Qualifications

Professional Engineering Services

Town of Barrington, New Hampshire

February 1, 2021

Submitted by:

Gorrill Palmer
707 Sable Oaks Drive - Suite 30
South Portland, ME 04106
207.772.2515
William C. Haskell, PE

GORRILL PALMER

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February 1, 2021

Town of Barrington
Attn: Conner MacIver – Town Administrator
333 Calef Highway, PO Box 660
Barrington, NH 03825

Subject: **Qualifications for Professional Engineering Services**
Town of Barrington

Dear Mr. MacIver:

Gorrill Palmer (GP) is pleased to submit our qualifications to provide Professional Engineering Services to the Town of Barrington.

Gorrill Palmer understands the needs of communities to create a safe, pleasant, and flourishing environment for residents, businesses, and visitors. To support your growth, you require a qualified on-call engineering consultant with a Team that listens to your needs and provides a wide range of general engineering services in the most cost-effective manner possible. We have assembled a Team that will do that.

At Gorrill Palmer, our commitment to doing things right is evident in everything we do, from professional excellence in our project work to taking responsibility for projects within our communities. We focus on delivering a broad range of services that are customized for your project and community needs, recognizing that true value is measured in adaptability on every project. We believe that the following key differentiators make Gorrill Palmer the best-qualified firm to assist the Town of Barrington in the coming years:

The right experience: Our historical balance of municipal, state, and private development engineering work, naturally provides both breadth and depth to our services. Further, we have worked with numerous public and municipal clients on multi-disciplinary projects. We currently hold general engineering contracts in both urban and rural municipalities throughout southern Maine, including:

- Town of Cumberland
- Town of Gray
- Town of Harpswell
- Town of Lebanon
- City of Lewiston
- City of Portland
- City of Saco
- City of Sanford
- Town of Windham
- Town of York

To compliment our municipal experience in Maine, our staff also has land development experience in the following communities:

- City of Portsmouth
- Town of North Hampton
- City of Somersworth
- City of Rochester
- Town of Epping
- Town of Derry

Municipal projects can vary in scope and type — we have the flexibility and experience to help you manage and deliver those opportunities. Every municipality we work with further enhances our design and overall project

management perspective. We are able to uniquely adapt to a clients goals and priorities while staying true to our professional engineering principals.

Fresh Perspective: Our experience across New England and the Mid Atlantic allows us to design, plan, and review projects with an objective eye. We have provided site plan, subdivision, and traffic peer review services for almost 40 municipalities in Maine, New Hampshire. We believe the peer review should be a constructive process that benefits the public and the applicant, understanding that peer reviews are a positive part of the Planning Board review process and the overall objective for all parties should be an enhanced project.

Principal Involvement: Our Municipal Group leader and Principal, **William Haskell, PE** (NH #9827), has more than 25 years of design and management experience on municipal projects. Our philosophy is to have Principal actively involved in every project. This approach allows for active day to day project management, control over the design budgets and a contact person that is able to make critical decisions in a timely manner.

Performance Pays: The ability to establish and maintain accurate project budgets, designing to a budget, and the quality of the design project is critical on all projects. The attention to detail is why we produce design plans that minimize change orders during construction. Our team works closely with each other and with our clients from the data collection stages, throughout the design phase and into construction to establish accurate budgets and to provide a quality deliverable that minimizes change orders related to design and survey errors and omissions. Similar to our management philosophy, we involve a separate firm Principal to complete a QA/QC review on all designs prior to bidding. Additionally, every municipal engineer at Gorrill Palmer has extensive construction experience which allows them to design projects with a constructability point of view.

Gorrill Palmer is proposing to provide services for the following specialties as outlined in the RFQ:

- Civil Engineering Services/Engineer of Record (EOR)
- Planning Board Peer Review of Site Development and/or Subdivision Projects
- Permitting Assistance
- Grant/Loan Application and Administration Assistance
- Survey/Right-of-Way/Mapping Assistance
- 10-Year Roadway Improvement Plan
- Construction Inspection/Administration
- Town Facilities/Buildings – Condition Assessment, Engineering, and Bidding

We strongly believe we can provide the Town with a high level of service and we look forward to the opportunity to discuss this will you further. If you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
GORRILL-PALMER CONSULTING ENGINEER

William Haskell, PE
Principal
whaskell@gorrillpalmer.com

Owen Chaplin, PE
Project Manager
ochaplin@gorrillpalmer.com

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2. Firm Profile

Gorrill Palmer is an integrated design and engineering firm that focuses on municipal, transportation, land development, and traffic planning consulting services. We have been providing quality professional service to clients throughout Northern New England since 1998 and in the Mid-Atlantic area since 2013. When we were founded in 1998 our primary service lines focused on transportation engineering and land development, but we have since grown to be much a broader, multi-disciplinary consulting firm that includes civil engineers, transportation engineers, and transportation planning.

At Gorrill Palmer, we have created a work environment built upon integrity, skill and service. With an office in southern Maine, Gorrill Palmer's committed staff is well respected for our attention to detail and ability to consistently deliver high quality, innovative and cost-effective designs to our clients. We know that a project's success is built on a thorough understanding of our clients' needs as well as a collaborative, integrated approach to design and public process. To ensure we provide the highest level of responsiveness, Gorrill Palmer will provide all professional engineering services from our South Portland, Maine office.

We currently have active general consulting agreements with the following municipalities in southern Maine: Cumberland, Gray, Harpswell, Lebanon, Lewiston, Portland, Saco, Sanford, Windham, and York. In many cases, we have been providing general engineering services to these communities uninterrupted for over 10 years, which we believe is a testament to our experience, effectiveness and customer satisfaction. Our municipal experience is complimented by our project experience for repeat clients in communities such as Portsmouth, North Hampton, Somersworth, Derry, Rochester and Conway.

Gorrill Palmer provides peer review services, expert testimony, emergency response and a full range of services needed by municipalities. We also provide design review for compliance with local, state and federal regulations and standard engineering practices for residential, commercial and industrial developments as part of site plan review, review of preliminary and definitive subdivision plans, special permit applications, and other municipal activities. Work can include design elements, sewer, water, drainage, lighting, permitting, roadways, sidewalks and other infrastructure needs.

Our general engineering services include civil engineering, stormwater and utility planning and infrastructure, site planning, environmental permitting, dam, transportation, pavement management, grant/loan administrative assistance, and site and subdivision development review. These services make up our core service lines and expertise, and we can tailor them to meet the needs of the Town of Barrington.

We have formed our team based on long-standing relationships and our knowledge of their expertise. Our team members include:

- S.W. Cole Engineering – Geotechnical Engineer
- Doucet Survey LLC – Survey
- Allied Engineering, Inc. – Structural Engineer
- Flycatcher LLC – Wetland Scientist
- Thornton Tomasetti – Bridge Engineer

S.W. Cole Engineering was established in 1979 and is a geotechnical engineering, geo-environmental consulting and construction materials testing firm serving private and public sector clientele across Northern New England from offices in Maine, New Hampshire, Massachusetts and Vermont. A team of engineers, scientists and technicians provide services on more than 2,200 projects each year. Chad Michaud, Executive Vice President and Chief Operating Officer, has lived in Barrington for almost 10 years and is knowledgeable about the local issues. S.W. Cole Engineering will provide geotechnical engineering services from its Somersworth, New Hampshire office.

Doucet Survey LLC was established in 1993 to perform professional land surveying and mapping services for the government and private sector. The firm offers experience in areas such as surveying, mapping, and land planning. All thirty associates of Doucet Survey are skilled professionals who strive to provide their clients with innovative and high value solutions for all their surveying needs. The team includes: eight licensed staff members, seven fully equipped field crews, and a Subsurface Utility Marking crew, laser scanning crew and a UAV crew. Doucet Survey is licensed to practice throughout New England. The CAD department has won over 19 first place awards in New Hampshire and Maine contests since 1999. Doucet Survey will provide survey, right-of-way, and mapping assistance from its Newmarket, New Hampshire office.

Allied Engineering Inc. has been providing multidiscipline engineering support to its clients since 1958. The firms experience lies in their knowledge and understanding of Structural, Electrical and Technology systems for new buildings and renovation design projects. Allied Engineering has been servicing the municipal and government market for many years. a majority of the projects worked on involve feasibility studies and full design documents for town halls, fire stations, police stations, and public work facilities, libraries and community centers. Some recent municipal clients include the Town of Lebanon, City of Concord, City of Portsmouth, Portland, ME, Windham, ME, and City of Saco, ME, among several others. Allied Engineering will provide structural engineering services from its Portland, Maine office.

Flycatcher LLC was established in 2019 and is an environmental consulting company that provides permitting, field studies, land use, and conservation support for projects throughout the northeast. Teaming with Basswood Environmental, the team consists of wetland and soil scientists, GIS analysists, wildlife biologists, permit experts, botanists, invasive plant experts, and project siting professionals. Basswood is currently working on a rare species survey, relocation, and monitoring project on the Isinglass River in the Town of Barrington. Flycatcher will prepare and acquire necessary permits at the local, state and federal level from its Falmouth, Maine office.

Thornton Tomasetti is a global engineering firm that will provide bridge construction engineering services. Their experience stretches across the globe however we have teamed with them on several bridge projects in Northern New England. Thornton Tomasetti will provide their services from their Portland, Maine office.

We have worked with these firms for years and have developed trusted working relationships with them. Additional information about our team members will be provided later in this proposal. Qualifications for each subconsultant are also included in Section 4 of this qualifications statement.

3. Project Team

Gorrill Palmer will be the lead consultant and designer, providing civil engineering services and considered the Engineer of Record (EOR). A summary of the Gorrill Palmer key engineering staff that will be heavily engaged in all aspects of Town projects is listed below.

- ***William Haskell, PE*** (NH# 9827) will be assigned as **Project Team Manager** and primary point of contact for the Town. As the Municipal Group Leader and a Principal to the firm, Will provides technical assistance and quality assurance/ quality control (QA/QC) review for all projects. He has over 25 years of experience in general civil and municipal engineering, including land development and permitting, sewer and storm drain design, large culvert design and permitting and water resource planning and management.

- ***Owen Chaplin, PE*** will be assigned Project Manager, supporting William on specific projects. Owen has been the primary project engineer on a wide variety of municipal projects. These projects included highway design, culvert/drainage design, intersection and pedestrian improvements, and pavement management plans. Additionally, he has provided construction oversight on many of these projects and is able to see the project from start to finish. Owen will bring together his background knowledge of similar projects, and his experience in design and construction to guide projects through completion. He would be supported by other engineers and technicians who have similar experience at Gorrill Palmer. Owen is currently submitting his application for his New Hampshire PE license (by reciprocity).

These key staff would be supported by other engineers and CAD technicians as necessary to meet the Town's expectations and goals. Detailed resumes for Key Personnel are appended to this section.

William Haskell, PE – Principal Municipal Engineer, Project Team Manager/Primary Contact
Licensed Professional Engineer – New Hampshire #9827
Member of American Society of Civil Engineers; LEED AP Building Certification

Owen Chaplin, PE – Municipal Project Manager
Licensed Professional Engineer – Maine #15522
Member of the American Public Works Association; NETTCP Hot Mix Asphalt Paving Inspection Certification; Maine LPA Certified

Don Ettinger, PE – Principal Transportation Engineer
Licensed Professional Engineer – New Hampshire #15666
Maine LPA Certified

Randy Dunton, PE, PTOE – Principal Traffic Engineer
Licensed Professional Engineer – New Hampshire #14676
ISMA Certified – Work Zone Safety

Jonathan Edgerton, PE – Dam Engineer
Licensed Professional Engineer – New Hampshire #9660

Benjamin Shaw, EI – Municipal Project Engineer

Registered Engineer Intern (EI)

Member of the American Society of Civil Engineers; NETTCP Hot Mix Asphalt Paving Inspection Certification

Chris Daubert, EI – Municipal Design Engineer

Registered Engineer Intern (EI)

Member of the American Society of Civil Engineers

Gorrill Palmer has assembled a team of subconsultants to provide additional services on this project. Gorrill Palmer will be the prime consultant and responsible for general engineering services. Additional qualifications information for our subconsultants is included in Section 4 of this statement. We have teamed with the following professionals on numerous other projects and have developed trusted partnerships with them on similar projects:

Chad Michaud, PE – S.W. Cole Engineering

Licensed Professional Engineer – New Hampshire #10795

Member of American Council of Engineering Companies; member of GBA Professional Firms Practicing in the Geosciences

William Doucet, PS – Doucet Survey LLC

Licensed Professional Land Surveyor – New Hampshire #824

Member of American Council of Engineering Companies; member of American Institute of Architects; member of Massachusetts Association of Land Surveyors

William Faucher, PE, SECB – Allied Engineering

Licensed Professional Engineer – New Hampshire #8318

Member of Structural Engineers Association of Maine; member of Concrete Reinforcing Steel Institute; member of Construction Specifications Institute; member of American Concrete Institute

Richard Jordan – Flycatcher Wetland/Environmental

Licensed Professional Wetland Scientist – Maine #1517

Chairperson Maine Legislative Committee – Association of Wetland Scientist

Erik Lema – Basswood Environmental

Certified Wetland Scientist – New Hampshire #286

Licensed Site Evaluator, State of Maine

Jack Burgess, PE – Thornton Tomasetti

Licensed Professional Engineer – Maine #5745

Member of American Institute of Steel Construction; member of Structural Engineers Association of Maine

Detailed resumes for Key Personnel are appended to this section.

GORRILL PALMER

William C. Haskell

Professional Engineer | Principal

Education

- BS – Civil / Environmental Engineering, University of New Hampshire, 1990
- MS – Civil / Water Resources Planning & Management, Colorado State University, 1994

Registrations and Certifications

- PE: ME, NH, MA, VT & CA
- CPESC, CESSWI
- LEED AP Building, Design & Construction

Affiliations

- Member, American Society of Civil Engineers
- Maine ASCE – Board of Direction (Secretary, Vice President, President-Elect, President, Past President)
- Former Member, Town of Raymond Planning Board (seven years)
- South Portland/Cape Elizabeth Chamber Board

Experience

- > 25 years in private practice

Specialized Training

- Water Surface Profiling & Floodplain Analysis Seminar for HEC-RAS

Will joined Gorrill Palmer in 2002 and is a Principal and leader of the Municipal Group. He is responsible for overall business development for the Municipal Group and for assisting his staff with providing exceptional client service, technical design, and problem solving. His experience includes a broad range of civil engineering projects for both private and public clients and includes land development and permitting, municipal infrastructure, large culverts, hydrology and hydraulics, roadway design, multi-modal projects and pavement management. Mr. Haskell oversees the municipal projects and monitors budgets, schedules, quality assurance/quality control, and overall client satisfaction. Will's role in this contract will be as Principal-in-Charge to provide project management support for our Project Manager. He will also provide quality assurance/quality control reviews, and provide design and permitting guidance. He will be involved from start to finish to ensure the Town is provided with senior-level leadership.

