

TABLE 1.1.4 (1/17) LONGITUDINAL PROFILE

Semarang River (1/10)

LINE	ACCM.		LEFT			CENTER			RIGHT			Total WIDTH	REMARKS	
	DIS	DIS	Elevation	width	Backland Dike Crown	Lowest Water Level	Width	Dike Crown	Back Land Elevation	width				
0	0.00	0.00	0.189	111.63	-0.05	0.11	-0.27	126.34	0.53	0.62	0.619	76.44	314.41	
1	32.19	32.19	0.065	86.55	-0.06	0.03	0.41	127.93	0.87	0.76	1.043	68.62	283.10	
2	27.09	59.28	0.040	97.63	-0.20	0.14	2.84	124.09	1.06	0.62	0.775	47.82	269.54	
3	33.51	92.79	0.472	83.33	-0.24	0.37	1.74	99.30	0.57	0.69	0.738	58.15	240.78	
4	37.62	130.41	0.436	30.57	-0.14	0.39	2.09	94.32	1.12	0.94	0.890	61.84	186.73	
5	22.42	152.83	0.985	35.28	0.22	1.06	2.45	83.60	0.83	0.80	0.813	65.65	184.53	
6	25.96	178.79	1.062	62.77	0.34	0.96	2.31	76.36	0.86	1.14	1.012	50.15	189.28	
7	27.05	205.84	0.489	60.92	0.31	0.39	2.43	79.91	1.15	1.30	1.308	61.50	202.33	
8	29.72	235.56	0.165	53.77	0.32	0.07	2.48	66.86	1.20	1.47	1.338	52.64	173.27	
9	33.37	268.93	0.377	34.81	0.28	0.57	2.25	74.46	1.45	1.43	1.613	53.04	162.31	
10	27.39	296.32	1.304	41.18	0.00	1.20	1.75	57.86	0.49	1.57	0.571	69.92	168.96	
11	33.40	329.72	0.933	33.91	0.04	0.99	1.89	68.92	1.55	1.58	1.695	64.60	167.43	
12	31.49	361.21	0.420	23.43	0.30	0.69	1.72	71.68	1.58	1.56	1.688	63.88	158.99	
13	29.45	390.66	0.403	24.79	-0.29	0.50	1.80	71.00	1.62	1.56	1.816	75.08	170.87	
14	29.50	420.16	0.652	24.63	0.36	0.71	1.80	51.51	1.29	2.17	1.372	71.83	147.97	
15	28.61	448.77	0.761	30.67	-0.31	0.66	1.81	51.12	1.35	2.23	1.398	52.72	134.51	
16	30.14	478.91	0.722	31.01	-0.16	0.72	1.86	49.57	0.94	2.21	1.034	81.23	161.81	
17	32.30	511.21	0.619	33.26	-0.51	0.52	1.75	50.20	1.08	2.19	1.123	65.12	148.58	
18	32.36	543.57	0.684	40.53	-0.68	0.58	1.87	50.80	1.39	2.26	1.532	59.58	150.91	
19	31.10	574.67	0.565	45.18	-0.76	0.47	1.99	52.26	1.65	2.14	1.813	67.38	164.82	
20	29.10	603.77	0.475	32.67	-1.30	0.52	2.25	54.52	1.77	0.81	1.853	51.61	138.80	
21	28.33	632.10	0.620	33.43	0.05	0.52	2.31	53.84	1.77	0.78	1.835	57.73	145.00	
21+23	19.96	652.06	2.249	57.84	1.52	2.97	1.62	69.35	2.89	1.66	2.419	47.54	174.73	Bridge/L. Serisko Uleman Janaliv)
22	12.57	664.63	2.400	*	*	*	*	52.14	*	*	2.400	*	*	*
23	31.84	696.47	1.456	40.61	-0.15	1.36	2.38	50.57	0.15	0.25	0.096	33.00	124.18	
24	32.29	728.76	0.787	21.37	-0.08	0.69	2.19	49.87	-0.03	0.29	0.038	31.25	102.49	
25	32.74	761.50	1.128	21.43	0.23	1.03	2.30	49.59	-0.01	0.34	-0.007	34.59	105.61	
26	31.38	792.88	1.084	25.86	0.30	0.98	2.03	49.60	0.03	0.00	-0.143	9.23	84.69	
27	29.82	822.70	0.805	15.91	0.39	0.71	1.97	49.73	0.06	-0.15	-0.106	2.72	68.36	
28	29.72	852.42	1.029	16.13	0.31	0.93	2.00	47.61	0.32	0.37	-0.057	4.73	68.47	
29	30.26	882.68	1.146	17.32	0.34	1.05	2.03	45.09	0.04	0.08	-0.073	8.38	70.79	

TABLE 1.1.4 (2/17) LONGITUDINAL PROFILE

Semarang River(2/10)

LINE	DIS	ACCM. DIS	LEFT		CENTER				Total WIDTH	REMARKS					
			Elevation	width	Backland	Dike Crown	Lowest Water Level	Width			Dike Crown	Back Land	Elevation	width	
30	28.93	911.61	1.386	46.81	0.50	1.29	-2.67	0.47	40.59	-0.04	0.05	0.112	10.11	97.51	
31	27.65	939.26	0.795	31.71	0.49	0.70	-2.08	0.12	45.38	0.06	0.39	0.191	4.82	81.91	
31+8	14.97	954.23	0.864	19.64	0.18	0.81	-3.27	-0.60	57.52	0.23	0.28	0.225	20.00	97.16	Asin River
32	20.41	974.64	0.273	3.78	-0.19	0.79	-2.54	-0.16	38.56	0.25	0.28	0.362	4.09	46.43	
33	30.44	1005.08	0.221	18.00	0.00	0.74	-1.79	0.23	37.14	0.09	0.13	0.203	3.85	58.99	
34	30.49	1035.57	0.293	10.71	0.13	0.69	-2.30	-0.28	36.72	0.05	0.13	0.146	25.24	72.67	
35	39.04	1074.61	0.213	20.00	0.01	0.61	3.07	-0.37	39.97	0.18	0.19	0.269	20.00	79.97	
36	31.37	1105.98	0.243	13.22	0.41	0.70	-1.60	-0.59	41.29	0.13	0.43	0.069	4.01	58.52	
37	32.78	1138.76	-0.025	10.37	0.13	0.65	-1.81	-0.57	37.30	0.00	0.47	0.182	21.17	68.84	
38	30.33	1169.09	0.326	10.90	0.17	0.70	-2.09	-0.10	37.70	0.08	0.28	0.083	16.15	64.75	
39	29.43	1198.52	0.185	20.00	0.40	0.86	-3.04	-0.67	37.28	0.07	0.12	0.079	11.15	68.43	
40	29.05	1227.57	0.215	10.10	0.04	0.83	-1.96	-0.01	34.86	0.08	0.32	0.183	11.33	56.29	
41	28.96	1256.53	0.208	20.00	0.08	0.69	-2.95	-0.62	36.10	0.11	-0.04	-0.047	20.00	76.10	
42	26.52	1283.05	0.154	10.39	-0.08	0.78	-2.05	-0.04	36.60	0.27	0.17	0.218	13.22	60.21	
43	27.45	1310.50	0.238	9.42	0.03	0.71	-2.33	-0.10	36.49	0.24	0.44	0.262	5.56	51.47	
44	26.51	1337.01	0.160	8.92	0.01	0.69	-2.14	-0.13	37.31	0.29	0.29	0.229	4.00	50.23	
45	27.44	1364.45	0.180	6.96	0.04	0.63	-1.20	-0.15	37.54	0.35	-0.25	0.281	23.30	67.80	
46	29.40	1393.85	0.337	7.23	0.53	0.70	-1.57	-0.11	37.49	0.34	-0.30	0.256	32.97	77.69	
47	29.58	1423.43	0.049	40.31	0.10	0.70	-1.83	-0.29	40.24	0.30	-0.14	0.254	13.82	94.37	
48	31.25	1454.68	0.115	28.73	0.20	0.69	-1.74	-0.47	39.43	0.29	-0.16	0.270	16.60	84.76	
49	30.72	1485.40	0.030	32.89	0.03	0.69	-1.72	-0.52	39.92	0.36	-0.19	0.320	17.71	90.52	
50	30.58	1515.98	0.185	34.19	0.10	0.64	-2.73	-0.53	43.03	0.36	-0.22	0.298	14.30	91.52	
51	31.55	1547.53	0.123	29.40	0.16	0.71	-1.58	-0.57	41.54	0.28	-0.10	0.247	22.61	93.55	
52	29.70	1577.23	0.240	33.92	0.24	0.71	-2.34	-0.23	39.24	0.33	-0.14	0.318	17.67	90.83	
53	30.48	1607.71	0.242	37.52	0.23	0.77	-2.41	-0.26	37.33	0.28	-0.02	0.282	13.35	88.20	
53+17	20.56	1628.27	0.576	32.16	0.28	1.23	-1.82	-0.54	38.98	1.24	-0.10	0.283	33.18	104.32	
54	13.51	1641.78	0.303	25.47	0.34	0.76	-2.54	-0.18	36.80	0.21	0.29	0.215	19.45	81.72	
55	31.37	1673.15	0.153	4.26	0.26	0.74	-2.45	-0.17	36.38	0.21	0.25	0.205	6.05	46.69	
56	30.76	1703.91	0.307	3.38	0.61	0.76	-2.47	-0.16	35.69	0.24	0.42	0.248	11.43	50.50	
57	35.14	1739.05	0.162	5.01	0.25	0.69	-2.41	-0.19	34.80	0.38	-0.08	0.315	37.72	77.53	Bridge(Steel)
58	37.22	1776.27	0.161	0.72	0.22	0.69	-2.04	-0.16	37.49	0.23	0.29	0.379	9.13	47.34	

TABLE 1.1.4 (3/17) LONGITUDINAL PROFILE

Semarang River(3/10)

LINE	DIS	ACCM. DIS	LEFT		CENTER		RIGHT		Total WIDTH	REMARKS				
			Elevation	width	Backland Dike Crown	Lowest Water Level	Width	Dike Crown			Back Land Elevation	width		
59	29.59	1805.86	0.195	58.98	0.08	0.76	-2.27	34.78	0.21	0.399	8.05	101.81		
60	27.66	1833.52	0.371	13.08	0.42	0.75	-2.09	40.38	0.43	0.434	8.29	61.75		
61	26.17	1859.69	0.126	5.79	0.05	0.80	-2.42	35.02	0.34	0.344	8.92	49.33		
62	24.84	1884.53	0.116	5.69	0.21	0.82	-2.47	37.59	0.38	0.384	12.05	56.33		
63	28.93	1913.46	0.318	40.35	0.30	0.89	-2.47	37.77	0.42	0.36	5.46	83.58		
64	27.03	1940.49	0.353	8.86	0.41	0.90	-2.25	37.37	0.62	0.623	31.93	78.16		
65	25.41	1965.90	0.123	7.21	0.12	0.82	-2.30	37.96	0.61	0.538	9.17	54.34		
66	26.15	1992.05	0.309	5.39	0.30	0.87	-2.27	33.21	0.72	0.391	40.21	78.81		
67	31.43	2023.48	0.188	12.14	0.29	0.91	-2.55	34.18	0.74	0.472	24.57	70.89		
68	32.87	2056.35	0.284	8.32	0.36	0.91	-2.57	34.54	0.79	0.455	22.61	65.47		
69	34.38	2090.73	0.290	17.81	0.24	0.98	-2.64	33.58	0.77	0.380	28.75	80.14		
69+14	12.89	2103.62	0.385	20.08	0.04	1.46	-1.81	35.91	1.46	0.268	20.78	76.77		
70	16.18	2119.80	0.349	20.00	0.29	0.78	-2.93	30.91	0.76	0.19	2.46	17.91	68.82	
71	31.13	2150.93	0.413	7.42	0.31	0.80	-2.28	30.13	0.78	0.18	0.141	9.30	46.85	
72	28.44	2179.37	0.363	5.27	0.47	0.83	-2.39	32.08	0.84	0.18	0.255	7.86	45.21	
73	31.43	2210.80	0.486	9.66	0.19	0.86	-2.43	35.43	0.87	0.30	0.266	5.82	50.91	
74	31.85	2242.65	0.120	20.00	0.18	0.83	-2.96	42.87	0.73	0.99	0.187	20.00	82.87	
75	32.10	2274.75	0.390	1.72	0.40	0.82	-2.38	36.88	0.73	0.28	0.184	6.95	45.55	
76	32.32	2307.57	0.434	3.95	0.38	0.74	-1.99	36.85	0.74	0.25	0.149	12.56	53.36	
77	30.76	2338.33	0.556	4.78	0.20	0.85	-2.16	34.35	0.75	0.35	0.117	7.21	46.34	
78	27.94	2366.27	0.581	8.80	0.22	0.88	-1.75	38.47	0.86	0.21	0.270	7.70	54.97	
79	28.03	2394.30	0.598	11.70	0.18	0.87	-1.72	40.48	0.83	0.34	0.185	6.13	58.31	
80	30.21	2424.51	0.777	22.17	0.18	0.88	-1.69	33.51	0.81	0.31	0.470	10.26	65.94	
81	29.79	2454.30	0.600	21.27	0.60	0.94	-1.62	40.44	0.85	0.39	0.355	6.76	68.47	
82	27.59	2481.89	0.622	22.49	0.04	1.07	-1.62	41.33	0.86	0.44	0.320	8.36	72.18	
83	28.87	2510.76	0.692	22.03	0.08	0.98	-1.51	38.69	0.89	0.44	0.331	15.92	76.64	
84	29.51	2540.27	0.319	4.70	0.31	0.92	-1.62	37.92	0.92	0.46	0.342	5.79	48.41	
85	29.72	2569.99	0.333	0.72	0.36	0.84	-2.19	36.94	0.81	0.31	0.205	5.33	42.99	
86	29.59	2599.58	0.513	2.56	0.38	0.85	-1.80	37.53	0.86	0.27	0.272	41.99	82.08	
87	30.73	2630.31	0.351	5.10	0.46	0.87	-1.91	35.15	0.84	0.18	0.287	28.09	68.34	
88	33.63	2663.94	0.368	2.17	0.37	0.87	-2.17	33.42	0.86	0.23	0.443	15.80	51.39	

Bridgr(Concrete)

TABLE I.1.4 (4/17)) LONGITUDINAL PROFILE

Semarang River(4/10)

