

Pembroke Corridor Study

7/25/2017

Concept C - KY 115 Widening Carneal Lane (north of I-24) to Pembroke (north of bridge near Mason Lane)

Mainline Length (miles)		
	Unit	Unit Cost
Design		10%
Right of Way	LS	\$2,500,000
Utilities	LS	\$4,250,000
Construction		
MOT		1.5%
Drainage		3.0%
Earthwork		
Cut (CY)	CY	\$10
Fill (CY)	CY	\$8
Roadway - Full Depth	SY	\$60
Roadway - Overlay	SY	\$20
Guardrail	LF	\$16
Structures		
Bridges	SF	\$120
Culvert	CY	\$1,100
Retaining Wall	SF	\$70
Traffic Signal Changes	EA	
+25% Miscellaneous	%	25%
+30% Contingency	%	30%
Total		

KY 115 MP 3.137 to MP 10.0	
6.86	
Quantity	Cost
1	\$1,500,000
1	\$2,500,000
1	\$4,250,000
	\$14,900,000
	\$130,000
	\$260,000
100,000	\$1,000,000
	\$0
93,000	\$5,600,000
77,000	\$1,600,000
1,600	\$30,000
3,000	\$400,000
200	\$30,000
	\$0
	\$2,300,000
	\$3,500,000
	\$23,150,000

PRELIMINARY - For Planning Purposes Only

Pembroke Corridor Study

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Concept A-to-B2 - US 41 Widening (Concept B2 to east of Salubria Springs Road)

Mainline Length (miles)	Unit	Unit Cost
Design	%	10%
Right of Way	LS	\$600,000
Utilities	LS	\$400,000
Construction		
MOT	%	1.5%
Drainage	%	3.0%
Earthwork		
Cut (CY)	CY	\$15
Fill (CY)	CY	\$8
Roadway - Full Depth	SY	\$60
Roadway - Overlay	SY	\$20
Guardrail	LF	\$16
Sidewalk	SY	\$128
Structures		
Bridges	SF	\$120
Culvert	CY	\$1,100
Retaining Wall	SF	\$70
Traffic Signal Changes	EA	
+25% Miscellaneous	%	25%
+30% Contingency	%	30%
Total		

US 41 MP 3.730 to MP 4.0	
0.27	
Quantity	Cost
1	\$70,000
1	\$600,000
1	\$400,000
	\$630,000
	\$10,000
	\$20,000
3,200	\$50,000
	\$0
3,700	\$230,000
3,300	\$70,000
	\$0
0	\$0
0	\$0
	\$100,000
	\$150,000
	\$1,700,000

PRELIMINARY - For Planning Purposes Only

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Concept B1 - Pembroke Connector (Through Movement with KY 115 to US 41)

Mainline Length (miles)			New Connector MP 0 to MP 1.909	KY 115 Tee MP 0 to MP 0.117
	Unit	Unit Cost	2.03	
			Quantity	Cost
Design		10%	1	\$1,100,000
Right of Way	LS	\$1,000,000	1	\$1,000,000
Utilities	LS	\$500,000	1	\$500,000
Construction				\$11,000,000
MOT		1.5%		\$100,000
Drainage		3.0%		\$200,000
Earthwork				
Cut (CY)	CY	\$10		\$0
Fill (CY)	CY	\$8	128,000	\$1,100,000
Roadway - Full Depth	SY	\$60	45,300	\$2,800,000
Roadway - Overlay	SY	\$20		\$0
Guardrail	LF	\$16	3,100	\$50,000
Structures				
85' Steel Girder Three-Span Bridge	SF	\$150	13,000	\$2,000,000
Culvert	CY	\$1,100	2,200	\$400,000
Retaining Wall	SF	\$70		
Traffic Signal Changes	EA			\$0
+25% Miscellaneous	%	25%		\$1,700,000
+30% Contingency	%	30%		\$2,600,000
Total				\$13,600,000

PRELIMINARY - For Planning Purposes Only

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Concept B1 - Pembroke Connector - Shared Use Path (Through Movement with KY 115 to US 41)

Mainline Length (miles)	Unit	Unit Cost
Design		10%
Right of Way	LS	\$140,000
Utilities	LS	\$70,000
Construction		
MOT		1.5%
Drainage		3.0%
Earthwork		
Cut (CY)	CY	\$10
Fill (CY)	CY	\$8
Roadway - Full Depth	SY	\$60
Roadway - Overlay	SY	\$20
Guardrail	LF	\$16
Sidewalk	SY	\$128
Structures		
85' Steel Girder Three-Span Bridge	SF	\$150
Culvert	CY	\$1,100
Retaining Wall	SF	\$70
Traffic Signal Changes	EA	
+25% Miscellaneous	%	25%
+30% Contingency	%	30%
Total		

