



PARE
CORPORATION



Pare is pleased to share these updates with you!



ACEC ENGINEERING EXCELLENCE AWARDS

This spring, the Rhode Island and Massachusetts Chapters of the American Council of Engineering Companies (ACEC) recognized projects completed by Pare for demonstrating a high degree of merit and ingenuity, and for contributing to the infrastructure of the community.

The Wastewater Treatment Facility Levee Design for the Warwick, RI Sewer Authority received the first place Gold Anchor Award for a Project with Construction Costs of Less than \$10M from ACEC-RI. This sewer treatment plant which serves more than 60,000 residents and thousands of businesses was inundated by the historic floods of 2010, causing a crippling shut down and \$14M in damages. Pare designed and implemented a \$3.5M project

that raised the height of the protective levee by 5.5 feet. The project, completed within budget and ahead of schedule, will protect the wastewater treatment facility from a 500-year storm event.

The design for the replacement of Central Bridge No. 182 (renamed Veteran's Memorial Bridge) for the Rhode Island Department of Transportation received the second place Blue Ribbon Hope Award for a project with Construction Costs of More than \$10M from ACEC- RI and a Bronze Engineering Excellence Award from ACEC/MA. The project replaced the structurally deficient and functionally obsolete concrete bridge that was originally built in 1939. Pare widened the new bridge by 21 feet to accommodate a third travel lane and for bicycle & pedestrian improvements, and raised the profile to increase freeboard for boat traffic. The design required sensitivity to environmental issues including protecting the endangered Northern Diamondback Terrapin turtle, installing a 2,600-SF bioretention pond, restoring 2,400 SF of wetland area, and removing 2,600 SF of pavement to increase rainfall infiltration. Accelerated Bridge Construction (ABC) techniques were implemented to limit the impact of construction on the public.

The Stiles Reservoir Dam Reconstruction in Leicester, MA also received a Bronze Engineering Excellence Award from ACEC/MA. Pare developed a rehabilitation program to bring the 150-year-old Stiles Reservoir Dam into compliance with current dam safety regulations. To return the reservoir to its normal pool elevation and restore the recreational functions of the lake, a full-depth excavation of the 40-foot high dam was completed to replace the outlet, a sheet pile cutoff wall and an internal drainage system were installed, and the top of the dam was raised. These efforts corrected the significant seepage and leakage issues through the embankment. This \$3.2M project demonstrates how a dam can be upgraded to modern safety and resiliency standards while maintaining adjacent resource areas and retaining the aesthetic character of the original structure.

Congratulations to the many Pare managers and staff who worked on these projects, our dedicated design and construction partners, and our conscientious clients!



9-11 MEMORIAL FIELD SITE IMPROVEMENTS

Pare designed a new cost-effective synthetic turf field and drainage system for the 9-11 Memorial Field in Southborough, MA. Improvements at the field included full replacement of the existing synthetic turf and its subbase, modifications to the existing drainage system, resurfacing of a pedestrian path, and environmental permitting. The

design improves groundwater recharge and decreases peak discharge rates at the site while alleviating the previous standing water issues on the field. Pare's scope of work included permitting documents, construction observation, and preparing the Certificate of Compliance. Construction was completed on budget and ahead of schedule!

EAPs FOR SIGNIFICANT HAZARD POTENTIAL DAMS

Pare recently completed the preparation of emergency action plans (EAPs) for 32 state-owned dams for the MADCR Office of Dam Safety. Pare's plans employed the simplified methodologies per the 2017 revisions to the Dam Safety Regulations. These updated regulations will improve emergency preparation for all significant hazard potential dams in addition to those currently required for high hazard potential dams. As such, the owners of all significant hazard potential dams will soon be receiving orders from the Office of Dam Safety to prepare EAPs for their dams. Pare's work helps both the Office of Dam Safety and the individual dam owners provide for the public safety.



EAST COAST GREENWAY NEW ENGLAND BIKE-WALK SUMMIT

Pare's John Shevlin and Amy Archer presented a 30-year retrospective of the East Bay Bike Path at the East Coast Greenway New England Bike-Walk Summit. This 14.5-mile path was the first bicycle facility undertaken in the State of Rhode Island and

one of the first in the Northeast. In the presentation, Pare provided a retrospective to evaluate the success of the planning, outreach and design elements. You can use these hyperlinks to [view the presentation](#) or [download a pdf copy](#).

ROGER WILLIAMS PARK ZOO SOAR & EXPLORE ADVENTURE PARK

It is always great to see the public enjoying the efforts of Pare's engineering work in new ways. Pare completed the site design, civil engineering, permitting, and green stormwater design for the Roger Williams Park Zoo's Soar and Explore Adventure Park. This area features a family-friendly train ride, a track for camel rides, a new concession stand/restroom building, and a seated "Soaring Eagle" zip line ride that brings riders 115 feet above the zoo. These features are part of a 20-year zoo master plan with a strong environmental "Green" emphasis.





