V. Chalaubani road (Gurjaani Municipality) Rehabilitation Sub-Project

Environmental and Social Screening
and Environmental Management Plan

WORLD BANK FINANCED
SECOND REGIONAL AND MUNICIPAL INFRASTRUCTURE DEVELOPMENT PROJECT

Tbilisi, Georgia

July, 2015

Environmental Screening

The Subproject (SP) site is located in village Chalaubani in Gurjaani municipality, is in 90 km distance from the capital Tbilisi and envisages rehabilitation of village Chalaubani road, with total length 3.656 km. A town Gurjaani serving as the Centre of the Gurjaani district, is located in the eastern part of Georgia, in Kakheti region. Gurjaani is situated in the Alazani Valley, 110 km eastward of Tbilisi.

The road to be rehabilitated was constructed decades ago without the renovation is under usage. Presently asphalt layers are damaged due to the rainwater, snow. The damaged road hinders normal traffic movement, reduces traffic capacity of the road, contributes to the increased emissions, vibration and noise, and causes environment pollution.

Since there are potable water and gas pipes situated at 15-20 cm depth under and across the road pavement (from the water and gas mains to the yards of private dwellings), there is a risk of damaging these pipes in course of road works. Therefore, the project envisages their dismantling, laying at 50-60 cm depth below the pavement reference mark and later on - their reinstallation. No arrangement of sidewalks are envisaged under the SP, as there is a existing footpath between the roadside ditch and populated are.

The SP envisages asphalt paving of 3 656 m (total area 25812 m^2) internal district road of v. Chalaubani and includes two sections:

I. The section, which traverses village Chalaubani, intersects the railway line at picket 16+36, and ends at the border with the village Melaani, 3340 m long.
II. The section, which starts at picket 3+00 of the main road (right connection road #2), 316 m long.

The road rehabilitation works include:

- Removing the damaged and weathered asphalt concrete pavement (average thickness 5-6cm) by using machinery, its loading on the dump trucks by using excavators and transporting to the earth fill;
- Dismantling of the d=30mm potable water pipes laid acroos the road and installation of new pipes– 250 run.m;
- Dismantling of the d=30mm gas pipes laid acroos the road and installation of new pipes– 100 run.m;
- Cleaning road flanks and pavement from construction waste and runoff clayey earth resulting from precipitaions and its transportation to the earth fill;
- Cleaning of the existing road ditches;
- Arranging the new road ditches;
- Arranging the bottom layer of the base by using sand-gravel 1 412 cub.m;

- Arranging top layer of the base by using fractional crushed stone 20 182 cub.m;
- Arranging asphalt concrete pavement by using coarse grain asphalt concrete mix 18 502 sq.m;
- Arranging asphalt concrete pavement by using fine grained asphalt concrete mix 20 182 sq.m;
- Arranging road flanks - 7310-m^2
- Arranging road connections - 210 m^2;

The SP implementation duration is 4 months.

(A) IMPACT IDENTIFICATION

Has sub-project a tangible impact on the environment?	The subproject is expected to have a modest short-term negative environmental impact while its long-term impact is expected to be positive. The main impact will be during the construction phase, which includes works for laying various layers, movement and operation of heavy vehicles, supply of materials. The SP will be implemented in the urban area, with strongly transformed environment through the past anthropogenic impact. Therefore the impact is transitory and insignificant (noise, emissions, construction waste, temporary disturbance of traffic and access, etc.).
What are the significant beneficial and adverse environmental effects of sub-project?	The subproject is expected to have positive long-term environmental and social impacts from improving living and transportation conditions of the local population. It will decrease existing negative impacts on community and neighboring environment, such as dust, emissions, vibration and noise. The expected negative environmental and social impacts are likely to be short term and typical for small to medium scale rehabilitation works in urban landscape: noise, dust, vibration, and emissions from the operation of construction machinery; generation of construction waste; disruption of traffic and pedestrian access.

May the sub-project have any significant impact on the local communities and other affected people?	No land or other types of resettlement are expected. The long term positive social impact will be beneficial (improvement of local population living conditions, better traffic safety conditions, improved convenience of travelling, and growth of tourist flow). Negative impacts, related to the possible disturbance described above, are short term and limited to the construction site.

