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Date: 2018 November 30

In the name of God

Dr. Mechtild Rössler,
Director
World Heritage center

Subject: Submission of requested reports regarding the
“State of Conservation report of Meidan Emam, Esfahan”

Dear Ms. Rössler,

I would like to express my appreciation for the continued efforts of the World Heritage Center for promotion and preservation of WH Sites.

Here I write to respond to the enquiries regarding “State of Conservation Meidan Emam, Esfahan.” For any further information, I am at your disposal.

Please accept, your Excellency, the assurance of my highest consideration.

Yours sincerely,

Mohammad Hassan Talebian

Deputy for Cultural Heritage & Secretary for the Iranian world heritage properties
Iranian Cultural Heritage Handicrafts and Tourism Organization

Islamic Republic of Iran

Iranian Cultural Heritage, Handicrafts & Tourism Organization

ICHHTO



**State of Conservation report of Meidan Emam, Esfahan
World Heritage Site**

UNESCO

World Heritage Convention

Tehran 2018

In the name of God

- **Reiterates its request to the State Party to submit to the World Heritage Centre the draft Conservation and Management Plan prior to its finalization, for review by the Advisory Bodies, to carry out an assessment of the property's vulnerability to disasters such as earthquakes or fires, and to develop a systematic strategy for disaster risk reduction and integrate it into the Conservation and Management Plan;**

It is understood that formulating a preventive protecting policy against the disasters that may threaten a heritage sites, and more importantly a World Heritage Site as the legacy of generations, is necessary. Thus, studying the vulnerability and identification of every possible threat or risk that might endanger the World Heritage Sites in Iran are among the priorities of ICHHTO. In this regard, a due attention needs to be paid to factors such as development pressure, environmental and natural hazards, tourism pressure, population growth, so on and so forth. It is quite important and necessary to review the decreasing or increasing effect of abovementioned factors on cultural heritage sites and the required mitigation measures in order to minimize the impacts and achieve a resilience within the sites.

Based on this argument, a risk management study has initiated from 2016 in Meidan Emam World Heritage Site to evaluate the current state of the site, related threats and vulnerabilities and to propose adequate measures to prevent any damage to the monuments, the site and its visitors. The study is built on the initial input of the many elements such as: legal instruments; practical and technical measures, study of successful practices in the region and globally, etc. and are pursuing the following scenario:

Aim

Risk management of Meidan Emam and its buffer zone

Strategy

Providing adequate protection and maintenance to the structures and their spatial attributes to be resistant towards disasters and hazards considering services, public share and visitors;

Plans

- Structural and physical evaluation:

- Examination of the structures, as their foundation in order to evaluate the current status of their stability;
- recalculation of the structures weight, the forces and tensions opposing to the physical body of the square and its monuments, resistance of the historic materials and their monitoring;
- Evaluating the tourism impacts on the site, opportunities and threats;

- Mitigation facilities and equipment:

- Studying the appropriate equipment and safety mechanisms in time of risks, such as fire or earthquake, for the property and its buffer zone to be conformed with the international standards;
- Reorganization of service and emergency accesses and exits in the site s in order to enhance the level of safety in the site;

- Conservation and protection:

- Providing a precise monitoring calendar for a more comprehensive monitoring of the monuments, protection measures and engaged population in the site to guaranteeing its sustainability;
- Planning for constant and appropriate protection and renovation initiatives in the monuments and its setting by making use of active workshops and restoration laboratories;

- Training:

- Allocating and introducing safe places in term of earthquake and fire for the visitors and local community;
- Training the engaged society, visitors, as well as the associated authorities on the behaviors in terms of a risk, along with enhancing their sensitivity by explaining the OUVs of the site to reduce the negative impacts on the site in case of collective horror;
- Holding demonstrative Earthquake and fire Maneuvers;

- Developments:

- Permanent monitoring of urban developments in the core and buffer zone of Emam Square to be able to anticipate the threats imposing to the site by the surrounding activities or structures;

Outcome: Adopting a regulation for each case to be practice within the site in the short-term measures.

The study is considered to be a short-term plan, started by Meidan Emam World Heritage Base from 2015 and is yet to be finalized based on completion of other initial investigations, the final revision of which will be presented to the World Heritage Committee and its advisory bodies for comments before any implementations.

In-line with the upper mentioned study, several emergency preventive measures have been adopted and implemented until present time to ease the monitoring processes and provide an adequate setting for further decisions and actions.

These preventive measures are applied base on the proposed items in the draft management plan sent to WH Center in 2016.

- Providing a detailed Photogrammetric mapping of Emam Saqure and its buffer zone;



Figure 1. Photogrammetric mapping of Emam Saqure

- Reorganization of lights and lightings for an adequate sight during nighttime;



Figure 2. Providing lighting to the square for the nighttime

- Reorganization of electric infrastructures to provide lighting possibilities and preventing fire outbreaks;

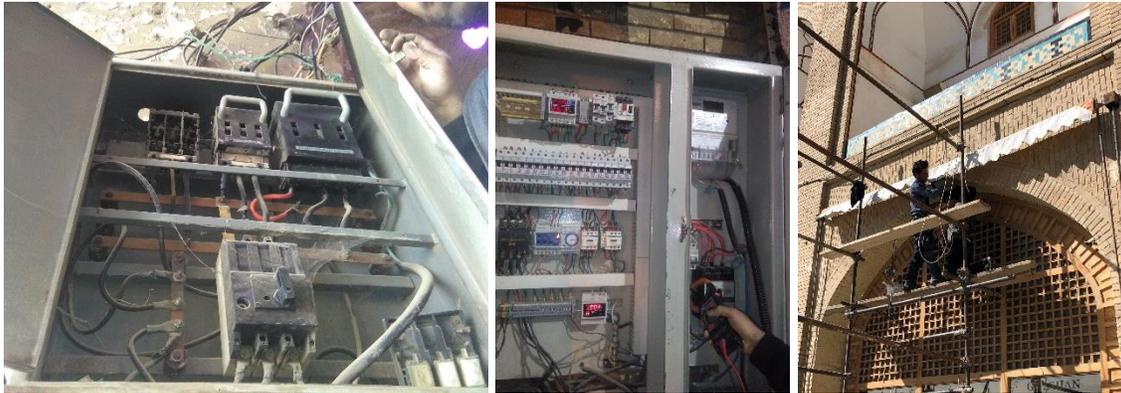


Figure 3. Reorganization of electric infrastructures

- Installing monitoring and CCTV cameras;



Figure 4. Installing protective and monitoring designations (Left: Emam Mosque- Middle: Ali Qapu Pavilion- Right: Sheykh Lotfollah Mosque)

- Establishment of a fire alarm system in Aali Qapu Pavilion;



Figure 5. Fire alarm system in Ali Qapu Pavilion

- Reorganization of the main entrance routes towards east and northwest (for facilitating the access during danger);



Figure 6. Reorganization of urban accesses to the Meidan Emam World Heritage Site (Left: Northwestern entrance from Hafiz St.- Right: Eastern entrance for Sepah St.)

