

GPI Calculations

Greenman-Pedersen, Inc.

Location Acton/Concord Job Number 606223
 Title Bruce Freeman Rail Trail Phase 2B
 Calculated By BAM Checked By _____

Item Number	Quantity	Unit	Description	Unit Price	Total
100.	1	LS	SCHEDULE OF OPERATIONS - FIXED PRICE \$60000	\$60,000.00	\$ 60,000.00
101.	2.1	A	CLEARING AND GRUBBING	\$17,800.00	\$ 37,380.00
102.1	1,500	FT	TREE TRIMMING	\$13.00	\$ 19,500.00
102.3	80	HR	CONTROL OF INVASIVE PLANTS EXISTING ON SITE	\$275.00	\$ 22,000.00
102.33	40	HR	INVASIVE PLANT MANAGEMENT STRATEGY	\$200.00	\$ 8,000.00
102.51	25	EA	INDIVIDUAL TREE PROTECTION	\$240.00	\$ 6,000.00
102.52	850	FT	TEMPORARY TREE PROTECTION FENCE	\$8.00	\$ 6,800.00
114.1	1	LS	DEMOLITION OF SUPERSTRUCTURE OF BRIDGE NO. C-19-037	\$30,000.00	\$ 30,000.00
120.	4,700	CY	EARTH EXCAVATION	\$30.00	\$ 141,000.00
121.	20	CY	CLASS A ROCK EXCAVATION	\$115.00	\$ 2,300.00
123.	200	CY	MUCK EXCAVATION	\$38.00	\$ 7,600.00
129.5	4,000	FT	TRACK EXCAVATION	\$30.00	\$ 120,000.00
129.7	8,000	FT	HANDLING AND TRANSPORTATION OF RAIL COMPONENTS	\$4.00	\$ 32,000.00
129.71	150	TON	HANDLING AND TRANSPORTATION OF OTHER TRACK MATERIALS	\$305.00	\$ 45,750.00
140.	1,270	CY	BRIDGE EXCAVATION	\$45.00	\$ 57,150.00
141.	50	CY	CLASS A TRENCH EXCAVATION	\$32.00	\$ 1,600.00
141.1	15	CY	TEST PIT FOR EXPLORATION	\$85.00	\$ 1,275.00
142.	600	CY	CLASS B TRENCH EXCAVATION	\$33.00	\$ 19,800.00
144.	10	CY	CLASS B ROCK EXCAVATION	\$150.00	\$ 1,500.00
150.	10,200	CY	ORDINARY BORROW	\$30.00	\$ 306,000.00
150.1	200	CY	SPECIAL BORROW	\$40.00	\$ 8,000.00
151.	3,200	CY	GRAVEL BORROW	\$35.00	\$ 112,000.00
151.2	775	CY	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES	\$50.00	\$ 38,750.00
156.	800	TON	CRUSHED STONE	\$40.00	\$ 32,000.00
156.1	145	TON	CRUSHED STONE FOR BRIDGE FOUNDATIONS	\$45.00	\$ 6,525.00
170.	10,700	SY	FINE GRADING AND COMPACTING - SUBGRADE AREA	\$4.00	\$ 42,800.00
180.01	1	LS	ENVIRONMENTAL HEALTH AND SAFETY PROGRAM	\$5,400.00	\$ 5,400.00
180.02	10	HR	PERSONAL PROTECTION LEVEL C UPGRADE	\$10.00	\$ 100.00
180.03	240	HR	LICENSED SITE PROFESSIONAL SERVICES	\$120.00	\$ 28,800.00
181.11	10	TON	DISPOSAL OF UNREGULATED SOIL	\$35.00	\$ 350.00
181.12	10	TON	DISPOSAL OF REGULATED SOIL - IN-STATE FACILITY	\$65.00	\$ 650.00
181.13	10	TON	DISPOSAL OF REGULATED SOIL - OUT-OF-STATE FACILITY	\$110.00	\$ 1,100.00
181.14	10	TON	DISPOSAL OF HAZARDOUS WASTE	\$450.00	\$ 4,500.00
183.1	1,000	GAL	TREATMENT OF CONTAMINATED GROUNDWATER	\$10.00	\$ 10,000.00
183.2	500	LB	DISPOSAL OF GRANULAR ACTIVATED CARBON	\$4.50	\$ 2,250.00
184.1	285	TON	DISPOSAL OF TREATED WOOD PRODUCTS	\$275.00	\$ 78,375.00
220.	3	EA	DRAINAGE STRUCTURE ADJUSTED	\$380.00	\$ 1,140.00
