

# Eloboration and Developing Historical Cities of Uzbekistan

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## 1. Introduction

Nowadays the preservation of the structure of historical places and the effective use of historical monuments which have architectural and artistic value, are extremely actual in the reconstruction and modernization of cities around the world. The need for protecting cities such as Memphis, Babylon, Rome, Athens, Paris, London, Vienna, Yerevan, Istanbul, Alexandria, Balkh, Baku, Delhi, Isfahan and others which have been formed from ancient in the world's urban planning, and the need for paying attention to their plan are required in today. In this regard, the neseccity for reconstructing the centers, complexes, shrines, architectural monuments, which have important significance in historical cities, the neseccity for restoring buildings and constructures which are identified in archeological excavations, have been demonstrated.

Identification genetic bases of cities, harmonization historical and modern buildings with each other, restoration historical core - squares, identification of protection zone of monuments, creation of tourist routes, improvement of engineering networks, road infrastructure and others in scientific researches which are devoted to appear and evolutionary development of historical cities, also, preservation and restoration of urban-planning systems which have been formed for centuries, and to adapt and modernize them to modern requirements, have important significance throughout the world. The issues such as supplying the stability of historical cities, researching processes of formation and development of the first cities, new scientific approaches in the history of urban-planning, identifying the plan system of cities and exposing their impact to the modern urban-planning culture, increasing tourism potential of historical areas, effective use of architectural monuments become one of the current tasks.

From the first years of independence, the protection of historical cities and cultural heritage sites in Uzbekistan have risen to the level of state policy. The number of sites of material cultural heritage in our country consists of 7476, 4308 of them are archeological, 2079 of them are architectural, 694 of them are the great art objects and 395 of them are sightseeing places. Currently, the state of generalization of information which are illuminated about the economic, social, military-political and territorial functions of the cities of Uzbekistan, their impact and interdependence needs special analysis. "Another important issue is how many tasks we have before us to restore and reconstruct the historical monuments of our country, to beautify the monuments of our great ancestors" [1]. Several difficulties have been appeared in modernization of settlements when scientific research on complex way by how principles are based for the formation and development trends of historical cities by experts in this field, is not created, the principles of their reconstruction and beautification, as well as the most suitable concepts for adaptation of historical cities to modern requirements are not developed. It is found that in the period of Soviet Union, the history of urban-planning of Uzbekistan was falsified for various reasons, as the result, a number of confusions have been appeared in the field of education, science and architectural planning. For example, the most ancient urban-planning history in Central Asia in the existing encyclopedic literature on the history of architecture, is marked with IV century BC on the example of Jonboz fortress [2]. In 1970, the 2,500th anniversary of Samarkand was celebrated with the help of local scientists and the public attempt. During the years of independence, it was discovered that the city has a history of 2750 years. Also, during the years of independence, the anniversaries of Karshi, Shakhrisabz, Bukhara, Khiva, Termez, Tashkent and Margilan cities were celebrated. Recent research shows that the urban-planning culture of Uzbekistan is even more ancient [3]. One of the urgent tasks of today is to study the traditional formation ways, structure, location and principles of development of the urban planning system, to create their theoretical basis.

## 2. Main Part

The results of the study **of the genesis and evolution of ancient cities** in Central Asia, especially in Uzbekistan, show that the history of ancient cities until the late 30s of the XX th century was mainly studied on the basis of written sources. From the 50s to 60s, 70s and 80s and the beginning of the XXI century, extensive archeological researches were carried out in the region, and new information about the history of ancient cities have being introduced into science.

Many scholars have conducted research works on issues of urban planning of antique period in different years [4].

Initially, most of the cities became residences and settlements. Some of them were formed in front of temples, also as castles or hordes. Craftsmanship was established in the first cities, and later, as a result of the development of trade, trade cities were formed [5, p. 6].

In the period of the Soviet Union, the origin of Central Asian cities was associated with the period of the introduction of European culture - with Alexander the Great, and the ancient period was understood as the development under the influence of Greco-Roman culture. Samarkand was admitted as the oldest city which its 2500th anniversary was celebrated in 1970. During the years of independence, it was identified that the age of Samarkand was equal to 2750 years, and the origin of Karshi and Shakhrisabz was equal to 2700 years. Recent researches show that the oldest city in the territory of Uzbekistan is the fortress Jarqo'ton which appeared in the late Bronze Age, and it is defined that its origin belongs to protocity culture as Sopollitepa which dated back to II millennium BC. Therefore, it is proposed to divide the history of urban planning in the ancient period of Uzbekistan into the following three stages: 1. The first antiquity century (Avesto period) - IX - VI centuries BC; 2. Middle antiquity century (Bactria-Sogdiana urban planning) - IV-II centuries BC; 3. Late antiquity century (Kushan period) - I century BC - IV century AD.

In the middle of II millennium BC, the Bactrian civilization appeared between the Amudarya and the Hindu Kush. This culture spreaded through the Amudarya to Surkhandarya and later to Khorezm. At the end of II millennium, large agricultural settlements were formed in the Fergana Valley. These settlements were expanded over time into agglomerations, and thus the culture of the first cities (the culture of the proto-cities) appeared. Their square or circle plans were considered a symbol of the universe. The temples and palaces were positioned in the centers of the cities.

The Sopollitepa site, which dates back to the XVIII-XIV centuries BC, has a square (82x82 m) perimeter wall. Mesopotamian corridors shaped "G" and "T" bulge outside the wall. It was considered a place to ambush enemies [6]. The outer wall of the Sopollitepa was built in a straight and clear shape. But the devices inside it are messy. This means that external defense walls and internal devices were built at different times. This can also be seen in the difference in the dimensions of the bricks there [7, p. 13, p. 102]. Because it's hard to believe that the people who built the city wall so precisely would build the buildings inside it in such a mess. A.Askarov noted that this monument has something in common with the city of Var type mentioned in the Avesta, but it is not exactly [7, pp. 136-137].

