

Construction Project Of Karmana Raboti-Malik Celebration - Reconstruction, Living Importance

Savriev Jasur Fakhridinovich

Independent researcher



Abstract – Karmana has long been mentioned in the historical writings of historians as the main trade center on the Great Silk Road. The article provides information about the history of the construction of the Raboti of Malik Sardoba, when sardobas actually appeared, and what are the main reasons, the historical appearance of Karman in the environment of that period, artificial water supply networks, sewerage, depending on the built sardobas. After gaining independence, in construction, attention was paid to preserving the appearance of artificial hydraulic structures, cisterns, repair, conservation, which reflects the state of the time.

Keywords – Cistern, Ceramic Pipe, Sewerage, Artificial Water Structure, Pool, Ditch, Saturated Waters, River Water, Wooden Cistern, Mixture, Sheep Milk Mixture, Aqueduct, Stone Nursery.

I. INTRODUCTION

Preservation and protection of historical and cultural monuments in Uzbekistan is one of the important priorities of state policy. In particular, during the years of independence, a number of architectural monuments of different historical periods were reconstructed and creative work was carried out. The history of the caravanserai, including the Raboti Malik caravanserai in Navoi, the period of reconstruction, the study of its current state, the restoration of its original appearance on the basis of historical data, arming the youth with history, pride in ancestral heritage, inheritance plays an important role in conducting educational work on the basis of the principles of The establishment of a well-equipped tourist base in the caravanserai is also important in the search for ways to turn Uzbekistan into an important historical object for tourism, which is an important factor in ensuring economic development.

II. LITERATURE REVIEW

For centuries, the land of Uzbekistan, as the central link of the Great Silk Road, has been the center of active trade, economic, spiritual and cultural ties between East and West. The development of the Central Asian region since ancient times is inextricably linked with the Great Silk Road. In particular, from the 2nd century BC, trade and cultural ties between China and the historical and cultural regions of Central Asia developed. As the caravan route developed, so did trade and cultural ties. Silkworms came to Fergana, Sogdiana and Baqtria. The interaction of Eastern and Western cultures is also growing. Many cultural similarities in the development of nations are due to this. Many caravanserais, cisterns, and cities were built along the Great Silk Road. Traders on this route often did not reach the end of the road. Because Central Asia was located in the middle of this road, traders used to sell their goods and buy local products in Khorezm, Samarkand, Termez, Bukhara and other regions. In the Middle Ages, there were many imported products in the markets of Central Asia, and today the findings of archeological excavations in the ancient cities and settlements along the Silk Road prove our point.

The Great Silk Road, which appeared in the 2nd century BC and lasted until the 16th century AD, was of great importance in the history of large-scale cultural and economic ties between the peoples of the East and the West. The First President of the Republic of Uzbekistan Islam Karimov commented on the importance of the Great Silk Road: "The history and culture of our people are ancient. The Great Silk Road passed through our country, through its beautiful cities of Samarkand, Bukhara, Khiva, Tashkent, Fergana. The road served as a reliable cultural and trade bridge between Asia and Europe. In this way, the cultures of the various ancient peoples who came in contact were enriched, and mutual peace and prosperity flourished. The regions of Uzbekistan are located at the crossroads of this road, which is visited by traders, artisans, scientists and architects from different countries". As the well-known scientist A. Ibragimov noted: "Trade is an honorable profession, trade caravans are considered to be the beacons of peace, the means of spreading and exchanging culture between countries and peoples. Books were considered the most valuable thing in trade caravans, valued more than gold. That is why the Great Silk Road can be called the Great Enlightenment".

III. ANALYSIS

The article discusses the origins of the cisterns, an important source that connects the Great Silk Road. Archaeologists have discovered that the oldest cistern in Central Asia was built during the reign of the Kushans. One of the oldest cisterns in the territory of northern Afghanistan (Baqtria), especially around the ancient city of Dilbarchin (Dilbarjin).

Although trade, especially international trade, flourished in the early Middle Ages (V-VII centuries), the tombs of this period have not yet been recorded by archaeologists.

A sardoba is a domed pool built specifically to collect and store water in scarce areas. According to another source, the word Sardoba consists of two stems: "sard" - cold, cool, wet and "ob" - water. The word sardoba means a cold cave, an ice house, a "cool room". The sardoba is designed to store water and was built in Central Asia and other countries in the East. They were built not only along major trade routes, but also in villages and large cities, and served to alleviate the shortage of drinking water. The appearance of the cisterns is reminiscent of modern cisterns. The walls of the cistern are cylindrical, 12-13 meters in diameter, 10-15 meters deep, and the surface of the pool is level with the ground.

