

EDUCATION

Purdue University, West Lafayette, IN
M. S., Civil Engineering (Geotechnical Emphasis), 1987

University of Rhode Island, Kingston, RI
B. S., Civil and Environmental Engineering, 1985

PROFESSIONAL REGISTRATION

Rhode Island, Connecticut, Illinois, Indiana, Louisiana,
Massachusetts, New York, Ohio, Pennsylvania, Vermont and Wisconsin



PROFESSIONAL EXPERIENCE

RT Group, Inc.
Co-Founder and Principal, 2002 - Present

Pare Engineering Corporation
Managing Engineer, 1997 - 2002

CH2M HILL
Senior Project Manager, 1995 - 1997
Project Manager, 1989 - 1995
Task Manager, 1987 - 1989

Rhode Island Department of Environmental Management, Summer Intern 1985

Mr. Russell has over 28 years of experience on a wide variety of civil, geotechnical, and environmental engineering projects. His expertise includes deep and shallow foundations, retaining walls, earth and masonry dams, temporary sheeting and shoring, marine/waterfront improvements, ground improvement, and conducting geotechnical investigations and preparing geotechnical data/design study reports for heavy civil, industrial, and major transportation related projects. Representative project experience includes:

Marine / Waterfront Engineering

- **Town of Narragansett, Waste Water Treatment Plant Flood-Proofing Project:** Senior Project Manager for preparing plans and specifications for bidding and construction of a flood-proofing barrier at the Scarborough Wastewater Treatment Facility located along the Narragansett Bay. The work included the design of an earthen berm with a sheet pile wall core; designing the barrier to account for existing utilities; incorporating a new stormwater run-off treatment system; preparing budget-level construction cost estimates; preparing the RICRMC Permit Application; preparing the FEMA Conditional Letter of Map Revision Application; and preparing plans and specifications for bidding and construction. Narragansett, RI.
- **Town of Narragansett, Waste Water Treatment Plant Flood-Proofing Alternatives Evaluation Report:** Senior Project Manager for the preparation of an Alternatives Evaluation

Report for the flood-proofing of Scarborough Wastewater Treatment Facility located along Narragansett Bay. The work included performing a topographic and bathymetric survey; overseeing a geotechnical investigation; and preparing the flood-proofing Alternatives Evaluation Report. Narragansett, RI.

- **Americas Styrenics, LLC, 5-Year Pier Improvements Plan Project:** Senior Project Manager for the preparation of the 5-Year Pier Improvements Plan for a 710-foot-long timber pier located on the Thames River. The work included performing a topside visual and underwater dive inspection off all timber components; developing an Alternatives Evaluation Report including budget-level cost estimates; preparing the CTDEEP COP Permit Application; preparing plans and specification for bidding and construction; and providing construction phase services. Gales Ferry, CT.
- **Town of Jamestown, Elevated Timber Walkway Project:** Senior Project Manager for the design of an elevated timber walkway to provide access to the coast of Narragansett Bay. The work included performing a topographic survey of the site; overseeing a geotechnical investigation; and preparing plans and specifications for permitting. Jamestown, RI.
- **Town of Jamestown, Boat Ramp Repairs Project:** Senior Project Manager for the design of a concrete boat ramp replacement located along the coast of Narragansett Bay. The work included performing a topographic and bathymetric survey of the site and preparing plans and specifications for permitting. Jamestown, RI.
- **Quonset Development Corporation, Zarbo Avenue Bulkhead Project:** Project Manager for completing the design of approximately 1,500 LF of new anchored sheet pile bulkhead. The work included preparing a Condition Assessment Report; performing a geotechnical investigation; preparing the RIDEM, RICRMC, and Army Corps of Engineers Permit Applications; and preparing plans and specifications for bidding and construction. North Kingstown, RI.
- **Quonset Development Corporation, Terminals 4 and 5 Bulkhead Improvements:** Project Manager for preparing plans and specifications for bidding and construction of a new concrete cap along an existing steel sheet pile bulkhead, including new bollards, cleats, and concrete pavement. North Kingstown, RI.
- **Quonset Development Corporation, Pier 2 Cofferdam Repairs Project:** Technical Consultant to the Quonset Development Corporation (QDC) for making repairs to two (2) cellular sheet pile cofferdams that were "severed" during pile driving operations for the construction of a new crane relieving platform. Evaluated the Contractor's proposed repair plan and analyses; advised and made recommendations to the QDC; and provided input during the repairs. North Kingstown, RI.
- **Quonset Development Corporation, Pier 1 Cleat and Bollard Repairs Project:** Project Manager for preparing a Pier Evaluation Report, including preliminary construction budget estimates for several alternatives. Prepared the plans and specifications for bidding and construction of the selected alternative and prepared and submitted the RICRMC permit application. North Kingstown, RI.
- **Quonset Development Corporation, Crane Relieving Platform Project:** Project Manager for preparing the conceptual design plans and preliminary budget estimates for the construction of two (2) pile supported relieving platforms to support a mobile harbor crane. North



Kingstown, RI.

