



Republika e Kosovës  
Republika Kosova - Republic of Kosova



Municipality of  
Kamenicë/Kamenica



# Urban Mobility Plan of Municipality of Kamenicë/Kamenica

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**Urban Mobility Plan of  
Municipality of Kamenicë/Kamenica  
2016 - 2020**

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March, 2016

# *Acknowledgments*

This plan was prepared by a Working Group of the Municipality of Kamenicë/Kamenica, in close cooperation with the coordination group and with the support of mobility professional consultants and DEMOS project officers.

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# 1. SCOPE OF THE PLAN

Challenges of modern planning in urban areas are related to the daily challenges to meet the requirements for movement, respectively finding environmentally sustainable alternatives, and provision of conditions for free and safe movement for all traffic participants.

Enhanced awareness of citizens regarding the use of active, clean and efficient transport methods such as walking, cycling and public transport provide a more efficient way to meet the requirements of daily movement.

Mobility Plan is a strategic development plan in the field of traffic for Municipality of Kamenicë/Kamenica. This plan intends to initiate sustainable and safer mobility for all traffic participants. In terms of traffic, this Plan will serve as a good basis for drafting plans and projects in the Municipality of Kamenicë/Kamenica concerning traffic.

During the process of drafting of the plan, modern trends and developments in the field of sustainable urban mobility will be considered. Thus, the implementation of mobility plan for the Municipality of Kamenicë/Kamenica aims to reduce the rate of motorization by promoting other forms of movement, such as development of cycling and creating spaces for walking, respectively, providing infrastructure conditions in order to accommodate all traffic participants.

The purpose of this Urban Mobility Plan is to establish a more sustainable transport system and other movements (motorized and non-motorized traffic) in order to:

- provide easier access for daily movements and other services,
- improve the safety level,
- reduce environmental pollution,
- increase the efficiency and economics during the transport of people and goods,
- enhancement of attractiveness and quality of urban environment.

Inclusion of citizens and other stakeholders in drafting the mobility plan is one of the most basic principles. Their inclusion and opinions are deemed as significant input since they relate to business needs, the organization and dynamics of the city as well with the quality of life.

## 1.1. Municipal profile from mobility perspective

### Population

Municipality of Kamenicë/Kamenica, according to the 2011 census, ensured by the working groups for preparation of the Municipal Development Plan, has 40224 residents living in a total area of 417 km<sup>2</sup>. Majority of population in Municipality of Kamenicë/Kamenica lives in villages, specifically 81.69% of the population. Only 18.31% of the population live in the only urban centre of this municipality, in centre of Kamenicë/Kamenica. Individual housing is predominant, only in urban centre there are very few public collective housing facilities.

## Geographical position

Municipality of Kamenicë/Kamenica is located in Eastern Kosovo, which is bordered in the south-west with the municipality of Ranilug/Ranilug, in the west Novobërdë/Novo Brdo municipality, in the northwest with Prishtinë/Pristina, in the north with the municipality of Medvedja/Medvegjë and Leskovac/Leskovc, in the east with Vranje/Vrajë, as well as to the east and southeast with Bujanoc/Bujanovac. Municipality of Kamenicë/Kamenica has an area of 417 km<sup>2</sup>. The geographical position of the Municipality of Kamenicë/Kamenica is peripheral, in the easternmost edge of Kosovo, but it is a bridge between Kosovo and municipalities of southern Serbia, mainly inhabited by Albanians. Through the main road Gjilan/Gnjilane -Bujanoc/Bujanovac, it is connected with other centres of Kosovo. Gjilan/Gnjilane city is 30 km away, while Prishtinë/Pristine is 75 km away from Kamenicë/Kamenica. It can be connected with Prishtinë/Pristina through shorter road, via Novobërdë/Novo Brdo and Llabjan/Labjane, and for both directions the road is shorter for 50-55 km. The nearest railway station is in Ferizaj/Uroshevac and Bujanoc/Bujanovac. The nearest airport is Prishtinë/Pristine Airport in a distance of about 90 km and Shkup/Skopje Airport, 130 km.



Fig.1.1.

## 1.2. Basic principles from municipal documents and plans and overall municipality objectives

Municipality of Kamenicë/Kamenica has already adopted a Municipal Development Plan (MDP) and Urban Development Plan (UDP). MDP and UDP of the Municipality of Kamenicë/Kamenica tackled the traffic and mobility issues in general, also they provide for planning of roads, cycling tracks and various types of transport. Below are presented some of the municipal objectives provided for within these plans that address spatial issues in general:

### MDP objectives

Construction of the new road network:

- Kamenicë/Kamenica – Kapi – Medvegjë/Medvedje,
- Kamenicë/Kamenica – Krilevë/Krilevo – Podujeva/Podujevo – Kosovo ring roads,
- Kamenicë/Kamenica – Hogosht /Ogoste– Desivojca –Guri i zi – Villasë/Vllase,
- Kamenicë/Kamenica – Berivojçë/Berivojce – Koretin – Dajkoc/Dajkovce – Muçivrc/Muciverce– Rogane/Rgacica– Karaqeve e poshtme/Donjea Karacevo– Muhoc/Muhovce,
- Kamenicë/Kamenica – Bullaj – Zllatar –Prishtinë/Prishtina,
- Hogosht/Ogoste– Lisocka – Zhuje – Shahiq – Gjyrishec/Durisevce – Sfirce – Baja e Sijarines/ Sijarinska Banja,
- Ring road of Kamenicë/Kamenica and improving existing road network with accompanying infrastructure in the direction of Serbia,
- Drafting of projects for higher and better passenger traffic inside the city, settlements and towards other municipal centres ,
- Drafting of projects for increasing the number of participants in urban traffic,

For urban roads:

- Marking (geodetic points where the road lies) the tracks of these roads and their maintenance.
- Any construction that runs contrary to their operation is not permitted to the existing and planned roads (when issuing permits)
- Initiation of conceptual projects for these roads with priority in clean areas (no constructions within construction limits)
- Opening of these roads with machinery, in order to define accurately how these roads will operate in the future, would help the execution of these roads,
- Drafting of main projects for these roads based on the map of urban transport infrastructure

## UDP objectives

- Construction of cycling and pedestrian tracks along the roads,
- Construction of green belts along all roads,
- Expansion of road infrastructure, Kamenicë/Kamenica –Crep/Crepana-Bujanoc/Bujanovac and Kamenicë/Kamenica –Crep/Crepana-Gjilan/Gnjilane
- Opening of new roads and the relation with neighbouring countries, Kamenicë/Kamenica, Hogosht/Ogoste, Poliqka, Desivojce, Trstene, Lebane,
- Connection to the outer ring , Kamenicë/Kamenica,Kriljeva, Podujevo
- Providing an environmentally sustainable system of movement by discouraging the use of private vehicles and encouraging walking and cycling,
- Support transportation by bus or minibus, in order to improve and strengthen it as main form of movement,
- Removal of pollution and noise from residential areas especially from sensitive urban areas, with the aim of increasing the quality of life but also reducing impact of hazardous gases in the environment,
- Supporting the use of bicycles as a mode of transportation, ensuring the necessary space and giving advantage to traffic;

### 1.3. Legal framework

Urban mobility plan for the Municipality of Kamenicë/Kamenica is a document which shall promote common interests of Kamenicë/Kamenica inhabitants for free and safe movement for all traffic participants in order to improve the quality of life and create a clean, sound and social environment.

Urban Mobility Plan for the Municipality of Kamenicë/Kamenica is based on the applicable legal framework in Kosovo and international principles and conventions related to sustainable urban mobility, as:

- Law No.02/L-70 on Road Traffic Safety,
- Law No. 2004/1 and Law No.04/L-179 on Road Transport, dated 16 May 2013,
- Law No. 2003/11 on Roads,
- Law no. 03 / L-040 on Local Self-Government, Assembly of the Republic of Kosovo (2012),
- Law No. 04/L-076 on Police
- Law No.2012/04-L-174 on Spatial Planning
- Law No. 03/L-160 on Air Protection from Pollution
- Law no. 03/L-025 on Environmental Protection

Traffic safety is governed by the Law No.02/L-70 on Road Traffic Safety. The purpose of this law is to regulate the rights and obligations in the road traffic system.

In addition to the Law on Traffic Safety, the Law on Police, adopted in 2012, also deals with the issue of traffic safety. On the other hand, the Law on Local Self-Government, Regulation on Municipal Services, as well as other legal acts of Kosovo municipalities treat the traffic safety by complementing the legal basis in this field.

The Law on Spatial Planning aims to regulate all matters related to spatial and urban planning. Within this law, spatial planning must observe the principles of protecting Kosovo's natural resources and promote sustainable development; it should also promote inclusive and participatory processes and involve all stakeholders and communities.

The Law on Spatial Planning provides that the professional expertise be integrated into the planning system by establishing the committee of planning experts (locally). In Kosovo there are two levels of planning (national and local) and the types of plans are as follows: Kosovo Spatial Plan, Spatial Plans for Special Zones, Municipal Development Plan, Urban Development Plan and Urban Regulatory Plans.

The Law on Environmental Protection defines the rational use of natural resources and limitation of pollution discharge on environment, prevention of damage, rehabilitation and improvement of damaged environment, improvement of environmental conditions in correlation with life quality and protection of human health.

Law on Local Self-Government defines the legal basis for a sustainable system of local self-government in Kosovo and defines their functions, powers, rights and duties and of respective bodies.

**Within the Law on Local Self-Government, the following rights have been assigned to the local level:**

- Local Economic Development;
- Urban and Rural Planning;
- Land Use and Development;
- Implementation of regulations on construction and construction control standards;
- Local Environmental Protection;
- Municipalities shall have their own full and exclusive powers, insofar as they concern the local interest while respecting the standards set forth in the applicable legislation; these powers are set forth in Article 17 of the Law on Local Self-Government.

## 2. STATE OF PLAY ANALYSIS

Traffic state of play in the Municipality of Kamenicë/Kamenica is assessed by a working group based on the works they have within relevant departments.

Main problems in the field of traffic and transport in the Municipality of Kamenicë/Kamenica were addressed during traffic state of play analysis. From the analysis made, based on partial inventories or observations made in the field, it is pointed out that some parts of the roads need maintenance and rehabilitation.

These roads are currently maintained with limited funds, especially road signalling maintenance. Their situation can be expected to deteriorate progressively and the road safety level can reduce if no sufficient funds are made available in the forthcoming years.

### 2.1. Traffic Safety

In order to have a clearer view of the current safety situation in the Municipality of Kamenicë/Kamenica, Kosovo Police provided data on the number of accidents, the consequences and the factors that have caused accidents. Therefore, the sources of the statistics presented in this chapter are provided by the information system between Kosovo Police- Police Station in Kamenicë/Kamenica.

Always, based on the data of the Kosovo Police, the total number of accidents in the Municipality of Kamenicë/Kamenica during 2014 was 102 accidents. Out of this number, 71 accidents with material damage, 22 with injuries and 3 of them with fatalities .The total number of accidents and accidents types during 2014 in the Municipality of Kamenicë/Kamenica are given in Fig.2.1.

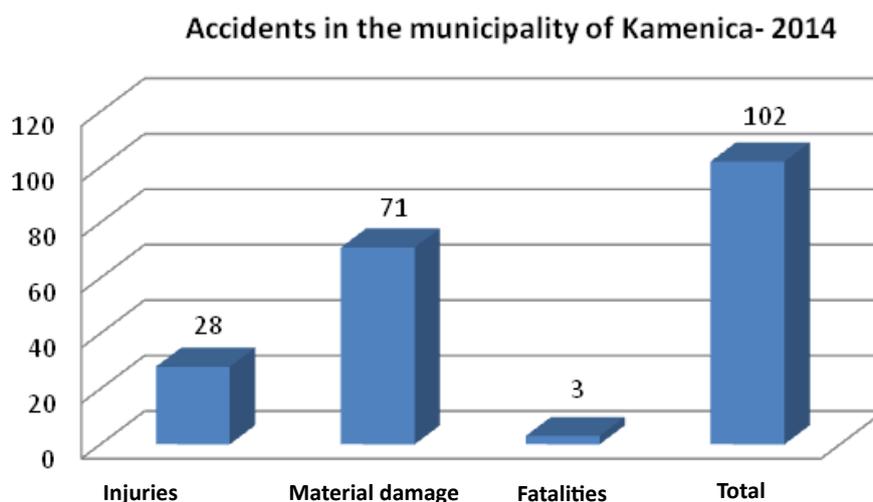
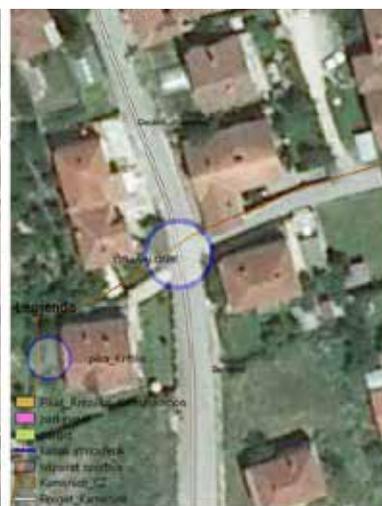
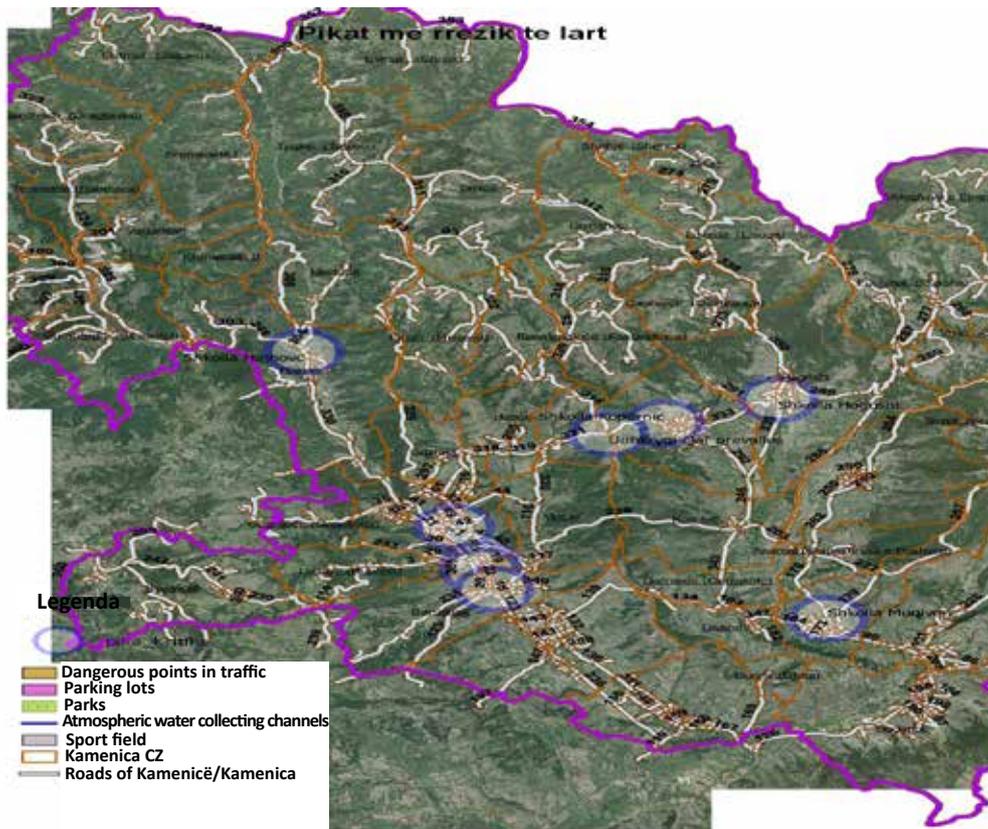


