



RECOMMENDATIONS FOR THE DESIGN OF SAFE PARKING SPACES FOR TRAFFIC ACCIDENTS AND TRUCKS

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<https://doi.org/10.5281/zenodo.7353845>

Annotation. This article analyzes the increase in global cargo transportation in the process of globalization and the increase in road traffic accidents in the process of automobileization. Recommendations for the maximum use of the transport corridor and the organization of the work of drivers, compliance with traffic rules, organization of rest and safe parking places have been developed.

Key words. International, global, globalization, safe parking places, road traffic incidents, Central Asia, transit, international cargo transportation.

Introduction

This article contains reminders for companies and drivers that carry out transportation in international trucks, examples of legal documents, compliance with them, work regimes, tasks that must be performed in connection with the inclusion of the Republic of Uzbekistan in international transportation agreements. Uzbekistan is located in the center of Central Asia from the point of view of location and is of great importance in the world transport corridor. Therefore, the use of this opportunity can be seen from the decisions made by our government, the international convention that is expected to be joined, and the acceleration of our joining the economic blocs. Maximum use of transit potential will provide new professions and income for Uzbekistan. It is necessary to provide transit routes located in our republic with all facilities for carriers engaged in transit and international cargo transportation. Because only and only economic effect is achieved with this.

The main part

The increase in the number of people and the level of car ownership are indicators that directly affect the issue we are studying. The population is very sparse on the land. About 70% of the entire population lives on 7% of the land. 15% of the entire land (149 million km²) (22.4 km²) has no permanent residents. Such places include the island of Greenland, the north of the Canadian-Arctic archipelago, the Sahara desert, and similar uninhabitable places. The population is expected to reach 8,046,949,318 by the end of 2022. The natural growth of the population is positive and this year amounts to 98,415,064 people [1].

The permanent population of the Republic of Uzbekistan today is 35,821,029 people as of October 1, 2022, and the growth rate of the permanent population has increased by 0.9% since the beginning of the year. Since the beginning of the year, the population of our country has increased by an average of 55,300 people every month. of which 18,232.9 thousand are urban residents (50.9 percent of the total population), 17,588.1 thousand are rural residents.

In recent years, as the process of automobileization has accelerated, long traffic jams on the roads and the damage of exhaust gases to the environment are increasing [2].

We will consider the analysis of road traffic incidents that occurred in the city of Tashkent in the last four years.

Analysis of traffic accidents by age

Table 1

Age of drivers	Number of traffic accidents			
	2018	2019	2020	2021
18-22	119	96	50	86
23-27	168	164	92	125
28-32	148	133	91	137
33-37	110	117	76	101
38-42	106	80	30	63
43-47	52	37	24	44
48-52	38	30	18	33
53-60	49	45	25	32
above 60	47	41	20	18

Analysis of road traffic accidents by labor activity

Table 2

Driver's seniority	Number of traffic accidents			
	2018	2019	2020	2021
to 1-2	108	129	62	52
From 3-5	137	99	55	80
From 6 to 10	180	179	96	154
from 11-15	141	131	80	173
from 16-20	98	88	36	79
from 21-25	30	24	10	40
until 26-30	19	15	5	29
above 30	13	6	3	13

Analysis of road traffic incidents by month

Table 3

Moon	Number of traffic accidents			
	2018	2019	2020	2021
January	103	116	53	32
February	75	95	62	86
March	95	83	69	60
April	92	81	62	117
May	99	91	33	100
June	79	68	42	89
July	108	99	67	113
August	125	121	54	95
September	67	36	27	90
October	128	115	119	122
November	131	120	96	101



December	138	121	169	195
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Analysis of traffic accidents by days of the week

Table 4

Days of the week	Number of traffic accidents			
	2018	2019	2020	2021
Monday	175	149	111	117
Tuesday	191	160	138	145
Wednesday	164	169	109	147
Thursday	177	160	173	182
Friday	170	165	121	170
Saturday	201	168	141	153
Sunday	155	157	98	145

