5	9	9	9	3′-10	1′-7	3′-10	2′-1	4′-4	3′-10	5	12	7′-6	6	9	7′-6	4	6	20	4	6	22	4	12	33
18-19	12	5	15.5	17.5	9	9	9	3′-10	1′-7	3′-11	1′-8	4′-3	3′-11	4	9	7′-8	6	9	7′-8	4	6	20	4	6	22	4	12	33
20-21	12	5	16.5	18.5	9	9	9	3′-10	1′-6	3′-11	1′-7	4′-8	4′-0	4	9	7′-10	6	9	7′-10	4	6	20	4	6	22	4	12	33
22-23	12	5	18	20	9	9	9	4′-4	1′-1	4′-0	1′-2	4′-10	4′-1	4	12	8′-1	6	9	8′-1	4	6	20	4	6	22	4	12	33
24-25	12	5	19.5	21.5	9.5	9	6	4′-4	1′-0	4′-2	1′-0	4′-9	4′-2	4	12	8′-4	5	6	8′-4	4	6	20	4	6	22	4	12	33

	BAR LIST																											
	e2			f1			f2			k1			k2			k3			k4					k6			k7		
FILL	SIZE	SP.	NO.	SIZE	SP.	NO.	SIZE	SP.	NO.	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	SIZE	SP.	L	H	V	SIZE	SP.	L	SIZE	SP.	L
0	4	17	30	4	12	39	4	17	30	5	12	38′-8	5	12	12′-11	5	12	12′-7	6	12	6′-10	3′-2	3′-8	5	18	38′-8	7	18	14′-11
1	4	17	30	4	12	39	4	17	30	6	18	38′-8	6	18	12′-8	6	18	11′-7	6	12	6′-10	3′-2	3′-8	5	18	38′-8	7	18	14′-7
2	4	17	30	4	12	39	4	17	30	6	12	38′-8	5	12	10′-0	4	12	7′-11	6	9	6′-8	3′-4	3′-4	5	18	38′-8	8	18	13′-10
3-6	4	17	30	4	12	39	4	17	30	6	12	38′-8	5	12	10′-0	4	12	7′-11	6	9	6′-10	3′-5	3′-5	5	12	38′-8	6	12	10′-11
7-8	4	17	30	4	12	39	4	17	30	5	9	38′-8	4	9	8′-6	4	9	5′-1	6	9	6′-2	2′-10	3′-4	4	9	38′-8	6	9	8′-3
9-10	4	17	30	4	12	39	4	17	30	5	9	38′-8	4	9	8′-10	4	9	4′-11	5	6	5′-8	2′-7	3′-1	5	12	38′-8	7	12	8′-4
11-12	4	17	30	4	12	39	4	17	30	6	12	38′-8	5	12	8′-11	4	12	4′-5	5	6	5′-7	2′-5	3′-2	5	12	38′-8	7	12	8′-3
13-15	4	17	30	4	12	39	4	17	30	6	12	38′-8	5	12	10′-0	4	12	4′-5	4	6	5′-8	2′-5	3′-3	5	9	38′-8	6	9	8′-2
16-17	4	17	30	4	12	39	4	17	30	7	18	38′-8	7	18	11′-4	4	18	5′-1	4	6	5′-9	2′-5	3′-4	5	9	38′-8	6	9	8′-3
18-19	4	17	30	4	12	39	4	17	30	7	18	38′-8	7	18	11′-4	4	18	5′-1	4	6	5′-10	2′-5	3′-5	5	9	38′-8	6	9	8′-5
20-21	4	17	30	4	12	39	4	17	30	5	9	38′-8	5	9	11′-5	4	9	5′-1	4	6	6′-0	2′-6	3′-6	5	9	38′-8	6	9	8′-6
22-23	4	17	30	4	12	39	4	17	30	6	12	38′-8	6	12	11′-10	4	12	4′-1	6	12	6′-7	2′-7	4′-0	5	9	38′-8	6	9	8′-9
24-25	4	17	30	5	12	39	4	17	30	6	12	38′-10	6	12	12′-0	4	12	4′-2	5	9	6′-5	2′-8	3′-9	5	9	38′-10	6	9	9′-1

