VARIABLE DIMENSIONS AND QUANTITIES FOR BARREL SECTIONS

REINFORCING BAR LIST

FILL	a1 SIZE	a1 SP	a1 LENGTH	a2 SIZE	a2 SP	a2 LENGTH	b1 SIZE	b1 SP	b1 NO.	b2 SIZE	b2 SP	b2 NO.	e1 SIZE	e1 SP	e1 NO.	e2 SIZE	e2 SP	e2 NO.	e3 SIZE	e3 SP	e3 NO.	e4 SIZE	e4 SP	e4 NO.	f1 SIZE	f1 SP	f1 NO.
0	15	140	4130	25	210	4130	10	175	40	10	175	42	15	300	22	10	360	22	15	300	11	10	360	11	15	420	20
300	15	210	4170	25	210	4170	10	175	40	10	175	42	15	300	22	10	360	22	15	300	11	10	360	11	15	420	20
600	15	210	4070	25	210	4070	10	175	40	10	175	42	15	300	22	10	360	22	15	300	11	10	360	11	15	420	20
900-2100	15	210	4030	25	210	4030	10	175	40	10	175	42	15	300	22	10	360	22	15	300	11	10	360	11	15	420	20
2400-2700	15	210	4070	25	210	4070	10	175	40	10	175	42	15	300	22	10	360	22	15	300	11	10	360	11	15	420	20
3000-3300	15	140	4120	25	210	4120	10	175	40	10	175	42	15	300	22	10	360	22	15	300	11	10	360	11	15	420	20
3600-3900	15	280	4170	25	210	4170	10	175	40	10	175	42	15	300	22	10	360	22	15	300	11	10	360	11	15	420	20
4200-4500	20	280	4220	25	210	4220	10	175	40	10	175	42	15	300	22	10	360	22	15	300	11	10	360	11	15	420	20
4800-5100	15	140	4270	25	210	4270	10	175	40	10	175	42	15	300	22	10	360	22	15	300	11	10	360	11	15	420	20
5400-5700	20	210	4320	25	210	4320	10	175	40	10	175	42	15	300	22	10	360	22	15	300	11	10	360	11	15	420	20
6000-6600	20	210	4400	25	210	4400	10	175	40	10	175	42	15	300	22	10	360	22	15	300	11	10	360	11	15	420	20
6900-7500	15	140	4490	25	210	4490	10	175	40	10	175	42	15	300	22	10	360	22	15	300	11	10	360	11	15	420	20

FILL	f2 SIZE	f2 SP	f2 NO.	f3 SIZE	f3 SP	f3 NO.	f4 SIZE	f4 SP	f4 NO.	k1 SIZE	k1 SP	k1 LENGTH	k2 SIZE	k2 SP	k2 LENGTH	k3 SIZE	k3 SP	k3 LENGTH	k4 SIZE	k4 SP	k4 LENGTH	k4 h	k4 v	k5 SIZE	k5 SP	k5 LENGTH	k5 h	k5 v
0	10	360	22	15	420	10	10	360	11	15	280	11 920	15	280	3280	15	280	3150	20	420	1690	690	1000	20	420	1640	640	1000
300	10	360	22	15	420	10	10	360	11	15	280	11 920	15	280	3180	15	280	3030	20	280	1430	640	790	20	280	1430	640	790
600	10	360	22	15	420	10	10	360	11	15	210	11 920	15	210	2650	15	210	2390	15	210	1720	900	820	15	210	1490	670	820
900-2100	10	360	22	15	420	10	10	360	11	15	280	11 920	15	280	2600	15	280	2440	20	280	1840	1050	790	20	280	1510	720	790
2400-2700	10	360	22	15	420	10	10	360	11	15	280	11 920	20	280	2440	15	280	2090	15	210	1760	940	820	15	210	1510	690	820
3000-3300	10	360	22	15	420	10	10	360	11	15	280	11 920	20	280	2500	15	280	2060	15	210	1740	920	820	15	210	1510	690	820
3600-3900	10	360	22	15	420	10	10	360	11	15	210	11 920	15	210	2270	15	210	1630	20	280	1710	920	790	20	280	1430	640	790
4200-4500	10	360	22	15	420	10	10	360	11	15	210	11 920	15	210	2320	15	210	1680	20	280	1870	870	1000	20	280	1770	770	1000
4800-5100	10	360	22	15	420	10	10	360	11	15	210	11 920	15	210	2370	15	210	1660	25	350	1940	940	1000	25	350	1740	740	1000
5400-5700	10	360	22	15	420	10	10	360	11	15	210	11 920	15	210	2470	15	210	1680	25	350	1940	940	1000	25	350	1740	740	1000
6000-6600	10	360	22	15	420	10	10	360	11	20	280	11 920	20	280	2570	15	280	1660	25	350	2470	1200	1270	25	350	2450	1170	1280
6900-7500	10	360	22	15	420	10	10	360	11	20	280	11 920	20	280	2650	15	280	1730	25	280	2470	1200	1270	20	280	2450	1170	1280

