Bridge over river Guadalete

El Puerto de Santa María, Spain / 2024

Owner	Ayuntamiento de El Puerto de Santa María
Client	Ayuntamiento de El Puerto de Santa María
Scope	tender design
Architect	VSING INNOVA

The new bridge will connect Valdelagrana with the heart of El Puerto de Santa María.

The bridge will serve as a new symbolic gateway to the historic center. It will represent a civic asset, reinforcing the sense of belonging and pride among citizens while contributing to the revitalization of the urban environment. Its design invites crossing, creating a welcoming and attractive experience for those who traverse it. Moreover, it will physically and symbolically connect two parts of the city, promoting movement between its historical roots and modern identity. On a symbolic level, the bridge reflects the City Council's commitment to establishing a link between historical heritage and urban future, becoming a landmark that highlights the city's identity and its dedication to the revitalization of the historic center.

The proposed design is a comprehensive solution that goes beyond the structural function of the bridge to become a civic symbol and a transformative element for the city. With an approach that combines functionality, symbolism, and robustness, it responds to the needs of the community and the urban environment. It is a cable-stayed bridge with a central pylon that maintains the essence of the solution presented in the Preliminary Study, but with a lower cable-staying system that transfers its load to a shorter pylon, thus better aligned with the flatness of the surrounding landscape.

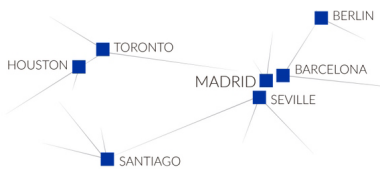
One of the key considerations in the project is the visual impact on the surrounding landscape, particularly the views toward the historic center of El Puerto de Santa María.

While the base solution we proposed improves upon the alternative defined in the Informative Study, it still includes a vertical element that could potentially raise concerns or objections from local and regional heritage authorities.

For this reason, we developed an alternative design, maintaining a similar span sequence and an inverted-rib deck, but replacing the cable-stayed system with a triangular upper chord suspension system.

This alternative not only reduces the visual impact on the historic landscape, but also brings significant technical and economic advantages:
- No cables, replaced by steel plates
- Lower construction cost
- Reduced maintenance needs

A solution that respects the setting while remaining structurally efficient and visually subtle.



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