The dome of the sardoba is made of high-quality bricks and plaster, with a hole in the top, around which there are holes for water to enter the pool. The entrance to the cistern also has a door, the front of which is fenced to keep the water clean. There is a watering trough for cattle near the cisterns, and water is poured from the pool through a special ditch. Some cisterns also had rooms for mirabs to monitor and clean them. The use of sardoba water had its own rules. A bucket was set up, tied to a rope, and then drained. The bucket is made of gujum or black willow twigs by special processing. With the onset of autumn and the onset of rainy days, the Sardoba is cleared of weeds. The waterway has been landscaped and planted with a variety of fruit and ornamental trees. A fee of one copper coin (14 coins) was charged for one use of water. There are speculations that the coins were thrown into special trays, which were collected by the water guards in the evening and distributed as a monthly salary to the workers who serviced the cistern.

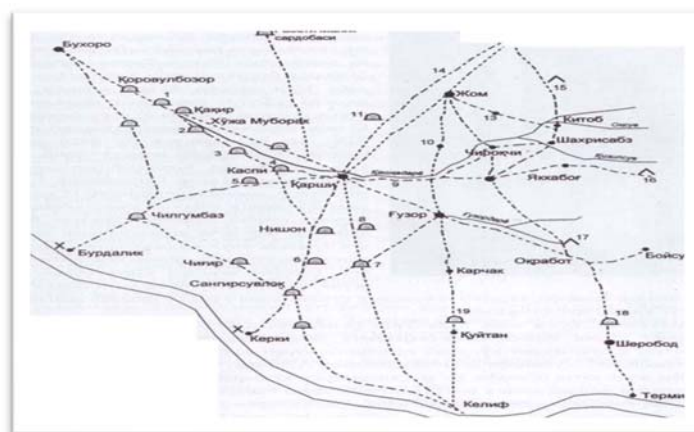
It is known that the Great Silk Road passed through Central Asia, and most of this trade route passed through vast deserts. The problem of water shortages due to the salinity of groundwater, the burying and drying of wells has always plagued travelers, trade caravans, khans, emirs and sultans. The need for water was especially great during the hot summer months. This has forced people to use the fresh water of snow and rain in the desert. The desire to use water efficiently inspired our ancestors to build cistern-like structures. To protect the water in the cisterns from pollution, they are surrounded by a wall, measures are taken to reduce the infiltration of water into the ground, and such pools are covered to reduce water evaporation. One can admire the ingenuity and entrepreneurship of the builders of the cistern. They knew how to keep the water in the cistern clean and tidy.

To do this, they used round bricks made of plaster to keep the water under the cistern pool and keep it clean from groundwater. The bricks were covered with a layer of charcoal made of saxophone, covered with 3 layers of felt made of camel's wool, and then covered with 3 layers of decorated cowhide, covered with bricks and plastered with plaster. This situation has been repeated several times. The saxophone served as a filter to remove salt from the water, while the plaster, baked bricks and cowhide protected the water from being absorbed into the ground. Sheep's milk and camel's hair are also added to the clay to make bricks. The walls of the cistern are up to 1.5 meters thick.

So, experiments in this field have been passed down from generation to generation over the centuries, and modern cisterns have emerged as the most convenient way to store fresh water in the desert. The main aspect of the construction of cisterns depended on

the accuracy of architectural and geometric calculations, the quality of raw materials used in it, the mechanical composition and the professionalism of the craftsmen. Typically, cisterns are built for 5-7 years. The bricks used in the construction of the building, as well as the technology of preparation of the mixture are very interesting. Special bricks were used to build a cistern. The main focus was on the soil, mainly due to its cleanliness, and it was often used to make bricks from the soil in the foothills of the Amudarya. The bricks were smeared with camel hair and baked for a while before being put into molds. When the clay is ready, it is poured into molds. Raw bricks are baked in a kiln after 1-2 years of sun exposure. In this way, baked brick has the properties of resistance to sunlight, moisture, salinity, heat resistance, and temperature control. The mixture of bricks and stones is a mixture of cement (sand, gravel, concrete used in modern construction) made of reeds, ash, sheep's milk and camel's whey, wool, added to form a solid mixture. All this not only strengthened the walls of the cisterns, but also protected it from rain, dust, erosion, and played an important role in keeping the water clear and clean for a long time. Cisterns can be easily included in the list of architectural monuments built by our creative people.

