

**Modern and Traditional Urban  
Design Concepts and Principles in Iran**

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## ***Preface***

After having received my second degree in England I started to work in Iran in my profession as an urban planner and began to understand the gap between theory and practice. The quality of education in environmental design and urban planning in Iran is quite adequate, but the dimension of the current urban development problems is such that the young generation of planners and architects cannot handle them.

Three years of practical and research work in Isfahan city, being one of the largest and most valuable cities in Iran, gave me the opportunity to see the real dimension of the urban and environmental problems. In those years simultaneous work in traditional cities with their existing rich historic continuity, and modern cities with their emptiness and their lack of tradition absorbed my interest and made me to look deeper into this subject.

Through my practical work I had enough background to conduct this doctoral work, but I found it very difficult to collect data and information on the subject. The urban planning system in Iran is not very well developed, it does not receive adequate finance and it lacks the systematic collection of planning information.

At the beginning of the work I looked for information, but apart from a few studies I could not find any substantial references dealing with this subject in Iran directly. After a few years I went back to Iran to collect new information and I noticed that urban development problems had received more attention not only from private researchers but also from the public. This stimulated me to continue this work and I hope that the result will not remain in the book shelf.

I started this work by myself but without the help and support of a few people it would not have been possible to complete this work. I wish to thank my first supervisor Prof. Dr. Michael Trieb for his excellent and knowledgeable supervision and his paternal patience. I also thank Prof. Dr. E. Ribbeck who accepted to be my second adviser. Thank and gratefulness go to my parents who helped me in many ways and although they are very far away, they continuously stimulated me to finish this work.

Also I would like to thank my friends and colleagues in the Ministry of housing and Urban Planning in Isfahan, Dr. Gangler and Dr. Reichet in Stuttgart University, Susan Jones and Charles Cockburn, my friendly Tutor from York University in England who supported me to finish the work, and finally my dear German friend Sabine Freter who helped me with translations.

## ***English summary***

### ***-Study Background and Motivation***

Fast urbanisation in Iran in the second half of the 20<sup>th</sup> century has mostly manifested itself in the emergence of large cities without any specific elements of Iranian culture and disconnected from their rich architectural and urban design past. And the old city centres, that are the only witness of the glorious past, are slowly vanishing, caused by modern developments.

After half a century these cities represent modern life standards regardless to Iranian cultural identity. The only linkage is their old city centers, which have helped them to keep their physiognomy as historic cities, but in reality urban development problems has put the present life and the future destiny of these cities in danger.

Since the middle of the 60s, these cities have become the subjects for urban development programmes of the country. The establishment of industries wishing to take advantage of the existing infrastructure was the beginning of a new development trend for them.

In last half of the century concentration of capital and accumulation of private and public investments in these cities mainly Tehran, changed them to metropolitan urban areas. The aim behind this strategy was to give the large historic cities of the country possibility to develop along Tehran for future industrial expansion and reducing the inequality between the regions of the country. The result of such planning policy, after a few decades, is overpopulation, migration and accumulation of industries in or around these cities, but also the loss of their identity.

At the beginning of 1980, the urban problems in these cities caught the attention of the State Department and in 1983 the redistribution of population came under political consideration. As the result of this policy, the establishment of new towns was suggested at the government level. Since then many new towns and cities have been planned and built around major cities. Generally these new towns have been able to accommodate mainly the immigrants of the major cities. But apart from a few notable examples, their development pattern is far from the traditional methods and their quality of life is strange to the socio-cultural needs of the Iranian people.

Therefore the main problems are:

- The historic parts of major cities, which are losing their traditional identity and are disconnected from modern urban developments.

-New towns, which have developed without concern and respect for Iranian architectural heritage and without cultural identity.

The aim of this work is to study the possibility to conserve the traditional qualities of old cities, adapted to modern life, and to develop new towns with modern forms of traditional quality and cultural identity by combining modern and traditional city design methods, elements and principles with each other. The result of this work should assist in maintaining the quality of historic cities, and should help to create new towns that respect social needs, cultural values of the Iranian people.

Although the loss of traditional values and cultural identity as an intercultural problem is well known, there are only few research works in the last time dealing with architectural aspects of traditional town planning and almost no publications about urban design.

### ***-Aim of the study***

The aspect of 'Identity' in design of modern environments becomes an important aspect of urban planning. Experience of spiritless living environments and repetition of cities in form and structure, has changed the idea of environment from a process to a product of architecture. The problem of identity in Iranian cities became manifest in the second half of the 20<sup>th</sup> century. In some modern cities it was not very intense. The traditional urban morphology was in fact a part of ordinary urban life, but in large historic cities with traditional and modern areas, this confusion became obvious.

Quantitative needs have tended to reduce the quality of the urban environment. This aspect of architecture in general, and the design of dwellings in particular detail, has been under the consideration of architects and urban planners in recent decades. Attention to the cultural aspects in design of new towns plays important role with regard to social behaviour and social atmosphere. Before planning a new town for accommodating extra population, we should think about the impact of environmental design on behaviour and the morals of the people with a view to reducing the psychological pressures of undesirable environmental design on human behaviour.

The hypothesis of this research work is that the traditional Iranian aspects of design have a timeless nature, which we can use today to recreate socio-cultural identity, and to meet the special social needs of Iranian daily life in urban planning. Using timeless principles and traditional methods as design tools and elements in development programmes of these new towns and cities not only provides them the necessary cultural and social identity, but also can join

compatibly modern urban physical forms with existing old fabrics of historic cities in a desirable way. To determine which timeless principles and traditional urban design methods are adaptable to modern urban planning systems this work has tried to answer the following questions:

What are the characteristics of an Iranian modern living environment?  
 What are the valuable traditional urban design methods and principles?  
 How can we determine the timeless principles and urban design methods?  
 How can these principles and methods be adapted to the modern urban planning system?

To find answers to these questions has been the main reason of this research.

### ***-Method of the study***

The applied methodology of this work to find suitable answers to above questions is characterised by the careful analysis of the timeless aspects of a number of important traditional urban design methods and principles in order to assess their ability to respond to the cultural needs of the Iranian people today in physical form.

The main body of the work is concentrated on studying the quality of urban life in traditional Iranian cities as well as the new towns around the country. The aim has been to search for the factors, design methods and principles, which have shaped these cities and new towns. Study and analysis of the quality of life in existing new towns and in old cities has attempted to put traditional and modern urban design methods and principles beside each other. The result of this analytical comparison has enabled the research to expose as well the weakness as the strengths of the old and the modern design principles and methods to answer the socio-cultural needs of people in a modern living environment.

The work consisted of Four Parts. Part one includes chapter one, part two includes chapter two and three, part three includes chapter four, and finally part four is consisted of chapter five and six.

## **Part One**

### **Chapter one**

Chapter One offers a brief account of problems of urban development and urbanism in Iran, specifically in large historic cities. Iran because of its political and geographical situation underwent great changes in 20<sup>th</sup> century. The Islamic revolution of Iran in 1979 should be seen as the most historical moment,

which not only changed Iran politically and economically, but socially too. This part has studied the urban development of Iran in pre-and post-Revolutionary periods.

Modernization in Iran as in many other Islamic countries has been a very important issue of urban development, which this part has dealt with it specifically. In second half of 20<sup>th</sup> century the contrast between modernity and cultural values came to be a very important aspect in social life of modern Islamic cities. The contradiction between traditional and modern way of life, had the most negative effect on historic parts of traditional cities. Lose of cultural identity and spiritless modern development came to be their main characteristics. This chapter has discussed this contradiction with the help of examples of small traditional cities in central part of Iran.

Attacking urban problems from physical side is seeking more for quantitative solutions that naturally ignore social values and behaviour. European standard that expose their effects through products, techniques and spatial behaviour, are used to change values in mostly Islamic societies. Accepting these changes in form of modernisation very rare pass to culture and life characteristics of Islamic nations. Consequently they destroy the identity and their harmonic relation with their natural and social environment.

This chapter brings this theme to the end with the discussion that learning from the past to form the future cities, needs a good understanding the meaning of modernization in Islamic societies. Defining modernity with respect to the cultural identity should not renounce the benefits of modern technology. Innovations are so important in order to absorb and to integrate them into a meaningful cultural system, which will question the role of architects and planners in using their knowledge and wisdom in urban design approach.

Learning from the past should accompany the fact that what we can learn from the past are urban design values, perceiving the quality of form and spaces, but it is not something to be directly transformed into new design system. Attention to space organization and principles in a modern expression of the past form should be the aim. To link past to present and future doesn't mean to copy the old urban design principles and elements and create new environments without understanding the values hided in these design principles. We should touch each principle, understand it and learn how is possible to adjust it in modern urban planning system.

## Part Two (Chapter Two and Three)

In these two chapters social, cultural and spatial aspects of the traditional cities mainly in central part of Iran are discussed. This study in detail analyses urban structure, elements, and design principles, as well as the quality of life in these cities.

### Chapter two

This chapter concentrated on the emergence of Iranian cities and their historic development. The basic factors as natural geographical (geography, ecology, defence strategy) as well as non-natural geographical (Administrative, military, religious and commercial), which have been important in emergence of historic cities, are studied in detail.

The emergence of cities and evolution of their elements is the most valuable part of the urban planning history in Iran. This study indicates that topography and water supply constitute the precondition for the emergence of settlements in Iran. The analytical study on urban elements, and their importance as morphological factors, indicate that the traditional Iranian city is a response to the religious, economical and cultural attitudes of its inhabitants, as well as a rational response to climatic characteristics of its region.

The city elements and structure, and the fabric of traditional Iranian cities have mainly shaped in Islamic period. The influence of Islamic values on social life of the people and development of traditional Iranian cities is deniable. This study indicate that many city elements primarily emerged in pre-Islamic period, but what is left today are the ones (mosque, Madreseh (religious school), bazaar, Maidan (square) and neighbourhood) which will remain important part of culture and social life of Iranian urban areas.

The most reasonable combination of cultural and climatic factors has been able to shape the desirable physical structure of traditional settlements. Variation in traditional architecture, building type, material, façade work, building structure, building order, colour, roof type and arrangement of building has gives identical identity to each city.

Chapter two comes to the conclusion that traditional Iranian cities depending on their location, geographical situation and climate vary in form and function. But in spite of this variation, they have common characteristics, which should be appreciated. The factors, which have shaped these characteristics, are: **natural situation, urban structure, urban spaces, urban skyline and building typology**. For better understanding, these factors are visualised in very simple drawing.

### **Chapter three**

To understand the role and value of the design principles and methods of traditional cities, this chapter has analysed the quality of urban life of Nain historic city in the central part of Iran. There are many historic cities in this area which could be studied, but the Nain city is chosen as the base of this research since it is one of the rare examples of historic cities in this area with less large scale change or damage.

The study of the neighbourhood typology indicates the similarity and unity in form and structure of all city parts. The traditional pedestrian network of the city is a symbol of an excellent spatial order, relations and variation in hierarchical communication system. The traditional bazaar of the city as one of the main elements of this system plays the pivotal role in the organic historic composition of the city.

Study the architecture and building method in Nain indicate that the physical body of traditional cities in this part of the country are not of any special quality which separate them from others, but their location, grouping, functional organization and simplicity in form distinguish their image. Design of narrow alleys, covered and half covered passageways, designing level of bazaar and buildings lower than ground level, use of wind catcher, use of hollow gardens and use of many other local techniques and environmental possibilities, express the ability of residents of such cities in countering the climatic obstacles of hot and dry areas.

The importance of cultural values and traditional way of life is to be seen in every aspect of environmental design. The important aspect of privacy has been reflected in design of private, semi-private and public spaces with great attention to climatic factor. The traditional design system of historic cities in Iran has never allowed direct connection of private and public spaces. Therefore there has always been a respectful separation between these two spaces.

At the end of this chapter the identical design methods and principles of Nain city, as the representative of all historic cities in central part of Iran, has been put together.

- A. The development principle based on natural and cultural factors as neighbourhood and neighbourhood centre.
- B. Form and structure. The historic cities have developed based on the needs for progress and communication.
- C. Urban planning. The physical development has corresponded to the socio-cultural, economic and political needs of people.

- D. Urban design principles as planning covered alleys to provide shadow.
- E. Design principles in private spaces as use of deep courtyards to provide desirable microclimate inside the building.

To show the ability and values of design principles and methods of traditional city of Nain in providing desirable living environment, these design principles and methods are demonstrated in detail with the help of small drawing.

### **Part Three**

#### **Chapter Four**

This chapter has examined the quality of life as well as the design principles and methods of new towns and cities, and has questioned their ability to answer the socio-cultural needs of people in their modern physical structure. The main emphasis of the study is to demonstrate the possibility of designing modern new towns with respect to cultural values and traditional design principles and methods.

The analytical method is used in this study, is based on the important timeless design principles of traditional Iranian cities studied in part two, in form of simple drawings. These timeless design principle and methods of traditional Iranian cities are:

- A. Principles of urban development**
- B. Principles in form and structure**
- C. Principles of urban planning**
- D. Principles of urban design**
- E. Principles of design in private spaces**

This analytical study indicates that in plan and design of selected new towns and cities, the attention has given just to one or two aspects. The study shows less respect for the local architecture, planning methods and design principles of their region. Not to forget that there are some examples as Alavi new town in Bandar Abass area, which relative attention to these aspects of design is noticeable, but in other cases these important aspects are ignored.

One of the rare examples of modern new towns designed with great respect to cultural and climatic aspects of its region is modern Shushtar new town with traditional image, in south of Iran. This new town is designed as a continuation of the old city with particular attention to the design principles and methods of the existing city. The awareness of the traditional way of life of people in this part of the country has been the most valuable concept of the work. In design of this new town, the architects and planners has given more attention to human interaction and activities, and use of spaces instead of physical dimension. The



special arrangement of buildings to provide the needed spaces for social and cultural activity, use of indigenous brickwork, applying the local building methods and materials, all indicate the aim of designers and planner to provide a modern humanised living environment, and to integrate the cultural aspects. In this study modern Shushtar new town because of its special characteristics is chosen as the base of comparison between new towns.

**Part Four:** consists of the summary and conclusions, and the recommendations of the research work.

### **Chapter Five**

This chapter is the summary and the conclusions of the whole work. The target of this work has been developing a relationship between timeless design methods and principles of traditional cities, and qualitative aspects of modern life in new towns. In order to achieve this aim, Chapter Five has summarised the results of the previous parts. Bringing these results together has helped the research to provide a checklist of the main planning principles and elements that traditional as well as the modern new towns are building up on. With the help of this checklist, the principles and design tools that could bring better quality to the life in modern living environments has been determined. This checklist has enable the research to suggest alternative design frameworks for new towns and modern living environments in Iran, as well as improving the quality of life the existing cities.

For better understanding, this chapter has used the simple drawing as the base of presentation.

The important factors in formation and development of traditional Iranian cities and their design principles and elements studied in part two are summarised as follow:

**A-Climate and geography**

**B-Urban elements and urban spaces**

**C-Urban structure**

**D-Skyline**

**E-Architecture and building type**

And the design principles and methods of traditional cities especially in dry zones of Iran are studied in:

**A. Public spaces**

**B. Semi-private spaces**

**C. Private spaces**

Apart from above results, in summary, this chapter has discussed the use of possibilities and local techniques as typical urban design tools in arid zones of Iran.

Obviously many of these design principles are not able to continue their traditional role in functional concept of modern planning and design system. But the strong role of Islamic culture in Iranian society makes the adaptability of these design principles in design of modern new towns, possible. For many modern architects and planners living in a new town as Shushtar means going backward and living primitive. But for the ones who support alternative shelter it is living with 'cultural identity'.

To emphasize the absence of cultural identity in modern new towns compare to a new town with traditional characteristics as Shushtar, this chapter has done a visualised comparative study based on the urban design concepts used in chapter four. The aim of this comparison was to indicate the effect of each principle and method in design of the modern, and Shushtar new towns. Analytical studies of this chapter emphasise the need for a new strategy in planning and design of new towns and cities in Iran. For Iran it is necessary to change the strategy of using the past to help towns and cities, to a political strategy for modern planning system.

To determine which of these studied design principles and methods support timeless nature to be able to reuse in the design of modern new town and cities, it is important to consider their role from:

**-Planning**

**-Urban-Architecture and**

**-Socio-Functional**

aspect in design of a new environment. Then based on individual requirements of each settlement and climatic-geographical possibilities, to choose suitable design principles and elements.

Based on these conclusions, a theoretical framework for the chosen timeless design principles and methods is suggested as the base for the alternative suggestions in next chapter.

## **Chapter Six**

This chapter has concentrated on proposals for new towns as well as historic citadel of the large cities.

**-Considerations for Historic Centres**

Creating a historical continuity in modern urban planning without conserving the historic areas is not possible. Therefore the conservation and revitalisation

of the spatial and architectural quality of Iranian historic cities is emphasised in this chapter. Conservation shouldn't mean changing the historic part to a museum, but through new roles, it can be reactivating in urban life of the city. These areas because of their poor accessibility, lacking services and badly maintained facilities, needs concepts and special attention to help them to preserve what is left and be an alive part of the large cities. Because of special situation of each historic citadel, it is not logic to give any direct suggestion for conservation and rehabilitation of historic cities in Iran.

The main aim in providing development plans for historic cities should not be change, but improving and providing better living standards which sometimes can be achieved through small and simple actions.

Attention to preserve and repair single buildings is very usual in Iran. Since last two decades, revitalisation and renovation of historic cores has begun partly in some of the traditional Iranian cities. Historic centres of Isfahan and Yazd are among the most important cases in central part of Iran. The aim of the revitalization and renovation plans in these cities is reviving their past image, restoring the ancient parts which still survive, and to adapt the traditional fabric to use in modern life.

In this part some of the activities have done recently in Isfahan and Yazd to reach these aims are presented as successful examples for revitalization and renovation of all historic cores in Iran.

### **-Alternative design proposals for New towns in Iran**

Based on the conclusions of chapter five a theoretical framework for the design methods and principles, which contain a timeless nature, has been suggested. The concept of this theoretical framework is used to establish the basic structure of proposals, and is used to identify the significance of these timeless elements, and principles with regard to function and appearance. Examples of the existing situation and suggested alternatives have allowed the investigation of the role of each element and design principle. Alternative proposals are presented in the form of simple drawings, to assess the visual impact of each timeless element and principle in a desirable environment.

Sources of this work stem partly from personal research together with existing published materials on urban development in Iran. Historical analysis of traditional cities in Iran is collected from existing published sources. Case studies that are the result of urban planning and design analysis were partly personally carried out in the historic cities of Isfahan and Nain in the central part of Iran. Case studies of new towns and cities used in chapter four are based on published materials from different sources.

## ***Deutsche Zusammenfassung***

### ***-Hintergrund und Motivation***

Die schnelle Urbanisierung im Iran in der zweiten Hälfte des 20th Jahrhunderts hat sich vor allem im Hervorkommen großer Städte ohne jedes spezifisches Element iranischer Kultur und ohne Verbindung zu ihrer reichen Architektur und städtebaulicher Vergangenheit gezeigt. Und die alten Stadtzentren, die einzigen Zeugen der glanzvollen Vergangenheit verschwinden langsam durch moderne Entwicklungen.

Nach einem halben Jahrhundert neuzeitlicher Stadtentwicklung repräsentieren diese Städte moderne Lebensstandards ohne jede iranische kulturelle Identität. Die einzige Verbindung zu dieser liegt dann nur noch in der Physiognomie der historischen Stadtkerne. Das enorme Ausmaß der städtebaulichen Probleme gefährdet damit nicht nur die heutigen Lebensbedingungen, sondern auch die zukünftige Entwicklung dieser Städte. Seit Mitte der sechziger Jahre wurde diese Städte Ausgangspunkt für Stadtentwicklungsprogramme des Landes. Industrieansiedlungen, die auf der vorhandenen Infrastruktur aufbauen, geben Anstoß für neue Stadtentwicklungen.

In der letzter Hälfte dieses Jahrhunderts wurde das Staatsvermögen sowie private und öffentliche Gelder in diesen Städten - hauptsächlich in Teheran – investiert. Metropole entstand. Das Ziel dieser Vorgehensweise sollte den großen historischen Städten des Landes die Möglichkeit einräumen sich wie Teheran industriell zu entwickeln, in der Hoffnung die Ungleichheit innerhalb des Landes zu reduzieren. Das Ergebnis dieser Planungspolitik ist nach einigen Jahrzehnten nicht nur Überbevölkerung, hohe Zuwanderung und die Ansammlung von Industrie in oder um diese Städte, sondern auch der Verlust ihrer Identität.

Anfang der achtziger Jahre habe die städtebaulichen Probleme dieser Städte die Aufmerksamkeit die Regierungsebene erreicht und 1983 ist es zu einer Neuverteilung der Bevölkerung unter politische Beachtung gekommen. Das Ergebnis dieses Grundsatzes, die Einrichtung neuer Städte, wurde von der Regierungsebene per Gesetz angeordnet. Seitdem sind viele neue Städte in der Nähe großer Städte geplant und gebaut worden. Diese neuen Städte haben hauptsächlich die Zuwanderung in größeren Städten abgefangen. Aber abgesehen von einigen beachtenswerten Beispielen sind ihre Entwicklungskonzepte von den traditionellen Methoden weit entfernt und ihrer Lebensqualität ist den sozial-kulturellen Bedürfnissen des Iranischen Volkes fremd.

Die wichtigsten Probleme sind deshalb:

- Der Verlust der traditionellen Identität der historischen Teile großer Städte
- Die Entwicklung neuer Städte ohne traditionelle Qualität und kulturelle Identität.

Das Ziel dieser Arbeit soll die Möglichkeit zu untersuchen, die traditionellen Werte der alter Städte zu erhalten, und die dem modernen Lebensbedingungen angepasst werden, und neue Städte mit modernen Formen traditionelle Qualitäten und kulturelle Identität zu entwickeln. Dies soll durch die Kombination moderner und zeitloser, traditioneller Entwurfsmethoden und Entwurfsprinzipien der Stadtgestaltung erreicht wurde. Das Ergebnis dieser Arbeit sollte bei der Erhaltung der Qualität historischer Städte helfen und neue Städte schaffen, die sozialen Bedürfnisse und kulturelle Standards und die Identität der iranischen Bevölkerung respektieren.

Obwohl der Verlust traditioneller Werte und kultureller Identität als ein interkulturelles Problem gut bekannt ist, gibt es bisher nur wenige Forschungsarbeiten, die sich mit dem Architektonischen Aspekt traditioneller Stadtplanung und Stadtgestaltung behandeln und, soweit bekannt, keine Veröffentlichungen, die sich mit dem zeitlosen Aspekt traditionellen iranischen Städtebau beschäftigt.

### ***-Ziel der Studie***

Die Betrachtungsweise von „Identität“ wird in der Gestaltung moderner Städte ein wichtiger Aspekt bei der Stadtplanung. Erfahrung aus freudlosem Lebensmilieu und Nachbildung von Städten in Form und Struktur hat die Entwicklung der Architektur verändert. Das Problem der Identität in iranischen Städten ist in der zweiten Hälfte des 20th Jahrhunderts darlegt worden. In einigen modernen Städten war es nicht sehr intensiv. Die traditionelle Stadtmorphologie war in der Tat ein Teil einfachen Stadtlebens, aber in großen historischen Städten mit traditionellen und modernen Bereichen dieser Fassungslosigkeit wurde deutlich.

Quantitativer Bedarf hat dazu geneigt, die Qualität der Stadt räumen zu reduzieren. Dieser Aspekt der Architektur im allgemeinen, und der Entwurf der Wohnungen im besonderen kam bei den Architekten und Stadtplanern in den letzten Jahrzehnten in Betracht. Die Berücksichtigung der kulturellen Gestaltungsaspekte spielen eine wichtige Rolle in die neuen Städte unter Rücksichtnahme der sozialen Lebensart und Atmosphäre. Vor Planung einer neuen Stadt wird sie der Bevölkerung angepasst, wir sollen die Wirkung der Vororte in bezug auf Verhalten und Moral der Bevölkerung mit den

psychologischen Spannungen unerwünschter Vorortgestaltung auf menschlichen Verhalten bedenken.

Die grundlegende Hypothese dieser Forschungsarbeit ist, dass das traditionelle iranische Entwurfsprinzipien einen zeitlosen Charakter hat, die wir heute nutzen können, neue sozial-kulturelle Identität zu schaffen und die speziellen sozialen Lebensbedürfnisse des täglichen Lebens im Iran zu befriedigen. Die Verwendung dieser traditionellen, aber zeitlosen Entwurfsprinzipien und Entwurfsmethoden in modernen Stadtentwicklungsprogrammen kann dazu beitragen, neuen Städten nicht nur soziale und kulturelle Identität zu geben, und Wege aufzuzeigen, moderne Baufunktionen und Bauformen in verträglicher Weise in alte Stadtstrukturen einzufügen. Die Arbeit versucht die Festlegung der zeitlosen Gestaltungsprinzipien und traditionellen Gestaltungsmethoden, die sich den modernen Stadtplanungssystemen anpassen, um die folgenden Fragen zu beantworten:

- Was ist der Charakter der iranischen modernen Städte?
- Was sind die wertvolle traditionelle Stadtgestaltungsmethoden und Gestaltungsprinzipien?
- Wie können wir die zeitlosen Gestaltungsprinzipien und die Stadtgestaltungsmethoden bestimmen?
- Wie können diese Gestaltungsprinzipien und Methoden dem modernen Stadtplanungssystem angepasst werden?

Das Hauptinteresse dieser Forschung ist die Beantwortung dieser Fragen.

### ***-Forschungsmethode***

Die angewandte Forschungsmethode dieser Arbeit ist brauchbare Antworten durch sorgfältige Analyse der zeitlosen Aspekte einer Anzahl wichtiger traditioneller Stadtgestaltungsmethoden und Gestaltungsprinzipien zu finden, und ihrer Überprüfung auf ihre Eignung, die kulturellen Lebensbedürfnisse der heutigen iranischen Bevölkerung in physischer Form zu befriedigen.

Der Hauptteil dieser Arbeit wird sich auf die Studie der städtischen Lebensqualität in traditionellen iranischen Städten sowie die neuen Städte überall im Land konzentrieren. Das Ziel war die Faktoren, Gestaltungsmethoden und Gestaltungsprinzipien zu erforschen, die diese Städte und neue Städte gestaltet haben. Die Studie und Analyse der Lebensqualität in bestehenden neuer Städte und in alten Städten hat versucht traditionelle und moderne Stadtgestaltungsmethoden und Gestaltungsprinzipien neben einander zu stellen. Das Ergebnis dieses analytischen Vergleichs hat die Forschung befähigt, ebenso die Schwäche zu darstellen, als auch die Kräfte der alten und

modernen Gestaltungsprinzipien und Methoden der sozial-kulturellen Bedürfnisse der Bevölkerung in moderne Städte zu beantworten.

Die Arbeit besteht aus vier Teilen. Teil eins enthält das erste Kapitel. Teil zwei umfasst die Kapitel zwei und drei. Der dritte Teil besteht aus dem vierten Kapitel und letztendlich besteht der vierte Teil aus Kapitel fünf und sechs.

## **Teil 1 - Kapitel 1**

Das erste Kapitel zeigt eine zusammenfassende Darstellung der Probleme von Stadtentwicklung und Stadtgestaltung im Iran, besonders in großen historischen Städten. Der Iran hat wegen seiner politischen und geographischen Situation große Änderungen im 20th Jahrhundert erlebt. Die islamische Revolution des Irans 1979 hat nicht nur den Iran politisch und wirtschaftlich verändert, sondern auch sozial, und sollte als den historischsten Moment gesehen werden. Dieser Teil hat die Stadtentwicklung des Irans in vor- und Nachrevolutionäre Zeit untersucht.

Modernisierung im Iran wie in vielen anderen islamischen Ländern ist ein sehr wichtiger Effekt bei der Stadtentwicklung gewesen, über den dieser Teil besonders behandelt. In der zweiten Hälfte des 20th Jahrhunderts ist es zu der Gegensätze zwischen Moderne und kulturellen Werten gekommen, einem sehr wichtigen Aspekt im sozialem Leben moderner islamischer Städte. Der Widerspruch zwischen traditionellem und modernem Lebensstil hat die negativste Wirkung auf historische Teile traditioneller Städte gehabt. Der Verlust kultureller Identität und freudloser moderne Entwicklung wurde zum Haupt Charakter der Städte. Dieses Kapitel hat diesen Widerspruch mit Hilfe von Beispielen kleiner traditionellen Städte im zentralen Teil des Irans erörtert.

Um die Stadtprobleme aus physischer Sicht anzugreifen, versucht man viele Lösungen zu finden, die natürlichen sozialen Werte und Verhalten nicht beachten. Europäischer Standard, der seine Wirkungen durch Produkte, Verfahren und räumliches Verhalten darlegt, wird benutzt die Werte in den meisten islamischen Gesellschaften zu ändern. Der Akzeptanz dieser Änderungen in Form von Modernisierung erfolgt sehr selten in Kultur und Lebensstil islamischer Nationen. Folglich zerstören sie die Identität und ihr harmonischen Beziehungen mit ihrer natürlichen und sozialen Umgebung.

Dieses Kapitel beendet dieses Thema mit der Diskussion, dass die Vergangenheit lehrt die zukünftigen Städte zu planen und die Modernisierung viel Verständnis der islamischen Gesellschaften braucht. Die Festsetzung der Moderne in bezug auf die kulturelle Identität soll nicht die Vorteile der moderner Technologie aufgeben. Innovationen sind sehr wichtig, um diese in

ein bedeutungsvolles kulturelles System einzugliedern, wird die Aufgabe der Architekten und Planer in der Praxis sein ihre Kenntnis und ihr Verständnis harmonischer Stadtgestaltung in Frage zu stellen.

Das Lernen aus der Vergangenheit soll die Fakten zusammenfassen, Stadtgestaltungswerte, das Verständnis der Qualität für Form und Raum, aber nichts kann direkt in das neue Gestaltungssystem übernommen werden. Das Ziel soll die Gliederung und Gestaltungsprinzipien modernen Ausdrucks in vergangener Form berücksichtigen. Die Verbindung zwischen Vergangenheit und Gegenwart bedeutet nicht künftig die alten Stadtgestaltungsprinzipien und Elemente zu kopieren und neue Lebensbereiche ohne Verständnis zu Werten zu entwickeln. Wir sollen jedes Gestaltungsprinzipien erröten, es verstehen und lernen wie es eventuell in das moderne Stadtplanungssystem integriert wird.

## **Teil 2 - Kapitel 2 und 3**

In diesen beiden Kapiteln werden soziale, kulturelle und räumliche Aspekte der traditionellen Städte hauptsächlich im zentralen Teil des Irans dargelegt. Diese Studie analysiert ausführlich die Stadtstruktur, Elemente und Gestaltungsprinzipien sowie die Lebensqualität in diesen Städten.

### **Kapitel 2**

Dieses Kapitel hat sich auf das Hervorkommen iranischer Städte und ihrer historischen Entwicklung konzentriert. Die grundlegenden Faktoren als natürliche geographische (Geographie, Ökologie, Verteidigungsstrategie) sowie nicht-natürlich geographisch (Verwaltung, Militär, Religion und Wirtschaft / Handel), die wichtig für das Hervorkommen historischer Städte gewesen sind, werden ausführlich erörtert.

Das Hervorkommen von Städten und die Entwicklung ihrer Elemente ist der wertvollste Teil der Stadtplanungsgeschichte im Iran. Diese Studie weist darauf hin, dass Topographie und Wasserversorgung den Vorbedingungen für das Hervorkommen von Siedlungen im Iran bilden. Die analytische Studie zeigt die Stadtelementen und ihre Wichtigkeit als morphologische Faktoren auf, dass die traditionelle iranische Stadt eine Antwort auf das religiöse, wirtschaftliche und kulturelle Verhalten seiner Einwohner ist, sowie eine vernünftige Antwort der klimatischen Kennzeichen seines Gebiets.

Die Stadtelemente und Struktur und die Konstruktion traditioneller iranischer Städte haben hauptsächlich die islamische Zeit gestaltet. Der Einfluss islamischer Werte im sozialen Leben des Volkes und bei der Entwicklung traditioneller iranischer Städte ist enthaltbar. Diese Studie weist darauf hin, dass viele Stadtelemente hauptsächlich aus der vorislamischen Zeit stammen, aber



was verbindet sie heute, das sind Moscheen, religiöse Schulen, Markt, öffentliche Plätze und Nachbarschaft), die als wichtige Teile kulturellen und sozialen Lebens iranischer Städte bleiben werden. Die vernünftigste Kombination kultureller und klimatischer Faktoren könne die wünschenswerte physische Struktur traditioneller Siedlungen gestalten. Variationen in traditioneller Architektur, Baustil, Material, Fassaden, Baustruktur, Bauplänen, Farbe, Dachform und Gebäudeanordnung verleihen jeder Stadt ihre unverwechselbare Identität.

Kapitel zwei kommt zu dem Schluss, dass traditionelle iranische Städte von ihrem Standort, geographischer Lage und Klima - in veränderter Form und Funktion - abhängen. Aber trotz dieser Variation haben sie gemeinsame Kennzeichen, die geschätzt werden sollten. Die Faktoren, die diese Kennzeichen gestaltet haben, sind: **Natur, Lage, Stadtstruktur, Stadtplätze, Stadtsilhouette und Gebäudetypologie**. Zum besseren Verständnis werden diese Faktoren mit sehr einfacher Zeichnung visualisiert.

### **Kapitel 3**

Um den Grundsatz und Wert der Gestaltungsprinzipien und Methoden traditioneller Städte zu verstehen, hat dieses Kapitel die Lebensqualität der historischen Stadt Nain im zentralen Teil des Irans analysiert. Es gibt viele historische Städte in diesem Gebiet untersucht werden könnten, aber die Stadt Nain wird als die Basis dieser Forschung gewählt, da es eines der seltenen Beispiele für historische Städte in diesem Gebiet mit geringem Ausmaß an Änderung oder Schaden ist.

Die Studie über nachbarschaftliche Typologie weist auf die Ähnlichkeit und die Einheit in Form und Struktur aller Stadtteile hin. Das traditionelle Fußgängernetz der Stadt ist ein Symbol einer ausgezeichneten Raumplanung, Verwirklichung und Variation in hierarchischem Handelssystem. Der traditionelle Markt der Stadt spielt als eines der Hauptelemente dieses Systems die zentrale Rolle in der einheitlichen historischen Ordnung dieser Stadt.

Die Studie über die Architektur und die Baumethode in Nain weist auf die physische Form der traditionellen Städte in diesem Teil des Landes hin, die nicht von besonderer Qualität sind, die sie von anderen unterscheidet, aber ihr Standort, Anordnung, Funktionalität und Einfachheit in Form unterscheidet ihre Stellung. Die schmalen Gassen, teilweise und ganz überdacht, bilden das Markt- und Gebäudeniveau als tieferliegende Bereiche, Windfang, vertiefte Gärten und als viele andere örtliche Verfahren und Möglichkeiten wurde genutzt und bekunden die Fähigkeit der Einwohner diese Städte gegen die klimatischen Hindernisse heißer und trockener Gebiete resistent zu sein.

Die Wichtigkeit kultureller Werte und traditionellen Lebensstil soll in jedem Aspekt der Vortortgestaltung gesehen werden. Der wichtige Aspekt der Persönliche Ruhe wurde im Design privater, halbprivater und öffentlicher Plätze unter Beachtung der klimatischem Faktor angestrebt. Das traditionelle Gestaltungssystem historischer Städte im Iran hat die direkten Anschluss privater und öffentlicher Plätze nie erlaubt. Daher gibt es dort immer eine ausreichende Trennung zwischen diesen zwei Plätzen.

Am Ende dieses Kapitels wurden übereinstimmende Gestaltungsmethoden und Gestaltungsprinzipien der Stadt Nain als Stellvertretende aller historischen Städten im zentralen Teil des Irans, zusammengestellt.

- A. Den Entwicklungsprinzipien basiert auf natürliche und kulturelle Faktoren als Nachbarschaft und Nachbarschaftlichzentrum.
- B. Form und Struktur. Die historische Städte wurden auf der Basis den Bedürfnissen für Fortschritt und Kommunikation entwickelt.
- C. Stadtplanung. Die physische Entwicklung habe den sozial-kulturellen, wirtschaftlichen und politischen Bedürfnissen der Bevölkerung entsprochen
- D. Stadtgestaltungsprinzipien als Planung überdachter Gassen, die Schatten spenden
- E. Gestaltungsprinzipien in privaten Bereichen als Nutzung tiefer Höfe, die innerhalb der Gebäude für ein wünschenswertes Mikroklima sorgen

Um die Fähigkeit und den Wert der Gestaltungsprinzipien und Methoden der traditionellen Stadt Nain zu zeigen, werden diese Gestaltungsprinzipien und Methoden ausführlich mit Hilfe kleiner Zeichnung erläutert.

### **Teil 3**

#### **Kapitel 4**

Dieses Kapitel hat die Lebensqualität sowie die Gestaltungsprinzipien und Methoden neuer Städte untersucht und hat ihre Fähigkeit hinterfragt, die sozial-kulturellen Bedürfnisse die Einwohner in ihrer modernen physischen Struktur zu beantworten. Das Hauptgewicht der Studie soll die Möglichkeit vorführen, moderne neue Städte in bezug auf kulturelle Werte und traditionelle Gestaltungsprinzipien und Methoden zu entwerfen. Die analytische Methode in dieser Studie basieren auf Teil zwei. Die wichtigen zeitlosen Gestaltungsprinzipien traditioneller iranischer Städte wurden an Hand einfacher Zeichnungen untersucht. Diese zeitlosen Gestaltungsprinzipien und Methoden traditioneller iranischer Städte sind:

- A. Grundregeln der Stadtentwicklung**
- B. Grundregeln in Form und Struktur**
- C. Grundregeln der Stadtplanung**

## **D. Grundregeln der Stadtgestaltung**

### **E. Grundregeln der Gestaltung privater Bereiche**

Diese analytische Studie weist darauf hin, dass bei der Planung und Gestaltung ausgewählter neuer Städte, nur wenigen Aspekten Bedeutung geschenkt werden kann. Die Studie macht deutlich, dass weniger Rücksicht auf örtliche Architektur, Methoden und Gestaltungsprinzipien dieses Gebietes genommen wurde. Nicht, um es zu vergessen, fällt es auf, dass es einige Beispiele wie die neue Stadt Alavi in Bandar Abass Gebiet gibt, der eingeschränkte Aufmerksamkeit dieser Gestaltungsaspekte zu Teil wird, aber in anderen Fällen werden diese wichtigen Aspekte ignoriert.

Eins der seltenen Beispiele für moderne neue Städte, die mit großer Rücksicht auf kulturelle und klimatische Aspekte dieses Gebiets entworfen wurde, ist die moderne Stadt Shushtar, eine neue Stadt mit traditionellem Image im Süden des Irans. Diese neue Stadt wurde als eine Weiterführung der alten Stadt entworfen unter Berücksichtigung der Gestaltungsprinzipien und Methoden der bestehenden Stadt. Die Achtung der traditionellen Lebensstil die Bevölkerung in diesem Teil des Landes ist der wertvollste Bestandteil der Arbeit gewesen. Für die Gestaltung dieser neuen Stadt haben die Architekten und Planer mehr Achtung auf menschliche Wechselwirkung und Tätigkeiten und Nutzung der Plätze, anstatt physischer Dimension gegeben. Die besondere Anordnung der Gebäude, die nötigen Plätze für soziale und kulturelle Tätigkeit, die Verwendung einheimischer Baumaterialien, die Versorgung der örtlichen Gebäude und Materialien zeigen, dass das Ziel den Designern und Planer ist, moderne humane Lebensbereiche unter Berücksichtigung kultureller Aspekte zu schaffen. In dieser Studie wird die moderne neue Stadt Shushtar wegen ihre besonderen Charakter als Vergleichsgrundlage neuen Städten gewählt.

**Teil 4:** Besteht aus der Zusammenfassung und Schlussfolgerungen sowie den Empfehlungen der Forschungsarbeit.

### **Kapitel 5: Zusammenfassung und Schlussfolgerungen**

Das Ziel dieser Arbeit ist einer Verbindung zeitloser Gestaltungsmethoden und Prinzipien traditioneller Städte sowie qualitative Aspekte modernen Lebens in den neuen Städten zu entwickeln. Um dieses Ziel zu erreichen, wurde im Kapitel 5 die Ergebnisse der vorherigen Teile zusammengefasst. Das Zusammentragen dieser Ergebnisse hat der Forschung geholfen, eine Kontrollliste der Hauptplanungsprinzipien und der Elemente zu erstellen, auf die traditionelle sowie moderne neue Städte aufbauen. Mit Hilfe dieser Kontrollliste wurde die Prinzipien und die Gestaltungsmitteln bestimmt, die eine bessere Lebensqualität in moderne Lebensbereiche bringen könnten. Diese Kontrollliste hat die Forschung befähigt, alternative Gestaltungsstrukturen für

neue Städte und moderne Lebensbereiche im Iran, als auch Verbesserungen der Qualität des gegenwärtigen Stadtlebens, vorzuschlagen.

Zum besseren Verständnis hat dieses Kapitel die einfache Zeichnung als Grundlage für die Präsentation benutzt.

Die wichtigen Faktoren der Gestaltung und Entwicklung traditioneller Iranischer Städte und ihrer Gestaltungsprinzipien und Elemente, die im Teil 2 untersucht wurden, werden folgendermaßen zusammengefasst:

**A-Klima und Geographie**

**B-Stadtelemente und Stadtplätze**

**C-Stadtstruktur**

**D-Stadtsilhouette**

**E-Architektur und Baustil**

Die Gestaltungsprinzipien und Methoden traditioneller Städte in trockenen Zonen des Irans werden wie folgt angewendet:

**-Öffentliche Plätze**

**-Halbprivate Plätze**

**-Private Plätze**

Von den obengenannten Ergebnissen abgesehen wird in diesem Kapitel der Gebrauch von Möglichkeiten und örtlichen Verfahren als typische Stadtgestaltungsmittel in trockenen Zonen des Irans erörtert.

Offensichtlich ist viele dieser Gestaltungsprinzipien nicht in der Lage ihre traditionelle Rolle im Funktionskonzept moderner Planung und Gestaltungssystemen fortzusetzen. Aber die starke Rolle islamischer Kultur in der iranischen Gesellschaft bildet die Anpassungsfähigkeit dieser Prinzipien im Design dieser modernen neuen Städte. Viele moderne gegenwärtige Architekten und Planer gestalten der neuen Stadt wie die Stadt Shushtar und erhalten den ursprünglichen Lebensstil. Aber für die, die Alternativen unterstützen, lebt es mit „kultureller Identität“.

Die Wirksamkeit des Fehlens kultureller Identität in modernen neuen Städten im Vergleich zu einer neuen Stadt mit traditionellem Charakter wie Shushtar, stellt dieses Kapitel vor und hat die vergleichende Studie zur Grundlage den Stadtgestaltungsbegriffen gemacht, die in Kapitel 4 benutzt worden sind. Das Ziel dieses Vergleichs sollte die Wirkung jedes Gestaltungsprinzipien und Methode im Design der modernen und neuen Stadt Shushtar zeigen.

Die analytische Studie dieses Kapitel deutet das Bedürfnis für eine neue Strategie bei der Planung und Gestaltung neue Städte im Iran an. Für den Iran ist es notwendig den Gebrauch der Strategien der Vergangenheit zu Gestaltung die neuen Städte, als politische Strategien für modernes Planungssystem zu finden.

Bestimmt wird, welche der untersuchten Gestaltungsprinzipien und Methoden den zeitlosen Charakter unterstützen und bei der Gestaltung moderner neue Städte wiederverwendet werden können. Es ist wichtig ihren Einflussbereich zu bedenken:

**A. Planung**

**B. Stadtarchitektur und**

**C. Soziale Funktionsaspekte**

im Design einer neuen Umgebung. Einzelne Anforderungen an Siedlungen und klimatisch-geographischer Möglichkeiten verwendbarer Gestaltungsprinzipien und Elemente wurden als Grundlage gewählt. Auf der Basis dieser Schlussfolgerungen werden ein Entwurfsrahmen stadtgestalterischer Entwurfsprinzipien für die gewählten zeitlosen Gestaltungsprinzipien und Methoden als Grundlage für die alternativen Vorschläge im nächsten Kapitel vorgeschlagen.

**Kapitel 6**

Dieses Kapitel konzentriert sich auf Vorschläge für neue Städte sowie historische Zitadellen der großen Städte.

**-Überlegungen zu historische Zentren**

Möglichkeiten eine historische Kontinuität bei moderner Stadtplanung zu schaffen, ohne die historischen Gebiete zu erhalten sind unmöglich. Folglich wird die Erhaltung und die wieder Belebung der Raumqualität und Architektur iranischer historischer Städte in diesem Kapitel hervorgehoben. Die Erhaltung bedeutet nicht, dass Änderung die historischen Teile zu einem Museum machen, sondern durch ihre neue Rolle werden diese im Stadtleben reaktivieren.

Diesen Gebieten mangelt es aufgrund ihrer schlechten Zugänglichkeit, Dienstleistungen und Service. Die brauchen den notwendigen Konzepten und der besondere Aufmerksamkeit, um ihnen zu helfen muss der verlassen und bewohnte Teil dieser großen Städte bewahrt werden. Aufgrund der besonderen Situation ist es nicht vernünftig für jede historische Festung einen direkten Vorschlag zur Erhaltung und Wiedereingliederung historischer Städte im Iran zu geben.

Das Hauptziel sollen Entwicklungspläne für historische Städte sein, durch die Veränderungen und Verbesserungen - manchmal durch kleine und einfache Handlungen - erreicht werden können, um bessere Standards zu erreichen.

Ansehen zu bewahren und einzelne Gebäude zu reparieren sind im Iran üblich. In die letzten beiden Jahrzehnte wurde mit der Erhaltung und Erneuerung historischer Zentren in einigen traditionellen iranischen Städten begonnen. Die historischen Zentren von Isfahan und Yazd sind die wichtigsten im zentralen Teil des Irans. Das Ziel sind anwendbare Pläne zur Erhaltung und Erneuerung der historischen Grundrisse in diesen Städten, die uralten Teile wiederherstellen, die noch vorhanden sind und den traditionellen Strukturen angepasst werden können, die im modernem Leben Anwendung finden können.

In diesem Teil werden Isfahan und Yazd als erfolgreiche Beispiele für Erhaltung und Erneuerung alter historischen Zentren im Iran vorgestellt, da diese kürzlich einige Leistungen erbrachten um diese Ziele zu erreichen.

#### **-Alternative Gestaltungsvorschläge für neue Städte im Iran**

Auf der Basis der Schlussfolgerungen des fünften Kapitels wurde ein Entwurfsrahmen stadtgestalterischer Entwurfsprinzipien herausgearbeitet, der alte und neue Gestaltungsprinzipien miteinander verbindet. Damit soll die Wiederverwendung traditioneller Entwurfsprinzipien unterstützt werden, soweit sie heute Gültigkeit haben, und ihre Anwendbarkeit auf moderne Lebensweisen demonstriert werden. Das Prinzip dieses Entwurfsrahmens soll genutzt werden, um die maßgebliche Anordnung der Vorschläge anzulegen und die Wichtigkeit dieser zeitlosen Gestaltungsprinzipien und Elemente zu identifizieren, nach Funktion und Erscheinung. Beispiele vorhandener Situationen und vorgeschlagener Alternativen ermöglichen die Untersuchung von jedem Element und Gestaltungsprinzipien.

Alternativvorschläge werden an Hand einfacher Zeichnungen dargestellt, um die Visualisierung jedes zeitlosen Elements und Gestaltungsprinzipien in einer wünschenswerten Umgebung zu ermöglichen.

Die Quellen des Hauptteils dieser Arbeit wurden teilweise persönlich und mit herausgegebenen Schrift über die iranische Stadtentwicklung zusammengetragen. Die historische Analyse traditioneller Städte im Iran wurde an Hand herausgegebener Quellen untersucht. Fallstudien, die das Ergebnis der Stadtplanung und Gestaltungsanalyse sind, wurden persönlich in den historischen Städten Isfahan und Nain im zentralen Teil des Irans durchgeführt. Die Fallstudien neue Städte basieren auf Kapitel 4.

## ***1. Urban Development in Iran***

Since the beginning of 20<sup>th</sup> century the urban areas of Iran have gone under the great social and economic transition. The main causes of this affair are political changes of the country in this period. This chapter aims to study the politic, economic and social situation of the country in pre- and post-Islamic revolutionary periods. It analyses the development of the urban areas under the political changes, and social-economic transition of Iran in 20<sup>th</sup> century. The main concentration of this study will be on large and historic cities.

### ***1.1. Geographical Situation***

Iran, in southwest Asia, located between the Caspian Sea in the north, and Persian Gulf in the south, covers an area of 1.6 million square kilometres, slightly larger than one fifth of the United States. In 1991, the population of Iran was 58 million, which is a population density of 35.3 persons per square kilometre. However, only about 10 per cent of the total area is under permanent cultivation and therefore population density per arable lands would be more than 352 persons per square kilometre. Only 20 per cent of the country is potentially cultivable, and forests and pastures cover 11 and 7 per cent of the country respectively. More than half of the country consists of desert, and highland. (1)

In general, Iran has a bowl-like shape with a high outside rim surrounding a lower interior and consists of a complex of mountain chains enclosing a series of central basins of the Zagros Mountains that extend from northwest to southwest occupying almost the entire western part of the country. The Alburz range in the north is narrower and higher than the Zagros. Elevation is an important factor in determining local climatic, particularly during the cold season. The great difference in elevation has resulted in great variation of climatic conditions, which range from sub-polar in the highlands to subtropical in the southern part of the country. This climatic variation has been the main cause of different urban environments, cultures and different ways of life during our history. (2)

The mean annual precipitation is estimated to be around 250 to 300 millimetres. As more than half of the country is virtually desert, precipitation and temperature are among the important factors in shaping the various types of economy, the distribution of the population and the patterns of land use. Iran's location between 30° and 60° N latitude, it's distance from large bodies of water, and local topography are the most significant factors that determine patterns of precipitation and water availability.



Figure 1: The provinces of Iran with their capital cities.

Source: Rashad, M., 'Iran', Köln 1998

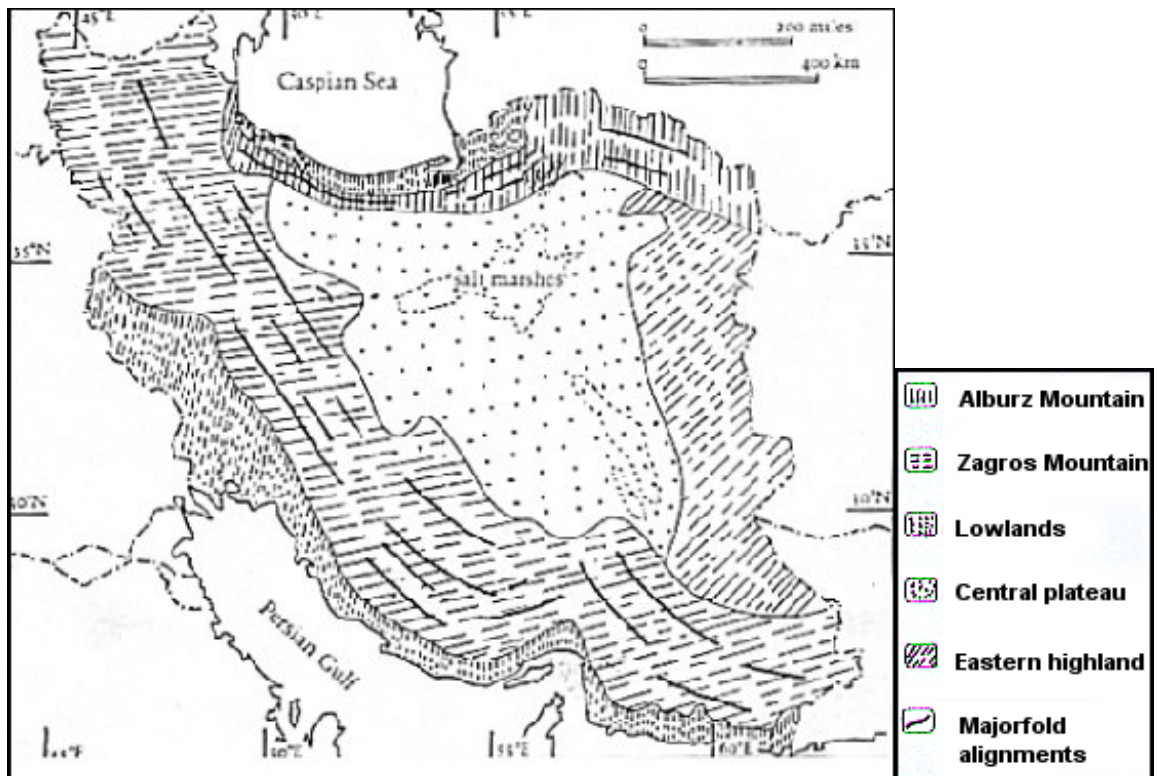


Figure 2: The physiography of Iran.

Source: Kheirabadi, M., 'Iranian Cities, formation and Development', USA, 1993.



## ***1.2 Political, Social and Economic Situation of Iran***

### ***1.2.1 Pre-Revolutionary Period -1979***

In the history of every country there are periods of time that play important roles in its future development. The ruling period of the 'Ghajar Dynasty', and the occupation of Iran by the Allies in Second World War, have been two historical moments, which influenced the economic development trends of the country in the 20th century. In brief, the ruling period of the 'Ghajar Dynasty' was the beginnings of economic dependency of Iran on other countries. The easygoing life style and disability of the Ghajar's leaders put the economy of Iran in the hands of Europeans. The occupation of the country by the Allies in Second World War, forced the economy of the country to undergo big changes. Investment in the industrial districts was reduced, and most of the development programmes slowed down. During this period of occupation, economic growth declined because of military costs and internal problems. In fact because of the Allies' costs, the value of existing currency of the country (Rial) increased, but the decline of industrial investment growth shifted the money to other economic branches, mostly trade and land speculation. (3)

With the rise to the power of Reza Khan the founder of the Pahlavi Dynasty in 1925, a new chapter in the societal transformation of Iran was opened. Reza Shah suppressed the autonomous regional forces and created a strong centralized state apparatus in the capital. Major military bases, industries, trade centres, public buildings, extensive road network, and the foundation of the first university in Iran were laid in Tehran. Economically, the country was beginning a transformation to a dependent capitalist state, replicating the global stratification system at the national context, with Tehran functioning as the core of surplus extraction from peripheries. (4)

In the 1940s Iran underwent great political changes, which were inevitably followed by new economic development programmes. Since then, Iran has been under the influence of the Western world. This fact has had a marked effect on its rapid development toward modernisation, as this aim becomes a target in Iran's 20th century development programme. The West has, always considered Iran due to its special location and its oil resources, a vital area for control. Taking advantage of this situation, Iran tried to reduce the inequality gap with the developed world. And the fastest way of reaching this goal was to follow the Western experiences. Unfortunately, after half a century, the results of this experience are, far from the expectations of the mass of the population. A principle cause of this state of affairs is rooted in the economic development. Social aspects were not considered but were inevitably affected. Although development should benefit every member of the society, less than 50% of the

total population has taken advantage of it. Since the 1950s, Iran increased its GNP (Gross National Product), and per capita income mainly by means of its oil industry. Most of this increase took place between 1960-1976 with an 8% annual growth rate of GNP per capita. The GNP per capita in 1976 was \$2060. This level of income put Iran in the first group of Middle East countries. (5)

The desire for economic growth is perhaps the greatest source of change in any society, since it influences every aspect of life. Those countries that have had one or more overwhelming commodity advantages (in our case oil) over the rest of the world, have often been able to carry out changes faster and more fundamentally than countries with a wider economic base but with no marked advantage in availability of any specific goods or services. Countries like Iran whose oil production is the only major export item are, in fact, in a dangerous position. They tend to increase their dependency on oil in such a way that other major and minor industries lose their efficiency. Dependency on oil has led to more dependency on the west in nearly all aspects of life. Leaders were aware that they were selling their richest and most valuable resources with aim to reach their economic goals, but what they receive in return is usually invested in institutions of western countries.

In the pre-revolutionary period, the government pursued industrialization policies at the expense of agricultural decline and rural under development. It cannot be denied that oil revenues have enabled Iran to invest and plan development on a scale and nature never experienced in the Middle East. This rapid pace has enabled Iran like some other Middle Eastern societies, to undergo transition from a pre-industrial and pre-urban society, to an industrialised and urbanised country. The revenue of oil has given the producing countries domestic savings out of all proportion.

### ***1.2.2 Post-Revolutionary period 1979-2000***

The Islamic revolution in 1979 was another historic moment for Iran. The prevalent conditions in the late 1970's were not sustainable as the revolutionary movement supported by the urban poor brought about the downfall of the political-economic elite. There was the hope that, this revolution would be able to reform development of the country. In order to be more independent from oil, in 1979, Iran started to develop a new form of economy based on agricultural and industrial basis and encouraging other sectors to be more active in the future life of the country. Unfortunately the beginning of the war with the neighbouring country Iraq in September 1980 increased the need for quick investment on arm's equipment, money that was earned in the oil sector.

Apart from different aims', reducing economic and demographic inequality between regions of the country has been one of the principle of development programmes after revolution. After revolution the establishment of foundations as 'Jihad-e-Sazandegi' or housing foundation tries to implement fast and short time development programmes in mainly rural areas to prevent or reduce migration from these areas to big cities. In contrast to the Ministry of Housing and Urban Development, which has sought to establish regional industrial cities to absorb labours from rural areas, 'Jihad' proposes to bring small conductive industries directly to the countryside where the peasants live. After the revolution, despite a relative improvement in the living conditions of rural areas, the Iranian villages are still provided with a minimum of social services and infrastructure facilities. Although, the post-revolutionary economy and embarked on a number of rural development programs, so long as the major urban areas serve as the centres of political administrative and economic power, the spatial disparities with continue to grow. (6)

Despite the intensions of the revolution to reduce the reliance on oil, it remained the major source of revenue for Iran after revolution. With an estimated 92.86 billion barrels at the beginning of 1995, Iran owns 9.3 per cent of the world reserves of crude oil. Its natural gas reserves, at 2 billion m<sup>3</sup> are second only to the former Russia. Islamic revolution like any other revolution in the world has had pre-determined objects. But after 21 years it hasn't been able to reach these objects. Not to forge the crucial economic obstacles mainly war, has played important role in this failure. (7)

### ***1.3 Urban Development in Pre-and Post-Revolutionary Periods***

Economic growth is only one of the major elements, which determines the change of a modern society. Another is the urbanisation that does not necessarily follow the pattern of economic growth, but is highly affected by it. Urbanisation, however, may happen in two different ways. In many developing countries, it happens at a relatively slow rate depending on revenue other than row oil, and in the other case as Iran, it happens at a faster rate of change only affecting a minority of the population of the region.