Daily analysis of road traffic incidents

Table 5

By time	Number of traffic accidents			
	2018	2019	2020	2021
00-06	114	138	89	100
07-09	157	169	110	164
10-12	184	170	168	170
13-15	180	179	127	174
16-18	226	181	171	212
19-21	260	210	161	199
22-24	112	81	65	100

He analyzed road traffic incidents in Tashkent city alone, but if we multiply this by 10 for the entire republic, very sad numbers will come out. To avoid these disappointments, it is time to pay special attention to international trucks. Taking into account the fact that international trucks transport long-distance and expensive goods, it is necessary to regulate the work of drivers. There are international regulations on this and we are a member of them [3].

The speed and quality of cargo transportation are always important for the successful operation of companies, as well as for the dynamic development of production and trade relations in cities and countries [4].

As the economy of the Republic of Uzbekistan is growing steadily in the coming years, the market of motor transport services is also developing.

The average annual growth rate of the truck fleet is 2...3%, while the material base of motor vehicles has increased 3...4 times over the last 6 years. This corresponds to the economic development of the republic. Road transport is the main mode of transport, carrying out more than 90% of domestic and international cargo transportation.

There is no other type of transport comparable to automobile transport in the transportation of valuable goods over short and medium distances, in the transportation of retail and industrial goods, in the logistics system, and in providing services to small businesses [5].



In the process of international integration, the importance of road transport in foreign trade has increased significantly. In the next 6 years, the volume of these cargoes increased 12 times.

Based on these, it is necessary to take into account that it is the duty of the carrier to deliver the cargo to its destination on time and without compromising its quality. The carrier must monitor the compliance of the driver attached to the vehicle with work modes and rest periods [6].

Let's get acquainted with the adopted normative legal documents of the Republic of Uzbekistan and the responsibilities in them.

Decision No. N340 of the Cabinet of Ministers of the Republic of Uzbekistan, adopted on 22.12.2011, "On the introduction of digital control devices in vehicles carrying international goods" With the Resolution of the Cabinet of Ministers in order to fulfill the obligations of the Republic of Uzbekistan regarding its participation in the European agreement on the work of crews of international cargo vehicles in the car signed in

In 1998, the Republic of Uzbekistan joined the European agreement on the work of crews of international cargo vehicles;

In accordance with the requirements of the European agreement, after June 16, 2010, it is accepted for information that it is necessary to provide the countries that are participants of the European agreement with digital control devices.

The Ministry of Transport of the Republic of Uzbekistan is designated as the competent body for fulfilling the obligations of the Republic of Uzbekistan related to the participation of Uzbekistan in the European agreement [7].

Ministry of Transport of the Republic of Uzbekistan:

In accordance with the requirements of the European agreement, the regulation on digital control device cards used to control the work and rest modes of drivers in international cargo transportation by car, as well as the instruction on the use of digital control devices should be developed within one month and in the prescribed manner. confirmation;

that in accordance with the requirements of the European agreement, the gradual introduction of digital control devices and their use will be coordinated;

It is said to ensure the implementation of measures to introduce a system of digital control devices in motor vehicles of the Republic of Uzbekistan that carry out international cargo transportation by car, and if the distance of car cargo transportation is 400 km or more, or if the cargo takes 9 hours or more it is said that two drivers must be attached to that vehicle if it is within the delivery distance. Drivers are required to rest for 15 minutes every 1.5 hours or 45 minutes every 4.5 hours [8].

