



DOI: <https://doi.org/10.38027/ICCAUA2025EN0122>

## Adaptive Reuse of a Complex of Three Historic Houses in the Dardasht Neighbourhood of Isfahan, Iran

\* Dr. Narmin Babazadeh Asbagh

Department of Architecture, Faculty of Architecture, Eastern Mediterranean University, Famagusta, Northern Cyprus

E-mail: [n.babazadeh.nba@gmail.com](mailto:n.babazadeh.nba@gmail.com), [narmin.babazadeh@emu.edu.tr](mailto:narmin.babazadeh@emu.edu.tr)

### Abstract

**Received:** 7 January 2025  
**Revised:** 13 May 2025  
**Accepted:** 18 June 2025  
**Available online:** 5 July 2025

Copyright © 2025 by the author(s).  
All rights reserved.

This article is published under an open-access model and is made available in accordance with the terms of the Creative Commons Attribution 4.0 International Licence (CC BY).



The publisher maintains a neutral stance concerning jurisdictional claims in published maps and institutional affiliations.

This article has been selected and peer-reviewed for publication in this journal as part of the 8th International Conference of Contemporary Affairs in Architecture and Urbanism, held on 8–9 May 2025 in Alanya, Türkiye.

Isfahan is a gorgeous historic city in Iran, well-known for the glorious buildings of the Safavid era. Dardasht is one of the significant neighbourhoods in Isfahan, consisting of elegant houses and valuable cultural heritage. There is a complex of three historic houses, Habib Abadi, Katiraei (Kadkhoda), and Badiol Sanaye, which are abandoned. This article proposes adaptive reuse to preserve this historic complex in the Dardasht neighbourhood of Isfahan. After comprehensive research about Isfahan, the neighbourhood of Dardasht, and the current situation of the houses, proposals for the adaptive reuse of this historic complex are suggested comprehensively. This historic research is based on qualitative and quantitative methods and the author's observations. The results of this article can be useful for preservationists and conservationists in the field of cultural heritage, and also architects and interior designers in designing in the historical context of ancient cities.

**Keywords:** Adaptive Reuse; Cultural Heritage; Historic House; Isfahan; Iran.

### 1. Introduction

The first part of this article is about Isfahan province, the geographical characteristics, history, name, formation of the city, Isfahan in the Safavid era, and the list of historic neighbourhoods in Isfahan. The second part is about the Dardasht neighbourhood, and the third part is about the historic buildings in the Dardasht neighbourhood. The fourth part is about the adaptive reuse of the complex of three historic houses of Habib Abadi, Katiraei (Kadkhoda), and Badiol Sanaye, and the fifth part is about conclusions and recommendations.

#### 1.1. Isfahan Province

Isfahan province, with an area of 106,179 square kilometres, accounts for about 25.6 per cent of the country's total area. The province is located between 30 degrees 42 minutes to 34 degrees 30 minutes north latitude and 49 degrees 36 minutes to 55 degrees 32 minutes east longitude in central Iran, while Isfahan city, with a geographical longitude of 51 degrees 39 minutes and 40 seconds east and a geographical latitude of 32 degrees 38 minutes and 30 seconds north, is the third largest city in Iran after Tehran and Mashhad. Isfahan Province is bordered by ten provinces: from the north by Markazi and Semnan provinces, from the south by Fars, Kohgiluyeh and Boyer Ahmad provinces, from the east by Yazd and Khorasan provinces, and from the west by Khuzestan, Chaharmahal and Bakhtiari, and Lorestan provinces. In terms of area, Isfahan Province ranks fifth after Khorasan, Kerman, Sistan and Baluchestan, and Fars provinces. Isfahan province has been continuously changing and evolving in terms of country divisions. So, since 1316, which is the date of the legalisation of country divisions, it was formed as the tenth province and consisted of two counties: Isfahan and Yazd. During this period, numerous changes have occurred in the country divisions. According to the latest country divisions in 1375, Isfahan province was divided into 18 counties, which include 67 cities, 38 districts, and 117 rural districts. The historical city of Isfahan is the centre of Isfahan province and is now the third most populous city in the country. The distance between Isfahan and Tehran is 425 kilometres, and it is located to the south of it. This city has been the focus of sultans and state administrators due to its very convenient geographical location in the heart of the Iranian plateau. Isfahan is about 1580 meters above sea level and is located east of the Zagros Mountain range. This city is located at the north-south and east-west crossroads of the country and has been a place of travel and encounters with different ethnic groups and cultures throughout history. The large area of Isfahan is limited to the desert

in the north and east, and its western and southern parts end in the Zagros highlands. The reason for the existence and emergence of this city should be considered the waters that originate from the high Zagros mountains called Zardokuh Bakhtiari and create Zayandeh-rud; as a result, the beautiful city of Isfahan is located on both sides of Zayandeh-rud. The city of Isfahan is built on a relatively flat plain with a slope of about 2% and facing northeast. Over the centuries, the city's development has been toward the southwest, because water is more abundant and pollution is less in this area. Strabo the German says: "The name of Isfahan was initially (Anzan) and then transformed into (Gabian), and from the Achaemenid period onwards it was transformed into (Gai) and later into (Ji). Referring to the available historical sources and evidence, it appears that the word (Aspadan) is Pahlavi to Ptolemies and (Sepahan) to Pahlavi and Isfahan to Arabs and Isfahan to today is an old word and is almost certainly a Pahlavi word, and its root, older than Pahlavi has not been discovered." When Isfahan was captured by the Arab invaders, the city was called (Ji), and Yaji was one of the most famous and prestigious villages in the city, which was located at the foot of the city in Abadi. Yakut Hamawi called Isfahan the city of cavalry, and Hamza Isfahani considers the word Isfahan or Espahan to be derived from the word "sepah" (Yakut Al-Hamawi, 1220, 1/38). In the book (Taqwim al-Buldan), it is quoted from Ibn Hawqal that Isfahan is at the end of the mountains towards the south and is the most fertile of the cities. It has a sardine mine. From Isfahan, they reach Kashan and Qom. Its origin is (Sepahan), meaning "armies" because the Persian army gathered there during a time of unemployment (Ibn Hawqal, 1321).

## 1.2. Geographical Characteristics of Isfahan

Isfahan is located in a plain with a width of 120% and 20 Farsakh, and its surroundings are covered by the lands of Hamedan and the provinces of Jabal and Nahavand up to the borders of Kerman and from around Ray and Qoms to the borders of Fars and Khuzestan. Isfahan has three provinces, 30 Rastaqs, 120 Tasujs (Yakut Al-Hamawi, 1220, 1/38), 5000 Diyeys, and 7 cities, which are described in the book of Isfahan. The book is about the history of Isfahan, authored by Hamze Esfahani (Esfahani, 1993). The names of the cities of Isfahan are as follows: Kahtha, Jar, Jay, Qe, Mehr Bin, Darram and Saroiyeh. Four of these seven cities were destroyed, and until the arrival of Islam, three cities were left: Ji, Mehrban, and Qe. These cities consisted of two furnaces (Yakut Al-Hamawi, 1220, 1/36 - 37), twenty-seven Rastaqs, and three thousand three hundred and thirteen Pareh Diyeh. Until the Arabs came to Isfahan and destroyed two of these three cities: Qeh from Rostaq Jeh and Saroiyeh from Rostaq Kashan. Then he founded the Qom furnace, composed of four rastaqs from Isfahan province and added other rastaqs from Hamedan and Nahavand to it. Isfahan had twenty-three rastaqs until Moatasim founded the Karaj furnace with four rastaqs from Isfahan province, and Nahavand and Hamadan Zia'i Chand added to it. According to the author of the mentioned book, after the era of Motasim, Isfahan had nineteen rastaqs, one furnace, and about two thousand five hundred diyas (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).



**Figure 1.** Location of Dardasht Neighbourhood in the Google Maps of Isfahan (Developed by the Author Based on Google Maps).

## 1.3. History of Isfahan

Isfahan is a city that some historians consider as the oldest city in Iran. The rooting of the great and ancient city of Isfahan should be considered primarily due to the presence of sufficient water in this area. Central Iran, with little rainfall, is considered one of the driest and most water-scarce regions in the world. However, the existence of a permanent river like the Zayandeh River has prepared the field for human life, and the suitable and warm weather has

given the possibility of agricultural activities to the people of the region. Therefore, settling next to the Zayandeh River, fertile soil and favourable climate have all played an important role in the creation of the city of Isfahan. Before Isfahan became the city today, the old city of Isfahan, located three kilometres southeast of it and right next to the Zayandeh River, was known as Ji and later as Shahrstan (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

#### **1.4. Name of Isfahan**

In the old historical and geographical documents, the name of Isfahan is written as follows: Ispahan, Sepahan, Espahan, Safahan, Esfahan, Asbahana, Spadana, and it is the name of the block in which the city of Isfahan is located. Most of the writers think that Isfahan was the gathering centre of the army in the years before Islam, especially during the Sasanian era, and the soldiers of the southern regions of Iran. Like Kerman, Fars, and Khuzestan, they gathered in this area, and after receiving training, they moved towards their destination, which is why the place was called Isfahan or Sepahan, and then it was written in Arabic as Isfahan. Of course, Isfahan also has an older word that has no connection with the current name, such as Anzan, Vagabian, Ganieh, and also Ji or Gi (Dehkhoda dictionary, under the supervision of Dr Moin, Tehran, 1339, p. 2784). In the books of both Greek historians of the fifth century BC, the name of Isfahan is called Partakni, and its location is to the east of Isfahan. Now it has been mentioned that the residents of the Parth tribe were Kinan, one of the tribes of Iranian Medes (Honarfar, 2016, p. 4).

#### **1.5. Formation of the City of Isfahan**

Spadan or Spadana in Greek, Sepahan in Pahlavi, Isfahan in Arabic, and finally Isfahan in Persian today, is a very old city, but its history is not very clear with the documents available before the Sassanid period. It was a reliable political administration, and despite the existence of a city next to it, it had created a significant settlement. At that time, there was still no city with the current definition, and Isfahan was divided into two parts, Yehudiyeh and Jai. Judea and its surrounding villages. The place had a peasant life when the Jews came to this area from Babylon. Due to ethnic and religious differences, this group did not have a socio-economic relationship with their nearby villages, and they lived separately from each other, and they lived in a closed system (Shafaqi, 2002).

The concentration centres of the settlements on the map indicate the fact that the main tendency of residential areas is towards the north of the river and around Yehudiyeh, and when the relationship between the settlements increased over time, it provided the basis for the formation of urban crime in this area. During the Arab invasion of Iran and successive conquests of the cities, Judea was spared from the Arab attack due to its smallness and little importance, which caused many people to immigrate to this city, and this caused the creation of a large and densely populated city. and the main core of Isfahan was formed in Judea. After the introduction of Islam to Iran, Isfahan gradually took shape, and by joining the small villages around Judea, it became a big city. Among those villages, we can mention: Batarkhan, Freeman, Yuan, Kharjan, Felfalan, Sanbalan, Faraan, Kamadan, Jozdan, Lenban, Ashkahan, Jazwan, Sanbalan (Sanbalistan), Hosseinian, Fabahan, (Khabjan). The period of prosperity and economic and architectural growth of Isfahan starts from the Seljuk period. In this period, Tughril, the founder of the Seljuq dynasty, despite the strong opposition of the people of Isfahan to his rule, made this city the seat of his government for twelve years, and to protect it from the attacks of the enemies, a high fence was built around the city.

After Toghr al-Arslan came to power, in this period, under the guidance of the political minister and scientist Owa Abu Ali Hassan Tosi, nicknamed Khwaja Nizam al-Mulk, the empire of Iran expanded from China to the eastern shores of the Mediterranean, and the centre of Iran's great government was the city of Isfahan. Among the urban development activities of the Malk Shah era, we can mention the construction of gardens and promenades (Chaharbagh), Atiq Square (Old Square), and the construction of the famous mosque, dome, and minarets of Isfahan. In the 7<sup>th</sup> century, with the Mongol attack on Iran, the urbanisation system suffered a lot of damage. During this period, urbanisation gave way to nomadism, and Isfahan was no exception to this rule. The weakening of Isfahan gained more speed with Timur's attack in the 8<sup>th</sup> century. Timur's attacks on Isfahan caused irreparable damage to the city. It is known that some of the city's residents revolted, and Timur ordered a massacre to suppress them (Hossein Mirjafari, History of Timurids and Turkmens, Isfahan University Press, 1375, p. 30). It is known that the ancient structures of the city of Isfahan, which often have a "many-mazed" roof, have saved people's lives from the attacks of foreigners on this city. Especially in the attacks on Timorese residents of older structures that had more complicated and narrow public roads have survived safely. After the attacks of Mongols and Timur, Isfahan did not occupy an important place in the history of the country due to a period of revolutions and internal wars, and the city went through a downward course in terms of economic and political importance until the beginning of the Safavid dynasty (Rahnamayi, 2009, p. 147).

#### **1.6. Isfahan in the Safavid Era**

After centuries of political unrest in the country, the Safavids were finally able to establish a national government based on the Shia religion in Iran. Political calm appeared in the country after the great wars and conflicts with the Ottoman Empire, the Uzbeks, and the Portuguese. The Safavid kings first moved their capital from Ardabil to Tabriz, then from there to Qazvin, and then to Isfahan. The Safavids followed the policy of urbanisation by emphasising the development of trade and the construction of roads and caravanserais. In this regard, they first paid attention to the development and reconstruction of Isfahan as an urban hyacinth; they made it the model of their urban planning policy and quickly implemented this model in other cities of the country. In the year 1006 AH. The Safavids decided to move their capital from Qazvin to Isfahan. The Safavids did not see Isfahan as the centre of their empire, more than their dynasty. Therefore, they sought the help of experienced city planners and architects with their accurate knowledge of geography and urban planning. They decided to develop the city and develop the old city to the south so skillfully that I have to study this scientific movement in line with the principles of modern urban planning. The development of the city towards

the south was done so consciously and masterfully that even today, this action can be compared with the movements and capabilities of 20<sup>th</sup>-century urban planning. This plan turned Isfahan into a twin city in the Safavid era. In this way, the city of Isfahan expanded on both sides of the Zayandeh River (Shafaqi, 2002).

### 1.7. List of Historic Neighbourhoods in Isfahan

1 - Tiran and Ahangaran 2 - Mornan 3 - Safi Mirza Mausoleum 4 – Dardasht 5- Shahshahan 6- Jubara 7- Prayer Qibla 8- Sarrafha (Money changers) 9 - Ab Bakhshgan 10 - New Gate 11 - Buashafia 12 – Mirmiran 13 - Lek Zaiha 14 - Ali Qoli Agha 15 - Posht Baroo 16 – Danbalan 17- Nizamieh 18- Jame Mosque 19- Kamar Zarin 20- Sheesh Bidabad 21 - Bidabad 22 - Homayun Bagh 23 - Tell Ashaghan 24 - Dar Jamilan Palace 25- Jamale 26- Kohne (old) Square 27- Mir Square 28- Seyed Ahmadian 29- Golestan 30- Seti Fatemeh 31- Darb e Kooshk 32- Shelle Rangha 33-Grek Barak 34- Nim Avar 34-Gol Bahar (Spring flower) 35-Khoshbaban 36- Ahmedabad 37- Al-Badran 38- Chaharsouk e Shiraziha 39- Shamsabad 40 – Shams Abad 41 – Darb e Qasr 42 – Khargah Bagh (Garden) 43 – Jahanma 44 - Farashkhane 45 - Hakim Mosque 46 - Dar al-Shifa 47 - Shah Bazar 48 - Khabjan 49 - Lenban 50 - Mustahalah 51 - Qezalbash Kuy 52- Takht Gonbad 53- Bakht neighborhood 54- Yazdabad 55- Karan 56 - Shirvani 57 - Fravel Khane 58 - Tabarak Castle 59 – Paghale 60- Murad Garden 61- New Bagh (Garden) 62- Kalantar (Sheriff's) Garden 63- Mahyar Garden 64 - Abbas Abad 65 – Shahzadeha (Princes) 66 - Behind the Shah Mosque 67 – Hassan-Abad 68 - Munshi Palace 69 - Sheikh Yusuf 70 - Telvasgan 71 – Charkhab 72- Imamzadeh Baqer 73- Khajo 74- Bagh e Karan (Garden) 75- Ierevan 76 - Qinan 77 - Provence 78 - Jolfa 79 - Tabriziha neighborhood 80- Garakal 81- Charsu 82- Sang Tshafa 83- Sichan 84 – Bagh e Flasan (Garden) 85 - Takht Foulad (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009) (See **Figure 1**).

## 2. Dardasht Neighbourhood

### 2.1. Dardasht Neighbourhood in Isfahan

Dardasht Neighbourhood, Darb Dasht, or Bab al-Dasht neighbourhood, is one of the old neighbourhoods of Isfahan, and it is one of the neighbourhoods located in the north of Isfahan city. It is written in Maajim al-Baldan that Dardasht is a neighbourhood in Isfahan, and apparently, it means the same as Bab al-Dasht. The author of al-Lab fi Tahdhib al-Lansab also said that Dardasht is a neighbourhood in Isfahan. And he said in half the world: Dardasht is located in the west of Isfahan city. What is certain is the age of this neighbourhood, its name has been common since ancient times, and it is even mentioned in the poems of Kamaluddin Ismail Khareev al-Ma'ani, and the Arabic name of this neighbourhood, which is Bab al-Dasht, was written by the names of several scholars and elders, and in Azmanah. Recently, some people have risen from there. Now we are going to describe the Dardash neighbourhood in Chardon's language: I will start with its ancient and famous minaret, which is known as the Shah minaret.