(B) MITIGATION MEASURES

Were there any alternatives to the sub-project design considered?	Given that the subproject envisages rehabilitation of the existing infrastructure, only alternatives of pavement typed have been discussed. **Option 1:** Complete Rehabilitation (using asphalt paving) – cost GEL 1,098,888.84; **Option 2:** Complete Rehabilitation (using concrete paving) - cost GEL 1,314,103.54. On the basis of the undertaken least cost analysis done by the MDF the **option 1** - Complete Rehabilitation (using asphalt paving) concluded that a best alternative entailing the lowest financial and economic costs. So, implementation of the option 1 was recommended.
What types of mitigation measures are proposed?	The expected negative impacts of the construction phase can be easily mitigated. The contractor will be responsible for the waste disposal at the permitted location, use the quarry materials from the licensed quarries only, prevent water and soil from pollution (fuel spills due to equipment failure, raw asphalt/concrete spills etc.,), avoid disturbance of population (noise, dust, emissions) through proper work/supplies scheduling, traffic management, good maintenance of the construction machinery, etc.

What lessons from the previous similar projects have been incorporated into the sub-project design?	MDF have wide experience of implementation of medium and large scale road and streets rehabilitation subprojects financed by various donor organizations. Based on lessons learned from previous similar projects, design envisages not only rehabilitation of road pavement but also rehabilitation of storm water drainage network, connections, installation of relevant signage, which will increase traffic and pedestrians' safety and backing further maintenance of the street cover.
Have concerned communities been involved and have their interests and knowledge been adequately taken into consideration in sub-project preparation?	The Project has been developed by the Municipality in consultation with the affected communities and as a response to the current situation. The local population is informed about scheduled rehabilitation works and have no claim on related disturbances. MDF and local municipality will organize consultation meeting with local population to inform them about EMP requirements and construction contractor obligations before starting of rehabilitation works.

(C) RANKING

The project has been classified as environmental Category B according to the World Bank safeguards (OP 4.01) and requires Completion of the Environmental Management Checklist for Small Construction and Rehabilitation Activities.

Social Screening

	Social safeguards screening information	Yes	No
1	Is the information related to the affiliation, ownership and land use status of the sub-project site available and verifiable? (The screening cannot be completed until this is available)	✓	
2	Will the sub-project reduce people's access to their economic resources, such as land, pasture, water, public services, sites of common public use or other resources that they depend on?		✓
3	Will the sub-project result in resettlement of individuals or families or require the acquisition of land (public or private, temporarily or permanently) for its development?		✓
4	Will the sub-project result in the temporary or permanent loss of crops, fruit trees and Household infra-structure (such as ancillary facilities, fence, canal, granaries, outside toilets and kitchens, etc.)?		✓
If answer to any above question (except question 1) is "Yes", then OP/BP 4.12 Involuntary Resettlement is applicable and mitigation measures should follow this OP/BP 4.12 and the **Resettlement Policy Framework**			

PART A: GENERAL PROJECT AND SITE INFORMATION

INSTITUTIONAL & ADMINISTRATIVE	
Country	Georgia
Project title	Regional and Municipal Infrastructure Development Project II
Subproject title	V. Chalaubani road (Gurjaani Municipality) Rehabilitation
Scope of site-specific activity	The SP envisages asphalt paving of 3 656 m (total area 25812 m^2) internal district road of v. Chalaubani and includes two sections: I. The section, which traverses village Chalaubani, intersects the railway line at picket 16+36, and ends at the border with the village Melaani, 3340 m long. II. The section, which starts at picket 3+00 of the main road (right connection road #2), 316 m long. The road rehabilitation works include: • Removing the damaged and weathered asphalt concrete pavement (average thickness 5-6cm) by using machinery, its loading on the dump trucks by using excavators and transporting to the earth fill; • Dismantling of the d=30mm potable water pipes laid acroos the road and installation of new pipes– 250 run.m; • Dismantling of the d=30mm gas pipes laid acroos the road and installation of new pipes– 100 run.m; • Cleaning road flanks and pavement from construction waste and runoff clayey earth resulting from precipitaions and its transportation to the earth fill; • Cleaning of the existing road ditches; • Arranging the new road ditches; • Arranging the bottom layer of the base by using sand-gravel 1 412 cub.m; • Arranging top layer of the base by using fractional crushed stone 20 182 cub.m; • Arranging asphalt concrete pavement by using coarse grain asphalt concrete mix 18 502 sq.m;