The problem in developing countries, even those with relatively small populations, is the distribution of cities. The population tends to be concentrated in a few large cities with little urban infrastructure. In Southeast Asia, large cities act as links to the industrialised countries and supplying raw materials. Although the proportion of the total population living in urban areas is still comparatively low, the size of the primate cities is extraordinary. According to the population census in 1956, 31.4% of Iranian people were

living in urban, and 68.6% in rural areas. But during the following years, with the political and economic changes, and the concentration of development programmes in urban areas, the distribution ratio changed to 61.3% of the total population living in cities up to 1996. The 8 years war between Iran and Iraq (1980-1988), also played an important role in the redistribution of the population, but it did not have a big effect on the urban-rural population distribution. (8)

Beginning in 1950s, put greater emphasis on economic aspects led to the fast development of our cities. As a result of investment in health care facilities, most of them concentrated in cities, the population of the country grew from 25.8 million in 1966 to 33.7 million in 1976, and the urban population from 38 to 47 per cent in this period. As the national census of the country shows, the population growth rate between 1966-76 had an increase from 2.7 to 3.9 percent. Between 1976-86 the population growth of the country suddenly decreased from 3.9 to 2.5% and to 1.5% between 1986-96. This decrease is mainly due to the political and socio-economic situation of Iran in Post-Revolution period. It should not forget that 8 years of war, and the economic problems of the following years had the main impacts on the decline in population growth between 1986-96. (9)

According to the first public census of Iran in 1956, from total 199 cities, just 3 cities of Tehran, Isfahan and Tabriz were urban settlements with more than 250,000 population (Table 4). In 1976 the number of the cities officially increased to 373 which 8 were cities with more than 250,000 populations. The number of the cities in this category increased to 16 (from total 496) in 1986 and to 23 (from total 614) in 1996. In Iran the largest number of the cities belong to the urban settlements with 5,000 to 25,000 population (table 4), but their role in population distribution is minimum. In 1976 the number of urban settlements with 5,000 to 25,000 populations were 277 from 373 cities with 17.7% of total urban population of the country. In 1996 the number of the cities in this category increased to 316 (from 614) with 10% of urban population. In another word more than half of the Iranian urban settlements are urban areas with 5,000 to 25,000 populations but the main part of the population of the country is concentrated in few largest cities. (10)

The main characteristic of urbanism in this era was the rapid growth of settlements with low population i.e. villages and small towns, and small number of cities with larger populations. Between 1956 and 1996 the number of urban settlements increased more than three times (in 1956, 199 cities, and in 1996, 614 cities), and urban population in the same period, 6.2 times (urban population in 1956 was 5.95 and in 1996, 36.82 millions). The irregularity of the population distribution is the result of changing socio-economic situation

on the one hand and the centralised political, economic system and planning programmes on the other. This has led to the concentration of population in only a few of the larger cities such as Shiraz, Isfahan, Tabriz, Mashhad and of course Tehran. The start of the war between Iran and Iraq in September 1980 was the beginning of another redistribution process of the population in some parts of the country. In fact there was a compulsory relocation of people who were living in the war areas.

This process began with the movement of the people living in the cities located on the southern and the western borders, to the central parts of the country. Lack of accommodation, and the hope that the war would not continue, made these people live with their relatives or in temporary homes for a period of time. But since the war continued and most of these cities were partly or completely demolished, they had to look for a permanent home and find a job wherever they could. Naturally most of them preferred to live in the large cities to have a better access to jobs and accommodations.

Shortly after the war, the population of the major cities increased; the situation in Tehran and Mashhad area was desperate. A comparison of the population census in 1986 and 1991, shows that during this 5 years, the population in Tehran Province rose from 8.7, to 10.3 million, and in Khorasan (Mashhad city is the centre of this province), from 5.3 to 6.4 million. Based on the census of 1986, during the 10 years from 1976 to 1986, 1.4 million people immigrated to Tehran, and nearly 800 thousand to the Khorasan provinces.

Even after the war and the rehabilitation of many of the damaged cities, the population of Tehran was not reduced to the expected level. In none of the large cities in Iran has the urban infrastructure met the population increase. In these cities the population increased rapidly and the real need of urban infrastructure and amenities was not considered. In other words, in some cases these cities are still in fact rural settlements but due to their population size are considered as urban centres. (11)

According to Table 4, the urban population of Iran in 1996 was nearly 6.2 times larger than in 1956. By comparison, the total population of the country trebled during the same period (3.2 times). This comparison indicates the increasing immigration of population to urban centres as a fast process. If this process was accompanied by a suitable population distribution policy, there might have been a chance for all to use urban services, such as infrastructure and education. In 1956 just Tehran was a metropolitan city with over a million populations, but in 1996 (the last official census), there are 5 metropolitan cities in Iran with one to nearly seven million populations.

To help to understand the population growth of urban centres, it is possible to compare the five largest cities. In the year 1956 from a total of 15 million people, 25.4% were residents of Tehran city. Tabriz city with 4.87% was the second largest city in the country. Although in the following years the share of Tehran compared to the total urban population was marginally reduced, in 1996 more than 18.4% of urban population of the country live in this city.

In principle, the population increase of Tehran developed slower than the other major cities. Statistical Centre of Iran indicates that between the years 1986-91, the Tehran population developed with a growth rate of 1.84 percent per year. According to the last population census of the country in 1996, Mashhad city with 5.1% after Tehran is the second largest city of the country, the city of Isfahan with 3.4% in the third place, Tabriz with 3.2, and Shiraz with 2.9% in place four and five. These figures indicate the situation of Tehran as an overpopulated city, which is slowly losing its absorbing power. (12)

Table 1: Population growth of Iran from 1881 to 1996

Year	Pop. in Thousand	Between Years	Growth Rate	Year	Pop. in Thousand	Between Years	Growth Rate
1881	7.654	-	-	1941	12.833	1936-41	1.4
1891	8.124	1881-91	0.6	1946	14.159	1941-46	2.0
1901	8.613	1891-01	0.6	1951	16.237	1946-51	2.8
1911	9.143	1901-11	0.6	1956	18.955	1951-56	3.3
1921	9.707	1911-21	0.6	1966	25.788	1956-66	2.7
1926	10.456	1921-26	1.4	1976	33.709	1966-76	3.9
1931	11.185	1926-31	1.4	1986	49.445	1976-86	2.5
1936	11.964	1931-36	1.4	1996	60.555	1986-96	1.5

Table 2: Population distribution in urban /rural areas from 1956 to 1996

Year	Total Pop.	%	Urban Pop.	%	Rural Pop.	%
1956	18,954,704	100	5,953,563	31.4	13,001,141	68.6
1966	25,788,722	100	9,794,246	38.0	15,994,476	62.0
1976	33,708,744	100	15,854,680	47.0	17,854,064	53.0
1986	49,445,010	100	26,844,561	54.3	22,600,449	45.7
1996	60,055,488	100	36,818,000	61.3	23,237,488	38.7

Table 3: Classification of the urban areas from 1976 to 1996 (population in thousand)

Population Classification	Urban Area	1976		Urban Area	1986		Urban Area	1996	
		Pop.	%		Pop.	%		Pop.	%
Total	373	15,855	100.0	496	26,845	100.0	614	36,818	100.0
250,000 & more	8	7,802	49.2	16	14,222	53.0	23	20,147	54.7
100,000-250,000	15	2,148	13.5	25	3,756	14.0	36	5,133	13.9
50,000-100,000	22	1,532	9.7	46	3,155	11.8	62	3,309	9.0
25,000- 50,000	45	1,540	9.7	67	2,321	8.6	94	4,260	11.6
10,000- 25,000	109	1,649	10.4	145	2,300	8.6	166	2,578	7.0
5,000- 10,000	168	1,162	7.3	113	833	3.1	150	1,105	3.0
Less than 5,000	6	22	0.1	84	258	1.0	83	286	0.8

Table 4: Distribution of urban population in major cities from 1956 to 1996

Major cities	1956		1986		1996	
	Urban Pop.	%	Urban Pop.	%	Urban Pop.	%
Total	5,953,563	100.0	26,844,561	100.0	36,818,000	100.0
Tehran	1,512,082	25.4	6,042,584	22.5	6,758,845	18.4
Mashhad	241,989	4.1	1,463,508	5.1	1,887,205	5.1
Isfahan	254,708	4.3	986,753	3.7	1,266,072	3.4
Tabriz	289,996	4.9	971,482	3.6	1,191,043	3.2
Shiraz	170,659	2.9	848,289	3.2	1,053,025	2.9

Source: Statistical Centre of Iran.

## ***1.4 Urban Planning Regulations***

Before urban planning was recognised as a social need and a special duty for government and municipalities, such new specific knowledge and professional expertise existed, but were not recognised. But today in many countries because of population growth and improvement of technology, communication and socio-economic activities, the function of planning has gone far beyond city limits. The regulation of urban planning, and development of living environment, has received more attention. (13)

Regulations and city planning laws in developing countries started only in the 20th century, specially the second half of it. The first regulation in urban planning in Iran was in fact a law for the development of passageways and streets in November 1933, which was improved later on in August 1941. The authoritative power of this law in implementing prepared plans was very weak. The main planning activities, regulations and laws specifically established for urban planning programmes started in 1966. (14)

### ***1.4.1 Reconstruction, Changes and the Planning Obstacles in Iran between 1921-41***

The reconstruction and improvement activities in Iranian cities started in 1921, by ministry of Housing and Urban Development. The beginning of the Second World War and the involvement of Iran resulted in the reduction, and in some areas the elimination of these activities. The city planning programmes during this period can be summarised as follows:

1. Planning of new streets and squares in the core of the large and some middle cities. These streets cut through the traditional fabrics in north south, or in west-east directions. This was the most usual planning method in developed countries, and although neglected the historical values of the cities, it provided good access (Abdulrazagh Avenue in Isfahan city, figure 4, 5).
2. Planning of ring roads around many large cities as Isfahan (figure 3).
3. Demolishing areas, which were not inhabited, and changing cemeteries, which were located in the centre of the cities into public green areas.
4. Encouraging and s forcing people to improve their dwellings' facades, mostly buildings located on the edge of new developed or extended streets.
5. Preparing suitable street layouts for future development areas, in or outside the cities.



6. Development and improvement of access in old areas of the cities, which had the potential to continue their life with the aim of rehabilitating and conserving such neighbourhoods.

In spite of these activities, effective and suitable regulations for urban planning actions, or reconstruction and rehabilitation of the cities were not provided. And any strong administrative framework or planning criteria for improvement of such activities was not considered. All these activities were under the control of public sector, mainly the central government. Apart from the Second World War, this was the main reason why these programmes did not continue after 1941.

#### ***1.4.2 The Critical Period in Improvement of the Cities between 1941-66***

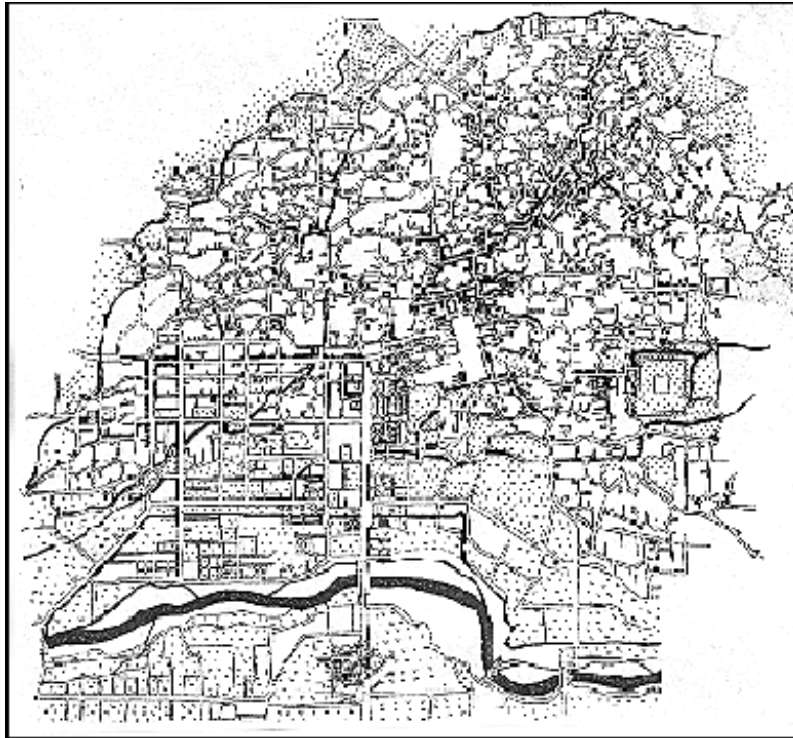
After the Second World War urban planning programmes started again, but very slowly. Characteristics of the urban planning activities during the 25 years between 1941 and 1966 can be summarised as follows:

A. Although the development of the cities and the urban population increase was 2 and half times more at the end, no control and supervision over the quality of development of the cities was exercised. The municipalities had limited authority over the urban planning activities inside the cities. Their authorities were limited to controlling the construction activities inside the old boundaries of cities. There were no law to give them ability to supervise the construction activities around the newly expanded cities or to prevent the development of buildings outside their administrative boundaries. Consequently, cities without any control over their development have extended and municipalities were obliged to supply them with urban infrastructure and amenities.

B. Land ownership was one of the main obstacles in any planning action. Inside and outside the city boundary, the owner of land had total control over his property, and the municipality had no authority to overcome this situation.

C. City municipalities had no authority to bring about changes in the condition of land ownership in the cities for planning purposes.

D. Many slum areas appeared around, next or even inside the cities. During this period (apart from some unnoticeable limited activities), no steps for renovation and rehabilitation or conservation of the cities were taken, but even the development of slums was not prevented. (15)

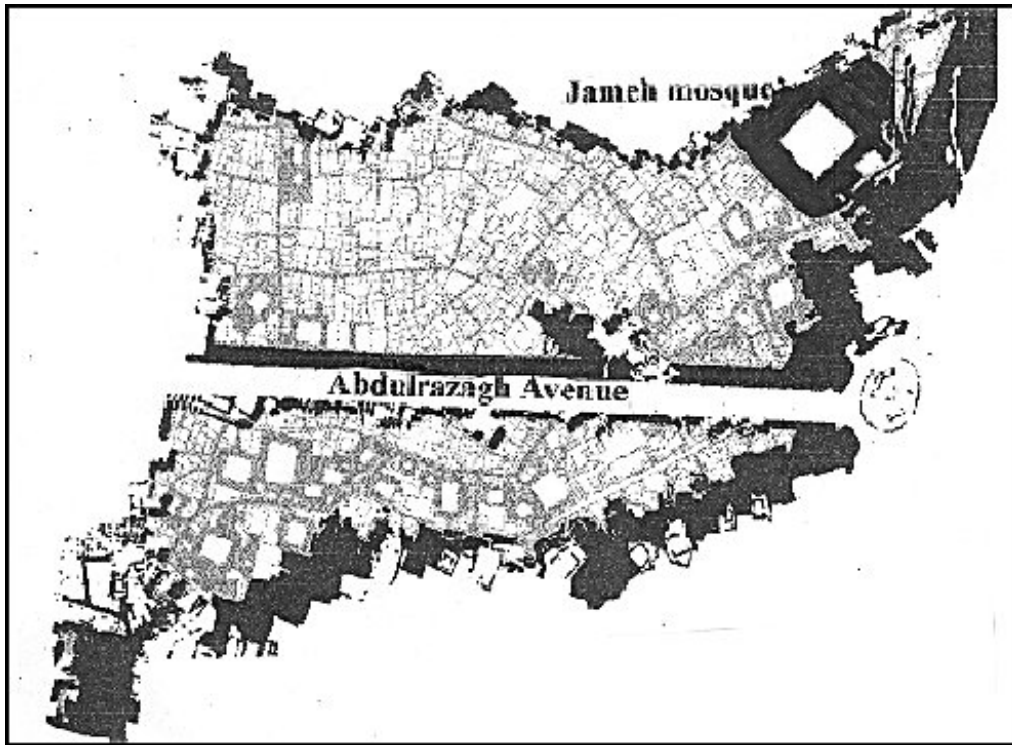


Structure of Isfahan city in 1919



Structure of Isfahan city in 1924

Figure 3: Isfahan city before and after urban improvement activities in Iran.  
Source: 'Städtebau in islamischen Ländern', ETH Zürich, 1980.



**Figure 4: the new Abdulrazagh Avenue, cutting through the historic texture.**  
 Source: 'Städtebau in islamischen Ländern', ETH Zürich, 1980.



**Figure 5: A view on old Maidan with Jameh mosque of Isfahan city. How ignorance the Abdolrazagh Avenue pieces the traditional bazaar.**  
 Source: Author, M.phil thesis.

### ***1.4.3 Modern Renovation Programmes after 1966***

The first modern planning law in Iran, the Act concerning buildings and widening of streets and alleys, were passed in 1933 by parliament. In 1941 it was revised as the street-widening Act, which was subject to amendments in the 1966 Municipality Act. It was abolished in 1968 when the urban Development and Redevelopment Act was introduced. As the title of this early law show, it was basically produced to ease the process of imposition of new road networks on the old fabric of the cities. Since legislation of this law in 1968, town planning in Tehran and the other major cities has mainly focused on physical changes. This trend of keeping town planning as a technical and a political process concentration on growth management and physical planning has continued even after the revolution.

The main characteristics of the modern urban planning in Iran have been that forward planning and development control have been carried out by two different, sometimes disconnected, agencies, which this division of labour has inevitably brought about conflict and disorders. From the beginning of 1966, there was an improvement of existing regulations and the approval of new laws. Establishment of the 'Town planning High Council' in 1972 had aim to provide legal bases for planning procedures and put forward a clearer definition of comprehensive plans, detailed plans and guide plans. (16)

Although in pre-revolutionary period the 'Town Planning High Council' was the only main decision maker for approving comprehensive plans, but after a further reorganisation, part of its authority was divided between sub-Councils working in each provinces. They got the authority to take decisions for planning programmes in war areas and in cities with less than 200 thousand inhabitants (based on the national census of 1986). But the decision on decentralisation and distribution of planning activities, also the preparation of general regulations and criteria for urban planning, remained in the hands of 'Town Planning High Council'. (17)

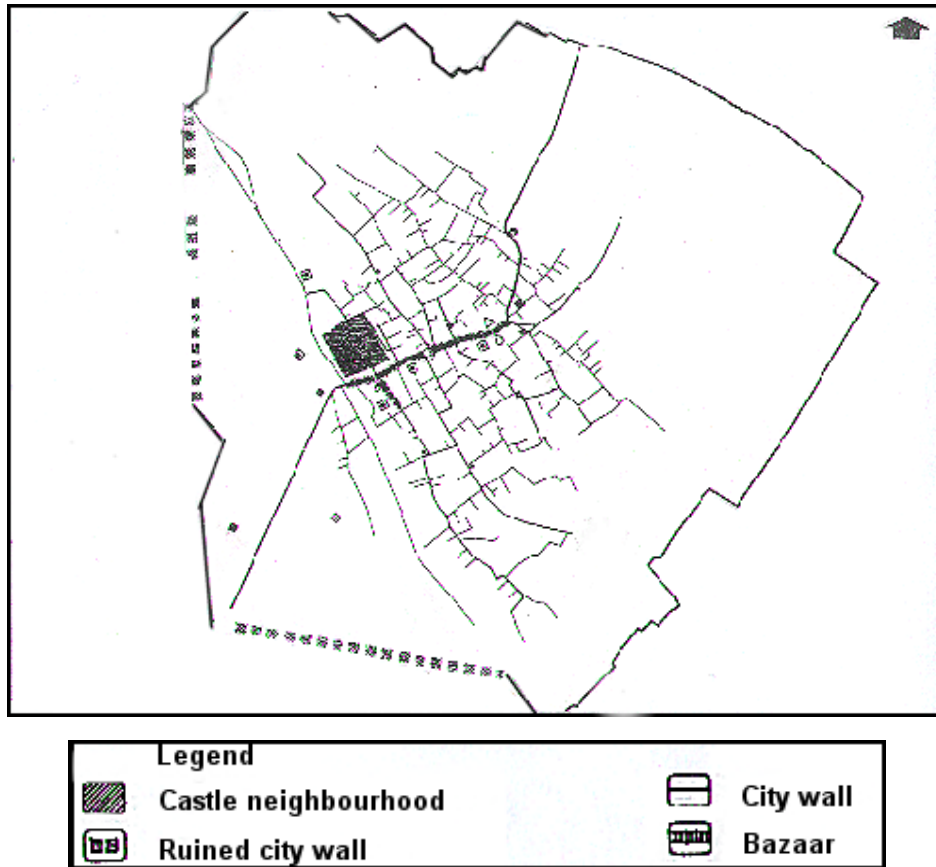


Figure 6: Traditional form and structure of Damghan city in early 20th century.

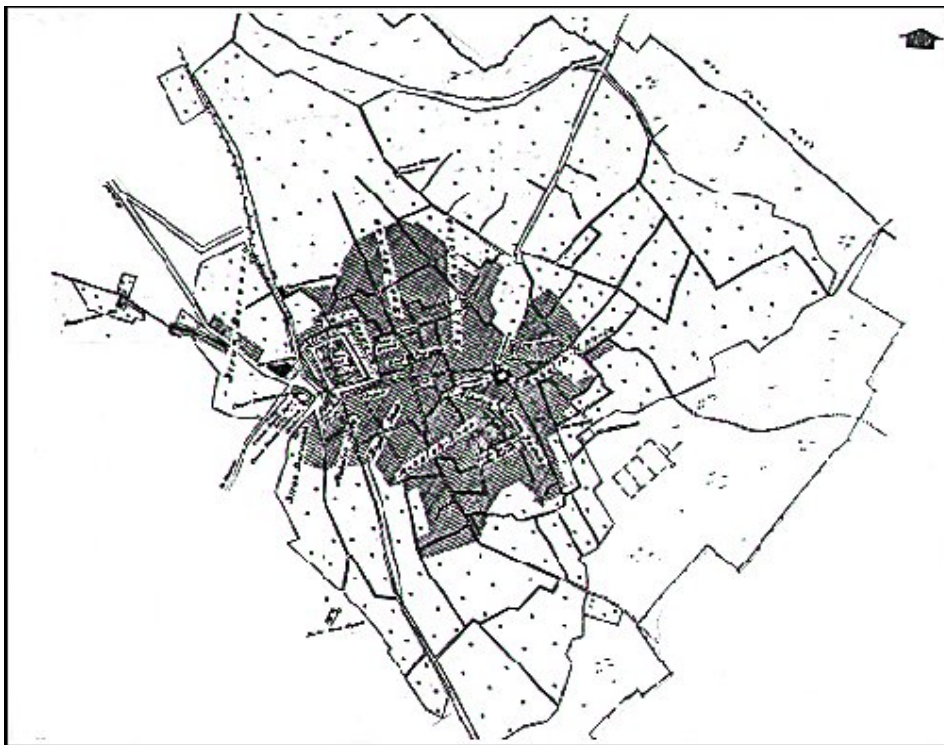
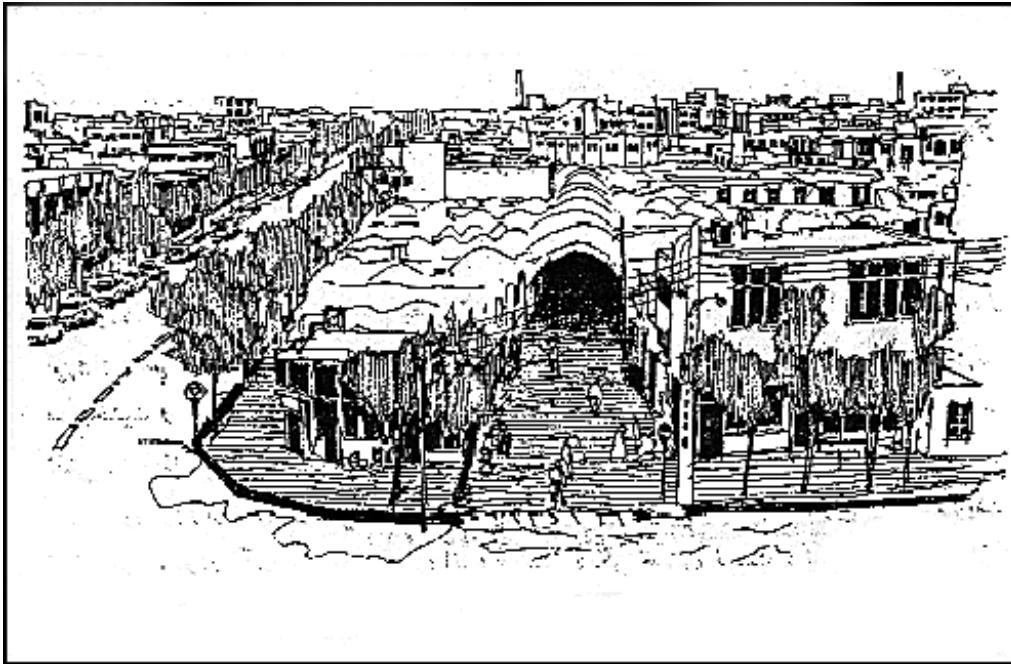


Figure 7: Development of Damghan city in 1931.

Source: Faza Institution, 'Building and City of Damghan', Tehran 1989



**Figure 8: Damghan city in 1989 after implementation of its physical plan.**



**Figure 9: A view of the city centre with the new street parallel to the traditional bazaar.**  
Source: Faza Institution, 'Building and city of Damghan', Tehran 1989.

#### ***1.4.4 Modernisation***

Unlike the eastern, evolution of the European cities in last century has been accompanied by technological and capital improvement. For eastern countries the import of high technology was by contrast a process of adoption rather than adaptation. The contrast between the acceptance of the high technology of the west and its adaptation to the Iranian context was a process, which led to false modernity in these countries. This process began without needed economic infrastructure, and cultural and social background. In Muslim societies with strong religious believes the fight between modern western ideas and social adaptation will always remain a barrier for radical modernity. These countries under the pressure and influence of European countries have developed in current century. But what they have achieved is not ‘development’ but ‘ill progress’.

Urban areas have been the real reflection of these events. The demographic concentration, combined with the accumulation of capital with new industrial technologies, changed the aspect of large European cities, which grew from a few hundred thousand to several million inhabitants within a few decades. It is worth to mention that many cities in late nineteenth century Europe had already undergone large-scale modernization with dramatic and often devastating effects on their built heritage. A notable example is Vienna and the removal of the old city walls for the construction of the Ring Street. (18)

Around 1950s, most countries of the Arab and Islamic world managed to establish their political autonomy, either through revolutionary actions or through peaceful agreements. The problem was, however, that political freedom did not automatically bring about cultural independence. The main reason for this was the colonial heritage in some Muslim countries. These nations were more or less forced to continue their pre-established economic patterns, which had become dependent on international trade structure. By superiority of western values, the cultural traditions were stigmatized as being backwards. As a result the creative potential of traditional urbanization process was blocked, while the deficiencies of the dominant western model with regard to a whole range of excluded cultural values, human resources and social opportunities were deliberately overlooked. (19)

The modernization process in Iran marked a radical turning point with founding of the Pahlavi dynasty in 1925. The inconsistency of the late Qajar rulers was replaced by a rapid acceleration towards modernization. Modernization was carried out using two different approaches. The Shah’s quest for both modernization and grandeur was expressed in buildings and great institutions, reflecting the forms of ‘Achaemenid’ and ‘Sasanid’ architecture that were

brought to light by the European archaeologists and some other people who had already started this trend. The second approach was represented by a group of architects who had been travelled to Paris, Vienna, and London and introduced into Iran a new language that broke all links and continuity with the past. (20)

Introduction of European modernity for a developing country as Iran resulted in huge movement of population between rural areas and cities, mostly to Tehran. Naturally under this circumstance the immigrants from rural or small cities take their rural culture with to the large cities. And it would be unrealistic to expect the recently urbanized rural societies successfully integrate western industrialization models within a few years. The spread of satellite settlements around the large cities turn to be the major characteristic of modernization in Tehran's and other large cities' urban environment.

Most of the Post-Second World War suburban development in Tehran region, focused on housing to give home to the immigrants who came to Tehran to find job or a better life. The pace of urban development was so fast that the provision of public facilities and infrastructure could not keep up with needs of the new areas, which partly explains why so few facilities are found in this dormitory suburban. In a very short time the historic face of the cities changed. The old areas demolished and in their place new buildings with different design concept erected. Middle of the twentieth century was the time for bulldozers to work in middle of the historic cities. Not only the historic areas slowly disappeared but even the name of the major streets and place of interest have changed and with them the common historical memory of the cities has been lost.

Stefano Bianca in his book 'Urban form in the Arab world' about modernization of these countries in 20<sup>th</sup> century says; 'paradoxical as it may appear, it is the riches Arab countries which have lost most of their traditional urban heritage, since the abundance of financial resources and the ensuing development pressures have led to the whole sale demolition of most of their historic centres in a short period of time. Other countries and cities struggle with poverty and suffer from the inability to maintain their traditional housing stock and to provide the most basic public facilities, but a fair part of their urban heritage still is in a position to be rescued'. (21)

In lasts half of the century concentration of capital and accumulation of private and public investments in Tehran changed this city to a metropolitan urban area. In the 1960s under the pressure of a high migration rate from other regions to Tehran, the pre-Revolutionary government decided to encourage the distribution of the immigrants to other large cities. The master plans were prepared for nine large cities that were in fact the main historical centres of Iran,



for a period of 25 years. The background of these plans was to choose Isfahan and other large cities such as Tabriz, Mashhad and Shiraz as growth poles, for future industrial expansion in the hope that with the increase of opportunities for employment, they will attract migrants from small cities and rural areas, who would otherwise go to Tehran'. In reality the aim wasn't to reduce the inequality between regions, but to reduce the pressure on Tehran city. (22) It is fortunate to say that lack of financial ability of state department saved many small cities from this faith. The small cities didn't receive comprehensive plans, but fast physical plans which introduced modern streets to their tidy knitted historic fabric. Although in a short period of modernization fever, they lost part of their valuable structure, but physical and cultural damages in these cities are not as serious as large historic cities. The case of traditional city of 'Sabzevar' in central area of Iran is an interesting example about these cities (Figure 10-13).

In all Iranian cities, after modernization, the traditional extended family in favour of nuclear families declined. The new house form, which developed in the urban environments, was an extroverted one. However, the need for privacy survived. Like before, the new house was enclosed within high walls. The courtyard remained a cultural symbol and the area in which women could move without being seen from outside. Although some of the modern housing complexes plan in flat and apartment in large cities, privacy remained a priority in housing development. After the Islamic revolution, planning regulations has enhanced the demand for privacy in dwellings

Modernization for many Islamic countries meant disconnection with culture. In many Arab countries, where they were implemented as complete 'packages' without recognizing the fact that physical forms of these projects have grown out of an alien ideological matrix and imply different codes of behaviour and different environmental conditions. Basic facilities were not re-assessed in the light of the traditional patterns and local customs, but simply identified with the physical structure these needs and facilities have assumed in the west. (23)

The traditional physical characteristics of the historic cities, such as walls, the gates and the narrow lanes, which were the best means of physical protection against the impact of vehicular traffic, lost their values. In modern concepts of land use, the role of urban elements as mosque were ignored and they often designed in complete isolation from the physical and social urban context. The important potential of urban elements for acting as focal points of aggregated community facilities and other public spaces play no role in design or improvement of modern cities.

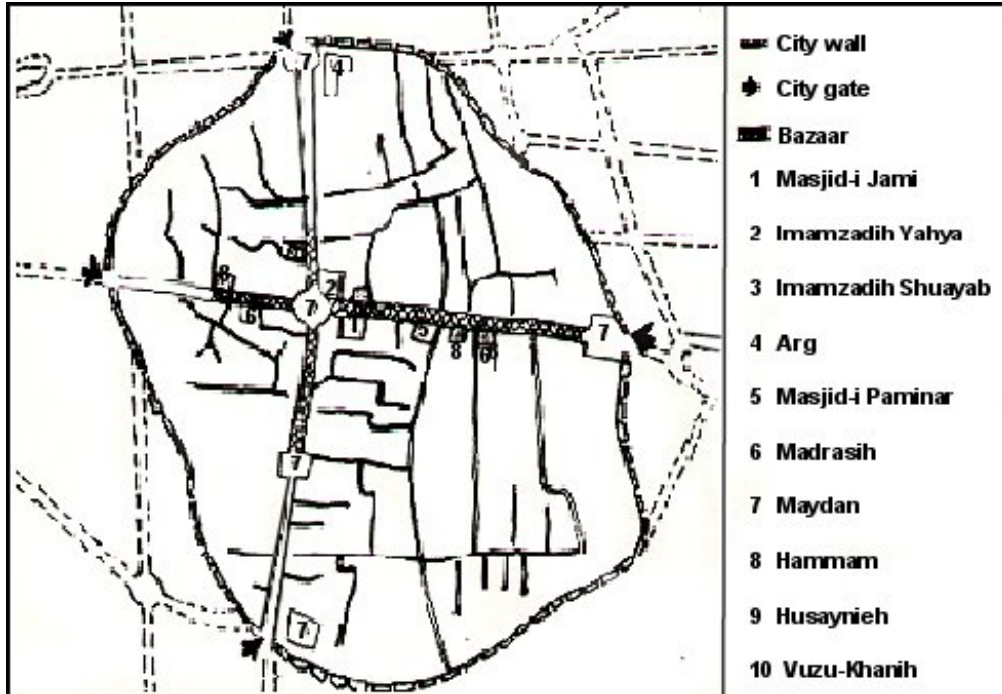


Figure 10: Traditional structure of Sabzevar city in 1920.



Figure 11: Uniformity of buildings in Sabzevar city in 1991.  
Source: Kheirabadi, M., 'Iranian cities, Formation and Development', US, 1993.

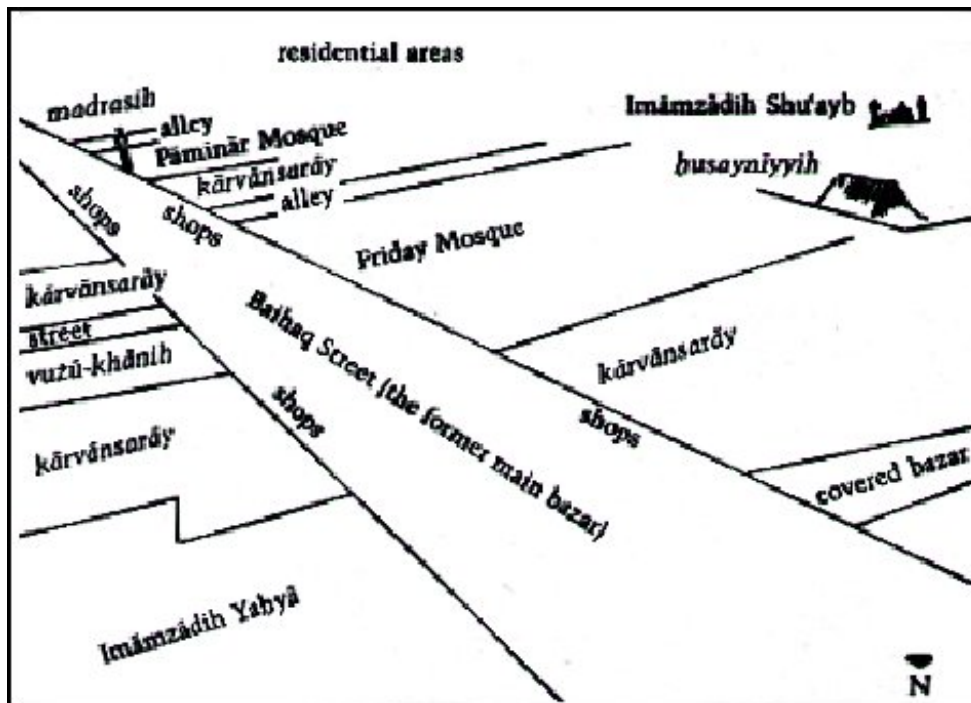
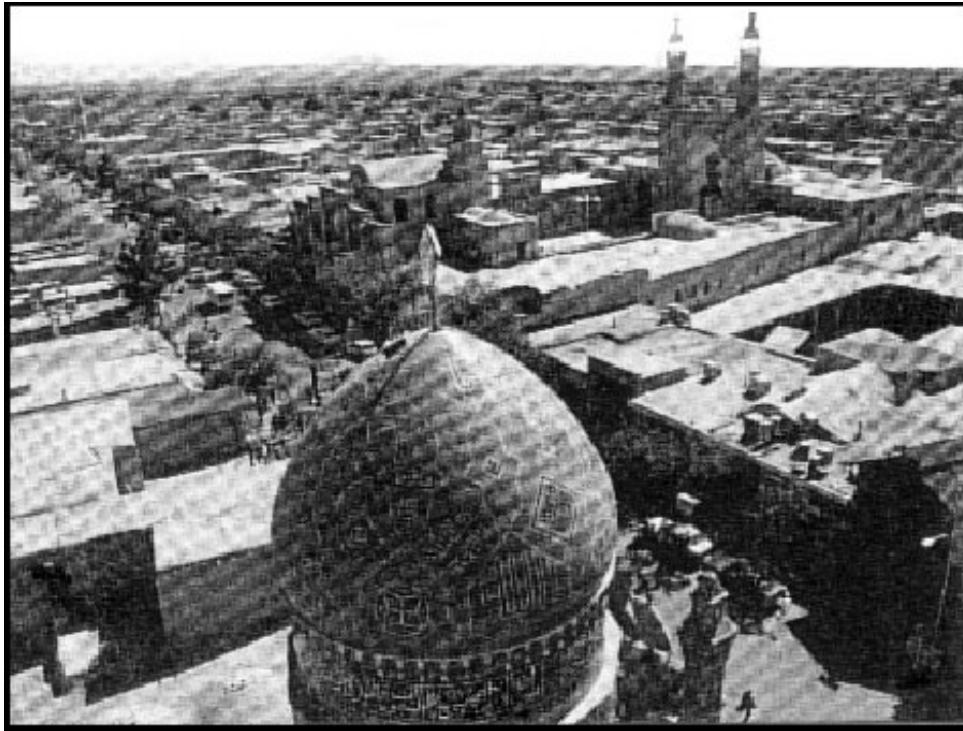
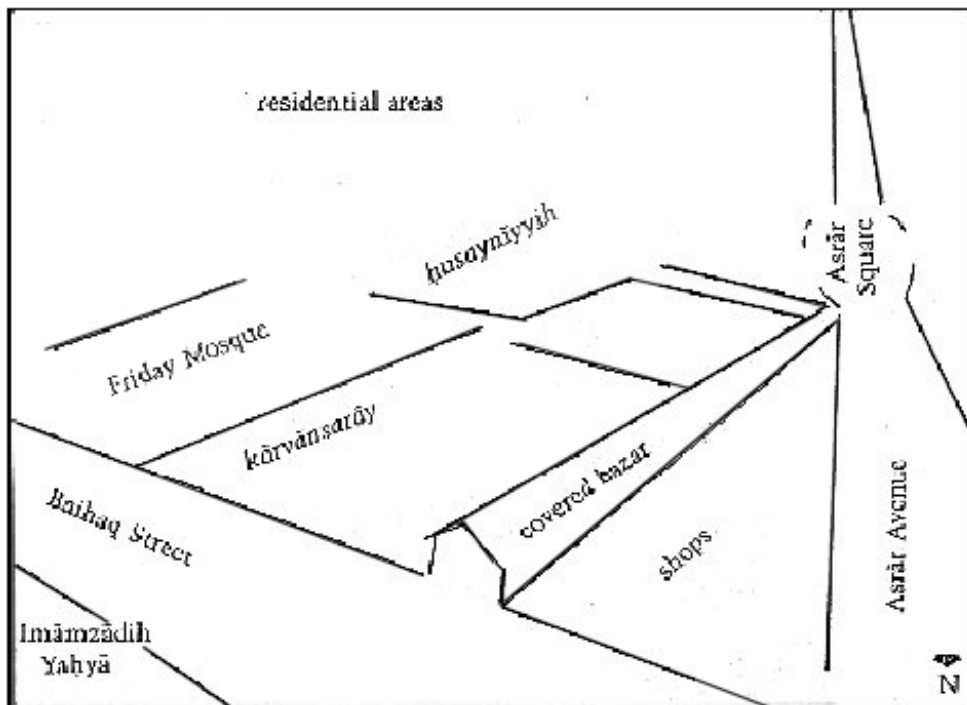


Figure 12: Sabzevar city after implementation of its comprehensive plan in 1980; the roof of the traditional bazaar is demolished and widened to form the major street of the modern city.

Source: Kheirabadi, M. 'Iranian Cities, Formation and Development'.



**Figure 13: The city centre of Sabzevar city today; the present bazaar was a major branch of the main bazaar; the original domed roof has been replaced by a metallic one. Source: Kheirabadi, M. 'Iranian Cities, Formation and Development'.**

David Hamer in his article “Planning and Heritage“ summarizes the modernization process in urban areas in 20<sup>th</sup> century. As he explains, at the beginning of century in reconstruction of city centres, the key issues were the relationship between heritage and planning. The flaw in the new urban planning was the assumption that older urban cores could be opened to accommodate modern traffic. In the later part of the century, after immense damage had been done to heritage, this approach began to prevail. The planners developed the concept of entertainments, theatre and arts districts in which historic ambiance and the protection of historic structures play a big part. In many European cities, the historic cores are now largely given over to these functions, and the protection and enhancement of heritage are top priorities. From beginning of second half of the century the attitude toward modernization changed strongly. Rehabilitation replaced demolition and conservation began to appeal as an alternative planning strategy. (24)

Homayoun Alemi describes the development phases of Tehran from 1850 to 1994. He summarises situation of Tehran city after modernization so that; ‘after the second world war Tehran lost the balance between its growing population and the availability of public spaces, between social participation and private life, between transport and traffic, between the function of a building and its appearance. In a few words, what was lost was the balance between modernization and history. Open spaces were built up. The villages around the city were buried inside the expanding metropolis, thus losing their original character and social cohesiveness. The drastic loss of traditional culture and customs is reflected in the neglect of the existing urban structure, which looks dated and old-fashioned. The collective memory and the buildings that symbolized it demolished to be replaced by new ones, which were probably more functional but lacked historical and cultural roots. This loss of historical references in the city reduced the sense of national identity. The lack of a collective sense of identity or belonging is what the Persian society is suffering from today’. (25)

‘Today modern cities and other man-made elements in the physical environment are becoming shapeless because they lack planning principles. But no such principles will be forthcoming and no action will be taken until the process of design is controlled by recognition of the realities such as importance of privacy in a Moslem society. While failing to produce satisfactory new environments, we are losing the best of the old, ancient, powerful symbols and images, and unique and irreplaceable spaces. Buildings and many memorials, man's most telling evidence of a traditional way of life is being neglected or totally destroyed, and we as a modern society seem to be unable to produce their modern equivalent’. (26)

During the last half of the century, many old centres of traditional Iranian cities demolished and replaced by new development programmes under the name of slum clearance. The misunderstanding the concept of modern city has allowed the modernists to cause injuries in historic cities, which often after half of the century have not yet been mended. In the large cities the traditional design concepts replaced by European life style and standard of living. The two fold face of these cities being further complicated by the deliberate choice of some architects and planners who have had more time to see the west and less time to appreciate their own architectural heritage. Although the modernization process hasn't stopped, the drastic situation of historic cities and high attention to the quantitative aspect of modern planning system design absorbed the attention of architects and planners. A critical review of the achievements and failures of modern city planning in 20<sup>th</sup> century reveals that modern societies can hardly afford to dismiss the values of pre-industrial urban structure as absolute. This is especially true for the societies of the so-called developing world, which in many respects are much closer to their reindustrialise cultural roots and to corresponding spiritual and social resources. (27)

However, it is not impossible to correct this current trend and to conceive a more constructive role of urban planning. Our professionals and our society are fully capable of coping with the large scale of complex problems, and of producing environments that could improve the quality of life for our people. But to do this we must first recognise the dominant circumstances of the present urban culture and how we are affect by it. We are responsible for making every urban form part of a fully functioning environment system and for providing the balance, which such system demands. (28)

Over the last decade, cultural identity and creative diversity have become highly publicized issues on the international level and Iran too. The concept of 'modern city' has changed it's meaning. Problems of disorientation, rootlessness and alienated from the society has questioned the quality of life in modern cities. And most of all, the concept of 'historical continuity', and learning from the past turn to be not only a back warding step but an effort which can link past, present and future together. This explains the search for strategies in design that allow the adaptation of traditional and cultural values in modern urban planning system. Now the issue is how to use the architectural and urban heritages of the past in creating environment with human scale and spirit. Unfortunately there is no special framework, which we should use. But the first step is to consider urban environments as the primary elements and then see whether we can create the spirit that is needed. It may or may not be successful but an effort must be made to do that.

## ***1.5 Summary***

Due to its strategic situation in Southwest Asia and its oil resources, Iran has a special geo-political and economic advantage to develop economically and socially faster than other countries in its category. The existence of oil gave Iran the power to undergo changes from a pre-industrial society to a modern country in a short period of time, which otherwise would not have been possible so rapidly. The dependency of Iran's economy on oil resulted in the neglect and weakness of other economic sectors on the one hand, and social transition beyond its capacity on the other. This fast development was followed by a gap between the quality of social life and technological changes. As predicted, the economy of Iran even after the Revolution continued to be dependent on the Western world. The 8 years of the war was one of the main reasons, why the economy of Iran became more dependent on the Western imports.

The existence of a few cities with very large populations is one of the main characteristics of many developing countries. The gap between social and economic development, along with the concentration of urban infrastructure and social welfare in large urban areas, has not stopped the people leaving their small cities for a supposedly better life in the cities. The unplanned migration has resulted in emergence of the urban areas, which are statistically recognised as a city, but a large share of their people is still socially underdeveloped. Based on the definition of the Statistical Centre of Iran, every settlement with more than a five thousand inhabitants, is recognised as a city and can have its own municipality. Regarding this definition, the number of cities increases every year, but in reality there is a reverse relationship between the number of the cities and the urban population.

The sudden economic and social change of Iran, and their effect on traditional cities made these cities weak in answering the fast technological improvement. Reconstruction and improvement activities that began in Iran at the beginning of the 20<sup>th</sup> century were the first urban planning actions, which aimed at improving the existing cities, based on the needs of the modern world. Unfortunately, in some cases, the ignorance of planning authorities, and exaggeration of modernity, led to the interference with historical texture. In the second half of the 20<sup>th</sup> century, many cities (most of which had valuable historic centres) were the target of this so-called modernisation. Under the effect of these new development policies, large numbers of people emigrated from rural and small cities to the larger urban areas. In less than a few decades, these cities changed into metropolitan areas in name but not in quality.

Ahmad Sharbatoghli in preface of his book "Urbanization and Regional Disparities in Post-Revolutionary Iran" explain significant events which have

played important roles in the formation of spatial structure in Iran in 20<sup>th</sup> are: the discovery of oil, the rise of Reza Shah (1925-1939), and subsequent centralization of state apparatus, the 1978-79 revolution; and the Iran-Iraq war which resulted in millions of war refugees and the destruction and damage of many cities, towns and villages. (29)

A realistic review on the urban situation of Iran in the last half-century indicates the uncontrolled urban development of some urban areas. Of course this has been the case in some of the large cities, mostly Tehran. Fortunately small cities cannot expect big changes. They are still influenced by their traditional social behaviour and are economically underdeveloped. Hopefully, this situation, along with suitable improvement programmes, will help these cities to keep and adapt their historic characteristics. Large cities that have suffered so many years of so-called modernisation have lost their historic characteristics will in the future, continue to offer living standards. With the help of a new urban vision of the modern city that retains and rehabilitates its traditional characteristics, the planners should try to correct the planning objectives by improving the existing situation in these cities, and by considering the design principles of the old cities, in planning future living environments.

To stay alive, cities need to go with technology but this does not necessarily mean replacing a traditional brick vaulted roof of a bazaar with a metallic one as in Sabzevar city. Surely cities need more than 'spirit' and 'identity' to 'stay alive'? And what exactly are a city's 'social values' and 'character' that they are so strong to 'keep a city alive'.

Islamic religion covers a whole range of countries from Asia to Africa. And although these countries have the same religious roots, still are culturally different. In order to gain a suitable adaptation of modern technology, these countries should define the concept of modernization regarding their social and cultural context. Modernization with respect to cultural identity should not renounce the benefits of modern technology. But it makes it clear why careful selection and adaptation of technical innovations is so important in order to absorb and to integrate them into a meaningful cultural system.



## ***1.6 Conclusions: What can we learn from the past?***

The contrast between modernity and cultural values had the most negative effect in historic parts of traditional Iranian cities, which gradually vanished as new developments influenced entire cities. In many of these cities historic cores have already been destroyed, and have left great monuments isolated and surrounded by new development. But in spite all economic and social changes, the historic centres were so intrinsic to the national way of life that technological change could not afford to destroy them completely. They are still an alive part of the cities and will always remain the cultural representative of our nation.

In few words, what is missing the modern cities is spirit and cultural identity. And the only way to give them the needed spirit and identity is to understand the realities about the historical cities. These realities are cultural values and social way of life, which have shaped the traditional living environments in centuries. Cultural values are qualities which are essential for building cities and sustaining them over time, but which urban civilization is unable to produce by it. Bianca says: ‘tradition means the chain of revealed truth, wisdom and knowledge, which is transmitted and renewed generation by generation, this linking various successive layers of temporal existence to the primordial reality which originated them’. (30)

Islamic religion covers a whole range of countries from Asia to Africa. And although these countries have the same religious roots, still are culturally different. Cultural values are the only principles, which differentiated societies from each other. Therefore, in order to gain a suitable adaptation of modernization to cultural values, each society should define concept of modernity for itself. But defining modernity with respect to the cultural identity should not renounce the benefits of modern technology. Innovations are so important in order to absorb and to integrate them into a meaningful cultural system. This will question the role of Architect and planner in using their knowledge and wisdom in urban design approach. In last half of the century some innovating architects and planners as Hassan Fathy, through their architectural work tried to prove the possibility of considering the traditional design principles in providing appropriate and affordable shelters in modern design context.

Historic cities of each country are open books to learn from. In fact they are an integral reflection of man’s innate aspirations. To learn from the past necessitate the respect and understanding the philosophy hid in muddy structure of historic cities. The revitalisation of the spatial and architectural

quality of this structure is a necessary aid in learning how to form the future cities. Since transformation of European modernization concept to eastern countries, economic justification about urban development has been a deliberate attempt to separate culture from development. Consequently, in modern concept of urban planning, rehabilitation of historic areas has always relied on economic justifications. But in order to achieve appropriate design strategies, the gap between planning and conservation disciplines should be reduces.

Learning from the past should accompany the fact that what we can learn from the past are urban design values, perceiving the quality of form and spaces, but it is not something to be directly transformed into new design system. We should be able to take space organization and principles in a modernized expression of past forms. Choosing appropriate strategies in design of modern urban area will avoid the risk of superficial transfers or dependency of foreign ideologies and eventually generate a meaningful new system of cultural references. As Bianca believes, rehabilitation of historic cities is an attempt to keep alive values, which are not measurable with the instruments of quantitatively, oriented modern civilization, but which are essential for people's spiritual emotional and physical welfare. (31)

To link past to present and future doesn't mean to copy the old urban design principles and elements and create new environments without understanding the values hided in these design principles. We shouldn't learn just to imitate it which it won't have any value. We should touch each principle, understand it, and learn how is possible to adjust it in modern urban planning system. Within the historic town are the attitudes and activities that connect people and their environment in a world of changing values, economies and social distinction not just the form and physical structure. The conservation of such heritage areas need to be based on an erudite and philosophical understanding of the relevant human interests within the specific geographical and social context and not merely on maintaining the fabric. (32)

In order to support above argument, in next two chapters, this work will study the structure and the main elements and design principles of traditional Iranian cities. The aim of these two parts is to understand the quality of these cities and to determine which timeless principles and cultural values have had the main role in building their environment.

## **Footnotes**

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## ***2. The Traditional Cities of Iran***

### ***2.1 Introduction***

This chapter will deal with the analysis of the emergence of Iranian cities and their historical development, their infrastructure, and their main design principles. The aim of this analysis in the first place is to have a view on traditional urban planning and architecture to increase the understanding of Iranian people of the construction of their living environment, and secondly it is an effort to provide an information base for further discussion in following parts.

The emergence of cities and evolution of their elements is the most valuable part of the urban planning history in Iran. Existing old cities are the only witnesses of this historic continuity. These cities, in replying to the needs of their residents, have been able to build the most valuable connection between human beings and their environment in a very long and slow process. These traditional documents are losing their value through modernisation. But what they have been in the past, and what they are today, should be respected and be seen as a learning base for improving our knowledge in planning present cities and developing better living environments in the future.

### ***2.2 Basic Factors in the Emergence of Cities***

#### ***2.2.1 Natural-Geographical Factors***

Traditional Iranian cities have developed with regard to the natural-geographical characteristics of their environment. Bazaars in hot and dry climate use the depth of the earth to benefit of it in hot and cold seasons. Houses in Shushtar or the city of Dezful in the south use natural underground space for its cool climate in summer, houses in Nain have excavated gardens to reduce the dryness of the desert, while the houses in cities like Mashhad and Semnan in north east take advantage of other natural capacities. The location of Iranian cities, mostly the big and developed, has always been dependent on the morphology and the liveability of their land. The accessibility of residential areas depends on ecological characteristics. For this reason the parallels growth of two or more big cities near or even few kilometres far from each other can be found.

### ***2.2.1.1 Geographic Factors***

The geographic factors have high effect in the shaping and physical development of the city. Primarily this has been subject to the micro natural-geography of its environment. After the emergence of primary settlements in Iran, two phenomena have affected its development, firstly access to existing building materials on the site, secondly, methods of building especially in the desert and mountain cities.

In exposing the close relationship between the life of the city and nature, the role of the building materials is very important. In one way, it limits the quantity of structural space of the city. And in another way, when used for roofs and facades of buildings (because of special physic-chemical combination), it produces a colour, exposes the relation of the city with the surrounding environment. (1)

### ***2.2.1.2 Ecological Factors***

Another phenomenon, which determines the fabric and the form of a structural space of a settlement, has been a result of the ecological factors. The existence of Water (drinking, agricultural and service water), has always secured the survival of Iranian cities. This case has been more important in desert cities and less important in cities next to the Caspian Sea, and in some of the western cities. The existence of water has also influenced the quality of urban infrastructure, the location and quality of it's agricultural land, and has contributed to the form which guided the way of physical development of settlements. In some of the Iranian cities, the way of water distribution to houses and public buildings, such as public baths, mosques, did not have a direct effect on shaping these units, but has affected the design of the city. Bringing water to a city through covered channels required the possibility of building these channels. Also, since the water must pass through houses one by one, the existence of a sanitation system and a good social co-operation between residents has been necessary.

The existence of cities in desert areas depended on ecological and natural factors such as water. The form of the water's distribution network in these cities, affects the form of the city, density of buildings, and physical development of the city. The role of a Qanat (underground water channels) in the emergence, development and even decline of a city such as Nain, has been as important as the other factors such as the concurrent existence of Isfahan city in short distance. (2)

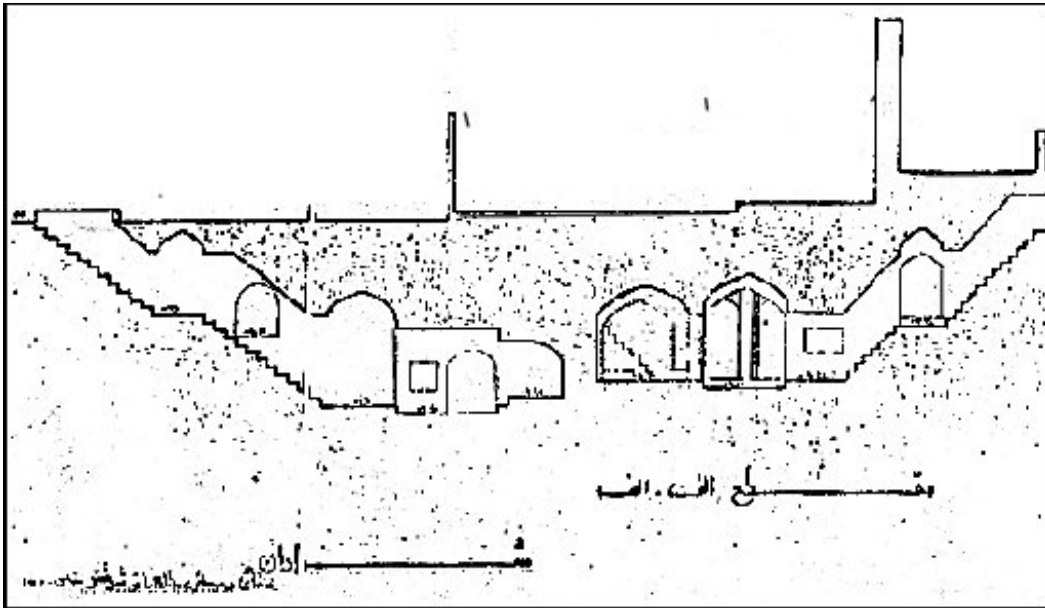


Figure 14: Example of an underground space (Shavadan) in city of Shushtar.  
Source: Mahdavi, A., 'Natural capacity in hot and dry zones', Jan. 1985

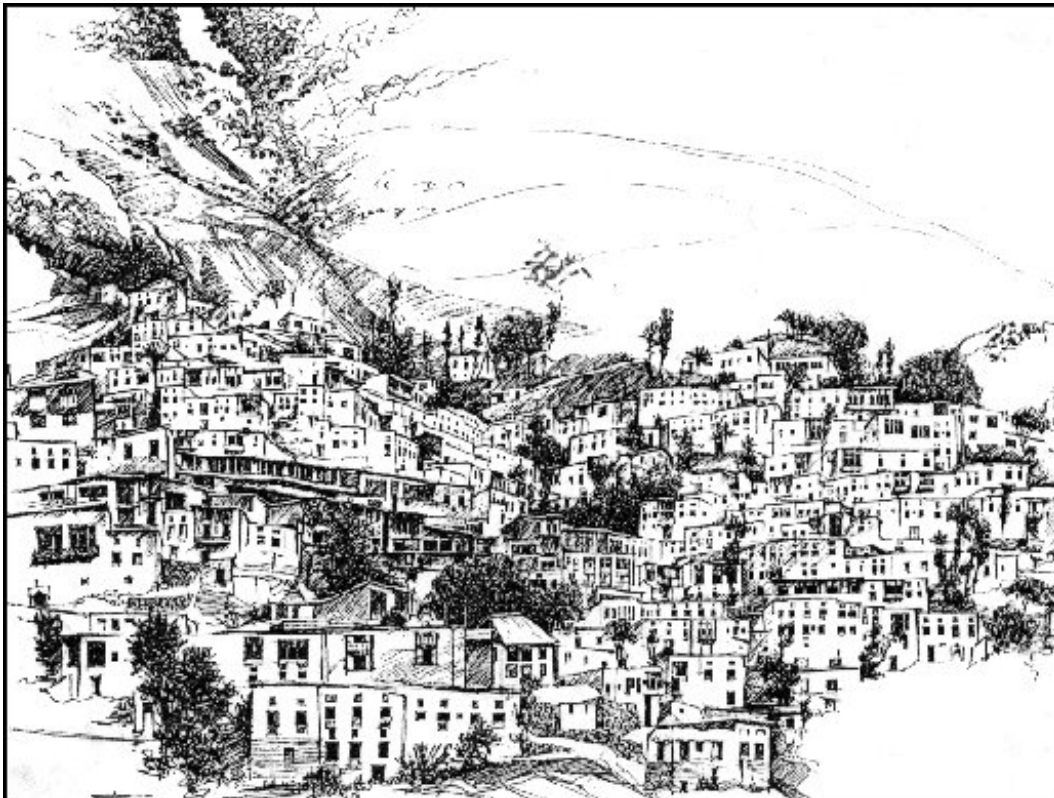


Figure 15: Village of Massoleh, near city of Rasht in north of Iran.  
Source: Seyhon, H., 'A view on Desert Architecture in Iran', 1989.

