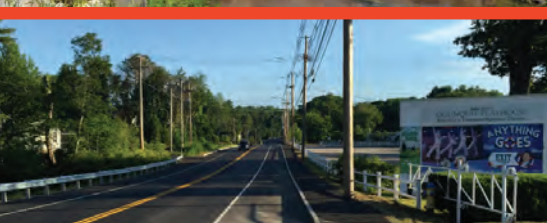
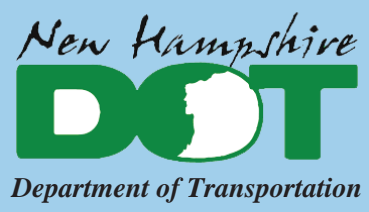


Qualification-Based Selection Contracts  
**Statewide On-Call  
Preliminary Engineering  
for Locally Administered LPA**



Submitted To:



Submitted By:



**December 30, 2022**



## Introduction Letter

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## 1. INTRODUCTION LETTER

December 30, 2022

Mr. William J. Oldenburg, PE  
Assistant Director of Project Development  
Chairperson, Consultant Selection Committee  
New Hampshire Department of Transportation

**Attn: Mr. William J. Oldenburg, PE; e-mail: William.Oldenburg@dot.nh.gov**  
**Re: Statewide On-Call Preliminary Engineering Prequalified List of  
Consultants for Locally Administered Local Public Agency (LPA)**

Dear Mr. Oldenburg:

WSP USA, Inc. (WSP) submits this letter of interest to the New Hampshire Department of Transportation (NHDOT) for the Statewide On-Call Preliminary Engineering Prequalified List of Consultants for locally LPA QBS Contracts. The local WSP team meets all the requirements for the tasks covered under this contract with the ability to deliver quality services in support of the Department's municipal assistance program and its customers.

WSP will provide quality and tested project management to municipalities which is why we are proud to assign Adam Stockin, PE, as Project Manager and primary point of contact. Adam is a proven manager and bridge engineer, with solid experience and knowledge delivering projects ranging from simple trails to complex efforts utilizing local, state, and/or various federal aid funding streams. Leading the highway design and the bridge design efforts will be Tim Higginson, PE, NH LPA Certified and Tim Polson, PE respectively, with Licensed Land Surveyor support provided by Darren Hardy, LLS. Our team also includes subconsultant TRC for environmental efforts.

As evidenced by the WSP team's prior performance on LPA projects we maintain the skills and passion required to support municipalities efficiently and cost effectively on the types of projects to ensure the NHDOT investments are meeting programmatic objectives of the various funding streams.

If you have any questions or require additional information, please do not hesitate to contact me at 617-780-8624 / dennis.baker@wsp.com.

Yours sincerely,  
WSP USA Inc.



Dennis Baker, PE  
Vice President  
New England District Business Line Leader, Transportation



## Project Understanding and Approach

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## 2. PROJECT UNDERSTANDING AND APPROACH

The New Hampshire Department of Transportation (NHDOT) Planning and Community Assistance Bureau has recently developed a three-tiered approach, to support municipalities in procuring preliminary engineering (PE) services for LPA projects. The first option is the long-standing method of municipalities administering the solicitation of proposals from consultant firms and managing the PE process throughout the duration of the project. The second option affords municipalities to hand the reigns over to NHDOT to administer the PE process, who will then issue tasks to on-call consultants. The third option allows municipalities to retain their administrative functions and establishes a “long list” of prequalified consultants maintained by NHDOT who are available for shortlist. This LOI utilizes option three, streamlining the process to make it easier for the smaller towns that may not have a standard process to meet state and federal requirements. NHDOT makes available to municipalities the funding streams highlighted on the right. Each of these funding streams may have a unique set of regulations or rules for procuring PE services.

A short list process will involve a town reviewing the list of prequalified firms in context with the type of technical services a specific project may require. NHDOT has narrowed it down to three primary assignment types: Highway Design, Bridge Design, and Additional Work Efforts. From the prequalified firms list, a town may shortlist three or more consulting firms to develop a simplified QBS selection and issue a PE services Agreement.


It is critically important that the prequalified consultants have solid working knowledge of all state and federal program requirements, possess strong communication skills, and pay constant attention to the LPA requirements. The consultants play an important role in supporting NHDOT in its federal grant administration responsibilities and recognizing the issues that may be triggered in an audit resulting in state and/or federal funding being jeopardized.


### Approach

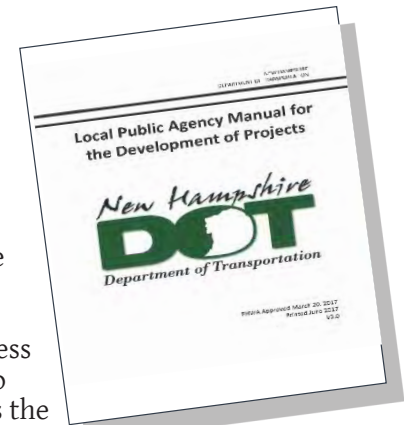
WSP has assembled a talented team to address the variety of projects that may be encountered under LPA programs. Our team is ready to support municipal owners in designing and delivering projects and is committed to NHDOT’s overall goals of innovative context sensitive solutions that are both budget and schedule driven.

### Management

Communication and implementation of a strong management plan is necessary to make all tasks and coordination among design disciplines and subconsultants work effectively. Our team will be managed by strong, trusted leadership and supported by experienced task leads and key subconsultant firms, as shown in our organization chart. A key advantage of our organization is built-in redundancy of design staff with LPA experience. Additionally, we will use a project management approach that has been successful on other projects encompassing the following actions:


 **Engineering Team Coordination:** Our project manager (PM), Adam Stockin, PE, has successfully led several multi-disciplinary projects. His experience, coupled with prior employment with NHDOT, makes him uniquely qualified to lead this team. Our management approach will be refined based on his experience and lessons learned. The team will host meetings communicating project decisions that allow everyone to understand the “big picture”, and then to break off to drive their associated discipline details.


