Table BQ 1.1(1) : Greater Dhaka East :Base of BQ

Each Stage U = 80%

Station No.	Distance (m)	Accumulative Distance(m)	Ground Elevation(m)	Top of Embankment(m)	Embankment Height(m)	Design N	1st Stage(m)	2nd Stage(m)	3rd Stage(m)	Remarks
E - 0	0.0	0.0	5.46	8.60	3.14	7.50	3.14			
1	400.0	400.0	5.46	8.62	3.16	7.50	3.16			
2	400.0	800.0	3.96	8.63	4.67	4.50	4.67			
3	400.0	1,200.0	3.96	8.65	4.69	4.50	4.69			
4	400.0	1,600.0	4.36	8.67	4.31	4.50	4.31			
5	400.0	2,000.0	4.36	8.69	4.33	4.50	4.33			
6	400.0	2,400.0	4.06	8.70	4.64	4.50	4.64			DC-4
7	400.0	2,800.0	4.26	8.72	4.46	4.50	4.46			
8	400.0	3,200.0	3.46	8.74	5.28	2.00	3.67	1.61		
9	400.0	3,600.0	2.96	8.76	5.8	2.00	3.67	2.13		
10	400.0	4,000.0	3.46	8.77	5.31	2.00	3.67	1.64		
11	400.0	4,400.0	3.96	8.79	4.83	2.00	3.67	1.16		
11+150	150.0	4,550.0	3.94	8.80	4.86	2.00	3.67	1.19		
12	250.0	4,800.0	3.92	8.81	4.89	2.00	3.67	1.22		
13	520.0	5,320.0	2.72	8.83	6.11	2.00	3.67	2.44		
14	400.0	5,720.0	2.65	8.85	6.2	2.00	3.67	2.53		
15	400.0	6,120.0	2.55	8.87	6.32	2.00	3.67	2.65		DC-3
16	400.0	6,520.0	3.06	8.88	5.82	2.00	3.67	2.15		
17	400.0	6,920.0	3.11	8.90	5.79	2.00	3.67	2.12		
18	400.0	7,320.0	3.11	8.92	5.81	2.00	3.67	2.14		
18+200	200.0	7,520.0	3.41	8.93	5.53	2.00	3.67	1.86		
19	200.0	7,720.0	3.70	8.94	5.24	2.00	3.67	1.57		
20	400.0	8,120.0	3.02	8.95	5.93	2.00	3.67	2.26		
21	400.0	8,520.0	2.94	8.97	6.03	2.00	3.67	2.36		
22	400.0	8,920.0	2.58	8.99	6.41	2.00	3.67	2.74		
23	400.0	9,320.0	2.48	9.01	6.53	2.00	3.67	2.86		
24	400.0	9,720.0	2.77	9.02	6.25	2.00	3.67	2.58		
25	400.0	10,120.0	2.68	9.04	6.36	2.00	3.67	2.69		
26	400.0	10,520.0	4.88	9.06	4.18	2.00	3.67	0.51		DC-2
27	400.0	10,920.0	5.00	9.08	4.08	2.00	3.67	0.41		
28	400.0	11,320.0	4.93	9.09	4.16	2.00	3.67	0.49		
29	400.0	11,720.0	4.93	9.11	4.18	2.00	3.67	0.51		
30	400.0	12,120.0	1.72	9.13	7.41	2.00	3.67	2.88	3.46	
31	400.0	12,520.0	1.73	9.15	7.42	2.00	3.67	2.88	3.48	
32	400.0	12,920.0	2.04	9.16	7.12	2.00	3.67	2.88	3.49	
33	400.0	13,320.0	4.37	9.18	4.81	2.00	3.67	1.14		
33+200	200.0	13,520.0	5.50	9.19	3.69	3.25	3.12			
34	200.0	13,720.0	6.63	9.20	2.57	4.50	2.57			
35	400.0	14,120.0	7.01	9.22	2.21	4.50	2.21			
36	400.0	14,520.0	4.38	9.23	4.85	4.50	4.85			
37	400.0	14,920.0	1.61	9.25	7.64	4.50	7.64			
38	400.0	15,320.0	2.78	9.27	6.49	4.50	6.49			
39	250.0	15,570.0	6.76	9.28	2.52	4.50	2.52			
40	400.0	15,970.0	6.96	9.30	2.34	4.50	2.34			
41	400.0	16,370.0	4.66	9.31	4.65	4.50	4.65			
42	400.0	16,770.0	5.46	9.33	3.87	4.50	3.87			
43	400.0	17,170.0	2.76	9.35	6.59	2.00	3.67	2.88	3.68	
44	400.0	17,570.0	1.96	9.37	7.41	2.00	3.67	2.88	3.70	
45	400.0	17,970.0	0.86	9.38	8.52	2.00	3.67	2.88	3.71	DC-1
46	400.0	18,370.0	1.06	9.40	8.34	2.00	3.67	2.88	3.73	
47	400.0	18,770.0	1.66	9.42	7.76	2.00	3.67	2.88	3.75	
48	400.0	19,170.0	1.76	9.44	7.68	2.00	3.67	2.88	3.77	
49	400.0	19,570.0	1.46	9.45	7.99	2.00	3.67	2.88	3.78	
50	500.0	20,070.0	2.16	9.48	7.32	2.00	3.67	2.88	3.81	
51	500.0	20,570.0	4.46	9.50	5.04	2.00	3.67	1.37		
52	370.0	20,940.0	3.09	9.51	6.42	2.00	3.67	2.75		
53	400.0	21,340.0	4.59	9.53	4.94	2.00	3.67	1.27		
54	400.0	21,740.0	5.06	9.55	4.49	2.00	3.67	0.82		
55	420.0	22,160.0	2.53	9.57	7.04	2.00	3.67	2.88	3.90	
56	160.0	22,320.0	2.08	9.57	7.49	2.00	3.67	2.88	3.90	
57	400.0	22,720.0	2.39	9.59	7.2	2.00	3.67	2.88	3.92	
58	400.0	23,120.0	2.37	9.61	7.24	2.00	3.67	2.88	3.94	
59	400.0	23,520.0	2.78	9.63	6.85	2.00	3.67	2.88	3.96	
60	400.0	23,920.0	7.26	9.64	2.38	7.50	2.38			
61	400.0	24,320.0	2.38	9.66	7.28	2.00	3.67	2.88	3.99	
62	400.0	24,720.0	4.73	9.68	4.95	2.00	3.67	1.28		
63	400.0	25,120.0	2.50	9.70	7.2	2.00	3.67	2.88	4.03	
64	400.0	25,520.0	2.95	9.71	6.76	2.00	3.67	2.88	4.04	
65	400.0	25,920.0	7.29	9.73	2.44	2.00				
66	400.0	26,320.0	7.55	9.75	2.2	4.50				
67	400.0	26,720.0	6.89	9.77	2.88	4.50				
68	400.0	27,120.0	7.01	9.78	2.77	4.50				
69	400.0	27,520.0	9.80	9.80	0	4.50				
				AVE	5.65	m		18870.0	7520.00	
				MAX	8.52	m		68.6%	27.3%	
				MIN	2.2	m				

Table BQ 1.1(2): Greater Dhaka East - Base of BQ of Embankment

Station	Distance	Accumulative Distance	Ground Elevation (pwd)	Top of Embankment (pwd)	Embankment Height (m)	Area (m2)	B. Width (m)	Slope.L.(R) (m)	Slope.L(C) (m)	Remarks
E - 0	0.0	0.0	5.46	8.60	3.14	45.3	27.8	9.9	14.9	
1	400.0	400.0	5.46	8.62	3.16	45.8	27.9	10.0	15.0	
2	400.0	800.0	3.96	8.63	4.67	97.2	40.0	17.8	19.8	
3	400.0	1,200.0	3.96	8.65	4.69	97.9	40.2	17.8	19.8	
4	400.0	1,600.0	4.36	8.67	4.31	82.9	37.9	16.6	18.6	
5	400.0	2,000.0	4.36	8.69	4.33	79.8	37.4	16.4	18.4	
6	400.0	2,400.0	4.06	8.70	4.64	96.0	39.9	17.7	19.7	DC-4
7	400.0	2,800.0	4.26	8.72	4.46	88.8	38.8	17.1	19.1	
8	400.0	3,200.0	3.46	8.74	5.28	123.3	48.7	19.7	24.7	
9	400.0	3,600.0	2.96	8.76	5.8	148.3	51.8	21.3	26.3	
10	400.0	4,000.0	3.46	8.77	5.31	124.9	48.9	19.8	24.8	
11	400.0	4,400.0	3.96	8.79	4.83	103.5	41.0	18.3	20.3	
11+150	150.0	4,550.0	3.96	8.80	4.84	104.7	41.2	18.4	20.4	
12	250.0	4,800.0	3.92	8.81	4.89	105.9	41.3	18.5	20.5	
13	520.0	5,320.0	2.72	8.83	6.11	164.3	53.7	22.3	27.3	
14	400.0	5,720.0	2.65	8.85	6.2	168.8	54.2	22.6	27.6	
15	400.0	6,120.0	2.55	8.87	6.32	175.0	54.9	23.0	28.0	DC-3
16	400.0	6,520.0	3.06	8.88	5.82	149.6	51.9	21.4	26.4	
17	400.0	6,920.0	3.11	8.90	5.79	148.0	51.8	21.3	26.3	
18	400.0	7,320.0	3.11	8.92	5.81	148.9	51.9	21.4	26.4	
18+200	200.0	7,520.0	3.11	8.93	5.82	135.1	50.2	20.5	25.5	
19	200.0	7,720.0	3.70	8.94	5.24	121.3	48.4	19.6	24.6	
20	400.0	8,120.0	3.02	8.95	5.93	155.2	52.6	21.8	26.8	
21	400.0	8,520.0	2.94	8.97	6.03	160.1	53.2	22.1	27.1	
22	400.0	8,920.0	2.58	8.99	6.41	179.9	55.5	23.3	28.3	
23	400.0	9,320.0	2.48	9.01	6.53	186.2	56.2	23.6	28.6	
24	400.0	9,720.0	2.77	9.02	6.25	171.6	54.5	22.8	27.8	
25	400.0	10,120.0	2.68	9.04	6.36	177.3	55.2	23.1	28.1	
26	400.0	10,520.0	4.88	9.06	4.18	78.0	37.1	16.2	18.2	DC-2
27	400.0	10,920.0	5.00	9.08	4.08	74.3	36.5	15.9	17.9	
28	400.0	11,320.0	4.93	9.09	4.16	77.5	37.0	16.2	18.2	
29	400.0	11,720.0	4.93	9.11	4.18	78.1	37.1	16.2	18.2	
30	400.0	12,120.0	1.72	9.13	7.41	236.3	61.5	26.4	31.4	
31	400.0	12,520.0	1.73	9.15	7.42	236.7	61.5	26.4	31.4	
32	400.0	12,920.0	2.04	9.16	7.12	219.6	59.7	25.5	30.5	
33	400.0	13,320.0	4.37	9.18	4.81	102.7	40.9	18.2	20.2	
33+200	200.0	13,520.0	5.50	9.19	3.69	66.6	32.7	13.2	16.7	
34	200.0	13,720.0	6.63	9.20	2.57	30.4	24.4	8.1	13.1	
35	400.0	14,120.0	7.01	9.22	2.21	23.4	17.2	7.0	7.0	
36	400.0	14,520.0	4.38	9.23	4.85	104.4	41.1	18.3	20.3	
37	400.0	14,920.0	1.61	9.25	7.64	250.2	62.8	27.2	32.2	
38	400.0	15,320.0	2.78	9.27	6.49	184.1	55.9	23.5	28.5	
39	250.0	15,570.0	6.76	9.28	2.52	29.2	24.1	8.0	13.0	
40	400.0	15,970.0	6.96	9.30	2.34	25.7	18.0	7.4	7.4	
41	400.0	16,370.0	4.66	9.31	4.65	96.3	39.9	17.7	19.7	
42	400.0	16,770.0	5.46	9.33	3.87	67.3	32.2	12.2	17.2	
43	400.0	17,170.0	2.76	9.35	6.59	189.6	56.5	23.8	28.8	
44	400.0	17,570.0	1.96	9.37	7.41	236.2	61.4	26.4	31.4	
45	400.0	17,970.0	0.86	9.38	8.52	306.3	68.1	30.0	35.0	DC-1
46	400.0	18,370.0	1.06	9.40	8.34	294.3	67.0	29.4	34.4	
47	400.0	18,770.0	1.66	9.42	7.76	257.5	63.6	27.5	32.5	
48	400.0	19,170.0	1.76	9.44	7.68	252.4	63.1	27.3	32.3	
49	400.0	19,570.0	1.46	9.45	7.99	272.1	65.0	28.3	33.3	
50	500.0	20,070.0	2.16	9.48	7.32	230.8	60.9	26.1	31.1	
51	500.0	20,570.0	4.46	9.50	5.04	112.2	47.2	18.9	23.9	
52	370.0	20,940.0	3.09	9.51	6.42	180.6	55.5	23.3	28.3	
53	400.0	21,340.0	4.59	9.53	4.94	108.0	41.6	18.6	20.6	
54	400.0	21,740.0	5.06	9.55	4.49	89.8	38.9	17.2	19.2	
55	420.0	22,160.0	2.53	9.57	7.04	214.6	59.2	25.2	30.2	
56	160.0	22,320.0	2.08	9.57	7.49	241.4	62.0	26.7	31.7	
57	400.0	22,720.0	2.39	9.59	7.2	224.1	60.2	25.8	30.8	
58	400.0	23,120.0	2.37	9.61	7.24	226.3	60.4	25.9	30.9	
59	400.0	23,520.0	2.78	9.63	6.85	203.8	58.1	24.6	29.6	
60	400.0	23,920.0	7.26	9.64	2.38	26.6	18.3	7.5	7.5	
61	400.0	24,320.0	2.38	9.66	7.28	228.7	60.7	26.0	31.0	
62	400.0	24,720.0	4.73	9.68	4.95	108.3	41.7	18.6	20.6	
63	400.0	25,120.0	2.50	9.70	7.2	223.8	60.2	25.8	30.8	
64	400.0	25,520.0	2.95	9.71	6.76	199.2	57.6	24.4	29.4	
65	400.0	25,920.0	7.29	9.73	2.44	27.6	18.6	7.7	7.7	
66	400.0	26,320.0	7.55	9.75	2.2	23.3	17.2	6.9	6.9	
67	400.0	26,720.0	6.89	9.77	2.88	38.2	26.3	9.1	14.1	
68	400.0	27,120.0	7.01	9.78	2.77	35.5	25.6	8.8	13.8	
69	400.0	27,520.0	9.80	9.80	0	0.0	4.0	0.0	0.0	
				AVE	5.66					
				MAX	8.52					
				MIN	2.2					

Table BQ 1.2(1): Greater Dhaka East - Bill of quantity of Embankment (Emb.V & Land)

Station No	Distance (m)	Accumulative Distance (m)	Ground Elevation (pwd)	Top of Embankment (pwd)	Embankment Height (m)	Area (m2)	Emb. Volume (m3)	Accum. Volume (m3)	B. Width (m) B+30m	Land Area (m2) L*(B+30)	Accum. Area (m2)	Remarks BQ BY Blocks
E - 0	0.0	0.0	5.46	8.60	3.14	45.3			57.8			
1	400.0	400.0	5.46	8.62	3.16	45.8	18220.0	18220	57.9	23140.0	23140.0	
2	400.0	800.0	3.96	8.63	4.67	97.2	28600.0	46820	70.0	25580.0	48720.0	
3	400.0	1,200.0	3.96	8.65	4.69	97.9	39020.0	85840	70.2	28040.0	76760.0	
4	400.0	1,600.0	4.36	8.67	4.31	82.9	36160.0	122000	67.9	27620.0	104380.0	
5	400.0	2,000.0	4.36	8.69	4.33	79.8	32540.0	154540	67.4	27060.0	131440.0	DC-4
6	400.0	2,400.0	4.06	8.70	4.64	96.0	35160.0	189700	69.9	27460.0	158900.0	L=4.55 km
7	400.0	2,800.0	4.26	8.72	4.46	88.8	36960.0	226660	68.8	27740.0	186640.0	V= 400032
8	400.0	3,200.0	3.46	8.74	5.28	123.3	42420.0	269080	78.7	29500.0	216140.0	A= 323271
9	400.0	3,600.0	2.96	8.76	5.8	148.3	54320.0	323400	81.8	32100.0	248240.0	
10	400.0	4,000.0	3.46	8.77	5.31	124.9	54640.0	378040	78.9	32140.0	280380.0	
11	400.0	4,400.0	3.96	8.79	4.83	103.5	45680.0	423720	71.0	29980.0	310360.0	
11+150	150.0	4,550.0	3.96	8.80	4.84	104.7	15615.0	439335	101.2	12911.3	323271.3	
12	250.0	4,800.0	3.92	8.81	4.89	105.9	26325.0	465660	71.3	21556.3	344827.5	
13	520.0	5,320.0	2.72	8.83	6.11	164.3	70252.0	535912	83.7	40300.0	385127.5	DC-3
14	400.0	5,720.0	2.65	8.85	6.2	168.8	66620.0	602532	84.2	33580.0	418707.5	L=2.97 km
15	400.0	6,120.0	2.55	8.87	6.32	175.0	68760.0	671292	84.9	33820.0	452527.5	V= 371481
16	400.0	6,520.0	3.06	8.88	5.82	149.6	64920.0	736212	81.9	33360.0	485887.5	A= 247301
17	400.0	6,920.0	3.11	8.90	5.79	148.0	59520.0	795732	81.8	32740.0	518627.5	
18	400.0	7,320.0	3.11	8.92	5.81	148.9	59380.0	855112	81.9	32740.0	551367.5	
18+200	200.0	7,520.0	3.11	8.93	5.82	135.1	28400.0	883512	110.2	19205.0	570572.5	
19	200.0	7,720.0	3.70	8.94	5.24	121.3	25640.0	909152	78.4	18855.0	589427.5	
20	400.0	8,120.0	3.02	8.95	5.93	155.2	55300.0	964452	82.6	32200.0	621627.5	
21	400.0	8,520.0	2.94	8.97	6.03	160.1	63060.0	1027512	83.2	33160.0	654787.5	
22	400.0	8,920.0	2.58	8.99	6.41	179.9	68000.0	1095512	85.5	33740.0	688527.5	
23	400.0	9,320.0	2.48	9.01	6.53	186.2	73220.0	1168732	86.2	34340.0	722867.5	
24	400.0	9,720.0	2.77	9.02	6.25	171.6	71560.0	1240292	84.5	34140.0	757007.5	
25	400.0	10,120.0	2.68	9.04	6.36	177.3	69780.0	1310072	85.2	33940.0	790947.5	DC-2
26	400.0	10,520.0	4.88	9.06	4.18	78.0	51060.0	1361132	67.1	30460.0	821407.5	L=6.00km
27	400.0	10,920.0	5.00	9.08	4.08	74.3	30460.0	1391592	66.5	26720.0	848127.5	V= 760123
28	400.0	11,320.0	4.93	9.09	4.16	77.5	30360.0	1421952	67.0	26700.0	874827.5	A= 484110
29	400.0	11,720.0	4.93	9.11	4.18	78.1	31120.0	1453072	67.1	26820.0	901647.5	
30	400.0	12,120.0	1.72	9.13	7.41	236.3	62880.0	1515952	91.5	31720.0	933367.5	
31	400.0	12,520.0	1.73	9.15	7.42	236.7	94600.0	1610552	91.5	36600.0	969967.5	
32	400.0	12,920.0	2.04	9.16	7.12	219.6	91260.0	1701812	89.7	36240.0	1006207.5	
33	400.0	13,320.0	4.37	9.18	4.81	102.7	64460.0	1766272	70.9	32120.0	1038327.5	
33+200	200.0	13,520.0	5.50	9.19	3.69	66.6	16925.0	1783197	92.7	16355.0	1054682.5	
34	200.0	13,720.0	6.63	9.20	2.57	30.4	9695.0	1792892	54.4	14705.0	1069387.5	
35	400.0	14,120.0	7.01	9.22	2.21	23.4	10760.0	1803652	47.2	20320.0	1089707.5	
36	400.0	14,520.0	4.38	9.23	4.85	104.4	25560.0	1829212	71.1	23660.0	1113367.5	
37	400.0	14,920.0	1.61	9.25	7.64	250.2	70920.0	1900132	92.8	32780.0	1146147.5	
38	400.0	15,320.0	2.78	9.27	6.49	184.1	86860.0	1986992	85.9	35740.0	1181887.5	
39	250.0	15,570.0	6.76	9.28	2.52	29.2	26662.5	2013655	54.1	17500.0	1199387.5	
40	400.0	15,970.0	6.96	9.30	2.34	25.7	10980.0	2024635	48.0	20420.0	1219807.5	
41	400.0	16,370.0	4.66	9.31	4.65	96.3	24400.0	2049035	69.9	23580.0	1243387.5	
42	400.0	16,770.0	5.46	9.33	3.87	67.3	32720.0	2081755	62.2	26420.0	1269807.5	
43	400.0	17,170.0	2.76	9.35	6.59	189.6	51380.0	2133135	86.5	29740.0	1299547.5	
44	400.0	17,570.0	1.96	9.37	7.41	236.2	85160.0	2218295	91.4	35580.0	1335127.5	
45	400.0	17,970.0	0.86	9.38	8.52	306.3	108500.0	2326795	98.1	37900.0	1373027.5	DC-1
46	400.0	18,370.0	1.06	9.40	8.34	294.3	120120.0	2446915	97.0	39020.0	1412047.5	L=14.00 km
47	400.0	18,770.0	1.66	9.42	7.76	257.5	110360.0	2557275	93.6	38120.0	1450167.5	V= 1898550
48	400.0	19,170.0	1.76	9.44	7.68	252.4	101980.0	2659255	93.1	37340.0	1487507.5	A= 1067422
49	400.0	19,570.0	1.46	9.45	7.99	272.1	104900.0	2764155	95.0	37620.0	1525127.5	
50	500.0	20,070.0	2.16	9.48	7.32	230.8	125725.0	2889880	90.9	46475.0	1571602.5	
51	500.0	20,570.0	4.46	9.50	5.04	112.2	85750.0	2975630	77.2	42025.0	1613627.5	
52	370.0	20,940.0	3.09	9.51	6.42	180.6	54168.0	3029798	85.5	30099.5	1643727.0	
53	400.0	21,340.0	4.59	9.53	4.94	108.0	57720.0	3087518	71.6	31420.0	1675147.0	
54	400.0	21,740.0	5.06	9.55	4.49	89.8	39560.0	3127078	68.9	28100.0	1703247.0	
55	420.0	22,160.0	2.53	9.57	7.04	214.6	63924.0	3191002	89.2	33201.0	1736448.0	
56	160.0	22,320.0	2.08	9.57	7.49	241.4	36480.0	3227482	92.0	14496.0	1750944.0	
57	400.0	22,720.0	2.39	9.59	7.2	224.1	93100.0	3320582	90.2	36440.0	1787384.0	
58	400.0	23,120.0	2.37	9.61	7.24	226.3	90080.0	3410662	90.4	36120.0	1823504.0	
59	400.0	23,520.0	2.78	9.63	6.85	203.8	86020.0	3496682	88.1	35700.0	1859204.0	
60	400.0	23,920.0	7.26	9.64	2.38	26.6	46080.0	3542762	48.3	27280.0	1886484.0	
61	400.0	24,320.0	2.38	9.66	7.28	228.7	51060.0	3593822	90.7	27800.0	1914284.0	
62	400.0	24,720.0	4.73	9.68	4.95	108.3	67400.0	3661222	71.7	32480.0	1946764.0	
63	400.0	25,120.0	2.50	9.70	7.2	223.8	66420.0	3727642	90.2	32380.0	1979144.0	
64	400.0	25,520.0	2.95	9.71	6.76	199.2	84600.0	3812242	87.6	35560.0	2014704.0	
65	400.0	25,920.0	7.29	9.73	2.44	27.6	45360.0	3857602	48.6	27240.0	2041944.0	
66	400.0	26,320.0	7.55	9.75	2.2	23.3	10180.0	3867782	47.2	19160.0	2061104.0	
67	400.0	26,720.0	6.89	9.77	2.88	38.2	12300.0	3880082	56.3	20700.0	2081804.0	
68	400.0	27,120.0	7.01	9.78	2.77	35.5	14740.0	3894822	55.6	22380.0	2104184.0	
69	400.0	27,520.0	9.80	9.80	0	0.0	7100.0	3901922	34.0	17920.0	2122104.0	
				AVE	5.66		Total	3901922		Total=	2122104.0	V= 3430186
				MAX	8.52				30.0			A= 2122104
				MIN	2.2							

Note:
1) V=Accum.Volume-Foundation .T Areax0.6mx0.8

Table BQ 1.2(2): Greater Dhaka East - Bill of quantity of Embankment (Foundation Treatmei

Station No	Distance (m)	Accumulative Distance (m)	Ground Elevation (pwd)	Top of Embankment (pwd)	Embankment Height (m)	Found. Treat. *	B. Width (m)	Foundation Treat.Area (m2)	Accum. F.T.Area (m2)	Accum. F.T.Area (m2)	Remarks (Enb.Km) (F.T.Km)
E - 0	0.0	0.0	5.46	8.60	3.14		27.8				
1	400.0	400.0	5.46	8.62	3.16		27.9		0		
2	400.0	800.0	3.96	8.63	4.67		40.0		0		
3	400.0	1,200.0	3.96	8.65	4.69		40.2		0		
4	400.0	1,600.0	4.36	8.67	4.31		37.9		0		DC-4
5	400.0	2,000.0	4.36	8.69	4.33		37.4		0		(L=4.55 km)
6	400.0	2,400.0	4.06	8.70	4.64		39.9		0		L=1.75 km
7	400.0	2,800.0	4.26	8.72	4.46		38.8		0		81881
8	400.0	3,200.0	3.46	8.74	5.28	*	48.7	17500	17500		
9	400.0	3,600.0	2.96	8.76	5.8	*	51.8	20100	37600		
10	400.0	4,000.0	3.46	8.77	5.31	*	48.9	20140	57740		
11	400.0	4,400.0	3.96	8.79	4.83	*	41.0	17980	75720		
11+150	150.0	4,550.0	3.96	8.80	4.84	*	41.2	6161	81881	81881	
12	250.0	4,800.0	3.92	8.81	4.89	*	41.3	10306	92188		
13	520.0	5,320.0	2.72	8.83	6.11	*	53.7	24700	116888		DC-3
14	400.0	5,720.0	2.65	8.85	6.2	*	54.2	21580	138468		(L=2.97 km)
15	400.0	6,120.0	2.55	8.87	6.32	*	54.9	21820	160288		L=2.97 km
16	400.0	6,520.0	3.06	8.88	5.82	*	51.9	21360	181648		151451
17	400.0	6,920.0	3.11	8.90	5.79	*	51.8	20740	202388		
18	400.0	7,320.0	3.11	8.92	5.81	*	51.9	20740	223128		
18+200	200.0	7,520.0	3.11	8.93	5.82	*	50.2	10205	233333	233333	
19	200.0	7,720.0	3.70	8.94	5.24	*	48.4	9855	243188		
20	400.0	8,120.0	3.02	8.95	5.93	*	52.6	20200	263388		
21	400.0	8,520.0	2.94	8.97	6.03	*	53.2	21160	284548		
22	400.0	8,920.0	2.58	8.99	6.41	*	55.5	21740	306288		DC_2
23	400.0	9,320.0	2.48	9.01	6.53	*	56.2	22340	328628		(L=6.00km)
24	400.0	9,720.0	2.77	9.02	6.25	*	54.5	22140	350768		L=5.80km
25	400.0	10,120.0	2.68	9.04	6.36	*	55.2	21940	372708		290755
26	400.0	10,520.0	4.88	9.06	4.18	*	37.1	18460	391168		
27	400.0	10,920.0	5.00	9.08	4.08	*	36.5	14720	405888		
28	400.0	11,320.0	4.93	9.09	4.16	*	37.0	14700	420588		
29	400.0	11,720.0	4.93	9.11	4.18	*	37.1	14820	435408		
30	400.0	12,120.0	1.72	9.13	7.41	*	61.5	19720	455128		
31	400.0	12,520.0	1.73	9.15	7.42	*	61.5	24600	479728		
32	400.0	12,920.0	2.04	9.16	7.12	*	59.7	24240	503968		
33	400.0	13,320.0	4.37	9.18	4.81	*	40.9	20120	524088		
33+200	200.0	13,520.0	5.50	9.19	3.69		32.7		524088	524088	
34	200.0	13,720.0	6.63	9.20	2.57		24.4		524088		
35	400.0	14,120.0	7.01	9.22	2.21		17.2		524088		
36	400.0	14,520.0	4.38	9.23	4.85		41.1		524088		
37	400.0	14,920.0	1.61	9.25	7.64		62.8		524088		
38	400.0	15,320.0	2.78	9.27	6.49		55.9		524088		
39	250.0	15,570.0	6.76	9.28	2.52		24.1		524088		
40	400.0	15,970.0	6.96	9.30	2.34		18.0		524088		
41	400.0	16,370.0	4.66	9.31	4.65		39.9		524088		
42	400.0	16,770.0	5.46	9.33	3.87		32.2		524088		DC-1
43	400.0	17,170.0	2.76	9.35	6.59	*	56.5	17740	541828		(L=14.0 km)
44	400.0	17,570.0	1.96	9.37	7.41	*	61.4	23580	565408		L=8.35 km
45	400.0	17,970.0	0.86	9.38	8.52	*	68.1	25900	591308		458697
46	400.0	18,370.0	1.06	9.40	8.34	*	67.0	27020	618328		
47	400.0	18,770.0	1.66	9.42	7.76	*	63.6	26120	644448		
48	400.0	19,170.0	1.76	9.44	7.68	*	63.1	25340	669788		
49	400.0	19,570.0	1.46	9.45	7.99	*	65.0	25620	695408		
50	500.0	20,070.0	2.16	9.48	7.32	*	60.9	31475	726883		
51	500.0	20,570.0	4.46	9.50	5.04	*	47.2	27025	753908		
52	370.0	20,940.0	3.09	9.51	6.42	*	55.5	19000	772907		
53	400.0	21,340.0	4.59	9.53	4.94	*	41.6	19420	792327		
54	400.0	21,740.0	5.06	9.55	4.49	*	38.9	16100	808427		
55	420.0	22,160.0	2.53	9.57	7.04	*	59.2	20601	829028		
56	160.0	22,320.0	2.08	9.57	7.49	*	62.0	9696	838724		
57	400.0	22,720.0	2.39	9.59	7.2	*	60.2	24440	863164		
58	400.0	23,120.0	2.37	9.61	7.24	*	60.4	24120	887284		
59	400.0	23,520.0	2.78	9.63	6.85		58.1		887284		
60	400.0	23,920.0	7.26	9.64	2.38	*	18.3	15280	902564		
61	400.0	24,320.0	2.38	9.66	7.28	*	60.7	15800	918364		
62	400.0	24,720.0	4.73	9.68	4.95	*	41.7	20480	938844		
63	400.0	25,120.0	2.50	9.70	7.2	*	60.2	20380	959224		
64	400.0	25,520.0	2.95	9.71	6.76	*	57.6	23560	982784		
65	400.0	25,920.0	7.29	9.73	2.44		18.6		982784		
66	400.0	26,320.0	7.55	9.75	2.2		17.2		982784		
67	400.0	26,720.0	6.89	9.77	2.88		26.3		982784		
68	400.0	27,120.0	7.01	9.78	2.77		25.6		982784		
69	400.0	27,520.0	9.80	9.80	0		4.0		982784	982784	982784
				AVE	5.66			TOtal=	982784	Total=	982784
				MAX	8.52		30.0				
				MIN	2.2						

