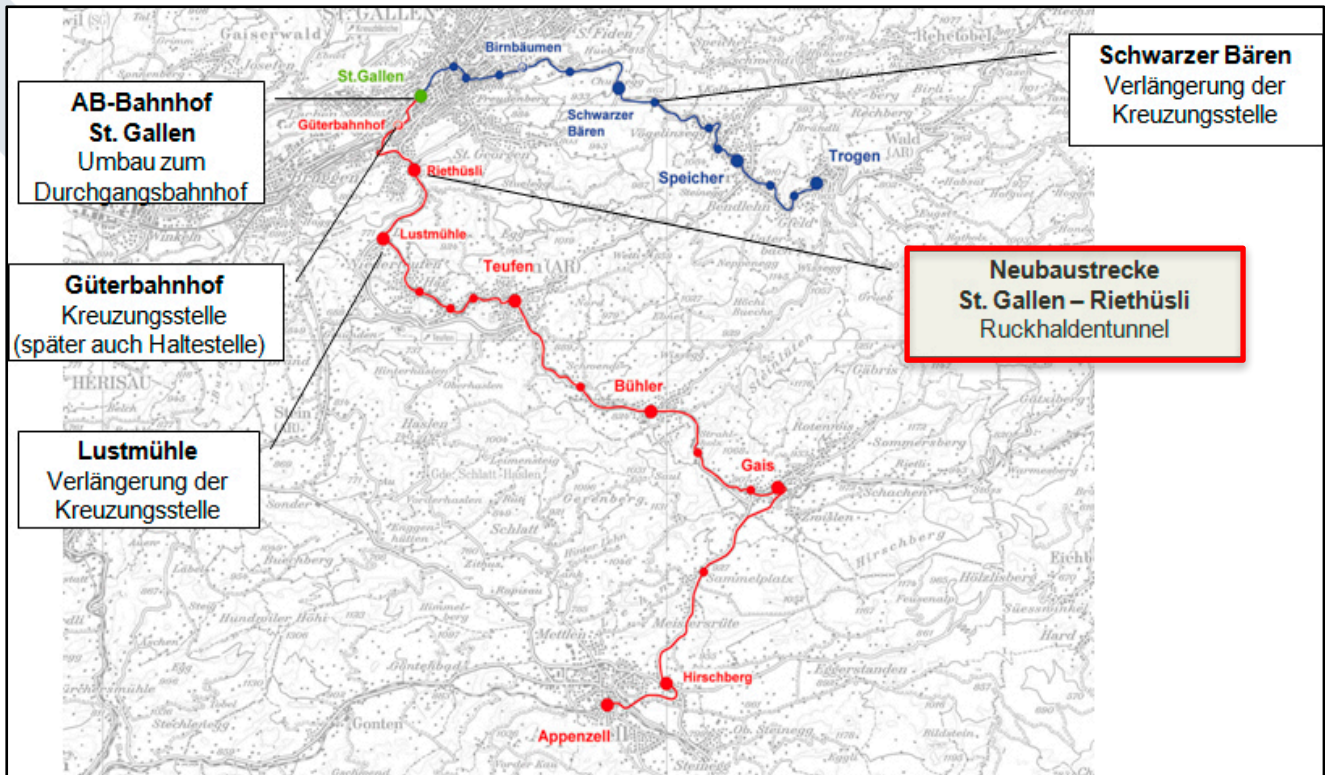


PASSANTE FERROVIARIO A SAN GALLO TRATTA RUCKHALDE

24.06.2016



DATI PRINCIPALI

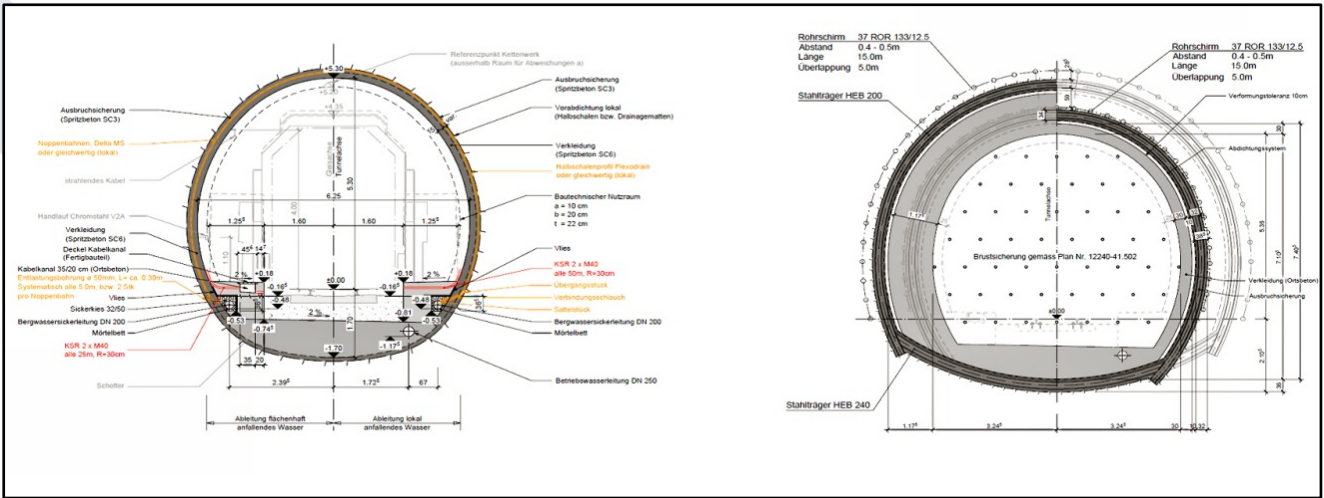


Tipologia d'opera	Tunnel ferroviario a una canna	
Committente	Ferrovie dell'Appenzello (Appenzeller Bahn, Herisau)	
Progettista	IG Ruck-Zug, c/o Schällibaum AG, Ebnaterstrasse 143, 9630 Wattwil	
Ubicazione	San Gallo	
Nome consorzio	Arge TransRuck	
Importo contrattuale	36'807'714.55 .- CHF (senza IVA)	
Percentuale Pizzarotti	25%	
Oggetto del contratto	Costruzione grezza e armamento ferroviario	
Avanzamento	in esecuzione i lavori preparatori al portale nord	
Data inizio lavori	marzo 2016	
Data fine lavori	ottobre 2018	
Dati principali	Lunghezza tunnel: Volume di scavo: Avanzamento con esplosivo: Avanzamento in materiale sciolto: Calcestruzzo spruzzato: Parete chiodata: Calcestruzzo per opere esterne: Lunghezza micropali: Pendenza massima tunnel:	ca. 633 m 33'000 m ³ 288 m galleria a una canna 345 m galleria a una canna ca. 4'900 m ³ ca. 1'150 m ² ca. 4'000 m ³ 950 m 8.5 %



PASSANTE FERROVIARIO A SAN GALLO TRATTA RUCKHALDE

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Questo lotto, oltre alla realizzazione della galleria scavata in tradizionale ed in parte in materiale sciolto, comprende esecuzione di opere civili quali:

- piccoli viadotti
- muri di sostegno
- trincee coperte
- edifici di servizio e parcheggi