General Engineering Services Contracts, Maine - Manages General Engineering Services contracts for City of Portland, City of Lewiston, City of Saco, Town of Windham, Town of Gray, and Town of Harpswell. Many of these contracts have been renewed for multiple terms. Projects include road reconstruction and streetscape design, municipal infrastructure upgrades and replacement, pedestrian improvements, municipal facility improvements, and pavement management.

Town of Conway, New Hampshire - Will has provided peer review services since 2014 for a variety of site plan review applications submitted to the Town of Conway, New Hampshire. Applications have ranged from large hotel projects that also required NHDES Alteration of Terrain permits and stormwater review to cellular communication tower sites. Will's primary focus has been to provide review comments relative to the technical, engineering aspects of each project, including: stormwater management and design, utility design, erosion control, vehicular and pedestrian access and design, parking lot design, and compliance with the Town's ordinances.

Town of Windham, Maine – Will has worked closely with the Town of Windham since starting at Gorrill Palmer in 2002. Acting as the Town Engineer until 2016, Will has worked on a variety of projects with the Town, including subdivision and site plan peer reviews, providing periodic construction inspection services for subdivision and site plan construction projects, design and construction inspection services for culvert and roadway projects. He has either acted as the construction inspector or managed other inspectors on over 75 subdivision and site plan construction projects in the Town. Some of these projects were also permitted by the Maine DEP, including: Valley View Subdivision, Mystic Woods Subdivision, and Sebago Heights Subdivision. Construction inspection services, included observations to confirm that the projects were being constructed in general conformance with the approved plans, erosion and sedimentation control inspections at the start of construction and periodically throughout the construction phase and final stabilization inspection services at the end of construction.

GORRILL PALMER

William C.Haskell

Professional Engineer | Principal

Town of Gray, Maine – Will has provided Town Engineer services to the Town of Gray since 2007. He has worked closely with the Town of Gray Planning Department, Town Manager and Public Works Department on a variety of projects, including design and construction inspection of culvert replacement projects, peer review of subdivision and site plan review projects, construction inspection services for subdivision and site plan construction projects, design and construction of roadway and pedestrian improvement projects, and general drainage and engineering guidance and consulting. Many of the subdivision and site plan projects have been small local projects that have not required Maine DEP permits, however, he has provided construction and erosion control inspections for the Eagle's Ridge Subdivision, which required a Maine DEP Stormwater Permit. More recently he has been providing peer review services for The Woodlands Subdivision project, which has also been submitted to Maine DEP for a Site Location of Development Act permit.

Town of Brunswick, Maine – Will has provided construction and erosion control inspection services for the Town of Brunswick on several subdivision projects since starting at Gorrill Palmer in 2002. He provided construction inspection services, including making periodic site visits to observe that construction was being completed in accordance with the approved plans and to observe that appropriate erosion and sedimentation controls were in place to protect adjacent water bodies and streams. He has provided construction services for the following subdivision projects: Mere Point, Julia's Way, John Thompson Estates, Garrison Grove, Botany Place Phases 1 through 10, Perreault Ridge and Beacon Ridge.

Anglers Road Realignment, Windham, Maine - Project Manager for this intersection realignment and road design project located at the northerly gateway to North Windham. Will has collaborated and assisted the Town of Windham, acting as their Town Engineer for ten years. This MaineDOT Municipal Partnership Initiative (MPI) project included the design of approximately 900 feet of municipal road and the alignment of a critical intersection with Route 302, which carries about 20,000 vehicles per day. A new lane was extended for 600 feet on Route 302 to improve the operation of the intersection. Pedestrian sidewalks and curb ramps were also designed to tie in with existing pedestrian amenities along Route 302. Will worked with the Transportation Planning Group to upgrade and imrove the signals at the new intersection of Anglers Road, Whites Bridge Road and Route 302. The project also required a Maine DEP Stormwater Permit. Will also managed the part time construction phase administration services, including half-time construction inspection, erosion control inspections, submittal review, responding to requests for clarification and review and certification of contractor payment requisitions.

Upper Marginal Way Intersection, Gray, Maine - Project Manager for this MaineDOT Municipal Partnership Initiative (MPI) intersection improvement project located on Route 100 in Gray. The Upper Marginal Way intersection with Route 100 consisted of a short arc-section of road that intersected with Route 100 at two locations. The sight lines and intersection approaches were unsafe. Gorrill Palmer redesigned the intersection to a standard tee intersection, removed and revegetated the prior paved areas. The project scope included design, bidding and part-time construction administration services.

Outlet Road Culvert, New Gloucester, Maine - Project manager to evaluate replacement options and final design plans for an existing 10 foot wide by 5 foot rise concrete deck bridge with concrete and rubble abutments. Replacement structure will likely be a 12 foot wide by 7 foot rise precast concrete box culvert with invert depressed 2 feet below the natural stream channel. Project will require an Army Corps of Engineers Category 2 General Permit.

North Lisbon Road Storm Drain, Lewiston, Maine - Project manager for a large diameter storm drain replacement project. Project consisted of replacing an existing 36 to 54 inch storm drain that had failed, causing flooding along North Lisbon Road. Existing pipe was abandoned in place and replaced with 48 to 60 inch storm drain and custom designed connection vaults. This project required a Maine DEP Natural Resources Protection Act (NRPA) Tier 3 permit and an Army Corps of Engineers Category 2 General Permit to relocate the storm drain which conveys a stream to its outlet below Gould Road.

GORRILL PALMER

Owen Chaplin

Professional Engineer | Project Manager

Education

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

Registrations and Certifications

- Maine #15522
- NETTCP Hot Mix Asphalt Paving Inspector - Certification #3201
- LPA Certified

Affiliations

- Member, American Public Works Association

Experience

- 7 years in private practice

Baker Brook Culvert Replacement, Windham, Maine – Owen served as the Design Engineer for the replacement of the existing twin 54" culverts on Falmouth Road at the Baker Brook in Windham. The existing culvert was replaced with a 14' span, 7' rise concrete box culvert at the same location. Owen developed the design plans and the hydrologic and hydraulic model for the Baker Brook watershed. He also prepared bid specifications, opinion of costs, and Army Corp of Engineers permit applications. Owen also served as the inspector throughout the construction phase.

South Street Drainage and Sewer Improvements, Biddeford, Maine – Owen served as the Project Engineer for municipal infrastructure improvements and upgrades to South Street in Biddeford. Design work included replacement of over 800 linear feet of new 18-inch diameter sanitary sewer, 3,000 linear feet of new 12 to 24 inch diameter storm drain, and over 3,400 linear feet of roadway rehabilitation on South Street. Owen prepared bid specifications, opinion of costs and was involved throughout the bidding process. He also served as the primary contact during construction.

State Street Infrastructure and Roadway Improvements, Portland, Maine – Owen served as the Design Engineer for the municipal infrastructure improvements and upgrades to State Street, Forest Avenue, Marginal Way, and Preble Street. Design work included replacement of over 1,600 linear feet of new 12 to 48 inch diameter sanitary sewer, 4,300 linear feet of new 18 to 84 inch diameter storm drain, and over 2,000 feet of street reconstruction. Owen prepared design plans and hydrologic/hydraulic models for new storm drain systems under various tidal conditions and rainfall events using AutoDesk Storm & Sanitary Analysis. Owen prepared bid specifications, several opinions of probable construction cost estimates at various stages of the design, and Maine DOT permit applications.

River Road/Route 302 Intersection Improvements, Windham, Maine – Owen served as the Design Engineer, assisting with the design of about 2,300 feet of River Road, the realigned intersection, drainage improvements, pedestrian improvements at the intersection, and about 800 feet of Route 302 restriping. He also prepared several opinions of probable construction cost estimates at various stages of the design. Owen was also heavily involved in the bidding and construction phases, serving as the primary coordinator between the Town and the Contractor. The construction phase included overseeing construction, field reports, on-site field changes, and numerous review meetings with Town staff and contractor.

Pavement Management Study, ME – Owen inventoried pavement conditions in Windham, Gray, Dover-Foxcroft, and Lewiston, Maine. Owen evaluated pavement conditions using several methodologies including: Visual Conditions Survey for Flexible Pavements (developed by the Maine DOT, Pavement Management Division), Road System Management Software (RSMS) – also developed by Maine DOT, and MircoPAVER (developed by the US Army Corps of Engineers). Owen assisted with prioritizing maintenance issues and anticipating future construction costs. Some notable studies include:

- Town of Gray, ME – 74 Miles, Visual Conditions Survey
- Town of Windham, ME – 102 Miles, Visual Conditions Survey
- Town of Dover-Foxcroft, ME – 46 Miles, RSMS
- City of Lewiston, ME – 55 Miles (Arterials), MicroPAVER

GORRILL PALMER

Owen Chaplin

Professional Engineer | Project Manager

Conant, Cloudman & Stevens Neighborhoods, Road and Utility Improvements, Westbrook, Maine - Owen served as the Design Engineer for municipal infrastructure improvements and upgrades in these three neighborhood areas. Design work included replacement of over 5,600 linear feet of new 8 to 20 inch diameter sanitary sewer, 1,200 linear feet of new 12 to 18 inch diameter storm drain, over 5,200 linear feet of street reconstruction and new sidewalk, and low impact development/ green infrastructure (LID/GI) improvements. The LID/GI improvements were located throughout the three neighborhoods and consisted of Focal Point Biofiltration systems, Flexi-Pave porous pavement sidewalks, PaveDrain parking stalls and underdrain soil filters. Owen developed the design plans and the hydrologic & hydraulic model for modeling the new storm drain systems on the project.

Route 4/17 Improvements, Jay, ME, MaineDOT - Owen served as a highway engineer for the final design of the reconstruction of 1.25 miles of Route 4/17 in Jay, Maine. Tasks included guardrail design, drainage design, driveway designs, construction notes, overall plan production and development of project quantities and construction cost estimates.

Construction Monitoring Services, Brunswick, Gray, Naples, Portland, & Windham – Owen served as the construction administrator for several projects in municipalities including Brunswick, Gray, Naples, Portland, and Windham. Owen provided part time, periodic construction monitoring and observation of the site construction, including: roadway construction, drainage, utilities, stormwater treatment systems, erosion control, and overall site stabilization. He communicated and coordinated with the contractors at each site to address deficiencies in the erosion and sedimentation control plans and general conformance of the site construction with the approved plans and permit applications. Field reports were prepared after each site visit and submitted to the Town and project stakeholders. Field reports included descriptions of work in progress, recent storm events, discussions/observations with contractor, questions or concerns, action item list, and construction photos.

Upper Marginal Way Intersection, Gray, Maine - Owen served as the design engineer for this MaineDOT Municipal Partnership Initiative (MPI) project for the Town of Gray. He was responsible for designing the new intersection, preparation of the design plans and project specifications, and developing the opinion of probable construction cost estimates. In addition, Owen also was responsible for completing the part-time construction administration services for the project, including periodic site observation visits and field reports, submittal reviews, responding to contractor's requests for clarification and review of payment requisitions.

Paving Coordinator, Portland, Maine – Owen served as the paving coordinator for the City of Portland on their 2016 Capital Improvement Program (CIP) Paving and Street Rehab project, overseeing all construction work including: paving, milling, ADA improvements, sidewalk, curbing, drainage, utilities, and striping. He also reviewed all quantities, pay requisitions, and traffic control plans with the contractor. Over four (4) miles of total streets were paved and 50 sidewalk ramps improved during the 2016 paving season. Owen developed estimates and quantities for streets included in the 2017 CIP Paving contract. Close coordination with Portland residents was maintained throughout the paving season.

Route 27 & Darin Drive Intersection Improvements, Augusta, ME, MaineDOT - Owen served as a highway engineer for the design of geometric improvements and signalization at the Darin Drive and I-95 southbound off ramp intersections with Civic Center Drive. Responsibilities included horizontal and vertical alignment development in InRoads, intersection layout, plan production and developing project quantity and cost estimates.

North Lisbon Road Storm Drain, Lewiston, Maine - Owen served as the Design Engineer for this large diameter storm drain replacement project. Project consisted of replacing an existing 36 to 54 inch storm drain that had failed, causing flooding along North Lisbon Road. Existing pipe was abandoned in place and replaced with 48 to 60 inch storm drain and custom designed connection vaults. This project required a Maine DEP Natural Resources Protection Act (NRPA) Tier 3 permit and an Army Corps of Engineers Category 2 General Permit to relocate the storm drain which conveys a stream to its outlet below Gould Road. Owen developed the hydrologic and hydraulic model for modeling the new storm drain and also prepared the NRPA Tier 3 application.

GORRILL PALMER

Don Ettinger

Professional Engineer | Principal

Education

- University of Maine, Orono: B.S. in Civil Engineering, 1994

Registrations and Certifications

- ME: #9244
- NH: #15666
- ME DOT LPA Certified

Experience

- 25 years in private practice

Don is a project manager and principal at Gorrill Palmer and leads the firms Transportation Engineering Group. Don has over twenty-five years of experience in transportation engineering. His experience includes design for roadway, intersections, pedestrian and bicycle facilities and rail, transit and bridge projects. He has worked on MaineDOT projects for over 20 years for the highway, bridge and multimodal groups. He has a thorough understanding on the Department's project development process as well as latest policies and design guidelines. In addition to working directly on MaineDOT assignments, Don is LPA certified and works with many municipalities on state transportation projects as well as MPI projects.