Fig.1. Number of accidents in the Municipality of Kamenicë/Kamenica in 2014

For a more detailed description of the places with a potential danger for causing accidents, few places that are considered dangerous for pedestrians are showed below (Fig.2).



a) Crossroad at the bridge-centre   b) Crossroad at the mosque   c) Crossroad at the former OSCE



e) Kopernica passage



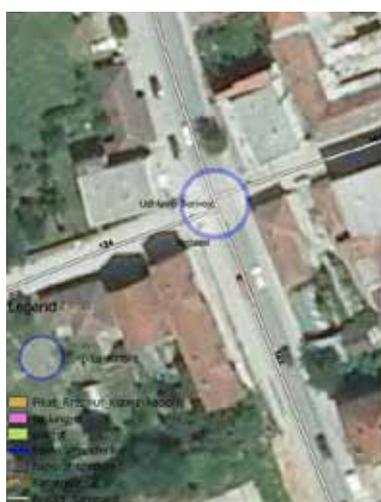
f) School in Hogosht



g) School in Karaqeve



h) School in Kopernice



i) School in Berivojce



j) School in Hajnoc

Fig.2. Risk identification on the roads in the Municipality of Kamenicë/Kamenica

## 2.2. Horizontal and vertical signalling

The state of play of horizontal and vertical signalling in the Municipality of Kamenicë/Kamenica is not at the appropriate level. Most of pedestrian crossings lack horizontal signalling, whereas in some passages the reflection is faded and cannot be considered as a place designated for pedestrian crossing. Longitudinal lines of roads and direction arrows are not visible in any part of the road.

In addition to the lack of horizontal signalling, road network in the Municipality of Kamenicë/Kamenica is not equipped with the appropriate vertical signalling. Lack of vertical signs is noted mainly at intersection of secondary roads with the main road, thus reducing the safety level.

In the highlights of the road network was noted the lack of direction signs, namely the denomination of settlements. It is worth mentioning that some of the existing direction signs do not meet the level of information, thus causing orientation confusion, especially for drivers who have no prior knowledge of road and terrain conditions.

As a significant problem is considered also the relevant signage for public transport respectively bus stops are not signalled properly, whereas in most cases the stops are made disregarding the road safety.

## 2.3. Pedestrian traffic

In the city of Kamenicë/Kamenica, surfaces for pedestrian movements are at a satisfactory level. There are sidewalks along the main road on both sides and are divided physically from motorized traffic and allow free and safe movement. The most frequented area of the city centre is wide enough, and in surfaces dedicated to pedestrians enable group movement of pedestrians and cyclists even though adequate cycling tracks are not marked.

On the other hand, some of suburban and rural parts of Kamenicë/Kamenica lack sidewalks and road shoulders, as the situation in some parts of the roads are considered dangerous, especially near schools.

Current state of sidewalks in Kamenicë/Kamenica is given in Table 1.

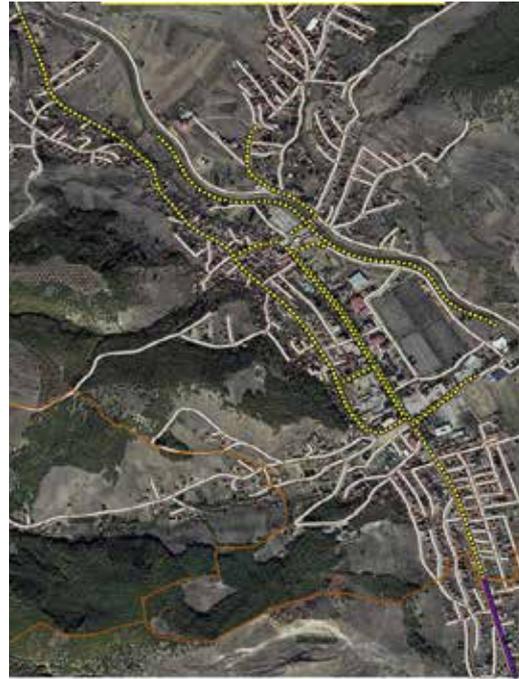
City/Village	Sidewalks surfaces (m)
Kamenicë/Kamenica	7882,3 m
Koretin/Koretin	2378.30 m
Berivojcë/Brivojce	1247,5 m
Hodonoc/Odanovce	2817,3 m
Roganë/Rogacica	1753 m
Hogosht/Ogoste	643.5 m

Table 1. Current state of sidewalks in Kamenicë/Kamenica

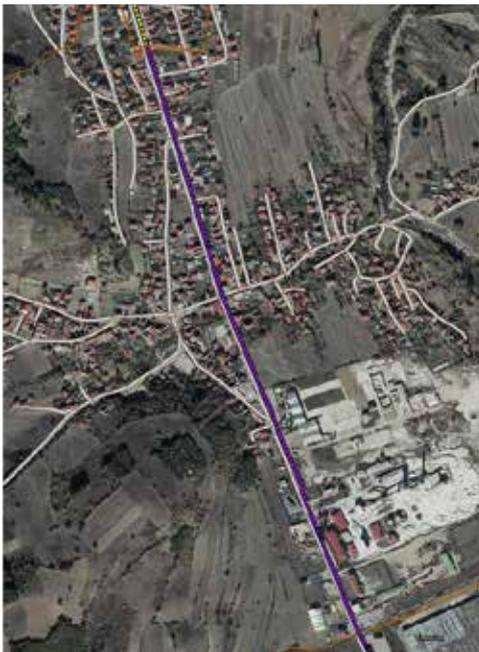
After field measurements, the current state of sidewalks and other surfaces for pedestrians' movement in the city of Kamenicë/Kamenica and in villages is given in Figure 3.



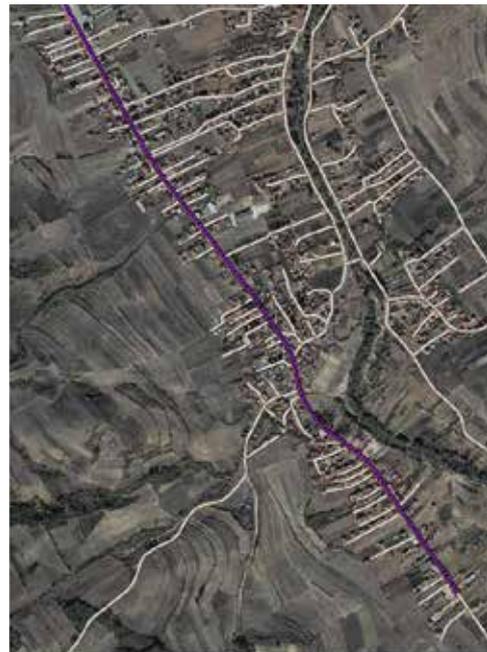
a) Sidewalks in Hogosht/Ogoste



b) Sidewalks in Kamenicë/Kamenica



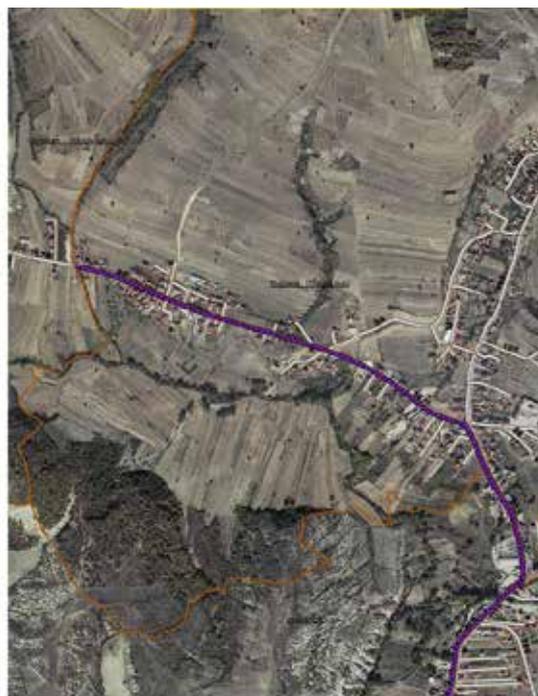
c) Sidewalks in Berivojcë/Berivojce



d) Sidewalks in Koretin



e) Sidewalks in Hodonoc/Odanovce



f) Sidewalks in Roganë/Rogacica

Fig.3 (a-f). The state of sidewalks in Kamenicë/Kamenica and in villages

## 2.4. Cycling traffic

Flat terrain and its great extension towards villages goes to the favour of the citizens of the Municipality of Kamenicë/Kamenica. Nevertheless, despite this convenient terrain for the development of cycling, such a movement form is not sufficiently promoted. Municipal Development Plan provides for cycling tracks, however, yet there is not even a single cycling track build yet.

Some approximate estimations ensured by association of cyclists in Kamenicë/Kamenica, have shown that the number of active cyclists in this Municipality is about 1,000, but in order to promote the cycling in the future, it is necessary to provide safe cycling conditions.

For the purpose of analysis and assessment of the road geometric elements, the working group carried out a site visit and in 7.0 km, found sufficient profile of the road and functional connection with villages Berivojcë/Berivojce, Koretin and Kamenicë/Kamenica.

A considerable part of the road to the village Berivojcë/Berivojce, possesses the physical division of the sidewalk in one part of the road, which is very convenient that despite pedestrian movement enables cyclists movement (Fig. 4).



Fig.4.

## 2.5. Parking

The current state of parking in the city of Kamenicë/Kamenica is at a satisfactory level. Existing parking locations are scattered mainly in the vicinity of municipal institutions, educational, health care, and trade facilities thus enabling citizens to perform daily services and activities in a more efficient way.

Parking lots are organized in angled parking (angle 90 °), but also the combined angled + parallel and is organized in two parking lots whereas parking for TAXI services are parallel.

Existing parking condition and their shape in the city of Kamenicë/Kamenica has been given in Table 3 and Fig. 5.

Public parking for citizens services		
Location	Types of parking	Surface
Next to VivaFresh	angle 90°	3415 m <sup>2</sup>
Old trade centre	angle 90°	335 m <sup>2</sup>
Next to Red Cross	angle 90°	432 m <sup>2</sup>
Next to Hygiene	angle 90°	718 m <sup>2</sup>
Next to former Mineral hotel	angle 90° + parallel	370 m <sup>2</sup>
Next to Police	angle 90°	945 m <sup>2</sup>
Next to NLB	angle 90°	1116 m <sup>2</sup>
Next to Kindergarten	angle 90°	515 m <sup>2</sup>
Next to Fuel pumps	angle 90°	190 m <sup>2</sup>
Next to BPB	angle 90°	190 m <sup>2</sup>
Next to Circulars	angle 90°	632 m <sup>2</sup>
Next to Department of urbanism	angle 90°	207 m <sup>2</sup>
Next to Shopping centre (in front of the park)	angle 90°	1343 m <sup>2</sup>
(4+1)TAXI service parking		
Next to Bridge	Parallel	815 m <sup>2</sup>

In addition to the city of Kamenicë/Kamenica, there are some parking lots at the village Rogaçicë/Rogacica for TAXI service needs.

Whereas, seven parking lots for persons with special needs are in the city of Kamenicë/Kamenica, all are marked properly with signalling.



Fig. 5. Parking locations in the city of Kamenicë/Kamenica

## 2.6. Collective transport (public-private)

Post 1999, a public transport in the Municipality of Kamenicë/Kamenica was organized by a public company, respectively running the business with funds that remained from N.T.P “Kosovatrans” until the privatization of this enterprise, then gradually some private operator were engaged in public transport.

Currently, in the Municipality of Kamenicë/Kamenica are operating several private transport companies, which cover the whole territory of the Municipality of Kamenicë/Kamenica.

Private transport operators fully observe preliminary published bus line and the itinerary.

### Lines within the Municipality are:

- Kamenicë/Kamenica –Hogosht/Ogoste,
- Kamenicë/Kamenica – Karaqevë/Karacevo,
- Kamenicë/Kamenica–Strezoc/ Strezovce-Krilevë/Krilevo,

### Lines outside the municipal territory are:

- Kamenicë/Kamenica–Gjilan/Gnjilane- Prishtinë/Pristina,
- Hogosht/Ogoste-Gjilan/Gnjilane–Prishtinë Pristina
- Shipashnicë/Sipasnica-Gjilan/Gnjilane,
- Karaqeve/Karacevo-Gjilan/Gnjilane.

