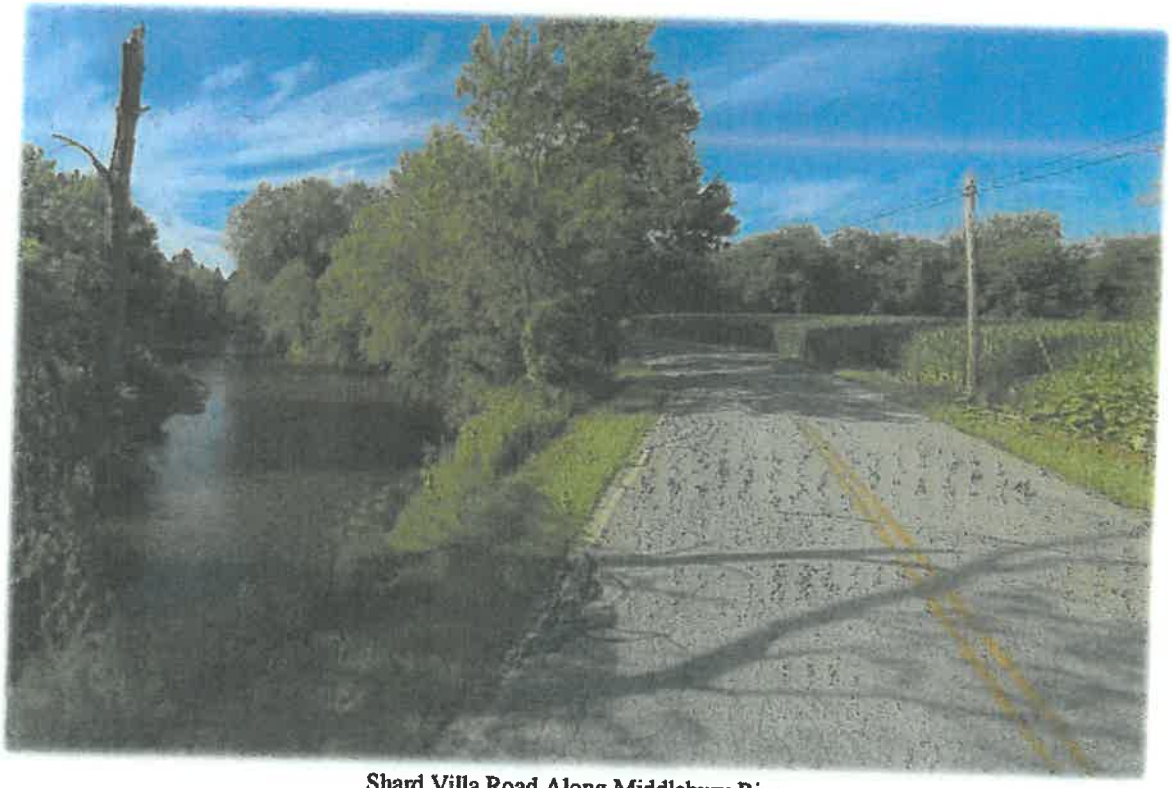
Proposal for Engineering Services
Shard Villa Road Improvements Project
Town of Middlebury, Vermont



Shard Villa Road Along Middlebury River

Prepared For:

Town of Middlebury
Public Works Department
Dan Werner, Public Works Planning Director
1020 South Route 7
Middlebury, Vermont

Delivered To:

Town of Middlebury
77 Main Street
Middlebury, Vermont 05753

January 4, 2018
P5183

Prepared by:

PATHWAYS CONSULTING, LLC
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January 4, 2018

Dan Werner, Public Works Planning Director
Town of Middlebury, Department of Public Works
77 Main Street
Middlebury, Vermont 05753

RE: PROPOSAL FOR ENGINEERING SERVICES, SHARD VILLA ROAD IMPROVEMENTS PROJECT, MIDDLEBURY, VERMONT (P5183)

Dear Mr. Werner:

We are pleased to provide our proposal in response to the Town of Middlebury's (Town) solicitation for Engineering Service Proposals for the Shard Villa Road Improvements Project. This proposal is provided based on the revised request for proposals (RFP) dated December 15, 2017. Although we were unable to attend the pre-proposal meeting on December 14, 2017, we appreciate you reaching out to us to discuss the project considerations. In brief summary, our goal is to assist the Town with developing meaningful and cost-effective road and bank stabilization improvements within the project corridor. We intend to involve the Town during all stages of the project development through various design review, and other meetings. Although we acknowledge that the project scope may vary depending on actual permitting considerations, the duration of construction, and the direction provided by the Town, we have developed what we believe is a reasonable approach to best serve the Town.

Pathways Consulting, LLC (Pathways) is a Disadvantaged Business Enterprise registered with the Vermont Agency of Transportation. Our staff of approximately 25 people has served many clients throughout our region from our centrally located offices along the Connecticut River. Scott Williams, P.E., will serve as our Project Manager to work with our team and the Town. Rod Finley, P.E., will serve as the Project Director, assisting Scott with project management; and members of our staff will serve the team to provide requisite services. Ian MacKenzie, P.E., will supervise the geotechnical investigation, design recommendations related to the field conditions, and will also be the on-site Resident Engineer during project construction.

As requested by the Town, we have provided a detailed proposal with not-to-exceed costs for site review, design, permitting, and construction administration services, and hourly construction observation services, based on the outlined tasks and cost matrix. We have also included additional qualifications and relevant experience information in the proposal to assist the Town in evaluating our proposal. Please find our standard Terms and Conditions, which we reference and include in our proposal, to be incorporated as part of our agreement with the Town.

We really enjoyed getting to know many individuals in the Town during our recent work on the Creek Road Study, and are very excited about the opportunity to continue our working relationship with the Town on this project. Given our long history of project planning, design, and successfully permitting and constructing projects, we believe we are well-suited to perform the requested tasks on-time and on-budget. We will work with the Town as an extension of your staff to complete the project in line with your expectations. We have attempted to provide a detailed approach in our proposal that is responsive to the Town's RFP.

Please let us know if you require additional information, and thank you again for the opportunity!

Sincerely,

PATHWAYS CONSULTING, LLC

Rodrick J. Finley, P.E.
Vice President/Director of
Engineering Services

SAW:RJF:sef

Enclosures

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I. BANK STABILIZATION DESIGN INTENT

According to the Town of Middlebury's (Town) Request for Proposals (RFP) and our discussions with Dan Werner, there is a 210-foot section of unstable bank along the Middlebury River on the west side of Shard Villa Road that requires stabilization as part of this project. The bank is apparently undermined and has resulted in some damage along the road shoulder. The top of the river bank is within 5 feet of the road shoulder. The river bank appears to be approximately 10 to 15 feet high and in the range of a 1:1 (horizontal to vertical) slope. The bank consists of mostly low-lying grasses with minimal woody vegetation and trees. The bank is also on the outside of a meander bend in the river, and there appears to be some signs of channel instability in the Middlebury River, such as gravel bars on the opposite side of the channel. We also reviewed a portion of the Middlebury River approximately one mile downstream of this project area as part of a Creek Road study completed on behalf of the Town, and the study indicated that this portion of the Middlebury River is undergoing frequent channel evolution, and is generally unstable vertically and horizontally as evidenced by the many meander bends and historic channels in this section of the river. Based on our limited review to date, we suspect that bank instabilities adjacent to the road are resulting from significant scouring on the outside of the river bend, lack of erosional resistance on the bank due to the limited deep-rooted vegetation on the bank, and excessive bank height adjacent to a frequently maintained Town road.

