

Problems of Further Development of City Transport

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Annotation: This article is about increasing the speed of vehicles moving in cities, as well as developing measures to prevent traffic accidents caused by the use of defective vehicles.

Keywords: city transport, street, road, traffic, safety, road surface.

In order to provide good service to passengers in city transport, it is necessary to solve the following scientific and technical problems:

- to fully satisfy the transportation needs of the population living in the city and its suburbs;
- increase the speed of transportation in each section;
- increase traffic regularity and density of transport units;
- increase the level of comfort for the passenger;
- ensuring traffic safety and reducing the harmful effects of transport on the environment.

Statistical data show that on average 9-10 thousand road traffic accidents occur in the territory of the republic every year. More than 2,000 of them are causing casualties. This is stated in the concept of ensuring road safety in the Republic of Uzbekistan in 2018-2022.

It is noted that in 2018-2022, by implementing the concept of ensuring road safety in the Republic of Uzbekistan, it is of particular importance to form completely new approaches to the task of increasing the efficiency of state management in the field of traffic organization and provision. This Concept includes the following main directions:

- further improvement of the regulatory legal framework in the field of ensuring road traffic safety, including further strengthening of measures of responsibility for serious violations of traffic rules;
- comprehensive improvement of road infrastructure, improvement of road quality, creation of reliable conditions for safe movement of vehicles;
- to improve the legal culture, necessary knowledge and skills of road users, and to strengthen their discipline.

Strengthening the legal framework in the field of road safety.

Equipping motor vehicles of individuals and legal entities with video recorders, organizing measures to determine the regulatory procedure for their use in order to prevent violations in the field of road safety.

Development and implementation of criteria for evaluating the results of service activities of road safety state service employees.

Strengthening liability for intentional violation of traffic rules.

Increasing the specified speed of movement, as well as improving measures to prevent traffic accidents caused by the use of defective vehicles.

Improvement of legal mechanisms for prosecuting pedestrians for traffic violations.

Improving the procedure for stopping vehicles on highways and holding special events and determining the list of grounds for this.

Creation of an electronic system for immediate formalization and review of materials on administrative violations in the field of traffic.

Implementation of a practical mechanism that ensures the rapid organization of the electronic system of identification of wanted persons and vehicles and its subsequent effective use.

Amendments and additions to traffic rules aimed at increasing the quality and reliability of traffic safety.

Taking into account the effectiveness of the work of the state traffic safety service organization, including the principles of dividing the Republic of Karakalpakstan and regions into sectors for the socio-economic development, the rational distribution of the forces and means of the road patrol service to take practical measures to increase withli.

Improving the procedure for mandatory technical inspection of vehicles.

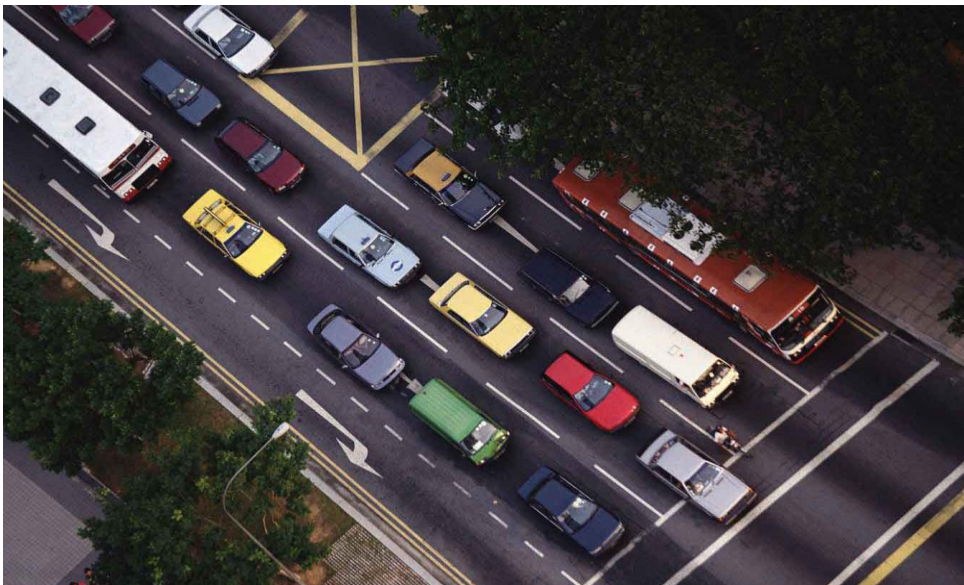


Figure 1. Movement of vehicles on roads.