LINE	DIS	ACCM. DIS	LEFT			CENTER					Total WIDTH	REMARKS			
			Elevation	width	Backland	Dike Crown	Lowest Water Level	Width	Dike Crown	Back Land			Elevation	width	
89	35.23	2699.17	0.481	20.00	0.55	0.88	-2.87	-0.42	36.67	0.91	0.11	0.488	20.00	76.67	
90	31.72	2730.89	0.914	36.58	0.63	0.84	-2.83	-0.58	39.83	0.86	0.41	0.500	47.18	123.59	
90+11	11.18	2742.07	0.939	20.50	0.39	1.70	-1.42	-0.42	41.15	1.70	0.47	0.834	20.00	81.65	Bridgr(Concrete),Baru River
91	14.82	2756.89	0.600	4.91	0.62	0.62	-2.16	-0.57	45.72	0.52	0.29	0.849	14.16	64.79	
92	22.64	2779.53	0.689	29.57	0.25	0.58	-2.05	-0.61	45.82	0.83	0.13	0.603	15.44	90.83	
93	20.83	2800.36	0.529	28.23	0.35	0.78	-2.67	-0.53	40.21	0.76	0.26	0.145	9.87	78.31	
94	26.75	2827.11	0.309	41.71	0.29	0.63	-2.12	-0.52	50.10	0.78	0.32	0.157	8.62	100.43	
95	28.93	2856.04	0.130	7.08	0.23	0.64	-2.65	-0.50	32.28	0.80	0.30	0.186	12.90	52.26	
96	25.27	2881.31	0.405	2.93	0.15	0.59	-2.31	-0.50	39.65	0.75	0.23	0.114	9.48	52.06	
97	27.47	2908.78	0.599	1.14	0.38	0.64	-2.50	-0.44	38.66	0.77	0.13	0.037	32.23	72.03	
98	27.28	2936.06	0.395	2.74	0.56	0.72	-2.18	-0.41	29.46	0.71	0.08	0.050	5.78	37.98	
99	30.56	2966.62	0.223	10.68	0.26	0.61	-2.17	-0.34	26.29	0.74	0.12	0.075	9.72	46.69	
100	28.88	2995.50	0.253	21.13	0.18	0.55	-2.28	-0.37	22.62	0.83	0.26	0.172	6.35	50.10	
101	30.80	3026.30	0.209	2.63	0.29	0.82	-2.28	-0.42	24.23	0.82	0.23	0.164	6.68	33.54	
102	30.82	3057.12	0.388	6.65	0.53	0.81	-1.87	-0.47	24.70	0.71	0.45	0.561	22.06	53.41	
103	33.10	3090.22	0.113	7.36	0.17	0.82	-2.14	-0.58	26.15	0.81	0.45	0.660	25.80	59.31	
104	33.13	3123.35	0.071	1.88	0.19	1.10	-2.23	-0.65	28.38	0.84	0.49	0.683	4.67	34.93	
105	39.51	3162.85	0.172	30.21	0.09	1.01	-2.10	-0.63	22.27	0.85	0.31	0.568	16.87	69.35	
106	33.71	3196.57	0.538	52.71	0.35	0.96	-2.01	-0.66	27.19	0.80	0.38	0.624	17.24	97.14	
106+13	5.28	3201.85	0.722	34.85	0.81	0.72	-1.72	-0.35	29.15	0.78	0.94	0.778	34.57	98.57	Rail Way
107	27.78	3229.63	0.526	43.30	0.35	0.59	-2.35	-1.07	28.75	0.82	0.59	0.719	50.28	122.33	
108	32.40	3262.03	0.165	1.57	0.16	0.49	-2.35	-1.05	26.54	0.76	0.54	0.664	20.00	48.11	
109	27.13	3289.16	0.136	6.64	0.18	0.73	-2.04	-0.47	25.84	0.79	0.58	0.109	35.73	68.21	
110	28.51	3317.67	0.486	4.66	0.66	1.00	-2.22	-0.41	26.01	0.85	0.42	0.684	17.51	48.18	
111	30.64	3348.31	0.499	1.47	0.50	0.85	-1.89	-0.43	25.78	0.93	0.36	0.445	4.50	31.85	
112	29.76	3378.07	0.466	1.45	0.47	0.72	-2.00	-0.64	25.59	0.83	0.25	0.378	2.73	29.77	
113	30.23	3408.30	0.723	4.59	0.66	0.85	-1.55	-0.08	22.50	1.05	0.56	0.533	2.58	29.67	
114	26.02	3434.32	0.550	24.10	0.56	0.67	-1.84	-0.74	24.85	0.89	0.62	0.823	5.04	53.99	
115	27.81	3462.13	0.954	24.62	0.69	0.77	-2.14	-0.46	20.97	0.84	0.70	0.928	27.58	73.17	
115+14	13.34	3475.47	1.921	50.20	0.43	1.67	-1.42	-0.41	23.88	1.72	0.56	1.686	22.52	96.60	Jl.Mputantular
116	16.51	3491.98	1.281	21.29	0.71	1.49	-1.19	-0.51	22.74	1.23	0.97	1.477	25.12	69.15	

TABLE I.1.4 (5/17) LONGITUDINAL PROFILE

Semarang River(5/10)

LINE	DIS	ACCM. DIS	LEFT			CENTER			Total WIDTH	REMARKS		
			Elevation	width	Backland Dike Crown	Lowest Water Level	Width	Dike Crown Back Land			Elevation	
116+8	9.64	3501.62	1.352	47.50	0.78	1.35	-1.08	20.52	1.36	1.365	45.29	JL. Suprpto
117	20.68	3522.30	0.861	22.31	0.61	0.87	-1.70	23.47	1.45	0.893	20.10	
118	29.19	3551.49	0.548	4.10	0.70	0.54	-1.99	23.39	0.69	0.553	14.75	
119	28.28	3579.77	0.571	7.73	0.76	0.57	-1.72	24.18	0.76	0.630	14.21	
120	26.97	3606.74	0.537	6.64	0.78	0.53	-1.80	26.52	0.86	0.772	34.47	
121	27.90	3634.64	0.676	4.78	0.71	0.74	-1.91	24.97	0.99	0.829	22.77	
121+3	4.19	3638.83	0.922	20.00	0.73	0.96	-1.71	18.69	1.06	1.023	30.73	
122	27.15	3665.98	0.715	4.77	0.86	0.71	-1.48	25.27	0.98	0.847	17.59	
123	29.90	3695.88	0.996	20.78	1.08	1.18	-1.44	25.92	0.93	1.095	18.37	
124	29.94	3725.82	1.670	7.15	0.73	1.95	-1.50	27.44	1.24	1.058	20.88	
125	30.05	3755.87	1.483	7.61	0.30	1.63	-1.59	27.43	1.19	1.110	13.03	
126	29.95	3785.82	1.284	6.12	0.34	1.38	-1.38	29.86	1.45	1.076	14.27	
126+17	17.57	3803.39	1.507	35.24	0.89	1.62	-1.08	23.59	1.62	1.596	22.17	
127	15.52	3818.91	1.124	4.93	0.75	0.98	-1.78	22.01	0.61	1.129	4.77	
128	31.65	3850.36	1.078	5.11	0.78	0.82	-2.01	21.45	0.74	0.768	2.43	
129	35.80	3886.36	0.596	4.84	0.86	0.59	-1.51	20.80	0.67	0.690	7.44	
130	31.86	3918.22	0.663	5.46	0.34	0.54	-1.92	21.00	0.56	0.619	3.54	
131	29.09	3947.31	0.621	4.37	0.62	0.67	-1.47	22.78	0.63	0.637	3.04	
132	27.43	3974.74	0.689	4.04	0.68	0.62	-2.00	22.11	0.69	0.655	4.09	
133	28.07	4002.81	0.733	4.74	0.83	0.71	-2.04	21.85	0.67	0.632	3.27	
134	29.29	4032.10	1.099	8.10	0.79	0.75	-1.37	21.73	0.77	0.739	5.01	
135	26.36	4058.46	1.214	6.58	0.87	0.89	-1.65	21.55	0.81	0.917	2.86	
136	29.83	4088.29	0.847	3.55	0.91	0.88	-1.54	22.71	0.97	1.000	6.92	
137	30.30	4118.59	1.384	3.39	1.32	1.21	-1.23	22.99	1.26	1.131	5.72	
137+14	14.29	4132.88	1.070	11.69	1.22	1.31	-0.90	21.61	1.25	1.278	13.81	
138	19.30	4152.18	1.003	3.46	1.04	0.99	-1.21	20.71	1.09	1.139	5.83	
139	31.96	4184.14	0.982	4.49	1.32	0.99	-1.42	21.14	1.19	1.174	6.69	
140	32.54	4216.58	1.026	3.73	1.06	0.97	-1.08	20.72	1.28	1.187	4.99	
141	33.27	4249.95	1.076	3.64	1.22	1.11	-1.00	20.59	1.19	1.223	11.07	
142	32.92	4282.87	1.232	4.00	1.35	1.31	-0.94	19.75	1.30	1.44	4.14	
142+25	24.48	4307.35	2.088	40.05	1.29	2.19	-0.75	20.62	2.22	1.904	39.90	
												JL. Pekajan

TABLE I.1.4 (6/17) LONGITUDINAL PROFILE

Semarang River(6/10)

LINE	DIS	ACCM. DIS	LEFT		CENTER		RIGHT		Total WIDTH	REMARKS					
			Elevation	width	Backland	Dike Crown	Lowest Water Level	Width			Dike Crown	Back Land	Elevation	width	
143	6.69	4314.04	1.896	4.02	2.10	2.08	-0.88	-0.29	21.72	1.89	1.47	1.796	47.34	73.08	
144	28.32	4342.36	1.486	4.28	1.53	1.35	-1.75	-0.33	21.36	1.19	1.17	1.220	5.00	30.64	
145	27.03	4369.39	1.861	5.48	1.59	1.25	-1.35	-0.25	19.16	1.37	1.30	1.337	10.87	35.51	
146	30.96	4400.35	1.690	11.22	1.59	1.27	-1.19	-0.23	20.17	1.32	1.39	1.290	11.80	43.19	
147	29.10	4429.45	1.624	1.64	1.62	1.40	-1.24	-0.33	23.68	1.31	1.62	1.287	10.06	35.38	
148	25.99	4455.44	1.560	1.48	1.56	1.41	-1.20	-0.31	22.05	1.45	1.41	1.400	4.45	27.98	
149	28.17	4483.61	1.553	4.03	1.68	1.48	-1.17	-0.27	20.77	1.43	1.74	1.394	4.90	29.70	
150	22.69	4506.30	1.492	6.31	1.61	1.49	-1.23	-0.32	18.78	1.51	1.65	1.493	10.47	35.56	
151	27.27	4533.57	1.609	5.30	1.87	1.51	-1.30	-0.36	21.07	1.55	1.70	1.515	4.13	30.50	
152	27.55	4561.12	1.616	20.00	1.85	1.49	-1.02	-0.33	21.06	1.56	1.70	1.615	20.00	61.06	
153	29.00	4590.12	1.660	4.32	1.75	1.66	-1.30	-0.37	20.64	1.65	1.76	1.712	4.83	29.79	
154	26.60	4616.72	1.667	3.57	1.73	1.54	-0.99	-0.36	21.69	1.66	1.70	1.609	5.23	30.49	
155	28.05	4644.77	1.603	4.33	1.84	1.53	-1.01	-0.42	21.18	1.88	1.63	1.616	4.40	29.91	
156	31.55	4676.32	1.337	5.84	1.77	1.58	-1.11	-0.43	19.49	1.94	1.75	1.651	5.49	30.82	
156+17	17.82	4694.14	2.133	20.00	2.00	2.18	-0.85	-0.38	20.28	2.00	1.81	1.820	4.92	40.28	Bridge(Foot Path)
157	11.91	4706.05	1.638	16.32	1.65	1.59	-1.06	-0.38	19.59	1.97	1.91	1.709	5.00	40.83	
158	30.76	4736.81	1.350	5.65	1.62	1.57	-0.86	-0.38	19.48	2.13	1.98	1.790	5.00	30.13	
159	29.92	4766.73	1.567	3.97	1.62	1.56	-0.88	-0.38	17.86	2.16	1.98	1.793	5.23	27.06	
160	30.39	4797.12	1.647	20.00	1.86	1.63	-0.84	-0.40	17.13	2.05	1.92	1.785	20.00	57.13	
161	33.36	4830.48	2.386	20.00	1.67	2.59	-0.38	-0.45	13.67	2.59	1.81	2.426	20.00	53.67	Jl.Kimangun Sarkoro
162	30.19	4860.67	2.070	3.56	2.14	2.07	-0.75	-0.27	13.06	2.04	2.09	1.986	3.92	20.54	
163	29.25	4889.92	2.079	20.00	2.50	2.05	-0.66	-0.28	14.07	1.99	2.57	1.916	20.00	54.07	
164	29.70	4919.62	2.087	4.82	2.14	2.10	-0.74	-0.23	14.43	2.10	2.20	2.038	3.33	22.58	
165	29.49	4949.11	2.089	6.45	2.15	2.13	-0.66	-0.17	14.53	2.19	2.17	2.111	15.10	36.08	
166	28.00	4977.11	2.042	4.97	2.15	2.03	-0.54	-0.12	14.35	2.36	2.26	2.289	11.81	31.13	
167	30.68	5007.79	2.156	5.55	2.27	2.17	-0.40	-0.15	14.34	2.22	2.47	2.178	15.41	35.30	
168	30.29	5038.08	2.346	7.24	2.30	2.37	-0.25	0.09	13.46	2.46	2.62	2.539	6.55	27.25	
168+7	7.01	5045.09	2.698	35.49	1.98	2.70	-0.11	0.08	13.84	2.75	2.11	2.630	21.98	71.31	Jl.Sebandaran
169	23.54	5068.63	1.951	4.07	2.12	2.03	-0.34	0.17	12.44	2.10	2.23	2.055	3.19	19.70	
170	29.98	5098.61	1.984	20.00	2.14	1.98	-0.21	0.26	14.17	2.15	2.11	2.052	3.44	37.61	
171	29.39	5128.00	1.896	5.45	2.00	1.91	-0.21	0.23	14.17	2.16	2.33	2.085	5.90	25.52	

TABLE 1.1.4 (7/17) LONGITUDINAL PROFILE

Semarang River(7/10)

