



Urban Planning Principles Of Timurid Kesh-Shakhrisabz And Their Significance For The Preservation Of Historical And Cultural Heritage

Nafisa Gilmanova

Doctor of Architecture (DSc)

Leading Research Fellow

Department of Urban Planning and Architecture

Institute of Art Studies

Academy of Sciences of the Republic of Uzbekistan

Corresponding author e-mail: nafisa_gilmanova@mail.ru

Abstract

Shakhrisabz, historically known as Kesh, occupies a prominent place in the urban history of Central Asia. As the birthplace of Amir Temur, it became one of the leading political, administrative, and cultural centers of the Timurid Empire during the late fourteenth century. The extensive building programme initiated by Amir Temur transformed not only the architectural appearance of the city but also established an advanced urban planning model integrating administrative, religious, memorial, residential, and commercial functions. The purpose of this study is to investigate the urban planning principles of Timurid Kesh-Shakhrisabz and to evaluate their significance for the preservation of historical and cultural heritage.

The research is based on archaeological evidence, historical chronicles, architectural studies, historical maps, and comparative spatial analysis. Particular attention is paid to the planning structure of the historical centre, the functional zoning of urban space, and the interaction between monumental architecture and the overall urban composition.

The findings demonstrate that the reconstruction of Shakhrisabz under Amir Temur represented a comprehensive urban planning programme rather than a series of isolated construction projects. The administrative district centred on Ak Saray Palace, the religious and memorial complexes of Dorut Tilovat and Dorus Saodat, residential quarters, craft districts, marketplaces, and defensive infrastructure formed an integrated urban system. This spatial organisation reflects a sophisticated medieval planning concept that harmoniously combined political authority, religious symbolism, and economic activity.

Although much of the historical layout has survived, contemporary urbanisation, modern construction within the historic centre, and changes to the traditional architectural environment increasingly threaten the integrity of the historic urban landscape. Therefore, the study of Timurid urban planning principles provides an essential scientific basis for developing effective approaches to the preservation of historic cities and their architectural heritage.

Keywords: Amir Temur, Shakhrisabz, Timurid urban planning, architectural heritage, historic urban landscape.



The Peerian Journal

Open Access | Peer Reviewed

Volume 55 June 2026

Website: www.peerianjournal.com

ISSN (E): 2788-0303

Email: editor@peerianjournal.com

1. INTRODUCTION

Urban planning has always reflected the political, social, and cultural development of civilizations. In Central Asia, medieval cities served not only as administrative and economic centres but also as symbols of state authority and cultural identity. Among them, Kesh-Shakhrisabz occupies a unique position due to its close association with Amir Temur and the formation of the Timurid Empire.

Following Amir Temur's accession to power in the second half of the fourteenth century, Kesh underwent a profound transformation. The city was reconstructed according to a unified planning concept that combined monumental architecture with a carefully organised urban structure. Administrative buildings, religious institutions, memorial complexes, markets, residential quarters, gardens, irrigation facilities, and defensive fortifications were integrated into a coherent spatial system reflecting both practical urban needs and the ideological principles of the Timurid state.

Previous studies have primarily focused on the architectural characteristics of individual monuments, particularly Ak Saray Palace, Dorut Tilovat, and Dorus Saodat. However, considerably less attention has been devoted to analysing Shakhrisabz as an integrated urban planning system. Modern approaches to the preservation of historical cities increasingly recognise that safeguarding individual monuments alone is insufficient; equal attention must be paid to preserving historical urban layouts, visual corridors, functional zoning, and the integrity of the historical landscape.

The relevance of the present study is determined by the growing challenges facing the preservation of Shakhrisabz. Rapid urbanisation, modern construction within the historical centre, and changes in the traditional urban environment have significantly altered the historical spatial organisation of the city. These processes require scientifically grounded approaches that take into account both the architectural heritage and the historical planning principles underlying the development of the city. The aim of this research is to identify the principal urban planning principles of Timurid Kesh-Shakhrisabz and to assess their significance for the preservation of historical and cultural heritage. To achieve this objective, the study analyses the city's planning structure, functional zoning, monumental architectural complexes, engineering infrastructure, and their role in shaping the historical urban landscape.

