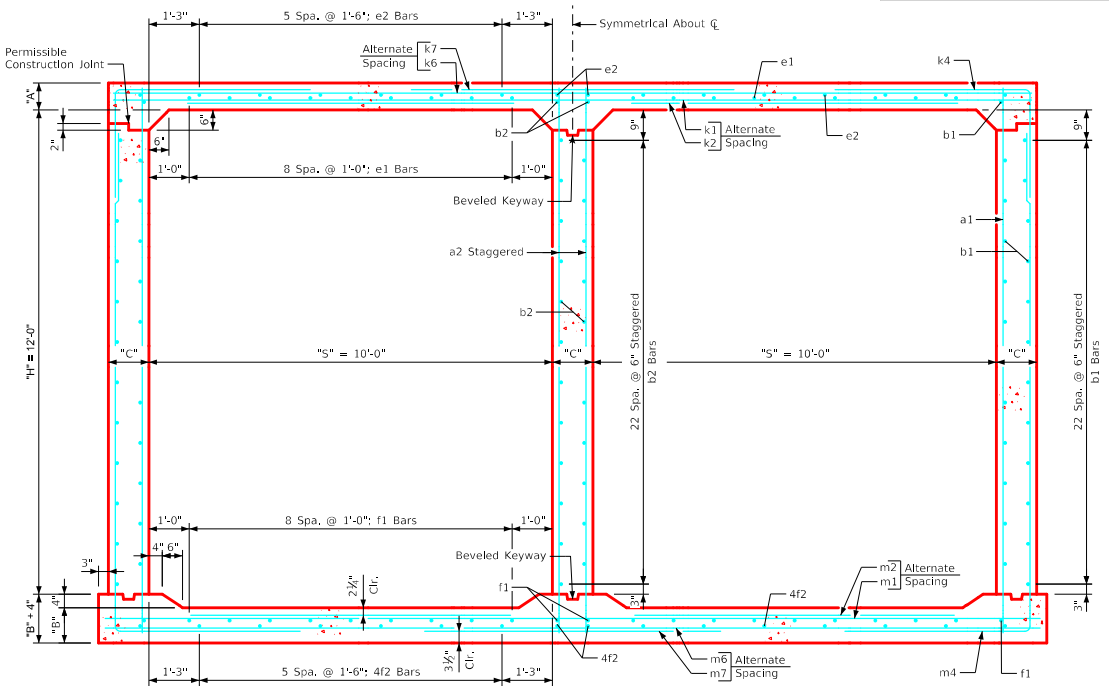
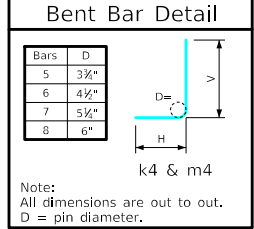


