TECHNICAL REPORT
(DESCRIPTIVE PROJECT)

Performance-based maintenance:
Berat-K/Gllave, K/Gllave-Antene, K/Poshnje –Velmisht-K/Patosi , K/Marinez-Marinez (70.2km) (CONTRACT 9)

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
2. 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)
74	1	Berat - K/Gllave	SMTW	38	4.5
N/A	2	K/Gllave - Antene	SMTW	3	4
73/2	3	K/Poshnje-Velmish-K/Patosi	SFL	26.2	6
N/A	4	K/Marinez-Marinez	SFL	3	5
CONTRACT 9 SUM				**70.2**	

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 –K/Gllave, 38km long.

The Berat –K/Gllave road axis traverses a highly rough terrain (hilly and mountainous) southwest to city of Berat and west to "Osum" River valley.

It starts at "Osum" River cable-stayed bridge of the city of Berat (approximately 100m southward to the bridge starts the road branch leading to Bilce village) and ends to the road branch leading to Buz village.

This road axis traverses some villages: Drobonik, Zhitom, Terpan, Rucaj, Rehove, Corogjafe, Mucaj and ends near the entrance to Gllave where the road is intersected with the one leading to Buz village.

Since it traverses a mountainous area, winter maintenance has been planned for the last 13 km of this road axis, although snow is present (during winter) in almost the entire area crossed by this road.

The area traversed by Berat –K/Gllave road axis is an agricultural area, known for the production of olives and cherries, but the lack of road infrastructure remains the main barrier for the entire economic activity of that area. Although the areas traversed by this road are close to the border with Tepelene and Permet, the lack of infrastructure prevent Berat –K/Gllave road axis from being a joint between the district of Berat and the above-mentioned cities.

Description of Berat –K/Gllave road axis, 38km long.

The Berat –K/Gllave road axis is 38km long and does not meet the minimum standards required for a national road, because, except for km 1 that is asphalted, the rest of this road axis is not asphalted.

- *It is a dual carriageway segment*.

-*Road grades* are actually paved with gravel. Some road waving and failures are identified in road grades in the areas of Drobonik, Zhitom, Terpan, etc. Thus, the road foundations are damaged. On the other hand, the asphalted km 1 presents no damages, and is in good condition.

-*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. Taking into account the fact that the side ditches dimensions are not optimal, their periodic cleaning is required.

-*Shoulders* have minimum dimensions throughout the road length, and they need periodic maintenance for the same reasons mentioned above.

