February 9, 2023 | Technical Proposal

Municipal Assistance Section of the Agency of Transportation (VTrans)

VTrans At-The-Ready (ATR) Consultant Engineering Services for Design 2023

vhb

In partnership with:

LN Consulting

UVM Consulting Archaeology Program

Contents

February 9, 2023

Ms. Nydia Lugo, Civil Engineer
Vermont Agency of Transportation
Highway Division - Municipal Assistance
219 North Main Street
Barre, VT 05641

Re: **Vermont Agency of Transportation—At-the-Ready Consultant Engineering Services for Municipalities 2023 Design Services**

Dear Nydia and members of the Selection Committee:

Our team is dedicated to our clients and the projects that improve mobility, enhance communities, and make Vermont a better place to live.

VHB is pleased to present our proposal in response to the Agency's Request for Qualifications for At-the-Ready Engineering **Design Services** for Municipalities. Our proven dedication to VTrans and its municipal transportation partners spans over 30 years. We understand the challenges facing Vermont and its communities and are firmly committed to helping achieve the vision of a safer, more efficient, and more connected transportation network. We believe in making meaningful contributions to our communities and our state by providing a balanced relationship between economic growth and environmental stewardship. We are committed to quality and at 1,800-strong, we provide both the local connection and depth of resources to meet the full needs of the VTrans Municipal Assistance Section (MAS) program.

Our team members' experience planning, permitting, and designing a wide range of roadway, bicycle, pedestrian, stormwater, and mulitimodal projects across Vermont has provided us with insights into innovations and potential issues that may arise during the course of these projects. We enjoy working cooperatively with municipalities and VTrans to identify and implement creative, effective, and constructible designs that local communities can be proud of for many years to come.

For this proposal, we have carefully chosen our team to meet the full range of municipal needs to successfully implement their projects. Our personnel are dedicated professionals who strive to provide the best services available. They are smart, genuine, and easy to work with, and sincerely care about doing projects the right way to provide the best end product possible. VHB staff are very familiar with the requirements of projects in the MAS process, and we look at projects from every angle to make sure that we see the big picture, avoid surprises and set-backs, and meet or exceed expectations every time.

We are extremely pleased to have the opportunity to present our proposal and we look forward to continuing collaborating with Vermont municipalities and VTrans on projects that make our communities even better places to live.

Sincerely,

VHB

Evan Detrick, PE
Contract Manager
Director of Transportation
edetrick@vhb.com

David Saladino, PE
Principal-in-Charge
Managing Director
dsaladino@vh

B. General Firm Information

VHB's South Burlington Team

MAS Understanding

The Vermont Agency of Transportation (VTrans) Municipal Assistance Section (MAS) was established in the 1990s as the Local Transportation Facilities section of the Program Development Division. Since its inception, its mission has been to work with and support municipalities and other organizations (the project sponsors) to implement transportation projects that improve its communities. This work includes a wide variety of projects, including bicycle and pedestrian facilities, roadway and intersection improvements, bridge and culvert replacements, stormwater improvements, salt sheds, and municipal park and ride facilities.

Projects advanced through the MAS are funded using a variety of sources, often including federal monies such as Transportation Alternatives grants, along with local matching funds, and occasionally state funds such as the Town Highway and Town Structures Grant Programs. With the use of federal and state funds, the projects are administered through VTrans and must be developed following the VTrans project development process outlined in the MAS's Local Projects Guidebook for Locally Managed Projects. Under this process, the municipality manages and develops the project, and VTrans administers the funding and verifies the established process is being followed. **Although VTrans helps the municipality with many aspects of the project development, it is ultimately the municipality's responsibility to advance the project. To do so, municipalities rely on the help of consultants.** Consultants can assist the municipalities in three different ways:

- Manage the project on behalf of the municipality as the Municipal Project Manager (MPM);
- Serve as the designer responsible for developing plans and specifications or preparing scoping reports;
- Provide construction administration and inspection services.

To retain the services of a consultant, municipalities have traditionally solicited proposals or statements of qualifications to identify consultants that are interested in helping them with their project, and to determine the best qualified firm to do so. This process can be burdensome on some municipalities, especially those with small staffs that are not familiar with the solicitation process. To streamline and simplify the process, the VTrans MAS developed a request for qualifications to identify a list of consultants that can provide services on an "At the Ready" basis. VTrans then develops three lists of consultants—one for Municipal Project Management, one for Design, and one for Construction Inspection that would essentially pre-qualify firms to provide these services. Once the lists of consultants are established, municipalities are able to pick the firm they feel is most qualified to assist them (after reviewing the qualifications of at least three consultants) and directly negotiate a reasonable scope and fee. By pre-qualifying a pool of consultants, the MAS aims to make the process easier for the municipalities, and condense overall project schedules by eliminating the solicitation effort from the process.

VHB's dedication to helping municipalities

VHB has a long history of delivering multi-faceted transportation services to municipalities throughout Vermont. Through our extensive experience on dozens of MAS/MAB/LTF projects, we are ideally suited to provide a broad array of design and scoping services under this retainer. Our Vermont team provides caring and responsive services, and with the support of nearly 100 individuals in Vermont, we have the resources to tackle the most challenging or unique assignments. We look forward to working with VTrans and municipalities across the State for the betterment of Vermont's transportation and stormwater infrastructure.

Firm Overview

Since 1979, VHB has partnered with public and private sector clients to provide high-quality transportation and stormwater engineering services through an integrated team approach to collaboration. VHB has continued to grow and hone a diverse workforce of 1,800 engineers, designers, scientists, and planners that deliver personalized service and bring value, responsiveness, and excellence to municipalities. We pride ourselves on our ability to guide our clients from initiation to completion of multi-disciplined, challenging, and important transportation projects of all sizes.

VHB Contact: Evan Detrick, PE
edetrick@VHB.com | 802.497.6179
40 IDX Drive
Building 100, Suite 200
South Burlington, VT 05403

VHB Vermont Managing Director: David Saladino, PE

Collaboration is a focal point of our approach to projects: VHB professionals routinely work together across practice areas to provide holistic project solutions. We emphasize truly listening to and understanding our client's unique needs while working collaboratively in a partnership. We also routinely incorporate input from stakeholders into our proposed solutions early in each project's development. This approach has helped us develop our strong track record of delivering comprehensive, forward-thinking, and well-supported projects in a timely and cost-effective manner. Evidence of this success can be found in the industry recognition VHB projects receive—and the number of repeat clients we are happy to serve.

The VHB Vermont Difference

VHB is different from other firms and uniquely prepared and suited to assist municipalities with At the Ready services in a comprehensive way because we offer many services right from our Vermont offices. We have provided similar services on dozens of projects for municipalities across Vermont.

VHB's services under this retainer will be provided out of our three Vermont offices. We offer a staff of nearly 100 professionals across Vermont who have experience in the many disciplines that may be required for local projects. Our staff in Vermont includes:

- Transportation and Traffic Engineers
- Structural Engineers
- Rail Engineers
- Planners
- Stormwater Engineers
- Landscape Architects
- Public Relations Specialists
- Professional Land Surveyors
- Boundary and Right of Way Specialists
- Geographic Information System (GIS) Specialists
- Natural Resource and Permitting Specialists
- National Environmental Policy Act (NEPA) Specialists
- Historic Preservationists
- Contaminated Soils Scientists
- Construction Administrators and Inspectors

Our Vermont offices provide the full range of services anticipated under nearly every MAS project. We take great pride in helping VTrans and municipalities improve the already great quality of life in Vermont. Our local presence, knowledge of VTrans' practices and expectations, and depth of resources allows us to provide personal service, value, and responsiveness every time.

We've put together a team in this proposal that reflects VHB's continued commitment to improve mobility, enhance Vermont communities, and balance development and infrastructure needs with environmental stewardship. While every project does not require this deep pool of talent, the resources are there when needed and our Vermont team can continue to call upon these key people as they have in the past.

For the planning, design, permitting and construction of the Lamoille Valley Rail Trail, VHB utilized nearly all of the skills listed above.

Subconsultants

UVM Consulting Archaeology Program

The University of Vermont Consulting Archaeology Program (UVM CAP) assists communities with their obligations with respect to archaeological resources, as required by state and federal laws. Since 1978 UVM CAP has conducted 350+ archaeological investigations as a direct consultant to VTrans and as a subconsultant to private engineering firms, cities, towns, and planning commissions for transportation-related projects. With a permanent full time staff of eight leading crews of trained field technicians, UVM CAP responds rapidly to all types of tranpsortation projects throughout Vermont.
Contact: John G. Crock, Ph.D | John.Crock@uvm.edu | 802-656-4310 | 111 Delehanty Hall, Burlington, VT 05405

LN Consulting | Electrical

LN Consulting was founded in Vermont in 1999 and has worked extensively as a subconsultant to VHB on dozens of projects providing electrical design support. The manager of L.N. Consulting is George D. Martin, P.E , and the company has a dedicated and experienced staff of 10 full time engineers. A majority of the firm's projects encompass sustainable, renewable, and energy efficient design techniques and systems.
Contact: John Askew | jaskew@lnconsulting.com | 802-318-8166 | 208 Flynn Avenue, #2J, Burlington, VT

Integrated Services Approach

VHB continues to hone a diverse workforce that delivers personal service, value, responsiveness, and excellence. The VHB Vermont staff has a wide range of skills and experience to cover the complete range of services needed under this retainer. **VHB's capability to provide a way array of skills under one roof benefits our clients by allowing us to provide efficient services requiring less coordination with subconsultants. Also, if unexpected issues arise during the design process, we have many skilled professionals at hand who can provide insights into how a similar problem has been handled for another project.** Our integrated planning, design, and engineering services include:

- Sidewalk and multi-use path scoping and design
- Integrated and protected bicycle lane scoping and design
- Complete Street evaluation, scoping, and design
- Roadway engineering
- Bridge and structural engineering
- Landscape architecture and streetscape design
- Design and implementation of traffic calming elements
- Park and Ride facility design
- Stormwater modeling and mitigation design
- Railroad coordination and rail crossing design
- Construction observation, inspection, and resident engineering services

VHB's Project Manager for each assignment will make certain that each relevant discipline is engaged and can provide feedback that further informs the overall project strategy. This assures that nothing is lost in translation between the client and project team members so that the best design ideas advance and the final product meets the project goals.

Team Accessibility

Our local presence throughout Vermont allows us to take a hands-on approach with attendance at regular work sessions during development of the design documents. In addition to our three offices, VHB has staff located around Vermont to be able to meet with a client on short notice. VHB also offers professionals across New England to assist and provide guidance with all aspects of transportation projects. Additionally, we maintain a diverse network of subconsultant teaming for specialty services such as geotechnical investigations and analysis, and archeological services. Opportunities for teaming with DBE and WBE firms will be considered based upon the best fit for services required.

When providing services on behalf of clients our goal is to be as accessible as possible. Our team members pride themselves in being accessible for a client's needs day and night. **When a large culvert beneath I-89 in Richmond recently failed, VTrans called VHB to help with the emergency response and contractor coordination.**


Community outreach in South Burlington

Previous Experience

VHB's Vermont staff was built around our relationships with local municipalities and VTrans. We are excited to continue our partnerships throughout the state and look forward to the opportunity to provide innovative, high quality transportation infrastructure projects in the future.

Current Municipal On-Call Engineering Services Contracts

- City of Burlington
- City of South Burlington
- City of Winooski
- Town of Middlebury

Current Vermont Agency of Transportation On-Call Retainers and Contracts

- At the Ready (ATR) Consultant Engineering Services for Municipalities
- Roadway, Traffic, & Safety Engineering
- Structures Engineering
- Railroad Engineering
- Park & Ride Management and Engineering
- General Environmental Services
- Natural Resource Services
- Environmental Resource Services
- Planning & Policy Services
- Design-Build Engineering & Construction Support
- Asset Management
- Highway Resurfacing
- Survey Services

Current Regional Planning Commission On-Call Contracts:

- Chittenden County Regional Planning Commission
- Northwest Regional Planning Commission

Commitment to Quality

Since the firm's inception, VHB has practiced a Quality Control process that was not only based on checking a product but a review by senior technical engineers to make certain of its conformance with the design requirements of the client. Today this process has evolved into a formal QA/QC program. It is an integral part of the client-focused service element of VHB. QA/QC is a planned program of continual improvement of VHB's work processes and project management techniques. **The goal of VHB's QA/QC program is to provide continuously improving service to our clients, faster production, better ideas, and more cost-effective ways in which to produce the work**. This translates into client benefits including saving money, accelerated schedules, and reduced problems during construction.

Through the QA/QC program, quality is improved not by more checking, but by doing it right the first time and eliminating the sources of these errors. By the time the design gets to the review stage, it has fewer errors, thereby reducing the time required for reviews and corrections.

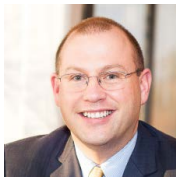
The Project Team

The Organizational Chart included on the following page shows the core team and key support staff that will work on this retainer contract. VHB's **Contract Manager, Evan Detrick, PE**, has worked continuously on MAS/MAB/LTF projects over the last 18 years. His experience includes managing over 75 projects through the program for municipalities across the State. Evan has been the Municipal Project Manager on significant roadway design projects in Hartford and South Hero, and has managed the design of a wide range projects including sidewalks, pathways, bridge

replacements, rehabilitation of covered bridges, roadway and intersection improvements, roadway resurfacing, slope stabilization projects, and stormwater improvement projects.

Under this retainer, Evan will be the initial point of contact for VTrans and municipalities for all assignments. Depending on the specific project, Evan will either manage the project himself, or assign another VHB Project Manager in consultation with the municipality and VTrans MAS Project Supervisor. **The VHB Project Manager will be determined based on the best interests of the municipality, and will not be finalized until the municipality and VTrans are in agreement.** For every assignment, Evan will conduct project reviews on a routine basis to verify the project is moving along as expected and VHB's services are meeting the expectations of VTrans and the client. Brief biographies of our key team members are shown in Section E of this proposal.

C. Organizational Chart



Principal-in-Charge
David Saladino, PE

Contract Manager
Evan Detrick, PE ●

Technical Advisor
Wayne Symonds, PE ●

DESIGN

PROJECT MANAGERS

Evan P. Detrick, PE ●
Jennifer Conley, PE, PTOE ●
Daniel M. Peck, PE ●
Drew Gingras, PE ●
Jeff Bachiochi, PE ●
Branden Roberts, PE
Karen Sentoff, EIT
Cierra Ford, PE ●
Scott Burbank, PE ●
Peter Smiar, PE ●

ENGINEERING STAFF

Transportation
Daniel M. Peck, PE ●
Drew Gingras, PE ●
Jeff Bachiochi, PE ●
Branden Roberts, PE
Tanner Burt, PE
Cierra Ford, PE ●
Rose O'Brien, EIT
Shayna Lillis
Nikki Mann
James Eyler

Structural
Scott Burbank, PE ●
Jason Keener, PE

Active Transportation
Rick Plenge, PE ●

Traffic
Karen Sentoff, EIT
Elisabeth Sundberg*
Evan Haugh**
Joseph Vanacore**

Stormwater Management
Peter Smiar, PE ●
Chris Hale-Sills, PE

SUPPORT

Historic/Cultural Resources
Kaitlin O'Shea ●

Rail Crossings
Scott Burbank, PE ●

Right-of-Way/Survey/GIS
Ryan Cloutier, LS ●

Electrical
LN Consulting

NEPA/Permitting
Brad Ketterling ●

Hydrologic & Hydraulic Studies
Robert Wildey, PE, CPESC ●

Contaminated Soils
Kurt Muller, PE

Landscape/Streetscape Design
Michael Willard, LEED AP, ASLA
Jeff Dube, PLA*

Archaeology
UVM Consulting Archaeology Program

GIS/Mapping/Graphics
Jesse Therrien*
Alexis Coplin*
Kimi Tokarczyk*

● Key Personnel

* Added April 18, 2023. See resume section for more information.

** Added August 11, 2023. See resume section for more information.

SUBCONSULTANT FIRMS
LN Consulting
UVM Consulting Archaeology Program

D. Availability Chart

The chart below indicates the average percentage of time each person has available to spend on projects under this retainer.

KEY PERSONNEL	NAME	ROLE	% AVAILABILITY FOR THIS CONTRACT
●	**Evan Detrick, PE**	Contract Manager, Project Manager	50%
	David Saladino, PE	Principal-in-Charge	10%
●	**Wayne Symonds, PE**	Technical Advisor	15%
●	**Jennifer Conley, PE, PTOE**	Project Manager	30%
●	**Daniel M. Peck, PE**	Project Manager/Senior Transportation Engineer	40%
●	**Drew Gingras, PE**	Project Manager/Senior Transportation Engineer	50%
●	**Jeff Bachiochi, PE**	Project Manager/Senior Transportation Engineer	50%
	Branden Roberts, PE	Project Manager/Senior Transportation Engineer	50%
	Tanner Burt, PE	Transportation Engineer	25%
	Karen Sentoff, EIT	Project Manager/Traffic Specialist	50%
	Nicole Rogers, PE	Project Manager/Traffic Engineer	50%
●	**Cierra Ford, PE**	Project Manager/Transportation Engineer	50%
●	**Brad Ketterling**	NEPA/Permitting	20%
●	**Kaitlin O'Shea**	Historic/Cultural Resources	20%
●	**Ryan Cloutier, LS**	Right of Way/Survey	20%
●	**Scott Burbank, PE**	Project Manager/Structural/Rail Crossings	15%
●	**Robert Wildey, PE, CPESC**	Hydrologic and Hydraulic Studies	20%
	Jason Keener, PE	Structural Engineer	25%
	Kelly Barry, PE	Structural Engineer	25%
	Michael Willard, LEED AP, ASLA	Landscape Architect/Streetscape Design	30%
	Rose O'Brien, EIT	Transportation Designer	25%
	Shayna Lillis	Transportation Designer	25%
●	**Rick Plenge, PE**	Active Transportation Specialist	10%
	Nikki Mann	Transportation Designer	25%
	James Eyler	Transportation Designer	25%
●	**Peter Smiar, PE**	Project Manager/Senior Stormwater Engineer	40%
	Chris Hale-Sills, PE	Stormwater Engineer	50%

E. Technical Capability

Understanding

Design activities include the development of scoping reports, preparation of engineering drawings, and preparation of specifications and contract documents so that projects can be brought to construction.

Scoping is commonly referred to as "Phase A—Project Definition" and is undertaken to identify a range of alternatives to address an identified need.

Phase A—Project Definition:

- Collect background information
- Identify environmental resources
- Local Concerns Meeting
- Identify Purpose and Need
- Evaluate a range of alternatives
- Preparation of Conceptual Plans and Cost Estimates
- Evaluate phasing (when necessary)
- Alternatives Presentation Meeting
- Reach Project Consensus

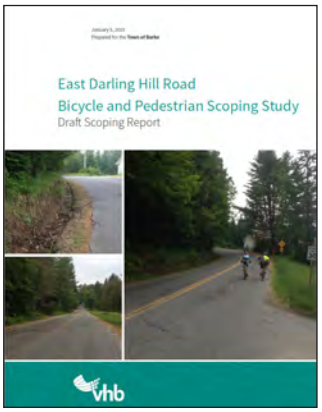
During Project Design, detailed engineering drawings and contract documents are prepared so construction bids can be solicited from qualified contractors and the project can be advanced through construction.

