VARIABLE DIMENSIONS AND QUANTITIES FOR BARREL SECTIONS

REINFORCING BAR LIST

FILL	a1			a2			b1			b2			e1			e2			e3			e4			f1			f2			f3			f4			k1			k2			k3			k4					k5				
	SIZE	SP	LENGTH	SIZE	SP	LENGTH	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	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	h	v	SIZE	SP	LENGTH	h	v
0	20	280	4110	25	210	4110	10	175	40	10	175	42	15	300	18	10	360	20	15	300	9	10	360	10	15	420	18	10	360	20	15	420	9	10	360	10	15	280	10 120	15	280	2600	15	280	2620	15	280	1410	720	690	15	280	1280	590	690
300	20	280	4130	25	210	4130	10	175	40	10	175	42	15	300	18	10	360	20	15	300	9	10	360	10	15	420	18	10	360	20	15	420	9	10	360	10	15	280	10 120	15	280	2540	15	280	2520	15	280	1380	690	690	15	280	1280	590	690
600	15	210	4060	25	210	4060	10	175	40	10	175	42	15	300	18	10	360	20	15	300	9	10	360	10	15	420	18	10	360	20	15	420	9	10	360	10	15	210	10 120	15	210	2470	15	210	2340	20	350	1760	970	790	20	350	1460	670	790
900-1800	15	280	4030	25	210	4030	10	175	40	10	175	42	15	300	18	10	360	20	15	300	9	10	360	10	15	420	18	10	360	20	15	420	9	10	360	10	15	280	10 120	15	280	2270	15	280	2210	15	280	1690	1000	690	15	280	1300	610	690
2100-3000	15	280	4030	25	210	4030	10	175	40	10	175	42	15	300	18	10	360	20	15	300	9	10	360	10	15	420	18	10	360	20	15	420	9	10	360	10	15	280	10 120	15	280	2090	15	280	2010	15	280	1710	920	790	20	280	1510	690	820
3300-3600	15	210	4070	25	210	4070	10	175	40	10	175	42	15	300	18	10	360	20	15	300	9	10	360	10	15	420	18	10	360	20	15	420	9	10	360	10	15	210	10 120	15	210	2090	15	210	1910	15	280	1720	900	820	15	280	1510	690	820
3900-4500	15	210	4120	25	210	4120	10	175	40	10	175	42	15	300	18	10	360	20	15	300	9	10	360	10	15	420	18	10	360	20	15	420	9	10	360	10	15	210	10 120	15	210	2110	15	210	1910	20	280	1710	920	790	20	280	1490	670	820
4800-5100	20	280	4170	25	210	4170	10	175	40	10	175	42	15	300	18	10	360	20	15	300	9	10	360	10	15	420	18	10	360	20	15	420	9	10	360	10	15	210	10 120	15	210	2140	15	210	1910	20	280	1690	900	790	20	280	1430	640	790
5400-5700	20	280	4220	25	210	4220	10	175	40	10	175	42	15	300	18	10	360	20	15	300	9	10	360	10	15	420	18	10	360	20	15	420	9	10	360	10	15	210	10 120	15	210	2190	15	210	1810	25	350	1920	920	1000	25	350	1770	770	1000
6000-6300	15	140	4260	25	210	4260	10	175	40	10	175	42	15	300	18	10	360	20	15	300	9	10	360	10	15	420	18	10	360	20	15	420	9	10	360	10	15	210	10 120	15	210	2210	15	210	1780	25	350	1940	940	1000	25	350	1740	740	1000
6600-6900	20	140	4300	25	210	4300	10	175	40	10	175	42	15	300	18	10	360	20	15	300	9	10	360	10	15	420	18	10	360	20	15	420	9	10	360	10	15	350	10 120	20	350	2140	20	350	1580	25	350	1940	940	1000	25	350	1740	740	1000
7200-7500	15	140	4350	25	210	4350	10	175	40	10	175	42	15	300	18	10	360	20	15	300	9	10	360	10	15	420	18	10	360	20	15	420	9	10	360	10	15	350	10 120	20	350	2160	20	350	1630	25	350	2220	940	1280	25	350	2200	920	1280

