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South China University of Technology

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南华西街历史文化街区色彩管控研究

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摘 要

在存量更新与历史文化保护并重的城市发展背景下，历史文化街区的更新模式正由“大拆大建”转向以精细化治理为导向的“微更新”。在这一转型过程中，城市色彩作为塑造街区整体风貌与空间感知的重要要素，不仅承载地域文化与历史信息，也是引导空间秩序优化与形象重塑的关键媒介。然而，当前历史文化街区更新中普遍存在色彩失序、缺乏系统管控及设计方法碎片化等问题，亟需建立科学、可操作的色彩管控体系。

本文以广州市南华西街历史文化街区为研究对象，在梳理城市色彩相关理论与国内外实践经验的基础上，构建面向本土情境的色彩引导方法。首先，通过文献研究与案例分析，总结城市色彩规划的发展路径，重点借鉴都灵等成熟案例的色彩调查与分级管控经验。其次，结合实地调研与图像分析，对片区街巷界面与建筑立面色彩进行定性与定量研究，从色相、明度、彩度及综合色彩关系等方面识别其现状特征与主要问题。

在此基础上，本文构建了“目标—原则—策略”的色彩引导体系：在目标层面，强调风貌保护、色彩整合与空间品质提升的协同实现；在原则层面，提出保护优先、整体协调、多样共生与渐进更新；在策略层面，从街区整体、重点界面及建筑单体三个尺度，提出综合色彩控制、界面连续性引导及立面分层设计等方法。同时，根据空间特征划分重点控制区与一般引导区，针对骑楼街与居住片区提出差异化管控策略。

在设计实践中，选取南华西路、同福西路及洪德路等典型街段进行验证。骑楼街侧重塑造连续统一的街道界面形象，强化整体识别性；居住片区则通过立面整治与分层控制，提升环境品质与生活秩序。研究表明，以城市色彩为切入点，可在保护历史风貌的同时有效优化空间环境，并通过“分析—导则—设计”的路径提升管控的系统性与可实施性，为类似历史文化街区的更新提供参考。

关键词：历史文化街区；城市色彩；色彩管控；微更新；南华西街

Abstract

Amid the shift from large-scale redevelopment to incremental “micro-renewal”, the regeneration of historic districts increasingly emphasizes refined management alongside heritage conservation. Urban color, as a key factor shaping visual character and spatial perception, carries cultural and historical meaning while guiding spatial order and identity. However, current practices often face problems such as color disorder, lack of systematic control, and fragmented design approaches, calling for a coherent and operable color management framework.

This study focuses on the Nanhuaxi Historic District in Guangzhou. Based on a review of urban color theories and relevant practices, it develops a context-responsive color guidance approach. Through literature review and case analysis, it summarizes the evolution of urban color planning and draws on established experience, particularly from Turin, in color survey and hierarchical control. Field investigation and image-based analysis are then employed to examine street interfaces and building façades, identifying key characteristics and issues in terms of hue, value, chroma, and overall composition.

A “goal-principle-strategy” framework is subsequently constructed. The goals emphasize coordinated heritage conservation, color integration, and spatial quality improvement. The principles include conservation priority, overall coordination, diversity within unity, and incremental renewal. Strategies are proposed at three scales—district, interface, and building—covering comprehensive color control, interface continuity, and layered façade design. The study further defines key control zones and general guidance zones, proposing differentiated approaches for arcade streets and residential areas.

Design tests are conducted on typical streets, including Nanhuaxi Road, Tongfuxi Road, and Hongde Road. Arcade streets focus on enhancing visual continuity and identity, while residential areas emphasize façade improvement and environmental quality. The results demonstrate that urban color can serve as an effective entry point for balancing conservation and spatial optimization. The proposed “analysis-guideline-design” approach improves both the systematic and practical aspects of color management and offers a reference for similar historic district regeneration.

Keywords: Historic District; Urban Color; Color Control; Micro-Renewal; Nanhuaxi Street

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Chapter 1 Introduction

1.1 Research Background

As urban development in China shifts from incremental expansion to the improvement of existing built-up areas, historic and cultural districts have gradually become key targets for the coordinated advancement of urban regeneration, cultural heritage preservation, and spatial quality enhancement. Unlike ordinary built-up areas, such districts not only embody local historical information and collective urban memory, but also sustain continuous community life and everyday activities. Their renewal and transformation therefore concern not only the improvement of physical spatial quality, but also the continuation of historical context and the preservation of local identity.

With the gradual withdrawal of conventional large-scale demolition-and-reconstruction approaches, how to promote the renewal of historic districts in a more refined and incremental manner—while preserving existing urban fabric and the continuity of everyday life—has become a critical issue in contemporary urban regeneration.

Within this context, color, as an important medium for the perception of urban character, spatial recognition, and regional expression in historic districts, has increasingly become a key factor influencing overall environmental quality. However, many such districts still face problems during the renewal process, including functional decline, disorderly urban character, fragmented street interfaces, and insufficient regulatory frameworks. This is particularly evident in arcaded street districts, where fragmented property ownership and mixed functions make comprehensive redevelopment difficult. Under these conditions, how to employ phased and implementable color control strategies to coordinate heritage conservation, spatial improvement, and functional revitalization has become a significant practical issue worthy of in-depth study.

1.1.1 Dilemmas Facing Historic and Cultural Districts

Historic and cultural districts serve as important spatial carriers of urban heritage, local memory, and community life. Their sustainable development depends not only on the overall continuity of historic character, but also on the ongoing support of everyday functions and urban vitality. However, under the combined influence of urban transformation, shifting consumption patterns, and lagging governance mechanisms, many such districts are currently confronted with a dual dilemma characterized by both functional decline and disorder in urban character. This situation is particularly evident in Lingnan arcaded street districts.

On the one hand, the rapid development of the digital economy and changes in consumer

behavior have continuously undermined traditional small-scale businesses that rely on physical foot traffic. As a result, the original community-oriented commercial activities and street life atmosphere in historic districts have been gradually weakened. Functions such as traditional catering, daily retail, and repair services are in decline, while vacancy rates of ground-floor street-facing shops have increased. This has reduced the capacity of these districts to support everyday life, thereby weakening their characteristic vibrancy and sense of community cohesion.

On the other hand, many traditional buildings within historic districts exhibit mismatches with contemporary commercial demands in terms of spatial scale, lighting and ventilation conditions, structural performance, and facility provision. These limitations make it difficult to accommodate modern retail, cultural consumption, and mixed-use operations that require higher spatial quality and more flexible usage scenarios. Constrained by heritage protection regulations, technical challenges, and limited investment returns, such buildings often fall into a practical predicament of being “difficult to modify, difficult to use, and difficult to revitalize”.

At the same time, historic districts commonly face issues such as complex property rights, the coexistence of multiple stakeholders, and significantly divergent interests. In mixed-use areas represented by arcaded street districts, it is common for a single building to have multiple ownership entities, which complicates coordinated efforts in façade improvement, functional adjustment, and environmental upgrading. As a result, renewal activities often remain fragmented and individualized, limited to small-scale repairs rather than forming coherent and effective interventions at the district scale. Therefore, the challenges faced by historic and cultural districts today are no longer limited to physical renewal alone, but constitute a complex and integrated dilemma involving heritage conservation, functional adaptation, and implementation governance.

1.1.2 Limitations of Color Control in Historic Districts

In the renewal of historic and cultural districts, color serves as a critical visual medium for the identification of urban character, the perception of spatial order, and the expression of regional culture. Compared with relatively stable spatial elements such as building massing, height, and street layout, color is more susceptible to change during piecemeal repairs, functional turnover, and individual renovations. As a result, it often becomes a concentrated manifestation of visual disorder within the district. For historic areas characterized by continuous street frontages and coherent building ensembles, color not only affects the visual

coordination of individual façades, but also plays a key role in maintaining overall streetscape continuity, shaping historical atmosphere, and reinforcing spatial identity.

However, although urban color planning has been explored in some regions in China, specialized color control systems for historic and cultural districts remain relatively underdeveloped. Existing regulations and management frameworks are largely oriented toward the overall urban environment or general development areas. Systematic and detailed technical support is still lacking in areas such as the extraction of historic color palettes, the construction of control color charts, the coordination of materials and architectural components, as well as implementation and inspection procedures. In many cases, relevant requirements remain at the level of general principles, without being translated into operational tools that can directly support approval processes and on-site implementation. This significantly limits the effectiveness of color control in practice.

More importantly, the common conditions of fragmented property ownership, multi-stakeholder decision-making, and incremental renewal further exacerbate the consequences of inadequate color control. In the absence of clear guidelines and unified regulation, individual property owners or users often carry out renovations based on personal preferences, construction experience, or short-term commercial considerations. This frequently results in disordered façade colors, fragmented streetscape relationships, and the loss of historically significant color information. Particularly under conditions of phased implementation and long-term transformation, such unguided, localized interventions tend to produce a “patchwork” urban image, undermining both the overall environmental quality and the cultural legibility of the district.

By contrast, historic cities such as Turin in Italy have developed relatively mature systems of color planning and implementation through long-term practice. Through standardized tools, classified control methods, and relatively clear implementation mechanisms, these systems ensure that color control is both professionally grounded and operationally feasible, enabling the continuous improvement of historic environments without reliance on large-scale demolition and reconstruction. In the Chinese context, how to develop a color control approach that responds to the realities of fragmented ownership, mixed functions, and incremental renewal — while balancing heritage conservation with practical implementation—has become a pressing issue in the study of historic district regeneration.

1.1.3 Research Demand for Color Control Methods under a Micro-Renewal Approach

As China's urban development shifts from incremental expansion to the improvement of existing built environments, the conservation and renewal of historic and cultural districts have become a key component of urban regeneration. Unlike ordinary built-up areas, such districts are characterized by distinctive historical fabric, architectural character, and continuity of community life. Their renewal therefore involves not only the enhancement of physical spatial quality, but also the transmission of historical information, the continuation of local identity, and the maintenance of existing social relations. In this context, conventional renewal approaches dominated by large-scale demolition and spatial restructuring are often incompatible with the principle of conservation priority and incremental improvement, and may even result in the destruction of urban fabric, distortion of historic character, and disruption of everyday life.

In contrast, micro-renewal emphasizes small-scale, incremental, and low-intervention strategies, which are more consistent with the fundamental requirements of “conservation first, repair-oriented intervention, and moderate revitalization” in historic districts. Its core objective is not to create entirely new spatial images through drastic transformation, but to respect existing spatial structures and architectural features, and to gradually improve environmental quality through façade improvement, interface repair, facility upgrading, spatial infill, and environmental optimization. Recent practices have demonstrated that micro-renewal has become an important pathway for the revitalization of historic districts, accumulating considerable experience in heritage conservation, functional enhancement, and vitality regeneration.

However, existing research and practice tend to focus primarily on spatial improvement, functional introduction, and public environment upgrading, while providing relatively limited systematic responses to issues such as color order, the composite color relationships of street interfaces, and the control of attached elements. In fact, as a crucial component of the perception of historic character, color not only affects the visual coordination of building façades, but also directly influences spatial recognition, environmental atmosphere, and the continuity of historic identity. Without integrated guidance across building bodies, street interfaces, and attached layers, even well-improved local environments may fail to achieve coherent overall outcomes due to imbalanced color relationships.

Furthermore, color control is particularly well-suited to the context of micro-renewal, not only because of its inherent flexibility and capacity for phased implementation, but also

because micro-renewal emphasizes low intervention, gradual progression, and adaptive adjustment. The actual visual effect of color schemes is highly context-dependent, influenced by factors such as lighting conditions, material textures, street scale, and surrounding interface relationships. Through small-scale pilot projects, phased implementation, and continuous calibration within micro-renewal processes, it becomes possible to progressively identify and establish appropriate color systems, thereby reducing the risks and irreversible consequences associated with large-scale, one-time interventions. Meanwhile, given the long-term and phased nature of historic district renewal—where different street segments, ownership entities, and intervention periods are difficult to synchronize—the phased implementation mechanism inherent in micro-renewal provides a procedural basis for ongoing coordination and dynamic adjustment. This helps maintain overall color harmony and streetscape continuity, avoiding the emergence of a fragmented “patchwork” appearance.

In addition, micro-renewal emphasizes respect for existing historical structures and the continuity of community life. Small-scale color adjustments are more conducive to preserving collective memory and spatial character, while also encouraging resident participation, facilitating user feedback, and informing subsequent optimization. For historic districts with diverse building periods, varied façade materials, and highly mixed functions, this approach—characterized by repair, coordination, and gradual integration—is more compatible with real-world conditions. Particularly in Lingnan arcaded street districts, where building typologies are relatively homogeneous but ownership structures are complex and comprehensive redevelopment is difficult, color control can serve as an effective tool to coordinate heritage conservation, interface improvement, and functional revitalization with minimal physical intervention. It thus becomes a key lever for promoting incremental renewal.

Based on this context, this study adopts micro-renewal as its methodological framework and color guidelines as its regulatory foundation. Focusing on the historic and cultural district of Nanhuaxi Street in Guangzhou—a typical arcaded street area characterized by fragmented ownership, mixed functions, and the need for long-term incremental renewal—the research draws on both domestic and international theories and practices. In particular, it references the technical approaches and implementation mechanisms developed in the color planning of Turin, Italy. The study aims to explore a locally adaptable color control methodology for historic districts in China, and to further validate its feasibility in coordinating heritage conservation, spatial improvement, and functional revitalization through urban design

practice.

1.2 Research Objectives and Significance

1.2.1 Research Objectives

This study takes the historic and cultural district of Nanhuaxi Street in Guangzhou as its research object. In response to its practical conditions—characterized by fragmented property ownership, mixed functions, relatively homogeneous building typologies, and the need for long-term incremental renewal—the study adopts micro-renewal as the implementation approach and color guidelines as the regulatory foundation, aiming to explore a color control methodology applicable to arcaded historic districts.

Specifically, the study first systematically reviews the development trajectory, implementation logic, technical tools, and regulatory mechanisms of color planning in Turin, Italy. It extracts key experiences related to color survey, color analysis, guideline formulation, and implementation management in the context of historic urban areas, and clarifies the methodological core that can be adapted to the local context.

Secondly, based on the spatial structure, building typologies, existing color conditions, and character-related issues of the Nanhuaxi Street historic district in Guangzhou, and drawing upon statutory conservation and development plans as well as field investigations, the study constructs a composite color control system and a hierarchical, category-based guideline framework suited to local conditions. This framework provides a basis for color regulation, interface optimization, and incremental renewal within the district.

Finally, building upon the established guideline system, the study integrates color control with micro-renewal design. Through district-scale urban design and targeted interventions in key areas, it tests the feasibility and applicability of the proposed methodology, and explores an integrated renewal approach that coordinates heritage conservation, spatial improvement, and functional revitalization.

1.2.2 Theoretical Significance

(1) Expanding the analytical dimension of micro-renewal research in historic districts.

Existing studies and practices largely focus on spatial improvement, functional introduction, public environment upgrading, and vitality enhancement, while systematic discussions on color order, the composite color relationships of street interfaces, and the control of attached elements remain relatively limited. By incorporating color control into the research framework of micro-renewal, this study emphasizes the fundamental role of color in the continuity of historic character, spatial recognition, and environmental coordination,

thereby enriching the integrated research paradigm of “conservation – improvement – revitalization” in historic and cultural districts.

(2) Establishing a methodological bridge between mature international color planning practices and local historic district renewal.

Rather than merely presenting or comparing the case of Turin, this study focuses on extracting its core methodologies, including survey and analytical techniques, classification-based control approaches, and implementation mechanisms developed in historic urban contexts. These are then reinterpreted and reconstructed in response to the realities of Chinese historic districts, such as fragmented property ownership, incremental renewal processes, and multi-stakeholder negotiation. In doing so, the study provides a methodological reference for the cross-contextual lessons of color planning practices.

(3) Contributing to the development of color guideline systems for historic districts.

Focusing specifically on historic and cultural districts, this study attempts to establish a relatively comprehensive color guideline system through multiple levels, including palette construction, function-based zoning control, continuous interface regulation, building-type-based guidance, and façade-level control. This approach helps advance research on color in historic districts from principle-based discussion toward more operational rule-making, offering a referable theoretical framework for future studies of a similar nature.

1.2.3 Practical Significance

(1) Providing targeted references for color control and micro-renewal implementation in the Nanhuaxi Street historic district of Guangzhou.

In response to current issues such as disordered color schemes, “patchwork” street interfaces, weakened historic character, and the lack of overall guidance in renewal processes, this study develops a guideline system and design interventions to offer a clear basis for future façade repair, interface improvement, node optimization, and functional upgrading. In doing so, it aims to enhance the overall environmental quality and visual identity of the district.

(2) Offering a referable renewal approach for similar historic districts with fragmented property ownership.

Compared with renewal models that rely on large-scale redevelopment or tourism-driven transformation, the combined approach of color control and micro-renewal proposed in this study is more suitable for historic districts characterized by similar building typologies, complex ownership structures, difficulties in coordinated intervention, and the need for long-term incremental development. Its value lies not in providing universally applicable

design solutions, but in establishing an implementation method that allows phased execution, gradual adjustment, and a balance between individual interventions and overall coherence.

(3) Promoting a shift from fragmented repair to holistic optimization in historic district conservation and renewal.

By positioning color guidelines as a key regulatory foundation within urban design, this study seeks to coordinate interventions across building bodies, street interfaces, and attached elements under conditions of low physical intervention. This approach enables the integrated advancement of heritage conservation, spatial quality improvement, and the continuity of community life within a unified renewal framework, thereby offering practical insights for the refined governance and sustainable regeneration of historic and cultural districts.

1.3 Literature Review

1.3.1 Research on Color Planning in Historic Districts Abroad

The theoretical foundation of color conservation and renewal in historic districts originates from the evolution of international heritage conservation concepts in the 20th century. The transition of monument conservation toward a more scientific paradigm established its epistemological basis. *The Venice Charter* (1964) defined the principles of authenticity and the holistic protection of the environment, while the *Washington Charter* (1987) explicitly incorporated the color of historic buildings into the scope of conservation, thereby providing a normative foundation for urban color planning.

Within this context, in 1979, Turin introduced its first color plan under the direction of Giovanni Brino, marking the formal beginning of systematic *color planning* in historic urban areas. The subsequent development of related teaching and practice systems also contributed to the disciplinary formation of color planning in Europe. In addition, the four color application strategies proposed by Boeschstein — functionality, relationality, symbolism, and emotionality — provide a systematic framework for multi-scalar color design^[1]. These strategies echo the principles of the *Venice Charter* and establish fundamental analytical dimensions for subsequent research.

Contemporary research on urban color planning demonstrates a clear pattern of regionally clustered academic traditions. The Architectural Color Research Group (GICA) at the Polytechnic University of Valencia represents a central force in color studies within the Mediterranean region. Established in 1991, the group emerged in the context of Spain's democratization process in the 1980s, which prompted a reassessment of the modernist misinterpretation of color and the resulting widespread deterioration of historic urban

environments.

Led by Angela Garcia-Codoñer, the team has carried out systematic color restoration practices in historic cities such as Valencia, Cartagena, and Ontinyent^{[2][3]}. Their methodology is grounded in four key pillars: in-depth historical analysis, laboratory-based material testing, building typological classification, and public communication. In particular, they emphasize the use of color charts (*carta cromática*) to preserve the complexity of historic urban color, avoiding homogenization caused by oversimplification^[4]. This methodological approach directly inherits the scientific principles of the *Venice Charter* and the environmental conservation principles of the *Washington Charter*.

The Color Laboratory at the Politecnico di Milano focuses on innovation in technical tools for color planning. Ceconello and collaborators were among the first to introduce ontology representation into color planning knowledge management. By integrating virtual reality technologies, they evaluate color schemes for urban furniture in the historic center of Milan, providing practitioners with systematic decision-support tools for color selection and addressing the practical challenge of consistency evaluation in planning projects^[5].

Meanwhile, the Budapest University of Technology and Economics has developed a colordynamic planning method based on the Coloroid color system. Antal Nemcsics and Takacs established a color scale through harmony threshold rules. Their façade design proposal for the Buda Castle District won first prize in an international competition, demonstrating the practical potential of quantitative color harmony theories in real-world applications^[6].

In terms of color representation and quantitative analysis, research has focused on the fundamental question of how color is organized and contributes to the structuring of urban environments. Nguyen and Teller developed a user-oriented color representation protocol in Liège, demonstrating that four types of urban areas each possess distinct color palettes. Their findings provide a statistical basis for urban design decision-making^[7].

Yamamoto found that, following the enactment of Japan's *Landscape Act*, most landscape planning practices have adopted the Munsell color system to regulate façade colors. However, simply restricting chroma has proven insufficient for fostering local identity. Related case studies demonstrate that color can serve as an effective tool for urban regeneration and the construction of regional identity^[8].

Gasparini proposed a multi-scalar intervention methodology in the Valle di Ledro, successfully coordinating diverse contextual conditions while preserving the distinctive identity of local settlements^[9].

In the field of color perception and emotional association, the empirical research of Manav has opened up new pathways for applying color – emotion relationships in urban design. Through street-view adjective matching experiments, Manav established an environment – response paired lexicon and evaluated the influence of building materials on color perception, demonstrating that abstract color schemes can effectively predict the perceptual and atmospheric outcomes of design proposals^[10].

Further studies by Jaglarz confirm the significant impact of color on observers. The research highlights that the difficulty of predicting color aesthetics lies in the complexity of its effects on human cognition, emotion, and behavior. It also emphasizes the need for architectural education to incorporate more comprehensive knowledge of color and its human impacts, aligning with the pedagogical innovation goals of the New European Bauhaus^[11].

In terms of visual induction effects in color restoration, Serra et al. investigated the phenomenon of color induction in the restoration of historic façades, noting that the perceived color of decorative elements may deviate from their nominal color due to the influence of surrounding surfaces. Their study indicates that induced colors tend to exhibit lower lightness and slight shifts in chroma. Hue induction is more pronounced for low-chroma nominal colors when placed against warm-colored backgrounds. The induction effect is strongest when the lightness of the element is similar to that of the background but differs in chroma, while differences in hue have a comparatively limited impact. This research provides a quantitative basis for color restoration in historic façades and helps bridge the gap between theoretical studies and practical application^[12].

In terms of overall urban planning and specialized planning for historic districts, Stefano Boeri proposed the concept of “color-based placemaking”, aiming to reconcile the demands of urban continuity and renewal. Building upon prior research on color, this concept emphasizes the dual role of color in the re-signification of space and the preservation of identity, with particular attention to place specificity and human experience^[13].

In contrast, specialized planning for historic districts places greater emphasis on the heritage value of color. In 2008, Angela Garcia-Codoñer and colleagues regarded color representation as an integral component of historic urban heritage. Their practice demonstrated that urban color structures follow recurring patterns and typological methods. In 2015, Serra led a restoration study of the historic center of Valencia, where interdisciplinary collaboration helped to identify original architectural forms and color characteristics, thereby advancing the restoration of historic landscape values.

Badami, in developing a color planning methodology for the Aegadian Islands, focused on the management of urban imagery. The study explored how color plans can safeguard urban narratives and identity while resisting homogenization, and raised critical reflections on the innovative nature of Italian color planning. Meanwhile^[14], Mele cautioned that when color planning becomes an autonomous or self-contained project, it risks losing authenticity. He emphasized that architectural form, regional color characteristics, and surface traces are essential evidence for understanding historical evolution^[15].

At the level of theoretical frameworks, current research has yet to establish a unified paradigm for understanding color as a structural variable. Angela Garcia-Codoñer and her collaborators regard color representation as a heritage value that should be incorporated into urban restoration, while Stefano Boeri emphasizes the flexibility and temporality of color. The divergence between these positions stems from differing interpretations of the principles set out in relevant international charters, indicating a need for further theoretical integration.

In terms of technical approaches, although digital tools and standardized color systems have become increasingly mature, a gap remains between quantitative analysis and the cultivation of local identity. Various methods — such as ontology representation and colordynamic planning — still face challenges in cross-cultural adaptation and in balancing quantitative criteria with designers' subjective judgment.

At the level of practical implementation, experiences from Spain and Italy suggest that planning lacking historical analysis and public engagement may lead to architectural degradation, and that sustained involvement of academic institutions is crucial for ensuring scientific rigor. However, current research pays insufficient attention to long-term monitoring and dynamic evaluation after implementation. Strategies to address the risk of color planning becoming a self-contained or isolated endeavor also remain underdeveloped.

In summary, research on urban color planning has developed into a relatively mature system that aligns with the evolution of international heritage conservation principles. However, key challenges remain, including balancing standardization with local specificity, translating findings from color – emotion studies into practical applications, establishing dynamic evaluation mechanisms, and integrating divergent theoretical perspectives. These issues constitute critical directions for future research.

1.3.2 Research on Color Planning in Historic Districts in China

Since the 2000s, urban color planning in China has entered an initial stage of development. Various cities have gradually formed practice systems centered on the logic of

“regional culture + functional zoning”. In 2000, Beijing first designated a “gray-toned composite color” as the recommended color for building façades. In 2001, Beijing and Panjin jointly formulated the first specialized urban color plan. Subsequently, cities such as Wenzhou, Harbin, Wuhan, and Nanjing successively issued color plans. By 2006, Hangzhou and Chongqing also carried out related practices, preliminarily establishing a framework from macro-level tonal guidance to micro-level control^[16]. However, this stage still faced issues such as insufficient quantitative indicators and the need to improve public participation mechanisms.

Subsequently, urban color planning and control in China have gradually developed toward standardization, digitalization, and refinement. After 2010, the field entered a stage of systematization, with many cities issuing characteristic color guidelines and incorporating public participation mechanisms. In recent years, a dual advancement has been achieved: the release of the national standard *Urban Color Design Guidelines* in 2023 has promoted standardization, while cities such as Xiong'an and Changsha have realized full-process digital regulation of color through CIM platforms, forming a new paradigm of “culture + technology + ecology” coordination. However, issues such as insufficient quantitative indicators and the need to improve cross-regional adaptability still remain.

Against this background, color planning for historic and cultural districts, as an important component of urban color planning, has gradually differentiated from overall urban color planning and formed a specialized research field centered on conservation and renewal.

In terms of research categories, existing studies can be summarized into four main types: theoretical and methodological innovation, application of quantitative techniques, advancement of digital technologies, and exploration of practical strategies. Overall, the field shows a development trend from traditional color chart comparison toward intelligent, precise, and multi-dimensional analysis.

(1) Research on Theoretical and Methodological Innovation

Studies in this category aim to construct theoretical frameworks and methodological systems for color planning in historic districts. Research on the Nanjing City Wall and its surrounding areas (Jiang Yueting et al., 2010) was among the first to introduce color psychology into urban color planning. It established an intrinsic link between urban color and urban culture, transforming abstract principles such as “coordination with historical and cultural context” into operational planning methods. Through in-depth exploration of urban history and cultural characteristics, combined with analysis of public recognition, the study defined overall color positioning and zoning control, laying a theoretical foundation for

subsequent research^[17].

Research on grassland cities (Guo Lixia et al., 2021), taking the historic district of Hohhot as an example, adopts a color geography perspective. It traces the dynamic evolution of regional urban color characteristics over time and analyzes the combined influence of natural and human environments on color patterns. The study reveals the formation mechanism of a distinctive color culture in grassland towns characterized by “temple-based origins and commerce-driven development”, thereby expanding the theoretical framework of regional color studies^[18].

The theory of color geography is further applied in the work of Dong Jiali et al. (2023). By using a closed card-sorting method to screen high-resolution images of natural, cultural, and built environments, and combining this with mobile applications for color data extraction, the study establishes an effective workflow and methodological model for color extraction, significantly improving design efficiency.^[19]

(2) Research on the Application of Traditional Quantitative Techniques

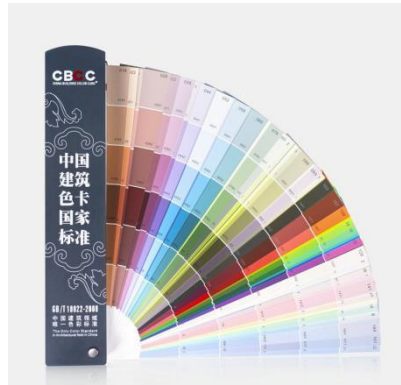


Figure 1-1 Chinese Architectural Color Card

(Source: <https://www.qtcclor.com/product/chinese-building-color-card-1026>)

Research on the application of traditional quantitative techniques employs color card standards and classical color systems as tools for the quantitative analysis of street color. Most studies adopt the *Chinese Architectural Color Card (GB/T18922-2008)* for both qualitative and quantitative color analysis. A study on Zhongshan 4th Road (Pei Guodong et al., 2020), from the perspective of color geography, analyzes the formation of street color character and summarizes the distinctive composition of “dominant color – accent color” in Republican-era administrative historic districts, providing a technical color language for the continuation of historical context^[20].

The NCS color system is applied in research on the Dazhao District (Jia Zhen et al., 2023), where characteristics are summarized from both objective quantification and subjective

perception, enhancing the scientific rigor of color application in conservation and renewal processes^[21].

A study on the Xuanwumen Area (Li Jingchen et al., 2019), through comparison of historical character, analysis of formation mechanisms, and identification of existing challenges, classifies buildings into five categories—such as residential and cultural—based on a hierarchical control strategy. It summarizes color characteristics as “roof and wall (base color) – doors, windows, and eaves (representative color)”. However, this study has limitations, including strong regional specificity, insufficient consideration of color coordination in modern architecture, and a lack of operational institutional design and quantitative color indicators^[22].

(3) Research on Digital Technological Innovation

Research on digital technological innovation marks the transition of color studies in historic districts toward greater intelligence and precision, characterized by diversified technical tools, multi-dimensional analytical approaches, and expanded data scales.

The application of GIS-based spatial information technology represents an in-depth use of digital tools at the district scale. A study on the Sanyang Design Capital Area (Tan Hui et al., 2024) uses the *Chinese Architectural Color Card* as a reference and the Munsell color system as a quantitative basis to construct a spatial database of building colors. It quantitatively analyzes hue, value, and chroma characteristics, and suggests strengthening the protection of architectural color character through digital means and exploring scientific management mechanisms^[23]. However, limitations remain in dynamic monitoring and intelligent control.

The integration of computer vision and color models introduces a new paradigm linking objective indicators with subjective perception. A study on the Taiyanggou Historic District (Ma Hui et al., 2025) combines computer vision techniques (K-means clustering) with the HSV color model to conduct quantitative color analysis. Using the Spearman rank correlation coefficient, it clarifies the relationship between objective color metrics and subjective perception, and proposes strategies such as supporting color control through greening and optimizing dominant hue proportions rather than simply increasing saturation. While offering practical insights, the study remains at the strategic level and lacks implementation validation^[24].

Research on the Five Great Avenues (Yang Rui, 2023) employs computational methods for color data visualization, quantitatively summarizes color combination patterns, and

defines color thresholds to derive a structural vocabulary of district color composition, providing a basis for urban identity positioning^[25]. A study on the Zhuzi Fang (Ma Chizhan et al., 2024) adopts multiple methods — including HSL color spectrum analysis, semantic differential (SD), and NPS scoring — to examine the relationship between traditional and modern architectural colors from a perspective of coexistence, identifying issues such as disrupted color continuity and loss of authenticity^[26].

The application of street-view image recognition technology enables a shift from micro-scale district analysis to macro-scale urban studies, significantly reducing research costs while improving analytical precision. A study on the historic district of Gaozhou (Pan Chen et al., 2025) extracts core colors from street-view images using image recognition techniques, and evaluates dominant tones, harmony, and complexity, providing both theoretical support and practical strategies for color maintenance and optimization^[27]. Research on the quantitative extraction of urban color characteristics across 20 Chinese cities (Lu Xu et al., 2024) classifies color information from street-view images and evaluates street color environments in terms of hue, saturation, and brightness^[28]. In addition, street-view analysis techniques enable the quantification of visual information — including elements, colors, quantities, areas, and proportions — such as in the work of Fu Qian et al., who use MATLAB and K-means clustering to extract building colors in the main urban area of Changsha^[29].

(4) Research on Practical Strategy Exploration

Research on practical strategy exploration focuses on diagnosing color-related issues in different types of districts and identifying optimization pathways, with an emphasis on balancing conservation and renewal.

In terms of color mapping and character shaping, a study on the Fuzhou Sanfang Qixiang (Zhu Xiaoyu et al., 2023) summarizes the architectural color characteristics of Nanhou Street and constructs a color atlas, proposing that distinctive urban character can be shaped through effective color guidance and control^[30].

At the street scale, refined control has been explored in a study on Wuhan Lihuangpi Road (Bai Ge et al., 2020). Addressing the limitation that existing urban color planning focuses primarily on macro-level control and neglects street-level conditions, the study proposes a color weighting method to generate street tonal schemes through parametric control, thereby compensating for the lack of detailed color planning approaches^[31].

In terms of cultural context activation and spatial regeneration, research on Taiyuan

Zhonglou Street (Hu Chuanjin et al., 2024) explores principles and methods for using color as an activating element within spatial sequences. Through color-based spatial transformation, it enhances the recognition of historical symbols and revitalizes spatial vitality^[32].

Regarding the protection of regional characteristics in ethnic areas, a study on Xizang Barkhor Street (Diao Jianxin et al., 2025) analyzes Tibetan architectural color culture and its compositional rules, and proposes suitable conservation principles, providing a scientific basis for regionally specific urban color planning^[33].

Other regional studies, such as those on Hunan Taiping Old Street^[34] (Chen Xiangyue, 2024) and Sichuan Chongzhou historic districts^[35] (Yang Fan, 2020), focus on identifying local characteristics, diagnosing existing problems, and proposing optimization strategies.

At the macro-control and dynamic monitoring level, a study on the Wuhan Dufudi Historic District (Tang Chang et al., 2025) proposes the establishment of scientific conservation strategies that integrate overall color control, identification of regional dominant tones, and coordination between historic districts and modern architecture. It emphasizes the use of modern data technologies for dynamic monitoring, including quantitative analysis of hue, saturation, and brightness distributions, as well as targeted analysis of façade lightness and saturation along streets, providing precise data support for macro-level control. However, the study focuses primarily on specific building types, and further research is needed on color characteristics and adaptive conservation strategies across different functional building categories^[36].

Overall, current research presents three common issues. At the theoretical level, the introduction of color-related theories remains at an early stage, lacking a systematic framework tailored to historic districts; principles such as “coordination with historical and cultural context” remain relatively abstract, resulting in a gap between theory and practice. At the methodological level, there is no unified standard for converting between different color systems, and digital technologies are often limited to status analysis; studies integrating street-view recognition, computer vision, and color models lack standardization and reproducibility. At the practical level, most studies emphasize diagnosis over implementation, with insufficient operability of color control strategies and limited effectiveness of management mechanisms. Issues such as coordination between historic and modern building colors remain inadequately addressed, and the translation from planning to implementation is not yet well established.

1.3.3 Research on Micro-Renewal Theory and Practice

Urban micro-renewal, as an important pathway for sustainable urban development in the post-industrial era, has formed distinctive theoretical systems and practical models both domestically and internationally. In Western contexts, approaches such as “urban acupuncture” and tactical urbanism are central, emphasizing bottom-up community empowerment and temporary interventions. In China, the concept of “organic renewal” serves as the localized theoretical foundation, highlighting government-led, multi-stakeholder governance and incremental transformation.

Internationally, in the 1980s, Spanish architect Manuel de Solà-Morales first proposed the theory of “urban acupuncture” in the renewal of Barcelona, advocating precise, small-scale, and reversible interventions to activate urban “pressure points”^[37]. This concept was further developed by Jaime Lerner, and the “point-based renewal” during Barcelona’s micro-scale improvement phase represents a typical practice^[38]. Tactical urbanism, by contrast, emphasizes grassroots participation, temporality, and low-cost interventions, encouraging public engagement; the “superblock” project in Barcelona demonstrates a process of gradually consolidating strategies through reversible testing. The key distinction lies in that urban acupuncture is more strategic and top-down, while tactical urbanism is more experimental and bottom-up.

In terms of practice and technology, projects such as the transformation of Times Square, the blue-space experiment in Rubi, and participatory urban parks in Rouen represent typical applications of tactical interventions. At the technical level, eye-tracking technology has been applied to optimize environmental design, while the concept of “Urban Acupuncture 2.0” proposes the use of social media data to enhance public participation in decision-making.

In China, the development of micro-renewal originated from the practical exploration of organic renewal theory. In 1989, Wu Liangyong led the renovation of Juer Hutong, proposing the theory of organic renewal, which emphasizes appropriate scale, respect for urban fabric, and the regularity of the renewal process. It encompasses three dimensions: overall organicity, process organicity, and unit-level organic renewal. This project became a model for inner-city regeneration and received multiple international awards^[39].

On this basis, community renewal in China has gradually moved away from large-scale demolition and reconstruction, evolving through three stages: from 1989 to 1999, the concept of organic renewal was established; from 2000 to 2013, international experiences were introduced with increasing emphasis on public participation and neighborhood relations; and since 2014, multi-stakeholder governance has been emphasized, with the promotion of

community planner systems and refined micro-renewal practices.

Drawing on the literature, current research exhibits clear characteristics. Micro-renewal of historic spaces focuses on cultural conservation and activation. For example, Rong Yuefang et al. developed a coupling coordination evaluation framework^[40], while Sheng Yuhong et al. analyzed three-dimensional renewal strategies for the Xihepu Historic District. Projects such as Guangzhou Enning Road and Fuzhou Yantai Mountain serve as representative practices^[41]. In contrast, community-scale studies emphasize resident participation and governance effectiveness. Liu Yuelai et al. and Kong Shuai et al. conduct empirical research from the perspectives of governance communities and scenario-based design, respectively^{[42][43]}.

At the practical level, diversified renewal approaches have continued to emerge. Taking the Siping Community in Shanghai as an example, renewal has been promoted through multi-stakeholder participation and hybrid models, with approaches such as playful urbanism, civic action, and urban guerrilla interventions representing diverse practical pathways. In terms of comprehensive theoretical research, Han Jiwen et al. analyze the driving mechanisms of residential micro-renewal^[44], while Li Xin et al. apply scale reconstruction theory to examine the reshaping of social relations, based on a case study of the Xiaoxihu Area in Nanjing^[45]. In addition, Chen Bing et al. propose a life-circle model guided by landscape ecology, taking Songling Subdistrict in Suzhou as an example^[46]. These studies provide theoretical support for micro-renewal practice.

Overall, while micro-renewal research at home and abroad exhibits distinctive characteristics in both theory and practice, it also faces common challenges. These include a disconnect between theory and practice, as well as tensions between top-down and bottom-up approaches. According to the literature, additional prominent issues include the fragmentation of theoretical systems, the limited application of quantitative evaluation tools, and, in practice, constraints such as single funding sources, high coordination costs, and the lack of operation and maintenance mechanisms.

1.3.4 Research Review

A comprehensive review of relevant studies at home and abroad indicates that the conservation and renewal of color in historic districts have gradually established a solid research foundation. International research started earlier and has accumulated substantial theoretical and practical experience in areas such as the understanding of historic color, urban color planning methods, the development of control tools, and implementation mechanisms.

In particular, approaches to overall color extraction, classification-based guidance, and phased implementation within historic environments have provided relatively mature technical pathways for the conservation of historic character and environmental improvement.

Domestic research, by contrast, is more closely aligned with the practical needs of urban renewal and historic conservation. It focuses on issues such as the continuity of historic character, spatial environment improvement, coordinated color control, and micro-renewal-based revitalization. Notable progress has also been made in district-level renewal strategies, color analysis methods, and the formulation of design guidelines.

Overall, existing studies have clearly demonstrated that color control is a key factor influencing the integrity of historic character, spatial legibility, and environmental coherence in historic districts, while micro-renewal serves as an important implementation approach suited to the incremental improvement of such areas.

However, from an overall perspective, several aspects of existing research still require further development. First, although international studies on color planning in historic districts are relatively mature in terms of methodological systems and implementation mechanisms, they are largely grounded in specific institutional contexts, modes of urban governance, and historical settings. How these experiences can be effectively adapted to the context of historic district renewal in China still lacks targeted methodological responses.

Second, domestic studies on color in historic districts tend to focus on the identification of existing color conditions, character evaluation, renewal proposals, or general guideline formulation. A systematic linkage between color control and district-level problem diagnosis, object-based classification and control, and the implementation process of renewal has yet to be fully established.

Third, existing research on micro-renewal primarily concentrates on public space improvement, functional insertion, community governance, and environmental quality enhancement, while relatively limited attention has been paid to issues such as the overall color relationships of building façades, the control of continuous street interfaces, and the regulation of attached elements. The role of color control in the incremental renewal of historic districts therefore remains insufficiently explored.

More fundamentally, the main limitation of current research does not lie in the lack of individual discussions on color issues or micro-renewal approaches, but in the absence of a systematic research framework that integrates the extraction of international color planning experience, the diagnosis of local historic district problems, the construction of color guideline systems, and the verification through design practice. In other words, most existing

studies remain at relatively discrete stages — such as case description, condition analysis, principle summarization, or design expression—while lacking in-depth discussion on how to establish a complete methodological chain of “experience reference – problem identification – guideline translation – practical validation” for historic districts characterized by fragmented property ownership, mixed functions, and incremental implementation. This gap is particularly evident in arcade-based historic districts such as Nanhuaxi Street.

Based on this, this study takes the Nanhuaxi Historic District in Guangzhou as the research object. On the basis of a systematic review of relevant theories and practices at home and abroad, it draws on the technical approaches, control tools, and implementation mechanisms of color planning in Turin. In combination with the spatial structure, building types, existing color conditions, and renewal demands of the Nanhuaxi arcade district, this study attempts to construct a color control methodology for historic districts, centered on color guidelines and implemented through micro-renewal. Furthermore, through district-scale urban design and key-area practice, the proposed method is applied and tested, with the aim of providing a reference framework and practical basis for the conservation and renewal of similar historic districts characterized by fragmented ownership and high sensitivity of urban character.

1.4 Research Content and Methods

1.4.1 Research Content

This study focuses on color control within the context of incremental renewal in historic and cultural districts. Taking the Nanhuaxi Historic and Cultural District in Guangzhou as the research object, and considering both research depth and methodological applicability, the study further narrows its scope to the arcade-dominated area, which features a continuous streetscape, a high concentration of traditional buildings, and strong representativeness within the district.

Based on this scope, an overall research framework of “experience extraction – problem diagnosis – guideline construction – design verification” is established. The main research content can be summarized into the following four aspects:

(1) Extraction of the Turin Color Plan Experience

By systematically reviewing the development process, implementation logic, technical tools, and control mechanisms of the color planning in Turin, this study summarizes its core experience in aspects such as color survey, color analysis, color palette construction,

classification-based guidance, and implementation management within the renewal of historic urban areas. It further clarifies the methodological characteristics embodied in historical contexts, including its scope of application and its relationship with urban planning.

On this basis, the study identifies the components that can be adapted to the local context, as well as the boundaries of such learning, thereby providing a methodological prototype for subsequent research.

(2) Problem Diagnosis of the Nanhuaxi Historic and Cultural District

Focusing on the arcade area of the Nanhuaxi Historic and Cultural District in Guangzhou, this study builds upon existing upper-level conservation and utilization plans. Through a combination of field investigation, architectural data collection, color sample comparison, historical streetscape tracing, and quantitative statistical analysis, a systematic diagnosis is conducted of the area's spatial structure, building typologies, functional composition, existing color conditions, and streetscape issues.

The study further identifies the key characteristics and core conflicts in terms of streetscape continuity, color order, street interface, interference from attached elements, and conditions for incremental implementation.

(3) Construction of the Color Guideline System

Based on the extraction of the Turin experience and the problem diagnosis of the Nanhuaxi Historic and Cultural District, and combined with the building types, street interface characteristics, and functional zoning requirements of the area, a comprehensive color control system and a hierarchical and classified guideline system applicable to arcade-based historic and cultural districts are constructed.

Specifically, this includes the establishment of Dominant Color, Secondary Color, and Accent Color palettes and material color palettes; color guidance for functional zones; control of continuous street interfaces of typical streets; classified architectural control; guidance on intervention approaches; and façade element control, thereby forming a color guideline framework that integrates overall coordination and implementation operability.

(4) Design Practice Verification

Based on the constructed color guideline system, color control is combined with micro-renewal design to carry out urban design practice in the Nanhuaxi Street area. Key areas are selected for detailed design and before-and-after comparative analysis, in order to verify the applicability and feasibility of the proposed methods in the coordinated advancement of streetscape conservation, spatial improvement, interface optimization, and functional activation, thereby forming an application pathway for color control in

property-rights-fragmented arcade-based historic and cultural districts.

1.4.2 Research Methods

(1) Literature Review Method

Through reviewing relevant domestic and international literature on historic and cultural district conservation, urban color planning, micro-renewal theory, and the color planning practice of Turin, this study organizes the related theoretical foundations and research progress, providing theoretical support for the construction of the research framework, the formulation of research questions, and the extraction of case-based experience.

(2) Case Study Method

Taking the color planning of Turin as the key case, this study systematically reviews its development process, control principles, technical tools, and implementation mechanisms, summarizes its core methods and experience in color planning for historic urban areas, and analyzes its implications for color control research in historic and cultural districts in China.

(3) Field Investigation Method

Field surveys and architectural data collection are conducted in the Nanhuaxi Historic and Cultural District in Guangzhou, recording information on building types, façade characteristics, doors and windows, decorative details, attached facilities, and street environments. Photographic documentation, coding, classification, and database construction are employed to establish a foundational dataset for the study.

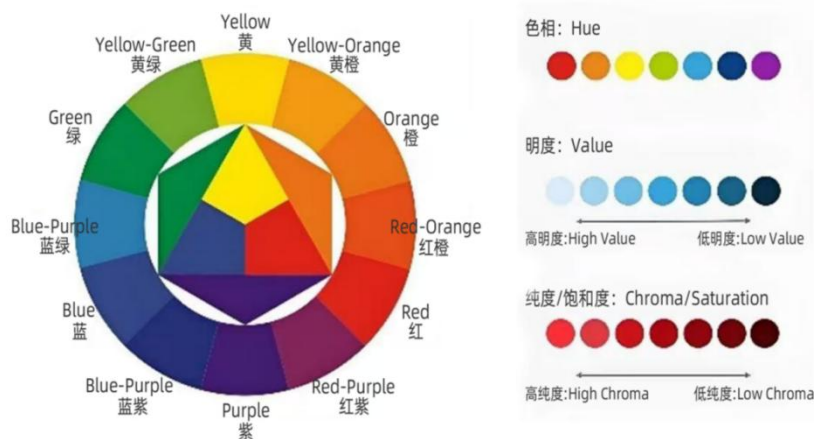


Figure 1-2 Three Elements of Color: Hue, Lightness, and Saturation

(Source: redrawn by the author)

(4) Sample Collection and Quantitative Analysis Method

Through building color sample comparison, color card identification, comprehensive color classification, and statistical analysis, the Dominant Color, Secondary Color, Accent Color, and material colors of the study area are summarized. The color characteristics of the

area are further analyzed from the perspectives of hue, lightness, saturation, and spatial distribution, providing a basis for subsequent palette development and guideline construction.

(5) Historical Information Retrospection and Comprehensive Interpretation Method

By integrating historical materials and streetscape imagery, this study conducts a comparative analysis of the evolution of selected building façades and street environments within the study area, identifying characteristics of building interventions, interface changes, and color transformation, thereby enhancing a comprehensive understanding of the district's historical character and existing issues.

(6) Research through Design Method

Based on the preceding research, the lessons of the Turin experience, the diagnosis of existing problems, and the construction of the guideline system are further implemented in urban design at the district scale and in key area practices. Through design representation and before-and-after comparison, the applicability and implementation effectiveness of the color control methods are tested.

1.4.3 Technical Route

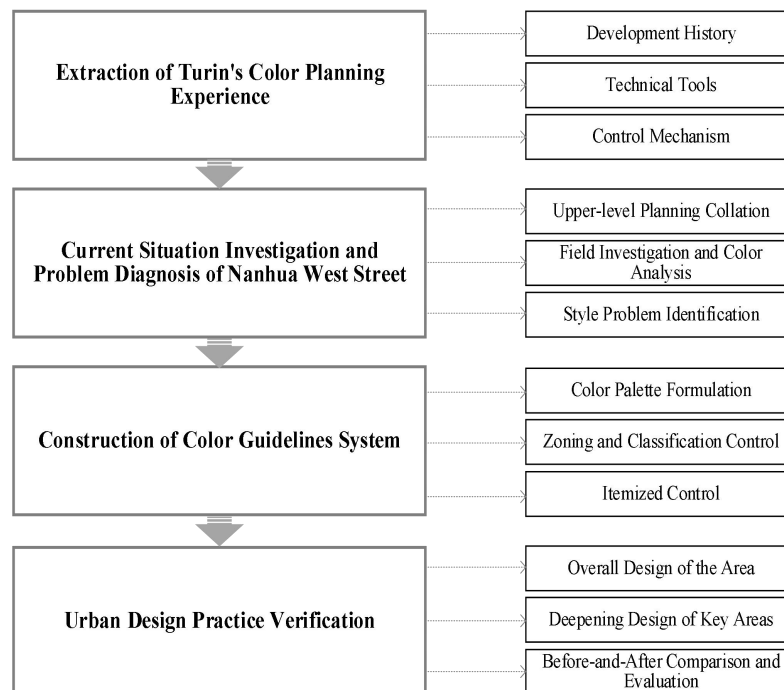


Figure 1-3 Technical Route Diagram

(Source: drawn by the author)

1.5 Research Innovations and Thesis Framework

1.5.1 Research Innovations

In accordance with the actual characteristics and research objectives of the

arcade-building (Qilou) area within the Nanhuaxi Historic and Cultural District in Guangzhou, this study's innovations are mainly reflected in the following three aspects:

(1) A Color Control Perspective for Incremental Renewal

Existing research on color in historic and cultural districts often treats color as a subsidiary element in heritage conservation, façade renovation, or visual coordination. Its regulatory function is typically confined to overall color summarization, localized renewal proposals, or general guideline-based descriptions. As a result, insufficient attention has been given to how color can operate as a regulatory medium that runs through long-term urban renewal processes.

Grounded in the practical conditions of the arcade-building area in the Nanhuaxi Street historic and cultural district — characterized by fragmented property ownership, mixed functions, relatively similar building typologies, and the difficulty of holistic transformation — this study does not regard color as a one-time static design outcome. Instead, it defines color as a dynamic control framework that supports phased construction, continuous adjustment, and multi-stakeholder coordinated renewal.

Specifically, color in this study not only contributes to maintaining stylistic continuity and façade coherence, but also plays a guiding role within the temporal logic of renewal. Under conditions where different street segments, property owners, and implementation phases cannot be advanced synchronously, color guidelines can regulate overall color relationships, the proportional balance of dominant, secondary, and accent colors, as well as the application boundaries of architectural components. In this way, individual renewal actions can gradually converge toward an ordered environmental system within a unified framework.

Accordingly, this study reinterprets color from a traditional “visual renovation issue” into a “dynamic control issue” within the context of micro-renewal in historic and cultural districts, thereby establishing a research perspective more aligned with the long-term and incremental implementation logic of arcade-building neighborhoods.

(2) Localized Methodological Lessons of the Turin Experience

The reference to Turin's color planning in this study is not based on formal imitation or direct replication of color palettes, but rather on the similarity of its objects of intervention and governance logic. Turin's color planning does not focus on isolated individual buildings; instead, it addresses the historic urban core as an integrated environmental system characterized by continuous street façades, heritage conservation requirements, and long-term

renewal demands. Similarly, the arcade-building area of Nanhuaxi Street is a historic and cultural district that must be renewed under conditions of existing urban fabric, continuity of everyday life, and multi-stakeholder negotiation. In this sense, the two cases are comparable in terms of research object and therefore capable of providing methodological lessons.

Based on this premise, this study extracts from Turin's color planning its approaches to survey and analysis, classification of control objects, logic of color system construction, and implementation mechanisms within historic environments. These elements are then reinterpreted in accordance with the higher-level planning requirements, spatial structure, building typologies, and color-related issues of Nanhuaxi Street. In other words, what is adopted from Turin is not its specific color outcomes, but rather its methodological logic of integrating color planning into the continuous governance of historic environments, which is further developed into a research approach applicable to Guangzhou's arcade-building historic districts.

Through this process, the study establishes an intermediate translational layer between foreign experience extraction and local problem response, thereby avoiding the disconnection often found in previous research between “case-based reference” and “local application”.

(3) Hierarchical Guideline Construction and Practice-Based Validation

The research outcomes of this study do not remain at the level of principle-based color control proposals. Instead, they further establish a hierarchical and classified guideline system for the arcade-building street area of the Nanhuaxi Street historic and cultural district, ranging from the district scale to the street scale, and from buildings to architectural components.

Based on comprehensive color analysis and problem identification, this study develops a foundational color control system consisting of dominant color, secondary color, and accent color palettes, as well as material color palettes for brick surfaces and window/door components. Furthermore, in accordance with different functional districts — such as commercial arcade areas, residential areas, and heritage exhibition zones—a function-oriented color guidance framework is constructed. At the same time, for typical street interface types, including primary commercial streets, mixed-use secondary lanes, and nodal street segments, continuous façade interface control requirements are proposed. In addition, through building classification, intervention strategies, and façade-level component control, the guidelines are further operationalized at the level of arcade façades, doors and windows, attached elements, and street interface components.

In other words, this study translates color control from an abstract set of principles into a

technical framework that can directly operate on color palettes, spatial interfaces, and concrete renovation elements within arcade-building districts. Moreover, the guidelines are not limited to drawings and textual descriptions. They are embedded into both the overall design of the Nanhuaxi Street district and detailed design for key areas. Through design implementation and comparative before-and-after analysis, the applicability of the guidelines and their effects on heritage conservation, spatial improvement, and functional activation are evaluated, thereby achieving a closed-loop research process from “rule construction” to “spatial transformation”.

1.5.2 Framework

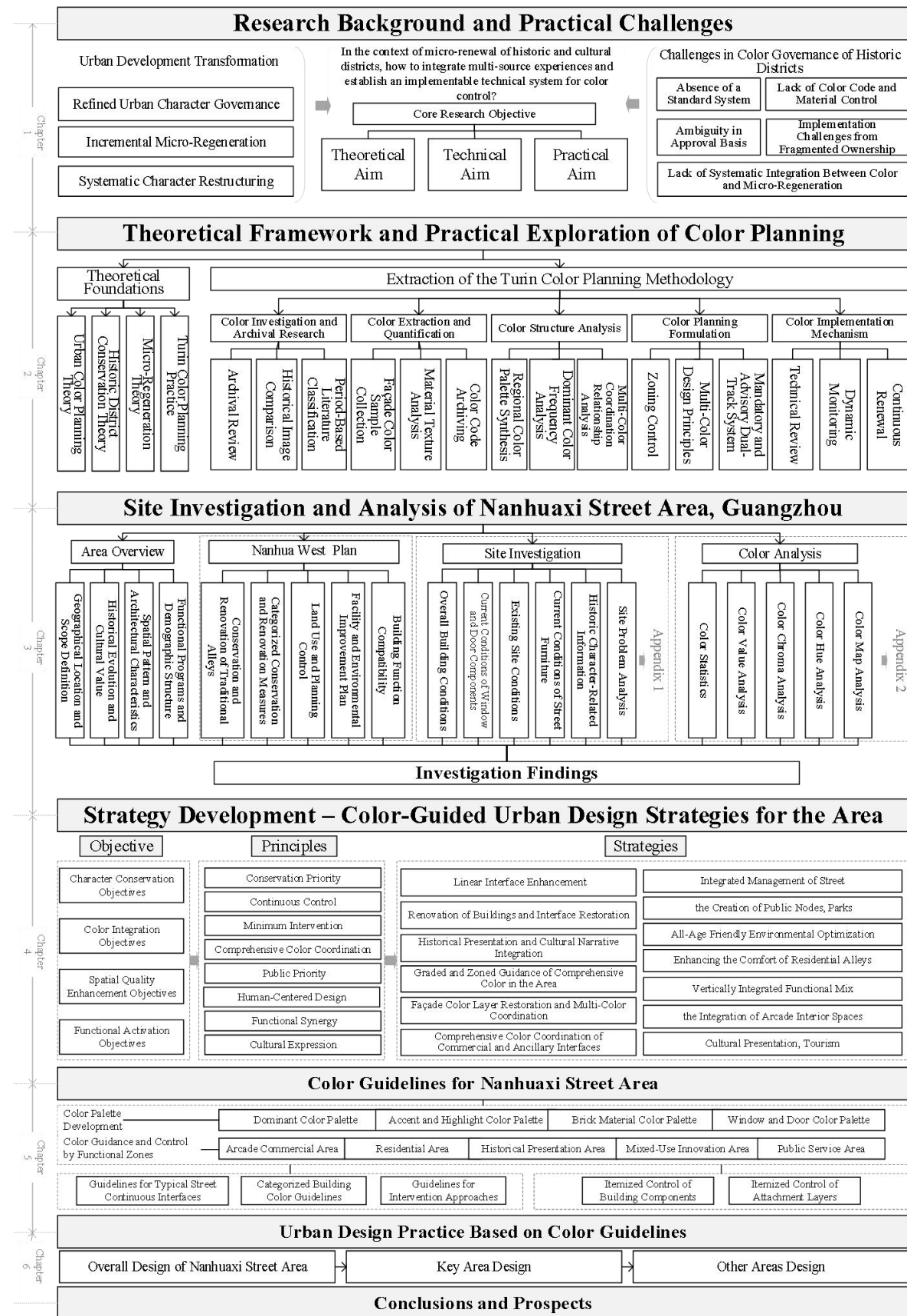


Figure 1-4 Framework(Source: drawn by the author)

Chapter 2 Theoretical Foundations of Color Control and Lessons from Turin

2.1 Conceptual Definition

2.1.1 Historic and Cultural Districts

(1) Basic Connotation of Historic and Cultural Districts in the Chinese Context

Historic and cultural districts constitute an essential spatial unit within the protection system of China's historic and cultural cities. They generally refer to areas within a defined boundary that have relatively well-preserved traditional spatial patterns, historic buildings, street morphology, and overall environmental character, and that possess significant historical and cultural value. Compared with individual heritage protection units or standalone historic buildings, historic and cultural districts emphasize not the preservation of isolated architectural entities, but rather the continuity of the overall spatial environment and the integrity of historical information. Their protection scope therefore includes not only the built fabric itself, but also street interfaces, spatial scale, environmental character, as well as associated everyday life settings and local memory.

In China's current legal and regulatory framework, the concept of the "historic and cultural district" has been formally incorporated into the statutory heritage protection system. *The Law of the People's Republic of China on Protection of Cultural Relics*^[47] explicitly includes historic and cultural districts, towns, and villages within the scope of protection. Furthermore, the Regulation on *the Protection of Famous Historic and Cultural Cities, Towns and Villages*^[48] further specifies their defining characteristics as areas that are "rich in cultural relics, with concentrated clusters of historic buildings, capable of relatively complete and authentic representation of traditional spatial patterns and historic landscape, and possessing a certain scale".

(2) Historic Urban Areas and Related Concepts in the European Context

When examining the color planning experience of Turin, Italy, the corresponding object of study in the international context does not refer to "historic and cultural districts" as defined within the Chinese institutional framework, but rather to "historic urban areas" within the European urban conservation discourse. The ICOMOS Charter for *the Conservation of Historic Towns and Urban Areas (Washington Charter)*^[49], adopted in 1987, defines the relevant subject as "historic urban areas", including cities, towns, historic centers, and historic districts together with their natural and man-made environments. This concept emphasizes the continuity and integrated value of the historic environment as a whole. Its spatial scale,

institutional context, and governance mechanisms are generally broader than those of the legally defined “historic and cultural districts” in China. In other words, there is no fully equivalent legal concept in Europe corresponding to China’s “historic and cultural district”. The object of Turin’s color planning is essentially a historic urban area—an integrated and holistic unit of the historic environment.

(3) Comparison between Historic Urban Areas and Historic and Cultural Districts and the Definition Adopted in This Study

Historic urban areas and historic and cultural districts remain comparable in terms of research methodology. Both are grounded in the holistic conservation of the historic environment, emphasizing the relationships among building groups, the continuity of street interfaces, the coordination of environmental character, and the persistence of historic spatial order. Both also face the practical requirement of balancing preservation and renewal within existing urban fabric. Therefore, the two concepts are not strictly equivalent, but can be aligned in terms of methodological logic and objects of control.

For this study, such a correspondence is meaningful not in the sense of directly transplanting Turin’s experience to Nanhuaxi Street, but in drawing upon the experience of color planning at the scale of historic urban areas to construct a methodological framework applicable to the study of historic and cultural districts in China. Based on this understanding, the conceptual usage in this paper is grounded in the statutory definition of China’s historic and cultural districts, and further specifies the research object as the arcade street (Qilou) area within the Nanhuaxi Historic and Cultural District in Guangzhou. In other words, the focus of this study is not on historic and cultural districts in a broad sense, but on a specific historic urban unit characterized by continuous arcade façades, traditional street patterns, complex property ownership structures, and incremental renewal needs.

2.1.2 Urban Color Planning

(1) Basic Connotations of Urban Color and Urban Color Planning

Urban color refers to the overall visual synthesis of colors perceived by the public within the urban environment. Its formation is collectively influenced by multiple factors, including physical geographic conditions, climatic characteristics, building materials, construction methods, and historical and cultural backgrounds. As a significant representation of the urban physical environment, urban color is not an abstract color combination existing independently of spatial carriers. Instead, it is a comprehensive color presentation attached to building facades, street spaces, public squares, open landscapes, and other visible interfaces. It serves

as a visual integration of urban spatial form, construction logic, and cultural accumulation^[50].

According to the national standard *Guidelines for Urban Color Design* (GB/T 42648—2023)^[51], urban color can be understood as the sum of visual perceptions of both natural and man-made environmental colors, possessing both objective physical attributes and subjective perceptual attributes. Within this framework, man-made environmental colors can be further categorized into fixed colors, mobile colors, and temporary colors, which together constitute a systematic and dynamic urban color system.

Building upon this, Urban Color Planning is not merely an aesthetic arrangement of comprehensive color effects. Rather, it is a specialized planning and control activity targeting the urban visual environment. It involves the holistic organization and continuous guidance of urban color relationships through methods such as field research and identification, historical analysis, color classification, color palette construction, zonal guidance, and the formulation of control regulations.

Relevant research indicates that urban color not only influences urban image and spatial perception but also plays a structural role in environmental identification, regional expression, and the shaping of place identity^[52]. Therefore, the core of urban color planning does not lie in imposing a fixed visual style upon a city. Instead, its essence is to establish a comprehensive color order, ensuring that different elements within the urban space maintain a relatively harmonious relationship throughout the processes of temporal evolution and urban renewal.

(2) Practical Attributes and Objectives of Urban Color Planning

Furthermore, urban color planning possesses distinct dynamic and process-oriented attributes. Since colors in the urban environment encompass both relatively stable fixed colors and mobile colors or temporary colors—which are constantly adjusted along with functional replacements, facility changes, and daily usage—color planning itself does not correspond to a static, final blueprint. Instead, it functions more as a control framework that exerts long-term influence and can be implemented in stages.

This is particularly crucial for historic districts characterized by complex property rights, inconsistent construction sequences, and diverse renewal entities. Given the reality that holistic and synchronized renovation is often difficult to achieve, color planning can provide a shared reference for partial updates carried out by different entities at different stages. It achieves this by guiding dominant color, secondary color, and accent color hierarchies, material color boundaries, and the order of street interfaces. This ensures that individual color choices are gradually integrated into the overall environmental order, thereby avoiding the

fragmentation of interfaces and the “patchwork” effect of urban landscape caused by scattered renovations. In other words, the goal of urban color planning is not to eliminate differences, but to establish a guiding framework for comprehensive color relationships that allows for incremental implementation and autonomous choices.

From the perspective of objective orientation, urban color planning conducted within historical environments typically serves three levels simultaneously: First, to protect the authenticity and continuity of the historical environment, avoiding the destruction of historical material characteristics and the overall district landscape caused by arbitrary renovations. Second, to maintain the continuity and coordination of the urban interface, fostering an ordered visual relationship among building structures, attached elements, and public spaces. Third, to provide an actionable common framework for subsequent design practices, administrative approvals, and public participation. Consequently, urban color planning possesses not only aesthetic significance for environmental improvement but also practical value for Color Control, organizational order, and implementation synergy.

(3) Definition of “Urban Color Planning” in this Study

Based on the aforementioned understandings, this thesis defines Urban Color Planning as a comprehensive spatial governance and design instrument. Within the context of specific historical and cultural settings and urban renewal conditions, it targets the urban visible physical environment. By utilizing technical tools — including color surveys, color classification, color palette systems, zonal guidance, and control regulations — it organizes, guides, and constrains the color relationships of building facades, street interfaces, and relevant public spaces.

This definition emphasizes the implementability, manageability, and multi-stakeholder synergy of urban color planning. It regards such planning as an essential medium connecting design practice, administrative management, and public participation, rather than a color design activity guided solely by visual aesthetics or artistic expression.

2.1.3 Urban Micro-regeneration

(1) Basic Connotations of Urban Micro-regeneration

Urban micro-regeneration is an incremental renewal philosophy proposed in contrast to traditional renewal models characterized by wholesale demolition and reconstructed development. It emphasizes continuous improvement and functional optimization of the built environment through small-scale, low-intervention, and phased approaches, while respecting existing urban fabric, spatial patterns, and social relations. Its core does not lie in reshaping

spatial forms through large-scale construction; instead, it focuses on addressing existing issues by responding to the needs of environmental remediation, functional repair, and quality enhancement within urban residual spaces in a relatively mild and adaptable manner. This approach achieves urban renewal while preserving original place identity and the continuity of daily life.

(2) Theoretical Origins and Intellectual Foundations of Urban Micro-regeneration

From the perspective of theoretical origins, the ideology of urban micro-regeneration is closely linked to the reflection on the “wholesale demolition and reconstruction” model of Modernism since the 20th century. In *The Death and Life of Great American Cities*, Jane Jacobs criticized the destruction of urban vitality and community structures caused by single-functional zoning and total-clearance redevelopment. She emphasized the importance of small blocks, diverse functions, and the order of daily life for sustainable urban development, providing a vital intellectual foundation for subsequent incremental renewal philosophies^[53].

Subsequently, Jaime Lerner proposed the “Urban Acupuncture” theory, advocating for small-scale, strategic interventions at key nodes to drive broader urban improvements. This further reinforced the renewal strategy of “leveraging holistic optimization through localized intervention”^[54]. Concurrently, in the practice of Chinese urban construction and heritage conservation, Wu Liangyong proposed the theory of “Organic Renewal”. This theory also emphasizes advancing incremental improvements while respecting the original urban fabric and historical continuity^[55]. Together, these theories constitute the essential intellectual sources of urban micro-regeneration.

(3) Practical Characteristics of Urban Micro-regeneration and Its Applicability to Historic Districts

From the perspective of practical characteristics, urban micro-regeneration typically possesses the following attributes: First, it emphasizes small scale and low intervention. The targets of renewal are usually specific issues within existing streets, buildings, interfaces, and public spaces, avoiding the destruction of original patterns and character through high-intensity renovation. Second, it highlights incrementalism and process-orientation. Renewal is often carried out in stages, allowing for continuous revision and adjustment based on actual effects during implementation. Third, it stresses realistic adaptability, making it particularly suitable for existing urban areas characterized by complex property rights, diverse implementation entities, and difficulties in achieving synchronized, holistic transformation. Fourth, it is life-oriented and emphasizes public participation, integrating residents’ daily

needs, community identity, and local memory into the renewal process. Consequently, urban micro-regeneration is not merely “minor repairs” in a simple sense, but a continuous renewal approach that integrates spatial improvement, governance coordination, and social integration.

