New tram depot in Hard, Zurich

Automatic evidence preservation and manual construction and track monitoring

A new building with 220 apartments was planned and constructed in the area of the old tram depot at Escher-Wyss Platz in Zurich. A new, continuous tram depot was built on the ground floor of the two high-rise buildings, which placed additional demands on the structural and stabilization concepts.

Due to the special location of the excavation pit between the Limmat River and the existing tram line, extensive structural monitoring was necessary. We supported the project from the start of construction to the completion of the shell. In addition to manual and automatic deformation measurements, various geotechnical sensors were also used.

Zurich, Switzerland
Building Authority
2020-2025

Services

- Automatic geodetic monitoring of the excavation pit and surrounding infrastructure
- Manual deformation measurements of the VBZ tracks, the listed existing building, neighboring buildings, and the embankment wall
- Automatic geotechnical monitoring of the excavation pit with groundwater level measurements and in-place inclinometers
- Continuous vibration measurements in neighboring buildings, some of which are highly sensitive
- Selective noise and vibration measurements during sheet pile tests during construction

All recorded data is documented in TEDAMOS Web, our password-protected customer portal with 24/7 access.

Technologies

- 2 precision total stations with several dozen measuring points
- 9 groundwater level measurements with LoRa radio modules
- 8 anchor force measurements with LoRa radio modules
- 9 vibration measuring devices
- 3 in-place inclinometers, each with 6 chain elements

TEDAMOS