

Emergency Repairs to White Horse Road Bridge



The White Horse Road Bridge was constructed in 1970 and carries White Horse Road over the PATCO and NJ Transit rail lines. This roadway carries 24,000 vehicles per day and is a vital commuter link for local commuter traffic and the nearby PATCO Lindenwold Rail Station.

During 2014, the bridge experienced severe corrosion of the beam ends at the bearings due to deteriorated deck joints. Eventually the conditions led to localized web-crippling type failure at the fascia and first interior beams, causing vertical displacement of the deck slabs. The partial failure of the beams prompted an emergency inspection by KSE on June 25, 2014, and a subsequent closure of the bridge to all traffic.

The impact of the lengthy detour to bypass the bridge would be severe to the local economy if the bridge remained closed for an extended period. KSE was commissioned by the County to implement an accelerated pseudo-design-build approach that involved extensive daily on-site interaction with the contractor and design modifications on the fly due to field conditions. A total of 56 beam ends with advanced deterioration were repaired using new structural steel angles and plates, which were field-bolted to the existing beams to restore full load capacity.

The choreographed operation required close coordination with key stakeholders including Camden County, local law enforcement, DRPA, PATCO, NJ Transit, and the General Contractor. On September 24, 2014, approximately twelve weeks after the initial closure, the bridge was re-opened to full unrestricted traffic after all repairs were completed successfully.

EMERGENCY REPAIRS TO WHITE HORSE ROAD BRIDGE

Location: Lindenwold, Camden County, New Jersey
Client : Camden County Department of Public Works



Entrant:

KSE

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