Reference project

Road viaduct over the railway line in Dąbrowa Niemodlińska, Poland

ASECON
ENGINEERING CONSULTANTS

Client:

Generalna Dyrekcja Dróg Krajowych i Autostrad

Project scope:

Modernization of national road No. 46 in Dąbrowa, demolition of the existing and construction of new viaduct over railway line No. 132 in 95+294 km.

Design scope:

Conceptual, basic and detailed design.

Project description:

Steel tied arch viaduct has been designed with the span of 41,6 m and skew of 42°. Due to undisturbed road traffic and railway line operation requirements and future double carriageway express road planning the viaduct has been located next to the existing one. Significant increase of railway line clearance has been also specified. BIM technology significantly facilitated the geometric alignment of the new viaduct with the existing road and enabled a detailed analysis of the construction stage, allowing for uninterrupted road and rail traffic.

Superstructure consists of two variable hight steel box girders connected by transverse composite crossbeams. The structure is supported on pot bearings located on RC abutments.

All steel elements on the underside of the viaduct have been designed of weathering steel in order to minimize the maintenance of the structure in the immediate vicinity of the railway line.