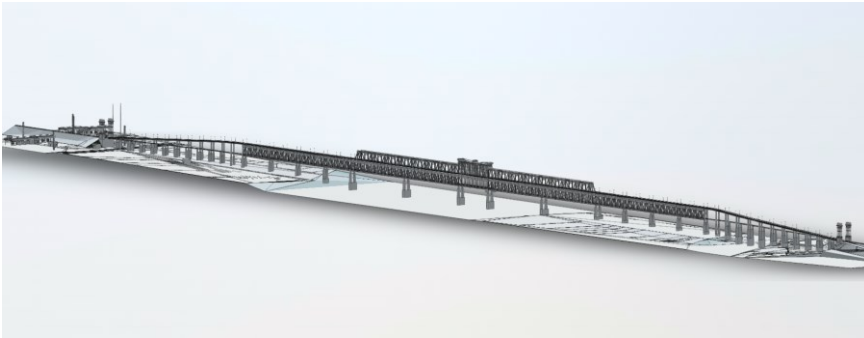


Detail design for a major repair of a bridge over the Danube River (Danube Bridge) between Ruse and Gyurgevo on the road I-2 Ruse-Ragrad from Pyce-km 0+000 to km 1+057



The bridge over the Danube River between the city of Ruse (Bulgaria) and the city of Giurgiu (Romania) was built according to a Soviet project and was put into operation in 1954.

The facility is a "farm" type steel structure on two levels - for road traffic (upper level) and railway line (lower level). The facility has a high intensity of vehicular traffic, a large proportion of which is heavy goods vehicles. In the past years, measures were taken to maintain the roadway in line with the current repair.

The purpose of a technical project for the implementation of repair and restoration works is to improve the technical and operational condition, carrying capacity and durability of the roadway and its supporting structure.

The bridge structure has a total length of 2226.00 m. It is divided into 37 spans with the following static support distances:

- 2 x 12 spans with a length of 33,60 m /34,00 m axially between the pillars and static scheme – simply supported beam.
- 2 x 4 spans with a length of 80,00 m and static scheme – continuous beam with two spans;
- 2 x 2 spans with a length of 160,00 m and static scheme – continuous beam with two spans;
- middle span with lifting steel structure 86.00 m and static scheme – simply supported beam (in Romanian territory).

On Bulgarian and Romanian territory, the bridge is symmetrical in the longitudinal direction.

EKJ Bulgaria's services:

During design:

EKJ Bulgaria is the contractor for the preparation of project development of phase "Technical design" for the Danube Bridge from km 0+000 to km 1+057.

Challenges:

- Strategic object of national importance
- Carrying capacity of the roadway and its supporting structure
- Implementation of RVR without interruption of the road and railway traffic
- Preparation of implementation technology
- Major repairs have already been carried out in the Romanian part
- Coordination with institutions
- The technical project is the basis for building a concept for maintenance and monitoring of the bridge facility

Client: Road Infrastructure Agency

Contractor: EKJ Bulgaria Ltd

Period: 2021-2022

Contract type: Design

Phase: Detail Design