- Defining access routes for the urban emergency services such as ambulances and firetrucks;

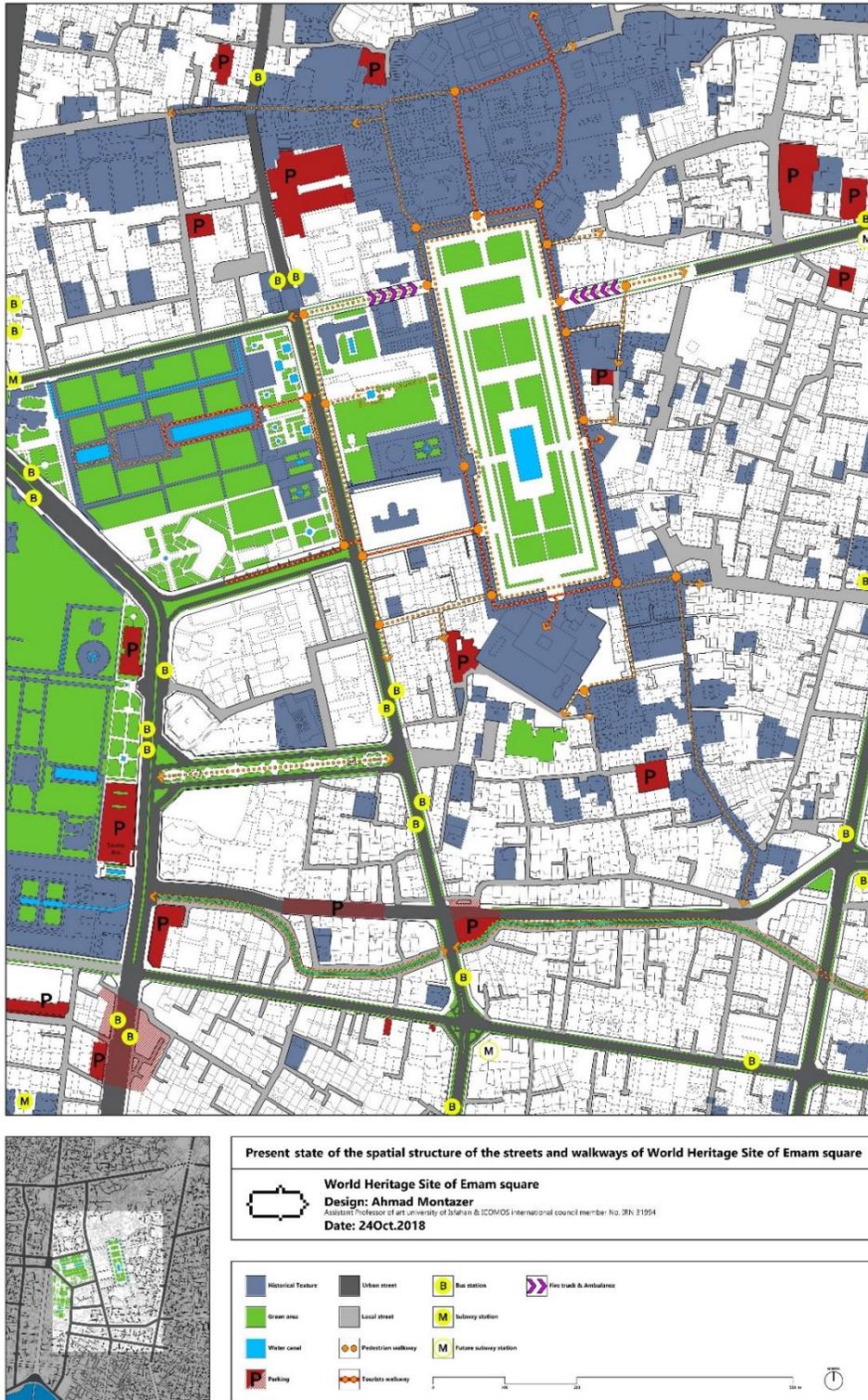


Figure 7. Access routes for the urban emergency services

- Organization of Ambulance service during the events;



Figure 8. Ambulance services during events and busy times

- Installing firefighting equipment and fire extinguishers in shops, bazaars and monuments for micro-emergency situations;



Figure 9. Providing fire- safety equipment to the publics in terms of micro-emergencies

- Strengthening Aali Qapu Pavilion to be resistant against earthquake and external forces based on precise plans and calculations;

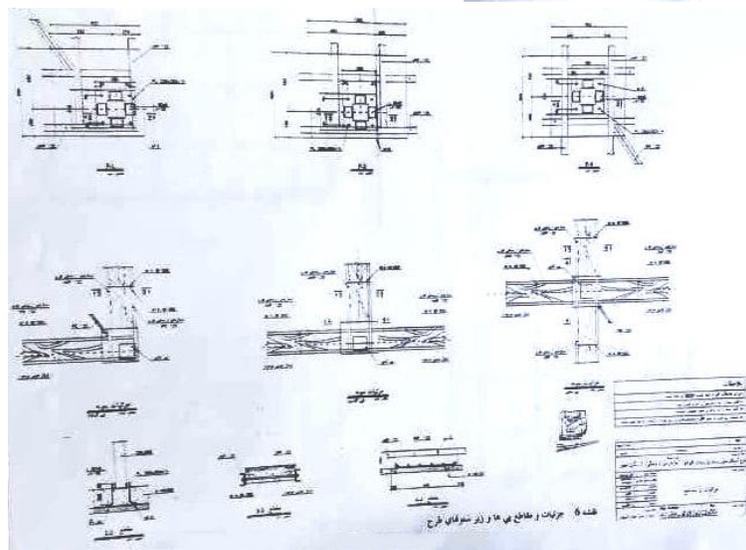
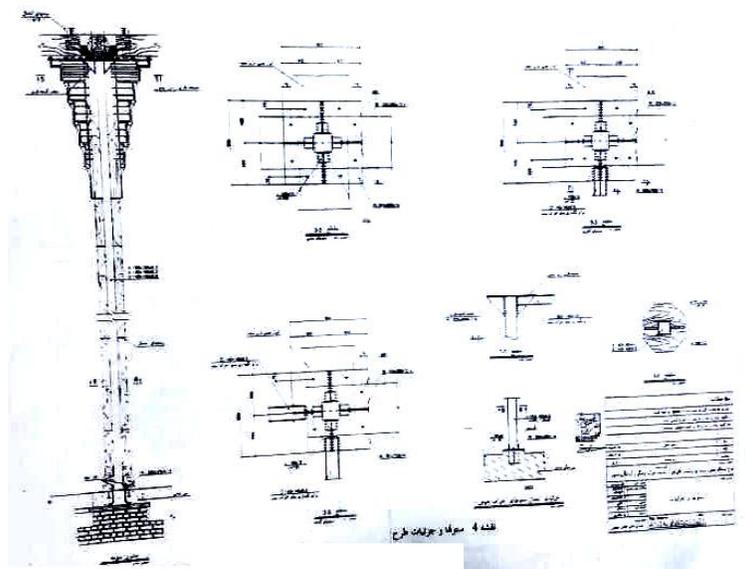
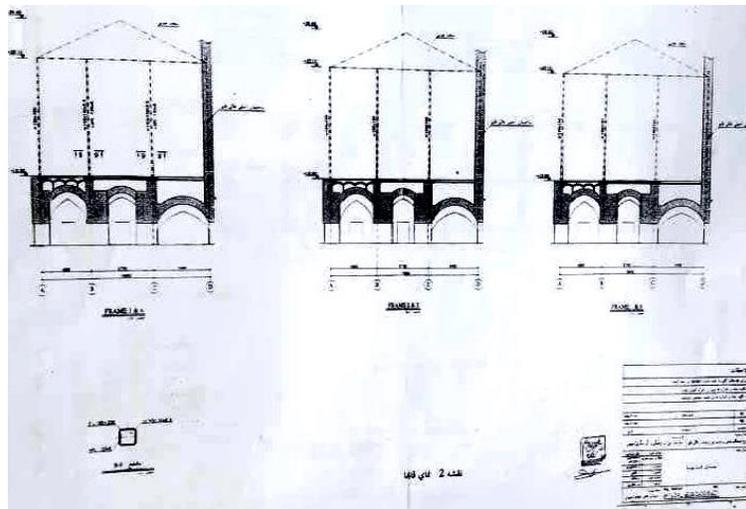


