



Civil / Structural /
Transportation Engineers

Construction
Inspectors/Managers

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*New Jersey
New York
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Alexander Hamilton Bridge, Cross Bronx Expressway, Ramp “D” Temporary Bridge 5A, Contract No. D260688

Bronx, New York

PROJECT TYPE

Design

CONTRACT AMOUNT

\$520,000 fee

ROLE

Subconsultant to CCA Civil Inc./ Halmar
International, LLC, JV
Bridge Engineering

PROJECT OWNER/CLIENT

New York State Department of Transportation

START & END DATES

7/2009 – 12/2011

REFERENCES

Gary Dinmore, formerly of Halmar
International, LLC, (914) 319-7779

AWARDS

ASCE NY Metro Construction Achievement
Project of the Year 2014;
ACEC NY Gold Award 2016

PROJECT DESCRIPTION

This \$417 million project, the largest single completed construction project by the NYSDOT, involved the re-decking and repairs to the superstructure steel of the Alexander Hamilton Bridge (AHB) and associated ramps. For the re decking extensive, staging was involved, including permanent lane closures and temporary structures. Three temporary ramps were constructed to maintain the traffic at various stages of construction.

SJH prepared design drawings and specifications for Temporary Ramp “D” and the associated substructures. The contractor opted to use steel for all temporary structures, so the temporary ramps are steel structures, with steel plated decks (“Battle Deck”) supported by steel floorbeams and stringers. The floorbeams and stringers are welded plate girders. Some of the spans of the temporary structures were eliminated by installing Geosynthetic Reinforced Earth System (GRES) walls. Reinforced concrete pedestals were installed on top of these GRES walls and the stringers supported by them. The bearings, removed from the original AHB, were repurposed for the temporary ramps.

The temporary ramp is supported by temporary steel towers on concrete foundations. The towers are braced laterally with other adjacent existing piers and substructures. The ramps were designed in accordance with AASHTO ASD. The designs were reviewed and approved by NYSDOT. This project won the **2014 Construction Achievement Project of the Year Award** by ASCE Metropolitan Section and the ACEC NY’s **Engineering Excellence Gold Award** in the Structural Systems category.



SJH Engineering, P.C.