

# Renovation Lower Schwand Bridge, Rüschegg BE

2000

---



On behalf of the Civil Engineering Office of the Canton of Bern, the task was to assess the condition of the Lower Schwand Bridge, to prepare a rehabilitation concept and to supervise the rehabilitation on site. Furthermore, the 133-year-old bridge was to be largely preserved and integrated into its surroundings.

## The project

During the rehabilitation in August / September 2000, the entire substructure (carriageway, cross and longitudinal girders, supports) was renewed within 3 weeks. During this time, motorized traffic was diverted and a temporary footbridge was installed on the outside of the bridge for pedestrians and cyclists.

## The construction method

The damaged oak bottom chord supports, longitudinal and transverse beams, and wind bracing were replaced. In addition, the longitudinal and transverse girders were covered with Sarnafil foil strips. Thickened and interlocking oak planks with a rough surface were chosen as the roadway structure. The transition from the bridge to the road is formed by cobblestones on both sides. The heavily weathered sandstone was completely replaced, while the less stressed ones were reworked down to the smooth base. Subsequently, the sandstone was coated with a water-repellent paint.



Detail



Detail



Bottom view



Side view

#### Construction Data

- Year of manufacture: 1867
- Weight limit. 10 to
- Support system: double suspension with 4 bays
- Span: 19 m
- Width: 4.30 m
- Height: 4.10 m

#### Services of Timbatec

- Assessment
- Remediation Concept
- Statics & Construction
- Tendering
- construction management

#### Stone masonry

Messerli Christian AG  
3608 Thun

#### Timber construction engineer / local construction management

ARGE Fritz Allenbach und Timbatec GmbH  
3612 Steffisburg

#### Client

Civil Engineering Office of the Canton of Bern, Obering. Kreis II  
3011 Bern

#### Assembly work in wood

Stettler Zimmerei GmbH  
3132 Riggisberg

#### Surfacing and construction work

Schmid Werner AG  
3132 Riggisberg