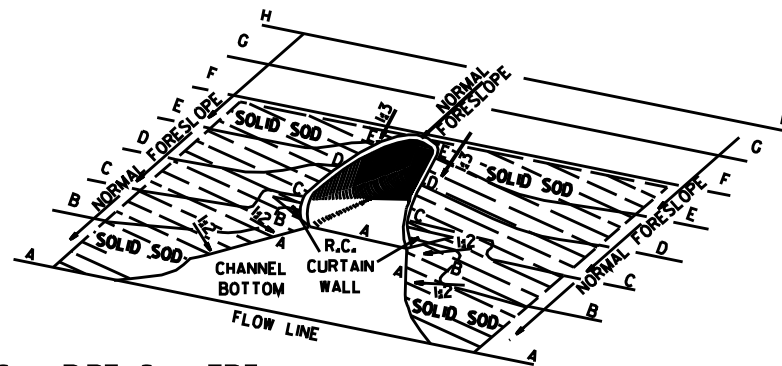
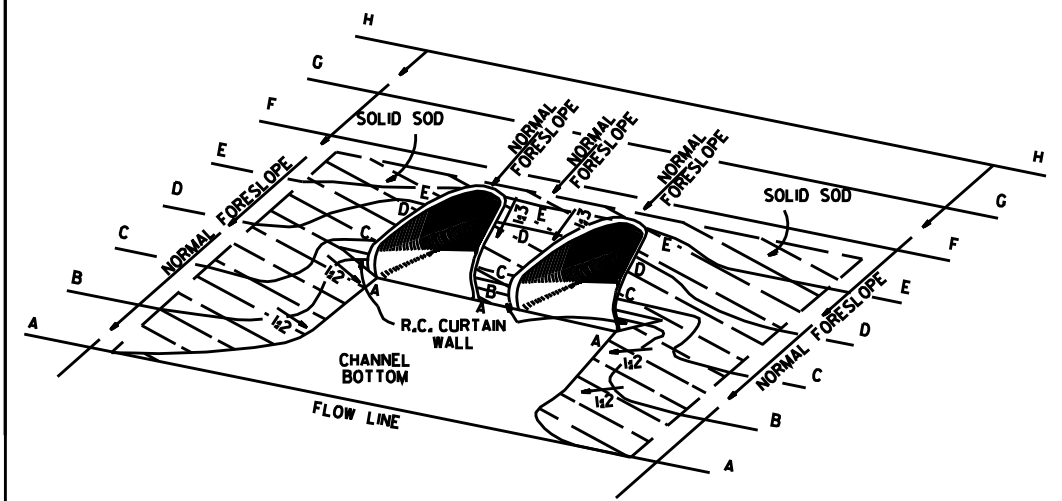


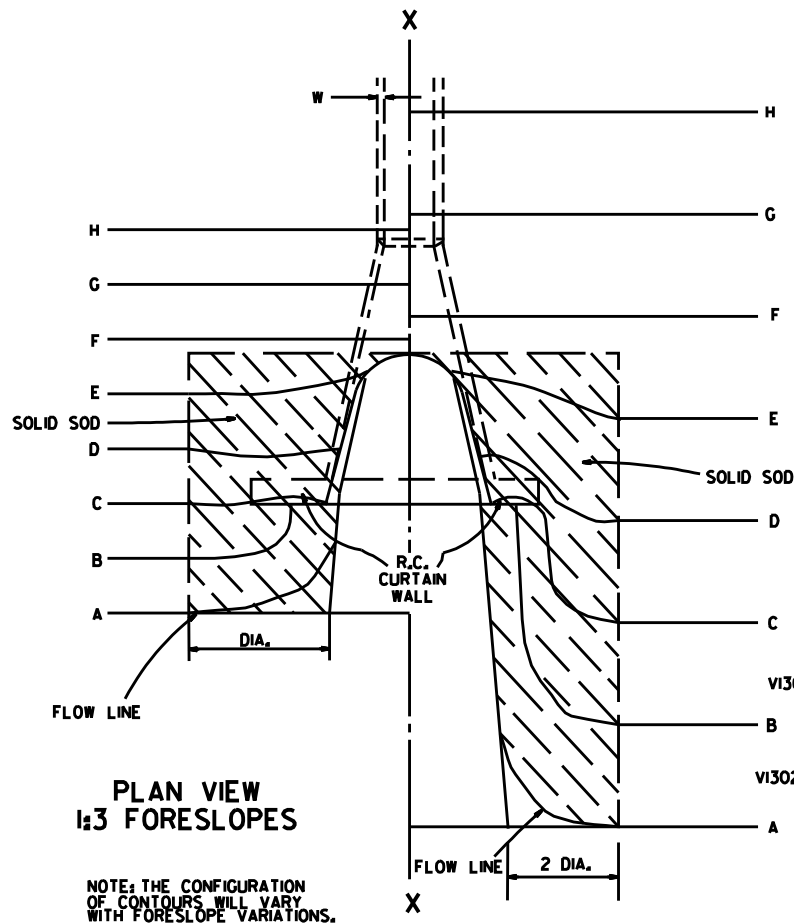
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 1/3 FORESLOPE



TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES



TYPICAL MULTIPLE PIPE CULVERT WITH FLARED END SECTIONS & FLATTENED ADJACENT SLOPES



PLAN VIEW 1/3 FORESLOPES

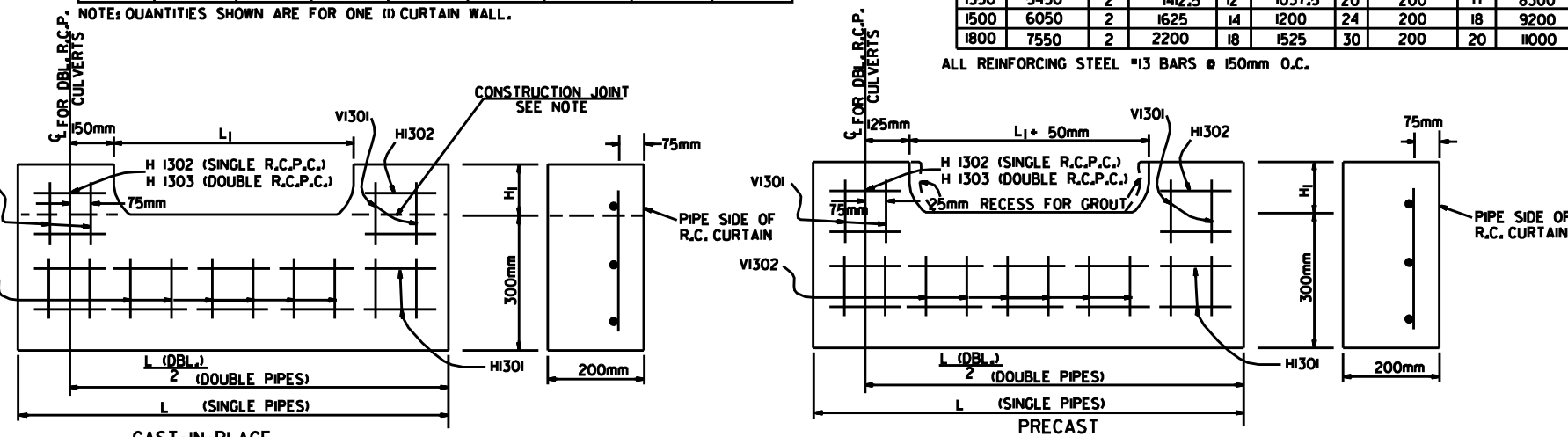
PLAN VIEW FLATTENED FORESLOPES

NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

PIPE DIA.	H ₁	L ₁	L	L (DBL.) 2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
					C.M.	KG.	C.M.	KG.
450	287.5	1025	2400	1875	0.24	17.5	0.34	25.0
600	312.5	1350	2850	2250	0.28	21.1	0.41	30.4
750	387.5	1675	3300	2700	0.34	24.7	0.51	37.3
900	475.0	2000	3900	3150	0.44	33.3	0.63	46.8
1050	637.5	2175	4650	3600	0.63	48.8	0.84	63.7
1200	725.0	2350	5100	3900	0.75	60.1	0.97	76.2
1350	837.5	2525	5550	4200	0.89	73.3	1.12	91.0
1500	1000.0	2700	6150	4650	1.12	94.8	1.41	114.1
1800	1325.0	3250	7650	5550	1.77	147.2	2.09	171.5

NOTE: QUANTITIES SHOWN ARE FOR ONE (1) CURTAIN WALL.



NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 300mm) SHALL BE PLACED MONOLITHICALLY, THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.

NOTE: THE PRECAST CURTAIN WALL WILL BE SET AND BACKFILLED WITH COMPACTED MATERIAL, THE FLARED END SECTION SHALL THEN BE SET IN PLACE AND THE 25mm RECESS FILLED WITH GROUT. WHERE "L" EXCEEDS 3300mm THE CURTAIN WALL MAY BE CAST IN TWO (2) OR MORE SECTIONS. THE METHOD OF JOINING THE SECTIONS FOR INSTALLATION SHALL BE APPROVED BY THE ENGINEER.

