



Appendix E

Initial Cost Estimates



SUM-CR8-9.08 (High Level Bridge)

Study

Engineer's Opinion of Probable Cost (Roadway Items for Alternatives 2C, 3, & 4)

Friday, August 16, 2024



Ref. No.	Item No.	Item Extension	Item Description	Quantity	Unit	Unit Cost	Total Cost
Roadway							
1	201	11000	CLEARING AND GRUBBING	1	LS	\$ 125,000.00	\$ 125,000.00
2	202	23000	PAVEMENT REMOVED	7,559	SY	\$ 7.00	\$ 52,913.00
3	202	30000	WALK REMOVED	13,161	SF	\$ 3.00	\$ 39,483.00
4	202	32000	CURB REMOVED	2,590	FT	\$ 9.00	\$ 23,310.00
5	203	10000	EXCAVATION	21,570	CY	\$ 13.50	\$ 291,195.00
6	203	20000	EMBANKMENT	36,120	CY	\$ 9.50	\$ 343,140.00
7	204	10000	SUBGRADE COMPACTION	10,056	SY	\$ 1.75	\$ 17,598.00
8	204	13000	EXCAVATION OF SUBGRADE	460	CY	\$ 25.00	\$ 11,500.00
9	204	30010	GRANULAR MATERIAL, TYPE B	460	CY	\$ 78.50	\$ 36,110.00
10	204	45000	PROOF ROLLING	6	HOUR	\$ 265.00	\$ 1,590.00
11	608		4" CONCRETE WALK	13,650	SF	\$ 7.50	\$ 102,375.00
12	609		CURB, TYPE 6	1,900	FT	\$ 27.50	\$ 52,250.00
Roadway Subtotal							\$ 1,096,464.00
Erosion Control							
13	659	10000	SEEDING AND MULCHING	18,065	SF	\$ 0.90	\$ 16,258.50
14	832	15000	STORM WATER POLLUTION PREVENTION PLAN	1	LS	\$ 15,000.00	\$ 15,000.00
15	832	15002	STORM WATER POLLUTION PREVENTION INSPECTIONS SOFTWARE	1	LS	\$ 5,000.00	\$ 5,000.00
16	832	30000	EROSION CONTROL	250,000	EACH	\$ 1.00	\$ 250,000.00
Erosion Control Subtotal							\$ 286,258.50
Drainage							
17			ALLOWANCE	1	LS	\$ 100,000.00	\$ 100,000.00
Drainage Subtotal							\$ 100,000.00
Pavement							
18			HAUL ROAD (INCLUDING EMBANKMENT AND SHORING)	8,245	CY	\$ 45.00	\$ 371,025.00
19			HAUL ROAD BRACING AND SHORING	1	LS	\$ 150,000.00	\$ 150,000.00
20			HAUL ROAD RESTORATION	4,123	CY	\$ 25.00	\$ 103,075.00
21			HAUL ROAD UTILITY ALLOWANCE	1	LS	\$ 75,000.00	\$ 75,000.00
22			PECK ROAD REHABILITATION, 1-1/4 INCH MILL AND FILL	458	CY	\$ 430.00	\$ 196,940.00
23	301	56010	ASPHALT CONCRETE BASE, PG64-28, (449)	1,378	CY	\$ 180.00	\$ 248,040.00
24	304	20000	AGGREGATE BASE	1,445	CY	\$ 45.00	\$ 65,025.00
25	407	20000	NON-TRACKING TACK COAT	910	GAL	\$ 3.50	\$ 3,185.00
26	441	70000	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG42-22	288	CY	\$ 350.00	\$ 100,800.00
27	441	70300	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)	402	CY	\$ 200.00	\$ 80,400.00
Pavement Subtotal							\$ 1,393,490.00
Water Work							
28			ALLOWANCE	1	LS	\$ 25,000.00	\$ 25,000.00
Water Work Subtotal							\$ 25,000.00
Sanitary Sewer							
29			ALLOWANCE	1	LS	\$ 15,000.00	\$ 15,000.00
Sanitary Sewer Subtotal							\$ 15,000.00
Lighting							
30			ALLOWANCE	1	LS	\$ 250,000.00	\$ 250,000.00
Lighting Subtotal							\$ 250,000.00

