

N4.1.5 Uetliberg Tunnel Pilot Tunnel through the Uetliberg Molasse

Excavation with the first tunnel bore machine (TBM) on the highway tunnel was begun successfully on May 8, 2002.

Construction work on the Uetliberg Tunnel, the longest of the new western bypass tunnels in Zurich, Switzerland, is progressing on schedule. Excavation of the soil section Diebis, which began at the installation site Landikon in the direction of Zurich Brunau, has already been completed. Systematic blasting work, necessary in the transition area between soil and molasse rock, are expected to be concluded in June 2002, along with the construction of the first lateral cross-cuts between the two tubes.

On May 8, 2002, another milestone was reached on the Uetliberg Tunnel project. After an approx. 5 week installation period, a TBM of 5.00 m diameter commenced operations in the northern tunnel tube (Basel) at the end of the soil section Diebis towards Zurich Brunau. This machine is to drive a pilot tunnel through the longest section of the Uetliberg Tunnel, the approx. 2'800 m Uetliberg molasse section. After approx. 7 months, the TBM is expected to reach the oncoming excavation, which at present is being carried out from the side Brunau.



Pilot-TBM with gripper plates in front of portal in Landikon



Cutting head of Pilot TBM (5m diameter)

After the breakthrough of the TBM into the oncoming excavation, the machine will be pulled back through the excavated pilot tunnel to Landikon and installed into the second tube. In mid-2003, the second tunnel tube (Chur) will be driven with the same machine. Starting in mid-2003, the first tunnel tube (Basel) will be expanded to its final cross section of 14.20 m to 14.40 m diameter using a tunnel bore extender (TBE with undercutting system)

In addition to the works which began in Landikon, excavation has also been underway since the begin of 2002 in the two soil sections Gjuch (2x 210 m section starting in Wettswil) and Juchegg (2x 400 m section starting in Zurich Brunau). The excavations are being carried out using the same core method with which the soil section Diebis has already been successfully excavated.



Core method of construction in all soil sections (example Diebis)



Portal Wanneboden (Wettswil)



Portal Gänziloo (Zürich Brunau)

Further information about the entire western bypass of Zurich can be found on the homepage of the construction engineering authority of Canton Zurich (Tiefbauamt des Kantons Zürich) at www.westumfahrung.ch. These web pages provide current information concerning construction activities for residents living near the site and interested professionals. Details related specifically to the Uetliberg Tunnel can be found on the project homepage of Amberg Engineering Ltd. at www.uetlibergtunnel.ch.



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