

EDUCATION

University of Rhode Island, Kingston, RI
M. S., Civil and Environmental Engineering
(Geotechnical Emphasis), 2010

University of Rhode Island, Kingston, RI
B. S., Civil Engineering, 2008

PROFESSIONAL REGISTRATION

Rhode Island, Massachusetts, Connecticut

PROFESSIONAL EXPERIENCE

RT Group, Inc.
Project Manager, 2016 - Present
Senior Project Engineer, 2013 - 2015
Project Engineer, 2009 - 2012

Jaques Whitford Company, Inc.
Staff Engineer, 2007 - 2009



Mr. Arpin has over 9 years of experience on a variety of geotechnical, marine / waterfront, civil, dam, structural, and environmental engineering projects. His design experience includes analysis and design of dams, retaining walls, support of excavation systems, pile-supported foundations, seawalls and bulkheads, and dewatering systems. Mr. Arpin also has extensive construction observation and field experience associated with general earthwork, dam rehabilitation and inspection, geotechnical explorations, and environmental sampling and monitoring.

At RT Group, Inc., he currently performs design analyses; assists in the assembly of plans and specifications for bidding, permitting, and construction; assists in coordinating and staffing field investigations; and supports Project Managers in the preparation of reports, studies, and construction cost estimates. Mr. Arpin is proficient in Computer-Aided-Drafting in addition to various engineering design software. As a Project Manager, he continues to gain professional engineering experience by expanding his responsibilities into project proposals, management, and advanced design work. Representative project experience includes:

Marine / Waterfront Engineering

- **Town of Narragansett, Waste Water Treatment Plant Flood-Proofing Project:** Senior Project Engineer 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 Engineer 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 Engineer 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 Engineer 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 Engineer 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:** Senior Project Engineer for completing the design of approximately 1,300 LF of new anchored sheetpile bulkhead. The work included preparing a Condition Assessment Report; performing a geotechnical investigation; completing design and permitting for the new bulkhead; and preparing plans and specifications for bidding and construction. North Kingstown, RI.
- **Quonset Development Corporation, Terminals 4 and 5 Bulkhead Improvements.** Senior Project Engineer for the preparation of plans and specifications for bidding and construction of a new concrete cap along an existing steel sheet pile bulkhead, including new bollards and cleats and concrete pavement. Responsibilities included designing the concrete cap to resist loading from vessels; performing the site survey; and assisting in the preparation of plans and specifications for construction. Quonset Point, RI.
- **Southern New England Ship Building Company, Laydown Area Expansion and Air Bag Launch Way Project:** Project Engineer for the preparation of plans and specifications for permitting, bidding, and construction of an expansion area to the facility's main yard and an Air Bag Launch Way used to launch dry docks constructed at the facility. Responsibilities included planning and overseeing the geotechnical investigation; designing two (2) 100-kip-lateral-capacity pile supported bollards; designing the concrete pavement for anticipated loads; performing a site survey and bathymetric survey; preparing plans and specifications for bidding and construction; submitting the USACE, RIDEM, and RICRMC Permit Applications; and providing construction observation. North Kingstown, RI.
- **Southern New England Ship Building Company, Cathodic Protection at the Waterfront**



Project: Project Engineer for the preparation of plans and specifications for the installation of a cathodic protection system for a previously installed sheet pile wall. Responsibilities included the design of the system and preparing plans and specifications for construction. North Kingstown, RI.