Bus transport is organized in several forms such as: international transport, intercity transport and urban-suburban transport.

These categories are divided according to the management, whereas the international and inter-urban transport is managed by the Ministry of Infrastructure, whereas urban-suburban transport is managed by municipality.

Besides the regular lines during the summer we have lines for most coastal cities of Albania and Montenegro, namely Ulqin/Ulcinj.

There is also a daily bus line Kamenicë/Kamenica -Tirana - Kamenicë/Kamenica.

In the absence of buses in some villages where there is smaller movement, these villages are covered by private mini-bus, who is provided with permission by DPSI.

## 2.7. Traffic load

For practical needs, nonlinearity characteristics limit of the vehicle circulation in different periods of time are of a special importance. Counting period and duration depends on the objectives and ways of better planning. Better results will be obtained when the counting is done through automatic counters at longer periods of time (12 or 24 in total).

Manual counting is performed for traffic load needs in the municipality of Kamenicë/Kamenica, due to the lack of time and other restrictions.

Counting forms have been compiled, providing time intervals of 15 minutes and resource have been allocated, depending on the structure.

A specific day during the week have been selected (a heavy traffic day), and counting has been performed at different times during the day, from 7:00 to 8:00 and from 12:00 to 13:00.

In order to collect data on the traffic flow in the city of Kamenicë/Kamenica, four characteristic points have been selected, where the number of vehicles on the road and at the entrance of the crossroads has been counted. Except motor vehicles, in order to determine the circulation structure, counting has been made on the number of pedestrians and cyclists moving within one hour.

Hot spots in which the traffic flow has been measured, are given in fig. 6.

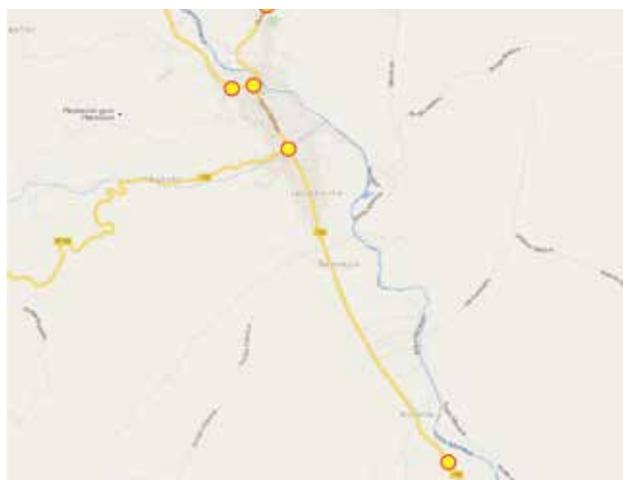


Fig. 6.

The results of traffic load in crossroads and parts of the road are given in Fig.7.

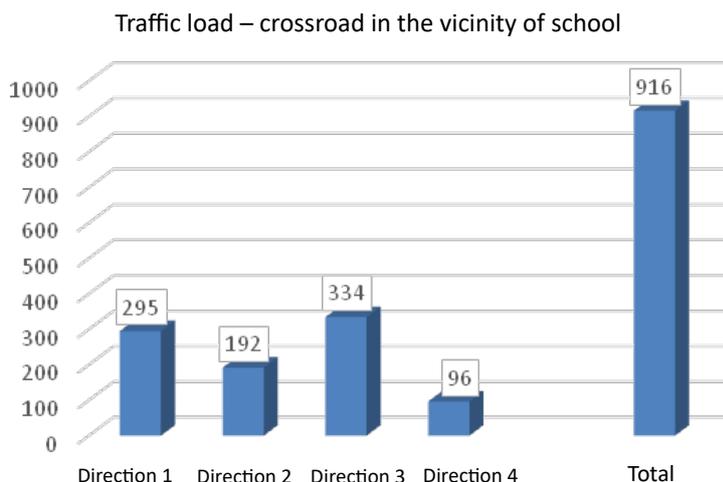


Fig. 7.

Regarding to circulation structure, passenger vehicles dominate with 60%, while heavy vehicles and buses account for about 5%. Non-motorized movements mostly are conducted by walking (28% pedestrian), while 7% of movements are by bicycles (Fig. 8)

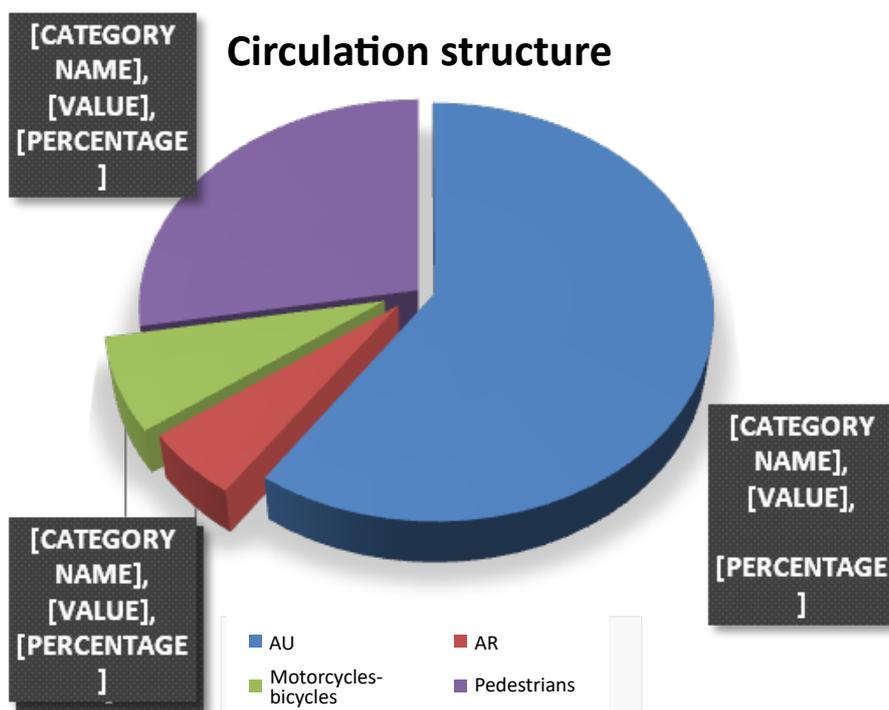


Fig. 8.

## 2.8. Road infrastructure for persons with special needs<sup>1</sup>

A constant challenge that complicates research in this field is the lack of accurate data on persons with special needs. Data related to persons with special needs are incomplete, not standardized and not disaggregated by gender, age, disability category, condition time, etc. The existing data do not allow a more detailed analyse for this category due the limited representation number in the collection of official data. Also, the lack of a standardized approach of data collection does not allow necessary information.

Although the Ministry of Environment and Spatial Planning has issued an Administrative Instruction providing technical conditions and manner of ensuring uninterrupted access, movement, residence and employment of persons with special needs, but still these conditions are not met in the Municipality of Kamenicë/Kamenica.

The lack of ramps, sidewalks height, respectively curbs near pedestrian crossing do not meet the needs of this category of people.

Seven parking lots for the people with special needs have been located in the Municipality of Kamenicë/Kamenica, while the road network mainly in pedestrian crossings does not meet the needs of this category of people.

## 3. VISION – STRATEGIC OBJECTIVES

In addition to mapping of existing situation described in the Chapter II, are identified the problems related to sustainable urban mobility, focusing on issues related to the level of safety, circulation setting, functionality and adaption of road infrastructure of participants in traffic, the Strategy, namely the vision on how will be the city of Kamenicë/Kamenica, in terms of mobility, has been drafted.

### 3.1. Vision components

In order to determine the strategic objectives for sustainable urban mobility in the Municipality of Kamenicë/Kamenica, are taken into account general principles, basic environmental protection and its components.

In accordance with visions of the existing plans (MDP and UDP), for the purposes of drafting the mobility plan, the following vision components have been considered:

- **Visions within the existing plans of city of Kamenicë/Kamenica**, that describes the city's identity,
- **Free and safe access for all participants in traffic**, such as movements to work, school, objects of particular importance, required daily services, etc.
- **Traffic safety**, where citizens must feel completely safe while moving in public spaces, streets, squares, parks, recreational areas, etc.

<sup>1</sup> The term "persons with special needs" in this plan refers to persons with disabilities as defined in Law, and other persons with special needs (e.g. parents with strollers, elderly, children, cyclists, etc).

- **Protection of environment:** development and promotion of non-motorized movements will help in reducing the level of motorization and environmental protection.
- **Citizens comfort and health**

Therefore, based on the vision components outlined above regarding the Urban Mobility Plan, the Municipality of Kamenicë/Kamenica has the following vision:

**KAMENICË/KAMENICA THE CITY OF CYCLING AND CULTURE IN TRAFFIC; attractive and sustainable city, which provides free and safe access for all participants in traffic; with clean environment and good conditions for healthy life.**

Urban mobility is a long-term vision of each municipality/city. Achieving this vision will be simply unthinkable without clearly defined objectives and measures for achieving these steps for mobility and integration of the city.

Within the vision fulfilment, five key strategic objectives have been defined for the Municipality of Kamenicë/Kamenica. Each of the strategic objectives is elaborated in the following chapter through adequate policies which will guide the drafting of mobility plan.

### **Objective 1- Improvement of traffic safety**

This strategy aims at tackling specific traffic safety issues, thus providing special measures to address them at the municipal level. Determination of technical measures to increase traffic safety and issues of concern will help the municipal level institutions in setting priorities, particularly near schools.

After identifying places around schools that are considered to be of high risk, methods for traffic calming will be used.

### **Objective 2- Development of the system for traffic arrangement and management**

Quality infrastructure in the transport sector and urban roads is also one of the important objectives for drafting the mobility plan.

Such a plan must be implemented to ensure particularly the following:

- Improvement of traffic conditions for all traffic participants,
- Reduction of the number of road accidents
- Reduction of pollution and compliance with environmental values,
- Reduction of public and private expenditures
- Adaptation of infrastructure for persons with special needs.

Upon adjusting of intersections, special attention must be paid to reducing the points of conflict, generally identified upon organizing movements in the circular surface and manoeuvres of turning. Parking lots issues and their dislocation, such as parking near the roundabout in the centre of Kamenicë/Kamenica, respectively in the vicinity of commercial buildings and in the schoolyard in Kamenicë/Kamenica will be within tackled upon traffic adjustment and management.

The road network in the Municipality of Kamenicë/Kamenica does not meet the conditions for free movement and for a better quality of life for people with special needs and their families. Throughout the planning it shall be avoided new barriers and existing barriers in construction, transport and road infrastructure, by reviewing and providing easy and safe access.

### **Objective 3 - Creating open spaces for recreation and non-motorized movement**

Walking is the oldest and most frequent form of travelling. In order for people to walk in safe, convenient, efficient and quiet manner, they need a well designed environment and infrastructure that meets their needs for free movement. A privileged place that the city of Kamenicë/Kamenica possesses is the main road, i.e. the most attractive area of the city. A part of this road, mainly during the summer, becomes a boulevard and serves as a meeting place for citizens. Therefore, provision of open spaces for pedestrian movement, is one of the objectives within this Plan.

### **Objective 4- Construction of cycling tracks**

Establishment of cycling tracks is one of the most important objectives within this Plan and aims at promoting and increasing cycling in the city of Kamenicë/Kamenica, and to functionally connect the cycling tracks with villages Berivojcë/Berivojce, Koretin and Topanicë/Topanica. This objective aims at traffic reduction, improving of air quality, reduction of parking demand and improvement of public health. This will be achieved by creating new cycling tracks, improving the safety of cycling, crossing of cycling over bridges and crossroads and the institutionalization of cycling.

### **Objective 5 - Adapting of road infrastructure to the persons with special needs**

Within this Plan, particular attention was paid to adapting of the road infrastructure to the persons with special needs, especially on the road crossings and pedestrian crossings.

## **4. URBAN MOBILITY PLAN 2016-2020**

### **4.1. Traffic safety in the vicinity of schools**

The road system in the city of Kamenicë/Kamenica has been neglected for years, and as a consequence we are facing an incomplete road system in some of the main roads leading into the city from the peripheral parts, or from villages outside the Municipality.

Traffic safety in general and the pupils` safety in schools in particular, have raised public concern and are estimated as main concern in the Municipality.

In order to improve safety near schools, physical methods of traffic control, namely physical barriers that affect traffic calming, have been provided within this Plan.

The term physical methods of traffic control, means all procedures which essentially are traffic actions and which affect the drivers behaviour. They include traffic calming on crossroads and road axis, as well as priorities for pedestrians and cyclists.

The most common measures to reduce speed and increase safety in traffic are traffic calming measures. In principle, traffic calming is a combination of a larger number of measures aimed at reducing the negative effects caused by the use of motor vehicles and leading to a change in drivers' behaviour and reducing the speed limit of traffic movement.

**Main purposes for traffic calming are:**

- Reducing speed near schools and in other significant zones;
- Creating road conditions for warning and forcing drivers to drive calmly and carefully;
- Improving and ornamenting the environment;
- Reducing the number of traffic accidents.

#### 4.1.1. The measures proposed for traffic control

Even if sometimes they seem as separate means, traffic calming and management represent different means and deal with various issues. Traffic management includes various measures to control the traffic in order to manage the movement and increase safety for pedestrians.

**Upon selecting the traffic calming measures, three basic criteria have been taken into account:**

- Road nature and function,
- Traffic conditions, and
- Additional criteria (road location, traffic flow setting, etc.

In the road network in the Municipality of Kamenicë/Kamenica, we have identified hot spots in national, regional and local roads.