2. MATERIALS AND METHODS

The present study applies an interdisciplinary approach combining methods of architectural history, urban planning analysis, archaeology, and historical geography. The research methodology is based on the comprehensive investigation of the historical development of Kesh-Shakhrisabz during the Timurid period and on the analysis of the city's spatial organization as an integrated urban system. The primary source base includes archaeological investigations conducted in the historical centre of Shakhrisabz, medieval written chronicles describing the construction activities of Amir Temur and his successors, historical cartographic materials, architectural surveys of preserved monuments, and contemporary studies devoted to the history of Timurid architecture and urban planning.

Historical-comparative analysis was employed to identify the evolution of the city's planning structure before and after the reconstruction initiated by Amir Temur. Comparative analysis with other major Timurid cities, particularly Samarkand and Herat, made it possible to determine the specific features of Shakhrisabz within the broader context of Timurid urban development.



The Peerian Journal

Open Access | Peer Reviewed

Volume 55 June 2026

Website: www.peerianjournal.com

ISSN (E): 2788-0303

Email: editor@peerianjournal.com

Spatial analysis constituted one of the principal research methods. Particular attention was devoted to the functional zoning of the city, the distribution of administrative, religious, residential, commercial, and defensive areas, and the compositional relationships between the principal architectural complexes. The interaction between the street network, monumental architecture, public spaces, irrigation facilities, and defensive structures was also examined to reconstruct the planning principles underlying the historical urban landscape.

The study further incorporates principles of heritage conservation by evaluating the degree to which the historical planning structure has survived and identifying contemporary factors affecting its authenticity and integrity. Modern urban development within the historical centre was analysed in relation to the preservation of historical spatial relationships and the visual integrity of the cultural landscape.

The combination of archaeological, historical, architectural, and urban planning methods provides a reliable basis for reconstructing the planning concept of Timurid Kesh–Shakhrisabz and for assessing its significance within the framework of contemporary heritage preservation.

3. RESULTS

3.1. Reconstruction of Kesh-Shakhrisabz under Amir Temur

The reconstruction of Kesh-Shakhrisabz initiated after Amir Temur came to power represented one of the most ambitious urban development programmes undertaken in Central Asia during the late fourteenth century. Unlike many medieval cities that evolved gradually over centuries, Shakhrisabz was transformed according to a coherent urban planning strategy reflecting the political ambitions of the emerging Timurid Empire.

Historical sources indicate that the reconstruction extended far beyond the construction of monumental buildings. It involved the renewal of the defensive walls, modernization of the street network, expansion of residential districts, improvement of irrigation systems, establishment of new public spaces, and construction of administrative, religious, and memorial complexes. These interventions fundamentally altered both the physical appearance and the functional organization of the city.

Particular importance was attached to creating a representative urban environment reflecting imperial authority. The reconstruction programme emphasized monumentality, spatial order, and visual dominance of major architectural complexes. Wide streets, carefully designed public spaces, and monumental entrances enhanced the ceremonial character of the city while simultaneously improving its functionality.

Archaeological evidence suggests that the reconstruction preserved certain elements of the earlier urban structure while reorganizing them within a more systematic planning framework. This combination of continuity and innovation became one of the defining characteristics of Timurid urbanism.

3.2. Functional Zoning of the City

One of the most remarkable achievements of Timurid urban planning in Shakhrisabz was the establishment of a clearly defined functional zoning system. Different sectors of the city were assigned specific administrative, religious, commercial, residential, and defensive functions while remaining interconnected through an integrated street network.



The Peerian Journal

Open Access | Peer Reviewed

Volume 55 June 2026

Website: www.peerianjournal.com

ISSN (E): 2788-0303

Email: editor@peerianjournal.com

The northeastern sector constituted the administrative core of the city. The monumental Ak Saray Palace dominated this district both visually and functionally, serving as the official residence of Amir Timur during his visits to his native city. Governmental ceremonies, diplomatic receptions, and important political events were concentrated within this area, emphasizing the symbolic role of architecture in expressing state authority.

The southeastern sector formed the principal religious and memorial district. The Dorut Tilovat ensemble included mosques, madrasas, and mausoleums associated with leading religious scholars, whereas the Dorus Saodat complex functioned as the dynastic burial place of the Timurid family. Together these ensembles established the sacred centre of the city and reinforced the ideological connection between political authority and religious legitimacy.

Commercial activities were concentrated around the Chorsu market situated at the intersection of the city's two principal streets. This location enabled efficient circulation of people and goods while simultaneously creating the principal urban node of the historical city. Residential neighbourhoods and artisan quarters developed around the commercial centre, ensuring close interaction between production, trade, and everyday urban life.

