School Richterswil, Field 1+2, Richterswil

2021

Thanks to the extension of the existing school, the new premises again offer sufficient space for the increasing number of students.

The project

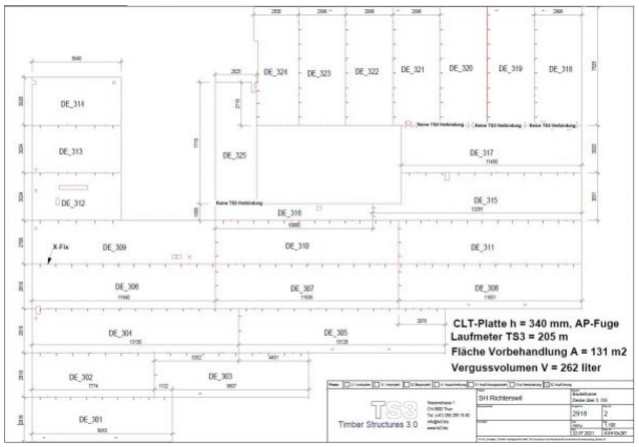
The existing school building was extended by 2 floors. In order to keep the weight of the addition as low as possible, early planning was done with a timber structure. Timbatec proposed the construction method with a TS3 slab so that the loads could be transferred directly to the load-bearing columns and walls below.
The cross-laminated timber panels were pre-treated in the factory and provided with sealing and segmental bands (white and black bands on the face). After positioning, they were joined together by joint grouting. Finally, on the underside of the ceiling, the joint is hardly visible. Beams are no longer necessary.

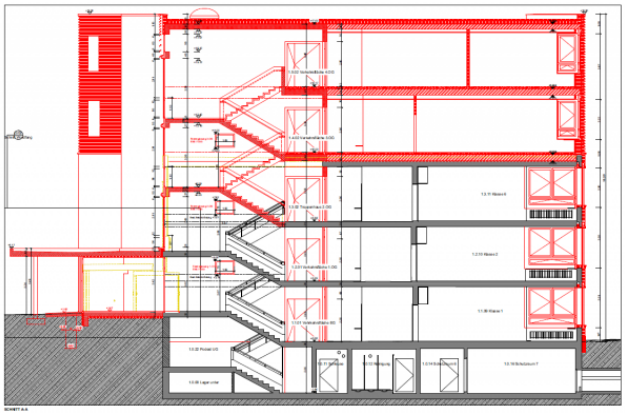
The construction

Since the top existing concrete floor was not strong enough to support the required 300 kg/m^2 a solid wood floor, cast with TS3, had to be installed on top of the existing concrete floor. Thus, all new loads are distributed directly to the load-bearing elements on the lower floors and the concrete floor is no longer loaded. A second challenge was that the entire construction work took place during ongoing school operations. Thanks to the prefabrication of the timber construction, the shell of the extension could be erected in 2 weeks during the summer vacations.

The challenge

The building was erected with solid wood ceilings (CLT TS3) on exterior walls in timber frame construction and interior walls in solid wood (CLT).





Construction Data
- TS3 ceilings 1970 m^2
- CLT panels 650 m^3
- Solid wood BSH 50 m^3
- External wall elements 400 m^2

Construction costs
- Wood construction approx. CHF 900'000.-

Services of Timbatec
- Timbatec advised the general contractor Allreal already in the competition phase and then accompanied the project as timber construction engineer. Our services included in particular the project planning and the detailed planning including the work planning
- the cost estimate
- the tendering and finally the supervision of the execution.

Architect
Batimo AG
4800 Zofingen

Timber**construction engineer**
Timbatec Holzbauingenieure (Schweiz) AG Zurich
8005 Zurich

Timber**construction**
Saxer Holzbau GmbH
8046 Zurich

Civil engineer
Forster & Linsi AG
8330 Pfäffikon ZH

GU/TU
Allreal Generalunternehmung AG
8152 Glattpark