Phase B—Project Design:

- Topographic survey
- Public Engagement
- Preliminary Plans
- National Environmental Policy Act (NEPA) clearance
- Permitting
- Utility coordination
- Right of Way impact assessment and acquisition
- Final Plans and Bid Documents
- Plans, Specifications and Estimates (PS&E) submission
- Assistance with Bid Process
- Bid Analysis and Recommendation to Award

Relevant Skills

Scoping Studies and Reports

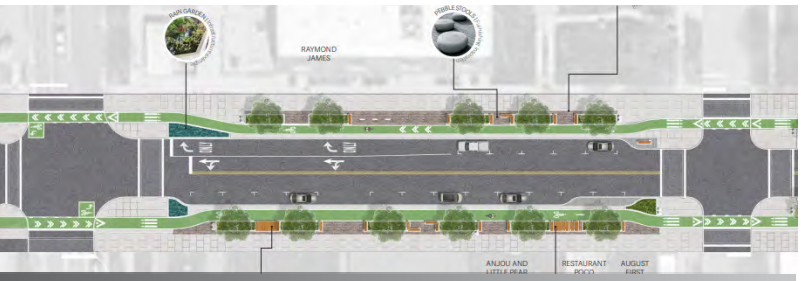


VHB works closely with communities to understand their concerns and needs for addressing safety and mobility issues for all modes of travel. VHB has undertaken a wide variety of scoping projects for numerous Vermont municipalities, including the **Town of Manchester Rail Trail Scoping Study, the Darling Hill Road Scoping Study in East Burke, the Williston Road Corridor Scoping Study for South Burlington, and Colchester's Malletts Bay Bike/ Ped Scoping Study.** We routinely prepare thoughtful and comprehensive scoping reports because we are well versed in engaging stakeholders at the Local Concerns meeting, and we work with the project sponsor to develop and evaluate alternatives to meet the goals of the project.

In addition, we fully understand how to design bicycle/ pedestrian, roadway, intersection and complete street infrastructure projects following the VTrans MAS process which enables us to focus on developing practical and constructible alternatives, reducing time spent on alternatives that would ultimately not become projects. We understand the importance of connectivity to local communities, and work to identify feasible, cost-effective alternatives that meet the project needs and enhance all modes of transportation.

Bicycle and Pedestrian Planning & Design Services

VHB has a proud history of working with state, regional, and municipal clients across Vermont to help them envision, plan, design, and construct a wide range of bicycle and pedestrian facilities. VHB's bicycle and pedestrian professionals deliver innovative, creative, and cost-effective solutions that integrate safe and efficient multimodal facilities into the built environment. We work closely with our clients and project stakeholders to determine the best use of limited funds to design environmentally sensitive and sustainable projects. We also understand the importance of broad community outreach and involving stakeholders early on in the process to establish community consensus around the project elements.



The VHB team is designing expanded pedestrian areas along with separated bike lanes along Main Street in Burlington

VHB's bicycle and pedestrian projects span the State, and include sidewalks, urban and rural pathways, multimodal transportation networks, pedestrian streetscape enhancements, greenways, rail trails, bike lanes on roadways, and riverwalks. The experience gained from designing a robust portfolio of constructed projects provides valuable feedback to projects that are in their planning stages where creativity must be balanced with real world realities. **Our South Burlington office includes a Bicycle Technical Committee member from the National Committee on Uniform Traffic Devices.** This Committee reviews bicycle accommodation around the country and is creating the national policy for bicycle pavement markings and signage. Our local experience ranges from adding on-road bicycle lanes in the Northeast Kingdom, to designing separated shared use paths in Bennington and Burlington, to innovative solutions to accommodate cyclists at intersections in Burlington. Our planners and engineers use their bicycles for basic transportation, recreation and sport, and this helps them comprehend and appreciate the factors that make multimodal facilities more welcoming, enjoyable and safe for a broad spectrum of users.

Roadway and Intersections

VHB designs roadway and intersection projects of all sizes for state transportation agencies, municipalities, and private developers. Projects range in size from isolated rural intersections to the redesign of interchanges along I-89, to the reconstruction of arterials, collectors, and local roads.

Services encompass the full design process, including:

- Preliminary planning and conceptual design
- Identification of resource constraints and mitigation measures
- Public involvement
- Preparation of contract plans, specifications and estimates
- Right-of-way
- Construction sequencing and scheduling
- Traffic management during construction
- Value engineering
- Contract documents and bidding services

Our engineers are well versed in the many aspects of roadway design including pavement, signs and pavement markings, drainage, guardrail length of need and end treatments, horizontal and vertical alignments, superelevation, clear zone determinations, and incorporation of bike lanes and buffers. We routinely apply the principles from the AASHTO "Green Book" and Roadside Design Guide: FHWA's Manual on Uniform Traffic Control Devices and Standard Highway Signs and Markings Book; and the VTrans Roadway Design Manual; the Standard Drawings; and the Specifications for Construction. **Under the MAS program, we've developed designs for the reconstruction of 1.2 miles of Federal Street in St. Albans; for dropping a through lane and adding bike lanes on US 5/Railroad Street in St. Johnsbury;** and and replacing a signalized intersection with a roundabout at the Bayside Intersection in Colchester.

VHB is designing improvements to Killington Road, which will allow for the expansion of the base village area. VHB graphics specialists created a number of images that are being used to demonstrate the changes to the general public.

As a partner with VTrans we have helped them develop some of their guidance materials. VHB was the primary author of VTrans' Hydraulics Design Manual which provides design guidance and requirements for the design of bridges, culverts, closed drainage systems, and open channels. Because we work extensively directly with VTrans, we have an in-depth understand of their requirements and design practices.

Given our on-going work with VTrans on a variety of roadway and intersection projects, municipalities can be confident that VHB will manage and design their projects using the latest standards, thereby eliminating the need for "redesigns" and making the best use of their resources. However, we understand that not VTrans requirements must be followed on all projects and can scale the approach appropriately.

Traffic

VHB's Traffic group is very well versed and knowledgeable in providing traffic analysis, traffic signal design, signing and pavement marking designs, ITS, speed studies, and road safety audits. These local traffic professionals balance the needs of all users to create a design that operates both safely and efficiently. Over the years, the traffic group has developed specific skill sets and high-quality working relationships with their peers at VTrans. This combined experience provides VTrans and municipalities with professionals that can perform routine design elements such as pavement markings and signing to complex coordinated signal systems, traffic control plans, and technically challenging ITS support.

Landscape Architecture and Placemaking

VHB's Landscape Architecture services include landscaping design, gateway markers, hardscaping such as benches and informational kiosks, and the planning and design of public spaces that make communities special. Our approach is to work closely with our clients to deliver solutions that reinforce a community's sense of place and identity through thoughtful design. We use VHB's integrated services approach, drawing upon our in-house technical skills to plan and design each of our projects, resulting in high-quality, enduring landscapes. Our landscape architectural project experience is diverse, including the planning and design of parks, recreational facilities, town centers, residential communities, and urban streetscapes. Founded on the recognition that we are civic and environmental stewards for generations to come, we strive to integrate principles of sustainability into the context of each project. Further, we make it our goal to implement creative planning and design solutions to help shape more livable community environments on projects of all scales.

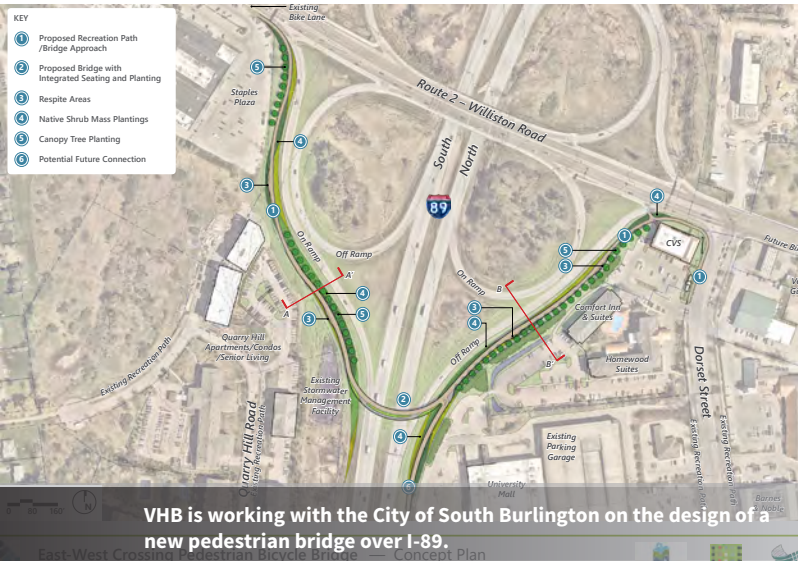
Park and Ride Engineering

For nearly ten years, VHB has been supporting VTrans' Park & Ride projects throughout Vermont including facilities in **Colchester, Springfield, Bradford, Pittsford, Barton, Berlin, Williston, Williamstown/Northfield, and Randolph**—the first Park & Ride in the state with permeable bituminous pavement. VHB currently holds the VTrans Park & Ride retainer contract and we have provided Project Administration services for 6 Park & Ride projects. Our experience providing Project Administration services on VTrans' recent Park & Ride projects has given us an in-depth understanding of Park & Ride projects from scoping to construction. VHB was also just selected to update the VTrans Park & RIde Plan, so we're thoroughly familiar with VTrans' Park & Ride policies and practices.

Bridges and Culverts

VHB provides the complete range of bridge design, engineering, and inspection services. We have performed inspection, rating, evaluation, and repair of municipal, state-owned, and federal bridges throughout many locations along

the eastern seaboard. We know how to create cost-effective right-sized solutions for bridge and culvert projects throughout Vermont which extend the service-life of bridges.



VHB is working with the City of South Burlington on the design of a new pedestrian bridge over I-89.

Stormwater Design and Treatment

From parks to tight urban spaces to suburban streets, VHB weaves site and transportation engineering with stormwater management and landscape architecture to create enduring and compliant stormwater designs that fit the environment. Because many of our clients are municipalities, we understand what is necessary to coordinate among multiple municipal groups with different operational, budgetary, and regulatory concerns in order to prepare and implement a realistic stormwater management program and to prioritize capital improvements that assure proper drainage/flood control and water quality control for resource protection and regulatory compliance. VHB designed VTrans' first interstate stormwater retrofit project.

Our work on MAS projects has provided us with the understanding that plans and bid documents for municipal projects can be scaled back somewhat and need not strictly follow typical VTrans requirements. No project is too big or small for us since we understand how to tailor our approach and our product appropriately. We are sensitive to the fact that funding to municipalities is limited, and strive to economize our engineering effort so that more funding can be allocated to construction.

Vermont Project Experience

Municipal Project Experience

Our ability to help our clients initiate and complete intricate, challenging, and important projects has given rise to an impressive portfolio of success, demonstrated by a high percentage of VHB's clients becoming repeat customers. Our experience in Vermont includes such high-profile projects as the design of the **Lamoille Valley Rail Trail**, which spans the northern tier of the State and once completed will provide year-round recreational opportunities on over 93 miles of trail. This project has been a collaborative partnership between the Vermont Association of Snow Travels (VAST), VTrans and the many communities through which the trail passes. VHB has also partnered with the City of Burlington for the rehabilitation of the **Burlington Bike Path**. Often referred to as the "crown jewel" of Burlington's recreational facilities, each year the path services tens of thousands of visitors and residents alike. VHB has designed multiple phases of the Bike Path totaling over six miles in length and is currently working on the design of the final segments.


Burlington Bike Path Rehabilitation

Project Experience

VHB's Vermont staff was built around our relationships with local municipalities and VTrans. We are excited to continue our partnerships throughout the state and look forward to the opportunity to provide innovative, high quality transportation infrastructure projects in the future. Providing consulting services to municipalities, and to state and federal agencies, is a core purpose of our company and a key focus of our Vermont staff. Our overall approach to the management of this contract is informed by our successful experience on a wide range of similar on-call assignments.

Scoping Studies

Health Path Scoping Study (MAS Project), St. Albans, VT

» VHB is working with the Town of St. Albans to complete the Health Path Scoping Study, which will identify potential multi-use path alignments to connect a 3-mile long gap between the Collins-Pearly Sports Complex and the Missisquoi Valley Rail Trail.

» Following the scoping study process of existing condition identification, improvement alternative analysis, and the selection of a preferred alternative(s) for the future multi-use trail through the Town of St. Albans with a connection to the Hard'ack Recreation Area

» Alternatives include many spur routes to connect to a medical complex, retirement communities and other destinations, as well as the crossing of the St. Albans State Highway and VT Route 36

Contact: David K. Allerton, P.E., Director of Public Works/Town Engineer
d.allerton@stalbanstown.com | 802-527-0739 (office)

Lake Street and Maquam Shore Road Scoping Study, Swanton, VT

» Presents a 4.5-mile-long scenic corridor, departing the Village Center of Swanton and traveling south along the shores of Lake Champlain, functioning as an alternate route for the Champlain Bikeway and a key connection opportunity to the Lamoille Valley Rail Trail

» VHB worked with the Town of Swanton to identify and evaluate alternatives to improve safety and mobility for all users—bicyclists, pedestrians and motorists—along the project corridor

» The VHB team worked alongside the Town to manage the public outreach effort, conduct the necessary existing conditions research, and develop smart, constructible design alternatives to address the stated purpose and needs of the project

"The VHB staff … were easy to work with [on the Scoping Study]. They presented their alternative concepts in clear, understandable terms accompanied by professionally drawn designs. Their Zoom presentations were done courteously with an open mind to suggestions from town staff and the public." --- Town Manager, Town of Swanton

Contact: Brian Savage, Swanton Town Manager
townadmin@swantonvermont.org | 802.868.7418

Malletts Bay Transportation and Stormwater Scoping Study, Colchester, VT

» Three VHB teams worked with the Town of Colchester to find preferred solutions to mobility, congestion, and stormwater issues throughout the Malletts Bay area.

» VHB evaluated alternatives for bike and pedestrian accommodation along West Lakeshore Drive, alternatives to improve safety and traffic capacity at the "Bayside" intersection, and (through our subconsultant) numerous stormwater treatment measures to improve runoff into Malletts Bay.

» VHB produced high-quality, creative, and comprehensive solutions to some of the most significant problems facing Colchester, including bicycle and pedestrian accessibility, traffic congestion, stormwater runoff throughout the watershed, and water quality of Malletts Bay.

Contact: Karen Adams, Technical Services Manager, Town of Colchester
802.264.5621| kadams@colchestervt.gov

Shared Use Paths

Lamoille Valley Rail Trail (LVRT), St. Johnsbury to Swanton (MAS Project)

» Permitting, Public Information and Engineering Services

» Provided professional services for a 93-mile trail through 17 communities and 3 counties, encountering over 88 bridges, 500 culverts, 22 state highways, 69 town roads and 97 private crossings

» Compiled base plans that documented existing conditions, including natural and cultural resources, using qualified staff and innovative field data collection techniques

» Assisted with public involvement process and developed conceptual plans and NEPA documentation in Phase A; prepared permit applications and completed final design for Phase B; and provided engineering support and public information updates throughout the Construction phase

» Developed the final design of the entire trail, rehabilitation of over 2 dozen major bridges and dozens of smaller culverts, and completed permit applications for approximately 93 miles of trail construction

» Developed LVRT Management Plan; currently developing amenity design standards

Contact: Chris Hunt, VTrans Project Supervisor
Chris.hunt@vermont.gov | 802-595-4556

Bennington Rail Trail, Bennington, VT (MAS Project)

» Town of Bennington engaged VHB to design the conversion of a former rail line into a multi-use pathway through downtown Bennington.

» Provided permitting and engineering services for a 2-mile trail through the northwest area of Bennington, crossing multiple town and state highways

» Compiled base plans that documented existing conditions, including natural and cultural resources, using qualified staff and innovative field data collection techniques

» Developed conceptual plans and NEPA documentation in Phase A; prepared permit applications and completed final design for Phase B; and provided engineering support throughout the Construction phase

» This trail follows a former rail line through a historically industrial corridor with known contaminated soils issues. VHB conducted pre-characterization investigations to identify the extent and types of contaminants, and prepared a Soil Management Plan to direct the contractor how to handle these soils during construction.

Contact: Daniel Monks, Planning Director
dmonks@benningtonvt.org | 802-442-1037

Three Rivers Path Extension—Phase 1, St. Johnsbury, VT

» Developed this 0.75-mile-long extension of the Three Rivers Path from its former terminus at South Main Street to bring it into the heart of downtown St. Johnsbury

» Path included a combination of on-road "advisory lanes", 10-wide gravel-surfaced pathway, sidewalks, and on-road bike lanes

» Design, utility coordination, and contract document preparation

» Alternatives developed by VHB avoided wetlands and minimized property owner impacts

» Project included the construction of a timber picnic pavilion with running water, electricity, picnic tables, and trash/recycling receptacles.

Contact: Chad Whitehead, St. Johnsbury Town Manager
(802) 748-8605 | cwhitehead@stjvt.com

Sidewalks

Middlebury Pulp Mill Bridge Road/Seymour Street Sidewalk (MAS Project)

» Towns of Middlebury, Weybridge and the Addison County Regional Planning Commission.

» Engineering services for plan development and bid documents for a new section of sidewalk approximately 2,700 feet in length along Seymour Street in Middlebury and along the length of Pulp Mill Road in Weybridge and Middlebury

» Rectangular rapid flash beacon at one of the crosswalks

» Planting of numerous trees to address property owner concerns

» Construction of a Redi-Rock retaining wall with custom cap and railing to minimize impacts to a property owner's driveway

Contact: Adam Lougee
alougee@acrpc.org | 802-388-3141

Montpelier Elm Street Sidewalk (MAS Project)

» Under an At-The-Ready contract, the City of Montpelier selected VHB to provide design and permitting services associated with the construction of new concrete sidewalk along Elm Street (VT Route 12) in Montpelier, Vermont.

» The project extend 1,300 feet along the east side of Elm Street from North Park Drive to the Community College of Vermont. The sidewalk extended the City's existing Elm Street sidewalk system from its former northern terminus to the Community College, a daycare center, and the Montpelier Recreational Field complex.

» VHB worked closely with City staff to make sure that an optimal alignment was selected for the sidewalk to minimize overall utility or right-of-way impacts while maximizing the opportunity for additional green space and future landscaping and streetscape amenities along the corridor.

Contact: Corey Line
cline@montpelier-vt.org | 802-262-6272

Stowe Sidewalk Construction & Utility Relocation

» Town of Stowe selected VHB to provide engineering and design services for the reconstruction of approximately 1.5 miles of existing sidewalks adjacent to its Class 1 Town Highways, including Main Street and the Mountain Road, within the historic commercial corridor of the old Stowe Village.

» Project included new and reset granite curbing, new concrete and concrete with paver accent sidewalks, ADA compliant crosswalks and ramps, interfaces with abutting sidewalks/patios and driveway entrances and miscellaneous stormwater and streetscape improvements.

» The project also implements certain utility relocations to eliminate existing overhead wired utilities along Main Street.

Contact: Harry Shepard, PE
hshepard@stowevt.gov | 802-253-8770

Stope Stabilization

Duxbury Crossett Hill Road Slope Stabilization (MAS Project)

» Town of Duxbury engaged with the team of VHB and Golder Associates, utilizing FEMA disaster funds, to design a repair for the failed embankment supporting Crossett Hill Road above the Crossett Brook streambank.

» VHB worked with Golder to design the new roadway embankment including the layout of stone fill slopes, ditches, curtain drains, and guardrail for approximately 300' of gravel roadway, and temporary construction access.

» Included permitting (DEC Stream Alteration, USACE), calculating permanent and temporary impacts and preparing all necessary application materials. VHB assisted the town in negotiating with private landowners, prepared Contract Documents (construction plans, specifications, and an estimate), and performed inspection services during construction.

Contact: Mari Pratt
Mari.DuxburyVT@gmail.com | 802-279-6470

Brownington Center Road Slope Stabilization (MAS Project)

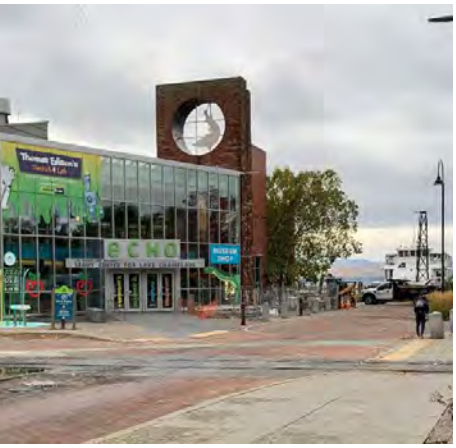
» Town of Brownington engaged with the team of VHB and Golder Associates, utilizing FEMA disaster funds, to design a repair for the failed embankment supporting Center Road above the Willoughby River streambank.

» VHB worked with Golder to design the new roadway embankment including the layout of stone fill slopes, ditches, curtain drains, and guardrail for approximately 300' of gravel roadway, and temporary construction access.

» Included permitting (DEC Stream Alteration, USACE), calculating permanent and temporary impacts and preparing all necessary application materials. VHB assisted the town in negotiating with private landowners, prepared Contract Documents (construction plans, specifications, and an estimate), and performed inspection services during construction.

Contact: Bev White, Selectboard Chair
beviejw462@yahoo.com | 802-754-8449

Rail Crossings



College Street Rail Crossing, Burlington, VT

» Engineering Services for VTrans that included assessing various track and siding layout alternatives, topographical survey on the New England Central Railroad right-of-way, coordinating with the VTrans Rail Section, acquiring inverts for stormwater utilities affected by the crossing project, and completing a Rail Diagnostic Meeting.

» Design will accommodate a second track crossing College Street on the Burlington waterfront in preparation for the extension of the Ethan Allen Express service to Burlington.

» VHB was engaged separately by the City of Burlington to relocate the former Burlington Greenway from the east side of the railroad to the west side, and for the reconstruction of the plaza area in front of the ECHO Leahy Center.

Contact: Paul Libby, VTrans Senior Project Manager
(802) 828-5209 | paul.libby@vermont.gov

Bridges + Culverts

Bethel Pinello Road Bridge Replacement

» During a 2019 flood event, the Pinello Road Bridge was damaged beyond repair due to flooding of the Gilead Brook, and a temporary bridge was installed to maintain access to the dead-end road.

» The storm event was a FEMA Disaster Declaration event.

» VHB is assisting the Town in vetting permanent replacement alternatives, cost estimating, navigating FEMA requirements, environmental permitting, design, and construction.

Contact: Therese Kirby, Town Manager
802-234-9340 | betheltownfinance@comcast.net

City of Montpelier, Grout Road Bridge

» Grout Road Bridge is a single span steel girder with timber deck bridge supported on unreinforced concrete abutments that services four private residences.

» VHB is responsible for the engineering to provide a load rating of the bridge in existing conditions, alternatives analysis report, permitting, utility coordination and design bid documents for the selected alternative (complete bridge replacement).

» In order for the existing structure to last until full replacement can be completed, VHB provided interim repair recommendations and interim repair documents for bidding.

Contact: Zach Blodgett, Deputy Director, Public Works
802-223-9508 | zblodgett@montpelier-vt.org

Stormwater

Green Stormwater Infrastructure Retrofits, Burlington, VT

» Topographic and utility survey, subsurface soil investigation, stormwater retrofit planning and design, and development of Construction Documents, and construction phase services

» 15 stormwater retrofit project locations located within the City right-of-way in a residential neighborhood in the City's South End, and 9 ROW subsurface infiltration systems in the Old North End

» Established site constraints, drainage patterns, and evaluated treatment opportunities associated with the proposed stormwater retrofit locations

» Final South End design consists of 15 separate bioretention cells that provide collection treatment, and infiltration of stormwater runoff that will result in a reduction of peak storm-water flows and total runoff volume to the City's existing stormwater collection system. This detention and infiltration of stormwater runoff achieves the City's project goals by reducing the frequency of combined-sewer overflow (CSO) events

» Burlington and VHB are now teaming to develop the next six retrofit designs to address CSO events in Burlington's Old North End.

Contact: Megan Moir, Division Director of Water City of Burlington, VT
802.863.4501 | mmoir@burlingtonvt.gov

Town of Essex Stormwater Services, Essex, VT (MAS Project)

» Soils investigation, scoping and conceptual ROW retrofit design services associated with stormwater retrofit treatment projects in the Autumn Knoll, Meadows Edge, and Logwood Circle neighborhoods. VHB is underway with site and utility survey and soil boring coordination.

» Partnering with the Town of Essex and the MAS to provide scoping, cost estimating, best fit analysis, and conceptual through final design services associated with two proposed subsurface stormwater treatment retrofit systems to be located on the lands of the Church of Latter-Day Saints property located along Essex Way

» Project management, coordination with the Church staff, public outreach and local concerns meetings, field survey, utilities research, wetland permitting assessments, soils investigations for infiltration potential and hazardous waste considerations, permitting and agency coordination, conceptual plan development, utility coordination, and environ-mental impact resolution

» Currently researching sand filter media amendments to achieve enhance phosphorus removal to be incorporated into the treatment system to make progress toward the goals of the Towns forthcoming Phosphorus Control Plan

Contact: Annie Costandi, Director of Stormwater Operations
802.878.1344 | acostandi@essex.org

Roadway Reconstruction

Winooski Main Street Revitalization Project, Winooski, VT (MAS Project)

» Full reconstruction of the Main Street (US 2/7) corridor from the Colchester Town line south approximately 4,000 feet to the bridge over the New England Central railroad.

» Significant ROW stormwater management enhancements consisting of small-scale gravel wetland cells located within the ROW, upgrades to existing water and wastewater infrastructure, burial of electric and telecommunication infrastructure, roadway reconstruction, and landscape, streetscape, traffic control, and pedestrian safety enhancements

» Very proactive community engagement with the public and local stakeholders.

Contact: Ryan Lambert, City Engineer
802.734.0022 | rlambert@winooskivt.gov

Burlington Great Streets–Main Street, Burlington, VT (MAS Project)

» Lead consultant and designer on this project to completely revitalize and reconstruct Main Street, incorporating ROW stormwater treatment retrofits within the confined corridor.

» Utility and stormwater soils investigation, full construction engineering design of a six-block-long section of Main Street from Battery Street to South Union Street.

» Began at the Alternatives Development and Public Involvement phase, continuing forward to Conceptual Plans through Contract Documents

» Extensive community and stakeholder outreach resulted in unanimous approval by City Council

» Final design enhances all elements of the streetscape to give Main Street a distinct identity, upgrading pedestrian facilities, installing bicycle facilities, improving stormwater infrastructure and treatment, and replacing and modernizing traffic signal equipment at six intersection.

Contact: Laura Wheelock, City of Burlington DPW
802-540-0397 | LWheelock@burlingtonvt.gov

St. Albans Federal Street Multimodal Connector Project (MAS Project), St. Albans, Vermont

» Project will reduce truck traffic and vehicle delays on Main Street; improve pedestrian and bicycle accommodations; and create direct access to commercial and industrial uses. Will reconstruct the roadway pavement and adjacent curbs and sidewalks; add bike lanes and parking; add landscaping and lighting; reconstruct drainage infrastructure and replace subsurface utilities. Federal Street will also be extended at its south end to make a direct connection to the St. Albans State Highway and I-89

» Authored the Environmental Assessment, Section 106 and Section 4(f) compliance documentation, conducted the public hearing, and drafted the Finding of No Significant Effect

» VHB services include topographic and ROW surveys; conceptual, preliminary and final design; permitting; utility coordination and design; traffic signal design; preparation of ROW Plans for nearly 200 properties; and preparation of bid documents

Contact: Chip Sawyer, Director of Planning & Development
802.524.1500 ext.259 | c.sawyer@stalbansvt.com

Key Personnel

Evan P. Detrick, PE

Contract Manager | 39 years of professional experience, 7 years with VHB

Evan is Director of Transportation in VHB's South Burlington office with over 35 years of experience supporting federal, state, and municipal projects. He has completed the planning and design of projects, including a variety of sidewalks, pathways, and trails; roadways on new alignments; roadway widening and rehabilitation; bridge construction and replacement; environmental assessments in accordance with NEPA; traffic signal improvements; and numerous stormwater improvement projects.

Wayne Symonds, PE

Technical Advisor | 31 years of professional experience, 1 year with VHB

Wayne is a Senior Structural Engineer supporting VHB's bridge design team throughout New England. Prior to joining VHB, Wayne worked for nearly 30 years with the Vermont Agency of Transportation (VTrans) as a bridge engineer, Project Manager, Structures Program manager and retiring as the Chief Engineer for the Highway Division. At VHB, Wayne is focused on mentoring, quality assurance, innovation, and constructability for bridge and other Transportation projects.

Jennifer Conley, PE, PTOE

Project Manager | 29 years of professional experience, 4 years with VHB

Jennifer is VHB's Director of Transportation Systems for Vermont. She has extensive transportation engineering experience having managed dozens of traffic engineering projects including planning and scoping studies, traffic operational studies, traffic studies, traffic signal design, and regional traffic modeling. Incorporating all roadway users, Jennifer has designed Complete Streets throughout New England. She has also managed transportation master plans for municipalities and institutions and conducted corridor studies.

Daniel M. Peck, PE

Project Manager/Transportation | 23 years of professional experience, 23 years with VHB

A civil engineer in VHB's Highway Department, Dan's focus is on transportation projects ranging from scoping studies and design projects (conceptual through contract design) of roadway, intersection, sidewalk and multi-use path projects that follow the VTrans MAS process, to include public informational meetings, review of right-of-way plans, development of construction estimates, and utility coordination.

Cierra Ford, PE

Project Manager/Transportation | 5 years of professional experience, 5 years with VHB

Cierra is a Transportation Engineer with experience in scoping and design, construction inspection, and developing the design of roadway, bridge and multi-use path projects. Cierra's services include drafting preliminary and final design plans using MicroStation and assisting senior project managers and engineers to complete design calculations for civil and structural projects.

Drew Gingras, PE

Project Manager/Transportation | 15 years of professional experience, 10 years with VHB

Drew is a Project Manager and Engineer with experience in transportation projects including bike/pedestrian planning and design, planning and scoping studies, traffic operations analysis, traffic calming design, and complete street conceptual design. Drew has designed more than 30 miles of on-street bicycle facilities, and has served as the design engineer on bicycle and pedestrian design projects throughout the northeast. Drew served as the Project Engineer for both the Colchester Avenue and East Allen Street Corridor Studies with the Chittenden County Regional Planning Commission (CCRPC).

Jeff Bachiochi, PE

Project Manager/Transportation | 11 years of professional experience, 6 years with VHB

Jeff is a Civil Engineer with extensive experience working on transportation and infrastructure projects, including urban roadways, highways, bridge approaches, rail & intermodal stations, traffic signals, and pedestrian/bicycle facilities. He is proficient in AutoCAD Civil 3D and MicroStation Open Roads Designer for roadway & utility modeling and plan production, and has experience creating specifications, estimates, and bidding documents for state, municipal, and privately funded infrastructure projects.

Brad Ketterling

NEPA/Permitting | 27 years of professional experience, 20 years with VHB

Brad has worked as an environmental scientist for close to two decades, specifically in the fields of wetland mitigation site feasibility and design, stream assessment, watershed planning, state and federal permitting, and NEPA compliance. Brad helps clients navigate complex regulatory requirements and achieve successful results by identifying and assessing natural and cultural resource issues and constraints and developing strategies to obtain authorizations that are in the best interest of the client and the environment. He has worked on a variety of projects from linear transportation and energy infrastructure improvements to telecommunications networks to ski resorts to natural areas restoration.

Kaitlin O'Shea

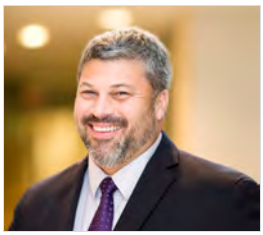
Historic/Cultural Resources | 17 years of professional experience, 8 years with VHB

Kaitlin is a Preservation Planner in VHB's Vermont office. With a strong background in and understanding of preservation principles and practice, she provides proficiency in regulatory process and compliance, particularly Section 106 review and Section 4(f) evaluations, as well as historic documentation, historic resource identification, and project management in the government framework. Kaitlin meets the Secretary of the Interior's Professional Qualification Standards for an Architectural Historian and Historian (36 CFR 61).

Ryan Cloutier, LS

Right of Way/Survey | 25 years of professional experience, 6 with VHB

Ryan is a Survey Manager in VHB's South Burlington office. Ryan serves clients' survey needs through the full project lifecycle from initial planning and research, to right of way, utility and boundary survey, through final design, construction, as-built and ALTA survey. He has in-depth experience on both the public and private sectors having held senior positions at the Vermont Agency of Transportation and with private consulting firms throughout New England.



Scott Burbank, PE

Project Manager/Structural | 28 years of professional experience, 13 years with VHB

Scott is Director of Structures in VHB's South Burlington office with extensive experience in planning, design and construction of both highway and railroad bridges, rail crossing projects, and rehabilitation of historic truss bridges and culvert replacements. His qualifications also include services for quality control and quality assurance, construction cost estimating, accelerated bridge construction (ABC), and structural inspections of both railroad and highway bridges.

Robert Wildey, PE, CPESC

Hydrologic and Hydraulic Studies | 20 years of professional experience, 17 years with VHB

Robert is Water Resources Engineer with VHB's Environmental Services Group where he has worked on a variety of water and stormwater-related projects for both public and private-sector clients. His key focus is the interface between natural streams and the built environment, from bridges and culverts that carry transportation infrastructure to stormwater treatment practices that manage runoff from impervious areas and convey flows to surface waters.

Rick Plenge, PE

Active Transportation Specialist | 25 years of professional experience, 1 year with VHB

Rick leads VHB's New England Active Transportation Service. He has a comprehensive transportation and project management background, with experience in traffic operations and safety analysis in the public and private sectors. Rick's responsibilities have included safety audits/studies, pedestrian and bicycle facility planning and design, quick build/pilot implementation projects, roadway design, traffic calming, parking studies, and traffic impact analyses. He has managed and led the design of numerous transportation planning and traffic engineering projects for states and municipalities.

Peter Smiar, PE

Project Manager/Stormwater | 18 years of professional experience, 7 years with VHB

Peter provides project management, stormwater design, hydrologic analysis, land use planning services, infrastructure design, and local, state, and federal permitting services for public and private sector clients in settings including high-density mixed-use infill sites, linear transportation projects, municipal recreation facilities, and state and local stormwater retrofit facilities. His approach involves using emerging technologies while being grounded in practical aspects including cost, feasibility, and long-term operations.

F. Resumes

Evan P. Detrick, PE

Contract Manager/Project Manager

Education

BS, Civil Engineering, Pennsylvania State University, 1984

BA, Liberal Arts, East Stroudsburg University of Pennsylvania, 1984

Registrations/Certifications

Professional Engineer (Civil), VT

Affiliations/Memberships

Vermont Society of Engineers

Evan is Director of Transportation in VHB's South Burlington office with over 35 years of experience supporting federal, state, and municipal projects. Evan's responsibilities include scoping and budgeting, personnel and work assignment scheduling, project management, and quality control. He has completed the planning and design of projects, including a variety of sidewalks, pathways, and trails; roadways on new alignments; roadway widening and rehabilitation; bridge construction and replacement; environmental assessments in accordance with NEPA; traffic signal improvements; property and topographic surveys; floodplain certifications; and numerous stormwater improvement projects.

39 years of professional experience, 7 years at VHB

VTrans Municipal Assistance Bureau, At-the-Ready Retainer Contract

With Evan as Contract Manager, VHB was selected by VTrans for the MAB "At-the-Ready" list of transportation engineering consultants that are pre-qualified to perform consultant services to state municipalities. VHB was selected under all three categories, including Project Management, Design, and Construction services.

City of Burlington, Great Streets–Main Street Revitalization, Burlington, VT

With Evan as Project Manager, VHB was selected to perform the planning and design of a complete revitalization and reconstruction of Main Street in downtown Burlington. The project includes extensive community and stakeholder outreach, roadway reconstruction, landscaping amenities, water and sewer replacement, signing and traffic signals.

Bayside Roundabout, Colchester, VT

Project Manager for the design and permitting of a new roundabout to replace the existing signalized intersection of Blakely Road, East Lakeshore Drive, and West Lakeshore Drive (the Bayside Intersection). The project includes field survey; investigation of contaminated soils; development of conceptual designs through complete contract documents; design of stormwater treatment practices; pedestrian rapid flashing beacons, new crosswalks, sidewalks, and sections of shared-use path; public engagement; preparation of a Categorical Exclusion to satisfy NEPA; and improvements to Bayside Park.

Bennington Rail to Trail Multimodal Path, Bennington, VT

Technical Advisor for the Bennington Rail Trail Multimodal Path. Engineering design services to develop a rail trail project consisting of a 1.1 mile 10-foot wide paved path, 600 foot railroad run-around, and a 0.5 mile 8- 10-foot wide aggregate surface path extension.

Federal Street Multi-Modal Connector, St. Albans City, VT

Federal Street and extend its southern terminus to make a new connection to the St. Albans Access Road to I-89. The project is receiving Federal funds through the VTrans MAB to improve traffic circulation, redirect truck traffic off Main Street, and encourage economic development in downtown St. Albans. Project includes roadway reconstruction, construction of a street on a new alignment, property acquisition from over 100 parcels, streetscape enhancements, and stormwater treatment.

David Saladino, PE

Principal-in-Charge

Education

BS, Civil & Environmental Engineering, University of Delaware, 1998

Registrations/Certifications

Professional Engineer (Civil), VT,

Professional Engineer (Civil), NH

Affiliations/Memberships

Institute of Transportation Engineers, Vermont

Institute of Transportation Engineers, New Hampshire

Dave is the Managing Director of VHB's South Burlington, Vermont, office. He has more than two decades of project management, transportation engineering, traffic engineering and transportation planning experience in both the public and private sectors. Dave's recent project experience includes transportation scoping and corridor planning, traffic impact studies, parking studies, transportation microsimulation modeling, and design of intersections, roundabouts, roads, sidewalks, and traffic signals.

26 years of professional experience , 8 years with VHB

Chittenden County I-89 2050 Study, Chittenden County, VT

David is Project Manager for a multiyear study of the Interstate I-89 corridor through Chittenden County. The project involves close collaboration with project clients (VTrans and CCRPC), stakeholders, and members of the public to develop a comprehensive plan for improvements along I-89 through 2050, including assessment of interstate widening, new/ improved interchanges, and technology upgrades.

I-89 Exit 12B/Tilley Land Use and Transportation Plan, South Burlington, VT

As Project Manager for the VT116-Kimball-Tilley Land Use and Transportation Plan, David led a team that examined the Tilley Drive/Kimball Avenue area of South Burlington to identify a package of transportation and land use recommendations that would foster a dense, mixed-use, multimodal development pattern. The project involved significant outreach to abutting landowners and members of the public.

Malletts Bay Transportation & Stormwater Scoping Study, Colchester, VT

Served as overall Project Manager for this three-part scoping study, which involved a bicycle and pedestrian scoping study for a new facility along West Lakeshore Drive, an intersection scoping study for the Lakeshore Avenue/Blakely Road intersection, and a stormwater scoping study for the Malletts Bay area.

Country Club Road Master Planning, Montpelier, VT

Served as VHB Project Manager to develop a comprehensive master plan for the 131-acre Country Club Road parcel in Montpelier. The Master Plan involved extensive existing conditions investigations, development of alternatives, and public outreach to arrive at community consensus on a preferred plan for the property.

Winooski Transportation Master Plan, Winooski, VT

David was Project Manager for the development of a Transportation Master Plan forthe City of Winooski. The Master Plan was the culmination of significant stakeholder outreach, planning and technical analysis, and coordination with City staff to develop an Action Plan for Winooski's transportation infrastructure.

East Allen Street Corridor Scoping Study, Winooski, VT

Served as Project Manager for a CCRPC Corridor Scoping Study along the East Allen Street (VT 15) corridor in Winooski, Vermont. The project involved an evaluation of existing conditions, committee and stakeholder outreach, alternatives evaluation, and identification of a preferred alternative.

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Wayne B. Symonds, PE

Technical Advisor

Education

BS, Civil Engineering, University of Vermont, 1992

Registrations/Certifications

Professional Engineer (Civil), VT

Wayne is a Senior Structural Engineer supporting VHB's bridge design team throughout New England. Prior to joining VHB, Wayne worked for nearly 30 years with the Vermont Agency of Transportation (VTrans) as a bridge engineer, Project Manager, Structures Program manager and retiring as the Chief Engineer for the Highway Division. In his role as the Structures Program Manager, he led the development of the VTrans Accelerated Bridge program and implementation of alternative contracting in Vermont, including Design Build and CMGC. At VHB, Wayne is focused on mentoring, quality assurance, innovation, and constructability for bridge projects.

31 years of professional experience, 1 year with VHB

City of South Burlington, Exit 14 Pedestrian Bridge,

Wayne was part of the VHB team that provided hybrid meeting support for this project that is critical to the South Burlington pedestrian and bicyclist community. A long time in the making, this meeting provided an opportunity for the project team to meet with the community to review proposed options and solicit feedback for a collaborative design. He is also supporting the team to evaluate structure alternatives and address challenging soil profiles.

VTrans, I-89 Exit 17 Bridge Replacement, Colchester, VT

VHB Senior Structural Engineer providing quality assurance and constructability review for this major transportation infrastructure project for the Vermont Agency of Transportation (VTrans) to reconstruct Exit 17 on Interstate 89 in Colchester. The project will address safety at the interchange and replace the poor condition bridge on VT Route 2 over the interstate.

VTrans, I-91 Bridges 96-3N and 96-3S, Lyndon, VT

VHB Senior Structural Engineer providing support for the development of the procurement documents for the Design-Build project to replace culverts in deep fill on I-91 in Lyndon Vermont.

VTrans, VT Route 100 over Deerfield River, Readsboro, VT

VHB Senior Structural Engineer providing quality assurance and constructability review for the redesign of the new plate girder bridge over the Deerfield River. The project is complicated by difficult geotechnical conditions and predicted hydraulic scour.

Vermont Agency of Transportation

Notable VTrans projects managed while at include the I-91 West River Bridge in Brattleboro and Main Street and Merchants Row over Vermont Rail in Middlebury. He has managed many Town Highway Bridge projects and understands the nuances involved with municipally lead projects.

Wayne also worked three years in the Construction Section where he was the Construction Structures Engineer and has experience in all aspects of bridge construction and supporting field staff in addressing construction issues.

Jennifer Conley, PE, PTOE

Project Manager

Jennifer is VHB's Director of Transportation Systems for Vermont. She has extensive transportation engineering experience having managed engineering design tasks for projects throughout New England including planning and scoping studies, traffic operational studies, and engineering design. Incorporating all roadway users, Jennifer has designed Complete Streets throughout New England. She has also managed transportation master plans for municipalities and conducted corridor studies.

Education

BS, Civil Engineering, Rensselaer Polytechnic Institute, 1993

Registrations/Certifications

Professional Engineer, VT

Professional Engineer, MA

Professional Engineer, NH

Professional Traffic Operations Engineer

Professional Engineer, ME

Professional Engineer, RI

Affiliations/Memberships

Institute of Transportation Engineers, New England

Rensselaer Polytechnic Institute Civil and Environmental Engineering Advisory Board

WTS International, Vermont

29 years of professional experience , 4 years with VHB

City of Burlington, Great Streets–Main Street Revitalization, Burlington, VT

Jennifer is currently serving as Project Manager for the reimagining of Burlington's Main Street. The project included extensive community and stakeholder outreach, resulting in unanimous approval of the project concept by City Council. Conceptual Engineering Design includes design of the pedestrian realm, off-street separated bike lanes, and design of transit stops along Main Street.

East Allen Street Scoping Study, Winooski, VT

The Chittenden County Regional Planning Commission (CCRPC) partnered with VHB to identify short- and long-term improvements to East Allen Street with the aim of creating a safe, vibrant, and multimodal gateway corridor into downtown Winooski, VT. The scoping study prioritized enhancing travel for pedestrians and bicyclists, supporting economic growth, improving safety, increasing transit accommodations, and managing vehicular congestion for the corridor. Jennifer functioned as the Project Manager for this scoping study.

Colchester Avenue Bikeways, Parking, Intersection Safety Study, Burlington, VT

Jennifer has served as the Project Manager for Colchester Avenue Study leading the Project Team through the assessment of existing conditions, engagement of the public to determine the local concerns, and the development, evaluation, and presentation of alternatives. Jennifer and the VHB team worked closely with a diverse Advisory Committee of residents and business representatives and engaged the public through both in person and online public meetings.

Swanton Village Downtown Scoping Study, Swanton, VT

Serving as Project Manager, Jennifer has led the multidisciplinary project team through the Downtown Scoping Study for Swanton Village. The project required a delicate balance to better accommodate the needs of pedestrians and bicyclists while accommodating vehicular traffic through the Village and providing parking and enhanced sidewalks to ensure continued economic development

VTrans Rail and Freight Plans, Statewide, Vermont

Jennifer is currently serving as the VHB lead for the updates to the Rail Plan and Freight Plan. She has managed efforts to update all existing conditions for the existing Rail and Highway infrastructure including asset conditions (rail, bridge, highway, support services, connections) and safety. Jennifer has worked with the VTrans team to develop evaluation criteria for a range of projects and initiatives that VTrans and partners are considering. As project ranking are being developed, she is leading the team to develop the cost estimates for inclusion in the plans.

Daniel M. Peck, PE

Project Manager/Transportation

Education

BS, Civil Engineering, University of New Hampshire, 2000

Registrations/Certifications

Professional Engineer (Civil), VT, 07/2022

A civil engineer in VHB's Highway Department, Dan's focus is on transportation projects ranging from scoping studies and design projects (conceptual through contract design) of roadway, intersection, sidewalk and multi-use path projects that follow the VTrans MAS process, to include public informational meetings, review of right-of-way plans, development of construction estimates, and utility coordination.

23 years of professional experience, 23 years with VHB

City of Burlington, Bike Path Rehabilitation, Burlington, VT

Dan was project engineer for the rehabilitation of a bike path located along Burlington's waterfront that has extraordinary views of Lake Champlain and the Adirondack Mountains. The 30-year-old bike path is a multi-use facility that supports alternative transportation, recreation, and active lifestyles; attracts visitors to the City of Burlington and stimulates the local economy; and enhances the overall quality of life. Being one of the busiest multi-use paths in the state, it is showing its age in terms of overall conditions and functionality, and VHB is addressing primary areas of design concern, including path width, geometry, shoulder conditions, and sight distance. Dan is providing quality assurance and quality control for the path design.

Town of Hinesburg, Sidewalk and Multiuse Path, Hinesburg, VT

For the Town of Hinesburg, Dan was Project Engineer for the development of a transportation enhancement project that contains two distinct segments: a 5-foot-wide sidewalk along the west side of Mechanicsville Road from Commerce Street to the Champlain Valley Union (CVU) High School Road, and a 10-foot-wide paved multi-use path along the north side of the CVU Road from Mechanicsville Road to Ballards Corner Road.

Essex Junction, Multiuse Path, Essex Junction, VT

VHB designed a 1,175-foot-long multiuse path along the existing rail corridor between North Street and Central Street. The new path allows cyclists and pedestrians to move from Essex High School to and from Central Street without using a public street. Key components of this project included coordination with the railroad, utilities, businesses, and residents, design of the path, lighting, and stormwater treatment. Funded by the Vermont Agency of Transportation, the Chittenden Country Regional Planning Commission, and the Village, this project marks the first time New England Central Railroad has allowed such a project along an active rail line.

Bennington Pathway, Bennington, VT

Dan was the Project Manager for the design of 1.5 miles of multi-use path connecting downtown Bennington to a park and school. The path will be constructed within a railroad right-of-way and will include the rehabilitation of an existing railroad bridge and traffic signal modifications.

Manchester Rail Trail, Manchester, VT

Dan was the Project Manager for a feasibility study to evaluate alternatives for the conversion of approximately 1.5 miles of an abandoned railroad corridor to a multi-use path in Manchester. The path would be an extension of the Town's existing multimodal trail network and potentially provide an off-road connection between the Manchester schools and the neighboring Dorset schools. The study evaluated construction costs, potential phasing, resource impacts and permitting requirements.

Drew Gingras, PE

Project Manager/Transportation

Education

BS, Civil Engineering, University of Vermont, 2011

Registrations/Certifications

Professional Engineer, DC

Affiliations/Memberships

National Committee on Uniform Traffic Control Devices, Bicycle Technical Committee

Drew is a Project Manager and Engineer in VHB's South Burlington office with experience in transportation projects at the municipal, state and federal levels. His experience includes bicycle and pedestrian planning and design, corridor scoping studies, traffic operations analysis, traffic calming design, trail planning and design, and complete street design. Drew has served the State of Vermont and its cities and town on countless transportation projects. Drew has the experience and expertise to navigate all phases of project, from project definition and public engagement, through to engineering design and project construction.

11 years of professional experience, 10 years with VHB

City of Burlington, Great Streets–Main Street Revitalization, Burlington, VT

Drew is Project Engineer and Active Transportation Lead for the reimagining of Burlington's Main Street. VHB was selected to perform the planning and construction engineering design of a complete revitalization and reconstruction of Main Street in downtown Burlington. The project included extensive community and stakeholder outreach, resulting in unanimous approval of the project concept by City Council.

Intervale Road Shared-Use Path, Burlington, VT

Through VTrans MAB "At-the-Ready", VHB was recently selected by the City of Burlington to design a shared-use path along Intervale Road in Burlington's North End. Drew is serving as Project Manager for this latest effort. The project navigates difficult topography and has required coordination with two other parallel and concurrent projects – The installation of a steam line connecting the McNeil Plan to the UVM Medical Center, and VTrans' own design project to rehabilitate the existing railroad crossing. The project is currently in Conceptual Design and is proceeding on schedule.

Winooski Main Street Revitalization, Winooski, VT

The Main Street Revitalization Project includes a full reconstruction of the Main Street (US 2/7) corridor in the City of Winooski from the Colchester Town line south approximately 4,000 feet to the bridge over the New England Central railroad. Drew served as a Transportation Design Engineer for the effort and led the design of the proposed bicycle facilities along this necessary Main Street revitalization. This effort included significant stormwater management enhancements, upgrades to existing water and wastewater infrastructure, burial of electric and telecommunication infrastructure, roadway reconstruction, sidewalk replacement, and significant landscape, streetscape, traffic control, and pedestrian safety enhancements along the length of Main Street.

Colchester Avenue Bikeways, Parking & Intersection Safety Scoping Study, Burlington, VT

VHB recently worked with the CCRPC to identify and prioritize improvements along Colchester Avenue that align with the City's vision for sustainable transportation infrastructure and enable a continuous and connected multimodal transportation corridor. Through extensive public and stakeholder engagement, the VHB project team was able to arrive at a preferred alternative for the corridor that received unanimous approval by the project's Advisory Committee.

Jeff Bachiochi, PE

Project Manager/Transportation

Education

MS, Civil Engineering, Northeastern University, 2016

BS, Civil Engineering, Northeastern University, 2012

Registrations/Certifications

Professional Engineer (Civil Engineer), MA, 06/2022

Jeff is a Civil Engineer in VHB's South Burlington office with extensive experience working on transportation and infrastructure projects, including urban roadways, highways, bridge approaches, rail & intermodal stations, traffic signals, and pedestrian/bicycle facilities. He is proficient in Microstation, OpenRoads, and AutoCAD Civil 3D for roadway & utility modeling and plan production, and has experience creating specifications, estimates, and bidding documents for state, municipal, and privately funded infrastructure projects. Jeff has performed construction administration services for various types of contract delivery methods including Design-Build, CM/GC, and Public-Private-Partnership projects.

11 years of professional experience, 6 years with VHB

Beaver Pond Shared Use Path, Proctor, VT

Jeff is the Project Manager and lead engineer for the design of a new shared use path in Proctor, VT. The Town of Proctor has acquired a Bicycle & Pedestrian Grant, administered by the Vtrans Municipal Assistance Section (MAS), and has engaged VHB to design and permit the project through the MA process. The new path, to be used by both pedestrians and bicyclists, will connect recreational areas at Beaver Pond to the town green on Main Street by utilizing an abandoned rail corridor.

South Royalton Sidewalk, Royalton, VT

Jeff is the Project Manager and lead engineer for the design of a new multi-level sidewalk project in the historic downtown village of South Royalton. This revitalization project will improve ADA access to businesses along Chelsea Street by replacing the existing stairs at each entrance with a flush raised sidewalk. The project also includes new sidewalks, ramps, street parking, pedestrian crossings & refuge islands, lighting, and other streetscape amenities. VHB is tasked permitting the project which includes a significant historic component to the Categorical Exclusion document in compliance with NEPA.

Bayside Roundabout, Colchester, VT

Jeff is the Project Engineer for the design and permitting of a new roundabout to replace the existing signalized intersection of Blakely Road, East Lakeshore Drive, and West Lakeshore Drive (the Bayside Intersection). The project includes field survey; investigation of contaminated soils; development of conceptual designs through complete contract documents; design of stormwater treatment practices; pedestrian rapid flashing beacons, new crosswalks, sidewalks, and sections of shared-use path; public engagement; preparation of a Categorical Exclusion to satisfy NEPA; and improvements to Bayside Park.

Branden Roberts, PE

Project Manager/Transportation

Education

BS, Civil Engineering, Wentworth Institute of Technology, 2014

Registrations/Certifications

Professional Engineer, VT

Branden is a Transportation Engineer, with experience in roadway design, bicycle and pedestrian facility design, and landfill design, as well as field inspection experience with construction materials like concrete, soil, and asphalt. He has performed many tasks including horizontal and vertical alignment design, roadway/multiuse trail modeling and cross section development, guardrail design, open flow and closed drainage design including watershed delineation, and quantities. He has experience in performing the above tasks by hand and utilizing computer aided programs such as MicroStation, Inroads, AutoCAD Civil3D and StormCAD.

8 years of professional experience, 8 years with VHB

City of Burlington, Bike Path Rehabilitation, Burlington, VT

Branden was the lead designer of six separate contracts for the rehabilitation of bike path located along Burlington's waterfront that has extraordinary views of Lake Champlain and the Adirondack Mountains. The 30-year-old bike path is a multiuse facility that supports alternative transportation, recreation, and active lifestyles; attracts visitors to the City of Burlington and stimulates the local economy. Design services included path widening, replacement of the pavement and subbase, intersection improvements, and the addition of stormwater treatment facilities.

City of Winooski, Main Street, Winooski, VT

Branden was a project designer for this three-quarter mile downtown roadway reconstruction including bicycle/pedestrian improvements, streetscape enhancements, undergrounding aerial utilities, closed drainage redesign and treatment, signal design, striping reconfiguration and signing upgrades. As a priority bicycle and public transit corridor for the City, there was an added design emphasis surrounding a connection through downtown for all modes of transportation.

East Main Street Sidewalk, Wilmington, VT

This project was a sidewalk reconstruction/redesign that started with conceptual plans and went through ROW, and most recently utility adjustments. Branden designed new/reconstruction of sidewalk throughout the corridor, 3 new retaining walls to be constructed adjacent to the sidewalk, and signing/crosswalk improvements along the corridor. He also produced the ROW plans and tables for this project.

St. Albans, Lake Street Connection, St. Albans, VT

Branden was a Design Consultant for this project to provide engineering services, streetscape design, and necessary infrastructure improvements on Lake Street between Main Street and Federal Street in accordance with the City's 2009 Downtown Master Plan. Branden's duties included design modifications, work zone traffic control plans, and quantities.

Warren Village Main Street Improvement, Warren, VT

Branden worked on this complete streets project to design a new village center for the town of Warren. He took the architect's hand sketches and recreated them in MicroStation. While drafting the plans, Branden backchecked the grading to make sure drainage and important tie-ins were met. He created vertical and horizontal alignments as well as a model for this project. He also quantified the roadway portion of the project after the design was complete and assisted the architect with producing his estimate.

Karen Sentoff, MS, EIT

Project Manager/Traffic

Education

MS, Civil & Environmental Engineering, University of Vermont, 2012

BS, Civil & Environmental Engineering, University of Vermont, 2008

Registrations/Certifications

Engineer in Training, VT

Karen joined the VHB team bringing experience as a transportation researcher and analyst at the University of Vermont Transportation Research Center. Her prior studies in civil and environmental engineering and her professional background in transportation represent a versatile set of skills supporting work at the confluence of transportation planning, design, and research. Karen continues to be excited by novel methods of transportation data collection, analysis, and modeling. She applies this to create practice-ready solutions to the real-world problems tackled by her team.

10 years of professional experience, 4 years with VHB

City of Burlington, Great Streets–Main Street Revitalization, Burlington, VT

VHB was selected to perform the planning and construction engineering design of a complete revitalization and reconstruction of Main Street in downtown Burlington. The project included extensive community and stakeholder outreach, resulting in unanimous approval of the project concept by City Council. Conceptual Engineering Design efforts include the pedestrian realm, off-street separated bike lanes, and design of transit stops along Main Street.

Colchester Avenue Bikeways, Parking & Intersection Safety Scoping Study, Burlington, VT

In collaboration with CCRPC and City of Burlington, VHB identified and developed transportation improvements for the Colchester Avenue corridor and intersection with East Avenue. A critical corridor that has undergone incremental changes, this study created a longer-term vision for a multimodal facility with dedicated bike infrastructure and permanent safety improvements. Karen developed and evaluated alternatives and engaged project stakeholders and public to guide decisions.

CCRPC, Amtrak Connections, Burlington, VT

Amtrak recently completed a long-planned extension of the Ethan Allen Express route to Burlington's Union Station. With the arrival of daily Amtrak service, CCRPC and Burlington Business Association have teamed with VHB to evaluate the access, circulation, multimodal connections, and wayfinding to and from the Amtrak platform at Union Station. Karen served as technical lead, bringing together resources to identify gaps in the existing walk, bike, transit, vehicular, and regional transportation connection to the station and recommending improvements and partnerships.

Swanton Downtown Scoping Study

The Village of Swanton sits at the confluence of primary regional routes along US 7 and VT 78, where the vision for a vibrant downtown center requires balance between the traffic thoroughfare and a more walkable, bikeable, and accessible Village core. Together with Village partners, community stakeholders, and the public, the VHB team helped to identify, develop, evaluate, and prioritize alternative designs for creative context sensitive solutions that are feasible, constructible, and will improve safety for pedestrians, cyclists and drivers.

Nicole Rogers, PE

Project Manager/Traffic

Education

BS, Civil Engineering, University of Vermont, 2013

Registrations/Certifications

Professional Engineer (Civil), MA,

Affiliations/Memberships

WTS International, Boston

Nicole is a Traffic Engineer in VHB's South Burlington office. A Professional Engineer, she has experience in transportation projects throughout New England that include corridor planning and scoping studies, traffic operations analysis and optimization, traffic calming and Complete Streets planning and conceptual design, and road safety audit reports. Nicole routinely utilizes and develops GIS applications in support of transportation planning and engineering assignments as well as to enhance project proposals, marketing products, presentation, and project infographics.

10 years of professional experience, <1 year with VHB

CCRPC, East Charlotte Traffic Calming, East Charlotte, VT

VHB worked with the CCRPC and Town of Charlotte to evaluate traffic calming measures appropriate for the East Charlotte Village Center. The area of study surrounds the intersection Hinesburg Road and Spear Street and focused on best practices and effective countermeasures to help reduce speeds in the rural transition zones and small-town centers. The study's short- and long-term recommendations have garnered support from the Charlotte Selectboard. Nicole has further developed supported recommendations and provided preliminary costs estimates for the Town.

City of Burlington, Great Streets Parking Analysis, Burlington, VT

VHB worked with the City of Burlington to conduct a parking inventory and utilization study to better understand the existing capacity and existing and future demand for parking in the downtown area. Nicole provided extensive data analysis and graphic design to develop a parking study document to help aid future decision making.

Upper Valley Lake Sunapee Transit Signal Priority System, NH/VT

Prior to joining VHB, Nicole evaluated and identified the infrastructure capabilities and needs to provide a transit signal priority (TSP) system along two established routes in the Upper Valley Lake Sunapee region. Work included a comprehensive field assessment of the signal equipment as well as planning and coordination with local and state stakeholders to determine an appropriate plan of action. Nicole's responsibilities included the development of a signal inventory database within the GIS environment as well as the preparation of an interactive, web-based "story map" highlighting the findings of the signal inventory and potential system wide improvements to provide a TSP system through means of multimedia content and mapping.

Vermont Agency of Transportation, Civil Engineer I/Traffic Design, Montpelier, VT

Prior to joining VHB, Nicole was involved in the statewide Traffic Signal Optimization Program. She was responsible for developing and deploying new signal timings for 14 coordinated intersections along Route 7 in Shelburne, VT. Nicole created construction documents for traffic related projects using MicroStation. Her project experience included roundabouts, signalized intersections, general intersection safety improvements, and intersection geometry improvements.

Cierra Ford, PE

Project Manager/Transportation

Education

BS, Civil Engineering, Worcester Polytechnic Institute, 2018

Registrations/Certifications

Professional Engineer (Civil), VT

Envision Sustainability Professional

Cierra is a Transportation Designer in VHB's Vermont office, with experience in scoping and design, construction inspection, and developing plans. Cierra's services include drafting preliminary and final design plans using MicroStation and AutoCAD software and assisting senior project managers and engineers to complete design calculations for civil and structural projects.

5 years of professional experience, 5 years with VHB

Burlington Bike Path Rehabilitation, Burlington, VT

Cierra is a Design Consultant for the third phase of the Burlington Bike Path Rehabilitation from Queen City Park Road to Perkins Pier. The project involves incorporating urban and rural placemaking and planning, civil and structural engineering, geotechnical expertise, environmental remediation, and innovative and intentional landscape architectural design.

Winooski, Main Street Reconstruction Project, Winooski, VT

Cierra is a Design Consultant for the preliminary design of a roadway reconstruction project along US Route 7 in Winooski. This project is highly complex, involving multiple sub-consultants and the integration of roadway, utility, and streetscape improvements. Cierra is responsible for the design of the underground utility network, consisting of new water, sewer, drainage, electric, telecom, and gas lines.

St. Johnsbury Three Rivers Path, St. Johnsbury, VT

Cierra is Project Engineer for the preliminary and final design of a multimodal path in St. Johnsbury, which consists of on-road bike lanes as well as an off-road aggregate path, abutting several Class III wetlands. Cierra was responsible for the project design and coordinating with the architect for the design of a pavilion at the path's trailhead.

Wilmington East Main Street Sidewalk, Wilmington, VT

Cierra is a Design Consultant for the preliminary design of a sidewalk project on VT Route 9 in Wilmington. Cierra is responsible for the design of a new sewer main running underneath the sidewalk with new laterals to most properties along its length, as well as the development of Right-of-Way plans.

North Champlain Street and Manhattan Drive, Burlington, VT

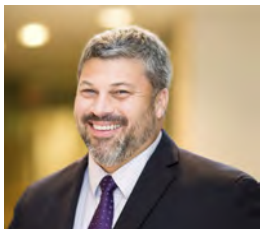
Cierra was the Project Engineer for the proposed improvements along North Champlain Street and Manhattan Drive in Burlington. The project involves a two-way cycle track on North Champlain Street separated from the vehicle traffic by vertical barrier elements, shared use and bicycle lane pavement markings on Manhattan Drive, signal improvements at two intersections in the project area, and other related items.

Killington Road Phase 1, Killington, VT

Cierra is a Project Engineer for Phase 1 of the Killington Road reconstruction as part of their Master Plan efforts. The project involves full-depth reconstruction of Killington Road on both its current alignment and a new alignment, construction of new roads, reconstruction of intersections of these roads including a new roundabout, and reprofiling and reconstruction of Killington Road at its intersection with US Route 4.

Scott E. Burbank, PE

Project Manager/Structural/Rail Crossings



Education

BS, Civil Engineering, Worcester Polytechnic Institute, 1993

Registrations/Certifications

Professional Engineer (Structural I), VT

Scott is Director of Structures and Rail in VHB's South Burlington office with extensive experience in planning, design and construction of both highway and railroad bridges and roadway and railroad crossing reconstruction projects. His qualifications also include services for quality control and quality assurance, construction cost estimating, accelerated bridge construction (ABC), and structural inspections of both railroad and highway bridges.

29 years of professional experience, 13 years with VHB

VTrans / Depot Street Bridge Replacement, Rockingham (Bellows Falls), VT

VHB is the design consultant for the VTrans Rockingham, Bellows Falls project which involves the removal and replacement of a historic concrete arch bridge with an off alignment vehicular bridge and addition of a multi-modal pedestrian bridge for VTrans. This project includes the reconfiguration of two town roads, rehabilitation of a parking lot, extensive utility relocation and undergrounding, drainage design, design of the vehicular bridge, and 3D modeling of all design elements. By managing challenging site constraints around the historic canal, VHB is progressing a design that will revitalize the village of Bellows Falls and increase accessibility for all modes of transportation on the town's island property. VHB is leading the environmental permitting and engineering design efforts including structural engineering, roadway design, and public outreach. Scott is the Senior Project Manager on the project overseeing the design and quality assurance.

VTrans / I-89 Bridges 76N&S and 77N&S, Colchester, VT

VHB was tasked with designing the deck replacement of Bridges 76N&S and 77N&S on I-89 over Bay Road and Mallet's Creek respectively. This project consisted of the removal and replacement of four bridge decks on one of the busiest stretches of the Interstate in Vermont. VHB's innovative design combined accelerated bridge construction techniques with a precast concrete deck system that had never been used in Vermont to finish the project within budget and ahead of schedule. The bridge decks were replaced with full-depth precast concrete deck panels during multiple weekend closures. This project also included substructure modifications to accommodate the new decks. To manage high traffic flows, VHB utilized lane shifts, crossovers, and partial demolitions of bridge decks prior to the bridge closures. Scott is the Project Manager responsible for the internal management of the VHB project team, coordination with the VTrans Project Manager, and other VTrans staff, as well as external stakeholders. Scott also provides project oversight, ensuring the project permitting, design and plan submittals are completed and delivered on-time and on budget.

VTrans / VT 4 over Ottauquechee River (Bridge #33), Killington, VT

VHB was the design consultant responsible for the roadway and structural design for the replacement of Bridge #33 over the Ottauquechee River on US Route 4 in Killington. VHB assisted with the regulatory permitting, ROW acquisition, and public meetings with VTrans, the Town, and project stakeholders. The existing single span concrete deck and steel beam bridge required a complete bridge replacement along with roadway widening and approach railing. Scott was the Project Manager responsible for the internal management of the VHB project team, coordination with the VTrans Project Manager and other VTrans staff, as well as external stakeholders. Scott also provided project oversight, ensuring the project permitting, design and plan submittals are completed and delivered on-time and on budget.

Peter Smiar, PE

Project Manager/Stormwater

Education

MS, Civil Engineering, University of Vermont, 2016

BS, Civil Engineering, University of Vermont, 2005

Registrations/Certifications

Professional Engineer (Civil), VT

Peter provides project management, stormwater design, hydrologic analysis, land use planning services, infrastructure design, and local, state, and federal permitting services for public and private sector clients in settings including high-density mixed-use infill sites, linear transportation projects, municipal recreation facilities, and state and local stormwater retrofit facilities. His approach involves using emerging technologies while being grounded in practical aspects including cost, feasibility, and long-term operations.

18 years of professional experience , 7 years with VHB

Burlington Bikepath Phase 2, Burlington, VT

This project consists of widening and improvement of the existing Burlington Bike Path from North Beach to the Winooski River. Stormwater management challenges included implementation of retrofit water quality practices within a confined linear right of way and densely populated urban corridor with several sensitive water resources. Peter performed assessment of existing stormwater related problem areas, concept design, coordination with State and local stakeholders, construction and operational phase stormwater design, permitting, and development of construction documents. The project involves implementation of Green Stormwater Infrastructure practices including two dry swales and a bioretention system retrofit.

Cambrian Rise Project/North Avenue Stormwater Retrofits, Burlington, VT

Peter has been leading the planning, design, permitting, and implementation of the Sustainable Sites-Certified stormwater management design for this proposed 740-unit mixed-use infill project, which includes .5 miles of proposed City roadway. Low Impact Development strategies include bioretention areas, 600' linear feet of green streets to manage runoff, and distributed underground infiltration systems. Peter's tasks included leading the subsurface soils investigation, soils characterization, incorporating green infrastructure practices, and leading design of the stormwater management system.

Vanguard Renewables Goodrich Farm Anaerobic Digester Project, Salisbury, VT

VHB's integrated land development and environmental permitting team provided survey, natural resources assessments, regulatory agency outreach, land use permitting, aesthetics analysis, site/civil/stormwater design, and construction phase services for a new methane digester located to be located on the Goodrich Farm off Shard Villa Road in Salisbury, Vermont. Peter served as Project Manager.

State of Vermont Agriculture and Environmental Laboratory, Randolph, VT

Peter led the site/civil engineering and State permitting services for the proposed $25 million, 37,000 sq ft LEED Silver Certified laboratory building for the State of Vermont. While performing civil engineering services, Peter collaborated with the Department of Buildings and General Services and project team members to develop state of the art stormwater management practices including a bioretention area, underground sand filter, and use of pervious paver surfaces for automobile parking areas.

Tanner Burt

Transportation

Education

BS, Civil Engineering, Clarkson University, 2018

Affiliations/Memberships

American Society of Civil Engineers

Tanner is a Transportation Consultant on VHB's Vermont Transportation team.

4 years of professional experience , 2 years with VHB

VTrans / NECR Bridge No. 35.01 over Route 14 Replacement, Royalton, VT

Under contract with VTrans, VHB is the designer for this project to replace Bridge No. 35.01 carrying NECR over VT Route 14 in Royalton. The project was initiated as an emergency project following a vehicle impact to the existing bridge. In line with the accelerated nature of the project schedule, VHB was able to deliver Contract Plans within just over one year from the notification to begin scoping and design. This project will increase the vertical clearance under the bridge and improve the geometry of VT Route 14 and adjacent roadways. The scope of VHB's work under this contract included roadway, railroad, and bridge design, right-of-way services, traffic analysis, utility coordination, environmental services, preliminary stormwater analysis, and cultural resource identification. In Tanner's role as a highway designer included developing proposed geometric re-alignment of the roaday; defining roadway superelevation; drainage and grading design; and developing solutions for utility conflicts.

VTrans / Colchester NH 028-1(31) Exit 17, Colchester, VT

Tanner is a highway designer for this major transportation infrastructure project for the Vermont Agency of Transportation (VTrans) to reconstruct Exit 17 on Interstate 89 in Colchester. The project will address safety concerns at the interchange and replace the structurally deficient bridge over the interstate. In addition, the project includes new ramp construction, ramp relocation, roadway widening, reconstruction of three signalized intersections, bicycle and pedestrian accommodations, and stormwater treatment. VHB is leading the environmental permitting and engineering design efforts including, traffic modeling and engineering, highway geometry design, structural engineering, environmental permitting, transportation management, and public outreach.

VTrans / Lyndon IM 091-3(53), Lyndon, VT

Under contract with the Vermont Agency of Transportation (VTrans) to replace the culvert structures under both northbound and southbound interstate barrels under I-91 in Lyndon, VT. This project was advanced as a Design-Build Method; VHB developed a Base Technical Concept and Design-Build Procurement Documents. Tanner's role as a highway designer included the development of geometric alignments for the work zone barrel crossovers to be included in the base technical concept; and prepared all associated temporary signing and striping modifications.

Rose O'Brien

Transportation

Rose is a recent Civil Engineering graduate with experience including field surveying and assessments, assisting in developing quantity and cost estimates, developing construction plan sets, performing traffic counts, and developing roadway designs. She has experience in performing the above tasks by hand and utilizing computer aided programs such as MicroStation, OpenRoads, InRoads, StormCAD, AutoCAD, Civil3D, Excel and iPD.

Education

BS, Environmental Engineering, University of Vermont, 2021

3 years of professional experience, 3 years with VHB

Lamoille Valley Rail Trail, Swanton to St. Johnsbury, VT

Rose assisted in conducting field surveys to assess the existing condition of culverts, crossings, signs, and other trail features along the Lamoille Valley Rail Trail from Swanton, VT to St. Johnsbury, VT. She assisted in generating construction quantities and developing a construction plan set, including traffic sign summaries, structural details, right-of-way plans and roadway crossing details. Plans were developed in MicroStation V8i and an ArcGIS webmap.

Killington Road Phase 1, Killington, VT

Rose generated 2D plans, a 3D model and quantities for Phase 1 of the Killington Road Master Plan. Rose modeled proposed utilities including stormwater, sewer, and water infrastructure along with roadway features. All modeling and plan development was completed in OpenRoads Designer.

Beaver Pond Path, Proctor, VT

Rose assisted in developing final plans for a multiuse path from Beaver Pond to the Town Green in Proctor, VT. All plans were created using MicroStation V8i. Rose also developed right-of-way plans and 502 hearing graphics for public meetings.

I-89 Exit 17 Final Design, Colchester, VT

Rose developed 502 Hearing colored graphics for the redesign of the I-89 Exit 17 interchange in Colchester, VT. All graphics were developed in MicroStation V8i. Rose also modeled stormwater infrastructure in OpenRoads Designer for a complete 3D model of the project.

Winooski Main Street Revitalization, Winooski, VT

Rose is editing drainage infrastructure details and developing right-of-way plans for the project. Drainage modeling was completed in StormCAD.

Intervale Road Shared-Use Path, Burlington, VT

Rose created a 3D model of the Intervale Road share-use path in OpenRoads Designer. She also developed a 2D plan set of the model and quantities for the project.

Killington-Stockbridge VT-100 Reclaim, Killington, VT

Rose assisted in the development of final plans for the Vermont Route 100 reclaim project from Killington to Stockbridge. Rose conducted a field review of existing conditions for use in updating the plan set, updated standard details, quantities, and underdrain, guardrail, and sign layout.

Shayna Lillis

Transportation

Shayna is a transportation designer in VHB's South Burlington, VT office. She has worked on a variety of projects throughout the state for VTrans and various municipalities.

1 years of professional experience, 1 year with VHB

City of Burlington, Great Streets - Main Street Revitalization, Burlington, VT

Shayna is currently serving as a transportation designer for the reimagining of Burlington's Main Street. VHB was selected to perform the planning and construction engineering design of a complete revitalization and reconstruction of Main Street in downtown Burlington. The project to date has included extensive community and stakeholder outreach, resulting in unanimous approval of the project concept by City Council. The project team is now moving into Conceptual Engineering Design. VHB is currently coordinating with Green Mountain Transit to evaluate transit ridership data in considering the relocation and/or consolidation of transit stops along the corridor.

Winooski Main Street, Winooski, VT

This project is a three-quarter mile downtown roadway reconstruction including streetscape, undergrounding aerial utilities, drainage redesign, signal design, striping reconfiguration and signing upgrades. Shayna's role includes designing impacted driveways and landscaping behind the Right of Way that is affected by this project. There has been a lot of team work with 4 major designers and several others helping on different aspects of this project simultaneously.

Town of Brattleboro, Sidewalk and Signal Project, Brattleboro, VT

Shayna is serving as a transportation designer for this project in the Town of Brattleboro, which includes both sidewalk and signal updates. This sidewalk will give the community better access to Vermont Route 142 and the new pedestrian and bicycle bridge over the Connecticut River once the replacement of the Route 119 bridge for motor vehicles is completed.

City of South Burlington, East-West Alternative Transportation Crossing Project, South Burlington, VT

The project includes design and construction of a new pedestrian bridge over I-89, adjacent to exit 14. Shayna served as a transportation designer aiding the engineer in creating a plan set and graphics for the city and the public to help them visualize the new bridge and select design elements that will make it customized to the community's needs.

Nicole Mann

Transportation

Nicole is a transportation designer in VHB's South Burlington, VT office. She has worked on a variety of projects throughout the state for VTrans and various municipalities.

1 year of professional experience, 1 year with VHB

City of Burlington, Great Streets - Main Street Revitalization, Burlington, VT

Nicole is currently serving as Transportation Designer for the reimagining of Burlington's Main Street. VHB was selected to perform the planning and construction engineering design of a complete revitalization and reconstruction of Main Street in downtown Burlington. The project to date has included extensive community and stakeholder outreach, resulting in unanimous approval of the project concept by City Council. The project team is now moving into Final Engineering Design. Nikki has prepared quantity calculations and cost estimates, and prepared various plans in CADD using Open Roads Designer. The project is being designed based on the 2018 VTrans Specifications.

Killington Road Design - Phase 1, Killington, VT

VHB is providing design and permitting services for the reconstruction of Killington Road – Phase 1. Nicole is providing transportation design services, include quantity calculations and cost estimates, and preparing plans using Open Roads Designer. The project is being designed based on the 2018 VTrans Specifications.

Vermont Agency of Transportation (VTrans), Colchester NH 028-1(31) Exit 17, Colchester, VT

Nicole is a Transportation Designer for this major transportation infrastructure project for the Vermont Agency of Transportation (VTrans) to reconstruct Exit 17 on Interstate 89 in Colchester. The project will address safety concerns at the interchange and replace the structurally deficient bridge over the interstate. In addition, the project includes new ramp construction, ramp relocation, roadway widening, reconstruction of three signalized intersections, bicycle and pedestrian accommodations, and stormwater treatment. VHB is leading the environmental permitting and engineering design efforts including, traffic modeling and engineering, highway geometry design, structural engineering, environmental permitting, transportation management, and public outreach.

James Eyler

Transportation

Education

BS, Civil Engineering, University of Vermont, 2021

Registrations/Certifications

Certified Concrete Testing Technician Grade I, American Concrete Institute, VT

James is a Transportation Designer on Vermont's Transportation team. At his previous employer, James was a Project Inspector on Vermont Agency of Transportation infrastructure projects.

2 years of professional experience, 1 year with VHB

City of Burlington, Great Streets - Main Street Revitalization, Burlington, VT

James is currently serving as a transportation designer specializing in existing utility information and modelling for the reimagining of Burlington's Main Street. VHB was selected to perform the planning and construction engineering design of a complete revitalization and reconstruction of Main Street in downtown Burlington. The approval of the project concept by City Council. The project team is now moving into Conceptual Engineering Design. VHB is currently coordinating with Green Mountain Transit to evaluate project to date has included extensive community and stakeholder outreach, resulting in unanimous transit ridership data in considering the relocation and/or consolidation of transit stops along the corridor.

Winooski Main Street, Winooski, VT

This project is a three-quarter mile downtown roadway reconstruction including streetscape, undergrounding aerial utilities, drainage redesign, signal design, striping reconfiguration and signing upgrades. James's roles included recreation of changes of plans through the development of contract plans.

VTrans / Colchester NH 028-1(31) Exit 17, Colchester, VT

James is a CAD technician, implementing new designs into the plans for this major transportation infrastructure project for the Vermont Agency of Transportation (VTrans) to reconstruct Exit 17 on Interstate 89 in Colchester. The project will address safety concerns at the interchange and replace the structurally deficient bridge over the interstate. In addition, the project includes new ramp construction, ramp relocation, roadway widening, reconstruction of three signalized intersections, bicycle and pedestrian accommodations, and stormwater treatment. VHB is leading the environmental permitting and engineering design efforts including, traffic modeling and engineering, highway geometry design, structural engineering, environmental permitting, transportation management, and public outreach.

Killington Road Design - Phase 1, Killington, VT

VHB is providing design and permitting services for the reconstruction of Killington Road – Phase 1. James's roles include the development of traffic detour plans.

EIV Technical Services, Civil Engineer, Winooski, VT

Prior to joining VHB, James was Consulting Inspector for Vermont Department of Transportation infrastructure projects. He also worked on railroad and paving projects in Chittenden and Addison County.

Evan Haugh

Transportation Designer

Education

BS, Civil Engineering & Math, Iowa State University, 2020

Registrations/Certifications

Engineer in Training

Evan is a Transportation Designer in VHB's Burlington, Vermont office. Evan has varied safety experience from program-level strategic planning to project-level design and delivery. He brings strong technical, research, and messaging skills from his experience with both infrastructure and behavioral safety programs.

3 years of professional experience

Vermont Agency of Transportation, HSIP Program Support

Under this ongoing project, Evan assists VTrans with program administration including producing documentation, project selection and prioritization, project delivery, and evaluation. Evan wrote HSIP Implementation Plans for FY 23 and 24, assisted with establishing a local systemic grant program, tracked obligations throughout the year, and developed strategies to satisfy special rules.

Vermont Agency of Transportation, HSIP Assessment

The HSIP Assessment was a comprehensive review of VTrans' operating procedures for its Highway Safety Improvement Program, recommending new processes and culminating in a new manual for the HSIP program. Evan researched previous VTrans documentation, best practices from other states, and federal requirements. Evan was extensively involved in drafting and preparing the new program manual.

Vermont Agency of Transportation, 2022-2026 Strategic Highway Safety Plan

The SHSP is Vermont's comprehensive action plan to reduce highway fatalities and serious injuries. The SHSP required significant stakeholder outreach to develop a coordinated plan for infrastructure and behavioral strategies. Evan assisted with drafting the SHSP document, hosting stakeholder meetings, and crash data analysis to deliver a guiding plan for five years of Vermont safety efforts.

Vermont Agency of Transportation, Network Screening

This project involved performing systemic network screening for roadway departure and intersection crashes in Vermont. Evan assisted with screening, developing a countermeasure selection matrix, and writing an implementation plan. Evan has been involved throughout this project with technical tasks, memo preparation, and technical presentations to multiple bureaus within VTrans.

Vermont Agency of Transportation, Highway Safety Plans and Annual Reports

Evan has been involved with behavioral safety planning and annual reports for the past two years. Evan was involved with target setting, developing rationales for each countermeasure strategy, and data analysis. Evan also assisted with program evaluation and strategy adjustments for missed safety performance targets.

Vermont Agency of Transportation, Speed Safety Camera Study

VTrans requested a Work Zone Automated Traffic Law Enforcement Study and Report to study issues, needs, feasibility and make recommendations regarding whether and how to proceed with ASE-WZ in Vermont. Evan researched best practices from other states, arranged informational interviews with vendors, and assisted in drafting the final report to the Legislature.

Joe Vanacore

Transportation Designer

Education

BS, Civil Engineering
Mathematics Minor
University of Vermont 2022

Joe is a Transportation Designer in VHB's Vermont Transportation Systems team. He also has experience with surveying as well as construction testing and support services. He specializes in data analysis and visualization for sustainable transportation design.

< 1 years of professional experience

VTrans Operations and Safety Bureau, HSIP Program Management

The HSIP Assessment reviewed VTrans' operating procedures for its Highway Safety Improvement Program, recommending new processes and culminating in a new manual for the HSIP program. Joe assisted with the preparation of the new HSIP Small Scale Local HSIP grant program guide that provides a methodology for making safety investments on municipal roadways. He assisted with the development of training materials for the program and is now participating in the review of town grant applications for safety improvements.

Bennington-NH 019(30) and STP 0137(20) Project Refinements

VTrans has initiated a system for incorporating locally generated projects into the VTrans program. At times, these locally proposed projects need additional analysis to confirm the purpose and need of the project and an understanding of the evaluation of alternatives and how the preferred alternative was selected. Joe conducted project research into previous planning studies relevant to subject intersections. He summarized the costs and benefits of recommended alternatives and prepared a Selectboard presentation. Additionally, Joe conducted thorough safety analysis and determined the cost of applicable crashes, adding valuable insights to the project.

VTrans Statewide Park and Ride

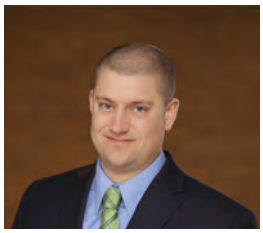
In support of the development of the updated VTrans Park and Ride Plan, Joe created a best practices survey to understand how other programs address issues related to misuse of public resources. He additionally sourced data from the Vermont Open Geodata portal for supplementary data visualization using ArcGIS Pro. This work included mapping park and ride colocations with recreation facilities, transportation facilities as well as general ownership and maintenance district information.

VTrans Operations and Safety Bureau, HSIP Implementation Plan

The HSP Implementation Plan is a strategy document which helps VTrans make progress towards their safety targets. details Vermont's performance against targets set in the previous years' Highway Safety Plan. The plan incorporates five year running crash and spending data for the purpose of evaluating if VTrans' investments are aligned with the crash profile, enabling informed decision-making. Joe performed the data manipulation for 2017-2022 crashes as well as spending and produced the respective data visualization for the report to determine if VTrans investments were in line with their crash profile.

Jason D. Keener, PE

Structural



Jason is a Transportation Engineer in VHB's South Burlington, Vermont, office with experience in culvert, roadway, and bridge replacement, Vermont stormwater standards, and construction inspection. His skills include computer-aided drafting programs AutoCAD and Microstation as well as surveying with a robotic total station.

16 years of professional experience, 11 years with VHB

Education

BS, Civil Engineering, Clarkson University, 2006

Registrations/Certifications

Professional Engineer, VT

Affiliations/Memberships

Vermont Society of Engineers, 2013

USDA Forest Service, AOP Culvert Replacement, Addison and Rutland Counties, VT

Jason is the Project Manager and Lead Designer on an ongoing IDIQ contract with the Green Mountain National Forest for projects throughout Vermont and New Hampshire. The scope of work includes improvements to existing and repair of damaged water crossings. Natural bottom and open bottom arch culverts, and bridges are chosen and designed to minimize impact to the stream ecology. Jason is responsible for structure selection and design, site design, grading, plan development, concrete foundation design, quantity calculations and cost estimating; and assists with hydrology and hydraulic analysis and stream simulation for stream crossings. The designs for replacement structures have included steel girder bridges with concrete substructures, aluminum box culverts and aluminum arches.

VTrans / Main Road (TH 1) Bridge 8 over Huntington River, Huntington, VT

VHB was the selected designer for the complete replacement of Bridge 8 on Main Road (TH 1) over the Huntington River. The design included a steel girder bridge with a curved deck to better fit the roadway geometry. For the substructure, piles were driven under alternating one-way traffic and precast concrete elements were used to reduce the length of the bridge closure. VHB performed roadway and structural design, construction cost estimating, and bid analysis for the construction of this 97'-2½" long single span bridge. VHB also assisted VTrans with the with the regulatory permitting and right-of-way acquisition. Jason designed the steel girder with cast-in-place concrete deck superstructure that is supported by integral abutments. Jason also assisted with the detailing and design checks for both pre-cast and cast-in-place substructure components.

VTrans Colchester IM 089-3(69), I-89 Bridges 76N&S and 77N&S, Colchester, VT

Jason was a Project Engineer for the deck replacement project of Bridges 76N&S and 77N&S on I-89 over Bay Road and Mallets Creek respectively. This project consisted of the removal and replacement of four bridge decks with precast concrete deck panels and utilized cross-overs and a 59-hour bridge closure period for four separate weekends to reduce impacts to the traveling public. Jason was responsible for the design of the precast deck panels as well as assisting with plan and project development as it follows the Construction Manager/ General Contractor (CM/GC process).

Kelly Barry, PE

Structural

Kelly is a Transportation Engineer in VHB's South Burlington, Vermont, office. Her design experience includes concrete and steel structures, as well as roadways and bike/pedestrian facilities. Kelly has assisted on many aspects of projects including task management, plan development, bridge inspection, load ratings, cost estimating, and structural design. She is also experienced in computer aided drafting programs such as MicroStation and AutoCAD.

Education

MS, Civil Engineering, University of New Hampshire, 2013

BS, Civil Engineering, University of New Hampshire, 2011

Registrations/Certifications

Professional Engineer (Civil Engineer), VT

Affiliations/Memberships

WTS International, Vermont

10 years of professional experience , 10 years with VHB

Grout Road Bridge, Montpelier, VT

Grout Road Bridge is a single span steel girder with timber deck bridge supported on unreinforced concrete abutments that services four private residences. VHB is responsible for the engineering to provide a load rating of the bridge in existing conditions, alternatives analysis report, permitting, utility coordination and design bid documents for the selected alternative. For the existing structure to last until full replacement can be completed, VHB is responsible for providing interim repair recommendations and interim repair documents for bid. As Project Manager, Kelly is responsible for coordinating between the Town, FEMA, the VHB design team, and local stakeholders.

Pinello Road Bridge Replacement, Bethel, VT

VHB is the designer for the Pinello Road Bridge project which involves the replacement of an existing temporary vehicular bridge in Bethel, VT. The original bridge was washed away in a FEMA declared emergency storm event in 2019. The project will replace the temporary structure with composite steel girder bridge on integral abutments that meets the bankfull width. The scope of work under this contract includes roadway and structural design, utility relocation, and developing Right-of-Way plans. As Project Manager, Kelly is responsible for coordinating between the Town, VTrans, FEMA, the VHB design team, and local stakeholders.

116 Sidewalk, Hinesburg, VT

Kelly served as a Design Engineer for the final design of a 1,000-foot sidewalk along Vermont Route 116 in Hinesburg. Her responsibilities included coordination with clients and State representatives and plan development and design. The project included the development of alternatives and conceptual plans through production of right-of-way plans, contract plans, and construction cost estimate.

Burlington Bike Path Rehabilitation Project, Burlington, VT

Kelly was a Design Engineer for the design of Phase 2 of the rehabilitation of a 30-year-old bike path through Burlington to Colchester, Vermont. Being one of the busiest multi-use paths in the state, VHB addressed primary areas of design concern, including path width, geometry, shoulder conditions, and sight distance. Kelly's responsibilities included plan development and design. The project included the development of alternatives and conceptual plans through production of right-of-way plans, contract plans, traffic control, and construction cost estimate for 3.3 miles of bike path.

Rick Plenge, PE, PTOE

Active Transportation

Education

BS, Civil Engineering, University of New Hampshire, 1997

Registrations/Certifications

Professional Engineer (Civil), NH, MA, CO

Professional Traffic Operations Engineer (Traffic Operations)

Affiliations/Memberships

Association of Pedestrian and Bicycle Professionals, 2008

WalkBoston

Rick leads VHB's New England Active Transportation Service. He has a comprehensive transportation and project management background, with experience in multimodal traffic operations and safety analysis in the public and private sectors. Rick's responsibilities have included safety audits/studies, pedestrian and bicycle facility planning and design, quick build/pilot implementation projects, roadway design, traffic calming, parking studies, and traffic impact analyses. He has managed and led the design of numerous multimodal transportation planning and traffic engineering projects for states and municipalities through various on-call and general engineering contracts.

25 years of professional experience , 1 year with VHB

City of Burlington, Main Street Redesign, Burlington, VT

Rick is serving as the transportation design lead for the redesign of a ½ mile portion of the Main Street corridor in downtown Burlington, VT. The project is incorporating a complete streets approach to better integrate the multimodal travel and curb side use demands while supporting the City's sustainability, economic and placemaking goals.

South Burlington/Exit 14 Ped Bridge, South Burlington, VT

Rick is leading the multimodal design of a signature architectural bridge over I-89 in South Burlington that will serve to connect existing residences and the University of Vermont Campus to the new South Burlington Town Center and University Mall redevelopment parcel. The project will develop an all ages and ability pedestrian and bicycle bridge that will remove an existing barrier in the multimodal transportation system that currently requires pedestrians and bicyclists to navigate four high speed interchange ramps to cross between both sides of the community.

Watertown Downtown Street Redesign, Watertown, MA

Rick is serving as the design lead for the redesign of several complex intersections within the City of Watertown. The design is striving to integrate a series of enhanced shared use path and dedicated bikeway facilities while improving traffic operations and safety for all travel modes. It will reconfigure intersection geometry, simplifying traffic operations to better define right-of-way throughout the corridors.

Town of Weston, Park Road Redesign, Weston, MA

Rick is managing the redesign of a rural one-mile portion of Park Road in Weston, MA to incorporate various multimodal safety and operational enhancements, including shared use path facilities, enhanced pedestrian and bicycle crossings, and ADA upgrades.

Route 28 (McGrath Highway), Somerville, MA

Rick is serving as the multimodal technical design Lead for the complete street upgrades along McGrath Highway. The MassDOT project is using a complete streets and safety driven approach to rebalance the roadway to better accommodate the safety and operational needs for more vulnerable roadway users. The roadway rebalancing has included the integrated of separated bikeways and shared use paths, enhanced pedestrian and bicycle crossings through several high-volume intersections and ramp terminals, specific pedestrian and bicycle signal treatments, and accessibility upgrades.

Chris Hale-Sills, PE

Stormwater

Education

BS, Environmental Engineering, University of Vermont, 2015

Registrations/Certifications

Professional Engineer, VT

Envision™ Sustainability Professional

Chris is a site/civil engineer with experience including the design and permitting of stormwater management and treatment systems, solar farms, subdivision roadways, residential sites, commercial sites, redevelopments, and construction oversight for both public and private clients. Chris also has experience with a variety of engineering and software suites, including AutoCAD, Civil3D, StormCAD, HydroCAD, HY8, and Estimator.

6 years of professional experience , 4 years with VHB

Colchester Phosphorus Control Plan, Colchester, VT

VHB assisted the Town of Colchester with the creation of a Phosphorus Control Plan (PCP) to be implemented over the next 10-20 years. Chris's work on the project focused on high level analyses of 4 initiatives covering 30+ potential project sites, ranging from site-level infiltrative BMP installation, to opportunities at 3-Acre sites, to roadway repair and improvements.

