

Research on Key Techniques of Green Planting Construction in Landscaping Project

Song Li

Shandong Zhongyu Construction Engineering Co., Ltd. Jinan, Shandong 250000

Abstract: Due to the continuous development of urbanization, it had a serious impact on urban ecology. Therefore, techniques to improve the living environment and quality of life in urban areas as well as ways to improve aesthetics and greening of urban gardens have gradually become the focus of attention. Re-building and arranging the green plant community rationally can effectively improve the quality of people's living environment. Besides, by maximizing ecological functions, it can better improve the quality of urban environmental. This paper introduces key technologies of green planting construction in urban landscaping projects and suggest ways to improve the urban ecological environment by viewing it from existing problems in the current urban ecological environment.

Keywords: *Landscaping Project; Green Planting; Construction Technology*

Publication date: May, 2019

Publication online: 31 May, 2019

Corresponding Author: Song Li, lisong493665815@sina.com

1 Introduction

Landscaping project managements are the most important part in the entire process of landscaping project. Reasonable landscaping construction should expand the scope of green planting in urban construction such as such as campuses, communities and enterprises appropriately. Thus, we can change the surrounding environment to a better and improve the quality of people's living as well as working environment. However, the development of landscaping construction work is inseparable from the cooperation

of manpower and material resources. Therefore, in specific work operations, it is required to strengthen the project management and specifically solve related problems to ensure that the landscaping work achieves a good progress and promotional effect. At present, there are still some problems in the technical management of landscaping projects in China, this requires relevant departments to pay attention to them by finding the root cause and make reasonable solutions. Thus, the quality of landscape construction and the effect of promoting the process in modern urban construction can be effectively improved.

2 Green planting and conservation in landscaping projects

Green planting and maintenance is the main component in the process of landscaping work as it also has an impact on the quality of the garden environment. Regarding green planting, cultivation and conservation, it is required to select the specific cultivation of seedlings according to the specific conditions of the local area. Then, by planting according to the standard, repeating inspection, calculating the survival rate of the plants as well as regularly watering and weeding the plants, it can handle various emergency situations. Most importantly, due the daily cultivation and conservation work that plays a decisive role in the growth of plants in the later stage, the work of greening and planting determines the survival rate of plants. Therefore, it is necessary to strictly manage these two to ensure a good quality and effect in landscape planting.

3 Construction technology in landscape planting

3.1 Map design in planting drawings

The important premise of green planting construction is the landscape planting design map. A rational and scientific landscape planting design map can improve the construction efficiency and quality of the overall landscaping project. Therefore, relevant designers are strictly required to design a reasonable planting plan for the classification of plant species to be planted in the garden as well as the distance between plants and plants, the orientation of planting and the shape of planting before the construction in order to meet the requirements of garden engineering work.

3.2 Specifications of plants

Determining the species of green plants is very important in the actual construction of greening and planting landscaping projects as the choice of plants directly determines the greening effect and the final effect of improving the ecological environment. In the beginning, the first step is to choose the main herb. It is required to select the corresponding plants accordingly to the current situation of the landscape. Secondly, colored flower species can aid in brightening up the garden's architecture and it would be more reasonable if they are chosen accordingly to the planting and building choices of the surrounding environment. Thirdly, we should first choose seasonal flowers because such flower types can prolong people's viewing time, improve in the beautification of garden and the ecological environment quality as well as adding an effective finishing touch to the landscaping work. Finally, the last step is the cultivation of hedges. The hedgerow is a planting form that is planted in a single row or a double row tightly combined with shrubs and small trees by the nearest distance; in another name as a hedge. In the green planting design, the hedges are related closer to the European gardening style and can form in different shapes according to different tree species as they are ornamental. As examples, common types of hedges are such as Chinese Boxwood (the saplings of the family), red leaves (ornamental trees, mainly red leaves), Chinese Glossy Privet (Oleaceae), and Chinese Privet. In the actual application of landscape planting, the main roles of hedges are functioned to reduce noise and green air, conceal bad scenery, beautify the city environment as well as to guide people on walking the route and so on. In addition, trees and shrubs are the most seen in urban garden environment construction. Therefore, when selecting trees and shrubs, appropriate selection and reasonable combination of tree species can enrich the visual aesthetic, beautify the urban environment and