REINFORCING BAR LIST

FILL	k6 SIZE	k6 SP	k6 LENGTH	k7 SIZE	k7 SP	k7 LENGTH	k9 SIZE	k9 SP	k9 LENGTH	m1 SIZE	m1 SP	m1 LENGTH	m2 SIZE	m2 SP	m2 LENGTH	m3 SIZE	m3 SP	m3 LENGTH
0	15	350	11 920	15	350	1730	15	175	11 920	15	280	12 070	15	280	2390	15	280	2190
300	15	280	11 920	15	280	1680	15	105	11 920	15	350	12 070	15	350	2240	15	350	1580
600	15	210	9830	15	210	1630	15	105	11 920	15	210	12 070	15	210	2140	15	210	1400
900-2100	20	280	9400	20	280	1760	20	105	11 920	15	210	12 070	15	210	2390	15	210	2210
2400-2700	15	210	9230	20	210	1660	15	105	11 920	15	210	12 070	15	210	2190	15	210	1760
3000-3300	15	210	9200	20	210	1660	15	105	11 920	15	210	12 070	15	210	2240	15	210	1610
3600-3900	20	280	9250	20	280	1710	20	105	11 920	15	210	12 070	15	210	2290	15	210	1630
4200-4500	20	210	9200	15	210	1450	20	105	11 920	20	280	12 070	15	280	2420	15	280	1610
4800-5100	25	350	9280	25	350	1780	25	175	11 920	20	280	12 070	20	280	2440	15	280	1630
5400-5700	25	350	9280	25	350	1810	25	175	11 920	20	280	12 070	20	280	2470	15	280	1680
6000-6600	25	350	9250	25	350	2140	25	175	11 920	25	350	12 070	25	350	2600	25	350	1630
6900-7500	20	280	9250	20	280	2140	25	175	11 920	25	350	12 070	20	350	2720	15	350	1680

FILL	m4 SIZE	m4 SP	m4 LENGTH	m4 h	m4 v	m5 SIZE	m5 SP	m5 LENGTH	m5 h	m5 v	m6 SIZE	m6 SP	m6 LENGTH	m7 SIZE	m7 SP	m7 LENGTH	m9 SIZE	m9 SP	m9 LENGTH
0	20	420	5060	1020	4040	25	420	4780	740	4040	15	280	9450	15	280	1320	15	105	12 070
300	20	350	5070	1000	4070	20	350	4680	610	4070	15	280	9380	15	280	1320	15	105	12 070
600	15	210	4910	940	3970	15	210	4610	640	3970	20	280	9450	25	280	1610	20	105	12 070
900-2100	20	280	4940	1000	3940	20	280	4610	670	3940	20	280	9330	25	280	1660	20	105	12 070
2400-2700	15	210	4890	920	3970	15	210	4610	640	3970	20	280	9330	25	280	1680	20	105	12 070
3000-3300	15	210	4920	900	4020	15	210	4660	640	4020	20	280	9330	25	280	1680	20	105	12 070
3600-3900	20	280	4960	920	4040	20	280	4680	610	4070	20	280	9300	20	280	1680	20	105	12 070
4200-4500	20	280	4990	870	4120	20	280	4860	740	4120	20	280	9250	20	280	1450	20	105	12 070
4800-5100	25	350	5070	900	4170	25	350	4910	740	4170	25	350	9350	25	350	1780	25	175	12 070
5400-5700	25	350	5160	940	4220	25	350	4960	740	4220	25	350	9330	25	350	1780	25	175	12 070
6000-6600	25	350	5270	970	4300	25	350	5220	920	4300	25	350	9330	25	350	1810	25	175	12 070
6900-7500	25	280	5620	1220	4400	20	280	5240	920	4320	25	420	9330	25	420	1810	25	105	12 070

DIMENSIONS

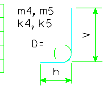
FILL	S	H	A	B	C	*D	*E	*F	*G	*J
0	3600	3600	280	280	305	140	105	210	490	280
300	3600	3600	295	305	305	210	105	70	280	280
600	3600	3600	245	255	305	210	105	105	280	280
900-2100	3600	3600	205	255	305	210	105	70	280	280
2400-2700	3600	3600	220	280	305	210	105	105	280	280
3000-3300	3600	3600	245	305	305	140	105	105	280	280
3600-3900	3600	3600	270	330	305	70	105	70	280	280
4200-4500	3600	3600	295	355	305	70	105	70	280	280
4800-5100	3600	3600	320	380	305	140	105	70	490	490
5400-5700	3600	3600	345	405	305	210	105	70	490	490
6000-6600	3600	3600	380	445	305	210	105	70	490	490
6900-7500	3600	3600	420	495	305	140	105	70	280	280

