

## Town Manager

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**From:** Morrison, Micah <mmorrison@bscgroup.com>  
**Sent:** Friday, May 5, 2023 2:04 PM  
**To:** Town Manager; Jon-Eric White  
**Subject:** Construction Estimate Summary and Estimate of Cost increases from 2019 to 2023  
**Attachments:** 20230505\_SUMMARY\_CONSTRUCTION EST.\_NEWBURYPORT\_WEST NEWBURY.pdf

BSC has reviewed the construction estimate of quantities and item costs. The estimate has been updated to include MassDOT and municipal comments and revisions to date. The unit prices have been updated in accordance with MassDOT standards and based on MassDOT current weighted bid averages. Attached is the summary sheet for the construction bid items calculated quantities and unit prices. This is the current estimated construction cost. The summary sheet is based on approximately 100 pages of quantity calculations.

Below is a summary of estimated project cost increases from 2019 to 2023.

	<b>Original Project Cost in 2019</b>		<b>\$2,600,000</b>
1	2019 Order of Magnitude Cost Estimate	\$2,150,000	
	2021 Detailed Cost Estimate	\$2,485,000	
	2023 Final Cost Estimate 5/5/2023	\$3,315,000	
	<b>Increase</b>		<b>\$1,165,000</b>
2	2019 Design/permitting estimate	\$410,000	
	2021 Design/permitting	\$436,000	
	2023 Final Permitting and Design	\$550,000	
	<b>Increase</b>		<b>\$140,000</b>
	2019 Contingency	\$0	
3	2021 Contingency Added	\$270,000	
	2023 Minimum Recommended Contingency 10%	\$331,500	
	<b>Increase</b>		<b>\$331,500</b>
4	2019 Resident Engineer (none BSC employee)	\$40,000	
	2021 Resident Engineer (none BSC employee)	\$150,000	
	2023 Resident Engineer (none BSC employee)	\$150,000	
	<b>Increase</b>		<b>\$110,000</b>
5	2023 Est. Construction Engineering Services*	\$60,000	
	<b>Increase</b>		<b>\$60,000</b>
	<b>Total Estimated Project Cost May 2023</b>		<b>\$4,406,500</b>

\* Construction Engineering services: shop drawing review, milestone inspection permitting and engineering, RFI's, meetings, review of contractor invoices, etc.

**Micah Morrison, P.E., S.E.**

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**MASSACHUSETTS DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION**  
**ESTIMATE OF QUANTITIES & ITEM COST**

CITY NEWBURYPORT/WEST NEWBURY  
 TYPE CONCRETE BOX BEAM  
 SPAN 45'-0"  
 ROAD PLUMMER SPRING ROAD/MIDDLE STREET  
 CALC. SSF/AK 2023

OVER  
 CLASS  
 BR. WIDTH  
 ROAD WIDTH  
 CHKD.

