

## Funicular railway Schwyz-Stoos



### SHORT DESCRIPTION

The existing funicular on the Stoos will be replaced by a new construction (the concession of the existing funicular is expiring and cannot be extended) with new lines. The type of cableway to be used is a funicular in shuttle service with 2 vehicles for passenger and goods transport. Both vehicles run on a common track between the termini with Abt's diversion in the middle of the line.

### THE PROJECT

The **route in the steep slope** (up to 110% inclination) between the valley and mountain stations runs straight in the ground plan. For topographical reasons, two rock bands (Tunnel Zingeliflüh and Ober Zingeli) and at the top the Stoosflüh (Tunnel Stoosflüh) must be crossed along the route. In the transition to the individual tunnels and in the tunnels, the rails run on a slab of prefabricated concrete elements, which are non-positively connected to the substructure and the ground. Above the Stoosflüh tunnel, the gravel track runs on a gradient of up to 30%.

### CHALLENGES

#### Challenges

- Slope
- Mountain construction site summer & winter
- Logistics for inclined shafts
- Geology
- Equipment and material can only be transported to the individual workplaces via the material ropeway

## **FURTHER INFORMATION**

### **Key data**

- Realisation 2013 - 2017
- Construction sum CHF 24.90 million
- EUR 23.71 million
- Total length 1.74 km
- Breakout cross section 27,40 m<sup>2</sup>
- Geology marl slate / limestone

### **Implenia under construction**

#### **Task**

Lead management, Chair Technical management, Commercial management and site manager

Implenia Switzerland Ltd,  
Infrastructure - Tunnelling  
CH-8304 Wallisellen

#### **Services rendered**

Tunnel construction and material ropeway

#### **Construction method**

- After the start of construction, the material ropeway will be built first in order to ensure the access to the construction site. The three tunnels will be constructed by blasting (Zingeliflüh and Ober Zingeli in advance using the DN 1.8m and 1.4m raisdrill method). A 74-tonne, 28-metre-long tunnel boring machine (Kolk) will be used for the blasting operation.
- Stoosflüh tunnel: length 235 m
- Tunnel Ober Zingeli: length 90 m
- Zingeliflüh tunnel: length 252 m

#### **Project participants**

Owner

Funicular railway Schwyz - Stoos AG

Engineer

Slongo Röthlin Partner AG, Stans

ARGE

ARGE Implenia - Vetsch

## FACTS

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<b>Location</b>	Schwyz , Switzerland
<b>Status</b>	completed
<b>Construction volume (value of our services)</b>	25 M CHF
<b>Start of construction</b>	May 2013
<b>Completion</b>	May 2017
<b>Blasting method</b>	✓

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## SERVICES

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Tunnelling

Service tunnels



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<https://implenia.com/en/references/detail/ref/funicular-railway-schwyz-stoos/>

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