

Rodanthe Bridge

Rodanthe, NC

Project Description

The Rodanthe "Jug Handle" Bridge is a new 2.5-mile long crossing that will be part of State Route NC-12 in the Outer Banks. It will provide a permanent bypass to portions of the barrier islands that are prone to severe erosion, flooding, and breaches between the Pamlico Sound and Atlantic Ocean. The NC-12 route is the main emergency evacuation route for the Outer Banks, so the new structure will provide a much more reliable and resilient route of travel compared to the current surface roads. The new bridge turns out from the island into the bay, runs tangent to the island, and then turns back to the island to meet up with the surface roads.

Owner

NC Department of Transportation

Contractor

Flatiron

Designer

RK&K

Our Role

McNary Bergeron designed the advancing rail system along with the lead trestle template and the crane platforms. Working with Flatiron and DEAL, the details of the rail system were coordinated to accommodate the specialized equipment used on the trestle - platform bogies, rail cars, straddle gantries, and pile trippers.

Total Contract Value

\$145 Million

Timeline

2018-2021

Construction Method and Specifications

Due to the shallow water depth in the bay, conventional barge mounted cranes were not feasible. Instead, an advancing rail system was designed to straddle the permanent bridge footprint. It was used in a leap-frog fashion with all construction activities occurring within the 1600-foot trestle area similar to an assembly line. Two headings (north and south) were used to meet the project completion date.