This minaret is in the middle of the square, surrounded by shops that are three feet high from the ground. The circumference of the minaret is twenty feet, and its height is sixty feet. This minaret is made of brick and lime and is covered from the top to the bottom with the head of the shekar. It is known that this minaret was built in memory of the great hunt that one of the last kings, whom some consider to be Shah Ismail and others Shah Tahmasab, and was built on the occasion of a magnificent party that was given to many ambassadors. The hunting ground near Isfahan was in Hazar Dareh, and the hunters had been pushed forward from twenty farsakhs. There were so many hunts that day that the king wanted to build a minaret in memory of that day. They say that this minaret was built during a feast that lasted seven or eight hours. The architect came to the king and said: The minaret has been completed and the heads of the shekars have all been used; only a large head of the shekar is needed for the head of the minaret. The king, who was intoxicated by the pure wind, said: You say that now we should go hunting again and bring the head of the big game that you want. I don't know any animal bigger than you; your head should be placed on the minaret. And as he ordered, his head was cut off and placed on top of the minaret.

Near this minaret, there is a grave that is three feet high and made of stone and is known as Ghazal's grave. Here is the grave of the famous horse of Shah Abbas Kabir, which was called a deer due to its agility and speed. This Arab horse belonged to the Ottoman sultan. Shah Abbas Kabir had heard the description of this horse and was thinking about how to get it for a while. In the end, leave this path. Many times, one of the great robbers and thieves known as Malik Ali Qomi had forgiven him and sent him to find him. At that time, the Ottoman sultan was in Istanbul, Malik Ali set out, and after changing himself into different forms, he became Mehtar Ghazal, until one day, when the weather was good, he rode it and reached Iran and presented the horse to Shah Abbas. From this place, we reach the old square of Qasr and the bathhouse of Mirza Sadr Jahan Mostofi al-Mamalek. Most of the Muslims of the East, especially the Iranians, have both names and nicknames that are derived either from their language or the Arabic language. The meanings of nicknames are generally ideas and imaginations that are either desired or claimed. This habit came to them from the Hebrews, and for this reason, they are more fortunate than we Westerners, who have names and nicknames, most of which are meaningless.

After that, we will reach the palace, the mosque, the torch bearer's market, and the palace of the nobleman who is the head of the Jarchian, who is one of the most important positions in Iran. Another caravanserai is in Ghazini, and after that, there is a palace and a bathhouse and a small market of Mirza Sadr Khasa, and after that, there is a bathhouse of Amir Akhorbashi and the palace of Abbas Qoli Beyk Mehrdar. This palace is on the road, which is separated by two alleys, one known as Zulfiqar Alley and the other as Hakim Fereydon Alley. Other important alleys in the neighbourhood are Farashbashi Alley, Naqshian Alley, and Mirza Fasih Alley, each of which has a bath named after its alley. Then we reach Kolah Dozan alley, where Nematullah's support is located, which is located in the middle of a garden, and its brick walls are mesh, which can be seen from everywhere. The walls of Muslim mosques and monasteries are generally meshed and have priority over the walls of our monasteries, which are very high. Iranians say that a dervish should roam around and ask for alms from people, and after that, he is free and owns his soul.



The word *takiye* means both a shelter and a pillow, and it means that a person leaving this world should not have more than a place to stay, and he does not need a big house. Near this support is the caravanserai of Mirza Ismail Kavachi Shah, the caravanserai of Mirza Kochuk Sadr Khasa mentioned before, and four other less famous caravansaries. Passing here, we reach the famous place known as the foot of the burnt plantain. This is an old sycamore trunk, which is connected to another support, which is the seat of dervishes and similar to the support mentioned above. Near here is a palace named Mir Ismail, and an area called Peach and Peach Garden, because seventy years ago, when Isfahan had less population, there was a large garden full of peaches and peach trees in this place, but now a part of this garden has been turned into a field. In one corner of it is the laundry room, and in the other corner is Imam Qoli Khan Mosque. Above it are Gud Saghersazan, Mullah Zaman Mosque, Ali Sultan Jarchi Bashi Alley, and Mullah Hassan Shater Alley. Shatran are quick and agile foot soldiers for the king, and there is also the alley of night owls. The word *Shab Baaz* is synonymous with our word *Tarar*. What is the coffee in this place of Zain al-Abidin's house? The scandal and scandal of this famous person and Shah Abbas II brought him severe punishment for public attention (Chardin, 1686, Isfahan section). For more information about the Dardasht neighbourhood of Isfahan, a published article by the author entitled "Tomb of Sultan Bokht Agha and Two Minarets of Dardasht Neighbourhood in Isfahan, Iran" can be read (Babazadeh-Asbagh, 2022b).

## 2.2. Darb-e-Imam Neighbourhood

### 2.2.1. Imamzadeh Darb-e-Imam (Imam's Door)

Darb-e-Imam from the era of Jahanshah Qaraqyunlu is one of the prestigious Imamzadeh of Isfahan, located in the Darb-e-Imam neighbourhood, one of the old neighbourhoods of Isfahan and adjacent to the old neighbourhood of Dardasht is Darb-e-Imam is the tomb of two Imamzadeh named Ibrahim Batha and Zain al-Abidin. The historical building of Darb-e-Imam consists of two large and small domes and a large, tiled door from the era of Jahanshah Qaraqyunlu, which is located on its northern side, and three courtyards on its northern, eastern, and western sides. The exterior of this building has tile and stucco decorations on all three courtyards, and both of its domes, especially the larger dome, are covered with exquisite tiles.

East of Lower Chaharbagh Street, in the old cemetery of Jamilan (Sonbolistan), and near the old neighbourhood of Dardasht in Isfahan, there is the tomb of two Imamzadeh, whose construction was completed in 857 AH (1453 AD) during the reign of Jahanshah Qaraqyunlu. These two Imamzadehs, Ibrahim and Zayn Al-Abidin, are the grandsons and great-grandsons of Hassan Al-Muthanni and Ali Ibn Jafar, who were buried in this place. The historic building of Darb Imam consists of two large and small domes, a tiled entrance, and three courtyards in three directions, north, east, and west. The main entrance is located in the northern courtyard and is built with beautiful and harmonious mosaic tiles. Many researchers, including Andre Godard, have pointed out the subsequent changes of the building in different periods, especially the Safavid period. The inscription on the entrance is written in Persian in the white third script with mosaic tiles on a blue, azure background. This inscription mentions the name Jahanshah Qaraqyunlu and the date 857. To the east of this entrance is another entrance whose inscriptions refer to the renovations of the building during the reign of Shah Sultan Hussein Safavid. The authors of these inscriptions are Mohammad Reza Emami and another calligrapher named Abdol Rahim.

The domes in the historical building of Darb Imam were not built at the same time. The large dome was built at the same time as the construction of the tomb in the 9<sup>th</sup> century. Its inscriptions include verses from the Holy Quran. However, the small dome was built in 1081 AH. The inscription on this dome is in the handwriting of Mohammad Reza Emami. To the west of the Darb Imam compound is a small mosque attributed to Saeed Ibn Jubair, a great man who served as Imam in Isfahan in the early days of Islam. The interior of the tomb is decorated with very colourful tiles. Inside the western porches are very beautiful stucco mouldings and cornices that reflect the taste, innovation, and creativity of Isfahan artists of that time. The large dome of Darb Imam and the eastern and northern porches were renovated in 1328 AH. The tiles of the small dome and the western parts of the building were restored in 1332 AH. The exterior of the tomb and its adjacent walls are also decorated with very beautiful tiles and elaborate plaster muqarnas. In general, the Darb Imam complex of Isfahan is considered one of the undisputed masterpieces of Iranian art due to its artistic and architectural features and magnificent tile and stucco decorations, which reflect the course of Iranian architectural art in different eras. This precious work has attracted the attention of architects, researchers, and archaeologists due to its architectural features from the era of the Turkmen (Qaraqyunlu) rule, and many of them have studied it and published the results of their studies (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009) (See **Table 1**).

### 2.2.2. The Saqqakhaneh of the Imam Gate Hall

In traditional Iranian architecture, Saqqakhaneh referred to small spaces in public passages that residents and merchants would set up to provide water to thirsty passersby. Saqqakhaneh were usually large stone containers into which drinking water was poured, and cups were tied to them with chains. Saqqakhaneh were initially more of a service, and their founders built and maintained them mostly to gain rewards. Some Saqqakhaneh were permanent, while others were set up at special times, especially during the Muharram mourning period. To inform passersby at night, candles were placed and lit around the Saqqakhaneh, which later took on a religious aspect, and those who had vowed and needed something would light candles in the Saqqakhaneh every Friday night. In Tehran, larger water fountains were built, and in them, the images of religious figures such as Abbas, the brother of Imam Hussein, and Ali Akbar, and other votive offerings of the people were kept by the servants of the water fountain. The water fountain, which is composed of the two words "saqa" and "khane", got its name because in the past, the "saqa" would stand next to the water fountain and empty his water bottle into it after receiving money from passersby.

In any case, the water fountain was a sacred place for quenching the thirsty, the sacredness of which was due to the people's belief in the water fountain in the past and its deep connection with the event of Karbala and Hazrat Abolfazl (AS). It is worth saying that in the past, what made the water fountains survive and prosper were the people's votive offerings and the cash they put into the water fountain's fund. The waterworks had different positions in terms of sanctity; some were highly sacred, and some were considered ordinary waterworks. Some of the waterworks in Isfahan in the past include the waterworks of Imamzadeh Darb Imam, the waterworks of Taj al-Din, the waterworks of Zikr Ullah Mosque, the waterworks of Lenban Mosque, and the waterworks of Seyyed Mosque. It is necessary to explain that the waterworks were mostly located in front of mosques, water tanks, shrines, and bazaars, and were made of copper, brick, and stone, and their forms were in the form of mortars, pedestals, and walls. It is worth noting that now the number of waterworks has decreased, especially in the newly built areas of the city, and water coolers have taken their place. In the hall on the eastern side of the Imam Gate area, there is a large Saqqakhaneh with a green-coloured five- and seven-arched geometric arch, with wooden guards and doors that have eight-pointed star networks of jasper knots. Inside, there is a water well with a water wheel and support for a water wheel and a stonecutter, and it also has a bee house window facing the area. Part of the middle sash window, which was damaged, has been recently restored. Although Saqqakhaneh has a city water supply, the water pipes have been closed (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### **2.2.3. The Saqqakhaneh of the Northern Courtyard of the Imam's Gate**

In the left corner of the northern alley of the tomb courtyard, there is a wide and relatively short Saqqakhaneh, which is limited by a brick frame from above and on both sides, and its entrance has a continuous pattern of the sun on the tile. Its wooden guard and door have ten square sections, and each section is made of a star-shaped latticework of the Jafari knot and was renovated a few years ago. This Saqqakhaneh has city-piped water, and under the tap, a small stone drain for the outflow of water can be seen on the ground (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### **2.2.4. The Saqqakhaneh adjacent to the Imam's Gate**

At the end of the alley that connects the northern courtyard of the tomb to the adjacent alley, on the wall facing the alley, there is a small Saqqakhaneh that has a tiled entrance with a blue four-pointed star pattern and a blue iron guard (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### **2.2.5. Saeed Bin Jubair Mosque of Isfahan**

The Saeed Bin Jubair Mosque, whose original construction dates to the early centuries of the Hijri calendar, is located on the western side of the northern courtyard of Imamzadeh Darb-e-Imam in Isfahan. Sheikh Jafari Ansari wrote about this small mosque in his History of Isfahan: "Another of the ancient mosques is the mosque attributed to Saeed Bin Jubair. Its area is more than a cage, the door of which opens into the courtyard, and its main building, after the Imamzadeh Ismail Mosque (Shaya Mosque) and part of the Jame, was older than the other mosques." In the late Safavid period, some tiling work was done in this mosque (Jafari Ansari, 1999, pp. 123-124).

## **2.3. Darvazeh-e-Nou Neighbourhood**

### **2.3.1. Darvazeh-e-Nou Safaviyan Bazaar**

The Darvazeh-e-Nou Bazaar, one of the old bazaars in Isfahan, is being renovated in the Safavid style and with a roof. Engineer Jafari, Managing Director of the Isfahan Municipality Renovation and Improvement Organisation, stated: "based on the research conducted and the documents obtained, it is shown that the Darvazeh-e-Nou Bazaar was roofed, and accordingly, with the implementation of the reorganisation plan, this bazaar will return to its historical past". He added: "only parts of the bazaar that have historical evidence will be roofed, and currently, the first stage of the renovation of this bazaar has been completed by the Municipality Renovation and Improvement Organisation in the form of a roof, and other parts of the bazaar will also be roofed". Referring to the use of an old and skilled master craftsman in arching the bazaar's roof, Jafari said: "by using appropriate materials, this place will be made resistant to natural disasters, including earthquakes, for a long time". He mentioned the interruption in the arrangement of the electrical installations of the Darvazeh-e-Nou Bazaar as one of the reasons for the delay in the revival of this bazaar and added: "so far, 86 historical monuments of the province, including old bazaars and bridges, have been restored and revived by the Isfahan Municipality Renovation and Improvement Organisation" (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### **2.3.2. Bazaarcheh Khan**

This bazaar is in the Darvazeh-e-Nou neighbourhood, near the small mosque of Suleiman Bey, one of the officials of Shah Abbas II, which was built in 1072 AH (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### **2.3.3. Suleiman Bey Mosque of Isfahan**

This building is in the Darvazeh-e-Nou neighbourhood and Bazaarcheh Khan Alley and is a small mosque that was built by Suleiman Bey, one of the officials of the court of Shah Abbas II. On its entrance, an inscription in white script on a background of azure brick tiles dated 1072 AH has been installed (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

## **2.4. Sonbolistan Neighbourhood**

### **2.4.1. Jamilan Palace Caravanserai Building (Qasr Palace)**

This building is one of the inner-city caravanserais that has the complete and classic type of caravanserai and is considered one of the private caravanserais. The building is a four-porch type, the porches of which were later converted into rooms. The building is part of the endowment and has almost all the spaces of a caravanserai. In some opinions, it is called a Seljuk palace, and in others, it is called a Safavid caravanserai (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### **2.4.2. Jamshidi House**

Jamshidi House is in the historical neighbourhood of Sonbolistan. During the Seljuk period, a building called Jamilan Palace was built in the Sonbolan neighbourhood, which became known as Chelmon Palace among the residents of the neighbourhood. Jamilan Palace was built in the middle of a large garden. So far, no trace of the building itself has been identified, but parts of the garden entrance building and its corrugated walls can be identified. The Jamilan Palace was demolished during the Safavid era, its garden was separated, and a new building was built inside the compound, including the seminary, the remains of which have now been converted into commercial shops, etc. The Jamshidi House is the westernmost block of the garden (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

## **2.5. Posht-e-Baro Neighbourhood**

### **2.5.1. A'lam House**

On Abdo-r Razzagh Street, in an alley facing the Lovers' Hill and in the heart of Isfahan's old fabric, there is a house that is considered one of the most important buildings in Isfahan due to its beauty, elaborate decorations, artistic features, plaster and mirror paintings, and wood and stone crafts. This house, which had been left unused by its owners for years, was restored and rebuilt after being purchased. Unfortunately, parts of this interesting building have been destroyed by profit-seeking individuals who considered the existence of this precious work to be a hindrance to their own profit-seeking goals. This includes the fire that destroyed the very beautiful entrance of the house and the destruction of the gate that was built on the northern passage and protected the house as a strong and stable support. What attracts attention in the A'alam House is the variety of decorations, paintings, and stucco. The five-door room of the A'alam House presents the decorative arts of the Qajar era to the viewer like an exquisite album of mirror work, painting, stucco, and woodcarving. The numerous designs drawn from the beautiful palaces of Isfahan and Iranian and European landscapes, along with flowers, plants, and stained glass, can be suitable models for the decorative arts of the Qajar era. In addition, the decorations of this house reflect the renewed attention of Qajar artists to the arts of the Safavid era (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### **2.5.2. Haghighi House**

Haghighi House, which has been registered as a historical and national monument, is in the old neighbourhood behind the barrow and is one of the most beautiful and spectacular houses of the Zand era, built by the Haghighi Brothers and remaining in this old neighbourhood. Haghighi House is in an old alley called Yazdeh Pich, which is now called Pardis Alley. The architecture of the house is completely in the style of Safavid architecture. However, its decorations are from the Zand dynasty. The extraordinary similarity of the gold flower and shrub decorations of this building with the decorations of the Karim Khani Citadel in Shiraz proves the connection of this building with the Zand dynasty. Like all Iranian houses, the Haghighi House has a private exterior, and the latticed sash windows with coloured glass are considered valuable latticework art. The gold and mirror decorations and exquisite muqarnas work in the Safavid style and the delicate-coloured stucco have made this house one of the valuable, interesting, and spectacular works of Isfahan. Haghighi Brothers House was taken out of private ownership in 1350 AH and was placed in the possession of the Ministry of Culture and Art at the time, and is currently in the possession of the Isfahan University of Art (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

## **2.6. Jamala Neighbourhood**

### **2.6.1. Vazir Bath**

This bath was built during the Safavid era and has many attractions. However, with the loss of the practical aspect of public baths, this bath, like other baths of its time (Shah Ali Bath, Sheikh Bahai Bath, etc.) and the lack of attention from residents, fell into disrepair. It has now become a centre for the intellectual development of children and adolescents. From the Vazir bath, only its name is visible in various sources. This bath was noticed after the victory of the revolution, and it was renovated by preserving its originality and architectural features. After the renovation, it was given to the Intellectual Development Centre for children and teenagers (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### **2.6.2. Habibeh Begum Caravanserai**

This caravanserai is part of the Haj Mohammad Jafar complex, which suffers from many problems. The southern side of the building was destroyed due to the construction of Abdo-Razzagh Street, and other parts of the building are also severely deteriorated (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

## **2.7. Darb-e-Ghasr Neighbourhood**

### **2.7.1. Qodsi House**

Address: Abdo-r Razzagh Street, Haj Mohammad Jafar Bazaar, Qodsiyeh Alley. Near Darb-e-Imam Isfahan, on the west side of Haj Mohammad Jafar Abadeh Bazaar, it is located, which leads to two entrances from the north and south, the northern and southern entrances overlooking the alley. Around this house, there are other valuable historical houses, such as Tadayyon House and Zarrabi House, most of which are from the Qajar period. Qodsi House is one of the old houses from the Safavid period that has undergone fundamental and physical changes in different periods. In 1278 AH, a school was established in a place near Darb-e-Imam in the personal house of the late Mirza Abdol Hosein Khoshnevis, nicknamed Qodsi, who was famous in his time for his grace, manners, eloquence, and calligraphy of Naskh. Later, it was moved to a new location in the Haj Mohammad Jafar Abadeh neighbourhood. Among the centres like the school during that period were Dar-al-Fonon in Tehran, Roshdiyeh in Tabriz, and the same school in Isfahan. The educational period of this school was three two-year terms. After 40 years and the death of Professor Qodsi, this place was rented for education until 1976. After this time, his heir, Mr. Manouchehr Qodsi, had the above place, which is 1978, on the condition of reviving this centre into a cultural place and transforming it into a centre for Isfahan studies. He transferred it to the Ministry of Culture and Arts at the time.

