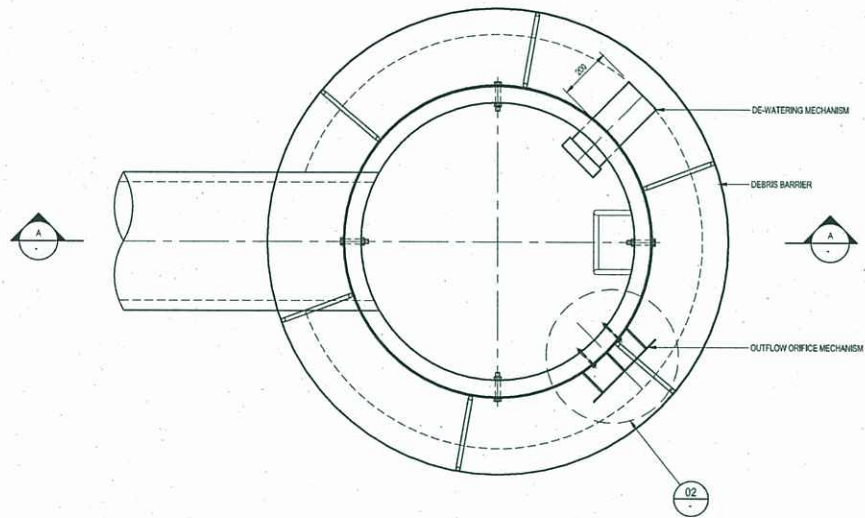
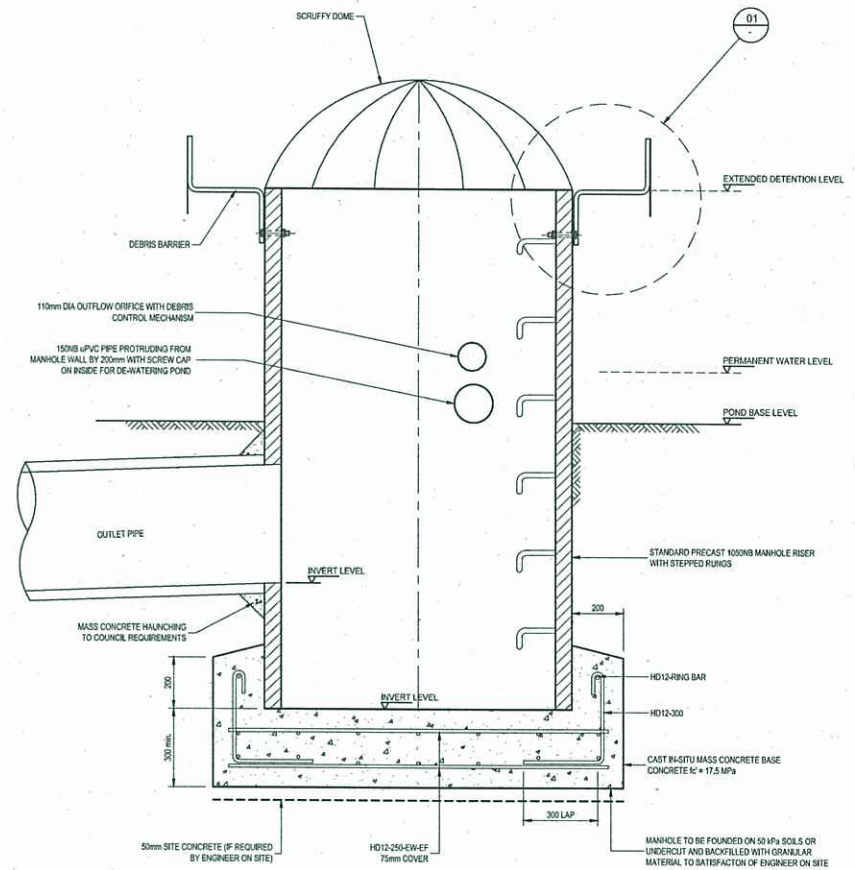


300 mm
200
100
50
10 mm
0



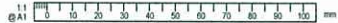
OUTLET STRUCTURE PLAN
SCALE: 1:10-A1



OUTLET STRUCTURE SECTION
SCALE: 1:10-A1

CONSTRUCTION

- NOTES:
- ALL STEELWORK, BOLTS, NUTS AND WASHERS TO BE HOT DIPPED GALVANISED MILD STEEL.
 - WHEN USED IN WASTEWATER APPLICATION USE 316 STAINLESS STEEL INSTEAD OF MILD STEEL.



