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LANDSCAPE SOLUTIONS AROUND THE ROADS

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Abstract:

This article describes the landscaping of streetside areas, climate, wind and land geology, and how to organize the roadside landscape, depending on the climatic conditions of the area, what ornamental vegetation and landscape methods. scientific research on the beautification of the area using.

Keywords: Roads, structural elements, transport, ornamental plants, trees, hygrophytes, mesophytes, xerophytes ecology, green architecture, ornamental trees and shrubs, plant composition, aesthetics and open environments.

Extensive work is being carried out in our country to create a variety of buildings and facilities that meet international standards. From the first years of independence, our country has attached great importance to access to world markets and the development of trade and economic relations with the outside world. In particular, the reconstruction and construction of roads, bridges and tunnels, airports and airfields are ongoing.

In this regard, the Decree of the President of the Republic of Uzbekistan dated February 14, 2017 No PF-4954 "On measures to further improve the management system of road facilities" and the Decree of the President of the Republic of Uzbekistan "On In accordance with the Resolution of the State Committee for Motor Roads and the Republican Road Fund under the Cabinet of Ministers of the Republic of Uzbekistan dated February 14, 2017 No PP-2776, as well as in the field of roads In order to further improve public administration, the Cabinet of Ministers adopted a resolution. Particular attention is paid to the organization of landscaping and beautification of areas adjacent to highways [1].

A unified state policy on the formation and implementation of modern approaches to the architectural and landscape design and landscape design of roads;

Organize and systematize the maintenance of roadside areas in the lanes allocated for highways;

Rational organization of scientific research through the widespread use of advanced modern technologies and international standards in the field of repair, improvement and landscaping of roads, taking into account the climatic conditions of different regions of the country;

A thorough study of best international practices in the protection of roads and their structural elements from the effects of adverse weather conditions, based on the results of which the areas adjacent to highways are protected from traffic pollution and emissions. introduction of the most effective and successfully tested modern methods and technologies of protection;

Taking into account modern requirements, the organization of training and retraining of highly qualified personnel in the design of roads, architectural and artistic design and landscape design on the basis of departmental higher and secondary special, vocational education institutions covering functions.

In our country, narrow and bumpy roads are being replaced by wide and comprehensive roads that can meet modern requirements. There is a lot of good work being done in our country to make the dirt roads only in the memory of the people. In recent years, at the initiative of the head of our state, special attention is paid to the development of transport and communication networks.

Over the years, the construction of highways, the establishment of transport links with foreign countries, the introduction of modern equipment and technologies in the road industry, the training and retraining of specialists who can meet today's requirements. Work has been done. In particular, bold steps have been taken to access the world's ports by connecting our country's roads to the Trans-European and Eurasian roads.

The design of highways should take into account environmental protection measures that do not harm the existing geological, hydrogeological, ecological and other natural conditions. The development of measures should take into account the location of valuable agricultural lands, cemeteries, mosques and other religious buildings and structures, as well as recreation areas, nature reserves, health care facilities and sanatoriums.

The impact of vehicles on the environment (noise, vibration, exhaust fumes and the dazzling effects of headlights) must be taken into account. The choice of highway route should be based on a comparison of options that take into account a wide range of interrelated technical, economic, ergonomic, aesthetic, environmental and other factors.

The proposed road construction is aimed at ensuring compliance with environmental requirements, the level of environmental hazards that may adversely affect the state of the environment and the health of citizens, environmental protection and rational use of natural resources. it is advisable to include measures that are adequate and reasonable.

Air and soil temperature, soil water, nutrition, light and composition are important environmental factors for Uzbekistan. In this case, the nutrition and water regime of the soil can be regulated by appropriate agro-technical measures. Air and soil temperatures are almost unregulated.

Effective results will be achieved on the proposed highway through the natural conditions of the area, climatic factors and the use of climate-friendly and local ornamental plants suitable for the area.

Currently, the streets of Fergana are being planted with greenery. The paths are widened, mainly from the following ornamental plants, including trees: white willow (Salix alba L.), linden (Tilia cordata), Virgin spruce (Juniperus virginiana), Biota Thuja (Thuja Orientalis), common pine (Rinus silvestris L.), Crimean pine (Pinus nigra subsp. pallasiana), tulip tree (Liriodendron tulipifera), white mulberry (Morus alba 'Pendula'), fake chestnut (Aesculus hippocastanum), oriental maple (Platan orientalis), Island (Ailánthus altíssima), Acacia (Acacia), birch (Betula), oak (Oiegsik), willow (Salix babylonica L.), catalpa (Catalpa), mackerel (Maclura pomifera) and others;

Shrubs: Indian nasturtium (Lagerstroemia indica), Japanese ligustrum (Ligustrumjaponicum), orange pyracanta (Pyracantha crenulata), European forsythia (Forsythiaeuropaea), Syrian hibiscus (Hibiscus syriacus L.), Japanese green quince (Chaenomeles) (Buxus semperverens).

If we analyze the attitude of these ornamental woody plants to environmental factors, in terms of their attitude to light, woody plants are divided into light-loving, shade-tolerant, semi-shade-tolerant and shade-loving.

- Light lovers - Mojjevelnik (Virginsky), Virgin spruce (Juniperus virginiana), Biota-Thuja - (Thuja Orientalis), common pine (Rinus silvestris L.), Crimean pine (Pinus nigra. Pallasiana), white. tut (Morus alba "Pendula");
- Partially shade-tolerant - Lipa - (Linden (Tilia cordata)), Tulip (Liriodendron tulipifera)
- Soybeans - Fake chestnut - (Aesculus hippocastanum).

