Abstract | Safavid era is the most brilliant era in architectural history of Iran and Chaharbagh avenue is the most important and a worth factor of the historical city of Isfahan's identity and it seems to be the first one with this characteristic in the world.

Wide and straight avenues (Chaharbagh) are Symbolic elements in the history of Safavid urbanization which were the major elements of the development and improvement of cities in this era. In fact Chaharbagh Avenue has connected Darvazeh Dolat and Hezar Jarib gardens by two types of royal palaces. Chaharbagh Abbasi is located between Darvazeh Dolat and Si-O-Se pol. The avenue was designed in Shah Abbas I era. Shah Abbas I was the king who changed his capital from Qazvin to Isfahan and decided to gather all the artistic wealth of the country into that central spot which has been called “Nesfe Jahan”. It was surrounded by palaces and residences of noblemen. In 1706-1714, the large madrasa complex of Madar-e Shah was built along the eastern side of the boulevard. Today, it is surrounded with shops, hotels, and some remaining palaces.

The hypothesis of this research is based on the changes of avenues in different periods in terms of physical and social relationship patterns. The achievements of archeology, Persian literatures and visual resources along with notes of European tourists who have visited this avenue provide a rich set for identifying this historical avenue. This research seeks to answer this question: what changes have been occurred in Chaharbagh Abbasi Avenue from the Safavid era to the contemporary era and for this purpose, existing maps of this avenue have been studied by descriptive-analysis method. When this avenue was created in Safavid era, it had properties of cohesion and coherence with aspects of tourism and recreation without intentions of speculative and commercial; and it affected by heterogeneous applications such as businesses and services in subsequent eras especially after Qajar era. Business activity is the major activity in this historical avenue nowadays.

Keywords | Isfahan, Avenue, Chaharbagh, Historic Maps.
Introduction | Every classification of the avenue returns to Vitruvius and his triple descriptions of the avenue. He has divided avenues into three categories: tragic, casual and legendary (Moughtin, 2004:128). History of avenue, which means the wide and long way with water creek and trees, at least reach to the second century in the Iranian urbanization. After then to Mongol invasion, this condition had probably been existed in Iranian urban planners; because in literatures, in many cities like Marv and Zaranj, had been spoken about gardens and canals in the city (Ahari, 2006:49). Chaharbagh Avenue is wide and geometrically direct. In fact, this avenue connects the two species of royal palaces. In this paper, we present and evaluate a few maps and pictures of Chaharbagh Avenue and discuss their harmony or conflict. We consider maps of Chaharbagh Avenue in four eras: Safavid, Qajar, Pahlavi and the contemporary period. During the Safavid era, map of Engelbert Kaempfer and in Qajar era, maps of the Proskuryakov and Russian Pranovershikov Cherifik and Pascal Coste and in Pahlavi period, maps of Donald Wilbur, Seyed Reza Khan and Shafaghi and at the end, the map of the avenue in the contemporary era is represented with its applications.

Chaharbagh Abbasi Avenue Prepared Maps Studying in Different Time Period

a) Safavid era (1591-1797 M)

1. The oldest map of the Isfahan DolatKhaneh

Engelbert Kaempfer has visited Isfahan during the years 1684-1685. He portrayed Isfahan Dolatkhaneh in the famous prospect as paleographic sides region (Pic. 1). Oblique line which connects the Darvazeh Dolat and Goldasteh garden (octagon) defines the pathway, which is most likely the south-west Al-i Buyeh's fence of the fourth century. The distance between Naqsh-e Jahan and Al-i Buyeh's fence, which Dolatkhaneh has been created in it, is the approximate range of historical Naqsh-e Jahan gardens (Ayatoallah Shirazi, 2002: 3). Radial design in little garden in Khargah and Bolbol garden and alignment of the beginning and end of the garden in both eastern and western sides of the avenue is another issue of this project.

In Pic. 1, the pool in front of the Khargah garden is drawn in an octagonal shape, while Chardin in his descriptions of pools, mentioned it was square with one hundred and twenty feet perimeter and Bolbol pool and Takht garden was octagonal (Chardin, 1996:120). In addition, double row of trees on this avenue has been drawn.

In other map (Pic. 2), Kaempfer has introduced gardens in two sides of the Chaharbagh Avenue, and has shown the Khargah, Bolbol, Mehmankhaneh Darvishan and Tavoos gardens on the eastern side and Mosman (octagonal), Takht and Shahi garden on the western side. Kaempfer has not mentioned the vineyards, berries gardens and Shirkhaneh which Chardin had described in his itinerary. The Chaharbagh School has not also been shown; because Kaempfer has seen the avenue in time of King Suleiman while some part of the Bolbol Garden has been dedicated to Madar-e Shah Collection (school - caravansary - bazaar) in Shah Sultan Hussein.

