Research on Operability—Based Color Planning of Anlu City in Hubei Province

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Abstract. To complete the urban color planning of Anlu city, practical and feasible work schemes and technical paths have been formulated against specific projects, and analyses of natural color, cultural color, traditional architecture color, modern architecture color and regional development personal color have been conducted in succession. Based on the above, the urban collective chromatogram is obtained, the dominant color of Anlu city extracted, and overall strategy for color planning proposed. Then according to the three joints divided, corresponding color control guide rules are proposed for five-color area. In this way, not only relatively consistent urban color style can be established, but also individual pursuit of color for areas with different functions can be satisfied. At the end, several suggestions are put forward to ensure color planning implementation and management.

Introduction

With constant development of cities and accelerated urbanization, urban color style has attracted more and more attention, and as a result, urban color has also become a hotspot in urban planning and construction [1]. Therefore, it has become the development goal for many cities to seek unique urban color. This paper, with a case study of the color planning in Anlu city of Hubei province, attempts to seek urban color planning and control methods consistent with Anlu characteristics, and expects to provide referable value for color planning of other cities.

Urban Color Survey

Natural Color

The ancient city of Anlu was originated from the convergence of Cuoshan River, Haizi River and Fu River. The city is closely related with river, for it has Fu River in the west, Cuoshan River in the north and Haizi River in the south. The city boasts interconnected water and land as well as surrounding mountains and hills. Baizhao Mountain gained overnight fame thanks to the residence of Li Bai, a famous poet in Tang dynasty. Well-known works in the literary history of China enable its natural landscape to pass from one generation to another. In Qianchong, ancient gingko trees dot the mountains and hills, presenting an enchanting scenery. Urban color should be in the same pace with natural environment, so in color we should mainly choose the architecture environment of light green, light blue and light yellow for coordination.

Cultural Color

The arrival of Li Bai had peaked the cultural accumulation of this city, not only bringing here the prosperous culture of the flourishing Tang dynasty but also leaving behind eternal poetry on this beautiful land. All these historical legends and heritage become the cultural accumulation of today’s
construction. Besides, Anlu is also famous for wash painting caricatures. And it was designated “home for Chinese caricature art” in 1993. The handicraft textile also boasts delicate and colorful patterns. Among them, representative works are chosen for color extraction, so as to draw the color spectrum map consistent with them. As a result, cultural color of gray blue and red brown is obtained.

**Traditional Architecture Color**

A survey of traditional historic architectures in Anlu was conducted, where all these ancient architectures reflect the important historical position of it as well as the glorious level of Chinese ancient architectural technology. The most characteristic and representative historic architectures include Jinquan Temple, Dehui Temple, four Number One Scholars Lane Relic as well as Floating Cloud Building Relic. Through visual comparison of color atlas, color samples and pictures were taken. In this research, Chinese Architecture Color Atlas based on GB/T15608-1995 *Chinese Color System* was adopted to conduct urban color survey, “Monsel system” was also applied to carry out digital expression of sampled colors, and then quantitative analysis was conducted of hue, brightness and saturation of colors. At the end, the current color spectrum of the region was summarized, and the conclusion was obtained that traditional architectures are mostly in the color of red brown, ink and gray white [2].

**Modern Architecture Color**

We also conducted a survey of modern architectures of Anlu, dividing them into six types, namely residence, public facilities, industrial buildings, construction structures, temporary buildings and parergon buildings. The survey adopted the same data collection and collation methods same to those of traditional architectures, so as to sum up the status of modern architecture color [3]. Meanwhile, the one hundred-plus architecture roof and wall colors are summed up, so as to obtain the collective chromatogram consisted of colorless system, gray blue system, beige gray system, yellow brown system, red brown system, pink gray system and flying color system. It has objectively reflected the overall color style of modern architectures in Anlu city.

**Regional Development Individual Color**

The urban functions of Anlu city include innovation-driven industrial base, production-city integrated demonstration city as well as political, cultural and business center. Innovation-driven and production-city integrated areas or streets are dominated by white, light blue or light green. Meanwhile, bright colors are chosen as sideline in combination of public service function, presenting an impression of stability mixed with liveliness.

Through the above analysis, summarization and collation of various color tables, the overall color spectrum of Anlu city can be obtained. The spectrum is a direct summary of city colors, which can control the overall framework of urban colors and serve as the precondition to highlight urban characteristics and inherit urban culture in urban color planning [4].

**Color Control Planning in Anlu City**

**Overall Strategy of Color Planning**

- **Base on nature and respect ecology.** The natural landscape and ecological corridor of Baizhou Mountain, Gingko Valley and Fu River are set as the background color of the city. The natural landscape shall be creatively integrated into the urban color system.