With the beginning of the imposed war, this place became a place to settle Iraqi refugees and refugees of the imposed war, and from that time, its decline intensified. In 1979 and 1992, conservation and local restorations were carried out by the Cultural Heritage Organisation. This house has two entrances on the north side, and the rooms are built on two floors on four sides around the courtyard. The plinths and stairs of the building are made of stone, and its decorations date back to the Safavid to Qajar eras. The northern façade of the building has carved decorations and plaster lachak and bergamot motifs that are particularly elegant. The southern part of the building is the oldest and dates to the late Safavid era. The two western and eastern façades of the building date back to the late Qajar and early Pahlavi eras. Qodsi House is of great importance due to the presence of very beautiful lachak and bergamot decorations, carvings, and motifs, and in terms of capturing the architectural features of the Safavid to Qajar eras. This house has now become a seminary and the administrative centre of the Isfahan Seminary/ Imam Jome's House (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### **2.7.2. Haj Mohammad Jafar Abadei Mosque and Bazaar**

Haj Mohammad Bin Mohammad Safi Abadei is one of the famous clerics, scholars, and jurists of Isfahan in the 13<sup>th</sup> century Hijri. A beautiful and well-built mosque was built in Isfahan in his name in the bazaar of Isfahan, which is a memorial to him, and there is also a pillar in front of the steel throne of Isfahan where he was buried. Tuysarkani 1374-1293 AH and his brother, Mr. Haj Mirza Abul Hassan Tuysarkani 1383-1295 AH used to lead in this mosque. The late Haj Mohammad Jaafar is one of the prominent and famous students, and Hojjat Al-Islam is the shaft. This mosque is in the Dardasht neighbourhood and has a privileged and unique position in terms of local connections. It is interesting from the "knotwork" type, but because the mosque's builder did not have enough time to complete the work, important parts of it remained unfinished. Haj Mohammad Jafar Abadeh has virtuous compositions, including:

1-Naqud al-Masail Jafariah in Argumentative Jurisprudence in Arabic and Persian.

2- Meraya's book on principles.

3-Description of the abstraction of speech.

4- Course description.

5- Question and answer.

His death happened in Ramadan 1280 lunar year in Isfahan, and he was buried in Takht-e Foolad, which is now called by his name. He had two sons named: Agha Abdul Javad and Haji Atta Allah (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

#### **2.7.2.1. Haj Mohammad Jafar Abadei Bazaar**

This bazaar is in the neighbourhood of Jamala in the aftermath of the Nim Avard Bazaar and the Darb-e Qasr neighbourhood. Haj Mohammad Jafar Abadei Mosque and Hawabigam Timcheh are in this bazaar. The Jamala neighbourhood, which dates to the pre-Safavid era, is a subset of the Dardasht-e Bozorg neighbourhood of Isfahan, which itself includes three bazaars: Haj Mohammad Jafarabadeh, Vazir Bazaar, and Doumar Bazaar, as neighbourhood centres. This axis starts from Haj Mohammad Jafarabadeh Bazaar, passes through the Vazir Bath and the Imamzadeh Darb-e Imam Tomb, reaches Jamilan Palace, and passes through the passages inside the neighbourhood to the Shah Ali Bath and finally to the Atiq Square. Among the restoration efforts of Professor Mehdi Paknejad, one of the most prolific architects of Isfahan, is the restoration of the Haj Mohammad Jafar Abadeh Bazaar and Mosque (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

#### **2.7.2.2. Haj Mohammad Jafar Abadei Mosque**

One of the most precious and important monuments of the Qajar era in Isfahan is the Haj Mohammad Jafar Abadeh Mosque. This mosque, which is the memorial of Haj Mohammad Jafar Abadeh, a prominent cleric of the Qajar era, is considered one of the most significant monuments of Isfahan in terms of its strength and knotwork tile decorations. This mosque is in the Dardasht neighbourhood of Isfahan, which has a privileged and unique location in terms of local connections because, in addition to the adjacent market, it is connected to most of the surrounding units by existing alleys. This unique building is connected to the northern alley and the eastern bazaar by two doors on the northern and eastern facades. The inscription on the eastern entrance of the mosque is in white Thuluth script on a background of



lapis lazuli brick tiles and includes verses from the Quran. The date of writing of this inscription is 1296 AH. On the crescent of the northern porch and around it is also an inscription in Thuluth script dated 1280 AH.

On the western porch is an inscription that has been tiled in recent years, and verses from the Quran are written with the date 1368 AH. On the porches on both sides of the western porch and in the arches of the corridors of the northern porch of the mosque, very beautiful construction lines are written, the content of which is religious phrases. The exquisite pulpit of this mosque is decorated with solid geometric patterns and colourful wooden instruments and words, and makes every viewer wonder and admire. The winter nave of the mosque, located on the western side of the building, adds to the elegance and grandeur of the mosque with its tiles, brickwork, and geometric designs. The main altar of the Haj Mohammad Jafar Mosque, decorated with tiles of 7 colours of brick, is completely similar to the tiles of the Sayyid Mosque. Many researchers and experts believe that the master of both mosques was the same. The Haj Mohammad Jafar Abadeh Mosque was hit by a missile during the war and suffered severe damage, which was rebuilt in the first method (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

It is appropriate to mention that the Haj Mohammad Jafar Mosque was built in Isfahan at a time when the city of Isfahan had lost the grandeur of the Safavid era after the Afghan attacks and the change of capital, so the construction of this mosque is considered the resumption of the greatness of Isfahan. This building is in the Isfahan bazaar, between the Nim Avard and Jamala Kale neighbourhoods, Darb-e-Imam, in a bazaar of the same name. It is a valuable work of the Qajar period, built by Haj Mohammad Jafar Abadei, one of the famous clerics of Isfahan in the 13<sup>th</sup> century AH. According to Rafiei Mehrabadi, only the nightstand of the mosque was built by the individual, and the rest of the mosque was already in place. It seems that the mosque was built at the time of Haj Mohammad Jafar's death in 1280 AH. It was completed in the 12<sup>th</sup> century, and only a part of its decorations was completed after his death by his son, who became the imam of the mosque. The current building of the mosque has a gate, courtyard, porch, nave, and beautiful decorations of special knotted tiles. The tile decorations of the mosque are dated 1280, 1296, 1367, and 1370 AH and contain Quranic verses.

Haj Mohammad Jafar Abadei Mosque is interesting in terms of its strength and knotted tile decorations, but since the builder did not live long enough to complete the mosque, the tiling of important parts of it remained unfinished. The inscription on the southern porch of the mosque is in Thuluth script on a background of azure-coloured brick tiles, and on the exterior of the porch, in two small square shapes, in simple black masonry script on a white background, in each shape, four words, “Allah”, and in two large squares, the name, “Ali”, is inscribed. Above the inscription inside the porch, in scattered square shapes, in simple black masonry script on a white background, with carved tiles, the name “Ali” and the sentence, “Allah-o Akbar”, are read. On the spars around the porch, in three-line checkered masonry script of azure-coloured on a turquoise background, is written: “Ya Ahkam Al-Hakimin”, “Ya Dail Al-Muthihirin”, “Ya Qazi Al-Hajat”, “Ya Ghiyat Al-Mustaghithin”, and “Ya Hayy Ya Qayyum”.

Haj Mohammad Jafar is one of the famous clerics of Isfahan in the 13<sup>th</sup> century Hijri, who left a mosque in the bazaar of Isfahan, and a support in the first throne of Isfahan, where the ashes were deposited, is still named after him. Haj Mohammad Jafar Mosque is interesting in terms of strength and tile decoration, but because the builder's life was not enough to finish the work of the mosque, the tiling of important parts of it remained unfinished. The inscription on the south porch of the mosque is written in third white script on the background of azure-coloured clay tiles after the sentence (Qala Allah Ta'ala) including verse 29 to the beginning of verse 43 of Surah (PBUH) and in the exterior view of the porch in two small square shapes with simple black calligraphy on the background. White, four words (Allah) in each shape, and the name in two big squares (Ali) role is closed. On the top of the inscription inside the porch, the name (Ali) and the sentence (Allah Akbar) are read in scattered square shapes in a simple black font on a white background with carved tiles, and in the spurs around the porch, it is written in a three-colour checkerboard font of azure colour on a turquoise background. “Ya Akhm al-Hakimin”, “Ya Dalil al-Muthahirin”, “Ya Qadi al-Hajat”, “Ya Ghiyath al-Mustaghithin”, “Ya Hayy or Qayyum” (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009) (See Table 1).

#### 2.7.2.2.1. North Porch

On the crescent of the North Porch and around it, Surah Asri is written in the script of Thulsh until the end of verse 13 and ends with the year 1280. Around the North Porch, in numerous spiers, in simple black single-line masonry script on a white background (in the margin) and black three-line checkered masonry script on a brick background (in the text), the following is written:

- A margin containing Surah Al-Fil and its text, the phrases “Ya Allam Al-Ayoub”, “Ya Ghaffar Al-Zanub”, and “Ya Sattar Al-Ayoub”.
- A margin containing Surah Al-Fatiha and its text Surah Al-Ikhlās.
- A text with the phrases “La ilaha illallah” (There is no god but Allah), “Mohammad Rasoolullah” (Mohammad is the Messenger of Allah), and “Ali Waliullah” (Ali is the guardian of Allah).
- The text of one Esper is only tiled and on its margin in black masonry script on a yellow background. The following poems are written:
  - The compass circle came in the middle, and the point in the circle became apparent.
  - The head of monotheism became the pole of the world, and the Mahdi of the end of time came.
  - The king of the whole world became the ruler of the world, and the Sultan of the world came.
  - The image of a heart in my heart became the master of the sentence of lovers.
  - Whoever loses his head in this sorrow is free from this and that which came.
- The masonry lines of the fifth esper are like the third esper, and the sixth esper is like the second esper, whose explanation was given earlier.

- On the margin of one esper, Surah Qadr is written, and in its text, the sentences “Allah Rabi” (Allah is my God), “Mohammad Nabi” (Mohammad is my prophet), and “Ali Amir al-Mu'minin Imami” (Ali, who is Amir of believers, is my Imam) are written. In two large square shapes on the exterior of the northern porch and four bergamots in simple black masonry script on a white background, it is written: “Subhan Allah” (Allah is Pure), “al-Hamd Lilah” (praise is special to Allah), “la ilaha illallah” (There is no god but Allah), “Allahu Akbar” (Allah is greater).

#### 2.7.2.2.2. West Porch

The inscription on the west porch, which has been tiled in recent years in white Thul's script on a background of azure mosaic tiles, after the sentence “Besmellaherrahmanerrahim” (In the name of Allah, the Most Merciful, the Most Merciful), contains verse 35 of Surah “Noor” (Light), and the date of tiling this porch is written at the end of the inscription in 1368 AH (Hijri). On one slab in black Thul's script on a background of white mosaic tiles, the sentence “La Howl wa La Quwah Ela Ballah Al-Ali Azim”, (There is no power or might except Allah, the highest, the great) (1370 AH) is written, and on another slab in white Nastaliq script on a background of black mosaic tiles “In the name of Allah, the Almighty, and the mosques of Allah, do not call on anyone with Allah” (1367 AH). On the porches on either side of the west porch, on a hexagonal slab in white mosaic masonry script on a background of azure-coloured mosaic tiles, is written: “An al-Saluhah Tanhi Aan Al-AI-Fasha and Al-Munker” (Indeed, prayer forbids indecency and evil). In the arches of the corridors on the sides of the northern porch of the Haj Mohammad Jafar Abadei Mosque, the word “Allah” is engraved in large quadrilateral shapes in one and the word “Akbar” in the other in Masonic script. The inscription on the eastern entrance of the mosque is in white Thuluth script on a background of azure-coloured brick tiles, containing verse 30 of Surah S (PBUH), and the date of the tiling is written at the end of the inscription, 1296 AH (Jaberi Ansari, 1999, pp. 291-292).

### 2.8. Jame Mosque of Isfahan

Jame Atiq (old) Mosque is, in one sense, the oldest building in the city of Isfahan today because there is no mention of it being a part of the fire temple. The Muslims had built a mosque in Saujian Alley, which was known by this name in the ministry of Saaduddin Mohammad Sawi, and today is known as Sabjian Alley, and they made this mosque the Qibla of that design. The marble grid on the north face is believed to be inside the fire temple, behind which a light was lit and worshipped from outside. There is another possibility: these mesh stones were made to connect the women's congregation to the men's line so that the women stand behind the men to pray and not be seen, and the line is also connected. The dome, known as the earthen dome, seems to be the oldest building of the Jame Mosque, and later, in Islam, it became a mosque, and this can be seen from the lines of its edges around the head of the door. The library, rooms, and book storage were built with the efforts of Professor Abu al-Abbas Ahmad Ziai. Safa Umar, in the state of Umar Bin Abdulaziz Ajli, was built by the Abi Zolf family, and its foundation was connected to the main foundation, which was a wall surrounding the fire temple. Shaheer and Daralamare are all covered, and the dolphins are the buildings except for the mosque, and the pool between the mosque, which is covered with four pillars, and a seating area on the four pillars, is covered. It is the primary building.

Khaje Nizam al-Mulk, the minister of the king, made Isfahan the capital of the sultan in 465 AH and ordered to repair it and make the old dome a dome, and Khaje's son built a clay dome under his father's promise in 481 and up to 500 AH and fourteen years he added to the settlement of Hemi, and that year, Shahi Mahmud Bin Mohammad Bin Malak Shah, the Ismaili interiors, set fire to the mosque at night for the storage of his books, and the following year, Mahmud repaired the dome and façade of Umar Bin Abdul Aziz ordered. On the west side is Safa Ustad, and on the side of Safa Ustad, there is a mosque and a mihrab, which is amazing because of the stucco mouldings around the mihrab, that stucco moulding is from the time of the Shia people Isfahan, which has the name of Hazrat Amir above the mihrab, and it was Sultan Mohammad Khoda-bande during his reign in 710 AH. On the east side, opposite the teacher's (Ostad) porch, is the student's (Shagerd) porch, which has a muqarnas roof made of cut bricks with elaborate plasterwork, but most of it is cast. It is known that the building was made of plaster because of a lack of patience and haste; it has a marble plinth and a distinguished inscription. On the north side, in front of Sefe Sahib, there is a long and rectangular inner porch called Ivan and Sefe Darvish. A mesh marble stone is placed in it, which is likely to have been built for the door of the fireplace.

The oldest historical building of Isfahan should be considered as the Juma Mosque or the Jame Mosque of Isfahan. The current appearance of the mosque is mainly related to the actions of the Seljuk period, but its repairs and additions are related to later periods, especially the Safavid era. However, in the archaeological excavations, the pre-Seljuq stages were also found, which go back to the Al-Buyeh period and the third century of Hijri. In these excavations, pre-Islamic works have also been discovered. The mosque has several entrances, each of which relates the space of the mosque to parts of its surrounding context. These entrances were not all built at the same time, and each one was built at a certain point in history and related to the interior and exterior of the building. Passages and passages that exist around the mosque show the wide connection that the mosque has with the old fabric of the city.

The Isfahan Jame Mosque was built with a plan of four porches, and since it brings together the artistic and architectural innovations of 15 centuries of the Islamic era, it is considered one of the best works in the world and is famous today. According to various sources, the Jame Mosque has suffered a lot of damage over time due to fire and numerous wars and unrest of different eras, and it has been rebuilt and restored. The four porches around the square characterise the Iranian style of mosque construction, which has been popularised in other mosques after its construction. These porches, which are called Safa Sahib in the south, Darvish Safa in the north, Master Safa in the West, and Pupil Safa in the East, are decorated with moqrans and use one of the most interesting techniques of Iranian architecture. In general, Jame

Mosque consists of several spaces: Four-Ivan courtyard, Shabestan, Mozaffari school, small rows of Dailami period, Nizam al-Mulk dome, Taj al-Mulk dome, Oljaito Mihrab, famous four ivans of Sahib, Master, Student, Dervish (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009) (See **Table 1**).