Route 4/17 Reconstruction, Jay, Maine – Project Manager for design services associated roadway reconstruction of Route 4/17 in Jay, ME. The project began at Pineau St. in Jay and extended 1.25 miles north/west. Work involved full depth reconstruction with a box section, granite curbing, sidewalk and a combination of open and closed drainage design. Work also included guardrail design, entrance design and design of numerous side road intersections. Gorrill Palmer provided final plans, quantities, cost estimate and special provisions. (03/2012 – 09/2016)

Route 236/91 Intersection Improvements, South Berwick, Maine – Project Manager for preliminary and final design services associated with geometric safety improvements and installation of a new traffic signal at the intersection of Route 236 and 91. Work includes widening of Route 236 to accommodate two northbound lanes, provisions for an alternating merge, widening of Route 91, drainage improvements, development of signing, striping and signal plans. Work also includes traffic analysis, development of submittal documents including quantities, cost estimate and special provisions. (01/2018 - Present)

Forest Avenue & I-295 Ramp Improvements, Portland, Maine – Project Manager for the design of I-295 Ramp and Forest Avenue improvements including realignment of ramps, sidewalk, bicycle and side path improvements. Work included realignment of Interstate 295 ramps for Forest Avenue to enhance safety of motorists and pedestrians; layout of ADA compliant sidewalk and side path trails along Forest Avenue; re-striping of Forest Avenue to accommodate bicycle lanes; intersection layouts. (08/2013 – 01/2015)

Mill, Main and Broad Street Improvements (LAP), Auburn, Maine – Project Manager for preliminary and final design services associated with safety, intersection and corridor improvements along Mill, Main and Broad Streets in the New Auburn neighborhood. This is a complete street project and a LAP project that includes utility coordination, landscaping, lighting, environmental coordination, traffic analysis, signal design, intersection geometric improvements, roadway improvements, pedestrian and bicycle accommodations and access management. This project involves significant public coordination, development of submittal documents including quantities, cost estimate, specifications and bid book. (01/2017 - Present)

GORRILL PALMER

Randy Dunton

Professional Engineer | Project Manager

Education

- University of Maine: B.S. in Civil Engineering

Registrations and Certifications

- Maine PE # 8686
- New Hampshire PE #14676
- Certified by ITE as a Professional Traffic Operations Engineers #611
- Certified by ISMA:
  Work Zone Safety
  Traffic Signal Technician Level1
  Traffic Signal Construction Tech. Level II
  Traffic Signal Field Tech. Level II
  Traffic Signal Design/Engineering Tech. Level II

Affiliations

- Past President, Maine Chapter, Institute of Transportation Engineers

Experience

- 12 years with firm
- 25+ years total

Randy is a partner at Gorrill Palmer and provides Transportation Planning services. Randy has over twenty-five years of experience in traffic and transportation engineering. He has worked for both the private sector as well as with the MaineDOT as the Region Traffic Engineer for the southern region of the State. His design and project management experience include traffic signal design, traffic permitting, intersection and corridor designs, feasibility studies, traffic calming design, safety evaluations and analysis, traffic modeling and analysis, peer reviews. He is a licensed PE in both Maine and NH, a certified Professional Traffic Operations Engineer (PTOE), and has numerous IMSA Certifications. The following is a very small sample of the types of projects that reflects Randy's experience:

Town of Conway, New Hampshire – Randy has provided peer review services since 2014 for a variety of site plan review applications submitted to the Town of Conway, New Hampshire. Applications have ranged from hotel projects to cellular communication tower sites. Randy's primary focus and specialty has been to provide review comments relative to the technical, engineering and transportation planning aspects of each project, including: traffic impacts and design, traffic and pedestrian signal design, and pedestrian accommodations and compliance to the Town's ordinance.

Fort Kent Signal Improvement Route 1/11, Fort Kent, Maine – Lead Traffic Engineer for preliminary and final design of this signal, pedestrian ramp and roadway improvement project at the intersection of Route 1 and Route 11 in Fort Kent, ME. Work includes traffic analysis, installation of new signal mast arms, signal equipment, pedestrian ramp improvements and drainage improvements. Randy's efforts include signal and pedestrian equipment layout, signage, proposed timing and phasing and signal notes. (Jan 2018 – Present)

Route 236/91 Intersection Improvements, South Berwick, Maine – Lead Traffic Engineer for preliminary and final design services associated with geometric safety improvements and installation of a new traffic signal at the intersection of Route 236 and 91. This project involves the signalization of a currently unsignalized intersection, signal equipment layout, signage, proposed equipment schedule, traffic data collection, traffic analysis, proposed timing and phasing and signal notes. (Jan 2018 – Present)

Route 236 Corridor Study, Kittery/Elliot, Maine – This was a corridor study of Route 236 for the two municipalities as well as SMPDC. It involved a safety review using the Highway Safety Manual, a speed study review, capacity analysis, geometric design of the corridor, signal warrant analysis, and numerous stakeholder and public meetings. The study was recently completed, and the recommendations are now being pursued to be implemented in the next two years when the road is repaved. (Aug 2018 – Aug 2019)

Route 112 Corridor Study, Saco, Maine – Randy was a project manager on this study responsible for data collection, computer modeling, identifying concepts and alternatives, and writing the final report. Gorrill Palmer completed the corridor study of Route 112 in Saco from Spring Street to Louden Road, as well as a section of Industrial Park Road.

Jonathan C. Edgerton, PE

Jonathan Edgerton Consulting, LLC
197 Lewis Hill Road,
Bowdoin , Maine 04287
jonathan.edgerton@icloud.com
207-751-0674

Education and Registration

BSCE Rensselaer Polytechnic Institute
Professional Engineer in New Hampshire and Maine

General

Mr. Edgerton has 35 years of professional consulting experience, working on a broad variety of civil engineering projects for both public and private sector clients. He is currently an independent consultant, although he worked for over thirty years for consulting firms based on New Hampshire and Maine.

His experience includes hands-on experience in engineering efforts associated with nearly two hundred dams and levees throughout New England. These efforts have included inspections, breach analysis & inundation mapping, spillway sizing, gate replacement, dam removal, fish passage, design and administration of construction for rehabilitation efforts and new dam construction.

Dam Project Experience in New Hampshire

Auburn, NH - Calef Lake Dam
Barrington, NH - Mendums Pond Dam
Durham, NH - Durham Reservoir Dam
Epping, NH - Bunker Pond Dam
Epsom, NH - Cass Pond Dam
Errol, NH - Errol Hydro Dam
Exeter, NH - Great Dam
Freedom/Effington, NH - Ossipee Lake Dam
Franconia, NH - Mittersill Dam
Goffstown, NH - Upper Dam
Goffstown, NH - Lower Dam
Greenland, NH - Winnicut Dam
Harrisville, NH - Seaver Dam
Lebanon, NH - Mascoma River Dam
Manchester, NH - Cohas Reservoir Dam
Newmarket, NH - Macallen Dam
New London, NH - Pleasant Lake Dam
Pembroke, NH - Buck Street Dam
Peterborough, NH - Cranberry Meadow Pond Dam
Rochester, NH - Round Pond Dam
Rochester, NH - Tufts Pond Dam
Rochester, NH - West End Dam
Salem, NH - Canobie Lake Dam
Waterville Valley, NH - Corcoran's Pond
Wilton, NH - Pine Valley Dam
Wilton, NH - Old Reservoir Dam
Windham, NH - Moeckel Dam

GORRILL PALMER

Benjamin Shaw

Registered Engineer Intern I Project Engineer

Education

- B.S. Civil Engineering , 2017, University of Maine, Orono, ME.

Registrations and Certifications

- Registered Engineering Intern in Maine
- NETTCP Hot Mix Asphalt Paving Inspector Certification

Affiliations

- Member, American Society of Civil Engineers

Experience

- 3 years in private practice

Pavement Management Study, Maine - Ben completed pavement condition surveys for Cape Elizabeth, Cumberland, Gray, Lewiston, and Windham, Maine. Combined, Ben has evaluated over 500 miles of pavement following ASTM D6433 standards and importing the results into MicroPAVER (developed by the U.S. Army Corps of Engineers). Ben used MicroPAVER to model pavement deterioration and ultimately calculate future maintenance and construction costs which influenced the Municipality's Capital Improvement Program.

Preble Street Sidewalk Improvements, Portland, Maine – Ben served as a Design Engineer for the CDBG sidewalk improvements along Preble Street in Portland. Design work included replacement of over 700 linear feet of brick sidewalk, improvements to pedestrian ramps, and lighting upgrades. The design was challenging given the steepness of Preble Street and other urban constraints. Ben helped prepare bid specifications and opinion of costs.

Laurel Cove Roadway Improvements, Harpswell, Maine – Ben served as the Design Engineer for municipal roadway improvements in Harpswell. Design work included rehabilitation of 3,800 linear feet of roadway and drainage improvements. Ben prepared bid specifications and opinion of probable costs for the Town.

South Street Drainage and Sewer Improvements, Biddeford, Maine – Ben served as the Design Engineer for this drainage and sewer improvements project in Biddeford, Maine. The project included the replacement of approximately 3,200 linear feet of new 6 to 24 inch diameter storm drain; 2,500 linear feet of 6 to 18 inch diameter sanitary sewer; 2,600 linear feet of 4 to 8 inch diameter ductile iron water main with new service connections; stripping and repaving approximately 3,500 linear feet of roadway and sidewalks. Ben prepared bid specifications and several opinions of probable cost estimates at various stages of the design.

South Street Construction Inspection, Biddeford, Maine – Ben served as the full-time construction inspector on the City of Biddeford, South Street Drainage and Sewer Improvements Project. Duties included daily construction observations for conformance to contract documents; observing storm drain, sanitary sewer, and water main installation; recording and tracking construction quantities; coordinating multiple field changes to the design with the City and Contractor; and responding to residents' questions and concerns.

State Street Infrastructure Improvements, Construction Inspection, Portland, Maine – Ben served as a Construction Inspector on the City of Portland, State Street Infrastructure Improvements Project. The project included replacement of sanitary sewer and storm drains, sediment baffle box, and full-depth road/sidewalk reconstruction. Ben's duties included daily construction observations for conformance to contract documents; observing storm drain, sanitary sewer and roadway construction.; recording tracking construction quantities; coordinate field changes to the design with the City and Contractor.

GORRILL PALMER

Chris Daubert

Design Engineer

Education

- BS – Civil / Environmental Engineering, University of Maine, Orono.

Registrations and Certifications

- Maine Licensed Engineer Intern (EI)

Affiliations

- American Society of Civil Engineers (ASCE), Maine Section

Depot Street Reconstruction and Utility Improvements, Windham, Maine – Chris served as a design engineer for this road reconstruction and municipal infrastructure improvement project. The project included a full depth reconstruction of 1,925 linear feet of Depot Street; replacing 450 linear feet of 8 to 12 inch diameter gravity sewer; construction of a new sewer pump station with 400 linear feet of 4 inch diameter force main; construction of 2,700 linear feet of 12 inch and 24 inch diameter water main; and renewal of all drainage infrastructure. Chris prepared bid specifications and several opinions of probable cost estimates at various stages of the design.

Western Promenade Drainage Improvements, Portland, Maine - Chris served as the primary design engineer for this drainage improvements in Portland, Maine. The project consisted of installing approximately 2,070 linear feet of 10" to 36" storm drain pipe on Western Promenade, Danforth Street, and Vaughan Street. Additionally, Chris used Autodesk Storm and Sanitary Analysis to model the watershed and analyze future storm separation connections. Chris also prepared opinions of probable construction costs and bid documents throughout various stages of the design process. The project is currently the Final Design phase.

Construction Inspection Services, Windham, Gray, Naples, and Freeport, Maine - Chris travels to various construction sites in the Towns of Windham, Gray, Naples, and Freeport, Maine to observe site containment and erosion control measures. Chris communicates with various contractors to understand schedule, coordinate repairs to erosion control measures, and observe key installations. Chris writes and distributes field visit summary reports that are distributed to the Towns, the owner, and the contractor. Chris also reviews and recommends Performance Guarantee (Letter of Credit) reductions to the Town based on project completeness.

Brand Road Construction Inspection, Windham, Maine - Chris served as the primary inspector for this road reconstruction and drainage improvements project in Windham, Maine. The project consisted of partial reconstruction of approximately 2,200 feet of Brand Road including drainage and safety improvements. Chris provided part-time inspection services that included overseeing construction, field reports, on-site field changes, coordination with abutters, and tracking daily quantities. Chris also reviewed pay requisitions and punch list items with the Town and Contractor.

Pavement Management, Lewiston, Maine – Chris assisted in a pavement condition survey update for the City of Lewiston, Maine. Chris evaluated 180 miles of pavement following ASTM D6433 standards and importing the results into MicroPAVER (developed by the U.S. Army Corps of Engineers). Chris used MicroPAVER to model pavement deterioration and ultimately calculate future maintenance and construction costs which influenced the City's pavement budget.

Shaker Road Sidewalk and Drainage Improvements, Gray, Maine – Chris served as the design engineer for this sidewalk reconstruction and drainage improvement project. The project included reconstructing approximately 5,600 linear feet of sidewalk; constructing 700 linear feet of new sidewalk; and replacing 800 linear feet of 15 to 18 inch diameter storm drain. Chris prepared bid specifications and several opinions of probable construction cost estimates at various stages of the design.

S.W.COLE ENGINEERING, INC.

Our Clients Make Better Decisions
From the Ground Up.

Chad B. Michaud, P.E.
Executive Vice President
Chief Operating Officer
Principal Geotechnical Engineer

Education:
B.S., Civil Engineering, University of Maine
GBA Fundamentals of Professional Practice Course

Registrations:
Professional Engineer (P.E.), New Hampshire, Maine, Connecticut, Massachusetts, Vermont and Rhode Island

Affiliations:
American Council of Engineering Companies (ACEC)
GBA Professional Firms Practicing in the Geosciences

Public Service:
Board of Directors, Barrington Youth Association
Environmental Technical Advisory Board, Creteau Career and Technical Center, Spaulding High School
Youth Baseball, Softball, and Soccer Coach

Chad Michaud went to Stearns High School in Millinockett, Maine before attending the University of Maine in Orono, Maine. Chad joined S. W. Cole Engineering, Inc. in 1999 as a Geotechnical Engineer. His duties progressed to a project manager and senior geotechnical engineer.

Chad has served on the Board of Directors since 2009. In 2014, he was named Executive Vice President and Chief Operating Officer of the firm. His responsibilities in these roles include corporate management, branch office management, project management training and mentoring, and corporate level oversight of operational functions such as health and safety, human resources and information technology.

Chad's responsibilities with the firm as a Senior Geotechnical Engineer are to manage projects, service clients, provide contract development, coordination of subcontractors and subconsultants, and oversee a staff of geotechnical engineers providing coordination of subsurface investigations and geotechnical design and specifications. Chad has experience providing soils engineering services on a variety of projects including multi-story mixed use commercial buildings, roadways, state and municipal bridges, airports, wastewater and water treatment facilities and lagoons, gas pipelines, municipal buildings, schools, towers, and large retail facilities and industrial structures in New Hampshire, Maine, Connecticut, Vermont, Massachusetts and Rhode Island.

Chad is known for his extensive experience with municipal and local public agency (LPA) funded bridge projects. Chad has worked on hundreds of bridge replacements and rehabilitations in the state of New Hampshire, as well as across New England.

Chad has significant experience providing geotechnical evaluation and global stability analyses for segmental mechanically stabilized earth (MSE) retaining walls and earth embankment slopes. Chad has been involved with many projects requiring a review of slope failures and the development of alternatives for reconstruction.

Chad has experience with field testing and evaluation of various stormwater infiltration testing techniques such as double-ring infiltrometer, Guelph permeameter, and borehole falling head methods.

