

# **Zürich Löwenstrasse : the new station below Zürich Hauptbahnhof**

Autor(en): **Hoekstra, George**

Objektyp: **Article**

Zeitschrift: **Swiss express : the Swiss Railways Society journal**

Band (Jahr): - **(2010)**

Heft 103

PDF erstellt am: **28.05.2024**

Persistenter Link: <https://doi.org/10.5169/seals-854436>

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# ZÜRICH LÖWENSTRASSE

George Hoekstra

The new station below Zürich Hauptbahnhof



ALL PHOTOS: George Hoekstra

*During 2002–2004 when the track into the Hauptbahnhof was re-laid, the opportunity was taken to construct part of the new underground station (shown here) in relative ease, before the new track was laid down.*

On the third day of a recent symposium organised by *SMA + Partner* for professionals in the railway industry, delegates had a chance to visit the building site of the new Zürich “Löwenstrasse” through station. This is being built underneath the existing Hauptbahnhof. As I am a civil engineer, this was especially interesting for me. I was even able to add some explanations in English for the mostly foreign participants. The Hauptbahnhof has no more capacity left and traffic is still growing fast. Several possibilities were explored, but planners managed to convince the voters of Zürich, that the only really practical solution (and the most expensive one) was to build an additional through station underneath the existing one. This way the city would not be disfigured and future growth could still be accommodated.

But there are many problems. The new station has to be constructed directly underneath the existing one, but traffic there cannot be interrupted in any way! The solution is to close off only half of a set of platforms at a time, sink in two 30m deep concrete walls and cover over, making something like an upside-down cake tin. The tracks are then restored. Underneath this cover, excavation and building of the new station between

these walls (the work which takes the most time), can then take place without disturbing the trains. Then there is the River Sihl, which runs underneath the Hauptbahnhof. As the fall of the river could not be changed, it will now have to flow in between the stations in new tunnels! And finally the new line will have to run underneath Zürich’s main river, the Limmat, which runs in front of the Hauptbahnhof. All of this means the new

*As traffic cannot be interrupted, the two tracks between the platforms are taken up one set at a time, along with only half of the width of the platforms. The other (outer) halves of the platforms remain and can be used normally.*





station has to lie quite deep underground, hence the 30m deep excavations. As far as the station itself is concerned, new research on passenger flows will be taken into account. For a start, it will have very wide platforms, much wider than the old Hauptbahnhof. Up-to-date real time information systems will be installed. It is realised that a minute saved in passenger connecting times only costs a fraction of the cost of faster trains. Excavation is expected to be finished by the end of 2011 and trains should be running by the timetable change in December 2013.

*Excavation of the very narrow, 30 metre deep slits for the concrete walls is done by these special grippers.*



High Performance Inter-Regio. In today's rail traffic every minute counts! To keep delays in hand, could the SBB be testing high performance IRs? I found this one on the 8th May in Basel.

Normally these IR trains run with a Class 460, or with one Re4/4II, so what was going on was not obvious. Indeed, the Re4/4II's (which are now getting a little older - up to 45 years) are gradually slipping out of the top jobs. You will still see them on the Gotthard on the 'made-up' trains every hour, because of the need to offset the missing Pendolini, but rostered jobs in main line service are relatively few. They work extensively in freight service, often in pairs or with a Re 6/6, and are frequently found on branch lines, especially in the west, where however the Flirts and Domino (reconditioned NPZ) are also threatening them. Withdrawals have started. If you like these locos come to Switzerland soon.