



Bidegorri footbridges between Azitain and Maltzaga

Eibar, Spain / 2018

Owner
Client
Scope
Architect

Diputación Foral de Gipuzkoa
Diputación Foral de Guipúzcoa
detailed design
UTE Fhecor-Sestra



In 2017, the Provincial Council of Gipuzkoa awarded to SESTRA-FHECOR joint venture the detailed project of the bike lane route between Azitain and Maltzaga, in Eibar, Spain.

The new 'Bidegorri' (route for bicycles and pedestrians) will be 2.5-km long. The first section runs parallel to the N-634 and the river Ego, crossing it twice, while in the second section the bidegorri crosses the Ego again and later the river Deba in parallel to an ETS railway bridge. The route links to a section already built parallel to the AP-8.

FHECOR has designed five bridges, three on the Ego River, one on the Deba River, and another parallel to the N-634.

The footbridges 1 and 2, on the Ego, have modest spans. They have been designed with a U-shaped section formed by two lateral metal beams, with a variable section height and the outer core folded inwards, with the purpose of giving greater visual lightness to that wall and avoiding the internal stiffening of this element.

Footbridge 1 will replace an existing one that is in precarious conditions.

Footbridge 2 crosses the Ego river with an important angle and connects on its left with a section of bidegorri parallel to the N634.

Footbridges 3 and 4 have about 80m spans and have been projected with a hybrid beam-arch solution, with a gradient in convex agreement with the high point in the center of the walkway.

The footbridges are formed by two longitudinal beams of corten steel, with a variable section height between 0.50 m at supports and 3.30 m at center span. In the area where section is higher than 2.00 m the longitudinal beams with full-height transversal reinforcers split into two cords joined by vertical uprights, materializing the hybrid beam-arch solution.

Footbridge 3 has been fitted with some important external constraints, such as the proximity of the ETS railway platform, the presence of the pillars of the structures of the AP-1 and AP-8 highways, the steep slope on the banks of the river Ego and the passage of the footbridge under the shadow of the bridges of the highway, which has motivated a crossing on the Ego River bed with a great angle, increasing the span of the walkway to 80 m.

Footbridge 4 crosses the Deba river bed parallel to the current ETS railway bridge.



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