



RESUME

Education

B.S., 1975, Civil Engineering,
University of Massachusetts
M.S., 1977, Coastal Engineering,
University of Delaware

Professional Registrations

Professional Engineer
1991, *Massachusetts*, #36227
1995, *Maine*, #8188
1995, *New Hampshire*, #09013

Areas of Specialization

Coastal Engineering
Waterfront Engineering
Civil Engineering
Permitting
FEMA Flood Studies
Navigation Improvements
Beach Erosion Control
Shore Protection Structures
Marina Layout and Design
Shoreline Erosion Evaluation

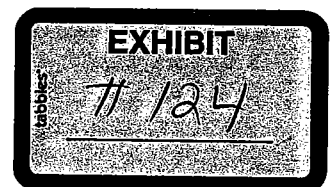
Peter J. Williams, P.E.
Senior Project Manager

Summary of Experience

Mr. Williams has over 33 years of experience in the coastal and waterfront engineering field and has been responsible for a wide range of waterfront transportation projects. His technical expertise includes the planning, engineering, design, permitting and management of projects involving commercial pier and wharf restoration, harbor improvement and maintenance dredging, coastal structures, waterfront structures, condition assessments, and design and numerical modeling of coastal flooding due to storm surges and wave run-up. Mr. Williams was the project manager for the Secure Dock Facility project at the New Bedford State Pier and currently is the project manager for the Spaulding Hospital Rehabilitation Project in the Charlestown Navy Yard. Prior waterfront transportation project experience has also included the Commercial Pier Improvement Project- Marshfield, MA, Hodge Boiler Works Pier and Bulkhead Project - Boston, MA, CITGO Mooring Improvement Project - Braintree, MA, and the T-Wharf Repair Project - Plymouth, MA.

Relevant Project Experience

- **Project Manager for the Massachusetts DCR New Bedford State Pier Secure Dock Facility Project.** The Secure Dock Facility Project involved installation of new concrete floats, mooring systems, pier improvements, timber dolphin, gangway, security fencing and surveillance system, and new utility services to allow the secure docking of police vessels. Provided permitting preliminary design, final design, bid solicitation service and construction oversight.
- **Project Manager for the Spaulding Rehabilitation Hospital Project, Charlestown Navy Yard.** Vine-GZA's involvement with the hospital replacement project involved the condition assessment and design of repairs and reconstruction of existing waterfront structures. This work included the replacement of steel sheet pile bulkheads with granite revetments, installation of new steel king pile bulkhead, repair of granite block seawalls, repairs to the concrete filled steel pipe pile and timber fender system of the deep draft concrete pier to allow the docking of special event ships. Provided condition assessment, planning, preliminary design, permitting, final design and construction period services.
- **Project Manager for the U.S. Gypsum Pier Reconstruction Project, Charlestown, Massachusetts.** The proposed improvements included the reconstruction of the timber pier and replacement/upgrading of the ore transfer system. Project involved inspection and feasibility investigation for repair, development of rehabilitation and reconstruction alternates, permitting, and preparation of construction plans and specifications.





