Route 36 Highlands Bridge

Monmount, NJ

Project Description

The Route 36 Highlands Bridge connects Sea Bright and Atlantic Highlands over the Shrewsbury River in Monmouth County, New Jersey. The new bridge replaced the existing Route 36 Highlands bridge, which was built in 1932 and had reached the end of its service life. The existing Route 36 Highlands Bridge, with a 35-foot vertical clearance, was rated the worst movable bridge in New Jersey. The two new fixed span precast segmental concrete box structures provide a 65-foot vertical clearance over the Shrewsbury River channel and will carry two 12-foot lanes of traffic in each direction, with a median barrier.

Owner

New Jersey Department of Transportation

Contractor

J.H. Reid General Contractor

Designer

Jacobs

Our Role

McNary Bergeron & Associates provided construction engineering services including:

- Design of precast cofferdams and support system for footing construction
- Integrated shop drawings for precast column and superstructure segments
- Construction analysis
- Step-by-step erection procedures for substructure and superstructure
- Development and design of falsework, cantilever stability system, lifting assemblies and rigging, and misc temporary works
- Geometry control system, including casting software for column and superstructure segments.

Total Contract Value

$124 million

Timeline

June 2008 - May 2011

Construction Method and Specifications

- Precast concrete cofferdams are floated into place above driven piles, then filled with concrete for bridge footings
- Precast hollow segmental box pier columns and caps
- Precast concrete segmental variable depth box girder superstructures
- Built using the balanced cantilever method with ground-based and barge-based cranes
- Segments are constructed using the short line precasting method
- Four separate segmental superstructures with typical span lengths of 180' to 235'
- Deck widths ranging from 26' to 46'