green the air. Besides, when selecting tree species, it is also required to make reasonable choices accordingly to the specific growth characteristics of shrubs and trees. As examples, common types of trees are such as Eucalyptus (bean-like genus), Pine (coniferous plants), Willow and Red Pine (green pine branch tree) etc., while common shrub plants are such as Cloves (deciduous shrubs or small trees), Bauhinia (bean legumes plants) and Willow branches etc. Lastly, the choice of different tree species needs to be in accordance with the specific design and actual scope of the garden^[1].

3.3 Selecting operators

It is required for professional operators to perform effective and professional operations in the greening and planting of landscaping projects. Firstly, a series of targeted training and assessment should be carried out for actual operators. The actual operation and application should be required accordingly to different characteristics and design methods of different plants to ensure a good effect and quality of green planting. Secondly, to ensure the survival rate of plants and the quality of growth in the later stage, professional operators are required guide in the design and construction of landscaping projects. Finally, at the same time, it is necessary to control the quality of planting strictly.

3.4 Planting

The most important method of improving a plant's survival is to follow strictly on the seasonal characteristics of plants at suitable plantation times. Therefore, the environmental conditions of selecting seedlings can be beneficial to water dredging. During the early spring germination and autumn defoliation, this period is the period when the seedlings have the weakest viability and the plant dormancy period and rhizome growth period. In terms of the climate in Xiamen, the four seasons are constantly alike as Spring and the changes between seasons are not huge. However, there are some special tree species that have requirements on the temperature and humidity of the season. As examples, plants such as Camphor tree and Eucalyptus are suitable for spring planting. The survival rate of these plants is very low at low temperatures in winter or at high temperatures in summer.

3.5 Reasonable planning of landscaping projects

According to the standards and requirements of the

landscaping project, the planning of greening and planting work should be carried out. Therefore, it is required to conduct local inspection and research work before planting. Local inspection and research such as analyzing and mastering the climate, environment, air humidity and temperature of the local garden, understanding the greening process clearly and thus, the overall planning and design of the landscaping projects^[2]. Besides, it is compulsory to follow the planning and design of the landscaping project to implement the corresponding planting in order to achieve the expected planning and design of green planting. In addition, this can improve the effect of landscaping planting planning and landscaping engineering design as it is more artistic, ecological, ornamental and requires scientific and reasonable design as well as structural layout in the preliminary work.

4 The importance of green planting conservation in landscaping projects

Green planting conservation is an important part of green planting construction in landscaping projects. The important work contents and steps in the landscaping project are watering, fertilizing, pest control, daily care and maintenance etc. These are the daily safety management contents of green plants.

4.1 The effect of soil on plant growth

The requirements for soil during the growth period of sap are extremely high. Firstly, before the saplings are planted, it is necessary to reach the appropriate temperature and humidity. Secondly, it is compulsory to lay out the loose soil in time. Finally, at the same time, loose and moist soil should be selected for planting.

4.2 Fertilizing and watering

It is important to have maintenance on plants to ensure a good quality and effective process of the landscaping project construction. Firstly, we need to ensure the rationality of watering and fertilizing plants to ensure the environment and survival rate of a plant growth. When the vegetation is watered, it is necessary to ensure that the soil covered is wet as well as it is watered accordingly to different plant growth conditions and actual conditions. Besides, it should be taken note that in order to avoid affecting a plant's growth when fertilizing plants, we need to apply fertilizer according to the specific conditions and not excessive or too little fertilization. Therefore, this requires us to operate in

accordance with the plant's maintenance standards and plant's growth requirements when watering and fertilizing are occurring.