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- **Project Manager for a conditions findings study for the CITGO berthing facility on the Fore River in Braintree, Massachusetts.** Project included under and above water inspection, material testing, and evaluation of mooring and berthing loads on fendering and dolphin structures. Additional work efforts include computer modeling of mooring line loads, design of fender repairs and design/implementation of mooring and berthing improvements.
- **Project Manager for the Parcel 6 and 7 Waterfront Improvement project at the Charlestown Navy Yard, Charlestown, Massachusetts.** The project involved the rehabilitation of approximately 1,000 linear feet of steel sheet pile bulkhead and granite block seawall and the development of a water taxi docking float. Services provided included under and above water inspection, material testing, and evaluation of remaining structure life of the waterfront structures. Provided evaluation and design for the reconstruction of stone seawalls, steel sheet pile bulkheads and docking system.
- **Project Manager for the Town of Scituate 2010 Revetment Repair Project.** The \$950,000 repair project involved the repair of damaged stone revetments at nine locations including Minot Beach, Glades Road, Surfside Road, Lighthouse Point, First Cliff, Second Cliff, Third and Fourth Cliff. Provided preliminary design, permitting, final design and construction period services.
- **Project Engineer/Manager for Fender Pile Repair Project, Town Pier Green Harbor Marshfield, Massachusetts.** The project involved the evaluation of the existing structure conditions, evaluation of alternative fender structures, preliminary design and final design of proposed fender improvements. Provided condition inspection, preliminary design, permitting, final design and construction period services.
- **Project Manager for the Town of Marshfield Foster Avenue Seawall Project.** The project involved the replacement of approximately 400 feet of failed seawall and toe revetment. Provided preliminary design, permitting, final design and construction period services.
- **Project Manager for the Town of Scituate 7TH & 8th Avenue Seawall Repair Projects.** The repair projects involved the temporary replacement of failed seawall sections with a stone revetment and the final rehabilitation of shoreline by the placement of new concrete seawalls with revetments. Provided preliminary design, permitting, final design and construction period services.
- **Wollaston Beach Improvement Project, Quincy, Massachusetts.** As subconsultant responsible for the planning and design of seawall repairs and beach nourishment phases of the project. The project involved repairs to approximately 5,500 feet of concrete seawalls and the placement of beach nourishment along approximately 2,000 feet of the shoreline to restore the recreational beach. Beach nourishment design was developed to minimize and avoid impacts to inter-tidal areas and adjacent mooring basins.
- **Project Manager for the Parcel 4 waterfront improvement project at the Charlestown Navy Yard, Charlestown, Massachusetts.** The project involved the rehabilitation of approximately 800 linear feet of granite block seawall and the development of a new waterfront docking facility. Services provided included under and above water inspection of waterfront structures, preliminary and final design of seawall repairs, drainage improvements and utility services, construction period services.
- **Project Manager for the Town of Hull Cadish Avenue Seawall Project.** As Project Manager, responsible for providing surveying, engineering, design, permitting and construction oversight services for temporary and permanent repairs to the failed seawall. Conducted an alternatives analysis to determine the



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most suitable replacement structure that would minimize/avoid impacts to the beach, protect public utilities located within 10 feet of the original seawall and maintain public access. The selected alternative consisted of a 365 linear foot slope stone revetment with a buried toe and granite cap.

- **Project Manager for the Town of Scituate Oceanside Drive Seawall Repair Project.** The \$1,000,000 repair project involved the replacement of failed seawall sections and the rehabilitation of 1,200 feet of deteriorated concrete seawall and toe revetment. Provided preliminary design, permitting, final design and construction period services.
- **Project Manager for the Grandview Avenue Seawall Repair Project, Winthrop, Massachusetts.** Responsible for preliminary design, permitting, final design, bid solicitation and construction period services. The project involved the rehabilitation and repairs of approximately 700 feet of concrete seawall.
- **Popes Island Marina Improvement Project, New Bedford, Massachusetts.** The project involved the rehabilitation and replacement of portions of the marina floating dock system. The project was designed to improve the stability and durability of the floats and pile mooring system. Work efforts included alternative analyses, preliminary design, permitting, final design, bid solicitation and construction monitoring services.

With previous firms, typical projects that Mr. Williams was responsible for include:

- **FEMA Coastal Flood Insurance** for numerous communities in Massachusetts including Weymouth, Hingham, Cohasset, Scituate, Marshfield, Duxbury, Kingston, Plymouth, Dennis, Brewster, Orleans, Eastham, Wellfleet, Chatham, Harwich, Nantucket, Edgartown, Oak Bluffs and Tisbury. Studies involved the statistical analyses, determination 100-year still water flood elevations, wave height analyses, calculation of extreme wave run-up elevations, computer modeling of estuarine and riverine processes, calculation of flood hazard factors and mapping of flood hazard areas.
- **Project Manager for U.S. Army Corps of Engineers Navigation Improvement Project, Piscataqua River, Portsmouth, NH.** The \$15,000,000 dredging project involved both overburden and ledge removal to widen ship turning areas. Work efforts included the negotiation of local cooperation agreement with the State of New Hampshire, coordination with resource agencies, final design, and the preparation of construction plans and specifications.
- **Project Manager/Engineer for the Foster Avenue Seawall Repair Project, Marshfield, MA.** The project involved the design and construction services for the repair and reconstruction of deteriorated concrete seawalls. The seawall repairs had to address long term deterioration due to freeze/thaw spalling, poor drainage, toe erosion, and wave/cobble abrasion.
- **Project Manager/Engineer for the Wave Street Seawall Reconstruction Project, Marshfield, MA.** Project involved the evaluation repair alternatives for the reconstruction of a seawall previously rebuilt as a revetment. The selected repair alternative had to provide a cost effective solution which would reduce wave run-up and not significantly increase the footprint of the structure.
- **Project Manager/Engineer for the Foster Avenue, Brant Rock and Bay Avenue Seawall Repair Project, Marshfield MA.** The project involved the design and construction services for the repair and reconstruction of deteriorated concrete seawalls. The project involved the evaluation of repair alternatives



