

# Defining a Structural Model for the Revitalization of the Lost Urban Spaces (City Entrances) in Contemporary Urban Design

## Case Study: Entrance of *Sanandaj*

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### Abstract

Not long ago, city gates and entryways had high spatial value and were among the landmarks for marking city boundaries. Today with cities having been expanded and developed, such aspect of the entrance concept is lost and entryways are turned to passages for transportation. In fact, the rich spatial value of such entrances has decreased as they are solely spaces for passing through out or into the city. The dissonant expansion of entryways causes irregularities in thresholds of urban structure. This is due to imprudent intrusion into city landscape entailed by ill-considered planning activities. The main problem is the lack of comprehensive visual or mental definitions in the field. In other words, the challenge includes improper sequencing, zoning, and lack of lucid scenario and interfere procedure. Through defining a scenario, this study aims to set a spatial hierarchy for urban entryways. It then uses a comparative study to examine the scenario for an existing case study. This study provides a new definition for designing and planning for the fields concerned with city entryways. This implies methods by which authorities can interfere in the process of urban design.

**Keywords:** Energy, Entryways and Thresholds, Spatial Quality, Sequencing, Lost Urban Space, Entrance of Sanandaj

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### 1. Introduction

Urban space, its definition and characteristics have been among the main areas of research in recent decades. In fact, research has been done on “city”, “urban life”, “urban aesthetics”, “and city identity” and other subjects related to city including management, education, designing and construction.

According to Bahreiny (1998), “Urban space is a scene where general activities of urban life happen. Streets, squares and parks of a city all form human activities.”

There is another definition of urban space and that is the perception a person has considering all dimensions of a city in his mind. This concept is considered as a meaningful and intellectual identity and also a meaningful and subjective perception of the city which includes characteristics, events, customs and norms happening in the city as a unit.

As a result, urban space includes a set of social and cultural relationships in a specific group and a specific place.

### 2. Lost urban spaces of city entrances

To talk about the entrance as one of the urban spaces can be very large. But today with the development of technology, people are traveling by air,

train, etc. The other gates have lost their traditional concept. Instead, the airport and the train station can be considered as the symbol of identity. Today the city is designed in an entry form, scale and proportions with respect to the city (Torabi & Sima, 2013)

Urban space in different writings is classified as squares, streets, frontages, coasts and seashores, stairs and so on.

But, another part can also be considered in this classification which measuring its dimensions are hesitating and we can name it as “an interpretation of lost urban spaces”.

Lost spaces are organized residues of urban visions near skyscrapers or useless shopping centers, which are far from the tumult of passengers’ activities in the city. Most of the time, they cut the relations between commercial centers and residential regions. They are non-residential lands along freeways where no measures are taken to maintain and use them more efficiently. Lost spaces are those left beside seas, railways, vacant military territories, industrial settings, vacant places remained from urban development etc. (Transic, 1986).

Today, the cities face a big problem related to urban design. Urban spaces have lost their role, the spaces which were the most communal places in each city. Markets, streets and squares which were full of population and carried a traditional sense of space are now the oldest urban regions and they have not been able to find their real position and role with no effective influence in new urban life (Transic, 1986).

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But the most important urban space which all inhabitants deal with it unconsciously and is rarely found in urban design literature is entrance areas of cities and we can name them as “large-scale lost urban spaces”. In other words, city entries are the first urban spaces which all individuals face when they enter the city (Carmona, 2006).

The entrance of each space is the first place where general characteristics of space, rules of entering, private and public limits and other space properties can be discovered as we attend it. Indeed, by providing an entrance for a space (whether a city, a district or a building) that space gains an identity in the eyes of its inhabitants, is marked and it seems more lively (Alexander, 1977).

“City entrance includes a path by which the course of entering the city (from outside in) happens. This area, which is the distance between natural space outside the city and man-made environment inside, not only has partial features of both environments (exterior and interior) but also carries an independent identity” (Ablaghi, 1996).

The routes of daily trips by citizens in their own cars, buses or undergrounds to the outside of the city are formed by undesirable and ugly views and nobody pays attention to these regions while because of their use these spaces should be considered as parts of desirable and important urban spaces and a citizen should be able to feel and experience city events while passing through them or going to work or spending free time outside the city (Gharib, 2003).

