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ROAD REHABILITATION AND SAFETY PROJECT (RRSP)

ENVIRONMENTAL MANAGEMENT PLAN

Heavy maintenance (road rehabilitation - upgrading) of the State Road of the IIA Category No.160

Section: Svilajnac – Medveđa

PRE FINAL

Novi Sad, April 2018.

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APPENDICES

ABBREVIATIONS AND ACRONYMS

AADT	Annual Average Daily Traffic
BD	Bidding Documents
BoQ	Bill of Quantitites
CEP	Contractor's Environmental Plan
EBRD	European Bank for Reconstruction and Development
EHS	Environmental, Health and Safety guidelines
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EMP	Environmental Management Plan
HSE	Health, Safety and Environment
IFC	International Finance Corporation
IFIs	International Financing Institutions
INP	Institute for Nature Protection of the Republic of Serbia
IPCM	Institute for Protection of Cultural Monuments of the Republic of Serbia
MEP	Ministry of Environmental Protection
MoT	Ministry of Transport (fmr. Ministry of Infrastructure and Energy – MoIE)
MS	Method Statement
PERS	Public Enterprise "Roads of Serbia"
PPE	Personal Protective Equipment
PSC	Project Supervision Consultant
RE	Resident Engineer
RRSP	Road Rehabilitation and Safety Project
SE	Site Engineer
SLMP	Safety Labour Management Plan
SSIP	Site Specific Implementation Plan
ToR	Terms of Reference
WB	The World Bank Group
WMP	Waste Management Plan
PAP	Project affected persons
SEP	Stakeholder Engagement Plan
NTS	Non-Technical Summary

INTRODUCTION

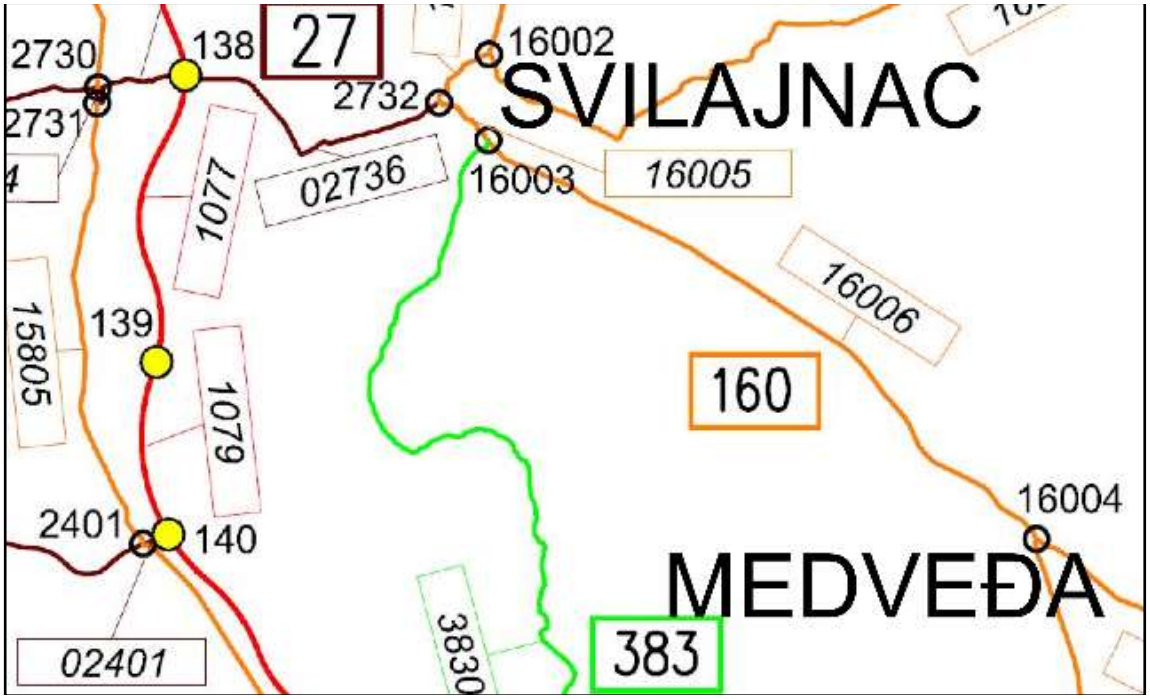
The Environmental Management Plan (EMP) has been prepared for the proposed heavy maintenance and rehabilitation (road rehabilitation-upgrading) of the State Road of the II A Category, No. 160, section Svilajnac-Medveđa to ensure the application of good environmental practice and document compliance with the requirements of the contract.

Length of the section Svilajnac (Crkvenac) - Medveđa (Glogovac) is 14.774 km.
The beginning and the end of the road section IIA-160 coincide with the nodes 16003 Svilajnac (Crkvenac) and 16004 Medveđa (Glogovac). The subject section belongs to the Pomoravlje Administrative District located in the central and eastern part of the Republic of Serbia. The section Svilajnac (Crkvenac) – Medveđa (Glogovac) in length of 14.774 km belongs to the State road of IIA - 160 (old road mark R-103) („Official Gazette of RS“, No. 93/2015).

The Republic of Serbia has applied for a loan from the World Bank, European Investment Bank and European Bank for Reconstruction and Development for financing of the costs of Road Rehabilitation and Safety Project and intends to apply a part of loan proceeds for heavy maintenance on state road II A Category, No. 160, section Svilajnac - Medveđa.

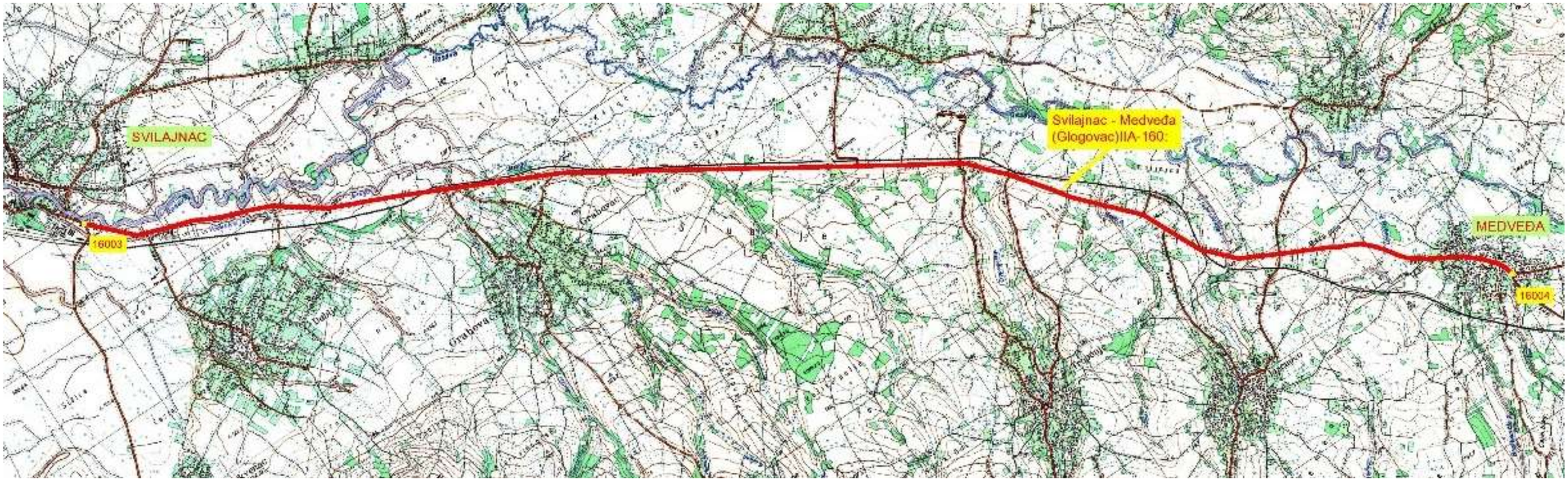
The Project has been classified as Environmental Category B, i.e. a project requiring an EMP pursuant to IFIs Safeguard Policies.
The EMP is analyzing the rehabilitation and implementation phase of the project EMP defines measures and Contractor's obligation during rehabilitation phase that have to be implemented in order to protect environment.

The aim of the environmental management plan is to highlight the negative environmental impacts and management problems during the construction period, as well as the necessary mitigation measures that the Contractor must apply. The key components of the Environmental Management Plan are: Plan for the mitigation of adverse impacts on the environment and Plan for monitoring the impact on the environment. They are prepared based on field investigations and contract requirements.



Picture 1. Location of section Svilajnac-Medveđa.

Picture 2. Location of section Svilajnac-Medveđa.



Picture 3. Coverage of the project Svilajnac-Medveđa.

EXECUTIVE SUMMARY

Project description

Project of heavy maintenance and rehabilitation of state road IIA Category, No.160 section Markovac–Svilajnac is part of the support project of the International Financial Institutions (World Bank, European Investment Bank and European Bank for Reconstruction and Development) to the Government of the Republic of Serbia for the Road Rehabilitation and Safety Project (RRSP). This project represents the first phase of the Government's National Road Rehabilitation Program and spans from 2014-2019:

- Improvement of the national road network through rehabilitation of about 1.100 km of existing road network spread over the entire country;
- increasing the safety level on designated roads by applying safety measures in all project phases;
- capacity building and coordination of traffic safety institutions through implementation of a number of different services

State road IIA-160 represents a traffic link between the Braničevo and Pomoravlje Administrative District, thus the subject section connects the Municipality of Svilajnac and the local community of Medveđa.

Section Svilajnac (Crkvenac) - Medveđa (Glogovac) is located on the road Požarevac - Žabari - Svilajnac - Despotovac - Dvorište - Resavica - Senje - Ćuprija. Start and end sections provided for the rehabilitation coincide with nodes 16003 Svilajinac (Crkvenac) and 16004 Medveđa (Glogovac).

Functionally, according to General regulations for parcellation, regulation and construction ("Official Gazette RS" No. 50/2011) this section is classified as a regional road.

89,12% of the section, according to its characteristics, is treated as road out of urban areas, while 10,88% runs through a suburb of the city of Svilajnac (720 m) and through Medveđa (886 m).

The road works covered by the Project will be carried out on the existing road with no change of the dimensions of the existing road, and as such no expropriation is necessary. The project entails no resettlement and land acquisition as defined by OP 4.12, nor long lasting disruptions to the natural environment, settlements and to the quality of life of the local population.

Total length of the section, according to Road Database, is 14.774 km.

According to the implementation plan, the main objectives of the project are to increase the usage value and durability of the road, improve traffic safety, consider requirements of the local community (social aspect) and comply with the environmental requirements to the maximum extent possible in the circumstances of

physical constraints and limitations arising from the nature of the permitted construction and traffic interventions.

Picture 4. Section in the inhabited area.

Picture 5. Facilities along the section Svilajnac-Medveđa.

Picture 6. Typical road landscape of section Svilajnac-Medveđa.

Special attention should be given to the sections passing through urban areas, close to schools, kindergartens, intersections and public buildings. On these locations it is necessary to construct or rehabilitate existing footpaths and improve traffic safety.

Policy, legal and administrative framework

The (MEP), is the key institution in the Republic of Serbia responsible for formulation and implementation of environmental policy matters.

In the Republic of Serbia, the Environmental Impact Assessment procedure is regulated by the Law on Environmental Impact Assessment ("Official Gazette of RS" No. 135/04, 36/09), which is completely in line with European EIA Directive - 85/337/EEC. The Environmental Impact Assessment **is not required** when road rehabilitation and maintenance of regional or main roads is planned.

Based on the decision issued by the Institute for Nature Conservation of Serbia, state road IIA category No.160 section Svilajnac-Medveđa is not located within a protected area, for which the process of protection is implemented or initiated (Appendix 5 - Annex 2).

Under the terms issued by the Institute for Protection of Cultural Monuments Kragujevac there is one cultural monument of high importance for Republic of Serbia:

1. IDIMUM - Archeological site

On the left bank of the Resava River in the village of Medveđa near Despotovac at the sites of Bedem and Popov čair, there are remains of the Roman road station Idimum on the road Via publica *(Viminacium - Naissus)*. Archaeological research of the site was performed between 1960 and 1962 by the National Museum in Belgrade. On that occasion, parts of the Roman road and the remains of architecture were discovered, among which there were terra and other smaller buildings, and the analysis of the obtained data confirmed that there was a civilian settlement *(vicus)* next to the road station *(mansio)*. Movable archaeological material revealed that the works on the site were originally undaertaken in the end of the 3rd and 4th centuries.

Works on road rehabilitation are permitted under conditions mentioned in the received document. Conditions mainly apply to the excavation works and discovering of potential new archaeological sites. The Conditions are attached to this document, Appendix 5 - Annex 1.

Request for opinion regarding necessity of EIA procedure for this project was submitted to The (MEP). According to received response ref. No. 011-00-0101/2017-02 dated 03.08.2017. (attached to this documents, Appendix 5 - Annex 4), *EIA procedures are not required.*

Lender requirements will also apply to this project and include the following Environmental Policies

- Operational Policy OP 4.01 Environmental Assessment;
- EBRD Environmental and Social Policy 2008
- EIB Statement of Environmental and Social Principles and Standards (2008).

The World Bank, European Bank for Reconstruction and Development (EBRD) and European Investment Bank (EIB) will require that the project complies with the national laws of Republic of Serbia and EU standards. List of main laws and regulations currently in force in Republic of Serbia is attached in Appendix III.

Baseline conditions assessed during route survey

The section of the state road of IIA category No. 160 connects Svilajnac and Medveđa. Length of the section to be rehabilitated is 14.774 km.

On the section belonging to the IIA 160 road from Svilajnac to Medveđa, there are 26 (twenty-six) culverts on the section, pipe, box and arched. The culverts are generally in poor condition. The technical solutions for repair shall be carefully adopted, as some of the culverts have been extended in the previous period.

On two culverts at app. Chainage km 53+230 and km54+530, the width of the pavement is app. 4.8 m, while the total width of the traffic profile is app. 6.5 m. Both culverts are in extremely poor condition. Urgent repair of the walls and extension of the traffic profile with appropriate kerbs and protective fence / sidewalk fences is required. Possible extension, prolongation and cutting of existing and construction of new culverts will be analyzed and defined in the Main Design.

