

APPENDIX B: COST ESTIMATION AND EFFECTIVENESS SUMMARIES BY CORRIDOR

Project 1B

Benefit Cost

Table 1
Summary

Project 1B	Low	High
Operating Benefit	\$ 36,059,047	\$ 36,059,047
Travel Time Benefit	\$ 206,856,047	\$ 206,856,047
Operating and Maintenance Benefit	\$ (2,904,287)	\$ 3,773,121
Total Benefit	\$ 240,010,807	\$ 246,688,215
Costs		
Mill and Overlay	\$ 1,560,000	\$ 1,560,000
Managed Lanes	\$ 975,000	\$ 1,300,000
Grading and Drainage	\$ 455,000	\$ 1,300,000
Major Structures	\$ 500,000	\$ 1,000,000
Utilities	\$ -	\$ 370,500
Miscellaneous Items	\$ 1,300,000	\$ 3,900,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 1,677,000	\$ 3,301,000
Engineering (18%)	\$ 1,164,000	\$ 2,292,000
Total Cost	\$ 7,631,000	\$ 15,023,500
PV Total Cost	\$ 7,631,000	\$ 15,023,500
Project Salvage Value	\$ 851,221	\$ 1,451,795
(PV Total Cost - Salvage Value)	\$ 6,779,779	\$ 13,571,705
Benefit-Cost Ratio		
	35.40	18.18

Project 3A

Benefit Cost

Table 1

Summary

Project 3A	Low	High
Operating Benefit	\$ 93,949,190	\$ 93,949,190
Travel Time Benefit	\$ 519,285,022	\$ 519,285,022
Operating and Maintenance Benefit	\$ 12,999,808	\$ 44,503,476
Total Benefit	\$ 626,234,020	\$ 657,737,688
Mill and Overlay	\$ 18,400,000	\$ 18,400,000
Managed Lanes	\$ 3,450,000	\$ 4,600,000
Grading and Drainage	\$ 1,610,000	\$ 4,600,000
Major Structures	\$ 1,875,000	\$ 3,750,000
Utilities	\$ -	\$ 1,311,000
Miscellaneous Items	\$ 4,600,000	\$ 13,800,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 10,477,000	\$ 16,261,000
Engineering (18%)	\$ 7,274,000	\$ 11,290,000
Total Cost	\$ 47,686,000	\$ 74,012,000
PV Total Cost	\$ 47,686,000	\$ 74,012,000
Project Salvage Value	\$ 4,651,392	\$ 6,818,286
(PV Total Cost - Salvage Value)	\$ 43,034,608	\$ 67,193,714
Benefit-Cost Ratio	14.55	9.79

Project 4A

Benefit Cost

Table 1

Summary

Project 4A	Low	High
Operating Benefit	\$ 140,023,692	\$ 140,023,692
Travel Time Benefit	\$ 752,388,883	\$ 752,388,883
Operating and Maintenance Benefit	\$ 33,582,689	\$ 71,592,549
Total Benefit	\$ 925,995,264	\$ 964,005,124
Costs		
Mill and Overlay	\$ -	\$ -
Managed Lanes	\$ 5,550,000	\$ 7,400,000
Grading and Drainage	\$ -	\$ -
Major Structures	\$ -	\$ -
Utilities	\$ -	\$ 2,109,000
Miscellaneous Items	\$ -	\$ -
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 1,943,000	\$ 3,328,000
Engineering (18%)	\$ 1,349,000	\$ 2,311,000
Total Cost	\$ 8,842,000	\$ 15,148,000
PV Total Cost	\$ 8,842,000	\$ 15,148,000
Project Salvage Value	\$ 1,686,970	\$ 2,249,293
(PV Total Cost - Salvage Value)	\$ 7,155,030	\$ 12,898,707
Benefit-Cost Ratio		
	129.42	74.74

