Two-Tier
(State-Local)
Qualifications-Based
Selection for

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

Design Services

HOYLE TANNER

hoyletanner.com

Vermont Agency of Transportation
Municipal Assistance Section

February 9, 2023

HOYLE TANNER

Trusted Experts | Innovative Results

February 9, 2023

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

RE: Request for Qualifications (RFQ)
At-The-Ready (ATR) Consultant Engineering Services for Municipalities 2023
Design Services Category

Dear Ms. Lugo,

VTrans' At-the-Ready (ATR) program is unlike any other in Vermont. Through this program, VTrans helps municipalities across the state get the best services they can through a streamlined process. Because of this process, municipalities save money without having to chase after engineering or construction consultants that may or may not be a good match for their needs. Hoyle Tanner has been an incumbent in this program since its creation and has witnessed first hand its utility in helping Vermont municipalities enhance their transportation infrastructure.

Our team has significant VTrans and Vermont project experience to successfully complete projects, and we specialize in ithe development of 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 deliverables are consistent, and that adherence to the Vermont Municipal Assistance Section (MAS) Local Project Guidebook and other Vermont-specific resources are project priorities.

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.

VTrans has relied on Hoyle Tanner's expert engineers for decades. Not only have we added team members, but we are continually in search of new practices, additional certifications, and knowledge sharing to provide the best services possible. VTrans can have confidence in the Hoyle Tanner team to deliver exceptional results to its municipalities under another multi-year agreement.

Very Truly Yours,

HOYLE, TANNER & ASSOCIATES, INC.

Jon Olin, PE
Vice President, Vermont Regional Business Manager

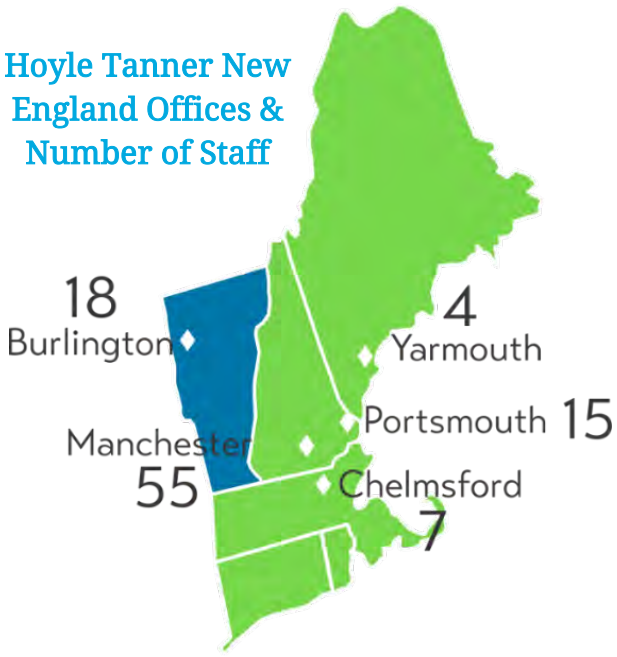
Table of Contents

roadway reconstruction & bike lane facility south burlington, vermont

firm information

ORGANIZATION

Hoyle Tanner is an established consulting engineering firm with five offices throughout New England including Burlington, Vermont. **We are so proud to be entering our 50th year in business**; an achievement accomplished through dedication and providing services that clients continue to select our firm for. Since Hoyle Tanner's beginning in 1973, we have provided municipal, state and federal clients with a wide range of services in the transportation, civil, structural, aviation, and environmental fields. Our firm consists of more than 100 professionals including engineers, planners, technicians, permitting specialists, drone operators, and specialized support professionals.



Our Burlington office was established in 1988, and it continues to grow. Under our Ground Transportation Division leadership of **Jon Olin** and **Todd Sumner**, we are positioned to hire and develop several more engineers in the coming years. With a healthy balance of municipal bridge, roadway, intersection, stormwater and bicycle/pedestrian facility projects, we are a go-to local resource for the communities in which we live.

Hoyle Tanner is directed by a nine-member Board of Directors. Our corporate leaders Christopher Mulleavey (President/CEO) and Matthew Low (Director of Engineering Operations) are Professional Engineers licensed in Vermont and are actively involved in the industry. Under their expert leadership, Hoyle Tanner has not only navigated the global challenges that have been presented but continued to evolve and thrive in the face of it.

Our Mission, Vision, and guiding values of respect, responsibility, quality, and commitment chart our course and our purpose. Hoyle Tanner professionals adhere to these principles through the projects we deliver and how we conduct business.

Our Vision

Our projects will improve the natural and built environments providing healthy and vibrant communities.

Our Mission

Dedicated professionals delivering the right solutions connecting people to sustainable environments.

MANAGEMENT

Hoyle Tanner and our clients depend on responsive and thorough managers to complete quality projects on-time and within-budget. Regular and clear communication is critical to ensure everyone understands expectations, progress, and issues that must be addressed. Our Contract Manager Jon Olin is dedicated to understanding all facets of business involving state and federally funded projects so that we continue to be one of your most trusted and dependable consulting firms.

All projects will be administered by Jon as the point-of-contact for Municipal ATR Design Engineering Services assignments.

Primary Contact Information

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

Jon Olin, PE
Vice President
(802) 489-7364
jolin@hoyletanner.com

SERVICES

Hoyle Tanner offers our clients a full complement of transportation engineering services to support municipally-managed projects. 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. See below for specific areas of expertise with relevance to municipally-managed projects:

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

Vermont Municipality & Municipal Project Manager

VERMONT AGENCY OF TRANSPORTATION

1st

Contract/Project Manager
*Jon Olin, PE

1st

2nd

3rd

Director of Engineering Operations
Matthew Low, PE

President
Christopher Mulleavey, PE

roadway, bicycle & pedestrian facilities, intersections & safety

*Todd Clark, PE – Quality Assurance Auditor
*Stephen Haas, PE, PTOE – Project Manager
*Heidi Marshall, PE – Project Manager
*Alyssa Smith – Engineer
Marisa DiBiaso, PE – Project Manager
Jacob Sparkowich, PE – Senior Engineer
Jeffrey Collins, EIT – Senior Engineer
Nicole Centerbar, PE – Engineer
Luke Cisneros – Engineer
Zachary Roussel, EIT – Engineer
Caroline Corwin – Engineer
Nicholas Eagan, EIT – Engineer
Kevin Preston – CADD Technician

bridge, culvert & transportation structures

*Sean James, PE – Quality Assurance Auditor
*Todd Sumner, PE – Project Manager
*Josif Bicja, PE, – Project Manager
Edward Weingartner, PE – Senior Engineer
Joseph Ripley, PE – Senior Engineer
Owen Krauss, PE – Senior Engineer
Kayla Hampe, PE – Engineer
Alex Spieler, EIT – Engineer
Ryan McMullen, PE – Engineer
Katelyn Welch, PE – Engineer
Kathryn Dziadowicz – Engineer
Lynne Sabourin, EIT – Engineer
Paul Dustin – CADD Technician
Travis Gelinas – CADD Technician

permitting, right-of-way & stormwater

Kimberly Peace – Senior Environmental Coordinator
Joanne Theriault, CWS, AWB® – Environmental Coordinator
Deb Coon – Environmental Coordinator
Elizabeth Bosiak – Right-of-Way Specialist
*Kirstin DiPietro Worden, PE – Senior Stormwater Engineer
Aidan Short, EIT – Stormwater Engineer
John Reilly, PE – Senior Wastewater Engineer
Mallory Rakowski – Water/Wastewater Engineer

Lines of Communication for Problem Resolution

*** Key personnel responsible for project management and/or technical leadership tasks.**

KEY PERSONNEL

Our key personnel have proven time and again their invaluable capacity to complete high-quality projects. From our most senior engineers to our 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 the Appendix of this qualifications package.

Jon Olin, PE *Vice President / 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 25 years of experience in delivering results on small-to-large transportation projects and MAS-funded projects (under the former Local Transportation Facilities program), and will ensure well-planned and well-coordinated project deliverables. He has experience in many disciplines of transportation engineering, has established relationships with permitting regulators, regional planning commissions, 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 engineering services in 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 Sumner, PE *Senior Structural Engineer – Project Manager*

Todd is a senior structural engineer with over 30 years of experience as a design engineer and project manager on bridge and transportation projects for VTrans. He also has experience with Locally Administered projects. Todd brings a depth of state and federal project experience that will provide value to your team in advancing projects and meeting the project development process. He will be responsible for project management for structures as well as roadway, bicycle and pedestrian projects.

Stephen Haas, PE, PTOE *Vice President – Project Manager of Roadways & Intersections*

Steve has over 20 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, civil/site engineering, transportation planning, and cost estimating for Vermont projects. Steve will be responsible for project management for roadway, intersection, and safety projects.

Alyssa Smith *Transportation Engineer*

Alyssa has a wide variety of experience in a number of transportation-related areas including traffic engineering, road safety, and transportation planning for both US and UK firms. Her experience includes Road Safety Audits, crash analysis, cycle route reviews, pedestrian facilities reviews, and design of pedestrian and bicycle facilities.

Heidi Marshall, PE *Associate – Project Manager of Roadways & Bicycle/Pedestrian Facilities*

In Heidi's longevity as a Senior Project Manager, she has gained (and added to her) extensive experience on dozens of municipal engineering and construction projects. Her technical responsibilities include, but are not limited to municipal sidewalk, path, roadway, utility, infrastructure, parking and intersection design, and permitting. Heidi's proficiency in working with municipalities -- along with her appreciation for smaller communities -- makes her an asset for managing roadway, intersection/safety, bike, pedestrian, and stormwater projects in Vermont's towns.

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

Sean is our Ground Transportation Division Manager and has 28 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 a National Bridge Inspection Standards (NBIS) Certified Bridge Inspector. Sean will be responsible for Quality Assurance monitoring of transportation structure disciplines.

Todd Clark, PE *Senior Vice President – Quality Assurance Auditor of Roadways, Bicycle/Pedestrian Facilities & Intersections; Safety & Transportation Alternatives*

Todd is a Senior Vice President with over 32 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 and pedestrian disciplines.

Josif Bicja, PE *Vice President – Project Manager of Bridge, Culvert & Transportation Structures*

Josif has over 20 years of experience in the design and rehabilitation of numerous municipal bridge and miscellaneous structural 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 transportation structure disciplines.

Kirstin DiPietro Worden, PE *Associate – Senior Stormwater Engineer*

Our Lead Stormwater Engineer has been closely following the Vermont Clean Water Act's progress and its impact on communities. Kirstin has vast 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.

ADDITIONAL EXPERTISE

Hoyle Tanner also has expertise in hydraulic analysis, environmental permitting, Right-of-Way acquisition and utility coordination and relocation, which are important and integral to project design.

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 Stowe Stagecoach Road Bridge Replacement, Kayla utilized our 2D modeling software to identify backflow conditions from a downstream convergence allowing for a more efficient bridge span to be permitted.

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 (CATEX) 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 CATEX and NEPA documentation.

With a career in the Right-of-Way field since 1979, **Elizabeth Bosiak** 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.

John Reilly, PE brings decades of experience in water and wastewater design with expertise in state, federal and regionally-specific (e.g. Champlain Water District) standards and requirements. He has successfully helped our bridge and roadway team manage these utilities with temporary bypass and permanent relocation design. John recently provided these services on the Densmore Drive Culvert Replacement where the potable water line was lowered several feet below the new culvert and the sanitary sewer was temporarily bypassed while a replacement line and new manhole was installed.

PROJECT SPECIFIC SUBCONSULTANTS

Hoyle Tanner has in-house engineering expertise to lead the design efforts for all project types identified in the RFQ. For specialty or support services we maintain 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, local knowledge, and experience.

RESOURCE PLANNING

Hoyle Tanner utilizes Deltek Vision® resource planning software which fully-integrates budget, resource, and schedule management into our operations, providing accurate financial forecasting and resource management. This tool is used throughout our firm to track project budgets and optimize team resources. As part of our quest for continuous improvement, we are excited to announce that in mid-2023 we will be implementing Mosaic which will provide our project managers with additional robust tools for managing schedules, budgets, and milestones. Our continuous training, coordination, and utilization of planning software allows Hoyle Tanner management to accurately project availability and maintain our commitment to projects. We take pride in the detailed effort we put into resource planning and our ability to effectively coordinate on-time delivery of projects with the professionals promised in our qualifications.

MUNICIPAL PROJECT EXPERIENCE & AVAILABILITY MATRIX

KEY PERSONNEL *	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	Hydrology & Hydraulic Analysis	Stormwater Treatment	Transportation Alternatives Projects	NEPA Documentation & Permitting	Right-of-Way Acquisition	NBIS Certified Bridge Inspector	LPA Certification	Availability
Jon Olin, PE	●	●	●		●				●	●		●	●	●			35%
Todd Sumner, PE	●	●			●				●				●				35%
Stephen Haas, PE, PTOE	●	●	●	●	●	●	●	●		●	●	●				●	25%
Alyssa Smith	●	●	●	●	●	●		●									40%
Heidi Marshall, PE	●	●	●		●	●	●	●	●	●	●	●	●	●		●	30%
Sean James, PE					●				●			●	●	●	●	●	15%
Todd Clark, PE	●	●	●	●	●	●	●	●	●			●	●	●		●	15%
Josif Bicja, PE									●	●		●			●	●	25%
Kirstin DiPietro Worden, PE										●	●	●					25%

**Availability is expressed as a percentage of time each key personnel can dedicate to Vermont Municipal Projects.*

*** Hoyle Tanner key personnel will be supported by our deep team of engineers, planners and technicians. These engineers have the availability and expertise to support a wide range and quantity of VTrans MAS projects.*

Hoyle Tanner understands that quality is the responsibility of everyone on the team. Our **commitment to quality** is demonstrated in every project we complete with an organized, documented process that team members can refer to in our Quality Assurance and Quality Control Manual (QAQCM) – updated in 2021. Our approach to quality control, while systematic, also considers the variability of each project and project team. Our senior bridge and highway engineers routinely meet to discuss project performance and what tools, roles, internal senior review checkpoints, and team compositions work best. Ensuring quality should never be stagnant and our firm is committed to training new or recently promoted staff and refining our process to best deliver each and every project.

QUALITY ASSURANCE & CONTROL PROCESS

1. The Project Manager is responsible for overall Quality Control and Assurance for the project. Project Manager develops Project Specific Quality Assurance Plan (PSQAP) that is reviewed with the Quality Assurance Auditor for approval. The Quality Assurance Auditor is often the Division Manager who has significant experience in the respective discipline. The PSQAP includes specific project requirements, operating procedures, and defines team member roles.
2. The Project Manager conducts a kickoff meeting that includes: client, project information, scope of services, roles, subconsultant services, PSQAP, project schedule (including critical points for senior review), constructability overview, maintenance of traffic options, risks, critical resources, key assumptions, and potential opportunities for innovation.
3. Designers complete tasks in a logical order that reduces the risk of redesign. They communicate potential solutions before they begin design and consult with senior technical staff if coaching or feedback is needed. Designers check their work, make corrections where needed, and summarize assumptions before it is to be checked by others.
4. Design Checkers review the design assumptions to ensure they are consistent with standard practice and the scope of services, and check work noting agreements and cause for corrections.
5. Design Resolution: If the Designer and Checker cannot come to an agreement, a senior technical engineer and the Project Manager provide final decisions. Calculations and summary sketches are initialed and dated once they are finalized.
6. The Designer and CADD technician are responsible for the plans, specifications, and estimates. They ensure the contract documents reflect the final design and meet CADD standards. As drawings are developed, they are checked by the Design Checker in a similar manner to calculations.