According to sources, in the Middle Ages there were 44 cisterns in Movarounnahr, 29 of which were in the Karshi desert, 3 on the trade route between Tashkent and Fergana, and one near Karmana.



Map of cisterns built in the deserts of Central Asia in the 19th century

Many medieval cisterns have been preserved in the desert regions of Uzbekistan. The oldest of the sardobas that have come down to us is the Sardoba in Raboti Malik, near Karmana. Built in the 10th century on the road connecting Bukhara and Samarkand, it has survived through some recent renovations, along with a caravanserai here.

According to the researchers, the builders of the cisterns, which were built mainly in the desert, were well acquainted not only with the architectural style, but also with natural changes, chemical and physical laws, geographical sciences, and mastered these works. Raboti Malik Sardoba, which is more than a century old, still retains its historical status despite the changes in time and space, the events that took place during this period, and the changes in nature. No one has come to this land in the last hundred years. But the cisterns are alive. Although their builders are unknown, it is true that they have left an indelible and unforgettable statue for future generations.

According to the residents of the area around the sardoba in the 19th century, the monument was built by order of Amir Temur, and the building materials needed for its construction were transported from Samarkand by people passing by. Legend has it that the Sirdarya River was replenished with the help of Urunboyarik. E. Markov, who traveled throughout Central Asia, wrote interesting stories about Amir Temur. No matter where he visited the architectural monuments of different periods (mosques, cisterns, etc.), the locals always associated them with the construction of Temur ("the favorite hero and great king in the imagination of the peoples of Central Asia"). Markov witnessed the following legend about the inscriptions on the rocks of "Temur's Gate": "This rock widened the narrow gorge with Timur's hands." When he saw another large sardoba, Markov's companion said to him, "Sardoba is a well! Water! It was built by Temur ... camels drank water, people drank water, the whole area drank water".

However, it is narrated that historical sources, in particular, Hafiz Tanish al-Bukhari's "Abdullanoma", say that Bukhara khan Abdullah II (1534-1598) visited this place on April 10, 1580 during his march to Tashkent (1579-1583) orders the construction of a cistern and a caravanserai on the ground.

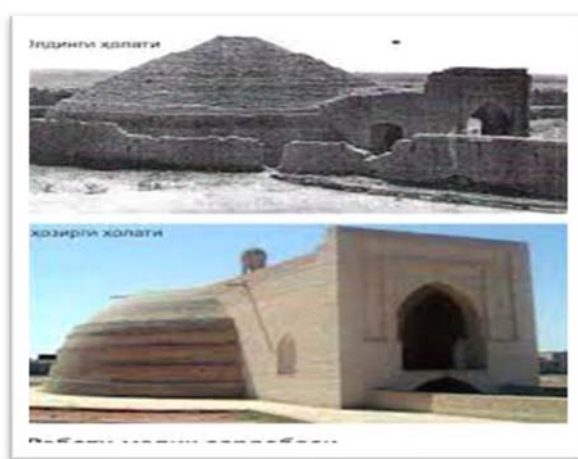
Sardoba and Raboti Malik monuments in Karmana district, one of the most memorable corners of Navoi region, testify to the ancient history. They are located on both sides of the road from Navoi to Bukhara.

It is useful to give the following information about the name Rabati Malik or Choli Malik and the date of its naming:

The Malik Desert has long been considered a vast desert area connected by trade routes connecting the West and the East. One thousand eight hundred and forty-first year ... The caravan from Bukhara to Samarkand stops in the village of Boston, now part of Qiziltepa district. After resting, the passengers of the caravan set off again. In the caravan, the historian A. Lehmann, who is fascinated by the history of this country, writes down invaluable historical facts and information. "Eighteen miles from Boston, an oasis suddenly appears in the middle of a vast desert. It is now a ruined fortress, in front of which is a small village and a pool of water, (meaning Sardoba). The castle is ancient and belongs to the ancient times of this country. When I asked anyone about it, they said it was 700-800 years ago. It was built by one of the leaders of the ancient clans of Movarounahr in a dream by the command of God. Malikkhan (as he called the founder of the fortress, invaded and hijacked the area and made a name for himself with his fearlessness and wickedness). The large circular dome building, which is very well preserved in the village, has a special grandeur. The light rays fall on it from a very high dome and porch. It stands halfway underground and serves as a refuge for tourists..."

