



James A. Jackson, PE

Civil Engineer

CDR MAGUIRE INC.
PROJECT MANAGER/PRINCIPAL
ENGINEER

TECHNICAL EXPERTISE

Construction Administration and
Project Management
Rehabilitation of Marine Structures
Marine Structure Design:
Piers, Wharves, Bulkheads,
Marinas, and Seawalls
Waterfront Redevelopment
Cost Estimation
Site Inspection and Design

YEARS OF EXPERIENCE

CDR Maguire: Since 1993
CDR Maguire: 1985-1989
Total: Since 1985

EDUCATION

BS/1985/Civil Engineering
University of Rhode Island

PROFESSIONAL REGISTRATIONS

Professional Engineer:
CT-18936, MA-42563,
VI-678C, RI- 5708

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers

PROFESSIONAL PROFILE

Mr. Jackson's engineering experience includes several years with CDR Maguire in the Marine Department and several years of construction experience. His marine experience includes designing and analyzing various marine structures including bulkheads, piers and jetties. Involvement included initial site surveys, conceptual design, computation of budget cost estimates, state/federal permit applications, preparation of plans and contract documents, and construction administration and inspection. Construction experience includes major bridge construction and Superfund remediation.

REPRESENTATIVE PROJECTS

Barrett Park Dam, Leominster Massachusetts: Provided subsurface exploration, stability assessment for both static and seismic conditions, redesign, and construction related services for this Phase II dam assessment and redesign to mitigate observed seepage and potential instability. Seepage solutions considered included steel and synthetic material sheet piling, grout curtains and impervious blankets.

Retaining Wall and Drainage Improvements, Crown Mountain Road, St Thomas, USVI: Responsible for project management and design of a reinforced-concrete retaining wall to replace the stone-filled gabion wall that failed during Hurricane Georges. The existing gabion retaining wall was destroyed and a portion of the roadway washed out from heavy rains associated with the hurricane in 1998. Drainage improvements were also included; a drainage system was designed to collect runoff from the mountain and convey it across the road. A boring program was performed to determine existing soil properties. This project included preparation of construction plans and specifications.

Temporary Channel Diversion Structure Design (TCDS), Central Artery/Third (CA/T) Harbor Tunnel Project, Boston, MA: Involved in the design of a TCDS to divert tidal and drainage flows along ~2,000 feet of the Fort Point Channel to facilitate construction of deep tunnels under the channel. The TCDS consists of a single-sided composite sheetpile section and a pile-supported steel box section with a concrete-filled gravity dam outlet structure. Responsibilities included design of the diverse components of this structure and the layout of the TCDS to accommodate the extensive network of railroad and vehicle bridges located along the alignment of the structure. This work was part of the overall project known as The Big Dig in Boston.

Wollaston Beach Seawall Rehabilitation, Quincy, MA, Metropolitan District Commission: Design of a seawall and shore protection along a 3,300 LF portion of Wollaston Beach. The seawall and shore protection were designed to protect Quincy Shore Drive and the 24" MWRA force main from wave impacts associated with a 100 year storm event. The replacement seawall included a steel sheet pile wall with concrete encasement. The shore protection consisted of a three layer riprap revetment designed to USACOE standards. Preparation of contract documents including plans, specifications and estimates and for coordination of the permit application process.

Tide Gate Design, Cooper River / Route 30 Tide Gate, Camden, NJ: Performed preliminary design of the Cooper River tide gate. Flooding due to high tide events in the Delaware River led to the need for a tide gate to control the flooding along Route 30. The tide gate consists of a hydraulically operated bottom-hinged flap gate controlled by hydraulic pistons. The gate was designed to be supported on a reinforced-concrete foundation with concrete abutments at each end to hold the pistons. The concrete foundation is supported by steel-pipe piles. Design included the gate, foundation, abutment structure, and steel sheet-pile cofferdam to allow for construction of the structure in a dry condition.

