Analysis of the Influence of Environmental Technology Factors on Landscape Design and Construction

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Abstract. Landscape design and construction can reflect the economic and social development of a city. It is the external image of the city, adding color to the routine lives of people. In this paper, the current situation of urban landscape design is summarized. The influence of the environmental technology factors on urban landscape construction is analyzed, and the effective measures for controlling the effect of urban landscape are proposed.

Keywords: Landscape Design, Construction, Effect Control

1. Introduction

With the continuous acceleration of the urbanization rhythm in my country, the quality of landscape projects has also been significantly improved to some extent [1-4]. In China’s infrastructure construction, the construction of landscape occupies a prominent position. The landscape of the landscape represents the overall appearance of a city, adds color to the architectural landscape of the city, enriches the practical functions of the urban landscape, and at the same time improves the quality of life of the people of the city [5-8]. Design is an integral part of urban landscape construction. Design is a decisive factor that determines landscape and function. Under the premise of urban landscape engineering design, it is necessary to combine current urban environment, urban economic development, urban social and humanities and other practical factors in landscape design. Incorporating human wisdom to better match the overall appearance of the city, add new colors to the city, and further improve the quality of the urban landscape and the rich use of functions [9].

The landscape design can endow the entire landscape with a sense of harmony and provide people with visual enjoyment. Plant landscaping directly affects the overall design effect of the landscape. During the construction of gall forests, we must fully understand the habits of plants, and we must follow certain principles to make the forest landscape more attractive [10]. In the design of a landscape-like view, using different plants can create different environmental arts and make people have different visual experiences. This is the direct position of plants in landscape design. Hence, landscape design should not only enhance the aesthetics of the landscape but also consider the natural landscape presented by the landscape. In short, whether it is technology or modern aesthetics, plant landscaping can provide landscape designers with thoughts and play a supporting role. This article summarizes the general situation of urban landscape design at this stage, analyzes the influence of environmental technology factors on the construction of urban landscapes, and puts forward effective measures for the control of urban landscape effects.

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2. Overview of Current Situation of Urban Landscape Design

Currently, there are many problems in China's landscape design and construction projects. In the design process of the urban landscape, there is no scientific, scientific research on the urban landscape based on the actual development of the city and the natural environment of the city. With rational design, some urban landscape designers only pay attention to the aesthetics of the landscape, and the landscape function of the landscape is only part of the aesthetic background. Meanwhile, it also neglects the necessary component to coordinate with the natural environment of the city. As a result, the final landscape design does not match the actual situation in the construction process, and ultimately the aesthetics of the landscape and the use of the function and quality have declined, which in turn hinders the sustainable development of the urban landscape. Currently, there are the following problems in the design of urban landscape:

2.1. Landscape design scheme is inconsistent with the actual construction environment

At this stage, most landscape architects only pay attention to the design link of the landscape, do not specifically consider the specific construction operation link, and only pay attention to the aesthetics of the landscape and ignore its function. In the end, the construction process cannot be carried out according to the original design drawings, which affects the construction period of the landscape construction and makes the overall quality of the urban landscape poor.

2.2. Practical functions are ignored

Currently, the design of urban landscapes only pays attention to the final design aesthetics, and ignores the practical functions of urban landscapes, and the landscape has only become an appreciation project. The meaning of the urban landscape is to use reasonable engineering techniques and artistic inspiration to design and plan grass, landscape, and buildings in a certain urban environment, so as to better realize the function of the building. When designing landscapes, we must comprehensively consider factors such as urban drainage, architecture, transportation, urban characteristics, and urban environment. While enhancing the overall appearance of the city, it can also offer aesthetics and practicality to people.

2.3. Urban landscape design lacks innovation

In the new era of rapid development of network information technology, network technology has made the connections between cities more and more close, and a large number of design resources can be easily obtained, while also promoting the progress of urban landscape design to some extent. Development, so that landscape designers can communicate and communicate their respective design ideas through the Internet; however, there has been a phenomenon of plagiarism of landscape design. For the sake of their own interests, landscape designers adopt network design solutions to make landscape design appear. The same phenomenon.