Table BQ 1.2(3): Greater Dhaka East - Bill of quantity of Embankment (Sodding &Brick Soling)

Station	Distance	Accumulative Distance	Ground Elevation (pwd)	Top of Emb. (pwd)	Emb. Height (m)	Slope (R) & Berm (m2)		Sodding (m2)	Accum. Sodding (m2)	Revetment (m2)	Accum. Revetment (m2)	Slope (C) (m)	Sodding (m2)	Accum. Sodding (m2)	Brick Soling O/M Berm:5m (m2)	Remarks
E - 0	0.0	0.0	5.46	8.60	3.14	9.9						4.9				
1	400.0	400.0	5.46	8.62	3.16	10.0		3980.0	3980.0			5.0	1980	1980	2000	
2	400.0	800.0	3.96	8.63	4.67	17.8		5560.0	9540.0			9.8	2960	4940	4000	
3	400.0	1,200.0	3.96	8.65	4.69	17.8		7120.0	16660.0			9.8	3920	8860	6000	
4	400.0	1,600.0	4.36	8.67	4.31	16.6		6880.0	23540.0			8.6	3680	12540	8000	
5	400.0	2,000.0	4.36	8.69	4.33	16.4		6600.0	30140.0			8.4	3400	15940	10000	
6	400.0	2,400.0	4.06	8.70	4.64	17.7		6820.0	36960.0			9.7	3620	19560	12000	
7	400.0	2,800.0	4.26	8.72	4.46	17.1		6960.0	43920.0			9.1	3760	23320	14000	DC-4
8	400.0	3,200.0	3.46	8.74	5.28	19.7	2	7360.0	51280.0			19.7	5760	29080	16000	
9	400.0	3,600.0	2.96	8.76	5.8	21.3	2	8200.0	59480.0			21.3	8200	37280	18000	
10	400.0	4,000.0	3.46	8.77	5.31	19.8	2	8220.0	67700.0			19.8	8220	45500	20000	
11	400.0	4,400.0	3.96	8.79	4.83	18.3		7620.0	75320.0			15.3	7020	52520	22000	
11+150	150.0	4,550.0	3.96	8.80	4.84	18.4		2752.5	78072.5			10.4	1927.5	54448	22750	
12	250.0	4,800.0	3.92	8.81	4.89	18.5		4612.5	82685.0			15.5	3237.5	57685	24000	
13	520.0	5,320.0	2.72	8.83	6.11	22.3	2	10608.0	93293.0			22.3	9828	67513	26600	
14	400.0	5,720.0	2.65	8.85	6.2	22.6	2	8980.0	102273.0			22.6	8980	76493	28600	
15	400.0	6,120.0	2.55	8.87	6.32	23.0	2*			9120.0	9120.0	23.0	9120	85613	30600	DC-3
16	400.0	6,520.0	3.06	8.88	5.82	21.4	2*			8880.0	18000.0	21.4	8880	94493	32600	
17	400.0	6,920.0	3.11	8.90	5.79	21.3	2*			8540.0	26540.0	21.3	8540	103033	34600	
18	400.0	7,320.0	3.11	8.92	5.81	21.4	2*			8540.0	35080.0	21.4	8540	111573	36600	
18+200	200.0	7,520.0	3.11	8.93	5.82	20.5	2*			4190.0	39270.0	15.5	3690	115263	37600	
19	200.0	7,720.0	3.70	8.94	5.24	19.6	2*			4010.0	43280.0	19.6	3510	118773	38600	
20	400.0	8,120.0	3.02	8.95	5.93	21.8	2*			8280.0	51560.0	21.8	8280	127053	40600	
21	400.0	8,520.0	2.94	8.97	6.03	22.1	2*			8780.0	60340.0	22.1	8780	135833	42600	
22	400.0	8,920.0	2.58	8.99	6.41	23.3	2*	9080.0	111353.0			23.3	9080	144913	44600	
23	400.0	9,320.0	2.48	9.01	6.53	23.6	2*	9380.0	120733.0			23.6	9380	154293	46600	
24	400.0	9,720.0	2.77	9.02	6.25	22.8	2*	9280.0	130013.0			22.8	9280	163573	48600	
25	400.0	10,120.0	2.68	9.04	6.36	23.1	2*	9180.0	139193.0			23.1	9180	172753	50600	DC-2
26	400.0	10,520.0	4.88	9.06	4.18	16.2		7860.0	147053.0			13.2	7260	180013	52600	
27	400.0	10,920.0	5.00	9.08	4.08	15.9		6420.0	153473.0			12.9	5220	185233	54600	
28	400.0	11,320.0	4.93	9.09	4.16	16.2		6420.0	159893.0			13.2	5220	190453	56600	
29	400.0	11,720.0	4.93	9.11	4.18	16.2		6480.0	166373.0			13.2	5280	195733	58600	
30	400.0	12,120.0	1.72	9.13	7.41	26.4	2*	8520.0	174893.0			26.4	7920	203653	60600	
31	400.0	12,520.0	1.73	9.15	7.42	26.4	2*	10560.0	185453.0			26.4	10560	214213	62600	
32	400.0	12,920.0	2.04	9.16	7.12	25.5	2*			10380.0	70720.0	25.5	10380	224593	64600	
33	400.0	13,320.0	4.37	9.18	4.81	18.2	*			8740.0	79460.0	15.2	8140	232733	66600	
33+200	200.0	13,520.0	5.50	9.19	3.69	13.2	*			3135.0	82595.0	6.7	2185	234918	67600	
34	200.0	13,720.0	6.63	9.20	2.57	8.1	*			2125.0	84720.0	8.1	1475	236393	68600	
35	400.0	14,120.0	7.01	9.22	2.21	7.0	*			3020.0	87740.0	2.0	2020	238413	70600	
36	400.0	14,520.0	4.38	9.23	4.85	18.3	*			5060.0	92800.0	15.3	3460	241873	72600	
37	400.0	14,920.0	1.61	9.25	7.64	27.2	2*			9100.0	101900.0	27.2	8500	250373	74600	
38	400.0	15,320.0	2.78	9.27	6.49	23.5	2*			10140.0	112040.0	23.5	10140	260513	76600	
39	250.0	15,570.0	6.76	9.28	2.52	8.0	*			3937.5	115977.5	8.0	3937.5	264451	77850	
40	400.0	15,970.0	6.96	9.30	2.34	7.4		3080.0	188533.0			2.4	2080	266531	79850	
41	400.0	16,370.0	4.66	9.31	4.65	17.7		5020.0	193553.0			14.7	3420	269951	81850	
42	400.0	16,770.0	5.46	9.33	3.87	12.2		5980.0	199533.0			12.2	5380	275331	83850	
43	400.0	17,170.0	2.76	9.35	6.59	23.8	2	7200.0	206733.0			23.8	7200	282531	85850	
44	400.0	17,570.0	1.96	9.37	7.41	26.4	2*			10040.0	126017.5	26.4	10040	292571	87850	
45	400.0	17,970.0	0.86	9.38	8.52	30.0	2*			11280.0	137297.5	30.0	11280	303851	89850	
46	400.0	18,370.0	1.06	9.40	8.34	29.4	2*			11880.0	149177.5	29.4	11880	315731	91850	DC-1
47	400.0	18,770.0	1.66	9.42	7.76	27.5	2*			11380.0	160557.5	27.5	11380	327111	93850	
48	400.0	19,170.0	1.76	9.44	7.68	27.3	2*			10960.0	171517.5	27.3	10960	338071	95850	
49	400.0	19,570.0	1.46	9.45	7.99	28.3	2*			11120.0	182637.5	28.3	11120	349191	97850	
50	500.0	20,070.0	2.16	9.48	7.32	26.1	2*			13600.0	196237.5	26.1	13600	362791	100350	
51	500.0	20,570.0	4.46	9.50	5.04	18.9	2*			11250.0	207487.5	18.9	11250	374041	102850	
52	370.0	20,940.0	3.09	9.51	6.42	23.3	2*			7807.0	215294.5	23.3	7807	381848	104700	
53	400.0	21,340.0	4.59	9.53	4.94	18.6	2*	8380.0	215113.0			15.6	7780	389628	106700	
54	400.0	21,740.0	5.06	9.55	4.49	17.2	*			7160.0	222454.5	14.2	5960	395588	108700	
55	420.0	22,160.0	2.53	9.57	7.04	25.2	2*			8904.0	231358.5	25.2	8274	403862	110800	
56	160.0	22,320.0	2.08	9.57	7.49	26.7	2*			4152.0	235510.5	26.7	4152	408014	111600	
57	400.0	22,720.0	2.39	9.59	7.2	25.8	2*			10500.0	246010.5	25.8	10500	418514	113600	
58	400.0	23,120.0	2.37	9.61	7.24	25.9	2*			10340.0	256350.5	25.9	10340	428854	115600	
59	400.0	23,520.0	2.78	9.63	6.85	24.6	2*			10100.0	266450.5	24.6	10100	438954	117600	
60	400.0	23,920.0	7.26	9.64	2.38	7.5	*			6420.0	272870.5	2.5	5420	444374	119600	
61	400.0	24,320.0	2.38	9.66	7.28	26.0	2*	6700.0	221813.0			26.0	5700	450074	121600	
62	400.0	24,720.0	4.73	9.68	4.95	18.6		8920.0	230733.0			15.6	8320	458394	123600	
63	400.0	25,120.0	2.50	9.70	7.2	25.8	2*	8880.0	239613.0			25.8	8280	466674	125600	
64	400.0	25,520.0	2.95	9.71	6.76	24.4	2*	10040.0	249653.0			24.4	10040	476714	127600	
65	400.0	25,920.0	7.29	9.73	2.44	7.7		6420.0	256073.0			2.7	5420	482134	129600	
66	400.0	26,320.0	7.55	9.75	2.2	6.9		2920.0	258993.0			1.9	920	483054	131600	
67	400.0	26,720.0	6.89	9.77	2.88	9.1		3200.0	262193.0			9.1	2200	485254	133600	
68	400.0	27,120.0	7.01	9.78	2.77	8.8		3580.0	265773.0			8.8	3580	488834	135600	
69	400.0	27,520.0	9.80	9.80	0	0.0		1760.0	267533.0			0.0	1760	490594	137600	
				AVE	5.66			Total=	267533	Total=	272871		Total=	490594	137600	
				MAX	8.52											
				MIN	2.2											

Table BQ 1.3 : Greater Dhaka East - Base of BQ of Sub-Embankment

Each Stage U = 80%

Station	Distance	Accumulative Distance	Ground Elevation	Top of Embankment(m)	Embankment Height(m)	Design N	1st Stage(m)	2nd Stage(m)	3rd Stage(m)	Remarks
SA 0	0.0	0.0	6.90	8.62	1.72	4.00	1.72			
1	400.0	400.0	7.61	8.62	1.01	4.00	1.01			
2	400.0	800.0	6.16	8.62	2.46	4.00	2.46			
3	400.0	1,200.0	6.53	8.62	2.09	4.00	2.09			
4	400.0	1,600.0	5.59	8.62	3.03	4.00	3.03			
5	400.0	2,000.0	4.44	8.62	4.18	4.00	4.18			
6	400.0	2,400.0	4.07	8.62	4.55	2.00	3.67	0.88		
7	400.0	2,800.0	4.54	8.62	4.08	2.00	3.67	0.41		
8	400.0	3,200.0	4.26	8.62	4.36	2.00	3.67	0.69		
9	400.0	3,600.0	6.44	8.62	2.18	4.00	2.18			
10	400.0	4,000.0	5.21	8.62	3.41	4.00	3.41			
11	400.0	4,400.0	4.09	8.62	4.53	2.00	3.67	0.86		
12	400.0	4,800.0	4.18	8.62	4.44	2.00	3.67	0.77		
13	400.0	5,200.0	5.63	8.62	2.99	2.00	2.99			
14	400.0	5,600.0	6.64	8.62	1.98	4.00	1.98			
15	400.0	6,000.0	6.35	8.62	2.27	4.00	2.27			
16	400.0	6,400.0	8.12	8.62	0.50	4.00	0.50			
				AVE	3.11	m		2000.0		
				MAX	4.55			0.3		
				MIN	0.50					

Station	Distance	Accumulative Distance	Ground Elevation	Top of Embankment	Embankment Height	Design N	1st Stage	2nd Stage	3rd Stage	
SB 0	0.0	0.0	3.87	8.33	4.46	2.00	3.67	0.79		
1	360.0	400.0	2.51	8.33	5.82	2.00	3.67	2.15		
2	400.0	760.0	2.30	8.33	6.03	2.00	3.67	2.36		
3	400.0	1,160.0	2.55	8.33	5.78	2.00	3.67	2.11		
4	400.0	1,560.0	1.57	8.33	6.76	2.00	3.67	2.88	0.21	
5	400.0	1,960.0	2.95	8.33	5.38	2.00	3.67	1.71		
6	400.0	2,360.0	3.70	8.33	4.63	2.00	3.67	0.96		
7	400.0	2,760.0	4.58	8.33	3.75	2.00	3.67	0.08		
8	350.0	3,160.0	4.91	8.33	3.42	2.00	3.42			
9	400.0	3,510.0	4.65	8.33	3.68	2.00	3.67	0.01		
10	400.0	3,910.0	5.39	8.33	2.94	5.00	2.94			
11	400.0	4,310.0	6.09	8.33	2.24	5.00	2.24			
12	400.0	4,710.0	6.57	8.33	1.76	7.50	1.76			
				AVE	4.72			3335.0	400.00	
				MAX	6.76			0.7	0.1	
				MIN	1.76					

Station	Distance	Accumulative Distance	Ground Elevation	Top of Embankment	Embankment Height	Design N	1st Stage	2nd Stage	3rd Stage	
SC 0	0.0	0.0	3.36	8.21	4.85	4.00	4.85			
1	500.0	500.0	2.76	8.21	5.45	4.00	5.45			
2	500.0	1,000.0	4.53	8.21	3.68	4.00	3.68			
3	500.0	1,500.0	4.09	8.21	4.12	4.00	4.12			
4	500.0	2,000.0	3.94	8.21	4.27	4.00	4.27			
5	500.0	2,500.0	4.29	8.21	3.92	4.00	3.92			
6	500.0	3,000.0	3.12	8.21	5.09	2.00	3.67	1.42		
7	500.0	3,500.0	2.83	8.21	5.38	2.00	3.67	1.71		
8	500.0	4,000.0	2.03	8.21	6.18	2.00	3.67	2.51		
9	500.0	4,500.0	2.58	8.21	5.63	2.00	3.67	1.96		
10	500.0	5,000.0	2.49	8.21	5.72	2.00	3.67	2.05		
11	500.0	5,500.0	2.66	8.21	5.55	2.00	3.67	1.88		
12	500.0	6,000.0	2.10	8.21	6.11	2.00	3.67	2.44		
13	310.0	6,310.0	2.92	8.21	5.29	2.00	3.67	1.62		
				AVE	5.48			3556.0		
				MAX	6.18			0.6		
				MIN	3.68					

Table BQ 1.4(1) : Greater Dhaka East - BQ of Sub-Embankment (Emb,Foundation & Land)

Station No	Distance (m)	Accumulative Distance (m)	Ground Elevation (pwd)	Top of Embankment (pwd)	Embankment Height (m)	Area (m2)	Emb. Volume (m3)	Accum. Volume (m3)	B. Width (m) B+30m	Land Area (m2) L*(B+30)	Accum. Area (m2)	Foundation .T Area (m2)
SA 0	0.0	0.0	6.90	8.59	1.69	18.8			44.3			
1	400.0	400.0	7.61	8.59	0.98	10.1	5780.0	5780.0	40.1	16880	16880	
2	400.0	800.0	6.16	8.59	2.43	31.0	8220.0	14000.0	48.8	17780	34660	
3	400.0	1,200.0	6.53	8.59	2.06	24.5	11100.0	25100.0	46.5	19060	53720	
4	400.0	1,600.0	5.59	8.59	3.00	42.7	13440.0	38540.0	52.2	19740	73460	
5	400.0	2,000.0	4.44	8.59	4.15	73.2	23180.0	61720.0	65.1	23460	96920	
6	400.0	2,400.0	4.07	8.59	4.52	86.6	31960.0	93680.0	67.3	26480	123400	14480
7	400.0	2,800.0	4.54	8.59	4.05	69.7	31260.0	124940.0	64.5	26360	149760	14360
8	400.0	3,200.0	4.26	8.59	4.33	79.6	29860.0	154800.0	66.2	26140	175900	14140
9	400.0	3,600.0	6.44	8.59	2.15	26.0	21120.0	175920.0	47.1	22660	198560	
10	400.0	4,000.0	5.21	8.59	3.38	51.5	15500.0	191420.0	54.5	20320	218880	
11	400.0	4,400.0	4.09	8.59	4.50	85.9	27480.0	218900.0	67.2	24340	243220	12340
12	400.0	4,800.0	4.18	8.59	4.41	82.5	33680.0	252580.0	66.6	26760	269980	14760
13	400.0	5,200.0	5.63	8.59	2.96	41.8	24860.0	277440.0	51.9	23700	293680	
14	400.0	5,600.0	6.64	8.59	1.95	22.7	12900.0	290340.0	45.9	19560	313240	
15	400.0	6,000.0	6.35	8.59	2.24	27.5	10040.0	300380.0	47.6	18700	331940	
16	400.0	6,400.0	8.12	8.59	0.47	5.8	6660.0	307040.0	37.0	16920	348860	
							*V=	273402		Total=	348860	70080
				Ave.H=	2.90							

Station	Distance	Accumulative Distance	Ground Elevation (pwd)	Top of Embankment (pwd)	Embankment Height (m)	Area (m2)	Emb. Volume (m3)	Accum. Volume (m3)	B. Width (m) B+30m	Land Area (m2) L*(B+30)	Accum. Area (m2)	Foundation .T Area (m2)
SB 0	0.0	0.0	3.87	8.33	4.46	91.7			68.8			
1	360.0	360.0	2.51	8.33	5.82	152.4	43938.0	43938.0	81.9	27126	27126	16326
2	400.0	760.0	2.30	8.33	6.03	163.0	63080.0	107018.0	83.2	33020	60146	21020
3	400.0	1,160.0	2.55	8.33	5.78	150.4	62680.0	169698.0	81.7	32980	93126	20980
4	400.0	1,560.0	1.57	8.33	6.76	202.0	70480.0	240178.0	87.6	33860	126986	21860
5	400.0	1,960.0	2.95	8.33	5.38	131.0	66600.0	306778.0	79.3	33380	160366	21380
6	400.0	2,360.0	3.70	8.33	4.63	98.4	45880.0	352658.0	69.8	29820	190186	17820
7	400.0	2,760.0	4.58	8.33	3.75	66.4	32960.0	385618.0	61.5	26260	216446	14260
8	350.0	3,110.0	4.91	8.33	3.42	56.4	21490.0	407108.0	59.5	21175	237621	
9	400.0	3,510.0	4.65	8.33	3.68	64.2	24120.0	431228.0	61.1	24120	261741	12120
10	400.0	3,910.0	5.39	8.33	2.94	42.9	21420.0	452648.0	56.6	23540	285281	
11	400.0	4,310.0	6.09	8.33	2.24	27.0	13980.0	466628.0	47.4	20800	306081	
12	400.0	4,710.0	6.57	8.33	1.76	19.3	9260.0	475888.0	44.6	18400	324481	
							*V=	405920		Total=	324481	145766
				Ave.H=	4.36							

Station	Distance	Accumulative Distance	Ground Elevation (pwd)	Top of Embankment (pwd)	Embankment Height (m)	Area (m2)	Emb. Volume (m3)	Accum. Volume (m3)	B. Width (m) B+30m	Land Area (m2) L*(B+30)	Accum. Area (m2)	Foundation .T Area (m2)
SC 0	0.0	0.0	3.36	8.20	4.84	107.3			71.1			
1	500.0	500.0	2.76	8.20	5.44	134.4	60425.0	60425.0	79.7	37700	37700	
2	500.0	1,000.0	4.53	8.20	3.67	64.2	49650.0	110075.0	61.1	35200	72900	
3	500.0	1,500.0	4.09	8.20	4.11	78.9	35775.0	145850.0	66.7	31950	104850	
4	500.0	2,000.0	3.94	8.20	4.26	84.4	40825.0	186675.0	67.6	33575	138425	
5	500.0	2,500.0	4.29	8.20	3.91	71.9	39075.0	225750.0	62.5	32525	170950	
6	500.0	3,000.0	3.12	8.20	5.08	117.6	47375.0	273125.0	77.5	35000	205950	20000
7	500.0	3,500.0	2.83	8.20	5.37	131.0	62150.0	335275.0	79.3	39200	245150	24200
8	500.0	4,000.0	2.03	8.20	6.17	170.8	75450.0	410725.0	84.1	40850	286000	25850
9	500.0	4,500.0	2.58	8.20	5.62	143.0	78450.0	489175.0	80.8	41225	327225	26225
10	500.0	5,000.0	2.49	8.20	5.71	147.5	72625.0	561800.0	81.3	40525	367750	25525
11	500.0	5,500.0	2.66	8.20	5.54	139.2	71675.0	633475.0	80.3	40400	408150	25400
12	500.0	6,000.0	2.10	8.20	6.10	167.1	76575.0	710050.0	83.7	41000	449150	26000
13	310.0	6,310.0	2.92	8.20	5.28	126.8	45554.5	755604.5	78.7	25172	474322	15872
							*V=	664850		Total=	474322	189072
				Ave.H=	5.08							

Note:
Foundation T.Areax0.6mx0.8

Table BQ 1.4(2) : Greater Dhaka East BQ of Sub-Embankment (Sodding & Brick Soling))

Station	Distance	Accumulative Distance	Ground Elevation (pwd)	Top of Emb. (pwd)	Emb. Height (m)	Slope (U) (-Berum) (m)	Sodding (m2)	Accum. Sodding (m2)	Slope(D) (-Berm) (m)	Sodding (m2)	Accum. Sodding (m2)	Accm.Brick Soling(Berm*2) (m2)
SA 0	0.0	0.0	6.90	8.59	1.69	2.4			2.4			
1	400.0	400.0	7.61	8.59	0.98	0.2	520.0	520.0	0.2	520	520	2400
2	400.0	800.0	6.16	8.59	2.43	4.8	1000.0	1520.0	4.8	1000	1520	4800
3	400.0	1,200.0	6.53	8.59	2.06	3.6	1680.0	3200.0	3.6	1680	3200	7200
4	400.0	1,600.0	5.59	8.59	3.00	6.6	2040.0	5240.0	6.6	2040	5240	9600
5	400.0	2,000.0	4.44	8.59	4.15	13.2	3960.0	9200.0	13.2	3960	9200	12000
6	400.0	2,400.0	4.07	8.59	4.52	14.4	5520.0	14720.0	14.4	5520	14720	14400
7	400.0	2,800.0	4.54	8.59	4.05	12.9	5460.0	20180.0	12.9	5460	20180	16800
8	400.0	3,200.0	4.26	8.59	4.33	13.8	5340.0	25520.0	13.8	5340	25520	19200
9	400.0	3,600.0	6.44	8.59	2.15	3.9	3540.0	29060.0	3.9	3540	29060	21600
10	400.0	4,000.0	5.21	8.59	3.38	7.8	2340.0	31400.0	7.8	2340	31400	24000
11	400.0	4,400.0	4.09	8.59	4.50	14.3	4420.0	35820.0	14.3	4420	35820	26400
12	400.0	4,800.0	4.18	8.59	4.41	14.0	5660.0	41480.0	14.0	5660	41480	28800
13	400.0	5,200.0	5.63	8.59	2.96	6.5	4100.0	45580.0	6.5	4100	45580	31200
14	400.0	5,600.0	6.64	8.59	1.95	3.3	1960.0	47540.0	3.3	1960	47540	33600
15	400.0	6,000.0	6.35	8.59	2.24	4.2	1500.0	49040.0	4.2	1500	49040	36000
16	400.0	6,400.0	8.12	8.59	0.47	1.6	1160.0	50200.0	1.6	1160	50200	38400
							Total=	50200		Total=	50200	38400
				Ave.H=	2.90							
						3.0						

Station	Distance	Accumulative Distance	Ground Elevation (pwd)	Top of Emb. (pwd)	Emb. Height (m)	Slope (U) (-Berum) (m)	Sodding (m2)	Accum. Sodding (m2)	Slope(D) (-Berm) (m)	Sodding (m2)	Accum. Sodding (m2)	Accm.Brick Soling(Berm*2) (m2)
SB 0	0.0	0.0	3.87	8.33	4.46	14.1			16.1			
1	360.0	360.0	2.51	8.33	5.82	18.4	5850.0	5850.0	23.4	7110.0	7110	2160
2	400.0	760.0	2.30	8.33	6.03	19.1	7500.0	13350.0	24.1	9500.0	16610	4560
3	400.0	1,160.0	2.55	8.33	5.78	18.3	7480.0	20830.0	23.3	9480.0	26090	6960
4	400.0	1,560.0	1.57	8.33	6.76	21.4	7940.0	28770.0	26.4	9940.0	36030	9360
5	400.0	1,960.0	2.95	8.33	5.38	17.0	7680.0	36450.0	22.0	9680.0	45710	11760
6	400.0	2,360.0	3.70	8.33	4.63	14.6	6320.0	42770.0	16.6	7720.0	53430	14160
7	400.0	2,760.0	4.58	8.33	3.75	8.9	4700.0	47470.0	13.9	6100.0	59530	16560
8	350.0	3,110.0	4.91	8.33	3.42	7.8	2922.5	50392.5	12.8	4672.5	64202.5	18660
9	400.0	3,510.0	4.65	8.33	3.68	8.6	3280.0	53672.5	13.6	5280.0	69482.5	21060
10	400.0	3,910.0	5.39	8.33	2.94	6.3	2980.0	56652.5	11.3	4980.0	74462.5	23460
11	400.0	4,310.0	6.09	8.33	2.24	4.1	2080.0	58732.5	4.1	3080.0	77542.5	25860
12	400.0	4,710.0	6.57	8.33	1.76	2.6	1340.0	60072.5	2.6	1340.0	78882.5	28260
							Total=	60073		Total=	78883	28260
				Ave.H=	4.36							