	• Arranging asphalt concrete pavement by using fine grained asphalt concrete mix 20 182 sq.m; • Arranging road flanks - 7310-m2 • Arranging road connections - 210 m2; The SP implementation duration is 4 months.		
Institutional arrangements (WB)	Task Team Leader: Ahmed Eiewida, Co-Task Team Leader: Xiaolan Wang	Safeguards Specialist: Darejan Kapanadze	
Implementation arrangements (Borrower)	Implementing entity: Municipal Development Fund of Georgia	Works supervisor: (tbd)	Works contractor: (tbd)
SITE DESCRIPTION			
Name of institution whose premises are to be rehabilitated	Gurjaani Municipality		
Address and site location of institution whose premises are to be rehabilitated	13, Noneshvili street, Gurjaani Tel: +(995 353) 22 00 06 E-mail: gurjaan_raioni@mail.ru The SP site is located in Eastern Georgia, Kakheti Region, in v. Chalaubani. Distance from Tbilisi is 90 km and 11 km from town Gurjaani		
Who owns the land? Who uses the land (formal/informal)?	Local Municipality owned land.		
Description of physical and natural environment around the site	Gurjaani is a town in Georgia, located in the region of Kakheti and serving as the centre of the Gurjaani district. Gurjaani is situated in the Alazani Valley, 415 m above sea level, and 110 km east of the nation's capital Tbilisi. As of the 2002 census, its population was approximately 10,000. Total length of the road to be rehabilitated is 3.656 km and it is conditionally divided in two sections. Section I- traverses village Chalaubani, intersects the railway line at picket 16+36, and ends at the border with the village Melaani, 3340 m long. Section II-starts at picket 3+00 of the main road (right connection road #2), 316 m long.		

	The road mainly runs along residential buildings and agricultural lands. There are kindergarten, public school and Village Sakrebulo buildng located along the road. The village is located in Gurjaani Municipality, on Alazany Valley, on the bank of river Chermiskhevi. The village is accessible via Telavi-Bakurtsikhe motor road. It is the center of community. The village is located at 380 m altitude above the sea level, at 11 km distance from Gurjaani. According to the census of the year 2002, there are 6385 persons residing in the village. There are kindergarten and public school operating in the village. The village also has a first-aid post, which is accommodated in the village Sakrebulo building. The leading branch of economy is agriculture. In particular, viticulture and livestock farming. Vineyards occupy 20% of agricultural lands. Main industrial occupation is wine-making. The district area is intersected with railway lines and motor roads. <u>Geological, engineering-geological and hydrological conditions</u> In terms of geomorphology, the Sp area is located in the vast valley type area. Its relief is plain. There is no complexity with negative or positive forms. In terms of tectonics, the district is located in the eastern part of the central zone of Ajara-Trialeti fold system. As opposed to other sections of the central zone of Ajara-Trialeti fold system, the eastern end is characterized by fold attenuation, which manifests in development of weakly contracted folds. As for hydrological conditions, there is no natural exposure of ground waters detected within the survey area or in its vicinity. According to the new scheme of seismic zoning of Georgia, construction site falls within an 8 point earthquake intensity zone. The leading branch of municipality economy is agriculture. In particular, viticulture and livestock farming. Vineyards occupy 20% of agricultural lands. Main industrial occupation is winemaking. The district area is intersected with railway lines and motor roads.
Locations and distance for material sourcing, especially aggregates, water, stones?	Water will be available at the construction site from the local water supply system.

	Distance to the nearest licensed borrow pit is approximately 35 km.
LEGISLATION	
National & local legislation & permits that apply to project activity	SP has been classified as low risk Category B according to the WB policies and the ESMF. Gurjaani municipal authority approved the SP. Georgian legislation does not require any type of environmental review, approval, or permitting for the SP. Though according to the national regulatory system: (i) construction materials must be obtained from licensed providers, (ii) if contractor wishes to open quarries or extract material from river bed (rather than purchasing these materials from other providers), then the contractor must obtain licenses for extraction, (iii) if contractor wishes to operate own asphalt or concrete plant (rather than purchasing these materials from other providers), then the contractor must obtain an environmental permit with an established ceiling of pollutant concentrations in emissions and technical report on inventory of atmospheric air pollution stationary source agreed with MoENRP. (iv) Permanent placement of the inert material (cut ground and sedimentary soil) generated in the course of earth works in a selected location must be approved by local (municipal) governing bodies in written; (v) Construction waste must be disposed on the nearest municipal landfill in accordance with written agreement with the Solid Waste Management Company of Georgia Ltd. under the Ministry of Regional Development and Infrastructure. Copies of extraction licenses (if applicable), permits for operating asphalt/concrete plants (if applicable), and waste disposal permits will be attached to this EMP once the contractor is selected and mobilized to the work site. GOST and SNIP norms must be adhered

