

RESPONSE TO REQUEST FOR QUALIFICATIONS FOR

At-The-Ready Consultant Engineering Services for Municipalities 2023

Design Services

Vermont Agency of Transportation
Municipal Assistance Bureau

February 9, 2023





Stantec has been providing an array of planning, design, engineering, construction inspection, and project management services to VTrans and the municipalities and communities of Vermont for over 65 years.



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A.

COVER LETTER

Burlington Great Streets, Burlington, Vermont



A.

COVER LETTER



Stantec Consulting Services Inc.

193 Tilley Drive, Suite 101
South Burlington, Vermont 05403

February 9, 2023

Nydia Lugo

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

RE: RFQ for At-The-Ready Consultant Engineering Services for Municipalities, Design Services, 2023

Dear Ms. Lugo:

We're active members of the communities we serve. That's why at Stantec, we always design with community in mind. When we take on a project, we see more than a highway, road, bridge, or pond. At Stantec, we look at every challenge as an opportunity to bring communities together. In the face of ever-increasing budget constraints and the need for an expanding range of services, having a trusted team, such as Stantec makes sense for your high priority projects requiring multi-disciplined consultation. Our proposed team, of engineers and environmental scientists is broadly skilled and has extensive experience with the design, project management, and construction inspection services typically required for projects administered through the VTrans Municipal Assistance Section (MAS).

Our staff are recognized regional leaders in transportation and stormwater projects and have worked hand-in-hand with Vermont communities for many years. We have the experience and capacity to provide the highest level of service to our communities for the following reasons:

We Know the VTrans Project Development Process: The results speak for themselves. Our team members have provided design, project management, and construction inspection services for over 40 MAS funded transportation and stormwater projects over the last 10 years. Our team knows what it takes to move a project from concept to 100% design and into construction. It is one reason why Stantec has been repeatedly selected by our existing clients.

We understand Financial Constraints Facing Vermont Municipalities: Vermonters deserve high-quality services delivered in a reasonable amount of time to avoid unnecessary schedule delays and change orders during construction. First-rate work from a firm that is experienced with state and federally funded projects can result in tens or even hundreds of thousands of dollars saved during construction. Our team has a successful record of doing this for Vermont municipalities. It is our primary goal for every project we work on.



Design with community in mind

We Know State and Federal Regulations: We have knowledge of state and federal regulations. Over 95% of the work done by this team is state and federally funded, meaning these projects meet their requirements and follow their processes. Unique requirements typically include NEPA documentation, state and federal permitting and clearances, and Right-of-Way acquisition procedures.

We Are Committed to Vermont: Living and working in Vermont, and having worked with VTrans and many Vermont municipalities for over 65 years, we are passionate about helping our communities. We believe the best way to do this is to provide quality, innovative, and responsive service. That is our commitment.

We emphasize the depth of our in-house resources, our specific knowledge of MAS projects and processes, and our ability to respond both timely and in sufficient detail to sustain progress and maintain the project schedules. We look forward to continuing to contribute our enthusiasm and skills to improve Vermont's infrastructure and environmental footprint. Thank you for your consideration.

Sincerely,

Stantec Consulting Services Inc.

A handwritten signature in blue ink, appearing to read 'Greg Goyette'.

Greg Goyette, PE
Principal, Transportation
(802) 497-6403
Greg.Goyette@stantec.com

A handwritten signature in blue ink, appearing to read 'Israel Maynard'.

Israel Maynard, PE
Associate, Transportation
(802) 497-6415
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B.

GENERAL FIRM INFORMATION

University Place, Burlington, Vermont



GENERAL FIRM INFORMATION

Introduction to Consultant

Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of place and of belonging. That's why at Stantec, we always design with community in mind.

We care about the communities we serve—because they're our communities too. This allows us to assess what's needed and connect our expertise, to appreciate nuances and envision what's never been considered, to bring together diverse perspectives so we can collaborate toward a shared success.

We're designers, engineers, construction inspectors, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe. Projects that we're proud to be a part of and stand behind.

Company Information

Projects will be completed out of our South Burlington, Vermont office as Stantec Consulting Services Inc., a division of the Stantec group of companies.

FIRM NAME

Stantec Consulting Services Inc.

BUSINESS ADDRESS/PHONE/EMAIL

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 South Burlington, Vermont 05403
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 E: Greg.Goyette@stantec.com |
 Israel.Maynard@stantec.com

YEAR FIRM WAS ESTABLISHED/ FORMER FIRM NAMES

Stantec Inc. was formed in 1954 in Canada. Stantec Consulting Services Inc., however, was originally incorporated in 1929 as Manhasset Civil Engineers and was eventually acquired by Stantec Consulting Group Inc. in 2004 (later renamed to Stantec Consulting Services Inc. that year). Stantec Consulting Services Inc. established the South Burlington, Vermont office in 2006 following the acquisition of Dufresne-Henry.

Stantec & Vermont

For 65+ years Vermont municipalities have been, and continue to be, very important clients to our team. We have a strong desire to be involved in our communities and are prepared to commit the necessary resources to help you succeed. Our deep and talented team offers Vermont municipalities the support of our many local staff who have established relationships with various local, regional, and state officials. As local and experienced staff, we can readily provide the closeness, accessibility, responsiveness, project area familiarity, and local contact to streamline the work and provide successful projects on your schedule.

Firm's Capabilities to Perform the Work

Our local team of planning, design, and engineering professionals has decades of first-hand experience in Vermont. The South Burlington office staff will lead these services. When needed, support from other regional offices can be readily solicited. These regional offices have over 2,000 staff members who can handle virtually any assignment. The result of this connected team's resources, knowledge, and experience is an unmatched commitment to meet your project's needs.

Understanding of the Work Required

Through our involvement with the Municipal Assistance Section (MAS) over the last 20+ years and working with VTrans on over 15 retainer type contracts that date back to 1992, Stantec team members understand what it takes to successfully plan, design, and construct projects that receive funding through the MAS program. We have worked with MAS and municipal staff to move over 40 projects into construction over the last 10 years, and are currently working on over 10 projects that are in varying stages of project development.

A successful project is the result of identifying project issues and working together to find solutions. This includes the ability to anticipate issues and methods to expedite the project development process. Stantec team members have done this consistently for MAS projects. They understand that team work with municipal representatives and VTrans are paramount to successfully delivering projects. Our team members have a great understanding of not only how



Fort Ethan Allen Sidewalk, Colchester, Vermont

to find solutions for design and construction challenges, but also of issues that require early coordination such as utility relocations, environmental permitting, and Right-of-Way acquisition. The team members shown on the organization chart include specialists in ROW plan and document development, utility coordination and relocation design, and environmental permitting including stormwater, wetlands, Act 250, and local review. Stormwater permitting is a complex issue in Vermont. Team members are very knowledgeable on how requirements apply to transportation projects. We have helped VTrans and ANR develop the Transportation chapter for the recently released and revised Vermont Stormwater Management Manual and are at the forefront of innovative stormwater practices that help municipalities not only meet their regulatory obligations but also improve water quality for our communities.

Team members are also familiar with the “Municipal Assistance Bureau Local Project Guidebook for Locally Managed Projects”. This document is used by Stantec as a framework for developing a detailed scope of work for each assignment and for helping municipalities navigate requirements associated with state and federally funded projects.

Past experience has also proven that having knowledge of the local area and established local relationships are a great benefit. Having worked in Vermont for over 65 years, our team has these qualities and resources. From our experience with working with the VTrans MAS program, we also understand the value of having a team with a wide range of capabilities, experience, and resources. For instance, when the Town of Waterbury requested graphics

to help the community better understand the upcoming construction of Main Street, Stantec’s graphic artists were available to assist and quickly produce these graphics that were positively received by the community.

Having worked on numerous projects administered through the Municipal Assistance Section, our project team understands the constraints our communities are often working with. Project funding is often based on cost estimates prepared during the scoping phase. This project funding is typically capped and any design and construction costs over the budgeted amount often become the responsibility of the municipality. Our team has had numerous successes working with Vermont communities to move these types of projects into construction and within their allotted budgets.

How to Work with Stantec

The organization chart on page 15 includes Stantec’s personnel that are available to support your projects. If a municipality elects to work with Stantec on their project, they can notify Stantec’s Program Manager, **Greg Goyette**. Greg will then discuss the project with Assignment Managers and assemble the team that has the qualifications and availability to complete the work. The Assignment Manager will then work closely with the appropriate municipal staff to develop a scope of work and fee that fits expectations and budget.

Subconsultants

Vermont Survey & Engineering (VSE) | Survey Services

FIRM NAME

Vermont Survey and Engineering, Inc.

BUSINESS ADDRESS/PHONE/EMAIL

79 River Street, Suite 201
Montpelier, Vermont 05602
P: (802) 229-9138
E: info@vermontsurvey.com

YEAR FIRM WAS ESTABLISHED/ FORMER FIRM NAMES

Vermont Survey and Engineering, Inc. (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 Archaeological Associates | Archaeological/Historical Services

FIRM NAME

Hartgen Archaeological Associates, Inc.

BUSINESS ADDRESS/PHONE/EMAIL

1744 Washington Ave.
Rensselaer, NY 12144
P: (518) 283-0534
E: bvenables@hartgen.com

YEAR FIRM WAS ESTABLISHED/ FORMER FIRM NAMES

Hartgen Archaeological Associates, Inc. (1973)

Hartgen Archaeological 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 archaeological 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 archaeological investigations; National Register eligibility synopses, architectural history; HABS/HAER documentation; historical deed and document research; historical map research; development of archaeological 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. Our experience encompasses the range of projects typically undertaken by VTrans, such as highway, bridge, airport projects. Our 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 archaeologists, 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 their 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). Their diligent staff, their flexible corporate organization and their ability to interact effectively with our clientele, state, and federal agencies ensure that each project proceeds through the review process successfully and that all phases of the project are completed in a timely and efficient manner.



ORGANIZATIONAL CHART

Guilford Welcome Center Resurfacing, Guilford Vermont



Program Manager

Greg Goyette, PE *	802.497.6403	greg.goyette@stantec.com
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Design Services

Assignment Managers

DESIGN SERVICES		
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Lead Engineers

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Subconsultant Support

SURVEY		
Vermont Survey & Engineering, Inc.	802.229.9138	info@vermontsurvey.com

ARCHEOLOGY / HISTORIC		
Hartgen Archeological Associates	518.283.0534	bvenables@hartgen.com

Municipal Project Management Services

Assignment Managers

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Construction Inspection Services

Assignment Managers

CONSTRUCTION INSPECTION SERVICES		
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Construction Inspectors

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Subconsultant Support

MATERIAL TESTING		
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Additional Technical Support / Discipline Leads

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TRAFFIC MANAGEMENT / CONSTRUCTIBILITY		
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BIKE / PEDESTRIAN / COMPLETE STREETS		
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RIGHT-OF-WAY		
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TRAFFIC SAFETY & OPERATIONS		
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GEOTECHNICAL		
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STRUCTURES		
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LIGHTING DESIGN		
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LANDSCAPE DESIGN		
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STORMWATER DESIGN / ANALYSIS		
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HYDRAULICS / CULVERT DESIGN		
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VISUALIZATION / CADD / BIM / 3D MODELING		
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ENVIRONMENTAL (CONTAMINATED SOILS, NEPA, PERMITTING)		
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Kevin Walsh	857.415.3921	kevin.walsh@stantec.com
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UTILITIES (WATER / SEWER, TUNNELING / TRENCHLESS, RELOCATION)		
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RAIL		
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GRANT WRITING		
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* Resume included for key staff in Section F

D.

AVAILABILITY CHART

Mansfield Avenue, Burlington, Vermont



Availability Chart

The following chart details availability of key staff members to devote to municipal projects over the next 6 months and an estimate of how much time each staff member has historically worked on municipal projects. It's important to note that, no matter the firm, staff availability will likely change over the life of the prequalification due to new assignments, staff turnover, promotions, and other factors. Stantec's unique depth, breadth, and quality of design professionals in Vermont uniquely positions us to absorb these changes without sacrificing the quality of design services that our clients have come to expect from us. In addition, we have had a very low turnover rate of key staff over the last 10 years, which leads to our clients receiving quality service on a consistent basis.

6 - Month Outlook

Team Member	Project Role	Estimated Hours Available Over the Next 6 Months	% Time Typically Spent on Municipal Projects
Greg Goyette, PE	Program Manager, Assignment Manager – Design, MPM	300	50%
Greg Edwards, PE	Assignment Manager – Design, MPM, Construction Inspection, Grant Writing	200	20%
Mike Fowler, PE	Assignment Manager – Design, Pavement Design, Rail	1000	30%
Israel Maynard, PE	Assignment Manager – Design, Hydraulics/Culvert Design	500	30%
Marc Foisy, PE	Assignment Manager - Design	300	50%
Erik Alling, PE	Assignment Manager – Design, Bike/Ped/Complete Streets	500	85%
Amanda Ludlow	Assignment Manager – Design, Stormwater Design/Analysis	500	50%
Tom Knight, PE	Assignment Manager - Design, Bridges	500	50%
Thad Luther, PE	Assignment Manager – MPM, Lead Engineer, Traffic Signal Design	300	50%
Rick Bryant, PE	Assignment Manager – MPM	300	50%
John Little, CPESC	Assignment Manager – MPM, Construction Inspection	500	50%
Justin Rabidou	Assignment Manager – MPM	500	50%
Gary Santy, PE	Assignment Manager – MPM	200	50%
Karl Richardson, PE	Lead Engineer	500	50%
Todd Duguay, PE	Lead Engineer, Construction Inspection	500	50%
Dave Youlen, PE	Lead Engineer	500	50%
Glenn Burgmeier, PE	Lead Engineer	500	50%
Chris Gendron, PE	Lead Engineer, Stormwater Design/Analysis	500	70%
Walt Woo, PE	Lead Engineer, Traffic Signal Design	500	40%

6 - Month Outlook - Continued

Team Member	Project Role	Estimated Hours Available Over the Next 6 Months	% Time Typically Spent on Municipal Projects
Jared Grigas, PE	Lead Engineer	500	50%
Caela Peterson	Lead Engineer	500	40%
Sean Neely	Lead Engineer	500	50%
Bernie Gagnon, PE	Construction Inspection, Traffic Management/Constructability	500	50%
Doug Campbell, PE	Construction Inspection, Utilities	500	75%
Deron Barnes	Construction Inspection, Engineer/Technical Support	500	50%
Justin Laperle, EIT	Construction Inspection	500	50%
Rachel Galus	Construction Inspection	500	50%
Andrew McQueeney	Vermont Survey & Engineering	500	50%
Stephen Fraser, LS	Vermont Survey & Engineering	500	50%
Jason Riley	Vermont Survey & Engineering	500	50%
Dr. Brent Venables	Hartgen Archaeological Associates	150	30%
Walter Wheeler	Hartgen Archaeological Associates	100	20%
Alan Brown	S.W. Cole Engineering	550	10%
Scott Harmon	S.W. Cole Engineering	500	10%
Thomas Morgan, PE	S.W. Cole Engineering	500	15%

E.

DESIGN SERVICES

Manchester Roundabout, Manchester, Vermont



DESIGN SERVICES

Qualifications and Experience of Firm

The Stantec team has successfully moved over 20 projects through the VTrans MAS program and into construction over the last 10 years. These projects include shared-use paths, sidewalks, roundabouts, rail crossings, bridges, roadways, streetscapes, traffic signals, and stormwater treatment systems. Most of the projects involved utility relocations, Right-of-Way acquisitions, and environmental permitting and demonstrate the breadth and depth of our local capabilities. All of these projects were completed by closely following the framework provided by the “Municipal Assistance Bureau Local Project Guidebook for Locally Managed Projects”. A listing of these projects, including construction completion year, is below. Project examples either completed through the MAS or relevant to these types of projects are included in the following pages.

- Norwich Tigertown Culvert | 2022
- South Burlington Bartlett Brook Stormwater Treatment System Expansion | In Progress
- Essex Cul-De-Sacs Stormwater Retrofits | 2022
- South Burlington Lindenwood Drive Stormwater Detention Pond | In Progress
- Colchester Prim Road | In Construction
- Essex Phosphorous Control Plan | In Progress
- Essex Pinecrest Drive Sidewalk | 2021
- Hartford Sykes Mountain Avenue Sidewalk | 2022
- South Burlington Dorset Street Signalization Improvements | In Construction
- West Lakeshore Drive Shared-Use Path | 2019
- Lamplite Acres Stormwater Improvements | 2019
- Essex Towers Road Sidewalk | 2019
- Vergennes Gateway Sidewalk | 2018
- Colchester Fort Ethan Allen Sidewalk | 2018
- Essex Route 2A Shared-Use Path | 2015
- Waterbury Roundabout | 2015
- South Burlington US 2/I-89 Exit 14 Widening | 2015
- Waitsfield Village West Sidewalk Project | 2014
- Waitsfield Old County Road Intersection Realignment | 2014
- Waterbury Stowe Street Sidewalk | 2014
- Vergennes Train Depot Relocation | 2013
- Waterbury Farr Road Extension & Bridge Removal | 2013
- Statewide Safe Routes to School Radar Speed Feedback Signs | 2013
- Manchester Roundabouts | 2013
- Dorset Street Shared-Use Path | In ROW
- Moretown Route 100B Sidewalk | In ROW

- Hinesburg Sidewalk Realignment | In progress
- Montpelier Barre Street Shared-Use Path | In progress
- Williston Route 2A Shared-Use Path | In progress
- Jericho Route 15 Sidewalk | In progress
- Springfield Riverwalk Scoping Study | In progress
- East Burke Pedestrian Improvements Scoping Study | In progress
- Burlington Lake Street Shared-Use Path and Rail Crossing | In progress

Knowledge of Federal & State Requirements

Working on state and federal funded transportation projects is primarily what we do. As a result, we are very knowledgeable of current standards and policies. The following is a list of some of the Design Standards Criteria and Guidelines we regularly apply to projects:

- VTrans Municipal Assistance Bureau Local Projects Guidebook for Locally Managed Projects - August 2014 (Revised September 2021)
- VTrans Local Transportation Facilities Guide to the Right-of-Way Phase
- VTrans Local Projects Bid Documents and Appendix
- Vermont Pedestrian and Bicycle Facility Planning and Design Manual
- VTrans Procedure for “Public Interest Funding”
- VTrans Work Zone Safety and Mobility Guidance Document
- VTrans Project Development Process
- VTrans Project Scoping Manual
- 2017 Vermont Stormwater Management Manual Rule and Design Guidance
- VTrans Traffic Signal Installation Policy
- VTrans Road Design Manual
- VTrans Structures Manual
- VTrans Level of Service Policy
- AASHTO Guide for Design of Pavement Structures
- VTrans CADD Policies and Standards
- VTrans Route Survey Manual
- VTrans Hydrologic and Hydraulic Design Guidelines and Criteria
- VTrans Hydraulic Evaluation of Bridges Waiver valuation process
- VTrans Policy on Design Exceptions
- VTrans Guardrail Policy
- Americans with Disabilities Act (Uniform Federal Accessibility Standards)

- NACTO Urban Street Design Guide
- NACTO Urban Bikeway Design Guide
- AASHTO A Policy on Geometric Design of Highways and Streets
- AASHTO Standard Specifications for Highway Bridges
- AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.
- AASHTO Roadside Design Guide
- Highway Capacity Manual (TRB Special Report 209)
- FHWA Uniform Relocation Act Section 23 of CFR
- National Environmental Policy Act of 1969 (NEPA)

One of the most important aspects to assure your project is eligible for FHWA funding is that any acquisitions of Right-of-Way meet the federal Uniform Act regulations. There is a relatively new guide to assist with this. It is the Real Estate Acquisition Guide For Local Public Agencies (2018 Edition). This guide includes the ability to reduce the local match by using Right-of-Way donations by property owners and describes the use of waiver valuations to minimizing costs and time for the Right-of-Way acquisition process. We are very familiar with this process and have utilized these techniques on numerous VTrans and MAS projects to minimize costs and time for the Right-of-Way acquisition process.

Project Examples

Stantec's local experience is a perfect fit for any municipal project from planning to scoping to design. Our team has experience with survey, engineering and permitting on a long list of projects for Vermont communities. Our resume of projects includes designs that involve stormwater treatment and management, ROW plan and document development, utility relocations, traffic management during construction, categorical exclusion documentation, floodplain permitting, historic/archaeological resource assessments, and construction bid documents following the Municipal Assistance Section template to name a few. Our team understands federal and state requirements that need to be followed for MAS funded projects. Team members have experience with requirements such as acquiring temporary and permanent easements in accordance with the Uniform Act, applying VTrans Roadway and Structural Engineering Instructions to projects that fall within the State Highway System, and developing traffic management plans using the VTrans Work Zone Safety and Mobility Guidance Document. We recently applied the Work Zone Safety and Mobility Guidance Document to develop a traffic management plan for the construction of a new roundabout and interstate bridges in Waterbury, Vermont. The result was a traffic management plan that has resulted in minimal disruption to the traveling public and the community during construction of these major infrastructure projects.

Roadway Reconstruction & Rehabilitation



↑ WATERBURY MAIN STREET RECONSTRUCTION , WATERBURY, VERMONT

Waterbury's Main Street was crumbling, and the water and sewer infrastructure had aged to the point of being unreliable. Both needed repair so VTrans turned to Stantec to help the community. Stantec provided preliminary and final engineering services, as well as Right-of-Way plan development for the reconstruction of this one mile of roadway in the historic village of Waterbury. Enhancing the Vermont village feel of the business district while being responsive to community concerns and minimizing impacts on day-to-day life, was a challenge that required a highly skilled team. Stantec carefully considered these challenges and developed a project that met the community's long-term needs, minimized risk to VTrans and the contractor, and could be built with minimal disruption to all involved.

The location of the new water and sewer mains were thoughtfully sited so that the existing mains could remain active while the new mains were constructed. The design also maintained minimum separation distances required by regulation with minimal disruption to traffic mobility through the Village. By carefully considering the location of the new water and sewer infrastructure, Stantec's efforts allowed the contractor to methodically construct the project in segments with enough room to maneuver their equipment safely. The design considered work zone safety not only for the community and traveling public but also for the workers. To keep the community informed throughout the project, Stantec developed visualizations in the form of maps, photo simulations, and storyboards. These visualizations greatly supported the Town's and VTrans' public relations efforts during construction.

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BURLINGTON SOUTH WINOOSKI AVENUE REHABILITATION, BURLINGTON, VERMONT

Creating safer complete streets and more livable spaces has long been a mission for the City of Burlington. Routinely this has been commonly accomplished by integrating more pedestrian and bicycle facilities along existing street corridors. Their South Winooski Avenue corridor was a four-lane arterial focused on moving traffic at higher speeds. It provided little traffic calming and no dedicated bicycle facility and was a prime candidate to transform a roadway focused on moving vehicles to a major north-south bicycle corridor.

This was readily accomplished within the existing roadway width by reconfiguring this arterial roadway from a four-lane undivided highway to a three-lane section with two through lanes, a center, two-way left-turn lanes, and two bicycle lanes. This reconfiguration, known as a "Road Diet," was a low-cost improvement since it involved simply adjusting the pavement markings and signage along this ½-mile corridor. The proven benefits of a Road Diet include crash reductions, reduced vehicle speeds, and a safer operation for all users.

Working closely with the City of Burlington, Stantec developed the contract plans, details, specifications, and estimates, for implementing the complete street concept. We utilized the City's Quick Build Guidelines and included features such as buffered bike lanes with protecting delineators, crossbike markings at drives and side streets, a bike box and two-stage left-turn queue box at a major intersection, curbside bus stop markings, and painted curb extensions with removable planters and barriers. To provide bike lanes on each side of the road, on-street parking was reduced to one side on one block, and another converted to one-way traffic. Our design considered the impact on turning vehicles and adjusted the pavement markings to accommodate turning transit busses without encroachment on adjacent lanes.

Pedestrians now have fewer traffic lanes to cross, bicycles have dedicated two-way facilities often buffered from traffic, and turning vehicles have fewer conflicts with one-lane to cross. The result was a project accomplished in a 4-month timeframe from start of design to installation.

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UNIVERSITY PLACE, BURLINGTON, VERMONT

University Place is the heart of the University of Vermont's (UVM) historic core which includes some of its most iconic buildings and open spaces, including University Row and the University Historic Green. This area is oriented towards academic and administrative uses, and is also UVM's primary interface with visitors and the local community. It forms a signature image of the University which helps UVM continue to attract top students and faculty. However, University Place has great potential to create a better sense of place and contribute to UVM's and the City of Burlington's commitment of becoming more walkable and bikeable.

The City and UVM turned to Stantec to help tap into this potential. Rather than focusing solely on accommodating vehicles—be they cars, bicycles, or buses—the team instead focused on the people who rely on this street to conduct their daily lives. We considered how people engaged with the surroundings, accessed the multiple destinations of campus, and interacted with other people essential to campus operations, recreation, and vitality. We accomplished this by conducting a series of online surveys. The online surveys allowed us to connect with more stakeholders. It was more accessible than a traditional in-person meeting and allowed people to think about the project on their own timeline. We received over 500 responses and many of them were very insightful into existing issues for the design team to consider.

Stantec then completed planning, design, and engineering for converting University Place into a semi-shared street. The street was narrowed and converted to one-way for motor vehicles. Buffered-bike lanes and pull-off area for food trucks/unloading were added. Pedestrian pathways adjacent to the road were widened and made accessible, and a curbless plaza was incorporated at the main pedestrian desire line. Water mains over 100 years old under the roadway were relined. Construction was substantially completed in December 2022.

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MILTON TOWN HIGHWAY RESURFACING, MILTON, VERMONT

The Town of Milton turned to Stantec to assist them with making paving improvements to the following roads: Ellison Street, Upper and Lower Lamoille Terrace, Arrowhead Ave., Brandy Lane, Haydenberry Drive, Whisper Lane, Duck Court, Winter Lane, Andrea Lane, a one-mile portion of Westford Road, and Mears Road. These roads connect various communities within the Town and its central district and school system.

Stantec performed a site visit to better understand the varying need of repairs on these roads. We then developed plans, details, quantity calculations and a construction cost estimate for the Town's review, followed by finalizing these documents in preparation for bidding. The Town anticipates advertising for the construction of this project in early 2023, and Stantec will provide Construction Oversight Services during construction.

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Bicycle & Pedestrian Infrastructure



↑ WEST LAKESHORE DRIVE SHARED USE PATH, COLCHESTER, VERMONT

The Town of Colchester has long recognized the value of developing a network of pedestrian and bicycle facilities to complement their transportation and recreation system. Over the years they have developed more than 5 miles of shared-use paths to promote active transportation and link their various neighborhoods to surrounding communities. The result has been strong support to expand their well-used shared use system and fill-in important links. One of the needed links was a 4,400-foot section along West Lakeshore Drive between Church Road and Prim Road.

Initially, we worked with Town staff to develop and evaluate alternatives, complete a public outreach process and gain concurrence on a preferred alternative – a 10-foot wide asphalt shared-use path along the south side of West Lake Shore Drive. We then completed the design plans, permit applications, and Right-of-Way plans and coordinated utility relocations. Some of the greatest constraints on the design were the proximity of residences to West Lakeshore Drive, the existing landscaping in their front yards, and the limited existing highway Right-of-Way width. A 10-foot shared-use path required the path be within 45 feet of residences and required obtaining permanent rights from more than 20 property owners. While our design avoided or minimized impacts, the project did include mitigation measures such as replacement landscaping.

Project features also included the construction of a grass channel for stormwater treatment, a new closed drainage system, utility relocation, driveway reconstruction, and landscaping.

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VERMONT ROUTE 15 SHARED-USE PATH, COLCHESTER & ESSEX, VERMONT

Stantec provided preliminary and final engineering plans for a 1.5 miles of shared-use path along VT Route 15 – a busy four-lane highway that serves a college campus, a medical center, student housing, and businesses, and is an important regional connection between Winooski and Essex Junction.

Stantec's design takes advantage of existing green spaces to treat stormwater runoff through disconnection or infiltration into the surrounding soils. The stormwater design minimized the need to pay for additional land acquisition, and will be easy to maintain by Town staff without the need to purchase additional equipment. Project construction was completed in 2022.

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↑ BURLINGTON MANSFIELD AVENUE SHARED-USE PATH AND TRAFFIC CALMING, VERMONT

The City of Burlington has long recognized the value of developing a network of pedestrian and bicycle facilities to complement their transportation and recreation system. Over the years they have enhanced their network with on and off-road facilities to promote active transportation and link their various neighborhoods to surrounding communities. The result has been strong support to expand an existing 1600-foot-long sidewalk along Mansfield Avenue to a full 10-foot-wide side path. Additionally, curb extensions and raised crosswalks were installed as traffic calming measures for the roadway.

Initially, we worked with City staff to develop and evaluate alternatives, complete a public outreach process and gain concurrence on a preferred alternative. The preferred alternatives a 10-foot wide asphalt shared-use path along the existing sidewalk alignment on the east side of Mansfield Avenue with curb extensions at Loomis Street and raised crosswalks across Mansfield Avenue placed at strategic locations to encourage the design speed of 25 mph. We then completed the design plans and permit applications. Some of the greatest constraints on the design were the proximity of existing street trees along Mansfield Avenue and an existing stormwater treatment facility immediately adjacent to the roadway that was to remain in-place after construction. The final design allowed for all trees and the stormwater treatment facility to remain.

Project features also included the construction of a grass channel for stormwater management, improvements to the existing closed drainage system, driveway reconstruction, and landscaping. Construction was completed in 2022.

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Rail Trails

↓ QUEQUECHAN RIVER RAIL TRAIL, FALL RIVER, MASSACHUSETTS

The City of Fall River has been working towards its goal of converting a former railroad corridor along the Quequechan River into a shared-use trail for bikes and pedestrians. Phase 1 of the Quequechan River Rail Trail was constructed in 2008. Stantec completed design of Phases 2 and 3 of the project. The total length of Phases 2 and 3 is approximately 8,300 linear feet including the spur trail. The trail consists of a 10-foot wide paved surface with 2 to 3 foot soft surface shoulders.

The six timber trestle bridges along the corridor were replaced with timber boardwalks due to the advanced deterioration of the structural elements. The boardwalks were designed for vehicular access for both maintenance and emergency vehicles. Helical pile foundations were selected due to the difficulty in accessing the site with heavy equipment to construct wooden piles and because of the environmental constraints/impacts driving wooden piles would cause. Seven boardwalks totaling 1,260 feet were included in this project.

Other enhancements included site furnishings, informational and directional signage, and landscaping. The trail had been designed to minimize impacts to adjacent environmental resource areas. Environmental approvals required for this project include an Environmental Notification Form under the Massachusetts Environmental Policy Act (MEPA), Water Dependent Chapter 91 License with the Massachusetts Department of Environmental Protection, and Notice of Intent/Order of Conditions with the Fall River Conservation Commission.

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↑ NORTHERN STRAND RAIL TRAIL, SAUGUS, MASSACHUSETTS

Sweeping through five communities—Saugus, Malden, Revere, Everett and Lynn—the Northern Strand Community Trail stands as a key recreational fixture in these neighborhoods. Stantec provided complete design and construction phase services along the final route for this 9-mile trail. We evaluated wetlands, flood prone areas, utilities, land uses, property ownership, user safety, and construction costs of alternative alignments. Our team met with area residents and abutters to achieve consensus and develop a facility responsive to peoples’ needs. Among design issues were various aspects of stormwater management including maintaining existing swales and drainage patterns, allowing rainwater to percolate into the soil, avoiding point source discharges, and meeting Stormwater Management Guidelines.

“The money being committed to create the Northern Strand Community Trail is money well spent,” said Transportation Secretary and CEO Stephanie Pollack. “This ten-mile corridor will be a pathway connecting neighborhoods, linking residents to business districts and, in general, improving the quality of life for people in several communities.”

With several at-grade crossings, user safety remained a top priority with signs, pavement markings, access gates, removable bollards and flashing warning beacons to define the interaction at road crossings and ensure ample trail visibility for motor vehicles. Signage and pavement markings were important in defining access points, trail destinations, and rest areas. The railroad structures along the route were retained and relocated along the trail to preserve a sense of history.

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↑ CAPE COD RAIL TRAIL, DENNIS-WELFLEET, MASSACHUSETTS

Stantec has a long relationship with the Massachusetts Department of Conservation and Recreation (DCR) and the Cape Cod Rail Trail (CCRT). It started with the design of two bridges over US Route 6 in Orleans and Harwich to connect missing sections of the trail. It continued with the reconstruction of the entire 22-mile trail with overlooks, safety improvements, signals, parking lots and amenities. To keep the trail open during the busy tourist seasons, we constructed half of the trail at a time to keep 11 miles available for the public. Frommer’s Travel Guide named the CCRT one of the top ten family friendly biking vacations in the country!

We are currently the designers of the extension of the CCRT north through the town of Wellfleet. This section of the trail extension starts at the existing trailhead at LeCount Hollow Road in south Wellfleet and runs north approximately two miles, ending at a new trailhead at Route 6, just south of Wellfleet Center. In addition to extending the trail and bringing it closer to the commercial center of Wellfleet, the additional trailhead was anticipated to ease the demand at the LeCount Hollow trailhead, where parking demand often exceeds parking capacity. This section of the trail is particularly environmentally sensitive.

Environmental permitting requirements are being coordinated throughout design and consist of filing a Notice of Intent with the Wellfleet Conservation Commission, an Environmental Notification Form with the EEA and MEPA, and coordination with the MassWildlife’s Natural Heritage & Endangered Species Program.

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Intersections & Safety



↑ WATERBURY ROUNDABOUT, WATERBURY, VERMONT

Putting the needs of the community and our client front and center, we tackled the traffic and safety issues at this existing unsignalized “T” intersection by designing a new roundabout with a number of features requested by the residents and business owners. The US Route 2 and VT Route 100 intersection, built in 1960, was experiencing increasing traffic with over 12,000 vehicles per day and 600-foot queues during peak travel hours. Further, while Route 2 is a village road with children and residents making up a large pedestrian component, Route 100 has higher speeds and large trucks heading to Green Mountain Coffee Roasters and affecting pedestrian safety.

Managing the traffic flow and providing a safer pedestrian environment were major goals of the town, as well as creating a northern gateway for Waterbury. We provided preliminary and final design services, permit coordination, and construction related engineering to meet our client’s goals. This was not without challenges. Among the most complex was the need to provide access to businesses adjacent to the roundabout during construction. To address this, we built into the construction documents the requirement for the contractor to place signs guiding drivers to parking lots for the businesses, to provide parking attendants to help drivers find spaces, and to station flaggers at business driveways to allow traffic flow.

The roundabout operation resulted in drivers having to slow down, and splitter islands in the middle of the roads provided shorter crossings, increasing pedestrian safety. We designed an ADA compliant path to the town Recreation Center, a major destination. Landscaping, lighting, and patterned concrete give the roundabout an aesthetic significance worthy of a gateway into town. We also provided stormwater management, utility coordination and updates, and traffic control during construction.

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DORSET STREET SIGNALIZATION IMPROVEMENTS, VERMONT

Dorset Street in South Burlington is a major thoroughfare for the many of the City’s existing retail, commercial, hospitality, and restaurant locations. The recent development of Market and Garden Streets has increased demand on the 9 signals between US Route 2 and Kennedy Drive/I-189. The project is significant to the city and the poor existing signal timings were a source of many complaints from the roadways users. Additionally, several of the intersections were missing key pedestrian safety components which this project was able to address.

We were responsible for bringing all 9 intersections up to current standards including the ability to coordinate and add Signal Performance Measures which eased congestion. Elements of the design included intersection layout, traffic capacity analysis, and pedestrian equipment and ramp improvements. New traffic signal phasing and timing schemes are expected to be a future design for the project’s team.

Project constraints included coordination with 2 other overlapping projects and impacts to State and Federal highways. These were overcome by effective communication during design.

CONTACT

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VT 116/NORTH STREET/SOUTH STREET IMPROVEMENTS, BRISTOL, VERMONT

Stantec provided final design services for the improvements to the VT116/North Street/South Street intersection in the center of Bristol, Vermont. This intersection was identified as a high-crash location, and was ranked #66 statewide with 20 crashes over five years. The existing signal equipment was also outdated and in need of replacement.

Stantec worked with the Town and VTrans to design a actuated traffic signal system, improved intersection geometry with bulb-outs, decorative intersection street lighting and landscaping. This project was coordinated with the existing streetscape on Main Street and also with concurrent design for a public park adjacent to the intersection. The project improved safety for motorists, pedestrians and bicyclists and enhanced the aesthetics of downtown Bristol. Construction was completed in the summer of 2015.

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Replacement, Rehabilitation or Maintenance of Bridges & Culverts

REPLACEMENT OF CULVERT #24 AND #25 ON TIGERTOWN ROAD, NORWICH, VERMONT

We provided design, permitting and construction services for the replacement of two culverts on Tigertown Road in Norwich, Vermont. The first location replaced the existing corrugated metal pipe with a 10'x6' precast concrete box culvert, the second location replaced the existing corrugated metal arch with a 13'x6' precast concrete box culvert. Both locations were embedded to create a natural stream bottom for aquatic organism passage. Both locations also featured flared wingwalls and cutoff walls to protect from scour. Roadway closures with temporary detours were utilized to control traffic during construction. Both locations were completed within the 5-day windows allotted.

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OAK CREEK VILLAGE CULVERT REPLACEMENT, SOUTH BURLINGTON, VERMONT

The City of South Burlington hired Stantec to design, permit and provide construction assistance for two large box culverts in the Oak Creek Village Neighborhood where there has been a long history of flooding issues. Avoiding and relocating several utilities added to the complexity of this project. Stantec optimized the box culvert size to provide sufficient hydraulic opening and aquatic organism passage. The project was funded through the VTrans Municipal Assistance Bureau. Stantec developed plans and contract documents in accordance with VTrans MAS requirements and designed the project to eliminate Right-of-Way impacts. This approach along with Stantec's experience had the benefit of accelerating the project schedule. Both culverts have been constructed within the budget available to the City.

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REPAIRS AND MAINTENANCE CHARLOTTE BRIDGE 31 DORSET STREET OVER THE LAPLATTE RIVER, CHAROLETTE, VERMONT

The Town of Charlotte had a problem- one of their bridges had a severe load restriction due to a deteriorated pier. The pier needed to be fixed before winter so Town's snow plows could maintain the roads for winter travel. Stantec led the design and permitting process, which included strengthening of the pier and resource identification and permitting. They discovered that the anticipated repair work was likely to disturb a threatened and endangered fish (stonecat/ channel darter) fish which resides in the Laplatte River. Stantec worked with the permitting agencies to develop a strategy for protecting the fish while making the repairs to the pier. Stantec helped the town obtain the Threatened and Endangered Species permit to conduct the work. In this case, Stantec's team of wildlife biologist performed the preconstruction electrofishing survey and relocation of the fish in the vicinity of construction. The project was successfully completed before winter set in.

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Stormwater

BARTLETT BROOK STORMWATER TREATMENT SYSTEM EXPANSION, SOUTH BURLINGTON, VERMONT

The existing wetland treatment area will be expanded to treat an additional 9.34 acres of impervious surface to aid in compliance with the Bartlett Brook Flow Restoration Plan. The expanded system will not only meet the flow mitigation required by the flow restoration plan but will also provide water quality treatment for the impervious surfaces routed to the system. The project includes combining the closed drainage system along Harbor View Road with the closed drainage system along U.S. Route 7 to route the flow to the expanded system. Stantec is providing engineering, permitting and Right-of-Way services for the project.

CONTACT

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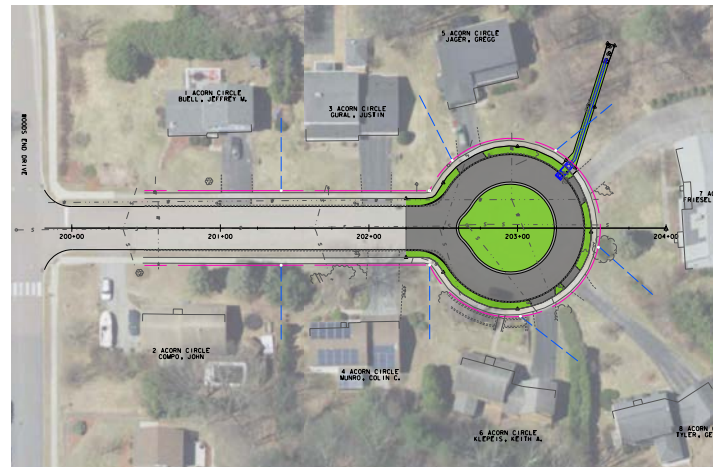
↑ LAMPLITE ACRES GREEN STREETS IMPROVEMENTS, WILLISTON, VERMONT

The Lamplite Acres development in Williston, Vermont was constructed in the 1960s with no storm sewer system or ditching along the roads. The sandy soils within the development allowed storm runoff to infiltrate for much of the year; however, flooding on the roads was common when the ground was frozen, during the spring melt and large rain events creating headaches for residents of the neighborhood. Stantec worked with a local steering committee to evaluate numerous alternatives and make recommendations for mitigating existing stormwater issues through low-impact development and green infrastructure improvements. Alternatives considered included roadside infiltration trenches, rain gardens, stormwater curb extensions, and pervious pavements. The recommended improvements consisted of a combination system of roadside rain gardens with a secondary underground infiltration system to handle larger storm events. Stantec prepared cost estimates and care/maintenance recommendations for the improvements. The recommended improvements were unanimously accepted by the Town.

The Town constructed improvements for one area of the neighborhood as a pilot project with their own forces using engineering plans developed by Stantec. The pilot project succeeded, and as a result, the Town pursued and received VTrans Transportation Alternatives Grant funding to construct the remaining improvements in the neighborhood. The remaining improvements, designed by Stantec, were constructed by the Town in 2019.

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↑ ESSEX CUL-DE-SAC STORMWATER IMPROVEMENTS (TA), ESSEX, VERMONT

To help the Town with meeting the requirements of the Lake Champlain Phosphorus Total Maximum Daily Load (TMDL), Stantec designed stormwater retrofits for three cul-de-sacs. The project consisted of three sites Acorn Circle, Sage Circle and Oakwood Lane. For each site the cul-de-sacs were redesigned to remove unnecessary pavement from the center and added stormwater treatment. At Sage Circle the soils were appropriate for infiltration and a sub-surface infiltration field was constructed in the center. Acorn Circle and Oakwood Lane were not suitable for infiltration so were designed as sub-surface media filters. The media in the filters were amended with water treatment residuals to increase the amount of phosphorus removal. Construction was completed in 2022 and all three sites will be monitored for performance over the coming years.

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Key Personnel

Stantec has a resource pool of highly talented and skilled people who have much to offer. We strongly believe that the assignment of a small core group where decisions are made, clearly understood, and carried out, is a key element to quality service. For this reason, we have identified a group of design services Project Managers that would take the lead on an assignment depending on expertise, relationships, workload, and client needs. These Project Managers were selected based on their experience working with Vermont municipalities.

Our Project Managers have the luxury of working with a deep bench of engineering technical support staff as identified in the organizational chart from Section C. The Project Manager would select a Project Engineer from the support staff available, and these two team members would collaborate through the development process to work with the client, make decisions, and successfully deliver the project. This

team would pull in other technical support staff as necessary to address challenges that require skills outside of the range of the Project Manager/Project Engineer team.

As shown in the organizational chart, our Project Managers and Engineers have expertise in many specialty services often required for a VTrans MAS funded project. Specialties include highways, bicycle/pedestrian facilities, complete streets/urban design, traffic signals, roundabouts, street lighting, stormwater systems, bridges, culverts, utility relocations, water and wastewater systems, Right-of-Way plan and document development, traffic management, constructability review, and park-and-rides. Stantec team members available for these assignments are primarily Vermonters based out of our South Burlington office. The following is a brief description of each key staff member and their role along with a listing of relevant MAS experience.



VTrans - Waterbury Main Street Reconstruction, Waterbury, Vermont

Assignment Managers

GREGORY GOYETTE, PE | PROGRAM MANAGER, ASSIGNMENT MANAGER: Greg will be the point person for municipalities to call upon as new assignments come up. If called, Greg will identify a Project Manager/Project Engineer team for each assignment, and work with them to develop a suitable scope and fee. He will also be available to serve as Project Manager depending on project needs and current workload. Greg has worked with the Municipal Assistance Section for the last 21 years, and has familiarity with many of the current project supervisors. His technical experience and proven managerial skills make him a great fit for this role.

GREG EDWARDS, PE | ASSIGNMENT MANAGER: Greg has over 35 years of engineering experience, with a focus on highway and traffic engineering. Over these years, he has been involved with hundreds of transportation projects with over 50 in Vermont alone. His experience includes the planning, scoping, permitting, design, and construction of a wide range of transportation projects from the Bennington Bypass new construction to the reconstruction of Church and St. Paul Street in Burlington. Through this experience, he is very familiar with the VTrans project development process, specifications, and methods to expedite the process while meeting VTrans procedures, standards and specifications.

MIKE FOWLER, PE | ASSIGNMENT MANAGER: Mike is a Senior Project Manager and is responsible for managing projects and the preparation of preliminary, final and contract design plans for various transportation projects. This work includes field reviews, developing horizontal and vertical alignments, structural pavement design, drainage design, quantity computations and cost estimating. Spending nearly three decades at the Vermont Agency of Transportation (VTrans), Mike has engineered hundreds of highway infrastructure assets to improve mobility and connectivity for communities throughout the Green Mountain State.

ISRAEL MAYNARD, PE | ASSIGNMENT MANAGER: Israel has worked as a Project Engineer for the last 16 years on numerous Roadway, Bridge, Resurfacing, Park-and-Ride and shared use path projects. He has utilized his proficiency in Highway and Stormwater design to produce high quality designs in conformance with VTrans standards that meet regulatory obligations.

MARC FOISY, PE | ASSIGNMENT MANAGER: Marc has 30 years of experience in Transportation Design. He is responsible for managing projects and the preparation of preliminary, final and contract design plans for various transportation projects. This work includes field reviews, design layout, drainage design, quantity computations and estimating. Marc also has extensive experience and formal training with CADD software including MicroStation and InRoads.

ERIK ALLING, PE | ASSIGNMENT MANAGER: Erik has worked as a Project Engineer for the last 10 years on numerous path, sidewalk, and complete street projects funded through the MAS. He has a thorough knowledge of VTrans Standard Construction Specifications and developing project manuals including Special Provisions using the MAS template. He has utilized his proficiency in CAD platforms to produce high quality buildable plans that are in conformance with VTrans CADD Standards.

AMANDA LUDLOW | ASSIGNMENT MANAGER: Amanda is a Principal in Stantec's South Burlington, Vermont office. Specializing in green infrastructure practices and sustainable stormwater management design, she has more than 20 years of environmental consulting experience. Amanda has spent her career focusing on the development of innovative sustainable solutions to solve environmental problems including constructed treatment wetlands, phytoremediation, natural media filtration, green infrastructure, green and sustainable remediation, and life cycle analysis. She has applied these alternatives to a diverse range of impacted environments including groundwater and surface water contamination, stormwater

runoff, landfill leachate, contaminated soils and sediments, and industrial/municipal wastewaters. Additionally, Amanda has extensive experience in the assessment, investigation and restoration of sensitive habitats from freshwater wetlands and tidal wetlands to riparian ecosystems—including sustainable shoreline stabilization design—on grassland and woodland habitats.

TOM KNIGHT, PE | RAIL, SAFETY: Tom has 24 years of structural design experience with Stantec. His structural experience includes various aspects of structural bridge design, rating, rehabilitation, inspection and construction administration for both highway and railroad structures throughout New England. Tom's structural design experience is complimented by his experience in the analysis and assessment of the structures for scour and hydraulic considerations. Tom's approach to bridge improvements includes considering traffic impacts, environmental/stream impacts, and adjacent property impacts. With a thorough understanding of the design and regulatory process, he strives to offer solutions that are cost effective, quick to construct, while minimizing impacts to resources.

Design Support Staff

KARL RICHARDSON, PE | LEAD ENGINEER:

For the last 14 years, Karl has worked on numerous roadway and sidewalk projects funded through the MAS. Karl is well versed in the MAS process for the development of construction plans, estimates, specifications and project manuals. Karl was the lead engineer for complex MAS complete street projects in South Burlington on US Route 2 and the Waterbury roundabout.

TODD DUGUAY, PE | LEAD ENGINEER, CONSTRUCTION INSPECTION:

Since beginning his career in 2003, Todd has designed roadways and interchanges, stormwater management and drainage systems. As a Transportation Engineer, he is responsible for the preparation of preliminary, final and contract design plans and documents for various transportation projects. This work includes field reviews, design layout, drainage design, quantity computations, estimating and specifications. Todd has extensive experience and formal training with CADD software including MicroStation and InRoads.

DAVE YOULEN, PE | LEAD ENGINEER:

Dave is a Professional Engineer and has over 20 years of experience with an emphasis on traffic management, quality control and quality assurance, construction administration and inspection. His technical background includes highway and bridge design, utility and signal design, traffic management plans, and construction. With his construction experience, he plays an important role in the quality of constructability review of projects. Prior to joining Stantec, Dave worked for the State of New Hampshire Department of Transportation as a Civil Engineer in the Bureau of Construction. His responsibilities have included resident inspection; daily reporting; shop drawing processing and

review; change orders; payment requests; project closeouts; claims resolutions; and coordination between owner, contractor, and designer.

GLENN BURGMEIER, PE | LEAD ENGINEER:

Glenn has worked as a Project Engineer for the last seven years on multiple long roadway rehabilitation projects and several park-and-ride facilities constructed by state and/or federal funding. He has knowledge of state and federal roadway design standards for roadway and parking facility geometry, signage and pavement markings, and safety measures. He has used his knowledge of lighting design standards and software to help develop multiple park-and-ride lighting layouts as well as isolated roadway lighting augmentation. He has applied his aptitude in CADD, roadway modeling, and programming to generate project documents in accordance with federal guidelines and VTrans standards with a high degree of accuracy and quality.

THAD LUTHER, PE | LEAD ENGINEER:

Thad has served as a Project Engineer and manager for various transportation-related projects for over 24 years. His current focus is on integrating Bentley OpenRoads Designer (ORD) into Stantec's workflow for transportation project designs. Thad is also on the Vermont Agency of Transportation (VTrans) ORD workspace development team. VTrans retained Stantec to complete a "functional" ORD workspace. This functional workspace is being used across Vermont by VTrans and their consultants on all new design projects. Thad's roadway experience in traffic engineering, signal design, highway geometrics, site work, and aviation services allows him to creatively apply OpenRoads technology to varied aspects of the design process. His roadway experience includes updating existing intersections, the final design of limited access facilities, award-winning rural highway upgrades, and the completion of planning studies for future roadway expansions. His experience includes neighborhood enhancement projects that utilize context-sensitive design to satisfy multiple stakeholders.

CHRIS GENDRON, PE | LEAD ENGINEER:

Chris has worked as a Project Engineer for the last 12 years on numerous stormwater, roadway, path and sidewalk projects funded through the MAS. He specializes in stormwater design and analysis. He has a thorough understanding of Vermont permitting requirements. He consistently works with utility companies on utility relocations. He is an expert user of Inroads and Microstation. He has produced high quality buildable plans that are in conformance with VTrans CADD Standards.

CAELA PETERSON | LEAD ENGINEER:

Caela has over 6 years of experience working on engineering projects in Maine and Vermont, including over three years of roadway reconstruction inspection. She has served as Lead Designer on multiple state highway resurfacing and reconstruction projects. These have included upgrading all crosswalks to meet ADA and PROWAG requirements. Her responsibilities have included plan design and review, quantity calculation and review, financial estimates and review, and assembling special provision documents. Caela is a resident of St. Albans and a member of the Vermont chapter of Women’s Transportation Seminar (WTS) and the Burlington Young Professionals in Transportation.

SEAN NEELY | LEAD ENGINEER:

Sean provides planning, analysis, design, CADD, and GIS support on a range of transportation projects, including bicycle and pedestrian facilities, Complete Streets, urban design, and traffic management. Sean recently completed a master’s degree at the University of Vermont (UVM) in civil engineering for transportation, and a certificate of graduate studies in sustainable transportation systems and planning. He worked as a research assistant at the UVM Transportation Research Center (TRC) both before and during graduate school. Prior to working at the TRC, Sean practiced consulting for planning and engineering projects across the country. He holds a bachelor’s degree from the University of Southern Maine in environmental science and policy, with a focus in community planning and geographic information systems (GIS).

WALT WOO, PE, PTOE | LEAD ENGINEER:

Walt has extensive practical experience as a Transportation Engineer, having participated in the analysis and design of dozens of signalized intersections on municipal and state roadways. He also possesses strong skills and experience in other aspects of transportation engineering, including traffic signing, pavement markings, traffic management and highway design. He also has extensive experience in traffic capacity analysis and traffic simulation modeling and has prepared numerous transportation planning studies that evaluated future traffic operations based upon anticipated future land use and travel patterns, among many factors.

Other Support Staff

In addition to the above team members, Stantec has extensive technical support staff and equipment that are provided and utilized on an as-needed basis. Within the region, we offer a complete range of surveying, CADD design, and project management staff, all of whom will be called upon, as required, to satisfactorily complete those components of the project.



F.

RESUMES

University Place, Burlington, Vermont



F.

RESUMES

Key Staff Resumes

On the following pages we've included resumes for our key staff and our subconsultants key staff. Our local team of transportation planning, design, and engineering professionals has decades of first-hand experience in Vermont with design, project management and construction inspection services. Our South Burlington office staff will lead these services and when needed, support from other regional offices can be readily solicited. These regional offices have over 2,000 staff members, many with transportation engineering and traffic management expertise, and environmental specialists who can handle virtually any assignment. The result of this connected team's resources, knowledge, and experience is an unmatched commitment to meet your project's needs.



Greg Goyette, PE

**Program Manager,
Assignment Manager**

YEARS WITH STANTEC

21

EDUCATION

Master of Science, Civil Engineering, Clarkson University, Potsdam, New York

Bachelor of Science, Civil Engineering, Clarkson University, Potsdam, New York

REGISTRATIONS

Professional Engineer #8834, State of Vermont

Certified Professional in Erosion and Sediment Control #3116, CPESC, Inc.

MEMBERSHIPS

President (2009-2011), Vermont Society of Professional Engineers

President (2011-2012), Vermont Society of Engineers

Greg has managed and developed numerous transportation and stormwater projects for state, municipal, and private clients. He also has co-managed Burlington International Airport's Stormwater Compliance efforts over the last five years. Greg primarily focuses on urban/village roadway reconstruction projects and specializes in roundabout, bicycle / pedestrian, and low impact development (LID) stormwater designs. Greg's projects have been recognized in Vermont and New England for innovative design approaches.

RELEVANT EXPERIENCE

Vergennes Train Depot Relocation | Vergennes, Vermont

Project Manager responsible for oversight of civil/site, MEP, structural and landscape architecture design services for the move and rehabilitation of the historic Vergennes train station. Stantec developed specifications for moving the existing building 1000 feet to the current park-and-ride facility, worked with the VT State Historic Preservation Officer for the historic elements of the project, and designed the site to accommodate a future platform for rail service.

Montpelier Taylor Street to Main Street Multi-Use Path | Montpelier, Vermont

Project Manager responsible for engineering and permitting services for the design of a 968-foot shared-use path including a bridge beginning at Taylor Street crossing Carr Lot and the Central Vermont railroad, spanning the North Branch of the Winooski River and ending at Main Street in Montpelier, VT. The project involved reconstruction of a historic granite block wall, rehabilitation of a railroad crossing, mitigation of contaminated soils, decorative path lighting, landscaping, and was coordinated with the adjacent transit center building and site plan.

Burlington University Place | Burlington, Vermont

Project Manager for the planning and design of improvements to University Place, a multimodal street serving the needs of people travelling through the University of Vermont's historic core. This area is oriented towards academic and administrative uses and is also UVM's primary interface with visitors and local community. Rather than focusing solely on accommodating vehicles—be they cars, bicycles, or buses—the team instead focused on the people who rely on this street to conduct their daily lives. Stantec considered how people engaged with the surroundings, accessed the multiple destinations of campus, and interacted with other people essential to campus operations, recreation, and vitality. We wanted to understand the needs of the people who use the street. Stantec conducted a series of online surveys, allowing us to connect with more stakeholders given the circumstances of the COVID-19 pandemic. Using this approach saved Stantec, the City, and UVM time associated with an in-person public meeting and allowed us to spend more time where it mattered most by reviewing and summarizing community feedback.

Main Street Revitalization | Waterbury, Vermont

This one-mile crumbling roadway required reconstruction, and the community considered this an ideal time to make transformative improvements, especially after being devastated by Tropical Storm Irene in 2011. Stantec's team was up for the challenge. Greg's team was called upon to work closely with VTrans staff and the Waterbury community to complete this project's engineering. Our team conducted significant public outreach, including multiple public meetings and one-on-one meetings with property owners to understand community needs and discuss project impacts. Multiple project stakeholders were engaged in addressing project logistics such as utility relocation routing, water, and sewer infrastructure impacts, historic resource constraints, hazardous materials mitigation, streetscape design including pedestrian scale lighting, landscaping, wayfinding, parking and business district impacts, and traffic maintenance during construction. A constructability review was completed to identify and communicate potential risks to the community during construction. This community outreach effort allowed Stantec to carefully craft plans and bid documents that prioritize minimizing construction impact to businesses, residents, pedestrians, motorists, and the community. The result of this effort will be a transformative project with the support of the community and project stakeholders.



Greg Edwards,

PE, ENV SP

Assignment Manager

YEARS WITH STANTEC

34

EDUCATION

Bachelor of Science, Civil Engineering, University of Vermont, Burlington, Vermont

REGISTRATIONS

Envision™ Sustainability Professional (ENV SP), Institute for Sustainable Infrastructure, 01/03/2016

Professional Engineer #5842, State of Vermont

Professional Engineer #7247, State of Maine

Professional Engineer #6765, State of New Hampshire

MEMBERSHIPS

Past Board Member and Past President, American Council of Engineering Companies (Vermont)

Past President & Board Member, Society of Engineers, State of Vermont

Member, Institute of Transportation Engineers

Greg has over 36 years of engineering experience including the planning, design, permitting, quality control, construction and rehabilitation of transportation facilities. Mr. Edwards is an effective project manager and excellent facilitator, promoting the expediency of successful projects. He has managed multi-disciplined teams for projects up to \$60 million construction cost.

Over the course of his career, Mr. Edwards has managed hundreds of transportation planning, design and construction projects ranging from resurfacing, roadway, bridge, and roundabout designs to traffic studies and alternatives analyses. He and his staff have also designed a number of unique projects including a series of "park-and-ride" facilities, several recreation paths, a river restoration, and town and city Main Street reconstructions. His technical expertise includes transportation planning, public facilitation, traffic engineering, alignment studies, highway design, drainage design, and cost estimating.

RELEVANT EXPERIENCE

CCRPC VT 15 Pedestrian and Bicycle Scoping Study | Essex, Vermont

Project Manager responsible for the scoping study of a 0.7-mile section of VT Route 15. This section of VT 15 has remained largely unimproved since its reconstruction in 1934 as the surrounding land and area has seen significant development. Some pedestrian and bicycle facilities have been constructed with this development but they remain unconnected in this section of VT 15. Short term and long term improvements to calm traffic and to better connect and accommodate pedestrian and bicycle movements will be considered. Services will include traffic and safety analysis, alternatives development and evaluation, facilitation and coordination of public input process and project advisory committee.

CCRPC VT 15 Susie Wilson Road to West Street Extension Scoping Study | Essex Junction, Vermont

Project Manager responsible for the scoping study of a 0.8-mile section of VT Route 15. Reconstructed in 1964, as a four-lane median divided highway, it lacks bicycle facilities and forms the western gateway to the Village of Essex Junction. Short-term and long-term improvements to calm traffic and to better accommodate pedestrian and bicycle movements will be considered. Services will include traffic and safety analysis, alternatives development and evaluation, facilitation and coordination of public input process and project advisory committee.

Side Streets to Church Street Improvements | Burlington, Vermont

Project Manager responsible for preparing a feasibility study to enhance side streets along the Church Street Marketplace in Burlington, Vermont. Services included facilitating a public process, evaluating alternatives and developing a preferred alternative. The result included up to \$6 million in improvements with a focus on pedestrians, bicycles, and economic development. Improvements consisted of sidewalk expansions / replacements, intersection bulb-outs, traffic signal upgrades, street lighting, and gateway treatments using recycled materials.

CCRPC Riverside Avenue/Colchester Avenue Scoping Study | Burlington, Vermont

Project Manager responsible for the scoping study for the redesign of a "High Crash Location" intersection in Burlington, Vermont. Improvements were proposed to calm traffic and to better accommodate pedestrian and bicycle movements. Short term and long term improvements were provided and included wider sidewalks, bike lanes, pedestrian signal phasing and intersection reconfiguration. Services included traffic and safety analysis, alternatives development and evaluation, facilitation and coordination of public input process and project advisory committee.



Michael Fowler,

PE

Assignment Manager

YEARS WITH STANTEC

5

EDUCATION

Associate in Civil Engineering Technology, Vermont Technical College, Randolph Center, Vermont

Bachelor of Science, Civil Engineering, University of Vermont, Burlington, Vermont

REGISTRATIONS

Professional Engineer
#018-0007892, State of Vermont

Michael is a senior project manager and is responsible for managing projects and preparing preliminary, final, and contract design plans for various transportation projects. This work includes field reviews, developing horizontal and vertical alignment, structural pavement design, drainage design, quantity computations, and cost estimating. He has an excellent working knowledge of CADD software, including MicroStation and InRoads, and extensive experience with project scheduling and cost estimation software.

Spending nearly three decades at the Vermont Agency of Transportation (VTrans), Mr. Fowler has engineered hundreds of highway infrastructure assets to improve mobility and connectivity for communities throughout the Green Mountain State. For the last 13 years, he utilized modern asset management techniques and principles to determine project selection and scheduling for the VTrans' 3-year paving program. In that capacity, he performed, guided, and approved all designs involving various treatments. He also had to plan—and prepare—budgets for the paving program, helping to manage over \$500 million in value from start to finish.

Mr. Fowler's years in roadway and bridge design have given him a broad knowledge of the various components of the highway system network. This well-rounded experience generated a strong understanding of the philosophy behind sound infrastructure asset management. It resulted in Mr. Fowler becoming the lead on project cost estimation support for VTrans.

RELEVANT EXPERIENCE

Waterbury VT 100 Water Main | Waterbury, Vermont

Project Manager for the design of a 3600 ft. extension to the municipal water distribution line along VT route 100. Project demands significant coordination among numerous State agencies and multiple property owners. The length of the project falls also within the limits of a major VTrans roadway rehabilitation adding further complexity. Potential alignments for the watermain are complicated by the broad existence of bedrock, a leachfield sewer system in the path, Class II wetlands through much of the corridor, and petroleum underground storage tanks in an area adjacent to the VT route 100 highway ROW. Permits are required from the Vermont Agency of Transportation, the Vermont Agency of Natural Resources, and the U.S. Army Corps of Engineers. Project is planned for construction in the Fall of 2018 and is currently on schedule and within budget.

Chester-Springfield-Rockingham-Windsor STP 2952(1) | Chester-Springfield-Rockingham-Windsor, Vermont

Project Manager and lead VTrans design engineer for this multi-town \$10 million project funded through the VTrans Paving Program and developed to treat 11.2 miles of Class 1 town highways within the respective municipalities. Project involved grinding/milling of the existing pavement, resurfacing, new pavement markings, guardrail, signs, sidewalk and cross walk upgrades for ADA compliance, drainage improvements, traffic signal upgrades, and the reconstruction of a significant at grade railroad/highway crossing in Chester. While the focus of the scope centered on the highway, much initiative involved the assessment of pedestrian facilities and their interaction with the highway, all as a means of seeking improvements where possible within the boundaries of a VTrans paving project. Project demanded rigorous coordination amongst the exceptional number of stakeholders throughout project development. The project spanned 2 construction seasons and was completed in 2016 on time and within budget.

Waterbury Elm Street Sewer Main | Waterbury, Vermont

Project Manager for the design of a new 375 ft. sewer main line along the length of Elm Street. The strategic replacement of an existing line provides the opportunity for a late stage design improvement on a more significant upcoming large-scale replacement of the municipal sewer main along Main Street. The Elm Street segment alignment had to fit precisely within a matrix of various other existing and proposed underground utilities demanding multiple different required offset/shy distances.



Israel Maynard,

PE

Assignment Manager

YEARS WITH STANTEC

16

EDUCATION

Bachelor of Science, Civil Engineering, University of Vermont, Burlington, Vermont,

REGISTRATIONS

Professional Engineer
#69573, State of Vermont

MEMBERSHIPS

Member, Chi Epsilon
National Civil Engineering
Honor Society

Israel has 16 years of experience in designing transportation projects. He has experience designing projects in both the traditional design-bid-build delivery as well as alternative delivery, including Design-Build and Public Private Partnership (P3). Technical skills include highway design, traffic control, stormwater management, plan production, and cost estimating.

One of Mr. Maynard's greatest assets is his proficiency in a variety of design software, including Microstation, InRoads, OpenRoads, Storm and Sanitary, Geopak Drainage, HydroCAD, HY8, and AutoTurn. This proficiency makes him a constantly sought-after and valuable team member.

RELEVANT EXPERIENCE

Bartlett Brook Stormwater Treatment System Expansion | South Burlington, Vermont

Project Manager for the expansion of an existing stormwater treatment wetland. The project is one of several projects being done by the City of South Burlington, VT as part of the Bartlett Brook Flow restoration plan. The project involves rerouting flow currently discharging directly to Bartlett Brook through roughly 1200' of new closed drainage to the expanded wetland. The goal of the project is to manage the stormwater runoff from an additional 9 acres of impervious surface.

West Lakeshore Road/Prim Road Intersection | Colchester, Vermont

Project Manager for this intersection realignment project that involves adding two turning lanes and a signal to the intersection of West Lakeshore Drive and Prim Road. The re-alignment of the intersection requires a new closed drainage system, and bio-retention stormwater treatment area. The new roadway also features new sidewalk, and shared use paths. The project will allow for more efficient travel for people travelling from Malletts bay area to Downtown Burlington as well as improve safety at this busy intersection.

West Lakeshore Drive Shared Use Path | Colchester, Vermont

Senior Engineer for the design, specifications, estimate, and permitting efforts for this shared use path construction project. The shared use path is a 4,400 LF ten-foot wide path along West Lakeshore Drive in Colchester. Project features also included the construction of a grass channel, stormwater, drainage, driveway reconstruction and other incidentals.

Church Street and St. Paul Street Improvements | Burlington, Vermont

Project Engineer for the final design of improvements to Church Street and St. Paul Streets in Burlington, Vermont. Improvements for this project focused on pedestrians and economic vitality through efficient lighting, textured walkways, public art, benches, wider sidewalks at corners, roadway improvements, accessibility modification and improvements, trees and plants, gateway features and drainage improvements, signage and other pedestrian amenities to those areas bordering Church Street.

Norwich Tigertown Road Culvert Replacement | Norwich, Vermont

Project Manager for the design and replacement of two culverts on Tigertown Road in Norwich, Vermont. Both existing culverts suffered extraordinary damage during a rain event in 2017, when they were overtopped and washed out the roadway. Both existing culverts are steel corrugated metal pipe culverts that will be replaced with concrete box culverts with headwalls and wingwalls.

VTrans Culvert Design | Various Locations, Vermont

Roadway Engineer for the design of 11 culverts throughout the state. Project involved screening the sites, field survey, development traffic control plans, project impact data, and providing aquatic organism passage where applicable. The project is a fast-track design and utilities-accelerated bridge construction methods to minimize the disruption to the traveling public.



Marc Foisy, PE

Assignment Manager

YEARS WITH STANTEC

26

EDUCATION

Associate of Science,
Architectural Engineering
and Building Technology,
Vermont Technical College,
Randolph, Vermont

Bachelor of Science, Civil
Engineering, Norwich
University, Northfield,
Vermont

REGISTRATIONS

Professional Engineer
#8436, State of Vermont

Marc has 30 years of experience in Transportation Design. He is responsible for managing projects and the preparation of preliminary, final and contract bid design plans for various transportation projects. This work includes field reviews, geometric design layout, drainage design, quantity computations and estimating. Mr. Foisy has extensive experience and formal training with CADD software including MicroStation and InRoads.

RELEVANT EXPERIENCE

VTrans Benson STP 017-1(17) | Benson, Vermont

Project Manager for this 5-mile project along VT Route 22A in the town of Benson, VT. This project corrects horizontal and vertical alignment deficiencies along the corridor to meet AASHTO standards. The roadway width has been widened to meet current standards, and the use of geogrid has been included to increase the structural capacity of the subbase. This project was also a pilot project in the development of an OpenRoads software workspace for VTrans. Other unique features include stormwater practices, ROW plan development, and the development of Plans, Estimate and Specifications construction bid documents.

VTrans Hartford STP PS24(2) and NH PS24(3) | Hartford, Vermont

Project Manager of this 5-mile project along US 5 in the Town of Hartford, Vermont. Unique features include the removal of subsurface concrete slabs. The scope of work included the complete removal of the existing concrete roadway, approximately eight inches below the bituminous roadway surface. The scope also included horizontal and vertical alignment improvements, superelevation improvements, shoulder widening, and a complete digital 3D model of the proposed surface utilizing InRoads design software.

VTrans Richmond-Bolton STP 2924(1) | Richmond, Vermont

Project Manager for this 9-mile resurfacing project along US Route 2 in the towns of Richmond and Bolton, Vermont. The scope of work included the complete removal of the existing concrete roadway, approximately eight inches below the bituminous roadway surface. The scope also included horizontal and vertical alignment improvements, superelevation improvements, shoulder widening, and a complete digital 3D model of the proposed surface utilizing InRoads design software. The scope of work also included the upgrade of three traffic signals, including a full re-design at the River Road intersection.

Roadway Resurfacing Design | Statewide, Vermont

Project Engineer on the fast track design of over 15 VTrans 3R/STP highway projects totaling over 30 miles. Projects consisted of upgrading facilities to current FHWA and VTrans Standards; designing signs and pavement markings meeting the MUTCD; designing for ADA compliance; upgrading signal installations; resolving high accident locations.

US Route 7 Signalization | Middlebury, Vermont

Project Engineer for a corridor signal study and design involving the upgrade of six signalized intersections. Services included corridor traffic capacity analysis, geometric and signal improvement recommendations, corsin simulation, signal timing, phasing and coordination, public participation process, signal designs, and Right-of-Way services. Design was in compliance with VTrans Guidelines and the MUTCD.



Erik Alling, PE

Assignment Manager

YEARS WITH STANTEC

14

EDUCATION

Bachelor of Science, Civil Engineering, University of Vermont, Burlington, Vermont

REGISTRATIONS

Professional Engineer
#89153, State of Vermont

MEMBERSHIPS

Board of Directors, Vermont Society of Engineers

Board of Directors, Past-President - Vermont Section, American Society of Civil Engineers

Erik has designed and developed numerous transportation projects for state and municipal clients. Erik primarily focuses on bicycle/pedestrian and complete streets projects and projects administered through the VTrans Municipal Assistance Bureau program. Erik's interest in bicycle/pedestrian projects has him on a trajectory to be a regional expert.

RELEVANT EXPERIENCE

Lamplite Acres Green Streets Improvements | Williston, Vermont

Project Engineer responsible for finalizing design plans, specifications and estimate and submitting contract documents in preparation for project advertisement for green infrastructure improvements in the Lamplite Acres neighborhood. Stantec worked with a local steering committee to evaluate alternatives and make recommendations for mitigating existing stormwater issues through low-impact development and green infrastructure improvements. Stantec prepared cost estimates and care/maintenance recommendations for the improvements. The Town unanimously accepted the recommended improvements and constructed a small scale pilot project with their own forces using engineering plans developed by Stantec. The Town selected Stantec to design the remaining improvements and help advance the project into construction.

Burlington University Place | Burlington, Vermont

Project Engineer for the planning and design of improvements to University Place, a multimodal street serving the needs of people travelling through the University of Vermont's historic core. This area is oriented towards academic and administrative uses and is also UVM's primary interface with visitors and local community. Rather than focusing solely on accommodating vehicles—be they cars, bicycles, or buses—the team instead focused on the people who rely on this street to conduct their daily lives. Stantec considered how people engaged with the surroundings, accessed the multiple destinations of campus, and interacted with other people essential to campus operations, recreation, and vitality. We wanted to understand the needs of the people who use the street. Stantec conducted a series of online surveys, allowing us to connect with more stakeholders given the circumstances of the COVID-19 pandemic. Using this approach saved Stantec, the City, and UVM time associated with an in-person public meeting and allowed us to spend more time where it mattered most by reviewing and summarizing community feedback.

Dorset Street Signals | South Burlington, Vermont

Project Manager responsible for the design of upgrades to the existing traffic signals at 9 intersections along Dorset Street and along Williston Road in the vicinity of I-89 Exit 14 in South Burlington.

Mansfield Avenue Shared Use Path And Traffic Calming | Burlington, Vermont

Project Manager for the evaluation and design of a 10-foot-wide, 1,600-foot-long, asphalt shared use path along the east side of Mansfield Avenue in Burlington, VT. Stantec worked with City staff to develop and evaluate alternatives, complete a public outreach process and gain concurrence on a preferred alternative. Traffic calming features were evaluated such as raised crosswalks, raised intersections, and mini-roundabout, due to cost and impact these features were postponed to a future phase. We completed the alternative evaluation process in just 2 months, submitted conceptual plans 2 months later, and now are developing final plans with the goal to bid the project within just 8 months of starting it.

Essex Towers Road Sidewalk | Essex, Vermont

Project Engineer responsible for the design of horizontal and vertical alignments, stormwater system, and stormwater treatment. Mr. Alling developed the conceptual plans and estimate for this project consisting of 1,000 linear feet of 5-foot wide concrete sidewalk along the northern side of Towers Road from the intersection of VT Route 15 and VT Route 128 to Clover Drive.



Amanda Ludlow

Assignment Manager

YEARS WITH STANTEC

4

EDUCATION

Winter Vegetation Identification, Rutgers University, Cook College, New Brunswick, New Jersey

Hydric Soils, Rutgers University, Cook College, New Brunswick, New Jersey

Methodology for Delineating Wetlands, Rutgers University, Cook College, New Brunswick, New Jersey

Bachelor of Science in Bioengineering, Syracuse University, Syracuse, New York

Master of Arts in Marine Biology, Boston University, Woods Hole & Boston, Massachusetts

Master of Science in Civil and Environmental Engineering, Utah State University, Logan, Utah,

Amanda specializes in nature-based solutions for the treatment of municipal wastewater, industrial process wastewater, stormwater runoff, groundwater and surface water contamination, mine drainage, and landfill leachate. Amanda has spent her 24-plus year career focused on developing innovative sustainable solutions to solve environmental problems, including engineered wetlands, phytoremediation, natural media filtration, and sustainable stormwater management. Amanda is also a Subject Matter Expert for environmental permitting and ecosystems restoration at Stantec. She has extensive experience in assessing, investigating, and restoring sensitive habitats, from freshwater wetlands and tidal wetlands to riparian ecosystems—including sustainable slope stabilization design—to grassland and woodland habitats.

RELEVANT EXPERIENCE

Industrial Green Infrastructure, Smelter* | Iceland

Developed and led the design and implementation of a natural system for the treatment and management of stormwater runoff from an active 200-acre smelter. A major objective of the project and commitment to the community was to change the facilities footprint from a typical 75% “brown” to 75% “green”. The design targeted the use of GI techniques (with engineering enhancements) throughout the site to lower the rates and volumes of stormwater runoff and remove contaminants prior to discharge to the fjord.

Ocean Breeze Park* | Staten Island , New York

Developed sustainable stormwater design of a 110-acre park facility located within the 100-year floodplain. Major project elements included design and permitting of green infrastructure practices (stormwater wetlands and bioretention) to manage runoff from a LEED certified 70,000 ft² indoor track field house.

BTV Phosphorus Control Plan | South Burlington, Vermont

As part of our ongoing management of Burlington International Airport’s (BTV) stormwater permit compliance program, Stantec is currently evaluating existing and assessing proposed stormwater management practices for potential credit towards the phosphorus reduction goals as per the 2018 MS4 General Permit. The goal of the PCP is to achieve a level of phosphorus reduction equivalent to the percent reduction target for developed lands in the Main Lake (20.2%) and Shelburne Bay (20.2%) segments, consistent with requirements of the Lake Champlain Phosphorus TMDL and the ANR Phase I Implementation Plan. Amanda is leading the evaluation of credits towards the phosphorus reduction goals and the development of the phosphorus control plan.

Essex Phosphorus Control Plan | Village of Essex Junction and Town of Essex, Vermont

Worked with Stone Environmental to develop a Phosphorus Control Plan for developed land consistent with the Lake Champlain Phosphorus Total Maximum Daily Load for two communities. Reviewed existing permitted systems and identified potential retrofits to improve phosphorus capture and retention credit.

St. Albans Stormwater Utility Planning | Saint Albans City, Vermont

Worked with the Town of St. Albans to develop a draft Stormwater Ordinance that established the creation of a stormwater utility to address illicit discharge detection and elimination, construction site runoff, stormwater management for existing and new development, stream channel disruption and promote pollution prevention. The primary purpose of stormwater ordinance was to establish an equitable fee collection system for all properties in Town, including public and private systems, to manage and fund the expanded program and infrastructure investments. Evaluated existing expenditures to develop a forecast of the Town’s annual revenue requirements and ultimately a multi-year rate adjustment plan to generate sufficient revenues to meet the costs of the future stormwater system.



Thomas Knight,
PE

Assignment Manager

YEARS WITH STANTEC
24

EDUCATION

Certificate, Trained in the Design of Stream/Road Crossing for Passage of Aquatic Organisms, VT Department of Fish and Wildlife, Vermont

Certificate, Trained in Railway Bridge Engineering, University of Wisconsin Ext., Philadelphia, PA

Bridge Inspection Seminar, AREMA, Northlake, Illinois

Trained in Stream Stability and Scour at Highway Bridges, National Highway Institute, Orlando, Florida

Bachelor of Science, Civil Engineering, University of Vermont, Burlington, Vermont

REGISTRATIONS

Professional Engineer #8277, State of Vermont

Thomas has 24 years of structural design experience with Stantec. His structural experience includes various aspects of structural bridge design, rating, rehabilitation, inspection, and construction administration for highway and railroad structures throughout New England. Mr. Knight's structural design experience is complimented by his experience in analyzing and assessing structures for scour and hydraulic considerations.

Mr. Knight's approach to bridge improvements includes considering traffic impacts, environmental / stream impacts, and adjacent property impacts. With a thorough understanding of the design and regulatory process, Mr. Knight strives to offer cost-effective and quick-to-construct solutions while minimizing impacts on resources.

RELEVANT EXPERIENCE

Montpelier-Siboinebi (river water) Path Bridge | Montpelier, Vermont

Tom managed the of the bridge substructure and the layout and specification of the bridge superstructure which carries the Siboinebi Path over the North Branch of the Winooski River. The structure includes aesthetic lighting and a robust and durable design that compliments the surrounding natural and historic features. The project (designed by Stantec) includes a connection from the east side of the City at Dog River Road, passing through the newly opened Taylor Street Transit Center and across a new bridge over the North Branch River to Main Street.

Town of Waterbury – Farr Road over the Little River | Waterbury, Vermont

Project Engineer for the inspection, rating, and design of repairs to this 100-foot single-span steel warren pony truss bridge that carries traffic over the Little River. Mr. Knight was responsible for inspecting the structure, performing a load rating of the structure under both two-lane and single lane traffic, developing a posting recommendation for the structure under its current condition, designing interim repairs to the structure. Inspection access included climbing and ladders.

VT 22A (Main Street) over Otter Creek Pedestrian / Sidewalk Improvements | Vergennes, Vermont

Project Engineer responsible for evaluating alternatives and developing a report for adding a sidewalk to the VT22A Bridge over Otter Creek and the roadway approaches.

Queen City Park Road Bridge over Vermont Railway | Burlington, Vermont

Project Engineer responsible for the scoping process for the rehabilitation of this 79 foot long bridge. The bridge was constructed in 1966 and has ongoing structural deterioration and functional deficiencies. The scoping process included soliciting public input, developing and evaluating alternatives, seeking endorsement of a preferred alternative, and providing a scoping report.

Town of Richmond - Bridge Street over the Winooski River | Richmond, Vermont

Project Engineer for the inspection, rating, and design of repairs to this 229-foot single-span steel camel-back thru-truss bridge that carries two lanes of traffic over the Winooski River. The structure, built in 1929, has severely deteriorated bottom chord members. Mr. Knight was responsible for inspecting the structure, performing a load rating of the structure under both two-lane and single lane traffic, developing a posting recommendation for the structure under its current condition, and designing bolted field repairs to the structure that add internal redundancy to fracture critical members and drastically increase the load rating of the structure.



Karl Richardson,

PE

Lead Engineer

YEARS WITH STANTEC

14

EDUCATION

Associate in Applied Science, Civil Engineering, Vermont Technical College, Randolph, Vermont

REGISTRATIONS

Professional Engineer #59609, State of Vermont, 7/31/201

Karl has over 32 years of experience in civil engineering on a wide variety of private and public projects in the areas of transportation and land development. He has prepared designs, improvement plans, final maps, and transportation improvements for state agencies, municipalities, schools, and private developments. Karl is passionate about utilizing technology to create successful designs. His passion includes using his proficiency in CADD platforms to produce high-quality buildable plans. His expertise includes highway design, bicycle/pedestrian design, drainage design, stormwater treatment, and permitting, and he is sought after by many internal teams and clients.

RELEVANT EXPERIENCE

Burlington Great Streets | Burlington, Vermont | Senior Project Engineer

Senior project engineer responsible for this redesign of two streets, Bank and Cherry, in downtown Burlington. The redesign prioritized pedestrian safety and movement and maintained the on-street parking needed for the small business. The design incorporated raised intersections, bicycle racks, parklets, seating areas outside popular business and restaurants, green stormwater infrastructure, and public art. Stantec also assisted the City in identifying areas of private parcels needed to support the construction of the plan. Cost: \$20 Million (Construction). This project is estimated to be completed in 2024.

VTrans - Waterbury Main Street Reconstruction | Waterbury, Vermont

Senior Project Engineer for the reconstruction of Main Street in Waterbury, Vermont. Stantec provided preliminary and final engineering services, as well as Right-of-Way plan development for the reconstruction of this one mile of roadway in the historic village of Waterbury. The location of the new water and sewer mains were thoughtfully sited so that the existing mains could remain active while the new mains were constructed. By carefully considering the location of the new water and sewer infrastructure, Stantec's efforts allowed the contractor to methodically construct the project in segments with enough room to maneuver their equipment safely. Stantec developed visualizations in the form of maps, photo simulations, and storyboards to keep the community informed throughout the project. These visualizations greatly supported the Town's and VTrans' public relations efforts during construction.

VTrans I-89 Exit 12 Signal Upgrades | Williston, Vermont

Project Engineer responsible for the shared-use path design portion of the improvements at the Exit 12 interchange in Williston, Vermont. Improvements consisted of constructing a new southbound auxiliary lane on VT 2A from Marshall Avenue to the I-89 Exit 12 northbound on-ramp, optimize signal timings and extend the existing shared-use path on the east side of VT 2A from the State Police Barracks to Hurricane Lane.

US Route 2/VT Route 100 Roundabout | Waterbury, Vermont

Preparing final contract plans and permits for the replacement of a stop-controlled T-intersection with a roundabout that will serve as the gateway to downtown Waterbury, Vermont. Stantec worked effectively with the client, adjacent property owners, and a nationally recognized expert on roundabout design to develop a project that results in a context-sensitive, safe and efficient intersection design. New drive access and parking layouts for a gas station, post office, and restaurant were designed to ensure that a positive impact to these neighboring businesses will occur as a result of the project.

Vergennes Train Depot | Vergennes, Vermont

Project Engineer responsible for the plan development for the relocation of a historic train depot in the City of Vergennes. This unique project moves the unused building approximately 1/4 mile to its final destination adjacent to a state park and ride facility in the town of Ferrisburgh. The building will go through a rehabilitation process to change its current use into office space, while planning on its future use as a commuter rail station. Project includes an ADA accessible site, utility extensions, landscaping and geothermal heating system.



Todd Duguay, PE

Lead Engineer

YEARS WITH STANTEC

16

EDUCATION

Bachelor of Science, Civil Engineering, University of Hartford, West Hartford, Connecticut

REGISTRATIONS

Professional Engineer
#59592, State of Vermont,
7/31/2012

MEMBERSHIPS

Member, Vermont Society of Engineers

Member, American Society of Civil Engineers

Since beginning his career in 2003, Todd has designed roadways and interchanges, stormwater management, and drainage systems. As a Senior Transportation Engineer, he is responsible for preparing conceptual, preliminary, final, and contract design plans and documents for various transportation projects. This work includes field reviews, design layout, drainage design, quantity computations, estimating, and specifications. Mr. Duguay has extensive experience and formal training with CADD software, including OpenRoads, MicroStation, InRoads, and Civil 3D. His proficiency with software and his knowledge of various client standards make him a great asset to any team. He has also worked as a construction inspector on highway and aviation projects.

RELEVANT EXPERIENCE

Waterbury Route 100 Watermain | Waterbury, Vermont

Senior Transportation Engineer responsible for 3D modeling of the waterline. Project included design of 1,800 linear feet of new waterline to be installed within close proximity of VT Route 100, in Waterbury. Potential alignments for the watermain were complicated by the broad existence of bedrock, a leachfield sewer system in the path, Class II wetlands through much of the corridor, and petroleum underground storage tanks in an area adjacent to the VT route 100 highway ROW.

VTrans Winooski Circulator Improvements | Winooski, Vermont

Project Engineer responsible for roadway, curbing and raised island layout and grading and design of the drainage improvements due to the roadway reconstruction. Stantec provided engineering and design services to VTrans to address safety concerns at Vermont's #1 ranked High Crash Location, the Winooski Circulator. Stantec evaluated the safety improvements identified by the Chittenden County Regional Planning Commission (CCRPC) and the City of Winooski. We analyzed additional improvements utilizing VISSIM, recommended design modifications, and developed final construction plans. The selected improvements included, improving visibility between pedestrians and drivers, reducing weaving within the Circulator, relocating signalized pedestrian crossings to a safer location with refuge islands, and improving bicycle facilities.

Manchester Roundabout | Manchester, Vermont

Project Engineer responsible for taking the project from the Preliminary Design through Construction of the project. Work included responding to client comments, revising the signing design to complying with the latest version of the MUTCD, revising the quantity computations to comply with the current version of the VTrans Construction Specifications. Completing Contract Plans and Construction documents. Assisted project manager during construction engineering services phase of the project with any roadway or drainage questions or issues.

Waterbury Roundabout | Waterbury, Vermont

Staff Engineer responsible for complete horizontal and vertical design of Routes 100 and 2, and a newly designed parking lot for the US Route 2 and VT Route 100 intersection. Other responsibilities included cross sectional design, drainage design, construction phasing, a complete quantity computation and estimate as well as building InRoads templates and roadway model for this intricate roundabout design. The proposed improvement will be a single lane roundabout. Services provided included preliminary and final design through contract plans and bid services. This project included an extensive public participation and training program on the education of roundabouts



Dave Youlen, PE

Lead Engineer

Dave is a professional engineer with over 23 years of experience with an emphasis on traffic management, quality control, quality assurance, construction administration, and inspection. His technical background includes highway and bridge design, utility and signal design, traffic management plans, and construction. With his construction experience, he plays an essential role in the quality of constructability reviews of projects. Prior to joining Stantec, Dave worked for the State of New Hampshire Department of Transportation as a Civil Engineer in the Bureau of Construction. His responsibilities have included resident inspection; daily reporting; shop drawing processing and review; change orders; payment requests; project closeouts; claims resolutions; and coordination between owner, contractor, and designer. Dave has completed over ten construction inspection assignments for VTrans bridge, roadway, and paving projects under a retainer contract. He has several certifications, including NETTCP (Paving Inspector and Driven Pile Foundation) and ACI.

RELEVANT EXPERIENCE

Burlington Great Streets | Burlington, Vermont

Project Engineer responsible for the roadway reconstruction design of two streets, Bank and Cherry, in downtown Burlington. The redesign prioritized pedestrian safety and movement and maintained the on-street parking needed for the small businesses. The design incorporated new underground electric, communications, water and sewer utilities, stormwater system upgrades, raised intersections, bicycle racks, parklets, seating areas outside popular business and restaurants, green stormwater infrastructure, and public art.

US Route 2, Main Street Project | Waterbury, Vermont

Transportation Engineer responsible for Constructability and Traffic Management for the development of final and contract plans and documents. Responsibilities include constructability plan review, erosion prevention and sediment control design, quality control plan reviews and quantity calculations and review for this \$20+ million construction of US Route 2 through Downtown Waterbury. This 1 mile long, 2-lane roadway included full depth of urban street reconstruction and street scape work, new water and sewer mains and services, new stormwater systems, and the undergrounding of utilities. Services included design for highway, stormwater treatment, traffic signals, Right-of-Way, utilities and lighting.

US 2 / VT 100 Roundabout | Waterbury, Vermont

Project Engineer for replacement of a stop-controlled T-intersection with a roundabout that will serve as the gateway to downtown Waterbury, Vermont. Responsibilities include assisting with development of project plans and specifications. Also investigated various traffic control options, constructability review, and quantity calculations. New drive access and parking layouts for a gas station, post office, and restaurant were designed to ensure that a positive impact to these neighboring businesses will occur as a result of the project.

University Place | Burlington, Vermont

Project Engineer responsible for the roadway reconstruction design of University Place, on the campus of the University of Vermont in Burlington. The redesign prioritized pedestrian safety and movement through narrowing the street to shorten pedestrian crossing distances and reducing the number of roadway crossing locations. The design incorporated narrowing of the street and changing from a two-way street to a one-way street configuration, new wider sidewalks, new water and sewer utilities, stormwater system upgrades, raised pedestrian crossing plaza.

YEARS WITH STANTEC

18

EDUCATION

Bachelor of Science, Civil Engineering, Clarkson University, Potsdam, New York

REGISTRATIONS

Professional Engineer #8831, State of Vermont

MEMBERSHIPS

ACEC Representative , VTrans Work Zone Safety and Mobility Steering Committee, American Council of Engineering Companies (Vermont)



Glenn
Burgmeier, PE

Lead Engineer

YEARS WITH STANTEC
14

EDUCATION

Associate of Science
Architectural and Building
Technology, Vermont
Technical College,
Randolph, Vermont

Bachelor of Science in Civil
Engineering, University of
Vermont, Burlington,
Vermont

REGISTRATIONS

Professional Engineer
#018.0092702, State of
Vermont

MEMBERSHIPS

Member, Chi Epsilon
National Civil Engineering
Honor Society

Member, American Society
of Civil Engineers

Member, Tau Beta Pi
Engineering Honor Society

Since joining Stantec in December 2008, Glenn has provided design and CADD support on a variety of transportation design projects. Glenn's primary responsibilities include assisting in the design and plan preparation for various transportation projects. He has experience working in Microstation, In-Roads, AutoCAD, Synchro, and SimTraffic. Throughout his career, Mr. Burgmeier has also provided electrical design and assisted in developing Electrical, mechanical, and plumbing construction documents for numerous residential, commercial, and industrial projects in the New England area.

RELEVANT EXPERIENCE

Waterbury-Stowe STP 2945(1) | Waterbury-Stowe, Vermont

Staff Engineer aided in site survey, development of project plans, three dimensional modeling in Microstation and inroads formats using the current VTrans CADD guidelines, superelevation calculations and diagrams, superelevation modeling per AASHTO, ditching design, underdrain design and earthworks quantity takeoffs. VTrans required 2'-0" maximum deviation from existing roadway alignment, and included stringent side slope requirements in environmentally sensitive areas.

Colchester Park and Ride Design | Colchester, Vermont

Staff Engineer providing external lighting design, modelling for calculations for park and ride lot per VTrans and local ordinance. Assisted with lighting and electrical plan assets, survey, drainage, and ditching design, project plan and alignment development, sign and pavement marking layout, bus turning movement analysis, and coordination with VTrans and the Town of Colchester. Attended DRB meetings to address abutter concerns.

Williston Park and Ride Design | Williston, Vermont

Staff Engineer providing external lighting design and modeling for park and ride lot calculations per VTrans and local ordinance. He assisted with lighting and electrical plan assets.

Burlington Great Streets | Burlington, Vermont

Staff Engineer responsible for sign and pavement marking design, project phasing plan development, aided in project plan development, quantity takeoff and estimate for this redesign of two streets, Bank and Cherry, in downtown Burlington. The redesign prioritized pedestrian safety and movement and maintained the on-street parking needed for the small business. The design incorporated raised intersections, bicycle racks, parklets, seating areas outside popular business and restaurants, green stormwater infrastructure, and public art. Stantec also assisted the City in identifying areas of private parcels needed to support the construction of the plan.

VT Route 116 Resurfacing | Starksboro-Hinesburg, Vermont

Staff Engineer aided in GPS survey, and was responsible for town ordinance study, sign design and layout, sign post design, guard rail and bridge rail design, ADA compliant sidewalk ramp design, assessment of drainage and utility structures within the roadway, and traffic control plans. This 12.2 mile cold planing and resurfacing project includes rural and urban sections.

VTrans Charlotte FEGC 019-4(20) Culvert Replacement | Charlotte, Vermont

Staff Engineer responsible for inroads site terrain modeling, including a site visit and assisting in the design of the new culvert in Charlotte, Vermont.



Thad Luther, PE

Lead Engineer

YEARS WITH STANTEC

22

EDUCATION

Florida Advanced Work
Zone Traffic Control Course,
ATSSA, Brandon, Florida

AS - Civil Engineering,
Vermont Technical College,
Randolph, Vermont

BS - Civil Engineering,
University of Vermont,
Burlington, Vermont

REGISTRATIONS

Professional Engineer
#8281, State of Vermont,
7/31/2010

Thad has served as a project engineer and manager for various transportation-related projects for over 24 years. His current focus is on integrating Bentley OpenRoads Designer (ORD) into Stantec’s workflow for transportation project designs. Thad is also on the Vermont Agency of Transportation (VTrans) ORD workspace development team. VTrans retained Stantec to complete a “functional” ORD workspace. VTrans and its consultants are using this functional workspace across Vermont on all new design projects. Thad’s roadway experience in traffic engineering, signal design, highway geometrics, site work, and aviation services allows him to creatively apply OpenRoads technology to varied aspects of the design process. His roadway experience includes updating existing intersections, the final design of limited access facilities, award-winning rural highway upgrades, and the completion of planning studies for future roadway expansions. His experience includes neighborhood enhancement projects that utilize context-sensitive design to satisfy multiple stakeholders. Elements of these enhancement projects include roundabouts, traffic calming, sidewalks, and new drainage facilities. Thad combines technical know-how with the ability to facilitate communication between clients, co-workers, and the public to complete projects.

RELEVANT EXPERIENCE

VTrans Colchester Diverging Diamond Interchange Renderings | Colchester, Vermont

Project Engineer on this project addressing traffic congestion and safety concerns at the I-89 Exit 16 interchange in Colchester, Vermont. Stantec created realistic renderings and created multiple drive-through and flyover videos for the new interchange as well as created a video game-like driving simulator. VTrans was able to use these simulations and renderings in their public outreach educational program that will provide a level of comfort to the public by allowing them to “see” and “use” the DDI.

Manchester Roundabout | Manchester, Vermont,

Project Engineer responsible for geometric layout, final grading, coordination between design disciplines and quality control for this highway/bridge project located in Manchester Center, Vermont. The project involves construction of two roundabouts, roadway reconstruction, widening of an existing stone arch bridge, and sidewalk/curb reconstruction. The project also includes replacement of storm drains, water lines, and sewer lines. Services included design, permitting, utility coordination, ROW, and assistance during bidding/construction.

Burlington Edmunds School Mid-Block Crossing | Burlington, Vermont

Project Manager responsible for overseeing design of this mid-block crossing. Design included bulb-outs, signing, striping and the addition of Rectangular Rapid Flashing Beacons. Presented project at public alternatives presentation meeting and worked directly with client’s project manager.

VTrans - Bristol 116 Intersection Upgrade | Bristol, Vermont

Project Manager responsible for design services for the improvements to the VT116 / North Street / South Street intersection in the center of Bristol, Vermont. Stantec worked with the Town and VTrans to design an actuated traffic signal system, improved intersection geometry with bulb-outs, decorative intersection street lighting and landscaping. The project improved safety for motorists, pedestrians and bicyclists and enhanced the aesthetics of downtown Bristol.

Lamplite Acres Green Streets Improvements | Williston, Vermont

Project Engineer for green infrastructure improvements in the Lamplite Acres neighborhood. Stantec worked with a local steering committee to evaluate alternatives and make recommendations for mitigating existing stormwater issues through low-impact development and green infrastructure improvements. Stantec prepared cost estimates and care/maintenance recommendations for the improvements. The Town unanimously accepted the recommended improvements and constructed a small scale pilot project with their own forces using engineering plans developed by Stantec.



Chris Gendron,

PE

Lead Engineer

YEARS WITH STANTEC

12

EDUCATION

Bachelor of Science, Civil Engineering, Norwich University, Vermont

REGISTRATIONS

Professional Engineer
#104146, State of Vermont

Engineering Intern #53952,
State of Vermont

MEMBERSHIPS

President, American Society
of Civil Engineers

Chris is passionate about working on projects that grow and enhance our communities. Since joining Stantec in 2010, he has worked on high-profile projects ranging from the Waterbury Main Street Revitalization, the BTV Hotel, and BETA Technology's assembly facility. Chris takes pride in working cooperatively with the design team, owners, and regulators to ensure projects are delivered to the client's satisfaction. While his focus is on land development projects, he has a broad depth of experience across many disciplines, including aviation, transportation, bike/ped, and stormwater treatment. He has also developed close relationships with scientists, landscape architects, and engineers across the region to support clients across multiple facets of project development.

RELEVANT EXPERIENCE

VTrans - Waterbury Main Street Reconstruction | Waterbury, Vermont

Drainage Stormwater Engineer responsible for plan development and design for the reconstruction of Main Street in Waterbury, Vermont. Stantec provided preliminary and final engineering services, as well as Right-of-Way plan development for the reconstruction of this one mile of roadway in the historic village of Waterbury. The location of the new water and sewer mains were thoughtfully sited so that the existing mains could remain active while the new mains were constructed. By carefully considering the location of the new water and sewer infrastructure, Stantec's efforts allowed the contractor to methodically construct the project in segments with enough room to maneuver their equipment safely. Stantec developed visualizations in the form of maps, photo simulations, and storyboards to keep the community informed throughout the project. These visualizations greatly supported the Town's and VTrans' public relations efforts during construction. This project is currently in construction and is expected to be completed in the Spring of 2021.

VT Route 15 Shared Use Path | Essex Junction, Vermont

Responsible for generating cross sections and project limits for the proposed path. Responsibilities extended into sign and signal design.

Montpelier Taylor Street to Main Street Multi-use Path | Montpelier, Vermont

Project Engineer responsible for engineering and permitting services for the design of a 968-foot shared-use path including a bridge beginning at Taylor Street crossing Carr Lot and the Central Vermont Railroad, spanning the North Branch of the Winooski River and ending at Main Street in Montpelier, VT. The project involved the reconstruction of a historic granite block wall, rehabilitation of a railroad crossing, mitigation of contaminated soils, decorative path lighting, and landscaping, and was coordinated with the adjacent transit center building and site plan.

CCRPC Lake Street Scoping | Burlington, Vermont

Project Manager responsible for studying various improvements to Burlington's popular Lake Street along Waterfront Park related to stormwater treatment, pedestrians, and cyclists.

Butler Farms/Oak Creek Village Culvert Replacement Drainage Study | South Burlington, Vermont

Responsible for sizing and designing four box culverts to relieve flooding issues. Project requires meetings with several permitting agencies and various utilities. Stormwater modeling and culvert sizing was completed using HydroCad and the FHWA Nomograph software. Oversaw construction activities and provided engineering feedback throughout construction.



Caela Peterson

Lead Engineer

YEARS WITH STANTEC

6

EDUCATION

Bachelor of Science, Civil Engineering, Norwich University, Northfield, Vermont

Since joining Stantec in June 2016, Caela has provided design and CADD support on a variety of transportation design projects. Mrs. Peterson has assisted in the design process, including horizontal and vertical alignment, roadway modeling through InRoads and OpenRoads Designer, signal design and pavement markings, as well as bicycle and pedestrian facilities. She has experience with Microstation, InRoads, OpenRoads Designer, and HY8.

RELEVANT EXPERIENCE

Burlington Champlain Elementary Pedestrian Improvements | Burlington, Vermont

Construction inspector / resident engineer for improvements providing safe pedestrian access to multiple public spaces including Champlain Elementary School and Callahan Park. Other responsibilities include submittal reviews for pay requisitions and testing results. Project features include raised intersections, new sidewalk and ADA accessible ramps as well as new drainage work and a rain garden.

Fairfield Juare Road Culvert Replacement | Fairfield, Vermont

Construction Inspector for replacement of a CMP culvert with a bridge. Inspection responsibilities include observing excavation, concrete foundation and bridge abutment placement, precast bridge deck placement, paving, as well as roadway grading and other construction activities required for completion of the project.

Mansfield Avenue Shared Use Path And Traffic Calming | Burlington, Vermont

Project Engineer for the evaluation and design of a 10-foot-wide, 1,600-foot-long, asphalt shared use path along the east side of Mansfield Avenue in Burlington, VT. Stantec worked with City staff to develop and evaluate alternatives, complete a public outreach process and gain concurrence on a preferred alternative. Traffic calming features were evaluated such as raised crosswalks, raised intersections, and mini-roundabout, due to cost and impact these features were postponed to a future phase. We completed the alternative evaluation process in just 2 months, submitted conceptual plans 2 months later, and now are developing final plans with the goal to bid the project within just 8 months of starting it.

University Place | Burlington, VT, USA

Project Engineer responsible for design of improvements to University Place, a multimodal street serving the needs of people travelling by foot, bicycle, transit, and motor vehicle.

Dorset Street Shared Use Path | South Burlington, Vermont

Project Engineer responsible for the design of a shared use path along Dorset Street in South Burlington, VT.

Moretown STP BP19(3) Sidewalk | Moretown, Vermont

Project Engineer responsible for the design of a 1,300-foot-long section of new concrete sidewalk to replace existing asphalt.

Williston Shared Use Path | Williston, Vermont

Project Engineer responsible for the design and layout of a new 10-foot-wide shared use path along VT Route 2A in Williston, VT.



Sean Neely

Lead Engineer

YEARS WITH STANTEC

6

EDUCATION

Master of Science, Civil Engineering, University of Vermont, Burlington, Vermont

Bachelor's Degree, Environmental Science, University of Southern Maine, Portland, Maine

Certificate of Graduate Studies in Sustainable Transportation Systems & Planning, University of Vermont, Burlington, Vermont

Sean provides planning, analysis, design, CADD, and GIS support on a range of transportation projects. Sean completed a master's degree at the University of Vermont (UVM) in civil engineering for transportation and a certificate of graduate studies in sustainable transportation systems and planning. He worked as a research assistant at the UVM Transportation Research Center (TRC) both before and during graduate school. Prior to working at the TRC, Sean practiced consulting for planning and engineering projects across the country. He holds a bachelor's degree from the University of Southern Maine in environmental science and policy, with foci in community planning and geographic information systems (GIS).

RELEVANT EXPERIENCE

South Burlington STP SGNL(53) | South Burlington, Vermont

Served as Lead Traffic Signal Designer. The Dorset Street Signal Improvements Project is in South Burlington, Vermont. The project includes upgrades to nine existing traffic signals along Dorset Street and along Williston Road in the vicinity of I-89 Exit 14. Work to be performed under this contract varies at each signal and includes new signal heads/backplates/reflective borders, new signal mast arms, controller cabinets, signal controllers, vehicle detection, traffic management software (Centracs Mobility Essentials), pedestrian control buttons and new countdown/audio walk indicators, pedestrian ramp upgrades, and incidental items. The upgrades comply with current VTrans standards.

Richmond-Bolton STP 2924(1) | South Burlington, Vermont

Served as Lead Traffic Signal Designer. The Bridge Street Signal in the center of Richmond had outdated signal equipment and needed to be updated as part of this pavement restoration project. Existing conditions included underground and above-ground utilities, limited Right-of-Way, and the intersection is in an urban area with sidewalks and signalized pedestrian crossings. The compact urban nature of the Bridge Street intersection necessitated reviewing multiple alternatives and evaluating their impacts on both existing infrastructure and also the operational efficiency of the intersection.

Williston NH 5500(18) | Williston, Vermont

Served as Lead Traffic Signal Designer. A new southbound right-turn lane onto the I-89 northbound on-ramp at Exit 12 was designed as part of this project. The additional lane required a new mast arm and signal heads that will work with the existing traffic signal equipment to remain, including signal interconnection. Stantec collaborated closely with VTrans on the design of the modifications. Our work included incorporating subsurface utility engineering completed separately by VTrans into the design plans and reviewing the work to minimize potential for conflicts with existing utilities and other infrastructure. Stantec also included the new Detector Channel Assignment Sheet into the plans.

VT Route 15 Traffic Signal Systems Assessment | Winooski, Colchester, and Essex, Vermont

Provided support with field inventory data collection for eleven signalized intersections, assessment of whether existing conditions meet standards, identification and prioritization of recommended action items, development of costs, and report preparation.

Burlington University Place | Burlington, Vermont

Providing project engineering support for the planning and design of improvements to University Place, a multimodal street serving the needs of people travelling by foot, bicycle, transit, and motor vehicle at the interface between City street and the historic gateway of the University of Vermont. Involved with existing conditions assessment, public input survey review, development and evaluation of alternatives, and design of the selected alternative.



Walt Woo, PE, PTOE

Lead Engineer

YEARS WITH STANTEC

12

EDUCATION

M.Eng., Civil Engineering,
McGill University, Montreal,
Québec

B.Eng., Civil Engineering,
McGill University, Montreal,
Québec

REGISTRATIONS

Professional Engineer
#46083 (Civil),
Commonwealth of
Massachusetts, First Issued
2004

Certified Professional
Traffic Operations Engineer
#2781, Transportation
Professional Certification
Board Inc., First Issued
2009

Professional Engineer
#13572, State of Maine,
First Issued 2014

MEMBERSHIPS

Member, Institute of
Transportation Engineers

Walt has extensive practical experience as a transportation engineer, having participated in analyzing and designing dozens of signalized intersections on municipal and state roadways. He also possesses strong skills and experience in other aspects of transportation engineering, including traffic signing, pavement markings, traffic management, and highway design. He also has extensive experience in traffic capacity analysis and traffic simulation modeling and has prepared numerous transportation planning studies that evaluated future traffic operations based on anticipated future land use and travel patterns, among many factors.

RELEVANT EXPERIENCE

Northern Strand Community Trail - Phase 2 | Lynn, Massachusetts

Senior Transportation Engineer for the design of on-road two-way separated bicycle lanes through Downtown Lynn and on the Lynnway. Work on this Complete Streets project includes a road diet to accommodate the introduction of bicycle lanes through this dense section of the City. Responsible for the planning, operations analysis, and design at signalized intersections to accommodate future growth while also accommodating the implementation of the road diet and the use of bicycle traffic signals.

Spring Street & Hayden Avenue Sidewalk Planning | Lexington, Massachusetts

Transportation Engineer for the conceptual planning and design of sidewalks along Spring Street and Hayden Avenue. A network of sidewalks connecting Marrett Road (Route 2A) and Waltham Street (via Spring Street and Hayden Avenue) was developed based upon topographic and other constraints, including the presence of stone walls and trees. Preliminary construction costs associated with the sidewalks were also identified. The work was undertaken as a part of grant funding applications prepared by the Town.

Pleasant Street (MA Route 60) Reconstruction | Belmont, Massachusetts

Traffic Engineer for the design of the reconstruction of traffic signals at three intersections along Pleasant Street in Belmont. These improvements are a part of the Pleasant Street reconstruction project, which consists of the reconstruction of 2 miles of MA Route 60 through the Town of Belmont, Massachusetts. Tasks performed on this project included the design and layout of traffic signals, detectors, signal conduit and emergency vehicle pre-emption equipment. Conducted intersection traffic capacity analyses to determine optimal traffic signal timing and phasing. Signal equipment selection, construction cost estimates were also completed. Conducted a review of traffic signal shop drawings and final inspection of the traffic signals.

Lincoln Street (Route 3A) Roadway Improvements | Hingham, Massachusetts

Traffic Engineer for the design of traffic signal and roadway improvements along Lincoln Street (Route 3A), in Hingham, Massachusetts. The project included the design and coordination of five traffic signals along the corridor. Tasks included the design and layout of traffic signals, detectors, conduit and pre-emption equipment. Completed a review of shop drawings and final inspection of the traffic signal and pavement markings.



VERMONT SURVEY and ENGINEERING, INC.

SURVEYORS and CIVIL ENGINEERS

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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 SCR(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



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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:

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 SCR(11)
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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
Vermont Society of Land Surveyors



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.

Phase II archeological site evaluation 2011-12 Swanzey 15697, Swanzey Factory Road, Swanzey, Cheshire County, NH
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.

Phase III archeological data recovery 1996-2006 Fort Ticonderoga, Town of Ticonderoga, Essex County, New York
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.

Archeological reconnaissance survey 2014 Middlebury State Airport, Middlebury, VT
Conducted historic research and archeological reconnaissance survey for five archeologically sensitive areas within the airport property.

Literature/ Archival research 2008 Samuel Harrison House Project, Town of Pittsfield, Berkshire County, MA
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.

Cultural landscape studies 2004 Rogers Island Cultural Historic Park Management Plan, Fort Edward, Washington County, NY
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.



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 VTtrans 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:

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 NYS DOT, NYSOPRHP, VAOT, 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.