For historic and cultural districts, urban micro-regeneration demonstrates even stronger practical applicability. These districts not only carry traditional street patterns, architectural styles, and local cultural memories but also sustain continuous daily life and community relations; thus, their renewal can rarely be advanced through large-scale reconstructive development. In contrast, under the prerequisite of “protection first, maintenance-oriented, and moderate revitalization”, micro-regeneration can gradually improve the quality of the district through facade restoration, interface remediation, facility enhancement, functional adaptation, and environmental darning. This approach is more conducive to preserving historical information while maintaining spatial and lifestyle continuity. Especially for historic districts with fragmented property rights, composite functions, and inconsistent renewal timelines, the characteristics of micro-regeneration—such as phased implementation, dynamic adjustment, and multi-stakeholder participation—offer greater practical feasibility.

(4) Definition of “Urban Micro-regeneration” in this Study

Based on the aforementioned understandings, this thesis defines Urban Micro-regeneration as a renewal path characterized by continuous improvement and incremental optimization of buildings, street interfaces, and the public environment. This path operates under the prerequisite of preserving existing block fabric, architectural style, and the continuity of daily life. It addresses the practical issues of historic and cultural districts through small-scale, low-intervention, and phased approaches.

This definition emphasizes the incremental nature, adaptability, and process-oriented attributes of micro-regeneration. It posits that such regeneration is not a holistic development aimed at reshaping spatial forms, but rather a sustained renewal approach oriented toward the existing urban stock and serving long-term governance.

2.2 Theoretical Foundation

2.2.1 The Evolution of Architectural and Urban Color Theory and Practice

(1) The Theoretical Foundations of the Classical and Modern Periods

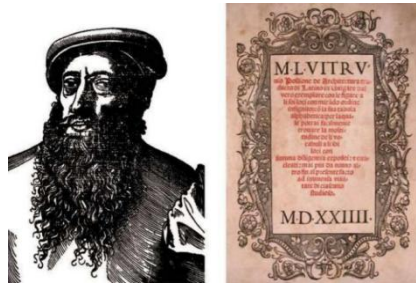


Figure 2-1 Vitruvius and *De Architectura Libri Decem*



Figure 2-2 Leon Battista Alberti and *De Re Aedificatoria*

In the field of architecture, the Roman architect Vitruvius was the first to discuss color in a systematic way in his writings of the first century CE. He examined the sources of natural colors, pigments, and coloring substances, although he did not yet clearly distinguish the concept of color from that of coloring materials^[56]. During the Renaissance, Leon Battista Alberti continued this understanding of color in *De Re Aedificatoria*. Although he still regarded color as a decorative element, he was the first to associate it directly with aesthetic value. Nevertheless, his architectural aesthetics still focused mainly on geometric form, and color remained relatively marginal. In 1676, André Félibien, in *Principles of Architecture, Sculpture, Painting, and Other Arts*, clearly described the laws governing the mixture of the three primary colors—red, yellow, and blue—thus laying an important foundation for the later development of color theory.

(2) The Revival and Systematic Study of Color in the 19th Century



Figure 2-3 Owen Jones and the Crystal Palace

In the 19th century, Neoclassical architecture generally adopted gray, white, or monochrome styles. However, the architect Hittorff was an important exception. In projects such as the Cirque d'Hiver in Paris, he made extensive use of polychromy, breaking the

relative silence of color at that time. During this period, Owen Jones and Gottfried Semper became the key figures driving color studies. As the color designer of the Crystal Palace, Jones systematically discussed the principles and practice of historical color design in works such as *An Attempt to Define the Principles Which Should Regulate the Employment of Colour in Decorative Arts* (1852), *The Colouring of Architecture and Ornament* (1854), and *The Grammar of Ornament* (1856), and strongly defended the color scheme of the Greek Court in the Crystal Palace^[57].

At the same time, a pioneer of the Arts and Crafts Movement proposed a new line of thought in *The Seven Lamps of Architecture* (1849), advocating the use of the natural colors of materials rather than paint. In the chapter “*The Lamp of Beauty*”, he also imagined the possibility of monochrome sculpture and argued that architectural color should come from the observation of nature. Architectural historians also began to trace the historical development of color in a more systematic way. In *The History of the Human Habitation* (1875), Eugène-Emmanuel Viollet-le-Duc gave a detailed account of the use of architectural color in ancient China, Egypt, Greece, Rome, and medieval Europe, and included four color plates. In *Histoire de l'Architecture* (1899), August Choisy introduced the color practices of ancient Egypt, Greece, and other cultures^[58]. Later, in his doctoral dissertation published in 1941, Rex Distin Martienssen conducted a detailed study of the polychrome decoration of Greek temples^[59].

(3) Color Exploration and Transformation during the Modernist Period



Figure 2-4 Le Corbusier, excerpts from his writings on architectural polychromy, and the view of the Pessac housing estate

In the early 20th century, the attitude of modernist masters toward color underwent a clear transformation. In his early years, Le Corbusier regarded form as primary and color as secondary. In fact, in his articles published in *L'Esprit Nouveau* between 1921 and 1924, he even denied the role of color in the construction of pictorial space. However, by 1931, in *Architectural Polychromy*, he had completely changed his view. Citing and supporting Fernand Léger's argument, he stated that color was as indispensable as water and air. Through

design examples such as the Pessac housing project, he demonstrated how color could reshape spatial perception. Later, in 1937, in relation to the *exhibition of the Pavillon des Temps Nouveaux*, he further proposed the idea of “the joy of polychromy,” directly linking architectural creativity with the vitality of color, and emphasizing that color is a core element of space rather than a mere surface decoration^{[60][61]}.

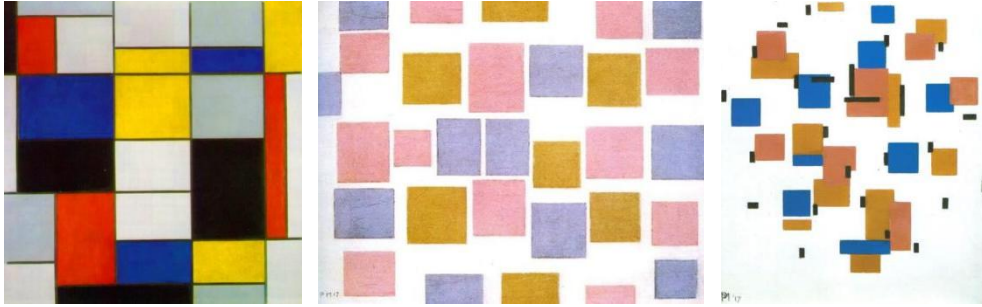


Figure 2-5 Mondrian expressed *Neo-Plasticism* in his paintings.

During the same period, Walter Gropius emphasized the psychological effects of color perception in Bauhaus teaching, arguing that color could shape spatial form^[62]. Meanwhile, the De Stijl, through the theories and practices of Piet Mondrian and Theo van Doesburg, further stressed color as a crucial factor in spatial order and compositional relationships.

De Stijl also played a significant role in the formation of modern color concepts in the 20th century. As a key representative of the movement, Piet Mondrian, in his theory of Neo-Plasticism, advocated the use of vertical and horizontal lines, primary colors, and a limited palette of black, white, and gray to construct a universal and orderly visual language^[63]. He did not regard color as a decorative element attached to the surface of form; rather, he considered it an integral component of spatial relationships and structural order, emphasizing the unity of color, line, and composition.

The rectangular compositions, primary color system, and asymmetrical balance promoted by De Stijl not only influenced painting but also, through the architectural and interior practices of Gerrit Rietveld, J. J. P. Oud, and Theo van Doesburg, facilitated the transition of color from two-dimensional art to architectural spatial organization. This shift reinforced the structural and spatial attributes of color within the context of modernism^[64].

From the perspective of the evolution of architectural and urban color theory, the key contribution of Mondrian and De Stijl lies in liberating color from traditional decorative logic, transforming it into a critical medium for expressing order, defining relationships, and shaping spatial rhythm.



Figure 2-6 Bruno Taut (1880 – 1938) and some of his colorful houses

The most representative master of color in this period was Bruno Taut. Although he was less well known than figures such as Le Corbusier, his influence on later generations was profound. He was one of the most active advocates of color in architecture. In 1915, the Falkenberg Housing Estate that he designed in Berlin-Grünau caused a great sensation because of its bold color scheme. Contemporary public opinion even claimed that it had “outraged the people of Berlin”, and some critics went so far as to call for the architect to be sent to prison. This reaction, to some extent, also reflects the revolutionary nature of his color practice^[65].

(4) Postmodernism and Contemporary Diversification

Within modernism itself, attitudes toward color were always marked by contradiction. Some architects criticized the simplification of color in the 19th century, while others still regarded color merely as a decorative element. The “International Style” of modernism advocated the removal of ornament and promoted a purist preference for white. However, architects such as Frank Lloyd Wright had already recognized the value of color and argued that materials should be allowed to display their inherent natural colors. Maurice Besset’s monograph, meanwhile, offered an in-depth analysis of the overall evolution of architectural color in the 20th century^[66].

By the 1970s and 1980s, with the rise of postmodernism, a new generation of architects began to re-examine the relationship between architecture and the historical environment. As a result, architectural color was given new theoretical significance and new directions of expression. In the United States, Charles Moore and Robert Venturi, and in Italy, Paolo Portoghesi and Aldo Rossi, were all important representatives of this period, emphasizing historical context and symbolic expression.

Driven by this theoretical shift, research on urban color grew significantly in the 1980s. A trend toward “polychrome decoration” in architecture gradually emerged in Europe and began to be explored at the urban scale. Among these practices, the construction of French new towns became an important testing ground for the revival of color. Cities such as Cergy-Pontoise, Le Vaudreuil, and Évry explored the systematic use of color in the modern

urban environment through colored building facades and overall color strategies.



Figure 2-7 The Research of Jean-Philippe and Dominique Lenclos^[67]

By the 1990s, related theories and practices had begun to enter a stage of systematization and academic reflection. In his book *Color in Architecture*^[68], Harold Linton systematically reviewed the color practices of modern and contemporary architects. The scholars and practitioners discussed in the book, including Jean-Philippe Lenclos and Giovanni Brino, gradually became important figures in the global field of color consulting. Their research and practice covered new architectural color design, color restoration of historic buildings, and urban color planning.

After that, the experience of polychrome architectural practice and the theory of color geography developed in Europe began to spread to East Asia, first influencing Japan and then extending to China. Through academic seminars, publications, interviews, and thematic exhibitions, Lenclos introduced related theories and methods into the Asian context, and promoted the gradual accumulation of more systematic experience in the research and practice of urban color planning in East Asia.

2.2.2 Core Theoretical System

(1) Urban Image Theory

Urban Image Theory is an important response to the overly simplified functionalism of modernist urban planning. Its core concern lies in the perceptual dimension and recognitional value of urban space. This theory was systematically proposed by Kevin Lynch in *The Image of the City* (1960)^[69]. Its central argument moved beyond the traditional emphasis of urban planning on quantitative indicators alone, and instead stressed that urban space should possess

two key qualities: imageability and wayfinding. Imageability refers to the ability of urban elements to evoke clear and stable mental images in the minds of observers, while wayfinding relies on the legibility of space to help people orient themselves and navigate within the city. Together, these two qualities form the basis on which urban space can be perceived and remembered.

Lynch's study was influenced by the theory of universal artistic language and by German Gestalt psychology. He argued that the formation of urban image depends on the organic combination of five core elements: paths, nodes, edges, districts, and landmarks. As a visual clue that runs through these elements, color plays a key role in strengthening spatial recognition and continuity.

a. Paths:

As the dominant element that forms the urban framework, paths include not only roads and railways, but also such linear spaces as subways and tunnels. The functions and activities concentrated along them have a strong influence on people's perception of space.

b. Edges:

Edges are strongly directional and divisive elements, such as waterfronts, walls, and railings. Although they may allow visual or tactile interaction across them, they still clearly separate different spatial domains.

c. Districts:

Districts are distinctive spatial units formed by continuous themes such as natural conditions, building functions, and spatial form. They have a unique sense of scale, and the way they connect with other districts directly affects the integrity of the overall urban image.

d. Nodes:

As intersections of paths and edges, nodes are not only transport hubs, such as stations and squares, but also key spaces where people stop briefly, observe their surroundings, and make choices.

e. Landmarks:

As external reference points, landmarks serve as important visual anchors for spatial cognition. Their recognizability, scale relationship, and continuity are essential to guiding people's understanding of space.

This theory was further developed by later scholars. For example, Wolfe (2016) proposed the method of the "city diary"^[70], which advocates capturing individuals' direct observations of urban space in order to supplement the limitations of technical tools such as maps and statistical data. This approach further highlights the irreplaceable role of perceptual elements,

including color, in the construction of urban image.

In the context of micro-renewal in historic districts, Urban Image Theory provides important guidance for color planning. It suggests that, by identifying and continuing the traditional color system of a district, color should be used to strengthen the relationship between historical spatial texture and visual perception. In this way, color can become a visual link connecting buildings, streets, and public spaces, helping people form a clear understanding of and emotional connection to the district through dynamic experience, while avoiding the fragmentation of spatial image that may result from modern renewal.

(2) Genius Loci Theory

The theory of Genius Loci was formally established by Christian Norberg-Schulz in *Genius Loci: Towards a Phenomenology of Architecture*^[71] (1980). It is a key theory that criticizes the homogenization of modernist architecture and emphasizes the uniqueness of space. This theory reinterprets the Latin concept of genius loci and defines it as the spirit of a place—a conceptual landscape jointly shaped by the natural environment, historical context, social culture, and human experience. It is regarded as the source of people's sense of belonging and identity in space.

Norberg-Schulz pointed out that the uniqueness of genius loci comes from the combined satisfaction of spatial orientation and identity recognition. Space provides individuals with a basis for physical orientation, while the cultural meaning and emotional value it carries allow them to form a sense of identity. When these two aspects are unified, space becomes a true place for dwelling. This view has been echoed by many scholars. From a biophilic perspective, Stephen Kellert^{[72][73]} further argued that the uniqueness of a place essentially lies in the deep integration of culture and nature, and that architecture and landscapes shaped by genius loci become “emotional spaces” that carry regional identity. Christopher Alexander^{[74][75]} also emphasized that architecture and spatial design should be rooted in local conditions, and that the use of local materials, craftsmanship, and cultural traditions is essential to cultivating a distinctive sense of place.

As a core material and visual component of genius loci, color is a direct visual expression of regional character. In color planning for historic districts, Genius Loci Theory calls for the rejection of standardized color schemes and instead advocates the exploration of color genes that are closely related to the local natural environment and historical traditions. For example, the gray tone of blue brick and the white tone of bamboo-tube houses in Lingnan arcade districts are, in essence, the result of long-term interaction among local climate, materials, and ways of life. To preserve and continue these colors is therefore to

protect the unique spirit of place and cultural memory of the district.

(3) Color Geography

Color geography was proposed by Jean-Philippe Lenclos in 1976^[76]. It is a key theory for revealing the internal relationship between regional color and the natural environment and geographical conditions. This theory breaks away from the idea that color is merely an aesthetic choice. Instead, it argues that the color system of human settlements is not formed by chance, but is a kind of “visual translation” of the geographical environment, jointly shaped by the geology, climate, light conditions, and material resources of a specific region.

Through his study of traditional architecture in different regions of France, Lenclos found that locally available natural materials, such as stone, pebbles, and sand, directly shaped the dominant tones of regional architecture through their inherent colors. At the same time, the colors of artificial materials such as plaster and pigments were also derived from the refinement of local mineral resources. Over time, this process created a close connection between the natural environment and the built environment. This view was further supported by Amos Rapoport^{[77][78]}, who, through his study of primitive settlements, confirmed that environmental conditions and the availability of materials directly determine the color characteristics of settlements, and that color is an important expression of regional adaptation.

Color geography provides an important method for tracing the origins of color in historic districts. By analyzing regional geological conditions, such as the red soil and limestone of Lingnan, climatic characteristics, such as the requirement for color durability under hot and rainy conditions, and traditional building materials, such as blue brick, timber, and shell lime, it is possible to identify the original color system of a district more accurately. In micro-renewal design, this theory requires that color planning should give priority to colors and materials that are compatible with local natural conditions, and avoid the introduction of external colors that conflict with the local geographical environment and material traditions, so as to ensure the regional authenticity and sustainability of the district’s color character.

2.3 The Practice of the Turin Color Plan

This study selects the color planning of Turin, Italy, as the primary research case mainly due to its representative and pioneering role in the development of urban color planning. Turin was one of the earliest cities in Europe to systematically implement urban color planning. In 1979, the Color Plan led by Giovanni Brino marked the formal beginning of modern urban color planning practice. For the first time, the plan integrated historic district color surveys, building classification, color palette construction, and implementation management into a

unified system, exerting a significant influence on subsequent color planning practices in other Italian and European cities. Therefore, it holds strong theoretical and practical representativeness.

At the same time, Turin's color planning was not developed solely for newly built urban areas, but was primarily oriented toward the renewal of historic districts and the preservation of traditional streetscapes, forming a relatively comprehensive methodology for investigation, analysis, and classification-based control. Its research focus is therefore highly relevant to the study of color control in historic cultural districts and provides important reference value.

2.3.1 Turin Color Plan Development Process

The practice of the Turin Color Plan can be divided into four major stages: the early regulatory stage, the period of stagnation and decline, the modern revival stage, and the current stage. Among them, the early regulatory stage and the modern revival stage produced systematic practical measures and therefore constitute the main source of its experience. By contrast, the problems that emerged during the period of stagnation and decline provided important directions for reflection and later improvement. During the revival period, supported by both historical archival research and modern color science, the Turin Color Plan achieved a shift in paradigm from administrative enforcement to scientific control.

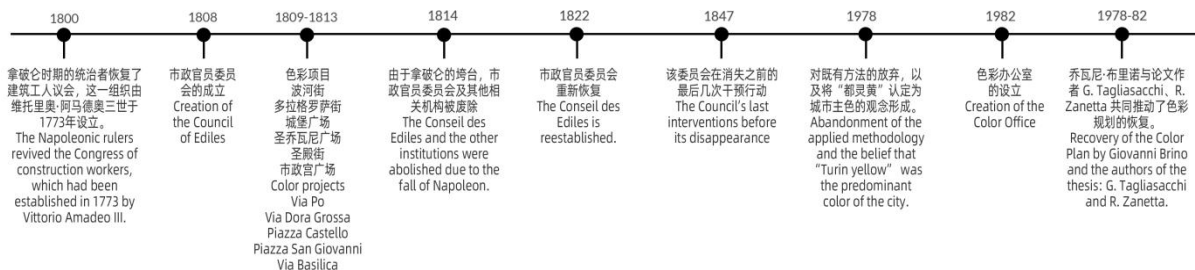


Figure 2-8 The Development Process of the Turin Color Plan

(Source: redrawn by the author)

Stage I: Early Stage (1800 – 1847)—The Establishment of the Color Plan

(1) Macro Historical Background

At this stage, the emergence of color planning was supported by the long-term accumulation of urban development. During the period of the House of Savoy, urban transformation and expansion laid the foundation for the unification of architectural character. In 1606, a ducal decree required property owners to renovate building facades in accordance with the design of Vitozzi. In exchange for donating arcade space, they were allowed to construct facades in a unified style marked by the alternating arrangement of gables. This policy promoted the regularization of architectural character. The arcade system designed by

Ascanio Vitozzi was gradually extended, eventually forming a continuous arcade network of 18 kilometers. This created a distinctive architectural and aesthetic complex and provided a solid spatial basis for unified color control. After Napoleon occupied Turin, the municipal institutions were reorganized in response to the needs of urban transformation and administrative control. This became an important opportunity for the official promotion of color regulation and helped establish the basic practical framework of the Turin Color Plan, which responded to the contemporary need to shape the image of the capital and preserve its historic character.

(2) Practical Motivation and Core Objectives

Practical background: Napoleon issued a decree ordering the demolition of all the defensive fortifications of Turin, which completely changed the city's appearance. During the early regulatory stage, the colors of urban buildings were highly disordered. Among the approximately 160 surviving applications for facade renovation permits, private owners showed very different color preferences. At the same time, architects were still largely limited to a superficial understanding of the Baroque style and lacked a mature knowledge of color, which led to visual disorder in the city and damaged its existing historic character.

Core objectives: The main objective was to establish a unified color code applicable to all building facades and to use it as a key tool for shaping an orderly urban image and maintaining historic character. At the same time, practical factors such as routine cleaning, weather resistance, and future renovation also needed to be considered. In this way, the interference of excessive color diversity with the unity of urban character could be avoided, and a standardized urban color order could be established.

Against this background, color was no longer simply a traditional architectural technique rooted in building practice. Instead, it began to be used as a means of correcting an urban style that had gradually become blurred. However, at this stage it was not yet formally defined as a color plan. Rather, it should be understood as an early form of practice centered on decorative methodology while also serving the function of urban character control.

(3) Main Institutions Involved

Congress of Building Workers

Conseil des Édiles

Municipal Palace

(4) Core Measures and Practical Implementation

Napoleon's decree ordering the demolition of all the defensive fortifications of Turin completely changed the city's appearance. Urban reconstruction and planning were then led

by Neoclassical architects, who formally held positions in the Consejo de Ediles between 1808 and 1814. Their main goal was to transform Turin into a modern political city, a direction that was consistent with the planning processes taking place in other European cities at the same time.

Within this framework, architects such as C. Randoni, F. Bonsignore, and L. Lombardi promoted the city's transformation toward a modern English style. They also carried out hydraulic engineering projects on both sides of the Po River, channeling several streams into it. At the same time, the old geometric urban fabric was extensively altered, and outdated Baroque districts were demolished. They were replaced by monumental buildings such as triumphal arches and colonnades that reflected the style of Napoleon's empire. However, because of financial shortages, and because both the French administration and local officials prioritized the removal of the fortifications, these plans were not fully implemented, although profound changes within the city continued to advance.

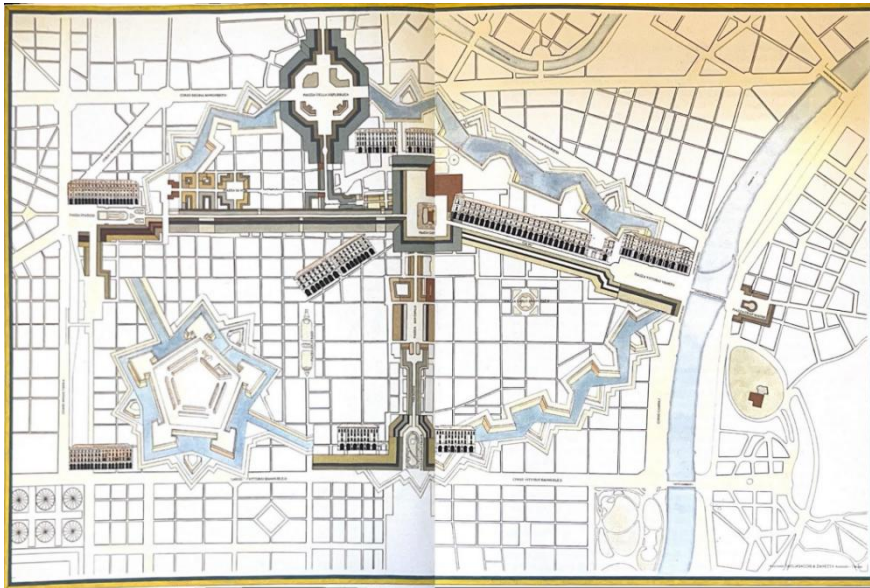


Figure 2-9 The Plan-View Color Diagram Of The Color Planning Project^[79]

In the figure 2-9, the Baroque “almond-shaped square” of the Theatrum Statuum in Turin, together with the plan-view color diagram of the color planning project, shows color in a quantified way according to the hierarchical sequence of architectural facades. The facades facing the street are rendered in relief colors, while the walls facing the courtyards are shown in base colors. All colors are taken from wall colors actually used in buildings of a unified style. This drawing is not an original historical plan. Rather, it is a visual reconstruction produced by modern researchers, such as Brino and the Rossi team, after 1978, by combining the 17th-century city plan with the color planning scheme of the early 19th century.

The main features of the urban planning and color planning scheme reconstructed by the Turin municipal officials' committee around 1850 are shown in the figure. This scheme represents a refined urban color control system based on clear principles. Using the mainstream colors of Turin as its foundation, it created a dedicated color sequence along the main ceremonial routes centered on Piazza Castello, giving the principal streets and squares of unified style a coordinated and coherent color tone. Secondary streets and squares were connected to these main routes and employed a richer sequence of auxiliary colors, thus forming a continuous color experience with clear hierarchy and gradual variation. The scheme included detailed technical provisions covering about eighty color tones. Before implementation, it was first displayed on the north wall of the City Hall to seek public recognition. In the end, it formed an urban color network centered on the core square as the visual focus, with a progressive structure extending from primary to secondary spaces. On this basis, planning control over all building facades was continued, and individual facade renovation permits were also brought under regulation.

Institutional support and procedural arrangements laid the foundation for effective control. In 1800, relying on the Building Workers' Congress reestablished under the Napoleonic administration, a basic management framework was set up. After the establishment of the municipal officials' committee in 1808, this body assumed the central responsibility for special color control and clarified the full process of "application – review – supervision – rectification", thereby strengthening official administrative authority. In 1812, the committee issued *the Turin Planning Regulations (Reglamento del Plan de Turin)*. After the committee was dissolved in 1814, control work was continued by the Department of Building Construction and Methods. When the committee was reestablished in 1822, it took over the color management responsibilities previously held by the Vicariato, formally incorporating color control into the urban planning system and ensuring the continuity of regulation.

The Turin Planning Regulations implemented three major control principles: form, function, and location. In general, the coloring of building facades began with a permit application. Property owners were required to submit an application and could state their own color preferences. The city council might take these preferences into account, but the final color scheme was determined exclusively by the council, so as to establish a conflict-free and unified color order across the city. One of the most striking features of the regulations was the richness of their color use. Particularly noteworthy was the permission — though not an

obligation—to imitate the colors of high-quality stone, thereby creating a visual impression of solidity and permanence. As a result, parts such as the building base, cornice, windowsills, supporting elements, and horizontal wall beams were often given colors similar to dressed stone. The building as a whole was required not only to appear visually solid and durable, but also to convey a sense of stability and reliability. For asymmetrical facades, color design was expected to visually correct imbalance as much as possible. Where complete correction was impossible, a monochrome scheme was adopted in order to avoid drawing excessive attention to irregular parts. The core purpose of polychrome schemes was to strengthen the sense of order on the facade, while irregular areas that could not be corrected through color were treated in a flat monochrome manner so as to reduce their visual impact.

Planned color influence zones and district color schemes. In response to Turin's broad streets and orderly large squares, a core primary color zone was defined, while secondary streets formed harmonious transitions through gradual color diffusion, thus creating a clearly layered color order. Taking Via Porta as the starting point of the color system, the color scheme for this street was formulated in 1809 under the direction of the architects Bonsignore and Randoni, and was then extended to the surrounding districts. In 1812, with the reconstruction associated with the Dora Grossa canal project, the scheme was further applied to the rebuilt buildings around Piazza Castello. In 1813, it was extended to Piazza San Giovanni, including the intersection in front of the Church of Santa Croce, as well as Piazza del Palazzo Ducale. Between 1828 and 1845, color schemes were continuously established for key areas such as Piazza Vittorio Veneto, Palazzo Carignano, Via Dora Grossa (now Via Garibaldi), and Piazza San Carlo. All of these followed the color style of Via Porta, thereby achieving coordinated and unified color control across the core urban area.



Figure 2-10 the color project implemented by the Municipal Officials' Committee^[81]

Standardization of the color palette to improve regulatory consistency. In 1847, the City Hall promoted a revision of the color palette for Via Dora Grossa. Color sample boards marked with numerical codes were installed on the inner facades, and this standardized palette was then used to formulate color schemes for individual buildings and entire districts. In this way, the earlier problem of disorderly color application without unified standards was addressed, and color control was advanced from an experience-based practice to a more standardized system. The related regulatory instructions remained in force for nearly half a century, with the latest surviving documents dating back to 1847.

Stage II: Passive Stagnation (from the late 19th century to the 1970s) — The Simplification of Color

(1) Macro historical background

During the same period, the historical development of Turin experienced sharp fluctuations. In 1861, after the victory in the Second Italian War of Independence, Turin became the first capital of the Kingdom of Italy. With the establishment of the Italian Parliament, the city entered a period of transformation. Measures such as road modernization, river filling, and the planning of ring boulevards reshaped the urban fabric. However, the Turin Massacre in 1864 and the subsequent loss of capital status dealt a heavy blow to the city's identity and economy, which directly led to a sharp decline in attention to urban character and color control. After that, Turin went through social unrest and casualties during the First World War, as well as political repression and industrial expansion during the Fascist period. The rise of Fiat, together with the supply of raw materials from the Venezia Giulia colonies, promoted industrial growth and triggered large-scale migration, further changing the city's spatial structure. In the 1950s, expropriation and reconstruction began in the Via Pietro Micca area of the city center. As an important part of post-war urban renewal, this project supported Turin's modernization. Between 1951 and 1971, massive migration led to a rapid population increase, which further reshaped the urban structure.

(2) Practical motivations and color evolution

The color system established in the early regulatory stage remained in operation for nearly half a century, but gradually collapsed in the second half of the 19th century due to multiple social crises. The main reason was the absence of effective functions within the public building management authorities, which caused the existing color control mechanism to fail completely. At the same time, the Industrial Revolution drove rapid urban expansion, and modern materials such as cement and new paints replaced traditional mineral pigments, further weakening the material basis of the historic color system. As a result, the original

standardized and diversified color schemes were continuously simplified. This process of simplification was not based on aesthetic preference, but on a practical strategy centered on reducing maintenance costs and avoiding management risks. During the Italian urban cleaning campaign in 1961, the color known as “Turin Yellow” (Torino giallo) was established. However, there is no record of this color in the relevant directives issued either by the Baroque-period Council of Ediles or by the architectural advisory committee of the mid-19th century. This tone was not replaced until 1980, when a new symbolic color system for Turin was introduced.

During this process, several major problems in the city’s color development became evident. First, the use of color entered a state of passive fixation, lacking scientific planning and dynamic guidance. Second, under the impact of industrial civilization, a monotonous color pattern became increasingly prominent, color hierarchy gradually disappeared, and the visual relationship between industrial urban elements and historic fabric became disconnected. Third, there was no coordinated color control between the old and new urban areas, leading to obvious visual conflict. At the same time, a large number of historical color archives were lost, making it difficult for the city’s color heritage to be effectively continued.

From the perspective of color evolution, the city’s color system gradually changed from the standardized and diversified system of the early regulatory stage to a two-color combination of giallo molera and terra ombra naturale, and finally solidified into a single dominant tone centered on Turin Yellow. This color was repeatedly repainted and continued for several decades, becoming the most notable color feature of this stage. Although it long served as a temporary visual symbol of the city, the logic behind its formation clearly departed from the earlier principle of color planning, in which architectural form and function were meant to serve the overall order of the city.

Stage III: Revival Stage (1978 – 1983) — Methodological Reconstruction and the Implementation of Standards

(1) Macro Historical Background

The modern revival at this stage was rooted in the broader context of urban development in Europe and Italy during the 20th century. After the Second World War, large-scale urban renewal and the conservation of historic character became major trends across Europe. These efforts focused on the restoration of historic urban fabric and the re-evaluation of public space, providing important external support for the restart and advancement of color planning in Turin. Unlike some European cities of the same period, whose renewal practices were more strongly influenced by avant-garde art movements such as Neo-Plasticism and Pop Art, as

well as by specific architectural ideas such as Robert Venturi's realist approach, the revival of color planning in Turin was less shaped by such avant-garde cultural trends. Its main driving force came instead from a systematic re-evaluation of the multiple values of urban public space. This involved a renewed understanding of streets, squares, palaces, galleries, and other public spaces, together with the visual role of urban furniture, advertisements, and installations. In doing so, it moved beyond the industrial-era limitation of treating public space mainly in functional and uniform terms, and promoted a return to its essential role in cultural continuity and civic coexistence. In this sense, it reflected both Italy's national orientation toward the revitalization of historic and cultural heritage and the broader European trend toward more refined urban governance.

(2) Practical Motivation and Core Objectives

The key trigger for the revival of color planning came from the architectural and structural restoration work carried out on the former residence of Alessandro Antonelli by Professor Giovanni Brino, Franco Rosso, and their team at the School of Architecture of the Politecnico di Torino. During this process, the team discovered archival evidence showing that the building's original facade in 1851 had been polychrome: rather than a single yellow tone, the original design used three main colors for different architectural elements and decorative parts. This discovery also led to the rediscovery of *the Turin Planning Regulations*.

At the same time, Brino was conducting research on the Crystal Palace at the Great Exhibition of 1851 in London, designed by Joseph Paxton. His study focused on the color scheme developed by Owen Jones on the basis of the three primary colors—blue, yellow, and red. This scheme followed the color principles of Michel-Eugène Chevreul, the leading French authority in color science, whose work on the color circle was also exhibited in the French section of the exhibition. This line of color theory had a deep connection with Turin. After visiting the exhibition, the Turin dyer G. G. Arnodin was inspired by Chevreul's color circle, moved to Paris, and worked with him for ten years. Antonelli's three-color design was in fact closely related to Jones's scheme, as both followed the same color principles.

Inspired by these two related lines of color practice, in 1978 the Deputy Mayor for Urban Planning of Turin officially commissioned Brino's team to prepare an overall color plan based on archival research. At the same time, a series of supporting measures were also carried out, including special investigations into urban furniture, the design of improvements for public facilities, the preparation of professional restoration institutions, and the planning of a museum of urban decoration. Together, these efforts gradually established a comprehensive support system for practice and promoted the coordinated development of district color

planning. Against this background, the major problems left over from the period of stagnation—such as the loss of historic colors and the long-term dominance of the single tone of “Turin Yellow”—became increasingly clear, making it urgent to achieve the revival of historic color and the reshaping of urban character through systematic planning.

(3) Core institutions and their roles

Color Office (Oficina del Color);

Urban Furniture Office (Oficina de Mobiliario Urbano);

Turin School of Urban Restoration (Escuela de Restauración Urbana de Turín).

Relevant municipal departments, as collaborative regulatory bodies, were responsible for coordinated control and institutional support for the color plan. These departments jointly undertook such core tasks as the review and approval of color schemes, full-process supervision of construction, and the operation and maintenance of the urban color database. At the same time, they worked with academic research teams, technical craftsmen, and other professional actors, building a platform for communication, coordination, and resource linkage among multiple parties, so as to ensure the standardization, continuity, and professionalism of color planning implementation.

(4) Core measures and practical implementation

A special project on color and lighting models, led by Germano Tagliasacchi and Riccardo Zanetta, became an important breakthrough at this stage. Its results were applied in the restoration of the streets and squares around Palazzo Carignano Square (Palazzo di Città). Through the use of carefully proportioned and colored potassium silicate paint, the project achieved precise restoration of building facades and arcades at both the technical and aesthetic levels. This was the first area in Turin where a group of buildings of unified style regained their original formal dignity through overall coordination.

On the basis of this project, related research was further deepened and eventually led to a set of color definition standards verified by the Piedmont Superintendency for Environmental and Architectural Heritage. Based on these results, color sketches were prepared for seven urban districts of unified architectural style. These original materials could be directly used in daily color control practice. The areas involved were: Piazza Vittorio Veneto and Via Po, Piazza Castello, Via Milano and Piazza della Repubblica, Piazza Statuto, Piazza San Carlo, Corso Vittorio Emanuele, and Via Nizza.

The archival research launched in 1978 also developed from this project background. It originated in the degree thesis *The Colors of Turin (Los colores de Torino, 1977 - 1978,*

School of Architecture, Politecnico di Torino), written by the architects Germano Tagliasacchi, Alessandro Tropea, and Riccardo Zanetta under the supervision of Professor Giovanni Brino. Subsequent studies expanded and deepened this line of research, and the results were eventually incorporated into the book *Color and the City: The Turin Color Plan, 1800 – 1850* (*Colore e città: il piano del colore di Torino, 1800 – 1850*).

The archival research ultimately collected a large number of historical documents, which were classified into three historical periods.

a. The Old Regime (Antiguo Régimen)

The documents from this period mainly came from three sources: the files on “building repair permits” from 1772 to 1798, the records of the Consejo de los Ediles from 1773 to 1798, and the commission records of the Casa Real from 1750 to 1759, the latter describing projects ordered directly by the monarchy. It is also worth noting that relatively few documents survive from the period of French occupation, whereas the records of the Consejo de los Ediles during the reign of Carlo Alberto are especially rich, amounting to three large volumes.

b. The Restoration Period (1814 – 1848)

The documents from this period include Consejo de los Ediles of “building reports”, Consejo de los Ediles of “building permit” files, the meeting minutes of the Consejo de los Ediles from 1815 to 1818, the records of the city council from 1822 to 1848, and related materials from the municipal architectural archives.

c. From the Constitutional Period to the implementation of the *Decoration Regulations* (1849 – 1863)

The documents from this stage include thirty-eight files on building repair, police correspondence, construction permits, the meeting minutes of the Consejo de los Ediles before 1859, and project records preserved in the architectural archives.

Taken together, around 5,000 documents discovered across these different periods were organized into *the Archival Color Project and Polychrome Project Image Collection* and were further incorporated into the nine-volume *Toponymic and Chronological Catalogue of Archival Documents* (*Catálogo toponímico cronológico de los documentos de archivo*). These materials confirm that Turin once implemented a highly strict color control system. As a unique environmental and urban reorganization project, this system was able to continue developing while respecting local architectural culture.

In 1978, the Urban Furniture Office (Oficina de Mobiliario Urbano) was established as a

special supporting institution. It was rooted in the municipal government's recognition of Neoclassical ideals and in the city's existing capacity for architectural restoration, and it responded to the practical needs of urban character restoration and public-space improvement. The team developed analytical standards and methods for color selection, and through legislation brought architectural painting under the category of special maintenance.

In its first year, the team followed up on 500 building projects. Because the applications were random in nature, they involved a wide variety of building types, which further highlighted the need for a systematic study of the traces of urban color during the organization of materials. On the basis of hundreds of field inspections, the team compiled standardized operation sheets and color cards, and, according to building use, typology, orientation, and relationship to surrounding space, defined clear norms for color application in different areas.

At the same time, the team promoted the revival of traditional restoration techniques using high-quality materials, addressed the problems of illegal post-war construction and color disorder, and made up for weaknesses in the protection of the city's artistic heritage. It also adjusted and improved the control system in light of actual urban conditions, thereby enhancing its adaptability and long-term effectiveness.

By 1979, color investigation and renovation work had been completed for no fewer than 3,500 buildings.

The Turin Color Plan served as a specialized supplement to the General Regulatory Plan. On this basis, the overall framework of the color plan, as shown in the figure2-11, was established.

The Color Office (Oficina del Color) was the core team throughout the whole process. Preparation for its establishment began in 1978, and it was formally founded in 1982. At the same time, relying on special tasks commissioned by the urban furniture department, the team carried out a systematic methodological study of the evolution of urban color from 1600 to 1900. It mainly aimed to solve two problems: first, decorative craftsmen did not regard painting work as a form of restoration; second, pigments matching the color palette of the historic center had disappeared from the market. To address these issues, the team mainly undertook three tasks: reopening archival research, defining the color spectrum of "Turin colors", and studying the color strata on building surfaces through stratigraphic methods. At the same time, it also introduced the system of master painters.

In its study of the color spectrum, the team identified and classified 107 colors known as "Turin colors". Through statistical model analysis, it further developed a palette of 30 core colors and produced them as small color cards, making it easier for workers to mix paints on

site and expand color combinations. On the basis of this research, Turin implemented unified color control and guidance for buildings of consistent style. During the Urban Color Pilot Project from 1987 to 1989, about 90 sections of arcades were restored, accounting for 54% of the total length.

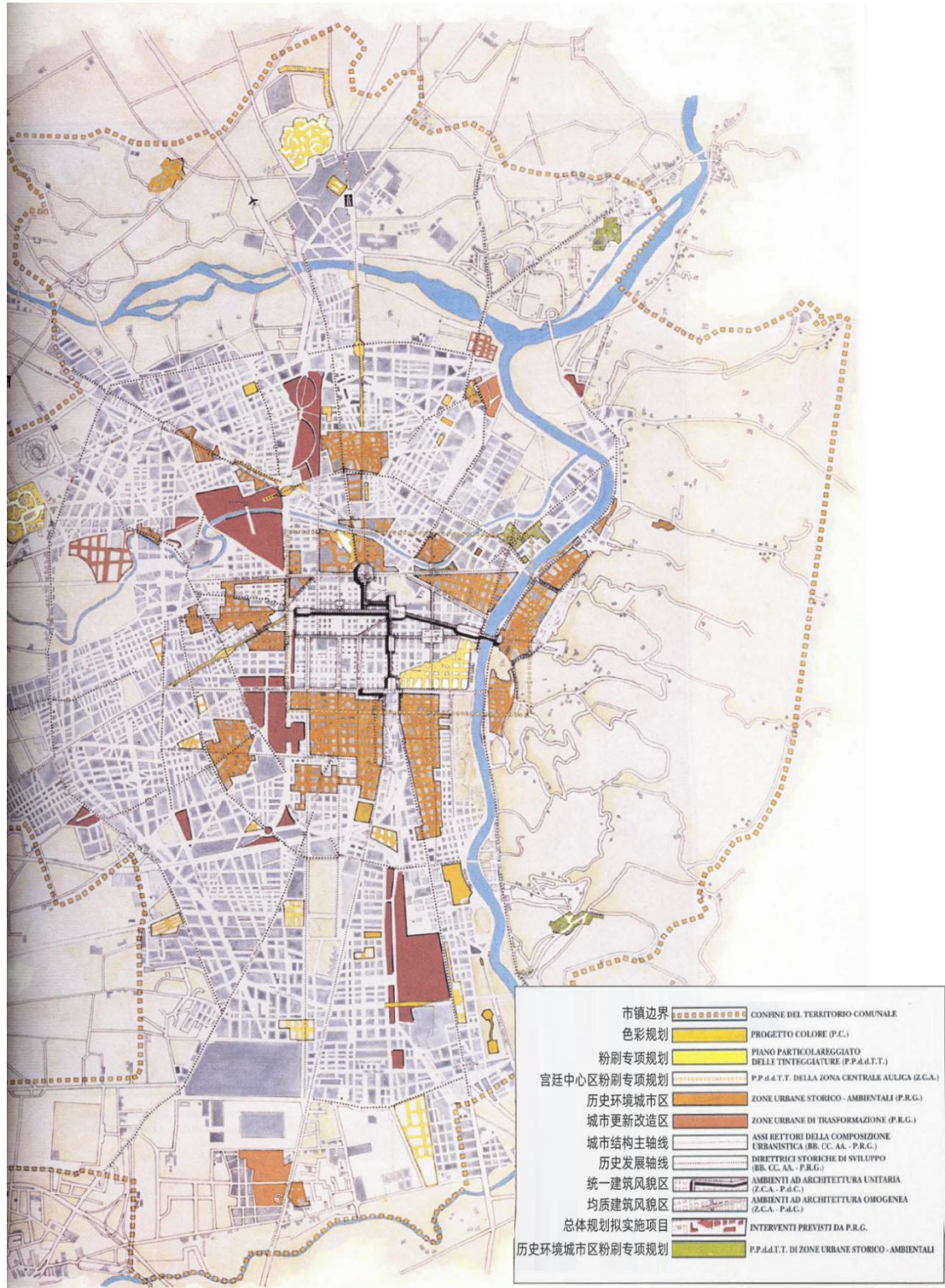


Figure 2-11 Overall Framework of the Color Plan^[81]

However, one year after the implementation of unified color control and guidance in Turin, the initial interventions gave rise to disagreement among heritage protection institutions, as well as scholars of art history and architectural history. The main reasons were as follows:

The problem of color contrast: the new polychrome painting schemes formed a strong contrast with the unified appearance of Turin Yellow (Torino giallo), which had been established during the Italian urban cleaning campaign of 1961. During this phase, more than 3,000 related regulations were issued.

The problem of culture and materials: when historic color standards were applied to 17th- and 18th-century buildings, inconsistencies arose with the use of modern paints, leading to conflicts between traditional colors and contemporary materials in actual appearance.

The problem of over-control: the scope of paint management became too broad. In the first year alone, it involved about 500 projects, and in later years this number increased to around 800 annually. The planning team found it difficult to respond effectively in time, revealing shortcomings in both management and implementation.

The use of stratigraphic methods to study color layers on building surfaces emerged largely because of the excessive number of painting applications submitted. This method, originally applied by restorers to the discovery of architectural color, was developed by Philippe Lentz and later extended to the analysis of building structures, natural materials, and artificial materials. Through the study of building typologies in different areas, it established a database of colors together with a symbolic cross-indexing system. Although this method was applied only in certain parts of Turin, its aim was to create a repeatable and coordinated color scheme for the whole city. However, because the project had unsatisfactory effects in practice in 1982 and led to public distrust, it was terminated in March 1983.

By 1996, the Office had completed more than 10,000 building intervention projects, covering the repainting and restoration of facades from different historical periods and involving a wide range of intervention types, materials, and techniques. It thus became the central coordinating body of citywide color planning.

At the same time, in 1982, the Turin School of Urban Restoration (Escuela de Restauración Urbana de Turín) was established as a professional support institution to provide technical and human-resource support. With the assistance of surviving master craftsmen, the school was founded and operated under the direction of Giovanni Brino until 1992. Its main tasks were the development of color restoration techniques and the training of professional personnel. It also set up a mobile workshop, which extended restoration practice across Italy,

France, and Switzerland, thereby promoting the dissemination and standardization of color restoration techniques and addressing the problem of discontinuity in the transmission of traditional restoration skills.

Stage IV: The Current Stage of Policy Implementation

(1) Macro Historical Background

After 1997, the continued advancement of color planning in Turin was the result of multiple macro-level forces. At the urban level, the crisis of the automobile manufacturing industry, centered on Fiat in 1996, placed Turin under strong pressure to transform in the context of deindustrialization. After 1997, the city promoted its transition toward a technology-, tourism-, and culture-oriented economy through measures such as the establishment of ITP (the regional investment agency) and the integration of tourism institutions. In this process, color planning became an important vehicle for upgrading the city's image, helping to reshape urban identity and support diversified economic development. At the level of historical continuity, Turin had a long tradition of color planning. However, under the impact of new construction in the second half of the 20th century, the traditional color character of the city was damaged. The color restoration program led by Giovanni Brino between 1978 and 1983 laid the foundation for later work. After 1997, color planning became a key means of protecting historic districts. It continued the idea of "authentic restoration" while also responding to the visual unification needs associated with the preparation for the 2006 Winter Olympics, thus balancing historical continuity with contemporary demands.

The external environment and the domestic context also provided important support for this process. At the European level, integration deepened in the 1990s. After the signing of the *Maastricht Treaty* in 1992, the scale of EU structural funds continued to expand, with a focus on regional revitalization and cultural heritage protection. Turin incorporated color planning into its program of culture-led urban regeneration, connected it with EU funding, and strengthened local cultural identity. At the same time, the discourse of the creative city gained influence in the late 1990s, and the theory of the "creative class" became widely known. Under these conditions, urban aesthetics increasingly became a form of soft power for attracting talent and capital, and Turin accordingly upgraded the strategic role of color planning. At the domestic level, after the political restructuring that followed the Mani Pulite campaign in the 1990s, the autonomy of local government increased. As the capital of the Piedmont Region, Turin used color planning as a tool of cultural governance, rebuilt the legitimacy of local governance, and created a distinctive urban identity in order to compete with the traditional tourism triangle, while also drawing on local experience to ensure

implementation and respond to the adjustment of the city's industrial structure.

(2) Core Institutions Involved

Leading institutions: the Turin municipal government (the Color Office together with related planning departments)

Supporting institutions: academic institutions, such as DIST at the Politecnico di Torino, and local design networks

(3) Core Measures and Practical Implementation

At present, Turin's urban color planning has developed into a continuously operating and institutionally complete implementation system. Its main legal basis is the municipal regulation *Regolamento n.239 - Piano del Colore*, which clearly defines the legal status of the color plan, the management bodies, the approval procedures, and maintenance responsibilities. This regulation serves as the fundamental norm for the management and restoration of building facade colors in Turin. Within this framework, the municipal government, through the specialized color management office (Ufficio Colore) and in cooperation with the relevant technical committee (Commissione Colore), supervises the entire process of facade painting, restoration, and renewal. At the same time, the scope of control has been extended to urban furniture. The plan includes categories of regulated urban furniture and planning drawings for the components of open urban space, clarifies the implementation areas such as secondary streets, specifies optional furniture types and configurations, determines layout standards, establishes a timetable for the horizontal use of urban furniture, and defines combination rules in matrix form, thereby supporting the optimization and governance of public space.

The current color plan does not remain at the level of general principles. Instead, it is supported by a relatively complete technical and operational system, including documents such as the *Guida Facciate (Guide to Facades and Color Maintenance)*, the official color chart *Mazzetta Colori*, and *Pietre Locali (Reference for the Colors of Local Stone)*, which reflects local building traditions. These documents are used to guide material selection, construction methods, and the appropriate restoration of historical colors. In practice, any project involving changes to or restoration of building facade colors must legally apply for a *Verbale Colore* (color certificate), submit a color scheme, photographs of the existing condition, and technical explanations, and may only be implemented after regular review by the color committee. In addition, the regulation clearly specifies the cycles for facade maintenance and repainting, so that color planning is embedded in the process of urban renewal through routine administration and continuous maintenance.

For citizens, property owners, administrators, and professionals, Regulation No. 239

clearly defines the “*color report*” as a legal document that provides standardized guidance for the colors, materials, and components of building facades. Relevant applications must be submitted together with the required materials according to the issuance, review, and coordination procedures of the report, and building procedures must be filed through the designated online portal. After regular review by the color committee, the report is issued within the specified period and remains valid until a new report is produced. The regulation requires property owners to maintain or renew facade colors at least once every twenty years, and to maintain porticoes and galleries every seven years. In historically important axial areas, the maintenance cycle is even shorter. In restricted zones such as the historic center, or in the case of special buildings, on-site inspection may also be required. If colors outside the official color chart are to be used, approval by the color committee is necessary, and related questions may be addressed through designated consultation channels.

Overall, Turin’s urban color planning has developed from an early experimental exploration into a stable and institutionalized management tool. Through legal regulation, technical guidelines, and approval procedures, its color practice and restoration of historic character continue to advance, and they remain active in the maintenance of historic districts, the arrangement of urban furniture, and the city’s overall visual environment.

2.3.2 Turin Color Planning Principles and Target Objects

The principle system of color planning in Turin is not intended to optimize the local color composition of individual buildings; rather, it establishes an integrated color control logic oriented toward the overall environment of the historic urban area. Its core task is to address issues such as the conservation of historic environments, the maintenance of street continuity, the expression of material authenticity, and the coordination of visual order. Through corresponding principles, color control is implemented across multiple target objects, including building bodies, façade components, street interfaces, and even public facilities. Therefore, the principles in Turin’s color planning are not isolated abstract design concepts, but a comprehensive regulatory system closely associated with specific control issues, target objects, and implementation mechanisms.

(1) Polychromatic Design Principle: Addressing Material Stratification and Façade Flattening

Turin’s color planning first emphasizes that the overall color organization of individual buildings should be based on the inherent polychromy of traditional architecture, rather than applying a single unified color across the entire building. This principle primarily responds to

the common problem of façade flattening in the renewal of historic buildings — namely, the practice of uniformly covering walls, moldings, columns, and decorative elements with a single color during repair or renovation, thereby weakening the original material differences, compositional hierarchy, and historical texture of the building.

Accordingly, the principle of polychromatic design requires distinguishing different hierarchical elements in façade design, including main wall surfaces, cornices, window surrounds, moldings, columns, and decorative details. Based on material properties and tectonic relationships, a structured color composition with clear dominant color, secondary color, and accent color should be established. In this way, the structural legibility and historical authenticity of the façade can be restored.

The scope of this principle extends beyond the allocation of colors within individual buildings to encompass the hierarchical relationships among architectural components and the modes of material expression. Furthermore, this principle has been directly translated into the palette system, component-based color application rules, and façade color review criteria within Turin’s color guidelines, thus playing a foundational role in subsequent detailed control measures and component-level guidance.

(2) Formal Principle: Addressing Façade Legibility and Compositional Order

The formal principle emphasizes that color must serve the clear expression of architectural form and façade composition. The core issue it addresses lies in the gradual weakening of component relationships, the blurring of façade zoning, and the excessive exposure of irregular or discordant elements during long-term repair, extension, and partial renovation of historic buildings, all of which undermine overall architectural legibility.

To address this, the Turin Color Plan treats color as an auxiliary means for enhancing façade readability and reconstructing compositional order. For façades with clear composition and well-preserved hierarchy, color should reinforce segmentation, component logic, and proportional order. In cases where local morphological defects or incongruous elements persist and cannot be fully corrected in the short term, overall color adjustment can be employed to mitigate their visual prominence.

Accordingly, under the formal principle, color primarily acts upon façade composition, component boundaries, and the visual expression of irregular elements. At the implementation level, this principle is typically embedded in detailed façade guidelines concerning window and door surrounds, cornices and moldings, colonnades, and wall surface zoning, and serves as an important criterion in the approval process for evaluating whether façade color composition contributes to the reinforcement of formal order.

(3) Functional Principle: Addressing Architectural Identity Expression and Block-Level Heterogeneity

The functional principle emphasizes that building color should correspond to usage attributes, spatial roles, and environmental identity. It addresses the issue that, although different buildings within a historic environment must maintain overall visual coherence, excessive homogenization may weaken functional legibility and spatial hierarchy.

Based on this understanding, the Turin Color Plan advocates that, under the premise of overall coordination, color should appropriately respond to differences in building types. Buildings of varying nature — such as palaces, religious buildings, public buildings, and ordinary residential buildings — should express corresponding environmental character and role distinctions through their overall color composition. The key is not to create strong contrast, but to establish controlled differentiation within a shared tonal order, allowing color to act as an external indicator of architectural “character” and spatial identity.

The scope of this principle primarily includes the allocation of overall façade color across different building types, the expression of key components, and the regulation of relationships with the surrounding environment. At the guideline level, the functional principle is often integrated with building classification control, functional zoning guidance, and the overall color expression of key landmark buildings, providing an evaluative basis in the approval process for differentiating color strategies among various building types.

(4) Locational Principle: Addressing Street Continuity and Environmental Coordination

The locational principle emphasizes that building color design should not be evaluated in isolation from its context, but rather in relation to its specific position. It requires a comprehensive consideration of façade orientation, lighting conditions of streets and squares, and the overall color relationships between the building and its surrounding environment. The issue it addresses is that, in historic urban areas, color decisions based solely on individual buildings may achieve local coherence while resulting in overall imbalance, thereby disrupting street continuity and the consistency of place atmosphere.

Accordingly, the Turin Color Plan requires that façade color composition should not only respond to the building’s own conditions, but also align with the overall tonal relationships of the street segment, square, or urban node in which it is located. In particular, it seeks to establish a hierarchical yet continuous color order among primary streets, major squares, and secondary streets.

In this sense, the scope of the locational principle extends beyond individual buildings to encompass the coordinated color relationships across street interfaces, square edges, and adjacent buildings. In practice, this principle is often translated into district-based zoning guidance, continuous street frontage control, and overall color coordination requirements for key areas. It also directly informs subsequent color mapping, street-segment approval processes, and comprehensive environmental evaluation.

(5) Holistic Coordination and Hierarchical Integration Principle: Addressing Fragmentation of Control Objects

The Turin Color Plan does not confine color control to individual building façades; instead, through the principle of holistic coordination and hierarchical integration, it extends control to the entire urban environment. The core issue it addresses is that, if regulation focuses solely on building bodies while neglecting urban furniture, public facilities, material specifications, and street interfaces, the historic environment may still exhibit a fragmented appearance due to surface-level interference and the dissonance of public spaces.

To address this, the Turin Color Plan, grounded in institutional frameworks such as *Regolamento n.239 - Piano del Colore*, operates across multiple scales: at the macro level, it focuses on the overall character of the historic urban area; at the meso level, it addresses the relationships between urban blocks and open spaces; and at the micro level, it regulates the color application of architectural components and materials. Furthermore, urban furniture is incorporated into the overall color coordination framework.

Accordingly, the scope of this principle covers multiple layers, including buildings, streets, squares, public facilities, and material systems. Its significance lies in demonstrating that the Turin Color Plan is not a set of isolated design interventions, but a systematic governance tool oriented toward the historic urban area, providing direct guidance for the subsequent hierarchical control system at the levels of district, street, building, and component.

(6) Combined Mandatory and Advisory Principle: Addressing Multi-Actor Implementation and Incremental Renewal

In terms of implementation mechanisms, the Turin Color Plan neither relies solely on mandatory approval nor allows complete autonomy in individual decision-making. Instead, it establishes a balance between mandatory baseline control (*Impuesto*) and advisory guidance (*Propuesto*).

This principle responds to the practical conditions of historic urban renewal, characterized by multi-actor participation, uneven implementation timelines, and long-term

incremental processes. Through region-specific color regulations, approval procedures, and usage restrictions defined by administrative authorities, the plan ensures that essential baseline requirements are enforced. At the same time, tools such as color charts, recommended palettes, and general combination rules provide individual actors with a degree of flexibility in decision-making. In this way, color planning maintains necessary regulatory authority while accommodating ongoing repair, phased renovation, and resident-initiated updates within historic environments.

The primary object of this principle is the behavior of multiple actors within the implementation process itself. More importantly, it demonstrates that the Turin Color Plan is not a one-time, static regulatory exercise, but a dynamic governance process characterized by continuous advancement and iterative adjustment under a structured framework. This has direct relevance for the application of color guidelines in the micro-renewal of historic districts.

In summary, the principle system of the Turin Color Plan reflects a logical transition from individual building color composition to the governance of the overall historic urban environment. At the design level, principles such as polychromatic design, formal organization, functional differentiation, and locational coordination address issues related to material hierarchy, façade order, architectural identity, and street continuity. At the implementation level, principles of holistic coordination and the integration of mandatory and advisory approaches further incorporate color control into a long-term governance framework for historic environments.

Together, this system not only forms the foundation for the effective implementation of the Turin Color Plan, but also provides direct methodological insights for this study in moving from problem diagnosis in historic districts toward the construction of color control guidelines.

2.3.3 Turin Color Planning Technical Tool System

The reason why the Turin Color Plan was able to evolve from historical color research into a regulatory practice for the overall environment of the historic urban area lies in its development of a systematic technical toolkit. Rather than remaining at the level of empirical judgment of overall color, it gradually established an integrated system composed of historical identification, standard extraction, spatial representation, information database construction, and institutional implementation. The key characteristic of this system is twofold: on the one hand, it employs scientific methods to identify and extract the original color information of

historic buildings; on the other hand, it draws lessons from this information to develop standardized tools applicable to planning representation, guideline formulation, and approval management.

(1) Color Spectrum and Standard Palette Tools: Addressing Historical Color Identification and Standardization

The Turin Color Plan first addresses the identification and standardization of original colors in historic buildings through the use of color spectrum tools. In his research on historical colors, Giovanni Brino proposed a Munsell color system comprising 46 colors, which was incorporated into the original color maps. These colors were not derived from subjective experience, but were defined based on the analysis and comparison of the chemical composition of 19th-century original pigments. They were then ranked according to their frequency of occurrence within the “color palette” and further illustrated through chronological diagrams to reveal their patterns of use across different historical periods.

In this way, color is no longer a vague impression of the historic environment, but becomes an object that can be systematically identified, compared, and statistically analyzed.

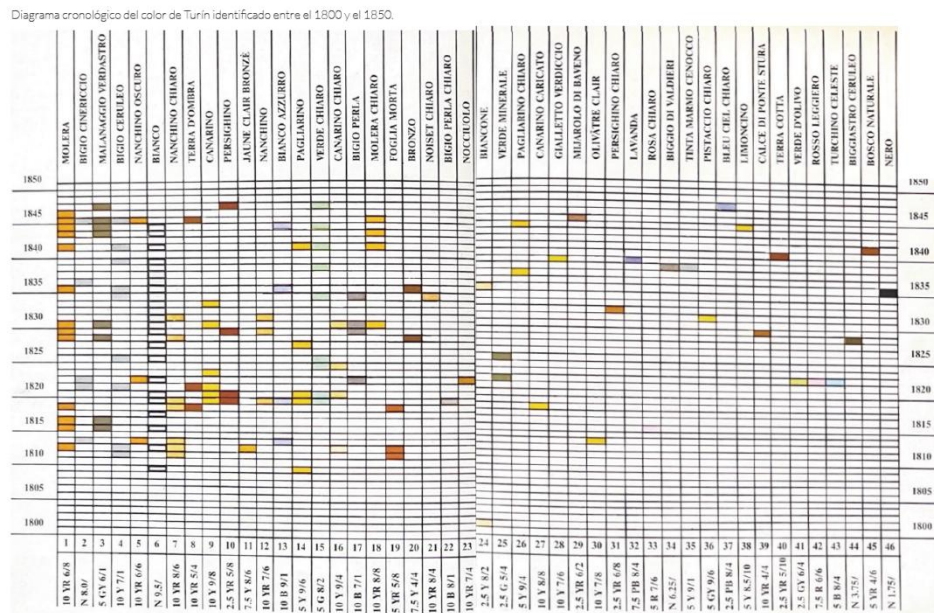


Figure 2-12 Chronological Diagram of Urban Colors in Turin, 1800 – 1850^[81]

Building on this foundation, the municipal color office conducted “field experiment”-based surveys and classification studies to continuously trace the evolution of original colors. Through this process, it further developed identification methods for “Turin colors” and established a standardized palette system. This system comprises a total of 107 colors, including 72 for plaster surfaces, 22 for wood, and 13 for ironwork. All color names are derived from historical terminology, material properties, or places of origin.

Through additional statistical analysis, the research team identified 30 highly reliable core plaster colors from this set, sufficient to meet the practical needs of most historic building restoration projects. The resulting palettes and color swatches function not only as tools for overall color display, but also as directly applicable references for subsequent design, approval, and construction processes.

In other words, the color spectrum and standard palette tools address not only the question of “what colors existed historically”, but more importantly, “how these colors can be consistently and systematically applied in contemporary restoration and renewal”.



Figure 2-13 Twenty-Five Key Colors Extracted from Historic Buildings^[81]



Figure 2-14 Recommended Wall Color Palette for the Turin Color Plan (NCS Codes)^[81]

Figure 2-15 Recommended Color Palette for Woodwork (NCS Codes)^[81]Figure 2-16 Recommended Color Palette for Ironwork (NCS Codes)^[81]

(2) Color Dictionary and Database Tools: Addressing Historical Color Traceability and Information Organization

If color spectra and standard palettes address the identification and standardization of overall color, then color dictionary and database tools further undertake the tasks of historical color traceability, information integration, and long-term management. *The Diccionario de colores (Color Dictionary)* represents a key technical outcome of the Turin Color Plan. In essence, it is a specialized database for identifying original mineral pigment formulations. This tool establishes a one-to-one correspondence between pigment composition data and color names recorded in municipal archives, incorporating more than 15,000 color entries and documenting, in detail, their historical origins, Munsell codes, and NCS codes.

In this way, a clear linkage is formed among traditional color nomenclature, historical archival records, and modern overall color coding systems, providing a standardized basis for the precise restoration of historic colors.

Further, the color database is not limited to a simple compilation of names and codes. It integrates stratigraphic methods to systematically analyze color layers on building surfaces and, in combination with typological studies of buildings across different areas, forms a cross-referenced indexing system. This system, based on methodologies developed by restoration specialist Philippe Lenzi, spans multiple dimensions, including building structure,

natural materials, and artificial materials. Its aim is to support the continuous development of color schemes that are repeatable, comparable, and mutually coordinated at the urban scale.

In other words, the core issue addressed by the database tool is no longer confined to the selection of overall color for individual buildings, but extends to the long-term accumulation, sharing, and reuse of historical color information at a broader scale. This constitutes a crucial foundation enabling the Turin Color Plan to evolve from isolated projects toward regional implementation.

(3) Color Mapping Tool: Lessons from Façade Logic for Urban Spatial Control

The Turin Color Plan does not confine color control to the restoration of individual building façades. Instead, it further employs the Mapa cromático (color map) to learn from façade-level color relationships into a form of control applicable at the urban spatial scale.

The color map is a planning tool grounded in the historical color system, which abstracts and planarizes the relationships of background, focal elements, nodes, and hierarchical structures embedded in building façades. By marking different color units and their respective control ranges within the urban plan, it enables the logic of overall façade color composition to extend from individual buildings to streets, squares, and the broader spatial structure of the city.

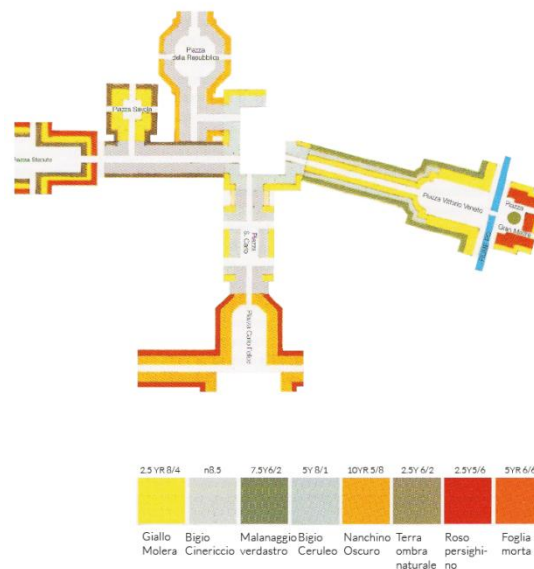


Figure 2-17 Color Map of Piazza Castello^[80]

(Source: Color and the City: The Turin Color Plan, 1800 – 1850)

The key significance of this tool lies in the fact that it does not directly prescribe specific colors for individual buildings. Instead, it guides the overall coordination of urban axes, square spaces, and important interfaces through the regulation of overall color relationships. As illustrated by the color map of Piazza Castello, the actual object of control has shifted from

building surfaces to urban spatial relationships themselves. In other words, through an ordered color system, the tool provides systematic guidance for open urban spaces and continuous street frontages.

Therefore, the color mapping tool addresses the question of how to translate building-level color relationships into a control language applicable to blocks and the overall historic urban environment. This provides direct methodological insights for subsequent street-segment guidelines and continuous interface control in historic districts.

(4) Standardized Regulatory Tools for Renewal: Addressing Implementation and Long-Term Governance

The technical toolkit of the Turin Color Plan extends beyond investigation, analysis, and representation into the realms of implementation and governance, forming a system of standardized regulatory tools for renewal. From an early stage, Turin has relied on legal instruments as a key support for color planning. Through continuous refinement, it has gradually established a legal framework centered on *Regolamento n.239 - Piano del Colore*.

The significance of this framework lies not only in expanding the scope of control—incorporating both building façades and urban furniture—but also in elevating color control from design recommendations to an institutionalized mechanism that is subject to approval, supervision, and periodic maintenance.

Specifically, through palette standards, renewal cycles, approval procedures, and multi-level supervision, the system establishes a long-term governance model that is both regulatory and operational. For example, for overall color updates of non-public buildings, the plan stipulates periodic requirements: generally, renewal occurs approximately every 20 years in ordinary areas, every 7 years in portico and gallery zones, and at shorter intervals for buildings located along historic axes and in key areas.