Figure 10. Strengthening plans and calculation of Ali Qapu Pavilion

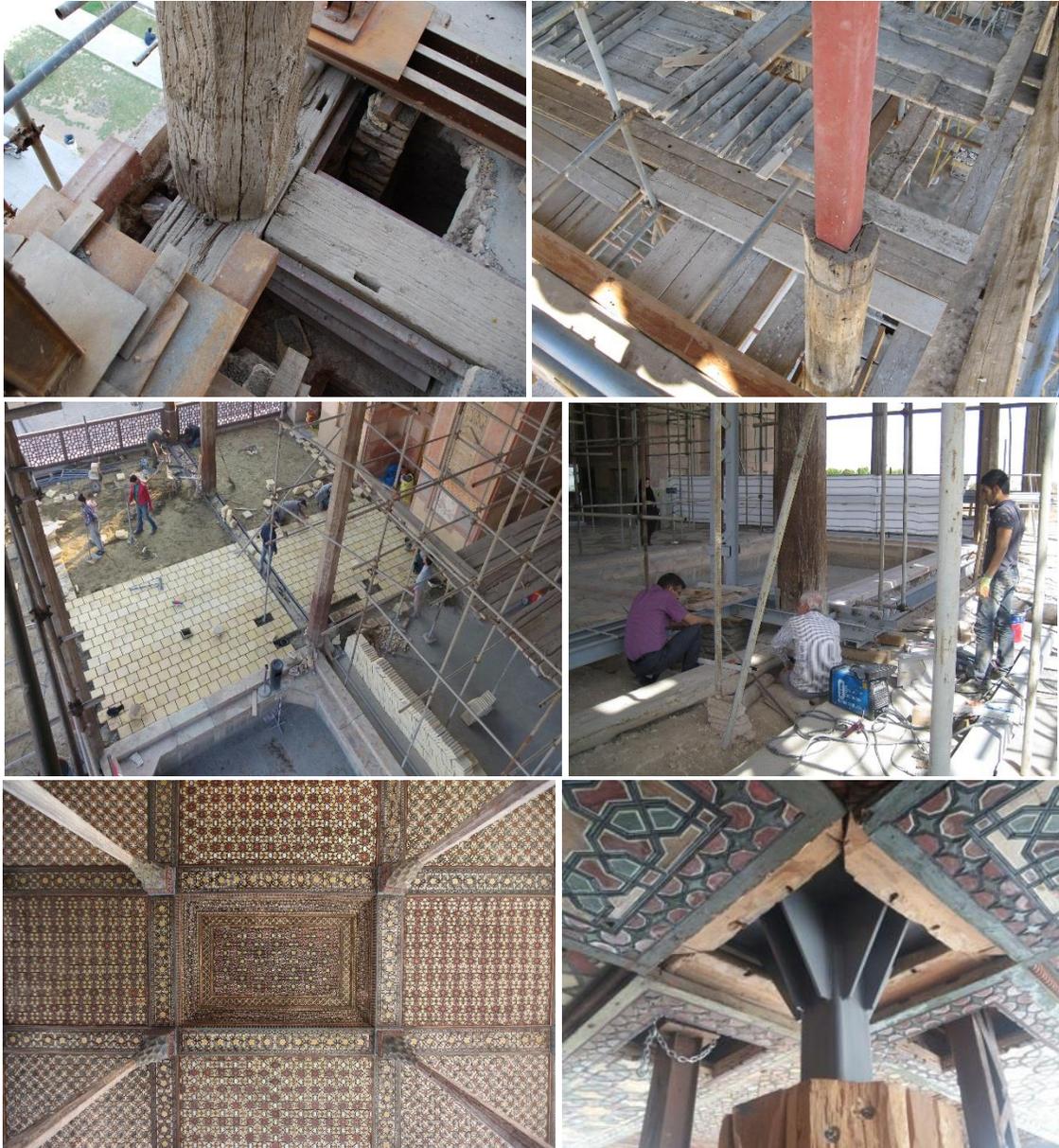


Figure 11. Strengthening process of Ali Qapu Pavilion

- **Information on the development of the spatial structure for the pedestrian roadways for visitors to the property,**

Iranian architecture, has always been associated with special rituals, one of which is mirrored in entering into the main spaces, specifically a sacred area like mosques, shrines, etc. Passing the entrance, the paths towards the main structure, are often considered to create a particular environmental-effected behavior. Such behaviors are associated with socio-cultural values and have been predetermined based on the architectural values by designers of the spaces. All the architectural elements have been designed in a way to grant the highest spiritual feelings to the passerby, as to induce the best perception of its architectural soul.

Meidan Emam (Naqsh-e Jahan Square) and its Entrances

The Main Public Entrance of the Square

The main connection between Naqsh-e Jahan Square and the historic fabric of the city is located in the northern part of this square. As a symbol of the Safavid Empire's economy, along with bazaar which, in addition to its economic function, creates a space for access and dynamism highlights its role as the starting point of one of the main axis of the square. Based on this argument, the Qaisarieh Bazaar (the Shahi Bazaar) has been constructed as a subsidiary branch of the main bazaar and parallel to it. It is, however, connected to the main bazaar by two other bazaars; Zargarha Bazaar and the Dar Al-Shafa Bazaar. The connecting point of the Bazaar to Naqsh-e Jahan Square emerges in a form of a Portico, (the so-called Portico of Qeyssariyeh), sitting in the middle of the square's northern side. During the Safavid Period, the Naqsh-e Jahan Square was located in the south of the city while the majority of the city's populations were living in the northern part of the city. Therefore, it was necessary to place the most important entrance in the northern part of Naqsh-e Jahan Square to connected the city with the newly developed parts.

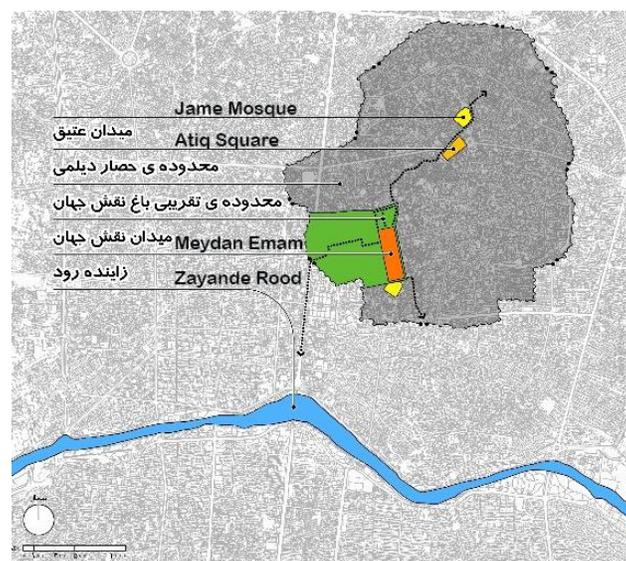


Figure 12. Position of the Qeyssariyeh Bazaar and the Meidan Emam and their correlation with the main axis of Isfahan Bazaar

By studying the entrances of the square in Safavid era, an argue can be places that there were two main entrances for the public in Naqsh-e Jahan Square. One of which is the Qeyssariyeh Portico and the other is the intersection of the Hassan Abad Bazaar with the Square. The later facilitated the access of the developed areas in the southeastern parts of the city to the Naqsh-e Jahan Square. While Qeyssariyeh Portico, located on the northern side, connected this square to the historic districts of the city, as well, to the districts inhabited the majority of the city population. Therefore, it can be considered more important.