The route crosses the following watercourses:

- Vodenički trough km 46+603.00;
- Jaruga km 47+791.00;
- Jaruga km 48+443.00;
- Jaruga km 49+840,00;
- Jaruga km 50+323.00;
- Troponjski stream km 53 +200.00;
- Vlaški stream km 54+378.00;
- Jasenovački stream km 55+887.00;
- Lipovački stream km 57+488.00;
- Brestovački stream km 58+288.00;
- Buk km 58+740.00.

Within the landslide zone, at approximate chainage km 50+145.00 in length of 100 m, repair of the pavement structure on the respective stretch has been performed during regular maintenance.
The existing condition shall be checked within the Design and additional repairs of all road elements shall be anticipated, if any.

There will be no land acquisition as defined by OP 4.12 during the project implementation.

Within the corridor of road section Svilajnac- Medveđa there are no significant sources of noise or air pollution.

Section Svilajnac - Medveđa goes through settlements Svilajnac, Grabovac and Medveđa.
Current traffic load (AADT) on section Svilajnac - Medveđa is cca 2185 vehicles/day.

Summary of environmental impacts

Road rehabilitation works on proposed sections will have only minor impacts on the environment (environment category B). Most impacts are temporary and they will disappear after the road rehabilitation works are completed.

The possible temporary impacts as a consequence of construction activities will consist of, disruption of current traffic circulation, roadway safety, damage to access roads, dust nuisance, gaseous emissions, potential pollution of soils and water resources, brief disturbance to biota, and momentary interference to neighboring settlements through various construction activities. The contractor's base and workers camp can be potential sources of temporary adverse impacts.

No relocation and resettlement issues as defined by OP 4.12 are anticipated.
Local residents will be affected with minor air and noise pollution during rehabilitation works on proposed road section.

In respect to future use of the rehabilitated road section – this section belongs to the inter-regional roads network, on which a significant increase of road traffic as a result of rehabilitation works is not expected.

Various cases of water contamination can occur during the rehabilitation of the road and future operation. Adequate mitigation measures (waste water collection from the road surface and bridges, installation of oil separators before discharging waste water) and monitoring activities are planned, in accordance with the Law on water ("Official Gazette of RS", 30/2010, 93/2012 and 101/2016). As for the potential pollution during operation, these are limited to accidents only. In such a case, procedures for action in incidental situations, as defined by the Ministry of Interior and in the Law on water, will apply.

In respect to impact of the potential increase of the vehicle speed on rehabilitated roads, this issue will be addressed through the project's road safety component, which will include implementation of the active and passive measures to control the vehicle speed on rehabilitated road sections.

The proper implementation of the EMP measures, as listed in Appendix I would offset or minimize any impact on local human and biotic environment that might be related with any long-term cumulative negative effects.

Environmental management plan

Possible environmental impacts will be *mitigated during the design/pre-rehabilitation, rehabilitation, and operation Phases, are summarized and shown in Appendix I.*

The rehabilitation impacts will be minor, reversible and manageable if the mitigation measures, as given in the EMP, are properly implemented.

EMP has 2 main parts:

- Mitigation Plan (Appendix I),

- Monitoring Plan (Appendix II)

During the rehabilitation, the Contractor will work according *to the Contractor 's Environmental Plan (CEP) which is based on the EMP.*

The findings and proposed mitigation measures have been compiled into an Environmental Mitigation Plan (Appendix I). It summarizes all the anticipated environmental impacts and its associated mitigation measures during the design, rehabilitation and operational phases. It makes reference to the laws and contract documents, approximate location, time-frame, and the responsibility for its implementation and supervision.

A monitoring plan for the proposed Project (Appendix II) has been prepared as well.

The main components of the monitoring plan are the following:

1. Environmental issues to be monitored and the means of verification,
2. Specific areas, locations and parameters to be monitored;
3. Applicable standards and criteria;
4. Duration and frequency;
5. Institutional responsibilities for monitoring and supervision.

Public consultation

As required by the WB Safeguards Policies, public consultations will be organized during the preparation of EMP and before the works start. The EMP and other project information will be disclosed to the Public and available locally to the communities. All documents will be, delivered to the Municipalities, made publicly available on site, placed on PERS's web site and announced in the newspapers.

The public will be informed through local media about the time and place of public consultations.

Detailed Report on Public Consultation process will be presented within the Appendix VI of this EMP document.

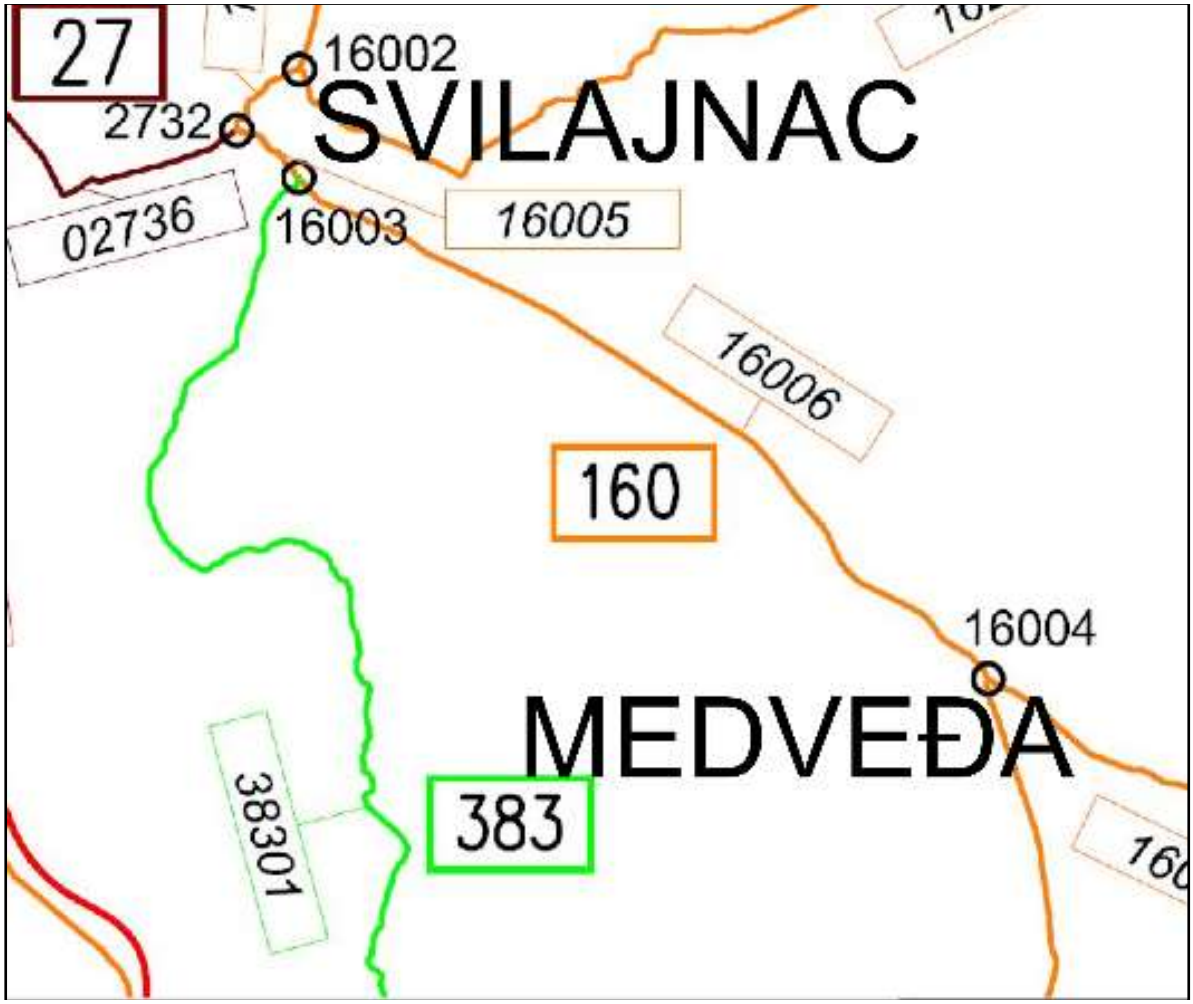
Beneficiary consultations will be conducted during the construction phase, and records of environmental and social issues raised and complaints received during consultations, field visits, informal discussions, formal letters, etc. will be followed up and the records will be kept by the Contractor.

A Grievance Mechanism will be implemented to ensure that all complaints from local communities are dealt with appropriately, with corrective actions being taken and the complainant being informed of the outcome. It will be applied to all complaints from affected parties. A grievance form is attached in Appendix IV and hard copies will be made available at community centers.

PROJECT DESCRIPTION

Location description

The subject section belongs to the Pomoravski Administrative District located in the central and eastern part of the Republic of Serbia. The section Svilajnac (Crkvenac) – Medveđa (Glogovac) in length of 14.774 km belongs to the State road of IIA - 160 (old road mark R-103) („Official Gazette of RS“, No. 93/2015). It represents a traffic link between the Branicevo and Pomoravlje Administrative District, thus the subject section connects the Municipality of Svilajnac and the local community of Medveđa.



Picture 7. Location of the road section Svilajnac – Medveđa

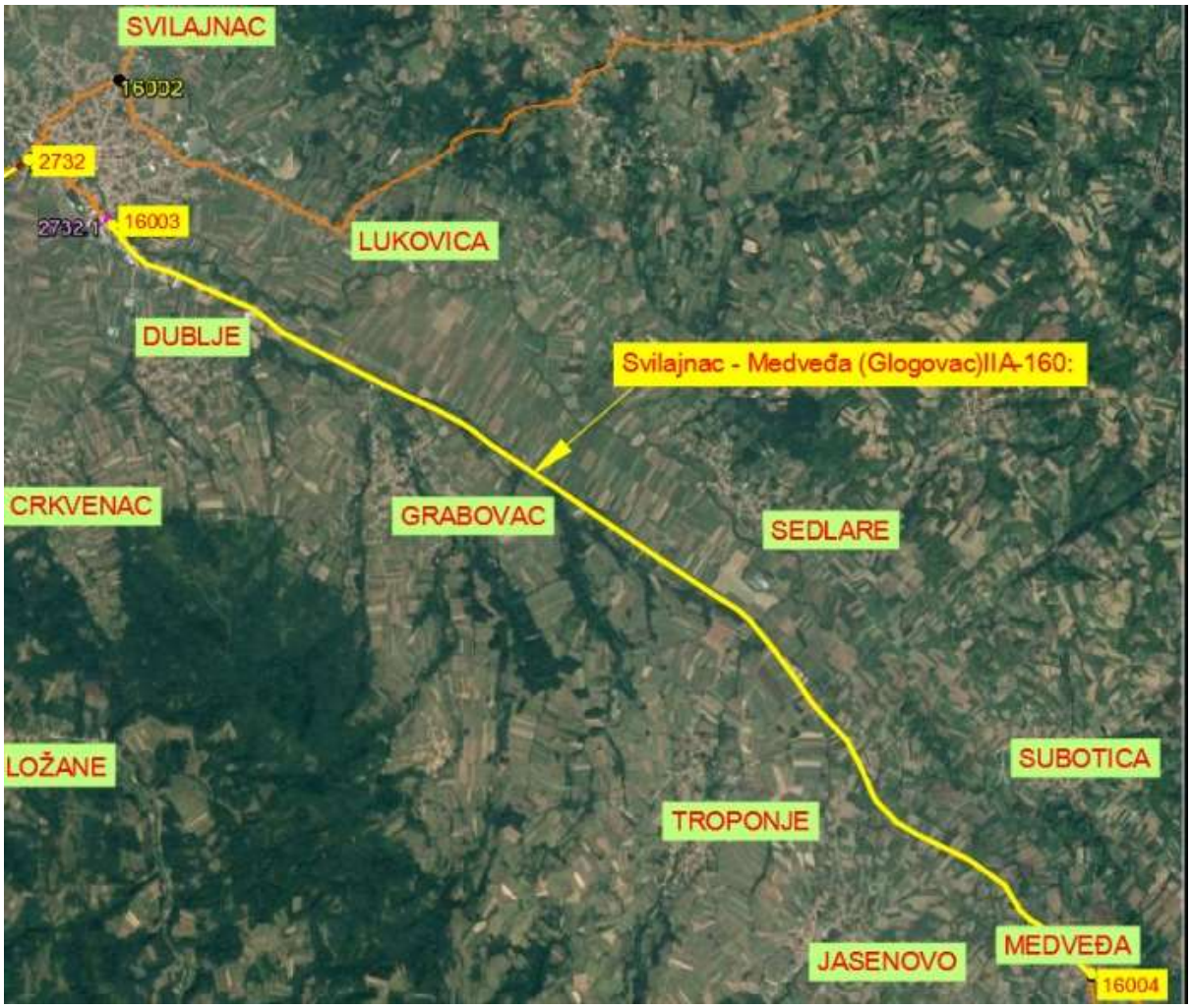
The area is mildly hilly, with an average altitude of 150.00 m. The section is typically rural and runs through agricultural land.

Planned construction works

Planned construction works on the section include strengthening existing road construction, reconstruction of the existing waste water collection system from the

road, collection and drainage of water from terrain and design of all components that will improve traffic safety conditions.

The width of existing asphalt pavement with marginal strips is within the range of 6 to 6.2 m.



Picture 8. Location of road section Svilajnac – Medveđa.

Culverts

In the subject section there are twenty-four existing structures which are classified as culverts due to span length less than 5,0 m. In the following document an overview Table No. 1 is given with structure data that are currently available. Some of the data are estimated and their accuracy will be checked during the process of project planning and design.
Beside the structures existing in the roadway section Svilajnac – Medveđa, there are also structures connecting the crossroads on mentioned section and structures entering on private plots. Those structures will be processed after setting traffic and

road parameters, and also after processing of hydraulic calculation. Structures will be made of RC or PVC circular pipes with all the necessary elements.