### **2.9. House of Kolahduzha**

This building is located on Abdo-R-Razzagh Street and Haj Mohammad Jafar Bazaar and was built around 1271 AH. Among the interesting parts of this building is the basement with excellent tiling, the northern hall of the house decorated with plaster decorations in the form of flowers and bushes, birds, and Quranic verses, and there are two fully painted plaster columns between the room and the palace. The paintings on the windows add to the beauty of this hall (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### **2.10. Mohammad Gholi Shiran's House**

This building is in the Darb-e Koushk neighbourhood, Chahar Bagh Street, below Bazaarcheh Haj Mohammad Ali and Shoharaki Alley, and it is one of the works of the late Qajar and early Pahlavi periods. Shiran's house is built on one floor with an area of about 900 square meters, and its different architectural spaces are gathered on the three sides of the central courtyard: north, east, and west. The entrance to the building is through a beautiful vestibule. The pediment is decorated with four stuccoed columns and a beautiful inscription placed in the opening of the crescent arch. After the vestibule, there is a long corridor that leads directly to the courtyard, but the turn created in the vestibule denies the possibility of directly viewing the courtyard. The main spaces of the house are located on the north front and include a nine-door hall with exquisite stucco decorations, mirrors, and paintings (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### **2.11. The House of Naalbandha**

In the third district of Isfahan, opposite the door of the Hajj Mohammad Jafar Abadeh Mosque, there is an old and beautiful house that is considered a cultural heritage site and is known as the House of the Farriers. This house was built by the Farrier Bashi of the Safavid era. This building is in Kuy-e Jamale and in front of the Mohammad Jafar Mosque. It is a work of the Safavid era and the construction of Naalbandbashi. Saeed Nafisi, a contemporary researcher, visited this house and wrote about it in his book, *Ahwal Sheikh Bahai*. According to Saeed Nafisi, a hall has been built in this house, which has many long niches. In each niche, a picture of one of the Iranian scholars is beautifully painted, such as the pictures of Abul-Qasim Mirfundarski, Sheikh Attar, Bayazid Bastami, Ibrahim Adham, Sheikh Ahmad Ahsai, Jalaluddin Mohammad Rumi, Shams al-Din Tabrizi, Shah Nematullah Vaali, Sheikh Bahai, and Sheikh Safi al-Din Ardebili, and pictures of other intellectuals. Each of these pictures is one and a half meters long and one meter wide, and its artist was Rajab Ali Isfahani, whose name was written under each image (Nafisi, 1937).

### **2.12. Almasi House**

This building is located on Abdo-r Razzagh Street, Haj Mohammad Jafar Bazaar, and Qasharky Alley, and it is one of the works of the Qajar period. Today, only an area of about 180 square meters remains from this house. The old room of this house is decorated with beautiful moqrans decorations, mirror work, and paintings (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### **2.13. Tadayyon House**

This building is in the Jamale neighbourhood and Abdo-R-Razzagh Street, and it is one of the works of the Qajar period. Tadayyon house is built with an interior and exterior style of 620 square meters on one floor, and in some places, it has a mezzanine. The axis of the building is north-south. The main spaces of the building are located on its north side and include a hall and two rooms with three doors. The hall is decorated with paintings in the style of cast iron, mirror work, and a train in the dual part. Other spaces in the house include seven-door and three-door rooms, a container, a kitchen, a water tap, and a water source. Painting, cast iron making, mirror work, framing, mosaic, train making, plastering, and soap tile work are among the decorations of this house (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009) (See **Table 1**).

### **2.14. Jamshidi-Far House**

This building is located on Abdo-r Razzagh Street, Sonbolistan Street, adjacent to Jamilan Palace, and is one of the works of the Safavid period and later. Jamshidi-Far house, with an area of more than 670 square meters, was built in two storeys. In the current state, the architectural spaces are located on its north and east sides and can be accessed through two entrances on the east and west sides. The spaces on the north front originally belonged to another house. The main hall of the house is located on the eastern front and has a height equivalent to two floors and overlooks the porch through five mesh doors. Four rooms with three doors are located on the sides of the hall on two floors and have access to the hall and the covered porch. The three-door rooms are decorated with moqrans work decorations. To access the upper floor, a staircase is installed at the far end of the eastern side. The porch has two wooden columns with carved decorations. The pond in the middle of the yard with a decorative design has given a beautiful effect to the rectangular yard of the house (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### **2.15. House of Haj Rasouliha**

This building is located on Chahar-Bagh-e Payin Street and Darb-e Koushk Alley, and it is one of the works attributed to the late Zandiyeh period. It was built by the great family of Haj Rasouliha, who was a reputable merchant. Two floors

and basements have been built on the west and east sides. The inner part of the house is separated today and has become an independent house. The entrance gate of the building is in the southwest corner and leads to the large and central courtyard of the building through a vestibule and a short corridor. On the second floor, there is a vestibule of a room that is connected to the Gushvar room of the southern front of the house. The house has another entrance in the southeast corner that leads to the stables and then to the courtyard. The rectangular courtyard of the building has a rectangular basin in the middle and the main axis, and two tree-planted areas on each side. Different spaces of the house are gathered with rich decorations on the four fronts of this yard. Some of these decorations, including coloured plasters, have been damaged over time, and during the years 1357 to 1364, repairs were made on the remaining parts by the Isfahan Cultural Heritage and Tourism Organisation.

The façades around the yard are also decorated with many lattice doors and windows or coloured glass and wooden porcelain knots; unfortunately, most of them are damaged. In the middle of each side of this courtyard, there is a hall decorated with moqrans, trains, plastering, gilding, painting on plaster, and delicate and beautiful sashes. The northern front hall is wider than the other halls and occupies most of this front. Access to this hall is possible through the shoe racks on both sides. On the second floor, there are Gushvar rooms on the shoe racks, and they are connected to the hall on one side and to the courtyard of the nobles on the other side. The south front of the house also includes a hall and two rooms with three doors on their sides, which are separated by two shoeboxes. On the second floor, there are three-door rooms and two other rooms, and they are connected to the nobles' hall. The east and west fronts of the house also have the same composition. The halls of these two fronts, with a height equivalent to two floors, have high and wide sashes towards the courtyard, and the sash of the western hall has been destroyed. The service spaces are located behind the main spaces (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

#### **2.16. House of Haj Mohammad Javad Zargar/ Calligrapher**

This building is located on Abdo-r Razzagh Street and Qazviniha Alley and was built by Seyed Ismail Qazvini in the early Qajar period. At the beginning of the Qajar period, a group from Qazvin migrated to Isfahan, and some luxurious houses of this group remain, of which Zargar House is one of them. Zargar House was built with an area of 1100 square meters on two floors and around a relatively large and rectangular yard, and has a high artistic value. Like other houses in Isfahan, this house has many halls and rooms and is decorated with seven-hole sashes, milk and sugar plasters, mirror work, and paintings (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

#### **2.17. Faani House**

This building is in Abdo-r Razzagh Street, Qazvini-Ha Kuy, and Haj Mohammad Jafar Alley and is one of the works of the Qajar period (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

#### **2.18. Habib Abadi House**

This building is located on Ibn-e Sina Street and is considered one of the works of the early Pahlavi period. Habib Abadi House was built with an area of about 1300 square meters and has five-door (panj-dari) and three-door (se-dari) rooms. The north front of this house is decorated with numerous columns and tiling on two floors (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

#### **2.19. Imamzadeh Jafar (Jafariyyah Tomb)**

On the western edge of Hatef Street and opposite Imamzadeh Ismail Alley, the Imamzadeh Jafar building is located, which is built in the form of an octagonal tower. This small, very beautiful building is an example of the tombs and mausoleums that were built during the Mongol rulers in Iran. This building used to have a pyramid-shaped dome that has now disappeared. There are a pair of inscriptions on the exterior of the dome. The first inscription is written in white third-order mosaic script on a blue background and includes the verse of the throne, at the end of which is the date 725 AH. Above this inscription, another inscription is written in simple Kufic script on a turquoise background, including verses from the Holy Quran. On the plaque above the entrance to Imamzadeh Jafar, in a white third-order mosaic script on a blue tiled background, blessings on the fourteen infallible saints are written. According to the tombstone of Imamzadeh, the owner of the tomb is Ja'far Ibn Sayyid Murtaza, and his lineage goes back to Hassan Ibn Hussein Ibn Mohammad Ibn Hussein (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

#### **2.20. Takiyeh Abadeh**

Takiyeh Haj Mohammad Jafar Abadeh is one of the Qajar era's Takiyeh, located on the right side of Fayz Street, adjacent to the southern side of Rukn-e-Mulk Mosque. The Takiyeh site was part of the large Vale Garden, which Rukn-e-Mulk purchased from his descendants and in 1324 AH ordered the construction of a tomb for Mohammad Jafar Abadeh, a prominent jurist and mujtahid (died 1280 AH), who was buried there. This Takiyeh includes a tomb in the middle and two eastern and western courtyards, and rooms built around the courtyards. Takiyeh Abadeh is one an excellent example of Qajar-era architecture. The entrance to the Takiyeh is decorated with an inscription in the handwriting of Mirza Fath al-Jalali and poems by Toghrol Isfahani, and the presence of unique examples of tiling, calligraphy, and brickwork is among the artistic manifestations of this Takiyeh. Takyeh Abadeh is the burial place of scholars and great scholars of jurisprudence, preaching, and oratory. Including:

- Hajj Mohammad Jafar Abadeh, a distinguished scholar and author of works such as "Jafari Jurisprudence and Nuqod al-Mas'al and..."
- Mirza Mahmud Sadr al-Muhaddisin, a famous preacher and freedom-seeker of the Constitutional era, died in 1332

- Sheikh Mohammad Hassan Yazdi, a scholar and an unparalleled preacher, author of the book “Saif Al-Wa’aziin wa Al-Zakirin”, died in 1286
- Mirza Asda... Ashtari, a wise writer and scholar, died in 1395 AH (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### **3. Historic Buildings in the Dardasht Neighbourhood**

#### **3.1. Sultan Bakht Agha Tomb**

This tomb is in the Dardasht neighbourhood and next to the Do Minar School. This building, which consists of a gate with two minarets and a tomb chamber, is the burial place of Khan Sultan, the daughter of Amir Ghiyath al-Din Kaykhosrow Inju. On her tombstone, the name of Sultan Bakht Agha is mentioned. The gate faces almost south, and two circular minarets are built above it. Nothing remains of the buildings behind the gate, but on the west side and adjacent to the left side of the gate, there is a square room with a dome on it. The surfaces of the facade wall located on both sides of the gate are covered with decorative covering, and under this covering are foundations made of bricks of different sizes (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009; Babazadeh-Asbagh, 2022b) (See **Table 1**).

#### **3.2. Minarets of Dardasht**

These minarets are erected above the large entrance door of a building from the Mongol era, of which nothing else remains except these minarets. The mentioned building is probably the same school that Chardin mentions in his description of the "Dardasht neighbourhood": "...a large school with two tall towers or towers at its main entrance..." This form of building, i.e., the erection of two minarets above a gate or, as we see in Nakhchivan, attached to both sides of it, is often seen in buildings from the Mongol era (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009; Babazadeh-Asbagh, 2022b) (See **Table 1**).

#### **3.3. Dardasht Caravanserai**

Dardasht Caravanserai is in the old neighbourhood of Dardasht (Avicenna Street). The building belongs to the Safavid era, and its main role was as a hotel or inn. The caravanserai was built in a very large area and was surrounded by rooms called hujra. These rooms are roofed in the style of arches and fountains. The Renovation and Improvement Organisation of Isfahan Municipality has taken a great step in preserving and maintaining the Dardasht Caravanserai by organising and restoring this historical monument and creating a suitable use for it (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

#### **3.4. Dardasht Bath**

The Dardasht Bath, known as the Bazaar Bath, which is one of the works of Agha Momen, brother of Agha Noor, was built during the reign of Shah Abbas and Shah Safi and dedicated to the Agha Noor Mosque. This bath also has seven-coloured tiles with flower, bush, and slime motifs that have deteriorated over time. Its ceiling is 8-sided with an arch and dome covering, with glass skylights installed at the top of the dome. This bath, along with the Bazaar and the Caravanserai of the same name, has created a historical complex that is currently being restored by the Renovation and Improvement Organisation of Isfahan Municipality. The restoration of this bath has cost 310 million tomans so far, and a cultural use has been defined for it (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

#### **3.5. Saqqakhaneh of Dardasht Bazaar**

There is an interesting Saqqakhaneh in Dardasht Bazaar, whose tile decorations outside prevent anyone from looking inside. Two doors on either side of this building open inward, and the tile strip around the entrance is decorated with poems about Hazrat Abul Fazl (AS). The following is also written at the bottom of both sides of the tiles: May the curse of God be upon the one who betrays the tiles. In the forehead of the Saqqakhaneh, in the middle of a larger tablet, the name of the blessed Abu Abdullah Al-Hussein Al-Shaheed is engraved. The background around this tablet is covered with seven-coloured tiles with beautiful Islamic flowers, and the two middle columns, which seem to have been reconstructed, are made of mosaic tiles with Islamic twists. In the middle background, an image of Hazrat Abbas (AS) riding a horse is seen taking a waterskin from a woman dressed in blue. This Saqqakhaneh is located near the old palace in Dardasht on Abdol Razzaq Street and is the only mirrored Saqqakhaneh in Isfahan. The wooden guard of the Saqqakhaneh is made of the Jafari square Chinese knot type, and the paw symbol is engraved on top of it. Inside the Saqqakhaneh, the wall is also made with beautiful mirror art (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

#### **3.6. Sheikh Bahai Bath**

It is one of the masterpieces of architecture and engineering in the world, located within a radius of one hundred meters south of the Nizam-e-Mulk Dome (south of the Old Mosque) in the "Dar Dasht" neighbourhood. The date of its construction is stated to be 1065, and its design is attributed to Sheikh Bahai. Sheikh Bahai Bath dates to the Safavid period and was built with the engineering of Sheikh Bahai. The heating system of this bath is considered a masterpiece of engineering, using the laws of physics and chemistry. The water in this bath is lit by a "breath and gas" system, that is, by methane gas from the sewage of the Jame Mosque and by extracting oil from the Sheikh Bahai oil press located next to the bath. The oil press was a place for producing oil from oilseeds. Using this complex engineering system, this bath was lit for a long time with only one candle. Architecturally, this bath, like other Safavid baths, has the

characteristics of that era. This abandoned bath has been registered in the country's national heritage list (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### 3.7. Sheikh Bahai Oil Press

Sheikh Bahai Oil Press is interesting. This oil press is one of the oldest oil extraction factories in Isfahan and was operated by a blacksmith before it was converted into its current form. Samples of the old stone machinery of this factory are kept in a warehouse (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### 3.8. Dardasht Bazaar

This bazaar is located in the Dasht neighbourhood and is a large bazaar. The late Seyyed Abbas Beheshtian considers this market one of the big and interesting markets that were built in the neighbourhood. Also, the author of Isfahan's National Artefacts book called this bazaar Bazaarcheh. This market is a work of the Safavid era (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009; Babazadeh-Asbagh, 2022b).

### 3.9. Hammam Qazi Bazaar

This bazaar is in the neighbourhood of Dasht near Falakah ShahShahan, and the small mosque of Haji Yunus, one of the eunuchs of Shah Abbas II, which was built in (1073 AH), is in this bazaar (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### 3.10. Agha Noor Mosque

In the Dardasht neighbourhood of Isfahan, there is a mosque designed in the form of 4 porches according to Iranian architectural traditions. The entrances to the Agha Noor Mosque are located on the northern and eastern sides of the mosque, which are connected to the Dardasht Bazaar and the neighbourhood of the same name by the surrounding streets. The founder of the mosque, Noor al-Din Mohammad Isfahani, is one of the benevolent and charitable people who started the construction of the mosque during the reign of Shah Abbas I, but it was completed in the first year of the reign of Shah Safi. The inscription on the head of the mosque, which is written by Mohammad Reza Emami and dated 1039 AH, expresses the same thing. One of the beauties of the Agha Noor Mosque is its beautiful and interesting nightstand. The light of this nightstand is provided by pieces of transparent marble. The columns of the nightstand of mosque are also very interesting. On the sides of the nightstand's altar, religious phrases are written with simple black construction lines on a yellow background. The outer entrance of this nightstand is also decorated with knot tiles and construction lines. This nightstand was attached to the mosque in the 13<sup>th</sup> century. The northern entrance of the Agha Noor Mosque has an inscription written in the white Thuls script on a lapis lazuli tiled background by Mohammad Baqir Shirazi. The content of this inscription is verses from the Holy Quran. The Agha Noor Mosque suffered a lot of damage in the War of Independence and was rebuilt in the first method (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### 3.11. Fath Mosque of Isfahan

This building is in the old neighbourhood of Bab al-Dasht in Isfahan and is a small building that, according to the inscription on its door, was built by the religious scholar Abul-Futuh Mohammad in 987 AH. The inscription of this mosque is in the Alijan Moalem script, and on the two sides of its entrance, poems dated 988 AH have been carved on two stone tablets in Nastaliq script (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### 3.12. Haj Yunus Mosque of Isfahan

This building is in the neighbourhood of Dar Dasht in the Hammam Qazi Bazaar and near Shahshahan Square, and was built in 1073 AH. It was built in the 15<sup>th</sup> century by Haji Yunus Nami, one of the eunuchs of the court of Shah Abbas II. The inscription on the entrance of this mosque is carved in the raised third script and is in the handwriting of Mohammad Reza Emami. On the two panels of the old door of this mosque, an inscription dated 952 AH is carved in the raised third script. It seems that this door was related to an older building that existed in this place or was moved to this point from another place (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### 3.13. Shafiyyah School

Among the schools of the Safavid era, the Shafiyyah School is in the Bab al-Dasht neighbourhood, which has an area of one and a half acres and has a main entrance that was tiled during the reign of Shah Abbas II Safavid, in the handwriting of Mohammad Reza Emami (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

### 3.14. Zargar House

This building is in the neighbourhood of Hamam Wazir and Qazvini Street and is one of the works of the Qajar period, which is registered as number 1281 in the list of national works (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009). For more information about the houses in Isfahan, another published article by the author titled "Comparative Analysis of Qajar Historic Houses in Tabriz, Isfahan, Yazd, and Kashan, Regarding their Architectural Forms and Elements" can be studied (Babazadeh-Asbagh, 2022a).

