New Hampshire Department of Transportation

Letter of Interest Highway and/ or Bridge Design Engineering Services

AECOM

STATEWIDE ON-CALL PRELIMINARY ENGINEERING PREQUALIFIED LIST OF CONSULTANTS FOR LOCALLY ADMINISTERED LOCAL PUBLIC AGENCY (LPA) QUALIFICATIONS-BASED SELECTION CONTRACTS

January 18, 2024

Delivering a better world

AECOM
1155 Elm Street, Suite 401
Manchester, NH 03101
www.aecom.com
603 606 4800

February 18, 2024

Tobey Reynolds, PE
Assistant Director of Project Development
Chairperson, Consultant Selection Committee
New Hampshire Doepartment of Transportation
Hazen Drive, PO Box 483
Concord, NH 03302

via E-MAIL

Subject: **Letter of Interest for Statewide On-Call Preliminary Engineering Prequalified List of Consultants for Locally Administered Local Public Agency (LPA) Qualifications-Based Selection Contracts - Highway and Bridge Design Services**

Dear Mr. Reynolds:

Local Public Agencies (LPAs) across New Hampshire are busy and frequently understaffed. New Hampshire Department of Transportation (NHDOT) attempts to streamline the transportation infrastructure design and planning process by providing a list of prequalified firms for selection and use locally in qualifications-based selection (QBS) contracts. AECOM is excited to present our team and experience for prequalification in Preliminary Engineering.

Our **Program Manager, Dirk Grotenhuis**, is a New Hampshire (NH) Professional Engineer (PE) and has been leading transportation projects in NH and across New England for 30 years. Dirk previously held NHDOT LPA certification for many years and has assisted municipalities including Canaan, Portsmouth, Hillsborough, Dover, Concord, Somersworth, Peterborough and dozens more. He works out of our Manchester, NH office and will be supported by our 46 employees in Manchester as well as our 7 offices and 900 professionals across New England. We are pleased to have two NHDOT-certified Local Public Agency (LPA) staff members, Laura Machala and Sonnia Tejada and our team is also augmented by NH land survey licensed Doucet Engineering and geotechnical specialist Schonewald Engineering Associates, Inc.

The AECOM team is community- and implementation-focused. We are looking forward to working with local public agencies on transportation infrastructure and related projects; we are able to provide a full suite of services across all scales. Once a project is identified by a community, our **Highway Lead, Dave Patnaude**, our **Bridge Lead, Joe Allwarden**, and our specialty service leads will work with Dirk, Laura and Sonnia to identify appropriate team members based on the type of project, anticipated level of design, and auxiliary/supplemental services needed. Our depth of services and local office make us nimble when responding to requests.

Please contact me using the information in my signature if you have any questions.

Sincerely,

AECOM Technical Services, Inc.

Dirk Grotenhuis, PE, LEED AP
Vice President and Program Manager
Dirk.Grotenhuis@aecom.com
603-339-3774

Table of Contents

01

Project Understanding and Approach

Project Understanding and Approach

New Hampshire Local Public Agencies (LPAs) need access to experienced multidisciplinary professionals to advance transportation projects. The New Hampshire Department of Transportation (NHDOT) assists LPAs by developing a list of qualified consultants from which a local public agency can short list through a Qualifications Based Selection (QBS) and streamline the procurement process. These qualifications are applicable for locally managed projects with federal and/or state funding sources administered through NHDOT.

The AECOM team is uniquely qualified to provide professional project management, engineering, design, planning and environmental services due to the breadth of our experience working across New England.

Project Management
We understand that project size, type and requests will vary and will be responded to in a timely manner. Our team members' proximity, availability, and relationships will allow effective communication to address requirements of each assignment. The team understands that all of the projects require compliance with regulatory processes.

Multi-year prequalification lists place a premium on the organization and responsiveness of the consultant. Varying needs over different spans of time require a depth of staff, proximity to communities, and a proven management structure. New Hampshire municipalities and NHDOT can be confident in the ability of AECOM to be nimble in responding to requests as is evident by our long history of successful assignments through on-call contracts across New England.

As Program Manger, Dirk Grotenhuis, PE, LEED AP, a NH-certified Professional Engineer (PE) will be the single Point-of-Contact (POC) for the local public agency requesting a qualifications package for a simplified qualifications-based selection (QBS). Once a Task Lead and/or an Certified LPA are identified based on the type of work to be completed and staff availability, that individual will become the POC for the municipality for the duration of the project.

AECOM Project Management Process

Highway Design
Highway designers will be led by Dave Patnaude, PE. Dave has access to a bench of designers with a range of skills, specialties, and years of experience to engage based on what an assignment requires. Our core roadway teams focus on the planning, design and plan development for projects such as the **Salem (MA) Canal Street rehabilitation project** with a mix of highway, multimodal, drainage and ADA improvements. Similar to the Salem project, our roadway projects include multimodal considerations including bike lanes, sidewalks, separated paths and ADA compliance.

On projects such as the **Capital Corridor Rail project**, the work included the addition of park and ride lots, rail crossing upgrades and architectural amenities in support of transportation. An important part of most projects are the adjacent areas where curbline and drainage improvements are required and the roadway treatments range from overlay, inlay or more substantial pavement rehabilitation.

AECOM develops designs using CAD software and takes a collaborative approach to the development of design alternatives, identifying and discussing pros and cons of alternatives based on preliminary cost estimates and ability to meet intended project goals.

Bridge Design
AECOM bridge designers will be led by Joe Allwarden, PE and Kristina Hanes. Joe and Kristina have a team of structural engineers with experience across a range of structures through examples like the **small bridge program in Reading, Massachusetts** and the **NH Turnpike Statewide On-Call Bridge Design and Scour Countermeasures,** which included Scour Stabilization at Woodstock.