Table 1: list of structures on subject section

Culvert no.	Chainage	Opening	Description
1	46+020,67	Ø1,5m	Concrete tube culvert
2	46+603,58	4,0m	Stone arch with RC expansion framing structure
3	47+791,36	4,5m	Stone arch with RC expansion framing structure
4	48+443,21	до 1,0m	Stone arch with RC expansion framing structure
5	48+014,95	-	
6	48+261,57	-	
7	48+940,76	Ø0,8 m	Concrete tube culvert
8	49+247,74	0,8x0,3m	Stone arch
9	49+386,67	0,6x1,0m	Concrete culvert
10	49+586,82	0,6x1,0m	Concrete culvert
11	49+840,53	1,5 – 2,0m	RC AB vaulted culvert with expansion stracture
12	50+323,91	3,0m	Stone arch with RC expansion framing structure
13	50+832,46	-	
14	51+226,08	1,0m	Stone arch
15	51+783,36	1,5m	Concrete culvert
16	53+198,21	3,9m	Stone arch with RC expansion framing structure
17	53+903,21	0,6 – 0,8m	Concrete culvert
18	54+161,94	0,6 – 0,8m	Concrete culvert
19	54+478,77	3,4 – 4,0m	Stone arch with RC expansion framing structure
20	55+700,10	0,6 – 0,8m	Concrete culvert
21	55+887,48	4,0 – 5,0m	Stone arch with RC expansion framing structure on both sides
22	56+411,65	0,6 – 0,8m	Concrete culvert
23	56+777,92	-	
24	57+488,20	1,5 – 2,0m	Stone arch with RC expansion framing structure

Table 2: list of structures with planning works

Culvert no.	Chainage	Opening	Description
1	46+020,67	Ø1,5m	Expansion of structure with inflow and outflow culvert head
2	46+603,58	4,0m	Rehabilitation of existing structure and expansion of structure
3	47+791,36	4,5m	Replacement with tube culvert
4	48+443,21	Up to 1,0m	Replacement with tube culvert
5	48+014,95	-	Replacement with tube culvert
6	48+261,57	-	Replacement with tube culvert
7	48+940,76	Ø0,8 m	Expansion of structure with inflow and outflow culvert head
8	49+247,74	0,8x0,3m	Replacement with tube culvert
9	49+386,67	0,6x1,0m	Replacement with tube culvert
10	49+586,82	0,6x1,0m	Replacement with tube culvert
11	49+840,53	1,5 – 2,0m	Replacement with new culvert
12	50+323,91	3,0m	Rehabilitation of existing structure and expansion of structure
13	50+832,46	-	Replacement with tube culvert
14	51+226,08	1,0m	Replacement with tube culvert
15	51+783,36	1,5m	Replacement with tube culvert
16	53+198,21	3,9m	Replacement with new culvert
17	53+903,21	0,6 – 0,8m	Replacement with tube culvert
18	54+161,94	0,6 – 0,8m	Replacement with tube culvert
19	54+478,77	3,4 – 4,0m	Replacement with new culvert
20	55+700,10	0,6 – 0,8m	Replacement with tube culvert
21	55+887,48	4,0 – 5,0m	Rehabilitation of existing structure and expansion of structure
22	56+411,65	0,6 – 0,8m	Replacement with tube culvert
23	56+777,92	-	Replacement with tube culvert
24	57+488,20	1,5 – 2,0m	Rehabilitation of existing structure and expansion of structure

Planned works

Planned works include widening of the road up to 6.5 m out of urban areas and 6.0 m in the settlements, milling of the existing asphalt layer, construction or replacement of waterproofing, construction of asphalt layers, demolition and reconstruction of the curbs, repair or replacement of the bearing paths, repair of fences and guardrails.

Since the road is passing through the suburbs of Svilajnac and Medveđa, where there are no sidewalks, construction of sidewalks is planned on approximate length of 2050 m in Svilajnac and 1880 m in Medveđa.

The works will be done within the existing road alignment. The project entails **no land acquisition.**

All the road connections will be regulated. On the earth roads there will be designed flexible pavement structure. At the intersections with the local roads the radiuses will be regulated and necessary berms will be opened for better visibility. Wherever possible, on the main road there will be added left and right turn lanes.

Drainage of the road, in the registered watercourse areas, will be done by placing shallow channels in the bottom of embankment. Water from the road will be collected into channels and taken to waste water treatment systems (oil and fat separators placed close to recipient) wherever necessary.

Rehabilitation works description

According to the design, widening of the road is planned, resolving the problems concerning frequent intersections and connections, construction of satisfactory approaches on to the state road, solving problems of pedestrian's movement and improving traffic safety.

The road works covered by the Project will be carried on the existing road with no change of the alignments. The improvement of the road geometry shall be done, if necessary, with the goal of traffic safety in mind. The project entails **no resettlement and land acquisition as defined by OP 4.01**, nor long lasting disruptions to the natural environment and human settlements and activities.

The major planned construction works include improvement and widening of the existing road construction with corresponding elements on transversal profile within existing road alignment, reconstruction and remediation of existing drainage system, construction of elements in order to prolong the durability of the construction and improvement of traffic safety.

New intersections in level will be redesigned too. As well as new solutions for intersections, pedestrian and bicycle paths and bus stops in the settlements will be designed, according to requirements of the locals and conditions on site.

Due to widening of the road, extension of existing (not damaged) or construction of new culverts will be designed.

Reconstruction and extension of existing drainage systems (construction of ditches and open channels) will be done in line with Main Design.

On the locations where road is passing over watercourses, separators will be placed wherever necessary. They will treat water collected from road before it is discharged into the recipient.

Hydraulic characteristics of the elements for drainage along the road will be checked and corrected with the goal to get efficient and controlled system for collection of rainwater.

POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

Relevant institutions

Ministry in charge of environmental protection (The Ministry of Environmental Protection-MEP) is the key institution in Republic of Serbia responsible for formulation and implementation of environmental policy matters.

The other aspects of environmental management related to road rehabilitation projects are dealt with by several other institutions, among which are the Institute for Nature Conservation of Serbia (INCS) and the Institute for Protection of Cultural Monuments Kragujevac (IPCMK), and the Public Enterprise “Roads of Serbia” (PERS).

Existing Serbian legislation

Environmental protection in Republic of Serbia is regulated by several national and municipal laws and by-laws. The environmental legislation in force in Serbia is summarized in Appendix III.

EIA procedure in the Republic of Serbia

In the juridical system of the Republic of Serbia, the Environmental Impact Assessment procedure is regulated by the Law on Environmental Impact Assessment (“Official Gazette of RS” No. 135/04, 36/09), which is completely in line with European EIA Directive - 85/337/EEC. Therefore, Environmental Impact Assessment is not required for road rehabilitation projects unless the road is placed within or in the vicinity of natural/cultural protected areas. In that case Project proponent is obliged to submit Request for Decision-making on the necessity of preparation of the Environmental Impact Assessment to the MEP. Depending on the assessment of significance of potential environmental impacts of the project decision shall be made on whether it is necessary to implement full EIA procedure.

Based on the above criteria, EIA is not required for this project.

Relevant International Financing Institutions policies and statements

As the road rehabilitation will be funded by International Financing Institutions **(**IFIs) the following Lender requirements will need to be applied to any works:

- WB: Operational Policy OP 4.01 Environmental Assessment, which require partial EIA and development of site specific EMPs for projects belonging to Category B.;
- EBRD: Environmental and Social Policy 2008
- EIB: Statement of Environmental and Social Principles and Standards (2008).

Government of Serbia (GoS) regulations do not require separate section-specific EMP to be undertaken for this type of investments (road rehabilitation), while the WB policy requires partial EIA assessment and preparation of site-specific EMP for each section.

BASELINE CONDITIONS ASSESSED DURING ROUTE SURVEY

The subject section belongs to the Pomoravski Administrative District located in the central and eastern part of the R. of Serbia. The section Svilajnac (Crkvenac) – Medveđa (Glogovac) in length of 14.774 km belongs to the State road of IIA - 160 (old road mark R-103) („Official Gazette of RS“, No. 93/2015). It represents a traffic link between the Braničevski and Pomoravski Administrative District, thus the subject section connects the Municipality of Svilajnac and the local community of Medveđa.

There will be no land acquisition as defined by OP 4.12 during the project implementation.

Natural resources and cultural heritage

Directly on the alignment of the State Road II-A No.160, Svilajnac-Medveđa, there are no protected natural resources, which could be compromised during the heavy maintenance and elimination of damages at the road.

Under the terms issued by the Institute for Protection of Cultural Monuments Kragujevac there is one cultural monument of high importance for Republic of Serbia:

1. IDIMUM - Archeological site

On the left bank of the Resava River in the village of Medveđa near Despotovac at the sites of Bedem and Popov čair, there are remains of the Roman road station Idimum on the road Via publica *(Viminacium - Naissus)*. Archaeological research of the site was performed between 1960 and 1962 by the National Museum in Belgrade. On that occasion, parts of the Roman road and the remains of architecture were discovered, among which there were terra and other smaller buildings, and the analysis of the obtained data confirmed that there was a civilian settlement *(vicus)* next to the road station *(mansio)*. Movable archaeological material revealed that the works on the site were originally undaertaken in the end of the 3rd and 4th centuries.

Works on road rehabilitation are permitted under conditions mentioned in the received document. Conditions mainly apply to the excavation works and discovering of potential new archaeological sites. The Conditions are attached to this document, Appendix 5 - Annex 1.

Settlements

Section Svilajnac - Medveđa goes through settlements Svilajnac, Grabovac and Medveđa.

Watercourses

The route crosses the following rivercourses:

- Vodenica trough km 46+603.00;
- Jaruga km 47+791.00;
- Jaruga km 48+443.00;
- Jaruga km 49+840,00;
- Jaruga km 50+323.00;
- Troponje stream km 53 +200.00;
- Vlah stream km 54+378.00;
- Jasenovac stream km 55+887.00;
- Lipovac stream km 57+488.00;
- Brestovac stream km 58+288.00;
- Buk km 58+740.00.

Air pollution

Within the corridor of road section Svilajnac-Medveđa, there is no point of air pollution.

Noise

Existing state road of the II-A 160 on Svilajnac - Medveđa road direction as linear source is the only dominant noise source.

SUMMARY OF ENVIRONMENTAL IMPACTS

The following table provides a summary of the Environmental Impacts that are predicted for the project

Impact	Significance	Comment
Impacts on land use/ settlements	low	There will be no land acquisition as defined by OP 4.12 during the project implementation.
Ground and surface water	low	Due to low amount of drainage water that can be drained the consequential impact is minimal to negligible
Air quality	low	Temporary impact
Flora and fauna (protected areas and species)	low	No specific issues
Noise	low	Temporary impact
Access/crossing points of the main road and local roads	low	The rehabilitation and widening works won't affect existing crossing points. No specific issues
Soil management	low	With application of waste management measures
Waste	low	waste and wastewater management will be prepared and implemented
Cumulative impacts etc.	Moderate/low	Temporary, rehabilitation works may cause a slight increase of noise levels and air pollutants concentrations only during the works

Road rehabilitation works on Svilajnac - Medveđa section will have only minor impacts on the environment (**environmental category B**). Most of the impacts are of temporary character and they will disappear after the road rehabilitation works are completed.

The possible temporary impacts as consequence of the construction activities will consist of among others: disruption of current traffic circulation; roadway safety; damage to access roads; noise, waste and dust nuisance; and air emissions; potential impacts of soils and water resources; brief disturbance to biota, and momentary

interference to neighboring settlements through various construction and operation activities.

The Contractor's base and workers' camp can be potential sources of temporary adverse impacts, too.

Air and noise pollution within the residential areas

It is expected that local residents living along the road section will be affected with minor air and noise pollution during rehabilitation works. Local Air quality may experience some low and temporary deterioration due to dust from construction traffic and elevated levels of nitrogen oxide (NOx) and sulfur oxide (SOx) are the primary pollutants. The dust may settle on vegetation, crops, structures and buildings, and may cause some degree of impact.

Noise caused by the rehabilitation works will only be a temporary impact.

Noise barriers should be constructed only if they are determined to be "reasonable" and "feasible".

Section Svilajnac - Medveđa belongs to the state road network. On this section increase in road traffic due to road rehabilitation is not expected. Potentially increasing the speed limits of vehicles on the reconstructed section, shall be defined in the design part dealing with road safety. It will propose the use of active and passive measures for control of vehicle speed.

Potential Water Contamination

Cases of water contamination may occur during the rehabilitation of the project road, mainly spills and water from the equipment maintenance areas and sanitary wastewater effluent from the work camps.

As for the potential pollution during operation, these are limited to accidents only. In such a case, procedures for action in incidental situations, as defined by the Ministry of Interior and in the Law on water, will apply.

Fuel and lubricant spills can, in most instances, occur at the Contractor's work camp and motor pool while maintaining and washing equipment and work vehicles. The oily wash-water should be passed through an adequately sized, gravity oil separator prior to discharge.

Should spills occur in any part of the road, to mitigate the problem the Contractor should use absorbing materials, such as absorbent mats/fabrics, or sand and scrape off the contaminated soils and dispose them in an approved facility, in accordance with the Law on water ("Official Gazette of RS", 30/10, 93/12, 101/2016).

Works over bridges will be done with special care in order to avoid water pollution. Prior to start of any activity, Method Statements for proposed works have to be

submitted for approval to the Supervisor. Each Method Statement will have environmental protection section and proposed measures to be undertaken in order to avoid incidents and accidents during construction works. Mitigation measures or monitoring activities related to possible river contamination are part of this EMP.

Potential Cumulative impacts

The works execution on the heavy maintenance of the state road II A 160, on the section Svilajnac – Medveđa could have some cumulative impacts..

Possible cumulative negative impacts, as a result of construction activities, are temporary and consist of:

- obstruction of traffic,
- road safety,
- damages on the access roads,
- noise, dust, waste and air pollution,
- potential impacts on soil and water resources,
- short term impact on flora and fauna and surrounding settlements.

The construction out of site activities involving work in the quarry and asphalt bases, which, if not managed properly, can cause local adverse impacts.

