Signature bridge

Miami, USA / 20

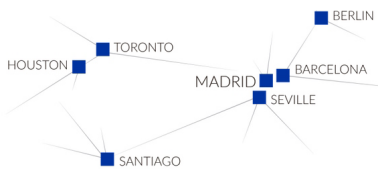
Structural type	Multi-arch bridge with a suspended deck
Characteristics	Six prestressed concrete arches with precast segments
Owner	Florida Department Of Transportation (FDOT)
Client	Archer Western-de Moya Joint Venture
Constructor	Archer Western-de Moya Joint Venture
Scope	Deck shop drawings and 3d model
Architect	Donald MacDonald Architects (DMD)

FHECOR is in charge of preparing the shop drawings, reinforcement schedules, and 3D models for the deck reinforcement of the Signature Bridge, which is being constructed in Miami (Florida, USA) by the joint venture formed by Archer Western and Demoya.

The 3D model has been used to detect potential conflicts associated with the passive reinforcement embedded in the concrete, whether conflicts between the reinforcement elements themselves or between the reinforcement and other embedded components, primarily the prestressing tendons. The model allows for realistic anticipation of conflicts and their proper resolution, ensuring that any adjustments do not negatively affect the schedule, cost, or quality of the constructed element.

The Signature Bridge is a highly complex structure, featuring a curved plan, variable width, warped surfaces, and concrete surfaces with varying slopes. It also contains an extremely high amount of reinforcement, with quantities far exceeding standard values. This geometric variability, combined with such high reinforcement densities, makes the deck reinforcement extremely complex, positioning the bridge among the most challenging prestressed concrete structures under construction worldwide today.

FHECOR, in collaboration with the bridge designer (HDR) and the contractor (Archer Western–Demoya Joint Venture), is successfully addressing this challenge and bringing this unique new structure to life for the city of Miami.



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