Additional Work Efforts Required
AECOM is pleased to be able to offer a wide array of services, some specialized, including project management, transportation planning, technical writing, pavement investigations and planning, environmental investigations and permitting, traffic control design, traffic analysis and engineering, geotechnical engineering, hydraulic calculations, cultural resources, topographic survey, ROW, alternative delivery, stakeholder and agency coordination, and public involvement.
Some examples of specialty work assignments for New England communities include:

- **City of Nashua, NH**, evaluating the feasibility of extending the commuter rail line from Lowell to Nashua as the first phase of an commuter rail extension to Manchester
- **City of Manchester, NH**, implemented a pavement management and performance assessment system
- **City of Malden, MA** Transit Action Plan, developed an action plan to improve bicycle and pedestrian access to bus stops and stations -20+ Communities across Massachusetts (and growing), developing conceptual designs for Safe Routes to School projects (e.g. designs for sidewalks, bike lanes, multi-use paths, crosswalks, signals, lighting, bus stop access, traffic calming devices)
- **Town of Brunswick, ME** Transit Study, conducted substitutional public involvement that requested in improved access to public transit

LPA Process Understanding and Approach
AECOM understands the LPA Process as it applies to the administration, consultant selection, project development, design, bidding, and construction of transportation projects using Federal Highway Administration funds. Just as important is the historic knowledge of the LPA areas that often lack detail or execution, including:

- Project reporting/tracking
- Consultant selection
- Utility agreements
- Bidding
- Construction pay items/payment
- Change orders
- Quality Assurance procedures

AECOM will help guide the municipality through the process and communicate with NHDOT as the various phases of the project proceeds. The scoping meeting and subsequent project checklist will ensure compliance with the LPA funds and process.

02

Organizational Chart

Organizational Chart

Key:
Personnel are AECOM staff unless unless otherwise indicated
◆ DBE
DS: Doucet Survey, LLC
SEA: Schonewald Engineering Associates, Inc. (SEA)

New Hampshire DOT
Department of Transportation

Program Manager

Dirk Grotenhuis, PE, LEED AP

Local Project Administrators

Laura Machala, AICP, ENV SP, LPA

Sonnia Tejada, ENV SP, LPA

Highway Design

David Patnaude, PE

Kathy Schaeffer, PE
Chris Dunlap, PE
Dennis Murtagh, PE
Matthew Mullally, PE
Keven Mulcahy, PE

Bridge Design

Joseph Allwarden, PE

Kristina Hanes, PE
Mike Brassard, PE
Diana McCullough, PE
Chris Pendagast
Regan Kelly
John McQuaid

Special/Support Services

Planning
Jill Cahoon, GISP, ENV SP
Casey Hardin, PE
Jay Doyle, AICP
Patrick Higgins

Pavement
Gerhard du Toit, PE
Jonathan Gould, PE
Rasool Nemati, PhD, PE
Sadichchha Sharma, PE

Active Transportation
Evan Moorman, AICP
Izaak Onos, MPPM

ITS
Chris Chaffee, PE, PTOE
Sushma Srinivas, PhD

Traffic Engineering
Jason Sobel, PE , PTOE

Environmental
Jennifer Doyle-Breen, PWS
Dave Derrig, Jr., AICP

Environmental Permitting
Nicole Callahan
Melissa Ryan

Geotechnical
Isabel Schonewald, PE (SEA) ◆

Landscape Architecture
Lorayne Black, RLA

Cultural Resources
Kaitlin Pluskota

Survey/ROW
Doucet Survey (DS)

Hydraulics/Drainage
Mick Dean, EIT

Utilities
Michelle Murphy

Public Involvement
Emily Becker
Luke Van Denend

03

Project Team

Project Team

The AECOM Team, consisting of AECOM, Doucet Survey, LLC and Schonewald Engineering Associates, Inc., brings comprehensive, industry leading experience to advance NHDOT's LPA program. We have all of the necessary skills and experience to effectively respond to any requests from municipalities.

AECOM is a premier, fully integrated professional and technical services firm, positioned to plan, design, and build infrastructure assets around the world for public and private sector clients. With nearly 50,000 employees — including planners, architects, engineers, designers, scientists and management and construction services professionals — AECOM is the #1 ranked Transportation firm in Engineering News-Record's The Top 500 Design Firms Sourcebook, and the #1 design firm in New England. AECOM's transportation practice leads the way in the planning, design, and project management of major transportation systems across all modes.

Since the 1970s, AECOM has been providing transportation planning and engineering services for a broad range of clients, including state DOTs, transit providers, municipalities, and private clients throughout New England. Our New England offices currently serve as home for over 900 professionals. With 45 employees at our offices in Manchester, NH, we are also supported by offices in Portland, ME; Providence, RI; Boston, MA; Chelmsford, MA; and Rocky Hill, CT.

Key Staff

Program Manager Dirk Grotenhuis, PE, LEED AP, based in Manchester, has over 30 years of diverse civil engineering with direct experience in the management and development of on-call transportation services, technical and planning studies, design plans, specifications, and cost estimates for projects involving site development, roadways, urban streets, aviation, bicycle/pedestrian facilities, and utility infrastructure. Mr. Grotenhuis provides a deep knowledge in sustainable, low-impact engineering practices and is experienced in public presentations, planning, and meeting facilitation.

Laura Machala is a **certified LPA** and senior transportation planner with 16Diamon years of planning experience grounded in equity and sustainability. Her work has focused on: transit, paratransit, bike/ped, land use, climate and energy. Laura has experience coordinating with multiple transit providers and other local, state and federal agencies, identifying best management practices as well as new and emerging technology and service provision strategies.

Sonnia Tejada is a **certified LPA** and serves as Operational Manager for the Pavement Group at AECOM and also a Project Manager. Sonnia conducts project reviews, ensures the implementation of best practices across New England, and demonstrates a remarkable blend of technical expertise, project management skills, commitment to quality and sustainability,and effective communication. Her strategic leadership consistently drives successful project outcomes, fostering a collaborative and innovative work environment tailored to clients' needs and goals.