LINE	DIS		ACCM.		LEFT			CENTER			RIGHT			REMARKS	
	DIS	DIS	DIS	DIS	Elevation	width	Backland	Dike Crown	Lowest	Water Level	Width	Dike Crown	Back Land		Elevation	width	Total WIDTH
172	27.72	5155.72	1.971	4.83	2.02	2.01	0.37	14.03	2.20	2.43	2.122	23.93	42.79		
173	30.84	5186.56	2.043	3.82	2.14	2.06	-0.29	14.14	2.19	2.26	2.158	9.17	27.13		
174	33.00	5219.56	2.089	4.28	2.13	2.10	-0.56	14.28	2.23	2.28	2.172	5.55	24.11		
175	31.71	5251.27	2.221	3.12	2.26	2.24	-0.46	14.13	2.33	2.52	2.319	15.88	33.13		
176	30.66	5281.93	2.333	3.34	2.41	2.34	-0.30	14.16	2.36	2.47	2.324	5.86	23.36		
177	27.74	5309.67	2.417	5.79	2.37	2.34	-0.27	14.34	2.33	2.41	2.342	4.41	24.54		
178	27.40	5337.07	2.356	4.42	2.38	2.23	-0.29	14.47	2.30	2.38	2.364	5.48	24.37		
179	28.31	5365.38	2.376	5.49	2.51	2.41	-0.31	14.11	2.44	2.42	2.356	6.08	25.68		
180	24.32	5389.70	2.398	12.71	2.38	2.36	-0.20	14.07	2.46	1.68	2.392	10.82	37.60		
181	28.81	5418.51	2.364	13.72	2.40	2.31	-0.23	14.06	2.36	2.32	2.252	6.16	33.94		
182	30.80	5449.31	2.359	4.67	2.42	2.27	-0.18	14.03	2.38	2.45	2.286	5.97	24.67		
183	31.36	5480.67	2.862	20.00	2.33	2.87	0.21	12.80	2.91	2.76	2.909	20.69	53.49		
184	30.45	5511.12	2.440	15.35	2.50	2.41	-0.28	14.32	2.49	2.50	2.437	3.92	33.59		
185	30.00	5541.12	2.319	5.35	2.41	2.28	0.04	14.09	2.45	2.50	2.392	4.58	24.02		
186	30.85	5571.97	2.389	7.14	2.43	2.36	-0.27	14.67	2.40	2.44	2.353	10.16	31.97		
187	33.00	5604.97	2.398	2.62	2.41	2.37	-0.11	14.77	2.49	2.58	2.460	9.49	26.88		
188	31.03	5636.00	2.355	16.73	2.36	2.34	-0.13	14.36	2.54	2.62	2.506	5.56	36.65		
189	29.88	5665.88	2.420	1.70	2.38	2.29	-0.04	18.29	2.48	2.24	2.460	3.44	23.43		
190	29.66	5695.54	2.311	6.54	2.35	2.29	-0.31	14.29	2.55	2.67	2.543	5.69	26.52		
191	26.32	5721.86	2.303	14.73	2.17	2.28	-0.07	15.02	2.42	2.43	2.483	3.29	33.04		
192	29.44	5751.30	2.258	9.06	2.55	2.26	0.03	14.39	2.31	2.38	2.323	19.01	42.46		
193	28.44	5779.74	2.298	6.84	2.38	2.28	0.17	14.59	2.37	2.45	2.371	6.40	27.83		
194	31.12	5810.86	2.357	7.40	2.39	2.32	0.11	14.20	2.41	2.47	2.353	4.05	25.65		
195	29.74	5840.60	2.584	7.49	2.54	2.53	-0.41	12.61	2.53	2.53	2.448	32.16	52.26		
195+17	17.18	5857.78	3.062	17.39	2.50	3.05	0.14	10.61	2.85	2.66	2.998	21.10	49.10		
196	13.11	5870.89	1.456	10.85	2.28	2.37	0.31	11.99	2.55	2.93	2.667	44.27	67.11		
197	30.17	5901.06	2.324	5.71	2.39	2.32	0.41	10.60	2.44	2.48	2.467	6.65	22.96		
198	29.24	5930.30	2.339	12.36	2.35	2.31	0.36	10.50	2.38	2.45	2.386	5.65	28.51		
199	30.11	5960.41	2.441	10.99	2.44	2.50	0.40	10.91	2.72	2.44	2.371	17.23	39.13		
200	30.02	5990.43	2.502	13.15	2.45	2.44	0.39	9.74	2.40	2.44	2.379	4.72	27.61		
201	30.18	6020.51	2.286	5.29	2.33	2.26	0.53	10.17	2.43	2.46	2.392	4.52	19.98		

JL. Wet Gandul

JL. Gajah Mada

TABLE I.1.4 (8/17) LONGITUDINAL PROFILE

Semarang River(8/10)

LINE	DIS	ACCM. DIS	LEFT		Dike Crown		Lowest Water Level		CENTER		Back Land		Elevation	Total WIDTH	REMARKS
			width	Elevation	width	Dike Crown	width	Water Level	width	Dike Crown	width	Back Land			
202	30.08	6050.69	2.223	5.60	2.24	2.22	0.02	0.89	10.09	2.65	2.26	2.286	7.68	23.37	
203	30.72	6081.41	2.320	5.30	2.29	2.28	0.49	0.94	11.63	2.37	2.40	2.304	18.75	35.68	
204	29.39	6110.80	2.488	5.10	2.49	2.46	0.52	0.97	10.69	2.50	2.55	2.419	6.03	21.82	
205	29.77	6140.57	2.499	3.07	2.51	2.48	2.48	0.61	10.43	2.58	2.56	2.475	7.55	21.05	
206	25.65	6166.22	2.561	6.03	2.55	2.55	0.67	1.05	11.05	2.53	2.52	2.423	5.94	23.02	
207	32.07	6198.29	2.435	6.92	2.42	2.37	0.84	1.09	10.37	2.48	2.50	2.423	7.36	24.65	
208	30.13	6228.42	2.542	5.86	2.53	2.50	0.73	1.12	10.77	2.45	2.52	2.393	6.36	22.99	
209	30.12	6258.54	2.453	6.73	2.43	2.42	0.70	1.13	10.26	2.39	2.51	2.449	4.30	21.29	
210	30.15	6288.69	2.428	6.27	2.39	2.41	0.65	1.14	10.16	2.49	2.49	2.427	15.87	32.30	
211	22.74	6311.43	2.407	31.96	2.29	2.41	0.24	1.14	7.94	2.41	2.47	2.439	17.76	57.66	JL.Thamrin
212	30.40	6341.83	2.455	4.73	2.47	2.41	0.79	1.15	9.20	2.55	2.68	2.528	5.64	19.57	
213	30.05	6371.88	2.546	3.71	2.33	2.47	0.93	1.13	10.27	2.56	2.61	2.554	9.37	23.35	
214	29.79	6401.67	2.574	5.32	2.57	2.53	0.83	1.21	10.39	2.59	2.65	2.600	9.18	24.89	
215	31.09	6432.76	2.612	5.33	2.62	2.55	1.12	1.33	10.55	2.65	2.81	2.666	5.08	20.96	
215+22	22.73	6455.49	2.728	24.84	2.12	2.77	1.09	1.37	9.56	2.71	2.77	2.599	35.20	69.60	Bridge(Foot Path)
216	7.44	6462.93	2.754	20.00	2.95	2.86	1.10	1.30	9.68	2.71	2.73	2.606	20.00	49.68	
217	30.64	6493.57	2.837	6.32	2.34	2.78	1.11	1.34	10.67	2.51	2.67	2.531	6.11	23.10	
218	29.94	6523.51	2.774	6.27	2.75	2.70	1.15	1.36	10.26	2.53	3.01	2.554	22.46	38.99	
219	30.55	6554.06	2.783	6.28	2.76	2.72	1.18	1.40	9.89	2.63	2.82	2.672	3.89	20.06	
220	30.54	6584.60	2.747	6.18	2.70	2.65	1.21	1.47	9.86	2.63	2.80	2.774	6.16	22.20	
221	30.52	6615.12	2.702	10.98	2.68	2.62	1.31	1.48	10.75	2.67	2.90	2.735	19.45	41.18	
222	29.84	6644.96	2.675	5.31	2.66	2.65	1.32	1.50	10.25	2.71	3.14	2.939	30.52	46.08	
223	31.05	6676.01	2.830	5.76	2.87	2.86	1.34	1.54	10.80	2.88	3.35	3.291	10.69	27.25	
224	29.23	6705.24	2.906	21.56	2.87	2.84	1.33	1.57	11.65	2.89	3.57	3.462	15.37	48.58	
225	29.38	6734.62	2.890	6.20	2.86	2.82	1.39	1.61	11.41	3.43	3.56	3.441	24.88	42.49	
225+10	10.18	6744.80	3.506	20.00	3.28	3.51	1.57	1.67	8.49	3.53	3.61	3.531	25.63	54.12	JL.Pekenden
226	19.78	6764.58	2.848	6.13	2.85	2.80	1.38	1.64	9.44	2.86	3.11	3.006	56.43	72.00	
227	30.24	6794.82	2.850	6.10	2.86	2.81	1.43	1.65	10.39	2.86	3.02	2.924	16.70	33.19	
228	29.80	6824.62	2.938	5.90	2.98	3.12	1.49	1.72	10.35	2.91	3.09	2.961	8.07	24.32	
229	28.56	6853.18	2.992	6.64	3.03	2.94	1.51	1.74	9.26	3.02	3.09	3.020	11.48	27.38	
230	27.66	6880.84	3.048	1.36	3.01	3.00	1.11	1.75	14.07	3.10	3.15	3.038	10.27	25.70	

TABLE 1.1.4 (9/17) LONGITUDINAL PROFILE

LINE	ACCM.		LEFT			CENTER				Total WIDTH	REMARKS					
	DIS	DIS	Elevation	width	Backland	Dike Crown	Lowest	Water Level	Width			Dike Crown	Back Land	Elevation	width	
231	29.43	6910.27	3.106	7.45	3.08	3.04	1.57	1.78	8.93	3.09	3.13	3.037	11.85	28.23		
232	29.56	6939.33	3.171	5.67	3.14	3.09	1.59	1.79	10.87	3.11	3.16	3.023	10.52	27.06		
233	29.27	6969.10	3.081	7.41	3.09	3.03	1.76	1.89	9.70	3.05	3.08	3.058	13.36	30.47		
234	29.61	6998.71	3.130	8.24	3.13	3.12	1.73	1.96	9.48	3.12	3.22	3.094	10.71	28.43		
235	29.84	7028.55	3.106	7.53	3.13	3.05	1.69	2.00	9.69	3.11	3.19	3.097	10.32	27.54	Bridge(Water)	
235+24	24.35	7052.90	3.281	20.00	3.43	3.66	1.73	2.06	10.98	3.98	3.88	3.473	20.00	50.98		
236	6.75	7059.65	3.186	15.20	3.15	3.14	1.72	2.00	9.26	3.21	3.21	3.183	7.41	31.87		
237	30.21	7089.86	3.261	14.66	3.30	3.19	1.79	2.01	9.87	3.34	3.34	3.289	5.15	29.68		
238	30.36	7120.22	3.335	5.45	3.39	3.31	1.82	2.03	9.86	3.68	3.30	3.358	5.29	20.60		
239	29.81	7150.03	3.321	5.12	3.29	3.29	1.80	2.05	9.91	3.49	3.51	3.432	4.70	19.73		
240	29.51	7179.54	3.511	0.77	3.41	3.35	1.84	2.02	17.35	3.50	3.52	3.525	0.96	19.08		
241	29.92	7209.46	3.716	5.33	3.63	3.57	1.63	2.04	7.87	3.61	3.73	3.512	46.70	59.90	Tugu Muda	
241+13	13.85	7223.31	4.116	47.09	4.17	4.01	1.32	1.92	7.11	4.11	4.23	4.113	46.24	100.44		
242	8.41	7231.72	*	*	*	*	*	*	*	*	*	*	*	*	*	
242+20	49.39	7281.11	4.566	11.80	4.30	4.79	1.47	2.13	12.93	4.79	4.46	4.984	16.52	41.25	Tugu Muda	
243	30.45	7311.56	4.978	34.00	4.61	4.97	2.03	2.14	16.23	5.33	4.84	5.027	21.34	71.57		
244	52.10	7363.66	4.831	28.74	4.76	4.86	1.79	2.22	16.40	4.85	4.59	4.827	35.06	80.20	Bridge	
245	47.58	7411.24	4.712	27.51	4.55	3.83	2.65	2.94	9.32	3.90	4.74	4.572	23.17	60.00		
245+28	28.84	7440.08	4.847	36.73	4.39	5.01	*	*	14.97	5.18	4.60	4.906	23.17	74.87	Bridge	
246	22.03	7462.11	4.849	22.31	4.75	5.00	2.84	3.01	16.06	5.03	4.78	5.186	15.51	53.88		
247	49.90	7512.01	4.823	37.40	4.86	5.23	2.88	3.10	14.96	5.34	5.41	4.523	17.28	69.64		
248	49.92	7561.93	4.925	38.69	4.86	5.26	3.01	3.19	15.71	6.78	9.90	6.783	6.11	60.51		
248+17	16.36	7578.29	4.866	27.23	4.33	4.74	3.04	3.16	16.27	4.88	9.43	4.962	11.28	54.78	Jl. Wonosari	
249	30.11	7608.40	4.937	46.53	4.96	5.34	3.32	3.46	21.84	4.87	4.89	4.873	0.52	68.89	Jl. Wonosari	
249+24	23.89	7632.29	4.857	26.90	4.50	4.55	3.30	3.45	24.48	4.70	7.73	4.672	21.53	72.91		
250	24.64	7656.93	5.018	37.64	4.85	4.77	3.37	3.53	28.31	4.82	4.44	4.264	31.73	97.68	Jl. Wonosari	
250+27	33.09	7690.02	4.837	25.49	4.67	4.94	3.50	3.60	35.40	5.05	6.27	5.051	13.20	75.09		
251	20.74	7710.76	4.933	24.85	4.98	5.11	3.25	3.62	29.61	4.91	4.51	4.457	3.72	58.18		
251+21	21.75	7732.51	5.040	36.60	4.08	4.61	2.89	3.14	27.01	4.63	4.81	5.007	20.82	84.43	Jl. Wonosari	
252	37.60	7770.11	5.244	35.27	5.14	5.10	3.58	3.68	30.68	4.67	4.35	4.354	0.84	66.79		
252+42	39.40	7809.51	5.210	29.09	4.90	5.12	3.55	3.77	32.31	4.98	4.63	5.068	51.55	112.95	Jl. Wonosari	

TABLE I.1.4 (10/17) LONGITUDINAL PROFILE

Semarang River (10/10)

