

**TOWN OF RICHMOND
CONTRACT FOR LIMITED SERVICES
Sinuosity Environmental**

This Contract is entered into on January 21, 2021, by and between the Town of Richmond (hereinafter "Municipality") and Sinuosity, LLC, a trail design/construction firm with a principal place of business in Morrisville, VT, with a mailing address of 94 White Birch Rd, Morrisville, VT 05661, (hereinafter "Contractor") for services to Municipality. Municipality and Contractor are referred to collectively as "parties."

In consideration of the mutual covenants and agreements as hereinafter set forth, the parties hereto agree as follows:

ARTICLE 1: SERVICES PROVIDED

Contractor agrees to perform the following service(s) according to the following timelines or schedule:

Aged upon services and timeline are described in detail in the attached proposal.

Contractor shall perform all services required under this Contract in a good workmanlike manner consistent with industry standards and according to the specifications and performance standards established by Municipality, if any. Municipality has the right to inspect and may reject any services provided by Contractor under this Contract that, in the Municipality's determination, were not completed in a good workmanlike manner or that otherwise failed to satisfy the established specifications or performance standards.

ARTICLE 2: COMPENSATION AND BILLING

Sinuosity will invoice on a monthly basis with payment due Net 30.

ARTICLE 3: TERM

The term of this Contract shall be from 1/21/21 to 9/21/21.

ARTICLE 4: INDEPENDENT CONTRACTOR

Contractor further acknowledges and agrees that it is an independent contractor and that nothing herein shall be construed to create the relationship of employer and employee between Municipality and Contractor. No employee-related withholdings or deductions shall be made from payments due Contractor. Contractor shall not be entitled to receive any benefits from Municipality and shall not be eligible for workers' compensation or unemployment benefits.

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ARTICLE 5: ASSIGNMENT AND SUBCONTRACTING

This Contract is binding upon and inures to the benefit of the heirs, successors, and assigns of the parties hereto. Neither party hereto may assign its rights or obligations under the Contract without the prior written consent of the other party. This Contract shall be governed by the laws of the State of Vermont.

Contractor shall not enter into any subcontract for performance of any services contemplated under this Contract nor assign any interest in the Contract without the prior written approval of Municipality and subject to such conditions and provisions as Municipality may deem necessary or desirable in its sole discretion. If Municipality permits the use of subcontractors, no subcontractor may perform any work under this Contract without first providing Municipality certificates of insurance showing all of the coverages required in Article 10 of this Contract. Contractor shall be responsible for the performance of all subcontractors. Before paying a claim that involves the use of materials or labor supplied by someone other than the Contractor, Municipality may require Contractor to supply proof of payment for such materials or labor.

ARTICLE 6: EQUIPMENT AND MATERIALS

Contractor warrants that it has the necessary equipment to provide the services required by this Contract. All materials used or supplied under this Contract shall be of first quality and meet the specifications established by Municipality, if any. Contractor will be solely responsible for supplying, storing, maintaining, and replacing any and all equipment that is necessary for implementing the services under this Contract. Municipality will not supply, nor will it pay for any repairs, maintenance or replacement of, or new equipment expenses, or temporary work related to signs, cones, or other traffic controlling equipment.

Municipality is exempt from sales tax on purchases for materials and products that are permanently incorporated into the infrastructure. Contractor shall pay all legal costs and assessed penalties for improper use of the municipality's exemption certificate number.

ARTICLE 7: PERSONNEL

Contractor is responsible for compliance with all applicable State and Federal laws. Contractor will manage his/her own personnel without general oversight by the Municipality and shall oversee and coordinate sub-contractors that are approved by Municipality. All drivers and equipment operators will be properly trained and have all certifications and valid licensing required to operate said equipment. The Contractor must certify to the Municipality that all drivers operating a commercial motor vehicle are in a federally mandated random drug and alcohol testing program that complies with Federal Motor Carrier Safety Administration (FMCSA) requirements.

Contractor alone shall be responsible for ensuring compliance with all applicable regulatory

requirements including but not limited to those from FMCSA and Vermont Occupational Safety and Health Administration (VOSHA).

Contractor further agrees to include this provision in all subcontracts.