Fort Trumbull State Park and Piers 4 & 7 Improvements, CTDEP, New London, CT: Responsible for design of waterfront improvements that included reconstructing a timber pier, repairing a timber pile fender system on a concrete pier, installing a floating dock system and installing water and sewer utilities on the piers. This project was performed to convert a retired naval facility into a state park providing public access for fishing from one pier, dock space for visiting ships including Tall Ships and access for water taxis. This project included preparation of contract documents and preparation of permit drawings.

Bulkhead and Site Improvements, Rhode Island State Pier 9, Newport, RI; Rhode Island Department of Environmental Management: Responsible for design and construction management of waterfront renovations that included replacing the bulkhead with a sheet-pile bulkhead with tierods and concrete deadmen. Limited overburden and high bedrock elevations created a need for toe pins in the rock; design of fenders and cleats; and retrofitting the timber piers to accommodate the new bulkhead. Site design consisted of preparing grading and drainage plans including a drainage system to treat runoff prior to discharge into Newport Harbor. This project included preparation of construction and permitting plans, specifications and an estimate for these renovations. Construction management responsibilities included managing a full-time inspector; review and approval of shop drawings and value-engineering changes; negotiating change orders; review and approving contractor payment requests, and monitoring construction progress.

Terminal Expansion, Oak Bluffs Ferry Terminal, Oak Bluffs, Martha's Vineyard, MA: Responsible for preliminary design of the pier expansion and site improvements to improve vehicle and pedestrian access at the Steamship Authorities existing ferry terminal. Design included expansion of the timber deck to provide increased capacity for vehicle access to the ferries and design of a new timber walkway to provide pedestrian access to the ferries. Design included a timber deck supported by steel pipe piles and a concrete cap.

Bulkhead Rehabilitation, Piers 2-3 and Piers 4-5, Port Authority of NY and NJ (PANYNJ), Brooklyn, NY: Responsible for design of repairs to the existing low-level and high-level relieving platforms. Repairs included concrete encasement of timber piles and steel H-piles; repairs to the concrete deck and pile caps; and repairs to a steel sheet-pile bulkhead. This project included preparation of construction plans, specifications, and an estimate for these repairs.

New Hampshire Commercial Fishing Piers Infrastructure Evaluation; Pease Development Authority, Division of Ports and Harbors: Performed an inspection and prepared an evaluation report for the commercial fishing piers located in Seabrook, Hampton, Rye and Portsmouth New Hampshire. An above and below water inspection was performed on the marine facilities consisting of steel sheet pile bulkheads, fixed timber piers and floating docks. Inspection of the upland facilities consisted of parking, site utilities, fuel systems and support buildings. Based on the findings of the inspection the structural capacity of the fixed piers was estimated. The evaluation report provided preliminary design solutions and cost estimates to correct deficiencies that were identified in the inspection.



Jitendra C. Shah, PE

Structural Engineer

CDR MAGUIRE INC.
DEPARTMENT MANAGER -
STRUCTURAL

TECHNICAL EXPERTISE

Building Rehabilitation
Seismic Design

YEARS OF EXPERIENCE

CDR Maguire: Since 1971
Total: Since 1970

EDUCATION

BS/1968/Civil Engineering/Bombay
University
MS/1970/Structural Engineering/West
Virginia University

PROFESSIONAL REGISTRATIONS

CA C048556, CT 17585, DC 9924, MA
35613, ME 9527,
NJ GE33703, NY 065250,
RI 3595

PROFESSIONAL PROFILE

Mr. Shah serves as Structural Department Manager and is responsible for engineering design development, directing the production of design and drafting in the Structural Department, project coordination and specification writing. He has extensive knowledge of computerized structural design and he utilizes state-of-the-art computer software including STRUDL, STAAD III, ADOSS, MAT and AutoCAD in the production of design and drafting.

He has provided structural design services for parking garages, public safety, academic, municipal, industrial, commercial and health facilities, restoration and rehabilitation projects, water/wastewater projects, marine projects and resource recovery facilities.

