

Appendix E – Opinion of Probable Cost

Cost Estimate - Option 1a

Campbell County - Slope Stabilization, KY 8 (Mary Ingles Highway) MP 4.0 to MP 5.0

Assumes: 2-lane rural section between marina and RR underpass

Added 4' paved shoulder

Pavement Cost

1.0 miles long	5,200 LF	1.0
22' wide	22 LF	
Area	114,400 SF	
	12,711 SY	
Cost @	\$72.00 per SY	

Shoulder Cost

4' wide shoulder x 2	8 LF	
Area	41,600	
	4,622 SY	
Cost @	\$47.00 per SY	\$1,132,444

Miscellaneous Items

	Qty.	Units	\$ per Unit	
Clearing & Grubbing	1.0	mi	\$100,000.00	\$100,000.00
DITCHING AND SHOULDERING	5,200.0	LF	\$2.50	\$13,000.00
Excavation and Backfill (4' nominal depth)	16,948	CY	\$45.00	\$762,666.67
Tieback Wall (8' nominal height)	28,000	SF	\$125.00	\$3,500,000.00
NON PERFORATED PIPE-6 IN	208	LF	\$11.50	\$2,392
PERFORATED PIPE-6 IN	728	LF	\$7.00	\$5,096.00
PERF PIPE HEADWALL TY 1-6 IN	26	Ea.	\$642.00	\$16,692.00
FLOWABLE FILL (as needed)	100	CY	\$125.00	\$12,500.00
REMOVE GUARDRAIL	5,200	LF	\$1.50	\$7,800.00
GUARDRAIL-STEEL W BEAM-S FACE	5,200	LF	\$16.00	\$83,200.00
GUARDRAIL END TREATMENT TYPE 1	2	Ea.	\$2,200.00	\$4,400.00
ENTRANCE PIPE-15 IN	120	LF	\$60.00	\$7,200.00
Structures (N/A)	0	SF	\$150.00	
Install curb and gutter	0	LF	\$19.00	\$0.00
Pavement Striping	20,800	LF	\$0.25	\$5,200.00
Sidewalk (4")		SY	\$36.00	\$0.00
Signalization		Ea.	\$100,000	\$0
Misc. drainage, erosion control, etc.			30% paving	\$339,733.33
Maintenance of Traffic	1	LS	\$500,000	\$500,000.00
			Subtotal	\$6,492,324
			Contingency (20%)	\$1,298,465
			Design (10%)	
			Mobilization (3%)	\$233,724
			Demobilization (1.5%)	\$116,862
			TOTAL CONSTRUCTION COST	\$8,141,375

Cost Estimate - Option 1b

Campbell County -New alignment, KY 8 (Mary Ingles Highway) north of MP 5.0
Assumes: New 2-lane rural section north of Tower Hill Road connecting to 6th Ave
6' shoulders (4' paved shoulder)

Pavement Cost

1.6 miles long	8,300 LF
22' wide	22 LF
Area	182,600 SF
	20,289 SY
Cost @	\$72.00 per SY

Shoulder Cost

4' wide shoulder x 2	8 LF	
Area	66,400	
	7,378 SY	
Cost @	\$47.00 per SY	\$1,807,556

Miscellaneous Items

	Qty.	Units	\$ per Unit	
Clearing & Grubbing	1.6	mi	\$100,000.00	\$157,197
Roadway Excavation	1,400,000	CY	\$4.75	\$6,650,000
Retaining wall (20' nominal height)	5,000	SF	\$150.00	\$750,000
PERFORATED PIPE EDGE DRAIN-6 IN	16,600	LF	\$8.00	\$132,800
PERFORATED PIPE-6 IN	1,494	LF	\$7.00	\$10,458
PERF PIPE HEADWALL TY 1-6 IN	42	Ea.	\$642.00	\$26,643
GUARDRAIL-STEEL W BEAM-S FACE	8,300	LF	\$16.00	\$132,800.00
GUARDRAIL END TREATMENT TYPE 1	2	Ea.	\$2,200.00	\$4,400.00
GUARDRAIL END TERMINAL SECTION TY 2	2	Ea.	\$80.00	\$160.00
ENTRANCE PIPE-15 IN	20	LF	\$60.00	\$1,200.00
Structures (N/A)	0	SF	\$150.00	
Install curb and gutter	0	LF	\$19.00	\$0
Pavement Striping	33,200	LF	\$0.25	\$8,300
Sidewalk (4")		SY	\$36.00	\$0
Signalization		Ea.	\$100,000	\$0
Misc. drainage, erosion control, etc.			30% paving	\$542,266.67
Maintenance of Traffic	1	LS	\$25,000	\$25,000.00

	Subtotal	\$10,248,780
	Contingency (20%)	\$2,049,756
	Design (10%)	
	Mobilization (3%)	\$368,956
	Demobilization (1.5%)	\$184,478
TOTAL CONSTRUCTION COST		\$12,851,970

Cost Estimate - Option 2

Campbell County - Shift alignment and Slope Stabilization, KY 8 (Mary Ingles Highway) MP 5.0 to MP 7.9
 Assumes: 2-lane rural section between RR underpass and KY 445
 Added 4' paved shoulder