New Connector MP 0 to MP 1.909	KY 115 Tee MP 0 to MP 0.117
2.03	
Quantity	Cost
1	\$370,000
1	\$140,000
1	\$70,000
	\$3,620,000
	\$100,000
	\$0
13,913	\$120,000
	\$0
	\$0
	\$0
11,200	\$1,500,000
3,000	\$450,000
300	\$50,000
	\$0
	\$560,000
	\$840,000
	\$4,200,000

PRELIMINARY - For Planning Purposes Only

Pembroke Corridor Study

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Concept B2 - Pembroke Connector - Shared Use Path (Through Movement with KY 115 to US 41)

Mainline Length (miles)		
	Unit	Unit Cost
Design		10%
Right of Way	LS	\$70,000
Utilities	LS	\$70,000
Construction		
MOT		1.5%
Drainage		3.0%
Earthwork		
Cut (CY)	CY	\$10
Fill (CY)	CY	\$8
Roadway - Full Depth	SY	\$60
Roadway - Overlay	SY	\$20
Guardrail	LF	\$16
Sidewalk	SY	\$128
Structures		
240' Pre-Stressed Concrete I-Beam (PCIB) Three-Span Bridge	SF	\$120
Culvert	CY	\$1,100
Retaining Wall	SF	\$70
Traffic Signal Changes	EA	
+25% Miscellaneous	%	25%
+30% Contingency	%	30%
Total		

New Connector MP 0 to MP 1.365	KY 115 Tee MP 0 to MP 0.117
1.48	
Quantity	Cost
1	\$260,000
1	\$70,000
1	\$70,000
	\$2,600,000
	\$50,000
	\$0
14,674	\$120,000
	\$0
	\$0
	\$0
8,010	\$1,030,000
3,000	\$360,000
200	\$30,000
	\$0
	\$400,000
	\$600,000
	\$3,000,000

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Concept C-to-B - KY 115 Widening
From Carneal Lane (north of I-24) to Pembroke Conector Tie-in

Mainline Length (miles)				KY 115 MP 3.137 to MP 9.45	
		Unit	Unit Cost	6.31	
				Quantity	Cost
Design			10%	1	\$1,400,000
Right of Way		LS	\$2,300,000	1	\$2,300,000
Utilities		LS	\$3,900,000	1	\$3,900,000
Construction					\$13,400,000
MOT			1.5%		\$120,000
Drainage			3.0%		\$240,000
Earthwork					
	Cut (CY)	CY	\$10	100,000	\$1,000,000
	Fill (CY)	CY	\$8		\$0
Roadway - Full Depth		SY	\$60	86,000	\$5,200,000
Roadway - Overlay		SY	\$20	71,000	\$1,500,000
Guardrail		LF	\$16	1,600	\$30,000
Structures					
	Bridges	SF	\$120		\$0
	Culvert	CY	\$1,100	200	\$30,000
	Retaining Wall	SF	\$70		
Traffic Signal Changes		EA			\$0
	+25% Miscellaneous	%	25%		\$2,100,000
	+30% Contingency	%	30%		\$3,100,000
Total					\$21,000,000

PRELIMINARY - For Planning Purposes Only

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Concept D - KY 115 Bridge Replacement

Mainline Length (miles)	Unit	Unit Cost
Design		10%
Right of Way	LS	\$36,443
Utilities	LS	61,953
Construction		
MOT		1.5%
Drainage		3.0%
Earthwork		
Cut (CY)	CY	\$10
Fill (CY)	CY	\$8
Roadway - Full Depth	SY	\$60
Roadway - Overlay	SY	\$20
Guardrail	LF	\$16
Structures		
Bridges	SF	\$120
Culvert	CY	\$1,100
Retaining Wall	SF	\$70
Traffic Signal Changes	EA	
+25% Miscellaneous	%	25%
+30% Contingency	%	30%
Total		

KY 115 MP 9.86 to MP 9.96	
6.86	
Quantity	Cost
1	\$100,000
1	\$40,000
1	\$70,000
	\$900,000
	\$10,000
	\$20,000
	\$0
	\$0
1,111	\$100,000
	\$0
	\$0
3,000	\$400,000
	\$0
	\$0
	\$133,000
	\$199,000
	\$1,110,000

PRELIMINARY - For Planning Purposes Only