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Transportation Engineers

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Inspectors/Managers

Bridge Condition
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*New Jersey
New York
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Bridge Deck Reconstruction, Miscellaneous Structural, Roadway and Lighting Improvements, Newark Bay –Hudson County Extension

OPS No. T3085, Contract No. T100.034

New Jersey

PROJECT TYPE

Design

CONTRACT AMOUNT

\$200,000 fee

ROLE

Subconsultant to URS Corporation
Bridge Engineering
Construction Support Services

PROJECT OWNER/CLIENT

New Jersey Turnpike Authority

START & END DATES

11/2008 – Ongoing

REFERENCES

Raj Navalurkar, Ph.D., P.E., URS Corporation
(201) 225-3280

PROJECT DESCRIPTION

This project involved bridge deck reconstruction, miscellaneous structural repairs, roadway improvements, lighting improvements and the installation of a de-icing system on the Newark Bay Bridge and the Newark Bay - Hudson County Extension from Mile N0.00 to 6.00 in Essex and Hudson Counties. SJH began work in 2008, providing field inspections, design, and preparation of contract documents for the repair of this tied-arch bridge.

The project features seismic analysis, recommendations for seismic retrofit and investigations and recommendations for main span tie chord redundancy improvements. The scope includes over twenty approach spans and a tied-arch main span. We performed load ratings of the stringers and floor beams in the as-built and as-inspected conditions. We also developed report details for steel stringers, floorbeams, bearings, and barrier and deck part replacements.

Because of their location encroaching on the adjacent lane or straddling two lanes, the majority of the deck replacements require utilization of the shoulders as traffic lanes. Placement and removal of the temporary line striping and of the concrete construction barriers necessitated the closing of supplementary or "buffer" lanes which were only permissible during certain off peak traffic times, late at night. The deck is replaced with precast concrete deck panels to expedite construction and to maintain the necessary lanes of traffic during construction. Work is carried out in daily, weekly and multi-week construction stages with single lane or shoulder closings.



SJH Engineering, P.C.