Pavement Cost

2.9 miles long		15,500 LF	
22' wide		22 LF	
	Area	341,000 SF	
		37,889 SY	
	Cost @	\$72.00 per SY	

Shoulder Cost

4' wide shoulder x 2		8 LF	
	Area	124,000	
		13,778 SY	
	Cost @	\$47.00 per SY	\$3,375,556

Miscellaneous Items

	Qty.	Units	\$ per Unit	
Clearing & Grubbing	2.9 mi		\$100,000.00	\$293,561
Roadway Excavation	850,000 CY		\$4.75	\$4,037,500
Excavation and Backfill (4' nominal depth)	50,519 CY		\$45.00	\$2,273,333
Tieback Wall (8' nominal height)	124,000 SF		\$125.00	\$15,500,000
Retaining wall (10' nominal height)	155,000 SF		\$100.00	\$15,500,000
PERFORATED PIPE EDGE DRAIN-6 IN	31,000 LF		\$8.00	\$248,000
NON PERFORATED PIPE-6 IN	620 LF		\$11.50	\$7,130
PERFORATED PIPE-6 IN	2,170 LF		\$7.00	\$15,190
PERF PIPE HEADWALL TY 1-6 IN	78 Ea.		\$642.00	\$49,755
FLOWABLE FILL	250 CY		\$125.00	\$31,250
REMOVE GUARDRAIL	15,500 LF		\$1.50	\$23,250.00
GUARDRAIL-STEEL W BEAM-S FACE	15,500 LF		\$16.00	\$248,000.00
GUARDRAIL END TREATMENT TYPE 1	2 Ea.		\$2,200.00	\$4,400.00
GUARDRAIL END TREATMENT TYPE 2A	2 Ea.		\$650.00	\$1,300.00
ENTRANCE PIPE-15 IN	200 LF		\$60.00	\$12,000.00
Structures (N/A)	0 SF		\$150.00	
Install curb and gutter	0 LF		\$19.00	\$0
Pavement Striping	62,000 LF		\$0.25	\$15,500
Sidewalk (4")	SY		\$36.00	\$0
Signalization	Ea.		\$100,000	\$0
Misc. drainage, erosion control, etc.			30% paving	\$1,012,666.67
Maintenance of Traffic	1 LS		\$500,000	\$500,000.00

	Subtotal	\$43,148,391
	Contingency (20%)	\$8,629,678
	Design (10%)	
	Mobilization (3%)	\$1,553,342
	Demobilization (1.5%)	\$776,671
TOTAL CONSTRUCTION COST		\$54,108,083

Cost Estimate - Major Rehabilitation

Campbell County - Major Rehabilitation, KY 8 (Mary Ingles Highway) MP 4.0 to MP 7.9
 Assumes: Mill & overlay, address pavement failures, and construct limited retaining wall

Mill & Fill

3.9 miles long	15,000 LF
22' wide	22 LF
Area	330,000 SF
	36,667 SY
Cost @	\$15.00 per SY

Pavement Failures

	7,500 LF	
Area	165,000	
	18,333 SY	
Cost @	\$72.00 per SY	\$1,870,000

Miscellaneous Items

	Qty.	Units	\$ per Unit	
Clearing & Grubbing		mi	\$100,000.00	\$0
DITCHING AND SHOULDERING	30,000.0	LF	\$2.50	\$75,000.00
Roadway Excavation	25,000	CY	\$4.75	\$118,750
Excavation and Backfill (4' nominal depth)		CY	\$45.00	\$0
Tieback Wall (8' nominal height)		SF	\$125.00	\$0
Retaining wall (10' nominal height)	5,000	SF	\$100.00	\$500,000
PERFORATED PIPE EDGE DRAIN-6 IN		LF	\$8.00	\$0
NON PERFORATED PIPE-6 IN		LF	\$11.50	\$0
PERFORATED PIPE-6 IN		LF	\$7.00	\$0
PERF PIPE HEADWALL TY 1-6 IN		Ea.	\$642.00	\$0
FLOWABLE FILL		CY	\$125.00	\$0
REMOVE GUARDRAIL	15,500	LF	\$1.50	\$23,250.00
GUARDRAIL-STEEL W BEAM-S FACE	15,500	LF	\$16.00	\$248,000.00
GUARDRAIL END TREATMENT TYPE 1	4	Ea.	\$2,200.00	\$8,800.00
GUARDRAIL END TREATMENT TYPE 2A	4	Ea.	\$650.00	\$2,600.00
ENTRANCE PIPE-15 IN	200	LF	\$60.00	\$12,000.00
Structures (N/A)		SF	\$150.00	
Install curb and gutter		LF	\$19.00	\$0
Pavement Striping	62,000	LF	\$0.25	\$15,500
Sidewalk (4")		SY	\$36.00	\$0
Signalization		Ea.	\$100,000	\$0
Misc. drainage, erosion control, etc.			30% paving	\$561,000.00
Maintenance of Traffic	1	LS	\$500,000	\$500,000.00

	Subtotal	\$3,934,900
	Contingency (20%)	\$786,980
	Design (10%)	
	Mobilization (3%)	\$141,656
	Demobilization (1.5%)	\$70,828
TOTAL CONSTRUCTION COST		\$4,934,365