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ARTICLE 8: SAFETY AND TRAFFIC CONTROL

The Contractor alone shall be responsible for the safety and security at construction sites and when working in or adjacent to public highways. Contractor is solely responsible for traffic control, which practices shall comply with the Manual on Uniform Traffic Control Devices, latest edition.

The contractor is responsible for contacting Dig Safe prior to any excavation. No excavation is authorized until after Dig Safe has marked all existing utilities. Prior to construction, the contractor shall notify Municipality of adjacent utilities when work activity may affect them.

ARTICLE 9: INDEMNIFICATION

Contractor shall indemnify and hold harmless Municipality, and Municipality's agents and employees, from and against all losses and all claims, demands, payments, suits, actions, recoveries, claims of outstanding indebtedness, attorneys' fees, liens, and judgments of every nature and description, brought or recovered against them by reasons of any act or omission of the said Contractor, its agents, employees, or sub-contractors, in the execution of the work or in guarding the same. The Contractor shall defend the Municipality and its officers and employees against all claims or suits arising in whole or in part from any act or omission of the Contractor or of any agent or subcontractor of the Contractor. The Municipality shall notify the Contractor in the event of any such claim or suit, and the Contractor shall immediately retain counsel and otherwise provide a complete defense against the entire claim or suit.

Contractor shall assume full responsibility for the protection of all buildings, structures, and utilities (both public and private). All damage, injury, or loss to any public or private property, by the Contractor, or any sub-contractor, shall be replaced or restored to at least the original condition to the satisfaction of the Municipality at the Contractor's expense.

Nothing in this Contract shall constitute a waiver by the Municipality of any statutory limits or immunities from liability.

ARTICLE 10: INSURANCE

Before commencing work on this Contract, the Contractor must provide certificates of insurance to show that the following minimum coverages are in effect. Contractor agrees that it will provide and maintain during the entire term of this Contract the following insurances with at least the indicated amounts of coverage and provide Municipality a certificate of insurance showing such coverages before providing any services under thisContract: (1) Commercial General Liability insurance coverage with a policy limit of at least \$1,000,000 per occurrence and \$2,000,000 in aggregate; (2) Business Automobile Liability coverage with total liability

limits of at least \$1,000,000; and (3) Statutory Workers' Compensation insurance. If Contractor is not required by law to carry workers' compensation insurance, in place of proof of workers' compensation insurance Contractor may provide a fully executed Non-Employee Work Agreement specifying the particular provision of 21 V.S.A §601(14)(F) that exempts Contractor from having to carry such coverage.

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ARTICLE 11: WARRANTY AND BOND

Contractor warrants all work performed under this Contract for a period of one year from the date the work is completed and accepted by Municipality. The warranty must be secured by either Contractor's performance bond or such other security as is acceptable to Municipality.

ARTICLE 12: NON-APPROPRIATION

If this Contract extends into more than one fiscal year of the Municipality and if appropriations are insufficient to support this Contract, the Municipality may cancel at the end of the fiscal year. In the case that this Contract is a Grant that is funded in whole or in part by federal or State funds, and in the event federal or State funds become unavailable or reduced, the Municipality may suspend or cancel this Grant immediately, and the Municipality shall have no obligation to pay Contractor from municipal revenues.

ARTICLE 13: TERMINATION

Municipality may terminate this Contract, with or without cause, upon 30 days written notice.

ARTICLE 14: DEFAULT

The occurrence of any of the following shall constitute default by Contractor and, if not corrected within 10 days of Municipality providing Contractor written notice of the default, shall allow Municipality to terminate this Contract:

- (1) failure to adequately perform or deliver the required services;
- (2) if applicable, failure to provide the required bonds or other security acceptable to Municipality before starting any work;
- (3) declaration of bankruptcy by Contractor;
- (4) making a material misrepresentation to Municipality;
- (5) persistently disregarding laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction; or
- (6) failure to perform any other material provision of this Contract.

Upon default of this Contract by Contractor, Municipality may withhold any payment due

Contractor for purposes of set-off until such time as the exact amount of damages due is determined. Such withholding shall not constitute default or failure to perform on the part of Municipality.