In the new era, the synchronized design gallery and construction process log can be used as a continuous full-cycle landscape design and construction management, and continue to summarize whether the function is practical. The owner’s feedback directly formed a comprehensive data module with the design and finished drawings, and summarizes the past Atlases and finished samples at the same time provide basic data and comparison solutions for innovation, further promoting the quality of landscape design.

3. Factors Affecting the Construction of Urban Landscape

3.1. Land Problem in Urban Construction

Land is the basic condition of urban landscape construction and an important component that affects the quality of landscape construction. The quality of land directly affects the survival rate of green plants. Hence, it is necessary to prepare the urban land before the construction and carry out land testing on the site to be constructed to ensure that the land meets the growing conditions of the green
plants to be planted. On this basis, it is necessary to apply fertilizer to the land regularly to provide sufficient nutrients for the growth of plants and to take measures to prevent insects. In the new period, the land composition can be analyzed through big data, and past disasters can be listed for early prevention.

3.2. Techniques for the Survival Rate of Landscape Plants
Only by improving the construction quality of urban landscapes and controlling the survival rate of green plants can we build a good ecological environment for the city. Hence, when purchasing green plants, the nearest green plant base should be purchased if possible, and green plants should be planted according to the normal planting sequence, and use the bottom of the vegetation to cover the soil and deep soil replacement. Landscape vegetation provides a good environment for growth. Meanwhile, plant maintenance measures shall be taken to solve the problems of planting in a timely and effective manner to increase the survival rate of green vegetation, so that the landscape can be further improved the overall quality.

3.3. Rockery Landscape in Garden Landscape
Ensuring the stability of the landscape is the technical difficulty of the landscape, to prevent the occurrence of safety accidents caused by rockery activities. Aiming at this kind of safety accident, the construction work should be carried out strictly according to relevant standard regulations and using standard construction techniques. In the preparation stage before the specific construction, the budget of landscape mechanics should be properly controlled, and the stability of the rockery should be ensured.

In the new period, big data can be used to analyze soil composition, plant growth, various landscape rockery and landscape materials, and list information on past disasters, survival rates, price fluctuations, etc. to prevent and purchase in advance to improve landscape construction. Overall quality.

4. Effective Measures for the Effect Control of Urban Landscape

4.1. Strengthening the exchange between technologies, making proper design drawings
Keep good communication between landscape architects and construction personnel is a necessary condition to ensure the smooth implementation of landscape design. In the process of landscape design, the designer should listen to the reasonable opinions of the construction personnel, makes up for the shortcomings in the design plan, and then improves the quality of the landscape design, understands the technical standards of construction, and understands the problems that arise during the construction process. Make a scientific and reasonable solution plan to ensure the smooth development of the project to some extent.

4.2. Construction Process Planning
The construction design process of the landscape actually refers to the role of coordinating and coordinating all aspects of the construction. In the specific construction process, two points should be noted:

Firstly, after the primary design and construction plan is completed, do a good job of budgeting for the construction time, using itemized or distributed construction methods to measure whether the construction technology and construction methods of the landscape can guarantee high quality during the budget period Completed the construction of the landscape.

Secondly, at the stage of formulating a specific landscape construction plan, it is necessary to control the capital budget of the landscape, achieve the high-quality goal of landscape design within a reasonable budget, control the construction time, and ensure that all The stage went smoothly.
4.3. Thorough and Rigorous Market Investigation
Detailed research and understanding of the urban environment of landscape construction and local social factors should be carried out to ensure harmony with existing buildings, and check that the existing infrastructure can match the actual situation, so as to ensure the smooth progress of the main process of landscape construction.

4.4. Sufficient Supplies
Sufficient material conditions and material quality have an inevitable relationship with the smooth progress of the landscape and the quality of the landscape. Check the construction equipment of the landscape in advance to ensure the normal operation of the mechanical equipment.

