

This department will cover member projects in process or just completed from ADSC Contractors, Associates and Technical Affiliates. As the title states it is "Not the Hole Story" but short stories providing **Foundation Drilling** readers an example of the projects in the industry. Publishing your project here is a complimentary member-only benefit. All member companies are invited to contribute to this department. To submit contact **Foundation Drilling** Managing Editor, Sherry Epperson at sepperson48@gmail.com. (Managing Editor)

Walking on Water

By Adam Running, Assistant Project Manager, Malcolm Drilling Company

Working to construct a bridge can be difficult, and this bridge was no different. The new two mile section of State Route 520 is being constructed next to the active highway and acts as the west connection for the floating bridge. This section is 90% over water and consists of 99 drilled shafts varying from 8'-12' in diameter and up to 175' deep.



Questions evolved from how to drill the shafts to how we would be able to access the shafts and ensure that the environment below wasn't impacted by the construction operations. Steel pipe piles and 12"x12" timber with finger sections that projected off towards each shaft were used to support cranes, drill rigs and provide access for spoils hauling and concrete and extended over 2,000 lin-



feet. The trestle that was constructed covered the structural needs to access the work areas but didn't account for containment.

A containment area was built at each shaft location using multiple layers of a fiber reinforced plastic along with a spoils bin for direct spin off and spoils hauling. Constant monitoring, inspection, and maintenance were needed to ensure the operations remained contained. Spoils would be hauled away in sealed trucks with concrete moving in shortly after.

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Drilling slurry was also utilized on this project and needed to be piped using high density polyethylene (HDPE) piping and was wrapped with secondary containment in high traffic areas. A group of plumbed baker tanks followed the operations down the trestle allowing for storage, batching and remixing.

With the trestle shafts over 35% complete MDCI shifted operations to complete shafts off of barges in deeper waters. These shafts were very unique in that the drilling methods were shifted to use of a crane mount rig adapting some older technology to our newer crane and methods. Some of the shafts installed with the crane mount were 12' in diameter and needed 500 cubic yards of concrete. Coordinating these shafts with bridge closures and traffic patterns were all part of standard operating procedures.

The team is working to be complete with all shafts by the end of 2016 with traffic running over them by summer of 2017.

The New Tappan Zee Bridge and Pierresearch

By Scott Farrar

A bridge for the future, the New Tappan Zee Bridge is being constructed using the latest technology, building materials and construction procedures to fulfill its design life of at least 100 years. To help achieve the ambitious goal of 100 useful years, Pierresearch was brought in to design and create a concrete accessory which met the design specifications for proper alignment and concrete cover of the reinforcing steel cages of the massive drilled shafts. What Pierresearch produced was a tough, durable pier wheel made of non-corrosive plastic. This economical solution featured a unique, one-piece design making installation fast and simple. These centering devices were produced on time and within budget.

Pierresearch of Arlington, Texas has been manufacturing high quality products for commercial and industrial construction and highways and



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