4.3 Managing colorful shrubs

During the inspection, it was learned that the colorful shrub comes in many varieties and multi-morphological characteristics. In the process of landscaping construction, we need to design the planting of colored shrubs appropriately. Thus, this can improve the ecological environment and make it more artistic as well as enhance the effect on the environment with its visual color. Compared with ordinary shrubs, colored shrubs have stronger purposes to be used. Due to its rich in colors characteristics, they need to make comprehensive and reasonable planning as well as design for the surrounding shrubs and other plants during planting. Thus, colorful shrubs can reflect with its characteristics and show a reasonable and effective planning in designing the garden. However, more stringent management requirements are required to maintain the shape and color of the shrubs. In addition, regarding the planting of turf, in order to avoid the normal use of turf due to turf water accumulation, the construction workers are required to tidy the whole site in a series of preparatory work, such as tidying, leveling and grading to combine with the soil better and promote a healthy growth of seedlings.

4.4 Techniques in planting seeds

It is important for staff to pay attention in planting seeds as the techniques used during a seedling planting process may seriously affect the survival rate of the seedlings if it is not handled flawlessly. After the shrubs are planted, it is necessary to dig a circular water retaining circle around the seedlings. The diameter should be 70cm, with a plus minus difference at maximum of 10cm. The size of the shrub water retaining ring is controlled at 40-60cm while the depth is about 3-5cm. Finally, it is required to water the shrubs once every 24 hours. Moreover, it is necessary to use bamboo and steel pipes at 3 and 4 feet as the main materials to support the tree accordingly to its sizes. Lastly, other planting holes that are not conducive to drain can be covered with gravel at the bottom of the hole to achieve a smooth drainage.

4.5 Conserving plants' ornamental

When designing and planning garden green plants, pay attention to the maintenance of artistic expression of

a tree. Through using different levels of trees, sparse, densely spaced and tree-shaped as the management and maintenance standards, the green planting has more landscape ornamental and artistic effects. Besides, timeliness in trimming the branches can affect the overall shape by maintaining large crowns, leafy branches, small leafy branches and shaped branches for growth as well as sheltering from wind and rain in special weather and avoiding serious consequences of broken branches by strong winds. When a worker trims the shape of the tree, it needs to be combined the design accordingly to the actual situation, this is to allow the overall tree shape has a certain regular shape and has a design effect, such as a square shape, a fan shape or a spherical shape etc. Thus, this can enhance the daily care management and the first time trim to maintain its' shape.

4.6 Strengthening pest control

Garden maintenance work is particularly important in order to ensure that these plants can grow normally. In the late period, personnel are required to achieve timely watering, weeding, and fertilization standards in the maintenance work. These are the basic conditions for ensuring the normal growth of plants. Majorly, plants' death and growth delays are caused by pests and diseases, which requires timely prevention and treatment during routine maintenance. Besides, plants are easily affected by the environment and the weather. This will cause plants to have anthracnose powdery mildew. However, these can be cleaned against dead wood branches with carbendazim and a regular check on the plants. Therefore, all the prevention work is important and necessary to ensure the efficiency of landscaping work.

5 Conclusion

Based on the above-mentioned contents, as China's urban development keeps pace with the time, people are increasingly demanding the quality of living environment. Under such circumstances, it is very important to strengthen the quality effect of landscaping planting. It is required to participate in the greening and planting construction personnel in the relevant garden projects to ensure the planting and management of the construction quality as the top priority; but it takes a period to complete the maintenance and treatment of green planting[3]. The management rules and regulations are established for relevant personnel to ensure the quality of green planting in the requirements of key technologies. This is to ensure that urban construction can beautify and environmentally improved. Thus, this can allow people to achieve visual satisfaction and quality of life as it can be developed healthily. Finally, promoting the development of modern cities, improving environmental quality and beautifying urban construction require effective improvement of planting and maintenance of green plants.

References

- [1] Yang YR, Wei HF, He Z, Wei MC. Analysis on the Organization and Management of Greening Planting in Landscape Engineering[J]. Agriculture & Technology, 2016, 18:210.
- [2] Luo JC. Research on Greening Planting Construction Process in Landscape Engineering[J]. Metallurgical Series, 2017(5):226-7
- [3] Zhou LL. Research on Key Technologies of Greening Planting Construction in Landscape Engineering[J]. Henan Building Materials, 2018(1):67-8.