In addition to road nature, adequate measures have been found to improve the safety level, particularly in the roads near schools, to do so below are the proposed recommendations:

**For regional roads:**

- Traffic calming measures, the application of the divisional islands along the road on both sides of the pedestrian crossing,
- Placing of adequate horizontal and vertical signalling, to warn on the school zone.

The proposed solution is primarily concerned with the critical areas in which there is conflict between vehicle and pedestrian traffic. Pedestrian safety is endangered due to high speed as well as due to inadequate road geometry in the point of conflict. The solution to these road sections is based on the good experiences of other countries.

### Technical solution is based on:

- Construction of the central pedestrian island on the main road on both sides of the pedestrian crossing, each with a length of 10m - 15m and a width of 1.5 to 2.0 m, while the height of the island edge  $h = 12$  cm (Fig. 9). This solution is provided for roads where the speed limit is 40-50 km/h, which corresponds to the speed limit in residential areas.

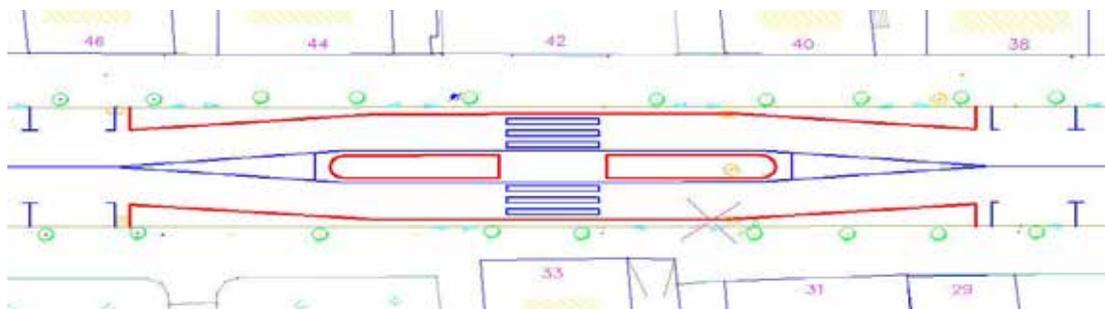


Fig. 9.

Bumps or platforms placed in roads for traffic calming are not preferred for highways and regional roads. Therefore, in case of application of traffic calming measures in the Municipality of Kamenicë/Kamenica, must be evaluated in which part of regional roads can be used the model with divisional island in pedestrians crossings. Road parts which do not meet the conditions for placing traffic island (due to the insufficient width or due to the cost), the traffic calming may be replaced by the application of rumble strips.

Rumble strips do not affect the comfort of movement due to their width (15-40 cm) and low height (5-12 mm), but warn vehicle drivers that they are approaching the area where they should increase attention level ( Fig. 10).

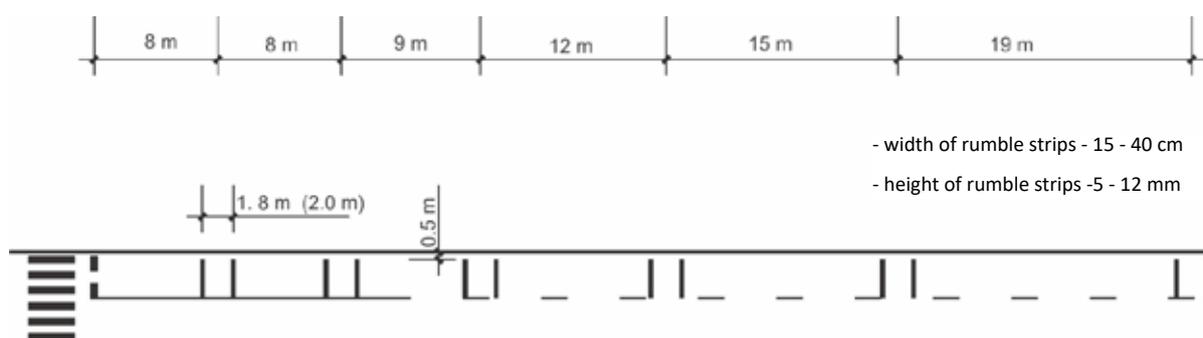


Fig. 10.

The model of placing rumble strips, as traffic calming measure, is proposed as a model for the Malësia neighbourhood (Fig. 11).

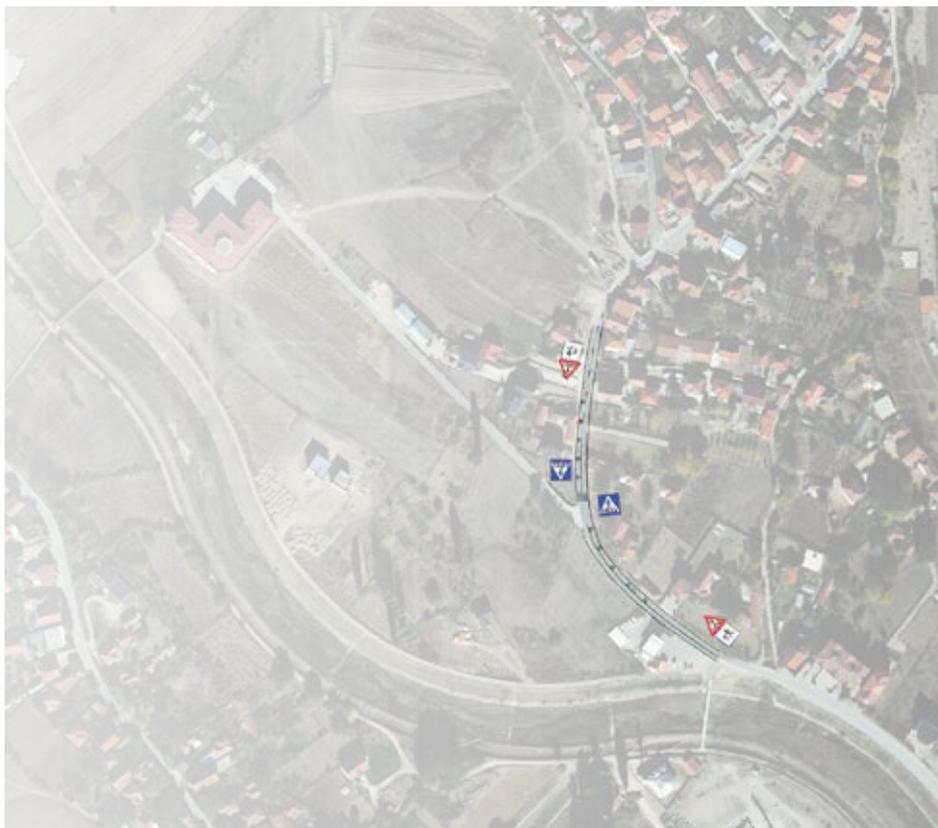


Fig. 11.

#### For local roads:

In some local roads sections with potential risk due to inadequate speed of motor vehicles, especially near school zones, physical barriers may be applied due to the geometrical elements of these roads, such as:

- Speed bumps
- Rumble strips
- Speed humps
- Circular speed bumps

Traffic calming measures are provided in ANNEX 1.

## 4.2. Traffic Signalling

From the standpoint of normal traffic operation and increased safety must be taken into account that horizontal and vertical signalling signs should be clear, precise and easily understandable for traffic participants.

Currently, the horizontal and vertical signalling in the Municipality is not homogenous, with the exception of some signalling elements in the city of Kamenicë/Kamenica.

Horizontal signalling is significantly scars and many problems are identified to the extent and maintenance. These problems are caused by poor durability of road pavement and the presence of dust caused by unpaved roads and sidewalks or poor road conditions. This situation reveals the difficulty to do the painting of horizontal signalling in a non solid and non steady foundation, since it leads to a poor visibility and longevity of horizontal signalling.

**In order to increase the horizontal signalling longevity, it is recommended:**

- the use of high quality materials and
- Timely provision of funds for maintenance for a long term period.

Vertical signalling should have a time limit of use not less than seven years. Also, vertical signals should be homogeneous, avoiding phenomena where small and large signals are installed without any special criteria, often the heights of these signals are not in accordance with the rules of installation, and there are only a few and sometimes not in very visible places.

**In order to improve vertical signalling in national and regional roads in the Municipality of Kamenicë/Kamenica, it is recommended that:**

- Traffic signs should be uniform (shape, colour, inscriptions, etc.)
- Clear visibility of the sign (which depends on the size, number and length of the inscription and the type of letters and symbols),
- When installing road direction signs, two levels of information must be used, namely the first and third level,
- If only the third level of information (road direction) is used, then the sign should be installed at the turning point.

### 4.3. Adjustment of traffic at crossroads

Upon arranging of traffic at crossroads, special attention must be paid to reducing the points of conflict, generally identified upon organization of movements in circulating surface as well as manoeuvres of turning.

Roundabouts are designed to reduce points of conflict in relation to classic intersections.

Near the roundabout in the centre of Kamenicë/Kamenica, respectively in the vicinity of commercial buildings are located parking lots. In this case, the actions of exiting the parking lot can be performed only on the circular surface of the roundabout. This action poses a potential risk for causing accidents (Fig. 12).



Slika 12.

Given that in the vicinity of commercial buildings are sufficient parking lots, customer services, including the supply, hence in order to increase the level of security in the roundabout, these parking lots must be dislocated.

The dislocation of this parking lot will enable the continuity of cycling track provided for in phase I of the construction of the cycling network (Fig. 13) as well as free and safe pedestrian movement.



Fig. 13.

During the analysis of traffic safety in crossroads, it is concluded that in entry of the intersection located in the bridge on the outskirts of the city of Kamenicë/Kamenica, existing visibility do not meet the conditions for safe movement on the occasion of the entrance and exit in this intersection.

Since there is sufficient area for improving visibility, it is proposed their improvement and traffic management with a directional Island (Fig. 14).



Fig. 14.

The yard of the elementary school in Kamenicë/Kamenica, is used for parking the vehicles of the school teaching staff. However, the situation becomes even worse in peak hours in the morning and noon, respectively before the beginning and at the end of the class, since in addition to vehicles of teachers, parents bring/take children from school in vehicles, thus creating traffic congestion and decreasing the safety level (Fig. 15).



Fig. 15.

### Version I

To close the entry to the school yard for motor vehicles, and to orient the traffic towards the bus station, and to build a bridge for school yard entering (picture 16).



Fig. 16.

### Version II

To close the entry to the school yard for motor vehicles, and to orient the traffic towards the entrance of the Municipal Assembly, a place that provides sufficient surface to meet the parking requirements (Fig. 17).



Fig. 17.

Following the analysis of two versions outlined above, it is concluded that the second version is more convenient and functional.

## 4.4. Provision of open spaces for recreation and non-motorized movement

For citizens of Kamenicë/Kamenica, free time should be understood as an after school/work activity, as a formative and regeneration moment for citizens. A privileged place under possession of the city of Kamenicë/Kamenica is its main road, i.e. the most attractive area of the city. A part of this road, mainly during the summer, becomes quiet promenade and serves as a meeting place for citizens.

Given that, the road network of the city of Kamenicë/Kamenica offers numerous alternatives to motorized traffic; it is proposed that this part of the road becomes promenade/pedestrianised (Fig. 18).



Fig. 18.

## 4.5. Sidewalks

Walking is the most universal form of travel. In order for people to walk in safe, convenient, efficient and quiet manner, they need a well designed environment and infrastructure that meets their needs for free movement.

Problems identified represent the concerns of citizens regarding the safety of pedestrian in intersections and the quality of the infrastructure established for walking.

The Mobility Plan for the city of Kamenicë/Kamenica aims to promote walking as a healthier and preferable alternative in comparison to short trips driving. The plan for promoting walking will be extended in two aspects:

- The establishment of a safe and convenient pedestrian system integrated with all other aspects of the transport system.
- Provision of facilities for pedestrian movement by giving to pedestrians the same importance as other types of transport during the distribution of shared public space.

The following are some specific recommendations for promoting walking:

- Improvement of pedestrians infrastructure, including intervention at intersections to make them safer for pedestrians
- Improving sidewalks and equipping with illumination,
- Improvement and completion of horizontal and vertical signalling on pedestrian crossings,
- Provision of a guide, maps for walking. Providing maps for places of interest to visit in the entire Municipality of Kamenicë/Kamenica,
- Organization of special days. This includes organizing the “Vehicle-free day” or organizing massive marches on foot to raise funds on assisting the community, or on issues affecting public opinion.

## 4.6. Establishment of cycling tracks

The purpose of the plan to increase number of cyclist in the city, aims to reduce traffic, enhance air quality, reduce the demand for parking spaces and improving public health. This will be achieved by creating new cycling track, improving the safety of cycling, bicycle crossing over bridges and intersections as well as institutionalization of cycling.

A significant part of the citizens of Kamenicë/Kamenica move regularly with ecological means of transport such as walking on foot and bicycles.

**Therefore, in order to promote and enhance this kind of movement, it is recommended:**

- Improvement interventions in the road network considering creating paths for cyclist and ensuring not only their expansion, but also their continuation.
- Establishment of parking lots for bicycles near the main axes of cycling tracks, and near facilities of special importance, ensuring the use of certain types of transport. People can leave bicycles at the relevant bicycle rack and use other forms of travelling to longer distances.
- Development of programmes to educate children and young people to use bicycles as a healthy and entertaining travelling mode.
- Strengthening the law enforcements to ensure cyclist move in designated cycling track and to avoid the bicycles theft in their bicycle rack.
- Establishment of cycling tracks to the park and within the new parks that will be used around the city of Kamenicë/Kamenica such as river zone, city park etc.

Establishment of new cycling tracks is planned to take place during the phase III (Fig. 19).



Fig. 19.

## PHASE I

The main road passing through the city centre of Kamenicë/Kamenica, is physically separated from sidewalks on both sides of the road. Such a state goes from the city centre to the crossroad in Berivojcë/Berivojce. The cycling track construction would provide the city with a significant cycling traffic. Cycling track along this road can be constructed easily and without any significant economic impact, using the significant width of sidewalk on one side, while on the other side with possibility of expanding it about 1m, aiming at free and unhindered movement between pedestrians and cyclists. These tracks will fulfil the safety criteria for cyclists and pedestrians.