- **Capital Terminal Company, Wilkes Barre Pier HZ-Cantilever Wall Project:** Project Engineer for the design and assembly of plans and specifications for the installation of a new cantilever wall to allow for the berthing of offloading vessels. The wall was designed to be constructed of interlocking H-piles (king piles) and AZ sheet piles. Responsibilities included assisting in the design of the wall; designing the cathodic protection system; and preparing plans and specifications for the construction cost estimate. East Providence, RI.
- **Capital Terminal Company, Wilkes Barre Pier and Underwater Structural Inspection Project:** Project Engineer for the preparation of the Structural Inspection Report for this approximately 1,000-foot-long Pier. Responsibilities included performing the top-side inspection and overseeing the underwater dive inspection of the pier components including timber support piles, a soldier pile and concrete panel wall, and various offshore mooring/breasting structures. East Providence, RI.
- **Capital Terminal Company, Wilkes Barre Pier Cathodic Protection Project:** Project Engineer for the design and installation of a cathodic protection system for steel H-piles and pipe piles for various components of the Wilkes Barre Pier. Responsibilities included the design and selection of the required anodes; preparing plans and specifications for construction; and providing construction observation. East Providence, RI.
- **Town of Jamestown, East Ferry Marina Seawall Replacement Project:** Project Engineer 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. Responsibilities included the planning and oversight of the geotechnical investigation; performing the site survey; performing the wall stability analyses; and reviewing the Contractor's Submittals for construction. Jamestown, RI.
- **Town of Jamestown, Dumpling Road Seawall and Roadway Reconstruction Project:** Project Engineer 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. Responsibilities included the planning and oversight of the geotechnical investigation; performing the site survey; completing the wall stability analyses; and reviewing the Contractor's Submittals for construction. Jamestown, RI.
- **Town of Jamestown, Fort Getty Boat Ramp Replacement Project:** Project Engineer for preparing plans and specifications for a new Pre-Cast Articulating Concrete Block boat ramp. Responsibilities included assisting in the design and preparing plans and specifications for construction. Jamestown, RI.
- **Town of Jamestown, Fort Getty Pier Inspection:** Project Engineer for the inspection of a WWI era timber pier. Responsibilities included conducting a visual inspection of the pier both topside and waterside, and reducing data from the inspection for the preparation of the inspection report. Jamestown, RI.



- **Styron LLC., Shoreline Protection Project:** Senior Project Engineer 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; completing the CTDEEP Structures, Dredging, and Fill Permit Application; and developing the revetment design to prevent continued erosion of the slope. Gales Ferry, CT.
- **City of Newport, King Park Beach Seawall Repair Project:** Project Engineer for the design of repairs and improvements to the existing seawall located in King Park. Responsibilities included assisting in the design of replacement sections for the seawall totaling over 150 linear feet; assisting in the design of a new concrete parapet above an existing seawall section totaling over 300 linear feet; and preparing plans and specifications for construction. Newport, RI.
- **Sakonnet Point Club, Marine Pipeline Project:** Project Engineer for the design and preparation of plans and specifications for bidding and construction of a new marine pipeline for a Reverse Osmosis Effluent Discharge Pipeline. Little Compton, RI.
- **Kiewit Infrastructure, Closed Loop Cooling Project:** Project Engineer 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 linear feet of pipeline into the water at one time. Somerset, MA.
- **Town of Jamestown, Fixed Timber Pier Repair and Improvements Project:** Project Engineer for the design and preparation of plans and specifications for the repairs to a 300-foot-long fixed timber pier. Separate plans and specifications were prepared for a fixed timber pier extension leading to floating docks secured by steel pipe piles. Jamestown, RI.
- **SeaRoc, Deepwater Wind Monitoring Buoy Project:** Project Engineer for the design of a barge mounted cradle to support a 50,000 pound meteorological buoy during deployment to its offshore location. RI and NJ offshore sites
- **Gulph Creek Site Project:** Staff Engineer for a project involving the design of a 656-foot-long retaining wall located along the Gulph Creek stream channel at the site of a LNG storage tank. The project was performed as part of the remediation of a contaminated former manufactured gas plant (MGP). The design also included the use of gabion baskets and Reno mattresses along the front of the retaining wall to prevent erosion from the creek. West Coshohoken, PA.

General Civil Engineering

- **Town of Jamestown, Fort Getty Roadway Repairs Project:** Senior Project Engineer 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.
- **Capital Terminal Company, Salt Pile Property Survey:** Project Engineer for the preparation of existing site plans for property owned by the terminal. Responsibilities included performing the site survey and preparing plans. East Providence, RI.



