



## Appendix D4 – Planning-Level Cost Estimates



Eastern Shore Rail to Trail - Shared Use Path					
ITEM	ITEM DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
<b>Roadway Discipline</b>					
101	CONSTRUCTION SURVEYING CONSTR.	1	LS	\$ 100,889.41	\$ 100,889.41
10123	Aggr. Base Matl. TY. I-21A	85800	TON	\$ 34.93	\$ 2,996,994.00
11040	Concrete Entrance Pave 7"	300	SY	\$ 90.34	\$ 27,102.00
11070	NS Saw-Cut Asph. Conc. SW-Cut Asph. Conc.	3090	LF	\$ 5.58	\$ 17,242.20
13108	CG-12 DETECTABLE WARNING SURFACE	390	SY	\$ 310.94	\$ 121,266.60
14300	CEMENT CONCRETE SIDEWALK 4"	120	SY	\$ 108.90	\$ 13,068.00
16340	ACSC_Conc. TY. SM-9.5D	1640	TON	\$ 76.74	\$ 125,853.60
16355	ACSC_Conc. TY. SM-12.5D	32180	TON	\$ 80.36	\$ 2,585,984.80
16370	ACSC_Conc. TY IM 19.0D	880	TON	\$ 105.55	\$ 92,884.00
16378	Thin Hot Mix Asphalt Concrete (Polymer Modified)	1770	TON	\$ 129.51	\$ 229,232.70
16392	ACSC_Conc. TY. BM-25.0D	2220	TON	\$ 87.99	\$ 195,337.80
24430	DEMO. OF PAVEMENT FLEXIBLE	1970	SY	\$ 14.86	\$ 29,274.20
<b>Subtotal</b>					\$ 6,535,129.31
<b>+15% Unaccounted for Items</b>					\$ 7,515,398.71
<b>Hydraulics Discipline</b>					
212	Minor Str. Excav. Box Culvert	270	CY	\$ 34.24	\$ 9,244.80
522	Concrete Class A4 Box Culvert	270	CY	\$ 1,614.97	\$ 436,041.90
27545	Storm Water Man. Basin Excav.	3950	CY	\$ 28.12	\$ 111,074.00
<b>Subtotal</b>					\$ 556,360.70
<b>+15% Unaccounted for Items</b>					\$ 639,814.81
<b>Traffic Discipline</b>					
50036	Flexible Post Delineator, Surface Mount	240	EA	\$ 25.45	\$ 6,108.00
50108	SIGN PANEL	1430	SF	\$ 31.55	\$ 45,116.50
50430	SIGN POST STP-1, 2", 14 GAUGE	1385	LF	\$ 14.19	\$ 19,653.15
50436	SIGN POST STP-1, 2 1/2", 12 GAUGE	3235	LF	\$ 18.83	\$ 60,915.05
50485	CONC. SIGN FDN. STP-1 TY.A	241	EA	\$ 253.32	\$ 61,050.12
51198	PEDESTRIAN ACTUATION PA-2	12	EA	\$ 260.00	\$ 3,120.00
51212	PEDESTAL POLE PF-2 12'	12	EA	\$ 980.00	\$ 11,760.00
51240	CONC. FOUNDATION PF-2	12	EA	\$ 946.97	\$ 11,363.64
51600	14/2 CONDUCTOR CABLE	1800	LF	\$ 1.38	\$ 2,484.00
51602	14/4 CONDUCTOR CABLE	1800	LF	\$ 1.66	\$ 2,988.00
51838	HANGER ASSM.SMB-3, ONE WAY	12	EA	\$ 312.66	\$ 3,751.92
52404	PEDESTRIAN SIGNAL HEAD SP-9	12	EA	\$ 861.81	\$ 10,341.72
54032	TYPE B CLASS I PVMT LINE MRKG 4"	55	LF	\$ 0.56	\$ 30.80
54042	TYPE B CLASS I PAVE. LINE MARKING 24"	55	LF	\$ 6.97	\$ 383.35
54105	ERADICATE EX. LINEAR PVMT MRKG	100	LF	\$ 0.46	\$ 46.00
55587	JUNCTION BOX JB-S2	12	EA	\$ 1,719.34	\$ 20,632.08
56054	3" PVC CONDUIT	600	LF	\$ 7.17	\$ 4,302.00
56200	TRENCH EXCAVATION ECI-1	600	LF	\$ 7.49	\$ 4,494.00
<b>Subtotal</b>					\$ 268,540.33
<b>+15% Unaccounted for Items</b>					\$ 308,821.38
<b>Materials/Geotech Discipline</b>					
120	REGULAR EXCAVATION	16770	CY	\$ 20.81	\$ 348,983.70
140	BORROW EXCAVATION	64500	CY	\$ 25.17	\$ 1,623,465.00
<b>Subtotal</b>					\$ 1,972,448.70
<b>+15% Unaccounted for Items</b>					\$ 2,268,316.01
<b>Other Discipline</b>					
110	CLEARING AND GRUBBING	7.4	AC	\$ 15,806.81	\$ 116,970.39
125	GRADING	49	MI	\$ 5,000.00	\$ 245,000.00
22685	Fence Wood Board	7112.0	LF	\$ 26.53	\$ 188,681.36
22721	Line Brace Unit FE-B	718	EA	\$ 175.00	\$ 125,650.00
22741	Corner Brace Unit FE-B	6.0	EA	\$ 175.00	\$ 1,050.00
NS	Erosion and Sediment Control	1	LS	\$ 504,447.07	\$ 504,447.07
NS	Seeding/Landscaping	1	LS	\$ 201,778.83	\$ 201,778.83
NS	Trailhead Amenities	9	EA	\$ 20,000.00	\$ 180,000.00
<b>Subtotal</b>					\$ 1,563,577.65
<b>+15% Unaccounted for Items</b>					\$ 1,798,114.30
<b>MOT</b>					
MAINTENANCE OF TRAFFIC - PROFESSIONAL JUDGEMENT (Percentage of Discipline Subtotals)					\$ 544,802.83
<b>Subtotal</b>					\$ 544,802.83
<b>+15% Unaccounted for Items</b>					\$ 626,523.26