- **Quonset Development Corporation, Casting Building Code Review:** Project Manager for preparing a Code Review and Letter Report, including a preliminary budget estimate to bring an existing metal building on the QDC's waterfront up to existing building code standards. North Kingstown, RI.
- **Town of Jamestown, East Ferry Boat Ramp Interim Repairs:** Project Manager for evaluating an existing boat ramp at the East Ferry Marina. The Scope-of-Work included performing a topographic and bathymetric survey of the boat ramp and surrounding area in order to develop a base plan of the area and quantify the extent of interim repairs needed. Jamestown, RI.
- **Americas Styrenics, Maintenance Dredging Project:** Project Manager for executing the sediment sampling plan; coordinating biological and chemical testing of sediment samples; preparing the CTDEP and Army Corps of Engineers Permit Applications; and preparing plans and specifications for dredging about 100,000 CY of accumulated sediment from the Thames River. Ledyard, CT
- **Town of Jamestown, Fort Getty Pier Inspection:** Project Manager for the inspection of a WWI era timber pier. Responsibilities included conducting a visual inspection of the pier both topside and waterside, and reducing the data for the preparation of the inspection report. Jamestown, RI.
- **Styron LLC., Shoreline Protection Project:** Project Manager for the design of a new riprap revetment to protect an eroding shoreline adjacent to an active rail line. Responsibilities included conducting a topographic survey of the wetlands and surrounding area; preparing the CTDEEP Structures, Dredging, and Fill Permit Application; and preparing plans and specifications for bidding and construction. Gales Ferry, CT.
- **Southern New England Ship Building Company, Phase I and II Improvements Projects:** Project Manager for widening an existing pile supported relieving platform and dredging about 10,000 CY of accumulated sediment to allow tug boats to be moved from land and onto a floating dry dock. Planned and coordinated the geotechnical investigation(s); prepared plans and specifications for bidding and construction; and submitted the RI State Building and RICRMC Permit Applications. North Kingstown, RI.
- **Southern New England Ship Building Company, Relieving Platform Repairs Project:** Project Manager for the design of a new H-pile supported relieving platform to allow 2,300 to 4,000 ton barges to be moved from land and onto a floating dry dock. Planned and coordinated the geotechnical investigation(s); prepared plans and specifications for bidding and construction; and submitted the RI State Building and RICRMC Permit Applications. North Kingstown, RI.
- **Southern New England Ship Building Company, Carrier Pier Repairs Project:** Project Manager for preparing a Pier Inspection Report documenting the damage to the existing concrete pier following a severe nor'easter. Designed the concrete deck and fender repairs, including utility improvements (e.g., electric, air, CO₂, and water); prepared plans and specifications for bidding and construction; and submitted the RICRMC Permit Applications. North Kingstown, RI.



- **MAMMOET USA NE, ATB Tugboat Load-out Project:** Project Manager for completing analyses to determine the safe jacking loads for the load-out of the 1,600 ton ATB Tugboat the Freeport. Also evaluated the safe transport loads for moving the Freeport on wheeled transporters across land and onto a floating dry-dock. North Kingstown, RI.
- **The Dow Chemical Company, Maintenance Dredging Project:** Project Manager for executing the sediment sampling plan; coordinating biological and chemical testing of sediment samples; preparing the CTDEP and Army Corps of Engineers Permit Applications; and preparing plans and specifications for dredging about 100,000 CY of accumulated sediment from the Thames River. Ledyard, CT
- **The Dow Chemical Company, Bulkhead Replacement Project:** Project Manager for developing replacement alternatives for an existing and deteriorated timber bulkhead located along the Thames River. Prepared the project base map; installed geotechnical instrumentation to monitor the movement of the existing and deteriorated timber bulkhead; completed a geotechnical investigation; prepared the CTDEP and Army Corps of Engineers Permit Applications; prepared plans and specifications for bidding and construction of a new 350-foot-long steel sheet pile bulkhead; and provided construction observation services. Ledyard, CT.
- **The Dow Chemical Company, 5-Year Improvements Plan:** Project Manager for developing a 5-year improvements plan for the Dow Chemical Company's Allyn's Point Plant Pier and Off-loading facility on the Thames River. Planned and coordinated the geotechnical investigations; prepared alternative evaluation memorandums/letter reports, and prepared implementation cost estimates to allow informed decisions to be made. Ledyard, CT.
- **The Dow Chemical Company, Seawall Repair Project:** Project Manager for the preparation of plans and specifications for the repair of about 700 LF of stone seawall. Prepared the CTDEP and Army Corps of Engineer Permit Applications; performed design analyses; prepared plans and specifications for bidding and construction, and assisted with the pre-qualification of contractors. Ledyard, CT.
- **The Dow Chemical Company, Breasting Dolphin Replacement Project:** Project Manager for the preparation of plans and specifications for the replacement of four existing timber pile breasting dolphins. The existing breasting dolphins were replaced with new steel mono-pile breasting dolphins (steel caissons drilled and socketed into bedrock). Planned and coordinated the geotechnical investigation; prepared the geotechnical data report; prepared the CTDEP and Army Corps of Engineer Permit Applications; performed design analyses for the laterally-loaded mono-piles; prepared plans and specifications for bidding and construction; and provided construction observation services. Ledyard, CT.
- **Town of Jamestown, East Ferry Marina Seawall Replacement Project:** Project Manager for the preparation of plans and specifications for bidding and construction of a new cast-in-place concrete seawall on Narragansett Bay. This project also included site improvements consisting of new concrete sidewalks, boat ramp repairs, and the installation of new metal benches, bike racks, and trash receptacles. Coordinated the geotechnical investigation; completed the wall stability analyses; and reviewed the Contractor's Submittal for construction. Jamestown, RI.