Temporary offices and ancillary facilities can be potential sources of short-term negative impacts.

However, they, due to their intensity, origin and duration are assessed to be moderate.

EMP focuses more on the stage of works involving heavy maintenance, because it is going to become a part of Contractor's obligations. Activities related to the regular maintenance of the section will not be in focus of the Environmental Management Plan but will only be presented in order to create an overall view.

ENVIRONMENTAL MANAGEMENT PLAN

Possible environmental impacts will be mitigated during the design/pre-rehabilitation, rehabilitation, and operation phases, as summarized in the Environmental Management Plan.

A basic assessment of the proposed road reconstruction and rehabilitation project concluded that the rehabilitation impacts will be minor, reversible and manageable if the mitigation measures as given in the EMP are properly implemented.

The EMP (Appendix I and Appendix II) is based on the type, extent and duration of the identified environmental impacts. PERS (the Implementing entity) will guide the design and supervision engineers and contractors on the implementation of the EMP.

A. MITIGATION PLAN

The findings and proposed mitigation measures have been compiled into an Environmental Mitigation Plan (Appendix I). It summarizes all the anticipated environmental impacts and its associated mitigation measures during the design, rehabilitation and operational phases. It makes reference to the preconditions obtained from the relevant institution (Institute for Nature Conservation of Serbia and Institute for Protection of Cultural Monuments Kragujevac), law and contract documents, approximate location, time-frame, and the responsibility for its implementation and supervision.

Contractor Management

The recommendations and proposed mitigation measures, as shown in Appendix I are Contractors obligations. Mitigation measures will be incorporated in the design and rehabilitation practices and as such their costs will be included in the rehabilitation cost.

The EMP is part of the work program and will be carried out by the Contractor's qualified and experienced staff who will be responsible for the environmental compliance requirements of the EMP. The Contractor and its sub-contractors will fully comply with Republic of Serbia national laws, EU standards and Lender requirements.

The contractor will use this document to cost his compliance with the EMP. It is the Contractor's obligation to include the cost of the implementation of environmental mitigation measures in his overall cost.

The Contractor will be required to provide a short statement that confirms that:

- the EMP conditions have been included into the bid price,
- the Contractor has a qualified and an experienced person on the Contractor 's team who will be responsible for the environmental compliance requirements of the EMP.
- The Contractor and its sub-contractors will comply with Republic of Serbia national laws, EU standards and Lender requirements.

Design Phase

In the Republic of Serbia, the Environmental Impact Assessment procedure is regulated by the Law on Environmental Impact Assessment ("Official Gazette of RS" No. 135/04, 36/09). According to it, the Environmental Impact Assessment is not required for road rehabilitation projects if the route of the road is not within natural/cultural protected areas.

Since there are no protected natural or cultural areas which could be endangered by the road rehabilitation works on this road section, EIA is not required.

Mitigation measures are part of the design and rehabilitation practices and the costs will be included in the rehabilitation cost.

In addition to addressing the requirements of the Mitigation Plan the following additional activities will be carried out during the design phase in preparation for the implementation of the project:

The Site Organization Plan will be prepared as part of Detailed design. Design phase will take place just after the appraisal of the project. Site organization study incorporates environmental, health and safety protection measures that meet legal and Lender requirements (including the measures defined in the EMP and Safety Labor Management Plan).

As for the potential pollution during operation, these are limited to accidents only. In such a case, procedures for action in incidental situations, as defined by the Ministry of Interior and in the Law on water, will apply.

The plan will contain basic requirements related to:

1. Provision of materials needed for construction works;
2. Material transport;
3. Material placement;
4. Site organization;
5. Waste management;
6. The right-of-way arrangement (cleaning).

Technical specifications for work execution which address environmental, health and safety protection measures:

1. Preliminary works;
2. Rehabilitation works on the existing pavement;
3. Earth works;
4. Drainage;
5. Traffic signage systems.

Supervisor and PERS are responsible for checking that the EMP requirements are incorporated into the site organization.

Site Organization Plan

The plan of construction site organization is the responsibility of the Contractor. He is obligated to prepare it and to comply with it during construction period.

Preparation of site and establishment of Contractors facilities: this applies to all of the Contractors facilities, storage areas, workshops, labor camps (when needed), concrete batching areas, asphalt plant, etc. The location and development of the Contractors facilities will be approved by the Resident Engineer (RE).

Taking into account the conditions of nature protection, legislation and environmental requirements when choosing a location and organization of the construction site, as well as during the actual construction, it must comply with the following:

1. Temporary location for storing the necessary construction and other material and equipment is needed to be located outside the area with tall vegetation and river flooding zones, and limited only to the duration of the works execution;
2. Provide temporary or permanent locations (existing regulated utility facilities/landfills) for disposal of service rubble and other waste material in any state, and municipal waste generated during the construction. Restrict storage / disposal in coastal area of smaller watercourses of a temporary nature, as well as on agricultural land;
3. Provide after completion of the works that all areas which are in any way degraded by construction works should be as soon as possible remedied;
4. During the works execution, strictly observe the planned alignment and corridor around it, in such a way that the earthworks and the use of machines would not leave consequences on the environment;
5. When performing the construction works on sections of the road which is next to the river, it should be predicted to maximize preservation of the coastline and coastal vegetation, wild species and their habitats;
6. In the zone of transition of the road (bridge) over the watercourses, where the earthworks are necessary, the project/design should foresee the usage of stone and other natural materials and largely avoid concreting of coast and riverbeds surrounding the watercourses;
7. Prohibit the servicing of machinery and vehicles along the road. In case of accidental spills of fuel, oils / lubricants and other harmful substances, the surface must be repaired and remedied;
8. The respective construction works on the road section which pass through the settlements should be executed only during the day (07.00hrs - 19.00hrs) because of the potential impact of noise from construction equipment and vehicles;
9. Protective fences and pedestrian crossings and passages are to be located at designated places where it is most appropriate, especially near existing settlements;
10. During construction, along the whole road section maximum level of communal hygiene should be maintained, with predefined locations for containers to be used for temporary storage of waste;
11. The size of contractor’s facilities is limited to absolute minimum to reduce unnecessary removal of vegetation;

12. The contractor's facilities are to be surrounded with an adequate security fence.

13. The sites are properly drained. Paved areas, including vehicle parking areas, workshops and fuel storage areas are to be drained to an oil and water separator;

14. Sanitary waste and grey waters are treated before release into surface water systems, in accordance with the Law on water ("Official Gazette of RS", No. 30/10, 93/12).
15. Fuel storage areas are not located within 20m of a water course.
16. Where fuel in excess of 5,000 liters is stored on site, it will be stored in sealed tanks on a concrete base that is bunded to hold 110% of the tank capacity;
17. All workshops would be provided with oil and water separators;
18. The contractor must have trained personnel who are competent in fuel handling procedures and for cleaning up accidental spills;
19. All waste oil, oil and fuel filters will be collected and disposed of in secure landfill areas. At the closure of the site, all contaminated soil will be excavated, removed and replaced with fresh topsoil;
20. Cleared material is to be piled into manageable sized heaps according to disposal or re-use requirements.
21. Limit the extent of excavation to reduce soil erosion potential. The contractor will be responsible for ensuring that the erosion is contained by soil conservation protection methods.
22. Apply soil conservation protection methodology to susceptible areas to prevent / minimize storm water runoff carrying eroded materials off-site.
23. Avoid excavation and operating machinery in wet ground conditions.
24. Upon the completion of all works, it is necessary to remove the machinery, construction materials, containers, spare parts and other equipment, as soon as possible;
25. After the completion of all works, it is required to cultivate the ground at all vulnerable areas by using the appropriate flora and species that are biologically stable under the given climatic conditions, resistant to adverse impacts (exhaust gases) and compatible with the surrounding area and purpose;

PERS is obliged to check through the engaged consultant for monitoring/supervision whether the requirements of the environmental management plan and management safety organization plan are implemented at the site.

Rehabilitation Phase Mobilization – Contractor EMP

During the rehabilitation, the Contractor will work according to the requirements of the Contractor's Environmental Plan (CEP) (based on the EMP) which will be prepared by the Contractor and approved by PERS. Supervision and monitoring of the CEP activities will be undertaken as follows:

I. The contractor has the initial responsibility for preparing and implementing the CEP as per the works contract.
II. The Resident Engineer (RE) will direct the Contractor with regard to compliance with the CEP.

III. PERS will carry out independent monitoring of the work and can issue Defect Notices to the RE who will transmit these to the Contractor.
IV. The contractor will have his own representative on site – the Site Engineer (SE) who will be responsible for implementing the contract and complying with the CEP.

Contractor prepares CEP before commencing the work. The Contractor will prepare a Contractor's Environmental Plan (CEP) that addresses the conditions of the rehabilitation in the EMP and include measures to comply with national legalization and Lender requirements. The CEP will detail how the Contractor will address the activities in the rehabilitation section of the EMP. The contractor will submit the CEP to the PERS for approval.

Following the approval of the CEP, the Contractor together with the person on the Contractor's staff who will be responsible for supervising the CEP will meet the Project Supervision Consultant PSC (Environment) on-site. If the plan is appropriate and implementable, the PSC will advise the PERS that the Contractor can now commence work.

Rehabilitation works

Preparation of site and establishment of contractor 's facilities: This applies to all of the Contractor's facilities, storage areas, workshops, labor camps (when needed), concrete batching areas, asphalt plant, etc.

The location and development of the Contractor's facilities will be approved by the RE. Locations will be selected so that:

1. Do not interfere with the environment and social well-being of the surrounding communities regarding noise, dust. vibration;
2. The size of contractor's facilities is limited to absolute minimum to reduce unnecessary removal of vegetation;
3. Sanitary waste and waste waters are treated before release into surface water systems, in accordance with the Law on water ("O Gazette of RS", 30/10, 93/12);
4. The sites are properly drained. Paved areas, including vehicle parking areas, workshops and fuel storage areas are to drain to an oil and water separator;
5. Fuel storage areas are not located within 20m of a water course. The contractor's facilities are to be contained within an adequate security fence.
6. Clearing of sites and removal and disposal of vegetation is minimized:
7. Wherever possible limit area to be cleared and avoid excessive machine disturbance of the topsoil;
8. Cleared material is to be piled into manageable sized heaps according to disposal or re-use requirements;
9. Prevention of soil erosion on construction site: The contractor will be responsible for ensuring that the erosion is contained by soil conservation protection methods.

The contractor will:

1. Limit the extent of excavation to reduce soil erosion potential.

2. Apply soil conservation protection methodology to susceptible areas to prevent / minimize storm water runoff carrying eroded materials off-site.
3. Avoid excavation and operating machinery in wet ground conditions.
4. Where fuel in excess of 5,000 liters is stored on site, it will be stored in sealed tanks on a concrete base that is bunded to hold 110% of the tank capacity.
5. All workshops would be provided with oil and water separators.
6. The contractor must have trained personnel who are competent in fuel handling procedures and for cleaning up accidental spills.
7. All waste oil, oil and fuel filters will be collected and disposed of in secure landfill areas. At the closure of the site, all contaminated soil will be excavated, removed and replaced with fresh topsoil.

Environmental Management during Rehabilitation works

Considering all identified impacts, it becomes essential for the Contractor to prepare and later conscientiously implement the EMP throughout the duration of the project to ensure compliance with legislative and Lender requirements.

The emphasis of the EMP shall be on the following:

1. Layout of the work camp and details of the proposed measures to address environmental impacts resulting from its installation. Description and layout of equipment maintenance areas and lubricant and fuel storage facilities including distance from water sources/bodies;
2. Sewage and septage management plan for provision of sanitary latrines and proper sewage collection and disposal system to prevent pollution of watercourses;
3. A plan (grievances mechanism and organizational structure) detailing the means by which local people and other project affected persons (PAP) can raise grievances arising from the rehabilitation process and how these will be addressed (e. g. through dialogues, consultations, etc.) (see Appendix 4 for the Project grievance mechanism);
4. Soil Management Plan detailing measures to be undertaken to minimize effects of wind and water erosion on stockpiles, measures to minimize loss of fertility of topsoil, time-frames, haul routes and disposal site;
5. Dust management plan which shall include schedule for water spraying on access roads and in nearby settlements along the project road, as well as list of equipment to be used; This applies to all of construction sites and haul roads. During rehabilitation, when dust may be generated, the Contractor will monitor the work-site conditions and apply dust control measures, which include reducing construction traffic movements and spraying water on exposed areas.
6. A plan indicating the location of the proposed material extraction site as well as rehabilitation measures to be implemented for the borrow areas and access roads upon project completion;
7. Waste and wastewater management plan. Disposal of waste materials: All construction waste materials including drums, lumber, sand and gravel, cement bags etc. are to be suitably disposed of. If these cannot be recovered for scrap value these materials should be taken to approved landfill sites for safe disposal. Hazardous waste will be stored and removed from the construction

site on demobilization, in accordance with the Law on Waste management ("Official Gazette of RS", 36/09, 88/10, 14/16) The CEP should cover all aspects of waste management, including implementation of practice standards such as reduce, re-use and recycle. It should specify final disposal alignments for all waste and demonstrate compliance to national legislation and best practice procedures on waste management. The Waste Management Plan will, as a minimum, include details of temporary waste storage, waste transfer and pre-treatment prior to final disposal or recycling. Licensed/approved facilities for solid and liquid waste disposal must be used and a duty of care and chain of custody for all waste leaving the site will be followed. As part of the plan Contractors will be expected to produce waste handling forms for chain of custody, which will be used to control waste leaving site. Thus, the waste controller will keep a copy of the form and the driver will always carry a copy and will ensure that the load is signed for at the final disposal site. All records will be kept by the Contractor for audit purposes and to demonstrate that the project is complying with best practice and applicable legislation;

