

DB ENGINEERING COMPANY



DESIGN, ENGINEERING AND CONSULTING COMPANY

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ABOUT OUR COMPANY

About our Company:

DB Engineering is company specialized in designing, designing supervision, site supervision and rehabilitation of road and railway infrastructure, including road and railway bridges, tunnels, motorways, junctions, city streets network.

Apart from these main disciplines, DB Engineering Co. also covers wide range of works on building structures, including land survey and geotechnical research.

All of our projects were successfully finished and they are guarantee that DB Engineering Co. manages all projects with highest quality and according to all relevant international standards, on mutual benefit and satisfaction of the Investor and the Beneficiary.

DB Engineering offers wide range of designing and engineering services:

- All types of Studies
- All phases of designing
- Project Monitoring
- Supervision of designing and construction works
- Consulting Services
- Design Review



DB ENGINEERING



Departments:

Operatively DB Engineering Co. is organized in two departments:

- **Structural Department**
(bridges, tunnels, overpasses, underpasses, temporary structures, walls and all other structures of roadway and railway infrastructure)
- **Roadway Department**
(motorways, junctions, regional and other roads, city streets, traffic equipment, signs and road marking design)

Both of these departments include following:

- Land survey
- Geological research
- Technical infrastructure Design
- Drainage Design
- Environmental Impact Assessment
- Studies on protection, technology, maintenance, monitoring
- etc.

Design & Engineering Services



Bridges & other structural objects



Roads



Employees, Clients:

DB Engineering Co. holds all necessary licenses for named services in Serbia.

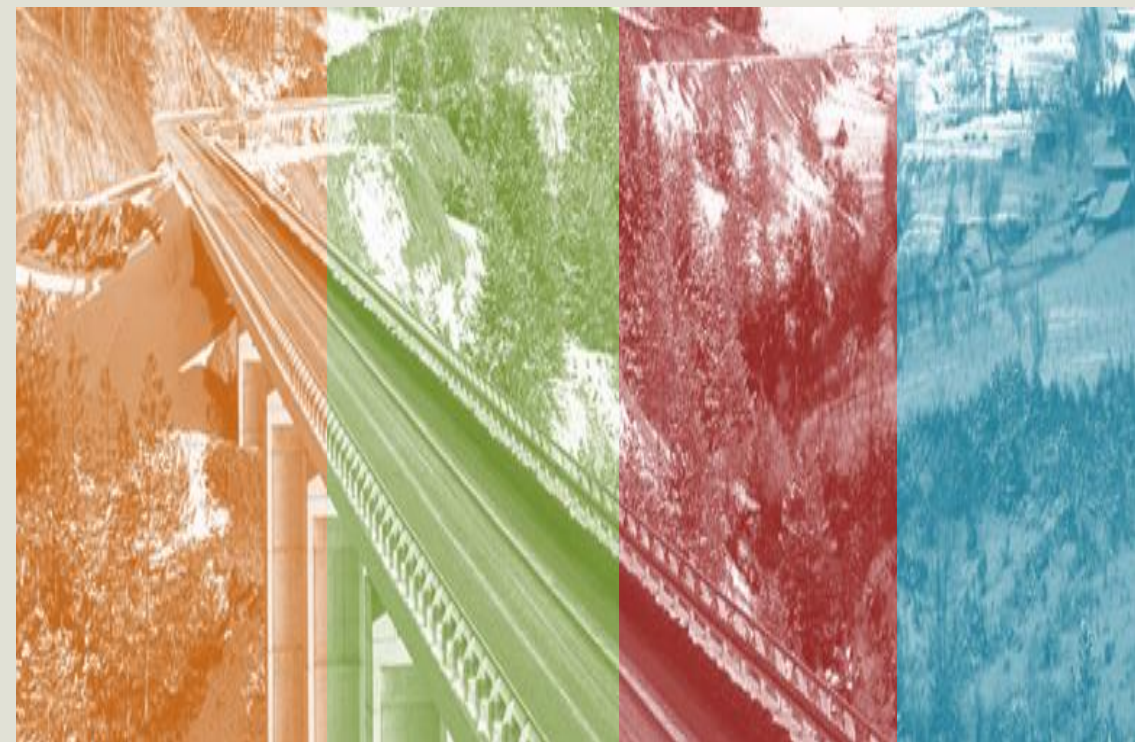
DB Engineering Co. employees are skilled, high qualified engineers who gained their knowledge and experiences in: Serbia, Montenegro, Bosnia and Herzegovina, Slovenia, Ireland, Oman and Libya.

Our Clients are:

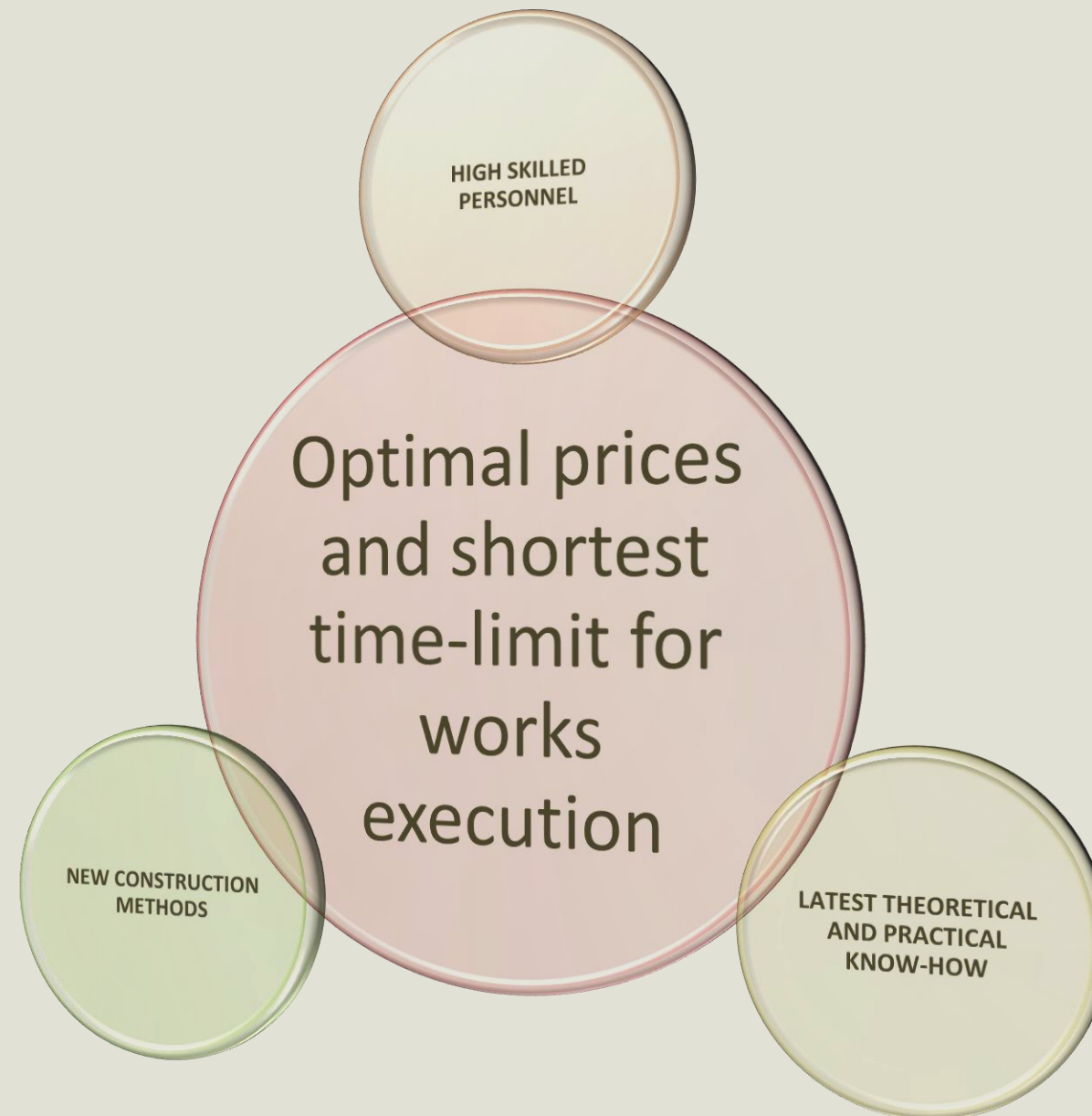
- Bridge, Roads & Traffic Authorities,
- Local Councils and
- Contractors.

Application of International and local standards, due to Clients request, such as:

- EUROCODES,
- AASHTO,
- British Standards,
- NRA Design Manuals,
- SRPS, SODOC and other national regulations,
- FIDIC procedures,
- etc.



DB Engineering Co. many times proved to be successful in developing high quality project in a short time by applying new constructions methods and latest theoretical and practical know-how:



Optimization of bridge and road design within the same company – time saving, workable, economic and sustainable solutions for our clients.

