

Commercial construction

Colombo AG, Aefligen

2019



In Aefligen, between Bern and Solothurn, a commercial building with various ancillary rooms was built. The building with a volume of over 6,000 cubic meters convinces with its load-bearing structure and the facade made of wood.

The project

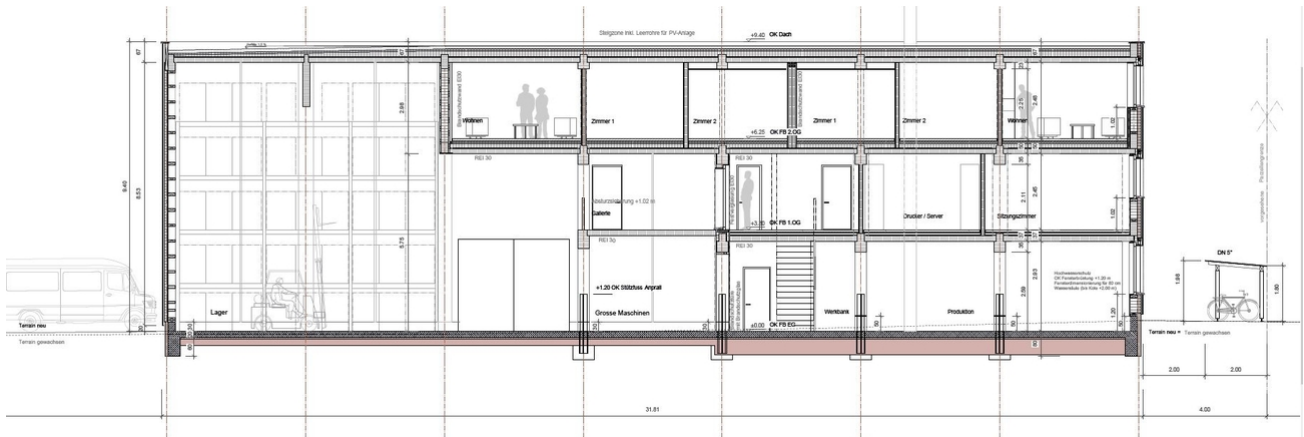
The new building on Industrieweg in Aefligen is used as a commercial building with storage, production and office space. Two apartments were also created on the 2nd floor. With a height of a good 9 meters, it comprises one-, two- and three-story building sections without a basement. The building is located in the alluvial area of the Emme River. Timbatec therefore prepared a report on the object protection measures and designed the exterior walls to withstand the water pressure of a 1.7m water column.

The construction

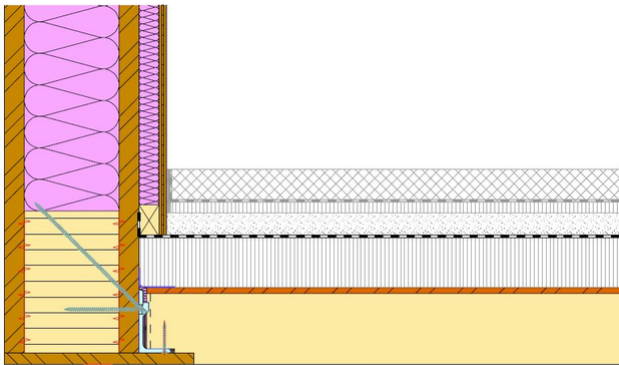
The building is a classic skeleton structure with beams resting on columns. The ceiling and roof structure is made of horizontal glulam. A dry-bonded chippings fill was placed on top for sound insulation. This eliminates the need for concrete. The stiffening is solved with slices of timber frame construction.

The challenge

All cross-sections of the beams were to be selected uniformly throughout the building. This could be fulfilled by using different wood strengths (GL24, GL32, BauBuche GL75). Other challenges were the cantilevered attic apartment or the columns dimensioned for an impact of the forklift truck (180kN).



Cut with projecting attic



Detail of ceiling connection to girder with cantilevered parapet



Terrace Attica

Construction Data

- Number of floors: 3
- Gross floor area: 1'360 m²
- Building length: approx. 31.8 m
- Building width: approx. 21.4 m
- Building height above ground: approx. 9.4 m
- Glulam Fi/Ta: 285 m³ (of which 200 m³ for the GD and the roof)
- Glulam BauBuche: 8 m³
- Structural timber Fi/Ta (DUO/TRIO): 36 m³

Construction costs

- BKP 214 (timber construction): 850,000.Swiss francs

Services of Timbatec

- SIA Phase 41 Call for tenders and comparison of offers
- SIA Phase 51 Implementation project
- Statics and construction
- cost estimation
- Site supervision and site inspections

Architect

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