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THE TRANSFORMATION OF SAMARKAND CITY STREETSCALES AND URBAN PERSPECTIVES IN THE TWENTIETH CENTURY: A HISTORICAL AND URBAN PLANNING ANALYSIS

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Abstract: This article provides a historical and urban-planning analysis of the transformation of Samarkand's streetscape and spatial perspective during the twentieth century. The study is based on the understanding of Samarkand as a multilayered city in which the archaeological area of Afrasiab, the Timurid historic city and the nineteenth- and twentieth-century European-style urban extension developed side by side rather than replacing one another. The streetscape is assessed through facade alignment, street width, greenery, transport structure, pedestrian quality, visual axes, historic landmarks and panoramic views. The paper identifies several stages: traditional mahalla streets at the beginning of the century, Soviet planning interventions of the 1920s-1940s, the monumental-compositional approach of the 1940s-1960s, modernism and microdistrict planning in the 1960s-1980s, and the emergence of historic-environment protection practices in the 1980s-1990s. The article proposes practical recommendations for using the principles of historic urban landscape, view corridors and perspective protection zones in the conservation and development of Samarkand's street environment.

Keywords: Samarkand, streetscape, urban perspective, historic centre, visual axis, Soviet urban planning, microdistrict, reconstruction, historic urban landscape, twentieth century.

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1. Introduction

Samarkand is one of the oldest and most complex cities in Central Asia in terms of historical and urban layers. Its urban space is perceived not only through the ensemble of monumental architectural structures but also through the streets, squares, neighborhood centers, panoramic views, and daily movement patterns that connect them. Therefore, the streetscape is not a secondary element of Samarkand's historic environment but a key urban factor defining the city's cultural identity[1].

According to UNESCO, the historic part of Samarkand consists of the Afrasiab archaeological site, the Timurid-era city, and the nineteenth- and twentieth-century European-style urban expansions. These layers form a continuous urban system that developed side by side without replacing one another. Studying the streets of the twentieth century thus involves not only analyzing transport or landscaping history but also understanding the spatial balance between historical layers[2].

The twentieth century marked a period of significant urban transformations for Samarkand. The new city structure, originally formed during the Russian Empire, was

reorganized to meet Soviet master plans and transport requirements; subsequently, monumental centers, wide avenues, microdistricts, and typical residential blocks emerged; by the end of the century, preserving the historic center, view corridors, and architectural heritage became a pressing issue[3].

The aim of this study is to analyze the step-by-step transformations of Samarkand's streetscape and urban perspectives during the twentieth century based on historical, compositional, and visual-urban planning criteria.

Research Object, Subject, and Objectives

The research object is the street and square system of Samarkand formed during the twentieth century, particularly streets adjacent to the historic center, the European-style new city, central avenues, microdistricts, and urban spaces surrounding major public facilities.

The research subject focuses on the factors influencing the formation of Samarkand's streetscape and perspectives, including historical, social, transport, architectural-compositional, and heritage preservation aspects[4].

The research objectives are as follows:

To periodize the stages of development of Samarkand streets in the twentieth century;

To comparatively analyze the street systems of the old city and the new city;

To determine the impact of Soviet urban planning policies on the streetscape;

To address the preservation of historical landmarks and visual axes;

To develop practical and scientific recommendations for contemporary reconstruction processes.

Theoretical Framework and Literature Review

The issue of streetscape in urban theory is closely related to the perception of the city image, sequential views revealed through movement, and the concept of spatial axes. K. Lynch interprets the image of the city through paths, edges, districts, nodes, and landmarks. In the context of Samarkand, historical landmarks such as Registan Square, Bibi-Khanym Mosque, Shah-i-Zinda, and the Gur-e-Amir Mausoleum serve as key reference points for street orientation and spatial perception[5].

The concept of "serial vision," introduced by G. Cullen, provides a framework for analyzing the sequence of views experienced while moving through urban streets. In Samarkand, this approach is particularly relevant in streets leading to historical monuments. The transition from narrow neighborhood lanes to monumental squares, the appearance of blue domes along tree-lined avenues, or the gradual emergence of a historic skyline along a wide boulevard contribute significantly to the emotional and compositional impact of the city image[6].