Sources about tent cities and settlements are as follows: According to the writings of Narshahi, [8] "In Bukhara, people initially lived in grasslands and tents. Over time, the number of people increased and devices began to appear. ... These places were not yet cities";

In another source, [9] the following sentences are stated: "The population of Guz, Pecheneg, Kifchah, and Madjgari did not have their own cities, and they lived in the grasslands";

The Spanish ambassador, Rui Gonzalez de Clavijo [10], wrote in his diary: There were wide fields beside

Dilkusho garden, rivers and irrigation ditches flew here. The king ordered that a tent be pitched for him and his wives in this area. ... After the king's tent was pitched, it was clear where and how everyone would set up their tent. ... After three or four days about twenty thousand tents appeared around the tents of the kingdom ”;

According to the writings of K. Nasriddinov and P. Ravshanov [11]: “Kebekhan built a camp for himself on the hill of Zahhoki Moron where was situated 16 km in south of the ruins of Nakhshab (Nasaf), near Karshi railway station in the present-day. Although the place where Kebekhan lived, was initially made up of royal tents, buildings gradually began to appear ”;

In the book of Alp Er Tonga (Afrosiyab) was written [12]: “They are said that places from the borders of China were called Hanju, the main lands, such as Turkestan, were under the rule of his government up to the borders of the time country. The custom of Xirgoh (in the meaning "tent" - T.M.) is one of his inventions. According to Chinese researcher Bao Muping, such tent cities existed in Mongolia until recently.

Based on the above mentioned information, it can be concluded that Sopollitepa was initially formed as a tent city-settlement. Also examples of this type of city can also be found in the settlements of Kozalikir (VII-VI centuries BC), Qalaliqir (IV century BC) in ancient Khorezm. There are 2 parallel internal corridors in Qalaliqir fortress and 3 corridors in Kozalikir. Other findings were not found except them. So we can classify both of these cities as tent city-settlements. In the cities of this type, fortifications served two protective and residential functions.

The oldest sources about the peoples of Central Asia are given in the Avesta. The two major political alliances: the Greater Khorezm and the Kingdom of Bactria existed in Central Asia until this areas were under the rule of the Achaemenid Empire. There are not historical sources on Central Asia in the period of II millennium, so archeological materials are important in illuminating these periods. In this periods, areas which were suitable for farming and have good water resources, had large size. For example, Jarq'oton was 100 hectares in the last quarter of the II millennium BC, Namozgohtepa was 70 hectares in the beginning of the II millennium BC, Shahri-Sokhta was 150 hectares in the second half of the III millennium BC.

Researchers who have studied with the history of the peoples of Central Asia have developed various developmental models of urban processes from the ancient to the Middle Ages. Academician E.V.Rtveladze divides the evolution of urbanization in Bactria and Tokharistan into 5: 1. Ancient urbanisation settlements of the Bronze Age (first half of the II millennium BC - beginning of the I millennium BC); 2. Cities formed in the Early Iron Age (beginning of the I millennium BC - IV century BC); 3. The development of cities in Hellenistic-ancient times (III century BC - III century AD); 4. Cities in transition period (The second half of the III century AD - the first half of the V century AD); 5. New first feudal cities (the second half of the III century AD - beginning of the IX century) [14].

X.Sh.Pulatov divides the urban-planning of ancient Turan (Central Asia) into four major periods: 1. The first period (4 millennium BC - the middle of the VI century BC); 2. The Achaemenid period (558-330 years BC); 3. The first antique period (330 year BC - I century BC); 4. The last ancient period (I-VI centuries AD) [5, p. 24].

B.A. Litvinsky divides the evolution of urban processes in Central Asia into 5 stages: 1. Proto-cities (II millennium BC); 2. Ancient urban settlements (the end of the II millennium BC - the first three centuries of the I millennium BC); 3. Antique cities (VI-IV centuries BC); 4. The dualism of urban-planning and the beginning of the synthesis of Central Asian and Hellenistic cultures (IV-II centuries BC); 5. High-level synthesis of Central Asian-Hellenistic-Indian cultures and the development of ancient cities (I

century BC-III-IV centuries AD) [15]. Here the first 2 stages served as the base for the formation of classical ancient cities in Central Asia in the VI-IV centuries BC.

The concept of the city which was developed by V.V. Bartold is considered very common in Central Asian urbanism. According to the opinion of author, the three-part topography - arc (arc), shahristan (ancient city, residential quarters) and rabod (handicraft sites) are characterized for the cities of the IX-XII centuries [16]. This view is characterized for only feudal cities and is not suitable for the first classical cities.

In defining the concept of "city", historians pay more attention to the size of the area, its structure and the nature of the function it performs. One of the most reliable criteria of ancient cities is its internal structural form.

Yu.A. Zadneprovsky distinguishes 5 different archeological criteria for the cities of ancient Fergana: 1. The settlements had large size; 2. The defense system was developed; 3. The arc was present; 4. Agricultural oases were formed around the center; 5. The settlements were considered centers of handicraft activities and trade (exchange) [17].

V.I. Gulyaev generalizes sources by historical cities and proposes to distinguish 8 archeological attributes: 1. Presence of palace complexes; 2. Presence of monumental temples (religious buildings); 3. Separation of palaces and religious establishments from common dwellings by walls, ditches, etc., and the location of these areas in the visible central part of the settlement; 4. The richness of the "Holy quarters" in terms of monumental sculpture, painting and etc.; 5. The presence of royal tombs and the presence of valuables in them; 6. Presence of monumental art samples; 7. The art of writing - the existence of epigraphy; 8. Quantitative indicators: large area, availability of many accommodation and community facilities, dense population in them and etc. [18].

According to the opinion of many researchers, one of the most important hallmarks of urban qualities is the presence of walls and defenses.

