
Triborough Bridge Deck Replacement, TB-64A

GPI

Construction Engineering & Inspection



Client/Owner: Triborough Bridge & Tunnel Authority

Project Location: New York, NY

This project replacement of the Queens approach span deck with pre-cast panels, the suspension bridge suspender ropes, and the suspension bridge roadway with a new orthotropic deck panel system. Four lanes of traffic were maintained in each "peak" direction with three lanes in the opposing "off peak" direction through the use of movable barrier. This left a single lane closed and dedicated for deck replacement operations. In addition to this single closed lane, the contractor was allowed to "bump out" the movable barrier to form two closed lanes during the overnight periods in order to place cranes and facilitate the movement of large pieces of equipment or material.

With this single lane approach, the roadway areas were replaced with modular deck units on a "lane-by-lane" basis, progressing from the Queens-bound right lane to the Bronx-bound right lane. Each lane replacement was considered a discrete stage of construction, with two pre-stages that prepared the bridge for the eight stages of construction. In these pre-stages, the Queens Plaza and Approach areas were widened and the median barrier/deck replaced with temporary deck and the movable barrier system. This "cleared the deck" to afford the contractor the flexibility to move lane-by-lane and replace the Triborough's deck under traffic. Rounding out the deck and suspender replacement work was an extensive bridge lighting and electrical system replacement effort. Finally, through a series of complex structural lifting and re-support operations, the truss pins were removed and replaced. The total construction cost of this project was \$200 Million.