TECHNICAL REPORT (DESCRIPTIVE PROJECT)

Performance-based maintenance: Berat -Corovode, Corovode -Hambull, Hambull-Rog (62.7km) (Contract 10)

1. Scope of services to be carried out

The services to be provided include all the activities, physical and others, which should be carried out by their compliance with the levels of service, and the criterion set for their performance fulfillment, or any other requirement. In particular, they include managerial duties and physical works concerning road-related assets and items:

- -Asphalt
- -Shoulders
- -Road signs and supply of road safety devices
- -Drainage facilities
- -Vegetation control
- -Escarpments (excavations and shoulders)
- -Art works
- -Traffic management
- -Soil accumulation
- -Snow removal (if winter maintenance is available)

The services required by road maintenance are classified in:

- 2. Rehabilitation/Periodic Works in the form of quantity of a ceiling amount, while indicating the quantities of measurable works to be carried out in order for the road to meet its performance standards.
- 3. Routine Maintenance Services in the form of quantity expressed in a monthly ceiling amount (this will be a monthly quantity applicable throughout the contract duration, expressed in price per km for each month multiplied by road length and duration of services);
- 4. Emergency Works in the form of a traditional bill of quantities.

The main functions of maintenance bases in general should be as follows:

- 1. Supervision of road segment/section in certain periods by levels of service
- Control of traffic data for this segment
- 3. Observation of meteorological factors
- 4. First aid in case of accidents (related to road and traffic elements)
- 5. Maintenance on desired road layers conditions
- 6. Maintenance of parking spaces, service, road signs, lighting systems, and future signaling and telecommunication.
- 7. Repairs and reconstruction after road accidents
- 8. Repairs and reconstruction after natural disasters
- 9. Cleaning operations of drains, culverts and other facilities related to the removal of water from road surface.
- 10. All the operations for the cleaning and maintenance of:
- road signs, safety devices (guardrails, parapets) and lighting system
- local repair of sidewalk damages
- vegetation protection

■ winter activities for the removal of snow and ice.

Winter maintenance works include:

- 1. Preliminary works before winter
- 2. Organization of materials storage locations
- 3. Protective measures for snow, ice, snow piles and avalanches
- 4. Removal of snow from highway carriageway and communication signs and signals
- 5. Marking of carriageway sides
- 6. Ensuring carriageway drainage system operation
- 7. Removal of vehicles from the road
- 8. Installation of specific communication signals in case of special traffic regime for road closures
- 9. Ongoing public information on road conditions and traffic flow

5. Segments to be covered by the contract:

Road No.	No.	Road names	Road type	Total length (km)	Width (m)
72	1	Berat - Corovode	SHL	45.7	6
N/A	2	Corovode - Hambull	SMTW	12.7	5
N/A	3	Hambull - Rog	SMTW	4.3	5
CONTRACT 10 SUM				62.7	

Note: SFL – road in a field terrain with one carriageway, without winter maintenance, SHL – road in a hilly terrain with one carriageway, without winter maintenance, SMTW – road in a mountainous terrain with one carriageway, with winter maintenance.

6. Specific condition

For each case, the segments to be included in investment (reconstruction) or other projects of the Albanian Road Authority will be reduced from the contract.

7. Road signs and safety

The maintenance of road signs and safety (guardrails) will be focused on repair and upgrade of the existing one.

8. Description of the area where the road is located

Road: Berat-Corovode, 45.7km long

The Berat-Corovode road axis traverses a mainly hilly and mountainous terrain southeast to Berat district and west to Skrapar district.

It starts in Uznove exit (west to "Avatar" bar) and ends in Corovode city center square (in front of the municipality building).

It starts in the exit of Uznove quarter, crossing some villages of Berat district, such Vodice, Fushe Peshtan, Vertop, Mbrakull, Plirez (Plireze Birdge), which is the border line betweem districts of Berat and Skrapar),

and then continues to Skrapar district, firstly crosses Polican city and then the villages of Pronovik, Bogove, Kakruke, Orizaj, Munushtir, and finally reaching Corovode city.

