

New construction RFSM Building F, Fribourg

2018



The new four-story building for the RFSM is the first hospital in Switzerland to be constructed entirely of wood. Timbatec provided all timber engineering services for this Minergie-P building, contributing to the building's safety.

The project

The Fribourg Mental Health Network (RFSM) is a medical and psychosocial competence center offering outpatient and inpatient treatment. A new four-story building made entirely of wood extends the building complex in Villard-sur-Glâne. In terms of fire protection, the RFSM is considered a hospital building with the corresponding requirements EI60-RF1. This means that each room is a separate fire compartment. A patient must be protected from a fire in the neighboring room and its smoke development for 60 minutes. Only the change in fire safety regulations in 2015 have made this project possible. Increased requirements are also placed on earthquake safety.

The construction

A vertically oriented fir wood facade adorns the new building. The interior of the building also features a lot of wood: The floor slabs and roof are cross laminated timber (CLT) panels that rest on steel beams in the main axes. Between the glulam columns (BSH), non-load-bearing interior walls are mounted on sound-insulating stud scantlings. And rare in such buildings: the elevator shaft and stairwell core are also constructed of CLT.

The challenge

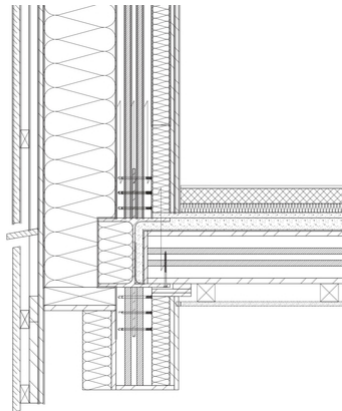
Fire protection and earthquake resistance were the big sticking points in this building. Thanks to the use of cross-laminated timber wall panels combined with steel components and the encapsulated structures, the hospital is safe against both hazards.



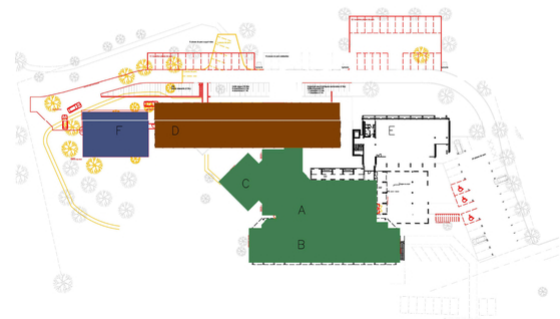
Hospital corridor with the rooms arranged on both sides (photos Vonlanthen Holzbau AG)



Assembly of the interior walls forming the fire compartment



Detail ceiling connection



Situationsplan

Construction Data

- Gross floor area: 1300 m²
- Number of floors: 1 basement + 4 upper floors
- Cross laminated timber: 215 m³
- gypsum fiberboards: 3725 m²
- Wood (CLT/ BSH/DUO): 118.85 t
- Steel: 29.09 t

Construction costs

- BKP 2: 15.3 million CHF

Services of Timbatec

- SIA Phase 31 Preliminary design
- SIA Phase 32 Construction project
- SIA Phase 41 Tendering and comparison of offers
- SIA Phase 51 Implementation project
- SIA Phase 52 Execution
- Fire protection planning
- Works planning 3D and 2D

Client

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