REPRESENTATIVE PROJECTS

Gainer Dam, Scituate Rhode Island: Provided structural engineering for the rehabilitation of various structures at the Providence Water Supply Board's Scituate, RI facility. The project was a design-build, fast-track effort. The project included rehabilitation of the spillway, meter chamber, blow-off structure, and horseshoe dam.

Diamond Hill Reservoir Dam, Cumberland, RI: Provided structural engineering for the raising of an existing earth embankment structure and its ancillary components an additional 10 feet. The reservoir, one of two serving the City of Pawtucket, Rhode Island, has a storage capacity of 3,600 million gallons with an impoundment area covering 390 acres. The embankment supports a roadway and serves as a divider between the upper and lower reservoirs. The dam, which revealed an inadequacy of the core wall to withstand the raising, included underwater tremie placement of a new concrete core wall and detailed monitoring of toe pore pressures during and after construction to ensure adequacy of the raised embankment with respect to seepage. Embankment fill was manufactured from on-site materials.

Arnold Mill Dam Restoration, Cumberland, RI: Provided structural engineering for the restoration of this 150-foot-long by 24-foot-high spillway, retaining walls, stilling pool and training walls. The expansion joints in the spillway were leaking, and numerous cracks had developed on the spillway surface. Repair methods included removing all deteriorated concrete, injecting chemical grout in the crack, repairing expansion joints, and applying shotcrete on the spillway and wall surfaces. Steel platforms, handrails and ladders in the existing Gatehouse Structure were removed and replaced. A vandal-proof door and hardware were installed. The badly deteriorated blow-off structure was removed and rebuilt with a new cast-in-place concrete structure.



Jitendra C. Shah, PE
Structural Engineer

Long View Reservoir, North Providence, RI: Structural Engineer for the addition of an underground water reservoir abutting the existing reservoir. The 320' x 200' x 27' deep reservoir structure was built all underground with highly organized construction techniques to maintain the stability of the existing reservoir in service.

Rivera and Alava Wharf Restoration, Subic Bay, Philippines: Project Structural Engineer for the restoration of existing wharf. The project included the removal of unsound, deteriorated concrete, sandblasting and extensive replacement of existing reinforcement bars. The pier slab, beams and piles were restored with epoxy injection and new concrete.

Coal Pier Restoration, Montaup Electric Company, Somerset, MA: Project Structural Engineer for the restoration of the existing coal pier. The project included the removal of unsound, deteriorated concrete, sandblasting and replacement of existing reinforcing bars. The pier slab, beams and piles were restored with shotcreting and epoxy injection.

Portland International Marine Terminal, Portland, ME: Structural study of the existing international passenger ferry terminal on Casco Bay. Serious deterioration of timber piles and decking, including displacement of the piles during adjacent construction, threatened the structural integrity of this steel framed building supported on a system of timber and concrete decks and piles. Work included evaluation, long-term repair recommendations and the design of emergency stabilization to permit its safe continuing operation as passenger ferry terminal.

Rivera Wharf Restoration, Subic Bay, Philippines: Project Structural Engineer for the restoration of existing wharf. The project included the removal of unsound, deteriorated concrete, sandblasting and extensive replacement of existing reinforcement bars. The pier slab, beams and piles were restored with epoxy injection and new concrete.

Repairs to Fuel Wharf V-3, Defense Fuel Support Point Naval Supply Center, Pearl Harbor, HI: Structural Engineer for the structural repair of approximately 24,600 SF of reinforced concrete wharf, 550 LF of concrete bulkhead and 110 LF of steel sheet piling. The project required a detailed site inspection and inventory, development of various component repairs and replacement of existing timber fender system.



Robert P. Sims, P.E.