Neither party shall be held responsible for delay or failure to perform when such delay or failure is due to any of the following uncontrollable circumstances unless the act or occurrence could have been foreseen and reasonable action could have been taken to prevent the delay or failure: fire, flood, epidemic, strikes, wars, acts of God, acts of public authorities, or delays or defaults

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caused by public carriers; provided the non-performing party gives notice as soon as possible to the other party of the inability to perform. The Municipality and the Contractor agree to attempt to resolve quickly all matters related to uncontrollable circumstances and use all reasonable effort to mitigate its effects.

In addition to the above, in the event of a State or Federal Disaster Declaration, Municipality reserves the right to suspend certain provisions of this Contract to conform with FEMA or Vermont Emergency Management regulations and directives.

Upon completion of the work or upon termination of the Contract, the Contractor shall remove from the vicinity of the work all equipment and all temporary structures, waste materials, and rubbish resulting from its operations, leaving the premises in a neat and presentable condition. In the event of failure to do so, the same may be done by the Municipality at the expense of the Contractor.

ARTICLE 15: REMEDIES

Default or breach of this contract by Contractor shall entitle Municipality to seek remedies under law and as provided by this Contract. In the event this Contract is terminated by reason of default by Contractor, Municipality may recover the necessary costs of termination, including but not limited to, administrative, attorneys' fees and legal costs, from Contractor. Except when caused by uncontrollable circumstances, if Contractor fails to meet any performance deadlines established by this Contract, or fails to perform in accordance with the specification, terms, and conditions of this Contract, Municipality shall have the right to purchase the services and materials from other sources on the open market or to purchase those items necessary to continue functioning until delivery from Contractor is complete. Municipality may deduct as damages from any money due or coming due to Contractor the differences between Contractor's price and the higher price or the costs of temporary items. Municipality may require Contractor, at Contractor's sole expense, to re-perform any items of work provided for in this Contract that do not meet the established specifications, standards, or Municipality directives.

Any remedies available to Municipality are cumulative and not exclusive. The seeking or exercising by Municipality of a remedy does not waive its right to seek or exercise any other remedy available to it at law, in equity, by statute, or under this Contract.

ARTICLE 16: ARBITRATION

Should disputes arise between the Contractor and the Municipality about this Contract or any related matter, the parties agree to arbitrate any such controversy, pursuant to the Vermont Arbitration Act, 12 V.S.A. § 5651 et seq.

ARTICLE 17: CONTRACT DOCUMENTS

This Contract shall constitute the entire agreement between the parties on the subject matters. All prior agreements, representations, statements, negotiations, and understandings shall have no

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effect. There shall be no modifications or amendments to this Contract or to the Addendum unless said changes, modifications, or amendments are in writing duly executed by the parties.

ARTICLE 18: SEVERABILITY

The provisions of this Contract are severable and if a court of competent jurisdiction holds any portion of this Contract unconstitutional or invalid, the remainder of this Contract shall not be affected and shall remain in full force and effect.

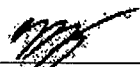
IN WITNESS WHEREOF, the parties do hereby execute this Contract on the day and year first written above.

MUNICIPALITY: By the members of its Selectboard:



Town Manager

CONTRACTOR:

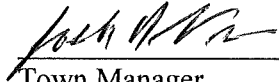
By: 

Duly authorized representative of Contractor

ACKNOWLEDGMENT OF ARBITRATION

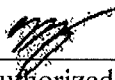
We understand that this Contract contains an agreement to arbitrate. After signing this document, we understand that we will not be able to bring a lawsuit concerning any dispute that may arise which is covered by the arbitration agreement, unless it involves a question of constitutional or civil rights. Instead, we agree to submit any such dispute to an impartial arbitrator.

MUNICIPALITY: By the members of its Selectboard:



Town Manager

CONTRACTOR:

By: 

Duly authorized representative of Contractor

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December 15, 2020

Andrews Community Forest Committee
Richmond, VT
richmondtownforest@gmail.com

Re: Andrews Community Forest Ecological Trail Planning

Dear ACF Committee Members,

Arrowwood Environmental, LLC (Arrowwood) and Sinuosity, LLC are pleased to respond to the above-referenced Request for Proposals (RFP) issued by the Andrews Community Forest Committee, dated October 15, 2020. Included in this electronic submission is one PDF file of our proposal containing an overview of the project, a proposed scope of work, schedule, budget, project team qualifications and experience on similar projects. This proposal was prepared by a collaboration of Arrowwood and Sinuosity, and I will be the point of contact for the proposal.

Our collaboration brings together a group of highly qualified Vermont-based professionals with extensive experience in ecological resource assessment and recreational trail design. Members of our team have a strong working knowledge of the Andrews Community Forest (ACF) through Arrowwood's involvement with developing the ACF Forest Management Plan.

We are excited at the opportunity to continue our work with the ACFC to design an ecologically informed trail network on the newly acquired town forest. This project will likely serve as a model for other Vermont towns that seek to strike a balance between ecological preservation and recreation on public forest lands.

If selected for this project, our team would apply our expertise to develop a trail network that provides recreationalists with an enjoyable experience while at the same time preserving those significant ecological features that make the ACF special. We look forward to working with you. Please do not hesitate to contact me with any questions regarding our submission.

Sincerely,

A handwritten signature in black ink, appearing to be "Dori Barton", with a long, sweeping underline.

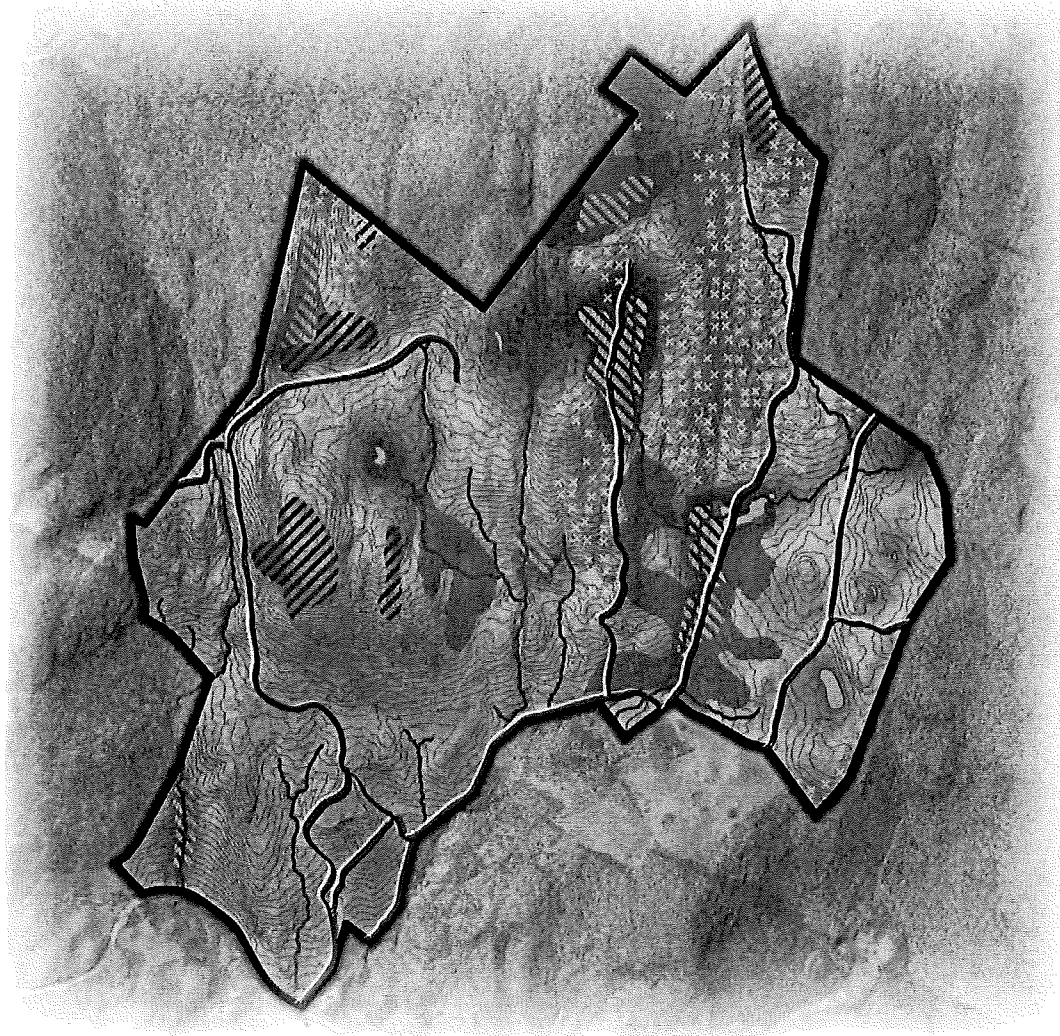
Dori Barton
Principal Wetland Ecologist/Hydrologist