 **Managing Project Scope and Cost:** Communication is the key to managing project scope, especially on locally administered projects where primary decision makers may change during election of local officials. Through open communication with the owner and project sponsors, documentation of the project goals and objectives in a concept plan, and establishment of a clear understanding of project deliverables at project outset, WSP will avoid scope creep throughout the execution. After an assignment is negotiated, our task leads will establish the budget and inform all staff of budget goals. The budget will be broken down as necessary into individual tasks in a work breakdown structure (WBS) to better track the expenditures on the project.




### \$ NHDOT Funding Streams

- ▶ **Federal Transportation Alternatives Program (TAP)**
- ▶ **Federal Congestion Mitigation Air Quality Program (CMAQ)**
- ▶ **Federal Municipal Off System Bridge Program (MOBRR)**
- ▶ **State Bridge Aid (SBA)**
- ▶ **Other Federal Aid funds for local and state highways**

 **Managing Project Schedule:** The WSP team’s overall effort for an assignment will be controlled by a detailed critical path method (CPM), schedule-driven work plan. Major activities, submission dates, review times, and critical path items will be identified in this schedule. Adam or the task lead will set internal deadlines, including QC and constructibility review hold points in advance of the deliverable dates set with the owner.

 **Project Communication:** As Project Manager, Adam will be the main point of contact with NHDOT and the relevant municipality. This communication may include weekly calls and over-the-shoulder meetings to keep the project sponsor informed of progress and potential issues with solutions. Adam will be in continual communication with the project leads to maintain continuity of knowledge and design intent.

 **Quality:** WSP is an ISO 9001 certified company with a robust internal project specific QA/QC management plan implemented by all offices. In addition to these standard practices, the local WSP team will also implement targeted constructibility reviews. This value-added approach can result in costs and schedule savings and reduced project impacts.

### Highway Design Efforts

WSP’s local experience includes large and complex highway projects as well as smaller municipal initiatives. Tim Higginson will lead our highway team bringing to bear his NHDOT design experience that includes several LPA projects in the state. Erik Maki brings 30 years of traffic engineering experience to our team, having managed and directed several major traffic engineering programs at the state and local level for MassDOT and the Boston Transportation Department.

#### The WSP Team Provides Best Value

- ▶ Local Presence
- ▶ Responsive and innovative
- ▶ Familiar with all state and federal requirements
- ▶ Depth and breadth of professionals and experience

### Bridge Design Efforts

Tim Polson will lead a WSP local team of structural engineers that previously completed a large array of bridge rehabilitation and replacement projects in New Hampshire and across the region. Our structural team will be responsible for bridge evaluations, inspections and load ratings.

LPA projects recently completed by our team include bridge and culvert replacements, roadway reconstruction, multi-use trails, and Context Sensitive Solutions, a sample of which has been included in the Appendix.

### Additional Work Efforts:

- ▶ **Environmental Documentation and Permitting:** TRC’s Heather Storlazzi Ward, CWS and staff have expertise in permitting projects involving the National Environmental Policy Act (NEPA), New Hampshire Department of Environmental Services and the U.S. Army Corps of Engineers New England District, including work on FHWA funded projects.
- ▶ **Hydraulic Studies and Reports:** WSP brings extensive experience in developing hydraulic studies, scour countermeasures and subsurface foundation protection. These efforts will be led by Karie-An James, PE who recently completed hydraulic and habitat connectivity studies for a 24-foot box culvert for Mays Bridge in Lubec, ME, and a 20-foot span box culvert for Half Mile Pond Brook Bridge in Amherst, ME.
- ▶ **Traffic Engineering:** Erik Maki, PE, PTOE has vast experience in traffic control design and traffic analysis. Over his 30 years’ experience, he demonstrated his innovative mindset and drive for practical solutions.
- ▶ **Technical Writing Assignments:** Denise Short, senior technical editor in Merrimack, will provide technical writing support for procedures, bid documents and specs, and will craft reports targeted to a specific audience.
- ▶ **Geotechnical Evaluations and Analysis:** WSP has the geotechnical staff located in New Hampshire to call upon as needed. With our recent acquisition of Golder, we have the capabilities to develop subsurface programs, oversee their field performance, and design foundation systems for various soil conditions.
- ▶ **Topographical Survey & Right-of-Way Plans Development:** Darren Hardy, LLS will lead survey and ROW layout and plan preparation efforts. In 2018, WSP successfully performed the survey and prepared preliminary ROW plans suitable for recording at the Hillsborough County Registry of Deeds for a 12-mile portion of the F.E. Everett Turnpike.
- ▶ **Public Involvement:** Delia Makhetha will work with NHDOT to determine the appropriate platform and incorporate relevant meeting elements (presentations, live interactive polling and Q&A sessions) with attention-grabbing graphics.

Our team has the talent and resources available to provide project management services, assist in alternative procurement methods, and coordinate between local public agencies and NHDOT. Our technical capabilities, reputation of being responsive and collaborative, and excellent working relationships developed with clients across the region will ensure the right designs are completed on time and within budget.

