

A New Steel Arch Bridge in the City of Padua

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Summary

The municipality of Padua has recently achieved an important goal, namely the project for the new Fair Bridge. Located in the North side of the city, the bridge wants to be also a comfortable and pleasant gate for pedestrians and bicycles. The main crossing is a steel double arch bridge; the steel-concrete composite deck accommodates the road lanes on transversal cantilevers hanging from the stays, whereas the wide pedestrian boulevard is placed between the skew planes of the arches. Furthermore, the separation between the different areas is filled with continuous flowerbeds, an ideal extension of the park to the city. After the main span over the railway area, the road lanes split on two different slender box girder steel bridges. The whole process of design was carried out in a very short time, and was constantly kept in touch with the national railway company RFI in order to take into account the many requirements coming from the criticality and importance of the position.

Keywords: arch bridge, flyover, box girder bridge, Padua.

1. Introduction



Fig. 1: Bird-eye view of the Fair Bridge

In its long lasting effort to improve the viability system – and particularly to increase the access points to the city centre – the municipality of Padua has recently achieved an important goal, namely the project for the new Fair Bridge. A new arch-shaped bridge has been designed to cross the railway line as part of the city proposed new urban distribution axis.

The Fair Bridge is, therefore, one of the important new elements which are inserted into the ADU (Urban Distribution Axis) of the PRUSST (Urban Advancement & Sustainable Development Programme) which has

been nicknamed the “Arco di Giano”. The PRUSST provides the renovation and rehabilitation of important disused industrial areas, in order to generate new directional joints (at the centre and at east) and a new viability exchange system (RFI national railway, SFMR regional railway, SIR-1 metro-bus and city-bus systems). The Arco di Giano consists of a 5km-long east-west traffic route which runs parallel to the railway and has several junctions linking in to it. This route represents a secondary viability between the east and the west city highways and it has the important function of realising a road axis connected with the main city functional centres. This new axis, which is partially parallel to the old existing via Tommaseo – via Venezia, is going to redistribute city traffic