T. Shirinov proposes to divide the stages of urbanization in Central Asia into the following stages: community settlements, proto-cities and the first city. T. Shirinov also cites 9 attributes of the archeological city: 1. Presence of palaces where community leaders or rulers lived; 2. The existence of monumental temples, which are the religious center of the country; 3. The presence of arc surrounded by defensive walls and the location of the houses where the inhabitants of the palace lived; 4. Presence of buildings which the urban population lived in a large area (not less than 3-6 hectares), the location of facilities that served the general public, the concentration of productive forces in this area - handicraft workshops and machines; 5. Presence of highly developed handicraft quarters (pottery, plumbing, textiles, construction, stone and leather processing); 6. Presence of "rich" graves where seals or valuables are found; 7. Radical differences of houses which the population of the city lived and indicate the hierarchy of urban population; 8. Finding items which belong to other cultures and reflect the development of trade; 9. Presence of glyptics, epigraphy and primitive writing forms [13].

As a result of the research, 14 architectural and urban-planning attributes were formed on the basis of above mentioned data which include the first cities: 1. Functional division of the city into arc and urban (shahristan) parts; 2. Presence of fortifications, ditches and gates; 3. The importance of natural relief in the structure of cities: the location of the main part in the highest area; 4. Location close places to rivers; 5. Formation of network of streets: stratification of main wide streets, narrow and closed streets; 6. Existence of area and market which the community gathered; 7. The existence of religious building; 8. Presence of palace building; 9. Presence of dwells; 10. Formation of types of measurements; 11. Improvement of construction methods; 12. Development of construction materials; 13. Presence of

drainage facilities; 14. Existence of cemeteries.

Currently, a number of studies are being conducted to determine which location in the territory of Uzbekistan should be considered as the first example of city. For example, Jarqo'ton which belongs to the II millennium, is interpreted by A.A. Askarov as the first monument of agricultural culture which is suitable to the ancient Eastern civilization, it is interpreted by T.Sh. Shirinov as the first city. This settlement consists of two arcs and the shahristan parts. The arc is located in the northwestern part of the area and has a total area of 3 hectares. It is surrounded by a 1.20-1.50 meter thick defensive wall. On the west side of the arc is located the Jarkoton "Palace of Kings" (42x42 m). Shahristan is located on the northeast, east and south sides of the arc. The Jarqo'ton fire temple (60x44,5 m) was opened and studied in it. The cemetery is located on the south and southwest side of Shahristan. They are separated by a natural cliff. According to our opinion, Jarqo'ton is formed as the first city, giving that this monument corresponds to above mentioned 14 architectural-urban attributes.

The type of proto-cities which formed as settlements around the arc led to the growth of the first cities. In antique period, two- or three-part cities developed in this way around the arc. We can see that in this period, "tent" city-settlements which were mainly surrounded by corridor wall, there were not enough buildings inside, all the buildings on the city stage were rebuilt from tents and dual cities were formed which was crossed main street of the city from the center, administrative, trade, public buildings were located in the bottom, had one gate and square form.

At the beginning of the Hellenistic period, straight rectangular form cities developed along the Amudarya based on the orderly plan of the Greeks. In the III century BC, on the banks of the Amu Darya, the Greco-Bactrian king Demetrius built the city of Demetria (later Dermed, Termed, Termez). This city was a rectangular shape and had 450x120 m measure and was surrounded by a defensive wall. The city of Demetria during the Kushan period became an arc, and the city expanded to 500 acres. The options for the reconstruction of the monument with central courtyard of Qoratepa settlement and the fortress wall of Chingiztepa settlement which were located in this area, were developed in this research. This will help to further expand the tourism potential of our country.

The impact of the Hellenistic period plan can also be seen in the cities of Khorezm. After entering the Greco-Bactrian kingdom in 250-125 years BC, Khorezm adopted the idea of a new urban planning which was taking shape along the Amudarya. In Khorezm the tradition of orderly planned cities and settlements was established in III century BC - III century AD. From the II century BC, the nomadic and settled tribes of Fergana formed the kingdom of Dovon. It consisted of about 70 large and small cities, fortresses, and feudal castles. In antique period, a number of cities were formed in the Surkhandarya region. In particular, Zartepa, Kuznaqala, Dalvarzintepa and others. Relief-dependent cities had also been formed in this area. One of such cities is Kampirtepa (the III century BC - III century AD).

From VI century BC to the III century AD, the Mingorik agricultural town where consisted of an arc, a palace-temple complex and a rectangular shahristan, developed in the south of modern Tashkent.

All of them give evidence that there were many small proto-cities on the border of antique period and the Middle Ages, but that they were actively expanded into ring towns. The two ring cities led to the division of the major Islamic cities into internal (rabodi dohil) and external (rabodi xorij) parts.

In general, the Late Bronze and Early Iron Ages are considered one of the most important turning points in the history of the peoples of Central Asia. The urban culture began to form in these areas. In particular, the Sopollitepa monument was formed as a protocity, and the Jarqo'ton monument was formed as the first example of a city. Thus, there are more evidences to support our hypothesis that the process of urbanization in Central Asia dated back before 3,500 years. There are three bases and sources for this: 1.

In the Avesto which is considered the holy book of fire-worshippers, is written the construction of a fortress in the form of "var" or "vara". Scholars understand this castle as a city. Although the 2700th anniversary of the creation of the Avesto is celebrated, most scholars connect that it appeared in the II millennium BC. Thus, the "var" which is praised in the Avesta - the city is also associated with more than three thousand years of history; 2. The Sopollitepa archeological monument which dated back to the II millennium, forms such a perfect castle in measurement 82x82 m, that it can be assumed that the close generations of the community who built it, created a high urban culture; 3. Abu Rayhan Beruni in his work "Monuments of ancient peoples (Osor ul-Baqiya)" wrote that the peoples of ancient Khorezm formed their state 980 years before the invasion of Alexander the Great, they had the state language, script and all other attributes of statehood. If we take into account that in those days the states were in the form of city-state, the history of Khorezm urban planning can date back to about XIV century BC. It can be concluded that it dates back to the XIV century.