### 3.15. Explanation of Dardasht Buildings

The seat of Sheikh Abu Ishaqiyah's government was in Isfahan, around the Jame Mosque and Dardasht and near the houses of Mir Mirran, and his government buildings became known as Abu Ishaqiyah, and indeed, when Mubariz al-



Din was defeated and Mirmiran fled to Kashan, Sheikh Abu Ishaq after hiding in the house of Sheikh Asil al-Din, Sheikh Al-Islam took that drunkard out of the oven and fell into the hands of Sultan Shah, the niece of Mubariz al-Din, and was sent to Shiraz and was killed by Amir Mubariz al-Din, but because she was the daughter of his brother, Khan Sultan, the daughter of Ki Khosrow, his ruler was one of the most famous women, Rashida. Shah Mahmud, then Mubariz al-Din, and looking at the beauty and perfection and honouring of the most beloved women to Mahmud, either at the same time, he moved his uncle's body from Shiraz to Isfahan, or after Mobariz al-Din's blindness and Mahmud's rule in Isfahan, with the year he was with Shah Mahmoud went to Shiraz and sat on the throne of Shiraz. In Taraeq al-Haqayq, quoting from Majlisi, he wrote: "There was a grave near the Jame Mosque, and they called it Abu Ishaqiya, and sixty years ago, they broke open that place, and a blue pan appeared in the place of Asia, and the bones of a corpse with a sword placed on his side and from The sword was as healthy as a pencil sharpener.

And Khan Sultan herself, the daughter of Ki Khosrow and Inju, is buried in the dome at the foot of the caravanserai of two minarets in Dardash, and she arranged a tombstone to her life in the year seven hundred and fifty-three; And because he had a secret grudge against Mubariz al-Din and his race in killing his uncle, Sheikh Abu Ishaq (who had taken the kingdom from their family). Shaban Rooz fought between her husband, Shah Mahmud, and her brother-in-law, Shah Shuja, who finally overthrew them all, during Shah Shuja's attack on Isfahan and the siege of Mahmud, that lioness showed amazing bravery and courage, and Shah Mahmud He said that one of the bloodsheds and attacks of Shah Shuja on him was from Sultan Bakht Agha's trickery, one night when he was drunk, he killed him in the year 769 and buried him in this tomb at the foot of the minaret. And after killing him, if he was alive, he spent his life in burning and sorrow. Bab Al-Dasht neighbourhood, there is a dome above the Shafiyya school, known to the common people as Abu Ali Sina, and he was the teacher of Sheikh al-Rashee because his grave is in Hamadan.

Two Imamzadeh at Darb Imam, one of them is called Imamzadeh Ibrahim Tabatabayi from the Thabeiras of Hassan Muthani, and the other is called Sayyid Ali, nicknamed Zain al-Din and the son of Ali Bin Jafar Urezi, and this is related to the place of Ureez, which is a valley outside Medina, Bari. The two Sayed Aali Nesab are buried in this place, and in front of the Imamzadeh dome, there is a mausoleum with excellent plastering and beautiful tiling. He was decorated by the short-term government of Amir Jahanshah Qaraqvinlu in Iraq. They say that the grave of Amir Jahanshah's mother is in that place where the name of Amir Jahanshah is written from the inscription outside the tomb, and Amir Jahanshah himself was killed in Diyarbakir by Amir Hassan Beyk Aq Qinlu and was killed by Iskandar Nami. Safaviyya, there is Agha Noor Mosque in the Dardasht neighbourhood and it is considered to be attributed to Aghanu who was one of the nobles and scholars of the time of Shah Abbas I, and there is a reference in the east porch of it, the history has written: "Noor Mosque is Ajam Kaaba, according to some It was believed that the calligraphy of Agha Mohammad Saleh was one of the students of Mir Emad Qazvini, but he became famous for the calligraphy of Mirza Noorullah, the son of Sadr al-Shari'a, who was one of the famous calligraphers during the reign of Shah Abbas. It has good tiling; Its area is about three acres.

Among the schools of the Safavid era, there is the Shafia school in the neighbourhood of Bab al-Dasht, which has an area of one acre and has a small door, which was tiled by Shah Abbas the Second Safavid. It was fifty thousand meters of land. Formerly, the place of his graves was visible, although the surrounding people included it as their house. With the efforts of Amin al-Tajjar, an arboretum was built as a national garden of the municipality, and water flowed from the Faden river to that place. In that land, three important layers of graves were found, the layer under the graves was from the Sabians and before Islam, where the dead were placed in vats; And Sanbulistan had a valid significance due to its proximity to Saeed Bin Jubeir Mosque and the location of the Imam's door, one of the famous Imamzadehs.

The longest day in Isfahan in late spring reaches fourteen hours and fourteen minutes, and the longest night, at the beginning of winter until dawn, is twelve hours and thirty-one minutes, and between dawns, one hour and thirty minutes, and the day in winter is nine hours and fifty-six minutes.

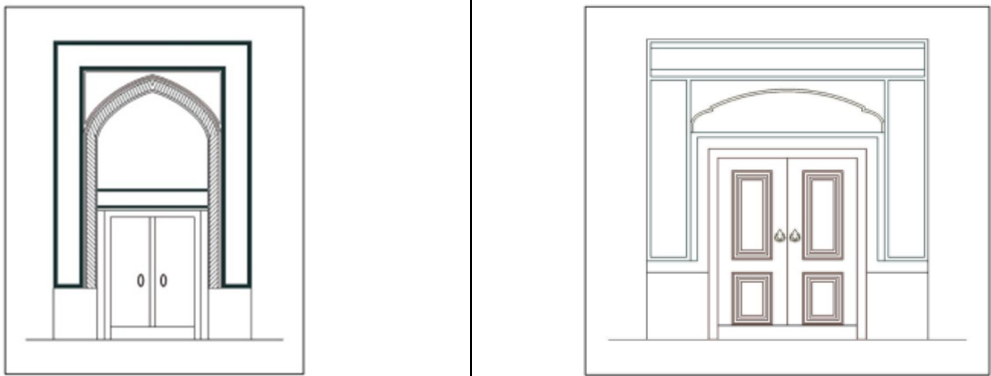
Due to the hardness of the land, the cost of farming is high, and the grain is low. In years of prosperity, food for six months must be brought from Iraq, Borborud, Chaplaq, Khansar, Golpaygan, and Kamreh. In the past, the neighbourhoods of Isfahan City were divided into two parts: one is Nemati Khana, and the eastern side is from south to north, Khajo, Bagh Karan, Baghat, Tervaskan, Sheikh Youssef, Paghela, Karan, Ahmedabad, Yazdabad, Dar Al Batikh, Mir Square, Golbar and Old Square, Jobareh, Letur, Goud Maqsood Beyk, Chanar Sukateh, and outside the gate of Sayed Ahmadian and Shahshahan. The second: Haidari Khana, and on the west side from north to south, Dardasht, Jamala Kale and Nam Vard, Hakim Mosque, Homayun Bagh, New Gate, Bidabad, Shamish, Noor neighbourhood, Charsu, Shamshabad, and Lanbanin (Reports of Isfahan Cultural Heritage and Tourism Organisation, 2009).

**Table 1.** Historic Buildings in the Dardasht Neighbourhood of Isfahan (Developed by the Author).

	
---	--



Imamzadeh Darb-e-Imam.



Eastern (Right) and Southern (Left) Entrances of Haj Mohammad Jafar Abadei Mosque.





Haj Mohammad Jafar Abadei Mosque.



Silhouette of the Neighbourhood, Two Minarets of Dardasht (Right) and Jame Mosque of Isfahan (Middle).



View from the roof of Karbasi House towards two minarets of Dardasht (Left) and Jame Mosque of Isfahan (Right).



Tadayyon House (ruined and abandoned).

#### 4. The Adaptive Reuse of the Complex of Three Historic Houses of Habib Abadi, Katiraei (Kadkhoda), and Badiol Sanaye

The author has published several articles about the adaptive reuse of the historic buildings like houses and churches such as “Adaptive Reuse of the House of Mirza Mehdi Farrashbashi in Tabriz, Iran” (Babazadeh-Asbagh, 2021, June) which was derived from her master’s thesis titled “The Conservation and Revitalisation of Mirza Mehdi Farashbashi’s House in Tabriz” (Babazadeh-Asbagh, 2011). Moreover, the relevant video of the presentation of the article can be watched on her YouTube channel (Babazadeh-Asbagh, 2021, May 14). Another published article by the author is “The Adaptive Reuse of Cibali Tobacco Factory, Kadir Has University” (Babazadeh-Asbagh, 2018), and the related video can be observed (Babazadeh-Asbagh, 2023, August 5). A comprehensive study about the “Adaptive Reuse of Abandoned Churches in the Walled City of Famagusta, North Cyprus” (Babazadeh-Asbagh, 2024a), its presentation video (Babazadeh-Asbagh, 2024, January 12), and another published book chapter of the author entitled “Interpretation Proposals for the Churches in the Walled City of Famagusta, North Cyprus” (Babazadeh-Asbagh, 2024c) are other studies about the adaptive reuse which are derived from the PhD dissertation of the author titled “Interpretation Problems and Proposals for the Churches in the Walled City of Famagusta” (Babazadeh-Asbagh, 2023). Similarly, the author’s published book entitled “Cultural Heritage Interpretation: Problems and Proposals for the Medieval Churches in the



Walled City of Famagusta, Northern Cyprus” can be studied for the adaptive reuse of the cultural heritage buildings (Babazadeh-Asbagh, 2024b).



**Figure 2.** Location of the Complex of Three Houses in the Areal View of 1335 AH, Before the Foundation of Ibn-e-Sina Avenue (Developed by the Author).

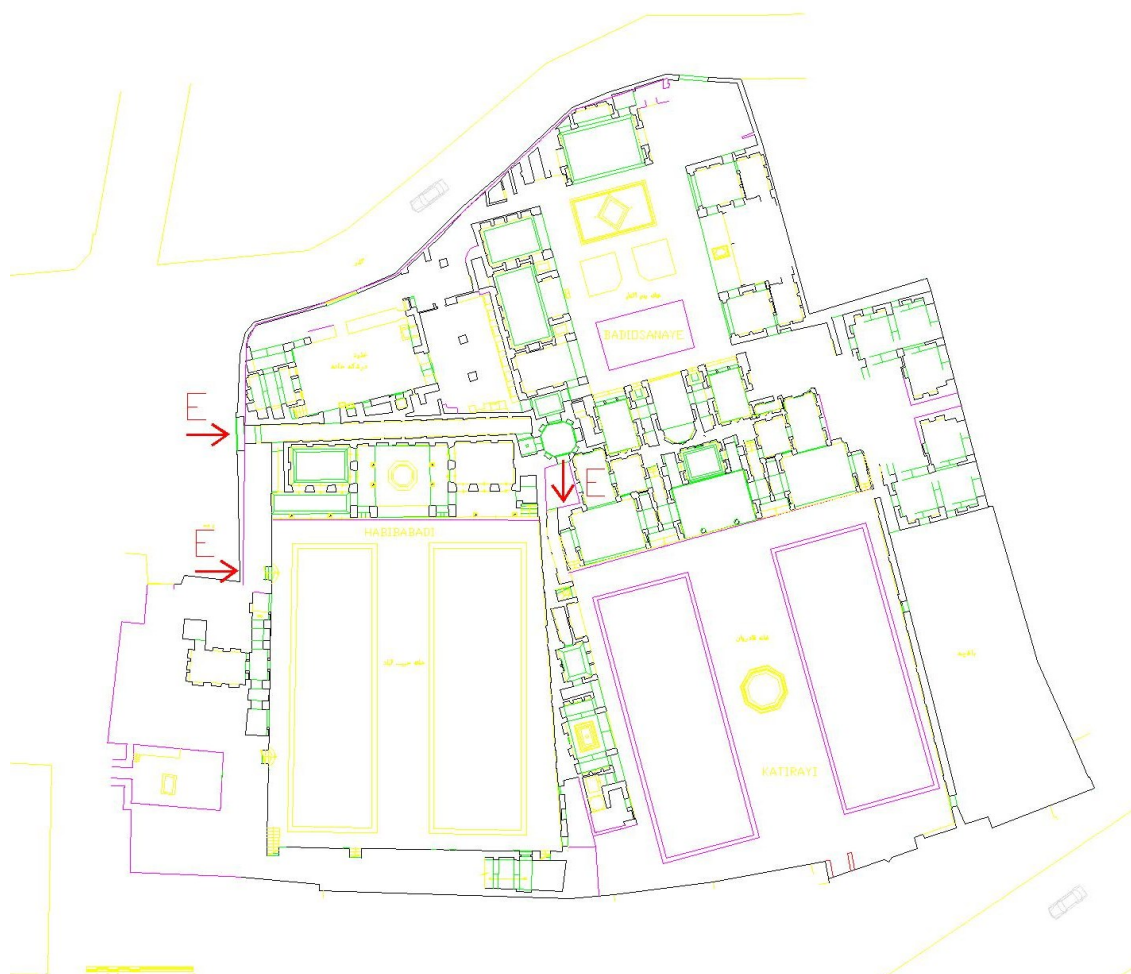


**Figure 3.** Access Roads to the Complex of the Houses in the Dardasht Neighbourhood (Developed by the Author).

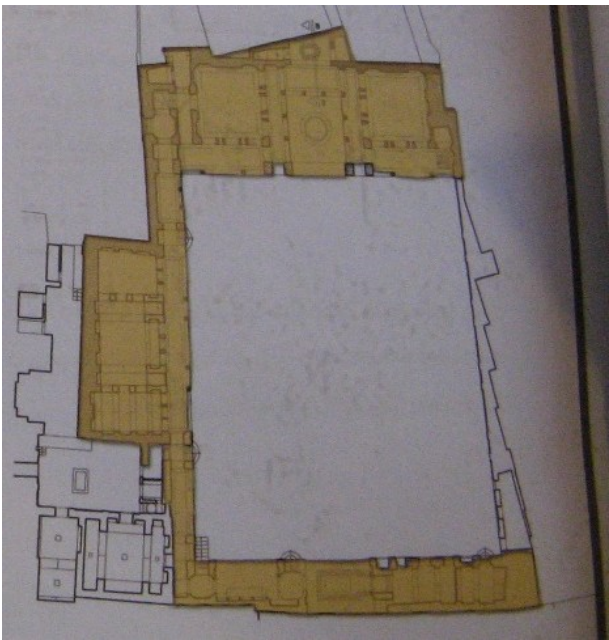




**Figure 4.** Ground Floor Plan of the Complex of Three Historic Houses in the Dardasht Neighbourhood (Developed by the Author).



**Figure 5.** Plan of the Complex of Three Historic Houses in the Dardasht Neighbourhood (Developed by the Author).



**Figure 6.** Plan of the First Floor of Habib Abadi House (Developed by the Author).



**Figure 7.** Plan of the First Floor of Habib Abadi House as a Library of Architectural Books (Developed by the Author).