SUM-CR8-9.08 (High Level Bridge)

Study

Engineer's Opinion of Probable Cost (Roadway Items for Alternatives 2C, 3, & 4)

Friday, August 16, 2024



Ref. No.	Item No.	Item Extension	Item Description	Quantity	Unit	Unit Cost	Total Cost
Gas							
31			ALLOWANCE	1	LS	\$ 25,000.00	\$ 25,000.00
Gas Subtotal							\$ 25,000.00
Electric							
32			ALLOWANCE	1	LS	\$ 100,000.00	\$ 100,000.00
Electric Subtotal							\$ 100,000.00
Traffic Control							
33			ALLOWANCE	1	LS	\$ 50,000.00	\$ 50,000.00
Traffic Control Subtotal							\$ 50,000.00
Landscaping							
34			ALLOWANCE	1	LS	\$ 75,000.00	\$ 75,000.00
Landscaping Subtotal							\$ 75,000.00
Maintenance of Traffic							
35			ALLOWANCE	1	LS	\$ 50,000.00	\$ 50,000.00
Maintenance of Traffic Subtotal							\$ 50,000.00
Items of Work							
36	614	11000	MAINTAINING TRAFFIC	1	LS	\$ 150,000.00	\$ 150,000.00
37	619	16020	FIELD OFFICE, TYPE C	24	MTH	\$ 2,100.00	\$ 50,400.00
38	623	10000	CONSTRUCTION LAYOUT STAKES AND SURVEYING	1	LS	\$ 100,000.00	\$ 100,000.00
39	624	10000	MOBILIZATION	1	LS	\$ 800,000.00	\$ 800,000.00
Items of Work Subtotal							\$ 1,100,400.00
Construction Subtotal							\$ 4,566,612.50
Contingency (30%)							\$ 1,369,983.75
Inflation (33%)							\$ 1,959,076.76
Construction Total							\$ 7,895,700.00

In providing estimates of probable construction cost, the Client understands that the Consultant has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the Consultant's estimates of probable construction cost are made on the basis of the Consultant's professional judgment and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's estimate of probable construction cost. Please note that the pricing, contingencies and opinion contained or referenced herein anticipates a standard economic environment, and does not account for any uncertainty related to COVID-19 or the current extreme market conditions. As such, Client and Consultant recognize the current market volatility due to such factors including but not limited to COVID-19 restrictions, material and equipment shortages, and rapid price fluctuations. The existence and contents of this document shall not be construed to create responsibility or liability of Client or Consultant for changes related to this estimate of probable cost.

SUM-CR8-9.08 (High Level Bridge)

Study



Engineer's Opinion of Probable Cost (Roadway Items for Alternative 2B)