220.5	1	EA	DRAINAGE STRUCTURE REMODELED	\$700.00	\$ 700.00
227.3	15	CY	REMOVAL OF DRAINAGE STRUCTURE SEDIMENT	\$225.00	\$ 3,375.00
227.31	450	FT	REMOVAL OF DRAINAGE PIPE SEDIMENT	\$10.00	\$ 4,500.00
236.01	1	LS	PRECAST CONCRETE CULVERT - 48" X 48"	\$30,900.00	\$ 30,900.00
290.3	40	FT	INFILTRATION TRENCH	\$200.00	\$ 8,000.00
295.01	1	LS	BIORETENTION BASIN (STA. 23+00 RT)	\$18,000.00	\$ 18,000.00
295.02	1	LS	BIORETENTION BASIN (STA. 32+00 RT)	\$30,000.00	\$ 30,000.00
385.1	2	EA	MONITORING WELL DECOMMISSIONED AND ABANDONED	\$2,000.00	\$ 4,000.00
402.	700	CY	DENSE GRADED CRUSHED STONE FOR SUB-BASE	\$63.00	\$ 44,100.00
415.	350	SY	PAVEMENT MICROMILLING	\$10.00	\$ 3,500.00
440.	27,000	LB	CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL	\$0.35	\$ 9,450.00
443.	35	MGL	WATER FOR ROADWAY DUST CONTROL	\$50.00	\$ 1,750.00
450.90	2,280	TON	CONTRACTOR QUALITY CONTROL	\$4.50	\$ 10,260.00
451.	50	TON	HMA FOR PATCHING	\$210.00	\$ 10,500.00
452.	500	GAL	ASPHALT EMULSION FOR TACK COAT	\$8.00	\$ 4,000.00
453.	600	FT	HMA JOINT SEALANT	\$1.00	\$ 600.00
455.23	950	TON	SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5)	\$125.00	\$ 118,750.00
455.32	1,200	TON	SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0)	\$120.00	\$ 144,000.00

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455.42	60	TON	SUPERPAVE BASE COURSE - 37.5 (SBC - 37.5)	\$145.00	\$ 8,700.00
455.60	10	TON	SUPERPAVE BRIDGE SURFACE COURSE - 9.5 (SSC-B - 9.5)	\$225.00	\$ 2,250.00
455.70	10	TON	SUPERPAVE BRIDGE PROTECTIVE COURSE - 9.5 (SPC-B - 9.5)	\$225.00	\$ 2,250.00
470.2	350	FT	HOT MIX ASPHALT BERM, TYPE A - MODIFIED	\$20.00	\$ 7,000.00
472.	10	TON	HOT MIX ASPHALT FOR MISCELLANEOUS WORK	\$210.00	\$ 2,100.00
477.	300	FT	MILLED RUMBLE STRIP	\$20.00	\$ 6,000.00
482.3	260	FT	SAWCUTTING ASPHALT PAVEMENT	\$4.00	\$ 1,040.00
482.31	32	FT	SAWING & SEALING JOINTS IN ASPHALT PAVEMENT AT BRIDGES	\$38.00	\$ 1,216.00
624.1	175	FT	STEEL THRIE BEAM HIGHWAY GUARD (DOUBLE FACED)	\$50.00	\$ 8,750.00
627.4	2	EA	STEEL THRIE BEAM TERMINAL SECTION (DOUBLE FACED)	\$140.00	\$ 280.00
630.	1,150	FT	HIGHWAY GUARD REMOVED AND RESET	\$15.00	\$ 17,250.00
630.2	75	FT	HIGHWAY GUARD REMOVED AND DISCARDED	\$7.00	\$ 525.00
639.	1,350	FT	PRIVACY SCREEN	\$10.00	\$ 13,500.00
647.144	1,350	FT	144 INCH CHAIN LINK FENCE (PIPE TOP RAIL) W/BARB (LINE POST OPTION)	\$55.00	\$ 74,250.00
652.144	2	EA	144 INCH CHAIN LINK FENCE END POST	\$80.00	\$ 160.00
653.144	7	EA	144 INCH CHAIN LINK FENCE CORNER OR INTERMEDIATE BRACE POST	\$100.00	\$ 700.00
655.01	1,250	FT	TIMBER RAIL FENCE	\$35.00	\$ 43,750.00
655.02	750	FT	TIMBER RAIL FENCE ON BRIDGE	\$40.00	\$ 30,000.00
655.04	550	FT	TIMBER RAIL FENCE - 56" TALL	\$50.00	\$ 27,500.00