Water Engineer

**CDR MAGUIRE INC.
PROJECT MANAGER**

TECHNICAL EXPERTISE

Water and Wastewater Infrastructure
Program Management
Contract Documentation
Environmental Compliance
Design and Transportation Planning
GIS Applications
Permitting

YEARS OF EXPERIENCE

CDR Maguire: Since 2010
Total: Since 1985

EDUCATION

University of Texas/
B.S., Civil Engineering/1985

PROFESSIONAL REGISTRATIONS

MA 35130, RI 7879, ME 8561

CERTIFICATIONS

Distribution Water System Operator:
Treatment Operator 4T Class 2D –
Massachusetts
Massachusetts Certified Public
Purchasing Official (MCPPO)

PROFESSIONAL ASSOCIATIONS

American Water Works Association,
AC Pipe Standards Committee
New England Water Works
Association
New England Water Environment
Association
Massachusetts Water Works
Association, Past President & Program
Committee Co-chair
Middlesex/Worcester County Water
Association
Rhode Island Water Works Association
Grafton Water District, Board of
Commissioners (1995-2012)

PROFESSIONAL PROFILE

Mr. Sims has over 29 years of experience and has applied his knowledge to many aspects of the study, design and management of civil engineering projects. Water-related assignments have included water supply studies, treatment, distribution, pumping, and storage. In association with wastewater projects, he has been involved with facility plans, pumping stations, collections systems, residuals management, regulatory development, permitting, and with the development of financial assistance. For institutional clients, Mr. Sims has been involved with a variety of projects ranging from chilled water and steam service at universities to navigational aids at airports. Representative projects include:

REPRESENTATIVE PROJECTS

Phase I Dam Inspections: As part of an on-going relationship, Maguire performs dam inspections for the Department of Public Works and the City Engineer. The dams maintained by the DPW are connected to water supply (Cowee Pond and Perley Brook Pond) while the City Engineer is responsible for the other jurisdictional structures (Wright's Reservoir, Mahoney Pond and Wayside Pond). The Office of Dam Safety acting as a part of the Massachusetts Department of Conservation and Recreation manages the reporting for the jurisdictional dams in the State. As part of the Phase I inspection, a list of recommended maintenance and repairs is created along with an estimate of probable construction costs. Gardner, MA.

Phase I Dam Inspections: As part of on-going relationships with multiple dam owner's, Maguire performs Phase I dam inspections in multiple areas and files reports accordingly. Whitinsville, Baldwinville, Southbridge, Templeton, MA

Emergency Action Plan Updates: In 2008, Maguire was contracted to create Emergency Action Plans for three high hazard dams in the City of Gardner. The high hazard designation is a regulatory assignment based on the dimensions of the dam, the size of the impoundment, and the downstream threat level. The Office of Dam Safety acting as a part of the Massachusetts Department of Conservation and Recreation manages the reporting for the jurisdictional dams in the State. Gardner, MA

REPRESENTATIVE WATER PROJECTS

Regulatory Assistance: Managing Engineer for providing assistance to the Town of Oxford Department of Public Works for the development of a response to a rate filing request by a private water company. Project included providing expert testimony at the Department of Public Utilities. Oxford, MA.

Main Street Water Main Replacement: Managing Engineer for design, permitting, bidding, and construction-related services for 5,300 linear feet of 12-inch water main. Project included work in Route 140 which is a road maintained by the Massachusetts Department of Transportation. Upton, MA.

Mishnock Water Treatment Plant Site Design: Managing Engineer for the design of the civil site drawings for a 3 mgd water treatment plant for the Kent County Water Authority. Wetland delineation was performed for the site as well as permitting through RIDEM, RIDOH and the Coventry Planning Board. Unique site design features included the presence of a Rare and Endangered species, high groundwater, an infiltration lagoon, and a tight-tank for building wastewater. The client also added restraints for landscaping. Coventry, RI.

Water System Master Plan: Managing Engineer for the compilation of a water system



Robert P. Sims, P.E. *Water Engineer*

master plan for the Town's water system. The project utilizes build-out data from historic and local sources. System performance improvements were enhanced with the use of the hydraulic model. The final plan included a prioritized plan for continued improvement of the reliability of the system. Southborough, MA.

Spring Street Well Evaluation Study - Ashland Department of Public Works: Evaluation of a gravel-packed well completed in 1980 and never put into service due to TCE contamination. The well is currently being permitted as a new source to supplement existing sources. Concentration of organics including sulfates, iron, manganese and hardness will be key components of the development of a treatment option. Ashland, MA.