	BAR LIST																									QUANTITIES				
	k9			m1			m2			m3			m4					m6			m7			m9			CONCRETE (CY/FT)			STEEL
FILL	SIZE	SP.	L	SIZE	SP.	L	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	7	4.5	38′-8	5	12	39′-2	4	12	8′-1	4	12	2′-1	7	12	9′-10	4′-5	5′-5	4	12	39′-2	6	12	8′-8	6	4.5	39′-2	1.766	1.483	0.507	3.756	485.34
1	7	4.5	38′-8	4	9	39′-2	4	9	8′-7	4	9	4′-7	7	12	9′-6	4′-2	5′-4	4	9	39′-2	5	9	8′-6	5	4.5	39′-2	1.706	1.422	0.507	3.635	483.74
2	8	4.5	38′-8	5	9	39′-2	4	9	6′-9	4	9	2′-1	6	9	8′-9	3′-6	5′-3	5	9	39′-2	5	9	8′-4	5	4.5	39′-2	1.285	1.301	0.507	3.093	548.26
3-6	6	4.5	38′-8	6	12	39′-2	5	12	7′-3	4	12	3′-11	6	9	8′-9	3′-5	5′-4	5	12	39′-2	7	12	8′-6	7	4.5	39′-2	1.285	1.362	0.507	3.154	553.68
7-8	6	4.5	38′-8	6	12	39′-2	5	12	7′-11	4	12	3′-11	6	9	8′-4	3′-0	5′-4	5	9	39′-2	6	9	7′-10	6	4.5	39′-2	1.285	1.422	0.507	3.214	530.61
9-10	7	4.5	38′-8	6	12	39′-2	5	12	8′-7	4	12	3′-3	5	6	8′-1	2′-7	5′-6	4	9	39′-2	6	9	7′-10	6	4.5	39′-2	1.405	1.666	0.507	3.578	517.97
11-12	7	4.5	38′-8	6	12	39′-2	5	12	8′-10	4	12	3′-3	5	6	8′-1	2′-6	5′-7	5	12	39′-2	7	12	8′-0	7	4.5	39′-2	1.526	1.788	0.507	3.821	535.97
13-15	6	4.5	38′-8	5	9	39′-2	5	9	10′-5	4	9	3′-11	4	6	8′-2	2′-5	5′-9	5	12	39′-2	7	12	8′-2	7	4.5	39′-2	1.706	1.971	0.507	4.184	543.68
16-17	6	4.5	38′-8	5	9	39′-2	5	9	10′-9	4	9	4′-1	4	6	8′-4	2′-6	5′-10	5	12	39′-2	7	12	8′-4	7	4.5	39′-2	1.827	2.093	0.507	4.427	549.95
18-19	6	4.5	38′-8	5	9	39′-2	5	9	11′-4	4	9	4′-3	4	6	8′-5	2′-6	5′-11	5	9	39′-2	6	9	8′-6	6	4.5	39′-2	1.947	2.215	0.507	4.669	561.76
20-21	6	4.5	38′-8	6	12	39′-2	6	12	11′-5	4	12	3′-5	4	6	8′-6	2′-6	6′-0	5	9	39′-2	6	9	8′-8	6	4.5	39′-2	2.067	2.337	0.507	4.911	570.95
22-23	6	4.5	38′-8	6	12	39′-2	6	12	11′-10	4	12	3′-1	6	12	8′-8	2′-7	6′-1	5	9	39′-2	6	9	8′-11	6	4.5	39′-2	2.248	2.520	0.507	5.275	590.34
24-25	6	4.5	38′-10	6	12	39′-4	6	12	12′-1	4	12	3′-4	5	9	9′-0	2′-9	6′-3	5	9	39′-4	6	9	9′-2	6	4.5	39′-4	2.441	2.716	0.535	5.692	607.42

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN

TRIPLE REINFORCED CONCRETE BOX CULVERTS

APRIL, 2012

CULVERT BARREL DETAILS

12 x 5 BARREL SECTIONS

TRRCB 12-5-12

ENGLISH\RFDSIGNED\TRIPLECULVERTS.DGN - TRRCB 12-5-12 - THIS SHEET ISSUED 04-12