GILMERTON BRIDGE
Replacement Project

The $134 million Gilmerton Bridge Replacement Project on Military Highway/Route 13 in Chesapeake, Va. replaces the original twin bascule bridge (circa 1938) with a state-of-the-art vertical lift bridge spanning the southern branch of the Elizabeth River. When completed, the new bridge will ease traffic congestion for the 35,000 vehicles that use the bridge daily and provide taller clearance for enhanced maritime access.

Schedule

- Float-in Date: January 2013
- Fixed Completion Date: Winter 2015

Project Highlights

- Vertical clearance allows larger vessels to travel under the bridge, reducing number of bridge lifts
- Wider land widths to accommodate expansion when Route 13, Military Highway, is widened
- Congestion should be reduced as a result of fewer openings
- Bridge construction is overseen by The Virginia Department of Transportation
- City of Chesapeake continues to own, operate, and maintain the facility

Challenges

- Limited access between railroad and existing bridge
- Coordination with Norfolk Southern Railroad
- Tower erection over existing roadway
- Building new bridge over and under existing bridge
- Demolition of existing bridge under the newly constructed bridge

Phased Construction

- Phase I
  Shift existing four-lane traffic to two-lane traffic
  Construct two southbound lanes
  (approach spans), lift span and towers
  Install mechanical and electrical lift system
- Phase II
  Float-in lift span
  Shift traffic to new bridge, south-side lanes
- Phase III
  Demolition of existing bridge
  Construct north-side approaches
  Open all travel lanes
- Phase IV
  Construction of bridge protection system
  Continued demolition of existing bridge

Construction Management Team

- VDOT
  - James S. Utterback, PMP, Hampton Roads District Administrator
  - Bud Morgan, PE, Area Construction Engineer
  - Ashton Lawler, PE, State Structures and Bridges
  - Mitch Layton, Construction Manager
- CEI
  - Parsons Brinckerhoff (PB)
    - Marc Papini, Project Manager
    - Matt Liffick, PE, Deputy Project Manager
  - McDonough Bolyard Peck, Inc.
    - John Machner, Site Records Manager
  - Hardesty and Hanover
    - Doug Neely, PE, PM Moveable Bridge
  - NXL
  - Seventh Point
- Engineer of Record
  - Modjeski and Masters - Moveable Bridge
  - Gannett Fleming - Approach Bridges
- General Contractor
  - PCL Civil Constructors, Inc.
- Major Subcontractors
  - EV Williams Inc.
  - McLean Contracting
  - DT Read
  - Edwards Electric

VDOT Virginia Department of Transportation

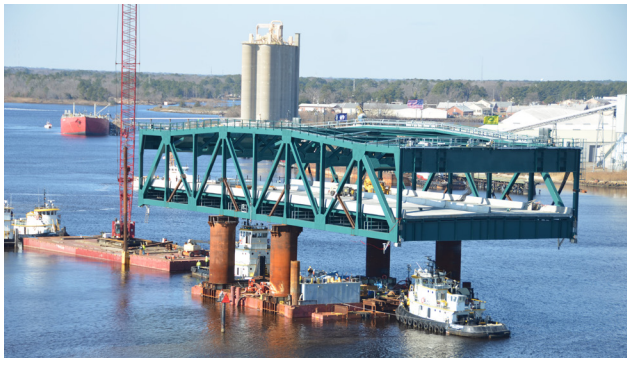
The towers are approximately 220-ft. tall with each leg supported by a 12-ft. diameter drilled shaft 125-ft. deep.

New Vertical-Lift Span Bridge

- Four-lane, vertical-lift bridge: Comprised of a single span which rises vertically, remaining parallel with the bridge deck, to accommodate maritime traffic and then descends to close.
- Lift Span Length: 250 ft.
- Open Position: 135 ft.
- Closed Position: 35 ft.
- Bridge width: 85 ft. wide.
- Vertical lift towers: 207 ft. tall each; include 1,009 steel members, each ranging from 5,000 pounds to 150,000 pounds

Construction Facts

- Eight 12-ft.-diameter drilled shafts, among the largest in diameter ever constructed in the U.S. using the oscillator method with temporary casing
- Total length of drill shafts: 124 ft.
- 10 million pounds of structural steel
- 3.1 million pounds of reinforcing steel
- 30,000 cubic yards of concrete
- 7,000 cubic yards of structural fill
- 4,500 linear feet of drainage pipe
- Four 15-ft. -high retaining walls
- Eight 15-ft.-diameter sheaves
- 200 different assembly lots of bolts



The lift span, which accommodates a six-lane road, was built off-site and floated in on a barge for final placement.