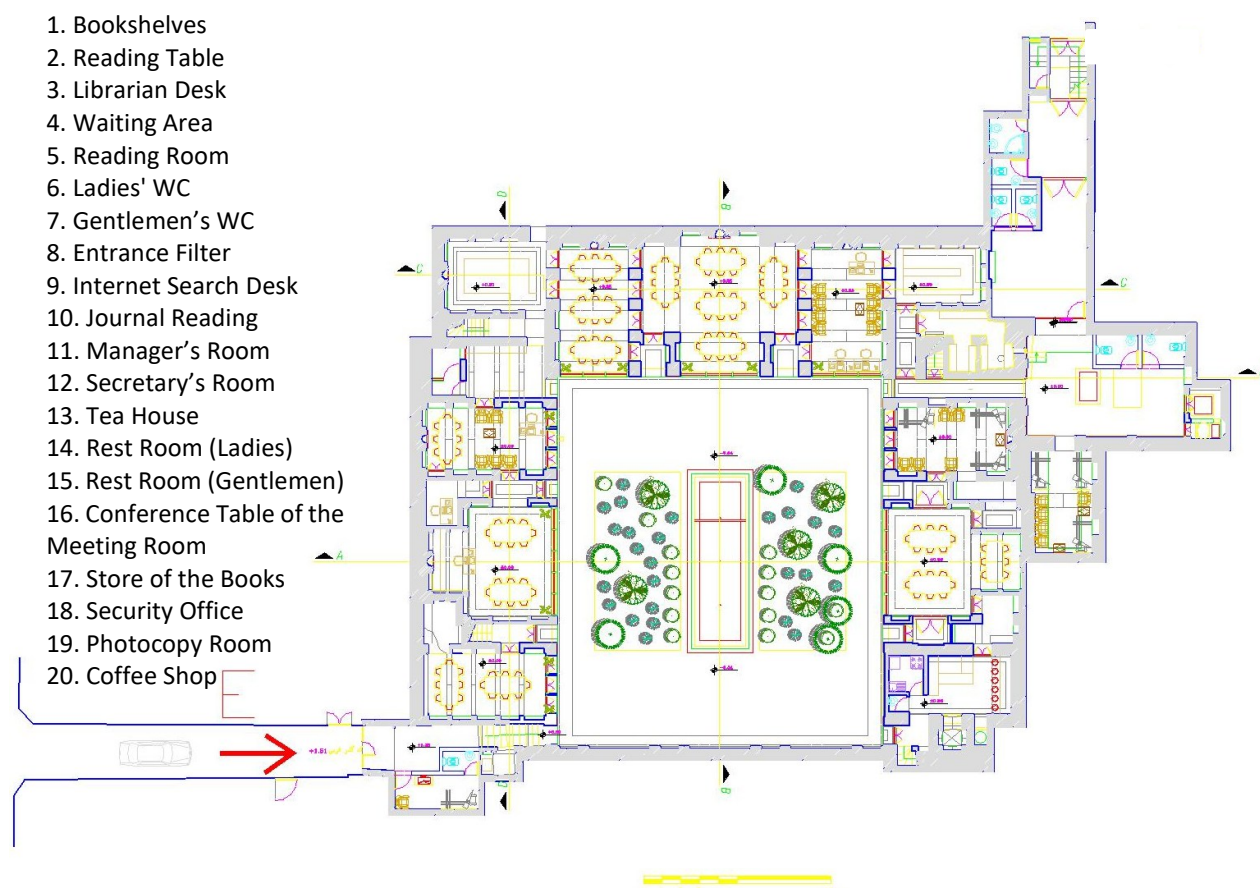




**Figure 9.** Sections of Habib Abadi House as a Library of Architectural Books (Developed by the Author).



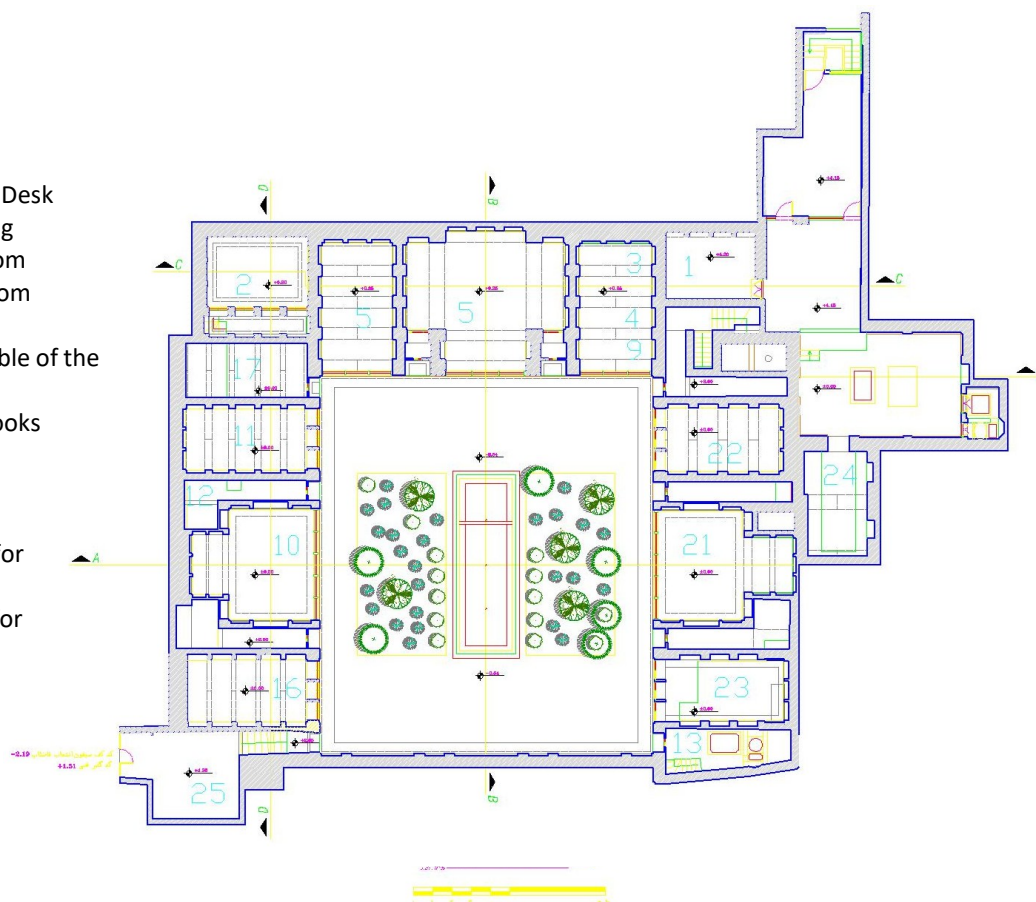
**Figure 10.** Plan of the Ground Floor of Katiraei (Kadkhoda) House as a Library of Historic Books (Developed by the Author).



**Figure 11.** Furniture Plan of the Ground Floor of Katiraei (Kadkhoda) House as a Library of Historic Books (Developed by the Author).

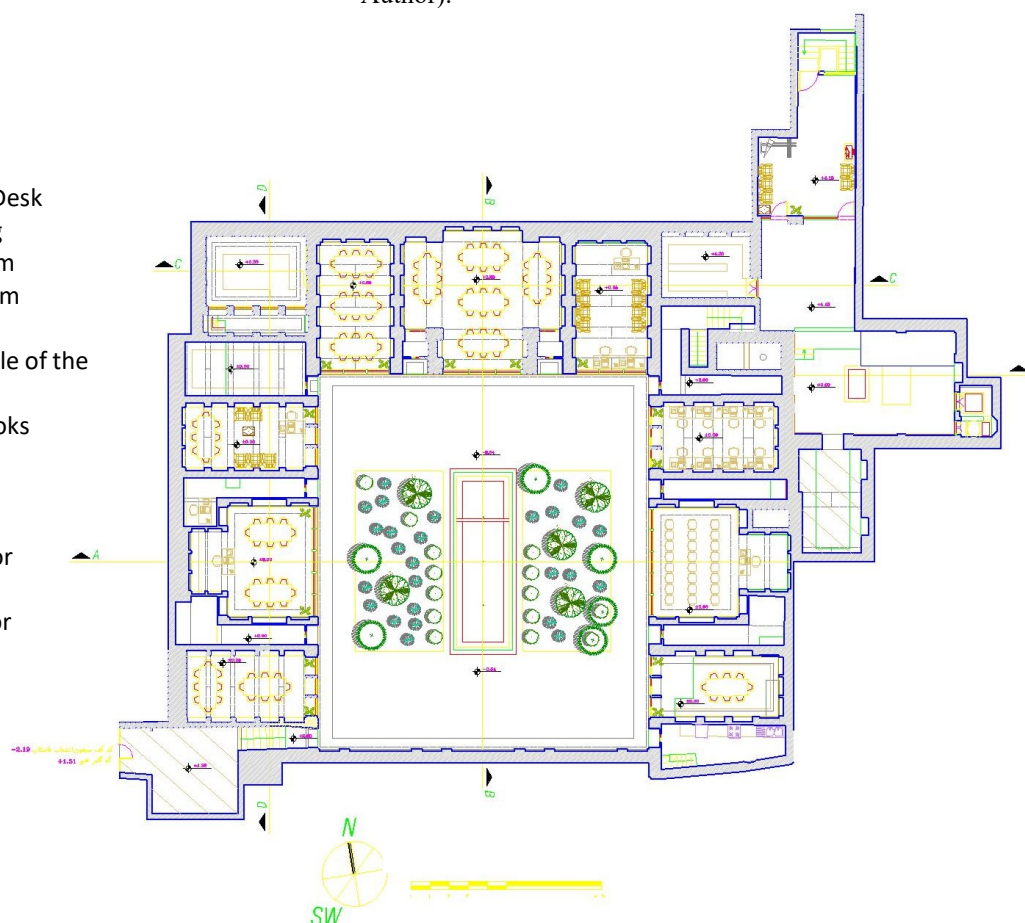


1. Bookshelves
2. Reading Table
3. Librarian Desk
4. Waiting Area
5. Reading Room
9. Internet Search Desk
10. Journal Reading
11. Manager's Room
12. Secretary's Room
13. Tea House
16. Conference Table of the Meeting Room
17. Store of the Books
21. Seminar Room
22. Computer Site
23. Book Store
24. Private Desks for Reading Books
25. Group Tables for Reading Books



**Figure 12.** Plan of the First Floor of Katiraei (Kadkhoda) House as a Library of Historic Books (Developed by the Author).

1. Bookshelves
2. Reading Table
3. Librarian Desk
4. Waiting Area
5. Reading Room
9. Internet Search Desk
10. Journal Reading
11. Manager's Room
12. Secretary's Room
13. Tea House
16. Conference Table of the Meeting Room
17. Store of the Books
21. Seminar Room
22. Computer Site
23. Book Store
24. Private Desks for Reading Books
25. Group Tables for Reading Books

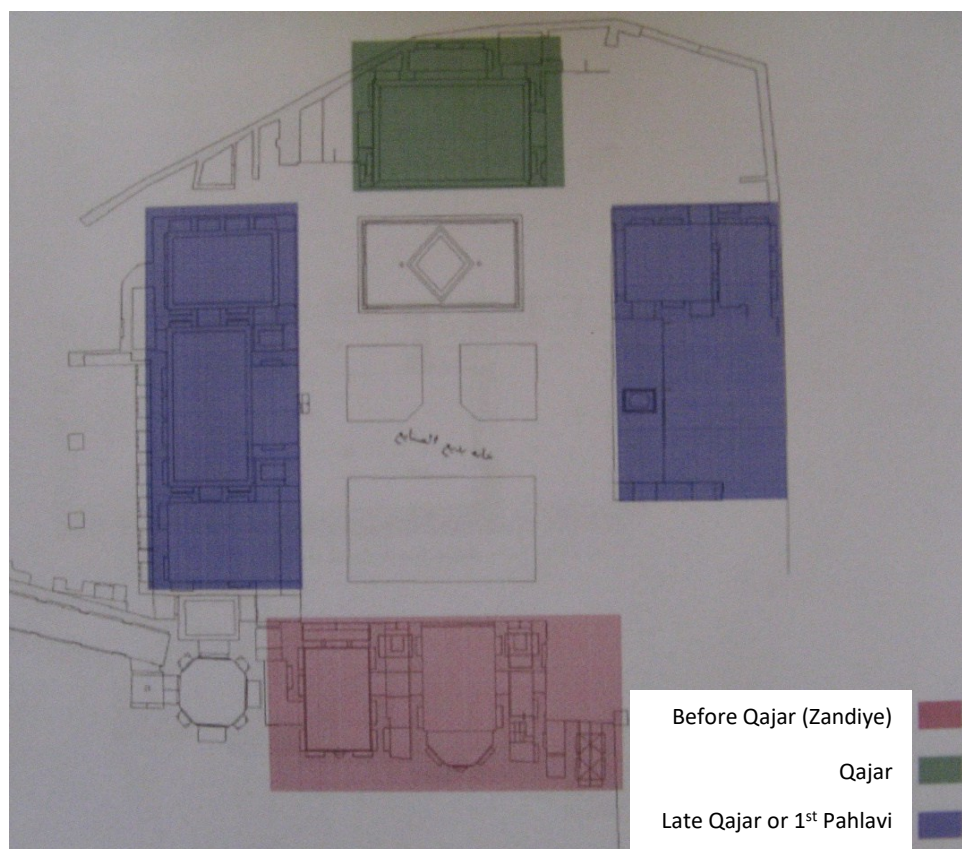


**Figure 13.** Furniture Plan of the First Floor of Katiraei (Kadkhoda) House as a Library of Historic Books (Developed by the Author).

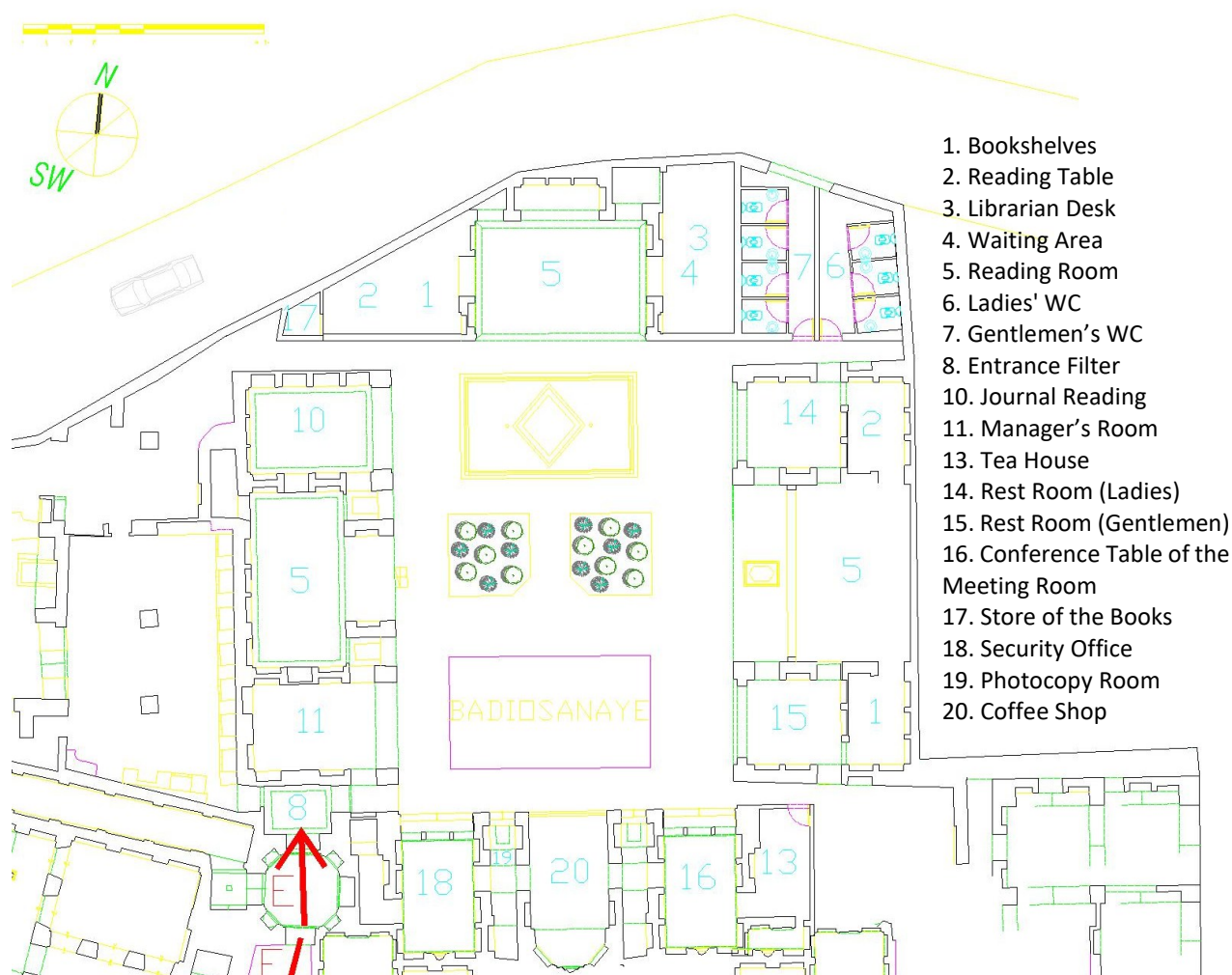


**Figure 14.** Sections of Katiraei (Kadkhoda) House as a Library of Historic Books (Developed by the Author).





**Figure 15.** Plan of the First Floor of Badiol Sanaye House (Developed by the Author).



**Figure 16.** Plan of the First Floor of Badiol Sanaye House as a Library of Art Books (Developed by the Author).





**Figure 17.** Furniture Plan of the First Floor of Badiol Sanaye House as a Library of Art Books (Developed by the Author).

#### 4.1. Adaptive Reuse of the Complex of Three Houses

According to the historic values of this complex, a cultural function like a library in the size of a historic neighbourhood can be a proper suggestion for the adaptive reuse of these three historic houses. Studying books in the beautiful and serene environment of these magnificent houses can be enjoyable and interesting. Three types of libraries for historic books, architectural books, and books about art are considered for the three houses of this complex (See **Figure 2 - Figure 17**).

#### 4.2. List of the Interior Spaces for a Library

1. Bookshelves of the information desk
2. Reading table at the information desk
3. Assistant desk for the librarian
4. Waiting area
5. Reading room
6. Ladies' WC
7. Gentlemen's WC
8. Entrance hall
9. A desk with computers for online searching for books
10. The newspaper desk and reading area
11. Principal's office
12. Secretary's office
13. Kitchen for staff
14. Restroom for ladies
15. Restroom for gentlemen
16. Conference table for meetings
17. Store of the books
18. Security office
19. Print and photocopy room
20. Coffeeshop
21. Seminar room

22. Computer site
23. Book Store/ Introduction of newly published books area
24. Private desks for reading books
25. Group tables for reading books.

#### 4.2.1. Bookshelves

The most common type of shelf is either a single, adjustable, one-sided type that runs along the wall or a double-sided one that is placed in the middle like an island.

The shelf height in the adult section is 2 m, in the children's section 1.5 m, and the shelf depth in the adult section is 200-300 mm Children's books

200 mm Literature, history, philosophy

300 mm Science, engineering, technical, etc.

The length of the shelves is generally 900 mm in the USA.

The distance between the shelves is 1800 mm in direct access and 1200 mm in indirect access.

The number of shelves is between 6-8.

