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Infranumerika doo
Hrvatske zeljeznice dd

The Contractual Models for Tunnels on New Croatian Railway Lines

International Symposium
"Practices and Trends for
Financing and Cotracting
Tunnels and Underground Works"

Athens
March 22-23, 2012

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1.Introduction

Port Rijeka :

* deep sea for the new generation of ships
* near to middle EU

1.Introduction

- **Traffic Corridors in SEE :**

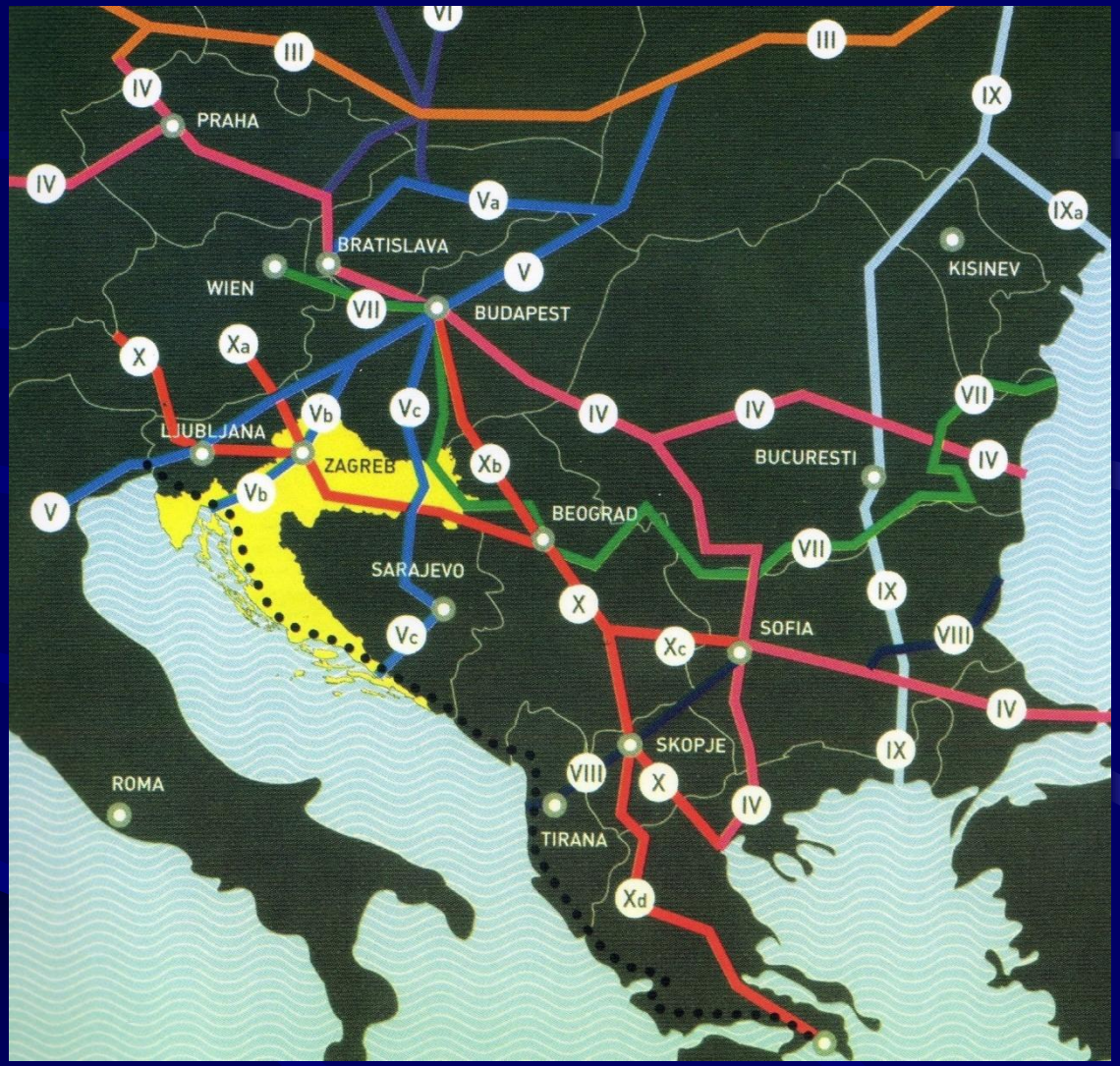
V, X – Slovenia

Vb, X – Croatia

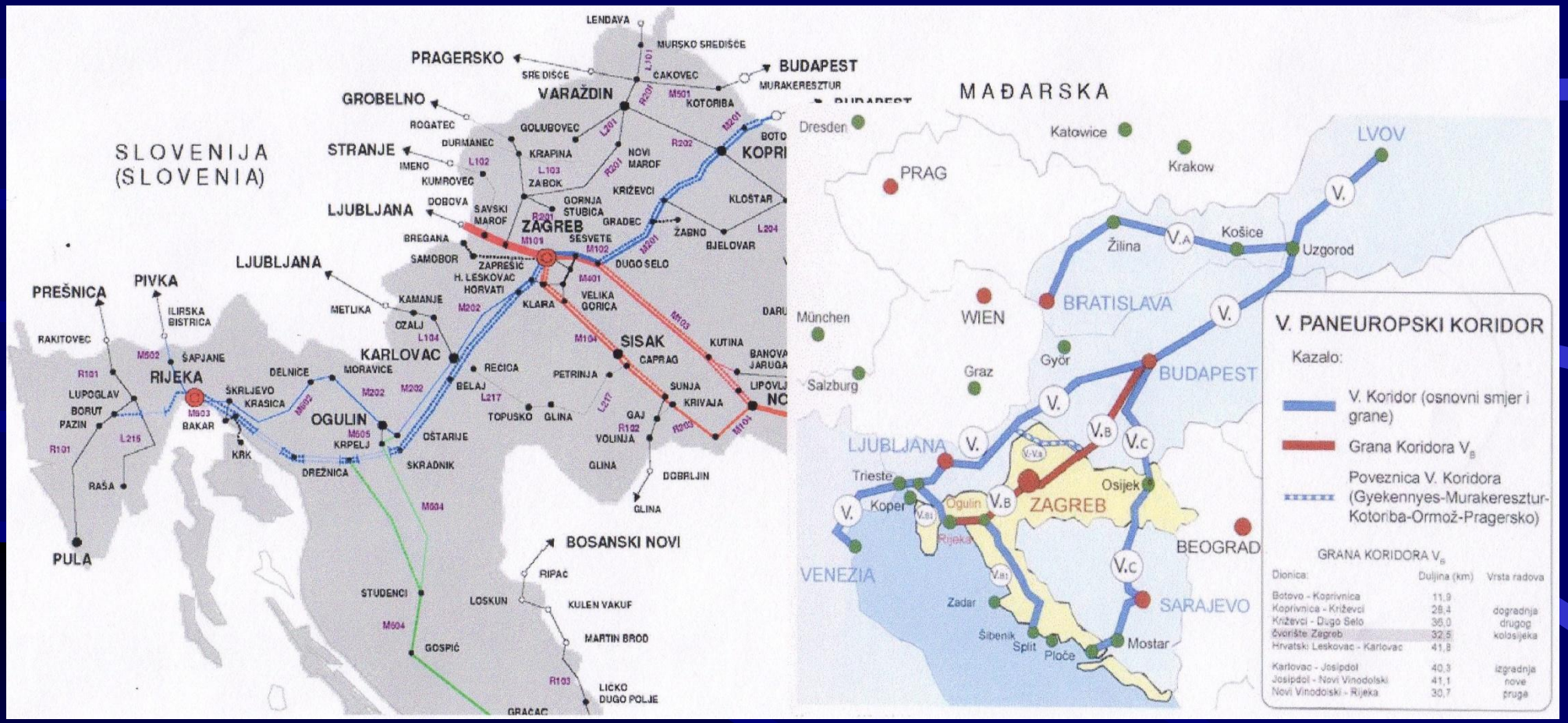
Vc – Bosnia+Herz.