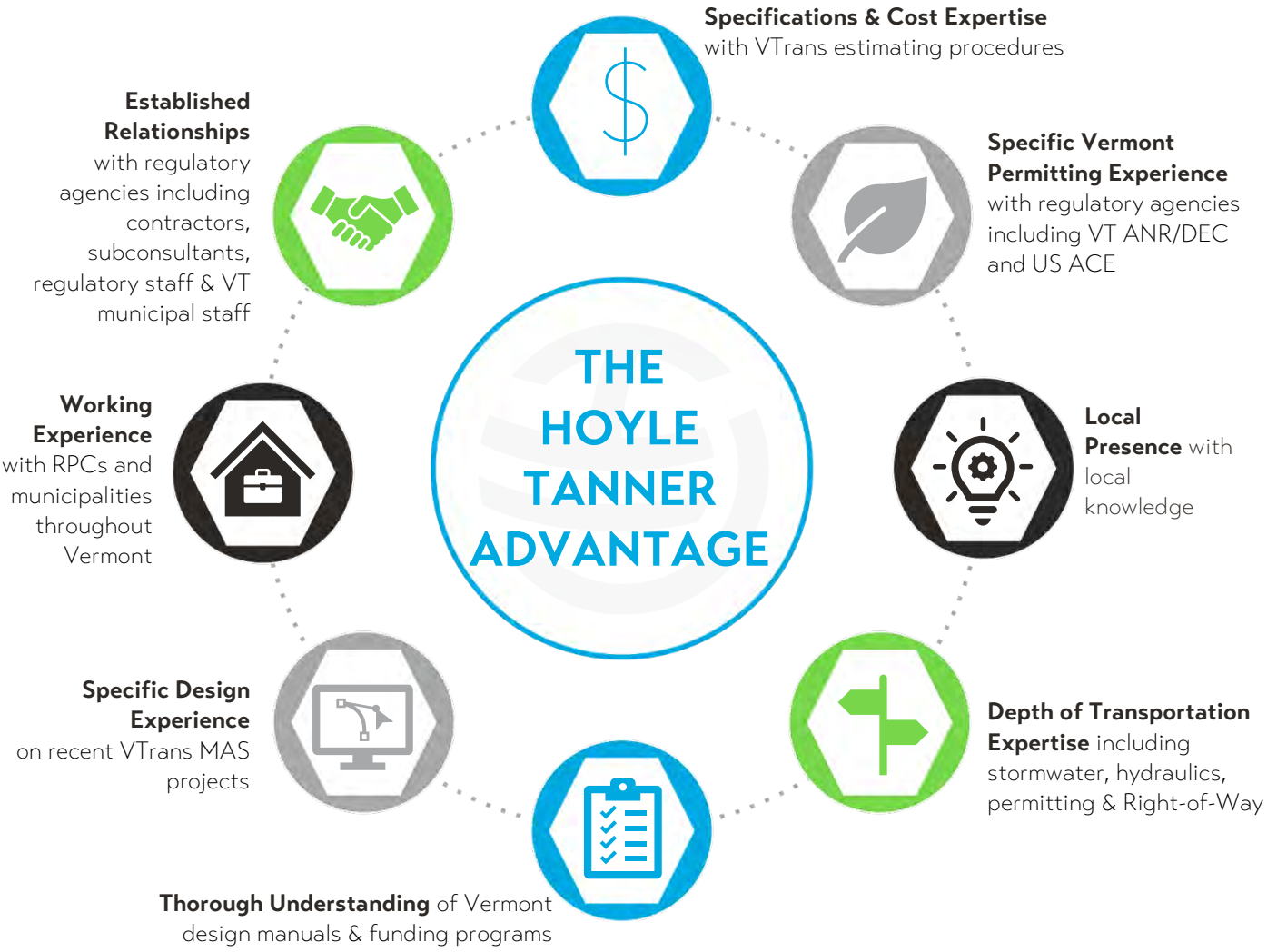
CONTINUOUS IMPROVEMENTS & ADAPTATION TO CHANGE

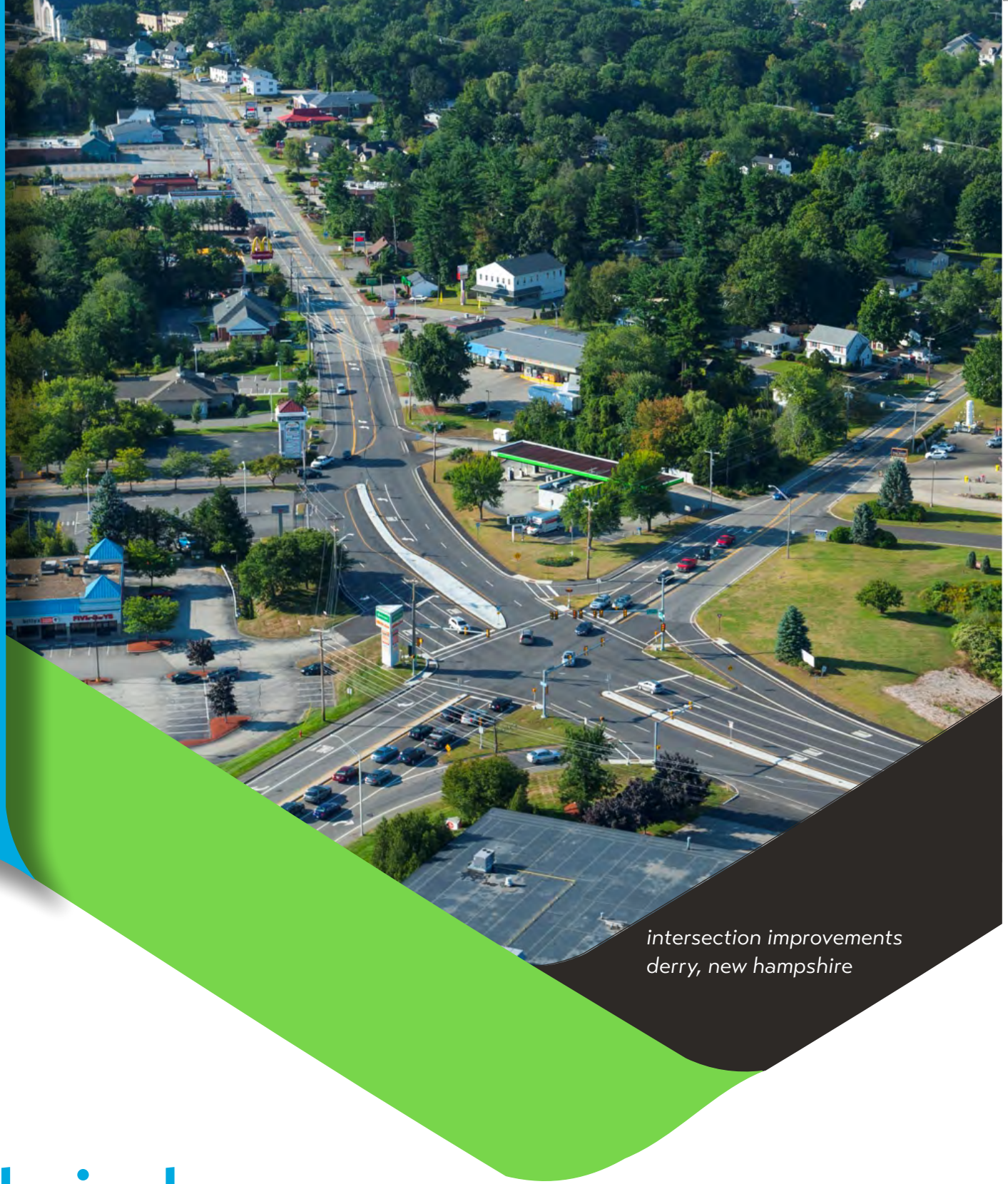
Our firm utilizes Bluebeam Studio for cloud-based document review and project team coordination. We have developed standard practices to best utilize this during the QC process. We use a color-coded system, status and nomenclature that allows for comments to be made, addressed, and backchecked in-real time with multiple users working within review documents simultaneously. When review sessions are complete, the documents are filed in our project QC folder.

Hoyle Tanner specializes in working with municipalities to maximize their efficiency with projects receiving state and federal funding. 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, evaluating permitting impacts, reviewing effects on abutting properties, and designing/managing traffic. Hoyle Tanner is always looking to add value to our clients' projects by considering initial and long-term costs, sustainability, innovative materials and accelerated construction.

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 relationships with our clients and stakeholders.

Hoyle Tanner prides itself in providing exceptional services that look for solutions beyond just the technical aspects of a project. You have our commitment to supporting municipalities with our expertise from start to finish. We enjoy working with our clients and stakeholders towards solutions that meet the project goals and needs of the community.





intersection improvements
derry, new hampshire

technical capability

Hoyle Tanner has received eight assignments through the VTrans ATR Consultant Engineering Services for Municipalities in the past two terms of this program. The volume and number of repeat municipal clients is reflective of the quality of our services and the diverse range of our team. Our firm, led by Jon Olin from the Vermont office, specializes in working on municipally-managed projects in Vermont. Jon has established many relationships with municipalities, regional planning commissions, and permitting agencies across the state. Hoyle Tanner will work with the VTrans MAS project manager, the municipality and their MPM to bring together the right in-house team and subconsultants for the specific project. Hoyle Tanner has extensive experience with regulations and requirements for municipal projects with state and federal funding and the expertise in scheduling and delivering Vermont projects meeting critical milestones and deliverables to make each project a success. This is supported by our example relevant projects and the qualifications of our staff that will be assigned.

PROJECT DEFINITION

The road map to successfully completing a project is developed through a quality scoping study. The scoping study is necessary for developing reasonable alternatives and solutions that meet the purpose and need of the project. Our engineers approach each project by asking questions and collecting data – including guiding informative discussions at the local concerns meeting – to help municipalities make informed decisions. The study is followed by a **Public Alternatives Presentation** and the municipality's final selection of an alternative. After the project scope is approved by the municipality, conceptual plans are developed, then presented in a **Public Informational Meeting**. Our team has experience with public presentations and developing conceptual plans to assist municipalities through these important steps in the process for federally funded projects.

We take great pride in being a firm that is capable of leading our clients from inception through completion of a project. Because we present feasible and constructible alternatives, almost 100% of our scoping studies result in construction completion. We accomplish this by getting our engineers experienced in existing facilities inspection, maintenance, design, and construction to ensure our proposed solutions consider permitting, Right-of-Way, maintenance and constructability perspectives.

With over 30 years of completing Vermont Transportation projects, our engineers have significant knowledge with VTrans Specifications and Cost Estimating Guidelines. We provide our clients with accurate project cost estimates for capital planning and conceptual alternative selection. These estimates are updated throughout the project development process as the design is refined, including accounting for fluctuations in material and labor costs.

PROJECT DESIGN

Hoyle Tanner is full-service engineering firm providing all the engineering services a municipality would require to successfully deliver MAS projects under this ATR program. This includes preliminary plans that refine project limits and impacts for obtaining required permits, supporting utility relocations and Right-of-Way easement procurements; final plans, specifications and itemized estimates; and contract plans (PS&E) for advertising. We have specific experience with scoping and designing the following project types throughout New England and with VTrans MAS for communities across Vermont.

Roadway Reconstruction & Rehabilitation Projects

Hoyle Tanner approaches each roadway project by considering life-cycle costs of appropriate roadway repair options to support municipalities making informed decisions. This includes both visual indicators such as the type of cracking, rutting, and other defects as well as subsurface exploration and surface drainage. Depending on the identified distresses, Hoyle Tanner's engineers are adept at recommending tailored treatments (thin overlays, mill and fill, hot and cold in-place recycling, reclamation, etc.) to extend the roadway's service life. **Dorset Street in South Burlington**, one of the most heavily traveled roadways in Vermont, had become severely rutted in recent years due the significant traffic loads accessing this mixed-used corridor. With careful investigation and analysis, our team identified that the roadway's structural box was sound and sufficient to support the daily loading it received. Through coordination with VTrans Materials Section, we employed a polymer-modified high-strength wearing course paired with variable depth milling to restore the roadway's surface without requiring full-depth reconstruction. Utilizing uniformed officers and flaggers, lane closures, median crossovers and temporary pedestrian accommodations and diversions maintained user access with limited disruption while expediting construction. See the Project Examples section for more information on Dorset Street.

We also evaluate the site to discuss and recommend other potential safety improvements to the municipality. These would include geometric improvements, bike and pedestrian facilities, transit considerations and utility needs. Regardless of the roadway being full reconstruction or rehabilitation, there are opportunities for the municipality to recognize other benefits such as considering the level of roadway repair and its cost in developing a sustainable long-term capital plan to be efficient with available funding.

Todd Sumner, Alyssa Smith, and Zach Roussel recently assisted the City of South Burlington with a Assessment Study of four intersections for pedestrian safety improvements.

Bicycle & Pedestrian Facilities Projects

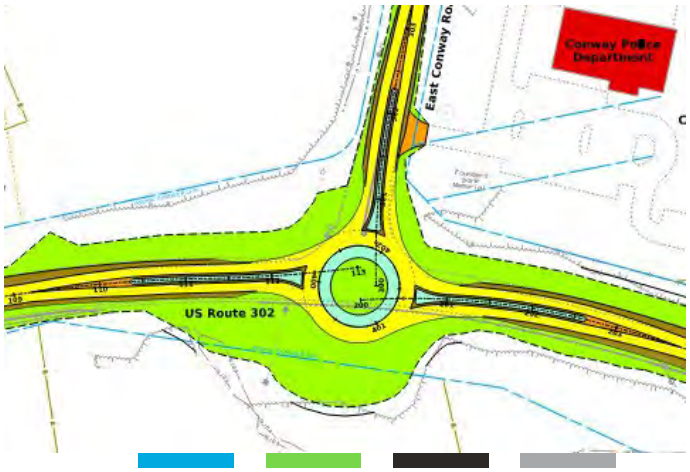
The Hoyle Tanner team stays current with Vermont Complete Streets requirements, Vermont State Design Standards and the many bicycle and pedestrian design resources shared on the MAS website. Our team is attentive to new and accepted traffic calming techniques and looks to implement emerging technologies where appropriate for the community needs. During site visits, engineers observe bicycle and pedestrian movements and assess current facilities to look for opportunities to improve safety. These improvements include adding a bike lane; shortening pedestrian crossings by utilizing curb extensions and median islands; crossing indicators such as raised/stamped crosswalks; and Rectangular Rapid Flashing Beacons (RRFB) – all of which improve pedestrian visibility and traffic.

Hoyle Tanner also considers incorporating green, complete and smart street practices that make sense in our northern climate. The addition of street trees, benches, bike racks and lighting can improve the total user experience. A project including parking, meter/pay stations and stormwater treatment may support a municipality's future needs or plans. In addition to the project samples

provided in this proposal, we have many other relevant examples including: Burlington's Schifilliti Park Pathway Design; Stowe's Moscow Village Streetscapes Design; and South Burlington's inventory and condition assessment of bike and pedestrian facilities.

Intersection & Safety Projects

Hoyle Tanner has significant intersection and safety project experience with municipal and state clients across New England. We have helped our clients determine the ideal intersection design that accommodates all desired users while providing a safe intersection that maintains an adequate level of service and blends into the local community. We understand the challenges of designing a successful intersection project. It starts with good data collection and evaluation of usage history to develop modeling to accurately predict vehicle, bike, and pedestrian behavior. We have worked on projects ranging from small improvements at existing intersections to large intersection improvement projects on state highways. The intersection of Eastman Road (US 302) and East Conway Road in Conway, New Hampshire typifies one of these projects where high speeds, excessive superelevation, and limited sight distance have led to it being ranked near the top of New Hampshire's High Crash locations. Utilizing funding from the Highway Safety Improvement Program (HSIP), Hoyle Tanner is partnering with the Town and NHDOT to design a new intersection that will improve safety and reduce crashes. Members of our traffic engineering team (Stephen Haas PE, PTOE and Jacob Sparkowich, PE) leveraged traffic analysis software including Synchro 11 and SIDRA to evaluate the feasibility of different intersection alternatives. Ultimately, a single lane roundabout was chosen for its ability to not only provide sufficient capacity, but also reduce crashes and calm traffic (which was not believed to be the case for a traffic signal). The project, which actually reduces the impervious footprint through a reduction in the required auxiliary turn lanes, will begin final design soon with construction anticipated in 2024.



For this high crash intersection in Conway, NH, a single-lane roundabout is being designed to improve safety, reduce travel speeds, and manage capacity.

Replacement, Rehabilitation & Maintenance of Bridges and Culverts

Our experts are also leaders in New England for inspecting existing bridges with several NBIS certified team members. We know that it is important early in the project development process to work with clients to assess the condition of their existing structures. We will identify which components need to be replaced, which ones are suitable for reuse, and determine the level of rehabilitation needed (based on the structure's needs and life cycle projections, as well as the municipality's transportation network priorities).

Our bridge team has significant experience with design – from simple structures, such as culverts and single span bridges, to complex structures including multi-span structures, curved girders, steel truss and covered bridges. Our quality control and quality assurance checks of our plans, specifications and

estimates help ensure the proper execution of work. The Hoyle Tanner design team develops practical solutions incorporating traffic control needs during construction, as well as long-term maintenance and life cycle costs. We bring specific experience in delivering project scoping and design through the ATR program including FHWA ER funding for the **Stagecoach Road Bridge Replacement** and TAP funding for the **Muddy Brook Culvert Replacement** projects – both of which are further highlighted in our project examples in the following pages.

Transportation Alternatives Projects

While our team completed a variety of projects with Transportation Alternative Program (TAP) funding (which could support many of the project types identified above), we also bring water quality design capabilities that qualify under the environmental mitigation category of municipal transportation needs. Hoyle Tanner is a leading engineering firm in Vermont for the design of stormwater projects, including stormwater system management, compliance with Total Maximum Daily Loads (TMDLs), hydraulic and hydrological modeling, flow restoration plan and phosphorus control plan development. We are well versed with stormwater project design, identifying permitting issues, and any other significant barriers to project implementation. We are experienced working with VTrans, VTDEC, the EPA and the Federal Highway Administration (FHWA) on regulatory and funding matters. The team has also developed inventory programs for municipalities that addresses water quality issues by identifying the priority needs for repair, replacement, and maintenance (e.g., cleaning of sediment and debris buildup) within the community stormwater system.

Hoyle Tanner will work with the municipalities on all projects to consider the best traffic management approach for vehicles, pedestrians and bicycles during construction and will develop detailed phasing plans. All project plans and specifications will also consider Work Zone Safety and Mobility Guidance.

This is exemplified by the **Kennedy Drive Stormwater Pond** retrofits which included evaluating the feasibility of directing additional stormwater runoff to the seven existing Kennedy Drive stormwater ponds and expanding and/or retrofitting them to provide treatment for additional runoff to fulfill requirements of the Potash Brook Flow Restoration Plan. As highlighted in our project example, Kennedy Pond #2 is in the final stages of design, having been completed with TAP funding.

BID & CONSTRUCTION-PHASE SUPPORT

Hoyle has significant experience with assisting municipalities with contract documents, project advertising and the opening of construction bids. We also work with municipalities to answer bid questions, assist with addendum's and provide a thorough bid analysis in compliance with FHWA criteria after bid opening. We provide design support during construction on all of our projects including plans and specification clarification, request for information, fabrication drawing review and assisting with differing site conditions.

PROJECT EXAMPLES

On the following pages, we have provided example projects 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.

Muddy Brook Culvert Replacement

South Burlington, Vermont
Thomas DiPietro, Director of Public Works
(802) 658-7961 ext. 6101 | tdipietro@southburlingtonvt.gov

Completion Date 2022

In 2017, a temporary bridge was installed at the Kimball/Marshall Avenue crossing over Muddy Brook to span a failing 15' diameter corrugated metal pipe structure. From this project onset, Hoyle Tanner supported the City of South Burlington and the Town of Williston in developing solutions, obtaining funding, stabilizing during an emergency (in response to a 2019 storm event), and eventually replacing the structure.

Our team completed a detailed hydraulic analysis utilizing 2D hydraulic software to design improved scour protection and water passage adequacy. We also provided visual aids showing upstream and downstream impacts that were used in public presentations. We worked closely with both municipalities as well as local bike and pedestrian advocacy groups to ensure the solutions would be safe and effective for all modes of transportation while considering cost and environmental impacts. Hoyle Tanner expertly led dispute resolution efforts with utility owners for this challenging private utility network at the project location.

The design solution was a 36′ span precast concrete arch culvert on friction pile supported footings. Utilizing a high-profile shape, the new arch supports both aquatic and terrestrial animal passage while allowing for buried utilities above. The design incorporates improved roadway geometry as well as a new 10' wide shared use pathway. The project was completed with FHWA Transportation Alternatives funding administered through the VTrans Municipal Assistance Program.

Stagecoach Road Bridge Replacement over Moss Glen Brook

Stowe, Vermont
Harry Shepard III, PE, Public Works Director/Town Engineer
(802) 253-8770 | hshepard@stowevt.gov

Completion Date 2021

Hoyle Tanner performed bridge and roadway design services for the replacement of a twin 14′-span corrugated pipe arch culvert crossing of the Moss Glen Brook. The existing deteriorated pipes were at risk of failure and were undersized for hydraulic streamflow capacity as well as presenting barriers to aquatic organism passage.

Our design solution incorporates a prestressed concrete NEXT Beam Type D superstructure that implemented accelerated bridge construction techniques, thus reducing the road closure duration. The beam ends were detailed with a semi-integral abutment design that removed the need for traditional bridge joints and the maintenance/replacement costs associated. The abutments were designed utilizing taper tube pipe piles which allowed for shorter pile lengths and avoidance of a soft clay strata layer, saving cost and installation time. Our team coordinated closely with regulatory officials and developed this solution which minimized site impacts, protecting sensitive resources and cost effectively improving the hydraulic capacity of the crossing.

Design, including all permitting and Right-of-Way coordination, was completed within eight months, with accelerated construction completed in less than 10 weeks. The project was completed with FHWA Emergency Relief (ER) program funding and was locally administered through the VTrans Municipal Assistance Section. Construction was successfully completed in September 2021.

Montgomery Streetscapes

Montgomery, Vermont
Bethany Remmers, Municipal Project Manager – NRPC
(802) 326-4719 | bethany@nrpcvt.com

Anticipated Completion Date 2025

Hoyle Tanner's water resources and transportation teams completed 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.