Development and establishment of penalty area regulations, improvement of their operation taking into account the introduction of public-private partnership mechanisms.

Introduction of public-private partnership mechanisms into the road safety system.

Implementing comprehensive measures to strengthen the scientific, personnel and material and technical potential of the State Road Traffic Service, introducing criteria for evaluating the results of the service activities of its employees.

In 2018-2019, the following key indicators will be taken into account and analyzed in order to evaluate the effectiveness of activities on ensuring road safety:

- the number of traffic accidents and administrative violations in the field of traffic;
- the number of traffic accidents and administrative offenses committed with the participation of pedestrians;
- the number of traffic accidents and administrative offenses committed with the participation of children;
- the number of traffic accidents that resulted in the death or injury of people;
- the number of traffic accidents caused by the unsatisfactory condition of the road surface, as well as the lack of road signs and lines;
- the number of traffic accidents committed by motor carriers in the field of passenger and cargo transportation;
- the amount of damage caused to road infrastructure objects;
- the number of security systems and tools used in transport and road infrastructure facilities;
- the total number of specialists of state bodies responsible for ensuring road safety.

Future daily movement speed is determined on the basis of economic research.

In the 90-95 km section of the I-category M-37 "Samarkand-Bukhara-Turkmanboshi" highway in the Samarkand region, the traffic speed is $N_0=14,000$ units/day. Based on this, the future average annual and average daily movement speed is determined using the following empirical formula.

$$N_{\text{future}}=N_{\text{current year}}(1+a)^t$$

Here:

$N_{\text{current year}}$ - Average daily traffic speed this year

a - annual growth rate

t - coefficient of road use year

The speed of traffic on the existing highway is 14,000 units/day, and we need to predict the expected speed of traffic in 10 and 20 years. The planned highway passes through the Samarkand region, and we assume the annual growth rate is 3%. Then the amount of $(1+a)^t$ will be 1.34 after 10 years, and 1.80 after 20 years.

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The value of the expected future daily traffic volume is as follows:

After 10 years:

$$N_{\text{future}}=14000*(1+0.03)^{10}=14000*1.34=18815 \text{ units/day}$$

After 20 years:

$$N_{\text{future}}=14000*(1+0.03)^{20}=14000*1.80=25286 \text{ units/day}$$

The street is one of only three radials that are nearly straight when viewed from the road network diagram.

In order to analyze a little deeper in terms of constructive and spiritual significance and to avoid mistakes, we have reached the following.

The amount of annual increase in the workforce will be as follows

Table 1

№	Car brand	Percentage%	Number of daily passes, pieces/milk		
			2014 year	2024 year	2034 year
1	A light car	58	8105	18815	10660
2	up to 3 t	4	485	650	871
3	up to 3-5 t	12	1675	2245	3008
4	up to 5-8 t	8	925	1240	1662
5	Above 8-12 t	3	830	1112	1490
6	Bus	6	780	1045	1400
7	14 tons	9	1200	1608	2155
8	TOTAL	100	14000	18815	25286