WILLIAM J. DOUCET, PS - President

EDUCATION:
University of New Hampshire, B.S.F. Forest Management
University of New Hampshire, Land Surveying Coursework

SOCIETIES:
ACEC-NH, AIA-NH, MALSCE Proprietors' Council
ME, MA & CT Societies of Land Surveyors
New Hampshire Land Surveyors Association (Director 04 - 07)
New Hampshire Land Surveyors Board (Chairman)
National Society of Professional Surveyors (Governor 04 - 07)

PROFESSIONAL CERTIFICATIONS:
New Hampshire Licensed Land Surveyor #824
Maine Professional Land Surveyor #2263
Massachusetts Professional Land Surveyor #45709
Connecticut Land Surveyor #LSX.0070457

KEY QUALIFICATIONS:
Mr. Doucet has been working in land surveying since 1981 and still finds learning opportunities every day. His favorite projects involve teams of professionals working together to solve problems and deliver the highest value service to clients. Most of his experience is in complex existing conditions surveys where a vast amount of data is collected using a variety of survey methods. Mr. Doucet has been working with AutoCad software since 1987 investing considerable effort to deliver design ready cad files. In 2015 he has immersed himself in learning as much as possible about High Definition Laser Scanning. His daily role is to manage the overall business and be accessible to staff and clients. Currently his Civic duties include Chairing the NH Land Surveyors Board of Licensure and Planning Board Member. Outside of work, he enjoys woodworking, photography, kayaking and sailing.

STEVEN V. MICHAUD, PS – Senior Vice President

EDUCATION:
University of Rhode Island, BS Resource Economics
University of Massachusetts, Legal Aspects of Land Surveying Coursework
New Hampshire Technical College, AutoCAD Coursework
University System of New Hampshire, Survey Research & Boundary Law Coursework
University of Wyoming, Survey Computations Coursework

SOCIETIES:
New Hampshire Land Surveyors Association
American Congress on Surveying and Mapping
National Society of Professional Surveyors
Vermont Society of Land Surveyors
Rhode Island Society of Professional Land Surveyors

PROFESSIONAL CERTIFICATIONS:
New Hampshire Licensed Land Surveyor #916
Vermont Licensed Land Surveyor #728
Rhode Island Professional Land Surveyor #1986

KEY QUALIFICATIONS:
Steve is a graduate of the University of Rhode Island, and is a Licensed Land Surveyor in NH, VT & RI. He began his Surveying career in 1995 and has been with Doucet Survey since 1997. In that time has served in many different roles-from Records Researcher to Survey Technician to Project Manager. In his current capacity as Senior Vice President, Steve primarily handles project management duties and business development relations. Steve has provided Professional Land Surveying services on projects such as the Center of NH in Manchester, UNIVERSITY OF NEW HAMPSHIRE Hamel Recreation Center, Walmart & Kohl's at the Berlin Mall in VT, Portsmouth International Airport at Pease, and dozens of miles of electric transmission corridor throughout New Hampshire. He is the primary point of contact for multi-year contracts with several municipal & state agencies as well as public utilities. Steve leads Doucet Survey's UAV (Unmanned Aerial Vehicle) team and is developing a portfolio of mapping, volumetric, inspection and photography projects using this emerging technology. Steve enjoys skiing, playing golf & hockey, following the New England sports teams, and spending time outdoors with his 2 boys.

JACK KAISER, PS – Vice President – Construction Specialist

EDUCATION: University of New Hampshire, Thompson School of Applied Science
Associates Degree in Civil Technology; Surveying and Mapping

SOCIETIES:
New Hampshire Land Surveyors Association
National Society of Professional Surveyors
Construction Fall Protection Safety Certification

PROFESSIONAL CERTIFICATIONS:
New Hampshire Licensed Land Surveyor #937
10 Hour OSHA Training Course for the Construction Industry

KEY QUALIFICATIONS:
Jack began surveying in 1993. He then went to the University of New Hampshire where he received an Associate's Degree in Surveying & Mapping in 1995. Jack started at Doucet Survey in 2001 and obtained his New Hampshire Surveyor's License in December of 2005. His current duties include project cost estimating, records research, boundary analysis, computations and client correspondence. Of the many varieties of surveys he works on, Jack deals primarily with roadway surveys and construction layout. Some of the more notable construction survey sites Jack has managed include; Lonza Biologics in Portsmouth, NH, Velcro USA in Somersworth, NH, Home Depot in Portsmouth, NH, Portsmouth Water Treatment Facility in Madbury, NH and The Ridge Shopping Plaza in Rochester, NH. Roadway surveys include over 10 miles of new residential subdivision roads, and over 60 miles of topographic surveys of local and state roads. In his free time during the colder months Jack enjoys watching sports and ice fishing. He more so enjoys waiting for the ice to melt so he can spend time on his pontoon boat and open water fish near home on Merrymeeting Lake.

WILLIAM P. FAUCHER, P.E., SECB

Allied Engineering
Structural Mechanical Electrical Plumbing

Structural Department Head
LEED AP, Registered Roof Consultant

William P. Faucher, P.E. has significant experience serving as project manager of Allied Engineering's Municipal projects. Bill has extensive experience analyzing and designing various structures utilizing a variety of construction techniques and materials including: reinforced masonry, pre-stressed concrete, stone, brick, braced steel and steel with moment connections, engineered wood systems, reinforced cast-in-place concrete, concrete masonry units, and cold-formed metal, both bearing and non-load bearing systems. Mr. Faucher's experience covers building analysis for renovations, seismic stress and wind and snow loading. He remains current with new building technology and techniques so each project is designed with the best options available to meet client needs.

Education, Registration, and Affiliation

University of Maine - B.S. in Civil Engineering Concentration - Structural - 1987
University of Wisconsin, Continuing Education in Foundation Design - 1989
Registered Professional Engineer - ME, NH, VT, MA, CT, RI, NY, NJ, VA, NC, SC, GA, FL
Structural Engineering Certification Board - (SECB)
Member – Past President (2000-2001) of Structural Engineers Association of Maine
Member - National Council of Examiners for Engineers and Surveyors (NCEES)
Member - Concrete Reinforcing Steel Institute (CRSI)
Member - Construction Specifications Institute (CSI)
Member - American Concrete Institute (ACI); ACI Concrete Flatwork Technician #912153
Member - Associated Constructors of Maine, Inc.
Member – IBEC (International Institute of Building Enclosure Consultants) – Professional Association for Roofing, Water-Proofing, Exterior Wall Systems
Member - NRCA – National Roofing Contractors Association

Relevant Experience

- Cash Corner Fire Station – South Portland, ME
- Town of Lebanon General Engineering Consulting Services – Lebanon, ME
- City of Saco General Engineering Consulting Services – Saco, ME
- City of Portland General Engineering Consulting Services – Portland, ME
- Westbrook Municipal Public Works Facility – Westbrook, ME
- Windham Public Works Facility, Windham, ME
- Windham Town Hall Structural Inspection, Windham, ME
- Windham Fire Station Conversion Evaluation – Windham, ME
- Oxford County Courthouse Masonry Restoration and Roof Upgrades, Norway, ME
- Saco Public Works Design/Build – Saco, ME
- West Kennebunk Fire Station – Design/Build with PM Construction
- Center Conway Service Garage - Conway NH

Richard Jordan, Senior Managing Partner

PROFILE

- 20 years of siting/permitting experience helping municipalities, developers and regulatory agencies identify, minimize, avoid and solve known and unforeseen challenges throughout the development and permitting process.
- Provides expert consultation and management services on a variety of development projects: renewable and traditional energy generation and transmission projects; transportation/infrastructure; commercial and residential developments; and conservation property assessments.
- Supports wetland creation, restoration and conservation projects through a team approach to complex problems and implementation of the best science and experiences available.
- Experienced in landowner outreach, stakeholder engagement, project development, and permitting at the local, state and federal levels.
- Professional Wetland Scientist, experienced consulting biologist, and Certified Professional in Erosion and Sediment Control helping projects maintain permit compliance and minimize impacts.

EDUCATION

- B.A., Environmental Science and Policy, University of Southern Maine, 1999

PREVIOUS CAREER EXPERIENCE

- TRC Companies; Managing Scientist and Solar Client Lead – New England; Scarborough, Maine (2014-2019)
- Tetra Tech; Project Manager/Wetland Scientist; Portland, Maine (2013-2014)
- Boyle Associates; Manager of Field Operations; Scarborough, Maine (2000-2013)

PROFESSIONAL CERTIFICATIONS/AFFILIATIONS

- Certified Professional Wetland Scientist (#1517)
- Certified Professional in Erosion and Sediment Control (#3645)
- Certified by the Maine DEP in Erosion and Sedimentation Control Practices (#1291)
- Member and Legislative Chairperson, Maine Association of Wetland Scientists
- Member, Maine Renewable Energy Association
- Member, E2Tech Maine

REPRESENTATIVE EXPERIENCE

Mr. Jordan is the founding partner of Flycatcher LLC and has provided environmental consultation and strategic permitting services on a wide range of projects, including transportation/multi-modal infrastructure projects, commercial and residential subdivisions, conservation properties, electric and natural gas transmission and distribution facilities, and wind and solar power development projects. Mr. Jordan's experience includes permit support at the local, state and federal levels; wetland, stream and vernal pool investigations; wildlife assessments; compensatory mitigation planning and design; environmental monitoring and inspection; invasive species management; conservation land planning; and erosion and sediment control planning and design. He has managed field data collection and presentation efforts on large projects and has performed delineations and peer reviews on sites

Flycatcher
LAND + SCIENCE + PEOPLE
BASSWOOD ENVIRONMENTAL

32 Brentwood Road
Cape Elizabeth, ME 04107
(207) 518-8442
erik@basswoodenv.com

ERIK LEMA
Owner/Principal Scientist

Erik Lema (NHCWS #286) created Basswood Environmental LLC in 2018 to provide New England clientele with robust, scientifically sound environmental services. He is an experienced project manager and field scientist with over a decade of professional consulting experience in the New England environmental industry, and nearly 20 years of experience studying botany and vegetation dynamics. He has managed numerous projects and produced comprehensive technical reports for services including wetland delineations, soil investigations, rare species surveys, invasive species management, environmental monitoring, and ecological restoration.

EDUCATION

2003 B.A., Environmental Studies. State University of New York at Buffalo.

2007 M.S., Forest Ecology. State University of New York, College of Environmental Science and Forestry.

PROFESSIONAL EXPERIENCE

- Owner/Principal Scientist, August 2018-Present. Basswood Environmental LLC. Cape Elizabeth, ME
- Environmental Scientist, 2010-2015; Senior Scientist, 2015-2018. Normandeau Associates, Inc. Portland, ME.
- Environmental Scientist, 2008-2010. Tetra Tech, Inc. Portland, ME.
- Botanist, 2008. Ecology and Environment, Inc. Throughout northern Utah and Nevada.

CERTIFICATIONS AND LICENSES

- Certified Wetland Scientist, State of New Hampshire
- OSHA 40-Hour HAZWOPER Certification
- Licensed Master Pesticide Applicator, State of Maine
- Certified in Erosion Control Practices, State of Maine.
- Licensed Site Evaluator, State of Maine

Jack A. Burgess, P.E.

Vice President

Project Role

Principal in Charge

Summary

Jack Burgess joined Becker Structural Engineers in 2007, which was acquired by Thornton Tomasetti in 2019. He brings thirty-five years of experience and has been designing bridges for the MaineDOT as a consulting engineer for more than twenty years. He recently served on the MaineDOT Chief Engineer's "Keeping Our Bridges Safe" task force. His bridge experience includes preliminary and final designs of bridges ranging from buried structures to multi-span river crossings. He has designed and detailed steel and prestressed concrete superstructures as well as integral abutment, pile-supported deep abutment, mass pier and pile-bent pier substructures. His experience includes preparation of special provisions, hydraulic analyses, load ratings, maintenance of traffic studies and stage construction plans.

Education

- M.S., Civil Engineering, 1986, University of Texas at Austin
- B.S. Civil Engineering, 1980, University of Vermont

Registrations

- Registered Professional Engineer in Maine (#5745)

Professional Activities

- Member, American Institute of Steel Construction , 2007-2019
- Member, Structural Engineers Association of Maine, 1991-2019
- Subcommittee, Maine DOT/ACEC Bridge, 2015-2017

Publications and Lectures

- "Anchorage Zone Cracking of Post-Tensioned Bridge Decks with Closely Spaced Anchors", American Concrete Institute Convention 1986, Baltimore, MD, Fall 1986, presenter and co-author

Select Project Experience

MaineDOT, I-395 Bridge Replacement over Webster Ave, Bangor, ME. Bridge engineering services for the replacement of a three-span bridge with a pedestrian / bicycle tunnel. Scope of services included developing plans, specification and estimates for the design of the structure while maintaining traffic flow above. Accelerated bridge construction techniques were utilized to replace the existing bridge while limiting the complete closure of I-395 to 65 consecutive hours.

MaineDOT Bridge Load Ratings, Statewide, ME. Load and resistant factor ratings for more than seventy bridges during six years. The ratings reflect the as-is condition of the bridges and was performed in accordance with the AASHTO Manual for Bridge Evaluation (MBE) and MaineDOT Load Rating Guide. Scope included site visits to field measure primary framing members for bridges that did not have plans. HL-93 live loading was utilized to screen whether an evaluation of Maine legal loadings was required.

MaineDOT, Mill Bridge Replacement over Mill Creek, Islesboro, ME. Bridge design services for a replacement bridge in an environmentally-sensitive and remote site. The work required close coordination with contractors and ferry and transport companies to overcome challenges related to constructability and shipping. The team recommended one crane transported by ferry to drive piles and erect beams. Design included re-use of granite block abutments that allowed for a shorter span and the use of shallow depth precast voided slabs. Scope included detailing of alternative precast and cast-in-place concrete elements to ensure lowest bid packages. Ultimately, the bridge was closed for only 10 weeks and the low bid was 10 percent below estimate.

MaineDOT, Covered Bridge Replacement over Little Androscoggin River, Oxford, ME. Bridge design services for the replacement of a timber covered bridge. The two-span bridge was constructed on a realignment to accommodate increased use and maintain traffic on the existing bridge during construction. The substructure consists of weathering steel plate girders, integral abutments and a post-tensioned, rock-socketed pile bent pier to alleviate scour concerns and resist heavy ice loads.

MaineDOT, Soucy Bridge Replacement over Perley Brook, Grand Isle, ME. Bridge engineering services for a new, 144-foot-long precast concrete box culvert with sloped ends and a 22-foot span to replace a culvert on the list of structurally deficient bridges. Scope included an analysis of the existing and proposed culverts using HY-8 for flows up to Q500 as well as design of a two-foot special fill in the culvert to provide stability and allow fish passage.