Andrews Community Forest

Ecological Trail Planning Proposal

Richmond, Vermont

December 15, 2020



Team Contacts: Dori Barton, Arrowwood Environmental, 802-434-7276, dori@arrowwoodvt.com
Mariah Keagy, Sinuosity LLC, 802-310-2298, mariah@sinuosity.net

Section I-Project and Team Overview

Project Understanding

Arrowwood Environmental, LLC (Arrowwood) and Sinuosity, LLC are pleased to respond to the above-referenced Request for Proposals (RFP) issued by the Andrews Community Forest Committee (ACFC) dated October 15, 2020. We believe our project team brings together a group of highly qualified Vermont-based professionals with extensive experience relating to both ecological assessments and trail design and development, ensuring the highest quality product.

Arrowwood was a member of the team that authored the Andrews Community Forest Management Plan (FMP, 2019) and through that effort conducted preliminary resource assessments of the parcel, both desktop and in-field investigation. Arrowwood collaborated with team members to develop the concept trail plan that was incorporated in the final Forest Management Plan (FMP). The concept plan and the assessment findings that were used to inform its design provide a sound foundation from which to develop and layout a finalized trail network that is sensitive to significant natural resources on the parcel.

The scope of the project, as detailed in the following proposal, includes conducting and compiling an ecological assessment of the ACF from existing resources and additional targeted field surveys (as needed). The data from the ecological assessment as well as VLT easement restrictions will be used to design a trail network that considers both the ecological sensitivities of the forest and the needs of recreationists. The project will involve the following key components:

- Ecological Assessment: Compile existing data, identify data gaps, target field investigations
- Trail Design and Flagging: Iterative process informed by ecological assessments, with ecological team members walking proposed layouts
- Public Walks
- Trail Design Approval: Presentation to ACFC, VLT and Richmond Select board
- Report and Poster

Project Team

Arrowwood Environmental, LLC

Established in 2001, Arrowwood is a Vermont based consulting company comprised of three ecologists and a GIS analyst with extensive experience conducting natural resource assessments throughout the State of Vermont. The company is 25% woman owned with a preference for hiring additional women when possible for subcontracting services.

The company was founded on a shared desire to assist private and public entities in Vermont to evaluate natural resources as well as to identify and protect areas of natural significance. Scientific backgrounds in zoology, botany, ecology, surface water hydrology as well as educational experience afford us the expertise to evaluate the significance of natural resources, including wildlife habitat, wetlands, rare plants and animals, and unique natural communities, and to provide a wide range of educational services.

In addition to extensive experience conducting ecological evaluations, our qualifications also include the preparation of environmental permits and provision of expert testimony in hearing situations such as Act 250, the Water Resources Board, the Public Service Board, and local and

regional planning bodies. We have also worked with the public and various conservation organizations to help educate and help communities protect their own local natural resources.

Sinuosity, LLC

Sinuosity, LLC is a trail development company able to provide professional services for every aspect of a trail network or project. Our mission is to plan, design, and build sustainable trails that highlight the landscape and promote enjoyable user experiences. We apply refined trail design, management, and construction techniques to minimize impact on the environment and create trail longevity.

Our specialties include design and construction of Mountain Bike Trails and Skills Parks, Multi-Use Trails, Backcountry and XC Ski Trails, Hiking Trails, and Walking Paths. Additional services include all aspects of Trail Planning, GIS Trail Mapping, Trail Maintenance Plan Development, and Trail Work Education

We were founded in 2006 by Brooke Scatchard (Trail Designer/Builder, owner), and joined by Mariah Keagy (Trail Planner/Designer, owner) in 2013, and have been members of the Professional Trail Builders Association since 2013. Brooke and Mariah’s skills in trail layout and design, trail planning, construction, management, and mapping combine to make a strong team of exceptional trail skills, diverse experience, and expertise. While their skill sets are diverse and complementary, they both share a passion for creating sustainable multi-use trail networks throughout New England.

Project Team Organization and General Approach

Our Project Team is summarized below in Table 1. Dori Barton will serve as the Project Manager for Arrowwood and Mariah Keagy will serve as Project Manager for Sinuosity. Dori and Mariah will jointly oversee each project task and ensure sound data collection and analysis, and high-quality and timely deliverables.