According to historical sources, even the founder of the Naqshbandi sect, Bahovaddin Naqshbandi, set foot in the Sardoba in Rabati Malik. It is said that Mawlana Arif Degaroni - Hazrat Sayyid Amir was the second of the four caliphs of pottery. He was buried in a village called Degaron. Degaron is a Hazara village located on the banks of the Kohak (Zarafshan) River, a nine-mile road from Bukhara to Bukhara. At the beginning of the Hazara journey, Hazrat Sayyid Amir Kulol said, "Among our companions, Hazrat Bahovuddin, with the permission of Hazrat Sayyid Amir Kulol, visited Mawlana Arif (conversations) for seven years, during which time they bowed to Hazrat Mawlana Arif. For example, at the time of ablution (Hazrat Bahovaddin Naqshband) they did not perform ablution on the river bank above Mawlana Arif. Hazrat Bahovaddin Naqshband participated in the construction and repair work of Mawlana Arif Deggarani and Rabati Malik during these seven years. Naturally, it is the place where Temur and Temurids, Ulugbek, Zahiriddin Muhammad Babur, Alisher Navoi and all the emirs of Bukhara set foot. As an example, Abdurazzaq Samarkandi in his work "Matlai sadayn va Majmai bahrain" ("The Rise of Two Blessed Stars and the Junction of Two Seas") says that Shahrukh tourists visited caravan stops and it is stated that they came to the big cities after a week's journey. He also writes that Mirzo Ulugbek arrived in Samarkand from Herat within a week. In our opinion, this distance was at least 250-300 km.

Rui Gonzalez de Clavijo, a Spanish traveler and ambassador who visited Amir Temur's palace in the 15th century, left Samarkand on Friday and arrived in Bukhara on Thursday (six days later). Therefore, it can be said that the Spanish traveler Rui de Clavijo Raboti Malik saw the cistern with his own eyes and of course enjoyed its clear waters himself and the caravan, rested in the caravanserai and stocked up on food. He went to Bukhara Sharif.



Raboti Malik Caravanserai and Sardoba's Past and Present Status.

150 meters south-east of Raboti Malik, the ruins of a domed sardoba, built in the 12th century, are preserved. A. Lehmann, who was in these places in 1841-1842, wrote about this Sardoba that the Sardoba, which supplied water to Rabati Malik, had a high dome, from which light fell, and half of the building fell to the ground. This place is a life-saving destination for travelers. M.S.

Salmin, who was in Sardoba in 1927, noted that in addition to the rainwater flowing into the Sardoba in Raboti-Maliki, there was also a canal from the Zarafshan River, where fish were swimming in the muddy waters. According to historical data, in the 1870s in the villages around Sardoba and Raboti Malik the use of water in Sardoba for life was recorded in S.I. Inoyatov's monograph "Amir Temur Raboti Malika". There are also various accounts of when and by whom Raboti Malik Sardoba was built. But in our opinion, the most accurate is the information given in M.E. Masson's book "The problem of studying cisterns". It indicates that Sardoba was built by Shamsulmulk at the same time as the Rabati Malik caravanserai. According to historical sources about the history of Karmana, it is located 150 meters from the Sardoba caravanserai, which is part of the Raboti Malik caravanserai. Currently, the M-37 Tashkent-Bukhara international highway passes between Caravanserai and Sardoba, and the modern Great Silk Road is also recognized as an interstate logistics transit route. Sardoba is a historical building of the Karakhanid period, built in the X century and first renovated in the XI century. From this information about the Sardoba, we can get an idea of how this structure was built and the total amount of drinking water stored in it.



Raboti Malik-Sardobasi (1980 and 1999)

For the construction of Raboti Malik sardoba, first of all, its geographical location, geodesy, cartography of the land were studied, the accuracy of geometric calculations, the source of raw materials used in it were taken into account, and then attention was paid to the construction site. Normally, a hole should be made after the ground has been excavated by digging a larger hole, and then from the lowest part of the pit, bricks are laid in a circle on the ground, and the bricks are fastened together. by the method they covered the surface in a dome without using any straw or other reinforced concrete products. The sardoba consisted of a dome-shaped chamber about 13 meters in diameter and 11 meters deep, with a small thatched roof on the north side. The peculiarity of the sardoba of that time is that it is made of 24-27 cm long and 4-5 cm thick bricks. No wood was used to build the cistern.