**Shared Use Path**  
**DETAILED PROJECT COST ESTIMATE SUMMARY**  
 (Version: 1/21/2020 - CTS Modified)

Portal ID:	N/A	Project UPC:	
Prepared By:	VHB	Milestone	Creation/Pre Scope
Reviewed By:	VHB	Date:	8/1/2020
County/City/Town:	Accomack County (01)	Tier Level	1

**Preliminary Engineering**

Project Estimate Component		Proposed Project Cost Estimate (\$)		
Discipline	Source	Base (\$)	Contingency (%)	Total
Roadway (Shared Use Path)	Profess. Judgement	\$ 1,546,650	10.00%	\$1,701,315
Hydraulics	Profess. Judgement	\$ 88,380	10.00%	\$97,218
In-plan Utilities				\$0
Traffic	Profess. Judgement	\$ 132,570	10.00%	\$145,827
Structures/Bridges				\$0
Materials/Geotech	Profess. Judgement	\$ 441,900	10.00%	\$486,090
Survey	Profess. Judgement	\$ 883,800	15.00%	\$1,016,370
Environmental	Profess. Judgement	\$ 751,230	15.00%	\$863,915
Right of Way				\$0
Other	Profess. Judgement	\$ 132,570	10.00%	\$145,827
VDOT Oversight Costs		\$ 441,900	10.00%	\$486,090
<b>Total PE Phase Estimate</b>		<b>\$ 4,419,000</b>	<b>11.85%</b>	<b>\$4,942,652</b>
PE Base Estimate Date (XX/XX/XXXX)		8/1/2020		
PE Phase Dates (XX/XX/XXXX)	Start Date		End Date	

**Right-of-Way & Utilities**

Discipline	Source	Base (\$)	Contingency (%)	Total
Right-of-Way	Tax Map	\$0	30.00%	\$0
Out-of-Plan Utilities (power, cable, gas, etc.)	Aerial Photo	\$0	30.00%	\$0
VDOT Oversight Costs		\$0	30.00%	\$0
<b>Total RW Phase Estimate</b>		<b>\$0</b>	<b>#DIV/0!</b>	<b>\$0</b>
RW Base Estimate Date (XX/XX/XXXX)		8/1/2020		
RW Phase Dates (XX/XX/XXXX)	Start Date		End Date	

