

US Army Hopson Jr. Memorial Bridge

Logan County, West Virginia

CLIENT

West Virginia DOT-DOH
1900 Kanawha Blvd., East
Charleston, WV 25305
Tim Priddy
(304) 558-3505

COMPLETION DATE

July 2020 (Design – Est.)
July 2021 (Construction – Est.)

PROJECT COST

\$450,000 (Design – Est.)
\$4 Million (Construction – Est.)

E.L. ROBINSON'S ROLE

Prime Consultant
Roadway Design
Bridge Design

PROJECT MANAGER

Faheem Ahmad, PE

KEY STAFF

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The US Army Hopson Jr. Memorial Bridge Inspection and Rehabilitation Project, known locally as the Hoppy Hopson Bridge, is a dual bridge structure, each consisting of four, prestressed concrete beam spans. The project comprising of two phases includes structure inspection and design study and the preparation of contract rehabilitation plans.

ELR performed the inspection of the superstructure Hoppy Hopson Bridge to identifying and prioritize the elements to be considered for inclusion in the design of renovation plans under Phase II of this project. Personnel collected information regarding crack locations and sizes while in the field. Applying the information collected helped develop cost estimates for Phase I. Four alternatives for jacking the US Army Hopson Jr. Memorial Bridge were studied. Developing these alternatives considered the use of pier frames and temporary towers for jacking and the use of a crossover and stage construction for Maintenance of Traffic (MOT).

ELR developed a 3-D finite element model of the existing structure. The analysis concluded that the use of stage construction would overstress the superstructure elements (beams, diaphragms, and deck). The design of the pier bearings, pier diaphragms, and the superstructure's behavior during the jacking operation was investigated using the 3-D models.