- **Town of Jamestown, Dumpling Road Seawall and Roadway Reconstruction Project:** Project Manager for the preparation of plans and specifications for bidding and construction of a new pre-cast concrete segmental seawall on Narragansett Bay, including roadway reconstruction. Coordinated the geotechnical investigation; completed the wall stability analyses; and reviewed the Contractor's Submittal for construction. Jamestown, RI.
- **Town of Jamestown, East Ferry Marina Curbing and Railing Project:** Project Manager for the preparation of plans and specifications for bidding and construction of new concrete curbing along an existing commercial pier. This project also included new ornamental railing; the installation of timber fenders for marina boats; and utility improvements (e.g., electric, water). Reviewed the Contractor's Submittal for construction and provided construction observation services. Jamestown, RI.
- **SeaRoc, Deepwater Wind Monitoring Buoy Project:** Project Manager for the design of a new cradle to lift and transport the meteorological monitoring buoy for the Deepwater Wind offshore wind farm development. RI and NJ offshore sites.
- **Kiewit Infrastructure, Closed Loop Cooling Project:** Project Manager for the design of concrete ballast blocks for launching and sinking two (2) 48-inch-diameter discharge pipelines for a blow-down structure. The ballast blocks were designed for a highly corrosive environment, and super-duplex stainless steel threaded rods were utilized for attaching the ballast blocks together. The project included the design of the launch rail system for moving about 200 LF of pipeline into the water at a time. Somerset, MA.
- **Dunellen, LLC, Breasting Plan Improvements Project:** Project Manager for the preparation of plans and specifications for bidding and construction of breasting plane improvements at the Wilkes-Barre Pier. The improvements included reinforcing an existing dolphin with new steel H-piles and installing two (2) new cell fenders to better absorb the estimated tanker vessel breasting energy. East Providence, RI.
- **RIDOT, Newport Marine Terminal Facility:** Task Manager for the design of plastic-coated steel guide piles that were used for securing concrete floating piers at the Long Wharf and Fort Adams terminal sites. Performed design analyses for the laterally loaded guide piles and other terminal components, and prepared plans and specifications for bidding and construction. Newport, RI.
- **The Narragansett Bay Commission, Seekonk River Interceptor Project:** Project Manager for the preparation of plans and specifications for the construction and dewatering of a marine cofferdam to allow an interceptor structure to be installed on the Seekonk River. Providence, RI.
- **The Narragansett Bay Commission, Combined Sewer Area 2B Headwall Improvements Project:** Project Manager for the Combined Sewer Overflow (CSO) Area 2B Headwalls Improvement Project along the Woonasquatucket River. This project included constructing five (5) new timber pile-supported concrete headwalls; installing new concrete flared end-sections; lining with cured-in-place pipe; abandoning sewer lines with controlled low-strength material fill; and installing new tideflex check valves that were from 20 to 96 inches in diameter. Prepared the plans and specifications for bidding and construction; reviewed the Contractor's submittals; and provided construction observation services. Providence, RI.

- **Narragansett Electric Power Company, Waterfront Bulkhead Replacement Project:** Project Engineer for coordinating a marine inspection of Narragansett Electric's pier and developing replacement alternatives for the deteriorating bulkhead wall. Providence, RI.
- **Milwaukee Metropolitan Sewerage District, Jones Island East Dock Bulkhead Project:** Project Manager for preparing plans and specifications for the construction of a new 700-foot-long steel sheet pile bulkhead and rubber bumper fender system at the Milwaukee Metropolitan Sewerage District's East Dock Facility. Prepared the Army Corps of Engineer Permit Application; designed the new wall and fender system; prepared the plans and specifications for construction; reviewed the Contractor's submittals; and performed periodic construction observation. Milwaukee, WI.
- **Milwaukee Metropolitan Sewerage District, South Dock Wall Project:** Project Manager for preparing plans and specifications for the construction of a new 300-foot-long concrete retaining/wave splash wall at the Milwaukee Metropolitan Sewerage District's South Dock Facility. Prepared the Army Corps of Engineer Permit Application; designed the new wall; prepared the plans and specifications for construction; reviewed the Contractor's submittals; and performed periodic inspection during construction of this project. Milwaukee, WI.
- **Milwaukee Metropolitan Sewerage District, East Dock Dredging Project:** Project Manager for preparing plans and specifications for dredging about 20,000 cubic yards of sediment at the Milwaukee Metropolitan Sewerage District's East Dock Ship Berth. Prepared the Army Corps of Engineer Permit Application; prepared the plans and specifications for dredging; reviewed the Contractor's submittals; and performed periodic inspection during construction of this project. Milwaukee, WI.

General Civil Engineering

- **Town of Jamestown, Fort Getty Roadway Repairs Project:** Project Manager for the design of repairs to a roadway damaged by storm surge. The project included performing a topographic survey of the existing conditions, designing the repairs, and preparing plans and specifications for construction. Jamestown, RI.
- **Southern New England Ship Building Company, Misc. Building Projects:** Project Manager for the construction of several new buildings and additions including a new Tug Assembly Shelter, Plate Roll-Out Shelter, Nurse's Office, and new Pipe Shop Building. Conducted the geotechnical investigation for each building/addition; prepared plans and specifications for bidding and construction; and submitted the RI State Building Permit Applications, including coordination with the RI State Fire Marshall's office. North Kingstown, RI.
- **Southern New England Ship Building Company, Concrete Pavement Evaluation Project:** Project Manager for the completion of a pavement evaluation to determine if an existing concrete pavement could support the construction of 2,300 ton and larger double-hulled fuel barges. Planned and coordinated the geotechnical investigation(s); prepared the pavement evaluation reports, and developed repair alternatives to allow the continued construction of barges on land. North Kingstown, RI
- **Outokumpu American Brass, Truck Loading Dock Improvements Project:** Project Manager for the design of new concrete retaining walls and concrete pavement at this active manufacturing facility. Designed the new retaining walls and pavement; prepared the plans



and specifications for bidding and construction; reviewed the Contractor's submittals; and provided construction observation services. Kenosha, WI.

- **SC Johnson Wax, New Tank Farm:** Project Manager for design, preparation of plans and specifications, and construction observation during construction of a new product storage tank farm. Racine, WI.

