

# Portsmouth Seawall

Portsmouth, Virginia



## HISTORY

One of America's oldest seaports, Portsmouth, VA, has a rich maritime history. Built on the bustling Elizabeth River, at Mile Post Zero of the Intercoastal Waterway, Portsmouth has a thriving tourism business based around the water.

## PROBLEM

The waterfront of Portsmouth, VA, including the seawall, is one of the hubs of tourism for the historic town. In 2015, an underwater inspection revealed structural problems with the seawall. The City of Portsmouth is investing more than \$20 million to overhaul the centerpiece of its historic waterfront.

## SOLUTION

The City of Portsmouth reached out to the marine construction experts at Crofton Industries. Crofton performed an additional

underwater inspection of the failed section of the seawall and found the reaction piles had failed and, as a result, the seawall had deflected and caused the double T deck panels for the elevated walkway to become unsafe for the public.

Crofton looked to Nucor Skyline for their engineering help and sheet pile expertise. Nucor Skyline provided engineering drawings for the redesign of the seawall. A crane was brought in on a barge to the project site where the existing deck sections were removed. After demolishing damaged concrete bent piles and reaction piles, new AZ-38 700N steel sheet piles were driven to design depth approximately two feet from the existing seawall to allow for room to work. Once the sheet pile was in place, a concrete cap was poured and new steel H-pile reaction beams and concrete pile bents were installed to support the concrete deck sections.

The river walk at Portsmouth, VA is once again open to the public, attracting new commercial and residential developments to the area.

## PROJECT PARTNERS

### Owner

City of Portsmouth – Portsmouth, VA

### General Contractor

Crofton Industries – Portsmouth, VA

## PRODUCTS

Sheet Piles: AZ-38 700N 60-73' (350 pair)

H-Piles: HP 14X73 (1,100 tons)

## PROJECT TIME FRAME

May 2015 to May 2017