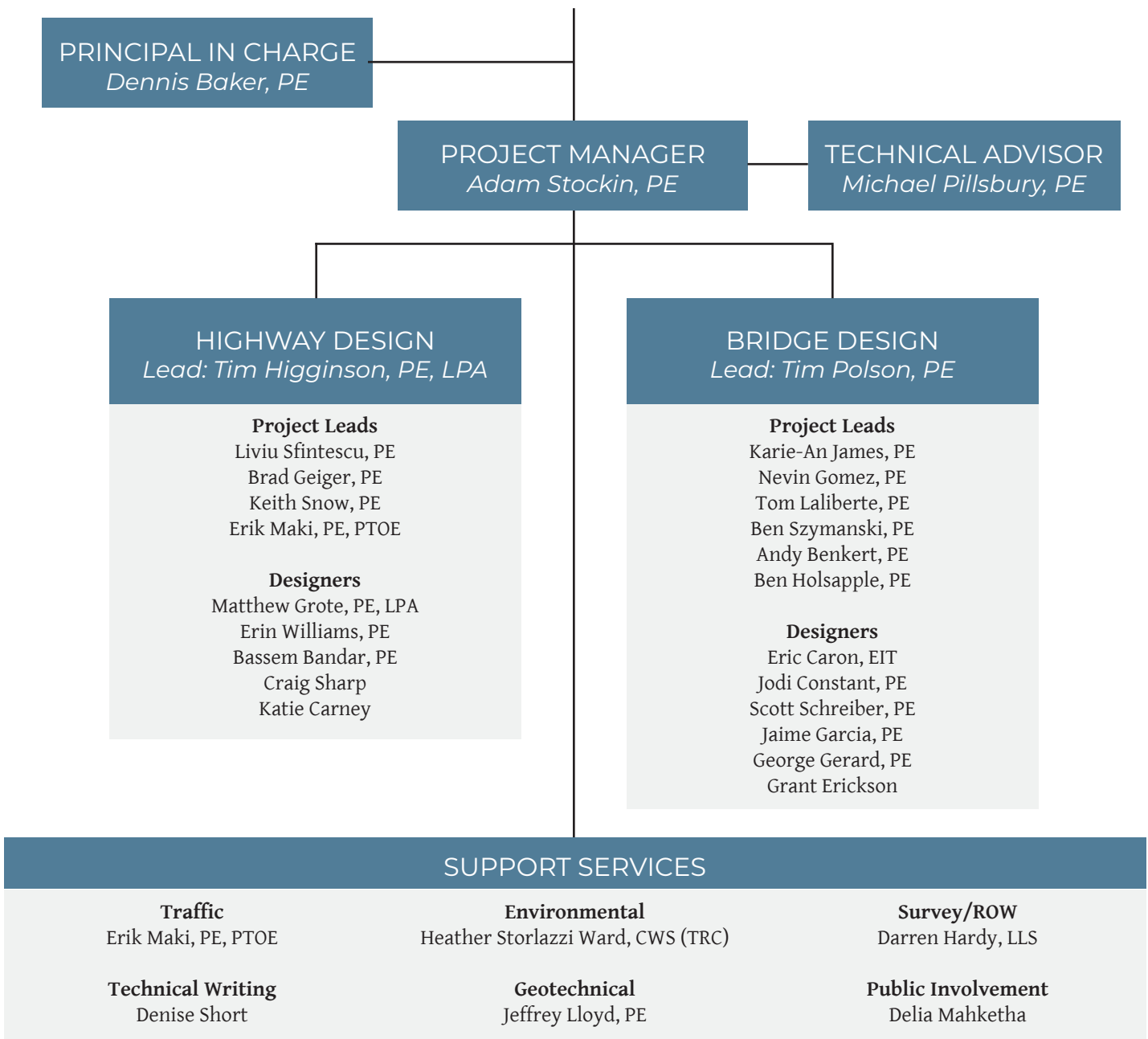


## Project Team and Organization Chart

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### 3. ORGANIZATIONAL CHART

The following organization chart lays out how the reporting functions are envisioned. Communication will be the key to success, to assure that projects finish on time and within budget.



New Hampshire Department of Transportation –  
Statewide On-Call Preliminary Engineering for  
Locally Administered LPA



## 4. PROJECT TEAM

Our proposed team will be led by WSP as prime consultant. WSP will be responsible for project management, quality assurance/quality control (QA/QC), will be leading highway and bridge design tasks and provide other support services indicated on the organization chart. Our team is supplemented by subconsultant TRC Solutions providing environmental consulting services who we have worked with on past projects including the NHDOT bridge on-call.



WSP is a nationally ranked transportation engineering company with local staff familiar to the Department. Located in our office in Merrimack, NH, these 80 staff members have gained experience working side by side in recent years on numerous projects. On-call contracts are the mainstay of the work for our New England-based transportation staff, with current assignments underway in New Hampshire, Vermont, and Maine for bridge inspection and design, highway design, survey, rail design, cultural resources, public outreach, and construction services. We have the depth of staff within the region to support the breadth of assignments under this contract and deliver them on schedule with high quality results.

WSP recently acquired Golder Associates, a ground engineering and environmental science consulting company with offices throughout the world. Since Golder opened their New Hampshire office 30 years ago, we have provided a broad range of geotechnical, environmental and construction support services to local northeast transportation projects and private industry, and currently have on-call geotechnical contracts with NHDOT, VTrans, and MaineDOT. Our team offers demonstrated geotechnical capabilities and experience throughout New Hampshire, New England and beyond, and we provide responsive service, flexibility, and staff to meet the needs of clients. We have worked closely with northern New England state and local clients on interesting projects, including: landslides, rock slopes, rockfalls, foundation design, floating bridge hull inspection, pavement studies, forensic studies, environmental studies, subsurface erosion and subsidence evaluation, contractor claim support, falling weight deflectometer measurements, and even inspection of a submerged tunnel between quarries with a remotely-operated vehicle (ROV). Golder's (now WSP's) New England staff includes geotechnical engineers and engineering geologists experienced with shallow and deep foundation systems, culvert replacement, MSE wall and abutment design, soil nailing, soft soils, staged construction of embankments, soil and rock slope stability assessment and stabilization, high angle rope access methods (IRATA), hazardous waste site characterization and mitigation, and geotechnical asset management (GAM). We are able to bring the resources of our global specialist geotechnical staff to local projects where needed.



TRC Solutions is a national engineering, consulting and construction management firm providing environmental consulting services for New Hampshire projects. TRC's staff of wetland scientists, regulatory specialists, wildlife biologists, remediation specialists and other professionals have completed the surveys, studies, agency consultations, and permitting for many energy infrastructure and transportation projects throughout New England. Their Manchester, New Hampshire staff have expertise in permitting projects involving the National Environmental Policy Act (NEPA) New Hampshire Department of Environmental Services (NHDES) and the U.S. Army Corps of Engineers (USACE) New England District. TRC has over 50 environmental and engineering professionals in New Hampshire, with over 300 additional supporting staff in Maine, Massachusetts and New York. Our New Hampshire staff understand the regulatory nuances and complexities inherent in permitting projects in the state.

- ▶ For every project--no matter the type, complexity or client--one thing remains constant, we propose the people with the most applicable experience. Our proposed staff for this contract are familiar with the State of New Hampshire and devise innovations, resolve disputes and inspire each other to meet project challenges. The matrix on the following page provides a list of the personnel available to support NHDOT and municipalities on any assignment. Resumes for upper and mid-level staff can be found in Section 6 - Appendix.