**Toponymic features of cities and stages of development in the Middle Ages.** In the III-IV centuries the Kushan empire collapsed. Sparks of Islamic architecture began to appear in Hellenistic hearths along the Amudarya. In the middle of the V century, the eastern Iranian Hephthalites state stabilized in Central Asia. Agriculture, handicrafts and trade flourished. In the early Middle Ages, the importance of castles-fortresses increased. The kushk (palace) which was located in the territory of Northern Termez and belonged to the V-VI centuries, was built on a hill 10 m high, the plan was planned in the form of a Mesopotamian corridor. Access to the kushk was carried out by a lifting bridge from a tower next to it. The Teshik fortress in Khorezm which belonged to the VI-VII centuries, was built on a rectangular defensive wall. It was accessed from a separate tower by a suspension bridge. The kushk near Samarkand which belonged to VII century, was designed as a distraction corridors for enemies [6, p. 11-13]. Yakkaparon and Kushparson palaces were also built in the territory of ancient Khorezm in these periods. Aktepa farmers kushk was built in the VII-VIII centuries, on the banks of the Karakamysk River in the north-western part of Tashkent.

In the V-IX centuries, most of the ancient cities were rebuilt out of decline. Along the caravan routes, new cities appeared. Their structure was different from the previous one. As a result of the development of cities, rabods were formed around them [5, pp. 86-87]. Proto-cities were slowly turned into cities, and castles into arc.

In the second half of the VI century, the kushk above the market grew to the level of the Bukhara arc. Along with the kushk, the Bukhara Shahrstan which was based on the Hellenistic rectangular plan, was built. In this period, the arc in Bukhara (kohandiz) and the city (shahrstan) became parts of the city which was intended for life.

From the middle of the VII century to the second half of the VIII century, Central Asia was conquered by the Arabs. After that, new types of cities began to develop. Arabic terms were added to Persian terms: such as city (medina), suburban (rabod). At this time, not only new urban types were formed, but also the suburbs were divided into internal and external parts. They were called darun / dohil and berun / xorij in Persian and Arabic languages, respectively.

According to the classification of cities formed in the early Middle Ages in the territory of present Uzbekistan, multi-layered cities also existed in the Sogd and Fergana regions. In the VI-VIII centuries there were 6 large and about 100 small cities in Fergana. Bukhara and Kesh were divided into four by main streets according to the ancient tradition.

Bukhara city achieved firstly political and cultural Renaissance in Central Asia in the IX-X centuries. The Arab geographers Ibn Khordobek and Qadami, Istakhri and Hawqal, Maqdisi and others who lived at that time, left excellent written information about the cities. In general, one of the characteristic features of the cities of this period was the presence of dense structures within the boundaries of the four-part or radial plans of the cities.

The cities were entered through gates. For example, in the XI-XII centuries, most cities expanded territorially and had 12 entrance gates.

In the IX-XII centuries, long walls were built around various oases and cities. These include the kampirak

wall surrounding the Bukhara oasis, the devori qiyomat (qiyomat wall) and the devori ko'ndalang long walls in Samarkand, the long defensive wall which was built along the Chirchik River, and the long walls in Termez city.

In 1220-1221, as a result of the Mongol invasion, the cities were destroyed. The Mongols destroyed the Amudarya dam and washed away Urgench. By the order of Genghis Khan, the wall of outer rabod which had rectangular form and dated back to the XI century in Samarkand, was demolished. Nevertheless, over time, life returned to the cities of Movarounnahr again. Andijan which was destroyed by the Mongols, was rebuilt by Genghis Khan's grandson Kaydukhan at the end of the XIII century.

In the 1330s, pre-Mongol urban culture and architectural monuments were restored. In 1333, Samarkand was "one of the largest and most beautiful cities in the world" despite its still crumbling walls, as the Moroccan traveler Ibn Battuta emphasized [19]. Urgench became the center of the Muslim world in the first half of the XIV century. The city expanded to the north, its area consisted of 430 hectares.

In the XII-XIV centuries, 3 types of economic cities were formed: cities with small markets, cities with large markets, as well as large cities with trade routes [6].

It is known that during the reign of Amir Temur creative works were carried out intensively. Amir Temur ordered to build a new arc in the west of Hisar. He also ordered the construction of a covered trade street facing south from the northern Ohanin Gate. In this period, the main complex objects of Samarkand were located on the north-south axis: Amir Temur Mosque and Bibikhanum Mausoleum, Registan Square and Amir Temur Mausoleum are clear examples of this. From this it can be concluded that certain urban planning rules were followed during the Timurids.

The rectangular shape of the cities of Bukhara, Herat, Merv, Shakhrisabz, Karshi, Baylakan, Andijan, Kokand, Tashkent, Shohrukhiya gives evidence to the continuation of centuries-old architectural traditions of Central Asia in the urban-planning of the Timurid period. In our opinion, when Amir Temur ascended the throne of Samarkand, it was formed in a straight rectangular scheme, like the cities mentioned above. Later, the sahibkiran expanded the city and ordered to build a hisar wall near the circle. Outside the city, Amir Temur had such gardens and charbags (country house) such as Naqshi Jahon Garden, Bog'i Baland, Bog'i Shamol, Bog'i Behisht, Bog'i Chinor, Bog'i Dilkusho, Bog'i Bo'ldu, Bog'i Zog'on, Bog'i Amirzoda Shohruh, Bog'i Davlatabad, and Bog'i Jahonnamo. Graphic restoration works of these gardens and their kushk-palaces have been carried out by Pugachenkova G.A., Urolov A.S., Nozilov D.A., Rakhimov K.J., Sodikova S.N., Mamatmusaev T.Sh., Gilmanova N.V. and others.

"The structure of the cities of Samarkand, Shakhrisabz and Herat shows that during the Timurids period the cities had towers and gates, were surrounded by strong defensive walls. Each city consisted of its own arc and hisar, and its central part, at the intersection of the streets, was separated by closed trade domes - chorsu. While the Friday mosques formed the center with the city market, the squares in front of the main madrassa represented a second center of the city. Craftsmen, according to the craft profession, were divided the population into strata, as a result urban areas such as mahalla, daha were appeared. The main streets consisted of craft and trade counters. The narrow streets formed places which the people could go and stop, through squares and pools" - writes M.K. Akhmedov [20].