R.C. CURTAIN WALL DETAILS

GENERAL NOTES

1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 19mm.
3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
4. WELDED WIRE MESH 76mm X 76mm MW65 X MW65 MAY BE USED IN LIEU OF REINFORCING BARS.

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT								DOUBLE R.C. PIPE CULVERT									
	H1301		H1302		V1301		V1302		H1301		H1302		H1303		V1301		V1302	
	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.
450	2300	2	587.5	4	487.5	8	200	8	3650	2	587.5	4	200	2	487.5	10	200	14
600	2750	2	650	4	512.5	10	200	9	4400	2	650	4	200	2	512.5	12	200	18
750	3200	2	712.5	4	587.5	10	200	12	5300	2	712.5	4	200	2	587.5	14	200	22
900	3800	2	850	6	675	12	200	14	6200	2	850	6	200	3	675	14	200	28
1050	4550	2	1137.5	8	837.5	16	200	15	7100	2	1137.5	8	200	4	837.5	18	200	30
1200	5000	2	1275	10	925	18	200	16	7700	2	1275	10	200	5	925	20	200	32
1350	5450	2	1412.5	12	1037.5	20	200	17	8300	2	1425	12	200	6	1037.5	22	200	34
1500	6050	2	1625	14	1200	24	200	18	9200	2	1625	14	200	7	1200	26	200	36
1800	7550	2	2200	18	1525	30	200	20	11000	2	2200	18	200	9	1525	33	200	40

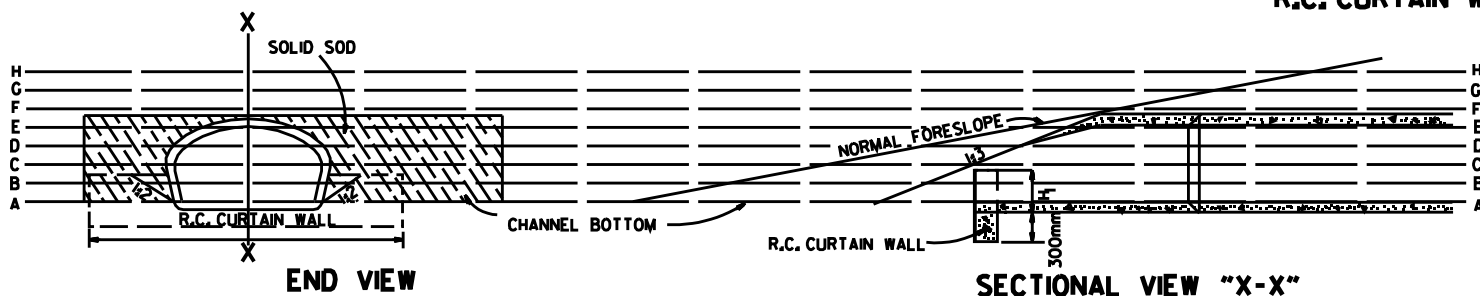
ALL REINFORCING STEEL #13 BARS @ 150mm O.C.

SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C.						DOUBLE R.C.P.C.								
	1/3			1/4			1/3			1/4			1/6		
	SQ. M.						SQ. M.								
450	4	6	10	5	7	11	8	12	16	4	6	10	5	7	11
600	7	10	16	8	11	17	12	16	24	6	9	15	8	11	17
750	11	15	24	12	16	25	16	21	36	10	14	24	12	16	25
900	14	22	34	15	23	36	20	27	48	14	19	34	15	21	36
1050	19	29	46	21	31	48	24	33	60	19	26	46	21	31	48
1200	24	39	57	26	40	59	30	42	72	24	33	57	26	40	59
1350	29	48	71	31	49	73	36	51	84	29	40	71	31	49	73
1500	38	52	87	40	54	89	48	66	108	38	52	87	40	54	89
1800	54	77	130	56	79	133	72	100	180	54	77	130	56	79	133

NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.

NOTE: ALL DIMENSIONS ARE IN mm's.



END VIEW

SECTIONAL VIEW "X-X"

4-5-97	REVISED STEEL BARS TO SOFT METRIC	
6-8-96	ADDED NOTE TO SOLID SODDING	
7-28-95	CONVERTED TO METRIC	
REVISED	REVISED	REVISED

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

STANDARD DRAWING FES-1 (M) METRIC