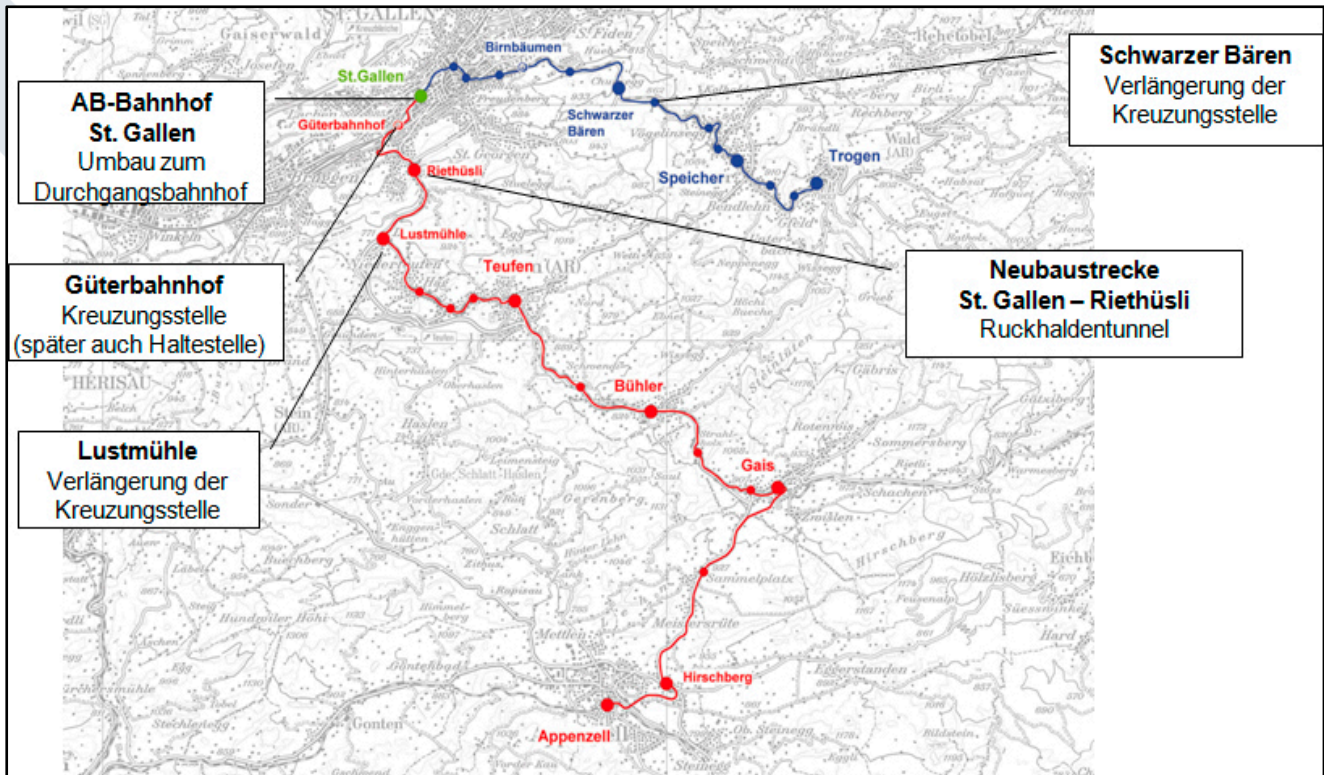
A lavori della costruzione grezza ultimati sarà poi da posare l'armamento ferroviario e il binario a scartamento ridotto di 1'000 mm.