UNESCO's Historic Urban Landscape (HUL) approach considers the historic city not merely as a collection of monuments but as an integrated system that includes natural landscapes, street and square networks, social life, view corridors, traditional housing, and contemporary development processes. The study of Samarkand's streetscape during the twentieth century is fully consistent with this approach[7].

Research conducted by J. van der Straeten on the Soviet urban development of Samarkand serves as an important source for understanding the processes of housing construction, microdistrict planning, and the formation of everyday urban landscapes during the 1960s–1980s. In local scholarship, the works of M. Q. Ahmedov, D. Qodirova, A. Asqarov, and official publications related to cultural heritage provide a fundamental basis for understanding the historical and architectural environment of Samarkand[8].

2. Materials and Methods

The research methodology is based on historical-comparative analysis, cartographic studies, archival and photographic materials, as well as architectural-compositional and visual-perspective analysis techniques. The streetscape was evaluated according to the following criteria: street width and facade alignment; visual axes relative to historical landmarks; greenery and shading systems; balance between vehicular and pedestrian traffic; rhythm and architectural style of facades; composition nodes of streets and squares; and the degree of impact on the historic environment.

Table 1. Criteria for Evaluating the Streetscape of Samarkand

Criterion	Description	Analysis Tool	Significance for Samarkand
Visual axis	Views oriented along historical or public landmarks	Photos, maps, perspective analysis	Preservation of views toward Registan, Bibi-Khanym, Shah-i-Zinda, and Gur-e-Amir
Façade alignment	Continuity of building rows, height, scale, and rhythm along the street	Façade scanner, photo comparison	Identifying low-rise historic center patterns and European-style order in the new city
Greenery	Trees, boulevards, shading, and microclimate factors	Landscape analysis	Enhancing pedestrian comfort in hot climate and softening streetscape
Transport-pedestrian balance	Ratio of cars, trams, public transport, and pedestrian flow	Transport schematics	Reducing traffic pressure in the historic center
Heritage impact	Effect of new construction on historic silhouettes, panoramas, and landmarks	HUL and conservation zones	Protecting the historic urban landscape in accordance with UNESCO standards

Early Twentieth-Century Streets of Samarkand: Contrast Between Old and New City

At the beginning of the twentieth century, Samarkand's street system was characterized by two major morphological components: the old city with its traditional Eastern organic urban structure and the geometrically planned new city that emerged under the influence of the Russian Empire in the late nineteenth century. In the old city, streets were closely connected with neighborhood communities, mosques, local gathering places, bazaars, and courtyard houses, creating a human-scaled environment characterized by narrow, winding, and shaded streets.

3. Results

In contrast, the new city was organized around straight streets, administrative buildings, military and public facilities, boulevards, and green corridors, shaping the urban image according to European planning principles. As a result, by the beginning of the twentieth century, Samarkand had already become a space of urban dialogue between two distinct street models: the traditional "inner neighborhood street" and the "avenue-boulevard" model.