Variable Dimensions and Quantities for Twin 10' x 12' Barrel Sections

Dimensions													Bar List																																										
Fill	S	H	A	B	C	D	E	U	W	X	Z		a1			a2			b1			b2			e1			e2			f1			k1			k2			k4			k6			k7			k9						
													Size	Sp.	L	Size	Sp.	L	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.	Size	Sp.	No.				
0	10	12	13	12.5	12	9	9	0'-2	6'-4	1'-8	6'-6	4	9	14'-0	7	9	14'-0	4	6	48	4	6	25	4	12	18	4	18	16	4	12	22	4	18	16	6	18	22'-8	5	18	11'-2	6	9	10'-6	6'-7	3'-11	4	12	22'-8	4	12	12'-8	4	4.5	22'-8
1	10	12	12.5	12	12	9	9	0'-10	6'-4	1'-11	5'-1	5	12	13'-11	7	9	13'-11	4	6	48	4	6	25	4	12	18	4	18	16	4	12	22	4	18	16	6	18	22'-8	5	18	10'-6	6	9	10'-6	6'-7	3'-11	4	12	22'-8	4	12	12'-8	4	4.5	22'-8
2	10	12	9	10.5	12	6	9	1'-3	6'-11	2'-1	4'-1	4	6	13'-6	7	9	13'-6	4	6	48	4	6	25	4	12	18	4	18	16	4	12	22	4	18	16	5	12	22'-8	5	12	9'-8	6	9	10'-5	6'-10	3'-7	5	18	22'-8	7	18	13'-10	7	4.5	22'-8
3	10	12	8	10	12	9	9	1'-8	4'-4	2'-2	3'-8	5	12	13'-5	7	9	13'-5	4	6	48	4	6	25	4	12	18	4	18	16	4	12	22	4	18	16	5	12	22'-8	5	12	8'-4	5	6	8'-3	5'-2	3'-1	5	12	22'-8	5	12	8'-8	5	4.5	22'-8
4	10	12	8	10	12	6	9	1'-11	3'-11	2'-3	3'-6	4	6	13'-5	7	9	13'-5	4	6	48	4	6	25	4	12	18	4	18	16	4	12	22	4	18	16	6	18	22'-8	6	18	8'-1	5	6	7'-11	4'-10	3'-1	5	12	22'-8	5	12	7'-10	5	4.5	22'-8
5-7	10	12	8	10	12	9	9	2'-4	3'-10	3'-2	3'-8	4	9	13'-5	7	9	13'-5	4	6	48	4	6	25	4	12	18	4	18	16	4	12	22	4	18	16	5	12	22'-8	5	12	7'-3	5	6	7'-8	4'-7	3'-1	5	12	22'-8	6	12	7'-8	6	4.5	22'-8
8-10	10	12	9	11.5	12	9	9	2'-3	3'-7	2'-1	3'-8	5	12	13'-7	7	9	13'-7	4	6	48	4	6	25	4	12	18	4	18	16	4	12	22	4	18	16	5	12	22'-8	5	12	7'-7	7	9	8'-5	4'-6	3'-11	5	12	22'-8	6	12	7'-2	6	4.5	22'-8
11-13	10	12	10	13.5	12	9	9	2'-1	3'-5	2'-1	3'-8	5	12	13'-10	7	9	13'-10	4	6	48	4	6	25	4	12	18	4	18	16	4	12	22	4	18	16	5	12	22'-8	5	12	7'-11	7	9	8'-10	4'-5	4'-5	5	9	22'-8	5	9	6'-10	5	4.5	22'-8
14-16	10	12	12	14.5	12.5	9	9	1'-9	3'-7	1'-11	3'-8	6	12	14'-1	7	9	14'-1	4	6	48	4	6	25	4	12	18	4	18	16	4	12	22	4	18	16	6	18	22'-9	6	18	9'-0	5	6	7'-9	4'-4	3'-5	4	9	22'-9	6	9	7'-2	6	4.5	22'-9
17-19	10	12	13.5	16	13.5	9	6	1'-9	3'-8	2'-1	3'-10	6	9	14'-4	6	6	14'-4	4	6	48	4	6	25	4	12	18	4	18	16	4	12	22	4	18	16	5	12	23'-0	5	12	9'-1	5	6	8'-0	4'-5	3'-7	4	9	23'-0	6	9	7'-4	6	4.5	23'-0
20-22	10	12	14.5	17	13.5	9	6	1'-5	3'-9	2'-0	3'-11	6	9	14'-6	6	6	14'-6	4	6	48	4	6	25	4	12	18	4	18	16	4	12	22	4	18	16	5	12	23'-0	5	12	9'-7	5	6	8'-1	4'-5	3'-8	4	9	23'-0	6	9	7'-6	6	4.5	23'-0
23-25	10	12	16	18.5	14.5	6	9	1'-4	3'-10	1'-7	4'-1	4	6	14'-9	8	9	14'-9	4	6	48	4	6	25	4	12	18	4	18	16	4	12	22	4	18	16	5	12	23'-3	8	12	10'-3	8	12	9'-4	4'-5	4'-11	4	9	23'-3	6	9	7'-8	6	4.5	23'-3