David Patnaude, PE will be our **Highway Engineering Lead.** David is the New England Civil Group leader for transportation. His project experience includes engineering and oversight for all aspects of design including horizontal and vertical alignments, wetland impacts, grading and drainage, erosion control, stormwater management, pavement design, pavement markings and signage, and traffic management.

Joseph Allwarden, PE will serve as our Bridge Engineering Lead. Joe is a NH resident, brings over 35 years of bridge design, inspection, rating and rehabilitation experience in NH and other New England states, as well as background in managing on-call bridge assignments for NHDOT, Maine DOT and MassDOT.

Schonewald Engineering Associates, Inc. (SEA) will handle the geotechnical needs for this program. Founded by Isabel (Be) Schonewald, PE, SEA's engineering specializations include traditional geotechnical, transportation geotechnics, earthwork/ geosynthetics, soft soils, and geotechnical instrumentation. SEA has successfully completed numerous bridge, traffic, multimodal, highway, and marine facility design projects; embankment dam and transportation embankment stability and settlement mitigation projects; and traditional building design geotechnical projects. SEA is a NHDOT Certified W/ DBE and an SBA Woman-Owned Small Business.

Doucet Survey, LLC (DS) will be repsonsible for ROW/Surveying. Doucet has survey crews under the direct supervision of licensed Professional Surveyors. Their experience includes hundreds of miles of highway survey and over 150 bridge surveys.

AECOM STAFF ASSIGNMENTS

Role	Name	Years Experience	Years w/ Firm	LPA Certified	Project Management	Highway Design	Bridge Design	Planning	Environmental Mgmnt.	Cultural Resources	Permitting	Traffic Control/Analysis	Pavement Mgmnt/Design	Hydraulics/Drainage	Geotechnical	Surveying	Right of Way (ROW)	Public Involvement	Alt. Procurement
Program Manager	Dirk Grotenhuis, PE	30	8		✓	✓		✓	✓		✓	✓		✓			✓	✓	✓
Local Project Admin	Laura Machala, AICP, LPA	16	2	✓	✓			✓										✓	
Local Project Admin	Sonnia Tejada, ENV SP, LPA	20	9	✓	✓	✓					✓	✓	✓		✓		✓		
Highway Eng. Lead	David Patnaude, PE	32	9		✓	✓											✓		✓
Sr. Highway Design	Kathy Schaeffer, PE	37	35		✓	✓					✓			✓			✓		
Sr. Highway Design	Chris Dunlap, PE	38	8		✓	✓								✓			✓		
Highway Design	Dennis Murtagh, PE	13	7		✓	✓								✓			✓		✓
Highway Design	Keven Mulcahy, PE	6	6			✓								✓			✓		✓
Bridge Eng. Lead	Joseph Allwarden, PE	36	15		✓		✓												
Sr. Bridge Design	Kristina Hanes, PE	34	6		✓		✓												
Sr. Bridge Design	Mike Brassard, PE	15	6		✓		✓												
Bridge Design	Chris Pendagast	6	2				✓												
Bridge Design	Regan Kelly	2	2				✓												
Planning	Jill Cahoon, GISP, ENV SP	23	21		✓	✓	✓	✓										✓	
Planning	Jay Doyle, AICP	43	38		✓			✓			✓	✓							
Pavement Mgmnt	Gerhard du Toit	34	7		✓								✓						
Pavement Mgmnt	Jonathan Gould, PE	24	10		✓								✓		✓				
Active Transportation	Evan Moorman, AICP	8	2		✓			✓	✓			✓						✓	
Active Transportation	Izaak Onos, MPPM	2	1					✓										✓	
ITS	Chris Chaffee, PE, PTOE	13	10		✓			✓				✓							
ITS	Sushma Srinivas, PhD	8	6		✓							✓							
Traffic Engineering	Jason Sobel, PE, PTOE	21	1		✓	✓		✓				✓							
Environmental	Jennifer Doyle-Breen	28	26		✓				✓	✓	✓			✓					
Environmental	Dave Derrig, Jr., AICP	40	33				✓		✓	✓		✓						✓	
Environ. Permitting	Nicole Callahan	17	11		✓				✓	✓	✓								
Environ. Permitting	Melissa Ryan	21	9		✓			✓	✓	✓	✓					✓	✓	✓	
Geotechnical Eng.	Isabel Schonewald, PE	38	18		✓										✓				
Landscape Arch.	Lorayne Black, RLA	35	11		✓	✓		✓										✓	
Cultural Resources	Kaitlin Pluskota	9	9							✓								✓	
Survey/ROW	Doucet Survey, LLC															✓	✓		
Hydraulics/Drainage	Mick Dean, EIT	7	7			✓					✓			✓					
Utilities	Michelle Murphy	5	5			✓					✓			✓					
Public Involvement	Emily Becker	11	8		✓			✓										✓	
Public Involvement	Luke Van Denend	1	1					✓										✓	

SUBCONSULTANTS

Schonewald Engineering Associates - Geotechnical Engineering
Doucet Survey, LLC- Survey/ROW

04

References

References

Project Reference	Project/Relevance
1. Charles Blackman NHDOT TSMO Bureau Charles.Blackman@dot.nh.gov Phone: (603) 271-6862	NHDOT Statewide Intelligent Transportation System Services, New Hampshire
2. Shelley Winters Director of Aeronautics, Rail & Transit Michelle.L.Winters@dot.nh.gov Phone: (603) 271-2449	NHDOT - Nashua-Manchester Passenger Rail (Capitol Corridor) Project, New Hampshire
3. Ryan Percival, PE Town Engineer Town of Reading, Engineering Division 16 Lowell Street Reading, MA 01867 Phone: (781) 942-6690	Town of Reading, Track Road 1 (West) Bridge over Walkers Brook, Reading, Massachusetts

05

Appendix A Resumes

Key Personnel Resumes

Dirk Grotenhuis, PE, LEED AP

Program Manager

Mr. Grotenhuis has over 30 years of diverse civil engineering with direct experience in the management and development of technical and planning studies, design plans, specifications, and cost estimates for projects involving transportation facilities including highway amenities, controls, and infrastructure. Provides a deep knowledge in sustainable, low-impact engineering practices. .

