

Nuremberg Metro Line U3 Northwest Extension Stations and Tracks in Inner-City Areas



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Summary

When building a metro in a medieval city like Nuremberg the challenges are not limited to the actual tunnelling. The limited amount of space available and various construction management issues have to be considered in planning just as much and just as carefully. This report describes the problems that ensued in the design and construction of the 1,1 km long track between two stations, which methods were used to solve them and how this was achieved. Detailed descriptions of the construction methods are given as well as the reasons behind the special constructive solutions that were used. The floating slab system used in the Nuremberg metro system is also explained and how it increases comfort and reduces noise pollution.

Keywords: metro; subway; cut-and-cover construction; wall-cover construction; bored pile; machine drilling; noise protection; floating slab system.

1. Introduction

The city of Nuremberg is located in the free state of Bavaria in the south of Germany. It is one of 14 large cities in Germany with more than 500 000 inhabitants. In 1965, the construction of a metro system was decided. Thus Nuremberg became the fourth city in Germany after Berlin, Hamburg and Munich and the 39th in the world with a true metro system, i.e. not a tramway that also happens to use tunnels. As a first step, a short track connecting the quarter of Langwasser was built and then the first line was continued

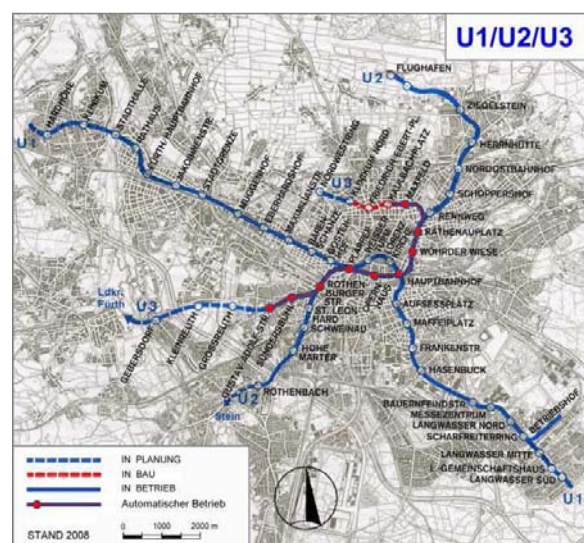


Fig. 1: Nuremberg Metro System