The field observations of entrance spaces of cities in Iran show that:

- 1- Entrance spaces of cities lack distinguishable and specified structures.
- 2- Entrance spaces lack identity and cause damages to the identity of cities due to their visual and environmental disorders.
- 3- Places with undesirable appearance like repair shops, warehouses, and building materials form the entrance scenery of most of the cities.
- 4- In the absence of a special and outstanding natural appearance, in the entrance spaces of most of the cities, there is no factor or special property which makes the entrance space of a city different from other cities in the region.
- 5- There aren't enough guidelines for newcomers on different parts of the city.
- 6- The signs which introduce the cities are mostly in unsuitable places and are of unreasonable sizes not easily in sight.
- 7- Entrance spaces of cities mostly lack visual attraction and don't create any motive for entering the city.
- 8- Due to the lack of a distinct and determined structure in the entrance spaces, most of the times no sense of entering the city is felt in this space.

### 3. City entrances domains

The entrance space of cities is a route through which entering the city becomes possible. This route is divided into three domains with their own special characteristics. In this course, the hierarchy of distinct spaces is distinguishable and perceptible when passing through a space with independent properties and they form a continuous whole (Ghavampour, 2006).

We can consider the middle domain as an intermediate one with a totally independent identity. Indeed, this domain as the biggest and the most influential one has an important role in transforming zones into each other in the entrance spaces of cities. The domain helps with the interpretation of behavior on both sides of entrance by settling on the borders inside and outside the city and providing enough time to transform outside and inside to each other. This space acts as a joint and results in a moderate transformation of two domains into each other by changing the rhythm of frame and reducing unpredictability in facing each of the two domains. Side domains are semi-independent and generally act as entrance spaces.

### 4. Model of Transect Zone in Entrance Area

In order to classify the city entrances areas, a model should be adopted. Thus, in this study Transect zone in entrance areas is chosen.

Form-based codes typically map a community into zones that differentiate the scale, form, and intensity of development they allow, rather than simply noting differences in allowable land use types. The organizing principle for the “zoning map” (typically called a Regulating Plan in a form-based code) is most frequently the Rural/Urban Transect, rather than the residential, commercial, and industrial land use distinctions of conventional zoning. The Transect is used to identify specific areas within a community according to their existing and/or desired characteristics using a continuum of zones ranging from the least urban to the most urban conditions within the community. The model, i.e. Transect provides six zones including Natural (T1), Rural (T2), Sub-urban (T3), General Urban (T4), Urban Center (T5), and Urban Core (T6), together with a Special District (SD) designation for areas with particularly specialized purposes (e.g., industrial, transportation, entertainment, or university districts, among others). Transect zones must be calibrated to local conditions and intentions, and can be expanded into subsets (e.g., T4a, T4b etc.) to address different urban design intentions in different areas with essentially the same intensities of development (i.e., the same mix of allowed land uses and residential densities). Some form-based codes use the Transect as the basis for mapping an area being coded, but assign zone names and map symbols to the zones that are different from those listed above. The Transect as used in urban planning and form-based coding was initially defined by Andres Duany of the architecture and town

planning firm Duany Plater-Zyberk of Miami (Crawford, 2008)

categories of engine-driven facilities and railway facilities (trains).