Sheet	Amendment	Approved	Revision Date
R1	TITLE BLOCK, FONT	RDH	MAR10

OPUS Nelson Office
Private Bag 35
Nelson 7010, New Zealand
+ 64 3 5481099

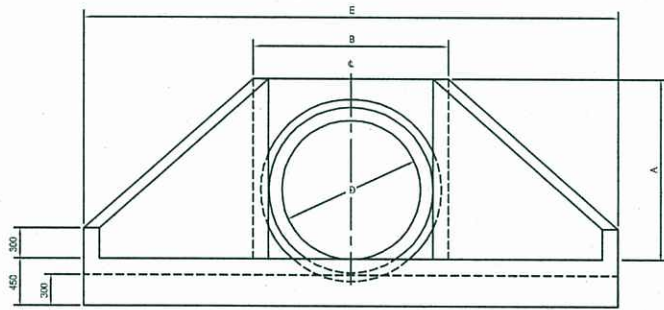
Drawn: J. CRAWFORD
Checked: J. CRAWFORD
Approved: J. CRAWFORD
Revision Date:

Project No.: #####
Scale: AS SHOWN (A1)
Drawing No.: 99/501/6/8505

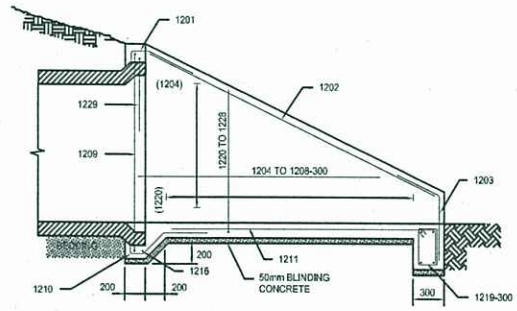
Project: ENVIRONMENTAL STANDARD DRAWINGS
WATER SECTOR
STORMWATER

Sheet: INLET AND OUTLET STRUCTURE
SHEET 1 OF 2 : GENERAL ARRANGEMENT

Sheet No.: 13
Revision: R1

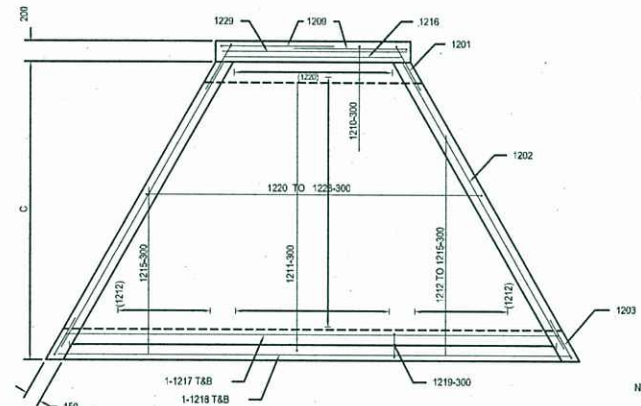


FRONT ELEVATION



SECTION ON CENTRELINE

BAR SHAPE TABLE			
MARK	SHAPE	MARK	SHAPE
1201		1211 to 1215	
1202		1216 to 1218	
1203		1219	
1204 to 1208		1220 to 1228	
1209		1229	
1210			