PROVIDING A CREATIVE SOLUTION FOR ROOF LOADS

Pare recently worked on a project for a confidential pharmaceutical client that required a creative engineering solution to a roof-loading problem. The client wanted to renovate an existing single-story building to house new manufacturing space that would require the installation of multiple, very large mechanical units on the roof. A total of 10 units were required, ranging from 8,500 lbs. to as much as 20,000 lbs. The building's roof framing had only been designed for "typical" roof loads,

and could not support units of this size without significant and costly retrofits/reinforcements.

The solution designed and developed by Pare was to construct a new structural steel platform, located above the existing roof structure, to support the new units. This equipment platform was sized to house all 10 units and provide adequate access space around them. The platform framing was supported by a series of tubular steel columns located so they could be buried within walls of the renovated spaces below. The columns passed through the existing roof surface to the ground floor and were placed on new footings cut into the existing ground floor slab. The platform framing and new columns were also designed to be rigidly attached to one another to provide lateral-load stability (i.e. wind and earthquake loads), thereby avoiding the need for bracing into the building.

Construction of this platform allowed the equipment to be installed where needed without imparting added loads to the existing building that would have resulted in complicated and costly retrofits.

SUPPORTING COMMUNITIES WITH THE MASSACHUSETTS EOEEA GRANT PROGRAM

Since the fund was established in 2013, Pare has successfully assisted an average of two Massachusetts communities per year to develop their Dams and Seawalls grant applications for the Executive Office of Energy & Environmental Affairs. One of the communities, the City of Gloucester is actively applying this funding to renovate and repair Haskell Dam, which is a 43-foot high and 480-foot long earthen embankment dam with a concrete support wall and spillway. The work will bring the 125-year-old dam into compliance with current safety regulations. As the dam is a significant component of the community's water supply system, the project demonstrates the impact that thoughtful planning and investment can have in improving the critical infrastructure.





ECONOMIC DEVELOPMENT AND PLANNING

Pare is assisting the Quonset Development Corporation with infrastructure improvements to Roger Williams Way and several intersecting streets as part of the expansion of the Electric Boat Facilities, owned by General Dynamics. This expansion will enlarge Electric Boat's existing

facilities by approximately 600,000 square feet for the manufacturing of the U.S. Department of Defense's new Columbia Class Submarines. Pare is currently designing water, sanitary sewer, gas, electric and pavement improvements that will allow Electric Boat to transport submarine segments over the roadways to their shipping dock. The first construction contract along Roger Williams Way is expected to begin in August of 2018 with completion of key infrastructure elements to allow for the opening of the new Electric Boat facilities by May, 2019. This new facility will add nearly 3,000 new jobs to the Quonset Business Park and the growing Rhode Island economy.

BUCKLIN AND CONLEY STADIUM PROJECT KICK-OFF!

Pare, partnering with Traverse Landscape Architects, was recently hired by the City of Providence Department of Parks and Recreation to design athletic field improvements at Bucklin Field and the Conley Stadium / Mount Pleasant High School athletic fields in Providence, RI. Pare will

be designing synthetic turf fields with a supporting drainage system in both locations. The project also includes designing improvements to the natural turf fields, tennis & basketball courts, and the track & field arena at Mount Pleasant High School. These fields are vital recreational areas to the ethnically, culturally and racially diverse urban neighborhoods which surround them. Although we are only at the beginning of the design process, we are already looking forward to seeing the impact of the improvements on these vibrant urban communities.



ENLIGHTENED BITES

Pare's Rising Professionals Committee continues to organize lively "Enlightened Bites" presentations. Most recently Kevin Viveiros, Vice President and Bridge Group Leader, shared his insights and career experiences. As Kevin celebrated his 30-year anniversary at Pare in May, we were fortunate to learn about his passion for

railroad & bridge engineering and his experiences as a Structural Specialist for the Rhode Island Urban Search & Rescue Task Force.

RECENT WINS

- RIDOT On-Call Railroad Consulting, Statewide, RI
- Massachusetts Executive Office of Health & Human Services, Shattuck Hospital Campus Planning, Boston, MA
- New Kennedy Middle School, Natick, MA
- New Amesbury Elementary School, Amesbury, MA
- Allen Street Reconstruction Design, Braintree, MA
- RIDOT Aquidneck Avenue Pavement Improvements, Middletown, RI
- Stearns Mill Pond Dam Repairs Design, Sudbury, MA
- Zambarano Hospital Water Tank Inspection and Cleaning, Burrillville, RI
- Glenbridge Avenue Bridge Superstructure Replacement Design, Providence RI
- Manville Bridge No.396 Superstructure Replacement Design, Lincoln & Cumberland, RI
- Subconsultant for signal support structures for Kennedy Plaza, Providence, RI
- United States Department of Agriculture (USDA) - Natural Resources Conservation Service (NRCS) A/E IDIQ Design Services On-Call Contract for the Northeast

COMPLETED PROJECTS

- RI Attorney General's Office New Customer Service Center, Cranston, RI
- Suez Water's New Sherman Elevated Water Tank, South Kingstown, RI
- Moderna Therapeutics New Manufacturing Facility, Norwood, MA
- Moses Brown Squash Court Center, Providence, RI
- Coal Pocket Pier, New Bedford, MA

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