

Road Tunnel

Uetlibergtunnel

Zurich, Switzerland

Uetliberg Molasse Section

Object

National highway tunnel, new construction

Construction Costs

Total costs Uetliberg tunnel: CHF 1'120 million

Project Schedule

Planning: since 1981
 Construction duration: Feb. 2002 - Sep. 2005

Project Description

2-tube tunnel: each tube with 2 traffic lanes and one shoulder.

Length Uetliberg MS: approx. 2'800 m
 Diameter: 14.20-14.40 m
 Cross section: approx. 160 m²
 Slope: 1.6 % (downward)

Driving Method

A tunnel boring machine (TBM, diameter 5 m) will be used to drive a pilot tunnel. Afterwards, a tunnel bore extender (TBE) will widen the tube to its full cross section.

Geology

Flat bedded strata of the upper fresh water molasse (alternation of hard sandstone seams and soft marl strata).

Max. overburden: approx. 320 m

Construction Details

- Excavation support pilot tunnel with GRP-bolts and steel-fibre reinforced shotcrete
- Excavation support TBE with mesh-reinforced shotcrete, bolts and steel installation as necessary
- Waterproofing with plastic membrane
- Cast concrete final lining

Our Services

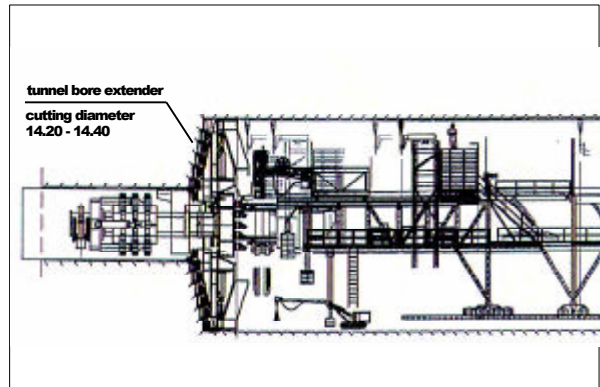
- Complete detail and construction design, tender documents of the underground works
- On-site construction management for underground construction
- Support project management of client

Client

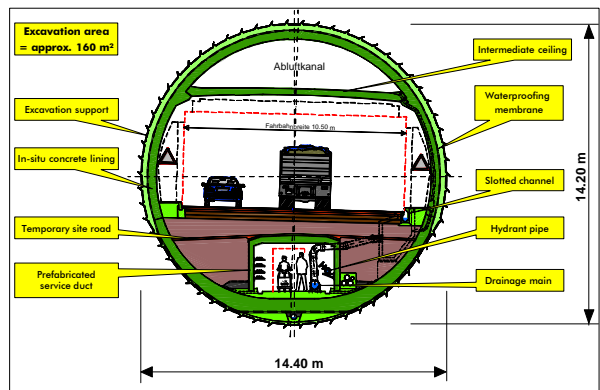
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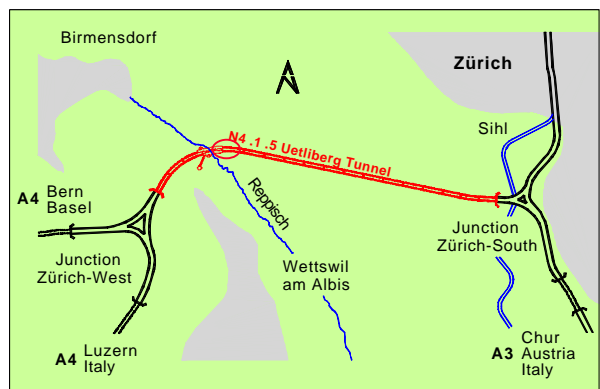
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TBE drive with undercutting systems and installation of support in back up equipment (variable cutting diameter 14.2 to 14.4m)



Standard cross section



Site plan