Cotton Mill Bridge Investigation over Royal River, Yarmouth, ME. Investigation of the structural supports of a sewer main on the bridge. Scope included evaluation and analysis of the supports for the preparation of rehabilitation plans and specifications. Coordination with MaineDOT was performed to verify that the sewer supports would not interfere with the proposed bridge rehabilitation to be performed the following year.

4. Firm's Related Experience

Gorrill Palmer is an engineering firm with multidiscipline staff that can provide a wide range of in-house technical skills to meet the challenges and needs of the Town of Barrington. Over the years, we have developed an exceptional record of performance for several communities through their "On-Call" Engineering Services Contract. These long-standing relationships are founded on our commitment to understanding our clients' needs, depth of qualified staff available across a wide range of disciplines, and our proven ability to complete concurrent assignments on time, within budget, and with minimal change orders during construction.

Our Team has the capability to provide the following services for design and review and have routinely provided these services to several other surrounding municipalities within the northeast area for nearly 30 years.

- ***Roadway***

Design services include new roadway construction, as well as roadway preservation\rehabilitation, complete streets, widenings, and reconfigurations to improve drainage and safety. Our staff has significant experience working with municipalities to optimize available funds and develop cost-effective, appropriate, and constructible solutions. Project elements include roadway design and rehabilitation, new sidewalks, complete streets, traffic calming, utility relocations, street lighting, grading, handicapped access, and bank stabilization. We have teamed with S.W. Cole Engineering on numerous roadway projects to analysis subsurface conditions and work with the Town to determine the most cost-effective treatment. Gorrill Palmer recently completed the design and construction of Brand Road in the Town of Windham, Maine. During design, it was determined that the most cost-effective treatment was an aggregate amendment and reclamation, saving the Town over $200,000 in construction costs. The project included enhancements to the existing roadway gravel, shoulder widening, drainage improvements, and paving. A similar treatment may be possible for Orchard Hill Road in Barrington.

- ***Stormwater***

Gorrill Palmer's stormwater engineers specialize in hydrology, hydraulics, and stormwater management. Their work includes determination of pre- and post-development stormwater runoff rates; design of stormwater drainage facilities following Best Management Practices (BMPs); analysis of riverine peak discharge rates and water surface profiles for various recurrence interval events; development of inflow and outflow stormwater hydrographs; preparation of stormwater management and erosion control plans; and assistance in environmental permitting issues, especially in terms of wetlands maintenance and mitigation/replication. Our drainage specialists ensure compliance with current, applicable regulations in terms of stormwater management, flooding, drainage, hydrology and water quality treatment for local

roadway and utility improvements, site developments, and other new infrastructure. For numerous site developments, our office has evaluated site hydrology and developed the design of storm drainage systems for sites, including onsite retention and detention facilities, infiltration systems, and sediment controls, as needed. Gorrill-Palmer's stormwater engineers are well versed with the design of "green," low-impact, Best Management Practices.

Gorrill Palmer has designed, permitted, and prepared bid packages on various types of drainage projects since the firm was established in 1998. During that time, we have completed numerous roadway, storm drain and infrastructure projects in municipalities of various sizes. Projects located in both large, urban municipalities such as the City of Portland and City of Westbrook, to more rural and suburban municipalities like the Town of Gray and Town of Windham. Most recently, we completed the design for the Long Hill Road Culvert Replacement project in Gray, Maine. Prior to the design, we prepared a successful Maine DEP Stream Crossing Grant application saving the Town $75,000, from having to fund locally. A full list of culvert projects Gorrill Palmer has completed is appended in this section. We believe that our stormwater management experience has resulted in improvements in our design process that will be beneficial when working with the Town of Barrington with potential culvert projects.

- ***Geotechnical***

We have teamed with S.W. Cole Engineering to provide subsurface explorations, geotechnical engineering, and material testing services. A full list of their services can be found later in this section. S.W. Cole will work with Gorrill Palmer on roadway projects, specifically Deer Ridge Road which appears to be failing. Additionally, S.W. Cole will assist with culvert projects and potential pavement condition surveys completed as part of the 10-year roadway improvement plan. SW Cole has worked on several roadway and culvert projects with Gorrill Palmer. Most recently, the firms have worked together on culvert projects in the City of Lewiston and Town of Windham. S.W. Cole has significant experience on roadway projects in New Hampshire including a recent project on Province Road in Barrington. Other notable recent projects in New Hampshire include:

- Lower Central Avenue, Dover NH
- Culvert Replacements, Wentworth, NH
- Municipal Roadways, Somersworth, NH

Descriptions and other similar experience can be found later in this section.

- ***Traffic Signals***

Gorrill-Palmer completes designs to signalize currently unsignalized intersections, revise and update existing signalized intersections, and create timing/phasing plans for all signals including isolated as well as complex interconnected/coordinated signal systems. We complete these projects for both the

MaineDOT and Municipalities on a regular basis. Traffic signal elements include; traffic signal timing/ phasing, design of traffic signal systems, channelization islands, pavement markings, signing, pedestrian crossings and accommodations, and transit stops and parking.

➢ *Traffic Impacts and Mitigation*

We work on both developer projects as well as Municipal and MaineDOT projects. This provides us a unique perspective in knowing both what to look for in reviewing developer projects as well as providing services for the municipality. Our staff of traffic, transportation planning and transportation engineering includes seven engineering professionals that can lead or assist in the design, analysis or peer review of transportation related projects and mitigation, coupled with our municipal team that work hand in hand with the engineers on transportation project planning, design and delivery.

➢ *Municipal and Private Utilities*

These services generally include the design of storm and sewer systems as outlined above, as well as the design and coordination with private utility companies for the design of upgrades, replacements, relocations or extensions of existing utility infrastructure. Gorrill Palmer has provided engineering design services on numerous projects for Portland Water District, Lewiston Public Works, and Maine Water Company on watermain replacements, extensions, and upgrades.

➢ *Dams*

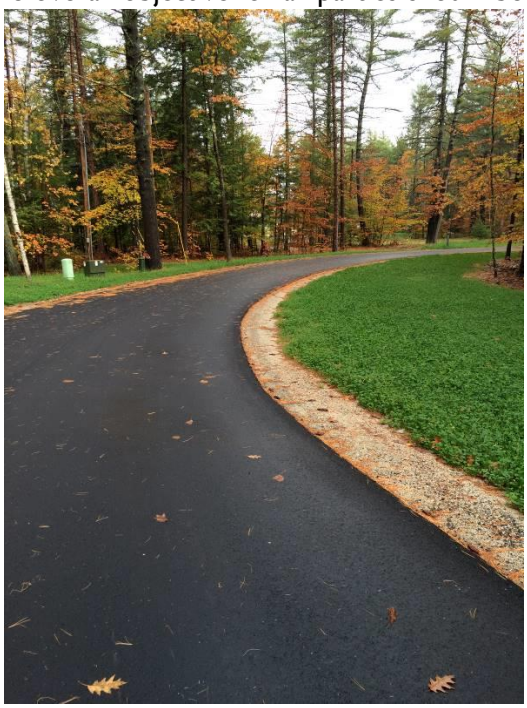
Jon Edgerton brings extensive engineering experience on nearly 200 dams and levees throughout New England, including the Mendums Pond Dam in Barrington. Work included inspections, breach analysis & inundation mapping, spillway sizing, gate replacement, dam removal, fish passage, design and administration of construction for rehabilitation efforts and new dam construction. A full list of dam project experience is appended to this section.

➢ *Environmental*

We have added Flycatcher to our team which is an environmental and land use consulting company. Flycatcher provides wetland and watercourse delineations, environmental studies, environmental permit compliance inspection, and strategic permitting support at the federal, state and local levels. Flycatcher is experienced and they are dedicated to helping projects achieve success. Flycatcher has worked with Gorrill Palmer on a number of culvert and site projects providing valuable support for design and permitting. A list of recent projects is appended in this section. Flycatcher and Basswood have partnered previously on wetland, rare plant and invasive species work and together provide a full suite of environmental support. Basswood is currently involved with the initial planning stages for the relocation of the state-endangered climbing hempvine found along the Isinglass River in Barrington. The firm has been working closely with New Hampshire's Natural Heritage Bureau to develop a preliminary transplant strategy for the population of hempvine that is proposed to be disturbed by the Greenhill Road bridge replacement project.

➢ *Planning Board Peer Review of Site Development and/or Subdivision Projects*

Gorrill Palmer has provided engineering and traffic peer review services for over 30 municipalities across New England. Unlike some firms, our philosophy on completing peer reviews is to have more senior level staff complete the reviews to ensure that the review comments are relevant to the regulatory and ordinance requirements, rather than just a quality assurance/quality control review for the design engineer. Our expertise in civil and transportation engineering is critical in providing effective development peer review and inspection services for municipalities. We believe the peer review should be a constructive process that benefits the public and the applicant, understanding that peer reviews are a positive part of the Planning Board review process and the overall objective for all parties should be an enhanced project. Additionally, we can tailor our review comments in a manner that best suits the Town. For many Towns, we provide peer review comments in email format. However, we can prepare a more formal letter or memorandum if desired. When appropriate, we will utilize virtual-based "Zoom" meetings to attend development review meetings, planning board meetings, etc. which addresses the current COVID19 pandemic and is more cost-effective. If selected for peer review services, we recommend scheduling a kickoff meeting with appropriate Town Staff to understand their desired formatting and expectations. We are actively providing peer review services for the following municipalities:



- Town of Conway, NH
- Town of Gray, ME
- Town of Windham, ME
- Town of York, ME

In addition to peer reviews, we regularly provide periodic construction inspection services for site and subdivision development review projects in Windham, Gray, Cumberland, and Brunswick. We have several engineers on staff that conduct the construction inspections and prepare the associated field reports. Their inspection work and field reports are reviewed by a Principal or Project Manager that is familiar with the project before being submitted to the Town and the Developer. A list of peer review and construction inspection projects Gorrill Palmer has provided to municipal planning departments is provided later in this section.

➢ *Permitting Assistance*

Gorrill Palmer offers extensive permitting experience with both environmental and transportation agencies in New England. We prepare and obtains permits from local, state, and federal agencies for both public and private sector clientele. We have experience with NH Department of Environmental Services (NHDES) permits from our prior development and roadway work in the Towns of Epping and North Hampton. Additionally, our experience peer reviewing development projects in the Town of Conway has included numerous NHDES Alteration of Terrain permitted projects. Recently, we have prepared and obtained Army Corp of Engineers (ACOE) category 2 permits as part of municipal culvert replacement projects in the Towns of Gray and Windham, City of Lewiston, and City of Westbrook. Our breadth of experience with ACOE General Permits is critical to assisting the Town with planning,

budgeting, and designing projects adjacent to natural resources. Recent municipal projects with extensive permitting include:

- Mill Road Culvert, Cumberland ME (ACOE, category 1 general permit)
- Falmouth Road Culvert, Windham ME (ACOE, category 2 general permit)
- New Gorham Road Culvert, Westbrook ME (ACOE, category 2 general permit)
- Longfellow Street Culvert, Westbrook ME (ACOE, category 2 general permit)
- Long Hill Road Culvert, Gray ME (ACOE, category 2 general permit)
- State Street Infrastructure Improvements, Portland ME (ACOE, category 2 general permit and Maine DEP Natural Resource Protection Act permit-by-rule)
- Windham Shared Maintenance Facility (MDEP, Site Location of Development Act permit and Natural Resource Protection Act permit)
- Falmouth Memorial Library, Falmouth ME (MDEP, Stormwater permit)

- ***Grant/Loan Application and Administration Assistance***

Gorrill Palmer has successfully assisted municipalities with grant and loan applications for state funding. We understand how significant costs can be for municipalities in order to fully comply with local, state, and federal design standards and requirements. Therefore, we regularly monitor potential grant opportunities to assist Towns with their aging infrastructure. In recent years, we have prepared MDEP Stream Crossing Grant Applications for the Town of Gray, Town of Windham, Town of Cumberland, and Town of Dover-Foxcroft. This competitive grant program is intended to assist municipalities with upgrading their culverts at stream crossings to improve fish and wildlife habitat and increase community safety. We will assist the Town of Barrington with the Aquatic Resource Mitigation (ARM) Grant Program and as well as other funding opportunities. Gorrill Palmer has recently prepared the following grant applications, successfully:

- Falmouth Road Culvert, Windham ME ($95,000 in grant funds)
- Mill Road Culvert, Cumberland ME ($47,500 in grant funds)
- Long Hill Road Culvert, Gray ME ($75,000 in grant funds)

Gorrill Palmer has also assisted several municipalities with the MaineDOT's Municipal Partnership Intuitive (MPI) program which is designed to promote partnerships between MDOT and municipalities by leveraging additional local resources to match state resources. We assist municipalities with MPI applications to fund the design and construction of State and State-Aid highway improvement projects. Gorrill Palmer will assist the Town of Barrington with potential grant opportunities such as the NHDOT Highway Block Grant program. We have recently completed the following projects with MPI funds:

- Route 1 Center Turn Lane, Cumberland ME ($500,000 state match funds)
- Blackstrap Road Widening & Partial Reconstruction, Cumberland ME ($500,000 state match funds)
- Main Street Reconstruction, Cumberland ME ($500,000 state match funds)
- Anglers Road/Route 302 Intersection Improvements, Windham ME ($500,000 state match funds)
- River Road/Route 302 Intersection Improvements, Windham ME ($300,000 state match funds)
- Route 302 Shoulder Improvements, Windham ME ($250,000 state match funds)
- Shaker Road Sidewalk & Drainage Improvements, Gray ME ($500,000 state match funds)

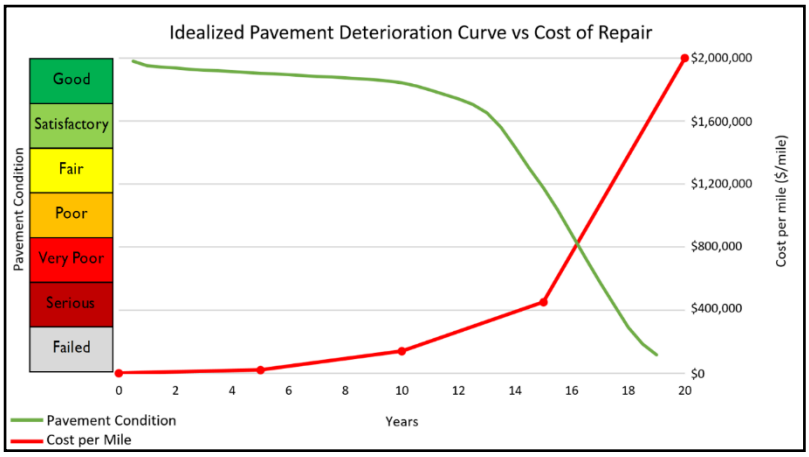
Survey

We have included Doucet Survey on our team for all surveying/right-of-way/mapping services. Doucet Survey provides surveying services for both private and public sectors and has a reputation for providing high quality surveying services to their clients. For the public sector, Doucet Survey has provided surveying services for over 150 municipal projects including the following in the Town of Barrington:

- Barrington Town Hall
- Barrington Highway Garage
- Barrington Elementary School
- Barrington Landfill
- Barrington Public Library

Additionally, they have provided over 300 miles of roadway and utility lines on State and Federal projects. Doucet Survey is under On-Call Contracts with NHDOT, Eversource, and the City of Laconia. They are part of teams under On-Call Contracts for US Army Corp, NH F&G, National Guard and US Navy. A full list of recent projects and municipal experience is appended to this section.