Historic cities had a main square called Registan. For example, the Registan Square in Samarkand was formed in the XV century and took on its present appearance in the XVII century. Registan squares existed in many historical cities of Central Asia.

In the reign of the Temurids, there were 6 entrance gates in Samarkand, 11 in Bukhara, 12 in Tashkent, 4 in Shakhrisabz, 5 in Merv, and 6 in Eski Termez. In addition to the gates, the cities also had gates such as darb, qopqa, and bob. They were smaller than the gate and connected the city with the inhabitants of the locality.

The arc which is one of the major parts of the city, is the part which is primary functional necessity in the city, and is also used under the names of diz, kohandiz, qal'a, o'rda; Shahrستان is the second most important part of the city, and is used under the names Hisor and Madina (Madina doxil); rabod is a part of the suburbs where the devices are less common, and is also used under names madina, xorij, surdiqat. In addition to these large parts, there are also small parts (large and small subdivisions) in the cities, they are called by different names in different regions:

№	City name	The name of a large division	The name of a small division
1	Andijon	district	mahalla
2	Buxoro	jarib	guzar
3	Margilan	district	mahalla
4	Samarkand	continent	guzar
5	Tashkent	district	mahalla
6	Khiva	elot	mosque-tribe
7	Kokand	district	mahalla

In the early Middle Ages, cities fell into decline as a result of the fall of the Kushan's Empire. Therefore, the importance of the construction of kushk-fortresses increased. By the V and VI centuries, the proto-cities were slowly turned into cities, and the kushk-fortresses into arc of city. In the Middle Ages, cities consisted of three parts (arc, shahrستان, and rabod), and in large cities each was surrounded by separate fortifications.

In the period of Amir Temur and the Timurids, cities were planned in a rectangular shape. The main streets which came from four directions, divided the city into four parts. In the reign of the Timurids, the rabod of Samarkand city was especially developed and its function was expanded. By this period, not only gardens, but also many kushks and scientific facilities had been built in the rabods. The first architectural views of Chilsutun, Bog'i Bo'ldi and Bog'i Davlatabad kushk-palaces have been graphically restored in this research .

In general, the role of cities in the political, socio-economic and cultural life of society is at different levels, it is often characterized by the formation and development of the center in areas with favorable geographical and topographic conditions. Such cities include Samarkand, Bukhara, Khiva, Tashkent, Karshi, and later Kokand which are the largest trade, economic, and cultural centers of the Middle Ages. The convenient location of cities on caravan routes played an important role in turning into their transit commercial centers and economic development.

**Changes in historical cities in the XVI-early XX centuries.** In the first half of the XVI century, long wars for government in Movarounnahr, political depression had a major impact on the country's economy. Only in the second half of the XVI century in Movarounnahr independent states - Bukhara and Khiva khanates were formed and began to recover themselves. The decline of international trade in the first half of the XVIII century, civil wars, and the disintegration of nomadic tribes put the government and order in Central Asia in a critical state. Later, in the second half of the XVIII century, foreign trade began to revive. Thus, in 1763, the Bukhara, Khiva and Kokand khanates were formed.

As Europe opened its trade route across the Atlantic, the Great Silk Road went down in history. In this way, the Shaybanids strengthened economic and cultural ties with Russia and India.

During the khanate, cities developed and mosques, madrasas, khanaqahs, baths, caravansarais, hospitals and other types of buildings were built. In 1557-1598, Abdullakhan II strengthened the Shaybanids dynasty around Bukhara. Thus, Bukhara experienced development after Samanids (IX-X centuries) and Karakhanids (X-XI centuries) dynasty. In urban planning of this period, the ideas of complexity came to



the leading role.

From the end of the XVI century to the first half of the XIX century, Bukhara had a city wall about 10 km away, it was built of raw bricks and straw. The gates were made of baked brick [21].

From the XVI century, Khiva was repeatedly declared the capital of the khanate. At the beginning of the XVII century, during the reign of Arab Muhammad (1602-1623 years), when relative political stability was established in Khorezm, Khiva really became the capital city of the state. Construction works were expanded. Khiva was especially developed in the XIX century. Due to the expansion and strengthening of the Khiva Khanate, the pace of construction at Ichankal'a (Fortress) and Dishankal'a (Fortress) accelerated.

In the period of the Kokand khanates (1709-1876), the city of Kokand became the largest political, economic and cultural center of Central Asia. During the reign of Umarm Khan, the city was called Kokand Latif (beautiful, charming and elegant city). Architecture, handicrafts, science, and trade extremely. Urban-planning culture was shaped in the traditional late medieval urban style, the Shahristan which had a single common center, had a radial plan and surrounded by a defensive wall.

In the late Middle Ages, the territory of cities was divided into different parts, the number of them varied in different parts of Central Asia according to some authors. For example, Samarkand and Margilan cities were divided into four parts [22] and Shakhrisabz was divided into two parts [23]. The city of Kokand was divided into 12 parts according to the city's 12 gates [24]. Tashkent was divided into four parts namely dahas - they were Ko'kcha, Sebzor, Shaykhantahur, and Beshyog'och[25].

In the second half of the XIX century, Central Asia, especially Uzbekistan, also clashed with the most advanced European and Russian cultures of that time. Russian architects adapted European urban models to the Turkestan region, and cities were formed in a radial-circular plan.

Russian cities were originally planned within the castle wall and gradually expanded. In Tashkent, the Russian city was planned on the basis of urban planning legislation, namely, a walking radius of 1,500 m [6]. Such "new cities" appeared on the outskirts of some ancient cities, suburbs, at a certain distance from them. In Samarkand and Tashkent, the first "new cities" were built instead of demolished ancient fortresses [5, p. 249]. Such cities which consisted of old and new parts, were later called "two-part" or "two-structured" cities. In the cities of Samarkand and Tashkent, the new city were formed on a three-light plan in an empty area.