Table 1. Proposed Project Team and Roles

Company & Address	Project Team Role
<p>Arrowwood Environmental, LLC 950 Bert White Road Huntington, VT 05462</p>	<ul style="list-style-type: none"> • Ecological Assessments • GIS, Mapping and Spatial Analysis Services • Public Walks • Reporting, Project Poster, and Presentation
<p>Sinuosity, LLC 94 White Birch Road Morristown, VT 05661</p>	<ul style="list-style-type: none"> • Trail Design and Flagging • Trail Construction Scoping • Public Walks • Reporting and Presentation

Proposed Project Staff

Below are brief professional biographies of Project Team personnel. Resumes are included in the Attachment.



Ecological Team

Dori Barton, Principal Wetland Ecologist/Hydrologist, Arrowwood

Dori Barton is a founding partner and principal wetland ecologist and hydrologist for Arrowwood. Dori has been an environmental consultant since 1997, working with public and private entities. Her responsibilities have included wetland delineations, wetland functional assessments and permitting, wetland restoration plan design, implementation, and monitoring; stream geomorphic assessments; wildlife habitat evaluations; hydrologic investigations; environmental assessments; and erosion prevention and sediment control plan design. Dori became a Certified Professional in Erosion and Sediment Control in 2003. Dori currently serves as Chair of the Huntington Select board, a board on which she has served for 11 years. Prior to that, Dori served on the Huntington Planning Commission for a period of ten years.

Michael Lew-Smith, Principal Wetland Ecologist/Botanist, Arrowwood

Michael Lew-Smith is a founding partner, and principal botanist for Arrowwood. Michael has extensive experience working closely with Natural Heritage Programs, The Nature Conservancy and private individuals and organizations. He has conducted wetland delineations, ecological restorations, and natural community mapping throughout Vermont. Much of his work involves rare plant inventories for proposed development projects as well as identifying rare plant habitat. Michael works closely with state agencies to develop rare plant avoidance, minimization, and mitigation strategies for a wide variety of projects. Michael is a member of the Flora Advisory Group (FLAG), which advises the state Endangered Species Committee on rare, threatened, and endangered botanical issues in Vermont.

Aaron Worthley, Principal GIS Analyst/Scientist, Arrowwood

Aaron Worthley is a partner and the principal GIS Analyst for Arrowwood, responsible for project mapping, GIS and CAD plan development, spatial data assessment, spatial database management, remote sensing, spatial, visual, and hydrological modeling, and GPS and drone surveying. Aaron also conducts field inventories and assessments for wildlife tracks, sign and habitat, avian habitat assessments and wetland delineations. Accomplishments include extensive map, plan and visual aid development for municipalities, organizations, businesses and private landowners, court exhibits, public presentations and project planning, community tree inventory project development and implementation, wildlife and bird inventories, habitat assessment, ecological predictive modeling, and mapping.

Trail Professionals Team

Mariah Keagy, Trail Designer and Planner, Sinuosity

Mariah Keagy began her career in trail construction and reconstruction in the Green Mountains of Vermont in 1996. She has extensive knowledge of multi-use trail design and management and diverse experience in natural resources, specializing in the New England landscape. Before returning full-time to Vermont in 2010, Mariah worked during field seasons throughout the U.S. learning about multi-use trails (hike, bike, motorized, pack and saddle, ski, and water) from the Everglades in Florida, Downeast of Maine, High Peaks of the Northeast, to the Chugach in Alaska. She returned to New England as the Trails Supervisor for the Appalachian Mountain Club, where she managed the White Mountain trails and developed a contract crew, designing and building trails throughout New England. She has a M.S. in Environmental Studies from Antioch New England and currently serves as a Vice Chair on the Vermont Trails and Greenways Council, is board member of the Green Mountain Club and 10-year member of its Trail

Management Committee. Mariah also recently completed a Wetland's Delineation course to assist in trail design and planning projects.

Brooke Scatchard, Trail Designer and Builder, Sinuosity

Brooke Scatchard has been designing and building trails since 1998, completing multiple trail projects and partnering with a range of organizations. A degree in Geography from the University of Vermont enables his application of advanced knowledge and technology to trail and map projects. Brooke also worked for three years as the Director of the Fellowship of the Wheel, the largest chapter of the Vermont Mountain Bike Association. Sinuosity, LLC was founded by Brooke in 2006 and is a member of the Professional Trail Builders Association. Brooke is constantly working to build the most progressive, fun, and sustainable trails in the Northeast and is a three-time winner of the MTBVT Trail Builder of the Year people's choice award.

Section 2- Proposed Scope of Work

Arrowwood and Sinuosity will participate in an initial meeting with ACFC to kick-off the project and verify the mutual understanding of the project context and goals. During the meeting, we will be prepared to discuss details regarding our approach and will be able to go over technical aspects of the project.

Task 1: Ecological Assessment

There is an existing well of information about natural resources on the ACF that is a result of at least five previous assessments. These works include the desktop assessment by Arrowwood for the Four Town Science to Action Resource Inventory (2013), the Audubon Forest Bird Habitat Assessment (Hagenbuch, 2017), the Vermont Land Trust Natural Communities Map and Assessment (Diamond, 2017), the Arrowwood desktop and preliminary field assessment of the parcel for the ACF management plan (2018), and the most recent UVM Field Naturalist Program Landscape Analysis and Inventory assessment (FNP, 2019). Additional information may be available, and will be sought, from other resource professionals recently working on and familiar with the property, notably the Chittenden County Forester. Arrowwood will compile all existing natural resource data to generate a comprehensive natural resources map for the parcel. Preliminary review of this combined data set suggests that there are no significant data gaps at a macro level for the purposes of this project. There is knowledge of large wetland resources, streams, natural community types, vernal pools and potential vernal pools, ledges, deer wintering habitat, and significant mast stands. Targeted field surveys at the macro level are likely to focus on field confirmation of wildlife habitat elements and identification of wildlife movement corridors through the ACF.

Field surveys will be conducted by Arrowwood at a micro-level in the area of proposed trails as the layout evolves. We anticipate an iterative process for the trail design with initial layouts based on review and consideration of the significant natural resources identified on the comprehensive resource map and the Habitat Sensitivity Heat Map generated by the Field Naturalist Program (2019). The Project team will utilize the resource management matrices that Arrowwood developed for the Vermont Town Forest Recreation Planning Project to narrow in on areas for trail development.

Arrowwood will take the preliminary trail design and conduct an in-field review of the preliminary route to identify any significant resources that would warrant consideration and possible reroute of the trails. These resources would include but not be limited to, wetlands and vernal pools, streams, ledge habitats, significant mast producing trees, steep slopes, sensitive micro-habitats, potential wildlife travel routes, potential bat roost trees and important bird nesting features.

Data collected from the field review will be incorporated into the comprehensive natural resource map and used to inform potential changes in the preliminary trail layout. Arrowwood would conduct subsequent rounds of in-field review of any rerouted sections of trail. This process would continue until a final layout is achieved.

Task Deliverables

- Comprehensive Resource Map (digital map and raw data)

Task II: Trail Design and Flagging

All steps in the trail design process will be both informed and guided by ecological assessment, as described above. A variety of GIS and other digital mapping software will be used at various stages of the project to efficiently analyze areas on the property suitable to support the sustainable, durable, and cohesive character sought after for the proposed trail network.

Conceptual Design (Assessment and field truthing)

Our process of trail design also begins with the initial meeting with ACFC and review of existing project documents to reaffirm and review trail network vision and desired goals for target trail users and trail experiences. This is usually done with an initial field visit, a review of the property and any existing trails and their conditions. We then begin to envision how the character of the landscape and any existing trail segments might complement and connect to achieve the goals of the project. Portions of this process have already been completed and are documented in the Andrews Community Forest Management Plan, which will be referenced and serve as a general guide.

The next step is the review/development of the proposed conceptual design, informed by ecological assessments, guided by the identified goals and cross referenced with spatial data on soils, slope, and landscape conditions for the area identified for the design. The result is an updated trail concept map with areas identified as most likely to support enjoyable, sustainable, and cost-effective trail building and lines representing conceptual (potential) trail zones (and/or corridors). These areas are generally characterized by well-drained soil with varying topography, minimal stream crossings, and a good base of mineral sub-soil. A portion of this process was completed as well and will be referenced whenever possible.

