

APPENDIX B

Cost Estimates

Bridge No. 01349Route 136 over Saugatuck River
Town of Westport**Preliminary Cost Analysis
Alternate A - Rehabilitation**

Item	Unit	Quantity	Unit Price	Total Cost
Roadway and Structure Items				
Blast Cleaning and Field Painting of Structure	L.S.	1	\$1,450,000.00	\$1,450,000.00
Class 1 Containment and Collection	L.S.	1	\$1,000,000.00	\$1,000,000.00
Rehabilitation of Existing Structural Steel	cwt.	720	\$816.67	\$588,002.40
Remove and Replace Existing Truss	L.S.	1	\$850,000.00	\$850,000.00
Truss Modifications & Bracing Modifications	L.S.	1	\$500,000.00	\$500,000.00
Mechanical/Electrical (Screw Jacks Adjustments)	L.S.	1	\$300,000.00	\$300,000.00
Partial Depth Patch	C.F.	150	\$260.00	\$39,000.00
Class "S" Concrete	C.Y.	6	\$12,927.48	\$77,564.88
Variable Depth Patch	C.F.	40	\$1,120.88	\$44,835.20
Mechanical/Electrical repairs	L.S.	1	\$250,000.00	\$250,000.00
Removal of Pier 2 Support System	L.S.	1	\$225,000.00	\$225,000.00
Pier 2 Support System	L.S.	1	\$350,000.00	\$350,000.00
Membrane Waterproofing (Cold Liquid Elastomeric)	S.Y.	700	\$80.00	\$56,000.00
Bituminous Concrete	TON	225	\$140.00	\$31,500.00
Asphaltic Plug Expansion Joint System	C.F.	20	\$300.00	\$6,000.00
Barrier Gates	EA	2	\$275,000.00	\$550,000.00
Metal Bridge Rail Support System	L.F.	580	\$350.00	\$203,000.00
Metal Bridge Rail	L.F.	580	\$200.00	\$116,000.00
Removal of Fender System (PIER2)	L.S.	1	\$250,000.00	\$250,000.00
Removal of Existing Fender System	L.S.	1	\$175,000.00	\$175,000.00
Fender System	L.S.	1	\$340,000.00	\$340,000.00
Temporary Bridge (See attached cost estimate)	L.S.	1	\$3,400,000.00	\$3,400,000.00
Repointed Masonry	S.Y.	50	\$215.00	\$10,750.00
			Subtotal A:	\$10,812,652.48
Traffic Items				
Trafficmen	HR.	500	\$75.00	\$37,500.00
Trafficperson (Municipal Police Officer)	L.S.	1	\$200,000.00	\$200,000.00
			Subtotal B:	\$11,050,152.48
Lump Sum Items				
Clearing and Grubbing (2.0% of Subtotal B)				\$221,003.05
Maintenance and Protection of Traffic (5% of Subtotal B)				\$552,507.62
Mobilization (7.5% of Subtotal B)				\$828,761.44
Construction Staking (1.0% of Subtotal B)				\$110,501.52
			Subtotal C:	\$12,762,926.11
Minor Items (15% of Subtotal A)				\$1,914,438.92
			Subtotal D:	\$14,677,365.03
Incidental and Contingencies (35% of Subtotal D)				\$5,137,077.76
			TOTAL:	\$19,814,442.79
			SAY:	\$19,800,000.00

Bridge No. 01349

Route 136 over Saugatuck River
Town of Westport

**Preliminary Cost Analysis
Alternate B - Structure Replacement (New Pratt Truss Swing Span)**

Item	Unit	Quantity	Unit Price	Total Cost
Roadway and Structure Items				
Removal of Superstructure	L.S.	1	\$580,000.00	\$580,000.00
Removal of Existing Masonry	C.Y.	500	\$115.00	\$57,500.00
Class "A" Concrete	C.Y.	1,600	\$550.00	\$880,000.00
Class "F" Concrete	C.Y.	774	\$825.00	\$638,550.00
Cofferdam and Dewatering	L.F.	1,250	\$175.00	\$218,750.00
Deformed Steel Bars (Epoxy Coated)	LB.	173,400	\$1.40	\$242,760.00
Deformed Steel Bars	LB.	130,000	\$1.20	\$156,000.00
Structural Steel	LB.	1,100,000	\$2.00	\$2,200,000.00
Elastomeric Bearings	EA.	28	\$950.00	\$26,600.00
Membrane Waterproofing (Cold Liquid Elastomeric)	S.Y.	1,570	\$80.00	\$125,600.00
Bituminous Concrete	TON	650	\$140.00	\$91,000.00
Earth Excavation	C.Y.	5,750	\$25.00	\$143,750.00
Structure Excavation - Earth	C.Y.	2,000	\$25.00	\$50,000.00
Pervious Structure Backfill	C.Y.	1,000	\$50.00	\$50,000.00
Driving Piles	L.F.	4,075	\$50.00	\$203,750.00
Operating machinery	L.S.	1	\$4,500,000.00	\$4,500,000.00
Operators House	L.S.	1	\$1,750,000.00	\$1,750,000.00
Submarine cable	L.S.	1	\$500,000.00	\$500,000.00
Electrical System	L.S.	1	\$3,750,000.00	\$3,750,000.00
Furnish Piles	LB.	398,275	\$0.70	\$278,792.50
Asphaltic Plug Expansion Joint System	C.F.	45	\$300.00	\$13,500.00
Metal Bridge Rail	L.F.	830	\$200.00	\$166,000.00
Metal Beam Rail (Type R-B 350)	L.F.	500	\$25.00	\$12,500.00
Warning & Barrier Gates	L.S.	1	\$750,000.00	\$750,000.00
Processed Aggregate Base	C.Y.	1,020	\$40.00	\$40,800.00
Removal of Fender System (PIER2)	L.S.	1	\$250,000.00	\$250,000.00
Removal of Existing Fender System	L.S.	1	\$175,000.00	\$175,000.00
Fender System	L.S.	1	\$375,000.00	\$375,000.00
Temporary Precast Concrete Barrier Curb	L.F.	250	\$40.00	\$10,000.00
			Subtotal A:	\$18,235,852.50
Traffic Items				
Trafficmen	HR.	4000	\$75.00	\$300,000.00
Trafficperson (Municipal Police Officer)	L.S.	1	\$450,000.00	\$450,000.00
			Subtotal B:	\$18,985,852.50
Lump Sum Items				
Clearing and Grubbing (2.0% of Subtotal B)				\$379,717.05
Maintenance and Protection of Traffic (5% of Subtotal B)				\$949,292.63
Mobilization (7.5% of Subtotal B)				\$1,423,938.94
Construction Staking (1.0% of Subtotal B)				\$189,858.53
			Subtotal C:	\$21,928,659.64
Minor Items (25% of Subtotal A)				\$4,558,963.13
			Subtotal D:	\$26,487,622.76
Incidental and Contingencies (35% of Subtotal D)				\$9,270,667.97
			TOTAL:	\$35,758,290.73
			SAY:	\$35,800,000.00