- **Southern New England Ship Building Company, Prefabricated Metal Building Project:** Project Engineer for the construction of a prefabricated metal building and its foundation. Responsibilities included preparing plans and specifications for permitting and construction; designing the building's foundation to resist wind and wave impact loading; and submitting the RI State Building Permit Applications, including coordinating with the RI State Fire Marshall's office. North Kingstown, RI.
- **Americas Styrenics, Bathymetric Survey:** Project Engineer for the preparation of plans showing the bathymetry of a turning and berthing basin used by large ships to off-load product to a manufacturing facility. Responsibilities included retrieving survey data using sonar equipment from a boat; importing data into AutoCAD; preparing plans showing the bathymetry; and calculating the volume of material required to be dredged. Gales Ferry, CT.

Structural Engineering

- **Hugo Key and Son, Inc., University of Rhode Island GSO Pier Demo Plan:** Senior Project Engineer 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 Engineer 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 Engineer 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 Engineer 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.
- **RIDOT, Weekapaug Bridge No. 997 Project:** Project Engineer for designing a current diverter for rehabilitation work performed on the existing masonry bridge piers. The diverter system was designed to float-in and sink around the piers so that underwater repointing and grouting repairs could be done while being protected from the strong currents of the Weekapaug Breachway. Westerly, RI.

- **RIDOT, I-95 Pawtucket Bridge No. 550 Project:** Project Engineer for preparing Engineering Submittals for the partial demolition of the Pawtucket Bridge as well as several overpasses in the immediate area of the Bridge. Responsibilities included, but were not limited to, preparing demolition plans for Phase 1A of Bridge No. 550; the design of demolition shielding for several overpasses to protect vehicular traffic below; the design of temporary shoring towers for the replacement of overpass bridge piers; and the analysis of existing bridge structures for construction equipment loading. Pawtucket, RI.
- **ConnDOT, Q E-2 Rte. 95 and Hwy. 34 Flyover Bridge Project:** Project Engineer for preparing Engineering Submittals for the construction of a new 1,900-foot-long twin steel box girder bridge. Engineering Submittals included a deck pouring sequence and a bridge deck overhang support analysis. New Haven, CT.
- **ConnDOT, Q-B Pearl Harbor Memorial Bridge Project:** Project Engineer for preparing an Engineering Submittal for the replacement of the Pearl Harbor Memorial Bridge Project. Engineering Submittal included a debris shielding system utilized on the existing bridge structure during the demolition work. New Haven, CT.
- **Nicholson Construction, AMTRAK Bridge Replacement Projects:** Project Engineer for preparing micro-pile design and pile load test reports for the replacement of two (2) Amtrak bridges. Responsibilities included the design of micro-piles to support permanent bridge abutments; the design of a static load test frame for the installed micro-piles; and the preparation of load test reports for tested piles. East Lyme and Stonington, CT.
- **MBTA, Porter Square Station Project:** Project Engineer for preparing Engineering Submittals to assist the Contractor in addressing deficiencies in the construction of new skylights and a new pedestrian bridge installed as part of this Vertical Transportation Improvements Project. Engineering Submittals included a structural analysis of the skylights steel sub-frame; an analysis of the pedestrian bridge; and repair details to address the deficiencies. Cambridge, MA.
- **Town of Jamestown, Fort Getty Pavilion Replacement Cost Estimate:** Project Engineer for the preparation of plans and specifications for the determination of a replacement cost for the Fort Getty Pavilion. The estimate was prepared following the collapse of the pavilion in February 2011 due to heavy snow and ice buildup. Responsibilities included the design of the proposed Pavilion structural components in accordance with ASCE 7 for wave, wind, and snow loading, while also accounting for scour and other factors for this coastal structure. Jamestown, RI.
- **Capital Properties Inc., Steeple Street Building Project:** Project Engineer for the structural design and renovations of this historical industrial building. Responsibilities included assisting in the structural design for a new 4-story elevator shaft and stair tower and for miscellaneous building modifications during the construction phase. Providence, RI.

Geotechnical Engineering

- **Groundwater and Environmental Services, Inc., Geotechnical Interpretive Reports:** Senior Project Engineer 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.

