



South Stamford Accessibility and MNRR Bridge Replacement Feasibility Study

Stamford, Connecticut
State Project No. 135-301

**PRELIMINARY ENGINEERING CONSTRUCTION COST ESTIMATE
PHASE I CONSTRUCTION**

Description	Phase 1 Construction	Phase 1 Construction
	Combined Construction Cost Totals	Individual Bridge Cost Totals
	Price	Price
Project Total		
Atlantic Street - Alternate 2	\$36,282,032.59	\$47,734,213.33
Elm Street	\$27,877,155.21	\$36,450,135.37
East Main Street	\$30,494,614.13	\$30,494,614.13
Net Savings in Rail Operation Costs (between Elm and East Main)	-\$255,000.00	-\$255,000.00
Section Sub-Total	\$94,398,801.93	\$114,423,962.83

Utility Relocation Costs		
Atlantic Street - Alternate 2	\$3,157,500.00	\$3,157,500.00
Elm Street	\$1,563,500.00	\$1,563,500.00
East Main Street	\$1,585,500.00	\$1,585,500.00
Section Sub-Total	\$6,306,500.00	\$6,306,500.00

Railroad Costs (incl. Force Account)		
Atlantic Street - Alternate 2	\$8,598,150.00	\$12,198,900.00
Elm Street	\$10,574,980.00	\$13,078,040.00
East Main Street	\$13,502,175.00	\$13,502,175.00
Net Savings by constructing 3 bridges at once	-\$7,000,000.00	-\$7,000,000.00
Section Sub-Total	\$25,675,305.00	\$31,779,115.00

Incidentals and Contingencies (applied to Project Total)				
1. Incidentals	@ 15%	\$14,159,820.29	18%	\$20,596,313.31
2. Contingencies	@ 10%	\$9,439,880.19	10%	\$11,442,396.28
Section Sub-Total		\$23,599,700.48		\$32,038,709.59

Cost of Bridge Rehabilitation (2012)	\$149,980,307.42	\$184,548,287.42
SAY	\$150,000,000.00	\$184,500,000.00

Inflation to Mid-Point of Construction				
Price Adjustment (adjust to 2017)	5 years @ 5%	\$41,436,793.68	5%	\$50,987,289.21

Cost of Bridge Replacement (2017)	\$191,417,101.10	\$235,535,576.63
SAY	\$191,400,000.00	\$235,500,000.00

Project Cost Escalation Footnotes:

1. Estimated construction cost shown above is based on 2011 prices.
2. Rate of construction cost escalation is estimated at 5% per year, per CTDOT Estimating Guidelines, calculated to the mid-point of construction, which is anticipated to be 2017 based on an anticipated 2015 start of construction. Accordingly, the cost escalation factor is 1.28.



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**PRELIMINARY ENGINEERING CONSTRUCTION COST ESTIMATE
ATLANTIC STREET**

Item No.	Description	Unit	Unit Price	Alternative 2			
				Two Span Top Down Concrete-Encased Steel Beams		Three Span Conventional Concrete-Encased Steel Beams	
				Quantity	Price	Quantity	Price
Highway & Traffic Items							
1.	Earth Excavation	CY	\$26.00	12,484	\$324,581.11	15,000	\$390,000.00
2.	Rock Excavation	CY	\$50.00	909	\$45,435.19	909	\$45,435.19
3.	Borrow	CY	\$20.00	2,205	\$44,100.00	2,205	\$44,100.00
4.	Drainage; Pipe (12")	LF	\$55.00	128	\$7,040.00	128	\$7,040.00
5.	Drainage; Pipe (15")	LF	\$60.00	244	\$14,640.00	244	\$14,640.00
6.	Drainage; Catch Basins	EA	\$2,800.00	6	\$16,800.00	6	\$16,800.00
7.	Manhole	EA	\$3,500.00	1	\$3,500.00	1	\$3,500.00
8.	Milling of Bituminous Concrete 0" - 4"	SY	\$8.00	3,911	\$31,288.89	3,911	\$31,288.89
9.	HMA - Superpave	T	\$105.00	5,861	\$615,355.42	6,740	\$707,700.00
10.	Processed Aggregate Base	T	\$45.00	2,867	\$129,022.32	3,300	\$148,500.00
11.	Subbase	T	\$35.00	3,264	\$114,242.59	3,750	\$131,250.00
12.	Temporary PCBC	LF	\$42.00	2,140	\$89,880.00	2,140	\$89,880.00
13.	Relocate TPCBC	LF	\$17.00	2,140	\$36,380.00	2,140	\$36,380.00
14.	Impact Attenuators	EA.	\$25,000.00	2	\$50,000.00	2	\$50,000.00
15.	Curbing; Concrete	LF	\$30.00	3,180	\$95,400.00	3,180	\$95,400.00
16.	Concrete Sidewalk	SF	\$15.00	9,200	\$138,000.00	9,200	\$138,000.00
17.	Trafficperson (City/State Police Officer)	HR	\$75.00	8,100	\$607,500.00	8,100	\$607,500.00
18.	Roadway Lighting	LF	\$40.00	2,930	\$117,200.00	2,930	\$117,200.00
19.	Traffic Signals; New	EA	\$200,000.00	3	\$600,000.00	3	\$600,000.00
20.	Traffic Signals; Minor Modification	EA	\$30,000.00	2	\$60,000.00	2	\$60,000.00
21.	Retaining Walls (Roadway)	SF	\$70.00	51,350	\$3,594,500.00	59,000	\$4,130,000.00
22.	Retaining Walls (Railroad)	SF	\$110.00	6,480	\$712,800.00	8,100	\$891,000.00
23.	Pump Station	L.S.	\$100,000.00	0	\$0.00	1	\$100,000.00
Section Sub-Total					\$7,447,665.51		\$8,455,614.07

