

GREEN MOUNTAIN ENGINEERING, INC.

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January 8, 2018

Ms. Kathleen Ramsay, Town Manager
Town of Middlebury
77 Main Street
Middlebury, VT 05753

RE: Shard Villa Road Improvements Proposal

Dear Ms. Ramsay;

We would like to thank you and Dan Werner for the opportunity to continue to provide engineering services for the Town of Middlebury. Attached are our Project Understanding, Scope of Services, Project Schedule and Cost Proposal.

The Scope of Services for this project includes providing engineering services for stabilization of approximately 210 feet of Middlebury River Bank along the west side of Shard Villa Road as well as road surface recycling and paving of a portion of Shard Villa Road. Green Mountain Engineering (GME) has the expertise to effectively address the requirements detailed in the Request for Proposals to complete the necessary engineering in a timely and cost-effective manner.

Thank you again for the opportunity to submit this proposal. We look forward to your response.

Respectfully,
GREEN MOUNTAIN ENGINEERING, INC.


Alan Huizenga, P.E.
President
enc.

Green Mountain Engineering, Inc.

Project Understanding

Shard Villa Road Improvements Project

As discussed in the pre-proposal meeting on December 14, 2017, Green Mountain Engineering, Inc., proposes a project to include design and permitting services for the following improvements:

1. Bank stabilization of a 210-foot long section of the Middlebury River along the west side of Shard Villa Road. GME has visited the site and anticipates a design similar to one prepared recently for the Town of Richmond for an unstable bank along the Winooski River. State of Vermont Watershed Management Division (Stream Alteration) and Army Corp of Engineers permits were obtained for a solution that included maintenance of as much existing established vegetation as possible, as well as slope anchoring with large diameter stone underlain by geotextile fabric.



Figure 1: Existing vegetation undermined along west side of Shard Villa Road



Figure 2: Pavement box-cut repairs due to close proximity of river and undermined soils beneath Shard Villa Road

2. Road surface recycling, subbase stabilization and paving of approximately 2,700 feet of Shard Villa Road from the bridge over the Middlebury River to the south. GME has been involved with numerous projects in the Town of Middlebury in recent years involving road material recycling. Special consideration will be required for two entrances that will need longer paved approaches to minimize damage to the travelled portion of the road. In addition, the swimming-hole access may require surface improvement to minimize the frequency of required maintenance.



Figure 3: Road surface looking northward along Shard Villa Road



Figure 4: Closer look at recent pavement repairs

Green Mountain Engineering, Inc.

Scope of Services

Shard Villa Road Improvements Project

The following technical approach is presented to address the Scope of Services contained in the Request for Proposals (RFP) identified as bid number 12-08-17 and information from the pre-proposal meeting on December 14, 2017.

1. GME will identify permits that will be required for the project. GME anticipates that a Stream Alteration Permit from the State of Vermont and an Army Corp of Engineers Permit will be required based on the project location, size and scope. Potential wetlands impacts and the need for a State of Vermont Construction General Permit will also be reviewed.
2. GME will establish a semi-permanent control system for both horizontal and vertical control within the project area. The control system will include traverse points and temporary benchmarks. The control will be based on Vermont State Plane Coordinate System.
3. GME will conduct topographical surveys of the project area. The topographic survey will be used to create a base map at a scale of 1-inch is equal to 20-feet (1" = 20') with 1-foot contours. GME shall identify current easements and any necessary easements. GME will attend a Pre-design meeting with the Town to discuss and evaluate design and construction alternatives to be considered.
4. GME will prepare an estimate of the construction cost and timeframe for the project.
5. Two (2) meetings with Town staff and one (1) with the Infrastructure Committee are included in the project for pre-design and final design.
6. Using the information obtained in Items 1 through 5, GME will prepare contract documents and construction plans for the proposed replacement project. The contract documents shall include an Advertisement for Bid, Information for Bidders, Bid Schedule, General Conditions, Special Conditions, and Technical Specifications for the project. Two (2) copies of the contract documents and contract drawings will be submitted to the Town for review. Upon completion of the Town's review, comments will be addressed and

incorporated into the contract documents and drawings. A copy of the final construction plans shall be submitted to the Town in PDF format at a scale of 1" = 20'.