4.5. Sufficient Manpower
In essence, sufficient labor is the basic condition for ensuring the smooth progress of landscape projects. Hence, the scientific and rational distribution of labor, the use of corresponding engineering techniques, and the work of mechanical equipment are the keys to complete the urban landscape design. Sexual factors.

5. Environmental Protection Concept in Landscape Design and Construction

5.1. Low-carbon Concept in Garden Water Landscape Design
Waterscape is also one of the important components of the landscape. Modern landscape design has more and more applications for water landscapes. Hence, it is necessary to integrate the carpet concept with the water landscape design. This needs to consider its landscape effect. Need to pay attention to ecology, affinity and creativity. In terms of site selection, it is necessary to rely on the main terrain and natural water sources to consider the design of the water body landscape. Taking materials locally can minimize energy consumption to a large extent.

5.2. Low-carbon Concept in Garden Plant Landscape Design
In the selection of garden plants, attention should be paid to the application of plant species with stronger carbon sequestration ability, which can greatly improve the carbon sequestration benefits of green landscape spaces, thereby creating conditions for the creation of low-carbon landscape spaces. To build a scientific and reasonable low-carbon landscape, we need to ensure a reasonable matching in the following five aspects: ① Focus on the combination of evergreen shrubs and deciduous trees. The carbon fixation and oxygen release capacity of shrubs is more significant than that of trees. ② Focus on the combination of slow-growing tree species and fast-growing tree species. The carbon fixation ability of fast-growing tree species is higher than that of slow-growing tree species. However, although some fast-growing tree species have a strong carbon-fixing capacity, they also release a large amount of carbon dioxide after being fixed. ③ Focus on the combination of deciduous vegetation and evergreen vegetation. Compared with evergreen vegetation, the color-fixing plants have a stronger ability to fix carbon and release oxygen. ④ Focus on the combination of old trees and young trees. The carbon sequestration capacity of young trees is higher than that of older trees. ⑤ Focus on the matching of native plants in the conventional garden plant industry, because native plants are local products. After a long evolution of such plants, their adaptability will be stronger.
5.3. Low-carbon Concept in Landscape Construction and Maintenance Management

To introduce the low-carbon concept into the design of the landscape, we need to consider the high-level construction quality and its long-term effective landscape effect in addition to the above considerations. In the specific construction process, it is best to reduce the mechanical operation parts as much as possible to reduce carbon emissions and energy effects, as well as reduce the damage caused by the machine to the surrounding ecological landscape.

The landscape design needs to be classified and then classified and evaluated. The range of the exact $x$ is $[a, b]$, then change the number $x$ in $[a, b]$ to the fuzzy number $y$ in the interval $[E, E]$ in the fuzzy domain. As shown in formula (1):

$$Y = \frac{2E}{b-a} \left[ X - \frac{a+b}{2} \right]$$

(1)

The lower approximate set of $X$ design scheme sets on $R$, as shown in formula (2):

$$R_\cap (X)\{X \subseteq U : R(X) \subseteq X\}$$

(2)

That is, if and only if $R(X) \subseteq X$ has $x \in R'(X)$, $R'(X)$ represents the largest set composed of certain elements belonging to $X$ based on the existing scheme.

5.4. Low-carbon concept in the Selection of Landscape Materials

In the construction process of landscape, whether it is paving the road of the landscape or reducing the carbon emissions, the most direct way is to choose low-carbon materials, which can more directly achieve the purpose of low-carbon development. For low-carbon materials, it is mainly the development of new materials and the use of wood materials. Moreover, the use of wood materials can better fix carbon emissions and effectively improve the benefits of low-carbon economy.

6. Conclusion

To some extent, the quality of urban landscape design and construction relies on the wisdom of
landscape designers to some extent. To fully reflect the practical functions and social value of landscape, we should combine the design with the actual urban environment, and other objective natural and subjective social factors in the new era. Through big data analysis, we should learn from foreign design experience and concepts, innovate new design styles continuously, and integrate human wisdom into the design, thereby enhancing the design quality and practical functions of the landscape at a higher level, which is of crucial significance and plays a key role for urban development in the future.

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