Project 6B

Benefit Cost

Table 1

Summary

Project 6B	Low	High
Operating Benefit	\$ 96,991,725	\$ 96,991,725
Travel Time Benefit	\$ 192,605,156	\$ 192,605,156
Operating and Maintenance Benefit	\$ (16,975,136)	\$ 8,707,202
Total Benefit	\$ 272,621,745	\$ 298,304,083
Mill and Overlay	\$ 3,600,000	\$ 3,600,000
Managed Lanes	\$ 2,250,000	\$ 3,000,000
Grading and Drainage	\$ 1,050,000	\$ 3,000,000
Major Structures	\$ -	\$ -
Utilities	\$ -	\$ 855,000
Miscellaneous Items	\$ 3,000,000	\$ 9,000,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 3,465,000	\$ 6,809,000
Engineering (18%)	\$ 2,406,000	\$ 4,728,000
Total Cost	\$ 15,771,000	\$ 30,992,000
PV Total Cost	\$ 15,771,000	\$ 30,992,000
Project Salvage Value	\$ 1,508,500	\$ 2,438,582
(PV Total Cost - Salvage Value)	\$ 14,262,500	\$ 28,553,418
Benefit-Cost Ratio	19.11	10.45

Project 7B

Benefit Cost

Table 1

Summary

Project 7B	Low	High
Operating Benefit	\$ 248,980,097	\$ 248,980,097
Travel Time Benefit	\$ 1,521,209,916	\$ 1,521,209,916
Operating and Maintenance Benefit	\$ 55,955,697	\$ 191,558,442
Total Benefit	\$ 1,826,145,710	\$ 1,961,748,455
Mill and Overlay	\$ 79,200,000	\$ 79,200,000
Managed Lanes	\$ 14,850,000	\$ 19,800,000
Grading and Drainage	\$ 6,930,000	\$ 19,800,000
Major Structures	\$ 9,560,000	\$ 19,120,000
Utilities	\$ -	\$ 5,643,000
Miscellaneous Items	\$ 19,800,000	\$ 59,400,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 45,619,000	\$ 71,037,000
Engineering (18%)	\$ 31,673,000	\$ 49,320,000
Total Cost	\$ 207,632,000	\$ 323,320,000
PV Total Cost	\$ 207,632,000	\$ 323,320,000
Project Salvage Value	\$ 20,609,614	\$ 30,525,085
(PV Total Cost - Salvage Value)	\$ 187,022,386	\$ 292,794,915
Benefit-Cost Ratio	9.76	6.70

Project 10A

Benefit Cost

Table 1

Summary

Project 10A	Low	High
Operating Benefit	\$ 97,607,045	\$ 97,607,045
Travel Time Benefit	\$ 671,246,054	\$ 671,246,054
Operating and Maintenance Benefit	\$ 17,521,481	\$ 59,982,946
Total Benefit	\$ 786,374,580	\$ 828,836,046
Costs		
Mill and Overlay	\$ 24,800,000	\$ 24,800,000
Managed Lanes	\$ 4,650,000	\$ 6,200,000
Grading and Drainage	\$ 2,170,000	\$ 6,200,000
Major Structures	\$ 6,300,000	\$ 12,600,000
Utilities	\$ -	\$ 5,643,000
Miscellaneous Items	\$ 6,200,000	\$ 18,600,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 15,442,000	\$ 25,915,000
Engineering (18%)	\$ 10,721,000	\$ 17,992,000
Total Cost	\$ 70,283,000	\$ 117,950,000
PV Total Cost	\$ 70,283,000	\$ 117,950,000
Project Salvage Value	\$ 7,759,820	\$ 12,170,970
(PV Total Cost - Salvage Value)	\$ 62,523,180	\$ 105,779,030
Benefit-Cost Ratio		
	12.58	7.84

Project 17A

Benefit Cost

Table 1

Summary

Project 17A	Low	High
Operating Benefit	\$ 107,987,648	\$ 107,987,648
Travel Time Benefit	\$ 968,915,178	\$ 968,915,178
Operating and Maintenance Benefit	\$ 24,506,286	\$ 52,243,211
Total Benefit	\$ 1,242,440,129	\$ 1,269,892,059
Mill and Overlay	\$ -	\$ -
Managed Lanes	\$ 4,050,000	\$ 5,400,000
Grading and Drainage	\$ -	\$ -
Major Structures	\$ -	\$ -
Utilities	\$ -	\$ 1,539,000
Miscellaneous Items	\$ -	\$ -
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 1,418,000	\$ 2,429,000
Engineering (18%)	\$ 984,000	\$ 1,686,000
Total Cost	\$ 6,452,000	\$ 11,054,000
PV Total Cost	\$ 6,452,000	\$ 11,054,000
Project Salvage Value	\$ 1,231,032	\$ 1,641,376
(PV Total Cost - Salvage Value)	\$ 5,220,968	\$ 9,412,624
Benefit-Cost Ratio	237.97	134.91