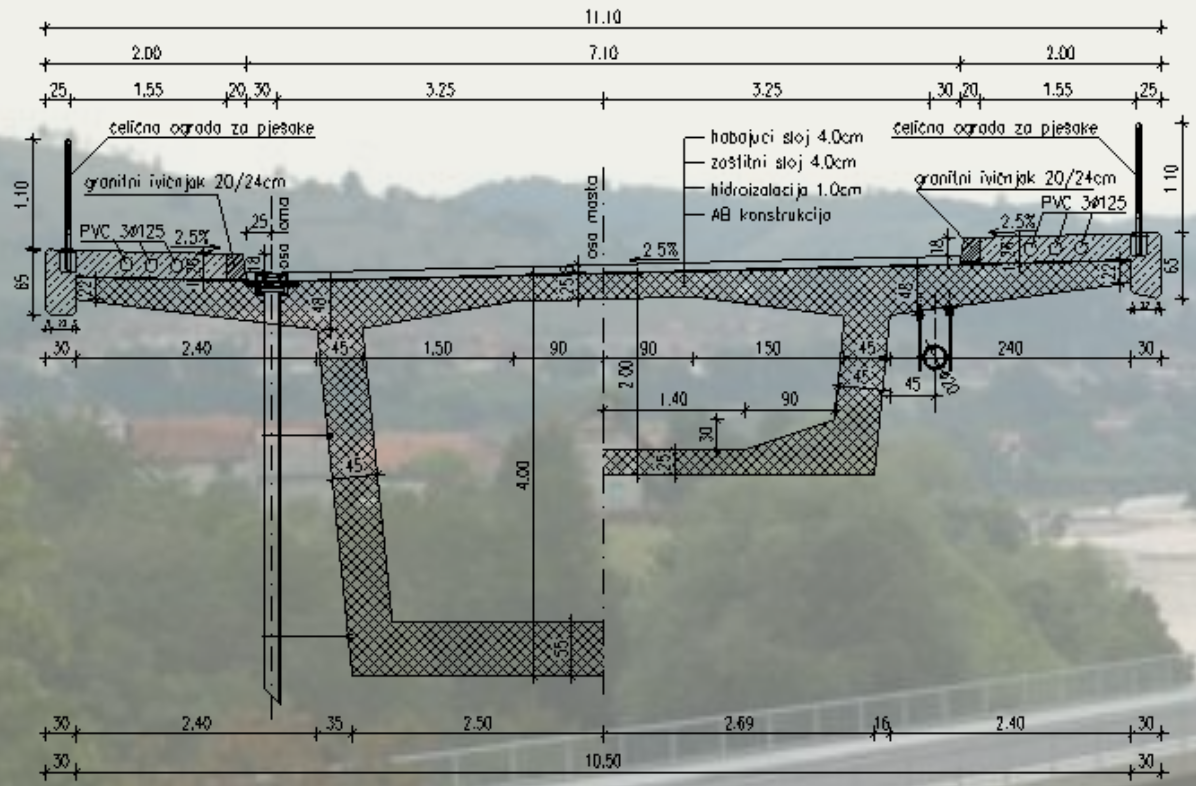
BRIDGES & OTHER STRUCTURAL OBJECTS

"RAKONJE" Bridge

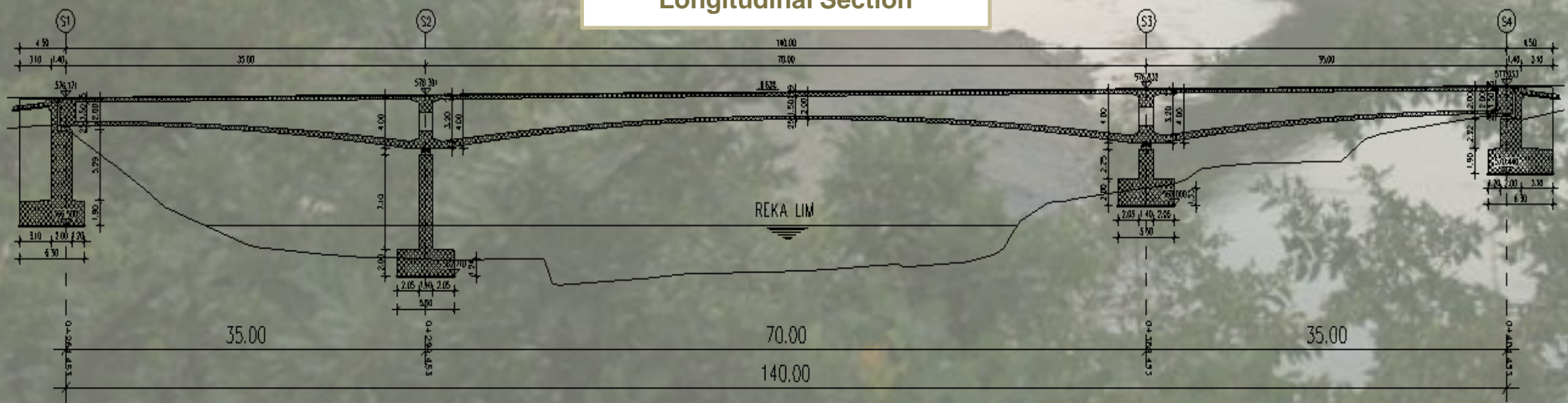
- **Location:** Bijelo Polje, Montenegro
- **Overall length:** $35.0+70.0+35.0=140.0\text{m}$
- **Central span:** 70.0 m
- **Costs:** € 2.10 million
- **Client :** Ministry of Transport, MNE
- **Design & consulting:** "DB Engineering"
- **Contractor:** "Putevi" a.d. Užice
- **Finished:** July 2008.



Cross Section

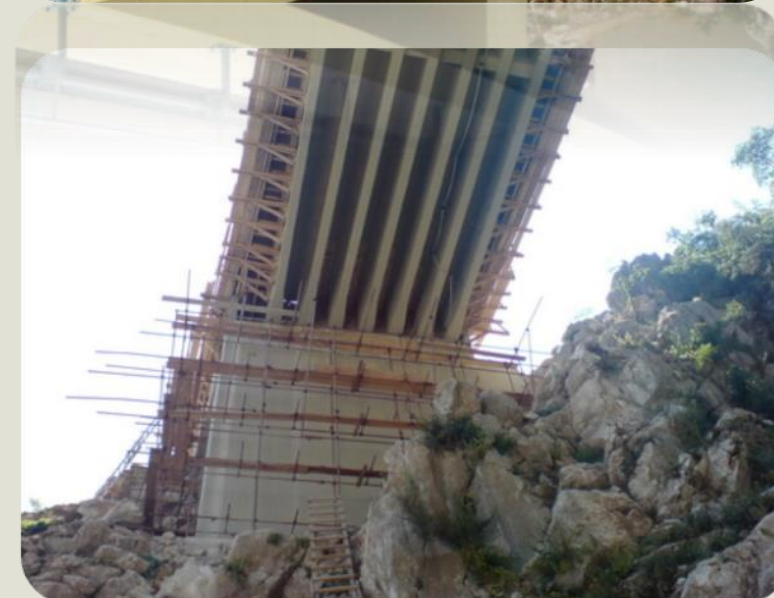


Longitudinal Section

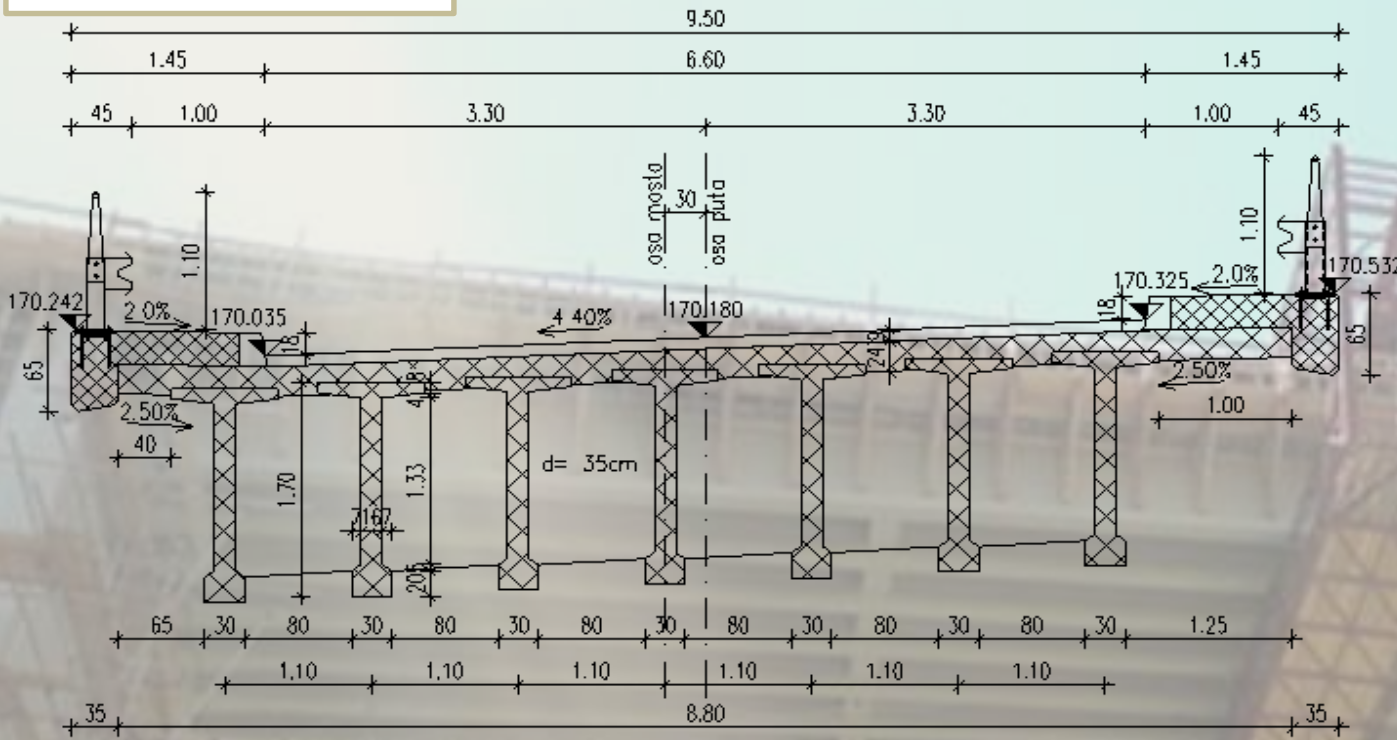


"LIPCI" Bridge

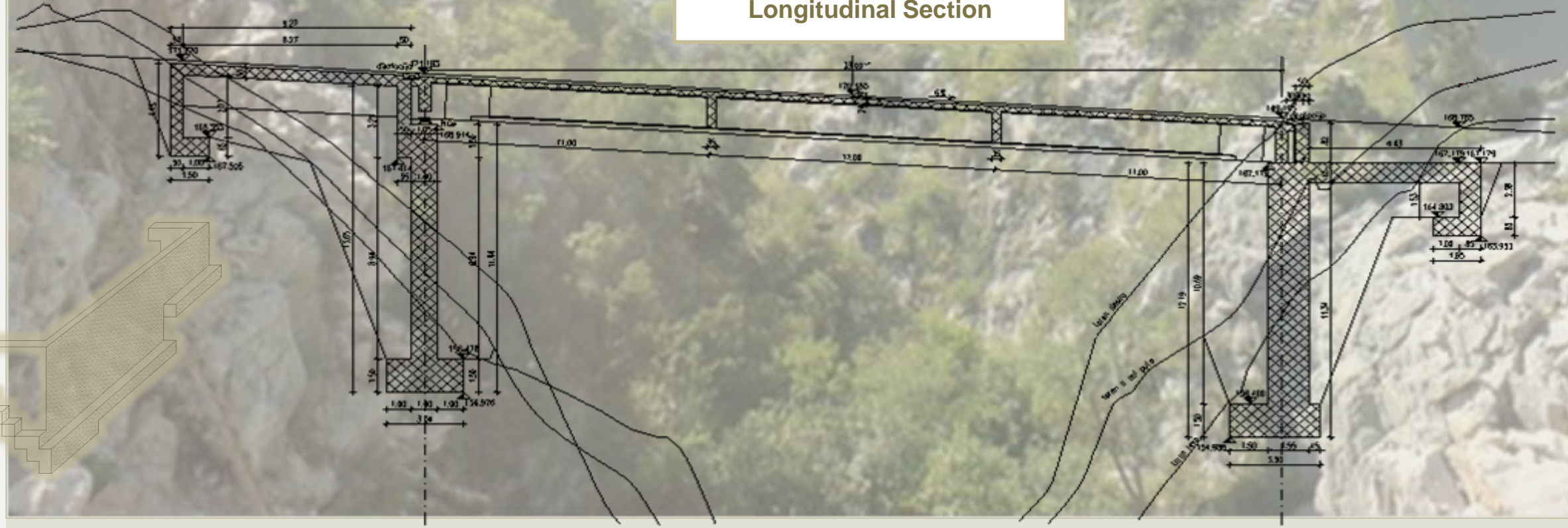
- **Location:** Lipci, Montenegro
- **Overall length:** $9.55+33.0+7.25=49.80\text{m}$
- **Central span:** 33.0m
- **Costs:** € 740.000
- **Client :** Ministry of Transport, MNE
- **Design & consulting:** "DB Engineering"
- **Contractor:** "Putevi" a.d. Užice
- **Finished:** July 2008.