Station	Distance	Accumulative Distance	Ground Elevation (pwd)	Top of Emb. (pwd)	Emb. Height (m)	Slope (U) (-Berum) (m)	Sodding (m2)	Accum. Sodding (m2)	Slope(D) (-Berm) (m)	Sodding (m2)	Accum. Sodding (m2)	Accm.Brick Soling(Berm*2) (m2)
SC 0	0.0	0.0	3.36	8.20	4.84	18.3			20.3			
1	500.0	500.0	2.76	8.20	5.44	20.2	9625.0	9625.0	25.2	11375	11375	3000
2	500.0	1,000.0	4.53	8.20	3.67	11.6	7950.0	17575.0	16.6	10450	21825	6000
3	500.0	1,500.0	4.09	8.20	4.11	16.0	6900.0	24475.0	18.0	8650	30475	9000
4	500.0	2,000.0	3.94	8.20	4.26	16.5	8125.0	32600.0	18.5	9125	39600	12000
5	500.0	2,500.0	4.29	8.20	3.91	12.4	7225.0	39825.0	17.4	8975	48575	15000
6	500.0	3,000.0	3.12	8.20	5.08	19.1	7875.0	47700.0	24.1	10375	58950	18000
7	500.0	3,500.0	2.83	8.20	5.37	20.0	9775.0	57475.0	25.0	12275	71225	21000
8	500.0	4,000.0	2.03	8.20	6.17	22.5	10625.0	68100.0	27.5	13125	84350	24000
9	500.0	4,500.0	2.58	8.20	5.62	20.8	10825.0	78925.0	25.8	13325	97675	27000
10	500.0	5,000.0	2.49	8.20	5.71	21.1	10475.0	89400.0	26.1	12975	110650	30000
11	500.0	5,500.0	2.66	8.20	5.54	20.5	10400.0	99800.0	25.5	12900	123550	33000
12	500.0	6,000.0	2.10	8.20	6.10	22.3	10700.0	110500.0	27.3	13200	136750	36000
13	310.0	6,310.0	2.92	8.20	5.28	19.7	6510.0	117010.0	24.7	8060	144810	37860
							Total=	117010		Total=	144810	37860
				Ave.H=	5.08							
									30.0			

Table BQ 1.5: Summary. of B.Q (Embankment-Dhaka & N.West)

Area	Dhaka East					N.West		
	DC-1	DC-2	DC-3	DC-4	Total	NW	NE	Total
1. Embankment.(m3)								
A.Main Embankment	1,898,550	760,123	371,481	400,032	3,430,186	161,641	517,392	679,033
B. Sub Embankment	273,402		405,920	664,850	1,344,172			
Sub. Total	2,171,952	760,123	777,401	1,064,882	4,774,358	161,641	517,392	679,033
2.Land Aquisition (m2)								
A.Main Embankment	1,067,422	484,110	247,301	323,271	2,122,104	285,839	587,107	872,946
B. Sub Embankment	348,860		324,481	474,322	1,147,663			
Sub. Total	1,416,282	484,110	571,782	797,593	3,269,767	285,839	587,107	872,946
3. Foundation.Treatment (m2)								
A.Main Embankment	458,697	290,755	151,451	81,881	982,784		48,475	48,475
B. Sub Embankment	70,080		145,766	189,072	404,918			
Sub. Total	528,777	290,755	297,217	270,953	1,387,702		48,475	48,475
5.Revetment (m2)								
A.Main Embankment	190,276	43,325	39,270		272,871		95,910	95,910
B. Sub Embankment								
Sub. Total	190,276	43,325	39,270		272,871		95,910	95,910
4. Sodding (m2)								
A.Main Embankment	337,756	202,835	85,015	132,521	758,127	88,422	118,135	206,557
B. Sub Embankment	100,400		138,956	261,820	501,176			
Sub. Total	438,156	202,835	223,971	394,341	1,259,303	88,422	118,135	206,557
5. Brick Soling (m2)								
A.Main Embankment	70,000	30,000	14,850	22,750	137,600	19,995	51,750	71,745
B. Sub Embankment	38,400		28,260	37,860	104,520			
Sub. Total	108,400	30,000	43,110	60,610	242,120	19,995	51,750	71,745

TABLE BQ 1.6: Dhaka East-B.Q of Flood Wall (R)

Station	Distance m	Accum.Dist m	Flod Wall Height m	R.C.C Volume m3	Form Work m2	Exca-vation m3	Foot Protection Area m2	Foot Protection Volume m3	Back Filling m3	Remarks
R 0	0	0	-	-	-	-	-	-	-	
R 1	270	270	0.30	41	324	68	-	-	54	
R 2	1000	1270	0.40	200	1600	300	-	-	200	
R 3	1000	2270	0.40	200	1600	300	-	-	200	
R 4	1000	3270	0.50	220	200	350	-	-	300	
R 5	1000	4270	0.40	200	1600	300	-	-	200	DC-4
R 6	1000	5270	-	-	-	-	-	-	-	
R 7	1000	6270	1.10	450	4400	1000	-	-	800	
R 8	1000	7270	0.90	375	3600	900	-	-	600	
R8+800	800	8070	0.80	280	2700	560			400	
Sub-Total			4.80	1966.00	16024.00	3778.00			2754.00	
R 9	200	8270	0.70	60	560	120	12.5	12500	90	
R 10	1000	9270	1.10	450	4400	100	-	-	800	DC-3
R 11	1000	10270	0.70	300	2800	600	-	-	450	
R11+300	300	10570	0.70	90	840	180			135	
Sub-Total			3.20	900.00	8600.00	1000.00	12.50	12500.00	1475.00	
R 12	700	11270	0.70	210	1960	420	-	-	315	
R 13	1000	12270	1.00	400	4000	900	-	-	700	
R 14	1000	13270	1.00	400	4000	900	-	-	700	DC-2
R 15	1000	14270	-	-	-	-	-	-	-	
R 16	1000	15270	0.80	350	3200	700	10.5	10500	500	
R16+150	150	15420	0.80	50	480	100			75	
Sub-Total			4.30	1410.00	13640.00	3020.00	10.50	10500.00	2290.00	
R 17	850	16270	0.70	255	2380	500	12.0	12000	380	
R 18	1000	17270	0.70	300	2800	600	4.0	4000	450	
R 19	1000	18270	0.60	250	2400	500	-	-	350	DC-1
R 20	1000	19270	0.40	200	1600	300	-	-	200	
R 21	1000	20270	0.60	250	2400	500	-	-	350	
R 22	1000	21270	-	-	-	-	-	-	-	
		21270								
Sub-Total			3.00	1255.00	11580.00	2400.00	16.00	16000.00	1730.00	
Total :		21270	15.3	5531	49844	10198	39	39000	8249	

Table BQ 1.7(1) Main Feature of Proposed Sluice Gate:Dhaka.East

No.	Sta. No.	Mark (Khal No.) Q(m3/s)	Dimensions of Culvert B (m)	H (m)	L (m)	N	Inlet B1 (m)	L1 (m)	B2 (m)	Outlet B3 (m)	B4 (m)	B5 (m)	L2 (m)	L3 (m)	O.Bridge L4 (m)	Khal Dimension (b1,b2,h1)	Remarks
I. Greater Dhaka East																	
1	E68 + 150	14	2.20	2.20	36.00	2	5.10	10.00	22.00	5.40	10.20	12.20	12.00	10.00	15.00	2.00	
		(KD-4) 22.57														20.20 4.55	
2	E55	15	2.20	2.20	34.00	3	8.00	10.00	25.00	8.60	13.40	15.40	12.00	10.00	15.00	5.00	
		(KD-3) 37.34														23.20 4.55	
3	E43 + 320	16	3.00	3.00	45.00	4	14.10	10.00	43.00	15.00	19.80	21.80	12.00	10.00	20.00	20.00	With Pump
		(KD-1) 83.18														40.80 5.20	P5 : (25.2 M3/s)
4	E28 + 150	17	2.80	2.80	45.00	6	20.30	10.00	51.20	23.00	28.00	30.00	12.00	10.00	20.00	27.00	Pump
		(KD-5) 114.61														49.00 5.50	P6 : (54.6 m3/s)
5	E11 + 340	18A	3.00	3.00	43.50	6	21.80	10.00	54.00	24.20	29.00	31.00	12.00	10.00	19.00	28.50	Pump
		(KD-11) 129.49														51.70 5.80	P7A : (53.1 m3/s)
6	E8 + 90	18B	3.00	3.00	43.50	6	21.50	10.00	53.00	23.00	27.50	29.50	12.00	10.00	19.00	27.50	Pump
		(KD-14) 140.67														50.70 5.80	P7B : (47.2 m3/s)
7	SA.11+100	Sub-1	3.00	3.00	40.00	4	14.20	4.50	22.00	14.20	16.00	22.00	4.50	10.00	15.00	16.00	Sub Emb.SA
		(KD-5) 83.2														31.70 3.92	

Table BQ 1.7(2) BQ OF SLUICE GATES :DHAKA EAST

Mark (Khal No.) Q(m3/s)	Concrete				Sheet Pile	R.C Pile			Bed. Protection	Excavation	Backfill
	Inlet	Mainbox	Outlet	Total			Per No.	Total L			
				m3	m2	No	m	m	m2	m3	m3
I. Greater Dhaka East		9.79									
		2.45									
14	132.19	433.44	83.91	649.54	312.60	64	19	1216	322	1396	665
(KD-4)											
22.57		9.57									
		2.45									
15	149.99	577.32	106.95	834.26	358.20	95	19	1796	384	1670	637
(KD-3)											
37.34		9.35									
		-0.70									
16	259.59	1229.02	156.95	1645.56	506.40	202	19	3845	628	7597	2777
(KD-1)											
83.18		9.10									
		-1.00									
17	299.22	1699.50	214.34	2213.06	612.00	292	25	7300	792	10181	3024
(KD-5)											
114.61		8.81									
		-1.30									
18A	321.13	1726.75	223.19	2271.07	640.80	304	8	2434	830	11022	3193
(KD-11)											
129.49		8.74									
		-1.30									
18B	316.08	1726.02	213.39	2255.49	627.90	299	10	2986	805	10919	3193
(KD-14)											
140.67		8.62									
		0.64									
Sub-1	90.46	1082.40	54.33	1227.19	430.20	158	10	1585	380	4377	1428
(KD-5)											
83.2											

Table BQ 1.8 BQ of Pump Station : G.Dhaka East

Project Area	No. (Khal No.)	Part	Bill of Quantities															
			Exca. (m3)	Banking (m3)	Backfill (m3)	R.C Pile (m)	Sheet.P (m2)	Leveling Conc. (m3)	Concrete (m3)	Re.Bar (t)	Form (m2)	Slope Protec. (m2)	Bed Protec. (Block) (m2)	Bed Protec. (Brick) (m2)	Sodding (m2)	Operation Bridge (m2)	Building (L.S)	Mechanic. & Electric. (L.S)
		Pump Station (Q=25.6)	16,800	18,221	3,394	5,302	67	204	3,786	379	6,815	882	-	449	2,380	-	1	1
DC-1	P5	Sluice Way (2.3X2.3X2)	6,980	-	1,152	2,433	196	123	841	76	1,850	557	168	-	-	18	-	1
	(KD-1)	Sub Total	23,780	18,221	4,546	7,735	264	327	4,627	454	8,665	1,439	168	449	2,380	18	1	1
		Pump Station (Q=54.6)	24,226	17,882	5,430	9,552	131	377	7,266	727	13,078	441	-	872	2,060	-	1	1
DC-2	P6	Sluice Way (2.7X2.7X3)	9,348	-	1,438	3,511	201	167	1,226	110	2,698	891	126	-	-	18	-	1
	(KD-5)	Sub Total	33,574	17,882	6,868	13,063	331	544	8,492	837	15,777	1,332	126	872	2,060	18	1	1
		Pump Station (Q=53.1)	39,766	13,026	7,061	4,806	131	377	7,238	724	13,029	1,091	-	872	1,499	-	1	1
DC-3	P7A	Sluice Way (2.7X2.7X3)	9,166	-	2,065	1,734	201	163	1,204	108	2,650	624	126	-	-	17	-	1
	(KD-11)	Sub Total	48,931	13,026	9,126	6,540	331	540	8,443	832	15,678	1,715	126	872	1,499	17	1	1
		Pump Station (Q=47.2)	33,720	11,246	7,739	6,267	131	377	7,234	723	13,022	706	-	872	1,336	-	1	1
DC-4	P7B	Sluice Way (2.5X2.5X2)	12,680	-	2,333	1,708	198	154	1,142	103	2,513	1,105	126	-	-	18	-	1
	(KD-14)	Sub Total	46,400	11,246	10,072	7,975	329	532	8,377	826	15,535	1,810	126	872	1,336	18	1	1
		Total	152,686	60,376	30,611	35,313	1,255	1,943	29,939	2,950	55,655	6,296	546	3,064	7,275	71	1	1

Table BQ 1.9 : BQ of Khal Improvement and Bridge : G.Dhaka East

Zone	Khal No.	Khal Length (km)	Open Channel: Brick Protection (m2)	Open Channel: Sodding (m2)	Covered Chann: Box Culvert (m)	Covered Chann: Brick Pipe (m)	Bridge (places)	Aqueduct (places)	Banking (1000m3)	Dredging (1000m3)	Maintenance Road (1000m2)	Land Acquisition (ha)
DC-1	KD-1-1	0.50	-	5,233	-	-	-	-	14.00	25.10	3.00	1.88
	KD-1-2	1.90	-	19,884	-	-	-	-	53.20	36.90	11.40	2.35
	KD-1-3	2.30	-	24,070	-	-	-	-	64.40	65.95	13.80	7.47
	KD-1-4	1.70	-	17,791	-	-	-	-	47.60	32.30	10.20	6.72
	KD-1-5	1.00	-	10,465	-	-	-	-	28.00	22.90	6.00	2.93
	KD-2	1.40	-	14,255	-	-	-	-	39.20	1.86	8.40	1.66
	KD-3-1	1.30	-	14,708	-	-	-	-	36.40	0.00	7.80	3.88
	KD-3-2	1.40	-	15,839	-	-	-	-	39.20	0.00	8.40	3.85
	KD-4	1.20	16,971	-	-	-	-	-	33.60	3.86	7.20	1.63
	KD-5-6	1.00	-	11,031	-	-	-	-	28.00	32.40	6.00	4.40
	KD-5-7	1.40	-	15,047	-	-	-	-	39.20	18.80	8.40	5.18
	KD-10-1	2.00	-	21,496	-	-	3	-	56.00	39.34	12.00	7.06
	KD-10-2	2.10	27,323	-	-	-	5	-	58.80	154.25	12.60	7.29
	Sub-Total	19.20	44,293	169,819	0	0	8	0	537.60	433.66	115.20	56.30
DC-2	KD-5-1	2.50	-	28,284	-	-	-	-	70.00	148.44	15.00	8.01
	KD-5-2	0.70	-	7,920	-	-	-	-	19.60	49.47	4.20	3.18
	KD-5-3	1.40	-	15,839	-	-	-	-	39.20	79.81	8.40	5.55
	KD-5-4	2.00	-	22,627	-	-	-	-	56.00	81.70	12.00	6.80
	KD-5-5	2.20	-	24,890	-	-	-	-	61.60	61.03	13.20	8.67
	KD-6	1.80	-	19,856	-	-	-	-	50.40	13.62	10.80	3.08
	KD-7-1	1.60	-	18,102	-	-	-	-	44.80	27.68	9.60	3.53
	KD-7-2	2.20	-	23,646	-	-	-	-	61.60	23.40	13.20	4.54
	KD-8	1.80	-	19,856	-	-	-	-	50.40	6.91	10.80	2.85
	KD-9	1.00	-	11,031	-	-	-	-	28.00	1.59	6.00	1.59
	Sub-Total	17.20	0	192,050	0	0	0	0	481.60	493.65	103.20	47.80
DC-3	KD-11-1	2.20	-	26,757	-	-	-	-	61.60	135.81	13.20	2.38
	KD-11-2	2.70	-	32,838	-	-	-	-	75.60	155.96	16.20	5.49
	KD-11-3	1.70	-	19,714	-	-	-	-	47.60	110.73	10.20	6.66
	KD-12-1	1.20	-	12,898	-	-	-	-	33.60	37.82	7.20	2.97
	KD-12-2	1.30	-	12,134	-	-	-	-	36.40	35.89	7.80	4.44
	KD-13-1	1.80	-	21,383	-	-	-	-	50.40	14.81	10.80	2.73
	KD-13-2	1.20	-	13,916	-	-	-	-	33.60	4.01	7.20	1.23
	Sub-Total	12.10	0	139,639	0	0	0	0	338.80	495.03	72.60	25.90
DC-4	KD-14-1	0.50	-	6,081	-	-	-	-	14.00	159.04	3.00	5.60
	KD-14-2	1.90	-	23,108	-	-	1	-	53.20	153.30	11.40	8.62
	KD-14-3	1.00	-	12,162	-	-	-	-	28.00	117.04	6.00	6.41
	KD-14-4	0.70	10,493	-	-	-	-	-	19.60	45.15	4.20	1.27
	KD-14-5	1.50	22,062	-	-	-	1	-	42.00	111.59	9.00	4.32
	KD-15-1	1.20	-	14,255	-	-	-	-	33.60	61.56	7.20	2.96
	KD-15-2	1.40	-	14,255	-	-	-	-	39.20	86.64	8.40	5.05
	KD-16	1.70	-	17,310	-	-	-	-	47.60	78.98	10.20	5.14
	KD-17-1	0.60	-	7,297	-	-	-	-	16.80	6.40	3.60	0.36
	KD-17-2	2.20	-	25,512	-	-	1	-	61.60	81.88	13.20	3.46
	KD-17-3	2.70	-	29,020	-	-	-	-	75.60	117.99	16.20	4.47
	KD-18-1	2.20	-	25,512	-	-	-	-	61.60	56.14	13.20	4.23
	KD-18-2	0.90	-	9,419	-	-	-	-	25.20	19.80	5.40	1.87
	KD-19	1.90	-	18,809	-	-	-	-	53.20	14.16	11.40	1.65
	KD-20-1	1.10	-	13,067	-	-	1	-	30.80	47.40	6.60	3.45
	KD-20-2	1.30	18,752	-	-	-	-	-	36.40	34.40	7.80	3.14
	KD-20-3	1.30	18,385	-	-	-	-	-	36.40	46.24	7.80	4.53
	Sub-Total	24.10	69,692	215,809	0	0	4	0	674.80	1,237.71	144.60	66.53
	Total	72.60	113,986	717,317	0	0	12	0	2,032.80	2,660.05	435.60	196.53

Table BQ 1.10 :CONSTRUCTION COST OF KHAL IMPROVEMENT AND TRUNK DRAIN WORKS : GREATER DHAKA EAST

(1991 Price)

Zone	Khal	Length	Open Channel								Maintenance Road						
			Type	Area	Unit Construction Cost			Construction Cost (1000TK)			Area	Unit Construction Cost			Construction Cost (1000TK)		
		m		(m2)	Total	F/C(%)	L/C(%)	F/C	L/C	Total	(m2)	Total	F/C(%)	L/C (%)	F/C	L/C	Total
DC-1	KD-1-1	500	Sodding	5,233	60	20	80	63	251	314	3,000	588	90	10	1,588	176	1,764
	KD-1-2	1,900	Sodding	19,884	60	20	80	239	954	1,193	11,400	588	90	10	6,033	670	6,703
	KD-1-3	2,300	Sodding	24,070	60	20	80	289	1,155	1,444	13,800	588	90	10	7,303	811	8,114
	KD-1-4	1,700	Sodding	17,791	60	20	80	213	854	1,067	10,200	588	90	10	5,398	600	5,998
	KD-1-5	1,000	Sodding	10,465	60	20	80	126	502	628	6,000	588	90	10	3,175	353	3,528
	KD-2	1,400	Sodding	14,255	60	20	80	171	684	855	8,400	588	90	10	4,445	494	4,939
	KD-3-1	1,300	Sodding	14,708	60	20	80	176	706	882	7,800	588	90	10	4,128	459	4,586
	KD-3-2	1,400	Sodding	15,839	60	20	80	190	760	950	8,400	588	90	10	4,445	494	4,939
	KD-4	1,200	Brick	16,971	1579	40	60	10,719	16,078	26,797	7,200	588	90	10	3,810	423	4,234
	KD-5-6	1,000	Sodding	11,031	60	20	80	132	529	662	6,000	588	90	10	3,175	353	3,528
	KD-5-7	1,400	Sodding	15,047	60	20	80	181	722	903	8,400	588	90	10	4,445	494	4,939
	KD-10-1	2,000	Sodding	21,496	60	20	80	258	1,032	1,290	12,000	588	90	10	6,350	706	7,056
	KD-10-2	2,100	Brick	27,323	1579	40	60	17,257	25,885	43,142	12,600	588	90	10	6,668	741	7,409
	Sub-Total	19,200				37	63	30,013	50,115	80,128	115,200		90	10	60,964	6,774	67,738
DC-2	KD-5-1	2,500	Sodding	28,284	60	20	80	339	1,358	1,697	15,000	588	90	10	7,938	882	8,820
	KD-5-2	700	Sodding	7,920	60	20	80	95	380	475	4,200	588	90	10	2,223	247	2,470
	KD-5-3	1,400	Sodding	15,839	60	20	80	190	760	950	8,400	588	90	10	4,445	494	4,939
	KD-5-4	2,000	Sodding	22,627	60	20	80	272	1,086	1,358	12,000	588	90	10	6,350	706	7,056
	KD-5-5	2,200	Sodding	24,890	60	20	80	299	1,195	1,493	13,200	588	90	10	6,985	776	7,762
	KD-6	1,800	Sodding	19,856	60	20	80	238	953	1,191	10,800	588	90	10	5,715	635	6,350
	KD-7-1	1,600	Sodding	18,102	60	20	80	217	869	1,086	9,600	588	90	10	5,080	564	5,645
	KD-7-2	2,200	Sodding	23,646	60	20	80	284	1,135	1,419	13,200	588	90	10	6,985	776	7,762
	KD-8	1,800	Sodding	19,856	60	20	80	238	953	1,191	10,800	588	90	10	5,715	635	6,350
	KD-9	1,000	Sodding	11,031	60	20	80	132	529	662	6,000	588	90	10	3,175	353	3,528
	Sub-Total	17,200				20	80	2,305	9,218	11,523	103,200		90	10	54,613	6,068	60,682
DC-3	KD-11-1	2,200	Sodding	26,757	60	20	80	321	1,284	1,605	13,200	588	90	10	6,985	776	7,762
	KD-11-2	2,700	Sodding	32,838	60	20	80	394	1,576	1,970	16,200	588	90	10	8,573	953	9,526
	KD-11-3	1,700	Sodding	19,714	60	20	80	237	946	1,183	10,200	588	90	10	5,398	600	5,998
	KD-12-1	1,200	Sodding	12,898	60	20	80	155	619	774	7,200	588	90	10	3,810	423	4,234
	KD-12-2	1,300	Sodding	12,134	60	20	80	146	582	728	7,800	588	90	10	4,128	459	4,586
	KD-13-1	1,800	Sodding	21,383	60	20	80	257	1,026	1,283	10,800	588	90	10	5,715	635	6,350
	KD-13-2	1,200	Sodding	13,916	60	20	80	167	668	835	7,200	588	90	10	3,810	423	4,234
	Sub-Total	12,100				20	80	1,676	6,703	8,378	72,600		90	10	38,420	4,269	42,689
DC-4	KD-14-1	500	Sodding	6,081	60	20	80	73	292	365	3,000	588	90	10	1,588	176	1,764
	KD-14-2	1,900	Sodding	23,108	60	20	80	277	1,109	1,386	11,400	588	90	10	6,033	670	6,703
	KD-14-3	1,000	Sodding	12,162	60	20	80	146	584	730	6,000	588	90	10	3,175	353	3,528
	KD-14-4	700	Brick	10,493	1579	40	60	6,628	9,942	16,569	4,200	588	90	10	2,223	247	2,470
	KD-14-5	1,500	Brick	22,062	1579	40	60	13,934	20,901	34,835	9,000	588	90	10	4,763	529	5,292
	KD-15-1	1,200	Sodding	14,255	60	20	80	171	684	855	7,200	588	90	10	3,810	423	4,234
	KD-15-2	1,400	Sodding	14,255	60	20	80	171	684	855	8,400	588	90	10	4,445	494	4,939
	KD-16	1,700	Sodding	17,310	60	20	80	208	831	1,039	10,200	588	90	10	5,398	600	5,998
	KD-17-1	600	Sodding	7,297	60	20	80	88	350	438	3,600	588	90	10	1,905	212	2,117
	KD-17-2	2,200	Sodding	25,512	60	20	80	306	1,225	1,531	13,200	588	90	10	6,985	776	7,762
	KD-17-3	2,700	Sodding	29,020	60	20	80	348	1,393	1,741	16,200	588	90	10	8,573	953	9,526
	KD-18-1	2,200	Sodding	25,512	60	20	80	306	1,225	1,531	13,200	588	90	10	6,985	776	7,762
	KD-18-2	900	Sodding	9,419	60	20	80	113	452	565	5,400	588	90	10	2,858	318	3,175
	KD-19	1,900	Sodding	18,809	60	20	80	226	903	1,129	11,400	588	90	10	6,033	670	6,703
	KD-20-1	1,100	Sodding	13,067	60	20	80	157	627	784	6,600	588	90	10	3,493	388	3,881
	KD-20-2	1,300	Brick	18,752	1579	40	60	11,844	17,766	29,610	7,800	588	90	10	4,128	459	4,586
	KD-20-3	1,300	Brick	18,385	1579	40	60	11,612	17,418	29,030	7,800	588	90	10	4,128	459	4,586
	Sub-Total	24,100				38	62	46,607	76,385	122,993	144,600		90	10	76,522	8,502	85,025
	Total	72,600				36	64	80,601	142,421	223,022	435,600		90	10	230,520	25,613	256,133

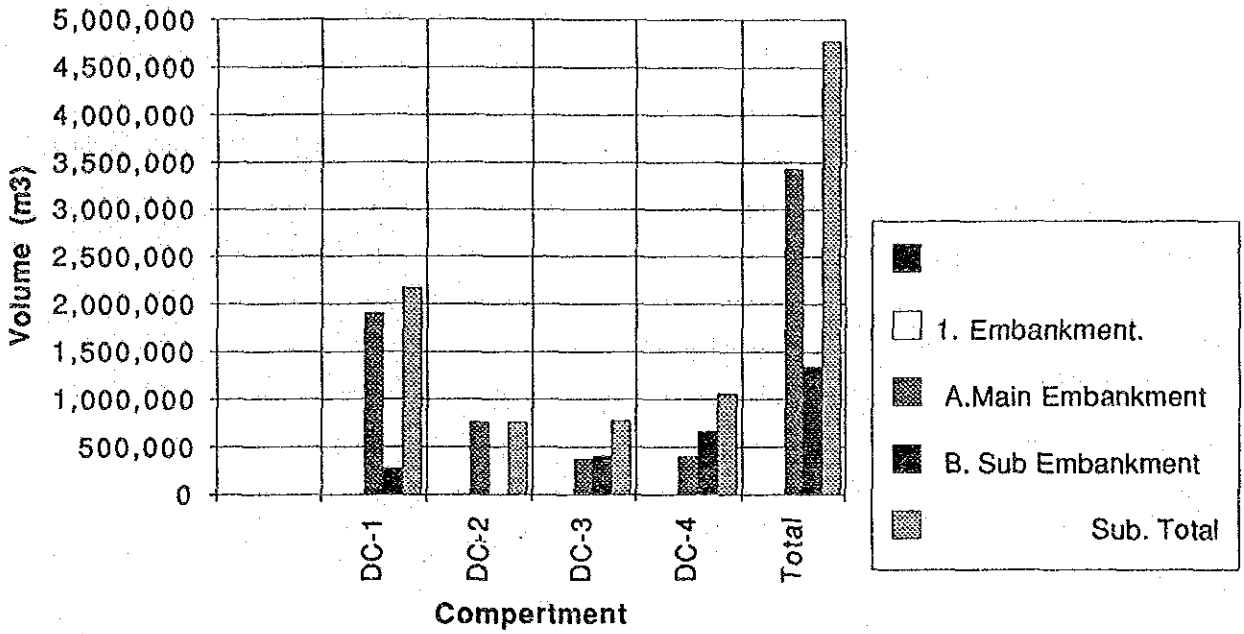
Table BQ 1.11 :CONSTRUCTION COST OF KHAL IMPROVEMENT AND TRUNK DRAIN WORKS

Dhaka East Zone (DC)

(1991 Price)