- **Highlight multiple colors and regard characteristics as guide.** According to the function division of different districts in Anlu, conscious efforts should be made to differentiate and guide in terms of architectural colors, so as to fully reflect intelligence and meanwhile create recognizable and representative colors.
Reproduce rhythm in harmonious coexistence. Brightening design should be conducted of important visual focuses, axes, joints and facades, so as to increase visual sensitivity and highlight key points. Meanwhile, color harmony and consistency should also be stressed, so as to create a flowing urban space with rhythms.

Control Guide in Division Color Planning

In this planning, the approach of “giving a guiding role to sub-districts and highlight local areas” is proposed, in which the color space adopts the shaping method of “three joints” and “five-color area”.

Comprehensive bright color joints. This joint is located at the center of central comprehensive area aimed at forging a business complex of old town, hence an upgrading for the central part of the old town of Anlu city. It is suggested to use color system with high saturation degree like warm red gray system and pink red system accompanied by bright color system like brown.

Cultural bright color joints. This joint is located at the center of Hexi area and the convergence of Bixun Road and Binhe Avenue. Planning should utilize large area of green land for planting so as to fit with architectures with harmonious colors, fully reflect the interacting role of high-speed railway, and shape the image of Anlu city. It is suggested to use colorless system dominated by bright and cold colors.

Business bright color joints. There are in total three business bright color joints. South comprehensive bright color joint serves as an exhibition area of the portal of southern Anlu, which fully reflects the urban image of Anlu and creates a southern business complex based on Taibai Avenue and Handan road. North comprehensive bright color joint bases on current business hotels, banks and offices to create a northern and surrounding business complex. East comprehensive bright color joint, located at the center of economic and technological development area, bases on Fazhan Avenue and Bixun Road as well as the eastern market to create an eastern business complex. It is suggested to adopt warm colors as the basic tone like warm yellow, warm grey, light brown and beige accompanied by light gray, white, sky blue and dark red, etc.

Eastern comprehensive area and northern residence area. Eastern comprehensive area features functions like residence, business, education, living service, supporting industry and logistics. Northern residence area focuses on living quarters and living services. Color selection shall be combined with relaxing and cozy tones. It is suggested to use warm beige gray and gray red systems with a focus on brightness and warmness.

Hexi area. This area locates at the west bank of Fu River and at the east of Xiao-Xiang city expressway. Color selection should consider the coordinating relationship of “high-speed railway” and “new district”. It is suggested to use colorless system with a focus on bright and cold colors. This area is a newly planned district, so in the future high-speed railway will also be put there, hence representing the image of Anlu portal. Therefore, it is suggested to use colorless system with a focus on bright and cold colors.

Southern comprehensive area. This area, located at the west of Taibai Avenue and at the east of Fu River, is an area dominated by new technology. Planning should display the spirit and style of modern new industrial area. It is suggested to use warm wood gray and gray blue systems accompanied by colorless system and gray red system with a focus on bright and warm colors.

Northern industrial area. This area, located at the east of Taibai Avenue, at the north of Jiefang Avenue and at the south of Gingko Avenue, is a district with a focus on developing Anlu-characteristic sectors. This area bases on existing industry at the east for structural adjustment and upgrading to build a new industrial park. This area is featured by new technology industry, so color selection should pay attention to coordinating with industrial area color. It is suggested to use gray blue and colorless systems like gray, white accompanied by gray red.
Color Planning Implementation and Management

This planning also proposes a scheme for implementation and management of Anlu urban color, including architectural color guidance into regional city design results and color division into division control guide rules as technical foundation for monitoring and approval [5]. Specifically speaking, color guide rules and architectural color guidance are used as reference to response color appeals and formulate color solutions. Meanwhile, through the next round of design and approval as well as the processes like rejection, adjustment and approval, guide color concepts and color adjustment scope will be provided for final examination and approval. At the end, in accordance with the reasons of final examination and approval, color guidance will be provided.

Summary

Urban color is the accumulation and deposit of the historical development of a city. Under the background of new-type urbanization, the rapid development of cities and towns is leading to the disappearance of local characteristics, while the planning and design of urban color serve as not only an important approach to forge city characteristics, but also the exclusive requirement for perfecting urban landscape and improving urban environment quality. Therefore, establishing an urban color style belonging to its own is completely necessary. On the basis of comprehensive survey, the relatively objective urban collective chromatogram is summarized, and the systematic planning strategy is adopted to guide the orderly implementation of color planning. In addition, when paying attention to the whole color atmosphere, the guidance of color using for sub-districts are put forward. In order to concretely implement and manage color planning, feasible solutions are concluded.

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