A45 replacement bridge Sechshelden









SHORT DESCRIPTION

Demolition and new construction of a 937 meter (north superstructure) and 916 meter (south superstructure) long prestressed concrete bridge on the A45 between Dortmund and Hanau.

THE PROJECT

The Sechshelden viaduct on the A45 consists of two substructures each, which will be replaced by a new structure.

The partial structures made of prestressed concrete, including the piers and abutments, will be completely demolished and also rebuilt in prestressed concrete. In the first construction phase, the first substructure in the direction of Hanau will be demolished and rebuilt. In the second construction phase, the second substructure in the direction of Dortmund will be demolished and rebuilt. The demolition and new construction of the Sechshelden viaduct will be supported by the use of launching and supporting scaffolding.

The structure crosses numerous traffic routes (DB AG - electrified line Gießen-Cologne - route number 2651, B 277, Willi-Thielmann-Straße, Straße Am Klangstein) and the River Dill.

The superstructures of the highway bridge are constructed separately for each directional lane as continuous girders over 16 spans:

- 59 + 56 + 8 x 54.5 + 72 + 3 x 83 + 65 (north section)
- 63 + 68 + 9 x 54.5 + 62.5 + 84 + 83 + 65 (south section)

The superstructures are designed as single-cell prestressed concrete box girders in mixed construction.

SERVICES IN DETAIL

Concrete and reinforced concrete work, prestressed concrete work, shoring work, deep foundation work, demolition work, supporting scaffolding, advancing scaffolding, earthworks, road construction, sealing work, bridge equipment, piping work, drainage work.

CHALLENGES

Demolition and new construction of the substructures in the direction of Hanau and in the direction of Dortmund using advancing scaffolding and shoring.

SUSTAINABILITY

The client has set up an ecological construction monitoring team. In cooperation and coordination with the ecological construction supervision, extensive measures are being implemented to protect the flora and fauna, such as the creation of individual tree protection measures, the erection of protective fences for biotopes worthy of protection, the installation of dormouse burrows, the deterrence of the dormouse and the dark meadow blue, as well as the protection of the dill from construction-related substance and material inputs.

FACTS

Location	Haiger , Germany
Status	Under construction
Construction volume (value of our services)	89 M EUR
Start of construction	September 2023
Building owner	Die Autobahn GmbH, NL Westfalen, Außenstelle Dillenburg
Project management	Implenia Civil Engineering GmbH, Niederlassung Frankfurt
Planning	Schüßler-Plan/Leonhardt, Andrä und Partner; Obermeyer GmbH/Ingenieurgemeinschaft Setzpfand/Hochreither Vorndran; Arcadis
ARGE	✓

SERVICES

- Road construction
- Civil engineering
- Structural engineering

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