VARIABLE DIMENSIONS AND QUANTITIES FOR BARREL SECTIONS

REINFORCING BAR LIST

FILL	a1			a2			b1			b2			e1			e2			e3			e4		
	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	NO.	SIZE	SP	NO.	SIZE	SP	NO.	SIZE	SP	NO.	SIZE	SP	NO.	SIZE	SP	NO.
0	15	210	2320	15	105	2320	10	175	20	10	175	22	15	300	22	10	360	22	15	300	11	10	360	11
300	15	210	2360	15	105	2360	10	175	20	10	175	22	15	300	22	10	360	22	15	300	11	10	360	11
600	15	140	2270	20	140	2270	10	175	20	10	175	22	15	300	22	10	360	22	15	300	11	10	360	11
900-2100	15	210	2230	15	105	2230	10	175	20	10	175	22	15	300	22	10	360	22	15	300	11	10	360	11
2400-2700	15	210	2270	15	105	2270	10	175	20	10	175	22	15	300	22	10	360	22	15	300	11	10	360	11
3000-3300	15	210	2320	15	105	2320	10	175	20	10	175	22	15	300	22	10	360	22	15	300	11	10	360	11
3600-3900	15	210	2360	15	105	2360	10	175	20	10	175	22	15	300	22	10	360	22	15	300	11	10	360	11
4200-4500	15	210	2410	15	105	2410	10	175	20	10	175	22	15	300	22	10	360	22	15	300	11	10	360	11
4800-5100	15	210	2470	15	105	2470	10	175	20	10	175	22	15	300	22	10	360	22	15	300	11	10	360	11
5400-5700	15	210	2530	15	105	2530	10	175	20	10	175	22	15	300	22	10	360	22	15	300	11	10	360	11
6000-6600	15	210	2610	15	140	2610	10	175	20	10	175	22	15	300	22	10	360	22	15	300	11	10	360	11
6900-7500	15	210	2700	15	105	2700	10	175	20	10	175	22	15	300	22	10	360	22	15	300	11	10	360	11

FILL	f1			f2			f3			f4			k1			k2			k3			k4					k5				
	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	15	420	20	10	360	22	15	420	10	10	360	11	15	210	11 620	15	210	3310	15	210	3080	15	210	1490	670	820	15	210	1410	590	820
300	15	420	20	10	360	22	15	420	10	10	360	11	15	210	11 620	15	210	3230	15	210	2950	15	210	1430	610	820	15	210	1380	560	820
600	15	420	20	10	360	22	15	420	10	10	360	11	15	210	11 620	15	210	2650	15	210	2340	15	280	1480	690	790	20	280	1380	590	790
900-2100	15	420	20	10	360	22	15	420	10	10	360	11	15	210	11 620	15	210	2620	15	210	2390	15	280	1510	690	820	20	280	1430	610	820
2400-2700	15	420	20	10	360	22	15	420	10	10	360	11	15	280	11 620	20	280	2570	15	280	2040	15	280	1480	690	790	20	280	1380	590	790
3000-3300	15	420	20	10	360	22	15	420	10	10	360	11	15	210	11 620	15	210	2600	15	210	1660	15	280	1480	690	790	20	280	1380	590	790
3600-3900	15	420	20	10	360	22	15	420	10	10	360	11	20	280	11 620	20	280	2440	15	280	1320	15	280	1480	690	790	20	280	1350	560	790
4200-4500	15	420	20	10	360	22	15	420	10	10	360	11	20	280	11 620	20	280	2470	15	280	1220	15	280	1480	690	790	20	280	1350	560	790
4800-5100	15	420	20	10	360	22	15	420	10	10	360	11	25	350	11 620	25	350	2600	15	350	1220	15	280	1510	720	790	20	280	1330	540	790
5400-5700	15	420	20	10	360	22	15	420	10	10	360	11	25	350	11 620	25	350	2650	15	350	1220	15	280	1710	920	790	20	280	1330	540	790
6000-6600	15	420	20	10	360	22	15	420	10	10	360	11	25	350	11 620	25	350	2670	15	350	1220	15	280	1760	970	790	20	280	1480	690	790
6900-7500	15	420	20	10	360	22	15	420	10	10	360	11	25	350	11 620	25	350	2750	15	350	1220	15	280	1810	1020	790	20	280	1480	690	790