Pavement/Asset Management



Gorrill-Palmer has completed the collection of pavement conditions data for 19 municipalities and more than 2,600 miles of roadway utilizing multiple methodologies, including ASTM D-6433, the Visual Method (using MicroPaver software) and the MaineDOT Road & Sign Management Software (RSMS). The general trend has been to use the ASTM methodology and MicroPaver software. Pavement Management is a great tool for evaluating and understanding the condition of your paved assets, which are typically the costliest asset for any municipality to operate and maintain. We have prepared pavement management plans for the following municipalities in the last five years:

- Town of Buxton, ME (81 miles)
- Town of Cape Elizabeth, ME (63 miles)
- Town of Casco, ME (34 miles)
- Town of Cumberland, ME (73 miles)
- Town of Dover-Foxcroft, ME (46 miles)
- Town of Falmouth, ME (90 miles)
- Town of Gray, ME (75 miles)
- Town of Lebanon, ME (75 miles)
- City of Lewiston, ME (184 miles)
- Town of Windham, ME (99 miles)

Additionally, we have assisted some of these municipalities with preparing estimates, budgets, and bid documents for their annual capital improvement projects (CIP). We also provide part-time and/or full-time construction inspection services to ensure proper constructability and monitor specific project costs. A list of pavement management experience is appended to this section.

➢ *Construction Inspection/Administration*

Construction management and inspection services are routinely provided for many of Gorrill Palmer's municipal roadway, waterworks, and wastewater projects. Our staff is fully experienced in addressing and resolving the many issues and problems that inevitably arise at the construction site. Their skills and experience have been invaluable in ensuring that construction proceeds in full compliance with contract documents, and in a manner that minimizes disruption to abutters. All municipal engineers at Gorrill Palmer have significant construction experience which allows us to be flexible with staff and provide responsive construction services. Given S.W. Cole's close proximity to Barrington, we will utilize their construction services when needed for an emergency on-call service. However, the intent is Gorrill Palmer would provide necessary coordination, and ultimately, provide construction engineering services on all construction projects. Our protocol with other long-distance municipalities is to strategically coordinate multiple construction site visits in one trip. This provides the client and/or developer with cost-effective construction oversight. We offer our clients extensive experience providing full and/or part time inspection services to help manage budgetary constraints. We provide construction inspection and administrative services on almost all of our design projects. We provide construction engineering services on a wide variety of projects, including:

- Roadway Reconstruction & Pavement Preservation
- Utility Upgrades (sanitary sewer, storm drain, water, etc.)
- Culvert/Minor Span Bridge
- Pedestrian Improvements
- Site Development
- Bank Stabilization
- Erosion & Sedimentation Control

We have several certified paving inspectors that have the Northeast Transportation Training Certification Program (NETTCP) Hot Mix Asphalt (HMA) Pavement Inspectors certification. These paving inspectors can be used for paving observations on subdivision roads or on existing town road paving projects, where the town wishes to have a certified inspector observing the paving work.

In the last five years, we have provided construction inspection services, both part-time and full-time, for almost 20 municipalities in southern Maine, including Windham, Gray, Harpswell, and Naples.

➢ *Town Facilities & Buildings*

We have included Allied Engineering on our team to provide structural engineering services. Bill Faucher, and his staff at Allied Engineering have extensive experience analyzing and designing various structures utilizing a variety of construction techniques and materials including: reinforced masonry, pre-stressed concrete, stone, brick, braced steel and steel with moment connections, engineered wood systems, reinforced cast-in-place concrete, concrete masonry units, and cold-formed metal, both bearing and non-load bearing systems. We have worked with Allied Engineering on several municipal facilities including the Windham Shared Maintenance Facility and the Harpswell Recycling Center. Additionally, Gorrill Palmer has provided civil/site engineering services on several other municipal facilities including Lewiston Hudson Bus Playing Fields, Shane's Inspirational ADA Compliant Playground, and Falmouth Memorial Library.

Brand Road Reconstruction, Windham, Maine

Project Type

Roadway improvements with safety and drainage improvements to an existing gravel road in Windham, Maine.

Services Provided

- Roadway Realignment
- Roadside Safety Design
- Road Reconstruction
- Drainage Improvements
- Bidding Assistance
- Construction Observations & Administration

The Town of Windham, Maine retained Gorrill Palmer for the design of reconstructing Brand Road. The project involved a partial reconstruction, drainage and safety improvements along 5,900 feet of Brand Road. Working with S.W. Cole Engineering, the project included an aggregate amendment and reclamation of the existing roadway gravel which provided a cost-effective enhancement to the road base. After minor alignment and shoulder improvements, the roadway was paved. Drainage was addressed with open channel ditching, catch basins, cross culverts, and a series of underdrain pipes. Safety improvements were made addressing steep slopes with guardrail upgrades. Gorrill Palmer prepared design plans project specifications, and bid documents. We presented at multiple public meetings and assisted the Town with obtaining necessary construction easements.

Gorrill Palmer also provided part-time construction inspection and administrative services. Work included overseeing construction, coordinating with abutters, and preparing field reports. We also reviewed pay requisitions and punch list items with the Town.

Key Staff:

Will Haskell, Owen Chaplin

Reference:

Mr. Doug Fortier
Public Works Director
Town of Windham
185 Windham Center Road,
Windham, ME 04062
(207) 892-1909
drfortier@windhammaine.us

Infrastructure Improvements - New Gorham Road & Maple Street - Westbrook, Maine

Project Type

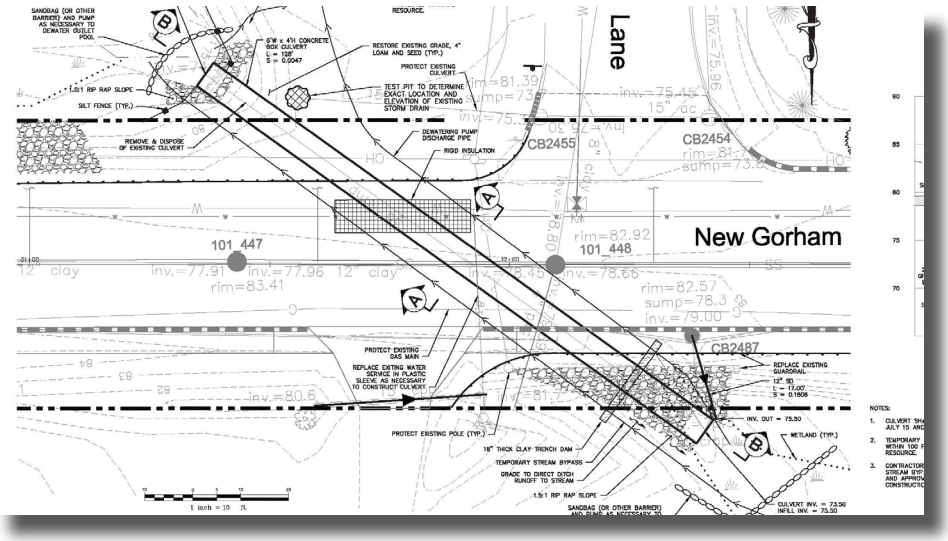
Prepare design plans for a new separated storm drain and sanitary sewer system in a residential neighborhood of Westbrook

Services Provided

- Sewer Separation
- Municipal Road Reconstruction
- Culvert Replacement

The City of Westbrook selected Gorrill Palmer to complete design plans for this project, which included new separated storm drains, new sewer infrastructure, and road reconstruction on New Gorham Road, Fairlawn Avenue, Maple Street, and Union Street. In all, the project includes about 4,700 linear feet of new 8 to 24-inch sanitary sewer, about 800 linear feet of new 12 to 18-inch storm drain, and about 6,000 linear feet of new water main.

In addition the project included over 5,400 linear feet of street reconstruction and sidewalk, landscaping improvements, and the replacement of two (2) 36 inch diameter cross culverts on New Gorham Road and Longfellow Street. The existing culverts were replaced with precast concrete box culverts sized to meet Army Corp of Engineers requirements.



Key Staff:
Will Haskell, Owen Chaplin, Grant Kern

Reference:
Mr. Eric Dudley, Ms. Katherine Kelley
City of Westbrook Department of Public Works
371 Saco Street
Westbrook, ME 04092
(207)854-0660

Baker Brook at Falmouth Road Culvert Replacement, Windham, Maine

Project Type

Culvert upgrade to reduce flooding and improve fish passage.

Services Provided

- Culvert Design
- Hydrologic & Hydraulic Modeling
- Roadside Safety Design
- Road Reconstruction
- Army Corps Permitting
- Bidding Assistance
- Construction Observations & Administration

Falmouth Road crosses Baker Brook east of Route 202, which is a large tributary to the Pleasant River. The Town decided to replace the existing twin 54-inch diameter corrugated metal pipes as they were deteriorating and undersized. Additionally, Falmouth Road was scheduled for a pavement preservation treatment as part of a Municipal Partnership Agreement with MaineDOT.

Gorrill Palmer competed the design plans recommending a 7' rise by 14' span precast concrete box culvert embedded two feet below the stream bottom which facilitates passage of aquatic organisms. The culvert was designed to convey the 100-year storm event without overtopping Falmouth Road. Gabion walls were proposed at both the inlet and outlet of the culvert to minimize stream impacts. Additionally, guardrail was designed along both sides of Falmouth Road to ensure roadside safety. The project received an Army Corps of Engineers Category 2 General Permit. Gorrill Palmer provided construction observations and administrative services to ensure the project was built in accordance with the design plans/permit and within the Town budget.

Key Staff:

Will Haskell, Owen Chaplin

Reference:

Mr. Doug Fortier
Public Works Director
Town of Windham
185 Windham Center Road,
Windham, ME 04062
(207) 892-1909
drfortier@windhammaine.us

Minor Span/Culvert Services

Gorrill Palmer has designed, permitted and provided construction services for numerous culvert and small bridge replacements in municipalities throughout the state for over 20 years. We have designed culverts in both urban and rural communities requiring multidisciplinary designs to accommodate utilities, roadside safety, and pedestrians. Our familiarity with the Maine DEP Natural Resource Protection Act and Army Corp permitting process ensure that projects are completed and permitted in a timely fashion. Many of the projects that we have completed were designed to pass the 100 year storm. Over the duration of the firm's existence, our Engineers have designed a number of large roadway culverts of varying materials. Including large concrete box culverts, multi-plate aluminum arch culverts, steel pipe arch culverts, multiple-barrel box culverts and three sided natural bottom culverts.

A hallmark of our firm is the active involvement of one of our principals in every project. This philosophy ensures that we provide the highest level of service and the close attention to detail that each project deserves. We view each project as a challenge; a challenge to provide our clients with a design that meets their needs in a cost-effective manner consistent with sound aesthetic and environmental principles. We provide professional services that directly result in high quality culvert projects, including:

- Evaluation of Existing Conditions
- Culvert Design
- Hydrologic & Hydraulic Modeling Analysis
- Stabilization
- Roadway Reconstruction
- Roadside Safety
- Utility Coordination
- Local, State, and Federal Permitting
- State & Federal Grant Applications
- Construction Administration and Observations

Key Staff:
Will Haskell, PE
Owen Chaplin, PE
James Attianese

Relevant Projects

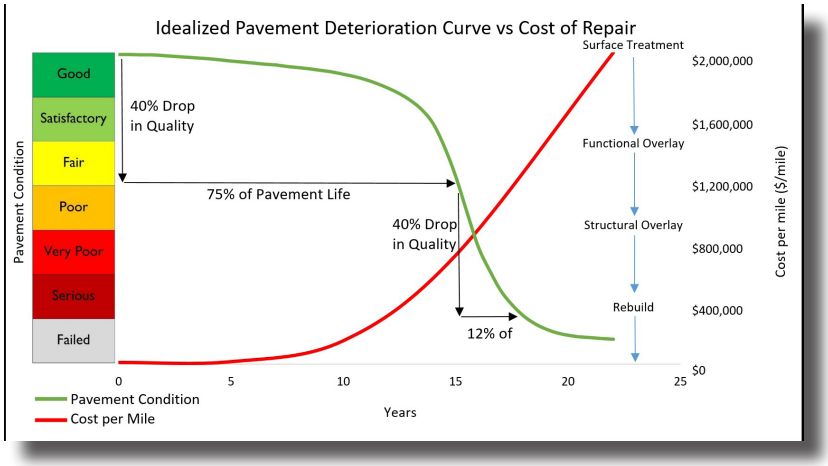
Representative culvert projects, designed by Gorrill Palmer, are listed below.

- Berwick, ME – Route 9 Culvert
- Cumberland, ME – Mill Road Culvert
- Cumberland, ME – Harris Road Culvert
- Cumberland, ME – Orchard Road Subdivision Culvert
- Dayton, ME – Route 5 Culvert
- East Machias, ME – Route 1 Culvert
- Freeport, ME – Flying Point Road Culvert
- Gray, ME – Center Road Culvert
- Gray, ME – Davis Bridge
- Gray, ME – Harris Road Culvert
- Gray, ME – Hunts Hill Road Culvert
- Gray, ME – Lawrence Road Culvert
- Gray, ME – Long Hill Road Culvert
- Gray ME – Totten Road Culvert
- Gray, ME – Westwood Road Culvert
- Gray, ME – Weymouth Road Culvert
- Harpswell, ME – Basin Point Road Culvert
- Harpswell, ME – Bethel Point Road Culvert
- Lewiston, ME – Central Avenue Culvert
- Lewiston, ME – College Street Culvert
- Long Island, ME – Island Avenue Culvert
- Millbridge, ME – Route 1 Culverts
- New Gloucester, ME – Outlet Road Bridge
- North Yarmouth, ME – Goldenrod Lane Culvert
- North Yarmouth, ME – Route 115 Culvert
- Portland, ME – Fall Brook Phase 3 Culvert
- Portland, ME – Rand Road Culvert
- Westbrook, ME – Longfellow Street Culvert
- Westbrook, ME – New Gorham Road Culvert
- Windham, ME – Falmouth Road Culvert
- Windham, ME – Lantern Lane Culvert




Pavement Management Services

Since 2006, Gorrill Palmer has conducted Pavement Condition Studies for over 20 municipalities across the State of Maine. We collect roadway condition data utilizing the Visual Conditions Survey for Flexible Pavements methodology. This methodology evaluates the existing condition of the pavement within several random 100-foot sections of the roadway to develop a pavement condition rating (PCR) for the roadway. The extent and severity of each pavement distress are recorded at each survey site. We have primarily used two different types of software in the past to assist us. One of which is PAVER, a program developed by the U.S. Army Corps of Engineers, used in conjunction with ASTM standard D6433 for evaluating pavement condition. The other is the MaineDOT's Road Surface Management System (RSMS) 16 software.



