

Original Research Article

Research on landscape design strategies of pocket parks in the microrenewal of old urban communities a case study of Shangcheng district Hangzhou

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Abstract: As China's urbanization has entered the stage of stock transformation, the contradiction between the lack of public space in old urban areas and the growth of residents' living needs has become increasingly prominent. Pocket parks, as an important carrier of micro-updating in old cities, have advantages such as flexible location selection and proximity to residents. Based on this, this paper conducts an in-depth analysis of the construction of pocket parks in the Shangcheng District of Hangzhou. From the dimensions of space efficiency, functional design and regional culture, this paper analyzes the construction of pocket park in Shangcheng District of Hangzhou, which provides some reference for urban renewal in similar areas.

Keywords: Hangzhou; old community; urban micro-updating

1. Introduction

With China's new-type urbanization advancement, urban development has shifted from incremental expansion to stock optimization. Urban micro-renewal focusing on old communities is a key direction for improving urban quality and residents' well-being. Old urban communities have high population density, aging facilities, insufficient green space and weak cultural display, restricting living environment improvement and regional context inheritance. Pocket parks, as small, distributed and accessible green spaces, can use idle land in old communities and supplement public activity places, solving the public space shortage. At present, pocket park construction in major Chinese cities has achieved phased results, but some old communities' landscape design has problems like single function, insufficient humanization, weak cultural integration and low space utilization. As a typical old area in Hangzhou, Shangcheng District has explored pocket park construction in urban micro-renewal and formed a replicable design model. Based on Shangcheng's cases, this paper explores landscape design strategies for pocket parks in old urban community micro-renewal, providing theoretical and practical references for other cities' old community public space construction.

2. Overview of the case in Shangcheng district, Hangzhou City

In recent years, as the core area of Hangzhou's old city district, the Shangcheng District has regarded the construction of pocket parks as an important part of the "Making Our City More Beautiful" initiative. More than 30 types of pocket parks will be built by 2025, covering many old districts such as Ziyang, Jianqiao, Wangjiang and Pengbu. These parks have significant exemplary significance in Zhejiang Province and even throughout the country^[1]. The Shangcheng District is the central urban area of Hangzhou, with a long history and numerous old residential areas. Residential areas built before 2000 accounted for over 60% of the total, all concentrated in this area. They generally have the characteristics of early construction period, high population density and small public green space. Before 2020, the average public green space area for residents in these old residential areas was less than 3 square meters, far below the average level of Hangzhou. Taking advantage of the policy opportunities brought by the improvement of urban environmental quality during the Asian Games and the renovation opportunities of old residential areas, the Shangcheng District made full use of various idle spaces and built small parks. From 2021 to 2024, the total area of new small park green spaces exceeded 150,000 square meters, benefiting nearly 200,000

households. The construction of these small parks in uptown has not only effectively improved the area's green coverage, but also improved the community facilities and solved a series of environmental problems that have long plagued residents.

This study selected four representative completed projects as the analysis samples. Their basic information is as follows:

- (1) Wen Chao Park: Located at the intersection of Yindu Road and Wen Chao Road in Wangjiang Subdistrict.
- (2) Pocket Park under the Northwest Overpass of Shide Road: Located in the south of Shengshangju Community on Jiachao .
- (3) Ancient Tree Park in Ziyang Subdistrict: Located at No. 401 Jiangcheng Road in Ziyang Subdistrict;
- (4) Tiancheng Unit Facility Pocket Park: Located at the intersection of Yicheng Road and Meijiaqiao Street, Jiachao Street.

3. Case study and analysis of landscape design for pocket parks in Shangcheng district, Hangzhou

3.1. Spatial efficiency

The location of Wenhao Park is adjacent to three large residential areas and Wangjiang Community Center. The surrounding residents are mainly elderly people and children, who have a strong demand for recreational spaces. Therefore, 2000 square meters of open grassland is reserved in the central area as the core area for public activities, which can meet the needs of various functions such as community markets, outdoor exhibitions and residents' fitness activities. Surrounding this area, four independent modules were set up, including a children's play area, an elderly fitness area, an aromatic plant technology area, and an Asian Games-themed landscape area. These modules are connected by a 2-meter-wide circular garden path. The park also provides wireless charging stations, accessible ramps, children's wash basins, and emergency call devices, covering the needs of all age groups from children to the elderly. Below the stone bridge, on the side close to Desheng Middle Road, a 2-meter-wide non-motorized vehicle lane was set up to meet the daily transportation needs of residents^[2].

3.2. Functional design

The overall layout of the ancient tree park is centered around the group of ancient trees. The existing pavilions and buildings have been preserved as the core leisure space. The road design completely avoids the root areas of the ancient trees and only renovates the original slippery floor tiles to achieve the purpose of slip prevention. By pruning the dense vegetation, more hydrangeas and lilies of the valley were planted in the gaps between the old trees, which not only did not destroy the growing environment of the old trees, but also enriched the landscape hierarchy. During the renovation process, the design team fully listened to the opinions of the residents and retained some of the familiar original facilities, such as stone tables and stone benches. Only the damaged parts were repaired. In the Tiancheng Unit Pocket Park, facilities such as bicycle parking areas, temporary courier storage points, and public restrooms were set up, located near the center of the community. On the side close to the center of the residential area, to meet the daily convenience service needs of the residents^[3].

3.3. Regional culture

The pocket parks in the Up Town District mainly use local plants from Hangzhou to reduce long-term maintenance costs. Wenhao Park incorporates the concept of "the three colors of the Asian Games" in its plant configuration. The upper layer uses local trees such as camphor and osmanthus as the framework, the middle layer combines colorful plants such as red maples and camellias, and the lower layer plants such as mint, rosemary, and gardenias from Hangzhou, forming a plant landscape that features "flowers throughout the year and fragrance all year round", and serving as an educational base for the aroma of plants for the surrounding primary school. The Old Tree Park strictly protects the old tree community. All the bottom plants are shade-tolerant native species to avoid the introduction of alien species that may affect the growth

of the old trees. Shide Liangjiao Park, considering the insufficient lighting in the bridge area, chose plants such as lilies, hyacinths, and begonias that are tolerant of shade, forming a plant community adapted to the environment of the bridge area.

4. Conclusion

Building pocket parks in old urban areas is a systematic project. Its core value lies not only in increasing the urban greening coverage rate, but also in enhancing community cohesion and improving urban livability through the renovation of small spaces. The practice in Shangcheng District, Hangzhou, shows that the successful design of pocket parks requires breaking away from the traditional thinking mode of landscape design, adhering to the core orientation of "people-oriented", and integrating spatial design with social governance, cultural inheritance and public welfare services to achieve the improvement of spatial quality and the enhancement of residents' sense of happiness.

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