



Mayport Naval Station, Wharf Delta Bulkhead Jacksonville, Florida

Repair/Replacement

Repair Wharf Delta bulkhead, including replace 2,080 linear ft. of existing steel-sheet pile bulkhead, encase it in protective concrete from wall top to 3.25 ft. MLW, and coat the bulkhead with marine sealants and sacrificial anodes below the water, plus engineer the protective coatings to have a 50-year lifespan.

The project design water depth was -33 ft. MLW, with an additional 2 ft. allowance for scour. Design load behind the wall includes a uniform load of 600 lbs. per sq. ft., HS-20-44 truck loading, a 140-ton mobile crane, and a 20-ton forklift.

Keeping shore-to-ship utilities operational during bulkhead construction was challenging. After strategizing ways to avoid ground surface disruptions, the team opted to drill and pressure-grout soil anchors into place below existing utilities. This optimized the team's effort to install a new H-Z combination high-modulus steel-sheet pile seawall in front of the existing bulkhead.

The project was awarded the 2010 American Concrete Institute (ACI), Florida First Coast Chapter Award for Significant Concrete Structure.

Schneider Engineering & Consulting
5430 W. Tyson Avenue
Tampa, Florida 33611
T: 813-835-2860

Completed
April 2010

Nature of Responsibility:

Gary Schneider, P.E., Project Director, Design
QC Manager
Stephen Walton, P.E., Designer of Record.

Client Representative

Joann Mason, Engineering Technician
NAVFAC Southeast
P.O. Box 30
Jacksonville, FL 32212
T: 904-509-8785
E: joann.mason@navy.mil