

# Overall renovation of the Bäumlihof school complex, Basel

2017

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Timbatec Holzbauingenieure was entrusted with the planning and management of the replacement of the existing façade for the complete renovation of the Bäumlihof school complex. 18-millimeter-thick glass-fiber-reinforced concrete panels were mounted on the wooden structure.

## The project

The Bäumlihof Gymnasium offers space for around 1500 students. About forty years after its opening, a complete renovation was due. During the extensive renovation measures, the electrical, sanitary and heating systems were replaced, the buildings were structurally strengthened and brought up to date from an energy point of view. For this purpose, the old concrete facade was completely dismantled and replaced by a wooden construction. The outer layer was installed on top of this. A new filigree façade made of thin glass-fiber-reinforced concrete panels now envelops the building. Furthermore, the wooden structure supports the large-format wood-aluminum windows with their opening casements. Timbatec Holzbauingenieure Schweiz AG planned the façade replacement and managed this sub-project.

## The construction

The spruce wood construction is not simply the basis for the facade. Since wood only chars slowly in the event of a fire and still has a load-bearing and insulating effect with its residual cross-section, it is also the fire protection layer for the steel parts underneath.

## The challenge

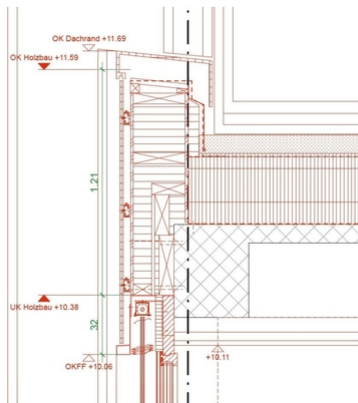
The challenge in designing the facade was to use the wooden elements to compensate for the unevenness and tolerances of the concrete structure. Steel elements were able to accommodate these tolerances and the punched-through concrete slabs.



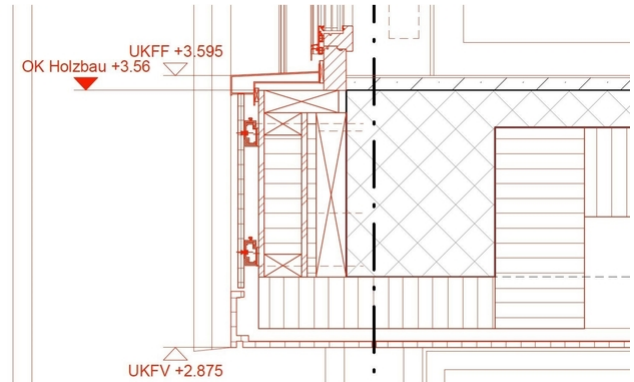
Temporary support with tree trunks



Connection of the wooden structure to the existing concrete elements



Sketch facade detail above



Sketch facade detail below

### Construction Data

- Structural timber FI/TA

### Construction costs

- Construction costs 105 million francs
- Construction costs BKP 214 1.28 million francs

### Services of Timbatec

- Planning of the facade with:
- Preliminary project
- construction project
- Devising/tendering
- Construction management and controls

### Timber construction engineer

Timbatec Holzbauingenieure Schweiz AG

### Timber construction contractor

Beer Holzbau AG  
3072 Ostermundigen

### Client

Canton Basel-Stadt  
4058 Basel

### Architecture

Enzmann Fischer Partner AG  
8003 Zurich

### General contracting

Zwimpfer Partner Architekten AG  
8047 Zurich

### Facade planning

Fiorio Fassadentechnik  
9524 Zuzwil