Years Experience
30

Education
BS, Civil Engineering

Licenses / Registrations
Professional Engineer: MA, ME, VT, NH, NY

LEED Accredited Professional: US Green Building Council

Project Experience

On-Call Engineering Services, City of Portsmouth, NH: On-Call Services Coordinator and Project Manager in charge of scoping, programming, and implementation of planning and engineering task orders including: Transportation Planning, Roundabout analysis & design, Peer Reviews of Traffic Impact Studies and Site Plans, Traffic analysis, Intersection analysis, Speed Studies andComplete Street Design.

Statewide Road Network Curve Fitting Analysis, NHDOT: Project Manager for the initial phases of methodology testing of curve fitting using various geo-processing tools that will identify safety issues.

I-89 Exit 18 ITS Queue Detection/Communication System, Lebanon, NH: Senior Project Engineer the design of an Intelligent Transportation System (ITS) to detect queue spillback from the off ramps at Exit 18 on to I-89 for NHDOT.

Laura Machala, AICP, ENV SP

Local Project Administrator

Laura is a senior transportation planner with experience in a wide variety of geographies and project types with a focus on long range transit and mobility planning, land use planning and effective community engagement. Laura has 16 years of professional planning experience grounded in equity and sustainability. Her work has focused on transit, paratransit, bike/ped, land use (with an emphasis on housing and TOD/mobility hubs), climate and energy. Laura has experience coordinating with multiple transit providers and other local, state and federal agencies, identifying best management practices as well as new and emerging technology and service provision strategies. Laura is LPA Certified in New Hampshire.

Years Experience
16

Education
MCP, City Planning, MIT
BA, Environmental Studies, Oberlin College

Licenses / Registrations
AICP/Certified Planner

Envision Sustainability Professional (ENV SP)

Project Experience

2045 Metropolitan Transportation Plan Update, Lewiston-Auburn, ME: Project manager for managing the update of the Lewiston-Auburn region's metropolitan transportation plan (MTP) that includes strategies for all modes, looking out 20 years in the future.

Southern Maine Transit Assessment, ME: Senior transportation planner for assessing existing transit service in the Southern Maine Planning and Development Commission region.

Greater Hartford Mobility Study, Hartford Region, CT: Senior transportation planner for comprehensive approach to improve mobility for all modes of travel in the Greater Hartford region.

CTDOT, State Rail Plan, CT: Senior transportation planner assisting CTDOT in its 2021-2025 update of the state rail plan for submission to the Federal Railroad Administration.

Sonnia Tejada, ENV SP

Local Project Administrator

Sonnia is a Civil Engineer and a former MassDOT employee with over 20 years of experience. Her extensive skill set includes expertise in highway design, project management, operational leadership, and team management. In her current role as an operational manager for AECOM's Pavement Engineering Group, she has gained invaluable insights into the pivotal role that well-maintained pavements play in the overall functionality of transportation networks. Sonnia is LPA Certified.

Years Experience
20

Education
BS, Civil Engineering

Licenses / Registrations
Envision Sustainability Professional (ENV SP)

Project Experience

- Demolition of Legacy Toll Plazas Along I-90, MA
- Bridge Replacement - I-495 NB and SB Over the Merrimack River, Haverhill, MA
- Bridge Replacement - Ashburnham Road (Route 12) over Phillips Brook, Westminster, MA
- Bridge Replacement - Salem Street over MBTA/Pine Street, Woburn, MA
- Bridge Replacement - West Second Street, Boston, MA
- Traffic Signal Installation at Route 110 & Route 495, Chelmsford, MA
- Bridge Replacement - Papermill Road over Weweantic River, Wareham, MA

David Patnaude, PE

Highway Design Lead

David is the New England Highway Group leader for transportation with over 32 years of civil engineering experience in highway engineering throughout New England. His experience includes engineering oversight for all aspects of design, including horizontal and vertical alignments, wetland impacts, grading and drainage, erosion control, stormwater management, pavement design, pavement markings and signage, and traffic management. David's civil and project engineering experience includes highway construction and rehabilitation. He has been a project manager, project engineer, and designer for various local roadway rehabilitation, interstate highway reconstruction, and major interchange widening projects. David has supervised the preparation of design calculations and final design documents, including specifications and construction cost estimates.

Years Experience
32

Education
BS, Civil Engineering

Licenses / Registrations
Professional Engineer, NH, MA, CT, ME, RI, PA

Project Experience

RIDOT, Route 6/10 Interchange Reconstruction DB, Providence, RI. Civil design manager for the Route 6/10 design-build that involves reconstruction of an existing interchange that connects Route 6 eastbound and westbound with Route 10 northbound and southbound.

MassDOT, Fore River Bridge DB, Quincy and Weymouth, MA. Civil design manager for the $244 million design-build Fore River Bridge project to replace the existing temporary drawbridge..

MassDOT, On-Call Highway and Bridges 2013-2018 - Dedham Street Corridor Additional Design, Dedham, MA. Project manager for reconstruction of Dedham Street and the I-95 interchange from 75% through final design.

MassDOT, Reconstruction of Pawtucket Boulevard, Tyngsborough, MA. Project manager for design preparation for the relocation of Pawtucket Boulevard and realignment of the roadways tying into Pawtucket Boulevard, to improve the traffic flow through the corridor.