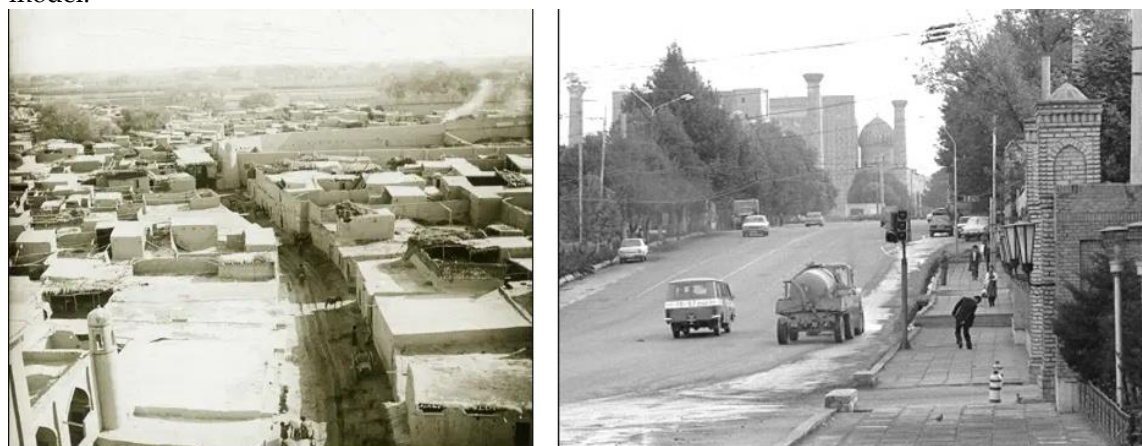


Figure 1. Historical Photographs of Samarkand Streets at the Beginning of the Twentieth Century: Comparative Views of the Old and New City (Based on Article Materials)

1920–1940: Initial Soviet Urban Interventions

During the 1920s–1940s, Samarkand's streets underwent modernization of infrastructure, enhancement of transport flows, and organization of public spaces. At this stage, streets were perceived not only as local movement corridors but also as open urban spaces reflecting the new political and administrative system[9].

The widening of streets, adaptation for tram and automobile traffic, and the creation of open spaces in front of large public buildings introduced a new rhythm to Samarkand's historic appearance. However, this process had a dual effect: on one hand, it improved

urban mobility and connectivity; on the other hand, it placed pressure on the delicate morphological fabric of the historic center in certain areas[10].



Figure 2. Tram and Street Infrastructure as a Factor in Modernizing Samarkand's Urban Landscape (Based on Article Materials)

1940–1960: Monumental Composition and Ideological Space

In the post-World War II period, Samarkand's streetscape was dominated by wide avenues, compositional axes, central squares, and administrative buildings. During this era, streets were not merely transport corridors but also stages reflecting state ideology and public life, embodying the city planning approach of the time.

Key features of the monumental approach included symmetry, orderly alignment of facades, rhythm along the streets, and enhanced composition nodes in public spaces. In Samarkand, this process did not compete with historic landmarks but rather provided opportunities to perceive them within the new urban framework[11].

1960–1980: Modernism, Microdistricts, and a New Street Scale

Between the 1960s and 1980s, modernist principles and industrial construction methods shaped Samarkand's urban space. Typical residential blocks, microdistricts, wide boulevards, pedestrian pathways, and green zones created a new street scale. Unlike the narrow, dense environment of the historic center, streets during this period became open, wide, and functional.

In planning microdistricts, the principle of separating transport flows from residential areas was applied, with schools, courtyards, and service facilities placed within walking distance. However, the proliferation of typical multi-story housing led in some areas to a reduction of local architectural uniqueness, standardization of facade appearance, and divergence from the historic city skyline[12].



Figure 3. Microdistricts and Multi-Storey Residential Complexes as One of the Main Factors Transforming the Streetscape during the 1960s–1980s

1980–1990: Preservation of the Historic Environment and Street Panoramas

By the end of the twentieth century, preserving the urban integrity of Samarkand's historic center had become a major concern. Regulating construction around historical monuments, preserving street panoramas, providing a scientific basis for restoration and reconstruction projects, and developing tourist routes emerged as the key priorities of this period[13].

Samarkand's status as a World Heritage Site further increased the importance of the Historic Urban Landscape (HUL) approach. Consequently, the streetscape should no longer be viewed merely as a collection of individual facades, but rather as a complex system consisting of historical landmarks, neighborhood environments, view corridors, green spaces, and elements of everyday urban life.



Figure 4. Reintroduction of National Decorative Elements on Urban Facades at the End of the Twentieth Century and on the Eve of Independence
Perspective and Visual Dominance in Samarkand Streets

Perspective refers to the sequence of spatial views perceived by an observer moving along a street. In Samarkand, the concept of perspective is primarily linked to historical landmarks: Registan Square, Bibi-Khanym Mosque, Shah-i-Zinda complex, Gur-e-Amir Mausoleum, Ulughbek Observatory, and other monuments serve as visual termini, orientation points, and defining elements of the cityscape along street axes[14].

