

Table 4.10: Northern Alignment Options - Capital Cost Base Estimates (August 2001)

Item	Rate (HK\$)	On Line Section		Option N1		Option N2		Option N3		Option N4	
		Quantity	Cost (HK\$)	Quantity	Cost (HK\$)	Quantity	Cost (HK\$)	Quantity	Cost (HK\$)	Quantity	Cost (HK\$)
Road Works											
Cut (m3)	110	30,600	3,366,000	117,384	12,912,240	191,856	21,104,160	148,932	16,382,520	143,524	15,787,640
Fill (m3)	20	3,970	79,400	13,000	260,000	21,550	431,000	11,220	224,400	11,120	222,400
Retaining Wall (m2)	4,200	4,374	18,370,800	7,547	31,697,400	12,400	52,080,000	6,879	28,891,800	6,864	28,828,800
Pavement + Others (m2)	3,240	22,330	72,349,200	19,691	63,798,840	20,097	65,114,280	19,945	64,620,990	18,930	61,332,390
Landscaping (item)	-	-	5,000,000	-	5,000,000	-	5,000,000	-	5,000,000	-	5,000,000
Sub-Total			99,165,400		113,668,480		143,729,440		115,119,710		111,171,230
Bridge Works											
Deck Area (m2)	21,120	475	10,032,000	1,473	31,099,200	1,663	35,112,000	1,758	37,118,400	1,568	33,105,600
Tunnel Works											
Portals (item)	-	-	-	-	-	-	-	-	28,000,000	-	28,000,000
Tunnel Civils (m)	815,000	-	-	-	-	-	-	560	456,400,000	720	586,800,000
Tunnel E&M (item)	-	-	-	-	-	-	-	-	84,000,000	-	108,000,000
Sub-Total			0		0		0		568,400,000		722,800,000
Tunnel Buildings											
Platform Cut	110	-	-	-	-	-	-	1,980	217,800	620	68,200
Platform Fill	20	-	-	-	-	-	-	260	5,200	90	1,800
Pavement + Others (m2)	510	-	-	-	-	-	-	1,950	994,500	1,875	956,250
Buildings Civils (item)	-	-	-	-	-	-	-	-	72,000,000	-	72,000,000
Buildings E&M (item)	-	-	-	-	-	-	-	-	90,000,000	-	90,000,000
Sub-Total			0		0		0		163,217,500		163,026,250
Total			109,197,400		144,767,680		178,841,440		883,855,610		1,030,103,080

Table 4.12: Northern Alignment Options - Annual Recurrent Cost Estimates

Item	Rate (HK\$)	On Line Section		Option N1		Option N2		Option N3		Option N4	
		Quantity	Cost (HK\$)	Quantity	Cost (HK\$)	Quantity	Cost (HK\$)	Quantity	Cost (HK\$)	Quantity	Cost (HK\$)
Maintenance											
Roads (m2)	21.0	22,330	468,930	19,691	413,511	21,264	446,549	19,640	412,445	19,082	400,722
Structures (m2)	47.8	475	22,705	1,473	70,386	1,663	79,468	1,758	84,009	1,425	68,115
Roadside Slopes (m2)	27.0	6,406	172,962	13,045	352,215	22,507	607,689	16,117	435,159	12,970	350,190
Road Lighting (km)	67,200	2.25	151,200	2.10	140,784	2.27	152,544	2.12	142,464	2.03	136,416
Drainage (item)	3,500,000	1.63%	57,120	1.63%	57,120	1.63%	57,120	1.63%	57,120	1.63%	57,120
Sub-Total			872,917		1,034,016		1,343,370		1,131,197		1,012,563
Staffing											
Roads (m2)	6.3	22,330	140,679	19,691	124,053	21,264	133,965	19,640	123,734	19,082	120,217
Structures (m2)	14.3	475	6,793	1,473	21,057	1,663	23,774	1,758	25,132	1,425	20,378
Roadside Slopes (m2)	8.1	6,406	51,889	13,045	105,665	22,507	182,307	16,117	130,548	12,970	105,057
Road Lighting (km)	1,100	2.25	2,475	2.10	2,305	2.27	2,497	2.12	2,332	2.03	2,233
Drainage (item)	3,500,000	0.60%	21,000	0.60%	21,000	0.60%	21,000	0.60%	21,000	0.60%	21,000
Sub-Total			222,835		274,079		363,542		302,746		268,884
Tunnel (Inc. Staffing)											
Operational Costs (km)	20,000,000	-	-	-	-	-	-	0.56	11,200,000	0.72	14,400,000
Electrical and Mechanical (km)	18,000,000	-	-	-	-	-	-	0.56	10,080,000	0.72	12,960,000
Sub-Total			0		0		0		21,280,000		27,360,000
Total			1,095,752		1,308,095		1,706,912		22,713,942		28,641,447

Table 5.10: Southern Alignment Options - Capital Cost Base Estimates (August 2001)

