
Landscape Design of Shui Xiu Yun TianGreen Space

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Abstract

Urban street green space is the carrier of urban image display. It not only reflects the development progress of a city, but also reflects the depth of life of urban residents. The common development of urban landscape and urbanization process is conducive to maintaining a good ecological environment of the city. The changes in people's lifestyles and the pursuit of quality of life have also led to the rise of modern landscape design from functional form to spiritual level. The design is based on the street green space of Yiyang City, Hunan Province. As a sustainable development city, Yiyang not only has abundant natural resources, but also has a profound cultural heritage. Under the premise of postmodernism, the design is based on circles and curves. The carrier integrates local cultural characteristics and uses the sponge city theory to realize the water-elastic design within the whole site, creating a new urban space integrating leisure, entertainment, ecological development and cultural display.

Keywords

Street green space ;City culture; Elastic design.

1. Introduction

Located in the north of Hunan Province, Yiyang is one of the core cities of Dongting Lake Economic Zone. It is located in the middle and lower reaches of cross-capital water, at the end of Yuan River and Li River.^[1-4] It is surrounded by the southwest of Dongting Lake. It has beautiful lake mountains and rich humanities.^[5-9] In recent years, the population growth and economic development, coupled with the aging of urban green space, have led to the decline of green space capacity and serious damage.^[10] Urban landscape construction and renewal is an important measure to improve the quality of life of residents. This design chooses an industrial wasteland near the river as the base site, combines the needs of the surrounding residents, and integrates the urban cultural characteristics, and forms a new landmark of urban landscape.

In the context of sustainable urban development, the construction of wasteland as a greening system is an ecological choice. The goal of Yiyang Urban Ecological Planning is to build a mountain and water ecological city and a leisure tourist resort, that is, to build Yiyang into a mountainous city with economic prosperity and beautiful environment. Strengthen urban ecological construction and protection, and transform the ecological environment of Yiyang City into a sustainable ecosystem of greening, purification, beautification and activation, and build a good ecological environment for social and economic development. Emphasis on strengthening the protection of human resources and the creation of distinctive features, the central city should show the cultural context.

2. Yiyang street green space design base

The design site is located at the north end of Zijiang Bridge in Ziyang District, Yiyang City, Hunan Province. It is on Zijiang East Road in the South and on Wuyi East Road in the north.

2.1 Location analysis

The surrounding areas are mainly urban commerce, public centres and residential districts, with a large flow of people. To the west, the city Traditional Chinese Medicine Hospital and the North Gate Shopping Market are dispersed in turn. The remaining three sides are residential areas. The East and north sides are commercial buildings, and the surrounding areas are Chenghuang Ancient Temple, the scenic belt along the river, Jinhua Park and other public spaces. The design block is a complete quadrilateral with an area of about 3 hectares. The site was originally used by a factory, and there are two dilapidated factories. The site has been idle for many years, and the vegetation growth is disorderly, which seriously affects the landscape integrity of the surrounding areas.

2.2 Geographical climatic conditions

Yiyang is located in $110^{\circ}43'$ to $112^{\circ}55'$ in the East longitude, and $27^{\circ}58'$ to $29^{\circ}31'$ in the North latitude. It belongs to the subtropical monsoon climate. The temperature is South wind prevails in summer half year, high temperature, high humidity and rainy, north wind prevails in winter half year, cold, dry and little rain. The annual average temperature is $16.1-16.9^{\circ}\text{C}$, sunshine is 1348 - 1772 hours, frost-free period is 263 days - 276 days, rainfall is 1230 mm - 1700 mm. From south to north, there is a cascade inclination. The southern half is hilly and mountainous area, which belongs to the remnants of Xuefeng Mountain. The northern half is the Dongting Lake silt plain, which is a school of water village scenery.

2.3 Regional Culture

In a city, know a city. The most profound way to understand a city is its culture. Urban culture is the concentration of the city in the long history, the refinement of material and spiritual, the essence and soul of the city image, which bears the memory of the city.

