

Bridges



Suspension Bridge in Elche

Structural Type	Suspension bridge of 164,50 m span.
Location	Ronda Norte in Elche. Alicante.
Opening date	July 2000.
Property	Generalitat Valenciana (Local government of Valencia).
Construction	FCC.
Professional Services	Construction Project and Technical Assistance.

The Suspension Bridge over the Vinalopó river in Elche is an asymmetrical suspension bridge of 164,50 m span and a width of 23,00 m. Its deck is supported by two groups of cables placed in tilted planes anchored in respective counterweights. It has a single pylon placed on the right riverbank. Each main cable is made up of eight closed cables of 125 mm diameter. As the cables used were chosen from catalogues, this solution is less expensive and, at the same time, allows the substitution of these elements. The hangers are placed at every 6,00 m and are also made up of closed cables of 60 mm diameter. The composite deck is a variable 0,60 m to 0,90 m deep. Its reinforced concrete pylon is 44,50 m high and consists of two shear walls parallel to the axis of the bridge which are transversally stiffened with a staircase placed inside.

The main cables were put in place using a guided cable system. The hangers and their connections to the main cable were placed by means of an especially designed system running over the previously fixed main cables. The steel deck was mounted with cranes. The concrete deck was cast all at once with the help of a special type of concrete with delaying effect in setting. In this way, its setting only took place once the entire deck had been cast.