IV. DISCUSSION

According to M.E. Masson, who conducted research on the construction of the Raboti Malik caravanserai, bricks of the same size and shape were used in the construction of the caravanserai. Sardoba is a very rare construction site. Such evidence confirms that, according to experts, the Raboti Malik caravanserai and Sardoba were built at the same time. The dome of the sardoba, according to architectural historians, dates back to the late Middle Ages (XII-XIX centuries). Because cisterns built separately or in caravanserais on the trade route have been used for a long time.

It is noted that inside the Raboti Malik caravanserai there was a pool of fresh water, the pool is inside the 12-meter fortress, the fortress is surrounded by a wall, said Karman historian A. Rakhmonov. The pool is circular, surrounded by bricks and about 6 meters deep. It is protected by a large lid made of circular fences to protect it from dust, dust and various germs. From this we can conclude that the pool between Sardoba and Rabot was provided by the underground ceramic pipes providing the water circulation system as well as the normality.

The Raboti Malik sardoba is also geographically unique in that the center of the sardoba is a collection point for snow and rainwater runoff from the surrounding slopes in the spring. This sardoba served as the only source of water and life in the deserts between Samarkand and Bukhara. It is also true that near the sardoba there are conditions for watering large and small ungulates. Proof of this can be seen in the excavations of the historical monument of Raboti Malik by archaeologists. The fact that several stone mangers were found near the sardoba to irrigate the cattle, as well as broken pieces of pottery poured into the manger, is a

clear proof of our opinion. Under the sardoba pool, round bricks made of gypsum were used to store water and keep it clean from groundwater. The bricks are mostly baked and the soil is made of pure clay. The clean soils were made of reeds and camel hair for the caravan of camels, and were used to make bricks from the soils around the Siyob River and the Obi Rahmat River near Samarkand, mostly in the foothills of the Amu Darya. Archaeologists have suggested that a certain amount of gypsum was added during the baking process. The bricks are covered with a layer of charcoal made of saxophone, covered with 3 layers of felt made of camel's wool, a thin layer of cowhide, covered with bricks and plaster. This case was repeated several times and collected until it became a dome. This means that the saxophone acted as a filter to clean them of salt, while the plaster, baked bricks and cow hides protected them from excess water and dirt. The walls of the cistern are cylindrical, with a thickness of 1.5 m, a diameter of 12 m and a height (from underwater to the dome) of 20 m. At the end of the circumference of the sardoba, at the beginning of the dome, there are arched holes 1.1 m wide and 1.5 m high on all four sides. These holes have always served to keep the water in the same moderation. The sardoba shrinks from the bottom to the top, allowing sunlight to enter the water through the hole, which acts as a natural filter to protect the water from various odors. About three hundred thousand, four hundred thousand bricks of special size were used to build one cistern. Not surprisingly, this is the wisdom behind the longevity of cisterns.

Ancient waterworks are among the most important architectural monuments of our ancestors, proving that hydraulic structures such as special pools, cisterns, reservoirs, bridges were built on the basis of certain ideas as an example of a complex engineering culture. Archaeological excavations carried out in 1937-1940, 1973-1977 show that there is historical evidence that Sardoba was well preserved until the beginning of the twentieth century, and in 1930-1935, due to the neglect of some people, nothing happened; the bricks of Malik Sardobasi, who had experienced mysteries, were ruthlessly looted and demolished. Architects estimate that up to 150 (one hundred and fifty thousand) cubic meters of water was stored in the largest cisterns in Movarounnahr and Khorasan on the eve of the Mongol invasion. The invasion of the Movarounnahr region by Genghis Khan's Mongol armies in the 1920s completely destroyed the city's culture, including the water supply system associated with cisterns on domestic and foreign trade routes.