LINE	DIS	ACCM. DIS	LEFT			CENTER					RIGHT		REMARKS		
			Elevation	width	Backland	Lowest	Water Level	Width	Dike Crown	Back Land	Elevation	width		Total WIDTH	
253	12.81	7822.32	5.491	33.88	5.33	5.49	3.64	3.84	31.21	4.35	4.11	4.353	2.55	67.64	JL. Wonosari
253+36	39.89	7862.21	5.523	26.12	4.86	5.35	3.69	3.94	24.92	5.07	4.44	5.077	46.06	97.10	
254	8.08	7870.29	5.767	42.13	5.59	5.76	3.77	3.97	22.66	4.37	4.56	4.379	26.14	90.93	
255	51.59	7921.88	5.961	28.10	5.77	6.23	3.84	4.07	23.08	4.82	4.60	4.821	0.76	51.94	Bridge Water Guate
256	48.80	7970.68	6.066	27.65	5.88	6.07	3.33	4.06	46.87	5.31	5.46	5.319	18.00	92.52	
256+16	15.64	7986.32	5.882	32.35	5.66	5.64	4.07	4.27	41.33	5.76	5.35	5.762	25.98	99.66	
256+24	8.68	7995.00	6.313	41.84	5.64	6.93	3.88	4.44	49.54	6.44	5.79	6.057	17.00	108.38	JL. Sutomo
257	36.38	8031.38	6.573	29.23	6.33	5.91	4.11	4.48	43.33	6.03	6.51	6.452	21.41	93.97	
258+28	31.18	8118.82	7.066	36.39	6.67	7.52	4.26	4.47	34.10	6.97	7.00	6.969	14.88	84.31	
259	19.76	8138.58	5.736	0.98	5.51	5.58	4.16	4.51	11.31	6.60	6.39	7.142	39.51	89.82	River River
260	50.26	8188.84	5.521	0.88	5.39	5.81	4.17	4.56	8.59	6.11	6.94	5.681	27.24	36.71	
261	49.05	8237.89	6.580	14.27	6.51	6.51	4.08	4.54	10.00	6.27	7.06	6.420	23.95	48.22	
261+30	30.88	8268.77	5.856	22.27	4.38	5.38	3.35	4.63	15.90	6.00	6.23	5.937	12.15	50.32	Siphon
261+37	7.33	8276.10	*	0.00	*	*	3.36	4.57	0.00	6.34	6.31	5.927	47.98	47.98	
262	12.59	8288.69	5.212	1.38	5.72	5.21	3.81	4.75	10.78	5.36	6.40	5.771	22.45	34.61	
262+41	40.94	8329.63	*	1.38	5.78	4.54	3.08	4.54	0.00	5.50	3.92	5.501	55.86	57.24	JL. Bendungan Guate(West Flood Way)
263	26.68	8356.31	5.416	2.61	5.36	5.49	3.98	4.54	12.19	5.70	6.12	5.802	3.53	18.33	
264	47.98	8404.29	5.629	20.83	5.93	5.65	4.42	4.62	11.35	6.51	6.67	6.712	1.34	33.52	
265	51.11	8455.40	5.300	4.01	5.35	5.19	4.44	4.71	9.92	5.39	5.55	5.396	0.58	14.51	JL. Bendungan Guate(West Flood Way)
266	52.08	8507.48	5.376	1.63	5.39	5.26	4.62	4.87	13.25	5.72	5.79	5.544	28.67	43.55	
267	52.53	8560.01	5.644	1.56	5.66	5.53	4.63	4.87	12.33	5.96	6.06	5.898	13.33	27.22	
268	50.47	8610.48	5.890	4.86	7.35	6.36	4.59	4.90	15.98	6.60	6.60	5.882	2.11	22.95	JL. Bendungan Guate(West Flood Way)
268+21	21.58	8632.06	9.861	28.05	8.65	9.63	3.87	4.85	31.16	9.82	9.48	9.660	42.46	101.67	
269	18.53	8650.59	8.521	44.48	5.63	8.52	3.81	4.86	20.20	8.41	7.69	8.602	44.85	109.53	

TABLE 1.1.4 (11/17) LONGITUDINAL PROFILE

Asin River (1/3)

LINE	DIS	ACCM. DIS	LEFT			CENTER			RIGHT			Total WIDTH
			Elevation	width	Backland	Dike Crown	Dike Crown	Back Land	Elevation	width	Back Land	
0	0.00	0.00	0.890	20.00	0.57	0.91	0.54	23.32	0.097	21.66	64.98	
1	18.52	18.52	0.778	20.00	0.57	0.81	-0.59	24.18	0.12	17.83	62.01	
2	20.80	39.31	0.761	20.00	0.44	0.71	-0.52	23.03	0.21	20.00	63.03	
3	19.38	58.69	0.784	20.00	0.79	0.72	-0.50	22.85	0.30	20.00	62.85	
4	20.51	79.20	0.780	20.00	0.32	0.74	-0.36	22.30	0.25	20.00	62.30	
5	19.60	98.80	0.765	20.00	0.40	0.71	-0.36	21.53	0.36	20.00	61.53	
6	19.68	118.48	0.742	20.00	0.67	0.65	-0.42	21.42	0.76	20.00	61.42	
7	19.81	138.29	0.750	20.00	0.60	0.65	-0.51	23.01	0.88	23.81	66.82	
8	20.18	158.47	0.679	20.00	0.16	0.61	-0.53	23.72	0.98	20.54	64.26	
9	19.70	178.16	0.702	21.97	0.09	0.65	-0.56	24.87	0.75	18.33	65.17	
10	20.07	198.23	0.834	23.34	-0.40	0.77	-2.82	24.09	0.74	17.10	64.53	
11	20.45	218.69	0.828	23.32	-0.70	0.76	-1.83	24.90	1.16	22.56	71.28	
12	19.89	238.59	0.739	25.53	0.04	0.63	-1.89	25.04	1.31	22.37	72.94	
13	20.20	258.79	0.753	25.00	-0.05	0.65	-1.87	25.13	1.01	20.00	70.13	
14	19.79	278.58	0.849	22.59	0.19	0.74	-1.92	25.05	0.88	16.50	64.14	
15	20.10	298.68	0.838	31.77	-0.52	0.72	-2.56	24.98	0.94	20.02	76.77	
16	20.03	318.71	0.784	32.86	0.43	0.73	-2.19	25.04	1.03	20.00	77.90	
17	19.64	338.35	0.972	32.63	-0.25	0.73	2.30	25.33	0.66	19.00	76.96	
18	20.15	358.50	0.838	22.88	-0.04	0.72	-2.26	25.06	0.17	18.98	66.92	
19	20.44	378.94	0.606	32.17	0.36	0.75	-2.43	24.79	0.14	25.52	82.48	
20	20.22	399.16	0.979	20.00	0.35	0.75	-2.93	20.73	0.42	20.71	61.44	
21	20.25	419.41	0.981	20.00	0.52	0.83	-2.37	21.84	0.03	22.10	63.94	
22	19.29	438.69	0.752	20.00	0.66	0.83	-1.98	22.65	0.19	20.00	62.65	
23	20.31	459.01	0.783	20.00	0.11	0.73	-2.81	21.07	0.27	21.09	62.16	

TABLE 1.1.4 (12/17) LONGITUDINAL PROFILE

Asin River (2/3)

LINE	DIS	ACCM. DIS	LEFT			CENTER			RIGHT			Total WIDTH	
			Elevation	width	Backland	Dike Crown	Lowest	Water Level	Width	Dike Crown	Back Land		Elevation	width
24	19.94	478.94	1.053	20.00	0.02	0.85	-2.09	-0.60	20.84	0.40	0.526	16.14	56.98
25	20.12	499.07	0.991	20.00	0.24	0.84	-1.91	-0.60	20.74	*	0.621	15.94	56.68
26	19.96	519.03	0.972	20.00	0.04	0.86	-2.19	-0.62	20.91	*	0.560	20.24	61.15
27	20.16	539.19	0.834	20.00	-0.37	0.77	-2.05	-0.57	20.82	*	0.549	21.52	62.34
28	19.64	558.83	0.771	20.00	0.44	0.77	-2.12	-0.54	20.87	*	0.544	22.11	62.98
29	20.01	578.84	0.761	20.00	0.34	0.80	-2.22	-0.59	20.65	*	0.518	25.90	66.55
30	19.88	598.72	0.776	20.00	0.64	0.78	-2.07	-0.38	19.00	*	0.68	22.08	61.08
31	20.28	619.00	0.194	21.24	0.02	0.75	-3.36	-0.65	20.00	*	0.26	22.73	63.97
32	20.20	639.20	0.879	20.00	0.05	0.88	-1.90	-0.58	21.84	*	0.00	25.65	67.49
33	19.93	659.13	0.931	20.00	0.38	0.93	-1.99	-0.61	20.96	*	-0.16	25.19	66.15
34	19.82	678.96	0.825	20.00	-0.22	0.82	-1.88	-0.75	21.16	*	-0.30	20.60	61.76
35	19.91	698.87	0.676	20.00	0.36	0.93	-1.96	-0.75	20.99	*	0.25	24.96	65.95
36	20.26	719.13	0.621	20.00	-0.01	0.98	-2.06	-0.84	20.90	*	0.31	27.99	68.89
37	20.30	739.43	0.627	20.00	0.08	1.01	-1.79	-0.62	20.98	*	0.38	21.39	62.37
38	19.63	759.07	0.646	20.00	0.24	1.04	-1.84	-0.70	20.68	*	0.47	23.29	63.97
39	19.90	778.96	0.650	20.00	0.45	0.82	-1.86	-0.62	20.71	*	0.47	18.84	59.55
40	20.03	798.99	0.758	20.00	-0.37	0.85	-2.69	-0.20	19.84	*	0.51	19.81	59.65
40+14	14.42	813.41	0.265	27.97	0.13	*	-2.14	0.71	12.02	*	0.08	33.15	73.14
41	5.70	819.11	0.090	29.06	-0.02	0.38	-2.26	-0.57	22.06	*	0.10	33.21	84.33
42	19.77	838.89	0.251	20.00	-0.27	0.78	-3.42	-0.45	21.30	*	0.17	24.52	65.82
43	19.89	858.78	0.512	20.00	-0.02	0.51	-2.44	-0.53	21.43	*	0.34	28.83	70.26
44	19.91	878.68	0.480	20.00	0.32	0.48	-2.43	-0.48	22.14	*	0.80	26.52	68.66
45	20.11	898.79	0.525	20.00	0.00	0.53	-3.29	-0.32	22.99	*	0.19	20.01	63.00
46	20.16	918.94	0.547	20.00	0.04	0.55	-2.05	-0.17	23.88	*	0.18	24.54	68.42

TABLE 1.1.4 (13/17) LONGITUDINAL PROFILE

Asin River (3/3)

LINE	DIS	ACCM. DIS	LEFT			CENTER			Elevation	Back Land	Dike Crown	Total WIDTH		
			Elevation	width	Backland	width	Dike Crown	width						
47	19.99	938.94	0.424	20.00	0.06	0.42	2.53	-0.18	23.30	*	0.11	0.474	10.00	53.30
48	20.29	959.23	0.382	20.00	0.06	0.38	2.75	-0.19	23.65	*	0.19	0.500	20.00	63.65
49	20.10	979.34	0.355	32.66	0.04	0.36	2.40	-0.42	24.41	*	0.03	0.564	10.00	67.07
49+13	13.21	992.54	0.121	23.29	*	*	2.30	0.74	26.76	*	0.35	0.448	20.00	70.05
50	6.48	999.02	0.232	23.42	0.06	*	2.77	-0.30	24.21	*	0.36	0.449	20.00	67.63
51	20.06	1019.03	0.526	20.00	0.20	*	2.24	-0.27	23.72	*	1.26	0.523	25.11	68.83
52	20.47	1039.56	0.337	20.00	0.61	*	2.80	-0.31	23.54	*	0.24	0.580	22.08	65.62
53	19.92	1059.47	0.434	20.00	0.05	*	2.19	-0.12	23.55	*	0.23	0.568	24.57	68.12
54	20.12	1079.59	0.344	20.39	0.31	*	2.71	-0.25	23.52	*	0.15	0.605	25.59	69.50
55	19.76	1099.35	0.234	20.00	0.43	*	2.69	-0.22	23.41	*	0.38	0.616	29.36	72.77
56	20.09	1119.44	0.361	20.00	0.05	*	2.74	-0.19	23.73	*	0.17	0.616	32.70	76.43
57	20.11	1139.56	0.470	20.00	0.24	*	2.60	-0.45	23.34	*	0.05	0.766	25.52	68.86
58	19.34	1159.40	0.474	28.69	0.03	*	1.75	-0.15	11.26	*	0.18	0.395	26.29	66.24
58+5	5.92	1165.32	0.400	30.75	0.04	*	1.17	-0.71	7.83	*	0.14	0.537	32.24	70.82
59	16.36	1181.68	0.367	20.00	0.44	*	1.30	-0.55	9.11	*	0.03	0.013	20.00	49.11
60	20.39	1202.07	0.326	20.00	0.32	*	1.22	-0.84	8.40	*	0.25	0.248	20.00	48.40
61	20.07	1222.14	0.317	20.00	0.32	*	1.19	-0.58	8.49	*	0.30	0.274	20.00	48.49
62	20.01	1242.15	0.322	20.00	0.21	*	1.63	-0.51	8.86	*	0.30	0.264	20.00	48.86
63	20.67	1262.83	0.329	20.00	0.40	*	1.07	-0.36	6.37	*	0.32	2.888	20.00	46.37
64A	16.93	1279.76	0.518	20.84	0.40	*	0.92	-0.28	5.55	*	0.24	0.486	18.48	44.87
65A	19.58	1299.34	0.010	20.00	0.02	*	1.44	-0.48	4.08	*	0.13	0.063	21.23	45.31
66A	19.20	1318.54	-0.001	20.00	-0.12	*	1.08	-0.45	3.49	*	0.20	*	16.51	40.00

TABLE 1.1.4 (14/17) LONGITUDINAL PROFILE

Baru River(1/4)