The focus is on engine-driven facilities. Considering the

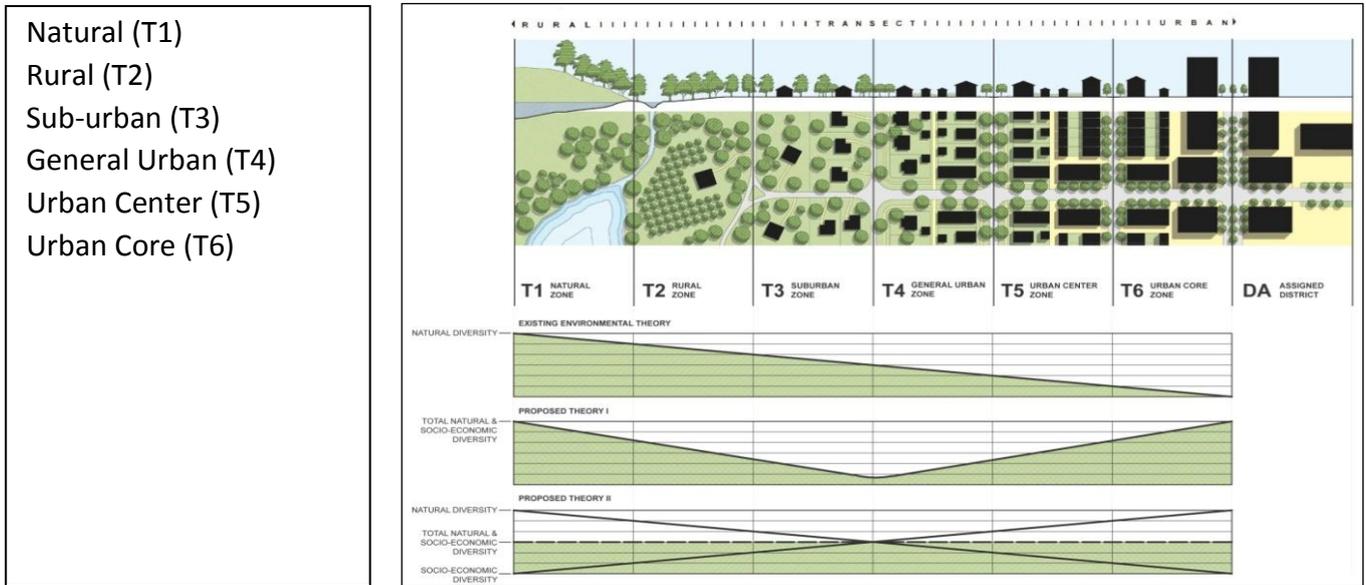


Fig. 1. City entrance zones according to the Transect model, Ref: Crawford, 2008

This model which is based on the transformation of various geographical domains within city entrances areas introduces specific frameworks of city entrances sequences. Based on this classification and according to the aims of the cities, various methods of interventions would be adopted. In other words, a framework for different entrance sequences would be assigned based on this model.

### 5. Setting zones for city entrances

Kinds of entrances based on the kinds of transportation systems:

City is an event and influencing this event is possible through some distinct channels. These channels are called the eras of city entry. Considering geographical location, transportation tools of city entrance eras are divided into three categories:

- 1) Land entrance eras
- 2) Sea entrance eras
- 3) Air entrance eras

Land entrance eras are considered as the oldest city entrances. In terms of quantity, they are at higher levels compared to other entrances. In seaports, the entrances occur through the sea too. This kind of entrance defines Sea entrance eras. Developments in technology and using airplanes in transportation resulted in the creation of a new definition of city entrances. These entrance eras which are found in cities with airports are called Air entrance eras. Transportation system on land entrance eras is based on two kinds: engine-driven facilities and trains. Thus, Land entrance eras are classified into two

variation and kinds of entrance eras, we can conclude that city entrance eras are channels on the land which provide entrance to the city through engine-driven facilities (Pakzad, 2005).

### 6. Classification of city entry courses in terms of perception

In this kind of classification, there are two viewpoints: one is in terms of city borders which are divided into subjective and objective borders. Objective border means an observable function in the joint space between two cities and subjective border means observing elements of city appearance (route, edge, node, land mark, district), laid out by Lynch, in this intermediate space.

Another perceptive classification of city entrance areas divides them into three types: mental, physical and visual eras. In fact, the most important function of entrance eras is creating a sense of entering the city in individuals. This feeling results from three conceptions: “visual entrance”, “mental entrance” and “physical entrance”. Each of these concepts is verified in some parts of entrance areas. To avoid unpredictability while entering the city, the natural and acceptable current of entering a city should happen in these forms:

#### A) Entrance from a mental point of view:

In starting parts of entrance areas, the individual feels the change in the quality of the environment around the route tangibly. This sense is conveyed by traces, terrific signs and also events around cities (e.g. a silo, an electricity post etc.) or the change in the movement rhythm of transportation facilities. This change in quality makes the

individuals expect and wait for entering the city. In this stage there is no objective sign of the city.

