

## **Development of Schemes Used in the Field of Land Transport Vehicles**

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**Abstract:** In the educational programs created by the teachers of "Engineering and computer graphics" at the department of "General Engineering Sciences" of the Institute of Engineering Economics, Karshi, they will create schemes based on the direction and learn the conditional graphic designations used in these schemes. Great importance is attached to learning. In particular, efforts are being made to create methodological support for the students of the 60712500 - Vehicle engineering (automotive transport) department, which will help students to develop their knowledge and skills in the implementation of specialty schemes.

**Research materials and method.** Diagrams used in the transportation industry can include various types of graphs, charts, and maps. Some of these include:

1. Road Maps: These are detailed maps showing road infrastructure such as roads, streets, junctions and junctions. They may also include distances between different locations, estimated travel times, and other useful information for travelers.
2. Traffic graphs: These are graphs that show changes in the number of vehicles on roads or other traffic routes over a period of time. They can be used to analyze and forecast traffic density, identify peak hours, and plan infrastructure.
3. Public transport schemes: These are diagrams showing the public transport network in a particular city or region. They may include information about bus, tram, subway and other public transport routes, as well as information about stops and timetables.
4. Transfer tables: These are graphs showing possible combinations of transfers between different modes of transport. They can be used to optimize routes and choose the most efficient methods of travel.
5. Parking Occupancy Graphs: These are graphs that show the occupancy level of a parking space at a particular location or building over a period of time. They can be used to determine the availability of parking spaces and plan the parking infrastructure.

These are some examples of schemes used in the transport sector. Depending on the specific needs and tasks, other types of charts and diagrams can be developed and used.

Surface transport route maps are a graphic representation of routes and public transport stops in a given area. They allow users to easily navigate the city's transport network by showing optimal routes, schedules and other information needed to plan their journey. Circuits can be presented in the form of maps or diagrams, using various graphic elements to show routes, stops and other details. They help to improve the ease and convenience of using public transport and help to make more efficient use of the city's infrastructure.

The following requirements are set for the implementation of surface transport vehicle routing schemes:

1. Clear and understandable: Diagrams should be clear and understandable to users so that they can easily read and understand the information presented in the diagram.
2. Completeness: schemes should contain all necessary information about routes, stops, timetables and other details related to surface transport.
3. Accuracy: Schemes must be accurate and consistent with actual ground transportation infrastructure and schedules.
4. Updateability: Charts should be updated to reflect any changes in routes, schedules or other ground traffic details.
5. Ease of use: Charts should be easy to use and have clear symbols, legends and instructions for users.
6. Graphic representation: Diagrams should use graphic elements such as arrows, lines, symbols and colors to clearly convey information about ground transportation routes and stops.

This is only part of the requirements that can be specified in the implementation of schemes for the direction of surface vehicles. Depending on specific needs and tasks, other requirements may be specified.

The graphic symbols used in the implementation of surface transport schemes in Uzbekistan are determined by GOST 2.784-89 "Unified system of construction documents. Automated schemes. General requirements". The following graphic symbols are used in these schemes:

1. Route lines: indicated by lines of different thicknesses and colors. Each line corresponds to a specific route.
2. Stops: indicated by circles or rectangles indicating the name of the stop. They are located on the route line.
3. Transfer nodes: are indicated by special symbols indicating the possibility of transferring from one route to another.
4. Terminals and termination points: indicated by signs indicating the beginning or end of the route.
5. Main directions of movement: indicated by arrows indicating the direction of traffic.
6. Other details: Schemes may also include additional features such as signs, waiting areas, etc.

**Summary.** In conclusion, it can be said that if a student starts studying drawings and schemes related to his specialty in the first year, his interest and love for his chosen profession will increase. A student who has mastered drawing up schemes and reading them well has no difficulty in mastering the specialized subjects, moreover, this knowledge and skills will be very necessary in his work.

#### **List of used literature:**

1. Zyryanov V.V. Kocher to V.G. Pozdnyakov M.N. //Sovremennye podkhody k razrabotke kompleksnykh scheme organizatsii dorozhnogo dvizheniya// Transport Rossiyskoy Federatsii. Scientific, practical, economic magazine.
2. A. V. Velmojin, V. A. Gudkov, A. V. Kulikov, A. A. Serikov. // Effektivnost gorodskogo pasajirskogo obshchestvennogo transporta // Monografiya, Volgograd 2002