

ADA COMMITTEE MEETING
March 8th, 2022 10:00am
City of Montpelier, VT

Remote meeting held via Zoom/phone in option

Present: Cameron Niedermayer, Councilmember Jack McCullough, Arne McMullen, Priscilla Fox, Chris Lumbra

Absent: Deanna (Dee) Jones, Margaret Ferron, Marty Robertson, Kevin Casey

Guests: Zack Hughes

Minutes

1. Introductions and Welcome
2. Approve agenda
3. Approve Minutes from last meeting
 - a. December 14th, 2021
 - i. Jack moved to approve minutes as presented/ Chris seconded
 1. Passed unanimously 10:08am
4. Public Comment
 - a. Zack Hughes- has noticed that there are sections of the sidewalk are not curb-cut all the way and it's hard to navigate. He noted the most impactful issues are at the curbs before the transit center and near the Shaws at the Barre/Main street intersection. Cameron Niedermayer will pass this information on the city's DPW team.
5. Continued Review of the ADA Transition Plan
 - a. Committee discussed the ADA Transition Plan's FY23 priorities. Cameron presented and asked the committee to discuss the City prioritizing the repair of the City Hall elevator as a first-step.
 - i. Committee agreed that the City Hall Elevator should be the main priority for the year, discussed potential impacts to voting, potential increased costs to repair if it fails, and other reasons to prioritize the elevator.
 - ii. Cameron discussed next steps, which is to determine repair needs and costs, applying for grants to assist in the funding, and getting an RFP out to contractors.

6. FY23 Budget and Town Meeting Update
 - a. The FY23 budget was approved- with \$130,000 specifically identified for ADA Transition Plan projects.
7. ADA Coordinator Position, continued discussion
 - a. MFD Chief Gowans has volunteered to serve as lead on City ADA Transition Plan projects.
8. Updates from Committee members
 - a. At the February 9, 2022 Council Meeting, City Council approved a bid for a “Universally Accessible Trail” in Hubbard Park. This Universally accessible trail will run from the New Shelter in Hubbard Park to the Tower was identified as a high priority item in our ADA transition plan for the Parks.
 - i. The bid information will be at the end of these minutes.
9. Confirm next meeting date
 - a. **June 7th 10am**
 - b. Agenda: Sidewalk by Shaws and Transit Center Update/Elevator Project Update/Hubbard Accessible Trail update
10. Other Business N/A
- 11. Adjourn 10:36am**



CITY COUNCIL Agenda Item #_____

Date:

Consent ☒ Discussion ☐

SUBJECT: Hubbard Park Universally Accessible Trail Bid

SUBMITTING DEPARTMENT: Parks & Trees

RECOMMENDED ACTION: Award trail design/build bid to Timber & Stone LLC.

STRATEGIC OUTCOME/PRIOR ACTION: ADA Transition Plan, Community Prosperity

EXPENDITURE REQUIRED: \$46,070 in Grant Funds (Recreational Trail Program). \$4,548.34 in matching funds.

SOURCE OF FUNDS: Grant Funds, Parks CIP

LEGAL REQUIREMENTS: N/A

BACKGROUND INFORMATION: This Universally accessible trail from the New Shelter in Hubbard Park to the Tower was identified as a high priority item in our ADA transition plan for the Parks. It will be our first accessible trail in our Parks system, and provide a unique trail experience incorporating woodlands, wetlands, and the Hubbard Park Tower. Interpretive signage (secured through a separate grant) will be installed along the trail as part of the project.

We received 3 bids for the project. While this is not the least expensive bid, it was by far the most comprehensive and realistic bid. We see a lot of added value to the extra cost including less chance for cost overruns, more opportunity for training our staff, more opportunity for incorporating volunteers, and an overall better product.

SUPPORTING DOCUMENTS: Bids attached.

INTERESTED PARTIES: Timber & Stone LLC.

CITY MANAGER'S APPROVAL:

Hermit Woods Trailbuilders, LLC

Proposal for Hubbard Park

01/20/2022

Project Overview

Project: ADA Trail at Hubbard Park

- It is proposed to install approximately 2500' of ADA trail leading from the "New Shelter" to Hubbard Park's Stone Tower along a layout as shown in the attached map below.
- Trail will swoop in a series of gentle curves, winding and navigating over the undulating terrain and taking advantage of natural features and grades to conform and integrate with the surrounding landscape.
- Trail surface will be graded to conform with all universally accessible guidelines.
- Finished trail will be 4-5' wide and consist of Geotech fabric topped with approximately 9" total of stone, including 6" of 1 ½" clean crushed stone topped with 3" of ¾" minus stone.
- Trail will be graded, compacted and finished to conform to all ADA standards as described by the USDA Guidebook for Outdoor Recreation and Trails
- Periodic French drains will be installed to allow for the free flow of water to either side of the trail.
- Two culverts will be required to cross larger drainages.
- Trail edges will be finished with dirt and all disturbed earth will be revegetated with organic matter
- All materials for this project will be staged on either end of the trail for installation.

NOTES:

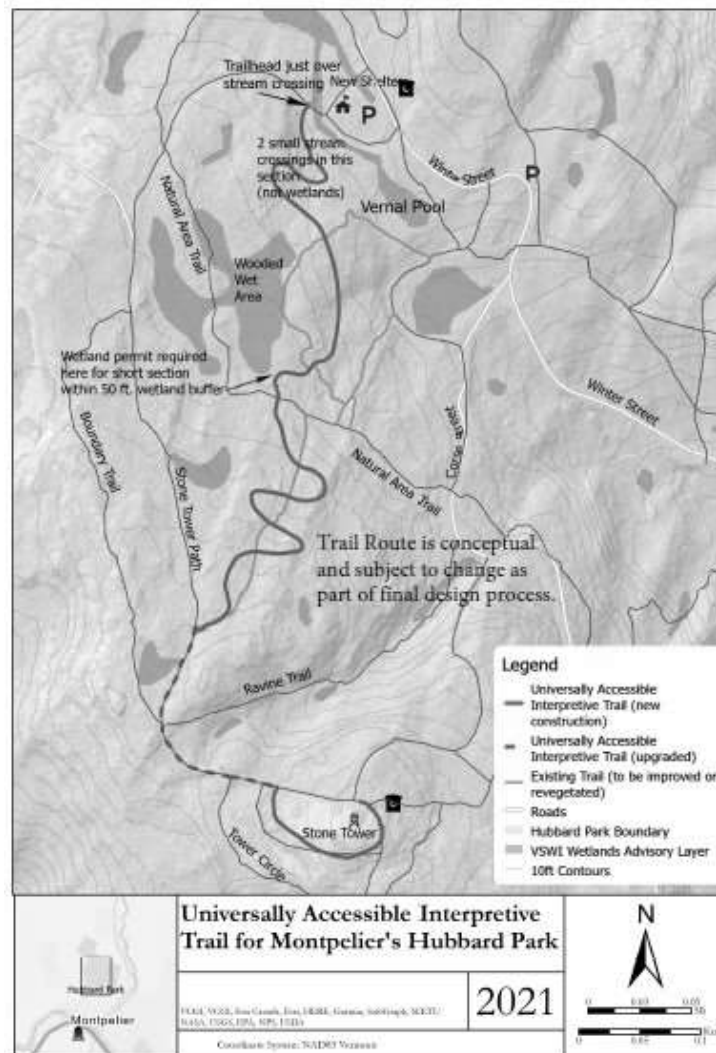
- *This bid assumes that the bridge pictured below is usable by small equipment and machines to transport gravel and materials across to the project site. If it is not, then prices will be adjusted accordingly to allow for either reinforcing the bridge or re-routing access.*
- *This bid assumes that materials are able to be staged at at least two places: adjacent to the "New Shelter" and along the Stone Tower Path where the new universally accessible trail intersects with it. If these staging areas are not available, prices will be adjusted accordingly.*
- *Volunteers can be incorporated into the work plan. Depending upon the number and quality of the volunteers, labor prices can be adjusted downwards based upon the amount of work they do. Any price adjustment will be made at the discretion of Hermit Woods Trailbuilders, and will NOT be based upon any local, state, federal or any other third-party entity's determination of the value of a volunteer hour.*