Project 18A

Benefit Cost

Table 1

Summary

Project 18A	Low	High
Operating Benefit	\$ 102,927,756	\$ 102,927,756
Travel Time Benefit	\$ 945,066,748	\$ 945,066,748
Operating and Maintenance Benefit	\$ 38,614,864	\$ 98,197,888
Total Benefit	\$ 1,086,609,368	\$ 1,146,192,392
Mill and Overlay	\$ 40,600,000	\$ 40,600,000
Managed Lanes	\$ 8,700,000	\$ 11,600,000
Grading and Drainage	\$ 4,060,000	\$ 11,600,000
Major Structures	\$ 2,503,000	\$ 5,006,000
Utilities	\$ -	\$ 3,306,000
Miscellaneous Items	\$ 11,600,000	\$ 34,800,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 23,612,000	\$ 37,419,000
Engineering (18%)	\$ 16,394,000	\$ 25,980,000
Total Cost	\$ 107,469,000	\$ 170,311,000
PV Total Cost	\$ 107,469,000	\$ 170,311,000
Project Salvage Value	\$ 10,131,037	\$ 14,716,232
(PV Total Cost - Salvage Value)	\$ 97,337,963	\$ 155,594,768
Benefit-Cost Ratio	11.16	7.37

Project 19A

Benefit Cost

Table 1

Summary

Project 19A	Low	High
Operating Benefit	\$ 9,171,253	\$ 9,171,253
Travel Time Benefit	\$ 495,436,592	\$ 495,436,592
Operating and Maintenance Benefit	\$ 33,288,676	\$ 84,653,352
Total Benefit	\$ 537,896,521	\$ 589,261,197
Mill and Overlay	\$ 35,000,000	\$ 35,000,000
Managed Lanes	\$ 7,500,000	\$ 10,000,000
Grading and Drainage	\$ 3,500,000	\$ 10,000,000
Major Structures	\$ 5,227,500	\$ 10,455,000
Utilities	\$ -	\$ 2,850,000
Miscellaneous Items	\$ 10,000,000	\$ 30,000,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 21,430,000	\$ 34,407,000
Engineering (18%)	\$ 14,878,000	\$ 23,888,000
Total Cost	\$ 97,535,500	\$ 156,600,000
PV Total Cost	\$ 97,535,500	\$ 156,600,000
Project Salvage Value	\$ 9,946,434	\$ 15,111,969
(PV Total Cost - Salvage Value)	\$ 87,589,066	\$ 141,488,031
Benefit-Cost Ratio	6.14	4.16

Project 20B

Benefit Cost

Table 1

Summary

Project 20B	Low	High
Operating Benefit	\$ 140,023,692	\$ 140,023,692
Travel Time Benefit	\$ 752,388,883	\$ 752,388,883
Operating and Maintenance Benefit	\$ 22,608,362	\$ 77,397,350
Total Benefit	\$ 915,020,938	\$ 969,809,926
Costs		
Mill and Overlay	\$ 32,000,000	\$ 32,000,000
Managed Lanes	\$ 6,000,000	\$ 8,000,000
Grading and Drainage	\$ 2,800,000	\$ 8,000,000
Major Structures	\$ 22,050,000	\$ 44,100,000
Utilities	\$ -	\$ 2,280,000
Miscellaneous Items	\$ 8,000,000	\$ 24,000,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 24,798,000	\$ 41,433,000
Engineering (18%)	\$ 17,217,000	\$ 28,766,000
Total Cost	\$ 112,865,000	\$ 188,579,000
PV Total Cost	\$ 112,865,000	\$ 188,579,000
Project Salvage Value	\$ 15,512,511	\$ 26,704,157
(PV Total Cost - Salvage Value)	\$ 97,352,489	\$ 161,874,843
Benefit-Cost Ratio		
	9.40	5.99