Western Entrances of the Naqsh-e Jahan Square

Unlike the eastern, northern, and southern sides of Naqsh-e Jahan Square, which used to connect the square to the residential and public areas of the city, there were gates and entrances on the western side which were allocated to government officials, royals and authorities. Therefore, it pinpointed within the western side to give an easy access to the governmental areas and monuments of the square and to the royal gardens located outside of Naqsh-e Jahan on the western edges. Aali Qapu Pavilion, Morvarid Palace, Chehel Sotoun Palace, Chahar Hoz Square and the Harem Complex of Shah were among the monuments in the governmental and royal zone which is known as the centers of governance in the Safavid Period (Dowlatkhan Safavi). One of the most important royal access routes to the square was a passage beside Aali Qapu Pavilion. This route was peculiar to the monarch (the shah) and his companions.

Three more gates exist in the western edge of Naqsh-e Jahan Square, two of which lead to Gozar-e Posht-e Matbakh [Behind-the Kitchen Passage] and the Harem Passage. The later, used to connect the harem to the surrounding bazaar of the square- the fourth gate on this side, interconnected Naqsh-e Jahan square to the Chahar Hoz Square as the two major squares that were hosted the Safavid sit of government.



Figure 13. Naqsh-e Jahan Square and the location of the main entrances during Safavid era

Entrances from Eastern and Southern Districts

The access towards the square from the local routes located on the eastern side of the square were made possible through the eastern side of the bazaar. Due to their local functions, these access routes were not appeared as a highlighted entrance on the inner facades of the square. However, it is noticeable for the Onlookers and passerby just when they were moving in the bazaars surrounding the Square. It should be pointed out that districts located in the south of Naqsh-e Jahan Square had also access to this square through the Abbasi Grand Mosque. In other words, the Mosque acted as an urban element interconnecting the square to the public life of the city located beyond the mosque.

The Contemporary Accesses and Entrances of the Square

A major modification in the access routes and entrances of the Naqsh-e Jahan Square struck in Pahlavi era, during which a network of streets established around the Square. As a result, the Hafiz Street and Sepah Street, located in the east and west of the Naqsh-e Jahan Square respectively, connected this square to the network of streets, made it possible for the engine vehicles to enter the square. New streets created inside the Square for vehicles to move around from the northernmost to the southernmost parts. Later on, the two subsidiary passages of Saadi and Posht-

e Matbakh also connected to this network, facilitating the exit route through southern sides. The state of traffic patterns persisted until years after the Islamic Revolution in Iran. In the 1990s, cars were banned from entering the southern and middle sections of the square, these sections, thus allocated to the carriages and pedestrians. Consequently, a heavy traffic jams produces in the northern section of the square. The process of limiting the traffic of motor vehicles in Naqsh-e Jahan Square continued in the next decade. Thereupon, Nosazi and Behsazi Organization of Isfahan (A Suborganization of the Municipality) removed the parking lots in the north of the square and transformed it into a green space. Due to the construction of new passages, it is currently possible to access Naqsh-e Jahan Square through 15 different entrances. In emergency cases, it is possible for the emergency service vehicles to enter the square via Hafiz and Saadi streets.



Figure 14. Traffic of motor vehicles in the Naqsh-e Jahan Square before the contemporary modifications

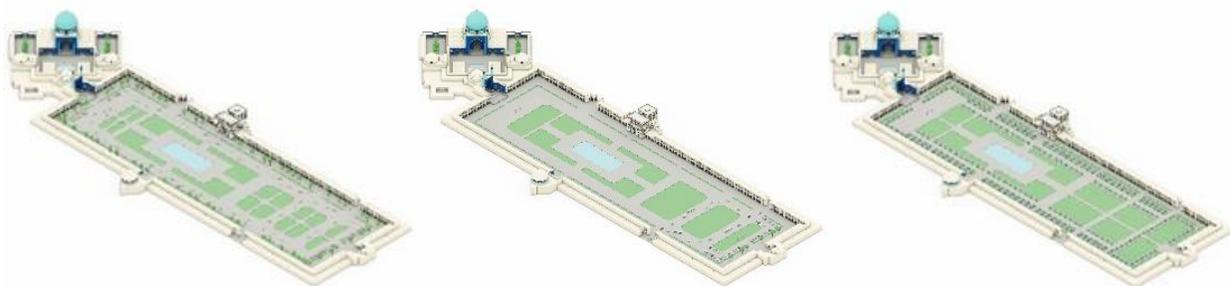


Figure 15. Displaying the modification process of Traffic in Meidan Emam- (Left: During Pahlavi era up to 1980s, Middle: 1990s, Right: 2000s until present)

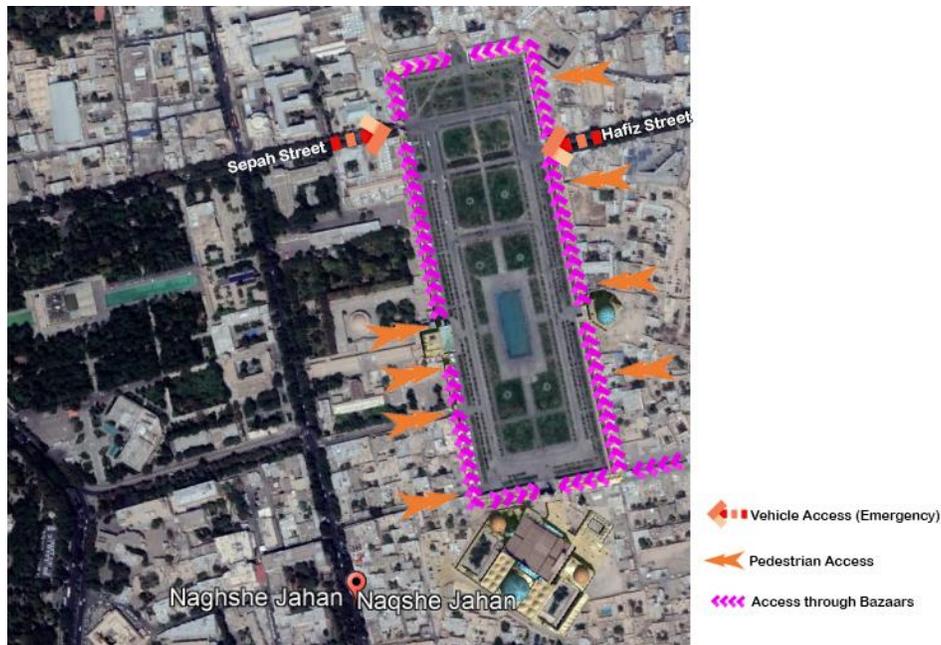


Figure 16. Current access routes and entrances to Naqsh-e Jahan Square

Issue and challenges that the traffic modification opposed to the site:

Developing the vehicle access during Pahlavi era, disrupted the authentic movement patterns in the complex and thus lead to indistinct perception of the space and visiting behavior. As the authentic movement towards the square was mainly designed to be through passing the Bazaars, crossing the darker simple spaces and reaching the core of light and colors accompanied with glorious structures and decorations. By development of the vehicle accesses the importance of Bazaar as one of the most significant axis of the square was clouded over. Still, the favored entrances to the square, are Hafiz and Sepah streets entrances, due to the ease of access to the public transportation services. Entering from the western and eastern sides of the square, is however, not preferred by the management of the site, since it is not provided with the best perspective of the square for the visitors and tourists and does not cover the entire conceptual and aesthetic significances of the World Heritage Site.

Landscape Management of the Naqsh-e Jahan Square to reduce the issues and challenges

Redefining the main entrance of the square is needed. However, currently the general access to the square is predominantly dependent on the existing motor vehicle transportation system which is complicated to make fundamental changes, as it engages with the life styles and the patterns of the living city. Yet, representing the entire values and significant attributes of the World Heritage Site is required through complex strategy and policy making in cooperation with the city authorities for one of the most important tourism destinations of Iran.