The proposed streetscape alternatives consider vehicular and non-vehicular traffic, including facilities for pedestrians and cyclists, and traffic calming improvements for vehicular traffic; encouraging drivers to slow down and stop at the small-town businesses located in the Village and Center. The design includes on-street and off-street parking, plantings, lighting, innovative stormwater treatment, wayfinding, public art opportunities, and the redesign of the Route 118 and Route 242 intersection. Two alternatives are being developed for this intersection – a mini-roundabout and a three-way stop-controlled intersection. The study was completed in April 2020 with funding through the USDA Rural Development program, where our team adhered to VTrans and FHWA project development practices to ensure it qualified for future funding programs.

Hoyle Tanner is now working with the Town and VTrans Municipal Assistance program in the preliminary design phase of this project for Montgomery Center, with funding through a FHWA Transportation Alternative Grant. Our team continues to coordinate the streetscape design with the wastewater project which is advancing under a separate contract by our Hoyle Tanner water resources team.

Spear Street Bike & Pedestrian Improvements

South Burlington, Vermont
Erica Quallen, Deputy Director of Capital Projects
(802) 658-7961 ext. 6115 | equallen@southburlingtonvt.gov

Anticipated Completion Date 2024

South Burlington is home to an extensive network of bicycle and pedestrian facilities and is continuously improving the connectivity for its wide range of recreational and non-motorized commuter traffic. The City received funding assistance through a Transportation Alternatives Grant administered through the VTrans Municipal Assistance Program. Hoyle Tanner is designing this important shared-use pathway along Spear Street connecting existing bicycle/pedestrian facilities from the University of Vermont Forestry Building to Swift Street - approximately 3,400'.

Hoyle Tanner worked closely with the City and VTrans to develop alignment alternatives that consider environmental and cultural resource impacts, abutter concerns, and utility conflicts, while promoting the safest bicycle and pedestrian layouts and Spear Street crossing locations. As part of the design, we have evaluated several concepts for the pathway location underneath Interstate I-189 bridges and have coordinated a meeting with key VTrans staff members to determine feasible solutions at these crossings. Our team has been committed to clear communication of the benefits, costs, future maintenance, and risks associated with each design challenge – offering our design opinion and solutions that allow the City to make fully informed decisions and advance the project. Hoyle Tanner is contracted through final design - estimated completion in February 2024.

Sidewalk Scoping Study

Roxbury, Vermont
Britney Pombar, Grants Administrator
(802) 485-7840 | roxasst@tds.net

Completion Date 2022

The Town of Roxbury has a classic Vermont small town charm and is located along State Route 12A. The village is comprised of local businesses, town buildings including the school, library and town office, mixed with private residences. With this concentrated collection of community resources, the village sees regular pedestrian traffic, but is lacking properly designed pedestrian facilities and roadway crossings.

Hoyle Tanner led the scoping design efforts for this study completed with funding through the VTrans Municipal Assistance Program. Our team began the project by engaging the community to identify the features and goals of the project, while guiding challenging conversations from concerned abutters and the community. Our design alternatives included several variations of typical sections for the roadway and sidewalk, all of which meet the requirements of the state highway that the facility is located within. With a history of drainage issues in the village, our alternatives identified collection systems both for the curbed and non-curbed alternatives to improve this section of road and properties within the project limits. Hoyle Tanner presented alternatives with detailed costs and project impacts, working with the community to understand the compromises and purpose of design features, leading to the selection of a preferred alternative and completion of the Scoping Study in May 2022.

Densmore Drive over Indian Brook

Essex Junction, Vermont
James Jutras, Water Quality Superintendent
(802) 878-6943 | jim@essexjunction.org

Completion Date 2021

Densmore Drive was completely washed out during the October 31, 2019 storm event, and the existing corrugated metal plate pipes sustained significant damage causing the Village to close Densmore Drive at the crossing for safety reasons. Hoyle Tanner was retained by the Village in March 2020 to provide engineering services for the design of a replacement structure. We identified that the most durable structure replacement would be a precast concrete box culvert with a span of 20′ and a rise of 7′. Through coordination with local precast manufacturers, we found that the materials specified would not be available in time for fall 2020 construction, so we coordinated with the Village and FEMA and designed a temporary stream channel to open the stream flow prior to winter, reducing the likelihood of flooding or ice jams prior to the culvert replacement in the following spring.

Our services included a detailed hydraulics study, precast box culvert design, and permitting coordination where we worked closely with regulatory personnel to streamline the review processes and ensure requirements were met. Our water resources engineers designed temporary and permanent solutions for the replacement of water and sewer lines withing the project limits. We also coordinated the temporary and permanent relocation of several underground private utilities (telecom, electric and gas). The project was completed in summer 2021 with funding through the FEMA Public Assistance program.

Dorset Street Rehabilitation

South Burlington, Vermont
Thomas DiPietro, Director of Public Works
(802) 658-7961 ext. 6101 | tdipietro@southburlingtonvt.gov

Completion Date 2022

Dorset Street is one of the most heavily traveled roadways in the State of Vermont carrying nearly 25,000 vehicles per day along this four to six-lane major commercial arterial that provides access to the University Mall. This volume of traffic, paired with the heavy vehicle traffic serving the retail businesses, has left the roadway significantly rutted, degrading its ride quality and complicating maintenance during snow and ice removal.

Our team's evaluation, which included pavement cores, borings and analyses, identified that the pavement structure and its subbase is generally in good shape and of sufficient thickness for its Average Daily Loads (ADL). Rehabilitation of the wearing surface was recommended to eliminate rutting and restore a proper roadway crown to promote drainage runoff. This project was broken up into phases for design and construction to allow it to be funded through the City's annual paving program. Design efforts included development of a roadway typical section, drainage detailing to restore damaged structures, pavement marking design and layout, traffic control planning, and development of bid plans and specifications.

Dewey Street Pedestrian Bridge

Rochester, New Hampshire
Michael Bezanson, PE, City Engineer
(603) 332-4096 | michael.bezanson@rochesternh.gov

Completion Date 2017

The existing Dewey Street pedestrian bridge was constructed in 1957 and consisted of five spans over the Cocheco River between Dewey Street and the Hanson Pines area. Hoyle Tanner performed an inspection and load rating of the structure under the first phase of the project to determine its condition and capacity to continue pedestrian traffic. The deliverable for the first phase of the project was a Letter Report documenting inspection findings and rating results, concept-level design details for a replacement structure alternative, and an engineer's estimate of probable construction cost for the conceptual replacement structure.

As a result of Hoyle Tanner's services under the first phase, a complete replacement structure was recommended to the City. Hoyle Tanner's services under the second phase included the design of a complete replacement structure consisting of a 200' long single-span, prefabricated steel truss bridge founded on pile-supported concrete abutments. A detailed hydrologic/hydraulic and scour analysis was performed to size the new structure in accordance with NHDOT and NHDES guidelines. Contract documents and a NHDES Wetland Permit Application were prepared for the project. Hoyle Tanner's services under the second phase also included construction administration and observation services, supporting the City during construction of the replacement structure by reviewing shop drawings, observing critical construction activities and providing on-call consultation to the City and contractor. Construction occurred in fall 2017; final completion was achieved July 2018. The project was fully funded by the City.

Transportation Alternatives Program (TAP) Sidewalks & Intersection Improvements

Exeter, New Hampshire
David Sharples, Town Planner
(603) 773-6112 | dsharples@exeternh.gov

Completion Date 2022

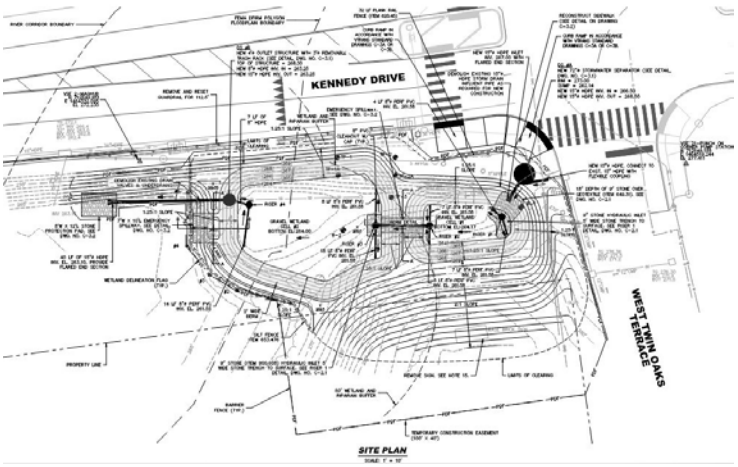
Promoting and providing safe pedestrian facilities to connect their residential neighborhoods with downtown, Philips Exeter Academy, and the Amtrak rail station is a high priority for the Town. Recognizing that there were gaps in their connected sidewalk network and limited suitable pedestrian crossing facilities, the Town selected Hoyle Tanner to develop solutions for three key locations: on Epping Road (NH Route 27), Winter Street and Spring Street. As the project is funded by FHWA through the LPA program administered by NHDOT, the Town also needed a partner who was knowledgeable in navigating this challenging program.

The project includes 1,600' of new and reconstructed sidewalk along these three roadways, as well as new ADA compliant curb ramps. A minor realignment of the unconventional intersection of Epping Road, Brentwood Road and Columbus Avenue improved pedestrian safety and reduced pedestrian/vehicle conflict points. Hoyle Tanner successfully led the project through the Engineering Study phase, which included interactive and thorough public outreach to analyze preferred alternatives (flyers, polling, Facebook group, etc.). We then provided both final design and near full-time construction administration and oversight. We completed the design phase and provided near full-time construction administration and oversight.

Kennedy Drive Stormwater Pond

South Burlington, Vermont
David Wheeler, EIT, Deputy Director of Water Resources (802) 758-7961 ext. 6113 | dwheeler@southburlingtonvt.gov

Anticipated Completion Date 2023



Hoyle Tanner evaluated 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. Our team advanced the design of Kennedy Drive Pond #2 with funding assistance provided through a FY19 Municipal Highway and Stormwater funding administered through the VTrans Municipal Assistance Program. Our stormwater design team worked closely with Hoyle Tanner roadway engineers to ensure the project was delivered in compliance with the VTrans project delivery process and standard specifications for construction. Our design deepens the existing stormwater pond with a gravel wetland that increases storage capacity for substantially improved treatment practice. The final design was approved in January 2023 and is being advanced for bid advertisement and construction in summer 2023.

Heritage Rail Trail Connection to Mine Falls Park

Nashua, New Hampshire

Sarah Marchant, Former Director of Community Development
(603) 856-0701 |
smarchant@communityloanfund.org

Completion Date 2019

This project incorporates a 450' paved trail, sidewalk improvements and a 90' pedestrian bridge to connect the Heritage Rail Trail to the Mine Falls Park Recreation Area. The new trail provides access to the park from one of the City's most densely-populated neighborhoods known as the "Tree Streets."

The start of the connecting trail includes an ADA-compliant ramp structure to make up the approximate 7' grade differential between the trail and Everett Street. The trail continues within the existing Right-of-Way on Everett Street to a mid-block crossing on Ledge Street. Due to the traffic volumes on Ledge Street, the crossing includes Rectangular Rapid Flashing Beacons with advance warning.

The pedestrian bridge spans 90' over the Nashua Canal. To minimize lateral loads on the historic stone retaining walls along the canals, the bridge is founded on a helical anchor foundation.

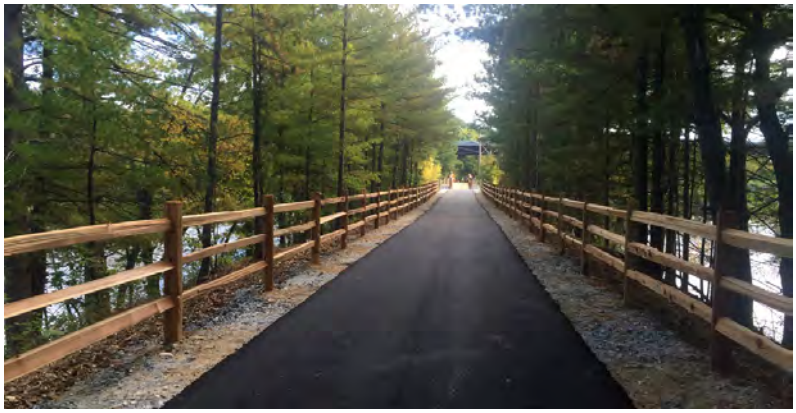
The project is partially funded through the Federal Transportation Alternatives Program and is administered through the Local Public Agency (LPA) program.

Piscataquog River Trail

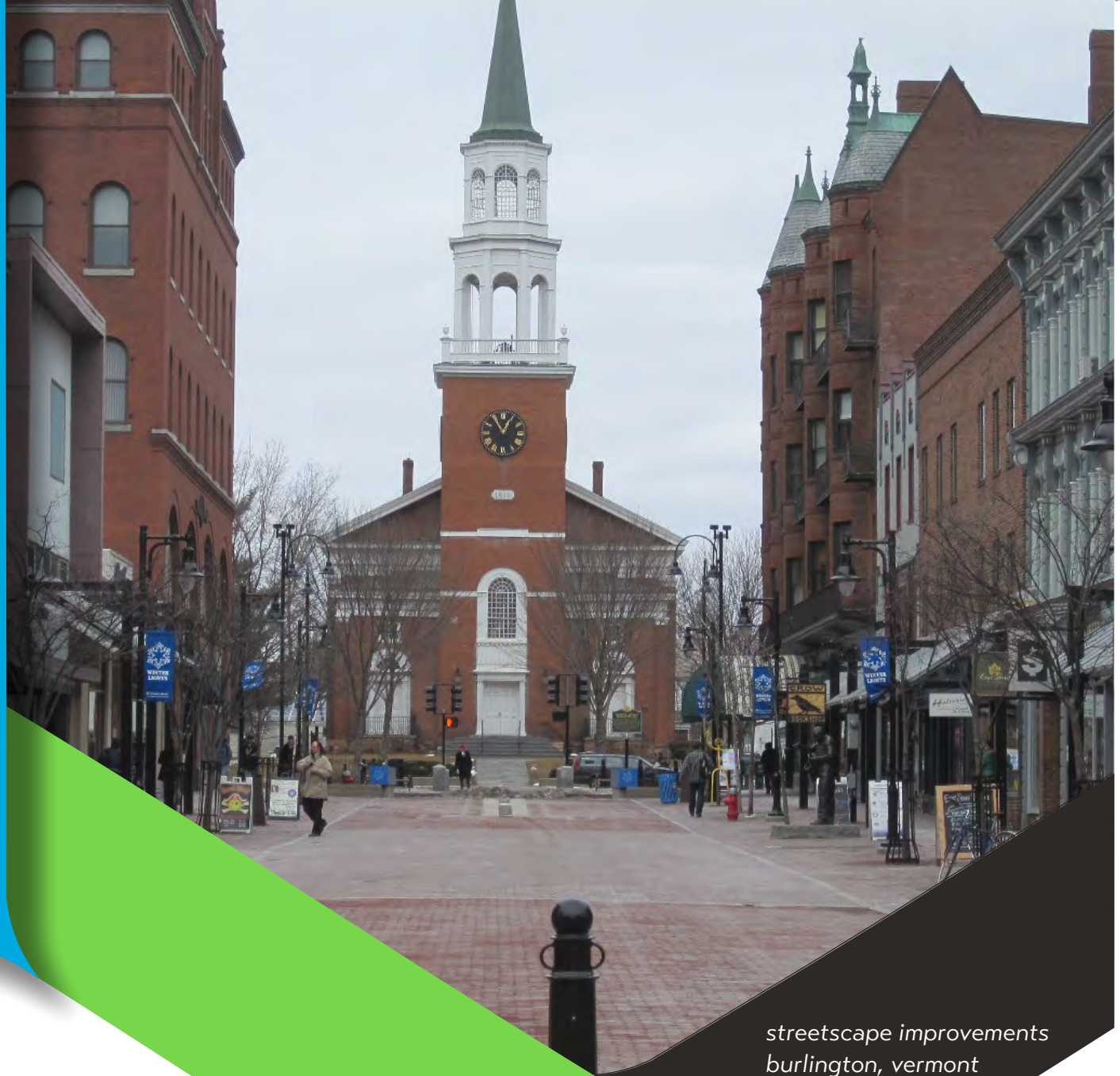
Manchester, New Hampshire

Owen Friend-Gray, PE, Deputy Public Works Director
(603) 624-6444 | ofriend@manchesternh.gov

Completion Date 2016



The City of Manchester selected Hoyle Tanner for design and construction services for the final phase of the Piscataquog Trail. This 1,800' long section of the trail is built on a former rail bed and the project includes a local street crossing with sidewalk improvements, easement acquisitions, pedestrian bridge over the Piscataquog River, trail section upgrades, as well as paving, landscaping 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 most 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. The project was partially funded through the federal Transportation Enhancement program and was completed through the NHDOT LPA program.



streetscape improvements
burlington, vermont

appendix

JON OLIN, PE

Vice President - Regional Business Manager-Vermont

Jon is a technical team leader with experience in structural and civil engineering in rural, suburban, and urban settings. His experience includes inspecting and load rating existing structures, design of multi-span bridges, long span steel girder design, prestressed concrete design, hydrologic and hydraulic analysis, and complex structural analysis. Throughout his career, Jon has designed various transportation projects including bridges and culverts, bicycle and pedestrian facilities, downtown redevelopments, specialty buildings, retaining walls, and FEMA emergency response transportation projects. Jon is skilled in working with private and public stakeholders to facilitate project buy-in.

25 YEARS OF INDUSTRY EXPERIENCE

13 YEARS WITH HOYLE TANNER

Registrations

Professional Engineer: VT, NH, CA

Education

University of Delaware, BS, Civil Engineering, 1998

Certifications

OSHA - Confined Space

Professional Associations

- ACEC VT Transportation Committee (Chair)
- American Council of Engineering Companies-VT (Board of Directors)
- American Society of Civil Engineers (ASCE)
- NY State County Highway Superintendents Association (NYSCHSA)
- Vermont Society of Engineers (VSE)
- Women's Transportation Seminar (WTS) - VT Chapter

Experience

Muddy Brook Culvert Replacement, South Burlington, VT: Project Manager for the scoping, design and construction-phase services including coordinating staff and subconsultants, public participation, and design oversight. Scope: Design for a 34′ span precast concrete arch culvert structure spanning Muddy Brook at the border of South Burlington and Williston, Vermont. Project included sensitive natural and cultural resources. As part of the project, our roadway engineers incorporated the design of a 10′-wide shared-use path to connect the South Burlington path to Williston bicycle and pedestrian facilities.

Stagecoach Road Bridge Replacement over Moss Glen Brook, Stowe, VT: Project Manager responsible for all technical aspects of the project, scheduling, budget and cost control, public presentations, permitting and client coordination. Scope: Design services for the FHWA ER funded 50' span bridge replacement. New bridge consists of a NEXT Beam Type D beam superstructure with semi-integral abutments supported on tapered steel piles.

