



CASE STUDY

Trident-1400 Buoys Provide Critical Navigation Safety to Narrow Shipping Channel

Tampa, Florida USA



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Project Overview



Application

Trident-1400 Buoys Provide Critical Navigation Safety to Narrow Shipping Channel



Product

Trident-1400 Buoy



Location

Big Bend Channel, Port of Tampa, Florida, USA



Date

October 2018



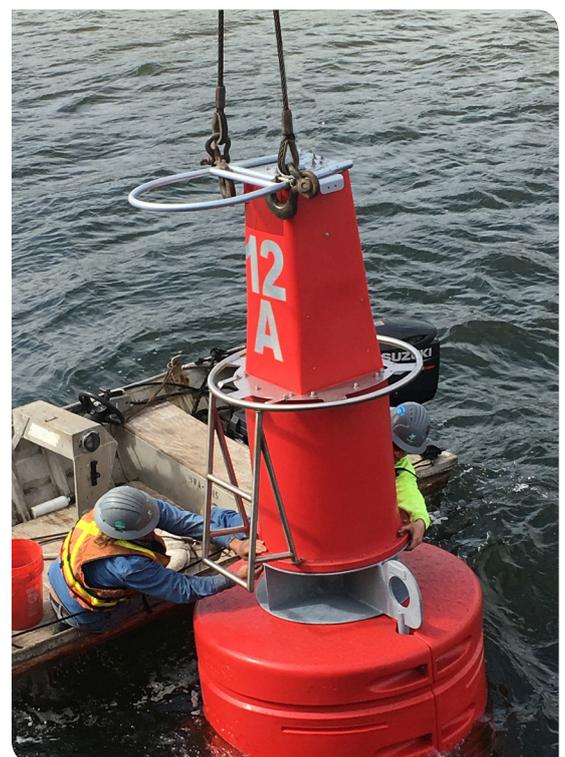
“The deployment of the Sealite Buoys was simple and straightforward. The modular buoy design allowed us to preassemble components for a quick turnaround into the water, and the barge was all we needed to safely and easily deploy the equipment. Truly an efficient, turnkey install.” - Tammy Castillo, First Choice Marine Supply Tampa, Florida, USA