## HIGHWAY AND BRIDGE DESIGN ENGINEERING SERVICES IN SUPPORT OF LPA PROJECTS

KEY PERSONNEL	PROJECT ROLE	Years of Experience	Years with Firm	LPA Certification	Project Management	Highway Design	Bridge Design	Structural Engineer	Alternative Procurement	Corridor Study Planning	Bridge Inspection	Bridge Load Rating	Hydrology	Environmental	Geotechnical Engineer	Surveyor	Public Involvement
Dennis Baker, PE	Principal in Charge	35	4		x	x	x	x	x		x	x					
Michael Pillsbury, PE	Technical Advisor	45	7		x	x			x	x							x
Adam Stockin, PE	Project Manager	22	12		x	x	x	x	x		x	x	x				x
Tim Higginson, PE, LPA	Highway Design Lead	20	16	x	x	x			x				x	x			x
Tim Polson, PE	Bridge Design Lead	11	5		x		x	x			x	x					
Liviu Sfantescu, PE	Highway Project Lead	22	21		x	x			x	x							x
Brad Geiger, PE	Highway Project Lead	34	17		x	x			x	x							
Keith Snow, PE	Highway Project Lead	28	16		x	x			x				x				
Erik Maki, PE, PTOE	Highway Project Lead	30	1		x	x				x							x
Erin Williams, PE	Highway Design	7	7			x				x							
Bassem Bandar, PE	Highway Design	34	5		x	x			x				x	x			x
Matthew Grote, PE, LPA	Highway Design	4	4	x		x							x				
Katie Carney	Highway Design	18	18			x			x	x							
Craig Sharp	Highway Design	10	10			x								x			
Karie-An James, PE	Bridge Project Lead	17	7				x	x				x					
Nevin Gomez, PE	Bridge Project Lead	7	6		x		x	x	x		x	x					
Tom Laliberte, PE	Bridge Project Lead	27	19		x	x	x	x	x	x	x	x					x
Ben Szymanski, PE	Bridge Project Lead	14	13		x		x	x	x		x	x					
Andy Benkert, PE	Bridge Project Lead	19	11		x	x	x	x	x			x		x	x		x
Ben Holsapple, PE	Bridge Project Lead	11	11		x		x	x	x		x	x					
Eric Caron, EIT	Bridge Design	2	2				x	x			x	x					
Scott Schreiber, PE	Bridge Design	12	2				x	x	x		x	x					
Jaime Garcia, PE	Bridge Design	7	7				x	x			x	x					
Jodi Constant, PE	Bridge Design	7	7		x	x	x	x	x								x
Grant Erickson	Bridge Design	1	1				x	x			x	x					
Heather Storlazzi Ward	Environmental	23	11		x									x			x
Darren Hardy, LLS	Survey/ROW	28	26		x				x							x	
Delia Makhetha	Public Involvement	9	7		x												x
Jeffrey Lloyd, PE	Geotechnical Design	18	14		x				x						x		

New Hampshire Department of Transportation – Statewide On-Call Preliminary Engineering for Locally Administered LPA



## References

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## 5. REFERENCES

We promise to continue earning your confidence as the long-term trusted consultant of choice by continuously demonstrating through our actions, the highest levels of professionalism, responsiveness and transparency that you have come to expect. We further promise to supply a team that is passionately and unconditionally committed to the successful delivery of your project, and by extension the local public agencies.

Client Reference	Email Address/Phone Number	Project
City of Dover Dave White, PE City Engineer	d.white@dover.nh.gov 603-516-6450	15402 Whittier Street over Cocheco River Dover, New Hampshire
City of Keene Donald Lussier, PE City Engineer	dlussier@ci.keene.nh.us 603-757-0682	26505 NH 12 (Main Street) over Beaver Brook Keene, New Hampshire
City of Lebanon Christina Hall, PE City Engineer	christina.hall@lebanonnh.gov 603-448-0674	Mount Support Road Improvements Lebanon, New Hampshire

- ▶ The WSP team has proposed personnel that are available and committed to meeting the needs of this project. We have selected individuals that have the requisite technical attributes and project experience to fully meet the demands of this agreement. This team has the necessary combined resources to deliver a successful project, and we are confident that we will meet NHDOT’s and relevant municipalitites goals. Resumes can be found in the following section.



# Appendix

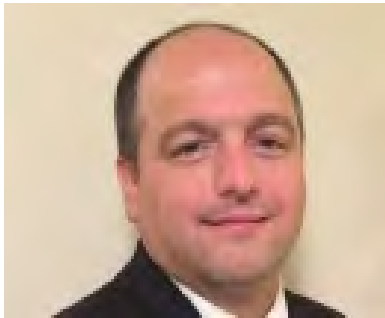
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# Resumes



## 6. APPENDIX



### ADAM STOCKIN, PE

*Project Manager*

#### *Career Summary*

Adam Stockin is a Project Manager working out of the Merrimack, New Hampshire office. He has served in this role on several projects within the region, ranging in scale from culvert replacements to multi-million-dollar construction projects. Adam has led projects from inception through to construction phase services and every step in-between. He understands the processes necessary for successful project delivery, including the importance of early and often communication with stakeholders.

#### *Representative Project Experience*

**Route 4 over Bunker Creek Design-Build Project – Durham, NH:** Design Manager for this project which consists of a 60' PBU span bridge with integral abutments founded on micropiles with a quarter mile of roadway approach work. The bridge was constructed utilizing ABC techniques within a 4-day closure period.

**NHDOT – Bridge On call Contract:** Project Manager for this contract with NHDOT to provide bridge design services. Eight task orders have been assigned to date including a preservation project, 2 accelerated deck replacements, grant writing assistance and overhead sign structure foundation design.

**I-93 Widening Northern Segment, New Hampshire:** Structural Task Manager for this project which included 12 miles of roadway and 18 bridges on Interstate 93. He was the project manager for 5 bridge projects and performed general oversight for 2 sub-consultants responsible for the design of the remaining 13 bridges.