Densmore Drive over Indian Brook, Essex Junction, VT: Project Manager responsible for all technical aspects of the project, scheduling, budget and cost control, public presentations, permitting and client coordination. Scope: Design and construction-phase services for the FEMA funded 20' span box culvert replacement. Project included the design of a bypass and replacement of water and sewer lines within the project limits. This was the first of three culvert replacement projects Hoyle Tanner completed along this segment of Indian Brook.

Densmore Drive Culvert #2 Replacement, Essex Junction, VT: Principal-in-Charge responsible for staffing support and quality control review. Scope: Design services for the village-funded 20' span box culvert replacement. Project included the waterline relocation design within the project limits. Project was the second of three culvert replacements along this Indian Brook Corridor.

Spear Street Bike & Pedestrian Improvements, Spear Street, VT: Project Manager / Senior Engineer responsible for quality control review. Scope: Provide engineering services for the design of a shared-use path along Spear Street between the Swift Street intersection and the University of Vermont Forestry Building, approximately 3,400′.

TODD SUMNER, PE

Senior Structural Engineer

34 YEARS OF INDUSTRY EXPERIENCE

2 YEARS WITH HOYLE TANNER

Registrations

Professional Engineer: VT

Education

- University of Vermont, BS, Civil Engineering, 1994
- University of Vermont, BS, Business Administration, 1989

Todd is a senior structural engineer with over 30 years of experience as a design engineer and project manager on bridge and transportation projects for VTrans. He also has experience with Locally Administered projects. Todd brings a depth of state and federal project experience that will provide value in advancing projects and meeting the project development process.

Experience

North Hero-Grand Isle Drawbridge, North Hero to Grand Isle, VT: Project Manager responsible for support during construction. Includes coordinating/answering questions about design, contract clarification and field changes, resolving project non-conformances, coordinating review and management of construction submittals. Scope: Hoyle Tanner is providing project manager services during construction for replacing the existing drawbridge. Project construction cost over $70 million, including a temporary drawbridge to maintain traffic during five years of active construction. Construction started in 2018.

VTrans - Berlin BF 0241(60) - Bridge 67 over Dog River, Berlin, VT: Project Manager responsible for the scope of work, schedule adherence, budget monitoring, client coordination and technical aspects of the project. Scope: Inspection, analysis and load rating of existing Pratt steel truss bridge (145' single-span bridge built in 1934). Engineering services for development of Alternatives Study (Scoping Report). During bridge inspection our team noticed significant section loss and cracking in one of the vertical truss members. VTrans requested a very quick turnaround for plans, specifications and an estimate to perform an emergency fix of the deteriorated member. Hoyle Tanner successfully completed this emergency engineering within the requested time frame.

CCRPC - Sidewalk Study, Hinesburg, VT: Project Manager responsible for scoping phase services including coordinating staff, design oversight and public presentation of alternatives. Scope: Projects involved assessing existing crosswalks at multiple locations for potential safety improvements. Also, our team evaluated options to increase pedestrian safety for several intersections where no pedestrian facilities currently exist.

VTrans Bridge Replacement of Bridge 10 on Town Highway 2, New Haven, VT: Project Manager responsible for schedule, budget, development and design for the replacement of a town highway bridge for New Haven. Worked with the town to determine maintenance of traffic that best fit the town's and the project's needs for schedule, cost and constructability. Scope: Utilized a 75-day bridge closure with traffic being maintained on alternate route. Hydraulic requirements/constraints required the pier cap design to be integral with the structural steel superstructure. Precast pier cap, abutments and approach slabs were used to reduce the duration of the bridge closure period. This bridge was the first time VTrans metalized the steel girders, instead of using paint or weathering steel, to achieve a longer life and lower maintenance costs.

STEPHEN HAAS, PE, PTOE

Vice President - Senior Transportation Engineer

Steve is an expert in identifying transportation infrastructure improvement opportunities and developing practicable, innovative, and sustainable engineering solutions. He specializes in roadway and traffic engineering, traffic analysis, multi-modal safety, and intersection and traffic signal layouts. Because of his specialty, he is knowledgeable in the AASHTO, FHWA, ITE, and TRB transportation guidelines. Steve has been the project manager or designer of many successful NH LPA projects for several communities, including corridor studies, Roadway Safety Audits (RSAs), Safe Routes to School (SRTS), downtown improvement projects, and Transportation Alternative Program (TAP) projects.

21 YEARS OF INDUSTRY EXPERIENCE

17 YEARS WITH HOYLE TANNER

Registrations

Professional Engineer: VT, NH, MA, ME

Education

Worcester Polytechnic Institute, BS, Civil Engineering, 2002

Certifications

- NH LPA Certification for Labor Compliance
- NH LPA Certification Training
- NHI Roadway Safety Design
- OSHA - 10 Hour
- Professional Traffic Operations Engineer

Professional Associations

- New Hampshire Institute of Transportation Engineers (NHITE) - Past President
- Plan NH

Experience

Heritage Rail Trail Connection to Mine Falls Park, Nashua, NH: Lead Roadway Engineer responsible for shared-use pathway design, ADA improvements, cost estimating, and public outreach assistance. Scope: This Transportation Alternatives Program (TAP) project provides connectivity of two existing recreation trail networks in the "Tree Streets" neighborhood of Nashua. Improvements included a new 100' pedestrian bridge over the Nashua Canal, 450' of new paved trail, and an ADA-compliant roadway crossing including Rectangular Rapid Flashing Beacons (RRFB).

Epping Road/Winter Street/Spring Street TAP Sidewalks, Exeter, NH: Project Manager responsible for technical oversight, project scoping, scheduling, budget and cost control, and client coordination. Scope: The goal of Exeter's Transportation Alternative Program (TAP) sidewalk project was 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 proposed 1,600' of new sidewalk along Epping Road (NH 27), Winter Street and Spring Street; 100' of sidewalk reconstruction; and ADA compliant wheelchair ramps. Minor intersection reconfiguration was also constructed at Brentwood Road (NH 111A) to reduce conflicts and improve pedestrian accommodation.

NHDOT Statewide Highway #41880 Conway, Conway, NH: Project Manager responsible for technical oversight, project scoping, scheduling, budget and cost control, and client coordination. Scope: Study of alternatives and preliminary design of intersection improvements at US 302 and East Conway Road through the Highway Safety improvement Program (HSIP). With a goal of reducing severe crashes and improving safety, improvements are anticipated to include either a proposed traffic signal or a roundabout. Completion of the public participation process and NEPA documentation will also be included.

Dorset Street - Phase II, South Burlington, VT: Project Manager responsible for technical oversight, project scoping, scheduling, budget and cost control, and client coordination. Scope: Providing final design, bid, and construction services for Phase II (Barnes & Noble to Garden Street) of the Dorset Street Pavement Rehabilitation project – a 1.1 mile heavily traveled commercial corridor.

ALYSSA SMITH

Transportation Engineer

Alyssa is an expert at identifying transportation infrastructure and streetscape designs that improve safety for pedestrians, bicyclists, and other road users. Alyssa has experience in the design of pedestrian and bicycle facilities, Road Safety Audits, crash analysis, pedestrian facilities reviews, Safe Routes to School, streetscape and gateway design, traffic calming scheme reviews, cycle route reviews, and intersection capacity analysis. Supplementing her US experience is several years working as a traffic and road safety engineer in Britain, allowing her to bring an innovative, international perspective to developing solutions for local projects.

6 YEARS OF INDUSTRY EXPERIENCE

2 YEARS WITH HOYLE TANNER

Education

- University of Leeds, MS, Transportation Planning & Traffic Engineering, 1998
- University of Illinois, BS, Civil Engineering, 1997

Professional Associations

Plan NH

Experience

Sidewalk Scoping Study, Roxbury, VT: Transportation Engineer performed conceptual design of new and existing sidewalk locations and new crosswalk locations as part of the scoping study. Scope: Identified and prioritized sidewalk conceptual designs as part of a sidewalk construction project within the town. Included the feedback and suggestions of Roxbury residents and stakeholders to ensure local input and support.

NHDOT Statewide #43095 - NH Route 25 Intersection Improvements, Moultonborough, NH: Traffic Engineer responsible for performing intersection capacity analyses for current and future traffic volumes. Scope: Study of alternatives and preliminary design of intersection improvements on NH 25 at Lake Shore Drive West, Lake Shore Drive East, and Glidden Road with a goal of addressing safety and capacity concerns within the corridor. Design efforts include intersection capacity analysis, sight distance evaluation, access management, and preliminary intersection and auxiliary turn lane design. Completion of the public participation process and NEPA documentation will also be included.

Safer Routes to School, Camden, London: Traffic Engineer Using PowerPoint presentations, held discussions with 7- to 11-year-olds regarding their journey to school and assisted students with filling in questionnaires. Scope: After analysis of responses, lead small groups of students on walking tours along the routes they follow to school to discuss difficult crossing points and other areas of concern.

Traffic Calming on Trunk Roads, Multiple Locations, London: Traffic Engineer studied traffic calming measures on trunk roads across England. Scope: This project was part of a report for the Highways Agency on the effectiveness of visual traffic calming through villages in reducing speed and accidents.

Safer Routes to School, Tower Hamlets, London: Traffic Engineer observed child pedestrian movements around two schools and child pedestrian accidents around five schools. Scope: Developed proposals for engineering measures to improve safety around schools based on accident reviews, observations on sight, and feedback from the school's faculty and students.

HEIDI MARSHALL, PE

Associate - Senior Municipal Engineer

38 YEARS OF INDUSTRY EXPERIENCE

5 YEARS WITH HOYLE TANNER

Registrations

Professional Engineer: VT, NH, ME

Education

University of New Hampshire, BS, Civil Engineering, 1985

Certifications

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

Professional Associations

- American Society of Civil Engineers - NH (ASCE-NH) - President (1994-1995), Past President, Clerk, Vice President
- American Society of Civil Engineers (ASCE)
- New England Water Works Association (NEWWA)
- New Hampshire Industrial Pretreatment Coordinator's Association (NHIPC) - Steering Committee Member
- New Hampshire Institute of Transportation Engineers (NHITE)
- New Hampshire Transportation Council - Appointed Member
- Plan NH
- Women's Transportation Seminar (WTS) - NH Chapter - Director/Program Chair

Heidi is a senior engineer who has been assisting New England communities with engineering needs for over three decades. Her expertise with municipal engineering and construction projects includes municipal sidewalk, path, trail, athletic fields, infrastructure, parking design, and permitting. Heidi is a recognized leader with municipal projects including parking design and permitting, public and private utility coordination, municipal fund management assistance, master planning, ADA accessible path compliance evaluations, construction administration and oversight, bid document reviews and specification development, feasibility and development reports and design, environmental document preparation, site design engineering, project management, budget tracking, and billing.

Experience

Multi-Use Path TAP Project, Londonderry, NH: Project Manager / Senior Reviewer responsible for overall project management including coordinating specialty comments and performing Quality Assurance review. Scope: Performing engineering and professional review of a site plan, including supporting town planning and engineering team members at meetings.

Ashuelot & Cheshire Rail Trails, Swanzey, NH: Project Manager responsible for client coordination, workflow, subconsultant coordination, and Quality Assurance. Scope: Preparation of an Engineering Study for proposed trail improvements along an existing abandoned rail corridor including required elements such as public informational meetings and resource coordination.

Union Street Sidewalk & Drainage Improvements, Peterborough, NH: Team Member assisting with initial scope, quality control, and quality assurance assistance. Scope: Hoyle Tanner provided civil engineering services for the design of a new 450' long sidewalk along Union Street and the replacement of two culverts. The project allowed for pedestrian connectivity from an apartment building to an existing sidewalk network and provided upgrades to aging drainage infrastructure. The design included a hydraulic drainage analysis of the existing 36" diameter culvert under Old Dublin Road and the 36" box culvert under Union Street to allow for replacement with 42" diameter culverts. The design also included relocation of the municipal sewer which ran under the stream. Environmental permitting services were provided for wetland impacts as well as an estimate of probable construction costs.

Wastewater & Streetscape Study, Montgomery, VT: Assistant Project Manager for QA/QC for streetscape improvement aspects associated with developing a preliminary engineering report for a water and sewer infrastructure project. Scope: Grant funding assistance and completion of a Preliminary Engineering Report to develop engineering alternatives including life-cycle costs to replace on-site septic systems with Town-owned wastewater collection, conveyance, treatment and infiltration. This project also included development of streetscape pedestrian, vehicular and bicyclist safety improvement alternatives.

SEAN JAMES, PE

Senior Vice President - Division Manager-Ground Transportation Services

27 YEARS OF INDUSTRY EXPERIENCE

27 YEARS WITH HOYLE TANNER

Registrations

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

Education

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

Certifications

- FHWA - Bridge Inspection Refresher Training
- FHWA - Fracture Critical Inspection Techniques for Steel Bridges
- FHWA - Safety Inspection of In-Service Bridges
- MaineDOT - Local Project Administration Certification
- 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

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 Division Manager of Ground Transportation, focusing on successful delivery of projects to our clients. Sean was named New Hampshire's Engineer of the Year in 2023.

Experience

Muddy Brook Culvert Replacement, South Burlington, VT: Principal-in-Charge for the scope of work, schedule adherence and client coordination. Scope: Design for a 34' span precast concrete arch culvert structure spanning Muddy Brook at the border of South Burlington and Williston, Vermont. Project included sensitive natural and cultural resources. As part of the project, our roadway engineers incorporated the design of a 10'-wide shared-use path to connect the South Burlington path to Williston bicycle and pedestrian facilities.

Stagecoach Road Bridge Replacement over Moss Glen Brook, Stowe, VT: Principal-in-Charge for the scope of work, schedule adherence and client coordination. Scope: Design services for the FHWA ER funded 50' span bridge replacement. New bridge consists of a NEXT Beam Type D beam superstructure with semi-integral abutments supported on tapered steel piles.

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.

Densmore Drive over Indian Brook, Essex Junction, VT: Principal-in-Charge for the scope of work, schedule adherence and client coordination. Scope: Design and construction-phase services for the FEMA funded 20' span box culvert replacement. Project included the design of a bypass and replacement of water and sewer lines within the project limits. This was the first of three culvert replacement projects Hoyle Tanner completed along this segment of Indian Brook.

TODD CLARK, PE

Senior Vice President - Principal Transportation Engineer

32 YEARS OF INDUSTRY EXPERIENCE

21 YEARS WITH HOYLE TANNER

Registrations

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

Education

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

Certifications

- AASHTO Roadside Design, National Highway Institute
- Access Management, Location and Design, National Highway Institute
- Design and Operation of Work Zone Traffic Control, National Highway Institute
- NH LPA Certification for Labor Compliance

Professional Associations

- American Consulting Engineers Council (ACEC-ME) - Highway Subcommittee Member
- American Society of Civil Engineers (ASCE)
- Boston Society of Civil Engineers Section (BSCES) - 2022 Executive Committee Vice President; Board of Government Government Affairs and Professional Practice Chair; Past T&DI Chair (2016), Transportation Committee Chair (2014)

Todd has extensive experience in transportation engineering managing multi-discipline projects with complex roadway, bridge, traffic, environmental, utilities and Right-of-Way components. His strengths include evaluation of roadway cross section, geometrics, compliance with stringent stormwater regulations, development of efficient traffic management and phasing strategies along interstate and arterial corridors. Todd serves as a Principal-in-Charge and Project Manager for municipal and state-agency transportation projects including NHDOT, MassDOT, and MaineDOT and is a former state-agency highway/bridge design employee.

Experience

Sidewalk Ramp Improvements, NH 1A/Ocean Boulevard, Hampton, NH: Principal-in-Charge for initial scoping and resourcing. Scope: Hoyle Tanner was selected by NHDOT to perform curb ramp improvements along NH 1A at Hampton Beach; one of the Department's largest inventory of pedestrian infrastructure. This critical project made accessibility improvements at nearly 125 locations, including new concrete ramps and landings, detectable warning surfaces, curb adjustments, and revised crosswalk markings to bring the facility into compliance in advance of large seasonal crowds.

Traffic Impact Study New Season RV Park, Hillsborough, NH: Principal-in-Charge for scoping, communications and providing design input. Scope: Prepared Traffic Impact Study for construction of a new 34 site RV Park. Our services included assembling traffic data, trip generation calculations and assignment, sight distance analysis, safety analysis, traffic operations evaluation, preparation of a technical memorandum, and public outreach.

Bolger Hill Road Drainage Alternatives Study, Jericho, VT: Principal-in-Charge responsible for scoping, communications and resourcing. 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'.

East Road Bridges 5 & 6, Milton, VT: Senior Transportation Engineer responsible for contributing scoping and early design input. Scope: Accelerated bridge design, permitting, and Right-of-Way coordination for the replacement of two bridges (one box culvert and one rigid frame) 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.

NH 101 Corridor Improvements Prioritization Study, Various Communities, NH: Principal-in-Charge / Project Manager responsible for the scope of work, client coordination, QC design oversight, document resourcing and schedule adherence. Scope: Partnered with NHDOT to provide roadway and traffic engineering and planning services, including traffic data compilation, safety and capacity analysis at 16 intersections and two roadway segments, conceptual and preliminary roadway design, as well as environmental and Right-of-Way reviews to determine the scope and costs of safety improvements along a 17-mile segment of NH Route 101.

JOSIF BICJA, PE

Vice President - Senior Structural Engineer

19 YEARS OF INDUSTRY EXPERIENCE

19 YEARS WITH HOYLE TANNER

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

- 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)
- Structural Engineers of New Hampshire (SENH) - President
- Vermont Covered Bridge Society

Josif has experience in the design, rehabilitation, and inspection of numerous bridges, covered bridges and miscellaneous projects. He has served as a project manager, structural design engineer, construction inspector, and construction administrator on over 80 NHDOT Municipally-Managed State Bridge Aid 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 nearly 20 years of experience working in transportation civil engineering projects.

Experience

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.

Longley Covered Bridge, Montgomery, VT: Senior Structural Engineer for the in-depth inspection, structural design, cost estimates, and oversight and management of study. Scope: (Town Lattice Trusses built in 1863, 70' long span) The bridge was closed due to damage from overweight vehicles. Prepared a scoping study for the Town of Montgomery, which presented alternatives to increase the live load capacity of the bridge.

Milford Pedestrian Bridges Condition Assessment, Milford, NH: Project Manager for the inspection of the bridge and preparation of the inspection report. Scope: The project included visual observation of the Gregg's Crossing Bridge and Swing Bridge over the Souhegan River to offer recommendations for maintenance and repairs. A letter report documenting the existing conditions and recommendations for repairs and maintenance for both bridges was provided.

Merrimack River Pedestrian Bridge, Manchester, NH: Project Manager for all technical aspects of the project, scheduling, budget and cost control, and client coordination. Scope: Conceptual design of a pedestrian bridge spanning the Merrimack River from Foundry Street to the Millyard to support a Build Back Better Regional Challenge (BBBRC) Grant application through the US Economic Development Administration (EDA).