Cross Section



Longitudinal Section

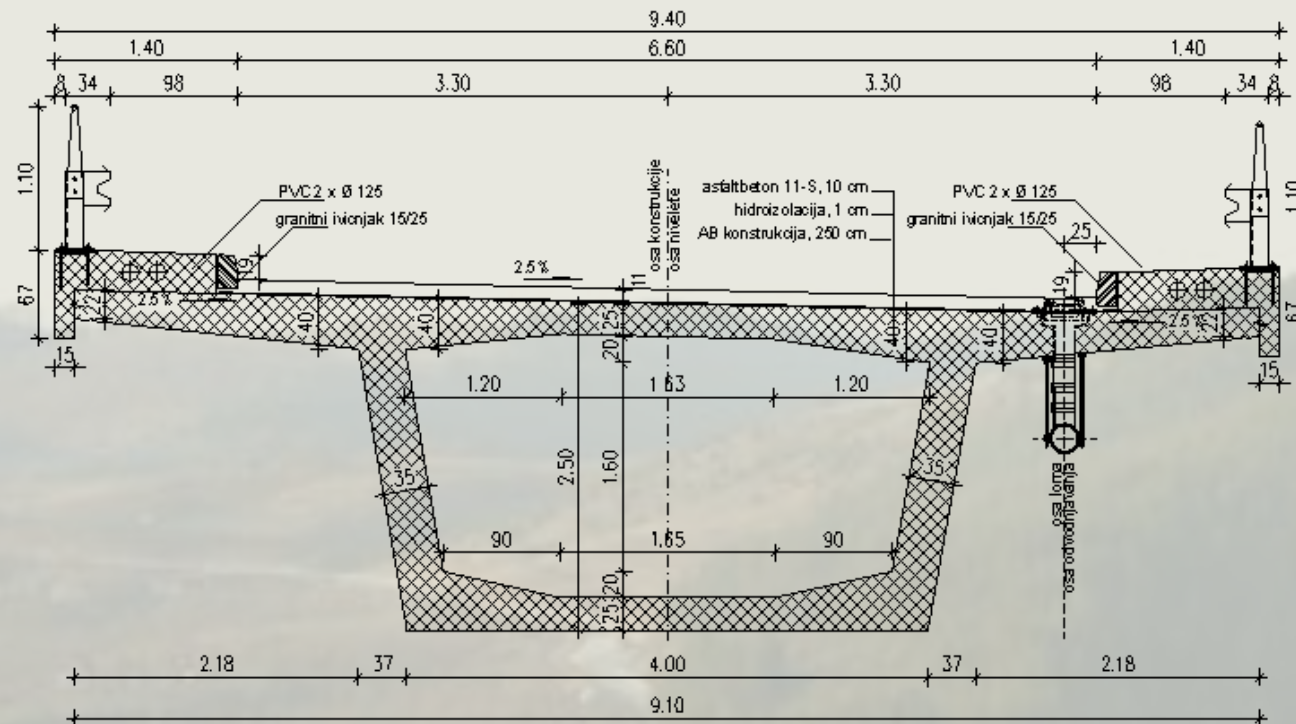


"ZLATIBOR" Bridge

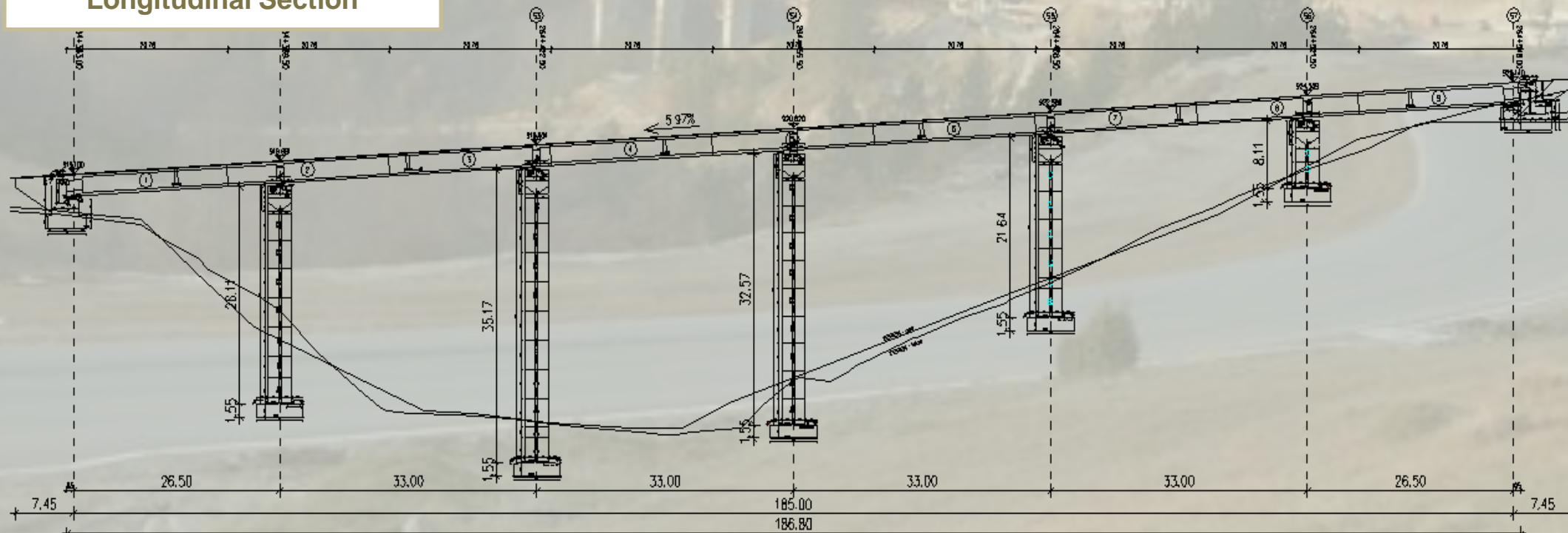
- **Location:** Zlatibor, Serbia
- **Overall length:** $26.5+4 \times 33.0+26.5=185.0\text{m}$
- **Central span:** 33.0m
- **First incremental launching in Serbia**
- **Costs:** € 1.35 million
- **Client :** "Roads of Serbia", Serbia
- **Design & consulting:** "DB Engineering"
- **Contractor:** "Putevi" a.d. Užice
- **Finished:** 2007.



Cross Section



Longitudinal Section

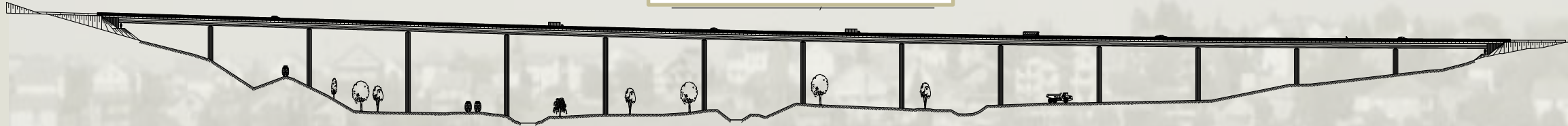


Viaduct No. 15 across Topciderska valley

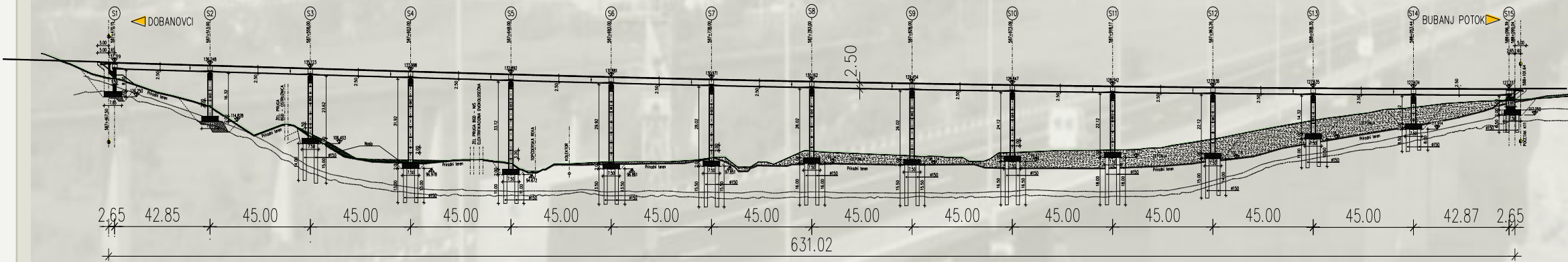
- **Location:** Belgrade Bypass, Serbia
(Highway E70 and E-75, Section Dobanovci
Bubanj stream, Sector 5.1)
- **Overall length:** 631,54m
- **Typical span:** 45.0m
- **Viaduct width:** 14,25m
- **Piers height:** more than 30m
- **Costs:** € 5,30 million
- **Client :** PE „Roads of Serbia“
- **Design & consulting:** "DB Engineering"
- **Contractor:** PRIMORJE dd
- **Finished:** 2012.



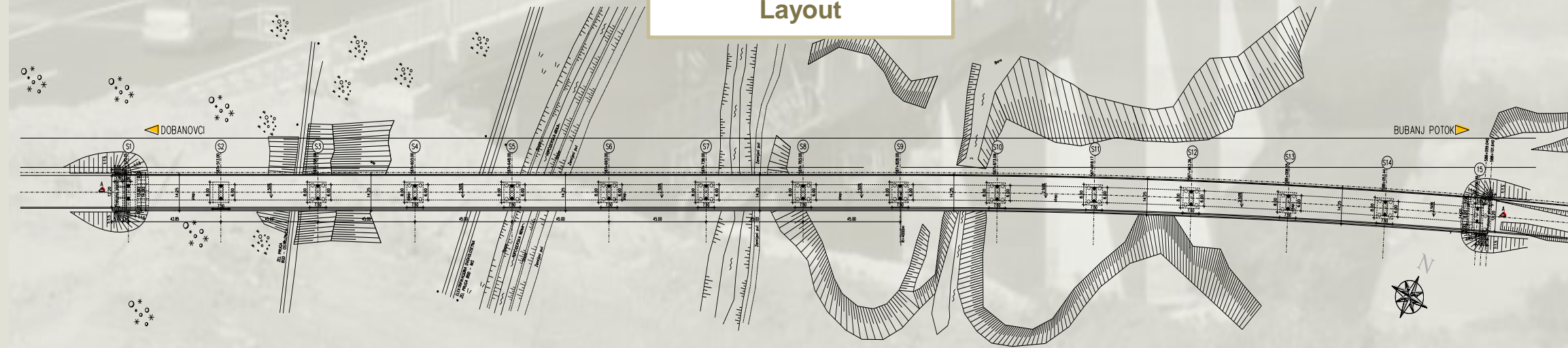
Side view



Longitudinal Section



Layout



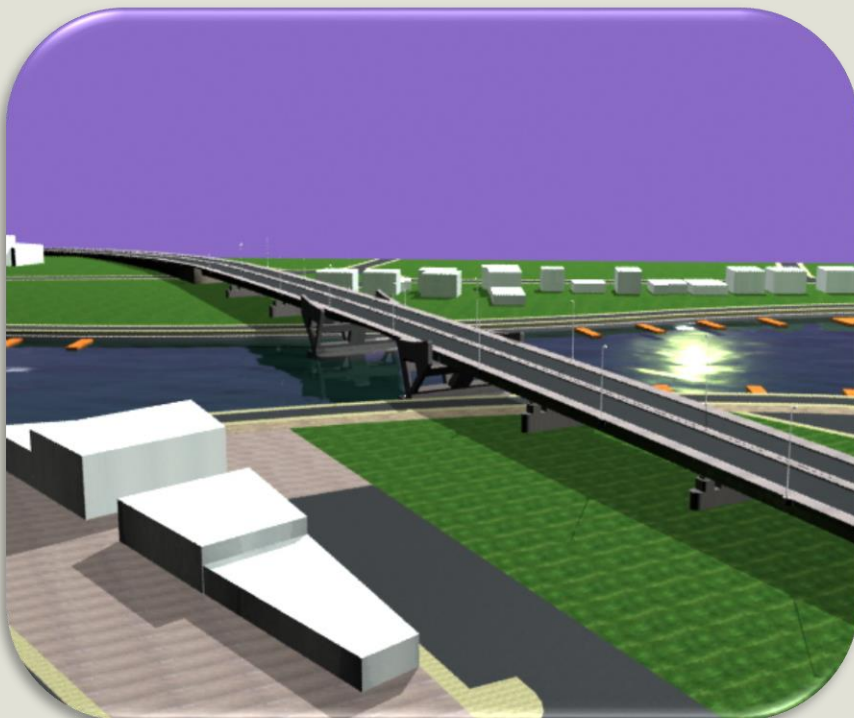
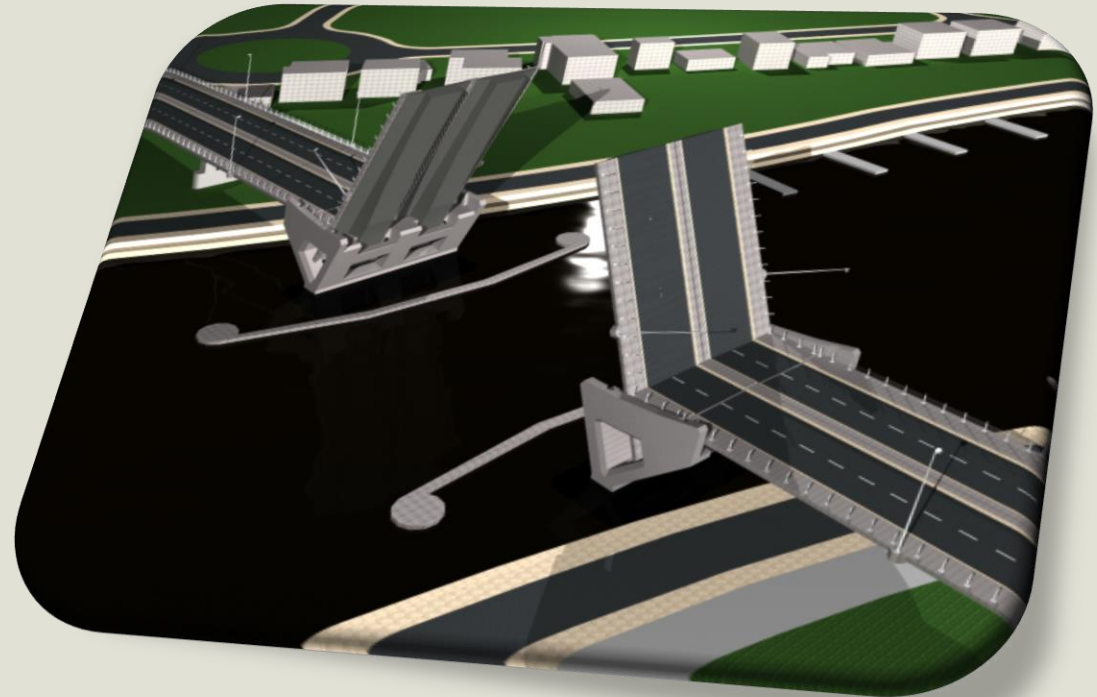
Bridge over river Tara near Kolašin