First phase of construction of this track is proposed from the city centre to the crossroad in Berivojcë/Berivojce. In this road section there is a physical separation and significant width for pedestrians and cyclists movement.

Two-way track can be used for a significant section of this segment, starting from the crossroad of the Berivojcë/Berivojce village towards the entrance of city, respectively near the school (Fig. 20). This section of sidewalk can be used for shared use by pedestrians and cyclists, because the pedestrian frequency in this section is lower.



Fig. 20.

## PHASE II

In second phase, is provided the construction of a new network for cyclist, which will be a continuation of the track from first phase, from crossroad of the Berivojcë/Berivojce village towards the exit of Koretin village.

Also in this road section, there is a sidewalk separated from traffic road, but there should be provided additional conditions to increase the safety of non-motorized movements.

## PHASE III

In third phase also, is provided the construction of a new network for cyclist, which will be a continuation of the path from previous phases, respectively from Koretin village to the Topanica village. The section of road whereby is provided the construction of the path during the third phase is a highway road, therefore, in order to create conditions for safe movement, it is necessary to physically divide the cyclist track from the part of the road intended for motorized traffic.

### Parking places for bicycles

The provision of bicycle parking is a key element in the overall efforts to help the use of bicycles in the city. Due to inadequate parking conditions, people are discouraged from cycling. Therefore, shall be provided easy bicycle's parking on both sides of the road as well as protection from theft and damages. In practice, there are two main modes of parking, short-term and long-term. Long-term bicycle parking provides a higher level of security and protection from inclement weather. This mode of parking is provided for situations when the bicycle is left unattended for extended periods of time, as in apartments or residential complexes, schools, working places etc. A Short-term mode provides the opportunity of locking the bicycle frame and both wheels, but does not provide security or protection from weather. They are temporary parking, where bicycle shall be left for a short period of time.

Depending on the requirements for bicycle parking, the most common and practical form is the inverted "U" form of bike rack. The height of this bike rack shall be between 0.7-0.8 m (Fig. 21).



Fig. 21.

Other form of bicycle parking consists of metal frames, providing space for 8-10 bicycles to be parked, by placing 3-4 parking together, achieving a number up to 40 bicycles. Dimensions of parking can be:

- 165 x 50 cm
- 170 x 50 cm and
- 200 x 100 cm

Parking structures may be rectangular or circular as follows (Fig. 22).

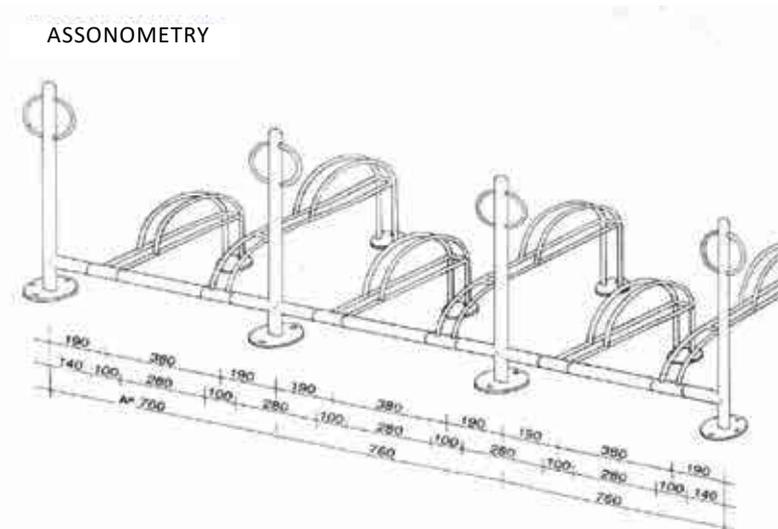


Fig. 22.

#### **Bike racks shall be designed as follows:**

- to provide high security accommodation of bicycle,
- do not bend wheels or cause damages to other bicycles,
- do not impede or interfere in pedestrian moving,
- may easily access on road and be protected from motor vehicles,
- to be visible from pedestrians in order to provide a security and increased use,
- to be covered in cases when user will leave the bike there for a long period of time,

In order to meet the requirements for bicycles parking, it is estimated that during the first phase, is primarily necessary to cover the most attractive area of the city of Kamenicë/Kamenica, in which area are the most important facilities for various daily services (Fig. 23).



Fig. 23.

### Public bicycles stations

Public bicycle stations shall provide a number of tangible benefits for the city of Kamenicë/Kamenica. The planning of public bicycle stations will promote a positive and green image for the city of Kamenicë/Kamenica, which would result in increasing the number of bicycle users and a sustainable business climate.

Although, at this phase it is very difficult to be implemented a program of public bicycle stations, this could help the city of Kamenicë/Kamenica to be recognised as a model city of green practices, stimulating benefits in quality of life in general. The programs of public bicycles across the world had a very positive benefit, because it does not require users to own a bike and in this case promoting the use of bicycle from people who are not regular users.

Therefore, after completion of the first phase of cycling tracks, when considered that advantage of cycling and completion of the primary network, shall be planned the placement of three public bicycle stations near the main road which goes through the city centre. If showed effective, then the number of public bicycle station can be increased.

## 4.7. Collective transport –setting of bus stops

Collective transport in the Municipality of Kamenicë/Kamenica includes buses, taxi services and informal system of vans. After analyzing the situation, it was concluded that in the Municipality of Kamenicë/Kamenica there are several private transport companies, which cover the entire territory of Kamenicë/Kamenica. Private transportation operators, observe the designated lines by observing also the schedule which is published in advance. Whereas, bus stops are not set and often their uncontrolled stop impacts on traffic and reduce the safety level to all traffic participants. Therefore, in order to meet the requirements for bus stops, it is recommended the placement of bus stops along the main road from crossroad in Berivojcë/Berivojce village, to the exit of the city of Kamenicë/Kamenica, near the bridge, and on the road which leading to Strezoc/Strezovce (Fig. 24).

Due to restrictions, are recommended bus stops along the longitudinal movement lane, equipped with appropriate signs and in compliance with technical criteria for bus stops.

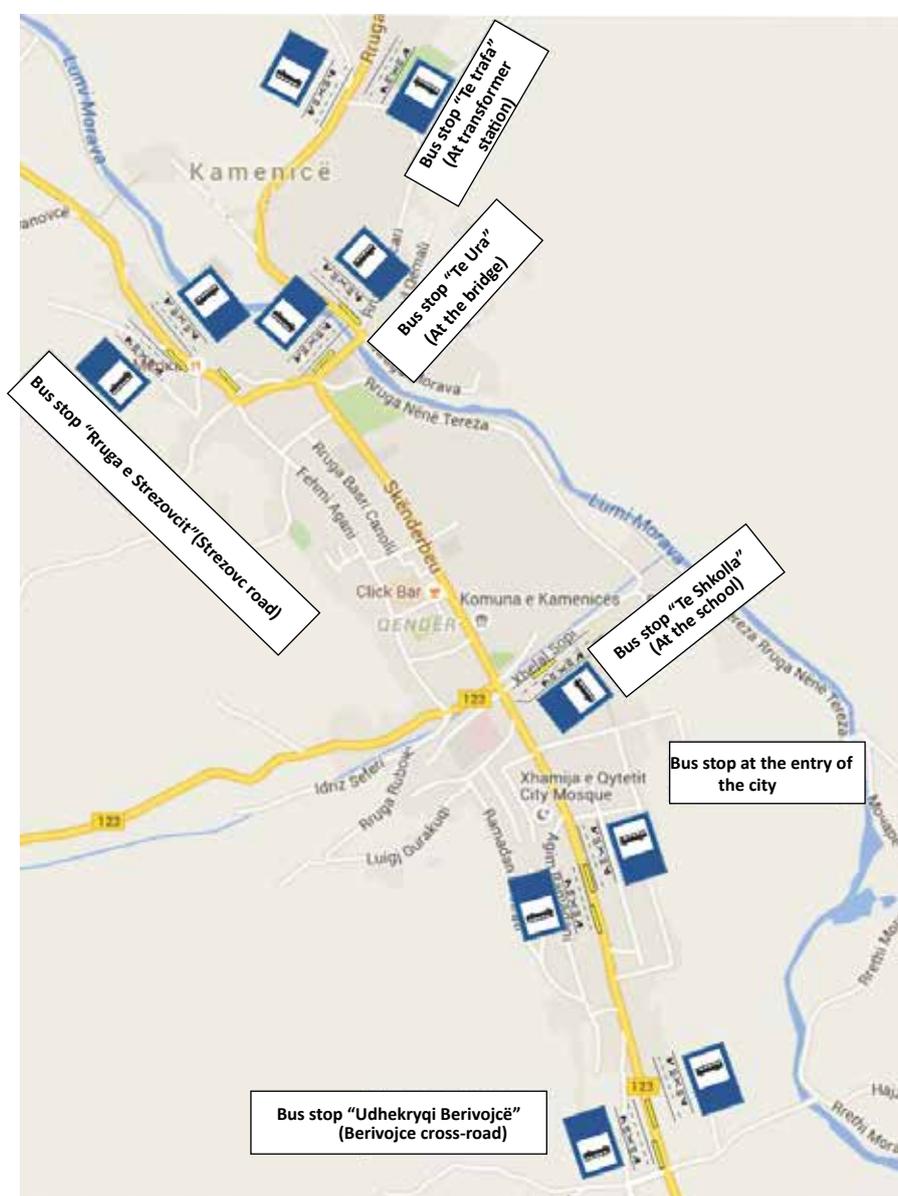


Fig. 24.

## 4.8. Adaptation of the road infrastructure for persons with special needs

According to Law no. 04/L-110 on Construction (LC), municipalities are responsible for implementing laws and Administrative Instructions concerning infrastructure adjustment for people with special needs. They are also responsible for development of NOP (National Operational Plan) for implementing NSRPD (National Strategy on the Rights of Persons with Disabilities), which will be approved by the Municipal Assembly.

According to action plan for implementing national strategy for people with special needs, municipalities should undertake certain activities related to the fifth objective of the strategy.

Department of Urban Planning is responsible for issuing the construction permit, as well as verifying whether constructed facilities meet the conditions foreseen in applicable laws and regulations confirming this through the issuance of occupancy certificate.

Within this plan, attention has been focused more on the adaptation of road infrastructure for persons with special needs, specifically road crossings and pedestrian crossings.

**In order to adapt road infrastructure for persons with special needs, are recommended the following measures:**

- Optimum difference in elevation between the road level and the ground level or reserved spaces next to them should be 2.5 cm,
- Pedestrian island should enable fulfilment of these conditions:
- In case pedestrian island is located at road level or their level at the crossing, it shall be of same level as road level, then the relief warning line is marked 15 cm from the beginning and 15 cm by the end, with normal engraving toward the movement, with width not less than 40 cm (Fig. 25).

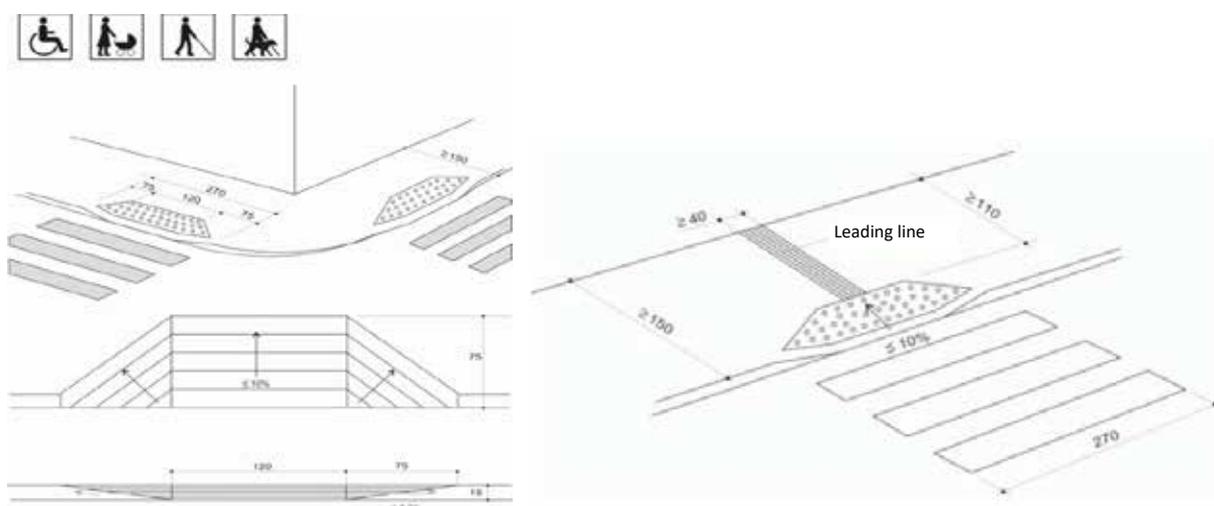


Fig. 25.

Parking lots should be placed at a minimum 1 parking lot for persons with disabilities in every 50 parking lots for vehicles, with width not less than 320 cm reserved for free for vehicles of people with special needs. Size of the parking lot for vehicles parked in angled position or parallel to sidewalk should be 370 x 500cm. If the parking lot is for two vehicles, then its size should be 500 x 590cm with 150 cm distance between them. Exiting from parking lot and entering into pedestrian sidewalks is performed with a 10% ramp and 120 cm width cm (Fig. 26).

