

U5 MUNICH, GERMANY



U5 Munich - Extension of the U5 to Pasing - Construction lot 5 West-2

Construction lot 5 West-2 connects to construction lot 5 West-1 in the east and is located between km 243.9+80,000 in the east and km 241.2+90,000 in the west. This results in a length of 2'690 m for the construction lot. It completely includes the two planning approval sections PA78 and PA79 as well as the starting shaft in Gotthardstraße, which is part of planning approval section 77.

Scope

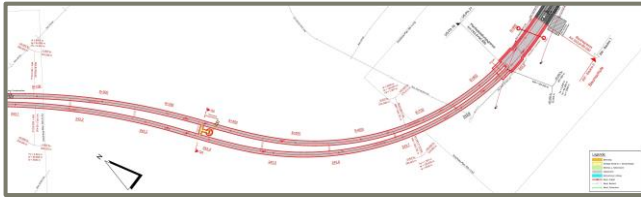
- Line length approx. 2.7 km
- 2 single-track underground tunnels, single-shell construction
- 2 stations in cut-and-cover
- 3 emergency exits with shaft structures

Challenges

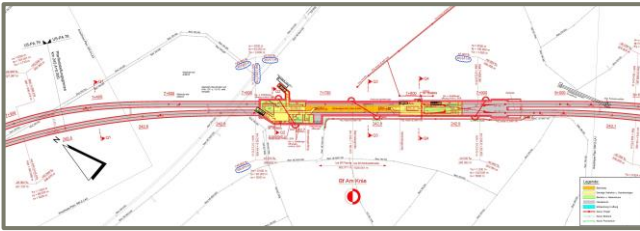
- General planning service: comprehensive planning, coordination and integration services
- Numerous interfaces of a major project
- Inner-city routing
- Constrained space conditions
- Complex logistics and construction processes
- Drifting in groundwater and in difficult geological conditions
- Small distance to buildings
- Entrances and exits to the railway stations
- Construction support measures
- (controlled pipe shield drilling, icing)
- Connection to Pasing station under operation
- Special civil engineering, deep excavations

Amberg Services

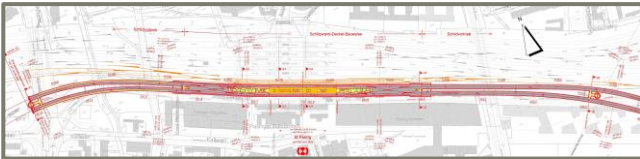
- Deputy overall project management
- Subproject management structural engineering
- Roadway tunnel
- Emergency exits
- Design and tender planning
- Implementation planning



- Site Plan, part 1
(start shaft, tunnel tubes and emergency exit 1)



- Site plan, part 2
(Tunnel tubes, Station Am Knie)



- Site plan, part 3
(tunnel tubes, emergency exits 2+3, and Station Pasing)

AMBERG FACTS

Contracted value JV

- Total in Joint-Venture EUR 11 m

Contracted value Amberg

- Total Amberg approx. EUR 1.4 m

Project Phases & Duration

- Design planning (Lph 3) 2020 - 2021
- Tender design (Lph 6+7) 2021 - 2022
- Detailed design (Lph 5) open

Project details

Engineering structures open construction method

- Start shaft length 90 m
- Station Knie length 318 m
- Station Pasing length 432 m
- Noise barrier

Engineering structures closed construction method

- TBM, diameter approx. 8 m
- Shield tunneling with liquid-supported working face
- segmental lining, single-shell
- 3 emergency exits with shaft structures

Further objects/works

- Sewer construction / waste water disposal systems
- Architecture
- Interiors and buildings
(enclosure emergency exits, operating buildings, network replacement plant, stations)
- Road traffic facilities
- Tramway traffic facilities
- Superstructure (slab track)
- Technical equipment for irrigation and drainage
- Technical equipment for ventilation and drainage

CLIENT FACTS

Overall costs

- Total Amount approx. EUR 414 m

Overview project

- Route length approx. 2.7 km
- km 243.9 + 80,000 to km 241.2 + 90,000
- 2 single track tunnels
- 2 stations
- 3 emergency exits
- Planning approval sections PA 77 to PA79

Geology

- Excavation below groundwater level
- Fillings non-cohesive
- Quaternary gravels
- Tertiary sands
- Tertiary clays / silts

Contact Person

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