YEARS WITH WSP: 13

YEARS TOTAL: 23

#### EDUCATION

BS, Civil Engineering

#### REGISTRATIONS

Professional Engineer: NH, VT, ME



### TIM HIGGINSON, PE

*Highway Design Lead*



LPA Certified

#### *Career Summary*

Mr. Higginson has a diverse background in transportation design, site design, survey, permitting, drafting, construction, inspection, project coordination, client, stakeholder and public coordination, cost estimates, scheduling, planning, and has been involved in presentations for a variety of design projects. Mr. Higginson attended NHDOT sponsored Context Sensitive Solution (CSS) training in its infancy and has applied CSS and complete street principles to incorporate public participation input on design projects..

#### *Representative Project Experience*

**NHDOT 15402 Whittier Street over Cocheco River, Dover, NH:** Project manager responsible for overseeing the preparation of permits, design plans and construction documents for the replacement of the Whittier Street Bridge. The project included relocation of aerial utilities and water line; preparation of Alteration of Terrain, Shoreland Protection and Wetland permits, as well as ROW negotiations to acquire easements on abutting properties.

**City of Keene NH Route 12 over Beaver Brook Box Culvert Replacement, Keene, NH:** Senior transportation engineer for the roadway portion of the final design and construction services for the replacement of the red list twin plate arch

culverts carrying Route 12 over Beaver Brook. Responsibilities included roadway, drainage design and oversight, utility coordination and support of environmental permitting. Project is municipally managed and constructed through municipal and state aid bridge-aid funds.

YEARS WITH WSP: 17

YEARS TOTAL: 27

#### EDUCATION

BS, Civil Engineering

#### REGISTRATIONS

Professional Engineer: NH, VT, ME

NH Local Public Agency Certification



**TIM POLSON, PE, LPA**  
*Bridge Design Lead*

**Career Summary**

Mr. Polson is a member of the Northeast structures team at WSP, serving as a senior structural engineer in the Merrimack, NH office. His work experience includes bridge inspections and ratings for both highway and rail structures, bridge rehabilitations/widenings and bridge replacements. He has prepared engineering structural plans, detailed quantity estimates, and has developed construction specifications and special provisions and both project design and construction schedules. Mr. Polson’s rail bridge design experience has required the use of Accelerated Bridge Construction (ABC) techniques, utilizing specialty heavy lift cranes and Self-Propelled Modular Transporters (SPMTs) to aid in expedited construction.

**Representative Project Experience**

**NHDOT 15402 Whittier Street Over Cocheco River Dover, NH:** Bridge design/ structural engineer responsible for preparing of permits, design plans and construction documents for the replacement of the Whittier Street Bridge.

**Bunker Creek ABC Bridge Replacement, Durham, NH:** This design-build project included the replacement of the existing concrete rigid frame structure with a

single-span integral abutment bridge founded on micropiles. The bridge was installed during a four day roadway closure. The superstructure was comprised of Precast Bridge Units (PBUs), each consisting of two steel girders and bare concrete deck. Ultra-High Performance Concrete (UHPC) was used for the longitudinal joints between the PBUs as well as for the end joint between the PBUs and pile cap. Served as the structural QC reviewer for the design calculations, bridge plans, and special provisions.

YEARS WITH WSP: 6  
 YEARS TOTAL: 12  
 EDUCATION  
 BS, Civil Engineering  
 REGISTRATIONS  
 Professional Engineer: NH



**LIVIU SFINTESCU, PE**  
*Highway Design Project Lead*

**Career Summary**

Mr. Sfintescu currently serves as WSP’s Highway Group Manager in northern New England leading a team of 11 engineers and CAD technicians. Mr. Sfintescu has a thorough knowledge of all types of transportation projects ranging from small municipal projects to major design contracts. On his various assignments he has been responsible for preparing plans, specifications and cost estimates, providing construction support, project management, and coordination between various disciplines such as roadway, structural, drainage, utilities, and traffic.

**Representative Project Experience**

**City of Keene NH Route 12 over Beaver Brook, Keene, NH:** Project manager for this LPA project replacing a municipal red listed bridge on Route 12. Traffic control is a key aspect of this project; it is in a high traffic location, just south of the Route 101 intersection. Specific responsibilities included preparation of traffic control and roadway design package and supervision of the other project elements.

**NHDOT, NH Route 101 Widening, Bedford, NH:** Project manager for the widening

of NH Route 101 from two to four lanes. Responsible for preparing final design documents, right-of-way plans and assisting in the development of permitting applications. Prepared traffic control plans and contributed to many aspects of the roadway design. Participated in numerous design and project management meetings with NHDOT, the Town of Bedford, and utility companies.

YEARS WITH WSP: 22  
 YEARS TOTAL: 23  
 EDUCATION  
 BS, Civil Engineering  
 REGISTRATIONS  
 Professional Engineer: NH,  
 MA, VA, GA, NV





**ERIK MAKI, PE, PTOE**  
*Traffic Impact Studies/Traffic*

**Career Summary**

Mr. Maki is the Director of Traffic Engineering Services for WSP’s New England district. He has 30 years’ experience in all facets of transportation engineering and planning in support of large-scale private development and public works projects, with expertise in traffic signal analysis and corridor design, Complete Streets, and temporary traffic controls during construction.

**Representative Project Experience**

**MassDOT Highway Division, Statewide On-Call Traffic Engineering Services, Design Manager:** Responsible for six consecutive, three-year contracts to provide on-call traffic engineering services statewide. These contracts have resulted in a range of traffic sign and safety improvements along Interstate, US and state-numbered highways, including the installation of new traffic and guide signs, guard rail protection, intelligent transportation systems (ITS) and other driver information systems.

YEARS WITH WSP: 7  
 YEARS TOTAL: 30  
 EDUCATION  
 BS, Civil Engineering  
 REGISTRATIONS  
 Professional Engineer: MA

**Boston Public Works/Boston Transportation Departments, Rutherford Avenue and Sullivan Square Project, Project Manager:** This \$200M project involves the reconstruction of a 1.5-mile urban corridor that experiences over 55,000 vehicle trips per day. It includes implementing a road diet, reducing Rutherford Avenue from eight lanes to five, and designing separated bike and pedestrian facilities, dedicated BRT lanes and linear open space. Facilitated a series of community information meetings to build consensus for the project’s urban design and transportation alternatives. In Sullivan Square the project includes shifting Main Street and moving utilities so Transit Oriented Development parcels can be created.