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 (one box culvert and one rigid frame) 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.

KIRSTIN DIPIETRO WORDEN, PE

Associate - Senior Environmental Engineer

28 YEARS OF INDUSTRY EXPERIENCE

26 YEARS WITH HOYLE TANNER

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)
- New Hampshire Water Pollution Control Association (NHWPCA)
- Water Environment Federation (WEF)

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.

Experience

Wastewater & Streetscape Study, Montgomery, VT: Project Engineer assisting with preliminary engineering. Scope: Grant funding assistance and completion of a Preliminary Engineering Report to develop engineering alternatives including life-cycle costs to replace on-site septic systems with Town-owned wastewater collection, conveyance, treatment and infiltration. This project also included development of streetscape pedestrian, vehicular and bicyclist safety improvement alternatives.

Integrated Water Quality Management Plan, Burlington, VT: Project Engineer responsible for preparation of stormwater and wastewater Preliminary Engineering Reports, development of conceptual designs, cost estimating, and Final Plan Report. Scope: The project includes the development of a comprehensive clean water alternatives analysis, including WWTF phosphorus optimization and upgrade opportunities; a City-wide runoff (stormwater and wet-weather) opportunities map; planning concepts for high-priority runoff mitigation projects; a preliminary affordability analysis; development of Preliminary Engineering Report documents; preparation of a Long Term Control Plan; development of an Industrial Pretreatment Program; Financial Capability Analysis; and preparation of an Integrated Plan Report.

Stormwater Improvement Project, South Burlington, VT: Project Engineer responsible for all technical aspects of the project. Scope: Hoyle Tanner provided bid phase, construction administration, and Resident Project Representative (RPR) services of this $765K stormwater treatment project that included: construction of a gravel wetland and new collection system infrastructure, a pretreatment hydrodynamic separator, wetland plantings, wood chip walking trail, curbing, sidewalk modifications, and split rail fencing.

WWTF Study & Basis of Design Report, Milford, NH: Senior Technical Engineer for wastewater process equipment alternatives. Scope: The facility received a new NPDES Permit in 2020 that includes nutrient (phosphorous) and metals (copper and aluminum) limits. The study includes recommendations for tertiary treatment based on findings from a pilot study, and evaluation of other major process areas and recommendations for future capital improvements at the WWTF.

MARISA DIBIASO, PE

Associate - Senior Civil Engineer

20 YEARS OF INDUSTRY EXPERIENCE

10 YEARS WITH HOYLE TANNER

Registrations

Professional Engineer: VT, NH, MA, ME

Education

- University of New Hampshire, MS, Civil Engineering, 2004
- University of New Hampshire, BS, Civil Engineering, 2002
- Plymouth State University, Certificate, Historic Preservation, 2021

Certifications

- NH Designer of Subsurface Disposal Systems
- NH LPA Certification for Labor Compliance
- OSHA Confined Space Entry

Professional Associations

- American Society of Civil Engineers (ASCE) - NH Section History & Heritage Committee: Chair 2021 - Board of Directors: -Vice President 2014-2017 -Clerk 2012-2014
- New Hampshire Public Works Association (NHPWA)
- New Hampshire Water Pollution Control Association (NHWPCA)
- Plan NH

Marisa is responsible for managing the technical and financial aspects of civil/site, roadway and structural engineering projects including client coordination, preparation of schedules, budgets and proposals. She is proficient in engineering design for a variety of projects completed by the civil/site, and highway divisions. She has experience in site, roadway, and utility design, construction inspection, drainage design and analysis, and environmental permitting. Her project expertise ranges from downtown revitalizations to private site developments to state roadways. Marisa is also well-versed in the use of civil design software such as AutoCAD, HydroCAD, Civil 3D and Carlson.

Experience

Heritage Rail Trail Connection to Mine Falls Park, Nashua, NH: Senior Civil Engineer provided design of crosswalk street lighting. Scope: This Transportation Alternatives Program (TAP) project provides connectivity of two existing recreation trail networks in the "Tree Streets" neighborhood of Nashua. Improvements included a new 100' pedestrian bridge over the Nashua Canal, 450' of new paved trail, and an ADA-compliant roadway crossing including Rectangular Rapid Flashing Beacons (RRFB).

Epping Road/Winter Street/Spring Street TAP Sidewalks, Exeter, NH: Senior Engineer responsible for design of sidewalk improvements at all three locations as well as conceptual design of intersection reconfiguration at Brentwood Road. Scope: The goal of Exeter's Transportation Alternative Program (TAP) sidewalk project was 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 proposed 1,600' of new sidewalk along Epping Road (NH 27), Winter Street and Spring Street; 100' of sidewalk reconstruction; and ADA compliant wheelchair ramps. Minor intersection reconfiguration was also constructed at Brentwood Road (NH 111A) to reduce conflicts and improve pedestrian accommodation.

Sheehan-Basquil Park Renovations Phase II, Manchester, NH: Senior Civil Engineer for the Phase II Renovations of the 9 acre park located in the City of Manchester. Scope: As part of the City's goal to renovate Sheehan-Basquil Park to benefit a greater demographic, Hoyle Tanner designed a new accessible playground and splash pad. The project included new lighting, drainage, landscaping and other improvements to create a neighborhood destination. Hoyle Tanner was retained to lead the public outreach effort and provide civil engineering design services best to achieve the community's vision within the project budget. This project was Land and Water Conservation Funded (LWCF).

Millyard Dog Park Feasibility Study, Nashua, NH: Project Manager responsible for leading civil engineering services, coordinating with subconsultants, overseeing project schedule and managing budget. Scope: The City of Nashua selected the Hoyle Tanner design team to determine if a 4.75 acre parcel selected by the City was suitable for use as a dog park.

JACOB SPARKOWICH, PE

Senior Transportation Engineer

11 YEARS OF INDUSTRY EXPERIENCE

10 YEARS WITH HOYLE TANNER

Registrations

Professional Engineer: NH

Education

University of New Hampshire, BS, Civil Engineering, 2012

Professional Associations

New Hampshire Institute of Transportation Engineers (NHITE) - Secretary/Treasurer 2021

Jacob's expertise is in roadway and traffic engineering to meet the transportation challenges and opportunities of a diverse group of clients including New Hampshire municipalities and New England state-agencies. He has extensive experience in developing roadway geometrics and site grading, temporary and permanent traffic signal designs, hydrologic and hydraulic calculations, stormwater BMP design, and utility mapping. For projects large and small, his proficiency includes working with a multitude of design software platforms, including Synchro, SimTraffic, SIDRA, MicroStation, InRoads, OpenRoads, Autodesk Civil 3D, SignCAD, and HydroCAD.

Experience

Montgomery Streetscapes, Montgomery, VT: Senior Traffic Engineer advising the design team on appropriate intersection improvements and traffic calming measures. Scope: The proposed streetscape alternatives consider vehicular and non-vehicular traffic including facilities for pedestrians and cyclists and traffic calming improvements for vehicular traffic; encouraging drivers to slow down and stop at the small-town businesses located in the Village and Center. The design includes on-street and off-street parking, plantings, lighting, innovative stormwater treatment, wayfinding, public art opportunities, and the redesign of the Route 118 and Route 242 intersection.

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.

Epping Road/Winter Street/Spring Street TAP Sidewalks, Exeter, NH: Roadway Engineer responsible for design of pedestrian sidewalk and intersection improvements, vehicle turning movement evaluations, plan development, and estimate preparation. Scope: The goal of Exeter's Transportation Alternative Program (TAP) sidewalk project was 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 proposed 1,600' of new sidewalk along Epping Road (NH 27), Winter Street and Spring Street; 100' of sidewalk reconstruction; and ADA compliant wheelchair ramps. Minor intersection reconfiguration was also constructed at Brentwood Road (NH 111A) to reduce conflicts and improve pedestrian accommodation.

Multi-Use Path TAP Project, Londonderry, NH: Project Engineer responsible for conducting an engineering study to determine the preferred alternative for conceptual trail alignment and developing conceptual plans, cost estimate, and report. Then advancing the preferred alternative through preliminary design including plan development and cost estimate preparation. Scope: Performing engineering and professional review of a site plan, including supporting town planning and engineering team members at meetings.

JEFFREY COLLINS, EIT

Associate - Senior Transportation Engineer

22 YEARS OF INDUSTRY EXPERIENCE

22 YEARS WITH HOYLE TANNER

Registrations

Engineer In Training: NH

Education

Clarkson University, BS, Civil Engineering, 2000

Certifications

- 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

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. Working with contractors, Jeff has provided 3D models and files, with the use of Automated Machine Guidance (AMG), to accelerate construction.

As a leader for our CADD services, Jeff's responsibilities involve maintaining adherence to client standards and electronic deliverables for our DOT clients in New England, as well as expanding the use of 3D design capabilities and developing workflows that increase plan development efficiencies. Jeff is an experienced transportation professional and excited about developing efficiencies and opportunities for our team.

Experience

Densmore Drive Culvert #2 Replacement, Essex Junction, VT: Task Manager responsible for the review of the roadway; design, quantities, estimate, and specifications. Additionally coached a roadway engineer and coordinated project details with our bridge design staff. Scope: Design services for the village-funded 20' span box culvert replacement. Project included the waterline relocation design within the project limits. Project was the second of three culvert replacements along this Indian Brook Corridor.

Muddy Brook Culvert Emergency Services, South Burlington, VT: Design Engineer responsible for development of a 3D model; used for plans development and provided to the contractor for use in their automated machine guided equipment. Scope: Emergency inspection and design of repairs for the temporary bridge stabilization and re-opening of Kimball/Marshall Ave within two months from the storm event. Project completed with FHWA ER funding.

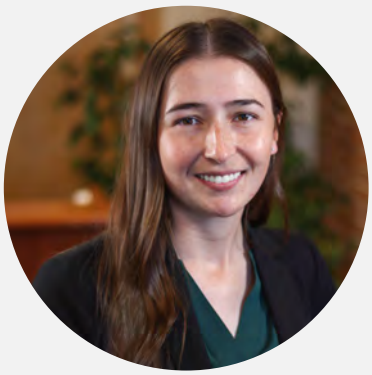
Dorset Street - Phase II, South Burlington, VT: Task Manager / Quality Control responsible for construction cost estimate, plan preparation, specifications, and electronic bidding. Scope: Providing final design, bid, and construction services for Phase II (Barnes & Noble to Garden Street) of the Dorset Street Pavement Rehabilitation project – a 1.1 mile heavily traveled commercial corridor.

Kimball/Forest Street Roadway Improvement, Lebanon, NH: Design Engineer / Quality Control responsible for reviewing roadway and grading design plans and estimate. 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.

NICOLE CENTERBAR, PE

Transportation Engineer

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



5 YEARS OF INDUSTRY EXPERIENCE

5 YEARS WITH HOYLE TANNER

Registrations

Professional Engineer: VT

Education

University of Vermont, BS, Civil Engineering, 2018

Experience

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: Design for a 34′ span precast concrete arch culvert structure spanning Muddy Brook at the border of South Burlington and Williston, Vermont. Project included sensitive natural and cultural resources. As part of the project, our roadway engineers incorporated the design of a 10′-wide shared-use path to connect the South Burlington path to Williston bicycle and pedestrian facilities.

Stagecoach Road Bridge Replacement over Moss Glen Brook, Stowe, VT: Roadway Engineer responsible for roadway design, calculations, layout, plans development, and cost estimating. Scope: Design services for the FHWA ER funded 50' span bridge replacement. New bridge consists of a NEXT Beam Type D beam superstructure with semi-integral abutments supported on tapered steel piles.

Dorset Street - Phase II, South Burlington, VT: Roadway Engineer responsible for plans development, cost estimating, and assistance in construction oversight. Scope: Providing final design, bid, and construction services for Phase II (Barnes & Noble to Garden Street) of the Dorset Street Pavement Rehabilitation project – a 1.1 mile heavily traveled commercial corridor.

Schifilliti Park Path, Burlington, VT: Roadway Engineer responsible for multi-use path and drainage design, calculations, layout, plans development, and cost estimating. Scope: Provide engineering services for the design of a multi-use pathway across Schifilliti Park connecting the neighborhood off Ethan Allen Parkway to Goose Court.

Spear Street Bike & Pedestrian Improvements, Spear Street, VT: Roadway Engineer responsible for roadway, pedestrian facilities, and drainage design, calculations, plans development, and cost estimating. Scope: Provide engineering services for the design of a shared-use path along Spear Street between the Swift Street intersection and the University of Vermont Forestry Building, approximately 3,400′.

Sidewalk Scoping Study, Roxbury, VT: Roadway Engineer responsible for roadway, pedestrian facilities, and drainage design, plans development, and cost estimating. Scope: Identified and prioritized sidewalk conceptual designs as part of a sidewalk construction project within the town. Included the feedback and suggestions of Roxbury residents and stakeholders to ensure local input and support.

LUKE CISNEROS

Transportation Engineer

6 YEARS OF INDUSTRY EXPERIENCE

2 YEARS WITH HOYLE TANNER

Education

California State University - Long Beach, BS, Civil Engineering, 2017

Certifications

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

Luke is a civil engineer and performs civil engineering design services and construction field engineering support. As a designer, he has experience on small to large roadway projects for New England municipalities as well as state agencies, including NHDOT, MassDOT, and VTrans. He represents the team in the field working with the contractors to monitor compliance with contract documents providing value to our clients' projects. Luke utilizes his experience in MicroStation assisting in plan and template creation and provides construction cost estimates for new projects.

Experience

Kennedy Drive at Twin Oaks Drive Mid-Block Pedestrian Crossing, South Burlington, VT: Transportation Engineer responsible for review of shop drawing and product data submittals for specification compliance. Scope: Preliminary and final design of a new mid-block crossing of Kennedy Drive to provide safe access for Green Mountain Transit bus stops and a connection to the City's shared use bike path. Improvements included rectangular rapid flashing beacons, overhead lighting, pedestrian refuge islands, new sidewalk and curb ramps, high visibility pavement markings, and pavement resurfacing.

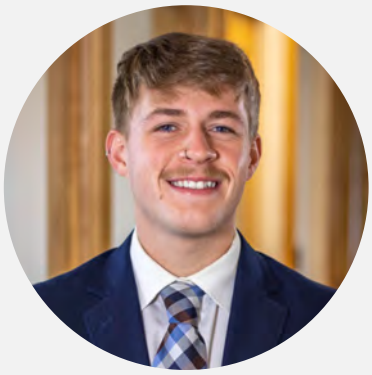
Perkins Road at Ocean Boulevard (NH Route 1A), Rye, NH: Transportation Engineer providing estimates for multiple design alternatives and making edits to plans for submission. Scope: Development of conceptual alternative for traffic and pedestrian safety improvements at the intersection of Perkins Road and NH 1A at Jenness Beach in Rye. Efforts will include traffic and pedestrian observation, drone survey, alternatives development, operational evaluation, cost estimating, report preparation, and public outreach.

MaineDOT - Bucknam Road I-295 Signal Final Design, Falmouth, ME: Transportation Engineer responsible for providing assistance with site assessment, design calculations, construction estimation, and creation of CAD plans. Scope: With heavy commuter volumes and poor geometry, the intersection of Bucknam Road with the I-295 NB Ramps has developed significant safety issues including off ramp queueing and wrong-way entry. Our team was selected, in partnership with an adjacent Hoyle Tanner bridge project, to design intersection improvements and reconstruction of 1,000' of Bucknam Road through the Highway Safety Improvement Program (HSIP). Design efforts included alignment and pavement layout, coordinated traffic signal design, closed drainage analysis and design, traffic control planning, cost estimating and bid specifications.

NHDOT Statewide Highway #41880 Conway, Conway, NH: Transportation Engineer for drainage modeling and site impact calculations. Scope: Study of alternatives and preliminary design of intersection improvements at US 302 and East Conway Road through the Highway Safety improvement Program (HSIP). With a goal of reducing severe crashes and improving safety, improvements are anticipated to include either a proposed traffic signal or a roundabout. Completion of the public participation process and NEPA documentation will also be included.

ZACHARY ROUSSEL, EIT

Transportation Engineer



Zachary has a variety of experience in transportation and construction oversite which guide his practices in the Ground Transportation Division. He entered the industry as a construction inspector and oversaw the installation of transportation and stormwater infrastructure in the area surrounding the Burlington, Vermont waterfront. This experience has given him a unique perspective on the construction process at the installation phase which will inform his design decisions. His interests in the field surround making roads and other transportation infrastructure safe for all users, whether they are in a vehicle or on foot. Additionally, Zachary has experience with Bluebeam, AutoCAD, HydroCAD, and ArcGIS.

1 YEARS OF INDUSTRY EXPERIENCE

1 YEARS WITH HOYLE TANNER

Registrations

Engineer In Training: VT

Education

University of Vermont, BS, Environmental Engineering, 2021

Certifications

ACI Field Testing Technician - Grade 1

Experience

Densmore Drive Culvert #2 Replacement, Essex Junction, VT: Transportation Engineer responsible for plan and cost estimate review. Scope: Design services for the village-funded 20' span box culvert replacement. Project included the waterline relocation design within the project limits. Project was the second of three culvert replacements along this Indian Brook Corridor.

Brickyard Road over Indian Brook, Essex Junction, VT: Transportation Engineer responsible for plan and cost estimate review and development. Scope: Design and permitting of the 20′ span concrete box culvert replacement carrying Indian Brook under Brickyard Road. Services included the design of village-owned water and wastewater utility relocation.

Spear Street Bike & Pedestrian Improvements, Spear Street, VT: Transportation Engineer responsible for roadway design, bicycle/pedestrian facility layout, and plan development. Scope: Provide engineering services for the design of a shared-use path along Spear Street between the Swift Street intersection and the University of Vermont Forestry Building, approximately 3,400′.

VTrans - Worcester Elmore Bridge 94, Worcester-Elmore, VT: Transportation Engineer responsible for traffic sign evaluation, layout and planning along with cost estimate development and review for roadway elements. Scope: As part of a bundled (five 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.

Stormwater System for Knoll Circle, Burlington, VT: Transportation Engineer responsible for HydroCAD design. Scope: Design a gravel wetland for a neighborhood in Burlington, Vermont.

Planning Stormwater Infrastructure for UVM's Campus, Burlington, VT: Transportation Engineer responsible for designing a stormwater management system. Scope: Specific project requirements included designing the porous asphalt pathway system with underdrain pipes, managing and editing the HydroCAD model and planting plans.

CAROLINE CORWIN

Transportation Engineer

Caroline is a recent graduate from Rensselaer Polytechnic Institute and works in our Ground Transportation Group. She previously interned with the MassDOT Bridge Section for two years and can transfer her knowledge to projects at Hoyle Tanner. She is becoming adept in AutoCAD Civil 3D and improving her design skills. Caroline also has experience with HY-8, Synchro, ArcGIS, and HEC-HMS.