X – Serbia

FYROM



2. Railway Corridor Vb

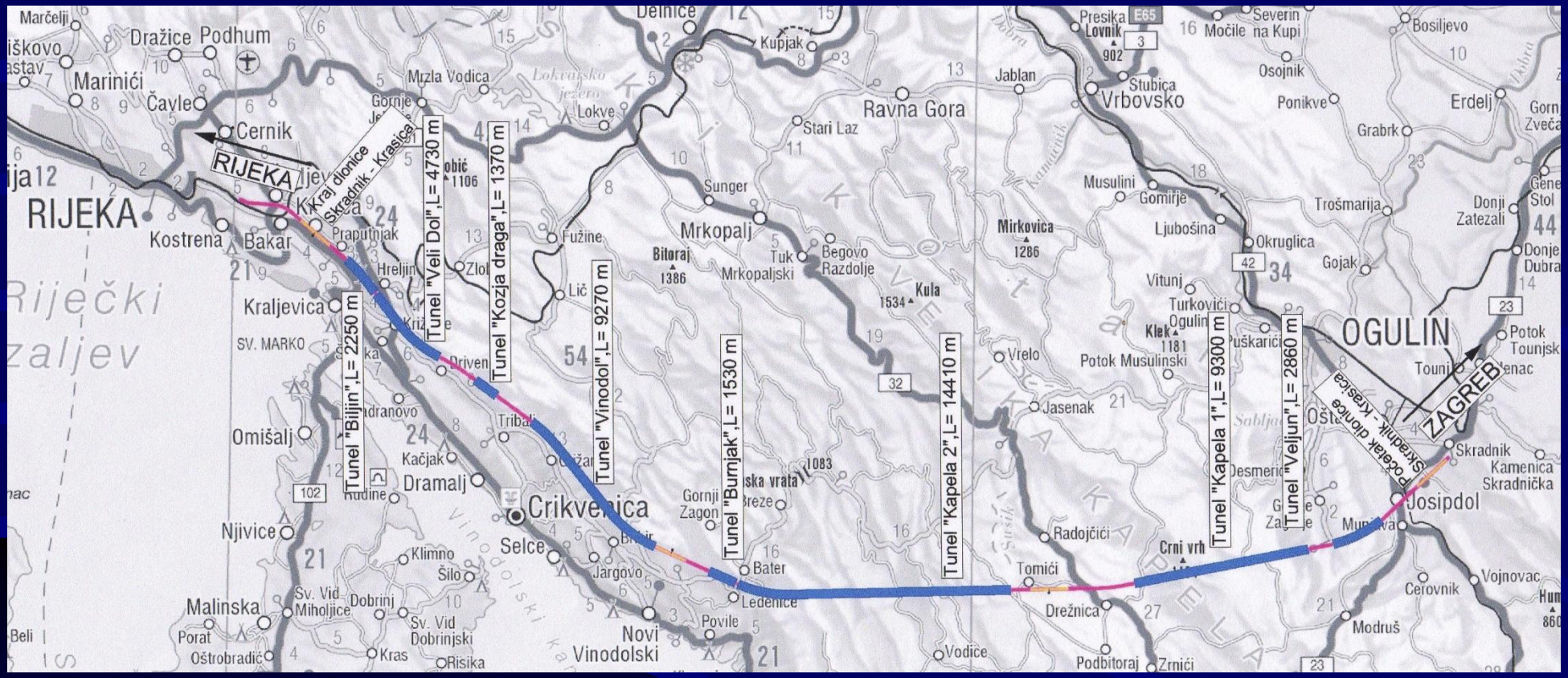


Layout of the railway network in Croatia and planned corridors.