- **Sprint/United Management Corporation, Seekonk River Horizontal Directional Drilling Project:** Senior Project Engineer 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.
- **Hugo Key and Son, Inc., Barney Pond Dam Pedestrian Bridge:** Senior Project Engineer 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:** Project Engineer 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, Ten Rod Road Bridge Widening Project:** Project Engineer for widening an existing bridge structure via the extension of the existing abutment foundations. Responsibilities included performing geotechnical design analyses; assisting in the preparation of the Geotechnical Data and Design Basis Report; and preparing plans and specifications for construction of the temporary earth support system (soldier piles and lagging) for construction. Exeter, RI.
- **RIDOT, Tefft Hill Trail Bridge Road Bridge Widening Project:** Project Engineer for widening an existing bridge structure via the installation of pre-cast concrete arch/bridge units beneath the existing bridge. Responsibilities included overseeing the geotechnical investigation; coordinating and performing the site survey; completing geotechnical design analyses; preparing plans; and assisting in preparing the Geotechnical Data and Design Basis Report. Exeter, RI.
- **RIDOT, Sakonnet River Bridge Replacement Project:** Project Engineer for preparing Engineering Submittals for the replacement of the Sakonnet River Bridge. Engineering submittals included, but were not limited to, temporary earth retaining systems; marine cofferdams; and pile installation procedures. Responsibilities included reviewing design calculations and preparing plans and specifications for construction. Portsmouth / Tiverton, RI.
- **AMTRAK, Bridge M.P. 114.30 Over the Miamicock River Project:** Project Engineer for preparing Engineering Submittals for the replacement of Bridge M.P. 114.30. Engineering Submittals included, but were not limited to, the designs of (4) pile supported temporary work platforms for construction cranes and equipment; four (4) temporary sheet pile bulkheads to support cranes; a temporary pile supported trestle bridge to support AMTRAK passenger trains; a temporary access bridge; marine cofferdams for construction of the new

bridge abutments; a dewatering plan; jacking and shoring of the existing bridge; Wave Equation Analyses (WEAP) for proposed piles; H-pile and micro-pile design; static pile load test analysis; and pre-condition surveys. East Lyme, CT.

- **AMTRAK, Bridges M.P. 135.51 and 135.67 Over West and East Harbor Project:** Project Engineer for preparing Engineering Submittals for the replacement of Bridges M.P. 135.51 and 135.67. Engineering Submittals included the design of the micro-pile supported foundation for the new bridge structures. The micro-pile foundation system was an alternate to the Contract designed drilled shaft foundation. Stonington, CT.
- **City of Newport, South Easton Pond Dam Rehabilitation Project:** Project Engineer for preparing two (2) Water Control Plans (upstream and downstream sides) for the rehabilitation of an existing 3,400-foot-long earthen dam. The rehabilitation consisted of the reconstruction of the existing dam and installing Pre-Cast Articulating Concrete Blocks (ACBs). The upstream Water Control Plan consisted of “leap-frogging” 500-foot-long sheet pile / aquabarrier cofferdam cells while construction of the dam progressed, allowing for reuse of materials between cells and helping to minimize costs. Responsibilities included assisting in the design of the cofferdam; assisting in the determination of seepage rates into the cofferdams; and preparing plans and specifications for construction. Newport, RI.
- **Narragansett Bay Commission, Seekonk River Sewer Overflow Interceptor-Regulator Project:** Project Engineer for preparing the Temporary Support of Excavation Submittal and Dewatering Plan for the installation of a Combined Sewer Overflow (CSO) Interceptor-Regulator in an existing masonry pipe on the Seekonk River. Responsibilities included assisting in the design of a combined sheet pile/soldier pile and lagging cofferdam; assisting in seepage calculations for the Dewatering Plan; and preparing plans and specifications for construction. Providence, RI.
- **Southern New England Ship Building Company, Tugboat Assembly Shelter Project:** Project Engineer for the design of a new 16,000-SF open bay Tugboat Assembly Shelter. The structure was constructed using used shipping containers and a clear-span removable steel truss roof system. Responsibilities included designing the H-pile foundation to resist various load cases including uplift from wave and wind forces; preparing a model of the structure in STAAD for structural analysis; and preparing plans and specifications for construction. North Kingstown, RI.
- **Dan’s Management, Retaining Wall Repair Project:** Project Engineer for the design of a repair to an existing stone retaining wall along the Pascoag River. Responsibilities included performing a site survey of the property; designing a geogrid reinforced retaining wall; assisting in the design of a concrete moment slab to be installed above the reinforced earth; and preparing plans and specifications for construction. Pascoag, RI.
- **Philadelphia Electric Company, Center Point Substation Project:** Staff Engineer for the design of site improvements for a new electrical substation. Responsibilities included assisting in the design of four (4) retaining walls, an access road, and a precast concrete arch bridge crossing wetlands. The site of the proposed substation contained wetlands which ran through the center of the property. Two (2) retaining walls were designed on either side of the wetlands to provide level ground for the installation of substation equipment. Worcester, PA.
- **Narragansett Bay Commission, Fields Point Tunnel Pump Station Project:** Staff Engineer for a project involving the monitoring of deep excavations during construction of the Field’s Point



