AP-36 MOTORWAY, MADRID- LEVANTE, OCAÑA - LA RODA SECTION (TOLEDO-CUENCA-ALBACETE, SPAIN)

Main data:

- ✓ Location: AP36 (Toledo, Cuenca, Albacete - Spain)
- ✓ Scope of Works: Construction Design
- ✓ Client: FERROVIAL AGROMÁN S.A.
- ✓ Date of project: 2004-2005
- ✓ Opening date: 2006
- ✓ Main features: Detailed Design of 34 bridges of a Toll Motorway
- ✓ Length of the section: 150 km

Summary:

The Ocaña-La Roda Motorway or AP-36, also known as the “Autopista Madrid – Levante”, connects the towns of Ocaña (Toledo) and La Roda (Albacete). It was designed as a solution to the traffic congestion on the A-3. The motorway begins at the intersection of the Motorway R-4 with the Motorway A-4 in Ocaña and it ends at the A-31 in La Roda. The total length of the motorway is 150,16 km. At the same time as the AP-36 was being built the section of the A-43 “N-301-A-3”, which is 29,06 km long and toll free was also being built. This section starts at the A-3 in Atalaya del Cañavate and crosses the AP36 at San Clemente.

The total length of the toll road is 119,38 km and the length of the toll free section is 30,78. The two toll free sections are: the A-4 to the N-301 intersection and the San Clemente - La Roda section.

There are more than 200 structures on the Motorway including viaducts, overpasses, underpasses and drainage works and it was built between 2004 and 2006 by Ferrovial Agroman.

TORROJA INGENIERIA S.L. designed 34 bridges, which were mostly highway overpasses, road underpasses and structures at intersections with other motorways.

With the focus on simplicity, speed of assembly and construction, the decision to use decks made of precast prestressed concrete beams was taken. Continuous hyperstatic box girders with variable depth were the most commonly used. The connections of the spans were made using prestressed high strength steel bars.

The piers were circular shafts of reinforced concrete and the abutments were open concrete abutments.

A special feature of all the overpasses of the AP36 motorway is the typology selected for the abutments. “Reverse bearings”, with two bottom and two top bearings, were installed in order to prevent the vertical movement of the deck due to the reduced length of the side spans.

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