At the same time, the plan does not exclude public participation through a closed administrative approach. Instead, within a structured regulatory framework, it provides standardized pathways for citizen-led renewal, allowing individuals to submit color proposals based on unified standards. This demonstrates that the implementation tools of the Turin Color Plan are not merely administrative constraints, but governance instruments that guide the continuous participation of multiple actors through standardized rules.

(5) Technical Toolkit System Characteristics

The technical toolkit system of the Turin Color Plan demonstrates a clear hierarchical and progressive structure. Color spectrum and palette tools address the identification and

standardization of historical colors; color dictionary and database tools enable the accumulation and long-term management of overall color information; color mapping tools facilitate the lessons of façade-level logic into urban spatial control; and standardized regulatory tools for renewal further embed these outcomes into approval procedures, maintenance frameworks, and public participation mechanisms.

Through this progression, color planning is no longer a process reliant on designers' subjective judgment of overall color composition, but instead evolves into a systematic technical pathway integrating investigation and identification, data organization, spatial representation, and institutional implementation.

For this study, the key insight from Turin does not lie in its specific color palettes, but in the comprehensive methodology it provides lessons from historical color research into a tool for managing historic environments. This offers direct methodological reference for the subsequent stages of investigation and diagnosis, guideline formulation, and implementation translation in the Nanhuaxi Historic and Cultural District in Guangzhou.

2.3.4 Turin Color Plan Positioning

The Turin Color Plan is a specialized planning tool developed within the overall framework of the *Piano Regolatore Generale* (P.R.G.). Its role is not to replace the master plan, but to refine, supplement, and implement requirements related to historic urban conservation, built environment improvement, and spatial quality enhancement through the medium of color. In other words, rather than functioning as an independent façade beautification scheme, it serves as a crucial intermediary linking overarching planning objectives with specific renewal practices.

From a methodological perspective, the Turin Color Plan does not treat color as a purely visual or decorative concern. Instead, it employs color as a regulatory instrument for identifying historical urban fabric, organizing street interfaces, and coordinating spatial hierarchies. Through tools such as color mapping, historical document review, and archival investigation, the plan enables a systematic interpretation of the historic environment and further delineates spatial units suitable for intervention. The “unity” it seeks is therefore not simple formal uniformity, but a differentiated coordination grounded in respect for historical characteristics, building typologies, and environmental relationships.

From an implementation perspective, the Turin Color Plan performs three interrelated functions: conservation, improvement, and governance. In historic areas, it serves as a tool to reinforce character preservation and maintain interface continuity; in areas with lower

environmental quality, it facilitates the coordination of differences, the repair of fragmented interfaces, and the enhancement of spatial quality. Through specialized instruments such as color maps, technical specifications, descriptive archives, and approval procedures, the plan is embedded into building renewal and routine management processes, transforming color control from design recommendations into enforceable and supervisable implementation mechanisms.

Overall, the Turin Color Plan can be defined as a specialized planning tool that, within the master planning framework, uses color as a medium to implement fine-grained governance of the built environment in historic urban areas. Its significance extends beyond color itself, lying in its ability to establish effective linkages among heritage conservation, spatial improvement, and continuous renewal through a relatively flexible yet operational medium. This also constitutes the key basis for this study to draw on its experience and learn from it into color control strategies for the Nanhuaxi Historic and Cultural District in Guangzhou.

2.3.5 Reference Cases and Methodological Insights

To avoid limiting the analysis of the Turin Color Plan to a single case, it is necessary to introduce representative practical references to examine the applicability and lessons of its methodological system across different historic environments. The aim is to demonstrate that the Turin approach—encompassing historical color investigation, standardized coding, spatial learning, and implementation mechanisms—can be reinterpreted and adapted across historic towns of varying scales and types.

Accordingly, this study selects the Cherasco Color Plan and a series of multi-town color coordination programs led by Bianchettiarchitettura as comparative references, analyzing them respectively from the perspectives of component-level guideline formation and regional-scale coordination and dissemination.

(1) Cherasco Color Plan

Cherasco, located in the Province of Cuneo in the Piedmont region of Italy, south of Turin, is a historic town whose color plan goes beyond merely tracing the evolution of historical color patterns. Instead, it seeks to integrate color control with the urban perception system — undertaking a systematic design approach oriented toward conservation and continuity through the coordination of spatial configuration, built form, materiality, and technical knowledge.

Its strategies encompass multiple dimensions, including the restoration of existing colors,

façade element – based color redesign, and “harmonizing repairs” (*ricuciture armonizzanti*). This case provides a relatively comprehensive demonstration of how historical color research can be translated from investigation and identification into implementable component-level guidelines.



Figure 2-18 Color Tracing in the Cherasco Color Planning Project

(Source: http://www.archisoave.it/dettaglio_progetto.aspx?id=32&lang=it)

Color tracing: evidence-based extraction of historical colors

Through material sample collection and historical archival research, the planning team identified the original color systems of three core interface types:

Building facades (*Facciate*): based mainly on the warm yellow tones of local stone, combined with warm colors such as orange-red and ochre formed by historical mineral coatings;

Inner sides of the arcades (*Fondo Portico*): as semi-open micro-environments, these areas are mainly characterized by soft neutral tones such as off-white and light gray;

Arcade ceilings (*Volta Portico*): due to different ventilation conditions, these surfaces preserved traces of earlier cool colors, such as gray-green and light blue.

Most of these colors were derived from local natural mineral pigments and traditional techniques, and they are well suited to the physical properties of historic building materials.

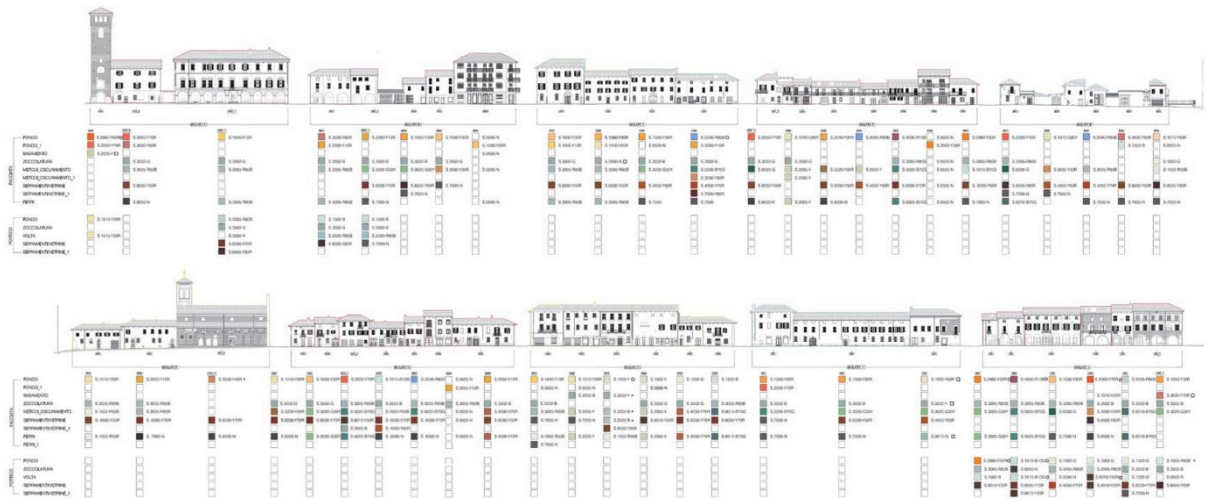


Figure 2-19 The “Color Coding Manual” in the Cherasco Color Planning Project

(Source: http://www.archisoave.it/dettaglio_progetto.aspx?id=32&lang=itt)

Color control: an operable system of technical guidance

The plan prepared a “color coding manual” for building facades, in which the urban interface was divided into quantifiable control units:

Component-based hierarchical control: specific color codes were assigned to different components, such as the base surface (*Fondo*), plinth (*basamento*), window surround (*Zoccolatura*), and stringcourse (*Separante*);

Linking color codes with construction methods: each color code was associated with specific technical requirements. For example, lime-based coatings were recommended for base surfaces;

Minimum-intervention and harmonizing repair: for damaged interfaces, the plan proposed a strategy of “harmonizing repair”, in which local color matching was used to achieve a natural integration of old and new traces.

At the level of urban image integration, this plan went beyond the control of color on individual building facades. Drawing on Kevin Lynch’s theory of urban image, it strengthened visual continuity along pedestrian routes and enhanced urban recognizability by coordinating the color relationships between adjacent buildings. At the same time, it emphasized the compatibility of color with the physical properties of building materials, while preserving color traces from different historical periods and avoiding homogenized visual uniformity, thus enriching the historical layers and memory points of the urban image.

(2) The Practice Of The Color Coordination Plan By Bianchettiarchitettura

Based on the information from the *Piano di Coordinamento Cromatico* projects completed by Bianchettiarchitettura for the three Italian towns of San Maurizio d’Opaglio,

Omegna, and Orta San Giulio, this study summarizes the practical process and shared methodology of each project, in order to provide empirical references for color control in historic towns.

The Color Coordination Plan Of San Maurizio d'Opaglio (2022)



Figure 2-20 Color Palette And Project Practice Of The San Maurizio d'Opaglio Color Plan

(Source: <https://www.bianchettiarchitettura.com/it/architettura/piano-del-colore-di-san-maurizio-dopaglio-2022/>)

Project initiation: Based on the recognition of the importance of color in the built environment, the municipal government of San Maurizio d'Opaglio commissioned Bianchettiarchitettura to prepare a Color Coordination Plan. The plan covers ten historic centers within its jurisdiction, including San Maurizio and Niverate, as well as the lakeside landscape control zone. The project has been approved by the Superintendency for Cultural Heritage and Landscape of the Province of Novara and has entered into force.

Core orientation: Grounded in the traditional polychromy of historic buildings, the plan aims to address the long-standing neglect of color in historic towns and the lack of normative control. It treats color as an important component of the urban built environment and seeks to restore the distinctive color character of the town through systematic planning.

Project outcome: The project produced a color coordination scheme suited to multiple historic villages and the lakeside landscape, while taking into account both the continuity of historical fabric and the compatibility with the surrounding landscape ecology.

The Color Coordination Plan Of Borgosesia (2023)

Commission and Objective: Borgosesia is a historic town in the Province of Vercelli, Piedmont, Italy. The plan takes the overall revitalization of the historic center and its surrounding settlements as its main objective, and seeks to build an operable technical system for color control. Covering both the town center and the peripheral areas, it aims to improve the city's visual order and its compatibility with the surrounding landscape through dynamic regulation.

Empirical Investigation and Color Tracing: The project combined historical archival research with on-site sampling and measurement to conduct a systematic examination and analysis of facade colors in the historic center. On this basis, it identified a traditional color

system centered on warm yellow tones, supplemented by mineral pigments such as ochre and orange-red.



Figure 2-21 Color Palette And Project Practice Of The Borgosesia Color Plan

(Source: <https://www.bianchettiarchitettura.com/it/architettura/piano-del-colore-di-borgosesia-2023/>)

Preparation of Technical Tools: Based on the results of color tracing, the team prepared a *Mazzetta Colori* and supporting technical sheets, specifying color parameters, suitable materials, and construction methods. In addition, a special color adaptation panel was developed for wooden components, further refining the paint properties and color-control ranges for different types of wood, thus providing standardized technical support.

Establishment of Hierarchical Control: The plan established a three-level control system of “urban district – building facade – component node”, so as to achieve refined and systematic color management while taking into account visual coordination and technical suitability at different scales.

Differentiated Control and Flexible Adaptation: For the peripheral areas around the historic center that developed in later periods, the plan adopted a differentiated strategy. It preserved color traces from different historical periods, while also defining threshold requirements for the compatibility of new building colors with traditional tones, thereby balancing the continuity of urban character with the flexibility of urban renewal.

The Color Coordination Plan Of Omegna (First Edition In 1984, Updated In 2018)

First Edition (1984): Led by the architect Fabrizio Bianchetti, this was one of the representative early practices in Italy that applied color planning to the built environment. Its scientific framework and methodology remained effective for a long time, and were widely documented, studied, and promoted in other regions.

Update and Optimization (2018): Commissioned to Bianchettiarchitettura, the 2018 update mainly aimed to evaluate the implementation of the original plan and, on the basis of more mature research results and regulations related to cultural heritage and landscape, to adjust the methods of investigation and the path of implementation.



Figure 2-22 Color Palette And Project Practice Of The Omegna Color Plan (2018)

(Source: <https://www.bianchettiarchitettura.com/it/news/piano-del-colore-omegna/>)

Key Upgrade: One of the major highlights of the 2018 update was the introduction of the Natural Colour System (NCS) as a dedicated working tool. Through the NCS system, colors were coded in a standardized way. By using such tools as the NCS ColourPin 2 spectrophotometer, the NCS Exterior color atlas, the NCS Index color atlas, and NCS color samples, and by combining on-site direct comparison with spectrophotometric testing, the project achieved precise tracing and standardized coding of historical colors. Based on the NCS system, colors were classified by hue, saturation, and lightness, and historical color traces were integrated into color families. In the end, 25 suitable colors were selected,

covering different parts such as building base surfaces, plinths, and stringcourses. At the same time, a supporting color manual and technical cards were prepared, clearly linking NCS codes with construction methods, so as to ensure the accuracy and repeatability of color restoration. With technical support from the Italian NCS institution, the project results were included in the official NCS project database and became a reference model for later color renewal in other towns.

Practical Value: By taking color planning as the entry point, the project helped encourage public attention to the built environment and laid a foundation for improving environmental quality and shaping urban image through building repair and maintenance.

The Color Coordination Plan Of Orta San Giulio (2024)

Commissioning Background: Drawing on the firm's many years of research and planning experience in the color of the built environment, Bianchettiarchitettura was commissioned by the municipal government of Orta San Giulio to prepare a plan for the historic center and old settlement areas within the town and its subordinate villages. The plan was approved by the joint Superintendency for Cultural Heritage and Landscape of several provinces, including Biella and Novara.



Figure 2-23 Color Palette And Project Practice Of The Orta San Giulio Color Plan

(Source: Bianchettiarchitettura official website)

Preliminary Investigation: A systematic archival study was carried out to identify the typical characteristics of local architecture. At the same time, on-site investigation was conducted to capture the existing traces of color on buildings.

Building Survey: All buildings within the historic center were surveyed. The study recorded traceable original colors, color changes that occurred during historical evolution, and later added colors, while distinguishing between colors that were compatible with the historic environment and those that were arbitrary. At the same time, a survey of valuable architectural elements within the jurisdiction was also completed.

Multi-Dimensional Analysis: The study did not stop at the color of building facades, but also systematically analyzed the structure, form, and construction materials of architectural components such as porticoes, plinths, window surrounds, pilasters, and balconies, so as to

examine the relationship between color and architectural texture.

Project Output: A color manual based on the local architectural history was compiled. It can also be extended to the areas surrounding the historic center, helping to maintain a unified color atmosphere and regional character, while supporting environmental improvement and urban renewal.

(3) The Color Plan Of San Fiorenzo

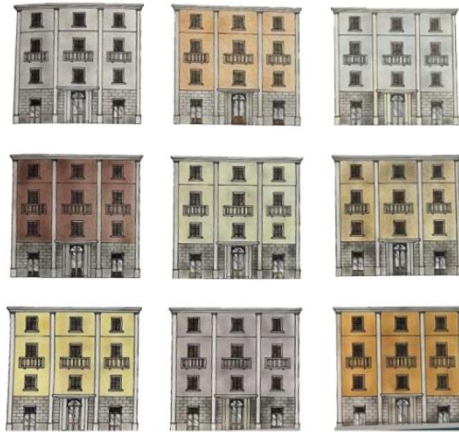


Figure 2-24 The Color Plan Of San Fiorenzo^[81]

(Source: Colorscape, Gruppo.I Piani Del Colore.Maggioli Editore,1987.Página 37)

In the case of San Fiorenzo, the color palette proposed by the municipal government required residents to follow several rules. First, they were not allowed to choose a color that had already been used on an adjacent building. Second, the colors of details such as doors and windows had to be coordinated with the main facade color. Third, for secondary elements such as doors and windows, any natural tone could be used in addition to the prescribed colors, but repainting with fashionable or unconventional colors that had recently become popular was not permitted.

In addition, the Milan-based Colorscape studio developed a systematic tool for the municipality of San Fiorenzo, namely *the Municipal Color Atlas*. This atlas contains nineteen modes of color presentation, and its color range was selected on the basis of a careful study of the existing historical and environmental characteristics.

2.3.6 Practical Experience Summary and Implications

Through the review of the Turin Color Plan and related cases, it becomes evident that its value does not primarily lie in a set of directly transferable overall color schemes, but in the establishment of a systematic methodology capable of supporting historic environment conservation, spatial improvement, and continuous renewal. By synthesizing its principles, technical tools, implementation mechanisms, and extended case studies, its experience can be

summarized in the following four aspects.

(1) Empirical Research as the Foundation

The Turin Color Plan is not based on subjective aesthetic judgment, but on empirical research, including archival document review, historical image comparison, material sample analysis, stratigraphic investigation, and field surveys. Through these methods, the original colors of historic buildings, material properties, and their processes of transformation are systematically identified.

As a result, color planning is first established as an evidence-based study of the historic environment, rather than merely an exercise in overall color design. Its core implication is that only through a thorough understanding of historical information, building typologies, and material characteristics can color control genuinely respond to the requirements of historical authenticity.

For this study, this experience indicates that color research in historic and cultural districts must be grounded in preliminary investigation and quantitative analysis, thereby avoiding subjective generalizations of overall color that are detached from actual site conditions.

(2) Hierarchical Control as the Structural Framework

Another prominent feature of the Turin Color Plan lies in its establishment of a multi-scalar control structure, rather than limiting color regulation to the selection of overall color for individual buildings. This structure unfolds progressively from the urban scale to block space, street interface, building façade, and down to component details.

Whether through color mapping, which coordinates relationships among open spaces and streets, or through palettes, technical sheets, and component-based guidelines that refine control over building bodies and surface layers, it is evident that color planning can only evolve from localized repair into a tool for comprehensive environmental governance when it operates across multiple spatial levels.

In this sense, hierarchical control is not merely a formal classification, but a fundamental framework that enables color planning to simultaneously address macro-level character coordination, meso-level interface continuity, and micro-level component articulation.

For this study, this insight directly informs the construction of the subsequent guideline system, indicating the need to establish a hierarchical and categorized control framework spanning district, street, building, and component levels.

(3) Dynamic Implementation as a Strategic Approach

The Turin Color Plan does not represent a one-time fixation of overall color schemes, but

rather a dynamic implementation strategy capable of adapting to long-term processes of urban renewal. On the one hand, it establishes fundamental control boundaries through standard palettes, recommended color systems, and technical rules; on the other hand, it incorporates phased restoration, localized interventions, and harmonizing repairs, allowing updates carried out by different actors at different times to be gradually integrated into a coherent overall order.

In this sense, color planning in Turin is not a static outcome, but a continuous tool with a strong process-oriented character. This is particularly significant for historic environments, where comprehensive renewal is rarely achievable through a single intervention and instead depends on long-term, phased, and incremental implementation.

For this study, this experience suggests that color control should not be understood as a one-time determination of overall color composition, but rather as a set of guiding parameters that can operate continuously and be dynamically adjusted within the process of micro-renewal.

(4) Governance Mechanism as the Safeguard for Implementation

The sustained effectiveness of the Turin Color Plan lies in the fact that it does not remain at the level of design documents or guideline formulation. Instead, it embeds color control into the governance system of the historic environment through legal instruments, approval procedures, renewal cycles, standardized documents, and pathways for public participation. In other words, its implementation does not rely solely on professional judgment by designers, but is secured through institutional mechanisms that ensure executability, continuity, and public engagement.

This governance-oriented characteristic indicates that color planning is not only a design method, but also a collaborative mechanism oriented toward the routine management and continuous renewal of historic environments.

For this study, the key implication is that, for color guidelines in historic and cultural districts to be practically meaningful, they must integrate both technical expression and implementation logic, and allow for connections with approval processes, restoration practices, and phased renewal at the guideline level.

In summary, the experience of the Turin Color Plan and its related cases can be distilled into a methodological framework characterized by: empirical research as the foundation, hierarchical control as the structural framework, dynamic implementation as the strategy, and governance mechanisms as the guarantee for execution.

These insights do not directly provide specific color solutions, but instead offer a

methodological basis for the subsequent stages of existing condition assessment, color guideline construction, and design validation for the arcade street area within the Nanhuaxi Historic and Cultural District in Guangzhou.

2.4 Extraction of Color Control Methods for Historic and Cultural Districts Based on the Turin Experience

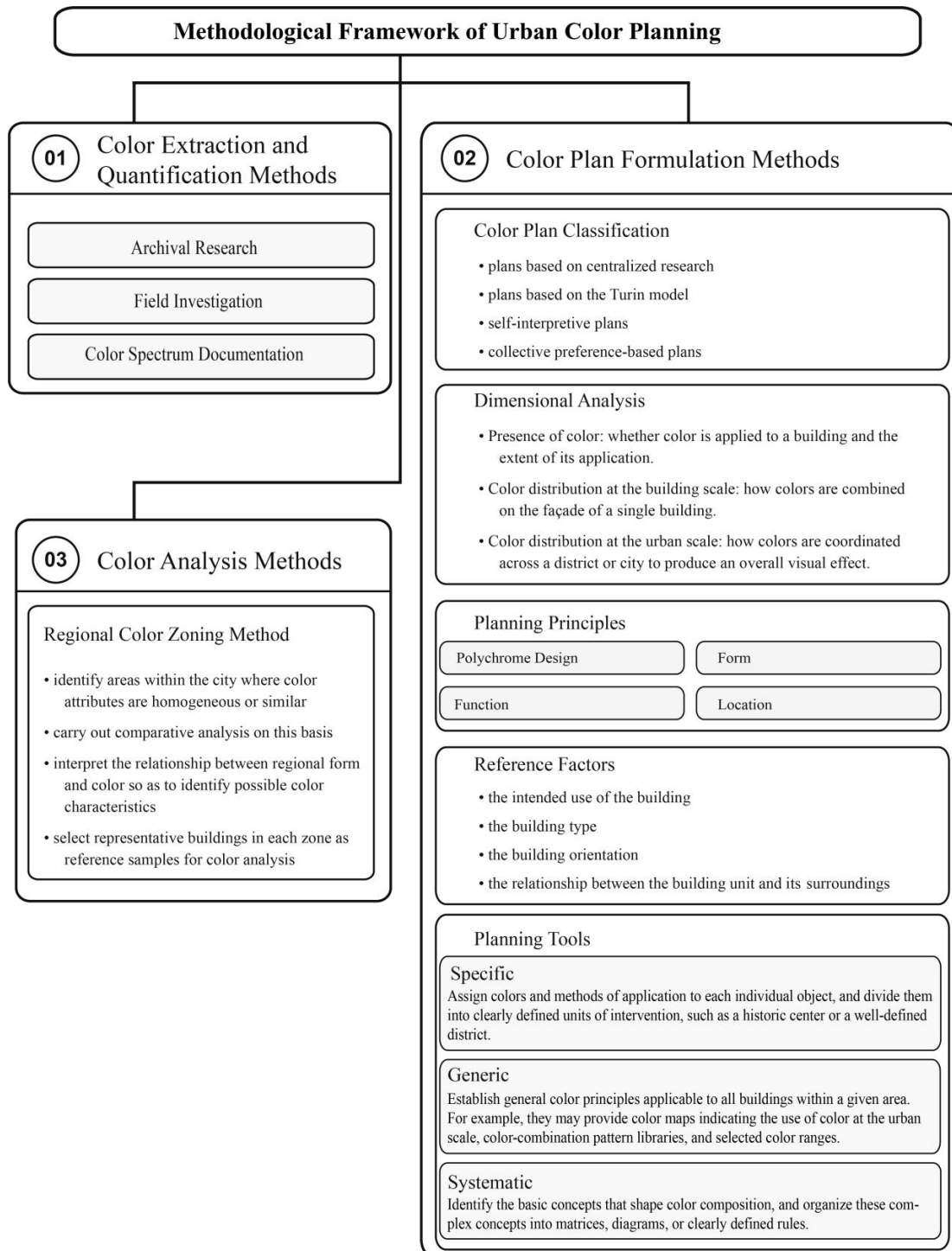


Figure 2-25 The Turin Color Planning Methodology Framework

(Source: drawn by the author)

A review of the principles, technical tools, and implementation mechanisms of the Turin Color Plan reveals that its transferable value does not lie in specific color outcomes, but in the formation of a methodological approach to color control oriented toward historic environments. This approach is not a single technique, but a continuous process composed of four interrelated stages: color extraction and quantification, color analysis and problem identification, guideline construction, and implementation with dynamic updating.

For this study, the significance of this methodological framework lies in its ability to transform the Turin experience from a case-based reference into a research pathway applicable to the arcade street area of the Nanhuaxi Historic and Cultural District in Guangzhou, thereby providing a methodological foundation for subsequent stages of existing condition assessment, guideline formulation, and design validation.

2.4.1 Color Extraction and Quantification Methods

Color extraction and quantification constitute the starting point of color control in historic and cultural districts. The purpose of this stage is to transform overall color information embedded in building surfaces and historical materials into data that can be identified, compared, and encoded. In historic environments, color does not exist as an isolated visual phenomenon independent of its material carrier; rather, it is closely associated with materials, architectural components, traces of repair, and processes of historical transformation. Therefore, color extraction is fundamentally a process of historical identification.

Drawing on the Turin experience, this stage mainly includes three components. First, archival research, which involves examining building permits, historical drawings, restoration records, and related documents to identify construction and renewal phases, thereby tracing color information from a historical perspective. Second, field investigation, which entails on-site surveys, color chart comparison, sample collection, and component documentation to directly identify residual colors on façades, decorative details, and material surfaces. Third, standardized coding, which applies color spectra, coding systems, and statistical methods to classify and quantify identified colors, transforming them from descriptive observations into technical data.

The core issue addressed by color extraction and quantification methods is the establishment of a foundational dataset for overall color research in historic districts. For this study, this stage directly corresponds to subsequent field surveys, color sampling, and statistical analysis of color data.

2.4.2 Color Analysis and Problem Identification Methods

Following color extraction, the focus of research shifts from “what colors are present” to “how these colors relate to buildings, streets, and the historic environment.” Accordingly, the core task of color analysis is to interpret color within spatial structures and historical evolution, and to identify underlying issues on this basis.

The Turin experience demonstrates that color analysis should not remain at the level of individual buildings, but should instead be conducted at the area scale. The so-called regional color zoning method involves identifying spatial units with similar overall color characteristics within a defined area, and further analyzing their relationships with historical development, building typologies, and spatial morphology. The emphasis is not on simply dividing areas into color blocks, but on revealing the mechanisms through which overall color order is formed.

Specifically, this method operates across three dimensions. First, the historical dimension examines the background and evolution of color formation in different districts or street segments. Second, the typological dimension analyzes the correspondence between building types, façade compositions, and overall color relationships. Third, the morphological dimension explores how streets, squares, nodes, and continuous interfaces influence overall color order. Through these three dimensions, three types of overall color maps—historical, typological, and morphological—can be constructed, enabling the identification of issues such as color disorder, fragmented interfaces, architectural inconsistency, and interference from attached elements.

Color analysis is not a descriptive summary of existing conditions, but a diagnostic process oriented toward problem identification. Its ultimate purpose is to provide a clear object basis and problem framework for subsequent guideline formulation.

2.4.3 Color Guideline Construction Methods

Color guideline construction is the key stage in drawing lessons from the results of preliminary investigation and analysis to establish regulatory rules. Its task is not to propose abstract overall color principles, but to develop an operable guideline system based on color patterns, spatial relationships, and renewal demands within the historic environment.

Drawing on the Turin experience, the first step in guideline construction is to define control levels. Color control in historic and cultural districts does not operate at a single scale, but simultaneously across four levels: district, street, building, and component. At the district level, the focus is on overall tonal character and functional zoning differences; at the street

level, on continuous interfaces and node identification; at the building level, on façade composition—namely the relationships among dominant color, secondary color, and accent color—as well as material compatibility and building classification; and at the component level, on specific elements such as wall surfaces, doors and windows, moldings, colonnades, and attached layers. In this sense, color guidelines fundamentally constitute a hierarchical control system.

Second, guideline construction must address the relationship between overall consistency and local differentiation. Color control in historic districts should neither pursue absolute uniformity nor allow individual variation to evolve into disorder. Instead, within an overall control framework, guidelines should introduce structured differentiation based on building function, typology, orientation, and relationships with the surrounding environment.

Finally, guideline construction requires clear technical representation. Color palettes, technical sheets, street-segment drawings, building classification control tables, and component-level guidelines all function as media for applying lessons from overall color control to design, approval, and construction processes.

For this study, this stage directly corresponds to the development of dominant – secondary – accent color palettes, functional zoning guidance, continuous interface guidelines, building classification control, and façade component guidelines presented in Chapter 5.

2.4.4 Color Implementation and Dynamic Update Methods

The effectiveness of color control in historic and cultural districts depends not on the mere formulation of guideline documents, but on whether these rules can be integrated into actual renewal processes. Therefore, implementation is not a supplementary stage following guideline formulation, but an integral component of the overall color control methodology.

The Turin experience demonstrates that color implementation requires a balance between regulatory control and flexible guidance. On the one hand, administrative authorities ensure the protection of historic character and interface order through approval procedures, area-based restrictions, and usage standards. On the other hand, recommended palettes, general rules, and technical guidelines provide a degree of flexibility for different actors involved in the renewal process. In this way, color control maintains regulatory effectiveness while accommodating the realities of multi-actor participation and phased implementation.

More importantly, renewal in historic districts is rarely completed in a single intervention; rather, it unfolds over time through continuous repair, replacement, and localized adjustments. Accordingly, color implementation must be inherently dynamic. In other words, color control

should not be understood as a one-time determination of overall color outcomes, but as a regulatory framework capable of continuous operation across different stages, with the capacity for ongoing adjustment based on implementation feedback.

For this study, this aspect is particularly critical. The arcade street area of Nanhuaxi Street is characterized by fragmented property ownership, uneven renewal rhythms, and multiple stakeholders. Under such conditions, color guidelines can only effectively support micro-renewal processes if they incorporate phased implementation and adaptive capacity. In this sense, color control is transformed from a “guideline document” into an “implementation pathway”.

In summary, the methodological framework for color control in historic and cultural districts, distilled from the Turin experience, can be understood as a continuous process: establishing a data foundation through color extraction and quantification; defining control objects through color analysis and problem identification; forming a regulatory system through guideline construction; and achieving sustained effectiveness through implementation and dynamic updating.

2.5 Chapter Summary

This chapter focuses on the theoretical foundation of color control in historic and cultural districts and the methodological lessons of the Turin experience. It first clarifies the core concepts of historic and cultural districts, urban color planning, and urban micro-renewal, thereby defining the research object, control medium, and implementation pathway of this study. It then reviews the evolution of architectural and urban color theories, along with related theoretical frameworks, establishing a foundation for subsequent analysis.

On this basis, the chapter systematically examines the development background, control principles, technical tools, planning positioning, and related cases of the Turin Color Plan, highlighting that its primary value lies not in providing directly transferable color outcomes, but in forming a methodological approach to overall color control oriented toward historic environments.

Furthermore, drawing on the Turin experience, this chapter extracts a fundamental methodological framework for color control in historic and cultural districts. This framework can be summarized as a continuous process: establishing a data foundation through color extraction and quantification; defining control objects through color analysis and problem identification; constructing a regulatory system through guideline development; and ensuring sustained effectiveness through implementation and dynamic updating. At the same time, the

chapter clarifies the boundaries of methodological borrowing: this study draws lessons from the methodological logic and control mechanisms of the Turin experience, rather than its specific palettes, material systems, or management outcomes. Its objective is to reconstruct these methods in a localized manner, in response to the conditions of Chinese historic and cultural districts, particularly the arcade street area of Nanhuaxi Street.

Therefore, the core contribution of this chapter lies in completing the transition from international case analysis to a research methodology tailored to this study, thereby providing a methodological foundation for subsequent stages, including existing condition assessment, color guideline construction, and design validation for the Nanhuaxi Historic and Cultural District in Guangzhou. The following chapter will build on this framework, integrating upper-level planning review, field investigation, and color analysis to conduct a systematic diagnosis of spatial characteristics, existing color conditions, and key issues within the study area.

Chapter 3 Planning Preconditions and Investigation Analysis of the Nanhuaxi Street Area

3.1 Planning Preconditions

3.1.1 Location Analysis and Research Scope

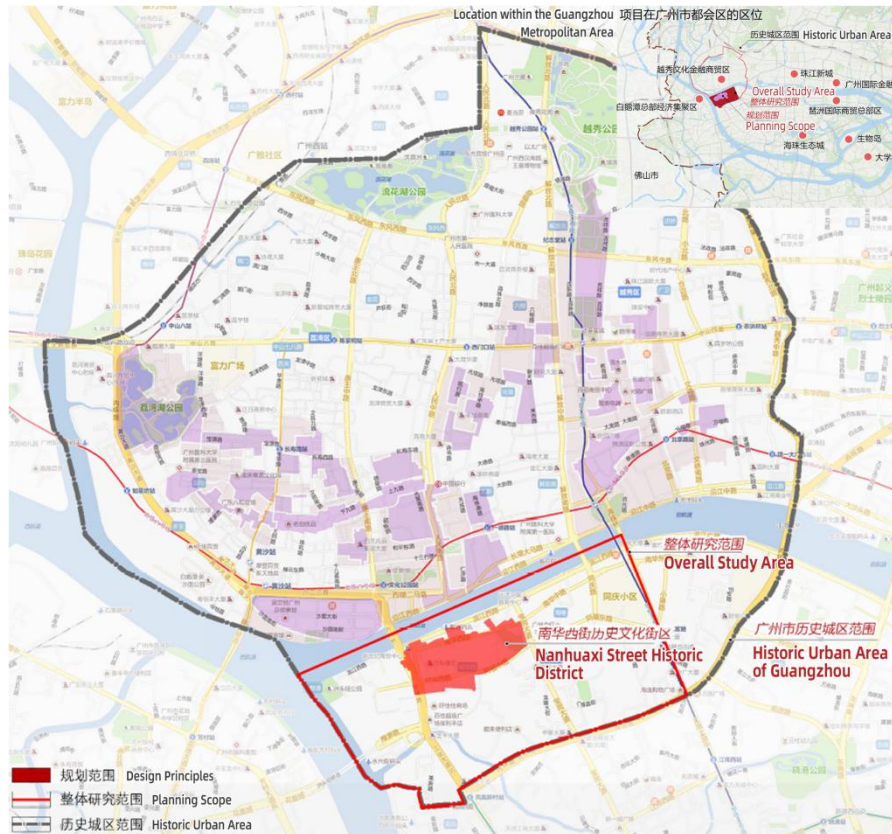


Figure 3-1 Location Of The Nanhuaxi Historic And Cultural District Within The Historic Urban Area Of Guangzhou

(Source: Protection and Utilization Plan of the Nanhuaxi Historic and Cultural District)

The Nanhuaxi Historic and Cultural District is located in the northwestern part of Haizhu District, Guangzhou, on the core waterfront area along the southern bank of the Pearl River. It is the earliest urban area in Haizhu District and is often described by the saying, “*Nanhuaxi came first, and then Haizhu District.*” With both natural advantages and rich cultural heritage, the district serves as an important spatial carrier of the integration of Lingnan water-town culture and Guangfu commercial culture.

In terms of location (Figure 3-1), the district is close to such historic commercial core areas as Shamian Island and the Thirteen Hongs in Liwan District, and faces the traditional urban area on the northern bank across the river. It was not only an important waterfront settlement during the flourishing period of Pearl River shipping in the Qing Dynasty, but also an important spatial node connecting Haizhu District with the old urban area. The surrounding

area includes traditional commercial streets such as Tongfuxi Road and Nanhuaxi Road, and it is also close to major transport hubs such as The 2nd Workers' Cultural Palace Station on Metro Line 2 and Tongfuxi Station on Metro Line 8. Therefore, the district enjoys good accessibility. It not only continues the traditional spatial fabric of the old Guangzhou area south of the river, but also connects organically with the modern urban transport network.



Figure 3-2 Definition Of The Research Scope

(Source: drawn by the author)

The scope of this study is further refined from the entire Nanhuaxi Historic and Cultural District to the arcade (Qilou) street area within the district (Figure 3-2), with its geographical boundaries defined based on the official conservation plan. This area is located at the outer interface of the district's spatial structure and serves as the primary window for presenting historic character and urban image. It is also the most active and perceptually prominent public space in daily life. The arcade street is not only the area with the most continuous arcade façades and the highest density of traditional buildings, but also preserves the Lingnan traditional street pattern structured around a "T-shaped" road system. As such, it demonstrates strong representativeness and visual prominence in both spatial perception and visual expression.

From the perspective of research rationale, the arcade street, as the main public-facing interface, has façade colors that directly influence the overall image and spatial quality of the district. It therefore represents a critical area in urgent need of systematic intervention and guidance. By analyzing the façade color characteristics and compositional logic of this area, it is possible not only to develop targeted color control strategies, but also to generate methodological references that can be extended to the inner parts of the district and other historic urban segments.

In addition, in terms of adaptability, the selected area shares a high degree of similarity with the traditional urban districts underlying the Turin Color Plan in terms of spatial morphology, historical development context, and color composition characteristics. Its continuous street interfaces, relatively stable building typologies, and historically accumulated color base provide a practical foundation for applying Turin’s model of “overall coordination and sub-area guidance”. Meanwhile, existing issues such as color heterogeneity, weakened interface continuity, and disordered localized renewal reflect typical characteristics of incremental urban regeneration, effectively corresponding to the color governance challenges commonly faced in historic and cultural districts today. Therefore, selecting the arcade street as the entry point is not only representative and targeted, but also conducive to the wider application and dissemination of the proposed methodology.

3.1.2 Historical Evolution And Cultural Value



Figure 3-3 Historical Development Of Nanhuaxi Street

- a) Map Of The Territory Of Guangzhou Prefecture In The Yongle Encyclopedia Of The Ming Dynasty
- b) Painting Of The Nanhuaxi District Reflecting The Prosperity Of The Thirteen Hongs^[82]
- c) Entrances To The Wu Family Mansion And The Pan Family Mansion

(Source: <https://new.qq.com/rain/a/20220728A07VES00>)

The Nanhuaxi Historic and Cultural District is a microcosm of the “Henan” area of Guangzhou, reflecting its transformation from natural deposition to human settlement, from commercial prosperity to modern renewal. The area where it is located, namely Haizhu District (historically known as “Henan”), was part of the Baiyue region in the pre-Qin period. During the Han and Jin dynasties, land gradually emerged due to the sedimentation of the Pearl River, and agricultural settlements began to appear. In the Song and Yuan periods, with the gathering of migrants, Lingnan water-town villages gradually took shape. In the forty-first year of the Qianlong reign of the Qing Dynasty (1776), the district was formally established. Benefiting from the commercial advantages brought by the Canton trade system, it became a core area where merchants of the Thirteen Hang built residences and gardens. Mansions of

wealthy merchant families such as the Pan and Wu families, together with arcade buildings and bamboo-tube houses, formed the traditional spatial pattern of “commerce in the front and residence at the back”. During the Republican period, with municipal construction and arcade-building regulations, the street network and modern urban pattern of the district were basically established, and the area also became a residential quarter for overseas Chinese and wealthy merchants. From the founding of the People’s Republic of China to the period before the reform and opening up, industrial development became the dominant urban orientation. As a result, the district’s commercial vitality declined, and its residential pattern gradually turned into that of crowded shared courtyards under housing reform and related policies. However, the construction of major roads around the area unexpectedly helped preserve its original street fabric. After the reform and opening up, the district experienced a period of economic recovery. Since the late 20th century, however, under the pressure of urban expansion and real estate development, it has fallen into difficulties such as the aging of physical space and a single functional structure. It eventually entered a stage of conservation and renewal as a historic and cultural district. Its historical trajectory not only reflects the rise and decline of Guangfu commercial culture, but also records the transformation and persistence of traditional urban space in the course of city development.

Table 3-1 The Development Process Of The Nanhuaxi Area

Time	Key Events
December 2000	Nanhua Street was included in the 37 historical and cultural protection zones in Guangzhou.
2005	<i>The Haizhu District Nanhua Historical and Cultural Street Protection Plan (2005)</i> was completed, clarifying the protection scope and objectives.
November 2006	The Haizhu District Government listed the renovation of dilapidated houses in Nanhua as a key task and decided to implement it in two phases.
August 2007	The first-phase renovation project of Nanhua was launched, and public housing tenants signed relocation agreements.
2008 – 2009	The first-phase project completed demolition compensation and land transfer; Junhua Group won the development right.
January 2010	Construction of the first-phase project commenced; in February of the same year, Junhua Group took the lead in developing the plot.
November 2011	The first-phase dilapidated house renovation project in Nanhua was completed, and residents moved back.
2012	<i>The Guangzhou Historical and Cultural City Protection Plan – Research on the Protection and Development of Arcade Streets</i> was issued.
2015	The planning scheme for the micro-renovation of Nanhua Historical and Cultural Street was formulated.
2016	<i>The Nanhua Historical and Cultural Street Protection Plan (2016 Approved Version)</i> was submitted for approval.



Figure 3-4 Schematic Diagram Of The Phase I And Phase II Areas Of Nanhuaxi

(Source: redrawn by the author)

As shown in Table 3-1 and Figure 3-4, the redevelopment of the Nanhuaxi area has undergone a clear transition from a model dominated by the renovation of dilapidated housing to one that places equal emphasis on conservation and adaptive use, and from localized demolition-and-reconstruction to overall revitalization. After Nanhuaxi Street was included in Guangzhou's list of 37 historic and cultural conservation areas in 2000, the renewal of the district entered a stage of institutionalized conservation. The preparation of the Protection Plan for the Nanhuaxi Historic and Cultural District of Haizhu District in 2005 further clarified the conservation scope and improvement objectives, and provided a planning basis for subsequent renewal. From 2006 to 2011, taking advantage of the urban environmental improvement campaign for the Guangzhou Asian Games, the area promoted the first phase of renewal with a focus on the redevelopment of dangerous and dilapidated housing, and gradually formed a spatial implementation pattern divided into Phase I and Phase II. Among them, Phase I mainly focused on the waterfront area and the improvement of the urban interface, while Phase II covered a larger area within the district. Overall, the renewal was carried out through a combination of demolition compensation, cleared-land transfer, and market-oriented development. This approach achieved certain results in improving infrastructure conditions, optimizing road connections, and enhancing the residential environment. However, its demolition-led mode of renewal also weakened, to some extent, the continuity of the original fabric of the historic district. Thereafter, with the adjustment of conservation concepts and urban renewal policies, the Nanhuaxi area gradually shifted from large-scale reconstruction to a gradual renewal approach oriented toward conservation and adaptive use. In particular, after the preparation of the micro-renewal implementation plan in 2015 and the submission of the reviewed draft conservation plan in 2016, the renewal strategy

further turned toward “light intervention and strong conservation”. It emphasized the revitalization of the district on the premise of preserving its traditional pattern and historical character, through such means as the restoration of historic buildings, the improvement of the spatial environment, the appropriate introduction of new functions, and the enhancement of public services. At the same time, mechanisms such as the transfer of development rights were used to coordinate the relationship among conservation, development, and resettlement. In this way, Nanhuaxi was gradually transformed from a renewal logic centered on dilapidated-housing reconstruction to a historic district renewal path in which conservation, renewal, and revitalization proceed in parallel^[83].

The cultural value of the Nanhuaxi Historic and Cultural District is reflected in the overlapping of Guangfu commercial traditions, the evolution of Lingnan architecture, the continuation of local customs, and the waterfront spatial pattern, showing a clear character of complexity and historical layering. First, at the level of commercial culture, the district served as an important spatial carrier for the residence and activities of the merchants of the Thirteen Hongs under the background of the Qing Dynasty Canton trade system. Historical remains such as the Pan Clan Ancestral Hall and the Pan Family Mansion vividly reflect the Guangfu business-residential pattern of “commerce in the front and residence at the back”, and bear witness to the prosperity of Guangzhou as a modern treaty-port city and to the historical process of cultural exchange between China and the West. Second, at the level of architectural culture, the district brings together various building types, including arcade buildings, bamboo-tube houses, Xiguan mansions, and garden villas, and also preserves distinctive cultural spaces such as the Puppet Theatre. It therefore presents, in a relatively complete way, the developmental process through which traditional Lingnan architecture transformed into modern architecture, and has high value for typological and regional architectural research. Third, at the level of everyday life and folk culture, the district, supported by a traditional street system organized around a “T-shaped road” framework and by highly continuous arcade interfaces, has continued the strong everyday urban atmosphere of the old Henan area of Guangzhou. The long-term settlement of local residents has formed neighborhood networks, traditional street commerce, and intangible cultural practices such as puppet performance, which together constitute a living carrier of Guangfu daily-life culture and folk tradition. In addition, at the level of urban character and ecological pattern, the district faces the Pearl River to the north and is crossed by the Shuzhu Creek, forming the Lingnan water-town spatial feature of “built by the water and prospering because of the water”. Together with traditional building groups, street interfaces, and old trees, these elements shape the unique

identity of the historical character of Guangzhou's southern riverbank. Finally, from the perspective of spatial ownership and cultural layering, the district contains a mixed distribution of immovable cultural relics, historic buildings, and traditional buildings, while public housing, private housing, and mixed ownership coexist. This not only records the evolution of urban dwelling forms and property relations in different historical periods, but also makes the district an important micro-scale sample for observing urban social structure, spatial organization, and cultural accumulation.

3.1.3 Foundational Spatial Pattern of the Site

The spatial pattern of the Nanhuaxi Historic and Cultural District is not the result of concentrated construction in a single historical period. Rather, it is a composite historical space that gradually took shape under the combined influence of the Lingnan water environment, the development of Guangfu commerce, and local building traditions. Its overall structure shows the clear characteristics of “streets formed by water and neighborhoods gathered through commerce”. The Pearl River and the Shuzhu Creek together constitute the basic framework for the district's external connections and internal organization, and further gave rise to a nested spatial hierarchy of “river – creek – street – neighborhood”, which established the district's basic form of development by the water and prosperity through trade.

From the perspective of urban fabric, Nanhuaxi Street developed a “T-shaped road” framework centered on the arcade street of Nanhuaxi Road, with vertical side lanes interwoven into a dense network of alleys. This street structure not only clearly organized the traditional functional order of “commerce in the front and residence at the back”, but also created a traditional urban environment suitable for walking and social interaction through narrow streets, continuous interfaces, and a high building-line ratio. This high-density and small-scale spatial organization did not weaken the quality of the district. On the contrary, through the mixed embedding of commercial, residential, and public activity spaces, it formed a spatial fabric with strong capacity for daily life and a clear sense of local identity.

From the perspective of architectural form, the district contains a relatively complete Lingnan architectural spectrum made up of arcade buildings, bamboo-tube houses, and merchant residences, all of which reflect a building logic of “practicality first and adaptation to local conditions”. Arcade buildings responded to the dual needs of commercial activity and climatic shelter; bamboo-tube houses adapted to the requirements of ventilation and daylighting in a hot and humid environment; and merchant residences reflected a composite spatial character combining dwelling, reception, and the display of social status in the context

of modern commercial society. It can therefore be seen that the Nanhuaxi Historic and Cultural District not only preserves a relatively complete traditional spatial structure, but also presents, at the level of architectural type and form, a historical character in which Lingnan locality and modern Sino-Western integration coexist. This provides a clear spatial foundation for subsequent conservation and renewal.

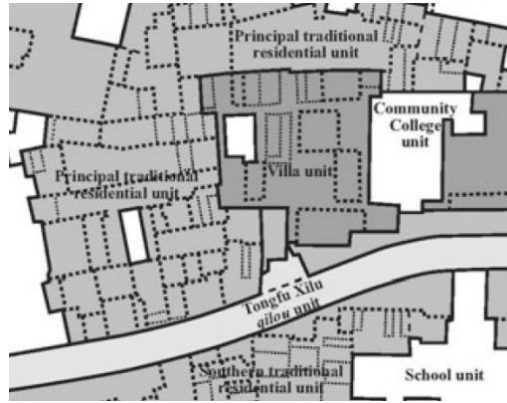


Figure 3-5 Urban Landscape Zoning Map Of The Tongfuxi Road Area^[84]

(Source: J. W. R. Whitehand and the historico-geographical approach to urban morphology)

From the perspective of local spatial layout, the Nanhuaxi Historic and Cultural District shows a clear characteristic of “arcade enclosure and concentric distribution”. The arcade street along Nanhuaxi Road forms the outer interface of the district and encloses the traditional residential area inside, while the core area of the district is occupied by villa-style residences (Figure 3-5), thus forming a concentric spatial structure of “outer commercial interface – middle traditional residential area – inner villa residential cluster”.

3.1.4 Functional Patterns And Population Structure

In terms of functional patterns and business types, the Nanhuaxi Historic and Cultural District has long been centered on residential use and traditional commerce. As of 2016, the arcade street along Nanhuaxi Road was still dominated by low value-added businesses such as hardware shops, grocery stores, and small-scale catering. Cultural spaces such as the Puppet Theatre had a relatively low rate of use, and the district as a whole showed the characteristics of “residential dominance, scattered commerce, and inactive cultural functions”. With the outward relocation of urban commerce and the transformation of consumption structure, traditional business activities in the district have continued to decline. A large number of shops along Nanhuaxi Road are now vacant, and only a few long-established businesses, such as Gengtiangong Herbal Tea, remain in operation, while commercial vitality has clearly weakened. Although some historic buildings, such as the Pan Family Mansion and Shuangqing Building, have undergone partial restoration, they are still mainly under static

conservation, with limited regular opening and experiential activities, and have therefore failed to generate effective cultural attraction. At the same time, the integration of culture, commerce, and tourism has progressed slowly. Because of the lack of systematic cultural-tourism products and operational mechanisms, most visitors come only for brief visits, and a stable consumption chain has not been formed. As a result, the district's functions have further shifted toward residential use, and some vacant shops have been converted into storage or temporary living spaces, making the tendency toward functional simplification increasingly evident.

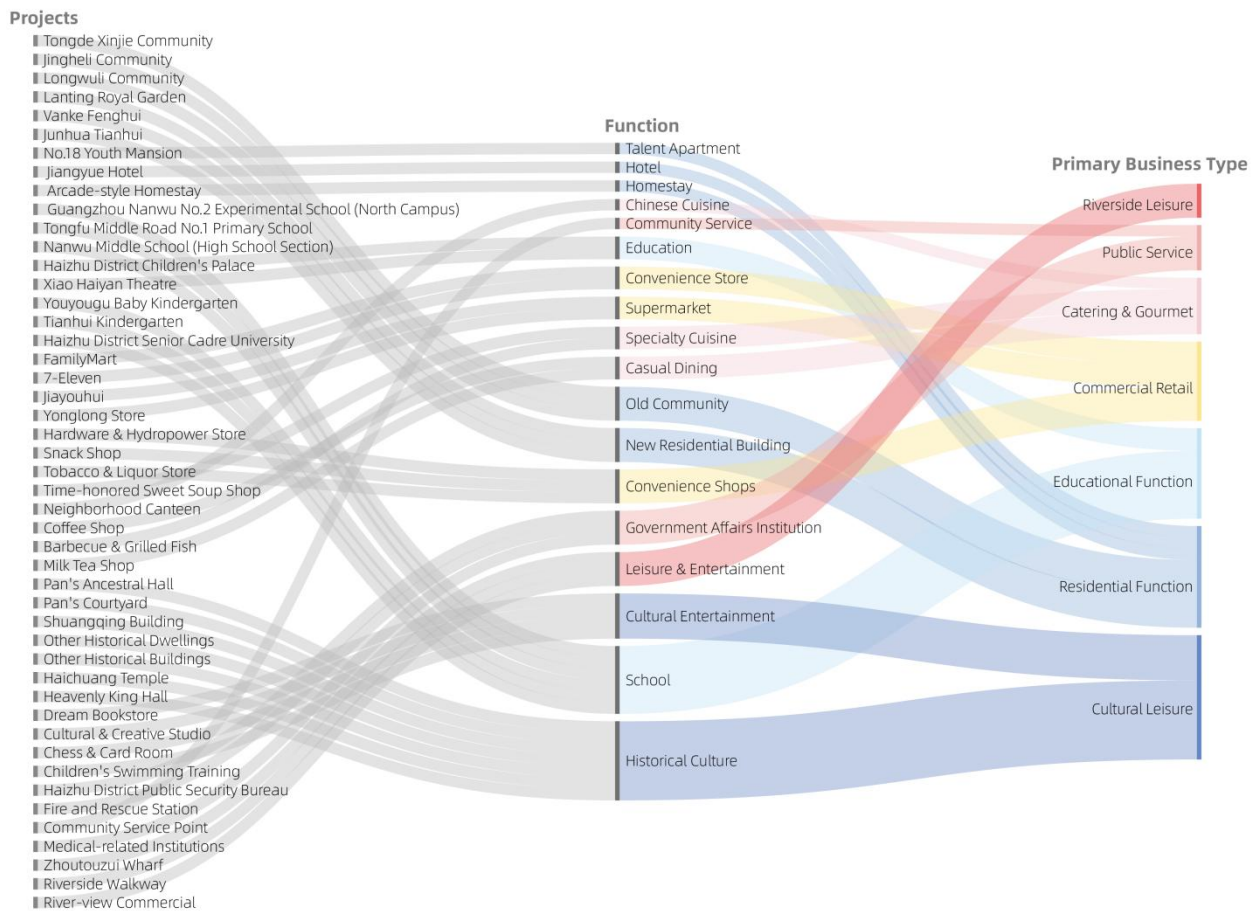


Figure 3-6 Distribution Of Business Types Within The Study Area

(Source: drawn by the author)

As shown in Figure 3-7, the ownership structure of the district is characterized by a mixed and diversified pattern, mainly consisting of private housing, public housing, and mixed public-private property. These different forms of ownership are spatially interwoven, forming a complex ownership network. Under such conditions of multiple ownership types, it is difficult to unify the interests of different stakeholders, and renewal decisions are often fragmented. This not only constrains the advancement of conservation and renewal projects in the district, but also increases the difficulty of character control and environmental

improvement, and has become one of the main bottlenecks restricting the sustainable development of the area.



Figure 3-7 Ownership Distribution In The Nanhuaxi District (Partial)^[85]

In terms of population structure, the district is characterized by deep aging and the gradual solidification of its social network. In 2016, the population density of the core area was about 38,500 persons per square kilometer, significantly higher than the average level of Guangzhou. Although the total population has declined slightly in recent years due to the out-migration of some residents, the high-density and crowded spatial pattern has not been fundamentally relieved. In terms of age structure, the degree of aging has continued to intensify. The proportion of elderly people aged over 60 exceeds 30%, which is significantly higher than the city average. As a result, elderly-care services, such as senior canteens and community care, have become core community needs, while the continuous outflow of younger people has weakened intergenerational replacement. In terms of household registration and mobility, the floating population still accounts for about one-third of the total, most of whom are engaged in low-end commerce or migrant labor and show relatively high mobility. The registered population is mainly composed of long-term local residents, who have a strong sense of identity with the district. However, due to aging and outward migration, the traditional “acquaintance society” has gradually weakened, and it has become more difficult for new groups to integrate. Elderly residents now form the core of the district’s social network, and neighborhood interaction is largely centered on elderly care and community services. The absence of younger groups has further reduced the momentum for cultural consumption and spatial innovation, leading to a more rigid social structure and limited development vitality.

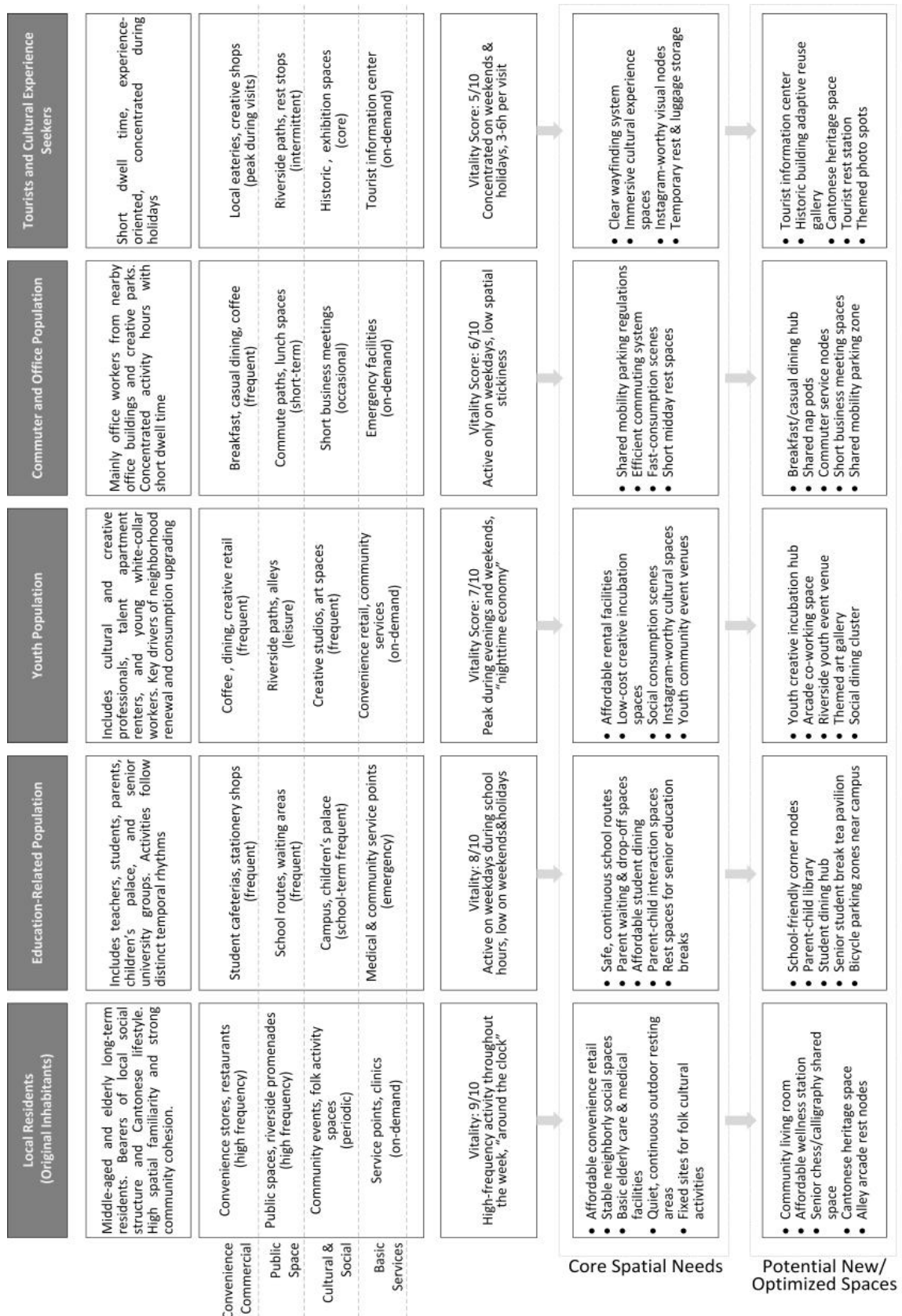


Figure 3-8 Population Types In The Nanhuaxi District

(Source: drawn by the author)

From the perspective of population composition and activity characteristics, the

Nanhuaxi area presents a composite pattern of use in which local residents form the basic user group, education-related groups and young people provide important additional vitality, and commuters as well as tourists participate on a periodic basis. Among these groups, local residents are mainly middle-aged and elderly long-term inhabitants. They engage in daily activities frequently and have a strong attachment to local space, making them the core group in maintaining the everyday atmosphere and community relationships of the area. Education-related groups generate stable and cyclical activity during school hours, pick-up and drop-off periods, and after-school time, and therefore show a clear demand for safe and continuous school routes, stay spaces, and convenient service facilities. Young people are more active at night and on weekends, and they constitute an important force in promoting consumption upgrading, the introduction of cultural and creative functions, and the revitalization of space. Commuters and office workers mainly stay for short periods and are more dependent on fast dining services, short-term resting spaces, and efficient transport connections. Tourists and cultural-experience groups, by contrast, appear mainly on holidays and weekends, and pay greater attention to guidance systems, cultural display spaces, and place nodes with strong recognizability. Overall, the current intensity of human activity in the area can be summarized as high-frequency and stable activity by residents, concentrated activity during educational periods, active youth presence at night, short-term inflow of office workers, and holiday fluctuations of tourists. This suggests that subsequent urban design should respond to the needs of all age groups, different time periods, and multiple user types, and should develop a composite spatial system that balances daily life services, cultural display and experience, and the stimulation of flexible urban vitality.

3.1.5 Analysis of Historical Colors and Regional Cultural Characteristics

The color characteristics of the Nanhuaxi Historic Cultural District are closely related to the traditional building materials, climatic conditions, and the development background of arcade buildings in the Lingnan region. Influenced by the hot and humid climate of Lingnan, traditional arcade buildings generally adopted light-colored façades and low-saturation material colors to reduce heat absorption and coordinate the visual environment of continuous street spaces. At the same time, the shaded interfaces formed by the continuous arcade grey spaces further reinforced the soft and harmonious overall color relationship of the district.

In terms of building materials, traditional arcade buildings in the district widely employed local materials such as grey plaster reliefs, exposed aggregate finishes, terrazzo, blue bricks, and light-colored lime plaster. The inherent colors of these materials collectively

formed a historical color palette dominated by grey-white, beige, light grey, and other low-saturation warm tones. In addition, some wooden components, iron decorative elements, and traditional architectural details adopted dark or low-lightness colors to enhance the layering and spatial hierarchy of building façades.

Meanwhile, the development of arcade buildings in Nanhuaxi Street was influenced by modern Lingnan commercial culture and Nanyang architectural styles. Some buildings incorporated light green, reddish-brown, and other accent colors in columns, cornices, and decorative components, forming streetscape characteristics with distinct regional features. These colors did not exist independently, but were integrated with building materials, construction techniques, and street spaces to create a continuous historic urban character.

However, during the long-term process of incremental renewal, influenced by commercial operations, individual renovations, and the lack of unified control, the original historic colors of some buildings were gradually replaced by highly saturated exterior coatings, modern ceramic tiles, and large-scale advertising facilities. As a result, the overall color order of the district has been disrupted, and the continuity of historical color information has gradually weakened. Some newly introduced materials also lack coordination with the original arcade buildings in terms of texture, hue, and lightness relationships, further undermining the continuity and authenticity of the district's historic character.

Therefore, in the subsequent construction of color guidelines, it is necessary to integrate historical materials, traditional craftsmanship, and regional color characteristics, while appropriately continuing and guiding the original overall color relationships of the district, so as to strengthen the authenticity and integrity of historic cultural district conservation.

3.2 Requirements and Implications of the Superior Plans

3.2.1 Protected Scope And Protected Objects

In November 2017, the Protection and Utilization Plan for the Nanhuaxi Historic and Cultural District was completed. The geographical boundary of the district was clearly defined. According to the official plan, the district extends south to Qixing Nanyue, Qixing Dongyue, Longqing North, and, via Longwuli, to Tongfuxi Road; north to Nanhuaxi Road, including the buildings along its northern side, and Aozhou Inner Street; west to Hongde Road; and east to Baogang Avenue. The total conservation area is 29.24 hectares, of which 22.3 hectares belong to the core conservation area and 6.94 hectares belong to the construction control zone. Overall, the district shows a spatial form that is elongated from east to west and relatively compact from north to south.

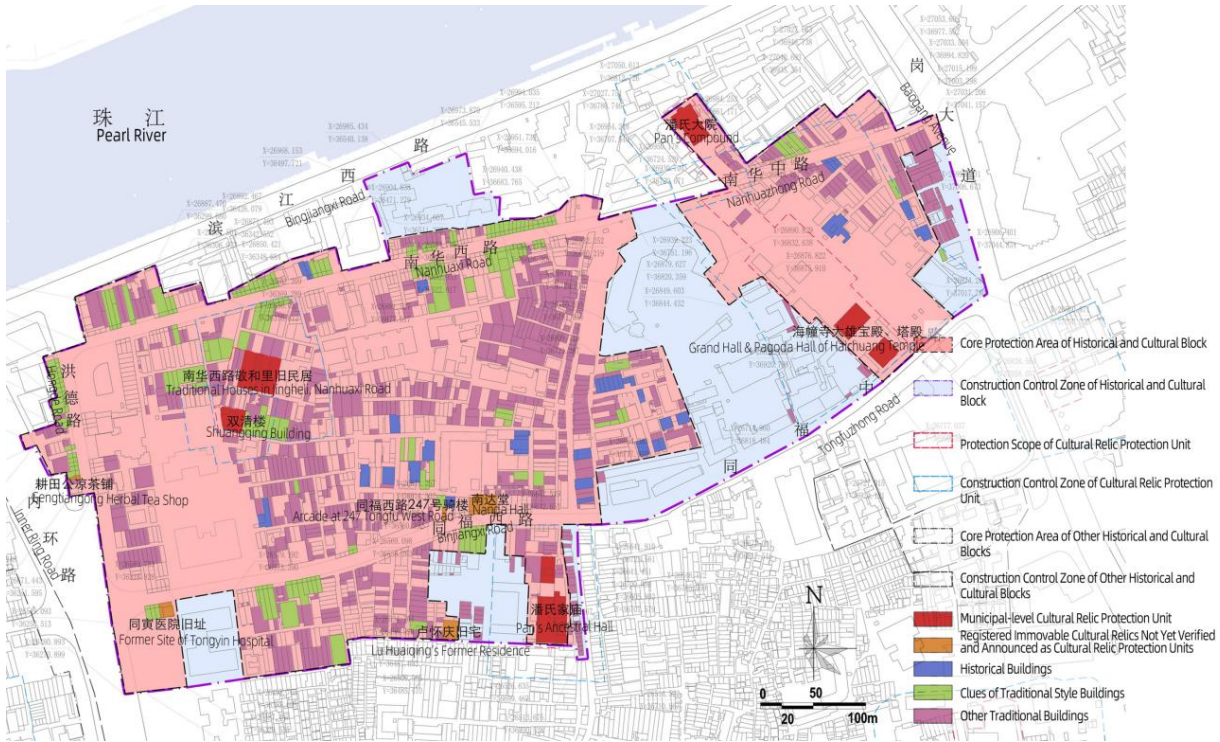


Figure 3-9 Map Of The Protection Scope

(Source: *Protection and Utilization Plan for the Nanhuaxi Historic and Cultural District*)

Its overall conservation principles follow the principles of authenticity, integrity, sustainability, and classified conservation. The protected objects are divided into tangible elements and intangible elements (Table 3-2).