Completed ADA trail built by Hermit Woods Trailbuilders, LLC in Worcester, VT



Image of the approximate site of the proposed northern ADA trail terminus. Any bridge repair/replacement is NOT included in this bid



Approximate route of proposed new universally accessible trail

Total Materials Costs

<u>Material</u>	<u>Amount</u>	<u>Estimated Unit Cost</u>	<u>Total Estimated Cost</u>
1.5" Drainage Stone	320 tons	\$14.20/ton	\$4,544
3/8" Minus Ledge-pack	160 tons	\$14.80/ton	\$2,368
Geotech Fabric	4 Rolls (12.5' width cut in half)	\$400/roll	\$1,600
24" Culverts	2	\$363.30/culvert	\$726.60
Wall Stone for Culvert Headers	4 yards	\$180/yard	\$720

<u>Total Estimated Materials Costs</u>	<u>\$9,958.60</u>
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Total Labor Costs

<u>Hermit Woods Labor Costs</u>	<u>\$29,700</u>
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Estimated Start Date: October 1st, 2022

Estimated Duration: 2 weeks

Questions/Comments Can be Directed to: Sam Brakeley at 802-727-0163 or sam@hermitwoodstrailbuilders.com



Hubbard Park Universally Accessible Trail – Design/Build **City of Montpelier**

Project Understanding and Scope of Work

Introduction

The addition of a universally accessible trail at Hubbard Park will further enhance this public space so that all users can enjoy its unique forested setting. To date, those who are limited in mobility have had to navigate limited options at the Park. This trail will be an attractive recreational feature for all who visit Hubbard Park and the City of Montpelier. Timber & Stone, LLC welcomes the opportunity to use our unique talents, specialized equipment, and local connections to help make this project a reality for the community.

This document serves to outline Timber & Stone, LLC's approach to designing and constructing the Hubbard Park Universally Accessible Trail. Through extensive fieldwork, collaboration with Hubbard Park Staff, and communication with the City of Montpelier, the trail's design and construction standards will not only adhere to the Federal Guidelines for Accessible Trails but will also match the intended vision of the City. The following sections address how Timber & Stone, LLC will accomplish the scope of work outlined in the RFP.

I. Introductory Project Meeting

An initial meeting with the City of Montpelier Parks Department will be an important first step for this project. This meeting will allow for discussion related to the following items:

- 1. Trail Alignment** – A review of the intended “control points” along the trail will help further define the possibilities of the trail's alignment. These points include trailheads, junctions, unique ecological features, and experiential “must haves.” Ultimately, these points will be connected by way of the trail design measures described in the lower sections of this proposal.
- 2. Trail Construction Standards** – A thorough review of the universally accessible trail construction standards will be presented and reviewed with Parks Staff. This discussion with the Parks Department Staff will allow for decisions related to trail width, grade, and sustainable character. Construction methods will also be shared and discussed.



3. Hybrid Construction with Park Staff – To broaden the impact of this project and to reduce costs, the construction phase of the trail will incorporate the talent of the Park Staff. At minimum, the aspects that will be incorporated and/or expanded on include:

- a. Material purchase and delivery by Parks Department Staff
- b. Utilization of Parks Department machinery. This includes: excavator, loader, and compactor. Additional machinery use may result in further cost savings.
- c. Training of Parks Department Staff on safe and sustainable machinery use on trail construction projects
- d. Incorporation of Parks Staff on trail construction tasks including: corridor clearing, handwork along trail's edging, compaction of surfacing, and import of material.

4. Involvement of the Montpelier Youth Conservation Corps - This project has the potential to be an exemplary trail construction effort for the City of Montpelier. When completed, this project could become a model for other communities to follow. By incorporating the MYCC, this project could provide meaningful training and work experience for local youth. Timber & Stone, LLC's extensive history of working with youth makes us uniquely qualified to create this opportunity. We would welcome further discussion of this idea and the potential it possesses.

The discussion of the items described above, at minimum, will help the design of the Hubbard Park Accessible Trail to be in line with the City of Montpelier's mission for the project while also taking full advantage of Timber & Stone, LLC's regional experience.

II. Fieldwork and Design

Following the introductory meetings and site walks, Timber & Stone, LLC will flag the trail's alignment. All aspects and constraints discussed with the Parks Staff will be considered and incorporated.

During the fieldwork portion of the design, Timber & Stone, LLC will take the following steps to properly align and design the Hubbard Park Accessible Trail:

- 1. Alignment** – The trail's alignment will be flagged every 50-100' with orange surveyor's tape. This method allows for easy viewing of the trail's shape and contour within the forest. Intended structures will be identified on the flagging and inventoried. All aspects of the trail's alignment will comply with the Accessibility Standards listed below.



2. **Testing** – To ensure adequate soils, limited impact on forest health, and avoidance of challenging bedrock, test pits will be hand dug along the proposed alignment. This process greatly improves the success of a trail's alignment and can be extremely revealing of what lies beneath.
3. **Walk-through** – To ensure that our vision and alignment of the trail is in line with the Parks Department's intent, we will host a final walk-through of the trail alignment. This meeting will ensure that the alignment of the structure matches the vision of the City and will also help highlight any portions that will require a heightened level of construction due to inherent topographical challenges.

III. Trail Accessibility

The Hubbard Park Universally Accessible Trail will be designed and constructed to be 100% accessible to all users. To achieve this, the trail will adhere to the National Guidelines for Accessible Trails in Undeveloped Areas. Adherence to these guidelines during all phases of this project will include the following characteristics:

Tread Width

A trail's tread is the surface on which the users walk or recreate. Whereas a trail encompasses all of the physical attributes of the entire experience, the tread is the specific surface that users recreate on. To accommodate users and to ensure that the trail is both safe and comfortable, it is recommended that the Hubbard Park Universally Accessible Trail maintain a 5 foot tread width whenever possible. This specification is derived due to the following conditions:

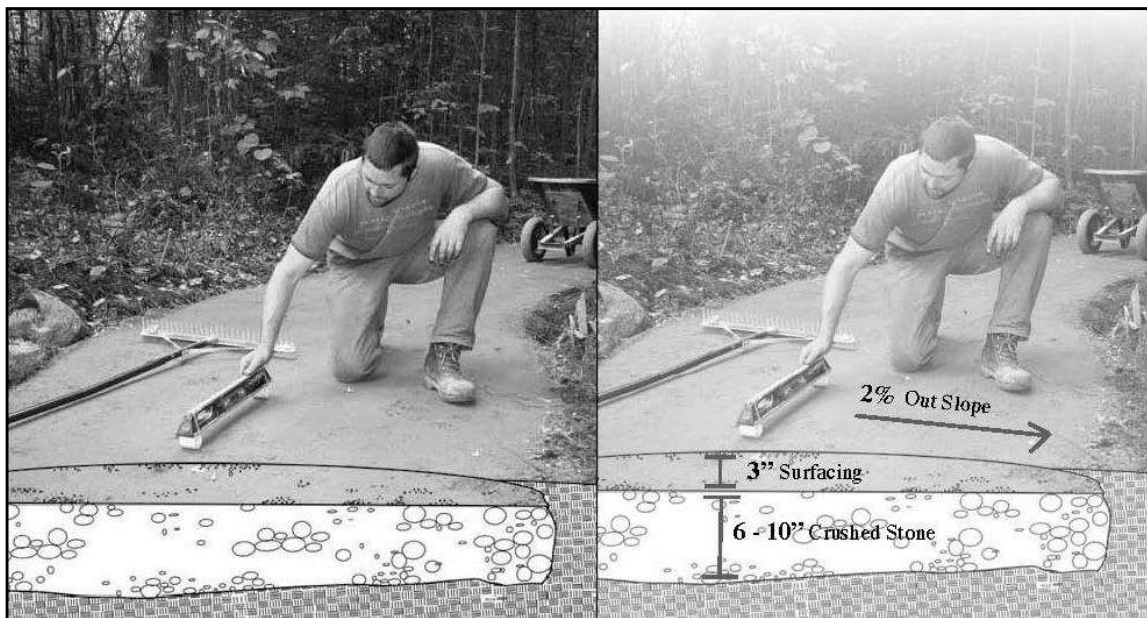
- The trail will provide a destination for groups or individuals looking to walk side by side.
- Trail users may be walking alongside an aid and will require additional tread width.
- The trail will be Universally Accessible. This allows for the possibility of wheelchairs and walkers being on the same trail and for those individuals to pass one another.

Ideally, the Hubbard Park Universally Accessible Trail will maintain a consistent width throughout. This width defines the character of the trail, allows for continuity of user experience, and assures users that there is ample room for travel and passing. These factors work in unison to provide a safe and enjoyable experience for all. This design detail will be discussed during the project meeting with the Parks Department as it does have bearing on project cost due to the increase of material required for an occasional 3 foot wide trail versus a consistent 5 foot wide trail.



Outslope

To ensure proper drainage of the Hubbard Park Universally Accessible Trail, the trail should be consistently outsloped or crowned. The outslope refers to the subtle outward slope that is perpendicular to the trail. This allows water to travel across the trail in a sheet flow pattern. The potential for erosion is highly reduced by outsloping the trail. If the trail is left flat, the water will find a way to develop a channel which will lead to erosion issues. The % grade of the outslope should strive to be 2%. When installed, the outslope can be between 3-5%. Over time the trail will compact and develop into a consistent 2%. Refer to the figure below for a representation of measuring grade and outslope.

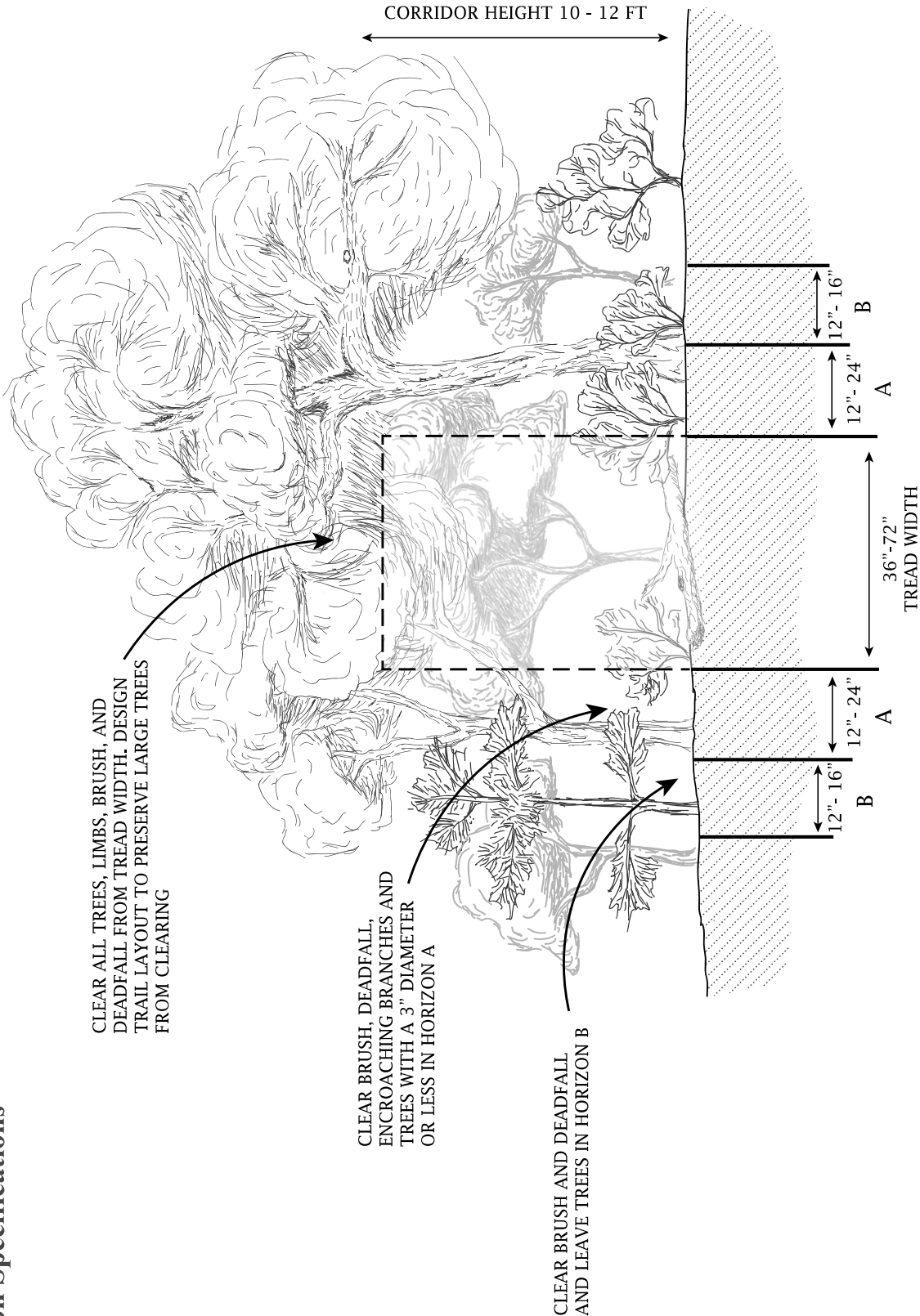


Running Grade

The running grade of a trail refers to the percent grade of the trail in the direction of travel. During the fieldwork and design phase of this trail, all sections will be aligned to achieve the acceptable running grade of universally accessible trails described in the table below. This will be accomplished by using a clinometer and smart level to measure grades during the field work.

Running Grade of Trail	Trail Length
0-5%	Trail can travel over any distance.
8.3%	Resting intervals required every 200 feet.
10%	Resting intervals required every 30 feet.
12%	Resting intervals required every 10 feet.

Hubbard Park Universally Accessible Trail
Trail Construction Specifications



Hubbard Park Universally Accessible Trail Trail Construction Specifications

TRAIL SURFACING INSTALLED 3" - 8" IN DEPTH WITH OUTSLOPING GRADES OF 2% FROM CENTER OF CROWN AND SUSTAINABLE RUNNING GRADES OF 5% - 8%

EXCAVATED MATERIAL USED TO SUPPORT SURFACING

EXCAVATED MATERIAL USED TO SUPPORT SURFACING

TRAIL WIDTH 5'

UNDISTURBED SOIL

EXISTING GRADE

3/8" CRUSHED STONE SURFACING INSTALLED 3" - 8" IN DEPTH WITH OUTSLOPING GRADES OF 2% AND SUSTAINABLE RUNNING GRADES OF 5% - 8%

INSTALL A LAYER OF GEOTEXTILE FABRIC OVER CRUSH MATERIAL OR UNDISTURBED SOIL AS NEEDED. THIS PREVENTS LOSS OF SURFACING INTO CRUSH MATERIAL OR UNDISTURBED SOIL

1-1/2" CRUSHED STONE USED TO INCREASE DRAINAGE AND RAISE SECTIONS OF TRAIL (CRUSH STONE DOES NOT ALWAYS NEED TO BE ADDED IF SOILS DRAIN WELL AND TRAIL GRADE IS WITHIN PARAMETERS)

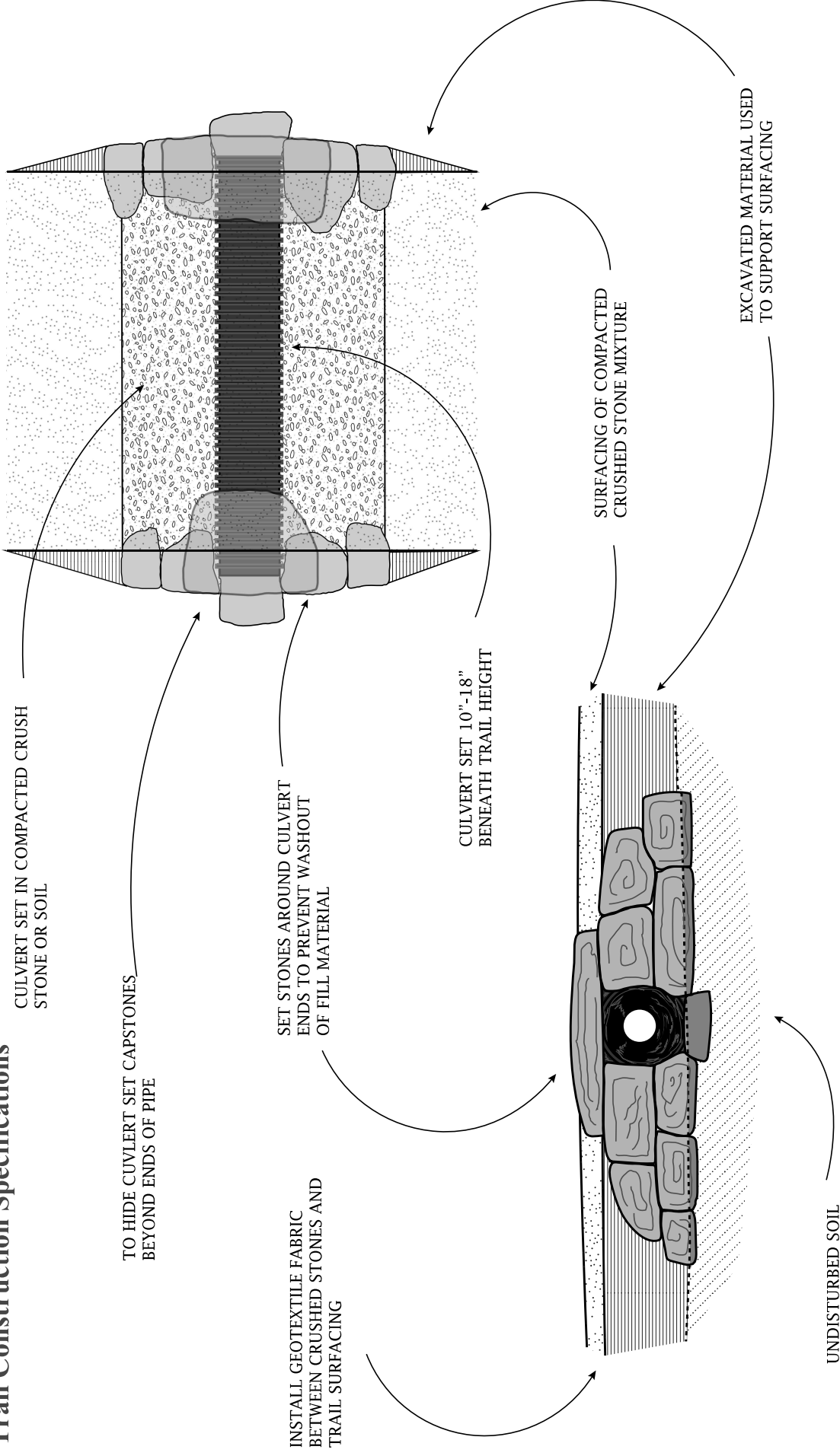
EXCAVATED MATERIAL USED TO SUPPORT SURFACING

TRAIL WIDTH 5'

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UNDISTURBED SOIL

Hubbard Park Universally Accessible Trail Trail Construction Specifications





IV. Construction Estimate

Although the resulting impact of this trail will be everlasting, the initial construction will be challenging. This is both due to the existing and known topographical and hydrological challenges as well as those unknown, as they are currently covered in snow. Unified, these factors make it difficult to assemble a narrowed construction estimate that will not be adjusted after the design phase.

