

The environmental problems of highway construction

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Abstract: With the vigorous development of the national economy in our country, the pace of highway construction is more and more quick, various of grades of highway is constructing, the mileage of highway is increasing, and family cars continue to increase, highway in comprehensive transportation system of the national economy is becoming more and more important. With the rapid development of highway construction, the pollution and the emergence of the problem such as the impact on the surrounding environment constantly.

The significance of highway environmental protection

As the popularity and development of social economy and the automobile highway environment protection problem becomes increasingly prominent, in the protection and improvement of the environment, promote the development of the highway and the environment coordination, highway environment protection problem got the attention of more and more widely, so that the connotation of the highway environmental protection the expansion and extension of widely^[1].

First of all, the highway environmental protection is the basis of the sustainable development, and it is also an integral part of the highway industry. With multiple functions of highway environmental protection, a variety of benefits and a variety of value, is the environmental resources, and basic resources, to promote the development of national economy, national security, disaster prevention and mitigation, eliminate poverty, has an irreplaceable role in such aspects as opening to the outside world^[2]. Second, to meet people's spiritual demand of highway environmental protection, improve the human body health, promote the human and the nature harmonious get along, etc., plays an important role and value^[3]. For engaged in road builders of highway environmental protection, to do the work well, must be from highway builder to master good environmental protection foundation, make everyone understand that environmental protection is always an eternal topic in highway construction, to combine better roads and environmental protection, both to protect the environment, and saving resources, better promote the development of economic construction comprehensively^[4].

The negative impact of highway construction on the environment

The air pollution

In the process of highway construction on the environment air pollution mainly include:

(1) Road of lime and cement, fly ash in building materials containing a large amount of dust, in the process of transportation and construction if we do not take appropriate measures, will produce large amounts of dust, damage to the surrounding air.

(2) Used in the construction of service road, especially in the dry season, after multiple rolling construction vehicle, the road soil into a powder, can also cause dust, damage to the surrounding air.

(3) Produces in the process of boil mix asphalt contain benzopyrene, acridine, phenols, pyridine, anthracene Nai harmful to the environment, such as asphalt smoke.

The period of highway operation, air pollution mainly comes from vehicle emissions of pollutants, according to statistics, by weight, 43% of air pollutants from motor vehicles, so the motor vehicle pollution is the main source of air pollution.

Noise pollution

Despite the current highway construction mechanization level is quite high, but, hard to avoid noise, while all kinds of construction machinery construction of construction personnel and affect the normal work and life of nearby residents.

(1) The construction site of the transport machinery, road construction machinery and other construction machinery and blasting operations produce noise.

(2) Stabilized soil mixing station, concrete mixing station, and the noise emitted by asphalt concrete mixing station work.

Water pollution

During the construction of water pollution includes:

(1) The spoil and slag discharge into the water.

(2) The construction of bridge may pollute the river.

The water pollution caused in the period of operating includes:

(1) The sewage from highway service area.

(2) Leakage of poisonous and harmful material transportation of vehicles and road surface of the solid waste with the rainwater into the water and cause pollution.

The influence of the ecological environment

The loss of soil and water

The construction of highway wastes much soil and water, such as:

(1) Destroy the ground vegetation and original landform, lead to the surface bare, caused the new soil and water loss.

(2) Temporary service road and building materials used in the construction, if do not take corresponding measures of soil and water conservation, encountered heavy rain or strong winds can cause soil erosion.

Geological disasters

The construction of highway can't avoid fill and excavation, such as high filling embankment in the plain; Building in the mountains cutting, to a large number of excavation. Such a high fill dig influence to the geological structure, causes such as landslide, collapse, debris flow and avalanche of geological disasters in high latitude area.

The impact on the plants and animals

The fill and excavation in highway construction will damage to the ground vegetation, highway construction and operation period of air, water, noise pollution and so on will be to produce a great impact on the surrounding plants and animals.

The influence of the social environment

The influence of the social environment includes the occupation of land, the house removal, travel block, the impact on the infrastructure and landscape environment.

The environment protection measures in highway construction

The protection of air

In building materials transportation with tarpaulin cover, the site click on the downwind in schools, residential areas, and enterprises and institutions, and choose the right wind direction in the construction. Construction of asphalt concrete pavement, asphalt concrete mixing plant is located in the residential areas, schools, and other environmental sensitive downwind, convenient production, and conform to the requirements of the health, do not use open type, semi-closed asphalt heating process. To formulate and implement motor vehicle emission standards, strictly control of motor vehicle exhaust pollution to vigorously develop powered by electricity, solar energy and other new energy vehicles.

The protection of water

The abandoned soil and slag pile up in a specified place, and to take protective measures to avoid its flow into the water^[5]. Construction during construction and service of sewage and sewage to enter the designated discharge pipes, or after processing, before discharge. It is forbidden to various leakage, bulk, overloaded vehicles on the road, prevent road and cause water pollution. The sewage treatment station should be set in the living area of the highway traffic administrative department of, and a variety of sewage treatment standard rear can discharge.

To reduce noise pollution

The yard, mixing station is located in the far away from school, residential areas, enterprises and institutions and other places, as far as possible use small noise of construction machinery. Actively negotiate with construction sections near schools and units, to adjust the construction time or take other measures to minimize the construction noise disturbance to the teaching and work. Pay attention to machine maintenance, keep the mechanical minimum sound level; Arrange workers take turns to do mechanical operation, reduce the time of the exposure to high noise; For workers with long working time near source, acoustic earplugs, helmets, daily protection for workers.

Ecological environment protection

In strict accordance with the design requirements, reasonable decorate the location of the borrow pit, the excavation conditions to minimize the damage to the ground vegetation, to take on the bare surface due to excavation of plant protection or stone protection, and on the ground of the perturbed restore its vegetation step by step. To abandon soil, abandoned slag according to piled up at designated places, and take protective measures, or reasonable use, such as filling embankment and reinforced embankment.

Social environmental protection

At the line selection, avoid to take up a lot of arable land. After the construction station and yard site construction to finishing planting in a timely manner. At the line selection to avoid around town residential area and larger villages, especially the school and its students mainly located: left underground channels, such as the viaduct, convenient residents travel. At the line selection around from the natural landscape and human landscape, route should be in harmony with the natural landscape and human landscape along the route, and reasonable protection and utilization. Found in the construction of cultural relics should contact the department of cultural relics of the state in time, when the protection of cultural relics.

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