AETR Agreement Schedule of Rules Defining Driving Periods, Breaks and Rest Periods (2010)

Table 6

Rules and norms	Excerpt from AETR
Maximum time of uninterrupted management	4.5 hours (Article 7 Clause 1)
Maximum control time during the day	9 hours, 10 hours twice a week



Maximum management time for a week/fortnight	56 hours (Article 6, Clause 2)/for two consecutive weeks 90th hour (Article 6 Clause 3)
Maximum number of driving cycles before weekly rest	A weekly rest period must begin no later than the end of the six 24-hour period beginning after the end of the previous rest period. The exception for unscheduled one-time passenger transportation, which determines the possibility of working for 12 consecutive days, is preserved with several reservations.
Minimum break time	45 minutes, it is allowed to divide the rest time into two intervals (the first is 15 minutes, the second is 30 minutes, continue no later than the end of the four-hour control). The purpose of this article is not used for driving and waiting time in a moving vehicle, ferry or train is not considered another work defined in article 1 of this Agreement and must meet the break
Daily rest time	11 hours, Between the two-week holidays, permission is granted for 9 hours up to three times a week (paragraph 5 of Article 8) During 12 hours, the first three times, the second time interval is not less than 9 hours
Weekly time off	For one driver (Driver brigade) - 45 hours, for a car - once every two weeks no more than 24 hours If the weekly rest period is reduced, the driver must be compensated no later than the end of the third week
A crew of two or more drivers	After 30 hours of work, every driver must rest for at least 9 hours continuously
NOTE	In cases of daily and reduced weekly rest, it is allowed to use the car salon for rest only in the parking lot.
	It is allowed to reduce the daily rest time without requiring compensation.
	Any rest period used to compensate for reduced weekly rest periods must be added to another rest period of at least 9 hours (Article 8, Clause 8).
	Crew members must be present at all times and present log sheets for verification, times must cover the current day and the previous 28 calendar days; the driver's card, if any, must be printed with manual entries for the current and previous 28 calendar days as required by this Agreement. If the driver is unable to provide the above documents, he must provide the activity confirmation form for this period. The form of the form is given in Annex 3 of AETR.



According to the above table (Table 1) of the AETR, the principle of ex-territoriality was introduced, i.e.: The contracting party gives its competent authorities the right to apply sanctions:

for a driver's violation of this Agreement that is established in that territory and for which no sanction has yet been imposed, even if the violation is committed in another Contracting Party or in a non-Contracting State [9].

an enterprise that has been found to have violated this Agreement in its territory and no sanctions have yet been applied to it, even if the violation was committed in the territory of another Contracting Party or a non-Contracting State.

Article 16 of the Law of the Republic of Uzbekistan "On Road Traffic Safety" (19.08.1999 N818-I) provides for legal entities and individual entrepreneurs whose activities are related to the use of vehicles. requirements are listed, and clauses 1 and 2 of these requirements are described as follows:

- organizing the work of drivers of vehicles in accordance with the requirements that ensure road safety;
- it is said to observe the regime of work and rest of the drivers established by the legislation.

Article 11 of this law states at the beginning of letter 2.

-Damage caused due to road traffic accidents caused by the non-fulfillment of the obligations assigned to them by road management bodies should be compensated by these bodies in accordance with the procedure established by law.

Article 38 of the Law of the Republic of Uzbekistan "On Guarantees of Freedom of Business Activity" (25.05.2000 No. 69-II) stipulates that the damage caused to the subject of business activity shall be borne by the person who caused the damage in full, including , must be compensated by adding lost profits. It is said that a person who is not the causer of damage can be charged with the obligation to compensate for the damage by law.

This is stated at the beginning of paragraph 9 of Section III, Section 26 of Annex 1 to the Cabinet of Ministers Resolution No. 342 of December 26, 2011, "On the provision and organization of safety in the region of highways in the territory of the Republic of Uzbekistan". , in which vehicle repair and lubrication, refueling, loading, unloading, loading and securing of loads to other equipment, cleaning and washing are prohibited on highways and their safety zones[10].

As can be seen from these normative legal documents, when the vehicle moves on the roads, it is necessary to move the goods to the destination within the agreed terms of the contract, without causing damage and observing the safety of traffic to other road users. raised

Research part

Drivers of vehicles need to stop outside roads that pose a threat to traffic safety in order to stop for rest or perform technical maintenance.

Clause 33 of this decision on the equipment of roads of international importance in our republic prohibits the construction of buildings at a close distance on both sides of the I- and II-category roads[11].