Friday, August 16, 2024

Ref. No.	Item No.	Item Extension	Item Description	Quantity	Unit	Unit Cost	Total Cost
Roadway							
1	201	11000	CLEARING AND GRUBBING	1	LS	\$ 125,000.00	\$ 125,000.00
2	202	23000	PAVEMENT REMOVED	7,559	SY	\$ 7.00	\$ 52,913.00
3	202	30000	WALK REMOVED	13,161	SF	\$ 3.00	\$ 39,483.00
4	202	32000	CURB REMOVED	2,590	FT	\$ 9.00	\$ 23,310.00
5	203	10000	EXCAVATION	21,570	CY	\$ 13.50	\$ 291,195.00
6	203	20000	EMBANKMENT	41,602	CY	\$ 9.50	\$ 395,219.00
7	204	10000	SUBGRADE COMPACTION	10,573	SY	\$ 1.75	\$ 18,502.75
8	204	13000	EXCAVATION OF SUBGRADE	460	CY	\$ 25.00	\$ 11,500.00
9	204	30010	GRANULAR MATERIAL, TYPE B	460	CY	\$ 78.50	\$ 36,110.00
10	204	45000	PROOF ROLLING	6	HOUR	\$ 265.00	\$ 1,590.00
11	608		4" CONCRETE WALK	14,475	SF	\$ 7.50	\$ 108,562.50
12	609		CURB, TYPE 6	2,050	FT	\$ 27.50	\$ 56,375.00
Roadway Subtotal							\$ 1,159,760.25
Erosion Control							
13	659	10000	SEEDING AND MULCHING	18,065	SF	\$ 0.90	\$ 16,258.50
14	832	15000	STORM WATER POLLUTION PREVENTION PLAN	1	LS	\$ 15,000.00	\$ 15,000.00
15	832	15002	STORM WATER POLLUTION PREVENTION INSPECTIONS SOFTWARE	1	LS	\$ 5,000.00	\$ 5,000.00
16	832	30000	EROSION CONTROL	250,000	EACH	\$ 1.00	\$ 250,000.00
Erosion Control Subtotal							\$ 286,258.50
Drainage							
17			ALLOWANCE	1	LS	\$ 100,000.00	\$ 100,000.00
Drainage Subtotal							\$ 100,000.00
Pavement							
18			HAUL ROAD	8,245	CY	\$ 45.00	\$ 371,025.00
19			HAUL ROAD BRACING AND SHORING	1	LS	\$ 150,000.00	\$ 150,000.00
20			HAUL ROAD RESTORATION	4,123	CY	\$ 25.00	\$ 103,075.00
21			HAUL ROAD UTILITY ALLOWANCE	1	LS	\$ 75,000.00	\$ 75,000.00
22			PECK ROAD REHABILITATION, 1-1/4 INCH MILL AND FILL	458	CY	\$ 430.00	\$ 196,940.00
23	301	56010	ASPHALT CONCRETE BASE, PG64-28, (449)	1,464	CY	\$ 180.00	\$ 263,520.00
24	304	20000	AGGREGATE BASE	1,531	CY	\$ 45.00	\$ 68,895.00
25	407	20000	NON-TRACKING TACK COAT	938	GAL	\$ 3.50	\$ 3,283.00
26	441	70000	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG42-22	305	CY	\$ 350.00	\$ 106,750.00
27	441	70300	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)	427	CY	\$ 200.00	\$ 85,400.00
Pavement Subtotal							\$ 1,423,888.00
Water Work							
28			ALLOWANCE	1	LS	\$ 25,000.00	\$ 25,000.00
Water Work Subtotal							\$ 25,000.00
Sanitary Sewer							
29			ALLOWANCE	1	LS	\$ 15,000.00	\$ 15,000.00
Sanitary Sewer Subtotal							\$ 15,000.00
Lighting							
30			ALLOWANCE	1	LS	\$ 250,000.00	\$ 250,000.00
Lighting Subtotal							\$ 250,000.00

SUM-CR8-9.08 (High Level Bridge)

Study




Engineer's Opinion of Probable Cost (Roadway Items for Alternative 2B)