Composition of movement speed

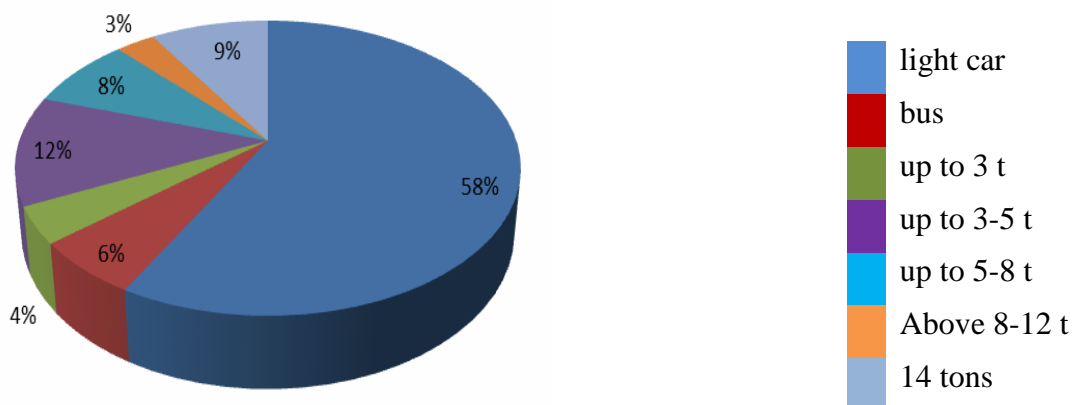


Figure 2. Cross section of Beruni and Ibn Khaldun streets.

The width of 8 lanes of the 4 lanes allocated for the main traffic of the public road is 32.3 m (of which the dividing barrier in the middle of the road is 80 cm, the lanes at both ends are 40 cm to 80 cm). The additional road after the pedestrian crossing and landscaping is 12.8 m long. (80 cm trays). In general, the sidewalk is 15.3 m, the general improvement (greenery) is 33.1 m. produces.

The length of the street is km, the number of cars passing through it is 1111 cars/hour, the capacity of the road is 1111 cars/hour.

If we visualize the above information more clearly and in order to make it easier to compare it with the proposed solution, the following form will be created (Fig. 3).

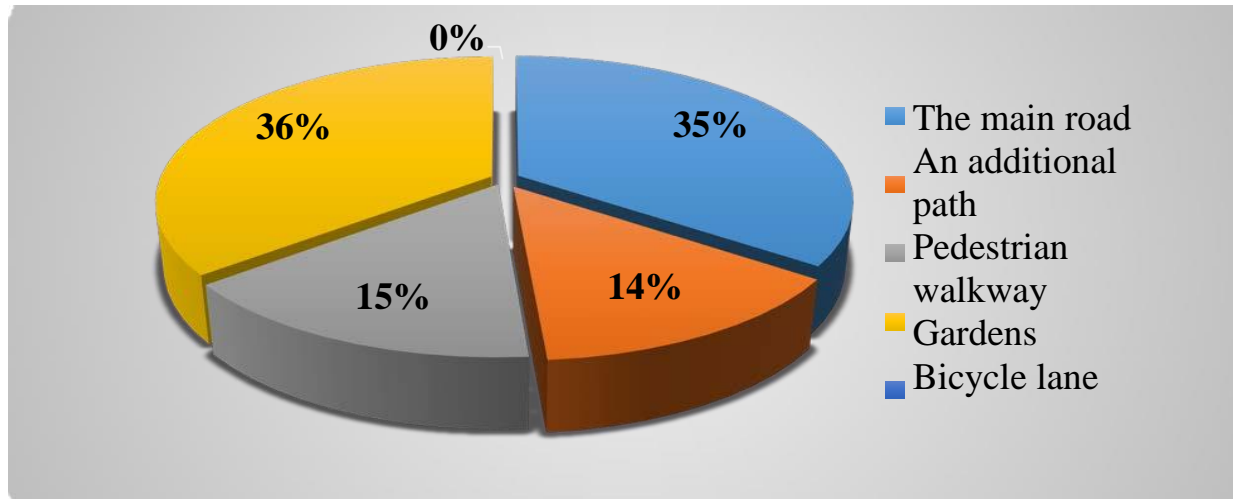


Figure 3. Relative diagram of the condition of Beruni and Ibn Khaldun streets.

In summary, it can be said that more than half of the world's population (4 billion people) lives in cities, and 75% of the world's gross domestic product is created in cities. The developed world has abandoned the dominance of automobiles in urban road infrastructure and the concept of faster and more car-carrying roads.

A city is safe and clean only if it is for pedestrians (90% of road users). The idea of urbanization is outdated and defeated. No matter how car-friendly you make the city (rural), no matter how wide the roads you build, traffic, noise, death and injury will not decrease.

In modern urban road infrastructure, roads should be safe and environmentally friendly: cars should travel less, pedestrians, strollers, wheelchairs, bicycles should have the same amount of space as cars.

As we mentioned above, you can see that we strive to create an innovative environment in the city artery, all the elements of which meet the requirements of the time. In addition, we found it necessary to introduce a double-deck expressway in order to create a basis for its long-term importance.

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