697.1	3	EA	SILT SACK	\$180.00	\$ 540.00
698.3	2,900	SY	GEOTEXTILE FABRIC FOR SEPARATION	\$4.00	\$ 11,600.00
701.	60	SY	CEMENT CONCRETE SIDEWALK	\$70.00	\$ 4,200.00
704.2	275	TON	STONE DUST	\$80.00	\$ 22,000.00
707.1	6	EA	PARK BENCH	\$2,900.00	\$ 17,400.00
710.8	3	EA	GRANITE MILE MARKER	\$1,000.00	\$ 3,000.00
714.6	1	LS	SEMAPHORE REPAIR	\$5,000.00	\$ 5,000.00
714.8	1	EA	BATTERY WELL REMOVED AND RESET	\$1,000.00	\$ 1,000.00
734.2	3	EA	SIGN - INTERPRETIVE - NPS STANDARD	\$800.00	\$ 2,400.00
740.	18	MO	ENGINEERS FIELD OFFICE AND EQUIPMENT (TYPE A)	\$3,000.00	\$ 54,000.00
748.	1	LS	MOBILIZATION	\$231,199.17	\$ 231,199.17
751.	700	CY	LOAM BORROW	\$50.00	\$ 35,000.00
751.72	5,700	SY	COMPOST TOPDRESSING	\$8.00	\$ 45,600.00
756.	1	LS	NPDES STORMWATER POLLUTION PREVENTION PLAN	\$4,500.00	\$ 4,500.00
765.421	4,700	SY	SEEDING - MID-HEIGHT UPLAND MIX - PART SHADE	\$2.00	\$ 9,400.00
765.554	250	SY	WETLAND MIX - SEASONALLY FLOODED (E154)	\$3.00	\$ 750.00
767.12	2,650	FT	COMPOST FILTER TUBES	\$6.00	\$ 15,900.00
769.	1,300	FT	PAVEMENT MILLING MULCH UNDER GUARD RAIL	\$10.00	\$ 13,000.00
772.356	4	EA	FIR - FRASER 5-6 FEET	\$257.50	\$ 1,030.00
773.436	3	EA	PINE - WHITE 5-6 FEET	\$278.50	\$ 835.50
774.642	3	EA	SPRUCE - WHITE 7-8 FEET	\$465.00	\$ 1,395.00
775.047	6	EA	HORNBEAM - EUROPEAN 8-10 FEET	\$500.00	\$ 3,000.00
777.036	7	EA	OAK - NORTHERN RED 2-2.5 INCH CALIPER	\$700.00	\$ 4,900.00
777.138	2	EA	OAK - PIN 2-2.5 INCH CALIPER	\$700.00	\$ 1,400.00
777.673	7	EA	SWEETGUM 2-2.5 INCH CALIPER	\$700.00	\$ 4,900.00
778.161	3	EA	BIRCH - RIVER 'HERITAGE' 8-10 FOOT CLUMP	\$417.50	\$ 1,252.50
783.037	10	EA	SHAD TREE - ALLEGHENY CLUMP 4-5 FEET	\$300.00	\$ 3,000.00
789.333	33	EA	BAYBERRY SHRUB - NORTHERN 2-3 FEET	\$82.50	\$ 2,722.50
789.669	47	EA	BLUEBERRY - LOWBUSH 6-9 INCH HEIGHT	\$33.50	\$ 1,574.50
794.731	36	EA	SUMMERSWEET SHRUB 18-24 INCH	\$40.00	\$ 1,440.00
795.053	8	EA	VIBURNUM - HIGHBUSH CRANBERRY 3-4 FEET	\$79.00	\$ 632.00
795.057	40	EA	VIBURNUM - LEATHERLEAF 24-30 INCH	\$36.00	\$ 1,440.00
795.069	9	EA	VIBURNUM - NANNYBERRY 24-30 INCH	\$36.00	\$ 324.00
795.151	5	EA	WINTERBERRY - MALE 18-24 INCH	\$40.00	\$ 200.00
795.157	39	EA	WINTERBERRY - FEMALE 24-30 INCH	\$59.00	\$ 2,301.00
796.03	14	EA	KODIAK BLACK BUSH HONEYSUCKLE	\$60.00	\$ 840.00

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Item Number	Quantity	Unit	Description	Unit Price	Total
804.4	150	FT	4 INCH ELECTRICAL CONDUIT TYPE NM - PLASTIC -(UL)	\$50.00	\$ 7,500.00
826.8	1	LS	TELEGRAPH POLE AND OVERHEAD WIRE REMOVED AND DISCARDED	\$7,800.00	\$ 7,800.00
832.	50	SF	WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A)	\$12.00	\$ 600.00