Tunnel Pumping Station CSO. Responsibilities included obtaining weekly inclinometer and piezometer readings and preparing field reports documenting the findings for a period of one (1) year. The pumping station was a component of the CSO. Providence, RI.

- **Narragansett Bay Commission, Fields Point Tunnel Pump Station Project:** Staff Engineer for a project involving the monitoring of adjacent structures during pile driving operations. Responsibilities included monitoring seismograph readings during the installation of the piles which were being installed for the foundation support system of a pump house. Providence, RI.
- **City of Medford, Courthouse Renovation Project:** Staff Engineer for preparing a Geotechnical Report for the renovation of an existing courthouse. Responsibilities included overseeing a subsurface exploration consisting of test borings that were completed both outside and within the existing building; visually classifying soils; and preparing boring logs and figures. Medford, MA.
- **McDonald's, Restaurant Renovation Project:** Staff Engineer for preparing Geotechnical Reports for the renovation of two (2) existing McDonald's Restaurants. Responsibilities included overseeing (2) subsurface explorations; visually classifying soils; and preparing boring logs and figures. Holyoke and Whitinsville, MA.
- **Rite Aid, Store Construction Project:** Staff Engineer for preparing a Geotechnical Report for the construction of a Rite Aid Retail Store. Responsibilities included overseeing the subsurface exploration; visually classifying soils; preparing boring logs and figures; and performing a site survey of the property. Southington, CT.

Dam Engineering

- **City of Providence, Canada Pond Dam Low-level Outlet Improvements Project:** Senior Project Engineer 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 Engineer 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 Engineer 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 Engineer 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.

- **Hugo Key & Sons, Inc., Featherbed Dam Dewatering, Flow Diversion, and SOE Plan:** Senior Project Engineer 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.
- **YMCA of Pawtucket, Quidnick Reservoir Dam Inspection Report:** Project Engineer for preparing an inspection report of the earth embankment dam. Responsibilities included completing a RIDEM file review of all relevant project information; visually inspecting the dam, including performing a survey of all deficiencies; and preparing the Visual Inspection Report detailing the condition of the dam. Coventry, RI.
- **Town of Chaplin, Darling Pond Dam Improvements Project:** Senior Project Engineer 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 with a sluice gate, installing a new primary box culvert spillway, flattening the dam, and armoring the upstream slopes. Chaplin, CT.
- **NATCO, Arctic Dam Hydroelectric Facility, Emergency Action and Safety Plans.** Project Engineer for preparing the Owner's Dam Safety Program (ODSP), Dam Safety Surveillance and 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 Engineer for the preparation of plans and specifications for the 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. Responsibilities included coordinating with FERC and RIDEM for making the repairs; reviewing Contractor's submittals; and providing construction observation services. West Warwick, RI.
- **Quidnick Reservoir Company, Flat River Reservoir Dam Spillway and Toe Repairs Project:** Project Engineer for the preparation of plans and specifications for making repairs to the spillway 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. Responsibilities included performing design analyses; preparing plans and specifications for construction; and providing construction observation. Coventry, RI.
- **Quidnick Reservoir Company, Flat River Reservoir Dam Improvements Project:** Project Engineer for the inspection, analysis, and repair of this 1,400-foot-long by 20-foot-high High-Hazard earth and masonry dam and its low-level outlet structure. Responsibilities included coordinating and overseeing the geotechnical investigation; performing a site survey; completing stability analyses for the two earthen dam sections and the spillway; and overseeing the dive inspection and repair of the low-level outlet structure. Coventry, RI.