The functional zoning of Shakhrisabz demonstrates a sophisticated understanding of urban organization in which each district performed specialized functions while contributing to the integrity of the overall planning structure.

3.3. Monumental Architecture and Urban Composition

Monumental architecture constituted the principal compositional element of the urban planning concept of Timurid Kesh-Shakhrisabz. Unlike many medieval cities where monumental buildings appeared as independent structures, the major architectural complexes of Shakhrisabz were deliberately integrated into a unified spatial composition that reflected both political ideology and urban functionality.

The most significant architectural landmark was the **Ak Saray Palace**, whose monumental scale and dominant position determined the visual hierarchy of the entire city. Located within the administrative district, the palace served not only as the ceremonial residence of Amir Timur but also as the principal symbol of imperial authority. Its enormous entrance portal, visible from considerable distances, functioned as the main urban landmark and established the compositional axis of the administrative centre.

A complementary role was played by the **Dorut Tilovat** and **Dorus Saodat** architectural ensembles situated in the southeastern sector of the city. These complexes formed the principal religious and memorial centre of Shakhrisabz. Their spatial arrangement created a symbolic connection between political power and religious legitimacy, one of the defining characteristics of Timurid state ideology.

The interaction between the palace complex and the sacred ensembles illustrates a sophisticated planning strategy in which monumental architecture organized urban space rather than merely occupying it. Public squares, streets, and visual corridors were designed to reinforce the perception of architectural dominance while simultaneously facilitating ceremonial processions and everyday urban movement.



The Peerian Journal

Open Access | Peer Reviewed

Volume 55 June 2026

Website: www.peerianjournal.com

ISSN (E): 2788-0303

Email: editor@peerianjournal.com

This compositional unity distinguishes Shakhrisabz from many contemporary medieval cities and demonstrates the advanced urban planning concepts developed during the Timurid period.

3.4. Engineering Infrastructure and Defensive System

The effectiveness of the urban planning concept of Timurid Shakhrisabz was closely associated with the development of engineering infrastructure and defensive architecture. Urban planning extended beyond monumental construction to include comprehensive measures ensuring security, water supply, transportation, and environmental comfort.

Historical sources and archaeological investigations indicate that the city was surrounded by massive defensive walls reinforced with towers and monumental gates. These fortifications defined the historical boundaries of the city while providing protection against external threats. The location of the gates corresponded with the principal road network, ensuring efficient communication with surrounding regions.

An extensive irrigation system supplied water to residential quarters, gardens, agricultural lands, and public spaces. Water channels performed both practical and aesthetic functions, contributing to the environmental quality of the urban landscape. Gardens established around the palace and residential districts reflected the Timurid tradition of integrating architecture with landscape design and created favourable microclimatic conditions within the city.

The internal street network also represented an important element of urban planning. The two principal streets intersecting at the Chorsu market connected the major functional districts and facilitated the movement of people, goods, and official processions. Secondary streets linked residential quarters with commercial and religious centres, producing a coherent transport system appropriate for a large medieval city.

These engineering solutions demonstrate that the planning of Shakhrisabz was based upon an integrated understanding of defence, infrastructure, public services, and architectural composition, reflecting one of the highest achievements of medieval urban planning in Central Asia.

3.5. Preservation of the Historical Urban Landscape

Although the principal monuments of Timurid Shakhrisabz have survived to the present day, the preservation of the historical urban landscape remains a major challenge. Heritage conservation today increasingly recognises that the value of historical cities depends not only upon individual monuments but also upon the integrity of their historical planning structure and spatial relationships.

Archaeological investigations demonstrate that substantial parts of the medieval street network, functional zoning, and historical boundaries of major architectural complexes remain identifiable despite centuries of transformation. Nevertheless, modern urban development has considerably altered the traditional urban environment.

New construction within the historical centre, changes in street alignments, the loss of traditional residential architecture, and the replacement of historic buildings with modern structures have disrupted historically established visual connections between major monuments. As a consequence, the authenticity of the historical urban landscape has been partially diminished.