**B) Entrance from a visual point of view:**

As soon as the first visual sign of the city appears, the visual stage of entering the city starts. Sometimes this visual sign is the background of the whole city (especially for the cities which are at height or depth in proportion to their entrances). In some cases this visual sign is due to a continuous change of the ratio of the built areas to the free ones (the ratio of mass to space) and marginal structures.

**C) Entrance from a physical point of view:**

Gradually and following the path, the feeling of approaching the city changes into a feeling of presence in the city. That part of entry which develops the feeling of presence in the city is called physical entrance. In some entrance eras, some of these concept-space related domains have a more sensible role compared to others. Besides, in some entrance eras these concepts are not complete and perfect. Moreover, these conceptual domains are not flexible and live in terms of local position and do not follow definite and distinct borders.

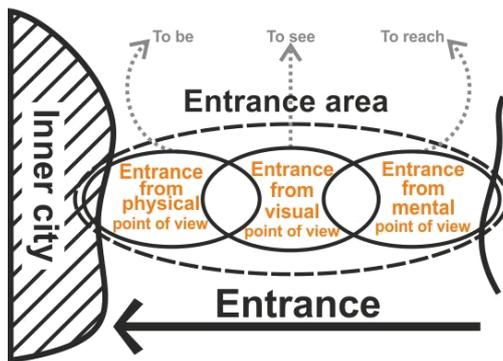


Fig. 2. Classification of city entry courses in terms of perception (entrance)

**7. Classification of city entry courses from the internal identity of spectator’s point of view**

**A) Approaching:** Structures along the roads; it conforms to the psychological essence of entrance

**B) Observing:** A silhouette of the city which is visible; it conforms to the visual entrance arena

**C) Attending:** An area where attendance at or physical entrance to the city happens; it conforms to the physical entrance arena

**8. Method**

This research uses an adaptive method in which different city entrance areas are recognized. Through this method, kinds of interventions and ways to compare the interventions in the areas are determined. Then, a sample of the areas which is unique with regard to physical, visual, and social dimensions is examined, and finally in

terms of different dimensions, principles and regulations of revitalizing these lost urban spaces are extracted.

**9. Case study: Entrance eras of Sanandaj- Iran**

Sanandaj, the capital of Kurdistan Province, is a mountainous city in the west of Iran. The city is not too old although Kurds have been living in Kurdistan for thousand years. Rapid growth and horizontal development of almost all the cities of the country, especially Sanandaj in recent decades not only have influenced urban design policies but also have had a critical role in exacerbating economical, social, political, managerial and environmental problems. Concerns caused by these effects resulted in some changes to solve the problem.

The entrance of Sanandaj from Hamadan, which is the case considered to study the districts of city entrances, is in the west of the city. This entrance route of Sanandaj has a specific and important role compared to other entrances because of some dominant elements such as the Terminal (for travelling to the cities like Kermanshah, Tehran and so on), Gheslugh Historical Bridge, Garyashan River, and Moulavi-e-Kurd edge Park. It, therefore, needs some special interventions in terms of design and planning.

In addition, the path is nostalgically, historically and culturally significant for the inhabitants. For instance, people have seen different transportation facilities passing through this path during special historical periods. For example, old inhabitants of the city still remember the oil trucks which passed this path during the Second World War.

Three districts of seeing, approaching and presence (entering) can be considered for the entrance path of Sanandaj from Hamadan. The first one (from the road-maintenance to the police station) is the sight district where a general view of the city appears and it conforms to the visual entrance district mentioned above. The second district (from the police station to Majdi Triangle Square) is the approaching district which includes the built structures of the road sides (the building of Veterinary Department of Kurdistan, a silo etc.) and is in accordance with the district of mental entrance. Finally, the third district (from Majdi Square to the Terminal) is where the presence in or physical entrance to the city is formed. This district conforms to the physical entrance mentioned before.

**A) District 1 (from the road-maintenance to the police station)**

In this district which includes the Emergency Medical Service (EMS) road station and the road-maintenance 35 kilometers far from Sanandaj to the police station and Salavat abad Village, architectural interventions have been considered. In other words, the intervention has the form of general location and providing policies.