Friday, August 16, 2024


Ref. No.	Item No.	Item Extension	Item Description	Quantity	Unit	Unit Cost	Total Cost
Gas							
31			ALLOWANCE	1	LS	\$ 25,000.00	\$ 25,000.00
Gas Subtotal							\$ 25,000.00
Electric							
32			ALLOWANCE	1	LS	\$ 100,000.00	\$ 100,000.00
Electric Subtotal							\$ 100,000.00
Traffic Control							
31			ALLOWANCE	1	LS	\$ 50,000.00	\$ 50,000.00
Traffic Control Subtotal							\$ 50,000.00
Landscaping							
32			ALLOWANCE	1	LS	\$ 75,000.00	\$ 75,000.00
Landscaping Subtotal							\$ 75,000.00
Maintenance of Traffic							
33			ALLOWANCE	1	LS	\$ 50,000.00	\$ 50,000.00
Maintenance of Traffic Subtotal							\$ 50,000.00
Items of Work							
34	614	11000	MAINTAINING TRAFFIC	1	LS	\$ 150,000.00	\$ 150,000.00
35	619	16020	FIELD OFFICE, TYPE C	24	MTH	\$ 2,100.00	\$ 50,400.00
36	623	10000	CONSTRUCTION LAYOUT STAKES AND SURVEYING	1	LS	\$ 100,000.00	\$ 100,000.00
37	624	10000	MOBILIZATION	1	LS	\$ 800,000.00	\$ 800,000.00
Items of Work Subtotal							\$ 1,100,400.00
Construction Subtotal							\$ 4,660,306.75
Contingency (30%)							\$ 1,398,092.03
Inflation (33%)							\$ 1,999,271.60
Construction Total							\$ 8,057,700.00


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		COST ANALYSIS		Project: CR008	
BRIDGE NO. 7730306 N. Main Street		ALTERNATIVE 1: Rehabilitate Existing Structure		PID: 115383	
				GPD Job: 2022078	
Initial Cost = \$43,697,400		Calculated By: TJW		Date: 8/14/2024	
Net Present Cost (Lifecycle) = \$72,856,300		Checked By: MOJ		Date: 8/14/2024	
Initial Cost Calculations					
<small>NOTES: Costs are based on values for construction beginning in 2030. (33% inflation from 2024) 30% contingency is included on this sheet.</small>					
Year 0	Repair, Re-Deck, Paint				
		Project Cost	Inflation Factor 2017 to 2031	Total	
	<i>Structure/Drainage/Erosion Repairs</i>	\$2,119,000	1.82	\$3,856,600	
	<i>Deck Replacement</i>	\$5,861,400	1.82	\$10,667,800	
	<i>Full Paint (383,400 sf)</i>	\$14,950,000	1.82	\$27,209,000	
				<i>Bridge Subtotal</i>	
				\$41,733,400	
	<i>Misc. Roadway, MOT & Incidental Costs</i>	\$1,079,100	1.82	\$1,964,000	
				TOTAL	
				\$43,697,400	

Note: Costs are based on various work items from Projects 1-C & 1-D in the 2017 LCCA Report and engineering judgement with a 30% contingency applied. Painted area supplied by 2015 Coating Condition Assessment Report.

		COST ANALYSIS		Project: CR008	
BRIDGE NO. 7730306 N. Main Street		ALTERNATIVE 2B: 3-Span Steel Plate Girder		PID: 115383	
				GPD Job: 2022078	
Initial Cost = \$72,184,400		Calculated By: MOJ		Date: 8/12/2024	
Net Present Cost (Lifecycle) = \$84,940,200		Checked By: TJW		Date: 8/12/2024	
Initial Cost Calculations					
<small>NOTES: Total costs are based on values for construction beginning in 2030. (33% inflation from 2024) 30% contingency is included on this sheet.</small>					
Item Number	Item Description	Unit	Quantity	Unit Cost	Total
202E11000	STRUCTURE REMOVED	LS	1	\$2,000,000.00	\$2,000,000
503E11101	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	LS	1	\$768,000.00	\$768,000
503E21100	UNCLASSIFIED EXCAVATION	CY	7,328	\$29.98	\$219,700
509E10000	EPOXY COATED STEEL REINFORCEMENT	LB	1,527,450	\$2.00	\$3,054,900
511E34446	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, SIDEWALK, AND RAILING	CY	2,435	\$1,100.00	\$2,678,500
511E40512	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS	CY	4,504	\$1,600.00	\$7,206,400
511E44112	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	CY	2,104	\$1,750.00	\$3,682,000
511E46512	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	CY	1,652	\$750.00	\$1,239,000
513E10280	STRUCTURAL STEEL MEMBERS, LEVEL 4	LB	2,645,280	\$3.25	\$8,597,160
513E10400	STRUCTURAL STEEL MEMBERS, HYBRID GIRDER, LEVEL SIX (6) FABRI CATION	LB	771,756	\$3.75	\$2,894,085
514E00060	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	SF	3,278	\$4.44	\$14,539
514E00066	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	SF	3,278	\$2.24	\$7,338
516E12400	SPECIAL - MODULAR EXPANSION JOINT	FT	154	\$5,000.00	\$770,000
524E95424	DRILLED SHAFTS, 30" DIAMETER, INTO BEDROCK WITH QC/QA	FT	276	\$400.00	\$110,400
524E95432	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK WITH QC/QA	FT	3,396	\$300.00	\$1,018,800
524E95454	DRILLED SHAFTS, 48" DIAMETER, INTO BEDROCK WITH QC/QA	FT	320	\$1,200.00	\$384,000
526E30010	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")	SY	509	\$316.32	\$161,007
607E39900	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	FT	1,814	\$150.00	\$272,100
867E00100	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL	LS	1	\$85,000.00	\$85,000
869E00100	HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS	EACH	24	\$20,000.00	\$480,000
					<i>Subtotal</i>
					\$35,642,900
					<i>30% Contingency</i>
					\$10,692,900
					<i>33% (Inflation, 2030 begin construction)</i>
					\$15,290,900
					<i>Bridge</i>
					\$61,626,700
					<i>ROW</i>
					\$2,500,000
					<i>Roadway</i>
					\$8,057,700
					TOTAL
					\$72,184,400