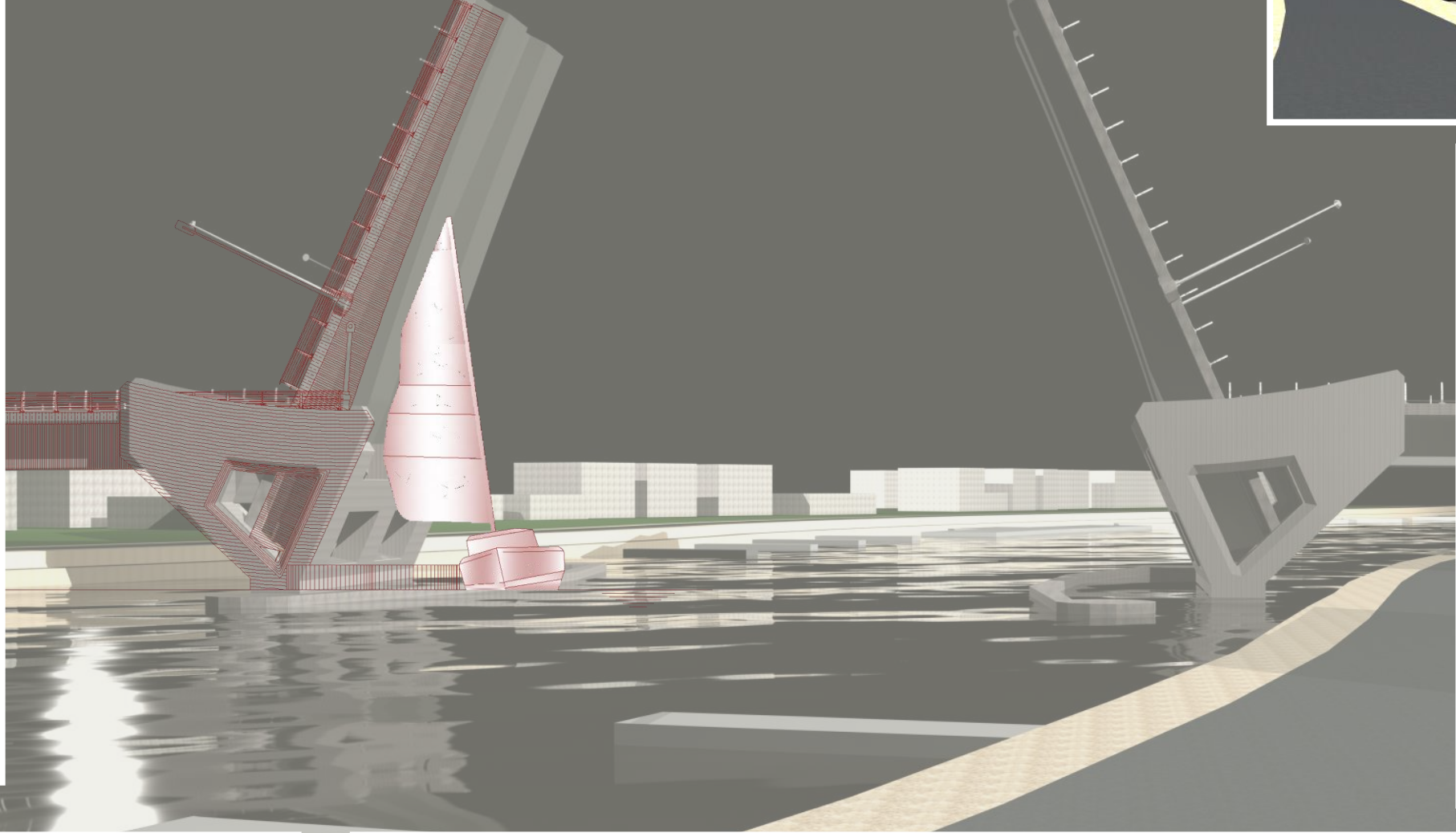
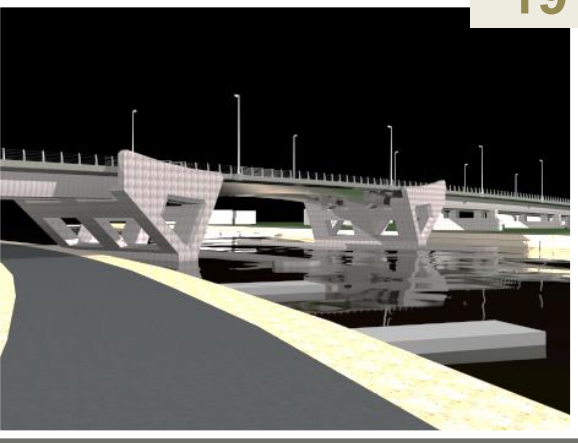
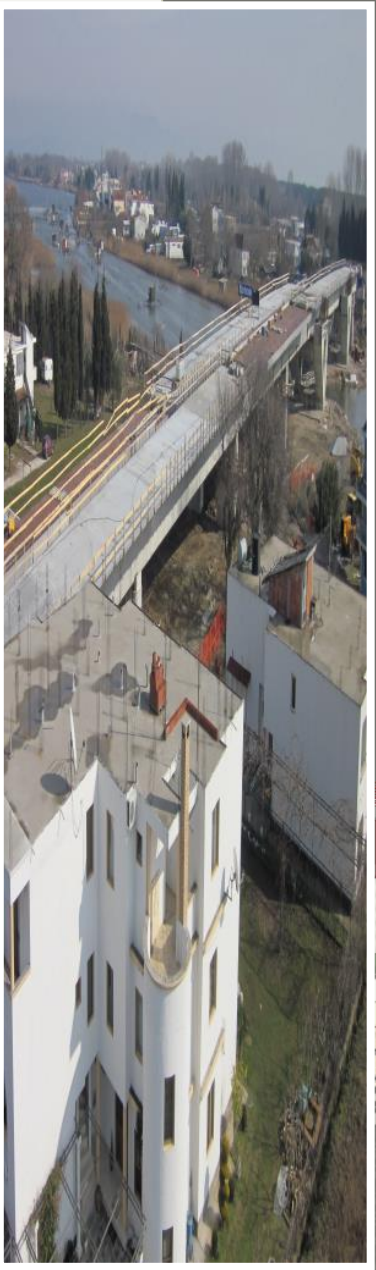
- **Location:** River Tara, Kolašin, Montenegro
Connection between M-9 Kolašin- Mateševo Road and M-2 Podgorica- Bijelo Polje Road
- **Bridge overall length:** 99.51m= 33.03+34.49+33.00
- **Bridge width:** 11,10 m
- **Underpass:** 4,0x5,0x29,0m
- **Road:** L=441.66m, Two intersections
- **Costs:** € 2,94 million
- **Client :** Ministry of Transport, MNE
- **Design & consulting:** "DB Engineering"
- **Contractor:** Bemax
- **Finished:** 2012.



"Port Milena" Bascule Bridge

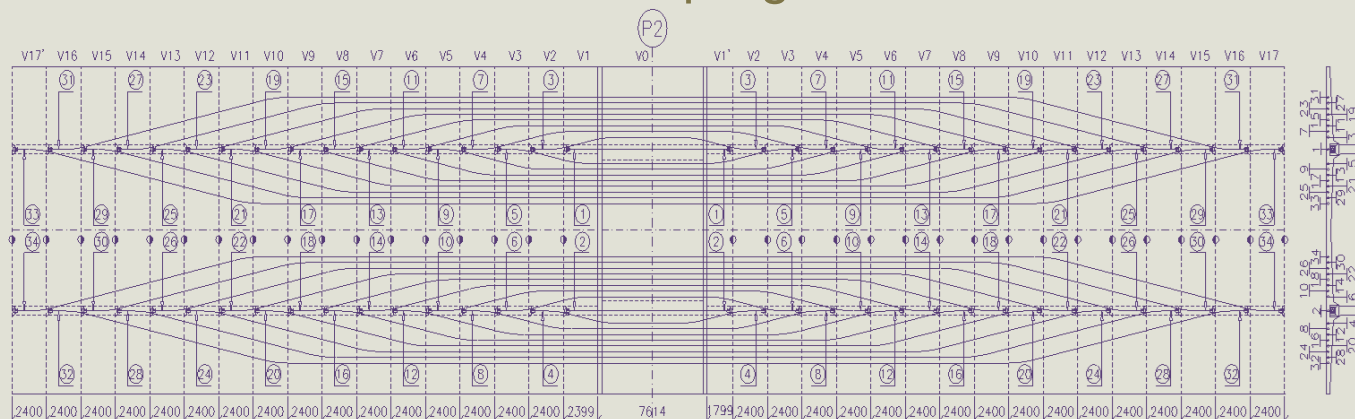
- **Location:** Port Milena Bay, Ulcinj, Montenegro
- **Overall length:** 345.20m = $34.0+2\times 44.0+40.60+56.0+43.60+46.0+37.0$
- **Bridge width:** 20,30m
- **Costs:** € 20 million
- **Client:** Ministry of Transport, MNE
- **Design & consulting:** "DB Engineering"
- **Contractor:** Primorje d.d.,
- **Status:** Finished 2013.

