

Road Tunnel

Uetlibergtunnel

Zurich, Switzerland

Object

National highway tunnel, new construction

Construction Costs

Total costs Uetliberg tunnel: CHF 1'120 million

Project Schedule

Planning: since 1981
 Construction duration: 2000 – 2008

Project Description

2-tube tunnel: each tube with 2 traffic lanes and one shoulder (cross section: 143 - 160 m²)
 1 ventilation station and 2 portal stations in cut-and-cover
 1 ventilation tunnel, shaft and flue
 1 material transport tunnel
 Cut-and-cover sections (3): total approx. 300 m
 Soft ground sections (3): total approx. 860 m
 Molasse sections (2): total approx. 3'300 m
 Overall length: (1 tube) approx. 4'460 m

Driving Method

Eichholz molasse section: drill and blast heading
 Uetliberg molasse section: mechanical heading with a pilot tunnel boring machine (diameter 5.00 m) and a tunnel bore extender machine (TBE)
 Soft ground sections: core boring with steel installation. Pipe screens system will be installed as necessary.

Geology

Molasse section: Upper fresh water molasse with sudden changes in the strata sequence (sandstone, siltstone and marl)
 Soft ground sections: heterogeneous moraine, partly overlaid with loam.
 Max. overburden: approx. 320 m

Construction Details

- Primary support molasse section with steel-fibre or mesh- reinforced shotcrete and bolts
- Primary support soft ground section with steel segments and steel-fibre reinforced shotcrete layers
- Waterproofing with plastic membrane
- Cast concrete final lining

Our Services

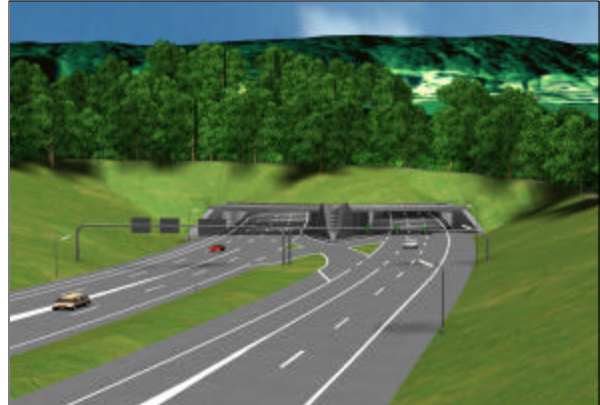
- Complete detail and construction design, tender documents of the underground works
- Partial design of the cut-and-cover sections
- On-site construction management for underground construction
- Support project management of client

Client

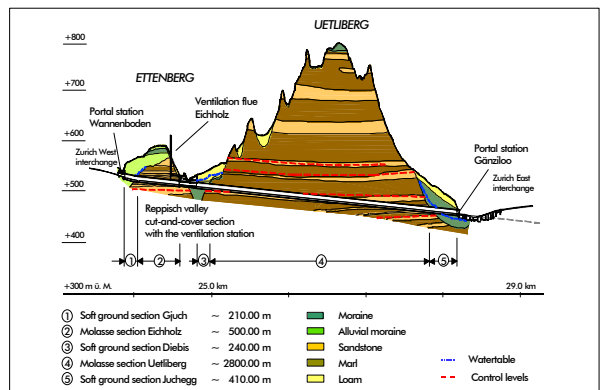
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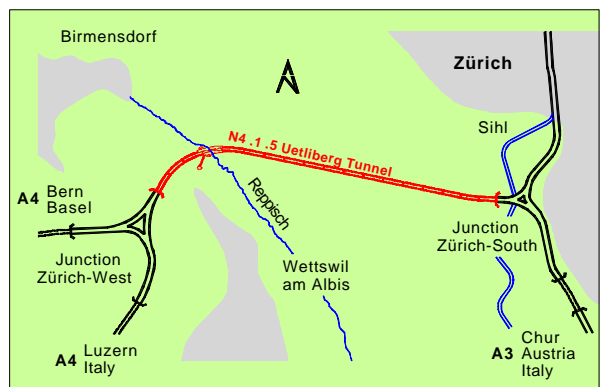
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View of west portal



Longitudinal geological profile



Site plan

For further information:

www.uetlibergtunnel.ch