One of the special functions of this city entrance is for rich people who pass through it towards *Salavat abad* Village. This causes a relatively heavy traffic in this route during the weekends. The lack of open urban and large-scale green areas and lack of order among them have

made people gather in this route during special times of the year. Besides, the road changing into a boulevard is another reason for feeling a sense of entering the city.

Table 1  
Classification of the entrance eras of Sanandaj and intervention types in them

Intervention method	Intervention type	Current condition	Urban entrance district	district
Use of nature Zoning strategy	Landscape architecture	Mountainous roads Plateau Veterinary Building	From the road- maintenance to the police station	<b>one</b>
Designing necessary spaces	Urban design in wide area	Industrial areas Wedding halls Villas Agriculture land	From the police station to Majdi Square	<b>two</b>
Urban design (structure- spatial organization- visual organization- land uses- public spaces- furniture- pavement)	Urban design in designing area	Rural erosion areas A historical bridge Gheshlagh area Garyashan River Molavi Park Majdi Square barns	From Majdi Square to the Terminal	<b>three</b>

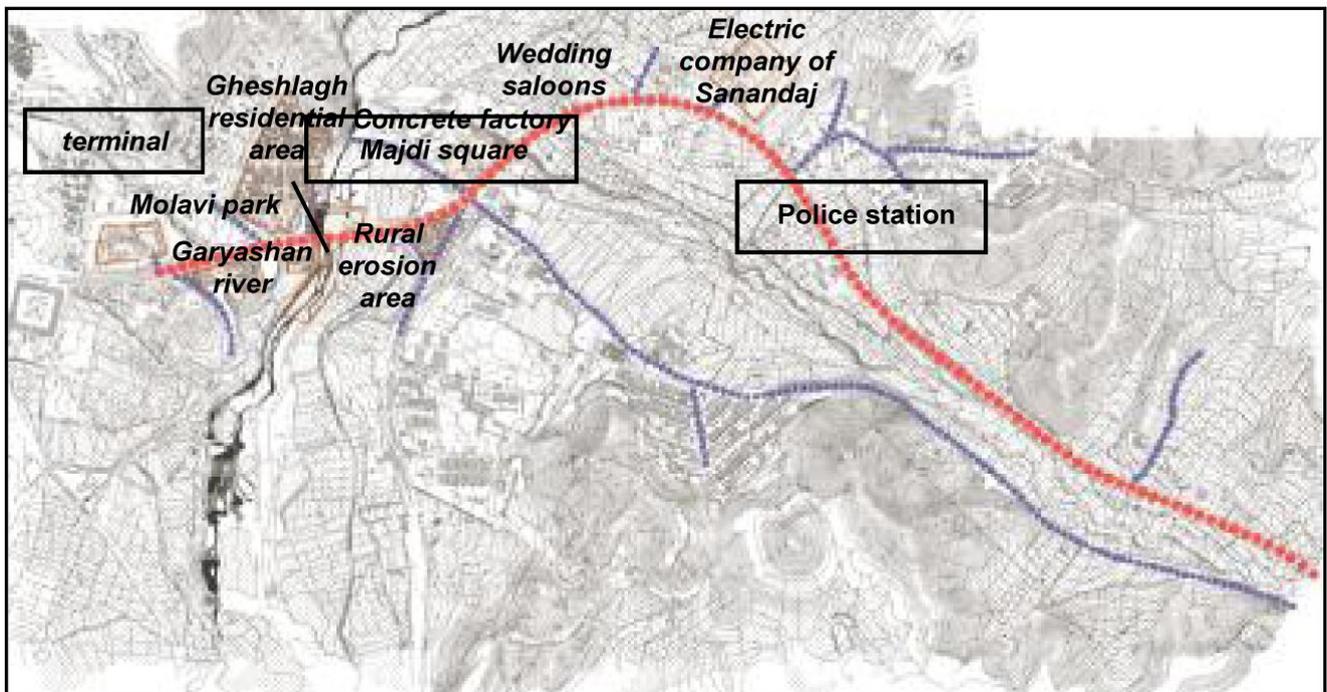


Fig. 3. Spatial-Functional structure of the entrance area of Sanandaj

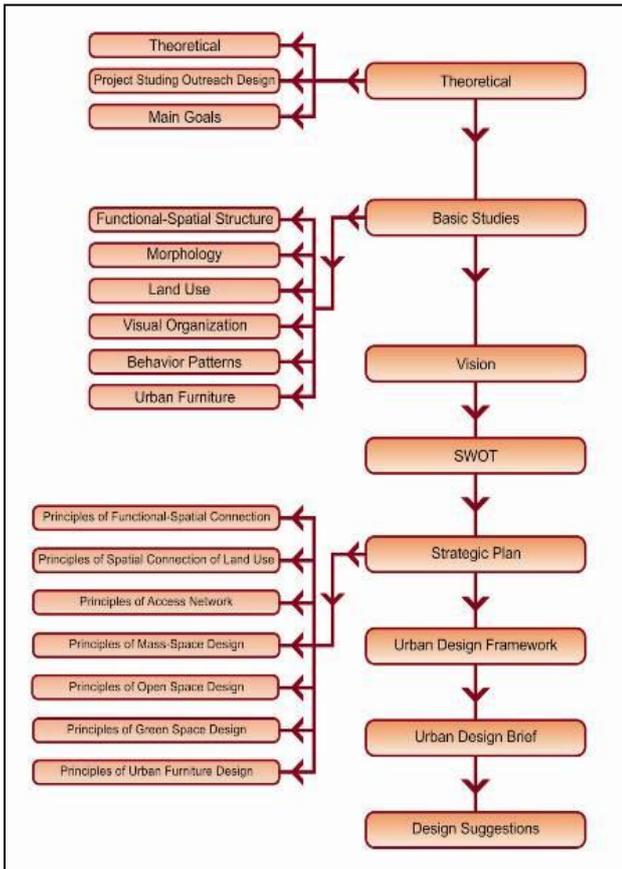


Fig. 4. Designing process

### B) District 2 (from the police station to Majdi Square)

This district is the widest area among the three eras mentioned, and intervention in it involves organizing and designing necessary spaces. In this regard, some points should be noted:

One of the features of city entrance districts, which are unique due to its excess in the cities of Iran, is the existence of wedding saloons scattered between the industrial city and Majdi Square; these saloons are widely welcomed on occasions of wedding celebrations. The point about these saloons is the lack of enough space in front of their entrances and this makes some interference between the pedestrians and the roadway and thus decreases the safety of this road. After you pass the entrance of the industrial city of Sanandaj, which is next to the fuel station, you can see industrial firms (iron-ware, workshops, centers which sell building materials and so on) everywhere and this dispersion violates the trend of hierarchical and gradual entering.

### C) District 3 (from Majdi Square to the Terminal)

The distance between Majdi Square and the terminal considered as the third district of the city is the main district for urban design interventions in this project. The