Multi-level loading is not recommended because:

It prevents the necessary flexibility and requires moving books to different levels.

Docking (loading and storing) in one environment is more flexible.

The maximum horizontal distance from the bookshelf to the exit, or book elevator, should be 33 m.

Different types of bookcases:

Movable shelves, which are mostly rectangular, reduce the area by 50%.

Use thermometers and smoke detectors, not sprinkler systems, which are even more harmful than fire.

#### 4.2.2. Study Area

900 x 600 mm work and study desk.

For students, a circulation space of 2.32 m<sup>2</sup> is considered, and for researchers, 3 m<sup>2</sup>.

Lockable cabinets and shelves are needed for short-term storage of books.

In public libraries, it is better to design small corners and cosy spaces.

In academic libraries, it is better to have a study area around the book depository. And in the depository, it is better to design temporary seating areas.

#### 4.2.3. Work Area

Places for opening and distributing books, cataloguing, binding, repairs, photocopying and typing, administrative offices, staff lounges, lockers, and services should be considered.

#### 4.2.4. Branches

Spaces should also be considered in the design of the library for the following functions:

Study area for reference books, typing and photocopying, slides and films, exhibition area, chair storage, meeting rooms, telephones, and project room.

- The larger the library, the more flexible it is for future changes.
- All quiet areas and environments, except for the depository, should be carpeted.
- Use light (dead) colours so that light can easily be reflected in the books on the lower floor.
- Use natural wood or fabric in calm colours for walls and columns.
- Use a floor heating system.
- For old books, humidity should be controlled to 55% and temperature at 20-22 C. Also, direct sunlight should be prevented.
- Fluorescent lighting is a traditional method. Necessary measures for emergency lighting are mandatory in case of a power outage.
- In the lending area, the shelves have their own size. 500 from the floor
- Small library with a staff section (deposit and return in one section), cross circulation.

Neufert shapes

- Island control:

Return and lending from two different directions.

Neufert Forms

- In large libraries, at least two employees should be present at work at any one time.

#### 4.2.5. Standards

Building / Type of use m<sup>2</sup> / per unit of infrastructure area

Public library

Library shelf space 0.007 per netbook volume

Reading room 2-3.3 per net reader

Staff space 9.3 per net employee

Total space 4.5 per net person

Exhibitions 1.4 per net person

Neufert Shape

Space Allocation % of Total Area

Adult Lending 27-40%

Reference 20%

Children 13% (150 m<sup>2</sup> max)

Circulation and Service (half of it for staff) 40%.

**Table 2:** Standards of the total volume and area according to the population of the service recipient (Neufert & Neufert, 2012).

Population of the service recipient	Total volume (m <sup>3</sup> )	Area (m <sup>2</sup> )
3000	4000	100
5000	4000	100
10000	6000	100
20000	12000	180
40000	24000	360
60000	36000	540
80000	44000	660
100000	50000	750

#### 4.2.6. Reference

- Public libraries should be fully visible from the outside and should be welcoming. At least 10 m<sup>2</sup> for easy movement. One separate reading area of 2.5 m<sup>2</sup> for every 1000 inhabitants, with a degree of privacy to prevent concentration.
- The lobby should be visually attractive. This space also reduces dust and noise at the entrance.
- Appropriate controls should be installed at the exit to prevent the loss of books. Electronic trackers are recommended for this purpose.

Building/Type of use VS Square meters/per unit of building area for University Libraries

Bookcases for less than 300,000 books: 0.01 per netbook

Bookcases for 300,000 to 1,000,000 books 0.06-0.07 per netbook

Bookcases for over 1,000,000 books, 0.05 per netbook

Study and reading 2.3-3.2 in the net hall

Requires space equal to 25% -40% of the student population

0.6-0.9 per net student

25% public service space for net study.

#### 4.2.7. Library Design

Libraries are unique spaces in building envelopes where most of the space is dedicated to books, not people. The first parameter in library design is the number of books available, not the number of users. For the details of the design of bookshelves, the numbers in the table can be used.

The following general guidelines are useful for preliminary design:

- In public libraries, 12-18.5 volumes per 0.1 m<sup>2</sup>.
- Minimum aisle dimensions between shelves, 90 cm.
- Staff spaces, 9.3 m<sup>2</sup> per person net.
- Reading room seating, 1.4 to 3.2 m<sup>2</sup> per person plus 6% additional space for configuration.
- Dimensional stability factor, 1.25%.
- Maximum area per floor between 1400 and 1860 square meters.

#### 4.2.8. Example

In a library with 100,000 volumes, how much space should be allocated to shelves?

First, we consider about 15 volumes per 0.1 square meter:

$$100,000/15=666.7$$

Add 10% of the space to configure the shelves. A total of 666.7+66.7=733.4 square meters of space should be considered for bookshelf space.

Library shelving is the number of books per 30 cm of shelf length based on the subject. (A standard bookshelf is 90 cm wide, 230 cm high, and has 7 shelves.)

Subject Number of books per 30 cm shelf length Number of books per side of shelf

Art 7 147

Magazines and periodicals 5 105

General documents 5 105

Technical and scientific 6 126

Medium for estimation 125

Finally, 10% should be added to these dimensions to prevent excessive accumulation and to allow for expansion.

#### 4.2.9. Suitable Characteristics for a Library

- Circulation
- Adequate lighting

- Accessibility
- Creating a suitable space for reading
- Attention to colour, materials, and texture
- Book Protection
- Appropriate service
- Consideration of support spaces (a section for copying, audiovisual space, etc.).

#### **4.2.10. Gallery**

Natural light is the most important issue discussed in gallery design.

Regarding lighting, it was thought that unnatural light is easily switched on and off and controlled and is always the same and has the possibility of giving full value to the architectural effect. And it can replace natural light. However, experience has shown that natural light has always been the best source of light for galleries. Even though it varies throughout the year and in different places.

The gallery building should be built in such a way that it can make maximum use of natural light. Natural light may enter from above or from the sides. It is better that in an exhibition space, natural light enters the building from the ceiling, and the combination of side light and light entering the space from the ceiling is used to illuminate a single subject.

#### **4.2.11. Lighting From Above**

Lighting from above has always been of interest to designers, and its advantages include the following:

- A fixed, free light source that can be used in all types of buildings. Unobstructed and shadowless light, in a way that prevents shadows from being cast on the subject.
- The ability to adjust the amount of light that is shed on the subject being displayed. Creating uniform lighting that gives maximum clarity to the subject due to minimal reflection.
- Saving on wall space and allocating it to the display space.

Despite the advantages mentioned, it can also have disadvantages:

- Possibility of water penetration from the ceiling.
- The need to regularly clean the windows.
- Heat loss.
- Higher installation and startup costs.

#### **4.2.12. Side Lighting**

Side lighting is provided either through regular windows that are installed in walls of various sizes and shapes or through continuous openings that are located at different heights (at a height where people can easily see outside or not at all). Using side lighting, whether through single windows or continuous windows, makes the wall where the window is installed and the opposite wall unusable. To avoid this problem, an unnatural light should be used in the centre or a corner of the room, at an appropriate angle. When using side lighting, the size, depth of the room, its shape, and the number of works on display should be considered, so that we have enough space to display the work.

#### **4.2.13. Entrance**

There should be only one public entrance. The entrance should lead to a desk, an information desk, or a catalogue storage area. The gallery manager's seating area should be designed so that he or she can leave the desk and walk around the gallery at specific times. The gallery entrance should be inviting and inviting to attract and guide any passerby.

#### **4.2.14. Entrance Hall**

The entrance hall has two functions. On the one hand, it is the gallery's service area, where clothes and packages are delivered. On the other hand, postcards, guidebooks, and samples of gallery objects are sold there. In this space, necessary points are reminded, and the route is determined. Friends meet, and groups are formed. On the other hand, special and symbolic functions are formed there as the first and last space visited in the gallery. And all the spatial features can be guessed by looking at the entrance hall.

#### **4.2.15. Exhibition Space**

A gallery with all its spaces the same size and shape will look very uniform. By changing the dimensions of the space and changing the height-to-width ratio, and by using different colours to paint the walls or different floor coverings, you can create a stimulus to attract attention unconsciously and spontaneously. Placing exhibition spaces and rooms one after the other in the same direction also causes uniformity, and even where this method cannot be avoided, the doors of the spaces should not be in the same direction and facing each other. Because in this case, a telescopic view of all the spaces of the building is created, which usually hurts the visitor. But without a doubt, this type of internal view in the building also has advantages, including its guiding role for the visitor and its security role. On the other hand, by changing the location of the doors, the visitor can be placed at the desired point in terms of entry, as desired by the design of the exhibition stands, to best leave an immediate and striking impression of the exhibition space as a whole, or the best view of the best object exhibited in that particular space, on the visitor's mind. The door should be placed in the space in such a way that the visitor can see the entire opposite wall when passing through it. For this reason, it is recommended that there be no window opposite the entrance door to the exhibition space. Dimensions and shapes also depend to some extent on the lighting system and internal lighting of the space.

Lighting from above provides more formal possibilities because the light can always be adjusted to a scale appropriate to the space. Side lighting is necessary for shallow (narrow) spaces. On the other hand, as the surface of the windows increases, it will be more difficult to prevent light from reflecting on the exhibited works on the front opposite the window. The connecting door between two spaces with side lighting should be closer to the wall where the windows are located. Otherwise, the intersection of the walls at this location will be unsuitable for displaying exhibition subjects due to less suitable lighting than other points in the space, and as a result, they will remain unused. However, if the lighting is provided through a window, a strip installed along the entire length of the outer wall, given that the light will reach all points of the space, including the intersection of the inner and outer walls, sufficiently, the connecting door between the spaces can be placed at the far end of the walls. In this way, we will have a more suitable exhibition space. Sometimes it seems appropriate to dedicate a single display space to display a specific and special display object of extraordinary value, to create the greatest possible focus and attraction, although this space is dedicated to the display of one object and can only be designed with the dimensions of the object in mind. However, a significant amount of space is always allocated for the visitor to walk around the work on display. On the other hand, permanent display galleries in museums occupy a considerable area. However, it has been suggested that the dimensions of such spaces should not exceed 6.5 m wide, 3.5-5.5 m high, and 19.5-24 m long.

#### **4.2.16. Gallery Design**

The height of the visitors, if the visitor is male, is 174 cm, and his/her visual level is 161 cm, and if the visitor is female, it is 158 cm, and his/her visual level is 149 cm. Therefore, the average visual level of adults is 155 cm. With a slight eye movement, people can usually easily see objects located in an oval-shaped cone, the apex of which is the viewer's eye. Studies in this field have shown that adult visitors only watch a surface in front of them that is 60-120 cm away from them and within 30 cm above and 90 cm below their visual level. Placing objects, displays, and information labels higher or lower than this level can cause muscle tension and can lead to back pain, eye strain, or a dry neck. In these cases, the space needed to distance the visitor from the display should be provided and anticipated, so that the visitor can easily see the entire subject without having to endure the physical strain. The flow of visitors' movement is like the flow of water through one eye. If the display cases and stands are arranged along gently curving lines, the visitor will find the space more attractive and will move more easily. The arrangement of the stands can be in a way that creates a kind of ambiguity. As a result, the visitor will be encouraged to visit with greater interest and enjoyment to discover the hidden events behind each event. It is not always necessary to consider open entrances for galleries. If the display cases and stands are placed in such a way that they are somewhat close to each other near the entrance, they create a narrower passageway, so that the visitor faces an opening of space after entering the gallery or exhibition hall.

#### **4.2.17. Spatial Divisions**

Of course, spatial divisions are relative to the object on display, and the lighting is variable. The modern way of designing spaces is to create a large environment that changes with lightweight partitions according to the needs and requirements at any time. However, traditionally, rooms enclosed by walls with different dimensions are usually considered. However, it will certainly be more effective to consider flexible spaces with multiple partitions to create periodic changes.

#### **4.2.18. Spatial Arrangements**

The height and dimensions of the rooms are determined according to the goods on display. Usually, dimensions of 14 x 16 x 23 ft are sufficient for art exhibitions. In the exhibition area of watercolour works, it is better to use unnatural lighting. In the design of galleries, try to separate their internal architecture from the external architecture and body and structure, so that there is sufficient flexibility to change the partitions. If permanent walls are used in the design of galleries, places should be considered for displaying and attaching works to the wall. Although one-way paths are not suitable for large exhibitions, their use in galleries seems logical because it saves space and makes supervision easier. To exit the gallery building, visitors should not have to retrace the steps they have taken. A path should be considered in the middle of the paths to pass from one section to another. Placing many paths and doors in parallel and creating a maze should be avoided.

### **4.3. Design of the Exhibition Space**

As mentioned, the design of the exhibition space depends entirely on the object being displayed, and no specific rules have been stated in their design; the only thing that is emphasised again is the flexibility of the design.

Unlike theatres where the visitor is in one place, in the design of galleries it is assumed that the visitor should be attracted to an object from the entrance, focus on it, and be guided through a selected path, preferably regular, and pass through the entire gallery.

The items that should be observed in the design are:

- Visitors should not cross the path twice.
- Sufficient space should be considered for visitors to move at different speeds.
- Circulation should be considered from the right side.
- There should be the possibility of viewing the collection briefly.
- Visitors need a place to sit and rest along the way. These spaces are usually lit with daylight, which is different from the lighting in the galleries.
- Use visual elements in the rest area to make the space attractive. Changing colours in different spaces is ideal for variety.

#### 4.4. Suitable Features for a Gallery

- Considering the structure in harmony with the function of the space.
- Harmony with surrounding buildings.
- Attention to colour, materials, and texture.
- Appropriate connections and proximity of spaces.
- Circulation, in a way that is fluid and that spaces for movement, stillness, pause, and rest are considered in appropriate positions along the way.
- Appropriate lighting using natural and artificial light and timely emphasis on objects and spaces.
- Placing openings in appropriate parts so that an appropriate display of objects is provided.
- Appropriate connection with the outside space.
- Attention to security and the possibility of appropriate surveillance.
- Preservation and preservation and prevention of the destruction of objects.
- Hierarchy.

#### 4.5. Analysis of Examples

##### 4.5.1. Example 1 Library

Filip Axter

New Hamp Shirez

Louis Kahn

Reason for Selection: To create spaces different from the usual principles, for studying and mastering the use of materials.

1967-72, Philip Axter Society Library and Dining Hall

This building is in the lush and beautiful New England fields and is composed of two distinct parts. One is a book depository with a considerable volume and breadth that must be protected from light, and the other is a reading room that instead provides light, silence, and solitude for readers.

Kahn avoids creating a large reading room, which is usually a built-in library, and emphasises that reading and reading are related to the personal characteristics of individuals. Therefore, he foresees a series of small rooms, specifically for reading, along the outer edge of the building. This part of the wall is brick. The central core of the library, the book depository, is made of reinforced concrete.

The dining hall consists of two large dining halls and four smaller halls, all of which use a central service area that has all the necessary services. To provide sufficient lighting, large skylights are used around the central core, and the smaller halls have large and generous windows that direct light inside.

The building materials used in the library and dining area are brick and concrete. While the doors and windows are made of wood. The roof of the dining hall is made of prefabricated concrete pieces, and all the above building materials are visible on the exterior.

The storage space is made of reinforced concrete, and in this respect, it is consistent with its function of protecting books, and the brick facade creates a suitable space for reading, both from the inside and outside of the building. Brick is usually used for educational and cultural spaces. A direct system has been used in terms of access to books.

It is very smooth in terms of circulation. Access to the floors is provided through two staircases in the corners of the plan, which are along one diagonal and are very easy, and the comings and goings do not cause any disturbance to the readers. Also, access to the bookshelves is easily possible from the special reading area.

Also, a suitable view of the outside space is provided from the reading area, and the necessary light is provided through the windows that surround the building.

The support and service space in this library is along the other diagonal.

##### 4.5.2. Library of Alexandria

Reason for selection: Revival of the traditions of Eastern culture.

Innovative in form and structure, and appropriate to its urban setting.

Its enormous reading room reflects Alexander's desire to attract scholars from all over the world.

The aluminium panels worked into the ceiling protect it from the direct effects of the scorching Egyptian sun.

The external volume of the building, emphasised by the reflective facade, refers to the ancient traditions of the city.

The enormous reading room with its forest of columns presents different spatial qualities. Some are isolated, some are open and airy.

Indirect lighting of the space.

To harmonise and adjust with the imposing building (the city assembly hall) that was adjacent to it, the architects split the oblique disk of the library and provided a rectangular frame for the irregular geometry of the existing building.

The irregularity of the disk has created a characteristic entrance space for the library.

The building's volume is 12 meters below sea level, which makes the building appear smaller without depriving it of natural light.

The building's design is said to have the heaviest foundation in the world.

The foundation is 33 meters below sea level, which can neutralise the building's sinking in the south and its rise in the north.

Fibre optic cables are embedded in the reinforcement network to show the gradual erosion of the structure.

The columned reading room is inspired by North African mosques.



The building is a symbol of energy efficiency. The massive southern wall acts as a heat reservoir, and the coolness of the sunken section naturally regulates the temperature of the upper floors.

Smooth wooden surfaces and oxidised bronze panels, and the subtle light that shines inward, create a sense of complete tranquillity.

#### **4.5.3. Galleries**

##### **4.5.3.1. Example 1**

Gallery U in Sugawara

Situation: Japan

Architect: Toyo Ito

Reason for selection: The clarity of the overall design. The closedness of the storage space and the openness of the exhibition space are a striking contrast.

This gallery consists of a combination of two simple volumes:

1- The storage space. The concrete volume resembles a box, part of which is sunk into the ground, clearly indicating its function.