Item	Rate (HK\$)	Option S1		Option S2A		Option S2B		Option S3	
		Quantity	Cost (HK\$)	Quantity	Cost (HK\$)	Quantity	Cost (HK\$)	Quantity	Cost (HK\$)
Road Works									
Cut (m3)	110	26,520	2,917,200	74,208	8,162,880	101,400	11,154,000	160,800	17,688,000
Fill (m3)	20	13,010	260,200	8,820	176,400	18,680	373,600	11,930	238,600
Retaining Wall (m2)	4,200	5,047	21,197,400	7,159	30,067,800	8,822	37,052,400	6,717	28,211,400
Pavement + Others (m2)	3,240	14,210	46,040,400	19,285	62,483,400	23,244	75,308,940	17,712	57,386,070
Landscaping (item)	-	-	5,000,000	-	5,000,000	-	5,000,000	-	5,000,000
Sub-Total			75,415,200		105,890,480		128,888,940		108,524,070
Bridge Works									
Deck Area (m2)	21,120	4,370	92,294,400	4,513	95,304,000	5,985	126,403,200	6,270	132,422,400
Total			167,709,600		201,194,480		255,292,140		240,946,470

Table 5.12: Southern Alignment Options - Annual Recurrent Cost Estimates

Item	Rate (HK\$)	Option S1		Option S2A		Option S2B		Option S3	
		Quantity	Cost (HK\$)	Quantity	Cost (HK\$)	Quantity	Cost (HK\$)	Quantity	Cost (HK\$)
Maintenance									
Roads (m2)	21.0	14,210	298,410	19,285	404,985	23,244	488,124	17,712	371,952
Structures (m2)	47.8	4,370	208,886	4,513	215,721	5,985	286,083	6,270	299,706
Roadside Slopes (m2)	27.0	6,126	165,402	14,606	394,362	21,128	570,456	26,078	704,106
Road Lighting (km)	67,200	1.86	124,992	2.38	159,600	2.92	196,224	2.41	161,616
Drainage (item)	3,500,000	1.63%	57,120	1.63%	57,120	1.63%	57,120	1.63%	57,120
Sub-Total			854,810		1,231,788		1,598,007		1,594,500
Staffing									
Roads (m2)	6.3	14,210	89,523	19,285	121,496	23,244	146,437	17,712	111,586
Structures (m2)	14.3	4,370	62,491	4,513	64,536	5,985	85,586	6,270	89,661
Roadside Slopes (m2)	8.1	6,126	49,621	14,606	118,309	21,128	171,137	26,078	211,232
Road Lighting (km)	1,100	1.86	2,046	2.38	2,613	2.92	3,212	2.41	2,646
Drainage (item)	3,500,000	0.60%	21,000	0.60%	21,000	0.60%	21,000	0.60%	21,000
Sub-Total			224,681		327,953		427,372		436,124
Total			1,079,491		1,559,741		2,025,379		2,030,624

Table 6.2: One-Way Traffic Scenarios - Capital Cost Base Estimates (August 2001)

Item	Rate (HK\$)	N1		N3		N4		S2A	
		Quantity	Cost (HK\$)	Quantity	Cost (HK\$)	Quantity	Cost (HK\$)	Quantity	Cost (HK\$)
Road Works									
Cut (m3)	110	115,389	12,692,790	89,124	9,803,640	86,041	9,464,510	64,461	7,090,710
Fill (m3)	20	11,246	224,920	8,977	179,540	8,896	177,920	7,710	154,200
Retaining Wall (m2)	4,200	7,169	30,109,800	5,982	25,124,400	5,833	24,498,600	6,756	28,375,200
Pavement + Others (m2)	3,240	19,054	61,734,960	17,125	55,485,000	16,638	53,907,120	18,018	58,376,700
Landscaping (item)	-	-	5,000,000	-	5,000,000	-	5,000,000	-	5,000,000
Sub-Total			109,762,470		95,592,580		93,048,150		98,996,810
Bridge Works									
Deck Area (m2)	21,120	1,178	24,879,360	1,406	29,694,720	1,140	24,076,800	3,953	83,476,800
Tunnel Works									
Portals (item)	-	-	-	-	14,000,000	-	14,000,000	-	-

Tunnel Civils (m)	407,500	-	-	560	228,200,000	720	293,400,000	-	-
Tunnel E&M (item)	-	-	-	-	42,000,000	-	54,000,000	-	-
Sub-Total			0		284,200,000		361,400,000		0
Tunnel Buildings									
Platform Cut	110	-	-	1,980	217,800	620	68,200	-	-
Platform Fill	20	-	-	260	5,200	90	1,800	-	-
Pavement + Others (m2)	510	-	-	1,950	994,500	1,875	956,250	-	-
Buildings Civils (item)	-	-	-	-	72,000,000	-	72,000,000	-	-
Buildings E&M (item)	-	-	-	-	90,000,000	-	90,000,000	-	-
Sub-Total			0		163,217,500		163,026,250		0
Total			134,641,830		572,704,800		641,551,200		182,473,610

Table 6.3: Comparison of Capital Cost Base Estimates (August 2001) for One-Way and Two-Way Traffic Scenarios

Alignment Combination	Cost (HK\$)	
	Two-Way	One-Way
N1/S2A	345,962,160	317,115,440
N3/S2A	1,085,050,090	755,178,410
N4/S2A	1,231,297,560	824,024,810