Geotechnical Engineering

- **Sprint/United Management Corporation, Seekonk River Horizontal Directional Drilling Project:** Senior Project Manager for the design of a Horizontal Directionally Drilled fiber optic cable conduit under the Seekonk River. The work included performing a topographic survey of the site; overseeing a geotechnical investigation; overseeing a bathymetric and geophysical survey of the river; preparing the RIDEM and RICRMC Permit Applications; facilitating obtaining easements on RIDOT property; preparing plans and specifications for bidding and construction; and providing construction phase services. Providence, RI.
- **Groundwater and Environmental Services, Inc., Geotechnical Interpretive Reports:** Senior Project Manager for the preparation of several Geotechnical Reports for proposed Cumberland Farms, Inc. convenience stores and gas stations. The work included analyzing geotechnical investigation data; evaluating seismic conditions; performing the preliminary foundation design; and developing construction considerations and recommendations. Throughout New England and New York.
- **Hugo Key and Son, Inc., Barney Pond Dam Pedestrian Bridge:** Senior Project Manager for the design of concrete footings for a pedestrian bridge over the Barney Pond Dam Spillway. The work included performing a stability analysis of the existing spillway training walls and designing the reinforced concrete footings for the 50-foot pedestrian bridge. Lincoln, RI.
- **RIDOT, Victory Highway Bridge Replacement:** Geotechnical Project Manager for the replacement of an existing bridge structure over I-95. Responsibilities included overseeing the geotechnical investigation; performing a site survey; and preparing the Geotechnical Data and Interpretive Reports. Exeter, RI.
- **RIDOT, Tefft Hill Trail Bridge Road Bridge Widening Project:** Geotechnical Project Manager for widening an existing bridge structure via the installation of pre-cast concrete arch/bridge units beneath the existing bridge. Coordinated the geotechnical investigation; performed geotechnical design analyses; and prepared the Geotechnical Data and Design Basis Report. Exeter, RI.
- **RIDOT, Ten Rod Road Bridge Widening Project:** Geotechnical Project Manager for widening an existing bridge structure via the extension of the existing abutment foundations. Coordinated the geotechnical investigation; performed geotechnical design analyses; prepared the Geotechnical Data and Design Basis Report; and prepared plans and specifications for constructing the temporary earth support system (soldier piles and lagging). Exeter, RI.
- **RIDOT, Robin Hollow and Weaver Hill Road Bridge Widening Projects:** Geotechnical Project Manager for widening two existing bridge structures via the extension of the existing abutment foundations. Coordinated the geotechnical investigation; performed geotechnical

design analyses; and prepared the Geotechnical Data and Design Basis Report. Exeter, RI.

- **RIDOT, Sakonnet River Bridge Replacement Project:** Project Manager for preparing Engineering Submittals for the replacement of the Sakonnet River Bridge. Engineering submittals included, but were not limited to temporary earth retaining systems; dewatering plans; jacking and shoring; Wave Equation Analyses (WEAP) for 72-inch-diameter pipe piles and H-Piles; marine cofferdams; and pre-condition surveys. Portsmouth/Tiverton, RI.
- **RIDOT, Contract No. 2002-CH-055:** Project Manager for completing static pile analyses; Wave Equation Analyses (WEAP); and preparing Engineering Submittals for completing static pile load tests (multiple pile types, 360 ton test load); pile tension tests (multiple pile types); and lateral pile load tests (multiple pile types). Also prepared the Engineering Submittal for the construction of a temporary utility bridge. Providence, RI.
- **RIDOT, Contract No. 2002-CB-074:** Project Manager for preparing Engineering Submittals for the construction of temporary support of excavation systems (ranging from about 15 to 20 feet deep). The support of excavation systems were used as jacking and receiving pits for the installation of a new water line beneath an active AMTRAK passenger line. Also prepared the dewatering plans to allow the jacked pipe to be installed. Warwick, RI.
- **RIDOT, Replacement of Middle Bridge, Bridge No. 114 Project:** Project Manager for completing static pile analyses; Wave Equation Analyses (WEAP); and preparing Engineering Submittals for the demolition of the existing bridge, and completing a static pile load test (24" PPCP, 360 ton test load). South Kingstown, RI.
- **RIDOT, Veteran's Memorial Bridge (formerly Court Street Bridge) Replacement Project:** Project Manager for designing high-strength rock anchors to stabilize the existing granite piers and abutments for the replacement of the Court Street Bridge. Prepared the rock anchor plans and specifications; reviewed the Contractor's submittals; reviewed the anchor proof and performance test results; and provided periodic consultation and construction observation during rock anchor installation. Woonsocket, RI.
- **RIDOT, General Nathanael Greene Memorial Bridge (formerly Forge Road Bridge) Replacement Project:** Project Manager for the geotechnical investigations and foundation design for the replacement of the Forge Road Bridge over the Potowomut River. Performed the geotechnical design analyses; prepared the Subsurface Investigation and Foundation Analyses Report; and prepared plans and specifications for the construction of the shallow foundations, including the temporary shoring/cofferdams. North Kingstown and Warwick, RI.
- **RIDOT, Potters Pond Bridge Replacement Project:** Project Manager for the design of the pile foundation system of the temporary bridge; the shallow foundations of the replacement bridge; and all temporary shoring/cofferdams. Also designed the temporary sheeting to protect a nearby wetland and support a temporary road adjacent to the wetland. South Kingstown, RI.
- **RIDOT, Wolf Rocks Trail Railroad Crossing Project:** Project Manager for evaluating the feasibility and cost of eliminating an existing at-grade railroad crossing along Amtrak's busy Northeast Corridor passenger line. Prepared the feasibility reports; performed preliminary design; prepared 30% plans and specifications for one grade crossing alternative; and provided cost information to RIDOT to assist them in the selection of an alternative to eliminate this



grade crossing. Exeter, RI.

