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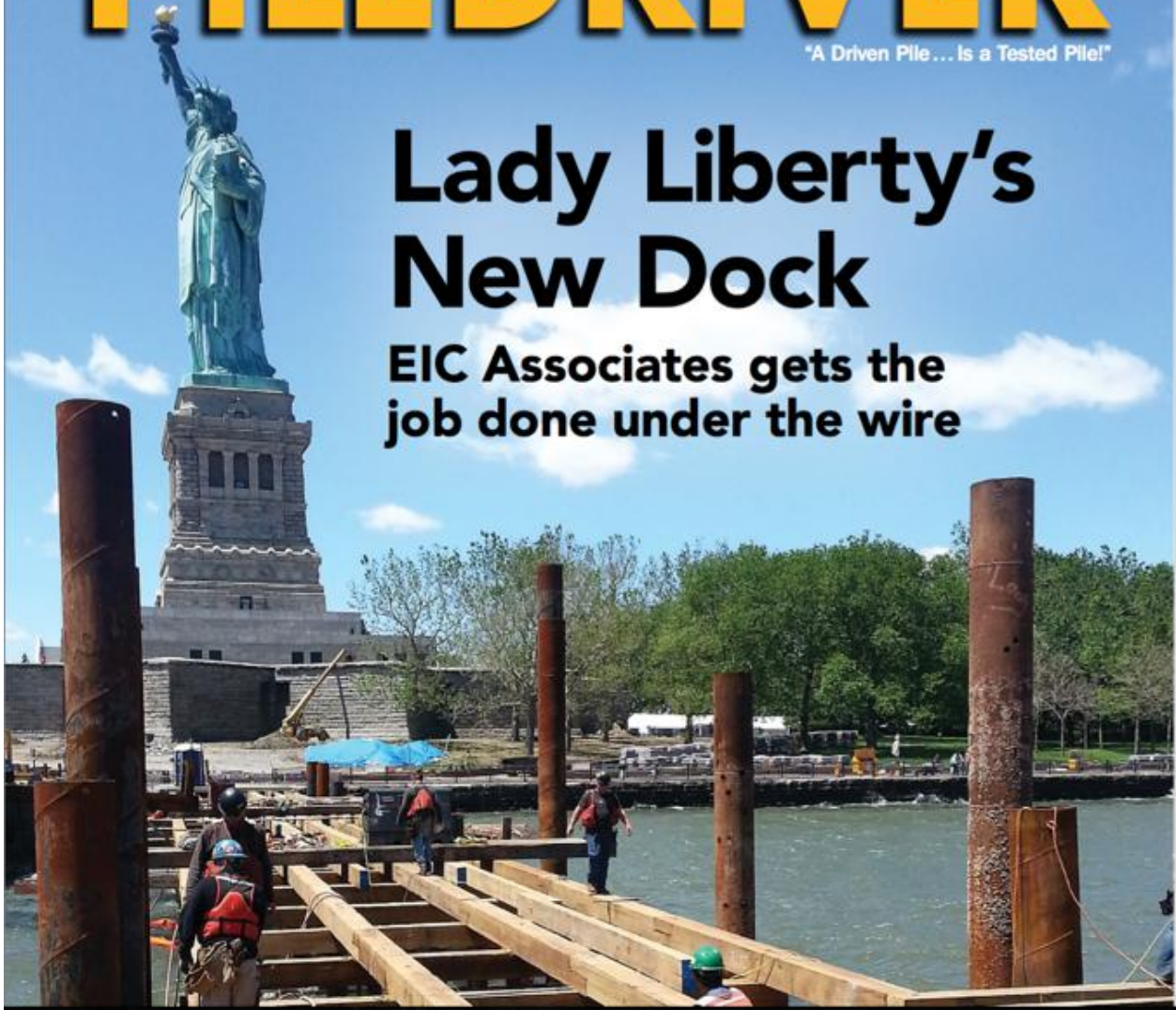
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# PILEDRIVER

"A Driven Pile... Is a Tested Pile!"

## Lady Liberty's New Dock

**EIC Associates gets the  
job done under the wire**



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# EIC Associates gets the job done under the wire

By Heather Hudson

Every company has had one of “those” jobs. The one with the impossibly short time frame. The one that requires materials from far-flung corners of the earth. The one that’s so high profile that it could make or break your reputation. The one that is riddled with challenge after unthinkable challenge.