Water Main Procurement Documents: Managing Engineer for the development and bidding of a procurement contract for water main installation. The intent of the project was to allow the town to bid general services for completing small dead-end connections as monies became available without developing extensive design documents for every small project. Cumberland, RI

City of Gardner Water Audit: Project Manager for the management of a partially funded DEP Water Conservation Grant. The project included gathering information on the consumption, metering calibration and unaccounted for water to determine ways that the City could reduce overall water consumption and reduce losses within the system and increase revenues through more accurate representations of water use. Gardner, MA.

Emergency Connection Plan: Managing Engineer for the evaluation of alternatives for providing an emergency water supply. The project involved a hydraulic analysis of the Town and the surrounding communities for available supply, existing pressure, and water quality parameters. Ashland, MA.

Vulnerability Assessments: Performed or provided assistance in the completion of Vulnerability Assessments for several medium and small communities in New England. Federal law in the Bioterrorism Act of 2002 mandated completion of a Vulnerability Assessment for public water suppliers serving more than 3,300 people. Ashland, Hopkinton, Westborough, Swansea, Westfield, MA, and Newport, RI.

Emergency Response Plan Updates: These projects have incorporated information from the Vulnerability Assessment and provided a basis for the update of the existing or creation of a new Emergency Response Plan. Federal law in the Bioterrorism Act of 2002 mandated completion of an Emergency Response Plan Update six months after the submittal of the Vulnerability Assessment. Ashland, Hopkinton, Westborough, Swansea, Westfield, MA and Newport RI.

City of Gardner Hydraulic Modeling Maintenance: Project Manager for the continued maintenance of the City's hydraulic water model. The on-going project also includes periodic reporting and reporting of water quality concerns and determination of available fire flows for proposed developments. The model is capable of tracking contaminants within the system as well as determining the efficiency of the flushing program.. Gardner, MA.

Zambarano Water Tank Rehabilitation: Managing Engineer for the design, bidding and construction administration for the rehabilitation of the water storage facility at the Eleanor Slater Hospital – Zambarano Campus. Project included permitting of remediation of lead-impacted soil, design of tank repairs and design of temporary water storage system to be utilized during times when the tank is off-line. Coordination was required with the existing water treatment facility and local fire department to provide sufficient storage for potable and fire fighting services, Burrillville, RI

Hydraulic Model Development: Managing Engineer for the calibration and development of a hydraulic model for the Town's water system. The project included meetings with the Town to accurately represent the system, meeting with the Town Planner to accurately depict future conditions, and a review of water system pumping and use records. Hydrant flow tests were also performed throughout the system to calibrate the information in the model. Southborough, MA.



David M. Nacci, PE

Geotechnical Engineering

CDR MAGUIRE INC.
PRINCIPAL GEOTECHNICAL ENGINEER

TECHNICAL EXPERTISE

Geotechnical Subsurface Exploration;
Laboratory Soil/Rock Testing;
Instrumentation Programs,
Geotechnical Data Analyses;
Design and Report Preparation;
Geotechnical-related Construction
Specifications and Cost Estimates;
Foundation Element Testing;
Geotechnical-related aspects of
Construction: Instrumentation,
Monitoring, and Problem Solving

YEARS OF EXPERIENCE

CDR Maguire: Since 1980
Total: Since 1978

EDUCATION

BS/1972/Civil/
Environmental Engineering/
University of Rhode Island;
MS/1980/Civil
Engineering (Geotechnical)/
University of Rhode Island

PROFESSIONAL REGISTRATION

FL-46098, MA-35713, RI-5437

CERTIFICATES

40-Hr HazWoper – Current;
10-Hr OSHA Construction –RI;
Amtrak – On-Track
Safety for Contractors

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers
and Rhode Island Section;
Boston Society of Civil Engineers;
Deep Foundations Institute;
ADSC International
Association of Foundation Drilling;
Association of Dam Safety Officials

PROFESSIONAL PROFILE

As Principal Geotechnical Engineer with CDR Maguire Inc., Mr. Nacci is responsible for providing geotechnical and related environmental, site/civil, and marine: exploration, testing, analysis, design, construction drawing detail/specification development and monitoring services required for solely for buildings, environmental work, pipelines, solid waste handling, disposal and resource recovery systems, power generation and power station pollution control facilities, marine waterfront development, groundwater studies, and transportation facilities including airport expansion, bridges, culverts, and highways.

