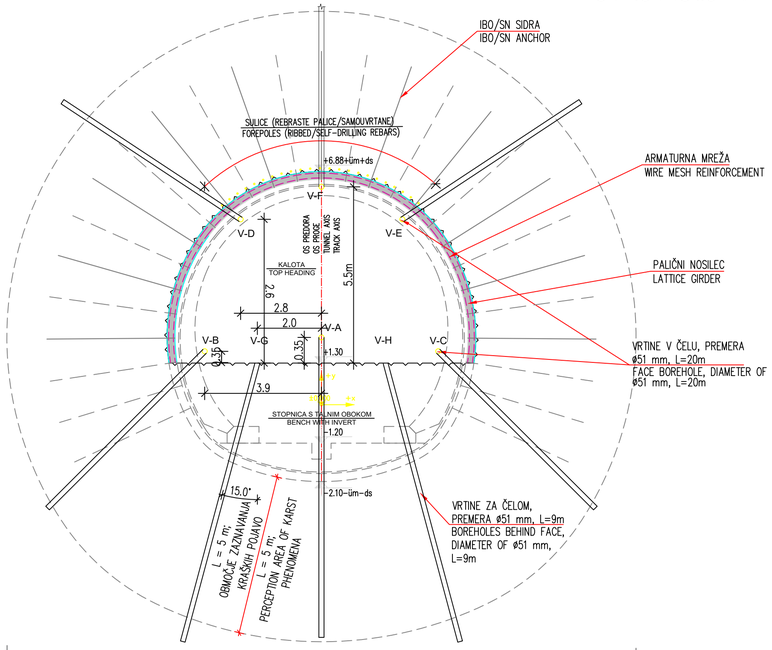
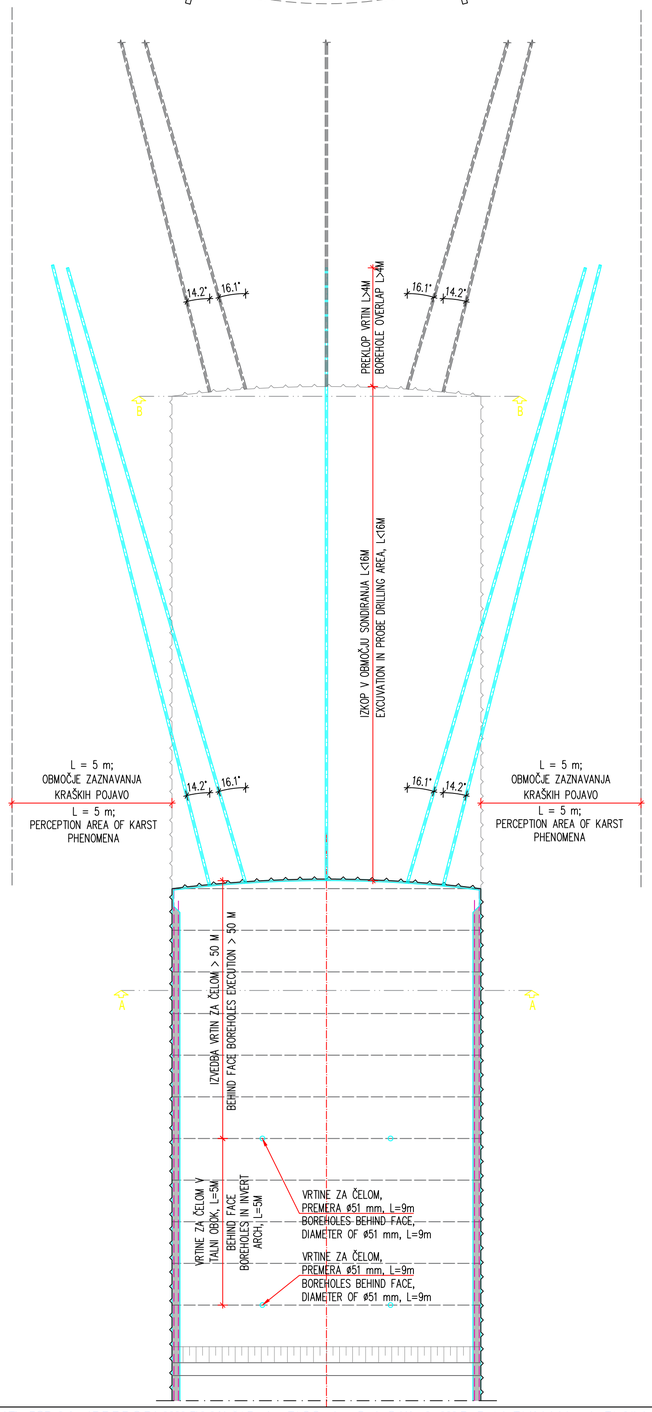
Nizka in srednja stopnja zakraselosti
low and medium level of karstification

