



McQuain Brothers Design Build Kanawha County, West Virginia

Client: Kokosing Construction Co.

Contact: Dustin Fisher, (614) 228-1029

Key Personnel:

Barry Logan, PE
Kevin White, PE
Erik Brokamp, PE
Matt Cornett, PE

Project Cost:

\$7.5 Million Construction
\$600,000 Design

Year Completed:

November 2012 Construction
December 2011 Design

E.L. Robinson's Role:

Prime Consultant
Roadway Design
Bridge Design
Construction Inspection

E.L. Robinson Engineering teamed with Kokosing Constuction on this Design Build project for the replacement of the twin I-79 bridges over US 119 and the Left Hand Creek in Kanawha County, West Virginia. The existing bridges were comprised of three (3) continuous spans, steel plate girders (CSPG) with a concrete deck. For both structures, the piers and north abutment were founded on steel piles while the south abutment rests on and is keyed into solid rock. The structures are in a horizontally (horizontal and spiral curve within the bridge limits) and vertically curved section of the roadway. The proposed structures utilized a three span layout with span lengths of 128'-0" – 122'-9" – 91'-0". The horizontally curved cast in place deck is supported by four lines of straight Type IV-J Prestressed Concrete Beams kinked over the piers. The beams are simple spans for dead loads and made continuous for live load. Abutment 1 is semi-integral while abutment 2 is integral. The design also involved 3-D slope stability analysis, minimal approach work, and median drainage design. ELR worked with Kokosing to develop a crossover maintenance of traffic scheme that maintained a single lane in each direction which allowed each structure to be completed without a phase construction joint.