REPRESENTATIVE PROJECTS

Simonds and Goodfellow Pond Dam Improvements, Leominster, MA: Provided geotechnical project design, construction documents and monitoring for this Phase II dam assessment and modification. Project components included: subsurface exploration and laboratory soil/rock testing programs, data analysis, dam static and seismic stability assessment and modification design. Dam modifications included: dam internal blanket and chimney drains, down-stream slope flattening and extension, new emergency draw-down pipeline system, new ogee and stair-step spillways and channel containment walls, expanded and redesigned emergency spillway, and dam height raising by three feet.

Barrett Park Dam, Leominster Massachusetts: Provided geotechnical project facets including: subsurface exploration, stability assessment for both static and seismic conditions, redesign, and construction related services for this Phase II dam assessment and redesign to mitigate observed seepage and potential instability. Seepage solutions considered included steel and synthetic material sheet piling, grout curtains and impervious blankets.

Fox Point Hurricane Barrier Certification, Providence, RI: Provided the geotechnical input, review and assessment of original design calculations and drawings, to the CDR Maguire team tasked with certifying this rip-rapped embankment and reinforced concrete hurricane barrier structure for the City of Providence as a condition of barrier transfer of ownership to the USACE.

Gainer Dam, Scituate Rhode Island: Provided geotechnical and site related design and construction document development services for the rehabilitation of various structures at the Providence Water Supply Board's Scituate, RI facility. The project was a design-build, fast-track effort. The project included rehabilitation of the spillway, meter chamber, blow-off structure, and horseshoe dam.

Sea Wall Replacement, Newport, RI: Provided the geotechnical related subsurface exploration program, analyses, design, and on-call construction monitoring for this \$450,000, 500 foot long circa 1930's section of Ocean Avenue sea wall replacement. The solution deviated from the typical reinforced concrete sea wall approach, to involve large inter-locking precast concrete blocks and angular crushed stone tied together and reinforced by geosynthetic grid layerings.

Berth 3 Rehabilitation, Port of Providence, RI: Provided the geotechnical related subsurface investigation program, analyses, design, construction document preparation assistance, and construction monitoring for the “knitting together” and underpinning of approximately 600 LF of 100 year old granite block sea wall by 1,200 “root piles” (six to eight inch diameter micropiles) in anticipation of future berth dredging.

Oak Bluffs Ferry Terminal Redesign and Reconstruction, Martha’s Vineyard, MA: Provided the project’s geotechnical subsurface investigation and laboratory soil testing programs, analyses, design, construction specification development and construction monitoring for this \$15M redesign and reconstruction of this 100 year old ferry terminal for the Martha’s Vineyard and Nantucket Steamship Authority. The project’s construction spanned three seasons and utilized “spin fin” steel pipe piles for the support of new dolphins, pedestrian walkways, transfer bridge, and pier structure.

Providence and Worcester Railroad Container Port, East Providence, RI: Involved in the initial subsurface investigation and laboratory soil testing programs, and conceptual geotechnical design, construction cost estimating and constructability assessment for this proposed \$500M container terminal in upper Narragansett Bay. The conceptual design involved the staged construction of a perimeter earth embankment extending into Narragansett Bay, in excess of 1 million cubic yards of imported structural fill over a 20-acre former bay area, an 800-foot pile supported deep water terminal deck and associated deep water dredging. Existing subsurface conditions presented up to 40 feet of soft organic sea bed soils.