Table 3-2 Table Of Protected Objects In The Historic And Cultural District

(Source: *Protection and Utilization Plan for the Nanhuaxi Historic and Cultural District*)

Category of Protected Objects	Subcategory	Specific Protected Objects
Natural Environment	Water Systems	Pearl River, Shuzhu Yong
	Ancient Trees	6 ancient and famous trees located in Haichuang Temple
Immovable Cultural Relics	Cultural Relics Protection Units	5 cultural relics protection units including the Main Hall and Pagoda Hall of Haichuang Temple, Pan's Mansion, etc
	Immovable Cultural Relics Not Yet Designated as Protection Units	5 immovable cultural relics including the former site of Tongyin Hospital, Gengtian Gong Herbal Tea Shop, etc
	Historical Buildings	20 historical buildings including the residence at No. 19 Qizhan South Street, etc
	Traditional Streets and Lanes	49 recommended traditional style building clues including the residence at No. 30 Jinghe Li, Tongfuxi Road, etc
Traditional	Arcade Streets	4 arcade streets including South Nanhua Road, Middle Nanhua Road, Tongfuxi

Category of Protected Objects	Subcategory	Specific Protected Objects
Streets		Road, Hongde Road
Traditional Streets	Traditional Streets	23 traditional streets and lanes including Longxi New Street, etc
Other Historical Environmental Elements		Ancient bridge sites including Shuzhu Bridge, Huanzhu Bridge, etc
	Folk Literature	Jinhua Ferry, Past Events of Shuzhu Yong, Nanhua West Poems
	Time-honored Brands	Gengtian Gong Herbal Tea Shop (1st Floor, No. 56 Hongde Road, Haizhu District), Chengzhu Restaurant (former site at No. 181 Middle Nanhua Road, Haizhu District)
Excellent Traditional Culture and Intangible Cultural Heritage	Traditional Opera	Puppet Show
	Traditional Music	Guqin Art (Lingnan School), Guangzhou Salt Water Songs
	Traditional Crafts	Cai Zha (Guangzhou Lion Head Making Craft), Xiaofeng Cake (Chicken Cake) Making Craft, Herbal Tea, Nanhua West Lanterns
	Deeds of Famous Figures	Merchant Families (Thirteen Hongs merchants represented by Pan, Lu, Wu, Si families) Art Masters (Ju Chao, Ju Lian, Gao Jianfu, Gao Qifeng, Chen Shuren, Li Xiongcai, Guan Shanyue) Revolutionary Pioneers (Liao Zhongkai, He Xiangning, etc.)

3.2.2 Protection And Improvement Of Traditional Streets And Alleys

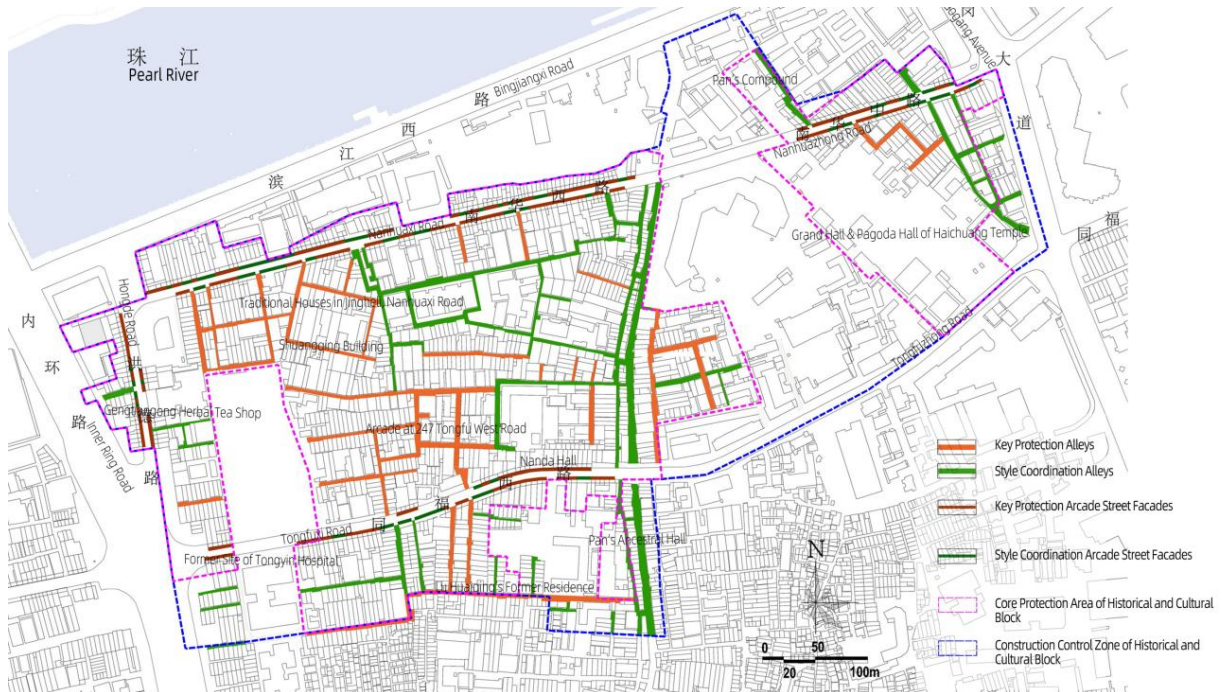


Figure 3-10 Map Of The Protection And Improvement Of Traditional Streets And Alleys

(Source: *Protection and Utilization Plan for the Nanhuaxi Historic and Cultural District*)

Combined with the defined research scope, it can be seen that the arcade street area of

Nanhuaxi Street discussed in this study belongs to the category of arcade streets identified in the government plan as a key object of protection. The relevant plan clearly designates Nanhuaxi Road, Nanhuazhong Road, Tongfuxi Road, and Hongde Road as integral arcade streets for overall character conservation, and emphasizes that refined improvement should be carried out on the basis of maintaining the traditional street-space pattern. Its core requirements include the following: maintaining the existing street width, cross-sectional form, road alignment, and continuity of arcade buildings; controlling the height and skyline of the buildings along the street, as well as the height – width ratio and facade rhythm of renewable street sections, so as to preserve the distinctive spatial scale and facade rhythm of arcade streets; strictly protecting cultural relic buildings and historic buildings along the street, carrying out classified improvement of traditional character buildings, and imposing character control on the scale, form, and color of ordinary building renovation; demolishing illegal structures and temporary additions in order to reduce interference with the historic street interface; prohibiting the construction of large-volume buildings on both sides of the street, and requiring any new buildings to be coordinated with the overall character in terms of scale, form, color, and materials; relieving traffic pressure by setting side lanes along both sides of the arcade street and adding parking facilities behind the buildings; and, in specific restoration work, emphasizing that repair and improvement should be carried out on the premise of maintaining historical authenticity, in accordance with the original character and materials. Overall, the government plan reflects a protection approach for arcade streets based on the principles of overall control, classified improvement, character coordination, and authentic restoration, which also provides a direct basis for the subsequent research in this thesis on color control and micro-renewal strategies for arcade streets.

3.2.3 Classified Protection And Improvement Measures

According to the plan, buildings and structures within the district are subject to classified conservation and improvement based on their historical and cultural value and their degree of character coordination. For the five municipal-level cultural relic protection units and the five immovable cultural relics not yet officially designated as cultural relic protection units, restoration measures are adopted, with emphasis placed on protecting their main facades, principal structures, floor layouts, and distinctive decorative elements. For the 14 historic buildings in the first batch, 1 in the second batch, and 7 in the third batch, as well as for traditional character buildings, improvement measures are adopted, allowing moderate functional optimization of the interior while retaining the original height, massing, appearance,

and color. For the 1,537 objects under preliminary protection and modern buildings that are coordinated with the traditional character, rectification measures are adopted, maintaining the original massing while ensuring that the exterior continues the features of traditional character. For the 102 modern buildings that are not coordinated with the traditional character, renewal measures are adopted, including the adjustment of color, roof form, number of floors, and partial or overall demolition, so as to achieve character coordination. Other immovable cultural heritage elements, once officially identified, will be incorporated into the corresponding protection lists and treated through classified improvement measures.

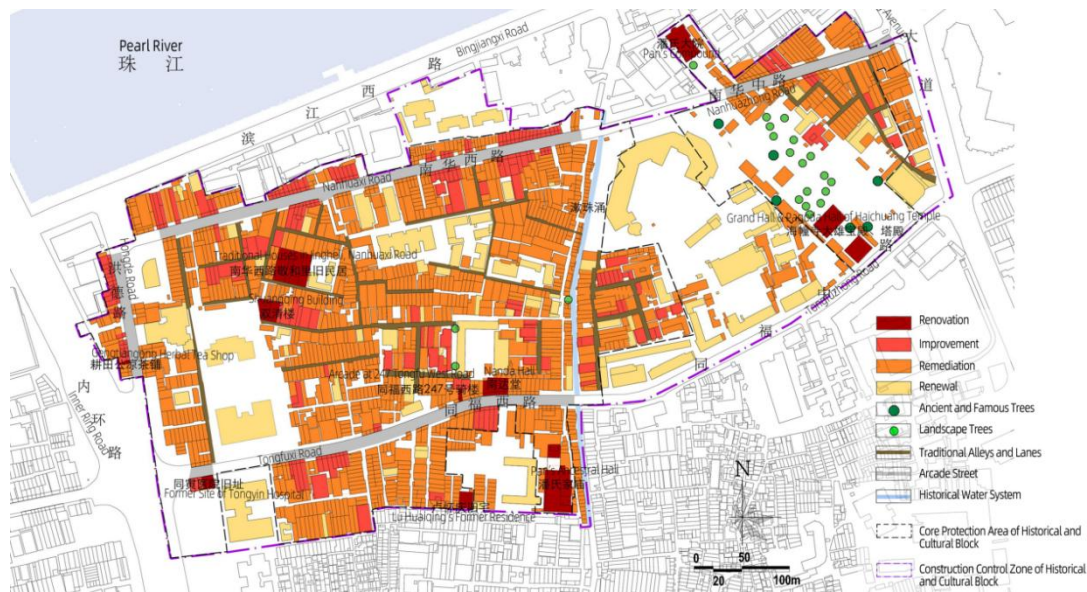


Figure 3-11 Map Of Classified Protection And Improvement Planning

(Source: *Protection and Utilization Plan for the Nanhuaxi Historic and Cultural District*)

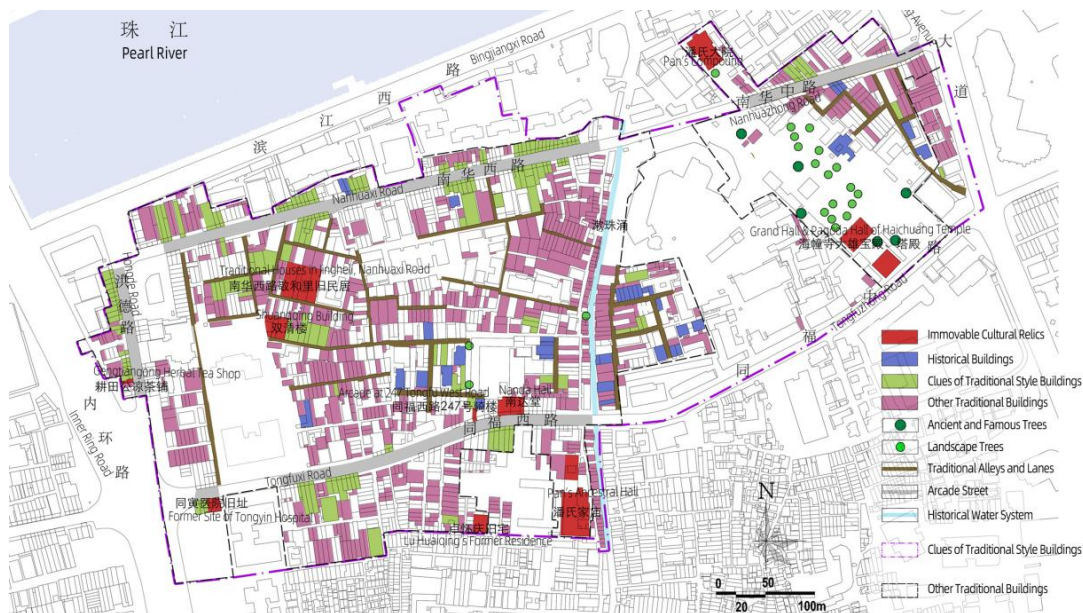


Figure 3-12 Map Of The Distribution Of Protected Objects

(Source: *Protection and Utilization Plan for the Nanhuaxi Historic and Cultural District*)

Table 3-3 Table Of Classified Protection And Improvement Measures

(Source: *Protection and Utilization Plan for the Nanhuaxi Historic and Cultural District*)

Category	Quantity	Protection & Renovation Method	Classified Protection & Renovation Control Requirements	
Immovable Cultural Relics	10	Restoration	The main facade, main structure, floor plan, characteristic decorations, and basic historical environmental elements shall not be altered	
Historical Buildings	22	Improvement	The main facade, parts, materials, structures, and decorations that reflect historical style features shall not be altered	
Traditional Style Buildings	0	Improvement	The main facade, parts, materials, structures, and decorations that reflect historical style features shall not be altered	
Others	Pre-protected Objects & Modern Buildings Harmonious with Traditional Style	1537	Renovation	The appearance of buildings with traditional style shall not be altered
	Modern Buildings Inharmonious with Traditional Style	102	Renewal	The appearance of the renewed buildings shall not conflict with the traditional style of the block

The Protection and Utilization Plan includes tables on the immovable cultural relics, historic buildings, and clues to traditional character buildings within the district, providing the specific name and construction period of each building.

3.2.4 Land Use And Planning Control

The government plan defines the Nanhuaxi Historic and Cultural District as a historic district whose dominant functions are traditional residence, commercial services, and cultural experience, and emphasizes the display and transmission of historical culture on the basis of continuing the characteristic features of Guangzhou's traditional dwellings, arcade buildings, and the residential-garden architecture of the merchants of the Thirteen Hang. This shows that the functional organization of the district is not intended merely to serve tourism development or commercial renewal. Rather, it takes the continuation of residential life as its foundation, supported by commercial vitality and cultural display, and thus forms a composite functional structure that combines everyday living, business operation, and cultural presentation. In terms of land-use control, the plan clearly prohibits the establishment of industrial land, logistics and storage land, transportation hub land, wholesale market land, and large hospital land within the core conservation area, so as to avoid the negative impact of high-intensity and highly disruptive functions on the historic character and the community living

environment. At the same time, it encourages the provision of land for commercial service facilities, cultural facilities, recreational and sports facilities, and residential use, so that the district as a whole forms a functional pattern centered on residence, commercial services, cultural facilities, and park green space. Overall, this functional orientation reflects the government plan's basic approach to the Nanhuaxi Historic and Cultural District, namely "promoting use through conservation, and continuing vitality through use", and provides a clear functional direction for subsequent conservation, revitalization, and spatial renewal.

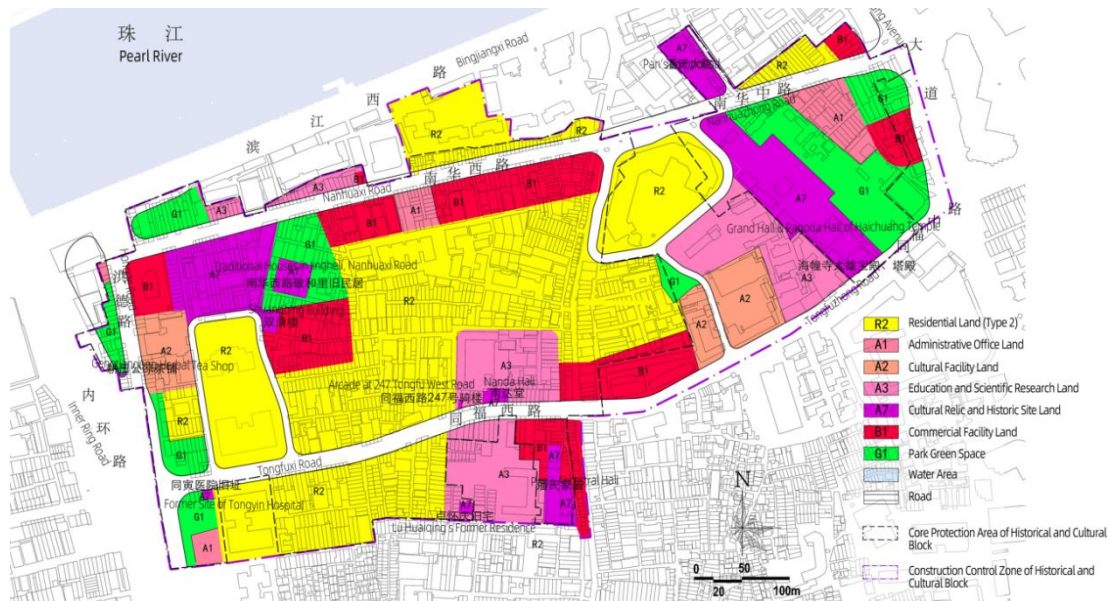


Figure 3-13 Land Use And Planning Control Map

(Source: *Protection and Utilization Plan for the Nanhuaxi Historic and Cultural District*)

3.2.5 Facility And Environmental Improvement Planning

In terms of traffic organization, the government plan emphasizes the continuation of the existing road network structure and the historic street pattern. On the basis of the original plan, it further clarifies the hierarchy of roads, traffic functions, and diversion relationships, so as to achieve the coordinated operation of the district's overall transport system. The road system is divided into three levels: expressways, secondary trunk roads, and local roads. Among them, the Inner Ring Road is defined as an expressway, while Tongfuzhong Road, Tongfuxi Road, and Binjiangxi Road serve as secondary trunk roads responsible for external connections. Nanhuaxi Road, Nanhuazhong Road, and Hongde Road function as local roads linking internal and external traffic. In view of the limited spatial scale within the historic district and the high requirements of character conservation, the plan proposes, on the premise of not damaging the traditional character or the original block structure, to moderately widen alleys, add passages, and open up dead-end roads, so as to improve internal accessibility and fire

safety. At the same time, internal traffic in the district is intended to be dominated by walking and non-motorized transport. Through such measures as the one-way traffic organization of roads including Nanhuazhong Road, Nanhuaxi Road, Hongde Road, Tongfuxi Road, and Nanhuazhong Road, the optimization of connections between bus stops and metro stations, sidewalk improvement, and the construction of a continuous pedestrian system, the plan seeks to create a historic district traffic environment that is oriented toward slow mobility, gives priority to public transport, and places moderate control on motor vehicles.

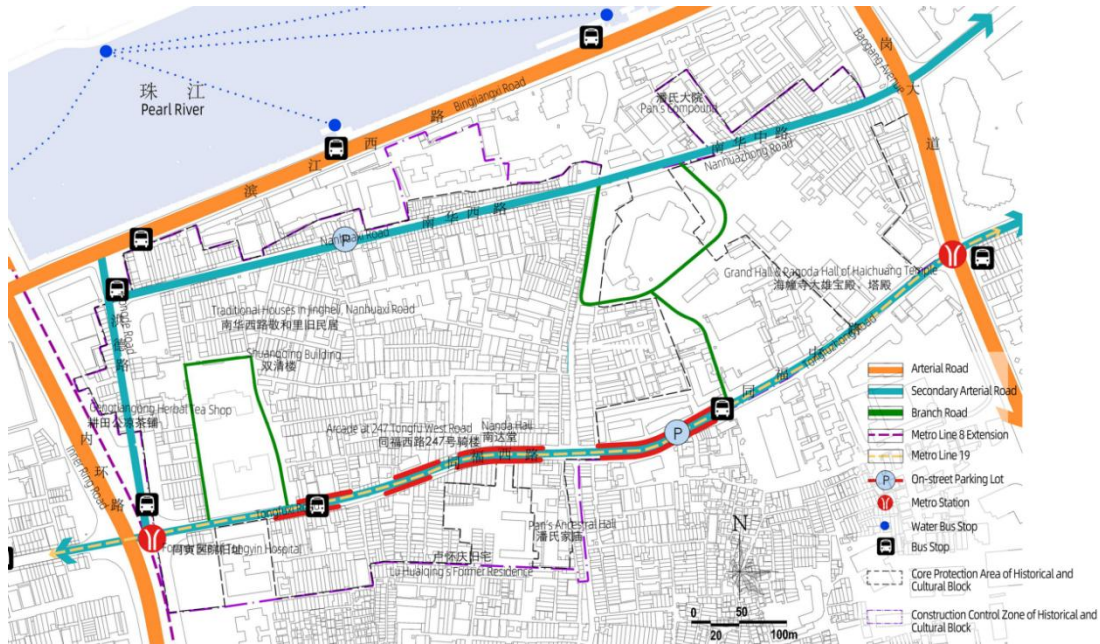


Figure 3-14 Road Traffic System Plan

(Source: *Protection and Utilization Plan for the Nanhuaxi Historic and Cultural District*)

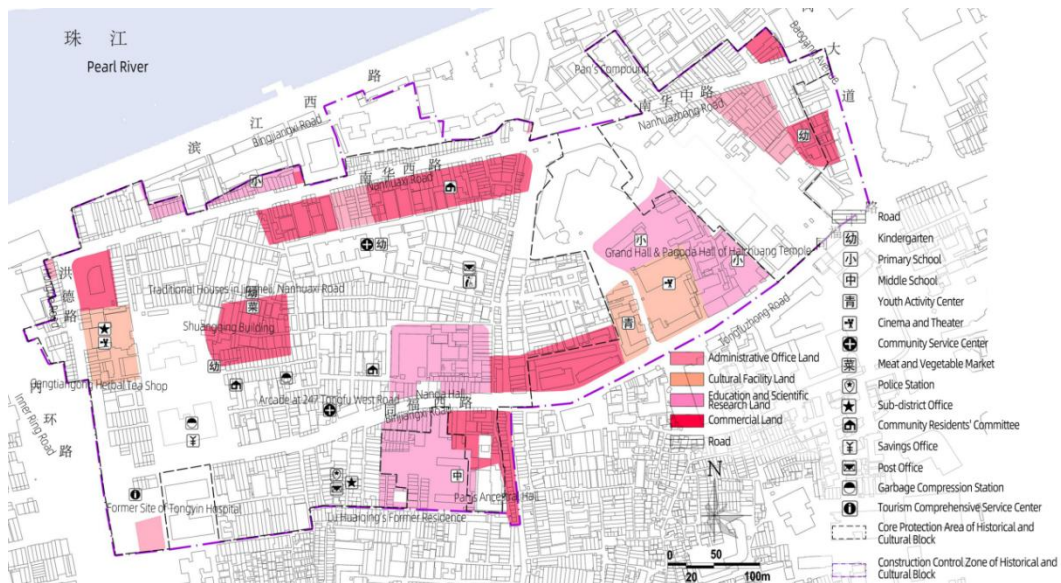


Figure 3-15 Public Service And Municipal Facility Plan

(Source: *Protection and Utilization Plan for the Nanhuaxi Historic and Cultural District*)

The plan requires priority to be given to the implementation of the community-supporting facilities identified in the current regulatory plan, and proposes the addition of facilities such as elderly service centers, so as to provide community services for the aging population and vulnerable groups.

3.2.6 Classified Control Of Building Function Compatibility

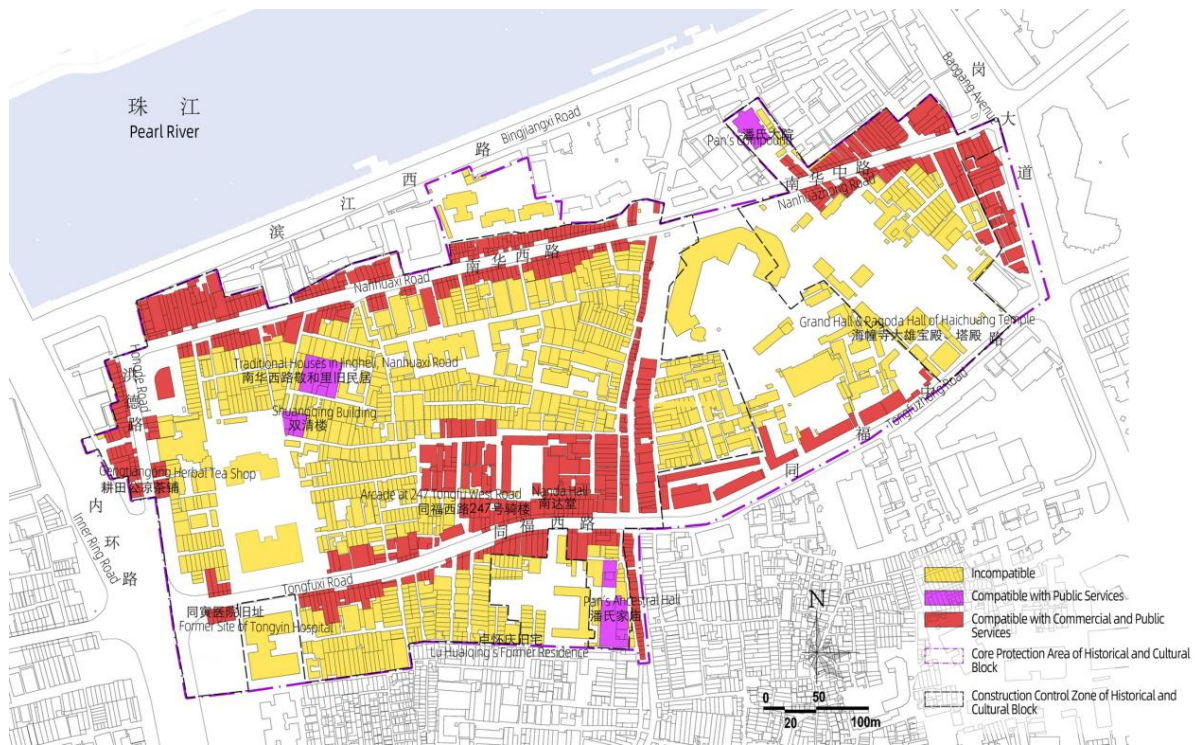


Figure 3-16 Classified Control Map Of Building Function Compatibility

(Source: *Protection and Utilization Plan for the Nanhuaxi Historic and Cultural District*)

In terms of functional control, the government plan reflects a core approach of conservation first, classified guidance, and appropriate revitalization. For buildings without functional compatibility within the core conservation area, such as the Main Hall and Pagoda Hall of Haichuang Temple and traditional non-street-facing residential buildings, the plan emphasizes the strict continuation of their original historical functions, and any unauthorized change of use is prohibited, so as to safeguard historical authenticity and cultural continuity. For buildings such as the Pan Clan Ancestral Hall, the former residential buildings in Jingheli on Nanhuaxi Road, Shuangqing Building, and the Pan Family Mansion, limited compatibility with public-service functions such as museums is allowed on the premise of meeting conservation requirements, in order to strengthen the public display and cultural dissemination functions of historic buildings. As for the arcade streets along Nanhuaxi Road, Hongde Road, Tongfuxi Road, and Nanhuazhong Road, as well as the buildings around the Pan Family Ancestral Hall, the red-brick villa cluster on Qizhanan Street, and the traditional

residences along Shuzhu Creek, the plan allows compatible functions such as commercial retail, characteristic catering, themed inns, and visitor service centers, provided that the historic character is protected and overall coordination is maintained. Overall, through a graded functional guidance system of strict protection, limited opening, and appropriate compatibility, the government plan provides an institutional basis for the revitalization and adaptive use of the historic district on the foundation of character conservation.

Table 3-4 List Of Building Function Compatibility

(Source: Protection and Utilization Plan for the Nanhuaxi Historic and Cultural District)

Type	Number of Buildings (Units)	Compatible Functions
No Compatibility	1076	None
Compatible with Public Services	4	Historical and Cultural Museums
Compatible with Commercial and Public Services	591	Commercial Retail, Characteristic Catering, Themed Inns, Tourist Service Centers

3.3 Investigation Methods And Technical Route

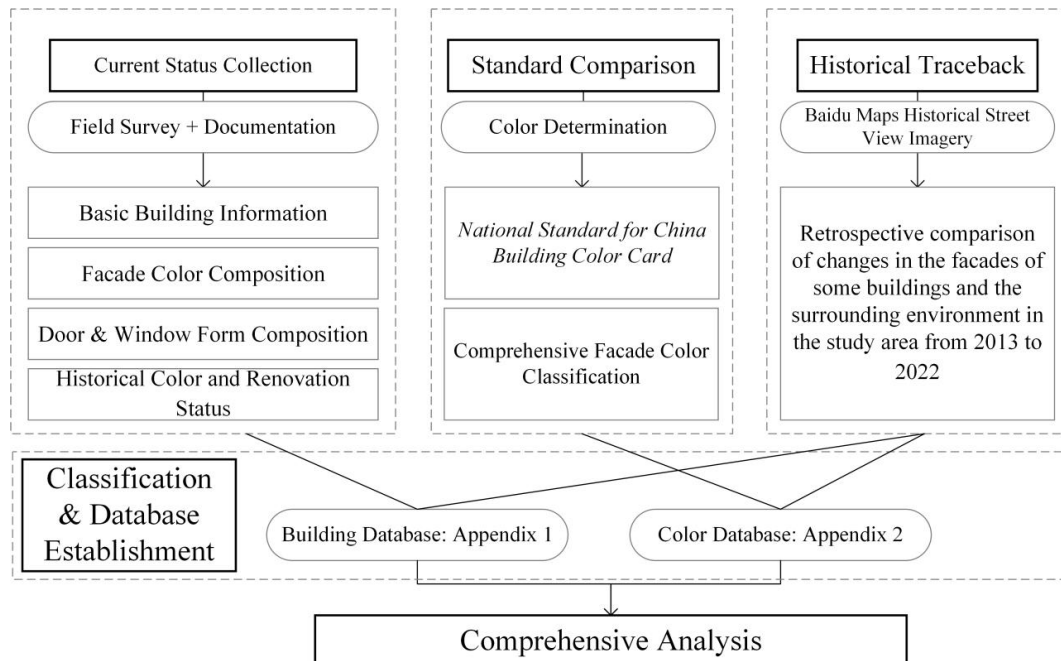


Figure 3-17 Investigation Methods And Technical Route

(Source: drawn by the author)

To systematically identify the current condition, compositional characteristics, and historical evolution of building colors in the study area, this research establishes an investigation system based on the sequence of current-condition collection – standard

comparison – classified database construction – historical review – comprehensive analysis. This system consists of field survey, comparison with standard color cards, database organization, historical street-view review, and integrated image interpretation. By combining qualitative observation with quantitative recording, the study systematically examines the color composition of building facades, interface characteristics, renewal conditions, and factors that interfere with the historic character of the study area, thereby providing a foundation for the subsequent analysis of existing color conditions, the identification of problems, and the formulation of planning strategies.

3.3.1 Field Investigation And Data Collection

Field investigation is the basic step for obtaining first-hand data in this research and also the main approach for identifying the current condition of building colors in the study area. The investigation was mainly carried out through on-foot survey. Buildings along the streets in the study area were numbered one by one, recorded individually, and photographed on site. Combined with field observation, written notes, and image collection, a systematic survey of facade colors and interface characteristics was conducted. In order to ensure the completeness and comparability of the sample information, written records of each building were made during the investigation by using a self-designed survey form (Figure 3-18), thus forming a relatively complete set of basic sample data (Appendix 1 for details).

The data collection mainly included the following aspects:

- a. Basic building information: building number, building type, number of floors, state of preservation, etc.;
- b. Facade color composition: main wall color and component colors, such as cornices, columns, mouldings, and decorative elements;
- c. Composition of door and window forms: door leaves, window frames, shutters, railings, and related elements;
- d. Historical color and renewal condition: whether there were phenomena such as partial renovation, inconsistent repainting, or material replacement.

The logic of building numbering is as follows: the first three initials of the name of the arcade street + A (for buildings located on the north or west side) / B (for buildings located on the south or east side) + a serial number (for east – west streets, the buildings on the west side start from No. 01; for north – south streets, the buildings on the south side start from No. 01).

To ensure the accuracy of color identification, the field investigation was conducted under conditions of natural diffuse light as far as possible, so as to avoid the influence of

strong sunlight, shadow obstruction, and rain-induced reflection on color judgment.

Building ID	Building Photo				
(Content)					
Address					
(Detailed Address)					

I. Basic Building Information					
Ground Floor Commercial Record	(Fill in business format, number of floors, signage condition, actual usage status, etc)				
Building Current Condition	(Fill in overall character, preservation level, number of stories, structural type, architectural style, etc)				
Existing Issues	(Fill in damage, leakage, illegal construction, facade damage, aging facilities, and related issues)				

II. Facade Color					
CBCC Color Code	Munsell Value	Color Name	Material	Proportion	Location
235	0.6YR5/4.8	Brick Red	Fired Red Brick	Main Color	The main wall on the second and third floors constitutes the base tone of the facade and serves as the core texture color of the arcade
72	6.3Y8/6.4	Beige	Cement	Secondary Color	Vertical structural columns, horizontal cornice moldings, decorative frames around window openings — facade decorative colors
102	3.1Y8.5/5.2	Light Gray	Natural Granite	Secondary Color	Ground floor arcade colonnade, building base, and facade dividing decorative lines
1321	7.5GY9/1	Light Grayish White		Secondary Color	Blank panel above ground floor shops, horizontal decoration below windows on the second and third floors
1056	5.6P2.5/1	Blackish Gray	Black Stone	Accent Color	Located at the corners of the building base, serving as a baseboard or decorative trim, it protects the wall, articulates the facade hierarchy, and enhances visual stability

III. Building History & Component Condition		
Archive Item	Description	Photograph
Window Condition	(Fill in window style, material, damage condition, opening type, dimensions, etc)	
Door Condition	(Fill in door style, material, damage condition, opening type, decorative details, etc)	
Relief Form	(Fill in relief location, subject matter, craftsmanship, preservation condition, dimensions, etc)	
Previous Building Condition	(Fill in previous architectural character, historic use, historical background, etc)	

Figure 3-18 Building Characteristic Recording For (Source: drawn by the author)

3.3.2 Color Comparison And Classified Recording

After the completion of field investigation and basic data collection, and in order to improve the objectivity and standardization of identifying the overall color of buildings, this study adopts *the Chinese Building Color Card Standard* as the basis for comparison, and carries out standardized identification and recording of the overall facade colors of buildings in the study area (Appendix 2 for details). After the field survey, on the basis of on-site photographs, the electronic version of *the Chinese Building Color Card Standard* available on the Qtccolor website was used to recheck and calibrate the dominant color, secondary color, and accent color of each sample building. Finally, the results of the overall color comparison were organized into a building color information table, which provides the basis for subsequent statistical analysis and the summary of the district color spectrum.

In the process of investigation and data organization, this study divides the overall color of building facades into three levels: dominant color, secondary color, and accent color (Table 3-5). This division is not based on strict geometric area calculation, but on a comprehensive judgment of the visual proportion and spatial perception of facade colors, which is more consistent with the actual characteristics of color investigation in historic district facades.

- a. Dominant color mainly refers to the overall color presented by the main wall surface. It usually occupies more than 60% of the visual area of the facade and is the core component in forming the overall color tone of the building;
- b. Secondary color is mainly distributed on secondary components such as columns, window surrounds, and mouldings, and usually accounts for about 30%;
- c. Accent color is mainly reflected in door and window details, decorative components, and locally emphasized parts, and usually accounts for about 10%.

Table 3-5 Classification Of Overall Facade Colors And Control Of Visual Proportions

(Source: drawn by the author)

Color Category	Application Position	Proportion Control
Dominant Color	Main Wall Surface	$\geq 60\%$
Secondary Color	Column Shafts, Window Sills, Moldings	$\leq 30\%$
Accent Color	Door & Window Details, Decorative Components	$\leq 10\%$

To facilitate subsequent statistical analysis and the summarization of the overall color spectrum, this study uses Excel to establish a building color information database and to record the surveyed samples in a standardized manner. The database is mainly organized according to such dimensions as CBCC color code, Munsell value, color name, proportion,

material, and location of application, and is linked to the corresponding building number to form a systematic table of overall color information. Through the classification, statistical processing, and comprehensive analysis of data from these dimensions, it becomes possible to further identify the compositional characteristics and distribution patterns of building colors in the study area, thereby providing a basis for the subsequent summarization of the overall color spectrum and planning research.

3.3.3 Supplementation Of Historical Information And Comprehensive Interpretation

To compensate for the limitation of the current-condition survey in the time dimension, this study further introduces the method of supplementing historical information and conducting comprehensive interpretation on the basis of field investigation, so as to carry out a longitudinal analysis of the evolution of building facades and street interfaces in the study area. Specifically, by using historical street-view images from Baidu Maps, this study reviews and compares the changes in some building facades and their surrounding environments in the study area from 2013 to 2022, in order to identify such dynamic changes as repainting, material replacement, the addition of attached components, changes in shop signs, and interface improvement at different periods. Finally, the information obtained from historical review is organized together with the results of the current-condition survey in tabular form, thus providing a basis for the subsequent analysis of the evolution of the overall color system and the identification of existing problems.

3.4 Site Investigation Analysis

3.4.1 Existing Building Conditions Analysis

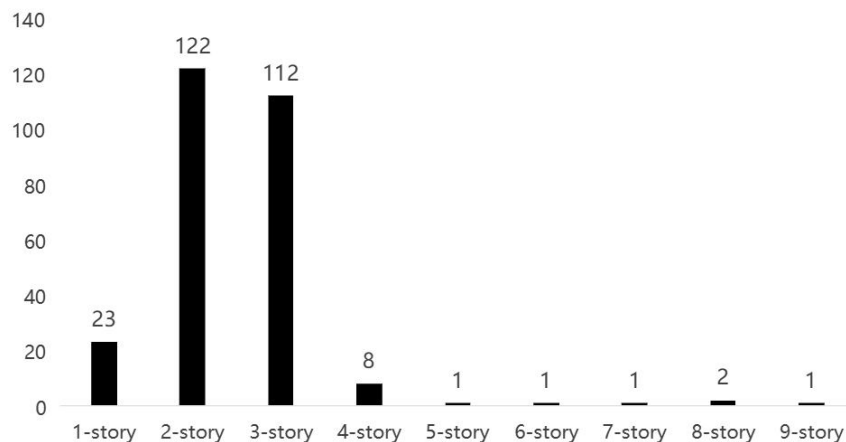


Figure 3-19 Statistical Chart Of Building Floor Numbers In The District

(Source: drawn by the author)

According to the field investigation, the district is dominated by arcade buildings, which

play the leading role in shaping the continuous street interface. Most buildings are two to three stories high, and the overall scale of the street interface is relatively stable. However, due to differences in construction standards in different historical periods and the impact of later functional additions and alterations, some two-story buildings have floor heights close to those of three-story buildings, resulting in a situation where the perceived height does not fully correspond to the actual number of floors. In addition to arcade buildings, the district also contains one- to two-story traditional dwellings, as well as four-story, seven-story, eight-story, and even high-rise residential buildings of more than twenty stories, which create obvious differences in height and interruptions in the street interface. In terms of structural type, arcade buildings are mainly of brick-and-timber structure, with some of mixed structure, while modern and contemporary residential buildings are mainly of reinforced concrete frame structure.

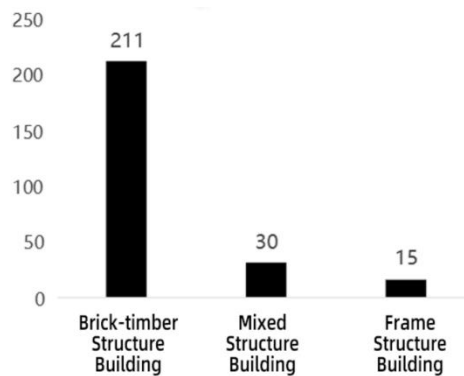


Figure 3-20 Statistical Chart Of Building Structural Types

(Source: drawn by the author)

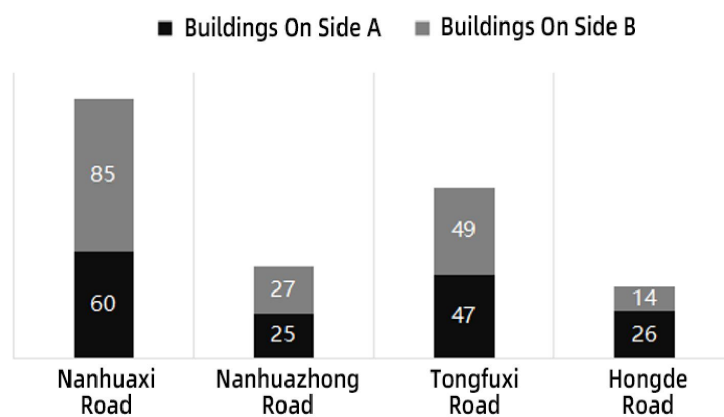


Figure 3-21 Statistical Chart Of The Number Of Buildings By Street

(Source: drawn by the author)

As shown in Figure 3-20, buildings with brick-and-timber structures dominate the study area, with an absolute number of 211 buildings, accounting for more than 82% of the total. By

contrast, mixed-structure and frame-structure buildings are relatively few, which reflects the overall character of the district as one based primarily on historic buildings. In terms of spatial distribution, as shown in Figure 3-21, a total of 333 buildings were surveyed in the area. Nanhuaxi Road has the largest number of buildings (145), followed by Tongfuxi Road (96), while Nanhuazhong Road and Hongde Road have relatively fewer buildings.

Table 3-6 Newly Built Or Renovated Buildings With Imitation Arcade Facades

(Source: drawn by the author)

Building Number and Photograph				
TFX-A11	NHZ-B22	NHZ-A05	NHZ-A06	NHX-B33
				
NHX-B19	NHX-A68		NHX-A26	
				

In terms of character attributes, in addition to the immovable cultural relics, historic buildings, and clues to traditional character buildings identified in the upper-level plan, there is a distinctive type among other traditional buildings and unclassified buildings, namely newly built or renovated buildings with imitation arcade facades. These buildings are often finished with small-sized facing bricks. In terms of formal language, they continue the general composition of arcade buildings, but show clear differences from traditional arcades in proportional relationship, decorative hierarchy, and the expression of material texture. They usually lack such decorative elements as parapets, window surrounds, and the ornamentation

of the first-floor colonnade, and therefore present a form of character reproduction that is relatively superficial and symbolic.



Figure 3-22 Unified Ground-Floor Form Of Arcade Buildings

(Source: drawn by the author)

For the ground-floor spaces of the arcade buildings in the district, a relatively unified interface order has been formed. Its basic composition can be summarized as a three-layer structural system of “base – colonnade – arcade eaves”. The ground floor is based on a three-part stone plinth. The lower part is usually made of dark stone, the middle part consists of light gray columns, and the upper part is closed by mouldings, thus forming a lightness gradient from dark to light and strengthening both the vertical rhythm and the sense of structural stability. The colonnade adopts a double-column arrangement, in which the inner and outer rows of columns jointly support the upper floor slab and create a continuous semi-open arcade space. The inner wall surface is mainly light gray, and the overall visual effect is transparent and orderly. There is also a designated signboard area, with unified carved decoration below it.

In the course of spatial use and renewal, arcade buildings have generally undergone spontaneous alterations to varying degrees. These are mainly reflected in the addition of upper and lower auxiliary window openings based on the original window openings in order to improve lighting and ventilation; the replacement of original large-scale or multiple connected windows with smaller single window openings; roof extensions using color steel sheets or light structural elements; the raising or partial reconstruction of parapets; and local repainting or cladding of facades. Most of these changes were driven by functional needs and lacked overall control of character and color. As a result, the proportional relationship of facades has been disrupted, their rhythmic order has become fragmented, and the overall continuity of color in the district has been disturbed.

Within the district as a whole, a small number of buildings have already undergone relatively systematic restoration and renovation. Representative examples include No. 225

Tongfuxi Street (renovated with the participation of Guangzhou Anju Group) and No. 134 Nanhuaxi Street (implemented with the participation of Nippon Paint Group). During the renewal process, both buildings underwent structural reinforcement and internal reorganization, with improvements made to their spatial layout and functional use. At the same time, the facade treatment adopted a strategy of retaining the original formal framework while applying large areas of monochrome repainting. Through the use of low-saturation or single overall hues, the weathered original facades were covered, producing a relatively unified and simplified interface effect. This kind of “overall monochrome covering renewal” improved the cleanliness and visual order of the street interface in the short term. However, it also weakened the layered expression of historic materials and the traces of time, showing a certain tendency toward surface treatment. Whether its overall hue is truly coordinated with the existing color spectrum structure of the district still needs to be evaluated within the broader color system.



Figure 3-23 Updated Building Facades

a) Building No. 134, Nanhuaxi Street b) Building No. 225, Tongfuxi Street

Apart from the above cases of relatively systematic restoration, most buildings remain in a state of natural aging or scattered repair. Weathering, surface peeling, and mottled facade colors are common. Air-conditioning units are densely mounted on exterior walls. The vacancy rate of ground-floor shops is relatively high, and the exposed roller shutters weaken the continuity of the street interface. In addition, shop signs lack unified control in terms of size, material, and color, while hanging laundry and exposed electrical wires and pipes are also quite prominent. Some long-vacant buildings, due to insufficient maintenance, even show signs of severe neglect, such as the growth of weeds on the facade. Taken together, these factors make the street frontage appear visually mixed in color and weakened in order.

In terms of the decorative system, the arcade buildings still retain a relatively complete facade composition logic. Decorative emphasis is mainly placed on window and door

surrounds, balustrade panels below windows, cornices, and parapets, often using reliefs, mouldings, and floral ornaments to strengthen visual layering. The first-floor colonnade spaces generally underwent phased overall repair in the past. The bases of the columns are often treated with black coating, while the connecting elements between columns and the decorative floral details remain largely unified, indicating traces of earlier centralized improvement.

Table 3-7 Examples Of Building Condition Classification (Source: drawn by the author)

Condi- tion	Typical Building			
Good				
	NHX-A01	NHX-A12	TFX-B17	NHZ-A10
				
	NHX-A19-20	HDL-A17	TFX-B11-16	HDL-A14
Poor				
	NHZ-A22-24	NHX-B46-52	NHX-A05	HDL-A18
				
	NHX-A26	NHZ-B02	NHZ-A05	NHZ-B23

Overall, the study area still preserves a relatively clear historical character framework in terms of its typological structure and traditional construction system. However, under the combined influence of long-term spontaneous alteration, functional replacement, and

insufficient maintenance, the proportional order of facades, the expression of materials, and the continuity of color have all been weakened to varying degrees. The cases of whole-building restoration led by enterprises provide a referential path for renewal in the district, but their color strategies still need to be carefully evaluated within the overall framework of color spectrum control. These existing conditions provide both a practical basis and a clear problem orientation for the subsequent statistical analysis of regional colors, the summary of hue structure, and the intervention of micro-renewal design.



Figure 3-24 Continuous Building Interface, North Side of Nanhuaxi Road

(Source: redrawn by the author)

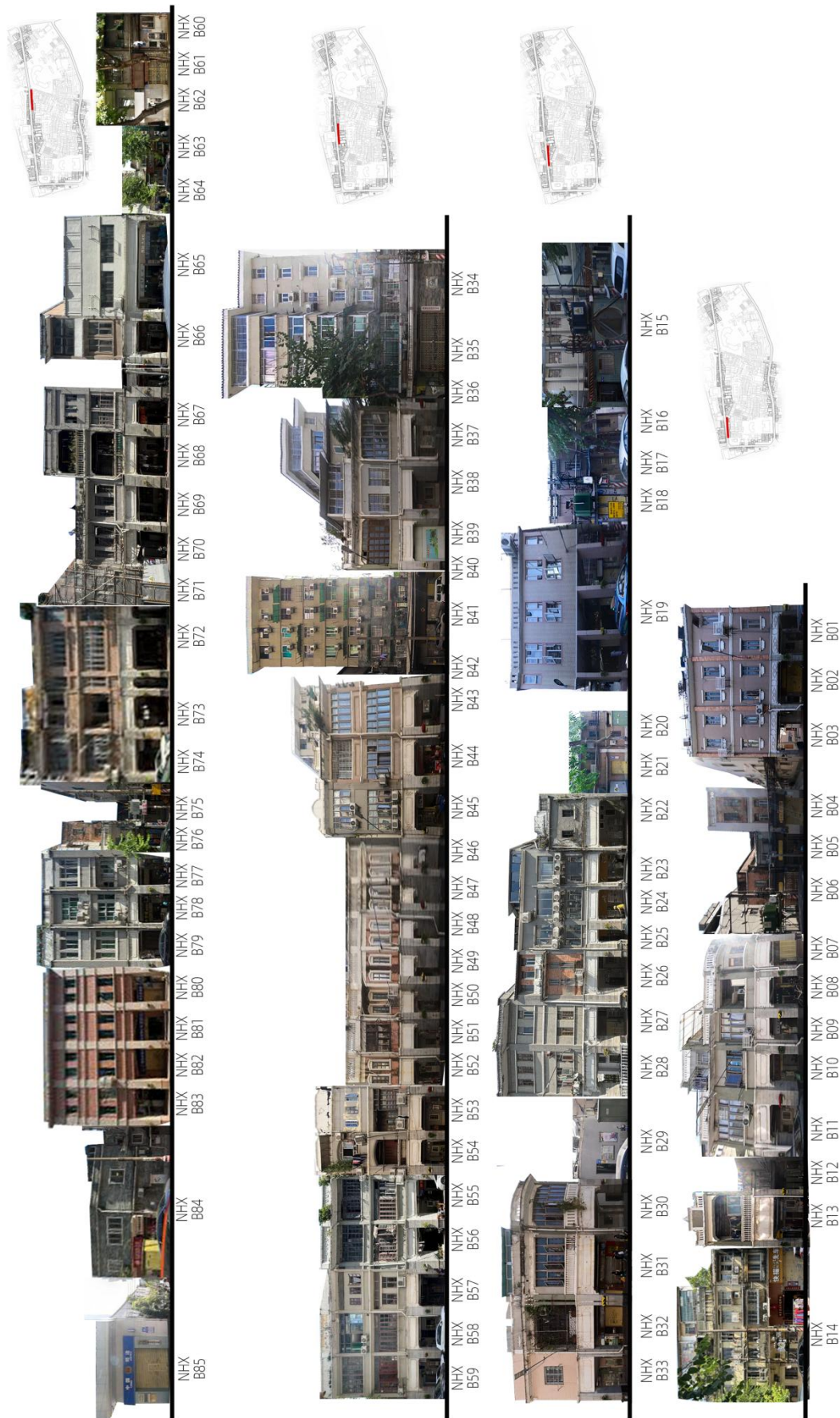


Figure 3-25 Continuous Building Interface, South Side of Nanhuaxi Road
(Source: redrawn by the author)



Figure 3-26 Continuous Building Interface, North and South Sides of Nanhua Middle Road
(Source: redrawn by the author)



Figure 3-27 Continuous Building Interface, North Side of Tongfuxi Road
(Source: redrawn by the author)



Figure 3-28 Continuous Building Interface, South Side of Tongfuxi Road
(Source: redrawn by the author)

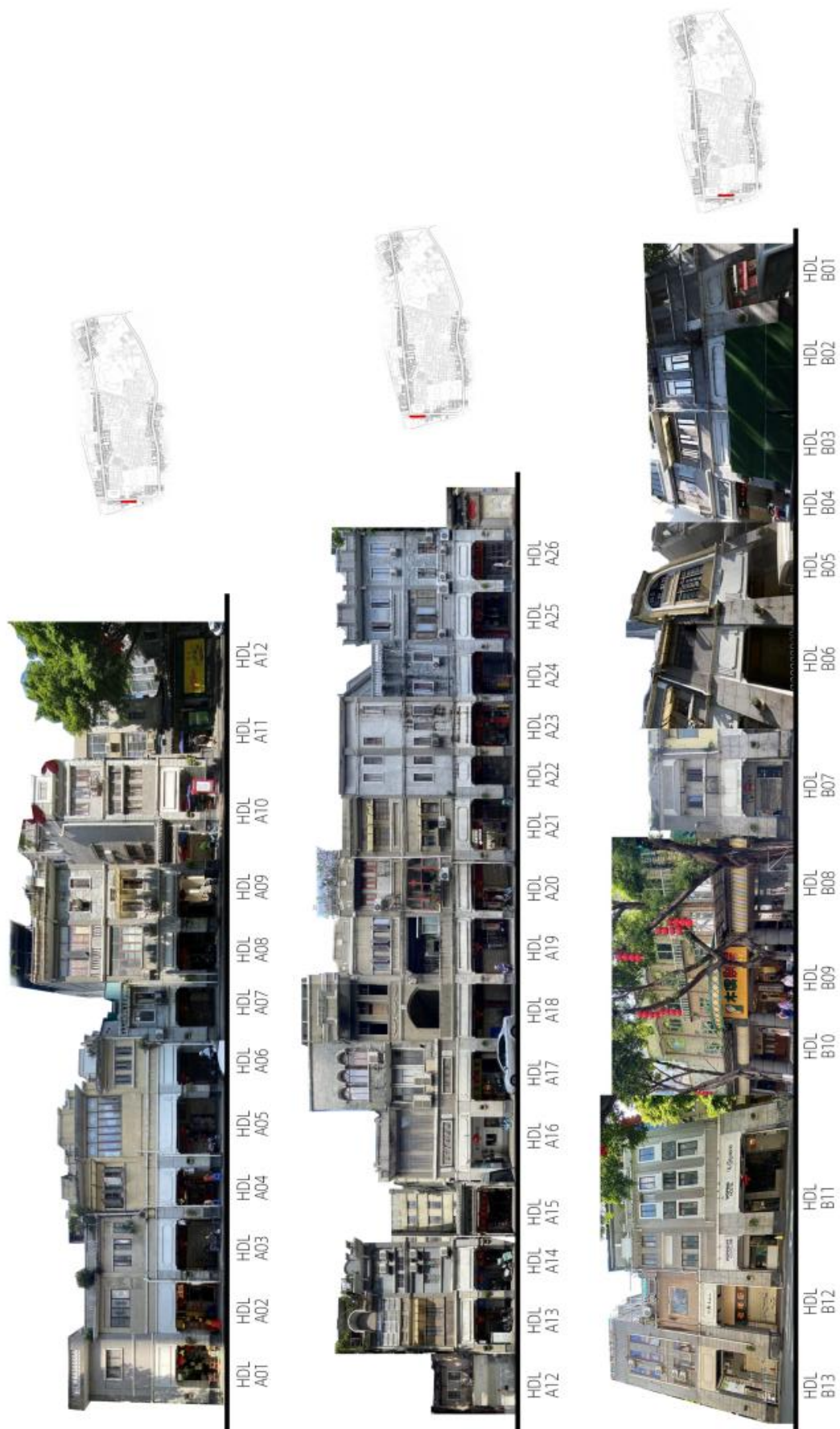


Figure 3-29 Continuous Building Interface, West and East Sides of Hongde Road
(Source: redrawn by the author)

3.4.2 Existing Door and Window Components Conditions

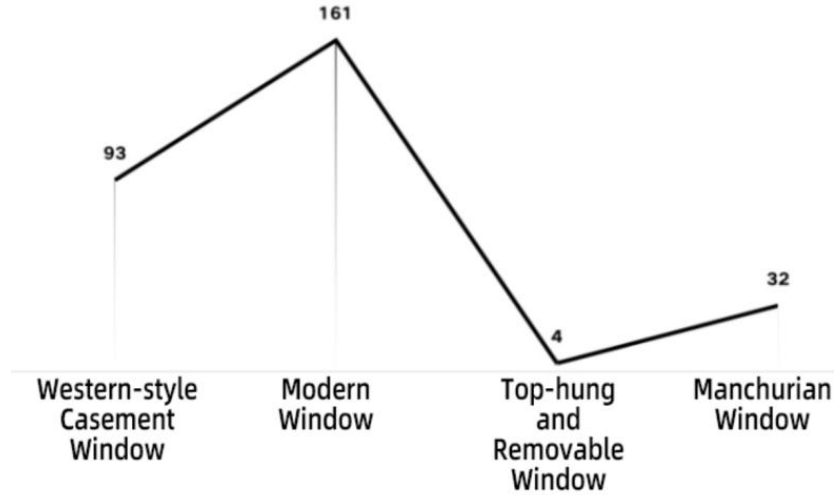


Figure 3-30 Statistical Chart Of Window Types

(Source: drawn by the author)

In terms of window types, the existing windows of arcade buildings can generally be divided into three categories: the first is the traditional patterned window (commonly known as the “Manzhou window”), the second includes lattice windows or Western-style casement windows, and the third consists of the aluminum-alloy windows that have been widely installed in recent years. These different window types show clear differences in material, proportion, and color expression, reflecting traces of construction and renewal from different historical periods.

It should be particularly noted that most of the so-called “Manzhou windows” found within the current study area are no longer made using traditional craftsmanship. Through on-site visual inspection and detailed observation, it can be seen that some of these patterned windows are in fact closer to modern industrial products, for example by using colored laminated glass, printed glass, or layered materials to imitate traditional patterns. Their colors are often more saturated and their surfaces more glossy, creating a strong material contrast with the original timber frames or gray-sand wall surfaces.

This kind of “imitation-traditional” treatment continues the formal language of the patterned window, but in terms of material texture and color control it shows a distinctly modern character, thereby weakening the gentle texture and layered expression that traditional patterned windows originally possessed.

Table 3-8 Window Type
(Source: drawn by the author)

Western-Style Casement Window	Modern Window	Top-Hinged Window	Manzhou Window
			

Table 3-9 Relationship Between Window Openings And Facade Composition
(Source: drawn by the author)

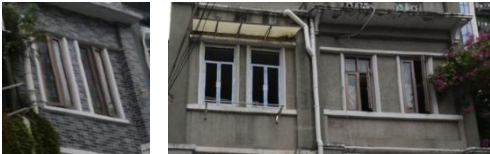
Window Set Closely Between Columns	Balcony	Three Windows In A Row	Two Windows In A Row
			

From the perspective of the relationship between window opening forms and facade composition, the windows of arcade buildings show a variety of combinations. Common forms include large-scale window openings placed closely between columns; door-and-window combinations set within balconies between columns, with balcony decoration often using vase-shaped railings; slender vertical windows; and small single window openings that have been widened in scale but reduced in height after later alteration.

Among these, slender vertical windows are more typical in relatively traditional arcade buildings, where the first-floor facade usually takes the form of either three windows in a row or two windows in a row, thus creating a stable facade rhythm. Some window openings have curved tops or arched forms, and in some cases horizontal strip-shaped ventilation windows are added above the windows, enhancing both the decorative effect and the compositional integrity of the facade.

Table 3-10 External Decorative Forms Of Window Openings

(Source: drawn by the author)

Window Type	Examples
Linked Form	
Enclosed Form	
Mixed Form	

In terms of external window decoration, common treatments include full-frame moldings that wrap small-scale window openings on all four sides, forming a complete framed composition. Between multiple windows, horizontal elements are often used to connect openings, creating a banded rhythm across the façade; larger windows may also adopt continuous horizontal decorative treatments. Within the study area, approximately 53 buildings feature enclosed framing, while around 141 buildings adopt linked horizontal compositions. The wall surfaces below windows are often supplemented with rectangular frames or carved decorative elements, further reinforcing façade hierarchy.

Along Hongde Road, many arcade buildings incorporate arched window elements. Due to the east – west orientation of the arcade streets, numerous shading devices have been installed on building façades. In the Tongfuxi Street area, some arcade buildings have transformed the original window openings between the second and third floors into door openings, with vase-shaped balustrades added externally to form semi-open balcony spaces. This intervention alters the original proportions of window openings and the rhythm of the façade to a certain extent.

Under the influence of safety and functional requirements, newer windows are commonly equipped with security grilles. Some older buildings, particularly those left vacant, lack such installations, while others have added security bars inside original wooden windows. A small number of buildings still retain traditional casement window forms, although these are now rare. Overall, window components exhibit a trend of material replacement, structural simplification, and increasing color uniformity. The contrast between old and new materials

further accentuates the layered temporal characteristics of the façade.

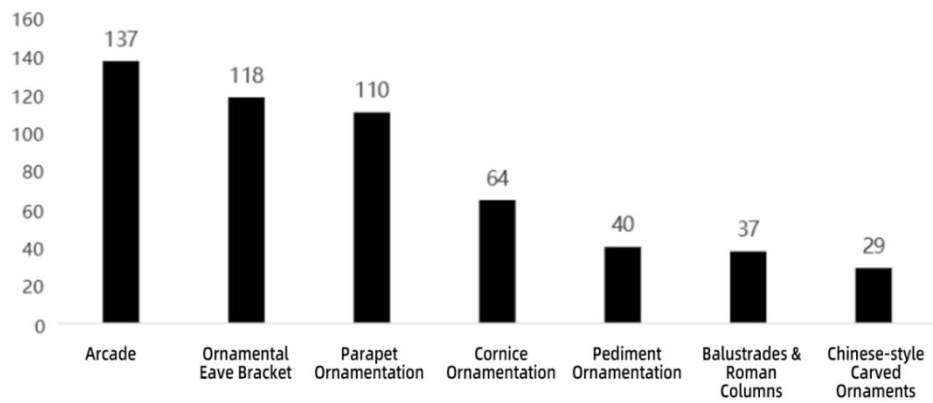


Figure 3-31 Statistics Of Arcade Buildings And The Types And Number Of Their Decorative Elements (Source: drawn by the author)

Among the 137 arcade buildings surveyed in this study, the decorative forms show a clear hierarchical distribution. Huayazi brackets (118 cases) were uniformly arranged in the first-floor arcade space during earlier renovation stages. Parapet decorations (110 cases), as core elements of both the facade and the roof, appear on almost the vast majority of arcade buildings and constitute a key formal language of the district’s overall character. Cornice decorations (64 cases), serving as transitional elements at the upper edge of the facade, decrease in number to 64 cases, but still play an important role in visual connection. By contrast, gable decorations (40 cases), railings and Roman columns (37 cases), and traditional Chinese carved ornaments (29 cases) are relatively fewer in number and function more as individualized accent decorations, mainly concentrated on distinctive arcade buildings. Together, these elements form a decorative spectrum of “core – transitional – accent” layers.

Table 3-11 Main Types Of Parapets (Source: drawn by the author)

Parapet Types and Representative Buildings	
NHX-A05	Battlement Type: NHX-A07
	
Carved Type: NHX-A34	Vase Type: NHX-A40
	

Among these elements, the parapet is an important component at the top of the arcade facade, and its decorative forms are relatively diverse, including vase-type balustrade rows, carved patterns, battlement forms, and continuous uniform-height types. In composition, these forms strengthen the continuity of the street skyline. However, weathering of parapets is currently quite serious, and some local components are damaged or missing. Because the wall surface has limited load-bearing capacity while the roof is relatively accessible, some outdoor air-conditioning units are concentrated on the parapet area, causing obstruction and visual interference to the original decorative outline and weakening the integrity of the upper facade elements.

As for the current condition of doors, the functional replacement of the ground-floor commercial interface is very evident. Most shop entrances have been covered by rolling shutters, making the original door forms difficult to identify. Due to long-term use, many rolling shutters have become yellowed and aged, which weakens the historic texture of the street interface. Inside the residential areas, common door types include traditional reddish-brown wooden doors, iron doors, and externally added sliding iron grille doors. Overall, the original door components inside the arcade buildings are relatively simple in decoration, and their character value is reflected more in proportion and spatial order than in elaborate ornamentation.

Overall, the doors, windows, and parapet components of the arcade buildings still retain certain elements of traditional construction logic and decorative vocabulary. However, under the influence of functional renovation, material replacement, and safety requirements, their form, material, and color expression show clear traces of temporal layering. In particular, the appearance of the so-called “modernized Manzhou windows” has created a tension between the traditional color system and contemporary material expression, directly affecting the continuity of the overall color spectrum and the expression of detailed character in the district.

3.4.3 Site Environment and Street Furniture Existing Conditions

Focusing on the arcade space and the street environment, a systematic investigation of site conditions and urban furniture was conducted. In addition to daytime surveys, nighttime observations were incorporated in response to the predominantly residential character of the area, in order to more comprehensively capture changes in spatial use intensity and environmental issues after residents return.

On this basis, the analysis examines multiple aspects, including spatial interface characteristics, pedestrian environment conditions, green space distribution, and the

arrangement and layout of various auxiliary elements — such as municipal infrastructure, transportation facilities, and street furniture. Through this approach, their impacts on the overall character, spatial order, and color expression of the district are systematically identified.

At present, the public space beneath the arcades is heavily occupied by everyday living and commercial activities. Non-motorized vehicles, such as electric bicycles and tricycles, are parked in a disorderly manner, while goods and personal belongings are arbitrarily stacked, severely encroaching on pedestrian space. Municipal and domestic facilities are intermingled without clear organization; overhead cables are irregularly installed; ground paving is damaged and poorly leveled. At night, insufficient lighting and the overlapping presence of warning signs and commercial signage further contribute to visual clutter. Overall, the area exhibits the typical characteristics of an old urban district: vibrant in daily life yet lacking spatial order and interface integrity.

As the primary pedestrian interface of the district, the arcade space has experienced evident functional and visual degradation. On the one hand, the ground-level semi-open space has been occupied by non-designated uses such as parking, commercial activities, and storage, undermining pedestrian continuity and comfort. On the other hand, façades exhibit issues including weathered wall surfaces, disordered pipelines, and irregularly mounted equipment; combined with cluttered signage, these conditions weaken the overall interface order. At the same time, damaged pavement and the intrusive placement of municipal facilities further disrupt spatial continuity, resulting in a marked decline in both the public service function and the historic character of the arcade space.

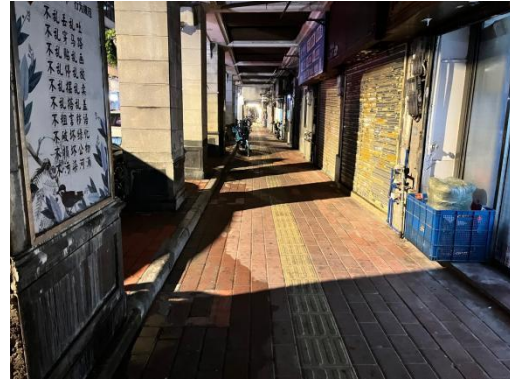
Table 3-12 Nighttime Conditions of Arcade Space

(Source: drawn by the author)

Photograph	
	
Drain Covers, Traffic Cones, Safety Barriers	Outdoor Dining Tables and Chairs, Horizontal Signage



Raised Platform Installations



Pavement Level Differences



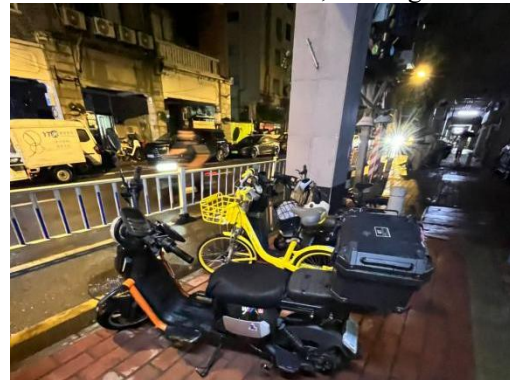
Electric Bicycles and Tricycles at Night



Electrical Facilities, Parking



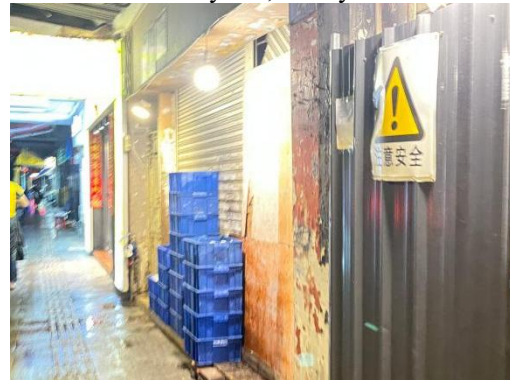
Electrical Installations and Overhead Wiring



Electric Bicycles, Safety Barriers



Clothes Drying, External Air-Conditioning Units



Cargo Storage

Nighttime field investigations indicate that the street interface exhibits pronounced spatial conflicts under high-intensity use. On the one hand, vehicular traffic remains active, with widespread roadside parking and temporary stopping. On the other hand, the installation

of safety barriers along certain street segments compresses and fragments pedestrian space, resulting in a lack of clear and orderly spatial organization between pedestrians and vehicles.

Under the combined influence of these factors, pedestrian route continuity is significantly disrupted, requiring frequent detours and reducing both comfort and safety. Overall, the street interface at night is characterized by dominant vehicular occupation, constrained pedestrian space, and a relatively disordered spatial condition.