2. Railway Corridor Vb

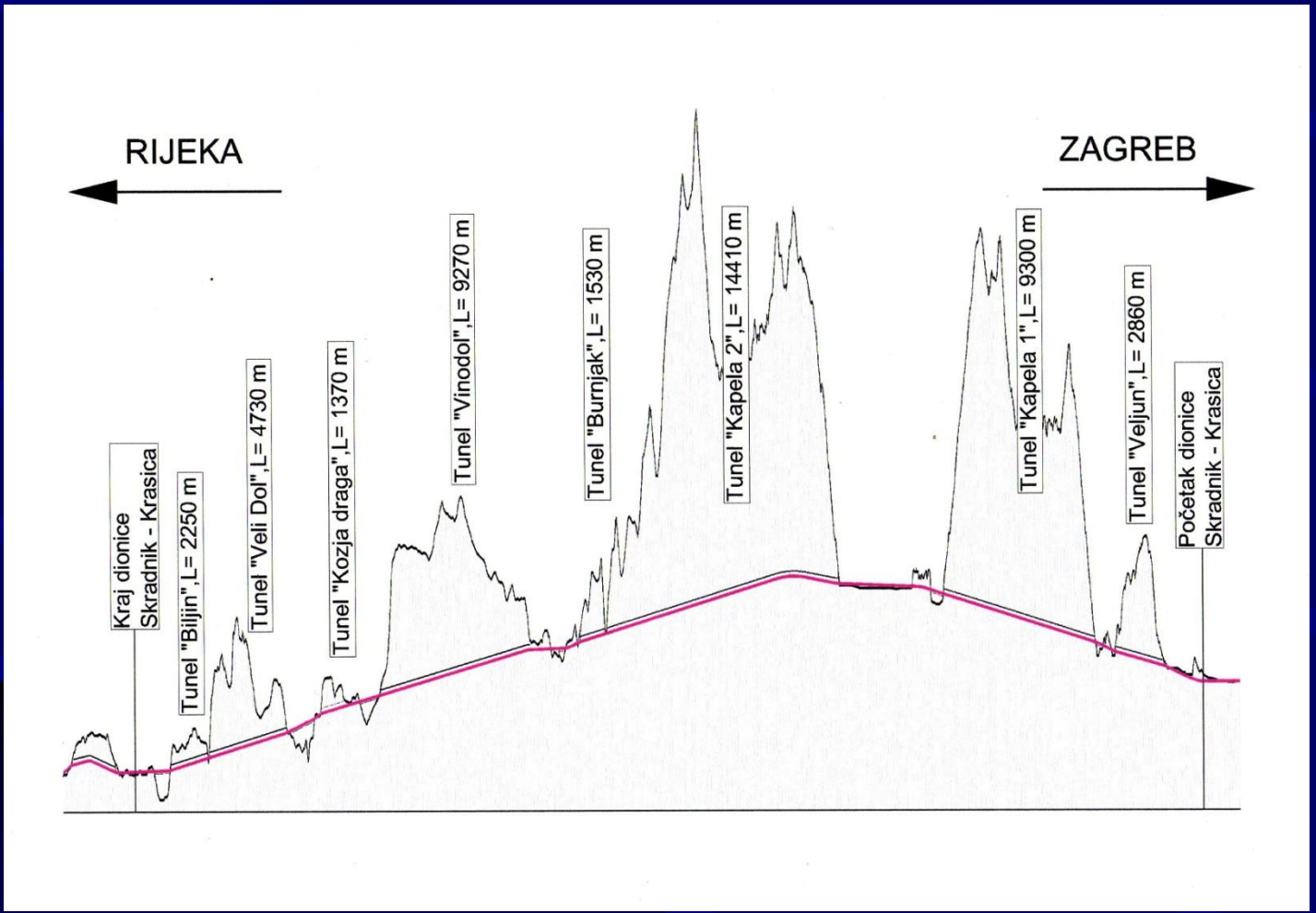
Layout of the railway line Botovo(HUN)–Zagreb-Rijeka on Corridor Vb.

3. Tunnelling Section



Layout of the tunnelling part of the Sector III, Section 3: (Skradnik-Krasica/Rijeka) railway line Botovo (HUN)-Zagreb-Rijeka on Corridor Vb.

3. Tunnelling Section



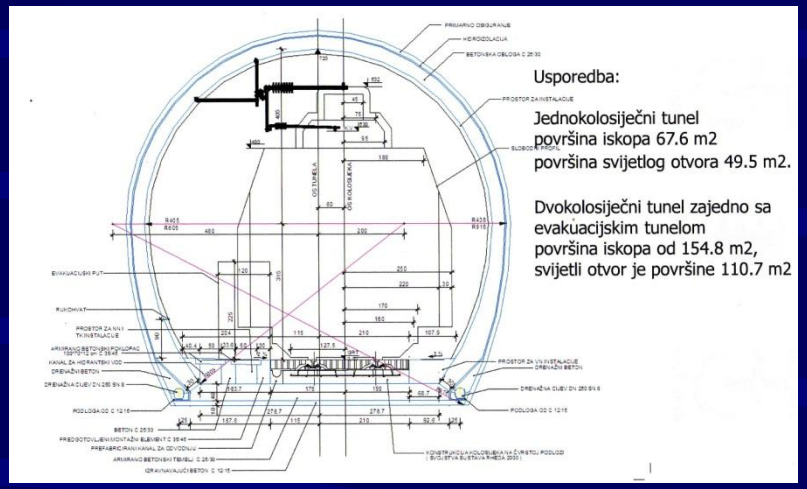
Longitudinal section of the tunnelling part

3. Tunnelling Section

Nr.	Tunnel	Length (m)
1	Treskavac	395
2	Veljun	2.860
3	Kapela 1	9.300
4	Kapela 2	14.410
5	Burnjak	1.530
6	Vranja	395
7	Vinodol	9.270
8	Kozja draga	1.370
9	Veli dol	4.730
10	Biljin	2.250

