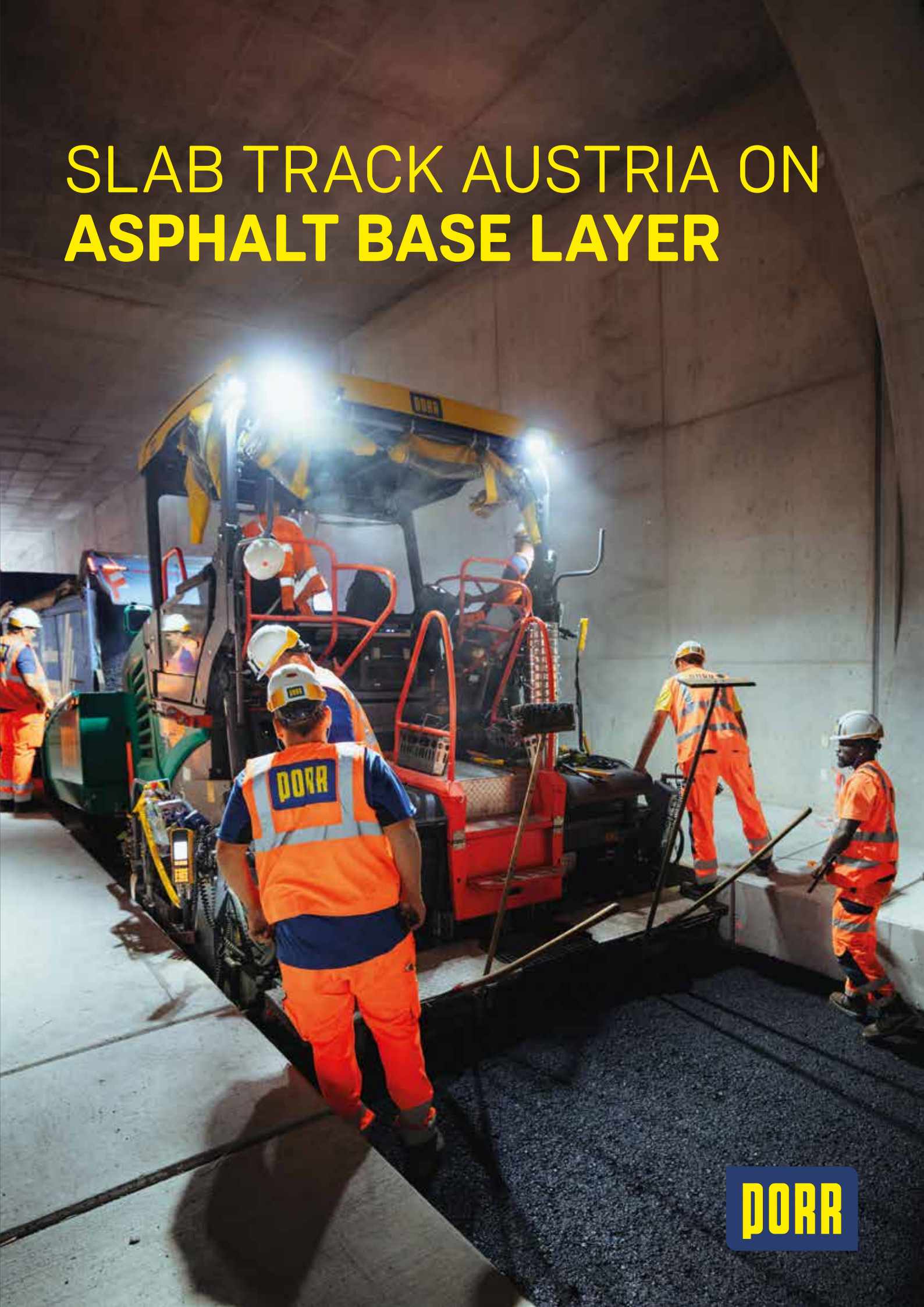
SLAB TRACK AUSTRIA ON **ASPHALT BASE LAYER**



NEWLY DEVELOPED
SYSTEM DESIGN

Slab Track Austria, also known as the PORR slab track system, is a technology developed by PORR in cooperation with the Austrian Federal Railways (ÖBB).