Yiyang is one of the famous historical and cultural cities in Hunan Province. It is one of the birthplaces of Chu culture. It has beautiful mountains and rivers, and a great collection of cultural celebrities. Longzhou Academy is one of the four ancient academies in Hunan Province. In addition, yiyang Black Tea is one of the famous ancient tea in China. It has excellent medicinal and health functions. Its tea culture is an important branch of Yiyang culture. And yiyang, as the "land of Nanzhu", is rich in bamboo resources. It is very common to appreciate bamboo, watch bamboo, eat bamboo and use bamboo. Bamboo weaving, bamboo carving, bamboo depression, bamboo ornaments and other special crafts are well known throughout the country.

3. Yiyang street green space design concepts and principles

3.1 Design concept

"Xiangyun" has been auspicious and wishful since ancient times, and is a representative symbol of China. Drop a stone on the calm water surface, and the water ripple will generate resonance waves around it, which will spread out. This is the water ripple effect. In China's landscape paintings, circles and curves are used as the main outlines of the design. The meanings of "Xiangyun" and "Water Pattern" are integrated into the design, aiming at injecting cultural atmosphere into life and generating positive thought resonance. Roundness is the most original form of nature, with a sense of mystery and tolerance. Since ancient times in China, it has the meaning of perfection and harmony. The circle is balanced in visual gravity, has a convergent and implicit beauty, and has the characteristics of softness, kindness and safety. Curves have the dynamic sense of moving clouds and flowing water. Their coherent soft turning gives people a comfortable sense of rhythm. They also imply twists and turns. Life is full of "curves".

3.2 Design vision

The goal of this paper is to create urban landmarks, inherit the essence of urban culture, and awaken the city's vitality. Urban landmark is the reflection of urban memory, it represents the development of an era. The concept of green development extends urban landmarks from architecture to landscape.

Landscape landmarks with symbolic, aesthetic, ecological and functional meanings are more conducive to urban development. And visual representation of landscape symbols, or metaphorical connotations of landscape facilities, gives the site cohesion and historicity, so that people feel urban culture in daily leisure, bathed in cultural atmosphere, so that urban culture becomes a part of life, with the proliferation and inheritance. In addition, the construction of this project can effectively improve the quality of life of the surrounding residents, slow down the aging of the scenery along the river, awaken the vitality of the region, connect the urban context, and grow with the city. At the same time, it is also of great significance to the renewal of the old blocks.

3.3 Design principles

The design principles of this paper reflect the functionality, ecology, interactivity and culture of the design. Functionality is the foundation of urban landscape design. Ecology is mainly reflected in the status quo of planting, combined with landscape functions, using strategies such as retention, transplanting and replanting to achieve sustainable development and upgrading. At the same time, using the sponge city theory to strengthen its ability to retain water, and realize the recycling of rainwater through drainage facilities.

4. Yiyang street green landscape design plan

This design takes various forms of water as the prototype, evolves different site design forms, takes cloud as the source of traditional culture, and integrates local culture into details to meet people's physiological and psychological needs of the site. The design can be divided into four landscape zones, vibrant open zone, smart viewing zone, leisure communication zone and quiet ecological zone.

4.1 Vitality open zone

Vitality is divided into three parts: Cultural Interpretation of historical celebrities, children's venues and service buildings. Cultural interpretation of historical celebrities takes cultural wall as the main carrier of interpretation. It is illustrated by specific relief and text. Sculpture is embellished in the venue, which is both cultural and interactive. At the same time, in the ground pavement design carving. Children's playground is mainly played in sand and shallow water, and the surrounding area is equipped with adult leisure stools. Service buildings include bicycle parking area, toilet and corridor space.

