



16th construction stage, Berlin A100, lot 6

Data and facts

Company	PORR GmbH & Co. KGaA, PORR Spezialtiefbau GmbH
Type	Rail and road tunnels
Runtime	05.2021 - 12.2023
Principal	Autobahn GmbH of the German Federal Government, Northeast branch

[Project report online](#)

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Re-routing through traffic from Berlin's south east

A trough construction with an underwater concrete base

Deep-level construction is one of the most important means of reducing noise pollution. However, the high groundwater level in Berlin and the tricky soil conditions mean that it also requires specialist civil engineering expertise – a prime case for PORR's teams of experts who possess specialist knowledge along the entire construction value chain.

As the trough blocks are below the groundwater level in several places, the construction pits have to be constructed with a horizontal underwater concrete base to make them watertight. A total of 9,800m³ of diaphragm walls measuring up to 1.40m in thickness and up to 30m in height, 7,100 metres of grouted anchors, and 10,300m of tension piles are used as tiebacks and to provide lateral support. The challenges of the project are not confined to the actual engineering work – the inner city location with its high density of buildings and heavy traffic means that setting up the construction site facilities and the excavation and removal of more than 80,000 m³ of soil are also highly complex tasks.

Curved route calls for an oblique-angled bridge structure

The crossing structure spanning the Ringbahn at Treptower Park will be constructed as an oblique-angled integral bridge with an exceptionally acute crossing angle of 35 gon. Reinforcements of more than 480kg/m³ and concrete grades C50/60 are required to absorb the enormous stress forces occurring at the corners. The diaphragm walls, which also double as foundations, are 1.40m thick and 26.5m deep. The reinforcement cages weigh up to 55t each.

BIM and LEAN construction ensure deadlines are met

The crossing structure, including the extension and track construction, had to be completed within five months before the track closure in November 2022. We were able to meet this challenging schedule thanks to the combined use of BIM and LEAN construction, coupled with a highly focused and concentrated team effort. An important milestone was reached in May 2022 with the construction of the diaphragm walls for the foundation of the supporting structure for the bridge. After seven weeks of intensive preparation, the concreting works – involving a total of 2,200m³ of concrete – were completed on schedule within 24 hours at the end of July.

Impressions



Image notes

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BAB100: a demanding civil engineering project

Do you have questions about the project or would you like to learn more? Feel free to contact us for further information.

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