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Mobile Pipe Coats Steel H-Beams for Shelter Island Boat Launch Facility using 100% Solids Polyurethane

The Port of San Diego is currently reconstructing the Shelter Island Boat Launch Facility, believed to be the busiest boat launch ramp in California with an estimated 50,000 launches annually. Part of the $9.5 million project involves increasing the length of the boarding floats and constructing a public walking platform with viewing areas around the dock.

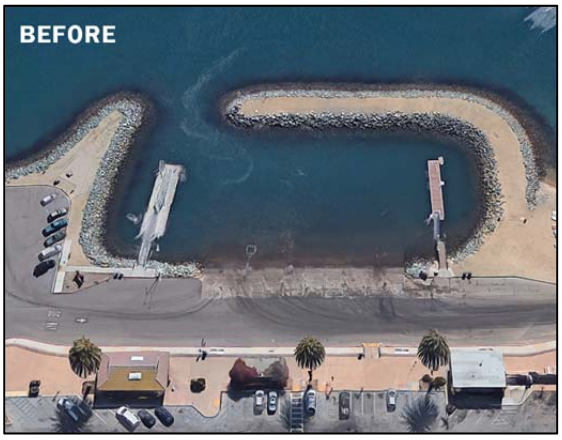

Figure 1: The original Shelter Island Boat Launch facility, estimated to be one of the busiest in California. Originally constructed in the mid 1950's.

Figure 2: The H Piles will provide the structural support for the pedestrian bridge at the facility. The H-piles will be piled into the ground, then precast concrete breakwater walls will fit over the H-Piles providing the necessary structural support.

To construct the walking platform, which will also serve as a breakwater, H-piles will be used in conjunction with a pre-cast concrete breakwater wall. H-piles are commonly used as end bearing piles driven into the ground to support bridges, buildings, and virtually every other type of structure. "End bearing" refers to the transfer of loads through soft soils to some suitable load-bearing strata. Since the H-piles will be encased in concrete in a salt water environment, the steel pile only requires corrosion protection at the bed-to-water interface. Accordingly, only ten-foot sections of the 60-foot piles were coated. Since the elevation of the shoreline varies, so too does the location of the coating on each steel pile.

In order to maximize protection against the corrosive effects of salt water, Mobile Pipe applied Polibrid® 705E elastomeric polyurethane. Polyurethanes are, in general, the preferred material for coating piles, allowing fast set-times for the applicator while simultaneously providing a durable and hard, yet flexible, finish. The Polibrid® 705E coating was applied at 80 mils nominal thickness.

Finding a coating applicator with the ability to stage, store, and expertly coat the 60-foot H-piles was critical to the contractor. Mobile Pipe's 36,000 square foot enclosed shop provided more than sufficient space to blast, mask, coat and store the H-piles in a timely manner, while Mobile Pipe's QP 3 quality certification provided the assurance that the coating would be applied using proper application techniques in order to provide the Port of San Diego with the required design life.

Figure 3: 80mils of Polibrid® 705E applied in 10-foot sections for corrosion protection of each H-pile. Polyurethanes offer great corrosion protection in salt water environments and are tough enough to handle the piling application.

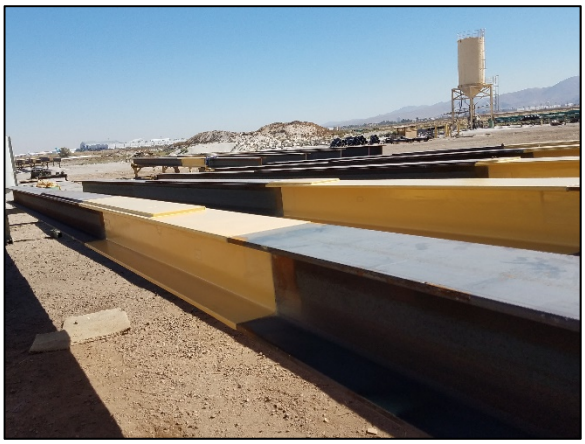

Figure 4: Mobile Pipe's 40-acre facility is more than adequate to handle the 60-foot H-piles. Our modern equipment enables Mobile Pipe to apply the polyurethane in a consistent and reliable manner.

Figure 5: In total, Mobile Pipe coated 51 H-piles for the new Shelter Island Boat Launch facility.

Polibrid® is a registered trademark of AkzoNobel.
Figure 1 and Figure 2 are courtesy of San Diego Unified Port District: https://www.portofsandiego.org/recreation/shelter-island-boat-launch.html