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SHORING PROJECT OF THE YEAR

How Performance Contrating bridged a gap

Following the 2018 storm, structural engineers found that wind and water had worn away the concrete beams and piers, as well as the exterior brick wall on the south face.

SAND, WAVES

After being heavily damaged by a storm in 2018, the historic Admiralty Apartments were in desprate need of structural reinforcement and repair. **Lindsey Anderson** reports.

Originally constructed in 1874, the Admiralty Apartments building in Port Townsend, WA has seen its fair share of renovation and updates. But when a massive windstorm swept through the area in 2018, the waterfront housing development was heavily damaged.

The three-story apartment building was initially constructed with timber and a brick exterior – all resting on top of concrete piers located directly on the beach of the Puget Sound.

Following the 2018 storm, structural engineers found that wind and water had worn away the concrete beams and piers, as well as the exterior brick wall on the south face. It was determined that major concrete repairs were required, as well as the replacement of the south face of the building.

GETTING TO WORK

Performance Contracting, Inc. was contacted to provide equipment for the job, as well as installation of the shoring, which was designed and completed by D.H. Charles Engineering, Inc.

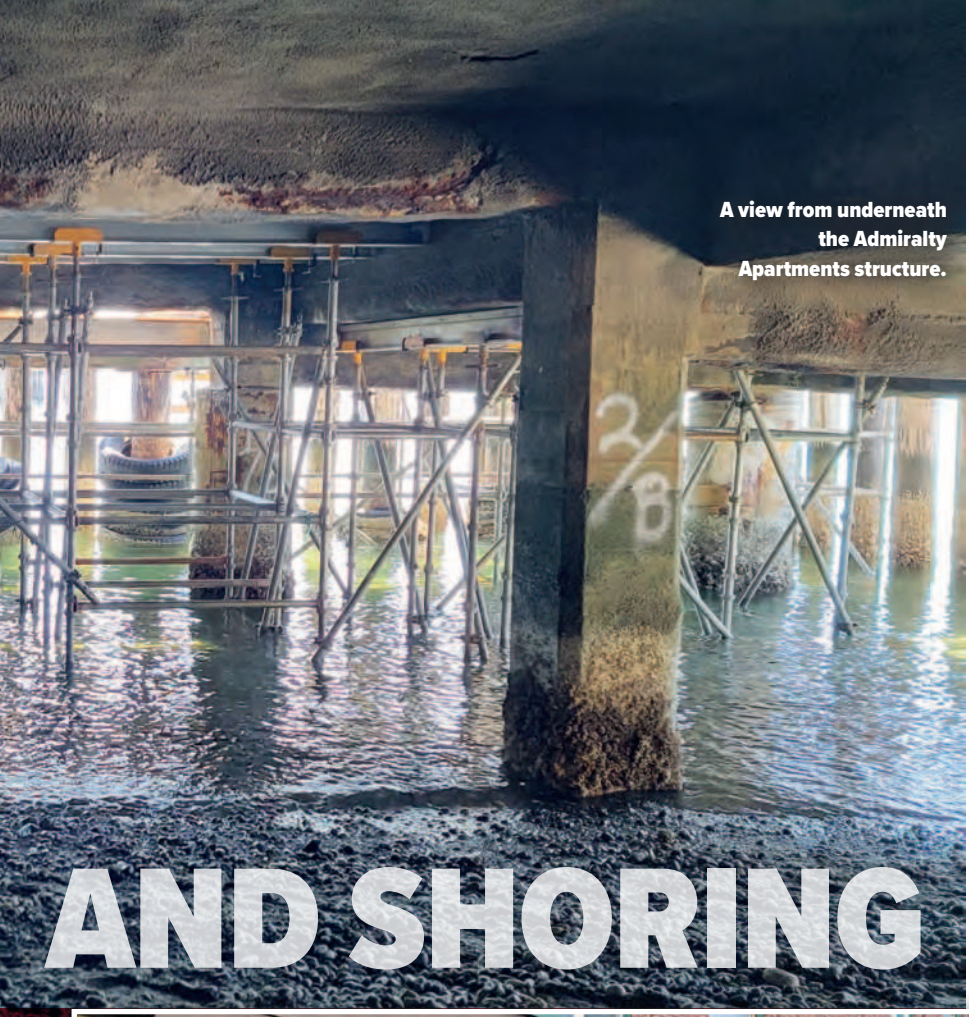
"It was determined that the concrete needed to be repaired, but there was a goal to save and maintain the rest of the building," says Mitch Meadows, branch manager for D.H. Charles Engineering. "There were many design challenges along the way, as well as phasing considerations that were critical to the success of this project."

Since the apartment building was installed entirely on piers, Meadows explains, the only place to install structural shoring was on the beach, which was subject to tidal changes, as well as storm events.

"This meant there were additional horizontal forces from waves and the potential of scouring around the shoring," Meadows says. "To solve this, shoring bearing pads were dug into the beach and buried, and rock spalls were back filled around each bearing pad in order to dissipate wave energy and protect against potential scouring."

The shoring was put in place to support the entire vertical load of the building while

A view of the system set in place.



A view from underneath the Admiralty Apartments structure.

AND SHORING

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One of the main goals was to maintain the entirety of the building.

A full perimeter access scaffold and enclosure was installed to help complete the work.

the existing piers and concrete beams were compromised and then replaced. Additionally, the modular scaffold shoring system was braced with horizontal and diagonal components, taking into consideration the additional lateral wave forces.

From design to removal of the shoring, the teams spent just under a year on the project.

Upon completion, which is estimated to be in mid-2022, the building's reinforced back end will prevent future damage while also preserving its historical look. **sa**