

### Gotthard Base Tunnel : Sections, Lengths & Breakthroughs

Section	Distance – km	Distance – miles	Type	Key Points
Gotthard North	4.4	2.73	Overground	Connects to GBT North Portal to existing SBB Railway System
Erstfeld	7.8	4.85	Open trench & cut-and-cover	<p>Two underground branch-off structures created 3km south of the portal to support future extensions.</p> <p>In 2008, Tunnel Boring Machines (TBM S-229) Gabi 1 began drilling East Tunnel towards Amsteg (Reached Amsteg: June 16 2009)</p> <p>In 2008, Tunnel Boring Machines (TBM S-230) Gabi 2 began drilling West Tunnel towards Amsteg (Reached Amsteg: September 16 2009)</p> <p>In this section, Gabi 2 achieved a world record for a tunnel boring machine of its size : it devoured <b>56 meters</b> of mountain in 24hours</p> <p>Erstfeld/Amsteg Horizontal/Vertical Breakthrough deviation in East Tunnel : 14mm / 5 mm</p>
Amsteg	11.3	7.02	Tunnel	<p>1.8km/1.12mi access tunnel (adit) excavated to enable machinery to arrive at the underground base tunnel construction site.</p> <p>May 27, 2003, Tunnel Boring Machines (TBM S-229) Gabi 1 began drilling East tunnel towards Sedrun (Reached Sedrun Boundary: 2006)</p> <p>August 19, 2003, Tunnel Boring Machines (TBM S-230) Gabi 2 began drilling West tunnel towards Sedrun (Reached Sedrun Boundary: 2006)</p>
Sedrun	8.5	5.28	Tunnel	<p>1km/0.62mi adit &amp; two 800-meters-deep vertical shafts provided access into the Gotthard massive.</p> <p><b>First Multi-functional Station site.</b></p> <p>East Tube Breakthrough to Amsteg: October 17 2007 West Tube Breakthrough to Amsteg: November 29 2007</p> <p>Amsteg/Sedrun Horizontal/Vertical Breakthrough deviation in East Tunnel : 137mm / 3mm</p>
Faido	13.5	8.39	Tunnel	<p>2.7km/1.68mi adit with a 13% grade provided access to construction site.</p> <p><b>Second Multifunction Station site</b></p> <p>Tunnel Boring Machine (TBM S-210) "Sissi" drilled East tunnel towards Sedrun (First Complete Tunnel Breakthrough : October 15, 2010)</p> <p>Tunnel Boring Machine (TBM S-211) "Heidi" drilled West tunnel towards Sedrun (Second Complete Tunnel Breakthrough : March 23, 2011)</p> <p>Faido/Sedrun Horizontal/Vertical Breakthrough deviation in East Tunnel : 80mm / 10mm</p>
Bodio	15.9	9.88	Cut-and-cover (few meters) Tunnel	<p>In November 2002, Tunnel Boring Machine (TBM) "Sissi" drilled East tunnel towards Faido (Breakthrough: September 6, 2006)</p> <p>In February 2003, Tunnel Boring Machine (TBM) "Heidi" drilled West tunnel towards Faido (Breakthrough: October 26, 2006)</p> <p>Bodio/Faido Horizontal/Vertical Breakthrough deviation in East Tunnel : 92mm / 17mm</p>
Gotthard South	7.8	4.85	Overground	Connects GBT South Portal to existing SBB Railway System

Data Sources : [AlpTransit Gotthard Pamphlet](#); [AlpTransit Archive Press Releases](#); [Herrenknecht Tunneling System Projects](#)