Humidity is essential for the normal development of plants. 70-80% humidity is best for most trees. Under these conditions, photosynthesis is better. The average long-term relative humidity in different regions of Uzbekistan ranges from 10 to 25%, and in July-August it falls to its lowest level.

Humidity affects the appearance of plants, their anatomical structure and physiological function. In arid regions, the leaf blades shrink, the number of hairs increases, and a waxy layer forms.

Classification of tree species according to water needs

- Hygrophytes - Lipa - (Tilia cordata), White willow (Salix alba L.).
- Mesophytes
- Xerophytes - Virgin spruce (Juniperus virginiana), Biota - Thuja - (Thuja Orientalis).

The following is an analysis of the relationship of ornamental trees to the effects of toxic gaseous compounds

- Gas-resistant - can quickly restore gas-damaged organs: Virgin juniper (Juniperus virginiana), Biota-Thuja (Thuja Orientalis), white mulberry (Morus alba 'Pendula'), False chestnut (Aesculus hippocastanum), oriental maple (Platan oriental)).
- Moderately resistant to gas - not resistant to adverse conditions, but stable: White willow (Salix alba L.).
- Tolerant - conifers, especially pines; deciduous - Lipa - (Tilia cordata) and others.

Although there are many types of flowers today, observations have shown that the following are mainly used as annual and perennial flowers in the landscaping of Fergana highways. Examples are Ageratum, Ageratum, Alissum, Astra, Ocimum, Tagetas, Viola, Verbena, Canna, Catharanthus, Bellis.

Daewoo Fergana Textile Factory in Fergana, Fergana Mechanical Plant, Uz Sangwoo SP, Barkamol Avlod Tayanchi LLC, Gazoblok Production Enterprise, AvtoOyna, Fergana Khlop-Zavod JSC, UzSalaman, Fergana Grain Products OJSC, Tapo- There are disk, Fergana oil depot, Fergana Uz-Salaman (shoe factory), nitrogen production plants. Of course, highways pass through these factories and plants. For this reason, landscaping their areas and roadside areas is important. As a result of damage to the atmosphere and soil by heavy metal residues, they accumulate in plants, as the leaves, stems and roots of plants have the property of accumulating these substances. Plants, especially those that grow in sandy soils, absorb and accumulate metal residues through their root systems. The amount of ash in the leaves of plants in such areas increases by one and a half to two times and is 13-17% [3]. Dust accumulated on the surface of plant leaves contains particles of the following heavy metals and trace elements: lead, iron, titanium, copper, zinc, nickel, cobalt, manganese and others. Dust scattered around large enterprises (from ash volume) contains 37.9% iron, 15.3% aluminum, 2.7% copper, 0.9% titanium, 0.8% manganese and 0.2% lead [; 3]. For this reason, it is advisable to build forest enclosures around and near large industrial enterprises and highways. In the organization of the landscape, the structure of plants, width, height and tree species are closely related to these indicators. Large-branched, hairy, split, rough, uneven-leaved tree species (oak, elm, mulberry, black walnut, white poplar, maple, small-leaved jiida, barberry, catalpa, soap tree, carcass etc.) traps dust in the air well. They also absorb toxic chemicals, especially carbon dioxide.

Atmospheric air is also polluted by incomplete fuel emissions from powdered hydrocarbon compounds. In the human respiratory tract, 13 to 48% of the mixture is retained in the air [3]. In addition, some types of crops make the driver tired. In order to ensure traffic safety, it is advisable to plant a group of ornamental trees, shrubs, low trees and flowers among the row crops. Borders, green fences or concrete walls will be built to limit it.

On either side of the bus stop on the highway, individual or group crops of trees and shrubs are planted in the form of a national hedge. Where possible, rabatkas will be placed in front of the station. In the open, small trees of one or more species are planted. These places are adapted for recreation. In plants, pine cones retain more dust than deciduous trees and reduce road noise, but do not provide shade. In autumn, snowless winters, and early spring, when there is a lot of dust in residential areas, conifers are important because deciduous trees do not have leaves. Due to the large leaf area of tall oak, sophora, ailant, elm, and ash trees, the green massifs that protect them protect the atmosphere from transport and industrial wastes and dust. Conifers are plants that absorb heavy metals and trace elements. These include spruce, pine, willow, and camel. These plants serve as indicators of atmospheric pollution. This is because the appearance of necrosis on their bodies and the shedding of needles indicate the presence of excessive harmful compounds in the air.

During the summer, the dust on the leaves of the plants should be washed frequently, otherwise the crops may gradually perish. A high degree of protection can be achieved by studying the dust protection properties of different trees and shrubs and organizing them properly.

In conclusion, due to the complete landscaping, the air is almost completely cleaned of dust. In this way, phytoncides released from plants reduce harmful microbes in the air. Even in winter, when trees do not have leaves, they are important in protecting them from dust. Other additional measures are needed to keep the air clean. It is important to improve the streets while preventing the spread of harmful substances in industrial enterprises. For this reason, in the regions, perpendicular to the wind, there are protective trees, and in cities - wide green alleys serve as ventilation corridors. Proper engineering and ecologically correct design ensures the effectiveness of the sanitary function of the work of green crops.

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