 COST ANALYSIS BRIDGE NO. 7730306 N. Main Street ALTERNATIVE 2C: 4-Span Steel Plate Girder					Project: CR008 PID: 115383 GPD Job: 2022078	
Initial Cost = \$71,472,500 Net Present Cost (Lifecycle) = \$84,500,500		Calculated By: MOJ Checked By: TJW		Date: 8/12/2024 Date: 8/12/2024		
Initial Cost Calculations <small>NOTES: Total costs are based on values for construction beginning in 2030. (33% inflation from 2024) 30% contingency is included on this sheet.</small>						
Item Number	Item Description	Unit	Quantity	Unit Cost	Total	
202E11000	STRUCTURE REMOVED	LS	1	\$2,000,000.00	\$2,000,000	
503E11101	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	LS	1	\$754,000.00	\$754,000	
503E21100	UNCLASSIFIED EXCAVATION	CY	5,794	\$31.56	\$182,863	
509E10000	EPOXY COATED STEEL REINFORCEMENT	LB	1,553,250	\$2.00	\$3,106,500	
511E34446	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, SIDEWALK, AND RAILING	CY	2,669	\$1,100.00	\$2,935,900	
511E40512	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS (PIER 2 & 3)	CY	4,756	\$1,600.00	\$7,609,600	
511E40512	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS (PIER 1)	CY	610	\$1,400.00	\$854,000	
511E44112	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTIN G	CY	1,079	\$1,300.00	\$1,402,700	
511E46512	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	CY	1,390	\$750.00	\$1,042,500	
513E10280	STRUCTURAL STEEL MEMBERS, LEVEL 4	LB	3,164,526	\$3.00	\$9,493,578	
513E10400	STRUCTURAL STEEL MEMBERS, HYBRID GIRDER, LEVEL SIX (6) FABRI CATION	LB	681,714	\$3.50	\$2,385,999	
514E00060	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	SF	3,278	\$4.44	\$14,539	
514E00066	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	SF	3,278	\$2.24	\$7,338	
516E12400	SPECIAL - MODULAR EXPANSION JOINT	FT	154	\$5,000.00	\$770,000	
524E95424	DRILLED SHAFTS, 30" DIAMETER, INTO BEDROCK WITH QC/QA	FT	240	\$400.00	\$96,000	
524E95432	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK WITH QC/QA	FT	3,360	\$300.00	\$1,008,000	
524E95454	DRILLED SHAFTS, 48" DIAMETER, INTO BEDROCK WITH QC/QA	FT	440	\$1,200.00	\$528,000	
526E30010	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")	SY	509	\$316.32	\$161,007	
607E39900	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	FT	1,916	\$150.00	\$287,400	
867E00100	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL	LS	1	\$85,000.00	\$85,000	
869E00100	HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS	EACH	30	\$20,000.00	\$600,000	
				<i>Subtotal</i>	\$35,324,900	
				<i>30% Contingency</i>	\$10,597,500	
				<i>33% (Inflation, 2030 begin construction)</i>	\$15,154,400	
				<i>Bridge</i>	\$61,076,800	
				<i>ROW</i>	\$2,500,000	
				<i>Roadway</i>	\$7,895,700	
				TOTAL	\$71,472,500	