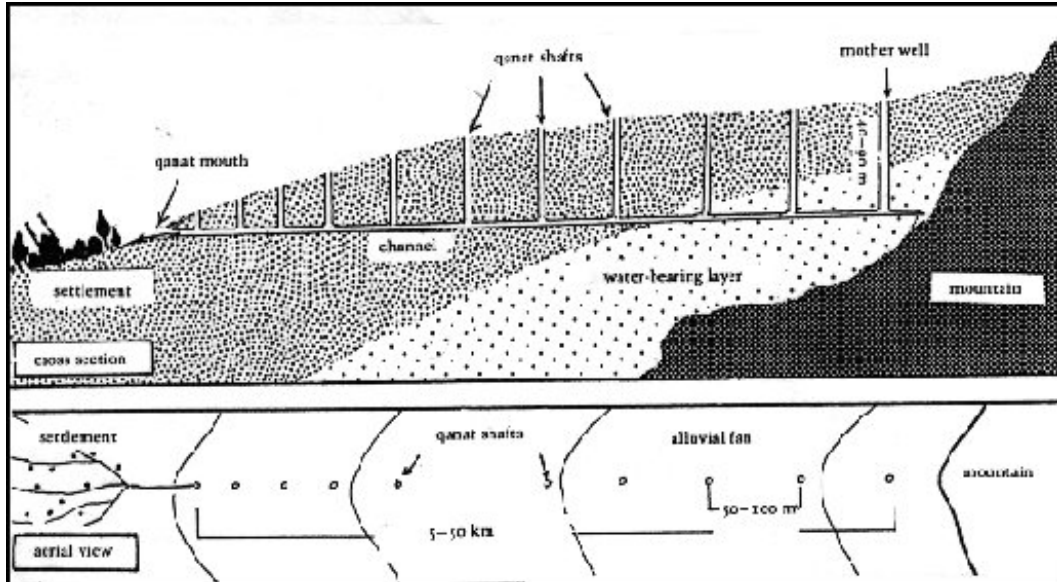


Figure 16: Diagram of a typical Qanat (underground water channel); the water distribution network in desert cities.



Figure 17: Qanats in Kerman city; Qanats are seen as continuous lines of mounds. Source: Kheirabadi M., 'Iranian Cities Formation and Development'.



### ***2.2.1.3 Defence Strategy***

The third factor of influencing the form of the old Iranian cities is the defence against possible attacks. The effect of this aspect is twofold, firstly, the location of the city in its natural base, second the city fabric, and criteria, which have been used as, designs regulations for streets patterns and public spaces.

In choosing the location of traditional cities, the topographical situation has always played an important role. Some of the old Iranian cities have had a special defence strategy, which has affected their physical form. For example, the old city of Tabriz has narrow and spiral alleys, which prevented penetration of enemies in the city. (3)

### ***2.2.2 Non Natural-Geographical Factors***

Apart from natural-geographical factors which have been the main reasons for the emergence of most of the Iranian cities, there have been some other elements which have also helped the emergence, evolution and shaping of some of the cities. One of the most important has been the political-administrative factor with regard to the ruling powers. Other factors such as commerce and the economic relations with other countries have also been a reason for the emergence of cities.

The main reason for the emergence and the life of these cities has been their function. These cities usually emerged along main roads and routs across the country, by rivers, ports, castles and seasonal commercial centres. Some other cities have emerged in regions where natural and geographic factors have been less important and were more dependent on the political and military position of an area. These cities have possessed a special strategic position and are located mostly on the borders of the country.

Religion has been another important factor, although the importance of this factor in the design of pre-Islamic cities, because of a lack of information, is not clear. The existing historical evidences indicate the contribution of religion in the emergence and life of some cities. In shaping and evolution of some existing cities, religion continued to remain an important factor.

### ***2.2.2.1 Administrative and Political cities***

One of the most important reasons for the emergence of towns and their administrations has been the provision of urban technical infrastructure. And the most important of these has been the establishment and maintenance of an irrigation system. Defending people against attacks from other groups has been another important responsibility of administration. Defence against nomads, is an important part of Iranian history. Therefore, regional and geographical characteristics of Iran led to the emergence of the centralised powers with special political and administrative organisations. The main function of these cities has been their political and administrative powers.

### ***2.2.2.2 Military Cities***

The strategic situation of Iran has resulted in protection of the borders as one of the main political priorities. One of the most effective ways of protecting from attacks has been the development of cities in strategic areas of the country. The history of Iran has witnessed the emergence of these cities in different periods. In the emergence of these cities the internal revolt and attacks of nomad-tribal groups, have been as important as outside attacks. The round shape design of these cities, indicate the importance of protecting central parts of the city from possible out-side and internal attacks. (4)

### ***2.2.2.3 Religious Cities***

There is little information about religious cities and religious spaces before Islam. The existing historic information's indicate the existence of temples in nearly all of the cities. Some of these cities religiously have been more important than the others and are known as religious city.

One of these important religious cities was located in the south of Iran and one of its biggest temples has remained. Today this temple is located in an area called after the temple, 'Choghazambil' in the Khozestan province. Choghazambil is part of an ancient huge building complex called 'Ziggurat'. This temple is in fact an ancient building in Iran. In this complex, apart from spaces, which were identified as palaces, a very high-developed water distribution system has been found which a dam of Dez River originally supported. Existence of such a system, plus water purification pools with distributing channels, indicate the existence of a highly equipped and a very developed city in that time. (5)

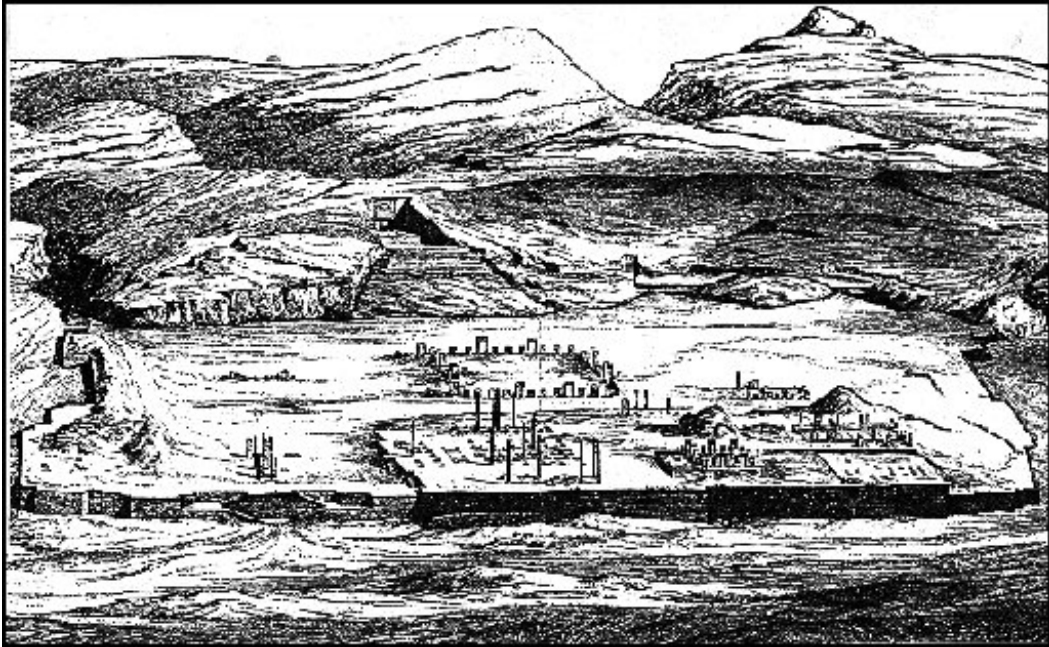


Figure 18: 'Persepolis complex' as an administrative city in Achaemenian period.

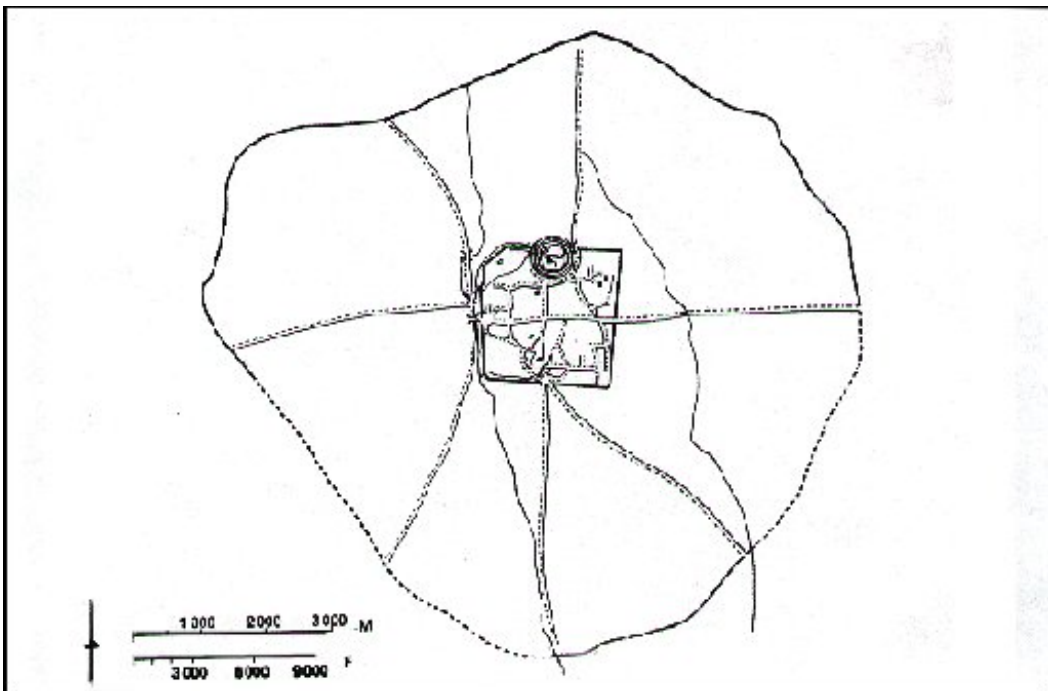
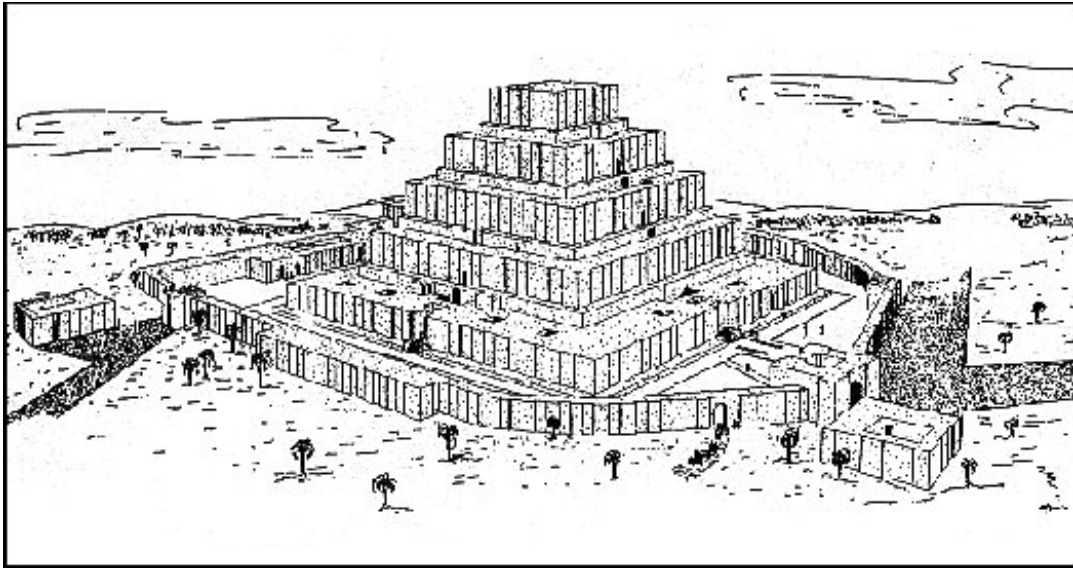
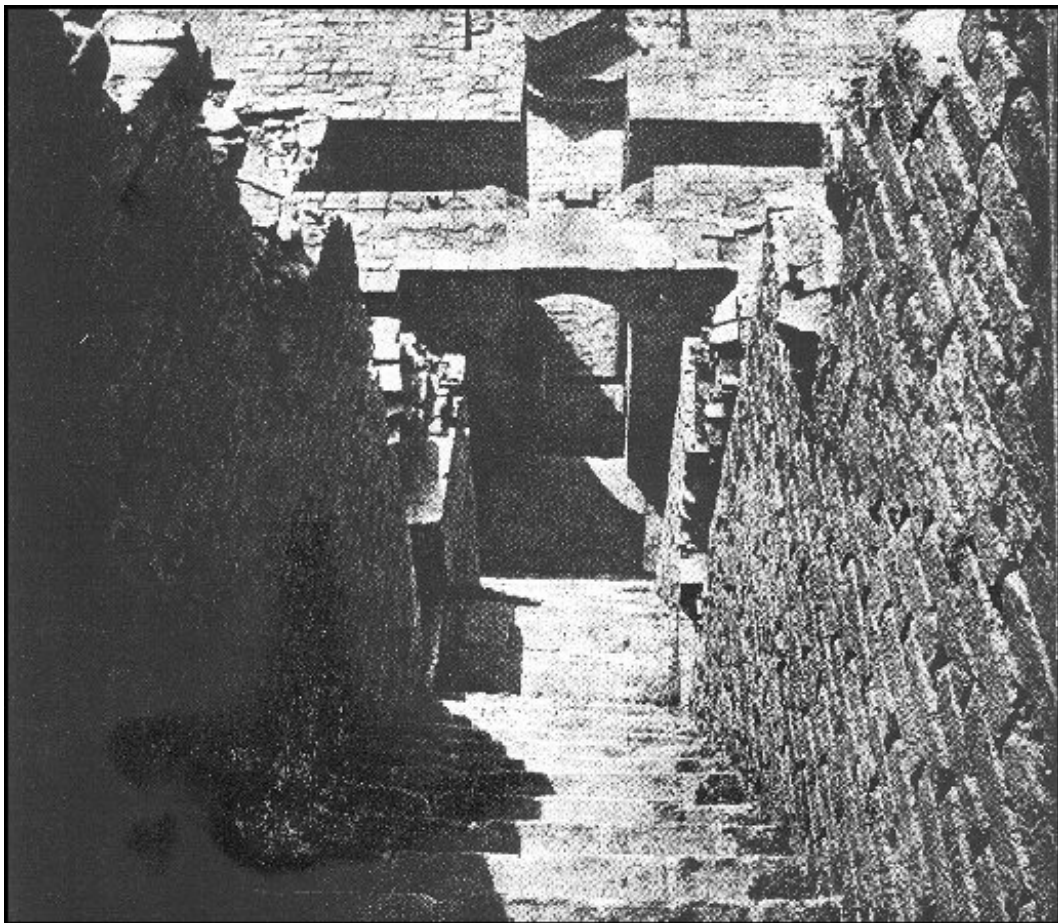


Figure 19: Map of 'Marve' city in Parthian Dynasty, 1-2 century AD.  
Source: Daylami, M., 'Architecture, City planning and Urbanism in Iran' 1987.



**Figure 20: Perspective of Choghazambil temple during 'Ilamy Dynasty'.**

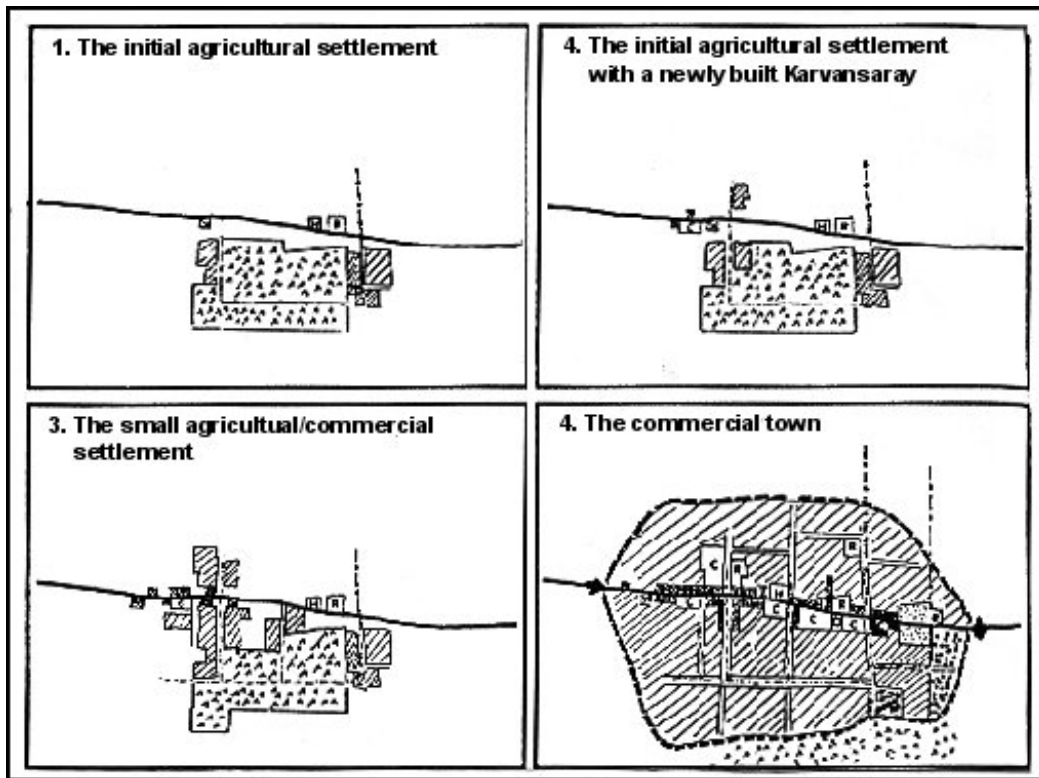


**Figure 21: Choghazambil, southwest entrance of Ziggurat.**  
**Source: Daylami, M., 'Architecture, City planning and urbanism in Iran'.**

#### ***2.2.2.4 Commercial Cities***

These cities based on natural-geographical criteria have emerged mostly along the important country roads and routes, rivers, ports, castles and seasonal commercial centres. In pre-Islamic commercial cities, attention was on producing goods, commerce and handicraft. The most important group of these cities has been the port cities along the Persian Gulf, which during the history have always been the most important commercial routes.

In the commercial cities the main urban element has been the bazaar, as a place for social communication, and a place for commercial deals in its primitive form. The bazaar in pre-Islamic periods in its primitive, and in Islamic periods in its evolving form, has played an important role in the life and development of the cities. Modern cities are the old commercial cities, which have developed with regard the bazaars.



Agriculture	Residential	Parks	City square
Qanats	Water course	Trade route	City wall
Government	The bazaar	C Caravanserai	H Hammam
M Madreseh	Q Coffee house	R Religious	Z Sport house

Figure 22: Schematic evolution of a typical commercial city along a trade route.  
Source: Kheirabadi, M., 'Iranian Cities'.

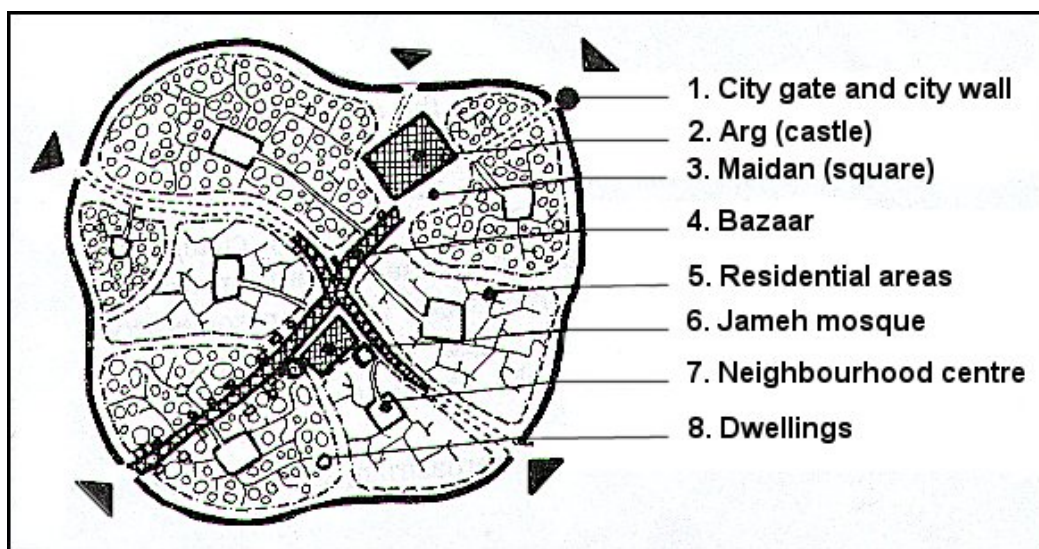


Figure 23: Structure of a commercial city in Islamic period.  
Source: After Soltanzadeh, H., 'History of City and Urbanism in Iran', 1986.

### **2.3 Urban Elements and Urban Spaces**

Many city elements primary shaped in pre-Islamic cities. They emerged and developed based on the needs of each period, or were completely destroyed as a result of inefficiency. The main elements of Iranian ancient cities were Kohandezh, Sharestan, Savad, Maidan (square), bazaar, neighbourhood, and mosque, Madreseh, Arge and Baro. In Islamic periods, some of these elements lost their efficiency and the others; Maidan, bazaar, neighbourhood, mosque, and Madreseh remained as the main elements of traditional cities in Iran.

#### ***-Kohandezh***

One of the most important political-administrative city elements in pre-Islamic period was Kohandezh. This has been a special residential area of kings, leaders and members of the court. Due to its importance, it was located in the centre of the city, higher than other areas. It was a completely independent and self-sufficient organisation, surrounded and supported by walls, ramparts and moat. In some of historic periods, temples and their dependent spaces had been established. (6)

#### ***-Sharestan***

Sharestan has been residential area for government and the army members. A wall and other necessary fortifications also surrounded this part. Social discrimination was an important reason for existence of this city element (7)

#### ***-Savad***

Savad has been in fact the suburban area of the ancient cities. The suburban areas of most of the cities were villages and settlements for farmers and craftsmen. (8)

#### ***-Neighbourhood***

Various factors such as geographic-climatic, defence oriented, cultural, historic and socio-economic reasons could have caused the emergence of settlements. Relations and continual contact of people has led to stronger relationships and increasing unity between them. Iranian cities, through domination of Arabs and Islamic religion on Iran (642 After Christ's), got very changeable and unstable situation. To overcome this situation, special urban form was created. In pre-Islamic cities, residential areas were divided based on socio-economic factors. By domination of Islamic religion, some other factors such as tribal relationships, and religious factors added to the others. (9)

The position of the minor religious groups (Zoroastrian, Christian and Jews), affected the importance of economic and social divisions. In such situations, in order to stay alive and build a stronger religious and social position, the

members of each religious group came together and settled in neighbourhoods separated from others. The fact that minor religious groups lived together had a strong effect on the design of urban areas. Some valuable examples of these cities apart from Isfahan are Yazd and Kerman on the edge of the desert, which throughout Iranian history have been important centres for Zoroastrian and Jewish minority groups.

### ***-Neighbourhood Centre***

Neighbourhood centre in providing the necessary urban infrastructure and spatial arrangement of its public and private buildings has been able to give special identity to each neighbourhood. The neighbourhood centre is recognised as the main part of a residential division, and it turns out to be important as an urban element in the development of the neighbourhood system in traditional Iranian cities. Apart from factors which have affected structural characteristic of each neighbourhood centres, in some areas, special ecological situation has determined the type of elements. For example in the northern areas of the country where residents of each neighbourhood simply have received their water from rivers, or in the areas with shallow wells, there has been no need for a public water reservoir in each neighbourhood centre. But in cities as Yazd or Nain where there were no such possibilities, residents of each neighbourhood have had to provide their water through underground water channels (Qanat system) and store it in water tanks.

Customs and traditions of each city and each group have also played an important role in the spatial form of each neighbourhood centre. Some of the cities have given more value to religious ceremonies and have built the necessary spaces in their neighbourhood centre such as Hoseinieh in Moslem quarters. Hoseinieh is an open space for religious gathering as praying and other cultural and community activities. These spatial semi-independent concepts, have varied from one city to another and from time to time. Each neighbourhood with regard to the services, has been a small city. The location of the services in a neighbourhood centre has been very important. The best location was at the intersection of the main streets, or in the physical centre of the quarter. In some of the cities, neighbourhoods had special gates, which could be closed in emergency cases. The internal space of each neighbourhood has been a semi-public space. This spatial division between neighbourhood and urban spaces, has been able to provide quiet and private space for its residents.



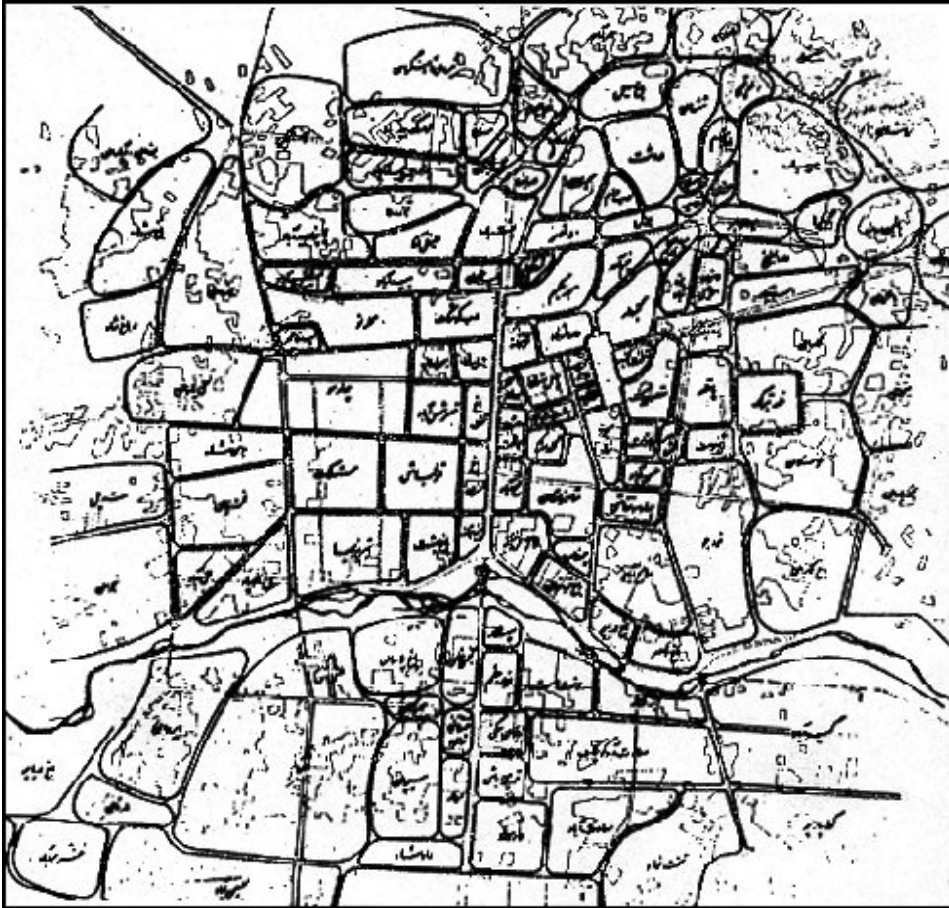
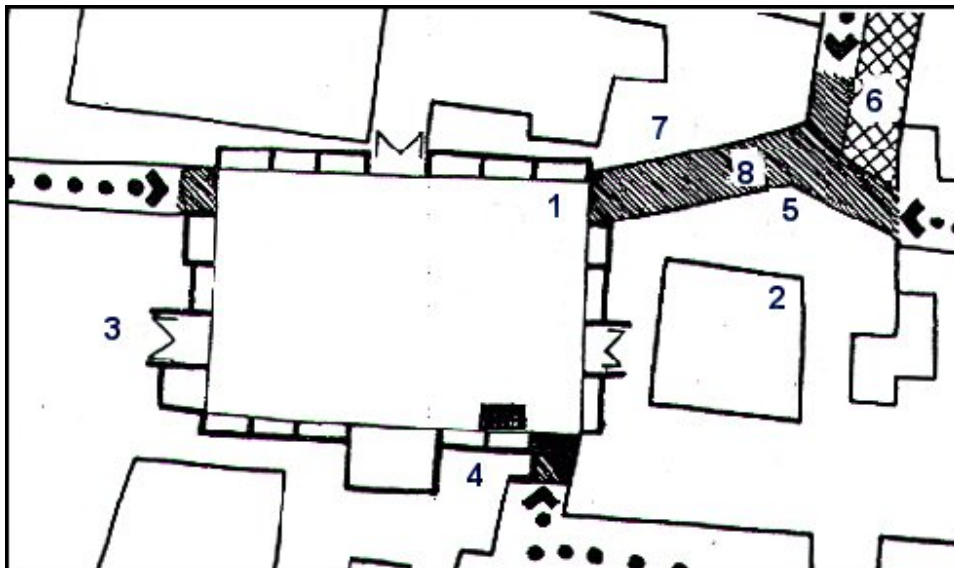


Figure 24: Neighbourhood system of Isfahan city before modern urban planning.  
Source: Falamaky, M., 'From Venice to Shiraz', 1978.



1. Open space      3. Hoseinieh      5. Hoseinieh      7. Drinking fountain  
2. Mosque      4. Water reservoir      6. Bazaar      8. Covered passage

Figure 25: Centre of Kelvan neighbourhood in Nain city.  
Source: Soltanzadeh, H., 'History of City and City planning in Iran', 1986.

### ***-Bazaar***

Bazaar as an economic element formed already in commercial pre-Islamic cities. The bazaar in rural areas has also been established as temporary markets. The bazaars in rural areas located in access to other areas. The role of the bazaar in development of cities, has been so important that future of a city has been dependent on it. Originally the initial nucleus of most bazaars was formed around one of the gates of the cities. Usually, the development of the bazaar inside the city has been mainly from city gates toward the city centre. Sometimes one branch of the bazaar extended from one gate to the others.

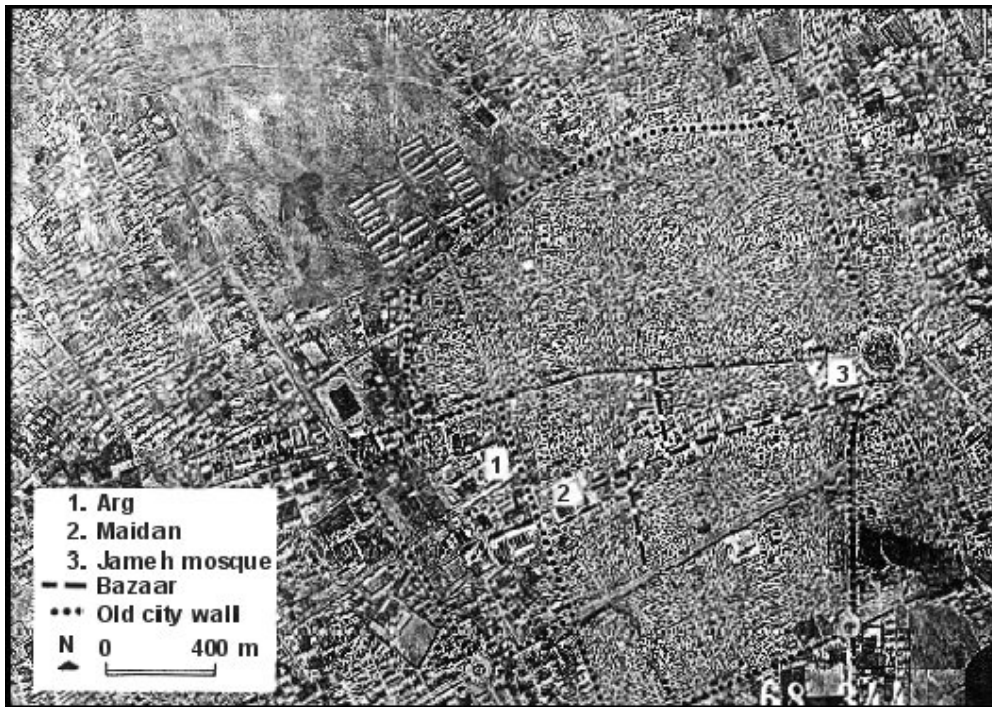
Michael Edward Bonine on his work 'Yazd and its Hinterland' describe the historic formation of old bazaar in this city: 'The main bazaar is not within the old city but is located just outside the old 'Mehriz' gate on the southern edge of the old city. The bazaar was constructed at this site shortly after the major wall was rebuilt by the 'Muzaffarids' (1314-1393).

In the late 14<sup>th</sup> century, a bazaar and two 'Sera' ( trade house), were built; a bazaar was finished in 'timurid' times (1370-15069) opposite the 'Mehriz' gate. With the addition of more branches of the bazaar, 'Sera', and religious buildings by such outstanding individuals as Mohammad 'Taqi' Khan in the 18<sup>th</sup> century and Mohammad Khan 'Vali' in the 19<sup>th</sup> century, the central bazaar complex took its present form. (10)

The formation of the bazaar elements, and their development trend depended on the main function of the city, its economic and population growth. In small cities in which the amount of commercial dealing with other cities was not high, the main part of the bazaar was allocated for supplying the internal needs of the city. In larger productive cities such as Isfahan, neighbourhood markets have been responsible for providing the daily needs of the residents, while the major part of the main city bazaar was for dealing with foreign commerce.

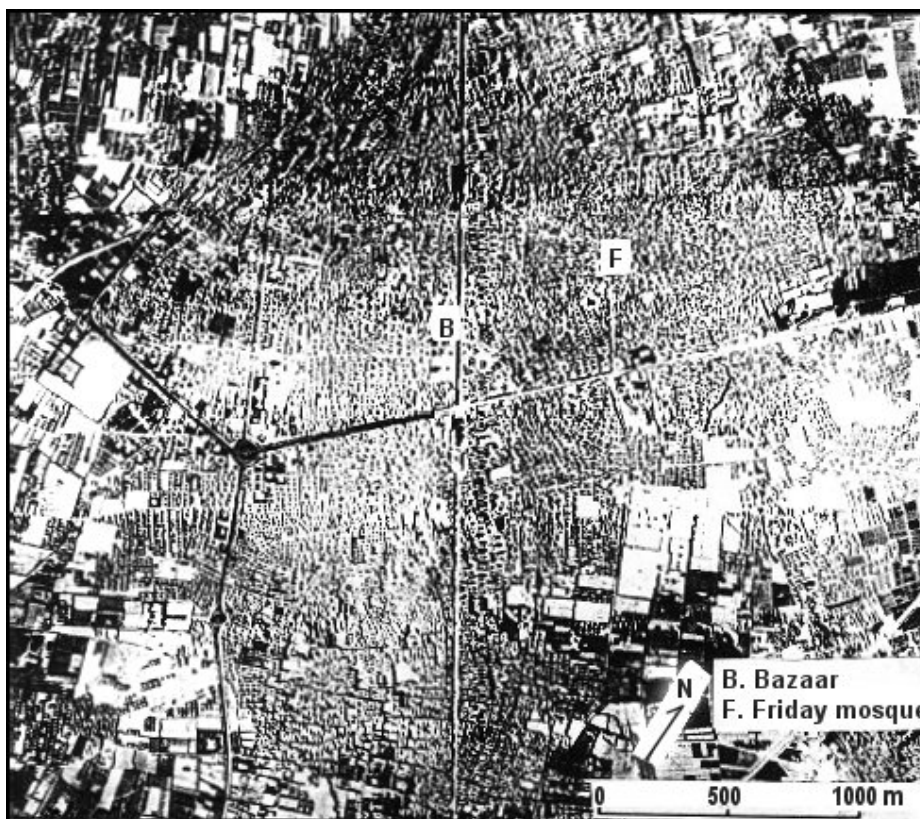
In their primitive physical form most of the bazaars, had no cover, but during their development, some of the city merchants built roofs to protect the workers and people against the heat in summer and cold in winter. The space of the bazaar was not just for dealing with commercial affairs, but included some of the main urban elements, as mosque, religious school, monastery and public baths. During the history of urbanism in Iran, the bazaar has been the most important spatial axis in the social life of the city. This axis has created a spatial link between three important religious, economic and political centres. Nowadays, there is no element in cities which could compare to the role of the bazaars.

The physical structure of the bazaar had reflected new needs of the people, and has continually changed its form. Apart from extending along the main roads and inside the residential areas, it has provided its new spaces through changing the function of the surrounding houses into a commercial area. The social function of bazaar in daily life of the city has been remarkable. Its functional characteristics have been able to absorb all the social activities. During New Year and religious ceremonies, the bazaar, or a part of it, has been the main place for celebration. Apart from different ceremonies, it has also been a place for punishing, or even used for political activities and protest against the government.



**Figure 26: Traditional city of Kerman; the bazaar, with its associated public buildings, forms the core of the city.**

Source: Kheirabadi, M., 'Iranian Cities Formation and Development'.



**Figure 27: Aerial view of traditional city of Yazd.**

Source: Bonine, M., 'Yazd and its hinterland', Marburg/Lahn 1980.

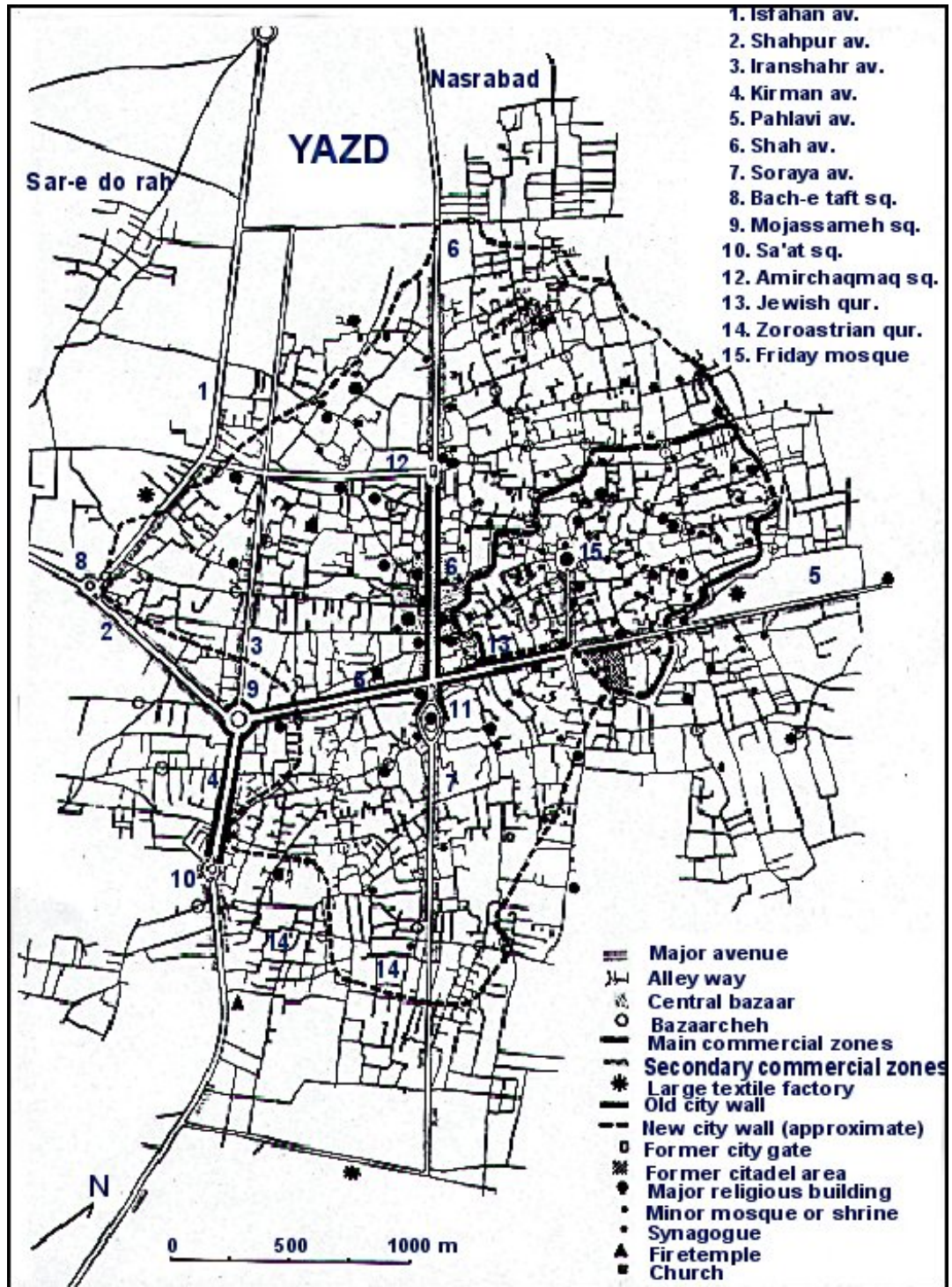


Figure 28: Structure of traditional city of Yazd.

Source: Bonine, M., 'Yazd and its hinterland', Marburg/Lahn 1980.

### ***-Mosque***

Mosques were built in Iran following the Arab domination and penetration of Islam religion into the Iranian culture. The primary mosque had a very simple form without any decoration, but through history, the increase of its importance as an urban and religious element, added to its architectural splendour. Historically, along praying, the mosque has functioned as religious school and a meeting place for the people. For this reason, until beginning of 20<sup>th</sup> century, the mosque and Madreseh (religious school), have had an integrated space, with integrated functions.

Since its transformation to Iran, the mosque has developed its social and cultural functions. Based on the function, there are four different types of mosques in Iran. (11)

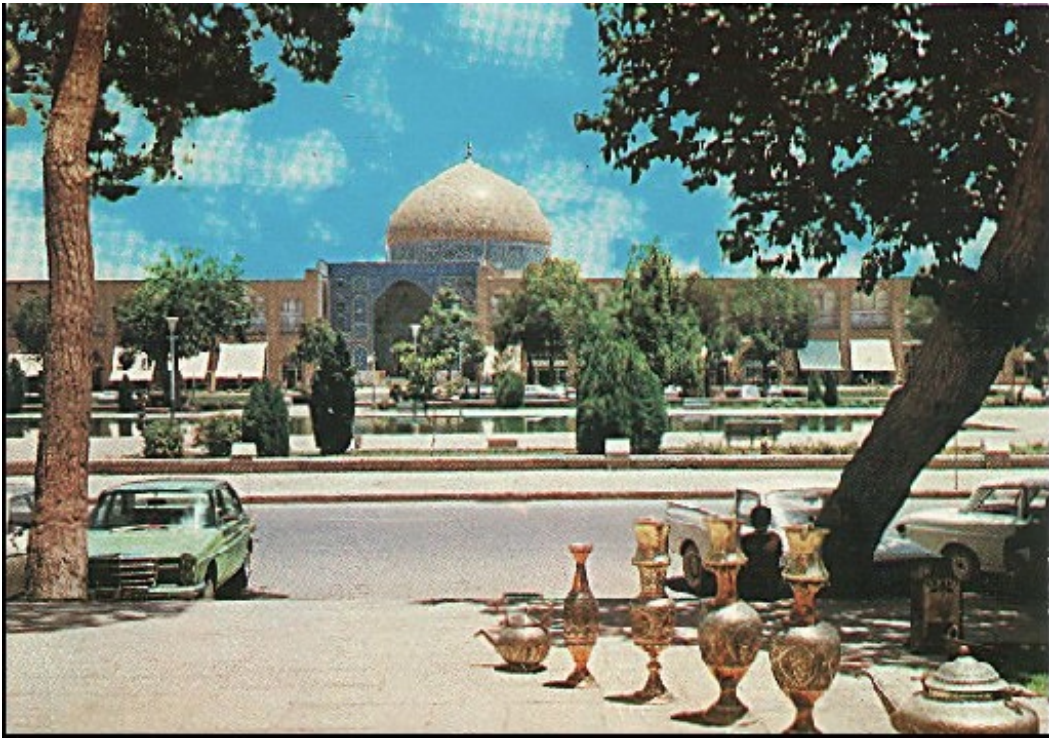
-First, the big mosques and the Friday mosques (congregational, Jameh mosques). These mosques built by leaders and kings. Although their services have been for different Islamic group, they have been practically under the control of the founder ( Sheykh-Lotfullah mosque in Isfahan).

-The second group includes medium sized mosques built by people and local nobles. These mosques have been more public without the limitations of Friday mosques (Jami mosque in Yazd).

-The third group are mosque-Madreseh (integrated mosque and religious school). Although they are not a great number, because of the dual functions (worship and education), they are important urban elements in the history of urban design in Iran (Ibrahim Khan mosque-madreseh in Kerman).

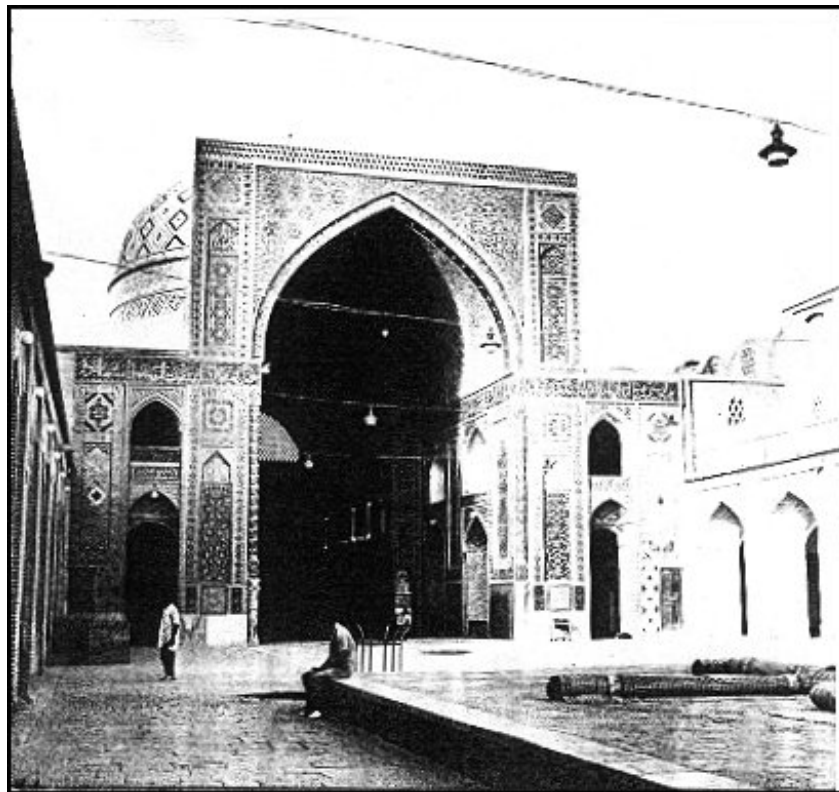
-The last group are the small mosques. The main and probably the only function of these mosques is worship. For this reason their build up area is very small. These mosques are usually built through charity and are located in neighbourhoods, along the bazaars and commercial centres .

Primary mosques were built very simple. In Iran, during history, mosque got more value as a religious element and some of local architectural characters used in its building. Veranda (Ivan) was the first Iranian architectural element, which added to the mosque. The next element was the four-arched roof, which in pre-Islamic periods was a spatial part of Zorasterian temples. Some of these temples, after Islam were used as primary mosques. (12)



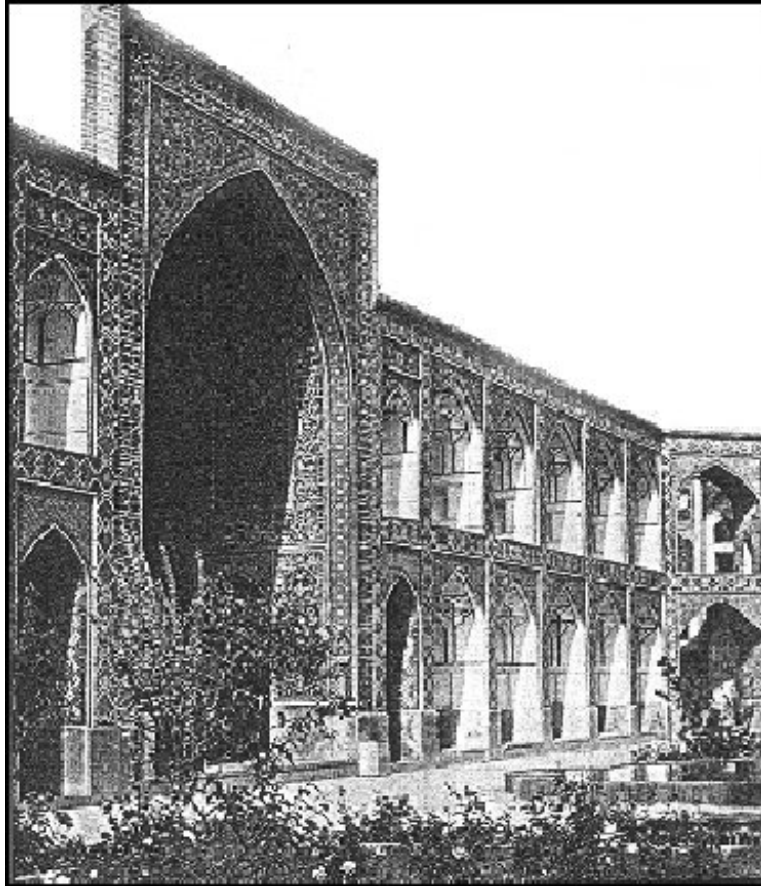
**Figure 30: ‘Sheikh-Lotfullah’ mosque in Isfahan city, for private worship of Safavid kings.**

**Source: Author.**



**Figure 31: ‘Jami’ Mosque in Yazd city.**

**Source: Hutt A. / Harrow, L., ‘Islamic Architecture’, Iran 2, London 1978.**



**Figure 32: Kerman city, 'Ibrahim Khan' Madreseh.**

**Source: Hutt A. and Harrow L., 'Islamic Architecture', Iran 2, London 1978.**



**Figure 33: A small and simple mosque without any decoration in Nain city.**

**Source: Author.**



### ***-Madreseh (religious school)***

Madreseh as an important religious element has a special place in the social life and physical structure of the Iranian cities. Madreseh has always functioned in relation to mosques. In reality the mosque has been one of the main elements and main spaces of the big schools.

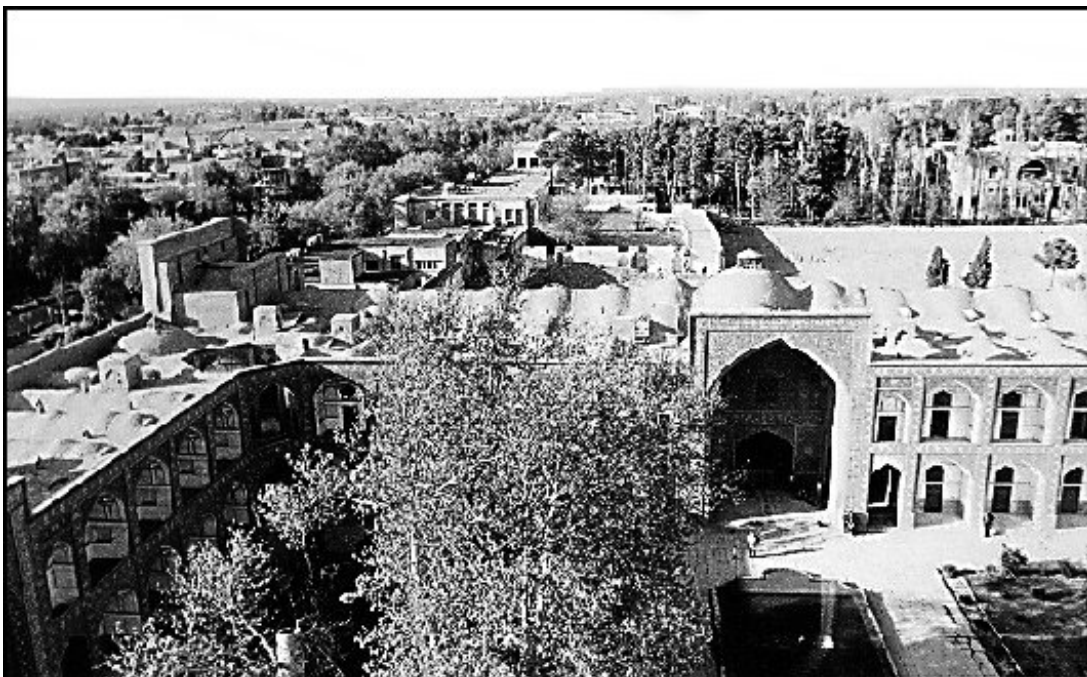
The social position of the founder was one of the factors in determining the location of the Madreseh in a city. These schools are usually located in the main parts of the city. Traditionally, some of them are established in neighbourhoods to increase their social and economic values in the city. Many of these schools, were forgotten and fallen into ruin after the death of the founder. But the schools, which built along the bazaars, and near the Jameh mosques, because of their excellent urban position, had a much better situation and were preserved.

Interrelations of the Islamic religion and politics have helped Madreseh to develop its social function. As in the case of political conflicts, Madreseh was an important space for meetings and gathering together of people. The space of the Madreseh has a more or less similar social function as a mosque. It's space in free time (out of teaching periods), functions as public place for speech and lecture.

The religious characteristic of the Madreseh has been one of the main determinants of its location in a city. Some of them have been built next to Jameh mosques and other religious centres. In commercial cities, due to the importance of the bazaar, and it's role as the main city communication axis, some of the schools have been built along it. In Isfahan city more than 10 Madreseh, and in Kashan, Yazd, Tabriz, and Mashhad and other historic cities, some have been built along the main bazaar of the city. (13)



**Figure 34:** A view of mosque of ‘Chaharbagh Madreseh’ in Isfahan city.



**Figure 35:** Chaharbagh Madreseh in Isfahan city.  
**Source:** Author.

### ***-Maidan (square)***

The characteristics and function of the administrative-political cities in Iran, created urban spaces as big squares. These urban spaces were primarily a place for temporary attendance of the army in front of the government building. Although the administrative - military and ceremonial aspects of the Maidan have been the main reason for its existence in most Iranian cities, they were not the only one. The Maidan during its evolution has been a place for temporary markets, amenities, ceremonies, New Year celebrations, races and sport competitions, punishing the politically sentenced and guilty people, or hanging criminals in public.

The function of the Maidan has been a reflection of its physical form and elements. In nearly all Maidans, a collection of governors' buildings as palaces and other similar administrative-political elements has existed. Apart from these elements, some of the Maidans shaped by residential areas and commercial spaces and some by architectural elements. This was the urban design criteria in the 15-16<sup>th</sup> century and the best example is 'Naghshe-Jahan' square in Isfahan city.

The existence of 'Ali-Qapu' Palace as political element, 'Royal' and 'Shaikh-Lotfulah' mosques as religious, and 'Gheysarieh' bazaar as the commercial elements, have made this Maidan the best and complete example of historical squares in Iran. All these elements are connected to each other through bazaars which surrounded the Maidan on four sides. The Maidan is surrounded by similar arched spaces which give it spatial harmony.

The Maidans are usually built at the intersection of the main city roads. Maidans in small cities have similar character but in smaller scale. They have at least one mosque and a public building as water reservoir. These Maidans have been without any magnificent physical structure. In most traditional cities, there are more than one Maidan. One is the main one and the rest provide needs of one region or zone of the city. The space of small Maidans is also used as Hoseinieh (a covered or open space for religious activities as speech).

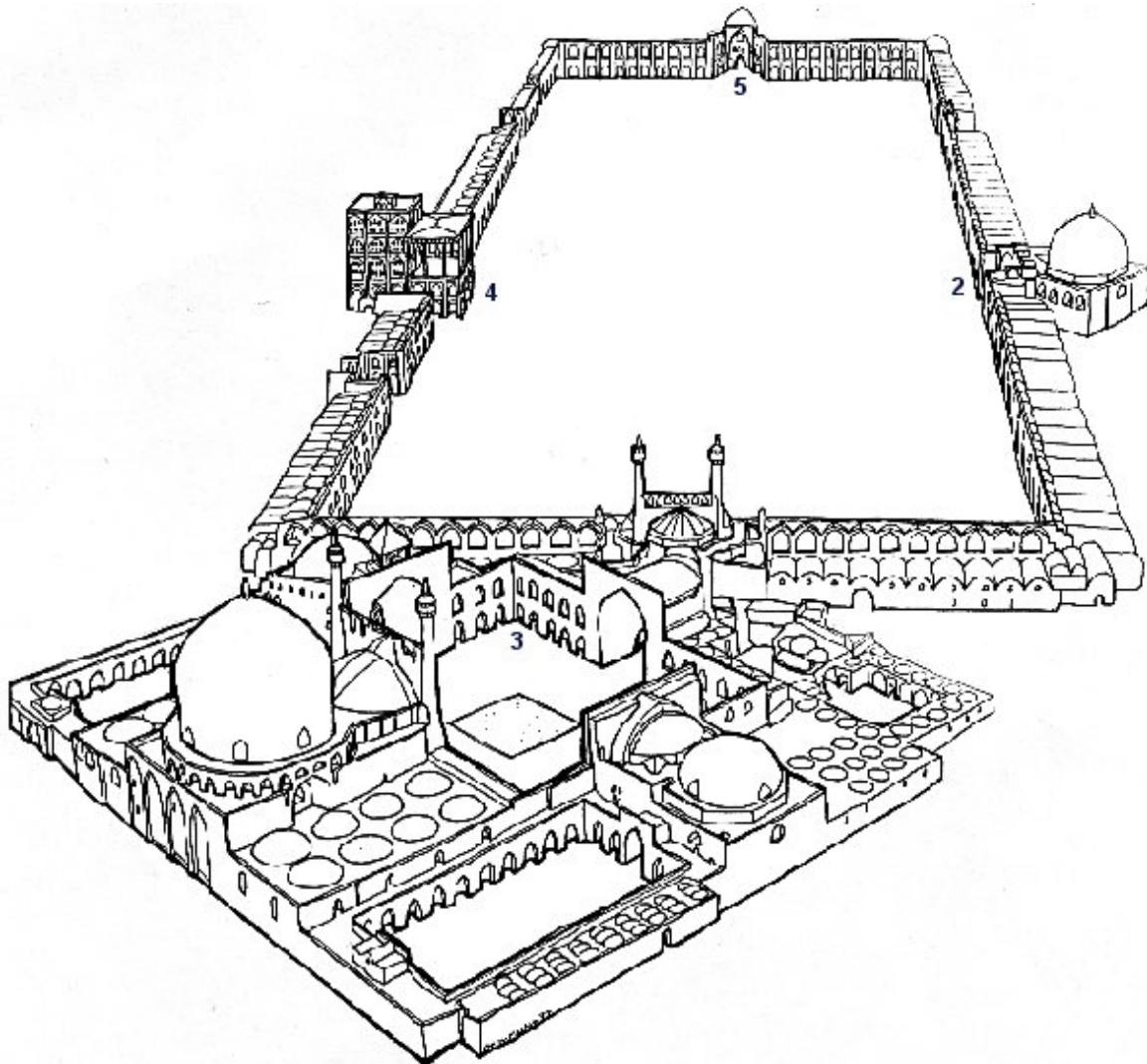
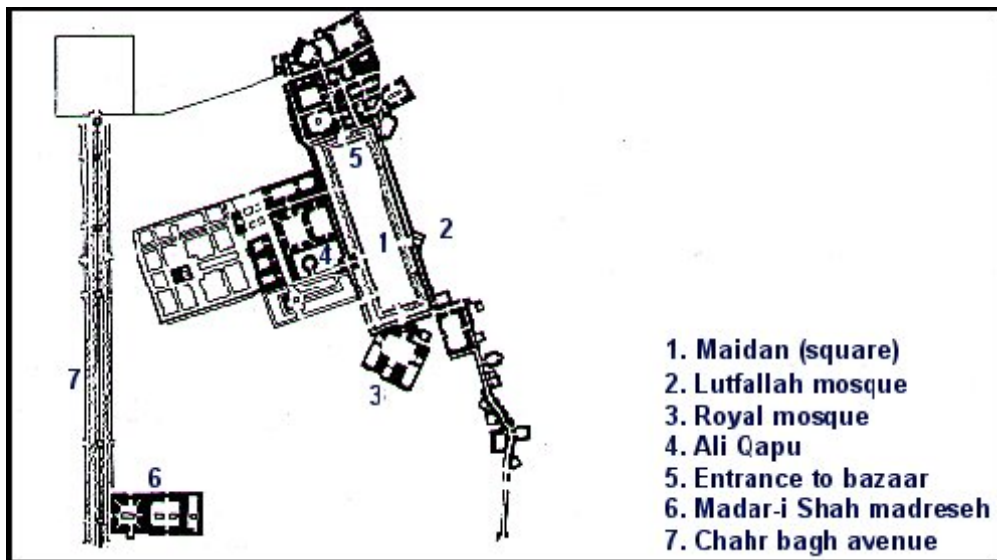


Figure 36: 'Naqshe-Jahan' square in Isfahan; the importance of Maidan in administrative new town of 'Shah Abbas' (Safavid Dynasty) in 15-16<sup>th</sup> century.  
 Source: Hutt, A/ Harrow L., 'Islamic Architecture, Iran 2'.

