



D4R7. New Danube Crossing at Bratislava

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Abstract

Bratislava Bypass project – D4R7 comprises D4 Highway with a length of 27 km and R7 Expressway with a length of 32 km. It was established as a Public-Private Partnership including design, construction, financing, operation, and maintenance. More than 100 concrete and steel bridges were executed within the project with different typologies, box-girder, beam bridges, post-tensioned slabs and culverts, ecoducts, cyclist and pedestrian bridges, as well as refurbishment of several structures in one of the major interchanges in Bratislava – Prievoz.

The most significant part of the D4R7 project is the 6th crossing over the river Danube, its floodplain, and adjacent area in Bratislava including the environmentally protected area of Natura 2000. It consists of a 3 km long highway elevated on the bridges and viaducts.

Keywords: Danube River, Slovakia, cable-stayed bridge, cast-in-situ balanced cantilever, movable scaffolding system MSS, concrete deck, steel deck, post-tensioned

1 Introduction

An international competition for the development of southern and south-eastern parts of Bratislava Bypass was announced as a PPP project in summer 2015. It included the design and construction of highway and expressway and concession for its maintenance for the next 30 years. The proposal, submitted by Zero Bypass Limited (a consortium of Ferrovial from Spain and Porr Bau from Austria), presented the best technical and financial offer and was selected in the middle of 2016. The D4R7 company was founded to lead and coordinate the design and construction of the project.

The design of the 6th Danube Crossing in Bratislava was developed by experts from Slovakia, Spain, the Czech Republic, and Austria. Dopravoprojekt from the Slovak republic is the leading design firm of the Project and the designer of West Approach Bridge and Kayak Bridge. They are supported by Torroja Ingenieria from Spain, the main designer of East Approach Bridge and Danube Bridge, Strasky, Husty and Partners from the Czech Republic, and BGG, geotechnical designers from Austria. The Category III Independent Checker was accomplished by the Spanish design office FHECOR. The role of Independent engineer of the project was performed by Austrian company FCP.