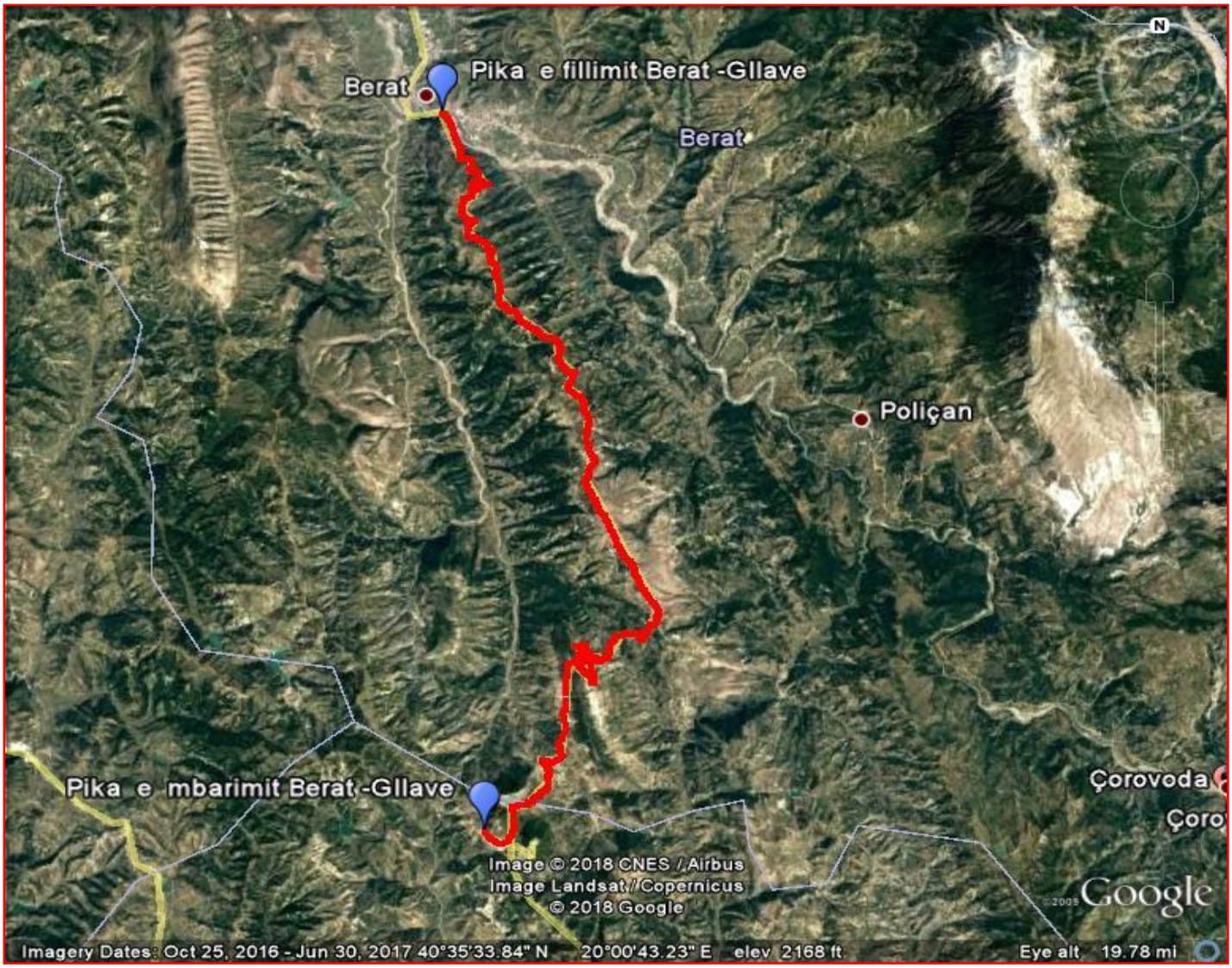
-*Vegetation* is present throughout the road length. It mainly consists of shrubs, olives and pines, and the latter pose danger as they are too close to the road. Period road controls are required in order to eliminate dangers from falling of pines, in km 1 in particular.

-*Road signs*. The road is equipped with common and indication road sign boards. The road marking lines are needed in its total length, as well as addition of new sign boards.

-*Art works*. This road axis consists of many art works, such as stone arch bridges, circular and box culverts, wing and retaining walls. These art works are partially in good conditions and operational.

-*Traffic*. This road has an average traffic volume of public transport vehicles and goods vehicles.

MAP OF BERAT-K/GLLAVE ROAD LOCATION 38Km



<u>Road: K/Gllave –Antene, 3km long.</u>

The Kthese Gllave-Antene road axis traverses a highly rough terrain (mountainous) and is a branch to the east of Berat-Gllave-Buze-Memaliaj road.

It starts eastward to the intersection of the above-mentioned road towards Gllave village and ends in the area where transmission antennas are installed.

It firstly crosses Malas village, then advances in a highly mountainous uninhabited terrain with sharp turns, and ends in the area where transmission antennas are located.

Since it traverses a mountainous terrain, winter maintenance has been planned for its entire length. The area it traverses is mainly uninhabited, and the lack of road infrastructure is the main reason. The purpose for this road construction is mainly the maintenance of transmission antennas, which are installed in the highest location of the area.

<u>Description of Kthese Gllave-Antene road axis, 3km.</u> The Berat – Gllave 3km long road axis does not meet the minimum standards of a national road, as it is not an asphalted road.

- *It is a dual carriageway segment*.

-*Road grades* are actually paved with gravel. Some road waving and potholes are identified in its entire length.

-*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. Taking into account the fact that the side ditches dimensions are not optimal, their periodic cleaning is required.