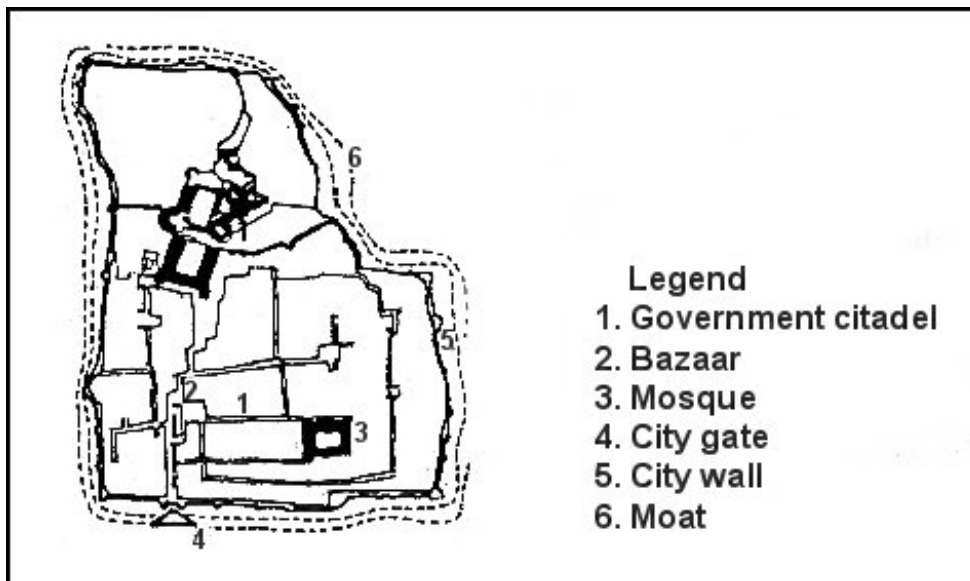
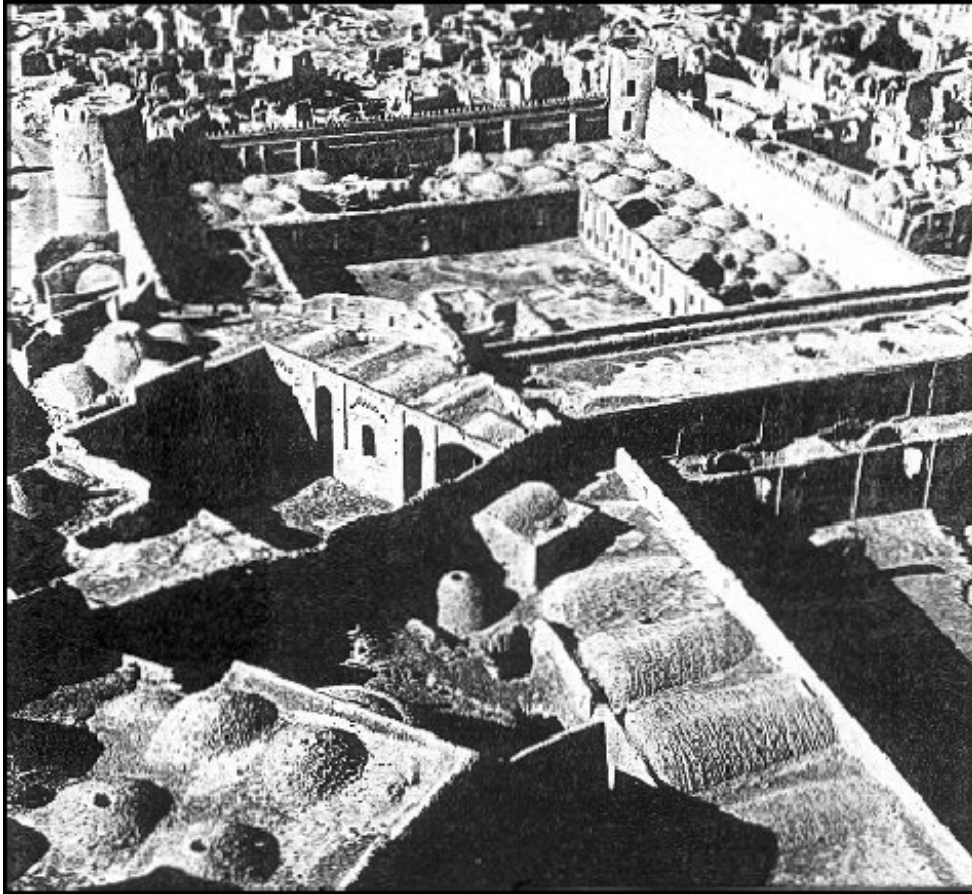
### ***- Arg (castle)***

The 'Arg' or castle has been an important element of administrative - military cities in Iran. The existence of the Arg has indicated the importance of a city within a region and its military importance. Cities with such a situation have used the 'Arg' as protective urban element against possible internal and external attacks.

The location of an 'Arg' in a city has always been subject to geographical characteristics and the strategic position of the city in the region. Usually an elevated part of the city and a better defence position was a suitable place for the 'Arg'. But where such a place did not exist, the 'Arg' located near, or attached to the city. Apart from these factors, the political and military members of the ruling system of each city have influenced the location of an 'Arg' in a city. Also the spatial situation of urban elements, such as the bazaar, 'Jameh' mosque and the most important gate of the city could play also a role. The 'Arg' in Islamic cities had a similar the 'Kohandezh' in ancient cities.

### ***-Baro (city wall)***

The 'Baro' or wall has been another important element in most of the old Iranian cities. The Baro was used for preventing attacks from strangers and tribal groups. They are not only to be found around some cities, but in some rural areas. Although the 'Arg' and 'Baro' were important in design of primary Iranian cities, they have lost their efficiency and do not have any place in the life of modern cities.



**Figure 37: Rest of the Arg -e- Bam in Kerman city.**

Sources: Hutt A. /Harrow, L., 'Islamic Architecture', and Tavasoli, M., 'Hot and dry climate'.

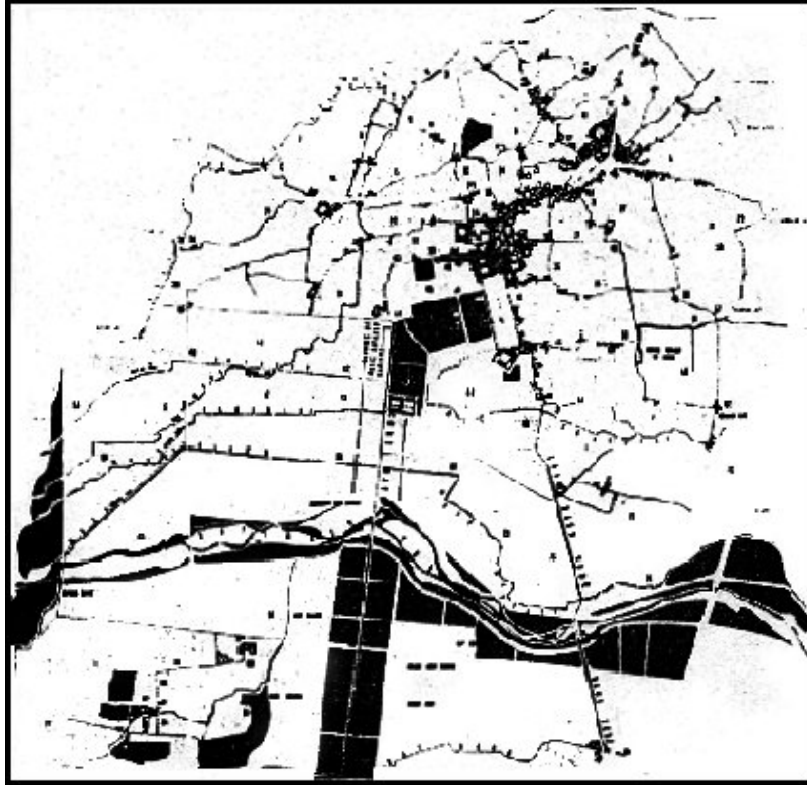
## ***2.4 Structure of Cities***

The structure of historic cities in Iran has changed continuously. This change has been, in fact, an evolution with regard to the needs or influence of the rulers. The traditional cities of Iran, apart from their special characters, have similar structure. In nearly all the cities, the ruling buildings, palaces and temples are located in the centre, surrounded by residential areas.

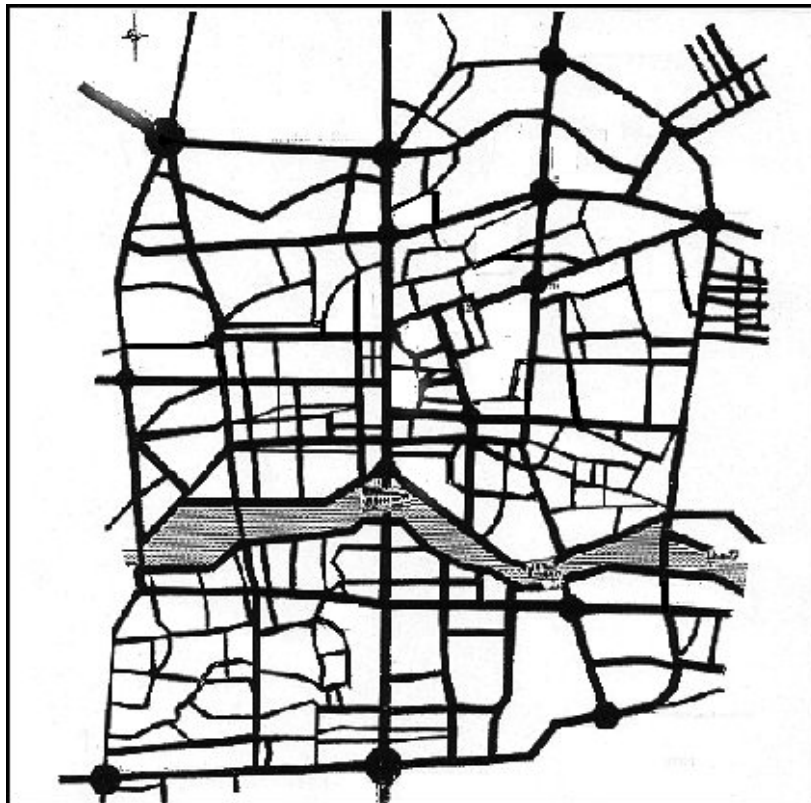
In the commercial cities bazaar is one of the main elements of this structure. In these cities, proximity and a close relationship between the administrative and religious centres has kept its basic form, and the bazaar, because of its ability in collecting most of the urban elements and acting as the economic centre in a city, or in a region, got important place in urban structure of traditional cities. The best example of such system is the Royal complex of Isfahan city in 15th - 16th centuries.

The bazaar in traditional Islamic cities functioned as the main service and communication axis. It developed simultaneously with the physical growth of the city. The neighbourhood system remained the base of city order, although the factors were changed. Neighbourhood centres, served all the daily needs of people and gave relative self-sufficiency to each quarter. Urban spaces and services were distributed in level of the city based on their function. For example the Caravanserais were located near the city gates to provide accommodation for travellers. Traditional urban structure and development continued up to beginning of 20<sup>th</sup> century. But the development of new streets to give best access to automobiles, reallocated the commercial centres along the main streets and gradually weakened the role of the bazaar in the life of the cities.

At the beginning of 20th century, allocation of administrative buildings in the new developing areas, reduced the value of historic part as the centre of the city. The neighbourhood system which up to that time had been able to keep the residential areas in a very strong order, broke down. And in the residential quarters ignorance to public needs and services encouraged people to leave it.



**Figure 38: The traditional structure of Isfahan city in 16<sup>th</sup> -17<sup>th</sup> Century.**  
Source: Author, M.phil thesis



**Figure 39: Structure of Isfahan city in 1986.**  
Original source: Sahâb publication, Tehran.



## ***2.5 Fabrics and Texture of Cities***

Natural situation plays the most important role in shaping the fabric of the cities in hot and dry climate. The fabric of traditional Iranian cities exposes their adaptability to climate, geography and cultural factors. Generally, traditional Iranian cities are classifiable into two main groups. The cities which are located in hot-dry, and cold areas of the country with attached and connected texture, and the cities located in the moderate and humid climate of the north, and the hot-humid climate of the Persian Gulf, with separated and disconnected urban fabric.

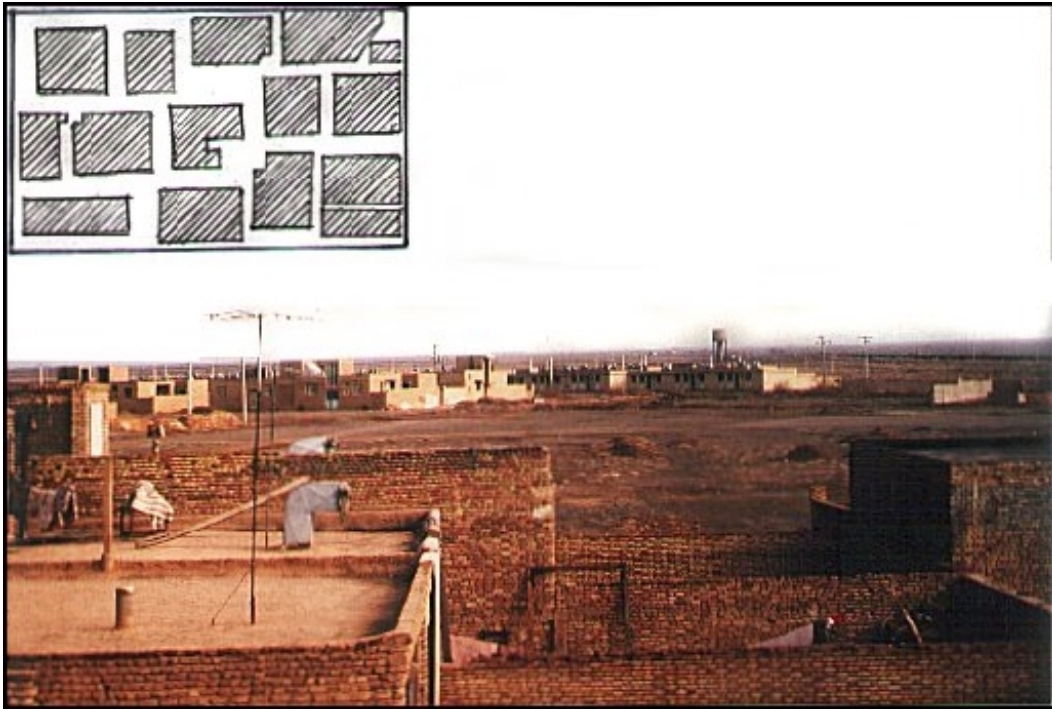
Although the basic criteria of both kind of urban fabric are similar, the structure of each city has its own special characteristics. In hot and humid climate wind plays important role in reducing the heat in summer days. To use wind in providing a micro-climate, separation of the building from each other is an important urban planning strategy. The cities with continuous texture are located on the edge or in the desert. The physical structure of these cities provides a surrounded and covered space to neutralise the effect of the desert on the life of the city. For this reason, houses are completely attached to each other and roads and alleys are narrow. The access has been designed mainly for pedestrians and primitive vehicles. (14)

In the desert area, the level of the underground water resources is low. Access to water is very difficult. The importance of this matter not only affects the general form of the urban structure, but its details too. In these settlements, access to the main source of water is possible by help of the 'Qanat system' (underground water channel), which brings water to ground level and through a simple traditional technology, transfers it to gardens, dwellings and public services. In these areas water is stored separately for each neighbourhood.

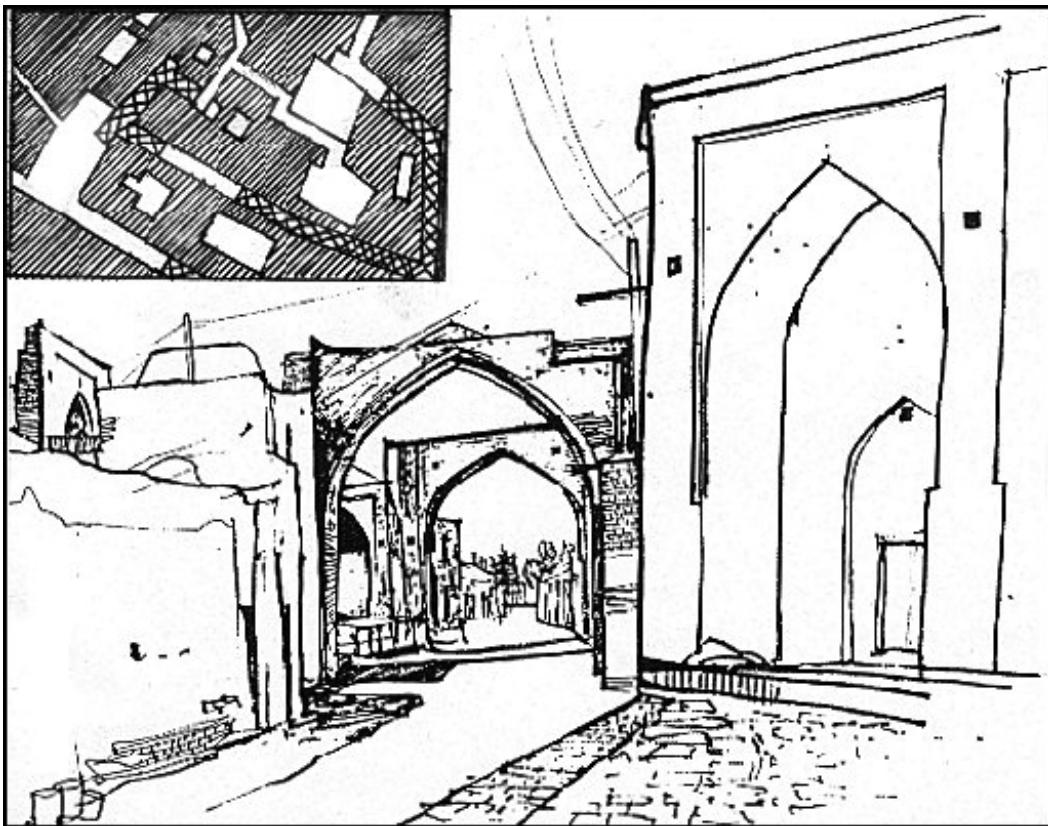
Scarcity and availability of water, the ways of storing it, along with the climatic situation of the desert has led to special allocation of dwelling and services. The bazaar although it has lost its efficiency as an economic symbol, is still the main axis of the pedestrian network of the cities in a hot and dry climate. Other accesses which connects different parts of the city to each other are built partly covered and partly open. The pedestrian system in hot and dry settlements, are not only planned for communication reasons, but to give access to pedestrians and protect them against the cold in winter and the burning sun of the desert in summer too.

The design concept of private spaces in both sort of fabric, is a continuation of design concept of public areas. The houses and the public spaces have been designed in such a way as to provide the best climatic situation for the

inhabitants. In the areas where the climate is moderate and the main part of the space is green, there is no need to provide a microclimate inside the buildings. But in the hot and dry climate, the inner design of the building is completely under the great effect of the climate. In such a climate open space plays a very important role in air circulation. For this reason houses are built around an open space as central courtyard; designed with two very important elements; gardens and small pools. The existence of green and water are a great help in providing a suitable microclimate inside the buildings.



**Figure 40: Bandar Abass city, an example of a disconnected urban fabric.**  
Source: Author



**Figure 41: A view on city of Ferdows, an example of a connected urban fabric.**  
Source: Seyhon, H., 'A view on desert architecture in Iran'.

## ***2.6 Skyline and Image of Cities***

The integration of each city and its environment was the main factor affecting the urban form in different parts of this country. But even in each different climatic zone there are differences, which give each city its unique characteristics. The visual characteristics of traditional cities are very important in giving them a special identity from outside and inside. Any observable element on the skyline of a city, apart from being a functional factor at the neighbourhood level such as a dome of a natural ice house, water reservoir, mosque, and Hoseinieh, and at the urban level as minaret of 'Jameh' mosque, 'Arg' or wind towers, were and still are the main basis for urban characteristics and orientation subjects for visitors and residents. Apart from such urban elements, the spatial arrangements of urban spaces, were also important in influencing the image of an living environment.

The existence of wind towers in arid climate has given a special characteristic to these cities. In modern cities the ecological and cultural effects have lost their value. The buildings are equipped with modern cooling systems and traditional 'Badgir' is hardly to see. The minaret and dome of the mosques are probably the only urban elements, which still play the main role in the image of a modern Islamic city. In spite of all this ignorance, still are the wind towers on the roof of the buildings of the Yazd, Kerman, Kashan, Tabas and Qom, which build the historic image of these cities. (15)

The old form and elements of traditional cities have a strong effect on the mentality of their inhabitants. For example the minaret along with its religious aspect has always been an important orientation object in the city. Today its only function, which has remained, is religious aspect. And although it is not necessary to use the minaret and dome to present the religious aspect of a building, we still use these two elements consciously to convey the image.

The peculiarity, and at the same time, simplicity in form has been so strong in making cities different from each other even within a region. No matter in which climatic zone, and oblivious to cultural differentiation, modern cities look similar. New areas of cities develop broken from old structures and attention to special quality of traditional city is not to be seen.



Figure 42: Skyline of 'Bidokht' city with its wind towers.

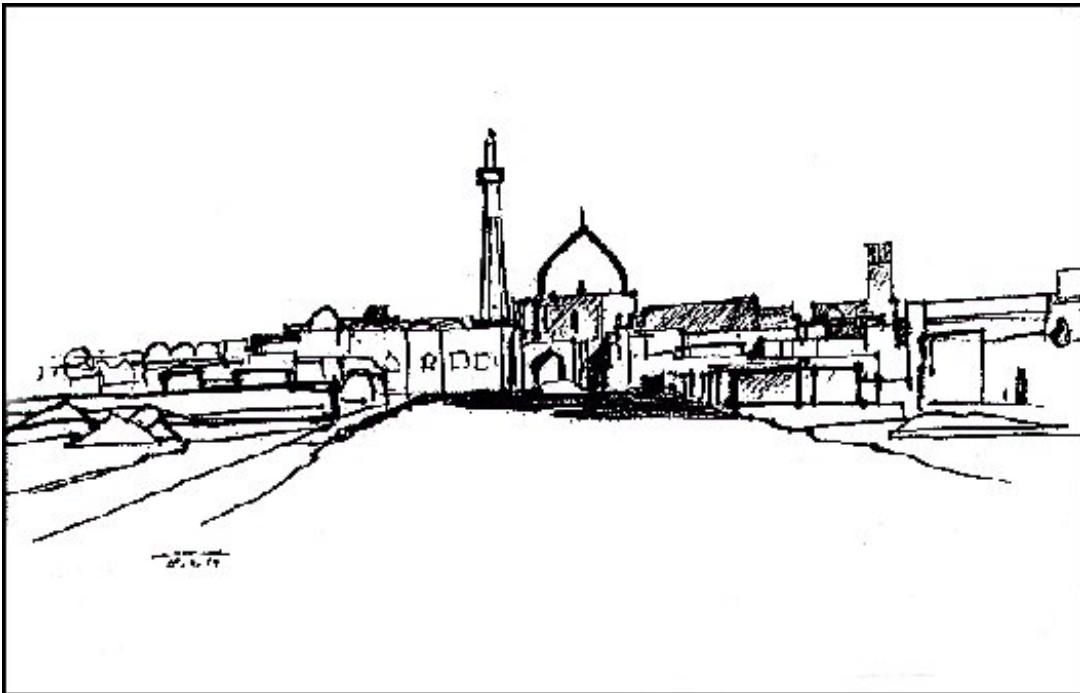


Figure 43: Nain city; minaret of 'Jameh' mosque and dome of 'Hoseinieh'.  
Source: Seyhon H. 'A view on desert architecture'.

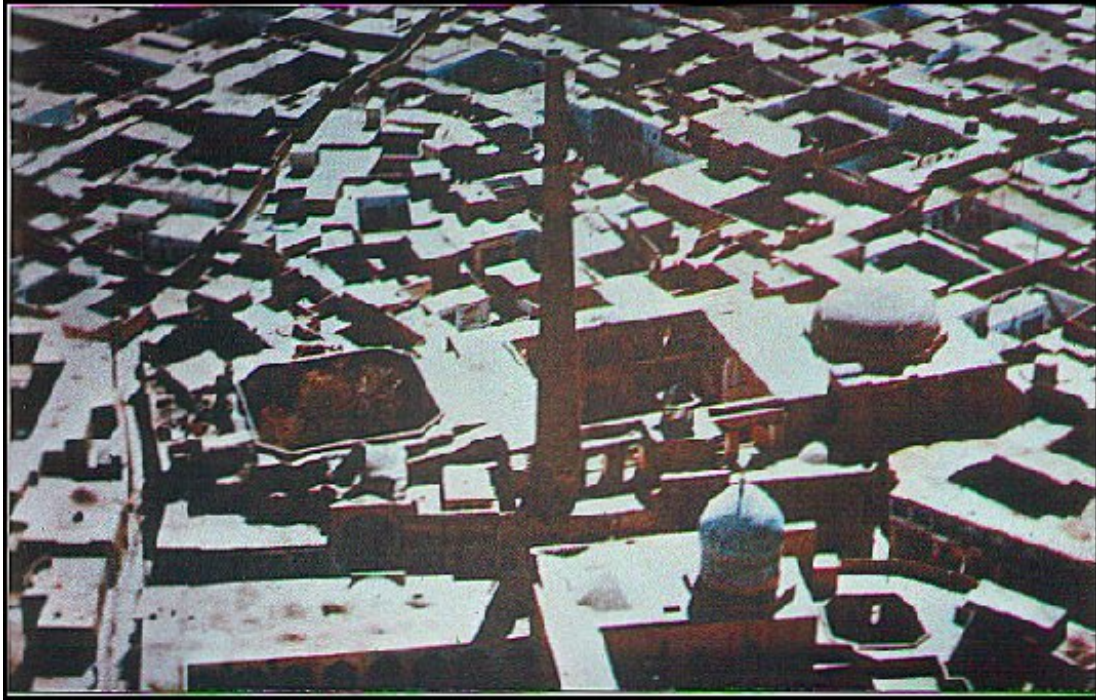
## ***2.7 Traditional Architecture and Building type***

Traditional architecture in each area is subject to geographical factors, cultural behaviour and the way of life of the people. In form and architecture of urban elements such as mosques, Madreseh, religion had the highest effect. But where they built, they represent the effect of local architecture. Other urban elements such as the bazaar have adapted their form to climatic condition. From open bazaars in the northern parts to covered and deeper ones in southern areas, all have remained traditional commercial symbols of historic and modern cities.

Variation in traditional architecture, in building types, materials, facade work, building structure, building order, colour, roof type and arrangement of buildings, depends on specific areas within the country. Apart from cultural aspects and function which determine the inner design and structure of every building, unity in building methods, building materials and harmony in colour, gave special characteristics to each area.

In the central part of the country with its hot and dry climate, the main characteristic of traditional architecture is harmony between the object and its environment. Public and private buildings were built originally from brick, but colour, and other local materials use for decoration give a harmonious facade to the old parts of historic cities. The use of the flat roofs with arched parts is very typical in this area. The arrangement of buildings and the design of narrow passageways between them play an important role in protecting people against the burning sun in summer and the unpleasant cold in winter.

Inner design of each building is subject to it's function. But no matter whether it is a public building or private, central courtyard, pool and trees are used as design elements to provide an inner micro - climate.



**Figure 44: Old Isfahan, harmony in form and building type.**  
Source: Author, M.phil thesis.



**Figure 45: A narrow passage in old Isfahan; Daradasht neighbourhood.**  
Source: Author

## ***2.8 Function of the Traditional City Elements***

Traditional commercial cities whether formed under the hard natural-geographical situation (desert areas, mountainous parts or on the edges of the central desert), or developed under the effect of suitable regional factors (as fertile areas of the north, green plains of the west or the rich river beds), all have their own special design principles which give them identity and characteristics completely different from similar cities in Europe or in the East. The urban elements which have shaped old Iranian cities, neighbourhood (and neighbourhood centre), bazaar, mosque, Madreseh and Maidan (square) have survived until today and have generally kept their function. The shape and functions of these elements have undergone many changes through the history of urbanism.

The first half of the 20<sup>th</sup> century, Iranian cities were scenes of fast politic, economic, and social changes. The new cities, which were built, and the new areas which developed during this time, were an effort to overcome the role of traditional urban design principles through use of modern technology. The dual large-historic cities are good examples. Today, they are in fact two cities in one. In spite of all intention in eradication of old parts of large cities, they stayed alive and reacted toward changes beyond their capacities. In spite of the functional and structural changes in the old cities, it should be mentioned that, many of these old areas, have been able to adapt themselves to the new urban system, and should not be seen as the lost socio-economic and cultural heritages. These areas still have a remarkable social and economic potential, and because of very strong linkage with Iranian culture, will always remain a liveable part of the large-historic cities.

### ***1- Neighbourhood***

The neighbourhood system in Iranian cities was based on the traditional socio-economic, and natural-geographical circumstances, and their planning basis has been far from the modern planning ideas and methods. In modern urban planning, division of residents in a city arises from special ideas based on rational and functional division of the people, while this matter in the past had very rich and complex roots. The neighbourhood in old Iranian cities arose from a need for organisation which connected both rationalism and functionalism to social behaviour, ideas and socio-economic activities very logically. (16) The basis of formation of dwellings, (which are the main forming elements of neighbourhoods), comes firstly from culture and tradition, and secondly from factors which have led to a variety of experiences in urban planning such as building material, building system, climate and financial abilities. Consequently it is not possible to introduce just one factor for



neighbourhood's physical form and apply it to all the cities. The factors which have shaped neighbourhoods through the centuries, gradually, under the effect of social change, increase of public knowledge, political, and most of all economic factors, gradually developed.

Today the physical barriers, such as wall and fences, have disappeared between neighbourhoods but their image is still existing. In the old areas the original names of neighbourhoods and more or less their limitation still exist. The principle of the neighbourhood has lost its function and many services which in the past were concentrated in the neighbourhood centre, today are carried out in other ways. Disorder of urban development led to the break up of the old city system and discontinuity in the form of new developing areas. Beside political and economic changes of the country which resulted in break down of traditional urban system, the factors as division of residential areas based on social classes, lack of equal distribution of services in different parts of the cities, public interest to modern housing models, regular encouragement of residents of old areas in rebuilding and using new building methods, encouraging housing investment, social changes in extended traditional families, and finally housing shortages in cities, have aggravated this problem in recent years.

## ***2- Neighbourhood centre***

Through these centres, as the secondary level of public activities, different services were distributed all over the city. Research in old Iranian cities shows that all have benefited from these secondary service centres, just cities with special natural-geographical situation without extension possibilities, have been the exception. (17) Public services located in the centre of a neighbourhood, have been able to answer public needs, while they have also supported the main bazaar. Neighbourhood centres and bazaars have offered services in different stages, with different forms, dimension and social behaviour. The bazaar, as the most dynamic element of the city, supplies all the neighbourhoods. Other urban element which has contributed in giving shape to neighbourhoods is the communication network including passage ways, close alleys and hidden ways between residential areas.

Neighbourhood centres were the minor urban elements with very effective role in the distribution of daily services. Existence of these simple service centres has prevented unnecessary extra journeys of residents to the centres of the cities. As the result of such an organised system, there has been a restricted division of service distribution in the city. Today, in the old neighbourhoods, these centres are still active and give services to their areas. Transformation of commercial activities and public services along the streets, has accompanied by

daily transportation of large numbers of people all over the city, which on the one hand has led to more dynamic daily life of cities, and on the other hand exposes the disability of new cities to provide an acceptable distribution of public services. Although the neighbourhood centre is one of the minor elements in a city, in reality it is an important planning strategy use as the ordering system in design of future residential areas.

### ***3- Bazaar***

The bazaar as a multi-functional element has not been strong enough in encountering and answering many of the needs of modern urban life. In the past the bazaar was one of the active socio - cultural centres of a city, but today because of fast population growth, and various modern public centres, there is a need for new spaces which can not be produced in the old part of the city, mainly bazaar. In spite of the bazaar's disability in responding to the needs of modern cities, commercial activities are not yet disconnected from the old city axis. In cities which bazaar has still power as the main economic axis, (as Yazd, Kashan ,Kerman, Isfahan, Shiraz), commercial activities take place in the traditional framework of the bazaar.

There are also trading organisations, which act out of the bazaar, but in co-operation with it. One example of this co-operation is the emergence of foreign industrial products which today because of their quality, reputation, form and volume, are presented in the bazaar. Today the bazaar has a direct relationship with outside trading centres, mostly for the products of which the bazaar is the main producer. As an example is the hand made products, which in spite of production being scattered around the city, their main reliance is still on the old bazaar, and its branches. In these cities, the big trade centres have usually developed along the new streets, and always attached to the old city and next to the bazaar.

This physical relationship is in fact a changing process of the bazaar. 'Chaharbagh' streets in Isfahan, 'Zand' in Shiraz, and the other main streets in large historic cities, are the most important locations for trade activities near the bazaar. This dependency, under the present situation (existence of modern communication) in reality is the biggest link between the new and old the part, and gives a dynamic form to both. The bazaar apart from its financial side, has been relatively able to keep its previous socio-cultural position in Iranian cities. Some new commercial complexes have been able to replace the bazaar, but even today none of the new city elements is able to compete the bazaar from a socio-cultural point of view. The bazaar always remains a cultural symbol of the Iranian cities.



**Figure 46: Isfahan city; centre of Jamaleh neighbourhood in 1995.**  
Source: Author.



**Figure 47: 'Wakil' bazaar; an active traditional commerce axis in present Shiraz city.**  
Source: Rashad, M., 'Iran', 1998.

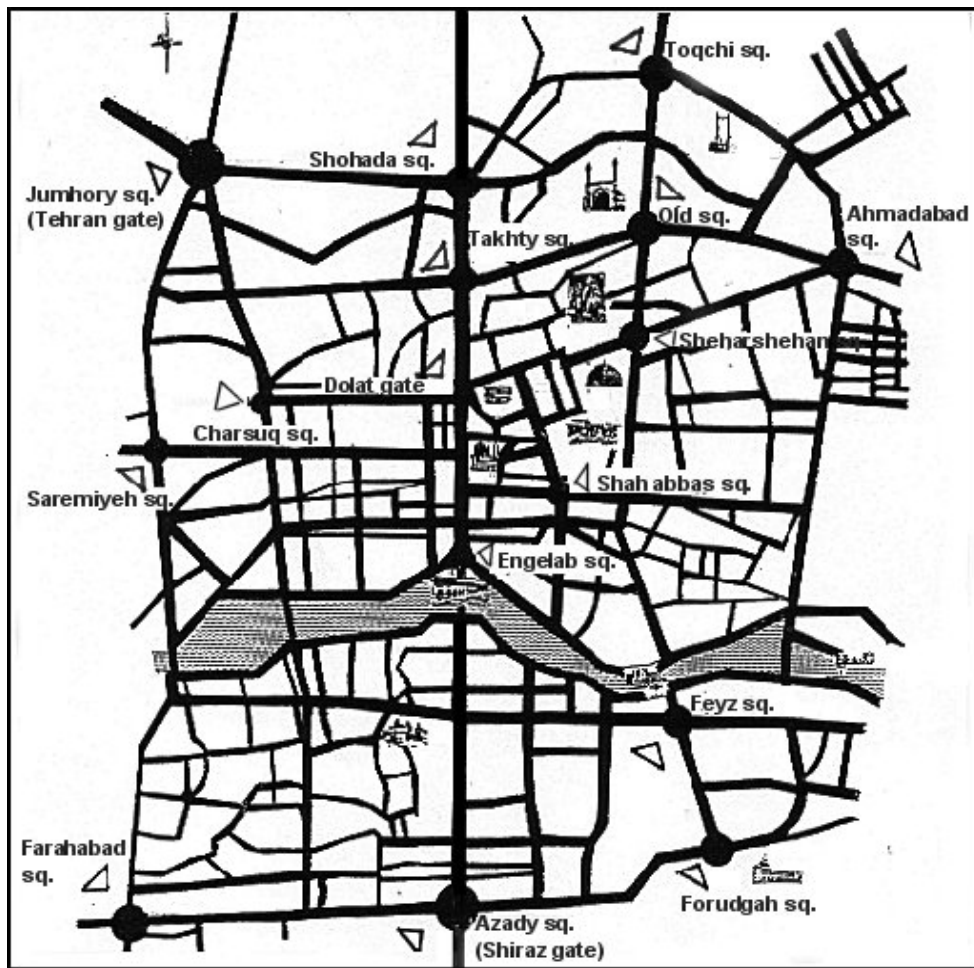
#### ***4- Maidan (square)***

Today the Maidan is one of the urban elements which appears in modern urban planning, different to its past form and function, but with its past strong image. Originally, the Maidan had a special function. The main Maidan of the city was often located in front of the administrative building, and was a place for arrival of trading caravans and travellers. Small Maidans were located in neighbourhoods, and their dimension was dependent on the amount of residents and their special socio-cultural affairs. Today, the establishment of a square in a city has another dimension compared to its past. And although the image of it has been very strong, its past function and form has changed. Today the most important function of a Maidan is connection and communication within the urban network.

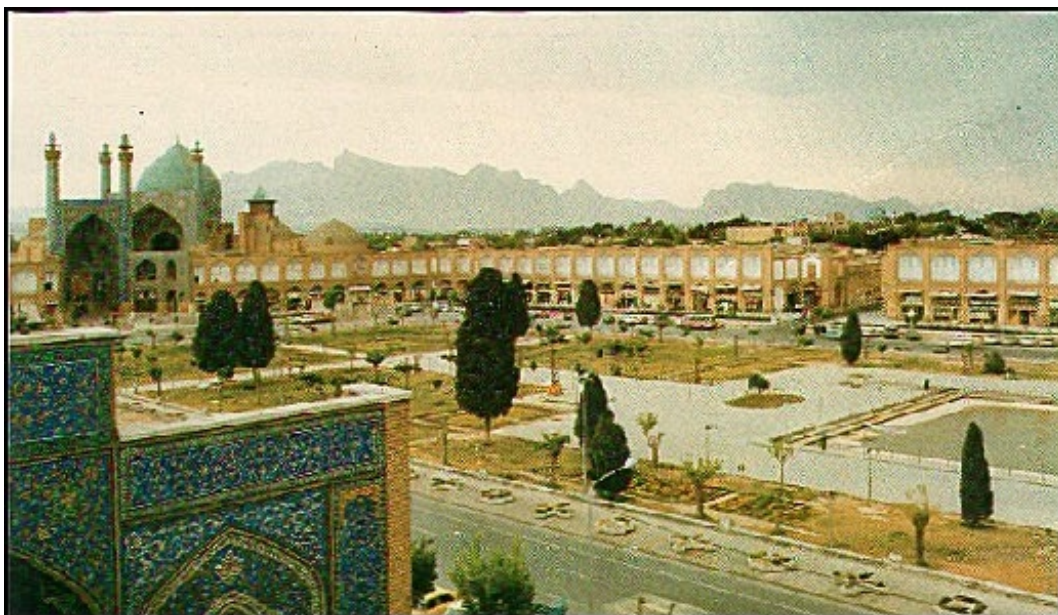
Apart from big and small squares the establishment of which was based on a special purpose, the main city squares are still the main communicational points. Interesting is that, entering and exiting Maidans which in the past were located near the city gates, today have a different function and completely different form. The squares located at special points of a city, are called after the next main city. For example in Isfahan city, Tehran gate is located near the last exit toward Tehran city, or Shiraz gate near the last exit toward Shiraz city. This situation exposes the importance of the role of the square in the Iranian culture and the urban planning system. Although the traditional form and function of the square has developed in modern cities, it has been able to keep its original image in the urban architecture of this country. Almost all the main Maidans of historic cities are still in their traditional form. And although they are important connecting points in the modern city networks, have been able to keep their historical image.

Although the social life of historic cities has been highly dependent on the desires of the ruling groups, the Maidan has constantly played an important role in the social and cultural life of the city. Even the new big squares, which were established in the second half of the 20<sup>th</sup> century, have also contributed actively to the social life of the city. The best example of these squares is 'Azady' square in Tehran city. 'Maidan-e-Azady' is square is the biggest square in Iran. 'Azady' means freedom. It built in 1971 as the symbol for freedom. This square has a 78000 sq. meters. Surface area, and its building is 45 metres high. The memorial building is a museum. This square is the centre of the present administrative and social activities of Tehran city. **(18)**

In post-revolution periods, Maidans, (squares) especially the main ones, have been the focal points for gathering and for socio-cultural activities.



**Figure 48: Main gates or squares of modern Isfahan city.**  
**Original source: Sahab publication.**  
**Work: Author.**



**Figure 49: Isfahan city, historic square of Naqsh-e-Jahan in 1981.**  
**Source: Author, M.phil thesis.**

## ***5- Mosque***

This element, with Islamic religion entered Iran and got such a strong place in the social life of the people that even historic events throughout the history could not influence it. In spite of the breakdown of the old neighbourhood system, the mosque has kept its position as the centre of any residential area. Each mosque as a public service element determines a non-visible limitation around a group of people. It is noticeable that this has been the case of every single traditional public service located in the neighbourhood centre such as public baths and bazaar. But following the breakdown of the neighbourhood system and improvement of facilities in cities, some of these elements lost their position, and for others there was no use any more.

The position of the mosque after the Islamic revolution in Iran became stronger. Especially during the war, mosques got multi-dimensional social, cultural, political and to some extent, even an economic function. The division of these activities between mosques in a city, has determined the boundary of each one (mosque) in relation to its function. In another word, the activities of mosques has created a new zoning system in cities. These new zones are without walls and their base of formation is different to the past neighbourhood system. Each new zone, in reality is a kind of neighbourhood and sometimes named after the mosque. This matter has made the mosque an even stronger urban element, and apart from its religious dimension, has involved it in all the modern urban planning and social activities.

## ***6- Madreseh (religious school)***

The Madreseh were very important educational element of each traditional city. Today they are still important urban elements of religious cities as Qom and Mashhad. They have their primary function and seen as a very important architectural and socio-historical element of these cities. In other words, in spite of a declining importance, they have been able to keep their past social value in the Moslem society of Iran. They are still the only place for religious education and a suitable space for social and cultural activities. The role of religious schools, as the result of political and social changes of the country in the last few decades before the Islamic revolution, mainly in post-revolutionary periods has developed. Beside mosques, they participated more in social and cultural activity in this period. They were the main places for political activities against last dynasty all over the country. Today most of the religious activities take place in historic schools as before, but the need for the new ones mostly in new cities is limited. The main religious education centres are the two above-mentioned religious cities in the first place, and then the major historical cities.

## ***2.9 Summary and Conclusions***

During history the existence and development of traditional cities in central part of Iran were subject to the ecological and geographical situation of their environment. Scarcity of water in desert area has even determined the physical development and fabric of the cities. The basic factors in making Iranian cities, have been a combination of natural-geographical (geographic, ecological, defence strategy), and non natural-geographical factors (administrative and political, military, religious and commerce. During each period of Iranian history, cities came to exist and functionally respond to the needs of their time. But many of these cities did not stay alive and left just a name or a few buildings behind.

In order to stay 'alive' traditional cities had to adapt themselves to the physical barriers of their region through creating urban planning and design strategies. The fabric of each historic city is a response to the physical barriers of its surrounding environment. The evolutionary process of the city and urbanism in Iran has been subject to culture and social behaviour and way of life of the people.

The urban elements of traditional cities are partly formed in pre-Islamic period as 'Kohandezh', 'Savad' and 'Shares tan'. And the others as Arg, Baro, Bazaar, Neighbourhood, Neighbourhood centre, Maidan, Mosque and Madreseh are mainly belong to Islamic period. From all the urban elements, which have formed Iranian cities since the pre-Islamic period, the bazaar, square (Maidan), neighbourhood, neighbourhood centre, mosque and Madreseh (religious school) exist today.

The bazaar historically has been one of the main factors in life and development of the traditional commercial cities. This element has been able to create spatial link between religious, economic and political centres. The bazaar because of its multi - functional ability will always remain a unique urban element in Islamic cities. The bazaar as commercial, the Maidan as administrative and political, mosque and Madreseh as religious, the neighbourhood as residential elements, and the neighbourhood centre as the distribution system of city services and facilities, all through their function have made traditional cities desirable living environments. Although each one of these elements has played a vital role in the development and spatial structure of cities, the role of none was as important as that of the bazaar. This element apart from its role in the physical development of the city, with its relation to the administrative and religious activities, has always been the most important element in the social life of the cities.

From the beginnings of the 20<sup>th</sup> century, the traditional cities are undergone enormous changes. They partly adapted to the modern technology, but the fast urban changes were beyond their capacities.

Unfortunately the image of traditional Iranian cities has lost its value in modern urban life. And modern cities are turning more and more shapeless compared to what we know as an Iranian city. The organic form of traditional cities could not resist the modern technology. To be able to answer the needs of a modern city, their organic fabric has changed. Although they are partly destroyed, they are still alive parts of the large cities.

The bazaar as the commercial centre has lost its functional efficiency although it is still the strongest socio-economic symbol of historic cities. The Maidan, although appearing in modern cities different to its past form and function, has been able to keep its image strongly. The main negative effect of modern time can be seen in the neighbourhood system. This system is mostly destroyed or at least has lost its meaning and function in new developing areas of the cities.

The strongest urban element, which since the Islamic period has been able to keep its function and structure, is the mosque. The mosque as the most important cultural and religious symbol of Islamic countries will remain a cultural, urban landmark and a focal point of Iranian cities. The Islamic revolution in Iran in 1978-79 was the beginning of new functions and new activities apart from religious ones, for mosques in Iran. In today's cities, although the neighbourhood system has broken down, the mosque has been able to function as a focal point in each residential area, and build a new version of the neighbourhood system.

## ***2.10 conclusions***

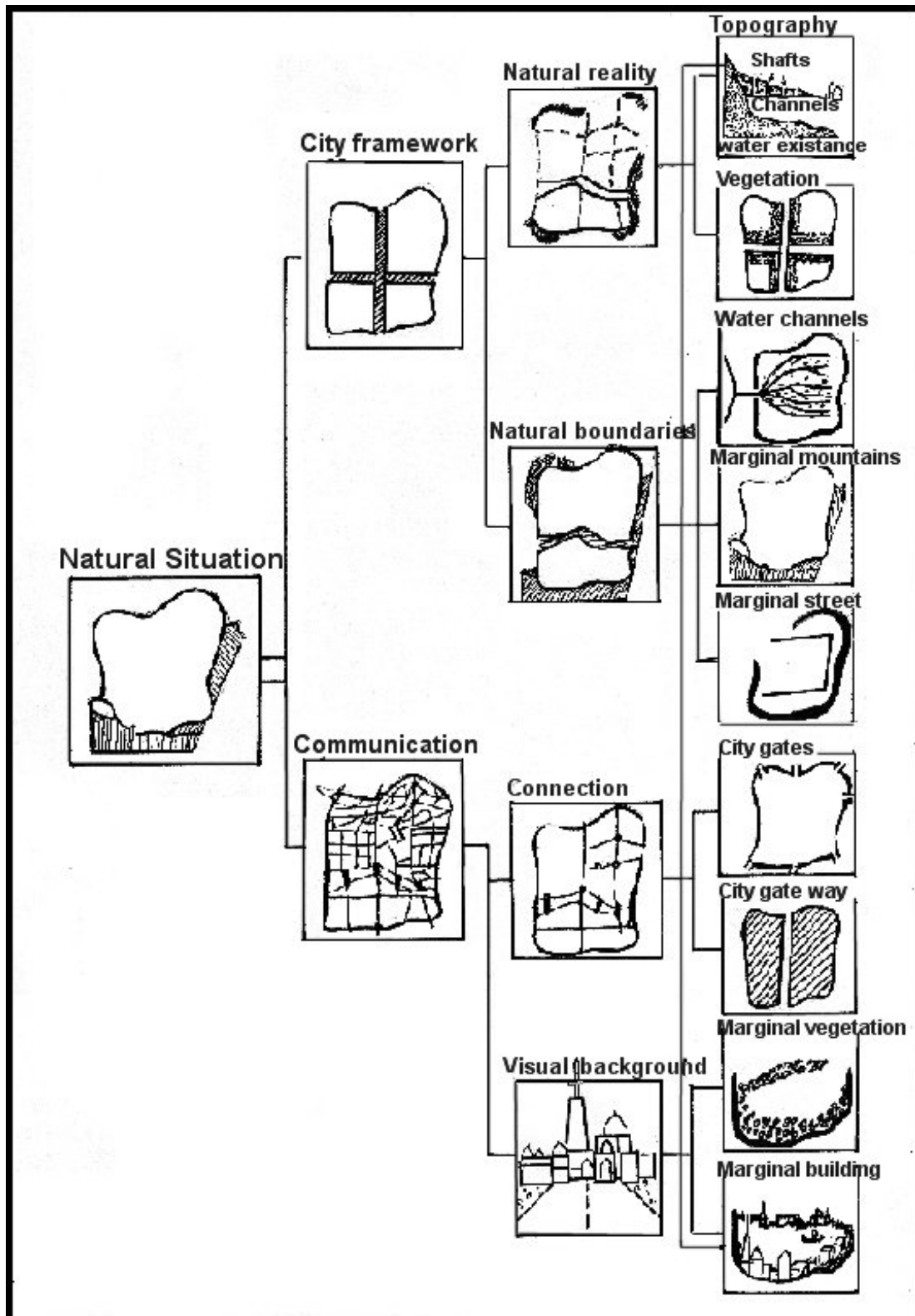
Old Iranian cities depending on their location, geographical situation and climate vary in form and function. In spite of this variation, they have common characteristics, which should be appreciated. The factors, which have shaped these characteristics, are: (19)

- Natural situation**
- Urban structure**
- Urban spaces**
- Urban skyline**
- Building typology**



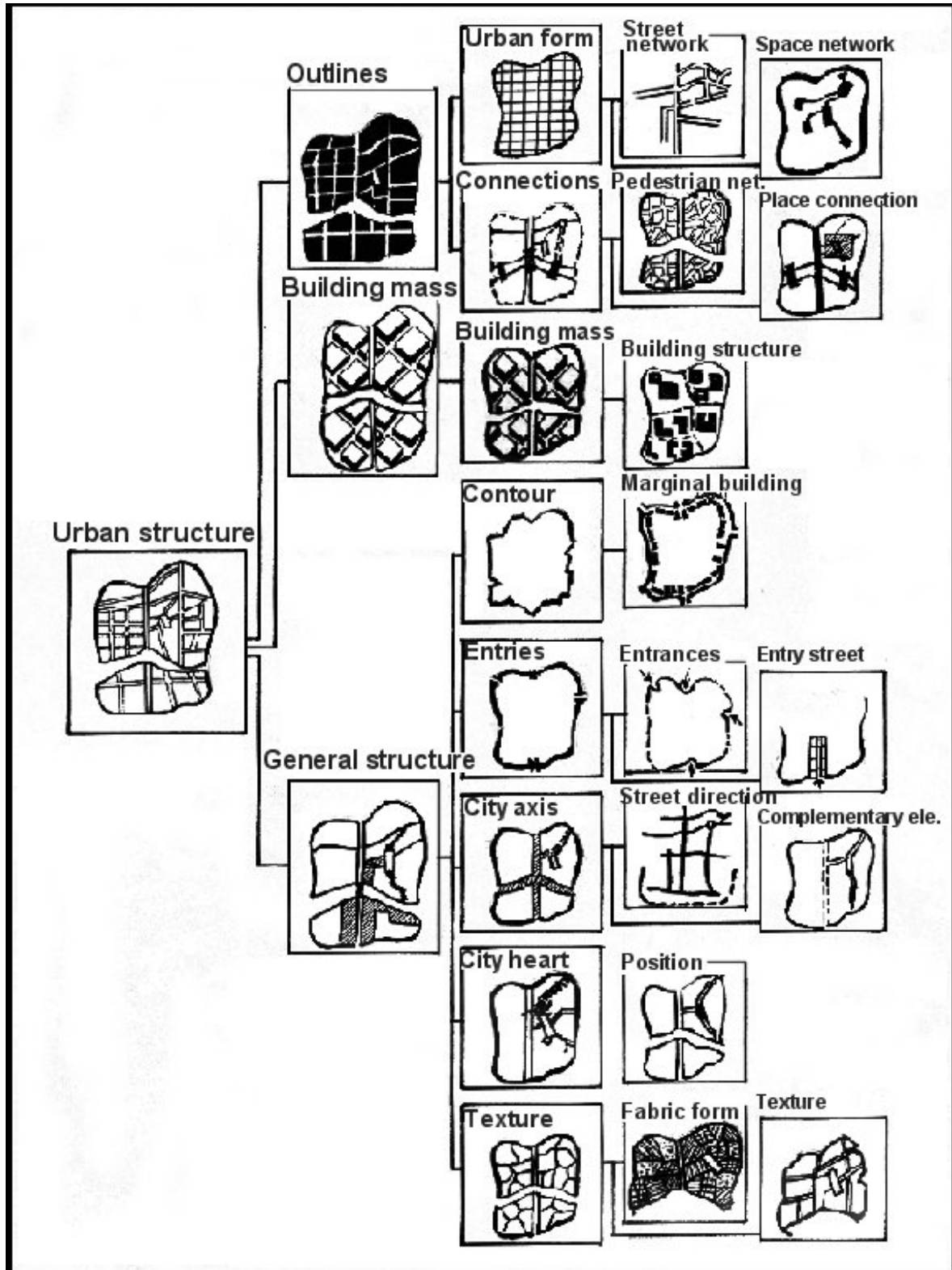
## ***-Natural Situation***

Historically, traditional Iranian cities instead of fighting against their natural situation have adapted themselves to it and have developed their individual form and characteristics.



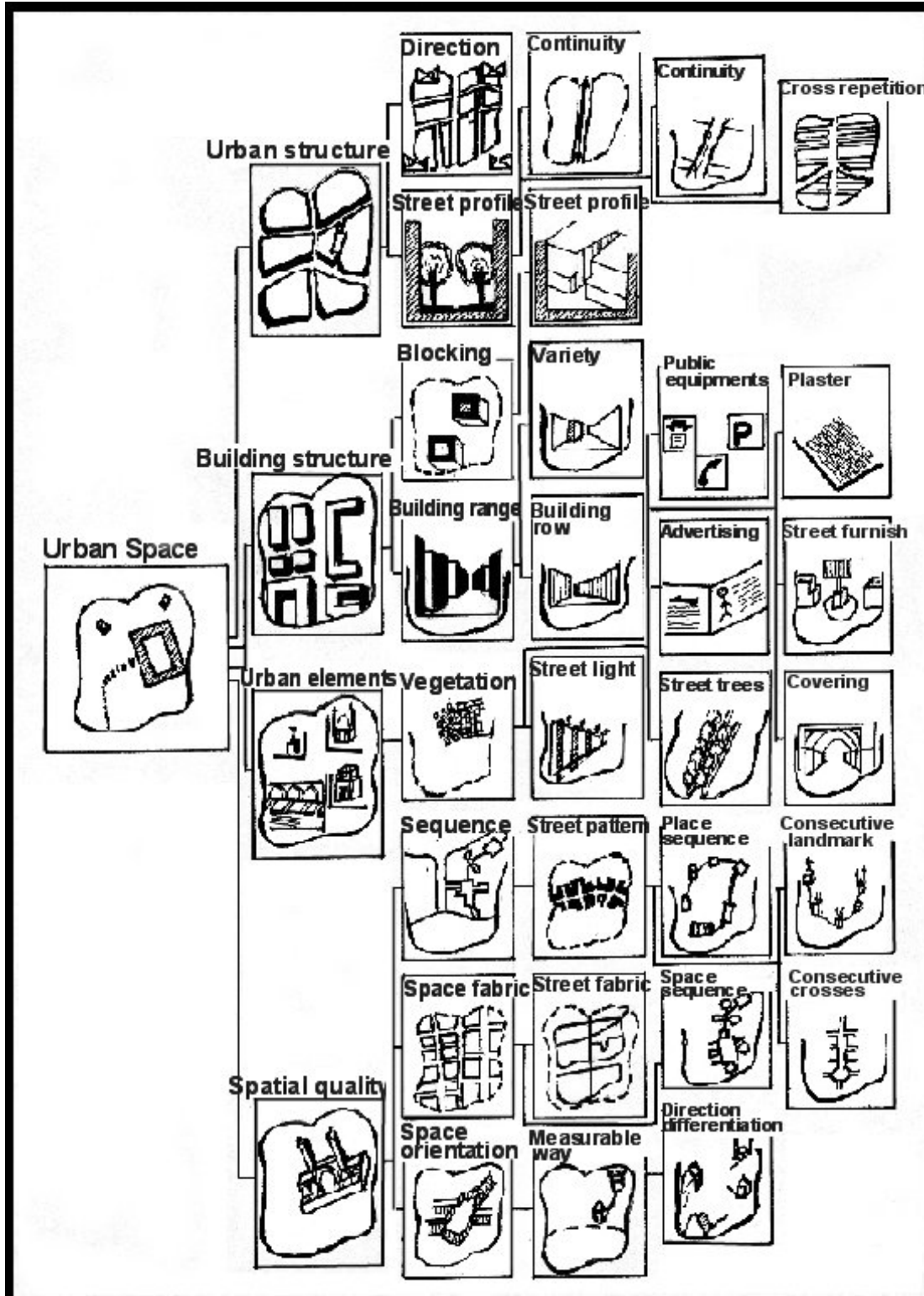
**-Urban Structure**

Climatic and geographic factors have been the main determinant of the structure of a traditional city. Narrow streets with high and attached houses are typical characteristics of traditional cities in hot and arid climatic zones.