- **Quidnick Reservoir Company, Flat River Reservoir Dam Biennial Inspection:** Project Engineer for performing the biennial inspection of this 1,400-foot-long by 20-foot-high High-Hazard earth and masonry dam. Responsibilities included performing the biennial inspection / evaluation; preparing the Inspection/Evaluation Report; and providing ongoing support for the maintenance and repair of this dam. Coventry, RI.
- **Nichols Pond Dam, Dam Repair Project:** Project Engineer for the preparation of permit submission plans for the repair of this existing dam along Breakheart Brook. Responsibilities included preparing a construction sequencing plan; assisting in the design of a new embankment; dam and low level outlet structure; and preparing plans and specifications for construction. West Greenwich, RI.
- **RIDEM, Notice of Intent to Enforce: Bleachery Pond Dam Low-Level Outlet Repairs Project:** Project Engineer for the preparation of conceptual plans and specifications for repairing a non-functional low-level outlet structure. Responsibilities included overseeing the underwater dive inspection; performing the topside inspection; preparing plans and specifications; and assisting in preparing the preliminary budget estimates for making the repairs. Lincoln, RI.
- **Town of Burrillville, Mill Pond Dam:** Staff Engineer for the preparation of plans and specifications for construction for the renovation of an existing earthen dam in Burrillville, RI. The project included the design of the renovated earthen dam and spillway; the design of replacement gates for the low level outlet; a feasibility study for installing a turbine to generate electricity; and attending a workshop conducted at the Burrillville Town Hall. Burrillville, RI.

Environmental Engineering

- **Millennium Tower, Dewatering and Water Treatment Plan:** Senior Project Engineer 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 Engineer for preparing 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.
- **Longwood Center, Dewatering and Treatment System Plan:** Project Engineer for preparing the Dewatering and Treatment System Plan for the temporary earth support system installed for the construction of the new eleven-story-high Longwood Center Building. The plan included estimating the expected seepage/leakage rate into the excavation; specifying the dewatering wells/pumps required; and designing the treatment system for the removal of VOC's and DNAPL in conjunction with Lockwood Remediation Technologies. Boston, MA.



- **Con Edison, Newtown Substation Project:** Staff Engineer for the design of a Permeable Reactive Barrier as part of a remediation project for this electrical substation. Responsibilities included preparing plans detailing the installation of a gate and funnel system through a carbon filter to treat petroleum contaminated soils. A 10-foot-diameter, 45-foot-long caisson was driven with a vibratory hammer and excavated with a clamshell to serve as a temporary excavation support system. A 6-foot-wide by 7-foot-long cassette composed of chambers of filter sand and carbon was then installed. A manhole structure was also constructed above the cassette to provide access for carbon changeoff. A barrier wall consisting of 112 Waterloo Sheet Piles was then installed on either side of the cassette to direct groundwater flow to the cassette. Sheet piles were grouted to the ground surface to provide an impermeable seal. Long Island City, NY.
- **Elliot Rose Company of Dover, Inc, Landfill Closure Design Project:** Staff Engineer for the preparation of plans and specifications for construction for the regrading and capping of a one acre landfill. The slope was part of the closure design which was required for the construction of a future precast concrete bridge over Varney Brook and associated wetlands which bisected the landfill. Responsibilities included preparing plans and specifications and providing engineering services during construction. Dover, NH.

PROFESSIONAL MEMBERSHIPS/ACHEIVEMENTS

Rhode Island Society of Professional Engineers
Vice President

Recipient of the 2007 and 2008 Jacques Whitford Student Incentive Award