In 1865, a Russian fortress was built in Tashkent on the basis of Pisarevsky's project about 700 m south of the Orda region. According to Pisarevsky's project in 1866, the Russian city was to develop in a radial-circular from the fortress towards south. However, the Turkestan Governor-General's goal which Tashkent was to be center, did not allow the project to materialize. Later, according to the project of M. Kolesnikov in 1866-1869, the city was formed in a chess-like structure towards east, on the basis of the Makarov project in 1870 it was in a semi-radial-circular plan [6, 26].

In 1876, the Fergana Valley was established on the site of the Kokand Khanate. It included large trade and handicraft centers such as Kokand, Margilan, Andijan, Namangan, Chust and Osh. At the end of the XIX century, the old cities of Fergana had a radial-ring structure typical of the cities of Turkestan in the late Middle Ages.

In Kokand, a new city was formed in the south-western part of the old part. In 1876, a large Russian rectangular fortress was built on the territory of Khudoyorkhan Palace. In 1890, according to the suggestion of the city architect M. Mauer, Rozenbahovsky (now Istiqlol) Street was continued to the

Aravan Gate which had fewer buildings than the city center. Thus the European part of the city began to develop from the center to the west. As a result of passed railway through Kokand, another wide street, Skobelovsky Avenue (now Turon), was built perpendicular to Rozenbahovsky Street. This street led directly to the train station. In this way, a new T-shaped city developed [27].

In 1876, the central city of the oasis was moved from Kokand to Margilan. A Russian fortress was built near the southern wall of the historic city. However, in 1877, after experts studied the climate and water of this area and found it was unsuitable, the construction of the city was moved to the city of New Margilan which was situated in 8 km south. Thus, Old Margilan saved its historical and traditional appearance.

The city of New Margilan was formed in the structure of light streets which was situated in the south-eastern part of the Russian castle and ring streets which connected them.

In Andijan, the Russian military garrison were temporarily housed in the Khan's Horde and Gultoba Fortress which were located in the center of the old city. In 1877, a Russian fortress was built in the south-eastern part of the old city. Later, the Russian city was built in a radial-circular plan between the castle and the old city. A wide street was passed from the Russian fortress to the Gultoba fortress in order to connect the old and new cities. The old and new cities were separated by railway. In 1878, the construction of Russian city began in Namangan. The new city was formed in the northern part of the old city. In the new city, five radial streets and four ring streets were passed through the fortress [28].

In Chust, the new city developed on the territory of the old city, as in new city Kokand, and had a "T-shaped" form [27].

In these periods, we can see the formation of new T-shaped parts of the city in the cities of the Fergana Valley (Kokand and Chust) and new cities in the radial-ring scheme (New Margilan and Andijan). The cities of Bukhara and Khiva remained unchanged in this period.

In the early of XX century, the construction of railway which connected Turkestan with Russia, gave a great impetus to the development of new cities.

In general, the cities of the khanate period in Central Asia are based on the planned solution of the cities of the earlier period. By this time, some of the complexes which were built in the Timurids period, had received their final appearance. Registan Square in Samarkand and others are a clear example of this.

Between the period of the Timurids and Tsarist Russia, the cities saved their historical territory and did not expand. Cities were protected by fortifications until the second half of the XIX century. After the Russians invaded Central Asia, they demolished the city arc and fortress and built Russian fortresses. These castles were formed at the territory of arc or near the arc. In some cities the Russian castle was positioned in an existing palace or administration building. Thus, for new cities, the Russian fortress is the core, around which the city expands. In most cities, Russian cities are formed in a three-beam pattern and in a radial-ring scheme.

The development of urban culture in Uzbekistan in the late of XIX and early XX centuries was mainly limited to the creation of modern infrastructure in "new" areas where the Russian officials, the military and the population lived, while the "old" areas where the local population lived, remained at the level of XVI-XIX centuries. During this period, urban culture and urban-planning developed within the framework of colonial interests, and the interests of the local population were not taken into account. This situation had led to the uneven development of urban culture. In the cities of this period, two different landscapes were seen side by side that - new cities with modern infrastructure for the Russian population,

as well as cities where the local population lived and outdated in the appearance of the last century. Straight and wide streets were passed in the new cities. They were planned in a light form which was spreaded from a single core according to the security point of view.

The construction of railways also had a major impact on the structure of cities in the early XX century. In particular, industrial zones were developed in the railway areas of the cities. This aspect has still been seen in the structure of cities in today.

**Improving the process of reconstruction of historic cities.** The process of development of urban-planning patterns located in the territory of Uzbekistan from ancient times to the present can be divided into five types: 1. "Tent" cities which were surrounded by a corridor wall, had without enough buildings inside, all buildings on the city stage restored from tents (in some sources, cities in the form of "var"); 2. Dual cities in the form of a rectangle with one gate which the main street of the city crossed from the center, in the city network were located administrative, commercial, public buildings; 3. Three-part cities which consisted of arces, shahristans, and rabads; 4. Two-structured cities which consisted of "Old" and "New" parts; 5. Cities which have been modernized as a result of technical progress.

Cities had concentric, sectoral, and multi-core development models. As the result of expansion of cities, they passed from one type to another. The area of cities was also directly related to the type of pack animal. For example, historic cities had 4-5 km wide in measurement. This took into account the optimal time for a person to walk from one end of the city to the center. In the XIX-XX centuries, the area of cities also expanded with the development of pack animal species. Thus, the territory of modern cities has now expanded by 20-30 km.

It has great importance to analyze the essence of the evolutionary changes in the process of emergence, formation and development of these regions before the implementation of projects for the reconstruction of historic cities. At the same time, it is expedient to analyze the two main aspects of historical cities in a complex way, distinguishing them: such as stem and weaving.