On one side of highways, in the following cases, on the basis of approved urban planning documents, construction of buildings on agricultural land on the basis of agriculture, objects in the order established by government decisions: from the edge of the carriageway:

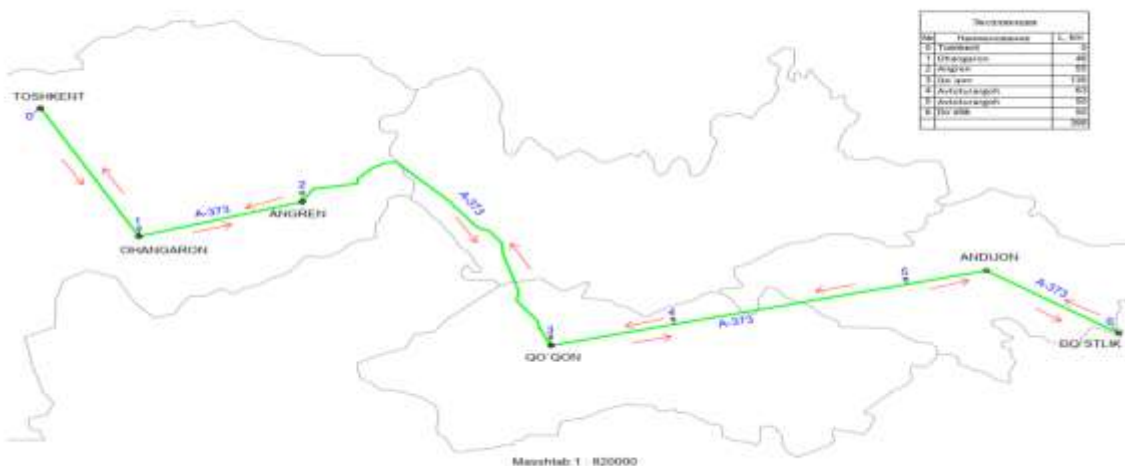
- in open places - 200 meters away;



- it can be placed in residential areas, on the side of highways where the boundaries of settlements meet - at a distance of 100 meters.

Unfortunately, we cannot say that there are constructions on our roads based on legal documents [12].

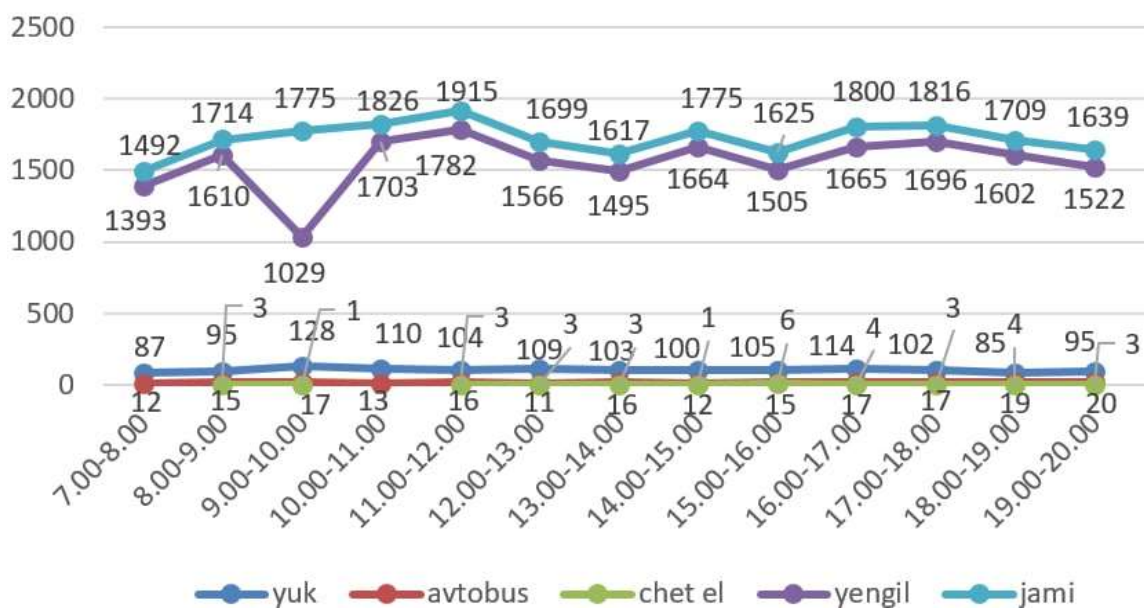
Taking this into account, a safe zone should be created on transit roads for international cargo vehicles in our country.