Figure 3-32 Continuous Interface Space Nighttime Conditions

In terms of the site environment, the continuous arcade corridor configuration limits the spatial conditions for planting street trees along the streets, resulting in a relatively low overall level of greenery coverage. Existing trees are mainly distributed in recessed spaces formed by setbacks of non-arcade buildings and at alley entrances, appearing in a scattered, point-like pattern without forming a continuous shaded street interface. Some residents engage in spontaneous rooftop planting, creating small-scale greenery; however, due to its limited extent, this has minimal impact on spatial perception at the street level. Overall, the greenery system lacks systematic organization and is insufficient to provide effective visual and spatial regulation.

Regarding street furniture, the range of facilities is relatively complete — including streetlights, mailboxes, trash bins, bulletin boards, and bus stops — generally meeting functional needs. However, there is a lack of overall coordination in terms of scale control, color consistency, and spatial arrangement. Some streetlights are mounted by projecting from arcade façades, resulting in insufficient integration with the building interface and causing disruptions to façade continuity.

In terms of building-mounted facilities, elements such as rainwater pipes, electrical conduits, and external air-conditioning units are frequently exposed and irregularly installed along façades, lacking unified standards. These elements create prominent linear and point-based visual disturbances. Most facilities are finished in neutral colors such as black, white, and gray; however, when accumulated and arranged in a disordered manner, they

contrast with the overall façade color, further intensifying the fragmented appearance of the building surfaces.

Overall, the weak greenery system, lack of integration in street furniture, and the disorderly attachment of building-mounted facilities collectively intensify visual clutter along the street interface, undermining color continuity and spatial order. This existing condition provides a clear basis for subsequent micro-renewal strategies, including facility integration, color control, and interface optimization.

3.4.4 Historic Features Existing Conditions

Through literature review and comparison of historical images, the evolution of the character of the Nanhuaxi Historic and Cultural District was examined in order to identify the impact of building renewal activities on the historic fabric and color system. The available materials show that the district developed from a settlement pattern shaped by the water environment, and that commercial development promoted the formation and improvement of the arcade street interface, creating a continuous corridor space and a unified facade rhythm. To further analyze the process of architectural change, this study combined historical street-view images from Baidu Maps and compared the condition of buildings along the street in 2013 and 2020. The comparison shows that some buildings gradually shifted from normal use to a state of aging and vacancy; some continued to be used after partial repair to improve living conditions; and others were repainted in a single color during renewal, but later again showed signs of deterioration and peeling. This reveals a cyclical pattern of “short-term refurbishment followed by renewed aging”.

Among the key samples, the changes in the buildings numbered NHX-A04 and NHZ-B23 are particularly typical, and they have had a relatively significant impact on the historic character of the district.

Table 3-13 Renewal Process Of Building NHX-A04

Current Condition	2017	2013
		

NHX-A04 was originally a traditional arcade building with typical facade proportions

and rhythmic characteristics. Historical images show that its original window openings were arranged in an orderly manner and that the facade composition was complete. Around 2016, the building underwent overall repainting and window alteration, and was converted into the commercial shop “sweet young”. During this renovation, the original rhythmic window openings were changed into a single window form, and the colors of the window glass on the second and third floors became inconsistent, which damaged the original facade rhythm and proportional relationship. The whole building was repainted white, covering the original material texture and color hierarchy, while the interior space was also structurally adjusted. After the shop later closed, the ground floor became vacant. The painted facade layer has since begun to peel off, showing obvious signs of surface aging. Overall, this case reflects how repainting-based renewal and spatial alteration, driven by short-term commercial needs, can cause strong disturbance to the architectural fabric. In the absence of a continuous maintenance mechanism, this eventually leads to the coexistence of character damage and functional decline.

Table 3-14 Renewal Process Of Building NHZ-B23

After 2019	2017	2013
		

NHZ-B23, by contrast, shows a change at the level of building mass. The building was extended from its original two-story form to four stories, thereby altering the original height order of the street interface. At the same time, a large commercial signboard was added to the facade, causing obstruction and interference to the original composition and decorative elements. The combined effect of volumetric extension and attached advertising weakened the overall proportional relationship of the continuous arcade corridor space and had a negative impact on the district’s skyline and the continuity of its color character.

Taken together, the above investigation shows that the historic buildings of Nanhuaxi Street have undergone different degrees of renewal and adaptive reuse over the past decade or so. However, some of these transformations were driven mainly by short-term commercial benefits and lacked overall character control and color-system constraints. As a result, facade

rhythm was disrupted, material expression was covered over, proportional relationships were altered, and problems such as additional construction and the layering of advertisements appeared.

3.4.5 Site Problems Analysis



Figure 3-33 Statistics Of The Number Of Buildings By Condition Classification
(Source: drawn by the author)

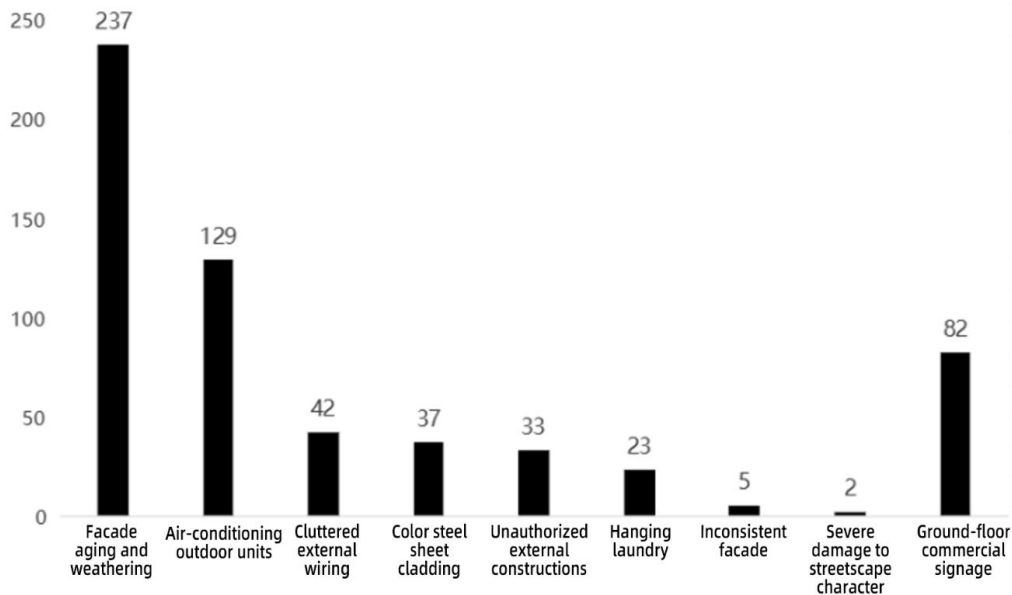


Figure 3-34 Statistics Of Building Problem Types
(Source: drawn by the author)

According to the statistical results of building condition classification, most buildings in the study area are in fair condition, with a total of 163 cases, which is significantly higher than the 50 cases in poor condition and the 43 cases in good condition. Overall, the buildings in the district have not yet entered a stage of widespread severe deterioration. However, most of them already show, to varying degrees, such problems as aging, disorderly attached facilities, and disordered street interfaces. Taken as a whole, the district presents an intermediate condition characterized by continued usability but insufficient environmental quality. This also indicates that the focus of renewal in the area should not remain limited to the treatment

of a small number of dangerous or dilapidated buildings, but should shift toward broader environmental improvement and character restoration.

From the statistics on specific problem types, the existing building problems show a clear concentration. Among them, facade aging and damage is the most common problem, reaching 237 cases, and is currently the most prominent architectural issue in the district. This indicates that long-term exposure to weather, insufficient maintenance, and material aging have significantly affected the overall character of the arcade facades. The second most common problem is air-conditioning units, with 129 cases, which also represents a relatively high number and reflects the fact that the disorderly attachment of modern living facilities to buildings in the historic district has become an important factor affecting facade integrity and visual order. In addition, there are 82 cases related to ground-floor shop signs, showing that the renewal of commercial interfaces lacks unified control and causes strong interference to the continuous arcade frontage and the recognition of historic character.

By comparison, problems such as peeling wall surfaces (42 cases), balcony canopies (37 cases), temporary structures (33 cases), and hanging laundry (23 cases) are fewer in number, but they also reflect the widespread presence of the outward extension of daily-life activities, the addition of temporary attachments, and insufficient building maintenance. Collapse at the lower street-facing facade (5 cases) and structural cracking (2 cases) are relatively limited in number, indicating that structural safety is not currently the dominant contradiction in the district, although local risk points still require special attention. Overall, the main building problems in the study area are concentrated in facade aging, disorderly equipment attachment, and the disorder of commercial interfaces, which suggests that building renewal in the district should focus more on character improvement, control of attached elements, and refined maintenance, rather than on simple large-scale demolition and reconstruction.

3.5 Color Investigation Analysis

Based on the color database obtained through the investigation, the building colors within the study area were organized and analyzed. From the perspective of building interfaces, a systematic analysis of the existing color conditions in the district was carried out. Given that vegetation in the area is limited and the proportion of urban furniture is relatively low, the overall street color is mainly composed of building facades and their decorative elements. Therefore, this study takes the dominant color, secondary color, and accent color of buildings as the core objects of investigation. Quantitative indicators such as hue, lightness, and saturation are used for statistical analysis, and comparative analysis is conducted by zone

in relation to spatial structure and differences in building types, so as to clarify the overall color spectrum structure and the characteristics of color distribution in the district.

3.5.1 Color Collection Scope

According to the results of the field investigation, the outer colonnade area on the ground floor of arcade buildings shows a high degree of homogeneity in both structure and color, while the inner interface is strongly affected by rolling shutters and commercial alterations, with many factors interfering with color perception, making it difficult to form stable and recognizable overall color characteristics.

Therefore, for arcade buildings, color collection is limited mainly to the facade areas of the second floor and above; for residential buildings and other building types, the entire facade is observed. The dominant color, secondary color, and accent color of buildings are identified and distinguished by level. Among them, the dominant color is a required item, while the secondary color and accent color are recorded according to their actual presence. In the data organization stage, the existing colors are taken as the main basis. For a small number of buildings with severe color peeling or serious human damage (such as NHX-A04), historical image materials are used as auxiliary references in order to improve the completeness and reliability of the data.

3.5.2 Color Statistical Analysis

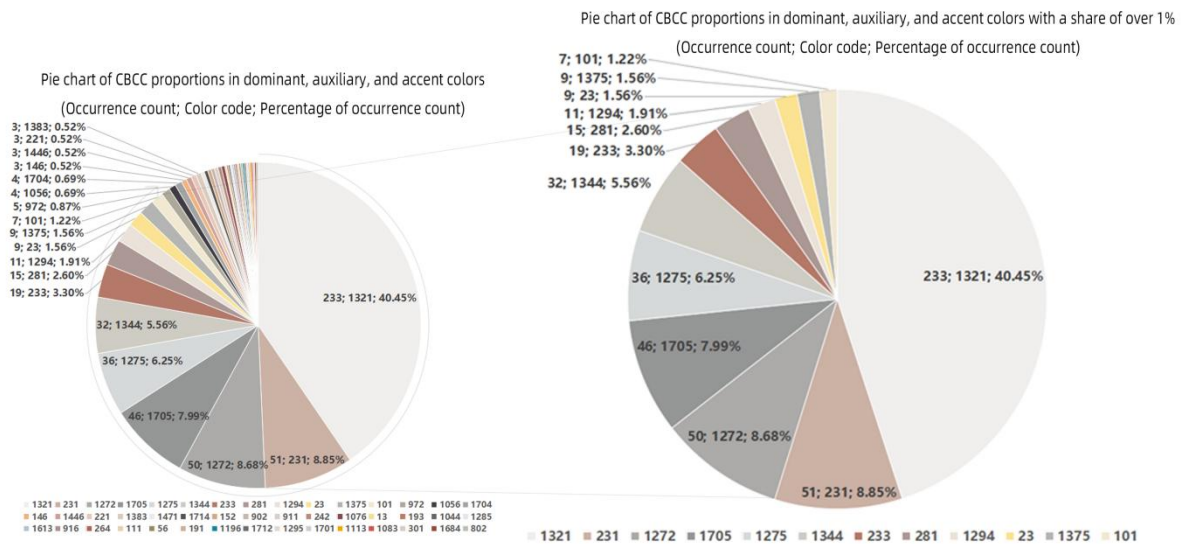


Figure 3-35 Pie Charts Of The Frequency Of Dominant Colors, Secondary Colors, And Accent Colors

(Source: drawn by the author)

First, the frequency of all identified colors was counted. As shown in Figure 3-35, the pie

chart on the left presents all color codes, while the one on the right shows only those accounting for more than 1%. It can be seen that Code 233 appears most frequently, and Code 51 is the second most frequent. In addition, colors with higher frequencies generally have lower saturation than those that appear only rarely. However, this alone does not directly determine whether these colors can be regarded as the representative colors of the study area.

Therefore, the following detailed analysis is based on Figure 3-36 and Figure 3-37. These two sets of pie charts distinguish between dominant colors and secondary&accent colors, making it possible to compare the frequency of color codes in relation to their actual spatial role on the facade. Secondary colors and accent colors are presented in one combined pie chart because secondary colors are not always present, and even when they do appear, their visual proportion is often not large enough to affect the dominant color. For this reason, they are counted together with accent colors.

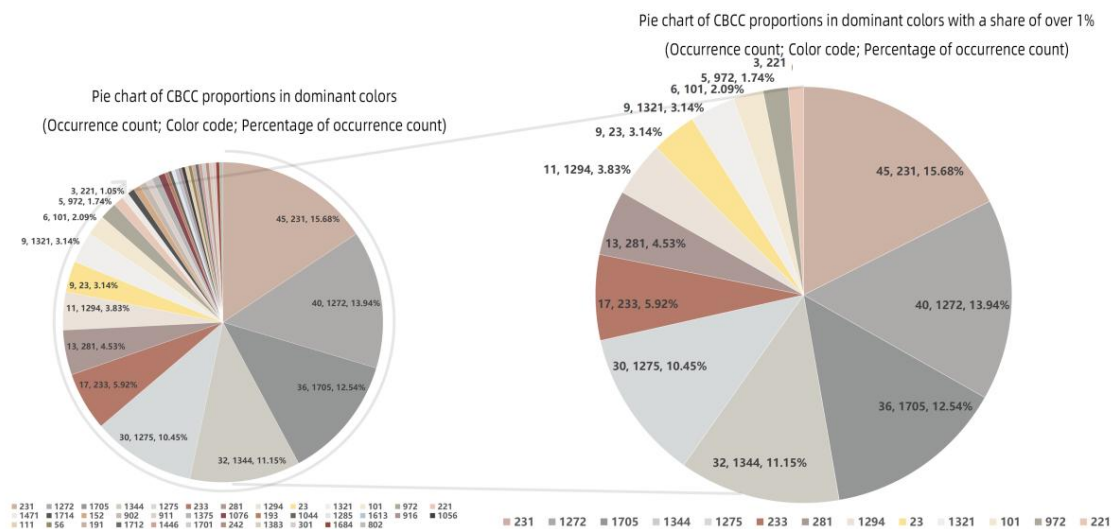


Figure 3-36 Pie Chart Of The Frequency Of Colors In The Dominant Tone

(Source: drawn by the author)

In the composition of the dominant tones, the colors accounting for more than 1% form a clear hierarchical structure. Among them, Code 231 (15.66%), Code 1272 (13.94%), Code 1344 (11.15%), Code 1275 (12.54%), and Code 1705 (10.64%) constitute the core group of dominant colors. These colors correspond closely to the typical materials of arcade buildings. Warm gray and gray-ochre tones such as 1321 and 1344 correspond to terrazzo-like wall surfaces, while red-brown tones such as 231 and 283 correspond to structural parts built with red brick. Yellow tones such as 23 are more commonly found in decorative components or local accents. This color composition clearly reflects the typical color pattern of the arcade buildings on Nanhuaxi Street, namely, a base of warm gray terrazzo-like surfaces, a structure

defined by red brick and blue brick, and local bright-color accents.

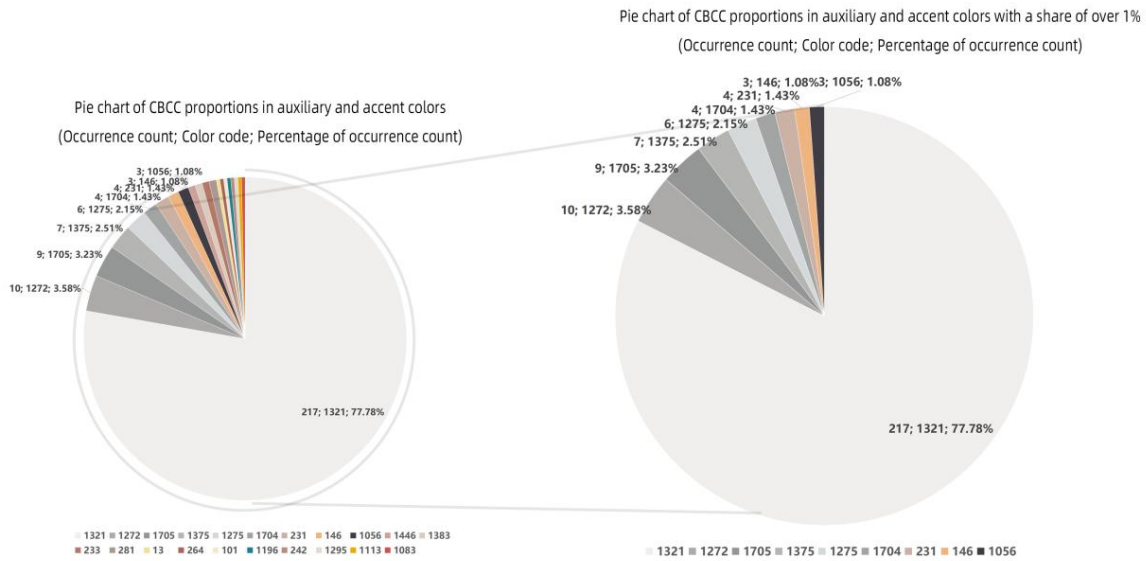


Figure 3-37 Pie Chart Of The Frequency Of Colors In Secondary And Accent Tones

(Source: drawn by the author)

A comparison between the pie charts of the dominant tones and the overall colors shows that the composition of the dominant tones is more diverse and balanced, and does not present an absolutely dominant color such as Code 1321 in the overall statistics. This phenomenon reveals the internal logic of the district's color system: the dominant tones, through the combination of several similar colors, jointly shape a unified yet layered street base atmosphere; the secondary and accent tones, by contrast, create local visual focal points through a few high-frequency colors such as 1321, thereby strengthening the detail and vitality of the district. This color structure, characterized by diverse yet unified base tones and prominent local accents, not only ensures the overall coordination of the historic district, but also avoids visual monotony through local color variation.

3.5.3 Hue, Lightness, And Saturation Analysis

The radar chart of hue analysis for the study area shows that the color distribution is clearly uneven, and that different color levels — namely all colors, dominant tones, and secondary and accent tones—display significant differences in hue preference.

In the overall distribution of all colors, three hue ranges — GY (green-yellow), YR (yellow-red), and N (neutral gray) — form clear peaks, while cool-color ranges such as B (blue), BG (blue-green), and G (green) appear only rarely or are almost absent. This feature closely corresponds to the material properties of the arcade buildings on Nanhuaxi Street: GY and YR relate to warm materials such as red brick and yellow terrazzo-like finishes, while N

corresponds to neutral gray materials such as cement and lime. Together, these hues form the basic hue structure of the district.

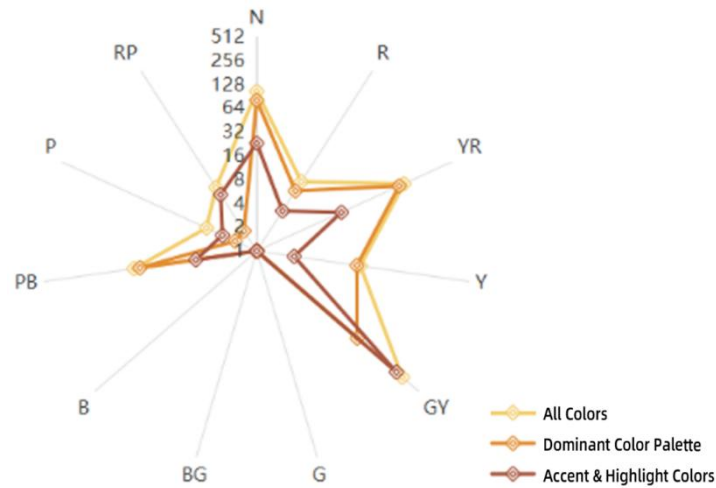


Figure 3-38 Hue Analysis Chart

(Source: drawn by the author)

The hue distribution of the dominant tones is more concentrated, mainly within the three core ranges of GY, YR, and N, with a particularly prominent peak in the GY range. This indicates that, as the dominant carrier of the spatial atmosphere, the dominant tones strictly follow the material logic of historic buildings. Warm yellow, reddish brown, and neutral gray are used as the main hues, creating a unified, calm, and historically grounded visual base. This highly concentrated hue distribution is a key factor in maintaining the overall character coordination of the district.

By contrast, the hue distribution of the secondary and accent tones shows a moderate degree of extension. Although GY, YR, and N still remain the core ranges, a small number of colors also appear in ranges such as RP (red-purple) and PB (purple-blue). This suggests that while secondary and accent tones continue the warm base established by the dominant tones, they also introduce a limited amount of low-saturation cool hues, such as purple and blue, to create subtle local contrast. In this way, they enrich the visual layering of the district without causing strong conflict with the dominant tones, thus enhancing detailed vitality while preserving overall harmony.

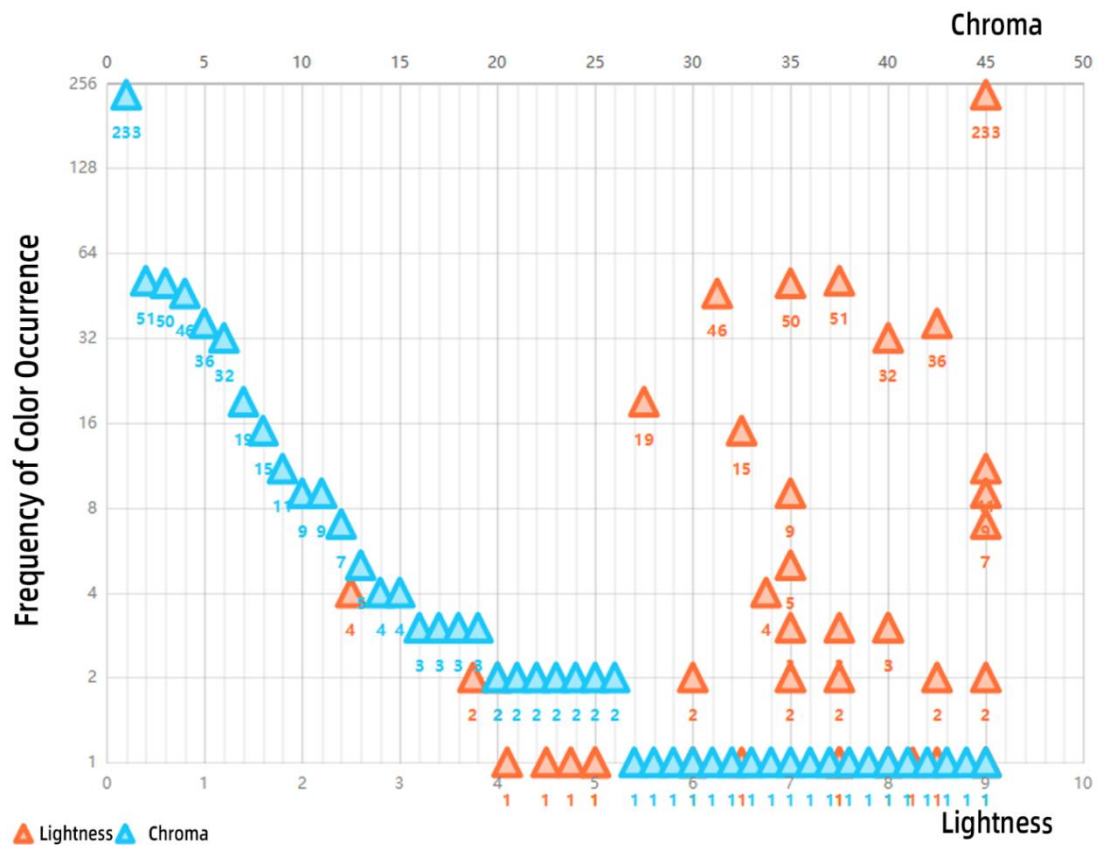


Figure 3-39 Scatter Plot Of Lightness And Saturation Distribution For All Colors
(Source: drawn by the author)

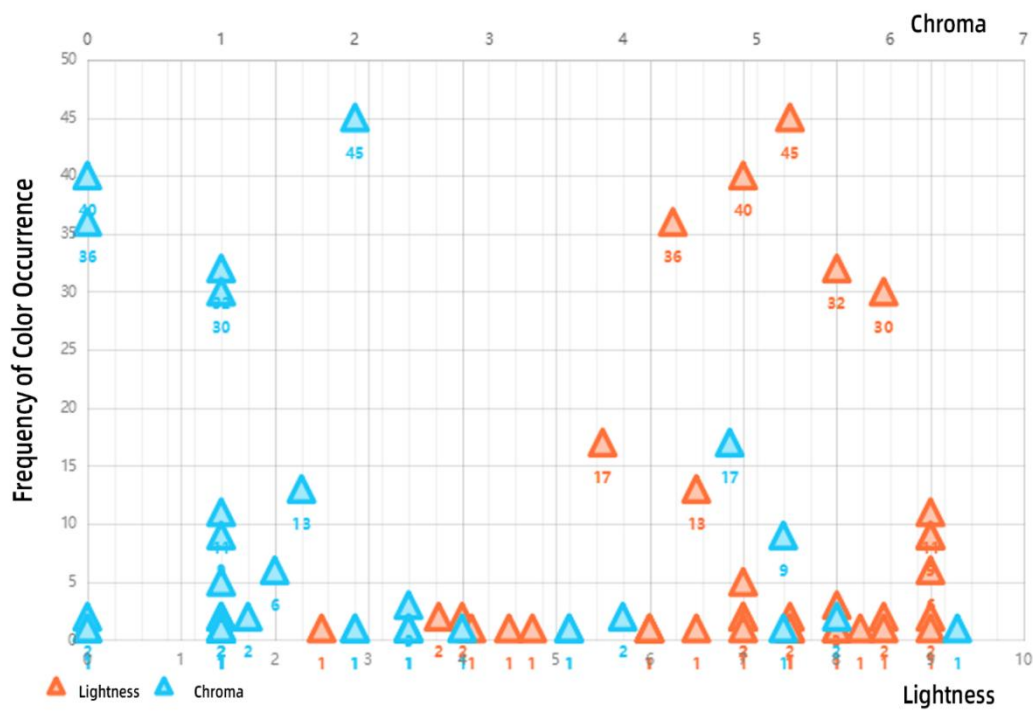


Figure 3-40 Scatter Plot Of Lightness And Saturation Distribution For Dominant Tones
(Source: drawn by the author)

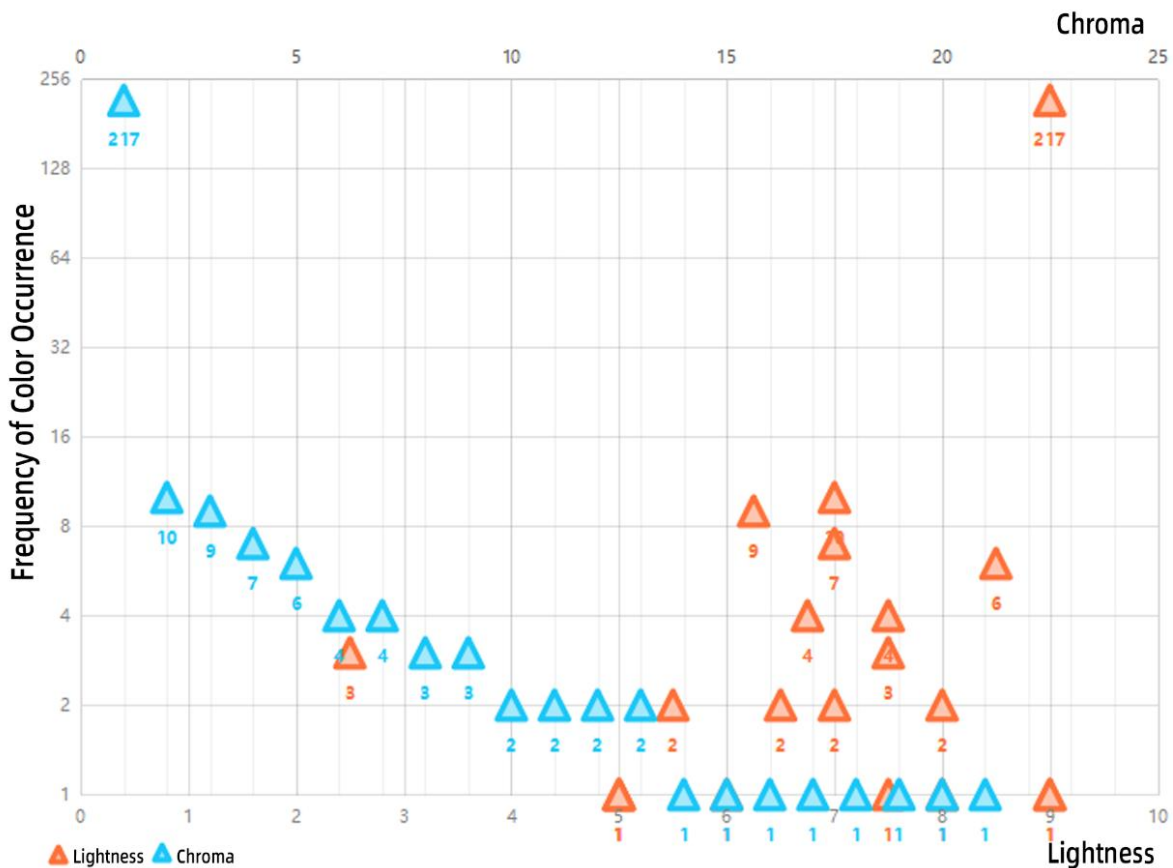


Figure 3-41 Scatter Plot Of Lightness And Saturation Distribution For Secondary And Accent Tones

(Source: drawn by the author)

From the overall structure of lightness and saturation, the colors of the district show a dominant characteristic of high lightness and low saturation, and this feature is especially evident in the dominant tones. Among the high-frequency dominant colors, Code 231, which appears 45 times, Code 1272, which appears 40 times, and Code 1705, which appears 36 times, all belong to the category of colors with high lightness and low saturation. These colors correspond closely to the terrazzo-like wall materials of the arcade buildings, such as light gray and beige-yellow surfaces. Through the combination of medium-to-high lightness and low saturation, they not only ensure the overall brightness and openness of the district, but also create a calm, harmonious, and historically grounded visual base. They therefore constitute the core color elements that maintain the coordination of the historic character of Nanhuaxi Street.

3.5.4 Color Map Analysis

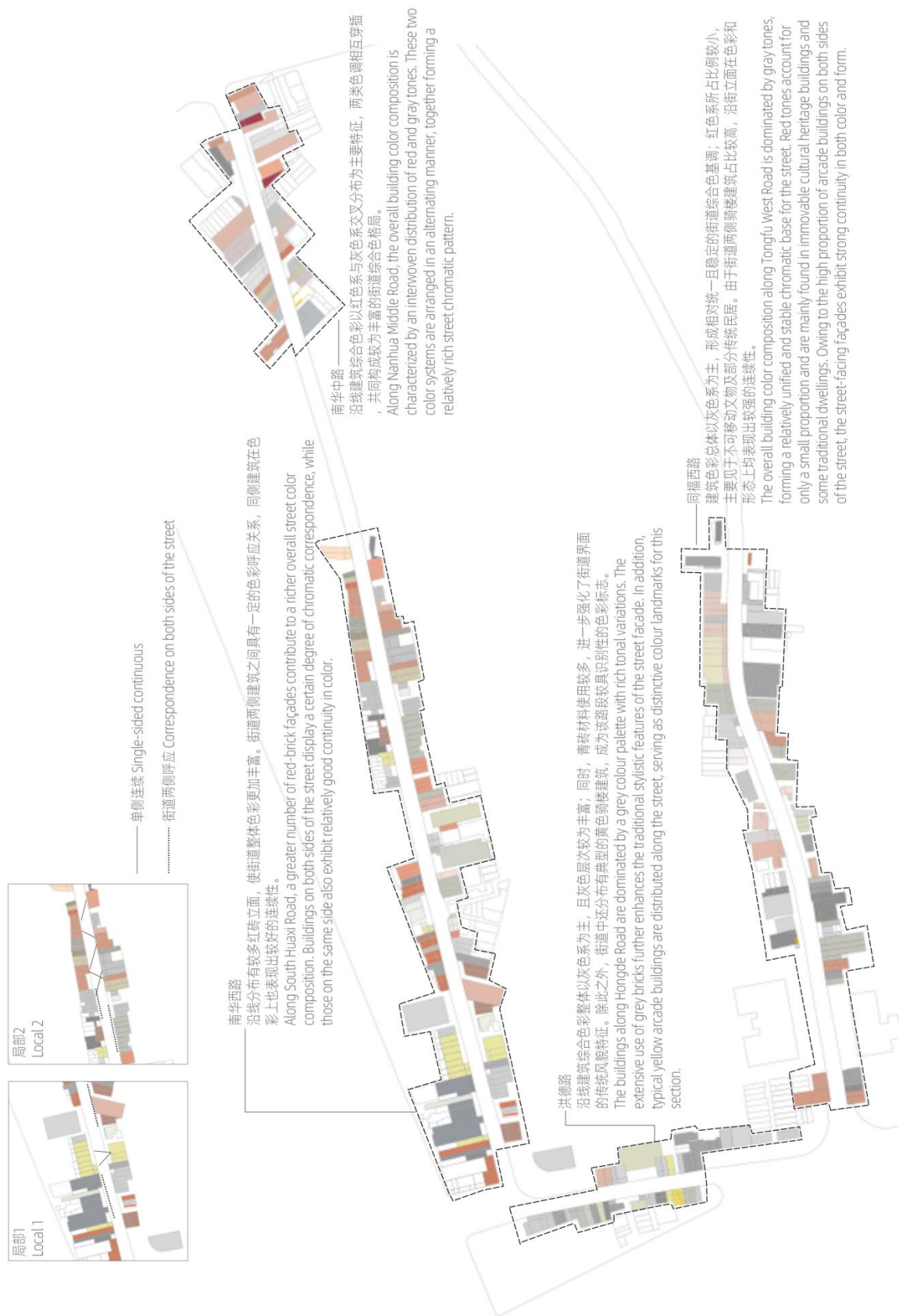


Figure 3-42 Color Map Of The Study Area
(Source: drawn by the author)

A color map is a way of observing building colors by representing the dominant facade color of each building on a plan. From the spatial distribution shown on the color map, the arcade colors in the study area display the coexistence of continuity and differentiation. On the one hand, within continuous arcade sections, there are often segments in which adjacent buildings share similar colors, and a clear relationship of “cross-street correspondence” can also be observed, that is, the facade colors of arcade buildings on both sides of the street tend to echo each other, forming an integrated street interface. On the other hand, the dominant colors of different streets show clear differences: Nanhuaxi Road is dominated by the red-brick facades of Code 233; Nanhuazhong Road is dominated by terrazzo-like facades in gray-ochre tones; Tongfuxi Road mainly features gray facades of blue brick or terrazzo-like finishes; and Hongde Road takes gray and yellow tones as its core colors. Among these streets, Nanhuaxi Road shows a much higher degree of color variation than the others, reflecting the complexity of its historical evolution and renewal process.

The construction period is a key factor affecting color homogeneity. Arcade buildings constructed in similar periods often used the same or similar exterior wall materials and coatings, thus forming a kind of “generational characteristic” in color. In subsequent maintenance and renewal, property owners also tend to choose coatings close to the original colors, which further strengthens this homogeneity. This phenomenon is especially evident in rows of connected arcade buildings. In several cases, two or more adjoining buildings share exactly the same parapet decoration, window form, and facade color, suggesting either unified construction by the same owner or coordinated construction in the same period. This reflects two mechanisms behind color continuity: simultaneous construction and imitative continuation. At the same time, natural weathering, material aging, and differences in the timing of renewal under different ownership conditions have caused slight variations in the same color across different buildings, adding further visual layering to the overall street interface.

For recessed residential buildings or buildings of other functions within the street interface, their facade colors do not create a strong break from the arcade buildings. Instead, they are generally built with materials similar to those of the arcades, such as blue brick, yellow terrazzo-like finishes, and gray-ochre terrazzo-like finishes, thereby maintaining the overall color coordination of the district. Renewal buildings from the 1980s and 1990s, as typical products of post-reform urban development, also show a degree of continuity with slight adjustment in facade material selection: small bricks are often in warmer tones than traditional gray-ochre, and some use white small bricks. However, because the number of

such renewal buildings is limited, they have not caused a significant impact on the overall historic character.

3.6 Investigation Conclusions

Based on a comprehensive review of historical context, conservation planning, site conditions, and color survey results, the following conclusions can be drawn:

(1) The historic spatial structure and traditional character framework are largely preserved, providing a foundation for subsequent conservation and renewal.

The study area retains, to a considerable extent, the traditional Lingnan street pattern, continuous arcade interfaces, and the spatial organization of “commercial in the front and residential at the rear”. Arcade buildings, traditional dwellings, and some modern-era structures together form a historically layered environment. Buildings are predominantly 2 – 3 story arcade structures, with a high proportion of traditional brick-and-timber construction. This indicates that the fundamental framework of historic character remains largely intact and has not undergone substantial disruption, thus providing a solid basis for conservation-oriented renewal and refined improvement.

(2) The overall color base remains relatively stable, but color continuity has been disrupted to varying degrees.

According to the overall color analysis, the dominant color tones of buildings in the area are primarily low-saturation, high-lightness hues such as warm gray, gray ochre, and reddish brown. These colors are largely derived from traditional building materials, including terrazzo, red brick, gray brick, and lime-based plaster, forming a relatively distinct regional color spectrum. This suggests that the original overall color tone of the district still persists, and the basis for visual identity remains.

However, due to localized renovations, spontaneous repainting, material replacement, and commercial modifications, some buildings exhibit deviations from the original color palette, weakened color layering relationships, and imbalanced façade rhythms. As a result, the continuity of overall color along the street has been partially undermined.

(3) Building Aging as the Most Widespread and Fundamental Issue

The investigation indicates that the overall condition of buildings in the area is generally rated as “fair”, suggesting that they have not yet entered a stage of widespread severe deterioration. However, most buildings exhibit common issues such as façade weathering, peeling surfaces, localized damage, and material aging. Among these, façade deterioration and damage are the most prevalent and constitute the most prominent existing problem.

This condition suggests that the focus of renewal should no longer be limited to the replacement of a few severely dilapidated structures, but should shift toward continuous maintenance, repair-based renewal, and character restoration at the level of the overall built environment.

(4) Building-Mounted Facilities and Spillover of Daily Activities Intensify Interface Fragmentation

External air-conditioning units, drainage pipes, electrical wiring, canopies, and drying Facilities are widely and irregularly attached to building façades. These elements are often superimposed with commercial installations such as signage and rolling shutters, resulting in a large amount of scattered, repetitive, and uncontrolled visual information.

Although such issues are often small-scale in isolation, their cumulative presence and continuous distribution significantly undermine the integrity, clarity, and historic character of arcade façades. As a result, they constitute a key factor affecting overall color order and spatial quality within the district.

(5) Superficial Renewal Tendencies and Their Ongoing Impact on Historic Character

Historical image comparison and analysis of key samples reveal that, over the past decade, some buildings in the area have undergone interventions such as overall monochromatic repainting, window opening modifications, façade tiling, rooftop extensions, and imitation arcade reconstructions. These renewal practices are typically driven by short-term aesthetic improvement, commercial use, or functional expansion, and often lack comprehensive control over original proportions, material textures, decorative details, and overall color composition.

While such interventions may improve building appearance in the short term, they tend to obscure historical information, simplify the architectural language, and lead to a surface-oriented transformation of the street interface over time. In some cases, they even result in a repetitive cycle of “renovation – deterioration – re-renovation”.

(6) Functional Decline and Social Structure Constraints Limit Revitalization

At the functional level, the study area exhibits a pattern characterized by “residential dominance, commercial decline, and insufficient cultural utilization”. Traditional commercial vitality has weakened, with some street-facing shops left vacant, and the potential of historic buildings for public use and cultural display has not been fully realized. At the social level, the district shows a relatively high degree of aging, with a noticeable outflow of younger populations. Meanwhile, the population structure and property ownership are complex, and coordination among multiple stakeholders is difficult, further increasing the challenges of

conservation, improvement, and revitalization. This indicates that the issues faced by the area extend beyond physical deterioration, encompassing deeper constraints related to functional organization and social dynamics.

Overall, the arcade street area of Nanhuaxi Street is currently in a condition where traditional character largely persists, yet environmental quality has declined; the overall color base remains relatively stable, yet local disorder has emerged; and the spatial structure continues, yet interface disturbances have intensified. The primary issues are not characterized by large-scale structural collapse or the need for comprehensive redevelopment, but rather by building aging, disordered attached elements, lack of effective color control, inappropriate renewal practices, and insufficient functional vitality.

Accordingly, subsequent research should take the preservation of the existing street pattern and historic color spectrum as a premise, and establish a micro-renewal strategy system oriented toward historic districts. This system should focus on façade repair, integration of attached facilities, regulation of commercial interfaces, overall color control, and the enhancement of the public environment.

3.7 Chapter Summary

This chapter presents a systematic analysis of the planning preconditions, upper-level planning requirements, and field investigations of the Nanhuaxi Historic and Cultural District in Guangzhou, establishing a comprehensive research foundation that progresses from macro-level understanding to micro-level empirical evidence.

First, at the level of planning preconditions, the research scope is defined as the outer arcade street interface of the district. This area simultaneously serves as a key zone for the display of historic character and the accommodation of public activities, making it both representative and a priority for intervention. Through an examination of historical evolution and spatial structure, the formation logic of “water-oriented street development” and “commercial front with residential rear”, as well as the concentric spatial structure, are clarified, providing a clear spatio-temporal framework for subsequent analysis.

Second, through the interpretation of upper-level planning documents, the chapter summarizes core requirements regarding conservation boundaries, categorized interventions, functional orientation, and spatial control. It identifies the guiding principles of “overall control, classified conservation, character coordination, and moderate revitalization”, which serve as institutional constraints and references for subsequent color control and renewal strategies.

Third, through a systematic investigation methodology and technical approach, a comprehensive color research framework is established, centered on field surveys, color card comparison, database analysis, and historical tracing. This ensures both the reliability of data sources and the scientific rigor of the analysis.

Finally, based on field investigation and color analysis, the key characteristics and major issues of the district are identified. On the one hand, the traditional spatial structure and overall color base remain intact, providing a foundation for conservation and optimization. On the other hand, issues such as building aging, interface disorder, color imbalance, and inappropriate renewal practices overlap, leading to a decline in overall character continuity and spatial quality. Meanwhile, functional decline and a rigid population structure further constrain the enhancement of district vitality.

Overall, the arcade street area of Nanhuaxi Street is currently in a transitional state where historic character persists but environmental quality has weakened. The core challenge has shifted from incremental development to the optimization of existing conditions. This chapter provides a clear problem-oriented basis and empirical support for the subsequent development of micro-renewal strategies guided by color control.

Chapter 4 Color-Guided Urban Design Strategies for the Area

4.1 Localized Lessons from Turin

The value of the Turin Color Plan lies in its systematic methodological framework rather than in specific color outcomes. Based on the actual conditions of the arcade street area of Nanhuaxi Street, this study selectively adopts and locally learns from its methods:

(1) Inheritance of the Methodological Sequence

Drawing on Turin's logic of "survey - analysis - guidelines - implementation", this study establishes a research pathway of "experience extraction - investigation synthesis - guideline construction - design validation", thereby forming a closed-loop transformation from precedent to design application.

(2) Adaptation of Control Logic

The control approach of "hierarchy, classification, and zoning" is retained and adapted to the characteristics of the arcade district. It is draw lessons from a four-level system of "area - street - building - component", enabling fine-grained control at a smaller spatial scale.

(3) Adjustment of Implementation Pathways

In response to fragmented property ownership and multi-stakeholder participation, the approach shifts from a model of "unified planning" to one of "guideline-based guidance with coordinated implementation", accommodating the realities of incremental and phased renewal.

(4) Lessons from Environmental Conditions

Taking into account the climatic conditions, material characteristics, and patterns of use in Guangzhou, the color strategy emphasizes material compatibility and maintenance feasibility, ensuring the practical implementability of the guidelines.

4.2 Design Objectives

This urban design project takes the arcade street area of Nanhuaxi Street as its focus. Grounded in the upper-level requirements for the conservation and adaptive use of historic and cultural districts, it responds to current issues such as building aging, fragmented interfaces, color disorder, and insufficient functional vitality.

With the preservation of the historic spatial structure and traditional color base as a premise, the project adopts micro-renewal as the primary approach and employs color control as an integrative guiding tool. It seeks to coordinate character restoration, environmental

improvement, functional optimization, and public space enhancement, thereby establishing a comprehensive set of renewal objectives that balance historical authenticity, continuity of everyday life, spatial integrity, and practical feasibility. Ultimately, the goal is to promote a transition from localized disorder to overall coordination, and from passive maintenance to structured revitalization.

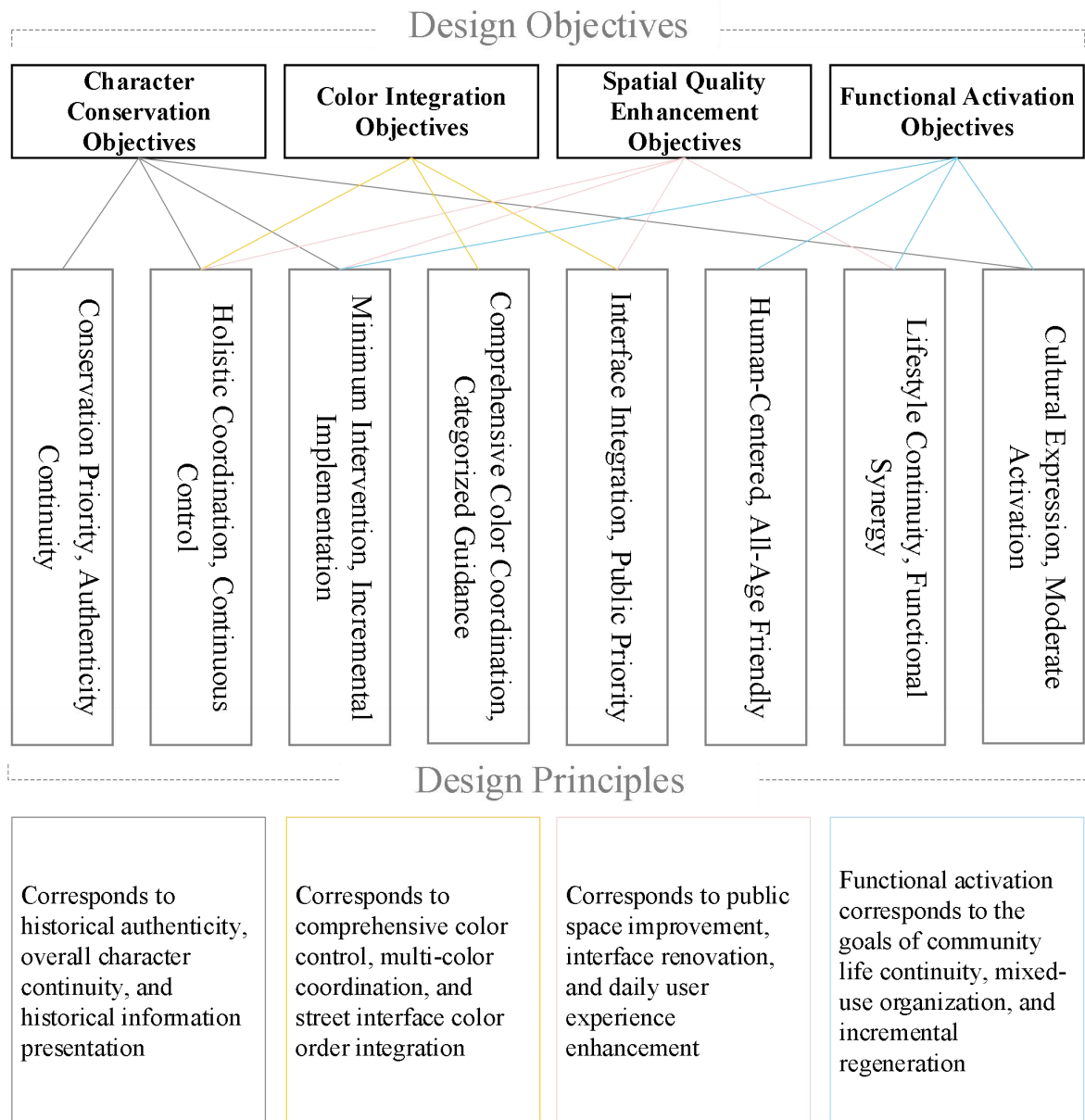


Figure 4-1 Design Objectives And Design Principles

(Source: drawn by the author)

(1) Character Conservation Objective

To sustain the overall spatial structure of the historic and cultural district and the continuous arcade interface, preserving traditional architectural forms and the qualities of the historic environment, while avoiding character fragmentation caused by localized

interventions.

(2) Color Integration Objective

To establish a hierarchical overall color system that coordinates relationships among buildings and between architectural components, enhancing visual order at the district scale and preventing color fragmentation and unregulated superposition.

(3) Spatial Quality Enhancement Objective

To improve the environmental quality of streets through interface renovation and spatial optimization, strengthening pedestrian experience and spatial continuity, and enhancing the public accessibility and usability of the district.

(4) Functional Revitalization Objective

To activate the mixed-use potential of arcade spaces by promoting commercial and community activities through interface improvement and environmental upgrading, thereby enhancing overall vitality and the capacity for sustained renewal.

4.3 Design Principles

To achieve the four planning objectives of character conservation, color integration, spatial quality improvement, and functional revitalization, the subsequent urban design should be based on both the conservation requirements of the historic and cultural district and the actual conditions of the area, and should follow the overall approach of conservation first, overall coordination, micro-renewal, and revitalization-oriented improvement. It should coordinate character continuity, color control, spatial improvement, and functional optimization in an integrated manner. In the design process, it is necessary not only to maintain the authenticity and continuity of the historic environment, but also to improve residents' daily-use environment and the overall quality of life in the district through polychrome coordination, interface integration, and the optimization of public space, while also responding to practical needs such as historical display, tourism introduction, all-age use, and residential comfort. On this basis, the following design principles are proposed.

(1) Principle of Conservation First and the Continuation of Authenticity

The existing architectural forms, material textures, structural characteristics, and historical color information of the district should be respected. The use of overall repainting, surface cladding, or imitation-historic reproduction to cover original historical traces should be avoided, so as to ensure that the renewed environment can still truthfully reflect the historical evolution of the district.

(2) Principle of Overall Coordination and Continuous Control

The design should not be limited to the repair of individual buildings, but should instead carry out coordinated control at the overall level of street fabric, arcade interfaces, building scale, spatial relationships, and continuous streetscape, so as to maintain the integrity, continuity, and coordination of the historic environment.

(3) Principle of Minimum Intervention and Gradual Implementation

In response to the current problems of the district, which are mainly characterized by local aging, disorderly attachments, and superficial disorder, priority should be given to low-intervention approaches such as repair, improvement, coordination, and optimization. Large-scale demolition and excessive renewal that may cause further damage to the historic character should be avoided, and environmental improvement should be continuously promoted through phased and gradual micro-renewal.

(4) Principle of Polychrome Coordination and Classified Guidance

The architectural body, decorative elements, attached facilities, commercial interfaces, and street environment should all be included in the overall color control system. On the premise of maintaining the unity of the overall character tone, full respect should be given to the differences in overall color formed by different construction periods, material properties, and compositional hierarchies within the historic district, so as to avoid the use of a single color to cover diversity. Through the coordinated use of similar colors, analogous colors, and low-saturation overall tones, and by implementing classified guidance according to different building types, protection levels, interface attributes, and functional sections, a polychrome district environment with unity and variation, continuity and hierarchy can be formed.

(5) Principle of Interface Integration and Public Priority

Building facades, shop signs, rolling shutters, canopies, outdoor air-conditioning units, pipes and wires, and street furniture should all be regarded as components of the street interface and integrated in a coordinated way. Priority should be given to improving the street spaces most directly perceived by residents and pedestrians, including arcade gray spaces, street-corner nodes, and the surroundings of public facilities, so as to enhance the overall interface quality and public-space experience of the district.

(6) Principle of Life-Quality Optimization and All-Age Friendliness

Spatial improvement should not be limited to visual enhancement, but should also emphasize such practical needs as movement, staying, resting, recognition, and participation. The district environment should be optimized in terms of safety, convenience, comfort, and accessibility, so as to effectively improve residents' daily quality of life. At the same time, the needs of different groups—including the elderly, children, young people, and tourists—should

be fully considered, thereby enhancing the inclusiveness and usability of the public environment.

(7) Principle of Life Continuity and Functional Coordination

The renewal of the historic district should be based on maintaining the original community life structure and residential use foundation. It should coordinate the spatial relationships among residential use, commerce, cultural display, and public services. On the basis of preserving the residentially oriented character of the district, it should promote the activation of street-facing interfaces, the reasonable use of historic buildings, and the enhancement of public activity capacity, so as to strengthen the comprehensive vitality of the district.

(8) Principle of Cultural Expression and Appropriate Revitalization

Character conservation should not stop at the preservation of physical form, but should also emphasize the recognizability and perceptibility of historical information. Through the sorting out and presentation of important buildings, street nodes, historical interfaces, and cultural clues, the readability of history and the memory of place in the district should be enhanced. At the same time, on the premise of not damaging community life order or the authenticity of the historic character, cultural display and tourism experience functions may be introduced in an appropriate manner, so as to improve the public attractiveness and cultural communication capacity of the district.

4.4 Design Strategies

In order to implement the design objectives and to transform such requirements as character conservation, color integration, spatial quality improvement, and functional revitalization into operable design actions, this urban design proposes, on the basis of the above principles, a strategy system oriented toward micro-renewal in historic districts. Overall, the formulation of these strategies takes character continuity as its premise, color integration as its main entry point, and spatial optimization and functional revitalization as its key focus. Through classified guidance and gradual implementation, it seeks to promote the transformation of the district from static conservation to orderly revitalization.

4.4.1 Character Conservation Strategy

Strategy for the Continuation of the Street Pattern and the Strengthening of Linear Interfaces

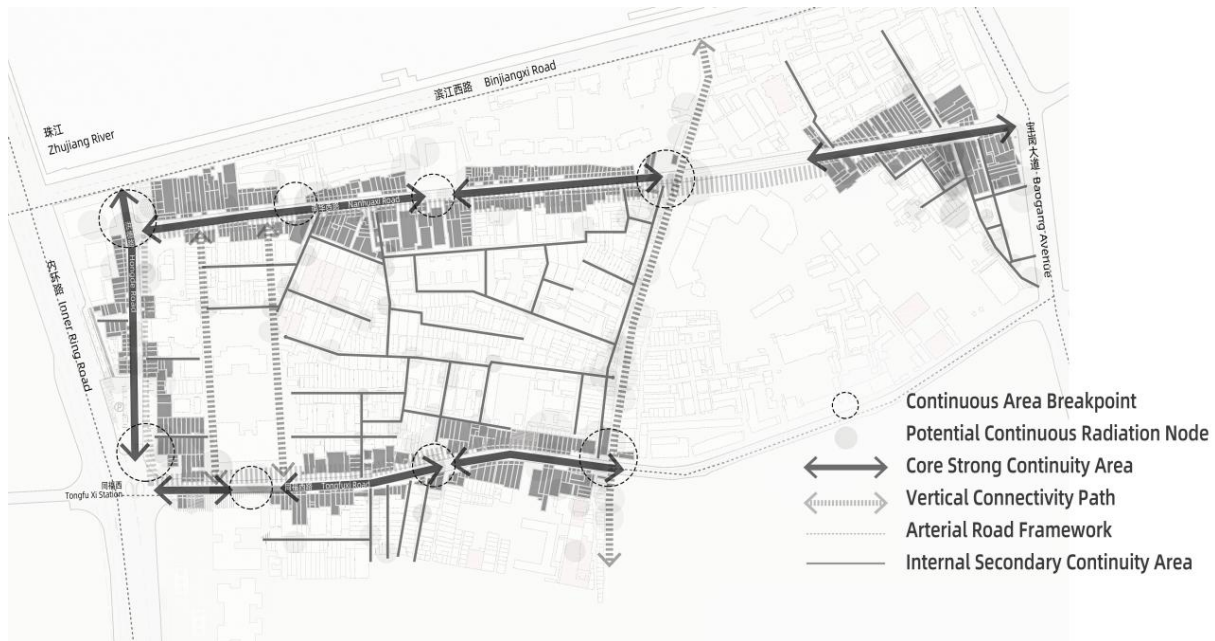


Figure 4-2 Analysis Diagram Of Site Continuity

(Source: drawn by the author)

The existing street fabric, the continuous arcade interface, and the relationships among traditional building groups in the district should be continued, so as to maintain the basic stability of street scale, building setback, corner transition, and the rhythm of street-front spaces, and to avoid damage to the original structure of the historic environment caused by local demolition and reconstruction, interface recession, or abrupt changes in building volume. At the same time, the linear spatial continuity of arcade streets should be reinforced, and the continuity of arcade corridors, street-front facades, and pedestrian interfaces should be maintained, so that the spatial perception of the historic district can be built upon an integrated sequence of “continuous streets and lanes – continuous interfaces – continuous activities”.

In design practice, the street pattern should be regarded as the structural framework of character conservation in the district. Subsequent improvement and renewal should be carried out on the basis of the existing street network and arcade spatial sequence, so that new interventions serve the existing pattern rather than reconstructing it.

Strategy For The Classified Restoration Of Historic Buildings And The Repair Of Street Interfaces

According to protection level, preservation condition, and character value, classified restoration and graded control should be implemented for cultural relic protection units, historic buildings, traditional character buildings, and ordinary buildings requiring improvement. For buildings of higher value and better preservation, protection and restoration

should be the main approach; for buildings showing local aging and disorderly attachments but retaining their main body, improvement and repair should be emphasized; for ordinary buildings with stronger conflicts in character, they should be incorporated into the overall environment through facade coordination, material replacement, and color integration.

This strategy emphasizes that conservation should extend from the repair of the building itself to the repair of the historic interface, meaning that doors and windows, railings, decorative details, cornices, and arcade colonnades should all be treated as objects of character repair, in order to maintain the overall historic features of arcade streets.

Strategy For Historical Display And The Linking Of Cultural Clues

Important arcade facades, historic street corners, traditional lanes, and cultural clue nodes should be incorporated into a display system. Through interface repair, node marking, display installations, cultural interpretation, and the organization of pedestrian routes, the recognizability and readability of the district's historical information can be strengthened.

This strategy emphasizes that a historic district should not only be preserved, but also seen and understood. Through linear routes, scattered historical resources can be connected into an experiential path that combines everyday life with cultural perception.

4.4.2 Color Integration Strategies

Strategy For Graded And Zoned Guidance Of The Overall District Color

On the basis of the district's traditional low-saturation color base, such as warm gray, gray-ochre, and reddish brown, and in combination with street attributes, building types, character value, and functional differences, a graded and zoned guidance system for the overall district color should be established.

In design, spaces such as arcade commercial main streets, residential side lanes, historic display nodes, and public activity spaces may be divided into different color-control units. According to different levels such as core control zones, coordinated control zones, and general guidance zones, corresponding requirements for dominant colors, secondary colors, and accent colors should be proposed. Through graded and zoned guidance, color can form an overall unified tone for the district while also showing moderate differences and recognizability in different spaces.

Strategy For The Repair Of Facade Color Layers And Polychrome Coordination

In response to current problems such as overall repainting, brick cladding, broken color layers, and inappropriate material replacement, the original relationship among facade color layers and the texture characteristics of materials should be restored. Specifically, based on

historical images, current-condition surveys, and the properties of traditional materials, priority should be given to retaining and repairing the expression of historic materials such as terrazzo-like finishes, gray sand mortar, red brick, and blue brick. By controlling the proportional relationships among dominant colors, secondary colors, and accent colors, the hierarchy and authenticity of facade color can be re-established.

At the same time, renewal should adhere to polychrome coordination rather than monochrome covering. On the basis of a unified overall district color tone, differences formed by different building periods, materials, and decorative hierarchies should be retained, so as to enhance the richness and authenticity of the street interface.

Strategy For The Coordination Of The Overall Color Of Commercial Interfaces And Attached Interfaces

In response to the problems of disordered colors and overly strong contrast in commercial interfaces such as shop signs, rolling shutters, canopies, and advertising facilities, a control approach should be established that is coordinated with the main body of the arcade buildings. The disorderly use of high-purity, high-lightness, and strongly contrasting colors should be controlled, and the use of low-saturation overall color systems that coordinate with the architectural base should be encouraged. At the same time, the size, position, material, and night lighting of shop signs should be guided in a unified way.

Meanwhile, attached interfaces should also be included in the scope of overall color control. Air-conditioning covers, railings, shading components, wayfinding facilities, and other attached elements should be treated through coordinated overall-color design, so as to avoid the disruption of interface continuity caused by overly prominent colors in the attached layer.

4.4.3 Spatial Quality Improvement Strategies

Strategy For The Integrated Management Of Attached Layers On Street Interfaces

Elements attached to the interface, such as outdoor air-conditioning units, drainage pipes, meter boxes, laundry facilities, canopies, rolling shutters, and street furniture, should be integrated and managed in a coordinated and graded way, so as to reduce the damage caused by scattered attachments to the integrity of street interfaces.

Specifically, this may be achieved through such measures as centralized arrangement, concealed treatment, same-color coordination, unified component forms, standardized installation methods, and the establishment of a negative list, so that the attached layer can shift from “disordered accumulation” to “orderly management”. This strategy emphasizes that

the attached layer of the interface is not a marginal issue, but an important level affecting the visual order and spatial quality of the historic district, and should therefore be incorporated into the joint control system of urban design and color guidelines.

Strategy For The Creation Of Public Nodes, Corner Parks, And Recessed Spaces

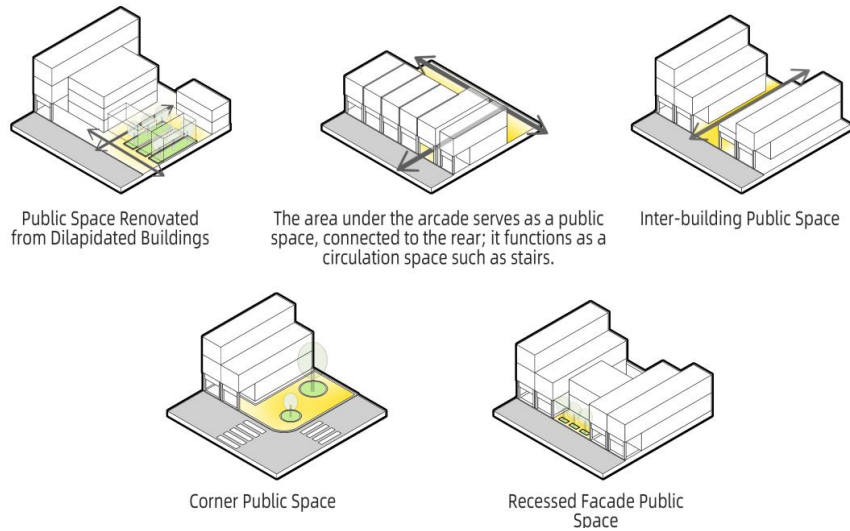


Figure 4-3 Diagram Of Public Node Creation Types

(Source: drawn by the author)

Around street-corner nodes, arcade gray spaces, recessed building-interface spaces, leftover corner spaces, and the surroundings of public facilities, a multi-level system of micro public spaces that is stoppable, identifiable, and socially interactive should be established.

In design terms, this may be achieved through such means as small corner parks, pocket spaces, the reuse of recessed interface spaces, staying spaces in front of arcades, resting spots under trees, and the improvement of the forecourts of public facilities. In this way, more small-scale public spaces suitable for rest, communication, display, and activities can be introduced into the historic district, thereby enhancing the usability and permeability of open space in the area. This strategy helps transform the district from a space primarily oriented toward movement into a composite space that also accommodates staying and public life.

Strategy For Optimizing The Slow-Mobility System And An All-Age-Friendly Environment

Focusing on the connections among arcade corridors, pedestrian systems in the streets and lanes, and important nodes, the district's slow-mobility network should be improved so as to enhance the continuity, shading, safety, and wayfinding quality of pedestrian movement.

At the same time, full consideration should be given to the needs of different groups, including the elderly, children, young people, and tourists. All-age-friendly spatial arrangements should be established in such aspects as pavement leveling, anti-slip treatment,

barrier-free access, the placement of resting facilities, lighting and wayfinding systems, and the setting of activity nodes, so as to improve the inclusiveness and everyday comfort of the district's public environment.

Strategy For Improving The Comfort Of Residential Streets And Lanes

For the internal streets and lanes of the district that are mainly residential in nature, priority should be given to improving quietness, tidiness, safety, and convenience, so as to create a district environment suitable for the continued daily life of residents.

Specifically, this may be achieved through such measures as improving everyday attached elements, optimizing street lighting, supplementing resting facilities, improving pedestrian interfaces, strengthening the penetration of greenery, and controlling the outward spillover of commercial disturbance. In this way, the environmental stability and sense of belonging of residential streets and lanes can be enhanced, so that the renewal of the historic district serves not only display and visitation, but also community life itself.

4.4.4 Functional Revitalization Strategies

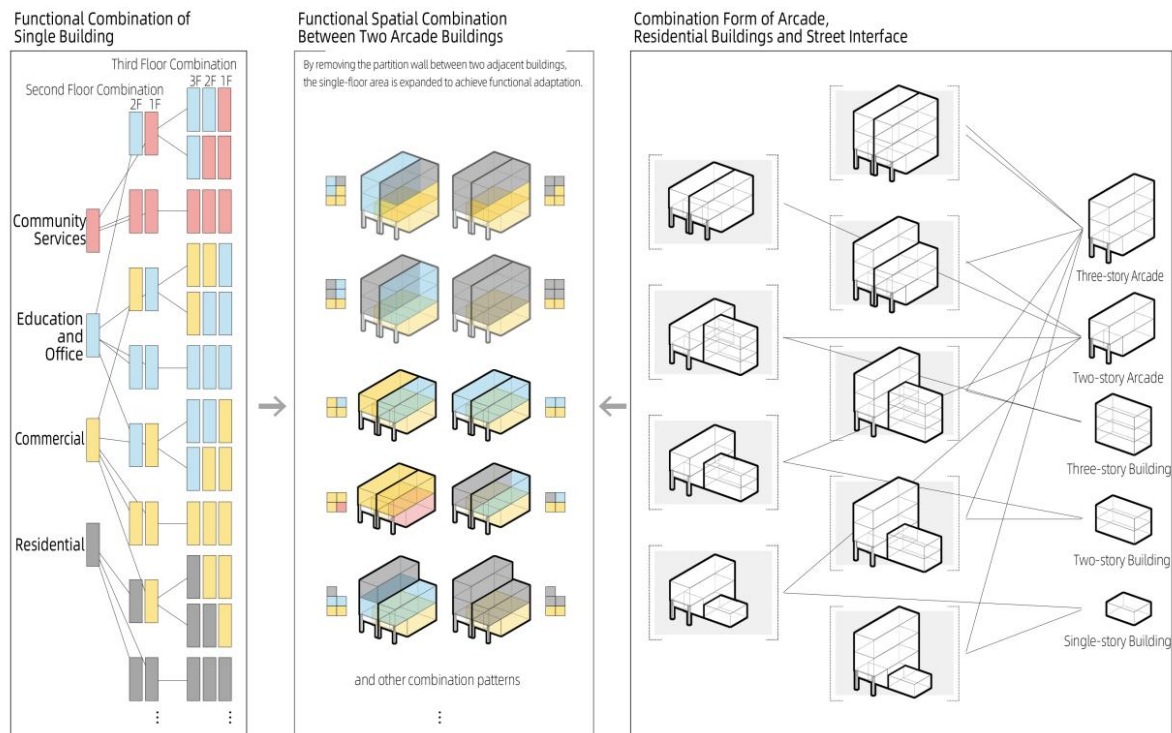


Figure 4-4 Composite Functional Forms Of The District

(Source: drawn by the author)

Strategy For Three-Dimensional And Mixed Functional Organization

In response to the current problems of commercial decline, functional monotony, and insufficient efficiency of space use in the district, a three-dimensional and mixed functional organization model should be established so as to promote the coordinated integration of

street-front commerce, cultural display on the upper floors, shared office use, community services, and residential functions.