Fill	Bar List																																				Quantities			
	m1			m2			m4			m6			m7			m9			Concrete (CY/FT)				Steel (LB/FT)																	
	Size	Sp.	L	Size	Sp.	L	Size	Sp.	L	H	V	Size	Sp.	L	Size	Sp.	L	Size	Sp.	L	Size	Sp.	L	Size	Sp.	L	Size	Sp.	L	Size	Sp.	L	Slab	Floor	Walls	Total				
0	6	18	23'-2	6	18	9'-0	6	9	19'-4	6'-10	12'-6	4	12	23'-2	5	12	13'-0	5	4.5	23'-2	0.992	0.973	1.289	3.254	423.71															
1	4	9	23'-2	4	9	8'-6	6	9	20'-3	7'-10	12'-5	4	9	23'-2	4	9	10'-2	4	4.5	23'-2	0.956	0.936	1.289	3.181	423.13															
2	5	12	23'-2	5	12	8'-2	6	9	17'-6	5'-2	12'-4	4	12	23'-2	6	12	8'-2	6	4.5	23'-2	0.708	0.828	1.289	2.825	441.58															
3	5	12	23'-2	5	12	7'-9	5	6	16'-11	4'-8	12'-3	4	9	23'-2	5	9	7'-4	5	4.5	23'-2	0.637	0.791	1.289	2.717	417.55															
4	5	12	23'-2	5	12	7'-7	5	6	16'-8	4'-5	12'-3	4	9	23'-2	5	9	7'-0	5	4.5	23'-2	0.637	0.791	1.289	2.717	419.97															
5-7	5	9	23'-2	4	9	5'-9	6	6	16'-8	4'-5	12'-3	4	12	23'-2	7	12	7'-4	7	4.5	23'-2	0.637	0.791	1.289	2.717	445.79															
8-10	5	12	23'-2	5	12	7'-11	7	9	16'-11	4'-6	12'-5	4	12	23'-2	7	12	7'-4	7	4.5	23'-2	0.708	0.900	1.289	2.897	460.13															
11-13	5	12	23'-2	5	12	8'-5	7	9	17'-1	4'-6	12'-7	4	12	23'-2	7	12	7'-4	7	4.5	23'-2	0.779	1.045	1.289	3.113	471.47															
14-16	5	12	23'-3	5	12	8'-9	5	6	17'-1	4'-5	12'-8	4	9	23'-3	6	9	7'-4	6	4.5	23'-3	0.928	1.125	1.342	3.395	444.13															
17-19	5	9	23'-6	4	9	8'-8	5	6	17'-3	4'-6	12'-9	4	9	23'-6	6	9	7'-8	6	4.5	23'-6	1.049	1.250	1.449	3.748	472.16															
20-22	5	9	23'-6	4	9	9'-0	5	6	17'-5	4'-7	12'-10	4	12	23'-6	7	12	7'-10	7	4.5	23'-6	1.121	1.323	1.449	3.893	481.79															
23-25	5	9	23'-9	4	9	9'-9	8	12	17'-6	4'-6	13'-0	5	12	23'-9	7	12	8'-2	7	4.5	23'-9	1.246	1.451	1.556	4.253	523.66															



Twin 10' x 12' Barrel Section

- Notes:**
1. Dimensions listed on this sheet to be used in conjunction with Sheet TWRCB G3-20.
 2. Fill, dimensions "S" and "H" are in feet.
 3. Dimensions "A", "B", "C", "D", and "Sp." listed in the bar list are in inches.
 4. Dimensions "L", "H", "V" are in feet and inches.

LATEST REVISION DATE	 Standard Design Twin Reinforced Concrete Box Culverts July, 2020	Culvert Barrel Details 10' x 12' Barrel Sections	TWRCB 10-12-20
----------------------	---	--	-------------------

ENGLISHLRFDDESIGNEDTWINCULVERTS.DGN - TWRCB 10-12-20 - THIS SHEET ISSUED 07-2020.