Zone	Khal	Length	Banking							Dredging							Land Acqisition						
			Volume	Unit Construction Cost			Construction Cost (1000TK)			Volume	Unit Construction Cost			Construction Cost (1000TK)			Area	Unit Price (1000Tk)			Cost (1000TK)		
	No.	(m)	(1000m3)	Total	F/C(%)	L/C (%)	F/C	L/C	Total	(1000m2)	Total	F/C(%)	L/C (%)	F/C	L/C	Total	(ha)	Total	F/C(%)	L/C (%)	F/C	L/C	Total
DC-1	KD-1-1	500	14.00	118	50	50	826	826	1,652	25.10	159	20	80	798	3,193	3,991	1.88	2,300	0	100	0	4,319	4,319
	KD-1-2	1,900	53.20	118	50	50	3,139	3,139	6,278	36.90	159	20	80	1,173	4,694	5,867	2.35	2,300	0	100	0	5,405	5,405
	KD-1-3	2,300	64.40	118	50	50	3,800	3,800	7,599	65.95	159	20	80	2,097	8,389	10,486	7.47	2,300	0	100	0	17,181	17,181
	KD-1-4	1,700	47.60	118	50	50	2,808	2,808	5,617	32.30	159	20	80	1,027	4,109	5,136	6.72	2,300	0	100	0	15,456	15,456
	KD-1-5	1,000	28.00	118	50	50	1,652	1,652	3,304	22.90	159	20	80	728	2,913	3,641	2.93	2,300	0	100	0	6,739	6,739
	KD-2	1,400	39.20	118	50	50	2,313	2,313	4,626	1.86	159	20	80	59	237	296	1.66	2,300	0	100	0	3,818	3,818
	KD-3-1	1,300	36.40	118	50	50	2,148	2,148	4,295	0.00	159	20	80	0	0	0	3.88	2,300	0	100	0	8,931	8,931
	KD-3-2	1,400	39.20	118	50	50	2,313	2,313	4,626	0.00	159	20	80	0	0	0	3.85	2,300	0	100	0	8,855	8,855
	KD-4	1,200	33.60	118	50	50	1,982	1,982	3,965	3.86	159	20	80	123	491	614	1.63	2,300	0	100	0	3,745	3,745
	KD-5-6	1,000	28.00	118	50	50	1,652	1,652	3,304	32.40	159	20	80	1,030	4,121	5,152	4.40	2,300	0	100	0	10,120	10,120
	KD-5-7	1,400	39.20	118	50	50	2,313	2,313	4,626	18.80	159	20	80	598	2,391	2,989	5.18	2,300	0	100	0	11,914	11,914
	KD-10-1	2,000	56.00	118	50	50	3,304	3,304	6,608	39.34	159	20	80	1,251	5,004	6,255	7.06	2,300	0	100	0	16,238	16,238
	KD-10-2	2,100	58.80	118	50	50	3,469	3,469	6,938	154.25	159	20	80	4,905	19,621	24,526	7.29	2,300	0	100	0	16,767	16,767
	Sub-Total	19,200	537.60				31,718	31,718	63,437	433.66				13,791	55,162	68,953	56.30				0	129,489	129,489
DC-2	KD-5-1	2,500	70.00	118	50	50	4,130	4,130	8,260	148.44	159	20	80	4,720	18,881	23,601	8.01	2,300	0	100	0	18,414	18,414
	KD-5-2	700	19.60	118	50	50	1,156	1,156	2,313	49.47	159	20	80	1,573	6,293	7,866	3.18	2,300	0	100	0	7,314	7,314
	KD-5-3	1,400	39.20	118	50	50	2,313	2,313	4,626	79.81	159	20	80	2,538	10,152	12,690	5.55	2,300	0	100	0	12,765	12,765
	KD-5-4	2,000	56.00	118	50	50	3,304	3,304	6,608	81.70	159	20	80	2,598	10,392	12,990	6.80	2,300	0	100	0	15,640	15,640
	KD-5-5	2,200	61.60	118	50	50	3,634	3,634	7,269	61.03	159	20	80	1,941	7,763	9,704	8.67	2,300	0	100	0	19,941	19,941
	KD-6	1,800	50.40	118	50	50	2,974	2,974	5,947	13.62	159	20	80	433	1,732	2,166	3.08	2,300	0	100	0	7,084	7,084
	KD-7-1	1,600	44.80	118	50	50	2,643	2,643	5,286	27.68	159	20	80	880	3,521	4,401	3.53	2,300	0	100	0	8,119	8,119
	KD-7-2	2,200	61.60	118	50	50	3,634	3,634	7,269	23.40	159	20	80	744	2,976	3,721	4.54	2,300	0	100	0	10,442	10,442
	KD-8	1,800	50.40	118	50	50	2,974	2,974	5,947	6.91	159	20	80	220	879	1,099	2.85	2,300	0	100	0	6,555	6,555
	KD-9	1,000	28.00	118	50	50	1,652	1,652	3,304	1.59	159	20	80	51	202	253	1.59	2,300	0	100	0	3,657	3,657
	Sub-Total	17,200	481.60				28,414	28,414	56,829	493.65				15,698	62,792	78,490	47.80				0	109,931	109,931
DC-3	KD-11-1	2,200	61.60	118	50	50	3,634	3,634	7,269	135.81	159	20	80	4,319	17,275	21,593	2.38	2,300	0	100	0	5,478	5,478
	KD-11-2	2,700	75.60	118	50	50	4,460	4,460	8,921	155.96	159	20	80	4,960	19,838	24,798	5.49	2,300	0	100	0	12,627	12,627
	KD-11-3	1,700	47.60	118	50	50	2,808	2,808	5,617	110.73	159	20	80	3,521	14,085	17,606	6.66	2,300	0	100	0	15,318	15,318
	KD-12-1	1,200	33.60	118	50	50	1,982	1,982	3,965	37.82	159	20	80	1,203	4,811	6,013	2.97	2,300	0	100	0	6,831	6,831
	KD-12-2	1,300	36.40	118	50	50	2,148	2,148	4,295	35.89	159	20	80	1,141	4,565	5,707	4.44	2,300	0	100	0	10,212	10,212
	KD-13-1	1,800	50.40	118	50	50	2,974	2,974	5,947	14.81	159	20	80	471	1,884	2,355	2.73	2,300	0	100	0	6,279	6,279
	KD-13-2	1,200	33.60	118	50	50	1,982	1,982	3,965	4.01	159	20	80	128	510	638	1.23	2,300	0	100	0	2,829	2,829
	Sub-Total	12,100	338.80				19,989	19,989	39,978	495.03				15,742	62,967	78,709	25.90				0	59,574	59,574
DC-4	KD-14-1	500	14.00	118	50	50	826	826	1,652	159.04	159	20	80	5,057	20,230	25,287	5.60	2,300	0	100	0	12,885	12,885
	KD-14-2	1,900	53.20	118	50	50	3,139	3,139	6,278	153.30	159	20	80	4,875	19,500	24,375	8.62	2,300	0	100	0	19,826	19,826
	KD-14-3	1,000	28.00	118	50	50	1,652	1,652	3,304	117.04	159	20	80	3,722	14,887	18,609	6.41	2,300	0	100	0	14,743	14,743
	KD-14-4	700	19.60	118	50	50	1,156	1,156	2,313	45.15	159	20	80	1,436	5,743	7,179	1.27	2,300	0	100	0	2,921	2,921
	KD-14-5	1,500	42.00	118	50	50	2,478	2,478	4,956	111.59	159	20	80	3,549	14,194	17,743	4.32	2,300	0	100	0	9,936	9,936
	KD-15-1	1,200	33.60	118	50	50	1,982	1,982	3,965	61.56	159	20	80	1,958	7,830	9,788	2.96	2,300	0	100	0	6,808	6,808
	KD-15-2	1,400	39.20	118	50	50	2,313	2,313	4,626	86.64	159	20	80	2,755	11,021	13,776	5.05	2,300	0	100	0	11,615	11,615
	KD-16	1,700	47.60	118	50	50	2,808	2,808	5,617	78.98	159	20	80	2,512	10,046	12,558	5.14	2,300	0	100	0	11,822	11,822
	KD-17-1	600	16.80	118	50	50	991	991	1,982	6.40	159	20	80	204	814	1,018	0.36	2,300	0	100	0	828	828
	KD-17-2	2,200	61.60	118	50	50	3,634	3,634	7,269	81.88	159	20	80	2,604	10,415	13,019	3.46	2,300	0	100	0	7,958	7,958
	KD-17-3	2,700	75.60	118	50	50	4,460	4,460	8,921	117.99	159	20	80	3,752	15,008	18,760	4.47	2,300	0	100	0	10,281	10,281
	KD-18-1	2,200	61.60	118	50	50	3,634	3,634	7,269	56.14	159	20	80	1,785	7,141	8,926	4.23	2,300	0	100	0	9,729	9,729
	KD-18-2	900	25.20	118	50	50	1,487	1,487	2,974	19.80	159	20	80	630	2,519	3,148	1.87	2,300	0	100	0	4,301	4,301
	KD-19	1,900	53.20	118	50	50	3,139	3,139	6,278	14.16	159	20	80	450	1,801	2,251	1.65	2,300	0	100	0	3,795	3,795
	KD-20-1	1,100	30.80	118	50	50	1,817	1,817	3,634	47.40	159	20	80	1,507	6,029	7,537	3.45	2,300	0	100	0	7,935	7,935
	KD-20-2	1,300	36.40	118	50	50	2,148	2,148	4,295	34.40	159	20	80	1,094	4,376	5,470	3.14	2,300	0	100	0	7,222	7,222
	KD-20-3	1,300	36.40	118	50	50	2,148	2,148	4,295	46.24	159	20	80	1,470	5,882	7,352	4.53	2,300	0	100	0	10,419	10,419
	Sub-Total	24,100	674.80				39,813	39,813	79,626	1,237.71				39,359	157,437	196,796	66.53				0	153,024	153,024
	Total	72,600	2,032.80				119,935	119,935	239,870	2,660.05				84,589	338,358	422,947	196.53				0	452,017	452,017

Embankment Volume:Dhaka East



Foundation Treatment Area :Dhaka East

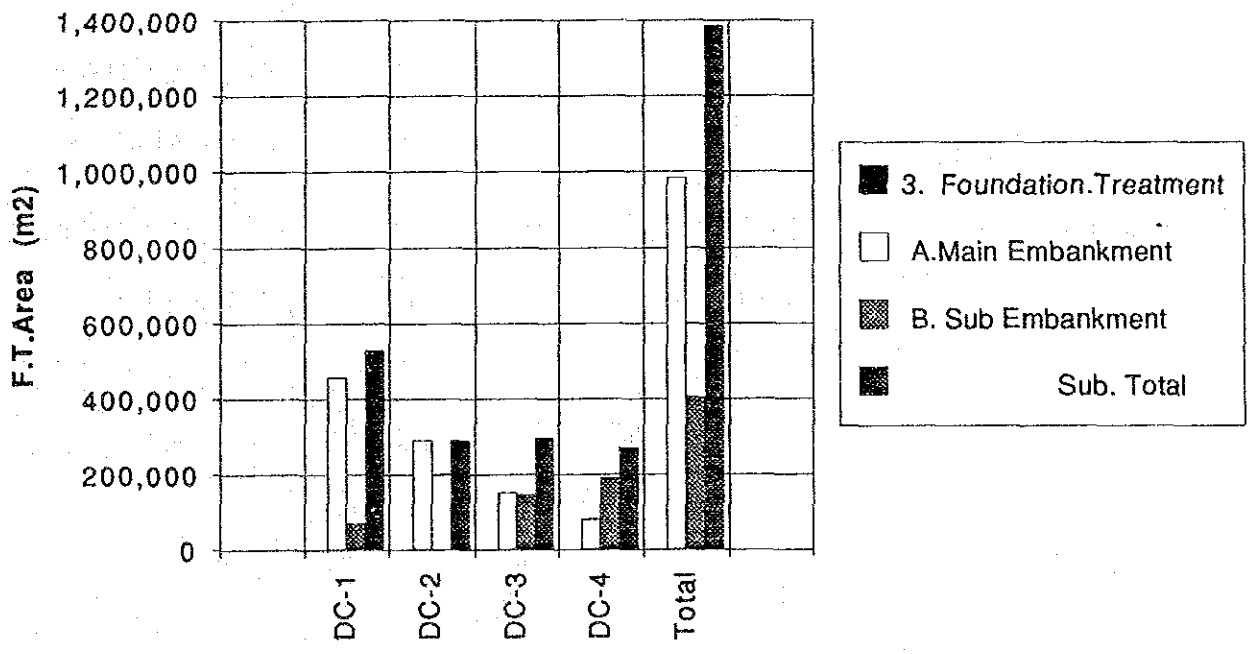
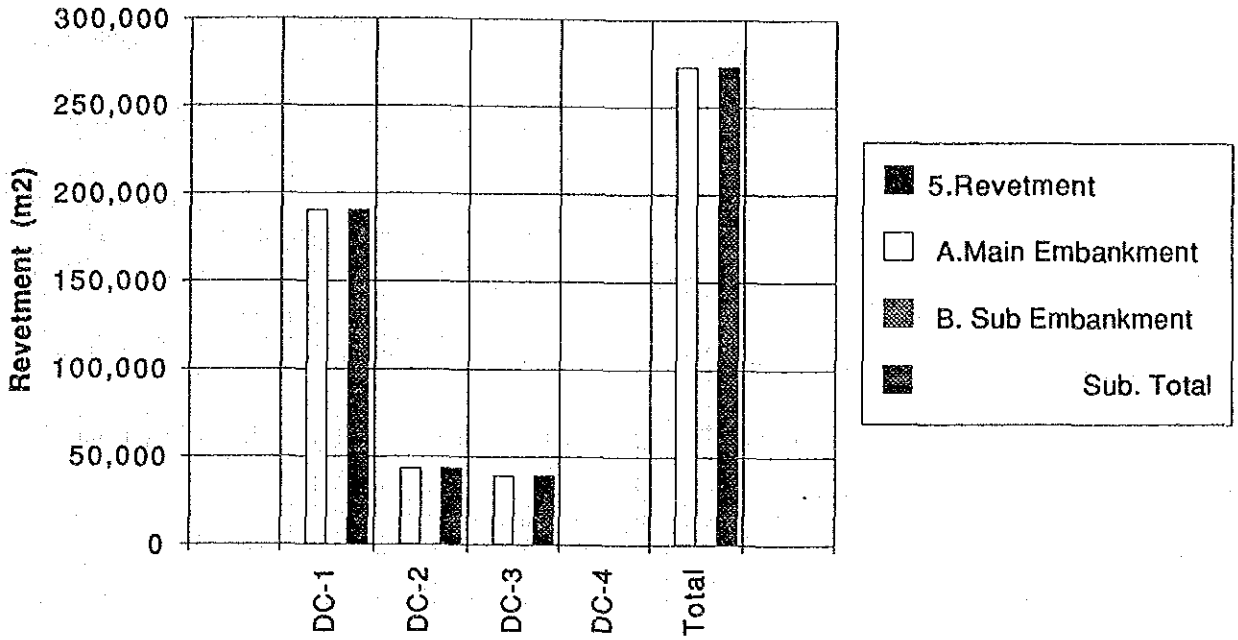


FIG. HD 1 | BQ of Embankment/Foundation

Revetment :Dhaka East



Sodding :Dhaka East

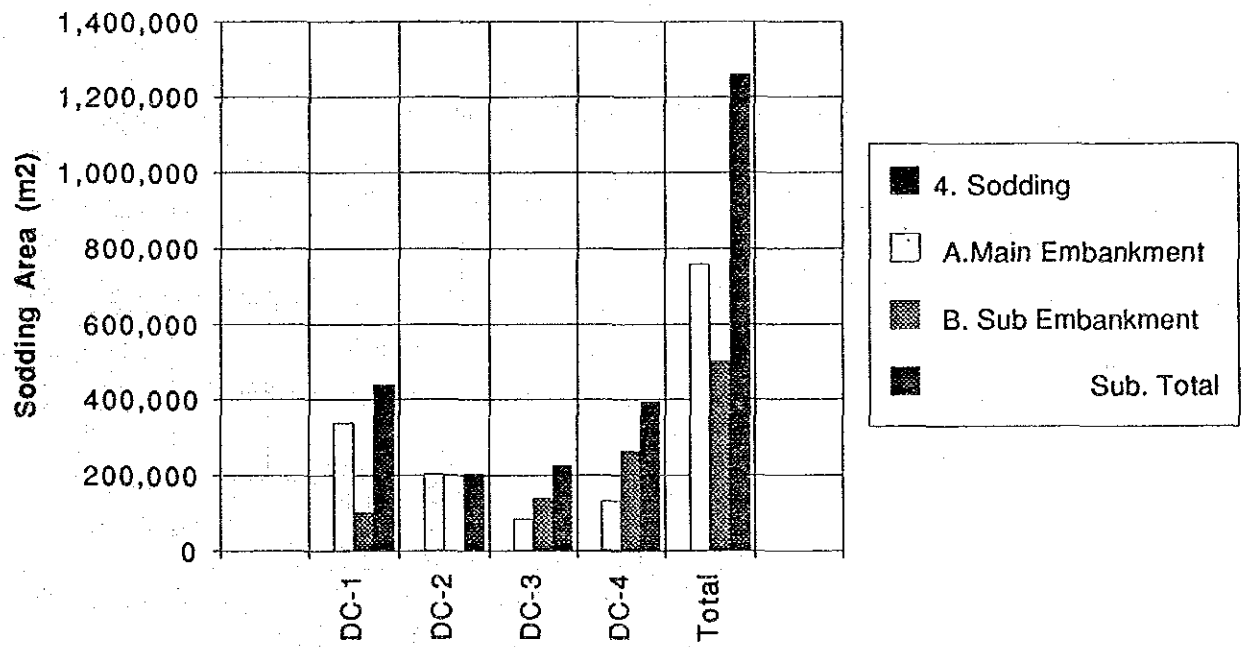
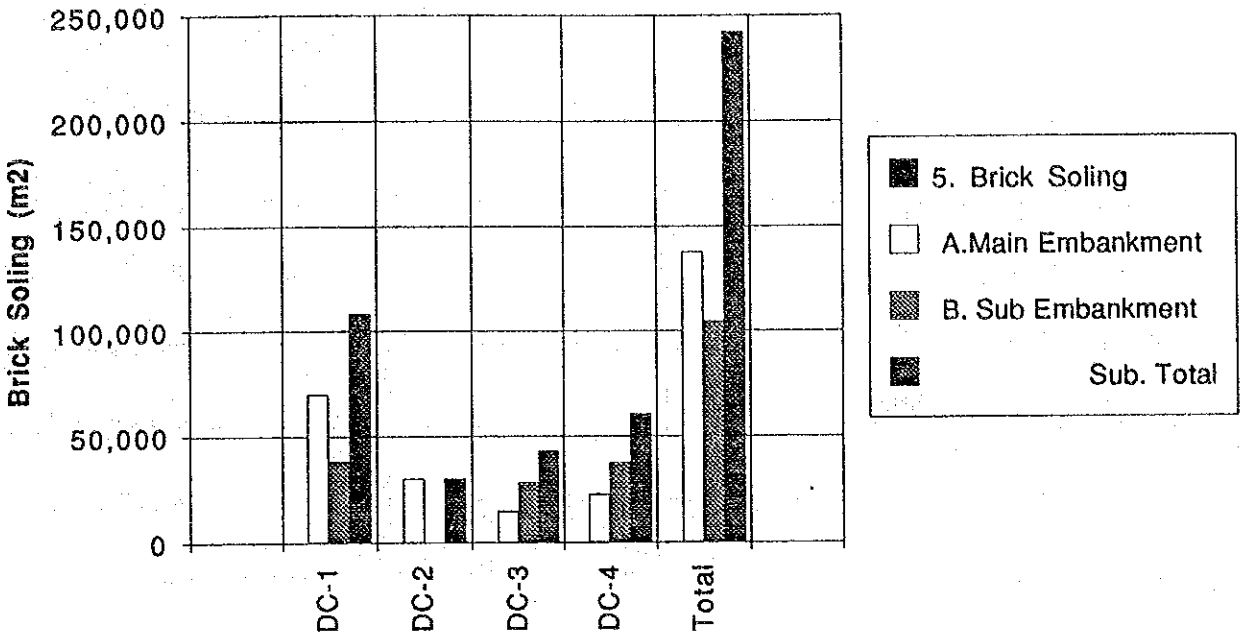


FIG. HD 2 | BQ of Revetment/Sodding

Brick Soling :Dhaka East



Flood Wall :Dhaka East

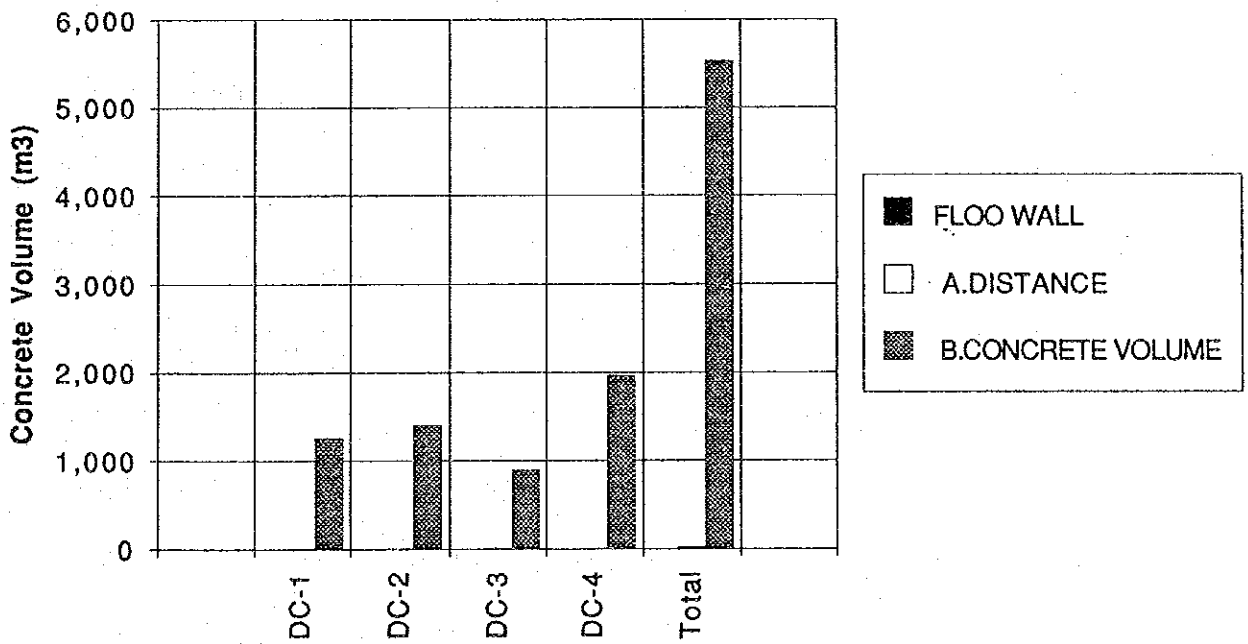


FIG. HD 3 | BQ of Brick Soling/Flood Wall

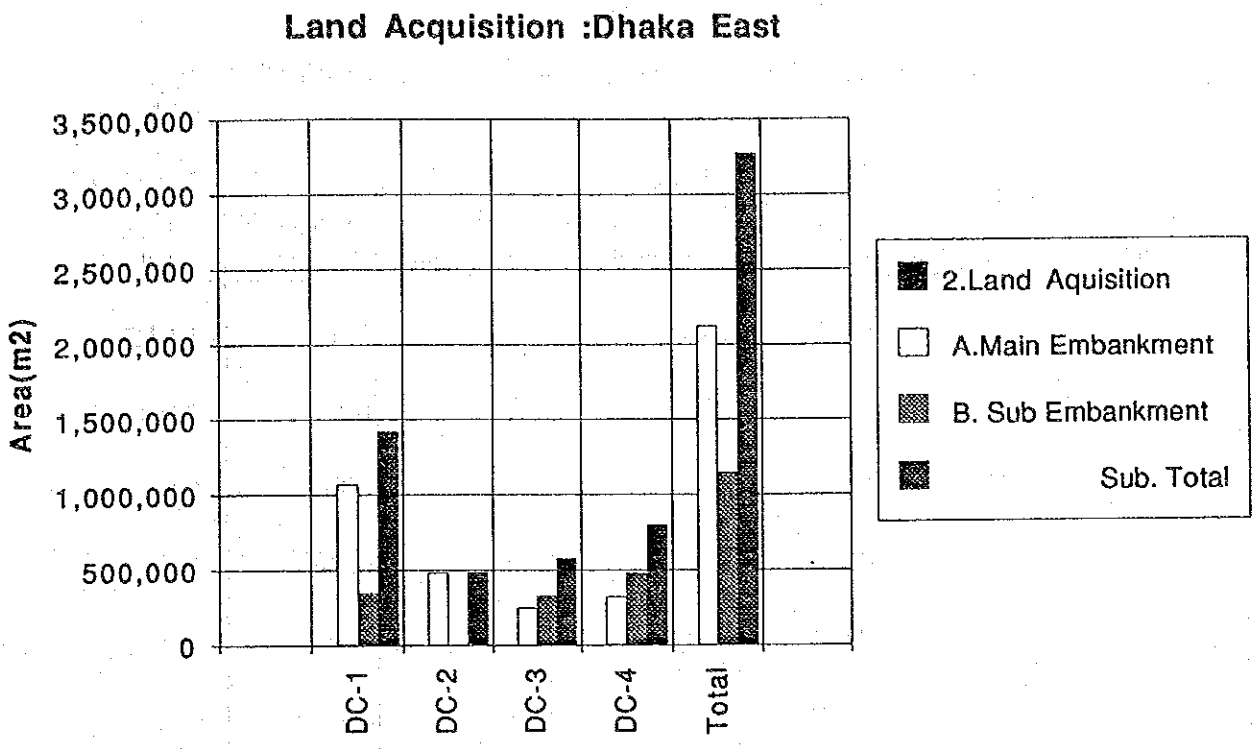


FIG. HD 4 | BQ of Land Acquisition

Table BQ 2.1 BQ of foot Protection of Existing Flood Wall :DND (DW)

Station No.	Distance (m)	Foot Earth Filling				Remarks No.of Stop.Log
		Earth Work		Sodding		
		Area (m2)	Volume (m3)	Width (m)	Area (m2)	
DW 1	400	9.6	3,840	7.74	3,096	
DW 2	400	6.4	2,560	5.71	2,284	
DW 3	400	4.0	1,600	8.67	3,468	
DW 4	400	8.8	3,520	5.19	2,076	
DW 5	400	9.6	3,840	7.83	3,132	
DW 6	400	18.4	7,360	7.78	3,112	
DW 20	400	1.6	640	1.28	512	
DW 24	400	8.8	3,520	4.21	1,684	
DW 26	400	10.4	4,160	7.65	3,060	
Total :	3600		31,040		22,424	14

Table BQ 2.2(1) : B.Q of Flood Wall : DND (DN)

Station	Distance (m)	Heightening of Wall			New Flood Wall (I-Type)					
		Height m	R.C.C Volume (m3)	Form work m2	Height m	R.C.C Volume (m3)	Form work m2	Excavation m3	Brick Soling m2	Back Filling m3
DN 0	200	-	-	-	1.20	100	960	230	50	180
DN 6	200	-	-	-	0.80	70	640	140	50	100
DN 7	400	0.25	18	320	-	-	-	-		
DN 9	400	0.20	16	200	-	-	-	-	-	-
DN 10	400	0.40	24	440	-	-	-	-	-	-
DN 12	400	0.20	16	200	-	-	-	-	-	-
DN 13	400	0.20	16	200	-	-	-	-	-	-
DN 14	400	0.25	18	320	-	-	-	-	-	-
DN 16	400	0.20	16	200	-	-	-	-	-	-
DN 17	400	0.20	16	200	-	-	-	-	-	-
DN 19	400	0.50	28	280	-	-	-	-	-	-
DN 20	400	0.50	28	280	-	-	-	-	-	-
DN 21	400	0.30	20	360	-	-	-	-	-	-
DN 22	180	-	-	-	0.40	36	288	54	45	45
Total:	4,980		216	3,000		206	1,888	424	145	325

Table BQ 2.2(2) : B.Q of Foot Protection of Flood Wall : DND (DN)

Station	Distance (m)	Foot Earth Filling				No. of Stop log
		Earth Work		Sodding		
		Area (m2)	Volume (m3)	Width (m)	Area (m2)	
						Total
DN 3	400	5.60	2,240	1.77	708	17
DN 5	400	3.20	1,280	0.39	156	
DN 7	400	12.00	4,800	8.81	3,524	
DN 9	400	13.60	5,440	9.42	3,768	
DN 10	400	9.60	3,840	7.82	3,128	
DN 12	400	14.40	5,760	11.09	4,436	
DN 13	400	21.60	8,640	11.78	4,712	
DN 14	400	12.00	4,800	9.53	3,812	
DN 16	400	11.20	4,480	8.55	3,420	
DN 17	400	16.80	6,720	8.59	3,436	
DN 18	400	23.20	9,280	12.75	5,100	
DN 19	400	2.40	960	2.60	1,040	
DN 20	400	10.40	4,160	8.58	3,432	
DN 21	400	16.80	6,720	9.39	3,756	
DN 22	180	-	-	-	-	
Total :	5780		69,120		44,428	17

Table BQ 2.3(1) :B.Q of flood Wall :DND (DE)

Station	Distance	Heightening of Wall			New Flood Wall (I-Type)					
		Height	R.C.C	Form work	Height	R.C.C	Form work	Excavation	Brick Soling	Back
	m	m	Volume (m3)	m2	m	Volume (m3)	m2	m3	m2	Filling (m3)
DE 0	100	-	-	-	0.70	30	280	60	25	45
DE 3	400	0.25	18	320	-	-	-	-	-	-
DE 6	400	0.2	16	200	-	-	-	-	-	-
DE 8	400	0.2	16	200	-	-	-	-	-	-
DE 13	400	-	-	-	0.80	140	1280	280	100	220
DE 15	400	0.2	16	200	-	-	-	-	-	-
DE 18	400	-	-	-	0.20	40	320	60	100	40
DE 19	400	0.2	16	200	-	-	-	-	-	-
DE 20	400	0.2	16	200	-	-	-	-	-	-
DE 22	400	0.2	16	200	-	-	-	-	-	-
DE 25	400	0.2	16	200	-	-	-	-	-	-
DE 26	150	-	-	-	0.45	30	270	53	38	38
Total :	4,250		130	1,720		240	2,150	453	263	343

Table BQ 2.3(2) :B.Q of Foot Protection of Flood Wall : DND (DE)

Station No.	Distance (m)	Foot Earth Filling				No. of Stop log m
		Earth work		Sodding		
		Area (m2)	Volume (m3)	Width (m)	Area (m2)	
DE 1	405	17	6,885	9.93	4,022	
DE 2	400	8.8	3,520	7.07	2,828	
DE 3	400	10	4,160	6.08	2,432	
DE 4	400	5.6	2,240	5.10	2,040	
DE 5	400	2.4	960	1.43	572	
DE 6	400	14	5,440	7.58	3,032	
DE 7	400	5.6	2,240	4.99	1,996	
DE 8	400	5.6	2,240	5.37	2,148	
DE 9	400	12	4,800	9.66	3,864	
DE 10	400	18	7,360	10.01	4,004	Total
DE 11	400	3.2	1,280	0.76	304	25
DE 12	400	4	1,600	1.30	520	
DE 13	400	4	1,600	1.75	700	
DE 14	400	3.2	1,280	1.97	788	
DE 15	400	8.8	3,520	4.88	1,952	
DE 16	400	2.4	960	1.63	652	
DE 17	400	4.8	1,920	2.61	1,044	
DE 19	400	6.4	2,560	3.03	1,212	
DE 20	400	12	4,800	4.88	1,952	
DE 21	400	-	-	-	-	
DE 22	400	14	5,440	7.07	2,828	
DE 25	400	25	9,920	14.61	5,844	
Total :	8,805		74,725		44,734	25

Table BQ 2.4 :B.Q of Flood Wall : DND (DS)

Station No.	Flood Wall Height m	Distance m	Flood Wall (I-Type) R.C.C Volume m3	Form Work m2	Exca-vation m3	Brick Soling m2	Back Filling m3	Foot Earth Filling				No. of Stop Log
								Earth Work		Sodding		
								Area m2	Volume m3	Width m	Area m2	
DS 0	1.50	0	-	-	-	-	-	-	-	-	-	
1	1.00	350	140	1400	315	88	245	1.50	525	1.66	581	
2	1.10	400	180	1760	400	100	320	10.00	4000	7.9	3160	2
3	1.50	400	240	2400	600	100	500	5.00	2000	4.74	1897	
4	1.00	400	160	1600	360	100	280	6.75	2700	5.0	2000	
5	-	400	-	-	-	400	-	6.00	2400	6.32	2528	
6	0.90	200	70	720	7	50	120	-	-	-	-	
Total :		2,150	790	7,880	1,682	838	1,465		11,625		10,166	2

Table BQ2.5(1) Main Feature of Proposed Sluice Gate:DND

No.	Sta. No.	Mark (Khal No.) Q(m3/s)	Dimensions of Culvert B (m)	H (m)	L (m)	N	Inlet B1 (m)	L1 (m)	Outlet B2 (m)	B3 (m)	B4 (m)	B5 (m)	L2 (m)	L3 (m)	O.Bridge L4 (m)	Khal Dimension (b1,b2,h1)	Remarks
J.DND																	
1	DE.10+300	20	3.00	3.00	21.50	6	21.50	10.00	47.00	23.00	27.80	29.80	12.00	10.00	7.00	33.50	Pump/Wall
		(KN-4) 143.5														45.30 5.90	P11 : (50.2 m3/s)
2	DE.17+350	19	2.40	2.70	-	2	-	-	-	-	-	-	-	-	-		P 10 (existing Pump.)