LINE	ACCM.		LEFT			CENTER					Total WIDTH		
	DIS	DIS	Elevation	width	Backland	Dike Crown	Lowest	Water Level	Width	Dike Crown		Back Land	Elevation	width
BALBP	0.00	0.00	0.872	29.31	0.32	0.30	-3.94	-0.34	83.44	0.78	0.87	0.872	20.00
1	18.82	18.82	0.203	41.72	0.31	0.36	-4.24	-0.39	69.92	0.77	0.86	0.861	28.48
2	20.81	39.64	0.161	20.00	0.35	0.31	-4.20	-0.54	71.85	0.81	1.05	1.052	34.55
3	20.83	60.47	0.375	27.62	0.43	0.31	-4.15	-0.55	65.40	0.83	1.09	1.034	26.75
4	19.84	80.31	0.194	24.29	0.37	0.34	-4.07	-0.41	59.16	0.83	1.08	1.116	17.71
5	21.85	102.16	0.191	20.00	0.04	0.33	-4.52	-0.57	52.19	0.60	1.11	0.920	24.43
6	17.86	120.02	0.190	22.89	-0.21	0.31	-4.31	-0.72	46.27	0.51	1.02	0.893	24.71
7	27.84	147.86	0.170	20.00	0.49	0.33	-4.06	-0.60	40.96	0.44	1.05	0.908	14.37
8	19.26	167.11	0.160	26.04	-0.46	0.32	-4.02	-0.50	41.29	0.51	1.13	0.902	23.48
9	20.98	188.10	0.158	25.66	0.05	0.30	-4.20	-0.20	41.88	0.50	1.02	0.920	20.25
10	19.63	207.73	0.386	19.68	-0.20	0.31	-5.59	-0.12	64.29	0.51	1.05	1.206	20.27
11	19.70	227.43	0.199	20.00	0.42	0.35	-3.88	-0.65	40.57	0.49	0.93	0.925	24.87
12	20.41	247.84	0.232	22.15	0.40	0.31	-3.71	-0.44	28.71	0.45	0.87	0.863	24.09
13	20.73	268.57	0.151	22.18	-0.30	0.27	-4.33	-0.25	28.65	0.39	0.98	0.822	27.18
14	19.25	287.82	0.149	22.13	-0.20	0.24	-4.37	-0.47	28.69	0.39	1.04	0.814	25.29
15	18.48	306.30	0.125	22.00	-0.16	0.23	-5.01	-0.27	28.87	0.39	1.02	0.827	21.19
16	21.49	327.79	0.191	21.47	-0.23	0.31	-3.34	-0.66	28.62	0.44	0.31	0.823	20.72
17	20.01	347.80	0.130	20.00	0.26	0.28	-3.38	-0.45	28.45	0.41	-0.14	0.809	20.00
18	19.73	367.54	0.177	20.00	0.27	0.29	-4.87	0.38	28.49	0.39	1.25	0.804	19.70
19	19.97	387.51	0.143	20.00	0.02	0.30	-3.07	-0.76	28.52	0.39	0.98	0.815	20.06
20	20.06	407.57	0.319	20.00	0.02	0.34	-4.74	-0.49	55.60	0.42	0.22	1.258	20.00
21	20.35	427.92	0.139	23.37	0.23	0.34	-3.21	-0.76	28.15	0.37	0.21	0.811	20.20
22	20.79	448.71	0.106	44.66	-0.59	0.28	-2.77	-0.79	28.16	0.37	0.41	0.838	20.03
23	19.21	467.92	0.092	21.16	-0.58	0.23	-2.35	-0.75	28.20	0.39	0.09	0.821	24.44

TABLE 1.1.4 (15/17) LONGITUDINAL PROFILE

Baru River(2/4)

LINE	DIS	ACCM.	LEFT			CENTER			Total WIDTH					
			Elevation	width	Backland	Dike Crown	Lowest	Water Level		Width	Dike Crown	Back Land	Elevation	width
24	20.33	488.25	0.113	20.00	0.03	0.30	-2.12	-0.79	28.37	0.35	0.15	0.833	22.23	70.60
25	18.78	507.02	0.118	20.00	-0.14	0.30	-3.21	-0.62	28.30	0.38	0.94	0.840	26.31	74.61
26	21.34	528.36	0.101	20.00	0.44	0.30	-2.09	-0.76	28.54	0.37	0.32	0.810	19.59	68.13
27	19.93	548.29	0.073	20.00	-0.08	0.31	-2.01	-0.70	28.26	0.38	1.05	0.820	21.46	69.72
28	20.29	568.58	0.856	20.00	0.54	1.03	-2.09	-0.61	31.60	1.06	0.26	0.945	20.00	71.60
29	19.33	587.91	1.887	20.00	1.52	2.37	-2.25	-0.53	32.67	2.21	0.25	1.757	20.00	72.67
29+8	8.40	596.31	2.046	27.22	1.90		-3.68	-0.45	33.22	1.90	0.04	1.957	22.73	83.17
30	12.22	608.53	0.314	24.44	0.89	1.68	-3.03	-0.44	26.76	1.85	-0.52	-0.028	20.00	71.20
31	17.44	625.97	-0.077	24.96	-0.30		-1.91	-0.44	31.63		-0.02	-0.021	21.43	78.02
32	17.86	643.83	0.118	41.98	2.30	2.63	-2.04	-0.54	28.48		0.13	-0.084	17.20	87.66
32+11	7.79	651.63	2.876	19.10	2.64		-3.33	-0.49	54.95		2.55	2.786	19.94	93.99
33	17.83	669.46	-0.046	21.73	0.07		-1.95	-0.64	36.70	3.58	2.52	-0.159	20.00	78.43
34	23.57	693.03	0.220	20.58	0.01		-1.92	-0.72	38.23	0.81	0.11	0.421	27.67	86.48
35	20.53	713.56	0.204	20.00	0.54		-1.88	-0.73	37.94	0.80	0.33	0.273	20.00	77.94
36	19.72	733.28	0.357	20.00	0.45		-1.94	-0.76	37.68	0.66	0.06	0.228	20.00	77.68
37	20.31	753.58	-0.165	20.00	0.13		-2.03	-0.73	40.21	0.63	-0.06	0.143	20.00	80.21
38	19.97	773.55	-0.137	20.00	-0.14		-1.92	-0.77	40.70	0.63	-0.25	0.115	26.47	87.17
39	21.50	795.05	0.017	20.00	-0.14		-1.79	-0.77	57.55	0.56	-0.06	0.101	20.00	97.55
40	19.69	814.74	-0.031	20.00	-0.10		-4.30	-0.59	55.99	0.59	-0.13	0.215	23.04	99.03
41	19.92	834.66	0.033	23.20	-0.16		-1.88	-0.54	57.95	0.62	-0.18	0.044	24.76	105.91
42	21.31	855.97	0.097	20.00	0.19		-1.90	-0.51	66.94	0.56	-0.14	0.059	24.80	111.74
43	21.03	877.00	0.130	21.26	-0.13		-1.91	-0.42	62.51	0.59	0.07	0.073	20.00	103.77
44	20.86	897.86	0.389	21.56	-0.32		-1.81	-0.39	53.02	0.60	-0.49	-0.070	20.00	94.68
45	21.00	918.86	0.311	20.00	0.18		-1.85	-0.43	41.04	0.60	-0.11	0.172	22.75	83.79

TABLE 1.1.4 (16/17) LONGITUDINAL PROFILE

Baru River(3/4)


LINE	DIS	ACCM. DIS	LEFT			CENTER			Back Land	Elevation	width	Total WIDTH
			Elevation	width	Backland	Dike Crown	Lowest	Water Level					Width	Dike Crown
46	19.63	938.49	0.016	20.00	-0.02	-1.77	-0.51	44.60	0.45	0.180	84.60	
47	20.56	959.05	0.264	28.27	-0.11	-1.80	-0.50	54.42	0.71	0.386	102.69	
48	19.28	978.33	0.097	27.28	-0.12	-1.85	-0.60	52.53	-0.16	0.366	101.20	
49	20.10	998.43	0.692	20.00	-0.14	-1.73	-0.67	54.56	0.06	0.295	94.56	
50	21.46	1019.89	-0.080	20.00	-0.24	-3.32	-0.68	40.70	-0.10	0.352	81.37	
51	20.46	1040.35	0.330	21.60	-0.37	-1.49	-0.80	55.13	-0.38	0.415	96.73	
52	21.57	1061.92	-0.090	27.31	-0.27	-1.50	-0.75	37.26	-0.43	0.661	84.57	
53	20.81	1082.73	0.104	20.00	-0.28	-1.64	-0.76	33.23	0.33	0.232	73.23	
54	20.64	1103.37	-0.231	20.00	-0.18	-1.67	-0.82	39.45	0.30	0.265	79.45	
55	21.63	1125.00	-0.144	20.00	-0.16	-3.09	-0.32	39.34	0.39	0.510	73.34	
56	20.00	1144.99	0.124	20.00	-0.02	-1.75	-0.81	49.78	0.68	0.636	89.78	
57	18.87	1163.86	0.226	20.00	0.13	-1.84	-0.79	51.37	0.59	0.572	91.37	
58	20.77	1184.63	0.010	20.00	0.00	-1.87	-0.69	37.65	0.36	0.421	77.65	
59	20.87	1205.50	0.381	20.00	0.32	-1.85	-0.51	45.38	0.43	0.241	85.38	
60	22.11	1227.61	0.152	22.34	0.04	-1.91	-0.61	27.25	0.42	0.242	69.59	
61	19.32	1246.93	0.388	22.56	0.38	-2.26	-0.37	27.82	0.35	0.393	70.38	
62	20.34	1267.27	0.173	26.92	0.10	-1.86	-0.68	29.77	0.17	0.338	69.12	
63	19.69	1286.96	0.128	20.00	0.22	-2.91	-0.52	30.48	0.22	0.277	70.48	
64	19.64	1306.59	0.060	20.00	0.25	-2.87	-0.55	31.51	0.26	0.271	71.51	
65	19.92	1326.51	0.105	20.00	0.25	-2.72	-0.76	30.26	0.31	0.244	70.26	
66	21.41	1347.92	0.151	23.72	-0.02	-2.85	-0.69	29.53	-0.30	0.229	73.25	
67	19.17	1367.09	0.046	20.00	0.44	-0.22	-0.81	29.77	0.22	0.297	69.77	
68	19.38	1386.47	0.130	20.00	0.30	-0.12	-0.73	30.09	0.23	0.338	59.16	
69	20.27	1406.74	0.200	35.35	0.19	-0.11	-0.75	30.38	-0.11	0.370	87.85	

TABLE I.1.4 (17/17) LONGITUDINAL PROFILE

Baru River(4/4)

LINE	DIS	ACCM.		LEFT		CENTER		RIGHT		Total WIDTH			
		DIS	Elevation	width	Backland	Dike Crown	Lowest	Water Level	Width		Dike Crown	Back Land	Elevation	width
70	22.48	1429.21	0.162	26.89	0.31	-0.22	-3.11	-0.72	25.66	0.13	0.12	0.219	22.22
70+13	12.99	1442.20	0.695	11.31	0.43		-2.32	-0.36	26.39		0.80	0.778	17.39
71	7.57	1449.77	0.603	20.00	0.25	0.34	-1.66	-0.71	24.15	0.41	0.43	0.470	19.58
72	18.90	1468.67	0.124	20.00	0.12	0.12	-1.73	-0.68	6.54	0.21	0.21	0.205	20.00
73	20.41	1489.08	0.858	20.00	0.86	0.86	-1.50	-0.70	7.17	0.58	0.58	0.583	20.00
BALEP	9.72	1498.80	0.664	0.00	0.53		-0.69	-0.62	14.45		0.61	0.619	21.90

TABLE 2.1.1 (1/42) BORING LOG DB1 (1/2)

 PT. Gto ACE Jln. Pajajaran no. 125 BANDUNG, INDONESIA			SOIL MECHANICS SURVEY FOR THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA														BORING LOG																				
Bore Hole		DB - 1	Sheet	1	of	2	Ground Water Level (GWL)			meter		Date		26 - 9 - 1995 to 27 - 9 - 1997																							
Location		URBAN DRAINAGE			Coordinate			x =		y =		Drawn by		Ade K & Kosasih																							
Boring Depth		30.00 meter			Angle			Sighting		Logged by		Rudy Muhranto		Supervisor																							
Elevation		±0,430 meter			Drilling Machine			YBM - 3ES																													
CLASSIFICATION AND DESCRIPTION OF MATERIAL																																					
1	2	3	4	5	6	7	8	9		12					13				19				20														
Date	Scale	Elevation	Stratum Thickness	Depth(m)	Soil Profile	Classification	GWL	DESCRIPTION	Standard Penetration Test					Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (γ _m)	Void Ratio, e	Atterberg Limits				Type	Strength Test												
									N-Value Number of Blows per 30 Cm Penetration											● Plastic Limit (%)	□ Plastic Index (%)	▲ Liquid Limit (%)	Angle Internal friction (°)		Cohesion (kg/cm ²)												
									0	10	20	30	40	50																							
0.00 - 0.35 m: GRAVELY SAND, brown, fine to medium grained, well graded, medium dense. Gravel's diameter up to 3.00 cm.									0								B																				
									1								0/30																				
0.35 - 25.00 m: SANDY CLAY, brown, high plasticity, very soft to soft, moist; become stiff in 18.00 m depth.									2																												
									3								0/30																				
CH									4																												
									5								0/30																				
									6								0/30							2745	90060	1506	1468		27*				74	101			
									7								0/30																				
									8								0/30																				
									10																												
									11								3/30																				
									13																												
									14								3/30																				
									15																												
									15								4/30																				

26 SEPTEMBER 1997

LEGEND: [Symbol] CORING [Symbol] SPT [Symbol] VOS

TABLE 2.1.1 (2/42) BORING LOG DB1 (2/2)

1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19				20		
Date	Scale	Elevation	Stratum Thickness	Depth(m)	Soil Profile	Classification	CWL	DESCRIPTION	Standard Penetration Test		Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (γ _m)	Void Ratio, e	Atterberg Limits				Strength Test																					
								N - Value Number of Blows per 30 Cm Penetration		● Plastic Limit (%) □ Plastic Index (%) ▲ Liquid Limit (%)							Type	Angle internal friction (°)	Cohesion (kg/cm ²)																							
									0	10	20	30	40	50							0	40	80	120	160																	
26 SEPTEMBER 1997								0.35 - 25.00 m: SANDY CLAY, brown, high plasticity, very soft to soft, moist, become stiff in 18.00 m depth.	15			4/30			2.65	78.80	1.605	1.963			32+														UU	1.64	0.063					
									16			4/30																														
									17			4/30																														
									18			6/30																														
									19			7/30																														
									20		Ac																															
						CH	4.20		21			50/30																														
									22			46/30																														
									23			51/30																														
									24			56/30																														
									25			43/30																														
27 SEPTEMBER 1997				25.00				25.00 - 27.00 m: SILTY SAND, dark grey, fine to medium grained, very dense, well graded.	25			36/30																														
									26		Sw																															
									27			52/30																														
				27.00				27.00 - 30.00 m: CLAY, brown, high plasticity, hard, moist.	27			34/30																														
									28			65/30																														
									29		CH																															
									30			69/30																														
				30.00				6.10				70/30																														
BOTTOM OF HOLE																				LEGEND		CORING	SPT	UO3																		