Structures Items - Undergrade Bridge							
24.	Structure Excavation - Earth (Complete)	CY	\$90.00	7,000	\$630,000.00	15,000	\$1,350,000.00
25.	Ballast	CY	\$175.00	500	\$87,500.00	500	\$87,500.00
26.	Ballast Mat	SF	\$15.00	9,400	\$141,000.00	9,400	\$141,000.00
27.	Pervious Structure Backfill	CY	\$105.00	500	\$52,500.00	1,600	\$168,000.00
28.	Removal of Superstructure	LS	\$250,000.00	1	\$250,000.00	1	\$250,000.00
29.	Removal of Substructure	LS		1	\$670,000.00	1	\$1,000,000.00
30.	Temporary Support	LS	\$200,000.00	1	\$200,000.00	1	\$200,000.00
31.	Tie-Back Wall	SF	\$400.00	5,050	\$2,020,000.00	5,050	\$2,020,000.00
32.	Steel-Laminated Elastomeric Bearings	CI	\$3.00	40,000	\$120,000.00	60,000	\$180,000.00
33.	Class "A" Concrete	CY	\$850.00	900	\$765,000.00	1,600	\$1,360,000.00
34.	Class "F" Concrete	CY	\$1,250.00	200	\$250,000.00	400	\$500,000.00
35.	Architectural Formliner	SY	\$400.00	200	\$80,000.00	200	\$80,000.00
36.	Deformed Steel Bars	LBS	\$1.60	110,000	\$176,000.00	220,000	\$352,000.00
37.	P/C Conc. Encased Steel Girders (33"D)	LF	\$1,560.00	5,100	\$7,956,000.00	0	\$0.00
38.	P/C Conc. Encased Steel Girders (30"D)	LBS	\$1,530.00	0	\$0.00	5,060	\$7,741,800.00
39.	Drilled Mini-Piles	EA	\$5,500.00	250	\$1,375,000.00	350	\$1,925,000.00
40.	Temporary Earth Retaining System	SF	\$50.00	1,970	\$98,500.00	1,970	\$98,500.00
41.	Temporary Earth Retaining System (RR)	SF	\$160.00	6,130	\$980,800.00	35,000	\$5,600,000.00
42.	Lead Health Protection Program	LS	\$100,000.00	1	\$100,000.00	1	\$100,000.00
Section Sub-Total					\$15,952,300.00		\$23,153,800.00

Structures Items - South Platform Extension							
43.	South Platform Extension	LS	\$100,000.00	1	\$100,000.00	1	\$100,000.00
44.	Stair Structure	LS	\$120,000.00	1	\$120,000.00	1	\$120,000.00
45.	Pedestrian Bridge	LS	\$120,000.00	1	\$120,000.00	1	\$120,000.00
Section Sub-Total					\$340,000.00		\$340,000.00



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Stamford, Connecticut
State Project No. 135-301

**PRELIMINARY ENGINEERING CONSTRUCTION COST ESTIMATE
ATLANTIC STREET**

Item No.	Description	Unit	Unit Price	Alternative 2			
				Two Span Top Down Concrete-Encased Steel Beams		Three Span Conventional Concrete-Encased Steel Beams	
				Quantity	Price	Quantity	Price
Structures Items - Ramp Fly-Over Bridge							
46.	Structure Excavation - Earth (Complete)	CY	\$90.00	3,700	\$333,000.00	3,700	\$333,000.00
47.	Pervious Structure Backfill	CY	\$105.00	1,500	\$157,500.00	1,500	\$157,500.00
48.	Steel-Laminated Elastomeric Bearings	CI	\$3.00	5,300	\$15,900.00	5,300	\$15,900.00
49.	Class "A" Concrete	CY	\$850.00	460	\$391,000.00	460	\$391,000.00
50.	Class "F" Concrete	CY	\$1,250.00	140	\$175,000.00	140	\$175,000.00
51.	Deformed Steel Bars	LBS	\$1.60	46,000	\$73,600.00	46,000	\$73,600.00
52.	Deformed Steel Bars Epoxy Coated	LBS	\$1.70	16,800	\$28,560.00	16,800	\$28,560.00
53.	Structural Steel	LBS	\$3.25	54,800	\$178,100.00	54,800	\$178,100.00
54.	Temporary Sheet Piling	SF	\$50.00	240	\$12,000.00	240	\$12,000.00
Section Sub-Total					\$1,364,660.00		\$1,364,660.00
Rail Operations							
55.	Temporary Platform ³ (Stamford Station)	LF	\$350.00	2,000	\$700,000.00	2,000	\$700,000.00
56.	Bridge Plates	EA	\$9,000.00	20	\$180,000.00	20	\$180,000.00
57.	Removal & Erection Cycle - Bridge Plates	EA	\$1,200.00	20	\$24,000.00	20	\$24,000.00
Section Sub-Total					\$904,000.00		\$904,000.00
Project Sub-Total							
Highway & Traffic + Structure + Rail Operations					\$26,008,625.51		\$34,218,074.07
Percentage Based Items (applied to Project Sub-Total)							
1.	Clearing and Grubbing Roadway	@		2%	\$520,172.51	2%	\$684,361.48
2.	M & P of Traffic	@		4%	\$1,040,345.02	4%	\$1,368,722.96
3.	Mobilization	@		7.5%	\$1,950,646.91	7.5%	\$2,566,355.56
4.	Construction Staking	@		1%	\$260,086.26	1%	\$342,180.74
5.	Minor Items	@		25%	\$6,502,156.38	25%	\$8,554,518.52
Section Sub-Total					\$10,273,407.08		\$13,516,139.26
Project Total							
Project Sub-Total + Percentage Based Items					\$36,282,032.59		\$47,734,213.33
Utility Relocation Costs							
1.	Utility Relocation	Est.	\$3,157,500.00	1	\$3,157,500.00	1	\$3,157,500.00
Section Sub-Total					\$3,157,500.00		\$3,157,500.00
Railroad Costs							
1.	RR Force Account Work ^{1&2}	@		40%	\$8,598,150.00	40%	\$12,198,900.00
Section Sub-Total					\$8,598,150.00		\$12,198,900.00
Incidentals and Contingencies (applied to Project Total)							
1.	Incidentals	@		18%	\$6,530,765.87	18%	\$8,592,158.40
2.	Contingencies	@		10%	\$3,628,203.26	10%	\$4,773,421.33
Section Sub-Total					\$10,158,969.13		\$13,365,579.73
Cost of Bridge Replacement (2012)					\$58,196,651.72		\$76,456,193.07
SAY					\$58,200,000.00		\$76,500,000.00
Inflation to Mid-Point of Construction							
Price Adjustment (adjust to 2017)		5 years	@	5%	\$16,078,661.87	5%	\$21,123,436.48
Cost of Bridge Replacement (2017)					\$74,275,313.59		\$97,579,629.55
SAY					\$74,300,000.00		\$97,600,000.00



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Stamford, Connecticut
State Project No. 135-301

PRELIMINARY ENGINEERING CONSTRUCTION COST ESTIMATE ATLANTIC STREET (3 SPAN ALTERNATES)

Alternative 2

Project Cost Escalation Footnotes:

1. *Estimated construction cost shown above is based on 2011 prices.*
2. *Rate of construction cost escalation is estimated at 5% per year, per CTDOT Estimating Guidelines, calculated to the mid-point of construction, which is anticipated to be 2017 based on an anticipated 2015 start of construction. Accordingly, the cost escalation factor is 1.28.*

NOTES:

1. MNRR Force Account value is based on 40% of the sum of the total structure and rail operations work for the Undergrade Bridge and Platform Extension + 25% minor items applied to the total structure work.
2. MNRR Force Account includes the cost of Metro North personnel and railroad work associated with the removal of the existing bridge and construction of the proposed bridge, including removal & replacement of railroad tracks, communications & signals, and catenary pole relocation where applicable.
3. Temporary Platform includes 1000-ft of installation and 1000-ft of removal.
4. Items NOT included in this estimate:
 - Building Demolition / ROW acquisitions
 - Environmental Remediation
 - Environmental Studies (20% of Environmental Remediation Costs)



South Stamford Accessibility and MNRR Bridge Replacement Feasibility Study

Stamford, Connecticut
State Project No. 135-301

**PRELIMINARY ENGINEERING CONSTRUCTION COST ESTIMATE
ELM STREET**

Item No.	Description	Unit	Unit Price	Alternative 1		Alternative 2	
				Quantity	Price	Quantity	Price
				Two Span Top Down Concrete-Encased Steel Beams		Three Span Conventional Concrete-Encased Steel Beams	
Highway & Traffic Items							
1.	Earth Excavation	CY	\$26.00	3,154	\$82,012.67	3,785	\$98,410.00
2.	Rock Excavation	CY	\$50.00	350	\$17,524.07	350	\$17,524.07
3.	Drainage; Pipe (15")	LF	\$60.00	208	\$12,480.00	208	-\$255,000.00
4.	Drainage; Pipe (18")	LF	\$67.00	64	\$4,288.00	64	\$4,288.00
5.	Drainage; Pipe (30")	LF	\$90.00	200	\$18,000.00	200	\$18,000.00
6.	Drainage; Catch Basins	EA	\$2,800.00	6	\$16,800.00	6	\$16,800.00
7.	Drainage; Double Catch Basins	EA	\$4,500.00	1	\$4,500.00	1	\$4,500.00
8.	Manhole	EA	\$3,500.00	2	\$7,000.00	2	\$7,000.00
9.	Milling of Bituminous Concrete 0" - 4"	SY	\$8.00	453	\$3,622.22	453	\$3,622.22
10.	HMA - Superpave	T	\$105.00	1,028	\$107,962.68	1,182	\$124,110.00
11.	Processed Aggregate Base	T	\$45.00	1,028	\$46,269.72	1,182	\$53,190.00
12.	Subbase	T	\$35.00	1,171	\$40,969.44	1,347	\$47,145.00
13.	Temporary PCBC	LF	\$42.00	430	\$18,060.00	430	\$18,060.00
14.	Relocate TPCBC	LF	\$17.00	430	\$7,310.00	430	\$7,310.00
15.	PCBC (Vertical and "F" Shape)	LF	\$100.00	240	\$24,000.00	240	\$24,000.00
16.	Impact Attenuators	EA.	\$25,000.00	2	\$50,000.00	2	\$50,000.00
17.	Curbing; Concrete	LF	\$30.00	1,490	\$44,700.00	1,490	\$44,700.00
18.	Concrete Sidewalk	SF	\$15.00	9,920	\$148,800.00	9,920	\$148,800.00
19.	Trafficperson (City/State Police Officer)	HR	\$75.00	1,300	\$97,500.00	1,300	\$97,500.00
20.	Roadway Lighting	LF	\$40.00	745	\$29,800.00	745	\$29,800.00
21.	Traffic Signals; New	EA	\$200,000.00	1	\$200,000.00	1	\$200,000.00
22.	Retaining Walls	SF	\$70.00	923	\$64,575.00	1,061	\$74,270.00
23.	Pump Station	L.S.	\$100,000.00	0	\$0.00	1	\$100,000.00
Section Sub-Total					\$1,046,173.81		\$934,029.30
Structures Items - Undergrade Bridge							
24.	Structure Excavation - Earth (Complete)	CY	\$90.00	7,800	\$702,000.00	15,600	\$1,404,000.00
25.	Ballast	CY	\$175.00	550	\$96,250.00	550	\$96,250.00
26.	Ballast Mat	SF	\$15.00	11,100	\$166,500.00	11,100	\$166,500.00
27.	Pervious Structure Backfill	CY	\$105.00	1,300	\$136,500.00	1,300	\$136,500.00
28.	Removal of Superstructure	LS	\$350,000.00	1	\$350,000.00	1	\$350,000.00
29.	Removal of Substructure	LS		1	\$730,000.00	1	\$1,000,000.00
30.	Tie-Back Wall	SF	\$400.00	7,470	\$2,988,000.00	7,470	\$2,988,000.00
31.	Steel-Laminated Elastomeric Bearings	CI	\$3.00	51,100	\$153,300.00	76,650	\$229,950.00
32.	Class "A" Concrete	CY	\$850.00	1,200	\$1,020,000.00	1,200	\$1,020,000.00
33.	Class "F" Concrete	CY	\$1,250.00	200	\$250,000.00	400	\$500,000.00
34.	Architectural Formliner	SY	\$400.00	300	\$120,000.00	300	\$120,000.00
35.	Deformed Steel Bars	LBS	\$1.60	140,000	\$224,000.00	140,000	\$224,000.00
36.	Structural Steel (Site No. 1)	LBS	\$3.25	0	\$0.00	0	\$0.00
37.	P/C Conc. Encased Steel Girders (32"D)	LF	\$1,180.00	6,100	\$7,198,000.00	6,710	\$7,917,800.00
38.	Drilled Mini-Piles	EA	\$10,000.00	330	\$3,300,000.00	440	\$4,400,000.00
39.	Temporary Earth Retaining System	SF	\$50.00	2,030	\$101,500.00	2,030	\$101,500.00
40.	Temporary Earth Retaining System (RR)	SF	\$160.00	6,540	\$1,046,400.00	26,160	\$4,185,600.00
41.	Lead Health Protection Program	LS	\$100,000.00	1	\$100,000.00	1	\$100,000.00
Section Sub-Total					\$18,682,450.00		\$24,940,100.00
Rail Operations							
42.	Bridge Plates	EA	\$9,000.00	25	\$225,000.00	25	\$225,000.00
43.	Removal & Erection Cycle - Bridge Plates	EA	\$1,200.00	25	\$30,000.00	25	\$30,000.00
Section Sub-Total					\$255,000.00		\$255,000.00
Project Sub-Total							
Highway & Traffic + Structure + Rail Operations					\$19,983,623.81		\$26,129,129.30



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Stamford, Connecticut
State Project No. 135-301

**PRELIMINARY ENGINEERING CONSTRUCTION COST ESTIMATE
ELM STREET**

Item No.	Description	Unit	Unit Price	Alternative 1		Alternative 2	
				Quantity	Price	Quantity	Price
				Two Span Top Down Concrete-Encased Steel Beams		Three Span Conventional Concrete-Encased Steel Beams	
Percentage Based Items (applied to Project Sub-Total)							
	1. Clearing and Grubbing Roadway	@		2%	\$399,672.48	2%	\$522,582.59
	2. M & P of Traffic	@		4%	\$799,344.95	4%	\$1,045,165.17
	3. Mobilization	@		7.5%	\$1,498,771.79	7.5%	\$1,959,684.70
	4. Construction Staking	@		1%	\$199,836.24	1%	\$261,291.29
	5. Minor Items	@		25%	\$4,995,905.95	25%	\$6,532,282.32
	Section Sub-Total				\$7,893,531.40		\$10,321,006.07

Project Total							
Project Sub-Total + Percentage Based Items					\$27,877,155.21		\$36,450,135.37

Utility Relocation Costs							
	1. Utility Relocation	Est.	\$1,563,500.00	1	\$1,563,500.00	1	\$1,563,500.00
	Section Sub-Total				\$1,563,500.00		\$1,563,500.00

Railroad Costs							
	1. RR Force Account Work ^{1&2}	@		40%	\$7,574,980.00	40%	\$10,078,040.00
	2. Temporary Cut and Throw	Est.	\$3,000,000.00	1	\$3,000,000.00	1	\$3,000,000.00
	Section Sub-Total				\$10,574,980.00		\$13,078,040.00

Incidentals and Contingencies (applied to Project Total)							
	1. Incidentals	@		18%	\$5,017,887.94	18%	\$6,561,024.37
	2. Contingencies	@		10%	\$2,787,715.52	10%	\$3,645,013.54
	Section Sub-Total				\$7,805,603.46		\$10,206,037.90

Cost of Bridge Replacement (2012)		\$47,821,238.67	\$61,297,713.27
	SAY	\$47,800,000.00	\$61,300,000.00

Inflation to Mid-Point of Construction							
	Price Adjustment (adjust to 2017)	5 years	@	5%	\$13,212,126.54	5%	\$16,935,428.00

Cost of Bridge Replacement (2017)		\$61,033,365.21	\$78,233,141.27
	SAY	\$61,000,000.00	\$78,200,000.00

Project Cost Escalation Footnotes:

1. Estimated construction cost shown above is based on 2011 prices.
2. Rate of construction cost escalation is estimated at 5% per year, per CTDOT Estimating Guidelines, calculated to the mid-point of construction, which is anticipated to be 2017 based on an anticipated 2015 start of construction. Accordingly, the cost escalation factor is 1.28.

NOTES:

1. MNRR Force Account value is based on 40% of the sum of the total structure and rail operations work for the Undergrade Bridge + 25% minor items applied to that total.
2. MNRR Force Account includes the cost of Metro North personnel and railroad work associated with the removal of the existing bridge and construction of the proposed bridge, including removal & replacement of railroad tracks, communications & signals, and catenary pole relocation where applicable.
3. Items NOT included in this estimate:
 - Building Demolition / ROW acquisitions
 - Environmental Remediation
 - Environmental Studies (20% of Environmental Remediation Costs)



South Stamford Accessibility and MNRR Bridge Replacement Feasibility Study

Stamford, Connecticut
State Project No. 135-301

**PRELIMINARY ENGINEERING CONSTRUCTION COST ESTIMATE
EAST MAIN STREET (U.S. ROUTE 1)**

				Alternative 1	
				Two Span Top Down Concrete-Encased Steel Beams	
Item No.	Description	Unit	Unit Price	Quantity	Price
Highway & Traffic Items					
1.	Earth Excavation	CY	\$26.00	3,348	\$87,056.67
2.	Rock Excavation	CY	\$50.00	372	\$18,601.85
3.	Drainage; Pipe (12")	LF	\$55.00	96	\$5,280.00
4.	Drainage; Pipe (15")	LF	\$60.00	104	\$6,240.00
5.	Drainage; Pipe (72")	LF	\$165.00	204	\$33,660.00
6.	Drainage; Catch Basins	EA	\$2,800.00	7	\$19,600.00
7.	Manhole	EA	\$3,500.00	3	\$10,500.00
8.	Milling of Bituminous Concrete 0"-4"	SY	\$8.00	719	\$5,755.56
9.	HMA - Superpave	T	\$105.00	1,051	\$110,336.80
10.	Processed Aggregate Base	T	\$45.00	1,051	\$47,287.20
11.	Subbase	T	\$35.00	1,196	\$41,870.37
12.	Temporary PCBC	LF	\$42.00	600	\$25,200.00
13.	Relocate TPCBC	LF	\$17.00	600	\$10,200.00
14.	PCBC (Vertical and "F" Shape)	LF	\$100.00	270	\$27,000.00
15.	Impact Attenuators	EA.	\$25,000.00	2	\$50,000.00
16.	Curbing; Concrete	LF	\$30.00	1,100	\$33,000.00
17.	Concrete Sidewalk	SF	\$15.00	8,800	\$132,000.00
18.	Trafficperson (City/State Police)	HR	\$75.00	1,100	\$82,500.00
19.	Roadway Lighting	LF	\$40.00	450	\$18,000.00
20.	Traffic Signals; Minor Modification	EA	\$30,000.00	2	\$60,000.00
21.	Retaining Walls	SF	\$70.00	450	\$31,500.00
Section Sub-Total					\$855,588.44
Structures Items - Undergrade Bridge					
22.	Structure Excavation - Earth	CY	\$90.00	7,000	\$630,000.00
23.	Ballast	CY	\$175.00	750	\$131,250.00
24.	Ballast Mat	SF	\$15.00	10,800	\$162,000.00
25.	Pervious Structure Backfill	CY	\$105.00	800	\$84,000.00
26.	Removal of Superstructure	LS	\$250,000.00	1	\$250,000.00
27.	Removal of Substructure (Two Span)	LS	\$530,000.00	1	\$530,000.00
28.	Tie-Back Wall	SF	\$400.00	6,550	\$2,620,000.00
29.	Steel-Laminated Elastomeric Brgs.	CI	\$3.00	37,000	\$111,000.00
30.	Class "A" Concrete	CY	\$850.00	1,200	\$1,020,000.00
31.	Class "F" Concrete	CY	\$1,250.00	200	\$250,000.00
32.	Architectural Formliner	SY	\$400.00	250	\$100,000.00
33.	Deformed Steel Bars	LBS	\$1.60	140,000	\$224,000.00
34.	P/C Conc. Enc. Steel Grdrs (39"D)	LF	\$1,620.00	6,400	\$10,368,000.00
35.	Drilled Mini-Piles	EA	\$10,000.00	340	\$3,400,000.00
36.	Repointed Masonry	SY	\$80.00	85	\$6,800.00
37.	Temp. Earth Retaining System	SF	\$50.00	2,030	\$101,500.00
38.	Temp. Earth Retaining System (RR)	SF	\$160.00	4,130	\$660,800.00
39.	Lead Health Protection Program	LS	\$100,000.00	1	\$100,000.00
Section Sub-Total					\$20,749,350.00
Rail Operations					
40.	Bridge Plates	EA	\$9,000.00	25	\$225,000.00
41.	Removal & Erection Cycle - Bridge Plates	EA	\$1,200.00	25	\$30,000.00
Section Sub-Total					\$255,000.00
Project Sub-Total					
Highway & Traffic + Structure + Rail Operations					\$21,859,938.44



South Stamford Accessibility and MNRR Bridge Replacement Feasibility Study

Stamford, Connecticut
State Project No. 135-301

**PRELIMINARY ENGINEERING CONSTRUCTION COST ESTIMATE
EAST MAIN STREET (U.S. ROUTE 1)**

				Alternative 1	
				Two Span Top Down Concrete-Encased Steel Beams	
Item No.	Description	Unit	Unit Price	Quantity	Price
Percentage Based Items (applied to Project Sub-Total)					
1.	Clearing and Grubbing Roadway		@	2%	\$437,198.77
2.	M & P of Traffic		@	4%	\$874,397.54
3.	Mobilization		@	7.5%	\$1,639,495.38
4.	Construction Staking		@	1%	\$218,599.38
5.	Minor Items		@	25%	\$5,464,984.61
Section Sub-Total					\$8,634,675.69

Project Total	
Project Sub-Total + Percentage Based Items	\$30,494,614.13

Utility Relocation Costs					
1.	Utility Relocation	Est.	\$1,585,500.00	1	\$1,585,500.00
Section Sub-Total					\$1,585,500.00

Railroad Costs					
1.	RR Force Account Work ^{1&2}		@	40%	\$10,502,175.00
2.	Temporary Cut and Throw	Est.	\$3,000,000.00	1	\$3,000,000.00
Section Sub-Total					\$13,502,175.00

Incidentals and Contingencies (applied to Project Total)					
1.	Incidentals		@	18%	\$5,489,030.54
2.	Contingencies		@	10%	\$3,049,461.41
Section Sub-Total					\$8,538,491.96

Cost of Bridge Replacement (2012) \$54,120,781.09
SAY \$54,100,000.00

Inflation to Mid-Point of Construction				
Price Adjustment (adjust to 2017)	5 years	@	5%	\$14,952,573.96

Cost of Bridge Replacement (2017) \$69,073,355.05
SAY \$69,100,000.00

Project Cost Escalation Footnotes:

1. Estimated construction cost shown above is based on 2011 prices.
2. Rate of construction cost escalation is estimated at 5% per year, per CTDOT Estimating Guidelines, calculated to the mid-point of construction, which is anticipated to be 2017 based on an anticipated 2015 start of construction. Accordingly, the cost escalation factor

NOTES:

1. MNRR Force Account value is based on 40% of the sum of the total structure and rail operations work for the Undergrade Bridge + 25% minor items applied to that total.
2. MNRR Force Account includes the cost of Metro North personnel and railroad work associated with the removal of the existing bridge and construction of the proposed bridge, including removal & replacement of railroad tracks, communications & signals, and
3. Items NOT included in this estimate:
 - Building Demolition / ROW acquisitions
 - Environmental Remediation
 - Environmental Studies (20% of Environmental Remediation Costs)