The Berat-Corovode road axis serves as a joint between the two districts and is of benefit to the large communities living in these areas, as well as to the business.

Description of Berat-Corovode road axis, 45,7km.

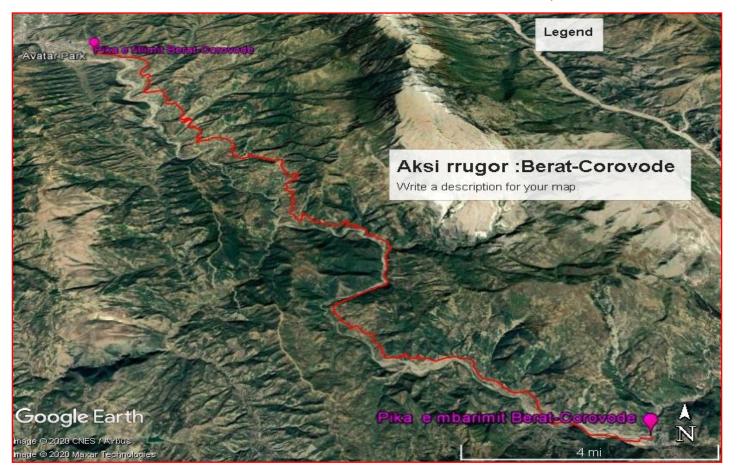
The Berat-Corovode 45,7km long road axis' general conditions are good, except for some amortization to Hyrje Bogove –Orizaj road segment (km33-km40) .

- It is a dual carriageway segment.
- -Roas grades The Berat –Polican road section's asphalt layers are in good conditions, as it has been significantly upgraded in 2019 through a donation made by TAP. The Hyrje Bogove –Kakruke-Orizaj road segment is amortized. Such amortization is a result of the lack on investments and of rough terrain, presence of water sources and frost. Approximately 30% of this segment length is amortized. Such amortization has led to medium and large potholes, as well as some cracks in the road.

The K/Buzuq –Ura Munushtir-Qender Corovode road segment is a new track built nearly 3 years ago, and its current conditions are good.

- -*Roadside ditches* .The hilly and mountainous terrain this road traverses is usually prone to landslides, alluvium, stone and rock massif falling. The most problematic are the areas of Bogove, Shkembi Selanit, Hija e Kakrukes, Rripi Strores. Taking into account the fact that the road traverses close to mountainous terrain and the presence of water sources, the side ditches are regularly clogged.
- -Shoulders have minimum dimensions throughout the road length, and they need periodic maintenance for the same reasons mentioned above.
- -<u>Vegetation</u> is present almost in the entire road length. It consists of shrubs and pines. The latter pose danger to the road as they are found too close to it, in km25 km 40 in particular.
- -*Road signs*. The road has been equipped with common and indication road sign boards, and an investment in this regard was made by ARA in April-May 2020. Road marking lines are needed in the entire road length. Horizontal marking lines are visible. Guardrails' conditions are good, but limited in number so they should be added to Bogove area.
- -Art works. This road axis consists of many art works, such as reinforced concrete bridges, circular and box culverts, some wing and retaining walls. These art works are generally in good conditions, no structural problems identified.
- -Traffic. This road has a dense traffic volume of public transport vehicles, goods vehicles and heavy vehicles.