Many cities in our country have a long history. Nowadays the life has being still continued in many of these cities and new modern buildings have being built. This process have become more widespread, especially during the years of independence. There are also ancient buildings and structures which have different historical and artistic value in such areas. In modern conditions, some of them will be preserved, while ancient buildings and structures which have not value, will be demolished and built new buildings instead of them. The need to renovate historical streets and squares will be appeared in the process of changing the architectural appearance of historical places. Because they do not correspond the parameters of modern requirements [29].

Constant dynamic processes, namely, changes have occured in the city. Control of the spatial development of cities has existed since the emergence of ancient cities. Prior to the Industrial Revolution, cities were protected by defensive walls. Later green rings appeared.

In the process of development (reconstruction) of historic cities, the three main conditions are seen :

1. The city moves from one area to another, to a nearby area (for example, Tashkent in ancient (Shosh) and early medieval centuries (Min o'rik apricots));
2. The plan system will be changed in one part of the city (for example, the south-western part of Kokand (Russian city));
3. A new territory is added to the city in bordering area (Tashkent, Samarkand in the second half of the

XIX century) [29].

Changes in the life of the cities (or their parts) can take place mainly as a process in four forms: the process of urban expansion; the process of improving urban qualities; the process of moving a city from one place to another; the decline of the city (or part of it). Reconstruction of the architectural and artistic environment of the city should be carried out in a comprehensive manner. In this case, the ancient center of the city should be considered as a historical heritage, and it is desirable to preserve it as much as possible. One of the main tasks in reconstruction projects is to take into account the engineering sector. In modern reconstruction, it is important to preserve the architectural heritage, to treat their protected areas with care [30].

In the form of reconstructed areas, the originality of the facilities of historical city centers should be preserved. In the reconstruction of the historic city center, it is expedient to consider, first of all, the production objects as the main building to be reconstructed. Then there will be an opportunity to expand the beautification, recreation areas and transport construction on the site of production objects in historic areas. This will definitely improve the ecological environment of the region and increase tourism opportunities.

Reconstruction and beautification works of historical areas of the city should be solved as a systemic task which includes the followings: [31]

development of long-term master plans of historical cities for the effective and systematic implementation of architectural and construction projects;

identification of ways of accounting, evaluation and effective use of cultural heritage sites;

the use of traditional methods and forms in the placement of modern objects in historical areas.

An important classification features of the areas to be reconstructed are considered their location in the urban area. According to the rule, three main areas can be distinguished: central, suburban and middle part of city. It should also be noted that the areas are located close to transport magistral and streets.

The most branched classification of regions is considered their spatial-planning structure. In particular, depending on the floor of the area (low-storey, medium-storey, multi-storey); depending on density (extensive, in high density); depending on the construction of the capital (in emergency, obsolete, valid, and etc.); characterized by planned organization and level of beautification.

The strategic goal of the reconstruction of any region is to create conditions for environmental security and quality of life, preservation of cultural heritage, as well as to create sustainable economic development.

Historic cities can be in different planning structures: free, rectangular, radial, radiant, mixed and other plans. Therefore, the zones can be reconstructed according to the following aspects: depending on the period of construction; depending on the historical and cultural value; depending on its location in the city; depending on spatial-planning parameters; depending on the functional significance; depending on socio-demographic characteristics.

Nowadays, the transport system in modern cities remains a factor in forming cities. Many historic city plans have several aspects that have become a shortcoming of the modern city [31]:

1. In the scheme of historic cities, all modes of transport move through the center. This causes

congestion in this area;

2. There is not clear differentiation, namely, hierarchy of the street system in cities. Lack of parking for transports;
3. The intersection of intensively moving streets through different levels is insufficient. The traffic flow is not completely separated from pedestrians;
4. Houses near main streets are not fully protected from noise, gas and dust.

Practice shows that it is expedient the reconstruction of the architectural and artistic environment of the city center should be carried out in a comprehensive manner. In this case, the center should be considered as a historical heritage, and it is better to keep it as independent as possible. One of the main tasks in reconstruction projects is to take into account the engineering sector. In modern reconstruction, it is important to preserve the architectural heritage, to treat their protected areas with care. Due to the dense facilities in the city centers, the main attention should be focused on solving the problem of their environmental condition.

Projecting problems in the reconstruction of historical mahallas can arise from the following situations [29]:

in case of necessity to establish a nature reserve;

in case which historic streets need to be widened;

in case of reconstruction of historical complexes and expansion of their territories;

in case of demolition of the mahalla and creation of a new mahalla in its place;

in case of necessity to destroy the mahalla and to build new mahalla.

The most difficult aspect of reconstruction works of mahallas is their social aspect. This aspect is also reflected in the issue of the integrity of historical mahallas. Of course, the best solution is to preserve historical mahallas as much original as possible.

Nowadays, there are a number of "transportation problems" in the reconstruction of historic cities. These include improving public transport, parking, street systems and private transportation systems and others. These problems are complicated the development conditions of cities. Traffic in cities largely depends on its planning structure, the density of streets, the distances between crossroads, the complexity of transport nodes. The city plan determines the speed of traffic, their conductivity capacity, the level of traffic safety and other important indicators.

It is also necessary to exempt the streets passing through the city center from the status of streets where only cars pass. For example, it is expedient to turn the part of A. Navai Street from Khadra Square to the territory of Orda into alley for pedestrians and people. If this work is done, the cultural buildings in the area: the National Academic Drama Theater of Uzbekistan, A. Navai Museum of Art and Literature, A. Navai Palace of Arts, Pakhtakor Stadium, Shaykhantahur complex, comfortable recreation areas for people around the houses which were built in the middle of XX century, will be created. The city's tourism potential would have been further enhanced, as well as having positive results in terms of ecology and noise. One of the urgent tasks of today is to conduct such research in a comprehensive manner in historic cities, to select the most optimal and effective ways of reconstruction of historical cities.