REINFORCING BAR LIST

FILL	k6			k7			k9			m1			m2			m3			m4					m5					m6			m7			m9		
	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	h	v	SIZE	SP	LENGTH	h	v	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH
0	15	280	10 120	15	280	1550	15	105	10 120	15	280	10 270	15	280	2090	15	280	1910	15	280	5220	1200	4020	15	280	4580	560	4020	15	280	8080	15	280	1380	15	105	10 270
300	15	280	10 120	15	280	1530	15	105	10 120	15	280	10 270	15	280	2090	15	280	1890	15	280	5010	970	4040	15	280	4600	560	4040	15	210	7980	15	210	1100	15	105	10 270
600	15	280	8670	15	280	1500	15	105	10 120	15	280	10 270	15	280	1910	15	280	1320	20	350	4940	970	3970	20	350	4580	610	3970	15	280	8060	20	280	1450	15	105	10 270
900-1800	15	280	8030	15	280	1610	15	105	10 120	15	280	10 270	15	280	2060	15	280	2010	15	280	4880	940	3940	15	280	4550	610	3940	15	280	7930	15	280	1400	15	105	10 270
2100-3000	15	280	7850	20	280	1530	15	105	10 120	15	280	10 270	20	280	2110	15	280	1910	15	280	4810	870	3940	20	280	4610	670	3940	20	280	7930	20	280	1450	20	105	10 270
3300-3600	15	210	7800	15	210	1320	15	105	10 120	15	280	10 270	20	280	2160	15	280	1830	15	280	4810	870	3940	15	280	4640	670	3970	20	280	7910	20	280	1350	20	105	10 270
3900-4500	15	210	7830	15	210	1400	20	105	10 120	15	280	10 270	20	280	2190	15	280	1910	20	280	4920	900	4020	20	280	4660	640	4020	20	280	7910	20	280	1450	20	105	10 270
4800-5100	20	280	7830	20	280	1400	20	105	10 120	15	280	10 270	20	280	2210	15	280	1830	20	280	4940	870	4070	20	280	4680	610	4070	20	280	7910	20	280	1380	20	105	10 270
5400-5700	20	280	7830	20	280	1400	20	105	10 120	15	280	10 270	20	280	2270	15	280	1830	25	350	5040	920	4120	25	350	4860	740	4120	20	280	7910	20	280	1380	20	105	10 270
6000-6300	20	280	7880	20	280	1450	20	105	10 120	15	280	10 270	20	280	2290	15	280	1780	25	350	5070	900	4170	25	350	4910	740	4170	20	280	7910	20	280	1400	20	105	10 270
6600-6900	25	350	7880	25	350	1450	25	175	10 120	15	280	10 270	20	280	2290	15	280	1830	25	350	5120	920	4200	25	350	4940	740	4200	20	280	7980	20	280	1660	25	105	10 270
7200-7500	25	350	7850	25	350	1450	25	175	10 120	15	280	10 270	20	280	2340	15	280	1890	25	350	5140	900	4240	25	350	5170	920	4250	20	280	7930	20	280	1450	20	105	10 270

DIMENSIONS

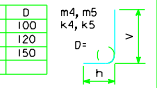
FILL	S	H	A	B	C	*D	*E	*F	*G	*J
0	3000	3600	270	270	305	210	105	210	280	280
300	3000	3600	280	280	305	210	105	210	280	280
600	3000	3600	230	255	305	105	105	245	280	280
900-1800	3000	3600	205	255	305	210	105	210	280	280
2100-3000	3000	3600	205	255	305	210	105	210	280	280
3300-3600	3000	3600	220	280	305	105	105	210	280	280
3900-4500	3000	3600	245	305	305	105	105	210	280	280
4800-5100	3000	3600	270	330	305	210	105	210	280	280
5400-5700	3000	3600	295	355	305	210	105	245	280	280
6000-6300	3000	3600	305	380	305	210	105	245	280	280
6600-6900	3000	3600	330	395	305	210	210	245	315	280
7200-7500	3000	3600	355	425	305	140	210	245	315	280