Thus, several meetings took place to incorporate the stakeholders, the result of which mirrors in the tourism access network reorganization of the city and not only Meidan Emam World Heritage

Site. Therefore, a study initiated to redirect the tourism access routes towards Meyda Emam via the historic axis of Isfahan city. Currently, tourists get access to Naqsh-e Jahan Square through independent routes which are separated from other major historic districts and sites of Isfahan city.

Defining a pedestrian tourism access path, starting from Atiq square, by Masjed Jame World Heritage Site, following through range of bazaars, reaching Naghsh-e Jahan square from its northern gate and through Qeyssariyeh Portico, passing Chaharbagh street and end leading to the natural axis of Zayande Rood, not only helps with entering the square from the northern side, where it meant to be the main entrance for the publics, also gives a bright understanding and a well perception of the development procedure of Isfahan historic city and the Islamic stage in Persian Architectural Style, along which a tour is provided for the tourist in the most outstanding samples of this architectural tradition. The study, however, is considered to be adopted within the middle term plans of ICHHTO in the region and is yet to be completed.

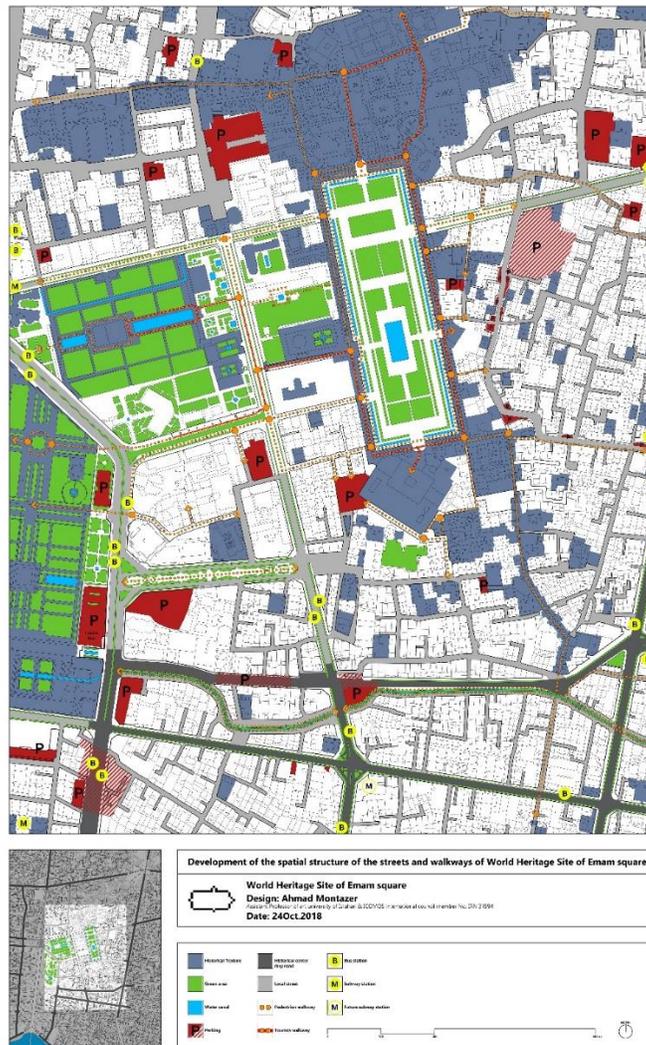


Figure 17. Spatial development of the Pedestrian Routes for the Visitors of Meidan Emam World Heritage Site

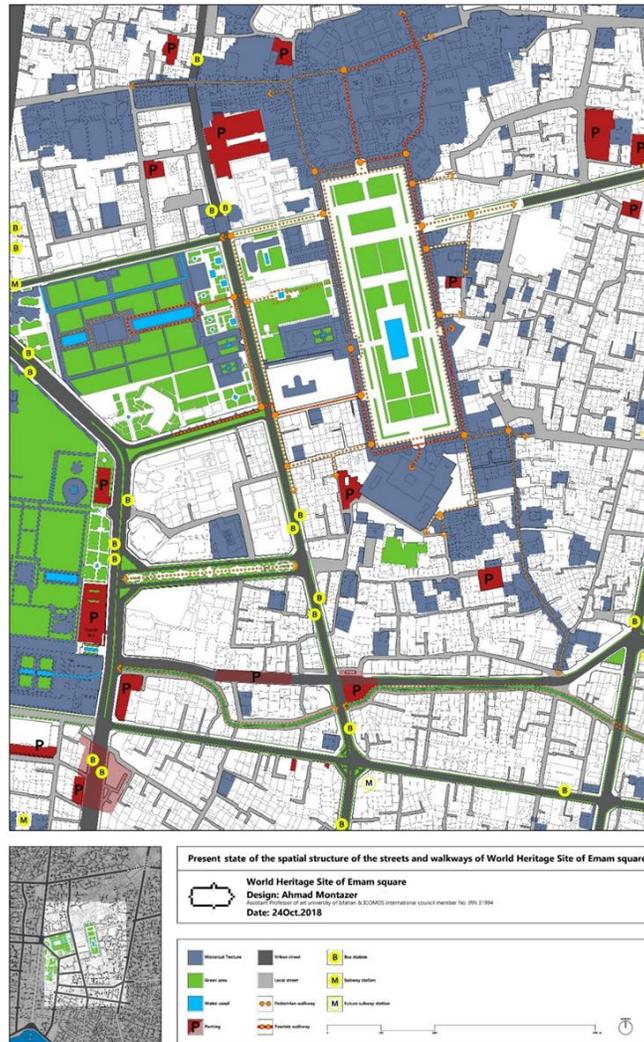


Figure 18. The current spatial structure of the Pedestrian Routes for the Visitors of Meidan Emam World Heritage Site

The current pedestrian area has also been improved by the following measures in order to provide the tourists, and also the residents, with the best visiting experience:

- Implementation of Cobblestone Pavements in Hafiz and Sepah Streets, Posht-e Matbakh and Saadi Passage and the northern and middle sections of Meidan Emam;
- Construction of Hakim Parking Lot (in the northeastern side of the Square);
- Construction of Kermani Parking Lot (in the northwestern side of the Square);
- And Construction of Farshadi Parking Lot.