 COST ANALYSIS BRIDGE NO. 7730306 N. Main Street ALTERNATIVE 3: Spandrel Arch					Project: CR008 PID: 115383 GF Job: 72477					
Initial Cost = \$80,508,800 Net Present Cost (Lifecycle) = \$99,947,300			Calculated By: MSM Checked By: EFD		Date: 4/22/2024 Date: 4/24/2024					
	Dimensions (Feet, LB)			Unit Convert		Total Quantity		Unit Cost	Total Cost	
	Length	Width	Ht/ Thk/ Wght/Area	Area Vol. Wt.	Unit	#	Quantity			Unit
Demo: Structure Removed				1.0	LS	1	1	LS	\$2,000,000.00	\$ 2,000,000
Cofferdams and Excavation Bracing				1.0	LS	1	1	LS	\$500,000.00	\$ 500,000
Unclassified Excavation				1.0	LS	1	1	LS	\$150,000.00	\$ 150,000
Temp Wire Faced Mech Stabilized Wall				1.0	LS	1	1	LS	\$85,000.00	\$ 85,000
219.75' Approach Span (Plate Girder)	219.75		742.5 plf	163,500	LB	6	981,000	LB	\$3.00	\$ 2,943,000
Spandrel Arch (Plate Girder)	490.00		796.3 plf	390,500	LB	6	2,343,000	LB	\$4.50	\$ 10,543,500
Spandrel Steel (W36 Beams)	493.67		182.0 plf	90,000	LB	6	540,000	LB	\$3.00	\$ 1,620,000
111' Approach Span (Plate Girder)	111.00		495.0 plf	55,000	LB	6	330,000	LB	\$3.00	\$ 990,000
W Spandrel Columns	436.35		225 plf avg.	98,500	LB	6	591,000	LB	\$3.50	\$ 2,068,500
Secondary Steel (20% Assumed)				159,500	LB	6	957,000	LB	\$3.00	\$ 2,871,000
Field Painting (End 10')	10.00		71 sf	800	SF	60	48,000	SF	\$35.00	\$ 1,680,000
Bearings (Pins at Skewbacks)				1.0	EA	12	12	EA	\$25,000	\$ 300,000
Bearing Pads (Approach Spans)				1.0	EA	36	36	EA	\$2,500	\$ 90,000
Modular Expansion Joints	76.33			76.3	LF	4	306	LF	\$5,000	\$ 1,530,000
Concrete Deck & Sidewalk	824.42		87 sf	2,660	CY	1	2,660	CY	\$1,100.00	\$ 2,926,000
Concrete Skewback	78.33		390 sf	1,135	CY	2	2,270	CY	\$1,300	\$ 2,951,000
Concrete Abutment	169.50	4.00	20	510	CY	2	1,020	CY	\$1,300.00	\$ 1,326,000
Concrete Abutment Footing	8.00		1690 sf	510	CY	2	1,020	CY	\$750.00	\$ 765,000
Reinforcement				577800.0	LBS	1	577,800	LBS	\$2.00	\$ 1,155,600
Drilled Shafts Above Rock (36" Dia)	70.00			70	LF	44	3,080	LF	\$1,000.00	\$ 3,080,000
Drilled Shafts Into Rock (36" Dia)	10.00			10	LF	44	440	LF	\$1,200.00	\$ 528,000
Approach Slab	30.00	76.33		255	SY	2	510	SY	\$316.00	\$ 161,160
Vandal Fence	958.00			958	LF	2	1,916	LF	\$150.00	\$ 287,400
									SubTotal	\$ 40,551,200
									30 % Contingency	\$ 12,165,400
									33% (Inflation, 2030 begin construction)	\$ 17,396,500
									Bridge	\$ 70,113,100
									ROW	\$ 2,500,000
									Roadway	\$ 7,895,700
									TOTAL COST	\$ 80,508,800



