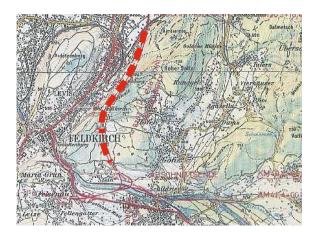


## A14 Rhine Valley Highway, Ambergtunnel (AT) Concept design NB tunnel, retrofit SB tunnel



Ambergtunnel near Feldkirch, Austria



Ambergtunnel portal



Traffic space of the Ambergtunnel after renovation

## **Description**

The Ambergtunnel is part of the Rhine Valley Highway A14, starting at the Austrian border with Germany near Hörbranz and continuing to the east of Bludenz. The southbound tube of the Ambergtunnel is open to traffic since 1985. It has been used for bi-directional traffic. The new northbound tube has been built from 2001 to 2005.

The concept design of the tunnel ventilation has been prepared by HBI Haerter. After inauguration of the northbound tunnel, both tubes were used for uni-directional traffic.

Due to the advanced age of the first tunnel's installations, a replacement and modernisation of the equipment was required. Due to construction of the second tube, the safety concept had to be modified considerably. Therefore, a new concept was designed.

The main features of the Ambergtunnel are as follows:

Tunnel length: 2,978 m Longitudinal gradient: 1.5% Number of tubes: 2

Egress passages: every 500 m
Traffic: uni-directional

Once the northbound tunnel was opened to traffic, the ventilation system of the southbound tunnel was changed to longitudinal.

## Services

HBI Haerter was responsible for the following services:

- Tunnel ventilation concept design for the new northbound tunnel
- Recommendations for ventilation equipment and safety concept for the southbound tunnel following the inauguration of the northbound tunnel (retrofit)
- Evaluation of the tunnel safety equipment for the southbound tunnel for three tunnel options with regard to new Austrian safety standards.