-*Shoulders* have minimum dimensions throughout the road length, and they need periodic maintenance for the same reasons mentioned above.

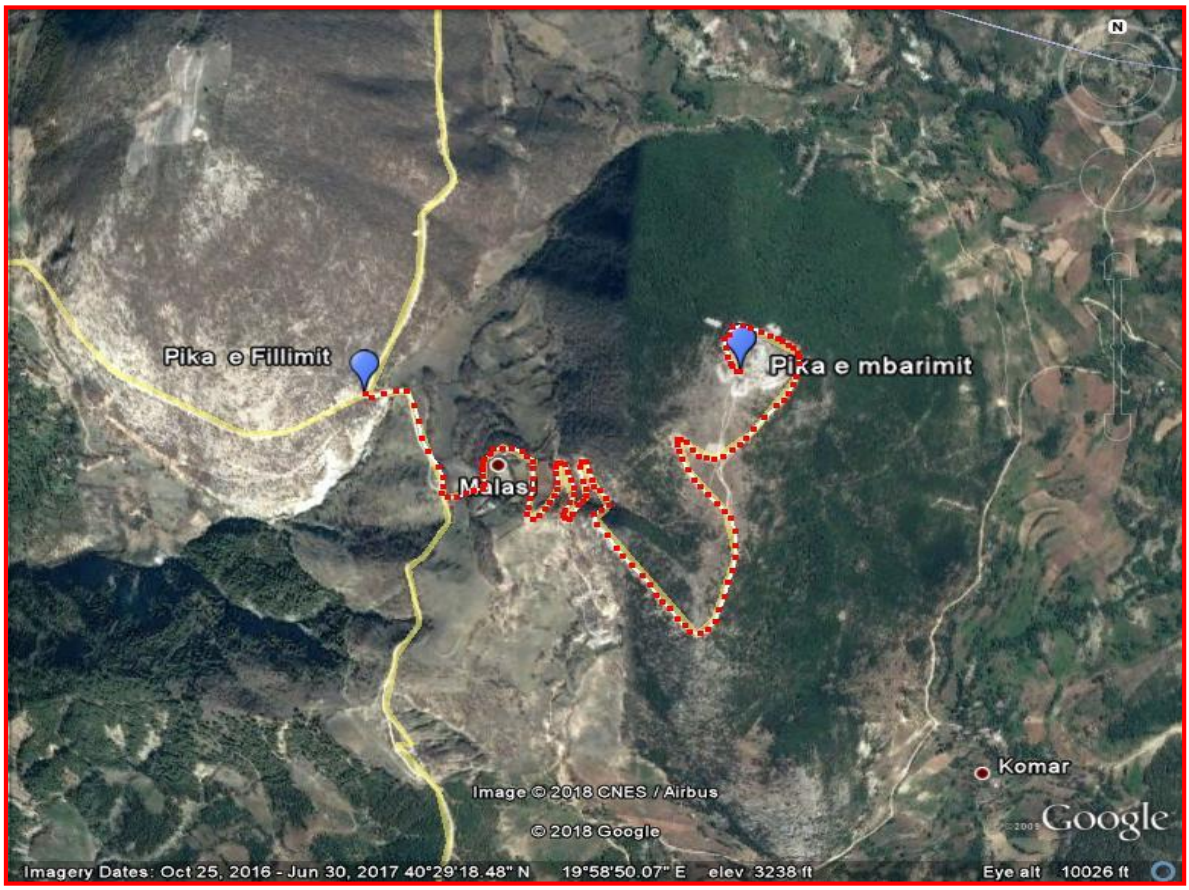
-*Vegetation* is present throughout the road length. It mainly consists of shrubs and pines, and the latter pose danger as they are too close to the road. Period road controls are required in order to eliminate dangers from falling of pines (Km1.5 and km2.5-km3).

-*Road signs*. The road is equipped with some common road sign boards. The road marking lines are needed in its total length, as well as addition of new sign boards.

-*Art works*. This road axis consists of some art works, such as culverts with ø 800mm pipes, and cement mortar retaining walls. These art works are generally in good conditions.