8. Oil and fuel storage management plan. The CEP should cover all procedures for storage, transportation and usage of oils and fuels, refueling of plant and machinery and procedures for minimizing the risk of ground and water contamination. All oils and fuels will be required to be stored within secondary containment of 110 % capacity and all spillages shall be cleaned up immediately. Refueling vehicles will carry Spill Kits to enable spillages to be cleaned up as soon as possible. All categories of spillage will be reported in accordance with the Plan to be developed by The Contractor. Toolbox Talks would be expected to be delivered on an ongoing basis as „continued training" and following any significant incident;
9. In-river works management plan. The CEP should cover procedures and plans for safeguarding aquatic habitats and fish during in-river work and will complement the Construction Method Statements;
10. Camp management plan. The CEP should contain procedures for establishing and operating construction camps in order to safeguard nearby communities and environmental resources;
11. Emergency response plan. The CEP should contain procedures for emergency response in the event of accidents or major incidents, in order to safeguard people, property and environmental resources. Details of the spill response equipment to be provided on site are to be specified;
12. Noise – all equipment is licensed and approved in accordance with EU standards. This applies to all machinery, vehicles and construction sites where noise and vibration may affect susceptible receptors. The contractor will be responsible for ensuring that noise and vibration does not affect the adjacent communities, in accordance with the Law on noise protection ("Official Gazette of RS", 36/09, 88/10). While it is unlikely that noise and vibration will be an issue due to the large distances between the activities and the communities the Contractor will confine all work to daylight hours (07.00hrs - 19.00hrs) should the community find that any night time operations become a nuisance;
13. Rehabilitation Plan: Clearance and rehabilitation of construction sites and removal of contractor septage facilities: It is Contractor responsibility to address site cleanup. This includes the removal of all waste materials, machinery and any contaminated soil. The contractor will develop a plan for handover, sale or

removal of all plant, vehicles and machinery to ensure that no unserviceable items are left on the construction site, in accordance with the Law on Waste management ("Official Gazette of RS", 36/09, 88/10, 14/16). All construction sites and work areas will be rehabilitated so that these can be returned as close as possible to their previous uses. This includes the stabilization and landscaping of all of the construction sites. No waste will be left on site after the work is completed, in accordance with the Law on environmental protection ("Official Gazette of RS", 135/04, 36/09, 72/09, 43/11, 14/16). Should the Contractor fail to remove the waste, the PERS is entitled to withhold payment and arrange the clean-up and deduct the cost of the clean-up and administrative charges from the final payment.

Safety

Safety and Hazard Assessment:

Before commencing work, the Contractor will be required to identify potential hazards. Provisions for emergency responses are to be included in the Contractor site safety plan which is to include nomination of a person who will be immediately contacted should an accident occur. The site safety plan will be submitted to the PSC for approval one week prior to starting work.

1. The contractor will be required to keep the site free of drugs and alcohol;
2. The contractor site safety plan will include provision for a safe work environment and provide safety measures and protective equipment to all workers including; hand, head, eye and ear protection and safety footwear;
3. The site safety plan will include provision for first aid facilities on-site and employ a trained first aid person, in accordance with the Law on Safety and Health at work ("Official Gazette of RS", 101/05, 91/15);
4. The contractor will provide supplies of potable water, toilets and wash water to the workers;
5. Safety and Labor Management Plan (SLMP) prepared by the PERS has to ensure H&S provisions during rehabilitation works;
6. Contractor is obliged to perform all project activities by respecting SLMP recommendations and all Serbian laws and sub-laws which are covering H&S issues.

The PERS and Contractor together have responsibility for reporting and investigating incidents.

Community safety from increased vehicle movements: This applies to all vehicles and particularly to haul trucks that pass-through settlements. The contractor will ensure that all vehicles which pass through villages are operated safely without endangering these communities.

The contractor is to ensure that:

1. All trucks and equipment are maintained in a safe operating condition;

2. All drivers and machinery operators are trained and act responsibly (to be stipulated in the Contractor site safety plan);
3. All loads are secured and all loads with potential dust generating materials (e. g. excavated soil and sand) will be covered with tarpaulins;
4. The Contractor will immediately remove any drivers that ignore any of the community safety requirements;
5. Speed limits will be observed.

Prior to commencement of construction activities/site works, all of the above plans will be submitted by the Contractor to the Sector for Investments within the PERS for approval.

Following the completion of works a Site restoration will take place. It's Contractor obligation to restore location of the project as it was at beginning of the project.

Operational Phase

People Safety: During operation, according to the assessment performed within the design phase, road safety features will include:

1. Measures to slow the traffic; e. g. decreasing of speed at selected places (e.g. settlements, schools, markets, etc.);
2. Dust suppression sealing;
3. Improvements in road signage and pavement markings, and
4. Attention to road accident black spots.

Road Maintenance:

- Routine maintenance (grading, grass cutting, drain clearing, and pothole patching and shoulder repairs, together with regular control and maintenance of drainage structures and retention) will be undertaken on regular basis;
- Seasonal maintenance such as flood repairs, emergency maintenance to reinstate roads after major failures, and the regular upkeep of safety features and road signs will be undertaken as necessary;
- Major maintenance that include resurfacing and repairs are typically scheduled over periods of several years.

B. MONITORING PLAN

A monitoring plan for the proposed Project (Appendix II) has been prepared. The main components of the monitoring plans include:

- Environmental issue to be monitored and the means of verification,
- Specific areas, locations and parameters to be monitored;
- Applicable standards and criteria;
- Monitoring of noise levels near residential areas;
- Monitoring of the procurement of materials (checks that valid permits are in place);

- Duration and frequency and estimated monitoring costs; and
- Institutional responsibilities for monitoring and supervision.

A field monitoring checklist has been prepared based on the EMP and monitoring plan (Appendix II). The field monitoring checklist will be used by the supervising field engineers. The signed checklists will be provided to the PERS who will be responsible for the follow-up and compliance reporting.

The PERS will maintain a Complaints Database, which will contain all the information on complaints or grievances received from the communities or other stakeholders. This would include: the type of complaint, location, time, actions to address these complaints, and final outcome.

C. INSTITUTIONAL IMPLEMENTATION AND REPORTING ARRANGEMENTS

Project Implementation

PERS is the Implementing Agency for the Project and will be responsible for the implementation and compliance with the EMP and Monitoring Plan. Day-to-day implementation and compliance will be the task of PSC.

Prior to the commencement of works PERS will submit to the Bank for its approval this section specific Environmental Management Plan.

The Contractor will provide "Zero monitoring" results prior to commencement of earth works, during its own mobilization phase.

To ensure that the proposed mitigation measures will be carried out by the Contractors during the construction stage, the Project Proponent undertook the following:

I. Clearly set out in the tender and contract documents the Contractor's obligation to prepare CEP and undertake environmental mitigation measures as specified in the Environmental Mitigation Plan in Appendix I (appended to Contract specifications);
II. No compensation for the costs of the required environmental mitigation measures and monitoring activities in the form of the particular item in the Bill of Quantities (BoQ) shall be given to the Contractor, except for the water quality analysis and noise measurement. The Contractor had to include these costs in the other items of the BoQ. Real expenditures of water quality analysis and noise measurement in scope defined by the Bidding Documents(BD) and the Contract shall be compensated to the Contractor in the form of the particular item in the BoQ;
For noncompliance with requested environmental mitigation measures and monitoring activities the Contractor shall suffer specific liquidated damages in a form of demerit points. Demerit points are provided as a measure that should stimulate the Contractor to carry out his obligations in an organized and timely way and to perform his duty meeting high standards even though those tasks

does not appear to be of a serious nature. Demerit points simultaneously have two meanings – numeric and monetary.
Each demerit point has associated monetary value which represents permanent payments reduction for determined noncompliance of the contracted obligations.
Number of received demerit points has a cumulative effect. If during the Contract the Contractor receives more than certain number of demerit points specified in the BDs and the Contract, the Contractor will for a period of 2 years not be allowed to compete for any other PERS works contract.
Also, if the Contractor is awarded over a specified number of demerit points, the Employer has a right to terminate the Contract. Monetary value of each demerit points as well as limits for other possible actions by the Employer is specified in the BDs and the Contract.
Application of explained two measures - compensation for specific costs and penalties for noncompliance – should assure implementation of all requested environmental mitigation measures and monitoring activities;

III. Explicitly require the Contractor to recruit an environmental specialist. The contractor will be responsible for the implementation of environmental mitigation measures during construction and shall employ an environmental specialist who will supervise implementation of the Contractor's environmental responsibilities and coordinate with the PERS and MCTI. The contractor, in coordination with PERS, shall set-up a grievance redress committee that will address any complaints during project implementation. During project implementation, the PERS shall monitor the compliance of the Contractor with the EMP provisions. It is proposed that the project supervision consultants (PSC) employ an environment specialist (with civil engineering/environmental management background) to assist the environmental supervision.

Upon Project completion, PERS will be in charge of the operation and maintenance of the Project Road. Routine and random monitoring will be undertaken as scheduled in the monitoring plan.

Contractor will make a proposal for environmental protection, including safety of persons associated with the works and the public, during a pre-construction period within the Environmental Management Plan. This proposal will be reviewed by PERS in order to obtain the "no objection" to the proposal's recommendations. In this regard, attention will be given to:

- Taking all reasonable steps to protect the environment on and off site and avoid damage or nuisance to persons or property arising from its operations,
- Maintaining conditions of safety for all persons entitled to be on site and
- Provision of all lights, guards, fencing, warning signs, traffic control and watching for protection of the works and other property and for the safety and convenience of the public.

During the implementation of this Project, the public has the right to participate either directly or indirectly, which introduces the possibility to present its interests and opinions in the process of decision making. In order to reach the best option during this process, PERS will disclose this EMP document to public, including local

municipalities and to all relevant non-government organizations. (See Appendix V). Draft EMP document will be published on PERS web site too (www.putevi-srbije.rs). During the process of public consultations, all relevant information (recommendations, opinions etc.) will be collected from the public, including all environmental issues related to this project. Opinions and suggestions are incorporated within the final version of EMP document.

During rehabilitation works, a public liaison officer, named by the Contractor will establish communication with local residents affected by the project and will be responsible to inform them about all project activities, especially related to environmental impacts of the project and planed mitigation measures.

Reporting Arrangements

Public consultation and presentation of EMP will be held and a report will be accompanied by the EMP.

Contractor will provide quarterly reports to the PERS which will document the environmental mitigation and protection measures, together with prescribed monitoring activities carried out during the reporting period. Contractor will take care on environment quality according to the mitigation and monitoring plan and will report to the PERS.

If any kind of accident or endangerment of environment happens, reporting will be immediate. Contractor will inform the project manager and local authorities about accidents immediately after they happen. If the project manager is not responding to the call, the Contractor will inform PERS about the accident.

A Grievance Mechanism will be implemented to ensure that all complaints from local communities are dealt with appropriately, with corrective actions being implemented, and the complainant being informed of the outcome. It will be applied to all complaints from affected parties. A grievance form is attached in Appendix IV and hard copies will be made available at community centers.

Appendix I

MITIGATION PLAN

MITIGATION PLAN

Phase	Issue	Mitigating measure	Responsibility		Comments
			Contractor	Supervision	
PRE-CONSTRUCTION	**Main Design phase**				
	Design in conflict with EMP	Contractor is obliged to obtain preconditions from Institutions dealing with environmental issues in order to avoid environmental risks during rehabilitation works	Designer	Technical control / PERS	
	Selected location for contractor's site facilities not appropriate	It has to be approved by the PERS. Locations will be selected so that they do not interfere with the environment and social well-being of the surrounding communities (noise, dust. vibration, etc.), limited size of contractor's facilities, reduce unnecessary clearing of vegetation, production of waste. Waste waters will be treated before being released into surface water systems Paved areas, including vehicle parking areas, workshops and fuel storage areas to be equipped with oil and water separator, and fuel storage areas to be located more than 20m from a water course. Avoid excessive machine disturbance of the topsoil. Prevention of soil erosion on construction site. Limit the extent of excavation to reduce soil erosion potential.	Designer	Technical control / PERS	

Phase	Issue	Mitigating measure	Responsibility		Comments
			Contractor	Supervision	
		Avoid excavation and operating machinery in wet ground conditions.			
	Road safety issues associated with pedestrian crossing	Plan for safe and adequate pedestrian crossing facilities equipped with ramps and structures that allow the use of wheelchairs, pushcarts, bicycles and prams.	Designer	Technical Control / PERS	
CONSTRUCTION	**Site Induction**				
	Safety on the site	All workers and visitors to site shall pass Health& Safety and Environment training and be instructed in the need and use of Personal protective equipment (PPE).	Contractor H&S and environmental officer	Supervisor	
	Stakeholder engagement	Details of the proposed road works, access points and safety features will be disclosed in the locality of the planned works. Feedback from local stakeholders will be sought and recorded. Evidence of how feedback has been considered in the final design will be recorded.			
	MANAGEMENT PLANS Contractor to prepare the following plans as described in the EMP to ensure compliance with legislative and Lender requirements. • Site organization plan, • Sewage and septic management, • Project grievance mechanism), • Soil Management Plan, • Dust management plan,		Contractor	Supervisor/ PERS	

Phase	Issue	Mitigating measure	Responsibility		Comments
			Contractor	Supervision	
	• A plan indicating the location of the proposed material extraction site as well as rehabilitation measures to be implemented for the borrow areas and access roads upon project completion, • Waste and wastewater management plan in accordance with the Law on Waste management ("Official Gazette of RS", 36/09, 88/10, 14/16), • Oil and fuel storage management plan, • In-river works management plan, • Camp management plan. • Emergency response plan. • Rehabilitation Plan • Safety and Hazard Assessment • Safety and Labor Management Plan (SLMP),				
CONSTRUCTION	**Material supply**				
	asphalt base dust, fumes, health effects and work safety, ecosystem disturbances	utilization of existing asphalt bases, requirement of official approval or valid operation license	Asphalt plant	Asphalt plant	Supplier from the offer / approved supplier
	Stone quarry dust, fumes, health effects and work safety, ecosystem disturbances	utilization of existing quarries, requirement of official approval or valid operation license	Contractor / Stone quarry	Supervisor	
	sand and gravel excavation sites	utilization of existing excavation sites or purchase of material from registered producers,	Contractor / sand and gravel	Supervisor	