Project 21B

Benefit Cost

Table 1

Summary

Project 21B	Low	High
Operating Benefit	\$ 294,943,884	\$ 294,943,884
Travel Time Benefit	\$ 1,575,014,301	\$ 1,575,014,301
Operating and Maintenance Benefit	\$ 48,607,979	\$ 166,404,303
Total Benefit	\$ 1,918,566,165	\$ 2,036,362,489
Mill and Overlay	\$ 68,800,000	\$ 68,800,000
Managed Lanes	\$ 12,900,000	\$ 17,200,000
Grading and Drainage	\$ 6,020,000	\$ 17,200,000
Major Structures	\$ -	\$ -
Utilities	\$ -	\$ 4,902,000
Miscellaneous Items	\$ 17,200,000	\$ 51,600,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 36,722,000	\$ 55,896,000
Engineering (18%)	\$ 25,496,000	\$ 38,808,000
Total Cost	\$ 167,138,000	\$ 254,406,000
PV Total Cost	\$ 167,138,000	\$ 254,406,000
Project Salvage Value	\$ 14,622,335	\$ 19,954,808
(PV Total Cost - Salvage Value)	\$ 152,515,665	\$ 234,451,192
Benefit-Cost Ratio	12.58	8.69

Project 22B

Benefit Cost

Table 1

Summary

Project 22B	Low	High
Operating Benefit	\$ 38,814,149	\$ 38,814,149
Travel Time Benefit	\$ 352,127,886	\$ 352,127,886
Operating and Maintenance Benefit	\$ (9,076,313)	\$ 6,675,521
Total Benefit	\$ 381,865,722	\$ 397,617,556
Costs		
Mill and Overlay	\$ 2,760,000	\$ 2,760,000
Managed Lanes	\$ 1,725,000	\$ 2,300,000
Grading and Drainage	\$ 805,000	\$ 2,300,000
Major Structures	\$ -	\$ -
Utilities	\$ -	\$ 655,500
Miscellaneous Items	\$ 2,300,000	\$ 6,900,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 2,657,000	\$ 5,220,000
Engineering (18%)	\$ 1,844,000	\$ 3,624,000
Total Cost	\$ 12,091,000	\$ 23,759,500
PV Total Cost	\$ 12,091,000	\$ 23,759,500
Project Salvage Value	\$ 1,156,516	\$ 1,869,580
(PV Total Cost - Salvage Value)	\$ 10,934,484	\$ 21,889,920
Benefit-Cost Ratio		
	34.92	18.16

Project 23A

Benefit Cost

Table 1

Summary

Project 23A	Low	High
Operating Benefit	\$ 117,790,190	\$ 117,790,190
Travel Time Benefit	\$ 861,233,699	\$ 861,233,699
Operating and Maintenance Benefit	\$ 29,555,260	\$ 151,118,326
Total Benefit	\$ 1,008,579,149	\$ 1,130,142,216
Mill and Overlay	\$ 62,480,000	\$ 62,480,000
Managed Lanes	\$ 10,650,000	\$ 14,200,000
Grading and Drainage	\$ 4,970,000	\$ 14,200,000
Major Structures	\$ 4,800,000	\$ 9,600,000
Utilities	\$ -	\$ 4,047,000
Miscellaneous Items	\$ 14,200,000	\$ 42,600,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 33,985,000	\$ 51,494,000
Engineering (18%)	\$ 23,595,000	\$ 35,752,000
Total Cost	\$ 154,680,000	\$ 234,373,000
PV Total Cost	\$ 154,680,000	\$ 234,373,000
Project Salvage Value	\$ 14,672,820	\$ 20,971,576
(PV Total Cost - Salvage Value)	\$ 140,007,180	\$ 213,401,424
Benefit-Cost Ratio	7.20	5.30

Project 26B

Benefit Cost

Table 1

Summary

Project 26B	Low	High
Operating Benefit	\$ 27,784,160	\$ 27,784,160
Travel Time Benefit	\$ 252,444,357	\$ 252,444,357
Operating and Maintenance Benefit	\$ (1,563,847)	\$ 2,031,680
Total Benefit	\$ 278,664,670	\$ 282,260,197
Mill and Overlay	\$ 840,000	\$ 840,000
Managed Lanes	\$ 525,000	\$ 700,000
Grading and Drainage	\$ 245,000	\$ 700,000
Major Structures	\$ -	\$ -
Utilities	\$ -	\$ 199,500
Miscellaneous Items	\$ 1,200,000	\$ 2,200,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 984,000	\$ 1,624,000
Engineering (18%)	\$ 683,000	\$ 1,127,000
Total Cost	\$ 4,477,000	\$ 7,390,500
PV Total Cost	\$ 4,477,000	\$ 7,390,500
Project Salvage Value	\$ 351,983	\$ 569,003
(PV Total Cost - Salvage Value)	\$ 4,125,017	\$ 6,821,497
Benefit-Cost Ratio	67.55	41.38

