INTERNATIONAL MULTIDISCIPLINARY JOURNAL FOR RESEARCH & DEVELOPMENT
SJIF 2019: 5.222 2020: 5.552 2021: 5.637 2022:5.479 2023:6.563 2024: 7,805
eISSN :2394-6334 https://www.ijmrd.in/index.php/imjrd Volume 12, issue 08 (2025)

ANALYSIS OF VEHICLE TRAFFIC VELOCITY IN THE REGIONAL CENTER

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Abstract: The analysis of vehicle speed in regional centers is a crucial aspect of transportation research, as it directly reflects the efficiency, safety, and sustainability of urban transportation systems. Vehicle speed, along with traffic flow and density, is a key parameter in assessing the performance of the road network. In regional centers, where rapid urbanization and increasing car ownership often outpace infrastructure development, studying vehicle speed provides important insights for managing traffic congestion, improving safety, and reducing environmental impacts.

Keywords: Vehicle speed, traffic speed analysis, regional centers, traffic flow, traffic density, traffic congestion, road safety, transportation planning, urban mobility, traffic management, transportation monitoring, point speed study, travel time study.

INTRODUCTION.

The organization of traffic safety on roads is becoming one of the most important problems today. The amount of damage caused by cars to the environment is increasing day by day, and the most important thing is that many people suffer and lose their lives as a result of road accidents. Despite a number of measures taken to prevent road accidents, their number cannot be reduced. This makes it necessary for specialists to take a very serious approach to road safety problems. To ensure traffic safety, it is necessary to take a scientific approach to it, analyze all its complex processes. For this, road safety specialists need to have knowledge of the main indicators of road traffic, how road conditions affect the movement of traffic flows, and how to manage traffic through technical means of traffic flow management [1].

The increase in the number of passenger cars of the population, in general, the smoothness of roads, the use of road signs, the operation of traffic lights, improving traffic on the roads, preventing road traffic accidents and various accidents are becoming one of the important problems [2]. Ministries, departments and khokimiyats should attach great importance to motor transport and road construction. In this regard, the Cabinet of Ministers adopted a resolution: “On measures to improve motor roads, their construction and adjustment”. One of the most important issues is to ensure the condition of motor roads using material and moral resources, and to ensure the organization of production technology. According to the resolution, it is planned to begin the construction of highways and motor roads that provide reliable communication between large districts and populated areas. Also, to expand the construction of motor roads connecting district and farm centers. Issues such as improving the quality of road construction, taking into account traffic safety, properly organizing freight and passenger transportation, and correctly assessing and proving the requirements for road elements by road transport engineers are also clearly defined.

It is necessary to distinguish between the work of road transport, the work of the driver, and the organization of the movement of vehicles and pedestrians on the road. The first two issues are

mainly dealt with by automobile companies, and the latter by road enterprises, road safety departments and representatives of the authorities.

Based on the above, the main goal of the organization of road traffic is to ensure the safe passage of various vehicles at high speeds along various sections of the road in all weather conditions of the year.

The main tasks of the organization of traffic are:

-determining and ensuring the order of movement of vehicles;

-ensuring the high efficiency of vehicles and creating the best road conditions;

-ensuring traffic safety;

-preventing pollution of the environment;

-ensuring that vehicles and road structures do not fail quickly.

The sharp increase in the number of cars in our republic has led to an increased need to prevent traffic jams at intersections, various accidents on the roads, an increase in traffic accidents, deterioration of road conditions and environmental degradation. The direct impact of the development and effective operation of the highway system on the improvement of the country's socio-economic indicators can be observed in two aspects:

-direct efficiency - the benefit received by transport users due to improved conditions on highways;

-indirect efficiency - economic efficiency not related to transport, the benefit received by economic sectors due to an increase in the speed of material flows.

Traffic management is a system of measures aimed at ensuring the efficient movement of vehicles, ensuring the maximum use of the geometric dimensions of the road, ensuring a safe traffic regime and high throughput on its various sections, and ensuring the most efficient movement of vehicles. The principles of traffic management are aimed at: correctly directing the flow of traffic, dividing it into groups by speed, setting rational speeds for each road section, and providing drivers with timely information about the direction of movement and road conditions.

A road traffic accident is an incident involving at least one vehicle moving on a road, resulting in death or injury to people, damage to vehicles, road structures, or cargo, and material damage.

Road accidents are characterized by 3 cases:

1. At least one vehicle is involved in a road accident. Any unfortunate incident on the road that does not involve a vehicle is not considered a road accident.

2. The vehicle involved in the road accident must be in motion. For example, if a car catches fire while being repaired at a parking lot, it is not considered a road accident.