TUNNEL FERROVIAIRE À SAN GALLO

PORTION RUCKHALDE

24.06.2016



DONNÉES DE BASE

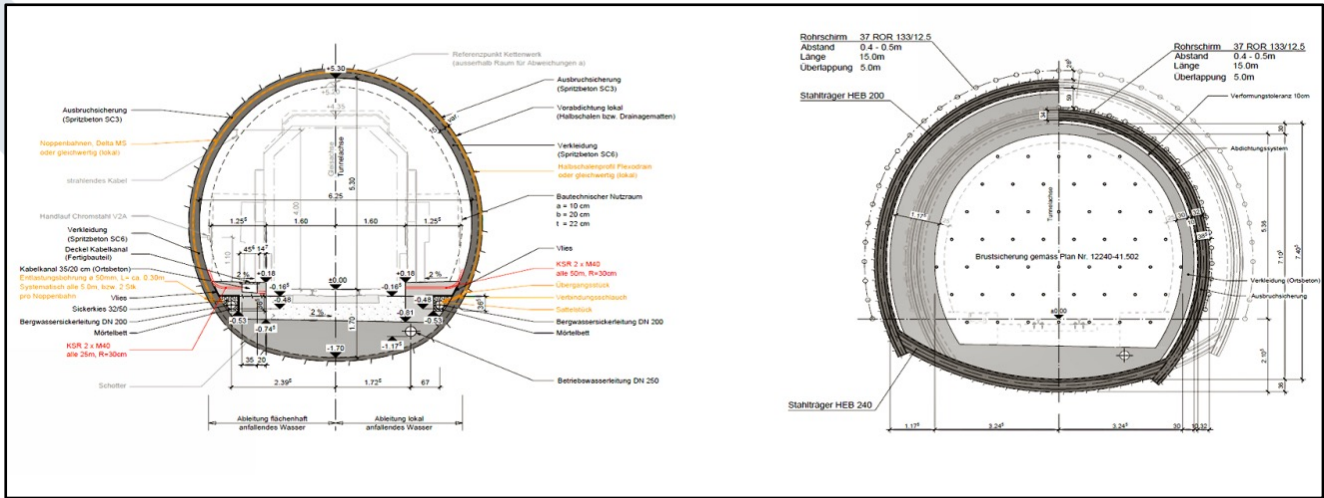


Type d'ouvrage	Tunnel ferroviaire à une canne	
Maitre d'ouvrage	Ferrovie dell'Appenzello (Appenzeller Bahn, Herisau)	
Ingénieur de projet	IG Ruck-Zug, c/o Schällibaum AG, Ebnaterstrasse 143, 9630 Wattwil	
Lieu	San Gallo	
Groupement	Arge TransRuck	
Montant contractuel	36'807'714.55.- CHF (HT)	
Pourcentage Pizzarotti	25%	
Objet du contrat	Construction brute et armement ferroviaire	
Avancement des travaux	En exécution les travaux de préparation au portail Nord	
Début des travaux	Mars 2016	
Fin des travaux	Octobre 2018	
Données principales	Longueur du tunnel :	env. 633 m
	Volume d'excavation :	33'000 m ³
	Avancement avec de l'explosif :	288 m tunnel à une canne