B) Qajar era (1797-1921)

In the Qajar era and especially when Zill al-Sultan was the ruler of Isfahan, the city had numerous damages. Dieulofoy, French traveler who visited Isfahan during this period, did not account the conditions of the avenues in the Qajar era comparable to the splendor of this avenue in Safavid era in his itinerary. Also the French traveler, Henry-René D’allemagne, has referred to the destruction of this avenue in Zill al-Sultan period.

1. Map provided by Proskuryakov and Russian Pranovershikov Cherifik (1851M)

Mapping of Iranian cities was carried out by Russian military surveyors. Production of these maps was
coincided with the beginning of the Naseraldin Shah and Chancellery of Amir Kabir, which the total approximation of Safavid city is visible.

Detailed topography was done in the presence and under the supervision of Colonel Chyrykf. The topography and map settings by captain Prskvryakf and Mvkv.zhy.ayy and the basic conception of the map was extracted in 1851 by E.P. Pranovershikov (Holster, 1976: 169); (Pic. 3).

At the beginning of the Khargah Garden, an octagonal pool can be seen that is inconsistent with the view of travelers; because according to travelers such as Chardin it was a small square-shaped pool (Chardin, 1996:120) while one other traveler didn't account this pool plus two other pools, in comparison with other large pools. Hypothesis accuracy of this drawing is the structural change of pool in this period. In this map, the radial gardening of Bolbol and Khargah garden which has been seen in the drawing of Kaempfer did not exist. As Kaempfer drawing, the beginning and end of the garden on two east and west fronts of avenue is in one extension.

Other noticeable examples could be the Madi's location in the avenue and four rows of trees.

2. Map of Isfahan by Pascal Coste (1867M)

The Map which was drawn by French Pascal Coste in 1867 was published in a book titled modern monuments of Iran in Paris. The fence is the most attractive part on the map of Pascal Coste which has been the memorial of Safavid era (Shafaghi, 2002: 350).

Pascal Coste map was prepared with the accuracy principles of mapping and its outline has a little difference with the current maps. Roads, avenues, main pathways and government offices and important buildings of the city, are depicted in their actual location. One mistake of this map is the alignment of Naghsh Jahan and Dolatkhaneh with Chaharbagh Abbasi Avenue (Pics. 4 & 5).

In Pic. 4, Coste has drawn the position of pools in Chaharbagh Avenue; he has drawn eight pools while according to Chardin's descriptions, the number of pools are seven. This pool might have existed and since Chardin had described the pools in front of gardens, he hasn’t mentioned to it. In Chardin’s descriptions, he had mentioned to only one octagonal pool in front of Bolbol garden, however, in this drawing Nišrm madi cross from an octagonal pool which is the sixth of heptathlon pools that Chardin has described in a square shape. As well as Shah stream which interred to Bolbol garden passed through the pool located in front of the garden and according to Chardin’ description it was octagonal while in this figure it is drawn in a square shape. He also mentioned that the pool in front of Khargah garden was square, the validity of this drawing with assumption that the Chardin’s descriptions of heptathlon pools was accurate, conclude that the structural changes has been occurred on this pool and the pool in front of the Khargah garden.

Oblique connecting line has not been shown on this map and the old palace has been drawn aligned with Chaharbagh Avenue which is wrong. The octagonal Goldasteh garden cannot be seen in Coste map.

C) Pahlavi era (1921-1979M)

The main devastations of avenue and the general structural changes of this avenue occurred when Shahande was the mayor of Isfahan, around 1928. In fact, in this period, maximum damages were cultural and identity damages which have the most significant impact on human role reduction in the Chaharbagh avenue.

1. Donald Newton Wilber map of Chaharbagh

Donald Wilber, by description and interpretation of Chardin and reports of other tourists and foreign guests and using the data obtained from Iranian sources, recast the map of this royal city (Pic. 6) (Wilber, 2005:83).

Gardens and palaces of Chaharbagh Abbasi Avenue

Pic 2: Plan of Chaharbagh by Engelbert Kaempfer.
are located in both eastern and western sides of the avenue. Eastward of Avenue included Khargah garden, Bolbol garden, Chaharbagh School, Berry Garden, Mehmankhaneg Darvishan Nematalahi and Shirkhan. Westward of this avenue included octagonal garden, Takht, grape, Mehmankhaneg Darvishan Heydari and Ghaafakhan (Pic. 6). According to this drawing, the body of the avenue included gardens except school Bagh. Chaharbagh School has been built in Shah Sultan Hussein’s period in this avenue. In this map, the radial formations of garden can be seen in Khargah and Takht gardens. In this map, as in the previous periods’ drawings, the beginning and the end of the garden on two eastward and westward of the avenue is in one extension. The end of garden in westward are aligned except Ghaafakhan and the end line of gardens in eastward are aligned except the Bolbol and Shirkhan gardens. A contradiction can be seen between Bolbol and Khargah gardens with lithography
2. Isfahan map known as Seyed Reza Khan’ map
A map with 1:4,000 scale and dimensions 125 × 133 cm has been printed in 1923. From rarity of this map, it can be concluded that a very small number of map were published (Shafaghi, 2002: 351).
The most important features of the Map are the presentation of avenues and alleys and different neighborhoods in the city. Green spaces or in the other words, gardens and farms have covered around the city with significant area which todays, only a small area of them remain as gardens and farms and it is dramatically reduced by urban development (Pic. 7).
Urban development since 1921 has caused the city's development based on the Safavid gardens; and the name of this newly neighborhoods usually has been named after the name of old gardens (Shafaghi, 2002: 291).

