

Relocating sewer lines at the new site of the Zurich Children's Hospital



Existing sewer lines and a main water-supply pipe threatened to hinder the construction of two new buildings that had been planned to enable the relocation of the Zurich Children's Hospital to a new site in Zurich Lengg. EBP was commissioned to complete the planning for the demanding relocation of the sewer lines and oversee the relocation efforts.

Owing to space limitations and an aging infrastructure, a plan was approved to relocate Zurich Children's Hospital from its current location in Zurich Hottigen to a new site in Zurich Lengg. The Herzog and de Meuron Architectural Firm was selected to oversee the planning for the emergency-care facility, as well as another building at an adjacent site to house classrooms, laboratories and other research facilities. The two buildings would be joined via a tunnel.

Relocation of all-purpose and rainwater drainage lines

To prepare the site adjacent to the new hospital site for construction, the developers needed to relocate two city sewer lines, including an all-purpose drainage line with a diameter of 1 meter and a rainwater drainage line with a diameter of 45 cm. EBP examined various alternative routes for the new sewer lines so as to arrive at an optimal solution, selected high-density polyethylene (HDPE) as a material for the new lines, and then planned the entire project for its timely execution. Throughout this planning stage, we remained in close consultation with the Zurich Waste Disposal and Recycling Company (ERZ) to whom ownership of the pipes would be transferred upon the completion of the project.

Client

Eleonore Foundation, Waste Disposal and Recycling Zurich

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Underpass of a water-supply line without interrupting supply

The fact that a city water line operated by the Zurich Water Supply Department (WVZ) also ran across the site in conflict with the planned routes of the new sewer lines presented a special challenge in the context of the project. Given that the 1.2-meter water line, which runs from the Lengg Lake Water Facility to Zurich, accounts for a large percentage of Zurich's overall water supply, it was essential to avoid damaging the pipe or even interrupting its operation during the pipe relocation work. EBP responded to this delicate situation by installing a steel bridging structure to enable construction workers to underpass the water line at two locations. The farsighted planning for the relocation of the sewer lines also enabled project managers to exploit synergistic effects during the construction phase for the new buildings. For instance, the retaining walls and the steel bridging structure built for the new sewer lines proved to be valuable assets when it came to the later construction of the tunnel link between the buildings.

Working in the capacity of site manager, EBP also oversaw the execution of the sewer-line relocation from start to finish.

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