India Point Park Improvements, Providence, RI: Provided the project’s geotechnical subsurface investigation, analyses, design, construction specification development and construction monitoring for approximately one mile of Narragansett Bay shoreline protection and improvements. Included in the design were wood pile supported ferry and municipal piers.

Port of New Hampshire Expansion, Portsmouth, NH: Provided the project’s geotechnical subsurface investigation and laboratory soil testing programs, analyses, design, and reporting for this \$15M port expansion project at the mouth of the Piscataqua River. Design elements included extensive structural fill placement over soft organic soils, cellular cofferdams, a trestle bridge, and two 500 foot long pile supported cargo handling decks with adjacent river bottom rock blasting and dredging.

Submarine Drydock and Warehouse Expansion, Submarine Base, Pearl Harbor, HI: Lead geotechnical engineer involved in the U.S. Navy’s “Functional Analysis” conceptual design formulation procedure. Provided preliminary subsurface investigations, analyses, foundation concepts, construction cost estimation and reporting, and value engineering concepts for this 900 foot long drydock, mooring system, pier access roadway ramps, and service utilities project. The project also involved the demolition of an existing supply-side warehouse, and the design and construction of a new mat supported 40,000 SF warehouse structure. The project’s construction cost was estimated at \$30M.

Seafood Cooperative Pier Rehabilitation, New Bedford, MA: Improvements and rehabilitation of the New Bedford Seafood Cooperative Pier consisting of the design of a steel sheet pile bulkhead with rock anchor tiebacks and a 3,000 SF pile supported concrete deck. Shallow bedrock required toe pin restraint for the bulkhead and rock socketed deck support piles. The Seafood Coop provides services to the New Bedford Fishing Industry. All construction was planned so that the existing pier would remain in continuous operation during construction.



Jane D. Witherell, PE, LEP, CHMM

Environmental Engineer

CDR MAGUIRE INC.
PRINCIPAL ENGINEER

TECHNICAL EXPERTISE

Management of site investigations
Compliance/Regulatory Requirements
Permitting and Remedial
Management plans
Expert Testimony, Compliance Audits
Licensed Environmental Professional

YEARS OF EXPERIENCE

CDR Maguire: Since 1999
Total: Since 1985

EDUCATION

BS/1984/ Civil Engineering University
of Connecticut

PROFESSIONAL REGISTRATIONS

Professional Engineer
CT 16502

Licensed Environmental Professional
276

Certified Hazardous Materials
Manager 14770

OSHA Hazardous Waste Site Training,
40 hours
8 Hour OSHA refresher

PROFESSIONAL PROFILE

Ms. Witherell is a Principal Engineer and Licensed Environmental Professional (LEP) who has provided environmental management and support on numerous environmental projects in Connecticut, Rhode Island, Massachusetts and New Jersey. Her responsibilities have included management/support of multiple-phase site investigations, remediation/closure projects, compliance/regulatory assistance, permit preparation and compliance for numerous environmental projects. She is a registered Professional Engineer (PE) in the State of Connecticut, a Licensed Environmental Professional (LEP) and Certified Hazardous Materials Manager (CHMM).

REPRESENTATIVE PROJECTS

Reconstruction of Post Office/Town Farm Road, Enfield, Connecticut, State Project No. 48-186: Conducted the hydraulic analysis and prepared the Storm Sewer Analysis and Report for the proposed storm sewer system as part of the Reconstruction of Post Office/Town Farm Road in Enfield, CT. The proposed project includes the replacement/upgrade of 3 existing storm sewer systems and the installation of 3 new subsurface storm sewer systems along the roadway within the project limits. The objective of the project is to reconstruct and improve safety along the roadway and upgrade the storm sewer systems to eliminate drainage and erosion problems. Three cross culverts will also be replaced as part of this project. Water quality best managements practices have been incorporated into the design which, include both structural and non-structural elements. The ConnDOT Drainage Manual, Connecticut Guidelines for Soil Erosion and Sediment Control, and CTDEP Stormwater Quality Manual were used as guidelines for the drainage design systems.