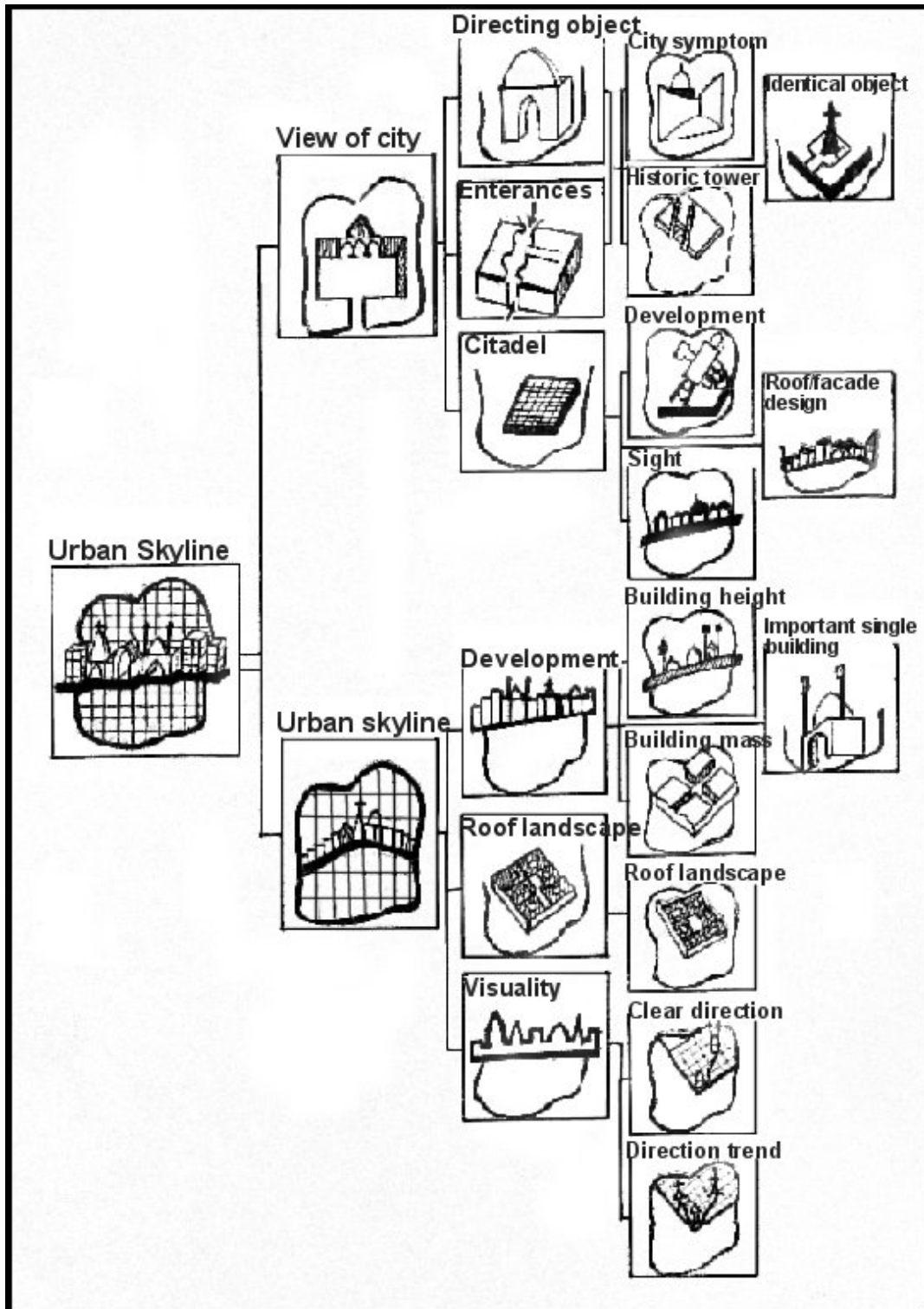
**-Urban Spaces**

The arrangement of the urban spaces, is design base of traditional cities which correspond to the cultural needs, and climatic factors of an area. In these cities the urban spaces are composed of public, semi-public and private spaces. The arrangements of these spaces determined the cultural and social behaviour.



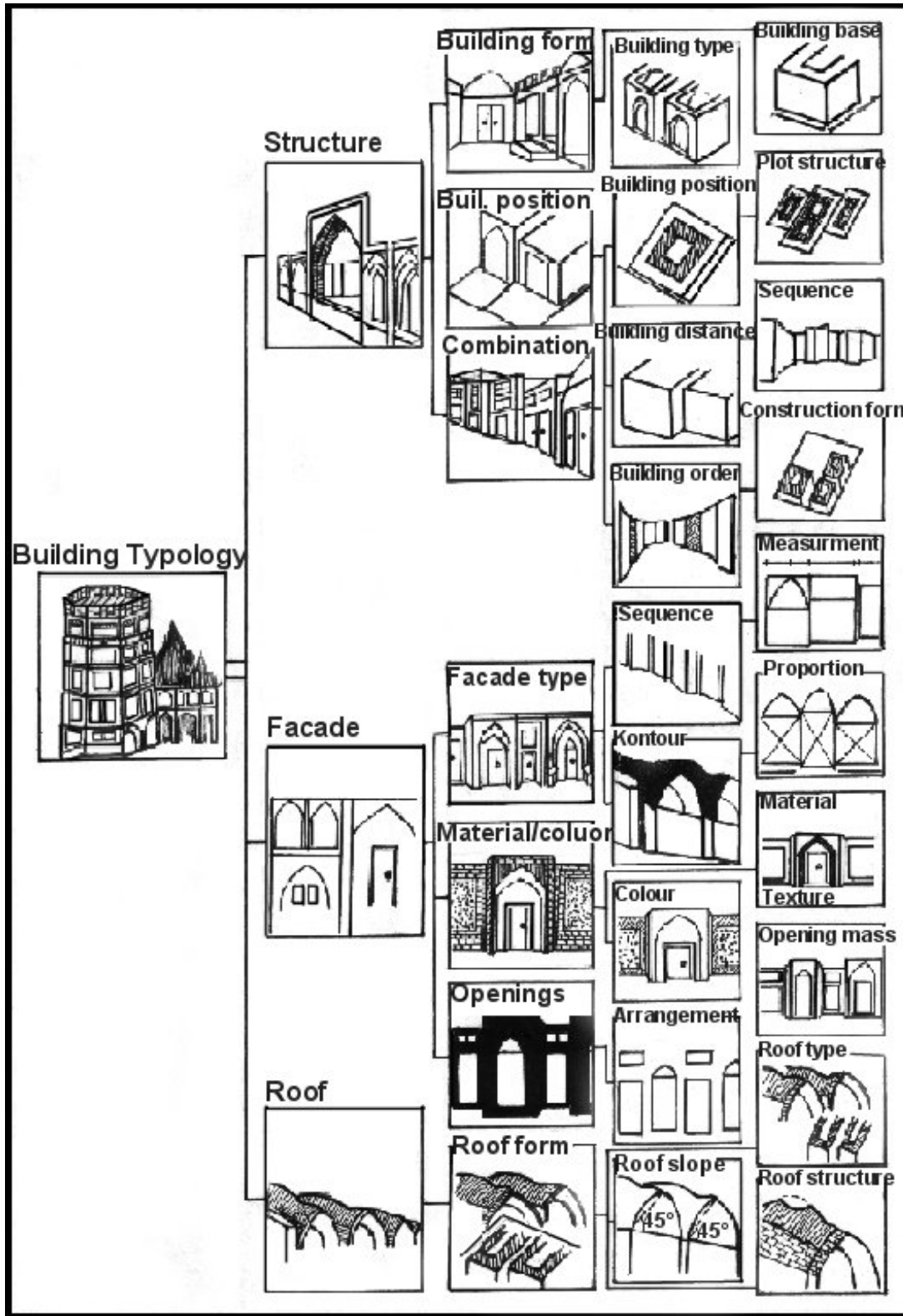
**-Urban Skyline**

The Image of traditional Iranian cities has been formed mainly along two factors, the cultural and climatic. The unique skyline of an old city expose its activity, power, decline, and the other characteristics, and it is the first image which establishes the identity of a city in the sight of an observer.



**-Building Typology**

Roof type, building material and even the colour of traditional is subject to climate, but the form, structure, building location and building order are cultural aspects.



## **Footnotes**

1. Falamaky, M., *From Venice to Shiraz, an essay on Conservation*, Tehran, 1979, Page 151.
2. Ibid. Page 196
3. Ibid. Page 129
4. Deylami, M., *Architecture, Urban Development, and Urbanism of Iran in passing the time*, Tehran, 1988, page 107.
5. Ibid. Page 202
6. Soltanzadeh, H., *History of City and Urbanism in Iran*, Tehran, 1986, page 67.
7. Ibid. Page 67.
8. Ibid. Page 68.
9. Ibid. page 236.
10. Bonine, M.E., *Yazd and its hinterland, a central place system of dominance in the Central Iranian Plateau*, Marburg/Lahn 1980, Page 95.
11. Soltanzadeh, H., *History of City and Urbanism in Iran*, Tehran, 1986. Page 266.
12. Ibid., Page 268.
13. Ibid., Page 280.
14. Ibid., Page 300.
15. Rashad, M., *Iran, Geschichte, Kultur und lebendige Traditionen-antike Stätten und islamischen Kunst in Persien*, Köln, 1998, Page 29.
16. Ibid. PP. 131-32.
17. Falamaky, M., *From Venice to Shiraz, an essay on Conservation*, Tehran, 1979, Page 189
18. For more information about ‚Azady‘ square in Tehran, please refer to: Rashad, M., *Iran, Geschichte, Kultur und lebendige Traditionen-antike Stätten und islamischen Kunst in Persien*, Köln, 1998, Page 103.
19. Original work from Trieb, M., *Stadtgestaltung - Theorie und Praxis*, 2. Durchges. Aufl., Braunschweig 1977.

### ***3. The Historic City of Nain***

#### ***3.1 Introduction***

This chapter analyses the design principles and methods of traditional architecture and design system in historical cities in the central part of Iran. This analysis will result in the development of a suitable framework for planning and design of new towns as present and future settlements. There are many special cities in this area with regard to climatic architecture, but the Nain city is chosen as the basis of this research since it is one of the rare historic cities in this area, which did not suffer from any large-scale change or damage. The main part of the following case study is a summary of a research, which was done as a base study for a rehabilitation and conservation programme of Nain's historical citadel. This research was done in 1986 by a group of architectural students from 'Montazeri Technical Institute' in Isfahan city, and a group of urban planners to which I had the honour to belong.

Originally the aim of this study was to prove that erosion or depreciation of historic urban fabric was not only the result of building material's erosion, but also of a wide range of cultural, economic, social and political factors. It also aims to prove that along with the physical rehabilitation and conservation of the urban fabric, action should be taken toward the cultural and social improvement of a city. For a historic city like Nain, probably the most important aspect is its history. Because structural and socio-cultural heritage is intimately linked, it is possible to learn from our ancestors experience when planning for the future. Therefore it was our duty to consider the history of the city as an important part of the study.

Based on experience of various experts involved in the programme, we understood that in dealing with historic projects, gaining a complete knowledge of people's way of life and existing problems in the area on the one hand, and recognising the historic atmosphere and life of the old city on the other hand, would be the best and most comprehensive education for us with a view to better understanding the people who were the planning target. To reach this aim, living in the study area with a close relationship to residents was the first and basic step to be taken. The second step was understanding the importance that in a historic fabric as Nain, the structure of the city was a collection of different systems of which each one had its own special characteristics. Apart from collecting the necessary information from different sources, it was necessary to investigate every single building.

## **3.2 General Situation of the City**

### **3.2.1 Location**

The area of Nain is located in central part of Iran and based on regional division of the country, it is part of the Isfahan province. From the north, the central desert bound the city of Nain, to the east is the Tabass area, to the south is the Yazd province, and to the west is the Isfahan area. The centre of Nain Shahrestan is Nain city which is located 1400 meter above sea level in 53° and 5" longitude, and 32° and 51" geographical latitude. This city is located 145 km east of Isfahan city. (1)

### **3.2.2 Physical condition**

The city of Nain is located in an even and sandy land, and apart from several isolated mountains in north, northeast, west and southwest, on the other side is the desert in a distance of 50 km. (2)

### **3.2.3 Climate**

Nain city is located in a hot and dry zone. The difference between day and night temperature in summer and winter is high. The minimum temperature is -4 and maximum is 37.5 centigrade. In this dry area, summer days are very hot and nights are cool, and in winter, days are moderate and nights very cold. From November until April there is enough humidity but the rest of the year is dry. The average rainfall in a year is just 82 mm.

In the region of Nain there are two main kinds winds. The first group are the permanent east-west winds of which originate in the desert. They never carry humidity and do not have an important effect on the climate and the amount of rainfall in the area. The second group are the winter winds come from northwest. They are cold and humid. They receive their humidity mostly from the Atlantic Ocean and the Mediterranean Sea. They reach the area through the western and north western mountains. (3)



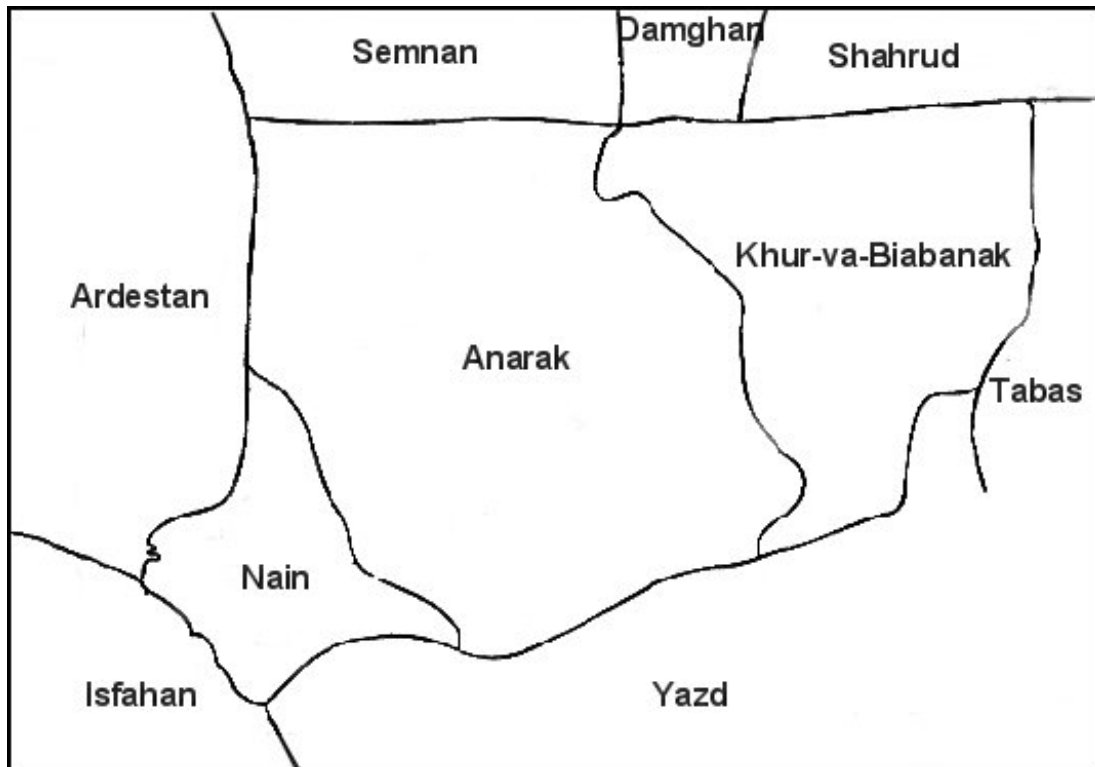


Figure 50: Location of Nain city in the central part of Iran.  
Source: Conservation programme of Nain city.

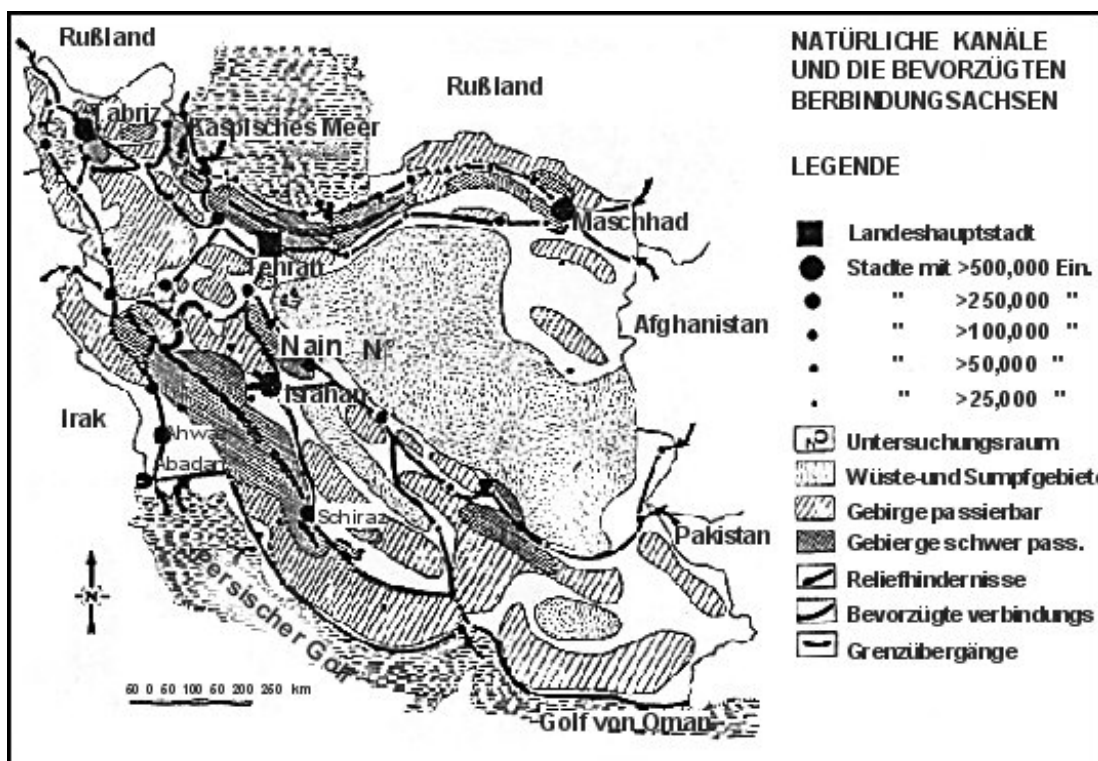


Figure 51: Natural situation of Nain city  
Source: Thumm, U., 'Iran, Wirtschaftsstruktur und Entwicklungsplanung', Bremen 1976.

### ***3.2.4 Ecological Condition***

The hot and dry climate far from the sea, with not enough rain and no water in the mountains, has caused the dryness of the area. Nain is a dry city without running water or rivers. The rainfall period is short and intensive. This sort of rainfall is usually followed by flooding and does not have an important role in agriculture of the area. The level of underground water is very low. The existing springs around the city are not noticeable and are just seasonal. The main source of irrigation in Nain was 10 underground channels of salty water. Most of these channels are dried out today. For the excavation of these channels experts are needed. Nowadays these experts have other jobs or are not able to work any more. Therefore the channels, which could still function today, are completely dry. The total remaining available land today is less than one thousand hectares. Gardens are mostly dried out or are in an unsuitable condition. Green areas around the city have always functioned as a belt and barrier between the city and the desert. Today this natural barrier has lost its efficiency. Dryness of the underground water channels has led to the reduction of the natural and agricultural capacity of the region.

### ***3.2.5 Historic Development***

Nain is in fact the intersecting point of two main east west and northwest routes in the central area of the country. Nain city was formed in the valley, which has been the main passage of the caravans travelling from Isfahan towards the east or the central north of Iran. In spite of its excellent geographic situation, scarcity of water has prevented Nain from providing normal life and normal growth. Today Nain is still considered as an administrative city in the main communication network of the central part of Iran. It has lost its old function, because the fast transportation system has reduced its importance.

### ***3.2.6 Structure of the City***

Today the city of Nain includes two small cities, which do not have much similarity. On one side the historic city is located with its organic and rhythmic development and its design criteria which are the result of the cultural, social and economic situation of the people, also the climatic, geographic, ecological situation of the region. On the opposite side is the new development area with modern planning and design standards. The new development area does not follow any planning concept of the historic city. And in spite of cultural and social relations, which are still very strong physical form has lost its continuity and has resulted in an inorganic and spiritless development.

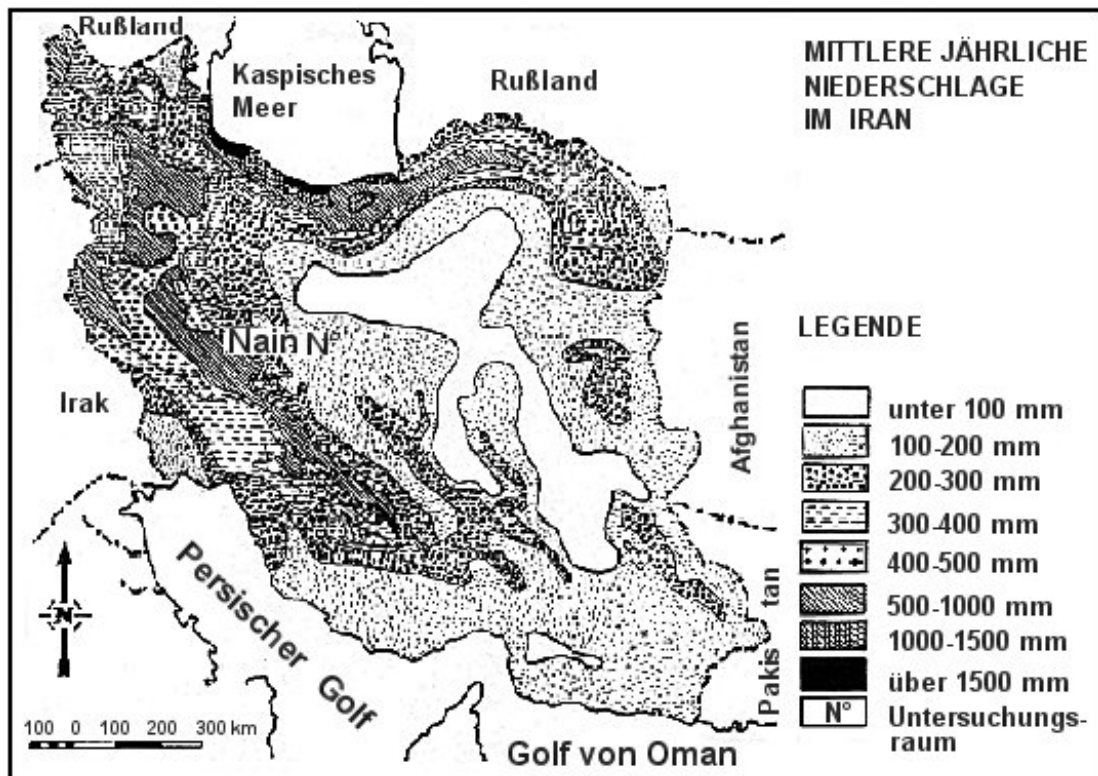


Figure 52: Annual rainfall in different parts of Iran.

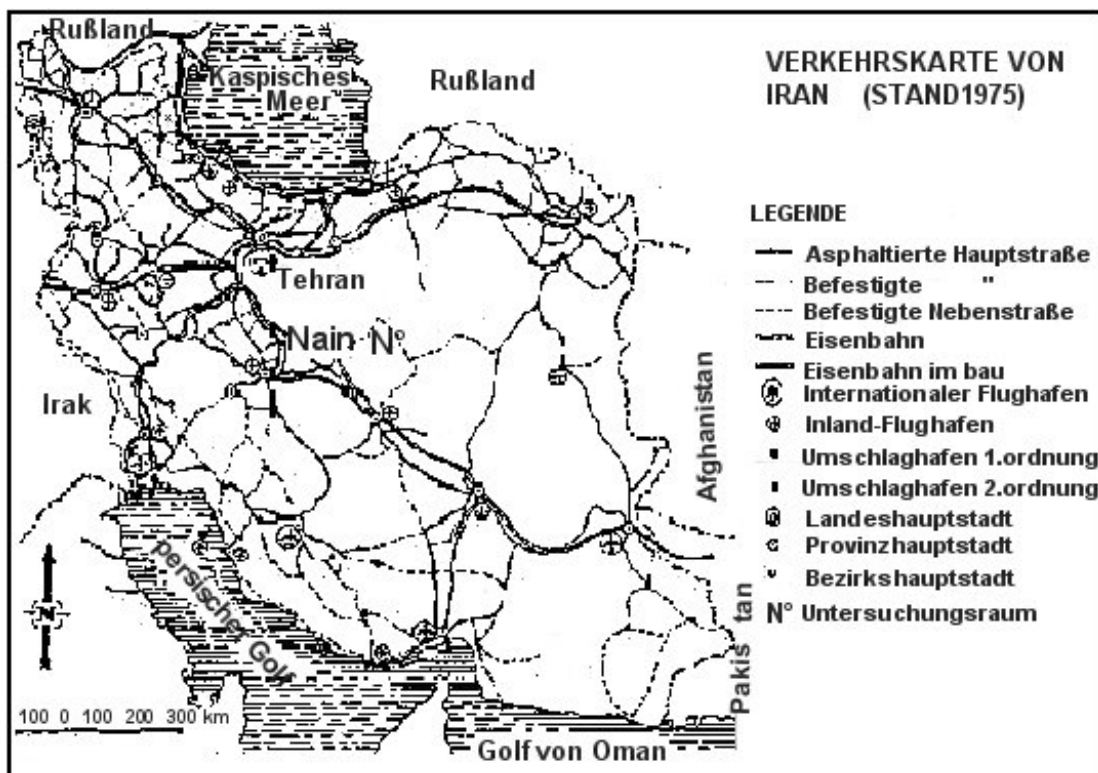


Figure 53: Position of Nain city in main transportation network of Iran.  
Source: Thumm U. 'Iran, Wirtschaftsstruktur und Entwicklungsplanung'.

### ***3.2.7 Population***

In first national census of the country in 1956, the population of Nain city was 4681 persons. In the year 1966 this population increased to 5925, in 1976 to 10261, and in 1982 to 14807 persons. Population growth between year 1956-66, 1966-76 and 1976-82 has been 2.38, 5.65 and 6.3 percent per annum. The population of Nain has grown very fast between the years 1956-82, but today the city of Nain is losing population. Isfahan city as the centre of the Isfahan province with all its opportunities has been able to absorb most of the Nain's population. City of Nain is a place for immigrants from rural areas of the region. This phenomenon has had a high effect on population of the city and quality of life of the people living mostly in the historical citadel. A population survey in the historical site determined that in 1985 the population of the site was not more than 2000 inhabitants. (4)

## ***3.3 Historic Centre***

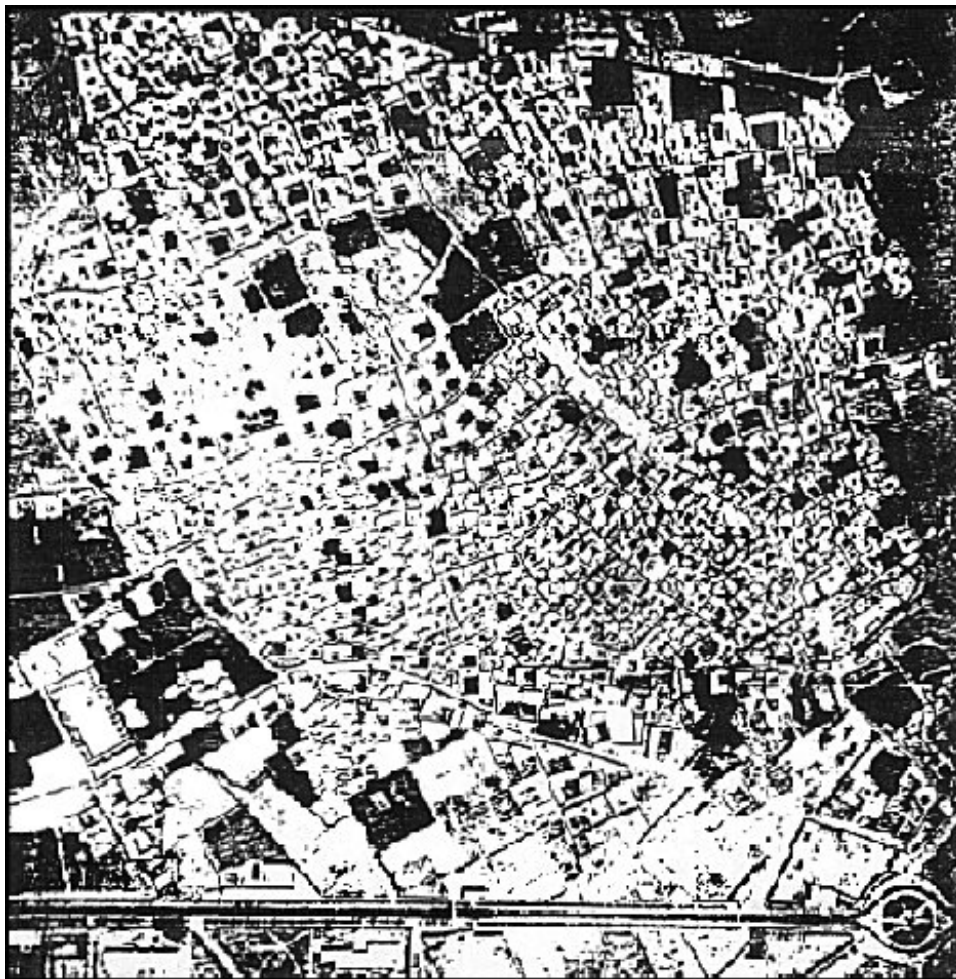
### ***3.3.1 Fabric and Nature***

The historic centre of Nain city is a solid and continuous entity. Because of its organic structure, the city is in harmony with the hot and dry climate. Colour is one of the most important criteria of this sun-dried brick fabric and is a serious element in the visual balance and appearance of the city. Its body has come from soil and has built a psychological relationship between the structure of the city and its surrounding harsh environment. Historic fabrics such as Nain are not built in contrast to their climate and their harsh environment, but they take advantage of every normal quality, which enhances the life of the residents. The building form, court yards and deep gardens, high ceilings, thick walls, hierarchical order in entering the houses, alleys, penthouses on alleys, water streams inside the city and location of the city in relation to the desert, all indicate a good understanding of the environmental condition and the most efficient use of existing natural capacities.

The organic development is based on the special natural-climatic characteristics of the Nain region. Each planning approach in a hot and dry climate must have been based on the special natural condition. Guiding development of the city along the underground water channels, and providing a special ecological system through architectural and design elements provides a balance and minimises cost of energy in this hot and dry climate. Many other simple planning concepts are a valuable part of the native city planning which should be studied separately.



**Figure 54: Urban development of Nain city during 1956-80.**



**Figure 55: Aerial view of Nain historic site in 1956.**  
**Source: Conservation programme of Nain city.**

### ***3.3.2 Historic Development***

The historic development of the city is divided into the pre- and post Islamic periods. Unfortunately there is not enough information about situation of the city in the pre-Islamic period. The existing information's about the city mainly concern the post Islamic time. Residential areas developed mainly in Pre-Islamic period. With the domination of Moslems in Iran, the mosque became one of the main urban elements added to the city and gave it a special image. In the early stages of the post-Islamic time, along with the development of residential areas, the bazaar came to exist. The existence of water resources allowed the new residential areas to develop in neighbourhood form and in a physical relation to the bazaar.

### ***3.3.3 Residential Areas***

In the 16<sup>th</sup> century the city developed considerably. New residential buildings and some public facilities like baths and water reservoirs were built. Actually the main urban development occurred in the 19th century. The division of residential areas based on the neighbourhood system, developed in this period. Religious centres were used as the basis of this division. The Mosque, open spaces, water reservoirs, public bath, commercial and other urban elements, gave each neighbourhood relative self-sufficiency by offering public services.

Spatial arrangement of urban facilities in a neighbourhood centre is one of the urban design principles of the 'Savavid Dynasty', which ruled Iran in the 15<sup>th</sup>-16<sup>th</sup> century. During the rule of this dynasty, urban planning developed in a large scale. Isfahan city is the masterpiece of their work in this period. The neighbourhood centre was designed in the form of a square with special organisation of facilities and services. A public open space for religious ceremonies is the centre of these squares. Because of the central location of these religious open spaces, there is good access to the communication network of the city. Usually each of these centres has a special access to the outside of the city, and one direct route to the bazaar.

### ***3.3.4 Typology of Neighbourhood Centres***

The historic site today is divided into seven main and two minor neighbourhoods. The main ones are, 'Chehel-Dokhtaran', 'Panjahe', 'Nogabad', 'Babolmasjed', 'Kelvan', 'Sarayeno' and 'Sang'. The 'Baghestan' and 'Sokan' neighbourhoods are the minor ones. Every neighbourhood has includes its own cultural identity. The main correlating element between these areas is the city bazaar, which is in fact the main vessel and actual link between neighbourhoods.

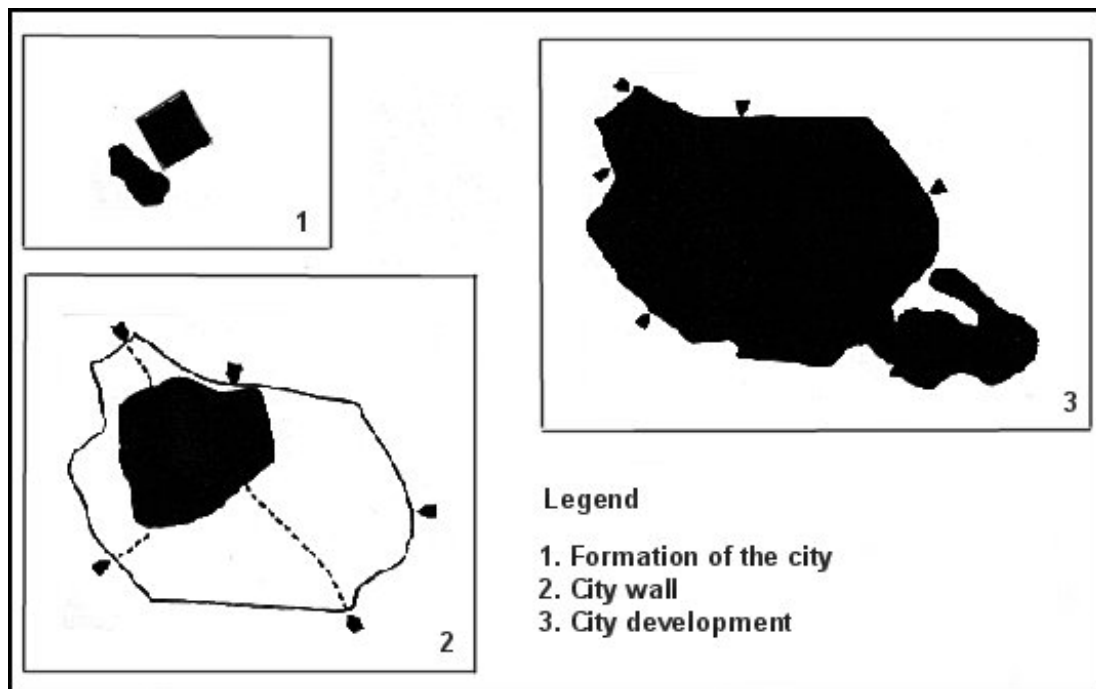


Figure 56: Historical development of Nain city in three stages.

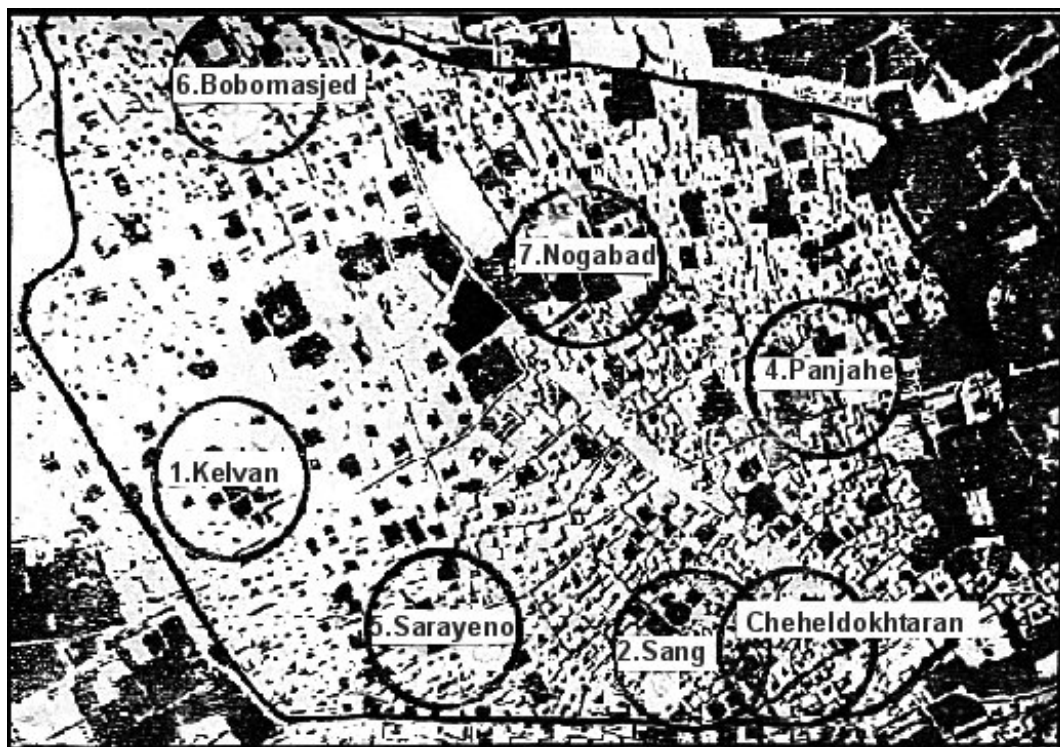
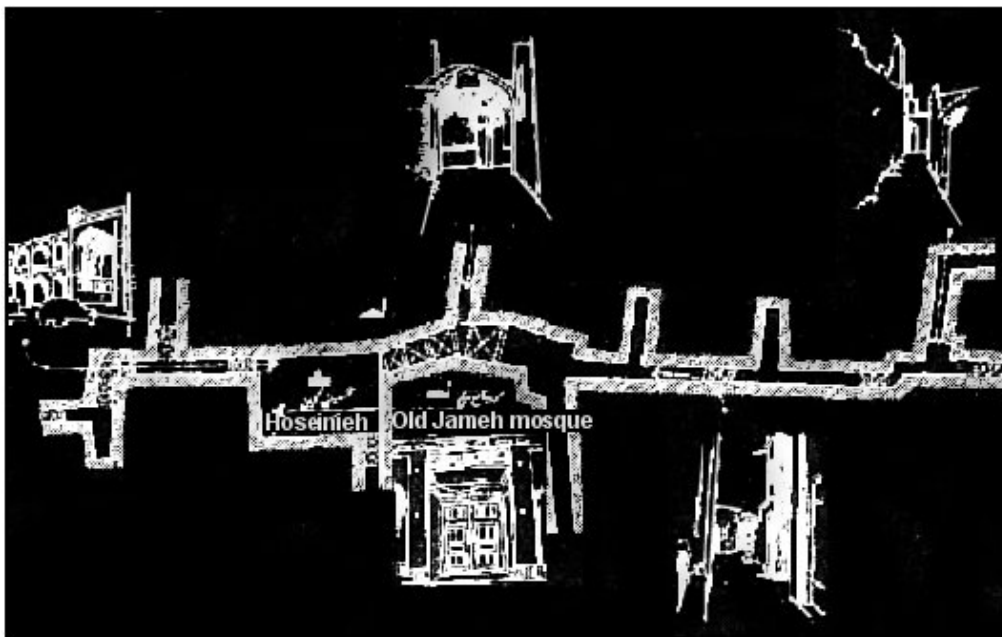
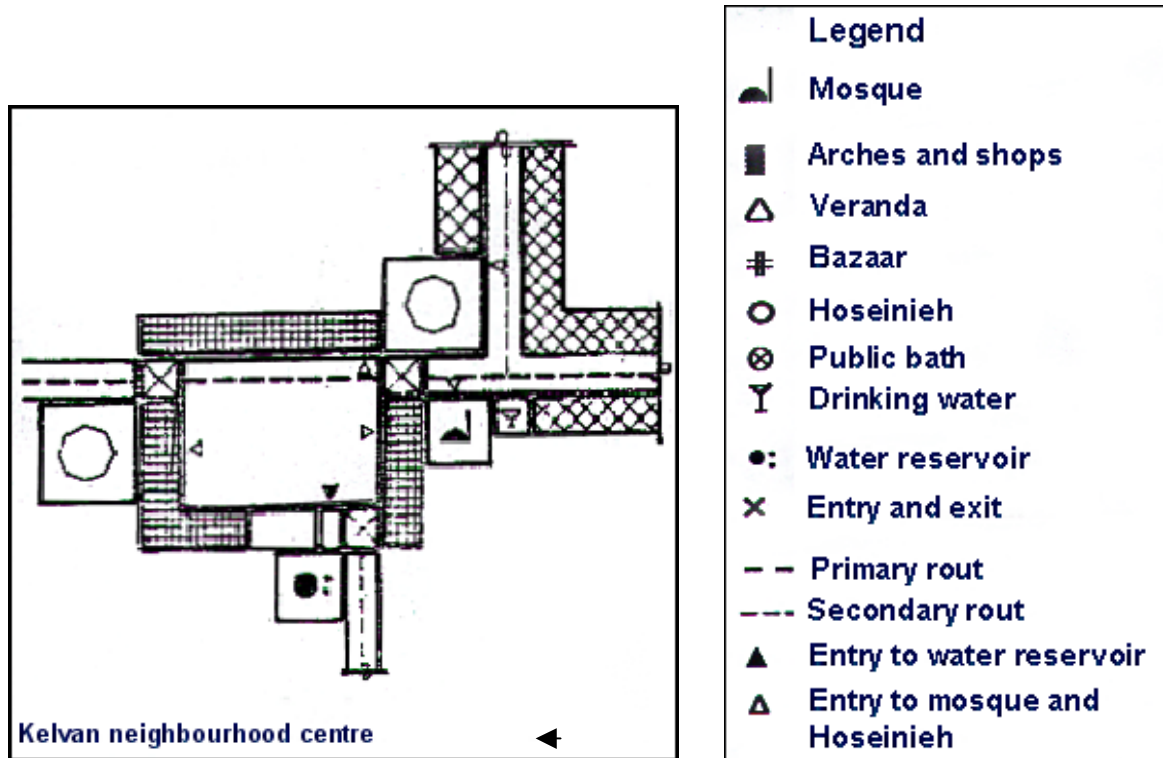


Figure 57: Nain historic site and its neighbourhoods.  
Source: Conservation programme of Nain city.

1. The “Kelvan“ neighbourhood centre is probably the oldest one in Nain city. It includes the old Jameh mosque, two Hoseinieh, one Saghakhaneh (drinking water), water reservoir, and commercial activities.



**Figure 58:** A schematic view of a part of “Kelvan” neighbourhood centre.  
**Source:** Conservation programme of Nain city.



2. The “sang” neighbourhood centre: includes two entrances and one old water reservoir called Kohne (the old), which was built on the site of an old public bath. This centre also includes Hoseinieh, Saghakhaneh, mosque and bath which both are called Imam Reza. The Imam Reza mosque and bath are shared with Chehel-Dokhtaran neighbourhood.

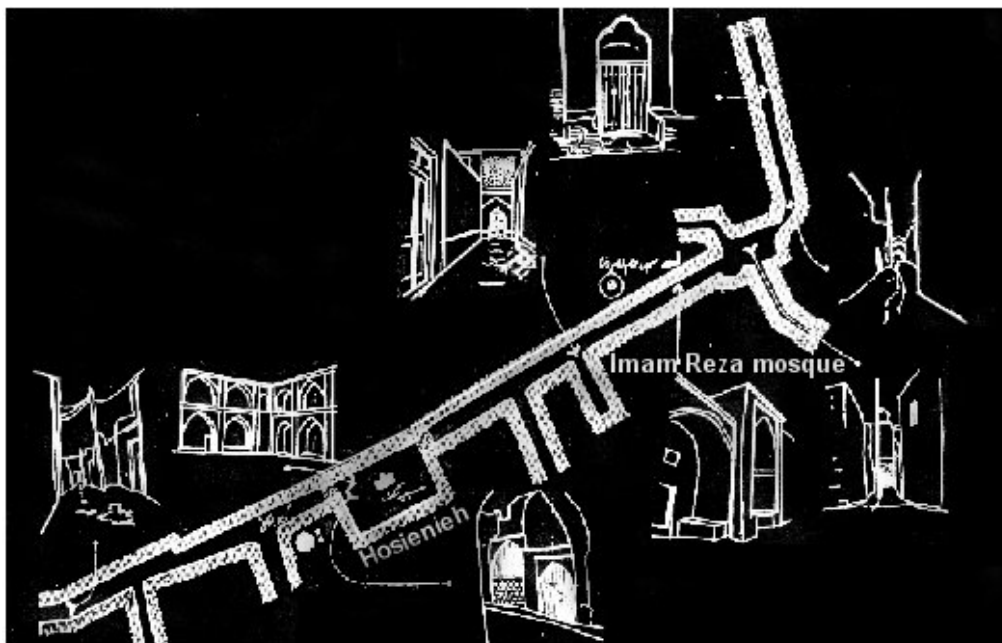
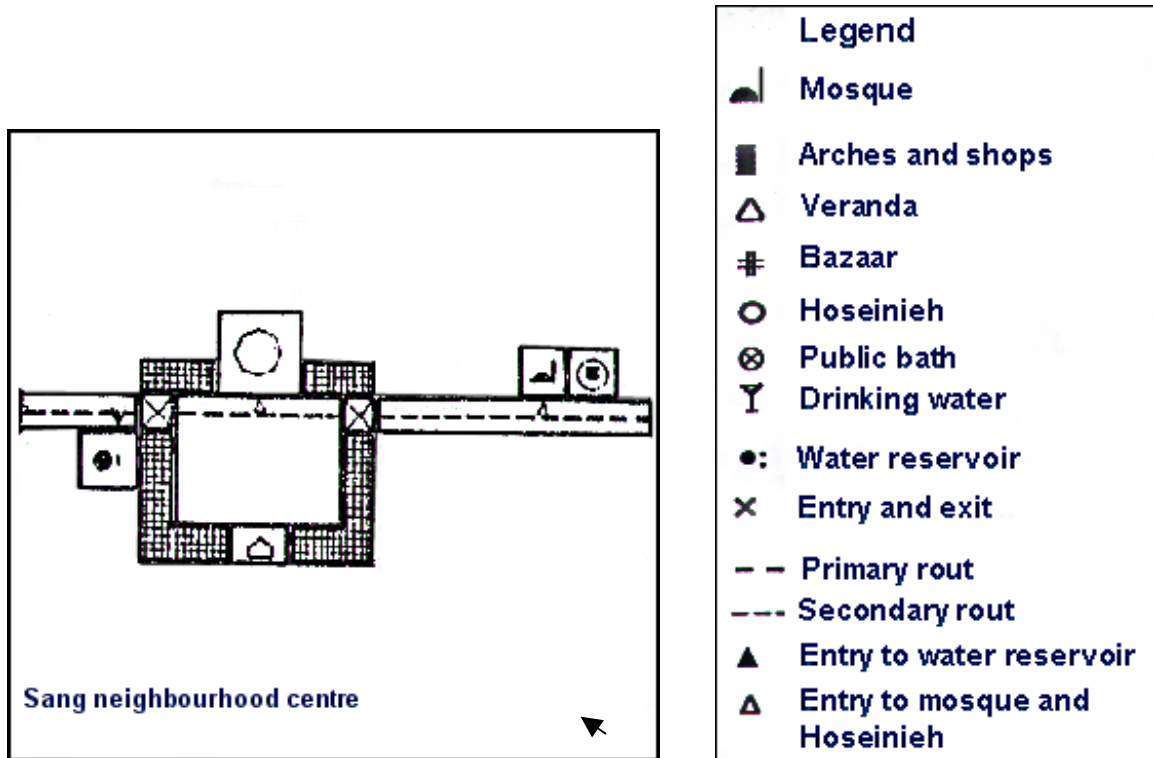


Figure 59: A view of a part of Sang neighbourhood centre.  
Source: Conservation programme of Nain city.

3. The “Chehel-Dokhtaran” neighbourhood centre: includes a very old mosque, which existed before the establishment of Hoseinieh and Saghakhaneh. This centre is one of the main parts of the old bazaar.

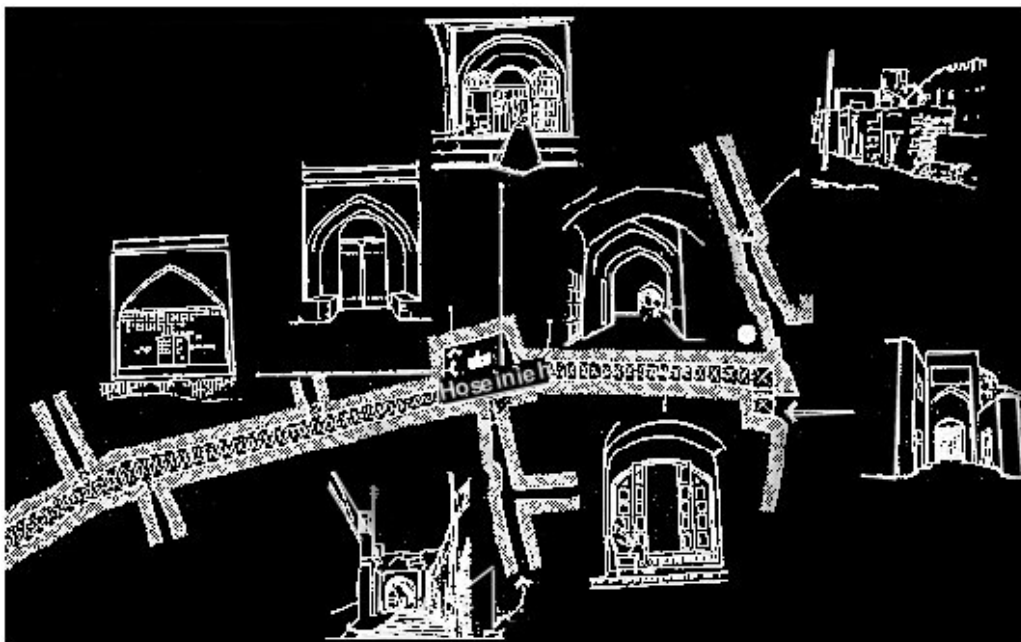
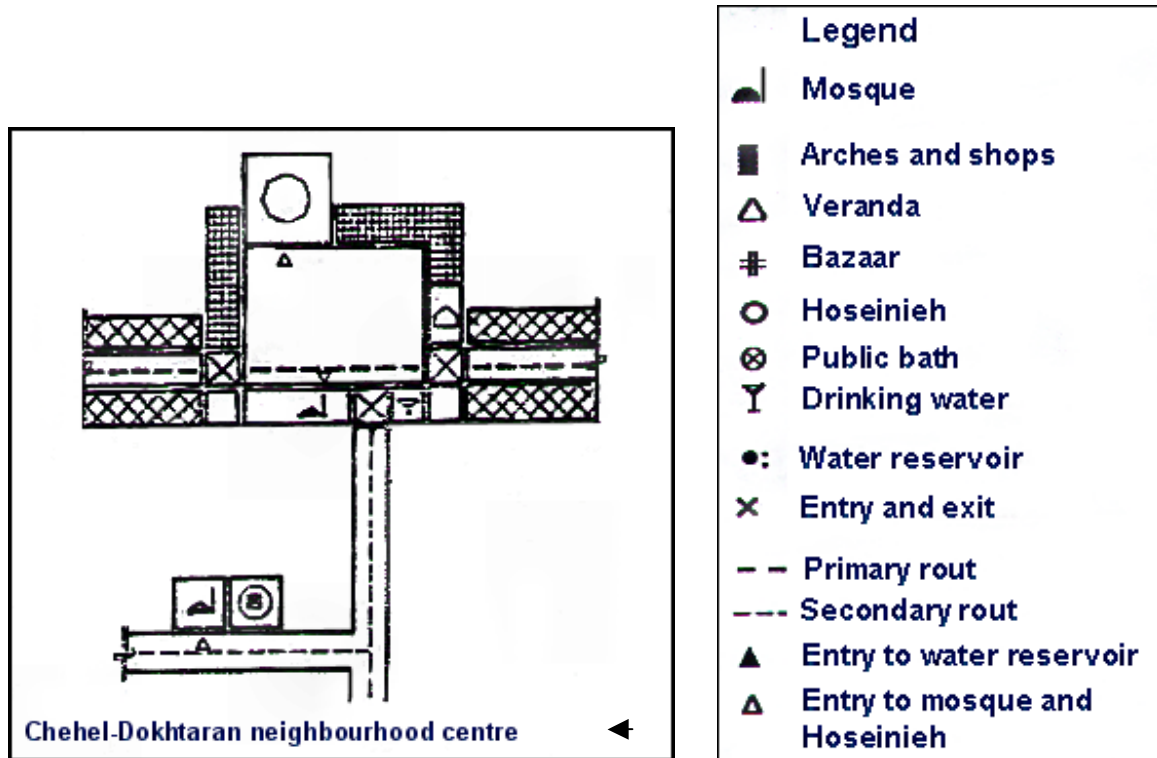
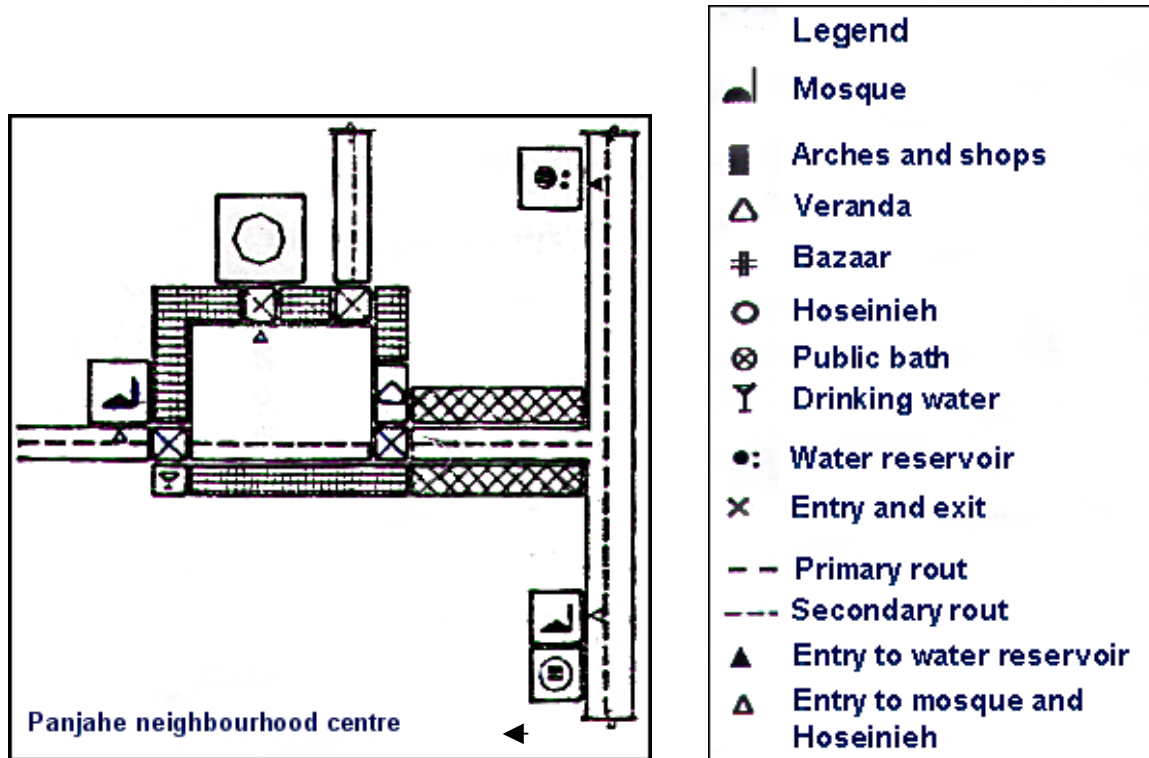


Figure 60: A view of a part of Chehel-Dokhtaran neighbourhood centre.  
Source: Conservation programme of Nain city.

4. The “Panjahe” neighbourhood centre: includes one of the oldest bazaars of Nain city, Hoseinieh, Saghakhaneh, and a mosque, which is called “Aboreihaneh”. Next to the mosque complex, the public bath and the water reservoir of “Mirza Kashefy” are located.



**Figure 61:** A schematic view of a part of Panjahe neighbourhood centre.  
**Source:** Conservation programme of Nain city.

5. The 'Sarayeno' neighbourhood center: includes a very old mosque, Hoseinieh, and water reservoir. This center is the last ones developed in form of square, use as Hoseinieh). The water reservoir is older than the Hoseinieh.