The marine division of EIC Associates Inc., a heavy construction firm based in Springfield, N.J., thrives on these kinds of jobs.

Case in point: while other companies balked at replacing the service dock on Liberty Island in seven short weeks, EIC dug in.

In fact, it was a job that seemed tailor made for outrageously ambitious, professional adrenalin-seekers Ray Sciahetano, vice president of EIC’s marine division, and Andre S. Ameer, project engineer.

“Everybody was apprehensive on even committing to a price on it. The difficulty of the job in relation to the time frame and the materials required to construct the project scared people,” said Sciahetano. “But it’s the Statue of Liberty. It would look great on our company resume... it’s one of those jobs that, if you can make it happen, proves you can do just about anything.”

## The backstory

In October 2012, Hurricane Sandy raged onto the shores of the U.S. northeast coast. Liberty Island, home to the Statue of Liberty, was hit hard. The 12-acre island is normally protected from extreme weather by the New York Harbor, but it was no match for Sandy. All of the docks, promenade and ancillary structures around the island were heavily damaged.

EIC was contracted in April 2013 to replace the 7,000 sq. ft. service dock on Liberty Island by constructing a new 250-foot by 20-foot pier stem and 80-foot by 25-foot T-platform and fender system.

The catch? It needed to be ready for the grand re-opening of the island on July 4, 2013.

The project was comprised of removing more than 200 existing timber piles from the previous service dock and building a new service dock pier, including installing 193 fiberglass piles with concrete fill, greenheart timber framing and treated timber decking.

The project also included the installation of a temporary docking location for Statue Cruises. This consisted of re-purposing and re-conditioning a 300-foot by 40-foot car float to accom-



modate 150-foot and 120-foot Tourist Cruise Boats carrying approximately 3,500 visitors per hour.

### Challenge 1 – Timing

"The schedule of this job was so intense, it made us stay so focused on the end game that we didn't have time to even worry about it not working out," said Sciahetano.

"We worked in stages. Simultaneously, we had rigs doing pile driving and pouring concrete while pile caps were going in and stringers and girders, cross-bracing and decking were all happening."

Crews would greedily snatch up the material that was shipped each day and worked frantically until it ran out. "At one point we had one end [of the dock] 100 percent complete while we were still driving piles at the other end."

Sciahetano says staging this way built momentum and synergy. Working seven days a week, 14 hours a day, with a maximum of five crews got the job done.

### Challenge 2 – Materials

Only greenheart timber from the wilds of South America would do for the framing and decking. However, it typically takes eight to 14 weeks' lead time.

"We pounded the pavement, made every call we could to every supplier we could. At one point, we were even looking to rent a cargo ship and get the materials ourselves," said Sciahetano.

In the end, one of their suppliers found overstock from a competitor.

"You have to make it happen, whatever it takes," said Ameer.

Other materials included composite piles filled with concrete as an alternative to traditional piles in order to increase longevity of the materials. Lee Composites supplied Creative Pultrusions' SUPERPILE FRP pipe piles to EIC to serve as bearing piles for the renovated service dock.

Using the pultrusion process and a polyurethane resin system, Creative Pultrusions produced 198 FRP pipe piles, each 48 feet long, 12 inches wide and a half-inch thick and fitted with

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*– Ray Sciahetano, Vice President, Marine Division, EIC Associates Inc.*





a steel pointed driving head to help drive them into the ground while keeping soil out of the inside of the pile so it could later be filled with concrete. An ICE I-8v2 diesel hammer was used to install the pipes.

"We were apprehensive about the original design of the piling, which called for a 0.375-inch wall that would be able to withstand impacting and installation without getting damaged or shattering. We proposed half-inch pile and 12-inch diameter that was structurally sufficient to stand on its own even without concrete fill," said Sciahetano.

"It was a smaller pile but we were more confident that the thicker pile wall would be more durable and it was accepted. It was our first time driving fiberglass piles and they went in perfectly."

During production, they used a steel falsework frame template for installing the pile grid managed a production of 12 to 18 piles/shift.

### Challenge 3 – Work on water

Let's not forget that Liberty Island is actually an island. This meant everything had to be completely marine-based. EIC couldn't store

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