1 YEARS OF INDUSTRY EXPERIENCE

1 YEARS WITH HOYLE TANNER

Education

Rensselaer Polytechnic Institute, BS, Civil Engineering, 2021

Experience

Mountain Street & High Street Waterline, Williamsburg, MA: Roadway Engineer responsible for drafting plans and modeling underground existing utilities and proposed watermain in three dimensions. Scope: Study phase services including data collection and alternatives analysis for the addition of a new transmission watermain.

Dorset Street Final Design - Phase III, South Burlington, VT: Roadway Engineer responsible for drafting layout of final design data collection from field visit. Scope: Providing final design, bid, and construction services for Phase III (Garden Street to Aspen Drive) of the Dorset Street Pavement Rehabilitation project – a 1.1 mile heavily traveled commercial corridor.

High & Winnacunnet Streets Infrastructure Project, Hampton, NH: Roadway Engineer responsible for field visit data collection, drafting roadway plans, and assisting with designing pedestrian facilities. Scope: Perform evaluation of existing surface and subsurface infrastructure and develop 30% preliminary design concepts and estimates for client review and funding approval.

MassDOT Contract #77869 Assignment No. 9 Fall River, Jefferson Street over Sucker Brook, Fall River, MA: Roadway Engineer responsible for development of alternatives from scope and drafting roadway plans. Scope: Complete replacement of the existing single span steel girder and timber deck bridge carrying Jefferson Street over Sucker Brook in Fall River. This project is in the preliminary (25%) design phase with the programmed construction advertisement date being summer/fall 2025; and the estimated construction completion date is December 2026.

Main Street Bridge & US Route 202 - Construction Engineering, Peterborough, NH: Roadway Engineer responsible for observation of construction activities, including placement of drainage pipes and removal of temporary pedestrian bridge. Scope: The project involves evaluation of the existing stone-faced concrete rigid frame constructed in 1940. The bridge is eligible for the National Register 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. Roadway design elements included analysis of alternative alignments and profiles, intersection analysis, and evaluation of temporary traffic control alternatives. Services included survey, geotechnical engineering, NEPA, roadway and engineering, public presentations, agency coordination and cost estimating. This project was funded through the Municipal Off-System Bridge Rehabilitation and Replace (MOBRR) program.

NICHOLAS EAGAN, EIT

Transportation Engineer

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 more complete look at a project during its design phase.

2 YEARS OF INDUSTRY EXPERIENCE

2 YEARS WITH HOYLE TANNER

Registrations

Engineer In Training: NH

Education

University of New Hampshire, BS, Civil Engineering, 2021

Experience

Kimball/Forest Street Roadway Improvement, Lebanon, NH: CADD Technician responsible for assisting with the development of 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 responsible for gathering 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 Bridge 84, Worcester-Elmore, VT: CADD Technician responsible for utilizing 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: Hoyle Tanner is completing the design of this 93' 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 (five structures) bridge design and construction project located on VT Route 12 in Elmore.

VTrans - Worcester Bridge 89, Worcester-Elmore, VT: CADD Technician responsible for utilizing 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: 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 (five structures) bridge design and construction project located on VT Route 12 in Elmore.

KEVIN PRESTON

CADD Technician

14 YEARS OF INDUSTRY EXPERIENCE

8 YEARS WITH HOYLE TANNER

Education

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

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, and Bentley Storm and Sanitary. He collaborates with state and municipal clients to create projects in an organized manner.

Experience

Muddy Brook Culvert Replacement, South Burlington, VT: CADD Designer responsible for preparation of contract plans. Scope: Design for a 34′ span precast concrete arch culvert structure spanning Muddy Brook at the border of South Burlington and Williston, Vermont. Project included sensitive natural and cultural resources. As part of the project, our roadway engineers incorporated the design of a 10′-wide shared-use path to connect the South Burlington path to Williston bicycle and pedestrian facilities.

Stagecoach Road Bridge Replacement over Moss Glen Brook, Stowe, VT: CADD Designer responsible for assisting in preparation of contract plans. Scope: Design services for the FHWA ER funded 50' span bridge replacement. New bridge consists of a NEXT Beam Type D beam superstructure with semi-integral abutments supported on tapered steel piles.

Heritage Rail Trail Connection to Mine Falls Park, Nashua, NH: CADD Technician responsible for field review to survey plans, CADD management and plan preparation. Scope: This Transportation Alternatives Program (TAP) project provides connectivity of two existing recreation trail networks in the "Tree Streets" neighborhood of Nashua. Improvements included a new 100′ pedestrian bridge over the Nashua Canal, 450′ of new paved trail, and an ADA-compliant roadway crossing including Rectangular Rapid Flashing Beacons (RRFB).

Densmore Drive over Indian Brook, Essex Junction, VT: CADD Designer responsible for roadway design, assisting in preparation of contract plans and quantity takeoffs. Scope: Design and construction-phase services for the FEMA funded 20' span box culvert replacement. Project included the design of a bypass and replacement of water and sewer lines within the project limits. This was the first of three culvert replacement projects Hoyle Tanner completed along this segment of Indian Brook.

Epping Road/Winter Street/Spring Street TAP Sidewalks, Exeter, NH: CADD Technician responsible for CADD management and plan preparation. Scope: The goal of Exeter's Transportation Alternative Program (TAP) sidewalk project was 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 proposed 1,600′ of new sidewalk along Epping Road (NH 27), Winter Street and Spring Street; 100′ of sidewalk reconstruction; and ADA compliant wheelchair ramps. Minor intersection reconfiguration was also constructed at Brentwood Road (NH 111A) to reduce conflicts and improve pedestrian accommodation.

EDWARD WEINGARTNER, PE

Vice President - Senior Structural Engineer

32 YEARS OF INDUSTRY EXPERIENCE

17 YEARS WITH HOYLE TANNER

Registrations

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

Education

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

Certifications

- FHWA - Bridge Inspection Refresher 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)

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, Open Bridge Designer, 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.

Experience

Merrimack River Pedestrian Bridge, Manchester, NH: Senior Project Engineer responsible for providing project and design technical assistance. Scope: Conceptual design of a pedestrian bridge spanning the Merrimack River from Foundry Street to the Millyard to support a Build Back Better Regional Challenge (BBBRC) Grant application through the US Economic Development Administration (EDA).

Stagecoach Road Bridge over Burton Pond Outlet, Wilton, NH: Senior Project Engineer responsible for providing project and design technical assistance and quality assurance. Scope: The project included hydraulic analysis, design, permitting and construction administration of the bridge replacement and associated roadway approach improvements. The new bridge consisted of a 32' long precast concrete arch with timber railing.

Wellington Road over Converseville Brook, Rindge, NH: Senior Project Engineer responsible for providing technical design assistance and quality assurance. Scope: The project involves the replacement of the existing structurally deficient bridge that consists of two 12' diameter corrugated metal pipes. It is anticipated that a concrete arched rigid frame will be the preferred replacement structure alternative.

VTrans - Berlin BF 0241(60) - Bridge 67 over Dog River, Berlin, VT: Senior Project Engineer responsible for the bridge inspection, preliminary structural analyses, emergency repair design and details and development of bridge rehabilitation alternatives. Scope: Inspection, analysis and load rating of existing Pratt steel truss bridge (145' single-span bridge built in 1934). Engineering services for development of Alternatives Study (Scoping Report). During bridge inspection our team noticed significant section loss and cracking in one of the vertical truss members. VTrans requested a very quick turnaround for plans, specifications and an estimate to perform an emergency fix of the deteriorated member. Hoyle Tanner successfully completed this emergency engineering within the requested time frame.

JOSEPH RIPLEY, PE

Senior Structural Engineer

12 YEARS OF INDUSTRY EXPERIENCE

12 YEARS WITH HOYLE TANNER

Registrations

Professional Engineer: NH, MA

Education

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

Certifications

- FHWA - Bridge Inspection Refresher Training
- FHWA - Fracture Critical Inspection Techniques for Steel Bridges
- FHWA - Safety Inspection of In-Service Bridges
- Mobile Elevated Work Platform (MEWP) Operator Certification
- 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)

Joseph's experience includes bridge design, inspection, load rating, shop drawing review, and construction observation for NHDOT, MaineDOT, VTrans 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.

Experience

Muddy Brook Culvert Replacement, South Burlington, VT: Lead Structural Engineer responsible for the layout and design of the bridge and foundation system. Scope: Design for a 34′ span precast concrete arch culvert structure spanning Muddy Brook at the border of South Burlington and Williston, Vermont. Project included sensitive natural and cultural resources. As part of the project, our roadway engineers incorporated the design of a 10′-wide shared-use path to connect the South Burlington path to Williston bicycle and pedestrian facilities.

Stagecoach Road Bridge Replacement over Moss Glen Brook, Stowe, VT: Lead Structural Engineer responsible for coordination of bridge design tasks and structural design of the deep foundation system. Scope: Design services for the FHWA ER funded 50' span bridge replacement. New bridge consists of a NEXT Beam Type D beam superstructure with semi-integral abutments supported on tapered steel piles.

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.

Heritage Rail Trail Connection to Mine Falls Park, Nashua, NH: Structural Engineer responsible for all structural design, civil/site layout, administration of plan preparation, specification writing and shop drawing review. Scope: This Transportation Alternatives Program (TAP) project provides connectivity of two existing recreation trail networks in the “Tree Streets” neighborhood of Nashua. Improvements included a new 100′ pedestrian bridge over the Nashua Canal, 450′ of new paved trail, and an ADA-compliant roadway crossing including Rectangular Rapid Flashing Beacons (RRFB).

Milford Pedestrian Bridges Condition Assessment, Milford, NH: Lead Technical Engineer / Bridge Inspector responsible for conducting the visual bridge observations and determining and prioritizing repair and maintenance recommendations. Scope: The project included visual observation of the Gregg’s Crossing Bridge and Swing Bridge over the Souhegan River to offer recommendations for maintenance and repairs. A letter report documenting the existing conditions and recommendations for repairs and maintenance for both bridges was provided.

OWEN KRAUSS, PE

Senior Structural Engineer

15 YEARS OF INDUSTRY EXPERIENCE

5 YEARS WITH HOYLE TANNER

Registrations

Professional Engineer: NH, ME

Education

University of Maine - Orono, BS, Civil Engineering, 2008

Certifications

- MaineDOT - Habitat Connectivity Design
- MaineDOT - Local Project Administration Certification
- OSHA - 10 Hour Construction Safety

Professional Associations

- American Council of Engineering Companies Maine - Bridge Subcommittee Member

Owen is a structural engineer with over a decade of experience in design, analysis, construction, inspection and rehabilitation of bridge and other highway, railroad, dam and building structures. Throughout his career he has been involved in numerous projects ranging from new bridge design, construction engineering, building design, dam rehabilitation, bridge inspections and project management. Owen's responsibilities involve the design of structures according to the most recent and applicable design codes and industry practices. He is also responsible for sharing his knowledge with other engineers and verifying that peer designs are appropriate in their approach and calculations such that they provide the client with the most economical, efficient, practical and responsible design solution.

Experience

MaineDOT - Large Culvert Replacement, Carroll Plantation, ME: Senior Project Engineer for the preliminary design of Lindsey Brook Bridge carrying Route 6 over Lindsey Brook. Scope: Preliminary and final design engineering services for the replacement of an existing 9′ by 8′ box culvert via staged construction with associated approach roadway improvements. The project is currently in the preliminary design phase and the replacement structure is anticipated to be a 14' span, 7' rise precast concrete box culvert with buried invert.

Swinging Bridge Inspection, Topsham/Brunswick, ME: Project Manager responsible for the scheduling of work, QC review and client coordination. Scope: Inspection and observation report for a historic cable suspension pedestrian bridge. Hoyle Tanner worked with a local non-profit along with the two municipal owners on either side of the structure to conduct field observations and develop an observation and condition report. Final report included recommendations for continued maintenance, including order of priorities.

Baxter Boulevard Pump Station Upgrades, Portland, ME: Structural Engineer for design of structural repairs and modifications to the pump station. Scope: Preliminary and final engineering design, bidding, construction administration and observation services for a complete upgrade at a large Portland Water District (PWD) pump station, including process and pumping equipment, electrical, instrumentation, mechanical, and HVAC upgrades. Assisted PWD with local and state permitting, including removal of an underground fuel storage tank. Coordination with the City of Portland's Baxter Boulevard West CSO Storage Conduit, which will be constructed in the vicinity and discharge to PWD's Baxter Boulevard Pump Station.

MaineDOT - Webb Brook Bridge, Patten, ME: Senior Project Engineer for the final design, plans and specifications for Webb Brook Bridge. Scope: Final design engineering services for the replacement of twin 60″ corrugated metal plate arch culverts with a 15' span, 6' rise precast concrete box culvert with buried invert via staged construction.

KAYLA HAMPE, PE

Senior Structural Engineer

11 YEARS OF INDUSTRY EXPERIENCE

7 YEARS WITH HOYLE TANNER

Registrations

Professional Engineer: NH, ME

Education

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

Certifications

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

Professional Associations

- National Council of Structural Engineers Association (NCSEA) - External Communications Committee
- Structural Engineers of New Hampshire (SENH) - Professional Development Committee Co-Chair

Kayla has broad structural engineering experience, spanning bridge rehabilitation, traffic control, building cladding, and roof analysis, and six 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. 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 bridges and existing bridge load ratings. Her hydraulic and structural engineering knowledge work together to help her design new bridges. Kayla was named Young Engineer of the Year in 2022.

Experience

Muddy Brook Culvert Replacement, South Burlington, VT: Hydraulics Engineer responsible for the hydraulic design of the proposed structure and final hydraulic report. Scope: Design for a 34′ span precast concrete arch culvert structure spanning Muddy Brook at the border of South Burlington and Williston, Vermont. Project included sensitive natural and cultural resources. As part of the project, our roadway engineers incorporated the design of a 10′-wide shared-use path to connect the South Burlington path to Williston bicycle and pedestrian facilities.

Stagecoach Road Bridge Replacement over Moss Glen Brook, Stowe, VT: Project Engineer responsible for helping to develop existing and proposed SRH-2D hydraulic models and writing the Hydrologic and Hydraulic Report. Scope: Design services for the FHWA ER funded 50' span bridge replacement. New bridge consists of a NEXT Beam Type D beam superstructure with semi-integral abutments supported on tapered steel piles.

Densmore Drive over Indian Brook, Essex Junction, VT: Project Engineer responsible for developing existing and proposed SRH-2D hydraulic models and writing the Hydrologic and Hydraulic Report. Scope: Design and construction-phase services for the FEMA funded 20' span box culvert replacement. Project included the design of a bypass and replacement of water and sewer lines within the project limits. This was the first of three culvert replacement projects Hoyle Tanner completed along this segment of Indian Brook.

Brickyard Road over Indian Brook, Essex Junction, VT: Project Engineer responsible for developing existing and proposed SRH-2D hydraulic models. Scope: Design and permitting of the 20′ span concrete box culvert replacement carrying Indian Brook under Brickyard Road. Services included the design of village-owned water and wastewater utility relocation.

ALEX SPIELER, EIT

2 YEARS OF INDUSTRY EXPERIENCE

1 YEARS WITH HOYLE TANNER

Education

- Rensselaer Polytechnic Institute, MS, Civil Engineering, 2020
- Rensselaer Polytechnic Institute, BS, Civil Engineering, 2020

Professional Associations

American Society of Civil Engineers (ASCE)

Structural Engineer

Alex's experience is developing working drawings for contractors to address their means and methods for bridge projects. This includes crane operations for demolition and erection, structural analysis of temporary conditions, design of temporary structures and construction observation. Alex has a working knowledge of AutoCAD, MIDAS Civil, RISA and Mathcad.

Experience

VTrans - Worcester Elmore Bridge 90, Worcester-Elmore, VT: Structural Engineer responsible for the development of the reinforcing schedule and the checking of calculations. 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 (five structures) bridge design and construction project located on VT Route 12 in Elmore.

NHDOT Ashland-Bridgewater 24904 Part B Bridge Design 42413 Task 8, Ashland-Bridgewater, NH: Structural Engineer responsible for preparing design calculation, quantity calculations, specifications and administration of plan preparation. Scope: This project includes design and permitting for the rehabilitation of the bridge carrying US Route 3/NH Route 25 over the Pemigewasset River between the Towns of Ashland and Bridgewater for NHDOT. The historic 800' long bridge consists of seven trestle spans and two Pratt deck steel trusses constructed in 1937 and rehabilitated in 1987.

Kew Gardens Interchange Demolition Plan, Queens, New York, NY: Assistant Project Engineer responsible for demolition plans of a highway flyover's deck including the analysis of the existing structure. Scope: The Kew Gardens Interchange was being completely reconstructed due to traffic capacity deficiency. An excavator was used to sequentially remove the deck of one of the existing flyover's to begin the demolition process.

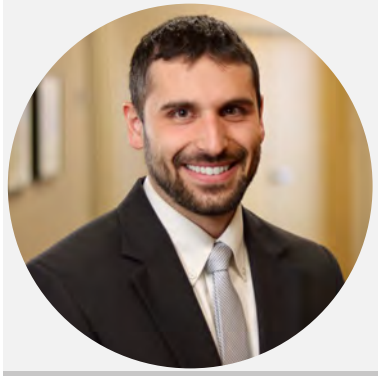
Saugus River Bridge Replacement Plan, Saugus-Lynn, MA: Assistant Project Engineer responsible for the crane access trestles in the Saugus River including design of the steel framing/timber decking and coordinating with the geotechnical engineers for pile design. Scope: The project was to design two crane access trestles, one for each bank of the Saugus River, to allow construction equipment to install the new bridge piers in the river. The new bridge will be a bascule structure scheduled to be completed in 2027.

Springfield Ave over the Garden State Parkway Jacking Plan, Irvington, NJ: Assistant Project Engineer responsible for designing several temporary supports. Scope: The project scope was to replace several stringer bearings and areas of deteriorated concrete. Temporary frames were used to relieve load from the stringers to gain access to the bearings.

RYAN MCMULLEN, PE

Structural 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.



8 YEARS OF INDUSTRY EXPERIENCE

5 YEARS WITH HOYLE TANNER

Registrations

Professional Engineer: NH

Education

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

Certifications

- ANSI 92.24/92.22 Mobil Elevating Work Platforms (MEWPs) Type 1, 2 & 3
- FHWA - Bridge Inspection Refresher 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

Experience

Muddy Brook Culvert Replacement, South Burlington, VT: Structural Engineer responsible for substructure design. Scope: Design for a 34' span precast concrete arch culvert structure spanning Muddy Brook at the border of South Burlington and Williston, Vermont. Project included sensitive natural and cultural resources. As part of the project, our roadway engineers incorporated the design of a 10'-wide shared-use path to connect the South Burlington path to Williston bicycle and pedestrian facilities.

Stagecoach Road Bridge Replacement over Moss Glen Brook, Stowe, VT: Structural Engineer responsible for checking superstructure and substructure calculations. Scope: Design services for the FHWA ER funded 50' span bridge replacement. New bridge consists of a NEXT Beam Type D beam superstructure with semi-integral abutments supported on tapered steel piles.