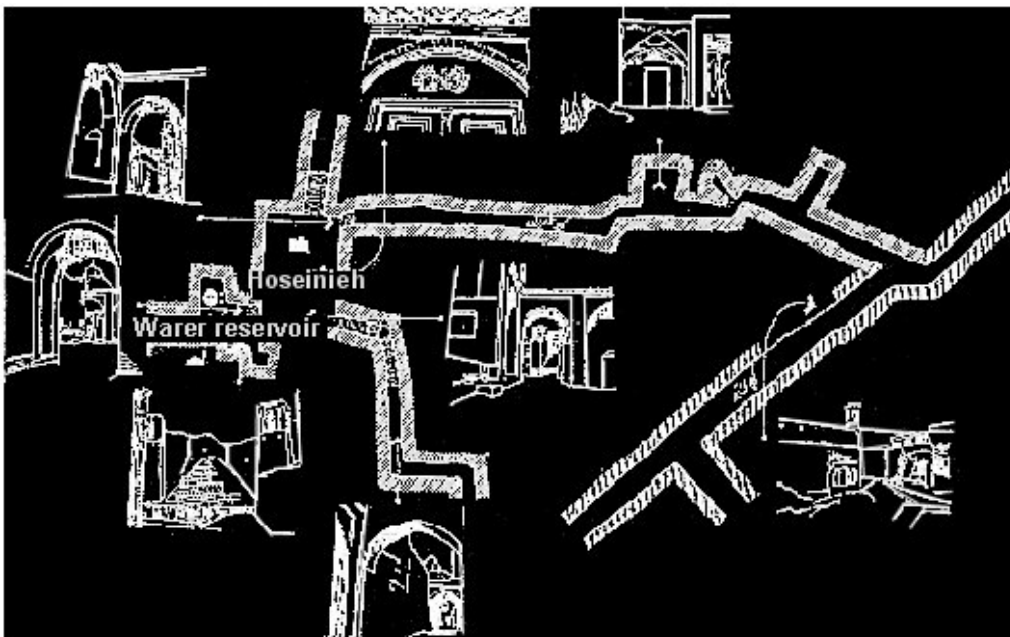
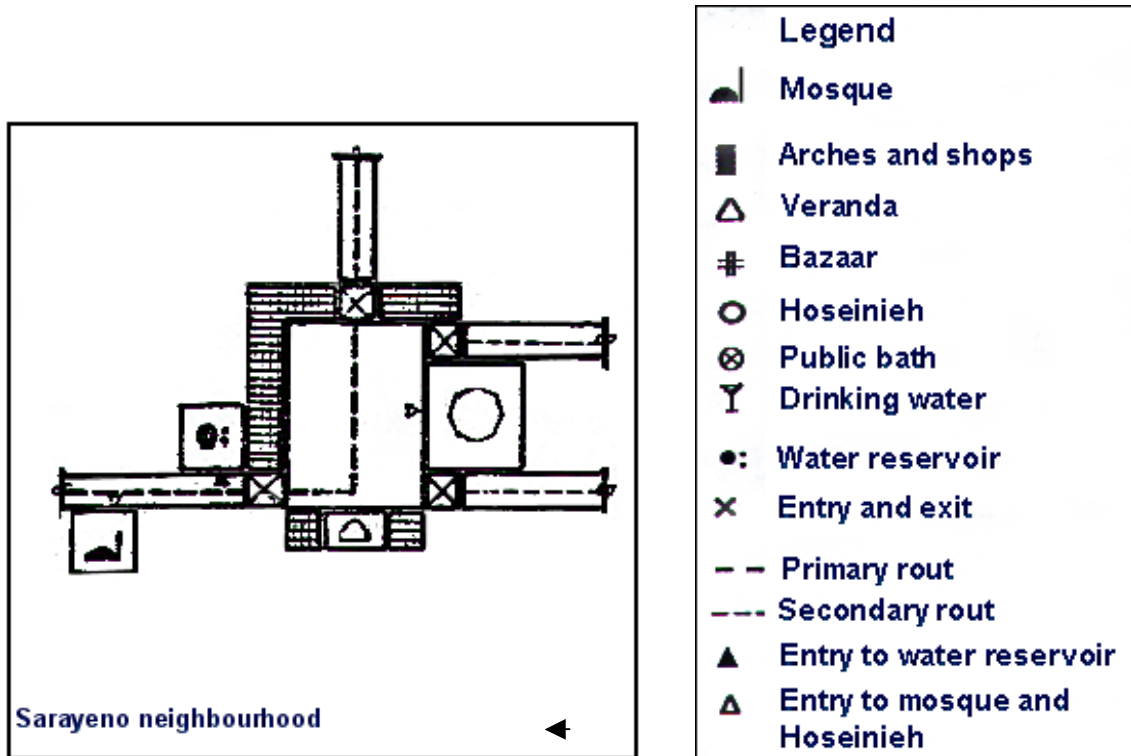


Figure 62: A view of Sarayeno neighbourhood centre.  
Source: Conservation programme of Nain city.

6. The “Bobolmasjed” neighbourhood centre: is a huge collection of Nain Jameh mosque, water reservoir, Hoseinieh, a small religious Shrine next to Hoseinieh and a Saghakhaneh. This complex is the most beautiful spatial arrangement in the whole Nain historic centre.

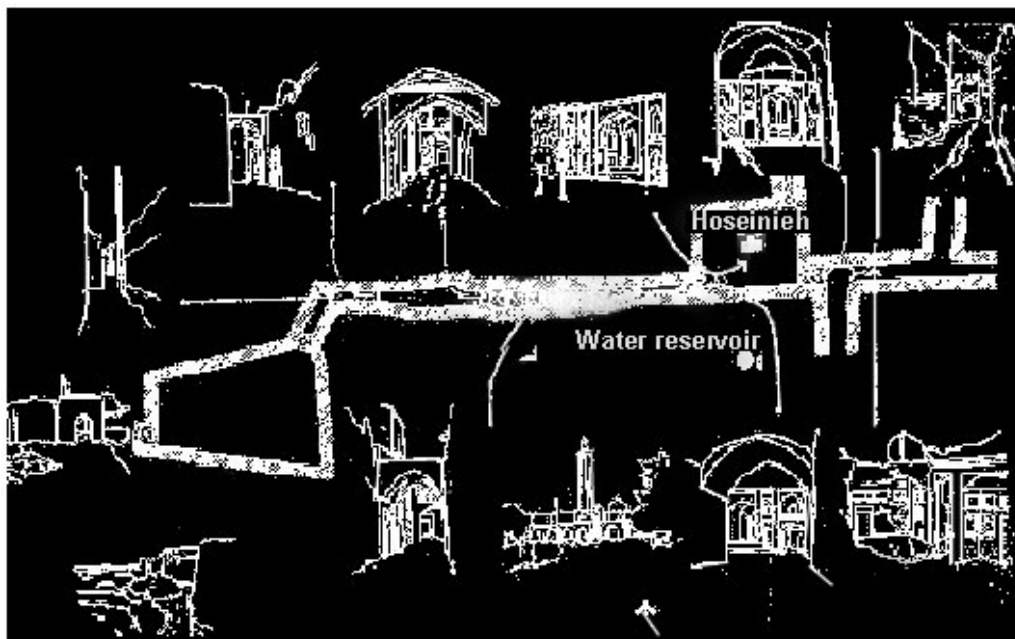
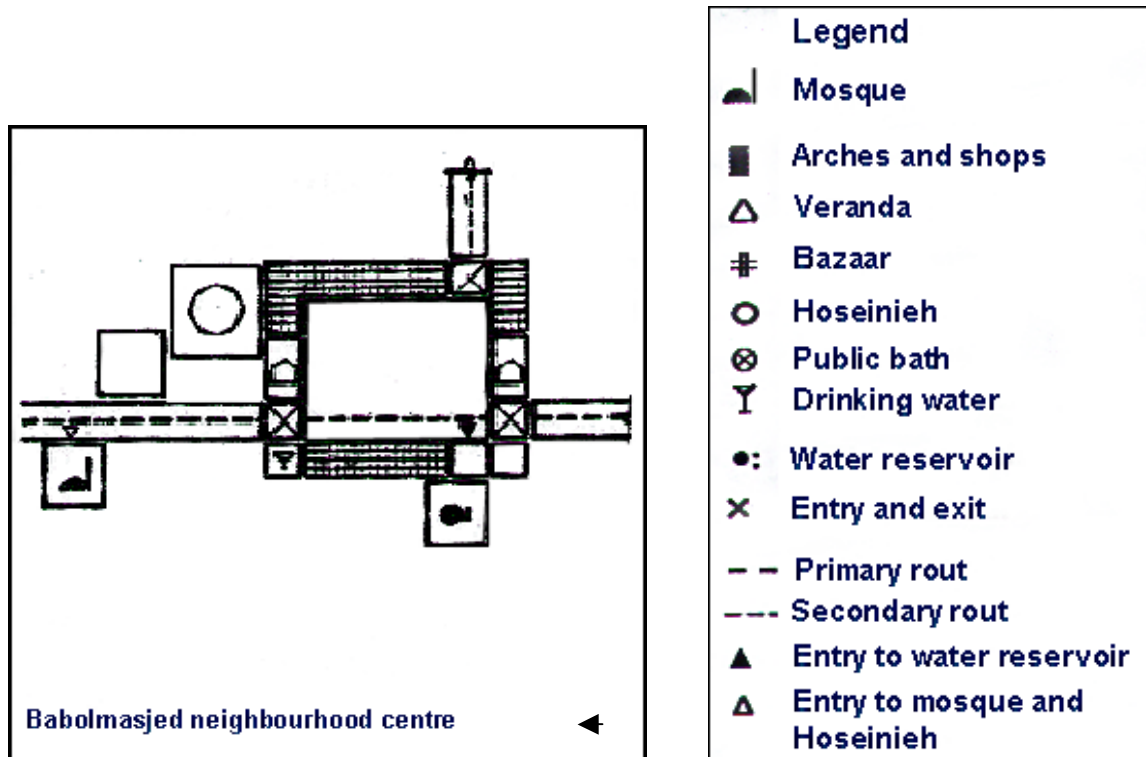
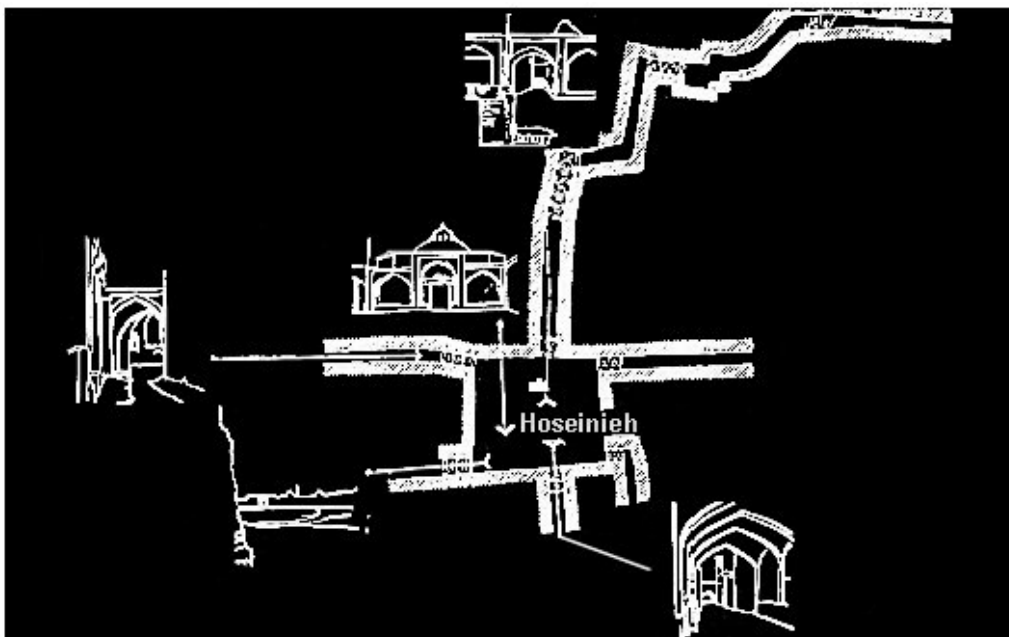
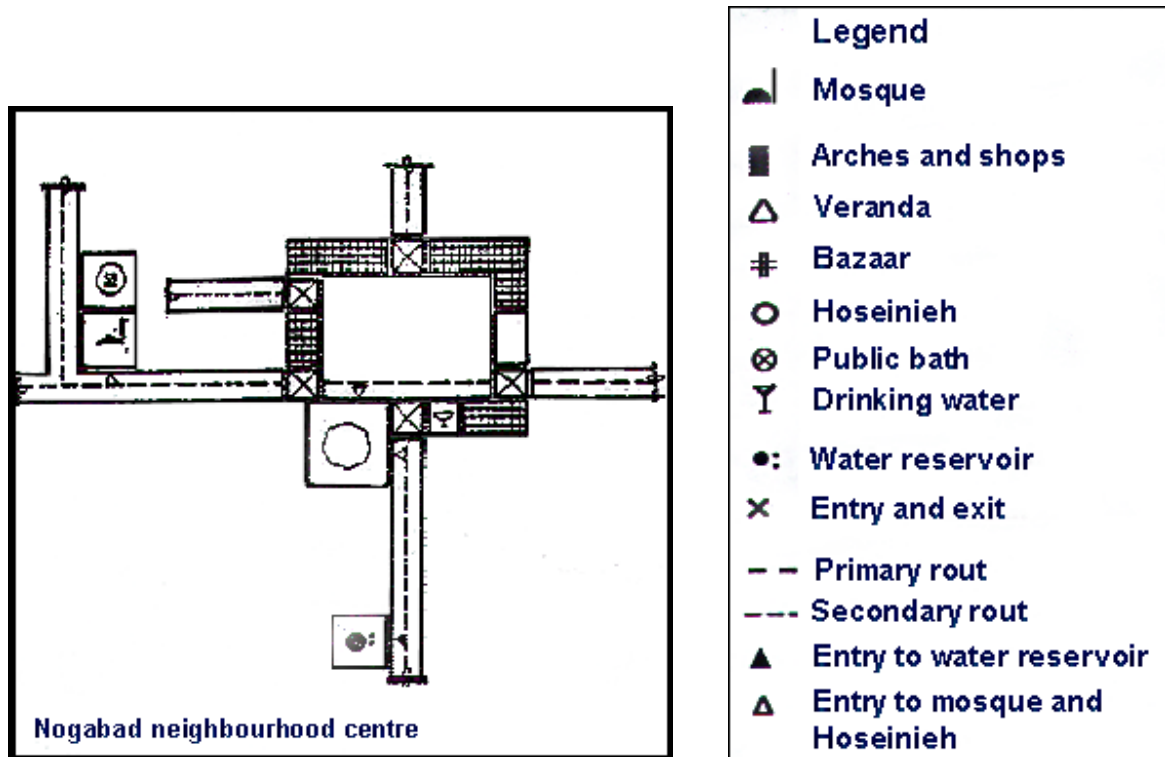


Figure 63: A part of Babolmasjed neighbourhood centre with its elements.  
Source: Conservation programme of Nain city.

7. The 'Nogabad' neighbourhood centre: includes Hoseinieh, Saghakhaneh, located next to central square of the neighbourhood, One mosque, public bath and water reservoir. One story high Taghnamas (arches) are built around the square. This Hoseinieh is the biggest one in Nain city.



**Figure 64: A part of Nogabad neighbourhood centre with Hoseinieh.**  
**Source: Conservation programme of Nain city.**

### ***3.3.5 Economic situation, Bazaar***

Previously Nain had been one of the most important carpet producers in Iran and its products had a big share of the exports of the country because of the beauty and quality. The bazaar of Nain had been the main centre of these economic activities. But today the modern economy of Isfahan has absorbed these productions. Economic changes in the country in the last decades have had a very negative effect on the economy of Nain city. The bazaar of Nain is in fact as all the other historic cities, the main axis and one of the main elements in the form and structure of the city. The establishment of a new bazaar has been the main factor in reducing activities of the old bazaar since the new one has been able to respond to the needs of its surrounding area.

New development in the city has been able to absorb most of the economic activities. Some of the activities from the old bazaar went to the new areas, and the old bazaar has lost more and more its economic-cultural function and its quality. The decay of the bazaar as the most important structural element of the citadel, influences the whole body of historical centre. Reduction in services, production activities and the movement of these activities to other places is the beginning of the decay of the bazaar. The revival of such activities resulting from the bazaar can spread its influence to all parts of the city. Economic reconstruction and rehabilitation of the bazaar is able to link the scattered and shattered economy of the citadel and influences its whole environment.

### ***3.3.6 Individual Buildings***

Individual buildings because of their special height are a very effective element in forming the urban skyline. Apart from domes of the religious open spaces like Hoseinieh and the wind towers of water reservoirs, the very important visual elements are Nain Jameh and 'Baba-Abdullah' mosques, dome and minaret of 'Sultan Saïed Ali' and 'Sultan Mosalieh' shrines. Their role as communication elements in Nain city is very important. These buildings whether at urban scale (Jameh mosque), or at neighbourhood scale (Hoseinieh) function as orientation information. These buildings have been used as the most important communication element in old cities of Iran.

The new urban planning programmes encourage development of high-rise building, which are hiding the elements of traditional cities, and are causing changes in the balance and equilibrium of the urban elements. In cases replacing their colour, has confused the communication system and mental relationship of people with urban form.

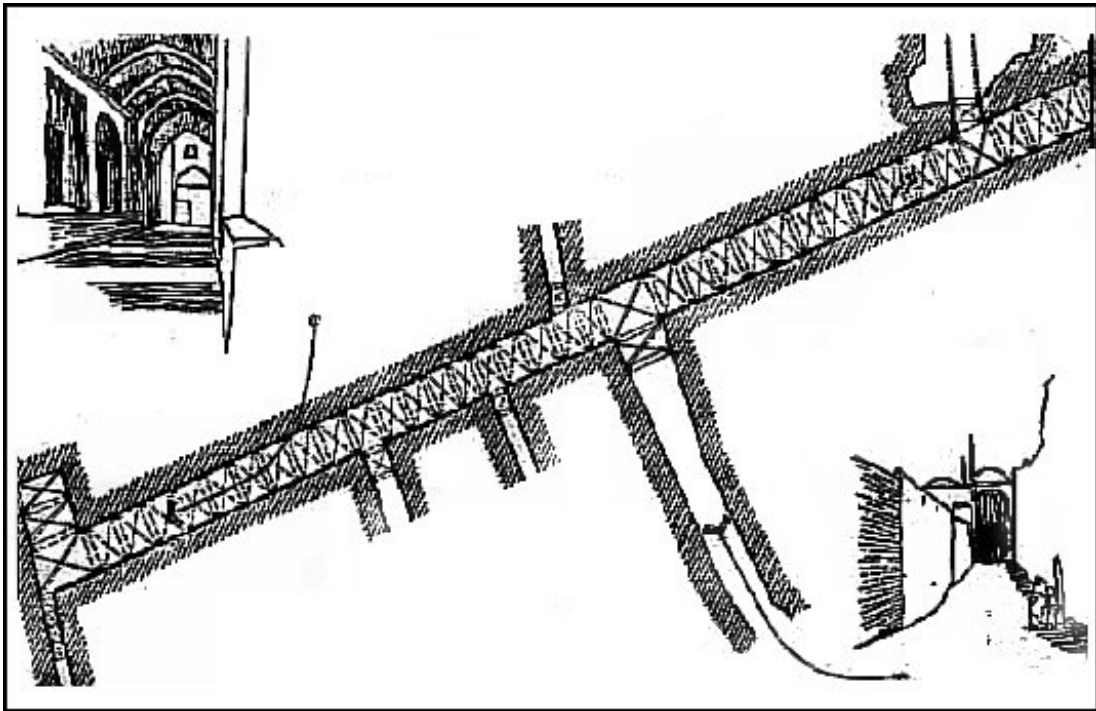


Figure 65: Bazaar of Nain as the most important cultural-urban element.

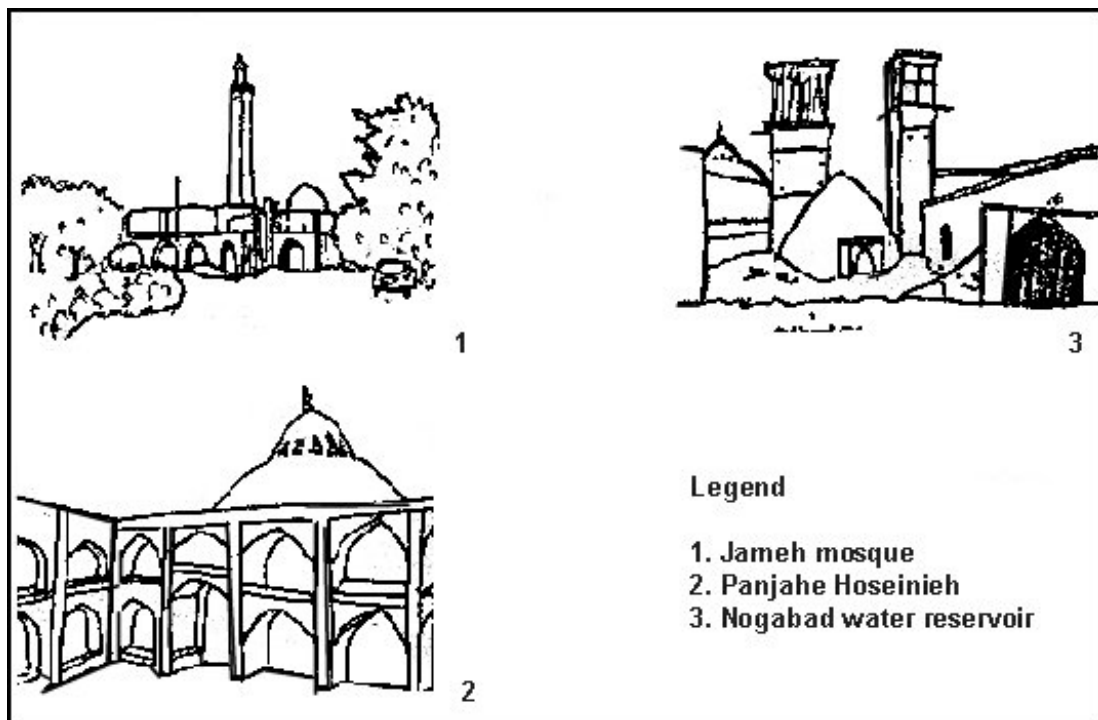


Figure 66: Effective single buildings in forming the urban skyline.  
Source: Conservation programme of Nain city.



### ***3.3.7 Urban Pedestrian Network***

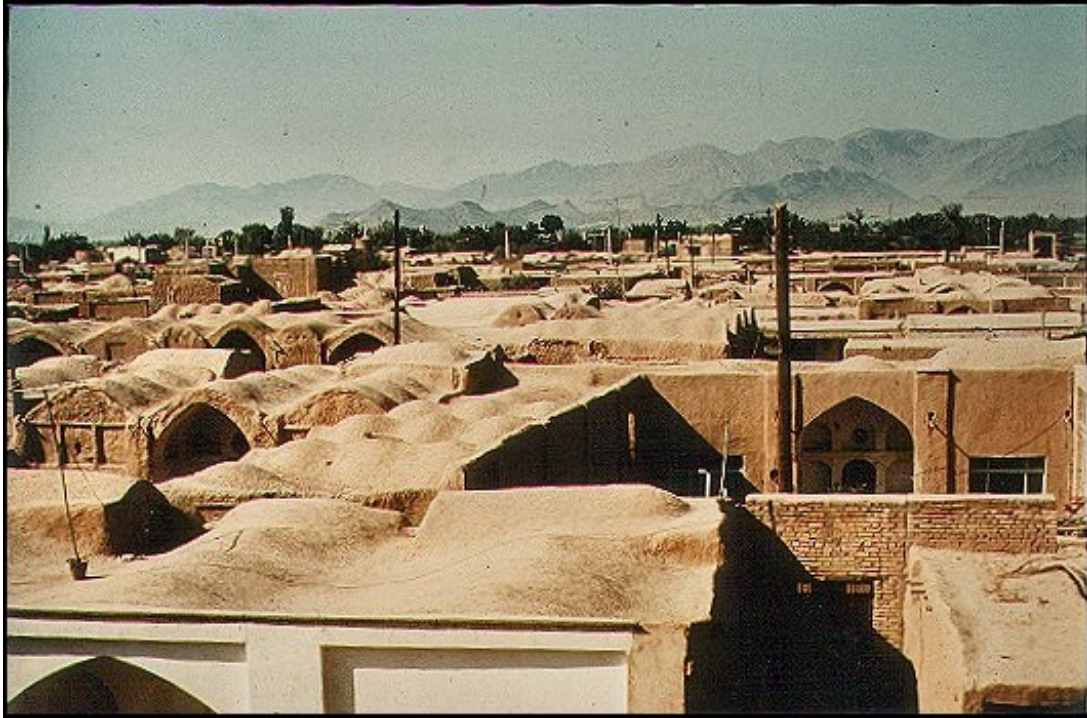
The traditional pedestrian network of Nain city is extra ordinary in this climate. Spatial orders and relations, variation in hierarchical communication and simplicity, are the main characteristics of this network. The bazaar as one of the main elements plays the pivotal role in this organic historic composition. Each element in this network is of special efficiency. Pavilions, entries, squares, narrow and wide alleys and entrances to houses, express different meanings. Up to early 20<sup>th</sup> century, the pedestrian network of the city developed organically. In the following years, the new streets developed to respond modern transportation, conflicted the existing pedestrian network.

The new developed streets have cut the pedestrian network of the historic area in many places and have divided some of the neighbourhoods. Interference with the historic network such as in Nain should be done with care to prevent any damage to valuable traditional system. The communication network plays an important role in relation to the city. Interference with the traditional system has a negative effect on the communication, and also on the cultural, historic, the economic and political function of the city. The consequences of combining a new communication system with the old one should be discussed before action is taken, and the effect of such planning measures should be carefully evaluated for future projects.

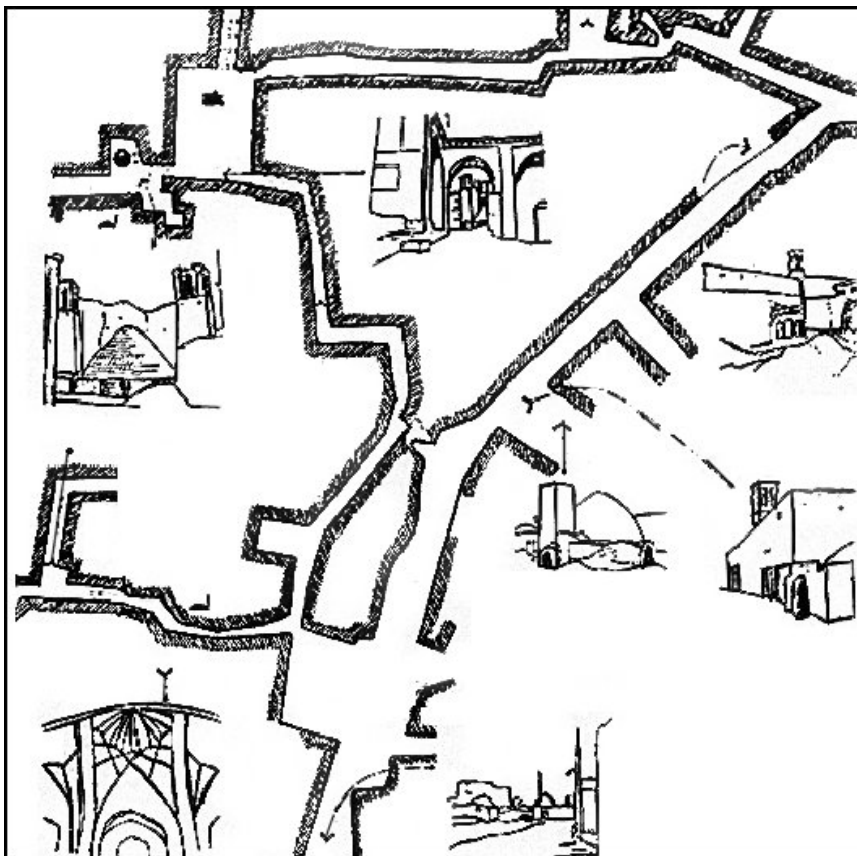
### ***3.3.8 Architecture***

Buildings in Nain are not of any special quality which separating them from other buildings in hot and dry climates, but their location, grouping and functional organisation shapes the urban fabric. The main architectural characteristics in such a climate are simplicity in form. Dwellings have a simple arched roof of sun-dried brick, a big central courtyard and at least one big veranda. The structure of the public buildings such as baths, water reservoirs, Hoseinieh and mosques vary in form. Every individual building has it's own beauty and simplicity. These buildings are without any decoration and their form variation distinguish them from the ordinary buildings.

The historic fabric of Nain in general, the building material, colour and volume contribute to harmonic atmosphere. The most important elements are Hoseinieh, water reservoirs, and domes of shrines, mosques and the minaret of the Jameh mosque. The composition and structure of volumes within the neighbourhoods is very simple. Domes and minarets in religious spaces indicate the physical distribution of neighbourhoods in the skyline of the city. The compositions of buildings as seem from the outside convey an organic impression, but inside they have their own special geometric order.



**Figure 67: City of Nain. Simplicity and harmony in form.**  
Source: Author



**Figure 68: A schematic view of pedestrian network of traditional Nain city.**  
Source: Conservation programme of Nain city.

### ***3.3.9 Architecture and Environment***

Apart from the new streets, which are incongruous to their surrounding areas, hierarchical and open spaces of historical fabric conform to the characteristics of their specific environment in this way achieving an ideal spatial form and functional identity in hot and dry climate. The central square of neighbourhoods is composed of two stories to providing shadow, with big and deep verandas and several openings for air circulation. There are also platforms for temporary resting. High alleys following the direction of the most desirable air circulation, with various covered passage ways, offer shelter during the hot times of the year. The adaptation of traditional architecture to a hot and dry environment in a simple way is obvious in every corner of the citadel. The traditional city was able to fight the heat and dryness of this climate with the help of non-mechanical devices and existing possibilities.

Building pavilions, small pools inside and outside houses, court yards, trees, local building materials and awareness of their thermal capacity, direction of buildings, circulation of water and air inside buildings, deep gardens and deep court yards, high arched roofs, numerous verandas, use of light colours in building, and many other techniques, are the simple and local non-mechanical solutions. Today forgetting these simple, cheap and independent solutions, our architecture in such cities is more and more dependent on energetic mechanical systems, which not only for a country like Iran, exacerbates economic pressure, but also increases the heat of the environment permanently.

### ***3.3.10 Space, Symbols and Urban landmarks***

Space in residential areas, is a matter of function, and every space has a special identity. In Nain city, space of the neighbourhood centre is recognised because of the elevation and height of the buildings, it's elements as covered entries, wind towers of houses and public buildings, and domes and minarets of mosques and shrines. The bazaar is composed of different entries and numbers of shops. Different sizes of neighbourhood centres, special spatial organisation of elements, all have given a special identity to these centres.

In Nain the most dominant urban elements in skyline of the city are religious spaces, domes and minarets. Development of urban landmarks has made people to understand their environment. The existence of these urban landmarks, make movement in the city much easier. Such strong images are recognised by people. This recognition is part of the cultural life of people living in historical sites.



**Figure 69: Wind catcher (Badgir), an example of a non-mechanical cooling system.**



**Figure 70: Trees and water, the most important design tools for inner spaces.**  
**Source: Author**

### ***3.3.11 Building Material***

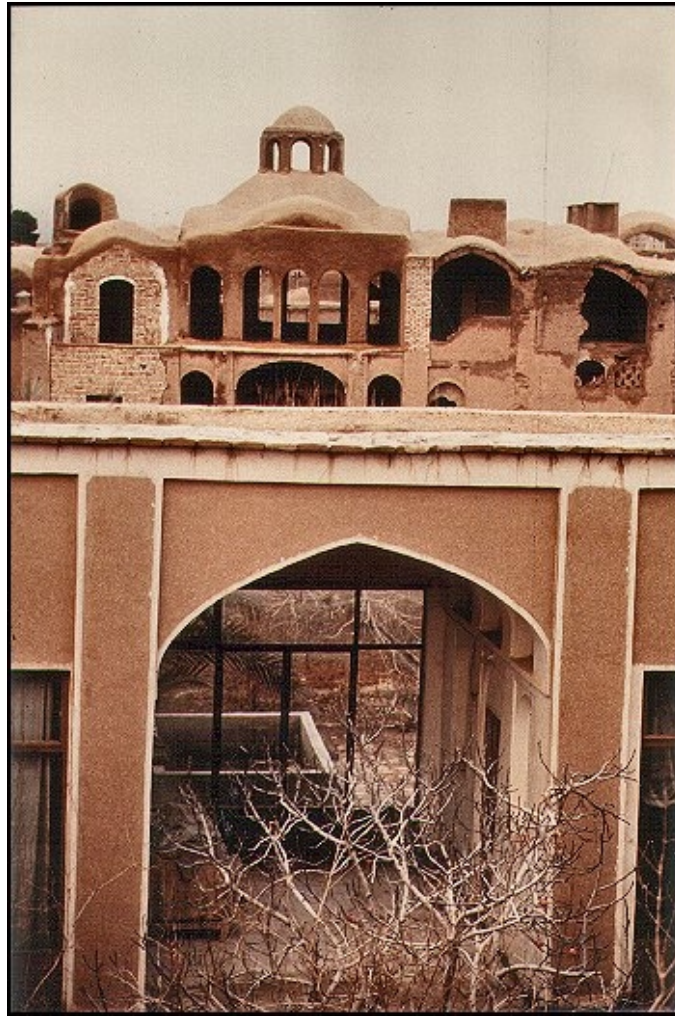
The colour of buildings and unity in form, indicate the highest relationship between the city and its environment. Sun dried and ordinary bricks are two main traditional building material which up to today have not under gone many changes. Residential buildings are mostly built of sun-dried brick and in construction of public buildings as bazaar, mosque, water reservoir, bath, Hoseinieh, both materials have been used. In public buildings ordinary bricks are mostly used as a facade or cover for the domes or minarets. The facade of traditional residential buildings inside and outside is mostly of clay and straw plaster with decoration. This simplicity in building material and unity of colour has helped the harmony with surrounding environment. The modern building materials are mainly ordinary brick and steel.

### ***3.3.12 Building Form***

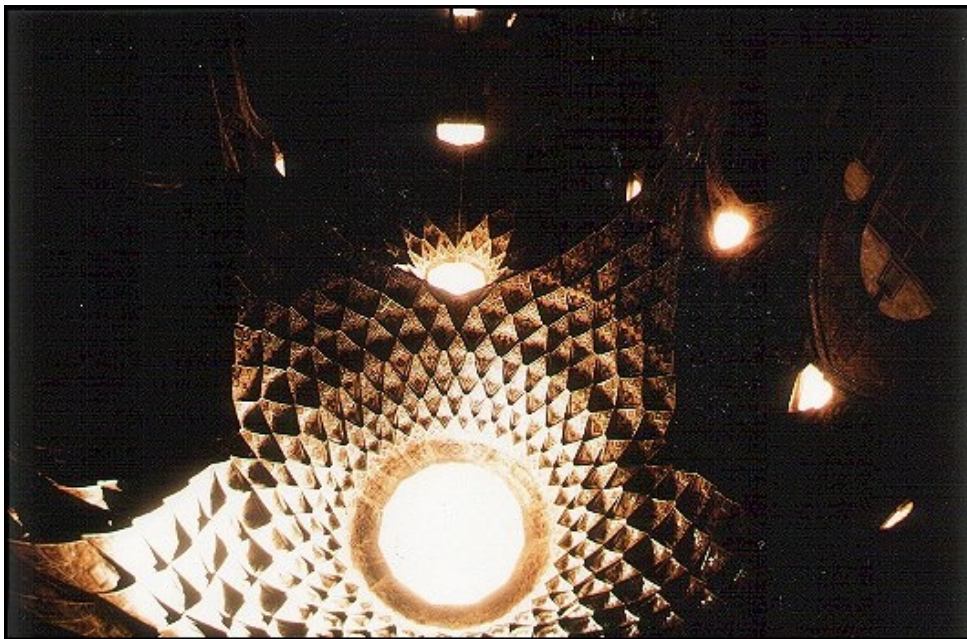
The immigration of people from the citadel to the new developing area had the highest effect on the use of traditional building material, form and architecture. Traditional architecture, in spite of its special characteristics and values, does not have place in modern life of the city. 'Hashti' as the main semi-private entry space of several houses, and the central courtyard in spite of their importance as the main design elements in such climate have lost their value. In modern building form and architecture, cultural concepts are changed. The 'Hashti' as the main physical barrier between public and private space, is eliminated, and the central courtyard is replaced by an entry space. This modern building concept is applied in areas from south to central Iran in spite of the climatic differences.

### ***3.3.13 Maintenance and Repair***

Up to the middle of the 20th century, repair and maintenance of all buildings in Nain has followed the common traditional methods. However, the cultural and economic changes, alongside the shortage of services, and the immigration of residents from the historic site, have turned the house into one of low-income people. Traditional houses, because of their dimension, use and form, need continuous maintenance and repair. Serious changes in architectural techniques, variation in materials, use of machinery, absorption of working power to the bigger cities, evacuation of historic sites and small cities from building labour forces, and the loss of traditional skills, have confused and destroyed the old repair and maintenance techniques of historical buildings. The repair activities just concern the registered cultural-historical buildings. These activities have been able to save many public buildings and increase the hope of the people living in historical area.



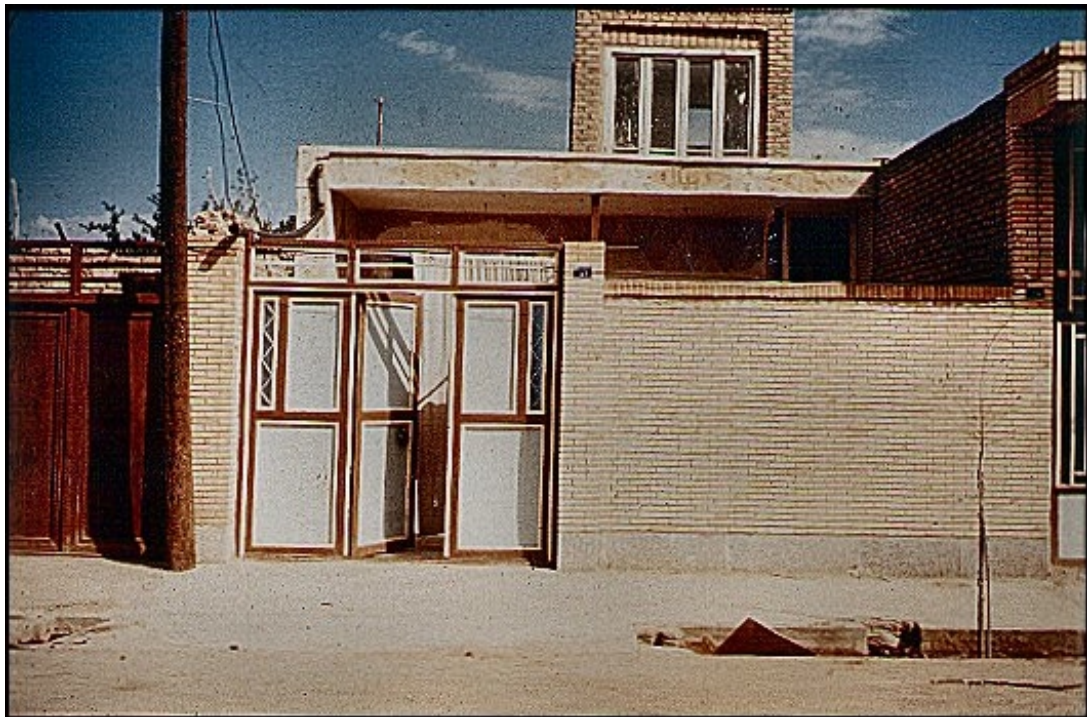
**Figure 71: Facade decoration with clay and straw plaster.**



**Figure 72: Internal decoration of a traditional house.**  
Source: Author.



**Figure 73: An empty old house in historic citadel of Nain city with its veranda and traditional central courtyard.**



**Figure 74: A typical house in new developing area of Nain city with entry space as the modern courtyard.**

**Source: Author**

### ***3.3.14 Gardens, Small Gardens and Hollow Gardens***

Green areas, gardens and small gardens have always been important elements of the inner environment. Unfortunately, many of these valuable gardens have dried out or are drying as the result of carelessness or migration of the owners. Furthermore, dryness of two main underground water channels, which have previously run through Nain city and have provided a moderate and humid microclimate, has aggravated the situation. Gardens are inseparable cultural elements of the cities in hot and dry climate. Added to the normal gardens and small gardens, hollow gardens are one of the main architectural elements of Nain city and other cities in central part of Iran. This internal design tool element plays a basic role for the ventilation of the housing units.

These special gardens can be found only in desert areas. They are established below ground level and although they look like normal gardens, are much more complicated. They not only provide shadow, but also help filtering the air. Water channels, which enter practically all of the houses, pass through hollow gardens, and simultaneously irrigate the trees. The water through evaporation takes the heat of the environment and consequently provides a moderate microclimate. Circulation of this cool air through the whole buildings is very pleasant in hot and dry summer days. The gardens and green areas around the city act as a filter between the desert and the city. They refine and cool the dusty air of the desert before it enters the city. Providing such a man made ecological system in facing and adapting to the desert, should be seen as a valuable strategy in encountering the rough nature of this area. This strategy because of its simplicity and economy value should be used in designing modern cities with regard to the rehabilitation and restoration of historic cities in this and the other parts of the country.

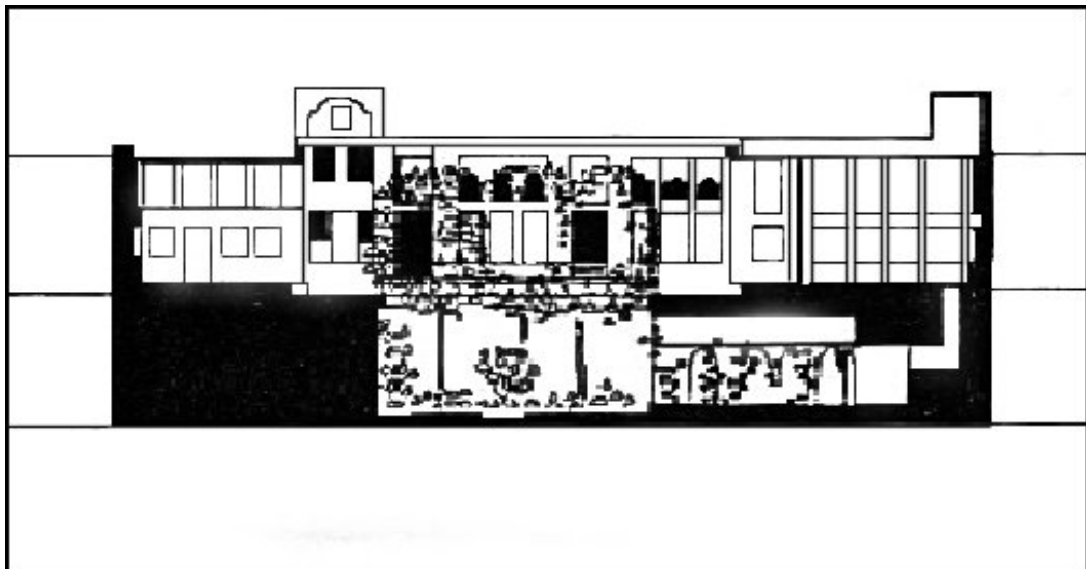
### ***3.4 Analysis of Open Spaces***

Public open spaces are the most fascinating parts of historic cities in hot and dry climate. Open spaces in historic areas are based on the hierarchical movement from the central part of the city, the main streets, alleys which lead to neighbourhood centres, secondary alleys, 'Hashti' of the houses, entry halls and the court yards. This hierarchy is a movement from public space to private space. The needs of the people and function of these spaces determine their order and compositions. Main access and streets are wider and alleys, which terminate at houses, are very narrow. In this hierarchical system the most important urban spaces are the covered semi-private spaces between groups of houses called 'Hashti', and the central square of the neighbourhood. The central space of the neighbourhood is the most excellent manifestation of urban design in a period of time by the people who used it.





**Figure 75: Greenery inside and around the city as a protecting element against desert.**  
Source: Author



**Figure 76: A section through a hollow garden in a residential building.**  
Source: Tavasoli, M. ' Hot and dry climate'.

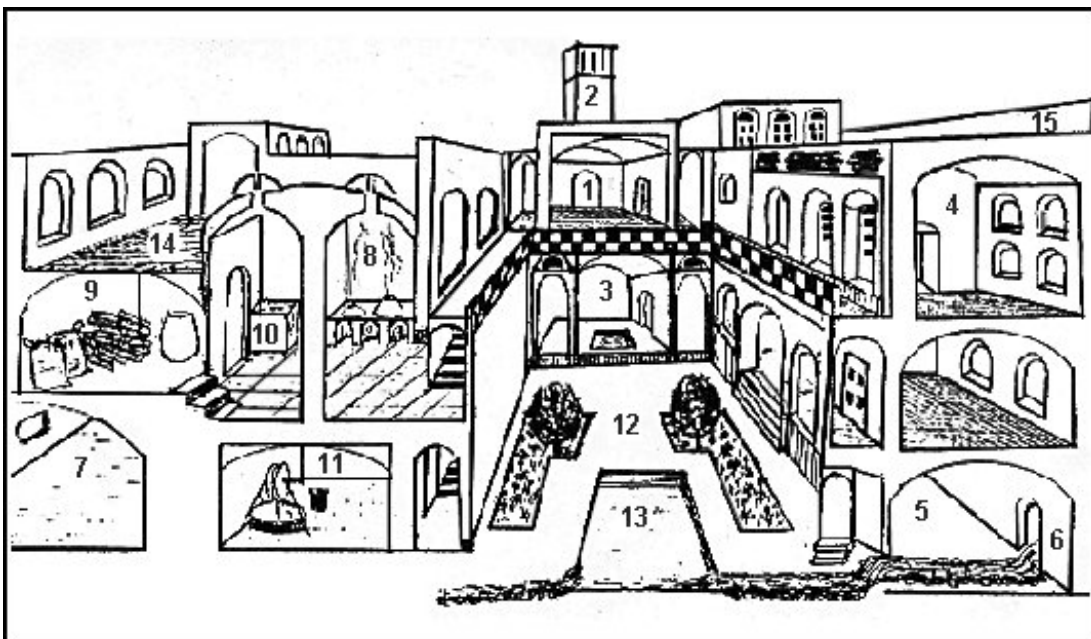
### ***3.4.1 private Spaces***

Private open spaces have two main characteristics. Firstly they have a role as an active functional space in relation to the houses. Secondly, there is the court yard which includes a secondary kitchen, daily activities, play for children on one side, and on the other side is a solution for facing the hot and dry climate and changing the internal atmosphere of the houses to a pleasant environment. The courtyard is a private space, which is a vital and basic element in houses in hot and dry climate. This traditional private space with its surrounding high walls is in fact, a free space for movement of family members mostly women. The absolute privacy of this space allows them to move and work without being observed by strangers.

### ***3.4.2 Public and Semi-private Spaces***

The traditional design system of historic cities in Iran has never allowed direct connection of private and public spaces. There has always been a respectful separation between these two spaces. This separation could have different forms, but 'Hashti' and covered entries are the usual ones. A combination of public and semi-public spaces includes a hierarchical system, which begins at the city gate and ends in the entry hall of houses. The traditional pedestrian system of the city is the main part of this system. After entering the bazaar through a gate, a quick and direct access to the neighbourhood centre is possible. Apart from these access, there are others which based on the hierarchical division are counted as second class access and connect the attached neighbourhood centres to each other. The third group are the access which lead to the external gates of the city.

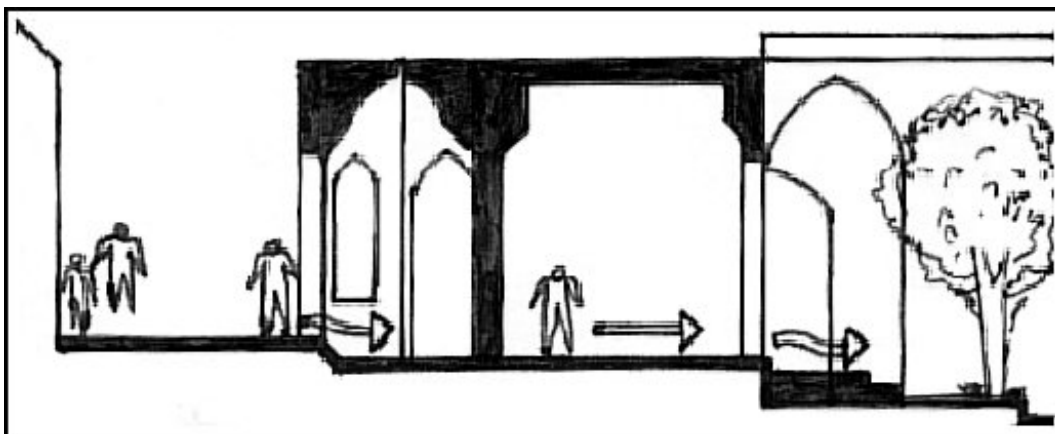
This spatial composition, completed with close ended alleys and 'Hashties'( the traditional entry halls to several houses), provide private and semi-private access to this network. Traditionally, in Iran gates separate semi-private and private parts of the network from the public spaces. The door of the houses or the entrances of the 'Hashties' are these barriers. Such a network today can be conserved and rehabilitated at least in small cities, where the modern wide streets do not have any place in life of the city. Although this simple system, has lost it's meaning, it can still be rehabilitated as a historical-cultural organisation. Continuous relations with the bazaar from any part of the city have resulted in development of a very rich social relationship. Damages in the pedestrian network result from the establishment of new streets have affected historic relationships and traditional social links. Any kind of interference with existing open spaces, or the development of new ones, should happen in view of the climatic dimensions and architectural criteria.



**Figure 77: Structure of a traditional house in hot and dry climate.**  
**Source: Author/ Kheirabadi, M. (Iranian Cities).**



**Figure 78: A simple and beautiful half covered passageway as a public space.**



**Figure 79: A section through passage, 'Hashti', and entry hall of houses.**  
Source: Author



**Figure 80: The 'Hashti', (the entry space of several houses) as a semi-private space.**



**Figure 81: Entry hall, a covered passage between 'Hashti' and courtyard of a house.**  
**Source: Author**

### ***3.4.3 Maidan (square), function and spatial relations***

The Maidan is the main public space in each neighbourhood. All the seven neighbourhoods have each a square, which is surrounded by cultural and service elements. These squares mostly located in centre of the neighbourhoods. In many ceremonies as religious, funeral, festal and political meetings, the Maidan is a space for gathering. In fact there are no other open spaces for such ceremonies. Apart from these functions, the Maidan is a place for free time, a children's play ground, and many other activities which residents see as a part of their daily life or special occasions.

These squares are connected to each other by a pedestrian network, which during the ceremonies and festival is used intensively. These movements reflect the spatial and socio-cultural relations of the historic areas, which still exist and probably are the strongest phenomena to keep the traditional citadel alive. These centres, in relation to the city and their neighbourhoods, function as the most important cultural and social elements. Many of the social ceremonies from the pre-Islamic period, are still carried out in these centres and attract also people from the new areas. These functions, still are the most important cultural elements of the city. In spite of all other absorbing power of the new areas, there is no spatial replacement for such simple open spaces, which demonstrate thousand years of traditional social and cultural relations of people who live in this simple complex.

### ***3.4.4 Cultural Activities***

From private spaces, which have been shaped based on family relations, climatic conditions, the cultural and social way of life, to public spaces in which their form has been subject to their function in relation to common cultural activities of the people, all have exposed the culture and social characteristic of the Iranian people. Cultural activities of people can be divided into two main categories: activities, which take place inside the houses, and the activities, which occur, outside the private spaces. What happens inside an Iranian house is an interesting part of cultural behaviour of these people, but our concern is the cultural activities outside the private spaces. Public activities of people in traditional cities can be divided into two main groups: Daily activities including the journeys of men to work, children to school, shopping of housewives, and the activities which take place weekly such as going to public baths. And cultural activities, which take place on special occasions such as religious activities at a special time of the year in month of 'Ramadan' or 'Moharam'. Also ceremonies as New Year and many other religious and national activities, which bring people together in public spaces.

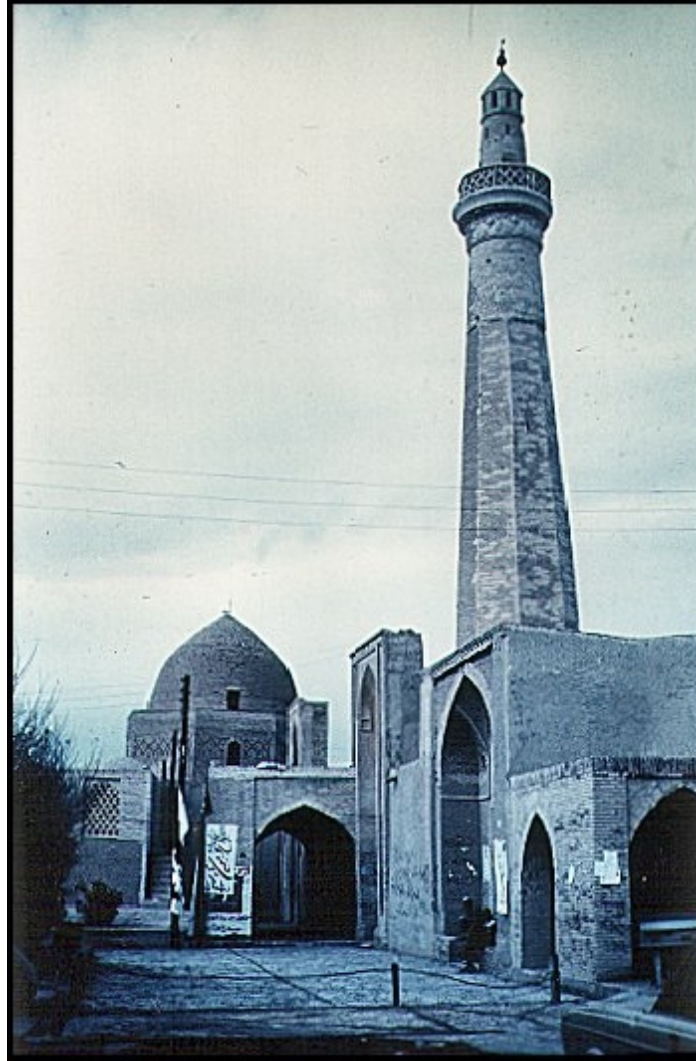


Figure 82: The 'Babolmasjed' neighbourhood centre with minaret of Jameh mosque.  
Source: Author

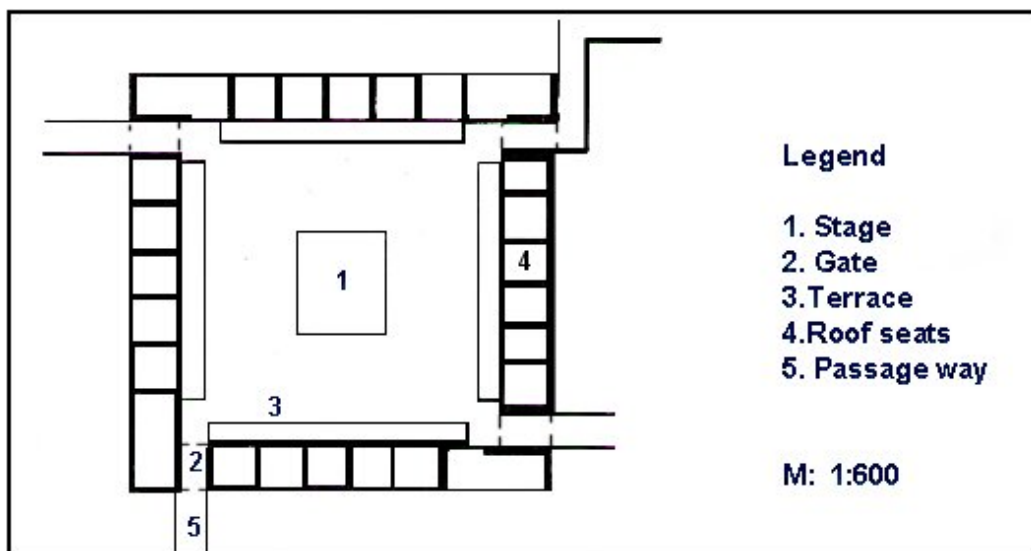


Figure 83: Outline of a Hoseinieh as a central public space of a neighbourhood.  
Original source: Tavassoli, M. 'Hot and dry climate'.

## ***1- Daily activities***

In traditional cities, activities outside the houses do not begin direct from the doors of the houses, but between the private and public space there is a semi-private space which has always protected the privacy of dwellings and has been a barrier between them and strangers. Therefore public activities begin in this semi-private space, which is traditionally called 'Hashti'. The 'Hashti' is a covered relatively small space, which opens up to three or four houses. The houses, which have a common Hashti, have a special social relationship with each other, mainly the daily contact of housewives and children.

Traditionally and culturally in a Moslem society as Iran, women were not allowed to show themselves to strangers. Therefore they had no place outside their own four walls. They were not allowed to work or even to go alone to other parts of the city. They could go out of their neighbourhood only with their husbands. Under these circumstances the daily activities of housewives were in fact restricted totally between their house and the neighbourhood centre. It should be mentioned that, in religious months women were more free to be active in common cultural and religious activities in neighbourhood.

Family life begins with men leaving the house to go to work and children to school. For the women, it is the beginning of their daily activity. After their house work, usually they leave the house to go to the neighbourhood centre. For them, even now, this short journey is the main part of their daily activities. Because this is not just a normal shopping trip but an excuse to meet other women, to talk, to get the latest news, to enjoy the time, and after a while to go back home. These activities have adjusted to the spaces, which provide the comfort and enjoyment for the people who use them. In a dry climate, which has very cold winter and very hot summer only, a covered bazaar, or a Hashti, or a shaded passage way can provide this comfort for a short stop.

Going to the public bath was also an enjoyable activity for the women and children. Although some of the houses had a private bath, it was very common for everybody to visit a public bath on special occasions or once a week. Traditional public baths in Iran are divided into private showers and public areas with showers and pools. In this space a group of women or men could bath together. The public baths are usually divided into two separated spaces, for male and females for hygienic reasons, but when it is small, one could use it at different times of the day.

For the women, the public bath was not just useful to wash themselves, but to meet others, and for the children to play. Usually a bath took four or five hours. Most of the marriages in traditional society of Iran began in the public baths. It



was usual that the mother of the bridegroom or her friends would look for a suitable girl and the best place to ask for a family meeting was the public bath. Nowadays this tradition cannot be found in many places. This tradition still remains in rural communities and small traditional cities, which had not much contact to the modern life. Although the public bath has kept its existence in historic cities, it has lost its importance as a part of weekly or daily activity of people. Daily activities of men include their journey to work. They either work in agriculture outside the city or they have work inside the boundaries with the bazaar as the main pivot. Therefore the daily journey of men has been more than simply a pedestrian trip.

At noon, after praying in the local mosque, the men could come home to have lunch and rest, and in the afternoon they would go back to work again. This movement through covered, semi-covered and open passageways has not been tiresome, but in fact very pleasant. The design of the pedestrian network in traditional cities has been adapted to the need of these short journeys. Apart from the beauty of these passages, in their simple form they have been able to offer comfort and psychological relaxation to the people, no matter at what time of the year. Interesting is that when we were working in Nain city, we used these passageways all the time when going to the bazaar. It was impossible to deny or ignore the functional ability of these spaces in relation to the climate.

The second part of the daily activities began in the evening. Open spaces in the neighbourhood centres are the main place for these activities. The shaded platforms of the Hoseinieh with their arched covers are the most comfortable place for men to sit and talk. It is a kind of daily visit of neighbours. Before there was television to keep children and adults at home, this evening activity actually was the most enjoyable part of the daily life. In summer after the sunset this gathering took place. In the open space of the neighbourhood centre men were busy to talk, drink tea, even do business, and children played without any disturbance. On the other side, the women who could not participate in the activities of their husbands, gathered in small groups in front of their houses on the small platforms to talk and enjoy the last hours of the day.