	Avancement en remblai :	345 m tunnel à une canne
	Béton coulé :	env. 4'900 m ³
	Mur à crampons :	env. 1'150 m ²
	Béton pour travaux extérieurs :	env. 4'000 m ³
	Longueur micro-poteaux :	950 m
	Pente maximale tunnel :	8,5 %



TUNNEL FERROVIAIRE À SAN GALLO PORTION RUCKHALDE

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Ce lot, en plus de la réalisation du tunnel excavé de façon traditionnelle et en partie en remblai, comprend l'exécution de travaux civils tels que :

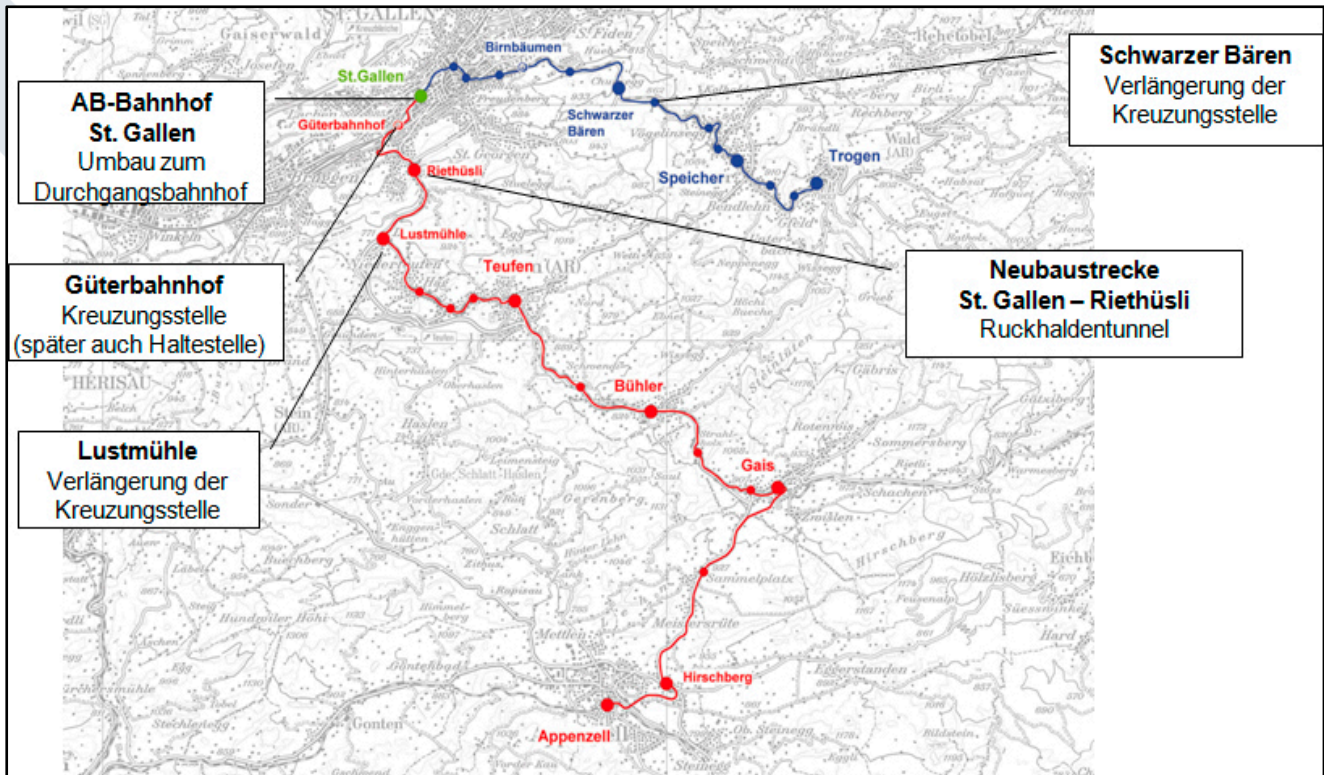
- Petits viaducs
- Murs de support
- Tranchées couvertes
- Bâtiments de service et parkings

Une fois les travaux de construction brute achevés il va falloir ensuite mettre en place l'armement ferroviaire et le rail à écart réduit de 1'000 mm.



