



Infrastructure Innovators Since 1994

QuakeWrap, Inc.

6840 S. Tucson Blvd., Tucson, AZ 85756

(520) 791-7000, FAX (520) 791-0600

Toll Free (866) QuakeWrap (782-5397)

www.quakewrap.com

PROJECT PROFILE

Bair Island Marina Seawall Repair with SPiRe® Panel System

System: QuakeWrap, Inc. SPiRe (Sheet Pile Repair) FRP panel system

Client: Bellingham Marine Industries

Owner: Irvine Company Apartment Communities, Inc.

Project Synopsis:

- Linear Feet – 2,319 (approximately 580 panels)
- Height – 10 feet manufactured height. Shop cut as directed by contractor for varying site conditions. Cut lengths range from 12" to 120".
- Profile - Skyline Steel SCZ 23. Could be used for Zee shapes similar to this profile.
- Production – Production rate will be approximately 8 panels per day

QuakeWrap, Inc. SPiRe FRP panel system was selected for this project as a long-term protection solution to prevent the corrosion of a steel sheet pile system. This system was compared to traditional coating systems and other panel systems and was selected based upon overall project price, ease of installation, QuakeWrap's engineering department support with professional engineered sealed design and QuakeWrap's ability for customization for the client's requirements.

- The SPiRe system includes the following components:
- Engineered calculations, drawings and specifications
- Installation and Operations & Maintenance Manuals
- Custom length SPiRe panels coordinated with the contractor with preinstalled spacer assembly for accurate placement of attachments
- Custom corner SPiRe panels and closure panels
- All connectors consisting of stainless steel self-tapping screws and washers, loose spacers for field installation
- QuakeBond 220UR epoxy for side seam overlap
- QuakeBond epoxy grout

This project has an extensive owner and contractor approval system to verify fit up, constructability and appearance. The four-phase process includes:

- Review and approval of shop drawings, calculations and product samples
- Dry mockup going through the entire installation process to work out any performance issues
- Wet mockup at the site to test constructability, handling, and process, as well as finished appearance



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Dry Mockup Photos:

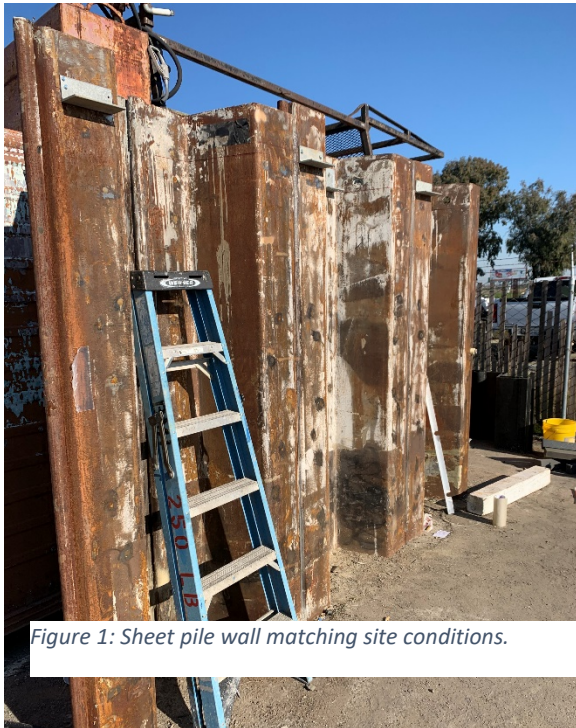


Figure 1: Sheet pile wall matching site conditions.



Figure 2: SPIRe panels getting prepared for installation.



Figure 3: Fit up of first panel.

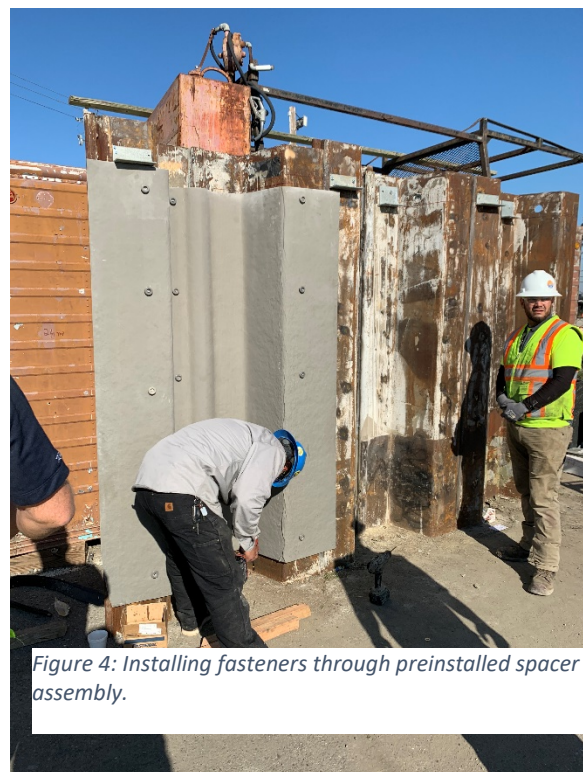


Figure 4: Installing fasteners through preinstalled spacer assembly.



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Dry Mockup Photos (con't):



Figure 5: Fit up of third and final panel for mockup.



Figure 6: Installed three panel mockup.



Figure 7: Close up of side seam. Panel finish for final product will be smooth.



Figure 8: Grouting of 1" space behind panel. No leaking of grout occurred.