GOIAN – CERVEIRA FOOTBRIDGE OVER THE MIÑO RIVER. SPAIN - PORTUGAL

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Summary

The Goián - Cerveira footbridge over the Miño river, result of an international competition held in 2017, will connect the Espazo Fortaleza park in Goián-Tomiño, Spain, and the Castelinho park in Vila Nova de Cerveira, Portugal. The proposed footbridge saves a main span of 265m, and is a suspended structure, with two towers located on the riverbanks, avoiding intermediate supports on the riverbed, and only one suspension cable. The towers are located not centered with the axis of the footbridge deck, that adopts a curved layout both in plan and in elevation. The curved layout in plan fits better to the footbridge arrival in both riverbanks, and improves its structural behavior. Indeed, the eccentric location of the suspension cable within the deck generates important horizontal transverse forces, that are supported by the curved deck by behaving as an arch. This configuration is also very convenient for supporting and controlling wind loads. It is a classic bridge type -suspended bridge- but with a singular configuration due to the curved layout of the deck and its arc-like behavior. The result is a very subtle and slender structure, a “line over the Miño river”, that highly preserves the environmental values of the river and the landscape.

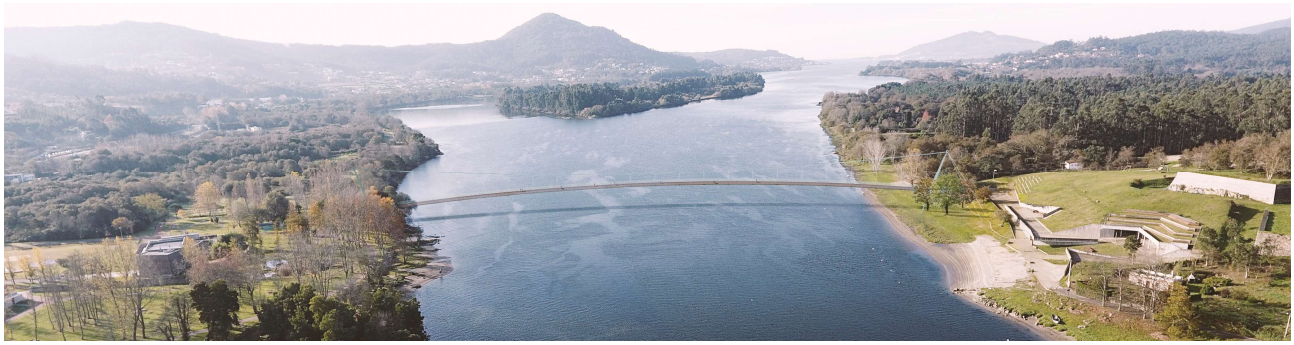

Fig. 1. Aerial view of the Goián-Cerveira footbridge.

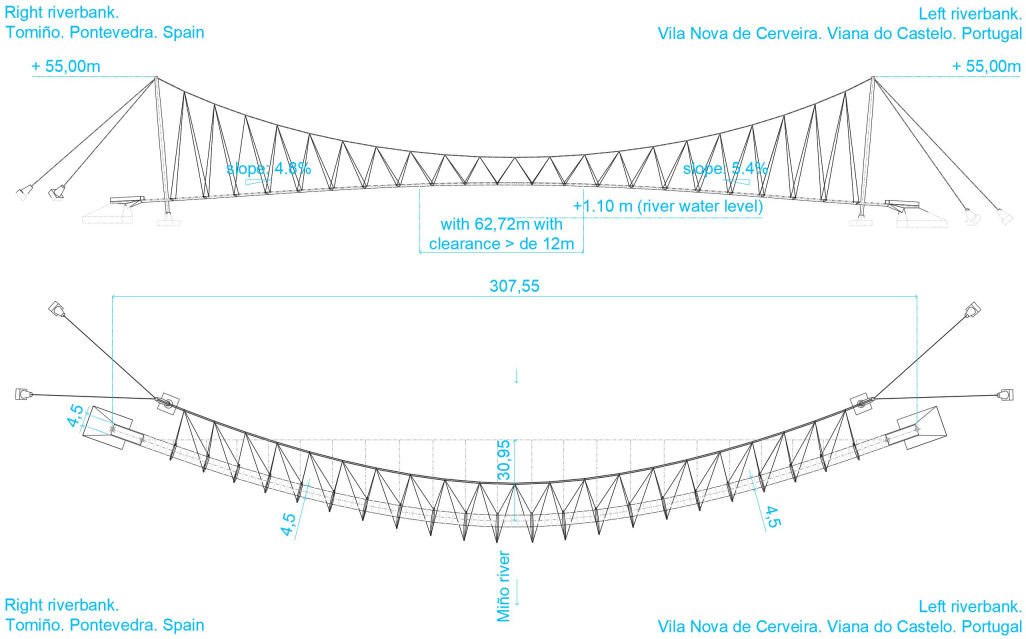

Fig. 2. General elevation and floorplan.

Keywords: Suspended footbridge; cable-supported structure; curved footbridge; river; slender.

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