Figure 19. Measures carried out to improve the quality of the Pedestrian area

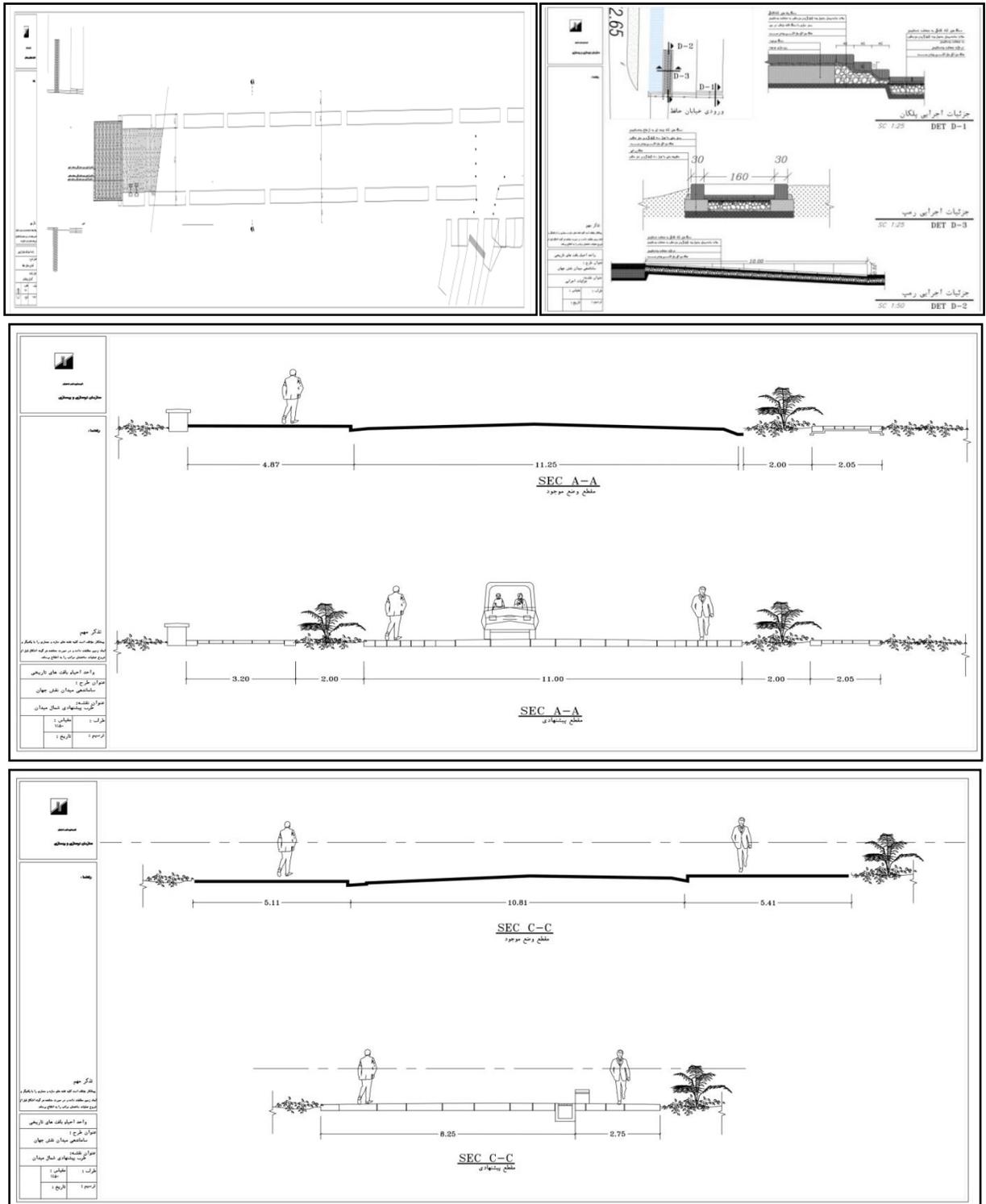


Figure 20. Details employed in the implementation of pedestrian pathways

- **Detailed information on the reorganization of the sewage system within the property and its buffer zone;**

The urban sewage system project initiated in Isfahan in 1920s during the Pahlavi I Period. The system was mostly comprised of septic wells as well as a limited network of sewage canals under the urban fabric. Development of urban sewage network has been pursued in Isfahan during the past 50 years. In the restoration plans adopted during Pahlavi era, it was endeavored to coordinate the provision of all urban services, such as electricity, telephone, potable water, urban sewage canals, etc. to the historic site of Meidan Emam. Accordingly, the plan for implementation of the sewage system in and around the Square was finalized in 1970-1971.

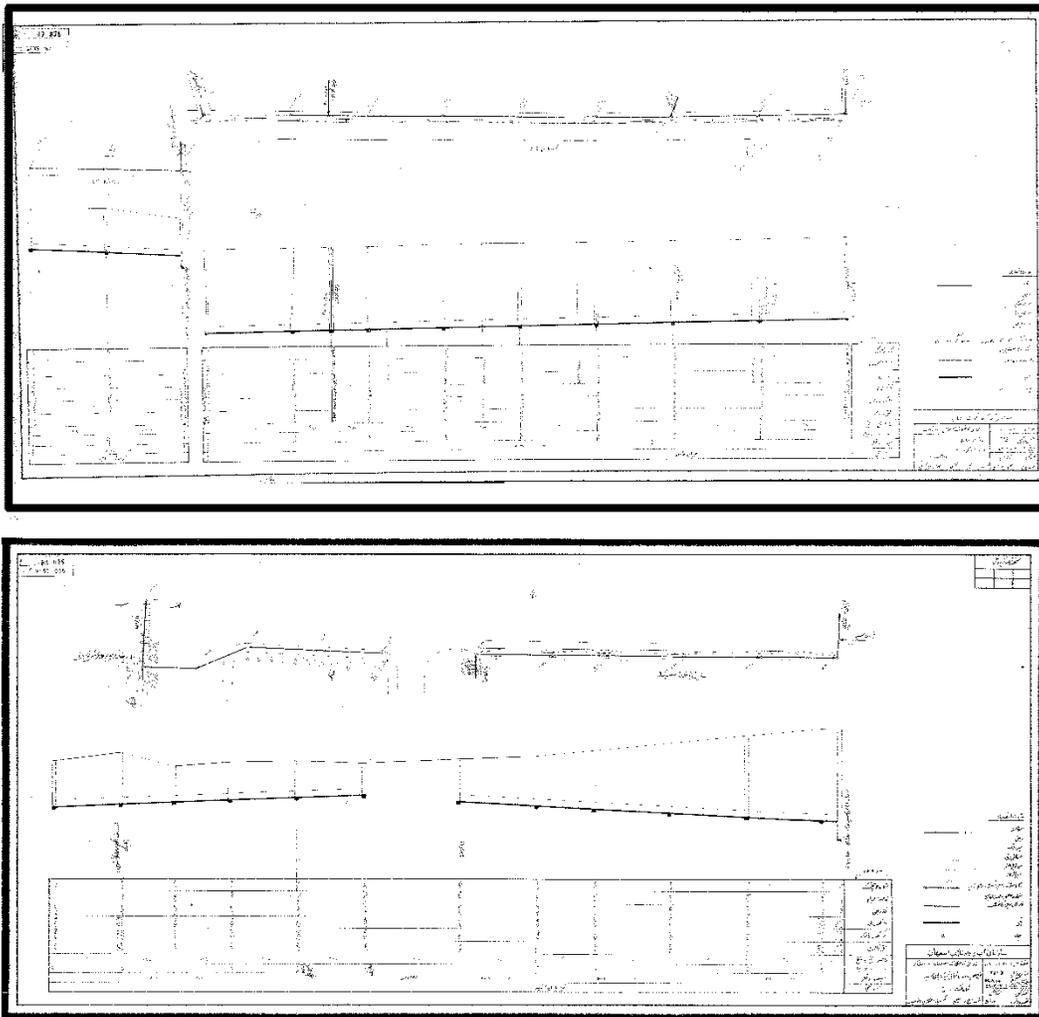


Figure 21. Samples of sewage plans in the vicinity of Meidan Emam carried out in 1970-1971 (Above: Hafiz St.-below: Sepah St. up to the Kaffashha Bazaar)

In this regard, the following projects have been carried out since 1975 to 1978, for the implementation of the urban sewage system in Emam Square (Naqsh-e Jahan):

- Construction of a septic tank in the western side of the square in 1975 (of which never came into use due to the construction of the sewage system);
- Digging canals for the water and sewage installations in between Sepah Street and Ali Qapu Pavilion the pipe laying of which completed in the 17 branches of Afarinesh Bazaar up to the Aali Qapu Pavilion in 1975;
- Digging canals for the water and sewage installations in between Ali Qapu Pavilion and the southeast edges of the Afarinesh Bazaar in the second half of 1975;
- Digging canals for the water and sewage installations in the southern and southeastern side of the square (the Sheykh Lotfollah Bazaar) in 1976;
- Digging canals for the water and sewage installations in the eastern, northern, and northwestern bazaars of the square (the Ahangarha Bazaar, the Rismanha Bazaar, the Nesfeh Bazaar, the Qannadha Bazaar, and the Kaffashha Bazaar) in 1978;



The construction of the Sewage Network in 1972-1978 in the Vicinity of Meydan Emam



Figure 22. Constructed sewage networks in the vicinity of Emam Square from 1972 to 1978

Thereafter, due to the alterations in the life styles, population, degradation and erosion of installations in years, a developing humidity factor diagnosed by the Emam Mosque, thus an enquiry made by ICHHTO Isfahan to the Water and Wastewater Company of Isfahan Province in

order to engage the company in provision of technical support and reorganization of the sewage system of the day in the vicinity of Abbasi Grand Mosque (Masjed Emam). The company, then, agreed to provide the adequate service for eliminate the issue raised in the area.