Drawing 1. A373 highway map and trucks safe parking places for.

There are 99 transit routes in our republic, most of them cross the A373 highway. The A373 highway is 399 km long and consists of flat roads, mountain roads, and mountain roads. We studied the area of A373 highway 90 km from Andijan region and determined on our map that a safe parking place is needed for 340 km of A373 highway. Because the traffic flow here is given in the table below.

Table 7



Histogram 2. 340 kilometers of the A373 highway daily traffic flow.

As can be seen from this table, the traffic flow is between 1492 and 1915 per hour. The number of foreign trucks goes from 1 to 6 per hour, and trucks go from 85 to 128. The capacity of the road, if trucks are parked on the side of the road, will reduce the technical speed of all other vehicles, and will create traffic jams. In order to avoid traffic jams and road traffic accidents, we present below the map of the safe parking place for trucks for this kilometer. In this drawing, we designed a safe parking area with lines inclined at 30° to the road, because after the road base there is a field where the truck can easily park and continue on its way. for. There are additional toilets, car service, scales, rest rooms for crews. We assumed that the safe parking area is 40 m^2 per car and the number of trucks is 10 units at most. The reason is that it is intended for the intermediate rest periods of drivers under the AETR contract [13-14].

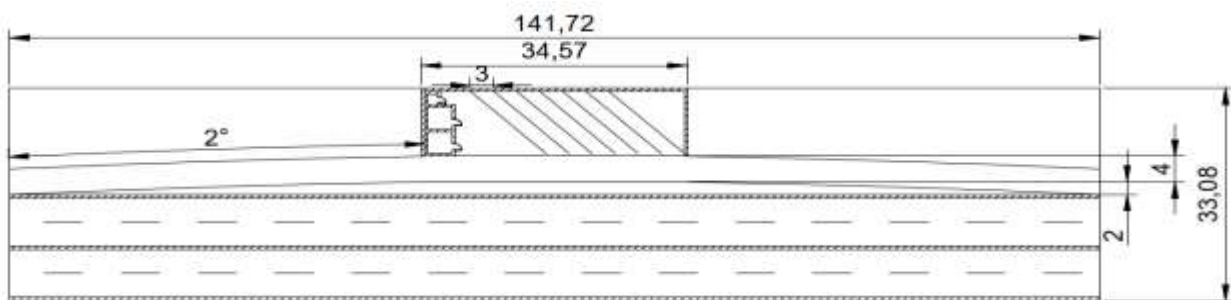


Figure 3. Safe parking on a 30° slope to the road.

If we organize such stops along the transit routes of our republic, we will prevent traffic accidents, have a positive effect on the environment, keep the technical speed at the same level, and at the bottom of all this, we will achieve economic efficiency.

Our country is on the verge of becoming a member of international economic blocs, so it is time to adapt our transport potential and road infrastructure to global requirements [15-16].

Conclusion

The export potential of our republic can be increased several times with agricultural products and mineral fertilizers. For this purpose, the place of transport logistics is incomparable for us. If we organize safe stops on transit routes (for 50-60 km) for the national transport companies and international transport drivers of our republic, we will prevent all kinds of unfortunate incidents, material losses, and intergovernmental responsibilities in the future. . The expected transit in the near future will also create grounds for increasing the number of passing traffic flows. In addition, we will work according to the AETR contract. All this is for human dignity.

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