**Construction**

Discipline	Source	Base (\$)	Contingency (%)	Total
Mobilization	Profess. Judgement	\$1,255,000	40.00%	\$1,757,000
MOT	Profess. Judgement	\$626,523	40.00%	\$877,133
Roadway	Bid Tabs	\$7,515,399	40.00%	\$10,521,558
Hydraulics	Bid Tabs	\$639,815	40.00%	\$895,741
In-plan Utilities				\$0
Traffic	Bid Tabs	\$308,821	40.00%	\$432,350
Structures/Bridges				\$0
Materials/Geotech	Bid Tabs	\$2,268,316	40.00%	\$3,175,642
Soundwalls				\$0
Other	Bid Tabs	\$1,798,114	40.00%	\$2,517,360
<b>Total Bid Items</b>		<b>\$14,411,988</b>	<b>40.00%</b>	<b>\$20,176,784</b>
Incidental-Claims & Work Orders (Percentage of Bid Items)	5% to 10% max	\$1,441,199	40.00%	\$2,017,678
Railroad Flagging/Coordination				0
State Forces				0
State Police				0
Contract Requirements (Incentive/Disincentive)	5%	\$1,008,839	40.00%	\$1,412,375
Construction Engineering (Inspection)	Environmental Inspection (\$)			0
	VDOT or Locality (\$)	\$2,882,398	15.00%	\$3,314,757
	VDOT Oversight (\$)			0
	<b>Total CEI</b>			<b>\$3,314,757</b>
<b>Total CN Phase Estimate</b>		<b>\$19,744,424</b>	<b>36.35%</b>	<b>\$26,921,594</b>
CN Base Estimate Date (XX/XX/XXXX)		8/1/2020		
CN Phase Start Date (XX/XX/XXXX)				
CN Phase End Date (XX/XX/XXXX)				
<b>Total Project Cost Estimate</b>				<b>\$31,864,246</b>



Eastern Shore Rail to Trail - Alternative Path					
ITEM	ITEM DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
<b>Roadway Discipline</b>					
101	CONSTRUCTION SURVEYING CONSTR.	1	LS	\$ 9,974.27	\$ 9,974.27
10123	Aggr. Base Matl. TY. I-21A	23600	TON	\$ 34.93	\$ 824,348.00
<b>Subtotal</b>					\$ 834,322.27
<b>+15% Unaccounted for Items</b>					\$ 959,470.61
<b>Materials/Geotech Discipline</b>					
140	BORROW EXCAVATION	5851	CY	\$ 25.17	\$ 147,272.31
<b>Subtotal</b>					\$ 147,272.31
<b>+15% Unaccounted for Items</b>					\$ 169,363.15
<b>Other Discipline</b>					
110	CLEARING AND GRUBBING	1	LS	\$ 15,806.81	\$ 15,806.81
125	GRADING	1	LS	\$ 10,000.00	\$ 10,000.00
NS	Erosion and Sediment Control	1	LS	\$ 49,871.36	\$ 49,871.36
NS	Seeding/Landscaping	1	LS	\$ 19,948.54	\$ 19,948.54
<b>Subtotal</b>					\$ 95,626.71
<b>+15% Unaccounted for Items</b>					\$ 109,970.71

**Altnerative Soft Surface Path**  
**DETAILED PROJECT COST ESTIMATE SUMMARY**  
 (Version: **1/21/2020 - CTS Modified**)

Portal ID:	N/A	Project UPC:	
Prepared By:	VHB	Milestone	Creation/Pre Scope
Reviewed By:	VHB	Date:	8/1/2020
County/City/Town:	Accomack County (01)	Tier Level	1