turning point of Sanandaj's entrance which needs a design through a logical process is this district and this is the reason for the importance of space quality. Some general cases about this district are as follows:

Three entrances toward the square (one from Hamadan, one from Kermanshah and one other entrance to the city) form a triangle square at the intersection.

Some important elements of this district are the residential area, Gheshlagh River, the Terminal, Moulavi Park etc.

The plan of organizing the entrance of Sanandaj from Hamadan has been performed in the form of determined areas and different zones (visual, mental and physical eras of entrance) and some small projects for each area.

## 10. Principles and Criteria

The principles which can be compiled to revive these lost urban areas are described below. The important point is that some of these principles can be follows for the entrances of other cities, but some others vary according on the identity and climate of each city and can be considered as a practical base uniquely and exclusively. The principles are comprehensive and related to the three domains mentioned.

## 11. Principles of spatial-functional relationships of the route

- Gradual and moderate transformation of the city entrance into the inner structure of the city by creating repetition and continuity in activities, physical elements, rhythm, pavement and urban furniture etc. and also creating a reflection of objects of view and structural elements of the city.
- Avoiding any sudden transformation and change in the physical condition and activities of the ends of the entrance (inside and outside the city)
- Considering the interconnection of space from outside the city toward its inside, based on a special structure
- Emphasizing the identity of the city in the entrance areas through these methods:
  - a) Settling some known and popular activities which are considered as identity-giving or an ID card for the city (e.g. arts like wood crafts, Jajim (a loosely-woven coarse woolen cloth))
  - b) Improving performances or different types of land use which exist in the people's collective memory.
  - c) Improving the view and vision based on one or more natural indicative elements (e.g. mountains, rivers, gardens etc.)
  - d) Using symbolic figures of the city
  - e) Using identity properties (considering morphology of the local physical condition of the city) in the whole or parts of building figures (Gharib, 2003).