In general, it is required to give most important significance to architectural monuments or complexes, especially located in the city center for the correct solution of the project of reconstruction of historical areas. Because they may be "holding" the whole city in terms of composition. Nowadays, there is a need to explore all aspects of the architectural and urban-planning heritage which have not yet been fully disclosed, and to develop scientific and methodological measures and recommendations which should be applied to them.

When projecting reconstruction of cities, it is necessary to conduct research works and work on the basis of its results. It is expedient to use architectural and urban-planning monuments in accordance with their historical, artistic, ideological and other values. It also is required a comprehensive solution of reconstruction projects in historic cities throughout the city.

### 3. Conclusion

As a result of research on theme "Formation and development of historical cities of Uzbekistan" concluded the following conclusions:

1. In the Bronze Age, traditional agricultural oases and irrigation systems were formed in the south of Central Asia and adjacent areas. This led to the formation of proto-cities (Sopollitepa) and the first city sample (Jarqo'ton).
2. The Late Bronze and Early Iron Ages were periods of significant upheavals in the history of the peoples of Central Asia. The beginning of the process of urbanization in this area was considered antique period for a long times and so far large archeological monuments of the Early Iron Age have not been given attention. Among them are Kyzyltepa (Northern Bactria), Yerkurgan (Sogd), Dalvarzin (Fergana) and others where were located in the territory of present Uzbekistan. They had a large size, like the structure of classical cities, well-developed defensive structures, monumental architecture, arcs, and cause to form subsequent cities.
3. It is suggested that the culture of urban-planning began to form in the territory of Uzbekistan in the middle of the II millennium BC on the basis of Beruni's written sources, ideas about urban-planning in the Avesto, examples of protocities in archeological sources.
4. Before the emergence of the city, firstly fortifications were built in terms of security reasons. This aspect is also used today in the construction of modern buildings, namely, the construction site is initially enclosed. After the creation of the safe zone, buildings were gradually built in these areas and cities were formed. These areas initially had light facilities which were restored from the tent. In the early settlements, fortifications were used not only for protection but also as dwellings for living. Sopollitepa, Kozalikir and Qalaliqir can be sample for it.
5. Historical cities were formed in such structures as tented (ancient period), dual (antique periods), two- or three-parts (antique and medieval centuries), two-structured (second half of the XIX century). Cities had expanded territorially over time and moved from one structure to another. Cities in ancient and antique periods were developed mainly concentric, were developed sectoral in the Middle Ages, and from the second half of the XIX century in a multi-core way.
6. When the fortifications of the ancient cities were demolished, ring-shaped streets appeared instead of them. Also, the "long walls" outside the city wall marked the directions of modern roads around the city. For example, the "Kampirak wall" which protected the Tashkent and Bukhara oases, the "Devori qiyomat" and the "Devori ko'ndalang" which protected the Samarkand oasis, are the sample for them. The directions of the ancient roads were noted in the historical topography of the cities by the city gates and qopqas (small gate). The streets which passed through the city center and gates and continued outside the

city were considered the main streets. Typically, the location of gates was reflected as crossroads in modern urban topography.

7. Markets played an important role in the formation of cities. In the early Middle Ages, markets appeared outside the city near the gate. By the Middle Ages, large markets developed in the center of the city - in the form of chorsu, small markets developed near the city gates.

8. In the structure of medieval cities, the western side had great importance from the world side. In large cities such as Samarkand, Bukhara and Khiva, the location of the territory of arc in the west derived from the idea of comparing them to a sacred place - Mecca.

9. The structure of the cities of the Timurids period was determined by defensive walls, gates, squares, complexes, mahallas, streets, neighborhoods, dwellings, administrative-daily buildings, irrigation systems, gardens and streets in axis direction form. According to the structural structure of the cities, it consisted of 3 parts: arces, fortresses and rabads, they became constant order in this period.

10. In the reign of Mirzo Ulugbek, the city of Samarkand was especially developed and its function was expanded. By this time, not only gardens and commercial buildings, but also many kushks and scientific buildings began to be built in the rabods.

11. The common city center, district centers and mahalla centers were formed within the structure of historical cities, depending on their function. The common city center was usually located in the geometric center of the city and was functionally comprehensive (social, commercial, ideological). The administrative-defense structures and socio-political areas of the city had a special place among the historical centers. In general, cities consisted of arc, shahristan; Shahristans: registan, chorsu, rasta (counter), mahalla, chakar, kalandarkhona and other parts.

12. In most historic cities, the Registan Square was considered an important core of the city. The Registan Square in Samarkand consists of three madrasas, it is clearly defined in terms of volume and space. There were also registans in Karshi, Shakhrisabz, Tashkent, Andijan and Namangan. Registan which was located in Bukhara between the Ark and Bolohovuz, is currently not expressed in terms of architectural urban-planning. Reconstruction of the registan squares of historical cities in one degree or another is considered one of the current actual issues.

13. Ensembles which consisted of several buildings, had the great importance in the cities. These complexes were considered the dominant structures, they marked the structure of the city. The trade counters were formed on the main streets of the city from the gates of the city or on the streets close to the central markets. These rastas (counters) were considered the private property.

14. After the Russians invaded Central Asia in the second half of the XIX century, they first demolished the city arc and fortification and built Russian fortresses. These fortresses were built places which instead of arc or near the arc. In some cities (Kokand and Chust) the Russian fortress was positioned in existed palace or administrative buildings. Thus, the Russian fortress was considered the core for new cities, and the cities around it were expanded. In most areas, Russian cities were formed in a three-light form, in a radial-circular scheme, and were located in the area which was close to the old cities.

15. Nowadays, there are great challenges in preserving and restoring the environment of historic cities. The construction of wide roads for modern transport systems in historic cities causes many problems. The wide streets which passed through the historic city centers, give only them the status of a traffic-road. Therefore,, it is proposed to narrow the streets in the central part of the ancient areas or turn them into parks in the development of perspective master projects of historic cities.

16. In the reconstruction of historic cities it is recommended to take into account the laws and models of their emergence, formation and development.

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