Joseph Allwarden, PE
Bridge Design Lead

Joe has 35 years of experience designing and managing bridge and structural projects. His experience includes projects ranging from small culvert replacements, to large multi-span truss bridges over major rivers. Joe's responsibilities have included project management, design, inspections, load ratings, and construction phase services. Joe is a NH resident, brings a wealth of bridge design, inspection, rating and rehabilitation experience in NH and other New England states, as well as background in managing on-call bridge assignments for NHDOT, Maine DOT and MassDOT.

Years Experience
35

Education
MS, Civil Engineering
BS, Civil Engineering

Licenses / Registrations
Professional Engineer: MA

Project Experience

City of Manchester, Queen City Bridge Report Study, Manchester, NH. Project Manager for the report study and final design of the rehabilitation of the Queen City Bridge in Manchester, NH. The three span deck truss over the Merrimack River was built in the 1930's. The project scope has included an existing condition report as well as a study to evaluate rehabilitation and repair options to extend the life of the bridge. The analysis included a detailed inspection as well as steel sampling and testing.

Maine Department of Transportation, Arundel and Wells Bridge Rehabilitations, ME. Project Manager for 2 bridge rehabilitations in Maine. Both bridges were fully inspected by AECOM to detail the extent of the deterioration.

Jill Cahoon, GISP, ENV SP
Planning

A 20-year transportation planning veteran, Jill Cahoon focuses on implementable transit and rail plans, effective community engagement and robust technical analysis. Ms. Cahoon is also an Environmental, Social, and Governance (ESG) Ambassador, representing Transportation through AECOM's Sustainable Legacies1 program.

Years Experience
23

Education
MA, Geography, University of Maryland, 2002

BS, Geography and GIS, University of Maryland, 2000

Licenses / Registrations
Geographic Information Systems Professional (GISP)

Envision Sustainability Professional (ENV SP)

Project Experience

Brunswick Transit Study, Town of Brunswick, ME: Project Manager. Worked with the Town of Brunswick to conduct a comprehensive transit study. The study focused on redesigning the Brunswick Explorer deviated fixed route service to better meet the current and future needs of the community. A streamlined, faster fixed route was designed and implemented in the fall of 2021.

Sullivan County Transit Short-Range Transit Operations Plan Development, Upper Valley Lake Sunapee Regional Planning Commission, New Hampshire: Project Manager. Assisted Southwestern Community Services, the operator of Sullivan County Transit, to develop a near-term operations plan for bus service in Claremont, Charlestown, and Newport, NH. Project involved the evaluation of existing services and the development of operational improvements, including the designation and improvements of bus stops, to enhance the service. 2019

Malden Transit Action Plan, City of Malden, MA: Project Manager. Worked with the City of Malden and partners like the MBTA to identify strategies to improve access to transit across all modes throughout the City – Commuter Rail, Orange Line Rapid Transit, MBTA bus, private shuttles, bicycle and pedestrian. 2022-2023

I-89 Commuter Bus Service Feasibility Study, Upper Valley Lake Sunapee Regional Planning Commission, New Hampshire: Project Manager. Evaluated commuter bus service options on the I-89 corridor connecting New London and Lebanon, New Hampshire. 2017

Jay Doyle, AICP
Planning

Jay has more than 43 years of experience in planning and managing complex transportation projects including roadways, transit, railroads and other infrastructure. His skills include project management; transportation planning; alternatives analysis and environmental review. His project experience includes transit planning for commuter rail, bus rapid transit (BRT), and multimodal projects in New England and Metro-NY.

Years Experience
43

Education
MCRP, City and Regional Planning, The Ohio State University
BA, Political Science, Marist College

Licenses / Registrations
AICP/Certified Planner

Project Experience

New Hampshire Department of Transportation, Statewide On-Call ITS Services. Principal-in-Charge for this On-Call contract covering a wide range of services in support of the TSMO Bureau including traffic signal connectivity, 5-year strategic plan, corridor ITS master plans, and design of ITS infrastructure and software.

MassDOT, Office of Transportation Planning, On-Call Transportation Planning PM/PIC for this On-Call contract, which provides transportation planning services on task order basis. Assignments include CIP SWOT analysis, survey of long-distance trip refueling infrastructure, SPR Salesforce portal, ICMS, roundabout capacity, and LMA Transit Action Plan.

Malden Transit Action Plan, City of Malden, MA. Principal-in-Charge for this citywide transit action plan which is reviewing existing MBTA operations focused primarily on bus and its connectivity with pedestrians, bicycles, and the rapid transit and commuter rail stations within Malden. Plan is developing list of actionable recommendations to improve service..

Vermont Agency of Transportation, Transit On-Call Consulting Services, Statewide. Principal-in-Charge for On-Call contract Recent completed assignments include Route Performance Reporting, and the Fleet Electrification Plan.

Gerhard du Toit, PE
Pavement Engineering

Mr. du Toit is a pavement engineer with over 30 years of experience specializing in road design, rehabilitation design, materials engineering, road maintenance and upgrading programs, pavement asset management systems, as well as construction management. Recent efforts have focused on implementing pavement management systems for several USAF and ANG facilities around the USA and abroad, major commercial airports and/or airport authorities, state DOT's, Counties, and municipalities that included ASTM based condition inspections, pavement condition data analysis, budget analysis, and development of multi-year capital improvement plans.