Table BQ 2.5(2) BQ OF SLUICE GATES :DHAKA EAST

Mark	Concrete				Sheet Pile	R.C Pile			Bed.	Excavation	Backfill
(Khal No.)	Inlet	Mainbox	Outlet	Total			Per No.	Total L	Protection		
Q(m3/s)				m3	m2	No	m	m	m2	m3	m3
		-1.40									
20	288.18	797.10	214.55	1299.82	580.20	181	8	1444	748	6635	1955
(KN-4)											
143.5											
19											

Table BQ 2.6: BQ of Pump Station : DND Area

Zone	No. (Khal No.)	Part	Bill of Quantities														
			Exca. (m3)	Banking (m3)	Backfill (m3)	R.C Pile (m)	Sheet.P (m2)	Leveling Conc. (m3)	Concrete (m3)	Re.Bar (t)	Form (m2)	Slope Protec. (m2)	Bed Protec. (Block) (m2)	Bed Protec. (Brick) (m2)	Sodding (m2)	Operation Bridge (m2)	Building (L.S)	Mechanic. & Electric. (L.S)
NA-1	P10	Pump Station (Q=14.5)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
		Sluice Way (2.4X2.7X2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	(KN-1)	Sub Total																
NA-1	P11	Pump Station (Q=50.2)	54,192	18,691	14,932	5,144	131	377	7,174	717	12,913	2,220	-	872	632	-	1	1
		Sluice Way (2.0X2.5X4)	-	-	-	2,115	207	172	1,174	106	2,583	-	147	-	-	11	-	1
	(KN-4)	Sub Total	54,192	18,691	14,932	7,259	338	550	8,348	823	15,495	2,220	147	872	632	11	1	1

Table BQ 2.7: BQ of Khal Improvement and Bridge : DND Area

Zone	Khal No.	Khal Length (km)	Open Channel Brick Protection (m2)	Open Channel Sodding (m2)	Covered Chal Box Culvert (m)	Covered Chal Brick Pipe (m)	Bridge (places)	Aqueduct (places)	Banking (1000m3)	Dredging (1000m3)	Maintenance Road (1000m2)	Land Acquisition (ha)
	KN-1-1	2.10	29,698	-	-	-	-	-	58.80	22.27	12.60	0.61
	KN-1-2	0.70	-	7,920	-	-	1	-	19.60	34.44	4.20	1.72
	KN-1-3	1.00	-	11,314	-	-	1	-	28.00	43.02	6.00	2.54
	KN-1-4	0.60	-	6,788	-	-	-	-	16.80	11.90	3.60	0.82
	KN-1-5	1.80	-	20,365	-	-	1	-	50.40	76.88	10.80	4.83
	KN-1-6	1.40	-	15,443	-	-	1	-	39.20	49.86	8.40	3.98
	KN-1-7	1.20	-	11,540	-	-	-	-	33.60	29.51	7.20	2.67
NA-1	KN-1-8	0.60	6,958	-	-	-	-	-	16.80	5.91	3.60	0.22
	KN-2-1	1.60	-	17,649	-	-	3	1	44.80	34.36	9.60	3.70
	KN-2-2	1.60	20,365	-	-	-	2	-	44.80	21.32	9.60	2.37
	KN-3	1.70	-	18,752	-	-	1	-	47.60	16.78	10.20	2.92
	KN-13	1.20	-	13,237	-	-	1	-	33.60	39.35	7.20	3.49
	KN-14-1	1.50	-	16,546	-	-	-	-	42.00	48.18	9.00	4.92
	KN-14-2	1.50	-	16,122	-	-	-	-	42.00	36.30	9.00	4.45
	KN-14-3	1.60	18,554	-	-	-	1	-	44.80	27.68	9.60	3.18
	KN-15	1.60	-	14,482	-	-	1	-	44.80	11.69	9.60	4.32
	KN-16	2.20	29,246	-	-	-	-	-	61.60	43.04	13.20	4.68
	Sub-Total	23.90	104,822	170,158	0	0	13	1	669.20	552.49	143.40	51.42
	KN-4-1	1.80	26,474	-	-	-	3	-	50.40	229.56	10.80	4.37
	KN-4-2	1.30	-	15,443	-	-	-	-	36.40	118.68	7.80	4.93
	KN-4-3	1.20	-	14,255	-	-	2	-	33.60	61.65	7.20	2.61
	KN-4-4	1.50	-	16,971	-	-	2	-	42.00	73.93	9.00	4.16
	KN-4-5	1.80	23,419	-	-	-	4	-	50.40	24.91	10.80	1.27
	KN-4-6	0.80	9,730	-	-	-	1	-	22.40	20.80	4.80	0.67
	KN-5-1	1.80	-	20,874	-	-	-	-	50.40	256.96	10.80	6.03
NA-2	KN-5-2	1.00	14,142	-	-	-	-	-	28.00	67.23	6.00	2.40
	KN-6	0.90	-	10,182	-	-	-	-	25.20	18.44	5.40	1.36
	KN-7-1	2.40	-	28,511	-	-	1	1	67.20	196.23	14.40	7.92
	KN-7-2	0.80	-	9,504	-	-	-	-	22.40	42.41	4.80	2.52
	KN-7-3	1.20	17,310	-	-	-	-	-	33.60	24.82	7.20	1.36
	KN-7-4	1.40	18,611	-	-	-	6	-	39.20	34.30	8.40	1.18
	KN-7-5	0.80	9,956	-	-	-	1	-	22.40	8.70	4.80	0.58
	KN-8	1.00	-	11,597	-	-	-	-	28.00	20.54	6.00	1.65
	KN-9	1.30	-	15,076	-	-	1	-	36.40	31.32	7.80	2.20
	KN-10	1.80	-	18,328	-	-	2	-	50.40	20.00	10.80	2.43
	KN-11	1.40	-	16,235	-	-	-	-	39.20	30.19	8.40	3.14
	KN-12	1.60	20,817	-	-	-	1	-	44.80	8.96	9.60	0.76
	KN-17	1.50	-	14,849	-	-	1	-	42.00	47.32	9.00	4.18
	Sub-Total	27.30	140,460	191,824	0	0	25	1	764.40	1,336.95	163.80	55.72
	Total	51.20	245,281	361,982	0	0	38	2	1,433.60	1,889.44	307.20	107.14

Table BQ 2.8 :CONSTRUCTION COST OF KHAL IMPROVEMENT AND TRUNK DRAIN WORKS : DND AREA

DND Project Area (NA)

(1991 Price)

Zone	Khal	Length	Open Channel								Maintenance Road						
			Type	Area	Unit Construction Cost			Construction Cost (1000TK)			Area	Unit Construction Cost			Construction Cost (1000TK)		
		m		(m2)	Total	F/C(%)	L/C(%)	F/C	L/C	Total	(m2)	Total	F/C(%)	L/C (%	F/C	L/C	Total
	KN-1-1	2,100	Brick	29,698	1579	40	60	18,758	28,136	46,894	12,600	588	90	10	6,668	741	7,409
	KN-1-2	700	Sodding	7,920	60	20	80	95	380	475	4,200	588	90	10	2,223	247	2,470
	KN-1-3	1,000	Sodding	11,314	60	20	80	136	543	679	6,000	588	90	10	3,175	353	3,528
	KN-1-4	600	Sodding	6,788	60	20	80	81	326	407	3,600	588	90	10	1,905	212	2,117
	KN-1-5	1,800	Sodding	20,365	60	20	80	244	978	1,222	10,800	588	90	10	5,715	635	6,350
	KN-1-6	1,400	Sodding	15,443	60	20	80	185	741	927	8,400	588	90	10	4,445	494	4,939
	KN-1-7	1,200	Sodding	11,540	60	20	80	138	554	692	7,200	588	90	10	3,810	423	4,234
NA-1	KN-1-8	600	Brick	6,958	1579	40	60	4,395	6,592	10,987	3,600	588	90	10	1,905	212	2,117
	KN-2-1	1,600	Sodding	17,649	60	20	80	212	847	1,059	9,600	588	90	10	5,080	564	5,645
	KN-2-2	1,600	Brick	20,365	1579	40	60	12,862	19,293	32,156	9,600	588	90	10	5,080	564	5,645
	KN-3	1,700	Sodding	18,752	60	20	80	225	900	1,125	10,200	588	90	10	5,398	600	5,998
	KN-13	1,200	Sodding	13,237	60	20	80	159	635	794	7,200	588	90	10	3,810	423	4,234
	KN-14-1	1,500	Sodding	16,546	60	20	80	199	794	993	9,000	588	90	10	4,763	529	5,292
	KN-14-2	1,500	Sodding	16,122	60	20	80	193	774	967	9,000	588	90	10	4,763	529	5,292
	KN-14-3	1,600	Brick	18,554	1579	40	60	11,719	17,579	29,298	9,600	588	90	10	5,080	564	5,645
	KN-15	1,600	Sodding	14,482	60	20	80	174	695	869	9,600	588	90	10	5,080	564	5,645
	KN-16	2,200	Brick	29,246	1579	40	60	18,472	27,708	46,179	13,200	588	90	10	6,985	776	7,762
	Sub-Total	23,900				39	61	68,247	107,475	175,723	143,400		90	10	75,887	8,432	84,319
	KN-4-1	1,800	Brick	26,474	1579	40	60	16,721	25,082	41,803	10,800	588	90	10	5,715	635	6,350
	KN-4-2	1,300	Sodding	15,443	60	20	80	185	741	927	7,800	588	90	10	4,128	459	4,586
	KN-4-3	1,200	Sodding	14,255	60	20	80	171	684	855	7,200	588	90	10	3,810	423	4,234
	KN-4-4	1,500	Sodding	16,971	60	20	80	204	815	1,018	9,000	588	90	10	4,763	529	5,292
	KN-4-5	1,800	Brick	23,419	1579	40	60	14,792	22,188	36,979	10,800	588	90	10	5,715	635	6,350
	KN-4-6	800	Brick	9,730	1579	40	60	6,145	9,218	15,363	4,800	588	90	10	2,540	282	2,822
	KN-5-1	1,800	Sodding	20,874	60	20	80	250	1,002	1,252	10,800	588	90	10	5,715	635	6,350
NA-2	KN-5-2	1,000	Brick	14,142	1579	40	60	8,932	13,398	22,330	6,000	588	90	10	3,175	353	3,528
	KN-6	900	Sodding	10,182	60	20	80	122	489	611	5,400	588	90	10	2,858	318	3,175
	KN-7-1	2,400	Sodding	28,511	60	20	80	342	1,369	1,711	14,400	588	90	10	7,620	847	8,467
	KN-7-2	800	Sodding	9,504	60	20	80	114	456	570	4,800	588	90	10	2,540	282	2,822
	KN-7-3	1,200	Brick	17,310	1579	40	60	10,933	16,399	27,332	7,200	588	90	10	3,810	423	4,234
	KN-7-4	1,400	Brick	18,611	1579	40	60	11,755	17,632	29,387	8,400	588	90	10	4,445	494	4,939
	KN-7-5	800	Brick	9,956	1579	40	60	6,288	9,432	15,721	4,800	588	90	10	2,540	282	2,822
	KN-8	1,000	Sodding	11,597	60	20	80	139	557	696	6,000	588	90	10	3,175	353	3,528
	KN-9	1,300	Sodding	15,076	60	20	80	181	724	905	7,800	588	90	10	4,128	459	4,586
	KN-10	1,800	Sodding	18,328	60	20	80	220	880	1,100	10,800	588	90	10	5,715	635	6,350
	KN-11	1,400	Sodding	16,235	60	20	80	195	779	974	8,400	588	90	10	4,445	494	4,939
	KN-12	1,600	Brick	20,817	1579	40	60	13,148	19,722	32,870	9,600	588	90	10	5,080	564	5,645
	KN-17	1,500	Sodding	14,849	60	20	80	178	713	891	9,000	588	90	10	4,763	529	5,292
	Sub-Total	27,300				39	61	91,016	142,279	233,295	163,800		90	10	86,683	9,631	96,314
	Total	51,200				39	61	159,263	249,755	409,018	307,200		90	10	162,570	18,063	180,634

Table BQ 2.9:CONSTRUCTION COST OF KHAL IMPROVEMENT AND TRUNK DRAIN WORKS

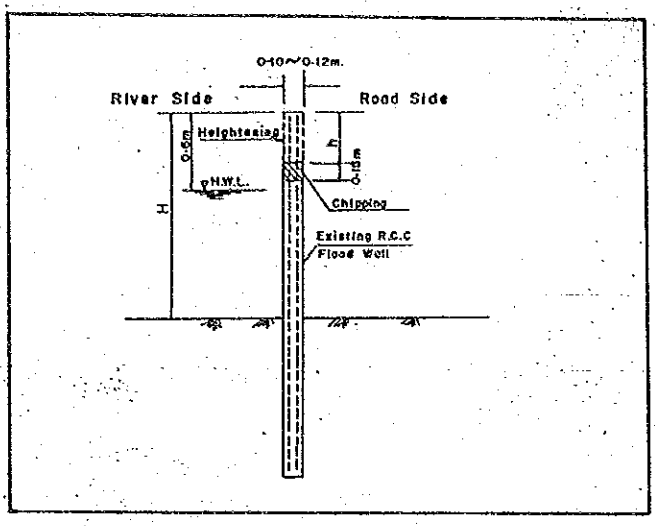
DND Project Area (NA)

(1991 Price)

Zone	Khal	Length	Banking							Dredging							Land Acqisition						
			Volume	Unit Construction Cost			Construction Cost (1000TK)			Volume	Unit Construction Cost			Construction Cost (1000TK)			Area	Unit Price (1000Tk)			Cost (1000TK)		
		m	(1000m3)	Total	F/C(%)	L/C (%)	F/C	L/C	Total	(1000m2)	Total	F/C(%)	L/C (%)	F/C	L/C	Total	(ha)	Total	F/C(%)	L/C (%)	F/C	L/C	Total
	KN-1-1	2,100	58.80	118	50	50	3,469	3,469	6,938	22.27	159	20	80	708	2,833	3,541	0.61	3,100	0	100	0	1,891	1,891
	KN-1-2	700	19.60	118	50	50	1,156	1,156	2,313	34.44	159	20	80	1,095	4,381	5,476	1.72	3,100	0	100	0	5,332	5,332
	KN-1-3	1,000	28.00	118	50	50	1,652	1,652	3,304	43.02	159	20	80	1,368	5,472	6,840	2.54	3,100	0	100	0	7,874	7,874
	KN-1-4	600	16.80	118	50	50	991	991	1,982	11.90	159	20	80	378	1,514	1,892	0.82	3,100	0	100	0	2,542	2,542
	KN-1-5	1,800	50.40	118	50	50	2,974	2,974	5,947	76.88	159	20	80	2,445	9,779	12,224	4.83	3,100	0	100	0	14,973	14,973
	KN-1-6	1,400	39.20	118	50	50	2,313	2,313	4,626	49.86	159	20	80	1,586	6,342	7,928	3.98	3,100	0	100	0	12,338	12,338
	KN-1-7	1,200	33.60	118	50	50	1,982	1,982	3,965	29.51	159	20	80	938	3,754	4,692	2.67	3,100	0	100	0	8,277	8,277
NA-1	KN-1-8	600	16.80	118	50	50	991	991	1,982	5.91	159	20	80	188	752	940	0.22	3,100	0	100	0	682	682
	KN-2-1	1,600	44.80	118	50	50	2,643	2,643	5,286	34.36	159	20	80	1,093	4,371	5,463	3.70	3,100	0	100	0	11,470	11,470
	KN-2-2	1,600	44.80	118	50	50	2,643	2,643	5,286	21.32	159	20	80	678	2,712	3,390	2.37	3,100	0	100	0	7,347	7,347
	KN-3	1,700	47.60	118	50	50	2,808	2,808	5,617	16.78	159	20	80	534	2,134	2,668	2.92	3,100	0	100	0	9,052	9,052
	KN-13	1,200	33.60	118	50	50	1,982	1,982	3,965	39.35	159	20	80	1,251	5,005	6,257	3.49	3,100	0	100	0	10,819	10,819
	KN-14-1	1,500	42.00	118	50	50	2,478	2,478	4,956	48.18	159	20	80	1,532	6,128	7,661	4.92	3,100	0	100	0	15,252	15,252
	KN-14-2	1,500	42.00	118	50	50	2,478	2,478	4,956	36.30	159	20	80	1,154	4,617	5,772	4.45	3,100	0	100	0	13,795	13,795
	KN-14-3	1,600	44.80	118	50	50	2,643	2,643	5,286	27.68	159	20	80	880	3,521	4,401	3.18	3,100	0	100	0	9,858	9,858
	KN-15	1,600	44.80	118	50	50	2,643	2,643	5,286	11.69	159	20	80	372	1,487	1,859	4.32	3,100	0	100	0	13,392	13,392
	KN-16	2,200	61.60	118	50	50	3,634	3,634	7,269	43.04	159	20	80	1,369	5,475	6,843	4.68	3,100	0	100	0	14,508	14,508
	Sub-Total	23,900	669.20				39,483	39,483	78,966	552.49				17,569	70,277	87,846	51.42				0	159,402	159,402
	KN-4-1	1,800	50.40	118	50	50	2,974	2,974	5,947	229.56	159	20	80	7,300	29,200	36,500	4.37	3,100	0	100	0	13,547	13,547
	KN-4-2	1,300	36.40	118	50	50	2,148	2,148	4,295	118.68	159	20	80	3,774	15,096	18,870	4.93	3,100	0	100	0	15,283	15,283
	KN-4-3	1,200	33.60	118	50	50	1,982	1,982	3,965	61.65	159	20	80	1,960	7,842	9,802	2.61	3,100	0	100	0	8,091	8,091
	KN-4-4	1,500	42.00	118	50	50	2,478	2,478	4,956	73.93	159	20	80	2,351	9,404	11,755	4.16	3,100	0	100	0	12,896	12,896
	KN-4-5	1,800	50.40	118	50	50	2,974	2,974	5,947	24.91	159	20	80	792	3,169	3,961	1.27	3,100	0	100	0	3,937	3,937
	KN-4-6	800	22.40	118	50	50	1,322	1,322	2,643	20.80	159	20	80	661	2,646	3,307	0.67	3,100	0	100	0	2,077	2,077
	KN-5-1	1,800	50.40	118	50	50	2,974	2,974	5,947	256.96	159	20	80	8,171	32,685	40,857	6.03	3,100	0	100	0	18,693	18,693
NA-2	KN-5-2	1,000	28.00	118	50	50	1,652	1,652	3,304	67.23	159	20	80	2,138	8,552	10,690	2.40	3,100	0	100	0	7,440	7,440
	KN-6	900	25.20	118	50	50	1,487	1,487	2,974	18.44	159	20	80	586	2,346	2,932	1.36	3,100	0	100	0	4,216	4,216
	KN-7-1	2,400	67.20	118	50	50	3,965	3,965	7,930	196.23	159	20	80	6,240	24,960	31,201	7.92	3,100	0	100	0	24,552	24,552
	KN-7-2	800	22.40	118	50	50	1,322	1,322	2,643	42.41	159	20	80	1,349	5,395	6,743	2.52	3,100	0	100	0	7,812	7,812
	KN-7-3	1,200	33.60	118	50	50	1,982	1,982	3,965	24.82	159	20	80	789	3,157	3,946	1.36	3,100	0	100	0	4,216	4,216
	KN-7-4	1,400	39.20	118	50	50	2,313	2,313	4,626	34.30	159	20	80	1,091	4,363	5,454	1.18	3,100	0	100	0	3,658	3,658
	KN-7-5	800	22.40	118	50	50	1,322	1,322	2,643	8.70	159	20	80	277	1,107	1,383	0.58	3,100	0	100	0	1,798	1,798
	KN-8	1,000	28.00	118	50	50	1,652	1,652	3,304	20.54	159	20	80	653	2,613	3,266	1.65	3,100	0	100	0	5,115	5,115
	KN-9	1,300	36.40	118	50	50	2,148	2,148	4,295	31.32	159	20	80	996	3,984	4,980	2.20	3,100	0	100	0	6,820	6,820
	KN-10	1,800	50.40	118	50	50	2,974	2,974	5,947	20.00	159	20	80	636	2,544	3,180	2.43	3,100	0	100	0	7,533	7,533
	KN-11	1,400	39.20	118	50	50	2,313	2,313	4,626	30.19	159	20	80	960	3,840	4,800	3.14	3,100	0	100	0	9,734	9,734
	KN-12	1,600	44.80	118	50	50	2,643	2,643	5,286	8.96	159	20	80	285	1,140	1,425	0.76	3,100	0	100	0	2,356	2,356
	KN-17	1,500	42.00	118	50	50	2,478	2,478	4,956	47.32	159	20	80	1,505	6,019	7,524	4.18	3,100	0	100	0	12,958	12,958
	Sub-Total	27,300	764.40				45,100	45,100	90,199	1,336.95				42,515	170,060	212,575	55.72				0	172,732	172,732
	Total	51,200	1,433.60				84,582	84,582	169,165	1,889.44				60,084	240,337	300,421	107.14				0	332,134	332,134

Fig. HD 5(1) : BQ of Construction and Rehabilitation Works of Flood Wall - Heightening

HEIGHTENING EXISTING FLOOD WALL



H = 0.5m
H + 0.15 m = 0.5+0.15 = 0.65m

1) Chipping = 0.11m 0.15m x 1m = 0.0165m3

2) Heightening : h+0.15 = 0.5+0.15 = 0.65m
(R.C.C) = 0.65m x 0.11m x 1m = 0.0715m

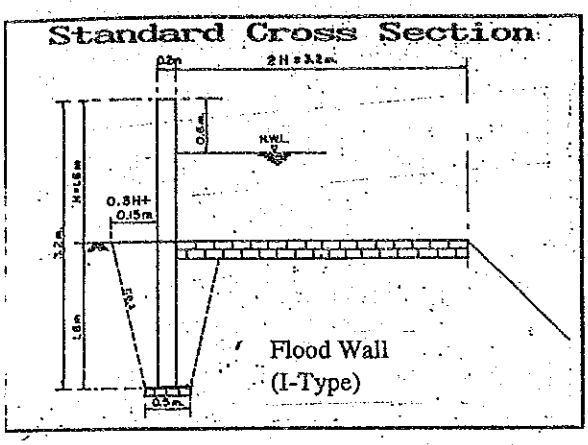
3) Form Work : 0.65m x 1m x 2 = 1.3m2

HEIGHTENING

Heightening of Flood Wall (m)	Chipping Volume m3	R.C.C Volume m3	Form Work m2	Remarks
H = 0.3 m	0.0165	0.0495	0.90	Chipping required same
H = 0.5 m	0.0165	0.0715	1.30	in all the flood wall to
H = 0.8 m	0.0165	0.1045	1.90	be raised.

Fig. HD 5(2) : BQ of Construction and Rehabilitation Works of Flood Wall - Heightening - I Type Wall

CONSTRUCTION OF NEW I-TYPE FLOOD WALL



H = 1.0m
2H = 2 x 1.0m = 2.0m/ (H+0.08 = 1.0+0.08) = 1.08m)
0.3H+0.15~ 0.3 x1.08+0.15 = 0.474m

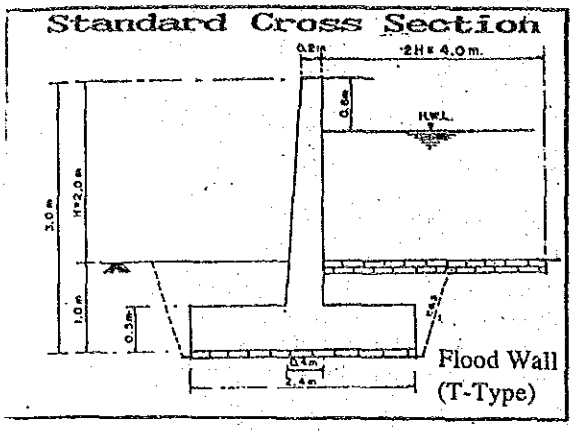
1) RCC = 0.2m x 2.0m x 1.0m = 0.4m3
2) Form Work = 2m x 2 x 1m = 4m2
3) Excavation = $\frac{(0.474m \times 2+0.2)+0.50)}{2}$ x1.08 = 0.89m3
4) Back fill = 0.89 m3 - 0.2mx1.08m = 0.68m3
5) Brick soling = 2H, 2mx1m = 2m2 (Top)
Total = 2.25 m2

FLOOD WALL (I-TYPE).