- **RIDOT, I-195 Improvements Project:** Project Manager for the preparation of the Geotechnical Data and Design Basis Reports for a new bridge; temporary earth retaining structures; and a new interceptor sewer as part of the I-195 improvements. Performed and reviewed the geotechnical analyses; developed the Geotechnical Data and Design Basis Reports format, and served as a reviewer for plans and specifications. Providence, RI.
- **WIDOT, STH 29 Project:** Senior Project Manager for the geotechnical investigation and design of a pre-load for over 3,000 linear feet of 4-lane highway embankment through a highly compressible deposit of peat and organic silt up to 30-feet-thick. Planned the geotechnical investigations; supervised in-situ field and laboratory testing; developed the field instrumentation plan (e.g., piezometers, settlement monitoring plates); prepared the pre-load plans and specifications; reviewed the Contractor's submittals; performed construction observation services during wick drain installation and pre-loading; and performed rheological modeling to determine when preloading was complete. Hatley, WI.
- **WIDOT, Verona Bypass Project:** Task Manager and Senior Geotechnical Reviewer for the foundation design of over 5 miles of new 4-lane highway and thirteen (13) new pile supported bridges. Verona, WI.
- **IADOT, US 18 Project:** Senior Project Manager for the geotechnical investigation and foundation design for thirteen (13) new pile-supported bridges with integral abutments. Developed the geotechnical investigation program and prepared the foundation plans and specifications. Cerro Cordo County, IA.
- **AMTRAK, Miamicock and Stonington Bridge Replacement Projects:** Project Manager for preparing Engineering Submittals for the replacement of two existing AMTRAK bridges over the Miamicock River and East & West Harbors. Engineering Submittals included, but were not limited to temporary pile supported work platforms, temporary pile supported trestle bridges to support Amtrak passenger trains; marine cofferdams for construction of the new bridge abutments; dewatering plans; jacking and shoring; Wave Equation Analyses (WEAP) for H-Piles; micro-pile design; and pre-condition surveys. East Lyme and Stonington, CT.
- **The Narragansett Bay Commission, Contract #01: 302.08-C:** Project Manager for preparing Engineering Submittals for lining a 220-foot-deep +/- Drop and Vent Shaft; the construction of temporary support of excavation systems (ranging from about 25 to 40 feet deep); the installation of flow bypass controls; the preparation of dewatering plans; and handling and disposing of contaminated soils. Providence, RI.
- **The Narragansett Bay Commission, Contract #01: 302.11-C:** Project Manager for preparing Engineering Submittals for lining a 200-foot-deep +/- Drop and Vent Shaft; the installation of flow bypass controls (gravity and pumped bypass); the preparation of dewatering plans; and miscellaneous geotechnical engineering support. Providence, RI.
- **The Narragansett Bay Commission, Contract #01: 302.11-C:** Project Manager for preparing Engineering Submittals for lining a 230-foot-deep +/- Drop and Vent Shaft; the construction of temporary support of excavation systems (ranging from about 35 to 40 feet deep); the installation of gravity flow bypass controls; the preparation of dewatering plans; and the preparation of a stormwater pollution prevention and control plan. Providence, RI.

- **Charter Oak Retail Center Development Project:** Task Manager for preparing the Geotechnical Data and Design Basis Reports for a 300,000 square foot retail development. Planned and coordinated the geotechnical investigation; prepared the geotechnical data and design basis reports; and prepared the plans and specifications for pre-loading a 65-foot-thick deposit of very soft varved silt and clay prior to construction. The Pre-loading plan included the installation of vertical drains to accelerate the consolidation of this deposit and geotechnical instrumentation to monitor pre-load performance. Hartford, CT.
- **Kvaerner Philadelphia Shipyard Project:** Project Manager for the geotechnical investigations and preliminary foundation design for a new complex of buildings that included a 238,000-square foot (SF) Fabrication Shop, 196,000-SF Panel Shop, 81,000-SF Grand Block Shop, 36,000-SF Paint Shop, 69,000-SF Dock Shop, and 50,000-SF Administration Building to support ship building activities. Other improvements included upgrading two (2) existing 1,100-foot-long by 150-foot-wide dry docks, new outdoor crane runways, new utilities, new roads, and over 1,000,000 SF of new paved parking/storage areas. Researched and reviewed geologic and geotechnical data; developed and executed the soil boring and test pit investigations; prepared the Geotechnical Data and Design Basis Reports, designed pile foundations and pavements; and developed a pile load test program. Philadelphia, PA.
- **Temporary Shoring / Sheet Piling Services Consultant to Contractor:** Project Manager for designing temporary shoring and sheet piling systems for this Providence based heavy-civil construction company over a period of sixteen (16) years. Performed analyses; worked with the Contractor to develop efficient and economical designs; and provided stamped plans and supporting calculations for review by the Owner's Engineer. Throughout New England.
- **Milwaukee Metropolitan Sewerage District, Turbine Modifications Phase 2B Project:** Senior Project Manager for the geotechnical investigation and foundation design for a new pile-supported turbine building at the Jones Island Wastewater Treatment Plant. Planned the geotechnical investigation; prepared the foundation plans and specifications; reviewed the Contractor's submittals; performed pile driving and earthwork construction observation; and supervised the dynamic pile driving analyses to confirm that the specified ultimate pile capacities had been achieved. Milwaukee, WI.
- **Milwaukee Metropolitan Sewerage District, Deep Tunnel Project:** Grouting Inspector for reducing the amount of groundwater inflow through fractured bedrock and into a 200-foot-deep by 30-foot-diameter storage tunnel for the Milwaukee Metropolitan Sewerage District's Deep Tunnel Project. Milwaukee, WI.
- **City of Milwaukee, Linwood Water Purification Plant Project:** Senior Project Manager for the geotechnical investigation and foundation design of a new mat-supported sodium hypochlorite/ammonia building at the Linwood Water Purification Plant. Milwaukee, WI.
- **City of Rochester, Minnesota, Rochester Wastewater Treatment Plant Project:** Project Engineer for the geotechnical investigation and foundation design for a wastewater treatment plant expansion. Developed the geotechnical investigation program; logged the soil borings; prepared foundation plans and specifications; reviewed the Contractor's submittals; performed sub-grade construction observation; and performed periodic inspection during the construction of the concrete footings and mat foundations. Rochester, MN.