**DARREN HARDY, LLS**  
*Survey/ROW*

**Career Summary**

Mr. Hardy understands the complexities of ROW, property boundary and utility issues. He was instrumental in the introduction of 3D laser scanning to state and municipal agencies demonstrating the benefits of using this technology as a survey tool for design projects. He chaired a committee in the NH Land Surveyors Association that provided guidance to the NHDOT ROW Bureau to rewrite the Department’s survey technical standards manual, which were implemented on the F.E. Everett Turnpike Survey, one of the first survey projects in the state under these guidelines.

**Representative Project Experience**

**F.E. Everett Turnpike, Nashua, Merrimack, Bedford and Manchester, NH:** Project manager for an on the ground survey for road detail for road widening improvement project. Conducted a boundary survey of the ROW and abutting parcels along the corridor, including five interchanges and 13 bridge structures. The survey was performed in accordance with the NHDOT survey technical standards and ROW plans were created along the corridor to recordable

YEARS WITH WSP: 26  
 YEARS TOTAL: 28  
 EDUCATION  
 BS, Survey Engineering  
 REGISTRATIONS  
 Licensed Land Surveyor: NH,  
 MA, ME

standards for the registry of deeds.

**Slayton Hill Road, Lebanon, NH:** Project manager for road detail ground survey for road improvements required as a result of road washouts. Conducted an engineering survey and a survey of the ROW and abutting parcels along the corridor and two bridge structures. The field survey included conditions and topographic detail. Easement plans and legal descriptions were created for acquisitions along the corridor and were suitable for recording at the registry of deeds. Digital files were submitted in CAD format.



## HEATHER STORLAZZI WARD, CWS

*Environmental Permitting*

### *Career Summary*

Heather has over 20 years of experience in natural resource assessments, wetland delineation, wetland functional assessments, and state and federal wetland permitting. In addition to natural resource assessments, Heather is experienced in Third Party environmental inspection (3PI) for Maine DEP, wetland mitigation sequencing and design, and environmental restoration.

Heather is a member of the New Hampshire Association of Natural Resource Scientists and Maine Association of Wetland Scientists and is an active member of the Vernal Pool Technical Committee.

Heather worked in New Hampshire for over 8 years as an environmental consultant and wetland scientist and is experienced in the Maine and New Hampshire permit process at the Federal, State and local levels. Local permitting in New Hampshire often required the preparation of Environmental Impact Assessments (EIS), presented to Planning Boards and Conservation Commissions. Heather is responsible for the management of wetland permitting and wetland mitigation projects, providing permitting and regulatory counsel and preparation of federal, state and local permit applications for projects throughout northern New England. She coordinates with local, state and federal regulators and provides documentation of avoidance and minimization efforts made during project design.

YEARS WITH TRC SOLUTIONS: 3

YEARS TOTAL: 20

### EDUCATION

BS, Environmental Science and Natural History

### REGISTRATIONS

New Hampshire Certified Wetland Scientist

Maine Certification in Erosion and Sedimentation Control

Heather assists clients in the preparation of both on-site and off-site alternatives analyses (including Clean Water Act Sections 401/404 and 404(b)(1) Analyses).



## JEFFREY LLOYD, PE

*Geotechnical*

### *Career Summary*

Mr. Lloyd is a Senior Geotechnical Engineer with responsibilities including project management and technical assignments for projects involving the collection of geotechnical data, data interpretation, computer modelling, and preparation of calculations and reports for geotechnical and other projects. Mr. Lloyd also manages our New England geotechnical engineering and geohazards team with ten engineers and geologists throughout New England.

### *Representative Project Experience*

**VTrans, Slope Stabilization, Project Manager:** PM for slope stabilization design for a shallow landslide along VT-125 that has been impacting the road for decades and was the subject of previous remediation attempts. Tasks included data review of previous site investigations and remediation work; a field program to fill in data-gaps; an alternatives evaluation to look at potential remediation's, including retaining walls, groundwater depressurization, and lowering the grade of the road; and managing final design efforts. .

**MaineDOT, Slope Stabilization, Project Manager:** PM for slope stabilization design for two soil slopes along Rt. 161 that are being eroded by the St. John River in far

northern Maine. Tasks included site reconnaissance; managing a field program that included geologic, geotechnical, and geomorphic field mapping; project management for hydraulic and slope stability modelling; development of remedial alternative approaches; preliminary and final civil design, and support during construction for the next two construction seasons.



## Applicable Work Experience

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## 6 APPENDIX - APPLICABLE WORK EXPERIENCE

### NHDOT 15402 Whittier Street Over Cocheco River, Dover, NH

**FIRM:** WSP USA Inc.

**STATUS:** Completed 2019

**CONSTRUCTION COST:** \$3.3M

**CLIENT:** City of Dover

**RELEVANT FEATURES:**

- Replacement of red-listed bridge
- Roadway alignment and profile deficiency corrections
- Hydraulic analysis and geomorphic assessment
- Environmental permitting
- Utility relocations
- Guardrail design



WSP prepared permits, design plans and construction documents for the replacement of the Whittier Street Bridge (NHDOT 111/132) over the Cocheco River and approximately 1,000-ft of approach roadway. The new alignment corrects the horizontal reverse curve and drainage issues on the existing bridge and adds a five-foot sidewalk to connect the existing sidewalks on either side of the river.

The project included relocation of aerial utilities and water line; preparation of Alteration of Terrain, Shoreland Protection and Wetland permits, as well as ROW negotiations to acquire easements on abutting properties.