TABLE 2.1.1 (3/42) BORING LOG DB2 (1/2)

1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20			
Date	Scale	Elevation	Stratum Thickness	Depth(m)	Soil Profile	Classification	G.W.L	DESCRIPTION	Standard Penetration Test					Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (γ _m)	Void Ratio, e	Atterberg Limits				Strength Test																	
				0.17		SP		0.00 - 0.17 m: CLAYEY SAND, yellowish brown, fine to medium grained, poorly graded, loose. 0.17 - 20.00 m: SANDY CLAY, grey, high plasticity, very soft, moist; occasionally mollusca shells in 15.00 m depth.	N - Value Number of Blows per 30 Cm Penetration												0	40	80	120	160																
									0	10	20	30	40	50																											
									0																																
									1																																
									2																																
									3																																
									4																																
									5																																
									6																																
									7																																
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									9																																
									10																																
									11																																
									12																																
									13																																
									14																																
									15																																

23 SEPTEMBER 1997

CH

LEGEND [Symbol] CORING [Symbol] SPT [Symbol] UDS

TABLE 2.1.1 (4/42) BORING LOG DB2 (2/2)


 PT. Geo ACE Jln. Pajajaran no. 125 BANDUNG, INDONESIA			SOIL MECHANICS SURVEY FOR THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA										BORING LOG														
Bore Hole: 08-2		Sheet: 2 of 2		Ground Water Level (GWL): meter				Date: 23-9-1997 to 24-9-1997																			
Location: URBAN DRAINAGE		Coordinate: x = y =				Drilled by: Ade K. & Koesih																					
Boring Depth: 30.00 meter		Angle: Bearing				Logged by: Rudy Muhranto																					
Elevation: +0.420 meter		Drilling Machine: YBM-3ES				Supervisor:																					
CLASSIFICATION AND DESCRIPTION OF MATERIAL																											
1	2	3	4	5	6	7	8	9	12					13	14	15	16	17	18	19					20		
									Standard Penetration Test											Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (k/m ³)	Void Ratio, e	Atterberg Limits					Type	Angle Internal Friction (°)	Cohesion (kg/cm^{2})
Date	Scale	Elevation	Stratum Thickness	Depth (m)	Soil Profile	Classification	GWL	DESCRIPTION	N-Value Number of Blows per 30 Cm Penetration					● Plastic Limit (%) ○ Plastic Index (%) ▲ Liquid Limit (%)													
15									0.17 - 20.00 m: SANDY CLAY, grey, high plasticity, very soft, moist, occasionally mollusca shells in 15.00 m depth.	15		3/30			2701	15050	1534	22%	0	34	69	103	UU	0.33	0.012		
16												3/30															
17												3/30															
18												3/30															
19												3/30															
20				20.00								6/30															
21									20.00 - 30.00 m: CLAY, greyish brown to brown, high plasticity, stiff to hard, moist.			8/30	Ac														
22												37/30															
23												53/30															
24												56/30															
25												54/30															
26												56/30															
27												68/30															
28												71/30															
29												59/30															
30				30.00								72/30	Oc														
BOTTOM OF HOLE																											

TABLE 2.1.1 (5/42) BORING LOG DB3 (1/2)

PT. Geo ACE Jln. Pajajaran no. 125 BANDUNG, INDONESIA		SOIL MECHANICS SURVEY FOR THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA													BORING LOG																						
Bore Hole DB-3 Sheet 1 of 2		Ground Water Level (GWL): meter						Date 19-9-1997 to 21-9-1997																													
Location URBAN DRAINAGE		Coordinate x * y *				Drilled by Ade K. & Koerish																															
Boring Depth 30.00 meter		Angle Bearing				Logged by Rudy Muranto																															
Elevation + 0.230 meter		Drilling Machine YBM-3ES				Supervisor																															
CLASSIFICATION AND DESCRIPTION OF MATERIAL																																					
1	2	3	4	5	6	7	8	9	12 Standard Penetration Test					13	14	15	16	17	18	19			20														
									N-Value Number of Blows per 30 Cm Penetration											Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (Um3)	Void Ratio, e	Atterberg Limits			Type	Angle Internal Friction (°)	Cohesion (kg/cm ²)						
Date	Scale	Elevation	Stratum Thickness	Depth(m)	Soil Profile	Classification	GWL	DESCRIPTION	0	10	20	30	40	50	0	40	80	120																			
									● Plastic Limit (%)			□ Plastic Index (%)								▲ Liquid Limit (%)																	
19 SEPTEMBER 1997	1			0.55	.....	GW		0.00 - 0.55 m: SANDY GRAVEL, sub rounded to angular, diameter up to 4.00 cm (retaining wall).	0																											
	2				.....			0.55 - 6.30 m: CLAYEY SAND, grey to dark grey, very fine to medium grained, poorly graded, moderately dense.	6/30																											
	3				.....				10/30																											
	4				.....				7/30																											
	5							6/30																												
	6							6/30																												
20 SEPTEMBER 1997	7				.....			6.30 - 30.00 m: SANDY CLAY, grey to greyish brown, high plasticity, soft to firm, moist; occasionally some mollusca shell; become stiff to hard in 22.00 m depth.	6/30																											
	8				.....				6/30																											
	9				.....				6/30																											
	10				.....				6/30																											
	11				.....	CH			3/30																											
	12				.....		0.35		4/30																											
	13				.....				3/30																											
	14							4/30																												
	15							6/30																												
				.....				4/30																												

LEGEND COARANG SPT UDS

TABLE 2.1.1 (6/42) BORING LOG DB3 (2/2)


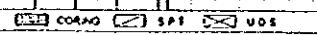
 PT. Geo ACE Jln. Pajajaran no. 125 BANDUNG, INDONESIA		SOIL MECHANICS SURVEY FOR THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA										BORING LOG																
Bore Hole : DB-3 Sheet 2 of 2		Ground Water Level (GWL) : meter					Date : 19-9-1997 to 21-9-1997																					
Location : URBAN DRAINAGE		Coordinate : x* y*					Drilled by : Ade K & Koesah																					
Boring Depth : 30.00 meter		Angle : Bearing :					Logged by : Rudy Muranto																					
Elevation : + 0.230 meter		Drilling Machine : YBM - 3ES					Supervisor :																					
CLASSIFICATION AND DESCRIPTION OF MATERIAL																												
1	2	3	4	5	6	7	8	9	12					13	14	15	16	17	18	19				20				
									Standard Penetration Test											Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (kN/m ³)	Void Ratio, e	Atterberg Limits				Strength Test
Date	Scale	Elevation	Stratum Thickness	Depth(m)	Soil Profile	Classification	CWL	DESCRIPTION	N-Value Number of Blows per 30 Cm Penetration									● Plastic Limit (%) □ Plastic Index ▲ Liquid Limit (%)								Type	Angle internal friction (°)	Cohesion (kg/cm ²)
									0	10	20	30	40	50						0	40	80	120	160				
15									15						4/30		2.644	71.750	1.543	1.843								
16									16						4/30													
17									17						5/30													
18									18						5/30													
19									19						6/30													
20									20						6/30													
21	20 SEPTEMBER 1997								21						4/30													
22							CH		22						6/30													
23									23						35/30													
24									24						45/30													
25									25						53/30													
26							4.90		26						49/30													
27	21 SEPTEMBER 1997								27						47/30													
28									28						43/30													
29									29						54/30													
30				30.00			3.70		30						67/30	DC												
BOTTOM OF HOLE									LEGEND 																			

TABLE 2.1.1 (7/42) BORING LOG DB4 (1/2)

1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		
Date	Scale	Elevation	Stratum Thickness	Depth (m)	Soil Profile	Classification	G.W.L.	DESCRIPTION	Standard Penetration Test					Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (kN/m ³)	Void Ratio, e	Atterberg Limits			Strength Test																	
									N - Value Number of Blows per 30 Cm Penetration											0	40	60	120	Type	Angle internal friction (°)	cohesion (kg/cm ²)														
									0	10	20	30	40	50						0																				
25 SEPTEMBER 1997				0.50		CH		0.00 - 0.50 m: SILTY CLAY, greyish brown, high plasticity, firm, moist.																																
								0.50 - 8.10 m: SANDY CLAY, grey, high plasticity, very soft, moist; containing some mollusca shells, and sand trace.																																
26 SEPTEMBER 1997				8.00		SP		8.10 - 8.50 m: CLAYEY SAND, grey very fine to fine grained, poorly graded, very loose.																																
								8.50 - 30.00 m: CLAY, grey to brown, high plasticity, firm to hard, moist.																																

TABLE 2.1.1 (8/42) BORING LOG DB4 (2/2)

1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20	
Date	Scale	Elevation	Stratum Thickness	Depth (m)	Soil Profile	Classification	G.W.L.	DESCRIPTION	N-Value Number of Blows per 30 Cm Penetration	Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (t/m ³)	Void Ratio, e	Atterberg Limits	Type	Angle internal friction (φ)	Cohesion (kg/cm ²)																				
									0 10 20 30 40 50							● Plastic Limit (%) □ Plastic Index ▲ Liquid Limit (%)																							
28 SEPTEMBER 1997								8.50 - 30.00 m: CLAY, grey to brown, high plasticity, firm to hard, moist.	15			2.742	58.560	1.524	1.620	31*	UU	3.404	0.013																				
									16																														
									17	6/30																													
									18	1/30																													
									19	1/30																													
									20	8/30																													
									21	8/30	Ac																												
						CH			22	9/30	Ac																												
							4.85		23	53/30	Ao																												
									24	43/30																													
									25	26/30																													
									26	23/30																													
									27	40/30																													
27 SEPTEMBER 1997									28	30/30																													
									29	27/30																													
				30.00					30	33/30	Dc																												

BOTTOM OF HOLE

LEGEND: COAMG, S.F.F., U.D.S.

TABLE 2.1.1 (9/42) BORING LOG DB5 (1/2)


 PT. Geo ACE Jln. Pejasjaran no. 125 BANDUNG, INDONESIA		SOIL MECHANICS SURVEY FOR THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA												BORING LOG																										
Bore Hole	DB - 5	Sheet	1 of 2	Ground Water Level (GWL):						meter	Date	1 - 10 - 1997 to 2 - 10 - 1997																												
Location				URBAN DRAINAGE				Coordinate		x =	y =	Drilled by		Sudarnadji																										
Boring Depth:				30.00 meter				Angle		Bearing :		Logged by		Rudy Muksanto																										
Elevation :				+ 0.450 meter				Drilling Machine		YBM - 3ES		Supervisor																												
CLASSIFICATION AND DESCRIPTION OF MATERIAL																																								
1	2	3	4	5	6	7	8	9	12					13	14	15	16	17	18	19				20																
									Standard Penetration Test											Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (γ _m)	Void Ratio, e	Atterberg Limits				Strength Test										
Date	Scale	Elevation	Stratum Thickness	Depth(m)	Soil Profile	Classification	G.W.L.	DESCRIPTION	N - Value Number of Blows per 30 Cm Penetration					Cohesion (kg/cm ²)	Angle Internal friction (φ, °)	Type	Cohesion (kg/cm ²)	Angle Internal friction (φ, °)	Type							Cohesion (kg/cm ²)														
									0	10	20	30	40							50	0	40	80	120	160															
1 OCTOBER 1997				0.40	[Soil Profile Diagram]	CH		0.00 - 0.40 m: SILTY CLAY, brown, high plasticity, firm, moist, containing some amount of plant roots.																																
	1			1.50		CH		0.40 - 1.50 m: SANDY CLAY, grey, very soft, high plasticity, moist.																																
	2			1.55	[Soil Profile Diagram]	SP		1.50 - 1.55 m: CLAYEY SAND, grey, fine to medium grained, poorly graded, very loose.																																
	3			2.80		CH		1.55 - 2.80 m: SANDY CLAY, grey, high plasticity, very soft, moist.																																
	4					[Soil Profile Diagram]	SP		2.80 - 4.45 m: SAND, grey, fine to medium grained, poorly graded, very loose.																															
	5								4.45 - 18.50 m: SANDY CLAY, grey, very soft to stiff, high plasticity, moist, containing some amount mollusca shells.																															
	6					[Soil Profile Diagram]																																		
	7																																							
	8					[Soil Profile Diagram]		3.40																																
	9																																							
	10					[Soil Profile Diagram]																																		
	11																																							
	12					[Soil Profile Diagram]																																		
	13																																							
	14					[Soil Profile Diagram]																																		
15																																								

TABLE 2.1.1 (10/42) BORING LOG DB5 (2/2)


 PT. Geo ACE Jln. Pajajaran no. 125 BANDUNG, INDONESIA			SOIL MECHANICS SURVEY FOR THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA										BORING LOG															
Bore Hole : DB-5 Sheet : 2 of 2			Ground Water Level (GWL) : meter							Date : 1 - 10 - 1997 to 2 - 10 - 1997																		
Location : URBAN DRAINAGE			Coordinate : x " y "							Drilled by : Sudarmady																		
Boring Depth : 30.00 meter			Angle : Bearing :							Logged by : Rudy Murtanto																		
Elevation : + 0.450 meter			Drilling Machine : YBW - 3ES							Supervisor :																		
CLASSIFICATION AND DESCRIPTION OF MATERIAL																												
1	2	3	4	5	6	7	8	9	12					13	14	15	16	17	18	19				20				
Date	Scale	Elevation	Stratum Thickness	Depth(m)	Soil Profile	Classification	GWL	DESCRIPTION	Standard Penetration Test					Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (tm ³)	Void Ratio, e	Azberg Limits				Type	Angle internal friction (°)	Cohesion (kg/cm ²)		
									N - Value Number of Blows per 30 Cm Penetration											0	40	80	120	160				
									0	10	20	30	40	50														
15								4.45 - 18.50 m: SANDY CLAY, grey, very soft to stiff, high plasticity, moist, containing some amount mollusca shells.																				
16																												
17																												
18				18.50																								
19								18.50 - 27.30 m: CLAY, grey brown to brown, high plasticity, stiff to hard, moist.																				
20																												
21																												
22																												
23																												
24																												
25																												
26																												
27				27.30																								
28				27.55		S.P.		27.30 - 27.55 m: CLAYEY SAND, grey brown, very fine to fine grained, poorly graded, moderately dense.																				
29								27.55 - 30.00 m: CLAY, brown, high plasticity, hard, moist.																				
30				30.00																								
BOTTOM OF HOLE																												