Based on specific road conditions, a recommended treatment is developed along with an opinion of cost for the treatment. This allows us to prioritize funding for pavement overlays and assist with planning future pavement expenditures. In total, we have surveyed almost 2,700 miles of paved roadway. Gorrill Palmer has provided Pavement Management Services for the following municipalities:

Key Staff:
Will Haskell, PE,
Owen Chaplin, PE,
Ben Shaw, EI

- City of Auburn
- Town of Buxton
- Town of Cape Elizabeth
- Town of Casco
- Town of Cumberland
- Town of Dover-Foxcroft
- Town of Falmouth
- Town of Gorham
- Town of Gray
- Town of Harpswell
- Town of Kittery
- Town of Lebanon
- City of Lewiston
- Town of Long Island
- Town of Old Orchard Beach
- City of Portland
- Town of Sebago
- City of Westbrook
- Town of Windham
- Town of Winslow
- Town of Yarmouth

Municipal Development Review Projects

Gorrill Palmer has provided development review services for municipalities across Maine, New Hampshire and Massachusetts since the firm started in 1998. Work primarily consists of peer reviewing site plan and subdivision applications submitted to the Planning Board. Gorrill Palmer provides civil engineering review of commercial and industrial site plans as well as subdivision and off-site improvements. Technical review includes: stormwater, utility, layout, roadway, traffic, erosion control, and all other civil elements of the project. Subsequent to peer reviews, Gorrill Palmer provides construction inspection services to ensure the project is built in accordance with the approved plans and permits. Construction services include: attending pre-construction meetings, reviewing submittals, periodic construction site visits, reviewing erosion control and overall site containment, preparing and distributing field reports, and review and recommend performance guarantees/letter of credit reduction requests submitted by the Developer/ Contractor based on construction observations.

- City of Bangor
- City of Belfast
- City of Ellsworth
- City of Portland
- City of Rockland
- City of Saco
- City of Waterville
- Town of Brunswick
- Town of Conway, New Hampshire
- Town of Cumberland
- Town of Falmouth
- Town of Freeport
- Town of Gorham
- Town of Gray
- Town of Greenwood, New Hampshire
- Town of Hampden
- Town of Harpswell
- Town of Kingfield
- Town of Limington
- Town of Naples
- Town of North Yarmouth
- Town of Ogunquit
- Town of Old Orchard Beach
- Town of Poland
- Town of Raymond
- Town of Rockport
- Town of Scarborough
- Town of Leominster, Massachusetts
- Town of Lancaster, Massachusetts
- Town of Standish
- Town of Topsham
- Town of Waterboro
- Town of Wells
- Town of Windham
- Town of Winterport
- Town of Yarmouth
- Town of York

Key Staff: Will Haskell, PE,
Owen Chaplin, PE,
Chris Daubert, EI

S.W.COLE ENGINEERING, INC.

Our Clients Make Better Decisions
From the Ground Up.

Providing Earth-Related Services for more than 40 Years

Established in 1979 in Bangor, Maine, S. W. Cole Engineering, Inc. is a geotechnical engineering, geo-environmental consulting and construction materials testing firm serving private and public sector clientele across New England from offices in Maine, New Hampshire, Massachusetts and Vermont. Our team of engineers, scientists and technicians provide services on more than 2,200 projects each year.

WHAT WE DO:

GEOTECHNICAL ENGINEERING

Subsurface Investigations, Foundations, Earthwork, Pavement

Our licensed engineers provide sensible geotechnical solutions for foundations, earthwork and pavements associated with building, site development and infrastructure projects in New England. Our services include:

- Geotechnical Feasibility Studies
- Subsurface Investigations
- Spread Footing Design Parameters
- Deep Foundation Engineering and Design
- Ground Improvement Engineering
- Excavation and Dewatering Consulting
- Retaining Wall and Slope Stability Analyses
- MSE Retaining Wall Design
- Pavement Engineering and Design
- Geotechnical Laboratory Testing

CONSTRUCTION MATERIALS TESTING & SPECIAL INSPECTIONS

Soil, Concrete, Grout, Asphalt, Masonry, Steel, Fireproofing

Our certified technicians provide field and laboratory testing for soil, concrete, masonry, steel, fireproofing and asphalt construction materials, including:

- Construction QA / QC Programs and Monitoring
- Earthwork Observations and Compaction Testing
- Reinforced Concrete Testing and Special Inspections
- Soil / Aggregate Sampling and Testing
- Structural Masonry Testing and Special Inspections
- Structural Steel Testing and Special Inspections
- Spray-Applied Fireproofing Testing and Special Inspections
- Pavement Evaluation and Testing
- IBC Special Inspection Coordination
- Slab Flatness and Moisture Testing
- Certified Welding Inspector Testing

Sidney, ME • Bangor, ME • Caribou, ME • Gray, ME
Londonderry, NH • Somersworth, NH • Taunton, MA • White River Junction, VT

S.W.COLE ENGINEERING, INC.

Our Clients Make Better Decisions
From the Ground Up.

Selected Projects
Barrington, NH

Lower Central Avenue – Dover, NH

In 2020, S.W.COLE was retained by the project engineer to provide explorations and geotechnical evaluation for reconstruction of a portion of Central Avenue. The proposed project consists of reconstruction of approximately 2,300 linear feet of Central Avenue between its intersections with Starks Avenue and Silver Street and upgrading of municipal utilities. The asphalt pavement on this area of Central Avenue is underlain by rigid concrete pavement. We provided an exploration program consisting of 10 test borings, provided soils laboratory testing, and made recommendations for construction of a new pavement section.

Culvert Replacements – Wentworth, NH

In 2020, S.W.COLE was retained by the project engineer to provide explorations and geotechnical engineering for two culvert/bridge replacement projects. One site is located on Frescoln Road at the crossing of Rocky Branch and the second site is located on Cross Road at the crossing of Rocky Branch. Both existing crossing structures consists of a 15 to 20-foot culvert crossing. We performed two test borings at each crossing and performed bedrock coring. We evaluated the subsurface findings using Load Resistance Factored Design (LRFD) methodology and developed recommendations for spread footing foundations.

Municipal Roadways – Somersworth, NH

In 2018, S.W.COLE was retained by the project engineer to provide explorations and geotechnical evaluation for reconstruction of several City roadways. The project consisted of reconstruction of a total about 7,700 linear feet of roadways and upgrading of municipal utilities. The roadways in this project included the entirety of Constitutional Way from High Street to Washington Street, Main Street from Johns Parsons Drive to Indigo Hill Road and the entirety of Cemetery Road from West High Street to Maple Street. We provided an exploration program consisting of 10 test borings and 28 ledge probes, provided soils laboratory testing, and made recommendations for construction of a new pavement section.

Province Road – Barrington, NH

In 2020, S.W.COLE was retained by the Town of Barrington Highway Department to provide explorations and geotechnical evaluation conditions of the gravel portion of Province Road. About 2,500 linear feet of Province Road from about 500 feet east of Ham Road to the Madbury town line has historically had winter and spring seasonal issues comprised of mudding, rutting, and general road instability. We performed 6 test borings to assess the subsurface conditions and provide laboratory gradation and chloride and sodium testing to evaluation the road base conditions. We evaluated the conditions and provide reconstruction options with various risk and cost discussions.

Municipal Roadways – Concord, MA

In 2020, S.W.COLE was retained by the project engineer to provide explorations and geotechnical evaluation for reconstruction of several City roadways. The project consisted of reconstruction of a total about 6,900 linear feet of roadways. The project involves five roads in a residential neighborhood including; Prescott Road, Peter Spring Road, Arrowhead Road, Cranefield Road, and Minuteman Drive. We provided an exploration program consisting of 13 test borings, provided soils laboratory testing, and made recommendations for construction of a new pavement section. Our evaluation included a reclaim blend analysis to assess the gradation of the resulting base product from grinding existing pavement into the existing base aggregate layer.

DOUCET SURVEY LLC

FIRM PROFILE

- **OVERVIEW**

Doucet Survey was established in 1993 to perform professional land surveying and mapping services for the government and private sector. We offer experience in areas such as surveying, mapping, and land planning. All thirty associates of Doucet Survey, Inc. are skilled professionals who strive to provide our clients with innovative and high value solutions for all their surveying needs.

Between our 8 licensed staff members and 7 fully equipped field crews plus a Subsurface Utility Marking crew, laser scanning crew and a UAV crew, Doucet Survey is licensed to practice throughout New England. Our CAD department has won over 19 first place awards in New Hampshire and Maine contests since 1999.

- **SERVICES**

Reliable survey data is essential for site planning, engineering design, permitting and construction. Our professional surveyors use automated survey systems to collect data with greater accuracy and speed. We use Trimble robotic total stations, Trimble digital levels, Leica Scan Station P & C series laser scanners, Trimble GNSS/GPS receivers and DJI Phantom 4 Pro UAV's and GSSI GRP in the field to document existing conditions and perform construction layout. In the office we use AutoDesk Civil Design Suite, Revit, Trimble Business Center and ESRI ArcGIS on robust computer workstations for analysis and compilation of design ready deliverables. The judgment and analytical skill of our professionals are required to interpret complex data and convert it to boundary plans, route survey plans, and topographic maps. As one of the largest Land Surveying firms in Northern New England we have the staff necessary to provide the highest level of service to our clients.

We have provided land surveying services for over 6,800 projects including 50+ Multi-unit Residential Projects, 25+ Office Buildings, 130+ Supermarkets, 15+ Drug Stores, 75+ Retail, 30+ Restaurants, 15+ Hotels, 50+ Other Commercial, 45+ Industrial, 15+ Health Services, 75+ Energy Sector, 45+ Marine, 150+ Municipal, State & Federal projects and over 300 miles of roadway and utility lines. Doucet Survey is under On-Call Contracts with NHDOT, Eversource, and the City of Laconia. We are part of teams under On-Call Contracts for US Army Corp, NH F&G, National Guard and US Navy.

- **MUNICIPAL EXPERIENCE**

- Barrington Town Hall
- Barrington Highway Garage
- Barrington Elementary School
- Barrington Landfill
- Barrington Public Library
- Mendums Pond Recreation Area – Barrington
- Dewey St. Ped. Bridge Rochester
- 2 mi. Rockingham Rail Trail, Manchester
- Newmarket/Newfields Route 108 Bridge over R.R.
- Portsmouth Middle School Deformation Survey
- $83M UNH Spaulding Life Science Bldg. Const. Layout
- Town of Durham Municipal water supply project due to contamination
- $92M Portsmouth Waste Water Treatment Facility

RELEVANT PROJECTS

Allied Engineering
Structural Mechanical Electrical Plumbing

City of South Portland, Maine

Since 2016 Allied Engineering has completed several projects for and in the City of South Portland. These projects have varied from municipal buildings, public safety, a community center and library and school spaces. We have primarily provided MEP and Fire Protection services for the following projects:

- South Portland Maintenance Garage
- South Portland Community Center Hot Tub
- South Portland Police Station Assessment, Boiler and HVAC Upgrades
- South Portland Bus Garage Assessment
- South Portland Pool Dehumidification
- South Portland Planning and Development Heat Pump
- South Portland Library Electrical Assessment
- Cash Corner Fire Station
- Redbank Community Center Addition
- Hamlin School Assessment
- West End Fire Station Boiler Replacement
- Central Fire Station MEPS Assessment

City of Saco, Maine

Since 2007 Allied Engineering has completed projects in and for the City of Saco, Maine. These projects include the following:

- City of Saco General Engineering Services Contract
- Saco Island Terrace Roof and Structural Upgrades
- Island Point Buildings 3,4, and 7 Reroofing and Site Lighting
- Saco Fire Station
- Saco City Hall
- Saco Public Works Design-Build Project
- Saco Satellite Public Safety Building

City of Portland, Maine

Since before 2008, Allied Engineering has completed projects in and for the City of Portland. These projects have included the following:

- Portland Police Station Fire Pump Replacement
- Hamlin School Assessment
- West End Fire Station Boiler Replacement
- Portland Public Schools Downtown Facilities Assessment
- Portland Public Schools Central Kitchen
- Portland Fish Exchange
- City of Portland Fore Street Restroom Utility Separation
- Deering and Lincoln Boilers
- Fort Allen Park Ramp Design
- Fore Street Restroom Utility Separation
- City of Portland Merrill Auditorium Air Intake
- Fort Allen Park Ramp Design

Flycatcher LLC Qualifications

Founded in 2019 by Richard Jordan, Maine-based Flycatcher LLC is an environmental consulting company that provides permitting, field studies, land use, and conservation support for projects throughout the northeast. Our work includes support for road and bridge construction, municipal and conservation property planning, commercial and residential subdivisions, electric and natural gas transmission facilities, and large-scale solar and wind power developments.

Flycatcher will be teaming with Basswood Environmental, LLC. Basswood is managed by Erik Lema, a NH-Certified Wetland Scientist (#286) and consulting botanist. The Flycatcher/Basswood team consists of wetland and soil scientists, GIS analysists, wildlife biologists, permit experts, botanists, invasive plant experts, and project siting professionals. We prepare and acquire permits at the local, state and federal levels and provide biological investigations (including wetland, watercourse and vernal pool investigations); compensatory mitigation planning and design; environmental monitoring and inspection; invasive species management; conservation land planning; and erosion and sediment control planning and design. Our team has over 100 years of combined project development experience in New England and beyond, providing the local experience and relationships necessary to understand, navigate the regulatory environment and help good projects find success. The Flycatcher team has conducted natural resource assessments on hundreds of projects and thousands of acres throughout the northeast.

Rich Jordan, Senior Manager and Founder of Flycatcher LLC, will manage the natural resource related services. Rich has partnered with the highly qualified engineers and planners at Gorrill Palmer on dozens of projects over the course of nearly 20 years. Rich is a certified Professional Wetland Scientist, a Certified Professional in Erosion and Sedimentation Control, former Vice Chair of the Falmouth Planning Board, and current Legislative Chair of the Maine Association of Wetland Scientists. Rich will be supported by a team of consulting scientists and natural resource experts to complete site reviews and assist in data preparation for use in Gorrill Palmer's design work. The team will include other Wetland Scientists, Biologist and GIS experts from Flycatcher LLC, along with Erik Lema (NHCWS) of Basswood Environmental. Flycatcher and Basswood have partnered previously on wetland, rare plant and invasive species work and together provide a full suite of environmental support.