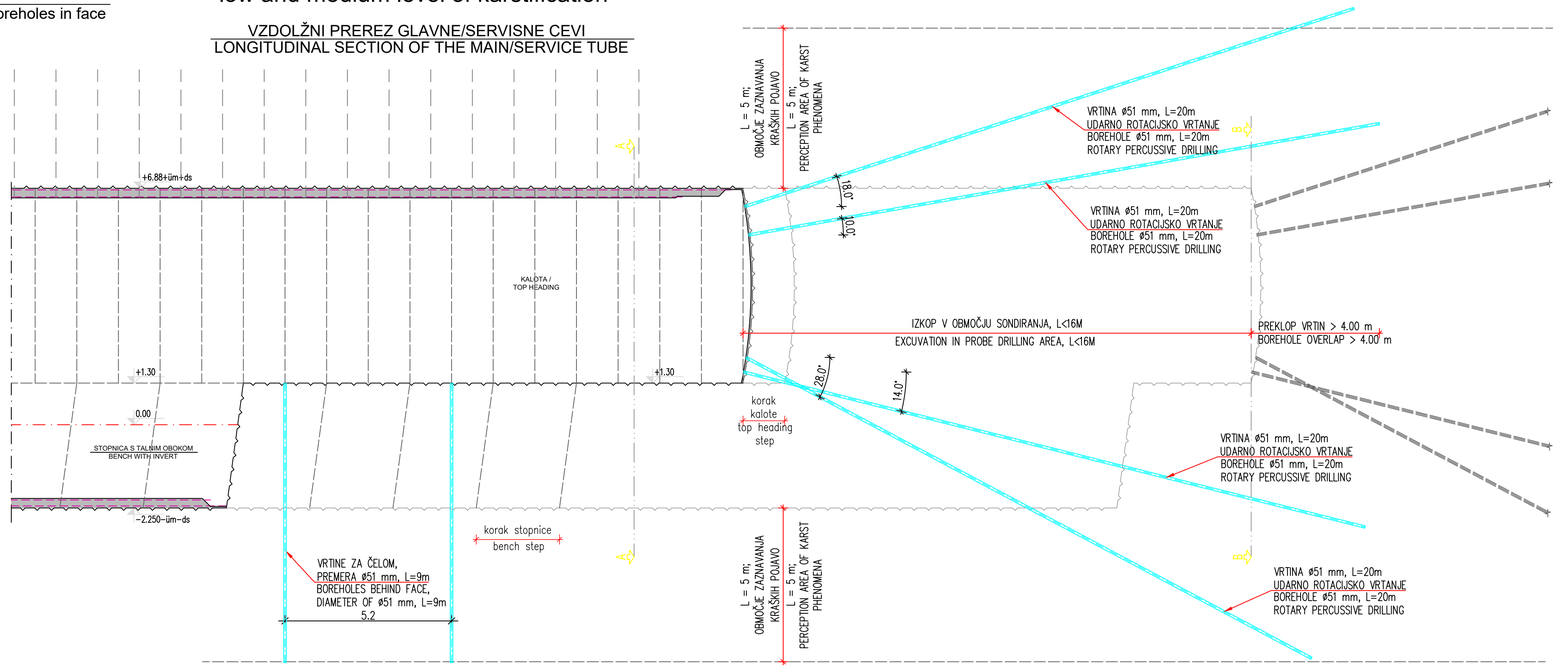
PREREZ A-A
SECTION A-A



SHEMA PREDVRTAVANJA - vrtine v čelu
FOREBORING SCHEME - boreholes in face



VZDOLŽNI PREREZ GLAVNE/SERVISNE CEVI
LONGITUDINAL SECTION OF THE MAIN/SERVICE TUBE



OPOMBE:

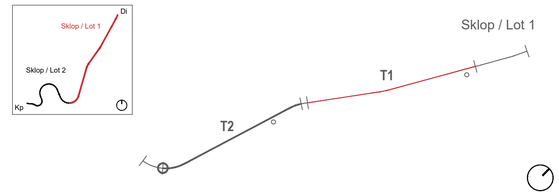
1. Prikazan raster vrtin se izvaja kot scenarij za nizko in srednjo stopnjo zakraselosti, kjer s centralno vrtino ne ugotovimo prisotnosti kraških pojavov. Glede na stopnjo zakraselosti se v centralni vrtini izvaja sondiranje z vrtinami oziroma geofizikalna metoda z refleksijo. Obseg glede na stopnjo zakraselosti je naslednji:
   - vrtine v čelo - izvedba 6 vrtin in ugotavljanje kraških pojavov z vrtinami,
   - vrtine v talni obok - izvedba dodatnih 2 vertikalnih vrtin za ugotavljanje kraških pojavov v stopnici in talnem oboku.
2. V primeru uporabe tega scenarija obstaja neraziskani del hribine med vrtinami. V primeru ugotovitve večje zakraselosti, je potrebno vrtine izvesti v večjem premeru, da se omogoči izvedbo geofizikalnih raziskav .
3. Vrtine se izvede vsakih 16 m.
4. Usmerjenost vrtin:
   - vrtini B,C: dolžina 20m, upad: -14°, azimut: 14°
   - vrtina A: dolžina 20m, upad: -20°, azimut: 0°
   - vrtini D,E: dolžina 20m, upad: +10°, azimut: 16°
   - vrtina F: dolžina 20m, upad: +18°, azimut: 0°
   - vrtini G,H: dolžina 9m, upad: - 90°, azimut: 15°
5. Vrtine se izvaja z udarnim rotacijskim vrtanjem premera 51 mm brez cevljenja.
6. Za izvedbo vrtine mora biti vrtalna garnitura opremljena z data loggerjem, kjer se spremlja hitrost in pritisk vrtanja.
7. Shema izvedbe vrtin se uporablja za drenirane in nedrenirane odseke predora na območjih nizke in srednje stopnje zakraselosti.
8. Injektiranje vrtin v dolžini 4 m se mora izvesti na območjih z dotoki vode.
9. Glede na razmere lahko geotehnični inženir določi izvedbo dodatnih vrtin.

NOTES:

1. The shown raster of boreholes is performed as a scenario for the low and medium level of karstification, where the presence of karst phenomena is not determined by the central boreholes. Depending on the rate of karstification, drilling with boreholes or geophysical method with reflection is performed in the central borehole. The extent according to the rate of karstification is as follows:
   - boreholes in face - implementation of 6 boreholes and finding out about karst phenomena with boreholes.
   - boreholes in inverted arch - implementation of 2 additional vertical boreholes to find out about karst phenomena in the bench and in inverted arch.
2. Using this scenario, part of the rock is unsearched among the boreholes. To determine that there are karstifications, boreholes need to be drilled in larger spaces so that geophysical researches can be conducted.
3. Boreholes are drilled every 16m.
4. Orientation of boreholes:
   - boreholes B,C: length 20m, decrease: -14°, azimuth: 14°
   - borehole A: length 20m, decrease: -20°, azimuth: 0°
   - boreholes D,E: length 20m, decrease: +10°, azimuth: 16°
   - borehole F: length 20m, decrease: +18°, azimuth: 0°
   - boreholes G,H: length 9m, decrease: - 90°, azimuth: 15°
5. The boreholes are being performed by rotary percussive drilling with the diameter of 51 mm without piping.
6. To drill a borehole, the drilling equipment must be equipped with a data logger in which the drilling speed and pressure are monitored.
7. The drilling scheme is used for drained and non-drained sections of the tunnel in areas of low and medium level of karstification.
8. Injection of boreholes in length of 4 m shall be applied in areas with water inflow.
9. Depending on conditions, geotechnical engineer can instruct execution of additional boreholes.

Projektantska skupina
2.TIR

Sofinancirano s pomočjo Instrumenta za povezovanje Evrope Evropske unije



Projekt / Project
Drugi tir železniške proge Divača - Koper, Sklop 1
Second Track of Divača - Koper Railway Line, Lot 1

Objekt / Structure
Načrt predora T1
Tunnel T1

Del objekta / Structure Part
Kraški pojavi
Karst Formations

Naročnik / Client 2TDK, Družba za razvoj projekta d.o.o. Železna cesta 18, SI-1000 Ljubljana			
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Vodilni projektant / Project Leader Elea iC d.o.o., Dunajska cesta 21, SI-1000 Ljubljana			
Projektant načrta / Designer IRGO Consulting d.o.o., Slovenčeva ulica 93, SI-1000 Ljubljana			
Namestnik vodje projekta / Deputy Project Manager dr. Vojkan Jovičić, univ.dipl.inž.grad.	Id. št. / ID No. G-2103	Št. projekta / Project No. 190175/1	Vrsta projekta / Stage PZI
Pooblaščeni inženir / Chartered Engineer dr. Vojkan Jovičić, univ.dipl.inž.grad. Elvir Muhić, dipl.inž.grad. mag. Boštjan Volk, univ.dipl.inž.grad.	Id. št. / ID No. G-2103 G-3568 G-2619	Zap. št. načrta / Cons. Plan No. S1-x2-03	Št. načrta / Plan No. IC337/19
		Vrsta načrta / Plan Type Načrt s področja gradbeništva	
Izdelovalec risbe / Draftsperson mag. Boštjan Volk, univ.dipl.inž.grad.	Id št. / ID No. G-2619	Merilo / Scale 1:100	Datum / Date 06 - 2020

Naziv risbe / Drawing Title
Shema predvrtavanja - sondiranje
Foreboring scheme - probe drilling

Risba / Drawing	Št. risbe / Drawing No.	Stanje risbe / Drawing Status	Različica / Revision
2TDK_IRG_PZI_GR_S1-x2-03_T8_XX_SH_OL_BI	8002	P	004

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12/9/2020