**Preliminary Engineering**

Project Estimate Component		Proposed Project Cost Estimate (\$)		
Discipline	Source	Base (\$)	Contingency (%)	Total
Roadway (Shared Use Path)	Profess. Judgement	\$ 294,600	10.00%	\$324,060
Hydraulics		\$ -		\$0
In-plan Utilities		\$ -		\$0
Traffic		\$ -		\$0
Structures/Bridges		\$ -		\$0
Materials/Geotech	Profess. Judgement	\$ 73,650	10.00%	\$81,015
Survey		\$ -		\$0
Environmental	Profess. Judgement	\$ 49,100	15.00%	\$56,465
Right of Way				\$0
Other	Profess. Judgement	\$ 49,100	10.00%	\$54,010
VDOT Oversight Costs		\$ 24,550	10.00%	\$27,005
<b>Total PE Phase Estimate</b>		<b>\$ 491,000</b>	<b>10.50%</b>	<b>\$542,555</b>
PE Base Estimate Date (XX/XX/XXXX)		8/1/2020		
PE Phase Dates (XX/XX/XXXX)	Start Date		End Date	

**Right-of-Way & Utilities**

Discipline	Source	Base (\$)	Contingency (%)	Total
Right-of-Way	Tax Map	\$0	30.00%	\$0
Out-of-Plan Utilities (power, cable, gas, etc.)	Aerial Photo	\$0	30.00%	\$0
VDOT Oversight Costs		\$0	30.00%	\$0
<b>Total RW Phase Estimate</b>		<b>\$0</b>	<b>#DIV/0!</b>	<b>\$0</b>
RW Base Estimate Date (XX/XX/XXXX)		8/1/2020		
RW Phase Dates (XX/XX/XXXX)	Start Date		End Date	

**Construction**

Discipline	Source	Base (\$)	Contingency (%)	Total
Mobilization	Profess. Judgement	\$123,000	40.00%	\$172,200
MOT				\$0
Roadway	Bid Tabs	\$959,471	40.00%	\$1,343,259
Hydraulics	Bid Tabs		40.00%	\$0
In-plan Utilities				\$0
Traffic	Bid Tabs		40.00%	\$0
Structures/Bridges				\$0
Materials/Geotech	Bid Tabs	\$169,363	40.00%	\$237,108
Soundwalls				\$0
Other	Bid Tabs	\$109,971	40.00%	\$153,959
<b>Total Bid Items</b>		<b>\$1,361,804</b>	<b>40.00%</b>	<b>\$1,906,526</b>
Incidental-Claims & Work Orders (Percentage of Bid Items)	5% to 10% max	\$68,090	40.00%	\$95,326
Railroad Flagging/Coordination				0
State Forces				0
State Police				0
Contract Requirements (Incentive/Disincentive)	5%	\$95,326	40.00%	\$133,457
Construction Engineering (Inspection)	Environmental Inspection (\$)			0
	VDOT or Locality (\$)	\$272,361	15.00%	\$313,215
	VDOT Oversight (\$)			0
	<b>Total CEI</b>			<b>\$313,215</b>
<b>Total CN Phase Estimate</b>		<b>\$1,797,582</b>	<b>36.21%</b>	<b>\$2,448,524</b>
CN Base Estimate Date (XX/XX/XXXX)		8/1/2020		
CN Phase Start Date (XX/XX/XXXX)				
CN Phase End Date (XX/XX/XXXX)				
<b>Total Project Cost Estimate</b>				<b>\$2,991,079</b>



Eastern Shore Rail to Trail - Equipment Removal					
ITEM	ITEM DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
<b>Traffic Discipline</b>					
51933	REMOVE EXISTING POLE	40	EA	\$ 1,051.14	\$ 42,045.60
51934	REMOVE EXISTING FOUNDATION	40	EA	\$ 1,856.52	\$ 74,260.80
51936	REMOVE EXISTING CONTROLLER	43	EA	\$ 287.27	\$ 12,352.61
51963	REMOVE EXISTING CONTROLLER FOUNDATION	43	EA	\$ 1,000.00	\$ 43,000.00
51963	REMOVE EXISTING PEDESTAL POLE	50	EA	\$ 460.00	\$ 23,000.00
51963	REMOVE EXISTING PEDESTAL POLE FOUNDATION	50	EA	\$ 1,150.00	\$ 57,500.00
NS	REMOVE OSS-1 CANTILEVERED OVERHEAD STRUCTURE	6	EA	\$ 2,907.66	\$ 17,445.96
<b>Subtotal</b>					\$ 269,604.97
<b>+15% Unaccounted for Items</b>					\$ 310,045.72
<b>Other Discipline</b>					
NS	REMOVE TRACK	257600.0	LF	\$ 30.00	\$ 7,728,000.00
NS	REMOVE TIES	19578	TON	\$ 180.00	\$ 3,524,040.00
<b>Subtotal</b>					\$ 11,252,040.00
<b>+0% Unaccounted for Items</b>					\$ 11,252,040.00
<b>MOT</b>					
MAINTENANCE OF TRAFFIC - PROFESSIONAL JUDGEMENT (Percentage of Discipline Subtotals)					\$ 57,608.22
<b>Subtotal</b>					\$ 57,608.22
<b>+15% Unaccounted for Items</b>					\$ 66,249.46