Cities have experienced changes, places have experienced changes, and cultural changes have given freedom to women to work outside the house. The economic situation has allowed people to move to areas with higher living standards. But what has not changed and remains the same is the social and cultural beliefs and the behaviour of the people. Since the beginning of 1980 my parents have lived in Shahin Shahr, a new town in the region of Isfahan (this new town will be analysed in chapter 4), and I lived with them from 1981 to end of 86. During this time I witnessed many interesting social activities of people who came from different parts of the country. In this new town, people have

tried to replace the traditional neighbourhood system by their way of life. In winter because of coldness, public and social relations are reduced but from spring to autumn when the climate allows, the outdoor activities begin.

The pleasant traditional spaces, which were adjusted and designed for such social activities, are missing but there is another kind of spaces in new form. In summer people try to stay at home during the hot times of the day, because there are no narrow or shaded passage ways with high walls or covered areas to protect them from the burning sun and provide for them a comfortable and pleasant pedestrian environment.

The real life in the town begins in the evening when the sun is friendlier. People get back from the work and it is the time for pleasure. In Iran, traditionally, for many different reasons shops are usually open up to late at night. Of course bazaars are the exception and they have their own regulations. Therefore for the people who want to go shopping, the evening is a pleasant time. At this time of the day people go out of the houses. People go out and sit in the parks where it is shaded and through water fountains it is much cooler there than inside the modern houses. Sometimes a group of women meet in front of a house sitting on comfortable seats and talk to each other.

In these nights, times do not play an important role. As long as people feel comfortable they stay outside. Sometimes husbands join their wives. Children also play with each other near to their parents home. I have seen this sort of meeting more often during wartime when people were obliged to spend the night in darkness. I have noticed that in a new town like Shahin Shahr, when the parks have not enough space, people used the big square of the town for their outdoor activities in the summer or they travel to Isfahan city. In this type of climate cultural outdoor activities of people can continue throughout the year. Urban planners cannot ignore the real need of these people. These cultural habits and activities depend on a pleasant living environment and this should be the starting point of any urban planning programmes.

## ***2- Public Cultural Activities***

In Iran there exist ceremonies based on overlapping of Old Iranian ceremonies and elements of the Islamic culture. There are special occasions, which take place during different times of the year all over the country. These religious ceremonies are based on believes of the Iranian people. Although the Iranian society has in last half of the century gone through a remarkable transformation, these cultural ceremonies will remain an inseparable part of Iranian culture.

### ***--New Year Ceremony***

Iranian people share this non-religious cultural ceremony even if they are not concerned with religion. New year in Iran begins with spring. This ceremony in reality starts one month before and continues at least two weeks after the New Year and consist partly of outdoor but mostly indoor activities. The belief that the New Year should begin with something new makes people buy new clothes and presents.

In Iran it is a common custom to set a table with seven different symbols such as germinated wheat and beans, painted eggs, red apples, candles, fish and other things. Each symbol is representative of a wish for the New Year. At the time of New Year eve, all members of the family sit on a table and listen to the radio or a member of the family reads the Holy Book. It is the only ceremony in Iran, which keeps people at home and holds the family together. At this time everybody has something new on. After the ceremony, children receive presents from their parents. The table stays set for at least one week.

From one month before the New Year ceremony, people begin with preparations. This brings a new life to the public areas mostly the traditional bazaars. On the last Wednesday of the year, people celebrate the fire ceremonies together. They prepare fire in each residential area, and jump over it with each other. These ceremonies continue until late night. The main concept of the New Year is visiting each other, and it is a time to forgive and forget. Everybody visits friends and members of the family and in between children have the best time. New year is a national holiday. This ceremony ends with an outdoor celebration on the 13th day of the New Year. On this day, which is one of the best holidays of the year, people go out of their houses. There is the belief that unlucky 13 should come to end outside the house, otherwise it follows the members of the family throughout the year.

### ***--Religious Ceremonies***

These ceremonies are Islamic, which the majority of people belong to, but they are highly respected by other minority groups. The most usual religious activities of people apart from their daily prayers taking place in the local mosques, is their attendance of the Friday prayers in Jameh mosques. Iranian people are "Shiia" Moslems and based on their belief, there are more ceremonies than other Moslem countries. Religious ceremonies are as important as mourning. These are mostly outdoor activities, and people try to attend every single one. Public spaces used to offer the best possibilities for these events. In modern cities these ceremonies are alive and important as before, but the spaces, which make them possible, are missing.

It is interesting that historic citadels and their old neighbourhoods are still the only places which absorb and bring back people from a far during these religious ceremonies. It seems the old remains that are the only real place for these cultural activities. Understanding the traditional roots of the cultural and spatial characteristics will guide us to improve new settlements and to design the future living environments.

### ***--Month of Ramadan***

Ramadan is one of the most important religious months for Moslems all over the world. This month is not just the fasting time, but it is the time, which brings people nearer to God and each other. During the day people do the usual work although they fast. At nighttimes when the sun goes down and the "Azan" through minarets of mosques call the prayers, the nightlife begins. Usually after midnight people stay at home, but during Ramadan people attend religious activities up to one or two o'clock in the morning. Even women who are not allow staying outside, attending religious activities during this month. The crowded places for night activities in Ramadan are Hoseinieh and "Takieh". Apart from the Hoseinieh, which has been the symbol of neighbourhood centres, ' Takieh ' is a temporary place for religious ceremonies, which is arranged through the support of people within bazaars, or in religious open spaces.

During the whole month people who are not particularly rich try to help and support the poor people. Sometime a rich person will support financially the activities of a ' Takieh ' throughout the month or help a group of poor people. These activities such as preparing a free dinner for Eftar (special dinner after sunset), or "Sahary" ( the first meal at early morning), need many volunteers and enough places. Women and men do all these activities separated from each other, but somehow together. Although Ramadan is the fasting and an enjoyable month for Moslems, for three days between 19 - 21 are the mourning times. During this time Imam Ali, the most important person for the "Shiia" Moslems, and the main successor after the prophet, martyred, and people show their deep sympathy by gathering together in mosques, Hoseinieh and Takieh for religious mourning through the nights.

### ***--Month of Moharam-Safar***

These two months are the mourning times for "Shiia" Moslems. "Shiia" people not only belief in the prophet Mohammed, but also in his twelve Imams as his followers. During these months two of imams with their families and followers, which were 72 people altogether, were martyred. Although this is a religious-historical event, which happened 14 centuries ago, for the Iranian people it has

remained as a respectful and memorable incident. During these two months opposite of Ramadan, nobody allows himself to marry or have a similar ceremony. People from small to old wear mostly black clothes, to show their respect and sympathy to the 72 martyrs. It seems that the social life of people is dead during these times, but it is not true. In fact this sorrow brings Moslems closer together. Socially they are more active and they try to show their sorrow through ceremonies.

The main ceremonies of the month of Moharam are the procession of religious mourners. Culturally each neighbourhood of the city has its own group. On the special days of the anniversary (called "Ashura and Tasuha"), from the very early morning these groups start their performance. They gather in the Hoseinieh or mosque of the neighbourhood and walk through the city; people stay on the sides of the pedestrian ways and watch. Traditionally every group follows its predetermined network through the neighbourhood. The mourning groups, after passing through different areas, meet each other in the main city square.

The spatial arrangements of traditional cities corresponded to these cultural activities of the people. There were always enough places in the centre of each neighbourhood for the people and religious members of the mourning groups. Mostly in the summer these old spaces were, and still are providing comfort for every body during such ceremonies. Apart from neighbourhood's Hoseinieh and the mosque, the main bazaar of the city and its religious spaces are among the most important places for any public religious ceremony during the whole year. Usually people working in the bazaar have the most interest in keeping their tradition, and therefore they invest time and money in the preparation and arrangement of all the religious ceremonies. In new areas of cities during the ceremonial time of the year, there are no obvious social activities, probably because there are no strong relationships between neighbours, and the spatial environment is not able to comply with the requirements of such ceremonies.

It is very unfortunate to see that in similar climatic zones, and not very far from each other, the new cities, or even new residential areas of the old cities develop without learning from traditional settlements. Although they were built for the same people with the same cultural background, they are not able to care for the simplest needs of their people. Cultural characteristics and activities of people in each climatic zone is much more important than just designing beautiful houses. Urban planners should always remember that people make spaces and although they may change these spaces, their culture will always remain the same, no matter where they are.

### ***3.5 New Urban Development***

Organic urban development continued until early years of 20<sup>th</sup> century. Even when the urban fabric inside the wall did not correspond to the spatial need of housing, the city has developed in directions that were expected. The first urban planning action, which should be called the beginning of the historical centre evacuation from services, occurred simultaneous with the development of a new street (today is the central street of the city), and the reallocation of the urban services. This street has passed through the south part of the historical site and includes two squares toward two main city exits. These squares are in fact the replacement of the old city gates. With the introduction of new streets after, the traditional organic development of the city has been weakened. In the following years because of the new commercial activities along these streets, the old bazaar slowly evacuated.

At this stage, the city started a two dimensional development. On the sides of the new streets, city linear development began around the new squares has radial development. This new form of development does not include any special neighbourhood system. Alleys on the sides of the historic centres, all try to connect to the central street of the city. This unusual combination in this part of the city has got special form, which today is very obvious.

The development of new streets mostly between 1956 and 1964 has been the starting point of unsuitable planning programmes consequences of which have been extremely detrimental. The result of this implementation programme has been planning of more new streets passing through the middle of the historic centre with the aim of providing better access. As a consequence of these new streets, many historical monuments were demolished. Neighbourhoods were destroyed and the remains of the old bazaar were moved to the new streets. Small shops in the neighbourhood centres were evacuated and people from the historical centre moved to the new parts of the city. The new streets were planned carelessly and illogically with higher buildings than height the historical buildings' level. Even today the parts of the historical centre next to these new streets remain ruined.

The construction of the city ring has determined the future development trend of the city. Two new big squares are located on the side of this ring. Today, the main body of the city is surrounded by four squares, and the physical development has reached the city ring. The structural character of the new city is in compatible with the historic centre. The last city planning action at the time of this research was the construction of a new street that passes through the middle of historical centre and has demolished many other buildings in this area. The implementation of this plan has resulted in the complete collapse of

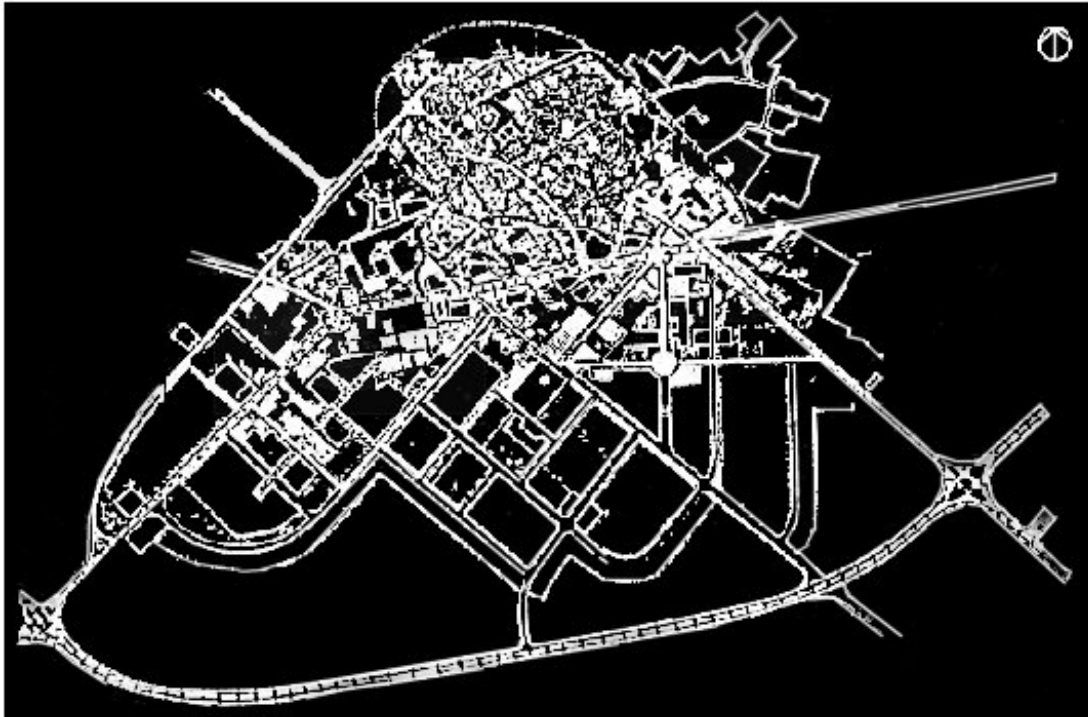
the historic centre. This kind of modern urban planning has its roots in an unknown and unfamiliar culture without any relevance to the rich planning culture of Nain city. The development of new part of the city is a combination of linear and radial growth that does not have any similarity with historic area. The new network does not support the idea of neighbourhoods and neighbourhood centres, and there is no special symmetry in the layout of the streets. The new city is a city without identity that does not possess any useful design concept, and concerning the service, physical criteria, and cultural and economic point of view is a dependent city.

### ***3.6 Urban Planning***

The complex character of urban planning and design of Nain city is not a function of regulation. In this city there are no special building and design regulations based on cultural, climatic, geographic criteria. Regulations use by the city municipality are from Isfahan city. The first physical plan for Nain city provided by the Ministry of Interior in Tehran and Isfahan city in 1966, and followed by a new one in 1981. These two plans determined the general guidelines of the urban development without taking the historical area into consideration. The only proposal concerning the historical centre was the new proposed streets, which divide this area into two parts. These plans do not consider the rehabilitation of the historical centre. They only provide quick north-south accesses ignorance to the traditional urban fabric. The existing design criteria and planning regulations are not the result of a reasonable analysis of Nain city and have caused disorder in the whole city.

### ***3.7 Conservation Plan***

Although the historical centre of Nain is one of the particular citadels in the central part of Iran, a special conservation plan for the present or the future has not been considered yet. The lack of an effective programme for conserving and rehabilitating the existing green area has resulted in increasing dryness and the destruction of the trees and vegetation. To damage and ruin of the green areas means destruction of the existing micro-ecosystem. Carelessness and the lack of a suitable planning concept have led to the evacuation, and consequently, the depreciation of this area. The only active organisation in this matter is the 'Conservation Foundation for Historical Monuments', which registers and conserves historic buildings, repairs and rehabilitates the neighbourhood centres, and also buildings which have in some extent a positive influence on the urban form and its physiognomy. The conservation plan of Nain city, which a part of its study on existing situation has been introduced in this work, will be completed and implemented in near future.

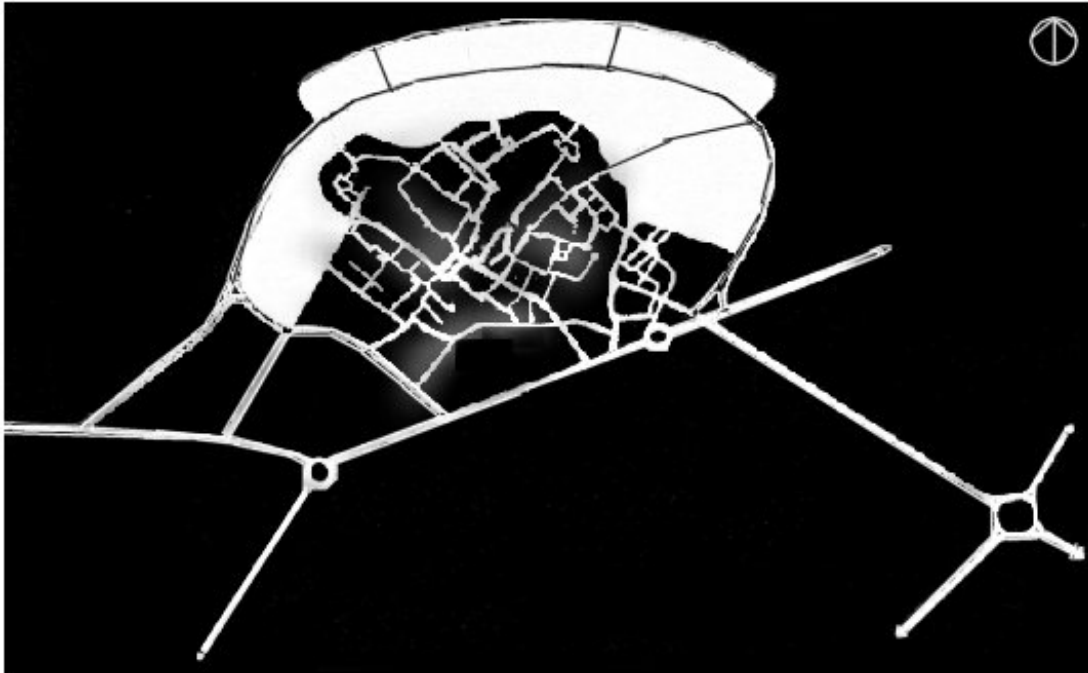


**Figure 84:** The first physical plan of the city with the new central street, in 1966.



**Figure 85:** Street network of the city in 1981.  
**Source:** Conservation programme of Nain city.





**Figure 86: Street network of historical area in 1981.**  
**Source: Conservation programme of Nain city.**



**Figure 87: Rest of an old building on the edge of a new street. A typical case in all historical citadel after the modernization.**  
**Source: Author**

### ***3.8 Summary and Conclusions***

One of the biggest problems affecting most of the traditional Iranian cities is the economic system and the economic policy of the country in general. Under the new policy of the government, Isfahan city as the centre of Isfahan province has become the industrial and political centre of the area. This decision has caused immigration of people from other cities in the region to Isfahan, and has negatively influenced the economic situation of other areas. The effect of such programmes is a continuous migration of people mostly from the rich families, to Isfahan city. This immigration caused an imbalance population distribution with all its economic and social consequences. In 1976 the population density in Nain area has been 1.1 people per hectare, and in the area of Isfahan this figure has been 48.4. (5)

The cultural influence of the western countries in the last decades, whether in spiritual or material form, the acceptance of unknown patterns, and the break of the people with their past, have resulted in a deep crisis which has affected every single part of historic sites. This effect has, in some cases, made people to look at the houses in which they have lived until recently, with different eyes. The cultural influence of the west and the resulting alienation has meant that sometimes people know less about their own country than about a city in a foreign country.

In spite of strong social and cultural changes, the relationship between the people and the historical sites is still strong and most of the old traditional and cultural religious ceremonies still take place in these areas. This relationship is so strong that some religious ceremonies attract people from hundred kilometres away to Nain city. Today the people who live in new developing areas of Nain city, feel the lack of this cultural and spiritual relationship whether with regard to the monumental heritage, or to their social structure. They try to compensate for such feelings by attending cultural-religious ceremonies on the historical site. The historic city has been shaped and developed organically along with to the political and natural situation of the area. The development of the city and its division into neighbourhoods, accompanied by neighbourhood centres has given the city its special characteristics. Although Nain's historic centre is a attached building complex, spaces such as the neighbourhood centre, the religious centres like mosques and Hoseinieh, and bazaar as a large scale buildings are visually enhancing.

The pedestrian network is one of the main characteristics of Nain's historic centre. This network is a symbol for the cultural organisation of this small community, an organisation that developed in thousand years and exposes the real pattern of city form and it's characteristics. The pedestrian network of the

historic centre contains old narrow alleys in the central part. These alleys were established in the early 20th century and connect the historic centre to main urban streets. The second group of streets are alleys, which developed organically around the historic centre. They are not vehicle streets, since they have not been planned for that. On the other hand, streets, which should provide access to the historical centre, failed. New streets through historic centres have been planned in most of the cities in hot and dry climates. Generally it can be said, that, these kind of streets cause damage to historic areas, and do not function as forecasted.

Usually historic centres only cover a small part of the cities. The construction of a ring road around a historic centre will provide reasonable access and will also distribute the vehicle movement around the whole area and consequently will reduce the need for widening the existing alleys. This will result in less damage to the pedestrian network of the city, and less vehicle movement in the area. The city is small enough to provide good access for pedestrians, but the new development has not been able even to solve the access problem of its residents. The new developments have a wide spread and unnecessary network for the vehicular movement in a situation where the city is not under pressure from traffic.

The bazaar of the city plays an important role in the pedestrian network of the historic area. People use the bazaars for quick access in the city. The reasons for using the bazaar as the main pedestrian way, happens because of its thermal protection during summer and winter. An analysis of the historic areas indicates that, vacation and immigration of commercial activities from the bazaar to the new established streets, has weakened the importance and function of the bazaar. The reduction in the function of the old bazaar is not a result of its disability to adapt to modern development, but the activity of the new bazaar has absorbed commercial activities, which counteract the interests of the old bazaar. The old bazaar is getting less attractive. The reason may be changes in cultural values, communication, social classifications, and interest of people to stay in historical sites.

In spite of the existence of all the services new developing area have no neighbourhood qualities. The lack of cultural identity and a special neighbourhood system, has led to a separation within the city between the old and the new parts. The new areas have no historical and cultural characteristics, and in the historic areas resident are isolated. On the one side there is a city with all the characteristics of a modern consume oriented society with no special culture, and on the other side, there is a city with cultural identity, self-sufficient, but poor. People who because of cultural and social interest would prefer to stay in the historic area, had to leave. Development of the

neighbourhood centres could be very effective in corresponding to the services and cultural needs of the people.

### **3.9 Conclusions**

The historic site of Nain city has a special identity through its form and structure, which developed on a long period of time. Nain city is representative for all historic cities in central part of Iran. The traditional urban design principles and methods of Nain city are:

#### **A. The development principles of Nain city are based on natural and cultural factors.**

- Neighbourhood typology
- Neighbourhood centre
- Relation and balance between empty, half full and full space.
- Urban symbols as the most important cultural elements within the urban fabric.

#### **B. Form and structure.**

- Historic citadel has developed based on the needs for progress and communication.
- Historic citadel contributed service centres.
- The historic centre includes closed neighbourhoods and a comprehensive pedestrian network within the whole city.
- This urban fabric tackled the climatic problems, providing a suitable eco-system by using the existing natural and man-made potentials.

#### **C. Urban planning**

- Nain historic site, during a long period of time has been depending on cultural characteristics, which obviously have highly affected the form of the city.
- The physical development has corresponded to the socio-cultural, economic and political needs of people.

#### **D. Design principles**

- Climatic balance by the help of underground water channel system.
- Encountering the desert sandy winds and air circulation with the help of green belts around the city.
- Planning covered alleys, which provide shadow.
- Deep courtyards inside the residential buildings

- Green spaces full of shadows.
- Verandas
- High ceilings and arches walls
- Light colour building material with low thermal capacity.
- Irregular design of alleys to prevent circulation of inconvenient winds within the city.

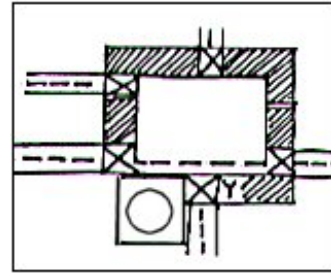
This chapter was simply a review of what we know as traditional urban planning and architecture in central part of Iran. Now the situation of the cities such as Nain raise the question: are the traditional characteristics of these cities, which have their roots in the culture of this country so strong and functional that we appreciate their real value and give them a respectful place in our modern cities; or, so we simply put them aside and replace them by new and modern approaches ignoring climatic and cultural differentiation ?

Architects, urban planners and transport engineers should accept more responsibility toward these cities. Architects and planners can create urban concepts for future cities, but the acceptance of such concepts, their physical, spatial and economic qualities depend on the residents.

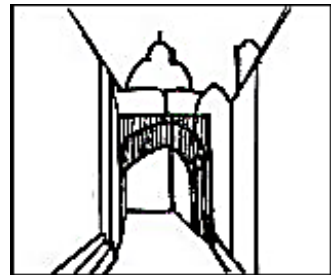
To show the ability and value of traditional way of life in providing desirable living environments, in this part the special urban design principles and methods of Nain city will be demonstrated.

## A. Development principles

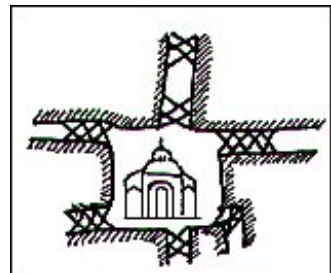
-Neighbourhood typology: Division of residential areas into neighbourhood has been an attempt to provide a system for the development of the city.



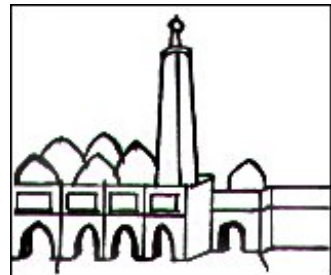
-Relation and balance between empty, half and full spaces, exposes the organic and rhythmic developments.



-Neighbourhood centre: This system has helped to provide a suitable distribution of city services.

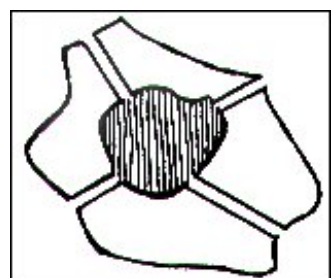


-Urban symbols as the most important cultural and city formal manifestations, indicate image development and understanding of people of their environment.

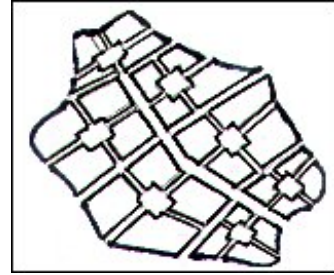


## B. Form and Structure

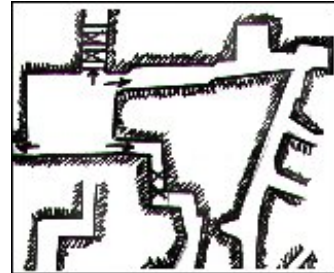
-Historic citadel has developed continuously based on the needs for progress and communication routes.



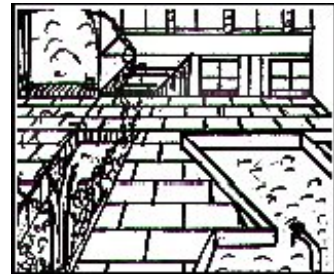
**-Historic citadel along its development has provided cultural and urban services through the establishment of neighbourhood centres.**



**-The old city is divided into neighbourhoods with a comprehensive pedestrian network within the whole city.**

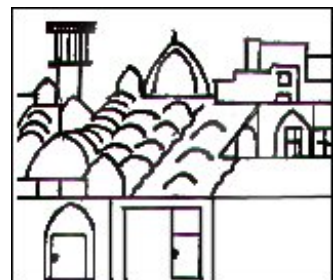


**-The traditional design methods has enabled the old city to solve climatic problems, and to provide a suitable eco-system for living. It has used all the existing natural and man-made potentials.**

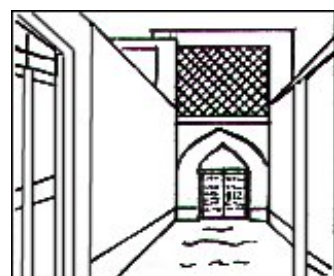


### **C. Urban Planning**

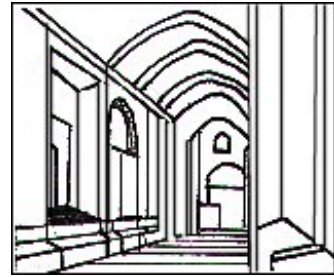
**-Nain historic site has depended on cultural characteristics, which obviously have greatly affected the form of the city.**



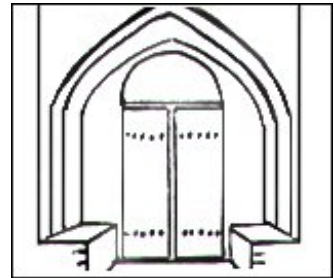
**-Its behavioural pattern and culture-structural relation has been mutual. This mutual relationship has given it the identity, which comes from urban structure.**



**-The old city of Nain has manifested the socio-cultural and economic-political values of its people in spatial structure.**

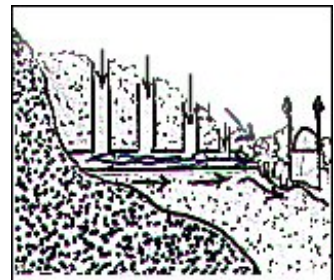


**-Urban and architectural elements are designed to response the socio-cultural behaviour of the inhabitants.**

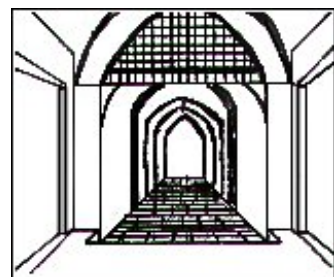


#### **D. Urban Design principles**

**-Existence of underground water channels (Qanat system), has enabled the cities in the arid zones to provide a climatic balance in the city.**



**-Designing bazaars lower than ground level to take advantage of the cooler micro climate, is a simple local technique in design of traditional cities in hot and dry climates.**

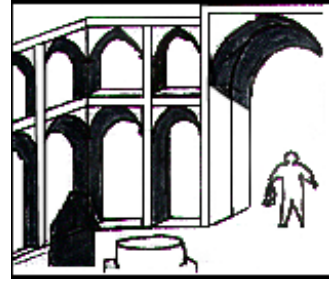


**-Planning gardens inside, and green belts around, has helped the cities to reduce the effect of sandy winds, and to moderate the air circulation.**





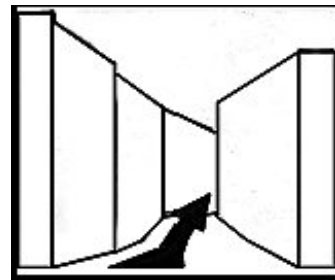
**-High walls around open spaces provide comfortable spaces, and answer the sense of security in open spaces.**



**-To protect people from burning sun in summer and cold winds in winter, the alleys are designed in form of covered and half covered passageways.**



**-To prevent circulation of inconvenient sandy winds of the desert in cities, alleys and passageways are designed in irregular form.**

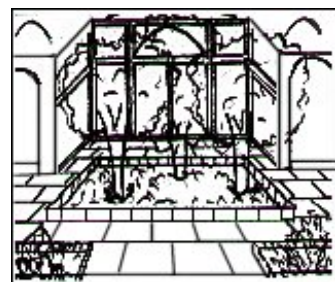


### **E. Design principles in private space**

**-Using local techniques in providing desirable microclimate inside the building as deep courtyards is one of the special design methods in Nain city.**



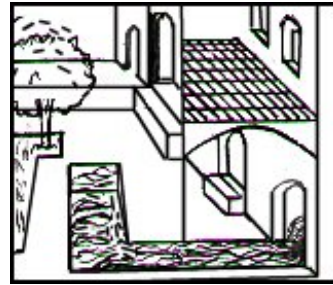
**-Trees are very important design tools in providing shadow in open as well as private spaces.**



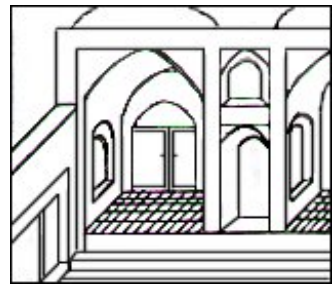
**-Special architectural elements as veranda provide a desirable atmosphere in the traditional courtyards.**



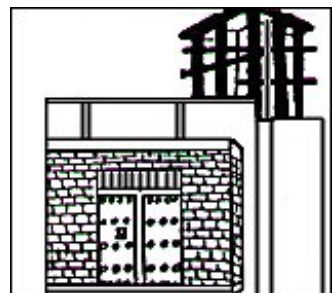
**-In dry and arid climate zones, water has a basic role in providing a microclimate inside the dwellings.**



**-Using high ceilings and arches walls reduces the heat and helps the circulation of air inside the closed spaces.**



**-Use of light colour building materials with low thermal capacity reduce the effect of the sun on body of buildings, and help the moderation of micro climate inside.**



**Footnotes**

1. 'Isfahan-Sakhteman office'/ 'Beheshty Technical Institute' ***"Conservation programme of Nain City"***, Isfahan 1986, Page 25.
2. Ibid. Page 28.
3. Ibid. Page 31.
4. Statistic centre of Iran, ***'National census of 1956-82'***.
5. Statistic centre of Iran, ***"National census of 1976"***.

## **4. Principles and Design Methods of New Towns**

### **4.1 Introduction**

Iran is a country with a very old city planning history. As review on urban planning before Christ shows, the early people of Iran had built their residential areas with complete awareness of climate, ecology and sociological factors in their time. For example in the "Media" period (4000 BC), the residential areas of 'Sialack in Kashan', showed architectural advancements and urban planning principles of high quality. There was already an awareness of climatic condition by using smooth, square bricks instead of the former elliptical bricks and using big pieces of pottery in the walls of the houses to prevent dampness, building external walls at different levels to get more light or shade. The attention to social aspects by using windows toward public passages, or dividing residential areas into smaller quarters with narrow alleys were special characteristics of this period. Through centuries, urban design and architecture of Iran were affected by other nations, but never forgot their origin. As in 'Achaemenian' period (559 to middle 400 BC), cities like 'Pasargad' and 'Persepolise', were built. (1)

Archaeological excavations have exposed design elements still to be found in our traditional cities. The existence of a sewage system in Persepolise shows that the planners in that time concentrated on sewage channels which would collect waste water from the buildings and streets and guided them to the outside of the cities. The sewage system of Persepolise and the excavation of the moat, or covered streams and underground channels indicate the special attention paid to the urban infrastructure in urban planning during that time. Urban analysts and archaeologists, like Prof. R. Girshman ( The French archaeologist who worked in 'Chogha Zanbil' in the south of Iran, from 1951 to 1962), believe that the cultural connection of the Iran with neighbouring countries happened because of the continues wars and commercial relations. The effect of foreign art on Iranians and the influence of Iranian art on neighbouring countries are results of this cultural contact. (2)

### **4.2 Structural Characteristics of Iranian Cities**

The city in Iranian culture is the most developed environment in which a variety of people lives together. In modern cities a strong relationship between people and what is left from the past, still exist in spite of physical changes. People who pay attention to their architectural and urban elements, respect the image of their city too. (3) Every building built in the past, is a witness of the relations between people and the environment. Houses were built with building materials existed locally. For this, every city had its own individual

characteristics. What have given identity to traditional houses, is the local environmental factors, and social and cultural relations. (4) There are not many written documents about traditional Iranian architecture and urban planning. Therefore we have to concentrate on characteristics and methods of the traditional built environments and the urban fabrics. Falamaky in his book 'From Veniz to Shiraz' analyses the historic cities in Iran. He argues that the characteristics of traditional cities which have shaped under a combination of environmental and cultural factors, are the main urban planning methods and design principles of these cities. He categorises these characteristics so: (5)

- Connection of urban structure to its ecological and geographical environments.
- Organic formation of the city and acceptable allocation of its forming elements.
- Understanding cultural way of life of the people in design of urban environments through local architects.
- Development and evolution of urban and architectural elements through history.
- Harmonic development of different parts of the urban structure.

### ***4.3 Break with Tradition***

Urban development in Iran is characterised by the harmonic development of large and medium sized cities, up to the beginning of modern industrial time. The reason for this harmony was slow population growth, lack of economic progress, close social relationships and a low rate of out migration. (6)

Industrialisation and social change have been two inseparable phenomena in the development of cities all over the world. During the industrial revolution in Europe, social change was subject to new forms of production and economic progress. In countries like Iran the same social change has appeared without direct relation to industrialisation. Social and economic changes in Iran began without the necessary social and economic welfare. This movement, in general, had caused the beginning of an urbanisation process in Iran. Population growth in the cities and demographic changes affected the industrial progress of the country.

This important period began nearly seven decades ago. The urbanization process in Iran is approximately simultaneous with the beginning of 'Pahlavi Dynasty' (1924-1941) and new legislation and political administration. With the modern social movement, which continues today, important industrial development and commercial progress occurred in the cities and had a considerable effect on their structure. With the beginning of the modern industrial period, the five main characteristics of planning and design methods

of traditional cities argued by 'Falamaky' (page 135), slowly lost their meaning and were replaced by new social welfare criteria. The main part of socio-economic change in the cities did not occur shortly after the basic legislation and new political administrative reform in Iran, but, already after the second world war. (7)

The main urban problems appeared in sixties and seventies, when private investment in the building sector and the provision of technical know how occurred. In this short period the need for physical change in the cities, resulted in irrational architectural and urban planning actions in the private and the public sectors, without any attention to the existing spiritual and cultural concept of the cities. These architectural and urban planning actions have mainly concentrated on the old fabric of the large cities and all have resulted in destruction of the cultural heritage, from which none of the Iranian cities has been excluded.

#### **4.4 *New Urban Planning Trends***

Since 1970s, following new Acts on housing and town planning regulations, the physical changes in large cities happened faster. What was old was not considered to be valuable anymore and should be replaced by something new. Distracted, demolished and empty spaces are the remains of this period. New streets were established to give better access to the residents of the old areas. Even today the construction of such streets still continues in spite of painful experiences in most of the large historic cities. Moreover these streets can not play an important role in providing a new functional traffic system as an alternative for the old access network. (8)

The new urban planning approach slowly pushed the historic part of the cities on the side and changed them to slum areas. Intended as an incentive for slum clearance, this law became a serious threat to the historic cities. Examples of these effects have been most evident in as in Julfa quarter (Isfahan city). These sort of programmes strengthened the position of the owners of buildings. In large cities the destruction of large old courtyard houses has enabled the owners to subdivide plots, or to build multi-story blocks of flats and gain money quickly. Today this law has changed but the idea of renovation still plays an important role in the life of the old cities. Many houses have been replaced by new ones, modern buildings which do not comply with old urban fabric. In spite of all the destructions, modern planning has found its place in Iranian urban planning through a young generation of architects who studied abroad and brought their foreign experience back to the country.

The production of comprehensive and physical plans began by copying them from other countries. The experts applied these plans without any changes to Iran, hoping that they would solve the urban planning problems. They made two big mistakes, first, they did not notice the problems of the implemented plans in other countries, and secondly, they ignored the people of this country, their relation to urban spaces and tradition. Although after a short time it was clear that the plans in their present form were not able to solve urban problems, they continued to be prepared and implemented in their original form.

There were few traditionalists who were against the modern urban planning trend, and paid more concern to the traditional planning and design techniques. They were aware that Iranian cities were experiencing changes in a short time, and that, these changes were beyond their capacities and would result in drastic consequences. For many, Iranian urban architecture was seen only under functional aspects, but others who had some knowledge of the traditional way of life, saw the importance of the spatial quality of the traditional form. They tried to see Iranian architecture as something more than just a decorative pattern. They searched for a more comprehensive idea of traditional urban design which also could contribute to contemporary architecture.

Until middle of 1980s, traditionalists could not influence the urban planning policies of the country, but through different activity as publishing books, tried to influence the young generation. Unfortunately, dispersed activities against highly centralised and narrow minded planning systems were not very effective. It took years of education and fight for traditionalist to absorb the attention of the urban planners and politicians. The urban problems in Iran were so complex and overwhelming that they created concern amongst enlightened planners as well as the government itself. This played an important role in making people aware of the need for a new systematic and comprehensive urban planning approach in Iran.

#### ***4.5 Modern Urban Planning Actions***

After the second world war, with an increase in mobility and a changing pattern of land ownership, many small satellite settlements grew around the cities, constituting one of the major forms of urban development in Tehran and other large cities in Iran. The development of these townships was under no form of planning control before the 1966 law, which required the development process to be based on consent from the Ministry of the Interior. It was the 1974 law and its 1976 subsequent by law which set the regulatory framework for this form of development, requiring the townships to apply for planning permission. (9)

The fast development of the Tehran region after second world war till 1976, convinced the "Elected Supervisory Council" on development of Tehran in 1979 to propose new satellite towns within the administrative boundary of the city. (10)

The pre-revolutionary government had reacted to the uncontrolled urban development of the big cities with two main policies. First: reducing the immigration rate from villages to the cities by providing better equipment and infrastructure such as water, electricity, telephone, sanitation, improvement in agricultural, animal husbandry, and educational service for the villages. Secondly: suggesting theoretical and practical ways to reduce population growth, but in practice these two methods were not efficient. Therefore the development of new towns as the third alternative and a complementary solution, came under consideration. This policy was passed by Iranian parliament in 1983, and its main aims in developing the new towns were the following: (11)

1. Suitable redistribution of population in specially chosen areas, through reallocating the over spill population of the big cities.
2. Decentralisation of services by transferring some of them to new towns, hoping that they would play the communicating role between small and the big cities.
3. Ventilation of living environments of large cities, improving and promoting their living standards and services.
4. Preventing irregular price increase of land properties and houses, development of squatters, and demolishing the agricultural lands around metropolitan areas.

To be able to reach these aims, present and future new towns should:

- Possess necessary infrastructure and urban equipment in order to provide jobs and self-reliance of its residents.
- Be located in a suitable distance from metropolitan area, in order to absorb the natural growth of the "mother city".
- Receive a suitable level of urban services compared to large cities.
- To offer qualitative social and environmental standards.

The construction of new towns on the one hand is seen as an answer to fast urban development, the massive needs for dwellings, and as preventing the emergence of spontaneous settlements. And on the other hand as an element for reallocating the immigrants, and as an approach for present and future urban development. The Ministry of Housing and Urban Development plays the main role in developing policies, doing the necessary studies and planning the



reallocation of the over spill population towards predetermined areas. The Tehran region, and Isfahan as the other large city, is the centres of these planning programmes. At the beginning of 1986, the State Department approved 16 thousand hectares land for the construction of the proposed satellite towns around Tehran city. Three years later, the agreement of comprehensive development plans and preliminary studies for few new cities in this region was made. And in 1990 the 'Architecture and Town Planning High Committee' of Iran, officially legalised the construction of these cities. These new cities and towns are 'Hashtgerd' with a forecasted of 500 thousand population in the year 2010 in the west, 'Parand' with 300 thousand in the south, 'Andisheh' with 60 thousand in the west, new (Latian) city with 100 thousand in the north, and 'Zavieh' with 200 thousand and 'Eshtehard' with 300 thousand in the south west of Tehran city. (12)

The importance of human aspect in design of new towns, motivated the Ministry of Housing and Urban development to begin with analytical studies on this subject. In 1992, the first research and planning group on socio-cultural affairs of new towns in Isfahan city was established. This group was organised by specialists and experts on sociology, statistics and demography, urban planning, psychology, and law. The aims and objectives of this group were: (13)

1. study of the structural, psychological, socio-cultural, and demographic problems of existing new towns in the Isfahan area.
2. Finding reasons for their problems.
3. Forecast of problems likely to happen in above mentioned context in existing, and in future new towns in this area.
4. Suggesting theoretical and practical solutions to prevent future problems.

The preliminary study of this group started in 'Shahin Shahr' new town in Isfahan region. This new town with twenty years of existence was chosen as a case study for the others with the aim to use its study results for preventing and reducing probable socio-cultural problems in development of future new towns in this part of the country. (14)

#### ***4.6 New Town in Iranian Urban Planning System***

The 'new town' is a completely new concept in urban planning system of Iran. Since 1972 with the establishment of the 'Architecture and Town Planning High Council', new towns as a part of comprehensive plans developed. Under these circumstances, new towns planned within the administrative boundaries of the metropolitan cities. (15) In 1977, the new law allowing the plan of new

towns outside the mother cities was passed. Since then, new towns do not plan as residential or suburban areas of major cities. Dependent on the distance from the mother cities, they had to offer more than just technical infrastructure. (16) Although the new towns in both cases have been able to play an important role in preventing the concentration of population in large cities, they have not been able to be self-sufficient in providing basic services. Thus, the original problems of large cities have remained, in spite of the existence of the new towns. Apart from some new towns where their development occurred along the industrial development (such as 'Poolad Shahr' with the steel mill factory in Isfahan area), others have only provided cheaper housing for immigrants and the middle to lower class people from major cities.

The first new towns developed as part of an industrial development in different parts of the country were successful. These cities were planned in special geographical situations, far from the large cities. And because of their self-sufficiency, they were able to accept their role and were able to produce enough jobs and services for the inhabitants. These new towns which developed to medium - sized cities are, Abadan, Masjed-Soleyman, port of Shah pour, Aghajary and Haftgel as the oil areas, and Andimeshk as a service city located in the south of Iran. (17)

No matter under which circumstances existing new towns were planned and, they have two common general characteristics. Firstly, they do not have traditional architecture characteristics, and secondly, private interests have played major role in their development. Just rarely we see examples with a good knowledge of indigenous urban design and architecture. Unfortunately these works are usually in small scale and support by few private people. Some of the existing satellite towns around major cities ('Ekbatan' new town in Tehran region), are not new towns, but mass housing production.

The policy of the 'Ministry of Housing and Urban Development' of improvement of housing patterns and problems in urban housing areas in Iran was able to link different organisations, and to establish new ones that are now active all over the country. One of these organisations is the 'Housing Bank', the main investor of housing and development projects in Iran. This Bank with the establishment of an 'Investor Company' began its activities in producing housing units and residential complexes in different parts of the country. This company implements many of the development projects in new towns. The main aim of this company is investment in and production of mass low cost housing units with modern technical building standards, industrially produced. The financial advantage in this investment plays a more important role than traditional design principles. (18)

## ***4.7 Example of New Towns in Iran***

The following examples describe the situation of existing and future new towns in Iran. This description is based on existing information.

### ***4.7.1 New Towns in the Tehran Region***

#### **- Hashtgerd New City**

The experience of satellite towns such as ‘Mehr Shahr’ in the Tehran region shows that the reduction of population growth in Tehran city alone has not been able to solve its social problems, since the scattered population distribution made it dependent on Tehran city concerning different services. The short distance between the residential areas and Tehran has caused more immigration for social reasons. Studies of the region of Tehran indicate that the dispersed settlement pattern of the Tehran area developed in the last decade, will continue. The existence of scattered residential areas in this region has resulted in an uneconomic distribution of services. There is a hope that the development of new cities at a suitable distance from Tehran will reduce the emergence of scattered development with the environmental problems. One of these new cities is Hashtgerd. This new city as a self-sufficient city is aimed to achieve the following goals:

- To house part of Tehran's over spill population
- To stop the growth of many unplanned urban centres in the region
- To gradually attract employees in light industry, and services.
- To preserve the ecological balance of the environment.

Hashtgerd is located 65 kilometres west of Tehran, midway on the Tehran-Qazvin corridor, where many large industrial, economic and residential centres are located. The new city is located to the north of the existing Hashtgerd town whose existing amenities can be used in the early stages of development of the new city. Hashtgerd new city is composed of two sectors, an industrial park of about 350 hectares on the South of the freeway and a residential area of about 400 hectares on the northern part of the free-way. This city expected to house 500 thousand people in 2016. The city is planed in two phases. In each development phase this new city is plan to offer the necessary urban facilities. The new city will provide a modern recycling sewage system with treatment plant and possibilities of recycling wastewater for green spaces and other allied uses. Good transport connection, and the completion of the Tehran, Karaj, Hashtgerd and Qazvin rapid transit (metro) system in near future, will make Hashtgerd to be the most successful new city in Tehran region. (19)

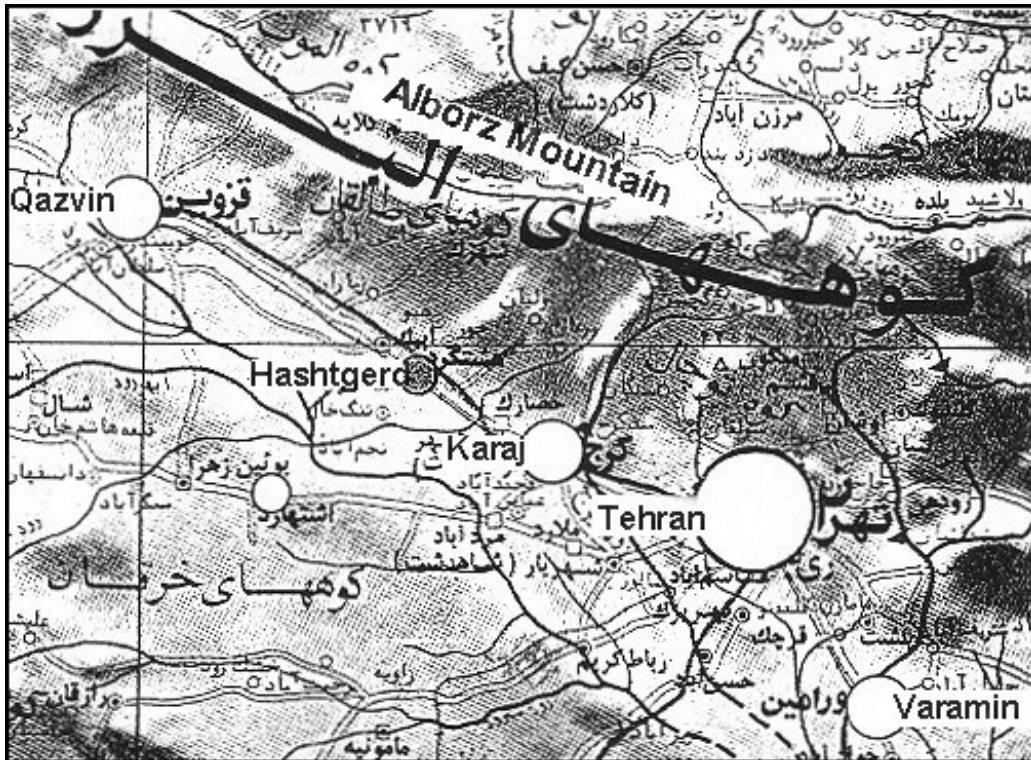


Figure 88: Location and communication of Hashtgerd city

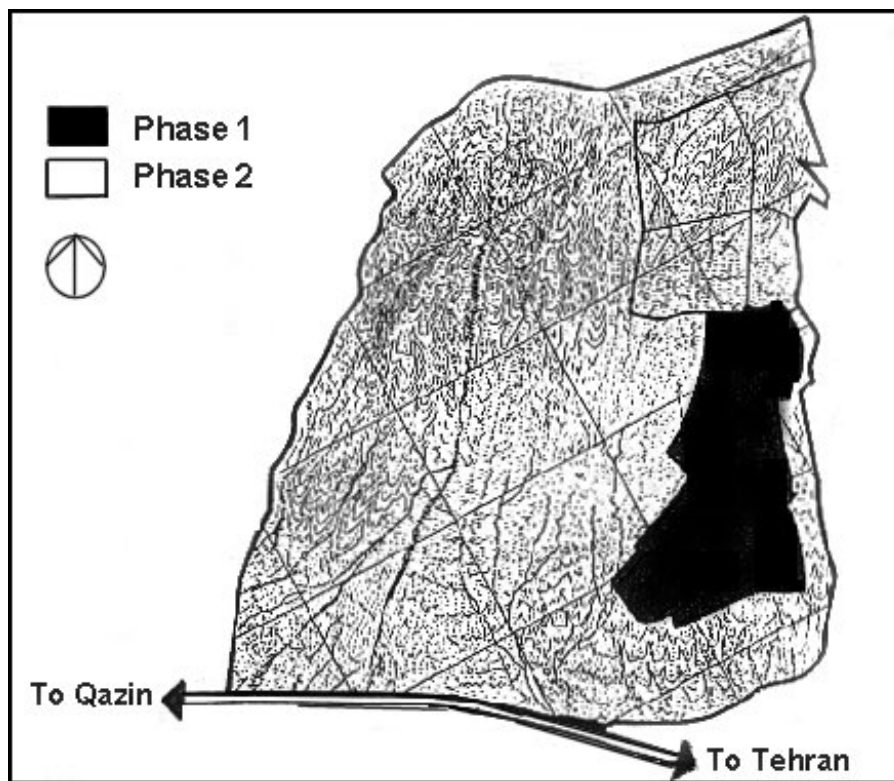


Figure 89: Land Development, location of phase 1 and phase 2

Source: Report on Hashtgerd city, Ministry of Housing and Urban Development

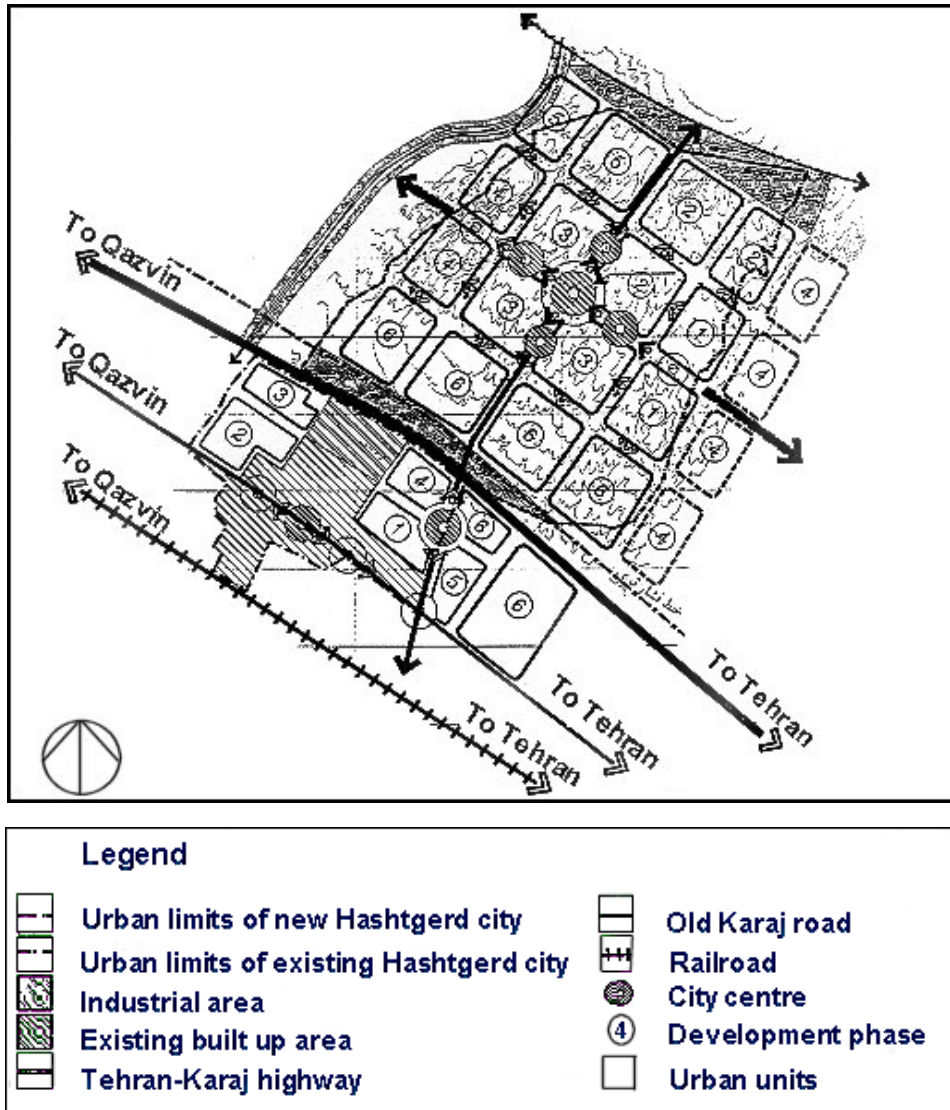
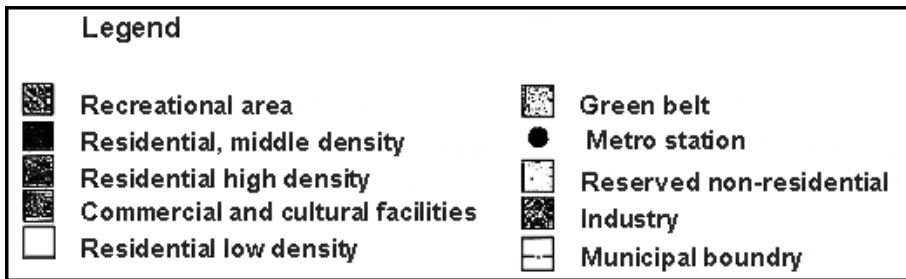
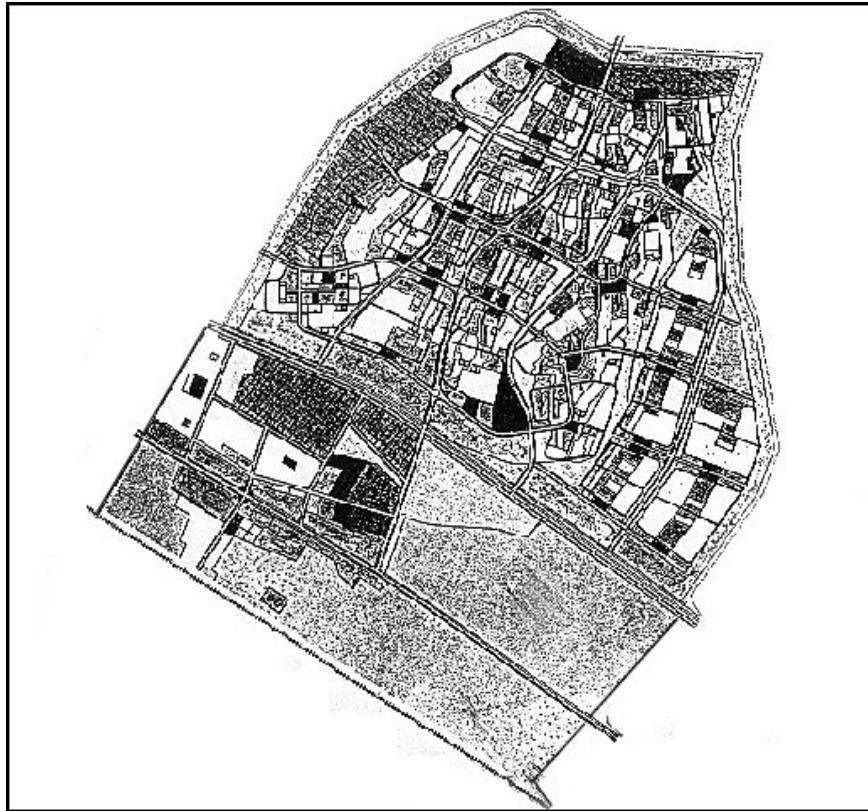


Figure 90: Development of Hashtgerd new city.



Figure 91: Residential neighbourhood in Hashtgerd new city Source: Report on Hashtgerd new city



**Figure 92: Development construction plan in Hashtgerd new city**



**Figure 93: Residential neighbourhood in Hashtgerd new city**  
 Source: Report on Hashtgerd new city

### **- Andisheh New City**

Another new city in Tehran region is Andisheh that is supposed to house a portion of the spill over population of Tehran and Karaj cities. The estimated population of the city will be 60 thousand persons. The new city of Andisheh is located 20 kilometres west of Tehran city near Karaj River. It has a pleasant climate and suitable slopes and natural situation.

Localization of 'Andisheh' new city was based on:

- A potential of providing jobs for future inhabitants.
- Easy access to the regional network of roads including the Tehran-Qazvin free way and Tehran-Hashtgerd railroad.
- Provision of water from different sources in the region (underground basin, well, and dam).
- Existence of non-arable land with access.
- Existence of Karaj and Shahreyar city in providing elementary needs in the preliminary development phases.