2- The exhibition space. It has an arched ceiling, consisting of latticed steel frames, to instil a sense of lightness in the space and create balance against the solid concrete walls.

Appropriate and controlled use of natural light. This light enters the environment from two channels:

1- A longitudinal window in the ceiling so that the light enters the space indirectly and, in addition to providing uniform light, induces a sense of lightness in the space.

2- Light enters from the side of the space, which is controlled by an awning and provides ambient lighting. Almost none of these two lights create any visual disturbance or shadow.

Also, artificial light is used in this gallery in a way that somewhat moderates the coldness and heaviness of the concrete texture and creates a suitable combination with natural light. The storage space for the works should have a close connection with the exhibition space, which in this example is created directly through a door that opens into the exhibition space. Of course, this connection should be in a way that does not distort the exhibition space.

In this example, the pre-entry space to the exhibition space is defined by several steps, and the display area of objects is separated from the movement by a platform.

##### **4.5.3.2. Example 2**

Storefront for Art of Architecture

Reason for selection: Optimal use of space considering the space limitation. This gallery is located in a residential area and a limited space at the intersection of three streets, and the whole design is formed on one surface. To solve the problem of a lack of space, movable walls that can rotate around an axis were used. The materials used in this surface were concrete combined with recycled fibres, which have a completely different texture from the surroundings in terms of appearance. It is completely open in terms of connection with the surrounding space, so that when the movable walls are open, this gallery is considered part of the sidewalk. The circulation is such that it is possible to rotate easily in the gallery and is completely free. This gallery is like a street gallery; in addition to the advantage it has of freedom in display, it has some problems in terms of security. Of course, what is displayed in this gallery is limited to displaying the works of architecture students and does not require a high-security factor compared to other works of art. No special work has been done in terms of lighting, and natural light fully enters the space through the windows.

##### **4.5.3.3. Example 3**

Rheinisches Landes Museum

The city of Bonn was known as the capital of West Germany during World War II. The city never reached Berlin in terms of history and economy. But despite its apparent power, its quiet nature was revealed. Despite being the birthplace of Beethoven, it does not have the cultural weight of most capitals. In 1990, the government decided to rebuild a public cultural institution called the Rheinisches Museum and did so through a competition. The museum was located behind the main railway station, close to the old city centre, in a green residential area. The museum depicts the art and history of the region, from Neanderthal times to modern man. The winner of the architectural competition, Knut Lohrer, later founded the architectural group Studgard with four of his colleagues, and they worked together from 1998 to 2003. The delay was due to doubts about the future of Bonn and technical changes that affected the design of the museum. The original structure was destroyed during World War II in 1890 and replaced in 1967 with a modernist block.

In 1909, a brick building with smaller additions was added to the museum. But by 1980, the museum complex had reached such a state of disrepair that the idea of demolishing the complex and rebuilding it elsewhere was even considered. To avoid this outcome and to make the most of the existing structures, the competition program made it mandatory to use buildings built between 1909 and 1967. The final cost of the project was around \$85 million. The Stuttgart team, led by Gerhard Busch, decided to create a relationship between the space built in 1909 and the renovated space in 1969. They demolished the dividing wall between the two buildings and created a continuous spatial flow by adding a distinctive Box Staircase near the entrance area. Even though Hermann and Bosch, members of the Stuttgart architectural group and familiar with museum design, had designed the museum in Stuttgart and the museum in Aalen, as well as their other colleague Kent, who designed the exhibitions, the project was awarded to the Creamuse group in Strasbourg. The architects had to design a flexible space to display any artwork.

The most interesting thing about the museum's exterior was its new entrance on Colemanstrasse. A transparent glass wall, inside which redwood panels protect the artwork while also providing natural light. Tall, narrow windows designed between the timbers allow controlled light to enter the exhibition space. The timbers are protected from moisture by a

glass cover, but over time their colour darkens, but never turns grey or black. The two architectural pieces sit 13 feet apart on the inside and outside of a building. The entrance, which leads to a shop on the right and a coffee shop on the left, has a surprisingly low ceiling. Bush was unhappy about this, but he had to do it to preserve the 1967 structure. After passing through a ticket control centre at the heart of the museum, located under a concrete and steel staircase with its open volume, five floors up, daylight mixed with fluorescent lighting illuminates the building. A steel staircase serves the areas that were previously separated by a wall. On the lower floors, where concrete stairs are usually used, the spaces are decorated with sycamore wood, which covers most of the exhibition spaces. The emphasis on low light in the building is made by using white curtains in front of the windows. The building is fully supplied with natural light using skylights and courtyards in the entrance area. While the architects intended to design a unified space, the interior designers of the exhibition space disrupted the architects' desired rhythm by creating false walls. The interior design of the exhibition was carried out by a French group (Neufert & Neufert, 2012).

## 5. Conclusions

According to the historical values of this complex of three houses, a cultural function like a library on the neighbourhood scale seems like an appropriate alternative for the adaptive reuse of the houses above. Reading books in the pleasant environment of these magnificent historic houses will multiply the joy of studying. Three libraries for historical, architectural, and art books are considered for these libraries after the consolidation, restoration, and revitalisation of this complex of historic houses. Habib Abadi House is concerned with a library of architectural books, Katiraei (Kadkhoda) House is proposed for a library of historical books, and Badiol Sanaye House is designed for a library of art books. The best rooms with the best views are considered reading rooms. The bookshelves are not considered on so many levels to lighten their weight and not to force the historic buildings with the extra weight of the heavy books. A bookstore is designed for selling books, and the security part controls the books extracted from the library, whether they have been bought or borrowed, with the library seal at the end of the book, supposed to be returned to the library within two weeks or a maximum of one month after extending. A small tea house is designed for the staff, and a coffee shop is designed for the customers to enjoy the pleasant environment of this complex of historic houses while reading. All the interventions are considered reversible, and the documentation of the alterations is presented like the pictures of the houses before the consolidation, during the restoration process, and after the adaptive reuse and new functions for respecting the authenticity of the original conditions of these historic buildings.

## Acknowledgements

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. The author takes all the pictures and draws, edits, and extracts all the figures of the maps from the AutoCAD programme. The author translates all the English text from the Persian Language. This research is the result of merging two projects about the adaptive reuse of historic buildings as a library and gallery and the adaptive reuse of a complex of three historic houses in the Dardasht neighbourhood of Isfahan, Iran, by the author under the supervision of Dr. Jabal Ameli at the Art University of Isfahan during master's studies of the author in the Spring Semester of 2009. This article was accepted for online presentation and presented at the 8<sup>th</sup> International Conference of Contemporary Affairs in Architecture and Urbanism (ICCAUA-2025) at Alanya University, Alanya, Antalya, Türkiye, during 8-9 May 2025 (Babazadeh-Asbagh, 2025, May 2).

## Conflict of Interests

The author declares that there is no conflict of interest.

## References

- Babazadeh-Asbagh, N. (2011). *The Conservation and Revitalisation of Mirza Mehdi Farashbashi's House in Tabriz* [Master's Thesis, Art University of Isfahan, Isfahan, Iran]. <https://doi.org/10.13140/RG.2.2.12404.73609>
- Babazadeh-Asbagh, N. (2018). The Adaptive Reuse of Cibali Tobacco Factory, Kadir Has University. *Tourism Graduate Students Research Congress*, 9, 203-210. Famagusta, Northern Cyprus. <https://dx.doi.org/10.2139/ssrn.5119737>
- Babazadeh-Asbagh, N. (2021, June). Adaptive Reuse of the House of Mirza Mehdi Farrashbashi in Tabriz, Iran. In *Proceedings of the International Conference of Contemporary Affairs in Architecture and Urbanism-ICCAUA (Vol. 4, No. 1, pp. 506-520)*. Alanya, Antalya, Türkiye. <https://doi.org/10.3802/ICCAUA2021300N15>
- Babazadeh-Asbagh, N. (2021, May 14). Adaptive Reuse of the House of Mirza Mehdi Farrashbashi in Tabriz, Iran. [Video]. YouTube. <https://youtu.be/fjPijN5SS4g?si=th2m3l5MZ5bsbOVy>
- Babazadeh-Asbagh, N. (2022a). Comparative Analysis of Qajar Historic Houses in Tabriz, Isfahan, Yazd, and Kashan, Regarding their Architectural Forms and Elements. *International Conference of Contemporary Affairs in Architecture and Urbanism*, 5(1), 586-605. Alanya, Antalya, Türkiye. <https://doi.org/10.3802/ICCAUA2022EN0087>
- Babazadeh-Asbagh, N. (2022b). Tomb of Sultan Bokht Agha and Two Minarets of Dardasht Neighbourhood in Isfahan, Iran. In Husain, H. (Ed.). *Heritage and the City: Values and Beyond* (pp. 12-26). Cinius Yayınları. ISBN: 978-625-8330-90-8. <https://doi.org/10.3802/NIICCAUA202302>
- Babazadeh-Asbagh, N. (2023). *Interpretation Problems and Proposals for the Churches in the Walled City of Famagusta* [PhD Dissertation, Eastern Mediterranean University, Famagusta, Northern Cyprus]. <https://doi.org/10.13140/RG.2.2.32196.60801>

- Babazadeh-Asbagh, N. (2023, August 5). The Adaptive Reuse of Cibali Tobacco Factory, Kadir Has University (Istanbul, Türkiye). [Video]. YouTube. <https://youtu.be/HmschzKEusw?si=HjxlVcAB--1VcUqs>
- Babazadeh-Asbagh, N. (2024, January 12). Adaptive Reuse of Abandoned Churches in the Walled City of Famagusta, North Cyprus. [Video]. YouTube. [https://youtu.be/ygUmjJiwwTs?si=2CGM7W\\_LerwlSYfz](https://youtu.be/ygUmjJiwwTs?si=2CGM7W_LerwlSYfz)
- Babazadeh-Asbagh, N. (2024a). Adaptive Reuse of Abandoned Churches in the Walled City of Famagusta, North Cyprus. *Journal of Mediterranean Cities*, 4(1), 130-156. [https://doi.org/10.38027/mediterranean-cities\\_vol4no1\\_8](https://doi.org/10.38027/mediterranean-cities_vol4no1_8)
- Babazadeh-Asbagh, N. (2024b). *Cultural Heritage Interpretation: Problems and Proposals for the Medieval Churches in the Walled City of Famagusta, Northern Cyprus*. Türkiye: Municipality of Alanya. E-ISBN: 978-625-99484-4-7. <http://dx.doi.org/10.2139/ssrn.5119840>
- Babazadeh-Asbagh, N. (2024c). Interpretation Proposals for the Churches in the Walled City of Famagusta, North Cyprus. In Nia, H. A., & Rahbarianyazd, R. (Eds.), *Innovative Approaches to Cultural Heritage and Sustainable Urban Development: Integrating Tradition and Modernity*, (pp. 316-359) Cinius Yayınları. ISBN: 6256072936, 9786256072930. <http://dx.doi.org/10.2139/ssrn.5119766>
- Babazadeh-Asbagh, N. (2025, May 2). Adaptive Reuse of a Complex of Three Historic Houses in the Dardasht Neighbourhood of Isfahan, Iran. [Video]. YouTube. <https://youtu.be/xL3nddeQvR8?si=flomlwweazLjIK8b>
- Chardin, J. (1686). *The Travels of Sir John Chardin* (Isfahan Section). Translator: Areidi, Hossein. Tehran: Takthir printing. <https://archive.org/details/travelsofsirjohn00char/page/n5/mode/2up>
- Esfahani, H. (1993). *Tā'rikh Isfahān* [The History of Isfahan]. [https://en.wikipedia.org/wiki/Hamza\\_al-Isfahani](https://en.wikipedia.org/wiki/Hamza_al-Isfahani)
- Honarfar, L. (2016). *تصویری از اصفهان پیش از اسلام* [An Idea of Isfahan before Islam] Vaghf-e Miras-e Javidan, Numbers 19 & 20. p. 4. <https://www.noormags.ir/view/fa/articlepage/280045/%D8%AA%D8%B5%D9%88%D8%8C%D8%B1%D8%B8%D8%A7%D8%B2-%D8%A7%D8%B5%D9%81%D9%87%D8%A7%D9%86-%D9%BE%D8%8C%D8%B4-%D8%A7%D8%B2-%D8%A7%D8%B3%D9%84%D8%A7%D9%85>
- Ibn Hawqal. (1321). *Taqwim al-Buldan* [Locating the Lands]. <https://www.britannica.com/topic/Taqwim-al-buldan>
- Jaberi Ansari, M. H. (1999). *تاریخ اصفهان و ری و همه جهان* [History of Isfahan and Ray and the Whole World]. pp. 123-124, 291-292. <https://noorlib.ir/book/info/69506/%D8%AA%D8%A7%D8%B1%DB%8C%D8%AE-%D8%A7%D8%B5%D9%81%D9%87%D8%A7%D9%86-%D9%88-%D8%B1%DB%8C-%D9%88-%D9%87%D9%85%D9%87-%D8%AC%D9%87%D8%A7%D9%86>
- Nafisi, S. (1937). *احوال و اشعار فارسی شیخ بهایی* [The Persian Poems and Sayings of Sheikh Baha'i]. Eghbal Publications. <https://www.30book.com/book/61081/%DA%A9%D8%AA%D8%A7%D8%A8-%D8%A7%D8%AD%D9%88%D8%A7%D9%84-%D9%88-%D8%A7%D8%B4%D8%B9%D8%A7%D8%B1-%D9%81%D8%A7%D8%B1%D8%B3%DB%8C-%D8%B4%DB%8C%D8%AE-%D8%A8%D9%87%D8%A7%DB%8C%DB%8C-%D8%A7%D8%AB%D8%B1-%D8%B3%D8%B9%DB%8C%D8%AF-%D9%86%D9%81%DB%8C%D8%B3%DB%8C-%D9%86%D8%A7%D8%B4%D8%B1-%D8%A7%D9%82%D8%A8%D8%A7%D9%84>
- Neufert, E., & Neufert, P. (2012). *Architects' data*. John Wiley & Sons. (4<sup>th</sup> Ed.). [https://books.google.com/books?hl=en&lr=&id=6N68sMtqXSUC&oi=fnd&pg=PR12&dq=Neufert,+E.+\(2009\).+Architects%27+data&ots=BbDAq3roTn&sig=iYpX3SU9dZcIhlYqia7BTIhVo0#v=onepage&q=Neufert%2C%20E.%20\(2009\).%20Architects%20data&f=false](https://books.google.com/books?hl=en&lr=&id=6N68sMtqXSUC&oi=fnd&pg=PR12&dq=Neufert,+E.+(2009).+Architects%27+data&ots=BbDAq3roTn&sig=iYpX3SU9dZcIhlYqia7BTIhVo0#v=onepage&q=Neufert%2C%20E.%20(2009).%20Architects%20data&f=false)
- Rahnemayi, M. T. (2009). *دولت و شهرنشینی در ایران (مبانی و اصول کلی نظریه توسعه شهر و شهرنشینی در ایران)* [Government and Urbanisation in Iran (General Foundations and Principles of the Theory of Urban Development and Urbanisation in Iran)]. Celebration Letter of Dr. Mohsen Ganji. Tehran. p. 147. <https://ensani.ir/fa/article/327245/%D8%AF%D9%88%D9%84%D8%AA-%D9%88-%D8%B4%D9%87%D8%B1%D9%86%D8%B4%DB%8C%D9%86%DB%8C-%D8%AF%D8%B1-%D8%A7%DB%8C%D8%B1%D8%A7%D9%86-%D9%85%D8%A8%D8%A7%D9%86%DB%8C-%D9%88-%D8%A7%D8%B5%D9%88%D9%84-%DA%A9%D9%84%DB%8C-%D9%86%D8%B8%D8%B1%DB%8C%D9%87-%D8%AA%D9%88%D8%B3%D8%B9%D9%87-%D8%B4%D9%87%D8%B1-%D9%88-%D8%B4%D9%87%D8%B1%D9%86%D8%B4%DB%8C%D9%86%DB%8C-%D8%AF%D8%B1-%D8%A7%DB%8C%D8%B1%D8%A7%D9%86->
- Reports of Isfahan Cultural Heritage and Tourism Organisation, *گزارش‌های سازمان میراث فرهنگی و گردشگری استان اصفهان* (2009). <https://isfahan.mcth.ir/>
- Shafaqi, S. (2002). *جغرافیای اصفهان: به ضمیمه یکصد و پنجاه قطعه نقشه، نمودار و عکس* [Geography of Isfahan: With One Hundred and Fifty Maps, Diagrams, and Photographs.]. <https://www.gisoom.com/book/1281139/%DA%A9%D8%AA%D8%A7%D8%A8-%D8%AC%D8%BA%D8%B1%D8%A7%D9%81%DB%8C%D8%A7%DB%8C-%D8%A7%D8%B5%D9%81%D9%87%D8%A7%D9%86-%D8%A8%D9%87-%D8%B6%D9%85%DB%8C%D9%85%D9%87-%DB%8C%DA%A9%D8%B5%D8%AF-%D9%88-%D9%BE%D9%86%D8%AC%D8%A7%D9%87-%D9%82%D8%B7%D8%B9%D9%87-%D9%86%D9%82%D8%B4%D9%87-%D9%86%D9%85%D9%88%D8%AF%D8%A7%D8%B1-%D9%88-%D8%B9%DA%A9%D8%B3/>
- Yakut Al-Hamawi. (1220). *Mu'jam Ul-Buldan* (Geographical Directory). 1/36 – 37, 1/38. <https://pieterderideaux.jimdo.free.com/5-contents-1201-1300/yakut-or-jakut-al-hamawi-1220/>