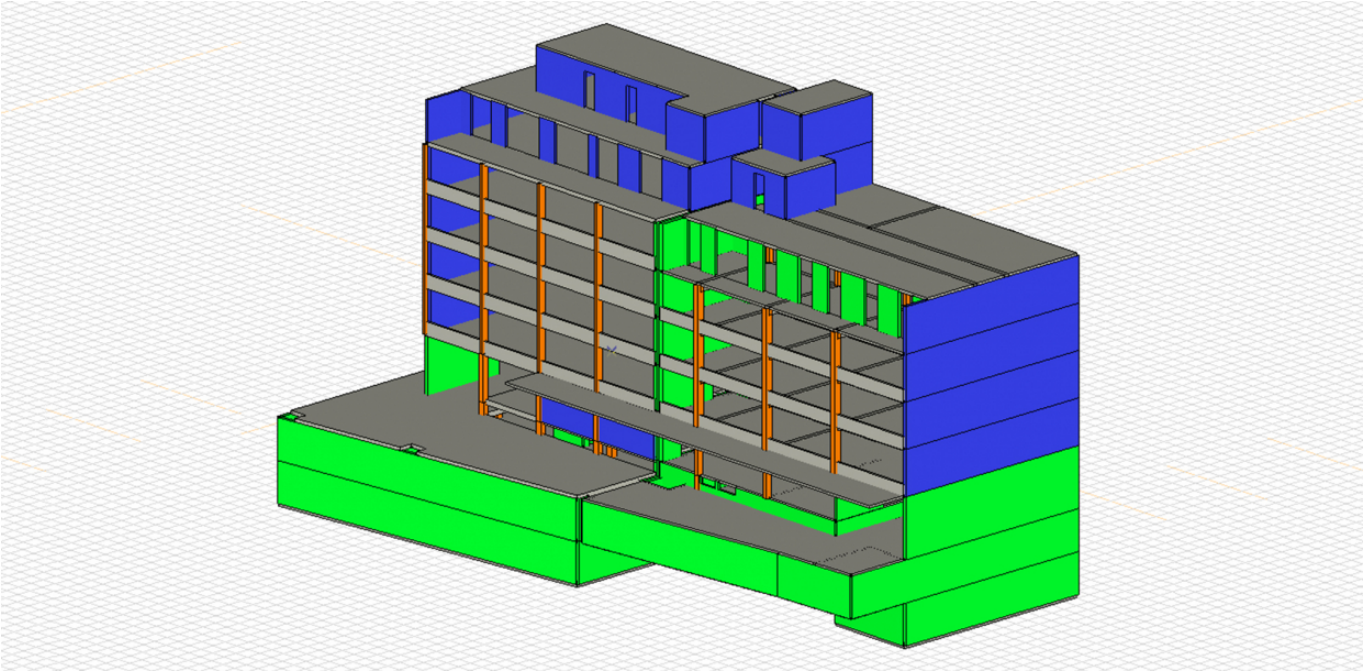
Inspection of load-bearing structures at Zurich site



EBP was commissioned to inspect the load-bearing structures and earthquake resistance of two directly adjacent buildings at a site on Limmatstrasse in Zurich. The scope of our assignment included an assessment of the structural feasibility of adding stories to the buildings.

Wishing to convert the two buildings on Limmatstrasse, the owner commissioned EBP to carry out a comprehensive assessment of the existing load-bearing structures and to thereby provide a basis for any subsequent designs. We ascertained the following: the maximum permissible load; the feasibility of an additional story (wood construction); the building's earthquake resistance; the load-bearing structure's fire-resistance rating.

On-site inspection in lieu of technical drawings

The two buildings were built in accordance with solid-construction designs in 1960 and 1981, respectively. The technical drawings for the load-bearing structures were not available, which is why all of the relevant information relating to materials and reinforcement ratios needed to be gathered by direct inspection. This inspection work was completed by a local subcontractor and supervised by EBP.

Additional stories, no supplementary earthquake resistance

Our review of the key data allowed us to ascertain the permissible load, i.e. to define any necessary measures such as shear reinforcement. Using a load comparison, we were able to confirm the feasibility of adding a story in a light wood

Client

SBB Real Estate AG

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construction without overloading the existing structures and foundations. We were also able to show that additional measures to enhance earthquake resistance were not needed.
Image description: structural model with materials
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