TABLE 2.1.1 (11/42) BORING LOG DB6 (1/2)

1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		
Date	Scale	Elevation	Stratum Thickness	Depth(m)	Soil Profile	Classification	G.W.L.	DESCRIPTION	Standard Penetration Test		Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (Um3)	Void Ratio, e	Atterberg Limits		Strength Test																					
									N - Value Number of Blows per 30 Cm Penetration								● Plastic Limit (%) □ Plastic Index ▲ Liquid Limit (%)		Type																					
									0	10	20	30	40	50			0	40	80	120	160																			
4 OCTOBER 1997				0.40		ML		0.00 - 0.40 m: SANDY SILT, greyish brown, low plasticity, soft, moist; some amount of plant roots.	0																															
						CH		0.40 - 3.55 m: SANDY CLAY, greyish brown, high plasticity, soft, moist.	1	3/30																														
				3.55		SP		3.55 - 4.60 m: CLAYEY SAND, grey, very fine to fine grained, poorly graded, very loose.	2	2/30																														
				4.60				4.60 - 17.00 m: SILTY CLAY, grey, high plasticity, soft to firm, moist; containing some amount of mollusca shells.	3	3/30	Ac																													
									4	3/30	As																													
									5	1/30																														
									6																															
									7																															
									8																															
									9																															
									10																															
									11																															
									12																															
									13																															
									14																															
								15																																

LEGEND [Symbol] CORING [Symbol] SPT [Symbol] UDS

TABLE 2.1.1 (12/42) BORING LOG DB6 (2/2)


 PT. Geo ACE Jln. Pajajaran no. 125 BANDUNG, INDONESIA			SOIL MECHANICS SURVEY FOR THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA										BORING LOG													
Bore Hole: DB-6 Sheet 2 of 2 Location: URBAN DRAINAGE Boring Depth: 30.00 meter Elevation: +0.245 meter			Ground Water Level (GWL) meter Coordinate: X = Y = Angle: Bearing Drilling Machine: YBM-3ES					Date: 4-10-1997 to 5-10-1997 Drilled by: Sudarmady Logged by: Rudy Muranto Supervisor:																		
CLASSIFICATION AND DESCRIPTION OF MATERIAL																										
1	2	3	4	5	6	7	8	9	12					13	14	15	16	17	18	20						
Date	Scale	Elevation	Stratum Thickness	Depth(m)	Soil Profile	Classification	GWL	DESCRIPTION	Standard Penetration Test					Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (Um3)	Void Ratio, e	Atterberg Limits		Strength Test				
									N - Value Number of Blows per 30 Cm Penetration											● Plastic Limit (%) □ Plastic Index ▲ Liquid Limit (%)		Type	Angle internal friction (c)	Cohesion (kg/cm ²)		
									0	10	20	30	40	50					0	40	80	120	160			
4 OCTOBER 1997						CH	5.60	4.60 - 17.00 m: SILTY CLAY, grey, high plasticity, soft to firm, moist; containing some amount of mollusca shells.	15					7/30		2.562	73.480	1.552	1.814	34.0	2.87	122				
				17.00				17.00 - 26.80 m: CLAY, grey to brown, stiff to hard, high plasticity, moist.	17					7/30												
									18					8/30												
									19					9/30												
									20					10/30												
									21					26	Ac											
									22					47/30												
5 OCTOBER 1997						CH			23					55/30												
				26.60					24					38/30												
						CH		26.80 - 27.60 m: SANDY CLAY, grey, hard, high plasticity, moist.	25					45/30												
				27.60					26					41/30												
						CH		27.60 - 30.00 m: CLAY, grey, hard, high plasticity, moist.	27					43/30												
									28					46/30												
						CH			29					45/30												
				30.00			5.30	BOTTOM OF HOLE	30					43/30	Dc											

TABLE 2.1.1 (13/42) BORING LOG DB7 (1/2)

1		2		3		4		5		6		7		8		9		12		13		14		15		16		17		18		19		20												
Date	Scale	Elevation	Stratum Thickness	Depth (m)	Soil Profile	Classification	GWL	DESCRIPTION	Standard Penetration Test					Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (t/m ³)	Void Ratio, e	Atterberg Limits				Strength Test																						
									N-Value Number of Blows per 30 Cm Penetration											B	Ac	As	Liquid Limit (%)	Plastic Index (%)	Liquid Limit (%)	Type	Angle Internal friction (°)	Cohesion (kg/cm ²)																		
24 SEPTEMBER 1997															0																															
1															600																															
2															300					B																										
3															500					Ac																										
4															300																															
5															300					As																										
6																																														
7															000																															
8															200																															
9															300																															
10															200																															
11															000																															
12																																														
13															300																															
14															600																															
15															400																															

TABLE 2.1.1 (14/42) BORING LOG DB7 (2/2)

PT. Geo ACE Jln. Pajajaran no. 125 BANDUNG, INDONESIA			SOIL MECHANICS SURVEY FOR THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA											BORING LOG													
Bore Hole : DB-7 Sheet : 2 of 2			Ground Water Level (GWL) : meter						Date : 24-9-1997 to 26-9-1997																		
Location : URBAN DRAINAGE			Coordinate : x* y*						Drilled by : Asep I Sobandi																		
Boring Depth : 30.00 meter			Angle : Bearing :						Logged by : Rudy Muhandi																		
Elevation : +0.245 meter			Drilling Machine : YBM-3E						Supervisor :																		
CLASSIFICATION AND DESCRIPTION OF MATERIAL																											
1	2	3	4	5	6	7	8	9	12					13	14	15	17	18	19				20				
									Standard Penetration Test										Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (k/m ³)	Void Ratio, e	Atterberg Limits				Strength Test
Date	Scale	Elevation	Stratum Thickness	Depth(m)	Soil Profile	Classification	GWL	DESCRIPTION	N-Value Number of Blows per 30 Cm Penetration					● Plastic Limit (%) □ Plastic Index (%) ▲ Liquid Limit (%)				Type							Angle internal friction (°)	Cohesion (kg/cm ²)	
										0	10	20	30	40	50												
									4.55 - 30.00 m: SILTY CLAY, brown, high plasticity, very soft to firm, moist, containing some amount of mollusca shells; become firm to hard in 16.00 m depth.	15	15	15	15	15	15	Ac					0.35	2.80	1.13	U	1.108	0.925	
										16	16	16	16	16	16												
										17	17	17	17	17	17												
										18	18	18	18	18	18												
										19	19	19	19	19	19												
										20	20	20	20	20	20												
										21	21	21	21	21	21												
										22	22	22	22	22	22												
						CH				23	23	23	23	23	23												
										24	24	24	24	24	24												
							400			25	25	25	25	25	25												
										26	26	26	26	26	26												
										27	27	27	27	27	27												
										28	28	28	28	28	28												
										29	29	29	29	29	29												
										30	30	30	30	30	30												
										BOTTOM OF HOLE																	
																				LEGEND		CORING		SPT		UDS	

TABLE 2.1.1 (15/42) BORING LOG DB8 (1/2)

PT. Geo ACE Jln. Pejajaran no. 125 BANDUNG, INDONESIA			SOIL MECHANICS SURVEY FOR THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA										BORING LOG															
Bore Hole : OB - 8 Sheet 1 of 2			Ground Water Level (GWL) meter					Date : 28 - 9 - 1997 to 1 - 10 - 1997																				
Location : URBAN DRAINAGE			Coordinate x = y =					Dated by : Asep / Sobandi																				
Boring Depth : 30.00 meter			Angle Bearing :					Logged by : Rudy Mukanto																				
Elevation : ± 0.250 meter			Drilling Machine : YBM - 3E					Supervisor :																				
CLASSIFICATION AND DESCRIPTION OF MATERIAL																												
1	2	3	4	5	6	7	8	9	12					13	14	15	16	17	18	19				20				
									Standard Penetration Test											Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (γ _{mo})	Void Ratio, e	Atterberg Limits				Type	Angle internal friction (°)	Cohesion (kg/cm^{2})
Date	Scale	Elevation	Stratum Thickness	Depth (m)	Soil Profile	Classification	GWL	DESCRIPTION	N - Value Number of Blows per 30 Cm Penetration					● Plastic Limit (%) □ Plastic Index (%) ▲ Liquid Limit (%)														
									0	10	20	30	40	50						0	40	80	120	160				
28 SEPTEMBER 1997								0.00 - 30.00 m: SANDY-SILTY CLAY, brown to light brown, very soft to firm, moist; containing some amount of gravels, with diameter up to 1 cm, and containing some motusca shells in 9.15 m depth; become hard in 18.00 m depth.	0																			
									1																			
									2																			
									3																			
									4																			
									5																			
									6																			
									7																			
									8																			
									9																			
									10																			
									11																			
									12																			
									13																			
									14																			
									15																			

LEGEND: [Symbol] COMPACT [Symbol] SPT [Symbol] UGS

TABLE 2.1.1 (16/42) BORING LOG DB8 (2/2)

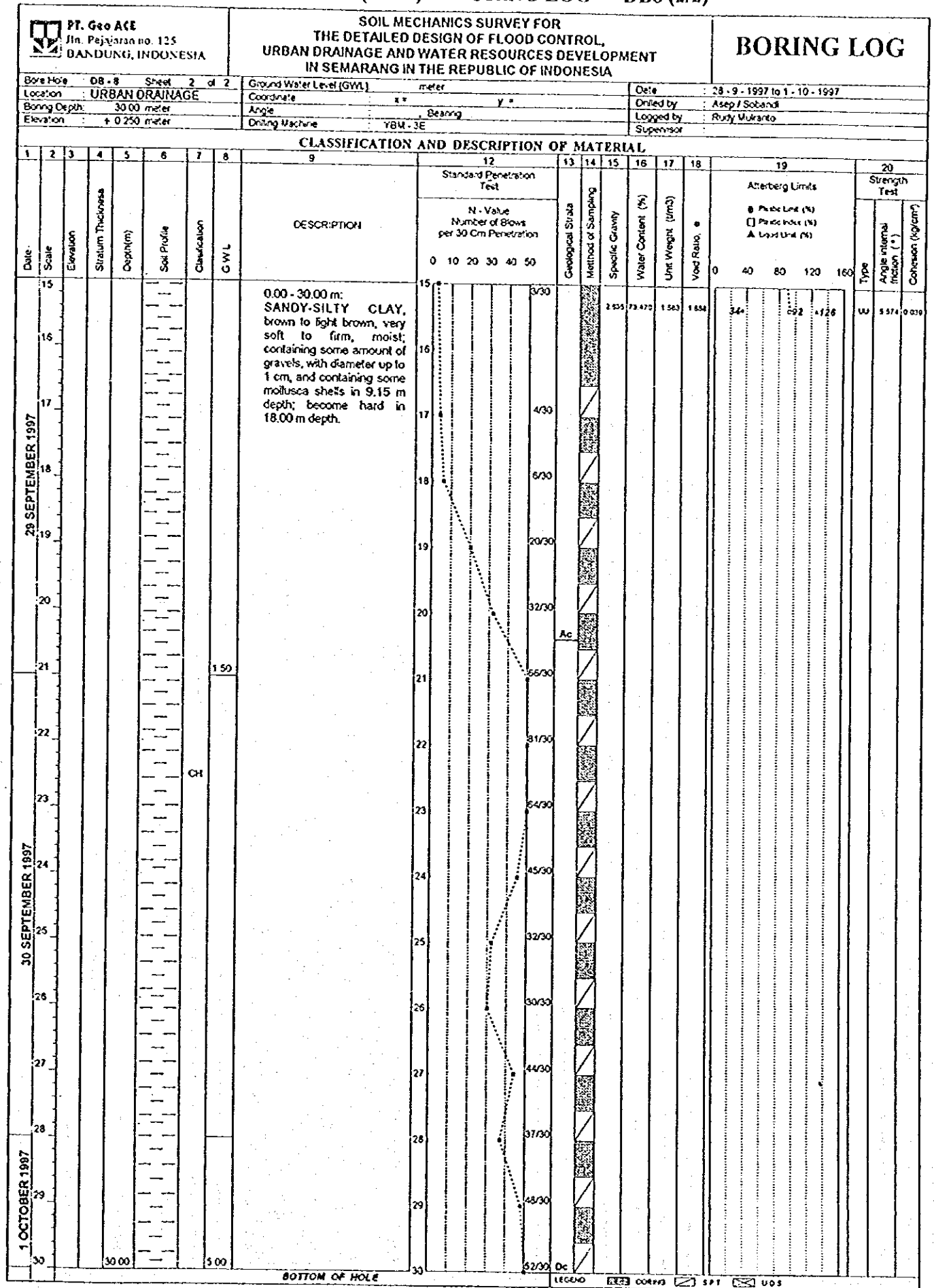


TABLE 2.1.1 (17/42) BORING LOG DB9 (1/2)

PT. Geo ACE Jln. Pajajaran no. 125 BANDUNG, INDONESIA		SOIL MECHANICS SURVEY FOR THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA										BORING LOG															
Bore Hole	DB-9	Sheet	1 of 2		Ground Water Level (GWL):					meter		Date			19-9-1997 to 22-9-1997												
Location	URBAN DRAINAGE				Coordinate					x =		y =		Drilled by			Asep / Sobandi										
Boring Depth	30.00 meter				Angle					Bearing		Logged by			Rudy Mulianto												
Elevation	- 1.350 meter				Drilling Machine					YBM-3E		Supervisor															
CLASSIFICATION AND DESCRIPTION OF MATERIAL																											
1	2	3	4	5	6	7	8	9			12					13			19			20					
Date	Scale	Elevation	Stratum Thickness	Depth (m)	Soil Profile	Classification	GWL	DESCRIPTION			Standard Penetration Test N-Value Number of Blows per 30 Cm Penetration					Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (T/m ³)	Void Ratio, e	Atterberg Limits ● Plastic Limit (%) □ Plastic Index (%) ▲ Liquid Limit (%)			Strength Test Type Angle internal friction (°) Cohesion (kg/cm ²)		
											0	10	20	30	40	50					0	40	60	120			
19 SEPTEMBER 1997						CH		0.00 - 2.15 m: SILTY CLAY, greyish brown to grey, high plasticity, soft, moist; some amount of gravels with diameter up to 4.00 cm.			0																
				2.15				2.15 - 2.70 m: RETAINING WALL.			3/30																
				2.70				2.70 - 24.10 m: CLAY, grey high plasticity, soft, moist; some amount of gravels with diameter up to 4.00 cm, and containing some mollusca shells.			3/30																
											0/30																
											0/30																
											0/30																
											0/30																
											1/30																
											3/30																
						CH					2.647	92.800	1.525	2.328													
											0/30																
											4/30																
											2.960	92.800	1.851	1.648													
											0/30																
											6/30																
											8/30																
											9/30																