## 12. Principles of spatial relationships among places

- Creating specific places and centers for the city entrance areas like restaurants, coffee shops, and big supermarkets
- Providing activities and centers which encourage pedestrians to visit there and stay (retailers, voluntary activities among people, peddlers and so on)
- Settlement of polluting places such as repair shops, industrial workshops, truck parking lots etc. is forbidden in the first layer and they should be transmitted to the second layer completely.
- Establishment of fuel stations, mosques and public rest rooms in the first layer is permitted.
- The lands in the first layer around the route are allocated to gardens, farms and residential low density buildings (garden houses)
- To increase the livelihood and positive presence of people in the entrance route of Sanandaj, some big shopping centers and commercial centers can be located.
- Reviving active and crowd-recipient places in the past like Garyashan River by creating attractive spaces and suitable fields to revive past activities.
- Applying modern technology for increasing considered centers in industrial units to avoid air pollution in the city caused by industrial pollutants.

## 13. Principles and standards of access network

- Land profile of the entrance areas changes by motion coordinates and legal speed of vehicles in different parts.
- Providing necessary facilities to control the speed. It is essential to set speed limits for some side areas. Some of these areas are residential fabric of route sides, saloons and house gardens.
- A suitable design of the route in road widening areas to encourage people to visit there and gather during the weekends is vital (road widening and providing parking lots).
- Public parking lots in the entrance route should be provided in the second layer beside the entrance route.
- Roads intersecting the entrance route should not connect directly to the high-speed line. The sight to junctures and exits should not be obstructed by signs and kerbs.

## 14. Design principles of space and mass

- It is very important to pay attention to the amount and percent of space and mass, city entrances hierarchy in a way that approaching the city follows a decrease in the percent of space and an increase in the percent of mass.
- It is recommended that the depth of settling domains in farther distances is considered smaller, relative to the city and gradually by approaching the city, it can get deeper.
- The position of masses relative to route sides should be as such that besides defining route walls, they consider the hierarchy of entering the city by designing.

- It should be noted that settling domains in distances which are closer to the city have more sides and they get less sides when getting far from the city (considering the visual effect of motion factor).

## 15. Principles of designing public open spaces and green spaces

- In the relationship between public spaces and their surrounding environment, the corridors and natural visions of territory should be considered a lot.
- Security and safety are among factors which make public open spaces namely pedestrians lively and crowd-recipient. Thus, it is better to avoid non-defendable spaces.
- Providing design and material for pavements which encourage pedestrians to stay in public open spaces along the route will be considered (path widening areas).
- To motivate activities which do not need any specific spaces like kerbs, out of shop sales, juggling shows in open spaces, some measures should be taken.
- The entrance path in some areas can be fenced by trees and plants.
- Since eliminating some elements like electricity posts along the route is not possible, some short walls with green spaces and trees behind them can be provided to reduce the undesirable view of the wall and electricity posts.
- Using ever green and shady trees in resting places (e.g. benches) is recommended.
- It is important to pay attention to the shape and function of the trees with regard to the climate.
- When using the trees, it is recommended to consider the balance between factors like route scale, shades and amount of light and shade in the setting.
- Plants can be used as visual design materials so some abnormal and ugly views of existing body can be hidden behind them.

## 16. Principles of urban furniture

- Since the maximum presence of people in route widening areas is during the weekends, providing a light design is vital.
- Behavioral models of people should be considered when designing the style and the location of urban furniture beside the route.
- We should pay attention to the natural environment and select furniture which have the most conformity with nature regarding the design and the kind of material.
- It is necessary to produce a design to create a harmony among the signs of commercial units, repair shops and workshops and the signs beside the route in order to decrease the visual disorder caused by them.