Despite the potential instabilities in the river channel within or near the project area, we do not believe that a broader geomorphic assessment of the Middlebury River is warranted, based on the limited scope of the project. We have formulated our proposal to include the necessary scope of services (e.g., site review, survey, and subsurface borings) to diagnose the primary causes of the bank instability, and address these causes in the most cost-effective long-term manner to preserve the roadway, and limit future maintenance and repair costs associated with this section of roadway. The goal of our approach will be to coordinate with the Vermont Agency of Natural Resources (VANR) River Engineer early in the design process to confirm that a geomorphic assessment will not be required, and determine the range of bank stabilization solutions that would be acceptable to the VANR. We have also included adequate time in our design services to review several bank stabilization alternatives that may be suitable for this project. Based on our experience with similar projects, we anticipate that the bank stabilization design will require heavy-type (2-3 foot stone) riprap keyed into the river bed at the bank toe, and extending to at least the ordinary high water (OHW) level. Above the OHW, we would consider stone fill on the slope face, and/or another type of bio-engineered stabilization technique, such as fabric encapsulated soil, to establish vegetation on the slope. Lastly, we suggest that some consideration is given during the project to shift the roadway to the east, if possible within the existing right-of-way (ROW), as this may be a viable solution to increase the buffer between the roadway and the river, lessen the slope, and reduce the potential for future bank issues.

II. UNDERSTANDING OF THE SCOPE OF SERVICES

1. The Town is soliciting services to facilitate road improvements along Shard Villa Road. The project will include 210 feet of bank stabilization on the west side of

the road along the east bank of the Middlebury River, and 2,700 feet of surface recycling and repaving.

2. We are responding to the Town's "Invitation to Bid, Town of Middlebury, Bid Number 12-08-17," received on December 14, 2017. We have also received the subsequent revised RFP, dated December 15, 2017, issued by the Town to address questions on the project scope raised during the non-mandatory pre-proposal meeting on December 14th, and our subsequent phone discussions with Dan Werner on December 15th.

3. We propose services for site assessment, topographic surveying, geotechnical investigation supervision, design and permitting, project review meetings, construction bid administration, and construction administration assistance in our proposal for this project.

4. We have included services in our proposal for initial site review, in addition to other site visits included in other tasks.

5. As requested in the RFP, we will participate in several meetings with Town staff during the project development process, in addition to other meetings included in separate project tasks within this proposal, which will include the following:

   - One (1) Project Kick-off Meeting – will be scheduled at the beginning of the project to review the project goals, process, schedule, and priorities.
   - One (1) Preliminary Design Meeting – will be scheduled early in the project development process and prior to filing regulatory applications.
   - One (1) Final Design Meeting – will be scheduled later in the project development process to review the final design prior to completing contract and bidding documents.
   - One (1) Town Infrastructure Committee Meeting – will be scheduled at an appropriate time during the project development process to review the bank stabilization design with the Town Infrastructure Committee.

6. We have included services to facilitate preliminary coordination with the VANR Watershed Management Division to review the Stream Alteration and Wetlands permitting required for the bank stabilization portion of the project. The intent of this preliminary regulatory review is to identify specific permit constraints, outline permit application requirements, and review potential permit conditions that may impact the project design and permitting.

7. We have included services for preparing and Engineer's Opinions of Probable Cost (EOPC) document based on the final project design for budgetary purposes. We will also provide an approximate schedule for construction with the EOPC.

8. All work will be accomplished in accordance with appropriate current standards, including:

   - Town of Middlebury Road Reclamation and Paving Specifications (samples provided by Town with RFP)

- Vermont Agency of Transportation (VTrans) Construction Manual
- VTrans Materials Sampling Manual
- VTrans Approved Products List
- VTrans List of Materials with Advanced Certification
- Manual of Uniform Traffic Control Devices
- VTrans Standard Specifications for Construction 2011
- VTrans Supplemental Specifications
- VTrans General Special Provisions for All Projects
- Vermont Department of Environmental Conservation (VDEC) "Vermont Standards & Specifications for Erosion Prevention and Sediment Control, 2006"
- VDEC "Low Risk Site Handbook for Erosion Prevention and Sediment Control, August 2006"
- VDEC "2017 Vermont Stormwater Management Manual" (VSMM)

9. We assume the Town will coordinate with DigSafe to mark the location of any underground utilities that are present within the project area prior to the subsurface investigation and our field surveying efforts. We have not included any related services in our proposal for research and location of existing utilities within the ROW or on Town-owned property in the project area.

10. We assume that all improvements will be within the existing Town ROW, or on Town-owned property (e.g., bank stabilization on west side of Shard Villa Road). We assume the Town will obtain written permission for Pathways to perform field investigation efforts including topographic surveying for any areas outside the existing ROW on adjacent privately owned lands.

11. We assume boundary surveying will not be required for this project. During our topographic surveying effort, our survey crew will locate visible boundary monumentation along the ROW and front boundaries of abutting properties. The ROW will be developed by a "best fit" of the approximate ROW width (assumed to be three rods) matching up with the available monumentation. We will provide limited assistance for the Town to formulate and obtain permanent and temporary work easement agreements with impacted landowners by depicting approximate easement limits on the design plans, as needed. We assume that the Town will provide all coordination, easement agreements, and legal services, as needed to obtain temporary and permanent easements for the project. We assume that survey plats related to land acquisition or temporary construction easements will not be required. If necessary, we can complete construction easement exhibits as an additional service.

12. We understand that the Town will subcontract directly with a subsurface soil boring contractor to perform four (4) shallow borings within the 2,700 feet of roadway, and three (3) deep borings in the bank stabilization area, as outlined in the RFP. We will provide limited coordination to assist the Town with identifying the location of these borings, and scheduling a subsurface soil boring contractor to perform the soil borings. We assume the four (4) soil borings within the paved roadway will be advanced to a depth of 10 feet, or refusal, and the three (3) borings within the bank stabilization area will be advanced to a depth of 15

feet, or refusal, and the boreholes will be patched following completion. We assume that one 8-hour day will be necessary to perform the soil borings and related split-spoon sampling with a truck-mounted soil boring machine. This task will include observation by a Professional Licensed Engineer during the investigation effort. Groundwater elevations in boreholes during the subsurface exploration period will be observed, if feasible.

13. The soil boring contractor will backfill the boring holes following drilling.

14. We also assume the Town will pay directly for any laboratory testing services related to soil boring samples. We assume soil laboratory testing will be necessary for the analyses of existing subbase aggregates and subgrade soils samples obtained during the subsurface investigation. We have not included any other geotechnical services in our proposal.

15. We have not included traffic control in our proposal for the soil boring efforts listed. We will work with the Town to notify the neighboring land owners of the geotechnical investigation effort and plan to maintain a minimum of one open travel lane at all times.

16. As requested in the RFP, we have included limited services to coordinate with local quarries to research the availability of stone fill and/or heavy-type riprap for use in the bank stabilization design.

17. We have included services for developing design and construction plans for the scope of roadway and bank stabilization improvements defined in the RFP. We assume our design services will include a conceptual phase to review up to two different bank stabilization approaches with the Town. We will refine the design plans during the preliminary and final design phases as needed to incorporate additional layout, details, specific permitting conditions, construction notations, and comments received from Town staff during the design review meetings.

18. We assume that a geomorphic stream assessment will not be required for the VANR Stream Alteration permitting. We have not included services for performing hydrologic and hydraulic modeling, or detailed stream flow calculations in our scope of services. However, we have included limited additional time in the various design phases to determine approximate stream flow levels for the Middlebury River to inform our bank stabilization design.