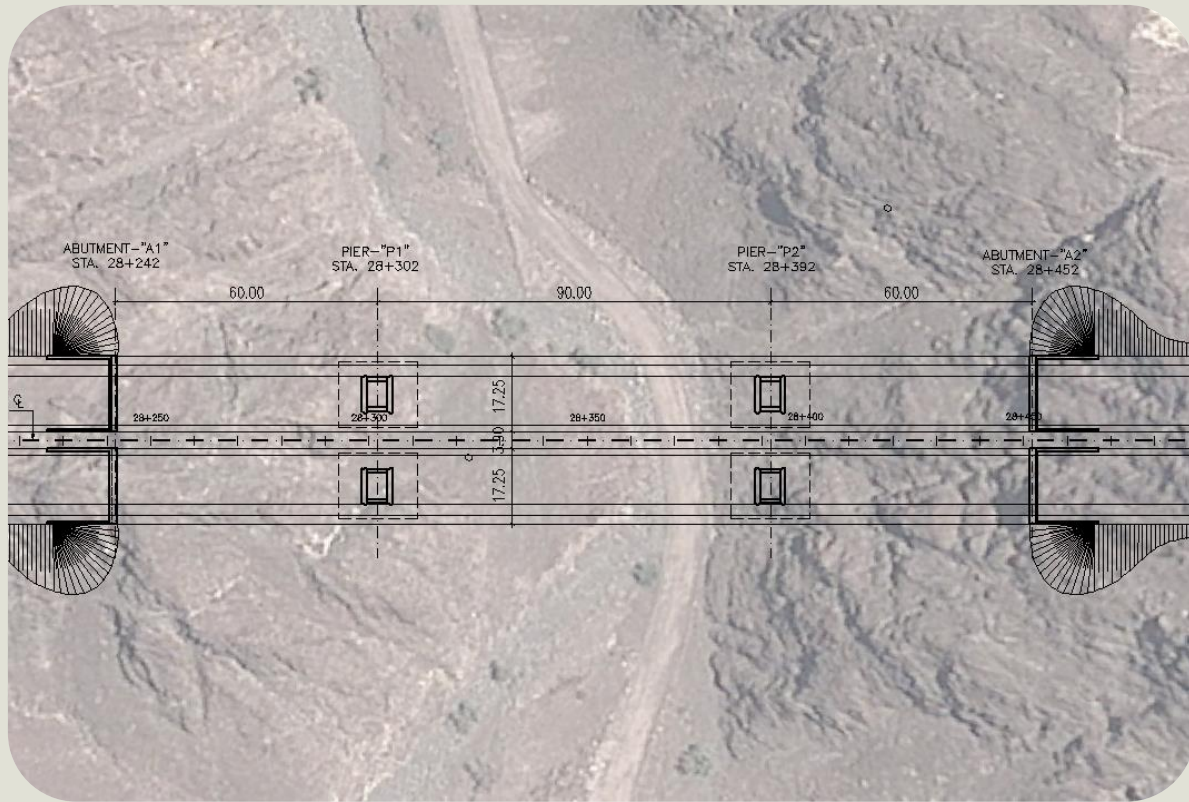




Bidbid - Sur Road Wadi Bridges

- **Dualization of Bidbid – Sur Road, Section 1, Package 1-A**
- **Bridges:**
 - Bridge No. 1 km 28+350 (L=60+90+60=210m),
 - Bridge No. 2 km 29+150 (L=60+2x90+60=300m),
 - Bridge No. 3 km 29+545 (L=60+2x90+60=300m),
 - Bridge No. 4 km 30+098 (L=2x60=120m),
 - Bridge No. 5 km 31+750 (L=60+3x90+60=390m),
 - Bridge No. 6 km 36+600 (L=60+2x90+60=300m)
- **Bridges width: 38.40m**
- **Location: Sultanate of Oman**
- **Design & consulting: "DB Engineering"**
- **Contractor: Astaldi-Ozkar JV**
- **Subcontractor: Rivoli S.p.A.**
- **Client: Ministry of Transport and Communications, Sultanate of Oman**
- **Status: Construction in progress**





CORIDOR X, SERBIA

- Design, consulting services and Value Engineering for more than 80 structures (bridges, overpasses, underpasses, tunnels etc.), Road, Technical infrastructure etc. on pan-European transport corridor X.
- Clients: Roads of Serbia and Koridori Srbije Ltd.

DESIGN

1) Corridor X - Highway E-80, Section Crvena Reka-Ciflik

- 15 bridges, over/underpasses and retaining walls

2) Corridor X - Highway E-75, Section Grabovnica – Grdelica

- 21 bridges, over/underpasses and retaining walls

3) Corridor X - Highway E-75, Section Horgos – Novi Sad

- 6 bridges redesign for contractor (Putevi Užice)

4) Corridor XI - Highway E-763, Beograd-Ljig-Požega Section Ub – Lajkovac

- 7 bridges redesign for contractor (Putevi Užice)



CORIDDOR X, SERBIA

VALUE ENGINEERING

1) Coriddor X - Highway E-75, Section Gornje Polje – Caricina Dolina

- from Grdelica to Tunnel Predejane
- 6 bridges. Road, Reinforced Soil, Drainage and Technical infrastructure design included.
- Contractor: AZVI, Taddei S.p.A.

2) Coriddor X - Highway E-75, Section Gornje Polje – Caricina Dolina

- from Tunnel Predejane to Caricina Dolina
- 6 bridges
- Contractor: Trace International Ltd.

3) Coriddor X - Highway E-80, Section Ciflik – Pirot (East)

- 6 bridges and 1 tunnel on Sector 5A
- Several smaller bridges on Sector 5B
- Contractor: AKTOR

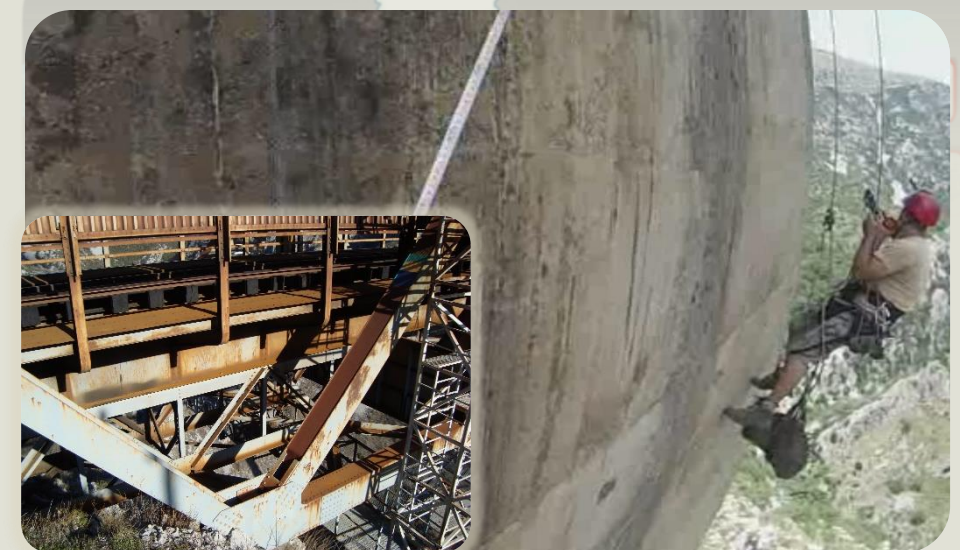
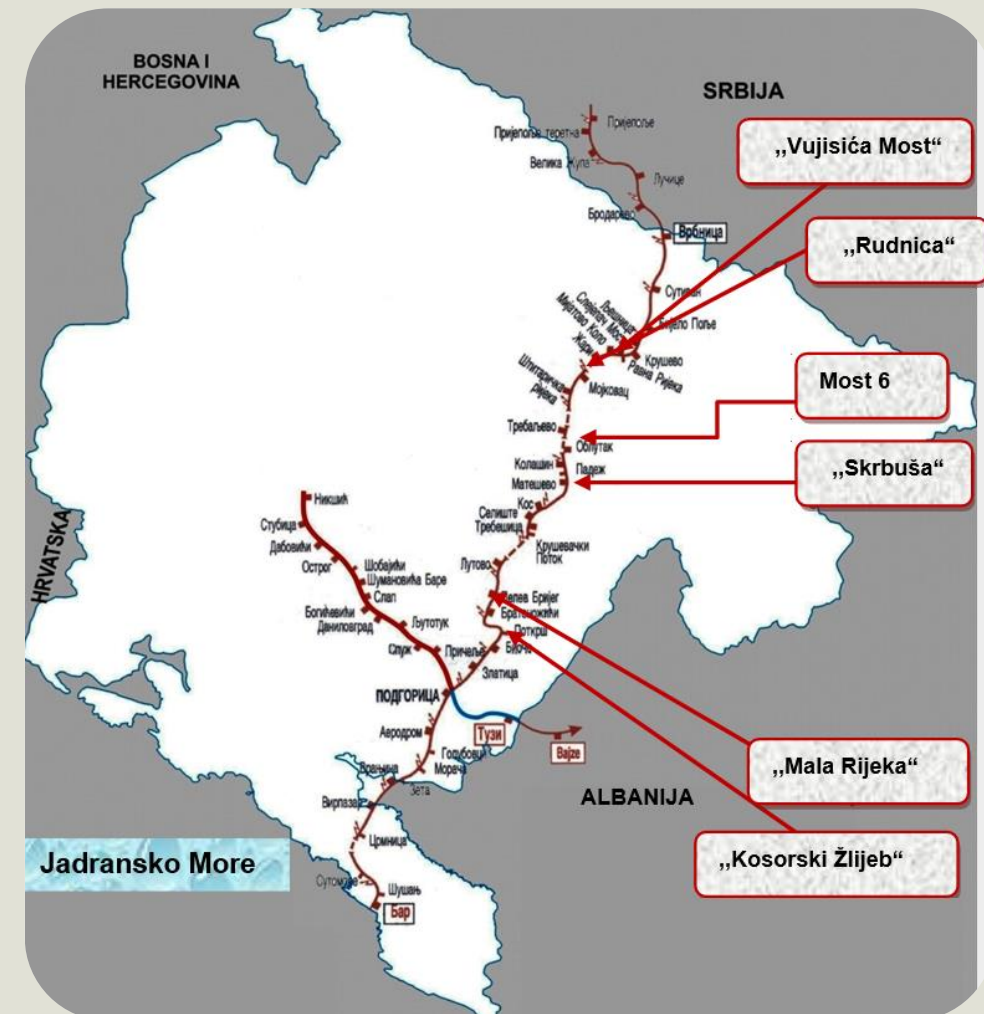
4) Coriddor XI - Highway E-763, Section Takovo – Preljina

- 8 bridges
- Contractor: AzVirt



RAILWAY BRIDGES REHABILITATION

- **Development of the Main Design for Rehabilitation of Steel Bridges on Railway Line Vrbnica-Bar**
- **Bridges:**
 - Mala Rijeka at km 385+489 (Lot 1)
L=81.20+92.80+150.80+92.80+81.20=498.80m
 - Rudnica at km 320+183.86 (Lot 2) . L=11m
 - Skrbusa at km 343+705 (Lot 2) . L=4x38=157m
 - Kosorski zlijeb at km 391+846 (Lot 2). L=70m
 - Vujisica most at km 312+557 (Lot 2) . L=42m
 - Most 6 at km 333+351 (Lot 3) . L=48.5m
- **Design & consulting:** "DB Engineering" as member of Consortium together with iC consulenten ZT GmbH and Mostprojekt
- **Client:** Railway Infrastructure of Montenegro
- **Project includes:** Study on the state of the bridges, Preliminary design, Final design, Land survey, Geological research and studies, Environmental Impact Assessment, Studies on protection, technology, maintenance, monitoring etc.
- **Status:** Design in progress