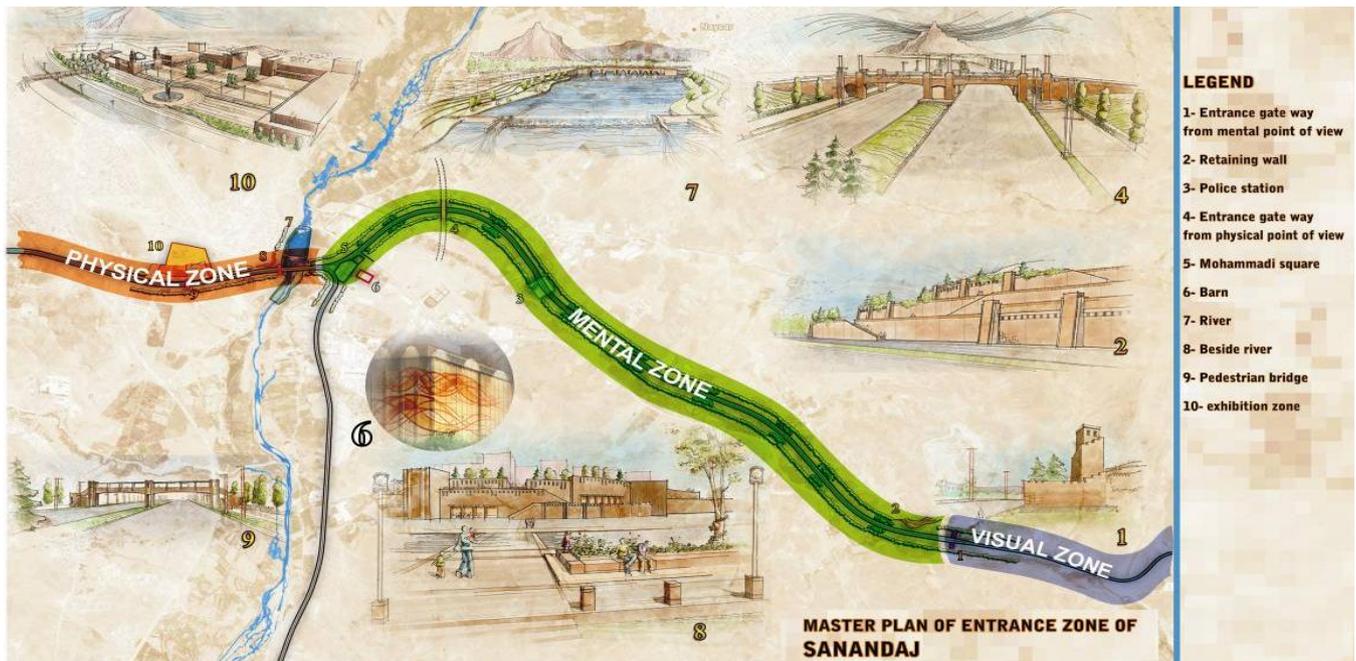


Fig. 5: Locations of local projects in the three entrance of Sanandaj  
(Source: Fajr-e-Tosea, Consultant Engineers, 2008)

## 17. Results

In the urban design of the entrances of Sanandaj, special attention is paid to the definition of local plans in terms of three entrance areas. These projects have been defined in accordance with the perceptual dimensions of each area (visual, psychological, physical) to create a unified master plan for organizing the city entrances. Regulations and criteria resulted from local plans form a concise document for such projects.

## 18. Conclusion

When creating a design to organize the entrance routes of a city, achieving its qualitative properties as a whole (as an urban space) and meeting subjective expectations about the entrance of the city, especially acceptability, legibility and distinction, are necessary.

The scheme provided in the present study to organize the entrance route of Sanandaj from Hamadan aimed to achieve these characteristics. The unique properties of this entrance including innovative views, people gathering there during the weekends and special occasions, and also its ecologic capabilities led us to consider four subjects: physical-functional, visual-perceptual, environmental and social-psychological.

This article provides a designing process for organizing the entrance route of a city – as a case study – hoping that by studying a special scheme, we can achieve an inclusive spectrum of problems and their solutions for an entrance route of a city as a lost urban space. In the large scale some of the solutions are comprehensive and can be extended to the entrance of other cities and some are locally and particularly considered for some cases.

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