



Response to Request for Qualifications for
At-The-Ready Consultant Engineering Services for Municipalities

Design Services

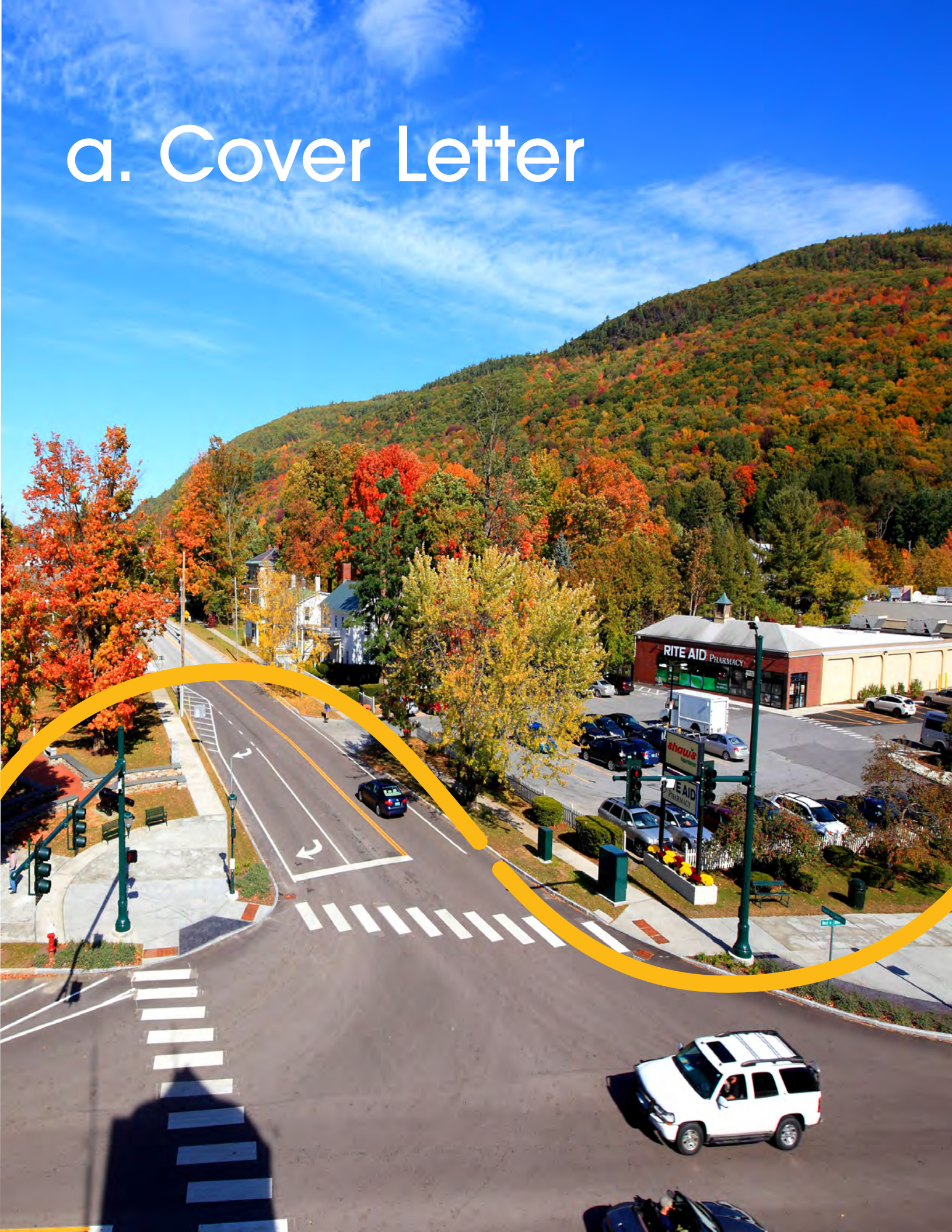
January 6, 2017

Stantec

What's inside

a. Cover Letter
b. General Firm Information
c. Design Services
d. Resumes
Appendix. Quality Control Plan

a. Cover Letter



Stantec Consulting Services Inc.
55 Green Mountain Drive, South Burlington, VT 05403
P: 802.864.0223 F: 802.864.0165

January 6, 2017

Nydia Lugo, Technical Development Engineer
Agency of Transportation, Municipal Assistance Bureau
1 National Life Drive
Montpelier, VT 05633

Reference: At-The-Ready Consultant Engineering Services for Municipalities - Design Services

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 neighborhood. 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 is broadly skilled and has extensive experience with the design services typically required for projects administered through the VTrans Municipal Assistance Bureau (MAB).

With over 160 transportation focused staff in New England, our team has ample capacity to meet project schedules. Our staff are recognized regional leaders in transportation 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 VTrans and Vermont Municipalities for the following reasons:

We Understand Financial Constraints Facing Vermont Municipalities

Vermonters deserve a high quality set of design plans 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 transportation projects can result in tens of thousands of dollars saved during construction. The Stantec team assigned to this project has a proven track record of doing this for Vermont municipalities. It is our primary goal for every project we work on.

We Know the VTrans Project Development Process

Having worked with municipalities and VTrans for 60+ years, managing transportation projects is this team's specialty. It is one reason why Stantec has been repeatedly selected by our existing clients. With this experience, we understand project development and methods to expedite the process. The results speak for themselves. Our team members have provided design, engineering, and permit services for over 17 MAB funded projects constructed within the last six years. Our team knows what it takes to move a project from concept to 100% design and into construction.

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 over the years, we have a strong desire to continue these relationships. 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 MAB 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 transportation infrastructure. Thank you for your consideration.

Very Truly Yours,

STANTEC CONSULTING SERVICES, INC.

Greg Goyette, PE
Senior Associate
Phone: (802) 497-6403
greg.goyette@stantec.com

Erik Alling, PE
Civil Engineer, Transportation
Phone: (802) 497-6004
erik.alling@stantec.com

b. General Firm Information

b. General Firm Information

Introduction to Consultant Firm

We're active members of the communities we serve. That's why at Stantec, we always design with community in mind. The Stantec community unites approximately 22,000 employees working in over 400 locations across six continents. We collaborate across disciplines and industries to bring buildings, energy and resource, environmental, and infrastructure projects to life. Our work—engineering, architecture, interior design, landscape architecture, surveying, environmental sciences, project management, and project economics, from initial project concept and planning through design, construction, and commissioning—begins at the intersection of community, creativity, and client relationships. With a long-term commitment to the people and places we serve, Stantec has the unique ability to connect to projects on a personal level and advance the quality of life in communities across the globe.

Company Information

Stantec Consulting Services, Inc.
55 Green Mountain Drive
South Burlington VT 05403
(802) 864-0223 | greg.goyette@stantec.com

Company History

Established: 1954
Former names:
Stantec Consulting Services Inc. (12/31/04 – present)
Dufresne-Henry (joined Stantec in 2006)
Stantec Consulting Group Inc. (4/2/04 – 12/31/04)
The Sear Brown Group Inc. (3/30/88 – 4/2/04)
Charles E. Ward, Inc. (11/15/68 – 3/30/88)
Manhasset Civil Engineers, Inc. (8/27/29 – 11/15/68)

1,500+
communities are enjoying the ride thanks to our devotion to enhancing their transportation networks

Stantec & Vermont

For 60+ years Vermont municipalities have been, and continue to be, very important clients to our team. We have a strong desire to be involved in this program 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 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.

Understanding of the Work Required

Through our involvement with the MAB over the last 15 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 MAB program. We have worked with MAB and municipal staff to move over 20 projects into construction over the last 6 years, and are currently working on over 15 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 MAB projects. They understand that project design, process, and team work with municipal representatives and VTrans are paramount to successfully delivering projects. Our team members have a great understanding of not only how to find solutions for design 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 upcoming TS4 requirements that VTrans will need to comply with. Right-of-way acquisition is often a very time consuming process. Our ROW specialists understand how to put together a quality set of ROW Plans and understand the waiver valuation process to help communities successfully and efficiently navigate ROW acquisition. 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 60 years, our team has these qualities and resources. From our experience with working with the VTrans MAB program, we also understand the value of having a team with a wide range of capabilities, experience, and resources. For instance, when VTrans needed specialty public relations material for a number of concurrent construction projects in the Waterbury area, including the municipally managed roundabout at the intersection of US Route 2 and VT Route

US2/VT100 Intersection Improvements, Waterbury, Vermont

100, Stantec's graphic artists were available to assist and quickly produce a widely used presentation that was positively received by the community.

Having worked on numerous projects administered through the Municipal Assistance Bureau, 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.

Firm's Capabilities to Perform the Work

Our local team of transportation 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 770 staff members, many with transportation engineering, traffic management, 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 project needs.

The Design Services section of this proposal provides an overview of recent and relevant design experience and key staff that would be available to work on assignments funded through the MAB program.

Commitment to Quality

Our commitment to quality is demonstrated through our Quality Control Plan and past performance, the results of which are best heard from our clients. We have been receiving excellent ratings for years on the VTrans Consultant Performance Evaluations forms for many of our VTrans MAB assignments. One category Stantec has repeatedly received excellent ratings for is timeliness and responsiveness. We are familiar with the quick-turnaround needs VTrans assignments often require. We also know this acceleration requires special attention to project quality and budget. This is becoming the norm for VTrans as they strive to deliver more projects, faster and more efficiently. When asked to, we have met the demanding schedules and plan quality requirements needed for these assignments. A comment from our recent evaluations includes:

"The level of professionalism and quality of the work product, plus the personal interaction of their Project Manager is all excellent. No hesitation in working with them in the future."

~ Jon Kaplan, Statewide STP SRIN(25)

Sub-consultants

The following sub-consultants have been added to our team to provide additional services typically required for MAB administered projects, including topographic survey, historic/archeological resource review, and landscape architecture. Our team has worked with these firms on many projects administered through the MAB.

Hartgen Archaeological Associates, Inc.

Hartgen is an award-winning provider of cultural resource management solutions serving the private and public sectors since 1973. Their archeological and historic preservation consultation services enable their clients to meet the regulatory requirements of the National Historic Preservation Act (NHPA), the National Environmental Policy Act (NEPA), and other federal, state, and local historic preservation laws. Their team includes 36 CFR61-qualified archeologists and an architectural historian committed to providing responsive and cost-effective services to their clients.

Over the past forty years, Hartgen has completed more than 5,300 cultural resource studies in the Northeast. Their services include all phases of cultural resource management such as Phase IA, IB, II, and III archeological investigations; National Register eligibility synopses; architectural history; HABS/HAER documentation; historical deed and document research; historical map research; development of archeological research designs and master plans; artifact cataloging, design and presentation of public information signs, pamphlets, and exhibits; and writing and publication of research reports, including presentation of results at scholarly and public meetings.

Hartgen staffing is sufficient to provide timely completion of project assignments. A flexible corporate structure allows for quick response to project assignments from the client. Key personnel and junior staff members are available to conduct work assigned under this contract.

Hartgen's relevant projects include: the Gilman Road Reconstruction project in Royalton, Vermont; the Thetford Park and Ride project in Thetford, Vermont; Montpelier Bridge No. 305 Repair in Montpelier, Vermont; Castleton STP BP 13(10) Sidewalk Project in Castleton, Vermont; and Jericho STP BP 15(21) Multi-Modal Connection Project in Jericho, Vermont.

Company Information
Hartgen Archeological Associates, Inc.
P.O. Box 81
Putney, VT 05346
(802) 387-6020 | tjamison@hartgen.com

Company History
Hartgen Archeological Associates, Inc. (1973 - present)

Vermont Survey and Engineering, Inc.

Vermont Survey and Engineering (VSE) is a locally owned, Vermont based land surveying firm with licensed Land Surveyors registered in the states of Vermont, New Hampshire, and New York. They provide a wide range of surveying services to federal, state, and municipal agencies, as well as residential property owners and commercial, industrial and residential developers.

Their surveying services include geodetic control and topographic, hydrographic, boundary, ALTA/ACSM, and construction layout surveys. They have trained and experienced personnel and professional quality equipment to provide Global Positioning System (GPS) data acquisition on geodetic control projects. Their right-of-way services are primarily focused on highway design and related activities for state and municipal agencies, including the preparation of right-of-way plans and associated title abstracting. As a firm specializing in surveying, their staff, as a matter of their daily routine, abstract titles, recover field evidence, interpret the evidence, and produce the final product. They use of leading edge technology and in-house computer-aided drafting and design (CADD) is centered on both AutoCAD and MicroStation platforms.

VSE's relevant projects include: the Colchester STP 5600(20) in Colchester, Vermont; the Railyard Enterprise Project in Burlington, Vermont; Brandon PLH ALPP(1) in Bradon, Vermont; and Berlin CMG Park(45) in Berlin, Vermont.

Company Information
Vermont Survey and Engineering, Inc.
79 River Street
Montpelier, VT 05602
(802) 229-9138 | info@vermontsurvey.com

Company History
Aquatec Survey Corporation (1982-1986)
Vermont Survey Consultants, Inc. (1986 - 1992)
Vermont Survey and Engineering (1992 - present)

SE Group

SE Group's landscape architecture team designs and creates great outdoor spaces where people can enjoy themselves through contemplation, socializing, or play. They strive for enduring design that elevates and engages the human experience, and meets the needs of all: from the end-users to those chartered with maintaining those spaces, always keeping in mind the nature in and of the place. Their specialities include landscape architecture, land use planning, environmental planning, project engagement, and community engagement.

SE Group's relevant projects include: Church Street Marketplace in Burlington; City of St. Albans Urban Redevelopment Planning/Streetscape Revitalization in St. Albans; Waterfront Access North Skate Park/Bike Path Project in Burlington; Market Street/City Center in South Burlington; College Street/Waterfront Access Project in Burlington;MRV Moves Active Transportation Plan in Mad River Valley, Vermont; and the Estes Valley Master Trails Plan in Estes Valley, Colorado.

Company Information
SE Group
131 Church Street, Suite 204
Burlington, VT 05401
(802) 862-0098 | mwillard@segroup.com

Company History
Sno.Engineering dba SE Group (1958 - present)

From left to right: Church Street Marketplace, Waterfront Access North Skate Park/Bike Path, City of St. Albans Urban Redevelopment



Greenman-Pedersen, Inc.

Greenman-Pedersen, Inc. (GPI) is an award winning, multi-disciplinary firm that has provided planning, design, landscape architecture, engineering, and construction services to government and industry for nearly 50 years. They are recognized in the Engineering News Record as a Top 100 Design Firm in the U.S. and have established long and successful relationships to provide planning, design, and engineering services to local, state, regional, and federal public agencies throughout New England and the east coast. Corporate-wide, GPI has over 1,200 employees. The New England Division of GPI, head-quartered in Wilmington, MA, with regional studio offices in Portsmouth, NH and White River Junction, VT has over 60 employees including 23 registered professionals in engineering and landscape architecture. GPI was established in 1966 is celebrating 50 years in business.

GPI's staff have successfully handled projects ranging in size and complexity, with some individual construction budgets reaching $300 million. The firm's high level of client acceptance has been achieved through professional expertise and conscientious performance and by reaching solutions to problems within regulatory and budget requirements.

GPI's relevant projects include: East Wheelock Street in Hanover, New Hampshire; Garden Street Scoping and Design in South Burlington, Vermont; Pearl Street Pedestrian Way in Barre, Vermont; the Rain Garden Retrofit in White River Junction, Vermont ; and the Dartmouth College and Town of Hanover Mid-Block Pedestrian Crossing at the Transit Hub.

Company Information
Greenman-Pedersen, Inc.
46 South Main Street
PO Box 65
White River Junction, Vermont 05001
(802) 359-4070 | cradisch@gpinet.com

Company History
Greenman-Pedersen, Inc. (1966 - present)

From left to right: Wheelock Street, White River Rain Garden, Dartmouth College Transit Hub Pedestrian Crossing

Organization Chart

As shown on the following page, we have a large depth of staff designated to perform management, engineering and design services, as well as an array of technical staff for supporting transportation services, and landscape architecture. With offices throughout North America, these teams have significant resources to assist them in completing any assignment. Our program sub-consultants are also shown on the organization chart. Familiar to both Stantec and VTrans, we have invited Hartgen Archaeological Associates, Vermont Survey and Engineering, SE Group, and Greenman-Pedersen to work alongside our team under this contract.

If complex project issues arise during project development, these key staff will rely on Stantec's 60 transportation professionals in our South Burlington, Vermont and Bedford, New Hampshire offices to provide the support needed to solve these issues. These staff are proficient in a great number of disciplines that are frequently required on municipal projects. These disciplines are highlighted in the organization chart on the following page. More detail on team members roles and relevant experience including a listing of MAB projects that they have worked on is provided in **Section c. under Key Personnel.**

VTrans
Municipal Assistance Bureau

Stantec Contract Manager
Greg Goyette, PE

DESIGN SERVICES PROJECT MANAGERS

Erik Alling, PE
Bike/Ped, Complete Streets

Gary Santy, PE
Highway, Park-and-Ride

Mike Chenette, PE
Structures, Culverts

Israel Maynard, PE
Highway, Stormwater

Marc Foisy, PE
Highway

Greg Edwards, PE
Scoping, intersection Design

Rick Bryant, PE
Scoping, Traffic Management, Urban Design

Greg Goyette, PE
Highway, Bike/Ped, Complete Streets, Roundabouts, Stormwater

Engineering Technical Support

Highway
Greg Goyette, PE
Thad Luther, PE
Karl Richardson, PE
Todd Duguay, PE
Chris Gendron, PE
Caela White,

Structures/Culverts
Tom Knight, PE
Peter Greenberg, PE
RuthAnne Daniels, EI

Bike/Ped/Complete Streets/Urban Design
Greg Goyette, PE
Chris Gendron, PE
Sean Neely

ROW and Document Development
Harry Petrovs, LS
Lori Buxton

Constructability Reviews
David Youlen, PE
Gary Santy, PE

Traffic Signal
David DeBaie, PE
Thad Luther, PE

Utility Relocation Design
Karl Richardson, PE
Chris Gendron, PE
Doug Campbell, PE

Roundabouts
Greg Goyette, PE
Karl Richardson, PE
Thad Luther, PE
David DeBaie, PE

Environmental Permitting/NEPA
Polly Harris
Krista Reinhart

Traffic Management
David DeBaie, PE
David Youlen, PE
Sean Neely, EI

Stormwater
Greg Goyette, PE
Todd Duguay, PE
Doug Campbell, PE
Chris Gendron, PE

Sub-consultants

ARCHAEOLOGY/HISTORICAL
Hartgen Archaeological Associates
Thomas Jamison, PH.D.
Elise Manning-Sterling, RPA
Walter Wheeler

SURVEY
Vermont Survey Engineers
Stephen Fraser, LS
Andrew McQueeny
Jason Riley, LS

LANDSCAPE ARCHITECT
SE Group
Michael Willard, LEED AP
Drew Pollak-Bruce
Tom Hand

LANDSCAPE ARCHITECT/ STREETSCAPE DESIGN
Greenman-Pedersen, Inc.
Robert White, RLA
Carolyn Radisch, AICP
Paula Holwerda, LEED AP

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.

As seen in the chart below, we can offer approximately 7,500 hours of Project Management time and 11,000 hours of Project Engineering support from Stantec staff in our South Burlington office, which is approximately $2,000,000 in contract value over the next six months.