NOTES

- Assumes that signs and pavement markings associated with the rail crossings will be removed during regular maintenance in conjunction with repaving.
- Does not include any salvage value potential.

**Removal of Railroad Equipment**  
**DETAILED PROJECT COST ESTIMATE SUMMARY**  
 (Version: 1/21/2020 - CTS Modified)

Portal ID:	N/A	Project UPC:	
Prepared By:	VHB	Milestone	Creation/Pre Scope
Reviewed By:	VHB	Date:	8/1/2020
County/City/Town:	Accomack County (01)	Tier Level	1

**Preliminary Engineering**

Project Estimate Component		Proposed Project Cost Estimate (\$)		
Discipline	Source	Base (\$)	Contingency (%)	Total
Roadway (Shared Use Path)				\$0
Hydraulics				\$0
In-plan Utilities				\$0
Traffic	Profess. Judgement	\$ 25,000	10.00%	\$27,500
Structures/Bridges				\$0
Materials/Geotech				\$0
Survey				\$0
Environmental				\$0
Right of Way				\$0
Other	Profess. Judgement	\$ 25,000	10.00%	\$27,500
VDOT Oversight Costs				\$0
Total PE Phase Estimate		\$ 50,000	10.00%	\$55,000
PE Base Estimate Date (XX/XX/XXXX)		8/1/2020		
PE Phase Dates (XX/XX/XXXX)	Start Date		End Date	

**Right-of-Way & Utilities**

Discipline	Source	Base (\$)	Contingency (%)	Total
Right-of-Way	Tax Map			\$0
Out-of-Plan Utilities (power, cable, gas, etc.)	Aerial Photo			\$0
VDOT Oversight Costs				\$0
Total RW Phase Estimate		\$0	#DIV/0!	\$0
RW Base Estimate Date (XX/XX/XXXX)		8/1/2020		
RW Phase Dates (XX/XX/XXXX)	Start Date		End Date	

**Construction**

Discipline	Source	Base (\$)	Contingency (%)	Total
Mobilization	Profess. Judgement	\$1,110,000	40.00%	\$1,554,000
MOT	Profess. Judgement	\$66,249	25.00%	\$82,812
Roadway				\$0
Hydraulics				\$0
In-plan Utilities				\$0
Traffic	Bid Tabs	\$310,046	25.00%	\$387,557
Structures/Bridges				\$0
Materials/Geotech				\$0
Soundwalls				\$0
Other	Bid Tabs	\$11,252,040	25.00%	\$14,065,050
Total Bid Items		\$12,738,335	26.31%	\$16,089,419
Incidental-Claims & Work Orders (Percentage of Bid Items)	5% to 10% max		0.00%	\$0
Railroad Flagging/Coordination				0
State Forces				0
State Police				0
Contract Requirements (Incentive/Disincentive)	5%		0.00%	\$0
Construction Engineering (Inspection)	Environmental Inspection (\$)			0
	VDOT or Locality (\$)			\$0
	VDOT Oversight (\$)			0
	Total CEI			\$0
Total CN Phase Estimate		\$12,738,335	26.31%	\$16,089,419
CN Base Estimate Date (XX/XX/XXXX)		8/1/2020		
CN Phase Start Date (XX/XX/XXXX)				
CN Phase End Date (XX/XX/XXXX)				
Total Project Cost Estimate				\$16,144,419