Wall Height (Hm)	R. C. C. m3/m	Form Work m2/m	Excavation m3/m	Back fill m3/3	Brick Soling (m2/m)		Remark
					Foot Protection	Under base	
H = 1.0 m	0.4	4	0.89	0.68	4.0	0.25	
H = 1.5m	0.6	6	1.54	1.22	4.0	0.25	1 m is taken as unit
H = 2.0m	0.8	8	2.34	1.93	4.0	0.25	length

Fig. HD 5(3) : BQ of Construction and Rehabilitation Works of Flood Wall - Heightening - T Type Wall

CONSTRUCTION OF NEW T-TYPE FLOOD WALL



H = 2.0m/H + 0.4 = 2 + 0.4 = 2.4m

1) RCC work : (0.2+0.4)m x 2.5m x 1m = 0.75 m3
(2+0.4)m x 0.5m x 1m = 1.20m3
= 1.95m3

2) Bricksoling (2+0.4)m x 1m = 2.4 m2

3) Excavation : (0.3 x1.08 x 2 + 0.15 x 2 + 2.0 + 0.4)m = 3.348m
2.0 + 0.4 + 0.15 x 2 = 2.7 m
$\frac{(3.348 + 2.7)m}{2}$ x 1.08m x 1m = 3.266m3

4) Form Work : (2.0 + 1.0) x 2 = 6m2

5) Backfill : 3.266-{2.4x0.58+$\frac{(0.4+0.36)}{2}$x0.5} = 1.684m3

FLOOD WALL (T)

FLOOD WALL (T-TYPE).

T-Wall Height (Hm)	R. C. C.	Form Work m2/m	Exca-vation m3/m	Back fill m3/m	Brick Soling m2/m		Remarks
					Foot Protection	Under base	
H = 2.0 m	1.95	6	3.266	1.684	4	2.4	Brick soling required
H = 2.5 m	2.35	7	3.806	1.934	5	2.9	only under the base slab.
H = 3.0 m	2.75	8	4.346	2.184	6	3.4	

Table BQ 3.1(1) : Narayanganj West - Base of BQ of Embankment (NW)

Each Stage U = 80%

Station	Distance	Accumulative Distance	Ground Elevation	Top of Embankment	Embankment Height	Design N	1st Stage	2nd Stage	3rd Stage	Mater	B. Width	S.U. (m)	S.D. (m)
NW 0	0.0	0.0	5.42	7.96	2.54	2.00	2.54			29.7	24.2	8.0	13.0
1	39.0	39.0	6.26	7.96	1.70	2.00	1.70			15.5	14.2	5.4	5.4
2	200.0	239.0	5.36	7.97	2.61	2.00	2.61			31.4	24.7	8.3	13.3
3	200.0	439.0	5.25	7.98	2.73	2.00	2.73			34.4	25.4	8.6	13.6
4	200.0	639.0	5.85	7.99	2.14	2.00	2.14			22.3	16.8	6.8	6.8
5	200.0	839.0	6.51	8.00	1.49	2.00	1.49			12.6	12.9	4.7	4.7
6	200.0	1,039.0	5.75	8.01	2.26	2.00	2.26			24.3	17.5	7.1	7.1
7	200.0	1,239.0	5.49	8.01	2.52	2.00	2.52			29.4	24.1	8.0	13.0
8	200.0	1,439.0	5.06	8.02	2.96	2.00	2.96			40.5	26.8	9.4	14.4
9	200.0	1,639.0	6.91	8.03	1.12	2.00	1.12			8.3	10.7	3.5	3.5
10	200.0	1,839.0	6.03	8.04	2.01	2.00	2.01			20.2	16.1	6.4	6.4
11	200.0	2,039.0	5.09	8.05	2.96	2.00	2.96			40.4	26.8	9.4	14.4
12	200.0	2,239.0	5.07	8.07	3.00	2.00	3.00			41.5	27.0	9.5	14.5
12	200.0	2,439.0	6.75	8.09	1.34	2.00	1.34			10.7	12.0	4.2	4.2
14	200.0	2,639.0	6.29	8.11	1.82	2.00	1.82			17.2	14.9	5.7	5.7
15	200.0	2,839.0	5.02	8.13	3.11	2.00	3.11			44.4	27.6	9.8	14.8
16	200.0	3,039.0	6.06	8.15	2.09	2.00	2.09			21.4	16.5	6.6	6.6
17	200.0	3,239.0	6.31	8.17	1.86	2.00	1.86			17.8	15.1	5.9	5.9
18	200.0	3,439.0	5.30	8.19	2.89	2.00	2.89			38.5	26.3	9.1	14.1
19	200.0	3,639.0	4.77	8.21	3.44	2.00	3.44			53.8	29.6	10.9	15.9
20	200.0	3,839.0	6.45	8.22	1.77	2.00	1.77			16.6	14.6	5.6	5.6
21	200.0	4,039.0	6.55	8.24	1.69	2.00	1.69			15.4	14.2	5.4	5.4
22	200.0	4,239.0	6.67	8.26	1.59	2.00	1.59			14.0	13.6	5.0	5.0
23	200.0	4,439.0	6.09	8.28	2.19	2.00	2.19			23.2	17.2	6.9	6.9
24	200.0	4,639.0	5.20	8.30	3.10	2.00	3.10			44.3	27.6	9.8	14.8
25	200.0	4,839.0	5.27	8.32	3.05	2.00	3.05			42.9	27.3	9.7	14.7
26	200.0	5,039.0	5.12	8.34	3.22	2.00	3.22			47.6	28.3	10.2	15.2
27	200.0	5,239.0	5.22	8.36	3.14	2.00	3.14			45.4	27.8	9.9	14.9
28	200.0	5,439.0	5.79	8.38	2.59	2.00	2.59			30.9	24.5	8.2	13.2
29	200.0	5,639.0	6.86	8.40	1.54	2.00	1.54			13.3	13.2	4.9	4.9
				AVE	2.43					847.9	617.5	222.9	297.9
				MAX	3.44								
				MIN	1.12								

Table BQ 3.1(2) : Narayanganj West - Stage Construction of Embankment (NE)

Each Stage U = 80%

Station	Distance	Accumulative Distance	Ground Elevation	Top of Embankment	Embankment Height	Design N	1st Stage	2nd Stage	3rd Stage	Mater	B. Width	S.U. (m)	S.D. (m)
NE 62	0.0	14,430.0	4.52	8.35	3.83	7.50	3.83			66.0	32.0	12.1	17.1
62A	55.0	14,485.0	7.10	8.35	1.25	7.50	1.25			9.7	11.5	4.0	4.0
63	200.0	14,685.0	6.76	8.36	1.60	7.50	1.60			14.1	13.6	5.1	5.1
64	200.0	14,885.0	7.04	8.37	1.33	7.50	1.33			10.7	12.0	4.2	4.2
65	200.0	15,085.0	4.29	8.38	4.09	2.00	3.67	0.42		74.8	36.6	15.9	17.9
66	200.0	15,285.0	4.32	8.39	4.07	2.00	3.67	0.40		74.1	36.4	15.9	17.9
67	200.0	15,485.0	4.79	8.40	3.61	2.00	3.61			59.1	30.7	11.4	16.4
68	200.0	15,685.0	6.12	8.41	2.29	7.50	2.29			24.9	17.8	7.2	7.2
69	200.0	15,885.0	4.86	8.42	3.56	7.50	3.56			57.6	30.4	11.3	16.3
70	200.0	16,085.0	4.21	8.43	4.22	2.00	3.67	0.55		79.6	37.3	16.3	18.3
71	200.0	16,285.0	7.80	8.44	0.64	7.50	0.64			3.8	7.8	2.0	2.0
-(1	179.0	16,464.0	2.70	8.45	5.75	2.00	3.67	2.08		145.9	51.5	21.2	26.2
-1	250.0	16,714.0	5.24	8.45	3.21	7.50	3.21			47.3	28.3	10.2	15.2
-2	250.0	16,964.0	3.91	8.45	4.54	7.50	4.54			91.8	39.2	17.4	19.4
-3	250.0	17,214.0	4.58	8.45	3.87	2.00	3.87			67.3	32.2	12.2	17.2
3	296.0	17,510.0	3.50	8.45	4.95	2.00	4.95			108.4	41.7	18.7	20.7
2	250.0	17,760.0	3.05	8.45	5.40	2.00	5.40			129.0	49.4	20.1	25.1
1	250.0	18,010.0	5.32	8.45	3.13	7.50	3.13			45.1	27.8	9.9	14.9
(1)	250.0	18,260.0	2.50	8.45	5.95	2.00	5.95			156.0	52.7	21.8	26.8
72	69.0	18,329.0	7.44	8.45	1.01	7.50	1.01			7.1	10.1	3.2	3.2
73	201.0	18,530.0	5.31	8.46	3.15	7.50	3.15			45.6	27.9	10.0	15.0
74	200.0	18,730.0	6.35	8.47	2.12	7.50	2.12			22.0	16.7	6.7	6.7
75	200.0	18,930.0	6.27	8.48	2.21	7.50	2.21			23.5	17.3	7.0	7.0
76	200.0	19,130.0	6.57	8.49	1.92	7.50	1.92			18.7	15.5	6.1	6.1
77	200.0	19,330.0	4.72	8.50	3.78	7.50	3.78			64.4	31.7	11.9	16.9
78	200.0	19,530.0	5.47	8.51	3.04	7.50	3.04			42.6	27.2	9.6	14.6
79	200.0	19,730.0	6.19	8.52	2.33	7.50	2.33			25.6	18.0	7.4	7.4
80	200.0	19,930.0	6.15	8.53	2.38	7.50	2.38			26.5	18.3	7.5	7.5
81	200.0	20,130.0	7.16	8.54	1.38	7.50	1.38			11.2	12.3	4.4	4.4
82	200.0	20,330.0	6.41	8.55	2.14	7.50	2.14			22.3	16.8	6.8	6.8
83	200.0	20,530.0	6.18	8.56	2.38	7.50	2.38			26.5	18.3	7.5	7.5
84	200.0	20,730.0	6.54	8.57	2.03	7.50	2.03			20.5	16.2	6.4	6.4
85	200.0	20,930.0	6.83	8.58	1.75	7.50	1.75			16.2	14.5	5.5	5.5
86	200.0	21,130.0	6.91	8.59	1.68	7.50	1.68			15.2	14.1	5.3	5.3
87	200.0	21,330.0	6.90	8.60	1.70	7.50	1.70			15.4	14.2	5.4	5.4
				AVE	2.92			814.50		1668.5	878.0	347.6	417.6
				MAX	5.95			14.3%					
				MIN	0.64								

Table BQ 3.2(1) : Narayanganj West - B.Q of Embankment (NW)

Station No	Distance (m)	Accumulative Distance (m)	Ground Elevation (pwd)	Top of Embankment (pwd)	Embankment Height (m)	Emb.Area (m2)	Emb. Volume (m3)	Acc.Volume (m3)	B.Width 30.0 (m)	Land .Area	Acc.Land Area (m2)	Remarks
NW 0	0.0	0.0	5.42	7.96	2.54	29.7			54.2			
1	39.0	39.0	6.26	7.96	1.70	15.5	881.4	881.4	44.2	1918.8	1918.8	
2	200.0	239.0	5.36	7.97	2.61	31.4	4690.0	5571.4	54.7	9890.0	11808.8	
3	200.0	439.0	5.25	7.98	2.73	34.4	6580.0	12151.4	55.4	11010.0	22818.8	
4	200.0	639.0	5.85	7.99	2.14	22.3	5670.0	17821.4	46.8	10220.0	33038.8	Emb.
5	200.0	839.0	6.51	8.00	1.49	12.6	3490.0	21311.4	42.9	8970.0	42008.8	L=1.539km
6	200.0	1,039.0	5.75	8.01	2.26	24.3	3690.0	25001.4	47.5	9040.0	51048.8	
7	200.0	1,239.0	5.49	8.01	2.52	29.4	5370.0	30371.4	54.1	10160.0	61208.8	
8	200.0	1,439.0	5.06	8.02	2.96	40.5	6990.0	37361.4	56.8	11090.0	72298.8	
8+100	100.0	1,539.0	5.99	8.02	2.04	24.4	3245.0	40606.4	48.8	5277.5	77576.3	
9	100.0	1,639.0	6.91	8.03	1.12	8.3	1635.0	42241.4	40.7	4472.5	82048.8	
10	200.0	1,839.0	6.03	8.04	2.01	20.2	2850.0	45091.4	46.1	8680.0	90728.8	
11	200.0	2,039.0	5.09	8.05	2.96	40.4	6060.0	51151.4	56.8	10290.0	101018.8	
12	200.0	2,239.0	5.07	8.07	3.00	41.5	8190.0	59341.4	57.0	11380.0	112398.8	
12	200.0	2,439.0	6.75	8.09	1.34	10.7	5220.0	64561.4	42.0	9900.0	122298.8	Road-Cum
14	200.0	2,639.0	6.29	8.11	1.82	17.2	2790.0	67351.4	44.9	8690.0	130988.8	Emb.
15	200.0	2,839.0	5.02	8.13	3.11	44.4	6160.0	73511.4	57.6	10250.0	141238.8	L=4.1 km
16	200.0	3,039.0	6.06	8.15	2.09	21.4	6580.0	80091.4	46.5	10410.0	151648.8	
17	200.0	3,239.0	6.31	8.17	1.86	17.8	3920.0	84011.4	45.1	9160.0	160808.8	
18	200.0	3,439.0	5.30	8.19	2.89	38.5	5630.0	89641.4	56.3	10140.0	170948.8	
19	200.0	3,639.0	4.77	8.21	3.44	53.8	9230.0	98871.4	59.6	11590.0	182538.8	
20	200.0	3,839.0	6.45	8.22	1.77	16.6	7040.0	105911.4	44.6	10420.0	192958.8	
21	200.0	4,039.0	6.55	8.24	1.69	15.4	3200.0	109111.4	44.2	8880.0	201838.8	
22	200.0	4,239.0	6.67	8.26	1.59	14.0	2940.0	112051.4	43.6	8780.0	210618.8	
23	200.0	4,439.0	6.09	8.28	2.19	23.2	3720.0	115771.4	47.2	9080.0	219698.8	
24	200.0	4,639.0	5.20	8.30	3.10	44.3	6750.0	122521.4	57.6	10480.0	230178.8	
25	200.0	4,839.0	5.27	8.32	3.05	42.9	8720.0	131241.4	57.3	11490.0	241668.8	
26	200.0	5,039.0	5.12	8.34	3.22	47.6	9050.0	140291.4	58.3	11560.0	253228.8	
27	200.0	5,239.0	5.22	8.36	3.14	45.4	9300.0	149591.4	57.8	11610.0	264838.8	
28	200.0	5,439.0	5.79	8.38	2.59	30.9	7630.0	157221.4	54.5	11230.0	276068.8	
29	200.0	5,639.0	6.86	8.40	1.54	13.3	4420.0	161641.4	43.2	9770.0	285838.8	
							Total=	161641		Total=	285839	
									30.0			

Table BQ 3.2(2) : Narayanganj West -B.Q of Embankment (NW)

Station No	Distance (m)	Accumulative Distance (m)	Ground Elevation (pwd)	Top of Emb. (pwd)	Emb. Height (m)	Slope (R) & Berm (m2)	Sodding (m2)	Accum. Sodding (m2)		Slope (C) (-)5m/3m (m)	Sodding (m2)	Accum. Sodding (m2)	Brick Soling L*5m/3m (m2)
NW 0	0.0	0.0	5.42	7.96	2.54	8.0			**	8.0			
1	39.0	39.0	6.26	7.96	1.70	5.4	261.3	261.3		5.4	261	261	
2	200.0	239.0	5.36	7.97	2.61	8.3	1370.0	1631.3	**	8.3	1370	1631	
3	200.0	439.0	5.25	7.98	2.73	8.6	1690.0	3321.3	**	8.6	1690	3321	
4	200.0	639.0	5.85	7.99	2.14	6.8	1540.0	4861.3		6.8	1540	4861	
5	200.0	839.0	6.51	8.00	1.49	4.7	1150.0	6011.3		4.7	1150	6011	
6	200.0	1,039.0	5.75	8.01	2.26	7.1	1180.0	7191.3		7.1	1180	7191	
7	200.0	1,239.0	5.49	8.01	2.52	8.0	1510.0	8701.3	**	8.0	1510	8701	
8	200.0	1,439.0	5.06	8.02	2.96	9.4	1740.0	10441.3	**	9.4	1740	10441	NW 0 to 8+100
8+100	100.0	1,539.0	5.99	8.02	2.04	6.5	792.5	11233.8		6.5	792.5	11234	7695
9	100.0	1,639.0	6.91	8.03	1.12	3.5	497.5	11731.3		3.5	497.5	11731	
10	200.0	1,839.0	6.03	8.04	2.01	6.4	990.0	12721.3		6.4	990	12721	
11	200.0	2,039.0	5.09	8.05	2.96	9.4	1580.0	14301.3	*	11.4	1780	14501	
12	200.0	2,239.0	5.07	8.07	3.00	9.5	1890.0	16191.3	*	11.5	2290	16791	
12	200.0	2,439.0	6.75	8.09	1.34	4.2	1370.0	17561.3		4.2	1570	18361	
14	200.0	2,639.0	6.29	8.11	1.82	5.7	990.0	18551.3		5.7	990	19351	
15	200.0	2,839.0	5.02	8.13	3.11	9.8	1550.0	20101.3	*	11.8	1750	21101	
16	200.0	3,039.0	6.06	8.15	2.09	6.6	1640.0	21741.3		6.6	1840	22941	
17	200.0	3,239.0	6.31	8.17	1.86	5.9	1250.0	22991.3		5.9	1250	24191	
18	200.0	3,439.0	5.30	8.19	2.89	9.1	1500.0	24491.3	*	11.1	1700	25891	
19	200.0	3,639.0	4.77	8.21	3.44	10.9	2000.0	26491.3	*	12.9	2400	28291	
20	200.0	3,839.0	6.45	8.22	1.77	5.6	1650.0	28141.3		5.6	1850	30141	
21	200.0	4,039.0	6.55	8.24	1.69	5.4	1100.0	29241.3		5.4	1100	31241	
22	200.0	4,239.0	6.67	8.26	1.59	5.0	1040.0	30281.3		5.0	1040	32281	
23	200.0	4,439.0	6.09	8.28	2.19	6.9	1190.0	31471.3		6.9	1190	33471	
24	200.0	4,639.0	5.20	8.30	3.10	9.8	1670.0	33141.3	*	11.8	1870	35341	
25	200.0	4,839.0	5.27	8.32	3.05	9.7	1950.0	35091.3	*	11.7	2350	37691	
26	200.0	5,039.0	5.12	8.34	3.22	10.2	1990.0	37081.3	*	12.2	2390	40081	
27	200.0	5,239.0	5.22	8.36	3.14	9.9	2010.0	39091.3	*	11.9	2410	42491	
28	200.0	5,439.0	5.79	8.38	2.59	8.2	1810.0	40901.3	*	10.2	2210	44701	NW 8+100 to 29
29	200.0	5,639.0	6.86	8.40	1.54	4.9	1310.0	42211.3		4.9	1510	46211	12300
											Total=	46211	19995

Table BQ 3.3(1) : Narayanganj West - B.Q of Embankment (NE)

Station No	Distance (m)	Accumulative Distance (m)	Ground Elevation (pwd)	Top of Embankment (pwd)	Embankment Height (m)	Emb.Area (m2)	Emb. Volume (m3)	Acc.Volume (m3)	B.Width (+30m) (m)	Land .Area	Acc.Land Area (m2)	F.T Area (m2)	Accum. F.T Area (m2)
NE 48	0.0		5.08	8.30	3.22	49.0			58.4				
48-(1)R	125.0	125.0	5.20	8.30	3.1	45.5	5906.3	5906.3	57.6	7250	7250		
48-1R	250.0	375.0	6.35	8.30	1.95	20.0	8187.5	14093.8	46.0	12950	20200		
48-(2)R	250.0	625.0	5.52	8.30	2.78	37.5	7187.5	21281.3	55.0	12625	32825		
48-2R	250.0	875.0	5.18	8.30	3.12	45.5	10375.0	31656.3	57.6	14075	46900		
48-(3)R	250.0	1,125.0	5.97	8.30	2.33	27.5	9125.0	40781.3	50.0	13450	60350		
48-(3)L	25.0	1,150.0	4.60	8.30	3.7	63.0	1131.3	41912.5	61.4	1392.5	61742.5		
48-2L	250.0	1,400.0	5.87	8.30	2.43	29.5	11562.5	53475.0	51.2	14075	75817.5		
48-(2)L	250.0	1,650.0	1.50	8.30	6.8	201.2	28837.5	82312.5	86.0	17150	92967.5		
48-1L	250.0	1,900.0	4.47	8.30	3.83	66.5	33462.5	115775.0	62.5	18562.5	111530		
48-(1)L	250.0	2,150.0	5.10	8.30	3.2	49.0	14437.5	130212.5	58.4	15112.5	126642.5		
49	100.0	2,250.0	4.52	8.30	3.78	66.0	5750.0	135962.5	62.0	6020	132662.5		
50	200.0	2,450.0	4.43	8.31	3.88	67.5	13350.0	149312.5	62.5	12450	145112.5		
51	200.0	2,650.0	4.43	8.32	3.89	67.6	13510.0	162822.5	62.5	12500	157612.5		
52	200.0	2,850.0	4.70	8.33	3.63	60.0	12760.0	175582.5	61.0	12350	169962.5		
53	200.0	3,050.0	5.50	8.34	2.84	39.5	9950.0	185532.5	56.0	11700	181662.5		
54	200.0	3,250.0	6.50	8.35	1.85	19.5	5900.0	191432.5	45.0	10100	191762.5		
55	200.0	3,450.0	5.70	8.35	2.65	34.0	5350.0	196782.5	55.0	10000	201762.5		
	Sub-Total	3,450.0					Sub-Total V:	196783		Sub-Total=	201763		
NE 62	0.0	14,430.0	4.52	8.35	3.83	66.0			62.0				
62A	55.0	14,485.0	7.10	8.35	1.25	9.7	2081.8	2081.8	41.5	2846.3	2846.3		
63	200.0	14,685.0	6.76	8.36	1.60	14.1	2380.0	4461.8	43.6	8510.0	11356.3		
64	200.0	14,885.0	7.04	8.37	1.33	10.7	2480.0	6941.8	42.0	8560.0	19916.3		
65	200.0	15,085.0	4.29	8.38	4.09	74.8	8550.0	15491.8	66.6	10860.0	30776.3	9720.0	9720.0
66	200.0	15,285.0	4.32	8.39	4.07	74.1	14890.0	30381.8	66.4	13300.0	44076.3	14600.0	24320.0
67	200.0	15,485.0	4.79	8.40	3.61	59.1	13320.0	43701.8	60.7	12710.0	56786.3		24320.0
68	200.0	15,685.0	6.12	8.41	2.29	24.9	8400.0	52101.8	47.8	10850.0	67636.3		24320.0
69	200.0	15,885.0	4.86	8.42	3.56	57.6	8250.0	60351.8	60.4	10820.0	78456.3		24320.0
70	200.0	16,085.0	4.21	8.43	4.22	79.6	13720.0	74071.8	67.3	12770.0	91226.3	13540.0	37860.0
71	200.0	16,285.0	7.80	8.44	0.64	3.8	8340.0	82411.8	37.8	10510.0	101736.3		37860.0
-(1	179.0	16,464.0	2.70	8.45	5.75	145.9	13398.2	95809.9	81.5	10677.4	112413.6	10614.7	48474.7
-1	250.0	16,714.0	5.24	8.45	3.21	47.3	24150.0	119959.9	58.3	17475.0	129888.6		48474.7
-2	250.0	16,964.0	3.91	8.45	4.54	91.8	17387.5	137347.4	69.2	15937.5	145826.1		48474.7
-3	250.0	17,214.0	4.58	8.45	3.87	67.3	19887.5	157234.9	62.2	16425.0	162251.1		48474.7
3	296.0	17,510.0	3.50	8.45	4.95	108.4	26003.6	183238.5	71.7	19817.2	182068.3		48474.7
2	250.0	17,760.0	3.05	8.45	5.40	129.0	29675.0	212913.5	79.4	18887.5	200955.8		48474.7
1	250.0	18,010.0	5.32	8.45	3.13	45.1	21762.5	234676.0	57.8	17150.0	218105.8		48474.7
(1)	250.0	18,260.0	2.50	8.45	5.95	156.0	25137.5	259813.5	82.7	17562.5	235668.3		48474.7
72	69.0	18,329.0	7.44	8.45	1.01	7.1	5627.0	265440.5	40.1	4236.6	239904.9		48474.7
73	201.0	18,530.0	5.31	8.46	3.15	45.6	5296.4	270736.8	57.9	9849.0	249753.9		48474.7
74	200.0	18,730.0	6.35	8.47	2.12	22.0	6760.0	277496.8	46.7	10460.0	260213.9		48474.7
75	200.0	18,930.0	6.27	8.48	2.21	23.5	4550.0	282046.8	47.3	9400.0	269613.9		48474.7
76	200.0	19,130.0	6.57	8.49	1.92	18.7	4220.0	286266.8	45.5	9280.0	278893.9		48474.7
77	200.0	19,330.0	4.72	8.50	3.78	64.4	8310.0	294576.8	61.7	10720.0	289613.9		48474.7
78	200.0	19,530.0	5.47	8.51	3.04	42.6	10700.0	305276.8	57.2	11890.0	301503.9		48474.7
79	200.0	19,730.0	6.19	8.52	2.33	25.6	6820.0	312096.8	48.0	10520.0	312023.9		48474.7
80	200.0	19,930.0	6.15	8.53	2.38	26.5	5210.0	317306.8	48.3	9630.0	321653.9		48474.7
81	200.0	20,130.0	7.16	8.54	1.38	11.2	3770.0	321076.8	42.3	9060.0	330713.9		48474.7
82	200.0	20,330.0	6.41	8.55	2.14	22.3	3350.0	324426.8	46.8	8910.0	339623.9		48474.7
83	200.0	20,530.0	6.18	8.56	2.38	26.5	4880.0	329306.8	48.3	9510.0	349133.9		48474.7
84	200.0	20,730.0	6.54	8.57	2.03	20.5	4700.0	334006.8	46.2	9450.0	358583.9		48474.7
85	200.0	20,930.0	6.83	8.58	1.75	16.2	3670.0	337676.8	44.5	9070.0	367653.9		48474.7
86	200.0	21,130.0	6.91	8.59	1.68	15.2	3140.0	340816.8	44.1	8860.0	376513.9		48474.7
87	200.0	21,330.0	6.90	8.60	1.70	15.4	3060.0	343876.8	44.2	8830.0	385343.9		48474.7
	Sub-Total	6,900.0					Sub-Total V=	320609			385343.9		48475
	Total=	10,350.0					Total=	517392			587106		48475

Note:
olume-F.T Area*0.6m*0.8

Table BQ 3.3(2) : Narayanganj West - B.Q of Embankment (NE)