The high level of international trade during the reign of Timur and the Temurids led to the construction of many more cisterns along these roads and the reconstruction of existing ones. A.A. Semenov gives information about Raboti Malik's sardoba in the article "Material monuments of Aryan culture". The sardoba is sometimes called a "small palace" because of its appearance. The entrance to the sardoba is majestic and decorated with arched roofs, through which it leads to a large and spacious pool. There are also rooms with windows in the corridor of the cistern, which are the rooms for the servants who serve the cistern. The cisterns are divided into several groups depending on the source of water. Some are for rainwater, some for running water, rivers and canals. There were also cisterns for soil and sewage. This is a historical fact, given that one of the main reasons for the construction of the Raboti Malik sardoba in the Karakum Desert was the lack of running water in the vicinity, the remoteness of sewers and the passage of a caravan route through the desert. The great Spanish ambassador, Rui Gonzalez de Clavijo, speaks of Malik Sardoba in a variety of buildings, and it is difficult to tell whether he is a rabot or a hazara: located on the ground, it was the only shelter where there were no houses on the road in the two days of drought and scorching heat. In this camp, water was brought from a distance of one day, which was laid underground, through pipes. This means that the rabbis, and the cisterns that are part of it, are considered to be highly engineering structures. This is evidenced by the long-distance water supply system and the perfect operation of the cistern. In ordinary rabots we knew that water was delivered through ditches or cisterns. Historical data confirms that the Raboti Malik sardoba was supplied with water within a day by special ceramic pipes. In addition to the saturated rain and snow water, the sardoba was brought from the Zarafshan River through a special canal. The desert areas of the Great Silk Road are characterized by extremely hot summers and very cold winters. For this purpose, the cisterns were built taking into account all climatic conditions. The thick walls of the cisterns played an important role in creating a temperate climate in winter and summer.

In addition to Sardoba, which has become a cultural heritage site in the Malik NCM area of Karmana district, which reflects the ancient and unique architecture of Navoi region, about 200 sewers have been dug in the region. Koriz is a Persian word meaning an underground structure built to collect groundwater and bring it to the surface. There are 280 wells in the Maston canal in Nurata district of Navoi region, the main well is 14 m deep and the tunnel is 3 km long. It is estimated that water can sometimes be delivered to cisterns in remote desert areas through these canals. Sardobas not only help to determine the direction of the ancient caravan routes, but also are an important historical source that reflects the history of architecture of our people, its achievements in this field, and the architectural styles of the past. These important historical monuments, inherited from our ancestors, who created the most effective ways to preserve fresh water in the desert deserts, unfortunately, some of them are neglected and on the verge of extinction.

Currently, the Navoi regional administration, the regional department of the Department of Preservation of Cultural Heritage, with special attention to historical monuments located in the region, has taken control of 437 objects included in the list of material and spiritual heritage, the state program on the basis of which it was gradually repaired and maintained through restoration. The first repair of the Raboti Malik sardoba began in 1996, and on September 9, 1996, H.R.Gaffarov, who was the governor of Navoi region at that time, wrote about the "Improvement and repair of the historical monuments of Sardoba and Raboti Malik". Decree of February 3, 1999 "On financial support for the repair of historical monuments of Sardoba and Raboti Malik" with the involvement of sponsors, No. 156 of May 3, 1999 (Malik Rabot and Sardoba decisions on the restoration and complex development of monuments) played an important role as one of the first steps in the repair of historical monuments in the region.

First of all, the resolution called for the improvement of the area around the historical monuments, the revitalization of archeological excavations and scientific work, the demolition of the old road around the monument, the construction of tourist corridors, special cars, bus stops, the reconstruction of Raboti Malik teahouse. Landscaping and landscaping, landscaping, landscaping, Damhoja freshwater pipelines, gasification of the memorial complex and the creation of facilities through a modern telephone system, a hotel for 200 people in Raboti-Malik, tourist destination, the task of building gas stations for cars was envisaged, and some of the tasks in the resolution remain unfulfilled to this day.

V. CONCLUSION

In order to implement this decision, the decision of the Navoi regional administration of February 19, 1997 "On financial support for the repair and complex development of historical monuments of Sardoba and Raboti Malik" was approved by the largest enterprises, organizations and firms in the region. Announcing the establishment of a limited liability company "Sardoba" for the construction of trade and catering outlets in the memorial complex, it was stated that on the initiative of 14 founding organizations will transfer 15 million to the company. The Karmana district administration has been instructed to allocate 10.5 hectares of land.

In conclusion, these events will help to restore the ruins of Sardoba and Raboti Malik and turn them into a place of pilgrimage for our people and visitors, to develop pilgrimage tourism and preserve it as a memory of the past for future generations.

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