LEGEND [Symbol] CORING [Symbol] SPT [Symbol] UDS

TABLE 2.1.1 (18/42) BORING LOG DB9 (2/2)

1		2		3		4		5		6		7		8		CLASSIFICATION AND DESCRIPTION OF MATERIAL																							
Date		Scale		Elevation		Stratum Thickness		Depth(m)		Soil Profile		Classification		GWL		9			12			13		14		15		16		17		18		19				20	
																DESCRIPTION			Standard Penetration Test			Geological Strata		Method of Sampling		Specific Gravity		Water Content (%)		Unit Weight (t/m ³)		Void Ratio, e		Atterberg Limits				Strength Test	
																			N-Value Number of Blows per 30 Cm Penetration											● Plastic Limit (%) □ Plastic Index (%) ▲ Liquid Limit (%)									
																	0 10 20 30 40 50													0 40 80 120									
20 SEPTEMBER 1997												CH				2.70 - 24.10 m: CLAY, grey, high plasticity, soft, moist; some amount of gravels with diameter up to 4.00 cm, and containing some mollusca shells.			15 16 17 18 19 20 21 22 23 24			Ac Ao				2.851 2.430		1.811 2.019				31.4 0.56 87							
21 SEPTEMBER 1997								24.10				SP				24.10 - 27.00 m: SILTY SAND, brown, fine to medium grained, poorly graded, dense, moist.			25 26			Dc Ds																	
22 SEPTEMBER 1997								27.00				CH				27.00 - 30.00 m: CLAY, dark grey, high plasticity, very stiff to hard.			27 28 29 30																				
BOTTOM OF HOLE																LEGEND CORANG SPT UDS																							

TABLE 2.1.1 (19/42) BORING LOG DB10 (1/2)


1		2		3		4		5		6		7		8		9												10				11				12			
Date		Scale		Elevation		Stratum Thickness		Depth(m)		Soil Profile		Classification		GWL		DESCRIPTION												Standard Penetration Test				Atterberg Limits				Strength Test			
																												N-Value Number of Blows per 30 Cm Penetration				Liquid Limit (%) Plastic Limit (%) Liquid Index (%)				Type Angle internal friction (°) Cohesion (kg/cm ²)			
																												0 10 20 30 40 50				0 40 80 120 160							
2 OCTOBER 1997																0.00 - 4.00 m: CLAYEY SAND, grey, fine to very fine grained, loose to moderately dense, poorly graded, wet.												14											
						4.00						SP																1/30											
																												5/30											
																												15/30				Ac							
																												4/30				As							
						5.00						SW				4.00 - 5.00 m: SAND, grey, medium to coarse grained, loose to very loose, well graded.												4/30											
																												4/30											
																												1/30											
																												2/30											
																												3/30											
																												5/30											
																												7/30											
																												8/30											
																												5/30											
																												7/30											
																												5/30											
																												10/30				Ac							
																												14/30											
3 OCTOBER 1997						12.55								3.65		12.55 - 20.00 m: SAND, grey, fine to medium grained, well graded, moderately dense to dense.												44/30											

LEGEND [Symbol] CORING [Symbol] SPT [Symbol] UDS

TABLE 2.1.1 (20/42) BORING LOG DB10 (2/2)

PT. Geo ACE Jl. Pajajaran no. 125 BANDUNG, INDONESIA			SOIL MECHANICS SURVEY FOR THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA										BORING LOG													
Bore Hole	DB-10	Sheet	2 of 2	Ground Water Level (GWL) : meter					Date					2-10-1997 to 3-10-1997												
Location			URBAN DRAINAGE			Coordinate					x *					y *										
Boring Depth			20.00 meter			Angle					Bearing					Drilled by			Uta Kocwara							
Elevation			+1.810 meter			Drilling Machine					YBM-3E					Logged by			Rudy Murtanto							
Elevation			+1.810 meter			Drilling Machine					YBM-3E					Supervisor										
CLASSIFICATION AND DESCRIPTION OF MATERIAL																										
1	2	3	4	5	6	7	8	9	12					13	14	15	16	17	18	19				20		
									Standard Penetration Test											Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (γ _{un})	Void Ratio, e	Atterberg Limits				Strength Test
Date	Scale	Elevation	Stratum Thickness	Depth (m)	Soil Profile	Classification	G.W.L.	DESCRIPTION	N - Value Number of Blows per 30 Cm Penetration					● Plastic Limit (%) □ Plastic Index (%) ▲ Liquid Limit (%)				Type	Angle internal friction (°)							Cohesion (kg/cm ²)
									0	10	20	30	40	50						0	40	80	120	160		
3 OCTOBER 1997								12.55 - 20.00 m: SAND, grey, fine to medium grained, well graded, moderately dense to dense.	15																	
									16																	
									17																	
									18																	
									19																	
									20																	
									21																	
									22																	
									23																	
									24																	
									25																	
									26																	
									27																	
									28																	
									29																	
									30																	

TABLE 2.1.1 (21/42) BORING LOG DB11

 PT. Geo ACE Jln. Pajajaran no. 125 BANDUNG, INDONESIA			SOIL MECHANICS SURVEY FOR THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA										BORING LOG															
Bore Hole	DB-11	Sheet 1 of 1	Ground Water Level (GWL)					meter		Date	6-10-1997																	
Location	URBAN DRAINAGE					Coordinate	x =	y =	Drilled by	Uus Koswara																		
Boring Depth	10.00 meter					Angle	Bearing		Logged by	Rudy Mulyanto																		
Elevation	+ 0.500 meter					Drilling Machine	YBU-3E		Supervisor																			
CLASSIFICATION AND DESCRIPTION OF MATERIAL																												
1	2	3	4	5	6	7	8	9	12			13	14	15	16	17	18	19				20						
									Standard Penetration Test									Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (γ _{sat})	Void Ratio, e	Atterberg Limits				Strength Test
Date	Scale	Elevation	Stratum Thickness	Depth(m)	Soil Profile	Classification	GWL	DESCRIPTION	N - Value Number of Blows per 30 Cm Penetration			Ac	B	As	At	A _c	U _c							W _L	W _p	PI	LI	Type	Angle internal friction (°)	Cohesion (kg/cm^{2})
									0	10	20							30	40	50	0	40	60					
6 OCTOBER 1997				0.20		SW		0.00 - 0.20 m: SAND, dark grey, with orange mottled, medium to coarse grained, well graded, loose.					rd															
	1			1.00		ML		0.20 - 1.00 m: SANDY SILT, black, very soft, low plasticity, moist.					B															
				1.60		GP			1.00 - 1.60 m: MASONRY.					Ac														
	2							1.60 - 6.10 m: CLAYEY SAND, yellowish grey to dark grey, medium to coarse grained, medium dense to loose, moderately to well graded.																				
						SW																						
	3																											
	4								Become very fine to fine grained, poorly graded (in 4.00 m depth).																			
	5																											
	5				6.10				6.10 - 10.00 m: SANDY CLAY, grey, high plasticity, soft to firm, moist.																			
6																												
7																												
8																												
9																												
10				10.00			3.97																					
								BOTTOM OF HOLE																				












LEGEND  rd  B  Ac  As  At  A_c  U_c  W_L  W_p  PI  LI

TABLE 2.1.1 (22/42) BORING LOG DB12

1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20	
Date		Scale		Elevation		Stratum Thickness		Depth (m)		Soil Profile		Classification		G.W.L.		DESCRIPTION		Standard Penetration Test		Geological Strata		Method of Sampling		Specific Gravity		Water Content (%)		Unit Weight (kN/m ³)		Void Ratio, e		Atterberg Limits		Strength Test					
9 OCTOBER 1997		1:1		0.90		0.90		0.90		SW		3.05		0.00 - 0.90 m: GRAVELY SAND, black, medium to coarse grained, well graded, loose. Gravels with diameter up to 3.00 cm.		50/15		Id																					
10 OCTOBER 1997		1:1		2.00		0.90 - 2.00		2.00		GP		3.05		0.90 - 2.00 m: GRAVEL (MASONRY).		50/5		B																					
9 OCTOBER 1997		1:1		5.45		2.00 - 5.45		5.45		SW		3.05		2.00 - 5.45 m: SAND, dark grey to grey, medium to very coarse grained, well graded, loose to loose; containing some mollusca shells.		8/30																							
10 OCTOBER 1997		1:1		6.10		5.45 - 6.10		6.10		SP		3.05		5.45 - 6.10 m: CLAYEY SAND, grey, fine to medium grained, poorly graded, very loose; occasionally mollusca shells.		3/30		As																					
10 OCTOBER 1997		1:1		10.00		6.10 - 10.00		10.00				3.05		6.10 - 10.00 m: SANDY CLAY, grey, high plasticity, very soft to moist, containing some amount of mollusca shells.		3/30		Ac																					
						BOTTOM OF HOLE						3.05																											

TABLE 2.1.1 (23/42) BORING LOG DB13 (1/2)

1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		
Date	Scale	Elevation	Stratum Thickness	Depth(m)	Soil Profile	Classification	CWL	DESCRIPTION	Standard Penetration Test N-Value Number of Blows per 30 Cm Penetration		Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (k/m ³)	Void Ratio, e	Atterberg Limits		Strength Test																					
									0 10 20 30 40 50								● Plastic Limit (%) □ Plastic Index (%) ▲ Liquid Limit (%)	Type	Angle internal friction (°)	Cohesion (kg/cm ²)																				
11 OCTOBER 1997	1							0.00 - 4.55 m: CLAYEY SAND, grey to dark grey, fine to medium grained, very loose to loose, poorly graded, occasionally mollusca shells in 3.55 m depth.																																
	2					SP					5/30	rd																												
	3										3/30																													
	4			4.55			1.65				9/30																													
	5									4.55 - 20.00 m: SANDY CLAY, grey, high plasticity, very soft to firm; containing some mollusca shells. Become very stiff in 14.00 meter depth.		6/30	As																											
12 OCTOBER 1997	6										3/30																													
	7										3/30																													
	8										3/30																													
	9					CH					2/30																													
	10										2/30																													
	11										2/30																													
	12										3/30																													
	13										3/30																													
	14										2/30																													
	15									19/30	Ac																													

LEGEND [Symbol] CORING [Symbol] SPT [Symbol] UDS

TABLE 2.1.1 (24/42) BORING LOG DB13 (2/2)

PT. Geo ACE Jln. Pajajaran no. 125 BANDUNG, INDONESIA			SOIL MECHANICS SURVEY FOR THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA										BORING LOG													
Bore Hole DB-13 Sheet 2 of 2		Ground Water Level (GWL) meter		Date		11-10-1997 to 13-10-1997		Location URBAN DRAINAGE		Coordinate x = y =		Directed by Uus Koswara														
Boring Depth 20.00 meter		Angle Bearing		Logged by Rudy Mulranta		Elevation +0.693 meter		Drilling Machine YBW-3E		Supervisor																
CLASSIFICATION AND DESCRIPTION OF MATERIAL																										
1	2	3	4	5	6	7	8	9	12 Standard Penetration Test					13	14	15	16	17	18	19 Atterberg Limits		20 Strength Test				
Date	Scale	Elevation	Stratum Thickness	Depth (m)	Soil Profile	Classification	GWL	DESCRIPTION	N-Value Number of Blows per 30 Cm Penetration					Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (kN/m ³)	Void Ratio, e	● Plastic Limit (%) □ Plastic Index (%) ▲ Liquid Limit (%)		Type	Angle internal friction (°)	Cohesion (kg/cm ²)		
									0	10	20	30	40	50					0	40	80	120	160			
12/10-97							3.85	4.55 - 20.00 m: SANDY CLAY, grey, high plasticity, very soft to firm, containing some mollusca shells. Become very stiff in 14.00 meter depth.	15					19/30												
									16					26/30												
13 OCTOBER 1997						CH			17					22/30												
									18					23/30												
									19					23/30												
				20.00			1.09		20					22/30	Dc											
										BOTTOM OF HOLE																
									21																	
									22																	
									23																	
								24																		
								25																		
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								27																		
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								30																		





LEGEND  CORING  SPT  UDS

TABLE 2.1.1 (25/42) BORING LOG DB14

 PT. Geo ACE Jln. Pajajaran no. 125 BANDUNG, INDONESIA			SOIL MECHANICS SURVEY FOR THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA											BORING LOG							
Bore Hole		DB-14		Sheet		1 of 1		Ground Water Level (GWL)			meter		Date		11-10-1997						
Location		URBAN DRAINAGE						Coordinate		x = y =		Drilled by		Asep / Sobandi							
Boring Depth		10.00 meter						Angle		Bearing		Logged by		Rudy Mukarto							
Elevation		+ 0.360 meter						Boring Machine		YBM-3ES		Supervisor									
CLASSIFICATION AND DESCRIPTION OF MATERIAL																					
1	2	3	4	5	6	7	8	9	12						19				20		
									DESCRIPTION						Standard Penetration Test N-Value Number of Blows per 30 Cm Penetration 0 10 20 30 40 50						Atterberg Limits ● Plastic Limit (%) □ Plastic Index (%) ▲ Liquid Limit (%)				Strength Test Type Angle internal friction (°) Cohesion (kg/cm^{2})
Date	Scale	Elevation	Stratum Thickness	Depth (m)	Soil Profile	Classification	G.W.L.							Geological Strata	Method of Sampling	Specific Gravity	Water Content (%)	Unit Weight (γ _m)	Void Ratio, e		
11 OCTOBER 1997				0.30	0	SW		0.00 - 0.30 m: GRAVELLY SAND , brownish grey, fine to coarse grained, loose, well graded. Gravel: reddish orange, diameter up to 2.00 cm (bricks).	0												
								0.30 - 5.10 m: CLAYEY SAND , brownish grey to grey, fine to medium grained, poorly graded, loose to moderately dense; occasionally mollusca shells.	1	6/30											
							SP			2	7/30	rd									
										3	14/30										
										4	23/30										
					5.10				5.10 - 10.00 m: SANDY CLAY , grey, high plasticity, soft, moist; containing some amount of mollusca shells.	5	4/30	As									
										6	4/30										
										7	3/30										
							CH			8	3/30										
										9	3/30										
					10.00					10	4/30	Ac									
									BOTTOM OF HOLE	11											
										12											
										13											
										14											
									15												

LEGEND: CORAG SPT UOS