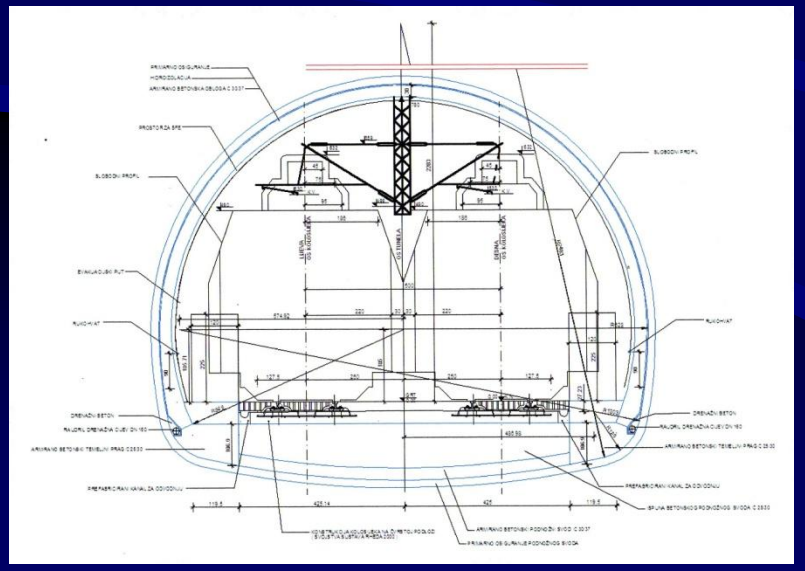
Tunnel lengths on the section Skradnik-Krasica/Rljeka

3. Tunnelling Section



single track excavation section without invert arch : 66.40 m²

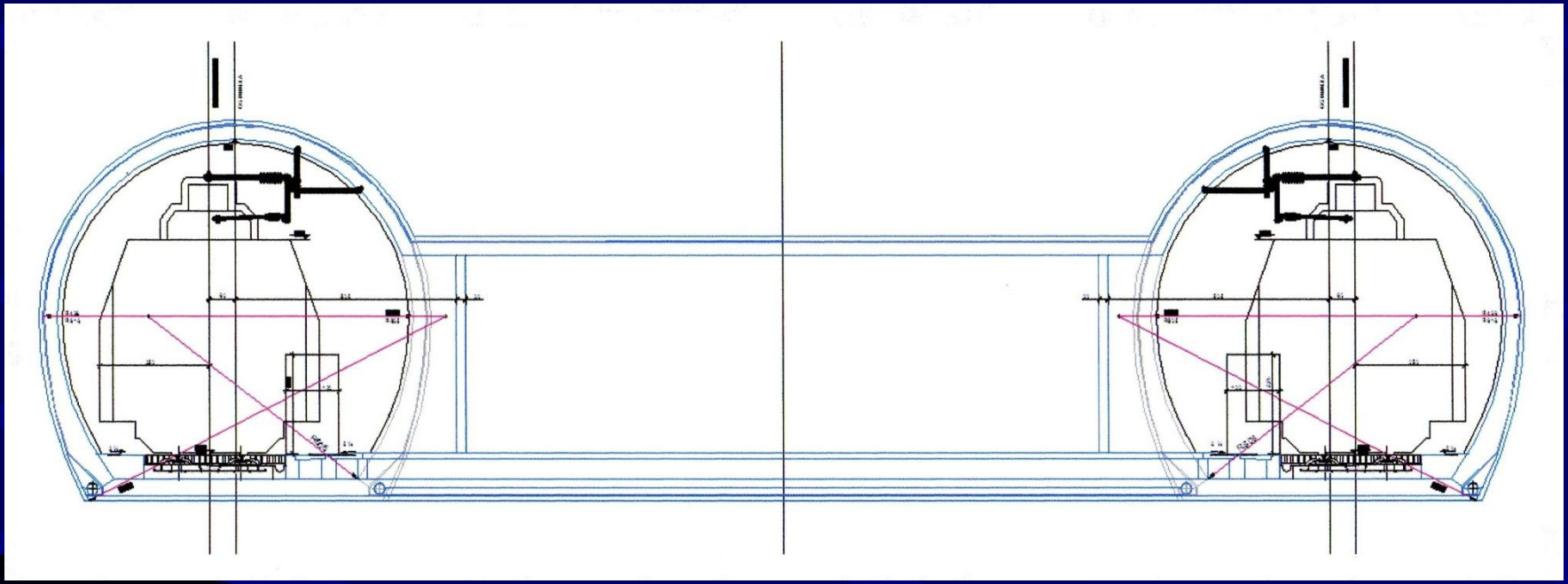
single track excavation section with invert arch : 74.74 m²



