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Award-winning Bridgeport waterfront project provides unique solution for developers and community

RACE Coastal Engineering, along with Bridgeport Landing Development (Project Owner) and GeoDesign Incorporated (Geotechnical Engineer), have been awarded the American Council of Engineering Companies (ACEC) 2017 "Excellence in Engineering" award at the state-level and a "National Recognition Award" on the national stage for its innovative approach to the *Steelpointe Harbor Waterfront Improvement Project*. John Roberge, Tim DeBartolomeo and Matthew Rakowski received the National Award on behalf of **RACE** at the awards gala in Washington, D.C. on April 25, 2017.

The Steelpointe Harbor Waterfront Improvement Project includes a 1,500 foot steel seawall ("bulkhead"). The purpose of the bulkhead is to stabilize the shoreline, protect it from further erosion, provide protection against frequent flooding, and contain upland soil contamination. The structure is key to enabling all future development at this site. The bulkhead is designed to follow the curvature of the future development and waterfront public access



harbor walk. Complications associated with this geometric design were met with innovative and pragmatic solutions by the Team. These included a unique cast-in-place concrete structural system that was fully customizable in the field to accommodate the design. Devin Santa, President of RACE Coastal Engineering says, "The curving bulkhead design created significant technical challenges. Together with GeoDesign, Inc., we developed a solution to accommodate this design in a cost-effective and technically sound manner. As engineers, it is not often we are able to brainstorm such unique designs with a willing owner as a participant. As a practicing engineer and lifelong resident of the area, I am thrilled to be a part of the revitalization of the City."

In the experience of the Owner, Team, and Peer review consultant, this structural design element had not been utilized before in such an application. In addition, the team developed a rigorous testing program to allow for the existing unclassified fill material onsite to remain as structural material. This testing and verification process saved at least \$400,000 and reduced environmental impacts by limiting material haulage and placement.





The project will provide future waterfront development of this valuable site which will allow for the construction, starting in 2017, of a new hotel, luxury apartments, and other commercial mixed use buildings to revitalize this underutilized area. The project will also include dredging for construction of a 200-slip marina.

The City of Bridgeport, Connecticut has a rich waterfront history including shipbuilding, commercial/industrial terminals, power generation facilities, and shell-fishing operations. However, the declining industry within the city and region has required that Bridgeport rethink its identity as a waterfront municipality. A keystone of this rethinking is the transition of this former environmentally contaminated power plant site into a new urban mixed-use development.

The City has sought to have the 52-acre vacant peninsula and underutilized waterfront developed for the past 20 years. However, the task of restoring the shoreline from its prior state of advanced deterioration daunted numerous potential developers from taking on this project until the Owner, Bridgeport Landing Development, LLC ("BLD"), began work. Bridgeport officials have for years promoted development at Steelpointe foremost on the basis of job creation for city residents. "Many of the jobs are going to Bridgeporters, which is something I've insisted on," stated former mayor Bill Finch in August 2016.

BLD, retained the engineering Team of RACE Coastal Engineering ("RACE") and GeoDesign, Inc. ("GeoDesign") to perform the engineering design. RACE performed the design, prepared the Contract Documents and performing Construction Administration Services. GeoDesign performed the subsurface investigations, determination of soil properties, and peer review of the RACE design.