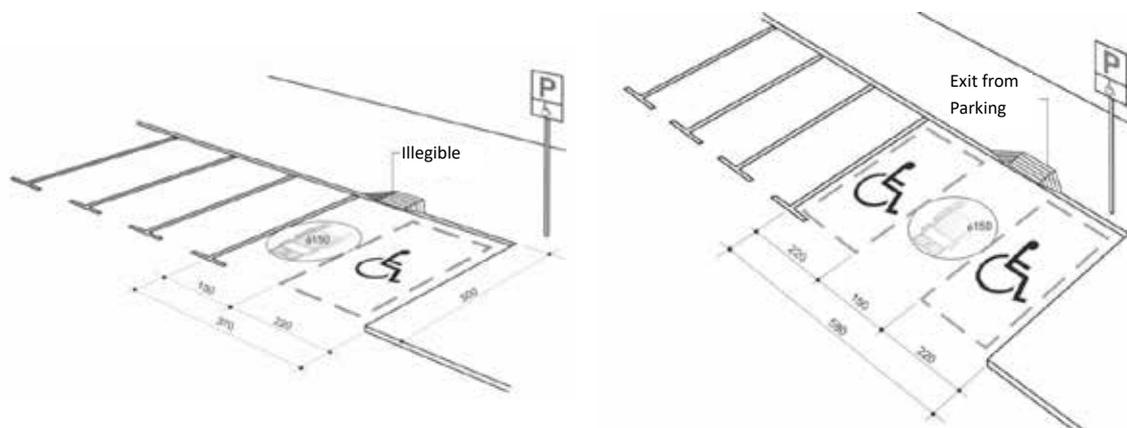


Fig. 26.

**Regarding infrastructure adaptation for people with special needs, for municipality of Kamenicë/Kamenica is recommended as follows:**

- Appropriate measures in accordance with technical criteria mentioned above should be taken in all road crossings and in pedestrian crossings in order to enable access for people with special needs.

## 5. FINANCIAL PLAN 2016-2020

### 5.1. Introduction

This financial plan analyzes 2016- 2020 municipal budget capacities, according to main short-term and medium-term municipal documents (municipal budget for 2016 and the Medium Term Budgetary Framework 2016-2018), as well as future municipal financial trends. The plan also provides necessary calculations regarding necessary budget for planned investments maintenance 2016-2020, as well as so far investments in the field of mobility.

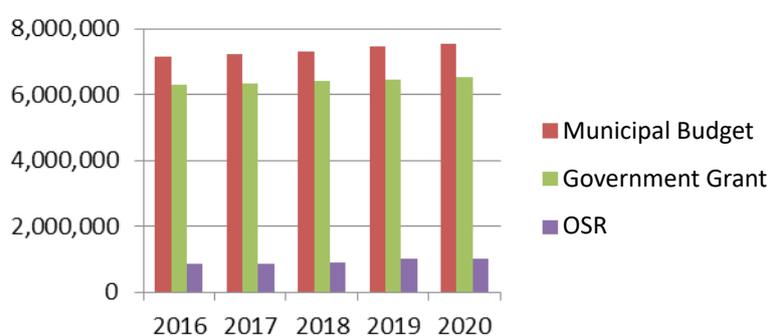
Proposals for investment in the field of mobility are based on municipal priorities in the period 2016-2020, as well as in municipal budget capacities considering budgetary trends; the trend of governmental grant and the trend of own-source revenues (OSR). In financing proposed projects, the possibility of funding from foreign donors through co-financing together with the municipality was considered as well.

However, in order to fully implement this plan, municipality is responsible to include investments and maintenance proposals in the field of mobility in the budget planning for the coming years.

## 5.2. Municipal budget capacities

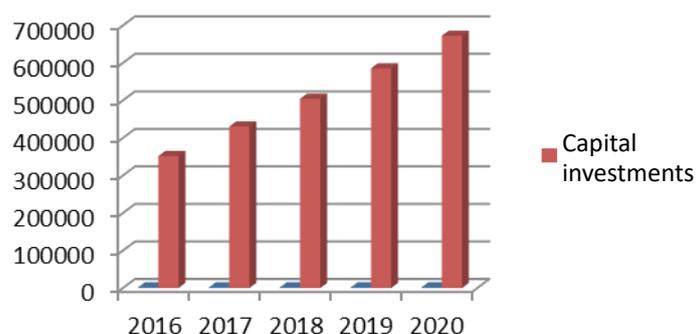
The budget of the Municipality of Kamenicë/Kamenica, based on Mid-Term Budgetary Framework for 2016- 2018, is as follows:

Year	Municipal budget	Government Grant	OSR
<b>2016</b>	<b>7.141.901</b>	6.291.901	850.000
<b>2017</b>	<b>7.220.810</b>	6.345.810	875.000
<b>2018</b>	<b>7.294.959</b>	6.409.959	885.000
<b>2019</b>	<b>7.469.020</b>	6.463.520	1.005.500
<b>2020</b>	<b>7.549.214</b>	6.523.654	1.025.560



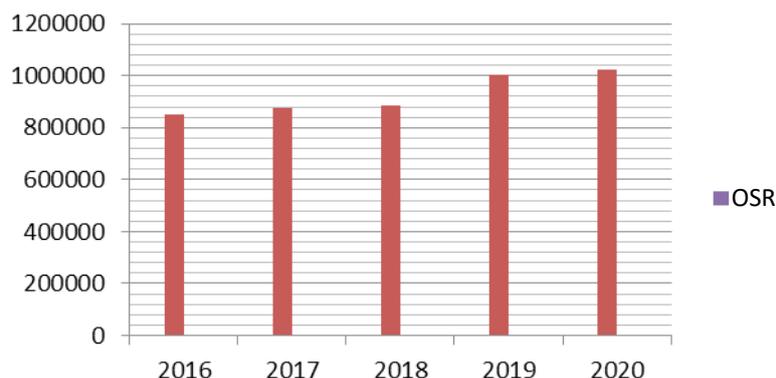
In order to implement projects proposed in this Plan, it is important for municipality to have sufficient budget dedicated to capital investments. Municipal plans for capital investments for 2016- 2020 are as follows:

Year	Capital Investments
<b>2016</b>	<b>351.606,00</b>
<b>2017</b>	<b>430.515,00</b>
<b>2018</b>	<b>504.664,00</b>
<b>2019</b>	<b>585.365,00</b>
<b>2020</b>	<b>672.352,00</b>



Capital investments growth trend in municipality is related to the Own-Source Revenues growth trend, which will also increase in the period 2016- 2020, as seen in the table and the graph below.

Year	January	February	March	April	Maj	June	July	August	Sep.	October	Nov.	Dec.	Total
<b>2016</b>	58.000	57.500	59.650	62.300	68.000	73.500	77.000	82.400	81.250	80.500	77.600	72.300	850.000
<b>2017</b>													875.000
<b>2018</b>													885.000
<b>2019</b>													1.005.500
<b>2020</b>													1.025.560
<b>TOT.</b>													<b>4.641.060</b>



### 5.3. Investments

As mentioned above, proposals for investments in mobility for the period 2016- 2020 are made according to medium-term priorities of the Municipality and its budgetary capacities. Amounts of proposed investments are provided according to the pre-measures and approximate preliminary calculations, which may be subject of change if a more approximate calculation will be realized.

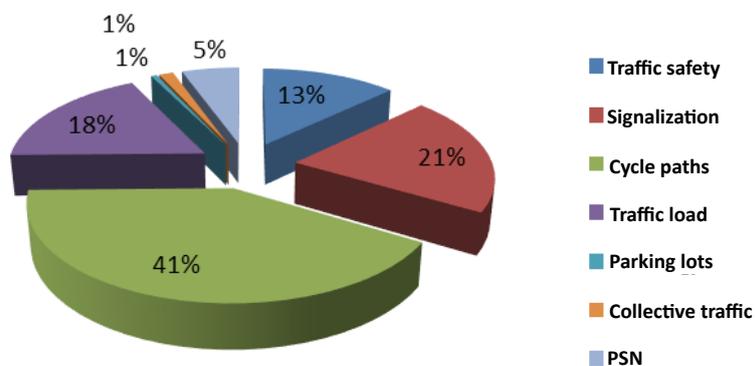
In the period 2016- 2020 are foreseen a total of 13 projects, measures or interventions are foreseen in total value € 364,000.00. Investment proposals are given in the table below:

No.	Project-Description	Category	Starting date	Completion date	Investment Duration (in days)	Priority	Financing Sources	Investments Year	Investment Value	%
1	Traffic calming near schools	Traffic Safety	01.04.2016	31.06.2016	90	Traffic Safety	OSR / Government grant	2016	7,000	1.92%
2	Dislocation of parking lots	Parking Lots	01.04.2016	31.05.2016	60	Parking Lots	OSR	2016	2,000	0.55%
3	Redesigning the intersection near the bridge	Traffic load	01.05.2016	15.07.2016	75	Traffic load	OSR	2016	5,000	1.37%
4	First phase of cycling track	Cycling track	01.04.2016	30.05.2016	60	Cycling track	OSR	2016	40,000	10.99%
5	Horizontal and vertical signalling	Signalling	01.06.2016	15.08.2016	75	Signalling	OSR	Each Year	75,000	20.60%

6	Free areas for non-motorized movements and recreation	Cycling track	01.03.2016	15.04.2016	45	Low	OSR	2016	-	0.00%
7	Road infrastructure for persons with special needs	Mobility for People with Special Needs	01.04.2017	15.05.2017	45	High	OSR	2017	20,000	5.49%
8	Closing the school yard for motor vehicles and construction of the bridge	Traffic Safety	01.03.2017	30.05.2017	90	Medium	OSR	2017	40,000	10.99%
9	Stations - bus stops	Collective Traffic	01.06.2016	31.07.2016	61	Low	OSR	2017	5,000	1.37%
10	Second phase of cycling track	Cycling track	01.04.2018	30.05.2018	60	Low	OSR	2018	40,000	10.99%
11	Parking lots for bicycles	Cycling track	01.03.2018	30.04.2018	60	Low	OSR	2018	10,000	2.75%
12	Third phase of Cycling track	Cycling track	01.04.2019	15.06.2019	75	Low	OSR / Government grant	2019	60,000	16.48%
13	Public bicycles	Traffic load	01.03.2020	30.06.2020	120	Low	OSR / PPP	2020	60,000	16.48%
									364,000	100.00%

Based on mobility categories, these investments are as follows.

Category	2016	2017	2018	2019	2020	Investment value	%
Traffic Safety	7,000	40,000	-	-	-	47,000	13%
Signalling	15,000	15,000	15,000	15,000	15,000	75,000	21%
Cycling tracks	40,000	-	50,000	60,000	-	150,000	41%
Traffic load	5,000	-	-	-	60,000	65,000	18%
Parking lots	2,000	-	-	-	-	2,000	1%
Collective traffic	-	5,000	-	-	-	5,000	1%
Mobility for People with Special Needs	-	20,000	-	-	-	20,000	5%
<b>TOTAL</b>	<b>69,000</b>	<b>80,000</b>	<b>65,000</b>	<b>75,000</b>	<b>75,000</b>	<b>364,000</b>	<b>100%</b>



Upon implementation of proposed projects, municipality can be based on the following funding sources: own-source revenues (OSR), governmental grants, co-financing with donors and through Public-Private Partnership (PPP).

**Co-financing way of proposed projects is given as follows:**

Financing	2016	2017	2018	2019	2020	Total	%
Own Source Revenues	62.000	80.000	65.000	15.000	15.000	237.000	65,11%
Government grants	7.000	0	0	60.000	0	67.000	18,41%
Combined	0	0	-	-	60.000	60.000	16,48%
<b>Total</b>	<b>69,000</b>	<b>80,000</b>	<b>65.000</b>	<b>75.000</b>	<b>75.000</b>	<b>364.000</b>	<b>100%</b>

The cash flow planning, which is required for the implementation of proposed projects, is also provided as an Annex to this Mobility Plan.

## 5.4. Maintenance

It is of a special importance that municipality to also do the appropriate budget planning concerning maintenance not only of proposed projects but also previous investments made in the field of mobility. As a result of the non appropriate budget planning necessary for maintenance, many previous investments of the municipality are being destroyed. In order to achieve this, the municipality must undertake an asset inventorying in the field of mobility and must have an accurate digitized database regarding the previous investments in mobility.

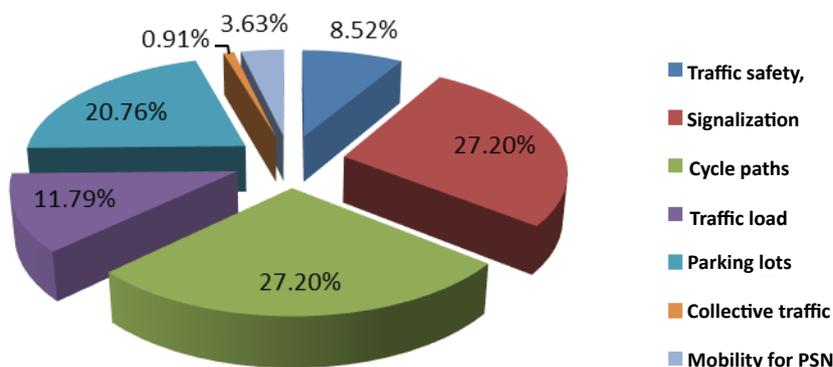
As a result of not having the asset inventory and an earlier appropriate budgeting for maintenance in the field of mobility, in the case of calculating the maintenance budget needed is used the annual depreciation rate and the price per unit based on findings in other Municipalities. Annual maintenance rate for different categories of mobility are shown below:

Categories	Annual depreciation (%) / Price per unit	Value of Investment €	Total Annual Value €
Traffic safety	10%	47,000	4,700
Signalling	20%	75,000	15,000
Cycling tracks	10%	150,000	15,000
Traffic load	10%	65,000	6,500
Parking lots <sup>2</sup>	1.02 €	2,000	11,447
Collective traffic	10%	5,000	500
Mobility for People with Special Needs	10%	20,000	2,000
<b>TOTAL</b>		<b>364,000.00</b>	<b>55,147.00</b>

<sup>2</sup> Category of parking lots, other than planned maintenance investment (2,000€), includes the maintenance of all identified public parking lots in the municipality in the area of 11.223m<sup>2</sup>.