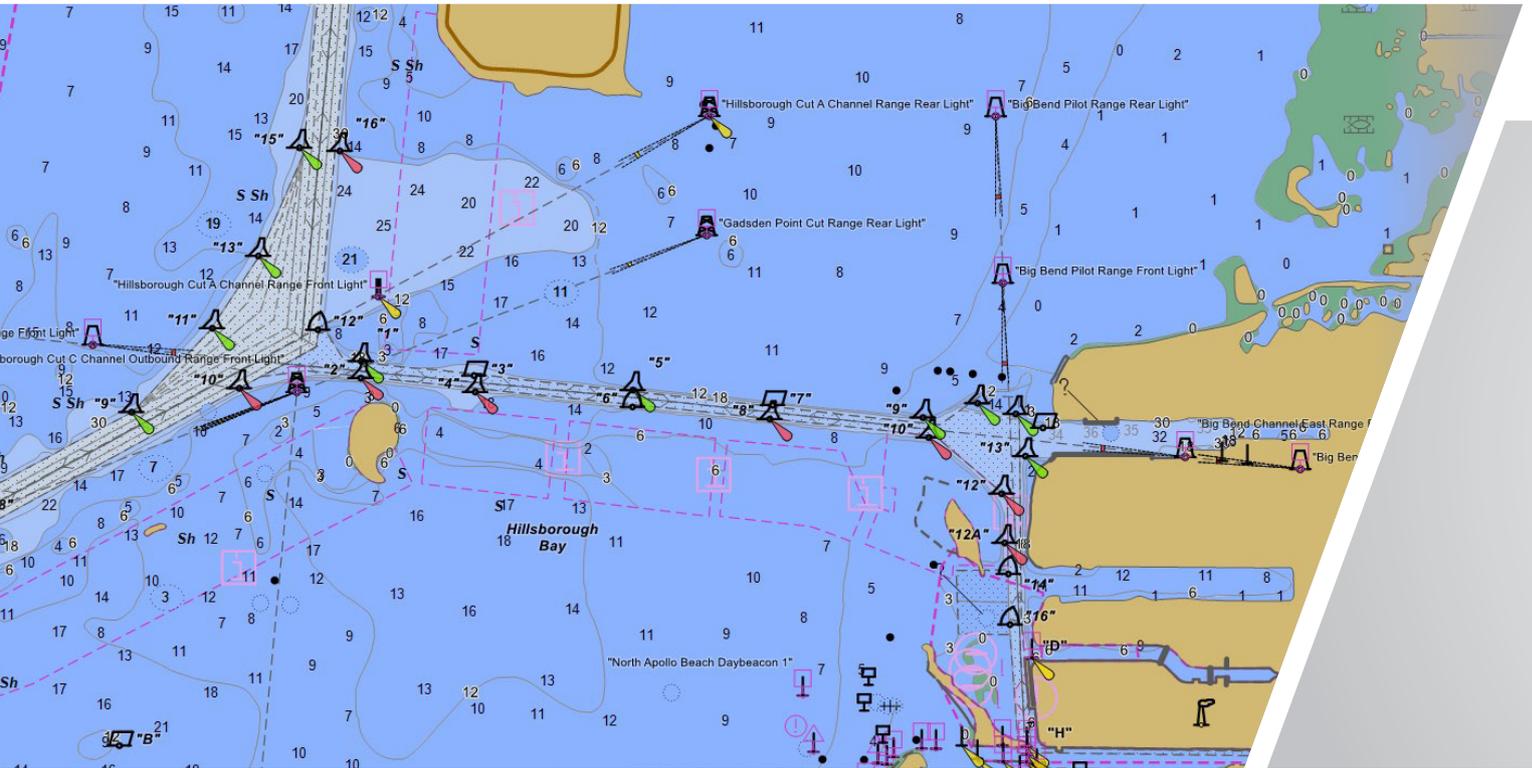
Background

Big Bend Channel is located within the harbor of Tampa, Florida. The Channel connects to Tampa Bay, which then empties into the Gulf of Mexico. The channel width stretches a mere 200' feet across and approximately one mile in overall distance.

The Channel is jointly owned and managed by three diverse companies, all of whom have the responsibility to maintain safe and efficient navigation on the waterway. The three companies are Tampa Electric (TECO), the Port Tampa Bay and The Mosaic Company.

TECO operates a power plant generating almost 2,000MW of electricity to support the local population of over one-million people. Port Tampa Bay is the largest port in Florida, annually routing more than 37 million tons of cargo through the port as well as serving as a major embarkation port for the world's largest cruise ship operator. The Mosaic Company stores and ships its products to all areas of the Gulf Coast, the Corn Belt (Midwest USA) and global export markets through its Tampa Marine Terminal. All three depend upon a fully functioning waterway for their businesses in the southeastern United States.





The Solution

The joint owners of the Channel decided to replace the existing navigation buoys; made of steel, the existing buoys were heavy and difficult-to-maneuver, requiring specialized barges to perform maintenance. The hollow design of the steel buoys resulted in them sinking when collisions with ships occurred. All Channel stakeholders agreed that AtoN (Aids to Navigation) replacement was necessary and that alternatives to steel buoys must be considered, to ensure longer lasting channel navigation aids.

The Commitment

Assisted by First Choice Marine Supply, the Channel Managers decided to install Sealite Trident-1400 buoys. These 5' diameter buoys provide sufficient buoyancy and focal height to mark the channel, while their foam-filled, polyethylene construction is extremely resilient and virtually unsinkable after impact.

Additional security is provided by the Trident-1400's two-piece design. Even if one piece of the hull is punctured, the other module will provide adequate buoyancy for recovery, and the damaged section can be easily replaced by on-hand spares. The polyethylene/foam construction also results in a buoy that is 50% lighter than the previous steel buoys. This enabled deployment and maintenance from standard construction barges, resulting in cost savings for the Channel owners.

Installation was done with a barge by Orion Marine Construction; no specialized vessels were needed because of the Trident-1400's light weight, resulting in additional cost savings. The deployment was accomplished quickly and easily.





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