3. Map of Isfahan by Shafaghi
“The history of Isfahan, Ray, and all of the world” is the most famous book of Haj Mirza Hassan Khan Ansari. The book was published in 450 pages with lead letters and Khashti size in Isfahan (Jaber Ansari, 1999: 175).
In the following, descriptions of this book are explained and at the end the layout of gardens are presented according to the subjects presented in the book.
- Khargah garden in the west of Chehelsoton (Jaber Ansari, 1942: 348).
- Takht garden with forty thousand Zare (1Zare=104 cm) in the westward of Chahar Bagh. The garden had two palaces, one palace opened to Chaharbagh and another to Shamsabad subsidiary avenue which is called Sheikh Bahai todays.
- Two manor’s garden (one endowed by Paghaleh and the other one was the Mohammad Amin Khan's garden and house) in the south of Takht garden (Jaber Ansari, 1942: 355).
- Tavos Khaneh garden in addition to Pahlavan Hossein's garden in the eastward of Chahar Bagh, which has more than 40,000 Zare.
- ZarinKhaneh garden and FathAbad garden in the eastward of Chahar Bagh, perhaps with 60,000 square meter area in front of Chaharbagh school and endowment of Shah Sultan Hussein. (Jaber Ansari, 1942: 356)
- Goldasteh garden, 30,000 Zare.
- Shirikhaneh garden in the eastward of the Chaharbagh whose path was from Palavan Hussein garden. (Jaber Ansari, 1942: 357)
In this map, contrary to descriptions of Jaber Ansari, Shirkhaneh garden is depicted on the westward front of avenue which is the place of GhafasKhaneh according to Chardin’s expression. “GhafasKhaneh garden was placed in front of Shirkhaneh garden on the westward of Chaharbagh Avenue. Wire cages are made of gold”. (Chardin, 1996: 121) Since the palace of Takht garden was opened to Sheykh Bahaei Avenue, the southward of garden was divided to smaller gardens, and the northern end of Takht and Bolbol garden was aligned, the approximate area of this garden is shown in map (Pic. 8).

D) Current status
In Pic. 9, a map of the surrounding land usage of Chaharbagh Avenue is presented in the current period. Commercial usage is the dominant norm in this avenue. In Bolbol garden, which is today called Shahid Rajaei Park, at some point the commercial use has been discontinued for entry to the park (Bolbol garden).
Pic 7: Gardens and farms around Abbasi Chaharbagh on Seyyed Reza khan’s map by Shafaghi (1923).
Source: Authors.

Conclusion (Comparison and analysis of maps) | The concept of Chaharbagh Avenue has changed in different historical periods. This avenue has recreational aspects in the Safavid era and for the first time in Qajar era it not only had used as promenade but it also had been a trade and commerce location. The avenue has been numerous damages when Zill al-Sultan was the ruler of Isfahan in Qajar era and had lost its Safavid era’s glory. The maximum damage was cultural identity damage which has the most significant impact on human’s role reduction in the Chaharbagh Avenue. This damage has arisen in Pahlavi era and later. Today, the avenue is one of the main routes of car commuter and its dominant usage is commercial. Comparison of existence maps has shown the inconsistencies. Some of them are due to the changes that have occurred in the interval between time periods.

- One of these changes is Madar-e Shah Collection in the south of Bolbol garden which is dedicated to this collection in Shah Soltan Hossein period. Before this construction the whole body of avenue was formed by mansions of garden entrance.

- Chardin mentioned the number of pools was seven in the avenue, but in Pascal Coste’s map which is drawn in the Qajar period, eight pools is displayed.

- In Kaempfer drawing, Goldasteh garden and its palace were displayed in an octagonal shape and the photograph had been taken by Holster confirms that; while Wilber in his depiction of the garden have not considered the octagonal shape for it.

- In the drawing of Kaempfer, radial formations of garden can be seen in Khargah and Bolbol garden, while Wilber did not mention this type of little garden formation in his restoration of Khargah garden.

- Goldasteh garden and oblique structures that Kaempfer called "closed road", has not been seen in later maps and this is a sign of major changes in these parts. However, the crooked wall of ChehelSoton which was parallel to oblique buildings can be the only element that implies on the existence of "closed road".

Reference List