UPPER ARTICHOKE RESERVOIR  
 HL-93  
 32'-6"  
 24'-0"  
 KLE/MCM 2023

**HIGHWAY ITEMS**

ITEM NO.	UNITS	ITEM DESCRIPTION	Unit Price	Bridge Quantity	Highway Quantity	Combined Quantity	Bridge Cost	Highway Cost	Total Cost
102.01	*	LS	SELECTIVE CLEARING AND GRUBBING	\$3,000.00	0	1	\$0.00	\$3,000.00	\$3,000.00
102.511	*	EA	TREE PROTECTION - ARMORING & PRUNING	\$452.50	0	6	\$0.00	\$2,715.00	\$2,715.00
102.521	*	FT	TREE AND PLANT PROTECTION FENCE	\$14.50	0	200	\$0.00	\$2,900.00	\$2,900.00
103.		EA	TREE REMOVED - DIAMETER UNDER 24 INCHES	\$1,850.00	0	15	\$0.00	\$27,750.00	\$27,750.00
115.1	*	LS	DEMOLITION OF BRIDGE NO. N-11-007=W-20-001(8BC)	\$240,000	1	0	\$240,000.00	\$0.00	\$240,000.00
120.		CY	EARTH EXCAVATION	\$60.00	0	180	\$0.00	\$10,800.00	\$10,800.00
121.		CY	CLASS A ROCK EXCAVATION	\$135.00	0	10	\$0.00	\$1,350.00	\$1,350.00
140.		CY	BRIDGE EXCAVATION	\$65.00	570	0	\$37,050.00	\$0.00	\$37,050.00
141.1		CY	TEST PIT FOR EXPLORATION	\$120.00	0	50	\$0.00	\$6,000.00	\$6,000.00
143.		CY	CHANNEL EXCAVATION	\$65.00	390	0	\$25,350.00	\$0.00	\$25,350.00
144.	*	CY	CLASS B ROCK EXCAVATION	\$185.00	90	0	\$16,650.00	\$0.00	\$16,650.00
151.		CY	GRAVEL BORROW	\$60.00	0	220	\$0.00	\$13,200.00	\$13,200.00
151.1		CY	GRAVEL BORROW FOR BRIDGE FOUNDATION	\$75.00	290	0	\$21,750.00	\$0.00	\$21,750.00
151.2		CY	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES	\$62.00	35	0	\$2,170.00	\$0.00	\$2,170.00
153.1	*	CY	CONTROLLED DENSITY FILL - NON-EXCAVATABLE	\$250.00	14	0	\$3,500.00	\$0.00	\$3,500.00
156.13	*	TON	CRUSHED STONE FOR INTEGRAL ABUTMENT PILES	\$72.00	35	0	\$2,520.00	\$0.00	\$2,520.00
156.5		CY	CRUSHED STONE FOR FILTER BLANKET	\$72.50	44	0	\$3,190.00	\$0.00	\$3,190.00
170.		SY	FINE GRADING AND COMPACTING - SUBGRADE AREA	\$15.00	0	720	\$0.00	\$10,800.00	\$10,800.00
290.	*	LS	DRAINAGE SYSTEM	\$100,000.00	0	1	\$0.00	\$100,000.00	\$100,000.00
402.		CY	DENSE GRADED CRUSHED STONE FOR SUB-BASE	\$125.00	0	80	\$0.00	\$10,000.00	\$10,000.00
443.		MGL	WATER FOR ROADWAY DUST CONTROL	\$60.00	0	3	\$0.00	\$180.00	\$180.00
450.22		TON	SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5)	\$300.00	0	70	\$0.00	\$21,000.00	\$21,000.00
450.31		TON	SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC - 12.5)	\$215.00	0	90	\$0.00	\$19,350.00	\$19,350.00
450.41		TON	SUPERPAVE BASE COURSE - 25.0 (SBC - 25.0)	\$220.00	0	180	\$0.00	\$39,600.00	\$39,600.00
450.60		TON	SUPERPAVE BRIDGE SURFACE COURSE - 9.5 (SSC-B - 9.5)	\$395.00	15	0	\$5,925.00	\$0.00	\$5,925.00
450.70		TON	SUPERPAVE BRIDGE PROTECTIVE COURSE - 9.5 (SPC-B - 9.5)	\$300.00	20	0	\$6,000.00	\$0.00	\$6,000.00
452.		GAL	ASPHALT EMULSION FOR TACK COAT	\$10.00	0	150	\$0.00	\$1,500.00	\$1,500.00
453.		FT	HMA JOINT SEALANT	\$2.00	0	450	\$0.00	\$900.00	\$900.00