**Preliminary Cost Analysis
Temporary Bridge and Roadway**

Item	Unit	Quantity	Unit Price	Total Cost
Roadway and Structure Items				
Structure Excavation	C.Y.	176	\$35.00	\$6,160.00
Fill	C.Y.	900	\$30.00	\$27,000.00
Pervious Structure Backfill	C.Y.	70	\$50.00	\$3,500.00
Bituminous Concrete Sidewalk	S.Y.	225	\$20.00	\$4,500.00
Class "A" Concrete	C.Y.	220	\$600.00	\$132,000.00
Structural Steel	LB	850,000	\$1.40	\$1,190,000.00
Temporary Deck	S.F.	18,900	\$35.00	\$661,500.00
Temporary Parapet	L.F.	1,080	\$50.00	\$54,000.00
Bituminous Concrete	TON	1,500	\$165.00	\$247,500.00
Removal of Temporary Bridge	L.S.	1	\$425,000.00	\$425,000.00
Trench Excavation	C.Y.	320	\$15.00	\$4,800.00
Temporary Slope Protection	S.Y.	200	\$4.00	\$800.00
Water Pollution Control (Estimated Cost)	EST.	5,000	\$1.00	\$5,000.00
Formation of Subgrade	S.Y.	1,350	\$3.20	\$4,320.00
Subbase	C.Y.	370	\$45.00	\$16,650.00
Sediment Control System	L.F.	400	\$8.00	\$3,200.00
15" R.C.P.	L.F.	280	\$75.00	\$21,000.00
Type "C" Catch Basin	EA.	2	\$2,500.00	\$5,000.00
Type "C-L" Catch Basin	EA.	2	\$2,500.00	\$5,000.00
Bedding Material	C.Y.	25	\$50.00	\$1,250.00
Bituminous Concrete Lip Curbing	L.F.	700	\$6.80	\$4,760.00
Concrete Curbing	L.F.	520	\$35.00	\$18,200.00
T.P.C.B.C.	L.F.	200	\$50.00	\$10,000.00
Relocated T.P.C.B.C.	L.F.	240	\$13.00	\$3,120.00
Temporary Impact Attenuation System - 700 LB	EA.	4	\$390.00	\$1,560.00
Temporary Impact Attenuation System - 1400 LB	EA.	8	\$390.00	\$3,120.00
Temporary Impact Attenuation System - 2100 LB	EA.	8	\$390.00	\$3,120.00
Relocation of Impact Attenuation System	EA.	5	\$420.00	\$2,100.00
Remove Metal Beam Rail	L.F.	600	\$6.50	\$3,900.00
Reset Metal Beam Rail	L.F.	600	\$19.00	\$11,400.00
R-B End Anchorage - Type II	EA.	1	\$1,400.00	\$1,400.00
Metal Beam Rail	L.F.	100	\$30.00	\$3,000.00
Remove and Reset Chain Link Fence	L.F.	150	\$35.00	\$5,250.00
6' Chain Link Fence	L.F.	300	\$25.00	\$7,500.00
Rebuild Stone Wall	L.F.	185	\$80.00	\$14,800.00
Turf Establishment	S.Y.	1,600	\$1.80	\$2,880.00
				\$2,914,290.00
Miscellaneous Items 10%				\$291,429.00
			Subtotal A:	\$3,205,719.00
Traffic Items				
Trafficmen	HR.	500	\$75.00	\$37,500.00
Trafficmen (State Police Officers)	L.S.	1	\$100,000.00	\$100,000.00
			Subtotal B:	\$3,343,219.00
			SAY:	\$3,400,000.00