Considering the above assumptions, the summary table of annual maintenance through categories is as follows:

Maintenance division into categories	Unit	Current amount	Investments / Units	total units	Investment value of Euro	Annual depreciation (%) / Price per unit	Annual Total Value Euro	The value per Unit	% Euro
Signalization	piece	0	2	2	47,000	10%	4,700	2,350	8.52%
Cycle paths	piece	NA	250	250	75,000	20%	15,000	60	27.20%
Traffic load	m	0	15,000	1,500	150,000	10%	15,000	10	27.20%
Parking lots	cope	NA	2	2	65,000	10%	6,500	3,250	11.79%
Collective traffic	m <sup>2</sup>	11,223	500	11,723	2,000	1.02 €	11,447	0.98	20.76%
Mobility for People with Special Needs	m <sup>2</sup>	NA	1	1	5,000	10%	500	500	0.91%
Mobilnost za OOS	m <sup>2</sup>	0	10	10	20,000	10%	2,000	200	3.63%
<b>Total</b>					<b>364,000</b>		<b>55,147</b>		<b>100.00%</b>



Annual maintenance budget in relation to the planned investments over the years is indicated below:

Category	2016		2017		2018		2019		2020		TOTAL	
	Investment Amount	Maintenance Amount	Investment value	Maintenance value								
Traffic safety	7.000	700	40.000	4.000	-	-	-	-	-	-	<b>47.000</b>	<b>4.700</b>
Signalization	15.000	3.000	15.000	3.000	15.000	3.000	15.000	3.000	15.000	3.000	<b>75.000</b>	<b>15.000</b>
Cycle paths	40.000	4.000	-	-	50.000	5.000	60.000	6.000	-	-	<b>150.000</b>	<b>15.000</b>
Traffic load	5.000	500	-	-	-	-	-	-	60.000	6.000	<b>65.000</b>	<b>6.500</b>
Parking lots	2.000	200	-	-	-	-	-	-	-	-	<b>2.000</b>	<b>11.447</b>
Collective traffic	-	-	5.000	500	-	-	-	-	-	-	<b>5.000</b>	<b>500</b>
Mobility for People with Special Needs	-	-	20.000	2.000	-	-	-	-	-	-	<b>20.000</b>	<b>2.000</b>
<b>TOTAL</b>	<b>69.000</b>	<b>8.400</b>	<b>80.000</b>	<b>9.500</b>	<b>65.000</b>	<b>8.000</b>	<b>75.000</b>	<b>9.000</b>	<b>75.000</b>	<b>9.000</b>	<b>364.000</b>	<b>55.147</b>

While below it is also provided the general budget regarding general maintenance in the field of mobility for the period 2016- 2020

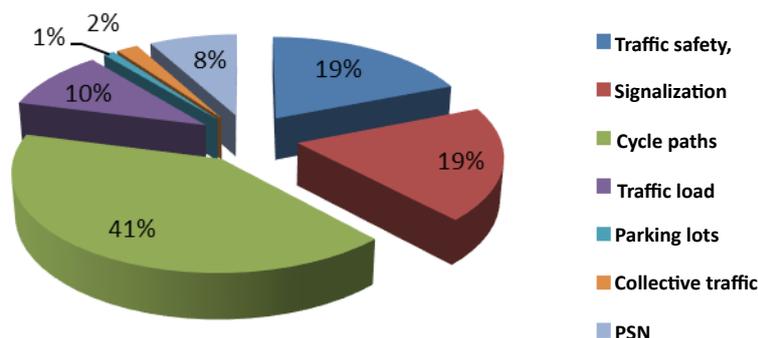
Category	Project-Description	Investment Year	Investment value	Annual maintenance	Maintenance Budget					TOTAL
					2016	2017	2018	2019	2020	
Traffic safety	Traffic calming near schools	2016	7.000	700		700	700	700	700	2.800
	Closing the school yard for motor vehicles and construction of the bridge	2017	40.000	4.000			4.000	4.000	4.000	12.000
Signalization	Horizontal and vertical signalling	every year	75.000	3.000	3.000	3.000	3.000	3.000	3.000	15.000
Cycle paths	First phase of cycling tracks	2016	40.000	4.000		4.000	4.000	4.000	4.000	16.000
	Free areas for non-motorized movements and recreation	2016	-	-	-	-	-	-	-	
	Second phase of cycling tracks	2018	40.000	4.000				4.000	4.000	8.000
	Bicycle Parking	2018	10.000	1.000				1.000	1.000	2.000
	Third phase of cycling tracks	2019	60.000	6.000					6.000	6.000
Traffic load	Redesigning the intersection near the bridge	2016	5.000	500		500	500	500	500	2.000
	Public bicycles	2020	60.000	6.000					6.000	6.000
Parking lots	Dislocation of parking lots	2016	2.000	200		200	200	200	200	800
Collective Traffic	Stations - bus stops	2017	5.000	500			500	500	500	1.500
Mobility for People with Special Needs	Road infrastructure for persons with special needs	2017	20.000	2.000			2.000	2.000	2.000	6.000
										78.100

As shown in the table, the total budget for maintenance in the field of mobility for the years 2016-2020 is €78.100. Below is also given detailed allocation in categories of mobility and also through the years so that municipality make the necessary annual maintenance budget plans.

Below is provided the budget by years and by category:

Year	Traffic Safety	Signalling	Cycling track	Traffic Load	Parking lots	Collective traffic	Mobility for People with Special Needs	TOTAL	%
2016	0	3.000	0	0	0	0	0	3.000	4 %
2017	700	3.000	4.000	500	200	0	0	8.400	11 %
2018	4.700	3.000	4.000	500	200	500	2.000	14.900	19 %
2019	4.700	3.000	9.000	500	200	500	2.000	19.900	25 %
2020	4.700	3.000	15.000	6.500	200	500	2.000	31.900	41 %
<b>TOTAL</b>	<b>14.800</b>	<b>15.000</b>	<b>32.000</b>	<b>8.000</b>	<b>800</b>	<b>1.500</b>	<b>6.000</b>	<b>78.100</b>	<b>100 %</b>
	<b>19 %</b>	<b>19 %</b>	<b>41 %</b>	<b>10 %</b>	<b>1 %</b>	<b>2 %</b>	<b>8 %</b>	<b>100 %</b>	

Allocation of 2016- 2020 maintenance budget by categories is as follows



Allocation of 2016- 2020 maintenance budget by years is as follows:

## 6. ACTION PLAN OF THE MUNICIPALITY OF KAMENICĚ/KAMENICA

Action plans are written plans by which are directed specific activities, while actions are focused toward certain initiatives. The main goal of the action plan is to make a concrete vision for a specific planning and to affect the implementation of certain goals.

In the framework of the urban mobility plan are included main services that are competences of the Municipality, such as safety near schools, regulation of traffic, transportation, recreational activities, and movements of non-motorized, and free and safe access for all participants in traffic.

The challenge is to find ways to promote and preserve the culture of walking, bicycle driving, free and safe access for all participants in traffic and to transfer the appropriate innovative practices in service of mobility in the Municipality of Kamenicě/Kamenica.

### Action 1: Appointment of a urban mobility officer

It is necessary to appoint an official for urban mobility within the Department for Public Services, who shall be tasked to prepare a programme for urban mobility management that includes more information, awareness campaigns, promotion, marketing, coordination and organization.

### Action 2: Increasing traffic safety - safety first

Education on traffic rules and safe movement in traffic. Department for Public Services together with Department of Education and Police should prepare the necessary material and organize lectures on traffic education in municipality of Kamenicě/Kamenica. Lectures should be held mainly by professionals of the field and should be organized in primary and secondary schools.

### Action 3: Promotion of non-motorized movement

Organize awareness campaigns and promotion of non-motorized movement. Media promotion at local level (local TV, electronic media, etc). Use certain events to promote non-motorized movement, such as European Mobility Week (16 to 22 September), a vehicle-free day, etc. In many countries during this week, thousands of activities will be held to promote non-motorized movement. It is necessary to establish partnerships between municipality and schools (possibly with involvement of any NGO) for drafting of appropriate policies and promoting of non-motorized movement.

### Action 4: Adaptation of the infrastructure for people with special needs

Department of Public Services in collaboration with Department of Urban Planning and in partnership with organizations of people with special needs, in all road crossings and pedestrian crossings must take appropriate measures in accordance with technical requirements, so that pedestrian crossings enable access to people with special needs.

No	Measures	Purpose	Indicators	Responsible Institution	Importance of Measures (1-3) <sup>3</sup>	Expenditures	Deadlines
1	Traffic calming near schools	Purpose of these measures is to calm traffic near schools in the Municipality of Kamenicë/Kamenica	Number of schools close to which are applied traffic calming measures	Municipality of Kamenicë/Kamenica / Ministry of Infrastructure	1	7.000 €	2016
2	Dislocation of parking lots	Purpose of these measures is the removal of parking lots in front of commercial buildings close to roundabout in the city centre.	State of dislocated parking lots	Municipality of Kamenicë/Kamenica	1	2.000 €	2016
3	Redesigning the intersection near the bridge	Improving the range of circle	Intersection's state after redesigning	Municipality of Kamenicë/Kamenica	1	5.000 €	2016
	First phase of cycling tracks	Provision of cycling tracks	Kilometres realized in the first phase	Municipality of Kamenicë/Kamenica	3	40.000 €	2016
4	Horizontal and vertical signalization	Placement, improvement and maintenance of road signals	Number of signs placed and the length / surface of the horizontal signalization	Municipality of Kamenicë/Kamenica	1	15.000 €	All years
5	Free areas for non-motorized movements and recreation	Creating open spaces for recreation and non-motorized movement in the main street "Skenderbeu"	State after implementation	Municipality of Kamenicë/Kamenica	3	/	2016

3 Importance of measures: 1. urgent, 2 - medium, 3 low

6	Road infrastructure for persons with special needs	Adaptation of road infrastructure for persons with special needs	Road infrastructure state after completion	Municipality of Kamenicë/ Kamenica	1	20.000 €	2017
7	Closing the school yard for motor vehicles and construction of the bridge	Increasing safety for pupils at the school entrance and entry of vehicles in the school yard through bridge	Construction of the bridge and closing the entrance of the school for motor vehicles	Municipality of Kamenicë/ Kamenica	2	40.000 €	2017
8	Stations - bus stops	Placing stations for bus stops	Number of realized stations - bus stops	Municipality of Kamenicë/ Kamenica	3	10.000 €	2017
9	Horizontal and vertical signalization	Placement, improvement and maintenance of road signals	Number of signs placed and the length / surface of the horizontal signalization	Municipality of Kamenicë/ Kamenica	1	15.000 €	All years
10	Second phase of cycle paths	Creating cycle paths	Kilometres realized in the second phase	Municipality of Kamenicë/ Kamenica	3	40.000 €	2018
11	Horizontal and vertical signalling	Placement, improvement and maintenance of road signals	Number of signs placed and the length / surface of the horizontal signalization	Municipality of Kamenicë/ Kamenica	1	15.000 €	All years
12	Third phase of cycling tracks	Creating cycle paths	Kilometres realized in the second phase	Municipality of Kamenicë/ Kamenica / Ministry of Infrastructure	3	60.000 €	2019
13	Horizontal and vertical signalling	Placement, improvement and maintenance of road signals	Number of signs placed and the length / surface of the horizontal signalization	Municipality of Kamenicë/ Kamenica	1	15.000 €	All years
14	Public bicycles	Placing public bicycle stations	Number of stations	Municipality of Kamenicë/ Kamenica / PPP	3	60.000 €	2020
15	Horizontal and vertical signalization	Placement, improvement and maintenance of road signals	Number of signs placed and the length / surface of the horizontal signalization	Municipality of Kamenicë/ Kamenica	1	15.000 €	All years

## 7. MONITORING PLAN

The monitoring plan is a document through which is monitored the implementation of the proposed measures within Urban Mobility Plan. The Municipal Assembly, namely the Department of Public Services of municipality of Kamenicë/Kamenica, shall be responsible for monitoring the mobility plan implementation.

Since the Urban Mobility Plan in the municipality of Kamenicë/Kamenica is a strategic document and its implementation depends on the adoption and implementation dynamics of other plans at the municipal level (MDP and UDP), and given the fact that Urban Mobility Plans are new documents which so far have not been designed or implemented in the municipalities of Kosovo, therefore, the monitoring and implementation of this plan requires support not only from other departments at the municipal level but also at central level.

Upon approval of the Urban Mobility Plan, the Department of Public Services, respectively its officials responsible for monitoring urban mobility, at least twice a year (every six months) reports to the Department of Public Services and to the Municipal Assembly on the implementation of measures provided for a certain period. The monitoring plan covers a 5 year period same as the lifespan of the Urban Mobility Plan.

Forms for monitoring urban mobility plan for municipality of Kamenicë/Kamenica, according to the action plan by years, are given in ANNEX 1.

## ANNEX 1

Usually before the first speed bump of the series of speed bumps, there is a sign for slowing down or a street sign. According to the rules, these artificial elements are set throughout the half or entire stretch of the road track.