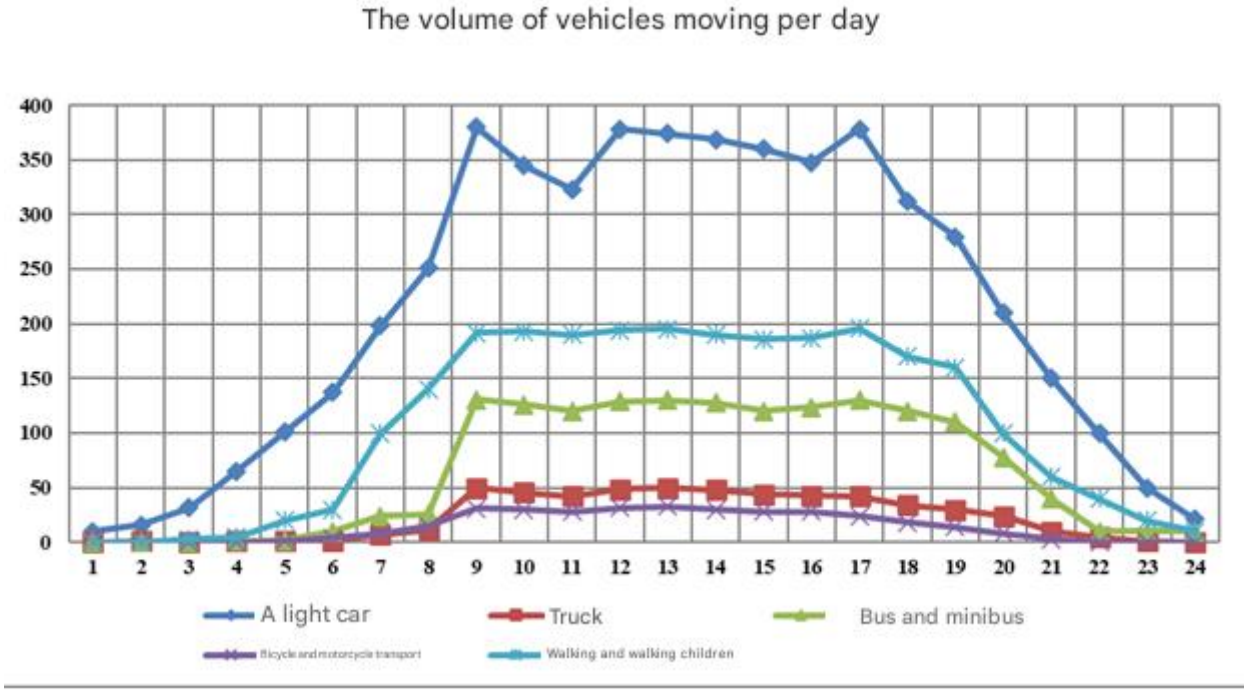
3. As a result of the accident, people are killed, injured, or property is damaged.

For example, on a country road, a driver overspeeds and loses control, causing the vehicle to skid off the road, but the vehicle is not damaged. Such an incident is a violation of traffic rules and the driver must be punished, but is not considered a road traffic accident. Motor vehicles

include cars, motorcycles, scooters, mopeds, bicycles with a suspension engine, trams, trolleybuses, tractors and self-propelled machines and mechanisms, as well as carts with animals [3-4].

As can be seen from Diagram 1, the amount of traffic is high during the daytime, while the amount of traffic is much lower at night.

Diagram 1.



During the operation, the traffic intensity, pedestrian traffic volume, and vehicle traffic volume in the city were studied in 2021 and 2022. Moving pedestrians and children on foot were observed not following traffic signs, drivers were observed driving while intoxicated, and drivers and pedestrians were observed moving erratically on the roads. In addition, irregular movement of vehicle drivers, failure to follow road markings and road signs were observed, pedestrians were observed not following traffic rules, and drivers did not use vehicle lighting devices properly at night, resulting in many road accidents in the district. It would be appropriate to carry out urgent work in the district to reduce road accidents. For example, in vocational colleges, lyceums, schools, preschool educational institutions and rural civic gatherings, employees of traffic safety departments hold roundtable discussions, seminars, practical trainings and propaganda and campaigning activities on the topics of "Traffic Rules", "Pedestrian Movement Culture" and "Driver Etiquette". Based on the results observed in the region, we recommend introducing the following changes:

- It would be advisable to install surveillance cameras in busy areas of city streets, install speed cameras;

- Pedestrian crossings remain in the city, and pedestrians move wherever they want. As a result, road traffic accidents involving pedestrians and children on foot are occurring, in order to prevent this, it is necessary to prepare pedestrian crossings at pedestrian crossings 5.16.1, 5.16.2,

install road signs and road markings indicating pedestrian crossings, and build underground or above-ground pedestrian crossings in areas of heavy pedestrian traffic;

- It is necessary to carry out propaganda and agitation work in all preschool educational institutions, schools, vocational schools and lyceums of the region, as well as in meetings of citizens of the neighborhood, in addition, it is necessary to ensure the regular organization of special programs and meetings by the employees of the State Traffic Safety Administration in the regional media and television;

- If drivers, pedestrians and children on foot follow the above, we will prevent accidents.

CONCLUSION

In conclusion, the results of experimental studies are presented. Theoretical studies have been conducted to improve the cooling system. In addition, the conditions for reducing energy consumption in the experimental determination of radiator heat transfer are expressed.

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