4.2 Smart viewing zone

The smart ornamental area is mainly composed of waterscape, which is a miniature of water resources. The design of the revetment adopts the form of hierarchical planting trough, planting ornamental aquatic plants, adapting to the change of water level caused by the increase of precipitation in rainy season, embellishing the water surface with phytoplankton, planting aquatic weeds on the bottom of the water, and purifying the water body.

4.3 Leisure zone

Leisure communication area is mainly tea culture, reflecting the artistic conception of tea. It mainly includes leisure teahouse and tea charm square. The public tea room is not only a good place for the leisure gathering of middle-aged and old people, but also a carrier for spreading the black tea culture to the residents' life. The black tea craft makes the scene sculpture, echoes with the tea plant landscape, enables more people to be familiar with the black tea culture.

4.4 Quiet ecological zone

The quiet ecological zone is mainly divided into two regions: bamboo culture display and plant ornamental. Different people have different perceptions of bamboo. The "Zhizhu Pavilion" is a good place for people to exchange leisure. The bamboo products displayed in this area embody the beauty of bamboo weaving, carving and decoration in Yiyang. Ornamental trees and flowering plants are planted in the ornamental area of the plant to decorate the jumping colors.

5. Conclusion

The design is people-oriented, and the scale space meets the physiological and psychological needs of human beings. Starting from the functional point of view, considering the ecological and regional cultural characteristics, and fully considering the needs of people at all levels, this plan designs a suitable activity site for people of all ages, the setting of its sponge body, the ecological restoration of the site, and the overall maintenance of the surrounding landscape. It is of great significance that the rainwater collection system in the site is conducive to alleviating regional drainage problems in the rainy season. The embedding of regional characteristic symbols, taking into account the concept of landscape and culture, is conducive to the dissemination of urban culture and the refinement of site spirit.

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References

- [1] XU Chen, CHEN Weixiao, YANG Jin. Ecological Sense, Behavior Orientation and Policy Transformation in Rural Planning: Taking L Town in Suqian as an Example [J]. Ecological Economy, 2016, 28(1): 36-39.
- [2] Zhouyong. Landscape Greening Design Based on the Concept of Sponge City [J]. Highway, 2018, (11): 309-311.
- [3] Lu Wenmei, Zhang Yunsheng. Social research report guiding urban greening construction with ecological concept [J]. Biology Teaching, 2004, 29 (6): 39-40.
- [4] Wang Lei. Analysis of Tea Cultural Landscape Function and Planning Design [J]. Tea in Fujian, 2018, (01): 220-221.
- [5] Di Chang, Xia Zhang, Qiong Liu, Ge Gao, Yue Wu. Location based robust audio watermarking algorithm for social TV system. In Pacific-Rim Conference on Multimedia 2012 Dec 4 (pp. 726-738). Springer, Berlin, Heidelberg.
- [6] Di Chang, Xia Zhang, Yue Wu. A Multi-Source Steganography for Stereo Audio. Journal of Wuhan University (Natural Science Edition). 2013; 3: 277-284.
- [7] Zhang Xia, Chang Di. Sonic audio watermarking algorithm for cable-transmission. The 2nd International Conference on Information Science and Engineering, Vol. 7, 2010, pp. 5395-5398. IEEE Catalog Number: CFP1076H-PRT, ISBN: 978-1-4244-8096-8.
- [8] Zhang Xia, Chang Di, Huang Qian. An audio digital watermarking algorithm in DCT domain for air-channel transmitting. Journal of University of Science and Technology of China, Vol(41), 2011.7, pp: 642 – 650
- [9] Zhang Xia, Chang Di, Guo Wei, etc. An Audio Steganography Algorithm Based on Air-Channel Transmitting. Journal of Wuhan University (Natural Science Edition), 2011, 57(6): 499 – 505.
- [10] Chen Rui. Landscape Planning and Design of City Waterfront Ecological Park with Characteristic Tea Culture [J]. Tea in Fujian, 2017, (08): 113-114.