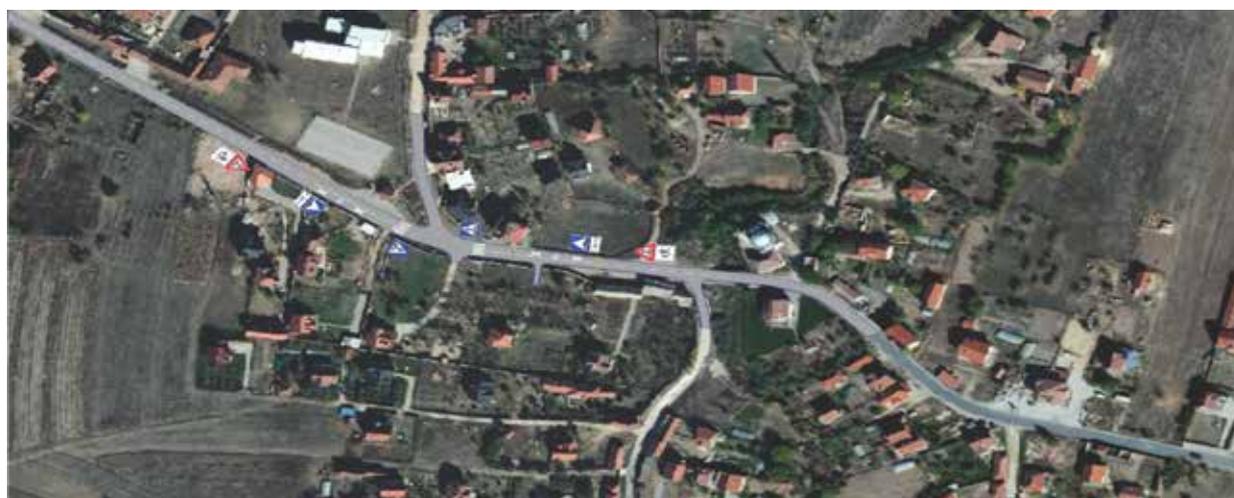
If they are placed in a row, the distance between them can vary from 20 to 60 m, depending on the situation.

Depending on the speed limit, the same are with dimensions as follows:

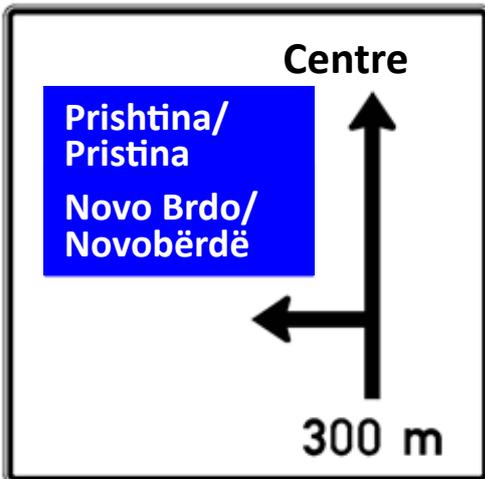
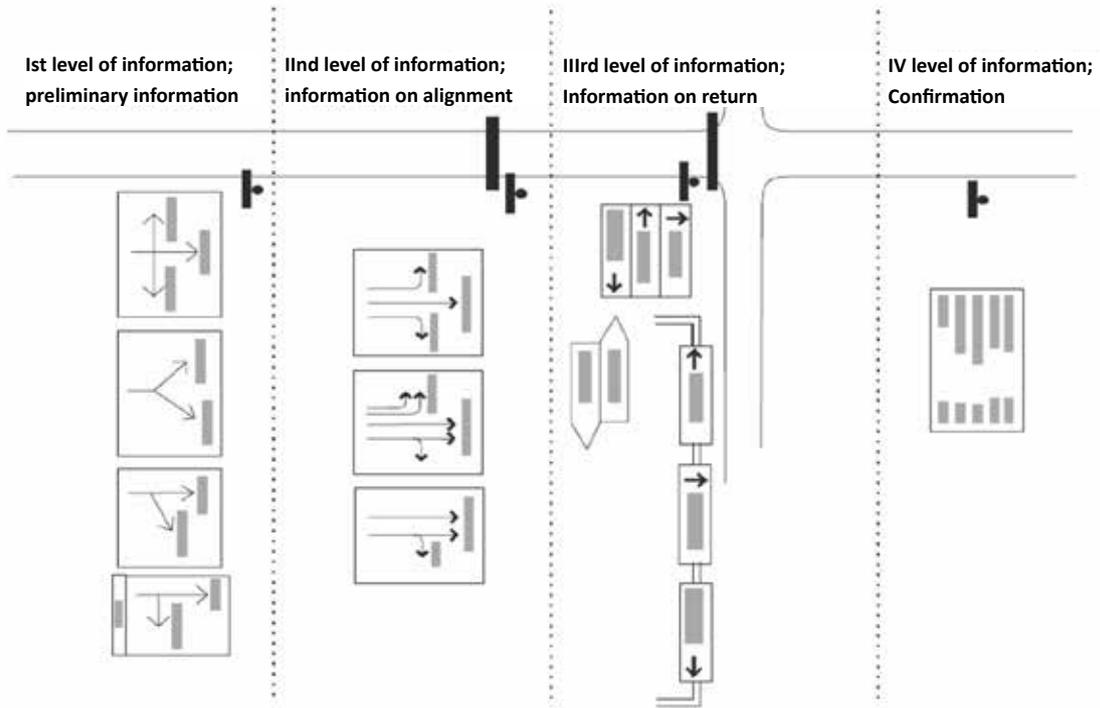
- Up to 50 km/h, their width must not be less than 60 cm, whereas the height must not be more than 3 cm;
- Up to 40 km/h, their width must not be less than 90 cm, whereas the height must not exceed to 5 cm and



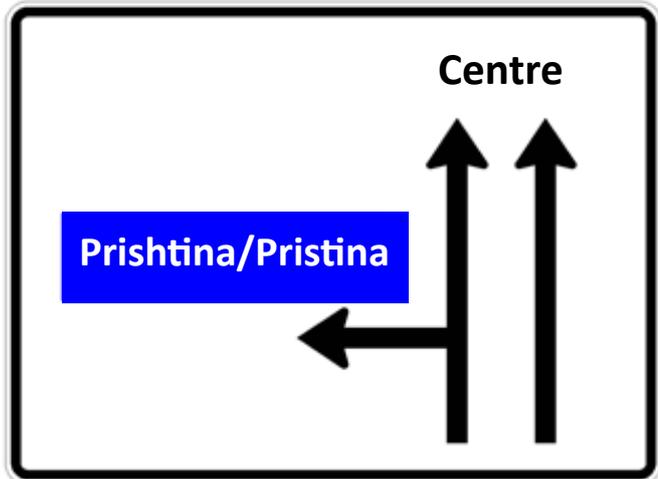
Placing of speed bumps on local roads as traffic calming measure is provided below.



# ANNEX 2



The I-st information level



The II-nd information level



The III-rd information level

## ANNEX 3

## MONITORING OF THE URBAN MOBILITY PLAN FOR 2016

Measures	SAFETY IN TRAFFIC - <b>Traffic calming measures</b>	
Location	Street _____	
Road type	national/regional	local
Expected actions	- Islands on pedestrian crossings - Other measures _____ 8. _____	- speed bumps - rumble strips - speed humps - circular speed bumps - only signalling
Implementation	YES	
	NO	
	PARTIALLY	
Is it necessary to use additional measures for traffic calming?		
YES		NO

Measures	TRAFFIC SAFETY – <b>Crossroad adjustment</b>	
Location	<b>The shopping centre in Kamenicë/Kamenica</b>	
1	Removal of parking lots in front of commercial buildings near the roundabout in the centre of the city.	
Implementation	YES	
	NO	
	PARTIALLY	
Is it necessary to use other measures to adjust the crossroad?		
YES		NO

Additional notes:

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Kamenicë/Kamenica, on \_\_\_\_\_

UMP monitoring responsible:

\_\_\_\_\_

	Measures	Redesigning of the crossroad at the bridge	
	Location	The shopping centre in Kamenicë/Kamenica - TE URA	
1	Expected actions	Improving rounding range	
Implementation	YES		
	NO		
	PARTIALLY		
Is it necessary to use other measures to adjust the crossroad?			
YES		NO	

	Measures	Cyclist Track Phase I	
	Location	The centre of the city- crossroad of Berivojcë/Berivojce	
	Road type	national/regional	local
		1. _____	1. _____
		2. _____	2. _____
		3. _____	3. _____
		4. _____	4. _____
1	Expected actions	Establishment of cycling tracks	
Implementation	YES		
	NO		
	PARTIALLY		
Is it necessary to use additional measures?			
YES		NO	

Additional notes:

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Kamenicë/Kamenica, on \_\_\_\_\_

UMP monitoring responsible:

\_\_\_\_\_

Measures		Traffic signalling	
Location		Municipality of Kamenicë/Kamenica	
Road type		national/regional	local
		1. _____	1. _____
		2. _____	2. _____
		3. _____	3. _____
		4. _____	4. _____
Signalling		Horizontal	Vertical
1	Expected actions	Establishment and maintenance of horizontal and vertical signalling	
Implement- tion	YES		
	NO		
	PARTIALLY		
Is it necessary to use other measures?			
		YES	NO

Additional notes:

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Kamenicë/Kamenica, on \_\_\_\_\_

UMP monitoring responsible:

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## MONITORING OF THE URBAN MOBILITY PLAN FOR 2017

	Measures	Infrastructure for people with special needs (PWD)	
	Location	<b>Municipality of Kamenicë/Kamenica</b>	
1	Expected actions	Adapting the infrastructure for people with special needs	
Implementation	YES		
	NO		
	PARTIALLY		
Is it necessary to use additional measures?			
YES		NO	

	Measures	Closing of the school yard for motor vehicles and construction of the bridge	
	Location	<b>At the entrance of the elementary school</b>	
1	Expected actions	Increased safety for pupils at the school entrance and entry of vehicles in the school yard through the bridge which is expected to be constructed	
Implementation	YES		
	NO		
	PARTIALLY		
Is it necessary to use other locations/change of location?			
YES		NO	

Additional notes:

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Kamenicë/Kamenica, on \_\_\_\_\_

UMP monitoring responsible:

\_\_\_\_\_

	Measures	Bus stops	
	Location	Municipality of Kamenicë/Kamenica	
	The type of the road where the bus-stops are to be placed	national/regional	local
		1. _____	1. _____
		2. _____	2. _____
		3. _____	3. _____
		4. _____	4. _____
1	Expected actions	Establishing of bus stops	
Implementation	YES		
	NO		
	PARTIALLY		
Is it necessary to use other measures?			
YES		NO	

Additional notes:

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Kamenicë/Kamenica, on \_\_\_\_\_

UMP monitoring responsible:

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Measures		Traffic signalling	
Location		Municipality of Kamenicë/Kamenica	
Road type		National/regional	local
		1. _____	1. _____
		2. _____	2. _____
		3. _____	3. _____
		4. _____	4. _____
Signalling		Horizontal	Vertical
1	Expected actions	Establishment and maintenance of horizontal and vertical signalling	
Implementation	YES		
	NO		
	PARTIALLY		
Is it necessary to use other measures?			
		YES	NO

Additional notes:

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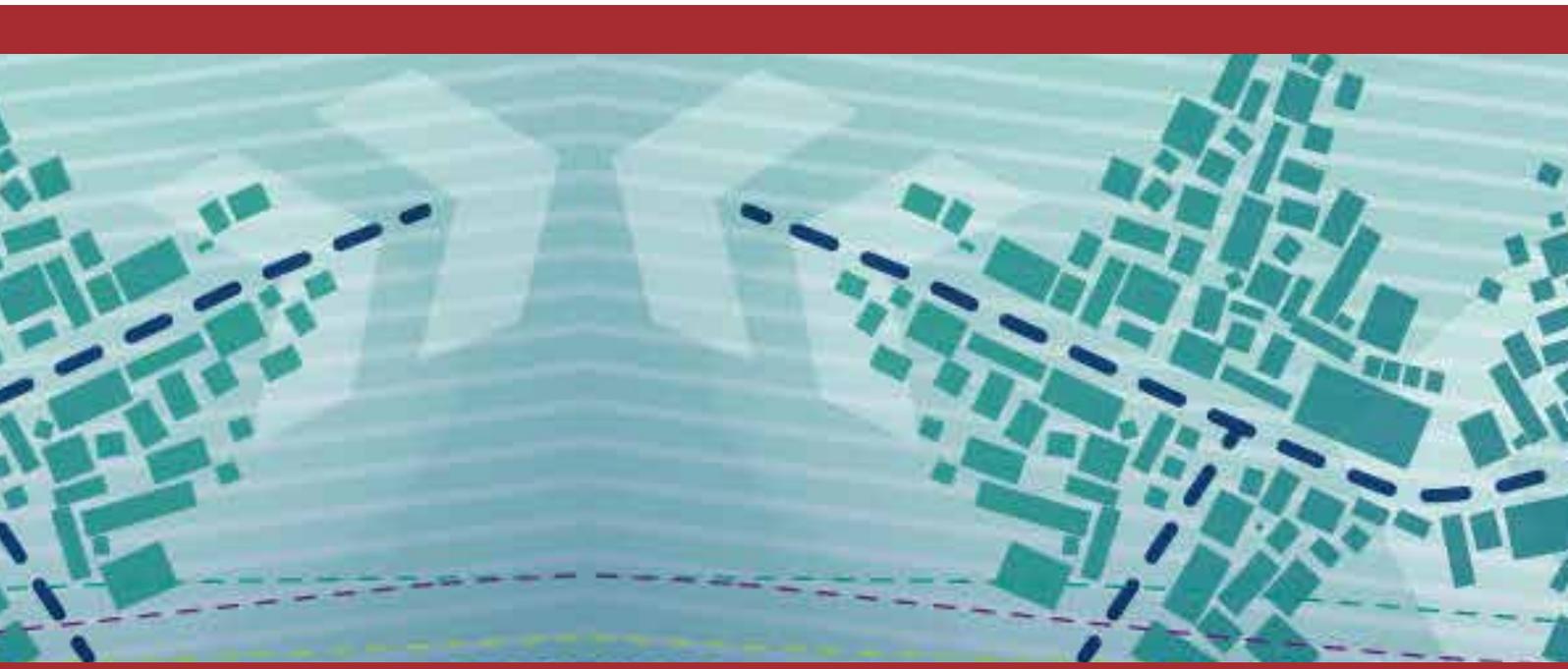


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Kamenicë/Kamenica, on \_\_\_\_\_

UMP monitoring responsible:

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**HELVETAS**  
Swiss Intercooperation

KOSOVO



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Cooperation Office Kosovo