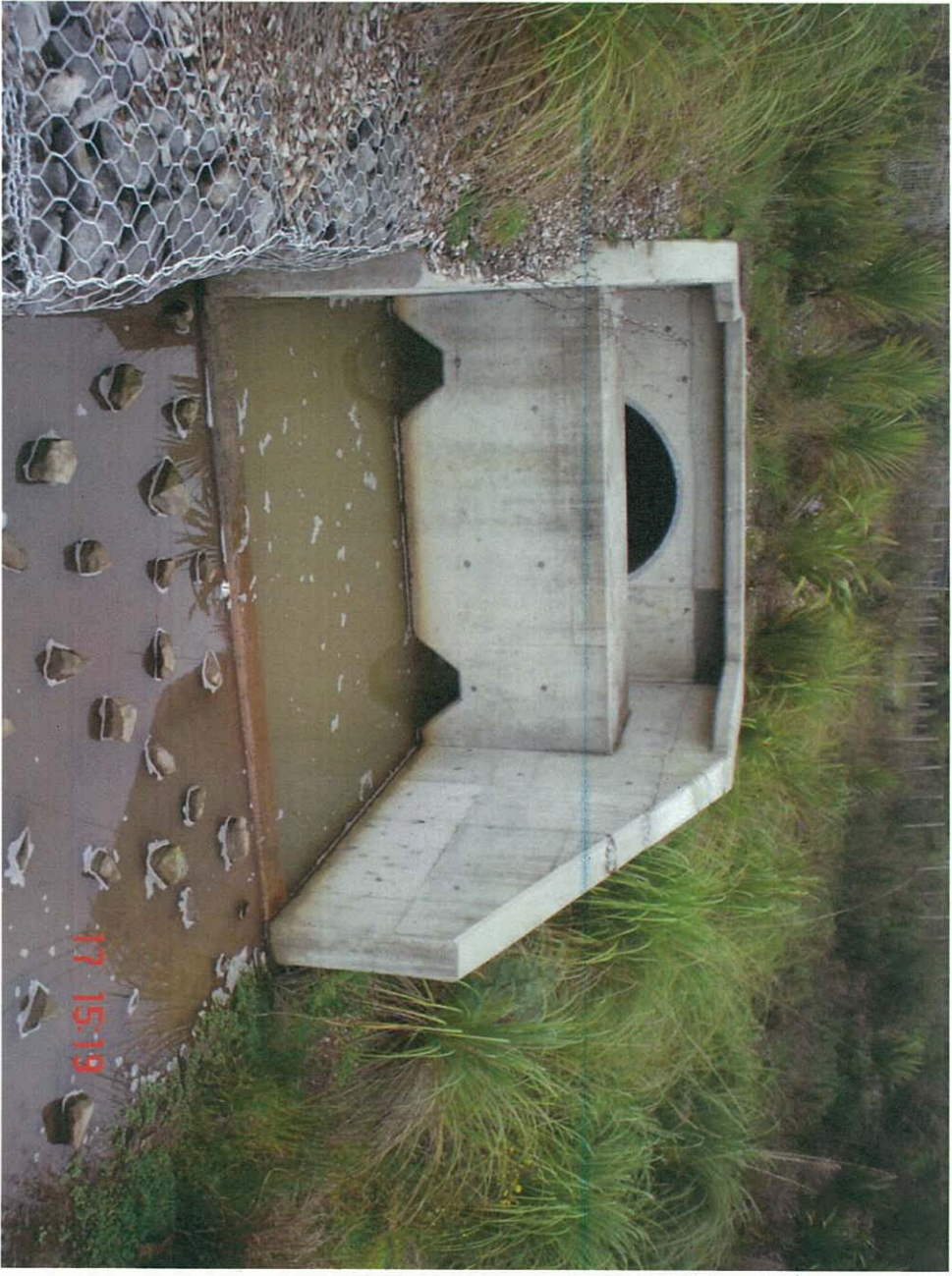
PLAN

DIMENSION TABLE					
PIPE DIA	A	B	C	D	E
450	800	900	1000	450	2150
525	875	1000	1150	525	2350
600	950	1050	1300	600	2600
675	1025	1150	1450	675	2850
750	1100	1250	1600	750	3100
825	1200	1300	1800	825	3400
900	1275	1400	1950	900	3690
975	1350	1500	2100	975	3980
1050	1425	1600	2300	1050	4280
1200	1600	1750	2600	1200	4750
1350	1750	1900	2900	1350	5250

450mm DIAMETER PIPE						
MARK	a	b	c	d	LENGTH	No.
1201	250	140	810	200	875	2
1202	110				1100	2
1203	430	450	200		1300	2
1204 TO 1208 (NO) REINFORCED						
1209	400				800	2
1210	1200				1000	2
1211	250	150	810	200	875	2
1212	110				1100	2
1213	430	450	200		1300	2
1214 TO 1215 (NO) REINFORCED						
1216	400				800	2
1217	1200				1000	2
1218	250	150	810	200	875	2
1219	110				1100	2
1220	430	450	200		1300	2
1221 TO 1228 (NO) REINFORCED						
1229	400				800	2
1230	1200				1000	2
1231	250	150	810	200	875	2
1232	110				1100	2
1233	430	450	200		1300	2
1234 TO 1235 (NO) REINFORCED						
1236	400				800	2
1237	1200				1000	2
1238	250	150	810	200	875	2
1239	110				1100	2
1240	430	450	200		1300	2
1241 TO 1242 (NO) REINFORCED						
1243	400				800	2
1244	1200				1000	2
1245	250	150	810	200	875	2
1246	110				1100	2
1247	430	450	200		1300	2
1248 TO 1249 (NO) REINFORCED						
1250	400				800	2
1251	1200				1000	2
1252	250	150	810	200	875	2
1253	110				1100	2
1254	430	450	200		1300	2
1255 TO 1256 (NO) REINFORCED						
1257	400				800	2
1258	1200				1000	2
1259	250	150	810	200	875	2
1260	110				1100	2
1261	430	450	200		1300	2
1262 TO 1263 (NO) REINFORCED						
1264	400				800	2
1265	1200				1000	2
1266	250	150	810	200	875	2
1267	110				1100	2
1268	430	450	200		1300	2
1269 TO 1270 (NO) REINFORCED						
1271	400				800	2
1272	1200				1000	2
1273	250	150	810	200	875	2
1274	110				1100	2
1275	430	450	200		1300	2
1276 TO 1277 (NO) REINFORCED						
1278	400				800	2
1279	1200				1000	2
1280	250	150	810	200	875	2
1281	110				1100	2
1282	430	450	200		1300	2
1283 TO 1284 (NO) REINFORCED						
1285	400				800	2
1286	1200				1000	2
1287	250	150	810	200	875	2
1288	110				1100	2
1289	430	450	200		1300	2
1290 TO 1291 (NO) REINFORCED						
1292	400				800	2
1293	1200				1000	2
1294	250	150	810	200	875	2
1295	110				1100	2
1296	430	450	200		1300	2
1297 TO 1298 (NO) REINFORCED						
1299	400				800	2
1300	1200				1000	2