In design practice, based on the traditional characteristics of arcade buildings—such as “shop below, dwelling above” or “commercial use on the ground floor and supporting functions on the upper floors”—different floors may be assigned differentiated functions. The ground floor should mainly accommodate display-oriented, open, and commercial uses, while the second floor and above may introduce light exhibition spaces, small studios, cultural experience functions, community sharing functions, or residential use according to the conditions of the building. In this way, the overall use efficiency and spatial vitality of arcade buildings can be improved.

Strategy For The Integration And Optimization Of Internal Arcade Spaces

In response to the fact that individual arcade buildings often have narrow frontage, great depth, and elongated internal space that make them unsuitable for modern business formats, it is possible, on the premise of protecting the main structure and character features of the buildings, to explore the joint use and adaptive transformation of the interior spaces of adjacent arcade buildings.

For example, the constraints of traditional arcade units may be improved by partially opening the ground floors of two or more adjacent arcade buildings, sharing rear auxiliary spaces, and optimizing vertical circulation and internal movement routes. This would make them better suited to such functions as dining, retail, cultural display, and mixed business operation. This strategy emphasizes that internal spatial optimization is an important basis for the revitalization of arcade buildings, but that the scale of intervention must be strictly controlled in order to avoid damage to historic structures and facade characteristics.

Strategy For Cultural Display, Moderate Tourism, And Community Coexistence

Relying on arcade streets, historic buildings, and characteristic nodes, a composite revitalization system should be established that combines community life, cultural display, moderate tourism, and public activities.

In terms of functional organization, the overall direction should remain “residence as the foundation, culture as guidance, commerce as coordination, and tourism in moderation”. On the one hand, the public attractiveness of the district may be enhanced by creating display nodes, visitor routes, small activity spaces, and cultural interpretation systems. On the other hand, excessive commercialization and scenographic treatment should be controlled, so as to avoid tourism development squeezing community life, and to promote coordination between

tourism experience and residents' daily life.

4.5 Chapter Summary

In summary, the urban design for the arcade street area of Nanhuaxi Street establishes a comprehensive strategy system composed of four key dimensions: character conservation, color integration, spatial quality enhancement, and functional revitalization.

Specifically, the strategy framework includes: continuation of the street pattern and reinforcement of linear interfaces; classified repair of historic buildings and façade restoration; integration of historical interpretation and cultural narratives; hierarchical and zoned guidance of overall color at the district scale; restoration of façade color layering and multi-color coordination; coordination of overall color across commercial and attached interfaces; integrated management of attached elements along street interfaces; creation of public nodes, corner parks, and recessed spaces; optimization of slow-mobility systems and all-age-friendly environments; enhancement of residential street comfort; organization of vertically mixed functional programs; internal spatial optimization of arcade buildings; and the integration of cultural display with moderate tourism development.

These strategies operationalize the previously defined design principles across multiple dimensions, including spatial structure, interface control, public environment, functional organization, and cultural activation. They also provide concrete support for subsequent stages, including the development of color guidelines, detailed node design, and the overall scheme articulation.

Chapter 5 Nanhuaxi Street District Color Guidelines

5.1 Color Palette Formulation

5.1.1 Dominant Color Palette

Based on the frequency statistics of dominant building colors, this study extracts 30 CBCC color codes with relatively high occurrence from the overall color samples, and uses them as the basic palette for dominant color control and selection in the district. Different material options may be adopted, while the main material choice is the fine aggregate finish.



Figure 5-1 Dominant Color Palette

(Source: drawn by the author)

5.1.2 Secondary And Accent Color Palette

For the secondary and accent colors of buildings, this study carries out a comprehensive selection based on the overall color statistics discussed in the previous chapter, and finally extracts 18 CBCC colors that are relatively consistent with the overall color characteristics of the district as the reference range for secondary and accent colors. Among them, Code 1321 is the most representative and the most frequently occurring accent color, and may be used as a key guiding color. The remaining colors may be applied appropriately according to different building types, interface locations, and decorative needs.



Figure 5-2 Secondary And Accent Color Palette

(Source: drawn by the author)

5.1.3 Brick Material Palette

In the selection of materials for building walls, column surfaces, and ground-floor wall bases, brick materials are also widely used in the historic district in addition to the fine aggregate finish, mainly including red brick and blue brick. In order to enhance the layering, diversity, and aesthetic expression of the facade, these brick materials are often combined in practice through different arrangements of hue and lightness, thus creating a richer interface effect. On this basis, this study selects and identifies five representative colors for red brick and five representative colors for blue brick, forming two independent matching color systems to guide subsequent facade repair and renewal design.

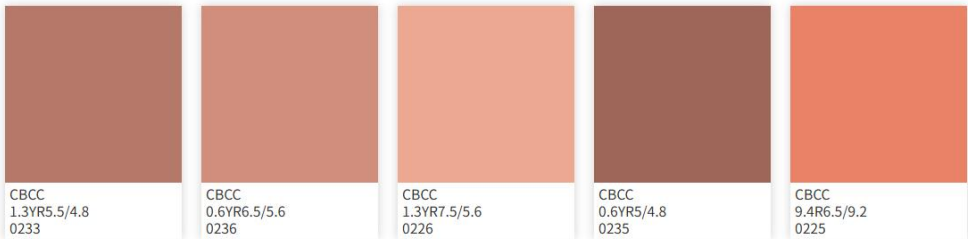


Figure 5-3 Red Brick Palette (Source: drawn by the author)

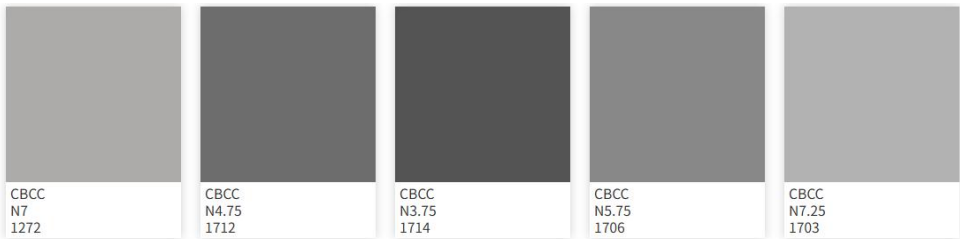


Figure 5-4 Blue Brick Palette (Source: drawn by the author)

5.1.4 Door And Window Palette

In the selection of colors for door and window frames, this study, based on the summary of the original architectural colors of the district, gives priority to 1321, 1042, and 0944, which have relatively low saturation and a high degree of coordination with the overall character, as the basic control colors. At the same time, based on the more representative existing colors found on site, deep wood tone 1052 and typical red metallic color 1084 are added as reference colors, so as to balance historical continuity with the recognizability of facade details.

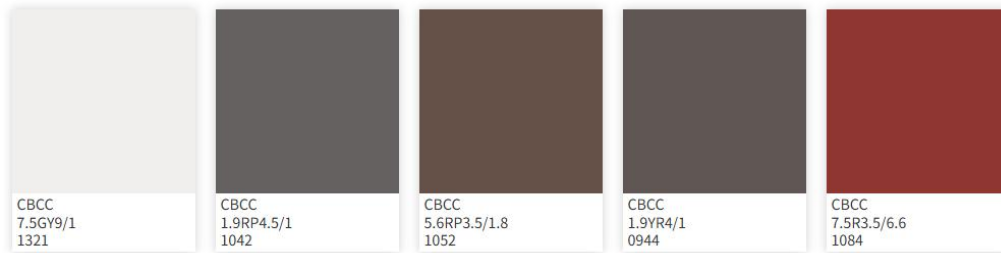


Figure 5-5 Door And Window Frame Palette

(Source: drawn by the author)

The dominant colors, secondary and accent colors, as well as the palettes for red brick, blue brick, and door and window frames summarized above, are all intended as an overall reference color system for different types of buildings within the district. This palette is mainly used to establish the basis for the control of the district's overall color system and to ensure the overall coordination and continuity of the character of the historic district. In subsequent implementation, the tendency of color use will be further controlled by zone according to the spatial characteristics, building types, and character conservation requirements of different parts of the district. For buildings that truly need to go beyond the established palette range, other colors may be used where appropriate after special review and approval, provided that the principle of overall character coordination is maintained.

5.2 Functional Zoning Color Guidance and Control

In combination with the functional arrangement in the upper-level plan, the protection categories of buildings, and the existing spatial characteristics of the area, this study further develops color-guidance zoning on the basis of the overall color palette. The study area is divided into five categories: the arcade commercial zone, residential zone, historical display zone, youth entrepreneurship, educational service, and convenience commerce integration zone, and public service zone. While all zones follow the overall principle of coordination within the district color system, differentiated control is established in terms of dominant

color tendency, material combination, secondary color allocation, and accent color use according to functional attributes, building types, and character conservation requirements, so as to form a zoned color system that balances overall unity with local recognizability.

Among these zones, the main differences are reflected in dominant color tendencies, the use of brick materials, the intensity of accent colors, and the control of door and window frame colors. Overall, the arcade commercial zone emphasizes display and recognizability; the residential zone emphasizes quietness and coordination; the historical display zone emphasizes authenticity and historical continuity; the youth entrepreneurship, educational service, and convenience commerce integration zone emphasizes rationality, freshness, and moderate vitality; and the public service zone emphasizes simplicity, clarity, and public recognizability. The color guidelines for each zone are as follows.

5.2.1 Arcade Commercial Zone

The arcade commercial zone includes ground-floor commercial arcade buildings and interfaces where the entire building is used for commercial purposes. It is the area with the strongest display character and the most obvious renewal vitality in the district. In terms of dominant colors, this zone mainly adopts yellow tones, red tones, and gray tones, forming a facade character that is relatively distinct while still coordinated with the overall tone of the historic district. For exterior facades, red brick and blue brick may be used according to actual building conditions in order to strengthen the layering of the arcade interface and the expression of traditional materials. Secondary colors should follow the basic principle of coordination with and support of the dominant color, and large areas of high-contrast color juxtaposition should be avoided. Accent colors should be concentrated in decorative details, and Code 1321 should be given priority as a unified guiding color, so as to ensure that the commercial interface remains active but not visually chaotic. For doors and windows, different colors may be used for the ground floor and the upper floors, but each level should still be controlled by a single color, and multiple colors should not be mixed on the same facade level. Upper-floor doors and windows may be consistent with those on the ground floor, or may adopt a different color according to the overall composition of the building, but internal unity within each building must be maintained.

5.2.2 Residential Zone

The residential zone is mainly oriented toward everyday living functions, and its overall color guidance should highlight a quiet, coordinated, and stable spatial character. Dominant colors should mainly adopt red tones and gray tones, which both respond to the existing

overall color characteristics of the district's buildings and help form a gentle and continuous residential interface. In terms of materials, red brick and blue brick may be used, but the use of red brick should be more restrained than in the commercial zone, and multicolor mixed combinations should be limited to coordinated combinations of only two red-brick colors, so as to avoid excessive visual complexity on the facade. In this type of zone, secondary colors may appropriately include more dark-toned options, to be used for wall bases, local components, or detailed edge treatment, thereby enhancing the stability of the interface. Accent colors should mainly use Code 1321, while a small number of low-saturation gray tones may also be added as alternative choices. Door and window frame colors may retain a certain degree of variety, but each individual building should use only one frame color, so as to maintain the integrity of the single building and the continuity of the street interface.

5.2.3 Historical Display Zone

The historical display zone is relatively limited in number within the district and mainly centers on immovable cultural relics, historic buildings, and buildings with special display value. In this type of zone, color control should take the retention of original colors as the primary principle, emphasizing the expression of historical authenticity and integrity. Therefore, the dominant, secondary, and accent color palettes in this zone should mainly serve as auxiliary references for repair and improvement, rather than replacing the original color characteristics. In terms of materials, traditional materials such as blue brick and red brick may continue to be used according to the original condition of the building. Door and window frame colors should adopt low-saturation overall tones, so as to emphasize the sense of weight, calmness, and historical depth appropriate to historic buildings, while avoiding excessively bright colors or treatments with a strong modern commercial character.

5.2.4 Youth Entrepreneurship, Educational Service, And Convenience Commerce Integration Zone

This zone is a mixed-function area formed in response to the demand for educational services, office and entrepreneurial activities, and convenience commerce brought by schools and surrounding educational resources within the site. Its spatial character lies between that of the traditional residential zone and the commercial zone: it requires a certain degree of recognizability, but must not damage the overall character order of the district. Therefore, in facade color selection, this zone should lean more toward gray tones and neutral tones, using relatively fresh and rational overall color relationships to respond to the spatial character of education, office, and service functions. Accent colors may, under overall control,

appropriately introduce some new color types, especially a limited supplement of cool colors, in order to strengthen the recognizability of contemporary functions. However, any newly added colors should be incorporated into the approval process and may only be used after special review, so as to prevent local renewal from breaking through the overall color boundary of the district. Overall, this zone should be controlled under the principle of “low-saturation base colors plus moderate cool-color accents”.

5.2.5 Public Service Zone

The public service zone mainly accommodates community services, management functions, and public-supporting facilities. Its overall color control should be more concise and clear, while emphasizing public character. In this zone, facade color should focus more on monochrome control, so as to form a stable and clearly identifiable public-building image that can be distinguished from other functional buildings. Its differentiated expression should not rely mainly on complex changes in dominant colors, but rather on the design of urban furniture, facade attachments, entrance components, and local facilities to strengthen recognizability. Colored parts of the building may be concentrated in local material expressions such as red brick, so as to retain a certain degree of historic district material character. Accent colors should be strictly controlled in scope and intensity, so as to avoid overly strong decorative effects. Door and window frame colors should adopt low-saturation overall tones, in order to maintain the steadiness, clarity, and overall coordination of public service buildings.

Overall, the zoned color guidelines represent a further refinement based on the overall color control of the district. Their core purpose is not to divide the district mechanically into separate color areas, but to use differentiated color tendencies to create moderate recognizability among different functional zones within a unified character framework. For buildings with genuine special needs, if it is necessary to go beyond the established color tendency of the relevant zone, implementation may only proceed after approval through the relevant review procedures, on the premise that the overall coordination of the district character is not damaged.

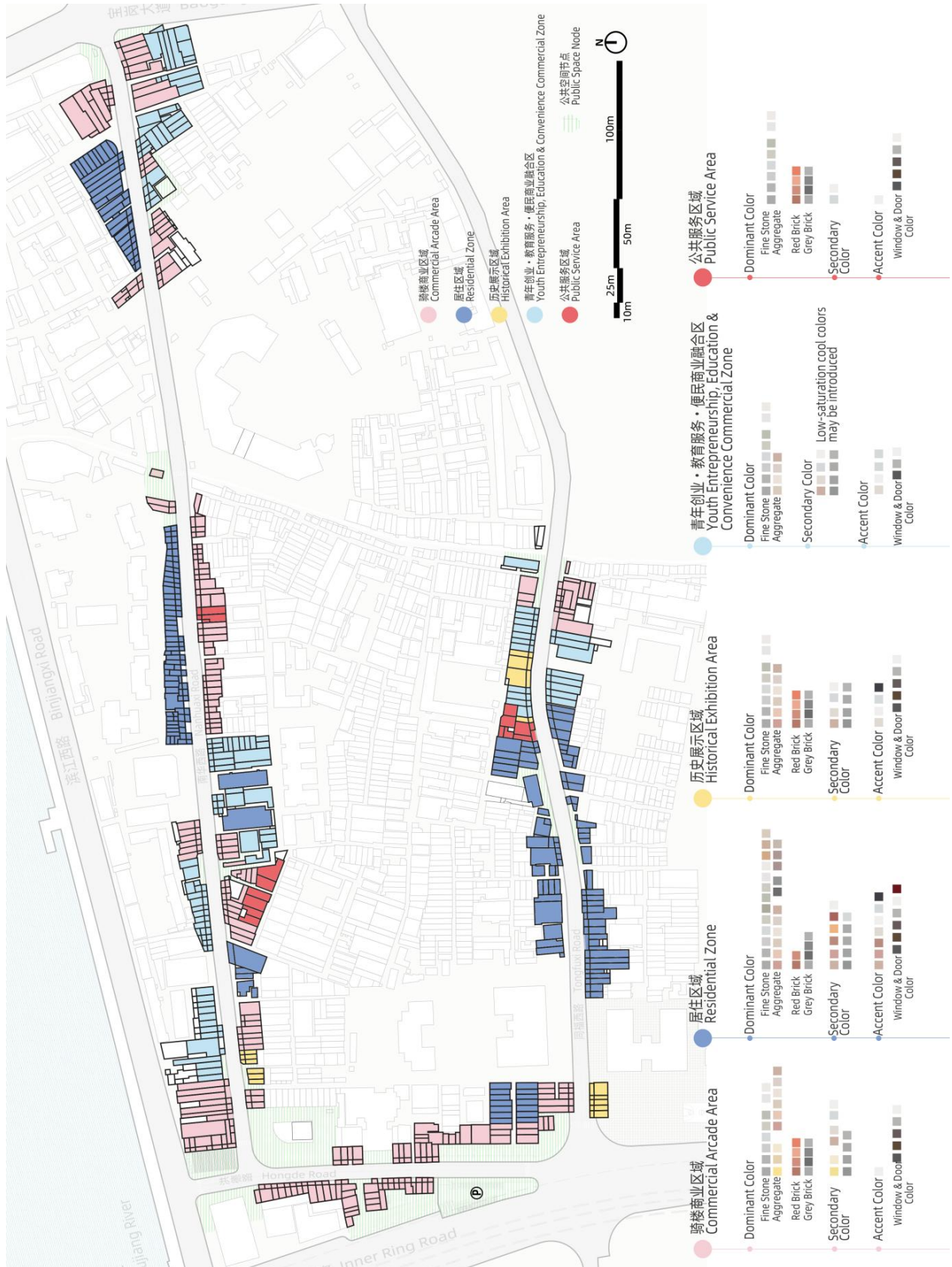


Figure 5-6 Plan Of Building Functional Zoning
(Source: drawn by the author)

5.3 Typical Street Continuous Interface Guidelines



Figure 5-7 Types Of Typical Continuous Street Interfaces

(Source: drawn by the author)

As shown in the figure, this study classifies the streets within the study area according to street-space form, street-front functional composition, and interface character. Although the functional zoning within the district is characterized by overlap and mixture, and different street types are not absolutely separated from one another, the differences in spatial scale, activity content, and user groups mean that their continuous interfaces show different tendencies in openness, everyday atmosphere, and visual character. Therefore, this study summarizes them into three types: the continuous interface of the commercial main street, the interface of multifunctional side lanes, and the interface of nodal street sections, and proposes corresponding guidelines for color and interface control for each type.

5.3.1 Commercial Main Street Continuous Interface

The commercial main street interface is the type of continuous interface in the district where arcade buildings are most concentrated, commercial activities are most active, and display attributes are the strongest. Its architectural form is mainly composed of entire commercial buildings, rows of commercial buildings, and mixed-use buildings with “residential functions above and commercial functions below”. Overall, it shows strong continuity, openness, and recognizability. On the basis of following the overall color palette of the arcade commercial zone, color control for this type of interface should focus on coordinating the overall color relationship among the architectural body, the ground-floor commercial interface, door and window components, the signboard system, and attached facilities, so as to form a continuous and unified street visual order that is layered and rich without becoming overly abrupt. Although the upper residential part has a certain degree of

independent use, in terms of its street-facing facade expression it should still be included in the overall character control system of the commercial main street, so as to ensure the integrity of the continuous arcade interface and the overall coordination of the main-street character in the historic district.

Recommended:

- The main body of the building should adopt overall colors such as yellow tones, red tones, and gray tones within the palette range of the arcade commercial zone.
- Rows of connected buildings or whole commercial buildings should use similar colors in a continuous arrangement, so as to maintain the overall coordination of the street interface.
- In some continuous building groups, the ground-floor height and cornice height should be consistent, so that the whole interface presents a clear rhythmic order.
- Buildings with residential use above and commercial use below should be incorporated into the control system of the arcade commercial zone as a whole, and the accent color of the upper floors should uniformly adopt CBCC 1321.
- The height of ground-floor door openings should be uniformly controlled at 2400 mm, and the facade should adopt the form and color combination of Typical Arcade Bay Facade Combination 1.
- External signboards should be placed on the decorative panel of the eave wall, with lettering treated in achromatic colors, while brand colors should be limited to a small area.
- Internal signboards should be placed inside the arcade colonnade, with unified control of size, position, and number of colors.
- Components such as doors and windows, railings, and mouldings should use analogous colors or low-saturation overall colors coordinated with the main building body.
- Attachments such as canopies, drainage pipes, security facilities, and laundry facilities should be treated through same-color coordination, concealment, or concentrated integration.

Not Recommended:

- Partial color jumps within connected buildings of similar form, which would damage the overall sense of the continuous interface.
- Overly bright, overly vivid, or strongly contrasting colors for detailed components such as door and window frames, railings, and decorative mouldings.
- A clear disconnection in tonal relationship between the ground-floor commercial interface and the upper building body.

- Excessive mixing of red brick and blue brick on the same facade, resulting in disordered material relationships.
- Shop signs with color purity obviously higher than that of the building body, creating excessively strong visual stimulation.
- Rolling shutters, canopies, and attached facilities that are not coordinated with the overall color of the upper building.
- Equipment components such as outdoor air-conditioning units, pipes, and protective covers forming obvious jump-color contrast with the wall surface.

Prohibited:

- Large-area use of fluorescent colors or highly saturated vivid colors as the main color of the building body or of door and window components.
- The use of highly reflective materials such as mirror-finish metal or mirror glass on major street-facing facades.
- The installation of cross-floor advertisements, full-surface light boxes, or other commercial facilities that damage the continuous arcade interface.
- Disorderly attachment of drying racks, security grilles, equipment pipes, and other elements on the street-facing facade.
- Arbitrary expansion of brand color areas beyond the control requirements, thereby damaging the overall character order of the historic district.

5.3.2 Multifunctional Side-Lane Interface

The multifunctional side-lane interface is mainly distributed in the residential zone, the youth entrepreneurship, educational service, and convenience commerce integration zone, and the public service mixed-use zone. It is a type of continuous interface in the historic district that combines daily residential use, basic services, and small-scale commercial functions. As this type of street still belongs overall to a residential environment, its color control should focus on residential comfort, the quiet character of the background, and the tidiness of the interface, while weakening commercial display expression and reducing the disturbance caused by highly recognizable colors to living space. Compared with the arcade interface of the main street, the multifunctional side-lane interface places greater emphasis on the small-scale continuous relationship between building bodies, as well as the overall integration of daily-use facilities, ground-floor frontages, and attached layers, so as to form a simple, gentle, and restrained street visual order.

Recommended:

- Building bodies should adopt low-saturation, soft overall colors such as gray, warm gray, gray-ochre, and light brown.
- Adjacent buildings should organize continuous interfaces through similar colors, analogous colors, and slight color variation, so as to strengthen overall coordination.
- In some continuous building groups, the ground-floor height and cornice height should be consistent, so that the whole interface presents a rhythmic order.
- Components such as doors and windows, mouldings, and railings should use low-saturation overall colors that are more restrained than the main building body.
- A limited number of ground-floor shopfronts should remain coordinated in overall color with the upper building body, so as to moderately weaken the commercial display character.
- The color of shop signs and decorative elements should be controlled within a low-purity range, with reduced area and quantity, so as to avoid disturbing the residential atmosphere.
- Canopies, drainage pipes, outdoor air-conditioning units, and other daily-use facilities should be treated through same-color coordination, concealment, or concentrated integration.
- The continuous relationship among multiple buildings should be expressed through simple facades, gentle tones, and subtle variation.

Not Recommended:

- Continuous use of high-saturation colors from the palette, resulting in an overly commercialized tendency in the side-lane interface.
- Overly bright colors for doors and windows, railings, mouldings, and local components, creating local visual jumps.
- Excessive numbers of shop signs, overly large sign sizes, or color purity obviously higher than that of the building body.
- Facade colors that remain completely unchanged over a long continuous stretch, lacking moderate variation and making the interface monotonous and rigid.
- A disconnection in tone between ground-floor frontages, rolling shutters, canopies, and the upper building body, damaging the overall continuity.
- Protective covers for air-conditioning units, pipelines, and daily-use facilities forming obvious jump-color contrast with the wall surface.

Prohibited:

- The use of fluorescent colors or highly saturated vivid colors on building bodies,

components, or shop signs.

- The use of highly reflective materials such as mirror-finish metal or mirror glass on major street-facing interfaces.
- Disorderly attachment of air-conditioning equipment, laundry facilities, security elements, and all kinds of daily-life appendages on the street-facing facade.
- The use of overly commercialized advertisements, light boxes, or decorative interfaces that damage the quiet and gentle spatial atmosphere of side lanes.

5.3.3 Nodal Street-Segment Interface

The nodal street-segment interface is mainly distributed in the historical display zone and around various types of micro public spaces. It is a special type of continuous interface in the historic district that combines the functions of display, staying, turning, and recognition. Compared with the main street and ordinary side lanes, this type of interface places greater emphasis on local recognizability, historical display, and the openness of public space. In response to such spatial conditions as nodal buildings, corner buildings, small squares, pocket spaces, and corner setbacks, it can form local visual focal points that are both stay-oriented and recognizable. However, its color control should still follow the overall color order of the district. With base colors as the main body, and through the coordinated use of small-scale accent colors, wayfinding facilities, display installations, and nodal components, it should enhance the readability and sense of place of nodal interfaces, while avoiding the creation of overly vivid scenic centers that are detached from the overall character.

Recommended:

- Building bodies should continue the base colors of the district and adopt overall colors such as low-saturation gray, warm gray, gray-brown, and light brick tones.
- Nodal buildings, corner buildings, or historical display objects may be moderately emphasized on the premise of overall coordination, so as to form local recognizability.
- In some continuous building groups, the ground-floor height and cornice height should be consistent, so that the whole interface presents a rhythmic order.
- Historical nodes should be arranged in combination with corridors, corner setbacks, small squares, or pocket spaces, and equipped with an appropriate amount of display and wayfinding facilities.
- Small-scale leisure and staying spaces may be set in public spaces in order to strengthen the stayability and public character of the node.

- Display facilities, interpretive elements, and nodal installations should adopt low-saturation and coordinated accent colors, using a small proportion to strengthen the visual focus.
- Renewal of historic buildings should mainly preserve original colors and material characteristics, and repair work should maintain the authenticity and sense of weight of the facade.
- Attached facilities, lighting, wayfinding, flower boxes, and similar elements within nodal spaces should be designed in an integrated way, so as to strengthen the connection between the street and the node.

Not Recommended:

- Excessive occupation of pocket spaces, corner setbacks, or public node spaces, thereby weakening their functions of staying and display.
- Arbitrary alteration of the original colors of historic buildings, or covering historic facades with highly saturated colors.
- Newly added display facilities, promotional elements, or wayfinding devices that are overly prominent and weaken the primary position of the historic building.
- Nodal building colors that are clearly disconnected from the surrounding continuous interface, forming isolated and abrupt visual patches.
- Excessive arrangement of display installations, leisure facilities, or attached components, leading to crowding and disorder in the nodal space.
- Replacing base colors with large areas of continuous accent colors, thereby weakening the overall color order of the district.

Prohibited:

- The use of fluorescent colors or highly saturated vivid colors to shape nodal facades or display centers.
- The use of highly reflective materials such as mirror-finish metal or mirror glass on nodal buildings or display facilities.
- The use of large and abrupt components to block historic facades, or the deliberate strengthening of visual elements that conflict with the historic environment.
- Disorderly attachment of equipment, pipelines, advertisements, and laundry facilities along nodal interfaces.
- Excessively scenic or commercial treatment of nodal spaces that damages the original scale and atmosphere of the historic district.

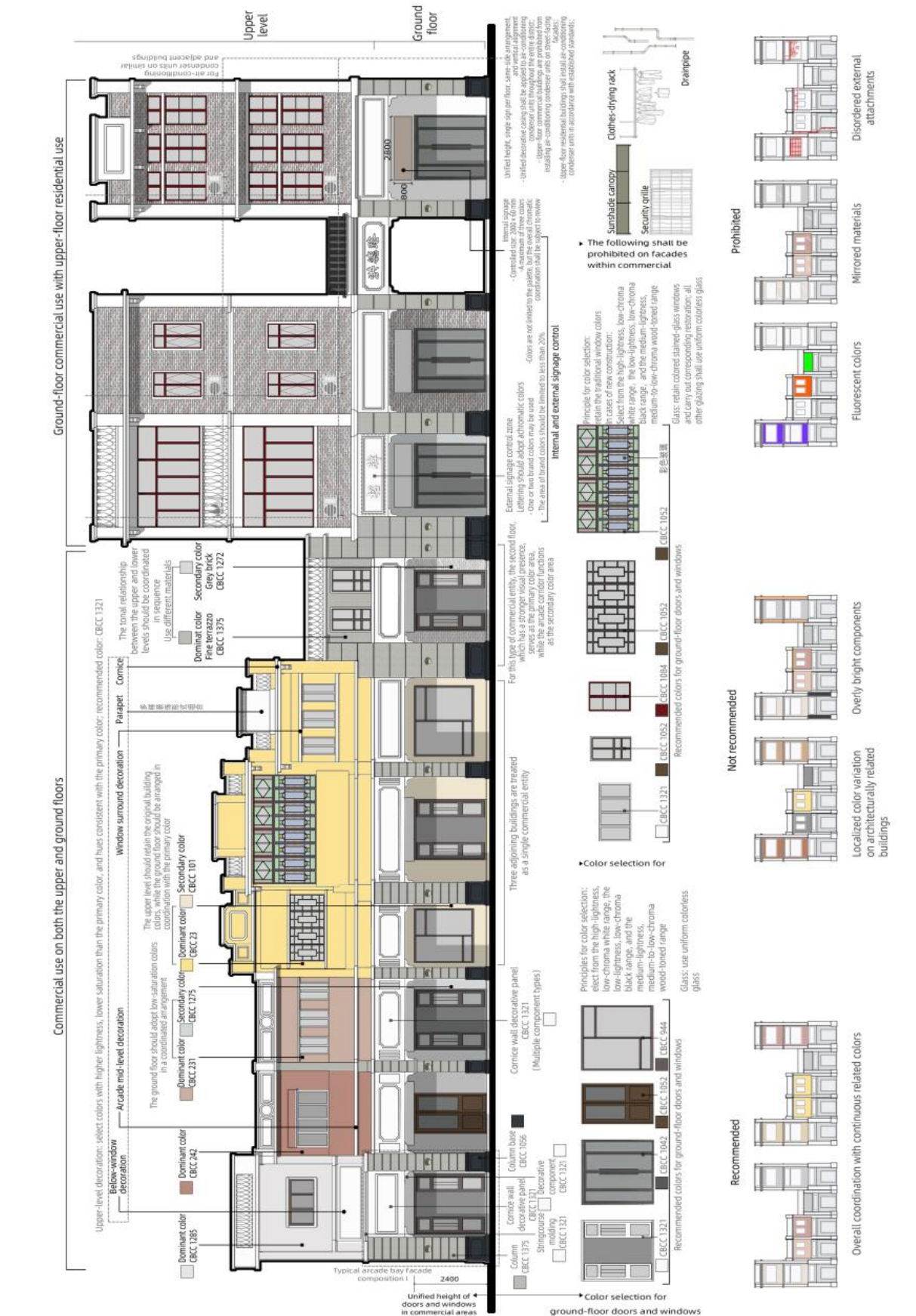




Figure 5-9 Continuous Interface Of The Multifunctional Side Lane

(Source: drawn by the author)



Figure 5-10 Continuous Interface Of The Nodal Street Segment

(Source: drawn by the author)

5.4 Architectural Interface Color Categorization Guidelines

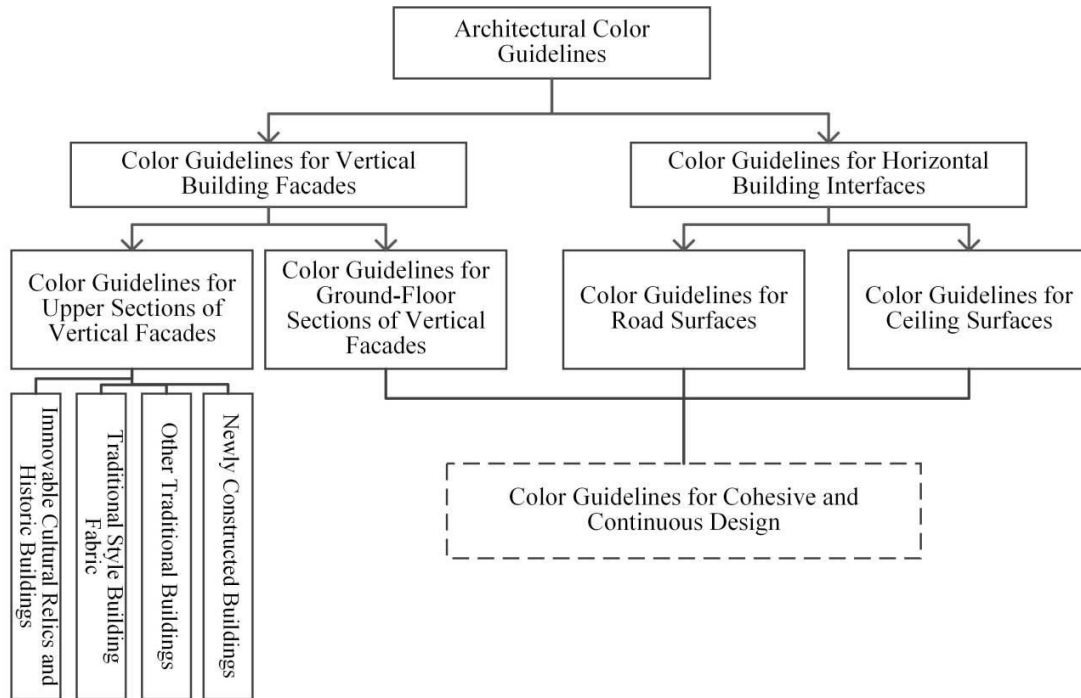


Figure 5-11 Building Color Guideline Categories

(Source: drawn by the author)

5.4.1 Upper Structure Color Categorization Guidelines

This section adopts the building classification system defined in the official conservation and utilization plan as the basis for color control in building renewal. Compared with approaches that classify buildings solely by style, function, or scale, this framework places greater emphasis on how different categories of protected buildings should address their relationship with existing colors during the renewal process. In other words, it focuses on how original colors should be treated in relation to varying heritage values and preservation conditions.

Based on this approach, color control strategies for different building types can be summarized into four orientations: for immovable cultural heritage and historic buildings, original colors should be preserved and restored to the greatest extent possible; for buildings identified as traditional character elements, color interventions should extend and coordinate with existing overall color characteristics; for other traditional buildings, moderate adjustments should be made under the premise of overall environmental continuity; and for new buildings, low-saturation, low-interference color strategies should be adopted to ensure harmonious integration into the historic context.

By establishing color renewal guidelines aligned with the official conservation classification system, building renewal can shift from superficial repainting toward a more comprehensive response to historical information, environmental relationships, and the continuity of urban character.

- (1) Immovable Cultural Heritage and Historic Buildings: Original color preservation and restoration under an authenticity-oriented approach
- (2) Traditional Character Buildings: Coordinated color updating based on the continuation of original overall color characteristics
- (3) Other Traditional Buildings: Overall color adjustment guided by environmental coordination
- (4) New Buildings: Low-intervention color strategies oriented toward integration with the historic environment

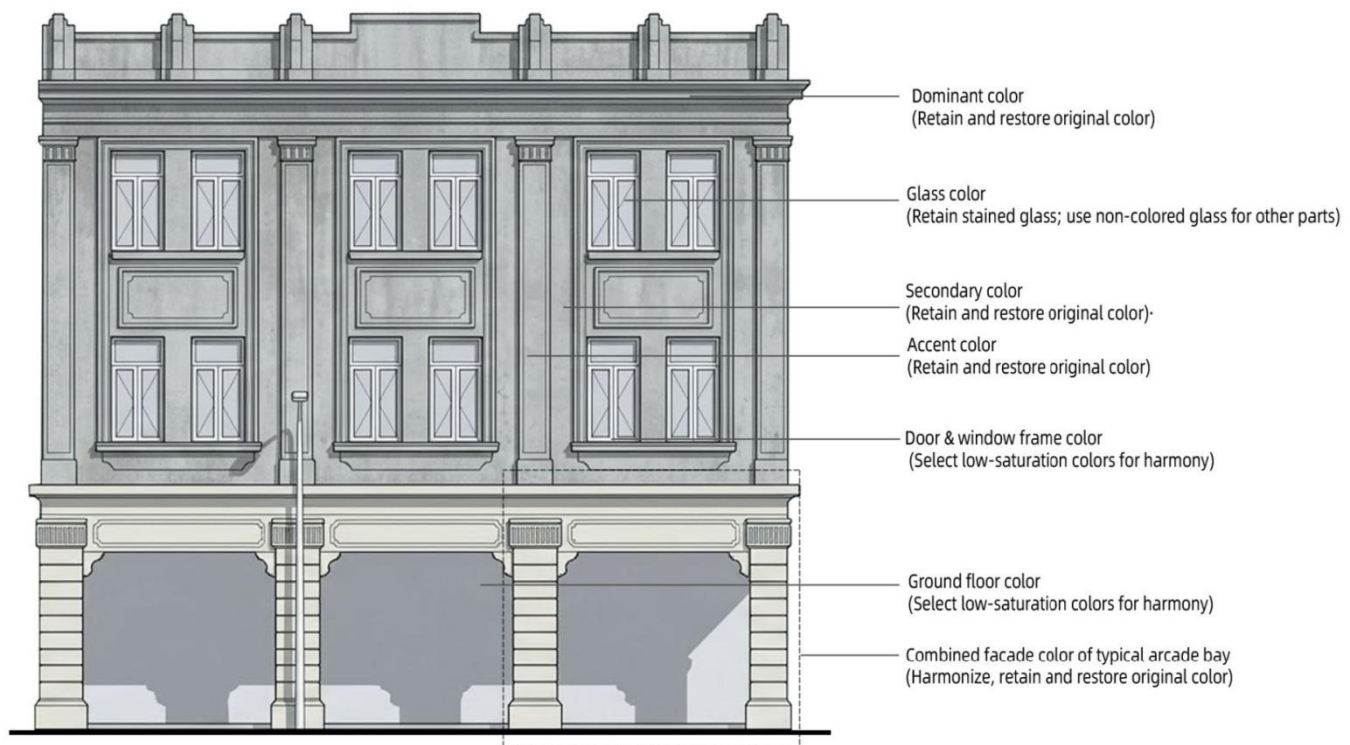


Figure 5-12 Color Guidelines For The Classification Of Immovable Cultural Relics And Historic Buildings

(Source: drawn by the author)

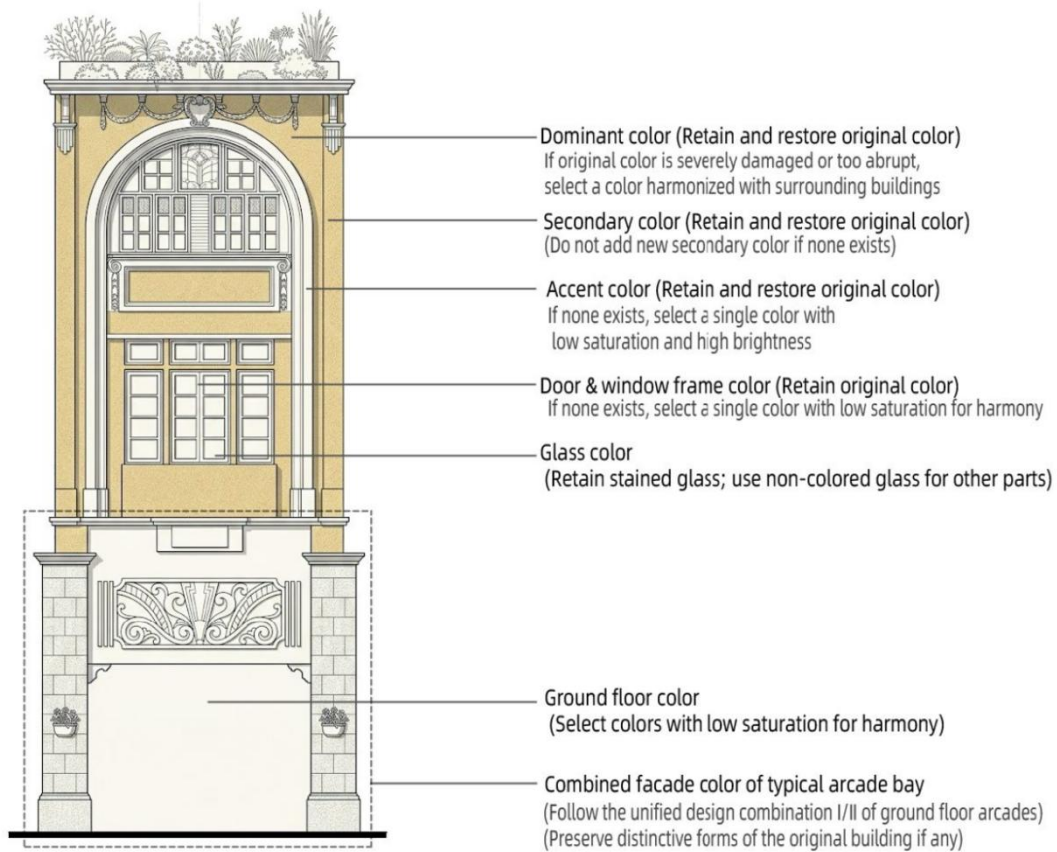


Figure 5-13 Color Guidelines For The Classification Of Clues To Traditional Character Buildings (Source: drawn by the author)

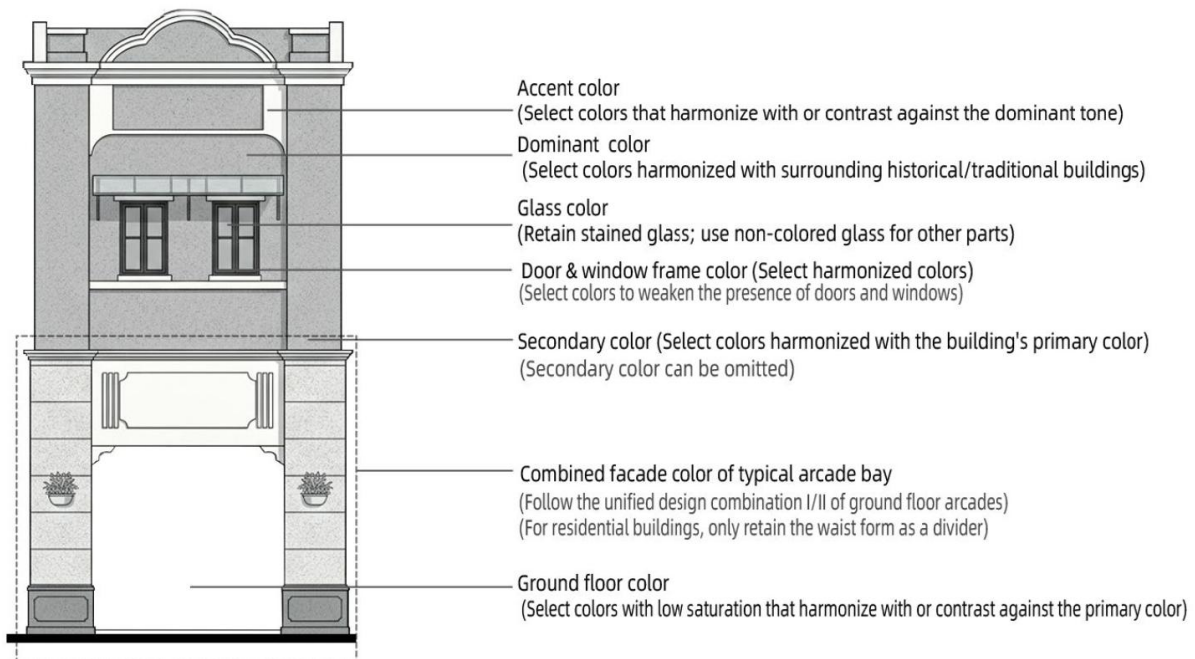


Figure 5-14 Color Guidelines For The Classification Of Other Traditional Buildings (Source: drawn by the author)

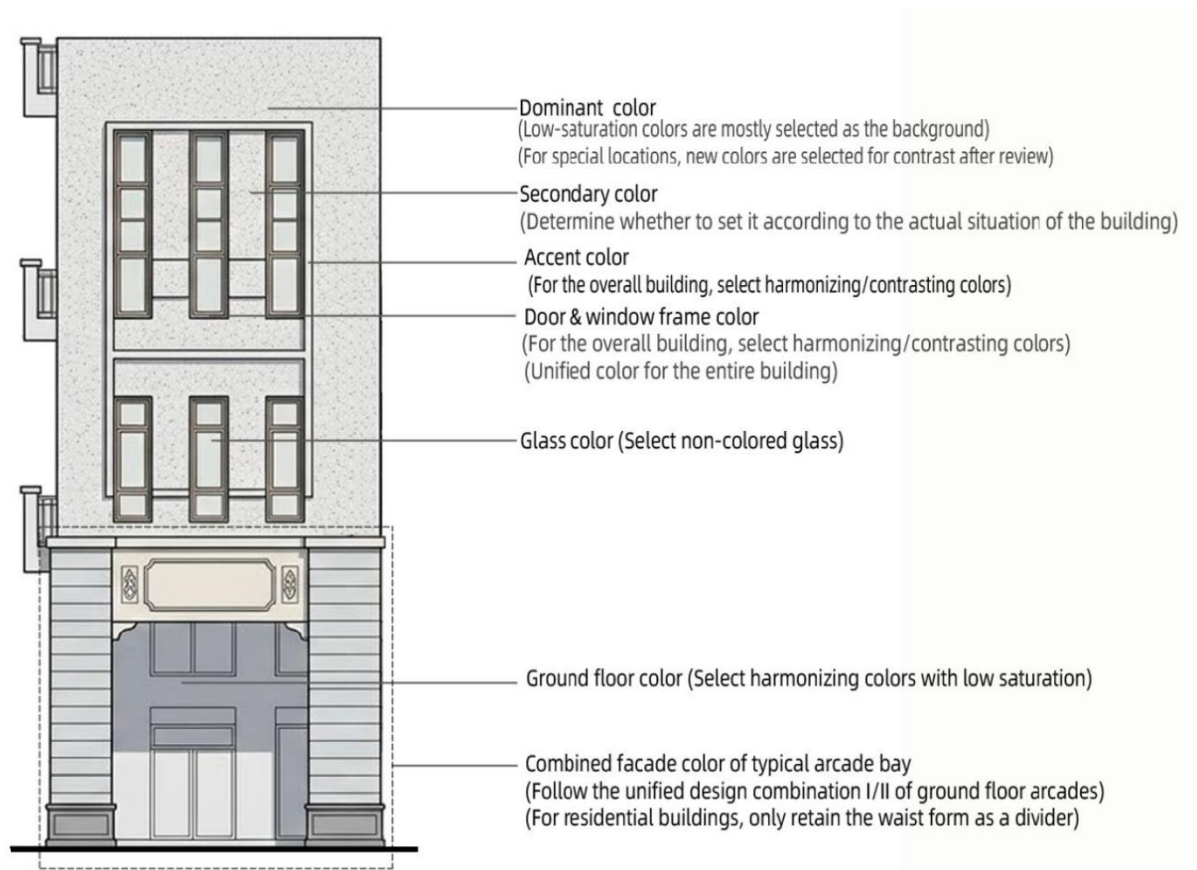


Figure 5-15 Color Guidelines For The Classification Of Newly Built Buildings

(Source: drawn by the author)

5.4.2 Ground-Level Building Color Categorization Guidelines

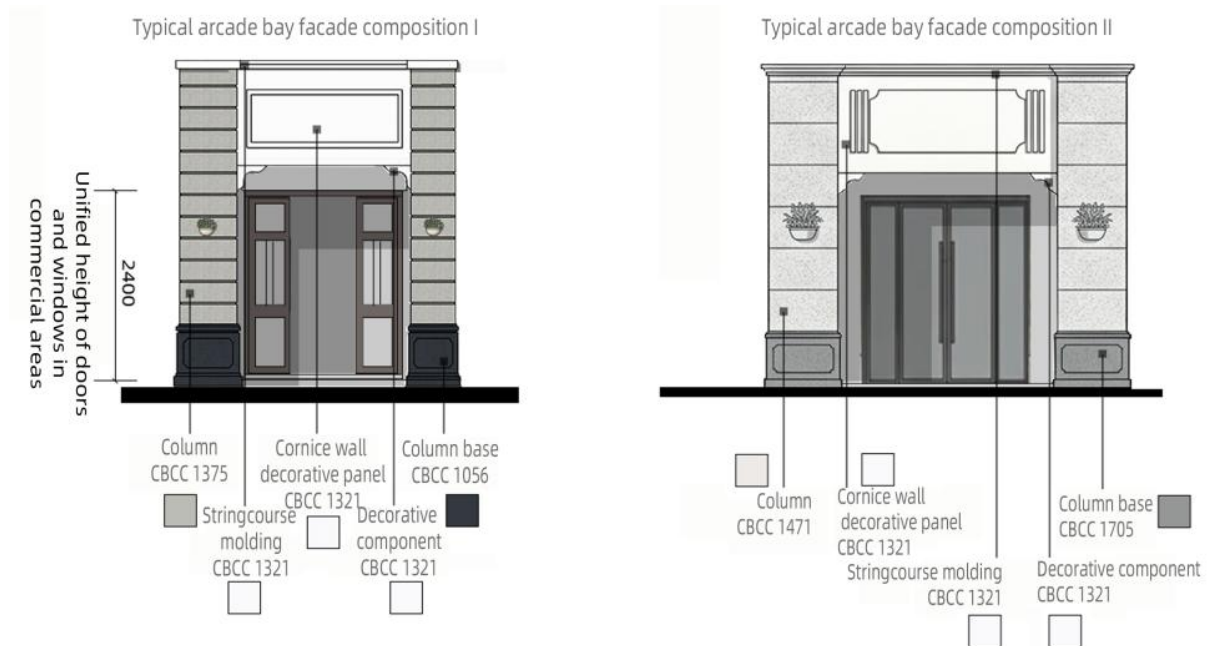


Figure 5-16 Color Guidelines For The Classification Of Ground-Floor Building Interfaces

(Source: drawn by the author)

The ground-floor façade of arcade buildings constitutes the interface layer that most directly engages with street perception and everyday use in historic districts. Its color control not only affects the integrity of individual building frontages, but also directly influences the overall order of the continuous arcade street interface. Compared with upper façades, the ground level is closer to the pedestrian eye level and is subject to multiple overlapping factors, including commercial activities, residential access, attached facilities, and high-frequency use. As a result, it is more prone to issues such as color disorder, component imbalance, and interface fragmentation.

Therefore, color guidelines for the ground-floor façades of arcade buildings should build upon the traditional proportional relationships and interface rhythm of the arcade base. Guided by an overall color strategy characterized by low saturation and medium-to-high lightness, the approach should coordinate the color relationships of columns, wall surfaces, decorative panels, column bases, and doors and windows. In doing so, it aims to establish a ground-level interface system that is “overall coordinated, locally differentiated, and continuously legible”.

(1) Overall Color Control Principles

The ground-floor façades of arcade buildings should primarily adopt low-saturation overall color tones such as warm gray, beige gray, light yellow, and light brown, avoiding high-purity and high-contrast colors that may disrupt the continuity of the interface.

Dominant colors should be applied to columns, wall surfaces, and other large areas of the ground-level façade. Secondary colors may be used for decorative panels beneath the eaves, moldings, and localized framing elements, while accent colors should be strictly limited in extent and reserved for detailing and interface identification.

Overall, façade hierarchy should be articulated through variations in lightness within the same color family, rather than through strong hue contrasts to achieve visual impact.

(2) Component-Based Color Control

Columns, as the primary vertical elements at the ground level of arcade buildings, should adopt overall color tones such as light gray, off-white, or light warm gray to reinforce street continuity. Wall surfaces and stringcourse zones may introduce moderate variation within a similar color range to enhance layering without compromising overall unity.

Decorative panels beneath the eaves should employ light or neutral tones coordinated with the columns, avoiding excessive visual emphasis. Column bases, plinths, and areas prone to staining should be treated with relatively darker colors to improve durability and visually anchor the ground level.

Doors, windows, and their associated frames should use darker tones—such as dark gray, gray-brown, or natural wood hues—to provide a subtle framing effect, enhancing the integrity and coherence of the ground-floor interface.

(3) Ground-Floor Color Composition Types

Under a consistent overall control framework, the ground-floor façades of arcade buildings may adopt several interchangeable overall color combinations to accommodate different building types and street segment characteristics. Two typical schemes can be summarized as follows:

The first is the “neutral gray – light gray-white – dark gray” combination. In this scheme, neutral gray is applied to the columns as the dominant color, while light gray-white is used for decorative panels beneath the eaves, stringcourses, and ornamental elements. Column bases are treated in dark gray to provide visual grounding. This results in a restrained and stable ground-level interface, suitable for arcade bays with strong commercial functions that require a continuous background character.

The second is the “light warm gray – light gray-white – medium-dark gray” combination. Here, light warm gray is used for the columns, with light gray-white maintained for decorative panels and ornamental elements, while column bases are finished in medium-dark gray. The overall effect is softer and more concise, making it suitable for street segments with stronger residential characteristics or relatively calm interface conditions.

Both combinations embody the fundamental principle of “lighter upper portions and visually grounded bases, with clear primary – secondary hierarchy”. They ensure overall unity of the ground-floor interface while allowing for a degree of contextual variation.

(4) Coordination Between Ground-Floor Bay Typology and Color

Color control at the ground level should be considered in conjunction with the configuration of façade openings. The two typical bay compositions illustrated correspond to different interface treatments.

The first type is based on a symmetrical door – window composition, with a clearly defined central entrance and vertical window panels or ventilation elements on both sides. This configuration is suitable for ground-floor interfaces combining commercial use with residential functions above.

The second type is characterized by a centrally emphasized opening, resulting in a more open and simplified façade. This arrangement is appropriate for ground floors with strong commercial display or public service functions.

Regardless of the typology adopted, it is essential to maintain clear column grid relationships, complete bay rhythm, and coordinated proportions of doors and windows. At the same time, the coordinated use of overall colors among columns, decorative panels, and column bases should ensure a continuous and stable ground-floor interface along the arcade street.

(5) Coordination of Detail-Level Environmental Elements

Based on overall color control at the ground level, supplementary environmental elements—such as wall-mounted lamps, planter boxes, storefront details, and moldings—may be appropriately introduced. However, both their form and color should remain subordinate to the overall interface order. Elements such as wall lamps and planter boxes should adopt low-saturation, neutral, or warm gray tones, maintaining consistency with primary architectural components and avoiding visually intrusive colors.

By regulating the scale, quantity, and color relationships of these attached elements, the overall coherence and refinement of the arcade space can be further enhanced.

Overall, the color guidelines for the ground-floor façades of arcade buildings do not prescribe a single fixed template. Instead, they establish a set of interchangeable color and typological combinations under a unified overall color tone and component-based control principles. The core objective is to maintain continuity, legibility, and historic character at the ground-floor interface through coordinated color relationships among columns, decorative panels, column bases, doors and windows, and attached elements, thereby providing a stable foundation for the overall character of the district.

5.4.3 Road Surface Color Guidelines

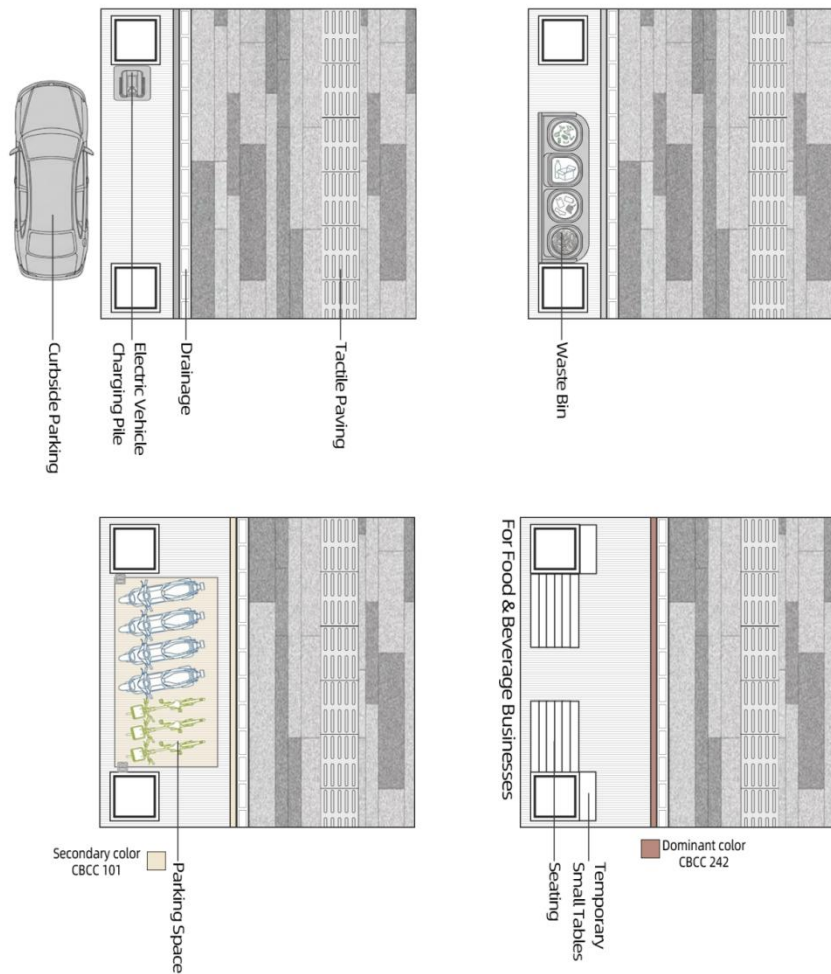


Figure 5-17 Road Surface Color Guidelines

(Source: drawn by the author)

For road interface color control, a gray-based palette should be adopted to establish a coordinated and low-interference background environment. Vehicular lanes and pedestrian pavements should be differentiated through gray materials with varying levels of lightness and texture. This approach reinforces spatial hierarchy and functional legibility through tonal variation, while maintaining overall color unity and continuity. For functional elements such as drainage strips and tactile paving, moderate contrast may be introduced within the gray spectrum to enhance visibility and safety.

On this basis, a limited use of secondary colors may be introduced as accents. These should be applied selectively to elements such as parking markings, non-motorized vehicle parking zones, bases of street furniture, and localized nodes. The selected colors should be low-saturation tones that harmonize with the surrounding environment (e.g., warm gray, light brown), with strict control over their extent and proportion to avoid large-scale application.

Through a strategy of “gray base with localized accents”, the street interface can

maintain an overall restrained and unified appearance while enhancing spatial guidance and detail recognition.

5.4.4 Ceiling Surface Color Guidelines

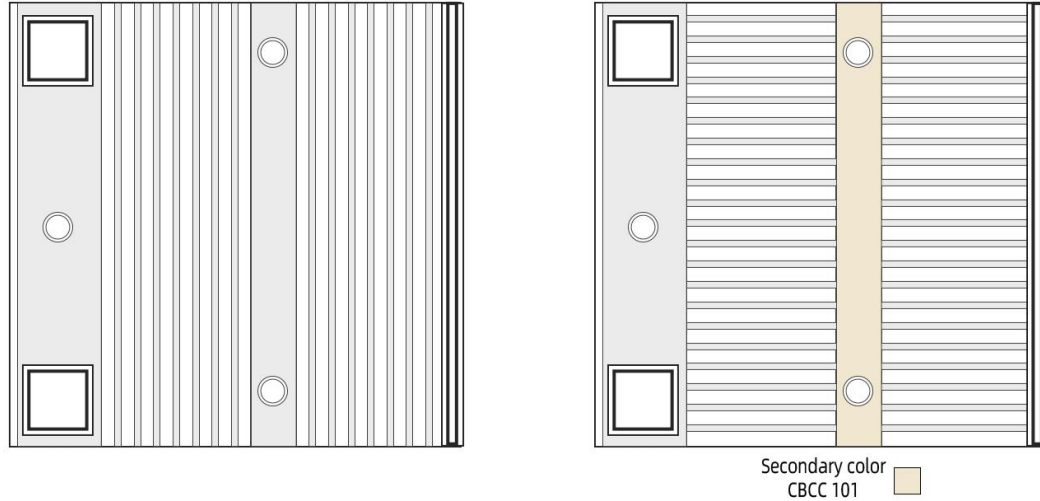


Figure 5-18 Ceiling Surface Color Guidelines

(Source: Drawn by the author)

For the ceiling interface of arcade spaces, color control should be dominated by low-lightness, neutral gray tones, establishing a continuous and restrained overhead background. The overall palette should remain within the gray spectrum, with subtle variations in lightness used to differentiate structural elements such as beams and slabs, thereby reinforcing spatial order and continuity while avoiding visual disturbance from high-contrast colors.

In terms of lighting design, an integrated approach should be adopted, coordinating both the inter-column spaces and the ceiling interface. Between columns, continuous linear lighting or point-based supplementary lighting should be installed to enhance pedestrian guidance and spatial rhythm. For the ceiling, recessed or surface-mounted lighting integrated with the structural system should be applied to create a uniform and continuous base illumination environment. The overall light color should be warm white or neutral white, harmonizing with the gray background, while avoiding mixed color temperatures and localized glare, thus improving nighttime legibility and comfort.

For attached elements such as pipelines and equipment, these should be incorporated into a unified gray control system and integrated with the lighting layout to reduce visual interference. Localized nodes may introduce low-saturation accent lighting or focused illumination, but the extent should be carefully controlled to maintain overall continuity.

Through the strategy of “unified color base + coordinated lighting between columns and ceiling + integration of attached elements”, a continuous, safe, and legible overhead interface can be established for the arcade gray space.

5.5 Intervention Guidelines

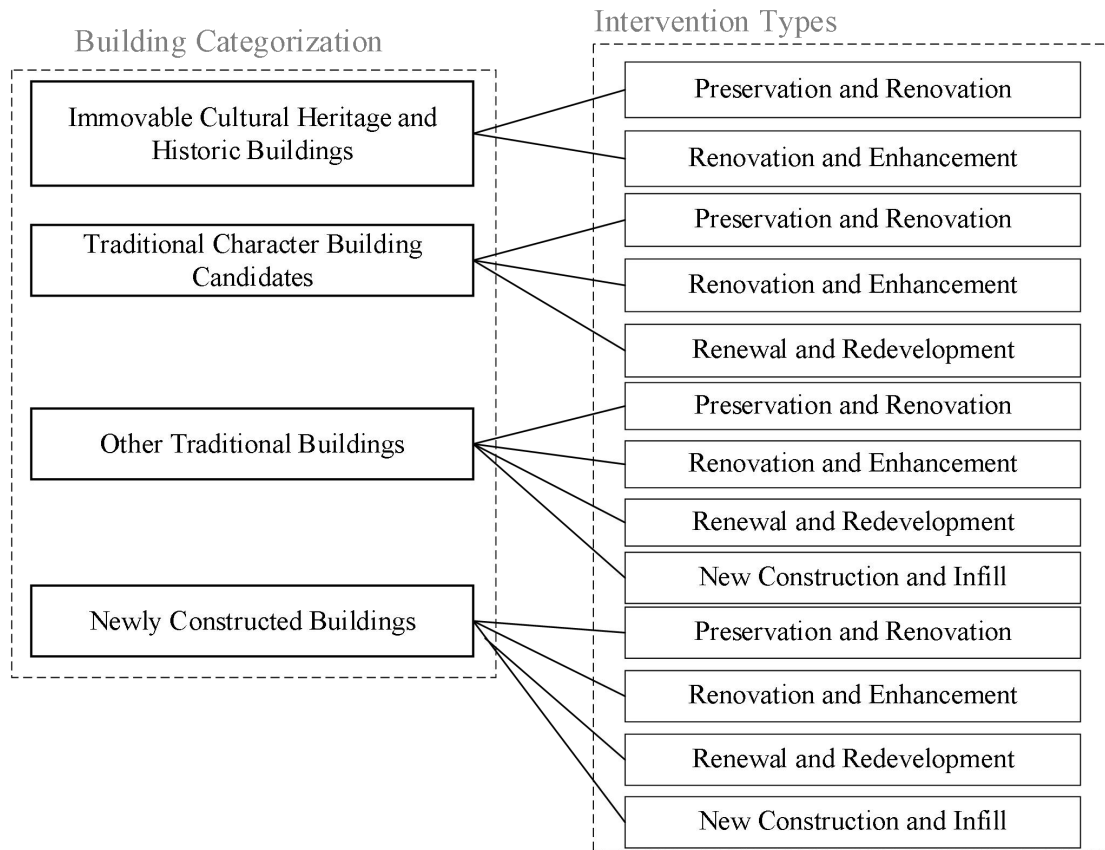


Figure 5-19 Building Categories in the District and Their Corresponding Intervention Types
(Source: Drawn by the author)

On the basis of the previous color guidelines derived from building protection categories, and in combination with the historical value, current condition, integrity of character, and degree of renewability of different buildings, this study further summarizes the intervention methods for building renewal in the study area into four types: retention and repair, improvement and upgrading, renewal and transformation, and new insertion. These four intervention types are not simply classified according to building form; rather, they constitute a graded control path for the implementation of renewal in historic districts, based on the relationship between buildings and their original colors, the degree of continuity of facade character, and the depth of interface improvement. Among them, the retention and repair type emphasizes the maximum preservation of original colors and historical information; the improvement and upgrading type focuses on the removal and integration of disorderly attachments and disordered interfaces; the renewal and transformation type emphasizes

optimized reorganization on the basis of retaining traditional clues; and the new insertion type stresses low-intervention and low-contrast integration into the historic environment. By establishing these four intervention types, the building classification-based color guidelines discussed earlier can be further transformed into implementable and operable renewal strategies, allowing color control to extend from static palette selection into the dynamic renewal process.