DIMENSIONS

FILL	*K	*L	R	T	U	V	W	X	Y	Z
0	105	210	380	395	925	4008	825	860	1463	690
300	210	210	440	445	925	4008	925	1160	1393	690
600	105	210	760	725	875	1918	955	1250	1463	830
900-2100	105	210	730	695	955	1488	825	850	1343	880
2400-2700	105	210	910	805	905	1318	955	1070	1343	900
3000-3300	105	210	920	795	905	1288	955	1150	1343	900
3600-3900	105	210	1140	945	925	1338	925	1140	1313	900
4200-4500	105	210	1110	925	765	1288	895	1150	1263	770
4800-5100	105	210	1120	925	945	1368	905	1140	1363	950
5400-5700	105	210	1110	875	975	1368	905	1110	1343	950
6000-6600	210	210	1120	855	1135	1338	845	1140	1343	980
6900-7500	210	210	1090	845	1135	1338	805	1110	1343	980

BENT BAR DETAILS

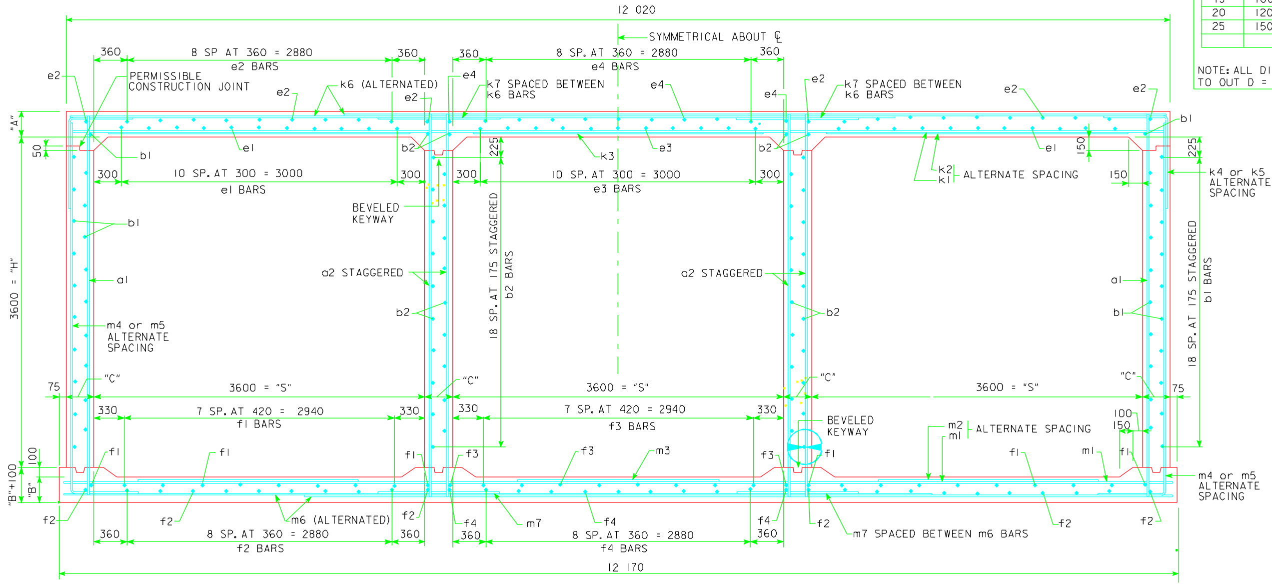
BARS	D
15	100
20	120
25	150



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

QUANTITIES

FILL	CONCRETE m3/m SLAB	FLOOR	WALL	TOTAL	STEEL kg/m
0	3.611	3.630	4.234	11.475	1020.9
300	3.791	3.934	4.234	11.959	981.8
600	3.190	3.325	4.234	10.750	1130.9
900-2100	2.709	3.325	4.234	10.269	1136.7
2400-2700	2.890	3.630	4.234	10.754	1117.9
3000-3300	3.190	3.934	4.234	11.358	1152.0
3600-3900	3.491	4.238	4.234	11.963	1138.2
4200-4500	3.791	4.542	4.234	12.568	1196.9
4800-5100	4.092	4.847	4.234	13.173	1381.3
5400-5700	4.392	5.151	4.234	13.777	1390.8
6000-6600	4.813	5.638	4.234	14.685	1513.6
6900-7500	5.294	6.246	4.234	15.774	1452.1



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: [signature]

STANDARD DESIGN

CULVERT BARREL DETAILS

FOR TRIPLE REINFORCED CONCRETE BOX CULVERTS

PROJECT DEVELOPMENT DIVISION
IOWA DEPARTMENT OF TRANSPORTATION

DECEMBER, 1994

MTRRCB 3600-3600-94

REVISED: 12/96 ; KEYWAY NOTATION CHANGED.
TRB3636M.S01

XXXXXXXXXXSYSTEMTIME XXXXXXXUSERNAME XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXDGNSPEC