

# Statement of Qualifications

March 6, 2020



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

**Hoyle, Tanner**  
& Associates, Inc.  
125 College Street, 4th Floor  
Burlington, VT 05401

## **About the Cover Photo:**

Our team recently completed a project with the City of South Burlington to improve safety for bicyclists at the Farrell & Swift Street intersection. An innovative “bike box” was installed to improve visibility of bicyclists looking to traverse the intersection. This first-in-the-state installation provides a dedicated refuge for bicyclists (painted with a highly visible shade of green indicative of bike lanes) allowing them to wait in front of queued traffic at the signalized intersection and reducing “right hook” accidents.

March 6, 2020

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



**RE: Request for Qualifications (RFQ)  
Two-Tier (State-Local) Qualifications-Based Selection for  
At-The-Ready (ATR) Consultant Engineering Services for Municipalities  
Design Services Category**

In response to the recent RFQ for the At-The-Ready (ATR) Program, Hoyle, Tanner is pleased to submit this qualifications package for your consideration. As an incumbent firm for the 2017 ATR under the Design Services category, we are well prepared to deliver projects in accordance with the VTrans Municipal Assistance Bureau (MAB) Project Development Process for all services listed in the RFP, including: Roadway / Intersection Reconstruction and Rehabilitation, Bicycle and Pedestrian Facilities, Safety, Bridges and Culverts, and Transportation Alternatives projects. We appreciate the streamlining opportunity that the ATR implements, and recognize the benefits ATR services offers to municipalities by ensuring highly-qualified firms are available, while meeting Brooks Act and selection requirements for consultant engineering services.

Our team has significant VTrans and Vermont permitting experience to successfully steer projects to completion, and we specialize in completing locally-managed projects with federal and state funding sources. In fact, over the past 25 years, we have provided engineering services to over 120 Vermont municipalities. **I will serve as the Contract Manager** for project requests through this program. I will ensure that the right team is formed for each project, that consistency in deliverables is maintained, and that adherence to the MAB Local Project Guidebook and other Vermont-specific resources are project priorities. Additionally, I will serve as the primary Project Manager for projects requested by municipalities. We have selected **three other capable Project Managers** from various disciplines and expertise to lead assigned projects: **Josif Bicja, PE; Stephen Haas, PE; and Audrey Beaulac, PE, CPSWQ.**

We have elected to only submit under the **Design Services** category of this RFQ. Although we have experience and depth of capabilities in municipal project management and construction inspection, we feel we are best suited to provide the greatest availability and diversity of services to municipalities under the design category.

We trust you will find our qualifications responsive to your request, and in an effort to assist the reader, we have strategically combined and organized certain aspects of the response. We look forward to working with Vermont municipalities under this contract to improve their infrastructure facilities.

Very Truly Yours,

**HOYLE, TANNER & ASSOCIATES, INC.**

A handwritten signature in black ink, appearing to read 'J. Olin', is written over the company name.

**Jon A. Olin, P.E. | Vice President, Vermont Regional Business Manager**

Evaluation Criteria	Hoyle, Tanner Response
<b>Qualification &amp; Experience</b>	<p>Our staff is trained to support municipalities and manage transportation projects with state and federal funding. We have the diverse range of expertise to support all project types (road, structure, bike/ped, environmental, etc.) that may be assigned through the MAB program.</p> <p>✓</p>
<b>Demonstrated Experience in Design</b>	<p>The sample projects provided in this response highlight our design experience while adhering to the project development process associated with federal funding. Our Project Managers have specific training to complete projects through federal funding processes, and when appropriate, have streamlined for design cost and schedule efficiency.</p> <p>✓</p>
<b>Commitment of Resources &amp; Staff</b>	<p>Our reputation is built upon trust. We only take on projects that we have the expertise and capacity to best serve our clients. It's how we've been in business for almost 50 years and how we plan to continue for over 50 more. We have provided an availability chart and experience matrix (page 8) for the staff in this response. You can be assured that our firm will provide the right team for each assignment, and when selected, we will achieve the project goals and meet the schedule with the resources committed to the assignment.</p> <p>✓</p>
<b>Experience with Municipalities</b>	<p>As an incumbent firm for this ATR contract and having had a Vermont office for over 30 years, we have a long history with Vermont municipalities, permitting criteria, and VTrans specifications and procedures. We use this experience to guide our municipal clients through the project development process, recognizing challenges early on and working out strategies to overcome.</p> <p>✓</p>

# What's Inside

	Page
<b>Cover Letter</b>	
<b>Executive Summary</b>	
<b>Firm Information</b>	1
<ul style="list-style-type: none"><li>▪ Introduction to Consultant Firm</li><li>▪ Organizational Chart</li><li>▪ Availability Chart &amp; Experience Matrix</li><li>▪ Quality Assurance &amp; Conclusions</li></ul>	
<b>Design Services</b>	11
<ul style="list-style-type: none"><li>▪ Qualification &amp; Experience of Firm</li><li>▪ Project Examples</li><li>▪ Key Personnel Profiles</li></ul>	
<b>Appendix A: Resumes</b>	21
<ul style="list-style-type: none"><li>▪ Staff Resumes</li></ul>	

# Streetscape Improvements Burlington, Vermont



## Firm Information

Since 1973, the professionals at Hoyle, Tanner have successfully collaborated with municipal and state clients on thousands of important projects. With a staff of nearly 100 engineers, planners, technicians, inspectors, and support personnel, Hoyle, Tanner has evolved and adapted to meet the constantly-changing needs of our clients, funding programs, and the increasing complexity of design and permitting.

We provide services in the fields of transportation (roadways, bridges, and aviation), water resources (water, wastewater, and stormwater), site development (civil, traffic, and parking), and structures (buildings), as well as asset management and environmental permitting related to all of these disciplines. Our team of professionals includes noted experts in their fields who are routinely invited to share their knowledge in journals and during conference presentations. We strive to improve continuously and are committed to providing value to our clients' projects.

We specialize in working with municipalities to maximize their efficiency with projects receiving state and federal funding, including Transportation Alternatives (TA), bicycle and pedestrian facilities, multi-modal facilities, SRTS, FEMA, FHWA ER, FAST Act, CMAQ, BUILD/TIGER Grant, Vermont Clean Water, and/or Town Highway and Structure Grants. To do this, our management team makes a point to stay well-informed of state and federal initiatives, program guidelines, and requirements. Our project managers have first-hand experience delivering projects using state-specific guidebooks and specifications, including the VTrans Municipal Assistance Bureau (MAB) Local Projects Guidebook and its appendices, as well as receiving training through programs such as New Hampshire and Maine's Local Public Agency and Local Project Administration LPA training and certification. Through this training and experience, our team ensures the municipality has a highly-qualified design team, both in engineering, and the delivery of the project to meet reporting, schedule, budget, and technical goals.

Since 1988, we have proudly maintained a Burlington, Vermont office. With over 32 years of providing engineering services to Vermont municipalities, we provide effective public outreach and participation, efficiently meet funding and permitting requirements, and have experience with various local contractors to bring projects through completion successfully.

With our office in Burlington, we are well situated to meet the municipality's needs. Our Vermont office, managed by Jon Olin, PE, has a reputation of providing clear communication and project updates, being available and responding quickly to calls and emails, managing projects within budget and schedule, demonstrating technical expertise, and bringing enthusiasm and care to every project through its successful completion.

**We will provide all transportation engineering services for At-The-Ready projects using our in-house staff located in our Burlington, Vermont and Manchester, New Hampshire offices.**



### Primary Contact Information

Hoyle, Tanner & Associates, Inc.

125 College Street, 4<sup>th</sup> Floor  
Burlington, VT 05401

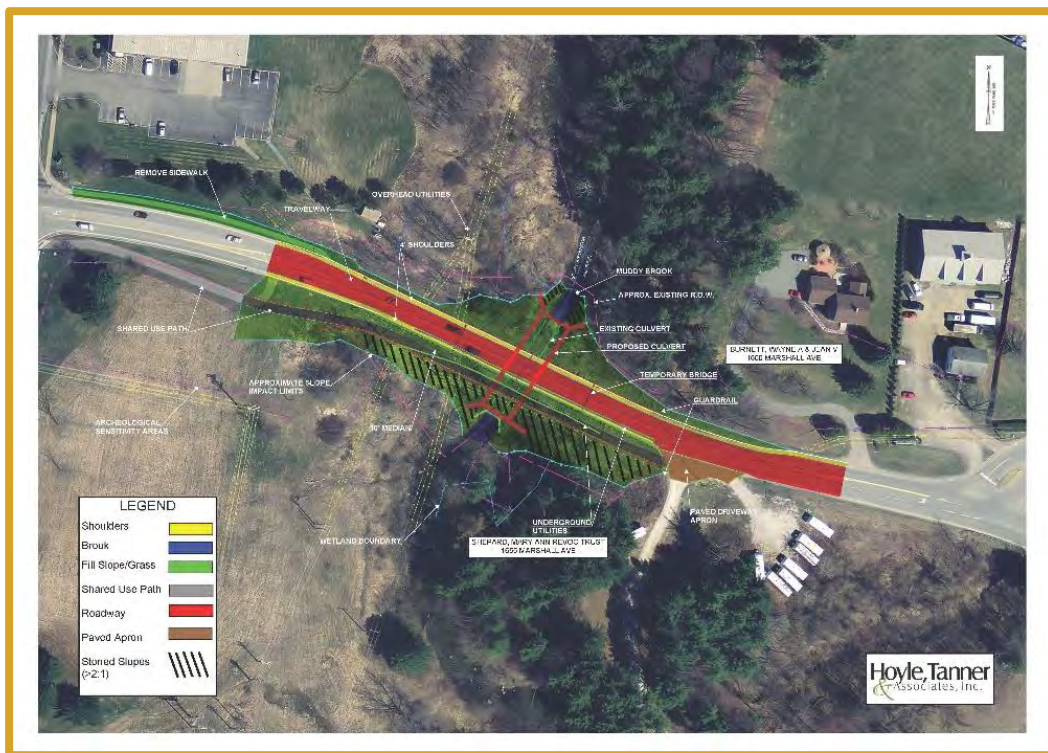
Jon A. Olin, PE, Vice President  
(802) 860-1331 ext. 314

[jolin@hovletanner.com](mailto:jolin@hovletanner.com)

## PROFESSIONAL DISCIPLINES

Hoyle, Tanner offers our clients a full complement of transportation engineering services. Specific areas of expertise with relevance of MAB administered projects include:

- Roadway Reconstruction & Rehabilitation
- Complete Streets & Traffic Calming Streetscapes
- Bicycle & Pedestrian – Shared-use, Multi-Use Shoulders, Paths & Sidewalk Design
- Traffic Signal Design
- Traffic & Safety Analysis
- Construction Staging/Traffic Control Plans
- Intersection Analysis & Design
- Intersection Control Warrants
- Regulatory, Guidance & Warning Signage
- Erosion Control, Stormwater Quality & Management
- Pedestrian Bridge Design
- Stormwater Best Management Practices (BMP) Design
- Bridge & Culvert Rehabilitation, Replacement & Preservation Design
- Park & Ride Facilities
- Stormwater Utilities
- Hydrologic & Hydraulic Analysis
- Right-of-Way Coordination & Acquisition
- Utility Avoidance, Coordination & Relocation Design Incorporation
- Permitting including NEPA Documentation Preparation
- Multi-Discipline Team Management
- Bid-Phase Services
- Construction Administration, Observation & Documentation
- Asset Management & Capital Planning



**Muddy Brook Culvert Crossing and Bike Path Extension  
South Burlington / Williston, Vermont**

## HOYLE, TANNER ADVANTAGES

### Personal Service & Responsiveness

The size of our firm allows us to provide our clients with a depth of engineering expertise, while still remaining flexible and responsive to adapt quickly to the specific project needs. The foundation of our business structure is built on developing mutually-beneficial, long-term partnerships with our clients, subconsultants, regional regulatory officials, and that we work towards project value and improved success.



## Firm Information

We welcome municipalities to contact our client references (included with project examples) and hear first-hand of how Hoyle, Tanner has not only excelled from a technical standpoint, but is also a trusted partner in overcoming challenges and meeting project goals. For example, we recently completed the inspection and inventory of the entire public-owned stormwater system for the Town of Colchester with funding provided through the Chittenden County Regional Planning Commission (CCRPC). Incorporating zoom camera technology, we **helped save the Town over \$300,000** completing the inspection of 114,600 linear feet of piping and 1,300 structures. Summarizing and presenting organized data, we developed a capital planning tool for the Town that prioritized needs and allowed for better long-term planning based on the remaining useful life and pipe/structure condition. Based on our success with this project, several neighboring communities are now moving forward with a similar approach.

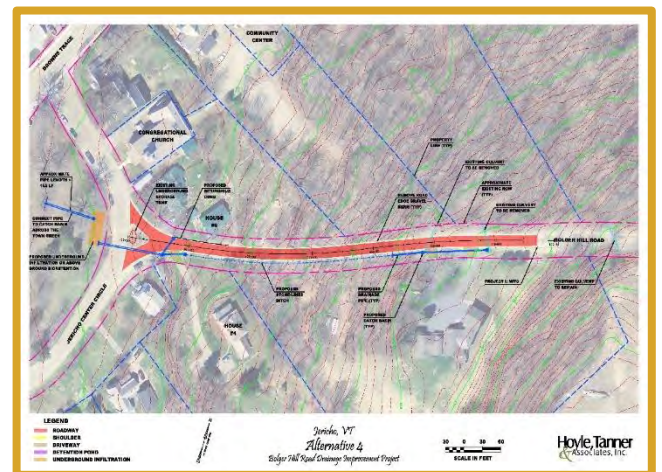
### Budget & Schedule Awareness

Our managers and accounting team use the Deltek Vision® software to manage staff hours, budget, billing, and expenses. Our Project Managers (PMs) meet weekly to coordinate staff assignments, project deadlines, personnel schedules, and share other relevant information on projects and clients. Continuous throughout the meeting, PMs update Deltek plans (project assignments) to ensure the right team is working at the right time to meet client schedules. Monthly, our PMs work with our accounting team to ensure invoices are accurate, complete, and compliant with client requirements for progress reports and other supporting information.

### Technical Excellence You Can Trust

We specialize in the assessment, prioritization, capital planning, and design of preservation, rehabilitation, and reconstruction of transportation and utility infrastructure and associated stormwater treatment. With New England state transportation agencies, our team of highway, traffic, and structural engineers are engaged in or have completed dozens of scoping and design projects where our designs have maximized the service life of pavements, culverts, bridges, slopes, and stormwater best management practices (BMPs).

Working with the CCRPC and the Town of Jericho, our transportation team, led by Audrey Beaulac, PE, CPSWQ developed the Drainage Alternatives Study to address gravel runoff and stormwater treatment from Bolger Hill Road. The preferred alternative is being advanced to final design and includes the design of two BMPs to treat stormwater before it reaches the wetland. These designed infiltration and bioretention practices will treat the following pollutants: TSS – Sediment, TP – Total Phosphorous, and TN – Total Nitrogen. This will also improve groundwater recharge, capture excess rainwater during large storm events, and filter out other pollutants such as automotive oils and brake dust. Our team worked closely with CCRPC and Town staff to develop feasible alternatives that met the project goals of reducing erosion and gravel sediment accumulation while improving stormwater treatment in a cost-effective solution with relatively low long-term maintenance needs.



**Drainage Alternatives Study on Bolger Hill Road, Jericho, Vermont**

## Firm Information

### Innovative Ideas for Better Projects

At Hoyle, Tanner, we are always looking to add value to our clients' projects. We do this on every project by considering initial and long-term costs, sustainability, innovative materials, accelerated construction methods, schedules, traffic management, environmental permitting, and effects on abutting properties. There are no "cookie-cutter" solutions for our projects; however, the experience we have gained enables our team to partner with municipalities to make prudent decisions together.

### Specializing in Municipal Client Service

Approximately 60% of the services we provide our clients are completed for municipal clients, with a large portion utilizing state and federal funding. In 2019 alone, Hoyle, Tanner provided services for over 118 municipally-managed projects. As illustrated on the next page, Hoyle, Tanner has provided engineering services to over 120 Vermont municipalities. It is our business to understand how to deliver the best projects meeting scheduling, reporting, permitting, design, and contractual requirements of particular funding programs.

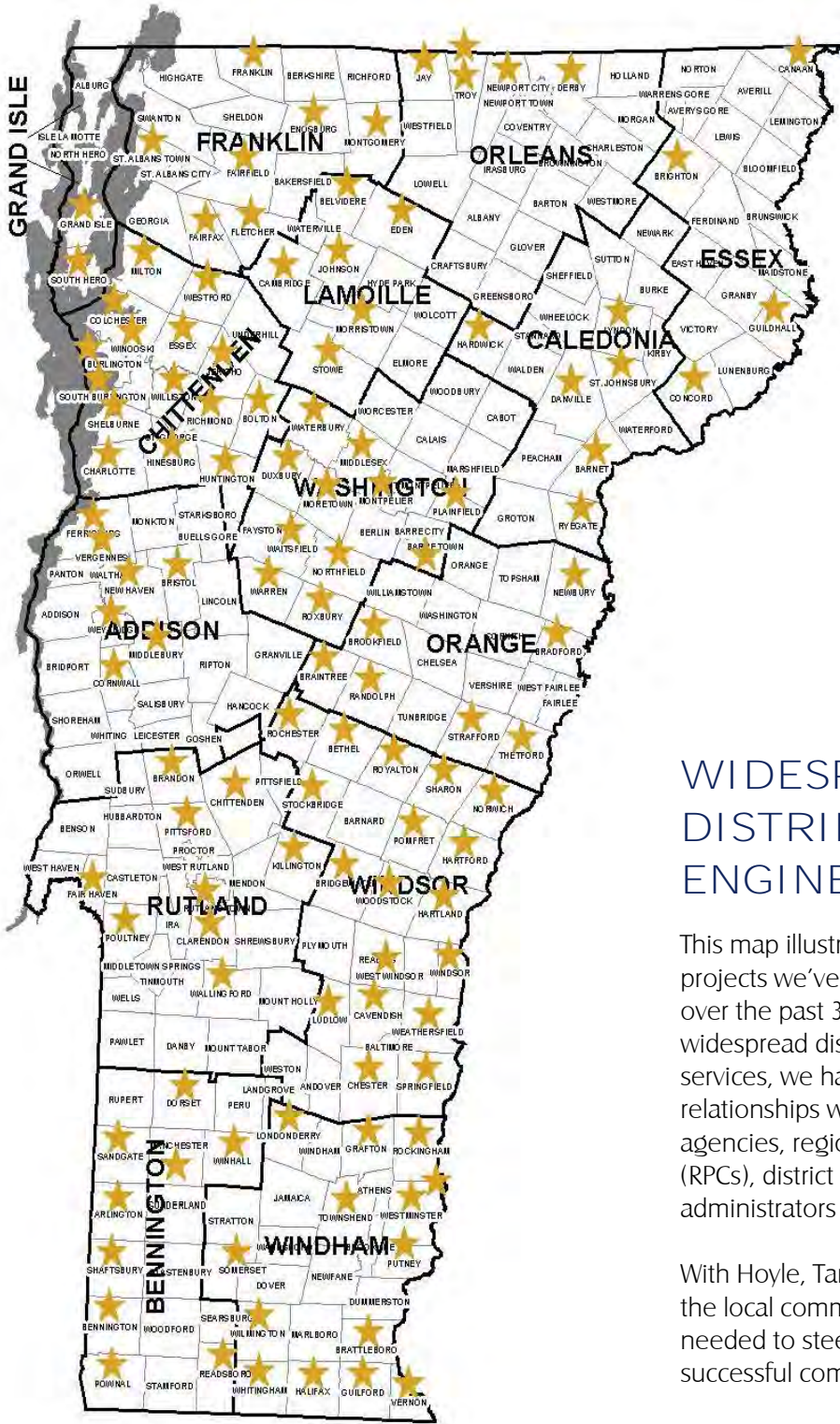


### OUR COMMITMENT

Hoyle, Tanner is committed to establishing long-term relationships with our clients. Our interest is to exceed your expectations in every way so that we will be your first phone call whenever the need arises. We pride ourselves in providing an exceptional, memorable experience. The design of infrastructure projects is much more than solely the technical aspects, which is why you have our commitment that we will support municipalities with our expertise from start to finish — from concept development to the ribbon cutting.



**Union Street Roadway Reconstruction, Pedestrian Facilities, Stormwater, Sewer Replacement, Lighting  
Peterborough, New Hampshire**



## WIDESPREAD DISTRIBUTION OF ENGINEERING SERVICES

This map illustrates the locations of projects we've completed in Vermont over the past 32 years. With this widespread distribution of engineering services, we have established many key relationships with municipalities, resource agencies, regional planning commissions (RPCs), district transportation administrators (DTAs), and contractors.

With Hoyle, Tanner, municipalities have the local commitment and experience needed to steer projects to their successful completion.

### PROJECT SPECIFIC SUBCONSULTANTS

Hoyle, Tanner maintains relationships with many local specialty subconsultants including geotechnical engineers, surveyors, environmental scientists, historical and archeological consultants, landscape architects, and railroad design engineers. Should a particular assignment require a service that is not offered by our firm, we will work with VTrans and the municipality to provide the right subconsultant for the type of service based on their proficiency in the specific discipline, local knowledge and experience, availability to complete the project, and VTrans documentation and prequalification.

### ADDITIONAL HOYLE, TANNER EXPERTISE

In addition to the services highlighted in the RFQ and our Design Services section of this proposal, we also provide park and ride facility design, stormwater engineering, hydrologic and hydraulic, and permitting/NEPA documentation services.



We understand the ability of the TA program to fund environmental mitigation projects related to stormwater and habitat connectivity. **Our Lead Stormwater Engineer, Kirstin DiPietro Worden, PE**, has been closely following the Vermont Clean Water Act's progress and its impact on communities. We encourage you to take a closer look at Kirstin's resume in the *Appendix* section for a sampling of experience in designing and implementing Best Management Practices (BMPs). Whether a community is an MS4, within the Lake Champlain basin, or Connecticut River basin, she has the knowledge and tools to work with our highway and environmental engineers to develop solutions that meet the regulatory needs.



With 2D hydraulic modeling capabilities, led by **Kayla Hampe, PE**, our team has extensive hydrologic and hydraulic analysis capabilities. Our team is proficient with this much higher quality software without added cost to the project. Additionally, this software allows us to represent culvert crossings more accurately, show streamflow impacts on slopes, design scour protection measures, and predict water surface elevations. On the recently-completed Dowsville Road Culvert Replacement project, our design team took an innovative approach to incorporate a precast form-lined bottom for this steep gradient crossing. As depicted on the graphic to the right, the boulder riffle pattern increases water depths and provides areas of relief for a fish passage that will not blow out during large storm events.



We have experienced in-house staff focused on environmental and cultural resources permitting led by **Kimberly Peace**. She has recently completed Stream Alteration, Army Corp GP, and NEPA Programmatic Categorical Exclusion documents for projects in Rochester, Duxbury, Milton, and Sharon. Because of Kimberly's knowledge and experience, our team can foresee potential project constraints and effectively communicate and navigate the project through Vermont and federal permitting requirements. We have established relationships with regulators and years of experience in preparing the state and Army Corp permits associated with transportation projects, as well as preparation of Categorical Exclusion (CatEx) and NEPA documentation.

### RESOURCE PLANNING & AVAILABILITY

The following pages illustrate our proposed team organization for MAB administered projects showcasing our exceptional depth and range of personnel, as well as our projected availability to perform on projects over the next three years. These are expectations based on our current workload and projections for future workload and commitment to clients. We have the depth and availability to complete a large number of projects for municipalities.

# Firm Information Organizational Chart

New personnel added after March 2020 can be found in the resumes section.



**Vermont Municipality & MPM**

## PRINCIPAL-IN-CHARGE

**Matthew Low, PE**  
Director of Engineering Operations  
Quality Administrator

## CONTRACT MANAGER

**Jon Olin, PE**  
Contract / Project Manager

### ROADWAYS, BICYCLE & PEDESTRIAN FACILITIES & INTERSECTIONS

- Todd Clark, PE - Quality Assurance Auditor
- Stephen Haas, PE - Project Manager
- Audrey Beaulac, PE, CPSWQ - Project Manager
- Heidi Marshall, PE - Senior Engineer
- Jacob Sparkowich, PE - Engineer
- Jeffrey Collins, EIT - Engineer
- Nicole Centerbar, EIT - Engineer

### BRIDGE, CULVERT & TRANSPORTATION STRUCTURES

- Sean James, PE - Quality Assurance Auditor
- Josif Bicja, PE - Project Manager
- Edward Weingartner, PE - Senior Engineer
- Kayla Hampe, PE - Engineer
- Joseph Ripley, PE - Engineer/Inspector
- Ryan McMullen, PE - Engineer
- Katelyn Welch, EIT - Engineer

### PERMITTING, ROW, STORMWATER

- Kimberly Peace - Senior Environmental Coordinator
- Joanne Theriault - Environmental Coordinator
- Elizabeth Bosiak - Right-of-Way Specialist
- Kirstin DiPietro Worden, PE - Stormwater Engineer

# Availability Chart & Experience Matrix

\* Availability is expressed as a percentage of time each staff member can dedicate to Vermont Municipal Projects

MUNICIPAL PROJECT EXPERIENCE																		
HOYLE, TANNER STAFF EXPERIENCE AND AVAILABILITY	Roadway Reconstruction	Roadway Rehabilitation	Intersection Analysis & Design	Roadside Clear Zone & Safety Design / Road Safety Audits	Bicycle & Pedestrian Facilities (On & Off Road)	Safe Routes to School	Park & Ride Facilities	Traffic Design	Bridge & Culvert Repair & Replacement	NBIS Certified Bridge Inspector	Hydrology & Hydraulic Analysis	Stormwater Treatment	Transportation Alternatives Projects	NEPA Documentation & Permitting	Right-of-Way Acquisition	LPA Certification	Availability	
	Matthew Low, PE	★	★							★				★	★	★	★	20%
	Jon Olin, PE	★	★	★		★			★		★		★	★	★			40%
	Todd Clark, PE	★	★	★	★	★	★	★	★				★	★	★	★		30%
	Stephen Haas, PE	★	★	★	★	★	★	★			★	★	★				★	40%
	Audrey Beaulac, PE, CPSWQ	★	★		★	★	★	★	★		★	★	★					40%
	Heidi Marshall, PE	★	★	★		★	★	★	★		★	★	★	★	★	★	★	40%
	Jacob Sparkowich, PE	★	★	★	★	★	★	★	★					★				50%
	Jeffrey Collins, EIT	★	★		★	★		★						★				50%
	Nicole Centerbar, EIT	★	★		★	★			★					★				60%
	Sean James, PE					★			★	★				★	★	★	★	40%
	Josif Bicja, PE								★	★	★			★			★	40%
	Edward Weingartner, PE								★	★				★			★	40%
	Kayla Hampe, PE								★		★							40%
	Joseph Ripley, PE								★	★				★			★	40%
	Ryan McMullen, PE								★									50%
	Katelyn Welch, EIT								★									50%
	Kimberly Peace													★	★			40%
	Joanne Theriault														★			40%
	Elizabeth Bosiak													★		★	★	40%
Kirstin DiPietro-Worden												★	★				40%	

### **QUALITY ASSURANCE PROGRAM**

A commitment to quality begins with the corporate culture. At Hoyle, Tanner our senior management encourages and challenges all team members to continuously assess and improve service to our clients. Regardless of whether the assignment is a proposal, permit application, inspection report, or set of calculations, we take pride in the presentation, organization and thoroughness of our deliverables.



In addition to maintaining high technical quality of design services, we deliver schedules, estimates, invoices, project status updates and communications in client-specific formats and frequencies that allow their internal departments to easily review and process information. After projects are complete, we discuss the clarity and constructability of our plans and specifications with contractors and resident engineers and implement improvements into our standard details and specifications.

Recently, we completed a company-wide training with our management staff, including Project Managers, in Federal Acquisition Regulation (FAR) to ensure as a company we properly document and charge for professional time and expenses to meet federal funding requirements. We recently implemented an annual company-wide project management training program which all our project managers will be attending (PSMJ Resources, Inc.® boot camp).

### **QUALITY ASSURANCE & CONTROL PROCEDURES**

Each project is completed under the guidelines of our Hoyle, Tanner Master Quality Assurance & Quality Control (QA/QC) Plan. Our QA/QC outlines our approach to the completion of projects, ensuring accuracy and the achievement of project goals. Due to the unique nature of individual projects, a Project Specific Quality Assurance Plan (PSQAP) is created by the Project Manager and reviewed with the Quality Assurance Auditor for approval. This simple-but-detailed form establishes the path to success for each project we complete.

Part of the PSQAP is establishing team roles. For each project we identify one of our senior engineers as the Independent Quality Control (QC) reviewer. As the Project Manager and design engineers are heavily involved in the project, the QC reviewer provides valuable perspective at established key milestones (e.g. alternatives investigation, conceptual, preliminary, and contract plans, specifications, and estimate). Scope, roles and project milestones are critical for all members of the project team to be aware of, including design, CADD, permitting, and management - the PSQAP helps ensure this information is effectively communicated and team members provide feedback early in the project to mitigate risks in the schedule and develop a clear path to successful project completion. Our Quality Assurance Auditor is specific for each Hoyle, Tanner core discipline. This person, often the Department Manager, has significant experience in the respective discipline and is responsible for the following:

- Establishing overall firm policies for quality and project management specific to that discipline
- Monitoring quality for the discipline company-wide
- Identifying required changes in firm policies
- Performing unannounced quality audits of projects
- Training Project Managers to ensure understanding and usage of company standard documents including the QA/QC Manual and Project Manager's Manual

#### **Quality Assurance Auditors for MAB assignments**

**Bridges & Structures**  
Sean James, PE

**Roadway, Intersection, and Bike  
& Pedestrian**  
Todd Clark, PE

**CONCLUSIONS**

The Hoyle, Tanner team has a proud history of not only completing transportation-based scoping studies, but seeing the recommended solutions through design and construction. We do this by establishing a comprehensive foundation for the project, including public participation, developing alternatives that can be achieved, providing accurate cost and schedule information, and laying out the road map for funding, permitting, Right-of-Way, and design to lead to successful project completion. We place great value on each project we have the opportunity to work on, and enjoy working with our clients and stakeholders towards solutions that meet the project goals and needs of the community.

Led by our **Vermont Regional Business Manager, Jon Olin, PE**, our team has a thorough understanding of completing projects for municipalities through the VTrans MAB, adhering to the Local Projects Guidebook, and the associated federal funding programs these projects rely on.

We understand that the selection committee faces a difficult decision in selecting the most qualified engineering firm for this project. The selected firm must be technically capable in a variety of disciplines, be cognizant of budget limitations, listen to input, and present solutions clearly. We believe we are that firm and have differentiated ourselves from others by demonstrating excellence on all of our work – please contact our references for confirmation. We understand the importance of these projects to the community and would appreciate the opportunity to partner with Vermont municipalities to make each vision a reality.

**THE HOYLE, TANNER ADVANTAGE:**

The infographic consists of eight colored boxes arranged in three rows, each containing a specific advantage of the firm. The top row has three dark blue boxes, the middle row has three teal boxes, and the bottom row has two medium blue boxes.

- Local presence with local knowledge** (Dark blue box)
- Working experience with municipalities and RPCs throughout Vermont** (Dark blue box)
- Depth of transportation expertise including stormwater, hydraulics, permitting, and ROW** (Dark blue box)
- Thorough understanding of Vermont design manuals and funding programs** (Teal box)
- Specific design experience with recent roadway rehabilitation and reconstruction, stormwater, bicycle and pedestrian, intersection, roadway safety, bridge and culvert rehabilitation and replacement projects, hydraulics, and the TA program** (Teal box)
- Established relationships with regulatory agencies including VT ANR/DEC and US ACE** (Teal box)
- Specific Vermont permitting experience including NEPA documentation** (Medium blue box)
- Expertise with VTrans specifications and cost estimating procedures** (Medium blue box)



# Downtown Revitalization Somersworth, New Hampshire



## QUALIFICATION & EXPERIENCE OF FIRM

Hoyle, Tanner is a full-service engineering firm that specializes in delivering design services for municipally-managed projects with state and federal funding. Our Vermont office, led by Jon Olin, has many established relationships with municipalities, regional planning commissions, and permitting agencies across the state. Jon will work with the VTrans MAB group, the municipality and their MPM to bring together the right team for the specific project, including our in-house staff and subconsultants.

### PROJECT DEFINITION

A quality scoping study is the road map for delivering a project to successful completion. We take great pride in being a firm that is capable of leading our clients from inception through completion of a project and almost 100% of our scoping studies get constructed. We do this by providing all of our engineers with experience in existing facilities inspection, maintenance, design, and construction, ensuring that our proposed solutions are capable of being implemented from permitting, Right-of-Way, long-term maintenance, and constructability perspectives. Our engineers are well versed with VTrans Specifications and Cost Estimating Guidelines, providing our clients accurate project cost estimates for capital planning and obtaining grant and bond funding.

### ROADWAY RECONSTRUCTION & REHABILITATION PROJECTS

Our engineers approach each roadway project by asking questions and collecting the data needed to help municipalities make smart choices that consider the full life-cycle of the roadway. This includes both visual indicators such as the type of cracking, rutting, and other defects as well as subsurface exploration and surface drainage. As we did on Union Street in Peterborough, New Hampshire, we also aid municipalities in considering other potential needs such as safety improvements including horizontal and vertical geometry, bike and pedestrian and transit considerations, and subsurface and overhead utility needs. Whether the project solution is a full reconstruction, reclaim, mill and fill, or overlay, there are opportunities for the municipality to recognize other project benefits and long-term capital planning efficiency. And with all of the services highlighted in this proposal, we work with the municipality to consider the best approach for traffic management and will work to develop detailed phasing plans and associated costs.



**Manchester Street/Airport Road Intersection  
Reconfiguration & Signalization  
Concord, New Hampshire**



**Union Street Reconstruction  
Peterborough, New Hampshire**

## **BICYCLE/PEDESTRIAN/TRANSPORTATION ALTERNATIVES**

Our team stays current with Vermont State Standards for Complete Streets and Traffic Calming, and looks to implement emerging technologies that are appropriate for the community needs and regional climate. We observe the pedestrian movements on a street and look for opportunities to provide efficient crossing locations based on these patterns. We look to shorten pedestrian crossings by utilizing curb extensions and median islands, which improves pedestrian visibility and calms traffic. When warranted, we utilize crossing indicators such as raised/stamped crossings (depending on the municipality's preferences), and push-button activated rapid flashing beacon signs (RRFB). This experience is highlighted in our Pearl Street Streetscape design recently completed for the City of Burlington (see project sample experience on the following pages).

In addition to coordinating the goals and needs of the vehicular, pedestrian, bicycle, and public transit, we work to incorporate green, complete, and smart street practices that make sense in our northern climate and improve the total user experience; this includes lighting, street trees, stormwater treatment, benches, bike racks, parking and meter/pay station locations, and long-term maintenance.

## **INTERSECTION & SAFETY PROJECTS**

Hoyle, Tanner is well versed in the design process and the challenges that accompany an intersection design project. We have worked on projects ranging from small improvements to existing intersections to large intersection improvement projects on state highways. Utilizing guidance from AASHTO's "Green Book" and VTrans Design Manual, our team will review existing and/or anticipated intersection demands and the project objectives to determine the appropriate intersection design that will accommodate all desired users. A recent example of one of our smaller projects was at the **Spring Street/Main Street Intersection in Winooski** where we worked with the City to prepare construction documents for several intersection improvements, including: lane reconfiguration, design of a new pedestrian crossing, specifications for new thermal video vehicle detection system, and new intersection striping and signage.



**Spring Street/Main Street Intersection  
Winooski, Vermont**

## **REPLACEMENT, REHABILITATION, & BRIDGE / CULVERTS MAINTENANCE**

Hoyle, Tanner's uniquely-qualified bridge engineering team has experience with over 50 bridge and culvert projects in the last 5 years alone. Our team is proficient in the inspection and design of simple to complex structures including multi-span structures, curved girders, covered bridges, culverts, and trusses. We work with our clients to assess their existing structure conditions and whether components of the substructure and superstructure are suitable for reuse with moderate repairs or partial replacements. Our experience developing practical solutions while incorporating traffic control needs and contractor capabilities is essential in developing maintenance programs and ensuring proper execution of work.

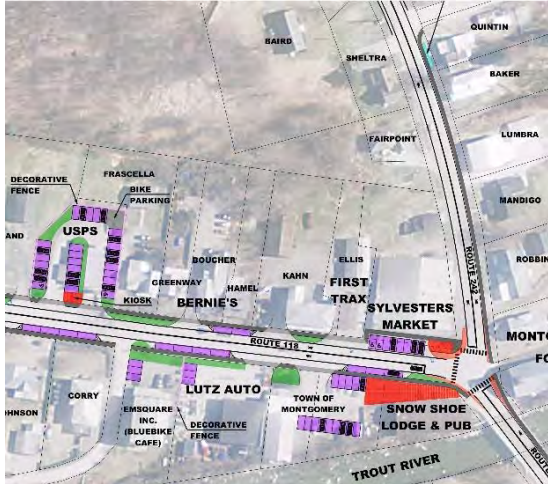


**Drew Road Culvert Replacement  
Derry, New Hampshire**

On the following pages, we have provided a sample of our diverse experience and capabilities. References have been provided for each project, and we welcome you to contact our references for further inquiry regarding our performance.

## Montgomery Wastewater & Streetscape Study

Montgomery, VT • Darren Drevik,  
Selectboard Vice-Chair • (802) 326-4306 •  
montgomeryselectboard.darren@gmail.com



Bicycle & Pedestrian | Right-of-Way | Landscape Architecture |  
Intersection | Engineering Study | Complete Street  
Stormwater | Utility Coordination

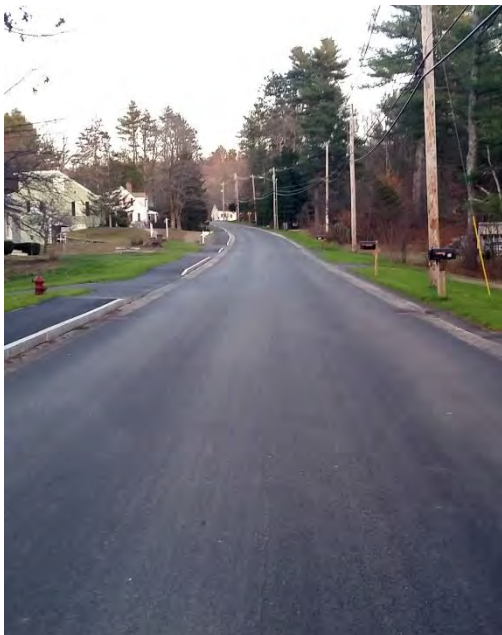
The Hoyle, Tanner Water Resources and Transportation Teams are completing a joint study for the Town of Montgomery for a new wastewater collection and treatment system and a streetscapes project that addresses traffic and pedestrian safety issues in the Village and Center locations.

Streetscape alternatives being proposed consider vehicular and non-vehicular traffic including facilities for pedestrians and cyclists, as well as accommodations for snowmobiles which provide a valued economic resource in the community. The design includes on-street and potential off-street parking, plantings, lighting, innovative stormwater treatment, wayfinding, public art opportunities, and redesign of the Route 118 and Route 242 intersection in Montgomery Center. Our team is working closely with the Town to understand the potential benefits and associated costs with taking Class I Town Highway ownership of a portion of State Route 118. The Study with funding through the USDA RD program is scheduled for completion April 2020.

Project Completion: Ongoing

## Penacook Road Rehabilitation

Hopkinton, NH • Neal Cass, Town  
Administrator • (603) 746-2892 •  
townadmin@hopkinton-nh.gov



Design | Environmental Permitting | Public  
Outreach/Participation Coordination | Bid Assistance  
Construction Administration

It had been many years since the Town of Hopkinton attempted roadway improvements within the Contoocook Village area. With a vision of providing more complete streets for all users, the Penacook Road Improvement project achieved success in making pedestrian, drainage and traffic calming improvements within a rural village setting.

Penacook Road connected east Hopkinton to the village area. For many years, residents within the project area felt speed and lack of sidewalks detracted from their neighborhood. Roadway users who use the roadway normally were well aware of the poor surface condition. The Town's road crews had to commit above average resources to repair the surface, reconstruct shoulders, and in winter months constantly maintain ice buildup.

With the new roadway, a full length sidewalk provides 1,900' of raised and separated sidewalk, closed drainage with treatment, relocated problem utility poles, accommodated larger vehicle movements within the new intersection geometry to calm thru traffic.

Hoyle, Tanner assisted the Town with a full range of services from concepts to punch list in a unique partnering relationship supplementing Town resources with coordination, permitting, design, public engagement, and cost estimating services.

Project Completion: 2017

# Design Services Project Examples

Hydraulic Analysis | Right-of-Way | Cost Estimating |  
Intersection | Regulatory Agency Coordination & Compliance

In summer 2016, the existing Dowsville Road metal pipe culvert over an unnamed brook partially collapsed causing a southern embankment failure and constricted hydraulic capacity. In summer 2017, the Town procured the services of Hoyle, Tanner to assist with a study to develop temporary stabilization measures and to perform the design services for the replacement structure.

The project was designed and permitted within 7 months, with construction completed in October 2018. Hoyle, Tanner took an innovative approach to this box culvert project by proposing a form-lined bottom that mimics a natural stream bottom. The form-liner includes a boulder pattern designed using our 2D hydraulic software that reduces design velocities and maintains water depths and provides relief areas for aquatic organism passage. Our project team worked closely with state and federal regulatory agencies, including Vermont Fish and Wildlife to advance this concept which was fabricated and installed with high praise from the precast manufacturer and contractor. Funding was provided through the VTrans Town Highway Emergency Grant program.

Project Completion: 2018



## Dowsville Road Culvert

Duxbury, VT  
Adam Magee, Highway Foreman  
(currently with Town of Jericho)  
• (802) 233-7158 •  
jerichohighway@jerichovt.gov

Design | Environmental Permitting | Public  
Outreach/Participation Coordination | Bid Assistance  
Construction Administration

The City of South Burlington retained the consultant services of the Hoyle, Tanner team to evaluate the existing Kennedy Drive stormwater ponds and adjacent drainage areas to identify which pond retrofit and rerouting opportunities should be advanced to engineering design. Kennedy Drive is a major roadway located within the Potash Brook watershed that connects Interstate 189 (I-189) to US Route 2 (Williston Road) and was reconstructed in 2007 by VTrans. As part of the Kennedy Drive reconstruction project, a series of seven stormwater treatment ponds were constructed to treat runoff from the upgraded roadway and some adjacent areas.

The purpose of this project was to advance with final design of pond retrofit and expansion opportunities for Kennedy Drive Ponds #2, #3 and #5/6, as identified and recommended within the earlier evaluation report. Hoyle, Tanner team members developed 50%, 90% and 100% design submittals, facilitated project design and review meetings, provided permitting support and coordinated onsite services including topographic survey, wetland delineation and soil borings. It is anticipated that the pond retrofit opportunities will be constructed in phases with the first phase of the project slated for construction during the 2018 season.

Project Completion: 2020

## Kennedy Drive Stormwater Pond Expansion & Retrofit Design

South Burlington, VT  
Thomas DiPietro, Deputy Director of Public  
Works • (802) 658-7961 • tdipietro@sburl.com



## Muddy Brook Culvert Replacement

South Burlington, VT • Thomas DiPietro,  
Deputy Director of Public Works • (802) 658-  
7961 • [tdipietro@sburl.com](mailto:tdipietro@sburl.com)



Engineering Study | Hydraulic Modeling |  
Hydrologic/Hydraulic Analysis | Subconsultant Coordination

With funding through the VTrans MAB Municipal Highway and Stormwater Mitigation Program, Hoyle, Tanner completed the Engineering Study of the replacement of a 15' diameter corrugated metal pipe structure as a joint project by the City of South Burlington and Town of Williston.

Hoyle, Tanner coordinated a team of subconsultants including a wetlands scientist, historical and archaeological scientists, and geotechnical engineers/drilling services to collect base data of the project site to assess environmental and cultural impacts. A detailed hydraulic analysis was completed utilizing 2D hydraulic software with output that not only helped the design team provide better scour protection and water passage adequacy, but provided visual aids used in public presentations.

As an important part of the study we incorporated bicycle and pedestrian crossing needs into the replacement alternatives. Hoyle, Tanner worked closely with both municipalities to ensure the solutions are safe and effective for all modes of transportation and consider cost and environmental impacts. Hoyle, Tanner is now under contract for the design of the preferred alternative, a 33' span precast concrete arch culvert.

Project Completion: 2019

## Bay & Upper Bay Roads Reconstruction

Sanbornton, NH • C.R. Willeke, PE, NHDOT  
Project Manager - Bureau of Planning and  
Community Assistance • (603) 271-6472 •  
[charles.willeke@dot.nh.gov](mailto:charles.willeke@dot.nh.gov)



Roadway Reconstruction | Culverts | Permitting  
Utility Coordination | Stormwater | Safety Improvements

These scenic roads, adjacent to Winnisquam Lake, have experienced major pavement deterioration due to an insufficient roadway box and lack of subsurface drainage. Roadway conditions had become so poor that Steele Hill, the areas major resort destination, had begun to detour traffic around the project area.

The design included pavement reclamation, unsuitable material removal, box reconstruction, and fabric reinforcement to help stabilize the pavement surface. Cut slopes and a high water table necessitated the design of 14,000 linear feet of underdrain to keep the roadway box dry. To convey surface drainage, roadside ditches were improved and additional driveway culverts were added. Multiple drainage culverts were upsized, as needed, and were given additional cover. Guardrail improvements were also designed to protect steep slopes and other hazards. Durkee Brook winds its way underneath Bay and Upper Bay Roads, and two of its crossings were simply dual 36" reinforced concrete pipes in poor condition. Through discussions with NHDES, Hoyle, Tanner designed two natural bottom culverts consistent with the NH Stream Crossing Rules. This project was administered by NHDOT's Bureau of Planning and Community Assistance.

Project Completion: 2014

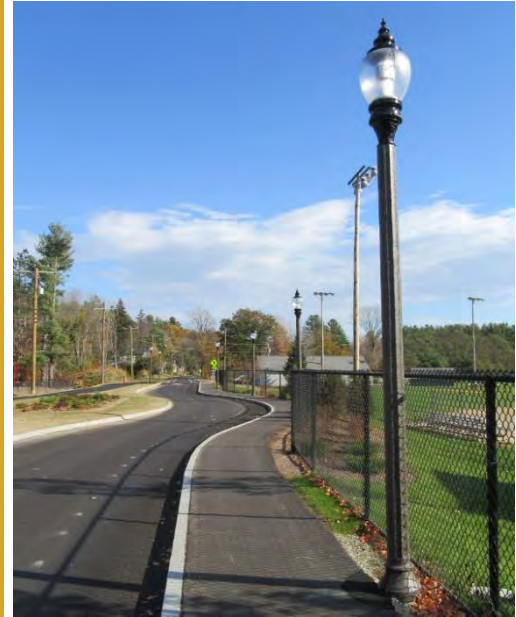
# Design Services Project Examples

Roadway Reconstruction / Rehabilitation | Stormwater  
Traffic Control | Permitting | Utility Coordination  
Right-of-Way | Pedestrian Facilities | Utility Improvements  
Landscaping

This two-lane roadway provides a vital link between Downtown and West Peterborough as it winds along the Nubanusit Brook. Due to the inadequate structural box, poor soils and utility construction, the roadway had deteriorated, cracked and rutted throughout its length. In addition, along segments of this roadway the profile remained extremely flat, promoting ponding and drainage issues.

To address the deficiencies, our design involved the reconstruction of 6,200 linear feet of roadway and associated sidewalk which included profile adjustments, pavement reclamation and geotextile reinforcement. During the roadway reconstruction, the failing sanitary sewer system was replaced and the existing asbestos cement pipe removed. The existing drainage system was also replaced and additional catch basins were incorporated to improve runoff capture, while the drainage outfalls were maintained to reduce impacts to the brook and surrounding wetlands. Subsurface drainage was also added to remove groundwater from the roadway box. Context sensitive solutions provided the required improvements while limiting impacts to historic homes, steep slopes, and roadside stone walls.

Project Completion: 2016



Intersection | Roadway Reconstruction | Stormwater Bicycle  
Facilities | Management Permitting | Traffic Control | Utility  
Coordination | Right-of-Way  
Cost Estimating | Construction Administration

The project is a multiphase effort for the widening and reconstruction of Manchester Street (US 3) involving acquisition of Right-of-Way, moving utility lines, realigning Airport Road to create a signalized intersection, replacing the drainage system, replacing waterlines and sewer lines and reconstructing the roadway with new box and pavement materials. The roadway was widened to one lane in both directions with a dedicated left turn lane (three lane configuration) for part of the corridor and to two lanes in both directions with a dedicated left turn lane (five lane configuration) in the rest of the corridor. The Right-of-Way acquisition, utilities and basic roadway geometry were designed for the addition of two additional lanes in the proposed three-lane area in the future to create a uniform five-lane layout as traffic volumes increase.

The complex urban drainage system not only collects the roadway runoff and abutter stormwater but also meets the NHDES Alteration of Terrain Permit requirements. Treatment and detention were provided by subsurface infiltration galleries designed as a component of the roadway drainage system which required extensive utility coordination to avoid conflicts.

Project Completion: 2017

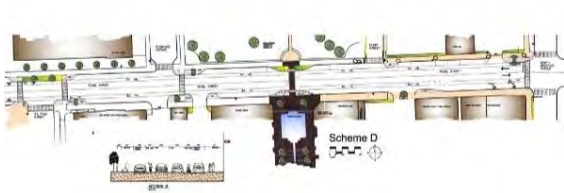
## Manchester Street Corridor Improvements

Concord, NH • Martha Drukker, Associate  
Engineer – Community Development •  
(603) 225-8520 •  
mdrukker@concordnh.gov



## Pearl St. Streetscape Improvements

Burlington, VT • Norm Baldwin, PE, City Engineer • (802) 865-5826  
nbaldwin@burlingtonvt.gov



Mid-block Crossings | Bicycle & Pedestrian  
Bus Transit & On-Street Parking | Public Outreach  
Roadway Rehabilitation | Stormwater | Landscape  
Architecture

This section of Pearl Street is the northern gateway to the City of Burlington downtown pedestrian marketplace. The 46' curb-to-curb width of the existing street provided a poor interface for the downtown pedestrian and vehicle traffic, and existing sidewalks had various obstructions including streetlights, traffic lights and parking meters that presented challenges for the pedestrians.

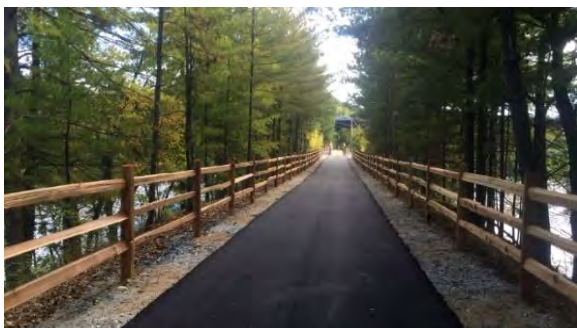
Hoyle, Tanner and TK Landscape Architects developed a solution that increased the number of on-street parking spaces; improved pedestrian safety with shorter, better-defined crosswalks; added traffic calming features such as bulb-outs and speed tables; provided bike lanes in both east and westbound directions; and improved the aesthetics of the street with plantings, textured pavers, and a featured intersection at Church Street. Key design features: provisions for City transit buses and emergency vehicles; the interaction between vehicles, bicycles, and pedestrians; and regrading for adequate stormwater drainage.

As the prime consultant, Hoyle, Tanner coordinated with the landscape architect, regulatory agencies, and City staff members while performing various tasks to develop the construction documents for the Pearl Street improvements. **This was a VTrans LTF funded project.**

Project Completion: 2014

## Piscataquog River Trail Phase IV

Manchester, NH • David Winslow, PE, Engineer • (603) 624-6444  
dwinslow@manchesternh.gov



Bicycle & Pedestrian | Permitting | Bridge  
Right-of-Way | Landscape Architecture

This 1,800' long section of the trail is built on a former rail bed and the project included a local street crossing, easement acquisitions, pedestrian bridge over the Piscataquog River, trail section upgrade and paving, and landscape and wayfinding enhancements. A full inspection and evaluation of the existing trestle was performed and both rehabilitation and replacement options studied. Replacement of the 1941, 7-span timber trestle with single-span steel truss was selected as the preferred alternative.

The trail improvements include paving the majority of the trail section and installing guardrail and fencing, as appropriate, to guide users along the trail. The intersection with an adjoining trail was improved with signs, landscaping and pavement to better connect the two trails. Improvements were made at each approach to the river crossing as years of unauthorized use have resulted in extensive erosion at the bridge approaches. This is a Transportation Enhancement (TE) project administered through NHDOT's LPA program.

Project Completion: 2017



Condition Assessment | Design | Cost Estimating Bidding  
Administration | Construction Administration

The Industrial Avenue Bridge (BR #17) over Allen Brook, originally constructed in 1932, is a 55' single span steel beam superstructure with a cast-in-place concrete deck. The Town of Williston was awarded a VTrans Town Highway Structures Grant to perform bridge deck repairs and resurfacing. Hoyle, Tanner performed a conditions assessment to determine the preferred alternative based on the extent of damage and available funding while considering the life expectancy and long term needs of the structure.

Hoyle, Tanner developed the design plans and specifications for the preferred alternative of resurfacing and bridge deck repairs, including a traffic control plan detailing construction sequencing and maintaining a single lane of alternating traffic on this important and heavily traveled section of road. During construction, our team remained flexible providing alternate details for the concrete deck repairs based on unforeseen conditions found when the pavement was stripped. The project was successfully constructed in June 2017, meeting the Town's budget with minimal impacts on traffic.

Project Completion: 2017

## Industrial Avenue Bridge Resurfacing

Williston, VT • Bruce Hoar, DPW Director • (802) 828-1239 • bhoar@willistonvt.org



Condition Assessment | Engineering Study  
Bridge Rehabilitation | Load Rating Analysis

The Longley Covered Bridge was built in 1863 by the Jewett Brothers. The bridge is a 70' long single span Town Lattice Truss, which spans the Trout River near the northwestern boundary of the Town of Montgomery with the Town of Enosburgh. Several serious structural deficiencies were observed during a routine bridge inspection by VTrans personnel; the bridge was closed to traffic in 2011.

The project consists of preserving the original design of Town Lattice Truss and retaining the roof framing and upper lateral bracing. The new trusses and floor framing are currently being designed for a 20 ton live load. The project also included application of a fire retardant coating, installation of a timber curb to protect the trusses, installation of new steel backed timber guardrail and approach roadway improvements. Construction was completed in 2017.

Project Completion: 2013

## Longley Covered Bridge Rehabilitation

Montgomery, VT • JB McCarthy • (802) 505-1451  
jb.mccarthy@vermont.gov



## Design Services Key Personnel Profiles

Our key personnel have proven time and again their invaluable capacity to complete high-quality projects. From our most senior engineers to our most respectful environmental coordinators, we are proud to highlight the expertise of the individuals who will be serving you. Resumes for our team members are provided in Appendix A of this qualifications package.

### **Matthew Low, PE – Director of Engineering Operations**

Matt is a Senior Vice President and Director of Operations for Hoyle, Tanner. He has 28 years of bridge, highway and structural design experience as a Project Manager for hundreds of municipally managed projects. For over 20 years, Matt has been a trusted resource for regional DOTs and has the full understanding of FHWA funding programs, goals and responsibilities of DOTs, and the role of the consultant. As Director of Engineering Operations, Matt has the responsibility to deploy resources and establish project teams that will best meet the needs of the individual projects and the municipalities we serve. Matt will be the Principal-in-Charge associated with this contract.



### **Jon Olin, PE - Associate / Contract Manager – Project Manager**

Jon is Regional Business Manager for our Vermont Office and a technical team leader in civil and structural engineering in rural and urban settings. Jon has over 22 years of experience in delivering results on small-to-large transportation projects and MAB-funded projects (under the former Local Transportation Facilities program), and will ensure well-planned and well-coordinated project deliveries. He has experience in many disciplines of transportation engineering, has established relationships with permitting regulators, RPCs, and municipalities throughout Vermont, and has a collaborative approach that is effective for stakeholder buy-in. Jon is the current Chair for the ACEC-VT Transportation Committee where he works closely with VTrans leadership on important issues to improve transportation engineering services within Vermont. With Jon, municipalities will have the experience and close attention that their projects need. Jon will be responsible for Project Management and will serve as the point person for coordinating work completed through this ATR prequalification.



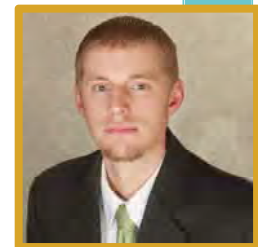
### **Todd Clark, PE - Senior Vice President - Quality Assurance Auditor of Roadways, Bicycle/Pedestrian Facilities & Intersections**

Todd is a Senior Vice President and Highway Department Manager with over 29 years of experience in the transportation engineering field, focused on large and small projects. Todd remains current with federal and state design standards and ensures that the highway group project managers, engineers, technicians, and specialists are equipped with the knowledge, resources, and tools they need to stay current with design practice and deliverables. Todd will be responsible for Quality Assurance monitoring of roadway and bike/pedestrian disciplines.



### **Stephen Haas, PE - Associate - Project Manager of Roadways, Bicycle/Pedestrian Facilities & Intersections**

Steve has over 18 years of experience designing transportation systems for municipal and state clients. His areas of expertise are intersection design, highway design, traffic analysis, and hydraulic/hydrology design. He is also well-versed in the development of Right-of-Way plans, permitting, site/civil engineering, transportation planning, and cost estimating. Steve will be responsible for project management for roadway, intersection, and safety projects.



## Design Services Key Personnel Profiles

### **Audrey Beaulac, PE, CPSWQ - Associate - Project Manager of Roadways, Bicycle/Pedestrian Facilities & Intersections**

Audrey possesses practical technical experience in all facets of roadway engineering, including roadway and intersection design, establishing alignments and profiles, creating grading plans, incorporating bicycle and pedestrian facilities, analyzing for guardrail warrants, calculating quantities and creating estimates. She also performs BMP and stormwater modeling and design, analysis of existing and proposed drainage systems and pollutant modeling and analysis. Audrey will be responsible for project management for roadway, bike and pedestrian, and stormwater projects.



### **Sean James, PE - Senior Vice President - Quality Assurance Auditor of Bridge, Culvert & Transportation Structures**

Sean is our Bridge Department Manager and has 24 years of experience on bridge and culvert design projects. He has provided inspection, evaluation, rehabilitative design, construction costs, estimates, and resident engineering for over 30 municipal bridge projects and 13 Vermont covered bridges. He is also a skilled public presenter and is a graduate of the Toastmasters Speechcrafters Course as well as a National Bridge Inspection Standards (NBIS) Certified Bridge Inspector. Sean will be responsible for Quality Assurance monitoring of bridge, culvert and transportation structure disciplines.



### **Josif Bicja, PE - Associate - Project Manager of Bridge, Culvert & Transportation Structures**

Josif has over 16 years of experience in the design and rehabilitation of numerous municipal bridge and miscellaneous structural projects. He has served as a design engineer on over 60 NHDOT Municipally-Managed State Bridge Aid Projects. He has extensive experience with design, construction administration, construction engineering, bridge inspection, load ratings and all other aspects of bridge projects. He is a certified (NBIS) bridge inspector, and has completed multiple covered bridge projects funded through VTrans. Josif will be responsible for project management of bridge, culvert, and transportation structure disciplines.



### **Kimberly Peace - Associate - NEPA & Environmental Permitting**

Kimberly has over 20 years of experience as a permitting specialist. She has experience with natural resource permit applications and procedures in all six New England states, as well as New York, South Carolina and Florida. She has developed federal permit applications and is familiar with procedures for completion of USACOE 404, FERC licensing, NEPA and EA/EIS documents. Kimberly will oversee all permitting and NEPA coordination.



### **Elizabeth Bosiak - Right-of-Way Acquisition**

With a career in the Right-of-Way field since 1979, Betsy has experience working with design, construction, and property owners during relocations of businesses and residences. She frequently communicates with property owners, ensuring they have an understanding of what occurs in the area of their property and explaining the easements or required property rights. In addition to her expertise, Betsy has worked closely with the Central New Hampshire Regional Planning Commission as a member of the Transportation Advisory Committee. As a member of the International Right-of-Way Association, she currently serves as New England Chapter 16 Secretary and Membership Chair, in addition to her membership in the International Asset Management Committee. Betsy will oversee all Right-of-Way acquisition.



# Route 28 Intersection Improvements Derry, New Hampshire



## Matthew Low, PE

Senior Vice President – Director of Engineering Operations – Quality Administrator

Matt is the Director of Engineering Operations and responsible for the coordination and quality of the firm's service offerings as well as productivity and efficiency. With a technical background in structural and transportation engineering, he has inspected, designed or rated nearly 200 bridges for municipalities, private entities and state transportation agencies throughout New England in addition to serving as the Project Manager for complex multi-disciplined transportation projects. Matt has expertise in the administration of on-call engineering contracts with state agencies and municipalities including resource allocation, funding coordination, and budgetary planning assistance. Related to project management, Matt has extensive experience coordinating with cultural and natural resource agencies related to NEPA as well as the bidding and construction phases of simple to complex projects. Matt is skilled in public outreach and has successfully facilitated public meetings for over two decades.

### Relevant Experience

**Piscataquog River Trail Phase IV, Manchester, NH:** Principal-in-Charge for the scope of work, QA/QC, design review, schedule adherence, and compliance with funding requirements. Scope: Design and construction-phase services for the 1,800' long section of the trail. The project included a local street crossing, easement acquisitions, a 160' single-span steel truss pedestrian bridge over the Piscataquog River, trail section upgrade and paving, and landscape and wayfinding enhancements.

**MassDOT Webster Street (Route 16) Roadway Improvements, Douglas, MA:** Senior Engineer for specification review and QC review. Scope: Project proposes roadway corridor safety improvements in response to being identified as a High Risk Rural Roadway under the FHWA Highway Safety Improvement Program and is located along a 4-mile segment of Webster Street (Route 16) from the Douglas/Webster Town Line to the Main Street intersection in the Town of Douglas. The project will be completed in two phases. Phase 1 completed a Road Safety Audit (RSA) and Phase 2 prepared plans, specifications, cost estimates, and assisted MassDOT with design, permitting, public hearing, and coordination for advertising.

**Main Street Bridge over the Contoocook River, Peterborough, NH:** Project Manager / Principal-in-Charge for the technical aspects of the project, scheduling, budget and cost control, public presentations, permitting, and client coordination, for the scope of work, QA/QC, design review, schedule adherence, and compliance with funding requirements. Scope: The project involves evaluation of the existing stone-faced concrete rigid frame constructed in 1940. The bridge is eligible for the National Registrar of Historic Places, and as such, an extensive NEPA and environmental permitting process was performed. The bridge will be replaced with a new cast-in-place concrete rigid frame emulating the existing structure, as well as a prefabricated steel truss pedestrian bridge.



Professional Registrations:  
Professional Engineer: VT, NH, MA, ME, FL, PA

Education:  
University of New Hampshire, BS, Structural/Civil Engineering, 1992

Certifications & Specialized Training:

- NH LPA Certification for Labor Compliance
- NH LPA Certification Training

Professional Associations:

- American Consulting Engineers Council (ACEC-NH) - NHDOT Bridge Issues of Common Concern (BIOCC) Committee Co-Chair (2009-Present), Consultant Representative (2004-2008); Bridge Quality Initiative Committee Roundtable Committee (2004-2008)
- New Hampshire Public Works Association (NHPWA)
- New Hampshire Society of Professional Engineers (NHSPE) - Current Member, Past President (2008-2009), Vice President (2006-2007), State Director (2005-2006); Teachers Award Chairperson (2008-2017)

Years With Firm: 21

## Jon Olin, PE

Associate / Contract Manager – Project Manager

Jon is the Regional Business Manager for our Vermont office and brings over 20 years of experience as a project manager and lead project engineer on various types of projects including highway, bridge, pedestrian and bicycle facilities, and buildings. Jon brings expertise in managing large projects with multiple team members, public engagement for project buy-in, developing projects for funding acquisition, and overseeing projects from conception through completion. Jon will be the primary point-of-contact and serve as the Project Manager, ensuring that all technical, schedule, and budgetary requirements are met.

### Relevant Experience

**East Road Bridges 5 & 6, Milton, VT:** Project Manager responsible for all technical aspects of the project, scheduling, budget and cost control, public presentations, permitting, and client coordination. Scope: Accelerated bridge design, permitting, and Right-of-Way coordination for the replacement of two bridges on East Road in Milton. Project design was awarded in September 2018 and construction was completed in November 2019.

**Town of Montgomery WW PER Update, Montgomery, VT:** Senior Transportation Engineer responsible for public presentations and oversight of the conceptual streetscape design. Scope: Development of a Preliminary Engineering Report (PER) for a joint wastewater collection system and Streetscape development for both Montgomery Village and Center.

**Dowsville Road Culvert, Duxbury, VT:** Project Manager for working closely with the Town to develop the preferred replacement alternative, coordinating with utilities and project abutters, and presenting at public meetings. Scope: Our team provided scoping, design and construction oversight services for this precast concrete 11' span by 4' rise box culvert project. Funding was provided through the VTrans Town Highway Emergency Grant program.

**Muddy Brook Culvert Replacement, South Burlington, VT:** Project Manager for the completion of the scoping study and final design. Scope: As a joint project between the City of South Burlington and Town of Williston, with VTrans MAB funding, Hoyle, Tanner completed a detailed engineering study for the replacement of the Muddy Brook Crossing Structure at Kimball / Marshall Avenue. The project is now in the design phase with the preferred alternative including a 34' precast concrete arch and extension of the 10' shared use path across Muddy Brook for future connection with Williston facilities.

**Pearl Street Streetscape Improvements, Burlington, VT:** Principal-in-Charge / Project Manager for the downtown streetscape improvements, consisting of two city blocks on Pearl Street. Scope: Improvements to two city blocks on Pearl Street, which included the conceptual planning for alternate bicycle/parking/travel lane alternatives, improvements to pedestrian access, traffic calming and streetscape features (such as curb extensions), and a pedestrian focal point at the Church Street intersection. The project was completed through the VTrans LTF program.



Professional Registrations:  
Professional Engineer: VT, NH, CA

Education:  
University of Delaware, BS, Civil Engineering, 1998

Professional Associations:

- ACEC VT Transportation Committee (Chair)
- American Council of Engineering Companies-VT (Board of Directors)
- American Society of Civil Engineers (ASCE)
- Vermont Society of Engineers (VSE)

Years With Firm: 10

## Todd Clark, PE

Senior Vice President – Quality Assurance Auditor of Roadways, Bicycle/Pedestrian Facilities & Intersections

Todd has extensive experience in the transportation engineering field on projects with complex roadway, traffic control, environmental, utilities and Right-of-Way components. His strengths include evaluation of roadway geometrics, development of efficient traffic management and phased layouts for interstate and arterial corridors in compliance with stringent stormwater regulations. Todd serves as a Principal-in-Charge and Project Manager for state-agency and municipal transportation projects for MassDOT, NHDOT, and MaineDOT and is a former state-agency highway/bridge design employee. He is the director of Hoyle, Tanner's Northeast Transportation Services Group overseeing, project delivery, design practices, innovation, quality control and assurance, mentoring and training.

### Relevant Experience

**Manchester Street Corridor Improvements, Concord, NH:** Principal-in-Charge for project scoping and QA design review; assisted with compliance with funding requirements. Scope: Design of improvement roadway plans to this 1.4 mile road segment to increase corridor capacity, improve safety at intersections, and implement innovative stormwater management and treatment design along with underground utility conflict avoidance and resolution, and bicycle accommodations.

**Union Street Reconstruction, Peterborough, NH:** Principal-in-Charge for project scoping, QA/QC, design reviews, schedule adherence, and compliance with funding requirements. Scope: Design, bid, and construction-phase services for a 6,200 +/- linear foot section of Union Street, including roadway reconstruction, a new roadway drainage system, sidewalk reconstruction, replacement in-kind sanitary sewer improvements, traffic calming via a raised intersection, crosswalks, and a horizontal deflector island, and new streetscaping. The project required close coordination with multiple departments within the Town of Peterborough and NHDES.

**Bay & Upper Bay Roads Reconstruction, Sanbornton, NH:** Principal-in-Charge for the NHDOT SAH project, permitting strategy, QA/QC design reviews, schedule adherence, and compliance with funding requirements. Scope: Three miles of roadway reconstruction, drainage and improvements, three-sided culvert design, signage and guardrail upgrades along Bay and Upper Bay Roads. The project required context-sensitive solutions due to the narrow roadway and adjacent historic homes and stone walls.

**Campbell Street Intersection, Manchester, NH:** Project Manager responsible for project coordination, schedule adherence, CMAQ funding application preparation, presentations, environmental documentation, design QA/QC and cost estimates. Scope: Study and preliminary design-phase services to evaluate options and advance the preferred alternative to reconfigure the Campbell Street intersection that encompasses three intersections in very close proximity to one another. The design includes combining two intersections into a single-lane roundabout, adding two thru lanes and traffic signal alterations.



Professional Registrations:  
Professional Engineer: VT, NH, MA, ME, FL

Education:  
University of Massachusetts Dartmouth, BS, Civil/Structural Engineering-Water Resources, 1991

Certifications & Specialized Training:

- AASHTO Roadside Design, National Highway Institute
- Access Management, Location and Design, National Highway Institute
- NH LPA Certification for Labor Compliance
- NH LPA Certification Training

Professional Associations:

- American Consulting Engineers Council (ACEC-MA)
- American Society of Civil Engineers (ASCE)
- Boston Society of Civil Engineers Section (BSCES) - T&DI Chair (2016), Transportation Committee Chair (2014)

Years With Firm: 18

## Stephen Haas, PE

Associate – Project Manager of Roadways, Bicycle/Pedestrian Facilities & Intersections

Steve assists clients in identifying infrastructure problems, as well as the associated transportation engineering solutions. Steve specializes in roadway and traffic engineering, traffic analysis, and intersection and traffic signal layouts. Because of his specialty, he is knowledgeable in the AASHTO, FHWA, ITE, and TRB transportation guidelines. He is well versed with NHDOT and VTrans standards. His understanding of balance, forward planning, and attention to detail is what makes him a respected mentor to his team. Steve has been the Project Manager or Designer of many successful NH LPA projects for several communities.

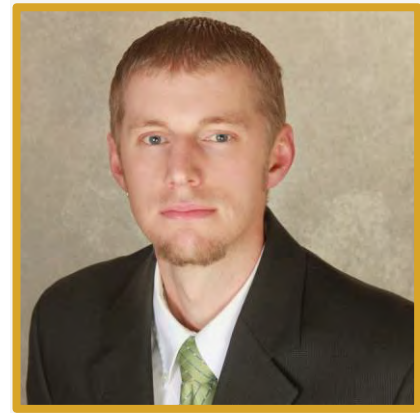
### Relevant Experience

**Main Street/Spring Street Intersection, Winooski, VT:** Lead Traffic Engineer responsible for intersection analysis, striping design, and traffic signal specifications. Scope: Final plan and specification development for the Main Street and Spring Street Intersection improvements, including lane reconfiguration for westbound traffic on Spring Street, design of a new pedestrian crossing on the south side of the intersection, specifications for new thermal video vehicle detection system, and new intersection striping and signage. Hoyle, Tanner remained closely involved through construction to ensure the system's retiming was completed accurately and zones for the video detection system performed adequately with actual traffic behaviors.

**Manchester Street Corridor Improvements, Concord, NH:** Project Engineer / Design Engineer for technical aspects of the project including roadway layout, drainage design, cost estimating, specifications, scheduling, budget and cost control, public presentations, permitting, and client coordination. Scope: Design of improvement roadway plans to this 1.4 mile road segment to increase corridor capacity, improve safety at intersections, and implement innovative stormwater management and treatment design along with underground utility conflict avoidance and resolution, and bicycle accommodations.

**Bay & Upper Bay Roads Reconstruction, Sanbornton, NH:** Project Manager / Engineer of Record for the roadway layout, surface and subsurface drainage design, guardrail layout, cost estimating, environmental permitting, and Right-of-Way plans, and construction plan and specification development. Scope: Three miles of roadway reconstruction, drainage and improvements, three-sided culvert design, signage and guardrail upgrades along Bay and Upper Bay Roads. The project required context-sensitive solutions due to the narrow roadway and adjacent historic homes and stone walls.

**Downtown Infrastructure & Revitalization, Somersworth, NH:** Traffic Engineer responsible for development and review of traffic signal plans. Scope: Hoyle, Tanner completed design, plans and technical specifications, permitting, bidding, construction administration and construction observation for the improvement of downtown utilities and roadways. This important revitalization project included site improvements, such as a redesign of the roadway profile and cross-sections to better accommodate roadway drainage through approximately 3,500' of roadway through downtown Somersworth. The project also included drainage and water line replacement, some sewer replacement, streetscape improvements, including new decorative lighting and sidewalks, and design of a new traffic signal at the five-way intersection on the south end of the project. The project met an aggressive timeline in order to meet the City's construction goals.



Professional Registrations:  
Professional Engineer: NH, MA, ME

Education:  
Worcester Polytechnic Institute,  
BS, Civil Engineering, 2002

Certifications & Specialized Training:

- NH LPA Certification for Labor Compliance
- NH LPA Certification Training
- NHI Roadway Safety Design
- OSHA - 10 Hour

Professional Associations:  
New Hampshire Institute of Transportation Engineers (NHITE)  
- Former President

Years With Firm: 14



## Audrey Beaulac, PE, CPSWQ

Associate – Project Manager of Roadways,  
Bicycle/Pedestrian Facilities & Intersections

Audrey continues to acquire technical and practical experience in many facets of roadway and water resources engineering applicable on projects that involve roadway design and stormwater management. By utilizing Best Management Practices (BMPs), she can design sites that treat additional stormwater runoff to meet permitting requirements. She quickly creates alignments, profiles, grading plans, analyzes guardrail warrants, calculates quantities and cost estimates providing conceptual to final design level projects that optimize stormwater treatment opportunities. Her career focus has been on state and municipal roadway design, stormwater modeling, and currently is a Certified Professional in Storm Water Quality. Audrey can use modeling results to then apply real-world practicality and deliver a functional BMP solution that is buildable, maintainable and cost effective.

Audrey has over a decade of engineering experience that includes design, field survey and construction inspection allowing her to visualize and understand potential concerns and issues of a project, whether standing in the field or assessing construction plans. Her experience makes her a highly valued member of the design team.

### Relevant Experience

**East Road Bridges 5 & 6, Milton, VT:** Task Manager and Lead Roadway Engineer for the roadway work associated with the reconstruction of the two bridges. Engineering responsibilities included review of several vertical alignment options for Bridge 5, including conceptual engineer's costs estimates. Additional responsibilities included coordination with and oversight of a team of engineers responsible for the advancement of the approved alternative through final design and preparation of construction plans and engineer's cost estimate. Scope: Accelerated bridge design, permitting, and Right-of-Way coordination for the replacement of two bridges on East Road in Milton. Project design was awarded in September 2018 and construction was completed in November 2019.

**Dowsville Road Culvert, Duxbury, VT:** Task Manager and Lead Roadway Engineer for the roadway design associated with the culvert replacement. Tasks included evaluation of the vertical alignment to improve existing roadway conditions and design of a temporary roadway for use during culvert reconstruction. Additional tasks included plan preparation oversight and review of the roadway construction estimate through all phases of design. Scope: Our team provided scoping, design and construction oversight services for this precast concrete 11' span by 4' rise box culvert project. Funding was provided through the VTrans Town Highway Emergency Grant program.

**Campbell Street Intersection, Manchester, NH:** Roadway Engineer performing roadway and drainage design, traffic counts, and plan preparation. Scope: Study and preliminary design-phase services to evaluate options and advance the preferred alternative to reconfigure the Campbell Street intersection that encompasses three intersections in very close proximity to one another. The design includes combining two intersections into a single-lane roundabout, adding two thru lanes and traffic signal alterations.



Professional Registrations:  
Professional Engineer: NH

Education:

- Villanova University, MS, Civil Engineering, 2019
- University of New Hampshire, BS, Civil Engineering, 2004

Certifications & Specialized Training:

- Certified Professional in Storm Water Quality (CPSWQ)
- MVP Certified Provider
- NH LPA Certification for Labor Compliance
- NH LPA Certification Training

Professional Associations:  
Women's Transportation Seminar (WTS) - NH Chapter

Years With Firm: 15

## Heidi Marshall, PE

Senior Engineer

Heidi is a senior engineer that began designing new roadways and intersections early in her career as part of many large-scale new subdivisions. Since shifting her focus to assisting New England communities nearly three decades ago, she has acquired vast experience with municipal engineering and construction projects including design, review, and permitting of roadways (new and rehabilitations), municipal sidewalks, utilities, associated infrastructure, and intersections. She is a recognized leader on municipal infrastructure projects with municipal state and federal fund management assistance, private utility coordination construction administration and oversight, bid document reviews, and specification development. Additionally, she is experienced with sanitary sewer and water impact evaluations and designs as associated with roadway or intersection improvement projects and is knowledgeable with environmental document preparation, and uses her strong project management, budget tracking, and billing skills to benefit each client.

### Relevant Experience

**Town of Montgomery WW PER Update, Montgomery, VT:** Assistant Project Manager for quality control and quality assurance for streetscape improvement aspects associated with development of a preliminary engineering report for a water and sewer infrastructure project. Scope: Development of a Preliminary Engineering Report (PER) for a joint wastewater collection system and Streetscape development for both Montgomery Village and Center.

**Elm Street/Gaslight District Improvements, Manchester, NH:** Team Leader / Project Manager responsible for scheduling, staffing, budgeting, cost control, fund management assistance, public outreach, client coordination, quality control and quality assurance for planning, permitting, design, and construction phases. Scope: This project involved Elm Street/Gaslight District Improvements in Downtown Manchester, which included the design of roadway, sidewalk, street lighting, and aesthetic improvements, as well as landscaping. The goal of the project was to revitalize and refresh this area of the City by improving infrastructure and pedestrian amenities and accessibility, while also enhancing the redevelopment potential of the properties. This project received High Priority Federal funds administered through the NHDOT's Municipally Managed program and has been defined as one of the City's development opportunities and a gateway in Manchester.

**Cardinal Road/Oriole Road Intersection Evaluation and Design, Windham, NH:** Project Manager responsible for technical aspects of the project, client coordination, scheduling and quality control. Scope: The project evaluated and conceptually designed and estimated improvements for a challenging curved "T" style intersection within a heavily populated residential neighborhood. Project challenges included pedestrian safety considerations and coordinating and implementing comments from a concerned citizen's neighborhood meeting.



Professional Registrations:  
Professional Engineer: VT, NH, ME

Education:  
University of New Hampshire, BS, Civil Engineering, 1985

Certifications & Specialized Training:

- NH LPA Certification for Labor Compliance
- NH LPA Certification Training
- OSHA - 10 Hour Construction Safety & Health

Professional Associations:

- New Hampshire Industrial Pretreatment Coordinator's Association (NHIPC) Steering Committee Member
- New Hampshire Institute of Transportation Engineers (NHITE)
- New Hampshire Transportation Council - Appointed Member
- New Hampshire Water Pollution Control Association (NHWPCA)
- Women's Transportation Seminar (WTS) - NH Chapter

Years with Firm: 2

## Jacob Sparkowich, PE

Engineer

Jacob's experience has included progressive opportunities to meet civil/site, and roadway and bridge engineering challenges. During his career as a design engineer, he has developed roadway geometrics and site grading, temporary and permanent traffic signal designs, hydrologic and hydraulic calculations, stormwater BMP design, and utility mapping on state and municipal projects. As an accomplished engineer, he mentors junior staff on all aspects of roadway design. While he works on all types of projects in our transportation group, he harbors a growing interest in traffic engineering. For projects large and small, his proficiency and continued work on our design software platforms, including Microstation, InRoads, Autodesk Civil 3D, SignCAD, Synchro, SimTraffic, and HydroCAD, has enabled our team to meet our clients' project goals and visions.

### Relevant Experience

**Piscataquog River Trail Phase IV, Manchester, NH:** Resident Engineer responsible for the oversight of project construction in accordance with contract documents. Scope: Design and construction-phase services for the 1,800' long section of the trail. The project included a local street crossing, easement acquisitions, a 160' single-span steel truss pedestrian bridge over the Piscataquog River, trail section upgrade and paving, and landscape and wayfinding enhancements.

**Manchester Street Corridor Improvements, Concord, NH:** Project Engineer responsible for field data collection, roadway and drainage design, plan development, and estimate preparation. Scope: Design of improvement roadway plans to this 1.4 mile road segment to increase corridor capacity, improve safety at intersections, and implement innovative stormwater management and treatment design along with underground utility conflict avoidance and resolution, and bicycle accommodations.

**Union Street Reconstruction, Peterborough, NH:** Transportation Engineer for the horizontal and vertical alignment development, traffic calming layout design, drainage analysis and design, utility coordination, shop drawing review, and plan and estimate preparation. Scope: Design, bid, and construction-phase services for a 6,200 +/- linear foot section of Union Street, including roadway reconstruction, a new roadway drainage system, sidewalk reconstruction, replacement in-kind sanitary sewer improvements, traffic calming via a raised intersection, crosswalks, and a horizontal deflector island, and a new streetscaping. The project required close coordination with multiple departments within the Town of Peterborough and NHDES.

**MassDOT Webster Street (Route 16) Roadway Improvements, Douglas, MA:** Design Engineer responsible for the evaluation of guardrail replacement needs, analysis of existing and proposed sight distances, prioritizing stormwater infrastructure replacement needs, documentation of environmental impacts, and shop drawing review. Scope: Project proposes roadway corridor safety improvements in response to being identified as a High Risk Rural Roadway under the FHWA Highway Safety Improvement Program and is located along a 4-mile segment of Webster Street (Route 16) from the Douglas/Webster Town Line to the Main Street intersection in the Town of Douglas. The project will be completed in two phases. Phase 1 completed a Road Safety Audit (RSA) and Phase 2 prepared plans, specifications, cost estimates, and assisted MassDOT with design, permitting, public hearing, and coordination for advertising.



Professional Registrations:  
Professional Engineer: NH

Education:  
University of New Hampshire, BS,  
Civil Engineering, 2012

Professional Associations:  
New Hampshire Institute of  
Transportation Engineers (NHITE)  
- Secretary/Treasurer 2020

Years With Firm: 7

## Jeffrey Collins, EIT

Associate – Engineer

Jeff began his career on exciting civil and transportation engineering assignments, ranging from conceptual design to observing construction completion. Through roadway and intersection projects as well as highway and interchange designs, he has acquired a concentrated knowledge of transportation principles from AASHTO, FHWA, and several state standards. His understanding of these regulations assists in roadway, highway, drainage, clear zone, and safety projects. He has quickly excelled in the design and plan production of projects utilizing the Microstation, InRoads, and AutoCAD platforms to develop 3-dimensional (3D) models for plans along with graphics for renderings and visualizations. Working with contractors, Jeff has provided 3D models and files, with the use of Automated Machine Guidance (AMG), to accelerate construction.

### Relevant Experience

**MassDOT Webster Street (Route 16) Roadway Improvements, Douglas, MA:** Roadway Engineer / Senior CADD Technician responsible for developing traffic control plans, checking quantities and overseeing the plans development to meet client electronic deliverables for a book project.

Scope: Project proposes roadway corridor safety improvements in response to being identified as a High Risk Rural Roadway under the FHWA Highway Safety Improvement Program and is located along a 4-mile segment of Webster Street (Route 16) from the Douglas/Webster Town Line to the Main Street intersection in the Town of Douglas. The project will be completed in two phases. Phase 1 completed a Road Safety Audit (RSA) and Phase 2 prepared plans, specifications, cost estimates, and assisted MassDOT with design, permitting, public hearing, and coordination for advertising.

**Campbell Street Intersection, Manchester, NH:** Transportation Engineer for conceptual roadway design and plan preparation. Scope: Study and preliminary design-phase services to evaluate options and advance the preferred alternative to reconfigure the Campbell Street intersection that encompasses three intersections in very close proximity to one another. The design includes combining two intersections into a single-lane roundabout, adding two thru lanes and traffic signal alterations.

**Putney Route 5 Park & Ride Facility, Putney, VT:** Project Engineer responsible for alternatives analysis to maximize parking spaces, maintain separation from Town emergency facilities, retain citizen access to recycling facilities and minimize environmental impacts. Additional responsibilities included design of stormwater treatment and ADA-compliant parking and sidewalks, coordination with public utilities, public presentations, permitting, cost estimates and plan preparation. Scope: Hoyle, Tanner provided services to design VTrans CMG Park (26), the first state-owned commuter Park & Ride facility serving residents of Windham County on US Route 5 and adjacent to Exit 4 of I-91.



Professional Registrations:  
Engineer In Training: NH

Education:  
Clarkson University, BS, Civil Engineering, 2000

Certifications & Specialized Training:

- AutoCAD 2006 Update, Imaginit
- BE Conference, Bentley
- BE Together, Bentley
- Bentley InRoads Conference, Bentley
- Context Sensitive Solutions, Tom Warne and Associates/PPS
- Highway Capacity Analysis, McTrans
- Microstation CAD Manager, ProSoft
- Roads and Bridges Conference, Bentley
- Roadway Safety Design, National Highway Institute

Years With Firm: 19

## Nicole Centerbar, EIT

Engineer

Nicole works in our Transportation Services Group implementing design related to roadway alignments, guardrail, pavement, bicycle/pedestrian facilities and drainage, as well as performing cost estimates. She is adept in GPS data collection, as well as Microstratation and Inroads while expanding her abilities in AutoCAD Civil 3D. Her background also includes asset management practices.

### Relevant Experience

**East Road Bridges 5 & 6, Milton, VT:** Highway Design Engineer responsible for roadway design calculations, layout, cost estimating, and plans development, and resident engineer inspection services. Scope: Accelerated bridge design, permitting, and Right-of-Way coordination for the replacement of two bridges on East Road in Milton. Project design was awarded in September 2018 and construction was completed in November 2019.

**Town of Montgomery WW PER Update, Montgomery, VT:** Roadway Engineer responsible for highway and streetscape designs, plans development, and cost estimating. Scope: Development of a Preliminary Engineering Report (PER) for a joint wastewater collection system and Streetscape development for both Montgomery Village and Center.

**Dowsville Road Culvert, Duxbury, VT:** Resident Engineer / Inspector responsible for ensuring construction followed plans and specifications. Scope: Our team provided scoping, design and construction oversight services for this precast concrete 11' span by 4' rise box culvert project. Funding was provided through the VTrans Town Highway Emergency Grant program.

**Dorset Street, South Burlington, VT:** Roadway Engineer responsible for cost estimating and assistance on design and construction phasing. Scope: Study and design of pavement rehabilitation for approximately 1.1 miles (5800 linear feet) of Dorset Street beginning at the intersection of Kennedy Drive and ending at the intersection of Williston Road (US Route 2). This project is currently in the conceptual phase with alternatives being developed for various multi-year phasing and construction traffic control options.

**Gage Girls Road Reconstruction, Bedford, NH:** Roadway Engineer responsible for roadway layout design and inputting designs into AutoCAD. Scope: Prepare final design of 1 mile of roadway reconstruction along Gage Girls Road. The project includes minor horizontal alignment improvements, profile revisions, full depth reconstruction, and drainage improvements. Permitting and Right-of-Way services were also performed.

**Muddy Brook Culvert Replacement, South Burlington, VT:** Roadway Engineer responsible for roadway design calculations, bicycle/pedestrian facilities layout and design, plans development, and cost estimating. Scope: As a joint project between the City of South Burlington and Town of Williston, with VTrans MAB funding, Hoyle, Tanner completed a detailed engineering study for the replacement of the Muddy Brook Crossing Structure at Kimball / Marshall Avenue.

**Shoreham-Richville Road Bridge #8 Conditions Assessment, Shoreham, VT:** Inspector responsible for inspecting the structural condition of the bridge, piers, abutments, and roadway. Scope: Bridge inspection (including under bridge inspection vehicle access) and conditions assessment with detailed cost and prioritization of repairs for the Richville Road Bridge over Lemon Fair River. Bridge is a 3-span rolled beam bridge with concrete deck for a total length of 252'.



Professional Registrations:  
Engineer In Training: VT

Education:  
University of Vermont, BS, Civil Engineering, 2018

Years With Firm: 2

## Sean James, PE

Senior Vice President – Quality Assurance Auditor of Bridge, Culvert & Transportation Structures

Sean has performed structural analysis and design of steel, prestressed concrete, reinforced concrete, masonry and wooden covered bridge repair, rehabilitation and replacement projects, as well as NBIS bridge inspection. His experience also includes inspection, design or rehabilitation of parking garages, historic buildings, sign structures and environmental containment structures. He has completed projects for NHDOT, MaineDOT, VTrans, MassDOT, NYSDOT, and numerous municipal clients. His project experience includes environmental permitting, NEPA and Section 106 review, bidding and construction inspection and administration. He serves as Hoyle, Tanner's Director of our Northeast Bridge and Structures Group, focusing on successful delivery of projects to our clients.

### Relevant Experience

**East Road Bridges 5 & 6, Milton, VT:** Principal-in-Charge responsible for the scope of work, schedule adherence, and compliance with funding requirements. Scope: Accelerated bridge design, permitting, and Right-of-Way coordination for the replacement of two bridges on East Road in Milton. Project design was awarded in September 2018 and construction was completed in November 2019.

**Piscataquog River Trail Phase IV, Manchester, NH:** Project Manager for the technical aspects of the project, scheduling, budget and cost control, public presentations, and permitting. Scope: Design and construction-phase services for the 1,800' long section of the trail. The project included a local street crossing, easement acquisitions, a 160' single-span steel truss pedestrian bridge over the Piscataquog River, trail section upgrade and paving, and landscape and wayfinding enhancements.

**Longley Covered Bridge Rehabilitation, Montgomery, VT:** Principal-in-Charge for QA review of structural calculations and drawings. Scope: (Town Lattice Trusses built in 1863, 70' long span) This project includes the final design of the preservation of design alternative for an H20 live load identified in our scoping study completed for the Town of Montgomery. The final design portion of this project was managed by VTrans since federal funding was obtained through the National Historic Covered Bridge Preservation Program.

**Green River Covered Bridge, Guilford, VT:** Project Manager for the technical aspects of the project including review of structural calculations and drawings, scheduling, budget and cost control, public presentations and permitting. Scope: (Town Lattice Trusses built in 1870, 104' span) Inspected, analyzed and designed a rehabilitation of the bridge. The Town Lattice trusses were built without secondary upper chords and exhibited sweep and racking in the trusses. The project also includes evaluation of the stone abutments.



Professional Registrations:  
Professional Engineer: VT, ME., NH, PA, NY

Education:

- Southern New Hampshire University, MBA, 2008
- University of Maine, MS, Structural Engineering, 1995
- University of Maine, BS, Structural Engineering, 1993

Certifications & Specialized Training:

- FHWA - Bridge Inspection Refresher Training
- FHWA - Fracture Critical Inspection Techniques for Steel Bridges
- FHWA - Safety Inspection of In-Service Bridges
- NH LPA Certification for Labor Compliance
- NH LPA Certification Training
- OSHA - 10 Hour

Professional Associations:

- National Society for the Preservation of Covered Bridges (NSPCB)
- Structural Engineers of New Hampshire (SENH) - Former President (2009-2013)
- Vermont Covered Bridge Society

Years With Firm: 24

## Josif Bicja, PE

Associate – Project Manager of Bridge, Culvert & Transportation Structures

Josif has experience in the design, rehabilitation, and inspection of numerous bridges, covered bridges, wastewater treatment facilities, and miscellaneous projects. He has served as a project manager, structural design engineer, construction inspector, and construction administrator on over 50 NHDOT Municipally-Managed State Bridge Aid Program projects, as well as for MassDOT, VTrans and NYSDOT. Josif has extensive experience and familiarity with the latest load resistance factor design methods. He has many years of experience working in transportation civil engineering projects.

### Relevant Experience

**East Road Bridges 5 & 6, Milton, VT:** Senior Engineer for the QA/QC, design review, schedule adherence, and compliance with funding requirements. Scope: Accelerated bridge design, permitting, and Right-of-Way coordination for the replacement of two bridges on East Road in Milton. Project design was awarded in September 2018 and construction was completed in November 2019.

**Dowsville Road Culvert, Duxbury, VT:** Senior Engineer responsible for the QA/QC, design review, schedule adherence, and compliance with funding requirements. Scope: Our team provided scoping, design and construction oversight services for this precast concrete 11' span by 4' rise box culvert project. Funding was provided through the VTrans Town Highway Emergency Grant program.

**Crescent Street Bridge, Rutland, VT:** Senior Structural Engineer for the in-depth bridge inspection, structural design, cost estimates, specifications, design, bid and construction-phase services. Scope: Provided inspection, load rating, and conditions assessment for this 100' span steel girder bridge over the East Creek in Rutland. Hoyle, Tanner prepared a report that aided the City in determining the short and long term plans for the structure. Based on findings presented in the report, Hoyle, Tanner was tasked with the design of deck and bridge barrier repairs necessary to maintain bridge function while more long term replacement options were pursued.

**Longley Covered Bridge Rehabilitation, Montgomery, VT:** Project Manager for all aspects of the project. Scope: (Town Lattice Trusses built in 1863, 70' long span) This project includes the final design of the preservation of design alternative for an H20 live load identified in our scoping study completed for the Town of Montgomery. The final design portion of this project was managed by VTrans since federal funding was obtained through the National Historic Covered Bridge Preservation Program.

**Piscataquog River Trail Phase IV, Manchester, NH:** Structural Engineer for the in-depth existing trestle inspection and preparation of the Engineering Study. Scope: Design and construction-phase services for the 1,800' long section of the trail. The project included a local street crossing, easement acquisitions, a 160' single-span steel truss pedestrian bridge over the Piscataquog River, trail section upgrade and paving, and landscape and wayfinding enhancements.



### Professional Registrations:

Professional Engineer: VT, NH

### Education:

- University of New Hampshire, MS, Civil/Structural Engineering, 2006
- University of New Hampshire, BS, Civil/Structural Engineering, 2003

### Certifications & Specialized Training:

- FHWA - Fracture Critical Inspection Techniques for Steel Bridges
- FHWA - Safety Inspection of In-Service Bridges
- NH LPA Certification for Labor Compliance
- NH LPA Certification Training
- OSHA - 10 Hour
- Shop Drawings & Contract Clauses Risk Control
- SPRAT - Level 1 Rope Access Technician

### Professional Associations:

- National Society for the Preservation of Covered Bridges (NSPCB)
- Vermont Covered Bridge Society

Years With Firm: 16

## Edward Weingartner, PE

Associate – Senior Engineer

Ed is a technical lead with increasing responsibility relative to large and complex bridge and transportation projects. Ed serves as Hoyle, Tanner's Program Manager for NBIS bridge inspections, as well as senior structural engineer for bridge projects for NHDOT, VTrans, MaineDOT, MassDOT and municipalities. His experience includes inspections and designs of large river crossings including historic trusses, bridges with movable spans, prestressed concrete girders, timber covered bridges, steel girders and other materials and bridge types. Ed has a thorough understanding of applicable AASHTO codes and manages Hoyle, Tanner's implementation of bridge evaluation software including MIDAS, Merlin-Dash, LEAP Bridge, MDX, BAR7, and others. He is also responsible for mentoring and training in new analysis techniques and implementation of the firm's quality control and assurance practices.

### Relevant Experience

**Rogers Rangers Bridge - US Route 2 over the Connecticut River, Guildhall, VT - Lancaster, NH:** Project Manager for the technical aspects of the project, scheduling, budget and cost control, public presentations, permitting, and client coordination. Scope: Evaluation of bridge rehabilitation/replacement and traffic control alternatives, public input process participation, NEPA process coordination and development of preliminary plans for the preferred alternative. This existing bridge is a 400' long two-span Park Truss constructed in 1950. Replacement of the bridge with a new two-span steel girder bridge 400' long adjacent to the existing bridge. Traffic was maintained on the existing bridge during construction. The project included 3,000 linear feet of roadway construction with a modified T-intersection.

**Dewey Street Pedestrian Bridge, Rochester, NH:** Senior Structural Engineer responsible for performing the bridge inspection, load rating calculation check and developing rehabilitation/replacement recommendations. Scope: This first phase of the project involved field inspection, load rating and condition evaluation of the Dewey Street Pedestrian Bridge over the Cocheco River. The second phase of the project included the design of the complete replacement structure consisting of a 200' long single-span, prefabricated steel truss bridge founded on pile-supported concrete abutments. Hoyle, Tanner prepared contract plans, permitting, bidding documents and construction administration and observation services.

**Walker Bridge Deck Repair, Ludlow, VT:** Senior Structural Engineer responsible for QA/QC. Scope: Hoyle, Tanner performed a conditions assessment, design of emergency repairs, and construction oversight for the Walker Bridge (Route 103) over the Black River with the purposes of identifying necessary repairs to maintain service until the bridge replacement, scheduled two years from the assessment. Hoyle, Tanner maintained close coordination with the Town, VTrans Bridge Inspection Unit, VTrans Structures Group, and the VTrans District Transportation Administrator during this project ensuring the appropriate sharing of information for short and long term planning.



Professional Registrations:  
Professional Engineer: VT, NH, MA, ME, CT, CA

### Education:

- University of Lowell, MS, Civil Engineering, 1991
- University of Lowell, BS, Civil Engineering - Magna Cum Laude, 1990

### Certifications & Specialized Training:

- FHWA - Fracture Critical Inspection Techniques for Steel Bridges
- FHWA - LRFD for Highway Bridge Superstructures
- FHWA - Safety Inspection of In-Service Bridges
- NHDOT – Load and Resistance Factor Rating, February 2009

### Professional Associations:

- American Society of Civil Engineers (ASCE)
- Precast/Prestressed Concrete Institute (PCI)
- Structural Engineers of New Hampshire (SENH)

Years With Firm: 29



## Kayla Hampe, PE

Engineer

Kayla has broad structural engineering experience, spanning bridge rehabilitation, traffic control, building cladding, and roof analysis, and three years of structural engineering focusing on bridge design. She also has experience with hydraulic engineering as it relates to bridge design. Her construction services experience includes traffic control plans for MassDOT bridge rehabilitation projects, salt shed foundation design and inspection, in addition to glass and metal facades for buildings. Bridge rehabilitation design experience includes temporary support and shielding projects, plate girder rehabilitation, and truss deconstruction. Her unique cladding designs involved vertical concrete fins along a curtain wall at Boston University, as well as the dynamic wall at Logan Airport garage. She is experienced in the application of the AASHTO LRFD Bridge Design Specifications and the AASHTO Manual for Bridge Evaluation, which she applies to design of new bridge structures and existing bridge load ratings. Her hydraulic and structural engineering knowledge work together to help her design new bridges. Kayla applies past experience to our Structural Engineering Department to meet the needs of our respected clients.

### Relevant Experience

#### **Young Road Culvert Replacement, Barrington, NH:**

Structural Engineer responsible for the construction observation including shop drawing review. Scope: Funded through the FEMA Hazard Mitigation Grant Program this project included the replacement of an existing 4' diameter reinforced concrete pipe culvert with a 3-sided rigid frame culvert spanning 7' with a 6' rise. The project also included highway safety improvements with widened shoulders, horizontal curve adjustments, and raising the road profile to decrease a vertical sag alignment.

**Lawrence Street over Blackwater River, Andover NH:** Project Engineer responsible for helping develop existing and proposed SRH-2D hydraulic models. Scope: The replacement of a 48' span steel beam bridge with a longer, single span girder bridge to improve hydraulics and provide wildlife passage along the river bank. The new bridge includes a wider roadway to accommodate two lanes of traffic and shared use shoulders. A single lane of two-way traffic is maintained on the existing bridge during construction.

**Elbow Pond Road over Mountain Brook, Andover NH:** Project Engineer responsible for helping develop existing and proposed SRH-2D hydraulic models. Scope: Project involved preparation of a hydrologic and hydraulic report, environmental permitting and design of a new substructure for an existing crossing that previously failed from scour.

**Mallego Road Bridge, Barrington NH:** Project Engineer responsible for calculation preparation, developing the SRH-2D hydraulic model, preparation of the Engineering Study, and construction observation. Scope: The project includes 435' of roadway construction and replacement of the existing deteriorated corrugated metal pipe bridge with a 40' span prestressed concrete deck beam superstructure. The superstructure has a 45-degree skew to the cast-in-place concrete substructure with spread footings.



Professional Registrations:  
Professional Engineer: NH, ME

Education:

- Lehigh University, MS, Structural Engineering, 2012
- University of New Hampshire, BS, Civil Engineering, 2010

Certifications & Specialized Training:

- NH LPA Certification for Labor Compliance
- NH LPA Certification Training
- OSHA - 30 Hour Construction Training Course

Professional Associations:  
Structural Engineers of New Hampshire (SENH) - Professional Development Committee Co-Chair

Years With Firm: 4

## Joseph Ripley, PE

Engineer / Inspector

Joseph's experience includes bridge design, inspection, load rating, shop drawing review, and construction observation for NHDOT, MaineDOT, VTTrans and NYSDOT and numerous municipal clients. His experience also includes inspection and rehabilitation of various other structures including covered bridges and parking garages and the use of small unmanned aerial systems (sUAS) for site mapping and bridge inspections. Joseph is fluent in various software programs such as Merlin-Dash, LEAP Bridge, GROUP/L-Pile, STAAD and Microstation.

### Relevant Experience

**East Road Bridges 5 & 6, Milton, VT:** Project Engineer responsible for all structural design, civil/site layout, administration of plan preparation and specification writing. Scope: Accelerated bridge design, permitting, and Right-of-Way coordination for the replacement of two bridges on East Road in Milton. Project design was awarded in September 2018 and construction was completed in November 2019.

**Piscataquog River Trail Phase IV, Manchester, NH:** Project Engineer for structural design, plan preparation, and shop drawing review. Scope: Design and construction-phase services for the 1,800' long section of the trail. The project included a local street crossing, easement acquisitions, a 160' single-span steel truss pedestrian bridge over the Piscataquog River, trail section upgrade and paving, and landscape and wayfinding enhancements.

**Crescent Street Bridge, Rutland, VT:** Structural Engineer for the load rating, structural design and plan preparation. Scope: Provided inspection, load rating, and conditions assessment for this 100' span steel girder bridge over the East Creek in Rutland. Hoyle, Tanner prepared a report that aided the City in determining the short and long term plans for the structure. Based on findings presented in the report, Hoyle, Tanner was tasked with the design of deck and bridge barrier repairs necessary to maintain bridge function while more long term replacement options were pursued.

**Church Street over the Tloga River, Belmont, NH:** Project Engineer for the structural design, civil/site layout, administration of plan preparation, shop drawing review and part-time construction observation. Scope: Design and permitting of emergency repairs to a corrugated metal pipe that was constructed in 1975 and was closed as a result of its poor condition. The emergency repairs consisted of constructing a cast-in-place reinforced concrete invert which allowed the bridge to reopen to all traffic.

**Scott Covered Bridge, Townshend, VT:** Project Engineer for the structural design, civil/site layout, administration of plan preparation and shop drawing review. Scope: (Kingpost and Town Lattice Trusses built in 1870, four spans, 276' total length) Inspected, analyzed and designed a rehabilitation of the bridge, which was closed due to its poor condition. The bridge originally carried vehicular traffic but has been limited to pedestrians since the 1950s. This unique bridge includes two different truss types and has undergone multiple repairs including installation of a new pier and nail-laminated wood arches.



Professional Registrations:  
Professional Engineer: NH

### Education:

- University of Massachusetts - Lowell, MS, Structural Engineering, 2013
- University of Massachusetts - Lowell, BS, Civil Engineering, 2011

### Certifications & Specialized Training:

- FHWA - Fracture Critical Inspection Techniques for Steel Bridges
- FHWA - Safety Inspection of In-Service Bridges
- NH LPA Certification for Labor Compliance
- NH LPA Certification Training
- OSHA - 10 Hour Construction Training
- SPRAT - Level 1 Rope Access Technician

### Professional Associations:

- ACEC-NH - Emerging Leaders Committee (2016 - Current)
- Structural Engineers of New Hampshire (SENH) - Younger Member's Group Board Member (2017 - Current)

Years With Firm: 9

## Ryan McMullen, PE

Engineer

Ryan has experience in the design and load rating of simple span vehicular bridges as well as the drafting of preliminary and final design plans. Other experiences include developing bridge engineering studies, preliminary design reports, and inspection of fracture critical bridges. He has performed construction administration for pedestrian and simple span vehicular bridges, and has been on site to inspect precast concrete bridge elements.

### Relevant Experience

**Westville Road Bridge, Plaistow, NH:** Resident Project Representative responsible for site visits, precast inspection, tracking quantities and submittals. Scope: Designed and administered construction for the replacement of the existing 14' span cast-in-place concrete arch bridge, originally constructed in 1940, to improve the roadway geometry, safety and hydraulic capacity of the crossing. The replacement structure is a 28' span precast rigid frame.

**Dolf Brook Watershed Analysis & Culvert Replacement, Hopkinton, NH:** Project Engineer responsible for the review of submittals. Scope: Hoyle, Tanner was selected by the Town of Hopkinton to design replacements for five structurally deficient culverts along Dolf Brook. Our efforts include topographical survey, watershed hydrology analysis, culvert hydraulic analysis and design, roadway design with multimodal accommodations, and NHDES permitting with Stream Crossing Rule compliance.

**Mallego Road Bridge, Barrington, NH:** Project Engineer responsible for reviewing submittals and precast plant inspections. Scope: The project includes 435' of roadway construction and replacement of the existing deteriorated corrugated metal pipe bridge with a 40' span prestressed concrete deck beam superstructure. The superstructure has a 45-degree skew to the cast-in-place concrete substructure with spread footings.

**Kearsarge Way & Market Street Bridges, Portsmouth, NH:** Project Engineer responsible for inspections to determine existing conditions, development of plan set and details. Scope: Provided inspection, evaluation, and design services for two vehicular bridges and one pedestrian bridge. Designed deck repairs for the Kearsarge Way Bridge, expansion joint replacements for the Market Street vehicular bridges, and substructure and other miscellaneous repairs for the Market Street Pedestrian Bridge.

**NHDOT Statewide #40759 Task 1 Hinsdale, Hinsdale, NH - Brattleboro, VT:** Bridge Inspector responsible for assisting the Team Leader with the fracture critical inspection and note reduction of the floor system. Scope: A routine and fracture critical member inspection was completed for two historic Camelback steel truss bridges. Additional detailed information was also obtained to aid in the development of future rehabilitation plans for the 330' and 203' long bridges.



Professional Registrations:  
Professional Engineer: NH

Education:

- University of New Hampshire, MS, Structural Engineering, 2015
- University of New Hampshire, BS, Civil Engineering, 2014

Certifications & Specialized Training:

- FHWA - Safety Inspection of In-Service Bridges
- NH LPA Certification for Labor Compliance
- NH LPA Certification Training

Professional Associations:  
Structural Engineers of New Hampshire (SENH) - Young Engineers Group

Years With Firm: 2

## Katelyn Welch, EIT

Engineer

Katie's experience includes design calculations, design quantifications, construction observation and inspection, shop drawing review, and CADD drafting for municipal and state agency bridge projects. Katie has working knowledge of Mathcad, Eriksson Culvert, STAAD, LEAP Bridge Concrete, Microstation V8i, InRoads, AutoCAD, and is proficient in Microsoft Office Suite programs.

### Relevant Experience

**East Road Bridges 5 & 6, Milton, VT:** Project Engineer responsible for the completion of the tasks involved in preliminary design phase services, including all structural design and administration of plan preparation. Scope: Accelerated bridge design, permitting, and Right-of-Way coordination for the replacement of two bridges on East Road in Milton. Project design was awarded in September 2018 and construction was completed in November 2019.

**NHDOT Monroe Bridge Inspection and Rating - Barnet Road, Barnet, Vermont - Monroe, NH:** Project Engineer for the completion of basic section property calculations and dead loads calculations of the existing structure. Scope: Performed a NBIS in-depth inspection and load rating of the bridge carrying NH Route 25 over the Connecticut River (Bridge. No. 032/103) for the NHDOT. The spans are comprised of one 120' and one 264' steel Pratt through trusses.

**Rabbit Hollow Road Bridge over Perry Brook, Swanzey, NH:** Project Engineer responsible for the completion of the tasks involved in study, preliminary, and final design phase services, including civil/site layout, all structural design, quantity calculation, specification oversight, administration of plan preparation, and shop drawing review. Scope: The project includes replacement of the existing structurally-deficient and undersized two corrugated metal pipes with a new 20'-0" span precast concrete box culvert.

**Perry Road Bridge over Tucker Brook, Milford, NH:** Project Engineer responsible for performing an "as-designed" load rating for the structure in question. Scope: Hoyle, Tanner performed load rating to determine the live load carrying capacity of the bridge. The existing bridge consisted of a 4-sided cast-in-place concrete box culvert constructed in 1978 with a clear span of 16' and a rise of 7'.

**North Shore Road over Tributary to Beaver Lake, Derry, NH:** Project Engineer responsible for the completion of the tasks involved in study, preliminary, and final design phase services, including civil/site layout, all structural design, quantity calculation, specification oversight, administration of plan preparation, and shop drawing review. Scope: The project included the preparation of a hydrologic and hydraulic study to investigate options for the replacement of a structurally deficient corrugated metal pipe arch. The recommended structure type will be 12' in span. Project elements also included consideration of environmental rules and regulations as well cost estimation for the proposed solution.



Professional Registrations:  
Engineer In Training: NH

Education:

- University of New Hampshire, ME, Structural Engineering, 2017
- University of New Hampshire, BS, Civil Engineering, 2016

Certifications & Specialized Training:

- NH LPA Certification for Labor Compliance
- NH LPA Certification Training
- NHI - Bridge Construction Inspection: Inspector Safety
- OSHA - 10 Hour Construction Safety

Professional Associations:

- Structural Engineers of New Hampshire (SENH) - Professional Development Committee Co-Chair
- Women's Transportation Seminar (WTS) - NH Chapter

Years With Firm: 5

## Kimberly Peace

Associate - Senior Environmental Coordinator

Kimberly has a thorough understanding of the intricacies of federal, state, and local ordinances and regulations required for successful project completion in a timely manner. She has extensive experience in National Environmental Policy Act (NEPA) compliance and the preparation of Categorical Exclusions (CEs), Environmental Assessments (EAs), and Environmental Impact Statements (EISs) in accordance with the varying guidelines developed by federal environmental regulatory agencies, including FAA, FHWA, USACOE, USFWS, the US Forest Service, EPA, DOE, and FERC. She is also experienced in wetland delineation, permitting, and mitigation design. She has technical experience with the identification and protection of natural resources – including rare, threatened, or endangered species – in all six New England states, as well as New York, South Carolina, and Florida.

### Relevant Experience

**East Road Bridges 5 & 6, Milton, VT:** Senior Environmental Coordinator for federal, state and local permitting efforts, including discussions with VT ANR, VT Fish and Game and USACE regarding stream stabilization alternatives. Scope: Accelerated bridge design, permitting, and Right-of-Way coordination for the replacement of two bridges on East Road in Milton. Project design was awarded in September 2018 and construction was completed in November 2019.

**Dowsville Road Culvert, Duxbury, VT:** Environmental Coordinator for federal, state and local permitting efforts, including discussions with VT ANR and VT Fish and Game regarding stream bottom restoration. Scope: Our team provided scoping, design and construction oversight services for this precast concrete 11' span by 4' rise box culvert project. Funding was provided through the VTrans Town Highway Emergency Grant program.

**West Hill Road Slope Repair, Rochester, VT:** Environmental Coordinator for development of a NEPA Categorical Exclusion for a Special Use Permit (SUP) from the US Forest Service for temporary access across USFS lands, as well as state and local permitting efforts, including a VTANR Stream Alteration permit. Scope: The Town of Rochester Vermont contracted with Hoyle, Tanner to design repairs to stabilize a slope failure affecting 100 vertical feet adjacent to Brandon Brook and West Hill Road. Intense rainfall events had undermined the toe and triggered the roadway and slope to fail and slide into the brook. Design plans and geotechnical calculations were prepared using a blast rock toe detail and Type II stone facing to restore the slope, toe and brook channel. Permits included a Categorical Exclusion Environmental Assessment, ACOE Category 2 and VT Stream Alteration Permit. The project is on United States Forest Service lands and was funded through VTrans.

**Route 132 & River Road Repairs, Sharon, VT:** Environmental Coordinator for federal, state and local permitting efforts including VT ANR Stream Alteration permit. Scope: Repair designs for 3.5 miles of Route 132 and 0.5 miles of River Road for damage resulting from Tropical Storm Irene. Design includes hydrologic and hydraulic analysis, culvert design, embankment stabilization design, retaining wall design, permitting, and roadway reestablishment. The project also includes design of a 7' by 6' tall concrete box culvert carrying the Quation Brook under Route 132, a 14' tall by 90' long retaining wall anchored to bedrock and designed to support the surcharge load of the roadway above, and several embankment stabilization designs where the brook has caused slope failure. This project was completed through the VTrans administered Federal Highway Administration Emergency Relief Program.



### Education:

- University of South Carolina, MS, Marine Science, 1994
- Thomas More College, BS, Biology, 1992

### Certifications & Specialized Training:

- FHWA - Public Involvement in the Transportation Decision-Making Process
- OSHA - HAZWOPER
- Society of Wetland Scientists

### Professional Associations:

- New Hampshire Association of Natural Resource Scientist (NHANRS)
- Society of Wetland Scientists

Years With Firm: 7

## Joanne Theriault

Environmental Coordinator

Joanne is a permitting specialist, wetland scientist and wildlife biologist with years of experience in the field. She has a thorough understanding of state and federal permitting and agency coordination for state environmental permits and NEPA compliance. She also has technical experience with the identification and evaluation of natural resources and management of human-wildlife conflict. Her technical specialties include vernal pool ecology, bird identification, wetland delineation/evaluation, and GIS data analysis.

### Relevant Experience

**East Road Bridges 5 & 6, Milton, VT:** Environmental Coordinator responsible for the preparation of state and federal environmental permit applications. Scope: Accelerated bridge design, permitting, and Right-of-Way coordination for the replacement of two bridges on East Road in Milton. Project design was awarded in Sept 2018 and construction was completed in Nov 2019.

**Muddy Brook Culvert Replacement, South Burlington, VT:** Environmental Coordinator responsible for developing an environmental permitting plan based on site-specific environmental data and both state and federal permitting regulations for inclusion in the project's Engineering Alternatives Report. Scope: As a joint project between the South Burlington and Williston, with VTrans MAB funding, Hoyle, Tanner completed a detailed engineering study for this culvert replacement and path extension.

**Epping Road/Winter Street/Spring Street TAP Sidewalks, Exeter, NH:** Environmental Coordinator responsible for preparation of NEPA documentation and preparing state permit applications in collaboration with the NH Department of Transportation – Bureau of Environment. Scope: The goal of Exeter's Transportation Alternative Program (TAP) sidewalk project is to eliminate gaps in the Town's existing sidewalk network and provide safe pedestrian facilities from residential neighborhoods to the historic downtown area. The project proposes 1,600 +/- linear feet of new sidewalk along Epping Road (NH 27), Winter Street & Spring Street; 100 linear feet of sidewalk reconstruction; and ADA compliant wheel chair ramps. A new crosswalk with overhead lighting will be proposed at Winter Street to provide connection to Park Street Common.

**Infrastructure Project, Safe Routes to School, Main Street, Plaistow, NH:** Environmental Coordinator responsible for assisting with preparation of a NEPA Categorical Exclusion document. Scope: The Town of Plaistow has spent years planning to improve pedestrian walkability and safety in their downtown along Main Street (NH 121A). They selected Hoyle, Tanner to develop enhancements including 650' of sidewalk, raised crosswalks with curb extensions, revised intersection geometry to reduce travel speeds, and associated signing, marking, and streetscaping. Our team also assisted the Town in applying for alternative funding including the TAP program.

**Riverwalk Parking Lot & Pedestrian Bridge Grove Street, Peterborough, NH:** Environmental Coordinator responsible for assisting with preparation of NEPA documentation and preparing state permit applications for the NH Department of Environmental Services. Scope: Design of a new 60-space parking lot and access drive with concrete sidewalks, seating area, retaining walls, and decorative fencing. Stormwater will be treated with rain gardens and a large underground infiltration chamber system. The site will also include LED ambient lighting and new landscaping throughout. A new 8' wide pedestrian bridge will be designed to span the Nubanusit Brook to provide connectivity and continuity from the new parking lot to the downtown area.



### Education:

- University of New Hampshire, MS, Natural Resources, 2009
- Northeastern University, BS, Biology, 2003

### Certifications & Specialized Training:

- Bilingual in English and French
- US Army Corps Wetland Delineator Methods Training

### Professional Associations:

- New Hampshire Association of Natural Resource Scientist (NHANRS)
- The Wildlife Society

Years With Firm: 4

## Elizabeth Bosiak

Right-of-Way Specialist

Betsy is Hoyle, Tanner's expert in Right-of-Way acquisition. She started her career in the field in 1979 when she joined the staff of the Right-of-Way Bureau of the New Hampshire Department of Transportation. In her role as land acquisition specialist, Betsy is conscientious and diligent when communicating with property owners, designers and field construction staff. She plays an essential role preparing proper documentation for land acquisition and easements to secure property rights in compliance with federal and state requirements. Betsy's expansive knowledge about Right-of-Way acquisitions and Avigation Easement acquisition results in cooperative and effective communication among project stakeholders.

### Relevant Experience

**Westville Road Bridge, Plaistow, NH:** Acquisitions / Relocation Specialist to determine land sales and computing values to offer to the owners and developed corresponding documents. Met with some property owners to discuss the project and compensation development. Scope: Designed and administered construction for the replacement of the existing 14' span cast-in-place concrete arch bridge, originally constructed in 1940, to improve the roadway geometry, safety and hydraulic capacity of the crossing. The replacement structure is a 28' span precast rigid frame.

**Safe Routes to School, Main Street, Plaistow, NH:** Acquisitions / Relocation Specialist for assisting with Right-of-Way concerns and utility issues as required for the project. Scope: The Town of Plaistow has spent years planning to improve pedestrian walkability and safety in their downtown along Main Street (NH 121A). They selected Hoyle, Tanner to develop enhancements including 650' of sidewalk, raised crosswalks with curb extensions, revised intersection geometry to reduce travel speeds, and associated signing, marking, and streetscaping. Our team also assisted the Town in applying for alternative funding including the TAP program.

**Dolf Brook Watershed Analysis & Culvert Replacement, Hopkinton, NH:** Acquisitions / Relocation Specialist for the research of property owners and deed information, and the development of easement documents utilizing this information. Scope: Hoyle, Tanner was selected by the Town of Hopkinton to design replacements for five structurally deficient culverts along Dolf Brook. Our efforts include topographical survey, watershed hydrology analysis, culvert hydraulic analysis and design, roadway design with multimodal accommodations, and NHDES permitting with Stream Crossing Rule compliance.

**Penacook Road Rehabilitation, Hopkinton, NH:** Acquisitions / Relocation Specialist for the research of property owners and deed information, and the development of easement documents utilizing this information. Scope: Rehabilitation of 1,700' of Penacook Road by full-depth reclamation of the existing pavement from NH Route 103 (Main Street) to Indian Ridge Road. Additional improvements include addressing drainage concerns, calming traffic, and providing pedestrian accommodations including a sidewalk along Penacook Road and 500' of Main Street.



### Education:

New Hampshire College, BA,  
Business Management, 1968

### Certifications & Specialized Training:

- MaineDOT - Local Project Administration Certification
- NH LPA Certification Training

### Professional Associations:

- Central New Hampshire Regional Planning Commission
- Epsom Planning Board - Secretary
- International Asset Management Committee
- International Right of Way Association - New England Chapter 16 Secretary, Membership Chair

Years With Firm: 5

## Kirstin DiPietro Worden, PE

Associate - Stormwater Engineer

Kirstin has experience in a range of stormwater engineering projects including hydraulic design, stormwater treatment system layout and stormwater sewer use ordinance studies. Additionally, she has experience in the design of water and wastewater treatment facilities, wastewater pump stations, and small scale sewage disposal systems. Her experience also includes water quality monitoring projects involving Indirect Discharge Permits, landfills, and hazardous waste sites, as well as Phase I and II Environmental Site Assessments.

### Relevant Experience

**City Offices Stormwater Improvements, South Burlington, VT:** Project Engineer for the detailed hydraulic design, stormwater treatment system layout, civil/site layout, administration of plan preparation and specifications for the replacement of the City's existing stormwater system at the City Office Complex in South Burlington. Scope: Conducted an Engineering Feasibility Analysis for the City's Municipal Office complex which had been identified as a location to evaluate and implement stormwater management improvements. This analysis was completed with a focus on the implementation of Low Impact Development measures. The identified and subsequently designed stormwater management improvements included a bioretention facility, vegetated swale and underground storage system. Hoyle, Tanner provided bid and construction-phase services including an onsite resident project representative, facilitating weekly project meetings, responding to RFIs, change order requests, issuing field orders, and shop drawing review.

**Potash Brook Flow Restoration Plan, South Burlington, VT:** Project Engineer responsible for conceptual design, constructability review and regulatory coordination. Scope: Development of multi-phase stormwater planning effort that resulted in the identification of over 100 potential stormwater treatment opportunities needed to achieve the flow restoration targets prescribed in the Potash Brook TMDL. The project has required coordination with numerous private landowners, other Municipal Separate Storm Sewer System (MS4) entities, and regulatory authorities. The project also included the close coordination with the City for the development of a city-wide ranking and implementation schedule of proposed BMPs, as well as development of a conceptual methodology for cost sharing with other MS4 entities that own impervious area within the impaired watershed.

**Bartlett Brook Central Stormwater Improvement Project, South Burlington, VT:** Project Engineer responsible for detailed process and hydraulic design, equipment selection and layout, civil/site layout, administration of plan and specification preparation and project cost estimating. Scope: Final design through the Bartlett Brook Flow Restoration Plan process included capturing collected stormwater runoff and conveying this stormwater to a City-owned parcel to allow for underground infiltration. Upon further investigation during final design, site soil conditions were found to be not favorable for stormwater infiltration. As a result, the design team advanced with design and implementation of a gravel wetland to provide for flow detention and phosphorus removal of the collected stormwater runoff from the contributing residential drainage area. Hoyle, Tanner provided construction-phase services for this project in summer 2017.



Professional Registrations:  
Professional Engineer: VT

Education:  
Worcester Polytechnic Institute,  
BS, Civil Engineering, 1994

Professional Associations:

- Green Mountain Water Environment Association (GMWEA)
- New England Water Environment Association (NEWEA)
- Water Environment Federation (WEF)

Years With Firm: 21



## Kevin Preston

### CADD Technician

Kevin is Hoyle Tanner's GPS Lead. He collects GPS data for verification, supplementary, and plan production purposes. Kevin trains employees on the collection, export, and utilization of data with ArcGIS, Microstation, and AutoCAD software. Along with his GPS skillset, he has proficiency with Bentley Microstation, Bentley InRoads, Bentley OpenRoads, Bentley Storm and Sanitary, Autodesk Civil 3D and Microsoft Office Suites. He collaborates with state and municipal clients to create projects in an organized manner.



#### **Education:**

New Hampshire Technical Institute, AS, Architectural / Civil Engineering, 2012

#### **Years With Firm: 6**

### Relevant Experience

**East Road Bridges 5 & 6, Milton, VT:** CADD Designer responsible for preparation of contract plans and quantity takeoffs. Scope: Accelerated bridge design, permitting, and Right-of-Way coordination for the replacement of two bridges on East Road in Milton. Design notice to proceed was given in September 2018, and through an accelerated project delivery, construction was completed in December 2019.

**VTrans - Worcester Bridge 89, Worcester-Elmore, VT:** CADD Designer responsible for preparation of contract plans, project 3D modeling and assisting teammates with software training. Scope: Hoyle Tanner is completing the design of this 77' span bridge consisting of steel beams and concrete deck superstructure on cantilevered abutments. This VTrans project is being completed as part of a bundled (5 structures) bridge design and construction project located on VT Route 12.

**VTrans - Worcester Elmore Bridge 90, Worcester-Elmore, VT:** CADD Designer responsible for preparation of contract plans, project 3D modeling and assisting teammates with software training. Scope: Hoyle Tanner is completing the design of this 40' span bridge consisting of steel beams and concrete deck superstructure on semi-integral cantilevered abutments. This VTrans project is being completed as part of a bundled (5 structures) bridge design and construction project located on VT Route 12 in Elmore, VT.

**VTrans - Worcester Elmore Bridge 94, Worcester-Elmore, VT:** CADD Designer responsible for preparation of contract plans, project 3D modeling and assisting teammates with software training. Scope: As part of a bundled (5 structures) bridge design and construction project, Hoyle Tanner is completing the design of this 11' span box culvert located on VT Route 12 in Elmore, VT.

**Muddy Brook Culvert Replacement, South Burlington, VT:** CADD Designer responsible for preparation of contract plans. Scope: Design for a 34' span culvert structure spanning Muddy Brook at the border of South Burlington and Williston, Vermont. Project site has sensitive natural and cultural resources. As part of the project our roadway engineers are designing an extension of the 10'-wide shared use pathway to connect with Williston bicycle and pedestrian facilities.

**CCRCP - Bolger Hill Road Design Phase, Jericho, VT:** CADD Designer responsible for assisting in project design, preparation of contract plans and quantity takeoffs. Scope: Providing engineering services for the Bolger Hill Road Drainage Alternatives Study (Scoping Study) from Jericho Center Circle to the top of the hill, approximately 850 linear feet.

**Bolger Hill Road - Design Phase, Jericho, VT:** CADD Designer responsible for assisting in project design, preparation of contract plans and quantity takeoffs. Scope: Provide engineering services for the final analysis and design of two Best Management Practices near the Town Green and Browns Trace.

## Janet Bishop

### Administrative Assistant

Janet's administrative duties support the functions of projects by formatting specifications, bid documents, addendas, and studies; preparing bid documents, plan lists, DBE coordination; creating and updating plans; receiving all project-related email correspondence and filing in public folders; creating contracts and agreements; and coordinating all aspects of construction administration.



**Years With Firm:** 15

### Relevant Experience

**Dowsville Road Culvert, Duxbury, VT:** Administrative Assistant providing support to the Project Manager and Resident Engineer, as well as associated filing and overall administrative support to all technical staff. Scope: Our team provided scoping, design and construction oversight services for this precast concrete 11' span by 4' rise box culvert project. Funding was provided through the VTrans Town Highway Emergency Grant program.

**City Offices Stormwater Improvements, South Burlington, VT:** Administrative Assistant providing support to the Project Manager and Resident Engineer, as well as associated filing, preparation of specifications, bidding documents, submittals, requests for information, change orders. Scope: Conducted an Engineering Feasibility Analysis for the City's Municipal Office complex which had been identified as a location to evaluate and implement stormwater management improvements. This analysis was completed with a focus on the implementation of Low Impact Development measures. The identified and subsequently designed stormwater management improvements included a bioretention facility, vegetated swale and underground storage system. Hoyle Tanner provided bid and construction-phase services including an onsite resident project representative, facilitating weekly project meetings, responding to RFIs, change order requests, issuing field orders, and shop drawing review.

**Mayfair Park Stormwater Improvements, South Burlington, VT:** Administrative Assistant providing support to the Project Manager and Resident Engineer, as well as associated filing, preparation of specifications, bidding documents, submittals, requests for information, change orders. Scope: Completed conceptual design evaluation of stormwater conveyance and treatment opportunities in the Mayfair Park neighborhood. Project tasks included coordination of topographic survey, evaluation of stormwater conveyance routes, alternative comparison and development of estimated construction costs. Completed permitting, easement acquisition and funding assistance, final engineering design drawings, technical specifications and contract documents. Hoyle Tanner also administered the procurement of bids and construction-phase services, including Owner teaming to provide Resident Engineering Services as needed.

**BIA Garage - 2017 Repairs, South Burlington, VT:** Administrative Assistant providing support to the Project Manager and Resident Engineer, as well as associated filing and overall administrative support to all technical staff. Scope: Engineer services for conditions assessment, prioritization of repairs, final plans development, and bid and construction phase services of the BIA Parking Garage. The repairs generally consisted of concrete patch repairs, joint sealant replacement, membrane installation, and concrete crack repairs. Work was phased over three phases to limit the number of parking stall closures at one time and meet BIA fiscal year budget spending.



## NICHOLAS EAGAN, EIT

CADD Technician

Years in Industry: <1



Years with Firm: <1

### Registrations:

Engineer In Training: NH

### Education:

BS University of New Hampshire (2021)

Nick has his Bachelor of Science Degree from the University of New Hampshire and is currently working on his Master's Degree. He has been interning with Hoyle Tanner since June 2021 and provides valuable assistance with Open Roads modeling and cost estimating. His background in sustainability helps Nick take a complete look at a project during its design phase.

### Experience:

**Kimball/Forest Street Roadway Improvement, Lebanon, NH:** CADD Technician helping develop quantity estimates for major items associated with the project. Scope: Advancing and modifying a prior design for a roadway, water, sewer, and drainage improvement project. Efforts included separating a single-phase project into two separate bid document packages, developing conceptual drainage management design for future conveyance of stormwater to the river, assisting with public outreach, utility relocations, and bid assistance.

**On Call Contract - Task Order #1 Amarosa Drive, Rochester, NH:** CADD Technician who gathered preliminary data through site visits consisting of survey data checks and traffic volumes in and out of the existing facility with the goal of improving intersection safety and efficiency with the prospect of increased traffic volume at the project location. Scope: Review alternatives, develop a design, contract documents, easement coordination and bidding assistance for intersection improvements related to a significant change of use of a parcel expanding at a problematic intersection.

**VTrans- Worcester Elmore Bridge 94, Worcester-Elmore, VT:** CADD Technician who utilized OpenRoads software to create 3D models of the proposed bridge and roadway finish ground surfaces. Additional tasks included using the software to check design elevations to assist with the layout of plan and cross sections. Scope: As part of a bundled (5 structures) bridge design and construction project, Hoyle Tanner is completing the design of this 11' span box culvert located on VT Route 12 in Elmore, VT.



Burlington, VT  
Manchester, NH  
Portsmouth, NH  
Yarmouth, ME  
North Andover, MA  
Oviedo, FL

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