Years Experience
34

Education
M-Eng Civil Engineering
B-Eng (HONS) Civil Engineering
B-Eng Civil Engineering

Licenses / Registrations
Professional Engineer: TX

Project Experience

- Pavement Management and Asset program for the City of Manchester, NH
- Porous Pavement design and specifications for the Pierce Island Parking Facilities in Portsmouth, NH
- Wynn Casino Encore Paving, Boston, MA
- MassPort Terminal B, Triple Roller, Boston, MA
- Demolition of Legacy Toll Plazas Along I-90, MA
- Boston Logan International Airport, MA
- Burlington International Airport, VT
- Newark International Airport, NJ

Jason Sobel, PE, PTOE
Traffic Engineering

Years Experience
21

Education
BS, Civil & Environmental Engineering, University of Vermont, 2002

Licenses / Registrations
Professional Engineer: MA, VT
Professional Traffic Operations Engineer

Jason has 21 years of transportation and traffic engineering experience, including 6 years as Director of Transportation for the City of Newton, MA. Jason's broad experience spans all aspects of Traffic Engineering, including intersection/roadway redesign projects, traffic management plans, traffic signal design, signing & pavement marking plan design, developing prioritization plans, preparing a wide range of traffic and parking studies, asset management, public outreach and coordination, and contractor oversight.

City of Newton, Traffic Calming Prioritization Plan, Newton, MA: Jason created and implemented a formal Traffic Calming evaluation and prioritization process across the City of Newton. Potential areas of traffic calming need were evaluated based on vehicle volumes and speeds, crash history, pedestrian demand, and proximity to land uses such as schools, village centers, MBTA transit stations, municipal parks, etc. (2017-2023)

Peabody Square, Peabody, MA: Technical traffic engineering lead for analyses and complex intersection and traffic signal design in the heart of downtown Peabody. (2014-2016)

Minuteman Bikeway Crossing at Lake Street, Arlington, MA (2014-2017) Project Manager for safety improvements at the critical Minuteman Bikeway crossing at Lake Street.

Newtonville Village Center, Newton MA (2017-2021) Responsible for complete oversight of the design, implementation, and construction management. This project reenvisioned the roadway and streetscape as a "Complete Street", reconstructed roughly 2,200 feet of Walnut Street through the heart of the Newtonville Village Center area.

Evan Moorman, AICP
Active Transportation

Years Experience
8

Education
Master of Arts (MA), Urban Planning, University of California-Los Angeles, 2016
Bachelor of Arts (BA), Geography, Macalester College, 2014

Licenses / Registrations
AICP/Certified Planner

Evan is a transportation planner for the AECOM Providence office, specializing in active transportation, first/last mile solutions, and cartography and GIS analysis. He has worked in a variety of different places, from the Midwest, to Canada, to New England, in rural, suburban, and urban contexts. .

Project Experience

Rhode Island Public Transportation Authority (RIPTA), East Side Tunnel Exterior Improvements Planning, Providence, RI: Transportation planner worked on transit and traffic data analysis, conceptual design, public outreach, bike and pedestrian/transit integration, and report creation. Ongoing

Boston Planning & Development Authority (BPPA), MassDOT, & Department of Conservation & Recreation (DCR), Kosciuszko Circle / William T. Morrissey Boulevard Corridor Study, Boston, MA: Transportation planner assisted with public outreach preparation, data analysis, bicycle and pedestrian facility selection, and document preparation Ongoing

State of Connecticut & City of Hartford, Greater Hartford Mobility Study, Hartford, CT. Transportation planner worked on active transportation connectivity analyses, project feasibility, project scoring based on multiple factors, and document preparation. Ongoing.

05

Appendix B Applicable Work Experience

Applicable Work Experience

Nashua-Manchester Passenger Rail (Capitol Corridor) Project, New Hampshire

Client/Date: New Hampshire Deprtment of Transportation Complete 2023

AECOM provided professional planning and engineering services to the New Hampshire Department of Transportation (NHDOT) for the preliminary engineering, environmental review, financial plan development, and public involvement to meet the requirements of the Federal Transit Administration (FTA) Section 5309 Capital Investment Grant Program (CIG) Project Development / Engineering phase for the extension of MBTA commuter rail services from Lowell, MA to Nashua and Manchester, NH.

Services provided included expedited confirmation of the Locally Preferred Alternative (LPA), development of 30% engineering design and associated capital and operating cost estimates, preparation of a draft NEPA Environmental Assessment (EA), and development of the project financial plan. AECOM worked with the NHDOT to leverage prior planning and engineering work conducted in the corridor.

Statewide Intelligent Transportation System Services, New Hampshire

Client/Date: New Hampshire Department of Transportation Ongoing

AECOM was retained by the New Hampshire DOT's Transportation Systems Management and Operations (TSMO) Bureau to perform various Intelligent Transportation System (ITS) services. To date, tasks include

ATMS Software

- Prepared a Concept of Operations for a procurement of the State's ATMS software including a new mapping system, traffic signal integration, and a connected vehicle subsystem.

Concept of Operations

- Developed a Concept of Operations for Intersection Conflict Warning Systems as well as a typical design, specification, and estimate.

ITS Design

- Designed various CCTV cameras, Dynamic Message Signs, and Road Weather Information Systems for mainstreaming assignments including special provision, engineer's estimate, construction drawings, and new typical details.
- Designed a connected vehicle roadside unit highway deployment, the first in New England.
- Designing an automated anti-icing system for the I-89 Bridge at the Vermont border.

Master Deployment Plan

- Developed the ITS Master Plan for the I-89 corridor from Concord to the Vermont border.

- Developed the ITS Master Plan for the 101 corridor from I-93 to I-93.

Test Plans

- Prepared standard test plans for CCTV cameras, dynamic message signs, motor vehicle detection systems, road weather information stations, wireless communications, and fiber communications.

Miscellaneous Support

- Developing an asset lifecycle management tool and cost expectation plan.
- Conducting best practices research on traffic signal software systems.
- Developing software requirements for a new TMC mapping platform.