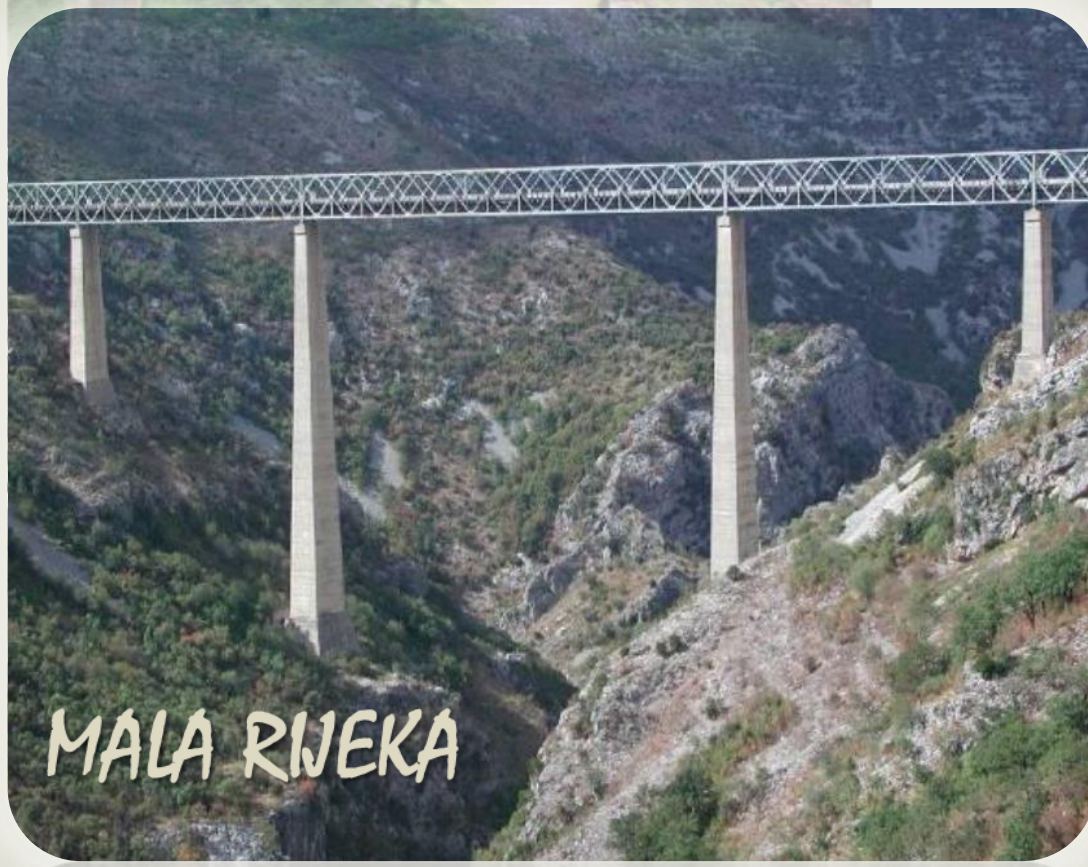




VUJISICA MOST



MOST 6



MALA RIJEKA



KOSORSKI
ZLJEB



RUDNICA



SKRBUŠA

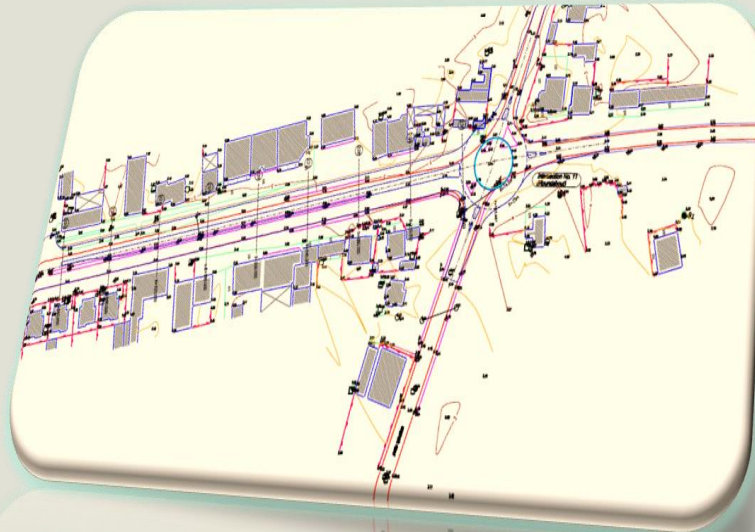
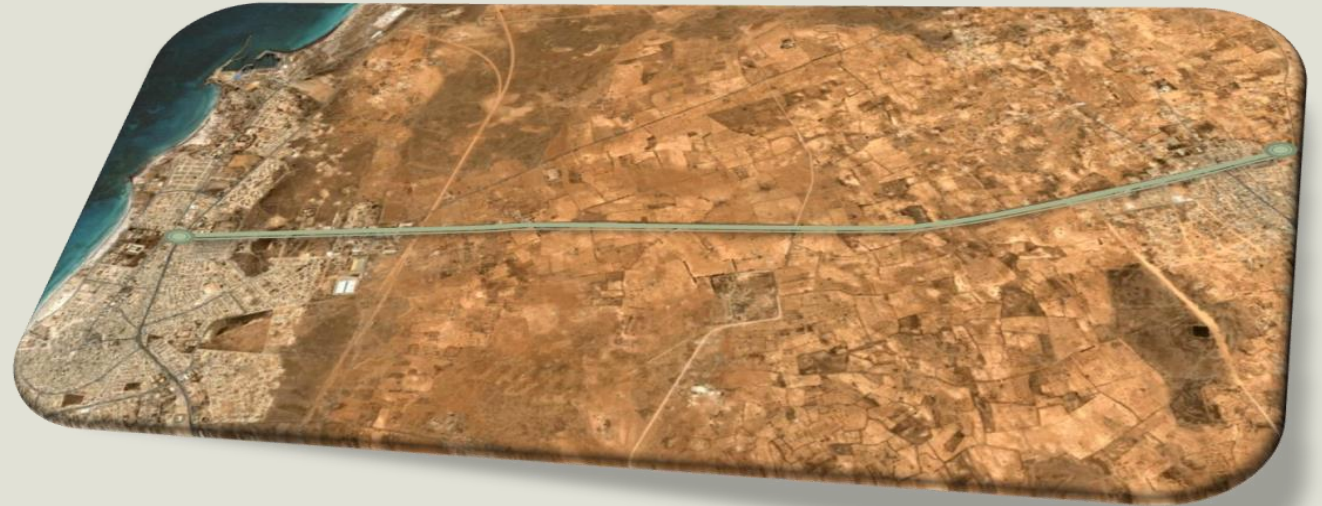
ROADS

Roads :

DB Engineering provides a complete and efficient design & consulting services to our clients for single traffic and pedestrian based projects through to addressing the complex requirements of highways and intersections of all kind.

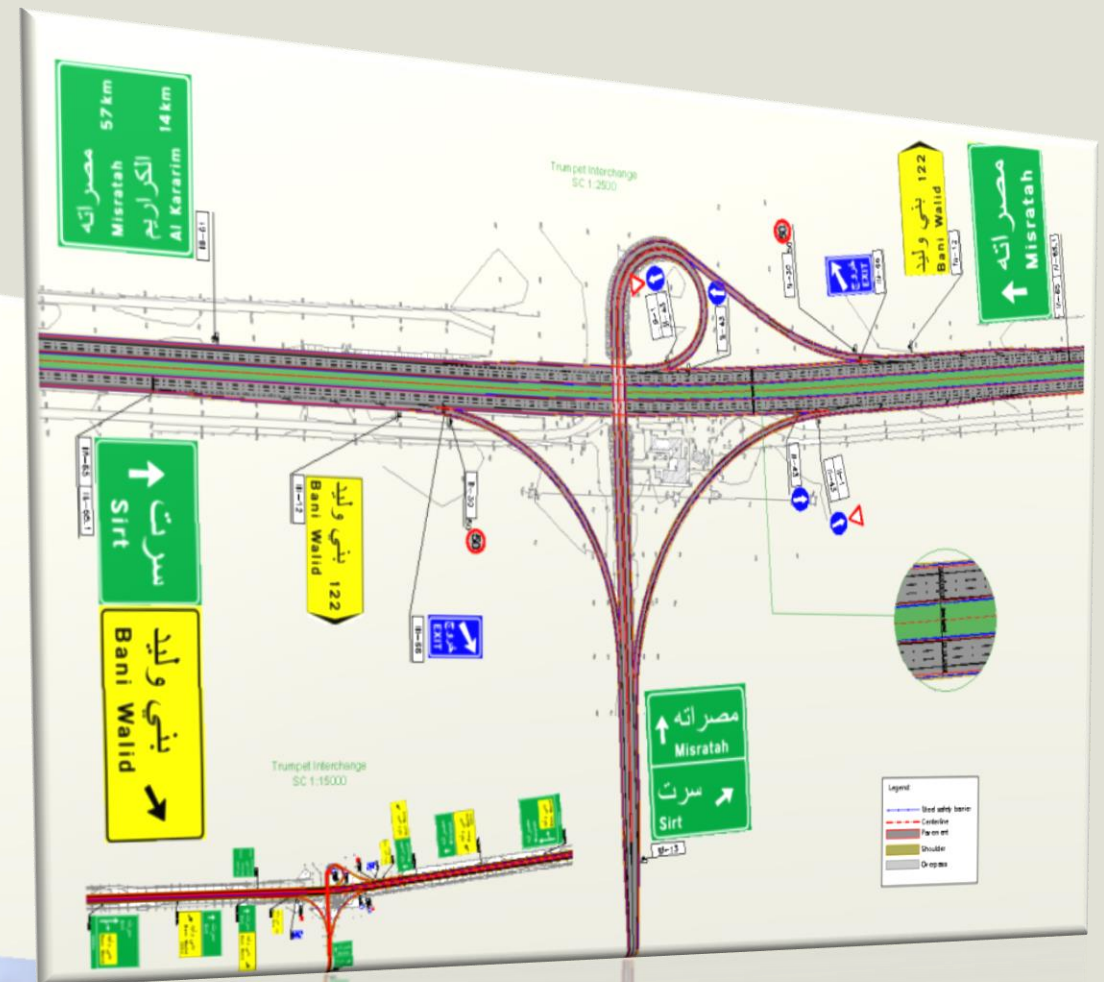
Our solutions, whether it is road or traffic signal design, in accordance with applicable guidelines, standards and specifications are always quality based with emphasis on the practical aspect.

Optimization of bridge and road design within the same company – time saving, workable, economic and sustainable solutions for our clients.



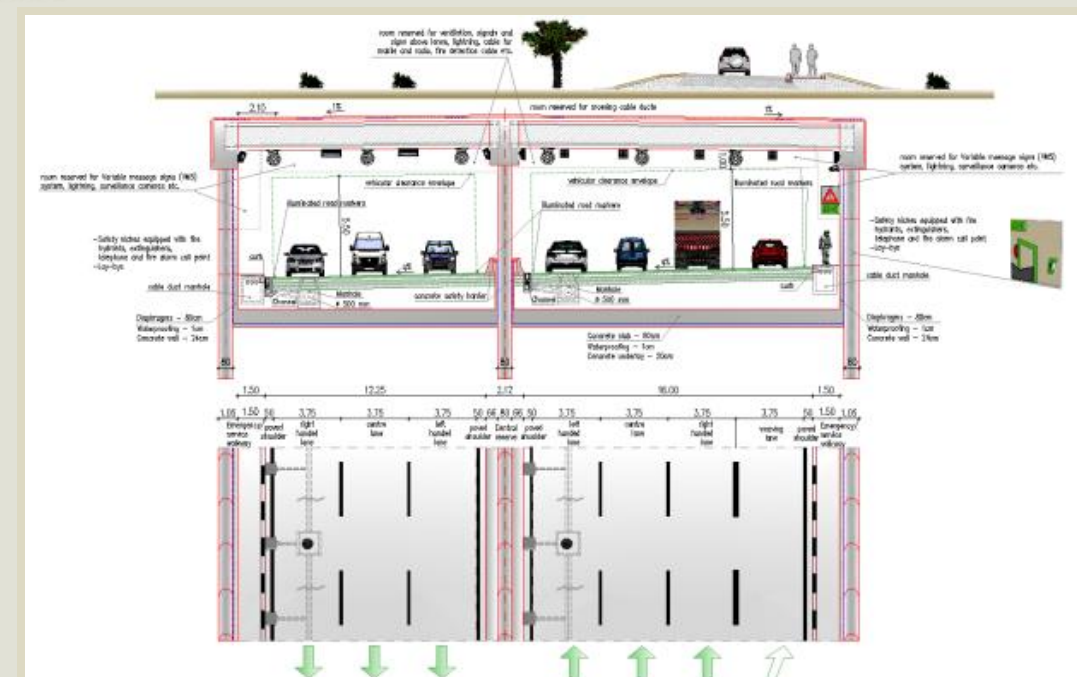
Coastal Road Motorway:

- Coastal Road Motorway Ra's Ajdir – Emssaed that stretches along Libya, from Tunisia to Egypt.
- Sector 1 (Ra's Ajdir – Tripoli), L=50km
- Sector 3 (Misratah – Sirt), L=250km
- Main characteristics: Urban/rural sections, numerous interchanges, intersections, rest and service areas, service roads etc.
- Design phases: Preliminary & Final Design



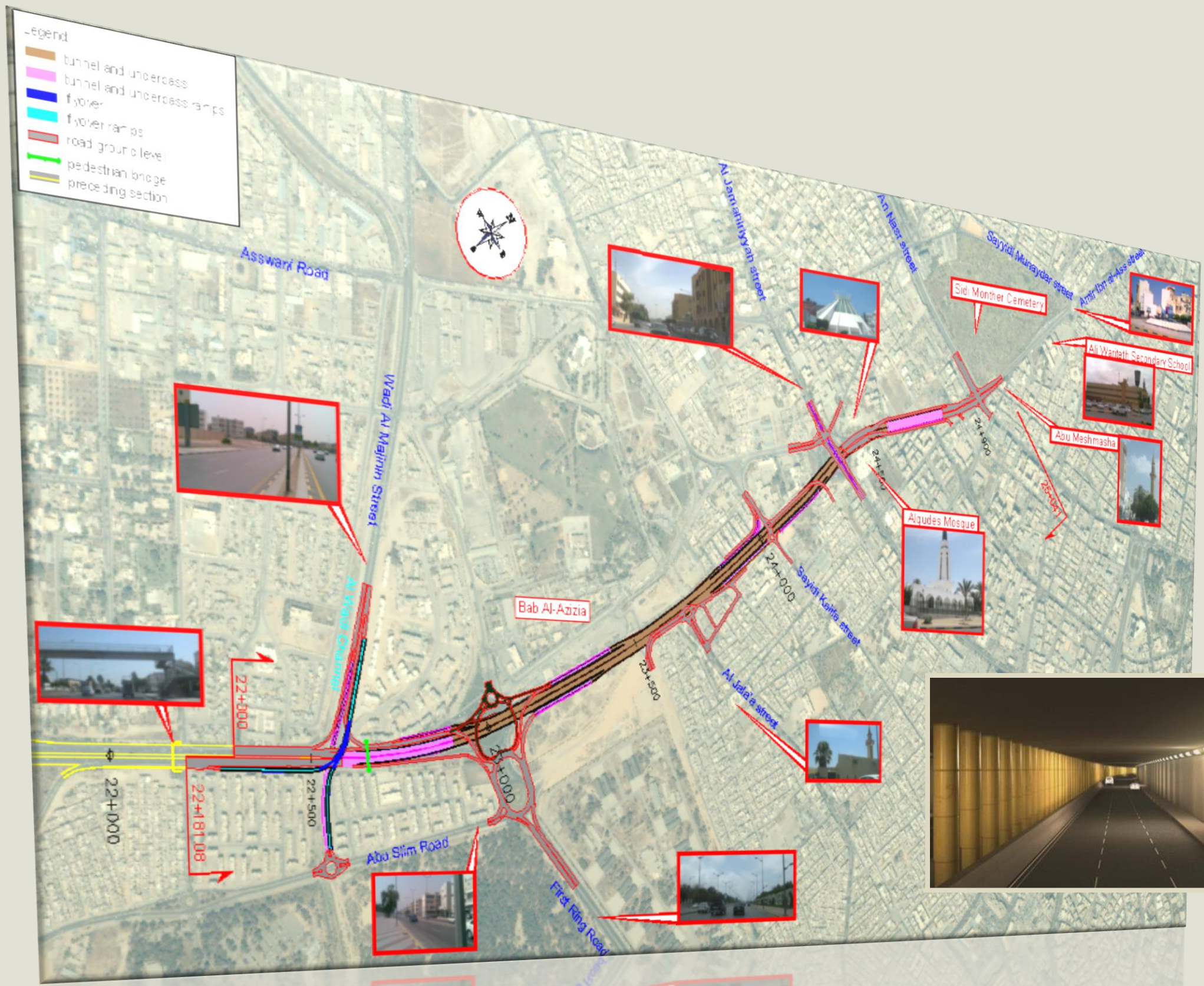
TIAR Northern Extension Project:

- **Tripoli International Airport Road's Northern Extension Project**
- The Tripoli International Airport Road connects the Tripoli International Airport with Tripoli City Center at the Old Medina (Green Square). This Design concerns the section known as the Northern Extension between km 22+500 and the Al Nasser Street Intersection (km 25+000) which includes a road tunneled structure, as required by the Client.
- **Road Design** includes: urban road tunnel (L=1.7km, from 3 to 4 lanes in each direction, sidewalks, and median), total road length of 12.5km, 6 Intersections or roundabouts, 3 Junctions.
- **Structures** design includes: urban road tunnel (Cut and Cover Tunnel Bottom-Up Construction, 3 bridges, 1 underpass, 1 flyover, 1 Pedestrian bridge).
- **Name of partners:** Meridijan Project, Tripoli
- **Name of Client:** Transportation Project Board, Libya, STRABAG-LIDCO Co.



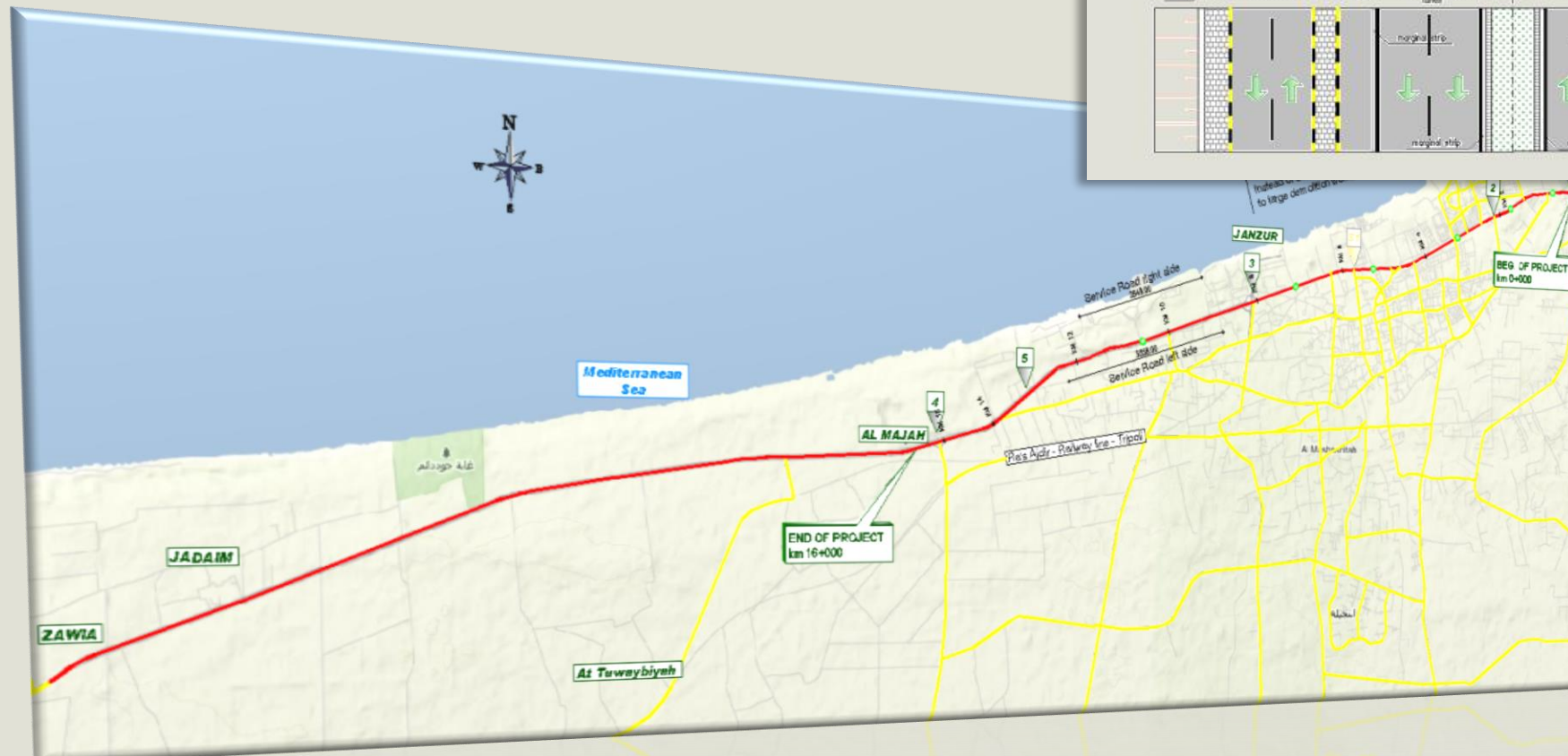
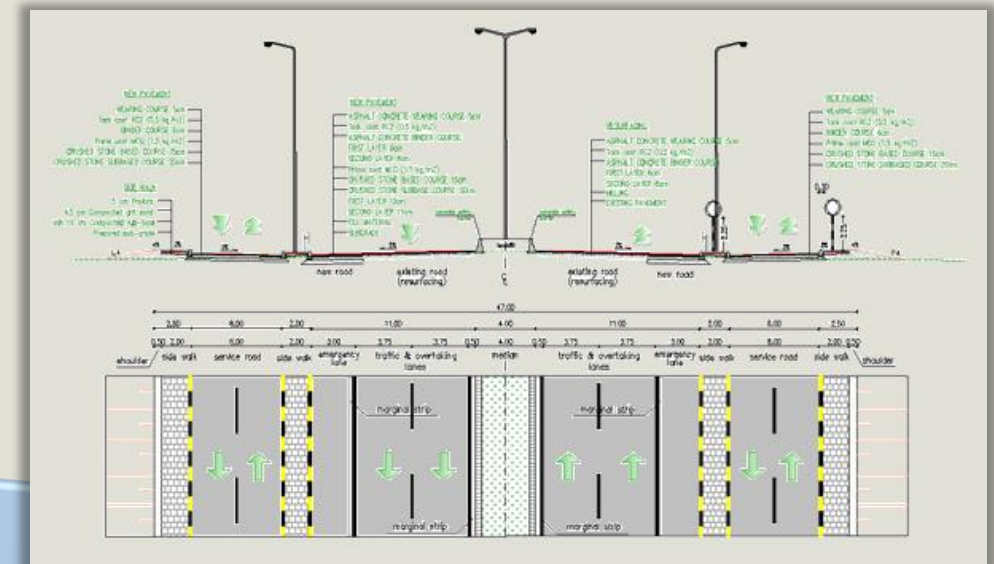
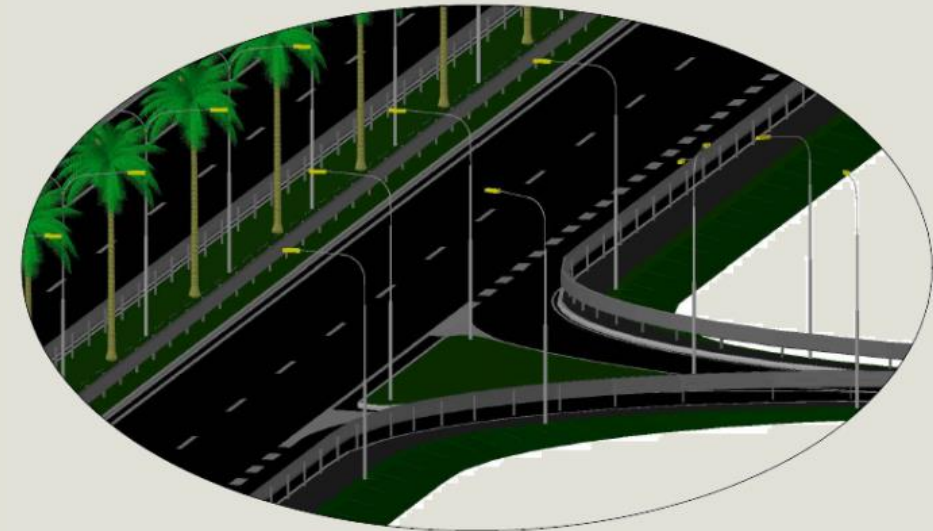
- **Design includes:** Traffic study data, Topographical survey, Road design, Traffic sign and road marking design, Existing utility and service installations and structures, Geotechnical report, Structures design, Tunnel water supply and drainage design, Tunnel power supply, Tunnel telecommunication and signaling systems, Tunnel ventilation, Works execution programme, Technical specifications and Cost estimate report.

ROADS
ROADS



Western Entrance of Tripoli:

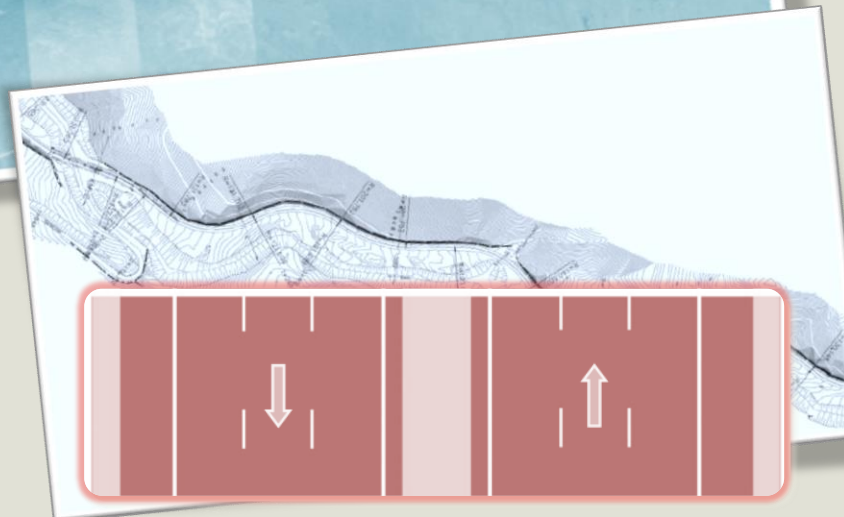
- **Road length:** from km 0+000 to km 16+000, L=16km,
- **Main characteristics:** Highly dense populated area.
- **Interchanges/Intersections:** four Interchanges, three signalized intersections, numerous connections and intersections.
- **Design phase:** Final design
- **Name of partners:** Meridijan Project, Tripoli
- **Name of Client:** The Authority of Roads & Bridges, Libya



Tocra-Al Bayda-Darnah:

- **Coastal Road Motorway, Sector 7 (Tocra-Al Bayda-Darnah)**
- **Road length:** 210 km
- **Main characteristics:** Demanding route through the mountain area, several towns and settlements
- **Design phases:** Feasibility Study & Final Design
- **Name of partners:** Meridijan Project, Tripoli
- **Name of Client:** The Authority of Roads & Bridges, Libya

ROADS
ROADS

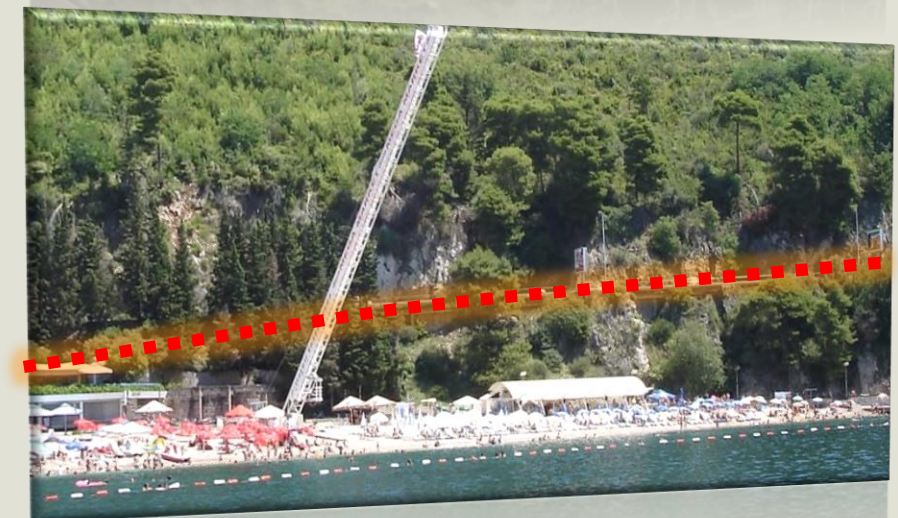
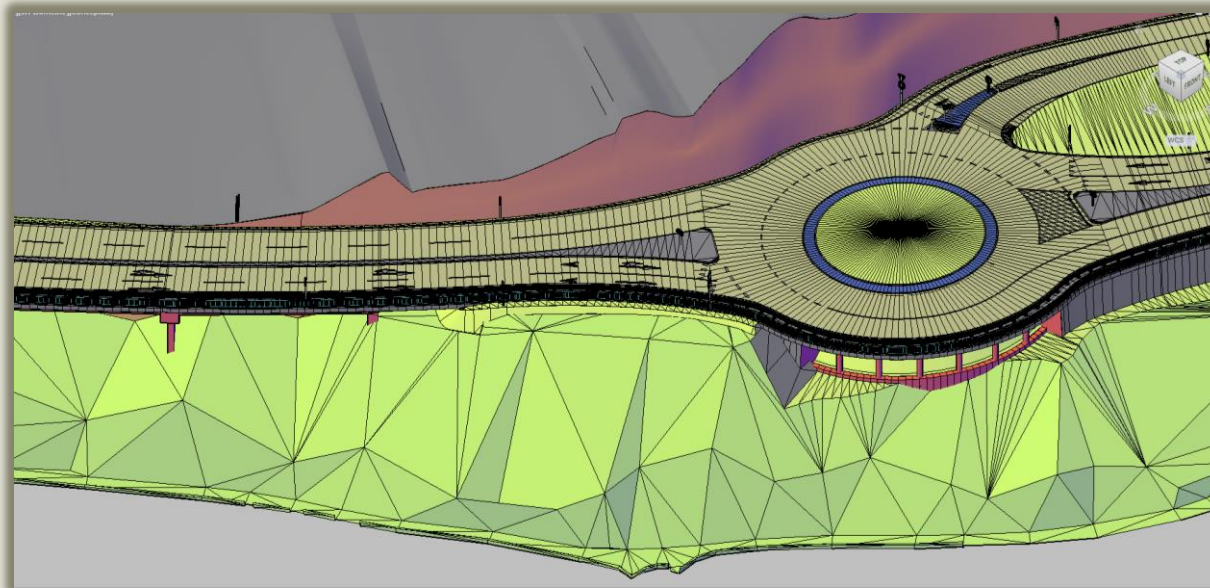


DB ENGINEERING



”Budva - Becici”

- **Reconstruction of road M-2 from Budva Boulevard to Becici Boulevard**
- **Road length: 1040m**
- **Project includes:** Road Design, Structures Design, Drainage Design, Traffic Design, Land survey, Geological research and studies, Environmental Impact Assessment, Studies on protection, technology, maintenance, monitoring etc.
- **Location:** Budva, Montenegro
- **Costs:** € 4,38 million
- **Client :** Ministry of Transport, MNE
- **Design phases:** Preliminary and Final Design
- **Date:** November 2014.

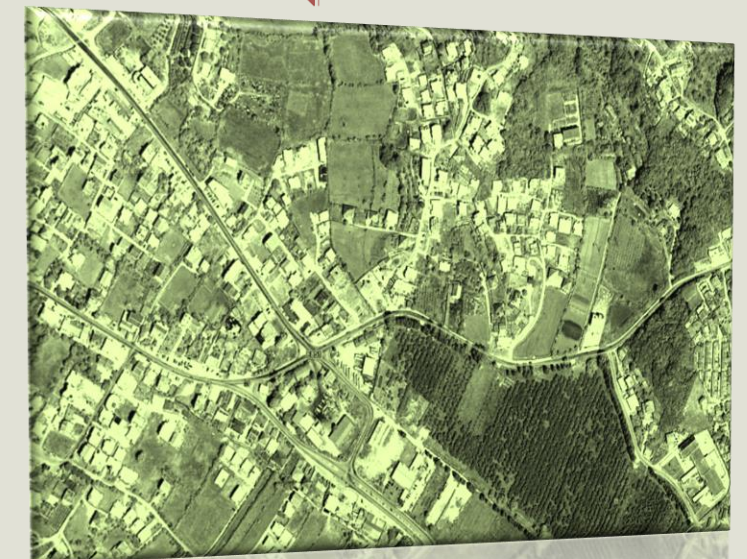
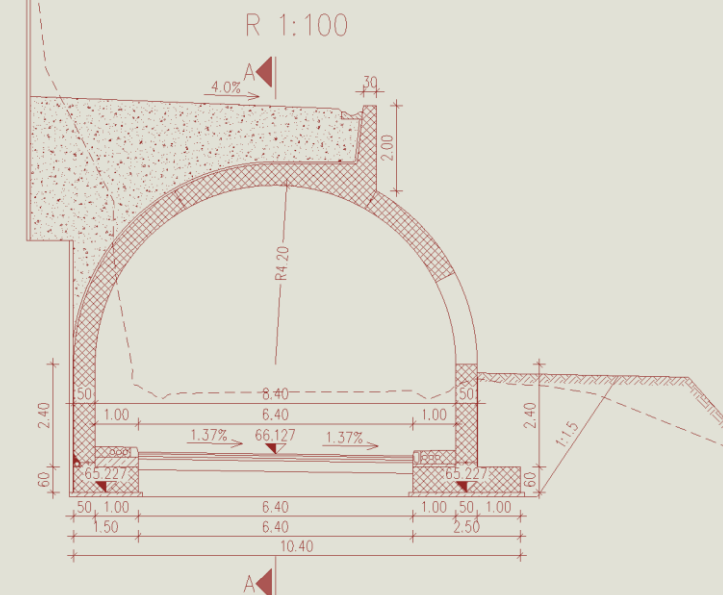


”Ulcinj - Krute”

- **Reconstruction of road M-2.4 Ulcinj-Krute-Vladimir-Sukobin, Section Ulcinj-Krute** from km 46+765.00 to km 60+115.86 (L=13.35km)
- **Project includes:** Road Design, Structures Design (1 Tunnel, 2 Open Tunnels, 3 bridges, 10 Retaining Walls, Canteliver Construction above river, numerous culverts, etc.), Drainage Calculation, Traffic Design, Land survey, Geological research and studies, Environmental Impact Assessment, Studies on protection, technology, maintenance, monitoring etc.
- **Location:** Ulcinj, Montenegro
- **Costs:** € 9,75 million
- **Client :** Ministry of Transport, MNE
- **Design phases:** Preliminary and Final Design
- **Date:** November 2014.



KAMPADA 5
POPREČNI PRESJEK 5-5





15/12/2011 11:40



17/12/2011 13:40



RECENT PROJECTS

List of recent projects:

- **22 Bridges and more than 1000 culverts**
Location: Highway Sirt-Ajdabiya, Al Jufrah-Sabha, Al Hishah-Al Jufrah, Sirt-Al Jufrah, Misurata-Sirte, Sabha-Al Raqabah, Libya
- **Rehabilitation/Reconstruction of Bridges and Overpasses: Overpass over Railway Kraljevo-Čačak, L=57m, Overpass over Railway near Stalać, L=179m and Bridge over Zapadna Morava river, L=155m**
Location: Kraljevo-Čačak, Serbia
- **Bridge "BASK"**
Location: Belgrade - Serbia
- **Approach Roads to Sava River Bridge - Final Design for several Viaducts, Overpasses and Ramps.** Location: Belgrade, Serbia
- **Bridge over river Lim in Berane. Street Polimska-Luge. L=35.0+60.0+35.0=130m. Preliminary design.**
Location: Berane, Montenegro
- **Bridge "Strojtanica" L= 70m**
Location: Bijelo Polje, Montenegro
- **Bulevar JNA Railway Overpass in Bar, L=196m**
Location: Bar, Montenegro
- **Reconstruction of reinforced concrete portals 110/35 kV Niksic. Preliminary design.**
Location: Niksic, Montenegro
- **Bridge over river Zeleznica in Bar, L=20m**
Location: Bar, Montenegro



List of recent projects:

- **Bridge over river Drina (L=230m), Border Crossings and Connection Road (L=1.5km) at Bacevci-Fakovici.**
Location: Bajina Bašta - Bratunac, Border of Serbia and Bosnia and Hercegovina
- **River Ljubovidža Arch bridge**
Location: Bijelo Polje – Pljevlja, Montenegro
- **Reconstruction of Lastva Grabaljska bridge at km 896+589**
Location: Tivat – Budva, Montenegro
- **Šavnik – Grabovica bridges (2) and retaining walls (3)**
Location: Šavnik, Montenegro
- **Double line Road Zuwarah-Al Jmayl, Preliminary and Final design & Consulting, L=9.5km**
- **Airport Sirt Double line Road , L=10km, Final design**
Location: Libya
- **Street Al Hadaba Al Khadra-Gaser Ben Ghasir, L=17km**
Preliminary & Final design
- **Street Bridge on Il Ring Road-Fair, L=6km**
Conceptual, Preliminary & Final design
Location: Tripoli, Libya





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