- a. Retention And Repair: mainly involving the cleaning of surface stains, the repair of local damage, and the continuation of original colors, without changing the overall color relationship of the building.
- b. Improvement And Upgrading: mainly involving the integration of attached layers, the reorganization of ground-floor interfaces, and the adjustment of overall colors, so as to improve the overall order of the street.
- c. Renewal And Transformation: optimizing and reorganizing the relationship between facade colors and components on the premise of retaining the basic clues of historic character.
- d. New Insertion: integrating into the overall environment of the historic district through low-saturation, low-contrast, and background-oriented treatment.

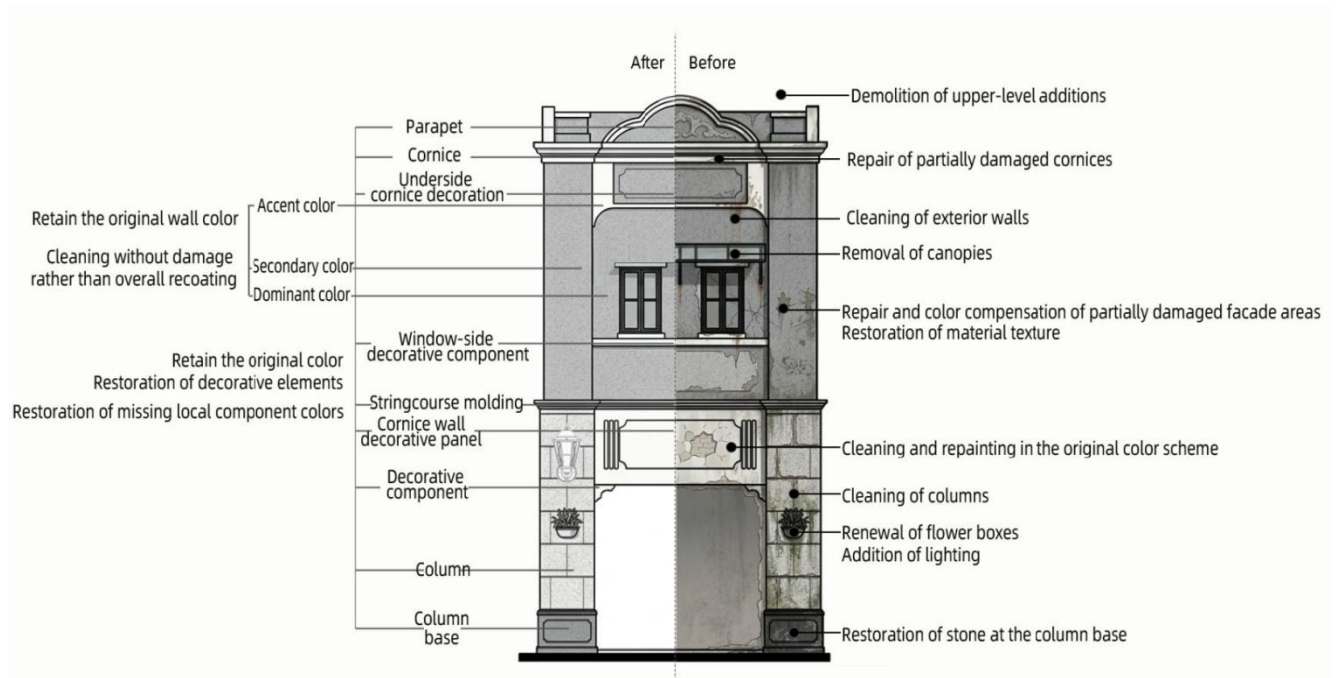


Figure 5-20 Intervention Type Of Retention And Repair

(Source: drawn by the author)

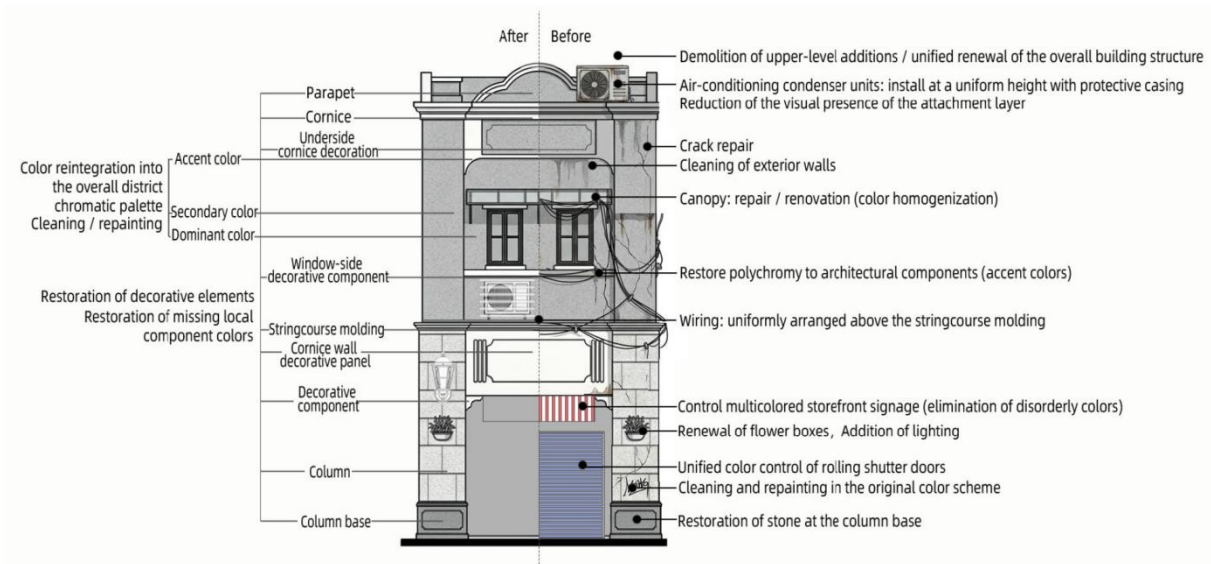


Figure 5-21 Intervention Type Of Improvement And Upgrading

(Source: drawn by the author)

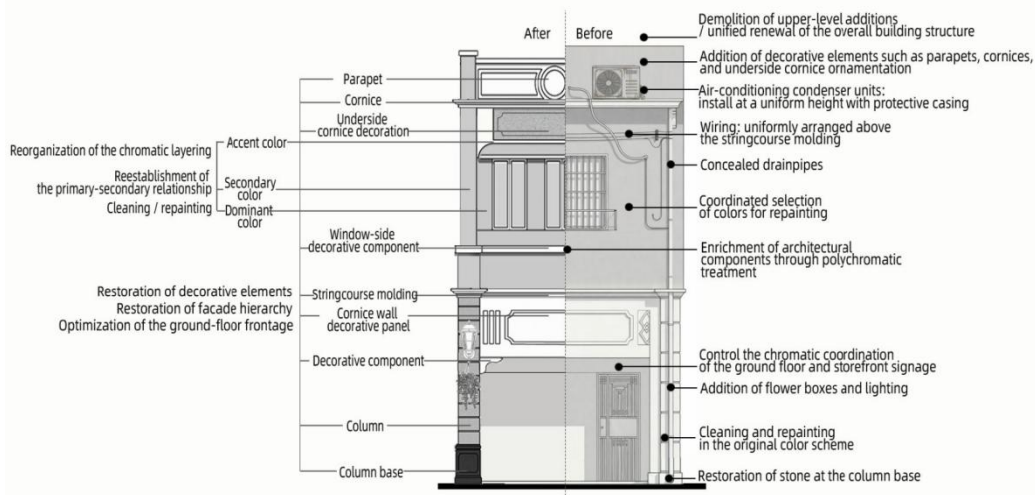


Figure 5-22 Intervention Type Of Renewal And Transformation

(Source: drawn by the author)

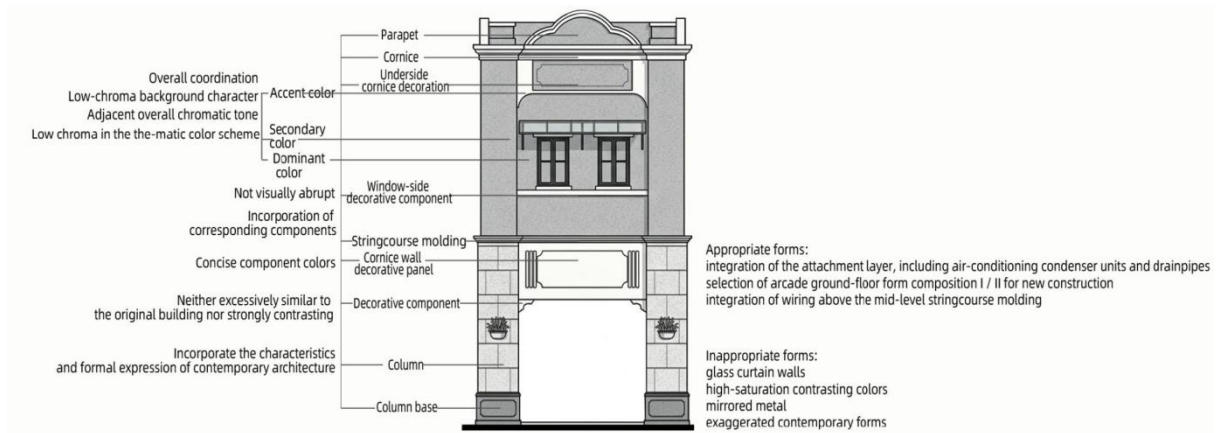


Figure 5-23 Intervention Type Of New Insertion

(Source: drawn by the author)

5.6 Façade Component Guidelines

On the basis of the previous zoned color guidelines, continuous interface guidelines, building classification color guidelines, and intervention guidelines, this study further proposes guidelines for individual facade elements. The purpose is to translate the relatively macro-level control requirements discussed earlier into the specific constituent elements of arcade building facades, thereby forming a technical link from overall character control to single-building implementation. The previous sections mainly addressed overall control under different zones, interfaces, building types, and intervention intensities, whereas this section further responds to the practical question of what exactly should be controlled on building facades, and how this control should be carried out in actual renewal.

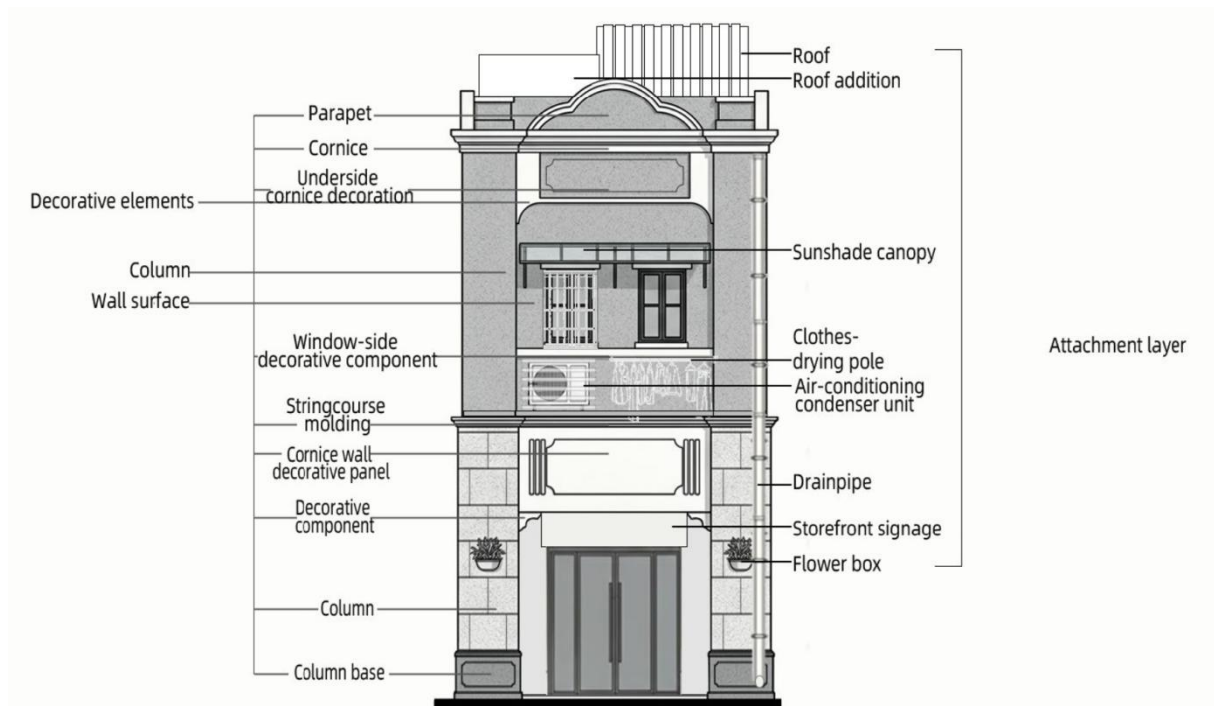


Figure 5-24 Control Items For Arcade Facades

(Source: drawn by the author)

In combination with the compositional characteristics of arcade building facades, this study divides the control objects into two categories: architectural body elements and attached-layer elements. Architectural body elements mainly include roofs, parapets, cornices and under-eave decorations, wall surfaces, columns and column bases, door and window frames, decorative window-side elements, stringcourses and mouldings, decorative eave-wall panels, decorative components, and glass. The main focus here is the control of facade composition, hierarchical order, material texture, and overall color coordination. Attached-layer elements mainly include canopies, clothes-drying rods and drying facilities,

outdoor air-conditioning units, drainage pipes, shop signs, flower boxes, and other small attached facilities. The main focus here is the impact of later-added facilities on the integrity and tidiness of historic facades. Through this itemized control, the requirements formed earlier at the levels of zoning, classification, and intervention can be further transformed into specific renewal criteria that are recognizable, implementable, and reviewable.

5.6.1 Building Body Component Control

(1) Roofs: Roof control should focus on maintaining the relationship between the building's upper outline and the overall skyline. Original roof forms—such as pitched roofs, flat roofs, and traditional roof-edge treatments—should be retained as far as possible, and roof forms should not be altered arbitrarily. In terms of color, low-saturation overall tones with limited lightness contrast should be used so that the roof remains coordinated with the main building body. Added roof facilities and existing rooftop extensions should be visually weakened through same-color treatment or subdued handling, so as to avoid highly contrasting color patches at the top.

(2) Parapets: Parapets should be controlled with regard to roof-edge form, proportional relationships, and the characteristics of the continuous interface. Well-preserved parapets should give priority to retaining their original outline, decorative mouldings, and detail patterns, while local damage may be repaired according to the original form. In terms of color, the overall color tone of the main building should be continued, or low-saturation colors close to the main tone should be adopted. Highly saturated or high-lightness colors should not be used to emphasize the roof edge, so as not to disturb the upper-order continuity of the street interface.

(3) Cornices And Under-Eave Decorations: Cornices and under-eave decorations are important parts of hierarchical transition on arcade facades, and control should focus on component hierarchy, decorative rhythm, and the relationship between dominant and secondary colors. Original cornice lines, gray plaster decorations, and edge-closing elements should be retained and repaired wherever possible. Colors should adopt analogous hues or low-saturation contrasting colors coordinated with the main body, so as to strengthen layering without producing abrupt visual jumps. Overly bright, overly vivid, or overly contrasting treatments are not appropriate.

(4) Wall Surfaces: Wall surfaces are the core elements through which the dominant facade color is expressed, and control should focus on the overall tone, material texture, and methods of repair and renewal. Wall colors should follow the district-wide overall color

palette and the building classification guidelines, with priority given to retaining the existing appropriate colors. When renewed, low-saturation and coordinated overall tones should be used. Damaged, stained, or later-incompatible painted areas should be treated in a unified manner. Large-area use of highly saturated colors to cover historic wall surfaces should be avoided, so as to prevent wall renewal from departing from the overall character tone of the district.

(5) Columns And Column Bases: Columns and column bases are important components of the first-floor arcade interface, and control should focus on continuity, stability, and the overall color relationship of details. Columns should adopt overall tones coordinated with the building body, while the column bases may use slightly darker colors or material changes to strengthen the sense of the base. Original decorative columns, moulded columns, or column-base forms with local characteristics should be retained and repaired. Highly saturated contrasting colors or materials and colors with an overly modern character should not be used as replacements.

(6) Door And Window Frames: Control of door and window frames should focus on the unity, coordination, and historical authenticity of detail colors. For immovable cultural relics and historic buildings, original door and window frame colors and traditional forms should be retained wherever possible. For other buildings, low-saturation and coordinated overall tones should be selected from the overall color palette, avoiding excessively bright or vivid frame colors that weaken the main building body. In principle, the door and window frame colors of the same building should be unified. If differentiation between the ground floor and upper floors is necessary, it should still obey the overall facade relationship and should not result in disorderly mixing.

(7) Decorative Elements Around Windows: Window surrounds, mouldings, floral ornaments, and other decorative elements around windows should be controlled with regard to their overall color relationship with doors, windows, and wall surfaces. Their colors should coordinate with the dominant color or create only slight layered variation, so as to strengthen the recognizability of facade details without using highly saturated jump colors. For flower windows, gray plaster, or decorative window surrounds with historical characteristics, priority should be given to retaining their original form and texture so as to continue the historical information expressed in the details of arcade buildings.

(8) Stringcourses And Mouldings: Stringcourses and mouldings should mainly be controlled to maintain the horizontal layering relationship and proportional order of the facade. The original height, thickness, and rhythmic relationship of the stringcourses and mouldings

in traditional arcade buildings should be retained as far as possible. In terms of color, analogous hues coordinated with the main body, or low-saturation colors with slight variation, should be used to strengthen layering without creating excessive contrast. Stringcourses should not be arbitrarily added or exaggerated merely for decorative effect.

(9) Decorative Eave-Wall Panels: Decorative eave-wall panels are important parts of the first-floor commercial interface of arcade buildings, carrying both decorative and signboard-related information. Control should focus on continuity of form, integrity of decoration, and coordination with the sign system. Original decorative content such as carved patterns, gray plaster, and ornamental motifs should be primarily preserved and repaired. Their colors should obey the overall facade tone and use low-saturation, coordinated overall colors. Excessively bright or vivid colors should not be used on this part merely to satisfy commercial display needs, as this would disrupt the hierarchy of the historic interface.

(10) Decorative Components: Decorative components include gray plaster, mouldings, floral ornaments, and other attached decorative content. Their control should focus on preserving historical information and strengthening the layering of details. Well-preserved decorative components should be repaired as a priority and should not be easily removed or replaced with modern components. Color treatment should emphasize low saturation and overall coordination, and details should be highlighted through slight differences from the dominant color, rather than being turned into overly prominent visual centers.

(11) Glass: For glass elements, control should focus on material texture, transparency, and compatibility with historic character. Traditional flower windows, colored glass, or window-grid forms with local characteristics should be retained as far as possible. For other parts, non-colored or weakly reflective glass should be used to maintain the simple and restrained texture of the facade. Newly replaced glass should not use mirror-finish, strongly reflective, or heavily colored materials, so as to avoid conflict with the environment of the historic district.

5.6.2 Attached Layer Component Control

(1) Canopies: Canopies are among the attached-layer elements most likely to affect the tidiness of the facade, and control should focus on installation method, scale, and color coordination. Canopies should adopt unified forms and heights, and should use low-saturation colors coordinated with the building body. High-saturation colors, exaggerated forms, or large-area advertising treatment should be avoided. Existing canopies that do not meet character requirements should be improved, replaced, or removed.

(2) Clothes-Drying Rods And Drying Facilities: Control of clothes-drying rods and drying facilities should focus on their degree of exposure and their disturbance to street-facing facades. These facilities should, as far as possible, avoid prominent visual surfaces along main streets, and should adopt concealed or centralized treatment. In terms of color, they should match the overall color of the wall or railing in order to reduce visibility. Disorderly outward projection or hanging along continuous street-facing interfaces should be avoided, as this creates obvious jump colors and visual disorder.

(3) Outdoor Air-Conditioning Units: Control of outdoor air-conditioning units should focus on installation position, height, and the integration of protective covers. In principle, disorderly exposure on the main street-facing facade should be avoided, and units may be integrated through centralized arrangement, recessed installation, or unified covers. The cover colors should adopt overall tones coordinated with the wall surface, so as to avoid obvious contrast between equipment and building body. Existing units that are arranged in a disorderly way should be reorganized in a unified manner in combination with improvement measures.

(4) Drainage Pipes: Control of drainage pipes should focus on reducing their cutting and interference effects on facade integrity. Pipes should be arranged along wall corners, column sides, or inconspicuous positions, and should be visually weakened through colors similar to the wall surface. Horizontal crossings, chaotic exposure, or visually prominent colors are not appropriate. For historic buildings and key display interfaces, concealed treatment should be used wherever possible to reduce the damage of pipelines to facade character.

(5) Shop Signs: Control of shop signs should focus on standardizing position, scale, material, and color purity. External signs should be installed in relation to decorative eave-wall panels, while internal signs should be controlled within appropriate positions inside the arcade colonnade, avoiding cross-floor signs, full-coverage signs, or signs that block historic components. Shop sign colors may appropriately express commercial identity, but overall they should obey the order of the overall colors of the building body and street interface. Color purity and sign area should be controlled, and highly saturated, large-area, or strongly illuminated treatments should be avoided.

(6) Flower Boxes And Small Attached Facilities: Flower boxes, lighting, wayfinding devices, and other small attached facilities should be controlled in terms of quantity, style, and overall coordination. These elements may be used to improve nodal spaces and ground-floor interface quality, but the principles should be small scale, low interference, and coordination. Colors should use low-saturation overall tones coordinated with the building body, so as to improve environmental quality without weakening the primary role of the historic facade.

Excessive accumulation or the creation of scenic decorative centers is not appropriate.

5.7 Implementation and Management Mechanisms of Color Guidelines

The renewal of historic cultural districts is typically characterized by fragmented property ownership, multi-stakeholder participation, and long-term incremental implementation. Therefore, the implementation of color guidelines should not remain at the level of static control, but should establish corresponding coordination and management mechanisms in conjunction with the actual renewal process.

During implementation, the application of the color guidelines can be advanced in phases alongside building restoration, façade improvement, business-format adjustment, and public environment enhancement, so as to avoid the implementation pressure and streetscape fragmentation caused by large-scale one-time renovation. For key street interfaces and areas with relatively intact historic character, pilot renewal projects may be prioritized to gradually establish a continuous and coordinated overall color order through node-based interventions and step-by-step advancement.

At the same time, the renewal of historic cultural districts involves multiple stakeholders, including government authorities, design teams, property owners, merchants, and residents. Accordingly, corresponding collaborative mechanisms should be established during the implementation process to strengthen scheme review, implementation coordination, and process management. Building façade restoration, advertisement renewal, and attached-element rectification may be carried out simultaneously with specific renewal projects, while phased feedback and dynamic adjustments can be adopted to optimize local implementation effects and ensure the continuity and coordination of the overall historic character.

In addition, considering the long-term and dynamic nature of historic cultural district renewal, the color guidelines should retain a certain degree of flexibility. Under the premise of overall control, moderate adjustments may be made according to different building conditions, functional requirements, and implementation constraints, thereby enhancing the practical operability and long-term applicability of the guidelines.

5.8 Chapter Summary

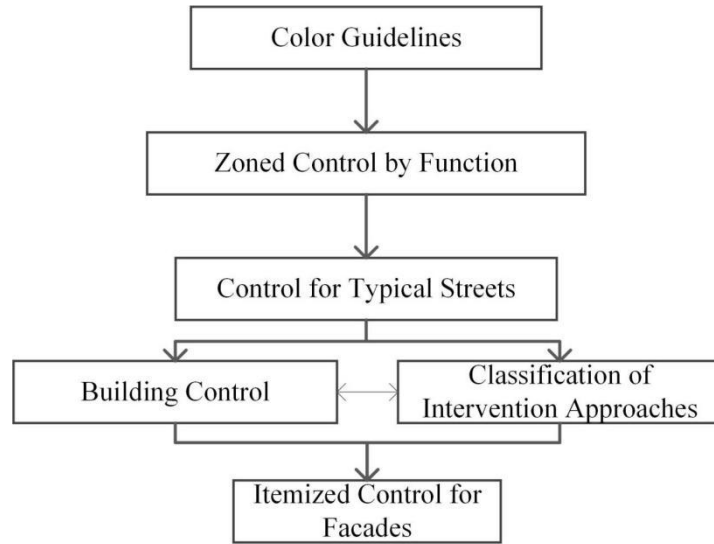


Figure 5-25 Color Control Hierarchy

(Source: drawn by the author)

This chapter, building upon the previous investigation and overall color analysis, establishes a relatively comprehensive color guideline system for the Nanhuaxi Historic and Cultural District in Guangzhou. Beginning with the formulation of an overall color palette, the content further extends to functional zoning guidance, control of continuous interfaces along typical streets, building classification-based color guidelines, intervention-oriented guidelines, and façade component guidelines. In doing so, it gradually forms a hierarchical control framework that progresses from overall to local and from macro-level strategy to implementation.

The core objective is to achieve differentiated guidance for various functional areas, street types, and building categories, while maintaining the overall character and original color features of the historic district. At the same time, color control is translated into specific regulations at the level of architectural components and attached elements, thereby providing an operable technical basis for subsequent area renewal design and implementation management.

Chapter 6 Urban Design Practice Based on Color Guidelines

6.1 Nanhuaxi Street District Overall Design

The overall design of the Nanhuaxi Street area is developed on the basis of previous site investigation, color analysis, and guideline formulation. Integrating the continuous arcade street interface, traditional street fabric, and existing functional distribution, the proposal establishes a comprehensive renewal framework structured around Nanhuaxi Road, Tongfuxi Road, and Hongde Road. Rather than pursuing large-scale demolition and reconstruction, the design adopts a gradual and categorized renewal approach under the premise of preserving the original spatial structure of the historic district. Through functional reorganization, façade and color upgrading, public space improvement, structural renovation, and green insertion, the plan constructs an overall framework characterized by “two horizontals and one vertical axis, phased implementation, and multi-point activation”.

From the perspective of spatial organization, Nanhuaxi Road is defined as the primary axis for historic character display, with emphasis on reinforcing the continuous arcade interface and enhancing the order of street frontage. Tongfuxi Road functions as a living-oriented renewal axis, supporting community connections and daily activities. Hongde Road serves as the western gateway axis, taking on roles of entrance identification, spatial transition, and node organization. Together, these three primary streets form the structural backbone of the overall design, which further extends into the inner neighborhood through a network of secondary streets and lanes, creating an integrated spatial renewal system combining main streets and internal alleys.

From the perspective of functional organization, the design builds upon the existing mixed-use structure of residential, commercial, and educational&enterprise functions, while introducing a moderate level of spatial reconfiguration. Commercial activities are primarily arranged along major streets such as Nanhuaxi Road, Tongfuxi Road, and Hongde Road, in order to reinforce the vitality of the ground-floor arcade interface. Residential functions are largely retained within internal streets and more domestic-oriented areas, preserving the everyday character of the community. Educational and enterprise functions are organized in relation to their existing distribution, forming synergies with adjacent public spaces and street nodes. As a result, the area develops a functional structure characterized by concentration along main streets, penetration into inner streets, and composite activity at key nodes.

In terms of renewal strategies, the design focuses on four main types of intervention. The first involves façade and color conservation and renewal, targeting arcade buildings and

typical street interfaces along Nanhuaxi Road, Tongfuxi Road, and Hongde Road. Through building repair, overall color control, and integration of attached elements, the continuity of historic street interfaces is restored. The second is public space optimization, which introduces small-scale activity and resting spaces at street corners, turning points, around schools, and within residual community spaces, thereby enhancing the capacity for public life. The third is structural improvement, addressing fragmented spaces and unclear interface relationships through spatial reorganization and repair, strengthening the integrity of the overall spatial system. The fourth is green insertion, improving the pedestrian environment through streetscape planting and nodal greenery, softening the rigid spatial atmosphere and enhancing overall environmental quality.



Figure 6-1 General Plan Of The Nanhuaxi Area

(Source: drawn by the author)



Figure 6-2 Layout Of Renewal Measures In The Nanhuaxi Street Area

(Source: drawn by the author)

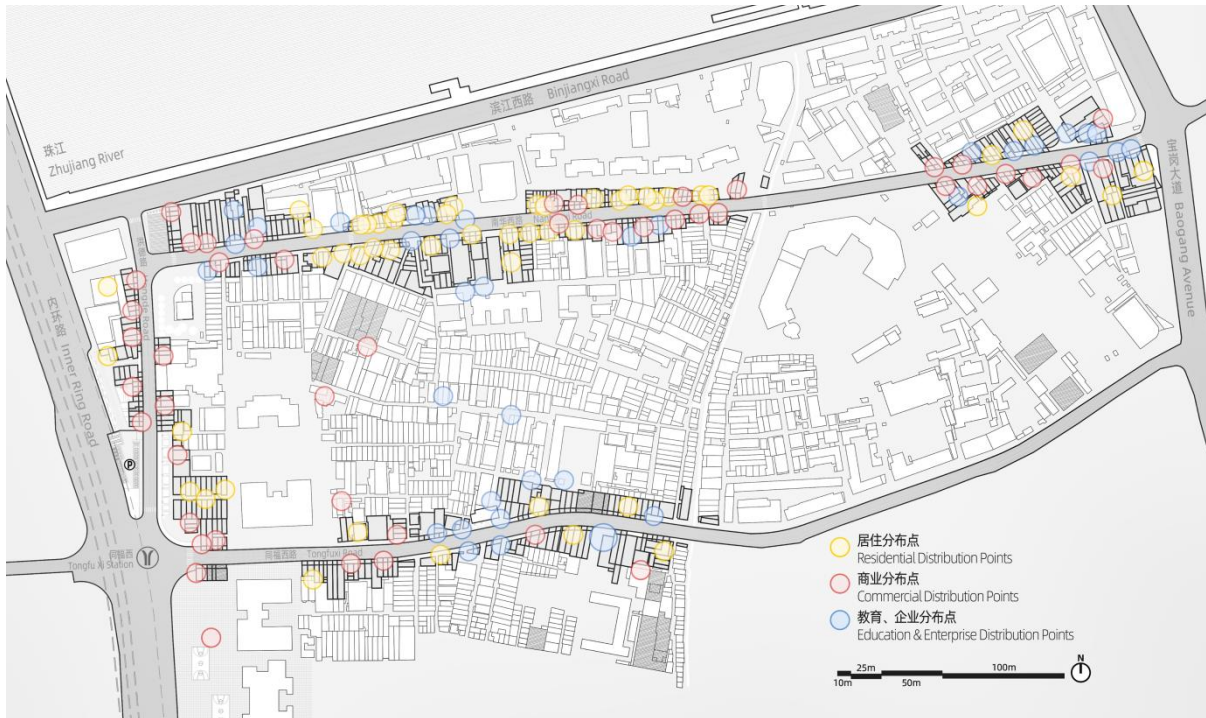


Figure 6-3 Functional Organization Diagram Of The Nanhuaxi Street Area

(Source: drawn by the author)

As can be seen from the section design, the streets along Hongde Road – Nanhuaxi Road – Tongfuxi Road adopt a one-way traffic organization model. Under the condition of limited street width, the demand for two-way motor-vehicle traffic is reduced, thereby releasing more interface space for walking, staying, and street-environment improvement. On both sides of the section, arcade buildings and their ground-floor pedestrian passages are retained, continuing the traditional continuous interface relationship of “building – corridor – street” in arcade streets. A one-way motor-vehicle lane is arranged in the middle to ensure basic traffic efficiency. Along one side of the street, organization is combined with local temporary parking demand, while bicycle and electric-vehicle parking spaces and buffer spaces are reserved on both sides, in order to reduce the disturbance of motor vehicles to the arcade pedestrian environment. Overall, the one-way traffic model not only responds to the spatial characteristics of historic districts, where road dimensions are small and interface continuity requirements are high, but also helps improve the quality of slow mobility, strengthen the everyday character and accessibility of arcade streets, and provide a more stable section basis for subsequent facade improvement, color renewal, and public-space optimization.

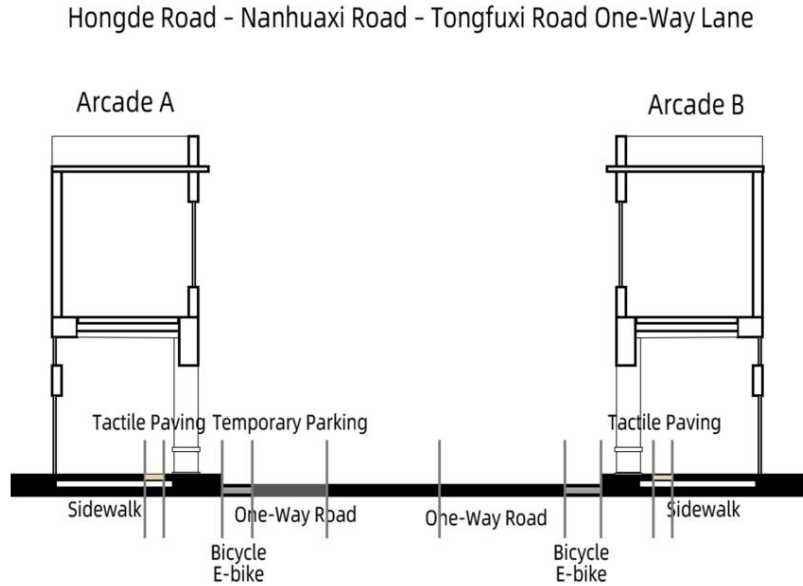


Figure 6-4 Arcade Street Section Design

(Source: drawn by the author)

The space beneath the arcade is the key ground-floor gray space addressed in this design. On the basis of retaining the characteristic of the continuous arcade corridor, the design reorganizes the ground-floor interface and the under-arcade environment as a whole, so that it can both meet everyday-use needs and maintain the continuity and tidiness of street space. Specifically, in this design, the position of entrances is reorganized in relation to ground-floor functions so that they are coordinated with the building bays and column-grid relationship. Ventilation windows are introduced in some parts to improve the ventilation conditions of the under-arcade space and the rear spaces. The ceiling under the arcade is designed in a unified way to form a continuous and complete upper interface. At the same time, lighting facilities are added to improve the nighttime walking environment and spatial recognizability. Flower boxes are also arranged at some local nodes along walls and beside columns to soften the spatial atmosphere and increase the everyday liveliness of the street. Through these treatments, the under-arcade space is transformed from a relatively fragmented ground-floor interface into a continuous, tidy, and comfortable pedestrian gray space.

The arrangement of the under-arcade space in this design includes the following:

- (1) Setting entrances coordinated with the building bays to meet ground-floor use needs;
- (2) Adding ventilation windows in some parts to improve ventilation in the under-arcade and rear spaces;
- (3) Unifying the ceiling treatment under the arcade to strengthen the continuity of the upper interface;

- (4) Supplementing lighting under the arcade to improve the nighttime pedestrian environment;
- (5) Arranging flower boxes at selected nodes to improve the quality of the spatial environment.



Figure 6-5 Rendering Of The Space Under The Arcade

(Source: drawn by the author)

6.2 Key Area Selection and Design Development

On the basis of the overall design of the district, this study further selects the western entrance area as the key design object for small-scale and refined spatial design practice. This area is located on the western edge of the Nanhuaxi Street district, adjacent to Hongde Road, Tongfuxi Road, and the metro station entrances and exits. It is one of the most direct gateway spaces connecting the district with the outside, and also an important node where the external urban traffic interface transitions into the internal space of the historic district. Compared with the ordinary streets and lanes inside the district, this area has a more complex spatial relationship and combines multiple attributes, including traffic distribution, street-corner staying, commercial interface display, and everyday community activities. It therefore has strong comprehensiveness and representativeness.

From the perspective of existing conditions, this area is located at the junction between the main urban interface and the internal fabric of the historic district, while also concentrating such problems as street-corner turning, entrance identification, mixed interfaces, and fragmented space. It therefore embodies, in a relatively concentrated way, the typical contradictions of the Nanhuaxi Street district in terms of character continuity, public-space quality, and interface order. For this reason, taking it as a key design area can not only

respond to the practical needs of shaping the western gateway image of the district and improving spatial quality, but also help to test, within a relatively small spatial range, the actual effects of the strategies proposed earlier, such as facade form and color guidance and control, attached-layer integration, public-space optimization, and greening intervention. Through the in-depth design of this area, a progressive relationship can be further established from the overall district design to node-space shaping, so that the renewal ideas at the overall level can be implemented and expressed in a more operable way in specific spaces.



Figure 6-6 Key Area Selection At The Hongde Road Street Corner

(Source: drawn by the author)



Figure 6-7 Layout Of Intervention And Renewal Measures In The Key Area

(Source: drawn by the author)

On the premise of retaining the original scale of the district and the mixed commercial-residential character along the street, the scheme reorganizes the relationship between buildings and open space along the road interface. Street-front buildings are arranged into a continuous interface of small-scale shops, and some buildings adopt the mixed mode of commercial use below and residential use above, so as to continue the everyday and commercial characteristics of the historic district. At the same time, in combination with bus stops, entrances and exits, bicycle and electric-vehicle parking areas, parking lots, and waiting areas, the traffic distribution function of the gateway area is improved, thus alleviating the previous problems of mixed pedestrian and vehicle movement and disordered staying. In terms of spatial organization, the design forms a transitional system from a linear pedestrian interface to nodal open spaces by introducing a public-service activity space, a shaded leisure belt, street-corner staying spaces, and a Nanhuaxi Historic District Cultural Pocket Park. In addition, the quality of the pedestrian environment is improved through the integration of tree arrays, green belts, and paving, thereby strengthening the entrance recognizability and public character of the area. Overall, the scheme not only improves the traffic and environmental order of the western gateway of the district, but also, through the composite organization of commerce, residence, and public activities, creates an entrance space that carries both the everyday atmosphere of the district and the character of historical and cultural display.



Figure 6-8 Plan Of The Key Design Area (Source: drawn by the author)



Figure 6-9 Axonometric Rendering Of The Key Area (Source: drawn by the author)



Figure 6-10 Axonometric Rendering Of The Key Area (Source: drawn by the author)



Figure 6-11 Rendering Of The Historic And Cultural Pocket Park In The Key Area
(Source: drawn by the author)



Figure 6-12 Rendering Of The Arcade Buildings In The Key Area

(Source: drawn by the author)

6.3 Before - After Comparison of Color Design in Key Areas

By retaining the basic outlines and typical decorative features of traditional arcade buildings, coordinating the overall color relationships among adjacent buildings, integrating attached elements that interfere with the historic character, and strengthening the continuity and rhythm of street-facing facades, the design gradually transforms the originally mixed and fragmented street frontage into a more coherent, layered, and distinctly Lingnan arcade-style street interface.

(1) Protection Of The Building Body And Continuation Of Architectural Form

During the renewal process, the design preserves the original volumetric relationships of the arcade buildings, the outlines of the parapets, the forms of the cornices, and some typical decorative details. For buildings with a certain degree of historical character and recognizability, the strategy is to retain the original form while repairing local damage, so as to avoid further damage to the original street character through excessive alteration. For representative traditional buildings, particular emphasis is placed on maintaining the original facade proportions and formal features, allowing them to continue serving as important carriers of the district's historical information.

(2) Overall Color Control And Color Coordination

Based on the overall colors of the surrounding buildings, the design reorganizes the original color relationships and establishes a color system mainly composed of gray, beige yellow, light warm gray, and low-saturation brick red. Through the hierarchical arrangement of dominant, secondary, and accent colors, individual buildings retain a certain degree of

difference while still achieving overall coordination. This avoids the visual fragmentation previously caused by excessive differences in lightness, saturation, and hue, and gives the entire street a stronger sense of unity and continuity in terms of overall color.

(3) Improvement Of Facade Components And Refinement Of Details

The design systematically reorganizes doors and windows, balustrades, decorative mouldings, cornices, and local facade details. Disorderly attached elements that previously interfered strongly with the street character are removed or visually weakened, while some window forms and details of the gray-space areas are redesigned in a coordinated manner, making the horizontal layering and vertical rhythm of the building facades clearer. Through unified control of the scale and form of components, the integrity and refinement of the facades are improved.

(4) Improvement Of The Ground-Floor Interface And Street Continuity

As the part of the arcade street most directly perceived by pedestrians, the ground-floor space is a key focus of the design. Through the unification of the overall tone of the ground-floor gray space, the coordination of opening relationships, and the optimization of the rhythm of the street-facing interface, the design strengthens the integrity of the continuous arcade corridor and improves the problems of local facade breaks, abrupt interface changes, and ground-floor disorder that previously existed along the street. As a result, the street space becomes more continuous, stable, and orderly in terms of pedestrian experience.

(5) Reinforcement Of Overall Character Expression

After renewal, the facades more strongly express the gentle, refined, and clearly layered historical character of a Lingnan arcade district. Rather than pursuing overly vivid or strongly contrasting visual effects, the design uses a low-saturation and coordinated overall color environment to highlight the architectural body and traditional character clues, strengthen the overall recognizability and historical atmosphere of the street, and promote a shift from “individual repair” to “reconstruction of continuous street character”.



Figure 6-15 Original Facade Of The Key Area — East Side

(Source: redrawn by the author)



Figure 6-16 Designed Facade Of The Key Area — East Side

(Source: drawn by the author)

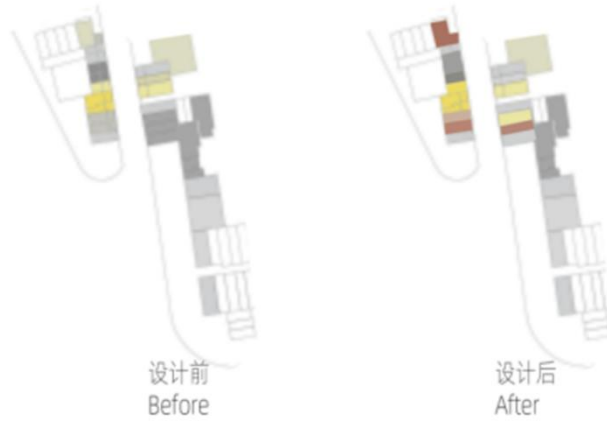


Figure 6-17 Comparison Of Color Maps In The Key Area

(Source: drawn by the author)

6.4 Other Areas Color Control

After establishing and testing the color control strategies for key areas, this study further selects two representative non-core sections within the district to carry out supplementary color control explorations (Figure 6-18). Although these areas are not part of the primary display interfaces, they play an important transitional and supportive role within the overall spatial structure of the district. Their color conditions directly influence the continuity and coherence of the overall historic character.



Figure 6-18 Locations of Additional Color Control Interventions

(Source: drawn by the author)

Compared with the refined design approach applied to key areas, these sections emphasize more fundamental and guidance-oriented color control. By maintaining the overall grey-toned base, regulating façade color relationships, and moderately optimizing local

interfaces and key elements, the strategy aims to achieve smooth visual transition and integration with the key areas. Through layered control and differentiated strategies across various segments, this approach further tests the adaptability and scalability of the color guidelines in diverse spatial contexts.

6.4.1 Other Area 1

Within a selected segment of Other Area 1, this study conducts a color optimization simulation over approximately half of the area and proposes two differentiated intervention approaches. The first is a “rehabilitation and enhancement” approach, which retains the original color base of existing buildings while improving interface quality through cleaning, repair, material renewal, and detailed adjustments, thereby maintaining the continuity and stability of the existing streetscape color pattern. The second is a “renewal and transformation” approach, which, on the basis of respecting the surrounding overall color environment, introduces a moderately updated color scheme with a controlled increase in brightness, aiming to enhance spatial legibility and street vitality.

In terms of implementation, the immovable cultural relic—Building No. 247 arcade—is subject to strict conservation measures, preserving its original colors and historic character as a reference benchmark for color control within the area. Meanwhile, considering the proximity to a school and the relatively high pedestrian activity, one three-story building is selected for focused intervention. Its original greyish tone is adjusted to a low-saturation blue palette to create a clearer visual node. The remaining buildings are treated with an overall increase in brightness, supplemented by harmonized ochre tones, thereby forming a streetscape interface that balances overall coherence with enriched hierarchy and rhythmic variation.

Existing Building Condition



Optimization Scheme 1: Retain Original Color & Repaint Renewal - Renovation and Enhancement Intervention Approach



Optimization Scheme 2: Introduce New Color & Comprehensive Renewal - Renovation and Retrofit Intervention Approach



Figure 6-19 Two Possible Scenarios for Interface Segments in Other Area 1

(Source: drawn by the author)

In the remaining half of this area, the intervention strategy is primarily rehabilitation-oriented, focusing on the systematic extraction and analysis of existing façade colors to restore the hierarchical relationships and overall tonal coherence of the yellow-grey

palette within the street interface. Specifically, under the premise of respecting original material textures and the historic color base, weathered, faded, or incompatible later coatings are selectively cleaned and repaired. Emphasis is placed on reinforcing the gradation in brightness and subtle contrasts within the yellow-grey spectrum, thereby re-establishing the overall unity and historic texture of the streetscape.

Within this segment, the immovable cultural relic — Nandatang Hall — is subject to a strict conservation approach, maintaining its existing colors and structural characteristics. Only essential conservation measures are undertaken, such as surface cleaning, localized reinforcement, and material restoration, to ensure the integrity of its historical information. Overall, this segment adopts a low-intervention, precision-repair strategy to recover color order and steadily improve spatial quality, forming a differentiated yet complementary control approach in relation to the previous segment.

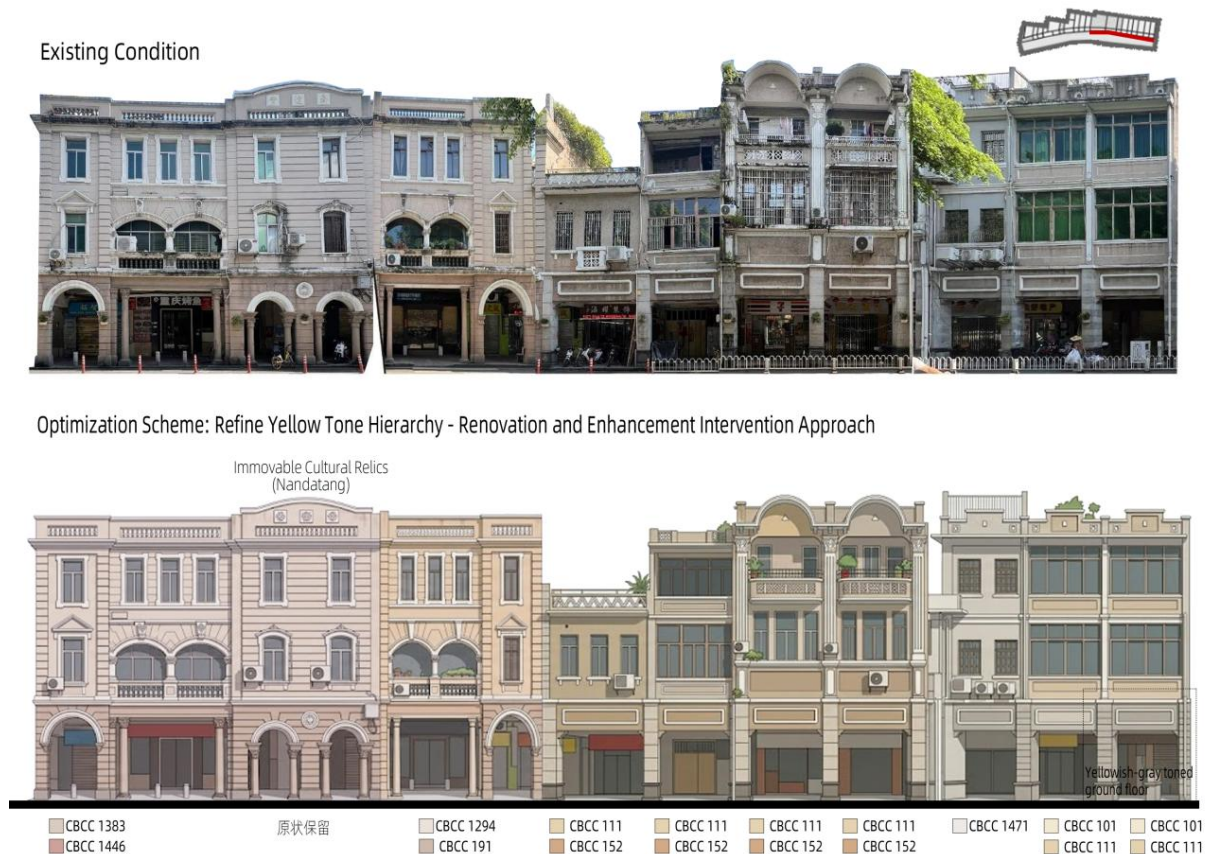


Figure 6-20 Interface Segment in Other Area 1

(Source: drawn by the author)

Overall, the color control strategy for Other Area 1 demonstrates a composite approach characterized by “conservation-led guidance combined with localized renewal”.

On the one hand, immovable cultural relics serve as the primary reference point. Through the rehabilitation and selective upgrading of surrounding building interfaces, the

visual dominance of historic elements is reinforced, forming a hierarchical color order that gradually transitions outward from the core. This approach enables an organic integration between old and new, ensuring both continuity and layered differentiation.

On the other hand, in response to the area's functional transformation—particularly the introduction of innovation-oriented activities—a controlled insertion of blue tones is explored as an identifying element within localized spaces.

Regarding the introduction of the blue palette, it is implemented here as an initial exploratory attempt at incorporating new colors. Its application is strictly limited in scale and intensity. The purpose is to test the compatibility and coordination of blue tones within the existing yellow-grey and ochre-dominated background, thereby providing empirical reference for potential future systematic applications. Accordingly, this type of color intervention follows a principle of cautious integration, emphasizing controllability and adaptability, and avoiding excessive disturbance to the overall historic character. It is thus inherently experimental and phased in nature.

6.4.2 Other Area 2

In Other Area 2, a predominantly residential section is selected as the intervention target, adopting an overall “renewal and transformation” approach. The strategy begins with the building structure itself, carrying out necessary repair and reinforcement for elements with safety risks or severe deterioration. At the same time, façade elements are systematically upgraded and optimized, including the standardization of parapet forms, regulation of column proportions and construction logic, and the removal of illegal additions and attached structures, in order to restore the integrity and order of the building interface.

At the level of building services, air-conditioning units are subject to unified control in terms of height and placement, reducing façade clutter and improving overall visual continuity.

In terms of color strategy, the approach emphasizes the individual building as the basic control unit, organizing façade colors in a layered manner. By differentiating and coordinating colors across the base, main body, and cornice, a clear sense of hierarchy and scale is established, allowing for controlled variation within an overall unified framework.

Existing Building Condition



Optimization Scheme: Demolish Illegal Additions, Restore Parapets, Reinforce Columns - Renovation and Retrofit Intervention



Figure 6-21 Interface Segment in Other Area 2

(Source: drawn by the author)

Overall, this area is oriented toward improving the quality of the residential environment. Through the integrated intervention of structural repair, interface reorganization, and color restructuring, it facilitates a transition from “disordered accumulation” to “ordered renewal”, enhancing both the overall streetscape character and the comfort of everyday living while maintaining functional continuity.

6.5 Chapter Summary

Building upon the previous research and the established guideline system, this chapter develops a systematic urban design practice for the Nanhuaxi Street area, spanning from

overall planning to specific nodes, and from spatial organization to color control.

At the overall level, a spatial framework structured as “two horizontals and one vertical axis”, defined by Nanhuaxi Road, Tongfuxi Road, and Hongde Road, is constructed. Through multi-dimensional interventions—including functional reorganization, façade renewal, public space optimization, and green insertion—a phased and zone-based renewal framework is established. This is further supported by one-way traffic organization and the reorganization of arcade undercroft spaces, enhancing street continuity and pedestrian-oriented quality.

At the level of key areas, the western gateway zone is selected for refined design. Through the optimization of traffic organization, interface reconstruction, and the introduction of open spaces, a spatial transition system from streets to nodes is established. This process verifies the practical applicability of strategies such as color control, integration of attached elements, and public space enhancement, enabling the effective translation of overall design concepts into specific spatial interventions.

In terms of color design, a comparative analysis of pre- and post-intervention conditions in key areas demonstrates the systematic implementation of building conservation, overall color control, component-level regulation, and ground-floor interface optimization. As a result, street façades transition from a fragmented and disordered state to a coherent, hierarchically articulated Lingnan arcade streetscape, reflecting a shift from isolated repairs to continuous interface reconstruction.

Finally, in the supplementary interventions for non-core areas, differentiated approaches combining “rehabilitation and enhancement” with “renewal and transformation” are employed to explore the adaptability of color guidelines across diverse spatial types. On the one hand, conservation-oriented strategies reinforce the historic color base and overall tonal order; on the other, selective introduction of new color systems and layered control methods enables moderate renewal and enhanced spatial legibility within an overall coordinated framework.

Overall, through multi-level design and typology-based strategies, this chapter establishes an implementable pathway for district renewal, demonstrating the integrative role of color control in the micro-renewal of historic districts and providing a practical foundation for further application and refinement.

Conclusion

Summary

This study takes the Nanhuaxi Historic and Cultural District in Guangzhou as the research object, focusing on urban design strategies for historic districts guided by color control. It aims to establish a relatively moderate and operational pathway that bridges heritage conservation and spatial renewal. Based on a review of theories related to urban color planning, historic district conservation, and micro-renewal, and combined with on-site investigation, the study systematically analyzes the spatial structure, building typologies, street interfaces, and color-related issues of the Nanhuaxi area. On this basis, it develops an integrated framework including overall color control, classification-based guidelines, and urban design practices.

The findings indicate that the core issues in the Nanhuaxi area are not limited to isolated color inconsistencies in individual buildings, but rather lie in the overall disorder of color relationships among building bodies, attached elements, street interfaces, public spaces, and the historic environment. Therefore, color in this study is not treated as a superficial aesthetic tool, but as a fundamental medium for character control and spatial integration, actively participating in interface repair, order reconstruction, and environmental coordination within the historic district. Based on this understanding, the study proposes strategies at the district level, including overall color control, zonal guidance, façade component regulation, and coordinated optimization of attached elements. These strategies are further developed in Chapter 6 through overall design and key area interventions, and façade renewal practices, forming a complete research pathway of “existing condition analysis – guideline construction – design implementation”.

This study argues that, for historic districts, the significance of color renewal does not lie in creating strong visual contrasts between old and new, nor in pursuing dramatic image transformation. Instead, it lies in restoring the continuity of street interfaces, stabilizing the overall color environment, and enabling the original historic character to be re-recognized through low-intervention approaches. Although not the most visually striking design method, it represents a more context-sensitive and realistic strategy for historic environments. Its value lies not in “how much is changed”, but in “whether the original character is appropriately preserved, coordinated, and continued”. In this sense, color serves both as a fundamental control element and as a methodological lens for understanding and reorganizing historic environments.

Future Prospects

Future research on color control and urban design in historic districts can be further advanced in three directions based on this study.

First, greater emphasis should be placed on the integration between color guidelines and implementation mechanisms. The effectiveness of design outcomes largely depends on their ability to be embedded within actual renewal processes. Future studies may incorporate factors such as property rights, stakeholders, phased implementation, funding mechanisms, and public participation, in order to develop more operational pathways that transform color control from a design document into an executable, negotiable, and sustainable governance tool.

Second, further efforts are needed to deepen the transition from district-level control to building-level refined interventions. Given the complexity of historic districts, no single template can address all conditions. Future research may refine strategies for different building types, interface conditions, and attached elements, establishing more targeted design guidelines and intervention units, thereby strengthening the linkage between guidelines and specific design actions.

Third, it is necessary to re-evaluate the role and limitations of color in historic district renewal. Color cannot substitute for functional reorganization, public space improvement, or social governance, nor can it independently resolve all issues. However, it can, in a relatively gentle, continuous, and low-intervention manner, restore spatial order and help reveal the inherent layers, character, and continuity of the historic environment. For historic districts, such an approach—characterized by gradual repair and cautious continuity rather than drastic transformation—constitutes a meaningful conservation pathway in itself.

Overall, the renewal of historic districts is not a process aimed at rapid transformation, but one that requires long-term accumulation, continuous coordination, and incremental implementation. Color may serve only as an entry point, yet precisely because it is fundamental, subtle, and restrained, it offers an effective approach for initiating renewal practices. With further refinement of implementation mechanisms and design depth, color control is expected to play an increasingly stable and enduring role in the conservation and renewal of historic and cultural districts.

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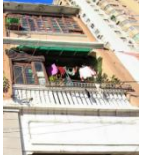
Appendix

Appendix 1 Summary Table Of Existing Building Conditions On Nanhuaxi

NO.	Building photograph	Overall character	Number of stories	Building structural type	Building type	Building description	Additional notes
NHX-A01		Good	3-story	Mixed-structure building	Other traditional buildings	Window: modern window, Window: horizontally decorated and linked composition, Rolling shutter door, Arcade building	1. A row of five adjoining arcade buildings; 2. Based on available documentation, the renovation is presumed to have been carried out during the period of the 2010 Asian Games; 3. The overall degree of chromatic coordination and preservation is relatively good;
NHX-A02		Poor	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: hanging laundry, Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: disorderly exposed electrical wiring, Issue: external additions, Window: modern window, Window: outer-framed composition, Rolling shutter door, Traditional door, Decoration: eave ornamentation, Street and alley: recessed façade	1. Identifiable element of historic character: eaves closure board in the form of an imitation wadang motif 2. A pronounced sense of everyday domestic life
NHX-A03		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: inconsistency between old and new façades, Issue: façade aging and surface deterioration, Window: pivot window, Window: modern window, Window: horizontally decorated and linked composition, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: Chinese-style carved ornamentation, Arcade building	1. Decorative carved ornament is present beneath the windows
NHX-A04		Poor	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: major damage to the historic character, Window: modern window, Arcade building	1. Repainting and spatial alterations have severely damaged the original architectural texture. 2. The building originally exhibited the characteristic appearance of a traditional arcade building. In 2016, it underwent repainting and window refurbishment, and was converted into a commercial storefront under the name *Sweet Young*; the shop was later closed. 3. At present, the façade surface is peeling, and the ground-floor commercial space is vacant. 4. The colors of the altered windows are also inconsistent. 5. The white finish dates from 2017.
NHX-A05		Poor	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: Manchurian window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Arcade building	1. The ground-floor signage has caused serious damage to the architectural character, whereas the original signage was better integrated with the building. 2. There are excessive outdoor air-conditioning units on the façade; three external units are present, and although protective grilles have been installed, the units have not been placed داخل them. 3. The overall form of the second floor has been relatively well preserved, and its color scheme has also been largely retained. 4. The images are from 2013 and 2017.
NHX-A06		Moderate	3-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: disorderly exposed electrical wiring, Window: modern window, Window: horizontally decorated and linked composition, Traditional door, Street and alley: recessed façade	1. The overall building façade is in a severe state of deterioration. 2. The building appears to have been a residential and/or office building.
NHX-A07		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: Manchurian window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Arcade building, Decoration: decorative corbeling	1. There is no entrance on the ground floor; it is occupied by an electrical distribution box.
NHX-A08		Moderate	3-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: disorderly exposed electrical wiring, Window: modern window, Window: outer-framed composition, Traditional door, Street and alley: recessed façade, Window: horizontally decorated and linked composition	1. The drainage pipes, as part of the streetscape elements, require further optimization. 2. The building has a relatively low floor-to-floor height. Although it is also three storeys, like the building to the east, it appears lower in overall height. 3. This is a residential-type building.
NHX-A09		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: disorderly exposed electrical wiring, Issue: external additions, Window: modern window, Rolling shutter door, Street and alley: recessed façade	1. The installation of temporary canopies has negatively affected the architectural character of the building. 2. Excessive recesses in the frontage interface have impaired daylight access and undermined the overall integrity of the street façade.

NHX-A10							
NHX-A11		Good	4-story	Mixed-structure building	Clues to traditional character buildings	Ground-floor commercial frontage: signage, Window: modern window, Rolling shutter door, Arcade building, Issue: external additions	1. There are rooftop additions at the top of the building; in the future, a typological framework may be established to regulate such rooftop extensions. 2. The building on the left is four storeys, and the building on the right is also four storeys, but their heights are inconsistent. 3. As a relatively tall building, it is presumed to have served an office function. 4. It belongs to a vertically proportioned building type.
NHX-A12		Good	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: Manchurian window, Window: horizontally decorated and linked composition, Rolling shutter door, Decoration: eave ornamentation, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building	1. It may serve as a typical example of a yellow arcade building, representing the ordinary type, while NHX-A05 may be regarded as the more refined or higher-grade yellow variant.
NHX-A13		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: disorderly exposed electrical wiring, Window: modern window, Window: horizontally decorated and linked composition, Traditional door, Street and alley: recessed façade	1. It is presumed to be a residential-type building, with no ground-floor commercial use.
NHX-A14		Good	1-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Street and alley: recessed façade	1. The house number signage should be made more prominent and concise. 2. The signage presents relatively serious problems in terms of both color and scale. 3. There is an entrance/exit adjacent to the building, which functions as a small plaza. 4. This establishment has remained in operation continuously over the years.
NHX-A15		Good	6-story	Mixed-structure building	Non-historic district building	Ground-floor commercial frontage: signage, Issue: hanging laundry, Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: external additions, Window: modern window, Window: horizontally decorated and linked composition, Street and alley: recessed façade	1. It is a building located outside the historic district and belongs to a residential area. 2. The ground-floor commercial unit has changed operators.
NHX-A16 NHX-A17 NHX-A18		Good	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: external additions, Window: Manchurian window, Window: outer-framed composition, Window: horizontally decorated and linked composition, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: decorative corbeling, Arcade building	1. There is a rooftop addition constructed with color-coated steel panels. 2. The windows are decorative patterned windows, resembling the effect of applied window film. 3. The central windows are arranged in a horizontal continuous band, while the windows on both sides adopt an enclosed composition. 4. The fully glazed central window may be regarded as a representative formal feature.
NHX-A19 NHX-A20		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: hanging laundry, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	1. This is a traditional arcade building, and its three-storey composition represents a relatively typical form. 2. It adopts a full-window façade composition combined with a balcony. 3. Newly added security grilles and stainless-steel components are present.
NHX-A21 NHX-A22		Good	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: Manchurian window, Window: horizontally decorated and linked composition, Window: outer-framed composition, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building	1. The treatment of the columns appears somewhat inappropriate, and vegetation is growing from the upper part.
NHX-A23		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: external additions, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: decorative corbeling, Arcade building	1. A steel-sheet rooftop addition has been constructed, which has damaged the historic character of the building.
NHX-A24		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Rolling shutter door, Decoration: decorative corbeling, Arcade building	1. Repainting was carried out between 2017 and 2019.

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NHX-A25		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: Manchurian window, Window: horizontally decorated and linked composition, Rolling shutter door, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	1. Horizontally continuous full-window composition.
NHX-A26		Good	3-story	Brick-and-timber structure building	Others	Issue: inconsistency between old and new façades, Window: modern window, Rolling shutter door, Arcade building	1. It is a newly built arcade building; the façade adopts a small-brick finish, and the window design does not conform to the original architectural form.
NHX-A27		Good	2-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Window: modern window, Decoration: railings, Roman columns, Street and alley: recessed façade	1. It is not an arcade building, but a small adjoining structure.
NHX-A28		Good	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Arcade building, Decoration: decorative corbeling	1. This is an arcade building with a distinctive architectural texture, featuring decorative relief detailing beneath the windows. 2. The roof is ornamented with decorative elements. 3. There is a small plaza adjacent to the building.
NHX-A29		Good	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: external additions, Window: Manchurian window, Window: outer-framed composition, Window: horizontally decorated and linked composition, Rolling shutter door, Arcade building	1. This is a traditional arcade building featuring decorative patterned windows.
NHX-A30		Poor	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: horizontally decorated and linked composition, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	1. A renovation carried out in 2019 altered the external appearance, while the decorative patterned windows were retained.
NHX-A31		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Rolling shutter door, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	
NHX-A32		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: hanging laundry, Issue: façade aging and surface deterioration, Issue: disorderly exposed electrical wiring, Window: Manchurian window, Window: side-hinged Western-style window, Rolling shutter door, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	
NHX-A33 NHX-A34		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: modern window, Window: outer-framed composition, Window: horizontally decorated and linked composition, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	
NHX-A35		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Traditional door, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Street and alley: recessed façade	
NHX-A36		Moderate	2-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Window: modern window, Window: outer-framed composition, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Street and alley: recessed façade	
NHX-A37		Good	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: Manchurian window, Window: horizontally decorated and linked composition, Rolling shutter door, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. These are two nearly identical buildings, both three-storey yellow arcade buildings. 2. The parapet decoration on the roof is distinctive.
NHX-A38							
NHX-A39		Good	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: outer-framed composition, Traditional door, Street and alley: recessed façade	1. It appears to be a residential building.

NHX-A40		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: modern window, Window: horizontally decorated and linked composition, Rolling shutter door, Arcade building, Decoration: railings, Roman columns, Decoration: roof parapet ornamentation, Decoration: decorative corbeling	
NHX-A41		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: hanging laundry, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building	
NHX-A42		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: pivot window, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building	
NHX-A43		Moderate	1-story	Brick-and-timber structure building	Other traditional buildings	Window: side-hinged Western-style window, Window: pivot window, Traditional door, Street and alley: recessed façade	1. It is a two-storey building with the first and second floors of roughly the same height. 2. It appears to be a residential building. 3. It has a tiled roof.
NHX-A44		Moderate	2-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Window: modern window, Window: horizontally decorated and linked composition, Arcade building	
NHX-A45		Moderate	1-story	Brick-and-timber structure building	Other traditional buildings	Issue: color-coated steel panels, Traditional door, Street and alley: recessed façade	1. It is a residential building with a color-coated steel-sheet structure.
NHX-A46		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation, Arcade building, Decoration: decorative corbeling	1. Security grilles have been installed, adversely affecting the architectural character.
NHX-A47		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation	
NHX-A48		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation	
NHX-A49		Moderate	4-story	Brick-and-timber structure building	Others	Window: horizontally decorated and linked composition, Traditional door, Street and alley: recessed façade	1. The building has undergone restoration; the original façade was grey. 2. It is a residential building.
NHX-A50		Poor	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Window: horizontally decorated and linked composition, Traditional door, Decoration: Chinese-style carved ornamentation, Decoration: roof pediment ornamentation, Street and alley: recessed façade	1. It is not an arcade building.
NHX-A51		Poor	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: hanging laundry, Issue: disorderly exposed electrical wiring, Window: modern window, Street and alley: recessed façade	1. It is not an arcade building. 2. The roof is finished with roof tiles.
NHX-A52		Poor	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: modern window, Traditional door, Street and alley: recessed façade	1. It is not an arcade building. 2. The roof is covered with tiles.
NHX-A53		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: Chinese-style carved ornamentation	1. Decorative relief detailing is present beneath the windows.
NHX-A54		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	

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NHX-A55		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: railings, Roman columns, Arcade building	1. The windows are directly connected to the doors. 2. The roof canopies are arranged in a staggered manner.
NHX-A56		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Window: side-hinged Western-style window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Arcade building	
NHX-A57		Moderate	1-story	Brick-and-timber structure building	Clues to traditional character buildings	Arcade building	1. A small canopy is present.
NHX-A58		Moderate	1-story	Brick-and-timber structure building	Clues to traditional character buildings	Arcade building	
NHX-A59		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Window: modern window, Window: outer-framed composition, Rolling shutter door, Decoration: decorative corbeling, Arcade building	1. It is a one-and-a-half-storey building.
NHX-A60		Poor	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Arcade building	1. It is somewhat dilapidated.
NHX-A61		Poor	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: pivot window, Decoration: decorative corbeling, Arcade building	
NHX-A62		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: hanging laundry, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: decorative corbeling, Arcade building	1.1. An upper-level balcony structure is present.
NHX-A63		Good	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: Manchurian window, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: decorative corbeling, Arcade building	1. It appears that the second-floor windows may also have been altered, as they do not align with the trim framing below. 2. It is unclear why the outdoor air-conditioning units were not installed within the designated protective enclosures.
NHX-A64		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. A balcony structure is present on the second floor. 2. The balcony windows are directly connected to the doors.
NHX-A65		Poor	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: modern window, Window: outer-framed composition, Decoration: railings, Roman columns, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building	
NHX-A66		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Window: modern window, Issue: inconsistency between old and new façades, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. It features distinctive modern-style windows and was renovated in 2013.
NHX-A67		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: Manchurian window, Decoration: decorative corbeling, Arcade building	
NHX-A68		Moderate	3-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: modern window, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. The second and third floors appear to have been combined into a duplex layout. 2. A sunshade canopy is present. 3. Security grilles have been installed.
NHX-A69							

NHX -B01 NHX -B02 NHX -B03		Poor	3-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Window: horizontally decorated and linked composition, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building	1. The columns are finished in red brick. 2. Distinctive decorative detailing is present beneath each window.
NHX -B04		Moderate	3-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: modern window, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: Chinese-style carved ornamentation, Arcade building	
NHX -B05		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: disorderly exposed electrical wiring, Window: modern window, Street and alley: recessed façade	1. Iron grilles.
NHX -B06		Moderate	2-story	Brick-and-timber structure building	Others	Street and alley: recessed façade, Window: modern window	1. There is also a small semi-public space in front of the building.
NHX -B07 NHX -B08 NHX -B09 NHX -B10 NHX -B11		Moderate	2-story 2-story 3-story 2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: external additions, Window: side-hinged Western-style window, Window: modern window, Window: horizontally decorated and linked composition, Rolling shutter door, Traditional door, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	1. There is a rooftop addition.
NHX -B12		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Rolling shutter door, Street and alley: recessed façade	1. The parapet is formed by iron railings.
NHX -B13		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Traditional door, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. The windows and doors are combined within the same façade composition.
NHX -B14		Moderate	3-story	Brick-and-timber structure building	Others	Issue: hanging laundry, Issue: color-coated steel panels, Issue: outdoor air-conditioning units, Issue: façade aging and surface deterioration, Issue: disorderly exposed electrical wiring, Issue: external additions, Window: modern window, Window: horizontally decorated and linked composition, Traditional door, Rolling shutter door, Decoration: roof parapet ornamentation, Street and alley: recessed façade	1. The ground floor accommodates both residential use and commercial frontage. 2. The roofscape is discontinuous, and there is an accessible rooftop area.
NHX -B15		Moderate	2-story	Brick-and-timber structure building	Others	Issue: disorderly exposed electrical wiring, Street and alley: recessed façade	1. A considerable amount of street furniture is present in this area. 2. There is a decorative wall in the foreground, with a white small-brick building located behind it.
NHX -B16 NHX -B17 NHX -B18		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: modern window, Window: horizontally decorated and linked composition, Traditional door, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: Chinese-style carved ornamentation, Street and alley: recessed façade	1. This is not an arcade building, but it incorporates many architectural elements characteristic of arcade buildings.