Phase	Issue	Mitigating measure	Responsibility		Comments
			Contractor	Supervision	
	riverbed and water quality disturbances, ecosystem disturbances	requirement of official approval or valid operation license	excavation management		
	concrete base dust, fumes, health effects and work safety, ecosystem disturbances	utilization of existing concrete base or purchase of concrete slabs from registered dealers, material should include appropriate quality attestation	Contractor / concrete base management	Supervisor	
CONSTRUCTION	**Transport of materials**				
	Asphalt dust, fumes	All trucks are to be covered	Contractor	Supervisor	
	Stone / Dust	Wet / cover truck load	Contractor / truck driver	Supervisor	
	Sand, gravel, dust	Wet or cover truck load	Contractor / truck driver	Supervisor	
	Cement, concrete	Remove fresh concrete that has spilled from the in-transit mixers from transport roads within 6 hours	Contractor / truck driver	Supervisor	
	Traffic management noise, vehicle exhaust, road congestion	Respect working hours (preferably 8-16h); use alternative routes to minimize major traffic sites Adequate temporary road signalization	Contractor / Transport manager; Truck operator	Supervisor	

Phase	Issue	Mitigating measure	Responsibility		Comments
			Contractor	Supervision	
	Chance of Archaeological finds	In case of chance finds Contractor is obliged to stop the works immediately and inform institute for protection of Cultural Monuments and PERS about it	Contractor	Supervisor	
CONSTRUCTION	**Construction site**				
	Noise effects to local residential blocks, fauna and workers	Limit activities to daily working hours (no works between 8 PM and 7 AM) or conduct them during the cited period, but with consent of the residents and management; Utilization of construction machinery with noise abatement equipment; ensure maximum functionality of machinery by regular (periodic) or extraordinary technical checkups of vehicles and equipment;	Contractor	Supervisor	
	Dust	Implement measures to avoid/minimize dust emissions, wetting /spraying the site, accesses, materials stockpiles and during loading/unloading activities; covering of vehicles carrying dusty materials; wheel washing/spraying of vehicles; speed limit of vehicles, site cleaning	Contractor	Supervisor	
	Vibrations	Limit activities to daily working hours (no works between 8 PM and 7 AM) or conduct them during the cited period, but with consent of the residents and management	Contractor	Supervisor	

Phase	Issue	Mitigating measure	Responsibility		Comments
			Contractor	Supervision	
	Traffic disruption during construction activity	Traffic management plan with measures to redirect traffic that are easily seen or easy to follow; include traffic police assistance if needed Construction Traffic Management Plan will establish speed limits for construction vehicles and organize traffic to avoid as much as possible populated areas. Local residents will be kept informed of planned works	Contractor	Construction Contractor	
	Reduced access to roadside activities	Provide alternative access to roadside activities at all times	Construction Contractor	Construction Contractor	
	Vehicle and pedestrian safety when there is no construction activity	Lighting and well-defined safety signs and protection measures.	Construction Contractor	Construction Contractor	
	Water and soil pollution from improper material storage, management and usage	Organize and cover material storage areas; isolate concrete, asphalt and other works from watercourse by using sealed formwork or covers; isolate wash down areas of concrete and asphalt trucks and other equipment from watercourse by selecting areas for washing that are not free draining directly into watercourse. Operate construction site in a way to reduce the risk of generating sediments and wastewater that may pollute local soils or receiving water bodies (considering situations such as including storm water runoff, wastewater generated from facilities on site such as wheel washing facility).	Construction Contractor	Construction Contractor	

Phase	Issue	Mitigating measure	Responsibility		Comments
			Contractor	Supervision	
		Soil Management Plan shall be prepared for the controlled removal of top soil, storage and reuse. Prevent sediments flowing into surface waters and drainage channels by localized control measures (e. g. sediment fences, check dams, mulch barriers, rock groins, or geofabric barriers, sediment basins), contouring to optimize slope angle and steepness, Prevent wind erosion via fencing, covering, etc.			
	Water and soil pollution from improper disposal of waste materials	Dispose waste material at location protected from washing out, should be marked in the site plan; if not on site, then at authorized landfill / depot	Construction Contractor	Construction Contractor	
	Water and soil pollution from improper disposal of waste materials	Storage of wastes according to international best practice (IFC EHS General Guidelines). Apply additional measures for storage of hazardous wastes (such as use of secondary containment, access restriction, provision of PPE etc.) as necessary to prevent harm to construction staff, environment and public. Use and labeling of designated waste collection containers and storage areas for different kinds of wastes (hazardous and non-hazardous).	Construction Contractor	Construction Contractor	
	Potential contamination of soil and water from improper maintenance and fueling of equipment	Apply best engineering practice in safe storage and handling of lubricants, fuel and solvents by secured storage; ensure proper loading of fuel and maintenance of equipment; collect all waste and dispose to permitted waste recovery facility	Construction Contractor	Construction Contractor	

Phase	Issue	Mitigating measure	Responsibility		Comments
			Contractor	Supervision	
	Water and soil pollution from improper disposal of waste materials	Transport of waste in marked vehicles designed to the type of waste to minimize the risk of release of materials (hazardous and non-hazardous materials) and windblown debris. Training of drivers in handling and disposal of their cargo and the documentation of the transport describing the nature of the waste and its degree of hazard.	Construction Contractor	Construction Contractor	
	Workers safety	Provide workers with safety instructions and protective equipment; safe organization of bypassing traffic	Construction Contractor	Construction Contractor	
	Landscaping	Along the road, to provide protective greenery and form lawns, using low greenery, which would allow visual protection of contact zones and aesthetic space design. It is recommended to use autochthonous, fast-growing species that have bacterial effect and expressed aesthetic values. Avoid invasive species and species that are determined as allergens	Construction Contractor	Construction Contractor	
	Culture Heritage Protection	If Contractor finds archaeological sites or objects, the contractor is obliged to interrupt works and notify the competent Institute for the protection of cultural monuments and take measures to not destroy it, not damage it and save it in place and in a position in which it was discovered. At the archaeological site, the presence of the experts of the competent Institute is obligatory	Construction Contractor	Construction Contractor/PERS ICH	

Phase	Issue	Mitigating measure	Responsibility		Comments
			Contractor	Supervision	
		when performing all earth works; The investor is obliged to notify the Institute, 15 days before commencement of works; If during earthworks archeological material arises, all costs of protection and conservation are at the expense of the investor. Necessary consent of the Institute to the project.			
OPERATION	**Maintenance**				
	Noise disturbance to human and animal population and workers	Limit activities to daylight working hours (not between 8 p. m. and 7 a. m. or as agreed with public); equipment operating with noise mufflers	Road maintenance company	Road maintenance company	To be specified in maintenance contract documents- Technical Specifications for realization of maintenance works
	Possible air, water and soil pollution dust, vehicle exhaust, fuel and lubricants spills	Apply best engineering practice in safe storage and handling of lubricants, fuel and solvents by secured storage; ensure proper loading of fuel and maintenance of equipment; collect all waste and dispose in line with the Law on waste management; organize and cover material storage areas; isolate asphalt from watercourse by using sealed formwork; selecting areas for washing that are not free draining directly or	Road maintenance company	Road maintenance company	

Phase	Issue	Mitigating measure	Responsibility		Comments
			Contractor	Supervision	
		indirectly into watercourses; dispose waste material at location protected from washing out			
	Vibrations	Limit activities to daylight working hours (between 8 p. m. and 7 a. m. or as agreed with public and authorities)	Road maintenance company	Road maintenance company	
	Workers safety	Provide safety measures for the workers along with the appropriate equipment; safe organization through alternative roads and appropriate traffic signalization. All workers and visitors to site shall be given a Health, Safety and Environment Induction and instructed on the need to use of PPE.	Road maintenance company	Road maintenance company	
	Maintenance	Regularly maintain curbs; mow and maintain the grass and dispose of it in a landfill; regularly clean drainage structures (drains) and dispose of the waste material in a registered landfill; regular cleaning of road surface, filling of holes, binders and cracks; the remains of asphalt originating from works on hole filling should be transported and disposed of in an appropriate landfill for construction materials; conduct regular and timely interventions of cleaning road surface and surrounding road structures in case of a traffic accident or tanker and other trucks overturning; conduct repairs	Road maintenance company	Road maintenance company	

Phase	Issue	Mitigating measure	Responsibility		Comments
			Contractor	Supervision	
	Increased vehicle speed	Install traffic signs for speed limit	Road maintenance company	Road maintenance company	To be specified in TS for maintenance works
	Possible air, water and soil pollution dust, vehicle exhaust, fuel and lubricants spills	Ensure proper handling of lubricants, fuel and solvents by secured storage; ensure proper loading of fuel and maintenance of equipment; collect all waste and properly dispose; properly organize and cover material storage areas; isolate asphalt from watercourse by using sealed formwork; selecting areas for washing that are not free draining directly or indirectly into watercourse; dispose waste material at appropriate location protected from washing out	Road maintenance company	Road maintenance company	
	Erosion, rock fall, hazardous conditions	install warning signs (rock fall, landslide, wet or slippery conditions, dangerous curve, animal or pedestrian crossing, school, slow moving vehicles, merge), reflective markers to indicate steep edge or convex mirrors to see oncoming traffic at blind curves; locate warnings at points considered necessary by good engineering practice, or as agreed in writing with public and authorities	Road maintenance company	Road maintenance company	

Appendix II

MONITORING PLAN

MONITORING PLAN

Phase	What is the *parameter to be monitored?*	Where *the parameter should be monitored?*	How *the parameter should be monitored? / type of monitoring equipment*	When *the parameter should be monitored? (frequency of measurement or continuous)*	*Why the parameter should be monitored? (optional)*	Institutional responsibility
						Operate
CONSTRUCTION			**Material supply**			
Asphalt plant	Possession of official approval or valid operating license	Asphalt plant	Inspection / supervising engineer	Before work begins	Assure compliance with environment, health and safety requirements	Plant Operator
Stone quarry	Possession of official approval or valid operating license	Stone quarry	Inspection / supervising engineer	Before work begins		Quarry Operator
Sand and gravel borrow pit	Possession of official approval or valid operating license	Sand and gravel borrow pit or separation	Inspection / supervising engineer	Before work begins		Borrow pit or Separation Operator

Phase	What is the *parameter to be monitored?*	Where *the parameter should be monitored?*	How *the parameter should be monitored? / type of monitoring equipment*	When *the parameter should be monitored? (frequency of measurement or continuous)*	*Why the parameter should be monitored? (optional)*	Institutional responsibility Operate
CONSTRUCTION			**Material transport**			
Asphalt	Truck load covered	Job site	Supervising engineer	Unannounced inspections during work, at least once per week	Assure compliance of performance with environment, health	Supervision Contractor
Stone	truck load covered or wetted	Job site	Supervising engineer	Unannounced inspections during work, at least once per week	and safety requirements and enable as	Supervision Contractor
Sand and gravel	truck load covered or wetted	Job site	Supervision	Unannounced inspections during work, at least once per week	As little as possible disruption to traffic	Supervisor/ Contractor
Traffic management	hours and routes selected	Job site	Supervision	Unannounced inspections during work, at least once per week		Supervisor / Contractor

Phase	What is the *parameter to be monitored?*	Where *the parameter should be monitored?*	How *the parameter should be monitored? / type of monitoring equipment*	When *the parameter should be monitored? (frequency of measurement or continuous)*	*Why the parameter should be monitored? (optional)*	Institutional responsibility Operate
CONSTRUCTION			**Construction Site**			
Noise disturbance to workers and neighboring population	Noise levels	Job site; nearest homes of settlements along the site	Equipment – hand-held analyzer with application software	Once at the beginning of the project, on half basis, and on complaint. If the results of monitoring are not satisfactory, monitoring should be conducted on monthly basis	Assure compliance of performance with environment	Contractor
Water and soil pollution from improper material storage, management and usage	Water and soil quality (suspended solids, oils, pH value, conductivity)	Watercourses	Unannounced sampling; analysis at accredited laboratory with necessary equipment	Monitoring should be done prior construction (on a referent point upstream of construction site) and once during rehabilitation works. If the results of monitoring are not satisfactory, monitoring should be repeated on monthly basis till the completion of works on the location	Assure compliance of performance with environment	Contractor
Dust	Air pollution (solid particles)	At and near job site	Inspection and visual observation	Unannounced inspections during material delivery and construction	Health and safety requirements and enable as little disruption to traffic as it is possible	Supervision / Contractor
Vibrations	Limited time of activities	Job site	Supervision	Unannounced inspections during work and on complaint		Supervision Contractor

Phase	What is the *parameter to be monitored?*	Where *the parameter should be monitored?*	How *the parameter should be monitored? / type of monitoring equipment*	When *the parameter should be monitored? (frequency of measurement or continuous)*	*Why the parameter should be monitored? (optional)*	Institutional responsibility
						Operate
Traffic disruption during construction activity	Existence of traffic management plan; traffic patterns	At and near job site	Inspection; observation	Before works start; once per week at peak and non-peak periods		Supervision Contractor
Reduced access to roadside activities	Provided alternative access	Job site	Supervision	Random checks at least once per week during construction activities		Supervision Contractor
Vehicle and pedestrian safety when there is no construction activity	Visibility and appropriateness	At and near job site	observation	Random checks at least once per week in the evening		Supervision Contractor
Workers safety	protective equipment; organization of bypassing traffic	Job site	inspection	Unannounced inspections during work.		Supervision Contractor

Phase	What is the *parameter to be monitored?*	Where *the parameter should be monitored?*	How *the parameter should be monitored? / type of monitoring equipment*	When *the parameter should be monitored? (frequency of measurement or continuous)*	*Why the parameter should be monitored? (optional)*	Institutional responsibility
						Operate
OPERATION			**Maintenance**			
Noise disturbance to human population and workers	Noise levels	Job site; nearest homes	Equipment – hand-held analyzer with application software	Unannounced inspections during maintenance activities and on complaint	Assure compliance of performance with environment, health and safety requirements	PERS
Vibrations	Limited time of activities	Job site	Supervision	Unannounced inspections during maintenance activities and on complaint		PERS
Workers safety	protective equipment; organization of bypassing traffic	Job site	Inspection	Unannounced inspections during maintenance activities and on complaint		PERS

Phase	What is the *parameter to be monitored?*	Where *the parameter should be monitored?*	How *the parameter should be monitored? / type of monitoring equipment*	When *the parameter should be monitored? (frequency of measurement or continuous)*	*Why the parameter should be monitored? (optional)*	Institutional responsibility
						Operate
OPERATION			**Road Safety**			
Increased vehicle speed	Condition of traffic signs; vehicle speed	Road section included in project	Visual observation; speed detectors	During maintenance activities; unannounced	Enable safe and economical traffic flow	Maintenance Contractor; Traffic Police
Erosion, rock fall, hazardous conditions	Road section included in project	Condition of hazard signs	Visual observation	During maintenance activities		Maintenance Contractor

Proposed Template - additional data that should be incorporated into monitoring plans:

1. General		
Is the project materially compliant with all relevant Performance Requirements (taking account of agreed action plans, exemptions or derogations)?	Yes ❑ No ❑	If no, please provide details of any material non-compliances:
Is the project materially compliant with all applicable environmental and social laws and regulations?	Yes ❑ No ❑	If no, please provide details of any material non-compliances:
Have there been any accidents or incidents that have caused damage to the environment, brought about injuries or fatalities, affected project labour or local communities, affected cultural property, or created liabilities for the company?	Yes ❑ No ❑	If yes, please describe, including details of actions to repair and prevent reoccurrence:
Have there been any changes to environment, social, labor or health and safety laws or regulations that have materially affected the company?	Yes ❑ No ❑	If yes, please describe:
How many inspections did you receive from the environmental authorities during the reporting period?	Number:	Please provide details of these visits, including number and nature of any violations found:
How many inspections did you receive from the health and safety authorities during the reporting period?	Number:	Please provide details of these visits, including number and nature of any violations found:
How many inspections did you receive from the labor authorities during the reporting period?	Number:	Please provide details of these visits, including number and nature of any violations found:
Have these visits resulted in any penalties, fines and/or corrective action plans?	Yes ❑	If yes, please describe, including status of implementing corrective actions to address any violations found:

	No ❑	
Has the Company engaged any contractors for project-related work in the reporting period?	Yes ❑ No ❑	If yes, please state for which types of work, and how the company has monitored the compliance of contractors with Performance Requirements and the Environmental and Social Action Plan:
Were any of the violations stated above the responsibility of contractors?	Yes ❑ No ❑	If yes, please provide details, including how the Company is ensuring that corrective actions are implemented by the Contractor?
Have any operations been reduced, temporarily suspended or closed down due to environmental, health, safety or labor reasons?	Yes ❑ No ❑	If yes, please describe:
Please describe any environment or social programs, initiatives or sub-projects undertaking during the reporting period to improve the company's environmental or social performance and/or management systems: Please indicate the level of associated expenditure (capital expenditure and operating expenditure), and whether this relates to the requirements of the Environmental and Social Action Plan, or to any other initiative:		

Appendix III

LEGISLATION

REGULATION AND REQUIREMENTS

This section sets out the regulatory context regarding consultation and public disclosure in Serbia as it relates to this Project. Specific reference is made to relevant Serbian legislation, regional regulatory instruments, and relevant EBRD requirements, the World Bank Policy on Access to Information and WB OP 4.01 Environmental Assessment.

In the juridical system of the Republic of Serbia, the Environmental Impact Assessment procedure is regulated by the Law on Environmental Impact Assessment ("Official Gazette of RS" No. 135/04, 36/09), which is completely in line with European EIA Directive (85/337/EEC, 97/11/EC, 2003/35/EC and COM 2009/378).

The main laws and regulations currently in force in Republic of Serbia which are relevant to the environmental protection during planning, design, construction and operating of this Project are listed below:

1. Law on planning and construction ("Official Gazette of RS" No. 72/2009, 81/2009,64/2010, 24/2011, 42/2013, 145/2014),
2. Law on nature protection ("Official Gazette of RS", 36/09, 88/10, 91/10, 14/16),
3. Law on environmental protection ("Official Gazette of RS" No. 135/04, 36/09, 72/09, 43/11, 14/16),
4. Law on EIA ("Official Gazette of RS" No. 135/2004, 36/2009),
5. Law on Strategic EIA ("Official Gazette of RS" No. 135/2004),
6. Law on waste management ("Official Gazette of RS", 36/09, 88/10, 14/16),
7. Law on noise protection ("Official Gazette of RS", 36/09, 88/10),
8. Law on water ("Official Gazette of RS", 30/10, 93/12),
9. Law on forest ("Official Gazette of RS", 30/10, 93/12, 89/15),
10. Law on air protection ("Official Gazette of RS", 36/09, 10/13),
11. Law on Safety and Health at Work ("Official Gazette of RS", 101/05, 91/15),
12. Agricultural Land Law, ("Official Gazette of RS" No. 62/06, 65/08, 41/09, 112/2015).

Regulations established on the basis of the Law on EIA include the following:

1. Decree on establishing the List of Projects for which the Impact Assessment is mandatory and the List of projects for which the EIA can be requested ("Official Gazette of RS" No. 114/08),
2. Rulebook on the contents of requests for the necessity of Impact Assessment and on the contents of requests for specification of scope and contents of the EIA Study ("Official Gazette of RS" No. 69/05).

Other relevant Serbian legislation

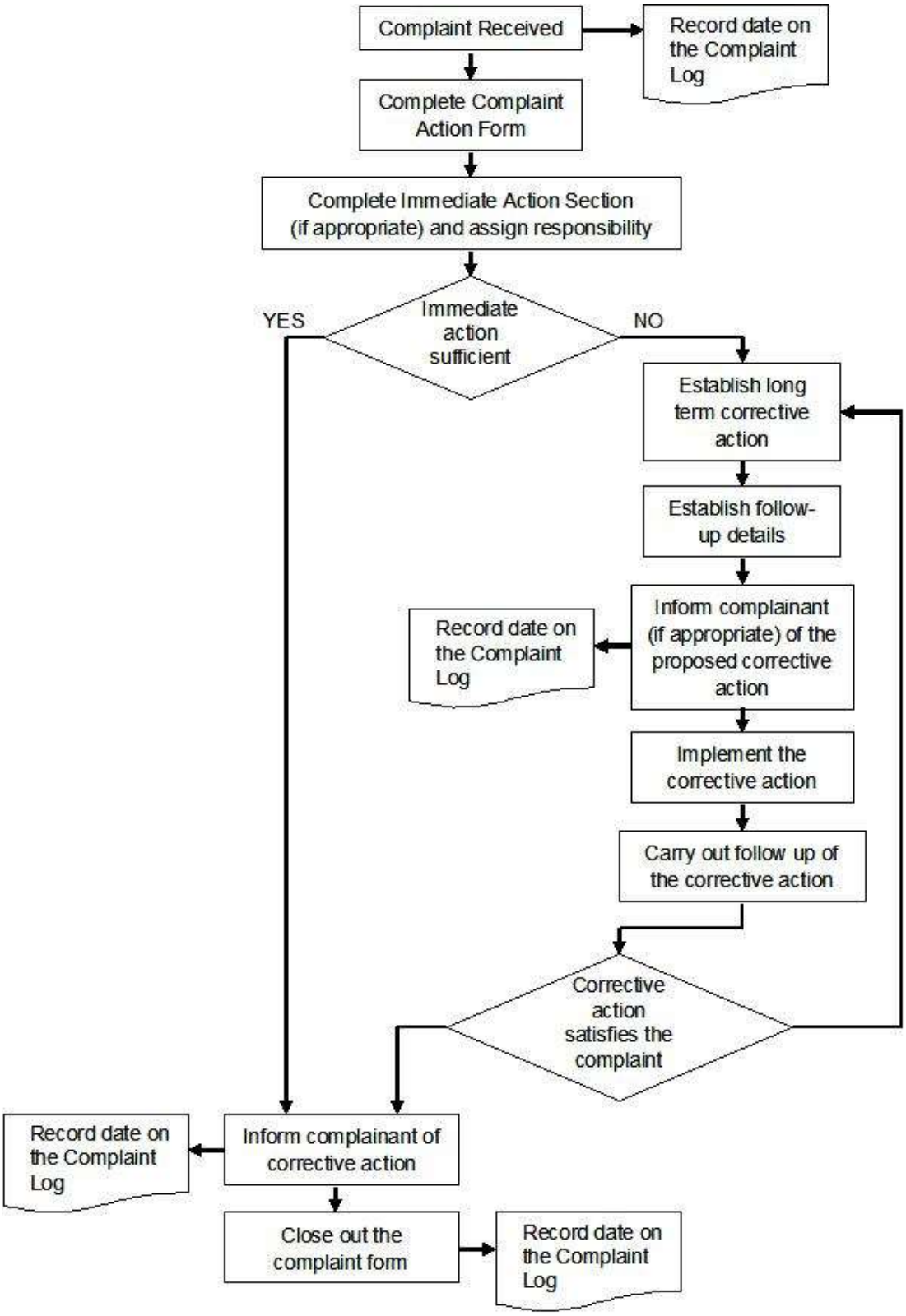
1. Law on confirmation of convention on information disclosure, public involvement in process of decision making and legal protection in the environmental area ("Official Gazette of RS", 38/09),
1. Law on public roads ("Official Gazette of RS" No. 101/2005, 123/07).

Appendix IV

GRIEVANCE MECHANISM

Grievance mechanism and form

Flowchart of Complaints/Grievance Procedure



<table>
<tr><td colspan="5">Grievance Reference Number (to be filled with number):</td></tr>
<tr><td rowspan="3">Contact Details</td><td colspan="4">Name:</td></tr>
<tr><td colspan="4">Address:</td></tr>
<tr><td colspan="4">Tel:</td></tr>
<tr><td></td><td colspan="4">e-mail:</td></tr>
<tr><td>How would you prefer to be contacted? Please tick box</td><td>By post</td><td>By phone</td><td colspan="2">By e-mail</td></tr>
<tr><td colspan="5">Name and the identification information (from identity card).</td></tr>
<tr><td colspan="5">Details of your grievance. Please describe the problems, who it happened to, when, where and how many times, as relevant</td></tr>
<tr><td colspan="5">What is your suggested resolution for the grievance?</td></tr>
<tr><td rowspan="3">How to submit this form to /[name of concessionaire]</td><td colspan="4">By Post to: [tbc]</td></tr>
<tr><td colspan="4">By hand: please drop this form at [tbc]</td></tr>
<tr><td colspan="4">By e-mail: Please email your grievance, suggested resolution and preferred contact details to: [tbc]</td></tr>
<tr><td>Signature</td><td colspan="2"></td><td>Date</td><td></td></tr>
</table>

Appendix V

DECISIONS OF THE COMPETENT INSTITUTIONS

Appendix 5 - Annex 1

Број: 439-02/1
Дана: 24.4.

Завод за заштиту споменика културе Крагујевац, на основу члана 27, 99. став2. тачка 1, 100. став 1. и 104. Закона о културним добрима („Сл. Гл. РС "бр. 71/94) и члана 131. Закона о општем управном поступку („Сл. Лист СРЈ" бр. 33/97) , а на захтев предузећа **Јавно Предузеће „ПУТЕВИ СРБИЈЕ"**, Булевар краља Александра 282, 11050 Београд 22, Сектор за инвестиције, Влајковићева 19а, Београд, бр. 438-02/1 дана 11.04.2017.год, доноси

РЕШЕЊЕ

У оквиру достављених граница наведеног подручја налази се:

ЈАВНО ПРЕДУЗЕЋЕ "ПУТЕВИ СРБИЈЕ"
Број: 953 - 8738
03 -05- 2017

Непокретно културно добро

1. **Idimum** – археолошки локалитет

I. Услови и мере техничке заштите, за израду техничке документације пројекта Појачаног одржавања деонице државног пута ПА реда 160 (стара ознака: регионални пут Р-103), деоница Свилајнац – Медвеђа (Деспотовац), могу се предузети на основу следећих услова:

Мере заштите археолошког локалитета:

1. На археолошком локалитету **обавезно је присуство стручњака надлежног Завода приликом извођења свих земљаних радова.**
2. Трошкови надзора над извођењем радова падају на терет инвеститора.
3. Инвеститор је дужан да обавести Завод за заштиту споменика културе у Крагујевцу 15 дана пре почетка планираних радова.
4. Уколико се током земљаних радова нађе на археолошки материјал трошкови археолошких истраживања, конзервације откривених налаза, заштите и чувања евентуалних непокретних археолошких остатака падају на терет инвеститора, под условима које прописује надлежни Завод за заштиту споменика културе.
5. На осталом простору је обавезно поштовање чл. 109. Закона о културним добрима (Сл. гласник РС бр. 71/94) који гласи:

"Ако се у току извођења радова нађе на археолошка налазишта или археолошке предмете, извођач радова је дужан да одмах, без одлагања, прекине радове и обавести надлежан Завод за заштиту споменика културе и да предузме мере да се налаз не уништи и не оштети и да се сачува на месту и у положају у коме је откривен"

II. Пројекат и документација морају бити израђени у свему у складу са издатим условима из тачке I овог решења.

III. По изради пројекта и документације у складу са овим условима, подносилац захтева је дужан да на исте прибави сагласност Завода за заштиту споменика културе у Крагујевцу.

IV. Ово решење не ослобађа подносиоца захтева обавезе прибављања и других услова, дозвола и сагласности предвиђених прописима о планирању и уређењу простора и насеља и изградњи објеката.

V. Ово решење важи годину дана од дана издавања.

VI. Жалба не одлаже извршење овог решења.

Образложење

Дана 03.04.2017. год. Заводу за заштиту споменика културе Крагујевац достављен је захтев предузећа *Јавно Предузеће „ПУТЕВИ СРБИЈЕ"*, Булевар краља Александра 282, 11050 Београд 22, Сектор за инвестиције, Влајковићева 19а, Београд. Захтевом се траже услови потребни за израду техничке документације, Главни пројекат, који обухвата радове ојачања постојеће коловозне конструкције, (на појединим местима до дубине 50-60 цм од постојећег коловоза), у постојећим габаритима коловозне конструкције са постојећим и санираним системом одводњавања.

Почетак деонице је на изласку из Свилајнца према Деспотовцу, код раскрснице за Црквенац, а крај деонице је у атару села Медвеђа на месту укрштања државних путева IIA реда бр.160 и бр.185 (раскрсница за Јагодину).

Након изласка на терен и увида у постојећу документацију утврдили смо да у оквиру планираног захвата се налази Утврђено културно добро, археолошки локалитет „Idimum „ у атару села Медвеђа, римско војно упориште и цивилно насеље, датовано у период I –IV в.н.е., и као такво представља веома значајан културно-историјски локалитет, на основу чега су и утврђени услови за извођење мера техничке заштите и других радова из диспозитива овог решења.

ПРАВНА ПОУКА: Против овог решења дозвољена је жалба Републичком заводу за заштиту споменика културе, Београд у року од 15 дана од дана његовог достављања. Жалба не задржава извршење овог решења.

Обрадили:

Александра Стефановић, дипл. ист. уметности
Снежана Станковић, дипл.инж.арх
Славица Ђорђевић, дипл.археолог
Јелена Мујић, дипл.етнолог – антрополог
Предраг Вукашиновић, дипл. прав.

ДИРЕКТОР
Марко Грковић

ДОСТАВИТИ

-Подносиоцу захтева
-архиви завода
-досијеу

Appendix 5 - Annex 2

Република Србија
ЗАВОД ЗА ЗАШТИТУ ПРИРОДЕ СРБИЈЕ
03 број: 020-728/3
Датум: 20.04.2017
Нови Београд, Др Ивана Рибара бр. 91
Тел: +381 11/2093-802; 2093-803
Факс: + 381 11/2093-867

Завод за заштиту природе Србије, на основу члана 9. Закона о заштити природе („Службени гласник РС", бр. 36/2009, 88/2010, 91/2010-исправка и 14/2016) и члана 192. став 1. Закона о општем управном поступку („Службени лист СРЈ", бр. 33/1997 и 31/2001 и „Службени гласник РС", бр. 30/2010), поступајући по захтеву ЈП „Путеви Србије", за израду техничке документације пројекта Појачано одржавање деонице државног пута IIА реда 160 (стара ознака: регионални пут Р-103), деоница Свилајнац-Медвеђа, општина Деспотовац, доноси

Р Е Ш Е Њ Е

1. Предметно подручје се не налази унутар заштићеног подручја за које је спроведен или покренут поступак заштите, не налази се у просторном обухвату еколошке мреже нити у простору евидентираног природног добра. Сходно томе, издају се следећи услови заштите природе:
   1) Дефинисати да се одводњавање саобраћајнице врши гравитационим отицањем површинских вода и по потреби изградњом отворених канала за прихват површинских вода;
   2) За воде које настају спирањем са коловоза и оптерећене су уљима и другим нафтним дериватима мора се предвидети изградња таложника и сепаратора масти и уља. Пре упуштања у реципијент или канализацију, обавезна је контрола њиховог квалитета;
   3) Као коловозни застор користити материјале који могу, са аспекта заштите, обезбедити смањење нивоа буке и вибрација и омогућити ефикасно дренирање воде са површине коловоза;
   4) Дефинисати ужу и ширу зону утицаја саобраћајнице на животну средину (посебно са аспекта очувања пољопривредног земљишта и производње хране одговарајућег квалитета), на основу тога утврдити мере и препоруке за коришћење земљишта;
   5) Дуж саобраћајнице предвидети заштитно зеленило - формирати травњаке, уз примену ниског зеленила, чиме би се омогућила визуелна заштита контактних зона и естетско обликовање простора;
   6) Препоручује се примена претежно аутохтоних, брзорастућих врста, које имају фитонцидно и бактерицидно дејство и изражене естетске вредности. Избегавати врсте које су детерминисане као алергене (тополе и сл.), као и инвазивне (багрем, кисело дрво и др.);
   7) Прибавити сагласност надлежних институција за извођење радова који изискују евентуалну сечу одраслих, вредних примерака дендрофлоре, како би се уклањање вегетације свело на најмању меру;
   8) Утврдити обавезу санације или рекултивације свих деградираних површина. Уз сагласност надлежне комуналне службе, предвидети локације на којима ће се трајно депоновати неискоришћени геолошки грађевински и остали материјал настао предметним радовима;

9) Предвидети постављање специјалних судова за сакупљање отпада на одговарајућим бетонским површинама;
10) Предвидети све мере заштите природе у акцидентним ситуацијама уз обавезу обавештавања надлежних инспекцијских служби и установа;
11) Уколико се током радова наиђе на геолошко-палеонтолошке или минералошко-петролошке објекте, за које се претпоставља да имају својство природног добра, извођач радова је дужан да у року од осам дана обавести министарство надлежно за послове заштите животне средине, односно предузме све мере како се природно добро не би оштетило до доласка овлашћеног лица;

2. Ово решење не ослобађа подносиоца захтева да прибави и друге услове, дозволе и сагласности предвиђене позитивним прописима.
3. За све друге радове/активности на предметном подручју или промене пројектне документације, потребно је поднети нови захтев.
4. Уколико подносилац захтева у року од две године од дана достављања овог решења не отпочне радове и активности за које је ово решење издато, дужан је да поднесе захтев за издавање новог решења.
5. Такса за издавање овог Решења у износу од 30.000,00 динара је одређена у складу са чланом 2, став 2, тачка 5 Правилника о висини и начину обрачуна и наплате таксе за издавање акта о условима заштите природе („Службени гласник РС", бр. 73/2011, 106/2013). Подносилац захтева је дужан да наведену таксу уплати у корист рачуна Завода у року од 5 дана од дана достављања предрачуна.

Образложење

ЈП „Путеви Србије", ул. Булевар краља Александра 282, 11050 Београд, обратило се захтевом II бр. 953-5918 од 23.03.2017. године за издавање услова заштите природе за израду техничке документације пројекта Појачаног одржавање деонице државног пута IIA реда 160 (стара ознака: регионални пут Р-103), деоница Свилајнац-Медвеђа, општина Деспотовац.

На основу достављеног захтева и документације подносиоца захтева утврђено је да је предметни Пројекат саставни део пројекта рехабилитације путева и унапређења безбедности саобраћаја на мрежи државних путева, који је подршка међународних финансијских институција Националном програму рехабилитације државних путева Републике Србије. Први циљ је израда техничке документације у виду Главног пројекта појачаног одржавања којим се обезбеђује повећање употребне вредности и трајности пута, унапређење безбедности саобраћаја, укључење захтева локалне заједнице и поштовање захтева заштите животне средине. Почетак деонице је на изласку из Свилајнца према Деспотовцу код раскрснице за Црквенац, а крај деонице је у селу Медвеђа на месту укрштања државних путева IIA реда 160 и бр. 185 (раскрсница за Јагодину). Планирани радови обухватају ојачање постојеће коловозне конструкције у постојећим габаритима, са постојећим и санираним системом одводњавања уз пројектовање свих елемената који подржавају трајност радова и унапређују систем безбедности саобраћаја и у потпуности је регулисана одредбама (чл. 57-60) Закона о јавним путевима Србије природе („Службени гласник РС", бр. 101/2005, 88/2010, 123/2007 и 104/2013).

Увидом у Централни регистар заштићених природних добара, документацију Завода, а у складу са прописима који регулишу област заштите природе, утврђени су услови заштите природе из диспозитива овог решења.

Законски основ за доношење решења је Закон о заштити природе („Службени гласник РС", бр. 36/2009, 88/2010, 91/2010 и 14/2016).

Израда техничке документације пројекта Појачаног одржавање деонице државног пута IIA реда 160 (стара ознака: регионални пут Р-103), деоница Свилајнац-Медвеђа, општина Деспотовац, може се реализовати под условима дефинисаним овим решењем, јер је процењено да неће угрозити основне природне вредности подручја.

На основу свега наведеног, одлучено је као у диспозитиву овог решења.

Подносилац захтева је ослобођен од плаћања таксе у складу са чланом 18. Закона о републичким административним таксама („Службени гласник РС", бр. 43/2003, 51/2003, 61/2005, 5/2009, 54/2009, 50/2011, 93/2012 и 45/2015).

Упутство о правном средству: Против овог решења може се изјавити жалба министарству надлежном за послове заштите животне средине у року од 15 дана од дана пријема решења. Жалба се предаје Заводу за заштиту природе Србије уз доказ о уплати Републичке административне таксе у износу од 440,00 динара на текући рачун бр. 840-742221843-57, позив на број 59013 по моделу 97.

ДИРЕКТОР

Александар Драгишић

Достављено:
- Подноспоцу захтева
- Архива x 2

Appendix 5 - Annex 3

Република Србија
МИНИСТАРСТВО
ЗАШТИТЕ ЖИВОТНЕ СРЕДИНЕ
Број: 011-00-0101/2017-02
Датум: 03.08.2017.
Београд

„Сапутник – М" д.о.о. Сомбор
-Меридијанпројект -
Огранак Нови Сад

Ул. Светог Ђорђа 6
25000 Сомбор

Предмет: Допис у вези са захтевом за давање мишљења

Министарству заштите животне средине обратили сте се Захтевом за давање мишљења о потреби покрстања процедуре у складу са Законом о процени утицаја животну средину („Сл.гласник РС", бр. 135/04, 36/09) за пројекат појачаног одржавања државног пута IIа-160 (стара ознака пута Р-103) деоница: Свилајнац – Медвеђа (Глоговац), дужина 14.774 км, стационажа: км 44+057 – км58+831, заведен под бројем 011-00-0101/2017-02 од 31.07.2017 године.

У допису наводите да је предметни пројекат обухваћен и интегралним „Пројектом Рехабилитације путева и безбедности саобраћаја („Road Rehabilitation and Safety Project – RRSP"), који се финансира из међународног кредита. Пројекат подразумева грађевинско – путарске радове у оквиру трасе већ постојећег пута. Предметна деоница припада Поморавском управном округу лоцираном у средишњем и источном делу Републике Србије. Предметна деоница представља део саобраћајне везе између Браничевског и Поморавског управног округа, при чему предметна деоница повезује општину Свилајнац и месну заједницу Медвеђа.

Планирано је да се Главним пројектом за појачано одржавање путева обезбеди: повећање употребне вредности пута, трајност пута, побољшање безбедности саобраћаја, укључивање захтева локалне заједнице и усаглашеност са захтевима заштите животне средине у највећој могућој мери под датим условима просторног ограничења и ограничења који произилазе из типа дозвољених грађевинских и саобраћајних интервенција.

Сва решења приликом израде пројектне документације – Главни пројекат за појачано одржавање пута, морају бити у оквиру постојећег путног појаса (укупна ширина коловоза је 6.5 м), без експропријације нових површина земљишта. За рехабилитацију предметне саобраћајнице употребили би се уобичајени грађевински материјали за ову врсту радова (агрегат, цемент, бетонско гвожђе, итд.). Побољшање предметне деонице захтева коришћење енергената, укључујући електричну енергију и течна горива. Радови ће обухватити постојећу коловозну конструкцију, у постојећем путном профилу, са постојећим и санираним системом одводњавања уз пројектовање свих елемената који продужавају трајност радова и унапређују систем безбедности саобраћаја.

На предметној деоници нема евидентираних станишта нити заштићених биљних и животињских врста. Такође нема регистрованих рекреативних центара. У близини пројектне деонице једино се налази непокретно културно добро „*Idimum*" – археолошки локалитет. У току извођења радова неће се произвести никакви материјали који загађују животну средину и који би могли доспети у земљиште и подземне воде.

Грађевинске машине ће током радова производити буку повишеног нивоа али се тај утицај сматра привременим и неће представљати трајну сметњу за становништво у окружењу. Потенцијално загађење ваздуха ће се огледати у појави прашине током извођења радова и транспорта материјала као и кроз привремено загађење ваздуха услед рада мотора грађевинских машина

Уз Захтев је приложена и додатна документација:

- Закон о јавним путевима („Сл. гласник РС" 101/2005), којим су дефинисане врсте радова, технички услови и начин извођења радова;
- Кратак опис пројекта;
- Решење о условима заштите природе бр. 020-728/3 од 20.04.2017. које је издао Завод за заштиту природе Србије;
- Решење бр. 438-0/4 од 24.04.2017. које је издао Завод за заштиту споменика културе у Крагујевцу;
- Графички прилог - прегледна карта;

На основу увида у захтев обавештавамо вас о следећем:

- У складу са члановима 3. и 4. Закона о процени утицаја животну средину („Сл.гласник РС", бр. 135/04, 36/09) предмет процене утицаја на животну средину су пројекти који се планирају и изводе, промене технологије, реконструкције, проширење капацитета који могу имати значајан утицај на животну средину, а притом су садржани у Уредби о утврђивању Листе пројеката за које је обавезна процена утицаја и Листе пројеката за које се може захтевати процена утицаја на животну средину («Службени гласник РС», бр.114/08).

- Пројекат појачаног одржавања пута не представља предмет процене утицаја на животну средину и није сврстан у Листама пројеката из поменуте Уредбе, па сагласно томе *носилац пројекта није у обавези* да отпочне процедуру процене утицаја на животну средину у складу са чланом 8. Закона о процени утицаја на животну средину.

- Носилац пројекта је обавези да се приликом извођења радова на појачаном одржавању предметне саобраћајнице у потпуности придржава услова и мера заштите животне средине из 1) Решења о условима заштите природе и заштите животне средине бр. 020-728/3 од 20.04.2017 које је издао Завод за заштиту природе Србије, и 2) Решења са условима и мерама заштите непокретних културних добара бр. 438-0/4 од 24.04.2017. године које је издао Завод за заштиту споменика културе у Крагујевцу.

ПОМОЋНИК МИНИСТРА
по решењу о овлашћењу
бр. 021-01-52/2017-01
од 26.07.2017.
Александар Весић

Доставити:
- Наслову
- Архиви