Project 27A

Benefit Cost

Table 1

Summary

Project 27A	Low	High
Operating Benefit	\$ 239,067,904	\$ 239,067,904
Travel Time Benefit	\$ 1,170,318,077	\$ 1,170,318,077
Operating and Maintenance Benefit	\$ 31,291,355	\$ 79,574,151
Total Benefit	\$ 1,440,677,337	\$ 1,488,960,132
Costs		
Mill and Overlay	\$ 32,900,000	\$ 32,900,000
Managed Lanes	\$ 7,050,000	\$ 9,400,000
Grading and Drainage	\$ 3,290,000	\$ 9,400,000
Major Structures	\$ 6,000,000	\$ 12,000,000
Utilities	\$ -	\$ 2,679,000
Miscellaneous Items	\$ 9,400,000	\$ 28,200,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 20,524,000	\$ 33,103,000
Engineering (18%)	\$ 14,250,000	\$ 22,983,000
Total Cost	\$ 93,414,000	\$ 150,665,000
PV Total Cost	\$ 93,414,000	\$ 150,665,000
Project Salvage Value	\$ 9,778,760	\$ 15,063,474
(PV Total Cost - Salvage Value)	\$ 83,635,240	\$ 135,601,526
Benefit-Cost Ratio		
	17.23	10.98

Project 28B

Benefit Cost

Table 1

Summary

Project 28B	Low	High
Operating Benefit	\$ 321,936,006	\$ 321,936,006
Travel Time Benefit	\$ 1,736,354,747	\$ 1,736,354,747
Operating and Maintenance Benefit	\$ 43,275,279	\$ 110,049,357
Total Benefit	\$ 2,101,566,031	\$ 2,168,340,110
Costs		
Mill and Overlay	\$ 45,500,000	\$ 45,500,000
Managed Lanes	\$ 9,750,000	\$ 13,000,000
Grading and Drainage	\$ 4,550,000	\$ 13,000,000
Major Structures	\$ 4,680,000	\$ 9,360,000
Utilities	\$ -	\$ 3,705,000
Miscellaneous Items	\$ 13,000,000	\$ 39,000,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 27,118,000	\$ 43,248,000
Engineering (18%)	\$ 18,828,000	\$ 30,026,000
Total Cost	\$ 123,426,000	\$ 196,839,000
PV Total Cost	\$ 123,426,000	\$ 196,839,000
Project Salvage Value	\$ 12,094,482	\$ 17,973,796
(PV Total Cost - Salvage Value)	\$ 111,331,518	\$ 178,865,204
Benefit-Cost Ratio		
	18.88	12.12

Project 29B

Benefit Cost

Table 1

Summary

Project 29B	Low	High
Operating Benefit	\$ 113,515,949	\$ 113,515,949
Travel Time Benefit	\$ 1,019,374,965	\$ 1,019,374,965
Operating and Maintenance Benefit	\$ 53,927,655	\$ 137,138,430
Total Benefit	\$ 1,186,818,570	\$ 1,270,029,345
Costs		
Mill and Overlay	\$ 56,700,000	\$ 56,700,000
Managed Lanes	\$ 12,150,000	\$ 16,200,000
Grading and Drainage	\$ 5,670,000	\$ 16,200,000
Major Structures	\$ 8,870,000	\$ 17,740,000
Utilities	\$ -	\$ 4,617,000
Miscellaneous Items	\$ 16,200,000	\$ 48,600,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 34,857,000	\$ 56,020,000
Engineering (18%)	\$ 24,200,000	\$ 38,894,000
Total Cost	\$ 158,647,000	\$ 254,971,000
PV Total Cost	\$ 158,647,000	\$ 254,971,000
Project Salvage Value	\$ 16,271,826	\$ 24,798,596
(PV Total Cost - Salvage Value)	\$ 142,375,174	\$ 230,172,404
Benefit-Cost Ratio		
	8.34	5.52