On-Call Services for Nashua Regional Planning Commission, Nashua, NH

Client/Date: Nashua Regional Planning Commission Complete 2018

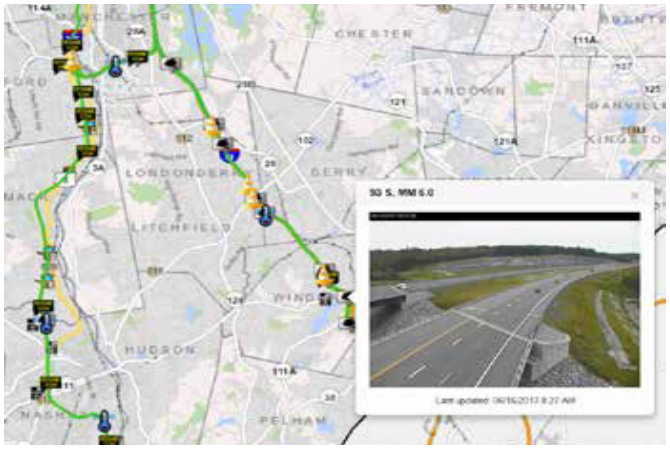
Traffic Simulation Analysis

Traffic Analysis including a Synchro audit for the Nashua Regional Planning Commission. Work also required additional Synchro analysis at several intersections in the region. A custom excel script was created to automatically update Synchro traffic volumes for an intersection in Merrimack, New Hampshire. Work also included Sidra Intersection 7 roundabout analysis of a double roundabout alternative in Pelham, New Hampshire.

Intelligent Transportation System (ITS) Roadmap

AECOM assisted NRPC with the creation of a Regional ITS Roadmap. The project included facilitating a Stakeholder Meeting at NRPC's Transportation Technical Advisory Committee to receive input on communities existing projects and future needs. The Roadmap provides an overview of ITS plans in New Hampshire and Nashua region.

It also presents recommendations of projects that meet theIt also presents recommendations of projects that



meet the Committee's preferences for ITS projects. Some of these included:

- Intersection Conflict Warning System
- Road Weather Information System
- Adaptive Traffic Signals
- Dynamic Travel Time Signs

Statewide On-Call Services for Turnpike System Services, New Hampshire

Client/Date: New Hampshire Department of Transportation Complete 2022

AECOM provided On-Call services to NHDOT for Statewide Turnpikes System Services including assignments involving bridge design work such as the Rehabilitation Study of the NB & SB Spaulding Turnpike Bridges over the Cocheco River and the superstructure rehabilitation/replacement of the Exit 2 Ramp B-D Bridge over I95 in Hampton.

Statewide On-Call Statewide Bridge Design and Scour Countermeasures, New Hampshire

Client/Date: New Hampshire Department of Transportation Complete 2023

AECOM is also providing Statewide On-Call Bridge Scour Services involving the hydrologic, hydraulic, and scour analysis, repairs design, and scour countermeasures design for 4 bridges in Woodstock and Lincoln.

For scour repairs of the Woodstock 195/093 Bridge. AECOM performed Hydraulic Study investigating various scour repairs and countermeasure alternatives and provided recommendations for the construction of scour stabilization at this pier. Alternatives ranged from

grout fill within sheetpile cofferdam or grout bags used as forms to riprap or articulated concrete blocks such as A-jacks around the repaired pier.

Southwestern Community Services (SCS) Short Range Transit Operational Plan, Sullivan County, NH

Client/Date: Upper Valley Lake Sunapee Regional Planning Commission (UVLSRPC)/2019

In coordination with Upper Valley Lake Sunapee Regional Planning Commission (UVLSRPC) and the New Hampshire Department of Transportation (NHDOT), this study assisted SCS in assessing current transit services and developing transit service alternatives for the short, mid, and long term that improve/enhance current services. Routes were completely redesigned to provide clockface schedules, improve operating efficiencies and serve new areas. The team developed a financial plan, public timetables, routing, vehicle schedules and crew schedules as part of the recommendations in the short term phase. Working with the local municipalities formal bus stops were proposed, and guidelines developed to transform the system into a true deviated fixed route system This project include a robust public outreach effort including surveys of drivers and both the riding and non-riding public, public meetings, and stakeholder focus groups.

I-89 Corridor Transit Feasibility Study, Sullivan County, NH

Client/Date: Upper Valley Lake Sunapee Regional Planning Commission (UVLSRPC)/2019

The Interstate 89 (I-89) corridor in New Hampshire connecting New London to Lebanon/Hanover is a heavily traveled road with no commuter transit services between these major destinations. The corridor has been identified in numerous documents, such as Long Range Transportation Plans and Human Service Transportation Coordination Plans, as having a need for connection. It has also been documented that the overall regional transportation network would be greatly improved if there was a transit connection. The goals for this commuter service feasibility study included the following:

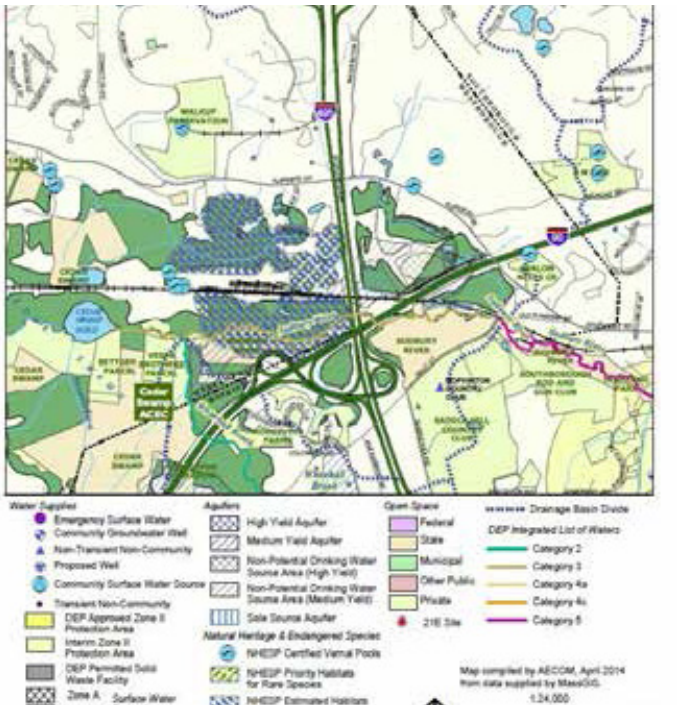
- Identify existing transportation systems, level of service, and demand for commuter service in the study area
- Develop commuter transit service options that connect New London to Lebanon and Hanover
  - Include a variety of stop types and locations
  - Include provisions for stop locations to have adequate parking, pedestrian/bicycle access, and customer amenities
  - Assess transit service options based on evaluation criteria including potential implementation challenges
- Identify coordination and connection opportunities with existing transportation services
  - Connect to existing transportation services at convenient times and locations
  - Evaluate interoperability potential including fare media, shared stop locations, cross-marketing, etc.
- Identify coordination and partnership opportunities with institutions, agencies and employers in the region
- Identify coordination opportunities to advocate for/educate on transit services
  - Develop sustainable partnerships, including funding partnerships, for the long-term success of the service