600mm DIAMETER PIPE						
MARK	a	b	c	d	LENGTH	No.
1201	250	140	810	200	875	2
1202	110				1100	2
1203	430	450	200		1300	2
1204 TO 1208 (NO) REINFORCED						
1209	400				800	2
1210	1200				1000	2
1211	250	150	810	200	875	2
1212	110				1100	2
1213	430	450	200		1300	2
1214 TO 1215 (NO) REINFORCED						
1216	400				800	2
1217	1200				1000	2
1218	250	150	810	200	875	2
1219	110				1100	2
1220	430	450	200		1300	2
1221 TO 1228 (NO) REINFORCED						
1229	400				800	2
1230	1200				1000	2
1231	250	150	810	200	875	2
1232	110				1100	2
1233	430	450	200		1300	2
1234 TO 1235 (NO) REINFORCED						
1236	400				800	2
1237	1200				1000	2
1238	250	150	810	200	875	2
1239	110				1100	2
1240	430	450	200		1300	2
1241 TO 1242 (NO) REINFORCED						
1243	400				800	2
1244	1200				1000	2
1245	250	150	810	200	875	2
1246	110				1100	2
1247	430	450	200		1300	2
1248 TO 1249 (NO) REINFORCED						
1250	400				800	2
1251	1200				1000	2
1252	250	150	810	200	875	2
1253	110				1100	2
1254	430	450	200		1300	2
1255 TO 1256 (NO) REINFORCED						
1257	400				800	2
1258	1200				1000	2
1259	250	150	810	200	875	2
1260	110				1100	2
1261	430	450	200		1300	2
1262 TO 1263 (NO) REINFORCED						
1264	400				800	2
1265	1200				1000	2
1266	250	150	810	200	875	2
1267	110				1100	2
1268	430	450	200		1300	2
1269 TO 1270 (NO) REINFORCED						
1271	400				800	2
1272	1200				1000	2
1273	250	150	810	200	875	2
1274	110				1100	2
1275	430	450	200		1300	2
1276 TO 1277 (NO) REINFORCED						
1278	400				800	2
1279	1200				1000	2
1280	250	150	810	200	875	2
1281	110				1100	2
1282	430	450	200		1300	2
1283 TO 1284 (NO) REINFORCED						
1285	400				800	2
1286	1200				1000	2
1287	250	150	810	200	875	2
1288	110				1100	2
1289	430	450	200		1300	2
1290 TO 1291 (NO) REINFORCED						
1292	400				800	2
1293	1200				1000	2
1294	250	150	810	200	875	2
1295	110				1100	2
1296	430	450	200		1300	2
1297 TO 1298 (NO) REINFORCED						
1299	400				800	2
1300	1200				1000	2

900mm DIAMETER PIPE						
MARK	a	b	c	d	LENGTH	No.
1201	250	140	810	200	875	2
1202	110				1100	2
1203	430	450	200		1300	2
1204 TO 1208 (NO) REINFORCED						
1209	400				800	2
1210	1200				1000	2
1211	250	150	810	200	875	2
1212	110				1100	2
1213	430	450	200		1300	2
1214 TO 1215 (NO) REINFORCED						
1216	400				800	2
1217	1200				1000	2
1218	250	150	810	200	875	2
1219	110				1100	2
1220	430	450	200		1300	2
1221 TO 1228 (NO) REINFORCED						
1229	400				800	2
1230	1200				1000	2
1231	250	150	810	200	875	2
1232	110				1100	2
1233	430	450	200		1300	2
1234 TO 1235 (NO) REINFORCED						
1236	400				800	2
1237	1200				1000	2
1238	250	150	810	200	875	2
1239	110				1100	2
1240	430	450	200		1300	2
1241 TO 1242 (NO) REINFORCED						
1243	400				800	2
1244	1200				1000	2
1245	250	150	810	200	875	2
1246	110				1100	2
1247	430	450	200		1300	2
1248 TO 1249 (NO) REIN						



Example of Stormwater Outfall with Energy Dissipater