Epping Road/Winter Street/Spring Street TAP Sidewalks, Exeter, NH: Resident Project Representative responsible for monitoring construction activities, quantity measurements, contractor coordination, interpretation of project documents and in field design changes. Scope: The goal of Exeter's Transportation Alternative Program (TAP) sidewalk project was 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 proposed 1,600' of new sidewalk along Epping Road (NH 27), Winter Street and Spring Street; 100' of sidewalk reconstruction; and ADA compliant wheelchair ramps. Minor intersection reconfiguration was also constructed at Brentwood Road (NH 111A) to reduce conflicts and improve pedestrian accommodation.

East Road Bridges 5 & 6, Milton, VT: Inspector responsible for precast concrete plant inspections. Scope: Accelerated bridge design, permitting, and Right-of-Way coordination for the replacement of two bridges (one box culvert and one rigid frame) 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.

Kearsarge Way & Market Street Bridges, Portsmouth, NH: Structural 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 vehicle bridges, and substructure and other miscellaneous repairs for the Market Street Pedestrian Bridge.

KATELYN WELCH, PE

Structural Engineer

8 YEARS OF INDUSTRY EXPERIENCE

8 YEARS WITH HOYLE TANNER

Registrations

Professional Engineer: NH

Education

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

Certifications

- NH LPA Certification for Labor Compliance
- NH LPA Certification Training
- NHI - Bridge Construction Inspection: Inspector Safety
- OSHA - 10 Hour Construction Safety
- SPRAT - Level 1 Rope Access Technician

Professional Associations

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

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, Erikkson Culvert, STAAD, LEAP Bridge Concrete, MicroStation V8i, InRoads, and AutoCAD.

Experience

Heritage Rail Trail Connection to Mine Falls Park, Nashua, NH: Resident Engineer responsible for construction observation, quality and quantity measurements, shop drawing review, contractor coordination, and associated construction administration. Checked on work progress with the contractor on a daily basis. Scope: This Transportation Alternatives Program (TAP) project provides connectivity of two existing recreation trail networks in the "Tree Streets" neighborhood of Nashua. Improvements included a new 100' pedestrian bridge over the Nashua Canal, 450' of new paved trail, and an ADA-compliant roadway crossing including Rectangular Rapid Flashing Beacons (RRFB).

Milford Pedestrian Bridges Condition Assessment, Milford, NH: Field Inspector responsible for the inspection and documentation of all visible structure deterioration using standard inspection techniques, as well as capturing photographs, and logging and organizing all gathered information. Scope: The project included visual observation of the Gregg's Crossing Bridge and Swing Bridge over the Souhegan River to offer recommendations for maintenance and repairs. A letter report documenting the existing conditions and recommendations for repairs and maintenance for both bridges was provided.

VTrans - Kingsley Covered Bridge Clarendon BO 1443(55), Clarendon, VT: Project Engineer responsible for the completion of the tasks involved in study-phase services, including structural design, quantity calculations, and report write-up. Scope: Inspected, analyzed, and currently designing a rehabilitation of the Town Lattice Truss, 120' single-span bridge that was built in 1836. The structural analysis is being performed utilizing STAAD software. The live load carrying capacity will be increased to 12 tons and strengthening of lateral bracing is also being investigated.

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 (one box culvert and one rigid frame) 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.

KATHRYN DZIADOWICZ

Structural Engineer

Kathryn's experience includes design calculations, design quantifications, construction observation and inspection, and shop drawing review for municipal bridge projects. Kathryn has working knowledge of Mathcad, Erikkson Culvert, HydroCAD, and AutoCAD.

5 YEARS OF INDUSTRY EXPERIENCE

5 YEARS WITH HOYLE TANNER

Education

University of New Hampshire, BS, Civil Engineering, 2019

Certifications

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

Professional Associations

Structural Engineers of New Hampshire (SENH)

Experience

Hornetown Road Bridge, Farmington, NH: Resident Project Representative responsible for the construction phase of the project including construction observation, quantity measurement, upholding specifications, and contractor coordination. Scope: The project included removal of existing structurally deficient bridge superstructure and replacement with a 40' long single span steel stringer bridge with wooded deck. Additional improvements included 160' of roadway construction.

Lake Shore Park - Jetty Walls Evaluation & Repairs, Gilford, NH: Project Engineer responsible for fabricating design alternatives and estimating construction costs. Scope: The project included performing a field inspection and condition evaluation of the concrete-faced jetty wall at the Lakeshore Park. Recommendations were developed for maintenance, repair, and rehabilitation work, which included developing concept-level details and estimated construction costs for the recommended work.

MaineDOT Bucknam Rd Bridge #5830 Phase II, Falmouth, ME: Structural Engineer responsible for the completion of certain aspects of the tasks involved in design phase services, including civil/site layout, structural design, quantity calculations, and administration of plan preparation. Scope: Replacement of the Bucknam Road Bridge over Interstate 295. The project was awarded for construction as part of a bundled bridge replacement and intersection improvement project that also includes replacement of the Johnson Road Bridge over I-295 and intersection improvements and signalization of the I-295 Exit 10 NB /Bucknam Road offramps interchange.

Four Rod Road Bridge, Rochester, NH: Resident Project Representative responsible for the construction phase of the project including construction observation, quantity measurement, upholding specifications, and contractor coordination. Scope: The project involves the design, permitting and construction of a temporary repair for the existing deteriorated corrugated metal plate (CMP) pipe to extend its service life. The temporary repair consists of a spray-applied geopolymer liner.

Penacook Road Bridge, Hopkinton, NH: Project Engineer responsible for the completion of tasks involved in preliminary and final design phase services, including rehabilitation design, quantity calculations, specification oversight and administration of plan preparation. Scope: This project is for preliminary and final engineering design services for the Penacook Road municipal bridge. Project also includes bid-phase services.

LYNNE SABOURIN, EIT

Structural Engineer

Lynne studied Ecological Engineering with a focus on rivers and streams. While at Oregon State, she also did an internship with the City of Corvallis in their Stormwater Utility. She has taken courses in hydraulics, hydrology, bioremediation, watershed management, and river engineering.

Lynne's main interest is rivers, and she has experience in stormwater, hydraulics, and stream restoration. While working with the City of Corvallis, she implemented stream bank restoration plantings in multiple locations around the City. She has also completed a project for her river engineering course that modeled the hydraulics of dam removal on the Klamath River in Oregon. Lynne has experience with AutoCAD, HEC-RAS, Microsoft Office, and ArcGIS.

<1 YEARS OF INDUSTRY EXPERIENCE

1 YEARS WITH HOYLE TANNER

Registrations

Engineer In Training: MA

Education

Oregon State University, BS, Ecological Engineering, 2021

Experience

Sand Hill Bridge over Long Pond Brook, Newport, NH: Project Engineer assisting with checking the wetland restoration completed by the contractor. Scope: This project includes the replacement of the existing structurally deficient and red-listed bridge constructed in 1984. After completion of the design by another consultant, Hoyle Tanner is currently providing construction observation and administration.

Nashua High School South & Whipple Street Pedestrian Bridges, Nashua, NH: Staff Engineer responsible for assisting with wetland delineation for the purpose of preparing the wetland permit application. Scope: Hoyle Tanner is working with the City of Nashua to design two replacement pedestrian bridges for existing structures at the end of their useful service life. The project includes evaluation of geometric layout, span length, and cost estimation to determine the structure type that best meets the City's goals. This project also includes design of abutments and low-displacement deep foundation systems that can be constructed within the geometric constraints of the existing Mine Falls Park without altering the existing historic canal embankments or excess removal of large mature trees.

MaineDOT Mattawamkeag and Drew Plantation, Augusta, ME: Hydraulics Engineer responsible for hydraulic modeling, geomorphic analysis, scour analysis, and writing the hydrologic and hydraulic report. Scope: This assignment includes preliminary design services for two large culvert replacements: one on Route 2 in Mattawamkeag (WIN 025425.00) and one on Route 171 in Drew Plantation (WIN 025521.00). MaineDOT intends to advertise these two projects together (either as separate plans or as a bundled contract) given the relatively close proximity in the rural area. The existing Mattawamkeag culvert is a 104' long concrete pipe, and the Drew Plantation culvert is a concrete pipe.

Amoskeag Bridge Eastbound & Ramp E, Manchester, NH: Hydraulics Engineer responsible for scour analysis and scour countermeasures design. Scope: Project includes a full inspection and evaluation of the 7 span, 858' long parabolically launched steel girder eastbound main span, as well as the 4 span, 362' long steel stinger exit ramp. Rehabilitation and deck replacement alternatives with traffic control are being studied.

PAUL DUSTIN

Associate - Senior CADD Designer

30 YEARS OF INDUSTRY EXPERIENCE

9 YEARS WITH HOYLE TANNER

Education

Keene State College, BS, Industrial Technology, Drafting & Design, 1993

Paul's expertise is in the development and detailing of contract plans for state agency and municipal bridge projects. His detailing experience includes all aspects of single and multi-span straight and curved girder bridges, concrete rigid frame structures, prestressed concrete structures, integral and semi-integral abutments, MSE retaining walls, historic covered bridges, and steel truss rehabilitation. Paul is intimately familiar with CADD standards and electronic submission requirements for MassDOT, NHDOT, VTrans, MaineDOT, and CTDOT.

Experience

Muddy Brook Culvert Replacement, South Burlington, VT: Senior CADD Technician responsible for leading CADD management in the preparation of contract plan documents. Scope: Design for a 34' span precast concrete arch culvert structure spanning Muddy Brook at the border of South Burlington and Williston, Vermont. Project included sensitive natural and cultural resources. As part of the project, our roadway engineers incorporated the design of a 10'-wide shared-use path to connect the South Burlington path to Williston bicycle and pedestrian facilities.

Stagecoach Road Bridge Replacement over Moss Glen Brook, Stowe, VT: Senior CADD Technician responsible for leading CADD Technicians and CADD management in the preparation of contract plan documents. Scope: Design services for the FHWA ER funded 50' span bridge replacement. New bridge consists of a NEXT Beam Type D beam superstructure with semi-integral abutments supported on tapered steel piles.

Piscataquog River Trail Phase IV, Manchester, NH: Senior CADD Technician responsible for record drawing preparation. 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.

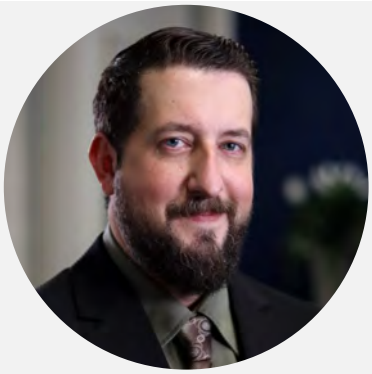
Densmore Drive over Indian Brook, Essex Junction, VT: Senior CADD Technician responsible for leading CADD Technicians and CADD management in the preparation of contract plan documents. Additional responsibilities included coordination with water and gas utilities and the development of utility plans. Scope: Design and construction-phase services for the FEMA funded 20' span box culvert replacement. Project included the design of a bypass and replacement of water and sewer lines within the project limits. This was the first of three culvert replacement projects Hoyle Tanner completed along this segment of Indian Brook.

East Road Bridges 5 & 6, Milton, VT: Senior CADD Technician responsible for leading CADD management in the preparation of all contract plan documents. Additional responsibilities included structure layout as well as checking various design calculations. Scope: Accelerated bridge design, permitting, and Right-of-Way coordination for the replacement of two bridges (one box culvert and one rigid frame) 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.

TRAVIS GELINAS

CADD Technician

As a CADD Technician, Travis is responsible for developing and detailing contract plans for municipal and state agency projects. He is trained in both AutoCAD and MicroStation software platforms and with these programs can develop many levels of plan preparation including presentation graphics, study graphics and project plans through all phases of development.



22 YEARS OF INDUSTRY EXPERIENCE

22 YEARS WITH HOYLE TANNER

Education

Pioneer School of Visual Arts, Certificate, Computer Graphics/Desktop Publishing, 1998

Experience

Muddy Brook Culvert Replacement, South Burlington, VT: CADD Technician responsible for assisting in the development of contract plans. Scope: Design for a 34′ span precast concrete arch culvert structure spanning Muddy Brook at the border of South Burlington and Williston, Vermont. Project included sensitive natural and cultural resources. As part of the project, our roadway engineers incorporated the design of a 10′-wide shared-use path to connect the South Burlington path to Williston bicycle and pedestrian facilities.

Stagecoach Road Bridge Replacement over Moss Glen Brook, Stowe, VT: CADD Technician responsible for assisting in the development of contract plans. Scope: Design services for the FHWA ER funded 50' span bridge replacement. New bridge consists of a NEXT Beam Type D beam superstructure with semi-integral abutments supported on tapered steel piles.

Piscataquog River Trail Phase IV, Manchester, NH: CADD Technician responsible for the preparation of contract plans. 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.

Densmore Drive over Indian Brook, Essex Junction, VT: CADD Technician responsible for the development of contract plans. Scope: Design and construction-phase services for the FEMA funded 20' span box culvert replacement. Project included the design of a bypass and replacement of water and sewer lines within the project limits. This was the first of three culvert replacement projects Hoyle Tanner completed along this segment of Indian Brook.

Kearsarge Way & Market Street Bridges, Portsmouth, NH: CADD Technician responsible for the development of contract plan documents. 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 vehicle bridges, and substructure and other miscellaneous repairs for the Market Street Pedestrian Bridge.

Main Street Bridge & US 202 - Construction Engineering, Peterborough, NH: CADD Technician responsible for detailing various contract plans. Scope: Reconstructing US Route 202 at the Main Street intersection and stabilizing the boulder retaining wall adjacent to the Contoocook River with minor reconstruction of the Transcript Dam.

KIMBERLY PEACE

Associate - Senior Environmental Coordinator

24 YEARS OF INDUSTRY EXPERIENCE

10 YEARS WITH HOYLE TANNER

Education

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

Certifications

- FHWA - Public Involvement in the Transportation Decision-Making Process
- OSHA - HAZWOPER

Professional Associations

- New Hampshire Association of Natural Resource Scientists
- Society of Wetland Scientists

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.

Experience

Sidewalk Scoping Study, Roxbury, VT: Senior Environmental Coordinator for supervision of wetland and stream alteration permit applications, coordination with VTrans staff regarding NEPA analysis and preparation of Programmatic Categorical Exclusion. Scope: Identified and prioritized sidewalk conceptual designs as part of a sidewalk construction project within the town. Included the feedback and suggestions of Roxbury residents and stakeholders to ensure local input and support.

Stagecoach Road Bridge Replacement over Moss Glen Brook, Stowe, VT: Senior Environmental Coordinator for supervision of wetland and stream alteration permit applications, coordination with VTrans staff regarding NEPA analysis, and preparation of Programmatic Categorical Exclusion. Scope: Design services for the FHWA ER funded 50' span bridge replacement. New bridge consists of a NEXT Beam Type D beam superstructure with semi-integral abutments supported on tapered steel piles.

Heritage Rail Trail Connection to Mine Falls Park, Nashua, NH: Environmental Coordinator for the preparation of a NEPA Categorical Exclusion. Coordinated with federal, state and local agencies to successfully fulfill permitting requirements, including impacts to the City of Nashua wetland buffer. Scope: This Transportation Alternatives Program (TAP) project provides connectivity of two existing recreation trail networks in the "Tree Streets" neighborhood of Nashua. Improvements included a new 100' pedestrian bridge over the Nashua Canal, 450' of new paved trail, and an ADA-compliant roadway crossing including Rectangular Rapid Flashing Beacons (RRFB).

Spear Street Bike & Pedestrian Improvements, Spear Street, VT: Senior Environmental Coordinator for supervision of wetland and stream alteration permit applications, coordination with VTrans staff regarding NEPA analysis, and preparation of Programmatic Categorical Exclusion. Scope: Provide engineering services for the design of a shared-use path along Spear Street between the Swift Street intersection and the University of Vermont Forestry Building, approximately 3,400'.

JOANNE THERIAULT, CWS, AWB®

Environmental Scientist

18 YEARS OF INDUSTRY EXPERIENCE

7 YEARS WITH HOYLE TANNER

Education

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

Certifications

- Associate Wildlife Biologist (AWB)
- Certified Wetland Scientist (CWS)
- US Army Corps Wetland Delineator Methods Training

Professional Associations

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

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, wildlife habitat assessment, wetland delineation/evaluation, and GIS data analysis.

Experience

Spear Street Bike & Pedestrian Improvements, Spear Street, VT: Wetland Scientist responsible for identifying and delineating natural resources at the project site including ordinary high water, top of bank, wetland boundaries and invasive plant species and preparing required permitting documentation including USACE Wetland Determination Forms and VT Wetland Evaluation Forms. Scope: Provide engineering services for the design of a shared-use path along Spear Street between the Swift Street intersection and the University of Vermont Forestry Building, approximately 3,400′.

Sidewalk Scoping Study, Roxbury, VT: Wetland Scientist responsible for identifying and delineating wetland boundaries at the project site and preparing required permitting documentation including USACE Wetland Determination Forms and VT Wetland Evaluation Forms. Scope: Identified and prioritized sidewalk conceptual designs as part of a sidewalk construction project within the town. Included the feedback and suggestions of Roxbury residents and stakeholders to ensure local input and support.

Muddy Brook Culvert Replacement, South Burlington, VT: Environmental Coordinator responsible for the preparation of state and federal environmental permit applications. Scope: Design for a 34′ span precast concrete arch culvert structure spanning Muddy Brook at the border of South Burlington and Williston, Vermont. Project included sensitive natural and cultural resources. As part of the project, our roadway engineers incorporated the design of a 10′-wide shared-use path to connect the South Burlington path to Williston bicycle and pedestrian facilities.

Brickyard Road over Indian Brook, Essex Junction, VT: Wetland Scientist responsible for identifying and delineating natural resources at the project site including ordinary high water, top of bank, wetland boundaries and invasive plant species and preparing required permitting documentation including USACE Wetland Determination Forms and VT Wetland Evaluation Forms. Scope: Design and permitting of the 20′ span concrete box culvert replacement carrying Indian Brook under Brickyard Road. Services included the design of village-owned water and wastewater utility relocation.

DEB COON

Associate - Environmental Coordinator

32 YEARS OF INDUSTRY EXPERIENCE

24 YEARS WITH HOYLE TANNER

Education

New Hampshire Technical Institute, AS, Environmental Sciences, 2022

Certifications

FHWA - Introduction to NEPA and Transportation Decisionmaking

Deb works with municipalities, state agencies and private clients to provide research and coordination on various projects for clients to receive relevant state or federal natural resource permits and funding for infrastructure projects. She has done historic research with the New Hampshire Division of Historical Resources and has coordinated with the NH Natural Heritage Bureau and NH Fish & Wildlife for threatened or endangered species impact. Her involvement also spans property research utilizing deeds, tax maps, and local assessor information. She maps project sites to determine waterbodies, types of streams, designated rivers, impaired waters, "highest ranked habitat for wildlife" and floodplains. Her additional expertise lies in creating documents, letters and presentations for use with public outreach throughout New England.