6 - Month Outlook

Team Member	Project Role	Estimated Hours Available Over the Next 6 Months	% Time Typically Spent on Municipal Projects
Greg Goyette, PE	Contract Manager, Roundabouts, Highway, Bike/Ped, Complete Streets, Stowmwater	1,000	50%
Erik Alling, PE	PM - Bike/Ped, Complete Streets	1,500	85%
Gary Santy, PE	PM - Highway, Park-and-Ride, Constructability Reviews	1,000	20%
Marc Foisy, PE	PM - Highway	500	50%
Greg Edwards, PE	PM - Scoping, Intersection Design	500	30%
Mike Chenette, PE	PM - Structures, Culverts	500	50%
Rick Bryant, PE	PM - Scoping, Traffic Management, Urban Design	1,500	70%
Israel Maynard, PE	PM - Highway, Stormwater	1,000	30%
Thad Luther, PE	Highway, Traffic Signal, Roundabouts	1,000	50%
Karl Richardson, PE	Highway, Utility Relocation Design, Roundabouts	1,000	50%
Todd Duguay, PE	Highway, Stormwater	500	50%
Chris Gendron, PE	Highway, Bike/Ped, Complete Streets, Urban Design, Utility Relocation Design, Stormwater	500	70%
Caela White,	Highway	500	20%
Tom Knight, PE	Structures/Culverts	500	30%
Peter Greenberg, PE	Structures/Culverts	500	30%
RuthAnne Daniels, EI	Structures/Culverts	500	30%
Sean Neely	Bike/Ped, Complete Streets,Urban Design, Traffic management	1,500	50%
David DeBaie, PE	Traffic Signal, Traffic Management, Roundabouts	500	30%
David Youlen, PE	Traffic Management, Constructability Reviews	500	50%

6 - Month Outlook - Continued

Team Member	Project Role	Estimated Hours Available Over the Next 6 Months	% Time Typically Spent on Municipal Projects
Doug Campbell, PE	Utility Relocation Design, Stormwater, Water/Wastewater	500	75%
Harry Petrovs, LS	ROW and Document Development	500	50%
Lori Buxton	ROW and Document Development	500	25%
Polly Harris	Environmental Permitting/NEPA	500	25%
Krista Reinhart	Environmental Permitting/NEPA	500	25%
Maegan Crowley, EI	Street Lighting	500	25%
Glenn Burgmeier, PE	Street Lighting	500	25%
Thomas Jamison	Archaeology/Historical	1,500	75%
Elise Manning-Sterling	Archaeology/Historical	1,500	75%
Walter Wheeler	Archaeology/Historical	1,500	75%
Stephen Fraser, LS	Survey	1,500	50%
Andrew McQueeny	Survey	1,500	50%
Jason Riley, LS	Survey	1,500	50%
Robert White, RLA	Landscape Architect, Streetscape Design	1,000	50%
Carolyn Radisch, AICP	Landscape Architect, Streetscape Design	1,000	50%
Paula Holwerda, LEED AP	Landscape Architect, Streetscape Design	1,000	50%
Michael Willard, LEED AP	Landscape Architect	1,000	60%
Drew Pollak-Bruce	Landscape Architect	1,000	75%
Tom Hand	Landscape Architect	1,000	25%

c. Design Services

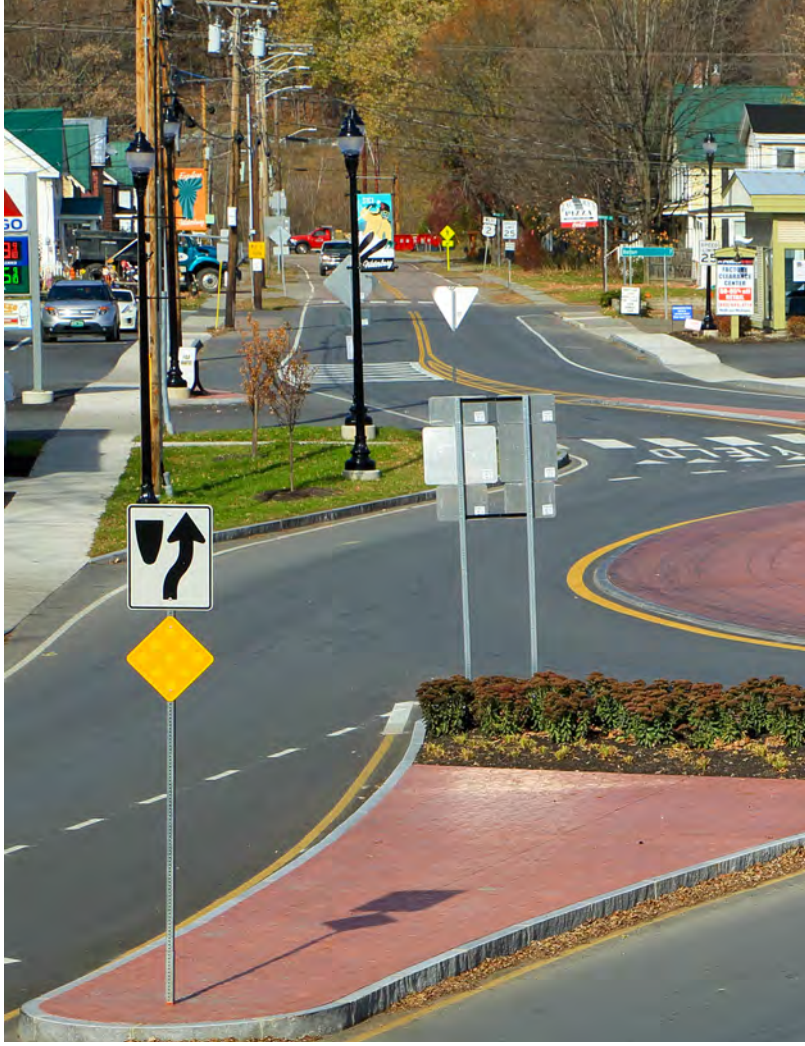
C.
Design Services

Qualifications and Experience

The Stantec team has successfully moved over 20 projects 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. 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 is below. Project examples either completed through the MAB or relevant to these types of projects are included in the following pages.

- Essex Route 2A Shared-Use Path (Ande DeForge) – Constructed 2015
- Waterbury Roundabout (Joel Perrigo) – Constructed 2015
- South Burlington US 2/I-89 Exit 14 Widening (Ande DeForge) – Constructed 2015
- Waitsfield Village West Sidewalk Project (Scott Gurley) – Constructed 2014
- Waitsfield Old County Road Intersection Re-alignment (Scott Gurley) – Constructed 2014
- Waterbury Stowe Street Sidewalk (Wendy Pelletier) – Constructed 2014
- Vergennes Train Depot Relocation (Wayne Davis) – Constructed 2013
- Waterbury Farr Road Extension and Bridge Removal (Joel Perrigo) – Constructed 2013
- Statewide Safe Routes to School Radar Speed Feedback Signs (Jon Kaplan) –Constructed 2013
- Manchester Roundabouts (Joel Perrigo) – Constructed 2013
- Enosburg Park-and-Ride (Wayne Davis) – Constructed 2012
- Swanton Rail Crossing (Jennifer Royer) – Constructed 2012
- Roxbury Rail Crossing (Jennifer Royer) – Constructed 2012
- Statewide Park-and-Ride Signage Replacement (Wayne Davis) – Constructed 2012
- Colchester Campus Connector Road (Bill Preis) – Constructed 2012
- Burlington Church St./St. Paul St. Improvements (Scott Gurley) – Constructed 2012
- Franklin Sidewalk (Jon Kaplan) – Constructed 2010
- Waterbury Park-and-Ride (Wayne Davis) – Constructed 2010
- Randolph Park-and-Ride (Wayne Davis) – Constructed 2008
- Ferrisburgh Park-and-Ride (Wayne Davis) – Constructed 2007
- Smuggler's Notch Composting Toilet Facilities (Scott Gurley) – Constructed 2007
- Rutland Us4/7 Street Improvements (Ande Deforge) - Constructed 2015
- Middlebury US7 Signal Improvements (Rob White) - Constructed 2006

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/archeological resource assessments, and construction bid documents following the Municipal Assistance Bureau template to name a few. Our team understands federal and state requirements that need to be followed for MAB 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 travelling public and the community during construction of these major infrastructure projects.



Project Examples

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, Rt. 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 storm water management, utility coordination and updates, and traffic control during construction. Construction was completed in 2015.

Contact

Alec Tuscany, Public Works Director
Town of Waterbury
P: (802) 241-4129
E: publicworksdirector@waterburyvt.com

Waterbury Roundabout, Waterbury, Vermont

Waitsfield Village West Sidewalk and Old County Road intersection

Waitsfield, Vermont

To assist the Village in realizing their vision for safer routes for pedestrians and school children along and across a heavily trafficked roadway, our team completed the design for 800 feet of sidewalk along Vermont Route 100. This project was designed, permitted and bid in one year after receiving the notice to proceed. Stantec's services were completed on schedule and within the budget allotted. A unique aspect of this project was coordination with the VTrans Historic Preservation Officer to determine what to do with a historic hitching post within the highway ROW that needed to be relocated behind the new sidewalk. Stantec identified this issue early in the design phase and the end result was no delay to the overall project. To help the Town realize an economy of scale during construction, the project was combined with a Stantec designed intersection re-alignment project at the Old County Road and Vermont Route 100 intersection. Construction was completed in 2014.

Contact

Valerie Capels
Town of Waitsfield
P: (802) 496-2218
E: townadmin@gmavt.net

Waterbury Stowe Street Sidewalk

Waterbury, Vermont

Stantec worked with the Town of Waterbury to prepare design plans and bid documents for 1,800+ feet of a 5 foot wide sidewalk along Stowe Street in Waterbury, Vermont. This project involved design and construction of ADA compliant sidewalk within the ROW limits of a Class 2 Town Highway, a gravity block retaining wall, drainage improvements and a traffic management plan. A unique aspect of the project included coordination with concurrent design and construction projects in the Waterbury area including an interstate bridge replacement project over Stowe Street. Construction was competed in 2014.

Contact

Alec Tuscany, Public Works Director
Town of Waterbury
P: (802) 241-4129
E: publicworksdirector@waterburyvt.com

VT 116/North Street/South Street Improvements, Bristol, Vermont

Colchester Campus Connector Road and Shared-Use Path

Colchester, Vermont

With just one project, students at Saint Michaels in Colchester have a safer and more environmentally friendly alternative for traveling between the college's North and Main campuses and drivers along Route 15 have an easier, less congested route. All thanks to the new Campus Connector, which has made traveling in Colchester an easier proposition for the entire community.

The new roadway, designed by Stantec, is being praised by all involved, from Saint Michaels, to the Army National Guard, to Senator Leahy, to VTrans and the Town of Colchester. It provides a safer and easier route for students to move between the two campuses via a new 10' wide shared-use path and 4' wide bicycle lanes, exactly what St. Mike's had hoped for. The Town used the project to demonstrate their new period street lighting standard and have expressed how attractive they find the new road.

The most innovative facet of this project is its approach to stormwater management and treatment. Stantec designed an infiltration system to address the very level site's drainage concerns. Rather than employ the typical stormwater collection and offsite disposal approach, the system treats runoff and then infiltrates it on site.

The project not only met its schedule but was so far under budget—thanks, in part, to very few change orders—that the town was able to use the remaining $400,000 to improve other town roads. Construction was completed in 2012.

Contact

Bryan K. Osborne
Town of Colchester
P: (802) 264-5625
E: bosborne@town.colchester.vt.us

US2 - Staples Plaza Intersection

South Burlington, Vermont

For years, drivers heading to I-89 out of Burlington got trapped in a right-turn-only lane along US Route 2. With both traffic and safety concerns the City of South Burlington needed a solution.

Stantec provided a full range of design services ranging from conceptual design through final design for the construction of a third eastbound lane of US Route 2, an urban arterial with over 40,000 vehicles per day, from the Sheraton Staples intersection to the I-89 southbound on-ramp.

The new road:

- Shifted and widened the roadway to add a lane, avoiding the need to remove critical parking spaces for the shopping center along the corridor
- Reduces the chance of accidents from the right lane

60+

work working with state and federally funded transportation projects.

- Has reduced congestion at this intersection, but also at the UVM jug handle
- Was constructed without major disruptions to ongoing traffic flow
- Is even more attractively landscaped, especially in the space of the former turn lane
- Came in far enough under budget that the city used the savings to initiate a study into continuing Route 2 downstream

Project elements included bicycle facilities, transit facilities, street lighting, landscaping, utility relocations, stormwater treatment, interconnected and coordinated signal system, and traffic control for highway widening. Stantec also provided NEPA documentation, contract plans, construction cost estimate and permitting meeting VTrans MAB procedures. This $4 Million project was completed in 2015.

Contact

Justin Rabidoux
City of South Burlington
P: (802) 658-7961
E: jrabidoux@sburl.com

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.

Contact

Patricia Coburn
VTrans
P: (802) 828-6980
E: patti.coburn@vermont.gov

Manchester Stone Arch Bridge and Roundabouts, Manchester, Vermont

Manchester Stone Arch Bridge and Roundabouts

Manchester, Vermont

To reduce congestion and improve safety at troublesome intersections, we designed a double roundabout for this thriving southwestern VT community, a popular tourist destination. Stantec provided final design and permitting services for these modern roundabouts at the intersections of VT Route 7A with VT Routes 11 and 30. We developed conceptual plans and permitting; including a hydraulics and hydrology analysis to show no impact due to new bridge. We also developed final roadway and bridge plans, and right-of-way acquisition plans. Our design included traffic calming, sidewalk/pedestrian facilities, landscaping and decorative lighting. Among the challenges our design team faced were creating a roundabout that would be partially located on a bridge, and accommodating the constraints of building this project within an urban historic district.

Contact

Joel Perrigo
Town of Manchester/VTrans
P: (802) 828-2583
E: joel.perrigo@state.vt.us

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 b . 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 MAB 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 MAB experience.

Project Managers

Gregory Goyette, PE, - Contract Manager, Project Manager. Greg will be the point person for VTrans 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 Bureau for the last 15 years, and has familiarity with many of the current project supervisors. Greg managed Stantec's Safe Routes to School retainer contract through the MAB and has assisted in getting over 20 assignments successfully constructed over the last six years. His technical experience and proven managerial skills make him a great fit for this role.

Relevant Projects: Essex Route 2A Shared-Use Path, Waterbury Roundabout, South Burlington US 2/I-89 Exit 14 Widening, Waitsfield Village West Sidewalk Project, Waitsfield Old County Road Intersection Re-alignment, Waterbury Stowe Street Sidewalk, Vergennes Train Depot Relocation, Waterbury Farr Road Extension and Bridge Removal, Statewide Safe Routes to School Radar Speed Feedback Signs, Manchester Roundabouts, Enosburg Park-and-Ride, Statewide Park-and-Ride Signage Replacement, Colchester Campus Connector Road, Burlington Church St./ St. Paul St. Improvements, Franklin Sidewalk, Waterbury Park-and-Ride.

Erik Alling, PE, - Project Manager. Erik has worked as a project engineer for the last 7 years on numerous path, sidewalk, and complete street projects funded through the MAB. He has a thorough knowledge of VTrans Standard Construction Specifications and developing project manuals including Special Provisions using the MAB template. He has utilized his proficiency in CAD platforms to produce high quality buildable plans that are in conformance with VTrans CADD Standards.

Relevant Projects: Waitsfield Village West Sidewalk – Phase 1 and Old County Road Intersection Realignment, Waitsfield Village West Sidewalk – Phase 2, Essex Route 2A Shared-Use Path, Franklin School Sidewalk, Hartford Lower Sykes Mountain Avenue Sidewalk, Waterbury Stowe Street Sidewalk.

Israel Maynard, PE - Project Manager. Israel has worked as a project engineer for the last 10 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.

Relevant Projects: Colchester Campus connector, Springfield Park-and-Ride with Shared use path realignment, Cambridge-Bakersfield Reclaim, Bridport/Irasburg/Winhall Box Culverts, Jay Bridge 10.

Mike Chenette, PE - Project Manager. Mike has worked as a Project Manager and designer on bridge and culvert related projects for over 20 years. These have included numerous town and state projects that were developed under the VTrans process. He has a thorough knowledge of VTrans project development procedures and requirements. His experience includes scoping, design, bid and construction services for a wide range of bridge and culvert projects.

Relevant Projects: Manchester Roundabout, Town of St. Johnsbury Bridge #46 replacement, Town of Corinth Bridge #36 replacement, Town of Rutland Prospect Hill Road Culvert replacement, Town of Burke Bridge #20 replacement, City of Montpelier Bridge #7 replacement, Town of Berlin Bridge #10 replacement, Town of Hartford Bridge Maintenance and Capital Improvement Plan.

Rick Bryant, PE – Senior Associate, Project Manager. Rick is a senior traffic engineer and transportation planner with 35 years of experience in New England. He has assisted multiple Vermont municipalities and VTrans in the planning and development of a variety of infrastructure projects. He is familiar with the VTrans traffic impact study guidelines and has assisted VTrans in formulating its policies relative to traffic impact fees for development projects and the provision of left-turn lanes on two-lane highways. He is an effective speaker with extensive public participation experience on transportation projects.

Relevant Projects: Williston Industrial Avenue Corridor Study, Williston VT 2A/Industrial Avenue Intersection Scoping Study, Proposed VTrans Park and Ride Lot in Williston, Waterbury Village Parking Study, Burlington Downtown Parking Study, Rutland Route 7 Corridor and Land Use Study, Shelburne Village Traffic Study, Burlington Riverside Avenue Scoping Study, South Burlington, Williston Blair Park Sidewalk.

Gary A. Santy, PE – Senior Principal, Project Manager. Gary will be available to provide project management services and quality assurance/quality control for projects. He has over 35 years of experience with Stantec in transportation design, traffic (vehicular, bicycle and pedestrian) management, construction engineering, public participation, environmental documentation, and permitting.

Relevant Projects: Widening Route 2 South Burlington, Waterbury Roundabout, East Montpelier Park & Ride, Burlington North St Revitalization Construction, Rutland Center St Marketplace.

Greg Edwards, PE – Senior Principal, Project Manager. Greg has over 25 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.

Relevant Projects: Burlington Church and St. Paul Street Reconstruction, Bristol VT 116/North Street/South Street Reconstruction, South Burlington US 2 Staples Plaza Reconstruction

Project Engineers and Technical Support Staff

Harry Petrovs, LS - Right-of-Way Specialist. Harry will be responsible for researching and documenting ROW records and preparing ROW Plans and Documents meeting VTrans requirements. Harry worked in the right-of-way section for the Agency of Transportation (VTrans) and was made the Chief of Plans and Titles Unit in 2008. Harry was assigned to the "Special Projects Unit (SPU)" responsible for oversight for development of right-of-way plans, and included preparation of documents for acquisition, negotiations for acquisitions, resolving right-of-way issues during construction.

Relevant Projects: Essex Route 2A Path, Essex Pinecrest Drive Sidewalk, Essex Towers Road Sidewalk, Waitsfield Village West Sidewalk – Phase 2, Waterbury Main Street Reconstruction, Burlington Roundabout.

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

Relevant Projects: Waterbury Roundabout, South Burlington US Route 2 Widening, Hartford Upper Sykes Mountain Avenue Sidewalk, and Hartford US Route 5 Sidewalk.

Todd Duguay, PE - Project Engineer. 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.

Relevant Projects: Essex Route 2A Shared-Use Path, West Lake Shore Drive Shared Use Path, Montpelier Taylor Street to Main Street Multi-use Path, Waterbury Farr Road, Butler Farms Stormwater Pond, EPA Demonstration Grant: Oak Creek Subdivision, Church Street Marketplace LTF Project, Rutland Center Street Marketplace, Waterbury Stowe Street Reconstruction, Colchester VT Route 15 & Fort Ethan Allen, Champlain Parkway, Manchester Roundabout, US2/I-89 Exit 14 Third Lane, Colchester Campus Connector Road, Waterbury Roundabout, Rutland US 7 Improvements.

Chris Gendron, PE - Project Engineer. Chris has worked as a project engineer for the last 6 years on numerous stormwater, roadway, path and sidewalk projects funded through the MAB. 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.

Relevant Projects: South Burlington Oak Creek Village Culverts, Waterbury Roundabout, Essex Route 2A Shared-Use Path (scoping and design), Old County Road Intersection Realignment, Hartford Sidewalk Projects, Waterbury Stowe Street Sidewalk.

Doug Campbell, PE - Project Engineer. Doug has worked on numerous roadway and bridge projects funded through the MAB and VTrans during his 27 year tenure at Stantec. Doug is well versed in the MAB process for the development of construction documents including plan sets, cost estimates, specifications and project manuals. Doug has design experience in construction phase engineering services, general civil engineering services including civil/site design, process design, drainage systems and stormwater design, stormwater systems management, roadway design, and design of water distribution and sewer collection systems. Doug has been a senior project engineer in several notable MAB and VTrans projects.

Relevant Projects: Waterbury Roundabout, Burlington Waterfront Access North, Phase II, Saint Johnsbury Replacement of Bridge No. 46 over Sleepers River, Colchester Campus Connector, Winooski Downtown Development Infrastructure Improvements, Burlington Champlain Parkway (formerly Southern Connector), Burlington Main Street Reconstruction.

Dave Youlen, PE - Project Engineer. Dave has worked as a transportation engineer for the last 18 years on numerous roadway, bridge, culvert, railroad and intersection projects, on both the construction inspection and design side, funded through the VTrans and MAB. He has a thorough knowledge of VTrans Standard Construction Specifications and developing traffic management and traffic control plans, as well as Special Provisions. He has utilized his years of experience in construction to perform plan and constructability reviews. He also has experience providing services in the Quality Assurance Unit at VTrans.

Relevant Projects: Winooski Downtown Redevelopment project, Burlington North Street Revitalization project, Colchester Campus Connector project, Richford TH 3 bridge replacement, Fairfield TH 1 and TH 47 bridge replacements, Middlebury to Burlington US Route 7 multiple paving projects, Addison VT 17 and VT 125 Overlay and Crown Point Historic Site Restoration, Washington County Railroad Bridge 501 emergency bridge stabilization project, Winooski West Canal Street Reconstruction, New Haven US Route 7 railroad crossing project, Bennington Route 279 North bypass project, Essex Susie Wilson Road culvert project, Essex Colbert Street Swirl Separator Project, Richmond-Williston I-89 culvert lining project.

Tom Knight, PE - Project Engineer. Tom has 17 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.

Relevant Projects: Hartford STP HTFD(1) – NECR over Bridge Street, Waterbury Roundabout (Main Street over Thatcher Brook Bridge), St. Johnsbury Portland Street Bridge.

Maegan Crowley, PE - Project Engineer. Maegan has worked as a Sr. Electrical Designer, in a variety of electrical engineering projects. She has designed numerous path, sidewalk, and streetscape lighting projects throughout New England. And has worked with VTrans Standard Construction Specifications. Her experience includes assisting Project Managers, technical design, and engineering analysis and is responsible for the layout and wiring of the street lights throughout the project area. She uses the latest in CADD and electrical engineering software and helps to put together the details, specifications, and bid documents for projects. She is also responsible for technical computer analysis, modeling consultation, detail technical support, and project review.

US2 - Staples Plaza Intersection, South Burlington, Vermont

Relevant Projects: Burlington Main Street, Waterbury Main Street & Roundabout, Bennington Bypass, Rutland STP019-3(57), Park & Rides in Springfield, Bradford, Enosburg and East Montpelier.

Glenn Burgmeier, PE - Project 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.

Relevant Projects: East Montpelier Park-and-Ride, Colchester US 7/Exit 16 Park-and-Ride, Springfield US 5 Park-and-Ride, Bradford Park-and-Ride, numerous VTrans resurfacing projects.

RuthAnne Daniels, EIT - Project Engineer. RuthAnne has nearly six years of experience in the design and construction inspection of transportation projects funded through the MAB. She is familiar with transportation and pedestrian bridge design, sidewalk design, slope stability design, and roadway improvement projects. She has performed construction management and inspection for roadway, drainage, road construction and paving projects. RuthAnne is experienced in bridge inspection and assessment.

Relevant Projects: Brandon Overflow Culvert, Burlington Island Line Pedestrian Bridge, Bethel Old Route 12 Bridge Removal, VTrans St Johnsbury BRO, VTrans East Montpelier Bridge Replacement, VTrans Lyme-Thetford Bridge Project, VTrans Westminster I-91 Bridge Project.

Sean Neely, EIT - Project 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 foci in community planning and geographic information systems (GIS).

Relevant Projects: I-89 Exit 14 Alternative Transportation Crossing Study, South Burlington Garden Street, Traffic Analysis for Chester/Springfield Route 11 Detour, Route 100 Guptil Road Waterbury Traffic Signal, Riverside Avenue/ Colchester Avenue Burlington Intersection Improvements, Weybridge-New Haven Bridge Detour Traffic Analysis, Pittsford-Brandon Temporary Traffic Control Plans, Williston Industrial Avenue Traffic Control Plans, Hartford Lower Sykes Mountain Avenue Sidewalk, Lamplite Acres Williston Drainage Improvements.

Polly Harris – Wetland Scientist, Permit Specialist. Polly offers more than 15 years of professional experience in the natural resource, floodplains and wetland science field. She is a Certified Floodplain Manager per the Association of State Floodplain Managers. She has performed resource identification, permitting and NEPA documentation for many Vermont projects. She has extensive background in environmental site evaluations, wetland and stream delineations, reporting, wetland permitting and wetland mitigation planning.

Relevant Projects: Essex Towers Road Sidewalk, Essex Pinecrest Drive Sidewalk, South Burlington Oak Creek Butler Farms Culverts, Waitsfield Old County Road Sidewalk Project.

Krista Reinhart – Stormwater Permit Specialist. Krista is an Environmental Scientist with over 19 years of experience in environmental assessments and federal, state, and local environmental permitting; construction-phase stormwater management design (e.g., Erosion Prevention and Sediment Control (EPSC) Plan preparation), permitting, and inspection/ oversight in compliance with the National Pollution Discharge Elimination System (NPDES) permit program; operational-phase stormwater management planning, design, permitting, and inspections/monitoring in compliance with the Vermont Agency of Natural Resources Environmental Protection Rules (Chapters 18 and 22, including drafts pending adoption); water quality monitoring; watershed planning; ecological restoration; and technical expert testimony before the Vermont Public Service Board (Section 248) and Vermont Natural Resources Board (Act 250). Krista has extensive experience on linear projects, including transportation corridors, natural gas pipelines, and electric transmission lines. Krista has also worked with the VTrans EPSC Protocol and the VTrans Environmental Procedures Manual, and is familiar with the draft Transportation Separate Storm Sewer System (TS4) Permit (pending adoption) and the draft Chapter 6.0 Public Transportation Projects of the Vermont Stormwater Management Manual (VSMM; pending adoption)

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, CAD design, and project management staff, all of whom will be called upon, as required, to satisfactorily complete those components of the project.

d. Resumes

Greg Goyette, PE

DESIGN SERVICES CONTRACT MANAGER

Years with Stantec: 15

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.

REGISTRATIONS

Professional Engineer #8834, State of Vermont

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

EDUCATION

M.S., Civil Engineering, Clarkson University, Potsdam, New York, 2001

B.S., Civil Engineering, Clarkson University, Potsdam, New York, 1998

MEMBERSHIPS

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

President (2011-2012), Vermont Society of Engineers

AWARDS

2010 ACEC Grand Award, Heritage Flight Aviation Campus Expansion

2009 ACEC Grand Award, Randolph Park and Ride

2008 Vermont Young Engineer of the Year (ACEC)

2007 ACEC Merit Award, Sharon-Strafford VT 132 Reconstruction

2001 ACEC Merit Award, US Route 2 Reconstruction; Danville, Vermont

SELECT PROJECT EXPERIENCE

Hartford Sykes Mountain Avenue and US Route 5 Bicycle Lane and Sidewalk Design, Hartford, Vermont

Project Manager for the final design, bid plans and documents for construction of sidewalks and 4' wide bicycle lanes along US Route 5 and Sykes Mountain Avenue. Unique aspects of the project include siting the Sykes Mountain Avenue sidewalk to accommodate future roadway widening from 2 lanes to 3 lanes and coordinating the design with adjacent projects currently in progress including the US Route 5/I-91 Interchange Scoping Study and final design of the Sykes Mountain Avenue/Beswick Road roundabout. The project is being completed through the VTrans Local Transportation Facilities program and is funded with two separate VTrans Enhancement Grants.

Garden Street, South Burlington, Vermont

Project Manager for design and engineering services for the development of a new roadway in the new City Center. This Complete Street project included pedestrian scale streetscape with bicycle facilities, green and low impact development infrastructure, and efficient traffic operations. Stormwater management, structural engineering, public input facilitation, right-of-way services, and traffic engineering services are additional services to be provided.

Campus Connector Road, Colchester, Vermont

Lead project engineer for local roadway project serving as connector road between student housing and Saint Michael's College in Colchester, Vermont. The project included bike lanes on both sides of the road and nearly one mile of sidewalk. Responsibilities include serving as technical lead on development of project plans and specifications, and working closely with client to ensure a context sensitive design. Unique aspects of this project include the design of a cost effective stormwater management system that meets state regulations in an urban and extremely flat area of town. The solution consists of a low impact design (LID) that utilizes existing sandy soils to infiltrate large storm events.

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

Lead project engineer responsible for designing single lane urban roundabout to improve safety and mobility near I-89 Exit 10 interchange. Design included a dry swale to treat water quality and recharge volume per the Vermont Stormwater Management Manual. Other responsibilities include serving as technical lead on development of project plans and specifications. 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.

VT Route 7A/11/30 Roundabout, Manchester, Vermont

Project Engineer responsible for the final design, permitting and contract plans for a proposed Modern Roundabout at the intersection of VT Route 7A/11/ 30 and a mini-Roundabout at the adjacent intersection of VT Route 7A/30 in the Village/Commercial Downtown area of Manchester Center, VT.

Erik Alling, PE

BIKE/PED/COMPLETE STREETS PROJECT MANAGER

Years with Stantec: 8

REGISTRATIONS

Professional Engineer #89153, State of Vermont

Envision™ Sustainability Professional (ENV SP), Institute for Sustainable Infrastructure

EDUCATION

B.S., Civil Engineering, University of Vermont, Burlington, Vermont, 2008

MEMBERSHIPS

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

Since joining Stantec in June 2008, Erik has provided design and CADD support on a variety of transportation design projects. Erik's primary responsibilities include preparation of preliminary, final and contract design plans for various transportation projects. This work includes field review, permitting, design, quantity computations and estimating. Erik has experience working in MicroStation, and InRoads.

SELECT PROJECT EXPERIENCE

Safe Routes to School - Sidewalk Design, Franklin, Vermont
Staff engineer for this sidewalk project including design of 1300' sidewalk connection and crosswalks to provide safer passage for students walking to school. Project administered through the VTrans Safe Routes to School Program. Mr. Alling assisted in developing design criteria, created alignment and layout plans, aided in stormwater drainage system, and CADD file management.

Sidewalk and Shared Use Path Design, Essex, Vermont
Staff engineer responsible for developing design criteria, creating alignments, developing typical sections, developing final plans, assisting with utility coordination, and conceptual drainage design. Also compiled bid documents for use as a project manual. Stantec provided engineering, design and permitting of 1130 feet of multi-use path along the southern side of Vermont Route 2A and 1530 feet of concrete sidewalk along the northern side of Pinecrest Drive from Route 2A to Suffolk Lane in Essex, Vermont.

Waitsfield Intersection Improvements, Waitsfield, Vermont
Transportation engineer responsible for designing horizontal and vertical alignments and signing, estimating project cost, creating a project manual, and filing permit applications for this new sidewalk and intersection realignment project.

Colchester-Essex NH 030-1(34), Colchester-Essex, Vermont
Project Engineer for the design and engineering of a shared use path along VT 15 in Colchester-Essex, Vermont. Responsibilities included developing design criteria, designing horizontal and vertical alignments, and leading effort to develop conceptual and preliminary plans.

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.

Williamstown STP WALK(18), Williamstown, Vermont
Resident project representative in charge of construction observation for the VT Route 14 sidewalk and pedestrian bridge construction. Responsibilities included daily quantity tracking, ensuring that the job was built per state specs, and helped coordinate between the town and contractor for schedule and payment.

US 2 / I-89 Exit 14 Improvements Design, South Burlington, Vermont
Staff engineer responsible for traffic control design, plan development, signage design, plan review/comment response, and quantity calculation/development of estimate for the construction of a third eastbound lane of US Route 2, an urban arterial with over 40,000 vehicles per day.

Gary Santy, PE

HIGHWAY/PARK-AND-RIDE PROJECT MANAGER, CONSTRUCTABILITY REVIEWS

Years with Stantec: 38

REGISTRATIONS

Professional Engineer #7563, State of Vermont

Professional Engineer #11152, State of New Hampshire

Professional Engineer #9419, State of Maine

EDUCATION

A.S., Vermont Technical College, Randolph, Vermont, 1978

MEMBERSHIPS

President, American Council of Engineering Companies (Vermont)

Vice President, Vermont Society of Engineers

Member, New Hampshire Good Roads Association

AWARDS

2009 ACEC Grand Award, Randolph Park and Ride

2002 FHWA Excellence in Highway Design for Urban Highways, Main Street Reconstruction; Burlington, Vermont

2001 ACEC Merit Award, US Route 2 Reconstruction; Danville, Vermont

Gary has over 38 years of experience with Stantec in transportation design, traffic (vehicular, bicycle and pedestrian) management, construction engineering, public participation, environmental documentation, and permitting. He has worked closely with the Vermont Agency of Transportation on dozens of roadway projects, including a high-profile project to create a new limited access bypass (VT Route 279) of US Route 7 and VT Route 9 around Bennington, Vermont. As the senior Project Manager for the $70-million effort, Gary coordinated with five other consultant firms to design and construct the bypass, and manage all aspects of its design for 5 construction contracts including drainage, hydraulics, erosion control, lighting and traffic signals, right-of-way, utilities coordination and construction engineering.

SELECT PROJECT EXPERIENCE

US 2 / I-89 Exit 14 Improvements Design, South Burlington, Vermont
Project Manager for the final design for the construction of a third eastbound lane of US Route 2, an urban arterial with over 40,000 vehicles per day, from the Sheraton Staples intersection to the I-89 southbound on-ramp. Project elements include decorative street lighting, landscaping, utility relocations, stormwater treatment, interconnected and coordinated signal system, and traffic control for highway widening. Stantec services will also provide NEPA documentation, contract plans, construction cost estimate and permitting meeting VTrans LTF procedures. Considerations included "Complete streets" approach with pedestrian bicycle ad transit facilities.

Waterbury Roundabout, Waterbury, Vermont
Project Manager responsible for managing the design, permitting, contract document development and construction related engineering for the US Route 2 and VT Route 100 intersection. The improvement is 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.

East Montpelier Park and Ride, East Montpelier, Vermont
Senior Project Manager with responsibility of Preliminary and Final Design for the Park and RIde facility in the Town of East Montpelier, Vermont. Stantec assisted the Town through the bidding phase, including preparation of the Contract Front-End Documents as well as coordination with the Town regarding the investigation and subsequent details for the Brownfield evaluation.

Berlin Park and Ride, Berlin, Vermont
Senior Project Manager with responsibility of Preliminary and Final Design for the Park and RIde facility in the Town of Berlin, Vermont. Stantec evaluated the design to maximize number of available parking spaces, accommodate public transit vehicles, shelter, lighting, bicycles and other amenities.

Putney Park and Ride, Putney, Vermont
Senior Project Manager with responsibility of Preliminary and Final Design for the lighting design, design of a relocated bus shelter, new bicycle shelter as well as a stormwater retention basin for the Park and RIde facility in the Town of Cambridge, Vermont.

Saint Johnsbury Park-and-Ride, St. Johnsbury, Vermont
Senior Project Manager with responsibility for preliminary and final design, contract plans and construction assistance for this 50± space lighted, paved and landscaped Park-and-Ride facility.

Mike Chenette, PE

STRUCTURES/CULVERTS PROJECT MANAGER

Years with Stantec: 17

REGISTRATIONS

Professional Engineer #3869, State of Vermont

EDUCATION

B.S., Civil Engineering, University of Vermont, Burlington, Vermont, 1975

AWARDS

2008 ACEC Merit Award, Smugglers' Notch Scenic Highway Corridor Improvements

Mike has over 35 years of civil engineering experience including the structural design of buildings and bridges, site development, roads, and water/wastewater systems. He has been responsible for the design, preparation of plans and specifications, investigations, and management of a variety of projects.

Mike is an accomplished Project Manager and engineer for bridge projects. These projects have included bridge repairs, rehabilitations, replacements and new construction. With his extensive experience he brings innovative and cost-effective solutions to maximize the benefits of bridge improvements.

SELECT PROJECT EXPERIENCE

Roxbury RT 12A Culvert Replacement, Roxbury, Vermont
Project engineer for emergency culvert replacement due to Tropical Storm Irene. Developed contract plans for 24' wide precast concrete span with natural bottom within one week. Considerations included rapid construction, readily available materials, and temporary maintenance of traffic.

VTrans – Bridport STP CULV(29), Bridport, Vermont
Project Manager for the design of the replacement of two culverts on Route 125 in Bridport. The existing corrugated steel culverts were replaced with precast concrete box structures that are buried several feet below the channel line to allow for a natural bottom. One of the culverts included an elevated shelf inside the box structure to allow for the passage of small mammals from one side of highway to the other. The culverts were replaced during short duration road closures of 5 days or less. A public informational meeting was held during the design phase to reach out to the nearby Towns that were impacted by the road closure and obtain their input and concerns.

Culvert Preventative Maintenance, Richmond-Williston, Vermont
Project Manager responsible for developing plans for culvert rehabilitation and headwall reconstruction including strict erosion control measures. This preventative maintenance project for two culverts along I-89 included site inspection, engineering investigations, environmental review, preparation of opinions of probably construction costs, preparation of Final and Contract Plans, and design assistance during construction.

Culvert Preventative Maintenance, Weathersfield-Thetford, Vermont
Project Manager responsible for developing plans for culvert rehabilitation and headwall reconstruction including strict erosion control measures. This preventative maintenance project for seven culverts along I-91 included site inspection, engineering investigations, environmental review, preparation of opinions of probably construction costs, preparation of Final and Contract Plans, and design assistance during construction.

VTrans Washington County Railroad Bridge #561, Coventry, Vermont
Project engineer for the design of a 3-span open deck railroad bridge in Coventry, Vermont. The proposed structure was for the replacement of multiple pipe culverts and provided increased waterway opening at the site. The design incorporated steel pile bents for piers to allow for an accelerated construction schedule.

St. Johnsbury BRO 1447(30), St. Johnsbury, Vermont
Project Manager for the design of the replacement of Bridge No. 46 on Town Highway 371, over the Sleepers River. Services included bridge type evaluation, geotechnical evaluation and developing contract plans for bidding.

Israel Maynard, PE

HIGHWAY/STORMWATER PROJECT MANAGER

Years with Stantec: 10

REGISTRATIONS

Professional Engineer #69573, State of Vermont

EDUCATION

B.S., Civil Engineering, University of Vermont, Burlington, Vermont, 2006

MEMBERSHIPS

Member, Chi Epsilon National Civil Engineering Honor Society

Since joining Stantec in May 2006, Israel has provided design and CADD support on a variety of transportation design projects. Israel's primary responsibilities include preparation of preliminary, final and contract design plans for various transportation projects. This work includes field reviews, design layout, drainage design, stormwater treatment facilities, quantity computations and estimating.

One of Israel's greatest assets is his proficiency with a wide variety of design software including MicroStation, InRoads, Storm/Sanitary, Hydrocad, Autoturn, Guidesign, and ArcView. He has been a quick study of these, and is constantly sought after as a valuable team member.

SELECT PROJECT EXPERIENCE

Colchester Campus Connector, Colchester, Vermont
Staff engineer responsible for CAD work, alignment design, drainage, and stormwater design for this roadway design project. This project consists of a roadway to be constructed between St. Michael's College and Camp Johnson and will provide considerations for pedestrian and bicycles. The new roadway will link the two facilities bypassing traffic on VT Route 15, provide a safer route for pedestrians and bicyclists, and create a gateway to Camp Johnson and St. Michael's College.

U.S. Route 2, Danville, Vermont
Responsible for final plans and ROW plans for the reconstruction of approximately one mile section of US Route 2 through the center of Danville, Vermont. The project design includes full depth roadway reconstruction, underground power, telephone and cable, a new closed storm drainage system, and stormwater treatment pond. Context sensitive design, the incorporation of local input, local concerns and traffic calming features is a central design principal for this project. Lighting, a traffic signal, signing and pavement markings are also incorporated. This one of a kind project includes extensive local involvement and a cooperative effort with the Vermont Arts Council to incorporate landscaping and sculptural elements into the overall project.

Waterbury Roundabout, Waterbury, Vermont
Responsible drainage design for the US Route 2 and VT Route 100 intersection. 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.

Bennington Route 279 North, Bennington, Vermont
Responsible for CAD work, systems Interchange drainage and stormwater treatment, systems Interchange alignment design, and construction engineering for the $43 million construction of new US Route 7 circumventing Bennington. This 3.85-mile long, two-lane limited access highway included two interchanges (a systems interchange and a single point diamond interchange), eight new structures, considerations for future four-lane construction, utility relocation, and 1.0 mile of urban street reconstruction. Specified low maintenance stormwater treatment designs included grass channels, wet swales, and a wet pond.

VT Route 143, Springfield, Vermont
Staff engineer responsible for CAD work and alignment design for the development of conceptual plans for the rehabilitation of Route 143 in Springfield, Vermont. This project evolves from urban to suburban to rural character and design along its 5-mile length.

Marc Foisy, PE

HIGHWAY PROJECT MANAGER

Years with Stantec: 20

REGISTRATIONS

Professional Engineer #8436, State of Vermont

EDUCATION

B.S., Civil Engineering, Norwich University, Northfield, Vermont, 1996

A.S., Architectural Engineering and Building Technology, Vermont Technical College, Randolph, Vermont, 1992

AWARDS

2004 ACEC/Maine Honor Award, US 201 Reconstruction; Moscow-Caratunk, Maine

2002 ACEC / Vermont Merit Award, US Route 2 Reconstruction; Danville, Vermont

2002 FHWA Excellence in Highway Design for Urban Highways, Main Street Reconstruction; Burlington, Vermont

2000 ACEC Engineering Excellence Award, Main Street Reconstruction; Burlington, Vermont

Marc has 20 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 has extensive experience and formal training with CADD software including MicroStation and InRoads.

SELECT PROJECT EXPERIENCE

Randolph-Roxbury ER STP 0187(11) and Roxbury-Northfield ER STP 0187(13), Randolph, Roxbury, and Northfield, Vermont

Project Manager for this Tropical Storm Irene Emergency Relief Project. Scope of work included the permanent repair to the pavement structure, using a reclaimed stabilized base process, to increases the strength and durability of pavement base layers. Additional work included culvert repair and replacement, ledge removal, superelevation and banking corrections, a new concrete panel at-grade railroad crossing along the mainline, guardrail repair, sign upgrades to comply with current MUTCD standards, and permitting assistance. Deliverables included plans and special provisions from Conceptual to Contract Plans for this 10 mile, $12 million construction project.

US Route 2 Reconstruction, Danville, Vermont

Project engineer responsible for Right-of-Way title abstracting, design of left-turn lane, and signing and pavement marking plans for this $4.5 million project. Project included total roadway reconstruction of a two-lane rural arterial through the town center with context sensitive design, drainage design/stormwater management, traffic calming, lighting, signing, pavement markings, and coordination with the Vermont Arts Council to design and implement aesthetic treatments and enhancements as identified by the Town.

Braintree ER STP 0187(12), VT Route 12A, Braintree, Vermont

Project Manager for this Tropical Storm Irene Emergency Relief Project. Scope of work included the complete replacement of Bridge Number 7, replacement of the approach slab to Bridge Number 6, and restoration of the side slope between VT Route 12A and the Third Branch of the White River. Due to the poor condition of Bridge Number 7 and the fear of an imminent failure, this project was fast tracked in design to get it out to bid prior to the spring run-off season. Project Manager duties included planning and meeting with VTrans and other stake holders to meet the projects demanding schedule, also included were property owner meetings and a fast tracked ROW process, and checking and coordination of the design for roadway and bridge pieces. Deliverables included plans and special provisions from Conceptual Plans to Contract plans, for this nearly $2 million construction project.

Bennington Route 279 North, Bennington, Vermont

Project engineer for the development of preliminary, final and contract plans and documents. Responsibilities include horizontal and vertical alignment design for mainline and 2 interchanges, establishment of final construction limits, drainage system design, stormwater management design, erosion prevention and sediment control design, design of a truck escape ramp along Route 9, and drainage system design for this $60 million construction of VT Route 279 circumventing Bennington. This 3.8 mile long, 2-lane limited access highway includes 2 interchanges (a systems interchange and a single point diamond interchange), 8 new structures, considerations for future 4-lane construction, utility relocation, and 1.0 mile of urban street reconstruction. Project requires extensive coordination of the 5-team member firms and working closely with the VTrans. Services include conceptual, preliminary, and final design for highway, structure, stormwater treatment, traffic signals, right-of-way, utilities and lighting.

Greg Edwards, PE

SCOPING/INTERSECTION DESIGN PROJECT MANAGER

Years with Stantec: 28

Greg has over 26 years of engineering experience including the planning, design, permitting, quality control, construction and rehabilitation of transportation facilities. Greg is an effective 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, Greg 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. As the leader of the firm's New England Transportation and Traffic Division, Greg's clients include large organizations such as the state transportation departments of Vermont, Maine, New Hampshire, New York and the Burlington International Airport. He has also worked for a variety of municipalities, including the cities of Burlington and Rutland, Vermont and Portland, Maine.

REGISTRATIONS

Envision™ Sustainability Professional (ENV SP), Institute for Sustainable Infrastructure

Professional Engineer #5842, State of Vermont

Professional Engineer #7247, State of Maine

EDUCATION

B.S., Civil Engineering, University of Vermont, Burlington, Vermont, 1979

MEMBERSHIPS

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

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

AWARDS

2007 ACEC Merit Award, Sharon-Strafford, Vermont 132 Reconstruction

2004 ACEC/Maine Honor Award for Engineering Excellence, US 201 Reconstruction; Moscow-Caratunk, Manie

2002 FHWA Excellence in Highway Design, Main Street Reconstruction; Burlington, Vermont

SELECT PROJECT EXPERIENCE

Church Street and St. Paul Street Improvements, Burlington, Vermont
Project Manager for the final design of improvements to Church Street and St. Paul Streets in Burlington, VT. 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.

VT Route 7A/11/30 Roundabout, Manchester, Vermont
Principal-in-Charge for the final design, permitting, and contract plans for a proposed modern roundabout at the intersection of VT Route 7A/11/ 30 and a mini-roundabout at the adjacent intersection of VT Route 7A/30 in the village/commercial downtown area of Manchester Center, Vermont.

US 2 / I-89 Exit 14 Improvements Design, South Burlington, Vermont
Project Manager for the final design for the construction of a third eastbound lane of US Route 2, an urban arterial with over 40,000 vehicles per day, from the Sheraton Staples intersection to the I-89 southbound on-ramp. Project elements include utility relocations, stormwater treatment, interconnected and coordinated signal system, traffic control for highway widening, decorative street lighting, and landscaping. Stantec services will also provide NEPA documentation, contract plans, construction cost estimates and permitting meeting VTrans LTF procedures. Considerations included "Complete streets" approach with pedestrian, bicycle, and transit facilities.

CCMPO – Route 15 Signalization Optimization, Winooski, Colchester, Essex, and Essex Junction, Vermont
Principal-in-Charge for the development of a computer model using Synchro and SimTraffic of a 16 intersection with 10 traffic signals in a 3.5-mile corridor. Project required traffic and geometric data collection and field calibration in order to produce an accurate representation of existing conditions. Coordination and optimization as well as geometric improvements were analyzed and summarized in a detailed report.

Rick Bryant, PE

SCOPING/TRAFFIC/URBAN DESIGN PROJECT MANAGER

Years with Stantec: 4

REGISTRATIONS

Registered Engineer #9004, State of Vermont

Registered Engineer #36532, Commonwealth of Massachusetts

EDUCATION

B.S., Civil Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts, 1979

B.S., Management, Massachusetts Institute of Technology, Cambridge, Massachusetts, 1979

M.S., Civil Engineering, University of California at Berkeley, Berkeley, California, 1980

MEMBERSHIPS

Instructor for PE Refresher Course, Boston Society of Civil Engineers Section

Member, Institute of Transportation Engineers

Rick is an Associate with more than 35 years of consulting experience in New England. He is a transportation planner and traffic operations specialist with extensive experience in the planning, design and permitting of transportation projects for public sector clients and land development projects for private sector clients. Rick has developed a broad knowledge of applicable state and local regulations needed for project permitting and has established strong working relationships with state highway and environmental permitting agencies. He is also an experienced public speaker who can effectively present transportation plans and projects in public hearings and other forums.

SELECT PROJECT EXPERIENCE

VT 2A Scoping Study, Williston, Vermont

Conducted a scoping study on behalf of the Chittenden County Regional Planning Commission and the Town of Williston to develop alternative improvement plans for the congested VT 2A/Industrial Avenue intersection and the VT 2A roadway segment leading north from the intersection. Proposed plans include capacity and safety improvements as well as new accommodations for pedestrians and cyclists. Alternatives, including various configurations of a modern roundabout were presented to the community and Town officials for review and selection of a preferred alternative.

Proposed Loop Road, Shelburne, Vermont

Working with the Chittenden County Regional Planning Commission on behalf of the Town of Shelburne an evaluation of a proposed change in the Shelburne Village roadway network was conducted. Existing traffic volumes were measured and reassigned to account for new travel routes that would be made available with the Loop Road built. Consequences for future land development in the village and Route 7 operations were quantified and presented to Town officials and residents.

Industrial Avenue Corridor Study, Williston, Vermont

For the Chittenden County Regional Planning Commission managed a corridor study for a redeveloping industrial district in Williston. Considered the multimodal transportation impacts of an ongoing transition from low-traffic generating industrial uses to high-traffic generating office and service uses. Developed localized trip generation rates that were applied to assumed future land use changes. Recommended the expansion of pedestrian and bicycle facilities and certain intersection modifications to add capacity.

Pearl Street Corridor Study, Burlington, Vermont

Conducting a roadway operations and design study for an urban street in downtown Burlington, Vermont. Modifications to existing lane use and parking conditions are being evaluated with the goal of adding bike lanes to the roadway. Impacts to traffic operations are being considered. Alternatives will be vetted in a public forum.

CCRPC Blair Park Williston Pedestrian Facility Scoping Study, Williston, Vermont

Project Manager for preparation of sidewalk scoping study for a compact, mixed-use community in Williston, Vermont. Project included field review, development of alternatives designs, preparation of alternatives evaluation matrix, cost estimates and final report. The report was provided to assist the Town in attaining a VTrans construction grant. The project was completed on time and under budget in spite of various scope changes.

Thad Luther, PE

HIGHWAY, TRAFFIC SIGNAL, ROUNDABOUTS

Years with Stantec: 16

REGISTRATIONS

Professional Engineer #8281, State of Vermont

EDUCATION

B.S., Civil Engineering, University of Vermont, Burlington, Vermont, 1997

A.S., Civil Engineering, Vermont Technical College, Randolph, Vermont, 1994

Florida Advanced Work Zone Traffic Control Course, ATSSA, Brandon, Florida, 2008

AWARDS

2007 ACEC Transportation Merit Award, Rt. 132, Sharon-Strafford, Vermont

Thad has served as a project engineer and manager for a diverse variety of transportation related projects for over 17 years. His roadway experience includes traffic engineering, signal design, highway geometrics and aviation services. His roadway experience includes updating existing intersections, final design of limited access facilities, award winning rural highway upgrades and completion of planning studies for future roadway expansions. He is also experienced with 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 successfully combines technical know-how with the ability to facilitate communication between clients, co-workers and the public to complete projects.

SELECT PROJECT EXPERIENCE

VTrans Waterbury Route 100 ATC Evaluation, Waterbury, Vermont
Project Manager responsible for the evaluation of adaptive traffic control (ATC) system on a 4-intersection corridor. This system is intended to efficiently adjust timings and phasing for large seasonal fluctuations in traffic due to tourism and special events. In addition, the ATC will better accommodate variable traffic flows due to numerous construction projects within the area. At the request of VTrans, Stantec evaluated the system and successfully incorporated the design details into Pre-Contract plans for an active bridge rehabilitation project without delaying the project schedule.

VTrans VT 289/VT 2A Interchange Improvements, Colchester-Essex, Vermont
Project Manager responsible for overseeing design of this signal equipment upgrade project. Project included evaluation of the existing signal system and integration of the upgraded signal equipment. This project is the first phase of a 2 phase project. Second phase involved capacity increases via lane additions so this signal upgrade project accounted for future roadway widening. The client desired to implement adaptive traffic control (ATC) into the signal system. Stantec evaluated various systems and selected the Rhythm Engineering's InSync System. This was the first ATC system installed in the state of Vermont.

U.S. Route 2 and Village Green Revitalization, Danville, Vermont
Traffic Engineer with responsibilities to include traffic data collection, developing timing and phasing plans utilizing Synchro software, traffic signal equipment layout, and development of plans consistent with the client's standards. Additional considerations include pedestrian facilities and lighting.

VT 116/North Street/South Street Improvements, 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 a 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.

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.

Karl Richardson, PE

HIGHWAY, UTILITY RELOCATION DESIGN, ROUNDABOUTS

Years with Stantec: 7

REGISTRATIONS

Professional Engineer #59609, State of Vermont

EDUCATION

A.A, Civil Engineering, Vermont Technical College, Randolph, Vermont, 1991

Karl has over 24 years of experience in civil engineering on a wide variety of private and public projects in the areas of transportation and land development. Karl has prepared designs, improvement plans, final maps, and transportation improvements for state agencies, municipalities, schools, and private developments. Karl utilizes 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.

SELECT PROJECT EXPERIENCE

US 2/I-89 Exit 14 Roadway Improvements, South Burlington, Vermont
Project engineer responsible for the final design of a third eastbound lane of US Route 2, from the Sheraton / Staples intersection to the I-89 southbound on-ramp. Project specifics include full depth widening, traffic signals, street lighting, landscaping, utility relocation, and stormwater treatment. Plan development and permitting for this urban principal arterial adhere to VTrans LTF procedures and included a construction general permit to address erosion protection and sediment control.

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.

CCRPC Lamplite Acres Green Streets Scoping Study, Williston, Vermont
Project engineer working with local steering committee to evaluate numerous alternatives and make recommendations for mitigating existing stormwater issues through low-impact development and green infrastructure in the Lamplite Acres neighborhood.

Hartford Sykes Mountain Avenue and US Route 5 Bicycle Lane and Sidewalk Design, Hartford, Vermont
Project engineer for the final design, permits, bid plans and documents for construction of sidewalks and 4' wide bicycle lanes along US Route 5 and Sykes Mountain Avenue. Unique aspects of the project include siting the Sykes Mountain Avenue sidewalk to accommodate future roadway widening from 2 lanes to 3 lanes and coordinating the design with adjacent projects currently in progress including the US Route 5/I-91 Interchange Scoping Study and final design of the Sykes Mountain Avenue/Beswick Road roundabout. The project is being completed through the VTrans Local Transportation Facilities program and is funded with two separate VTrans Enhancement Grants.

CCRPC US Route 7/Harbor Road/Falls Road Scoping Study, Shelburne, Vermont
Project engineer for the scoping study of a congested urban arterial intersection within the historic village core of Shelburne, Vermont. Services consisted of analyzing existing traffic conditions, identifying existing issues, developing a project purpose and need, identifying creative solutions and evaluating them, and conducting a public consensus building process. Considerations included promoting pedestrian and bicycle use and improving mobility on the urban arterial while respecting the historic and mixed use nature of the area. The resulting alternative includes a modern roundabout, creation of grid street network, and signalization improvements.

Todd Duguay, PE

HIGHWAY, STORMWATER

Years with Stantec: 10

REGISTRATIONS

Professional Engineer #59592, State of Vermont

EDUCATION

B.S., Civil Engineering, University of Hartford, West Hartford, Connecticut, 2003

MEMBERSHIPS

Member, Vermont Society of Engineers

Member, American Society of Civil Engineers

AWARDS

2013 ACEC/Vermont Merit Award Winner, Oak Creek Village / Butler Farms Stormwater Treatment

2011 ACEC/Vermont Merit Award Winner, Washington County Railroad (WACR), Bridge 501 Emergency Repairs

2009 ACEC/Vermont Grand Award, Randolph Park and Ride

Since beginning his career in 2003, Todd has designed roadways and interchanges, stormwater management and drainage systems. He has also worked as a construction inspector on both highway and aviation projects. As a Project 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, InRoads, and Civil 3D.

SELECT PROJECT EXPERIENCE

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.

US2/I-89 Exit 14 Third Lane, South Burlington, Vermont
Project engineer responsible for a complete quantity computation and preliminary plans estimate.

Colchester Campus Connector Road, Colchester, Vermont
Project engineer responsible for cross sectional design, quantity computation, estimate, and plan review for a local roadway construction project serving as the connector road between student housing and Saint Michael's College in Colchester, Vermont. Completed Contract Plans and Construction Documents, bid review and analysis and construction services.

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.

Rutland US 7 Improvements, Rutland, Vermont
Staff engineer responsible for horizontal roadway design for Route 7 and West Street, compiling conceptual plans, and fitting shared use path into context of the park for this $3 million highway and park improvement project. Stantec conducted the scoping, alternative analysis, public presentation/facilitation, traffic engineering and analysis, preliminary and final design, utility relocation and undergrounding power designs, construction services, landscape design, street lighting designs, and stormwater treatment.. Considerations included adding TWLTL, pedestrian facilities, traffic calming, access management, aesthetics, and historic district impacts.

East Montpelier Bridge, East Montpelier, Vermont
Project engineer responsible for a complete quantity computation and project estimate.

Chris Gendron, PE

HIGHWAY, BIKE/PED/COMPLETE STREETS/URBAN DESIGN, UTILITY RELOCATION DESIGN, STORMWATER

Years with Stantec: 6

REGISTRATIONS

Professional Engineer #104146, State of Vermont

Engineering Intern #53952, State of Vermont

EDUCATION

B.S., Civil Engineering, Norwich University, Vermont, 2010

MEMBERSHIPS

Webmaster, Norwich Practitioner Advisor, American Society of Civil Engineers

AWARDS

2013 Design and Technical Excellence, Waterbury Main Street

Since joining Stantec in June 2010, Chris has provided design and CADD support on a variety of transportation design projects. Chris's primary responsibilities include generation of conceptual, preliminary, final and contract plans for various transportation projects from planning level to construction. This includes park and rides, roundabouts, roadways (urban and rural), closed drainage, culverts, temporary traffic control, intersections, signals, shared use paths, sidewalks, utilities(water, sewer, gas, electric, communications). Chris is proficient in MicroStation, Inroads, Storm Sanitary, Guidsign, HydroCadd, Estimator and Excel. He has experience with AutoCad, Synchro and SimTraffic.

SELECT PROJECT EXPERIENCE

Safe Routes to School Waitsfield Intersection Realignment, Waitsfield, Vermont
Responsible for the majority of project design. The scope included safety improvements for the intersection of Old County Road and VT Route 100 in Waitsfield, VT. The project included realigning Old County Road to intersect perpendicular to VT Route 100, installing a crosswalk across VT Route 100, cold planning, sidewalk, subbase, paving, signage, pavement markings, drainage enhancement and above ground utility modifications.

Essex VT2A/289 Intersection Modification, Essex, Vermont
Transportation designer responsible for drafting complete set of signal modification plans, calculating quantities and creating a cost estimate. The scope included new controller cabinets, adding new controllers with adaptive traffic control capability, internet/intranet connection, adjusting controller timings, rearranging signal heads, installing new led lenses, installing video detection and radio interconnect. Chris was involved in the controller and utility line locations and the signal head arrangements.

Waterbury Main Street Reconstruction, Waterbury, Vermont
Responsible for plan development and design. This included complex inroads work to generate cross sections and profile that take into account minimizing impacts to this urban village. Plan development included underground and above ground utility design, drainage design, lighting and landscaping design, sign and pavement marking design.

Montpelier Route 2, Business Route 2, State Highway and Junction State Highway Composite Resurfacing, Montpelier, Vermont
Transportation designer responsible for surveying, drafting, calculating quantities, estimating and designing incidental items for a roadway resurfacing project. The scope of the project involved cold planning and resurfacing of the existing highway with new pavement markings, guardrail, signs, and other incidental items. Chris designed several sidewalk ramps and sign posts and was responsible for the majority of the quantity calculations on the Route 2 portion of the project. Chris surveyed the project and was responsible for completing four separate estimates.

VTrans Waterbury Bridge 46A, N&S, Waterbury, Vermont
Transportation designer responsible for environmental permitting and design, calculating quantities, traffic control planning, sign and pavement marking design, traffic signal design, parking lot design, InRoads Analysis, Earthworks, drainage design, drafting, pavement design and guardrail design. The scope included removal and replacement of concrete decks on Bridges 46 N&S with related approach work and construction of temporary crossovers and VT100/I89 intersection modifications, replacement of Bridge 46A with related approach work and construction of a temporary off ramp for traffic maintenance. Work also included modifications to an existing parking area on Stowe Street. Chris was responsible for the environmental permitting, quantity calcualtions, design of complicated traffic control elements, design of vertical alignments and cross slopes, and earthworks for permanent and temporary construction elements in this complicated phased project.

Caela White

HIGHWAY

Years with Stantec: 1

REGISTRATIONS

Certified Hot Mix Asphalt Paving Inspector, NorthEast Transportation Training and Certification Program

EDUCATION

B.S., Civil Engineering, Norwich University, Northfield, Vermont, 2016

MEMBERSHIPS

Secretary & Treasurer, Norwich University Student Chapter, Society of Women Engineers

Vice President, Norwich University Student Chapter, American Society of Civil Engineers

Since joining Stantec in June 2016, Caela has provided design and CADD support on a variety of transportation design projects. Caela has assisted in the design process, including signal design and pavement markings.

SELECT PROJECT EXPERIENCE

VTrans Waterbury-Stowe STP 2945(1), Waterbury-Stowe, Vermont
Designer responsible for signal design for this 9.5-mile roadway resurfacing project along VT Route 100 in Waterbury-Stowe, Vermont. This project included cold planing, concrete pavement removal, base courses and wearing course, correcting superelevation deficiencies, new pavement markings, guardrail, drainage improvements, culvert replacements, signs and other highway related items.

VTrans Montpelier STP 2950(1)
Designer responsible for assisting in the design process for signals and pavement markings, and providing CAD support for this roadway reconstruction project along 5 miles of VT Route 12 in Montpelier, Vermont. Features of the project included cold planing & resurfacing of the existing road, signal upgrades, pavement markings, guardrail, drainage surface feature adjustments, and traffic signal upgrades.

VTrans Barre City STP 2961(1), Barre, Vermont
Designer responsible for assisting in the design process for signals and pavement markings, and providing CAD support for this roadway reconstruction project along 2.2 miles of VT Route 14 in Barre City, Vermont. Features of the project included cold planing & resurfacing of the existing road, signal upgrades, pavement markings, guardrail, drainage surface feature adjustments, and traffic signal upgrades.

VTrans Barre City NH 29611(2), Barre, Vermont
Designer responsible for assisting in the design process for signals and pavement markings, and providing CAD support for this roadway reconstruction project along 3.3 miles of US Route 302 in Barre City, Vermont. Features of the project included cold planing & resurfacing of the existing road, signal upgrades, pavement markings, guardrail, drainage surface feature adjustments, and traffic signal upgrades.

VTrans Newport STP 1343(22), Newport, Vermont
Designer responsible for assisting in the design process for signals and pavement markings, and providing CAD support for this roadway reconstruction of a quarter mile stretch of VT Route 191 and replacement of an aging 30-inch culvert in Newport, Vermont.

Various projects for Maine Department of Transportation*, Various Locations, Maine
Inspected full reconstruction projects including gravity and force main sewer replacement, water main replacement, sewer and water utility connection replacement, drainage installation including underdrain pipelines and drainage basin installation, and rough and fine grading the road surface in preparation for pavement.

** denotes projects completed with other firms*

Sean Neely, EI

BIKE/PED/COMPLETE STREETS/URBAN DESIGN, TRAFFIC MANAGEMENT

Years with Stantec: 1

EDUCATION

M.S., Civil Engineering, University of Vermont, Burlington, Vermont, 2016

B.S., Environmental Science, University of Southern Maine, Portland, Maine, 2005

Certificate of Graduate Studies in Sustainable Transportation Systems & Planning, University of Vermont, Burlington, Vermont, 2016

Sean provides planning, analysis, design, CADD, and GIS support on a range of transportation projects. 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 foci in community planning and geographic information systems (GIS).

SELECT PROJECT EXPERIENCE

I-89 Exit 14 Alternative Transportation Crossing Study, South Burlington, Vermont
Responsible for project support in assembling existing conditions; stakeholder and public outreach; alternatives development and evaluation; drawing and graphics production; and report preparation for this scoping effort to study the feasibility of an alternative transportation crossing of Interstate I-89 in the vicinity of Exit 14 at US Route 2 / Williston Road in South Burlington, VT. The goal of the project is to recommend an alternative transportation crossing option that will better serve cyclists and pedestrians traveling between Burlington and South Burlington, with the support of the community, so that funding may be pursued for engineering, permitting, and ultimately construction.

South Burlington Open Space and Nature Areas Cost Estimating, South Burlington, Vermont
Provided quantity takeoff and cost estimating for municipal budget planning of City parks capital improvements. Estimates were provided for priority actions identified in the Red Rocks Park 2014 Management Plan and the Wheeler Nature Park Management Plan (2015).

Williston Industrial Avenue Traffic Control Plans, Williston, Vermont
Responsible for drafting temporary traffic control plan set documents for this roadway/ intersection reconstruction project on US Route 2 and Industrial Avenue in Williston, VT. The roadway will be widened and new traffic signal equipment installed.

Pittsford-Brandon Temporary Traffic Control Plans, Pittsford and Brandon, Vermont
Assisted in drafting temporary traffic control plan set documents. Stantec was selected to provide quality control review of revised preliminary plans for this roadway reconstruction project.

Traffic Analysis for Route 11 Detour, Chester-Springfield, Vermont
Responsible for traffic volume collection, traffic volume network preparation (existing and detour conditions), Synchro model development of signalized and unsignalized intersections, tabulation of Synchro results, interpretation of the results and supporting preparation of technical memo with appended calculations. This is a short-term roadway closure of Vermont 11 between Chester and Springfield during the replacement of four culverts.

Weybridge-New Haven Bridge Detour Traffic Analysis, Weybridge-New Haven, Vermont
Responsible for traffic volume collection, traffic volume network preparation (existing and detour conditions), observation of intersection operations, Synchro model development of signalized and unsignalized intersections, tabulation of Synchro results, interpretation of the results and preparation of brief technical memo with appended calculations. This was a short-term roadway closure of Vermont 17 due to the full replacement of Bridge 8 over Otter Creek.

David DeBaie, PE

TRAFFIC MANAGEMENT, TRAFFIC SIGNAL, ROUNDABOUTS

Years with Stantec: 12

David has over 40 years of traffic engineering experience. He prepares, manages, provides technical assistance on planning and permitting design projects. His expertise is traffic operations involving traffic signal, signal system, adaptive traffic signal control technology, intersection design, and traffic management plans and safety improvement projects. He has prepared roundabout analysis, parking studies, traffic impact studies, peer reviews, pedestrian accessibility, bicycle studies and Roadway Safety Audits. He has also conducted town-wide traffic studies and developed procedures for applying traffic impact fee systems. David has presented at Institute of Transportation Engineers District meetings and a recent nationally viewed webinar suggesting the pairing of Traffic Impact Fees and Adaptive Traffic Control. He has prepared and presented a review of Adaptive Traffic Control at a pair of Isolated intersections in Vermont at a Northeast District ITe meeting in Portsmouth NH. David has provided expert witness testimony in and for courts in Vermont, Massachusetts, and New Hampshire.

REGISTRATIONS

Professional Engineer #8533, State of Vermont

Professional Traffic Operations Engineer

Professional Engineer #5755, State of Maine

Professional Engineer #9014, State of New Hampshire

Professional Engineer #37966, Commonwealth of Massachusetts

EDUCATION

M.S., Civil Engineering, Northeastern University, Boston, Massachusetts, 1982

B.S., Civil Engineering, Northeastern University, Boston, Massachusetts, 1974

MEMBERSHIPS

Serves on Board of Directors for New England Section, Institute of Transportation Engineers

SELECT PROJECT EXPERIENCE

VT 289/2A Signalization Improvements, Colchester-Essex, Vermont
Senior traffic engineer responsible for design of this signal equipment upgrade project. Project included evaluation of the existing signal system and integration of the upgraded signal equipment. This project is the first phase of a 2 phase project. Second phase involves capacity increases via lane additions so this signal upgrade project accounted for future roadway widening. The client desired to implement adaptive traffic control (ATC) into the signal system. Stantec evaluated various systems and selected the Rhythm Engineering's InSync System. This was the first ATC system installed in the state of Vermont.

VTrans Waterbury Route 100 ATC evaluation, Waterbury, VT
Senior Traffic Engineer responsible for the evaluation of adaptive traffic control (ATC) system on a 4 intersection corridor. This system is intended to efficiently adjust timings and phasing for large seasonal fluctuations in traffic due to tourism and special events. In addition the ATC will better accommodate variable traffic flows due to numerous construction projects within the area. At the request of VTrans, Stantec evaluated the system and successfully incorporated the design details into pre-Contract plans for an active bridge rehabilitation project without delaying the project schedule.

Temporary Traffic Control Plans - Vermont Bridges, Various Locations, Vermont
Senior traffic engineer responsible for identifying temporary traffic control concepts for bridge painting projects in Barton and Coventry, deck membrane replacement in Danville and Lyndon, Bridge closures in Montpelier, East Montpelier and Waterbury.

Temporary Traffic Control Plan, Burlington, Vermont
Senior traffic engineer responsible for determining alternate routes near a planned roundabout on Shelburne Road at Willard Street Locust Street and Ledge Road. Determined where detour routes and what additional traffic control would be required. Similarly, recognized likely routes that traffic would likely divert to other than the detour routes.

I-89 Exit 14 Access Improvements, So. Burlington, Vermont
Analyzed the existing signal system operation to identify the actual flows and measured the improvement achievable by adding an eastbound lane accessing I-89. Prepared signalization plans for two locations.

David Youlen, PE

TRAFFIC MANAGEMENT, CONSTRUCTABILITY REVIEWS,

Years with Stantec: 12

David is a professional engineer and has over 15 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, David 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.

David has completed over 10 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.

REGISTRATIONS

Driven Pile Foundation Inspector, NorthEast Transportation Training and Certification Program

Certified Hot Mix Asphalt Paving Inspector #1351, NorthEast Transportation Training and Certification Program

Certified Concrete Inspector #187, NorthEast Transportation Training and Certification Program

Professional Engineer #8831, State of Vermont

Certified Concrete Field Testing Technician, Grade I #139648, American Concrete Institute

EDUCATION

B.S., Civil Engineering, Clarkson University, Potsdam, New York, 1999

SELECT PROJECT EXPERIENCE

Colchester Campus Connector, Colchester, Vermont
Staff engineer responsible for constructability review and quantity calculations for this roadway design project. This project consists of a roadway to be constructed between St. Michael's College and Camp Johnson and will provide considerations for pedestrian and bicycles. The new roadway will link the two facilities bypassing traffic on VT Route 15, provide a safer route for pedestrians and bicyclists, and create a gateway to Camp Johnson and St. Michael's College.

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.

Bennington Route 279 North, Bennington, Vermont
Project engineer for the development of preliminary, final and contract plans and documents. Responsibilities include constructability plan review, erosion prevention and sediment control design, and quantity calculations and review for this $60 million construction of VT Route 279 circumventing Bennington. This 3.8 mile long, 2-lane limited access highway includes 2 interchanges (a systems interchange and a single point diamond interchange), 8 new structures, considerations for future 4-lane construction, utility relocation, and 1.0 mile of urban street reconstruction. Services include conceptual, preliminary, and final design for highway, structure, stormwater treatment, traffic signals, right-of-way, utilities and lighting.

VTrans Quality Assurance Unit Services, National Life Building, Montpelier, Vermont
Performed plan and constructability review for plans at various levels of design. Also, helped with a statistical analysis comparing pre-final estimates and the contract plans for a number of projects to find the number of pay items and their impact on the value of contracts.

Tom Knight, PE

STRUCTURES/CULVERTS

Years with Stantec: 17

REGISTRATIONS

Professional Engineer #8277, State of Vermont

EDUCATION

B.S., Civil Engineering, University of Vermont, Burlington, Vermont, 1998

Trained in Stream Stability and Scour at Highway Bridges, National Highway Institute, Orlando, Florida, 2003

Certificate, Trained in Railway Bridge Engineering, University of Wisconsin Ext., Philadelphia, PA, 2010

Certificate, Trained in the Design of Stream/Road Crossing for Passage of Aquatic Organisms, VT Department of Fish and Wildlife, Vermont, 2008

MEMBERSHIPS

Member, Structural Engineers Association of Vermont

AWARDS

2011 ACEC/Vermont Merit Award Winner, Washington County Railroad (WACR), Bridge 501 Emergency Repairs

2010 ACEC/Vermont Grand Award Winner, Bridge Street Bridge over the Winooski River Rehabilitation

Tom has 14 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, Tom strives to offer solutions that are cost effective, quick to construct, while minimizing impacts to resources.

SELECT PROJECT EXPERIENCE

VTrans Bridge Street Bridge over Winooski River Rehabilitation, Richmond, Vermont
Project Manager for the final design and construction services for the rapid rehabilitation for this historic 229-foot single span steel parker through truss. The project included a 14 week accelerated schedule where preliminary plans and permitting review were conducted concurrent with final design. It also included development of advanced procurement contracts to pre-purchase bearings and exodermic bridge deck components to meet accelerated construction schedule.

VTrans Irene Culverts, Various Locations, Vermont
Project engineer responsible for the design of replacement culverts at 12 locations throughout the state of Vermont. Various designs included phased construction while maintain traffic, accelerated construction during defined road closure periods, construction with limited utility relocation, low slope aquatic organism design and natural channel bottoms within culverts. Tom was responsible for design and layout of the boxes and wingwalls which as well as consideration for aquatic passage in various locations.

Roberts Road over Gulfstream Brook Bridge #49 Replacement, Woodstock, Vermont
Project engineer for the final design and construction administration of the 62 foot precast next beam replacement for this crossing that was critically damaged by Tropical Storm Irene. Final design included new cantilevered abutments and wingwalls on spread footings.

Bridge 10, Berlin, Vermont
Project engineer responsible for the design of this 9x12x25 foot long natural bottom precast box that carries Chase Road over Chase brook. Tom was responsible for design and layout of the box and wingwalls which included design for aquatic passage on this stream which is crucial spawning habitat for trout who reside in the Dog River. In addition, Tom provided construction services for the project which included maintaining single lane traffic a very narrow mountain road throughout installation of the box.

Bridge Street Railroad Bridge over Bridge Street (TH#2), Hartford, Vermont
Tom was the Project Manager for construction services associated with the replacement of Bridge Street Railroad Bridge that carries New England Central Railroad over Bridge Street (TH #2). The project involved multiple facets of construction including traffic control, utility work, removal and disposal of contaminated soil, new drainage and drainage modifications, roadway and sidewalk construction, but the major challenge was the short work period for replacement of the railroad bridge. The new bridge was founded on a micro-pile foundation that was drilled from the top of the rail bed. Piles were later cutoff below grade and a pile cap was placed. The contractor was allowed a maximum of 48 hour track closure to remove the existing superstructure and replace it with a new precast beam bridge.

Peter Greenberg, PE

STRUCTURES/CULVERTS

Years with Stantec: 1

REGISTRATIONS

Professional Structural Engineer #47852, Commonwealth of Massachusetts

EDUCATION

B.S., Civil Engineering, Tufts University, Boston, Massachusetts, 2002

Peter is experienced in bridge inspection, rating, and design. As a qualified inspection team leader he has both inspected and overseen the field testing of several structures for state agencies such as Massachusetts Department of Transportation (MassDOT), Highway Division (both the former MassHighway and Massachusetts Turnpike Authority), and the Massachusetts Bay Transportation Authority (MBTA). Peter has also analyzed and designed numerous highway and railroad bridges of various structure types throughout New England.

SELECT PROJECT EXPERIENCE

WACR Bridge Load Ratings, Various Locations, Vermont
Bridge engineer responsible for performing rating calculations and QC reviews. Stantec performed load ratings for five bridges on the Vermont Rail System WACR Connecticut River Line, Lyndonville subdivision.

VT Route 14 Bridge No. 68 over the Winooski River CMGC, East Montpelier, Vermont
Bridge engineer responsible for QC reviews and assisted with design calculations for the replacement of Bridge No. 68 that carries VT Route 14 over the Winooski River in East Montpelier. Stantec developed a draft Traffic Management plan that minimizes delays to the traveling public, and provides a safe work zone for everyone.

Summer Street Bridge Replacement*, Bridgewater-Middleborough, Massachusetts
Lead designer and drafter for the replacement of the existing two-span structure with a proposed 115-ft single span New England Bulb Tee bridge. Responsible for the detailing, specifications, and design of non-standard precast substructure elements to be used in the construction of the integral abutments and independent wingwalls to accelerate the construction of the bridge.

Cross Street Bridge Replacement*, Somerville, Massachusetts
Bridge Engineer involved in the deck, floor system, and bearing replacement of an existing skewed truss bridge over MBTA and Pan Am railroad tracks. Restrictive geometric and clearance issues as well as track outage times are the driving force behind the proposed design. The project was advertised in May 2012.

Washington Street Bridge Replacement*, Hudson, Massachusetts
Lead designer for the replacement of an existing three-span masonry arch structure adjacent to the existing Hudson Dam. Replacement structure shall be comprised of prestressed concrete Northeast Extreme Tee (NEXT) beams founded on semi-integral abutments and drilled micro-piles. The project is complicated by complexities with demolition sequencing, traffic staging, and extensive utility coordination.

Complex Bridge Inspection (Contract Nos. 43745 and 63785)*, Various Locations, Massachusetts
Team Leader responsible for the routine, fracture-critical, and special member inspections of several structures on the MassDOT Complex Bridge list as part of the Joint Venture Complex Bridge Inspection Contracts with HNTB. Inspections include the Fall River Viaduct and "spaghetti ramps", the Casey Bridge in Lawrence, the Upper County Bridge in Haverhill, the Alford Street and North Washington Street Bridges in Boston, and the Deer Island swingspan in Amesbury.

Route 2 Relocation Project*, Cabot - Danville, Vermont
Project engineer responsible for designing and drafting several retaining walls, box culverts, and headwalls for various stream crossings.

** denotes projects completed with other firms*

RuthAnne Daniels, EI

STRUCTURES/CULVERTS

Years with Stantec: 1

REGISTRATIONS

Engineering Intern #54065, State of Vermont

EDUCATION

M.S., Civil Engineering for Structural Engineering, Northfield, Vermont, 2016

B.S., Civil Engineering, Burlington, Vermont, 2009

Railroad Bridge Inspection (40 hour course), Kansas City, Kansas, 2012

Railroad Bridge Engineering, Madison, Wisconsin, 2012

MEMBERSHIPS

Member, Order of the Engineer

Member, American Society of Civil Engineers

Member, Society of Women Engineers

Since joining Stantec in 2016, RuthAnne has provided design support for several railroad, structural and transportation projects. Her design responsibilities include project generation for clients including state DOTs such as VTrans and NHDOT as well as local town projects. Other activities include cost estimating, bid and FEMA cost analyses, orchestrating project progression with VTrans Rail, completing and reviewing contract documents. RuthAnne has nearly 5 years of experience in the design and construction inspection of transportation projects. She is familiar with railroad bridge design, sidewalk design, slope stability design and roadway improvement projects. She has performed construction management and inspection for roadway, drainage, road reconstruction, and paving projects. RuthAnne is experienced in railroad bridge inspection and assessment.

SELECT PROJECT EXPERIENCE

Burlington Island Line Trail Pedestrian Bridge, Burlington, Vermont
Staff engineer responsible for conducting field inspection of existing conditions on this deteriorating pedestrian bridge. The pedestrian bridge passes under the rail trail and leads to North Beach.

Hartford I-91 Exit 11 Interchange Sidewalk, Hartford, Vermont
Staff engineer responsible for the design of sidewalk and bicycle lanes on Route 5 in Hartford, Vermont. The sidewalk and bike lanes will be adjacent to Route 5, and the bike lanes will employ the latest standards and guidelines for bike lanes that navigate through interstate ramps and weave lanes.

VTrans WACR CRL STRBLOAD-104, Burke - Sutton, Vermont
Conducted field inspection of five railroad bridges in Burke and Sutton VT. Annual inspection of the bridges were completed and Ms. Daniels is currently working on load rating these railroad bridges.

VTrans Pittsford NH 019-3(494), Pittsford-Brandon, Vermont
Staff engineer responsible for the design of traffic control plans for the reconstruction of a segment of US Route 7.

Brandon Overflow Culvert*, Brandon, Vermont
Staff engineer responsible for designing this overflow culvert for the Neshobee River in Brandon VT. After TS Irene, the Neshobee River overtopped it's bank and cut straight through a building, roadway and park. The work for the culvert contained 100 year storms and flow under Route 7 and the park. The culvert inlet is a throat inlet with a wier-type design as to only allow waters in after it reaches a certain elevation. The funding for this project was a FEMA grant.

VTrans Montpelier Bridge 305 Inspection, Montpelier, Vermont
Conducted field inspection on this railroad bridge on the Washington County Rail Line (WCRL). The field inspections were conducted to gain a complete understanding of the condition of the members and their interaction with each other. When a member showed signs of deterioration, its condition was noted and measurements were taken to document the deterioration.

VTrans Montpelier Bridge 304 Inspection, Montpelier, Vermont
Conducted field inspection on this railroad bridge on the Washington County Rail Line (WCRL). The field inspections were conducted to gain a complete understanding of the condition of the members and their interaction with each other.

Doug Campbell, PE

UTILITY RELOCATION SERVICES, STORMWATER, WATER/WASTEWATER

Years with Stantec: 27

REGISTRATIONS

Professional Engineer #7421, State of Vermont

EDUCATION

B.S., Civil Engineering, University of Vermont, Burlington, Vermont, 1994

HAZWOPER 40 Hour Certification, Occupational Safety & Health Administration

Confined Space Entry Certification, Occupational Safety & Health Administration

MEMBERSHIPS

Member, American Society of Civil Engineers

Doug has over 27 years of design experience in construction phase engineering services, general civil engineering including civil/site design, process design, drainage systems and stormwater design, stormwater systems management, roadway design, and design of water distribution and sewer collection systems, and computer modeling of watershed and river characteristics.

SELECT PROJECT EXPERIENCE

Colchester Campus Connector, Colchester, Vermont

Project engineer responsible for final design and preparation of special provisions for replacement of existing 8" PVC\AC\VC sewer main with approximately 900 L.F. of new 8" sanitary sewer main including twenty (20), new 4" and 6" building service laterals while maintaining sewage flows in the existing main. Project elements included approximately 3,200 L.F of full depth roadway reconstruction along Johnson Avenue and Winchester Road in the Town of Colchester for connection of the Saint Michael's College main and north campuses including new stormwater drainage systems and treatment practices.

Winooski Downtown Development Infrastructure Improvements, Winooski, Vermont

Served as the lead inspector for this $14.2 million urban redevelopment project. Project elements included 9,100 linear feet (1.7 miles) of new and reconstructed roadways, 16,500 linear feet of concrete and brick sidewalks, 16,500 linear feet of granite curb, over 13,000 linear feet of storm and roof drainage systems, 3,200 linear feet of new sewer mains and laterals, 4,200 linear feet of water mains and laterals, three signal systems, traffic control plan for 23,000 vehicles per day, undergrounding of the existing utilities with over 15 miles of conduit, a comprehensive stormwater management system, extensive landscaping, parks and ornamental lighting.

Burlington International Airport - Stormwater Management Program, South Burlington, Vermont

Project engineer responsible for management and coordination of BTV's compliance program for nine Stormwater Discharge Permits, one Small Municipal Separate Storm Sewer System General Permit (MS4), one Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP), and one comprehensive Stormwater Management Program (SWMP). Management of BTV's stormwater permit compliance program, as required by the Vermont Agency of Natural Resources (VT. ANR), includes periodic field inspections of all stormwater infrastructure, annual comprehensive site inspection, monthly facility inspections of areas identified as Potential Pollutant Sources (PPS's) and facilities identified as stormwater Best Management Practices (BMP's), quarterly visual assessments of all fourteen of BTV's stormwater discharges including visual assessment of discharge samples and documentation, quarterly monitoring of stormwater effluent at three discharge locations including chemical analysis, development of annual reports and permit certifications for review and approval by VT. ANR, Notice of Intent (NOI) development and submittal, development of a long term Flow Restoration Plan, and annual update of the SWMP including permit / inspection summary and BTV's site drainage map.

Burlington International Airport – Air Carrier Apron – Glycol Treatment System Improvements, South Burlington, Vermont

Senior project engineer responsible for civil/site and process design, permitting, and construction phase services for this $1.95 million project for construction of system improvements to an existing aircraft deicing fluid (ADF) treatment system including complete removal of the existing system and replacement with a new, larger capacity system.

Harry Petrovs, LS

ROW AND DOCUMENT DEVELOPMENT

Years with Stantec: 3

REGISTRATIONS

Registered Land Surveyor #609, State of Vermont

EDUCATION

A.S., Surveying and Forestry, Paul Smiths College, New York, 1977

MEMBERSHIPS

Member, National Society of Professional Surveyors

AWARDS

2006 Vermont Agency of Transportation Project Team Award, Shelburne Falls Roadway and Sidewalk Improvements - (RETIRED)

2013 VT Agency of Transportation 20 Years of Service Award

2012 VT Agency of Transportation Certificate of Excellence

Harry has over 38 years of experience in right-of-way engineering, land surveying, real estate and forestry. For over 20 years, Harry was the Plan and Titles Section Chief at the Vermont Department of Transportation where he planned and directed the ROW Sections's activities as well as supervising the staff of 7 employees. He has a proven track record of strong leadership, communication and interpersonal skills and the ability to interact positively with stake holders and team members.

SELECT PROJECT EXPERIENCE

Main Street Reconstruction, Waterbury, Vermont

U.S. 2 / VT 100 Intersection Improvements, Waterbury, Vermont

Bridge 46 over Sleepers River, St. Johnsbury, Vermont

VT Route 2 Bicycle and Pedestrian Scoping, Richmond, Vermont

Ludlow Rail Crossing Scoping, Ludlow, Vermont

Leicester Rail Crossing Scoping, Leicester, Vermont

Hartford Park & Ride, Hartford, Vermont

Essex Pinecrest Drive and VT 2A Sidewalk and Recreation Path, Essex, Vermont

East Montpelier Park & Ride, East Montpelier, Vermont

Colchester Sidewalk Construction Inspection, Colchester, Vermont

Clarendon Rail Crossing Scoping, Clarendon, Vermont

Cambridge Park & Ride, Colchester, Vermont

Barton Rail Crossing Scoping, Barton, Vermont

Middlebury Airport*
VTrans Representation for legal proceeding at preliminary plan stage.

Rutland Airport*
ROW Mapping Adjustments for Avigation Easements

Morrisville - Stowe Airport*
Development of Mapping for Acquiring Avigation Easements Review

Franklin Airport*
Boundary Mapping for Leasing

** denotes projects completed with other firms*

Lori Buxton

ROW AND DOCUMENT DEVELOPMENT

Years with Stantec: 4

EDUCATION

A.S., Architectural and Building Technology, Vermont Technical College, Randolph, Vermont, 1981

Lori has 35 years of experience in all aspects of highway/bridge construction, surveying, mechanical, civil, and structural building. Lori has developed plans, estimating, site inspections, spec writing and field surveys for mechanical piping and ductwork, and right-of-way acquisitions for numerous highway projects in Vermont. Prior to joining Stantec, Lori was the owner and operator of a well-respected drafting service.

SELECT PROJECT EXPERIENCE

Roberts Road over Gulfstream Brook, Bridge #49 Replacement, Woodstock, Vermont
CADD Technician for the final design and construction administration of the 62 foot precast next beam replacement for this crossing that was critically damaged by Tropical Storm Irene. Final design of new cantilevered abutments and wingwalls on spread footings.

VTrans Culvert Design, Various Locations, Vermont
CADD technician 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.

VTrans - I-89 Bridges 46N, 46S, and 46A over Stowe Street and Thatcher Brook, Waterbury, Vermont (Structural Technician)
CADD technician for the investigation, scoping, and Final Design of three interstate bridges in Waterbury, VT. Investigation included performing a delamination survey of piers and obtaining concrete samples for chloride testing. As a result of this work, it was determined that Bridge 46A, a 434' long structure will be replaced and bridges 46N and 46S will be rehabilitated. The replacement bridge will be a 3-span (117' - 188 - 127') continuous plate girder bridge with semi-integral abutments, and fixed piers. This is the largest semi-integral bridge in Vermont and will use a geo-inclusion to reduce the passive pressure during thermal expansion. The bridge will use a bare concrete deck with solid stainless steel reinforcing. The combination of semi-integral abutments and stainless steel reinforcing in the deck and pier caps will provide a much longer service life for the bridge.

The decks of bridges 46 N&S will be replaced and will utilize link slabs to eliminate most of the existing expansion joints at the piers. In addition to the structural design, this project involves a complex traffic control plan, including a temporary off ramp to allow construction of PR 460 and cross-overs for the deck replacement on Bridges NA&S. Due to the proximity of the Exit 10 interchange to the bridges, the SOB unarm has to be reconfigured. A traffic simulation was developed to confirm the revised ramp configuration would work with the cross-overs in place.

Polly Harris, LS

ENVIRONMENTAL PERMITTING/NEPA

Years with Stantec: 10

As a Project Manager and Wetland Project Scientist, Polly is responsible for conducting wetland delineations and functional assessments, wildlife and habitat surveys, and assisting clients in the preparation of federal, state, and local permit applications. Polly offers more than 20 years of professional experience in wetland science and natural resource evaluations. She has extensive background in wetland project management, site evaluations, wetland and stream delineations, reporting, wetland permitting and wetland mitigation planning.

Polly has worked on a variety of assessments in compliance with the Endangered Species Act, rare plant research and monitoring, land ownership research, and natural area design and conservation.

REGISTRATIONS

Certified Floodplain Manager #US12-06465, Association of State Floodplain Managers

Apprentice Wetland Scientist #28, State of New Hampshire Board of Natural Scientists

EDUCATION

B.A., Middlebury College, Middlebury, Vermont, 1984

M.S., Botany, University of Vermont, Burlington, Vermont, 1991

Interagency Wetland Delineation Training Course, Seattle, Washington, 1993

Corps Wetland Delineator Certification Program, Seattle, Washington, 1994

MEMBERSHIPS

Member, Association of State Wetland Managers

Member, New England Chapter, Society of Wetland Scientists

SELECT PROJECT EXPERIENCE

Waterbury Roundabout Natural Resource Review, Waterbury, Vermont
Wetland Scientist. Evaluated wetlands, streams, wildlife habitat, and RTE habitat within project area. Provided summary of findings, including correspondence with Nongame & Natural Heritage Program.

Oak Creek Stormwater Project Wetlands Permitting, South Burlington, Vermont
Wetland Scientist. Conducted wetlands delineations and prepared USACE General Permit application for a stormwater pond in an impaired watershed.

Essex Sidewalk [STP SDWK (9)], Essex, Vermont
Wetland Scientist. Performed environmental resource evaluations and wetland delineations and prepared Vermont Wetland Permit application for unavoidable buffer impacts.

Colchester Shared Use Path, Colchester, Vermont
Project Scientist. Conducted natural resource evaluations, wetland delineations, and wetland permitting for a new shared use path.

Colchester Campus Connector, Colchester, Vermont
Environmental Scientist. Conducted environmental resource evaluations and documentation for a road and sidewalk improvement project. This included NEPA CE documentation and Vermont Act 250 permitting.

Burlington Main Street Crossing, Burlington, Vermont
Project Scientist. Conducted environmental evaluations and prepared NEPA CE documentation for a new road crossing.

Charlotte Bridge #31 RTE Permitting, Charlotte, Vermont
Project Manager. Conducted environmental resource evaluations for bridge repair project and identified potential for state endangered fish in project area. Prepared T&E Permit application for VT Fish and Wildlife Department, coordinated sampling design, and conducted fish sampling. Also prepared General Permit Application for the USACE.

Champlain Parkway, Burlington, Vermont
Conducted site evaluations, prepared Conditional Use Determination application for submittal to the Vermont Agency of Natural Resources, and attended public hearings for the Champlain Parkway transportation project.

Krista Reinhart

ENVIRONMENTAL PERMITTING/NEPA

Years with Stantec: 1

REGISTRATIONS

Certified Professional in Erosion and Sediment Control (CPESC), EnviroCert International, Inc., Marion, North Carolina, 2007

Certified Professional in Stormwater Quality (CPSWQ), EnviroCert International, Inc., Marion, North Carolina, 2008

Certified Erosion, Sediment and Stormwater Inspector (CWSSWI), EnviroCert International, Inc., Marion, North Carolina, 2013

Vermont Natural Shoreland Erosion Control Certification, Vermont Agency of Natural Resources, Montpelier, Vermont, 2016

EDUCATION

M.S., Forestry, University of Vermont, The Rubenstein School of Environment and Natural Resources, Burlington, Vermont, 2003

B.A., Geology, Hartwick College, Geology and Environmental Sciences Department, Oneonta, New York, 1994

AWARDS

2015 Member of District #9 Environmental Commission, Vermont Natural Resources Board

2011 Member of District #4 Environmental Commission, Vermont Natural Resources

Krista is a Project Manager and Environmental Scientist with over 19 years of experience in environmental assessments and permitting; construction-phase stormwater management design, permitting, and inspection/oversight; operational-phase stormwater management planning, design, permitting, and inspections/monitoring; water quality monitoring; watershed planning; ecological restoration; and technical expert testimony. Her focus is primarily on sectors including: renewable energy, linear pipeline and transmission line, industrial, and commercial and residential.

SELECT PROJECT EXPERIENCE

Farrell Street – Water Quality Improvement Project*, South Burlington, Vermont
In an effort to improve water quality within the EPA-listed impaired waterbody, Potash Brook, located in South Burlington, Vermont, Krista worked with the City of South Burlington to design, install, and monitor a stormwater management system that included a stormwater detention pond, hydrodynamic separator, and bioretention basin. Krista worked closely with the contractor during construction to ensure proper installation of these systems. Following construction, Krista and her staff conducted routine inspections on behalf of the City to monitor performance of the systems at achieving improved water quality, as well as aquatic and ecological habitat in surrounding areas.

Addison Rutland Natural Gas Project*, Chittenden and Addison Counties, Vermont
Project Manager for the Addison Rutland Natural Gas Project ("ARNGP"), Krista was the project team lead in preparing and filing the Erosion Prevention and Sediment Control ("EPSC") Plan associated with all facets of this 44-mile natural gas pipeline, including transmission and distribution mainlines, distribution networks, M&R stations, and laydown/staging areas, involving numerous crossings of natural resource areas (e.g., rivers, streams and wetlands). Krista also served as the lead EPSC Specialist / Environmental Inspector during construction, which involved routine site visits, close coordination with the project environmental team and contractor, coordination with state environmental regulators, and routine environmental trainings for equipment operators and inspectors.

Sheldon Springs Solar Farm*, Sheldon Springs, Vermont
Krista served as Project Manager for stormwater management services for Enel Green Power North America in the design, permitting and implementation stages of the 2.2MWac photovoltaic solar energy project in northwestern Vermont. Krista also provided technical support for the Section 248 petition to the Vermont Public Service Board, including preparation of the Erosion Prevention and Sediment Control ("EPSC") Plan design, resource agency coordination, and supporting technical testimony. She also provided environmental inspection services during construction to ensure proper implementation of the EPSC Plan through final site stabilization.

St. Albans Looping Phase VI*, St. Albans, Vermont
Project Manager for the Vermont Gas Systems, Inc. ("VGS") five-mile natural gas pipeline project, Krista performed construction-phase environmental inspection services in coordination with the VGS Project Manager. Krista was responsible for on-going inspections as they related to state and federal environmental permit compliance, environmental training for contractors, and coordination with the project environmental team, project engineer, and state and federal regulators.

East Avenue Loop 115kV Line*, Chittenden County, Vermont
For VELCO, Krista was Project Manager for environmental services associated with construction of parallel 4.8- and 4.6-mile transmission lines through the towns of Williston, South Burlington, Colchester, Winooski, and Burlington.
** denotes projects completed with other firms*

Maegan Crowley, EI, LEED AP

STREET LIGHTING

Years with Stantec: 17

REGISTRATIONS

Engineering Intern #4893, State of Maine

EDUCATION

B.S., Electrical Engineering, University of Maine, Orono, Maine, 1999

MEMBERSHIPS

Accredited Professional, U.S. Green Building Council

Member, Illuminating Engineering Society of North America

Member, Institute of Electrical and Electronics Engineers

As an engineer intern, Maegan has experience in a variety of electrical engineering projects. She has designed and prepared electrical specifications for streetscape projects throughout New England and Florida. Her experience includes assisting Project Managers, technical design, and engineering analysis. She has worked with electrical power systems, power generation systems, and control systems.

Maegan is responsible for the layout and wiring of the street lights throughout the project area. She uses the latest in CADD and electrical engineering software and helps to put together the details, specifications, and bid documents for projects. She is also responsible for technical computer analysis, modeling consultation, detail technical support, and project review.

SELECT PROJECT EXPERIENCE

Burlington Riverside Avenue, Burlington, Vermont
Assisted in the layout and design of ornamental street lighting design and electrical system for a 1-mile stretch of the reconstructed Route 7.

Bank Row / Energy Park, Greenfield, Massachusetts
Assisted in the layout and design of historic ornamental street lights for a federally-funded streetscape and park lighting project. All lighting systems had to be coordinated and hooked up to exiting and proposed power sources.

Brandon Village Route 7 Upgrades, Brandon, Vermont
Assisted in the layout and design of historic ornamental street lights for the Village of Brandon's Main Street/Route 7 upgrades.

Southern Connector/Champlain Parkway Design, Burlington, Vermont
Developed street lighting layout for this municipal Parkway and electrical system. The 2001 design engineering services downsized a previously proposed limited access highway to neighborhood-friendly parkway with bike lanes, sidewalks, ornamental street lighting, and trees. The redesign approach split the highway into a two narrow lane highway with low speeds and safe pedestrian crossings. In 2006 the mayor endorsed construction of the Champlain Parkway.

Danville Route 2, Danville, Vermont
Assisted in the layout and design of lighting fixtures, conduit locations, and the electrical system for a 0.7-mile stretch along Route 2 and the town green.

Roundabout Roadway Improvements, Waterbury, Vermont
Provided the layout and design of street lighting design and electrical systems.

Nahant Causeway Improvements, Nahant, Massachusetts
Provided the layout and design of historic ornamental street, conduit locations, as well as the electrical system.

Main Street Improvements, Waterbury, Vermont
Assisted in the layout and design of ornamental street lighting design and electrical systems.

VTrans Shelburne Road Improvements, South Burlington and Shelburne, Vermont
Assisted in the layout and design of street lighting and electrical systems for the widening of U.S. Route 7 (Shelburne Road).

Glenn Burgmeier, PE

STREET LIGHTING

Years with Stantec: 8

REGISTRATIONS

Professional Engineer
#018.0092702, State of Vermont

EDUCATION

B.S. in Civil Engineering, University of Vermont, Burlington, Vermont, 2008

A.S. in Architectural and Building Technology, Vermont Technical College, Randolph, Vermont, 1995

MEMBERSHIPS

Member, American Society of Civil Engineers

(Membership pending), Chi Epsilon National Civil Engineering Honor Society

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, Glenn has also provided electrical design as well as assisting in the development of Electrical, mechanical, and plumbing construction documents for numerous residential, commercial and industrial projects in the New England area.

SELECT PROJECT EXPERIENCE

US 2/I-89 Exit 14 Improvements Design, South Burlington, Vermont
Staff engineering responsible for providing design and drafting assistance on the construction of a third eastbound lane of US Route 2 in South Burlington, Vermont. Project elements include decorative street lighting, landscaping, utility relocations, stormwater treatment, interconnected and coordinated signal system, and traffic control for highway widening. Stantec services will also provide NEPA documentation, contract plans, construction cost estimate and permitting meeting VTrans LTF procedures. Considerations included "Complete streets" approach with pedestrian bicycle ad transit facilities.

US Route 7, VT Route 279 Bennington Bypass, Bennington, Vermont
Staff engineer responsible for overhead and ground mounted Type B large sign and sign post design per the MUTCD. This portion of the project required correspondence with local towns and coordination with other components of this legacy project.

VT Route 12A Resurfacing, Randolph, Braintree, Granville, Roxbury, Northfield, Vermont
S*taff 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, horizontal and vertical alignment development, superelevation modeling per AASHTO, underdrain design and earthworks quantity takeoffs. Other duties included sign and sign post design per MUTCD, guard rail and bridge rail design, erosion control and ditching design, pavement marking design per MUTCD, traffic control, quantity takeoff analysis and engineering estimate. Additional warning signage was required to notify drivers of substandard conditions as defined by AASHTO and MUTCD. This 20 mile reclaim project spanned two districts and included stream bank, culvert and bridge rehabilitation due to damage during hurricane Irene. The project was modeled to improve existing horizontal and vertical curve and banking superelevation deficiencies as well as the road structure. VTrans required 2'-0" maximum deviation from existing roadway alignment, and included stringent side slope requirements in environmentally sensitive areas.*

Alternate US Route 5 & US Route 5 Resurfacing, Newport-Derby, Vermont
Staff engineer aided in survey, development of project alignments and plans, guard rail and bridge rail design, assessment of drainage and utility structures within the roadway, pavement marking design, international sign design and sign layout, coordination with customs equipment and personnel , ADA compliant sidewalk ramp design, and resulting quantity take off analysis and engineering estimate. This 2.7 mile project occurred in a town bordering on Canada and required additional sensitivity relating to multiple border crossing locations on side roads, and included work within the US Customs area.

EDUCATION:

State University of New York at Albany
Ph.D., Anthropology, 1993; Master of Arts, Anthropology, 1986

Hamilton College
Bachelor of Arts, Anthropology, 1980

QUALIFICATIONS:

36 CFR 61 Qualified Archeologist

SPECIAL TRAINING:

Archeology Consultant Training, VT Division for Historic Preservation (VDHP), May 2016 Native American Graves Protection and Repatriation Act (NAGPRA), 1998; Federal Projects and Historic Preservation Law sponsored by the Advisory Council on Historic Preservation and the University of Nevada, Reno, 1997; Section 106 Workshop, Vermont Division of Historic Preservation (VDHP), 1996; Archaeological Collections Management and Curation, NPS, New England Regional Workshop, 1995; Managing New York's Underwater Resources, New York Sea Grant Policy Planning Symposium, 1995; Developing a Vermont Archaeological Predictive Model workshop, Vermont Agency of Transportation (VTrans) and VDHP 1999; evaluating significance of Historic and Archaeological Resources Workshop, Vermont College, Montpelier, VT, May, 2001; and Best Practices in Working with American Indian Tribes presented by the FHWA and sponsored by the VAOT, Montpelier, VT, 2004.

RELEVANT EXPERIENCE:

2016 Montpelier Bridge No. 305 Repair Project, City of Montpelier, Washington County, VT
Conducted Phase I archeological reconnaissance survey for proposed railroad bridge repair project. Identified areas of disturbance and fill, indicating no potential for intact archeological deposits.
Project sponsor: Vermont Agency of Transportation

2016 Castleton STP BP 13(10) Sidewalk Project, Town of Castleton, Rutland County, VT
Conducted Phase I archeological review and reconnaissance for a proposed sidewalk along Route 4A. Identified a small area of archeological potential between known utility disturbances. No archeological deposits encountered and project proceeded as designed.
Project sponsor: Vermont Agency of Transportation

2014 Williston Park and Ride Project, Ramsey Parcel, Williston, Chittenden County, VT
Assessed visual impacts of the construction of a park and ride facility on two adjacent or nearby mid-20th-century structures. Provided a brief assessment of the two structures and the surrounding historic landscape.
Project sponsor: Vermont Agency of Transportation

2014 Wilmington Sidewalk and Crosswalk Scoping Study, Wilmington, Windham County, VT
Principal investigator for an archeological resources assessment for a municipal CDBG-funded public works project.
Project sponsor: Town of Wilmington, Vermont Agency of Transportation

2013 Colchester STP SDWK (16) West Lakeshore Drive Shared Use Path, Town of Colchester, Chittenden County, VT
Conducted a Phase IB study for the construction of a nearly 4,500-ft long path funded through the Vermont Agency of Transportation Local Transportation Facilities. Served as principal investigator and prime contact, directed the fieldwork, evaluated a small precontact site, and wrote the report.
Project sponsor: Town of Colchester

2013 Chester Sidewalk Restoration Project, Town of Chester, Windsor County, VT
Compiled an archeological resource assessment nearly 3,000 ft of proposed path and sidewalks in the Town of Chester. Evaluated the project's effects on a National Register Listed historic district.

HARTGEN archeological associates inc

ELISE MANNING-STERLING, M.A., RPA
Project role: Historic Archeologist
Years with Hartgen: 15

QUALIFICATIONS: 36 CFR 61 Qualified. Meets the Secretary of Interior's Professional Qualification Standards

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:
Transportation-related projects

2015 North Hero Bridge, North Hero and Grand Isle, Grand Isle County, VT
Completed Phase I study for proposed bridge rehabilitation project. Examined terrestrial archeological sensitivity areas and supervised LCMM examination of underwater sensitivity.
Project sponsor: Vermont Agency of Transportation

2014 Newport State Airport Terminal Improvements, Newport, Orleans County, VT
Completed Phase I study for proposed expansion and improvements at Newport State Airport. Examined a study area of about 300 acres and identified three areas where disturbance was considered to be minimal. Reconnaissance survey consisted of 32 shovel tests over about 40 acres. Wrote report and directed the fieldwork.
Project sponsor: Vermont Agency of Transportation

2013-2014 Broad Street Parkway, Nashua, Hillsborough County, NH
Principal investigator for Phase II site evaluation of historic sites found within the Nashua Historic Manufacturing District. Historic sites cover a range of 19th and 20th-century industrial contexts. Serves as prime point of contact between the client and Hartgen.
Project sponsor: City of Nashua

2013 Interstate 89 Exit 17 Scoping Study, Colchester, Chittenden County, VT
Principal investigator for 64 acres including a varied landscape and multiple disturbances and alterations from the adjacent highway. Conducted the site visit and wrote the report.
Project sponsor: Chittenden County Regional Planning Commission

2013 Interstate 91 Bridge over the West River, Brattleboro, Windham County, VT
Conducted Phase II archeological site evaluation on a small precontact site within a proposed approach and staging area.
Project sponsor: Vermont Agency of Transportation

2012 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.
Project sponsor: New Hampshire Department of Transportation

2012 VT 2A/289 Interchange Scoping Study, Essex, Chittenden County, VT
Conducted an archeological resource assessment for Stantec Consulting Services under their contract with the CCRPC. Completed site visit and identified several historic structures within or very near the proposed project area that might be affected by future changes to the interchange.
Project sponsor: Town of Essex/Chittenden County Regional Planning Commission

2012 Pearl Street Scoping Study, Essex Junction, Chittenden County, VT
Completed an archeological resource assessment covering about 3,300 feet of Pearl Street for potentially sensitive areas for archeological or historic resources. Directed the project, conducted the site visit, and wrote the report.
Project sponsor: Chittenden County Regional Planning Commission

2011 Lebanon Airport Improvements, Lebanon, Grafton County, NH
Conducted Phase IA research and Phase IB testing for the proposed runway improvement project at Lebanon Airport in Lebanon, New Hampshire. Coordinated with Hartgen's architectural historian to evaluate adjacent historic structures. Wrote the report and directed the fieldwork.
Project sponsor: New Hampshire Department of Transportation

HARTGEN archeological associates inc

WALTER R. WHEELER
Project role: Architectural Historian
Years with Hartgen: 15

QUALIFICATIONS: 36 CFR 61 Qualified Architectural Historian

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

HEALTH/SAFETY: 40-hour HAZWOPER Training (OSHA 29 CFR Part 1910.120)

EXPERIENCE:
Transportation-related projects

2014 Maple Street Reconstruction Project, Weathersfield, Windsor County, VT
Conducted archeological resource assessment for nearly a mile of road reconstruction linking VT 106 with a recreational area. Assessed 27 structures adjacent or within the APE for National Register eligibility and potential impacts from the project.
Project sponsor: Vermont Agency of Transportation

2014 TAP TA 14(10) Sidewalk and Crosswalk Scoping Study, Wilmington, Windsor Co., VT
Evaluated 71 structures for NR eligibility, including part of a NR-listed historic district, and provided descriptions and an historic architectural context for the APE.
Project sponsor: Vermont Agency of Transportation

2014 Hanover Mobility Hub, Dartmouth College, Hanover, Grafton County, NH
Completed a Project Area Form and context statement for a large portion of the Dartmouth College campus and identified an historic district that extended beyond the survey area.
Project sponsor: NH Department of Transportation

2014 Williston Park and Ride Project, Ramsey Parcel, Williston, Chittenden County, VT
Assessed visual impacts of the construction of a park and ride facility on two adjacent or nearby mid-20th-century structures. Provided a brief assessment of the two structures and the surrounding historic landscape.
Project sponsor: Vermont Agency of Transportation

2013 Colchester Campus Connector Additional Improvements, Colchester, Chittenden County, VT
Section 106 review of proposed project impacts to landscape and built cultural resources within this National Register Listed Historic District.
Project sponsor: Town of Colchester

2013 New Castle – Rye Bridge Rehabilitation or Replacement, Rockingham County, NH
Completed a structure inventory form for this bascule bridge containing extensive historical research, a historical background, architectural description of the bridge, and comparative evaluation; developing a statement of significance relating the bridge's construction history to the World War II era Portsmouth Harbor Defense Area.
Project sponsor: NH Department of Transportation

2013 Williston Route 2 Multimodal Corridor Study, Williston, Chittenden County, VT
Compiled a structural inventory of 75 structures, 24 of which were found to be 50 years or older. Made recommendations based on potential effects of the project on historic resources and recommended construction materials sympathetic to the historic character of the project area.
Project sponsor: Chittenden County Regional Planning Commission

2013 Bridge Street Bridge Rehabilitation, Bellows Falls, Windham County, VT
Provided an architectural assessment of a c. 1920 concrete arch bridge and adjacent sidewalk and transportation improvements. Assessed potential impacts of the project to adjacent historic structures in two National Register-listed historic districts.
Project sponsor: Town of Rockingham

2011 Lebanon Airport Improvement Project, Lebanon, NH
Assessed a complex of aviation-related structures at a small airport planned in the late 1930s. Results were presented in a NH SHPO area form.
Project sponsor: City of Lebanon

2010 NY 5, 8 & 12 North-South Arterial Reconstruction, Utica, Oneida County, NY
Prepared HABS documentation for two National Register eligible houses.
Project sponsors: NYSDOT and the Federal Highway Administration (FHWA)

VERMONT SURVEY and ENGINEERING, INC.

SURVEYORS and CIVIL ENGINEERS

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

Stephen Fraser, LS, Principal — **VT LS #527**
Project Manager/Research Specialist — **NH LS #971**
AOT Manager IV — **NY LS #050855**

Number of years with firm: 12

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

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/CADD Manager
AOT Manager IV

Number of years with firm: 26

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

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

Structures Projects

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

Roadway Projects

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

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

Jason Riley, LS — VT LS #59686

Land Surveyor/Senior CADD Draftsman
AOT Technician VI

Number of years with firm: 13

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

Robert White, R.L.A.

Landscape Architect

GPI

PROJECT ASSIGNMENT:
Senior Landscape Architect

EDUCATION:
MLA/1984/Landscape Architecture
Harvard Graduate School of Design

BS/1981/Environmental Design
University of Massachusetts, Amherst

REGISTRATION:
2006/Registered Landscape Architect/NH #083
2006/Registered Landscape Architect/ME #96
2006/Registered Landscape Architect/VT #125.0069946

YEARS WITH FIRM: *2*

YEARS WITH OTHER FIRMS: *30*

PROFESSIONAL AFFILIATIONS:
American Society of Landscape Architects
American Planning Association, Northern New England Chapter
Plan NH

Professional Profile

Mr. White is a landscape architect with over 30 years of experience working in Vermont and northern New England on a wide range of landscape architecture projects for communities, institutions and private landowners. Recent projects range from the design of public space and streetscape improvements for Hampton Beach State Park, a $14.5 million renovation of New Hampshire's flagship state park, the Champlain College Perry Hall landscape and public space improvements at Kimball Union Academy and Cardigan Mountain School. Mr. White has a Masters Degree in Landscape Architecture from Harvard's Graduate School of Design, and is a licensed Landscape Architect in Vermont, New Hampshire and Maine.

Select Project Experience

Public Space and Streetscape Design

Depot Square and Railroad Street Improvements, St. Johnsbury, VT. Landscape Architect and Prime Contractor. Design of Improvements to the St. Johnsbury Welcome Center located at the threshold to the downtown. The improvements include a renovation to the Depot Square Park, and improved pedestrian connections to the Welcome Center (located in the historic train depot) and Railroad Street shopping district. Lead associated schematic design improvements for the Railroad Street streetscape. Scenic byways funded project administered through VTrans Municipal Assistance Bureau. *Client: Town of St. Johnsbury, VT*

White River Junction Main Street and Triangle Park, White River Junction, VT. Landscape Architect and Project Manager. This project involved an innovative reconfiguration of a key downtown parcel and streetscape. The site was the historic town square of White River Junction that was converted to a parking lot in the 1930's. The plan reconfigures the parking lot to allow a green space at Main Street, essentially doubling the green space without losing any parking. A missing section of Main Street sidewalk is incorporated as a pedestrian promenade with benches, street trees and lighting. *Client: Town of Hartford, VT*

Hampton Beach State Park Redevelopment Project, Hampton, NH. Team leader and project landscape architect for the $14 million renovation of Hampton Beach State Park. The renovated park included a renovated pedestrian boardwalk which included shade structures (sunstroke created the largest number of emergency calls), landscaping, seating plazas, lighting, wayfinding and ADA beach access. One of the key improvements included improved pedestrian crossings of Ocean Boulevard (NH Route 1A). This was achieved through crosswalks improved with spectacular 'sunfish' style wayfinding monuments that have become a treasured icon of the beach district streetscape. *Client: New Hampshire State Parks*

Carolyn Radisch, AICP

Urban and Transportation Planner

GPI

PROJECT ASSIGNMENT:
Project Manager/Transportation Planner

EDUCATION:
MS/1995/City and Regional Planning
MS/1995/Civil & Transportation Engineering
BS/1983/Environmental Design

REGISTRATION:
AICP/1992

YEARS WITH FIRM: *<1*

YEARS WITH OTHER FIRMS: *20*

PROFESSIONAL AFFILIATIONS:
American Institute of Certified Planners
Association of Bicycle and Pedestrian Professionals

PUBLICATION & PRESENTATIONS:
"Travel Choices in Pedestrian versus Automobile-Oriented Neighborhoods," Robert Cervero and Carolyn Radisch, Transport Policy, Vol. 3, No. 3, 1996

Original transit and pedestrian related research and drawings included in Transit Villages for the 21st Century, Michael Bernick and Robert Cervero, McGraw-Hill, 1997

"Anatomy of a Transit Stop," Bonnie Fisher and Carolyn Radisch, On the Ground, Volume 1, No. 2 (1995)

"Making Mobility Work in New England Small Towns." Northern New England Chapter of the American Planning Association, September 2011

Professional Profile

Ms. Radisch has national experience in urban planning with an emphasis on the integration of transportation planning and urban desisign. Her project experience focuses on downtown planning and projects that integrate transportation and land use planning. Through a career that has spanned east and west coasts, she has been involved in several noteworthy transportation innovations including the replacement of an elevated freeway structure with a boulevard in San Francisco; the reintroduction of cars and an attractive streetscape at a failed pedestrian mall in Santa Cruz; the conversion of one-way streets in Santa Monica to two-way traffic. She has lead the development of Complete Streets plan for several communities in Vermont and New Hampshire and the development of downtown plans that integrate pedestrain, bicycle, and transit modes with urban design and a strong sense of place. Her professional projects have been undertaken with the objective of creating attractive public spaces and facilities that add to the livability and sustainability of the community and its transportation system. Ms. Radisch has led numerous multi-disciplinary teams on complex, multi-faceted projects. Her project experience includes a full range of urban, suburban and small town projects and she has depth of experience in leading successful community engagement processes.

Selected Project Experience

Multi-Modal Transportation Plans, Hanover, NH. Planner and Project Manager. Several multi-modal plans for Hanover including the first-ever bicycle and pedestrian master plan for this quintessential New England college town of 10,000 people. As a follow-up to the master plan, developed a Safe Routes to School Travel Plan which further developed several bicycle and pedestrian network improvement as well as program concepts. These two plans supported the designation of Hanover as a Bike Friendly Community. For Advance Transit and the Town of Hanover. Led the development of a bus stop design study which recommended improvements to improve the accessibility, functionality and overall patron experience of transit stops. *Client: Town of Hanover, NH*

Garden Street Schematic Design, South Burlington, VT. Planner and Project Manager for the design of a new street in South Burlington's planned City Center district. The plan included leadership of the conceptual street design through a public outreach and City review process. The recommended design includes a protected bikeway -- the first for Vermont-- sidewalks and 'green street' bio-rentention features. *Client: City of South Burlington*

Greening America's Capitals, Montpelier, VT. Planner and Project Manager. Development of a plan that integrates innovative pedestrian, bicycle, green infrastructure and public space improvements into the downtown of Vermont's capital city. Greening America's Capitals is a project sponsored by the HUD-DOT-EPA Partnership for Sustainable Communities. *Client: United States Environmental Protection Agency and City of Montpelier, VT*

Paula Holwerda, LEED AP

Senior Landscape Designer

GPI

PROJECT ASSIGNMENT:
Project Landscape Designer

EDUCATION:
MS/2007/Landscape Architecture/Landscape Ecology
Wageningen University, Wagenignen, Netherlands

BS/2000/ Architecture
Universidad Cotolica de Cordoba, Cordoba, Argentina

REGISTRATION:
LEED AP Accredited Professional/2004
Licensed Architect (Cordoba, Argentina)/2001

SPECIAL SKILLS:
Fluent in Spanish

YEARS WITH FIRM: *2*

YEARS WITH OTHER FIRMS: *15*

Professional Profile

Ms. Holwerda, LEED-AP, is landscape designer and land planner. She has worked on various projects that expressed sensitivity to place and community. Ms. Holwerda has been involved in all stages of project design, from schematic through construction documentation. Paula takes the lead on developing planting plans and produces renderings and visualizations of plans to assist with community engagement and communication. Her background in architecture has provided her with a broad range of expertise allowing her to work at many scales to create special and meaningful sustainable places. She has a strong interest in environmentally responsible design. Ms. Holwerda earned her bachelor's degree in Architecture at Universidad Catolica de Cordoba, Argentina and her master's degree in Landscape Architecture with a minor in Landscape Ecology from Wageningen University and Research Centre, the Netherlands.

Select Project Experience

Rain Garden Design

Stormwater Rain Gardens, Multiple Locations, VT & NH. Landscape Designer. Working with project engineers, Ms. Holwerda developed planting design for several rain gardens in Vermont and New Hampshire, including the Hanover Coop, Hanover, NH; Dartmouth-Hitchcock Medical Center, Lebanon, NH; Bridge Street, White River Junction, VT; Kappa Delta Sorority, Hanover, NH.

Construction Documents and Landscape Design

Depot Square, St. Johnbury, VT Landscape Designer. Working with project engineers, developed landscape construction plans and planting design for the renovations to the historic depot/Welcome Center in the Downtown district. *Client: Town of St. Johnsbury, VT*

Summer Street Apartments, Barre, VT Landscape Designer. Working with project architects and engineers, developed construction plans and planting design for a mixed use development including 28 affordable units and office space in downtown Barre. *Client: Downstreet Community Development.*

Hanover Coop, Hanover, NH Landscape Designer. Working with project architects and engineers, developed construction plans and planting design for the expansion of the grocery store. Landscape plans including rain gardens and parking area planting. *Client: Consumer Cooperative Society of Hanover*

Prospect Place Riverwalk, White River Junction, VT Landscape Designer. Working with project architects and engineers, developed construction plans and planting design for riverwalk and rain gardens.

Client: Town of Hartford, VT

Hanover Inn Streetscape Design, Hanover, NH Landscape Designer. Working with project engineers, developed construction plans and planting design for public streetscape. Design issues included installation of Silva Cells for street trees and design of space and barrier for sidewalk dining. *Client: Town of Hanover and Dartmouth College*

MICHAEL K. WILLARD, LEED AP

SENIOR ASSOCIATE, LANDSCAPE ARCHITECT

Areas of Expertise

- Site Planning and Design
- Construction Documentation and Administration
- Project Management

Awards

- 2013 Vermont ASLA Public Space Award – Honor Award: St. Albans Main Street Streetscape
- 2013 Vermont ASLA Public Space Award – Merit Award: University of Vermont – James M. Jeffords Hall Plant and Soil Science Building Landscape
- 2013 Vermont ASLA Public Space Award – Honorable Mention: Norwich University Outdoor Recreation Center

Professional Memberships

- American Institute of Architects – Affiliate Member
- Vermont Green Building Network - Member

Registration

- Registered Landscape Architect: Vermont #125-0077688

Michael has a passion for developing complex design solutions. His broad technical skills and in-depth knowledge of materials and construction techniques enables him to guide clients through difficult design challenges, while developing creative, functional, and sustainable environments. Michael approaches projects with an open mind to creativity and innovation derived from the unique natural surroundings of each site. This thoughtful and unique process often leads to creative and award-winning design solutions. One of the greatest thrills for Michael is to see a design come to life as it transforms from the mind, onto paper, and eventually into a built environment that we all get to experience every day.

Experience

Michael has built an extensive portfolio of experience designing urban streetscapes, educational campuses, ski resorts, and commercial/residential properties. He oversees our projects from beginning to end—through detailed design to construction documentation.

Michael is a Registered Landscape Architect with a degree in Architecture from Vermont Technical College. As a LEED® Accredited Professional, his design work is driven by an environmental charter to encourage sensitive and responsible design.

Projects

- St. Albans Streetscape Project, Vermont
- Church Street Marketplace, Vermont
- South Burlington City Center - Market Street, Vermont
- Crested Butte Town Center, Colorado
- Ritz-Carlton at Lionshead, Vail, Colorado
- University of Vermont STEM Center, Vermont
- University of Vermont Jeffords Hall, Vermont
- Moran Center at Waterfront Park Redevelopment Plan, Vermont
- College Street Improvments, Vermont
- Bombardier Recreation Park, Vermont
- College Street/Waterfront Access Streetscape Project, Vermont
- Champlain College Business Center, Vermont
- Spruce Peak At Stowe, Vermont
- Champlain College Residence Hall, Vermont
- Suffield Academy, Connecticut
- Johnson State College, Vermont
- Norwich Outdoor Center, Vermont
- University of Vermont Medical Center, Vermont

SE GROUP

DREW POLLAK-BRUCE
ASSOCIATE PLANNER

Areas of Expertise

- Project Management
- Community Planning
- Parks, Trails and Recreation Planning1
- Socioeconomic Analysis

Affiliations/Memberships

- Young Professionals in Transportation, Burlington Chapter - Chairman of the Board
- Association of Pedestrian and Bicycle Professionals - Member
- American Planning Association – Member
- National Recreation and Parks Association – Member
- Vermont Recration and Parks Association - Member
- Colorado Parks and Recreation Association
- Congress for the New Urbanism - Member

Awards

- Honor Award for Sustainability and Environmental Permitting, Town of Nederland Comprehensive Plan Update, 2014
- Merit Award for Outstanding Project, APA Colorado, Town of Ridgway Land Use Plan Update, 2012

Thoughtful and detailed, Drew is attentive to the modern challenges in today's planning arena. Drew is a skilled analyst and planner who recognizes opportunities to bridge gaps and build workable solutions. His specialized knowledge and tools gained from work experience and academia empower clients to craft sustainable plans and policies that fulfill their vision for the future.

Experience

Drew has a wide-ranging background and academic experience in land use and multi-modal transportation planning, public policy, growth management, community development, open space and recreation, economic analysis and public participation. He has been an integral part of SE Group since 2011.

Drew has a Bachelor of Arts in Political Science and History from the University of Colorado, Boulder and Master of Regional Planning from Cornell University.

Representative Projects

- Underwood Park Vision Framework, Vermont
- City of Lebanon Vision Plan Branding Guidebook, New Hampshire
- Mad River Valley Active Transportation Plan, Vermont
- Estes Valley Recreation and Parks District Master Trails Plan, Colorado
- Mad River Valley Economic Study, Vermont
- Teton Village Comparable Communities Analysis, Wyoming
- Town of Nederland Comprehensive Plan Update, Colorado
- Hunter Creek-Smuggler Mountain Cooperative Plan, Colorado
- Town of Ridgway Land Use Plan - 2011 Update, Colorado
- Town of Silverthone Parks, Open Space, and Trails Master Plan, Colorado
- Clear Creek County Master Plan 2030 Update, Colorado
- Town of Snowmass Village Parks, Open Space, Trails and Recreation Master Plan
- Waterville Valley Pedestrian Village Study, New Hampshire
- City of Oneida Bicycle and Pedestrian Connectivity Plan, New York*
- Town of Andes Trail User Survey and Analysis for the Andes Rail Trail, New York*
- Village of Delhi River Park and Walk Master Plan, New York*
- City of Kingston Greenline Trail Feasibility Study, New York*
- Village of Clyde Lauraville Landing Canal Park Concept Plan and Recreational Needs Assessment, New York*
- Schuyler County Comprehensive Plan: Recreation Destination 2030, New York*

** Indicates projects completed while employed by Parks and Trails New York or at Cornell University*

SE GROUP

TOM HAND
LANDSCAPE ARCHITECT

Areas of Expertise

- Site Planning and Design
- Project Permitting
- Construction Documentation and Administration

Awards

- Northbank Bridge and Parks Project, Boston, MA 2013 ACEC Honor Award*

Appointments

- Development Review Board, Stowe, Vermont (2014-present)

Creative, versatile, and thoughtful, Tom's love of the outdoors results in a design approach that ensures projects meld seamlessly into their natural surroundings. His passion and dedication are evident in each project, regardless of scale, as he coordinates all aspects and pays close attention to every detail—striving for outcomes that exceed client expectations and provide an incredible user experience.

Experience

Tom has over a decade of project experience including detailed design, construction documentation and administration. His breadth of experience includes public and private projects, both national and international in scope.

Tom has a Bachelor of Science in Landscape Architecture from the University of Massachusetts, Amherst. He is involved with the Vermont ASLA, and is an active alumni of his college department, frequently returning to guest critic and speak.

Projects

- Town of Waterville Valley Planning Study, New Hampshire
- Waterville Valley Pedestrian Village Study, New Hampshire
- Underwood Park Vision Framework, Vermont
- Waterbury State Office Complex, Vermont
- Spruce Peak Adventure Center, Vermont
- The Balsams Resort, New Hamphsire
- Smugglers Notch Resort Development Masterplan, Vermont
- North Bank Bridge Pedestrian Bridge and Park Design, Massachusetts*
- U.S. Embassy Compound, Burundi*
- U.S. Embassy Compound, Suriname*
- U.S. Embassy Compound, Norway*
- University of Connecticut Student Union Terrace, Connecticut*
- Michael Capuano Early Childhood Education Center, Massachusetts*
- Fitchburg State University Mara Village Residence Hall, Massachusetts*
- Rochester Elementary School, Massachusetts*

** Indicates projects completed while employed by CRJA-IBI Group*

Appendix. Quality Control Plan

Stantec Quality Management System

A system to ensure quality assurance and control measures are being performed and documented

January 4, 2017

Table of Contents

1.0 INTRODUCTION 1

2.0 DESIGN QUALITY MANAGEMENT PROCESS 2
2.1 DEVELOPMENT OF PLAN SUBMITTAL PACKAGES FOR VTRANS REVIEW 2
2.2 DEFINITIONS 3
2.3 GENERAL QUALITY CONTROL AND QUALITY ASSURANCE PROCESS 4
2.3.1 Quality Control Reviews 4
2.3.2 Constructability Reviews 6
2.3.3 Quality Assurance Reviews 6
2.3.4 Auditing and Certification 7
2.3.5 Review Submittal 7
2.4 QUALITY MANAGEMENT WORKFLOW 7

1.0 INTRODUCTION

The Stantec Quality Management System (SQMS) interprets the work practices in Stantec through the filter of the ISO 9001:2008 standard. The SQMS is written to help introduce a newcomer to the organization's practices for planning, managing people, client satisfaction, practice management, managing sub-consultants and for continual improvement. This quality management system is audited on a regular basis to ensure that Quality Control and Quality Assurance measures are being performed and documented.

A critical component of any Design Quality Management System for a project is ensuring that all staff involved in the project is aware of the Quality Management System and are committed to following its direction. The Project Manager will be responsible for providing project staff with a copy of the Design Quality Management Plan. However, each Project Team member regardless of role is responsible for the quality of their work and is expected to provide an appropriate level of quality control on that work.

The design work associated with any project will be performed under the direction of a Project Manager. Design staff will be divided into design teams by disciplines including, but not limited to, the following:

- Structural
- Roadway Design/Traffic
- Geotechnical
- Traffic Control
- Environmental Permitting

Each design team will be led by a Discipline Design Leader (this may be the Project Manager when appropriate) identified by the Project Manager. Each Discipline Design Leader will report directly to the Project Manager. These design teams will perform Quality Control reviews of the design plans, design calculations and specifications packages.

The Design Quality Assurance Team will include a team of Independent Technical Reviewers that will work independent from the rest of the design staff. The Independent Technical Reviewers will be qualified specialists in each of the above disciplines and this team will perform independent technical reviews of the design plans and specifications packages. A Quality Assurance Coordinator, identified by the Project Manager, may be utilized to coordinate the efforts of the Independent Technical Reviewers.

This document will provide procedures that will be applicable to the design quality control and quality assurance processes. The design quality process shall be used for all design plans, documents, and reports prepared by Stantec. This Design Quality Management Plan will be distributed to all members of the design team that are assigned to any projects. The design

process may require modifications, refinement, or clarifications during the life of the contract. Modifications or revisions to the Design Quality Management Plan will occur from time to time to continue improving the process. Changes will be shared with VTrans and be distributed to members of the design team.

2.0 DESIGN QUALITY MANAGEMENT PROCESS

2.1 DEVELOPMENT OF PLAN SUBMITTAL PACKAGES FOR VTRANS REVIEW

Design Plan Submittal Packages will typically be submitted to VTrans for review at the following stages of plan development:

A. Conceptual Plans
B. Right of Way Plans
C. Final Plans
D. Contract Plans

At each of the stages listed above, each Work Package will undergo the following steps before being submitted to VTrans for review:

A. Quality Control Reviews
B. Constructability Reviews
C. Quality Assurance Reviews
D. Audit and Certification of documents
E. Submittal of plans, estimate and specifications to VTrans for review

The Design Team will prepare the design documents following the established design criteria for the project. Inter-Discipline and Design Team coordination will be achieved through the use of regularly scheduled meetings and written communications. These meetings will allow for the resolution of design issues prior to submittals to VTrans for review.

All Plan Submittal Packages will be checked and comments provided using the color coded system described in Section 2.3.1.1 below.

The following will be an overview of the Design Quality Management Process that will be used in the design of projects.

2.2 DEFINITIONS

Design Quality Management Plan	The documented requirements that establish and define responsibilities, performance measures, milestone audits and work procedures to ensure that the project deliverables meet predetermined requirements. It encompasses Quality Control, Quality Assurance, and Audit of the scope of work covered by this project.
Design Quality Assurance Coordinator	A person responsible to ensure the implementation of the Quality Management Plan for a particular project and to audit its execution. Audits the quality control and quality assurance documents to ensure that the process is being followed and that the project documentation is completed.
Quality Control	Review and test the product (deliverables) against predetermined requirements for compliance. Product not meeting the requirements will trigger adjustment or changes to the process leading up to the product or will identify product that must be rejected and replaced.
Quality Assurance	Review and document that the quality control described above is being performed. It will include independent checks by qualified personnel of the work done by others and is intended to address requirements alternatively defined as Proof of Compliance, Oversight and Independent Assurance.
Independent Review/Check	Unconstrained checks and back checks of the work of others by qualified personnel not directly involved in the original work. This may include checking assumptions and design criteria, and that the designs or other work product are acceptable in accordance with the project requirements and generally accepted engineering practices.

Quality Audit	A review of the documentation and processes of Quality Control and Quality Assurance to measure compliance.
Intra- and Inter-Discipline Reviews	Independent Checks focused on specific discipline elements or coordination between different Disciplines.
Constructability Review	An Independent Check facilitated by an independent reviewer to identify possible design improvements to make construction easier, safer and less costly and/or reduce environmental impacts.
Management Review	Meetings held on an as-needed basis, as requested by the Project Manager or the client, to monitor the effectiveness of, and to implement any needed improvements to, its Quality Management Plan in order to ensure compliance with the project and quality requirements of the project.

2.3 GENERAL QUALITY CONTROL AND QUALITY ASSURANCE PROCESS

2.3.1 Quality Control Reviews

Quality control is the responsibility of each individual undertaking a component of the work. To assist in this process, the Discipline Design Leaders will establish as part of this Design Quality Management Plan responsibilities and procedures for checking technical accuracy of the work, identifying and correcting any discrepancies, rejecting product not meeting requirements if necessary, and accepting the final work product as well as defining the frequency of implementing some or all of the procedure and reviewing procedural performance. This procedure will include reviews by individuals knowledgeable of the technical requirements for a particular activity and with the relevant qualifications and experience in the discipline.

The Quality Control Review process consists of the following components:

- Confirm that all standard policies, procedures, practices, and contract requirements have been followed.
- Intra-discipline independent technical checks of the design for technical accuracy, constructability and conformance to the standards and specifications. Any apparent discrepancies will be documented, reconciled, and/or the accepted course of action, including the individual responsible for the action,

identified.

- Inter-discipline reviews that will be used for all design reports, plans and specifications that involve more than one discipline. The objective of this review is to verify that there are no conflicts, misalignments, or omissions between the drawings and specifications prepared by the design team. The Project Manager will be responsible for designating the appropriate reviewers.
- Confirm that all issues raised and actions identified are addressed.
- Review the methodology and technical accuracy.
- Review all math and engineering computations.
- Review the form, content, organization, appearance, and grammar.
- Complete the appropriate VTrans milestone checklists

All formal comments and responses to those comments, generated through the quality control review process will be attached to the Design Quality Review Certification and included in the submittal to VTrans.

2.3.1.1 Checking Procedures for Design Plans, Calculations, Specifications, and Reports

All plan submittal packages will be checked and comments will be documented using the color-code system described below.

The color-code system will follow the following process:

1. The checker/reviewer will highlight in yellow information that has been found to be correct and consistent with the contract and design criteria or any VTrans approved deviations. This will show that the information has been subjected to a check or review and is found to be correct information. For text documents, checked and correct text does not need to be highlighted in yellow. Information such as tables, figures, equations and values, and any references to them should be highlighted to show that they have been reviewed.
2. Incorrect information shall be marked in red by the checker/reviewer for correction and additions by the originator of the information. Suggestions, comments and notes shall be written in red with a cloud around them.
3. Information that is marked up shall be back checked by the originator and for each red-marked comment with which the originator agrees, the document will be revised accordingly and the originator will be check marked green.
4. Information that is marked up that the originator disagrees with the checker/reviewer shall be resolved through discussion. If no agreement can be reached between the originator and the checker/reviewer, the Project Manager will decide upon the resolution. The originator will mark in green the disposition of

all red-marked comments.

5. All marked up and agreed upon or decided upon information shall be corrected or incorporated into the original document by the originator. These corrections or other updated information will be incorporated into the original document. The rechecker will verify that the original document has been updated in accordance with the agreed approach documented in the check.
6. Following each phase of the checking process, the responsible individuals involved will document their participation by placing their signature or initials and date on the plans, documents, or calculations. The documents or plans are then stored in the project files for record. QC records are maintained so that a permanent history of project development is created and progress can be reviewed as needed.
7. The Project Manager shall complete the checking procedure by signing off that the appropriate Quality Control process has been completed.

2.3.2 Constructability Reviews

The Project Manager will facilitate complete independent Constructability Reviews, by independent reviewers, of the drawings, specifications, and other design submittal documents. The purpose of the review will be to ensure that the documents contain sufficient information to allow the project to be constructed without any interpretation needed. The Constructability Reviewer shall sign the cover of the review set to certify in writing that the submittal has undergone a Constructability Review. The review set, along with any review comments, shall be stored in the project files.

2.3.3 Quality Assurance Reviews

The Project Manager will designate appropriate staff from each Discipline to carry out independent quality assurance reviews.

The reviews will be carried out by experienced professionals knowledgeable of the technical requirement for a particular activity, but has not been directly involved in the preparation of the material for that activity.

The individual reviews that the quality control process has been done as evidenced by completed and signed off checklists and appropriate Design Review Comment Form responses. The QA reviewer also undertakes an independent review of the activity to assure consistency with design standards and sound engineering judgement.

Components of the process include:

- Review and signoff of any Checklists, Design Review Comment Forms and Non- Conformance Reports completed during the quality control process.
- Undertake, document and place on file independent mathematical and

procedure checks of critical components of the design (i.e., roadway design, traffic operations, structural, geotechnical, trenchless technology, survey and environmental) as relevant.

- Evaluate whether the design teams assessed the problem appropriately, applied the correct analyses and that qualified personnel had been assigned to the tasks.
- Confirm that all contract requirements along with any client specific procedures have been followed.
- Confirm that any QC issues raised and actions required have been addressed.
- Check the total design or package of deliverables for completeness, clarity, and accuracy.
- Confirm that documents have been checked and signed by the drafter, designer, and reviewers.
- Confirm that the submittal package has been stamped, signed, and dated by a responsible Vermont licensed engineer where required under the contract provisions, general engineering practices or by applicable laws.

All formal comments and responses to those comments, generated through the quality assurance review process will be attached to the Design Quality Review Certification and included in the submittal to VTrans.

2.3.4 Auditing and Certification

Upon resolution and incorporation of all agreed upon Independent Quality Assurance Technical Review comments, the Project Manager, or Design Quality Assurance Coordinator, will audit the design review documents and certify them as meeting the requirements of the Design Quality Management Plan. The will sign off and document in writing to record and certify the audit.

Documentation of all comments received and the comment responses will be placed in the project records.

2.3.5 Review Submittal

The Project Manager will prepare the Submittal Package and submit it to VTrans for review.

2.4 QUALITY MANAGEMENT WORKFLOW

1. Project Manager will share design standards with entire project team.
2. Develop Design Criteria based on standards as appropriate for project. The following are possible items requiring design criteria:
    - Roadway

- Environmental
- Trenchless Technology
- Traffic
- Geotechnical
- Structures

3. Project Manager will provide design criteria to client and request approval.
4. During design, Project Manager will engage Independent Reviewers (and Design Quality Assurance Coordinator if used) to check design against design criteria.
5. Prior to each submittal, Quality Control Reviewers will fill out applicable plan checklists.
6. A constructability review will be performed.
7. Prior to each submittal, Independent Reviewers to conduct their reviews and document that they were completed by signing off
8. The Project Manager, or Design Quality Assurance Coordinator, will audit and certify that Quality Control and Quality Assurance procedures for the submittal have been completed.
9. The submittal will be reviewed, stamped, signed, and dated by the Project Manager or Engineer of Record.
10. The submittal will be submitted to VTrans and filed.

Quality Management Work Flow