The preservation of Shakhrisabz therefore requires an integrated conservation strategy extending beyond the protection of individual monuments. Particular attention should be devoted to



The Peerian Journal

Open Access | Peer Reviewed

Volume 55 June 2026

Website: www.peerianjournal.com

ISSN (E): 2788-0303

Email: editor@peerianjournal.com

safeguarding historical spatial organisation, visual corridors, traditional street patterns, archaeological layers, and the historical relationship between monumental architecture and its surrounding urban environment.

Such an approach corresponds to contemporary international principles of heritage conservation and contributes to maintaining the Outstanding Universal Value of the historical city for future generations.

4. DISCUSSION

The present research confirms that Timurid Shakhrisabz represents one of the earliest examples of comprehensive urban planning in Central Asia. Unlike spontaneous medieval urban development observed in many historical cities, the reconstruction initiated by Amir Timur followed a clearly defined planning concept integrating political administration, religious institutions, economic activities, engineering infrastructure, and monumental architecture into a unified urban system.

Comparison with other major Timurid cities, particularly **Samarkand** and **Herat**, demonstrates both common planning principles and distinctive local characteristics. Like Samarkand, Shakhrisabz employed monumental architecture to express imperial authority and incorporated sophisticated irrigation systems and carefully organised public spaces. However, Shakhrisabz differed by preserving a stronger relationship between the ruler's birthplace, dynastic memorial architecture, and administrative institutions. This unique combination transformed the city into both a political centre and a symbolic representation of Timurid legitimacy.

The analysis further demonstrates that the significance of Shakhrisabz extends beyond its surviving monuments. The historical value of the city is equally determined by its planning structure, functional zoning, visual organisation, and interaction between architecture and landscape. Consequently, conservation policies focusing exclusively on individual buildings cannot ensure the preservation of the city's historical authenticity.

From the perspective of contemporary urban conservation, the planning principles developed during the Timurid period remain highly relevant. Their study provides valuable methodological foundations for the sustainable management of historical cities and contributes to the development of integrated approaches combining monument protection with the preservation of historical urban landscapes.

5. CONCLUSION

The present study demonstrates that the urban planning concept implemented in Kesh-Shakhrisabz during the reign of Amir Timur represented one of the most advanced examples of medieval urban planning in Central Asia. The reconstruction of the city was based on a comprehensive planning strategy that integrated administrative, religious, memorial, commercial, residential, and defensive functions into a unified spatial system. Such an approach significantly distinguished Timurid Shakhrisabz from many contemporary medieval cities that developed primarily through gradual and spontaneous expansion.

The analysis confirms that monumental architectural complexes – including Ak Saray Palace, Dorut Tilovat, and Dorus Saodat – should not be regarded as isolated monuments but as essential components of an integrated urban composition. Their spatial relationships, together with the street network, public squares, irrigation infrastructure, and defensive walls, formed a coherent planning



The Peerian Journal

Open Access | Peer Reviewed

Volume 55 June 2026

Website: www.peerianjournal.com

ISSN (E): 2788-0303

Email: editor@peerianjournal.com

structure reflecting the political ideology, religious values, and social organization of the Timurid Empire.

A major contribution of the present research lies in interpreting Shakhrisabz as an integrated historical urban landscape rather than as a collection of individual architectural monuments. This approach allows a more comprehensive understanding of Timurid urbanism and demonstrates the necessity of preserving not only surviving buildings but also historical planning patterns, visual corridors, archaeological layers, and the traditional spatial organization of the city.

The study further indicates that contemporary urbanization, infrastructure development, and modern construction within the historical centre pose significant challenges to the authenticity and integrity of the historical urban environment. Consequently, future conservation policies should adopt integrated heritage management strategies based on the preservation of both architectural monuments and the historical urban fabric.

The results obtained may contribute to future archaeological investigations, urban heritage management, conservation planning, and the development of scientifically grounded approaches to safeguarding the historical cities of Central Asia. They may also support the implementation of international conservation principles promoted by UNESCO and ICOMOS for the protection of Outstanding Universal Value in historic urban landscapes.

SCIENTIFIC NOVELTY

The scientific novelty of this research consists in the comprehensive interpretation of Timurid Kesh-Shakhrisabz as an integrated urban planning system. Unlike previous studies that have primarily focused on individual architectural monuments, the present research examines the historical city through the interaction of its planning structure, functional zoning, monumental architecture, engineering infrastructure, and historical landscape. This integrated approach provides new perspectives for understanding Timurid urbanism and offers methodological recommendations for the preservation of historical cities under conditions of contemporary urban development

PRACTICAL SIGNIFICANCE

The findings of this study may be applied in the preparation of conservation programmes for historical cities, urban heritage management plans, archaeological documentation, restoration projects, and educational courses devoted to the history of architecture and urban planning. The proposed methodological approach may also support decision-making processes related to the sustainable preservation of the historical environment of Shakhrisabz.