19. We assume that there are jurisdictional wetlands located within the bank stabilization portion of the project area. We also assume the jurisdictional wetlands are limited to the banks of the Middlebury River, and have not included any wetland delineation services in this proposal. We have included services for preparation of a Stream Alteration permit application to the VANR, and wetlands applications to the VANR and the US Army Corps of Engineers (USACE), for the bank stabilization improvements.

20. We assume the project disturbances will be less than one acre, the project will not require coverage under the VDEC's Construction General Permit (CGP) Number

3-9020, and general construction activities will be covered under the VDEC's Low Risk Site Handbook. We have not included any services in this proposal for preparing a Notice of Intent (NOI) for coverage under the CGP 3-9020, or a separate Erosion Prevention and Sediment Control Plan (EPSC) for the project. However, we will incorporate typical erosion controls and Stormwater Best Management Practices into the design plans with appropriate notes, in accordance with general VANR construction requirements.

21. We have included services for completing construction documents, and assisting the Town during the bidding process.

22. This proposal does not include construction stake-out efforts. However, construction stake-out can be provide upon request as an additional service.

23. We assume that the road within the project corridor will be closed for portions of the construction of this project. It is assumed that construction staging areas will be maintained by the contractor within the closed portions of the road during construction or the contractor will be responsible for obtaining staging area agreements as necessary. This proposal does not include road closure signage planning, and will reference current Manual of Uniform Traffic Control Devices. Road closure warning and signage responsibilities will be identified within the Bid Documents.

24. Our Resident Engineer will wear personal protective equipment as appropriate, including appropriate headgear, footwear, and a reflectorized vest when on the project site.

25. Our Resident Engineer will be on-site during construction of the project to the extent necessary to certify, upon completion of the project, that the project was built as designed, subject to appropriate and necessary revisions during construction, in general conformance with project specifications and in compliance with contract provisions.

26. We have included services for completing limited record drawings for the bank stabilization portion of the project following completion of construction, as requested in the RFP.

27. This scope of services does not include laboratory or in-field materials testing services during the construction phase of this project. We will provide a cost for sub-consultant services related to construction materials testing services upon request.

28. The Town will be responsible for negotiating and resolving contract related issues that may arise during construction. Our Resident Engineer will support the Town as its primary contact person. Our Resident Engineer will be responsible for resolving design related issues that may arise during construction. We will secure in writing from the Town the necessary authority for our Resident Engineer, including stop-work, non-payment, etc.

29. Our Resident Engineer efforts shall be invoiced at a rate of $75 per hour, as a unit cost, plus mileage expenses. As requested in the RFP, we have included a cost in our scope of services for an assumed 5 weeks of full-time construction observation by our Resident Engineer, with the understanding that the extent of construction observation services will be determined at a later date, and based on the actual duration of construction. Items No. 9 and 10 of the RFP specifically outline construction-related services that would apply to the overall roadway project, rather than just the bank stabilization improvements. For the purposes of this proposal, we assume that the Town intends to retain us for construction review during the full duration of the roadway recycling and bank stabilization work, or approximately 5 weeks. On this basis, we have included this cost in our scope of services.

30. We have enclosed a cost matrix (Appendix A) to demonstrate the effort that we propose by task based on our current knowledge of the project.

31. The attached Terms and Conditions are incorporated as part of this proposal (Appendix B).

We have developed the following scope of services based on our understanding of the Town's RFP and related Addenda, and experience with other similar projects.

III. SCOPE OF SERVICES

Surveying, Site Review, Design, Permitting, Bidding, and Construction Services

1. **Project Kick-off Meeting:** We will attend a regularly scheduled project kick-off meeting to discuss the goals and objectives of the Town and define the project development process. We will identify project team members and respective roles during the project development process. We will provide an overview of the anticipated project development schedule. We will discuss the site conditions, communication protocols, project design, and coordinate the collection of information relevant to the project, including all existing project files, utility information, abutting property information, etc. We will coordinate this meeting and take notes to document the discussions for distribution to the project team.

2. **Initial Site Review:** We will schedule an initial site visit of the project area to review the current site conditions and collect updated field information. We will perform a field assessment of the project area to identify areas of concern within the existing roadway and the bank stabilization area; verify field information related to the roadway and other utilities; review the site conditions related to bank stabilization improvements; obtain visual observations and photographic documentation for the project site; and identify the survey limits for the project.

3. **Supervision of Soil Borings and Geotechnical Investigation:** Borings will be performed to evaluate existing pavement thickness, subbase, and subgrade soil characteristics. Borings are intended to support roadway analysis and design recommendations within the ROW, and to assist with bank stabilization design (on the adjacent Middlebury River banks). Borings will include:

- One (1) 8-hour day of drilling for an estimated 7 borings;
- Depth: 10' (within the roadway) to 15' (at roadway shoulder along Middlebury River banks), or investigations will performed to refusal if encountered within 10-15' from the surface;
- Drilling method will be soil boring by auger and split-spoon advancement;
- Supervision by Professional Licensed Engineer during the investigation;
- Groundwater elevations in boreholes during the subsurface exploration period will be observed, if feasible;
- We will assist the Town with retaining a local laboratory to complete particle-size distribution analyses of the boring samples (7 samples);
- We will retain soil samples from this effort for 60 days. Split-spoon sampling will be a variation of continuous and alternating samples;
- We will work with the subsurface exploration contractor and utility locating contractor to perform the investigations; and
- Boring logs shall be provided by the subsurface exploration contractor for the design, and the logs will be included in the construction bid documents.

4. **Topographic Surveying and Base Plan:** Our survey crew will perform topographic surveying for the project area under the supervision of our in-house Vermont Licensed Land Surveyor. We will develop a base plan from field data at an appropriate scale for design. Specific surveying components will include:

- Contours developed at two-foot intervals;
- Visible features such as edge of roadway, structures, top and toe of bank, water level, streambed within 10 feet of toe, trees, tree lines, etc.;
- The survey will include a 300' long by 100' wide area along Shard Villa Road and the adjacent Middlebury River Banks, including areas within and adjacent to the ROW (±50' assumed width);
- All visible and marked utilities;
- Boring locations;
- Visible boundary monumentation along the ROW and front boundaries of abutting properties. The ROW will be developed by a "best fit" of an assumed ROW width matching up with the available monumentation;
- At least two control points in locations that will not be affected by the construction;
- Horizontal controls will be established in accordance with State systems. The vertical datum will be NAVD88. The horizontal datum will be NAD83; and
- A digital base plan at a scale of 1" =40', or other appropriate scale for design. We will utilize information obtained during the initial site review and soil boring tasks to prepare the base plan for the project area.

5. **Local Quarry Coordination:** We will provide limited coordination within the established budget to contact local quarries and research the availability of locally sourced stone fill, boulders, and/or heavy-type riprap materials. We will utilize the information obtained from local quarries to determine appropriate materials for use in the bank stabilization design.

6. **Preliminary Regulatory Review with the VANR:** We will coordinate with the VANR staff as necessary to identify permitting requirements related to Stream Alteration and Wetlands applications for the bank stabilization improvements within the project area. This task will include phone and e-mail coordination, and scheduling site meetings as necessary to review the project scope, identify specific permit constraints, outline permit application requirements, and review potential permit conditions that may impact the project design.