DIMENSIONS

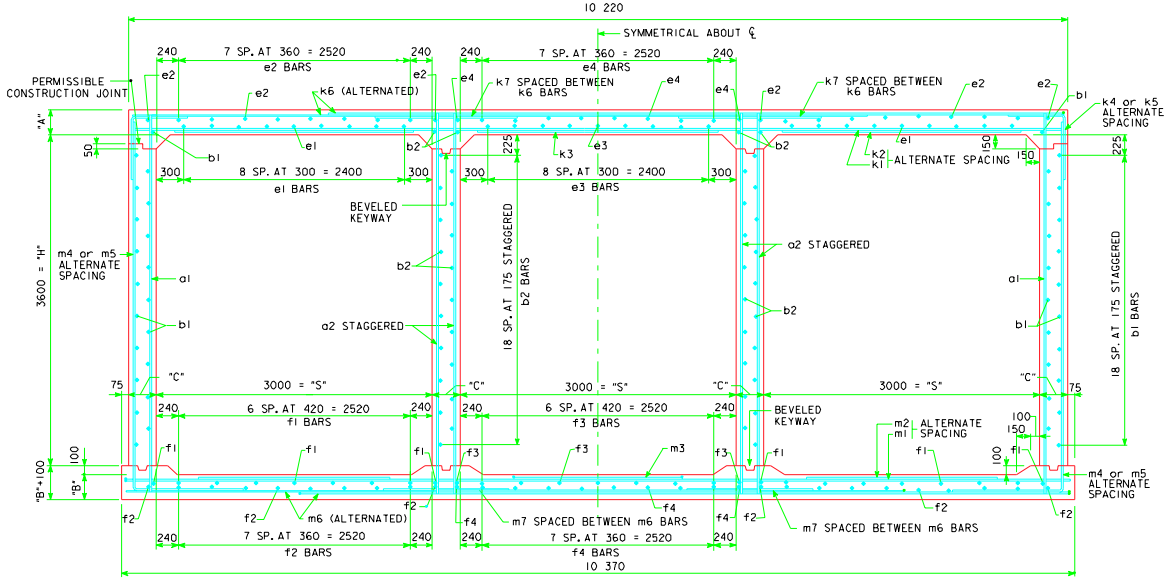
FILL	*K	*L	R	T	U	V	W	X	Y	Z
0	105	210	340	405	835	3408	685	700	1293	720
300	105	210	390	435	845	3408	685	710	1193	560
600	105	210	480	455	815	1958	765	990	1273	760
900-1800	105	210	550	525	875	1318	685	650	1143	740
2100-3000	105	210	650	625	815	1138	635	700	1143	760
3300-3600	105	210	700	655	705	1088	635	740	1123	710
3900-4500	105	210	700	685	735	1118	635	700	1123	760
4800-5100	105	210	700	685	765	1118	665	740	1123	740
5400-5700	105	210	750	655	765	1118	625	740	1123	740
6000-6300	105	210	760	665	765	1168	635	760	1123	760
6600-6900	105	210	860	705	765	1168	635	740	1193	890
7200-7500	105	210	840	715	765	1138	605	710	1143	790

BENT BAR DETAILS

BARS	D
15	100
20	120
25	150



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



BARREL SECTION

QUANTITIES

FILL	CONCRETE m3/m				STEEL
	SLAB	FLOOR	WALL	TOTAL	kg/m
0	3.005	3.022	4.234	10.261	897.5
300	3.107	3.126	4.234	10.467	909.1
600	2.596	2.866	4.234	9.696	941.4
900-1800	2.340	2.866	4.234	9.441	852.2
2100-3000	2.340	2.866	4.234	9.441	934.5
3300-3600	2.494	3.126	4.234	9.854	954.7
3900-4500	2.749	3.385	4.234	10.368	1036.3
4800-5100	3.005	3.644	4.234	10.883	1055.4
5400-5700	3.260	3.903	4.234	11.398	1149.5
6000-6300	3.362	4.163	4.234	11.759	1175.9
6600-6900	3.618	4.318	4.234	12.170	1234.5
7200-7500	3.873	4.629	4.234	12.737	1204.6

* THESE DIMENSIONS ARE CORRECT FOR 11 480 mm LONG STANDARD SECTIONS ONLY. DIMENSIONS MUST BE RECALCULATED FOR ALL OTHER SECTION LENGTHS.

DIMENSIONS LISTED ON THIS SHEET TO BE USED IN CONJUNCTION WITH SHEET MTRRCB 2-94

LATEST REVISION DATE : 12-5-96

APPROVED BY :

STANDARD DESIGN

CULVERT BARREL DETAILS

FOR

TRIPLE REINFORCED CONCRETE BOX CULVERTS

PROJECT DEVELOPMENT DIVISION

IOWA DEPARTMENT OF TRANSPORTATION

DECEMBER, 1994

MTRRCB 3000-3600-94

REVISED : 12/96 ; KEYWAY NOTATION CHANGED.
TRB3036M.SOI

XXXXXXXXXXSYSTEMTIME XXXXXXXUSERNAME XXXXXXXXXX