South End and O.N.E. Stormwater Retrofits, Burlington, VT

Chris performed stormwater modeling and design efforts aimed at reducing CSO storm events in the South end and Old North End of Burlington. Bioretention and infiltration projects required careful siting to appease residents, while providing maximum impact balanced with cost. Chris utilized GIS tools to create conceptual designs, and Civil3D to produce plansets.

Pine Tree Terrace, South Burlington, VT

VHB worked with the City of South Burlington re-design the stormwater collection system located in Pine Tree Terrace. Chris created a stormwater model of the pipe system and surrounding subcatchments, using StormCAD, to perform sensitivity analyses of different designs during various storm events on neighborhood scale.

Manhattan Drive Stormwater Outfall Improvements, Burlington, VT

Chris played a key role in the design and drafting of stormwater outfall repairs and a stone slope-stabilization berm, aimed at addressing increasing erosion and slope instability problems in Burlington's Old North End. He also modeled the existing stormwater drainage along with the proposed stabilized drainage channel in HydroCAD, and assisted with the state wetland, and local permitting processes.

City of Burlington, Main Street Corridor Revisions, Great Streets Initiative, Burlington, VT

Chris is currently performing stormwater modeling and design efforts, and sustainability leadership tasks involved in the revitalization of six blocks of Burlington's Main Street.

Town of Winooski, Main Street Revitalization, Winooski, VT

VHB assisted the Town of Winooski with the revitalization of seven blocks of Main Street, including the revision of pedestrian pathways, traffic patterns, landscaping amenities, and stormwater facilities. Chris' tasks included the design and drafting of two new gravel wetland treatment areas within the median of the road, and the creation and submittal of documents for state operational stormwater permitting.

Kaitlin O'Shea

Historic/Cultural Resources

Education

MS, Historic Preservation, University of Vermont, 2011

BS, Historic Preservation, University of Mary Washington, 2006

Affiliations/Memberships

Advisor, National Trust for Historic Preservation

Advisor, Vermont Marble Museum

UVM Historic Preservation Alumni Association

Kaitlin is a Preservation Planner in VHB's Vermont office. With a strong background in and understanding of preservation principles and practice, she provides proficiency in regulatory process and compliance, particularly Section 106 review and Section 4(f) evaluations, as well as historic documentation, historic resource identification, and project management in the government framework. Kaitlin meets the Secretary of the Interior's Professional Qualification Standards for an Architectural Historian and Historian (36 CFR 61).

17 years of professional experience , 8 years with VHB

VTrans Historic Preservation Services Contracts, Statewide, VT

As part of the Historic Preservation Services 2018 Contract (#PS0709), VHB was selected one of four firms to provide various preservation services to VTrans. Under this authorization, Kaitlin has completed reviews and documentation for historic resource evaluations, Vermont Architectural Resource Inventory (VARI) forms, Section 106 reviews, and Section 4(f) evaluations as well as mitigation projects such as Historic Resource Documentation Packages (HRDPs). Kaitlin is the Project Manager for the recently awarded Historic Preservation Services 2022 Contract (#PS1000), for which VHB was ranked in first place.

Chelsea Street Sidewalk Project, South Royalton, VT

On behalf of the Town of Royalton, Kaitlin completed the historic resource identification report for above-ground cultural resources as part of the VTrans MAB project process. VHB was hired to complete the design and engineering for the project. Following the completion of the report, VTrans requested that Kaitlin complete the Section 106 review and Section 4(f) evaluation. The Project involves streetscape and sidewalk reconstruction and redesign as well as pedestrian improvements to revitalize the Chelsea Block.

Hartford Bridge 7 Replacement, VTrans, Hartford, VT

Under contract with VTrans, Kaitlin completed the Section 106 review, MOA, and Section 4(f) evaluation for the replacement of the historic Bridge No. 7, which is located in the Hartford Village Historic District. The project resulted in an adverse effect to the bridge and the historic district. VTrans requested that Kaitlin write the individual Section 4(f) evaluation – the first one to be written in Vermont in seven years. Kaitlin worked closely with VTrans staff and their consulting engineers as part of this process.

Lamoille Valley Rail Trail STP LVRT(10)(11)(12)(13)(15), Swanton to St. Johnsbury, VT

Under contract with the VTrans, Kaitlin is part of the VHB team designing, engineering, and completing the environmental permits for the remaining 30 miles of the 93-mile project. Building on prior resource assessments, Kaitlin reviewed over 150 bridges, culverts, and cattlepasses to evaluate their historic integrity and significance as well as the project impact to each resource and the Lamoille Valley Railroad linear historic district. Kaitlin completed all of the Section 106 reviews and related Memorandum of Agreements (MOAs), as well as the Section 4(f) evaluations.

Robert Wildey, PE, CPESC

Hydrologic and Hydraulic Studies

Education

MS, Civil Engineering, University of New Hampshire, 2006

BS, Environmental Sciences, University of South Florida, 1997

Registrations/Certifications

Professional Engineer, VT

Affiliations/Memberships

American Society of Civil Engineers

American Water Resources Association

Robert is Water Resources Engineer with VHB's Environmental Services Group where he has worked on a variety of water and stormwater-related projects for both public and private-sector clients. His key focus is the interface between natural streams and the built environment, from bridges and culverts that carry transportation infrastructure to stormwater treatment practices that manage runoff from impervious areas and convey flows to surface waters. Robert is experienced with environmental permitting related to wetlands and other water resources at the local, state, and federal levels on projects as diverse as residential developments, retail shopping centers, renewable energy facilities, highway and rail projects, and utility corridors. He specializes in evaluations of erosion, sedimentation, and geomorphology in rivers.

20 years of professional experience , 17 years with VHB

Town Salisbury Bridge No. 4 Waterway Crossing Analysis, Salisbury VT

As part of the design for the replacement of Town Highway Bridge No. 4 carrying Maple Street over Leicester River, Robert provided design guidance to support the structural engineers in determining the proposed bridge dimensions and configuration to meet hydraulic freeboard and openness requirements for the project design storm. VHB performed a hydrologic and hydraulic analysis for the existing and proposed bridge to develop a preliminary structure size for the subject crossing and evaluate the potential impacts to the water surface elhyevation (WSE) of the river. VHB developed a step-backwater hydraulic model for the river crossing using the US Army Corps of Engineers (ACOE) hydraulic program HEC-RAS, Version 4.1.0 in accordance with the VTrans Manual and current practices.

VTrans, Culvert and Bridge Investigations, Vermont

Robert performed field investigations, hydrologic analysis, and hydraulic modeling associated with the design, permitting, and construction of culvert and bridge replacements at numerous crossing structures associated with Vermont Agency of Transportation (VTrans) roadway projects. One of these projects involved over 150 culverts along Vermont Route 100 in Killington, Pittsfield, and Stockbridge. Although this project was initially scoped as a roadway improvement project, it became apparent that a hydraulic analysis of the drainage infrastructure was warranted prior to the project moving to construction. In order to meet the project budget and timeline, a remote-sensing approach using GIS was applied to develop watershed areas and drainage characteristics, and a spreadsheet model was developed to calculate design flows and determine the hydraulic requirements for each culvert.

VTrans, Hydraulic Manual Revisions, Montpelier, Vermont

The Vermont Agency of Transportation (VTrans) Hydraulics Manual provides guidance for the assessment and design of hydraulic structures that are critical parts of the VTrans transportation infrastructure. The Hydraulics Manual had last been reviewed over 10 years earlier and needed to be brought up-to-date to reflect the current state of practice. Under contract to VTrans, Robert served as a key member of the VHB team to review the existing manual, confirm calculations, and rewrite text to make the manual more user-friendly.

Ryan Cloutier, LS

Right-of-Way/Survey/GIS

Ryan is a Survey Manager in VHB's South Burlington office. Ryan serves clients' survey needs through the full project lifecycle from initial planning and research, to right of way, utility and boundary survey, through final design, construction, as-built and ALTA survey. He has in-depth experience on both the public and private sectors having held senior positions at the Vermont Agency of Transportation and with private consulting firms throughout New England.

Education

BS, Mathematics, Saint Michael's College, 1998

Registrations/Certifications

Licensed Surveyor, VT

25 years of professional experience, 6 with VHB

East Main Street Sidewalk, Wilmington, VT

Ryan and his team conducted the field survey for the reconstruction of approximately 1,400 linear feet of existing sidewalks along the north side of East Main Street, in the historic center of Wilmington. This project includes new granite curbing, new concrete sidewalks, stairs and walkways, and driveway entrances. The project also includes the construction of several fieldstone walls, the replacement/extension of a sewer main and six laterals, and two new crosswalks. Because the new sidewalk will be wider than the existing, the project involves utility pole relocations to eliminate conflicts with the proposed sidewalk.

Vermont Agency of Transportation (VTrans), Survey Services On-Call, Vermont

Ryan is the Project Manager for the VTrans 1.5M Survey Services On-Call Contract. His responsibilities include the full project management lifecycle, from initiation through project closeout.. Projects using remote sensing technology include US 7–Shelburne Road Traffic signal project; Rockingham Ledge scan along I91; 3 miles of the Colchester Causeway connecting Colchester to South Hero, VT; and the Hartland, VTI91 bridge replacement project.

40 IDX Drive ALTA survey, South Burlington, VT

Ryan served as Project Manager on an ALTA survey of a 16-acre commercial site. A project with this much detail would normally take three weeks to survey using traditional methods, but using UAV, VHB was able to collect all of the necessary information in a couple of hours flight time and deliver the project ahead of schedule.

Franklin County State Airport, Vermont

Under an on-call contract with the Vermont Agency of Transportation (VTrans), Ryan was the project lead to provide boundary, topographic and records research for airport improvement projects. VHB performed a topographic survey of approximately 30 acres at the airport for stormwater improvements and fence upgrades. The topographic survey was combined with existing aerial LiDAR to build the final surface.

PanAm Bridge Deformation Monitoring, Bernardston, MA

Ryan served as Project Manager on a 3D scanning project to perform deformation monitoring of PanAm Bridge 42.81 in Bernardston. Services include the use of a 3D scanner to create a point cloud of the bridge piers, bridge arches, bridge abutments, and bridge wingwalls on both the east and west sides of the bridge pre- and post-construction. Ryan then compared the results of the pre-construction scan with the results of the post-construction scan to identify any vertical movement of the bridge pier, bridge arches, bridge abutments, or bridge wingwalls.

Michael Willard, ASLA, LEED AP

Landscape/Streetscape Design

Education

AA, Architecture, Vermont College, 1992

Registrations/Certifications

LEED Accredited Professional

Affiliations/Memberships

American Society of Landscape Architects

Vermont Bee Keepers Association

With over two decades of professional experience, Mike has an extensive portfolio of landscape architectural projects which includes master planning, commercial development, multifamily housing, residential projects, government facilities, streetscapes, parks, transportation, healthcare, institutional, innovative storm water, hotels, and resorts. In addition to Mike's strong design capabilities, he has a broad range of technical skills on all aspects of construction detailing and implementation and in-depth knowledge of construction materials and methods.

27 years of professional experience, 6 years with VHB

College Street Waterfront Access, Burlington, VT

Michael assisted the City of Burlington to strengthen the City's waterfront. This project consisted of redesigning lower College Street to incorporate innovative storm water gardens, transit stops, public parking and public bathroom facilities, outdoor gathering spaces, street trees and street lighting. This streetscape serves as the entrance to the Waterfront Park and Echo Center.

South Burlington City Center/Market Street, South Burlington, VT

As project manager, Michael worked closely with the City and design team to develop an award-winning streetscape design. Market Street was designed as one continuous "Main Street" with three distinct design styles that seamlessly link together. These design styles respond to the City's new Form Based Code zoning. The streetscape design incorporated innovative stormwater design, pedestrian connectivity to neighboring recreation assets, a multi-use path, and outdoor café and sitting areas.

Newport Waterfront and Downtown Master Plan, Newport, VT

As project manager, Michael was an integral member of the design team and visioning process for the Waterfront and Downtown Master Plan for the historic City of Newport. The plan identifies opportunities, public facilities, infrastructure improvements, land uses, and other physical enhancements to generate increased activity and economic vitality.

Downtown Core Master Plan, St. Albans, VT

As project manager, Michael was an integral member of the design team and visioning process for the Downtown Core Master Plan for the historic city block in St. Albans. The master plan included prioritizing development sites within the underutilized core block that would eventually see these priority sites turn into a new VT State Office Building, Downtown Hotel, and new multi-level parking garage.

Church Street Marketplace—Block One, Burlington, VT

As project manager, Michael was responsible for leading the design team to develop the site design, permitting and construction documentation. Phase One of this project was to provide design direction on streetscape improvements for the existing three pedestrian mall blocks. Some of these improvements included handicap access to merchants, installing new street trees, fixing general repairs and removing trip hazards. This project also included creating a new venue space in front of the downtown mall by developing a paving pattern to define the space. Phase Two of this project will extend the Marketplace one city block by eliminating vehicular traffic and continuing the pedestrian mall. Upon completion, this project will enhance and strengthen the famous "Outdoor Pedestrian Mall" that was originally created in 1981.

Brad Ketterling

NEPA/Permitting

Education

MS, Physical Geography, University of Western Ontario (Canada), 1995

BS, Geography, Concordia University, 1992

Brad has worked as an environmental scientist for close to two decades, specifically in the fields of wetland mitigation site feasibility and design, stream assessment, watershed planning, state and federal permitting, and NEPA compliance. Brad helps clients navigate complex regulatory requirements and achieve successful results by identifying and assessing natural and cultural resource issues and constraints and developing strategies to obtain authorizations that are in the best interest of the client and the environment. He has worked on a variety of projects from linear transportation and energy infrastructure improvements to telecommunications networks to ski resorts to natural areas restoration. Brad has managed projects for a variety of private and public sector clients, including the Vermont Agency of Transportation, the Vermont Telecommunications Authority, Green Mountain Railroad Company, amd the City of Burlington, Vermont.

27 years of professional experience, 20 years with VHB

Burlington Bike Path Rehabilitation, Burlington, VT

Brad assisted with various permitting activities associated with the proposed rehabilitation of the Burlington Bike Path, including: coordinating the process of infiltration testing to support the use of a driveable grass pavement system in Waterfront Park; coordinating with Department of Public Works Stormwater Program Manager to discuss potential stormwater treatment approaches; permit applications for Construction and Operational Phase Permits from the DEC Stormwater Section; preparation of city permit applications (Zoning Permit and Small Project EPSC Plan); and coordination with Senior Planner at Department of Planning and Zoning. He also performed a shoreline assessment of the Urban Reserve to assess areas in potential need of stabilization.

Cold Brook Stream and Floodplain Enhancement Project, Wilmington, VT

Brad is Project Manager responsible for developing the mitigation strategy to reclaim two artificial ponds in the floodplain of Cold Brook in Wilmington, Vermont. Relicts of past sand and gravel mining activities, these ponds captured Cold Brook during Tropical Storm Irene, resulting in elevated water temperatures in this trout stream and a disruption of natural sediment transport processes. He developed an approach to fill the ponds with rock material from adjacent reservoir excavation, establishing a pilot channel for Cold Brook. He also coordinated extensively with the U.S. Army Corps of Engineers and Agency of Natural Resources to gain concept approval and obtain all necessary permits.

Middlebury Main Street and Merchants Row Bridges, Middlebury, VT

Brad was Task Manager for Environmental Services, evaluating potential natural resources and other constraints on the design for the replacement of two bridges over the Vermont Railway in Downtown Middlebury as part of an Environmental & Historic Structures Evaluation and National Environmental Policy Act (NEPA) documentation. As a Local Transportation Facilities (LTF) project, direct coordination with VTrans staff was required with the Historic Preservation Officer, Archaeology Officer, and various members of the Environmental Section. Brad also coordinated directly with the Federal Highway Administration (FHWA) Environmental Program Manager with respect to NEPA compliance documentation and the development of an appropriate Section 4(f) Evaluation for bridge replacement.

Kurt Muller, PE

Contaminated Soils

Education

BS, Environmental Engineering, University of Vermont, 2004

BA, Biology, University of Vermont, 1999

Registrations/Certifications

Professional Engineer, VT

Affiliations/Memberships

Vice President - Vermont Environmental Consortium (2013- present)

American Council of Engineering Companies

Kurt's engineering expertise includes project management, investigation and remediation design, clean-up oversight, and stakeholder collaboration for brownfield sites. Specifically, Kurt's expertise focuses on managing complex projects that require coordination with a variety of stakeholders including EPA, DEC, attorneys, municipalities, transportation agencies, and the public. During all of his projects, Kurt has emphasized meaningful, proactive communication and community participation in order to ensure a successful outcome. Kurt is a licensed Professional Engineer in Vermont with 18 years of experience in the private sector.

18 years of professional experience, 4 years with VHB

Brownfields Investigation and Redevelopment

Project Manager on more than 50 EPA-funded Brownfield site investigations, where he has prepared Workplans/QAPP documents and investigation reports. He has performed Evaluations of Corrective Action Alternatives (ECAA) and prepared numerous Corrective Action Plans (CAPs) that address a wide variety of contaminants. Familiar with and generate risk-based and self-implementing cleanup plans for TSCA-regulated PCB sites. Characterized former dry-cleaner site with chlorinated solvent impacts. Designed, coordinated and implemented remediation for two former paper mills impacted by dioxins/furans and PCBs, which included developing DEC & EPA approved QAPPs for post remediation dioxins/furans indoor air clearance sampling, the first of their kind for Region 1 EPA. Prior to project management, performed soil, vapor and groundwater sampling using a variety of techniques including EPA's slow purge sampling procedures, membrane interface probing, Drive Point/Direct Push technology, Waterloo Profiling, incremental sampling methodology, soil and sediment coring, bathymetry assessments, and monitoring well installation. Also, supervised numerous underground storage tank closures throughout Vermont.

Management, Remediation and Construction Oversight

Between 2008 and project completion in 2013, provided oversight and project management for the National Park Service (NPS) on the successful Krejci Dump Site remediation in Cuyahoga Valley National Park. In 2014 and 2015 performed oversight and management assistance during the remediation of operable unit 1 (OU1) of the Washington Gas Site for NPS, and oversaw the construction of an isolation barrier at the Orphan Mine Site in Grand Canyon National Park. Provided investigation oversight and document review to confirm Administrative Order of Consent compliance at the GERO Vincennes Site. Designed, managed, and implemented an EPA approved soil and groundwater management plan for the City of Burlington's Waterfront Access North project (2013-present) that rehabilitated land surrounding a former coal fired power plant for safe recreational reuse.

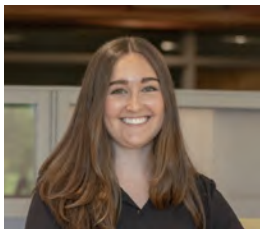
Environmental Site Assessments (ESAs)

Performed and/or oversaw more than 90 ESAs on a variety of commercial and residential properties. Project manager/lead engineer on several subsurface Phase II hydrogeologic investigations at a variety of petroleum, chlori-nated solvent, and PCB contaminated sites.

Elisabeth Sundberg was added as traffic support on April 18, 2023

Elisabeth Sundberg

Traffic



Elisabeth is a Transportation Planner on VHB's Vermont Transportation team. She recently received her Master of Public Administration with a focus on Urban and Regional Planning. Drawing on her studies and professional background working with municipalities, Elisabeth provides a unique understanding of the effect transportation efforts have on the greater urban environment.

1 year of professional experience

Education

MPA, Public Administration, University of North Carolina at Wilmington

BA, Urban Studies, College of Charleston

City of Burlington, Great Streets Parking Analysis, Burlington, VT

VHB worked with the City of Burlington to conduct a parking inventory and utilization study to better understand the existing capacity and existing and future demand for parking in the downtown area. Elisabeth coordinated the City and a team of data collectors to gather data regarding the inventory, occupancy, and turnover rates of public parking within the study area. Elisabeth facilitated thorough and accurate data collection by helping design the data collection survey instrument and supporting data collectors with routing, schedules, instructions on how to utilize the app, Survey 123.

VTrans, Lamoille Valley Rail Trail, Public Information Consulting, St. Johnsbury to Swanton, VT

Elisabeth is currently serving as Public Information Officer for the construction on the remaining segments of the Lamoille Valley Rail Trail. Working in close collaboration with VTrans and the contractor, Elisabeth provides accurate, timely information to the public through various forms of media relations including social media and the VTrans website. In addition, Elisabeth collects and, as appropriate, responds to public questions and comments received via email and telephone to improve public reception of the project.

CCRPC, Amtrak Connections, Burlington, VT

Amtrak recently completed a long-planned extension of the Ethan Allen Express route to Burlington's Union Station. With the arrival of daily Amtrak service, CCRPC and Burlington Business Association have teamed with VHB to evaluate the access, circulation, multimodal connections, and wayfinding to and from the Amtrak platform at Union Station. Elisabeth has been integral to the information gathering, site area assessments, and map and graphics development to evaluate the existing walk, bike, transit, vehicular, and regional transportation connections to the station and identify gaps in the system where potential recommendations for improvements can be made.

CCRPC, Winooski Walk Bike Plan, Winooski, VT

VHB is collaborating with the Chittenden County Regional Commission and the City of Winooski to enhance the safety and circulation of pedestrians and cyclists. Elisabeth is facilitating public meetings with key stakeholders in the area, with the assistance of community organizations. She is also working closely with AALV to ensure that meeting materials such as flyers, surveys, and mapping tools are translated for non-English speaking individuals. Elisabeth is taking charge of stakeholder engagement, while utilizing the Advisory Group to gather feedback from all community groups and improve mobility within Winooski.

Jeff Dube was added as landscape/streetscape support on April 18, 2023

Jeff Dube, PLA

Landscape/Streetscape Design

Jeff is a Landscape Architect serving VHB's Northeast Region based in South Burlington, VT. With knowledge of design, ecology, and urban systems, Jeff works to implement the community vision while creating dynamic and resilient landscapes for the future from large-scale planning project, mixed-use urban center, down to the neighborhood park.

8 years of professional experience

Education

MS, Landscape Architecture, University of Michigan, 2016

BS, Environmental Sciences, University of Vermont, 2010

Registrations/Certifications

Licensed Landscape Architect, VT

Burlington South End Multimodal Center Feasibility Study, Burlington, VT

VHB is leading this study to evaluate the feasibility of a regional transportation/transit facility with a parking garage, potential housing, and other uses envisioned for the 68 Sears Lane and 125 Lakeside Avenue parcels in Burlington. This study will equip the CCRPC with a strategic understanding of the best uses for these important Burlington parcels as the City looks to expand its transportation, housing, and parking options. Jeff is Landscape Architect on this project.

Jackson Laboratories Traffic Calming, Bar Harbor, ME

Jeff was Landscape Architect for a project assisting with planning and design for traffic calming concepts for Route 3 at Jackson Laboratory (JAX) campus. To continue furthering its goal of safety improvements at the Bar Harbor campus, JAX is embarking on an effort to design and construct traffic calming devices along Route 3 adjacent to the campus. The project is providing context-sensitive, data driven, and cost-effective design solutions to slow motorist speeds and provide safe¬¬r streets, while ultimately redefining the character of the Route 3 area in Bar Harbor.

VTrans, Lamoille Valley Rail Trail Trailside Facilities Design Guidelines

The LVRT Trailside Facilities Design Guidelines is a continuation of VHB's work with Vtrans and municipal partners on the Lamoille Valley Rail Trail (LVRT). The Guidelines are intended for communities seeking to design, build, and install new amenities that meet VTrans maintenance, safety, and accessibility requirements while better serving their community and the entire 93-mile corridor. The Guidelines illustrate how amenities can support social aspects of the trail and provide users with the ease, comfort, and convenience that contributes to a positive user experience. With the creation of the LVRT Trailside Facilities Design Guidelines, communities now have a comprehensive blueprint that can be used when creating meaningful spaces that engage with the LVRT.

Jesse Therrien was added as GIS/mapping support on April 18, 2023

Jesse A. Therrien

GIS/Mapping

Education

BS, Environmental Sciences, Northern Vermont University -Johnson, 2005

Jesse is an experienced Senior GIS Specialist/Environmental Scientist. His areas of experience include cartography and analysis using the full suite of Esri's Geographic Information System (GIS) ArcGIS Pro software to complete such tasks as data analysis, map and figure production, watershed delineation and modeling. Jesse is also a mobile data collection professional who routinely prepares custom field applications and manages large and complex datasets associated with various types of projects using such data collection programs as ArcGIS Field Maps.

18 years of professional experience

GIS Data Manager, Various VTrans Projects, VT

Jesse has acted as the GIS data manager for dozens of VTrans projects, completing the post-processing of GPS data, preparation of geodatabases, and creating presentation-quality mapping that incorporates both VHB-generated data and publicly available resource information. Jesse also routinely prepares basemapping to support mobile data collection and has created and maintained webmaps for internal data QA/QC and external coordination with VTrans and regulators.

Lamoille Valley Rail Trail, Swanton to St. Johnsbury, VT

Jesse supported all GIS data management for the Lamoille Valley Rail Trail Project, which is converting a 93-mile rail corridor across northern Vermont to a four-season multi-use trail across 17 communities. His work included evaluating and presenting natural and cultural resources data collected by VHB environmental scientists and preservation planners along the entire corridor, assisting with the analysis and presentation of impacts to regulated resources and environmental permit applications, and supporting public outreach and close coordination with the permitting agencies.

Vermont Wetland Mapping Project, Various Locations, VT

Jesse is currently assisting with the development and maintenance of mobile field-mapping applications and management of the project's ArcGIS Online web map, where field data collected by VHB, and the Vermont DEC Wetlands Program can be evaluated against modeled wetland mapping produced via an automated feature extraction process by partners at the University of Vermont Spatial Analysis Lab. The scope of the project includes the watershed of the Lewis Creek, Otter Creek, Winooski River, and Pike River.

South Burlington City Center, South Burlington, VT

The City of South Burlington has begun the process of creating a new City Center, located in the heart of South Burlington. This project encompasses a new roadway system and a mixed program of commercial and residential use that will serve as a focal point of transportation and economic activity. VHB is providing environmental and land development services to support the design of the new roadway system and City Center. The proposed 1.5-million-square-foot project includes retail, office, educational, and residential components. Jesse has provided natural resources investigation support through the use and management of spatial data for this project, as well as graphics support.

Alexis Coplin was added as GIS/mapping support on April 18, 2023

Alexis Coplin

GIS

Alexis is an Environmental Scientist and GIS Analyst in the Geomatics group in VHB's South Burlington, Vermont, office. She has diverse experience in geospatial analysis, mobile data collection, and geochemical studies. Responsibilities include mobile data collection application development, spatial data management and analysis, and mapping.

13 years of professional experience

Education

MS, Earth Science, Dartmouth College, 2009

BS, Geology, Colgate University, 2007

Certification

Certified GIS Professional (GISP# 160762)

VTrans/Statewide Property Parcel Mapping

Alexis updates parcel data for the VTrans Statewide Parcel Mapping Project. VHB has prepared parcel map data in GIS for over 15 participating towns that meets the Vermont Parcel Data Standard. This process includes working closely with the town to match parcel data to the Grand List through land record research, updating, correcting, and in some cases creating GIS parcel boundaries.

City of Burlington, Great Streets Parking Analysis, Burlington, VT

VHB worked with the City of Burlington to conduct a parking inventory and utilization study to better understand the existing capacity and existing and future demand for parking in the downtown area. Alexis developed a Survey123 form for collecting parking inventory and license plate observations using tablets. The Survey123 form stream-lined field work and eliminated the need for data entry once field work was complete.

Burlington Greenway Phases 2 and 3, Burlington, Vermont

Alexis facilitated data flow between project design plans and GIS mapping in support of project permitting efforts, working with MicroStation, AutoCAD, and ArcGIS software. She also provided completed construction plans in ArcGIS-compatible geodatabases to the City of Burlington.

Chittenden County Regional Planning Commission, I-89 2050 Study, Various, VT

This project entails a comprehensive evaluation of the Interstate 89 corridor through Chittenden County out to a design horizon year of 2050 and development of a suite of policy, planning, and infrastructure recommendations that align with stakeholder-identified Vision, Goals, and Objectives for the corridor. Alexis provides GIS support which includes developing base map and report figures as well as data management.

"Middlebury Village Historic District" Survey and National Register Nomination Update, Middlebury, VT

VHB is currently working with VTrans and the Town of Middlebury to update the existing Middlebury Village Historic District National Register nomination of 1976. The first phase of this project includes completing a Vermont Architectural Resource Inventory ("VARI") form for each building currently included within the historic district, as well as for buildings that are candidates for inclusion in the historic district if the district boundaries are expanded. Due to the vast number of properties that need to be surveyed – approximately 450, Alexis developed a digital version of the VARI form using Survey123. This digital survey improves the data collection process by expediting the field survey and auto-populating the final VARI forms. The digital survey developed for this project can also be leveraged by other projects that require the VARI form.

Kimi Tokarczyk was added as graphic design support on April 18, 2023

Kimi Tokarczyk

Graphic Design

Kimi is a Senior Creative Design Specialist in VHB's Vermont office where she develops visual solutions for a diverse range of projects and clients throughout New England. As a multidisciplinary designer, Kimi's wide skillset and experience include brand identity, marketing design, publication design, illustration/visualization, website management/ digital content, experiential design, photography, and video/motion graphics.

9 years of professional experience

Education

BS, Graphic Design, Art Institute of Pittsburgh, 2013

Registrations/Certifications

FAA Certified Remote Pilot for Small Unmanned Aircraft Systems

OSHA 10-Hour Construction Safety and Health Certificate

Affiliations/Memberships

AIGA, Vermont

CCRPC, Winooski East Allen Street Scoping Study, Winooski, VT

The scoping study for Winooski's East Allen Street prioritized increased safety and mobility for all roadway users. In support of the public and stakeholder engagement effort, Kimi created a project brand package that contained logo files, brand guidance, and a custom icon set. Kimi also developed public meeting flyers, informational handouts, and a presentation template.

VTrans, Middlebury Rail & Bridge Project, Middlebury, VT

The Middlebury Rail & Bridge Project required a large amount of community involvement. Kimi assisted the VHB project team by providing graphic support on public presentations. She also developed illustrative visualizations for early park design concepts and led the design of a series of interpretive panels that describe the project work, archeological resources recovered from the site, and the site's history.

Chittenden County I-89 2050 Study, Chittenden County, VT

Kimi led design support for the I-89 2050 Study in Chittenden County. In earlier stages of the project, she created a cohesive project brand that helped to guide the design of various outreach materials and a project website that hosts up-to-date project information. Working with the project team, she developed infographics, maps, and charts to produce a final report that is reader friendly and easy to navigate.

Downtown Swanton Scoping Study, Swanton, VT

As lead designer for the project, Kimi developed a project logo and outreach materials for the Downtown Swanton Scoping Study. The logo features a stylized swan icon that pays respect to the Town's beloved "Royal" swans used to help to identify and promote the project among the community. The colors and font styles of the brand act as a guide for consistency among outreach materials and generate project recognition among the community. Kimi also designed informative flyers ahead of public meetings.

Northland Newton Development-Historic Interpretation Plan, Newton, MA

VHB provided cultural resource services and development of a historic interpretive program for the 22.6-acre mixed-use development of the former Saco-Pettee Machine Shops in Newton, MA. Kimi supported the project team by assisting with historic research, developing interpretive themes, and conceptual designs for installations that feature reclaimed materials found on the site.

JOHN GORDON CROCK, PH.D.
University of Vermont Consulting Archaeology Program
111 Delehanty Hall, Burlington, Vermont 05405. (802) 656-4310. John.Crock@uvm.edu

EDUCATION:

2000 Ph.D. in Anthropology, University of Pittsburgh
1989 B.A. University of Vermont. Major: Anthropology; Minor: Religion

RESEARCH INTERESTS:

Archaeology of New England and northeastern North America; Archaeology and ethnohistory of the Caribbean Region; World Heritage; Cultural Resource Management; Trade and exchange; Maritime adaptations; Development of inequality; Human colonization of islands; Lithic analysis.

TEACHING:

2011-present Associate Professor University of Vermont Department of Anthropology
Courses include *Introduction to Prehistoric Archaeology*; *Indians of the Northeast: Vermont; Preserving the Past; Caribbean Archaeology; Anthropology of Islands; Field Work in Archaeology*; *Archaeological Laboratory Methods*.
2005-2011 Assistant Professor, University of Vermont Department of Anthropology.

CULTURAL RESOURCE MANAGEMENT:

2000-present Director, Consulting Archaeology Program, Department of Anthropology, University of Vermont. Principal Investigator and Chief Administrator. Exceeds 36CFR Qualifications.

SELECTED REFEREED PUBLICATIONS:

2021 A Deer Camp Forever: Archaeofauna from the Ewing Site. Nanny Carder and John G. Crock. *Archaeology of Eastern North America* 69:103-132.

2019 Natural and Anthropogenic Landscape Change and the Submergence and Emergence of Archaic Age Settlement on the Eastern Edge of the Anegada Passage. John G. Crock. Chapter 5 in *Early Settlers of the Insular Caribbean: Dearchaizing the Archaic,* edited by C. Hofman and A. Antczak, pp. 65-76. Sidestone Press.

2018 Paleoindian Sites, Site Patterning, and Travel Corridors along the Southern Arm of the Champlain Sea. Francis Robinson, IV, John G. Crock and Wetherbee Dorshow. Chapter 17 in: *In the Eastern Fluted Point Tradition, Volume 2*, edited by Joseph Gingerich, pp. 326-350. University of Utah Press.

2017 Early and Middle Paleoindian Settlement Patterns and the Late Pleistocene Environment along the Champlain Sea. Francis Robinson, IV, John G. Crock and Wetherbee Dorshow. *PaleoAmerica*. DOI=10.1080/20555563.2017.1380997

2017 "Marineness," the Underwater Seascape and Variability in Maritime Adaptations in the Late Ceramic Age Northern Lesser Antilles. John G. Crock, Nanny Carder and Wetherbee Dorshow. *Environmental Archaeology* 24(10):199-210.

2012 Maritime Mountaineers: Paleoindian Settlement Patterns on the West Coast of New England. John G. Crock and Francis W. Robinson, IV. In *Late Pleistocene Archaeology and Ecology in the Far Northeast,* edited by Claude Chapdelaine. Texas A&M University Press.

2012 A Pre-Columbian Fisheries Baseline from the Caribbean. Nanny Carder and John G. Crock. *Journal of Archaeological Science*. 39(10):3115-3124.

2011 Diet and Rank in a Caribbean Maritime Society. John G. Crock and Nanny Carder. *Latin American Antiquity* 22(4):1-22.

2009 Jackson-Gore: An Early-Paleoamerican Occupation in the Green Mountains of Vermont. John G. Crock and Francis Robinson, IV. *Current Research in the Pleistocene* 26:40-42.

OTHER:

33 other publications, 65 professional papers, 28 invited lectures; 150+ technical reports for regulatory archaeology and historic preservation projects.

Curriculum Vitae – Jorge L. Garcia PhD. He/him/his

Contact Information:

Jorge L. Garcia
Research Assistant Professor
UVM Anthropology/Consulting Archeology Program
111 Delehanty Hall
Burlington, Vermont 05405
802-656-1346
E-mail: Jorge.garcia@uvm.edu

Research Interests:

Archaeology, cultural resources management, and biochemestry. Historical Ecology, mobility and dietary reconstructions through stable isotope analysis.

Education

2014-2019	Doctor of Philosophy (Ph.d), Department of Anthropology, University of Florida, Gainesville, Florida.
2008-2012	Master of Arts (M.A.), Department of Anthropology, University of Central Florida, Orlando, Florida.
2006	Graduate Certificate in Maya Studies. University of Central Florida, Orlando Florida. Dr. Diane Z. Chase, Advisor.
2001-2005	Bachelor of Arts and Sciences in Anthropology with a Minor in Multicultural Studies, University of Central Florida, Orlando, Florida.

Research and Teaching Experience

2022	Archaeologist and Research Assistant Professor, Department of Anthropology and Consulting Archaeology Program, University of Vermont.
2021	Archeologist and Cultural Resources Specialist for the Department of Agriculture Natural Resources and Conservation Service
2013-2019	Research Assistant at the Historical ecology laboratory the bone chemistry laboratory, University of Florida.
2003-2013	Senior Field Supervisor for the Caracol Archaeological Project. Cayo District, Belize.

JOHN ASKEW, P.E.

Academic Qualifications

Clarkson University, 1985, B.S. of Electrical Engineering

Licenses

Professional Engineer – Vermont, New York, New Hampshire, Maine, Massachusetts, Connecticut, Florida, New Jersey, Ohio, South Carolina

Lighting Certified - National Council on Qualifications for the Lighting Professions (NCQLP)

Experience

2001 to present **L.N. Consulting, Inc.**, Burlington, VT

Senior Engineer. Provide electrical distribution, lighting, fire alarm systems design and consulting services for new and renovation construction projects.

1995 to 2008 **Burlington Electric Department**, Burlington, VT

Senior Engineer. Provide medium and low voltage electrical distribution systems design for infrastructure redevelopments and customer infrastructure upgrades and services. Provide energy analyses and coordination studies for electrical distribution systems.

1989 – 1995 **Thermo Consulting Engineers**, Williston, VT

Project Engineer/Project Manager. Provide electrical engineering design, construction management and project management services for diverse projects. Design lighting, communication, and electrical distribution systems for utilities and facilities. Provide building energy analyses for diverse projects.

1988 – 1989 **Hertzberg Consulting Engineers**, Burlington, VT

Project Engineer/Project Manager. Provide electrical engineering design, construction management and project management services for diverse projects.

1985 – 1988 **Florida Power and Light Company**, Cocoa, FL

System Protection Field Specialist. Provide installation, maintenance and troubleshooting of system protection relay systems; generation, transmission and distribution. Primary responsibilities also included acting as field engineer between design engineers and substation crews or contractors.

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