



# Elche Suspension Bridge

Alicante , Spain / 2000

Structural type  
Characteristics  
Owner  
Client  
Constructor  
Scope

suspension bridge  
main span 164.50 m  
Generalitat Valenciana  
FCC Construcción  
FCC Construcción, S.A.  
detailed design



The Suspension Bridge over the Vinalopó river in Elche is an asymmetrical suspension bridge 164.50m in span with a width of 23.00m. Its deck is supported by two groups of cables placed in sloping planes anchored by respective counterweights. It has a single pylon placed on the right riverbank. Each main cable is made up of eight closed cables 125mm in 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 every 6.00m and are also made up of closed cables 60mm in diameter. The composite deck is variable in depth, from 0.60m to 0.90m.

Its reinforced concrete pylon is 44.50m high and consists of two shear walls parallel to the axis of the bridge which are transversally stiffened with an internal stairwell.

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 poured in one casting with the help of concrete with a retardant. This way, full setting only took place once the entire deck had been cast.



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