Scour Mitigation for Pleasant Street Bridge (Bridge No. 04745) Over the Yantic River, Norwich, CT, State Project No. 103-258: Conducted hydraulic analyses and prepared the hydraulic report for State Project No. 103-258, Scour Mitigation of Pleasant Street Bridge over the Yantic River in Norwich, CT at part of the Federal Local Bridge Program. Prepared and submitted environmental permit applications for the project including: Local Inland Wetlands, CTDEP Flood Management Certification, Stream Channel Encroachment Line, and 401 Water Quality Certification and Army Corps of Engineers Section 404 Permit.

Rehabilitation of SR 536 (Crooked Street) Over the Quinnipiac River, Bridge No. 06500, Plainville, Connecticut, State Project No. 0109-0162: Conducted hydraulic analyses and prepared the Hydraulic Analysis Report for State Project No. 0109-0162, Rehabilitation of SR536 (Crooked Street) over Quinnipiac River, Bridge No. 06500 in Plainville, CT as part of the List 18 Bridge Rehabilitation Program. The hydraulic analyses consisting of the existing, proposed and natural conditions models for the subject culvert, as well as an analysis of the temporary hydraulic facility which will be used during construction. The hydraulic analyses were conducted in accordance with the guidelines established in the ConnDOT Drainage Manual, as well as the CTDEP Hydraulic Analysis Guidance Document.

State of Connecticut Department of Transportation: Worked on a variety of projects including environmental tasks associated with highway, bridge and facility construction projects; assessments and remediation of former disposal sites at ConnDOT maintenance garages; environmental audits; environmental



Jane D. Witherell, PE, LEP, CHMM
Environmental Engineer

permitting and compliance; and environmental cost evaluations and expert testimony as a part of site takings in conjunction with highway construction projects.

- Provided LEP oversight/management of the numerous Task 210 Subsurface Site Investigation Reports (SSIRs) conducted in support of ConnDOT's New Haven-Hartford-Springfield (NHHS) High Speed Rail Service from New Haven to Springfield. The limits for the Task 210 SSIRs extended from Milepost 1.0 (MP-1.0) in New Haven to MP-49.15 in Windsor Locks within the existing Amtrak Right-of-Way (ROW). Proposed Construction activities for the NHHS High Speed Rail service will include realignment of existing track; track installation, rail infrastructure including signalization systems and switches, repair, modification, or replacement of existing bridge and culvert structures, site preparation and demolition of existing structures. The Task 210 SSIRs were conducted in areas of anticipated construction activities along the active rail corridor. Based on the results of the Task 210 SSIRs Areas of Environmental Concern (AOECs) were identified within the project corridor in anticipation of the preparation of environmental specifications, plans and estimate for inclusion in the Contract Documents.
- Prepared "Environmental Condition Assessment Forms" (ECAFs) for various ConnDOT former disposal areas located at maintenance garages throughout the state. Conducted environmental investigations at these facilities to determine compliance with the Remediation Standard Regulations (RSRs) and facilitate LEP verification of the site under the "Voluntary Remediation Program." Prepared environmental clean-up work plans and directed remedial activities at two (2) facilities to achieve compliance with the RSRs.
- Provided expert witness testimony for two (2) ConnDOT transportation projects with regard to environmental issues on parcels involved in Rights-of-Way acquisitions. Testimony was given with regard to the environmental conditions of the parcels involved in the litigation proceedings, clean-up standards, regulatory requirements and estimated remedial costs to achieve compliance with State regulations and standards.
- Conducted environmental investigations in support of numerous ConnDOT transportation projects throughout Connecticut, including the determination of compliance with CTDEEP Remediation Standard Regulations and required remedial management to be conducted during construction to attain compliance.
- Conducted compliance audits at numerous ConnDOT facilities throughout the State of Connecticut, including a mass transit facility, to verify compliance with applicable federal, state and local environmental regulations. Determined required remedial measures and construction activities to attain compliance. Prepared Storm water Pollution Prevention Plans (SWPPP) for facilities following audits including specifications for facility modifications and Best Management Practices (BMPs) to ensure compliance with storm water regulations.