- **SC Johnson Wax, New Truck Scale Project:** Project Manager for the design of a new pile-supported truck scale for weighing tractor-trailer product deliveries at this active manufacturing facility. Designed the pile foundation of the new truck scale; prepared the plans and specifications; evaluated the bids; reviewed the contractor's submittals; and served as the Resident Engineer during construction. Racine, WI.

Dam Engineering

- **City of Providence, Canada Pond Dam Low-level Outlet Improvements Project:** Senior Project Manager for the design of repairs to the existing low-level outlet of a concrete and earth embankment dam. The work included performing a topographic survey of the site; observing an underwater dive inspection; preparing the RIDEM Dam Safety Permit Application; and preparing plans and specifications for bidding and construction. Providence, RI.
- **YMCA of Pawtucket, Quidnick Reservoir Dam Improvements Project:** Senior Project Manager for the design of improvements to a 650-foot-long earth embankment dam. Responsibilities include for preparing a Visual Inspection Report; performing a topographic survey; completing the design of the improvements; preparing the RIDEM Dam Safety Permit Application; and preparing plans and specifications for bidding and construction. Coventry, RI.
- **Quidnick Reservoir Company, Flat River Reservoir Dam Timber Sluice Gate and Trash Rack Repairs Project:** Senior Project Manager for the design of repairs to the three (3) existing timber sluice gates and the timber trash rack. This project included observing an underwater dive inspection; preparing plans and specifications for bidding and construction; and providing construction phase services. Coventry, RI.
- **NATCO, Arctic Dam Hydroelectric Facility Low-Level Outlet Repairs Project:** Senior Project Manager for the design of repairs to the existing low-level outlet at the Arctic Dam. The work included performing a topographic survey of the site; designing a slip-lining repair and gate replacement; preparing plans and specifications for construction; and providing construction phase services. West Warwick, RI.
- **YMCA of Pawtucket, Quidnick Reservoir Dam Inspection Report:** Project Manager for preparing an inspection report for this earth embankment dam. Responsibilities included completing a RIDEM file review of relevant project information; visually inspecting the dam, including performing a survey of all deficiencies; and preparing the Visual Inspection Report. Coventry, RI.
- **Hugo Key & Sons, Inc., Featherbed Dam Dewatering, Flow Diversion, and SOE Plan:** Project Manager for preparing contractor submittals for improvements made to this earth and masonry dam. The dewatering, flow diversion, and support of excavation plans that were prepared allowed the contractor to replace the existing stone masonry culvert with pre-cast box culverts and to reconstruct the municipal roadway travelling across the crest of the dam. North Kingstown, RI.
- **Town of Chaplin, Darling Pond Dam Improvements Project:** Project Manager for the design of improvements to this 250-foot-long earth embankment dam. Responsible for preparing a Visual Inspection Report; performing a topographic survey; completing design and permitting; and preparing plans and specifications for bidding and construction. This project included

retro-fitting the existing pre-cast drop-inlet type structure for use as a low-level outlet structure; installing a new primary box culvert spillway; flattening the upstream and downstream slopes of the dam; and armoring the upstream slope. Chaplin, CT.

- **City of Providence, Canada Pond Dam Alternatives Evaluation Report:** Project Manager for preparing an Alternatives Evaluation Report of this 340-foot-long concrete retaining wall and earth embankment dam. The work included performing a topside visual inspection; observing an underwater dive inspection; concrete coring; soil test holes; and preparing the Alternatives Evaluation Report. Providence, RI.
- **NATCO, Arctic Dam Hydroelectric Facility, Emergency Action and Safety Plans:** Project Manager for preparing the Emergency Action Plan (EAP), Owner's Dam Safety Program (ODSP), Dam Safety Surveillance Monitoring Plan (DSSMP), and Dam Safety Surveillance and Monitoring Report (DSSMR) for FERC review and approval. West Warwick, RI.
- **NATCO, Arctic Dam Hydroelectric Facility, Spillway and Toe Repairs Project:** Project Manager for preparing plans and specifications for bidding and construction of spillway and toe repairs following the March 2010 flooding. The repairs included rebuilding collapsed sections of the downstream masonry training walls, repairing the spillway masonry; and installing a new grouted riprap apron with an underdrain. Coordinated with FERC and RIDEM for making the repairs; reviewed Contractor's submittals, and provided construction observation services. West Warwick, RI.
- **NATCO, Arctic Dam Hydroelectric Facility, March 2010 Flood Response:** On site Project Manager during the March 2010 flooding (500-year event). Responsible for coordinating with local and state EMA, RIDEM, and FERC regarding the protection of the left and right abutments of the dam. Also coordinated with the site contractors retained by NATCO for the removal of the timber flashboards and debris and for the placement of sand bags to prevent the abutments from overtopping. West Warwick, RI.
- **NATCO, Arctic Dam Hydroelectric Facility, FERC Part 12D Report:** Project Manager and Independent Consultant for conducting the FERC Part 12D Safety Inspection of this 478 KW Hydroelectric Facility. Prepared for and attended the PFMA Site Inspection; prepared the STI Document; prepared the PFMA Report; and prepared and submitted the Part 12D Report. West Warwick, RI.
- **Quidnick Reservoir Company, Flat River Reservoir Dam, Spillway and Toe Repairs Project:** Project Manager for preparing plans and specifications for making repairs following the March 2010 flooding. This project included re-building collapsed sections of the downstream masonry training walls; repairing the damaged downstream apron using grouted riprap; replacing several undermined footbridge footings; and repairing the low-level outlet structure. Coventry, RI.
- **Quidnick Reservoir Company, Flat River Reservoir Dam Biennial Inspection:** Project Manager since 1998 for the performance of the biennial inspection of this 1,400-foot-long by 20-foot-high High-Hazard earth and masonry dam. This work includes performing the biennial inspection/evaluation; preparing the Inspection / Evaluation Report; and providing ongoing support for the maintenance and repair of this dam. Coventry, RI.