470.		TON	HOT MIX ASPHALT BERM	\$360.00	0	15	\$0.00	\$5,400.00	\$5,400.00
472.		TON	TEMPORARY ASPHALT PATCHING	\$400.00	0	5	\$0.00	\$2,000.00	\$2,000.00
504.		FT	GRANITE CURB TYPE VA4 - STRAIGHT	\$85.00	0	80	\$0.00	\$6,800.00	\$6,800.00
504.2		EA	GRANITE CURB TYPE VA-4 - SPLAYED END	\$150.00	0	10	\$0.00	\$1,500.00	\$1,500.00
620.136		FT	GUARDRAIL, TL-3 STIFFENING WITH HALF POST SPACING (SINGLE FACE)	\$150.00	0	320	\$0.00	\$48,000.00	\$48,000.00
620.137		FT	GUARDRAIL, TL-3 STIFFENING WITH HALF POST SPACING, DEEP POST (SINGLE FACE)	\$200.00	0	80	\$0.00	\$16,000.00	\$16,000.00
627.1		EA	TRAILING ANCHORAGE	\$2,500.00	0	1	\$0.00	\$2,500.00	\$2,500.00
628.24		EA	TRANSITION TO BRIDGE RAIL	\$6,750.00	0	4	\$0.00	\$27,000.00	\$27,000.00
630.2		FT	HIGHWAY GUARD REMOVED AND DISCARDED	\$8.00	0	500	\$0.00	\$4,000.00	\$4,000.00
657.	*	FT	TEMPORARY FENCE	\$30.00	0	150	\$0.00	\$4,500.00	\$4,500.00
698.4	*	SY	GEOTEXTILE FABRIC FOR PERMANENT EROSION CONTROL	\$24.50	390	0	\$9,555.00	\$0.00	\$9,555.00
741.	*	MO	ENGINEERS FIELD OFFICE AND EQUIPMENT (TYPE B)	\$3,000.00	0	22	\$0.00	\$66,000.00	\$66,000.00
748.		LS	MOBILIZATION	\$97,000.00	0.75	0.25	\$63,000.00	\$34,000.00	\$97,000.00
751.		CY	LOAM FOR ROADSIDES	\$80.00	0	20	\$0.00	\$1,600.00	\$1,600.00
765.		SY	SEEDING	\$3.00	0	125	\$0.00	\$375.00	\$375.00
767.121	*	FT	SEDIMENT CONTROL BARRIER	\$8.00	0	1000	\$0.00	\$8,000.00	\$8,000.00
769.01	*	SY	PAVEMENT MILLING MULCH UNDER GUARD RAIL	\$30.00	0	200	\$0.00	\$6,000.00	\$6,000.00
833.7		EA	DELINEATION FOR GUARD RAIL TERMINI	\$75.00	0	1	\$0.00	\$75.00	\$75.00
853.1		EA	PORTABLE BREAKAWAY BARRICADE TYPE III	\$150.00	0	4	\$0.00	\$600.00	\$600.00
853.21		FT	TEMPORARY BARRIER REMOVED AND RESET	\$15.00	0	75	\$0.00	\$1,125.00	\$1,125.00
853.22	*	FT	TEMPORARY BARRIER REMOVED AND STACKED	\$50.00	0	175	\$0.00	\$8,750.00	\$8,750.00
942.124		FT	STEEL PILE HP 12 X 84	\$233.00	380	0	\$88,540.00	\$0.00	\$88,540.00
948.41		EA	DYNAMIC LOAD TEST BY CONTRACTOR	\$10,000.00	2	0	\$20,000.00	\$0.00	\$20,000.00
948.5		EA	PILE SHOES	\$175.00	10	0	\$1,750.00	\$0.00	\$1,750.00
983.12	*	TON	RIPRAP WITH GRAVEL PACKED VOIDS	\$125.00	440	0	\$55,000.00	\$0.00	\$55,000.00
983.521	*	CY	STREAM/BANK RESTORATION	\$93.00	86	0	\$7,998.00	\$0.00	\$7,998.00
991.1	*	LS	CONTROL OF WATER - STRUCTURE NO. N-11-007=W-20-001	\$330,000.00	1	0	\$330,000.00	\$0.00	\$330,000.00
994.01	*	LS	TEMPORARY PROTECTIVE SHIELDING BRIDGE NO. N-11-007 = W-20-001	\$100,000.00	1	0	\$100,000.00	\$0.00	\$100,000.00
995.01		LS	BRIDGE STRUCTURE, BRIDGE NO. N-11-007=W-20-001	\$1,116,250.00	1	0	\$1,116,250.00	\$0.00	\$1,116,250.00
996.4	*	LS	PREFABRICATED CONCRETE MODULAR BLOCK WALL (WITH GEOGRID REINFORCEMENT)	\$643,280.00	0	1	\$0.00	\$643,280.00	\$643,280.00

TOTAL = \$2,156,198.00 \$1,158,550.00 **\$3,314,748.00**

**SAY \$3,315,000.00**