-*Traffic*. This road has a low traffic volume of mainly vehicles that has the transmission antennas as their destination.

MAP OF K/GLLAVE –ANTENE ROAD LOCATION 3Km



Road: **K/Poshnje –Velmisht –K/Patosi, 26,2km long**

The Kthese Poshnje-Velmish-Kthese Patosi road axis traverses a field and hilly terrain northwest to Berat district and southward to Fier district.

The Kthese Poshnje-Velmish-Kthese Patosi road axis start northwest to Poshnje roundabout (where road is divided into two branches, one towards Fier and the other towards Lushnje) and ends in the intersection of Berat-Fier road with Patos-Ballsh road.

It crosses some villages of Berat district, such as Poshnje, Sqepur, Kutalli, Pobrat, Velmish (Pleshive Bridge, which is the border line between districts of Berat and Fier) and continues to Fieri district, through villages of Strum, Roskovec, Zharrez, Verbas.It 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.

The area traversed by this road axis is an agricultural area, mainly focused on agriculture and oil industry, construction materials, etc.

The traffic volume of vehicles and people in this axis is considerable.

Description of Kthese Poshnje-Velmish-Kthese Patosi road axis 26,2km.

The Kthese Poshnje-Velmish-Kthese Patosi road axis, 26,2km long, is amortized in its first 9km, mainly in the K/Poshnje-Velmish segment.

- *It is a dual carriageway segment*.

-*Road grades* The K/Poshnje –Velmisht road section' asphalt layers are amortized up to 70% of its entire length. Furthermore, such amortization has led to medium and large potholes, as well as cracks in the road.

On the other hand, the Strum- Roskovec –K/Patosi segment of this road has been fully reconstructed, and there are no significant problems identified.

-*Roadside ditches* .The field and hilly terrain this road traverses is usually prone to landslides, alluvium and rock falling. The most problematic area is that of Qafa e Sqepurit, where the irrigation and drainage ditches are to close too roadside ditches, and the latter transform into their basins, and the presence of water is identified in the road axis as a result of runoff.

-*Shoulders* have minimum dimensions throughout the road length, and they need periodic maintenance for the same reasons mentioned above.