REINFORCING BAR LIST

FILL	k6			k7			k9			m1			m2			m3		
	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH
0	15	280	10 320	15	280	1930	15	105	11 620	15	280	11 770	15	280	2420	15	280	2140
300	15	280	9730	15	280	1660	15	105	11 620	15	280	11 770	15	280	2470	15	280	2110
600	20	280	9610	20	280	1680	20	105	11 620	15	210	11 770	15	210	2160	—	——	——
900-2100	15	210	9200	20	210	1630	20	105	11 620	15	280	11 770	20	280	2470	15	280	1930
2400-2700	20	280	9070	25	280	1680	20	105	11 620	15	210	11 770	15	210	2210	15	210	1580
3000-3300	20	280	9050	25	280	1660	20	105	11 620	20	280	11 770	20	280	2390	15	280	1550
3600-3900	20	210	9000	20	210	1400	20	105	11 620	25	350	11 770	25	350	2540	15	350	1450
4200-4500	20	210	8970	20	210	1450	20	105	11 620	25	350	11 770	25	350	2570	15	350	1220
4800-5100	20	210	8970	20	210	1430	20	105	11 620	25	350	11 770	25	350	2620	15	350	1220
5400-5700	25	350	9050	25	350	1760	25	175	11 620	25	350	11 770	25	350	2620	15	350	1220
6000-6600	20	210	9000	20	210	1530	20	105	11 620	15	210	11 770	20	210	2820	15	210	1450
6900-7500	20	210	9020	20	210	1630	20	105	11 620	15	210	11 770	20	210	2950	15	210	1530

FILL	m4					m5					m6			m7			m9		
	SIZE	SP	LENGTH	h	v	SIZE	SP	LENGTH	h	v	SIZE	SP	LENGTH	SIZE	SP	LENGTH	SIZE	SP	LENGTH
0	15	210	2700	510	2190	15	210	2750	560	2190	15	210	11 770	15	210	1400	15	105	11 770
300	15	210	2850	610	2240	15	210	2800	560	2240	15	210	9200	15	210	1400	15	105	11 770
600	15	280	2830	690	2140	20	280	2680	540	2140	15	210	9230	20	210	1450	15	105	11 770
900-2100	15	280	2800	690	2110	20	280	2670	560	2110	15	210	9100	20	210	1550	15	105	11 770
2400-2700	15	280	2830	690	2140	20	280	2680	540	2140	20	210	9070	20	210	1350	20	105	11 770
3000-3300	15	280	2880	690	2190	20	280	2730	540	2190	20	210	9070	20	210	1380	20	105	11 770
3600-3900	15	280	2930	690	2240	20	280	2780	540	2240	20	210	9050	20	210	1380	20	105	11 770
4200-4500	15	280	3010	720	2290	20	280	2830	540	2290	20	210	9050	20	210	1450	20	105	11 770
4800-5100	15	280	3240	900	2340	20	280	2880	540	2340	25	350	9120	25	350	1730	25	175	11 770
5400-5700	15	280	3340	920	2420	20	280	2960	540	2420	25	350	9120	25	350	1760	25	175	11 770
6000-6600	15	280	3460	970	2490	20	280	3040	540	2500	25	350	9120	25	350	1760	25	175	11 770
6900-7500	15	280	3590	1020	2570	20	280	3110	540	2570	25	350	9120	25	350	1810	25	175	11 770

DIMENSIONS

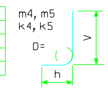
FILL	S	H	A	B	C	*D	*E	*F	*G	*J
0	3600	1800	280	270	230	105	105	105	280	280
300	3600	1800	295	295	230	105	105	105	280	280
600	3600	1800	245	255	230	140	105	210	280	280
900-2100	3600	1800	205	255	230	105	105	210	280	280
2400-2700	3600	1800	230	270	230	105	105	210	280	280
3000-3300	3600	1800	255	295	230	105	105	210	280	280
3600-3900	3600	1800	270	320	230	105	105	210	280	280
4200-4500	3600	1800	295	345	230	105	105	210	280	280
4800-5100	3600	1800	320	380	230	105	210	210	280	490
5400-5700	3600	1800	355	405	230	105	210	210	490	490
6000-6600	3600	1800	395	445	230	105	210	210	280	490
6900-7500	3600	1800	430	495	230	105	210	210	280	490