MAP OF BERAT-COROVODE ROAD AXIS LOCATION 45,7KM



Road: Corovode-Hambull, 12.7km long

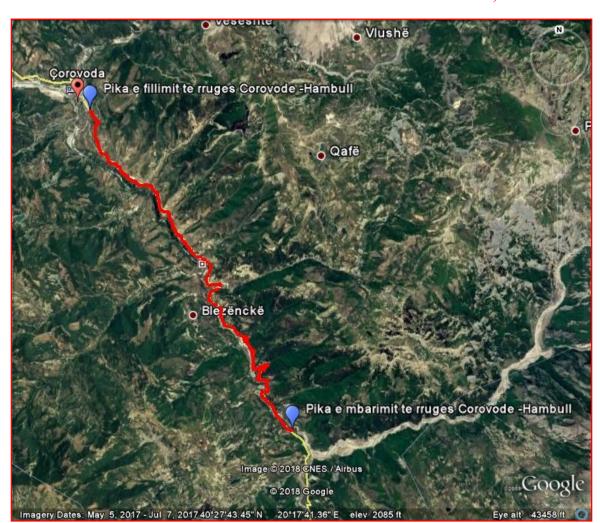
The Corovode –Hambull road axis lies in a hilly and mountainous terrain, in disadvantageous plan parameters. Sharp frequent turns are found in the entire toad. Many road sections have steep grades. The road traverses the canyon area and is intersected with some torrential water streams of "Osum" River. Snow and ice are always present during winter season in this road axis. Therefore, winter maintenance is foreseen.

The area it traverses is mainly inhabited, and it connects Skrapar area to Permet area and Three Bridges border crossing point. It is very important with regards to the social and economic aspects as it connects many inhabited areas, and is of benefit to the community and business.

<u>Description of Corovode – Hambull road axis, 12,7km.</u>

- It is a dual carriageway segment.
- -*Road grades* are actually paved with gravel and in good conditions. There is a road section equipped with sidewalks of ornamental concrete slabs, which are also in good conditions.
- -Roadside ditches .The rough and mountainous terrain this road traverses is usually prone to landslides, alluvium and rock falling, and as a result side ditches are easily clogged.

- <u>-Roadside gutters</u>. Concrete gutters are built in the road section where sidewalks and retaining walls are available, and their conditions are good. But, due to the rough terrain, their regular cleaning is needed.
- -Shoulders have minimum dimensions throughout the road length. Actually, their conditions are good.
- -<u>Vegetation</u> is present throughout the entire road length. It mainly consists of shrubs and pines, and the latter pose danger as they are too close to the road. Period road controls are required in order to eliminate dangers from falling of pines.
- -*Road signs*. The road has been equipped with vertical common and indication road sign boards. Guardrails are also present in certain road sections, and they are not damaged. Road marking lines are needed in the entire road length. Road marking lines are visible but not phosphorescent.
- -<u>Art works</u>. This road axis consists of considerable number of reinforced concrete wing and retaining walls, culverts and concrete bridges. These art works are generally in good conditions.
- -<u>Traffic</u>. This road has an average traffic volume of mainly public transport vehicles and goods vehicles. It is also used by heavy vehicles.



MAP OF COROVODE -HAMBULL ROAD AXIS LOCATION 12,7KM

Road:

Hambull -Rog, 4.3km long

The Hambull-Rog road axis lies in a hilly and mountainous terrain, in disadvantageous plan parameters. Sharp frequent turns are found in the entire toad. Many road sections have steep grades. The road traverses behind the canyons and sideways a valley slope. Snow and ice are always present during winter season in this road axis. Therefore, winter maintenance should be foreseen.

The area it traverses is mainly inhabited, and it connects Skrapar area to Permet area and Three Bridges border crossing point. It is very important with regards to the social and economic aspects as it connects many inhabited areas, and is of benefit to the community and business.

Description of Hambull-Rog road axis, 4,3km.

This road axis is a new track built in 2018 by State Budget funds. Its construction ended in May 2019, which is the second lot of Corovode –Permet road, and its warranty period expires in 8 May 2021.

- -It is a dual carriageway segment.
- -Road grades are actually paved with gravel and in good conditions.
- -<u>Roadside ditches</u>. The rough and mountainous terrain this road traverses is usually prone to landslides, alluvium and rock falling, and as a result side ditches are easily clogged.
- <u>-Roadside gutters</u>. Concrete gutters are built in the road section where sidewalks and retaining walls are available, and their conditions are good. But, due to the rough terrain, their regular cleaning is needed.
- -Shoulders have minimum dimensions throughout the road length. Actually, their conditions are good.
- -<u>Vegetation</u> is present throughout the entire road length. It mainly consists of shrubs and pines, and the latter pose danger as they are too close to the road. Period road controls are required in order to eliminate dangers from falling of pines.
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