PUBLIC CONSULTATION	
When / where the public consultation process will take /took place	EMP will be discussed with beneficiary community prior to the commencement of works.
ATTACHMENTS	
Attachment 1: Site map Attachment 2: Photos of the road to be rehabilitated Attachment 3: The public consultation recording (should be provided) Attachment 4: Agreements regarding the disposal of waste and other permits/agreements (should be provided)	

PART B: SAFEGUARDS INFORMATION

ENVIRONMENTAL /SOCIAL SCREENING			
Will the site activity include/involve any of the following?	**Activity/Issue**	**Status**	**Triggered Actions**
	A. Building rehabilitation	■ Yes [ ] No	See Section **A** below
	B. New construction	[ ] Yes ■ No	See Section **A** below
	C. Individual wastewater treatment system	[ ] Yes ■ No	See Section **B** below
	D. Historic building(s) and districts	[ ] Yes ■ No	See Section **C** below
	E. Acquisition of land[1]	[ ] Yes ■ No	See Section **D** below
	F. Hazardous or toxic materials[2]	[ ] Yes ■ No	See Section **E** below
	G. Impacts on forests and/or protected areas	[ ] Yes ■ No	See Section **F** below
	H. Handling / management of medical waste	[ ] Yes ■ No	See Section **G** below
	I. Traffic and Pedestrian Safety	■ Yes [ ] No	See Section **H** below

[1] Land acquisitions includes displacement of people, change of livelihood encroachment on private property this is to land that is purchased/transferred and affects people who are living and/or squatters and/or operate a business (kiosks) on land that is being acquired.

[2] Toxic / hazardous material includes but is not limited to asbestos, toxic paints, noxious solvents, removal of lead paint, etc.

PART C: MITIGATION MEASURES

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
0. General Conditions	Notification and Worker Safety	(a) The local construction and environment inspectorates and communities have been notified of upcoming activities (b) The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works) (c) All legally required permits have been acquired for construction and/or rehabilitation (d) The Contractor formally agrees that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment. (e) Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots) (f) Appropriate signposting of the sites will inform workers of key rules and regulations to follow.
A. General Rehabilitation and /or Construction Activities	Air Quality	(a) Demolition debris shall be kept in controlled area and sprayed with water mist to reduce debris dust (b) During pneumatic drilling/wall destruction dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site (c) The surrounding environment (sidewalks, roads) shall be kept free of debris to minimize dust (d) There will be no open burning of construction / waste material at the site (e) There will be no excessive idling of construction vehicles at sites (f) Truck loads should be confinement and protected with lining.
	Noise	(a) Limit activities to daylight working hours; (b) During operations the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed as far away from residential areas as possible (c) The machinery should move only along the preliminarily agreed route; (d) The maximum allowed speed should be restricted; (e) Proper technical control and maintenance practices of the machinery should be applied; (f) No-load operations of the vehicles and heavy machinery are not allowed. Proper mufflers will be used on machinery.
	Water Quality	(a) Contractor will be required to organize and cover material storage areas. The material storage sites should be protected from washing out during heavy rain falls and flooding through covering by impermeable materials. Appropriate erosion and sediment control measures will be established such as e.g. hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers; (b) Contractor will plan all excavations, topsoil and subsoil storage so as to reduce to a minimum any runoff; (c) Revision of vehicles will be required to ensure that there is no leakage of fuel and lubricating materials. All machinery will be maintained and operated such that all leaks and spills of materials will be minimised. Daily plant checks (Vehicle Maintenance Procedure) will be undertaken to ensure no leaks or other problems are apparent. Vehicle maintenance, cleaning, degreasing etc will be undertaken in designated areas, of hard-standing, not over made ground. Maintenance points will not be located within 50m of any watercourse;

		(d) Lubricants, fuel and solvents should be stored and used for servicing machinery exclusively in the designated sites, with adequate lining of the ground and confinement of possible operation and emergency spills. Spill containment materials (sorbents, sand, sawing, chips etc.) should be available on construction site; (e) Wet cement and/or concrete will not be allowed to enter any watercourse, pond or ditch.
	Waste management	(a) Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities. (b) Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers. (c) Construction waste will be collected and disposed properly on the agreed location. (d) The records of waste disposal will be maintained as proof for proper management as designed. (e) Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos)
	Material supply	a) Use existing plants, quarries or borrow pits that have appropriate official approval or valid operating license. b) Obtain licenses for any new quarries and/or borrowing areas if their operation is required; c) Reinstate used sections of quarries and/or borrowing areas as extraction proceeds on or properly close quarries if extraction completed and license expired; d) Haul materials in off peak traffic hours; e) Place speed regulating, diverting, and warning signs for traffic as appropriate.
H Traffic and Pedestrian Safety	Direct or indirect hazards to public traffic and pedestrians by construction activities	(a) In compliance with national regulations the contractor will insure that the construction site is properly secured and construction related traffic regulated. This includes but is not limited to: ▪ Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards ▪ Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes. ▪ Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement ▪ Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public. ▪ Ensuring safe and continuous access to office facilities, shops and residences during renovation activities, if the buildings stay open for the public.

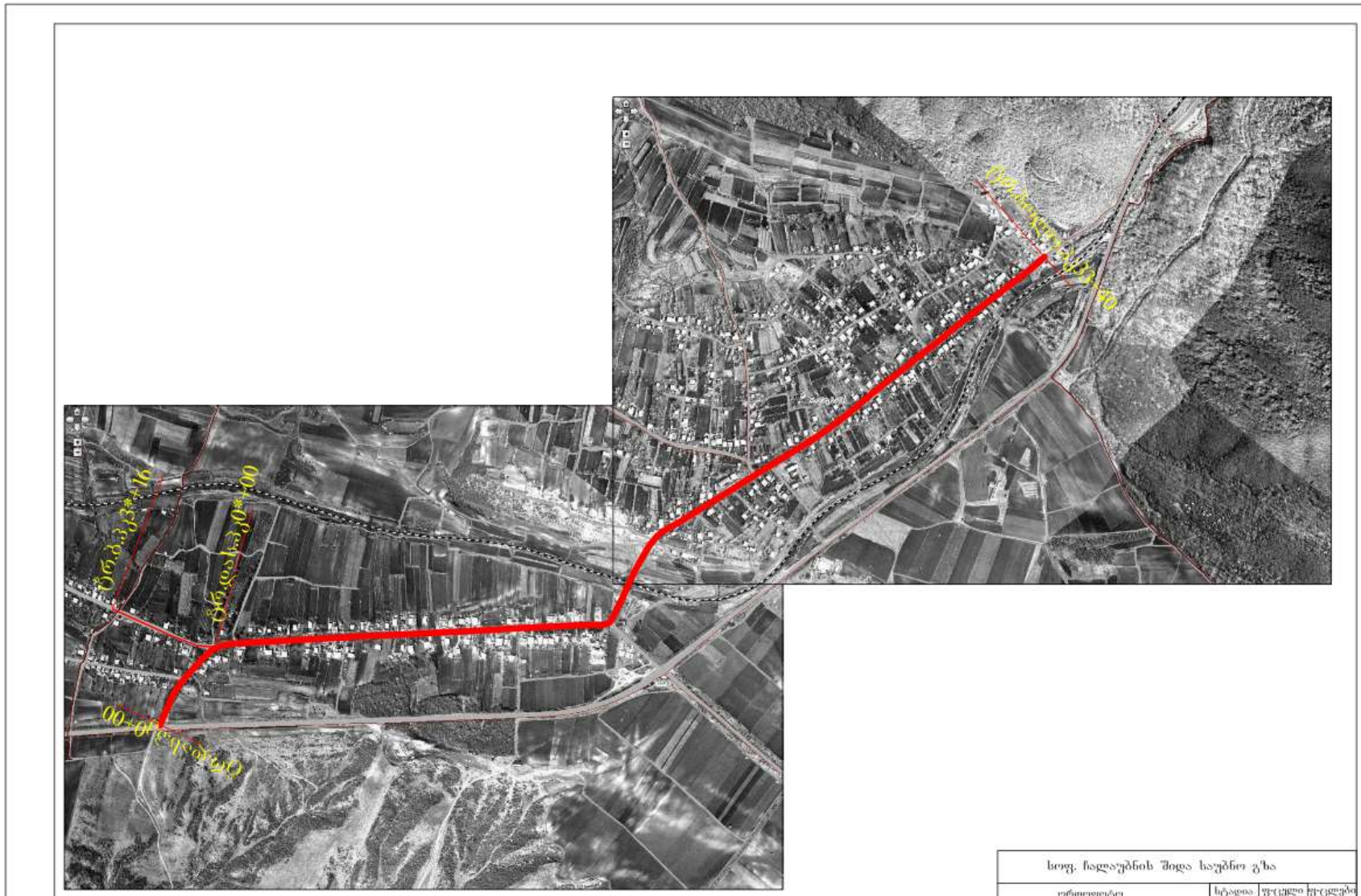
PART D: MONITORING PLAN

Activity	What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Who (Is responsible for monitoring?)
CONSTRUCTION PHASE						
Supply with construction materials	Purchase of construction materials from the officially registered suppliers	In the supplier's office or warehouse	Verification of documents	During conclusion of the supply contracts	To ensure technical reliability and safety of infrastructure	MDF, Construction supervisor
Transportation of consrtruction materials and waste Movement of construction machinery	Technical condition of vehicles and machinery; Confinement and protection of truck loads with lining; Respect of the established hours and routes of transportation	Construction site	Inspection	Unannounced inspections during work hours and beyond	Limit pollution of soil and air from emissions; Limit nuisance to local communities from noise and vibration; Minimize traffic disruption.	MDF, Construction supervisor, Traffic Police
Earthworks	Temporary storage of excavated material in the pre-defined and agreed upon locations; Backfilling of the excavated material and/or its disposal to the formally designated locations; In case of chance finds immediate suspension of works, notification of the Ministry of Culture and Monument Protection, and resumption of	Construction site	Inspection	In the course of earth works	Prevent pollution of the construction site and its surroundings with construction waste; Prevent damage and loss of physical cultural resources	MDF, Construction supervisor

Activity	What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Who (Is responsible for monitoring?)
	works exclusively upon formal consent of the Ministry.					
Sourcing of inert material	Purchase of material from the existing suppliers if feasible; Obtaining of extraction license by the works contract and strict compliance with the license conditions; Terracing of the borrow area, backfilling to the exploited areas of the borrow site, and landscape harmonization; Excavation of river gravel and sand from outside of the water stream, arrangement of protective barriers of gravel between excavation area and the water stream, and no entry of machinery into the water stream.	Borrowing areas	Inspection of documents Inspection of works	In the course of material extraction	Limiting erosion of slopes and degradation of ecosystems and landscapes; Limiting erosion of river banks, water pollution with suspended particles and disruption of aquatic life.	MDF, Construction supervisor
Generation of construction waste	Temporary storage of construction waste in especially allocated areas; Timely disposal of waste to the formally designated locations	Construction site; Waste disposal site	Inspection	Periodically during construction and upon complaints	Prevent pollution of the construction site and nearby area with solid waste	MDF, Construction supervisor, Gurjaani Municipality

Activity	What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Who (Is responsible for monitoring?)
Traffic disruption and limitation of pedestrian access	Installation of traffic limitation/diversion signage; Storage of construction materials and temporary placement of construction waste in a way preventing congestion of access roads	At and around the construction site	Inspection	In the course of construction works	Prevent traffic accidents; Limit nuisance to local residents	MDF, Construction supervisor
Workers' health and safety	Provision of uniforms and safety gear to workers; Informing of workers and personnel on the personal safety rules and instructions for operating machinery/equipment, and strict compliance with these rules/instructions	Construction site	Inspection	Unannounced inspections in the course of work	Limit occurrence of on-the-job accidents and emergencies	MDF, Construction supervisor
OPERATION PHASE						
Maintenance of rehabilitated roads	Installation of relevant signage for traffic safety; Demarcation of the sections of streets under repair; Disposal of asphalt and or other waste from the repair works to the designated landfill.	Rehabilitated sections of roads	Inspection	During maintenance works	Prevent road accidents and disruption of traffic	Gurjaani municipality

Attachment 1: Site map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Attachment 2: Photos of the road to be rehabilitated


ORAL

Attachment 3: The public consultation recording (should be provided)

Attachment 4: Agreements regarding the disposal of waste and other permits/agreements (should be provided)