DIMENSIONS

FILL	*K	*L	R	T	U	V	W	X	Y	Z
0	105	105	380	420	1050	2595	820	850	3970	720
300	105	105	440	470	930	2005	850	860	1400	690
600	105	140	750	720	900	1885	960	1920	1430	740
900-2100	105	105	720	730	870	1475	800	950	1300	840
2400-2700	105	105	900	800	900	1345	960	1130	1270	720
3000-3300	105	105	1090	770	900	1325	880	1140	1270	730
3600-3900	210	105	1260	910	750	1275	860	1190	1250	750
4200-4500	210	105	1310	900	800	1245	850	1310	1250	800
4800-5100	210	105	1310	850	650	1245	850	1310	1320	950
5400-5700	210	105	1310	850	980	1325	850	1310	1320	980
6000-6600	105	140	1310	860	820	1275	780	1190	1320	980
6900-7500	105	105	1310	830	900	1295	730	1150	1320	1000

BENT BAR DETAILS

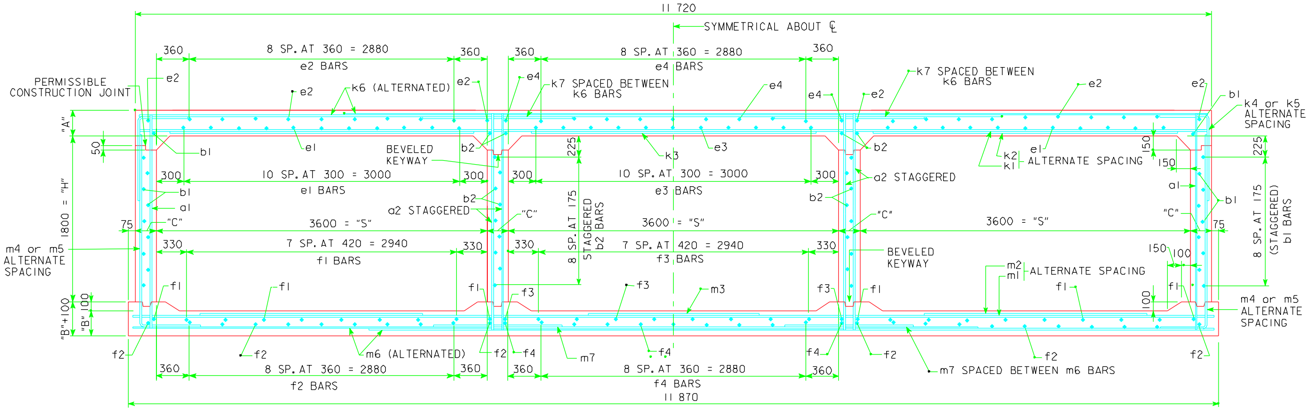
BARS	D
15	100
20	120
25	150



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

QUANTITIES

FILL	CONCRETE m3/m				STEEL
	SLAB	FLOOR	WALL	TOTAL	kg/m
0	3.486	3.397	1.540	8.422	874.0
300	3.661	3.694	1.540	8.895	851.0
600	3.075	3.219	1.540	7.834	910.8
900-2100	2.607	3.219	1.540	7.365	879.8
2400-2700	2.900	3.397	1.540	7.836	921.2
3000-3300	3.193	3.694	1.540	8.426	960.5
3600-3900	3.368	3.990	1.540	8.898	1030.0
4200-4500	3.661	4.287	1.540	9.488	1035.8
4800-5100	3.954	4.703	1.540	10.196	1098.3
5400-5700	4.365	4.999	1.540	10.904	1117.7
6000-6600	4.833	5.474	1.540	11.847	1062.8
6900-7500	5.244	6.068	1.540	12.851	1097.8



BARREL SECTION

* 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 3600-1800-94

REVISED : 12/96 ; KEYWAY NOTATION CHANGED.
TRB3618M.S01

XXXXXXXXXXSYSTEMTIME XXXXXXXUSERNAME XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXDGNSPEC