

GPI Calculations

Greenman-Pedersen, Inc.

Location Westford, Carlisle, Acton **Job Number** MAX-20010031.02
Title Bruce Freeman Rail Trail Phase 2A **Date** 10/25/2012
Calculated By MDK **Checked By** RSW

Item Number	Quantity	Unit	Description	Unit Price	Total
100.01	1	LS	Schedule Of Operations - Fixed Price \$100,000	\$100,000.00	\$ 100,000.00
101.	16.0	A	Clearing And Grubbing	\$9,000.00	\$ 144,000.00
102.51	50	EA	Individual Tree Protection	\$163.00	\$ 8,150.00
102.52	13,000	FT	Temporary Tree Protection Fence	\$40.00	\$ 520,000.00
120.1	30,500	CY	Unclassified Excavation	\$21.00	\$ 640,500.00
123.	60	CY	Muck Excavation	\$24.00	\$ 1,440.00
129.5	23,000	FT	Track Excavation	\$25.00	\$ 575,000.00
141.	10	CY	Class A Trench Excavation	\$25.00	\$ 250.00
141.1	50	CY	Test Pit For Exploration	\$59.00	\$ 2,950.00
144.	50	CY	Class B Rock Excavation	\$157.00	\$ 7,850.00
150.	4,000	CY	Ordinary Borrow	\$28.00	\$ 112,000.00
150.1	500	CY	Special Borrow	\$21.00	\$ 10,500.00
151.	16,000	CY	Gravel Borrow	\$26.00	\$ 416,000.00
156.	5	TON	Crushed Stone	\$36.00	\$ 180.00
170.	58,500	SY	Fine Grading And Compacting	\$3.00	\$ 175,500.00
180.1	1	LS	Health And Safety Plan	\$3,232.00	\$ 3,232.00
180.2	80	HR	Implementation Of Health And Safety Plan	\$74.00	\$ 5,920.00
180.3	80	HR	Personnel Protection Level C Upgrade	\$15.00	\$ 1,200.00
180.4	400	CY	Monitoring/Handling And Stockpiling Of Contaminated Soils	\$15.00	\$ 6,000.00
180.5	120	HR	Licensed Site Professional	\$96.00	\$ 11,520.00
180.6	25	EA	Miscellaneous Soils Testing	\$233.00	\$ 5,825.00
181.11	400	TON	Disposal Of Unregulated Soil	\$50.00	\$ 20,000.00
181.12	175	TON	Disposal Of Regulated Soil - In-State Facility	\$50.00	\$ 8,750.00
181.13	100	TON	Disposal Of Regulated Soil - Out-Of-State Facility	\$50.00	\$ 5,000.00
181.14	1	TON	Disposal Of Hazardous Waste	\$50.00	\$ 50.00
183.1	1,000	GAL	Treatment Of Contaminated Groundwater	\$11.00	\$ 11,000.00
183.2	200	LB	Disposal Of Granular Activated Carbon	\$4.00	\$ 800.00
184.1	1,320	TON	Disposal Of Treated Wood Products	\$98.00	\$ 129,360.00
185.8	1	LS	Remove Poison Gas Compartment Tank	\$10,000.00	\$ 10,000.00
202.	1	EA	Manhole	\$2,437.00	\$ 2,437.00
205.	2	EA	Leaching Basin	\$3,843.00	\$ 7,686.00
241.12	12	FT	12 Inch Reinforced Concrete Pipe	\$87.00	\$ 1,044.00
252.08	4	FT	8 Inch Corrugated Plastic (Polyethylene) Pipe	\$75.00	\$ 300.00
252.112	5	EA	12 Inch Corrugated Plastic Pipe Flared End	\$557.00	\$ 2,785.00
252.12	65	FT	12 Inch Corrugated Plastic (Polyethylene) Pipe	\$93.00	\$ 6,045.00
252.15	42	FT	15 Inch Corrugated Plastic (Polyethylene) Pipe	\$67.00	\$ 2,814.00
258.	15	SY	Stone For Pipe Ends	\$56.00	\$ 840.00
299.	1	LS	Remove and Reset Concord Water Department Pipes	\$100,000.00	\$ 100,000.00
402.	200	CY	Dense Graded Crushed Stone For Sub-Base	\$56.00	\$ 11,200.00
431.1	10	CY	High Early Strength Cement Concrete Base Course	\$188.00	\$ 1,880.00
440.	88,000	LB	Calcium Chloride For Roadway Dust Control	\$0.30	\$ 26,400.00
443.	180	MGL	Water For Roadway Dust Control	\$48.00	\$ 8,640.00
450.90	9,100	TON	Contractor Quality Control	\$1.30	\$ 11,830.00
451.	20	TON	HMA For Patching	\$168.00	\$ 3,360.00
452.	2,000	GAL	Asphalt Emulsion For Tack Coat	\$8.00	\$ 16,000.00
453.	28,000	FT	HMA Joint Sealant	\$2.00	\$ 56,000.00
455.23	3,100	TON	Superpave Surface Course - 12.5 (SSC - 12.5)	\$121.00	\$ 375,100.00
455.32	5,200	TON	Superpave Intermediate Course - 19.0 (SIC - 19.0)	\$115.00	\$ 598,000.00
455.42	200	TON	Superpave Base Course - 37.5 (SBC - 37.5)	\$96.00	\$ 19,200.00
470.2	100	FT	Hot Mix Asphalt Berm, Type A - Modified	\$8.00	\$ 800.00
472.	100	TON	Hot Mix Asphalt For Miscellaneous Work	\$199.00	\$ 19,900.00
482.3	1,500	FT	Sawing Asphalt Pavement	\$3.00	\$ 4,500.00
506.	10	FT	Granite Curb Type VB - Straight	\$35.00	\$ 350.00
506.1	80	FT	Granite Curb Type VB - Curved	\$39.00	\$ 3,120.00
509.	20	FT	Granite Transition Curb For Wheelchair Ramps - Straight	\$39.00	\$ 780.00

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Item Number	Quantity	Unit	Description	Unit Price	Total
509.1	10	FT	Granite Transition Curb For Wheelchair Ramps - Curved	\$44.00	\$ 440.00
511.1	310	FT	Granite Edging Type SB - Straight	\$22.00	\$ 6,820.00
512.1	90	FT	Granite Edging Type SB (Radius 10 Feet Or Less)	\$28.00	\$ 2,520.00
570.3	400	FT	Hot Mix Asphalt Curb Type 3	\$10.00	\$ 4,000.00
594.	50	FT	Curb Removed And Discarded	\$9.00	\$ 450.00
620.2	1,600	FT	Steel W Beam Highway Guard (Single Faced) - Rub Rail	\$30.00	\$ 48,000.00
627.1	8	EA	Steel W Beam Terminal Section (Single Faced)	\$70.00	\$ 560.00
644.072	2,100	FT	72 Inch Chain Link Fence (STW) (Line Post Option)	\$25.00	\$ 52,500.00
655.01	19,500	FT	Timber Rail Fence	\$16.00	\$ 312,000.00
656.	1	LS	Remove and Reset Electric Gate and Equipment	\$7,500.00	\$ 7,500.00
665.	1,750	FT	Chain Link Fence Removed And Stacked	\$3.00	\$ 5,250.00
665.3	100	FT	72 Inch Stockade Fence	\$40.00	\$ 4,000.00
667.	2	EA	Chain Link Fence Gate W/Gate Posts Removed & Stacked	\$275.00	\$ 550.00
668.	1	EA	Chain Link Fence Gate W/Gate Posts Removed & Reset	\$689.00	\$ 689.00
669.	350	FT	Fence Removed And Stacked	\$4.00	\$ 1,400.00
670.	100	FT	Fence Removed And Reset	\$25.00	\$ 2,500.00
673.	2	EA	Steel Pipe Access Gate	\$4,000.00	\$ 8,000.00
691.01	50	EA	Landscape Boulder	\$500.00	\$ 25,000.00
691.1	50	EA	Landscape Boulder Removed and Reset	\$300.00	\$ 15,000.00
697.	26,500	FT	Sedimentation Fence	\$3.00	\$ 79,500.00
699.	800	SY	Filter Strip	\$27.00	\$ 21,600.00
701.	250	SY	Cement Concrete Sidewalk	\$45.00	\$ 11,250.00
701.1	20	SY	Cement Concrete Sidewalk At Driveways	\$45.00	\$ 900.00
701.2	300	SY	Cement Concrete Wheelchair Ramp	\$66.00	\$ 19,800.00
701.3	60	SY	Stamped Cement Concrete Island	\$75.00	\$ 4,500.00
702.	10	TON	Hot Mix Asphalt Walk Surface	\$218.00	\$ 2,180.00
703.	400	TON	Hot Mix Asphalt Driveway	\$165.00	\$ 66,000.00
704.2	2,800	TON	Stone Dust	\$80.00	\$ 224,000.00
706.38	2	EA	Granite Pier	\$7,000.00	\$ 14,000.00
707.1	8	EA	Park Bench	\$1,900.00	\$ 15,200.00
707.81	5	EA	Removable Bollard	\$2,000.00	\$ 10,000.00
707.9	1	EA	Bicycle Rack	\$750.00	\$ 750.00
714.2	4	EA	Mile Marker Removed and Reset	\$1,000.00	\$ 4,000.00
714.3	10	EA	Railroad Signal Pole Removed and Reset	\$1,500.00	\$ 15,000.00
719.	1	EA	Track Switch Removed and Reset	\$2,500.00	\$ 2,500.00
719.1	5	EA	Signal Cabinet Removed and Reset	\$2,500.00	\$ 12,500.00
740.	26	MO	Engineers Field Office And Equipment (Type A)	\$2,300.00	\$ 59,800.00
748.	1	LS	Mobilization	\$277,521.09	\$ 277,521.09
751.	1,800	CY	Loam Borrow	\$30.00	\$ 54,000.00
755.	420	SY	Wetland Replication Area	\$90.00	\$ 37,800.00
756.	1	LS	NPDES Stormwater Pollution Prevention Plan	\$4,150.00	\$ 4,150.00
765.	13,000	SY	Seeding	\$2.00	\$ 26,000.00
765.15	7,000	SY	Seeding - Steep Slope Mix	\$2.00	\$ 14,000.00
767.2	2,800	SY	Hay Mulch	\$2.00	\$ 5,600.00
767.8	9,000	EA	Bales Of Hay For Erosion Control	\$12.00	\$ 108,000.00
767.9	7,000	SY	Matting For Erosion Control	\$10.00	\$ 70,000.00
769.	1,600	FT	Pavement Milling Mulch Under Guard Rail	\$7.00	\$ 11,200.00
785.733	48	EA	Inkberry - Compact 24-30 Inch	\$59.00	\$ 2,832.00
790.133	24	EA	Coralberry Shrub-Chenault 2-3 Feet	\$50.00	\$ 1,200.00
790.433	14	EA	Cranberry Bush - American 2-3 Feet	\$35.00	\$ 490.00
791.313	36	EA	Fothergilla - Dwarf 18-24 Inch Spread	\$50.00	\$ 1,800.00
794.735	17	EA	Summersweet Shrub 2-3 Feet	\$40.00	\$ 680.00
795.153	4	EA	Winterberry - Male 24-30 Inch	\$35.00	\$ 140.00
795.157	22	EA	Winterberry - Female 24-30 Inch	\$55.00	\$ 1,210.00

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Item Number	Quantity	Unit	Description	Unit Price	Total
804.3	410	FT	3 Inch Electrical Conduit Type NM - Plastic -(UL)	\$28.00	\$ 11,480.00
811.31	7	EA	Pull Box 12 X 12 Inches - Sd2.031	\$559.00	\$ 3,913.00
816.01	1	LS	Traffic Signal Reconstruction Location No. 1	\$78,875.00	\$ 78,875.00
816.80	1	LS	Traffic Control Signal Removed And Stacked	\$5,000.00	\$ 5,000.00
824.01	1	LS	Rectangular Rapid-Flash Beacons, Location No. 1	\$15,000.00	\$ 15,000.00
824.02	1	LS	Rectangular Rapid-Flash Beacons, Location No. 2	\$15,000.00	\$ 15,000.00
824.03	1	LS	Rectangular Rapid-Flash Beacons, Location No. 3	\$20,000.00	\$ 20,000.00
824.04	1	LS	Rectangular Rapid-Flash Beacons, Location No. 4	\$15,000.00	\$ 15,000.00
824.05	1	LS	Rectangular Rapid-Flash Beacons, Location No. 5	\$15,000.00	\$ 15,000.00
832.	850	SF	Warning-Regulatory And Route Marker - Alum. Panel (Type A)	\$9.00	\$ 7,650.00
832.1	5	SF	Trail Rules Sign	\$500.00	\$ 2,500.00
833.5	30	EA	Demountable Reflectorized Delineator - Guard Rail	\$5.00	\$ 150.00
833.7	10	EA	Delineation For Guard Rail Termini	\$30.00	\$ 300.00
847.1	130	EA	Sign Sup (N/Guide)+Rte Mkr W/1 Brkwy Post Assembly - Steel	\$81.00	\$ 10,530.00
850.41	100	HR	Roadway Flagger	\$48.00	\$ 4,800.00
851.1	25	DAY	Traffic Cones For Traffic Management	\$103.00	\$ 2,575.00
852.	320	SF	Safety Signing For Traffic Management	\$18.00	\$ 5,760.00
853.1	4	EA	Portable Breakaway Barricade Type III	\$145.00	\$ 580.00
854.016	500	FT	Temporary Paving Markings - 6 In. (Painted)	\$1.00	\$ 500.00
854.1	350	SF	Pavement Marking Removal - Paint	\$1.00	\$ 350.00
856.	10	DAY	Arrow Board	\$10.00	\$ 100.00
859.	730	DAY	Reflectorized Drum	\$0.20	\$ 146.00
860.12	100	FT	12 Inch Reflectorized White Line (Painted)	\$1.50	\$ 150.00
861.04	2,700	FT	4 Inch Reflectorized Yellow Line (Painted)	\$1.00	\$ 2,700.00
864.04	1,100	SF	Pavement Arrows And Legends Refl. White (Thermoplastic)	\$5.00	\$ 5,500.00
866.04	1,900	FT	4 Inch Reflectorized White Line (Thermoplastic)	\$0.50	\$ 950.00
866.12	550	FT	12 Inch Reflectorized White Line (Thermoplastic)	\$1.00	\$ 550.00
867.04	100	FT	4 Inch Reflectorized Yellow Line (Thermoplastic)	\$1.00	\$ 100.00
874.	5	EA	Street Name Sign	\$59.00	\$ 295.00
874.45	20	EA	Traffic Sign Removed and Discarded	\$50.00	\$ 1,000.00
874.55	3	EA	Miscellaneous Sign Removed And Reset	\$100.00	\$ 300.00
995.01	1	LS	Bridge Structure, Bridge No. 1	\$68,000	\$ 68,000.00
995.02	1	LS	Bridge Structure, Bridge No. 2	\$75,000	\$ 75,000.00
995.03	1	LS	Bridge Structure, Bridge No. 3	\$88,200	\$ 88,200.00
995.04	1	LS	Bridge Structure, Bridge No. 4	\$121,700	\$ 121,700.00
995.05	1	LS	Bridge Structure, Bridge No. 5	\$97,800	\$ 97,800.00
995.06	1	LS	Bridge Structure, Bridge No. 6	\$119,700	\$ 119,700.00
995.07	1	LS	Bridge Structure, Bridge No. 7	\$2,384,800	\$ 2,384,800.00
996.4	4,250	SF	Prefabricated Concrete Modular Gravity Wall	\$100.00	\$ 425,000.00
997.	6	EA	Repair Headwall	\$5,000.00	\$ 30,000.00
TOTAL					\$9,528,224.09
				GPI Design Contingency (15%)	\$1,429,233.61
				Plus 5% Construction Engineering (MassDOT)	\$476,411.20
				Plus 10% Construction Contingency (MassDOT)	\$952,822.41
				Plus Traffic Police	\$10,000.00
				Plus Utility Relocation Reimbursement (Estimated)	\$100,000
Estimate					\$12,496,691.32