7. **Conceptual Design:** We will prepare design plans for the project in a manner that involves the Town at critical stages of design review. We propose to develop 25% drawings for Town review in order to address the project permitting, budgeting, and timeframe for this project. We will provide the Town with conceptual sketches based on existing condition information obtained. We will utilize this task as an opportunity to review design alternatives with the Town's Department of Public Works (DPW), and to discuss the project, initial findings, and conceptual site sketches. As requested in the RFP, the conceptual design will focus on the bank stabilization area, with limited design sections, details, and work limits for the roadway recycling. Conceptual design plans will include:

   - Existing conditions;
   - General limits of proposed work;
   - Areas of concern for the roadway and bank stabilization area;
   - Approximate water levels in the Middlebury River based on readily available historic weather and flood event data, and performing a VT StreamStats review of the river in the vicinity of the bank stabilization area;
   - Conceptual layout of bank stabilization improvements;
   - Review of up to two (2) alternatives for bank stabilization design;
   - Typical sections and details.

8. **Preliminary Design and Review Meeting with the Town:** We propose to develop 75% drawings for Town review in order to address the project permitting, budget, and timeframe for this project at this point of the design. We will identify possible temporary or permanent easements that may be needed within the project area within this task. With Town concurrence, we will then complete design plans for use in support of the permitting and construction efforts. We will coordinate a meeting with the Town DPW, Town Manager, and/or others on the Town project team to discuss the project, adjacent land owner impact areas, and preliminary design plans. Preliminary design plans will include:

   - A site location plan;
   - An existing conditions base plan;
   - Approximate limits of proposed work;
   - Preliminary roadway and bank stabilization plan sheets;
   - Roadway, pavement, and bank stabilization design details;
   - Typical roadway sections for pavement recycling;
   - Preliminary grading design within the bank stabilization area;
   - Critical cross-sections for bank stabilization;

- Approximate temporary and permanent easements;
- Preliminary water diversion, dewatering and dewatering treatment, and erosion and sediment control practices; and
- Typical construction details and notations.

9. **Final Design and Review Meeting with the Town:** We will prepare final design plans for the project. We will incorporate comments from the preliminary design review meeting with the Town. We will also incorporate any regulatory conditions provided during the project permitting. We will coordinate a meeting with the Town DPW, Town Manager, and/or others on the Town project team to review the final design plans. Final design plans will include general notes, materials specification references, project sequence notes, proposed grading, proposed features, and construction details. Final design plans will include:

   - Roadway Plans: We will prepare final layout plans showing the limits of work for the pavement recycling;
   - Bank Stabilization Plans: We will prepare final layout plans showing the existing conditions, proposed grades, and design slopes;
   - Final Details: We will prepare final details for project components, including the pavement recycling, pavement sections to match the existing road surface within the bank stabilization area, and other bank stabilization details;
   - Traffic Controls: We will provide preliminary traffic control information in accordance with the Manual on Traffic Control Devices (MUTCD) to accommodate the proposed project improvements;
   - Water Diversion and Dewatering Measures: We will provide typical water diversion, dewatering, and dewatering treatment measures on the plans to guide the contractor during construction;
   - EPSC Plans: We will provide typical erosion and sediment control measures on the plans to guide the contractor during construction. The EPSC plans will address temporary and permanent stabilization of all disturbed areas, construction sequencing, and short-term and long-term maintenance measures;
   - Contract Document Review: We will provide a final Contract Document review to confirm that construction plans agree with pay items in the Contract Documents; and
   - Material Specifications: We will reference the Standard Specifications for project components.

10. **Town Infrastructure Committee Meeting:** We will attend a regularly scheduled meeting with the Town Infrastructure Committee to review the final design plans related to the bank stabilization. We will incorporate any comments received at this meeting into the final design and construction plans.

11. **Final Design EOPC:** We will utilize the final design plans to prepare an EOPC to determine the probable construction costs for the project. The EOPC will present estimated quantities, unit costs, total costs, and contingencies for construction of the roadway and bank stabilization components.

12. **VANR Stream Alteration Application:** We will coordinate with the regional VANR Rivers Engineer to determine information needed to complete a Stream Alteration Permit application. We will prepare documents for submittal of a permit application to the VANR Watershed Division for the proposed bank stabilization improvements. Requisite application materials may include a cover letter, project plans, historic and design-storm stream flow data, material specifications, or other information requested by the VANR.

13. **VANR and USACE Wetland Applications:** We will prepare documents for submittal of wetlands permit applications to the VANR Watershed Division and the USACE for the proposed bank stabilization improvements. Requisite application materials may include a cover letter, project plans depicting the wetland and wetland buffer impact areas, performing a wetlands functions and values assessment, or other information requested by the VANR and/or USACE.

14. **Construction Bid Documents and Bid Administration:** We will coordinate with the Town and prepare a construction bid package for the project, including an appropriate "front end" (Advertisement for Bid, Information for Bidders, Bid Schedule, etc.), bid tabulation based on VTrans unit cost and lump sum items, general and special conditions, technical specifications (based in part on Town standard reclamation and paving specifications provided with the RFP), other material specification, provisions required by VTrans (as applicable), and any special documents such as soil boring logs and permits. We will assist the Town with language for the request for bids for construction advertisement. We understand that the Town will provide the advertisement in accordance with their standard format and applicable funding requirements. We will conduct a pre-bid meeting with potential contractors and the Town to discuss the project. We will collect questions from the pre-bid meeting and respond to questions from contractors during bidding by issuance of up to two (2) addendum by e-mail. We will assist the Town with the review of bids for construction by attending a bid opening, reviewing bids, checking the apparent low bid for completeness, and making a recommendation for contractor selection.

15. **Miscellaneous Communications:** We will provide coordination, telephone, and e-mail communications as necessary. We will copy the Town on e-mailed communications with the VANR or other agencies. We will update the Town via e-mail at regular intervals.

16. **Record Drawings:** We will prepare final record drawings for the bank stabilization improvements following construction. We will provide additional topographic surveying of the project area to identify all completed bank stabilization measures, including the centerline and edge of roadway, finish grades, top and toe of the new bank, limits of work, changes in materials, and other pertinent information related to construction. We will prepare record drawings for the Town in a digital format compatible with Vermont Geographic Information System (VGIS) format, and provide two hard copy sets, and an electronic drawing file on compact disk.

17. **Construction Administration Services:** We will provide a limited number of hours for general construction administration services within the established budget to assist the Town during project construction. Our Resident Engineer will provide the following types of construction administration services:

- Review of contractor certificates, computations, shop drawings and/or materials submittals;
- Attendance at up to two (2) construction status meetings with the contractor and the Town;
- Review pay requisitions, and verify final contract quantities;
- Prepare weekly reports, including quantities;
- Issue change orders;
- Maintain files of all items submitted by the contractor;
- Issue a Certificate of Substantial Completion at the appropriate time; and
- Provide Final Completion Certification that the project was constructed as designed, subject to appropriate and necessary revisions during construction, and is in conformance with the contract documents.

18. **Hourly Construction Observation Services:** We will provide a combination of full-time and part-time construction observation services to assist with project construction based on the work tasks scheduled for completion. The actual costs associated with construction observation will depend on frequency of requested observations and the duration of construction. For purposes of this proposal, we have assumed our Resident Engineer would provide full-time construction observation for a 5-week construction period, as requested in the RFP. Our Resident Engineer will provide the following types of construction observation services:

- Document contractor interaction with Dig-Safe;
- Check on progress of construction;
- Verify grades and alignment are as specified;
- Verify testing requirements, collect samples from contractor, and schedule compaction testing (as applicable, depending on materials);
- Calculate and track contract quantities;
- Maintain communication with the Town, as needed, during construction;
- Accompany Town and/or State representatives on scheduled site visits;
- Participate in on-site construction meetings with the contractor and Town;
- Immediately report to the Town any unusual occurrences and all accidents occurring within the project limits;
- Review and submit to the Town any suggestions or requests made by the contractor to change or modify plan or contract document requirements;
- Receive certificates, computations, and reference materials provided by the contractor;
- Maintain on-site files with daily notations;
- Check that the contractor is in compliance with contract requirements, Town ordinances, property agreements, erosion and sediment control requirements, stormwater management plans, State permits, regulations, and statutes, Federal regulations and statutes, and exercise the engineer's

authority as provided in the contract documents;

- Observe and approve material sources;
- Review and verify traffic and pedestrian control activities;
- Communicate with adjacent property owners when necessary;
- Check that completed work complies with the plans and specifications;
- Conduct a substantial completion review of the project with the contractor's representative and issue a punchlist of items to be corrected or completed;
- Coordinate, schedule, and attend a final observation meeting; and
- Maintain a photographic record of the progress of construction and annotating photos to indicate content, context, and date. Maintain the photographic record for reference by Town and State representatives.

IV. ANTICIPATED PROJECT SCHEDULE

The following project schedule is provided based on our project experience, our initial review of the project, and the Town's proposed schedule in the RFP for initiating the bid process by March 15, 2018 or sooner. Due to the fact that the project will not be awarded until late January 2018, we feel that a bid date of March 30, 2018 may be more realistic considering that permitting and scheduling of the soil borings could delay the work. The project schedule could be compressed to allow adequate time for completing the design and permitting work to achieve a bid date of March 30, 2018, pending Town direction. However, the permitting duration is difficult to anticipate, and could dictate a later completion date than anticipated.

Solicitation Issued:	December 2017
Non-mandatory Pre-proposal Meeting:	December 14, 2017
Revised RFP Issued:	December 15, 2017
Proposals Due:	January 8, 2018
Notice of Engineering Award (anticipated):	January 23, 2018
Sign Contract (anticipated):	January 26, 2018
Project Kick-off Meeting:	January 29 to February 2, 2018
Initial Site Review:	January 29 to February 2, 2018
Local Quarry Coordination:	January 29 to February 2, 2018
Preliminary Regulatory Review with VANR:	January 29 to February 9, 2018
Geotechnical Investigation:	February 5 to 9, 2018
Topographic Surveying and Base Plan:	February 5 to 9, 2018
Conceptual Design:	February 12 to 16, 2018
Preliminary Design and Meeting with Town:	February 19 to March 2, 2018
Permitting:	February 19 to March 16, 2018
Town Infrastructure Meeting:	March 8, 2018
Final Design, EOPC, and Meeting with Town:	March 5 to 16, 2018
Construction Bid Documents:	March 16 to 30, 2018
Advertising for Construction Bid:	March 30, 2018
Construction (5 weeks during this period):	May thru September, 2018

V. PERSONNEL COMMITTED TO THE PROJECT

We are prepared to commit various members of our staff to serve as the core project team for the duration of the project. The following personnel represent our key staff members for this project. The key members of our team will be supported by other members of our staff to provide environmental, roadway design, construction, and other expertise. We can provide detailed resumes for these individuals, upon request.

- ***Rodrick J. Finley, P.E.,*** will be the **Project Director** for this project, providing senior level project overview, contract administration, and quality control/quality assurance review.

- ***Scott A. Williams, P.E.,*** will be the **Project Engineer** for the project and will be responsible for design and permitting efforts. Scott has extensive experience with bank stabilization work, and general project management experience. Scott will develop the design and construction plans, EOPC and bidding documents, and will provide specific expertise on the bank stabilization and roadway improvements. Scott will function as the primary contact for Town coordination.

- ***Patrick A. Buccellato,*** will act as our **Senior Designer** and will complete all computer-aided design for the project in conformance with Town and VTrans requirements.

- ***Ian S. MacKenzie, P.E.,*** will be the **Resident Engineer** for the project. Ian has experience with similar projects and permitting efforts for roadway, utilities, culvert, small bridge, and slope stabilization projects in Vermont, recently completing the design and resident engineering for Clay Wight Road in Randolph, and is currently working as the resident engineer for the Town of Norwich's extensive emergency roadway and stabilization repairs. Ian will also assist Scott to observe the soil borings during design development. Ian's experience with subsurface investigations and excavations and coordinating and supervising geotechnical investigation will be an asset to the Town and this project.

- ***Joseph E. "Skip" Nalette, L.L.S.,*** will act as the **Chief of Survey** for the project and will direct all field surveying and easement review.

VI. STATEMENT OF QUALIFICATIONS

Overview of Pathways Consulting, LLC (Pathways)

Pathways is a women-owned Disadvantaged Business Enterprise (DBE), certified with the New Hampshire Department of Transportation (NHDOT) and VTrans. Pathways consists of a diverse team of licensed professionals, technicians, and specialists. Our staff of 25 employees takes pride in providing multi-disciplined technical services to our clients, and many hold multiple professional licenses and certifications. Pathways was formed in December 2000 as a NH firm in a transition from T&M Associates, Inc., a company with roots to 1971 and earlier, which is still owned by two Pathways principals. We expanded our office to VT in 2006 when we purchased Hathorn Surveys in Wilder (Hartford), a firm that originated in 1972. Our efforts in planning and design maintain "green" concepts to provide responsible impacts on our community and the landscape in

which we reside. Infrastructure improvements and site development can be complex, involving many stakeholders and local, regional, State, and Federal permitting standards and processes. At Pathways, we attempt to address multiple standards and procedures simultaneously in a single design effort while obtaining stakeholders input to efficiently assist our clients with their objectives.

The goal of Pathways is simply to provide all our clients with professional, creative, and efficient service. To accomplish this goal, Pathways personnel strive to provide experienced, knowledgeable project representatives in-house, and in the many teams we form to meet our clients' needs. In addition, we work very hard to minimize the size and complexity of the corporate structure we present to our clients. We are able to streamline our efforts by developing reasonable schedules with client input, addressing budget constraints, and communicating during all project phases. We provide a variety of services within a limited staff size for versatility and greater understanding among all our staff members. Our diversity also allows us a greater opportunity to match individual skills with specific client needs. We use quality control, regulatory knowledge, and our excellent communication skills to address a broad spectrum of client and project needs.

Our staff has significant experience with publicly funded municipally-managed projects, including transportation construction projects. We have performed culvert replacement design projects for VTrans Highway grant funded projects; Local Project Administration design services in the planning, preliminary and construction engineering phases as well as the contract administration (resident engineering) for FHWA funded NHDOT projects; and roadway and slope stabilization projects for FEMA funded repair projects. We are familiar with VTrans Standard Specifications for Construction and have provided EPSC planning, observation, and field verification for a variety of VTrans highway projects.

Availability of the Technical Disciplines

Our project team provides all of the technical disciplines needed for this project in-house except for historical and archaeological review, which we solicit through sub-consultants if needed and as approved by the Town. Pathways currently provides the following in-house consulting services:

Transportation & Development Planning services include scoping studies, feasibility and site studies for projects ranging from intersection improvements to transportation alternative planning, passive recreation to site development, bicycle and pedestrian assessment, transit facilities, bridge and culvert feasibility, resource evaluations such as soils and wetlands, fiscal analyses for project budgeting and impacts, and general land use planning. Our planning services also include assistance with graphic representation of projects and funding source development, and public process support for a wide variety of transportation projects.

Surveying services include boundary and topographic surveys, subdivisions, construction stake-out, and specialty surveys such as flood insurance certifications and letters of map amendments (LOMA), ROW, and ALTA surveys. Our surveying experience also allows us to assist with title research and documentation for various applications. Our firm maintains Vermont licensure in-house for all related services.

Civil and Environmental Engineering design services are diverse and include highways; roads; intersections; parking; sidewalks; pedestrian and bicycle facilities; water distribution, storage, and treatment; stormwater drainage systems; bridge and culvert replacement; bulk fuel facilities; aboveground and underground fuel storage facilities; and many other types of projects. Engineering services also include contract operations for water treatment and distribution, wastewater collection and treatment, and industrial treatment systems; drainage analysis and pond design; and local, State, and Federal permitting assistance.

Environmental services include Phase I and II Environmental Site Assessments, hazardous waste evaluations; underground fuel storage tank closures; soil, groundwater, and industrial waste sampling programs; EPA Spill Prevention, Control, and Countermeasure (SPCC) Plans; EPA Storm Water Pollution Prevention Plans (SWPPPs); and investigation and remediation of petroleum-contaminated sites.

Construction services include scheduling, contract document development, bidding assistance, contract execution, administration and close-out, periodic or full-time observation of project construction, testing certification, quantity development, processing pay requisitions, record data collection and drawing production, record tie sheets/books, and digital project representation. We also have the ability to manage construction projects on a case-by-case basis.

Permitting services include the multiplicity of regulatory review and approvals required at the local, regional, State, and Federal levels. Our personnel offer comprehensive knowledge and experience with Federal and State standards and policies applicable to locally-managed transportation projects. This experience includes, but is not limited to VTrans, VANR agencies, and Act 250, Specifications for Contractor Services (from Appendix E of the MBA Local Projects Guidebook), Local Projects Development Process, NEPA environmental documentation, USACE, and FEMA. Although VTrans does not have a certification process for this kind of project, members of our team have Local Public Agency (LPA) Certifications from the NHDOT.

Geographic Information System and Mapping services include base mapping, field location and confirmation of system attributes, database preparation and management, and related services specific to client project needs for a variety of digital systems.

Geotechnical Consulting services include coordination and supervision of geotechnical investigations, data analysis, and limited consulting services specific to project needs.

Licenses and Certifications: Members of our staff maintain an array of licenses and certifications, including the following.

Licensed Professional Engineers.
Licensed Designers (NH on-site wastewater).
Certified Soil/Wetland Scientist.
40 Hour Hazardous Waste Course certifications.
LEED Accreditation.
NHDOT LPA Certification.
Licensed Land Surveyors.
Licensed Site Technicians (VT on-site wastewater).
Municipal water & wastewater operator licenses.
Certified Asbestos Inspector in NH & VT.
Certified Professionals in Erosion & Sediment Control (CPESC).

VII. RELEVANT EXPERIENCE AND REFERENCES

Members of our staff have worked on thousands of projects in our region from planning through implementation. The following is a short list of projects that demonstrate our success with roadway, bank stabilization, stream restoration, and other transportation enhancement projects. We have also included references with several key projects.

The following brief list of projects highlight our recent municipal work experience.

Connecticut River Bank Stabilization, Hanover, NH: Pathways completed an innovative bank stabilization design for 200 feet of failing banks along the Connecticut River that were threatening a residential dwelling. We provided design, permitting, and construction services for restoration of the river banks, and a floating docking facility accessed via a fixed timber landing on the bank. The restoration design incorporated innovative stabilization techniques, such as fabric-encapsulated soil (FES), native live willow stakes, compost-filled erosion logs, and stone fill toe armoring, to restore the steep (greater than 1:1 slope) 30-foot high banks along the river. The project also required designing innovative construction techniques to address difficult access conditions and to preserve existing trees on the bank. The project required permitting under the NHDES Wetlands and Shoreland programs. We provided observation services during construction that was completed in the fall of 2017.

Client Name: Bruce Swomley, Homeowner

Mink Brook Streambank Stabilization, Hanover, NH: Pathways completed an innovative stabilization design for 75 feet of eroded and failing streambanks on the Mink Brook that were threatening a residential property. We provided design, permitting, and construction services for restoration of the streambanks using fabric-encapsulated soil (FES), native live willow and dogwood stakes, native plantings, and in-stream rock vanes. The project also required removal of invasive species, minor improvements to a drainage swale, and stream diversion measures. The project required permitting under the NHDES Wetlands and Shoreland programs. We provided observation services during construction that was completed in the fall of 2017.

Client Name: Joan Wolter, Homeowner

River Road Emergency Bank Stabilization on Connecticut River, Lyme, NH: Pathways completed an emergency bank stabilization design for 75 feet of undermined and collapsing river banks on the Connecticut River that were threatening River Road and utility poles. We provided design, permitting, and construction services for restoration of the river banks using stone fill armoring and native plantings. The project required permitting under the NHDES Wetlands and Shoreland programs. We provided observation services during construction that was completed in the fall of 2016.

Contact Name: Dina Cutting, Select Board Administrator
Town of Lyme
Lyme, New Hampshire 03768
Telephone: (603) 795-4639
E-Mail: dina@lymenh.gov



Five Bank Stabilization Projects, Storrs Hill Ski Area, Stoney Brook Road and Slayton Hill Road, Lebanon, NH: Members of our staff recently completed planning, design, and permitting services for the City of Lebanon to repair bank failures that occurred during Tropical Storm Irene at five separate project locations in Lebanon. Pathways Consulting and Willis Consulting Engineers, geotechnical experts, teamed to develop the designs and to complete slope stability analysis for these projects. The stabilization methods including the construction of steep (approximately 1:1 slopes) stone fill revetments using 3 to 4 ton stone, and Class A, B, and C stone on all of the projects, while two locations required a geogrid and mechanically stabilized earth slope with stone fill on the face. Pathways also provided construction observation services.


Contact Name: Michael S. Lavalla
Director of Public Works, City of Lebanon
Lebanon, New Hampshire 03766
Telephone: (603) 448-3112
Email: Mike.Lavalla@lebcity.com

K-Mart River Bank Restoration Project on Mascoma River, West Lebanon, NH:
In conjunction with Headwaters, we completed a full stream geomorphic assessment and preliminary design for a degraded reach of the Mascoma River adjacent to a commercial shopping plaza. Pathways completed final design, permitting, bidding, and construction services for restoration of a 300-foot section of river bank. The restoration design incorporated innovative stabilization techniques such as restoration of a floodplain bench, rounded river stone fill, fabric-encapsulated soil, native willow brush layering, root wads, a "J-Hook" rock vane grade control structure, and native plantings. The project required permitting under the NHDES Wetlands, Stream Crossing, and Shoreland programs, coordinated review through the local Conservation Commission, and several local river advisory committees, and addressing endangered and invasive species. We provided observation services for the project that was completed in the fall of 2015.



Contact Name: Tracey M. Mezzanotte, Asset Manager
Dead River Properties
South Portland, ME
Telephone: (207) 773-5868
Email: tracey.mezzanotte@deadriver.com

Sugar River Bank Stabilization, Claremont, NH:
In conjunction with Headwaters we completed a full stream geomorphic assessment and preliminary design for a 600-foot degraded reach of the Sugar River that was threatening a municipal sewer force main beneath the river bed. Pathways completed final design, permitting, bidding, and construction services for restoration of the river banks and protecting the sewer line. The restoration design incorporated innovative stabilization techniques such as a floodplain bench, stone fill, fabric-encapsulated soil, native willow brush layering, and native plantings, in addition to a substantial temporary cofferdam diversion and dewatering system. The project required permitting under the NHDES Wetlands, Stream Crossing, and Shoreland programs. We provided observation services during construction that was completed in the spring of 2015.


Contact Name: Scott Sweet, Director of Public Works
City of Claremont
Telephone: (603) 542-7020
Email: ssweet@claremontnh.com

Clay Wight Road, Randolph, VT: We were retained by the Town of Randolph to survey, design, permit, and provide Resident Engineering services for the re-alignment and re-grading of a 1,620 linear foot portion of Clay Wight Road. Re-alignment was primarily proposed in two separate portions of the roadway and based on the excavation of adjacent roadside slopes with possible bedrock excavation and slope treatments. Along the southern roadside, stormwater pollution prevention techniques were designed to prevent runoff to an unnamed tributary of the White River Second Branch along Clay Wight Road. The project design specified guard rails, regrading roadway with new surface gravels and subbase materials, and restoration of all disturbed areas. The Project required a Wetland Permit for Class III impacts and Class II buffer impacts. We assembled specifications and bidding documents, and assisted the Town with bidding the project, conducting a pre-bid meeting, issuing addendums, reviewing the bids, recommending project award to a qualified contractor. We provided Resident Engineering and construction administrative services on behalf of the Town. The project was completed in the fall of 2017.

Lebanon Route 120 Pedestrian and Bicycle Improvements, Lebanon, NH: The City of Lebanon engaged us to provide surveying, planning, design, permitting, construction documents and construction engineering services for the Lebanon Route 120 Pedestrian and Bicycle Improvements Project, which is located on busy Route 120/School Street in Lebanon. The planning process included development of alternative layouts and project constraints, which we presented to the public and culminated in the selection of and detailed design of the preferred alignment. The sidewalk construction was completed in June 2017. We acted as the project Contract Administrator during construction on behalf of the City. The project was inclusive of approximately 1,400 linear feet of new bituminous sidewalk with granite curbing with widening of the roadway for bike lanes on both sides; intersection and roadway realignment/rehabilitation and drainage work. All aspects of the project complied with the NHDOT LPA Manual for the Development of Projects for this NHDOT funded project.

Downer Road Culvert Replacements, Downer Road, Sharon, VT: We provided surveying, engineering, design, and bid administration services for the replacement of two culverts with 5'x10' pre-cast concrete box culverts. This project was funded through a VTrans grant. We coordinated with the Town and various entities during all phases of the project. The project has recently received construction bids and the Town is in the process of selecting a contractor.

Elkins/Wilmot Center Road Transportation Enhancement Project, New London, NH: The Town of New London engaged us to provide surveying, planning, design, permitting, construction documents and construction engineering services for the Elkins Road/Wilmot Center Road Transportation Enhancement Project, which is located in the Elkins Village historic district and abuts Pleasant Lake. The planning process included development of alternative layouts and project constraints, which we presented to the public, culminating in the selection and detailed design of the preferred alignment. The sidewalk was completed in 2016 and traverses several public facilities including a public boat launch and several bridge crossings. All aspects of the project complied with the NHDOT LPA Manual for the Development of Projects for this NHDOT funded project.

Strafford Village Enhancement Project, Strafford, VT: We provided planning, engineering, design, permitting, and construction services for this project funded through a Vermont Local Transportation Facilities (LTF) Transportation Enhancement grant for the construction of approximately 3,000 linear feet of sidewalk, pedestrian crossings, curbing, landscaping, and drainage structure improvements within the village of South Strafford on VT Route 132. The project included a Preliminary Feasibility Study, when Pathways was a subconsultant to Resource Systems Group, followed by the design and construction phases, in which Pathways was the prime consultant. The project was designed according to VTrans standards, and included ROW work, temporary construction easements, utility pole relocation, categorical exclusion and environmental review, and a public involvement process. The project was constructed in 2011.

Putney Sidewalk Improvements, Putney, VT: We provided resident engineer/construction observation services to the Town of Putney for this LTF funded project, which included sidewalk and curb replacement and storm drain installation. Our construction services included assisting the Town with implementing plans prepared by Resource Systems Group (RSG) by providing observation, project meetings attendance, coordination with abutters, review of pay requisitions, communication with the MPM and the LTF Project Coordinator. Construction was completed within budget in August 2012.

Norwich Corridor Enhancement Project, Norwich, VT: Members of our staff assisted the Town on a pro-bono basis with developing an enhancement grant, serving as committee chair, assisting with the development of a multi-phased corridor enhancement master plan ranging from streetscape improvements to roundabouts, and assistance with implementation along approximately a one mile corridor in concert with VTrans programmed improvements.

Hartford Village Streetscape Project, Hartford, VT: Members of our staff worked with the community to develop alternatives and implement streetscape improvements for Hartford Village. The key issues for the project included two difficult intersections and providing bicycle, landscape, pedestrian, and lighting amenities to enhance the village business district. The photos presented for this project present the benefits of landscape, pedestrian, and traffic calming features as they currently appear.

Church Street Sidewalk Project, Hartford, VT: Members of our staff recently completed Church Street enhancements that included coordinating and synchronizing abutting and public interests, developing ADA compliant features to enhance a business district that is growing in vibrancy, utility evaluations and coordination, design, and bidding and project construction assistance.

Erosion Prevention & Sediment Control (EPSC) Plans for VTrans Projects, VT: We have assisted many contractors by preparing EPSC Plans for projects funded by VTrans, including the following recent projects: Granville, Lyndon-Derby, Chester, Hartford-Sharon, Sharon, and Weathersfield-Thetford. As the contractor's sub-consultant for each project, we worked with contractors and VTrans environmental engineers to maintain compliance with the State's Construction General Permit 3-9020, including designing and preparing a detailed EPSC Plan and associated documentation, construction sequencing, dewatering and stream diversion approaches, reviewing Best Management Practices (BMP's) for field activities, and providing related guidance to the contractor to satisfy VTrans requirements. These projects included activities such as culvert replacement and slip-lining, roadway and drainage improvements, and rock removal.

APPENDICES

APPENDIX A
Cost Matrix

COST PROPOSAL
for
TOWN OF MIDDLEBURY, VERMONT
PROPOSAL FOR ENGINEERING SERVICES: SHARD VILLA ROAD IMPROVEMENTS PROJECT
MIDDLEBURY, VERMONT
Prepared By:
PATHWAYS CONSULTING, LLC
P5183
January 4, 2018

PROJECT STAFF (LABOR CLASSIFICATION)	Survey Crew Chief	Two (2) Person Survey Crew	Project Director	Project Manager	Resident Engineer	Production Manager	Certified Wetland Scientist	Administrative Staff	Estimated Number of Labor Hours	Estimated Cost per Hourly Task
HOURLY RATE PER LABOR CLASSIFICATION	$75	$100	$110	$75	$75	$75	$75	$45		
Scope of Services										
Surveying, Site Investigation, Design, Permitting, Bidding, and Construction Assistance Services										
1. Project Kick-off Meeting			6	6					12	$1,110.00
2. Initial Site Review				6					6	$450.00
3. Supervision of Soil Borings and Geotechnical Investigation					16				16	$1,200.00
4. Topographic Surveying and Base Plans	4	12				16			32	$2,700.00
5. Local Quarry Coordination				4					4	$300.00
6. Preliminary Regulatory Review with VANR			1	8					9	$710.00
7. Conceptual Design			2	16		8			26	$2,020.00
8. Preliminary Design and Review Meeting with Town			4	24		32		2	62	$4,730.00
9. Final Design and Review Meeting with Town			2	12	8	24		2	48	$3,610.00
10. Town Infrastructure Committee Meeting				6				1	7	$495.00
11. Final Design EOPC			1	8	4				13	$1,010.00
12. VANR Stream Alteration Application			2	16		8		6	32	$2,290.00
13. VANR and USACE Wetlands Application			2	12		8	8	4	34	$2,500.00
14. Construction Bid Documents and Bid Administration			6	24	16	8		8	62	$4,620.00
15. Miscellaneous Communications			4	8	4				16	$1,340.00
16. Record Drawings	2	8		2		12			24	$2,000.00
17. Construction Administration Services			4		50				54	$4,190.00
Subtotal									**457**	**$35,275.00**

Project Expenses (mileage not included in hourly rates)

Document copies, prints, etc.			$1,000.00
Mileage (office to site to office = 140 miles)	Estimated Trips (Site Review, Surveying, Soil Boring Supervision, Meetings, Etc.)	13	$1,001.00
Project Expenses Estimated Subtotal			**$2,001.00**

TOTAL PROPOSAL COST **$37,276.00**

HOURLY CONSTRUCTION OBSERVATION SERVICES

Unit Cost = $75 per hour (excluding mileage)
Assumed Observation Hours (5 weeks x 5 days per week x 8 hours per day) = 200 hours
Subtotal Cost (200 hours x $75 per hour) = $15,000.00
Mileage Expenses (140 miles per trip x 25 trips x $0.55 per mile) = $1,925.00
TOTAL CONSTRUCTION OBSERVATION COST = $16,925.00

Hourly rates for change orders and construction related services as shown above.
We will provide a breakdown of our labor costs upon request.

APPENDIX B
Terms and Conditions

Terms and Conditions

1. **Billings/Payments:** Invoices will be submitted monthly by PATHWAYS, in PATHWAYS' standard format, to the CLIENT for services and reimbursable expenses and, unless other mutually satisfactory arrangements have been made between the CLIENT and PATHWAYS, are due upon receipt. Hours worked in excess of 40/week/individual will be billed at 1.5 times the normal rate. The invoices shall be considered past due if not paid within 30 days after the invoice date and PATHWAYS may, without waiving any claim or right against the CLIENT, and without liability whatsoever to the CLIENT, terminate the performance of the service. A finance charge will be assessed in the amount of 1.5% per month on unpaid balances. In the event any portion of the account remains unpaid 60 days after billing, the CLIENT shall pay PATHWAYS' collection costs, including reasonable attorney's fees. If the CLIENT fails to make payments when due or otherwise is in breach of this Agreement, PATHWAYS may suspend performance of services upon five (5) calendar days' notice to the CLIENT. PATHWAYS shall have no liability whatsoever to the CLIENT caused by any breach of this Agreement by the CLIENT. If the CLIENT fails to make payment to PATHWAYS in accordance with the payment terms herein, this shall constitute a material breach of this Agreement and shall be cause for termination by PATHWAYS. Payment of invoices is in no case subject to unilateral discounting or set-offs by the CLIENT, and payment is due regardless of suspension or termination of the Agreement by either party.

2. **Access to Site:** Unless otherwise stated, PATHWAYS will have access to the Site for activities necessary for the performance of the services. PATHWAYS will take precautions to minimize damage due to these activities, but shall not be held responsible for the restoration of any resulting damage. Arrangements and/or permission for site access shall be made by the CLIENT unless otherwise stated. The CLIENT shall provide for PATHWAYS' right to enter the property owned by the CLIENT and/or others in order for PATHWAYS to fulfill the scope of services included hereunder. The CLIENT understands that use of testing or other equipment may unavoidably cause some damage, the correction of which is not part of this Agreement.

3. **Buried Utilities:** PATHWAYS and/or its authorized subconsultant will conduct the research that in its professional opinion is necessary with respect to the assumed locations of underground improvements. Such services by PATHWAYS or its subconsultant will be performed in a manner consistent with the ordinary standard of care. The CLIENT recognizes that the research may not identify all underground improvements and that the information upon which PATHWAYS relies may contain errors or may not be complete. The CLIENT agrees, to the fullest extent permitted by law, to waive all claims and causes of action against PATHWAYS and anyone for whom PATHWAYS may be legally liable, for damages to underground improvements resulting from subsurface penetration locations established by PATHWAYS.

4. **Hidden Conditions and Hazardous Materials:** A condition is hidden if it cannot be investigated by reasonable visual observation or records reviewed as customary in the performance of the services being rendered. If PATHWAYS has reason to believe that such a condition may exist, PATHWAYS shall notify the CLIENT who shall authorize and pay for costs associated with the investigation of such a condition and, if necessary, costs necessary to correct said condition. If (1) the CLIENT fails to authorize such investigation or correction after due notification, or (2) PATHWAYS has no reason to believe that such a condition exists, the CLIENT is responsible for all risks associated with this condition, and PATHWAYS shall not be responsible for the existing condition nor any resulting damages to persons or property. Unless specifically agreed upon prior to the commencement of service, PATHWAYS shall have no responsibility for the discovery, presence, handling, removal, disposal, or exposure of persons to hazardous materials of any form.

5. **Permits and Approvals:** PATHWAYS shall assist the CLIENT in applying for those permits and approvals normally required by law for projects similar to the one for which PATHWAYS' services are being engaged. It is the CLIENT's responsibility to obtain any and all permits. PATHWAYS shall not be held responsible for the approval or denial of the aforementioned permits or approvals. The CLIENT also agrees not to make resolution of any dispute with PATHWAYS or payment of any amount due to PATHWAYS contingent upon the approval or denial of permits or approvals.

6. **Indemnifications:** The CLIENT shall indemnify and hold harmless PATHWAYS, all of its personnel, and its subconsultants from and against any and all claims, damages, losses and expenses (including reasonable attorneys' fees) arising out of or resulting from the performance of the services, provided that any such claims, damage, loss, or expense is caused in whole or in part by the negligent act or omission and/or strict liability of the CLIENT, anyone directly or indirectly employed by the CLIENT (except PATHWAYS), or anyone for whose acts any of them may be liable. This indemnification shall include any claim, damage, or losses due to the presence of hazardous materials. Accordingly, the CLIENT agrees, to the fullest extent permitted by law, to indemnify and hold PATHWAYS and PATHWAYS' subconsultants harmless from any claim, liability, or cost (including reasonable attorneys' fees and costs of defense) for injury or loss arising or allegedly arising from errors, omissions, or inaccuracies in documents or other information provided by the CLIENT to PATHWAYS.

7. **Risk Allocation:** To the maximum extent permitted by law, PATHWAYS' total liability to the CLIENT for any and all injuries, claims, losses, expenses, damages, or claim expenses arising out of this Agreement, from any cause or causes, shall not exceed $10,000 or the total amount of PATHWAYS' fee, whichever is greater. Such causes include PATHWAYS' negligence, errors, omissions, strict liability, or breach of contract.

8. **Termination:** This Agreement may be terminated upon 10 calendar days written notice by either party. In the event of termination, the CLIENT shall pay PATHWAYS for all services rendered to the date of termination, all reimbursable expenses, and reasonable termination expenses.

9. **Ownership of Documents:** All documents produced by PATHWAYS under this Agreement shall remain the property of PATHWAYS and will not be used by the CLIENT for any other endeavor without the consent of PATHWAYS. PATHWAYS also reserves all copyrights to all documents, services and works of authorship that are created or prepared by PATHWAYS.