In the historic center, street perspectives often manifest as a sequence of "narrow street – open square – monumental landmark." In the new city, perspective develops along the sequence "tree-lined boulevard – public building – wide square." In microdistricts, perspective is shaped not around monumental landmarks, but through the functional connection of residential blocks, green courtyards, and service facilities, forming a coherent urban spatial experience[15].

Table 2. Step-by-Step Transformation of Samarkand's Streetscape Throughout the Twentieth Century

Period	Urban Planning Characteristic	Streetscape Features	Perspective Characteristics	Main Challenge
Early 20th Century	Dualism of the old and new city	Narrow neighborhood streets and geometrically planned new streets	Internal neighborhood views and straight boulevard axes	Balancing two urban systems
1920–1940	Infrastructure and transport modernization	Widened streets, tram systems, and public squares	Movement-oriented urban views	Pressure on the historic urban fabric
1940–1960	Monumental-compositional approach	Wide avenues, administrative buildings, and symmetry	Ideological and aesthetic axes	Compatibility of scale with the historic center

1960–1980	Modernism and microdistrict development	Standard residential blocks, green courtyards, and wide arterial roads	Open and functional urban spaces	Standardization and loss of local identity
1980–1990	Conservation and reconstruction	Urban improvement, tourism routes, and preservation of the historic skyline	View corridors directed toward historic landmarks	Balancing reconstruction and authenticity

4. Discussion

Discussion: Spatial Balance Between Historical Layers

The analysis shows that the development of Samarkand's streetscape in the twentieth century was not a simple "from old to new" transition. Instead, it unfolded as a coexistence and interaction of multiple urban layers. The streets of the old city preserved an organic environment connected to neighborhoods, courtyard houses, passageways, and mosques, while the streets of the new city introduced a different spatial order through European-style straight axes, administrative buildings, and boulevards.

During the Soviet period, the street and square system was adapted to the demands of transport and public life. At the same time, this period enhanced the visibility of Samarkand's historical landmarks within the broader cityscape. Therefore, contemporary reconstruction efforts should not be limited to protecting historic monuments within designated zones; they must also control view corridors, street panoramas, facade scales, and the pedestrian experience leading to these landmarks.

Photographs included in the study illustrate these transformations: in the old city, low-rise, dense fabric and narrow streets are evident; streets with tram infrastructure introduce Soviet-era urban elements; and in microdistricts, multi-storey typical residential blocks and wider street sections emerge. Consequently, analyzing Samarkand's streetscape requires a combined methodological approach using archival photographs, maps, and on-site observations.

Practical and Scientific Recommendations

Major view corridors oriented toward historical landmarks should be designated as separate layers on maps, with regulations developed for height, color, signage, and facade interventions.

Streets adjoining the historic center should prioritize pedestrian access, maintain tree-lined areas, preserve low-rise facade rhythms, and ensure compatibility with traditional materials.

Residential blocks built during the Soviet modernist period should be documented not merely as outdated typical structures but as part of the twentieth-century urban heritage. Streetscape assessment should incorporate 3D visual analysis, photographic documentation, GIS-based view corridors, and monitoring of the historic skyline.

Reconstruction projects should follow the principle of "street segment – facade alignment – pedestrian experience – historic panorama" rather than focusing solely on individual buildings.

5. Conclusion

During the twentieth century, Samarkand's streetscape underwent several stages of transformation: traditional neighborhood streets, European-style new city, Soviet infrastructure, monumental avenues, modernist microdistricts, and historic environment preservation practices collectively formed a complex urban layer.

The streetscape is closely linked to historical monuments, with landmarks such as Registan, Bibi-Khanym, Shah-i-Zinda, and Gur-e-Amir serving as primary orientation points for the city's visual perspective.

Soviet-era urban planning introduced transport networks, wide streets, public squares, and microdistrict systems to Samarkand; however, this process required careful consideration of the scale and authenticity of the historic center.

By the end of the twentieth century, preserving the historic urban environment became a priority, which today must be addressed comprehensively using UNESCO's Historic Urban Landscape approach.

Future development of Samarkand's streetscape should prioritize view corridors, street panoramas, pedestrian environment quality, façade scale, and the preservation of historical and symbolic landmarks as essential urban planning criteria.

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