C-59 bypass viaduct

Sant Feliu de Codines, Barcelone, Spain / 2016

Client Scope Architect INFRAESTRUCTURES DE LA GENERALITAT DE CATALUNYA preliminary project IDP, Forest

This is a general improvement study (C-59 bypass) aimed at diverting traffic around the town of Sant Feliu de Codines. KP 19+000 to 25+000.

The development of the Construction Project is required for a 520 m-long bridge with a maximum height of 55 m at the central span, allowing the crossing of the Cascurell ravine, through which the Can Bosc stream flows.

Three different structural deck typologies are analyzed, all allowing the adoption of the same longitudinal configuration. In each case, the result is a viaduct of 520 m in length, divided into spans of $47.5 + 6 \times 70 + 47.5$ meters.

Each of the three deck typologies explores different pier shapes, ranging from the straight design of alternatives 1a and 1b, to a section with a capital and a diamond-shaped pier that brings lightness and elegance to the structure. It is worth noting that each pier typology is compatible with any of the three deck solutions.