- **Quidnick Reservoir Company, Flat River Reservoir Dam:** Project Manager for the preparation of the Emergency Action Plan (EAP) for this 1,400-foot-long by 20-foot-high High-Hazard dam. The project included reviewing/verifying the dam break analysis and inundation map prepared by the Army Corps of Engineers, preparing the written EAP, attending meetings with local and state emergency management personnel, and finalizing the EAP based on local and state emergency management personnel input. Coventry, RI.
- **City of Newport, Gardiner Pond Dam Improvements Project:** Project Manager for this Design-Build project that included replacing an existing 36-inch-diameter sluice gate. The project also included replacing the existing timber walkway with a new galvanized steel and aluminum walkway; installing a new pond level indicator; installing new security fencing; installing a new stainless steel ladder at the intake structure; and replacing the existing trash rack. Newport, RI.
- **Providence Water, Westconnaug Reservoir Dam Improvements Project:** Project Manager, through the 90 percent stage, for the preparation of plans and specifications for the rehabilitation of a 300-foot-long by 17-foot-high Significant-Hazard earth and stone-masonry dam within the Scituate Reservoir Watershed. The project included a geotechnical investigation, a dive inspection, topographic and bathymetric surveys, and wetland delineation. The results of the field investigation were presented in a Design Concept Report that also included hydrologic and hydraulic analyses, stability analyses, and the presentation of remedial alternatives to accommodate the spillway design flood, address the decayed timber components of the dam, and address seepage conditions. Foster, RI.
- **Providence Water, Barden Reservoir Dam Improvements Project:** Project Manager for preparing plans and specifications for the rehabilitation of a 600-foot-long by 31-foot-high Significant-Hazard earth and masonry dam within the Scituate Reservoir Watershed. This project included hydraulic and hydrologic analyses; upstream and downstream slope improvements; installation of pre-cast articulated concrete blocks along the crest and downstream slope of the dam; repair of two gate house structures; installation of a toe drain system; extensive masonry repairs; and miscellaneous site improvements. Prepared the RIDEM and Army Corps of Engineers permit applications; planned and coordinated the geotechnical investigation; performed design analyses; prepared plans and specifications for bidding and construction; and provided project management for full-time construction observation. Scituate, RI.
- **Providence Water, Ponaganset Reservoir Dam Improvements Project:** Project Manager for preparing plans and specifications for the rehabilitation of a 600-foot-long by 26-foot-high Significant-Hazard earth and masonry dam within the Scituate Reservoir watershed. This project included upstream and downstream slope improvements; installation of a toe drain system; placing riprap along the upstream and downstream slopes; constructing a new low-level outlet headwall; drainage improvements; and reconstructing George Allen Road along the crest of dam. Prepared the RIDEM and Army Corps of Engineer Permit Applications; planned and coordinated the geotechnical investigation; performed design analyses; prepared plans and specifications for bidding and construction; and provided periodic consultation and construction observation. Gloucester, RI.
- **Town of Sutton, Steven's Pond Dam Improvements Project:** Project Manager for preparing plans and specifications for the rehabilitation of a 250-foot-long Significant-Hazard earth and

masonry dam in southeastern Massachusetts. This project included upstream slope improvements; constructing a concrete cutoff wall; reconstructing a downstream granite block wall; reconstructing a low-level gate; and miscellaneous concrete and fencing work. Managed the preparation of the MADEM permit applications; performed design analyses; prepared plans and specifications for construction; and coordinated and managed the part-time construction observation. Sutton, MA.

- **The Providence and Worcester Railroad Company, Packers Pond Dam Expert Witness Testimony:** Project Manager for the performance of a focused Phase I Inspection/Evaluation of this 300-foot-long Significant-Hazard earth and masonry dam in southeastern Connecticut. The project included performing the focused evaluations/inspection; preparing the inspection/evaluation report; developing repair alternatives, including estimated construction costs; and serving as an expert witness for the Providence and Worcester Railroad during discussions with the dam's owner and the CTDEP. Plainfield, CT.
- **RIDEM, Bowdish Reservoir Dam Improvements Project:** Project Manager for the performance of a Phase I/II Inspection/Evaluation of this 250-foot-long by 14-foot-high High-Hazard earthen dam. The project included performing the inspection/evaluation; performing a dam breach analysis; preparing the inundation map; preparing the Inspection/Evaluation Report; developing repair alternatives and estimating construction costs; and attending a public workshop to describe the project. Project Manager for the preparation of plans and specifications for the rehabilitation of the dam. The work included upstream and downstream slope improvements; installation of pre-cast articulated concrete blocks along the crest and downstream slope of the dam; a new low-level outlet structure; installation of a toe drain system; construction of a new spillway and vehicle access bridge; and miscellaneous site improvements. Prepared the RIDEM Permit application; planned and coordinated the geotechnical investigation; performed design analyses; prepared plans and specifications for bidding and construction; prepared the Emergency Action Plan (EAP), and coordinated full-time construction observation services. Glocester, RI.
- **RIDEM, Notice of Intent to Enforce, Confidential Client:** Project Manager for the emergency repair of a Significant-Hazard earth and masonry dam. The project included preparing a repair plan for review and approval by RIDEM; preparing plans and specifications for bidding and construction; negotiating final repair costs with the selected Contractor; and providing construction observation. Coventry, RI
- **RIDEM, Notice of Intent to Enforce, Bleachery Pond Dam Low-Level Outlet Repairs Project:** Project Manager for preparing conceptual plans and specifications for repairing a non-functional low-level outlet structure. Served as a liaison between the Owner and RIDEM and prepared the preliminary budget estimates for making the repairs. Lincoln, RI.
- **RIDEM, Stillwater Reservoir Dam:** Project Manager for the performance of a Phase II Inspection/Evaluation, in consultation with Louis Berger and Associates, of this 1,300-foot-long by 20-foot-high High-Hazard earth and masonry dam. The project included hydraulic and hydrologic analyses, stability analyses, and the preparation of an Inspection/Evaluation Report, which included remedial repair alternatives and preliminary budget estimates. Smithfield, RI.

