

## Form as a result of local conditions. Architectural design of two new urban bridges in San Sebastian. Spain.

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### Summary

This paper introduces two singular structures designed in the city of San Sebastian. The singularity of these bridges is based not on its dimensions or technical features, but in the way they adapt its design to local conditions. The 6<sup>th</sup> bridge over the Urumea River will be finished in 2010. This skewed urban bridge is 90 m long, with three spans of approx. 30 m, and 22 m wide. The bridge replaces an existing steel structure with historical values which is reused as a footbridge in a green area. It crosses the river parallel to the existing railway bridge, with associated visual and noise disturbances for the area. The new bridge in the area of Txomin-Enea over the Urumea River adapts to the different characteristics of the river banks. As the left bank will be a newly urbanized area with a green park following the river with walking and cycling paths. The structure uses two spans of 42 and 18 m, with the main span over the river and the side span over the new green area.

**Keywords:** Conceptual design, Ethics and aesthetics values in design, The aesthetics of infrastructures, Local conditions, Urban bridges, San Sebastian.

### 1. Introduction

When designing an urban bridge determining factors switch from cost, function, structural efficiency and method of erection to others such as aesthetic design, scale, perception by users, landscape integration, symbolic function, urban planning flexibility., local conditions and restrictions. Technical and structural conditions become sometime less determinant, as local conditions and geometric restrictions grow more important, and other factors derived from the constrained existing space in urban areas and the confluence of transit, communications, installations, services, means of transportation and others, demand for special solutions. Also special erection procedures are sometimes needed affecting the final form of the structure.

Sometimes a successful design in this environment is a direct result of local conditions, in a way form adapts and specializes to respond to these special conditions. In these two relatively small bridges recently designed for the city of San Sebastian we try to exemplify this fact.