Erik is an experienced project manager and field scientist with over a decade of professional consulting experience in the New England environmental industry, and nearly 20 years of experience studying botany and vegetation dynamics. Erik is involved with numerous projects throughout NH and has produced comprehensive technical reports for services including wetland delineations, soil investigations, rare species surveys, invasive species management, environmental monitoring, and ecological restoration throughout NH and ME.

Flycatcher's Rodney Kelshaw (CWB, PWS, CPSS, CPESC, LSE, LSS) will support Rich and Erik on fieldwork, technical reporting and permitting. Rodney is a soil scientist, wetland scientist, wildlife biologist, and environmental inspector that was the former Chair of the Dedham, Maine Planning Board and Comprehensive Planning Committee and is currently the President of the Maine Chapter of the Wildlife Society. Rodney has performed wetland and watercourse delineations, collected on-site soil data to aid in design of stormwater controls and was the lead environmental scientist that permitted expansion projects for both the Maine Department of Transportation (MDoT) and Maine Turnpike Authority (MTA). Rodney has experience as an environmental inspector for active construction sites ranging from transmission line and wind power sites across Maine and provided erosion and sediment control inspections for transmission lines across Puerto Rico post Hurricane Maria emergency response reconstruction.

BASSWOOD ENVIRONMENTAL

SELECTED PROJECT EXPERIENCE

Rare Species Survey, Relocation, and Monitoring, Isinglass River, Barrington, NH (Ongoing. Field Work Slated for Summer 2021). Basswood is currently involved with the initial planning stages for the relocation of the state-endangered climbing hempvine (*Mikania scandens*) found along the Isinglass River in Barrington, New Hampshire. Basswood has been working closely with NH Natural Heritage Bureau to develop a preliminary transplant strategy for the population of hempvine that is proposed to be disturbed by a planned bridge replacement. The fieldwork, to be performed in the growing season of 2021, includes identification and marking of the affected individuals, excavation, selection of transplant sites, and three years of annual monitoring and management (if needed).

Vegetation Surveys. FERC Hydroelectric Dam Relicensing, Lake Umbagog and the Magalloway River, Errol NH and Vicinity (2019 – Present). Basswood conducted comprehensive surveys of wetland communities throughout Lake Umbagog and the Magalloway River, as well as associated watercourses including the headwaters of the Androscoggin River, Sturtevant Pond, and numerous oxbow ponds, marshes, and swamps associated with the project. These surveys, in coordination with the U.S. Fish and Wildlife Service, collected detailed information on the species composition and abundance of some of the most prominent wetland communities in the state. A search for both documented and unknown rare, threatened and endangered (RTE) species was also performed concurrently, and yielded several state-listed species which have been reported to the New Hampshire Natural Heritage Bureau.

Surveys and Permitting. Patricia T. Russell Park Improvements, Keene, NH (2020-Present). Basswood has spearheaded the natural resources surveys and is currently serving as the permitting manager for capital improvements to Patricia T. Russell Park. The proposed improvements include large-scale grading of the site, improved stormwater infrastructure, stream restoration of Beaver Brook, and increased recreational facilities

Natural resources Survey. Various Solar Power Projects, Throughout Southern and Central NH (2018 – Present). Basswood has performed wetland, vernal pool, and RTE species surveys for proposed solar power development on lots ranging from 20 to 300 acres in southern and central New Hampshire, as well as reconnaissance surveys on sites throughout the state. The efforts ranged from initial siting surveys to final wetland approval and third-party review procedures.

Natural Resources Survey and Permitting. Northern Pass Transmission Line, New Hampshire (2010-2016). Served as a wetland scientist along existing and greenfield transmission line corridor as part of the proposed addition of a high-voltage transmission line from the international border in Pittsburg, NH south to Londonderry, NH. A comprehensive data management plan was developed and implemented to collect, organize, and synthesize a large amount of data throughout multiple consecutive field seasons. Data collected included wetland, vernal pool, avian, mammal, and RTE species surveys.

Rare Species Surveys. FERC Hydroelectric Dam Relicensing, Connecticut River, NH and VT (2012-2013). Conducted RTE species surveys for over 250 known occurrences of rare plants in both New Hampshire and Vermont, along the Connecticut River, including submerged and floating aquatic species. All species located, including 53 new records, were documented and

RELEVANT EXPERIENCE

New Hampshire DOT, Bridge No. 239/152, NH Route 49 over the Mad River, Thornton, NH

Maine DOT, Mill Bridge over Mill Creek, Isleboro, ME

Maine DOT, Covered Bridge over Little Androscoggin River, Oxford, ME

Kenduskeag Stream Pedestrian Bridge, Bangor, ME

Select experience

New Hampshire DOT, Bridge No. 239/152, NH Route 49 over the Mad River, Thornton, NH. Bridge design services for the rehabilitation of a 534-foot long horizontally curved steel plate girder bridge. Scope of work includes replacing the concrete deck that is in poor condition and providing scour countermeasures for scour susceptible river piers. Route 49 is the main road to Waterville Valley. Maintenance of traffic during construction is a challenge at this site. Stage construction and a temporary bridge alternatives are being evaluated.

Maine DOT, Mill Bridge over Mill Creek, Isleboro, ME. Bridge design services for a replacement bridge in an environmentally-sensitive and remote site. The work required close coordination with contractors and ferry and transport companies to overcome challenges related to constructability and shipping. The team recommended one crane transported by ferry to drive piles and erect beams. Design included re-use of granite block abutments that allowed for a shorter span and the use of shallow depth precast voided slabs. Scope included detailing of alternative precast and cast-in-place concrete elements to ensure lowest bid packages. Ultimately, the bridge was closed for only 10 weeks and the low bid was 10 percent below estimate.

Maine DOT, Covered Bridge over Little Androscoggin River, Oxford, ME. Bridge design services for the replacement of a timber covered bridge. The two-span bridge was constructed on a realignment to accommodate increased use and maintain traffic on the existing bridge during construction. The substructure consists of weathering steel plate girders, integral abutments and a post-tensioned, rock-socketed pile bent pier to alleviate scour concerns and resist heavy ice loads.

Maine DOT, Soucy Bridge Culvert Replacement over Thibodeau Brook, Grand Isle, ME.Bridge engineering services for a new,144-foot-long precast concrete box culvert with sloped ends and a 22-foot span to replace a culvert on the list of structurally deficient bridges. Scope included an analysis of the existing and proposed culverts using HY-8 for flows up to Q500 as well as design of a two-foot special fill in the culvert to provide stability and allow fish passage.

Maine DOT, Greenlaw Brook Bridge Culvert Replacement over Greenlaw Brook, Limestone, ME. Preliminary design for the replacement of the corrugated metal pipe culvert. The existing culvert had a condition rating of four and exhibited deformation, scour holes, and perched inlets and outlets. Designing for habitat connectivity at this location was challenging due to the excessive grade separation at the site. The streambed was approximately 25 feet below the roadway and bedrock approximately 80 feet below the roadway, making many structural alternatives very costly. The proposed structure is a precast concrete box culvert with a 24-foot-span and 12-foot-rise installed in two halves to facilitate installation of special fill and grade control within the box culvert.

River Point Pedestrian Bridge, Falmouth, ME

River Point Pedestrian Bridge, Falmouth, ME. Bridge design services to the Town of Falmouth for the design-build replacement of the River Point pedestrian bridge, which crosses an active Pan Am Railways rail line to connect the West Falmouth Shopping Center Plaza to the Town's River Point Conservation Area. The team performed a condition assessment and preliminary design report prior to proving technical review of design and build submittals for the 105-foot-span, prefabricated steel truss bridge founded on reinforced concrete stub abutments on timber piles. Scope of work included technical review of the Town's contract with the design-build team, review of design submittals and shop drawings, erection procedures and material submittals, review of payment requisitions and review of change order requests.

Cotton Mill Bridge over Royal River, Yarmouth, ME. Structural engineering services to investigate the structural supports for the sewer main on the Cotton Mill Bridge in the Town of Yarmouth. Work included evaluation and analysis of the existing supports for the preparation of rehabilitation plans and specifications. Coordination with the MaineDOT was performed to verify the sewer supports did not interfere with the proposed bridge rehabilitation that was performed the year following the support installation.

Maine DOT, Meddybemps Bridge over Denny's River, Meddybemps, ME. Bridge design services to replace a rigid concrete frame structure with a 78-foot-span weathering steel girder superstructure with a curved concrete deck. To increase durability and service life of the structure, the design team used GFRP reinforcing in the bridge deck and a jointless integral abutment substructure. Challenges included providing temporary support of excavation in order to maintain traffic during construction with shallow bedrock at the site and tight horizontal clearances between the existing and proposed roadway alignments.

Kenduskeag Stream Pedestrian Bridge, Bangor, ME. Condition assessment of the pedestrian bridge that spans Pickering Square to Exchange Street to assess the deterioration of the structure for the City of Bangor. Built circa 1980, the bridge is 20 feet wide and has five spans with a total length of 409 feet. The superstructure consists of precast prestressed concrete single tee beams and a cast-in-place concrete wearing surface. The team investigated the bridge components and collected samples for chloride ion, petrographic analysis and compression strength testing. A rehabilitation matrix of various options was provided that evaluated rehabilitation of the superstructure, replacement of the superstructure, and removal of the bridge.

Private Residence Bridge, Camden, ME. Bridge design services for a 52-foot-6-inch span, curved steel girder bridge with a timber deck. The challenge to design an elegant structure that complemented the landscape while holding up to the harsh Maine elements was achieved through native material selection and careful attention to detail. The materials used for the bridge include steel for its strength, wood for its warmth and stone for its integrity.

Greenway Pedestrian Bridge, South Portland, ME. Structural engineering services through schematic design for the City of South Portland for a gateway pedestrian bridge spanning across a major intersection that divides the Greenbelt pedestrian and bicycle trail. The project included site visits to determine existing conditions and identify project constraints, preliminary design to determine feasibility, renderings to communicate the city's vision, and facilitating design charrettes to educate stakeholders and gather public input.

5. References

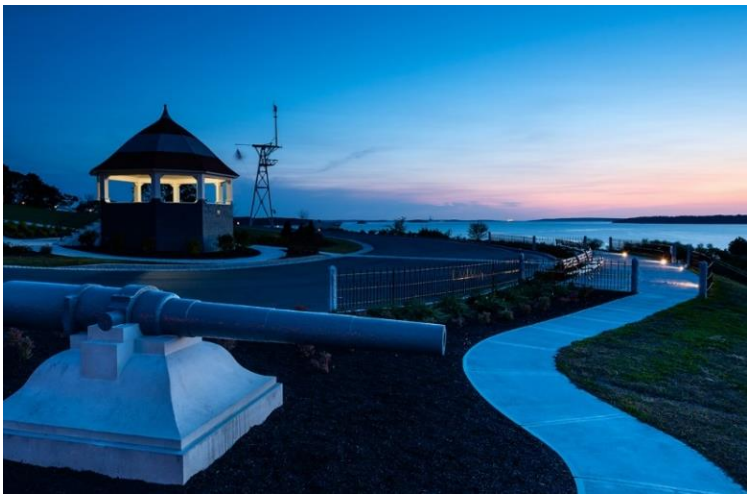
Brand Road Phases 1-4 Reconstruction (2019 – 2020)
Falmouth Road at Baker Brook Culvert Replacement (2017)
Pavement Management (2007 – 2019)
Doug Fortier, Director of Public Works
Town of Windham
185 Windham Center Road
Windham, ME 04062
207-892-1909
drfortier@windhammaine.us

Multiple Peer Review and Periodic Inspection Projects (Ongoing)
Amanda Lessard, Planning Director
Town of Windham
8 School Road
Windham, ME 04062
207-894-5900
alessard@windhammaine.us

Long Hill Road Culvert Replacement (2020)
Shaker Road Sidewalk & Drainage Improvements (ongoing)
Alec Dodd, Public Works Director
Town of Gray
16 Seagull Drive
Gray, ME 04039
207-657-3381
adodd@graymaine.org

6. Firm Performance

Gorrill Palmer personnel have completed over 1,000 of assignments under on-call services contracts for several municipalities and are thoroughly versed with the management and technical skills needed to ensure the success of these contracts. Our team members bring strong technical skills, extensive experience providing services for municipalities, and the availability to devote the time necessary to ensure that these assignments are successfully completed on time and within budget. Supporting our team will be S.W. Cole Engineering, Doucet Survey, Allied Engineering, Flycatcher, and Thornton Tomasetti. We believe our team covers a wide variety of civil engineering services, each firm providing credible consultation in their respective fields of expertise.



Our principal involvement at the firm ensure that all projects are reviewed by experienced professionals throughout the design process. William C. Haskell, PE brings more than 25 years of design experience and will be involved on all projects in the Town. Additionally, we involve a separate firm principal to complete a QA/QC review on all designs prior to bidding.

Our track record shows that we balance project commitments to support municipal and state clients, and we are staffed and available to continue to do so under this contract.

As will all projects, communication is critical at all stages of design and during construction. It is important to meet at the start of any design to define and understand the objectives of the project and any project-specific goals. During the design, we will meet or communicate by phone we will meet or communicate with Client representatives numerous times to review and discuss various aspects of the project. More formal design meetings will be held at critical project milestones, such as 30%, 80% and 100% complete.

Another Gorrill-Palmer philosophy is that design engineers must have construction experience. All of our engineering staff have spent time conducting construction observations on multiple construction project. Seven of our engineers have been full-time construction inspectors on highway, culvert, sewer and storm drain projects ranging in size from $200,000 to $10,000,000. This depth of construction experience has proven valuable in our project designs and in reducing construction costs.

Our team is committed to ensuring that all tasks for this project are completed on time and meet all of the requirements of the Town of Barrington. All of our proposed staff members are available to work on any projects that arise under this contract. Most importantly, we have capacity to accommodate additional design and peer review projects. We are confident that we will be fully available to complete work on any projects that are assigned to our team over the duration of the contract.

Gorrill Palmer does not have any active or settled claims or lawsuits within the past five years

7. Billing Rate Structure

As specified in the RFQ, our billing rate structure is attached in a separate sealed envelope.

8. Conflicts of Interest

We do not anticipate any conflicts of interest with the Town of Barrington. In fact, one of the benefits of selecting a Maine-based firm for this general engineering services contract is that we generally do not provide engineering design services for projects in the Town.

GORRILL PALMER