RAILWAY TUNNEL AT SAN GALLO RUCKHALDE STRETCH

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DESCRIPTION

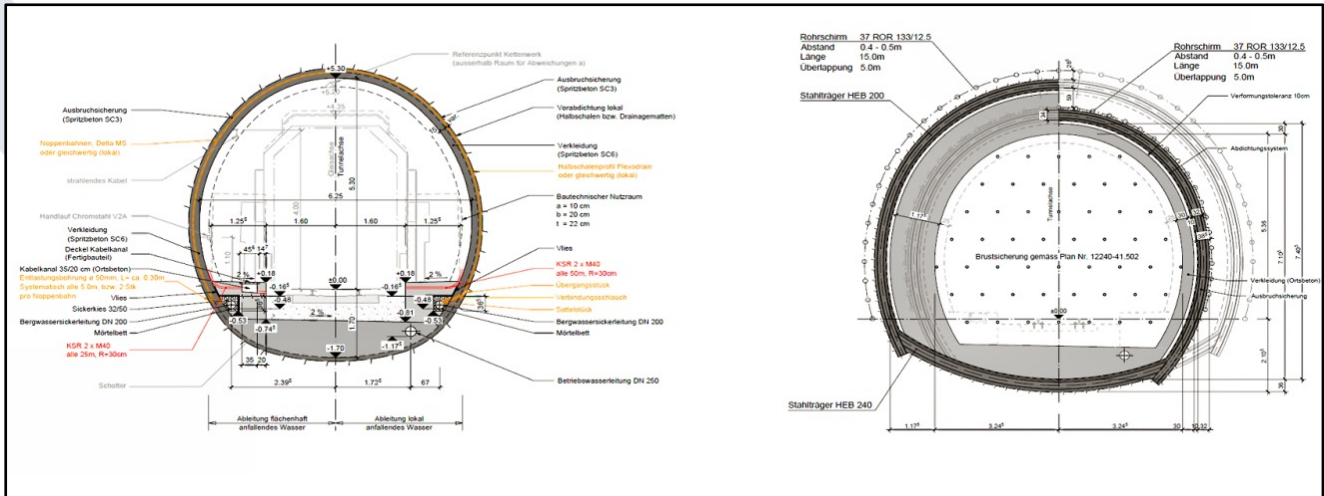


Type of work	One barrel Railway Tunnel																		
Employer	Ferrovie dell'Appenzello (Appenzeller Bahn, Herisau)																		
Project Supervisor	IG Ruck-Zug, c/o Schällibaum AG, Ebnaterstrasse 143, 9630 Wattwil																		
Location	San Gallo																		
Consortium	Arge TransRuck																		
Contract amount	36,807,714.55.- CHF (excl.VAT)																		
Work share Pizzarotti	25%																		
Contract object	Rough construction and rail permanent way																		
Progress	North portal preparatory works in progress																		
Work starting date	March 2016																		
Work completion date	October 2018																		
Main Data	<table border="0"> <tr> <td>Tunnel length:</td> <td>ca. 633 m</td> </tr> <tr> <td>Excavation volume :</td> <td>33,000 m³</td> </tr> <tr> <td>Progress with explosive :</td> <td>288 m one barrel tunnel</td> </tr> <tr> <td>Progress with unconsolidated material:</td> <td>345 m one barrel tunnel</td> </tr> <tr> <td>Sprayed concrete:</td> <td>approx. 4,900 m³</td> </tr> <tr> <td>Bolted wall:</td> <td>approx. 1,150 m²</td> </tr> <tr> <td>Concrete for external works:</td> <td>approx. 4,000 m³</td> </tr> <tr> <td>Micro poles length:</td> <td>950 m</td> </tr> <tr> <td>Maximum tunnel inclination :</td> <td>8.5 %</td> </tr> </table>	Tunnel length:	ca. 633 m	Excavation volume :	33,000 m ³	Progress with explosive :	288 m one barrel tunnel	Progress with unconsolidated material:	345 m one barrel tunnel	Sprayed concrete:	approx. 4,900 m ³	Bolted wall:	approx. 1,150 m ²	Concrete for external works:	approx. 4,000 m ³	Micro poles length:	950 m	Maximum tunnel inclination :	8.5 %
Tunnel length:	ca. 633 m																		
Excavation volume :	33,000 m ³																		
Progress with explosive :	288 m one barrel tunnel																		
Progress with unconsolidated material:	345 m one barrel tunnel																		
Sprayed concrete:	approx. 4,900 m ³																		
Bolted wall:	approx. 1,150 m ²																		
Concrete for external works:	approx. 4,000 m ³																		
Micro poles length:	950 m																		
Maximum tunnel inclination :	8.5 %																		



RAILWAY TUNNEL AT SAN GALLO RUCKHALDE STRETCH

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In addition to the realisation of the tunnel excavated using the traditional method and partly using unconsolidated material, this lot includes the execution of civil works, namely:

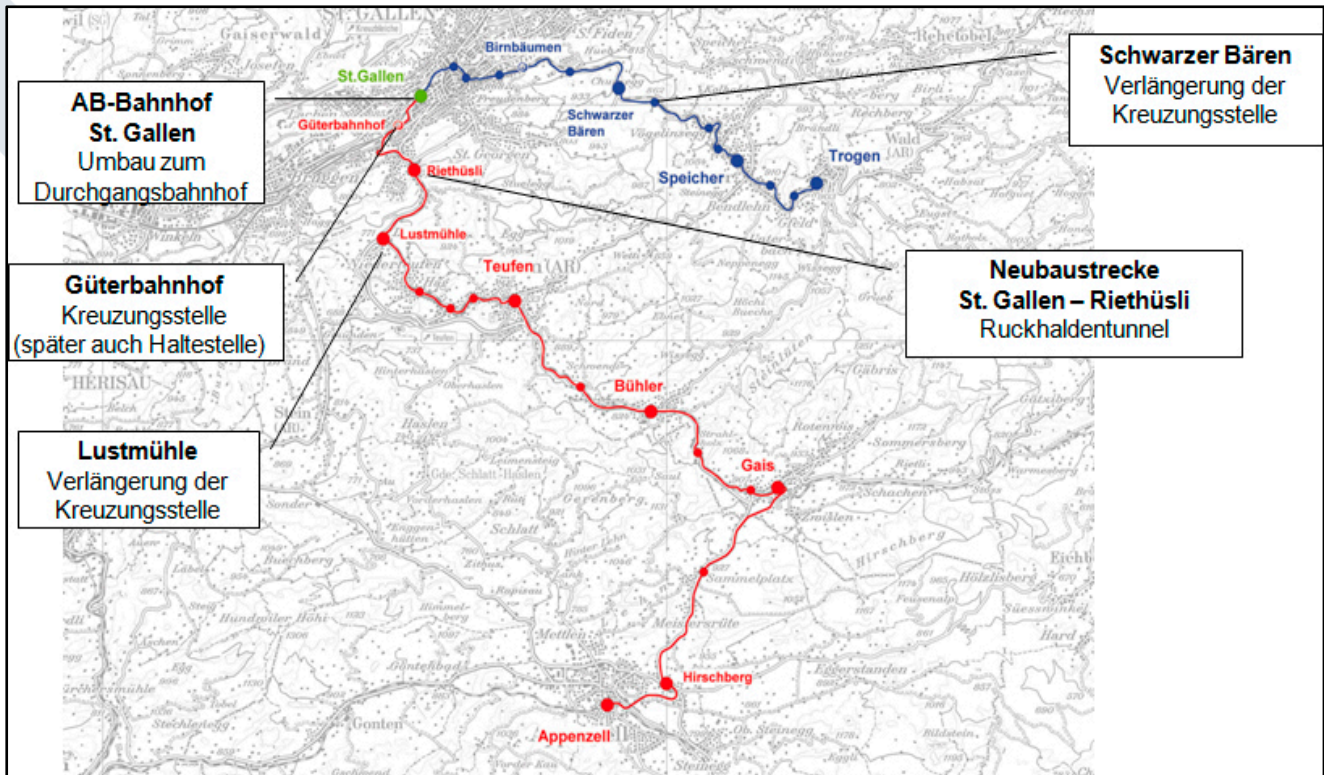
- small viaducts
- retaining walls
- covered dugouts
- Service building and parking facilities

Upon completion of rough work the rail permanent way and the 1,000 mm reduced track gauge must be installed.



DURCHMESSERLINIE APPENZELL TUNNEL ST. GALLEN – TROGEN

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PROJEKTDATEN



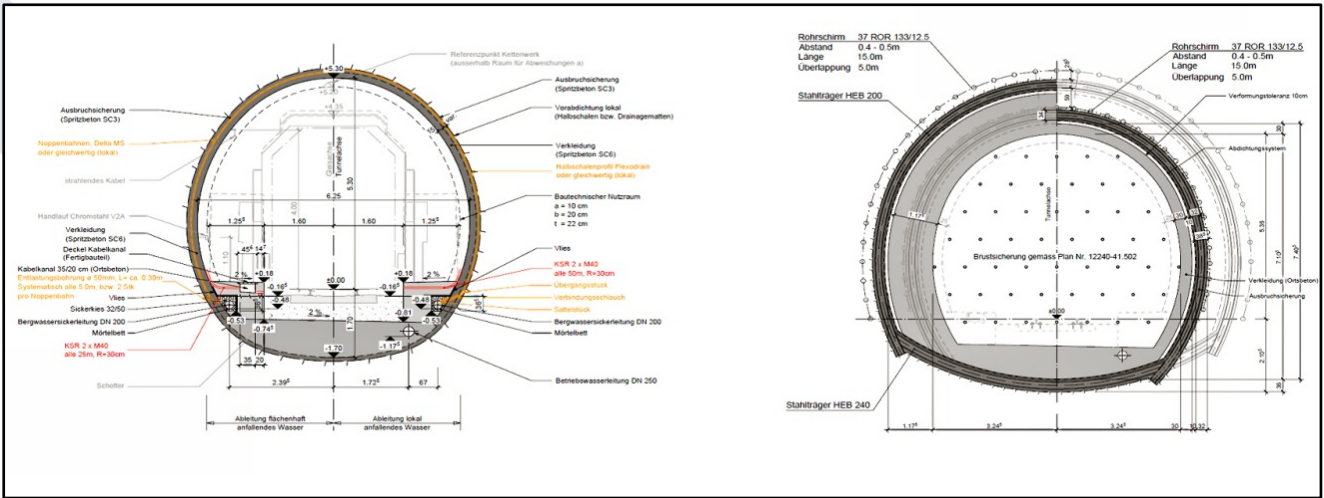
Art des Bauwerks	Einspurige Bahntunnel	
Bauherrschaft	Appenzeller Bahnen AG, Herisau	
Projektverfasser	IG Ruck-Zug, c/o Schällibaum AG, Ebnaterstrasse 143, 9630 Wattwil	
Ort	St Gallen	
Arbeitsgemeinschaft	Arge TransRuck	
Bausumme	36'807'714.55 – CHF (ohne MwSt.)	
Beteiligung Pizzarotti	25%	
Bauobjekt	Los 3.4	
Fertigstellungsgrad	Arbeiten am Nordportal	
Baubeginn	März 2016	
Bauabnahme	Oktober 2018	
Kennzahlen	Länge bergmännischen Tunnel: Sprengvortrieb: Ausbruchvolumen Untertag (fest): Lockergesteinsvortrieb: Spritzbetonsicherung Untertag : Rühlwände mit Spriessungen: Beton Kunstbauten, exkl. Untertag-Tunnel: Bohr- und Mikropfähle: Max. Steigung:	ca. 633 m ca. 288 m 33'000 m ³ ca. 345 m ca. 4'900 m ³ ca. 1150 m ² ca. 4'000 m ³ 950 m 8.5 %

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DURCHMESSERLINIE APPENZEL TUNNEL ST. GALLEN – TROGEN

24.06.2016



Nordportal



Die Hauptarbeiten für das Teilprojekt 3.4, Neubaustrecke Ruckhalde betreffen:

- Tunnelbau bergmännischer Vortrieb
- Kunstbauten:
 - Brückenbau
 - Stützmauern
 - Tagbautunnel
- Trassebau für Bahnanlagen
- Gleisbauarbeiten
- Technikgebäude
- Parkboxen