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NHX-B19		Moderate	3-story	Brick-and-timber structure building	Others	Issue: outdoor air-conditioning units, Window: modern window, Decoration: roof parapet ornamentation, Arcade building	1. It does not feature the colonnaded arcade at ground level and is therefore likely to be a newly built structure. 2. The roof incorporates imitation Roman columns. 3. Outdoor air-conditioning units are installed on the roof. 4. Two street lamps are attached to the façade. 5. Although it is an arcade building, it is not a historic one; compared with historic arcade buildings, it lacks much of the decorative richness and architectural charm characteristic of the traditional type.
NHX-B20		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: disorderly exposed electrical wiring, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Traditional door, Street and alley: recessed façade	1. This is a residential building. 2. It is not an arcade building.
NHX-B21		Moderate	2-story	Brick-and-timber structure building	Others	Issue: outdoor air-conditioning units, Issue: façade aging and surface deterioration, Window: modern window, Rolling shutter door, Street and alley: recessed façade	1. An electrical distribution box is present.
NHX-B22		Poor	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Traditional door, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Arcade building	1. The building was under renovation in 2020. 2. Decorative detailing is present beneath the windows.
NHX-B23 NHX-B24 NHX-B25		Good	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: external additions, Issue: outdoor air-conditioning units, Window: modern window, Decoration: decorative corbeling, Arcade building	1. The window configuration was altered in 2019. 2. Brand-new full-height glazing has been installed. 3. A row of outdoor air-conditioning units has been arranged, and it is relatively orderly. 4. The building has been renovated, but the intervention has somewhat compromised its original character.
NHX-B26		Poor	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Arcade building, Decoration: decorative corbeling	1. The roof is covered with tiles, likely because no parapet was constructed, causing the roofline to extend outward.
NHX-B27 NHX-B28		Good	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: eave ornamentation, Arcade building	1. Street furniture, specifically in the form of street lighting.
NHX-B29		Moderate	1-story	Brick-and-timber structure building	Other traditional buildings	Window: modern window, Arcade building, Traditional door	1. The roof is covered with tiles.
NHX-B30		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: Manchurian window, Decoration: railings, Roman columns, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building, Rolling shutter door	1. Vegetation is growing on the building.
NHX-B31		Moderate	2-story	Brick-and-timber structure building	Others	Issue: external additions, Issue: façade aging and surface deterioration, Window: modern window, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building, Issue: color-coated steel panels	1. An illegal three-storey addition constructed with color-coated steel panels is present.

NHX-B32		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Rolling shutter door, Arcade building, Decoration: Chinese-style carved ornamentation	1. The occupant appears fond of planting vegetation, and the rolling shutter door has turned yellow. 2. Decorative relief detailing is present beneath the windows.
NHX-B33		Moderate	2-story	Brick-and-timber structure building	Others	Window: modern window, Arcade building	1. It features a small-brick façade and is not classified as a historic building. 2. Security grilles have been installed.
NHX-B34 NHX-B35		Good	7-story	Frame structure building	Others	Street and alley: recessed façade, Window: modern window	1. It is not an arcade building, but part of a modern residential area.
NHX-B36		Good	1-story	Brick-and-timber structure building	Others	Street and alley: recessed façade	1. A small building located at a turning point within a narrow interstitial gap.
NHX-B37		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: modern window, Traditional door, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Vegetation is growing on the building. 2. The second-floor windows feature chamfered corners.
NHX-B38		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: external additions, Window: modern window, Window: horizontally decorated and linked composition, Decoration: decorative corbeling, Arcade building	1. It is a two-storey building with a rooftop addition. 2. Security grilles have been installed. 3. The second-floor windows feature chamfered corners.
NHX-B39		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: Chinese-style carved ornamentation, Arcade building, Decoration: decorative corbeling	1. The second-floor windows feature chamfered corners.
NHX-B40		Moderate	1-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: external additions, Rolling shutter door, Issue: color-coated steel panels, Window: modern window, Street and alley: recessed façade	
NHX-B41 NHX-B42		Good	8-story	Frame structure building	Others	Ground-floor commercial frontage: signage, Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Rolling shutter door, Street and alley: recessed façade	
NHX-B43		Good	3-story	Frame structure building	Others	Issue: façade aging and surface deterioration, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	1. The windows are arranged in both inner and outer layers, giving the building an appearance of long-term disrepair. 2. Decorative relief detailing is present beneath the windows; such relief ornamentation is generally rendered in the same color as the surrounding façade.
NHX-B44		Good	3-story	Frame structure building	Others	Issue: façade aging and surface deterioration, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof pediment ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building, Ground-floor commercial frontage: signage	1. Signage is installed within the ground-floor interior. 2. Security grilles have been installed.

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NHX -B45		Good	3-story	Frame structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: decorative corbeling, Arcade building	1. A large number of outdoor air-conditioning units are installed.
NHX -B46 NHX -B47 NHX -B48 NHX -B49 NHX -B50 NHX -B51 NHX -B52		Poor	2-story	Brick-and-timber structure building	Others	Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: external additions, Window: modern window, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	1. This is a row of seven contiguous buildings. 2. The composition appears highly characteristic, with a passage leading inward at the center. 3. A rooftop addition is present on the second building from the west.
NHX -B53		Poor	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: hanging laundry, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: decorative corbeling, Arcade building	1. On the second floor, one layer of windows is set inward, while the other is positioned outward. 2. The third-floor windows are modern in style. 3. The parapet decoration at the roof level is in a dilapidated condition. 4. Judging from the two outdoor air-conditioning units, it may be inferred that the building has likely been divided into two separate dwelling units.
NHX -B54		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: hanging laundry, Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: disorderly exposed electrical wiring, Issue: external additions, Window: side-hinged Western-style window, Window: modern window, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	1. A stainless-steel sunshade has been installed on the third floor near the parapet, which somewhat detracts from the historic character. 2. On the second floor, the windows and doors are clearly differentiated and finished in a red-brick tone; the window form is relatively representative. 3. Vegetation is growing on the roof.
NHX -B55 NHX -B56		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building	
NHX -B57		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: hanging laundry, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: decorative corbeling, Arcade building	1. A horizontal ventilation window band is present on the upper part of the façade, appearing on both the second and third floors.
NHX -B58 NHX -B59		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: outdoor air-conditioning units, Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Arcade building, Decoration: decorative corbeling	1. Large windows are generally articulated in a horizontally continuous composition. 2. Decorative relief detailing is present beneath the windows.
NHX -B60		Moderate	2-story	Brick-and-timber structure building	Others	Issue: hanging laundry, Issue: façade aging and surface deterioration, Issue: disorderly exposed electrical wiring, Traditional door, Window: outer-framed composition, Street and alley: recessed façade	1. A stainless-steel door is installed.
NHX -B61		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: modern window, Street and alley: recessed façade	1. Security grilles and a security door are installed.
NHX -B62		Moderate	2-story	Brick-and-timber structure building	Others	Window: modern window, Street and alley: recessed façade	1. This consists of two windows.

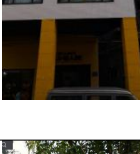
NHX-B63		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Window: modern window, Street and alley: recessed façade	1. The third floor features an added balcony structure.
NHX-B64		Moderate	1-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Traditional door, Street and alley: recessed façade	1. The roof is covered with tiles, and security grilles are installed below.
NHX-B65		Moderate	3-story	Mixed-structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Decoration: decorative corbeling, Arcade building	1. This is a two-bay arcade building, and the third floor has been enclosed with a solid wall. 2. The building originally had windows, but they were removed by 2022. 3. The signage is mounted on the exterior side of the façade.
NHX-B66		Poor	3-story	Mixed-structure building	Others	Issue: façade aging and surface deterioration, Window: modern window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. The building was renovated in 2020; updated photographs are required.
NHX-B67		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: hanging laundry, Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building	1. Clothes-drying poles are still present; however, the building may now be unoccupied, with only the poles remaining.
NHX-B68		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: hanging laundry, Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	1. The presence of Roman columns and the form above the windows may be attributable to the fact that the windows were installed after the balcony had been enclosed.
NHX-B69		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Arcade building, Decoration: decorative corbeling, Window: modern window	1. No. 134 Nanhuaxi Road was renovated by the Anju Group; three buildings were jointly refurbished and converted to accommodate a café and a traditional Chinese medicine shop. 2. The premises had previously been vacant.
NHX-B70							
NHX-B71		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Arcade building, Decoration: decorative corbeling, Window: modern window	1. No. 134 Nanhuaxi Road was renovated by the Anju Group; three buildings were jointly refurbished and converted to accommodate a café and a traditional Chinese medicine shop. 2. The premises had previously been vacant.
NHX-B72		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: modern window, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. These three units may be regarded as a single building entity.
NHX-B73		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: external additions, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Arcade building	1. There is a rooftop addition on the fourth floor. 2. A balcony is present on the second floor. 3. The building appears to be unoccupied.
NHX-B74		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building	1. There is a rooftop addition on the fourth floor.
NHX-B75		Moderate	1-story	Brick-and-timber structure building	Other traditional buildings	Issue: disorderly exposed electrical wiring, Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Street and alley: recessed façade	

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NHX-B76		Moderate	2-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Traditional door, Decoration: roof parapet ornamentation	1. It is not an arcade building, but it exhibits architectural characteristics associated with the arcade-building typology.
NHX-B77 NHX-B78 NHX-B79		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Window: horizontally decorated and linked composition, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building	1. Sunshading panels are present. 2. Vegetation is growing on the roof. 3. The building features vertically proportioned windows with horizontal decorative elements. 4. There is a small rear-opening window, which may correspond to a kitchen or bathroom.
NHX-B80-B83		Moderate	3-story	Brick-and-timber structure building	Others	Arcade building, Window: horizontally decorated and linked composition, Window: modern window	1. The signage is located within the interior.
NHX-B84		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Window: outer-framed composition, Street and alley: recessed façade	1. This could be integrated with the adjacent area to create a small plaza.
NHX-B85		Good	1-story	Brick-and-timber structure building	Others	Street and alley: recessed façade	1. This could be integrated with the adjacent area to create a small plaza.
NHZ-A01		Poor	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Arcade building	
NHZ-A02							
NHZ-A03		Poor	4-story	Mixed-structure building	Others	Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: external additions, Window: modern window, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. The third floor is directly connected to the sunshade canopy, suggesting that the third and fourth floors may have been later additions. 2. Security grilles have been installed. 3. The top floor contains color-coated steel-sheet structures and flowerpots that appear relatively hazardous.
NHZ-A04							
NHZ-A05		Poor	3-story	Mixed-structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: external additions, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building	1. There is a rooftop addition above. 2. The parapet is formed by iron railings. 3. It adopts a small-brick façade treatment and is a newer building compared with the older historic structures. 4. The occupants appear to have a strong inclination toward planting vegetation. 5. Security grilles and small ventilation windows are present. 6. It also incorporates minor decorative elements; in this respect, it may be regarded as a relatively typical example among newly built arcade buildings.
NHZ-A06		Poor	2-story	Mixed-structure building	Other traditional buildings	Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Window: horizontally decorated and linked composition, Arcade building	1. There is a rooftop addition above. 2. The absence of decorative corbeling below is characteristic of newly built small-brick buildings. 3. This building also features relatively tall ventilation windows on the second floor. 4. The third floor appears to be a temporary addition with windows, while the uppermost part is constructed with color-coated steel panels. 5. Vegetation is growing inside the building.
NHZ-A07		Poor	2-story	Mixed-structure building	Other traditional buildings	Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Issue: external additions, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. There is a rooftop addition on the top floor. 2. The image on the right dates from 2017, and the alteration may have occurred around 2018. 3. The decorative patterned windows were removed, and the original large windows were reduced in size and converted into security-grille windows. 4. An additional opening was introduced below, which appears to be a ventilation window, although its function is not entirely clear. 5. The building appears to have undergone restoration around 2018.

NHZ-A08		Poor	2-story	Mixed-structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Colored windows are present.
NHZ-A09		Poor	2-story	Mixed-structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	
NHZ-A10		Moderate	3-story	Mixed-structure building	Clues to traditional character buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Window: modern window, Decoration: railings, Roman columns, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. It adopts an oblique spatial configuration. 2. This form may allow space for accommodating outdoor air-conditioning units within the interior. 3. However, it is likely to have been strongly influenced by site conditions. 4. Relatively modern brick materials are also present inside. 5. This arrangement could separate the ground-floor commercial unit from the stairwell, thereby allowing the shopfront to be sold independently or leased under unified property management.
NHZ-A11		Moderate	3-story	Mixed-structure building	Clues to traditional character buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Window: modern window, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: railings, Roman columns, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. It adopts an oblique spatial configuration. 2. A slanted balcony is present. 3. There is a clothes-drying area on the roof. 4. There is also a small adjoining structure beside it.
NHZ-A12		Moderate	3-story	Mixed-structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: color-coated steel panels, Issue: external additions, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: railings, Roman columns, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. This building has been realigned to an orthogonal configuration.
NHZ-A13		Moderate	3-story	Mixed-structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: modern window, Decoration: railings, Roman columns, Arcade building	1. It adopts a new formal expression, featuring a simplified version of Roman columns. 2. It is possible that the insertion of a beam at the center resulted in the division of the structure into two storeys. 3. It appears to be a newly built structure, as it lacks the characteristic ground-floor arcade expression and does not clearly distinguish between columns and other structural elements.
NHZ-A14		Good	1-story	Brick-and-timber structure building	Other traditional buildings	Issue: color-coated steel panels, Street and alley: recessed façade	1. This is a small adjoining structure without windows or doors.
NHZ-A15		Good	1-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Issue: color-coated steel panels, Street and alley: recessed façade	1. The image showing the three units connected dates from 2022, whereas the image showing them as three separate units dates from 2019.
NHZ-A16		Good	1-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: color-coated steel panels, Street and alley: recessed façade	
NHZ-A17 NHZ-A18 NHZ-A19		Poor	3-story	Mixed-structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: Manchurian window, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. The decorative patterned windows on the third floor were removed during renovation. 2. The left image dates from 2013, and the third floor had been renovated by 2017.

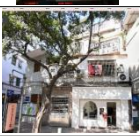
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NHZ-A20		Poor	1-story	Brick-and-timber structure building	Other traditional buildings	Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: disorderly exposed electrical wiring, Window: modern window, Decoration: roof parapet ornamentation, Street and alley: recessed façade, Rolling shutter door	1. An unusually configured corner building.
NHZ-A21		Poor	3-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Rolling shutter door, Decoration: roof parapet ornamentation, Street and alley: recessed façade	1. This is a residential building.
NHZ-A22 NHZ-A23 NHZ-A24		Poor	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Window: Manchurian window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Exposed brickwork is present. 2. There are three elevated openings, the function of which is unclear — possibly ventilation or another auxiliary purpose. 3. Part of the window composition consists of decorative patterned windows.
NHZ-A25		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: Manchurian window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	1. Decorative patterned windows, roof relief ornamentation, and brick detailing are present.
NHZ-B01		Poor	3-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: modern window, Window: outer-framed composition, Decoration: decorative corbeling, Arcade building	1. This is a residential building with sunshading panels, although these elements have already deteriorated with age.
NHZ-B02		Good	3-story	Brick-and-timber structure building	Others	Window: modern window, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Arcade building	1. The roof is accessible and equipped with safety measures. 2. It was likely newly built originally, as indicated by the small-brick façade treatment. 3. Although altered at a later stage, certain formal and textural features have been retained. 4. It may be classified as an intrusive intervention; however, it does not appear to constitute a major destruction of the historic character. 5. It is an arcade building, but it lacks decorative corbeling. 6. It was renovated in 2018.
NHZ-B03		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: outdoor air-conditioning units, Issue: façade aging and surface deterioration, Window: modern window, Rolling shutter door, Decoration: railings, Roman columns, Street and alley: recessed façade	1. Recessed.
NHZ-B04		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: inconsistency between old and new façades, Issue: outdoor air-conditioning units, Window: modern window, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	1. It was altered in 2017, and the modification resulted in a less visually satisfactory appearance. 2. The windows were reduced in size.
NHZ-B05		Moderate	3-story	Mixed-str ucture building	Other traditional buildings	Issue: façade aging and surface deterioration, Window: modern window, Rolling shutter door, Street and alley: recessed façade	1. The color scheme was also altered; the image on the right shows its earlier appearance.
NHZ-B06		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Window: modern window, Window: horizontally decorated and linked composition, Decoration: railings, Roman columns, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building	1. This building was altered in 2013, and its appearance prior to the intervention is unknown. 2. The columns are circular, which is a rather distinctive feature.
NHZ-B07 NHZ-B08 NHZ-B09		Poor	3-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	1. The small central structure is of uncertain function and currently appears to be abandoned. 2. These may be regarded as two separate buildings.

NHZ-B10		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Window: modern window, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: railings, Roman columns, Street and alley: recessed façade	1. Recessed.
NHZ-B11-B13		Good	3-story	Mixed-structure building	Historic building	Window: modern window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. These are historic buildings and constitute the only three officially recognized historic buildings within the study area. 2. A designated loading and unloading area should be provided, as it is inappropriate for such activities to continue occupying the space beneath the entrance gateway.
NHZ-B14-B16		Moderate	3-story	Mixed-structure building	Others	Issue: façade aging and surface deterioration, Window: modern window, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Security grilles have been installed; the original decorative patterned windows have been removed, and the window at the upper left corner is also no longer present.
NHZ-B17		Poor	3-story	Mixed-structure building	Others	Street and alley: recessed façade, Issue: façade aging and surface deterioration, Ground-floor commercial frontage: signage, Window: modern window, Decoration: eave ornamentation	1. The building height is inconsistent with the height of the arcade building.
NHZ-B18		Moderate	2-story	Mixed-structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Street and alley: recessed façade	1. The building has undergone renovation; the image on the right shows its appearance in 2013. 2. There is a recurring tendency to install outdoor air-conditioning units on the rooftop.
NHZ-B19		Moderate	4-story	Mixed-structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Window: modern window, Window: outer-framed composition, Rolling shutter door, Street and alley: recessed façade, Issue: outdoor air-conditioning units	
NHZ-B20		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: disorderly exposed electrical wiring, Window: modern window, Rolling shutter door, Street and alley: recessed façade	
NHZ-B21		Moderate	1-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: disorderly exposed electrical wiring, Street and alley: recessed façade	1. What follows is the entrance/exit area.
NHZ-B22		Moderate	3-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: modern window, Traditional door, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: decorative corbeling, Arcade building	1. This is a two-storey arcade building, which is relatively distinctive within the overall building context; however, it was likely constructed at a later stage. 2. Security grilles have been installed. 3. It lacks the infill paneling typical of the traditional colonnaded arcade form.
NHZ-B23		Moderate	4-story	Mixed-structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: major damage to the historic character, Window: modern window, Arcade building	1. This is a building of considerable historical significance. 2. It has been severely damaged. 3. It was originally a two-storey building with a highly traditional form, but it has since been transformed into a red-toned building.
NHZ-B24		Poor	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	
NHZ-B25		Poor	2-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Street and alley: recessed façade	1. Recessed. 2. A sunshade canopy is present.

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NHZ-B26		Poor	1-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: disorderly exposed electrical wiring, Window: side-hinged Western-style window, Traditional door, Street and alley: recessed façade	1. Recessed. 2. Sliding iron-framed windows are present. 3. The building has a tiled pitched roof.
NHZ-B27		Poor	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Window: Manchurian window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	
TFX-A01		Moderate	3-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: outer-framed composition, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: railings, Roman columns, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	1. Decorative patterned windows and relief ornamentation at the roof level are present. 2. Vegetation is growing on the roof. 3. On the third floor, a doorway and Roman columns are located at the center.
TFX-A02		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: disorderly exposed electrical wiring, Window: Manchurian window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: decorative corbeling, Arcade building	1. Decorative patterned windows are present, and there is also vegetation.
TFX-A03		Moderate	3-story	Brick-and-timber structure building	Others	Issue: outdoor air-conditioning units, Issue: façade aging and surface deterioration, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	1. This group of five buildings has remained largely unchanged. 2. Roof structures are present.
TFX-A04 TFX-A05		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: Manchurian window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Arcade building	1. These are two buildings, featuring roof structures and decorative patterned windows. 2. Vegetation is growing on the roof. 3. Decorative relief detailing is present beneath the windows, and there is also ornamentation between the two lower columns. The color scheme consists of only two colors, whereas buildings along Nanhuaxi Street generally adopt a three-color composition.
TFX-A06		Good	大于8-story的高-建筑	Frame structure building	Others	Street and alley: recessed façade	1. A newly constructed high-rise building.
TFX-A07		Moderate	1-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Street and alley: recessed façade	1. The roof is covered with tiles.
TFX-A08		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: outer-framed composition, Window: horizontally decorated and linked composition, Traditional door, Decoration: roof parapet ornamentation, Issue: disorderly exposed electrical wiring, Street and alley: recessed façade	1. The parapet is fitted with iron railings. 2. It is not an arcade building.
TFX-A09		Moderate	4-story	Mixed-str ucture building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Window: horizontally decorated and linked composition, Traditional door, Decoration: roof parapet ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: eave ornamentation, Street and alley: recessed façade	1. It is not an arcade building.
TFX-A10		Good	4-story	Mixed-str ucture building	Others	Street and alley: recessed façade	1. This is a community service center. 2. The signage is visually prominent and incorporates design elements that respond to the traditional architectural character. 3. Each outdoor air-conditioning unit has been provided with a protective enclosure.

TFX-A11		Moderate	3-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Window: modern window, Decoration: roof parapet ornamentation, Street and alley: recessed façade	1. Security grilles have been installed. 2. The yellow signage is highly conspicuous.
TFX-A12		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: disorderly exposed electrical wiring, Issue: external additions, Window: modern window, Street and alley: recessed façade, Rolling shutter door	1. A narrow lane is located on the right-hand side. 2. It seems that a function such as a milk station would be quite appropriate beside the entrance/exit area. 3. Numerous canopy structures have been added. 4. The signage makes this part of the interior appear somewhat visually cluttered.
TFX-A13		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: disorderly exposed electrical wiring, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Traditional door, Street and alley: recessed façade	1. Decorative eave detailing is present at the roof level.
TFX-A14		Good	3-story	Mixed-structure building	Others	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	
TFX-A15		Good	3-story	Mixed-structure building	Clues to traditional character buildings	Arcade building, Decoration: decorative corbeling	1. The building is nearly being engulfed by vegetation. 2. It is No. 225 Tongfuxi Road, renovated by the designer Liang Suiming. 3. It consists of an “urban living room” at the front and residential dwellings at the rear. 4. It adopts a vertically proportioned form, and the façade has been restored in accordance with the principle of “repairing the old as old.”
TFX-A16 TFX-A17		Poor	2-story	Mixed-structure building	Others	Ground-floor commercial frontage: signage, Issue: hanging laundry, Issue: façade aging and surface deterioration, Issue: disorderly exposed electrical wiring, Window: side-hinged Western-style window, Street and alley: recessed façade, Traditional door	1. Security grilles have been installed. 2. Both buildings have pitched roofs.
TFX-A18		Poor	3-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: eave ornamentation, Street and alley: recessed façade	1. The roof features parapet ornamentation resembling Roman columns. 2. It is not an arcade building.
TFX-A19		Poor	2-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: external additions, Window: modern window, Street and alley: recessed façade, Decoration: roof parapet ornamentation	1. Security grilles have been installed, and iron railings are present at the roof level of the second floor. 2. There is a rooftop addition on the third floor.
TFX-A20		Good	8-story	Frame structure building	Others	Ground-floor commercial frontage: signage, Issue: outdoor air-conditioning units, Street and alley: recessed façade	1. Security grilles have been installed, and iron railings are present at the roof level of the second floor. 2. There is a rooftop addition on the third floor.
TFX-A21		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: hanging laundry, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Decoration: eave ornamentation, Street and alley: recessed façade	1. It adopts a small-brick façade treatment. 2. It is a residential building that can also accommodate commercial use. 3. It appears that there is no proper place for hanging clothes. 4. Security grilles have been installed. 5. A silver-colored door is present.
TFX-A22							
TFX-A23							
TFX-A24		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: hanging laundry, Ground-floor commercial frontage: signage, Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. There is a third-floor addition constructed with color-coated steel panels. 2. The outdoor air-conditioning units are installed on the side elevation. 3. The signage is located within the interior. 4. The security grilles of the building on the right are set inward.
TFX-A25		Moderate	2-story	Frame structure building	Others	Ground-floor commercial frontage: signage, Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Window: modern window, Rolling shutter door, Window: outer-framed composition, Decoration: railings, Roman columns, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Street and alley: recessed façade	1. Mounting outdoor air-conditioning units on the side elevation is also a relatively appropriate solution. 2. The frontage is recessed, leaving an open area in front.

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TFX-A26		Good	3-story	Mixed-structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. The signage is located within the interior. 2. The roof ornamentation is highly distinctive.
TFX-A27		Good	3-story	Mixed-structure building	Immovable cultural relics	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Immovable cultural relic: the arcade building at No. 247 Tongfuxi Road.
TFX-A28		Poor	2-story	Mixed-structure building	Others	Issue: hanging laundry, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	
TFX-A29							
TFX-A30 TFX-A31 TFX-A32		Moderate	2-story	Mixed-structure building	Others	Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: external additions, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	1. Balconies are present, and the central opening has been enclosed with windows. 2. Vegetation is planted throughout the building. 3. The three units are basically identical and arranged symmetrically. 4. An additional structure has been built above the third floor. 5. The exterior adopts horizontal decorative treatment, while the two inner buildings on both sides exhibit a more vertically oriented doorway composition.
TFX-A33		Good	3-story	Frame structure building	Immovable cultural relics	Issue: outdoor air-conditioning units, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Immovable cultural relic: Nanda Hall.
TFX-A34		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	
TFX-A35		Moderate	3-story	Frame structure building	Others	Issue: inconsistency between old and new façades, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. The third floor is set back and includes a balcony, with one projecting portion that likely accommodates a specific function, such as a bathroom or kitchen. 2. Security grilles are installed on part of the façade. 3. Some exterior curtains are used for sunshading.
TFX-A36		Moderate	3-story	Frame structure building	Others	Issue: outdoor air-conditioning units, Issue: façade aging and surface deterioration, Issue: external additions, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Relief ornamentation is present at the roof level. 2. The window sills project outward and are fitted with iron railings.
TFX-A37							
TFX-A38		Moderate	3-story	Frame structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Security grilles have been installed.
TFX-A39		Moderate	3-story	Frame structure building	Others	Issue: façade aging and surface deterioration, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	
TFX-A40							
TFX-A41 TFX-A42		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Street and alley: recessed façade	1. The color scheme is distinctive, as it adopts a pink tone; however, this treatment is not considered appropriate. 2. The upper portion is finished with roof tiles. 3. A plastic canopy is present.

TFX-A43		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Street and alley: recessed façade	1. The roof is finished with tiles and color-coated steel panels. 2. It encroaches significantly upon the external street space.
TFX-A44							
TFX-A45		Good	5-story	Mixed-structure building	Others	Issue: outdoor air-conditioning units, Window: horizontally decorated and linked composition, Street and alley: recessed façade	1. The river is located on the right-hand side.
TFX-A46		Good	1-story	Brick-and-timber structure building	Other traditional buildings	Decoration: railings, Roman columns, Street and alley: recessed façade	1. Steel grilles are present on the second floor.
TFX-A47		Good	3-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Street and alley: recessed façade, Window: modern window, Window: horizontally decorated and linked composition	
TFX-B01		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	
TFX-B02		Poor	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: railings, Roman columns, Arcade building	1. Clothes-drying poles and protective enclosures for outdoor air-conditioning units are present. 2. The second and third floors feature door openings and Roman columns.
TFX-B03		Poor	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: Manchurian window, Window: horizontally decorated and linked composition, Traditional door, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	1. A considerable number of Chinese-style ornamental carvings are present.
TFX-B04		Poor	2-story	Brick-and-timber structure building	Immovable cultural relics	Issue: façade aging and surface deterioration, Window: outer-framed composition, Window: horizontally decorated and linked composition, Rolling shutter door, Window: Manchurian window, Arcade building, Decoration: decorative corbeling	1. Decorative patterned windows. 2. Immovable cultural relic.
TFX-B05							
TFX-B06		Good	9-story	Frame structure building	Controlled area of the historic and cultural district	Street and alley: recessed façade, Issue: outdoor air-conditioning units	1. This is a residential building. 2. Security grilles are installed, and clothes are hung out to dry.
TFX-B07		Moderate	3-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: outer-framed composition, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: railings, Roman columns, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	1. It is a vertically proportioned building. 2. The signage is located within the interior. 3. Roman columns are incorporated at the door openings on the second and third floors.
TFX-B08		Moderate	2-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Modern windows with black frames. 2. The signage is located within the interior.
TFX-B09		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: modern window, Window: horizontally decorated and linked composition, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	
TFX-B10							

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TFX-B11		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	- These are four buildings with traditional windows, belonging to a vertically proportioned building type. - The windows are framed by decorative treatment both above and below.
TFX-B12							
TFX-B13							
TFX-B14							
TFX-B15		Moderate	3-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Street and alley: recessed façade, Decoration: Chinese-style carved ornamentation, Decoration: roof parapet ornamentation, Window: side-hinged Western-style window, Issue: outdoor air-conditioning units, Issue: façade aging and surface deterioration	The parapet is articulated as a continuous band of Chinese-style carved ornamentation.
TFX-B16							
TFX-B17		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: color-coated steel panels, Issue: outdoor air-conditioning units, Window: modern window, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Rolling shutter door, Street and alley: recessed façade	- A canopy is present. - The roof includes color-coated steel panels.
TFX-B18		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Arcade building, Decoration: decorative corbeling	- Traditional window forms are preserved. - Security grilles are installed on part of the façade. - Ground-floor commercial signage is present both on the exterior and within the interior.
TFX-B19		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: modern window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: railings, Roman columns, Decoration: Chinese-style carved ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	- Two unidentified openings are present. - It adopts a curved form. - The signage is located within the interior. - Roman columns are present.
TFX-B20		Poor	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: railings, Roman columns, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	- It is a vertically proportioned building. - Roman columns are placed only in front of the central doorway on the third floor; many arcade buildings seem to adopt a tripartite composition.
TFX-B21		Poor	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Ground-floor commercial frontage: signage, Issue: disorderly exposed electrical wiring, Issue: façade aging and surface deterioration, Window: modern window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: railings, Roman columns, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	- Roman columns are incorporated on the second and third floors, together with a small-balcony composition. - Distinctive decorative detailing is present beneath the windows.
TFX-B22		Poor	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	Roman columns are incorporated on the second and third floors, together with a small-balcony composition.
TFX-B23		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Ground-floor commercial frontage: signage, Issue: disorderly exposed electrical wiring, Issue: façade aging and surface deterioration, Window: modern window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: railings, Roman columns, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	- Roman columns are incorporated on the second and third floors, together with a small-balcony composition. - Distinctive decorative detailing is present beneath the windows. - It is basically identical in appearance to TFX-B21.

TFX-B24		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: disorderly exposed electrical wiring, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	
TFX-B25		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Window: modern window, Rolling shutter door, Street and alley: recessed façade	
TFX-B26		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Window: outer-framed composition, Traditional door, Rolling shutter door, Decoration: eave ornamentation, Street and alley: recessed façade	1. Security doors and security grilles are installed.
TFX-B27		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: disorderly exposed electrical wiring, Window: modern window, Window: horizontally decorated and linked composition, Rolling shutter door, Traditional door, Street and alley: recessed façade	1. Street furniture includes waste collection facilities, as well as notice boards and publicity boards. 2. Security grilles have been installed.
TFX-B28		Moderate	1-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Street and alley: recessed façade	1. An extended sunshade canopy projects outward.
TFX-B29		Moderate	2-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Window: modern window, Decoration: railings, Roman columns, Decoration: roof parapet ornamentation, Arcade building, Decoration: decorative corbeling	1. Security grilles have been installed.
TFX-B30 TFX-B31		Moderate	3-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: disorderly exposed electrical wiring, Window: modern window, Rolling shutter door, Traditional door, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Arcade building, Decoration: decorative corbeling, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation	1. Security grilles have been installed. 2. A sunshade canopy is present.
TFX-B32 TFX-B33		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Issue: disorderly exposed electrical wiring, Window: side-hinged Western-style window, Window: outer-framed composition, Traditional door, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	
TFX-B34 TFX-B35 TFX-B36		Moderate	1-story	Brick-and-timber structure building	Other traditional buildings	Issue: hanging laundry, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Window: outer-framed composition, Rolling shutter door, Traditional door, Street and alley: recessed façade	1. The roof is covered with tiles. 2. It adopts a small-brick façade treatment with a pinkish hue. 3. Security grilles have been installed.
TFX-B37		Moderate	3-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: modern window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. The windows are arched in form. 2. The colonnaded arcade below also adopts an arched configuration.
TFX-B38 TFX-B39		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Window: modern window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	

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TFX-B40 TFX-B41		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Window: modern window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	1. It features distinctive projecting windows. 2. The roof ornamentation is also highly distinctive.
TFX-B42 TFX-B43		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	1. Door openings are also present on the second floor in this section. 2. Small projecting iron balconies extend outward. 3. The decorative patterning beneath the windows is distinctive and also follows a tripartite composition.
TFX-B44		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	1. It adopts an arched form. 2. Two tall columns are present, giving the building a rather grand appearance. 3. A small balcony is included.
TFX-B45		Moderate	3-story	Brick-and-timber structure building	Others	Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. The façade is finished in grey brick.
TFX-B46		Moderate	1-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Street and alley: recessed façade	1. The roof is covered with tiles. 2. A stainless-steel door is installed.
TFX-B47		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building, Issue: color-coated steel panels	1. There is a rooftop addition on the third floor.
TFX-B48		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: external additions, Issue: color-coated steel panels, Window: side-hinged Western-style window, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building	1. There is a rooftop addition on the third floor, and vegetation is growing on the building. 2. The windows exhibit a mixed stylistic composition.
TFX-B49		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: Chinese-style carved ornamentation, Decoration: decorative corbeling, Arcade building	1. A classical architectural form.
TFX-B50		Moderate	2-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. A classical architectural form.
TFX-B51		Moderate	1-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: disorderly exposed electrical wiring, Window: side-hinged Western-style window, Traditional door, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Street and alley: recessed façade	
TFX-B52		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Window: modern window, Decoration: railings, Roman columns, Window: outer-framed composition, Street and alley: recessed façade	1. A river is located farther in the background.
HDL-A01		Moderate	2-story	Brick-and-timber structure building	Others	Arcade building, Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling	

HDL-A02		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: Manchurian window, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Decorative patterned windows.
HDL-A03		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Window: Manchurian window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: decorative corbeling, Arcade building	1. Decorative patterned windows.
HDL-A04		Moderate	2-story	Brick-and-timber structure building	Immovable cultural relics	Issue: façade aging and surface deterioration, Window: Manchurian window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: decorative corbeling, Arcade building	1. Gengtian Gong Herbal Tea Shop; relief ornamentation is present at the roof level. 2. A sunshade canopy is present. 3. Decorative patterned windows.
HDL-A05		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: Manchurian window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Decorative patterned windows are present, together with relief ornamentation at the roof level.
HDL-A06		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Relief ornamentation is present at the roof level.
HDL-A07		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: color-coated steel panels, Issue: outdoor air-conditioning units, Issue: façade aging and surface deterioration, Issue: external additions, Window: side-hinged Western-style window, Window: outer-framed composition, Rolling shutter door, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	1. There is a third-floor addition constructed with color-coated steel panels. 2. A plastic sunshade canopy is present.
HDL-A08		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	
HDL-A09		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: modern window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building, Decoration: Chinese-style carved ornamentation	1. Small decorative ventilation reliefs are present. 2. A sunshade canopy is installed on the second floor. 3. Flowerpots are placed along the roof eaves.
HDL-A10		Moderate	4-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. It features traditional window forms and rises to four storeys. 2. It appears to have a double-layered window arrangement.
HDL-A11		Moderate	3-story	Brick-and-timber structure building	Other traditional buildings	Issue: outdoor air-conditioning units, Window: modern window, Street and alley: recessed façade	1. It is not an arcade building. 2. Security grilles have been installed. 3. The roof is covered with tiles, and a bus stop is located nearby.
HDL-A12		Moderate	2-story	Brick-and-timber structure building	Other traditional buildings	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: hanging laundry, Window: side-hinged Western-style window, Rolling shutter door, Street and alley: recessed façade	1. A tiled roof.
HDL-A13		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Relief ornamentation is present at the roof level. 2. A sunshade canopy is present. 3. Security grilles have been installed.

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HDL-A14		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Relief ornamentation is present at the roof level. 2. Security grilles have been installed. 3. A protective enclosure for an outdoor air-conditioning unit is present on the roof.
HDL-A15		Moderate	3-story	Brick-and-timber structure building	Other traditional buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition	1. The frontage is recessed. 2. Hongde Road is located above. 3. The security grilles appear to be installed on the inner side of the windows. 4. Below, there is a projecting arcade structure serving as a connection, but it extends only one storey.
HDL-A16		Moderate	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. The roof treatment and the decorative detailing beneath the windows are highly representative.
HDL-A17		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Window: outer-framed composition, Decoration: eave ornamentation, Arcade building, Decoration: decorative corbeling	1. These three characters previously read “Gengtian Gong.” 2. It adopts a distinctive window configuration. 3. On the second floor, there is a plaster cornice-like detail above the windows.
HDL-A18		Poor	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: modern window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. The second floor features an arched window composition, which thus far appears to be unique within the study area. 2. This building appears to be currently vacant.
HDL-A19		Poor	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	
HDL-A20		Poor	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. Red window frames.
HDL-A21		Poor	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. A sunshade canopy is present. 2. A small stainless-steel platform is installed.
HDL-A22 HDL-A23		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: decorative corbeling, Arcade building	
HDL-A24		Poor	2-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	

HDL-A25-A26		Moderate	3-story	Brick-and-timber structure building	Clues to traditional character buildings	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building, Window: horizontally decorated and linked composition	1. The placement of the outdoor air-conditioning unit is relatively appropriate and could be incorporated into a coordinated design scheme. 2. The windows adopt either a full-window composition or a small-window configuration.
HDL-B01		Poor	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	1. A sunshade canopy is present.
HDL-B02		Poor	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: outer-framed composition, Window: horizontally decorated and linked composition, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. The ground floor is fitted with a metallic silver rolling shutter door. 2. A sunshade canopy is present.
HDL-B03							
HDL-B04		Moderate	3-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	1. It is a three-storey building, and the plaque below is highly distinctive, as is this type of brickwork.
HDL-B05		Moderate	3-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: roof pediment ornamentation, Decoration: decorative corbeling, Arcade building	1. Decorative patterned windows are present, together with relief ornamentation at the roof level. 2. It again adopts an arched form, with a yellow-and-white color scheme.
HDL-B06		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Window: side-hinged Western-style window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: decorative corbeling, Arcade building	1. A sunshade canopy is present.
HDL-B07		Moderate	2-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. A sunshade canopy is present.
HDL-B08		Good	3-story	Frame structure building	Others	Ground-floor commercial frontage: signage, Window: modern window, Street and alley: recessed façade	1. This is the Puppet Theatre. 2. In fact, the signage is relatively well handled; it does not detract significantly from the historic character and may instead serve as a memorable visual landmark.
HDL-B09		Good	3-story	Brick-and-timber structure building	Others	Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. The café opened in 2017. 2. The connections between the windows are finished with collage-like grey brickwork, a treatment found only along Hongde Road. 3. The overall composition adopts a vertical façade proportion.
HDL-B10		Moderate	3-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Issue: color-coated steel panels, Issue: façade aging and surface deterioration, Issue: external additions, Window: Manchurian window, Window: horizontally decorated and linked composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. This is a hotel and features decorative patterned windows. 2. The roof includes a color-coated steel-panel addition.
HDL-B12		Moderate	2-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: external additions, Window: modern window, Decoration: roof parapet ornamentation, Decoration: roof pediment ornamentation, Decoration: eave ornamentation, Decoration: railings, Roman columns, Decoration: decorative corbeling, Arcade building	1. Iron mesh is installed at the roof level. 2. Security grilles have been installed.

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HDL-B13		Moderate	3-story	Brick-and-timber structure building	Others	Ground-floor commercial frontage: signage, Issue: façade aging and surface deterioration, Issue: outdoor air-conditioning units, Window: side-hinged Western-style window, Window: outer-framed composition, Decoration: roof parapet ornamentation, Decoration: eave ornamentation, Decoration: decorative corbeling, Arcade building	1. An entrance/exit is located adjacent to the building. 2. The signage is located within the interior. 3. A sunshade canopy is present. 4. Owing to its position beside the entrance/exit, a small balcony is provided on the side; this balcony form is highly representative. 5. A protective enclosure for an outdoor air-conditioning unit is installed on the front façade.
HDL-B14		Good	more than 8-story	Frame structure building	Others	Street and alley: recessed façade	1. This building is located at the corner of Nanhuaxi Road and is a high-rise structure. 2. It features numerous notice boards.

Appendix 2 Summary Of The Existing Color Conditions On Nanhuaxi

Building number	Building photograph	CBCC Color Code	Munsell value	Color name	Proportion	Material	Location of application
NHX-A01		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
		13	9.4Y9/4.8	#F2E195	Secondary color tone	Paint	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A02		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A03		1272	N7	#ACABA9	Dominant color tone	Paint	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A04		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A05		0023	8.1Y9/5.2	#FBE393	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A06		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A07		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A08		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A09		1471	8.8YR9/1	#EDEAE7	Dominant color tone	Small-brick	Wall surface
		193	4.4YR6/5.2	#BB7F64	Dominant color tone	Red brick	Decoration
NHX-A10		1044	3.1GY4.5/1	#676561	Dominant color tone	Exposed aggregate	Wall surface
NHX-A12		0023	8.1Y9/5.2	#FBE393	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A13		0023	8.1Y9/5.2	#FBE393	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A14		1285	8.8P9/1	#E7E5E6	Dominant color tone	Paint	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A15		1613	3.1PB7.5/2.4	#B5C3D0	Dominant color tone	Paint	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

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NHX-A16		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
NHX-A17		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Paint	Column
NHX-A18		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A19		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Column
NHX-A20		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A21 NHX-A22		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
		1275	5PB8.5/1	#D6D9DA	Secondary color tone	Paint	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A23		972	0.6GY7/1	#ADAA9B	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A24		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A25		916	6.3R6.5/2	#A99492	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A26		101	5Y9/1.4	#F3E8D1	Dominant color tone	Small-brick	Wall surface
		264	6.9R5/6	#AA6560	Accent color	Small-brick	Decoration
NHX-A27		1321	7.5GY9/1	#F0EFEE	Dominant color tone	Small-brick	Wall surface
		146	9.4YR7.5/5.6	#EFB481	Accent color	Others	Others
NHX-A28		1294	7.5YR9/1	#EBE3DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A29		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A30		1056	5.6P2.5/1	#403E44	Dominant color tone	Grey brick	Wall surface
		1714	N3.75	#545454	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A31		152	0.6Y7/4	#D2AA87	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A32		152	0.6Y7/4	#D2AA87	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A33		972	0.6GY7/1	#ADAA9B	Dominant color tone	Exposed aggregate	Wall surface
NHX-A34		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A35		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A36		972	0.6GY7/1	#ADAA9B	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A37		0023	8.1Y9/5.2	#FBE393	Dominant color tone	Exposed aggregate	Wall surface
NHX-A38		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A39		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A40		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1375	0.6RP7/1	#B5B5B3	Secondary color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

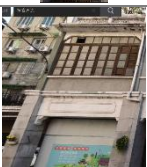
NHX-A41		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1375	0.6RP7/1	#B5B5B3	Secondary color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A42		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1375	0.6RP7/1	#B5B5B3	Secondary color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A43		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1375	0.6RP7/1	#B5B5B3	Secondary color tone	Exposed aggregate	Column
NHX-A44		1272	N7	#ACABA9	Dominant color tone	Paint	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A45		1272	N7	#ACABA9	Dominant color tone	Paint	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A46		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Column
NHX-A47		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A48		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A48		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A49		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A50		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A51		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A52		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A53		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A54		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A55		111	4.4Y8.5/2.4	#E5D2B0	Dominant color tone	Exposed aggregate	Wall surface
NHX-A56		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A57		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

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NHX-A58		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A58		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A59		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A60		0281	0.6YR6.5/1.6	#AC9894	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A61		0281	0.6YR6.5/1.6	#AC9894	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A62		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A63		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A64		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A65		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A66		1294	7.5YR9/1	#EBE3DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A67		0056	7.5Y6/2.8	#978967	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-A68		0191	8.8YR7.5/2.4	#CCA99C	Dominant color tone	Small-brick	Wall surface
NHX-A69		101	5Y9/1.4	#F3E8D1	Secondary color tone	Small-brick	Decoration
NHX-B01		0281	0.6YR6.5/1.6	#AC9894	Dominant color tone	Exposed aggregate	Wall surface
NHX-B02		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
NHX-B03		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B04		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B05		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B06		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B07 NHX-B08 NHX-B09 NHX-B10 NHX-B11		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

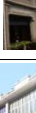
NHX-B12		1272	N7	#ACABA9	Dominant color tone	Paint	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B13		972	0.6GY7/1	#ADAA9B	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B14		0023	8.1Y9/5.2	#FBE393	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B15		1321	7.5GY9/1	#F0EFEE	Dominant color tone	Small-brick	Wall surface
		146	9.4YR7.5/5.6	#EFB481	Accent color	Others	Others
		1196	6.3B5/6.8	#178298	Accent color	Small-brick	Wall surface
NHX-B16 NHX-B17 NHX-B18		0281	0.6YR6.5/1.6	#AC9894	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B19		0902	9.4YR7.5/1	#C6B9AF	Dominant color tone	Small-brick	Wall surface
		1446	8.8R7/3.6	#CEA29A	Accent color	Small-brick	Decoration
NHX-B20		0281	0.6YR6.5/1.6	#AC9894	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B21		0281	0.6YR6.5/1.6	#AC9894	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B22		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B23 NHX-B24 NHX-B25		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B26		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
		1712	N4.75	#6D6D6D	Dominant color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B27 NHX-B28		0902	9.4YR7.5/1	#C6B9AF	Dominant color tone	Exposed aggregate	Wall surface
		1704	N6.75	#A3A4A4	Secondary color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B29		1321	7.5GY9/1	#F0EFEE	Dominant color tone	Paint	Wall surface
		1056	5.6P2.5/1	#403E44	Accent color	Others	Others
NHX-B30		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1704	N6.75	#A3A4A4	Secondary color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B31		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

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NHX-B32		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Column
		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B33		0221	5YR8/2.4	#E8C8B9	Dominant color tone	Small-brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B34		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Paint	Wall surface
		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1272	N7	#ACABA9	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B36		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
NHX-B37		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1704	N6.75	#A3A4A4	Secondary color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B38		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B39		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1704	N6.75	#A3A4A4	Secondary color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B40		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
NHX-B41 NHX-B42		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Paint	Wall surface
		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1272	N7	#ACABA9	Dominant color tone	Grey brick	Wall surface
NHX-B43		0281	0.6YR6.5/1.6	#AC9894	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B44		0281	0.6YR6.5/1.6	#AC9894	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B45		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B46 NHX-B47 NHX-B48 NHX-B49 NHX-B50 NHX-B51 NHX-B52		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B53		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B54		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

NHX-B55		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
NHX-B56		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B57		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B58		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
NHX-B59		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B60		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B61		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B62		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B63		1471	8.8YR9/1	#EDEAE7	Dominant color tone	Small-brick	Wall surface
NHX-B64		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B65		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B66		0281	0.6YR6.5/1.6	#AC9894	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B67		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B68		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B69		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
NHX-B70		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B71		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B72		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

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NHX-B73		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B74		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B75		0911	8.1R8.5/1.2	#DCD0CD	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B76		0911	8.1R8.5/1.2	#DCD0CD	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B77 NHX-B78 NHX-B79		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B80 NHX-B81 NHX-B82 NHX-B83		0242	3.1YR6/3.6	#B98C7E	Secondary color tone	Small-brick	Wall surface
		1446	8.8R7/3.6	#CEA29A	Dominant color tone	Small-brick	Wall surface
		1383	10YR8/1	#DBCCC0	Secondary color tone	Small-brick	Column
		1295	6.9YR8	#E1DAD2	Accent color	Small-brick	Decoration
NHX-B84		1714	N3.75	#545454	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHX-B85		1701	N8.25	#CECDCE	Dominant color tone	Others	Wall surface
NHZ-A01 NHZ-A02		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1375	0.6RP7/1	#B5B5B3	Secondary color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-A03		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
NHZ-A04		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-A05		101	5Y9/1.4	#F3E8D1	Dominant color tone	Small-brick	Wall surface
		0242	3.1YR6/3.6	#B98C7E	Dominant color tone	Small-brick	Wall surface
NHZ-A06		1383	10YR8/1	#DBCCC0	Secondary color tone	Small-brick	Column
		1446	8.8R7/3.6	#CEA29A	Secondary color tone	Small-brick	Decoration
NHZ-A07		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-A08		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-A09		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-A10		1705	N6.25	#959696	Secondary color tone	Others	Wall surface
		1275	5PB8.5/1	#D6D9DA	Secondary color tone	Others	Wall surface
		1321	7.5GY9/1	#F0EFEE	Dominant color tone	Paint	Column
NHZ-A11		1275	5PB8.5/1	#D6D9DA	Secondary color tone	Others	Wall surface
		1321	7.5GY9/1	#F0EFEE	Dominant color tone	Paint	Column

NHZ-A12		1375	0.6RP7/1	#B5B5B3	Dominant color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Secondary color tone	Paint	Decoration
NHZ-A13		1375	0.6RP7/1	#B5B5B3	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-A14		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
NHZ-A15		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
NHZ-A16		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
NHZ-A17		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
NHZ-A18		0281	0.6YR6.5/1.6	#AC9894	Dominant color tone	Exposed aggregate	Column
NHZ-A19		1321	7.5GY9/1	#F0EFEE	Secondary color tone	Small-brick	Wall surface
NHZ-A20		1383	10YR8/1	#DBCCC0	Dominant color tone	Paint	Wall surface
NHZ-A21		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
NHZ-A22		233	1.3YR5.5/4.8	#B57969	Secondary color tone	Red brick	Column
NHZ-A23		0281	0.6YR6.5/1.6	#AC9894	Dominant color tone	Exposed aggregate	Wall surface
NHZ-A24		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-A25		233	1.3YR5.5/4.8	#B57969	Secondary color tone	Red brick	Column
		0281	0.6YR6.5/1.6	#AC9894	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-B01		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Secondary color tone	Paint	Decoration
NHZ-B02		1321	7.5GY9/1	#F0EFEE	Dominant color tone	Others	Wall surface
		1113	3.8Y7.5/11.6	#EDAA00	Secondary color tone	Others	Column
NHZ-B03		0281	0.6YR6.5/1.6	#AC9894	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-B04		972	0.6GY7/1	#ADAA9B	Dominant color tone	Exposed aggregate	Wall surface
NHZ-B05		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
NHZ-B06		1705	N6.25	#959696	Secondary color tone	Others	Column
		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

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NHZ-B07		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
NHZ-B08		1375	0.6RP7/1	#B5B5B3	Secondary color tone	Paint	Column
NHZ-B09		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-B10		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-B11 NHZ-B12 NHZ-B13		1375	0.6RP7/1	#B5B5B3	Accent color	Paint	Decoration
		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
NHZ-B14 NHZ-B15 NHZ-B16		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-B17		1076	0.6R4/5.6	#864C56	Dominant color tone	Paint	Wall surface
		231	5.6YR7.5/2	#CCB1A5	Secondary color tone	Exposed aggregate	Wall surface
NHZ-B18		0233	1.3YR5.5/4.8	#B57969	Dominant color tone	Paint	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-B19		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		0281	0.6YR6.5/1.6	#AC9894	Secondary color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Secondary color tone	Paint	Wall surface
NHZ-B20		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Small-brick	Wall surface
NHZ-B21		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Small-brick	Wall surface
NHZ-B22		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-B23		1076	0.6R4/5.6	#864C56	Dominant color tone	Paint	Wall surface
NHZ-B24		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
NHZ-B25		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
NHZ-B26		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
NHZ-B27		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A01		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

TFX-A02		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A03		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A04		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
TFX-A05		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A06		101	5Y9/1.4	#F3E8D1	Dominant color tone	Others	Wall surface
TFX-A07		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
TFX-A08		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A09		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A10		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A11		1272	N7	#ACABA9	Dominant color tone	Small-brick	Wall surface
		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Small-brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A12		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A13		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A14		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		0281	0.6YR6.5/1.6	#AC9894	Secondary color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A15		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
TFX-A16		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
TFX-A17		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A18		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

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TFX-A19		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A20		1321	7.5GY9/1	#F0EFEE	Dominant color tone	Paint	Wall surface
TFX-A21		1321	7.5GY9/1	#F0EFEE	Dominant color tone	Small-brick	Wall surface
TFX-A22		231	5.6YR7.5/2	#CCB1A5	Secondary color tone	Exposed aggregate	Wall surface
TFX-A23		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
TFX-A24		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A25		1272	N7	#ACABA9	Dominant color tone	Small-brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A26		1294	7.5YR9/1	#EBE3DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A27		1294	7.5YR9/1	#EBE3DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A28		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
TFX-A29		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A30 TFX-A31 TFX-A32		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A33		1294	7.5YR9/1	#EBE3DA	Dominant color tone	Exposed aggregate	Wall surface
		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A34		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A35		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A36		1294	7.5YR9/1	#EBE3DA	Dominant color tone	Exposed aggregate	Wall surface
TFX-A37		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A38		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A39		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
TFX-A40		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

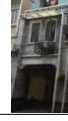
TFX-A41		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
TFX-A42		1083	4R5/10.8	#CD5452	Secondary color tone	Small-brick	Wall surface
TFX-A43		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
TFX-A44		1705	N6.25	#959696	Secondary color tone	Grey brick	Decoration
TFX-A45		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-A46		1321	7.5GY9/1	#F0EFEE	Dominant color tone	Paint	Wall surface
TFX-A47		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B01		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B02		1705	N6.25	#959696	Secondary color tone	Others	Column
		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B03		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
		1275	5PB8.5/1	#D6D9DA	Secondary color tone	Exposed aggregate	Column
TFX-B04 TFX-B05		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
		1275	5PB8.5/1	#D6D9DA	Secondary color tone	Exposed aggregate	Column
TFX-B06		0221	5YR8/2.4	#E8C8B9	Dominant color tone	Paint	Wall surface
		1321	7.5GY9/1	#F0EFEE	Secondary color tone	Paint	Wall surface
TFX-B07		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B08		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B09		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
TFX-B10		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B11 TFX-B12 TFX-B13 TFX-B14		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

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TFX-B15		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
TFX-B16		1705	N6.25	#959696	Secondary color tone	Others	Column
TFX-B17		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1705	N6.25	#959696	Secondary color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B18		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Secondary color tone	Paint	Decoration
TFX-B19		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B20		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B21		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B22		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B23		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B24		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B25		101	5Y9/1.4	#F3E8D1	Dominant color tone	Small-brick	Wall surface
		1272	N7	#ACABA9	Dominant color tone	Small-brick	Wall surface
		1056	5.6P2.5/1	#403E44	Accent color	Others	Others
TFX-B26		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
		1272	N7	#ACABA9	Secondary color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B27		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B28		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
TFX-B29		0301	5.6R8/2	#DCC9C9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B30		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
TFX-B31		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

TFX-B31-0		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
		146	9.4YR7.5/5.6	#EFB481	Secondary color tone	Others	Others
		1684	10R4.1/6.5	#944938	Dominant color tone	Exposed aggregate	Wall surface
TFX-B32		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
TFX-B33		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B34 TFX-B35 TFX-B36		0221	5YR8/2.4	#E8C8B9	Dominant color tone	Small-brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B37		1294	7.5YR9/1	#EBE3DA	Dominant color tone	Exposed aggregate	Wall surface
		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B38		1294	7.5YR9/1	#EBE3DA	Dominant color tone	Exposed aggregate	Wall surface
TFX-B39		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B40		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
TFX-B41		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B42		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
TFX-B43		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B44		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B45		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
		1272	N7	#ACABA9	Secondary color tone	Exposed aggregate	Column
TFX-B46		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
TFX-B47		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B48		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B49		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B50		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
TFX-B51		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

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TFX-B52		233	1.3YR5.5/4.8	#B57969	Dominant color tone	Red brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-A01		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-A02		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-A03		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-A04		0023	8.1Y9/5.2	#FBE393	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-A05		0023	8.1Y9/5.2	#FBE393	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-A06		0023	8.1Y9/5.2	#FBE393	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-A07		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-A08		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
		1272	N7	#ACABA9	Secondary color tone	Exposed aggregate	Column
HDL-A09		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
		1272	N7	#ACABA9	Secondary color tone	Exposed aggregate	Column
HDL-A10		1705	N6.25	#959696	Dominant color tone	Grey brick	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
		1272	N7	#ACABA9	Secondary color tone	Exposed aggregate	Wall surface
HDL-A11		101	5Y9/1.4	#F3E8D1	Dominant color tone	Small-brick	Wall surface
		1275	5PB8.5/1	#D6D9DA	Secondary color tone	Small-brick	Wall surface
		1056	5.6P2.5/1	#403E44	Accent color	Others	Others
HDL-A12		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface

HDL-A13		231	5.6YR7.5/2	#CCB1A5	Dominant color tone	Exposed aggregate	Wall surface
		1272	N7	#ACABA9	Secondary color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Wall surface
HDL-A14		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
		1272	N7	#ACABA9	Secondary color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Wall surface
HDL-A15		0802	7.5GY7.5/1	#BBBFB4	Dominant color tone	Paint	Wall surface
HDL-A16		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Wall surface
HDL-A17		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-A18		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Wall surface
HDL-A19		1344	1.9GY8/1	#CFCCC4	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-A20		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Wall surface
HDL-A21		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Wall surface
HDL-A22 HDL-A23		1705	N6.25	#959696	Dominant color tone	Exposed aggregate	Wall surface
		1272	N7	#ACABA9	Secondary color tone	Exposed aggregate	Column
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Wall surface
HDL-A24		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
		1272	N7	#ACABA9	Secondary color tone	Exposed aggregate	Column
HDL-A25 HDL-A26		1705	N6.25	#959696	Dominant color tone	Grey brick	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
		1272	N7	#ACABA9	Secondary color tone	Exposed aggregate	Column
HDL-B01		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration

Appendices

HDL-B02 HDL-B03		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
		1705	N6.25	#959696	Secondary color tone	Grey brick	Column
HDL-B04		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
		1705	N6.25	#959696	Secondary color tone	Grey brick	Column
HDL-B05		0023	8.1Y9/5.2	#FBE393	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-B06		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-B07		1272	N7	#ACABA9	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-B08		101	5Y9/1.4	#F3E8D1	Dominant color tone	Others	Wall surface
HDL-B09		1294	7.5YR9/1	#EBE3DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
		1705	N6.25	#959696	Secondary color tone	Grey brick	Wall surface
HDL-B10		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-B12		231	5.6YR7.5/2	#CCB1A5	Secondary color tone	Exposed aggregate	Column
		1294	7.5YR9/1	#EBE3DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-B13		231	5.6YR7.5/2	#CCB1A5	Secondary color tone	Exposed aggregate	Column
		1294	7.5YR9/1	#EBE3DA	Dominant color tone	Exposed aggregate	Wall surface
		1321	7.5GY9/1	#F0EFEE	Accent color	Paint	Decoration
HDL-B14		1275	5PB8.5/1	#D6D9DA	Dominant color tone	Others	Wall surface

攻读硕士学位期间取得的研究成果

一、已发表（包括已接受待发表）的论文，以及已投稿、或已成文打算投稿、或拟成文投稿的论文情况（只填写与学位论文内容相关的部分）：

序号	作者（全体作者，按顺序排列）	题 目	发表或投稿刊物名称、级别	发表的卷期、年月、页码	与学位论文哪一部分（章、节）相关	被索引收录情况

注：在“发表的卷期、年月、页码”栏：

- 1 如果论文已发表，请填写发表的卷期、年月、页码；
 - 2 如果论文已被接受，填写将要发表的卷期、年月；
 - 3 以上都不是，请据实填写“已投稿”，“拟投稿”。
- 不够请另加页。

二、与学位内容相关的其它成果（包括专利、著作、获奖项目等）

致 谢

时光荏苒，三年硕士求学之路落幕。回首这段珍贵旅程，我不仅收获了专业知识与学术能力的成长，更开阔了眼界、沉淀了心智，也收获了诸多温暖际遇，心中满是感恩。

首先，由衷感谢我的导师王璐老师。求学途中有幸得她指引，从入学学业规划到论文选题、框架打磨及最终定稿，她始终耐心指导、包容鼓励，助力我顺利完成硕士学业。同时，感谢孙一民老师、李敏稚老师，在论文撰写各环节提出宝贵意见，其严谨的治学态度深深感染我，既完善了论文质量，也让我习得求真务实的治学理念，受益匪浅。同时，感谢李春老师在教务工作中的悉心帮助，为我解决学业手续与校园事务难题，让我能安心投入学习与论文研究。

由衷感谢意大利都灵理工大学的 Mauro Berta、Francesco Novelli、Raffaele Cucuzza、Beppe Marano、Marta Bottero 诸位老师，全英文课程与跨文化交流拓宽了我的专业视野，也显著提升了我的专业英语能力。

感恩同窗相伴，感谢室友王同学、吴同学、牛同学，在我困惑时给予建议、忙碌时帮忙递送材料，情谊深厚。感谢副班长常同学、陈同学及团支书马同学，主动分担班级会议、材料收集等事务，为我减轻压力；感谢同窗同学，承载着我细细碎碎的记忆，并且在读研期间始终为我答疑解惑、分享经验；也感谢全体班级同学，积极配合各项工作，助力我顺利完成班级统筹事务。

最感恩我的家人，他们无条件的理解与支持，是我安心求学的坚实后盾；感谢苏天一小朋友的无声陪伴，治愈了我科研路上的焦虑与疲惫，成为我求学时光里的温柔慰藉。

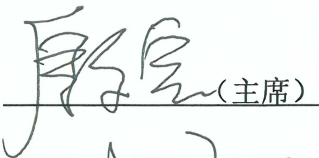
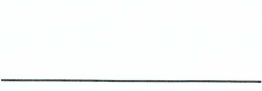
回望三载求学路，我何其幸运，一路皆遇良师益友。每当陷入困惑，总有他人悉心指点；每当遭遇难题，总有他人伸手相助，让我的求学之路少了坎坷、多了顺遂与温暖。

感恩相遇，不负韶华。愿老师们工作顺遂、桃李芬芳，同窗们前程似锦、万事顺意，家人们平安康健、岁岁无忧，愿我们奔赴前路，皆平安喜乐、万事胜意。

在最后，想在这里提醒自己，希望到 35 岁时还会想起这段日子，记得一些虚无缥缈的承诺和并不成熟的约定。它们真的会实现吗？我不知道，想看看十年后的结果。

邢泽蓉
2026 年 5 月 15 日
于华南理工大学 五山

四、答辩委员会决议书

答辩委员会对学位（毕业）论文的评语（主要内容包括：1. 论文选题与综述；2. 学术水平与创新性；3. 论文综合能力表现；4. 学位（毕业）论文答辩情况；5. 存在的不足之处和建议等） 论文以历史文化街区微更新为背景，聚焦历史文化街区色彩管控问题，选题具有一定现实意义与研究价值。论文以广州南华西街历史文化街区为研究对象，通过实地调研、文献研究、案例分析与色彩量化分析等方法，对街区风貌特征与现存问题进行了较系统研究，并借鉴都灵色彩规划经验，构建了面向历史街区更新的色彩导则与设计策略，形成了相应的城市设计实践成果，可为类似历史文化街区更新提供一定参考。 论文整体研究思路清晰，资料丰富，研究内容较完整，具有一定创新性与实践意义。答辩过程中，作者汇报表达清楚，能够较准确回答答辩委员提出的问题，基本达到建筑学硕士学位论文要求。建议根据答辩委员意见进一步修改完善论文。 根据投票结果，答辩委员会一致同意邢泽蓉通过硕士学位论文答辩，同意其毕业，并建议授予建筑学硕士学位。		
论文答辩日期：<u>2026</u> 年 <u>5</u> 月 <u>21</u> 日 答辩委员会委员 <u>5</u> 人 毕业表决票数：通过（<u>5</u>）票；不通过（<u>0</u>）票 学位表决票数：通过（<u>5</u>）票；不通过（<u>0</u>）票 答辩委员会决议（打“√”）： 毕业：通过（<u>√</u>）；不通过（ ） 学位：通过（<u>√</u>）；不通过（ ）		
答辩成员 签名	 (主席)    Mauro Berba (谢宇文) 	
答辩秘书 签名	