Trail Corridor Identification

Once these suitable areas and larger potential corridors have been determined in concept according to both trail sustainability and ecological values, the concept is field truthed. Focused and in-depth field exploration begins to identify viable trail corridors through these larger conceptual zones. Corridors are generally determined within 100-200' initially and mapped with a GPS. In this stage of trail design, we determine a trail's level of difficulty, designed user groups, potential direction of travel (if applicable) and identification of features which may serve as "Points of Interest" (such as rock ledges, large trees, overlooks, or other locally unique features) to route the trail over or near, as well as areas to be avoided for various reasons (such as natural resource sensitivity, the continuity of the desired trail difficulty, or other management concerns).

Trail Corridor Flagging

The final phase is refining these larger corridors into a clearly defined trail alignment and flagging marked corridor. This step includes refining the trail locations within 5-10' and marking the corridor with flagging tape on trees (and/or with pin flags in the ground.) Smaller site-specific sustainability considerations are taken into account on the microscale, such as routing trails

above trees on a slope as opposed to below (in order to reduce root exposure and damage), minimizing impacts at any water crossings by thoughtful placement, and building in and over features that provide enjoyment for as large a diversity of user groups and skill as possible as well as general variety of experience. Ecological review and any required alterations on this level will serve as one of the steps to finalizing the flag line for approval.

The last step will be to compile the scope of work for trail construction, to be included in the project Summary Report.

Task Deliverables

- Refined, (Ecologically Informed) Conceptual Design w/ Map
- Flagged Trail Alignment
- Scope of work for Trail Construction (included in the Summary Report)

Task III: Public Walks

The timeframe of the Project coincides with a global pandemic resulting in Statewide restrictions on public gatherings. For the purposes of this proposal, we assume that small gatherings will be permitted for this project and that we will be able to bring either the ACFC or Richmond residents out to the land to see portions of the trail alignment and ecological considerations during the design process. The focus and structure of the walks will be coordinated with the ACFC to best suit the project timeline, goals, and interests of the community.

Task Deliverables

- 2 Public Walks

Task IV: Report and Presentation

A summary report will be compiled to briefly document the process of both the ecological assessment, as well as the trail design process (as defined in Tasks I & II). Maps and trail descriptions will be included, as will the suggested scope of work for trail construction.

The Project Team will present the final trail alignment to the ACFC, Richmond Selectboard, and VLT at a joint meeting.

Arrowwood will design a project overview poster for display at kiosks on the ACF. The poster will seek to educate ACF users about the sensitive ecological resources on the property and how the trail design considers and integrates those resources in layout and usage.

At the conclusion of the project, GIS data and all pertinent photos from above tasks will be provided to the ACFC.

Task Deliverables

- Summary Report (comprising process and outcomes of Tasks I & 2)
- Joint Presentation to ACFC, Richmond Select board, VLT
- Poster (print-ready digital format)
- Pictures (compiled from previous tasks)
- GIS Data

Section 3 – Project Performance Measures, Deliverables, Schedules, and Budget

Included in Table 3 is a summary of project performance measures, deliverables, and schedule proposed by our project team.

Table 2. Performance Measures, Deliverables, Target Dates

Task	Performance Measure/Task	Deliverable	Timeframe
1	Ecological Assessment	<ul style="list-style-type: none"> • Comprehensive Resource Map 	February- April 2021
2	Trail Design and Flagging	<ul style="list-style-type: none"> • Conceptual Trail Design • Corridor Flagging 	March- May 2021
3	Public Walks	<ul style="list-style-type: none"> • 2 Public Walks 	April-May 2021
4	Report and Presentation	<ul style="list-style-type: none"> • Summary Report • Poster • Presentation • Pictures • GIS Data 	May 2021

The proposed cost estimate is presented in the table below. The hourly rate for work conducted is \$65/hr.

Table 6. Proposed Budget

Task	Arrowwood Hours	Sinuosity Hours	Cost
<i>Task 1. Ecological Assessment</i>	34	10	\$2860
<i>Task 2. Trail Design and Flagging</i>	20	51	\$4615
<i>Task 3. Public Walks</i>	8	8	\$1040
<i>Task 4. Report, Poster, and Presentation</i>	30	24	\$3510
Project Totals	92	93	\$12,000