ACKNOWLEDGEMENTS

The author expresses sincere gratitude to colleagues of the Department of Urban Planning and Architecture of the Institute of Art Studies of the Academy of Sciences of the Republic of Uzbekistan for their valuable professional discussions and support during the preparation of this research.

REFERENCES

1. Barthold V.V. 1968. *Turkestan Down to the Mongol Invasion*. London: Luzac & Co.
2. Buryakov, Y. F. (1975). *Historical Topography of the Cities of Central Asia*. Tashkent: Fan.
3. Bogoukhov, A. K. (1983). *Measured Drawings of Traditional Residential Architecture of Shakhrisabz*. Archive of UzNIPIrestavratsiya.



The Peerian Journal

Open Access | Peer Reviewed

Volume 55 June 2026

Website: www.peerianjournal.com

ISSN (E): 2788-0303

Email: editor@peerianjournal.com

4. Bryukhanov, V. A. (1983). Historical and Architectural Survey of the Residential Quarters of Shakhriyabz. Archive of UzNIPrestavratiya.UNESCO. 2000. *Historic Centre of Shakhriyabz*. UNESCO World Heritage Centre.
5. Vinogradov, A. N. (1953). Report on the Kok Gumbaz Mosque in Shakhriyabz (1947–1951). Archive of the Main Scientific and Production Department for the Protection of Cultural Heritage, Ministry of Culture and Sports of the Republic of Uzbekistan. Inventory No. 1492.
6. Voronina, V. L. (1969). Materials on the Vernacular Architecture of Kashkadarya Region. In Central Asian Ethnographic Collection (Vol. 2). Moscow.
7. Golombek L., Wilber D. 1988. *The Timurid Architecture of Iran and Turan*. Princeton University Press.
8. Gilmanova, N. V. (2021). Timurid Architecture in Miniature. Tashkent: Renaissance.
9. Gilmanova, N. V. (2026). Kesh. Tashkent: Ta'lim Nashriyoti.
10. Korchuganov, A. V. (1983). Architectural Research on the Historic Residential Development of Shakhriyabz. Archive of UzNIPrestavratiya.
11. Lunina, S. B., Usmanova, Z. I., Sultanov, H. T., & Dresvyanskaya, G. Y. (1993). Shakhriyabz (Parts I–II). Tashkent: Universitet.
12. Mankovskaya, L. Y. (1979). Architectural Monuments of Kashkadarya. Tashkent: Uzbekistan.
13. Masson, M. E., & Pugachenkova, G. A. (1953). Shakhriyabz under Timur and Ulugh Beg. Proceedings of the Central Asian State University, New Series, Vol. XLIX.
14. Masson, M. E. (1977). Archaeological Investigations of the Kesh Archaeological and Topographical Expedition. In Archaeology of Central Asia. Tashkent.
15. Pugachenkova, G. A., & Rempel, L. I. (1965). History of the Arts of Uzbekistan from Antiquity to the Mid-Nineteenth Century. Moscow: Iskustvo.
16. Pugachenkova, G. A. (1953). Architectural Characteristics of the Monuments of Shakhriyabz. Proceedings of the Central Asian State University.
17. Rtveladze, E. V., Sagdullaev, A. S. (1986). Monuments of Past Centuries. Tashkent: Uzbekistan.
18. Sultanov, H. T., Gilmanova, N. V. (2022). Historical, Architectural and Artistic Heritage of Kashkadarya. Tashkent: Fan va texnologiyalar. ISBN 978-9943-8584-4-2.
19. Hillenbrand R. 1994. *Islamic Architecture: Form, Function and Meaning*. Edinburgh University Press.
20. UNESCO. 2011. *Recommendation on the Historic Urban Landscape*. Paris: UNESCO.
21. ICOMOS. 1964. *International Charter for the Conservation and Restoration of Monuments and Sites (Venice Charter)*.
22. ICOMOS. 2011. *The Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas*.
23. Yakubov Y. 2018. Urban Development of Medieval Shakhriyabz. *Journal of Central Asian Studies*, 25(2), 45–61.