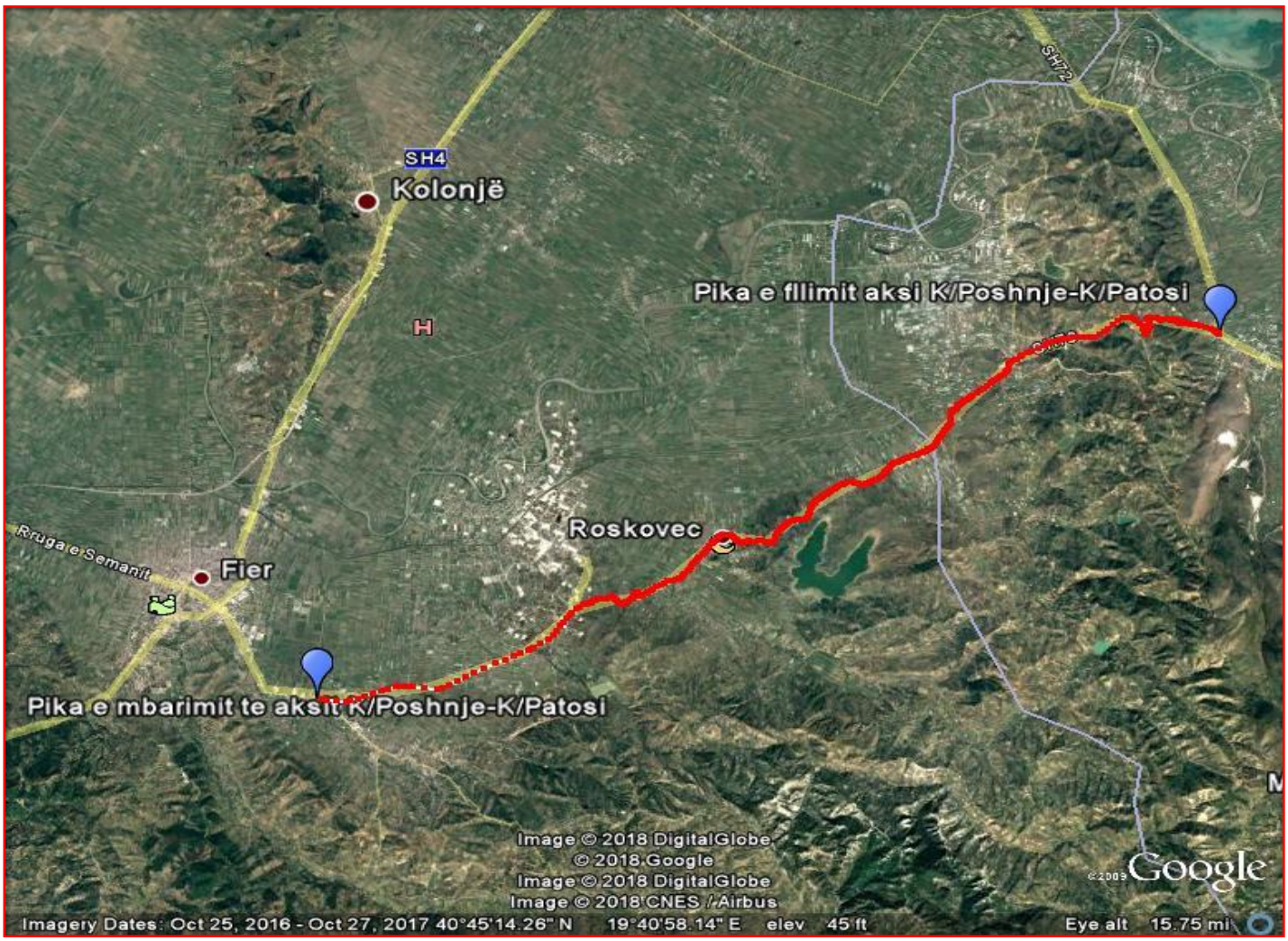
-*Vegetation* is present mainly in the first 9km of the road. It consists of shrubs and reeds. The latter pose danger to the road as they are found too close to it, in km8 - km 9 in particular.

-*Road signs*. The road is equipped with common and indication road sign boards. The road marking lines are needed in its total length. Horizontal marking lines are almost invisible. Guardrails conditions are good.

-*Art works*. This road axis consists of many art works, such as concrete bridges, circular and box culverts, some wing and retaining walls. These art works are generally in good conditions.

-*Traffic*. This road has a dense traffic volume of public transport vehicles, goods vehicles and heavy vehicles.

MAP OF K/Poshnje-Velmisht –K/Patosi ROAD LOCATION 26.2Km



Road: **K/Marinez-Marinez, 3km long**

The Kthese Marinez -Marinezroad axis traverses a field terrain and is a branch north to Berat –Fier road. It starts northwest to the branch leading to Marinez, which is located in Berat-Fier road and ends in the inhabited area of Marinez village.

Its crosses the area of Marinez village and serves a joint between Marinez area and Berat –Fier national road. The area that this road axis traverses is an oil field, and the oil extraction industry is developed.

Description of Kthese Marinez -Marinez road axis, 3km long.

The Kthese Marinez -Marinez 3km long road axis is generally in good conditions.

- *It is a dual carriageway segment*.

-*Road grades* They are in good conditions as this road axis has been fully reconstructed, and asphalt layers are also in good conditions, no problems identified.

-*Roadside ditches* .Their dimensions are not optimal and should be periodically maintained.

-*Shoulders* have minimum dimensions throughout the road length, and they need periodic maintenance.

-*Vegetation* is present mainly in the second km of the road, and consists of shrubs.

-*Road signs*. The road is equipped with common and indication road sign boards. The road marking lines are needed in its total length. Horizontal marking lines are almost invisible. Guardrails conditions are good.

-*Art works*. This road axis consists of circular culverts and retaining walls. These art works are generally in good conditions.

-*Traffic*. This road has a dense traffic volume of public transport vehicles, goods vehicles and heavy vehicles.