double track excavation section without invert arch : 97.60 m²

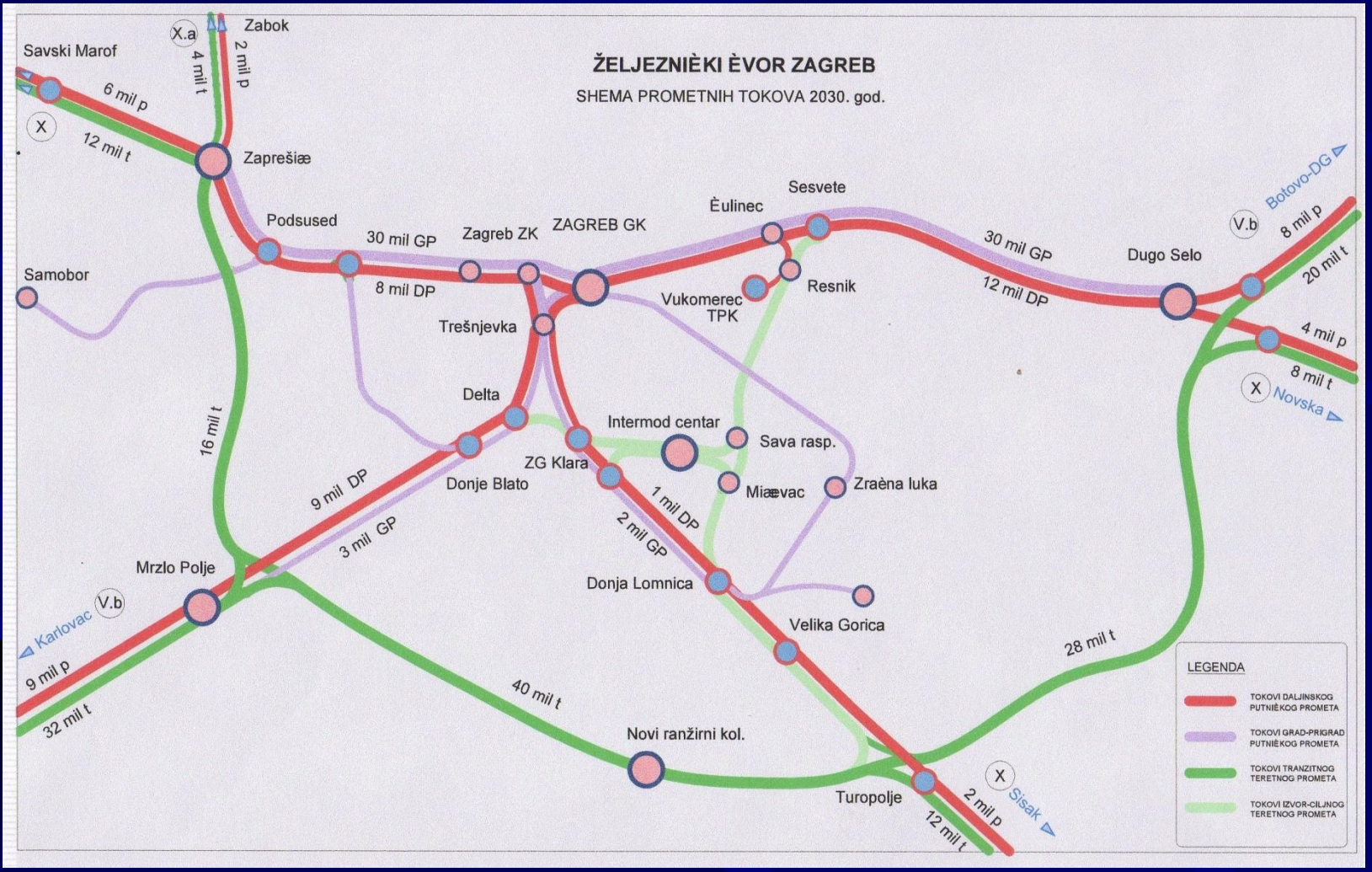
double track excavation section with invert arch : 113.50 m²

3. Tunnelling Section



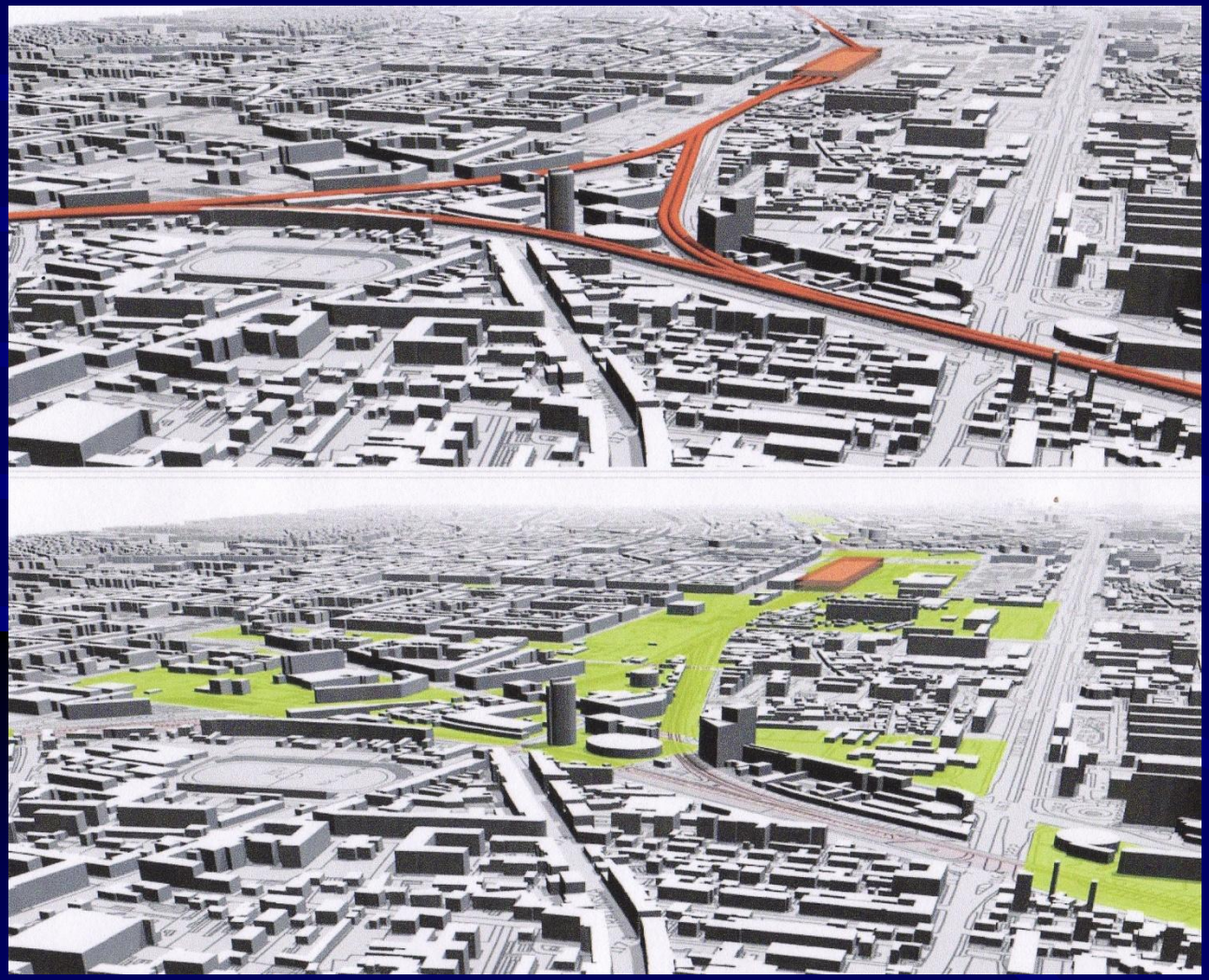
Typical cross section with single tubes and single track : foreseen for longer tunnels

3. Tunnelling Section



Layout of the suggested future Zagreb railway junction in 2030.

3. Tunnelling Section



3D view to the Zagreb railway triangle on surface and in underground.

4. Contractual Platform - PRAG

- pre-accession period for all projects wit h some part of EU Funds legal procedure over PRAG (Practical Guide to Contract Procurement)

- It replaces Croatian „Public Procurement Law“ (it will be changed after accession and will be very similar to PRAG and includin application of FIDIC documents fully)

- SERVICES : PRAG foresees procurement for services in a 2-step procedure (technical + financial part)
- Shortlist of prequalified applicants
- Award criteria : the best value for money

- WORKS :
- Selection criteria for the short list : financial and economic capacity + technical and professional capacities
- Award criteria : price (exceptionally best value for money)

5. Time Schedule

- Design and Permissions :
- Start with announcements in Summmer 2011
- Section 1: short list + financial bid submission, award : March 2012 ?!
- Section 2: short list : Feb.2012, financial bid is following
- Section 3: short list : expected
- Time for design and permissions : 42-48months (2012-end 2016)

- Construction Works :
- Section lenghts : 40-50 km
- Construction Award : beginning 2017 !?
- Construction works : 5-7 years (end at 2023-2025)

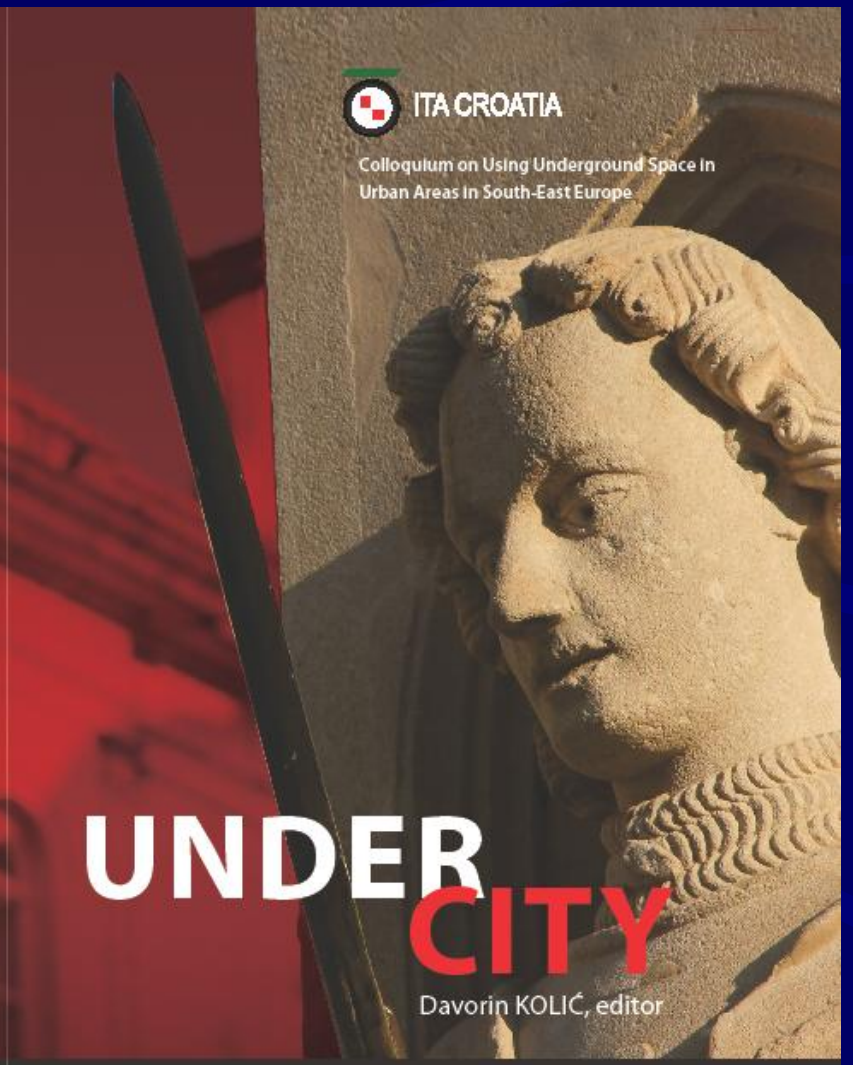
Prof.In-Mo LEE, South Korea
President ITA-AITES 2010-2013

"...I believe the past experience is really important in design and construction of new tunnelling project. It is equally important for tunnelling engineers to understand the fundamental principles of underground structures formed by excavation (in contrast to above ground structures). In this aspect, it is timely and beneficial to tunnelling engineers to hold this Symposium to exchange technical knowledge and ideas regarding tunnelling and underground structures among South-East European countries.

Underground space utilization has increasing importance as it enables us to make alternative use of the earth's surface for improvement in the quality of daily life. Particularly in urban areas, there is a worldwide trend to keep ground surface as green fields by putting existing surface structures into underground. Consequentially, tunnelling engineers are really creators of a new and sustainable world. I hope we - ITA, ITA Croatia, and neighboring member nations - take this opportunity to demonstrate to the government officials and decision makers that tunnelling and underground structures will offer us green and long lasting benefits..."

UNDER CITY

Davorin KOLIĆ, editor



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