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اصفهان : صندوق پستی ۹۰
تلفن : ۶۶۸۰۰۳۰۰۸
فاکس : ۶۶۸۹۵۸۶



اصفهان ، پایتخت فرهنگ و تمدن ایران اسلامی

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جناب آقای امینی
رئیس محترم هیئت مدیره و مدیر عامل شرکت آب و فاضلاب اصفهان

با سلام و احترام
بازگشت به نامه شماره ۸۹/۳۲۳۵ مورخ ۸۹/۸/۲۲ در خصوص اعلام آمادگی آن شرکت جهت رفع مشکلات موجود در مسجد امام (ره) اصفهان عرض تشکر : خواهشمند است دستور فرمایید کارشناسان ذیربط آن شرکت به این اداره کل معرفی تا پس از بحث و تبادل نظر و نشست های کارشناسی ، راهکارهای اجرایی عملی جهت رفع مشکلات یاد شده را بررسی و ضمن تعیین حدود مشارکت دو دستگاه ، زمینه های اجرای طرح ستاندهی مشکلات مسجد امام (ره) را در زمینه مسائل مربوط به سیستم ابرسانی و فاضلاب شهری و موارد مشابه فراهم نمایند.

اصفهان ، پایتخت فرهنگ و تمدن ایران اسلامی

جناب آقای حیدری پور
مدیرکل محترم اداره کل میراث فرهنگی ، صنایع دستی و گردشگری
موضوع : پیشگیری از تخریب بخشهایی از ساختمان مسجد امام (ره)

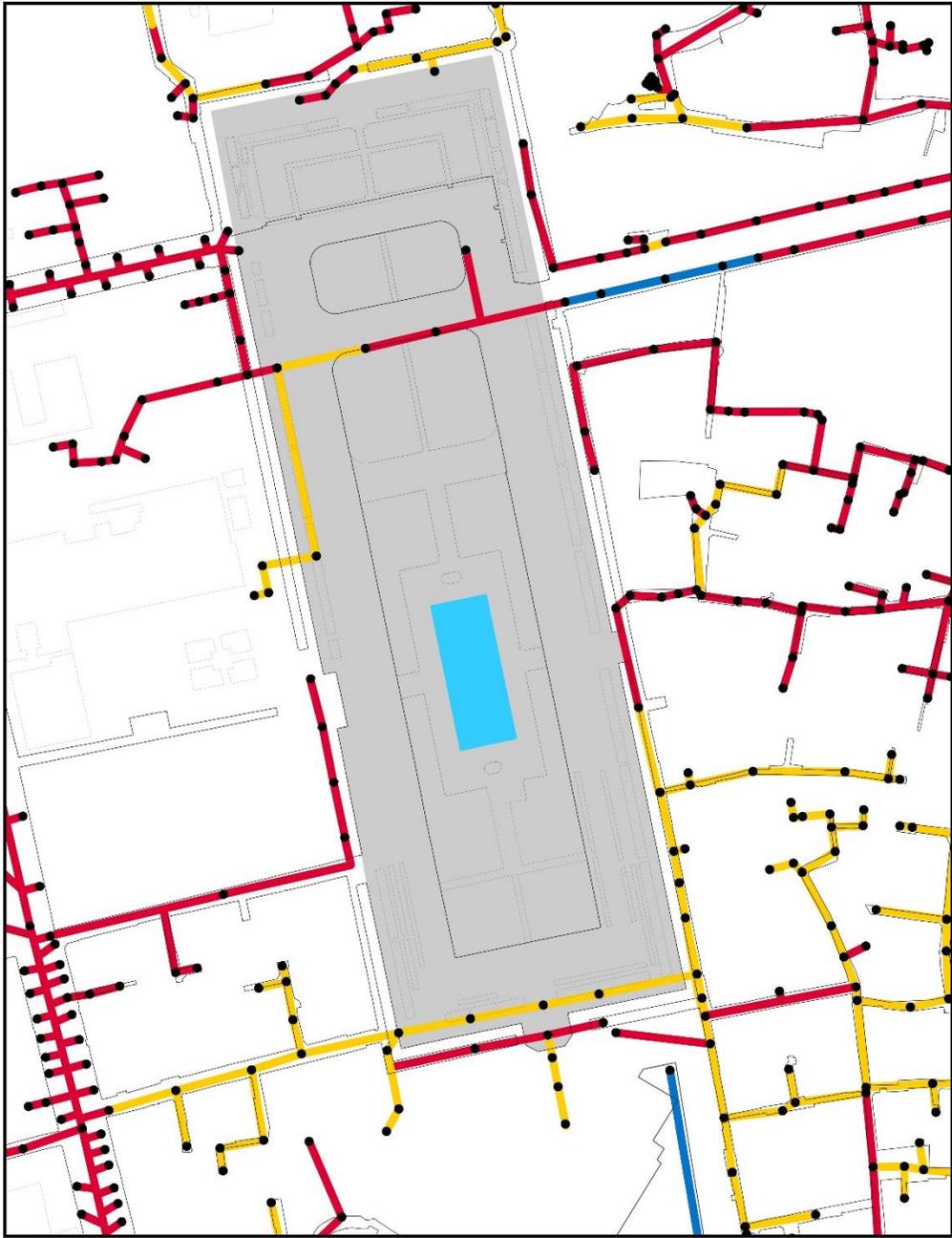
با سلام و احترام
پیرو جلسه مورخ ۸۹/۸/۱۲ ، در دفتر معاون محترم امور عمرانی استانداری اصفهان در زمینه پیشگیری از تخریب بخشهایی از ساختمان مسجد امام (ره) که ناشی از عبور فاضلاب سرویسهای بهداشتی مسجد از کنار بنا عنوان گردید، این شرکت آمادگی دارد با توان فنی و کارشناسی خود، در راستای رفع مشکل مذکور با آن سازمان محترم همکاری نماید.