### Mount Support Road Improvements, Lebanon, NH

**FIRM:** WSP USA Inc.

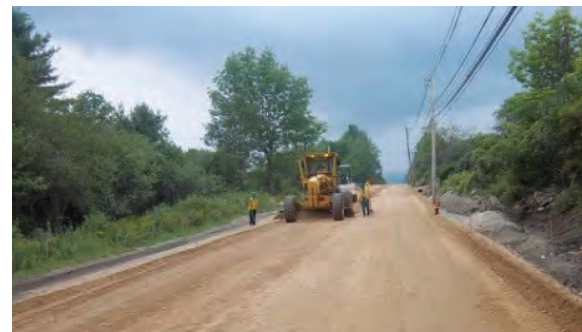
**STATUS:** Completed

**CONSTRUCTION COST:** \$3.7M

**CLIENT:** City of Lebanon

**RELEVANT FEATURES:**

- Roadway reconstruction
- Multi-use pathway
- Environmental permitting
- Drainage design and BMP evaluation



WSP completed planning, design, and construction administration for Mount Support Road. The road was in an advanced state of disrepair with poor drainage and undersized cross culverts.

This project has included nearly every element of municipal construction such as major culvert replacement, multi-use path, pervious concrete sidewalk, retaining walls, decorative fencing, guardrail, water service facilities, sanitary sewer facilities, roadway reconstruction, bus stops, signs, pavement markings, and traffic signals. WSP provided services from planning to completion of construction. These activities included:

- |   |                                 |
|---|---------------------------------|
| • Roadway preliminary and final design                | • Change orders or work orders  |
| • Water line design                                   | • Shop drawing review           |
| • Preparation of specifications and bid documents     | • Acceptance testing oversight  |
| • Wetland permitting                                  | • Application for payment       |
| • Culvert replacement design                          | • Contract completion documents |
| • Construction administration and inspection services | • Record drawing                |

Design features include: a 1.1-mile, 10-ft. wide multi-use path connecting the residential communities along Mount Support with commuter destinations; 1,500 feet of pervious concrete sidewalk utilized to address environmental concerns associated with storm water runoff; and box culverts sized to accommodate habitat connectivity.

## NHDOT 26505 NH12 (Main Street) Over Beaver Brook, Keene, NH

**FIRM:** WSP USA Inc.

**STATUS:** Completed, 2020

**CONSTRUCTION COST:** \$2.3M

**CLIENT:** City of Keene

**RELEVANT FEATURES:**

- Replacement of red-listed bridge
- Hydraulic analysis and geomorphic assessment
- Staged construction in high traffic area
- Environmental permitting
- Utility relocations
- Guardrail design



WSP preparation of permits, design plans and construction documents for the replacement of the Main Street Bridge (NHDOT 137/059) over Beaver Brook. The new structure will be constructed in phases by temporarily diverting the stream and utilizing precast elements to minimize in-water work and duration of traffic impacts. The project includes:

- Hydraulic analysis to ensure the proposed structure meets the NH Stream Crossing guidelines to the maximum extent practicable
- Preparation of wetlands and NHDOT temporary drive permits
- Design of gabion walls protected by plants and live stakes in order to stabilize the steep streambank
- Relocation of waterline, sewer, and communication conduits

## Bridge Street Railroad Accelerated Bridge Construction, Hartford, VT

**FIRM:** WSP USA Inc.

**STATUS:** Completed 2013

**CONSTRUCTION COST:** \$2.2M

**CLIENT:** Town of Hartford

**RELEVANT FEATURES:**

- Accelerated Bridge Construction
- Railroad coordination
- Pedestrian accommodation
- Street scaping



WSP designed the replacement of the historic railroad bridge over Bridge Street. This bridge was a vital resource to the railroad as well as the traveling public.

WSP submitted a design concept which utilized Accelerated Bridge Construction (ABC) techniques. This concept used precast concrete beams (one beam per rail) that were transversely post tensioned to provide a closed deck bridge. The significant advantage of the scheme was that the two track bridges could be built in one construction season. The majority of the new bridge construction work was completed while rail traffic was still maintained on the existing bridge as the contract allowed for only four days of total shutdown of the train traffic.

This bridge project combined many of the “classic” ABC techniques of utilizing pre-cast elements and short closure periods with unique and innovative railroad complexities. There are common essential factors for a successful project, whether a rail or highway bridge. Some of these include limiting the unknowns during construction and giving the contractor flexibility to utilize their strengths. The most important factor is communication between the contractor, designer, client and inspectors.

## Winnisquam Scenic Trail Phase I, Belmont, NH

**FIRM:** WSP USA Inc.

**STATUS:** Completed, 2016

**CONSTRUCTION COST:** \$800K

**CLIENT:** Town of Belmont

**RELEVANT FEATURES:**

- Trail design
- Environmental permitting
- Supported Transportation Enhancement Grant
- Guardrail design
- Utility coordination



The Town of Belmont, through the Belmont Recreation & Alternative Transportation Team, was awarded a NHDOT Transportation Enhancement Grant to build Phase 1 of the three-phase project from the Laconia city line to the Mosquito Bridge. WSP provided trail design, permitting and bid document preparation.

The path moves along the railroad and through wooded conservation lands and across a donated land easement to offer the rider nature all around. Our team oversaw the ROW requirements, some of which were donations to the project. The Winnepesaukee River Basin Program (WBRP) major sewer interceptor line runs adjacent to the railroad and the design adjusted the trail location to ensure the sewer line was not impacted.

Permitting for the trail was also a key project concern. Located along the shoreline of Lake Winnisquam, WSP was involved in the final plan preparation design review revisions and permitting through NHDES Shoreland and Alteration of Terrain. Work also included full field work and reporting for Phase 1A and 1B Archeology study.

With funding from the Transportation Enhancement Grant, WSP was attune to the project costs and budget. Our team designed a trail that would safely accommodate bikes and pedestrians and improve the Town of Belmont. The project was completed on time and on budget.

Throughout the project duration there was significant stakeholder involvement. Our team worked with not only NHDOT and the Town of Belmont, but the trail committee, as well as local community representatives. Timber guard rails and chain link fence were incorporated for the steeper slope locations for safety and aesthetics.