Project 41A

Benefit Cost

Table 1

Summary

Project 41A	Low	High
Operating Benefit	\$ 23,457,756	\$ 23,457,756
Travel Time Benefit	\$ 577,161,090	\$ 577,161,090
Operating and Maintenance Benefit	\$ 43,941,052	\$ 111,742,424
Total Benefit	\$ 644,559,897	\$ 712,361,270
Mill and Overlay	\$ 46,200,000	\$ 46,200,000
Managed Lanes	\$ 9,900,000	\$ 13,200,000
Grading and Drainage	\$ 4,620,000	\$ 13,200,000
Major Structures	\$ 12,600,000	\$ 25,200,000
Utilities	\$ -	\$ 3,762,000
Miscellaneous Items	\$ 13,200,000	\$ 39,600,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 30,282,000	\$ 49,407,000
Engineering (18%)	\$ 21,024,000	\$ 34,302,000
Total Cost	\$ 137,826,000	\$ 224,871,000
PV Total Cost	\$ 137,826,000	\$ 224,871,000
Project Salvage Value	\$ 15,381,107	\$ 24,451,428
(PV Total Cost - Salvage Value)	\$ 122,444,893	\$ 200,419,572
Benefit-Cost Ratio	5.26	3.55

Project 42B

Benefit Cost

Table 1

Summary

Project 42B	Low	High
Operating Benefit	\$ 208,366,828	\$ 208,366,828
Travel Time Benefit	\$ 1,172,572,045	\$ 1,172,572,045
Operating and Maintenance Benefit	\$ 37,283,317	\$ 94,811,754
Total Benefit	\$ 1,418,222,190	\$ 1,475,750,627
Costs		
Mill and Overlay	\$ 39,200,000	\$ 39,200,000
Managed Lanes	\$ 8,400,000	\$ 11,200,000
Grading and Drainage	\$ 3,920,000	\$ 11,200,000
Major Structures	\$ 72,165,000	\$ 144,330,000
Utilities	\$ -	\$ 3,192,000
Miscellaneous Items	\$ 11,200,000	\$ 33,600,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 47,210,000	\$ 84,953,000
Engineering (18%)	\$ 32,777,000	\$ 58,982,000
Total Cost	\$ 214,872,000	\$ 386,657,000
PV Total Cost	\$ 214,872,000	\$ 386,657,000
Project Salvage Value	\$ 37,337,573	\$ 69,320,540
(PV Total Cost - Salvage Value)	\$ 177,534,427	\$ 317,336,460
Benefit-Cost Ratio		
	7.99	4.65

Project 45A

Benefit Cost

Table 1

Summary

Project 45A	Low	High
Operating Benefit	\$ 73,679,815	\$ 73,679,815
Travel Time Benefit	\$ 514,050,000	\$ 514,050,000
Operating and Maintenance Benefit	\$ 52,564,443	\$ 179,948,839
Total Benefit	\$ 640,294,258	\$ 767,678,655
Mill and Overlay	\$ 74,400,000	\$ 74,400,000
Managed Lanes	\$ 13,950,000	\$ 18,600,000
Grading and Drainage	\$ 6,510,000	\$ 18,600,000
Major Structures	\$ 60,000,000	\$ 120,000,000
Utilities	\$ -	\$ 5,301,000
Miscellaneous Items	\$ 18,600,000	\$ 55,800,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 60,711,000	\$ 102,445,000
Engineering (18%)	\$ 42,151,000	\$ 71,126,000
Total Cost	\$ 276,322,000	\$ 466,272,000
PV Total Cost	\$ 276,322,000	\$ 466,272,000
Project Salvage Value	\$ 39,517,083	\$ 68,988,154
(PV Total Cost - Salvage Value)	\$ 236,804,917	\$ 397,283,846
Benefit-Cost Ratio	2.70	1.93

Project 50A

Benefit Cost

Table 1

Summary

Project 50A	Low	High
Operating Benefit	\$ 169,314,216	\$ 169,314,216
Travel Time Benefit	\$ 950,883,438	\$ 950,883,438
Operating and Maintenance Benefit	\$ 50,868,816	\$ 174,144,038
Total Benefit	\$ 1,171,066,469	\$ 1,294,341,692
Mill and Overlay	\$ 72,000,000	\$ 72,000,000
Managed Lanes	\$ 13,500,000	\$ 18,000,000
Grading and Drainage	\$ 6,300,000	\$ 18,000,000
Major Structures	\$ 2,400,000	\$ 4,800,000
Utilities	\$ -	\$ 5,130,000
Miscellaneous Items	\$ 18,000,000	\$ 54,000,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 39,270,000	\$ 60,176,000
Engineering (18%)	\$ 27,265,000	\$ 41,779,000
Total Cost	\$ 178,735,000	\$ 273,885,000
PV Total Cost	\$ 178,735,000	\$ 273,885,000
Project Salvage Value	\$ 16,250,626	\$ 22,779,304
(PV Total Cost - Salvage Value)	\$ 162,484,374	\$ 251,105,696
Benefit-Cost Ratio	7.21	5.15