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for sheet pile toe protection at Brant Rock. Methods to provide drainage behind existing seawalls in close proximity to existing houses were developed.

- **Erosion Control Project, Revere, MA.** Project Manager responsible for the preparation of final design plans and specification for the placement of beach nourishment along 13,000 feet of beach. The project was designed to serve the dual purposes of providing storm protection to the existing seawalls during frequent storms and providing recreational beach use. The project required extensive coordination between the state agencies, MDC and local communities on project benefits, impacts and permitting.
- **Santa Cruz Harbor Shoaling Study, Santa Cruz, CA.** The project involved the an in-depth study of sedimentary processes to determine the causes of the entrance shoaling problem at Santa Cruz Harbor, California based on calculated monthly littoral transport rates, dredging records, and monthly soundings of the entrance channel. Developed and evaluated sixteen alternative solutions involving hydraulic dredges, clamshell dredges, eductor systems, draglines, weir jetties, and various modifications of the entrance structures.
- **Moriches Inlet Breach Closure, Long Island, NY.** The project involved the development and monitoring of construction methods for closure of a breach through the barrier island east of the Inlet. Responsible for inspection of bathymetric surveys conducted to measure changes in the Inlet during closure.
- **Barnegat Inlet Littoral Transport Study, New Jersey.** The project involved the determination of monthly and annual transport rates from beach profiles, aerial photographs, dredging records, historic shoreline positions, and from wave hind cast data using the "Energy Flux Method" with a wave refraction computer program.
- **Beach Erosion Control and Hurricane Protection Study, Fire Island Inlet to Montauk Point, Long Island, NY.** Study involved the development and evaluation alternative solutions for beach erosion control and hurricane protection for the U.S. Army Corp of Engineers. Responsible for the evaluation of the effects of removing groin fields and the development and evaluation of the storm surge gate at the ocean inlets.
- **Port Ontario Harbor Refuge, NY.** The project involved the development of design wave studies, alternative structures analysis and quantity estimates for a U.S. Army, Phase II General Design Memorandum.
- **Liberty State Park, New Jersey.** The project involved the final design and preparation of plans of the shore protection structures for a 140-acre landfill. Responsible for the development of design conditions, design of shore protection structures and the preparation of design appendix for the Corps of Engineers Phase II General Design Memorandum.
- **Indian River Inlet Erosion Study, Delaware.** The project involved the studies to determine rates and aerial extent of erosion of the inlet and adjacent ocean shorelines, evaluation of ambient erosion rates versus those induced by the stabilization, and prediction of future erosion rates. Analyses were conducted of the Inlet hydraulics to evaluate changes in the channel configuration, tidal prism, and equilibrium cross-section. Long and short term remedial measures for the erosion problems were developed with their approximate costs.
- **Temporary Breakwater Repairs, Port of Haina, Dominican Republic.** The project involved the final design of temporary repairs for 3,000 feet of rubble-mound structures damaged by hurricanes. Responsible



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for the determination of extent of the damages, development of temporary repairs which could maintain undamaged sections and be utilized in the final repairs, and preparation of plans, specifications and cost estimates.

- **Coastal and Riverine Flood Insurance Study, Long Island, NY.** Project Manager for FEMA Flood Insurance Studies. Work efforts included the determination of base flood elevations, flood prone areas and flood hazard factors for 41 communities. Analyses included the numerical modeling of estuarine flows, determination of stage tide relationships, and the calculation of wave heights and crest elevations.

Professional Associations

Boston Society of Civil Engineers
American Society of Civil Engineers