COST ANALYSIS

**BRIDGE NO. 7730306 N. Main Street
ALTERNATIVE 4: Segmental Concrete Box**

Project: CR008
PID: 115383
GF Job: 72477

Initial Cost = \$79,465,600	Calculated By: MSM	Date: 4/22/2024
Net Present Cost (Lifecycle) = \$91,981,500	Checked By: EFD	Date: 4/24/2024

	Dimensions (Feet, LB)			Unit Convert		#	Total Quantity		Unit Cost	Total Cost
	Length	Width	H/ Thk/ Wght/Area	Area Vol. Wt.	Unit		Quantity	Unit		
Demo: Structure Removed				1.0	LS	1	1	LS	\$2,000,000.00	\$ 2,000,000
Cofferdams and Excavation Bracing				1.0	LS	1	1	LS	\$500,000.00	\$ 500,000
Unclassified Exccavation				1.0	LS	1	1	LS	\$150,000.00	\$ 150,000
Temp Wire Faced Mech Stabilized Wall				1.0	LS	1	1	LS	\$85,000.00	\$ 85,000
Segmental Box Section Concrete (Avg)	828.71		360 sqft	11,100	CY	1	11,100	CY	\$1,500.00	\$ 16,650,000
Segmental Box Section Tendons				607,000	LBS	1	607,000	LBS	\$6.00	\$ 3,642,000
Bearings				1.0	EA	6	6	EA	\$100,000	\$ 600,000
Concrete Deck & Sidewalk Overlay	828.71		28 sqft	860	CY	1	860	CY	\$900.00	\$ 774,000
Concrete Pier		12.00	4380 sqft	1,530	CY	2	3,060	CY	\$2,200	\$ 6,732,000
Concrete Pier Footing	26.00	60.00	8.00	470	CY	2	940	CY	\$750.00	\$ 705,000
Concrete Abutment	169.50	4.00	20	510	CY	2	1,020	CY	\$1,300.00	\$ 1,326,000
Concrete Abutment Footing	8.00		1690 sqft	510	CY	2	1,020	CY	\$750.00	\$ 765,000
Reinforcement				1797600.0	LBS	1	1,797,600	LBS	\$2.00	\$ 3,595,200
Modular Expansion Joints	76.33			76.3	LF	2	153	LF	\$5,000	\$ 765,000
Drilled Shafts Into Rock (60" Dia)	10.00			10.0	LF	11	110	LF	\$1,000.00	\$ 110,000
Drilled Shafts Above Rock (36" Dia)	70.00			70.0	LF	44	3,080	LF	\$300.00	\$ 924,000
Drilled Shafts Into Rock (36" Dia)	10.00			10.0	LF	44	440	LF	\$400.00	\$ 176,000
Approach Slab	30.00	76.33		255	SY	2	510	SY	\$316.00	\$ 161,160
Vandal Protection Fence	958.00			958	LF	2	1,916	LF	\$150.00	\$ 287,400

SubTotal	\$ 39,947,800
30 % Contingency	\$ 11,984,400
33% (Inflation, 2030 begin construction)	\$ 17,137,700
Bridge	\$ 69,069,900
ROW	\$ 2,500,000
Roadway	\$ 7,895,700
TOTAL COST	\$ 79,465,600