Experience

Stagecoach Road Bridge Replacement over Moss Glen Brook, Stowe, VT: Environmental Coordinator for the preparation of state and federal permitting efforts. Scope: Design services for the FHWA ER funded 50' span bridge replacement. New bridge consists of a NEXT Beam Type D superstructure with semi-integral abutments supported on tapered steel piles.

Spear Street Bike & Pedestrian Improvements, Spear Street, VT: Environmental Coordinator for the preparation of a NEPA Categorical Exclusion document. Scope: Provide engineering services for the design of a shared-use path along Spear Street between the Swift Street intersection and the University of Vermont Forestry Building, approximately 3,400'.

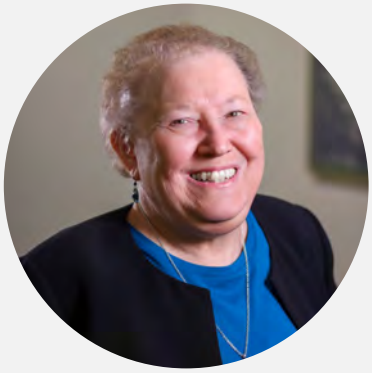
Sidewalk Scoping Study, Roxbury, VT: Environmental Coordinator for the detailed review of potential environmental impacts to be included in the study. Scope: Identified and prioritized sidewalk conceptual designs as part of a sidewalk construction project within the town. Included the feedback and suggestions of Roxbury residents and stakeholders to ensure local input and support.

Heritage Rail Trail Connection to Mine Falls Park, Nashua, NH: Environmental Coordinator for the preparation of a NEPA Categorical Exclusion. Coordinated with federal, state and local agencies to successfully fulfill permitting requirements, including impacts to the City of Nashua wetland buffer. Scope: This Transportation Alternatives Program (TAP) project provides connectivity of two existing recreation trail networks in the "Tree Streets" neighborhood of Nashua. Improvements included a new 100' pedestrian bridge over the Nashua Canal, 450' of new paved trail, and an ADA-compliant roadway crossing including Rectangular Rapid Flashing Beacons (RRFB).

Multi-Use Path TAP Project, Londonderry, NH: Environmental Coordinator for cultural resource coordination. Scope: Performing engineering and professional review of a site plan, including supporting town planning and engineering team members at meetings.

ELIZABETH BOSIAK

Right-of-Way Specialist



44 YEARS OF INDUSTRY EXPERIENCE

8 YEARS WITH HOYLE TANNER

Education

New Hampshire College, BA, Business Management, 1968

Certifications

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

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 NHDOT. 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.

Experience

Crane Hill Road Bridge over Gale River, Sugar Hill, NH: Acquisitions / Relocation Specialist responsible for meeting with the property owners to discuss the easement documents with property owners to obtain signatures. Scope: Excessive flooding of the roadway approaches and the deteriorating condition of the single lane, 108' long steel Warren Truss has led the Town to seek replacement solutions. We are working with the Town to expand upon previous studies of the bridge to design a more cost-effective bridge replacement solution.

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.

Main Street Bridge & US 202, Peterborough, NH: Acquisitions / Relocation Specialist for coordination between property owners and design or construction companies to address concerns that the owners may have regarding their property. 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. Roadway design elements included analysis of alternative alignments and profiles, intersection analysis, and evaluation of temporary traffic control alternatives. Services included survey, geotechnical engineering, NEPA, roadway engineering, public presentations, agency coordination and cost estimating. This project was funded through the Municipal Off-System Bridge Rehabilitation and Replace (MOBRR) program.

AIDAN SHORT, EIT

Environmental Engineer

4 YEARS OF INDUSTRY EXPERIENCE

4 YEARS WITH HOYLE TANNER

Registrations

Engineer In Training: NH

Education

- University of New Hampshire, BS, Civil Engineering, 2019
- University of New Hampshire, ME, Civil Engineering, 2020

Professional Associations

- New Hampshire Water Pollution Control Association (NHWPCA)
- Tau Beta Pi - - Engineering Honors Society Member

A recent graduate and master's degree recipient from the University of New Hampshire, Aidan specializes in analysis, modeling, and design of hydraulics- and hydrology-related engineering applications. During his time at Hoyle Tanner, he has contributed this knowledge to culvert replacement, drainage, and stormwater design, pumping stations, and wastewater collection system expansion projects, among many others. More recently, Aidan has started to expand his skill set to asset management after taking a class on the subject while in graduate school, working on several projects for which he has collected field data, compiled asset inventories and hierarchies, and assessed asset criticality and maintenance/replacement recommendations. Aidan is interested in climate change and the ramifications of sea-level rise and increasing temperatures on critical infrastructure. He hopes to expand on asset management methods with these climate change considerations to better assess infrastructure resiliency and prepare for future impacts. Aidan has significant experience with ArcGIS and AutoCAD Civil 3D and additional experience with HEC-RAS, SewerCAD, EPANET, and HY-8.

Experience

CSO Long-Term Control Plan Preliminary Engineering Report, Vergennes, VT: Environmental Engineer completed GPS survey of existing wastewater and stormwater collection system structures, reviewed results of prior studies and investigations on inflow and infiltration, analyzed rainfall and sanitary sewer overflow data, identified potential problem areas in wastewater collection system, made recommendations for refurbishment and additional investigations, and developed Long-Term Control Plan for City. Scope: The City has a sanitary sewer overflow (SSO) which periodically releases untreated sewerage into Potash Brook and Otter Creek during certain rain and snowmelt events due to inflow and infiltration. Hoyle Tanner developed a Long-Term Control Plan (LTCP) to provide a series of recommendations for elimination of the SSO as required by the VTDEC.

Wastewater Treatment Alternatives Study, Greensboro, VT: Environmental Engineer assisting in development of preliminary engineering report for potential wastewater implementation, including GIS analyses, needs analyses, and septic survey. Scope: Greensboro faces considerable challenges regarding wastewater treatment. Greensboro is applying for a USDA SEARCH grant to conduct a Wastewater Treatment Alternatives Study. In the Village, Bend, and Lake areas of Town, the alternatives would include decentralized treatment options and other state-of-the-art treatment alternatives that would provide low-maintenance effective treatment at the least cost to the community.

Wastewater & Streetscape Study, Montgomery, VT: Environmental Engineer helping to identify potential funding alternatives and working on developing funding alternatives report. Scope: Grant funding assistance and completion of a Preliminary Engineering Report to develop engineering alternatives including life-cycle costs to replace on-site septic systems with Town-owned wastewater collection, conveyance, treatment and infiltration. This project also included development of streetscape pedestrian, vehicular and bicyclist safety improvement alternatives.

JOHN REILLY, PE

Senior Environmental Engineer

30 YEARS OF INDUSTRY EXPERIENCE

15 YEARS WITH HOYLE TANNER

Registrations

Professional Engineer: VT, NH, MA, ME, DE

Education

- Pennsylvania State University, ME, Environmental Engineering, 2002
- University of Delaware, BS, Civil Engineering, 1993

Professional Associations

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

John's experience is in managing civil, environmental, and water infrastructure projects including planning, designing, and construction of centralized and decentralized wastewater collection, conveyance and treatment systems, stormwater collection, treatment systems, and potable water treatment, storage, transmission, and distribution systems.

Experience

Densmore Drive over Indian Brook, Essex Junction, VT: Lead Wastewater Engineer responsible for the design of the temporary bypass and permanent relocation of the municipal water and sewer lines for the culvert replacement construction. Scope: Design and construction-phase services for the FEMA funded 20' span box culvert replacement. Project included the design of a bypass and replacement of water and sewer lines within the project limits.

Hinesburg Road Water & Sewer Utility Relocation, South Burlington, VT: Project Manager for all technical aspects of the project, scheduling, budget and cost control, management of subconsultants, public presentations, permitting, and client coordination. Scope: This project included completing of a Record Drawing review and development of preliminary and final design for potable water and sanitary sewer utility relocation plans. The project also included technical specifications and cost estimates to be integrated into the VTrans' construction project to remove and replace the existing Potash Brook Culvert (where it crosses Hinesburg Road).

Hadley Road Preliminary Engineering, South Burlington, VT: Project Manager responsible for all technical aspects of the project, scheduling, budget and cost control, permitting, and client coordination. Scope: The project scope of work included completion of a preliminary engineering report and drawings including development of four alternatives to convey sanitary sewage from the Hadley Road Sanitary Sewer Service Area to the Bartlett Bay Wastewater Treatment Facility.

Wastewater & Streetscape Study, Montgomery, VT: Project Manager for all technical aspects of the project, scheduling, subconsultants, budget, and cost control, permitting, and funding agency and client coordination. Scope: Grant funding assistance and completion of a Preliminary Engineering Report to develop engineering alternatives including life-cycle costs to replace on-site septic systems with Town-owned wastewater collection, conveyance, treatment and infiltration. This project also included development of streetscape pedestrian, vehicular and bicyclist safety improvement alternatives.

Farrell Street Reconstruction Design, South Burlington, VT: Project Manager for coordination of project roadway engineers, integration of the roadway elements into the broader potable water and wastewater infrastructure project refurbishment, scheduling, budget, and client communications. Scope: Hoyle Tanner transportation services included scoping and final engineering design of the Farrell Street Road reconstruction and intersection treatments for bicycle accommodation associated with this potable water and wastewater infrastructure refurbishment project.

MALLORY RAKOWSKI

<1 YEARS OF INDUSTRY EXPERIENCE

1 YEARS WITH HOYLE TANNER

Education

Northern Arizona University, BS, Environmental Engineering, 2022

Environmental Engineer

Mallory graduated from Northern Arizona University in May 2022 with a bachelor's in environmental engineering. She worked with the City of Flagstaff's Water Services division as a Water Resources Technician where she gained experience and knowledge of drinking water and wastewater systems. Mallory prioritizes the health of the environment and is interested in increasing sustainability through reuse and sustainable treatment processes in addition to protecting drinking water supplies. Mallory has experience with AutoCAD, Civil 3D, Bluebeam, WaterGEMS, CulvertMaster, and FlowMaster.

Experience

Permitting Assistance Pilot Study, Burlington, VT: Environmental Engineer for drafting vendor site layouts and performing field work. Scope: The City of Burlington, is conducting pilot testing of tertiary treatment technologies to remove phosphorus from secondary effluent at the Main Wastewater Treatment Plant. The target dry weather effluent total phosphorus concentration is 0.1 mg/L. The selected treatment technologies for testing include: high rate ballasted flocculation sedimentation, continuous flow gravity sand filtration, and cloth media filtration.

MacDonough Drive Pump Station & Force Main Study, Vergennes, VT: Environmental Engineer for preparing a CWSRF planning loan application on behalf of the city. Scope: Evaluate current condition of the MDPS, develop alternatives for refurbishment/replacement of the pump station and force main, develop SSO storage tank alternatives, initiate an environmental assessment for the recommended alternatives, develop opinions of capital cost, life-cycle costs and present worth analysis.

WWTF Upgrade Step II Pre-Design, Brighton, VT: Environmental Engineer for developing task orders and subconsultant agreements, project specifications, and drafting process flow schematics. Scope: The Brighton WWTF is receiving upgrades to its facilities following the completion of a Preliminary Engineering Report which identified aging equipment and other WWTF infrastructure in need of refurbishment.

Wastewater & Streetscape Study, Montgomery, VT: Environmental Engineer for developing task orders and subconsultant agreements, CWSRF planning loans, Sewer Ordinance information, conducting site visits and field work, and preparing maps. Scope: Grant funding assistance and completion of a Preliminary Engineering Report to develop engineering alternatives including life-cycle costs to replace on-site septic systems with Town-owned wastewater collection, conveyance, treatment and infiltration. This project also included development of streetscape pedestrian, vehicular and bicyclist safety improvement alternatives.

Resume added on 12/15/23.

THOMAS BRYCE, CPESC, CESSWI

Environmental Engineer

7 YEARS OF INDUSTRY EXPERIENCE

<1 YEARS WITH HOYLE TANNER

Education

- University of Vermont, MS, Civil & Environmental Engineering, 2016
- Wentworth Institute of Technology, BS, Civil Engineering Technology, 2014

Certifications

- 10-Hour Construction Safety and Health (OSHA)
- 40-Hour Wetland Delineation Training (US Army Corps of Engineers)
- Certified Erosion, Sediment and Stormwater Inspector (CESSWI)
- Certified Professional in Erosion Prevention and Sediment Control (CPESC)
- Natural Shoreland Erosion Control Training (State of Vermont – DEC)
- Soils and Aggregate Inspector

Professional Associations

- American Society of Civil Engineers (ASCE)
- Vermont Society of Engineers (VSE)

Thomas is a Water Resources Specialist and has worked on a variety of water and stormwater-related projects. His key focus has been on long-term water quality monitoring, hydraulic and hydrologic analysis, modeling streams and culverts, as well as designing stormwater systems. Thomas also has experience with construction Erosion Prevention and Sediment Control (EPSC) Specialist inspections, construction oversight, as well as environmental permitting on the state and federal level.

Experience

Vermont Railway, Shelburne Transload Facility, Shelburne, VT: Environmental Engineer involved with the ongoing Water Quality Monitoring Program (WQMP) to evaluate the status of surface water and groundwater quality associated with stormwater discharges from the Project and to inform the adaptive management process employed as part of the Stormwater Pollution Prevention Plan (SWPPP). Scope: Shelburne Transload primarily involves the delivery, off-loading, storage and distribution of rail transported salt as well as other rail freight.

Jay Peak Resort, Jay, VT: Environmental Engineer involved with the ongoing monitoring and assessment efforts and annual reporting. Scope: Jay Peak Resort is a four-season resort in northern Vermont. Runoff from the Resort drains to Jay Branch and South Mountain Branch streams, both of which are tributary to the Missisquoi River. The aquatic biota in the streams have been found to be impacted by sediment released as the result of construction and operations at the Resort. Due to this a Water Quality Remediation Plan (WQRP) has been developed that addresses annual monitoring requirements and sediment remediation activities.

Stormwater Engineering for 3-Acre Site, Barre, VT: Environmental Engineer for providing oversite and direction for completion of 100% project plans for stormwater design component. Tasks included team coordination, CADD design and modeling review. Scope: Final design of multiple underground infiltration practices across a private three-acre site to treat stormwater runoff. The project is a public-private partnership between private landowners and the Town of Barre to meet 3-9050 permit compliance for the three-acre site.

Stormwater Engineering 3-Acre Sites, South Burlington, VT: Environmental Engineer for providing oversite and direction for completion of 100% project plans for stormwater design component. Tasks included team coordination, CADD design and modeling review. Scope: Final design of multiple stormwater practices across four separate three-acre sites in the City to treat stormwater runoff, including both gravel wetland treatment facilities and underground infiltration chamber practices. The project is a public-private partnership between private landowners and the City to meet 3-9050 permit compliance for the various three-acre sites.

MBTA B-06-026 (ACN) Bridge Repair Hydraulic Analysis, Hopedale, MA: Environmental Engineer who modeled the existing conditions of the site using the United States Army Corps of Engineers (USACE) Hydraulic Engineer Center Riverine Analysis System (HEC-RAS) to support the redesign of the replacement superstructure and abutments for construction. Scope: Conducted a hydrologic and hydraulic analysis to support the proposed bridge repair of Massachusetts Bay Transportation Authority (MBTA) Bridge B-06-026 (ACN) over the Charles River in Hopedale/Milford Massachusetts.

THOMAS BRYCE, CPESC, CESSWI

Environmental Engineer

VFWD Salisbury Fish Hatchery NPDES Permit Compliance Monitoring, Salisbury, VT: Environmental Engineer involved with ongoing monitoring and assessment efforts for the hatchery's wastewater discharges and to document operational changes at the station in order to comply with Vermont Water Quality Standards (VWQS). Scope: The Vermont Fish & Wildlife Department (VFWD) operates the Salisbury Fish Culture Station in Salisbury as a broodstock facility to supply juvenile fish to the other hatcheries as part of the statewide stocking program.

VTrans Lamoille Valley Rail Trail, Hydrologic Modeling & Culvert Analysis, Various Communities, VT: Environmental Engineer responsible for modeling a series of undersized culverts along a series of intermittent and perennial streams and proposed a design for each of the culverts to appropriately convey water through the system to avoid flooding or erosion. Scope: Trail rehabilitation and redesign along with a comprehensive analysis of a series of culverts and bridges.

Omya, Inc. NPDES Permit Compliance Monitoring, Florence, VT: Environmental Engineer involved with the ongoing monitoring and assessment efforts for Omya's wastewater discharges, consisting primarily of quarry dewatering and processing water from dust control and stormwater runoff. Scope: Omya, Inc. owns and operates calcium carbonate processing facilities and quarries, where water is used in the crushing and grinding of marble.

Rockefeller Dam/Peggy's Pond Restoration, Plymouth, VT: Environmental Engineer who developed a conceptual design plan involving the potential future breach of the Rockefeller Dam and subsequent restoration of the existing Peggy's Pond area. Scope: This plan included an approximation of proposed limits of grading/cut to assist with construction estimating and future stream channel restoration planning, while demonstrating that future forest management activities could be accommodated by the design.

Killington K1 Base Lodge Riparian Buffer Management Plan, Killington, VT: Environmental Engineer assisted in developing a riparian buffer management plan associated with the proposed reconstruction of the K1 Base Lodge. Scope: Lands along the reach of Roaring Brook within the developed areas of the Coolidge State Forest are occupied by the existing ski trails and resort infrastructure, and adjacent downgradient lands are owned by Killington.

Green Mountain Power, B20 & B22 Transmission Line Improvements, Various Communities, VT: Environmental Engineer who developed the EPSC plan for the project and successfully obtained a Construction Stormwater Permit from VTDEC. During construction, provided weekly EPSC inspections and environmental oversight, including natural resources flagging, tracking of earth disturbance and coordination with VTDEC inspectors. Scope: Green Mountain Power (GMP) sought to upgrade the structures and conductor along transmission lines.

Avangrid Renewables Deerfield Wind, Various Communities, VT: Environmental Engineer serving as part of a team of inspectors at the Deerfield Wind project. Scope: Under the requirements of the VTDEC Individual Construction Permit for the Deerfield Wind Project, a third-party inspector (EPSC Specialist) is required to provide oversight and biweekly reporting on the management of erosion and sediment controls.

CORPORATE HEADQUARTERS

150 Dow Street
Manchester, NH 03101

BRANCH OFFICES

125 College Street, 4th Floor
Burlington, VT 05401

Pease International Tradeport
100 International Drive, Suite 360
Portsmouth, NH 03801

285 Billerica Road, Suite 203
Chelmsford, MA 01824

106 Lafayette Street, Unit 2D
Yarmouth, ME 04096

95 E. Mitchell Hammock Road, Suite 200
Oviedo, FL 32765

HOYLE TANNER