7. GME shall prepare any necessary permit applications for the permits identified for the project. Any application fees will be paid directly by the Town. As stated in Item 6, GME anticipates that a Stream Alteration Permit from the State of Vermont and an Army Corp Permit will be required.
8. GME will prepare an Advertisement for Bid and submit it to the Town for distribution. During the bid phase, GME will conduct a pre-bid meeting, answer questions posed by contractors, issue addenda, and attend the bid opening. The Project will be ready to bid **no later** than April 13, 2018. GME will prepare a bid tabulation and a letter of recommendation to the Town. Upon acceptance of a contractor by the Town, GME will provide three (3) copies of conformed contract documents and drawings for agreement execution by the Town and the successful contractor.
9. GME will provide construction administration services during the construction of the proposed improvement. Construction administration will include:
 - a. Review of Shop Drawing Submittals
 - b. Review of Pay Requests
 - c. Issuing of Change Orders
 - d. Attendance at Contractor Meetings. We have estimated that only three (3) meetings are needed, including a kick-off meeting, one (1) progress meeting and a final completion meeting, based on the size of this project.
10. GME will provide Construction Review Services through completion of the Project. Construction review will include:
 - e. Full-time construction inspection for the portion of the work involved with the bank stabilization and road surface reconstruction. We estimate that this portion of the work will take approximately two (2) weeks. We have estimated eighty (80) hours for full-time construction inspection. GME will provide part-time construction inspection for general clean-up and other miscellaneous items. We have estimated eighteen (18) hours for this part-time construction inspection.

GME will provide part-time construction oversight services to verify satisfactory completion of testing requirements for the project.

- f. Substantial and final completion walk-through
 - g. Preparation of punch lists.
 - h. Contact with adjacent property owners.
11. GME will prepare record drawings for the bank stabilization portion of the project only, which will include the centerline elevation of the road surface, road asphalt edge, road shoulder and rock or other stabilization materials to the water's edge. We will submit a PDF and two (2) paper copies of record drawings to the Town.



Figure 5: View of undermined bank looking south along Shard Villa Road

Green Mountain Engineering, Inc.
Project Schedule
Shard Villa Road Improvements Project

The following Project Schedule will result in a completed project that meets the needs of the Town of Middlebury. In addition, our goal throughout the project shall be to maintain the satisfaction of the Town, the engineer, the contractor and landowners and residents in the area.

<u>Project Milestone</u>	<u>Complete by:</u>
Contract Award - Assumed	January 3, 2018
Topographic Survey & Pre-design Meeting	February 23, 2018
Start Design	February 23, 2018
60% Review Meeting	March 9, 2018
Construction Cost Estimate/Timeframe	March 16, 2018
90% Review Meeting/Submit Final Draft	March 22, 2018
Town Review	April 2 - 6, 2018
Submit Final Stamped Plans	April 10, 2018
Advertise for Bids	April 13, 2018
Pre-Bid Meeting	April 19, 2018
Bid Opening	May 4, 2018
Review Bids/Recommendation of Award	May 18, 2018
Start Construction	June 15, 2018
Complete Construction	July 31, 2018

Green Mountain Engineering, Inc.

Cost Proposal

Shard Villa Road Improvements Project

The following is our Cost Proposal for the engineering services for this proposed project:

<u>Task Items</u>	<u>Manhours (if hourly basis)</u>	<u>Amount</u>	<u>Basis</u>
Items No. 1 - 6	N/A	\$9,500	Lump Sum
Item No. 7	N/A	\$3,000	Lump Sum
Item No. 8	N/A	\$4,500	Lump Sum
Item No. 9	N/A	\$4,500	Lump Sum
Item No. 10	80 Full-Time @ \$75/hr. 18 Part-Time @ \$75/hr. 98 Total (plus miles)	\$8,000	Hourly
Item No. 11	N/A	\$1,200	Lump Sum
Total		<u>\$30,700</u>	