833.5	30	EA	DEMOUNTABLE REFLECTORIZED DELINEATOR - GUARD RAIL	\$6.00	\$ 180.00
833.7	2	EA	DELINEATION FOR GUARD RAIL TERMINI	\$50.00	\$ 100.00
847.1	6	EA	SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY - STEEL	\$125.00	\$ 750.00
850.41	450	HR	ROADWAY FLAGGER	\$55.00	\$ 24,750.00
851.1	22	DAY	TRAFFIC CONES FOR TRAFFIC MANAGEMENT	\$25.00	\$ 550.00
852.	750	SF	SAFETY SIGNING FOR TRAFFIC MANAGEMENT	\$20.00	\$ 15,000.00
853.1	16	EA	PORTABLE BREAKAWAY BARRICADE TYPE III	\$125.00	\$ 2,000.00
853.21	1,500	FT	TEMPORARY BARRIER REMOVED AND RESET	\$12.00	\$ 18,000.00
853.33	1,500	FT	TEMPORARY BARRIER - LIMITED DEFLECTION (TL-3)	\$80.00	\$ 120,000.00
853.501	4	EA	TEMPORARY IMPACT ATTENUATOR REMOVED AND RESET	\$1,500.00	\$ 6,000.00
853.73	2	EA	TEMPORARY IMPACT ATTENUATOR BI-DIRECTIONAL, NON-REDIRECTIVE (TL-3)	\$6,000.00	\$ 12,000.00
854.016	30,400	FT	TEMPORARY PAVING MARKINGS - 6 INCH (PAINTED)	\$0.35	\$ 10,640.00
854.036	500	FT	TEMPORARY PAVING MARKINGS - 6 INCH (TAPE)	\$2.00	\$ 1,000.00
854.1	15,200	SF	PAVEMENT MARKING REMOVAL	\$1.50	\$ 22,800.00
856.	10	DAY	ARROW BOARD	\$12.00	\$ 120.00
856.12	780	DAY	PORTABLE CHANGEABLE MESSAGE SIGN	\$25.00	\$ 19,500.00
859.	4,150	DAY	REFLECTORIZED DRUM	\$0.30	\$ 1,245.00
864.31	73	EA	SLOTTED PAVEMENT MARKER ONE-WAY WHITE	\$32.00	\$ 2,336.00
866.106	7,200	FT	6 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC)	\$1.00	\$ 7,200.00
867.106	5,750	FT	6 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC)	\$1.00	\$ 5,750.00
901.3	3	CY	4000 PSI, 1.5 INCH, 565 CEMENT CONCRETE FOR POST FOUNDATION	\$330.00	\$ 990.00
945.10	380	FT	DRILLED MICROPILES	\$250.00	\$ 95,000.00
948.60	1	EA	MICROPILE VERIFICATION LOAD TEST	\$25,000.00	\$ 25,000.00
948.61	2	EA	MICROPILE PROOF LOAD TEST	\$5,000.00	\$ 10,000.00
986.2	700	CY	MODIFIED ROCKFILL	\$80.00	\$ 56,000.00
991.1	1	LS	CONTROL OF WATER - STRUCTURE NO. C-19-040	\$70,000.00	\$ 70,000.00
995.01	1	LS	BRIDGE STRUCTURE, BRIDGE NO. C-19-039 (BUJ)	\$3,252,000.00	\$ 3,252,000.00
995.011	1	LS	CULVERT STRUCTURE, CULVERT NO. C-19-040 (BUK)	\$255,000.00	\$ 255,000.00
995.02	1	LS	BRIDGE STRUCTURE, BRIDGE NO. C-19-037 (BF4)	\$440,000.00	\$ 440,000.00
996.31	1,355	SY	MECHANICALLY STABILIZED EARTH WALL	\$650.00	\$ 880,750.00
996.33	17	DAY	MSE WALL MANUFACTURER'S REPRESENTATIVE	\$550.00	\$ 9,350.00
997.	260	CY	EXPANDED POLYSTYRENE	\$200.00	\$ 52,000.00
997.1	5	DAY	EPS MANUFACTURER'S REPRESENTATIVE	\$850.00	\$ 4,250.00
TOTAL					\$7,937,838.17
				GPI Design Contingency (10%)	\$793,784
				Construction Contingency (10%)	\$793,784
				Construction Engineering (5%)	\$396,892
				Traffic Police (2.5%)	\$198,446
				Utilities(Assumed)	\$20,000
				Total =	\$10,140,743.67
Estimate					\$10,141,000.00