Project 53A

Benefit Cost

Table 1

Summary

Project 53A	Low	High
Operating Benefit	\$ 195,486,620	\$ 195,486,620
Travel Time Benefit	\$ 1,202,237,165	\$ 1,202,237,165
Operating and Maintenance Benefit	\$ 50,868,816	\$ 174,144,038
Total Benefit	\$ 1,448,592,601	\$ 1,571,867,823
Mill and Overlay	\$ 72,000,000	\$ 72,000,000
Managed Lanes	\$ 13,500,000	\$ 18,000,000
Grading and Drainage	\$ 6,300,000	\$ 18,000,000
Major Structures	\$ 6,300,000	\$ 12,600,000
Utilities	\$ -	\$ 5,130,000
Miscellaneous Items	\$ 18,000,000	\$ 54,000,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 40,635,000	\$ 62,906,000
Engineering (18%)	\$ 28,212,000	\$ 43,674,000
Total Cost	\$ 184,947,000	\$ 286,310,000
PV Total Cost	\$ 184,947,000	\$ 286,310,000
Project Salvage Value	\$ 17,791,422	\$ 25,860,896
(PV Total Cost - Salvage Value)	\$ 167,155,578	\$ 260,449,104
Benefit-Cost Ratio	8.67	6.04

Project 54A

Benefit Cost

Table 1

Summary

Project 54A	Low	High
Operating Benefit	\$ 132,763,339	\$ 132,763,339
Travel Time Benefit	\$ 890,099,025	\$ 890,099,025
Operating and Maintenance Benefit	\$ 23,302,073	\$ 59,257,346
Total Benefit	\$ 1,046,164,436	\$ 1,082,119,710
Mill and Overlay	\$ 24,500,000	\$ 24,500,000
Managed Lanes	\$ 5,250,000	\$ 7,000,000
Grading and Drainage	\$ 2,450,000	\$ 7,000,000
Major Structures	\$ 7,575,000	\$ 15,150,000
Utilities	\$ -	\$ 1,995,000
Miscellaneous Items	\$ 7,000,000	\$ 21,000,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 16,371,000	\$ 26,826,000
Engineering (18%)	\$ 11,366,000	\$ 18,625,000
Total Cost	\$ 74,512,000	\$ 122,096,000
PV Total Cost	\$ 74,512,000	\$ 122,096,000
Project Salvage Value	\$ 8,509,523	\$ 13,672,416
(PV Total Cost - Salvage Value)	\$ 66,002,477	\$ 108,423,584
Benefit-Cost Ratio	15.85	9.98

Project 55A

Benefit Cost

Table 1

Summary

Project 55A	Low	High
Operating Benefit	\$ 37,533,474	\$ 37,533,474
Travel Time Benefit	\$ 255,570,828	\$ 255,570,828
Operating and Maintenance Benefit	\$ 38,434,216	\$ 131,575,495
Total Benefit	\$ 331,538,517	\$ 424,679,797
Costs		
Mill and Overlay	\$ 54,400,000	\$ 54,400,000
Managed Lanes	\$ 10,200,000	\$ 13,600,000
Grading and Drainage	\$ 4,760,000	\$ 13,600,000
Major Structures	\$ 35,190,000	\$ 70,380,000
Utilities	\$ -	\$ 3,876,000
Miscellaneous Items	\$ 13,600,000	\$ 40,800,000
Right of Way	\$ -	\$ -
Risk Factor (35%)	\$ 41,353,000	\$ 68,830,000
Engineering (18%)	\$ 28,711,000	\$ 47,787,000
Total Cost	\$ 188,214,000	\$ 313,273,000
PV Total Cost	\$ 188,214,000	\$ 313,273,000
Project Salvage Value	\$ 25,464,570	\$ 43,583,668
(PV Total Cost - Salvage Value)	\$ 162,749,430	\$ 269,689,332
Benefit-Cost Ratio		
	2.04	1.57