- **Town of Amesbury, Lake Gardner Dam:** Senior Reviewer during the preparation of plans and specifications for the rehabilitation of this large, High-Hazard dam. This project included upstream and downstream slope improvements; the installation of riprap along the upstream slope; reconstruction of the granite block spillway; installation of new slide gates; and miscellaneous site improvements. Also provided periodic consultation during construction of this project. Amesbury, MA.
- **Town of South Kingstown, California Jim's Pond Dam:** Project Manager for the performance of an emergency inspection and preliminary forensics evaluation of the failed California Jim's Pond Dam. The project also included the inspection of 4 downstream dams/dikes and 5 downstream culverts. Provided an assessment of existing conditions and recommendations for repair, maintenance, and, where applicable, further study. South Kingstown, RI.

Environmental Engineering

- **Millenium Tower, Dewatering and Water Treatment Plan:** Project Manager for the preparation of the Dewatering and Water Treatment Plan for the temporary earth support system installed for the construction of the Millennium Tower in Boston, Massachusetts. The Tower is being built adjacent to the historic Burnham Building and will be 55 stories, or approximately 606 feet tall upon completion. The plan included estimating the expected seepage/leakage rate into the excavation; specifying the dewatering wells/pumps; and designing the treatment system for the removal of site contaminants in conjunction with Lockwood Remediation Technologies. Boston, MA.
- **Berklee College of Music, Dewatering and Treatment System Plan:** Project Manager for the preparation of the Dewatering and Treatment System Plan for the temporary earth support system installed for the construction of the new Music Center at the Berklee College of Music. The plan included estimating the expected seepage/leakage rate into the excavation; specifying the dewatering wells/pumps; and designing the treatment system for the removal of VOC's and DNAPL in conjunction with Lockwood Remediation Technologies. Boston, MA.
- **Capital Terminal Company, Tank 115 Remediation Project:** Project Manager for the preparation of a Site Investigation Report and Remedial Action Work Plan for the remediation of a diesel fuel release at the Capital Terminal Company. Conducted a pilot study program; selected final treatment technologies; and outlined the full-scale remediation system. East Providence, RI.
- **Wright-Patterson Air Force Base, OU-4 RI/FS:** Project Manager for the remedial investigation/feasibility study (RI/FS) and remedial design for 4 abandoned CERCLA landfills and a drum staging/disposal area. Dayton, OH
- **US EPA, Onalaska Landfill Remedial Action Project:** Project Manager and lead designer for the preparation of plans and specifications for this US Environmental Protection Agency landfill cap remedial action project. Also directed the field inspection program. The project included construction of a clay and soil cap, ground improvements for construction of a new treatment plant building, construction of a landfill gas interceptor trench and venting system, and road improvements. Onalaska, WI.



- **SC Johnson Wax, Groundwater Remedial Action Project:** Senior Project Manager for the pre-design of a 2,000-foot-long groundwater interceptor and collector trench at this active manufacturing facility. Racine, WI.
- **US EPA, Forest Waste Lagoons Remedial Action Project:** Served as Task Manager and field team leader during the remedial design field investigation; prepared plans and specifications for bidding and construction; and performed construction observation for the cleanup of 9 lagoons used for the disposal of industrial liquid wastes. Ottisville, MI.

Structural Engineering

- **Hugo Key and Son, Inc., University of Rhode Island GSO Pier Demo Plan:** Senior Project Manager for the development of a demolition plan for the superstructure of an existing timber/concrete pier at the University of Rhode Island's Graduate School of Oceanography. The work included overseeing a dive inspection of the pile supports; performing a loading analysis of the pier to check the use of machinery to be utilized for the demolition; and developing a demolition plan to remove the concrete deck and timber structural components. Narragansett, RI.
- **Daniel O'Connell's Sons, Prefabricated Metal Building:** Senior Project Manager for the analysis of the column baseplates and concrete anchoring system to be used as part of the erection of a prefabricated metal building. The work included performing the load development for each column base plate in accordance with LRFD; and designing the baseplates and concrete anchors to support the applied loads from each column. West Warwick, RI.
- **EDM Construction, Inc., Erection Procedures:** Senior Project Manager for the preparation of the Erection Procedure Plans for three utility bridges being constructed as part of the MBTA Greenline Extension Project. The work included analyzing the crane pick loads; determining the outrigger bearing pressure; and developing the erection procedures. Somerville, MA.
- **J.H. Lynch and Sons, Inc., Providence Station Demolition Plan:** Senior Project Manager for the development of a demolition plan for a public plaza located above an existing underground parking garage at the Providence Station. The work included performing a comparative loading analysis of the existing parking garage to support demolition equipment; and developing a phased demolition plan to demolish portions of the plaza safely. Providence, RI.

PROFESSIONAL MEMBERSHIPS

American Society of Civil Engineers

PUBLICATIONS

Russell, J. B., 2010, *"Full Scale Footing Load and Settlement Response Case Study,"* Geo-Frontiers Conference

Bellisile, J. M., and Russell, J. B., September 2000, *"The Cost of Repairing a Dam; Information for Dam Owners,"* ASDSO Conference



Russell, J. B. and Lawrence, C. L., June 1998, *"Monitoring Preload Performance, Field Instrumentation for Soil and Rock,"* ASTM STP 1358

Russell, J. B., 1990, *"Remedial Action Case History: Forest Waste Site Lagoons,"* Proceeding of the 45th Annual Purdue Industrial Waste Conference