



VERMONT AGENCY OF TRANSPORTATION

TECHNICAL PROPOSAL - DESIGN

*Two-Tier (State-Local) Qualifications-Based Selection
for At-The-Ready (ATR) Consultant Engineering
Services for Municipalities*

March 6, 2020

Prepared for: Vermont Agency of Transportation
Municipal Assistance Bureau, 219 North Main Street, Barre, VT 05641



For more information, contact:

Dale Gozalkowski, PE | Project Manager
518-453-4551 | dgozalkowski@chacompanies.com



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Section A

Cover Letter

March 6, 2020

Ms. Nydia Lugo
Technical Development Engineer
Agency of Transportation, Municipal Assistance Bureau
219 North Main Street
Barre, VT 05641

**Re: Request for Qualifications | Two-Tier (State-Local) Qualifications-Based Selection for
At-The-Ready (ATR) Consultant Engineering Services for Municipalities | CHA Proposal No. X61338-Q1**

Dear Ms. Lugo:

Communities across the Green Mountain State are committed to designing and maintaining safe, reliable infrastructure that is essential for daily life, work and play. Thoughtfully designed and carefully planned roadways, bridges, bicycle and pedestrian accommodations, and underlying infrastructure including culverts and landscaping create spaces that encourage travel and activity and energize residents and tourists. For many years, **Clough, Harbour & Associates LLP (CHA)** has worked side by side with communities throughout Vermont, completing projects on time and within budget to exceed client expectations. Many communities have come to rely on us for expertise and a willingness to go the extra mile.

The CHA team brings VTrans these strengths:

- Efficient team thoroughly familiar with VTrans' policies, procedures and protocols
- Technical expertise with the types of projects anticipated to be advanced
- Exceptional communication skills, from routine project communications to formal public presentations when required
- Deep bench of 1,150 staff; offices in Burlington, Albany, Keene, Hartford and Metro Boston
- Schedule flexibility, as exhibited through the efforts completed throughout Vermont and New England

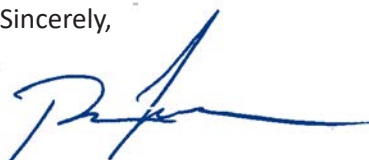
Our proposed project team of **CHA, Vermont Survey and Engineering, Inc.** and **Hartgen Archeological Associates, Inc.** has proudly completed a series of successful projects on behalf of VTrans including dozens of projects involving VTrans' primary agreements.

CHA's team will be led by Project Manager Dale Gozalkowski, PE, who brings a wealth of knowledge from his active involvement in the successful completion of nearly 300 projects involving VTrans. Dale will lead the effort to complete all projects in accordance with a municipality's and VTrans' policies, protocols and exacting expectations. He will be assisted by Jim Shields, IE (deputy project manager); Sarah Bowman, PE, PTOE (senior traffic engineer); and David Kahlbaugh, AICP (senior transportation planner). These staff members are anticipated to have active technical lead roles in the respective professional engineering services we provide. Rob Faulkner, PE, is our principal-in-charge, engineer-of-record and quality manager for this contract, and he will work with our team and the municipalities so that their needs are met and their goals exceeded.

CHA has the locally-based and readily available capacity to respond promptly, efficiently and with staff consistency to handle any opportunity presented. Design development and production will be tackled by our locally-based team.

CHA wants to partner with Vermont municipalities to deliver infrastructure solutions that serve its residents and businesses and strengthen the transportation foundation throughout the state. Please contact me at 802-236-0009 or rfaulkner@chacompanies.com if you would like to discuss our proposal.

Sincerely,



Robert Faulkner, PE

Section B

General Firm Information

Building **TRUST** through **responsiveness, reliability, expert knowledge and skill**

B. General Firm Information

Clough, Harbour & Associates LLP (CHA) is a highly diversified, full-service engineering consulting firm working to responsibly improve the world we live in. We provide a wide range of planning and design services to public, private and institutional clients. CHA was founded in 1952, and we currently have more than 1,150 professional staff located throughout the United States and Canada available to assist with our proposed team as the need arises. CHA has partnered with VTrans since the 1980s.

Clough, Harbour & Associates LLP

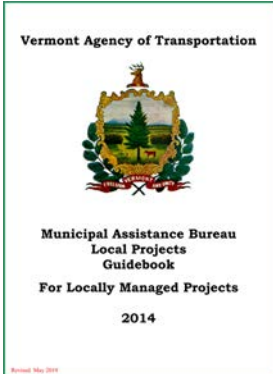
III Winners Circle
Albany, NY 12205

Contact: Dale Gozalkowski, PE
Email: dgozalkowski@chacompanies.com
ph: 518.453.4551 | cell: 518.469.8901

Former firm names and year established:

- Clough, Harbour & Associates LLP, 1981
- Clarkeson & Clough Associates, 1967
- Clarkeson, Clough, Yokel, 1966
- John Clarkeson, Consulting Eng., 1955
- Clarkeson Engineering Co., Inc., 1952

INTRODUCTION TO CONSULTANT FIRMS



At CHA, we strive to make our personnel an extension of a municipality's and VTrans' team and are committed to thoroughly understand your policies, procedures, and protocols. This includes the *VTrans Municipal Assistance Bureau Local Projects Guidebook (2014 – Revised May 2019)* and the *Municipal Assistance Bureau Local Projects Guidebook Appendices (2014 – Revised April 2018)*. Since the mid-1980s, CHA has successfully completed a wide-range of VTrans' projects, including some of the most challenging and complicated ones taken on by municipalities and VTrans. One such example of a complex municipal project that the CHA team has undertaken involving tremendous collaboration with a municipality, FHWA, and VTrans is the City of Burlington's Champlain Parkway. The Champlain Parkway project encompasses virtually all aspects of engineering, project management and public engagement that can occur on VTrans' Municipal Assistance Bureau (MAB) projects. Aspects of this project will be referenced throughout this submission.

CHA is extremely cognizant of the importance of delivering municipality's and VTrans' projects on schedule and within budget. This focused effort maximizes the amount of work that can be completed in each annual State of Vermont Transportation budget. CHA works with municipalities' and VTrans' personnel to establish realistic project schedules for all necessary project tasks, beginning in the technical and cost proposal process. Once those are established, CHA will advance each project in a logical and timely manner.

It is through efforts such as these that CHA has developed a reputation of excellent performance and efficiency, delivering on a large range of engineering design projects.

CHA's transportation specialists include engineers, planners, technicians, and CADD designers with extensive experience with traffic operations analysis and modeling, corridor studies, scoping studies, safety studies, signal design, traffic control plans, and traffic impact evaluations.



Technical Capabilities:

- Traffic Data Collection & Analysis
- Traffic Forecasting
- Traffic Signal & AWSC Warrant Analysis
- Traffic Operations Analysis (Synchro, SIDRA, and HCS)
- Capacity Analysis
- Traffic Modeling & Simulation (Vissim & SimTraffic)
- Roundabout Analysis & Modeling (SIDRA, Vissim, & HCS)
- Site Access and Circulation Studies & Design
- Traffic Calming Studies & Design
- Traffic Impact Studies & Development Reviews
- Temporary Traffic Control Plans & Detour Plans
- 3D Traffic Models for Public Meetings
- Parking Studies
- Roadway & Drainage Design
- Crash History Analysis
- Traffic Safety Studies & Countermeasure Evaluation
- Pedestrian/Bicycle Facilities Analysis & Design
- Access Management
- Intersection Geometric Design
- Traffic Signal System Design (Permanent & Temporary)
- Traffic Signal Optimization & Timing Plan Development
- Traffic Signal Preemption (rail, emergency vehicle preemption, transit)
- Highway-Rail Grade Crossing Diagnostic Traffic Signal Operations
- Pavement Marking & Signing Design
- Safe Routes to School
- GIS Data & Mapping
- Act 250, Environmental Court & State Superior Court Expert Witness Testimony
- Complete Streets & Road Diet Assessments

CHA's experience includes evaluating the operations and safety of the existing transportation system and recommending appropriate, cost-effective improvements to address the transportation system needs. Whether the project involves an isolated intersection or an entire corridor, we focus on:



CHA has extensive multimodal transportation design experience

- Understanding the users of the facility and the surrounding network
- Identifying the existing facilities and the needs for vehicle, pedestrian, bicycle, and transit users, and their compliance with standards and guidance
- Evaluating safety and countermeasure alternatives
- Assessing future conditions
- Recommending cost-effective, feasible improvements that enhance safety and accommodate the needs of all users

Evaluating operations and safety is an integral part of all transportation projects, beginning with agency/municipal coordination, using available resources to obtain existing data, performing a site investigation, and obtaining new data when necessary. From data collection and volume development to existing conditions analysis and improvement recommendations, CHA's transportation staff routinely evaluates operations using the most current traffic analysis software and technologies.

CHA is involved with traffic control and traffic management plans for construction staging and special events. Our experience includes urban and rural areas with various levels of traffic control. We have been involved with the development of traffic volumes for construction detours and diversions to model traffic operations during construction (e.g., Synchro/SimTraffic, Vissim). Based on results of the construction staging modeling, recommendations are made for temporary lane geometry changes, detour routes, signal timing modifications, and temporary traffic signal control.



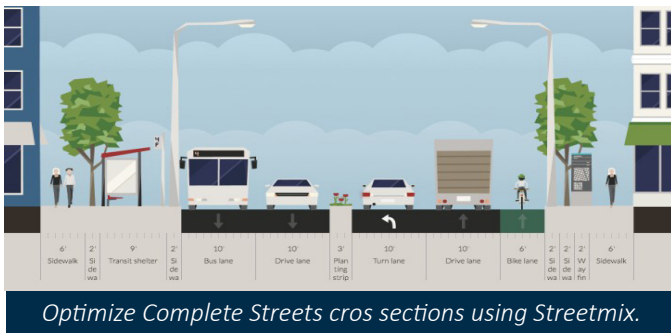
One of our featured projects, the City of Burlington's Champlain Parkway, is a complex urban project that required careful consideration of traffic control and traffic management plans for construction staging.

CHA prepared traffic management plans for VTrans per FHWA guidelines and included defined work zone limits, project background information, an overview of the roadways directly affected by the proposed work, site-specific traffic restrictions anticipated on the major roadways, impacts from other projects in the region, and the anticipated project schedule.

Traffic Data Collection and Analysis Tools: CHA owns and maintains state-of-the-art equipment for collecting traffic data, including the Miovision® video camera and automated data extraction system, hand-held traffic data recorders and GPS positioning devices. CHA also has traditional equipment, including automatic traffic recorders (tubes), radar speed guns and ball-bank speed indicators. This equipment allows us to effectively collect all types of information such as vehicle classification, the number of pedestrians, gaps and vehicle speeds.

The Miovision® video system is the latest in traffic data collection equipment. The video camera can be installed on any utility or light pole and positioned to record an intersection or roadway for multiple pre-programmed periods. This technology allows us to set the camera to record without needing a person present for the count periods. The video is then post-processed using Miovision's proprietary software to obtain the vehicle, pedestrian and bicycle counts. This technology is reliable, highly accurate and non-intrusive. Because the setup and take down occurs at the roadside, there are no issues in traffic disruption or safety, as crews and equipment remain outside the travel-way during equipment deployment. Further, having a video record of the count location enables additional data to be extracted later.

Our staff evaluates all types of intersections, ranging from simple unsignalized intersections to complex interchanges and roundabouts. In addition, CHA has developed a variety of customized spreadsheet applications to facilitate uniform data collection/ processing, analysis and evaluations.



Traffic Graphics Tools: A key element in building consensus for recommended solutions is the ability to translate concepts into forms that can be easily communicated to stakeholders, including regulatory agencies. CHA uses a variety of tools to present ideas and foster interaction among stakeholders as applicable to the unique project. For example, the interactive tool Streetmix quickly tests and illustrates alternative configurations and multimodal uses of available space within a roadway corridor. Google

Sketch-up, Autodesk Max and other digital sketch tools are used to create 3D views, artist renderings and photo-based visualizations. Transportation modeling programs such as SimTraffic and Vissim are used not only for analytical computations but also to produce visualizations and animations of traffic flow and operations.

Bridge and Culvert Engineering: CHA has a long history of performing structure replacement and rehabilitation projects efficiently, thoroughly and on schedule. We work with a municipality and VTrans from the moment we are contacted about a prospective project to create a detailed scope and assumptions that are mutually developed to provide the best framework for a well-thought-out plan. CHA firmly believes that this extra effort is worth the investment even before receiving an official authorization in order to start on the right track from day one, and helps us engage the appropriate personnel in advance.

A CHA-led team is resourceful and capable of taking a fresh view of all alternatives with short-term and long-term goals in mind. CHA investigates potential factors and impacts. An example is our recently-constructed VT Route 100C superstructure replacement project in Johnson, on which we provided valuable insights and feedback to VTrans after receiving conceptual plans. The project was slated for Accelerated Bridge Construction (ABC), but early on, CHA realized numerous changes were needed to provide ABC in a challenging site. **CHA and VTrans worked together to make significant scoping changes, delivering the best product to all stakeholders.** This process involved improving the roadway geometry in the corridor and rehabilitating a second nearby bridge.

CHA's innovative approach to precast and rapid-set concrete and prefabricated bridge units used many unique details due to site constraints and led to a very successful construction completed ahead of the accelerated schedule.



On projects with conventional delivery schedules, CHA has also performed successfully and efficiently. One recent example is the Ripley Road over Otter Creek bridge. CHA demonstrated flexibility by incorporating the VTrans-designed Dorr Drive bridge project in a composite set late in the design process. **The combined efforts of CHA and VTrans were recognized with a 2017 ACEC of Vermont Engineering Excellence Merit Award for design excellence while saving Vermont taxpayers an estimated \$500,000.**

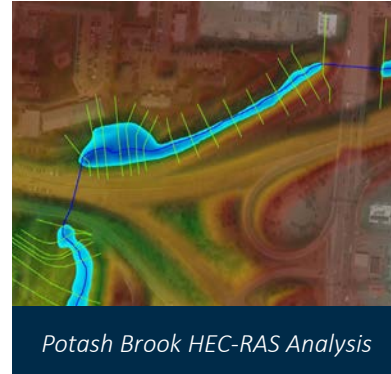
CHA has also performed dozens of straight forward projects, such as culvert replacements, in recent years for various clients throughout Vermont. An example of one of these municipal projects is the Town of Vernon's Central Park Road culvert replacement, included in the experience section of this submission.

Additionally, CHA is often selected when the culvert is on a complicated site that involves significant coordination with resource management, historical resource, hydraulic, hydrological, geotechnical, Aquatic Organism Passage (AOP), animal passage, utility, or limited right-of-way considerations. One current example of these unique culverts is located on the Champlain Parkway at Englesby Brook. This location has both contaminated soils as well as extremely compressible soils. As a result, CHA is using preloading, soil columns and settlement monitoring, eliminating most settlement prior to the culvert installation.

Another interesting set of projects involving CHA's structure and roadway personnel relate to the post-Tropical Storm Irene emergency services design work. Examples of these projects include CHA's work directly with VTrans, working out of the Rutland Incident Command Center (ICC) and involving structure, roadway and geotechnical evaluations and designs. There also were several municipalities that CHA contracted with directly to perform similar structure, roadway and geotechnical designs: the Town of Jamaica (Pike Falls Road, West Jamaica Road and Water Street roadway repairs, and four bridges over Ball Mountain Road repairs), Town of Brattleboro (Cooke Road bridge replacement), and the Town of Wardsboro (Boardman Loop Road bridge replacement.) Additional information regarding these projects are included in the design services section of this submission.

Hydrologic and Hydraulic (H&H) Engineering: CHA is well-versed in H&H engineering and has been performing these services for VTrans and other transportation entities throughout New England for decades. These efforts include determining hydraulic openings for culverts and bridges, AOP considerations, detailed scour analysis, stream alteration permitting, and the evaluation of floodplain impacts. CHA is familiar with the H&H methodologies outlined in the *VTrans Hydraulics Manual* and routinely uses the full-range of recommended modeling software such as HEC-HMS, HY-8 and HEC-RAS (1D & 2D models).

On Champlain Parkway, CHA recently encountered a challenge on Potash Brook (an impaired waterway) that required the development of an H&H model. The model would assess potential floodplain impacts from the construction of a shared-use path located along the northern bank of the brook that will provide pedestrian and bicycle access between US Route 7 and Pine Street.



A review of the effective Flood Insurance Study (FIS) for Chittenden County (August 2014) indicated that Potash Brook was studied by approximate methods, so base flood elevations had not been developed along the stream corridor. Instead, the Flood Insurance Rate

Map (FIRM) displays the approximate (Zone A) floodplain limits for Potash Brook, which appear to be inconsistent within the study reach based on a review of the latest available topographic mapping. Along with this fact, CHA considered the potential impact on adjacent landowners from fill placement shared-use path. As a result, CHA developed a detailed HEC-RAS model for the reach of Potash Brook from Queen City Road to US Route 7.

Utility Relocation Assistance: CHA is well versed in utility engineering and has been performing these services for transportation and utility entities throughout New England for decades. These efforts include use of state and federal regulations and utility company design standards for the installation or replacement of new and existing utilities, including relocation of existing lines for transportation improvements projects. CHA is familiar with and has worked with most of the utility companies in New England and has a working history with the required coordination efforts and design requirements. If utility relocation services are requested by VTrans, CHA would acquire the as-built and existing conditions plans and coordinate the relocation with the planned improvements and utility standards to verify the design requirements are met by all stakeholders. CHA will complete the required communications with the impacted utility and develop the design based on their standards.



Rutland West Street grade crossing (before and after)

Railroad Engineering Services:

In recent years, VTrans has been using its draft of the *VTrans Public Grade Crossing Guidance* more liberally and has routinely been performing railroad diagnostics at highway-rail grade crossings located within 1,000 feet of a project's limits as well as incorporating more improvements to these crossings than in years past. Should the need arise to incorporate highway-rail grade crossing work into the design of an At-The-Ready project, CHA has an extremely capable team

ready that is well versed in addressing these situations, from rail diagnostic through field reconnaissance, design and engineering support. Several VTrans' projects completed to date have incorporated rail flashers and included traffic signal preemption considerations for the proposed improvement to operations. Members of CHA's team have professional working relationships with the various operating railroads throughout the state of Vermont, and we are not currently engaged in any contracts with them as a direct client, CHA's project experience with them in Vermont has been through contracts involving VTrans or municipalities working with VTrans involving the Municipal Assistance Bureau (MAB).

Environmental Permitting: All projects shall meet the requirements of the National Environmental Policy Act of 1969 (NEPA). There are three classes of actions, which prescribe the level of documentation required in the NEPA process including the Categorical Exclusion (CE), Environmental Assessment (EA), and Environmental Impact Statement (EIS). Generally, most MAB projects are processed using CEs.

The Programmatic Agreement Categorical Exclusion (PA-CE) evaluation, documentation and submission process is commonly used on MAB projects and it will be progressed on a parallel track to the plan development process. To maximize efficiency in field data review and collection, the design team will initiate the PA-CE research during the Preliminary Plans development stage. This research and coordination typically consist of a limited regulatory record review of the area adjacent to the corridor. CHA also coordinates with the United States Fish and Wildlife Service and the Vermont Agency of Natural Resources to research the potential for threatened or endangered

species impacts because the construction of the proposed project, the presence of wetlands or wetland buffers and coordinating with town and/or regional officials so that the proposed project is consistent with their intentions.

Simultaneously, Hartgen Archeological Associates, Inc. identifies cultural resource issues related to the project area and develops an Archeological Resource Assessment (ARA) for the project area. The sensitivity rating will be formulated from project area research, the field review and the Environmental Predictive Model for Locating Archeological Sites (supplemented by the on-line GIS VermontArcheoMap). Project area research consists of the examination of archeological site location maps and site files available on-line at VT DHP, historical maps and related documents on-line, and the digital archives for State and National Register historic structures and districts with boundary maps. The identification of archeologically sensitive areas and historic properties in the project produced by the ARA will be linked to project Preliminary Plans to indicate resources present in the Area of Potential Effects (APE). The findings of the investigation with reference to archeological sites, historic structures and districts will be summarized in a report, which also contains recommendations for their treatment. This report is included as an attachment to the PA-CE.

When required, the PA-CE documentation will be directed through the VTrans' Environmental Services Manager. These documents will be created in draft form and provided to the respective VTrans' Environmental Regional Specialist for their review and concurrence. These documents will be verified, signed and forwarded to the FHWA Environmental Program Manager for final concurrence and approval.

Once approved, any permit requirements and/or environmental mitigation will be incorporated into the Final Plans.



Recent 3D InRoads model example

CADD Efficiencies and Electronic Delivery:

CHA has over 30 years of experience in plan production using the most recent versions of MicroStation and InRoads CADD software. For all VTrans assignments, CHA will develop digital files per the latest specifications and requirements outlined in the *Vermont Agency*

of Transportation CADD Standards and Procedure Manual – 2014, and InRoads Fundamentals Manual 2007.

Project, Regulatory and Public Meetings: CHA's team of engineers and planners prepare for and execute first-rate meetings tailored specifically to reach the target audiences. Depending on the project's attributes and complexities, there are a variety of meetings needed to take a project from a concept to construction.

These meetings include focused project meetings with engaged municipal personnel, meetings with regulatory agencies to secure permit clearances, public outreach meetings, project update meetings, and formal project presentations like public hearings involving intricate planning and execution.



The Parkway public outreach meeting on September 26, 2019 aired live and now archived on Channel 17 Town Meeting Television.

Some keys to accomplishing successful meetings are technical expertise, a thorough understanding of the intimate details of each project, complete comprehension of the purpose for the meeting (including the desired outcomes before the meeting is held), the attendees' levels of understanding of the project, and the meeting attendees' perspectives and concerns.

CHA has worked with VTrans and municipalities on dozens of Class I rehabilitation projects. Each of these projects involved direct and regular coordination between the CHA design team, the municipality's specialists and concerned constituents. We have found that each municipality has its own set of unique circumstances and considerations.

Dale Gozalkowski and many of the technical design leaders on CHA's team actively lead technical discussions in all types of meetings. Municipal and VTrans personnel quickly recognize that a project team led by Dale is technically

sound and meetings will be conducted efficiently and professionally. CHA's team includes many talented presenters who are regularly asked to present projects including the technical nuances.

In addition to the technical expertise of the CHA team, we are extremely capable of involving technology and computer graphics including simulations and renderings to help relate key project details to the respective audience. As an example, the rendering below was created from the birds-eye aerial simulation prepared for public outreach meetings created for the City of Burlington's Parkway project.

Other technology and computer tools that have been useful to connect to various audiences include the traffic graphics tools mentioned previously, including Streetmix to illustrate alternative configurations and multi-modal uses of available space within a roadway corridor.



Parkway visualizations and renderings assist public outreach efforts

Construction Bid Services (e.g. bid package preparation and bid analysis):

The Contract Plans submission will include a complete set of project plans, complete bid documents, and a comprehensive Engineer's Estimate in Transport Estimator format for use by the municipality and VTrans. The complete plans, specifications and estimate package include the information provided to the contractors prior to the bid. The Contract Plans submission will follow the standards and processes described in the *VTrans Municipal Assistance Bureau (MAB) Guidebook for Locally Managed Projects*. Bid documents will be prepared following the formatting templates provided on VTrans' MAB website. This documentation consists of notices to bidders, applicable permits, right-of-way and utility clearances, railroad agreement (when applicable), design certification, and appropriate NEPA approvals.

The digital files used to create the Contract Plans submission will also be provide to the municipality and VTrans. As mentioned previously, these are typically prepared in MicroStation and named in accordance with VTrans' file naming conventions. Contract Plans preparation and submission will be the culmination of the plan development process. The Contract Plans package will include all

necessary hard copy and digital format information in compliance with VTrans' current standards. CHA routinely performs bid analysis services including evaluation of unit bid prices and evidence of unbalanced bidding resulting in an advantage to the contractor and a corresponding disadvantage to the municipality and VTrans.

Engineering Support During Construction: The CHA project team recognizes the importance of remaining involved and focused during this stage of the project. Members of our team have developed a solid reputation with municipalities' and VTrans' PMs, Regional Construction Engineers and Resident Engineers for being extremely responsive in reviewing contractor submittals, processing requests for information, furnishing general construction advice, and representing a municipality and VTrans in construction conflict resolution issues. All contractor submissions will be reviewed and stamped by a professional engineer licensed in the State of Vermont in accordance with *VTrans' Standard Specifications for Construction*. Additionally, the CHA project team will attend the respective Pre-Construction Conference to provide clarity to any design nuances or environmental commitments as needed.



Sub-Consultants

Vermont Survey and Engineering, Inc.

79 River Street, Suite 201
Montpelier, VT 05602

Contact: Andrew McQueeney

Email: amcqueeney@vermontsurvey.com

ph: 802.229.9138 | fax: 802.229.9130

Former firm names and year established:

- Vermont Survey and Engineering, Inc., 1992
- Vermont Survey Consultants, Inc., 1984
- Aquatec Survey Corporation, 1982

VERMONT SURVEY AND ENGINEERING, INC. (VSE) is a New England-based Land Surveying firm, first incorporated in 1982. VSE's client base encompasses Federal, State, and Municipal agencies as well as commercial, industrial, and residential developers. They provide survey services to engineering firms, architectural firms, environmental firms, utility companies and construction companies. Their professional staff includes land surveyors licensed in Vermont, New Hampshire, and New York. Right of way services primarily focus on highway design and related activities for State and Municipal agencies, including the

preparation of right of way plans and associated title abstracting. Surveying services include geodetic control and topographic, hydrographic, boundary retracement, ALTA/ACSM, and construction layout surveys.

Their extensive experience working on all types of VTrans projects have included projects for Highway, Bridges, Aviation, Rail, and Right of Way. Their services cover topographic survey, establishing, and setting control, creating right of way plans, and boundary retracement plats. VSE has provided boundary surveys for Vermont Department Buildings & General Services and right of way

plans for the New Hampshire Department of Transportation. They have consistently delivered skilled personnel and expertise to the many VTrans projects, and are committed to continuing this relationship and quality product during this contract.

Hartgen Archeological Associates, Inc.,
1744 Washington Avenue Extension
Rensselaer, NY 12144

Post Office Box 81
Putney, VT 05346

Contact: Thomas Jamison
Email: amcqueeney@vermontsurvey.com
ph: 802.387.6020 | fax: 802.387.8524

Former firm names and year established:

- Hartgen Archeological Associates, Inc., 1973

HARTGEN ARCHEOLOGICAL ASSOCIATES, INC., founded in 1973, has grown to become the largest privately-owned cultural resource management firm in the northeast and a recognized leader in the field. The company provides a full range of services which help clients to comply with the requirements of Section 106 of the National Historic Preservation Act, the National Environmental Policy Act, Vermont Act 250 processes and with the Vermont Agency of Transportation (VTrans) and the Federal Highway Administration (FHWA) regulations. Hartgen has extensive experience conducting cultural resource projects for federal, state, municipal, and private clients.

Hartgen has completed over 1,000 archeological studies, historic preservation reviews, and architectural studies throughout Vermont including over 430 for VTrans. Their experience in Vermont includes all phases of cultural resource management including ARAs, Phase IA, IB, II and III archeological investigations; National Register eligibility synopses, architectural history; HABS/HAER documentation; historical deed and document research; historical map research; development of archeological research designs and master plans; artifact cataloging, design and presentation of public educational signs, pamphlets, and exhibits; and writing and publication of research reports including presentation of results at

scholarly and public meetings where appropriate. Their experience encompasses the range of projects typically undertaken by VTrans, such as highway, bridge, airport projects. Their clients include engineering firms, private organizations, museums, municipal state governments and federal agencies.

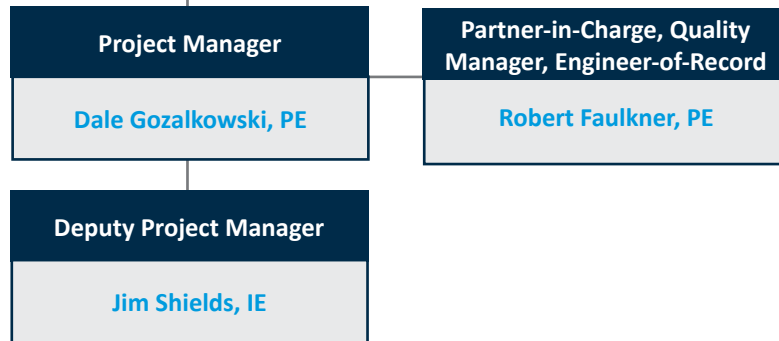
Hartgen is composed of a staff of over 30 well-qualified, experienced professionals, including archeologists, an architectural historian, laboratory staff, documentary researchers, CAD/GIS designers, editorial and administrative personnel, many of whom have worked together as a team for years. The staff's individual professional backgrounds and their shared experiences in the field are the foundation of Hartgen's growth and success. Their staff is well versed in cultural resource regulations including Section 106 of the National Historic Preservation Act (NHPA). Project oversight is provided by our 36 CFR 61 qualified Principal Investigators. They have staff certified in health and safety operations at hazardous materials (HAZMAT) sites, and in the Native American Graves Protection and Repatriation Act (NAGPRA).

Clough, Harbour & Associates LLP (CHA)

Vermont Survey & Engineering, Inc. (VSE)
Survey and Mapping, ROW Acquisition

Hartgen Archeological Associates, Inc. (HA)
Cultural Resources

Organization Chart



Thomas Jamison, PhD, RPA
(HA) | Principal Investigator

Elise Manning-Sterling, MA, RPA | (HA)
Principal Investigator

Walter Wheeler
(HA) | Senior Architectural Historian

Andrew McQueeney
(VSE) | Project Manager

Stephen Fraser, LS
(VSE) | Project Manager

Jason Riley, LS
(VSE) | ROW Specialist

Sarah Bowman, PE, PTOE
Senior Traffic Engineer

David Kahlbaugh, AICP
Senior Transportation Planner

Brian Healey, PE
Project Engineer

John Olsen, PE
Project Engineer

Jack Scudder, PE
Project Engineer

Jeff Parker, PE
Project Engineer

Christine Lilholt, PE, PTOE
Senior Traffic Engineer

Nick Schwartz, RLA, LEEDAP
Lead Landscape Architect
(Bicycle/Pedestrian Design & Landscape Architect)

Tim Burtnick
Principal Eng. Tech Designer

Cindy Kahlbaugh
Senior CADD Technician

Josh Heald
CADD Technician

Matthew Mokey, PE
Lead Project Engineer
(Railroad Design)

Kris Detlefsen, PE, CPESC
Lead Project Engineer
(Hydraulic Design)

Charlie Symmes, PE
Lead Project Engineer
(Geotechnical Design)

Jason Gorman, PE
Lead Project Engineer
(Utility Design)

Chris Einstein, PWS
Lead Environmental & Natural Resources Scientist

Rogina Camilli
Environmental & Natural Resources Scientist

John Greaves, IV, CWS
Environmental & Natural Resources Scientist

Tony Papile, PE
Engineer-of-Record (Structures)

Jeff Najdowski, PE
Lead Project Engineer
(Structural Design)

Ryan Henderson, PE
Senior Structural Engineer

Nick Bennett, PE
Project Engineer

Peter Perkins, PE
Senior Structural Engineer

Antonio D'Elia, EIT
Project Engineer

Phil Roth
Senior Eng. Tech Designer

Please refer to the individual resumes included in this submission for state-specific licensure information. All engineering work for the project will be supervised and stamped by individuals who are licensed in the state of Vermont.

STAFF AVAILABILITY CHART

NAME	TITLE	PROJECT AVAILABILITY
CLOUGH, HARBOUR & ASSOCIATES LLP		
Dale Gozalkowski, PE	Project Manager	50%
James Shields, IE	Deputy Project Manager	60%
Robert Faulkner, PE	Partner-in-Charge, Quality Manager/Engineer-of-Record	60%
Sarah Bowman, PE, PTOE	Senior Traffic Engineer	70%
David Kahlbaugh, AICP	Senior Transportation Planner	70%
Brian Healey, PE	Project Engineer	70%
John Olsen, PE	Project Engineer	70%
Jack Scudder, PE	Project Engineer	70%
Jeff Parker, PE	Project Engineer	40%
Matthew Mokey, PE	Lead Project Engineer (Railroad)	70%
Christine Lilholt, PE, PTOE	Senior Traffic Engineer	70%
Nick Schwartz, RLA, LEEDap	Bicycle/Pedestrian Design Landscape Architect	60%
Kris Detlefsen, PE, CPESC	Lead Project Engineer (Hydraulics)	70%
Charlie Symmes, PE	Lead Project Engineer (Geotechnical)	60%
Jason Gorman, PE	Lead Project Engineer (Utility)	50%
Chris Einstein, PWS	Lead Environmental & Natural Resources Scientist	70%
Rogina Camilli	Environmental & Natural Resources Scientist	70%
John Greaves, IV, CWS	Environmental & Natural Resources Scientist	6%
Tony Papile, PE	Engineer-of-Record (Structures)	50%
Jeff Najdowski, PE	Lead Project Engineer (Structures)	50%
Ryan Henderson, PE	Senior Structural Engineer	50%
Nick Bennett, PE	Project Engineer	60%
Peter Perkins, PE	Senior Structural Engineer	60%
Antonio D'Elia, EIT	Project Engineer	70%
Phil Roth	Senior Engineering Tech Designer	70%
Tim Burtnick	Principal Engineering Tech Designer	60%
Cindy Kahlbaugh	Senior CADD Technician	70%
Josh Heald	CADD Technician	70%
VERMONT SURVEY & ENGINEERING, INC.		
Andrew McQueeney	Project Manager	50%
Stephen Fraser, LS	Project Manager	50%
Jason Riley, LS	ROW Specialist	50%
HARTGEN ARCHEOLOGICAL ASSOCIATES, INC.		
Thomas Jamison, PhD, RPA	Principal Investigator	30%
Elise Manning-Sterling, MA, RPA	Principal Investigator	20%
Walter Wheeler	Senior Architectural Historian	20%

Section C

Design Services

We are **LEADERS** in the field of
Transportation Engineering

C. Design Services

QUALIFICATIONS AND EXPERIENCE OF FIRM

The following projects are a sample of our municipal transportation design engineering services experience consistent with the project types indicated in the Request for Qualifications for At-The-Ready Consulting Engineering Services for Municipalities.

CITY OF BURLINGTON, CHAMPLAIN PARKWAY | *Burlington, VT*



CHA is providing engineering services to create a multimodal transportation facility that removes traffic from residential streets and provides a transportation gateway to the downtown commercial district.

This City of Burlington project included evaluations of multiple alignments, cross-section alternatives, circulation patterns, roundabout options, and provisions for transit and pedestrian/bicycle accommodations. These evaluations included assessments of transportation system performance and of impacts related to environment, air/noise, historic districts, rail mainline and railyard facilities.

Bicycle and pedestrian design was accomplished with the following: proposed shared-use paths, on-street bicycle lanes, sharrows (shared lane markings), pavement marking buffers near on-street parking, and bicycle boxes for turning at signalized intersections. Curb extensions were implemented at numerous intersections to reduce pedestrian crossing distances. Additionally, design vehicle turning movements were optimized to reduce roadway widths. These optimizations were made by considering the design vehicle and function of the streets involved at an intersection-by-intersection basis and RRFBs associated with multiple midblock crosswalks. Raised intersections were incorporated into the design to improve pedestrian visibility and reduce vehicular traffic speeds.

Design services included hydraulic and hydrologic analysis for Potash Brook floodplain (an impaired waterway) due to anticipated embankment being placed within the limits of the floodplain; subsurface exploration and geotechnical design, requiring soil improvements to support the box culvert at Englesby Brook; box culvert structural design for Englesby Brook; and highway-rail grade crossing design at Home Avenue (complete reconstruction), Flynn Avenue (complete reconstruction), Sears Lane, Maple Street, and King Street. CHA also provided engineering services for the Act 250 application and hearings, including expert witness testimony at Vermont State Superior Court and Vermont Environmental Court. NEPA processing efforts involved a DSEIS, FSEIS, LS EIS and various re-evaluations. Coordination of complex federal and state environmental permits was required. Extensive public outreach efforts were involved throughout this project. *Contact: Norm Baldwin, PE, 802-865-5826, nbaldwin@burlingtonvt.gov*

CITY OF BURLINGTON, ON-CALL AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES

Burlington, VT

CHA provides transportation planning and traffic engineering support to the City of Burlington under this on-call contract. These services include reviewing traffic impact studies and site plans prepared for development applications. Tasks include providing input on scoping issues, conducting peer reviews of the technical submissions, coordinating with the City's DPW staff, and preparing written comments. Projects that have been reviewed under this agreement include:

- Hotel Champlain
- Cambria Hotel
- Cambria Rise Mixed-Use
- City Place
- Burton Hub Mixed-Use

Our review of these projects confirmed that the traffic impacts of these projects were appropriately identified, and that the mitigation strategies were effective and considered local issues and needs. *Contact: Susan Molzon, PE | 802-540-0557 | smolzon@burlingtonvt.gov*

CITY OF BURLINGTON, PINE STREET & LAKESIDE AVENUE INTERSECTION TRAFFIC SIGNAL DESIGN

Burlington, VT



CHA provided engineering design services for a new traffic signal system at the intersection to replace outdated and non-compliant equipment. The project involved traffic data collection and traffic modeling analysis to evaluate alternative layouts and signal phasing/timing options. The signal was designed to optimize the reuse of the equipment for integration with a future planned roadway project that involved realignment and reconfiguration of the intersection approaches. The system included video vehicle detection, accessible pedestrian signals (APS), and sidewalk and ADA ramp design. Design services included signal design and specifications, contract documents, construction support during design, shop drawing reviews, and as-built drawings. *Contact: Norm Baldwin, PE, 802-865-5826, nbaldwin@burlingtonvt.gov*

CITY OF BURLINGTON, UNIVERSITY HEIGHTS AND UPPER MAIN STREET TRAFFIC EVALUATIONS

Burlington, VT



CHA is conducting a traffic study of the intersection of Main Street (US Route 2) and University Heights at the UVM campus. This intersection is along a major arterial providing regional access to the City Center District and is a major pedestrian access point for the University. This study involved documentation of existing conditions and a comprehensive assessment of vehicle, pedestrian and bicyclist mobility and safety. CHA provided traffic counts for (vehicles, pedestrians and bicyclists), speed data, crash history analysis, capacity modeling and analysis, queue analysis, control device compliance studies, pedestrian/bicyclist origin-destination analysis, signal timing plan review and optimization, and traffic calming. CHA identified and evaluated a range of strategies to address the congestion and safety issues (including low-cost signal timing/phasing modifications, crosswalk enhancements, and larger capital

improvements to expanded sidewalk facilities), and to increase queue storage capacity. *Contact: Laura Wheelock, PE | 802-338-2125, lwheelock@burlingtonvt.gov*

TOWN OF VERNON, CENTRAL PARK ROAD CULVERT REPLACEMENT | *Vernon, VT*



CHA completed the design and construction inspection for the replacement of a metal pipe arch culvert carrying Central Park Road over an unnamed brook. The replacement structure was a 14-foot by 8-foot precast concrete box culvert and included retention sills to replicate a natural stream bottom. The project also included a realignment of the upstream inlet to improve the brook alignment. The scope of services included survey, geotechnical investigations, hydraulic analysis, structural design, right-of-way, permitting (Agency of Natural Resources and USACE), bidding services, and construction inspection. *Contact: David Walker, 802-254-9428, vernonhighway@gmail.com*

TOWN OF BRATTLEBORO, COOKE ROAD BRIDGE REPLACEMENT | *Brattleboro, VT*

The Town solicited proposals from design-build teams for the replacement of the Cooke Road bridge over Whetstone Brook that was destroyed during Tropical Storm Irene. As part of that solicitation, the Town of Brattleboro retained CHA to provide the preliminary engineering, hydraulic analysis and geotechnical investigations and engineering as well as contract bid documents. *Contact: Stephen Barrett, 802-254-4255, sbarrett@brattleboro.org*

DUTCHESS COUNTY, DUTCHESS RAIL TRAIL | *Dutchess County, NY*



CHA provided preliminary design, including environmental and right-of-way services and final design, for the construction of an 11.8-mile-long multi-use trail and linear park along the abandoned Maybrook Rail right-of-way from the Poughkeepsie to East Fishkill. The project was part of Dutchess County's long-term vision of providing a greenway to link the towns of East Fishkill, Wappinger, La Grange, and Poughkeepsie.

The project involved the design of a multi-use path along the entire 11.8-mile stretch of abandoned railbed, which included both paved and soft-tread paths, 14 roadway crossings, 16 access points including 6 new trailheads, 4 new single-span bridges, and one new multi-span bridge, and the rehabilitation of numerous existing culverts and other railroad structures. The improvements had to be carefully designed to minimize

environmental impacts to endangered species, state and federal wetlands, surface waters, and floodplains, as well as historical and cultural resources.

The project includes the reuse of the historically significant Dover Furnace Bridge, which was removed as part of a separate project and designed by CHA to be used as part of this project to provide access to the trail over the Wappingers Creek from a new trailhead.

Because the project included extensive features and amenities, and traversed four towns in Dutchess County, an extensive public outreach program was required to gather public input and effectively balance the needs of the trail users with those of the adjacent property owners, business owners, community groups, and local governments. CHA developed a comprehensive public outreach strategy, which included a public involvement website designed to inform the public, solicit input and opinions, and promote community involvement in the redevelopment of the former railbed into a community park.

The project has been designed and constructed in stages. The overall project has been very successful with the public, and has received overwhelming approval from users and the surrounding communities. *Contact: Robert Balkind, PE, 845-486-2085, rbalkind@dutchessny.gov*

DUTCHESS COUNTY, HARLEM VALLEY RAIL TRAIL | *Dutchess County, NY*



CHA provided preliminary and final design, including environmental permitting and right-of-way services, for the construction of eight-miles of shared-use trail totaling \$11.5M. Alternatives evaluated included both a completely off-road trail along the abandoned railroad corridor and an on-road trail for some segments due to environmental resources located within the abandoned railroad corridor. The preferred alternative is the off-road trail, using a combination of a paved surface, gravel surface, and a boardwalk trail. The preliminary engineering addressed six bridges located along the corridor that will be rehabilitated, as well as several road crossings. This 10-foot-wide shared-use trail is located within the abandoned Harlem Valley Railroad right-of-way and is currently owned by the NYS Office of Parks, Recreation and Historic Preservation. The preliminary design included extensive

delineation and analysis of environmental resources, impacts and mitigation. The most prevalent resources included bog turtle habitat and extensive wetlands created by a major beaver impoundment. The bog turtle habitat and wetlands resulted in the development of the boardwalk structures for segments totaling 4,120 feet of the trail, realignment of the proposed trail, and drainage modifications. CHA provided all design services, with emphasis on natural habitat, agricultural districts, Section 4(f) lands, wetlands, and threatened and endangered species. *Contact: Robert Balkind, PE, 845-486-2085, rbalkind@dutchessny.gov*



TOWN OF JAMAICA, TROPICAL STORM IRENE EMERGENCY SERVICES | Jamaica, VT

Immediately following Tropical Storm Irene, CHA was retained by the Town of Jamaica to assess the storm damage to dozens of roads and bridges and provide emergency engineering services to restore access to the Town's residents that had become isolated due to washed-out road and bridges. CHA's efforts began with an extensive assessment and mapping of the damaged areas and development of emergency repair plans for the most severely damaged and isolated areas. These efforts included coordinating with area contractors and National Guard resources that were deployed to the area, as well as the Agency of Natural Resources, and tracking

work efforts and material quantities at each damaged location to help assure timely FEMA reimbursement. CHA's efforts further included FEMA coordination and the design, permitting and construction observation of long-term repairs to several thousand feet of local roadways, including Pikes Falls Road, West Jamaica Road, Water Street, and Coleman Hill Road as well as four bridges over the Ball Mountain Brook (one on Depot Street, one on Sage Hill Road, and two on Pikes Falls Road.)

The Depot Street bridge lost 20 feet of an approach embankment and was subjected to debris impact and accumulation, including hundreds of cubic yards of trees and four wood-frame structures that were destroyed on and under the bridge; this two-span, steel multi-girder bridge suffered damage to a concrete pier cap supporting a fascia girder, requiring immediate partial closure of one side of the structure. The balance of the structure was undamaged, permitting confident partial opening of the bridge after reconstruction of the washed-out approach.

The Sage Hill Road bridge lost 15 feet of an approach embankment and suffered debris-impact damage to the main steel girders. The upstream fascia girder was twisted beyond serviceability, requiring immediate closure of this one-lane, steel multi-girder bridge. As no bridge plans were immediately available, expedited on-site structure documentation was required. Load ratings and repair designs were advanced within 24 hours to permit the start of emergency repairs.

The Pikes Falls Road bridge, just north of the intersection with West Jamaica Road, lost 75 feet of an approach embankment and suffered severe scour undermining of south abutment. CHA engineers performed a comprehensive field assessment at the bridge and developed emergency repair designs, collaborating with a National Guard disaster response team to rebuild the approach as well as underpin and armor the damaged abutment. Both approaches to the second bridge on Pikes Falls Road were washed out. CHA engineers verified that the bridge substructures had not been scoured/undermined and developed contract plans to restore the approaches. *Contact: Paul Fraser, 802-874-4681, pfraserjamaicasb@svcable.net*

CITY OF TROY, ON-CALL TRANSPORTATION ENGINEERING SERVICES | Troy, NY

CHA is providing a variety of transportation and planning services to the City of Troy (population of 50,000) through an on-call service agreement. Examples of completed assignments include:

- Traffic data collection
- Capacity analysis
- School zone traffic control
- Bus rapid transit station design review
- Downtown on-street parking and circulation improvements
- ADA ramp inventory and assessment
- Sight distance analysis
- General traffic engineering and transportation planning activities
- Roadway and intersection improvement concepts
- Roadway and intersection design
- Traffic signal design and construction support

Each assignment is handled on a task-order basis, with task budgets and schedules established according to the level of complexity of the task. The results of each assignment are documented with supporting data, analyses, citations of the applicable governing criteria (e.g., MUTCD, AASHTO, State Highway Design Manual), and applicable graphics to illustrate the recommendations. *Contact: Monica Kurzejeski, 518-279-7073, Monica.Kurzejeski@troyny.gov*

CITY OF SCHENECTADY, ERIE BOULEVARD RECONSTRUCTION AND COMPLETE STREETS | *Schenectady, NY*



CHA designed the reconstruction of an approximately one-mile-long section of Erie Boulevard to provide an improved gateway to the new Rivers Casino. The firm evaluated various cross-sectional alternative “road diet” concepts to repurpose this “sea of pavement” from its excessive width (consistent with that of the original Erie Canal) to an inviting gateway with a boulevard feel—transforming a road that was exclusively built for moving cars to one that accommodates all modes of traffic entering the city.

The corridor’s aging infrastructure, parking, access control, pedestrian and bicycle accommodations and aesthetics were significantly improved. A meandering raised curbed center median with lighting was constructed to slow traffic and provide a significant gateway improvement. In addition, CHA reconstituted parking on the sides of the through-lanes to provide safer and more efficient traffic flow. Design services included survey and mapping; preliminary highway design; environmental studies; final plans, specifications, and estimate (PS&E); preparation of bid documents; letting; award; and construction inspection. The design involved roadway reconstruction; mid-block pedestrian crossings with RRFBs, new curbing and sidewalks; parking, median and intersection upgrades; and landscaping/streetscape treatments.

The project used a robust public outreach program, including numerous public meetings, televised project presentations and interviews on Schenectady public access television to help gain the support of the project’s stakeholders, businesses and residents.

Transportation engineering services provided for this project included traffic data collection and processing, traffic forecasting, capacity analyses (Synchro/SimTraffic), roundabout analysis and simulation (Rodel and Vissim), crash analysis and countermeasure investigations, truck access and circulation assessments, access management, pedestrian crossing/device compliance field study, signal warrant analysis, signal system design, signal timing plans for coordinated operations (Synchro) and midblock crossing designs with RRFB implementation. *Contact: Christopher Wallin, PE, 518-382-5082, cwallin@schenectadyny.gov*

VTRANS, MANCHESTER STP 2970(1) REHABILITATION | *Manchester, VT*



This \$5.3M project included rehabilitating approximately 6.6 miles of VT Route 7A, VT Route 11 and VT Route 30. In addition to the conventional pavement rehabilitation, this project included reconstructing an existing grade crossing and development of a traffic management plan. Traffic engineering services provided as part of this assignment included evaluation and design of stop bar detection systems, pedestrian signal system improvements and developing special provisions to support these technologies. This project included on-street bicycle accommodations which consisted of shared travel lanes and exclusive bicycle lanes. *Contact: Matthew Bogaczyk, 802-793-5321, matthew.bogaczyk@vermont.gov*

VTRANS, TROPICAL STORM IRENE ENGINEERING ASSISTANCE | *Rutland, VT*



CHA provided personnel to create “Quick Teams” that reported to the Rutland Incident Command Center. These Quick Teams were comprised of experienced professionals of varying engineering specialties including bridge structures, geotechnical, dam safety, roadway as well as a full-service survey team to obtain whatever information was needed to assist in the assessment of the post Tropical Storm Irene conditions and the development of remediation plans to address the respective sites that our Quick Teams were assigned. Our Quick Teams were fully equipped to work as if their four-wheel drive trucks were their office as each was furnished with computers and all necessary engineering design software including MicroStation and the survey equipment to obtain field measurements and prepare project base mapping. *Contact: Callie Ewald, 802-595-4589, callie.ewald@vermont.gov*

VTRANS, RUTLAND CITY RIPLEY ROAD AND DORR DRIVE BRIDGE REPLACEMENTS | *Rutland City, VT*



2017 Vermont ACEC Engineering Excellence Merit Award Winner

The original Ripley Road bridge was a two-span, steel pony truss, one of only 87 truss bridges left in Vermont. To preserve its identity as a truss bridge, Ripley Road bridge was replaced with a two-span, galvanized steel pony truss with a span ratio virtually identical to the former structure. This approach achieved a longer-lasting structure that is aesthetically faithful to the historic 1928 bridge and satisfies State Historic Preservation Office requirements.

After Contract Plans were submitted, VTrans decided to combine the Ripley Road bridge with a VTrans in-house project (Dorr Drive bridge replacement). The scheduled completion of the Dorr Drive bridge became a high priority for the State of Vermont, and CHA assisted VTrans in developing composite plans for the two structures as well as Special Provisions and a combined engineer's estimate in a compressed period of time.

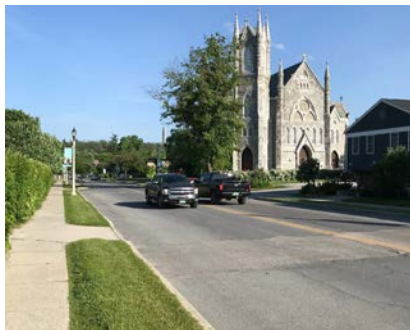
Maintaining access across Otter Creek to local businesses (including the College of St. Joseph campus) was critical to the construction process because these two bridges and another roadway (with height restrictions associated with a railroad underpass) are the only viable means to cross Otter Creek near Rutland. Bundling these two projects facilitated construction sequencing, minimized the disruption of vehicular traffic, optimized safety, reduced the overall length of construction required, and reduced the overall construction costs of both projects.

Concerns about maintaining access on each side of Otter Creek throughout the construction of these two bridge replacements contributed to the decision to construct the Dorr Drive bridge first because a prior decision was made place a temporary bridge atop the failing Ripley Road bridge to extend its useful life. This temporary solution, a narrow alternating one-way operation controlled by traffic signals on all three bridge approaches, allowed Ripley Road bridge to provide truck access across Otter Creek until Dorr Drive bridge was replaced.

CHA's alignment and structure study for the Ripley Road bridge examined online and offline roadway geometrics and superstructure alternatives at the onset of the project. CHA also assisted VTrans with the bid analysis of the composite project and provided engineering support during construction.

This project is an example of an engineering team's commitment to identify and evaluate all aspects of a project and develop a solution through a cooperative partnership involving all parties and agencies, which strikes a balance between engineering ingenuity, historical integrity and fiscal responsibility. *Contact: Wayne Symonds, PE, 802-279-8745, wayne.symonds@vermont.gov*

VTRANS, BENNINGTON COMPOSITE REHABILITATION | *Bennington and Village of North Bennington, VT*



The Bennington NH 2966(1) and Bennington STP 2973(1) projects were advertised as a composite project totaling \$5.0M and included rehabilitating approximately 5.9 miles of US Route 7, VT Route 9, VT Route 67 and VT Route 67A. In addition to the conventional pavement rehabilitation, this project included reconstructing an existing grade crossing and development of a traffic management plan. Traffic engineering services provided as part of these assignments included evaluation and design of video vehicle detection systems and development of special provisions to support these technologies. This project included on-street bicycle accommodations, which consisted of shared travel lanes. *Contact: Matthew Bogaczyk, 802-793-5321, matthew.bogaczyk@vermont.gov*

VTRANS, JOHNSON VT ROUTE 100C SUPERSTRUCTURE REPLACEMENTS | *Johnson, VT*



This accelerated bridge construction project included the superstructure replacement of Bridges 1 and 2 on VT Route 100C over the Gihon River. The initial intent of this project was to replace the superstructure of only Bridge 2 in response to structural deficiencies. However, after CHA raised concerns about the roadway geometry of the approaches, VTrans determined that rehabilitating the superstructure Bridge 1 (located approximately only 100 ft away) and widening both structures would be the better overall solution at this location.

Precast solid slab beams were used for the shorter span of Bridge 1 in order to reduce construction duration while still using a cost effective solution. Precast NEXT beams were originally slated to be used for the longer span of Bridge 2 for the same reasons, but hydraulic requirements drove the superstructure of Bridge 2 to be shallower. CHA worked closely with the VTrans' project manager in evaluating a number of alternatives and provided feasibility summaries for VTrans' senior management evaluation. Ultimately heavy, shallow steel rolled beams were selected, but the six beams were separated into three innovative prefabricated bridge units each consisting of two rolled beams and a concrete deck poured at an off-site location to achieve the accelerated bridge construction schedule. During construction, these three units were lifted into place and rapid setting concrete was poured in between the units which had reinforcement bars protruding like a zipper between interior units.

CHA also designed and detailed non-standard precast approach slabs with similar closure pours that greatly reduced construction time. Unique site conditions included the limited right-of-way width, a private residence, municipally-owned and maintained features located on the island created by the bifurcated reaches of the Gihon River, and one approach slab overhanging an existing U-wall designed as a moment slab with a fascia-mounted guardrail.

Key components of the project included avoiding right-of-way impacts and minimizing utility conflicts during construction. Unique modifications of the existing substructures were used to maintain embankments within the available right-of-way limits while reducing impact to adjacent property owners.

All these innovative, non-standard details led to both bridges being constructed approximately quicker than the anticipated accelerated construction schedule. *Contact: Wayne Symonds, PE, 802-279-8745, wayne.symonds@vermont.gov*

VTRANS, BERLIN COMPOSITE RECLAMATION AND REHABILITATION | *Berlin, VT*



This \$5.6M project included the NH STP 2947(1), STP 2935(1) and NH STP 2938(1) projects, which included reclaiming approximately one mile of the Berlin State Highway and rehabilitating approximately five miles of US Route 302, VT Route 62 and Berlin State Highway. This project involved the reconstruction of the existing grade crossing on US Route 302, including the addition of rail signals. Traffic engineering services provided as part of these assignments included evaluation and design of stop bar detection systems, pedestrian signal system improvements and developing special provisions to support these new technologies. This project also included the evaluation and design of an alternate signing and pavement marking scenario encompassing US Route 302, which included the conversion of a four-lane section to a three-lane section with a median two-way opposing left-turn lane and improved on-roadway bicycle accommodations. Additionally, this project incorporated experimental pavement markings throughout the US Route 302 corridor. Incorporating these experimental markings allowed VTrans to evaluate the newest products available. *Contact: Michael Fowler, PE, 802-363-9040, michael.fowler@partner.vermont.gov*

KEY PERSONNEL

Our team **UNDERSTANDS** complex needs and offers creative problem-solving and innovative options

Dale Gozalkowski, PE, is our project manager and a principal highway engineer with 29 years of experience working with VTrans. He has been actively and continuously involved with the design of nearly 300 different VTrans projects, including some

of the most challenging VTrans had undertaken to date. Dale has worked almost exclusively on VTrans projects or municipal projects involving VTrans' policies and protocols since the early 1990s. This dedicated involvement keeps him continually apprised of the latest trends in permitting, design plan development, and the bid advertisement process, and he shares this insight with CHA's entire team on a regular basis. During his career, Dale has established a reputation for consistently providing deliverables of unmitigated quality while being cognizant of schedule and budget constraints.

Dale approaches all projects with a contagious passion. He has assembled this core team of project engineers and is assisted by personnel who share his work ethic, vision and enthusiasm. He realizes that these are the attributes that truly build successful engineering projects.

His role will be to guide CHA's efforts so project development, environmental processing, plans and contract bid documents are consistent with the latest VTrans policies, procedures and protocols. In addition, Dale will be performing independent reviews of all deliverables, checking that they conform to VTrans' latest standards and expectations. He also has excellent presentation skills, which are especially beneficial during the public involvement portions of these projects or when coordinating with regulatory agencies. VTrans' personnel and the respective communities that are involved with these assignments quickly recognize that a project team led by Dale is technically sound and that project will be conducted efficiently and professionally. He provides the design and construction background necessary to supervise and monitor the technical aspects of the assignments while coordinating and managing the non-technical aspects.



Jim Shields, IE, is our deputy project manager with 25 years of experience in transportation engineering and planning. He has extensive experience on a wide range of roadway projects for multiple state agencies and municipal clients, encompassing intersection

reconfigurations and roadway corridor reconstruction. Jim has worked almost exclusively on VTrans' projects or municipal projects involving VTrans' policies, procedures and protocols over the past 20 years and has been involved with some of VTrans' most challenging projects.

Jim is well versed in NEPA policy and regulations, Act 250 and VTrans' policies, permitting procedures and design standards. Jim has proven to be dedicated to the clients and projects he is assigned and consistently provides deliverables of unmitigated quality. His role in this primary agreement will be to guide CHA's technical design staff through the VTrans' design process so that their efforts will result in a successful project. Jim will verify that all designs are developed in accordance with AASHTO, MUTCD and the VTrans design standards. He will also be responsible for staff allocation and tracking the design team's financial performance on project assignments so that CHA delivers on budget within the project's schedule.



Robert Faulkner, PE, is our partner-in-charge, quality manager and engineer-of-record for all submissions. Rob has 33 years of experience in the design, management and construction administration, and inspection of state-owned and municipal highway, bridge,

infrastructure and site projects throughout New England. As our quality manager and a principal engineer, Rob has provided senior-level oversight and quality control reviews on dozens of complex transportation projects. In addition to Rob's design background and experience, his expertise in construction administration and his role as a resident engineer on previous transportation projects has afforded him insightful perspective regarding the constructability of these types of projects.



Tony Papile, PE, Engineer-of-Record (Structures) has 33 years of experience with bridge analysis, rehabilitation and replacement projects; performing, leading, and managing bridge inspection contracts; and designing retaining walls and other transportation-related

structures. He has designed and managed a wide variety of bridge projects. He has also led many quality control and assurance initiatives within CHA. Tony has been involved with VTrans' projects for decades, and in the last decade he has performed quality assurance by performing independent reviews and stamping and signing all VTrans' structural plans.



Sarah Bowman, PE, PTOE, is a senior traffic engineer with 12 years of experience, encompassing numerous traffic engineering projects such as corridor studies, traffic impact studies, interchange and highway evaluations, parking studies, safety studies, signal

designs, signal timing plans, and pedestrian and bicycle facility design throughout the Northeast. Sarah has experience on multiple projects in Vermont for VTrans and the City of Burlington that involved signal designs and detection improvements, pedestrian signal improvements to meet ADA guidelines, timing plan development, rail preemption analysis, intersection and corridor evaluations, and peer reviews for traffic impact studies.

Sarah has extensive experience using a wide variety of capacity analysis software, including Synchro/ SimTraffic, Vissim, SIDRA, and HCS to analyze many different intersection and interchange types such as roundabouts, signalized intersections, unsignalized intersections, merge/diverge points, alternative intersections (e.g., as diverted left-turn intersections and median U-turns), and alternative interchanges (single point urban interchanges and partial interchanges). She has used Vissim to create large networks to analyze complex intersections, interchanges and interstates, and produced 3D models from the software for use in agency meetings and public meetings.



David Kahlbaugh, AICP, is a senior transportation planner with 43 years of experience in transportation planning and traffic engineering involving a wide range of transportation and site development projects throughout the eastern US. His experience includes

comprehensive transportation plans, corridor studies, access management plans, transportation infrastructure planning and design (scoping through final design), and intersection safety/congestion studies for communities in New York State and New England. He has extensive experience in mobility and access studies, safety studies, complete streets design, concept development, traffic forecasting, traffic impact studies, traffic operations analysis, parking studies, traffic calming, warrant studies, and traffic control systems design. This experience includes the preparation of traffic analyses, studies and design for major public transportation projects and for private development projects.

He is the principal transportation analyst for the federally funded Champlain Parkway project in Burlington, VT, where he has led the efforts for the project's traffic forecasting, traffic operations modeling and analysis (Synchro/SimTraffic, HCS, CORSIM), traffic safety analysis, alternatives development and feasibility studies, rail diagnostics, and has served as principal designer for the traffic signal system (coordinated system with rail and emergency vehicle preemption and transit signal priority). He has also been on the design team for numerous projects for VTrans for the evaluation of traffic operations and safety, rail preemption analysis, and design of traffic control devices.



Stephen Fraser, LS (VSE), has been involved with engineering and surveying since 1971. Before joining Vermont Survey and Engineering, Inc. in 2005, he was employed for 25 years by the City of Barre as a mapping and surveying specialist. Since

joining Vermont Survey, Mr. Fraser has served as project manager for survey and right-of-way efforts associated with a twenty-five mile power transmission project in western Vermont, which includes plat preparation and title research on approximately 150 properties. He is also Manager-In-Charge of deed research, property surveys, and plat preparation and is an accomplished AutoCAD operator.



Andrew McQueeney (VSE), has been involved with engineering and surveying since 1985. As CADD manager, he is responsible for developing AutoCAD, MicroStation and InRoads deliverables as well as overseeing CADD work of others.

He has been using AutoCAD software since 1991 and Bentley Systems and Intergraph software since 1998. As a principal of the company since 2009, Andrew now coordinates the activities of the field crews and office staff, and acts as project manager for the majority of VTrans projects that VSE is involved with.



Thomas R. Jamison, PhD, RPA, Project Manager/Principal Investigator (HA), has been with Hartgen since 1990 and serves as a project manager in Putney, VT. Thomas' expertise includes historic and precontact archaeological research

and documentation, surveys, mapping, excavation, and laboratory research. He has received special training relative to cultural resource management services including Native American Graves Protection and Repatriation Act (NAGPRA) and Best Practices in Working with American Indian Tribes presented by the FHWA and sponsored by VTrans.

Thomas has conducted over 500 surveys throughout the region including Vermont, Connecticut, New Hampshire, New York and New Jersey. These surveys include site file screenings, archaeological resource assessments (ARAs), Phase IA, IB, II and III archaeological investigations, and miscellaneous client support services for projects that included more than half a dozen airports in Vermont, numerous transportation-related projects such as bridge replacements, repavings, pathways and scenic byways; and municipal projects such as water and sewer transmission projects as well as projects related to residential, commercial and industrial developments.



Elise Manning-Sterling, MA, Project Manager/Principal Investigator (HA),:

Elise has 40 years of experience in historic and precontact archaeology throughout the country, including over 20 years in the northeast with Hartgen.

As project manager, she has conducted over 400 projects throughout Vermont, New Hampshire, Massachusetts, and New York, including Archaeological Resource Assessments (ARA), and Phase I, II and III archaeological investigations. Elise has authored numerous scholarly articles on diverse

historic archaeological topics, including the excavation of historic farmsteads at Antietam Battlefield, the mitigation Fort Ticonderoga's East Flank, the study of 19th-century butchery practices at Harper's Ferry, and the changing foodways in 17th and 18th century Tidewater region, as evidenced through archaeological faunal assemblages.

Elise managed the multi-year excavations at Fort Ticonderoga, a National Historic Landmark in Essex County, New York and has conducted several archeological environmental assessments at the Ethan Allen Firing Range in Chittenden County, VT for the Vermont Army National Guard. Most recently, she has conducted ARAs and/or Phase IB testing for several VTrans bridge projects, including Brandon Churchill Bridge, Lincoln Bridge, New Haven Bridge, Waterbury Farr Road Bridge and Pulp Mill Bridge in Middlebury, as well as VTrans projects for Stowe Sidewalk, Hartford Rest Area, and Milton Sewer improvements.



Walter R. Wheeler, BA/BS, Senior Architectural Historian (HA),:

Walter has more than 29 years of experience evaluating historic structures and districts for National Register eligibility, preparing National Register and National

Historic Landmark nominations and preparing HABS/HAER documentation. Walter has served as Hartgen's senior architectural historian for 21 years and has authored numerous scholarly articles and two monographs on New York State architecture.

Walter has conducted detailed examinations of historic structures in Vermont and New York, documenting the history of each structure through identification of additions and modifications, the presence of historically significant features, historic research and dendrochronological analyses. He has completed over 250 structure surveys either in association with archaeological investigations or as individual studies. These surveys have resulted in the inventorying of hundreds of structures in New York and Vermont. He conducted HABS-equivalent documentation of buildings in Barre and Stockbridge, VT for VTrans. In addition, he has completed nine Historic Structure Reports, five National Register and/or National Historic Landmark nominations and 20 documents to HABS/HAER standards

Section D

Resumes



Dale is a principal highway engineer with 29 years of experience working with VTrans and he has been actively and continuously involved with the design of nearly 300 different VTrans projects including some of the most challenging projects VTrans has undertaken during that time. Dale has worked almost exclusively on VTrans' projects or municipal projects involving the agency's policies and protocols since the early 1990s. This allows him to continuously keep apprised of the latest trends in permitting, design plan development, and the bid advertisement process and shares this insight with CHA's entire team on a regular basis.

Education: Clarkson University, NY, B.S. in Civil Engineering

Registrations & Certifications: Professional Engineer - NY, VT

Memberships & Affiliations
American Council of Engineering Companies, American Society of Civil Engineers

Years with CHA: 29

Dale Gozalkowski, PE

Project Manager



SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Rochester ER STP 0162(21) Reclamation
- Brandon-Goshen ER STP 0162(22) Reclamation
- Jamaica-Winhall STP 2904 (1) Reclamation
- Stockbridge-Bethel STP 2910(1) Reclamation
- Warren-Waitsfield STP 2506(1) Reclamation
- Berlin Composite Reclamation and Rehabilitation
- Bridgewater-Woodstock NH 2611(1) Reclamation
- Fair Haven NH HES 020-1(21) Intersection Reconfiguration
- Wilmington HES 010-1(38) VT Routes 9 & 100 Reconfiguration
- Tropical Storm Irene Engineering Assistance at Rutland ICC
- Lake Champlain Bridge Replacement
- Richmond Checkered House Bridge Widening Design Build
- Rutland Ripley Road over Otter Creek Bridge Replacement
- Old Bennington Reconstruction of Monument Avenue
- Brighton STP PC19(1) Pavement Rehabilitation
- Poultney-Fair Haven-West Rutland Composite Pavement Rehabilitation
- West Rutland STP FPAV (18) Composite Pavement Rehabilitation
- Woodstock-Hartford Pavement Rehabilitation
- Hartford STP PC21(4) Pavement Rehabilitation
- Manchester STP 2970(1) Composite Rehabilitation
- Bennington NH 2966(1) and STP 2973(1) Composite Rehabilitation
- North Bennington STP 9646(1)S Water Street Improvements
- Chester-Springfield-Rockingham-Windsor STP 2952(1) Rehabilitation
- Swanton STP 2958(1) Rehabilitation
- St. Albans STP 2957(1) Rehabilitation
- Essex (Essex Junction) NH 2956(2) Rehabilitation
- Essex (Essex Junction) STP 2956(1) Rehabilitation
- Old Bennington Reconstruction of Monument Avenue
- Rutland City Composite Rehabilitation
- Burlington City Composite Rehabilitation
- Fair Haven Composite Rehabilitation
- Manchester-Dorset NH 2608(1)S Rehabilitation

City of Burlington, VT

- Champlain Parkway
- Pine Street at Lakeside Avenue Traffic Signal Replacement
- University Heights and Upper Main Street Traffic Evaluations
- City Place Traffic Impact Study Review
- Cambria Hotel Traffic Impact Study Review



Jim is a senior highway engineer with 25 years of experience in transportation engineering and planning. Jim has extensive experience on a wide range of roadway projects for multiple state agencies and municipal clients encompassing intersection reconfigurations, roadway corridor reconstruction and interchange reconfigurations. He has worked almost exclusively on VTrans' projects over the past 20 years and has been involved with some of VTrans' most challenging projects. Jim is well versed in NEPA policy and regulations, Act 250 and VTrans' policies, permitting procedures and design standards.

Education: Roger Williams University, RI, B.S. in Civil Engineering

Registration & Certification: Engineer-in-Training, NY

Memberships & Affiliations: American Society of Highway Engineers

Years with CHA: 19

Jim Shields, IE

Deputy Project Manager

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Rochester ER STP 0162(21) Reclamation
- Brandon-Goshen ER STP 0162(22) Reclamation
- Jamaica-Winhall STP 2904 (1) Reclamation
- Stockbridge-Bethel STP 2910(1) Reclamation
- Warren-Waitsfield STP 2506(1) Reclamation
- Berlin Composite Reclamation and Rehabilitation
- Bridgewater-Woodstock NH 2611(1) Reclamation
- Fair Haven NH HES 020-1(21) Intersection Reconfiguration
- Wilmington HES 010-1(38) VT Routes 9 & 100 Reconfiguration
- Tropical Storm Irene Engineering Assistance at Rutland ICC
- Lake Champlain Bridge Replacement
- Richmond Checkered House Bridge Widening Design Build
- Rutland Ripley Road over Otter Creek Bridge Replacement
- Old Bennington Reconstruction of Monument Avenue
- Brighton STP PC19(1) Pavement Rehabilitation
- Poultney-Fair Haven-West Rutland Composite Pavement Rehabilitation
- West Rutland STP FPAV (18) Composite Pavement Rehabilitation
- Woodstock-Hartford Pavement Rehabilitation
- Hartford STP PC21(4) Pavement Rehabilitation
- Manchester STP 2970(1) Composite Rehabilitation
- Bennington NH 2966(1) and STP 2973(1) Composite Rehabilitation
- North Bennington STP 9646(1)S Water Street Improvements
- Chester-Springfield-Rockingham-Windsor STP 2952(1) Rehabilitation
- Swanton STP 2958(1) Rehabilitation
- St. Albans STP 2957(1) Rehabilitation
- Essex (Essex Junction) NH 2956(2) Rehabilitation
- Essex (Essex Junction) STP 2956(1) Rehabilitation
- Old Bennington Reconstruction of Monument Avenue
- Rutland City Composite Rehabilitation
- Burlington City Composite Rehabilitation
- Fair Haven Composite Rehabilitation
- Manchester-Dorset NH 2608(1)S Rehabilitation

City of Burlington, VT

- Champlain Parkway
- Pine Street at Lakeside Avenue Traffic Signal Replacement

Town of Bethlehem, NY, Delaware Avenue Hamlet Streetscape



Rob has 33 years of experience in the design, management and construction administration, and inspection of state-owned and municipal highway, bridge, infrastructure and site projects throughout New England. As the quality manager and a principal engineer, Rob has provided senior-level oversight and quality control reviews on dozens of complex transportation projects throughout New England. In addition to Rob's design background and experience, his back-ground in construction administration as well as serving as the resident engineer on transportation projects has allowed him to obtain insightful perspective regarding the constructability of these types of projects as well.

Education: University of Hartford, CT, B.S. in Civil Engineering

Registrations & Certifications: Professional Engineer - CT, MA, ME, MI, NH, VT

Memberships & Affiliations: American Society of Civil Engineers

Years with CHA: 23

Rob Faulkner, PE

**Partner-in-Charge, Quality Manager,
Engineer-of-Record**

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Rochester ER STP 0162(21) Reclamation
- Brandon-Goshen ER STP 0162(22) Reclamation
- Jamaica-Winhall STP 2904(1) Reclamation
- North Hero-Grand Isle Movable Bridge Replacement
- Brighton STP PC19(1) Pavement Rehabilitation
- Manchester STP 2970(1) Composite Rehabilitation
- Bennington NH 2966(1) and STP 2973(1) Composite Rehabilitation
- Poultney-Fair Haven-West Rutland Composite Pavement Rehabilitation
- West Rutland STP FPAV (18) Composite Pavement Rehabilitation
- Chester-Springfield-Rockingham-Windsor STP 2952(1) Rehabilitation
- Swanton STP 2958(1) Rehabilitation
- St. Albans STP 2957(1) Rehabilitation
- Essex (Essex Junction) NH 2956(2) Rehabilitation
- Essex (Essex Junction) STP 2956(1) Rehabilitation
- Johnson VT Route 100C Superstructure Replacements
- Brattleboro-Hinsdale BRP 2000(19)SC
- WW II Veterans Memorial Highway (Bennington-Hoosick) Western Segment
- Taylor Street Bridge Rehabilitation
- Clarendon Gorge Trailhead Enhancement

City of Burlington, VT

- Champlain Parkway
- Pine Street at Lakeside Avenue Traffic Signal Replacement

Town of Vernon, VT

- Tyler Hill Road Culvert Replacement
- Central Park Road Culvert Replacement
- Huckle Hill Road Culvert Replacement

Brattleboro DPW, VT, Cooke Road Bridge Replacement

Town of Jamaica, VT, Tropical Storm Irene Emergency Services

Town of Wardsboro, VT, Boardman Loop Road Bridge Replacement



Sarah is a senior traffic engineer with 12 years of experience, encompassing a wide variety of traffic engineering projects including, but not limited to, corridor studies, traffic impact studies, interchange and highway evaluations, parking studies, safety studies, signal designs, signal timing plans, and pedestrian and bicycle facility design throughout the northeast.

Education: Rensselaer Polytechnic Institute, NY, B.S. in Civil Engineering

Registrations & Certifications: Professional Engineer - NY, CT, NJ, GA, NH, ME

Professional Traffic Operations Engineer

Memberships & Affiliations: Institute of Transportation Engineers

Years with CHA: 12

Sarah Bowman, PE, PTOE

Senior Traffic Engineer

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Berlin Composite Reclamation and Rehabilitation
- Rutland Ripley Road over Otter Creek Bridge Replacement
- Poultney-Fair Haven-West Rutland Composite Pavement Rehabilitation
- West Rutland STP FPAV (18) Composite Pavement Rehabilitation
- Hartford STP PC21(4) Pavement Rehabilitation
- Swanton STP 2958(1) Rehabilitation
- St. Albans STP 2957(1) Rehabilitation
- Essex (Essex Junction) NH 2956(2) Rehabilitation
- Essex (Essex Junction) STP 2956(1) Rehabilitation

City of Burlington, VT

- Champlain Parkway
- Pine Street at Lakeside Avenue Traffic Signal Replacement
- University Heights and Upper Main Street Traffic Evaluations
- Cambria Hotel Traffic Impact Study Review
- Burton Hub Traffic Impact Study Review
- Cambrian Rise Traffic Impact Study Review
- Hotel Champlain Traffic Impact Study Review

City of Schenectady, NY, Erie Boulevard Reconstruction and Complete Streets

Town of Bethlehem, NY, Delaware Avenue Hamlet Streetscape

NYS Dept. of Transportation, NYS Route 5S (Oriskany Street) Safety Project

Maine Dept. of Transportation, River Road Intersection Improvements

New Hampshire Dept. of Transportation

- Epping Route 126/25 Final Design
- Spaulding Turnpike Interchanges 11-16 Reconstruction

City of Troy, NY

- Oakwood Avenue (NYS Route 40) Traffic Signals
- Maple and Campbell Avenue Traffic Signals

City of Albany, NY, Intersection of Everett Road and Central Avenue Signal Plans



David has 43 years of experience in transportation planning and traffic engineering involving a wide range of transportation and site development projects throughout the eastern US. His experience includes comprehensive transportation plans, corridor studies, access management plans, transportation infrastructure planning and design (scoping through final design), and intersection safety/congestion studies for communities in New York State and New England.

Registrations & Certifications:
American Institute of Certified Planners, NICET IV

Memberships & Affiliations:
American Planning Association, Association of Pedestrian and Bicycle Professionals, Institute of Transportation Engineers

Years with CHA: 29

David Kahlbaugh, AICP

Senior Transportation Planner

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Berlin Composite Reclamation and Rehabilitation
- Wilmington HES 010-1(38) VT Routes 9 & 100 Reconfiguration
- Rutland Ripley Road over Otter Creek Bridge Replacement
- North Hero-Grand Isle Movable Bridge Replacement
- Lake Champlain Bridge Replacement
- Poultney-Fair Haven-West Rutland Composite Pavement Rehabilitation
- West Rutland STP FPAV (18) Composite Pavement Rehabilitation
- Hartford STP PC21(4) Pavement Rehabilitation
- Chester-Springfield-Rockingham-Windsor STP 2952(1) Rehabilitation
- Swanton STP 2958(1) Rehabilitation
- St. Albans STP 2957(1) Rehabilitation
- Essex (Essex Junction) NH 2956(2) Rehabilitation
- Essex (Essex Junction) STP 2956(1) Rehabilitation
- Colchester-Essex STP SGNL (45) Rail Preemption Signal Design
- Rutland City Composite Rehabilitation
- Burlington City Composite Rehabilitation.
- Barre City STP 2961(1) Grade Crossings Design

City of Burlington, VT

- Champlain Parkway
- Pine Street at Lakeside Avenue Traffic Signal Replacement
- University Heights and Upper Main Street Traffic Evaluations
- City Place Traffic Impact Study Review
- City Market Traffic Impact Study Review
- 44-50 Lakeside Avenue Redevelopment Traffic Impact Study Review
- Cambria Hotel Traffic Impact Study Review
- Burton Hub Traffic Impact Study Review
- Cambrian Rise Traffic Impact Study Review
- Hotel Champlain Traffic Impact Study Review

City of Schenectady, NY, Erie Boulevard Reconstruction and Complete Streets

Town of Bethlehem, NY, Delaware Avenue Hamlet Streetscape



Christine has 26 years of experience in traffic engineering and transportation planning and design. Her expertise includes traffic impact studies, corridor studies, systems operation modeling and analysis, traffic safety studies, traffic data collection/analysis, traffic control systems design, and NEPA documentation. Representative project experience includes:

Education: Clarkson University, NY, B.S. in Civil & Environmental Engineering

Registrations & Certifications: Professional Engineer - FL, GA, MA, NY, VA, Professional Traffic Operations Engineer

Memberships & Affiliations: NYS Society of Professional Engineers, Institute of Transportation Engineers

Years with CHA: 10

Christine Lilholt, PE, PTOE

Senior Traffic Engineer

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Bethel VT Route 12 over Gilead Brook Bridge Replacement
- North Hero-Grand Isle Movable Bridge Replacement

City of Burlington, Champlain Parkway

NYS Dept. of Transportation

- Route 12B Corridor Safety Study – Oneida & Madison Counties
- NYS Route 434/Rano Boulevard/Sycamore Road Intersection Improvements
- Interstate 87 (I-87) Exit 4 Access Improvements
- High Speed Intercity Passenger Rail (HSIPR) Program and Transportation Investment Generating Economic Recovery, (TIGER) Discretionary Grant program

Town of Bethlehem, NY, Delaware Avenue Hamlet Streetscape

Adirondack/Glens Falls Transportation Council, Bay Street and Sanford Street Intersection Safety Study

Port Authority of NY & NJ, LaGuardia Airport West End Utility & Roadway Relocation

Croton-on-Hudson, NY, Croton Point Avenue Multimodal Corridor Improvements Scoping & Design

Town of Colonie, NY, Maxwell Road Extension Design

Norfolk Southern Railway, Intermodal Transfer Facilities NEPA Permitting and Design (Franklin County, Harrisburg, and Rutherford, PA)

Daniel Barclay, Traffic Control Plan for Superload Transport.

Onondaga County, Velasko Road Reconstruction

City of Port Jervis, NY, Rehabilitation of East Main Street

Maine Dept. of Transportation, Route 202 & Main Street Intersection Reconfiguration

Schenectady County, NY, Alplaus Avenue and Maple Avenue Intersection Improvements



John has five years of experience working in the transportation field on several VTrans pavement rehabilitation projects. He has experience designing signing and striping per the MUTCD and VTrans' standards. He has also created roadway typical sections, developed site specific details, calculated detailed estimates, prepared engineer's estimates, and prepared plan sets for submission. John has become familiar with VTrans' design practices and quantity estimating.

Education: University of Vermont, VT B.S. in Civil Engineering

Registration & Certifications: Professional Engineer - VT

Years with CHA: 5

John Olsen, PE

Project Engineer

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Rochester ER STP 0162(21) Reclamation
- Brandon-Goshen ER STP 0162(22) Reclamation
- Jamaica-Winhall STP 2904 (1) Reclamation
- Brighton STP PC19(1) Pavement Rehabilitation
- Poultney-Fair Haven-West Rutland Composite Pavement Rehabilitation
- West Rutland STP FPAV (18) Composite Pavement Rehabilitation
- Hartford STP PC21(4) Pavement Rehabilitation
- Manchester STP 2970(1) Composite Rehabilitation
- Bennington NH 2966(1) and STP 2973(1) Composite Rehabilitation
- STP 2956(1) Essex (Essex Junction) Rehabilitation
- NH 2956(2) Essex (Essex Junction) Rehabilitation
- STP 2958(1) Swanton Rehabilitation
- STP 2957(1) St. Albans Rehabilitation
- Berlin Composite Reclamation and Rehabilitation
- Ryegate IM 091-2(80) Rock Catchment
- Lyndon IM 091-3(51) Rock Catchment
- Burlington HES 5000(18) Subsurface Utility Exploration

City of Burlington, VT

- Champlain Parkway
- University Heights and Upper Main Street Traffic Evaluations



Jack's five years of experience has been concentrated on several VTrans projects including pavement rehabilitation and reconstruction. Jack has been responsible for roadway modeling using InRoads design software, ADA compliant design, bicycle facility design, pavement marking and sign design, and EPSC plans. He is very familiar with VTrans' policies, protocols and procedures related including plan development, CADD standards, bid documents including technical special provision and construction cost estimating. He has experience preparing environmental permitting materials for state and federal agencies, as well as documents in support of NEPA.

Education: State University of New York Polytechnic Institute, NY, B.S. in Civil Engineering Technology

Registrations & Certifications:
Professional Engineer - ME

Years with CHA: 4

Jack Scudder, PE

Project Engineer

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Rochester ER STP 0162(21) Reclamation
- Brandon-Goshen ER STP 0162(22) Reclamation
- Jamaica-Winhall STP 2904 (1) Reclamation
- Swanton STP 2958(1) Rehabilitation
- St. Albans STP 2957(1) Rehabilitation
- Essex (Essex Junction) NH 2956(2) Rehabilitation
- Essex (Essex Junction) STP 2956(1) Rehabilitation

City of Burlington, VT, Champlain Parkway

NYS Dept. of Transportation, NYS Route 5S (Oriskany Street) Safety Project

Indiana Dept. of Transportation, On-Call Scoping Reports

Port of Coeymans, NY, Port Coeymans Battery Storage Noise Study

Village of Ellenville, NY, D&H and O&W Heritage Trail Project

Orange & Rockland Utilities, Inc., Stream Bank Erosion Assessments



Brian has 14 years of experience in the design of highway and bridge projects for state and municipal clients including two of VTrans' most complicated projects in recent history.

Education: Clarkson University, NY, B.S. in Civil Engineering

Registration & Certifications:
Professional Engineer - NY

Memberships & Affiliations:
American Society of Civil Engineers, Chi Epsilon, ASHE

Years with CHA: 14

Brian Healey, PE

Project Engineer

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Jamaica-Winhall STP 2904(1) Reclamation
- Rutland City Composite Rehabilitation
- Brandon-Goshen ER STP 0162(22) Reclamation
- Rochester ER STP 0162(21) Reclamation
- Berlin Composite Reclamation and Rehabilitation
- Bethel VT Route 12 over Gilead Brook Bridge Replacement
- Ryegate Interstate 91 Culvert Replacement
- Lake Champlain Bridge Replacement
- Richmond Checkered House Bridge Widening Design-Build

NYS Dept. of Transportation, NYS Route 5S (Oriskany Street) Safety Project

City of Schenectady, NY, Erie Boulevard Reconstruction and Complete Streets

Town of Bethlehem, NY, Delaware Avenue Hamlet Streetscape

City of Albany, NY, Central Avenue Corridor Improvement

City of Cohoes, NY, Bridge Avenue Bridge over the Fifth Branch of the Mohawk River

City of Rensselaer, NY, Route 20 Bicycle/Pedestrian Transportation Improvements

Delaware County, NY, Arbor Hill Road

Onondaga County, NY, Old Route 5 Paving Project

City of Port Jervis, NY, East Main Street over the Neversink River

Dutchess County, NY

- Dutchess Rail Trail
- Harlem Valley Rail Trail



Jeff has 20 years of experience in transportation engineering, planning, and project management. He manages large transportation planning projects as well as multi-discipline design projects involving the reconstruction of municipal streets and bridges.

Education: Clarkson University, NY, B.S. in Civil Engineering

Registrations & Certifications: Professional Engineer - CT

Years with CHA: 20

Jeff Parker, PE

Project Engineer

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Rutland-Killington NH 9809(1) Rehabilitation
- Killington NH 2106 (1) Rehabilitation
- Rutland-Pittsford NH 2119(1) Rehabilitation
- Brandon-Salisbury NH 2130(1) Rehabilitation
- Rochester-Granville STP 2124(1) Rehabilitation
- Pawlet-Wells STP 9818 (1) Rehabilitation
- Brookfield-Montpelier IM 089-1(21) Rehabilitation
- Bennington NH 2225(1) Rehabilitation
- North Bennington STP 9646(1)S Water Street Improvements
- Fair Haven-Rutland NH 9811(1) Rehabilitation
- Arlington-Sunderland STP 2223(1) Rehabilitation
- Middlebury-New Haven NH 9813(1) Rehabilitation
- Wallingford-Rutland Town NH 2408(1) Rehabilitation
- Killington-Bridgewater NH 2502(1) Rehabilitation
- Rochester-Chittenden STP 2505(1) Rehabilitation
- Wilmington HES 010-1(38) VT Routes 9 & 100 Reconfiguration
- Old Bennington Reconstruction of Monument Avenue
- WW II Veterans Memorial Highway (Bennington-Hoosick) Western Segment
- Bennington NH F019-1(4) Southern Segment
- North Hero-Grand Isle Movable Bridge Replacement
- Replacement of Overlay on Bridge 42 Southbound I-89
- Jericho Pedestrian Bridge
- Johnson VT Route 100C Superstructure Replacements



Matt has 15 years of experience with transportation engineering and will lead any railroad design or coordination efforts needed for this primary agreement. Throughout his entire career, he has been actively involved with VTrans projects and has extensive work experience and contacts throughout the railroad industry. Matt is also a certified railroad contractor safety trainer.

Education: Syracuse University, NY, B.S. in Civil Engineering

Registrations & Certifications: Professional Engineer - NY, ERailSafe (2018-2020), Certified Norfolk Southern Safety Trainer (2018-2019), Amtrak Contractor Safety & Awareness (2019), Certified CSX Railroad Contractor Safety Trainer (2018-2019), Long Island Railroad Roadway, Worker Protection (201-2019)

Memberships & Affiliations: American Railway Engineering & Maintenance of Way Association

Years with CHA: 15

Matthew Mokey, PE

Lead Project Engineer (Railroad)

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Brighton STP PC19(1) Pavement Rehabilitation
- Poultney-Fair Haven-West Rutland Composite Pavement Rehabilitation
- West Rutland STP FPAV (18) Composite Pavement Rehabilitation
- Leicester STP 2033(29) Grade Crossing Design
- Pittsford STP 2033(30) Grade Crossing Design
- Middlebury STP 2035(20) Grade Crossing Design
- Salisbury STP 2035(21) Grade Crossing Design
- Salisbury STP 2034(22) Grade Crossing Design
- St. Johnsbury-Lyndon STP 2936(2) Grade Crossing Design with six highway-rail grade crossings
- Cavendish-Shrewsbury NH 2975(1) Grade Crossing Design with three highway-rail grade crossings
- Barre City NH 2961(2) Grade Crossings Design
- Montpelier STP 2950(1) Grade Crossings Design
- Middlebury-Ferrisburgh NH SURF(55) Grade Crossings Design
- Essex (Essex Junction) NH 2956(2) Rehabilitation
- St. Albans STP 2957(1) Rehabilitation
- Berlin Composite Reclamation and Rehabilitation
- Manchester STP 2970(1) Rehabilitation
- Bennington Composite Rehabilitation
- Wilmington HES 010-1(38) VT Routes 9 & 100 Reconfiguration
- Chester-Springfield-Rockingham-Windsor STP 2952(1) Rehabilitation
- Rutland City Composite Rehabilitation
- Fair Haven Composite Rehabilitation
- Castleton Composite Rehabilitation
- Manchester-Dorset NH 2608(1)S Rehabilitation
- Rutland-Burlington VTRY(3) Continuous Welded Rail including four highway-rail grade crossings
- Rutland-Burlington FRTII(24) Continuous Welded Rail including a highway-rail grade crossing

City of Burlington, VT, Champlain Parkway



Nick has 26 years of experience in the planning, landscape architecture and construction fields. He leads CHA's landscape architecture team on different project types with a focus on sustainability, resiliency and community development. His project focus includes pedestrian circulation/ADA compliance on urbanized street systems, on- and off-road bicycle circulation and accommodation, landscape/habitat design, visual impact assessment and visualizations/animations for community engagement.

Education: State University of New York at Cobleskill, NY, A.A.S. in Landscape Development, SUNY College of Environmental Science and Forestry, NY, B.L.A. in Landscape Architecture

Registrations & Certifications: Registered Landscape Architect - CT, MA, ME, NJ, NY, RI, LEED Accredited Professional

Memberships & Affiliations: American Society of Landscape Architects, Council of Landscape Architects Registration Boards

Years with CHA: 23

Nick Schwartz, RLA, LEED AP

Bicycle/Pedestrian Design, Landscape Architect

SAMPLING OF PROJECT EXPERIENCE

City of Burlington, VT, Champlain Parkway

City of Schenectady, NY, Erie Boulevard Reconstruction Complete Streets

NYS Dept. of Transportation

- NYS Route 5S (Oriskany Street) Safety Project
- NY Route 5 (Lakeshore Road) Reconstruction
- Hoosick Street (NY Route 7) Reconstruction & Widening
- Routes 52 & 55 Reconstruction & Safety Improvements
- US Routes 9 & 20 Urban Roadway Reconstruction

City of Albany, NY

- Central Avenue Corridor Improvement
- Delaware Avenue Reconstruction

City of Rensselaer, NY

- Reconstruction of Broadway
- Route 20 Bicycle/Pedestrian Transportation Improvements

Town of Bethlehem, NY, Sidewalk/Bikeway Feasibility Study

Town of Malta, NY, Transportation Linkage Plan

City of Watertown, NY, Public Square Streetscape

Town of Halfmoon, NY, Champlain Canal Towpath Trail

Village of Port Jefferson, NY, Meadow Parking Lot Pedestrian Walkway

Connecticut Dept. of Transportation, Putnam Bridge Walkway Feasibility Study

City of Newburgh, NY, Robinson Avenue Reconstruction

Albany County, NY, Albany Shaker Road & Watervliet Shaker Road Reconstruction

City of Cohoes, NY, North Mohawk Street Reconstruction

Town of Halfmoon, NY, Champlain Canal Towpath Trail

Dormitory Authority of New York State, Amsterdam Pedestrian Access

Town of Bethlehem, NY, Delaware Avenue Hamlet Streetscape



Kris is a principal hydraulics design engineer with 23 years of experience, and he has specialized experience in hydrologic and hydraulic applications. He has been involved in a variety of projects, including bridge scour assessments, dam break modeling, flood plain evaluations, erosion prevention and sediment control planning, and watershed studies.

Education: *Utah State University, UT, M.S. in Civil & Environmental Engineering, SUNY College of Environmental Science and Forestry, NY, B.S. in Natural Resource Engineering*

Registrations & Certifications: *Professional Engineer - NY, ME, GA, Certified Professional in Erosion & Sediment Control (CPESC)*

Memberships & Affiliations: *American Society of Civil Engineers, Association of State Dam Safety Officials*

Years with CHA: 23

Kris Detlefsen, PE, CPESC

Lead Project Engineer (Hydraulics)

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Richmond Checkered House Bridge Widening Design-Build
- Bennington VT Route 9 over Roaring Branch Micropile Underpinning
- Wallingford Pedestrian Bridge Adaptive Re-use
- Bethel VT Route 12 over Gilead Brook Bridge Replacement
- WW II Veterans Memorial Highway (Bennington Bypass) Western Segment
- Morrisville-Stowe State Airport, Runway 1-19 Reconstruction

Battleboro Department of Public Works, VT, Replacement of Cooke Road Bridge

City of Burlington, VT, Champlain Parkway

Town of Vernon, VT

- Tyler Hill Road Culvert Replacement
- Central Park Road Culvert Replacement

New Hampshire Dept. of Transportation

- Two culvert crossings for the FE Everett Turnpike
- Cornish-Windsor Covered bridge over the CT River – Countermeasure Design
- Conway Covered Bridge over the Saco River – Countermeasure Design

City of Keene, NH

- Spring Street over Beaver Brook Culvert
- Route 10 over Ash Swamp Brook Culvert
- Beaver Brook Floodplain Storage Evaluation

Town of Egremont, MA, Mt. Washington Road over Karner Brook (two culverts and one bridge)

Town of Greenfield, MA, Nash's Mill Road over the Green River

Dutchess County, NY

- Dutchess Rail Trail
- Harlem Valley Rail Trail



Charlie has spent 20 years working in the geotechnical engineering field on transportation and civil engineering projects. His expertise includes settlement and bearing capacity analyses, slope stability modeling, dam inspections and analyses, and the design of deep foundations and earth retaining systems. Charlie coordinates subsurface investigations and prepares geotechnical reports.

Education: Rensselaer Polytechnic Institute, NY, Geotechnical Engineering Graduate Coursework, Virginia Polytechnic Institute & State University, VA, B.S. in Civil Engineering

Registrations & Certifications: Professional Engineer - CT, GA, ME, NY, VA, VT

Memberships & Affiliations: American Society of Civil Engineers, Geo Institute

Years with CHA: 19

Charlie Symmes, PE

Lead Project Engineer (Geotechnical)

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Rochester ER STP 0162(21) Reclamation
- Brandon-Goshen ER STP 0162(22) Reclamation
- Jamaica-Winhall STP 2904 (1) Reclamation
- Richmond Checkered House Bridge Widening Design-Build
- North Hero-Grand Isle Movable Bridge Replacement
- Rutland Ripley Road over Otter Creek Bridge Replacement
- Johnson VT Route 100C Superstructure Replacements
- Lake Champlain Bridge Replacement
- Bennington VT Route 9 over Roaring Branch Micropile Underpinning
- Wallingford Pedestrian Bridge Adaptive Re-use
- WW II Veterans Memorial Highway (Bennington Bypass) Western Segment
- Taylor Street Bridge Rehabilitation
- St. Johnsbury Depot Hill Road over Passumpsic River Bridge Replacements
- Searsburg-Wilmington Bridge Replacements

City of Burlington, VT, Champlain Parkway

Maine Dept. of Transportation, Statewide Scour Term Agreements

Massachusetts Dept. of Transportation, Bridge No N-21-002 Route 122 over Blackstone River

Connecticut Dept. of Transportation, Metro North Railroad Cos Cob Bridge Access Improvements Feasibility Study

Canadian Pacific Railway/D&H, Slope Remediation at MP 124.58

Dutchess County, NY

- Dutchess Rail Trail
- Harlem Valley Rail Trail

Town of Vernon, VT, Central Park Road Culvert Replacement



Tony has 34 years of experience with bridge analysis, rehabilitation and replacement projects; performing, leading, and managing bridge inspection contracts; and designing retaining walls and other transportation-related structures. Tony has been involved with VTrans projects for decades, and in the last decade he has performed the same QA role by performing independent reviews and stamping and signing all VTrans' structural plans.

Education

Virginia Polytechnic Institute & State University, VA, B.S. in Civil Engineering

Registrations & Certifications

Professional Engineer - CT, DC, FL, IN, KY, MA, MI, NJ, NY, OH, PA, VA, VT

Memberships & Affiliations

American Society of Civil Engineers
 Association for Bridge Construction and Design
 National Council of Examiners for Eng. & Survey
 Precast Concrete Association of NY

Years with CHA: 32

Tony Papile, PE

Engineer-of-Record (Structures)

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Richmond Checkered House Bridge Widening Design-Build.
- Rutland Ripley Road over Otter Creek Bridge Replacement.
- Johnson VT Route 100C Superstructure Replacements
- Bennington VT Route 9 over Roaring Branch Micropile Underpinning.
- Jericho Pedestrian Bridge.
- Taylor Street Bridge Rehabilitation.
- Wallingford Pedestrian Bridge Adaptive Re-use.
- Lake Champlain Bridge Replacement.
- Bridge 44; US Route 2 over I-89.
- Proctor VTRY(10) Rail Bridge Rehabilitation.
- Pittsford VTRY(11) Rail Bridge Rehabilitation.
- Bethel VT Route 12 over Gilead Brook Bridge Replacement.
- WW II Veterans Memorial Highway (Bennington-Hoosick) Western Segment.
- Searsburg-Wilmington Bridge Replacements.
- St. Johnsbury Depot Hill Road over Passumpsic River Bridge Replacements.
- Preventive Maintenance Project BHF MEMB(20) Statewide - SW Region

City of Burlington, VT, Champlain Parkway.

NYS Department of Transportation, Accelerated Bridge Program Phase 1B Design-Build.

Indiana Department of Transportation, Ohio River Bridges.

Aerostar New York Holdings, LLC, LGA - Airport Central Terminal Building Replacement Project.

Dutchess County, NY

- Dutchess Rail Trail
- Harlem Valley Rail Trail



Jeff is a senior structural engineer with 23 years of comprehensive experience in bridge design, coupled with practical knowledge of the construction industry and a thorough comprehension of contractor means and methods. This combination of skill sets provides an invaluable technical resource during the development of non-standard structural details, bridge staging plans, and construction cost estimates. In addition to his VTrans proficiency and knowledge of manuals, practices and standards, Jeff has performed extensive transportation structures work for a variety of clients, primarily including NYSDOT and IDOT as well as MaineDOT, MassDOT, many counties, and contractors on design-build efforts.

Education: *University of Illinois at Urbana-Champaign, IL, BS in Civil Engineering (Structural Emphasis)*

Registration & Certification: *Professional Engineer - OH, NY, IL, Structural Engineer - IL, HI*

Memberships & Affiliations: *Association for Bridge Construction and Design*

Years with CHA: 7

Jeff Najdowski, PE

Lead Project Engineer (Structures)

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Rutland Ripley Road over Otter Creek Bridge Replacement
- Johnson VT Route 100C Superstructure Replacement
- Proctor VTRY(10) Rail Bridge Rehabilitation
- Pittsford VTRY(11) Rail Bridge Rehabilitation
- Bethel VT Route 12 over Gilead Brook Replacement
- Ryegate Interstate 91 Culvert Replacement

City of Burlington, VT, Champlain Parkway.

Dutchess County, NY, Harlem Valley Rail Trail Rehabilitation

Putnam County, NY, Mill Road Over Clove Creek

Middlesex County, NJ, Johnson Drive Bridge and Culvert Replacements

Maine Dept. of Transportation, Scour Plans of Action

Massachusetts Dept. of Transportation, Scour Plans of Action

Dutchess County, NY, Harlem Valley Rail Trail



Ryan has 24 years of hands-on experience in the design, rehabilitation, inspection, and investigative study of bridges, towers, and related civil engineering structures. He evaluates structural safety and conditions; monitors changing deficiencies; analyzes stresses in new and deteriorated structures; and has made hundreds of recommendations for long-term, short-term and emergency measures.

Education

Rensselaer Polytechnic Institute, NY, B.S. in Civil/Structural University at Albany, NY, MBA

Registrations & Certifications

Professional Engineer - FL, MA, ME, NY

Memberships & Affiliations

*American Society of Civil Engineers
Association for Bridge Construction and Design
National Council of Examiners for Eng. & Survey
Chi Epsilon
Toastmasters International*

Years with CHA: 20

Ryan Henderson, PE

Senior Structural Engineer

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Richmond Checkered House Bridge Widening Design-Build
- Rutland Ripley Road over Otter Creek Bridge Replacement
- Johnson VT Route 100C Superstructure Replacements
- Jericho Pedestrian Bridge
- Wallingford Pedestrian Bridge Adaptive Re-use
- Proctor VTRY(10) Rail Bridge Rehabilitation
- Pittsford VTRY(11) Rail Bridge Rehabilitation
- Bethel VT Route 12 over Gilead Brook Bridge Replacement
- Ryegate Interstate 91 Culvert Replacement
- WW II Veterans Memorial Highway (Bennington-Hoosick) Western Segment)
- Searsburg-Wilmington Bridge Replacements
- Lake Champlain Bridge Replacement



Nick has over 10 years of experience in design and inspection of bridge structures in addition to his early years as a geotechnical engineer. His experience in design includes calculations of bridge elements associated with both new and rehabilitated structures, load ratings, developing detailed construction plans and estimates and performing shop drawing reviews. Nick has been the lead engineer on a variety of VTrans' projects, including the Johnson Route 100C bridges, Proctor and Pittsford rail bridge load ratings, and Englesby Culvert along the Champlain Parkway for City of Burlington.

Education

Northeastern University, MA,
B.S. in Civil Engineering

Registrations & Certifications

Professional Engineer - NY, VT
NETTCP Subsurface Inspector
Erosion & Sediment Control
Inspector

Memberships & Affiliations

American Society of Civil Engineers
Order of the Engineer

Years with CHA: 10

Nick Bennett, PE

Project Engineer

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Rutland Ripley Road over Otter Creek Bridge Replacement
- Johnson VT Route 100C Superstructure Replacements
- Proctor VTRY(10) Rail Bridge Rehabilitation
- Pittsford VTRY(11) Rail Bridge Rehabilitation
- Lake Champlain Bridge Replacement
- Jericho Pedestrian Bridge
- Bethel VT Route 12 over Gilead Brook Bridge Replacement

City of Burlington, Champlain Parkway

NYS Department of Transportation, Route 32 over the Mohawk River

NYS Thruway Authority, Reconstruction of I-90

Maine Department of Transportation, Scour Plans of Action EAST

Massachusetts Department of Transportation, Bridge No N-21-002 Route 122 over Blackstone River

New Hampshire Department of Transportation, Spaulding Turnpike – Newington/Dover

Albany County, NY, CR 53 (Jericho Road) over the CSX Selkirk Rail Yard Bridge Removal

City of Albany, NY, New Pedestrian Bridge over Manning Boulevard

City of Cohoes, NY, Bridge Avenue Bridge over the Fifth Branch of the Mohawk River

City of Glens Falls, NY, Wilkie, Keenan & Halfway Brook Dams, Water Supply Study



Peter has 34 years of experience on all aspects of large and small bridge projects, ranging from condition inspections and survey through structural type study preparation and preliminary design to final design and construction inspection. His background includes unique experiences like historic stone arch analysis and movable bascule and swing bridge analysis and restoration. Peter's structural experience extends beyond bridges and includes retaining walls, sign support structures, lattice towers, and buildings.

Education

University of Connecticut, CT, B.S. in Civil Engineering

Registrations & Certification

Professional Engineer - CT, MA, ME, NH

Memberships & Affiliations

American Railway Eng & Maint-of-Way Assoc.

National Society of Professional Engineers

Precast/Prestressed Concrete Institute

Years with CHA: 24

Peter Perkins, PE

Senior Structural Engineer

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Richmond Checkered House Bridge Widening Design-Build
- Rutland Ripley Road over Otter Creek Bridge Replacement
- Bennington VT Route 9 over Roaring Branch Micropile Underpinning
- WW II Veterans Memorial Highway (Bennington-Hoosick) Western Segment
- Jericho Pedestrian Bridge
- Wallingford Pedestrian Bridge Adaptive Re-use
- Taylor Street Bridge Rehabilitation
- St. Johnsbury Depot Hill Road over Passumpsic River Bridge Replacements

Town of Vernon, VT

- Central Park Road Culvert Replacement
- Huckle Hill Road Culvert Replacement
- Tyler Hill Road Culvert Replacement

Maine Department of Transportation

- Pine Point Crossing Bridge.
- Route 1 Bypass over Elliot Road
- Colley Wright Brook Bridge Replacement
- Route 1 Bypass over Elliot Road
- Pine Point Crossing over B&M Railroad
- Austin Stream Bridge No. 2027 over the Austin Stream
- Chester Lincoln Bridge over the Penobscot River

Massachusetts Department of Transportation

- Route 141 over Chicopee River
- Route 2 Bridge Replacement
- Meadow Road over Saw Mill River
- South Ferry Road over Sawmill River
- Birnam Road over Sawmill River
- Glen Valley Road Bridge over East Branch of Swift River
- Bridge No. N-21-002 Route 122 over Blackstone River
- Route 141 over Chicopee River



Philip has over 25 years of experience in the detailing and planning of bridge projects. Phil's prior experience with a steel detailer affords him the insight and judgment to produce highly constructible bridge plans.

Education

Hudson Valley Community College, NY, A.A.S. in Civil Engineering

Memberships & Affiliations

Association for Bridge Construction and Design

Years with CHA: 12

Philip Roth

Principal Engineering Tech Designer

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Rutland Ripley Road over Otter Creek Bridge Replacement
- Wallingford Pedestrian Bridge Adaptive Re-use
- Bethel VT Route 12 over Gilead Brook Bridge Replacement
- Bridge 44; US Route 2 over I-89
- Bennington VT Route 9 over Roaring Branch Micropile Underpinning
- Jericho Pedestrian Bridge
- Johnson VT Route 100C Superstructure Replacements.
- Richmond checkered House Bridge Widening Design-Build
- Lake Champlain Bridge Replacement
- Ryegate Interstate 91 Culvert Replacement

Town of Rockingham, VT, Replacement of Bartonville Covered Bridge

Town of Rockingham, VT, Worrall Covered Bridge

New York State Department of Transportation

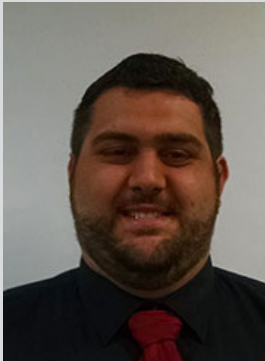
- Accelerated Bridge Program Phase 1B Design-Build
- Route 211 over Wallkill River
- NY 25 over NY 107 Bridge Rehabilitation
- Route 32 over the Mohawk River

Albany County, NY,

- CR 253 Superstructure Replacement over NSRR Tracks
- Pictuay Road Over Coeymans Creek Bridge Replacement
- Old Ravena Road over CSX (North Bridge)

City of Cohoes, NY, Bridge Avenue Bridge over the Fifth Branch of the Mohawk River

City of Keene, NH, Spring Street Over Beaver Brook Bridge Replacement



In the four years since graduating with a Master's Engineering degree, Antonio has quickly proved himself to be a very capable engineer who efficiently assists project engineers with many aspects of bridge design. In his time at CHA, he has designed both single and multi-span structures as part of various bridge replacement and rehabilitation projects. He also has experience in bridge load ratings, sign structure analysis, steel detailing, and culvert design.

For recent VTrans' projects, Antonio has been the primary junior engineer assisting the lead engineer for all aspects of the Proctor, Pittsford, and Johnson projects, including performing load ratings, bridge rehabilitation details, superstructure design, and the many various day-to-day calculations that support an effective project plan.

Education

Rensselaer Polytechnic Institute, NY, M.E. & B.S. in Civil Engineering

Registrations & Certification

Engineer-in-Training, NY

Years with CHA: 4

Antonio D'Elia, EIT

Project Engineer

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Johnson VT Route 100C Superstructure Replacements.
- Proctor VTRY(10) Rail Bridge Rehabilitation.
- Pittsford VTRY(11) Rail Bridge Rehabilitation.

NYS Thruway Authority

- MP 191.32 over Flat Creek.
- MP 58.43 over Route 207 Bridge Replacement.

City of Port Jervis, NY, East Main Street (Route 6) over the Neversink River.

City of Troy, NY, Seawall Stabilization Project.



Jason has 21 years of experience as a project engineer and project manager on complex environmental and energy projects, which includes the management of projects from conceptual design, permitting, and final design through construction. His experience includes securing state and federal permits for complex natural gas, electrical transmission and utility projects that present unique challenges due to sensitive environments and regulatory coordination. Jason also has experience coordinating with utilities for the relocation and replacement of utility lines and meeting the utility and regulatory design standards.

Education: State University of New York at Cortland, NY, B.S. in Physics

Registrations & Certifications: Professional Engineer - NY

Memberships & Affiliations: American Society of Civil Engineers

Years with CHA: 21

Jason Gorman, PE

Lead Project Engineer (Utility)

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation, Bennington NH F19-1(4)
Southern Segment

Reed & Reed, Inc., Seneca Lake Submarine Cable Replacement

UGI Utilities, Inc., Luzerne County (Jaycee Drive) Engineering services

National Grid - Northborough, MA, MWRA 8(m) Permit Help

Orange & Rockland Utilities, Inc.

- Old Ridge Road Project (Warwick Expansion)
- O&R Monhagen Ave. – Middletown, NY

New England Gas Company, Tauton River Crossings/Gas Distribution Main Replacement Project

Vermont Gas Systems, Inc., Phase 1 VGS Amendment - Engineering Support

New York Power Authority, Onsite Project Management for Submarine Cable Replacement Project

Seneca Meadows, Inc., Gas Pipeline Relocation

Olver Incorporated, Interim Improvements Design

CH2M Hill, First Light Power Generating Facility



Tim is CHA's CADD Operations Manager with over 34 years of experience. He improves processes and incorporates procedural adjustments to streamline workflow between CHA's offices. Through his promotion of CADD software, Tim has played an integral role in producing contract plans, conforming to multiple client standards, maintaining quality, and meeting project deadlines.

Education: Hudson Valley Community College, NY, A.A.S. in Industrial Technology

Registration & Certification: AutoCad Certified

Years with CHA: 29

Timothy Burtnick

Principal Engineering Tech Designer

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Rochester ER STP 0162(21) Reclamation
- Brandon-Goshen ER STP 0162(22) Reclamation
- Jamaica-Winhall STP 2904 (1) Reclamation
- Stockbridge-Bethel STP 2910(1) Reclamation
- Warren-Waitsfield STP 2506(1) Reclamation
- Berlin Composite Reclamation and Rehabilitation
- Bridgewater-Woodstock NH 2611(1) Reclamation
- Fair Haven NH HES 020-1(21) Intersection Reconfiguration
- Wilmington HES 010-1(38) VT Routes 9 & 100 Reconfiguration
- Tropical Storm Irene Engineering Assistance at Rutland ICC
- Lake Champlain Bridge Replacement
- Richmond Checkered House Bridge Widening Design Build
- Rutland Ripley Road over Otter Creek Bridge Replacement
- Old Bennington Reconstruction of Monument Avenue
- Brighton STP PC19(1) Pavement Rehabilitation
- Poultney-Fair Haven-West Rutland Composite Pavement Rehabilitation
- West Rutland STP FPAV (18) Composite Pavement Rehabilitation
- Woodstock-Hartford Pavement Rehabilitation
- Hartford STP PC21(4) Pavement Rehabilitation
- Manchester STP 2970(1) Composite Rehabilitation
- Bennington NH 2966(1) and STP 2973(1) Composite Rehabilitation
- North Bennington STP 9646(1)S Water Street Improvements
- Chester-Springfield-Rockingham-Windsor STP 2952(1) Rehabilitation
- Swanton STP 2958(1) Rehabilitation
- St. Albans STP 2957(1) Rehabilitation
- Essex (Essex Junction) NH 2956(2) Rehabilitation
- Essex (Essex Junction) STP 2956(1) Rehabilitation
- Old Bennington Reconstruction of Monument Avenue
- Rutland City Composite Rehabilitation
- Burlington City Composite Rehabilitation
- Fair Haven Composite Rehabilitation
- Manchester-Dorset NH 2608(1)S Rehabilitation

City of Burlington, VT, Champlain Parkway

- Pine Street at Lakeside Avenue Traffic Signal Replacement

Dutchess County, NY

- Dutchess Rail Trail
- Harlem Valley Rail Trail



Cindy has 32 years of experience and works very closely with Tim Burtnick. She has been involved in many of CHA's transportation design projects and plays a vital role in producing contract plans, conforming to multiple client standards, maintaining quality, and meeting project deadlines.

Education: Hudson Valley Community College, NY, A.A.S. in Engineering Science

Years with CHA: 22

Cindy Kahlbaugh

Senior CADD Technician

SAMPLING OF PROJECT EXPERIENCE

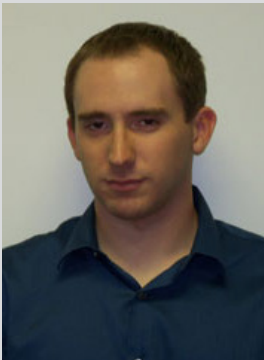
Vermont Agency of Transportation

- Brighton STP PC19(1) Pavement Rehabilitation
- Poultney-Fair Haven-West Rutland Composite Pavement Rehabilitation
- West Rutland STP FPAV (18) Composite Pavement Rehabilitation
- Leicester STP 2033(29) Grade Crossing Design
- Pittsford STP 2033(30) Grade Crossing Design
- Middlebury STP 2035(20) Grade Crossing Design
- Salisbury STP 2035(21) Grade Crossing Design
- Salisbury STP 2034(22) Grade Crossing Design
- St. Johnsbury-Lyndon STP 2936(2) Grade Crossing Design with six highway-rail grade crossings
- Cavendish-Shrewsbury NH 2975(1) Grade Crossing Design with three highway-rail grade crossings
- Barre City NH 2961(2) Grade Crossings Design
- Montpelier STP 2950(1) Grade Crossings Design
- Middlebury-Ferrisburgh NH SURF(55) Grade Crossings Design
- Essex (Essex Junction) NH 2956(2) Rehabilitation
- St. Albans STP 2957(1) Rehabilitation
- Berlin Composite Reclamation and Rehabilitation
- Manchester STP 2970(1) Rehabilitation
- Bennington Composite Rehabilitation
- Wilmington HES 010-1(38) VT Routes 9 & 100 Reconfiguration.
- Chester-Springfield-Rockingham-Windsor STP 2952(1) Rehabilitation.
- Rutland City Composite Rehabilitation
- Manchester-Dorset NH 2608(1)S Rehabilitation
- Rutland-Burlington VTRY(3) Continuous Welded Rail including four highway-rail grade crossings
- Rutland-Burlington FRTII(24) Continuous Welded Rail including a highway-rail grade crossing

City of Burlington, VT, Champlain Parkway

Dutchess County, NY

- Dutchess Rail Trail
- Harlem Valley Rail Trail



Josh has six years of experience concentrated on numerous VTrans projects including pavement rehabilitation, full-depth pavement reclamation, rock catchment and bridge replacements. He provides technical assistance with all CADD related applications for our engineering staff and has been responsible for ensuring that contract plans are developed per VTrans' CADD Standards and design practices. Josh is also very familiar with VTrans' design practices and CADD standards.

Education: Hudson Valley Community College, NY, A.A.S. in Civil Engineering

Years with CHA: 6

Josh Heald

CADD Technician

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Rochester ER STP 0162(21) Reclamation
- Brandon-Goshen ER STP 0162(22) Reclamation
- Jamaica-Winhall STP 2904 (1) Reclamation
- North Hero-Grand Isle Movable Bridge Replacement
- Brighton STP PC19(1) Pavement Rehabilitation
- Poultney-Fair Haven-West Rutland Composite Pavement Rehabilitation
- West Rutland STP FPAV (18) Composite Pavement Rehabilitation
- Hartford STP PC21(4) Pavement Rehabilitation
- Manchester STP 2970(1) Composite Rehabilitation
- Bennington NH 2966(1) and STP 2973(1) Composite Rehabilitation
- North Bennington STP 9646(1)S Water Street Improvements
- Chester-Springfield-Rockingham-Windsor STP 2952(1) Rehabilitation
- Swanton STP 2958(1) Rehabilitation
- St. Albans STP 2957(1) Rehabilitation
- Essex (Essex Junction) NH 2956(2) Rehabilitation
- Essex (Essex Junction) STP 2956(1) Rehabilitation
- Rutland City Composite Rehabilitation
- Burlington City Composite Rehabilitation
- Ryegate IM 091-2(80) Rock Catchment
- Lyndon IM 091-3(51) Rock Catchment
- Burlington HES 5000(18) Subsurface Utility Exploration

City of Burlington, VT

- Champlain Parkway
- Pine Street at Lakeside Avenue Traffic Signal Replacement



Chris has 30 years of experience in community planning, site planning, regulatory compliance, and wetland delineation. His experience includes the management and preparation of comprehensive plans, state and federal environmental impact statements, zoning analysis, and wetland delineation, permitting and mitigation. Chris has broad experience working and coordinating with both the public and private sectors, and he has successfully brought many controversial projects to consensus and closure.

Education: SUNY College of Environmental Science and Forestry, NY, M.S. in Resource Management, B.S. in Environmental Science

Registrations & Certifications:
Professional Wetland Scientist

Memberships & Affiliations:
American Planning Association,
Society of Wetland Scientists,
Board of Governors, NYS
Wetlands Forum

Years with CHA: 24

Chris Einstein, PWS

Lead Environmental Natural Resources Scientist

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Richmond Checkered House Bridge Widening Design-Build
- Rutland Ripley Road over Otter Creek Bridge Replacement
- Wallingford Pedestrian Bridge Adaptive Re-use
- WW II Veterans Memorial Highway (Bennington Bypass) Western Segment
- Ryegate Interstate 91 Culvert Replacement
- Old Bennington Reconstruction of Monument Avenue
- Highway Resurfacing Services Program
- Morrisville-Stowe State Airport, Runway 1-19 Reconstruction

City of Burlington, VT, Champlain Parkway

NYS Dept. of Transportation

- Commercial Vehicle Inspection Facility
- Accelerated Bridge Program Phase 1B Design-Build
- Route 32 over the Mohawk River

Massachusetts Dept. of Transportation, Route 141 over Chicopee River

Norfolk Southern Corp., Franklin County Regional Intermodal Facility

Ogdensburg Bridge & Port Authority, Track, Bridge and Grade Crossing Improvements

Albany County, NY, Pictuay Road Over Coeymans Creek Bridge Replacement

City of Cohoes, NY, Bridge Avenue Bridge over the Fifth Branch of the Mohawk River

Town of Bethlehem, NY, Delaware Avenue Hamlet Streetscape

Dutchess County, NY, Dutchess Rail Trail

Town of Vernon, VT

- Tyler Hill Road Culvert Replacement
- Central Park Road Culvert Replacement



Rogina is an environmental scientist with 43 years of experience involving Phase I Environmental Site Assessments and Phase II Subsurface Investigations throughout the East Coast. She handles regulatory compliance issues which include stormwater/ NPDES permit applications and discharge monitoring/reporting.

Education: State University of New York at Cobleskill, NY, A.A.S. in Biology

Activities and Training: OSHA 40 Hour Hazardous Waste, OSHA 8-Hour Hazwoper Refresher

Years with CHA: 29

Rogina Camilli

Environmental & Natural Resources Scientist

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Rutland Ripley Road over Otter Creek Bridge Replacement
- Ryegate Interstate 91 Culvert Replacement
- Old Bennington Reconstruction of Monument Avenue
- Highway Resurfacing Services Program

City of Burlington, VT, Champlain Parkway

Albany County, NY, Pictuay Road Over Coeymans Creek Bridge Replacement

City of Albany, NY, Reconstruction of Lark Street (Madison Avenue to Clinton Avenue)

City of Buffalo, NY, Bailey Avenue over Cazenovia Creek

City of Cohoes, NY, Bridge Avenue Bridge over the Fifth Branch of the Mohawk River

City of Keene, NH, Spring Street Over Beaver Brook Bridge Replacement

City of Schenectady, NY, State Street (Rehabilitation/Reconstruction)

Columbia County, NY, Rehabilitation of County Route 7 & 7A

NYS Dept. of Transportation, Route 32 over the Mohawk River

NYS Thruway Authority, Interchange 23 to Interchange 24 Reconstruction and Widening

Rockland County, NY, CSX River Line over Gurnee Avenue

Sullivan County, NY, County Bridge No. 293 over the Neversink River



John has 18 years of experience in wildlife, vegetation, wetland delineation, ecological inventories, threatened and endangered species surveys, habitat creation, habitat management, wetland mitigation, stream assessment, environmental screenings and environmental permitting. Tasks include identification and natural history of wildlife, vegetation and ecological communities, biodiversity, environmental impact assessment, climate change and environmentally sensitive design.

Education: State University of New York at Cobleskill, NY, B.S. in Wildlife Management, Hudson Valley Community College, NY, A.A.S. in Criminal Justice

Registration & Certification: Certified Wetland Scientist - NH, US Fish & Wildlife Service Recognized Small Whorled Pogonia Surveyor

Memberships & Affiliations:

New York State Wetlands Forum, New York Flora Association, The Wildlife Society

Years with CHA: 18

John Greaves IV, CWS

Environmental & Natural Resources Scientist

SAMPLING OF PROJECT EXPERIENCE

Vermont Agency of Transportation

- Morrisville-Stowe State Airport, Runway 1-19 Final Design
- Morrisville-Stowe State Airport, Runway 1-19 Rehabilitation
- Morrisville-Stowe State Airport, Runway Improvements EA
- Morrisville-Stowe State Airport, Master Plan Update
- Morrisville-Stowe State Airport, Runway 1-19 CA/CI
- Ripley Road over Otter Creek Bridge Replacement
- Ryegate Interstate 91 Culvert Replacement
- Highway Resurfacing Services Program

City of Burlington, VT, Champlain Parkway

Town of Vernon, VT, Huckle Hill Road Culvert Replacement

City of Schenectady, NY, Erie Boulevard Reconstruction and Complete Streets

NYS Dept. of Transportation

- Commercial Vehicle Inspection Facility
- Route 32 over the Mohawk River
- Ithaca Maintenance Facility
- Commercial Vehicle Inspection Facility

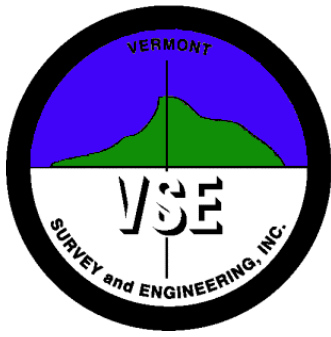
NYS Thruway Authority

- Albany Corridor Needs Assessment and Design
- Interchange 23 to Interchange 24 Reconstruction and Widening
- Slingerlands Bypass Extension

City of Port Jervis, NY, Rehabilitation of East Main Street

City of Rensselaer, NY, Route 20 Bicycle/Pedestrian Transportation Improvements

City of Watertown, NY, State Street Infrastructure & Utility Improvements



VERMONT SURVEY and ENGINEERING, INC.

SURVEYORS and CIVIL ENGINEERS

79 RIVER STREET, SUITE 201 • MONTPELIER, VERMONT 05602
(802) 229-9138 • FAX (802) 229-9130 • E-mail: Info@VermontSurvey.com

Stephen Fraser, LS – Principal/Project Manager
AOT Manager IV

VT LS #527
NH LS #971
NY LS #050855

Number of years with firm: 14

Mr. Fraser has been involved with engineering and surveying since 1971. Before joining Vermont Survey and Engineering, Inc. in 2005, he was employed for twenty-five years by the City of Barre as a mapping and surveying specialist. During this period, his responsibilities included maintaining water, sewer, and surface utility maps; GIS mapping using ArcInfo 8.0.3; project design and deed research; municipal surveying and construction layout; assisting all departments with their mapping needs; assisting the public regarding all aspects of property ownership; and E 911 liaison.

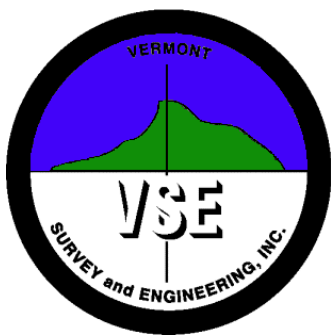
Since joining Vermont Survey, Mr. Fraser has served as Project Manager for survey and right-of-way efforts associated with a twenty-five mile power transmission project in western Vermont, which includes plat preparation and title research on approximately 150 properties. He is also Manager-In-Charge of deed research, property surveys, and plat preparation and is an accomplished AutoCAD operator.

Mr. Fraser has been involved with the following VTrans projects:

Bennington Bypass North NH F 019-1(5)
Bennington AV-FY 15-010
Brandon NH 019-3(496)
Burlington MEGC M 5000(1)
CULV032-CULV033 Statewide
East Montpelier-Marshfield-Plainfield HPRC(1)
Essex-Westford HPRC(2)
Hartford STP 0113(59)S
Hartford STP BIKE(62)
Hartford STP EH09(15)
Hartford STP EH10(18)
Middlebury AIR 04-3181
Morristown STP HES 030-2(28)
South-Hero STP HES 028-1(22)
South Hero STP SHST(1)
Williston STP HES 5500(12)

Professional Affiliations/Education

A.A.S. Civil Engineering Technology (Surveying Major) – VT Technical College
Vermont Society of Land Surveyors
New Hampshire Land Surveyors Association
New York State Association of Professional Land Surveyors



VERMONT SURVEY and ENGINEERING, INC.

SURVEYORS and CIVIL ENGINEERS

79 RIVER STREET, SUITE 201 • MONTPELIER, VERMONT 05602
(802) 229-9138 • FAX (802) 229-9130 • E-mail: Info@VermontSurvey.com

Andrew McQueeney – Principal/Project Manager **AOT Manager IV**

Number of years with firm: 29

Mr. McQueeney has been involved with engineering and surveying since 1985. Before joining Vermont Survey and Engineering, Inc. in 1991, he was employed by McDonald-Sharpe Surveyors and Engineers of Old Saybrook, CT. As CADD Manager, he is responsible for developing AutoCAD, MicroStation and InRoads deliverables as well as overseeing CADD work of others. He has been using AutoCAD software since 1991 and Bentley Systems and Intergraph software since 1998. A Principal of the company since 2009, Mr. McQueeney now coordinates the activities of the field crews and office staff, and acts as Project Manager for the majority of VTrans projects that VSE is involved with.

Mr. McQueeney has been VSE Project Manager for the following VTrans projects:

Structures Projects

Bennington ER BHF 010-1(45)
Bethel BHF 0241(38)
Cavendish ER BRF 0146(13)
Corinth BRO 1447(29)
CULV032-CULV033 Statewide
Fairfield BRO 1448(38)
Hyde Park STP CULV(26)
Lincoln FAS 0188(TH1)
Lunenburg NH CULV(27)
New Haven FAS 0183(TH2)
North Hero-Grand Isle BHF 028-1(26)
Plymouth ER BRS 0149(5)
Rockingham BRF 0126(12)
Ryegate IM CULV(28)
Waterbury IM 089-2(43)
Woodstock BHO 1444(52)

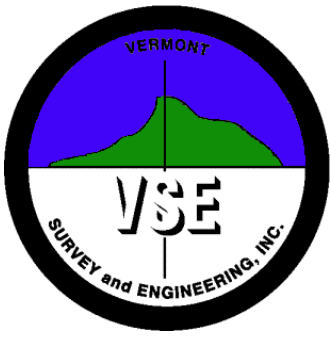
Roadway Projects

Andover-Chester STP 016-1(28) SC
Bakersfield STP SCRP(11)
Brandon-Rochester ER STP 0162(21)
Guilford-Rockingham IM SIGN(44)
Marlboro-Brattleboro NH 010-1(46) SC
Milton IM 089-3(66)
Morristown STP HES 030-2(28)
Randolph-Northfield STP 0187(10) SC
Rutland-Killington NH 020-2(36)
South-Hero STP HES 028-1(22)
St. Johnsbury-Lyndon IM 091-3(50)
Stockbridge-Bethel STP 2910(1)
Waterbury FEGC F 013-4(13)
Williston STP HES 5500(12)
Windsor IM 091-1(64)
Woodstock STP 0241(40)

Professional Affiliations/Education

A.A.S. Surveying and Forestry - Paul Smith's College
Hazardous Waste Operations & Emergency Response OSHA 29 CFR 1920.120

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Jason Riley, LS – CADD Operator/ROW Agent
AOT Technician VI

VT LS #59686

Number of years with firm: 16

Mr. Riley has been involved in the surveying field for the past 14 years. During this time his duties have ranged from Rodman to Party Chief to CADD draftsman. He has experience in highway construction layout, 3-dimensional topographic surveying, boundary survey, and as-built surveys. Mr. Riley's responsibilities have also included deed research and plat preparation, construction quantity calculation, and oversight/training of other draftsmen. A Vermont Licensed Land Surveyor since 2012, Mr. Riley's capabilities and responsibilities continue to grow at VSE.

Mr. Riley has been involved with the following VTrans projects:

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Professional Affiliations/Education

A.A.S. Surveying and Forestry - Paul Smith's College
Vermont Society of Land Surveyors

HARTGEN

THOMAS R. JAMISON, PH.D., RPA

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P +1 802 387 6020

tjamison@hartgen.com

..... archeological associates inc

EDUCATION:

The State University of New York at Albany

Ph.D., Anthropology, 1993

The State University of New York at Albany

Master of Arts, Anthropology, 1986

Hamilton College, Clinton, NY,

Bachelor of Arts, Anthropology, 1980

QUALIFICATIONS:

36 CFR Part 61 Qualified Archeologist

SPECIAL TRAINING:

Best Practices in Working with American Indian Tribes

Workshop on effective consultation and interaction with and what issues to expect when working with American Indian Tribes. Presented by FHWA, sponsored by VAOT, Montpelier, December 2004

Developing a Vermont Archeological Predictive Model Workshop

Workshop on GIS in archeological compliance in Vermont, sponsored by the VAOT, VDHP, Montpelier, February 1999.

NAGPRA's Evolving Legacy Seminar

Training in Native American Graves Protection and Repatriation Act compliance, sponsored by the University of Nevada at Reno, Philadelphia, December 1998.

Section 106

Trained in Section 106 - National Historic Preservation Act, the Advisory Council on Historic Preservation and the University of Vermont at Burlington, April 1997.

PROFESSIONAL EXPERIENCE:

August 1997 - Present Project Manager and Office Director*Hartgen Archeological Associates, Inc.*

Management of branch office in Putney, Vermont. Directs research for cultural resources surveys throughout New England. Coordinates projects with hiring of field crew and completion of fieldwork, laboratory analysis, and reports. Recent contracts have included many VTrans projects for airports, bike paths, bridges, highway reconstruction, park and ride lots and repaving.

June 1994 - August 1997 Project Director*Hartgen Archeological Associates, Inc.*

Directed archeological research for cultural resources surveys throughout New York State and in Vermont and New Jersey. This work included all phases of archeological research from Phase I literature reviews and surveys to Phase III site mitigations. Prepared reports reviewed by NYSOPRHP, NYSDOT, VDHP and FERC. Special tasks included transit survey and CAD mapping. Training in historic preservation law, collections curation and management, and underwater resource protection.



- EDUCATION:**
- The College of William and Mary
Masters of Arts, Historical Archeology, 1994
- State University of New York at Binghamton
Bachelor of Arts, Anthropology, 1983
- EXPERIENCE:**
- 2011 Lebanon Airport Improvements, Lebanon, Grafton County, New Hampshire
Phase I archeological survey Conducted Phase IA research and Phase IB testing for the proposed runway improvement project at Lebanon Airport in Lebanon, New Hampshire.
- 2011-12 Swanzev 15697, Swanzev Factory Road, Swanzev, Cheshire County, NH
Phase II archeological site evaluation Conducted Phase IB and II archeological field investigations on two historic sites (one dating to the early 19th century, and one dating to the mid-18th century) as part of the initial planning process for the construction of a traffic circle.
- 1996-2006 Fort Ticonderoga, Town of Ticonderoga, Essex County, New York
Phase III archeological data recovery Directed intensive archeological data recovery investigation at the 18th-century Fort Ticonderoga site in Ticonderoga, New York. Revealed 18th-century occupation deposits, ground surfaces, middens, masonry walls, an elaborate drainage system, and other structural features that broadened the knowledge of the 1755 Lake Champlain landscape, the original fort configuration, and 18th-century military construction techniques.
- 2014 Middlebury State Airport, Middlebury, VT
Archeological reconnaissance survey Conducted historic research and archeological reconnaissance survey for five archeologically sensitive areas within the airport property.
- 2008 Samuel Harrison House Project, Town of Pittsfield, Berkshire County, MA
Literature/ Archival research Prepared a historical context report for the National Register of Historic Places-listed Reverend Samuel Harrison house and conducted Phase IB excavations to provide the background necessary for a comprehensive interpretation of the site.
- 2004 Rogers Island Cultural Historic Park Management Plan, Fort Edward, Washington County, NY
Cultural landscape studies Prepared a Cultural Resources Management Plan for a proposed Cultural Historic Park at Rogers Island. Recorded the 18th-century military structures on Rogers Island based on historical research and previous archeological excavations on the island.
- EXPERIENCE WITH OTHER FIRMS:**
- 1999 Archeologist, Principal Investigator URS Greiner Woodward-Clyde, Inc.
Supervised archeological investigations, laboratory analysis and report production
- 1998 Archeologist, University of Kansas, U.S. Fish and Wildlife, Museum of Natural History Paris
Survey and excavation of precontact Aleut sites on Attu Island in the Aleutian Island chain
- 1996 Archeologist, Smithsonian Institute, Aleutian Islands, Alaska
Excavation of precontact and contact period Aleut village and midden site located on Agattu Island in the Aleutian Islands.
- 1994 Archeological Faunal Analyst Department of Archeological Research, Colonial Williamsburg
Faunal Analysis of 17th, 18th, and 19th-century assemblages.
- PUBLICATIONS:**
- 2010 Ticonderoga: French Fort Construction on the Eighteenth-Century Frontier. In *Soldiers, Cities, and Landscapes, Papers in Honor of Charles L. Fisher*. Edited by Penelope Ballard Drooker and John P. Hart. New York State Museum.
- 2000 Antietam: The Cultural Impact of Battle on an Agrarian Landscape. In *Archaeological Perspectives on the America Civil War*. Edited by Clarence R. Geier and Stephen R. Potter. University Press of Florida
- 1999 *Battle on an Agrarian Landscape*. URS Greiner, Inc. Draft report. Submitted to National Capital Area National Park Service.

HARTGEN

archeological associates inc

WALTER R. WHEELER

1744 Washington Ave. Ext., Rensselaer, NY 12144

P +1 518 283 0534

wwheeler@hartgen.com

EDUCATION: Rensselaer Polytechnic Institute, **Bachelor of Architecture May 1987**
Bachelor of Science, Building Science, May 1986

QUALIFICATIONS: 36 CFR Part 61 Qualified Architectural Historian

SPECIAL TRAINING: Section 106, **Trained in Section 106 - National Historic Preservation Act; Digital Recording Strategies for Historic Structures Seminar, Brooklyn Polytechnic, Brooklyn, NY, June 2002** Evaluating Significance of Historic and Archeological Resources Workshop, **Vermont College, Montpelier, VT, May 2001**

PROFESSIONAL EXPERIENCE:**June 1999 – Present - Senior Architectural Historian**

Hartgen Archeological Associates, Inc. Oversee and prepare architectural resource surveys, including pre-assessments, literature reviews and historical documentation; field reconnaissance; report and proposal preparation. Responsible for preparing documents to be reviewed by the NYSDOT, NYSOPRHP, VTrans, VDHP, NHDES, USACOE, and other agencies in accordance with SEQR, Section 106, NEPA and other regulations.

November 1992 – June 1999 Architectural History Consultant

Provided consulting services for private and public clients including architectural firms, municipalities, museums and historical societies. Clients included the Metropolitan Museum of Art, the Albany Institute of History and Art, the New York Public Library and John G. Waite Associates. Projects included surveys, historic structure reports, national register listings, and preservation consultations.

PRINCIPAL PUBLICATIONS:

In preparation *Building Albany: Studies in the Vernacular Architecture of the Upper Hudson and Lower Mohawk Valleys*. Albany, NY: SUNY Press.

2010 "Once adorned with quaint Dutch tiles...: A Preliminary Analysis of Delft Tiles Found in Archaeological Contexts and Historical Collections in the Upper Hudson Valley," in Penelope Ballard Drooker and John P. Hart, eds., *Soldiers, Cities and Landscapes: Papers in Honor of Charles L. Fisher*. *New York State Museum Bulletin 513*, 107-150. Albany, NY: New York State Museum.

2009 *Albany Architects*. Diana S. Waite, editor. Albany, NY: Mt Ida Press/ Historic Albany Foundation. Contributed two biographical essays.

2005 *The Encyclopedia of New York State*, Peter Eisenstadt, editor. Syracuse, NY: Syracuse University Press. Author of several architectural entries.

2000 *The Marble House in Second Street: Biography of a Town House and its Occupants, 1825-2000*. Troy, NY: Rensselaer County Historical Society.

1993 *A Neat Plain Modern Style: The Architecture of Philip Hooker and His Contemporaries, 1796-1836*. Amherst, MA: University of Massachusetts Press.