Marti Tunnel AG
Bauunternehmung

B10 ROSENSTEINTUNNEL
STUTTGART (DE)

CLIENT
Landeshauptstadt Stuttgart, Tiefbauamt,
DE-70176 Stuttgart

DESIGNING ENGINEER AND SITE SUPERVISION
WBI Prof. Dr.-Ing. W. Wittke, Beratende Ingenieure für Grund- und Felsbau GmbH, DE-69469 Weinheim

IMPLEMENTATION PLANNING
Bernd Gebauer Ingenieur GmbH, DE- 80687 München

TIME OF COMPLETION
05.2014 – 10.2020

CONTRACT SUM
CHF 115 Mio. (€ 101 Mio.)

EXECUTION OF THE WORK
ARGE B10 Rosensteintunnel

CONSORTIUM PARTNERS
Marti Tunnel AG, CH-3302 Moosseedorf
Marti GmbH Deutschland, DE-70567 Stuttgart
WOLFF & MÜLLER Spezialbau GmbH & Co. KG, DE-70435 Stuttgart

TECHNICAL AND COMMERCIAL LEAD
Marti GmbH Deutschland, DE-70567 Stuttgart

TECHNICAL MANAGEMENT TUNNEL
Marti Tunnel AG, CH-3302 Moosseedorf

Marti Tunnel AG
Seedorffeldstrasse 21 CH-3302 Moosseedorf Tel. +41 31 388 75 10 www.marti-tunnel.ch tunnel@martiag.ch

B10 ROSENSTEINTUNNEL
STUTTGART (DE)

WORK DESCRIPTION

The 1’500 m long construction lot comprises the Rosenstein tunnel as well as channel shifting -dismantling of old channels and new construction and transportation infrastructures.

The Tunnel is executed using conventional methods (shotcrete with cast in place concrete lining) with two parallel-aligned tunnel tubes.
The project consists of the geotechnical works of the construction pit and slope support as well as injections and the excavation and rock support of the rock tunnel. In addition, concrete and inner lining steel works cut and cover construction and the operation buildings are also part of the project. The inner lining construction is realized with waterproof concrete.

A total of 5 cross connections are planned in order to connect the two, 25 meter distant parallel tunnels. Hereof, 4 cross connections are to be built for pedestrians and 1 for vehicles. Furthermore, the tunnel length requires the location of two emergency niches which are placed around the middle of the tunnel.

Construction and time schedule
The tunnel tubes are developed as a double lined vault construction with a shotcrete lining and a concrete inner lining. The cross connection accounts 110 m2 and in the emergency niches area 145 m2. The tunnel is driven by an access tunnel from east to west with a max. gradient of 4%.

Facts and figures
Construction lot length:

- Open construction pit Pragstrasse 155 and 255 m
- Rock tunnel 2 x 740 m
- Open construction pit Neckartalstrasse 50 and 70 m
- Excavation volume 170’000 m³
- Concrete-/ shotcrete volume approx. 137’000 m³
- Reinforcement steel approx. 9'700 t
- Construction method sprayed concrete lining excavation method (mechanical advance with top heading and bench/ invert excavation)

SCOPE OF THE WORKS

B10 Rosensteintunnel, Stuttgart
Roadtunnel

GEOLOGY

- Lettenkeuper (lower Keuper)
- Depleted GipskeuperQuaternarytop layers
- Filling deposits

21.07.2020

Marti Tunnel AG
Seedorffeldstrasse 21 3302 Moosseedorf Tel. +41 31 388 75 10 www.marti-tunnel.ch tunnel@martiag.ch