عاشق امینی
رئیس هیئت مدیره و مدیر عامل

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تلفن : ۶۶۸۰۰۳۲۱۱
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Figure 23. Correspondences regarding the reorganization of the sewage system in the vicinity of Meidan Emam



The current state of the Sewage system in the vicinity of Meydan Emam

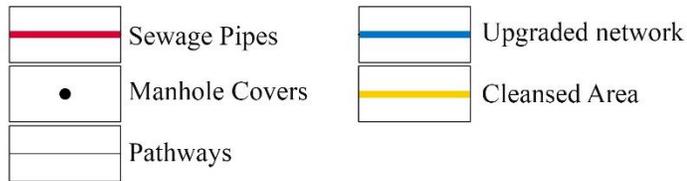


Figure 24. The current state of the sewage networks in the vicinity of Meidan Emam after the reorganizations

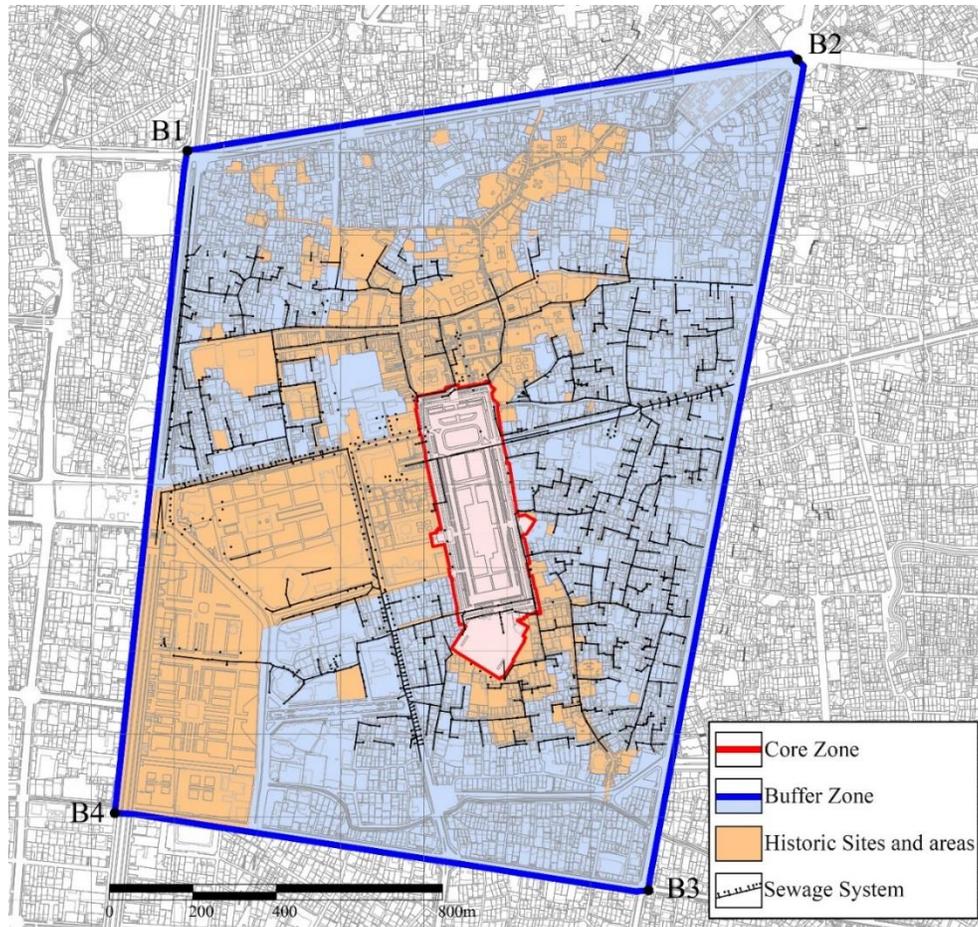


Figure 25. The sewage network mapping in the buffer zone of Meidan Emam Esfahan

Upon the agreement several experts were sent to the area to initiate a technical investigation regarding the issues and the mitigating and preventive measure to be taken into account.



Figure 26. Field survey on the sewage network in the vicinity of Meidan Emam



Figure 27. Increase in the humidity levels before the reorganization of the sewage networks

In order to mitigate the damages, a reorganization within the sewage discharge of Masjed Emam proposed. The reorganization implemented in 13 following stages and according to the designated plans:

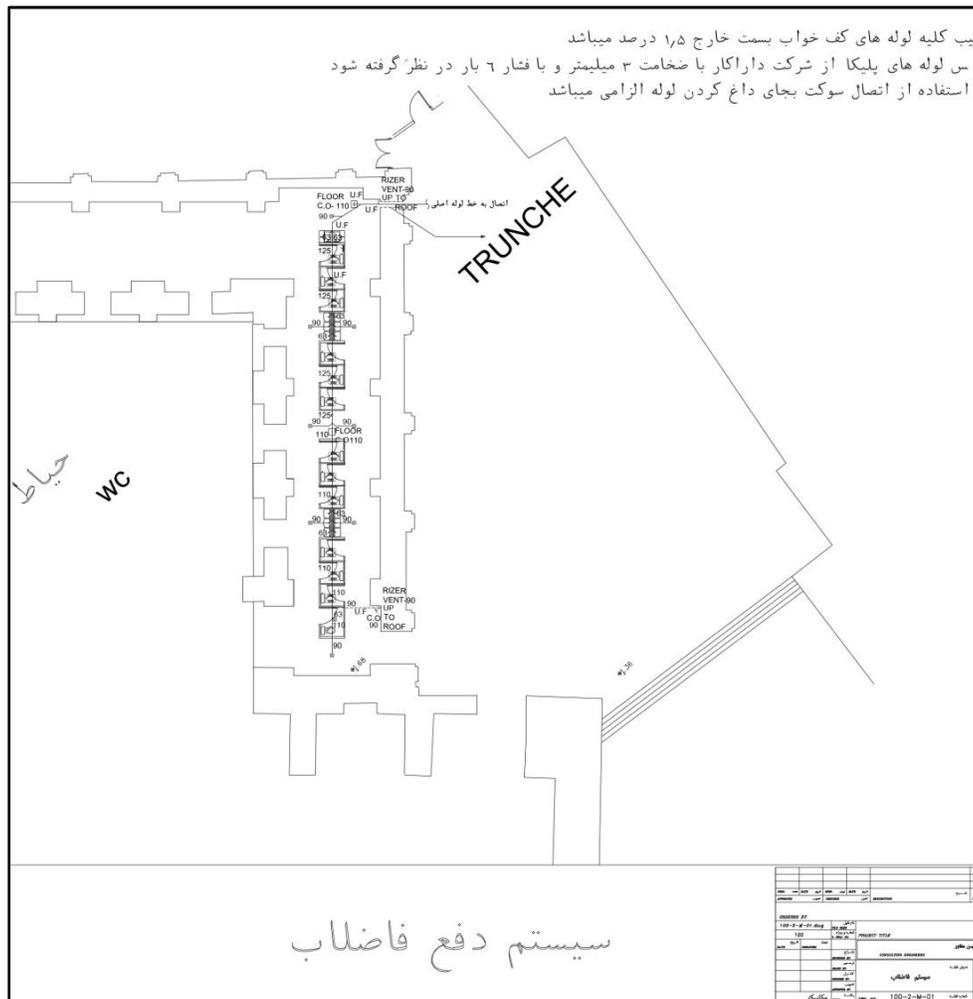


Figure 28. Reorganization plan of the wastewater system of Masjed Emam



Figure 29. The previous condition of bathrooms in Masjed Emam with leakage issues and inauthentic design

1. Destruction of added bathrooms in recent years;
2. Removing the added tiled-walls;
3. Removing added pavements;
4. Reorganization of the infrastructure for laying the sewage system;
5. Laying down the sewage pipes;
6. Changing the water installations and old water pipes;
7. Laying the toilets;
8. Paving the floor;
9. Make use of the traditional wooden doors based on the existing authentic patterns;
10. Restoration of the historic walls;
11. Reorganization of the external area and walls;



Figure 30. reorganization of Masjed Emam bathrooms

Further measures

According to numerous sessions held from 2011 up to present, during which several expert reviews and technical investigation presented, the following measures adopted in order to minimize the damages to the complex due to:

- Removing the sewage network in the eastern edge of Imam Mosque and transferring it to the sewage network within the southern edge;
- Reorganizing the entire sewage system of the Mosque;
- Renovating the sewage installations in the edges of Hafiz Street;
- Cleansing the sewage systems in the neighborhood of Naqsh-e Jahan Square;