Station No	Distance (m)	Accumulative Distance (m)	Ground Elevation (pwd)	Top of Emb. (pwd)	Emb. Height (m)	Slope (R) & Berm (m2)	Revetment (m2)	Accum. Revetment (m2)		Slope(C+R) For Sodding (m)	Sodding (m2)	Accum. Sodding (m2)	Brick Soling Berm :5m (m2)
NE 48	0.0		5.08	8.30	3.22	10.4				10.2			
48-(1)R	125.0	125.0	5.20	8.30	3.1	9.8	1262.5	1262.5		9.8	1250	1250	
48-1R	250.0	375.0	6.35	8.30	1.95	6.3	2012.5	3275.0		6.3	2012.5	3262.5	
48-(2)R	250.0	625.0	5.52	8.30	2.78	8.8	1887.5	5162.5		7	1662.5	4925	
48-2R	250.0	875.0	5.18	8.30	3.12	9.8	2325.0	7487.5		9.8	2100	7025	
48-(3)R	250.0	1,125.0	5.97	8.30	2.33	7.8	2193.8	9681.3		7.8	2200	9225	
48-(3)L	25.0	1,150.0	4.60	8.30	3.7	11.8	244.4	9925.6		11.8	245	9470	
48-2L	250.0	1,400.0	5.87	8.30	2.43	7.8	2450.0	12375.6		7.8	2450	11920	
48-(2)L	250.0	1,650.0	1.50	8.30	6.8	24.4	4025.0	16400.6		24.4	4025	15945	
48-1L	250.0	1,900.0	4.47	8.30	3.83	12.4	4600.0	21000.6		11.5	4487.5	20432.5	
48-(1)L	250.0	2,150.0	5.10	8.30	3.2	10.4	2850.0	23850.6		10.2	2712.5	23145	
49	100.0	2,250.0	4.52	8.30	3.78	12.0	1120.0	24970.6		12	2220	25365	17250
50	200.0	2,450.0	4.43	8.31	3.88	5.9				5.9	3580	28945	
51	200.0	2,650.0	4.43	8.32	3.89	9.0				9	2980	31925	
52	200.0	2,850.0	4.70	8.33	3.63	11.5				11.5	4100	36025	
53	200.0	3,050.0	5.50	8.34	2.84	12.3				12.3	4760	40785	
54	200.0	3,250.0	6.50	8.35	1.85	12.3				12.3	4920	45705	
55	200.0	3,450.0	5.70	8.35	2.65	12.0				12	4860	50565	
	Sub-Total	3,450.0					Sub-Total=	24971			Sub-Total=	50565	17250
NE 62	0.0	14,430.0	4.52	8.35	3.83	12.1				12.1			
62A	55.0	14,485.0	7.10	8.35	1.25	4.0	443	443	*	4	443	443	
63	200.0	14,685.0	6.76	8.36	1.60	5.1	910	1353	*	5.1	910	1353	
64	200.0	14,885.0	7.04	8.37	1.33	4.2	930	2283	*	4.2	930	2283	
65	200.0	15,085.0	4.29	8.38	4.09	15.9	2010	4293		12.9	1710	3993	
66	200.0	15,285.0	4.32	8.39	4.07	15.9	3180	7473		12.9	2580	6573	
67	200.0	15,485.0	4.79	8.40	3.61	11.4	2730	10203		11.4	2430	9003	
68	200.0	15,685.0	6.12	8.41	2.29	7.2	1860	12063	*	7.2	1860	10863	
69	200.0	15,885.0	4.86	8.42	3.56	11.3	1850	13913		11.3	1850	12713	
70	200.0	16,085.0	4.21	8.43	4.22	16.3	2760	16673		13.3	2460	15173	
71	200.0	16,285.0	7.80	8.44	0.64	2.0	1830	18503	*	2	1530	16703	
-(1	179.0	16,464.0	2.70	8.45	5.75	21.2	2076.4	20579		21.2	2076.4	18779	
-1	250.0	16,714.0	5.24	8.45	3.21	10.2	3925	24504		10.2	3925	22704	
-2	250.0	16,964.0	3.91	8.45	4.54	17.4	3450	27954		14.4	3075	25779	
-3	250.0	17,214.0	4.58	8.45	3.87	12.2	3700	31654		12.2	3325	29104	
3	296.0	17,510.0	3.50	8.45	4.95	18.7	4573.2	36227		15.7	4129.2	33233	
2	250.0	17,760.0	3.05	8.45	5.40	20.1	4850	41077		20.1	4475	37708	
1	250.0	18,010.0	5.32	8.45	3.13	9.9	3750	44827		9.9	3750	41458	
(1)	250.0	18,260.0	2.50	8.45	5.95	21.8	3962.5	48790		21.8	3962.5	45421	
72	69.0	18,329.0	7.44	8.45	1.01	3.2	862.5	49652	*	3.2	862.5	46283	
73	201.0	18,530.0	5.31	8.46	3.15	10.0	1326.6	50979		10	1326.6	47610	
74	200.0	18,730.0	6.35	8.47	2.12	6.7	1670	52649	*	6.7	1670	49280	
75	200.0	18,930.0	6.27	8.48	2.21	7.0	1370	54019	*	7	1370	50650	
76	200.0	19,130.0	6.57	8.49	1.92	6.1	1310	55329	*	6.1	1310	51960	
77	200.0	19,330.0	4.72	8.50	3.78	11.9	1800	57129		11.9	1800	53760	
78	200.0	19,530.0	5.47	8.51	3.04	9.6	2150	59279		9.6	2150	55910	
79	200.0	19,730.0	6.19	8.52	2.33	7.4	1700	60979	*	7.4	1700	57610	
80	200.0	19,930.0	6.15	8.53	2.38	7.5	1490	62469	*	7.5	1490	59100	
81	200.0	20,130.0	7.16	8.54	1.38	4.4	1190	63659	*	4.4	1190	60290	
82	200.0	20,330.0	6.41	8.55	2.14	6.8	1120	64779	*	6.8	1120	61410	
83	200.0	20,530.0	6.18	8.56	2.38	7.5	1430	66209	*	7.5	1430	62840	
84	200.0	20,730.0	6.54	8.57	2.03	6.4	1390	67599	*	6.4	1390	64230	
85	200.0	20,930.0	6.83	8.58	1.75	5.5	1190	68789	*	5.5	1190	65420	
86	200.0	21,130.0	6.91	8.59	1.68	5.3	1080	69869	*	5.3	1080	66500	
87	200.0	21,330.0	6.90	8.60	1.70	5.4	1070	70939	*	5.4	1070	67570	106650
	Sub Total:	6,900.0					Sub-Total=	70939			Sub-Total=	67570	34,500.0
	Total:	10,350.0					Total=	95910		5	Total=	118135	51750

Table BQ 3.4(1) :B.Q OF FLOOD WALL- N.WEST (NB)

Station	Flood Wall Height m	Distance m	Flood Wall (T/I-Type) R.C.C Volume m3	Form Work in2	Excavation m3	Brick Soling m2	Foot Protection (Brick soling) m2	Back Filling m3	Land Acquisition		Remarks
									Non Commercial Area m2	Commercial Area m2	
NE 0	1.30	0	0	0	0	0	0	0			
1	1.30	200	105	1040	250	50	800	200	1000		
2	2.50 (T)	203	477	1420	772	589	1075	396		1015	
3	2.50 (T)	197	463	1380	749	572	985	384		985	
4	2.80 (T)	200	520	1520	790	640	1120	420		1000	
5	3.25 (T)	205	605	1743	913	748	1333	472		1025	
6	1.80	205	150	1486	410	52	820	328		1025	
7	-	190	-	-	-	-	-	-		0	
8	2.60 (T)	200	490	1440	750	600	1040	400		1000	
9	2.80 (T)	200	520	1520	790	640	1120	420		1000	
10	2.80 (T)	200	520	1520	790	640	1120	420		1000	
11	1.80	200	150	1450	400	50	800	320		1000	
12	2.00	200	160	1600	470	50	800	380		1000	
13	2.40 (T)	200	380	1360	710	560	960	380		1000	
14	2.50 (T)	200	470	1400	760	580	1000	390		1000	
15	2.40 (T)	200	380	1360	710	560	960	380		1000	
16	1.40	200	110	1120	280	50	800	220		800	
17	2.00	200	160	1600	470	50	800	380		1000	
18	2.00	200	160	1600	470	50	800	380		1000	
19	1.80	200	150	1450	400	50	800	320	1000		
20	1.30	200	105	1100	250	50	800	200	1000		
21	2.5 (T)	200	470	1400	760	580	1000	390	1000		
22	1.40	200	110	1120	280	50	800	220	1000		
23	1.40	200	110	1120	280	50	800	220		800	
24	2.00	200	160	1600	470	50	800	380		1000	
25	1.60	200	130	1280	340	50	800	270	1000		
26	1.80	200	150	1450	400	50	800	320	1000		
27	3.50 (T)	200	630	1800	978	780	1400	480		1000	
28	3.00 (T)	200	550	1600	840	680	1200	440	1000		
29	2.00	200	160	1600	470	50	800	380	1000		
30	2.50 (T)	200	470	1400	760	580	1000	390	1000		
31	2.80 (T)	200	520	1520	790	640	1120	420	1000		
32	1.80	200	150	1450	400	50	800	320	1000		
33	2.00	200	160	1600	470	50	800	380		1000	
34	2.40 (T)	200	380	1360	710	560	960	380	1000		
35	1.50	200	120	1200	316	50	800	240		800	
36	2.50 (T)	200	470	1400	760	580	1000	390		1000	
37	1.60	191	124	1222	325	48	612	258		955	
38	2.50 (T)	234	550	1400	890	679	1170	457		1170	
39	1.50	175	105	1050	271	44	700	210		700	
40	1.60	200	130	1280	340	50	800	270	1000		
41	2.20 (T)	200	425	1280	670	520	880	360	1000		
42	1.00	200	80	800	180	50	800	140		600	
43	1.60	200	130	1280	340	50	800	270		1000	
44	1.50	200	120	1200	310	50	800	240		800	
45	2.50 (T)	200	470	1400	760	580	1000	390		1000	
46	3.00 (T)	200	550	1600	840	680	1200	440	1000		
47	2.60 (T)	200	490	1440	750	600	1040	400	1000		
48	1.70	200	140	1360	370	50	800	290	1000		
	Sub-Total	9600	14129	65321	26204	14832	43415	16135	18000	27675	
55	1.80	200	150	1450	400	50	800	320	1000		
NE 56	1.80	200	150	1450	400	50	800	320	1000		
57	3.00 (T)	200	550	1600	840	680	1200	440		1000	
58	2.50 (T)	200	470	1400	760	580	1000	390		1000	
59	1.50	200	120	1200	310	50	800	240		1000	
60	1.00	200	80	800	180	50	800	140		600	
61	1.10	200	90	880	200	50	800	160		800	
62	2.50 (T)	180	470	1400	760	522	900	351		900	
	Sub-Total	1580	2080	10180	3850	2032	7100	2361	2000	5300	
88	0.75	500	175	1500	325	125	2000	250		2000	
	Sub-Total	500	175	1500	325	125	2000	250		2000	
	Total	11680	16384	77001	30379	16989	52515	18746	20000	34975	

TABLE BQ3.4(2) : BILL OF QUANTITIES FORFLOOD WALL:LAND (N.WEST (N

Station	Flood Wall Height m	Distance m	LAND ACQUISITION				Building Compensation (m2)
			Easily Availab		Not Easily Available		
			Width(m) (4+1) m	Area (m2)	Width (m) (2h+1) < 5 m	Area (m2)	
NE 0	1.30	0	5				-
1	1.30	200	5	1000			-
2	2.50 (T)	203			5	1015	-
3	2.50 (T)	197			5	985	-
4	2.80 (T)	200			5	1000	-
5	3.25 (T)	205			5	1025	-
6	1.80	205			5	1025	-
7	-	-			5		-
8	2.60 (T)	200			5	1000	-
9	2.80 (T)	200			5	1000	-
10	2.80 (T)	200			5	1000	-
11	1.80	200			5	1000	-
12	2.00	200			5	1000	-
13	2.40 (T)	200			5	1000	-
14	2.50 (T)	200			5	1000	-
15	2.40 (T)	200			5	1000	-
16	1.40	200			5	800	-
17	2.00	200			5	1000	-
18	2.00	200			5	1000	-
19	1.80	200	5	1000			-
20	1.30	200	5	1000			-
21	2.5 (T)	200	5	1000			-
22	1.40	200	5	1000			-
23	1.40	200			4	800	-
24	2.00	200			5	1000	-
25	1.60	200	5	1000			-
26	1.80	200	5	1000			-
27	3.50 (T)	200			5	1000	-
28	3.00 (T)	200	5	1000			-
29	2.00	200	5	1000			-
30	2.50 (T)	200	5	1000			-
31	2.80 (T)	200	5	1000			-
32	1.80	200	5	1000			-
33	2.00	200			5	1000	-
34	2.40 (T)	200	5	1000			-
35	1.50	200			4	800	-
36	2.50 (T)	200			5	1000	-
37	1.60	191			5	955	-
38	2.50 (T)	234			5	1170	-
39	1.50	175			4	700	-
40	1.60	200	5	1000			-
41	2.20 (T)	200	5	1000			-
42	1.00	200			3	600	-
43	1.60	200			5	1000	-
44	1.50	200			4	800	-
45	2.50 (T)	200			5	1000	-
46	3.00 (T)	200	5	1000			-
47	2.60 (T)	200	5	1000			-
		9210		17000		27675	

Table BQ3.5(1) Main Feature of Proposed Sluice Gate N.WEST

I. Narayanganj West																		
1	NE84 + 120	21 (KN-18) 7.23	1.70	1.70	24.00	1	1.70	5.00	11.00	1.70	3.70	5.70	5.00	5.00	7.00	2.00 9.40 3.70	Emb
2	NE 77 + 160	22 (KN-19) 16.72	2.60	2.60	39.30	1	2.60	10.00	23.20	3.30	8.00	10.00	12.00	10.00	15.50	2.00 20.00 4.50	Pump/Emb P12 : (2.0 m3/s)
3	NE69 + 100	23 (KN-20) 20.04	3.00	3.00	38.00	1	3.00	10.00	23.60	3.70	8.00	10.00	11.00	10.00	15.50	2.00 20.00 4.50	Pump/Emb P13 : (2.2 m3/s)
4	NE49 + 100	24 (KN-22) 21.9	2.20	2.20	24.00	2	5.10	5.00	14.00	5.40	7.40	9.40	5.00	5.00	No	4.50 12.24 3.87	Emb
5	NE46 + 180	25 (KN-23) 10.54	2.00	2.00	7.00	1	2.00	1.50	11.00	2.00	3.50	5.50	1.50	5.00	No	2.50 9.26 3.38	F. Wall
6	NE40 + 170	26 (KN-24) 10.31	2.00	2.00	7.00	1	2.00	1.50	11.00	2.00	3.50	5.50	1.50	5.00	No	2.50 9.28 3.39	F. Wall
7	NE32	27 (KN-25) 8.83	2.00	2.00	7.00	1	2.00	1.50	11.00	2.00	3.50	5.50	1.50	5.00	No	2.00 8.88 3.44	F. Wall
8	NE26 + 150	28 (KN-26) 9.18	2.00	2.00	7.00	1	2.00	1.50	11.00	2.00	3.50	5.50	1.50	5.00	No	2.00 8.92 3.46	F. Wall
9	NE19	29 (S-1) 10.47	3.00	3.00	7.00	1	3.00	1.50	5.00	3.00	4.50	6.50	1.50	5.00	No	Box Culvert 3.00 3.0mx3.0m	F. Wall
10	NE8 + 50	30 (S-2) 6.17	2.50	2.50	7.00	1	2.50	1.50	5.00	2.50	4.00	6.00	1.50	5.00	No	Pipe Culvert 2.50 D=2.5m	F. Wall
11	NE5 + 70	31 (KN-27) 7.18	1.70	1.70	7.00	1	1.70	1.50	10.00	1.70	3.20	5.20	1.50	5.00	No	2.00 8.04 3.02	F. Wall
12	NE1 + 150	32 (S-3) 3.89	2.20	2.20	7.00	1	2.20	1.50	4.00	2.20	3.70	5.70	1.50	5.00	No	Pipe Culvert 2.20 D=2.2m	F. Wall
13	NW23	33A (KN-28) 26.97	2.40	2.40	38.00	2	5.80	10.00	16.00	6.60	10.00	12.00	9.00	10.00	15.50	6.00 14.00 4.00	Pump/Emb P14A : (2.7 m3/s)
14	NW14 + 190	33B (KN-30) 43.15	3.00	3.00	29.50	2	7.00	10.00	19.60	7.80	14.00	16.00	15.00	10.00	8.50	9.50 17.50 4.00	Pump/Emb P14B : (5.3 m3/s)

Table BQ3.5(2) BQ OF SLUICE GATES :N.WEST

III Narayanganj West											
		8.58									
		3.30									
21	51.75	145.32	19.35	216.42	193.80	13	13	168	147	365	232
(KN-18)											
7.23		8.54									
		0.00									
22	141.89	313.43	70.37	525.69	297.90	37	13	485	312	2917	2012
(KN-19)											
16.72		8.47									
		3.21									
23	154.39	324.48	68.07	546.94	312.30	40	13	524	316	763	416
(KN-20)											
20.04		8.30									
		2.63									
24	66.02	288.41	31.47	385.90	254.40	38	13	491	214	788	369
(KN-22)											
21.9		7.69									
		3.12									
25	28.23	40.00	5.22	73.44	176.70	8	6	51	145	126	78
(KN-23)											
10.54		7.65									
		3.11									
26	28.23	39.94	5.22	73.38	176.70	8	6	51	145	127	79
(KN-24)											
10.31		7.59									
		3.06									
27	28.23	39.92	5.22	73.36	176.70	8	6	51	145	131	81
(KN-25)											
8.83		7.55									
		3.04									
28	28.23	39.88	5.22	73.32	176.70	8	6	51	145	133	83
(KN-26)											
9.18		7.52									
		3.33									
29	11.18	51.34	6.58	69.09	182.70	13	6	75	95	123	66
(S-1)											
10.47		7.47									
		3.00									
30	11.35	45.85	5.90	63.10	170.70	10	6	63	90	145	85
(S-2)											
6.17		7.44									
		2.98									
31	23.85	36.15	4.81	64.81	166.50	7	6	43	132	133	86
(KN-27)											
7.18		7.42									
		3.25									
32	8.25	41.62	5.49	55.36	160.50	9	6	55	77	118	71
(S-3)											
3.89		8.30									
		0.50									
33A	113.17	484.89	67.69	665.76	306.60	72	16	1147	260	3057	1603
(KN-28)											
26.97		8.17									
		0.50									
33B	141.19	441.80	136.36	719.35	324.00	81	11	889	336	2930	1418
(KN-30)											
43.15											

Table BQ 3.6: BQ of Pump Station : Narayanganj West

Project Area	No. (Khal No.)	Part	Bill of Quantities															
			Exca. (m3)	Banking (m3)	Backfill (m3)	R.C Pile (m)	Sheet.P (m2)	Leveling Conc. (m3)	Concrete (m3)	Re.Bar (t)	Form (m2)	Slope Protec. (m2)	Bed Protec. (Block) (m2)	Bed Protec. (Brick) (m2)	Sodding (m2)	Operation Bridge (m2)	Building (L.S)	Mechanic. & Electric. (L.S)
		Pump Station (Q=2.0)	11,418	4,338	4,000	786	39	54	689	69	1,240	1,203	-	130	652	-	1	1
NB-1	P12	Sluice Way (1.0X1.0)	-	-	-	435	170	36	236	21	520	-	63	-	-	16	-	1
	(KN-19)	Sub Total	11,418	4,338	4,000	1,221	209	89	925	90	1,760	1,203	63	130	652	16	1	1
		Pump Station (Q=2.2)	8,783	7,342	3,077	846	39	54	638	64	1,149	749	-	130	1,104	-	1	1
NB-2	P13	Sluice Way (1.0X1.0)	-	-	-	456	170	34	223	20	490	-	63	-	-	16	-	1
	(KN-20)	Sub Total	8,783	7,342	3,077	1,302	209	87	861	84	1,639	749	63	130	1,104	16	1	1
		Pump Station (Q=2.7)	8,490	7,675	2,974	893	42	58	711	71	1,280	358	-	141	1,153	-	1	1
NB-4	P14A	Sluice Way (1.1X1.1)	-	-	-	502	171	39	256	23	564	-	63	-	-	17	-	1
	(KN-28)	Sub Total	8,490	7,675	2,974	1,395	213	97	967	94	1,843	358	63	141	1,153	17	1	1
		Pump Station (Q=5.3)	13,468	2,002	4,717	969	60	86	883	88	1,589	1,283	-	193	301	-	1	1
NB-5	P14B	Sluice Way (1.5X1.5)	-	-	-	479	176	53	345	31	760	-	63	-	-	8	-	1
	(KN-30)	Sub Total	13,468	2,002	4,717	1,448	236	138	1,228	119	2,349	1,283	63	193	301	8	1	1
		Total	42,158	21,356	14,767	5,366	867	411	3,981	388	7,591	3,593	252	594	3,210	57	1	1

Table BQ 3.7: BQ of Khal Improvement and Bridge : Narayanganj West

Zone	Khal No.	Khal Length (km)	Open Channel Brick Protection (m2)	Open Channel Sodding (m2)	Covered Char Box Culvert (m)	Covered Char Brick Pipe (m)	Bridge (places)	Aqueduct (places)	Banking (1000m3)	Dredging (1000m3)	Maintenance Road (1000m2)	Land Acquisition (ha)
NB-1	KN-18	0.40	3,960	-	-	-	-	-	11.20	5.52	2.40	0.65
	KN-19	1.20	-	10,182	-	-	1	-	33.60	29.85	7.20	2.43
	Sub-Total	1.60	3,960	10,182	0	0	1	0	44.80	35.37	9.60	3.08
NB-2	KN-20	0.90	-	6,364	-	-	-	-	25.20	8.46	5.40	0.90
	KN-21	1.40	13,859	-	-	-	1	-	39.20	26.90	8.40	2.50
	KN-22	0.80	9,051	-	-	-	2	-	22.40	9.84	4.80	1.60
	Sub-Total	3.10	22,910	6,364	0	0	3	0	86.80	45.20	18.60	5.00
NB-3	KN-23	0.60	5,940	-	-	-	1	-	16.80	7.80	3.60	1.02
	KN-24	0.70	6,930	-	-	-	1	-	19.60	11.20	4.20	1.20
	KN-25	0.40	3,960	-	-	-	-	-	11.20	0.00	2.40	0.37
	KN-26	0.60	5,940	-	-	-	-	-	16.80	0.00	3.60	0.12
	KN-27	0.30	2,970	-	-	-	-	-	8.40	1.80	1.80	0.31
	S-1	0.90	-	-	900	-	-	-	-	-	-	-
	S-2	0.30	-	-	-	300	-	-	-	-	-	-
	S-3	0.20	-	-	-	200	-	-	-	-	-	-
	Sub-Total	4.00	25,739	0	900	500	2	0	72.80	20.80	15.60	3.02
NB-4	KN-28-1	0.90	-	7,637	-	-	-	-	25.20	10.25	5.40	1.65
	KN-28-2	0.50	-	3,960	-	-	-	-	14.00	4.33	3.00	1.04
	KN-29	1.40	15,839	-	-	-	2	-	39.20	35.40	8.40	2.70
	Sub-Total	2.80	15,839	11,597	0	0	2	0	78.40	49.98	16.80	5.39
NB-5	KN-30-1	0.30	3,394	-	-	-	1	-	8.40	13.52	1.80	0.41
	KN-30-2	1.50	16,971	-	-	-	-	-	42.00	13.67	9.00	1.26
	KN-31-1	0.80	-	6,788	-	-	1	-	22.40	22.80	4.80	1.53
	KN-31-2	1.30	14,708	-	-	-	2	-	36.40	33.30	7.80	3.01
	KN-32	1.80	20,365	-	-	-	2	-	50.40	37.60	10.80	3.45
	Sub-Total	5.70	55,438	6,788	0	0	6	0	159.60	120.89	34.20	9.66
	Total	17.20	123,886	34,931	900	500	14	0	442.40	272.24	94.80	26.15

Table BQ 3.8:CONSTRUCTION COST OF KHAL IMPROVEMENT AND TRUNK DRAIN WORKS

Narayanganj West Zone (NB)

(1991 Price)

Zone	Khal	Length	Open Channel								Covered Channel								Maintenance Road						
			Type	Area	Unit Construction Cost			Construction Cost (1000TK)			Size	Length	Unit Construction Cost			Construction Cost (1000TK)			Area	Unit Construction Cost			Construction Cost (1000TK)		
		(m)		(m2)	Total	F/C(%)	L/C(%)	F/C	L/C	Total	(m)	(m)	Total	F/C(%)	L/C (%)	F/C	L/C	Total	(m2)	Total	F/C(%)	L/C (%)	F/C	L/C	Total
	KN-18	400	Brick	3,960	1579	40	60	2,501	3,752	6,253	-	-	-	-	-	-	-	-	2,400	588	90	10	1,270	141	1,411
NB-1	KN-19	1,200	Sodding	10,182	60	20	80	122	489	611	-	-	-	-	-	-	-	-	7,200	588	90	10	3,810	423	4,234
	Sub-Total	1,600				38	62	2,623	4,240	6,863									9,600		90	10	5,080	564	5,645
	KN-20	900	Sodding	6,364	60	20	80	76	305	382	-	-	-	-	-	-	-	-	5,400	588	90	10	2,858	318	3,175
NB-2	KN-21	1,400	Brick	13,859	1579	40	60	8,754	13,130	21,884	-	-	-	-	-	-	-	-	8,400	588	90	10	4,445	494	4,939
	KN-22	800	Brick	9,051	1579	40	60	5,717	8,575	14,291	-	-	-	-	-	-	-	-	4,800	588	90	10	2,540	282	2,822
	Sub-Total	3,100				40	60	14,546	22,011	36,557									18,600		90	10	9,843	1,094	10,937
	KN-23	600	Brick	5,940	1579	40	60	3,752	5,627	9,379	-	-	-	-	-	-	-	-	3,600	588	90	10	1,905	212	2,117
	KN-24	700	Brick	6,930	1579	40	60	4,377	6,565	10,942	-	-	-	-	-	-	-	-	4,200	588	90	10	2,223	247	2,470
	KN-25	400	Brick	3,960	1579	40	60	2,501	3,752	6,253	-	-	-	-	-	-	-	-	2,400	588	90	10	1,270	141	1,411
NB-3	KN-26	600	Brick	5,940	1579	40	60	3,752	5,627	9,379	-	-	-	-	-	-	-	-	3,600	588	90	10	1,905	212	2,117
	KN-27	300	Brick	2,970	1579	40	60	1,876	2,814	4,689	-	-	-	-	-	-	-	-	1,800	588	90	10	953	106	1,058
	S-1	900	-	-	-	-	-	-	-	-	3.0x3.0	900	84,631	60	40	45,701	30,467	76,168	-	-	-	-	-	-	-
	S-2	300	-	-	-	-	-	-	-	-	ø 2.5	300	28,067	46	54	3,873	4,547	8,420	-	-	-	-	-	-	-
	S-3	200	-	-	-	-	-	-	-	-	ø 2.2	200	25,527	46	54	2,348	2,757	5,105	-	-	-	-	-	-	-
	Sub-Total	4,000				40	60	16,257	24,385	40,641		1,400		58	42	51,922	37,771	89,693	15,600		90	10	8,256	917	9,173
	KN-28-1	900	Sodding	7,637	60	20	80	92	367	458	-	-	-	-	-	-	-	-	5,400	588	90	10	2,858	318	3,175
NB-4	KN-28-2	500	Sodding	3,960	60	20	80	48	190	238	-	-	-	-	-	-	-	-	3,000	588	90	10	1,588	176	1,764
	KN-29	1,400	Brick	15,839	1579	40	60	10,004	15,006	25,010	-	-	-	-	-	-	-	-	8,400	588	90	10	4,445	494	4,939
	Sub-Total	2,800				39	61	10,143	15,563	25,706									16,800		90	10	8,891	988	9,878
	KN-30-1	300	Brick	3,394	1579	40	60	2,144	3,216	5,359	-	-	-	-	-	-	-	-	1,800	588	90	10	953	106	1,058
	KN-30-2	1,500	Brick	16,971	1579	40	60	10,719	16,078	26,797	-	-	-	-	-	-	-	-	9,000	588	90	10	4,763	529	5,292
NB-5	KN-31-1	800	Sodding	6,788	60	20	80	81	326	407	-	-	-	-	-	-	-	-	4,800	588	90	10	2,540	282	2,822
	KN-31-2	1,300	Brick	14,708	1579	40	60	9,289	13,934	23,224	-	-	-	-	-	-	-	-	7,800	588	90	10	4,128	459	4,586
	KN-32	1,800	Brick	20,365	1579	40	60	12,862	19,293	32,156	-	-	-	-	-	-	-	-	10,800	588	90	10	5,715	635	6,350
	Sub-Total	5,700				40	60	35,096	52,847	87,943									34,200		90	10	18,099	2,011	20,110
	Total	17,200				40	60	78,665	119,045	197,710		1,400		58	42	51,922	37,771	89,693	94,800		90	10	50,168	5,574	55,742

Table BQ 3.9:CONSTRUCTION COST OF KHAL IMPROVEMENT AND TRUNK DRAIN WORKS

Narayanganj West Zone (NB)

(1991 Price)

Zone	Khal	Length	Banking							Dredging							Land Acqisition						
			Volume	Unit Construction Cost			Construction Cost (1000TK)			Volume	Unit Construction Cost			Construction Cost (1000TK)			Area	Unit Price (1000Tk)			Cost (1000TK)		
		m	(1000m3)	Total	F/C(%)	L/C (%)	F/C	L/C	Total	(1000m2)	Total	F/C(%)	L/C (%)	F/C	L/C	Total	(ha)	Total	F/C(%)	L/C (%)	F/C	L/C	Total
NB-1	KN-18	400	11.20	118	50	50	661	661	1,322	5.52	159	20	80	176	702	878	0.65	7,400	0	100	0	4,810	4,810
	KN-19	1,200	33.60	118	50	50	1,982	1,982	3,965	29.85	159	20	80	949	3,797	4,746	2.43	7,400	0	100	0	17,982	17,982
	Sub-Total	1,600	44.80				2,643	2,643	5,286	35.37				1,125	4,499	5,624	3.08				0	22,792	22,792
NB-2	KN-20	900	25.20	118	50	50	1,487	1,487	2,974	8.46	159	20	80	269	1,076	1,345	0.90	7,400	0	100	0	6,660	6,660
	KN-21	1,400	39.20	118	50	50	2,313	2,313	4,626	26.90	159	20	80	855	3,422	4,277	2.50	7,400	0	100	0	18,500	18,500
	KN-22	800	22.40	118	50	50	1,322	1,322	2,643	9.84	159	20	80	313	1,252	1,565	1.60	7,400	0	100	0	11,840	11,840
	Sub-Total	3,100	86.80				5,121	5,121	10,242	45.20				1,437	5,749	7,187	5.00				0	37,000	37,000
NB-3	KN-23	600	16.80	118	50	50	991	991	1,982	7.80	159	20	80	248	992	1,240	1.02	7,400	0	100	0	7,548	7,548
	KN-24	700	19.60	118	50	50	1,156	1,156	2,313	11.20	159	20	80	356	1,425	1,781	1.20	7,400	0	100	0	8,880	8,880
	KN-25	400	11.20	118	50	50	661	661	1,322	0.00	159	20	80	0	0	0	0.37	7,400	0	100	0	2,738	2,738
	KN-26	600	16.80	118	50	50	991	991	1,982	0.00	159	20	80	0	0	0	0.12	7,400	0	100	0	888	888
	KN-27	300	8.40	118	50	50	496	496	991	1.80	159	20	80	57	229	286	0.31	7,400	0	100	0	2,294	2,294
	S-1	900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	S-2	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	S-3	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sub-Total	4,000	72.80				4,295	4,295	8,590	20.80				661	2,646	3,307	3.02				0	22,348	22,348
NB-4	KN-28-1	900	25.20	118	50	50	1,487	1,487	2,974	10.25	159	20	80	326	1,304	1,630	1.65	7,400	0	100	0	12,210	12,210
	KN-28-2	500	14.00	118	50	50	826	826	1,652	4.33	159	20	80	138	551	688	1.04	7,400	0	100	0	7,696	7,696
	KN-29	1,400	39.20	118	50	50	2,313	2,313	4,626	35.40	159	20	80	1,126	4,503	5,629	2.70	7,400	0	100	0	19,980	19,980
	Sub-Total	2,800	78.40				4,626	4,626	9,251	49.98				1,589	6,357	7,947	5.39				0	39,886	39,886
NB-5	KN-30-1	300	8.40	118	50	50	496	496	991	13.52	159	20	80	430	1,720	2,150	0.41	7,400	0	100	0	3,034	3,034
	KN-30-2	1,500	42.00	118	50	50	2,478	2,478	4,956	13.67	159	20	80	435	1,739	2,174	1.26	7,400	0	100	0	9,324	9,324
	KN-31-1	800	22.40	118	50	50	1,322	1,322	2,643	22.80	159	20	80	725	2,900	3,625	1.53	7,400	0	100	0	11,322	11,322
	KN-31-2	1,300	36.40	118	50	50	2,148	2,148	4,295	33.30	159	20	80	1,059	4,236	5,295	3.01	7,400	0	100	0	22,274	22,274
	KN-32	1,800	50.40	118	50	50	2,974	2,974	5,947	37.60	159	20	80	1,196	4,783	5,978	3.45	7,400	0	100	0	25,530	25,530
	Sub-Total	5,700	159.60				9,416	9,416	18,833	120.89				3,844	15,377	19,222	9.66				0	71,484	71,484
	Total	17,200	442.40				26,102	26,102	52,203	272.24				8,657	34,629	43,286	26.15				0	193,510	193,510