## Duck Farm Road over Mill River, Fairfield, CT

**FIRM:** WSP USA Inc.

**STATUS:** On-going

**CONSTRUCTION COST:** \$3.4M

**CLIENT:** City of Fairfield

**RELEVANT FEATURES:**

- Preliminary and final design
- Environmental permitting
- Utility relocations
- Hazardous materials assessment
- Drainage design



The Duck Farm Road Bridge crossing Mill River is an two-span structure composed of steel girders with a reinforced concrete deck supported by reinforced concrete abutments and pier on spread footings. The bridge's structural deficiency required a posting prohibiting vehicles over of 33 tons from crossing the bridge. WSP designed a full bridge replacement of the structure under the Federal Local Bridge Program.

Key issues for this project include stakeholder coordination, hydraulic design, utility coordination, safety deficiencies, and environmental permitting. WSP has completed preliminary design for the bridge replacement and is currently completing permit applications and final design. Initial work completed by WSP included a hazardous material assessment, and evaluation on how to manage these hazardous materials during the construction phase.

## Replacement of Bridge 10 over New Haven River, New Haven, VT

**FIRM:** WSP USA Inc.

**STATUS:** Completed

**CONSTRUCTION COST:** \$3.56M

**CLIENT:** VTrans

**RELEVANT FEATURES:**

- Accelerated Bridge Construction
- Jointless bridge
- Hydraulic improvements
- Alignment and profile improvements
- Prescriptive special provisions for precast sequencing



This Accelerated Bridge Construction (ABC) project consisted of the replacement of a 170-ft three span bridge. The replacement bridge is a 164-ft, two-span curved steel girder superstructure with precast integral abutments on steel piles. The central pier consists of an integral pier cap connected to a single 6-ft diameter column supported by an 8-ft diameter drilled shaft. This structure has no joints or bearings, thereby decreasing future maintenance costs and increasing the service life of the structure.

This removal of the structure and the construction of this complex bridge was successfully completed in 72 days. The use of precast abutment stems and the precast cap system significantly improved the time to completion.

The use of an integral pier cap connection was necessitated by the limited hydraulic opening and a vertical roadway alignment that could not be significantly modified without extensive adjustment to the approaches. The end result was an innovative design that pulled the pier cap up to the girder level, which reduced hydraulic impacts during periods of higher flow and lowered the potential for debris collection at the pier location.

## NHDOT Statewide Bridge On-Call, Various Locations, NH

**FIRM:** WSP USA Inc.

**STATUS:** On-going

**CONSTRUCTION COST:** Varies by assignment

**CLIENT:** NHDOT

**RELEVANT FEATURES:**

- Structural design
- Environmental permitting
- Traffic control/detours
- Hydrology



WSP was selected in 2019 to provide on call bridge services to the NHDOT bridge group. Over the last two years, WSP has been assigned eight task orders to work as an extension of DOT staff.

- NH 12 over NHRR, Surry: WSP will be designing the deck replacement as well as rehabilitation/repairs to the abutments.
- Overhead Sign Structures (OHSS), Keene: WSP reviewed fabrication drawings and calculations for a proposed OHSS and designed the foundations and prepared the design drawings.
- Pease Marine Terminal Expansion, Portsmouth: This dock extension project for the Pease Development Authority (PDA) is unique for NHDOT staff. WSP reviewed plans and estimates on behalf of NHDOT and provide comments to the PDA.
- Bridge Design Statewide, Canaan: This project consists of Bridge Preservation design for three bridges along Route 4. Preservation activities include partial and full depth deck patching, joint replacements, bearing rehabilitation and concrete repair.
- 189 over Rte 114, Sutton: WSP designed the bridge deck replacements for two bridges over the interstate.

## Phase IV Traffic Signal System Upgrade, Norwalk, CT

**FIRM:** WSP USA Inc.

**STATUS:** On-going

**CONSTRUCTION COST:** \$3.5M

**CLIENT:** City of Norwalk

**RELEVANT FEATURES:**

- Traffic engineering
- Signal design
- Traffic signal upgrade, video detection installation
- Signal timing optimization
- CMAQ reporting



Under Congestion Mitigation Air Quality (CMAQ) funding program, WSP is designing and implementing an intelligent transportation system on City and the State-owned roadway facilities. The project goal is to improve operating conditions and maximize capacity during incidents on I-95 between interchange 14 through 16 within the City and improve overall traffic signal operations within the City limits. WSP is providing the following services: redesign and upgrade of five new intersections along Route 1/Van Buren Avenue; design for the installation of up to 15 DMS along I-95 diversionary routes; design for the installation of six roadway weather sensors (probes) on local roads (i.e., I-95 diversionary routes); development of traffic signal optimization timing plans for up to 70 traffic signals within the City limits, inclusive of signal adaptive control along the I-95 diversionary routes for incident management. WSP also performs shop drawing/catalogue-cuts/calculation and reviews for each item in the construction contract. The WSP team will provide construction administration and inspection, assist the City with problem resolution relative to construction activities in the field as well as the system interfaces with DPW infrastructure. Upon system implementation, WSP conduct review of verification test plans submitted by the Contractor and make recommendations to the City with respect to the acceptability of the test plans.

## Landslide Mitigation Design, Duxbury, VT

**FIRM:** WSP USA Inc.

**STATUS:** Completed

**CONSTRUCTION COST:** \$127K

**CLIENT:** Town of Duxbury, VT

**RELEVANT FEATURES:**

- Back-analysis of slope stability
- Geotechnical drilling
- Mitigation alternatives evaluation



WSP teamed with VHB to provide engineering services to develop mitigation designs for the repair of a slope failure adjacent to and including part of Crossett Hill Road on the Crossett Brook in Duxbury, Vermont.

To develop a mitigation approach, WSP/VHB reviewed existing data and reports prepared by FEMA following previous slides at this location, evaluated available LiDAR data, conducted a geotechnical investigation focusing on the subsurface clay layer and water table, performed a topographic survey of existing conditions, and performed a field assessment of high water and river erosion. WSP performed a back analysis of the existing slope stability to evaluate soil properties and potential modes of failure.

The final design recommendation consisted of a rip rap counter berm and slope treatment with curtain drains spaced across the road and extending down to the top of the clay confining layer. WSP/VHB prepared permit level drawings, applications, and cost estimate, prepared ROW drawings and aided the Town in easement negotiations and preparation of easement drawings, and prepared construction details and final design drawings for submittal to FEMA and inclusion in the construction bid package.





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