Attached to this proposal are two versions of Timber & Stone, LLC's construction estimate for the Hubbard Park Universally Accessible Trail. These estimates were developed after attending the pre bid meeting on January 13th and returning to the site for two additional surveys. Our costs are based on the best conditions possible for excavating, importing material, and constructing sustainable trail within challenging terrain. Below is a description of each option:

- **Option One** – This estimate is based on our typical pricing structure when deductions are not available. These differences include:
 - All machinery used is owned by Timber & Stone, LLC
 - Trail surfacing and subsurfacing materials are planned at 5.5' instead of 5'. This acknowledges the width needed for equipment. Ultimately, the trail is naturalized to a consistent 5' width.
 - Depths of surfacing are planned at 8" for surfacing and 6" for drainage stone. This acknowledges necessary depth changes due to topography and compaction after installation.
 - Reductions for potential labor involvement, as described above, were not included.
- **Option Two** – This estimate is based on the construction details provided in the RFP and assumes robust hybrid construction. These details include:
 - Use of Parks Department excavator for at least one month
 - Trail surfacing and subsurfacing materials planned at 5' maximum.
 - Depths of surfacing are planned at 3" for surfacing and 6" for drainage stone
 - Incorporation of a minimum of 40 hours for 2-3 volunteer / Park Staff who focus on corridor clearing, root clipping, and tread establishment
 - Availability of 1-2 Park Staff throughout for assistance as needed

Please note: Both options include per yard material pricing from the quarry with delivery provided by Park Staff to the site. The quarry can only provide 2021 pricing at this time. This price will undoubtedly increase in 2022.



Conclusion

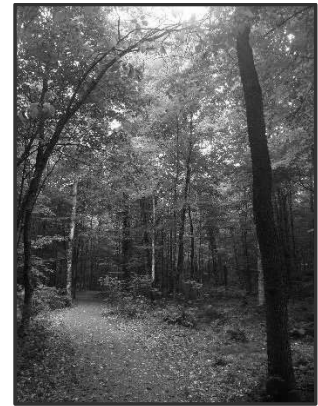
Timber & Stone, LLC is committed to designing and constructing trails that are universally accessible to all users. This project aligns well with that goal as well as our ability to work alongside project partners and members of the community. We are able to blend our technical expertise with the interests, investments, and expectations of those who we collaborate with.

When completed, this universally accessible trail will be a unique addition to the City of Montpelier's Hubbard Park trail network. We hope to be actively part of making it a reality.

Thank you for your serious consideration of our proposal.

Respectfully Submitted,

Joshua D. Ryan
Principal
Timber & Stone, LLC



Timber & Stone, LLC
Conservation Minded Construction

Joshua D. Ryan
4764 Center Road
East Montpelier, VT 05651

Phone: 802-522-9856
Email: joshryan@timberandstonellc.com
Web: www.timberandstonellc.com

Project Estimate: January 25, 2022

To:
Alec Ellsworth
Montpelier Parks
39 Main Street
Montpelier, VT

Hubbard Park Universally Accessible Trail Montpelier, VT

Work Description –	
Fieldwork and Design Phase	
Scope of Work	
• Initial meetings with City of Montpelier Parks Department	
• Review of trail construction standards and identification of trail control points with City	
• Centerline flagging of trail alignment	
• Inventory of all construction segments and necessary structures	
• Walk through of trail alignment, adjustment as needed based on Park Staff feedback	
• Adjustment of cost proposal as needed to align with finalized trail design	
Project Total =	
\$ 2,750.00	
Option One – 2,500' of 5' Wide Accessible Trail Per Proposal Description	
Construction Materials	
	\$ 10,842.01
• 3/8" Minus Crushed Stone Surfacing (331 Yards @ \$10.25/Yard)	
• 1 1/2" Washed Crushed Stone (255 Yards @ \$16.00/Yard)	
• Non-Woven Geotextile Fabric (2,500 Feet)	
• 24" Culverts (2)	
• Erosion Control Measures	
Equipment Rental – Excavators, Material Haulers, Compactors, Loaders	\$ 9,665.67
Fuel – Off road diesel, gasoline, vegetable based bar oil	\$ 347.75
Mobilization – Equipment and Machine Delivery	\$ 1,284.00
Construction Labor – (Site Setup, Construction, Administration, and Site Cleanup)	\$ 25,748.91
Project Total =	
\$ 47,888.34	

This quote is relevant to the 2022 Construction Season and includes the following:

Professional Trail Construction Labor
Timber & Stone, LLC Liability Insurance and Administrative Overhead
Crew Mobilization, Specialty Tools, and Equipment Expenses

This Quote is Design/Build Based and is Subject to Change Based on the Following:

Change in Trail Design Before Start of Construction
Change Order of Trail Design After Start of Construction

*Project cost does not include bonding, permitting, or engineering

Timber & Stone, LLC
Conservation Minded Construction

Joshua D. Ryan
4764 Center Road
East Montpelier, VT 05651

Phone: 802-522-9856
Email: joshryan@timberandstonellc.com
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• Centerline flagging of trail alignment	
• Inventory of all construction segments and necessary structures	
• Walk through of trail alignment, adjustment as needed based on Park Staff feedback	
• Adjustment of cost proposal as needed to align with finalized trail design	
Project Total =	\$ 2,750.00
Option Two – 2,500' of 5' Wide Accessible Trail Per RFP Description	
Construction Materials	\$ 8,265.05
• 3/8" Minus Crushed Stone Surfacing (116 Yards @ \$10.25/Yard)	
• 1 1/2" Washed Crushed Stone (231 Yards @ \$16.00/Yard)	
• Non-Woven Geotextile Fabric (2,500 Feet)	
• 24" Culverts (2)	
• Erosion Control Measures	
Equipment Rental – Excavators, Material Haulers, Compactors, Loaders	\$ 14,552.00
Fuel – Off road diesel, gasoline, vegetable based bar oil	\$ 347.75
Mobilization – Equipment and Machine Delivery	\$ 1,284.00
Construction Labor – (Site Setup, Construction, Administration, and Site Cleanup)	\$ 19,036.42
Project Total =	\$ 43,485.22

This quote is relevant to the 2022 Construction Season and includes the following:

Professional Trail Construction Labor
Timber & Stone, LLC Liability Insurance and Administrative Overhead
Crew Mobilization, Specialty Tools, and Equipment Expenses

This Quote is Design/Build Based and is Subject to Change Based on the Following:

Change in Trail Design Before Start of Construction
Change Order of Trail Design After Start of Construction

*Project cost does not include bonding, permitting, or engineering



TIMBER & STONE, LLC

Firm Overview

Since 2004, Vermont based Timber & Stone, LLC has provided technical advice and construction expertise to land managers seeking to build or improve recreational trails. Conservation Minded Construction is the adage that guides our work.

Our goal—sustainably built, multi-use trails that provide users with a safe and enjoyable outdoor experience. We work with a variety of clients and project sponsors—from municipalities to private landowners—on projects throughout the Northeast.

Timber & Stone, LLC is dedicated to providing clients with professional, customized trail design and quality, conservation-minded construction. Whether working independently or alongside volunteers, Timber & Stone, LLC is committed to making the trail construction process, from initial consultation to the final ribbon cutting, a rewarding experience for the entire community.

WHAT WE BELIEVE

Trails provide people with opportunities to recreate, educate, and contemplate.

They are an essential component of our culture. Trails offer a safe and sustainable way to access wild areas. They are also a vital part of building vibrant community; offering a recreational outlet to the public. With thoughtful, informed consideration paid to design and construction, trails enhance the intrinsic value of natural areas to the human community.

WHAT WE DO

Trail Design. Construction. Education.

For the last fourteen years, Timber & Stone, LLC has assisted clients—from municipalities to private landowners—in transforming their trail aspirations into reality. Our goal is to build safe, appropriately designed trails and pathways in a sustainable and efficient manner; trails that balance recreational needs while preserving the character and sanctity of the natural landscape.

Simply put, we build trails that stand the test of time.

Founded and based in Central Vermont, Timber & Stone, LLC has completed projects throughout the Northeast. We are available to work as a contracted crew or alongside volunteers, students, and stewards. With a keen eye to safety, we empower groups of volunteers by building skills and camaraderie while effectively managing the worksite to attain a high quality product.

Timber & Stone, LLC 4764 Center Road East Montpelier, VT, 05651 802-522-9856 TimberandStonellc.com



WHO WE ARE

In addition to our team of employees, Timber & Stone, LLC is comprised of 3 dedicated trail designer/builders.

Josh Ryan

Principal Trail Designer and Builder

Josh has been recreating on and caretaking trails since the day his parents first laced up his hiking boots.

For over twenty years, Josh has worked on trails with a wide array of students, volunteers, and fellow trailbuilders both as a Crew Leader and as an independent contractor. Previous to founding Timber & Stone, LLC, Josh worked for the Vermont Youth Conservation Corps, Maine Conservation Corps, Student Conservation Association, US Forest Service, and completed his graduate coursework in Environmental Education at Antioch University in Keene, NH.

Josh makes his home in East Montpelier, Vermont with his wife, two daughters, and one gigantic Newfoundland pup. In addition to constructing trails, Josh has also taught courses in Trail Design and Construction at local Universities and Graduate Schools. He is an active member of the Professional Trailbuilders Association and the local East Montpelier Trails Committee. Josh also serves as a Committee Member for the annual Vermont Conference on Recreation and was appointed by VT Governor Phil Scott to serve on the Vermont Outdoor Recreation Economic Collaborative task force.

Gordon Adams

Trail Designer and Builder

After a two-year hiatus, we were pleased to welcome Gordon back to the trailbuilding team in 2015. Gordon was instrumental to the completion of numerous, multi-faceted trail projects during the 2011/2012 trail season.

Since last working for Timber & Stone, LLC in 2012, Gordon traveled extensively through the United States, taking time to work on various farms through the WWOOFer (Willing Workers on Organic Farms) program and thru-hiking the Appalachian Trail with his brother and his trusty dog companion, Jack.

Gordon brings a strong set of skills in fine woodworking, carpentry, traditional trailwork, and ecological inquiry to his work with Timber & Stone, LLC. In the past, Gordon has worked for Stauffer Woodworking, Vincent L. Adams Cabinetmakers, and Maine Coast Heritage Trust and pursued studies at the Dutchess Academy of Environmental Studies in Staatsburg, New York and Sterling College in Craftsbury, Vermont. A native of upstate New York, Gordon currently makes his home in East Montpelier, Vermont.

Pete Hiser

Trail Designer and Builder

Pete Hiser joined the Timber & Stone, LLC crew in 2016.

Pete graduated from the University of New Hampshire in 2014 with a B.S. in Environmental Conservation and Sustainability. This academic background combined with his many years of work in the landscaping industry are the perfect fit for the projects we have on tap for this season. Pete brings a variety of transferable skills from his experience working in the landscaping industry including: equipment operation and maintenance, site planning and layout, and technical stonework. A born and bred Vermonter, Pete's professional and personal aspirations give him ample time to adventure in the natural surroundings. He is an avid fly fisherman and enjoys camping, hiking, and skiing whenever he can. Pete currently resides in Burlington, Vermont.

Timber & Stone, LLC 4764 Center Road East Montpelier, VT, 05651 802-522-9856 TimberandStonellc.com



Timber & Stone, LLC

Recreational Trail Design and Construction

Project Portfolio: Universally Accessible Trail Design and Construction



Barnes Camp Accessible Boardwalk (2017)

The Long Trail, Stowe, VT

Overview:

- 600 foot elevated wetland boardwalk on a helical pile foundation system
- Multiple viewing platforms installed along this scenic section of the Long Trail

Contact:

Tasha Wallis, Executive Director
Lamoille County Planning Commission
tasha@lcpvvt.org or (802) 888-4548

Camp Smith Accessible Trail (2016)

Little River State Park, Waterbury, VT

Overview:

- 1/2 Mile accessible trail system with interpretive overlooks for public engagement
- Meanders through a historically significant former Civilian Conservation Corps encampment

Contact:

Sue Bulmer, Northeast Parks Regional Manager
Vermont Department of Forest, Parks & Recreation
susan.bulmer@vermont.gov or (802) 476-0181



Bomoseen State Park Accessible Boardwalk (2016)

Bomoseen, VT

Overview:

- 200 foot boardwalk supported by helical pile foundations and located within a sensitive wetland environment
- Decking and railing constructed of naturally rot resistant Black Locust and White Oak

Contact:

Frank Spaulding, Parks Project Coordinator
Vermont Department of Forest, Parks & Recreation
frank.spaulding@vermont.gov or (802) 522-0798



Mount A Accessible Trail (2014-2016)

Mount Agamenticus Conservation Area, York, ME

Overview:

- Design and construction of a one mile accessible trail that navigates granite ledges and rock outcroppings
- Installed multiple boardwalks, bridges, and a 30' circular observational platform

Contact:

Robin Kerr, Conservation Coordinator
robin@agamenticus.org or (207) 361-1102

Eshqua Bog Accessible Trail and Boardwalk (2014-2015)

Eshqua Bog Natural Area, Hartland, VT

Overview:

- Design and construction of a 460 foot accessible boardwalk supported by helical pile foundations
- Multiple viewing platforms allows for photography and appreciation of rare wetland flora

Contact:

Lynn McNamara, Director of Stewardship
The Nature Conservancy in Vermont
lmcnamara@TNC.org or (802) 229-4425



Shaftsbury State Park Accessible Trail (2015, 2017)

Shaftsbury, VT

Overview:

- Design and construction of 100' accessible boardwalk supported by helical pile foundations
- Upgrade of existing boardwalk to comply with accessible trail guidelines

Contact:

Lisa Thorton, Stewardship Forester
Vermont Department of Forests, Parks, & Recreation
lisa.thorton@vermont.gov or (802) 777-7480



Reservoir Accessible Trail (2010, 2015)

Waterbury Center State Park, Waterbury, VT

Overview:

- Constructed 1/4 mile accessible trail that allows access and viewing of the Waterbury Reservoir
- Installed connector paths allowing access to boat launch, swimming area, and picnic tables

Contact:

John Medose, Northeast Parks Facility Manager
Vermont Department of Forests, Parks & Recreation
john.medose@vermont.gov or (802) 426-3050





Entrance Bridge (2015/2016)

Birds of Vermont Museum, Huntington, VT

Overview:

- Design and construction of 100' accessible elevated boardwalk and bridge supported by helical pile foundations
- This custom built structure serves as main entry point to museum facilities

Contact:

Erin Talmage, Executive Director
Birds of Vermont Museum
museum@birdsofvermont.org or (802) 434-2167

Long Beach Boardwalk (2013)

Barnstable, MA

Overview:

- Construction of 350' accessible boardwalk that serves as public access to Long Beach
- Installed innovative foundation in beach ecosystem

Contact:

Rebecca Nickerson, Project Manager
Town of Barnstable
508-790-6316



Front Bay Park (2012)

Wolfeboro, NH

Overview:

- Design and construction of a one mile accessible trail system that borders Lake Winnepesaukee
- Design, construction, and installation of an accessible timber framed gazebo

Contact:

Rob Houseman, Former Wolfeboro Town Planner
robert.houseman@hanovernh.org or (603) 640-3212

Longwood Gardens Trail System (2008)

Kennett Square, PA

Overview:

- Served as member of specialized construction crew that designed and installed this accessible treehouse and elevated ramp system

Contact:

Eyrich Stauffer, Lead Design/Builder
Stauffer Woodworking
eyrich@staufferwoodworking.com or (802) 272-9535



Project Portfolio: Trail Assessment, Planning and Design

Overview: For nearly a decade, Timber & Stone, LLC has prepared comprehensive trail design plans and reports for dozens of organizations and municipalities for properties throughout the Northeast.

Each of the document titles below indicates the completion of extensive field work. Foot-by-foot analysis of a trail is required in order to generate thorough construction and/or maintenance specifications for each site.



Enders Falls Trail Design

Prepared for: Connecticut Department of Energy and Environmental Protection
Granby, CT (2018)

Raven Ridge Natural Area Accessible Boardwalk and Trail Design

Prepared for: The Nature Conservancy
Hinesburg, VT (2017)

Norwalk River Valley Trail Layout and Design

Prepared for: Friends of the Norwalk River Valley Trail (NRVT)
Ridgefield, CT Section (2018), Norwalk, CT Section (2017),
Redding, CT Section (2016) and Wilton, CT Section (2013)

Rock Point Trail Assessment and Design

Prepared for: The Rock Point Center
Burlington, VT (2017)

Pine Island Cemetery Trail Design

Prepared for: Norwalk Redevelopment Agency
Norwalk, CT (2017)

Ossipee Pine Barrens Accessible Trail Design

Prepared for: The Nature Conservancy
Ossipee, NH (2017)

Lubberland Creek Accessible Trail Design

Prepared for: The Nature Conservancy
Newmarket, NH (2017)

Marshall Conservation Area Trail Master Plan

Prepared for: Town of Conway, NH (2016)

Hawkins Brook Nature Trail Accessible Trail and Boardwalk Design

Prepared for: Town of Meredith, NH (2016)

"The trail layout and design document Timber & Stone, LLC prepared was thorough; sufficiently so, that it has given funders the confidence to make substantial contributions and was used to successively support permit applications."

-Pat Sesto, Chairperson
Norwalk River Valley Trail

North Branch Cascades Trail Assessment and Design

Prepared for: The Vermont River Conservancy
Worcester/Elmore, VT (2016)

Mills Riverside Park Trail Assessment Plan

Prepared for: Jericho/Underhill Park District
Jericho, VT (2016)

Black Mountain Trail Assessment and Design

Prepared for: The Nature Conservancy
Dummerston, VT (2015)

Wiessner Woods Trail Management Report

Prepared for: Stowe Land Trust
Stowe, VT (2015)

Birds of Vermont Museum Accessible Trail

Prepared for: Birds of Vermont Museum
Huntington, VT (2014)

Shoreline Greenway Trail Maintenance Plan

Branford, CT (2014)

Eshqua Natural Area Accessible Trail Design

Prepared for: The Nature Conservancy
Hartland, VT (2013)

Burlington Multi-Use Trail Design

Prepared for: Burlington Parks and Recreation
Burlington, VT (2013)

Sustainability Academy Multi-Use Trail

Prepared for: Burlington Sustainability Academy
Burlington, VT (2012)

Front Bay Park Accessible Trail Design

Prepared for: Town of Wolfeboro
Wolfeboro, NH (2011)

Maple Street Park Multi-Use Trail Design

Prepared for: Essex Junction Recreation and Parks
Essex Junction, VT (2011)

Indian Brook Reservoir Trail Maintenance and Management Plan

Prepared for: Town of Essex
Essex, VT (2010)

"Timber & Stone, LLC has been helping us to make our trail networks more durable, accessible, and enjoyable for the past decade. Their work is high quality and well designed. It reflects a clear understanding of what makes for a positive and memorable recreational experience for the range of user groups and abilities that frequent our trails. "

-Kristen Sharpless,
Conservation Program Manager
Stowe Land Trust

March 5, 2020

To Whom it May Concern:

The Nature Conservancy in Vermont highly recommends Timber & Stone, LLC as an exceptionally skilled and professional trail construction team. We have worked with them on numerous occasions when we've needed expertise and experience for technical trail planning, development and project construction at our natural areas and have always been extremely happy with their work.

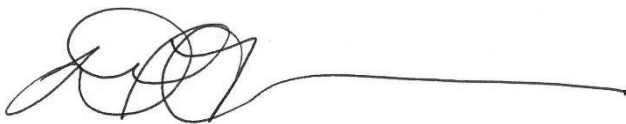
Timber & Stone, LLC:

- Has particularly unique experience and extensive history of designing and building mobility/accessible trails;
- Has a solid track record of completing projects on time and on budget;
- Shows extraordinarily strong communication skills that aid in communicating with TNC representatives, public trail users, local officials and media partners;
- Employs innovative construction tactics that leave little trace on sensitive wetlands and forested habitats;
- Demonstrates a collaborative approach with TNC while constructing design/build trails; and
- Possess a solid reputation throughout the Northeast as a trusted, dedicated, and skilled trail contractor.

Most recently we worked with Timber & Stone, LLC to build a fully accessible boardwalk in a highly sensitive wetland area that extends for nearly 1/3 mile allowing a broad range of users to visit this special place. The property contained a rare plant that was critically important to protect. Josh Ryan and his team listened to our requirements that the boardwalk fit in with the natural landscape, be sourced as locally and naturally as possible, and above all have as little impact as possible to the flora and fauna of the wetland. They went above and beyond to meet these expectations and have provided us with a beautiful, fully accessible boardwalk without damaging the plants immediately surrounding it. Their professionalism, attention to detail, and clear communication throughout the project made the whole project flow smoothly. The care and consideration Timber & Stone, LLC put in to ensuring the crew was able to identify the site's rare plants and avoid impacts was very important to us and has provided people of all mobility levels the opportunity to connect with the nature. We plan to work with this team for many years to come.

If you have further questions about Josh Ryan and his team at Timber & Stone, LLC, please don't hesitate to contact me.

Kind Regards,



Heather Furman
State Director
The Nature Conservancy in Vermont

Hubbard Park Universal Access Trail

Design and Construction Proposal



Zac Freeman / Owner

Trail design and Construction
1289 Flint Rd
Braintree, VT 05060
802-272-6214
zac@apextrailworks.com

Alec Ellsworth
Montpelier Parks Director
39 Main St. Montpelier, VT

Dear Alec and City of Montpelier Parks Department,

Thank you for inviting me to submit a proposal for the Hubbard Park Universal Access interpretive trail in Montpelier, Vt. As our society evolves, there's a growing need for access to enjoyable and sustainable outdoor recreational trails. This exciting trail project will fill a need within the greater Montpelier community and be an excellent addition to the Hubbard Park trail network.

My name is Zac Freeman, and I and the owner/operator of Apex Trailworks LLC, based in my home town of Braintree, VT. I have been building trails practically my whole life, and in the last 5 years taken the steps to build a successful trail contracting & excavating business. I have built many multi-use trails on public and private land, as well as trail head infrastructure components, such as timber frame trail kiosks, and parking lots. Clients have included municipalities, State of Vt, non-profits, educational institutions, conservation organizations, and private landowners. My body of work extends past trail building into community and sustainable recreation development with the trail organization I helped found Ridgeline Outdoor Collective (formally RASTA).

I feel my skillset, experience and equipment lend itself very well to creating a professionally built trail to the specs outlined in the RFB. I am a clean and efficient operator and work very well with volunteers. I have lead countless volunteer workdays over the years, successfully building many miles of trails.

I did attend the walk through with Alec and company, and was able to preliminarily visualize what the trail would look like and where it would go. The snow cover did make it hard to see the ground, but we were able to work with it. If you have any questions about this proposal, I am happy to answer them and work through any possible changes needed.

Thanks you kindly for your consideration, Zac Freeman

Project Summary

The goal of this project is to design and build roughly 2500' linear feet of new universal access multi-use trail from the "New Shelter" to the Stone Tower. The trail profile will conform to all required standards laid out in the RFB, and USFS guidelines. The general corridor has been identified, but no pin flags have been placed for exact tread location. Part of my proposal will be the design and layout component and then construction. The terrain lends itself well to the desired trail specs and I see minimal potential issues with construction. I am happy to work with you to identify the need for culverts vs. wooden bridges where identified and discussed on the walk-through. Volunteer labor can be utilized to reduce the cost of the water crossings.

Scope of work

The trail will be built with the use of my mini excavator, small articulated wheeled loader, and the surface will be finished with a plate compactor and a variety of hand tools. The construction of the trail will start with the removal of the top layer of organic material and be replaced with a base of drainage stone over a layer of state approved geotextile fabric, and finished with a fine hardpack. Compaction of the materials will ensure proper slope for needed drainage and surface firmness. Multiple material staging sites were identified on the walk through and I feel locations will work well to efficiently move material into the trail. Apex Trailworks would have a 2 or 3 person crew working on this project to do operate equipment and do hand work. As discussed the Park Dept will take care of needed tree removal after the design is agreed upon.

Due to the snow covered ground during the walk-through, I was unable to identify the presence of any potential water. Sufficient soil types were confirmed by Alec and are assumed to be suitable to build on. Some sections of the trail may be slightly elevated, with an uphill swale to prevent the water from seeping into the trail. Proper steps will be taken to shed water off the trail using grade reversals, knicks, and the use of smaller culverts may be necessary. One small section within the first 200+ yards, looked to have the presence of ledge & may need a small retaining wall to elevate the trail on the downhill side. One load of 5" stone will be suggested for culvert armoring and erosion prevention, if sufficient native stone is not present to use.

Project Timeframe

The overall project will take an estimated 3-4 weeks to build from start to finish. That includes a few days for design and layout. The Apex Trailwork crew could start this project in May 2022, weather dependent. There are factors that could delay the estimated timeframe, ie weather, material delay, equipment, and if such delay occurs it would be immediately communicated to the Park Director, Alec Ellsworth. Before any construction starts we would collectively make a solid plan to stick to helping avoid any unforeseen delays!

Trail Design

The trail design will follow the guidelines laid out in the RFB. The trail will maintain the appropriate grades throughout (exact grades numbers are a little hard to pinpoint without seeing the ground without snow coverage, and we will work with the Park Director to identify specific bump-out areas for interpretive signage. The structure of the trail will consist of 6" 1 1/2" drainage stone over geotextile fabric and topped with a suggested 4-5" of 1/2" or 3/8" hardpack. The thicker top layer is to reduce any migration of larger stone from rising to the surface. The trail will maintain a 5' width to maximize the accessibility needed. Pike Industries was contacted for material supply and it was suggested by their specialist to possibly use 1/2" plant mix opposed to 3/8". There is a substantial cost savings here that he noted and they have supplied 1/2" plant mix for other ADA trail builds in the past. The two primary water crossings will require culverts and or bridges. Rock armoring will be done on either side of the abutments to prevent erosion. Native stone will be hopefully be sourced on site to use, but may require importing stone to use.

Budget

The chart below breaks down the costs to design and build of the trail. As discussed, I am happy to work with the Parks Dept to leverage volunteer labor to reduce the costs. One such reduction would be volunteer build wooden bridges across the two required crossings. In addition, volunteer labor could be used to smooth out the finish surface material and run the compactor. If the actual build time is reduce, it will be reflected on the final invoice. There is no time included for tree removal. Jeff Salvador from Pike Industries did say a 5-7% price increase will be in effect after Feb 5th for the 2022 construction season.

Thank you for the opportunity to bid on this job. Please don't hesitate to reach out to discuss this bid. I am happy to work with the Parks Dept to move around our services & time involved to accommodate your budget and include more possible volunteer hours where applicable.

Activity	Description	Unit Cost	Total Units	Total
Equipment and operator labor	Construction of trail and material transport. Mini Excavator and loader	\$100 per hr	200 hours	\$20,000
Hand labor & design	Trail design, layout, compaction and stone work	\$50 per hr	60 hours	\$3,000
Culvert	x1 20" long / 24"	\$1050 each	1	\$1050
Drainage stone	1 1/2"	\$9.55 per ton	375 tons	\$3581
Finish stone	3/8" custom bucket mix *Park Dept choice	\$22 per ton	250 tons	\$5500
Finish stone	1/2 " plant mix *Park Dept choice	\$11.50 per ton	250 tons	\$2875
Geotextile fabric	12' x 326' per roll	525 per roll	5 rolls	\$2625
Equipment mobilization	Transporting equipment to and from Hubbard Park			\$1000
>>>>	NOTE; total includes both finish materials	<<<<		\$39,631