Table BQ 4.1 : CONSTRUCTION COST OF SLAB BRIDGE

TYPE.A (L=3.00m,W=3.66m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	59,337	39	61	1.00	23	36	59
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	1,126.00	36	143	179
2. Backfill	m3	118	50	50	930.00	55	55	110
3. Concrete (1:3:5)	m3	3,777	60	40	5.50	12	8	21
4. Concrete (1:2:4)	m3	4,786	60	40	5.50	16	11	26
5. Reinforcement Bar	t	44,717	60	40	0.50	13	9	22
6. Form	m2	761	80	20	12.10	7	2	9
7. Brick Work	m3	3,156	40	60	197.00	249	373	622
8. Miscellaneous	LS	197,789	39	61	1.00	78	120	198
Subtotal			39	61		466	721	1,187
Total			39	61		489	757	1,246 (113,486Tk/m2)

TYPE.B (L=3.50m,W=3.66m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	68,797	40	60	1.00	27	41	69
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	1,250.00	40	159	199
2. Backfill	m3	118	50	50	1,022.75	60	60	121
3. Concrete (1:3:5)	m3	3,777	60	40	5.50	12	8	21
4. Concrete (1:2:4)	m3	4,786	60	40	8.28	24	16	40
5. Reinforcement Bar	t	44,717	60	40	0.75	20	13	33
6. Form	m2	761	80	20	18.22	11	3	14
7. Brick Work	m3	3,156	40	60	228.00	288	432	720
8. Miscellaneous	LS	229,323	40	60	1.00	91	138	229
Subtotal			40	60		546	830	1,376
Total			40	60		574	871	1,445 (112,782Tk/m2)

Table BQ 4.1 : CONSTRUCTION COST OF SLAB BRIDGE

TYPE.C (L=4.00m,W=3.66m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	78,257	40	60	1.00	31	47	78
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	1,374.00	44	175	218
2. Backfill	m3	118	50	50	1,115.50	66	66	132
3. Concrete (1:3:5)	m3	3,777	60	40	5.50	12	8	21
4. Concrete (1:2:4)	m3	4,786	60	40	11.07	32	21	53
5. Reinforcement Bar	t	44,717	60	40	1.00	27	18	45
6. Form	m2	761	80	20	24.34	15	4	19
7. Brick Work	m3	3,156	40	60	259.00	327	490	817
8. Miscellaneous	LS	260,857	40	60	1.00	104	156	261
Subtotal			40	60		627	938	1,565
Total			40	60		658	985	1,643 (112,254Tk/m2)

TYPE.D (L=5.00m,W=3.66m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	97,178	41	59	1.00	39	58	97
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	1,622.00	52	206	258
2. Backfill	m3	118	50	50	1,301.00	77	77	154
3. Concrete (1:3:5)	m3	3,777	60	40	5.50	12	8	21
4. Concrete (1:2:4)	m3	4,786	60	40	16.63	48	32	80
5. Reinforcement Bar	t	44,717	60	40	1.50	40	27	67
6. Form	m2	761	80	20	36.59	22	6	28
7. Brick Work	m3	3,156	40	60	321.00	405	608	1,013
8. Miscellaneous	LS	323,925	41	59	1.00	131	193	324
Subtotal			41	59		787	1,156	1,944
Total			41	59		827	1,214	2,041 (111,515Tk/m2)

Table BQ 4.2: CONSTRUCTION COST OF GIRDER BRIDGE

TYPE.A (L=6.00m,W=3.66m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	83,446	40	60	1.00	33	50	83
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	1,536.00	49	195	244
2. Backfill	m3	118	50	50	1,260.00	74	74	149
3. Concrete (1:3:5)	m3	3,777	60	40	7.20	16	11	27
4. Concrete (1:2:4)	m3	4,786	60	40	9.50	27	18	45
5. Reinforcement Bar	t	44,717	60	40	0.86	23	15	38
6. Form	m2	761	80	20	20.90	13	3	16
7. Brick Work	m3	3,156	40	60	276.00	348	523	871
8. Miscellaneous	LS	278,152	40	60	1.00	110	168	278
Subtotal			40	60		661	1,008	1,669
Total			40	60		694	1,058	1,752 (79,798Tk/m2)

TYPE.B (L=7.00m,W=3.66m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	86,991	40	60	1.00	35	52	87
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	1,564.50	50	199	249
2. Backfill	m3	118	50	50	1,282.00	76	76	151
3. Concrete (1:3:5)	m3	3,777	60	40	7.20	16	11	27
4. Concrete (1:2:4)	m3	4,786	60	40	12.50	36	24	60
5. Reinforcement Bar	t	44,717	60	40	1.13	30	20	50
6. Form	m2	761	80	20	27.50	17	4	21
7. Brick Work	m3	3,156	40	60	282.50	357	535	892
8. Miscellaneous	LS	289,971	40	60	1.00	116	174	290
Subtotal			40	60		697	1,042	1,740
Total			40	60		732	1,095	1,827 (71,304Tk/m2)

Table BQ 4.2: CONSTRUCTION COST OF GIRDER BRIDGE

TYPE.C (L=8.00m,W=3.66m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	90,537	41	59	1.00	37	54	91
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	1,593.00	51	203	253
2. Backfill	m3	118	50	50	1,304.00	77	77	154
3. Concrete (1:3:5)	m3	3,777	60	40	7.20	16	11	27
4. Concrete (1:2:4)	m3	4,786	60	40	15.50	45	30	74
5. Reinforcement Bar	t	44,717	60	40	1.40	37	25	62
6. Form	m2	761	80	20	34.10	21	5	26
7. Brick Work	m3	3,156	40	60	289.00	365	547	912
8. Miscellaneous	LS	301,790	41	59	1.00	122	180	302
Subtotal			41	59		734	1,077	1,811
Total			41	59		770	1,131	1,901 (64,934Tk/m2)

TYPE.D (L=10.00m,W=3.66m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	97,629	41	59	1.00	40	57	98
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	1,650.00	52	210	262
2. Backfill	m3	118	50	50	1,348.00	80	80	159
3. Concrete (1:3:5)	m3	3,777	60	40	7.20	16	11	27
4. Concrete (1:2:4)	m3	4,786	60	40	21.50	62	41	103
5. Reinforcement Bar	t	44,717	60	40	1.94	52	35	87
6. Form	m2	761	80	20	47.30	29	7	36
7. Brick Work	m3	3,156	40	60	302.00	381	572	953
8. Miscellaneous	LS	325,428	41	59	1.00	134	191	325
Subtotal			41	59		806	1,146	1,953
Total			41	59		847	1,203	2,050 (56,016Tk/m2)

Table BQ 4.3: CONSTRUCTION COST OF CANTILEVER BRIDGE

TYPE.A (L=22.00m,W=3.66m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	125,512	46	54	1.00	58	68	126
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	1,754.00	56	223	279
2. Backfill	m3	118	50	50	1,464.00	86	86	173
3. Concrete (1:3:5)	m3	3,777	60	40	9.57	22	14	36
4. Concrete (1:2:4)	m3	4,786	60	40	66.00	190	126	316
5. Reinforcement Bar	t	44,717	60	40	5.94	159	106	266
6. Form	m2	761	80	20	145.20	88	22	110
7. Brick Work	m3	3,156	40	60	289.00	365	547	912
8. Miscellaneous	LS	418,372	46	54	1.00	193	225	418
Subtotal			46	54		1,159	1,351	2,510
Total			46	54		1,217	1,419	2,636 (32,734Tk/m2)

TYPE.B (L=24.00m,W=3.66m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	129,258	47	53	1.00	60	69	129
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	1,757.00	56	223	279
2. Backfill	m3	118	50	50	1,456.00	86	86	172
3. Concrete (1:3:5)	m3	3,777	60	40	9.57	22	14	36
4. Concrete (1:2:4)	m3	4,786	60	40	72.00	207	138	345
5. Reinforcement Bar	t	44,717	60	40	6.48	174	116	290
6. Form	m2	761	80	20	158.40	96	24	121
7. Brick Work	m3	3,156	40	60	289.00	365	547	912
8. Miscellaneous	LS	430,860	47	53	1.00	201	230	431
Subtotal			47	53		1,206	1,379	2,585
Total			47	53		1,267	1,448	2,714 (30,902Tk/m2)

Table BQ 4.3: CONSTRUCTION COST OF CANTILEVER BRIDGE

TYPE.C (L=26.00m,W=3.66m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	133,005	47	53	1.00	63	70	133
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	1,760.00	56	224	280
2. Backfill	m3	118	50	50	1,448.00	85	85	171
3. Concrete (1:3:5)	m3	3,777	60	40	9.57	22	14	36
4. Concrete (1:2:4)	m3	4,786	60	40	78.00	224	149	373
5. Reinforcement Bar	t	44,717	60	40	7.02	188	126	314
6. Form	m2	761	80	20	171.60	104	26	131
7. Brick Work	m3	3,156	40	60	289.00	365	547	912
8. Miscellaneous	LS	443,349	47	53	1.00	209	234	443
Subtotal			47	53		1,254	1,406	2,660
Total			47	53		1,316	1,477	2,793 (29,352Tk/m2)

Table BQ 4.4: UNIT CONSTRUCTION COST OF RAILWAY BRIDGE

A. BN-43,BN-54,BN-55 (L=3.50m,W=1.70m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	37,477	47	53	1.00	17	20	37
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	358.40	11	46	57
2. Backfill	m3	118	50	50	261.72	15	15	31
3. Levelling Concrete	m3	3,777	60	40	4.15	9	6	16
4. Brick Work	m3	3,156	40	60	96.67	122	183	305
5. Form	m2	614	80	20	6.70	3	1	4
6. Miscellaneous	LS	20,637	39	61	1.00	8	13	21
Subtotal			39	61		170	264	433
III. Temporary Work	LS	216,692	39	61	1.00	85	132	217
IV. Prefebricated Steel Structure								
Main Girder								
1. Girder	t	26,000	100	0	3.22	84	0	84
2. Installation	LS	8,372	90	10	1.00	8	1	8
3. Miscellaneous	LS	7,367	55	45	1.00	4	3	7
Subtotal			96	4		95	4	99
Total			47	53		367	420	787
V. C.D.S.T.	LS		0	100	1.00	0	117	117

B. BN-30 (L=4.40m,W=1.70m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	42,113	47	53	1.00	20	22	42
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	392.30	12	50	62
2. Backfill	m3	118	50	50	284.81	17	17	34
3. Levelling Concrete	m3	3,777	60	40	4.23	10	6	16
4. Brick Work	m3	3,156	40	60	107.49	136	204	339
5. Form	m2	614	80	20	6.75	3	1	4
6. Miscellaneous	LS	22,767	39	61	1.00	9	14	23
Subtotal			39	61		187	291	478
III. Temporary Work	LS	239,055	39	61	1.00	93	146	239
IV. Prefebricated Steel Structure								
1. Girder	t	26,000	100	0	4.05	105	0	105
2. Installation	LS	10,530	90	10	1.00	9	1	11
3. Miscellaneous	LS	9,266	55	45	1.00	5	4	9
Subtotal			96	4		120	5	125
Total			47	53		420	464	884
V. C.D.S.T.	LS		0	100	1.00	0	147	147

Note : Preparation work (site clearing, site office motor pool, survey works, soil boring, safety control, etc.)

Table BQ 4.4: *UNIT CONSTRUCTION COST OF RAILWAY BRIDGE*

C. BN-53 (L=5.30m,W=1.70m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	46,744	48	52	1.00	23	24	47
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	426.20	14	54	68
2. Backfill	m3	118	50	50	307.90	18	18	36
3. Levelling Concrete	m3	3,777	60	40	4.30	10	6	16
4. Brick Work	m3	3,156	40	60	118.30	149	224	373
5. Form	m2	614	80	20	6.80	3	1	4
6. Miscellaneous	LS	24,893	39	61	1.00	10	15	25
Subtotal			39	61		204	319	523
III. Temporary Work	LS	261,381	39	61	1.00	102	159	261
IV. Prefebricated Steel Structure Main Girder								
1. Girder	t	26,000	100	0	4.88	127	0	127
2. Installation	LS	12,688	90	10	1.00	11	1	13
3. Miscellaneous	LS	11,165	55	45	1.00	6	5	11
Subtotal			96	4		144	6	151
Total			48	52		473	509	982
V. C.D.S.T.	LS		0	100	1.00	0	178	178

D. BD-5 (L=9.40m,W=1.70m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	69,227	50	50	1.00	34	35	69
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	619.96	20	79	99
2. Backfill	m3	118	50	50	451.02	27	27	53
3. Levelling Concrete	m3	3,777	60	40	5.26	12	8	20
4. Brick Work	m3	3,156	40	60	168.94	213	320	533
5. Form	m2	614	80	20	7.48	4	1	5
6. Miscellaneous	LS	35,471	39	61	1.00	14	22	35
Subtotal			39	61		289	456	745
III. Temporary Work	LS	372,450	39	61	1.00	144	228	372
IV. Prefebricated Steel Structure Main Girder								
1. Girder	t	26,000	100	0	8.65	225	0	225
2. Installation	LS	22,490	90	10	1.00	20	2	22
3. Miscellaneous	LS	19,791	55	45	1.00	11	9	20
Subtotal			96	4		256	11	267
Total			50	50		724	730	1,454
V. C.D.S.T.	LS		0	100	1.00	0	315	315

Note : Preparation work (site clearing, site office motor pool, survey works, soil boring, safety control, etc.)

Table BQ 4.4: UNIT CONSTRUCTION COST OF RAILWAY BRIDGE

E. BN-19,BN-21 (L=26.20m,W=1.70m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	120,091	57	43	1.00	68	52	120
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	760.79	24	97	121
2. Backfill	m3	118	50	50	537.76	32	32	63
3. Levelling Concrete	m3	3,777	60	40	8.46	19	13	32
4. Brick Work	m3	3,156	40	60	262.93	332	498	830
5. Form	m2	614	80	20	9.70	5	1	6
6. Miscellaneous	LS	52,607	39	61	1.00	21	32	53
Subtotal			39	61		432	672	1,105
III. Temporary Work	LS	552,372	39	61	1.00	216	336	552
IV. Prefebricated Steel Structure Main Girder								
1. Girder	t	26,000	100	0	24.11	627	0	627
2. Installation	LS	62,686	90	10	1.00	56	6	63
3. Miscellaneous	LS	55,164	55	45	1.00	30	25	55
Subtotal			96	4		714	31	745
Total			57	43		1,430	1,092	2,522
V. C.D.S.T.	LS		0	100	1.00	0	878	878

Note : Preparation work (site clearing, site office motor pool, survey works, soil boring, safety control, etc.)

Table BQ 4.5 : CONSTRUCTION COST OF AQUEDUCT

A. BN-9 (L=7.00m)

(1991 Price)

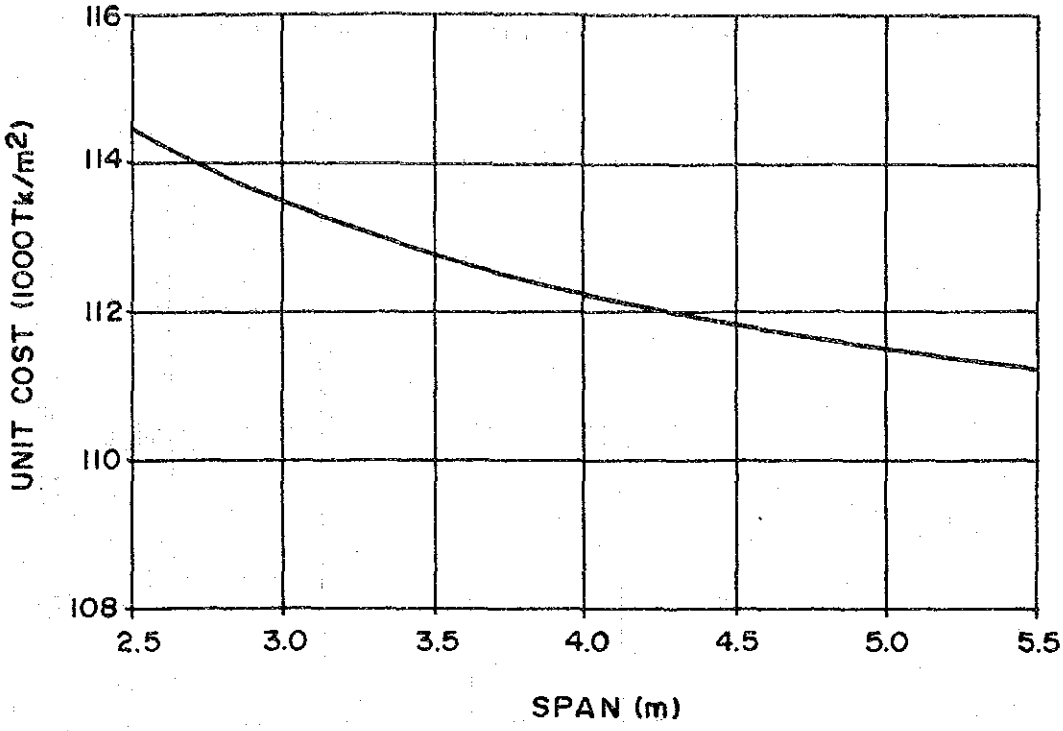
Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	78,041	38	62	1.00	30	48	78
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	1,377.00	44	175	219
2. Backfill	m3	118	50	50	1,089.00	64	64	129
3. Concrete (1:3:5)	m3	3,777	60	40	5.90	13	9	22
4. Concrete (1:2:4)	m3	4,786	60	40	2.10	6	4	10
5. Reinforcement Bar	t	44,717	60	40	0.19	5	3	8
6. Form	m2	761	80	20	4.62	3	1	4
7. Brick Work	m3	3,156	40	60	288.00	364	545	909
8. Miscellaneous	LS	260,135	38	62	1.00	100	160	260
Subtotal			38	62		599	962	1,561
Total			38	62		629	1,010	1,639

B. BN-35 (L=15.00m)

(1991 Price)

Item	Unit	Unit Cost (TK)			Quantity	Construction Cost (1000TK)		
		Total	F/C(%)	L/C(%)		F/C	L/C	Total
I. Preparation of Work	LS	121,572	39	61	1.00	48	74	122
II. Direct Construction Cost								
1. Excavation	m3	159	20	80	2,073.00	66	264	330
2. Backfill	m3	118	50	50	1,638.00	97	97	193
3. Concrete (1:3:5)	m3	3,777	60	40	9.00	20	14	34
4. Concrete (1:2:4)	m3	4,786	60	40	9.20	26	18	44
5. Reinforcement Bar	t	44,717	60	40	0.83	22	15	37
6. Form	m2	761	80	20	20.24	12	3	15
7. Brick Work	m3	3,156	40	60	435.00	549	824	1,373
8. Miscellaneous	LS	405,241	39	61	1.00	159	247	405
Subtotal			39	61		952	1,480	2,431
Total			39	61		999	1,554	2,553

UNIT CONSTRUCTION COST OF SLAB BRIDGE



UNIT CONSTRUCTION COST OF GIRDER BRIDGE

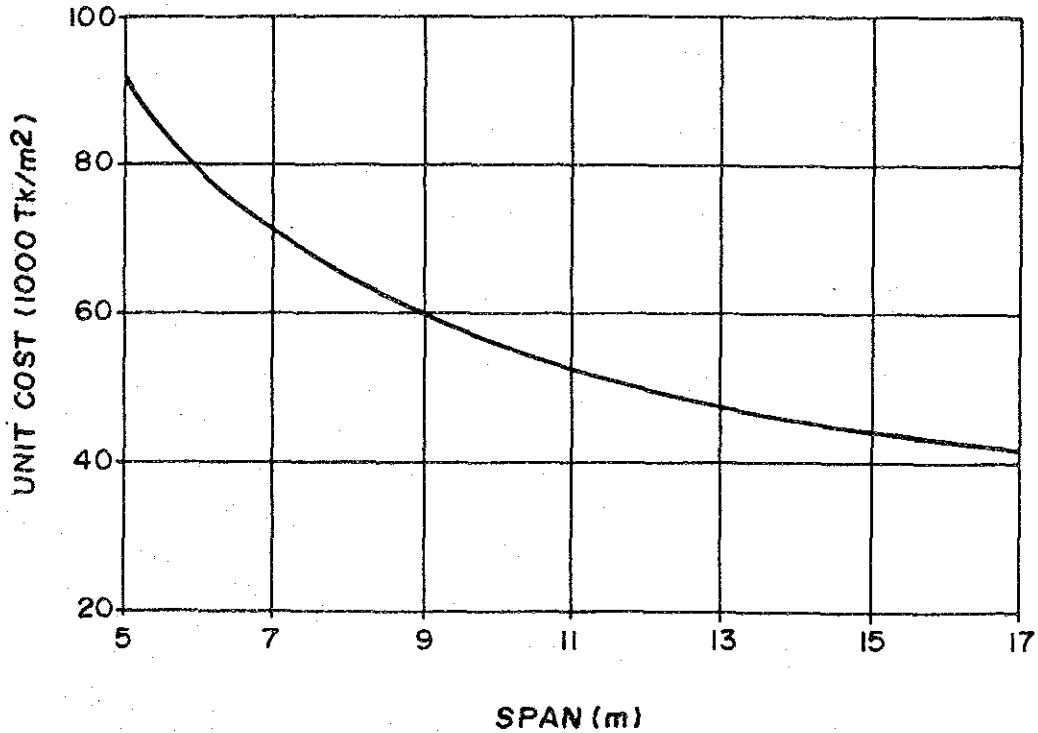


FIG. HD 6(1) | Unit Construction Cost of Bridge - Slab/Girder

GREATER DHAKA PROTECTION PROJECT (STUDY IN DHAKA METROPOLITAN AREA) OF BANGLADESH FLOOD ACTION PLAN NO.8A IN THE PEOPLE'S REPUBLIC OF BANGLADESH

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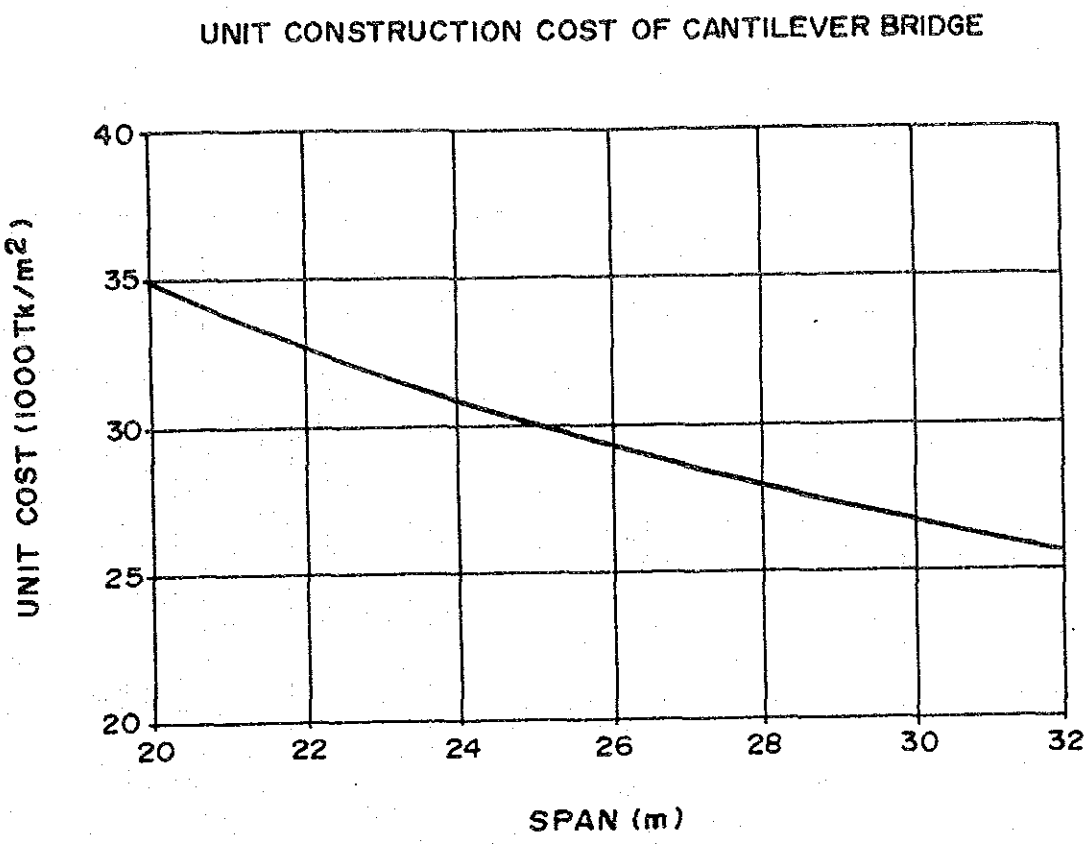

FIG. HD 6(2)	Unit Construction Cost of Bridge - Cantilever

GREATER DHAKA PROTECTION PROJECT (STUDY IN DHAKA METROPOLITAN AREA) OF BANGLADESH FLOOD ACTION PLAN NO.8A IN THE PEOPLE'S REPUBLIC OF BANGLADESH

Data HD 6 : Proposed Disbursement Schedule

Table H 1 :Proposed Disbursement Schedule :DC-1

Unit :Million TK

Phase		Total Cost	F/C	L/C														
Project Area		F/C & L/C	%	%	'92	'93	'94	'95	'96	'97	'98	'99	2,000	'01	'02	'03	'04	'05
G.Dhaka East																		
1.DC-1																		
A.Project Preparation																		
1).Administration		104									17	17	17	17	17	16		
2).Engineering		398									199	199						
3).Compensation		34									17	17						
4).Land Aquisition		531									265	266						
Sub-Total : (x10^6 TK)		1,067									498	499	17	17	17	16	0	0
(F/C)		268																
(L/C)		799																
B.Flood Mitigation																		
1).Embankment		2,340											585	585	585	585		
2).Flood Wall		22											6	6	6	4		
3).Sluice Gate		165											41	41	41	42		
4).Related.Struc.Etc		0																
Sub-Total : (x10^6 TK)		2,527											632	632	632	631	0	0
(F/C)		1,675																
(L/C)		852																
C.Storm Water Drainage																		
1).Pump Sta.		634												181	181	180		
2).Khal Improve.		280												93	93	94		
3).Bridge,Etc		17												6	6	5		
Sub-Total : (x10^6 TK)		932												280	280	279	0	0
(F/C)		657																
(L/C)		275																
D.Physical Contingency													130	130	130	128		
Sub-Total : (x10^6 TK)		518																
(F/C)		349																
(L/C)		169																
E.Operation&Maintenance	*																	
1).O & M Work		808															36	36
2).Repacement Cost		389															36	36
Sub-Total : (x10^6 TK)	*																	
(F/C)																		
(L/C)																		
F.CDST & Tax (L/C)		572											122	122	122	123		
G. Total : (x10^6 TK)		5,616			0	0	0	0	0	0	498	499	900	1,181	1,181	1,177	0	0
(F/C)		2,949																
(L/C)		2,667																

Note: *:Not Included in Total Cost