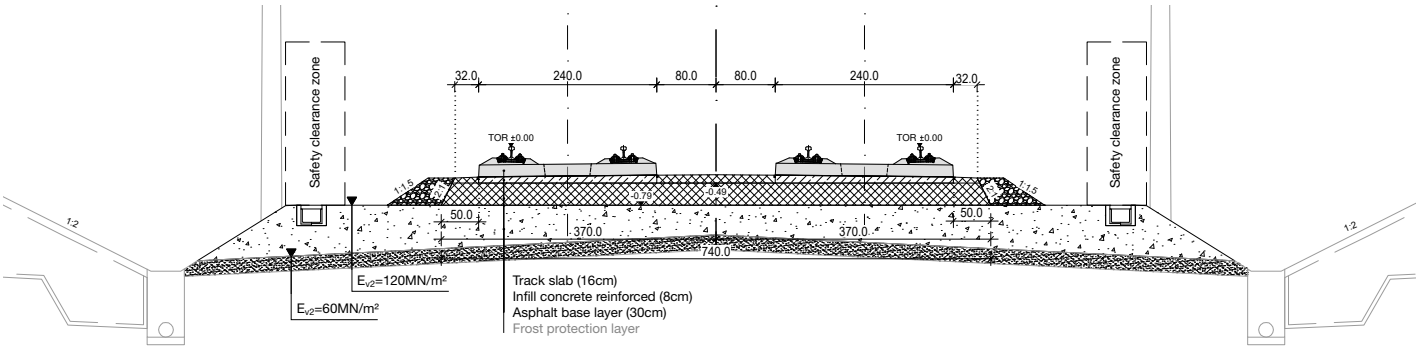
The Slab Track Austria system on an asphalt base layer (ABS) is a newly developed solution designed to enable faster and more cost-effective installation of the entire superstructure.

Asphalt base layer with many advantages

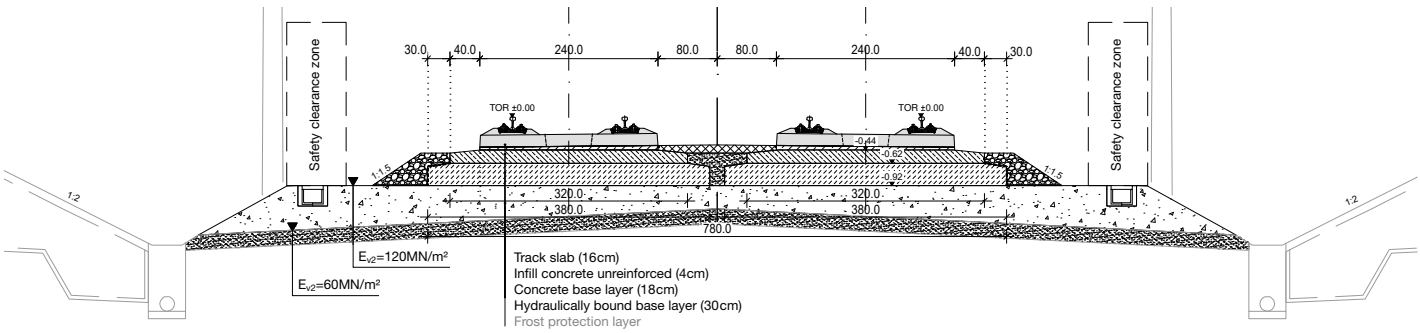
The new system is used for the first time on route 4703 in the Obertürkheim junction on-grade, at the entrance areas, and inside the tunnel based on the approval for operational testing by DB InfraGO. The operational testing aims to verify and confirm the functional suitability of the Slab Track Austria system on an asphalt base layer under operating conditions.

The asphalt base layer replaces the concrete base layer and the hydraulically bound base layer of the standard Slab Track Austria system configuration and consists of a sustainable low-temperature asphalt with a high recycled content.

STA on asphalt base layer (on-grade)



STA on concrete and hydraulically bound base layers (on-grade)



MAJOR PROJECT STUTTGART 21 LOT C – **OPERATIONAL TESTING**

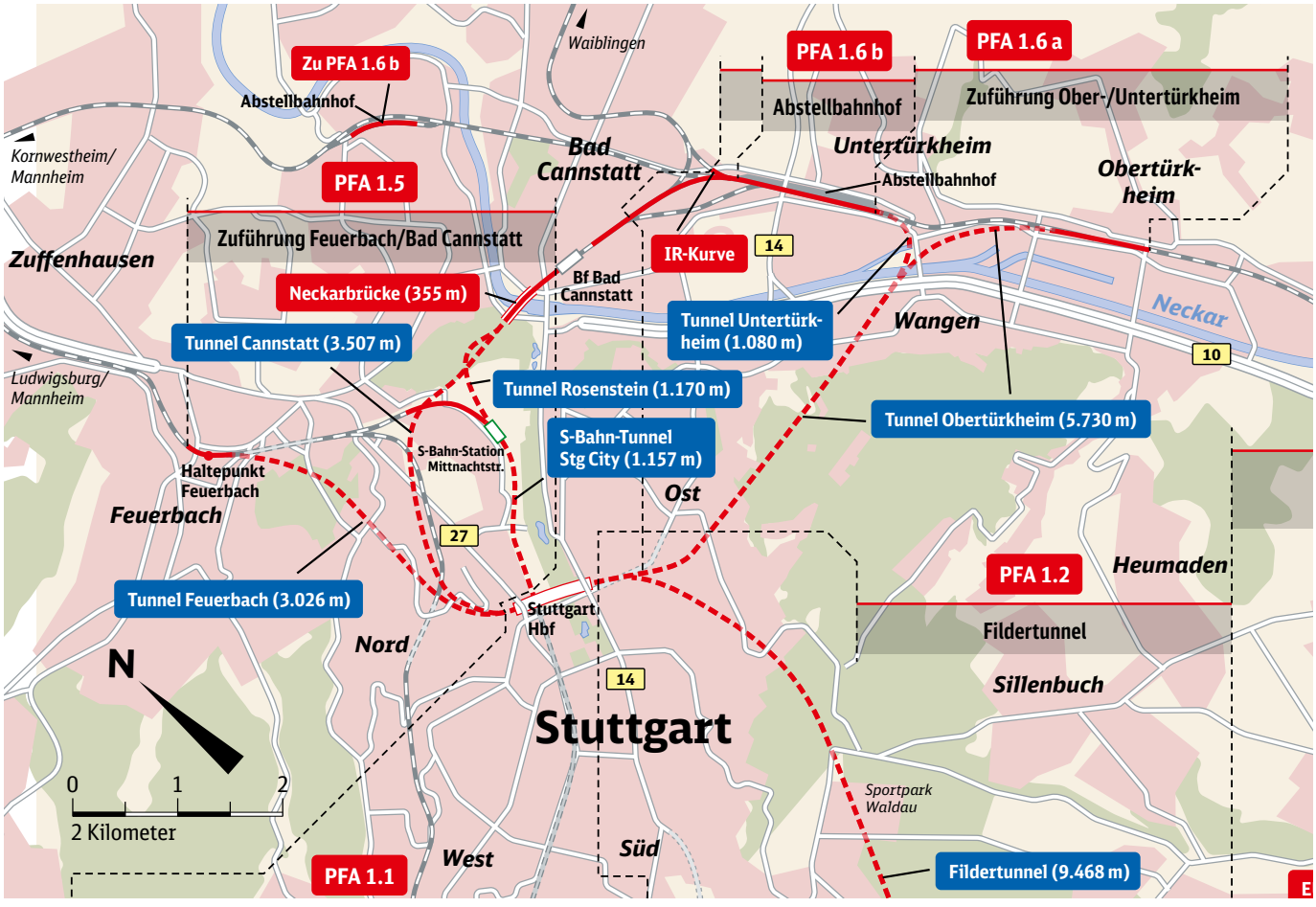
Stuttgart 21 stands as one of the most significant German infrastructure projects of the past two decades. PORR's patented Slab Track Austria technology is being utilized in this project. The new underground station in Stuttgart and the Stuttgart-Ulm line encompass over 100 km of tunnel.

PORR has been commissioned with the design and build of 33 km of slab track system, along with the electrical equipment and cable pulling. The project involves the production, delivery, and installation of 6,300 track slabs and 80,000 m³ of concrete.

Full-service provider

The new system structure is being deployed for the first time on route 4703 at the Obertürkheim junction. The Slab Track Austria system, installed on an asphalt base layer, is being tested in Lot C of the major Stuttgart 21 project. This includes approximately 90 m on-grade, 210 m at the entrance areas, and 200 m inside the tunnel.

All asphalt work is carried out by PORR Verkehrswegebau - full service from a single provider. The minimum thickness of the asphalt base layer is 15 cm at the entrance and inside the tunnel, and 30 cm on-grade. The temperature-reduced asphalt mix used in the Stuttgart 21 project contains a high proportion of reclaimed asphalt, at 75% by mass, developed in accordance with German recycling laws. The asphalt base layer is produced in two to three layers.



Shear bond strength testing at Technical University of Munich

To test the bonding strength between the asphalt base layer and the cast concrete, PORR has established its own test field and commissioned the Institute of Road, Railway and Airfield Construction at the Technical University of Munich to conduct the shear bond strength test under pressure load.

ADVANTAGES OF THE **NEW SYSTEM**

- Lower construction height and width, resulting in reduced material requirements
- Excellent bedding behaviour due to the asphalt base layer
- Faster readiness for site traffic and the installation of slab track
- Jointless, continuous installation
- Effective sealing against surface water
- Lower CO_2 footprint through the use of recycled materials and the elimination of cement-bound base layers
- Higher degree of mechanisation
- Continuous rebuild from ballast superstructure to slab track possible
- Easy recovery of the asphalt base layer after end-of-life using milling technology

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