MassDOT On-Call Environmental Services, Massachusetts

Client/Date: Massachusetts Department of Transportation Ongoing

AECOM is providing on-call services to the MassDOT Highway Division, providing a full range of multidisciplinary technical assistance on various projects throughout the Commonwealth. Tasks under this contract included water quality monitoring in New Bedford Harbor, wetlands and habitat studies, hydrologic and hydraulic modeling, ENF preparation and GIS training. MassDOT has recently renewed this contract for a second period (2019-2022). The range of environmental and engineering services required to be available under this contract include the following:

- Compilation and review of environmental studies, design plans, construction specifications and special provisions;
- Early Environmental Coordination with regulatory agencies reviewing MassDOT projects;
- Public Outreach;
- Engineering, environmental or traffic studies;
- Preparation of MEPA/NEPA documentation in support of state and federal regulatory requirements;
- Wetland delineation and preparation of permit filings in association with conservation commission and Army Corps of Engineers permits;
- Preparation of wetland mitigation plans;
- Noise measurements, assessments and design of noise barriers;
- Hazardous waste assessments;
- Wildlife habitat assessments, surveys andmmonitoring;
- Historic and archaeological resources assessment.



On-Call Services for City of Salem, Massachusetts

Client/Date: City of Salem, Massachustts Ongoing

AECOM is providing On-Call Engineering Services for the City of Salem, Massachusetts under earlier iterations of the On-Call Contracts. Many tasks have been completed on behalf of the city including the following:

- Field reconnaissance
- Streetscape preliminary design
- Traffic impact analysis
- Traffic counts
- Traffic signal inspections and analysis
- Water main inspections peer review
- Culvert conditions assessment

Track Road 1 (West) Bridge over Walkers Brook, Town of Reading, MA

Client/Date: Town of Reading, Massachustts Ongoing

AECOM is providing Project Manager and Engineer of Record for the bridge replacement for this 10 ft. span culvert under MassDOT's Municipal Small Bridge Grant Program. AECOM assisted the Town of Reading with preparation of the Grant Application under MassDOT's Municipal Small Bridge Grant Program. After Grant award for Design and Construction funding of maximum $500,000 AECOM provided the bridge design and construction phase services. Design involved the local road widening from 15 to 22 feet and replacement of the 10-foot span culvert/ bridge over Walkers Brook. The original cast-in-place cantilevered abutment bridge/culvert with concrete deck and wood railings was replaced with a longer precast concrete bridge/culvert and MassDOT standard S3-TL4 bridge rail. Clamshell Precast modules were used to accelerate construction and dewatering time and to facilitate erection within a small site and

presence of overhead aerial utilities. Bridge design plans were submitted to MassDOT for Chapter 85 Municipal Structural Adequacy review and approval. Coordination with Town of Reading Conservation Commission was performed and environmental compensatory storage requirements were satisfied, and order of conditions followed by Contractor. AECOM provided construction phase services and project was completed within design and construction budgets.

Statewide Bridge Design On-Call, Rhode Island

Client/Date: Rhode Island Department of Transportation Ongoing

AECOM was recently selected for an additional on-call bridge design contract through RIDOT. Through this program, AECOM has prepared base technical concept plans for several design-build projects, been assigned a complete bridge replacement design over Amtrak's Northeast Corridor, developed plans for repairs to deficient box girders to extend the life of a prestressed box girder bridge, as well as prepared rehabilitation and preservation plans for 17 different structures.

Pavement Management and Asset Program Development, Manchester, NH

Client/Date: City of Manchester, NH DPW 2017

The City of Manchester, NH is responsible for approximately 420 center-line miles (over 1,200 lane-miles) of arterial, collector and local roads. AECOM implemented a pavement management system for the City that included both pavement and asset assessments, and allowed the City to increase their resurfacing budget dollars three-fold and bring expertise in construction support to their new resurfacing program. Subsequently, AECOM continues to support the City in developing detailed annual resurfacing programs for each year, providing recommendations on rehabilitation types, and providing construction oversight.

Sample Asset Details Integrated with Pavement Condition in GIS

AECOM

About AECOM

AECOM is built to deliver a better world. We design, build, finance and operate infrastructure assets for governments, businesses and organizations in more than 150 countries. As a fully integrated firm, we connect knowledge and experience across our global network of experts to help clients solve their most complex challenges. From high-performance buildings and infrastructure, to resilient communities and environments, to stable and secure nations, our work is transformative, differentiated and vital. A *Fortune 500* firm, AECOM had revenue of approximately $14.4 billion during fiscal year 2023. See how we deliver what others can only imagine at aecom.com and @AECOM.

Contact
Dirk Grotenhuis, PE, LEED AP, Vice President
dirk.grotenhuis@aecom.com
T 603.339.3774