The medium range plan proposes a central sector and a common regional service core with the city of Shahriyar, which includes five medium sized communities and 20 smaller communities. They will provide housing for 60 thousand persons in the short run and 100 thousand persons in the long run. With the aim of shifting population of Tehran city to this town, many housing units are allocated to different organisations in Tehran city. (20)

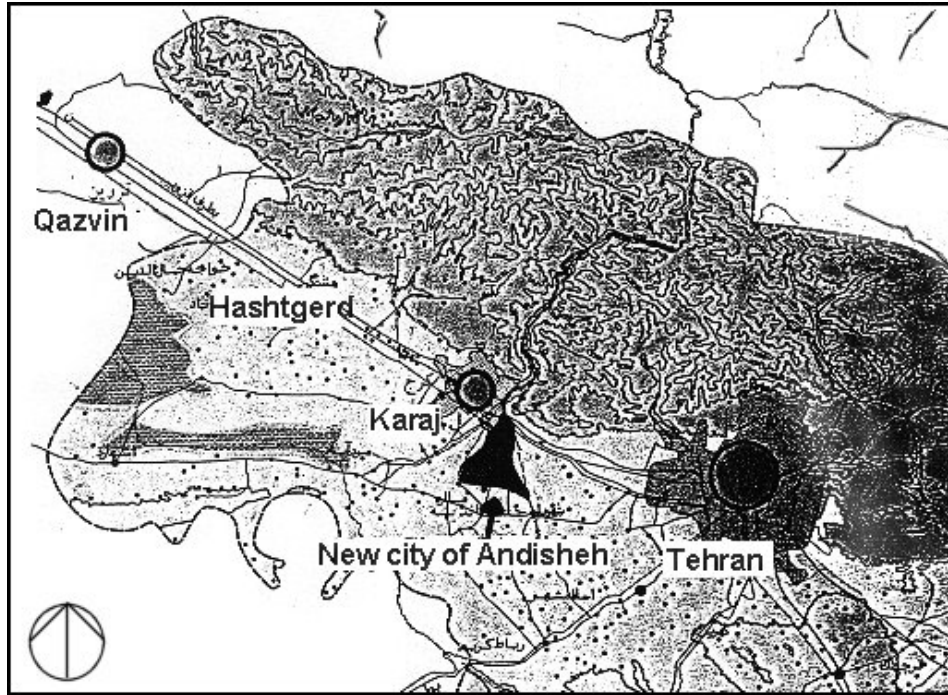


Figure 94: Location of Andisheh new city.

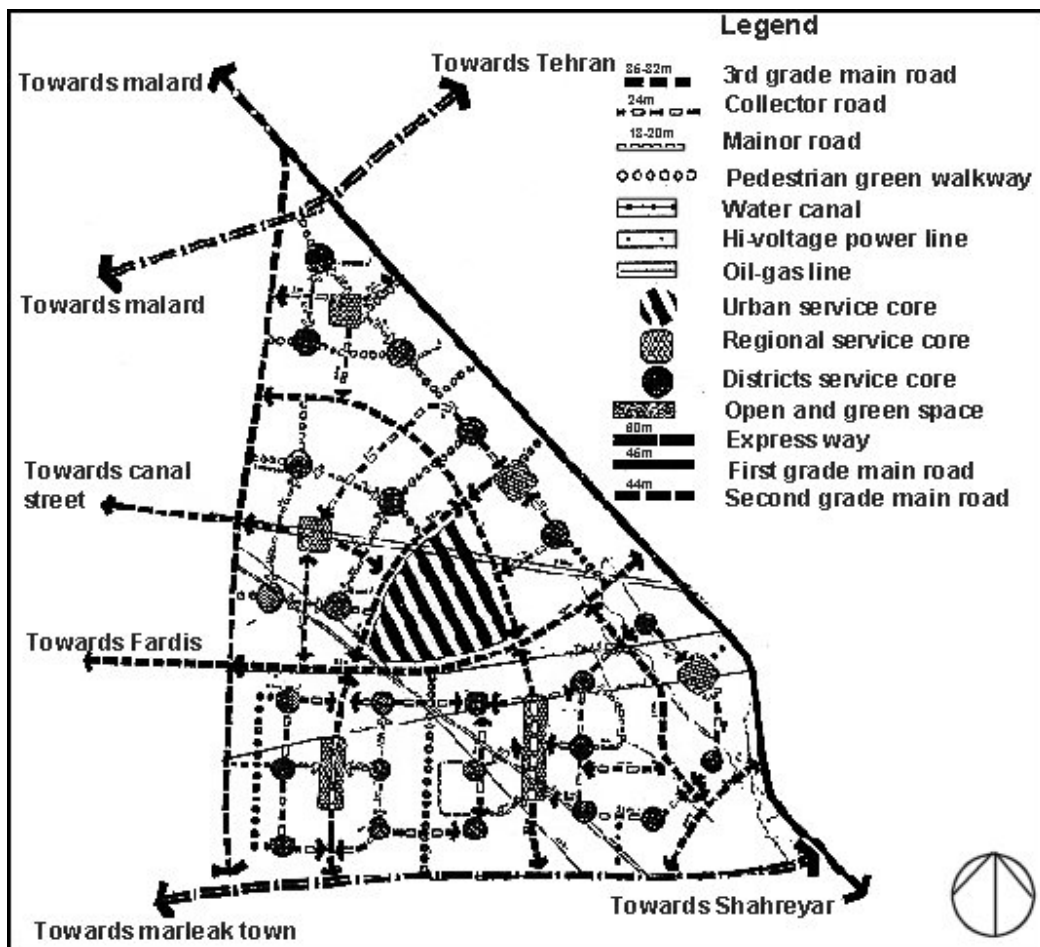


Figure 95: General concept for expansion and spatial organisation of Andisheh new city  
Source: Report on Andisheh new city



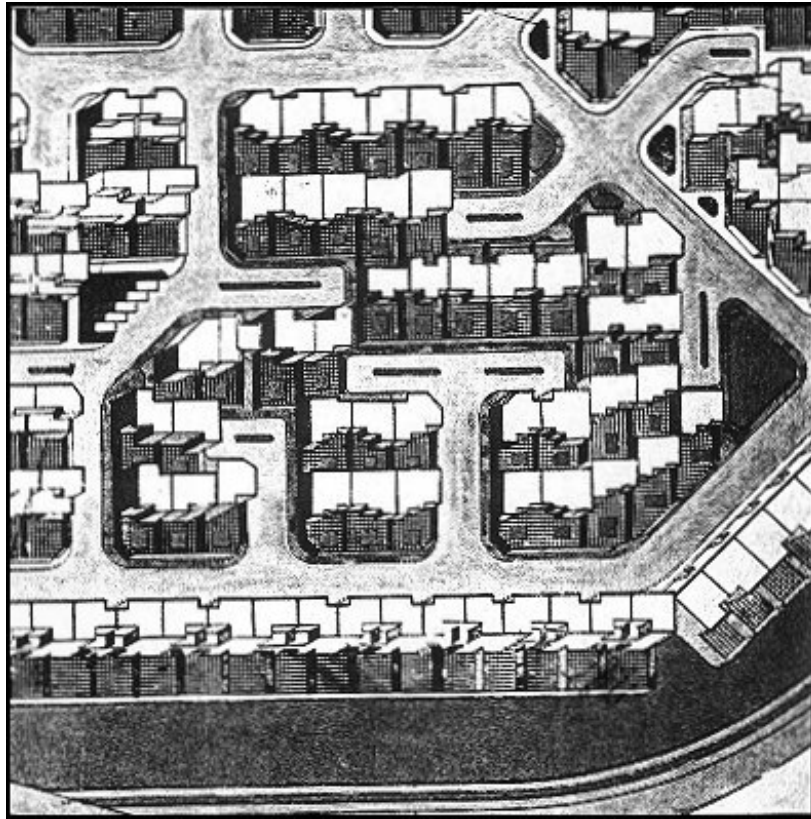


Figure 96: The general view of the single unit subdivisions in Andisheh new city.

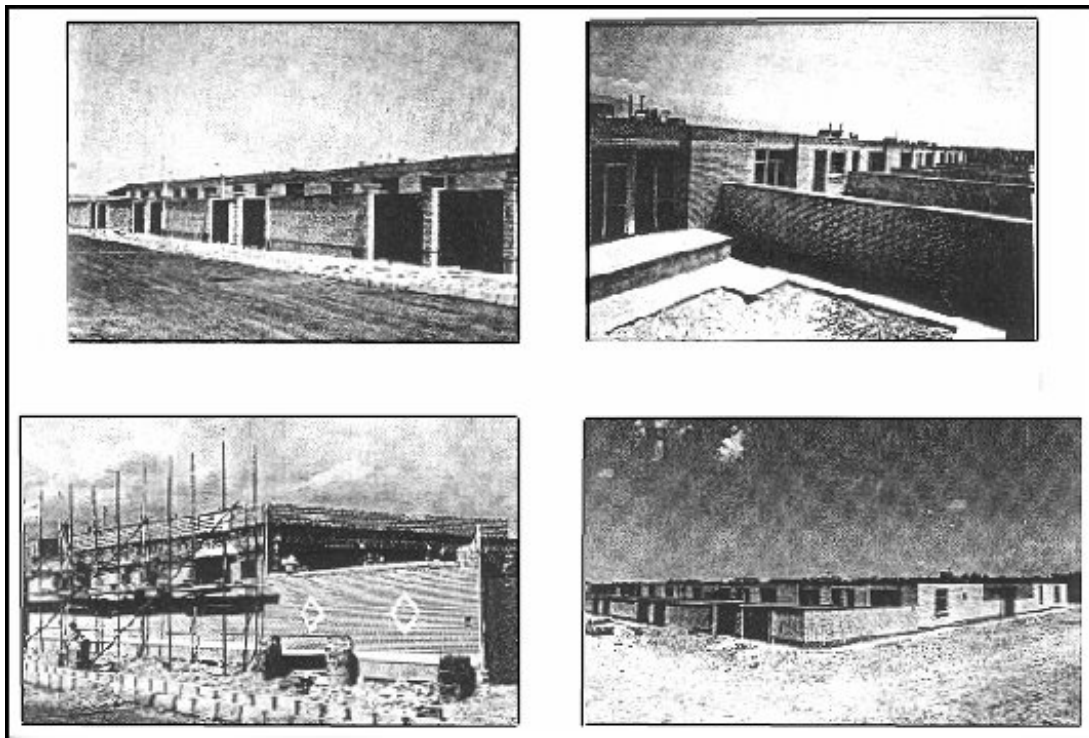


Figure 97: Construction in Andisheh new city.  
Source: Report on Andisheh new city

## - The New Latian City

The expansion of foreign relations of Iran with other nations and the scattered development of Tehran, and limited central area of that city, has led to a situation where the Islamic Republic of Iran considered it necessary to define a certain area where embassies as well as other political agencies of different countries could be constructed. At the same time, their respected members could settle there, no matter what their beliefs and cultures are. This intended new city is called "Latian" located near Tehran and will enjoy a desirable climate and good services.

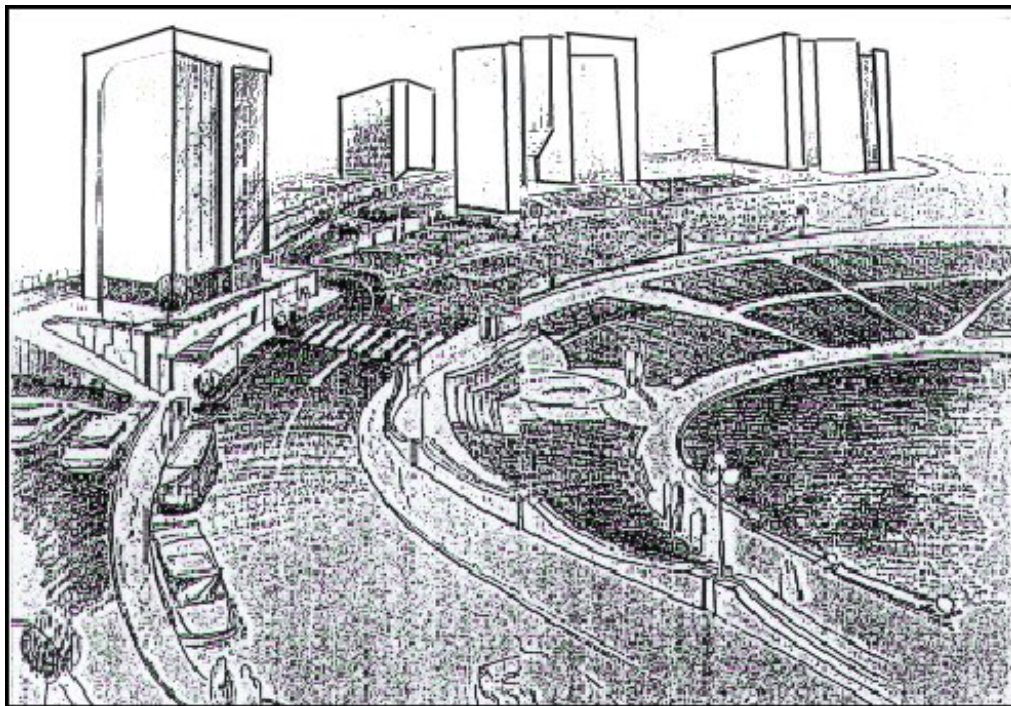
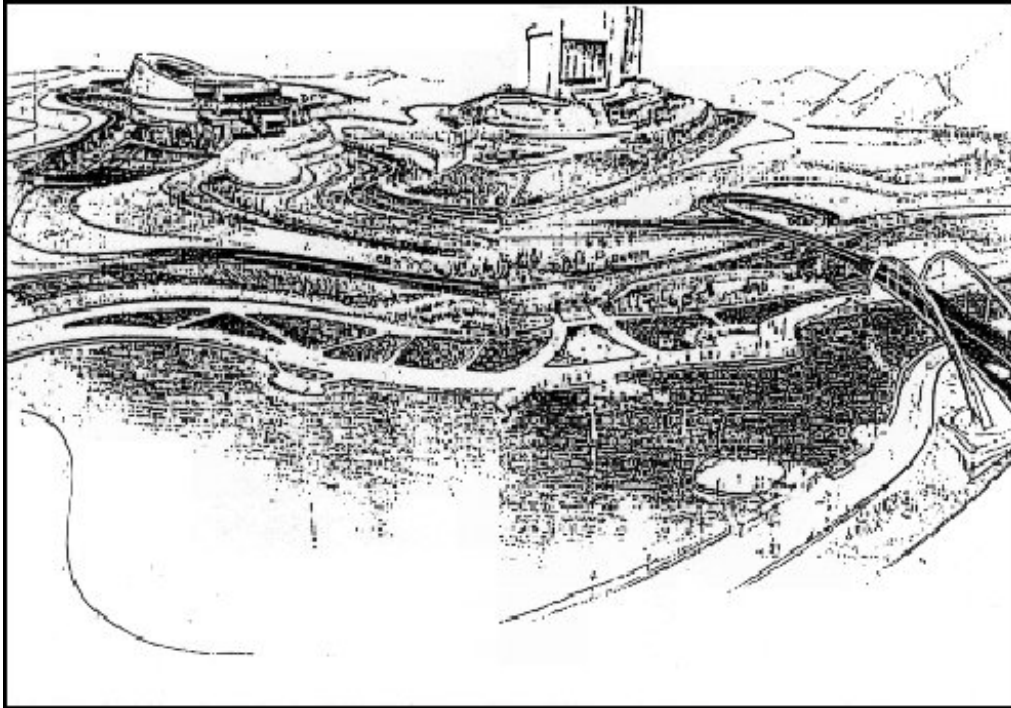
The plan of the new Latian city as a town for diplomats, has been proposed with regard to the increasing population of Tehran area and for those foreign nationals who engage in political affairs. There is the hope that this new city, which will be 25 kilometres from Tehran by road, will not only contribute to the decentralisation of Tehran city, but will also help in solving the problems of foreign diplomats and other foreign nationals living in Tehran.

Latian city will have a diplomatic-political function and will provide its inhabitants with all the facilities and amenities available in a self-contained city. There is hope that with the help of experts the construction of this diplomatic region can happen as soon as possible.

The presence of the diplomats, foreign employees and representative offices will influence the atmosphere in this city. These activities will undoubtedly have profound and extensive socio-economic effects on various investments in the region. These investments will simultaneously cause migration of people and cause job opportunities leading to an attractive economic growth.

The population residing in this settlement, is expected to reach 2500 people with two development stages by the year 2000, consisting of the foreign staff employed by embassies, their first-rank personnel and their families, local employees of the foreign delegates and of the people employed in service of the town.

The embassy area will include all diplomatic sections. The residential area is designed to meet social needs and patterns of the residents. The houses comprise 30% villas, 70% apartment units in 3 sizes of large, medium and small. The services area designed in 2 local and central levels, including all local and civic facilities and amenities. (21)



**Figure 98: Schematic view of future Latian city.**  
Source: New Latian city in a General perspective

### ***4.7.2 New Towns of the Mashhad Area***

#### **- Golbahar New Town**

Mashhad as the largest city after Tehran, is the main migration pole in northeast of Iran (Figure 1, page 5). Mashhad is the main religious city in Iran and second holy city one after Mecca. It receives yearly an enormous number of visitors and immigrants. Based on the development plan of Mashhad, approved in 1990, the population of this city will reach 5.8 million people in 25 years (2015). Considering the infrastructure capacity of Mashhad, settlements of huge population in and round this city will not be possible. It is forecasted that 1.5 million of this population will be able to settle in three new towns around Mashhad in distance of 40 to 60 kilometres. The Golbahar new town is located in northwest of Mashhad. The main aims of this town are:

- To accumulate the over spill population of the Mashhad area.
- To offer necessary services in the area.
- Providing new job possibilities for future population.
- Attracting factories and firms to the area.
- Providing a pleasant urban residential environment.
- To prevent demolition of the existing natural eco-system in the area.

Apart from aims mentioned in choosing the location of the town, the environmental aspects such as the stabilisation of the soil around the new town, preventing air pollution around and within the town, flood control and creation of green areas and natural parks have also been the main aims.

To reduce future pressure on Mashhad city, these new towns should become self-sufficient in different development phases, and also should be able to distribute population and services suitably.

The development pattern is planned in three phases with population of 360 to 430 thousand. High quality infrastructure and use of modern water recycling, and alternative energy sources such as solar system for warm water and heating facilities in winter, hope to help this new town to offer a desirable living environment for the future residents. (22)

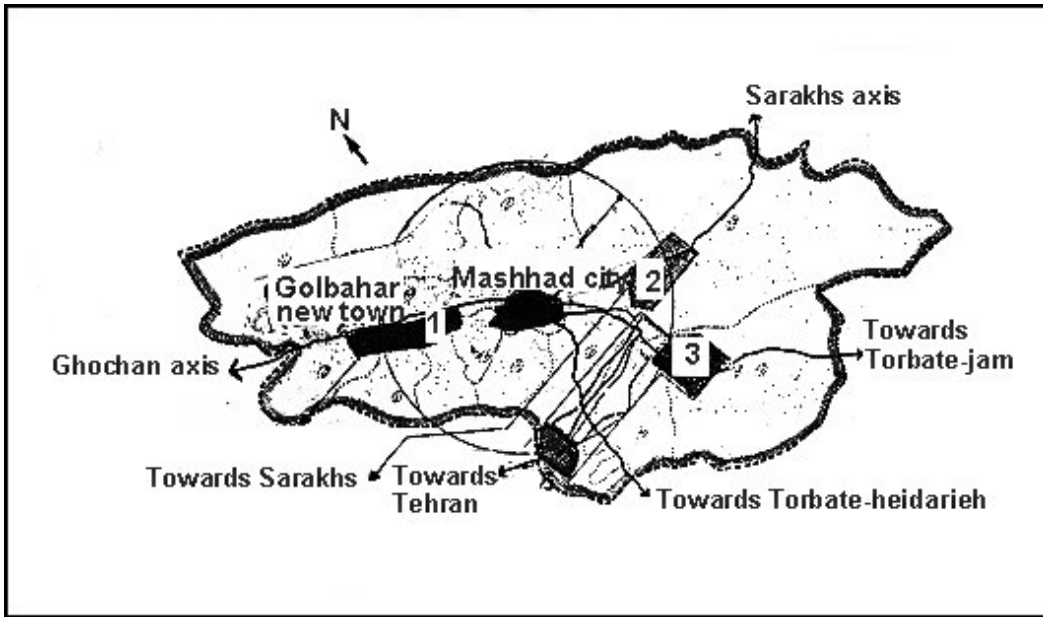


Figure 99: Location of new towns in Mashhad area.

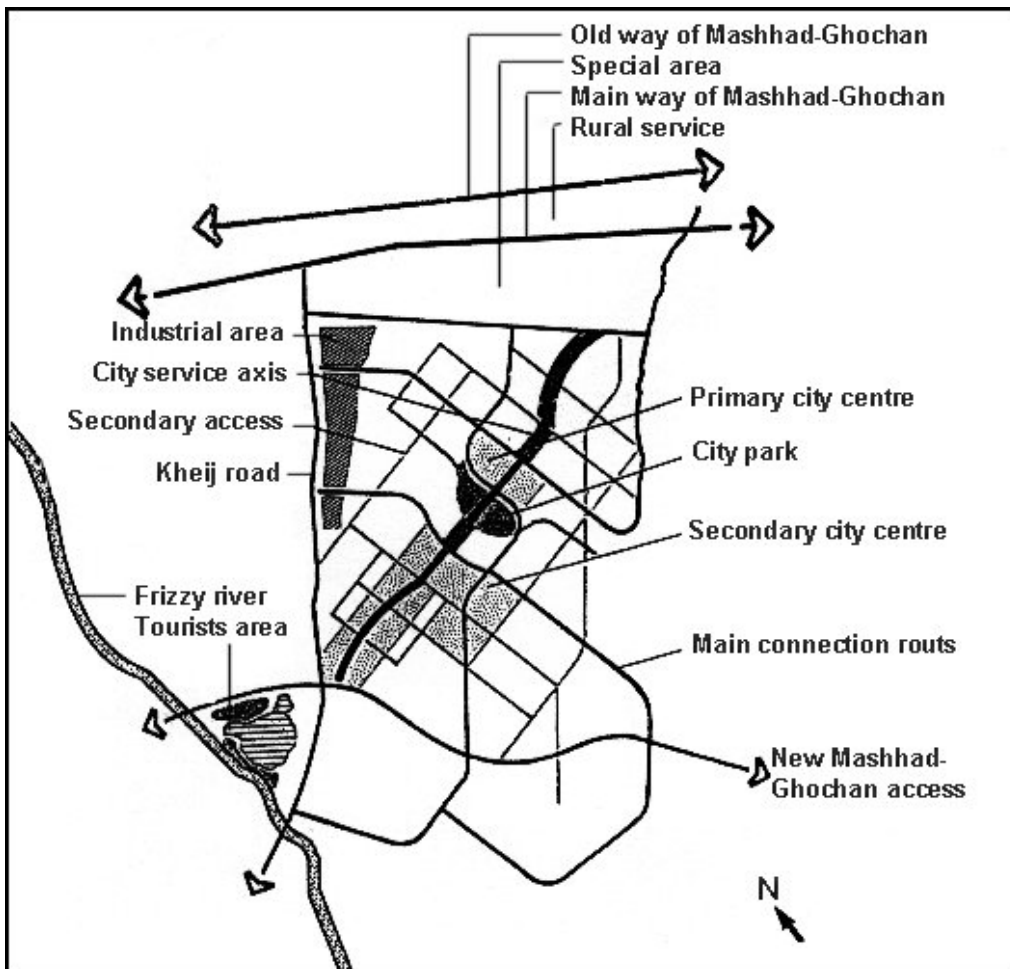
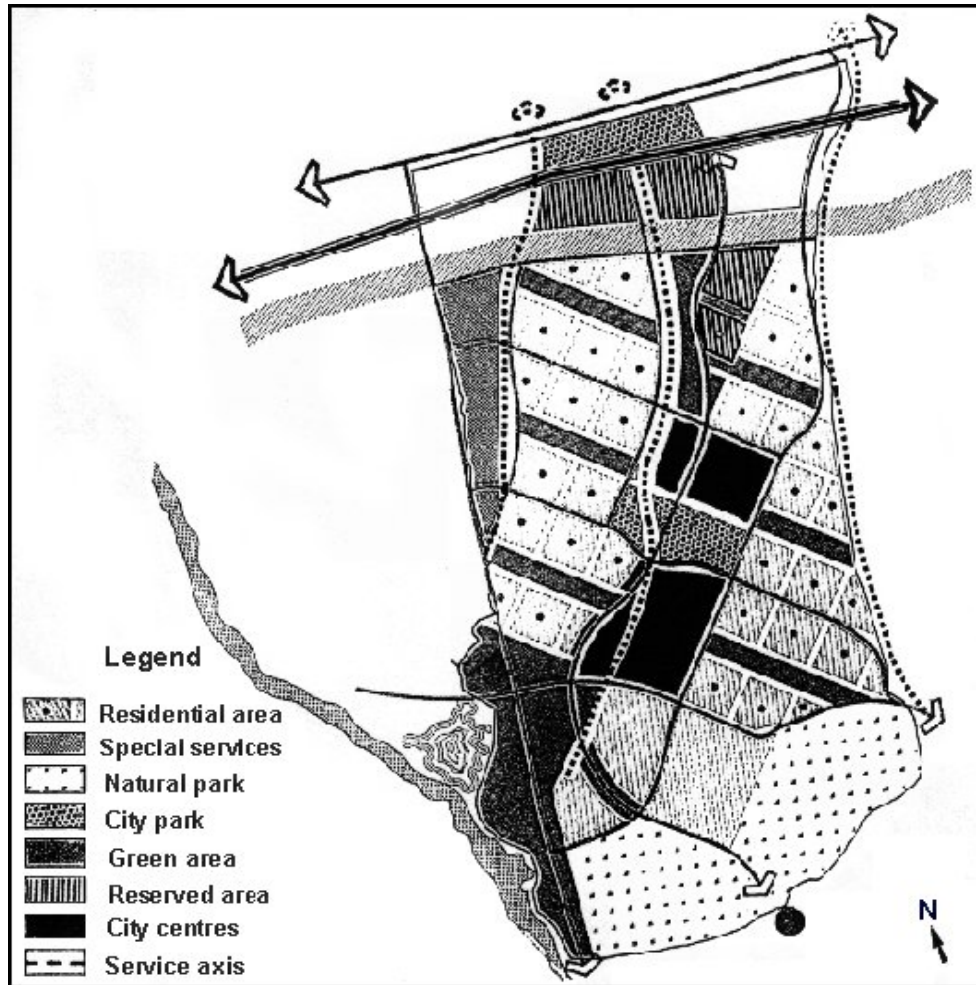


Figure 100: General structure of Golbahar new town

Source: Report on Golbahar new town, Ministry of Housing and Urban Development.



**Figure 101: Land use Development plan of Golbahar new town.**



**Figure 102: Two storey houses in construction in Golbahar new town.**  
**Source: Report on Golbahar new town**

### ***4.7.3 New Towns of the Isfahan Area***

Isfahan area is the third largest region, and an important industrial area of the country. Since the approval of its master plan in 1968, the foundation of new towns in this area came under consideration. Today, after more three decades, the new towns of the region have been able to house immigrants who otherwise would live in Isfahan city. The Isfahan region is planning for a population of 4.4 million people in 2011. Considering the limited infrastructure capacity of Isfahan city, the development of more new towns recognised essential in last decade. (23)

#### **- Shahin Shahr New Town**

The New town of Shahin Shahr was planned by a private English enterprise in 1968. It is located 45 km north from Isfahan city with the aim to attract major housing development for foreign companies whose factories and offices were located in this area. It was predicted that this new town would absorb 300 thousand people by the year 2000. It is interesting to note that in the 26 years, since its foundation (1968-1994), this new town has been able to absorb nearly 70 thousand population. Half of its present population originated from Isfahan province, and the other half is from other regions. This new town has influenced the increase of population in Isfahan city. But it was not able to provide the necessary facilities and job possibilities.

Shahin Shahr was one of the first new towns, planned with high standard city infrastructure. Its sewage treatment system is unique in Iran. Although its master plan was developed by an English Consultant, 'the Williamson Partnership', the design of buildings was done by Iranian architects. Consequently, different building types with individual ideas are to be seen in this new town. The housing units range from low-medium to very high building costs. The site of houses are between 150 to 1000 m<sup>2</sup>, and they are between one and three stories. it is necessary to point out that Shahin Shahr was originally intended to house middle or lower-middle class people but, after the revolution, it attracted various people from different income groups. Its location in main road between Tehran and Isfahan, short distance to industrial plants of the region, good access to Isfahan and other cities of the region has made it an important settlement in this region. (24)

One of the first socio-cultural studies about new towns in Iran was on Shahin Shahr. This study indicated that Shahin Shahr as a modern new town possesses none of the traditional urban architectural characteristics. Although it was mainly designed by Iranian architects, natural, physical, ecological and traditional characteristic of the area were not taken into consideration. Shahin

Shahr as a part of Isfahan region possesses characteristics of hot and dry climate. The study also indicates that there is little social contact between residents which are partly results of urban design concept, and partly from social and income differentiations. Existing recreational and cultural services are not sufficient and for commercial services, the town is highly dependent on Isfahan city. This study indicates that Shahin Shahr has socio-cultural problems. The study group recognises the problems and their causes, and they hope that the town will become a desirable environment. The socio-cultural analytical study pays a lot of attention to the aspect of neighbourhood. (25)

On the basis of population census of 1991, nearly 67000 people lived in this town. Considering the population growth rate of 19.5 percent between 1976-86, this new town will be able to house 4000 more people each year. In 1994, this new town, was made a municipality. This policy has helped this new town to be more self-sufficient and reduces its dependency on Isfahan city. Implementation of different housing projects, beside services and industrial activities in and around Shahin Shahr as Isfahan refinery, power station, army station, and Shahin Shahr university, have been the main reason for attracting population to this city compare to other new towns in the region. (26)



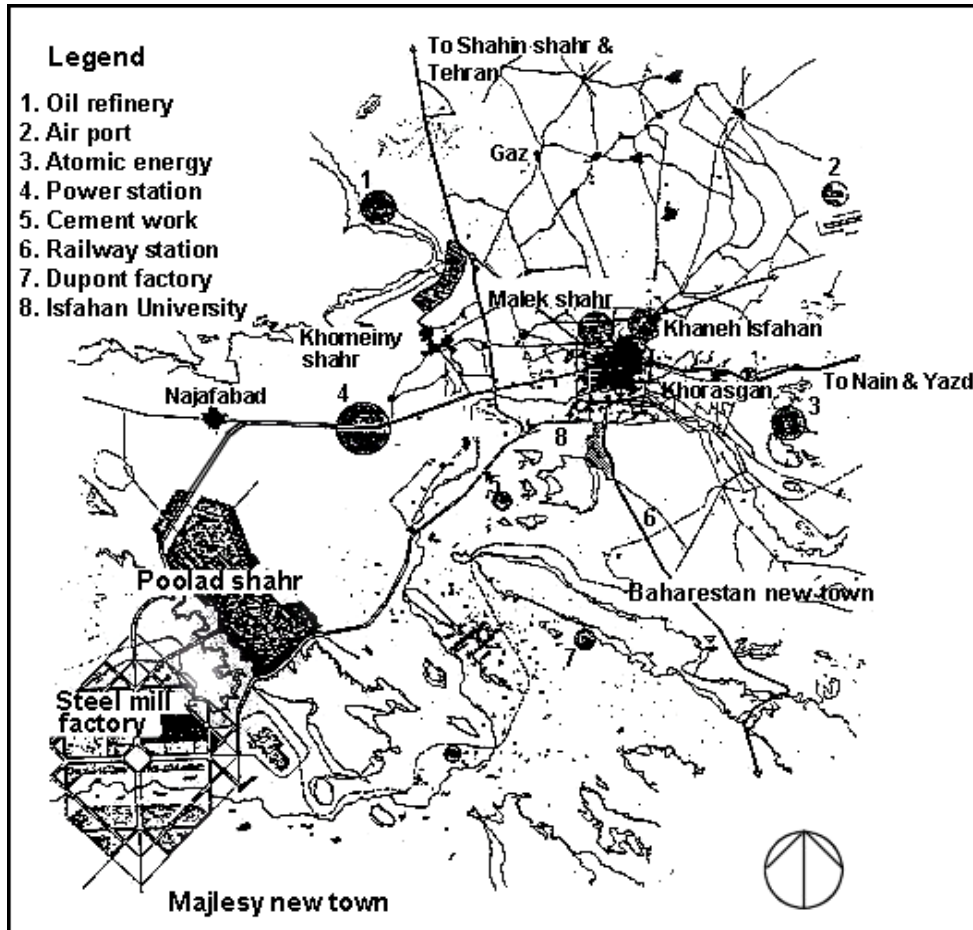


Figure 103: Location of new towns in Isfahan area.  
 Source: Author, M.phil thesis.

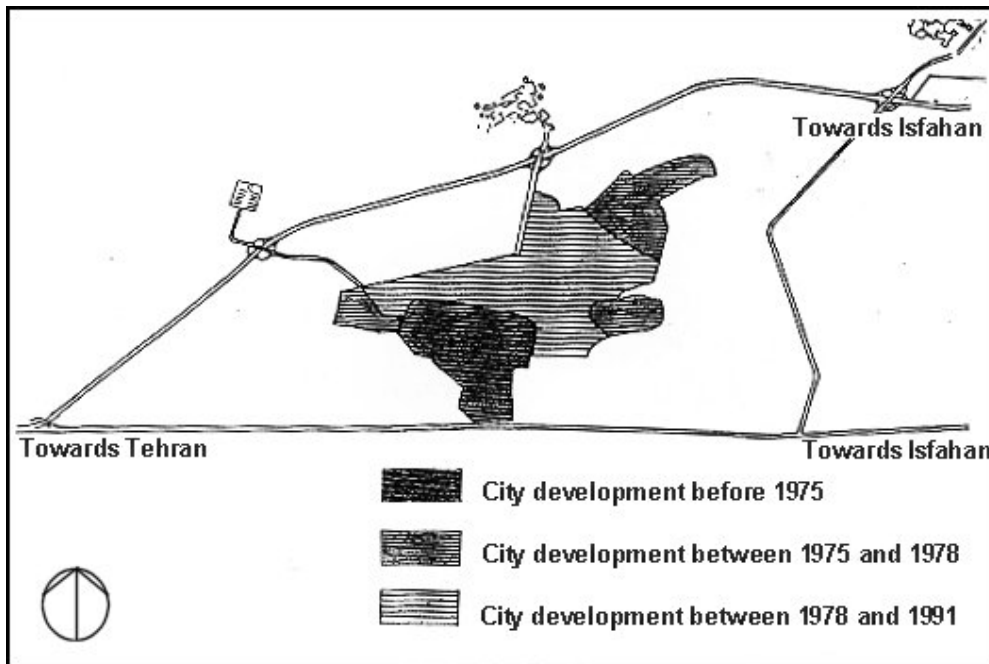


Figure 104: Development phases of Shahin Shahr.  
 Source: 'Socio-cultural study of Shahin Shahr', 1991.



**Figure 105: The main commercial centre of Shahin Shahr new town.**



**Figure 106: Exposure of traditional building characteristics of the area.**  
Source: Author



**Figure 107: Effect of climatic characteristics on design of modern openings. ‘Saderat Bank’ building in Shahin Shahr new town.**



**Figure 108: Internal design of a dwelling with respect to traditional and climatic characteristics of Shahin Shahr area.**

**Source: Author**

## **- Poolad Shahr New Town**

Poolad Shahr new town is 35 km southwest of Isfahan city. The 'National Iranian Steel Corporation' in conjunction with the Poolad Shahr steel mill factory built it. Other industries of brick, cement, prefabricated building products and by-products of steel existed in this area already. The Steel mill factory was located on the edge of the Isfahan oasis, a short distance from iron and coal deposits in the central area of the country. This was the first big steel mill factory in Iran. 'Originally this complex was planned to be built in Karaj area near Tehran and was supposed to be built by Germans, but it did not happen. Later on, Iran made an agreement with Russia. Building started in March 1967 and the first production was in March 1972. This town was planned to give homes to the workers of this factory and their families. It was predicted that this town would be able to attract 300 thousand people in year 2000'. (27)

Although Poolad Shahr was originally planned to be a vibrant and active city in the context of industrial activities of the area, it did not function as expected. The sudden change of the residential environment could be one of the reasons why this town, after nearly three decades, has not been able to attract the predicted population. Since the foundation of this new town just 40 thousand people have been interested in living there and most of the workers have preferred to live in Isfahan and work in Poolad Shahr

On the basis of the new policies with regard to the improvement of housing patterns in the region of Isfahan, a new comprehensive plan for the city of Poolad Shahr was approved in January 1994. Urban services and technical infrastructure introduced in Poolad Shahr as one of the important new towns which attract investment and population to this area. Poolad Shahr, as a future active city with a capacity for 500 thousand will not only be able to house the workers of the large industries in western area of Isfahan, but may also function as the second biggest city for the whole region. (28)

The analysis of the economic and social characteristics of Poolad Shahr indicate that this new town could become, in the future, the most important industrial residential city of the steel industry in the central part of Iran. The specific potentials are:

- The appropriate location of the city with regards to the industrial centres towards the west of the region.
- Accessibility of industries and of the town to the various national and regional communications networks.

-Existence of vast lands, not being suitable for agriculture, which offer further possibilities for expansion of the city and industry.

-Existence of mountains around the city, which have a significant role in the prevention of pollution into the city. (29)

Generally, the whole structure of the town is divided in two sections a southern and a northern section. The southern section extending in a circular shape constitutes the main part of the city, while the northern section that has a rectangular structure and is designed for future expansion of the city. The centre of the city is situated in the farthest point of the southern part. The major services of the city are centred in this part, and the network of roads begins in this part of the city, connecting various areas. On the basis of the urban master plan, the whole city comprises of ten areas and fifty districts. The forecast of the population density is equivalent to 180 persons per hectare of land. (30)

The district is the smallest element of the city structure, and has a centre for provision of the daily requirements of the residents. The centre of district is a service nucleus, as prescribed by the comprehensive project of the city, provide the periodicity requirements of the inhabitants. Part of this centre is educational, medical, religious, cultural, commercial, administrative, and sport services as well as a green area are for the inhabitants on an area of 13 hectares. The preliminary studies for design have been completed, and applicants from private and public sectors have declared their interest for participation in the building process. (31)

The Industrial zone of approximately 400 hectares is situated at the farthest southern end of Poolad Shahr, and borders on the north and north eastern side with the residential areas, and from east and west with land designated for other uses. The land has been divided into two parts by the Isfahan-Poolad Shahr highway. The industrial zone constitutes one of the four areas of the main activities in the complex. It is divided into twenty basic groups of industries. The location for installation of these industries was determined with regard to the pollution, distance from housing areas, number of employment opportunities, the rate of utilisation of the infrastructure installations, requirements of raw materials and other relevant materials, as well as requirements of the industries to be adjacent to each other. (32)

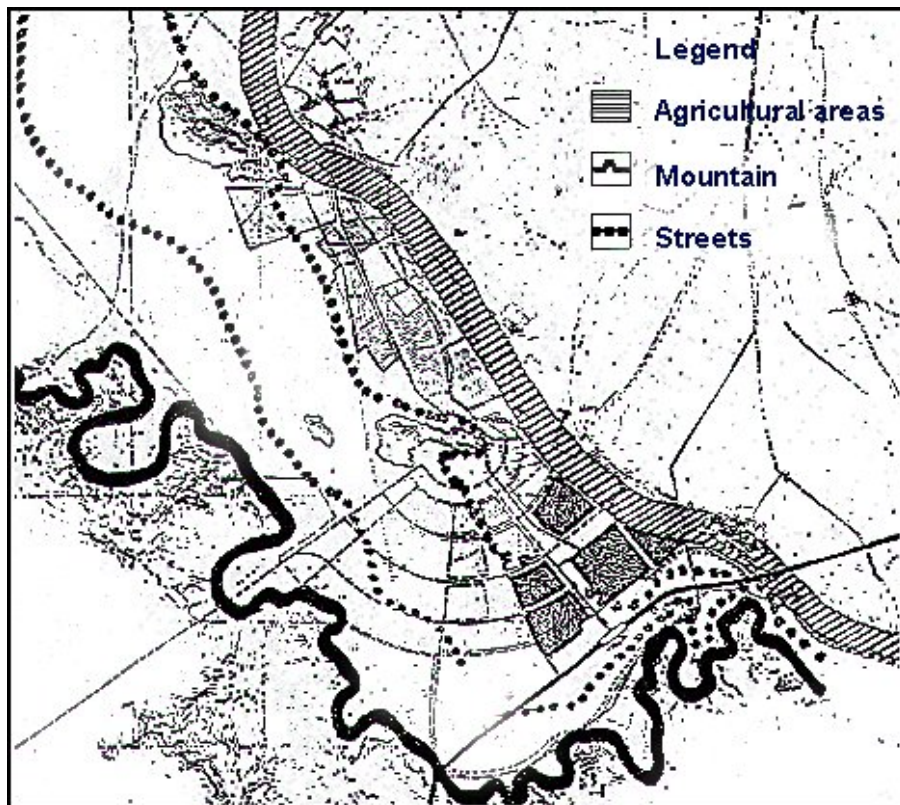


Figure 109: Natural situation of Poolad Shahr.

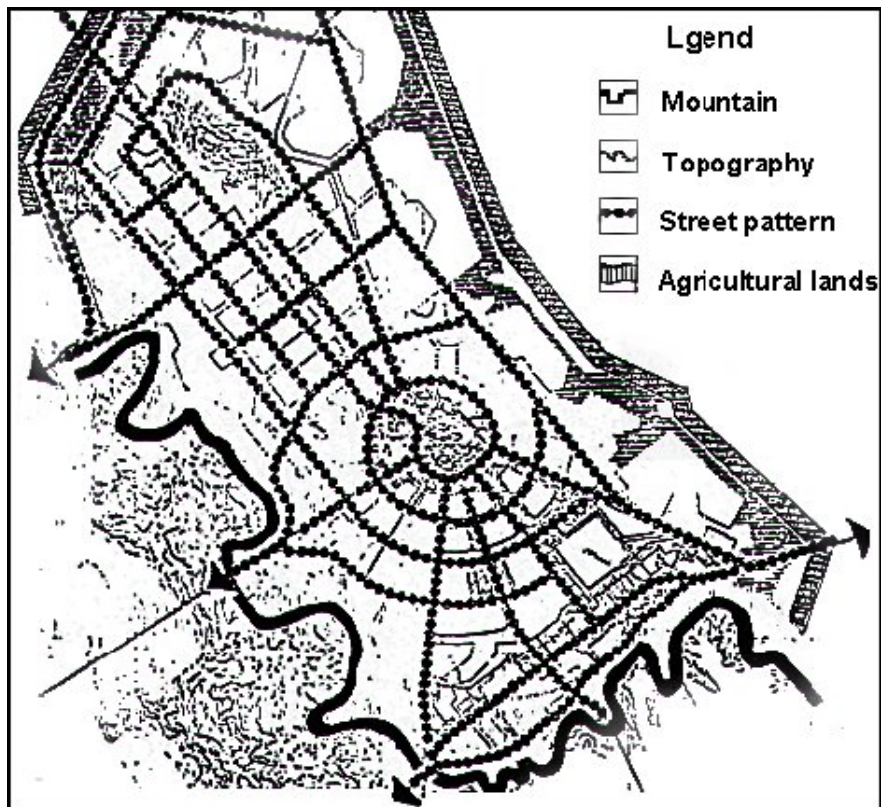
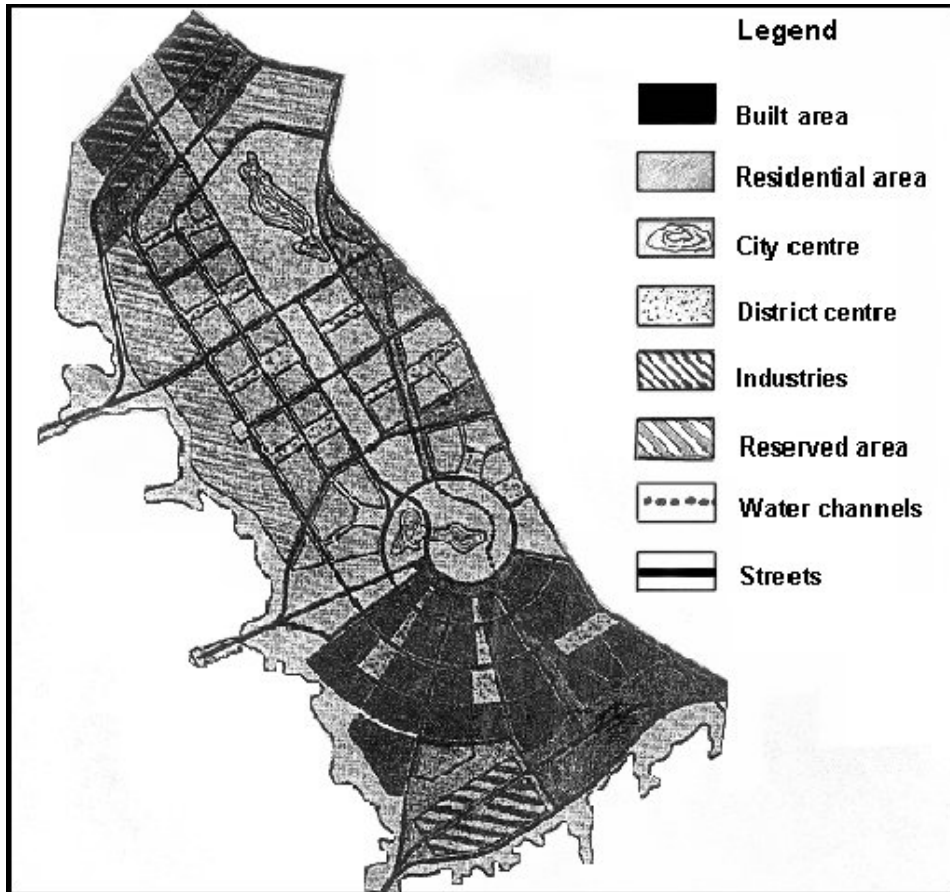


Figure 110: General structure of Poolad Shahr.

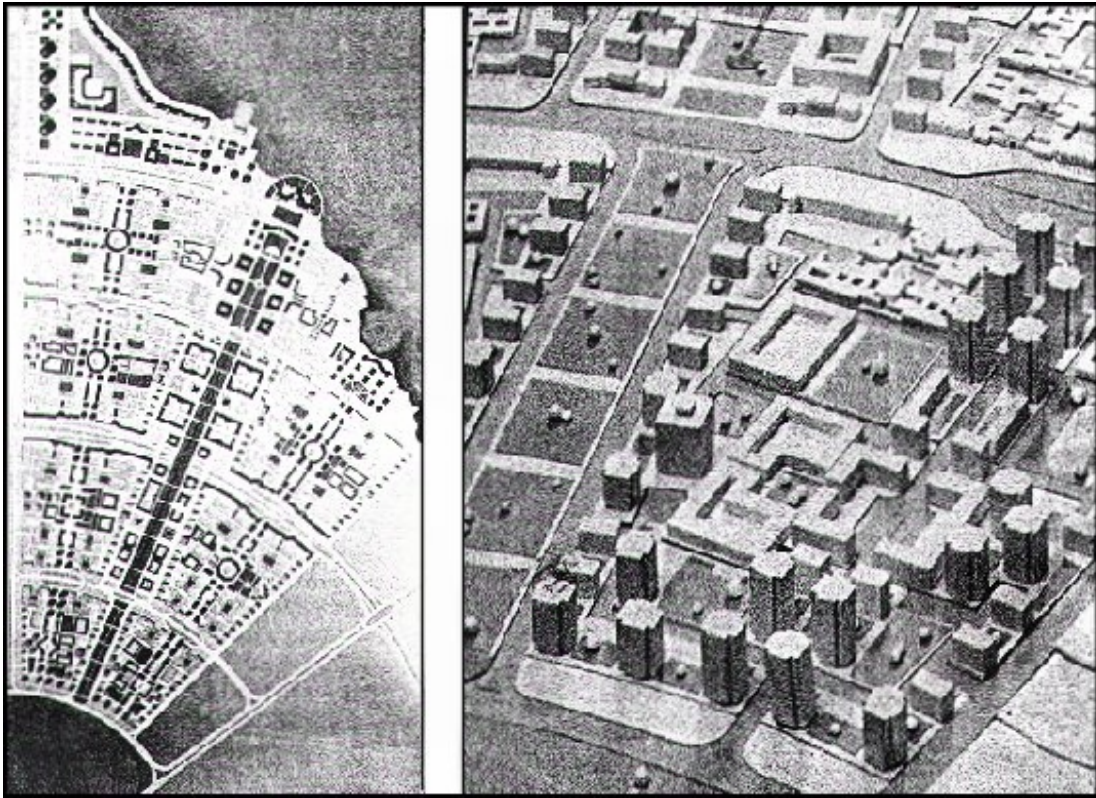
Source: Ministry of Housing & Urban Development, 'New town, new culture in living'.



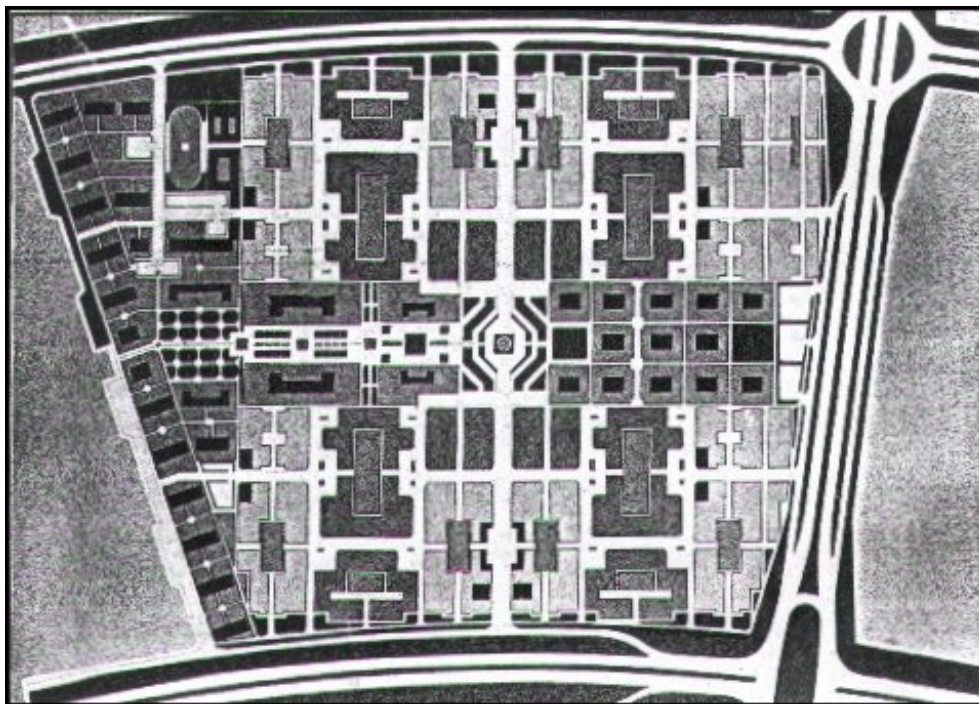
**Figure 111: New master plan of Poolad Shahr approved in 1994.**  
 Source: 'Hamshahry newspaper', October 1995



**Figure 112: Division of the town into two connected city centres.**  
 Source: Report on Poolad Shahr new town.

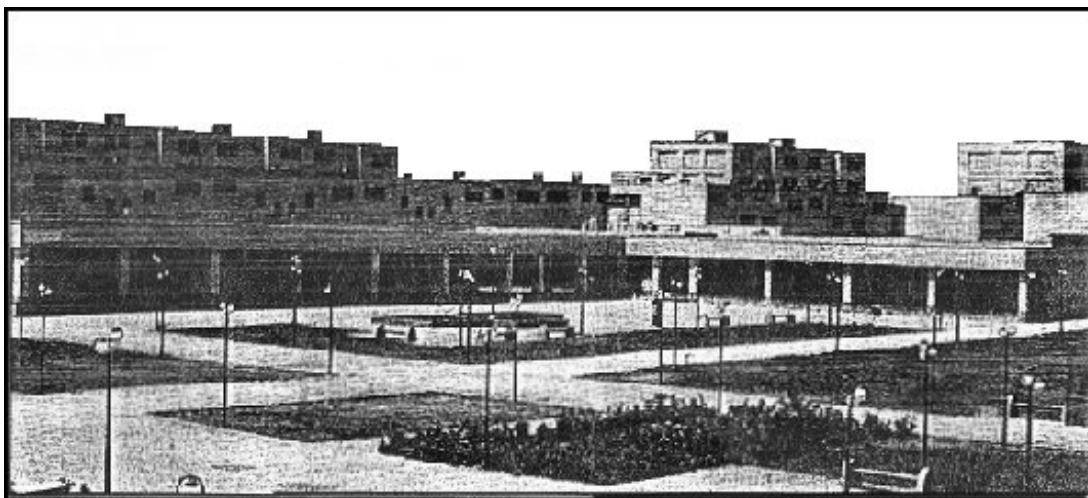
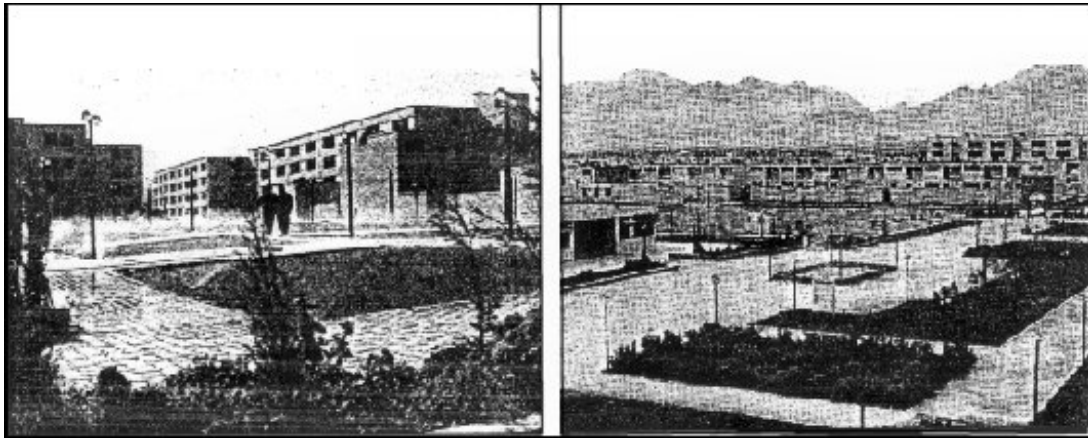


**Figure 113: Radius structure of the Poolad Shahr new town.**



**Figure 114: Division of residential areas into districts.**  
Source. Report on Poolad Shahr new town.





**Figure 115: A view on residential areas of Poolad Shahr new town.**  
Source: 'Hamshahry newspaper'

### **- Malek Shahr New Town**

Malek Shahr is a modern satellite new town planned in the master plan of the Isfahan region in 1968. This comprehensively planned suburban area was built in the north west of the city by private enterprise. It has an approximate area of 20 hectares, and consisted of 7000 housing units and a final population of 30,000. Although it was planned in the category of satellite towns, it is in fact, a new residential area of Isfahan city. It is located less than five km from Isfahan and is dependent on this city with respect to services. Malek Shahr has all the amenities offered by a modern new town.

Malek Shahr new town has a very well planned urban road network and very good access to Isfahan city. It contains vast areas of green spaces with modern facilities such as a Casino. After the revolution these facilities planned just for upper class people were changed into a centre for all people living in this and surrounding areas. The original aim in the planning of this residential areas was to provide a high standard European style accommodations for upper class people and foreign employees and their families working in the region. With the Islamic revolution in 1978-79, all foreign employees in Iran left the country and their housing units were taken over by the government and re-sold to Iranians.

The residential buildings designed in the original plan are two or three storey houses, one and two bedrooms apartments in five storey or one or two person's flats in twelve storey blocks. There are also large size apartments. After the revolution with the changes in social attitudes, and the new policies of the government, the construction of Malek Shahr slowed down but didn't stop. During the war, many immigrants from war areas came to live in this new town. Its residential quality and easy access to Isfahan city encouraged these people to stay permanently. This satellite town gives home to many different income groups coming from different parts of the country. (33)

The 'Housing Bank' as the main investor, since October 1995 began its large housing project activities in this new town. The main aim is providing houses for different income groups. The first of these activities is planning and implementing a residential complex project consisting of 240 housing units. Naturally these sorts of activity will affect the future image of this new town from a rich suburban to an ordinary residential area. (34)

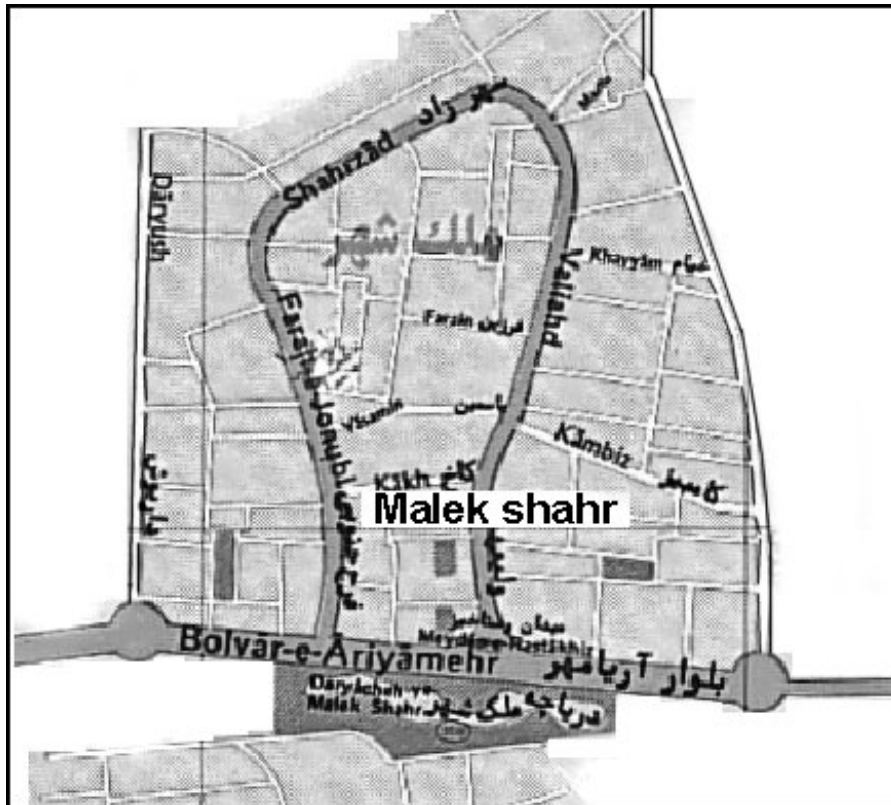


Figure 116: Urban structure and street pattern of Malek Shahr new town.  
Source: 'Gita Shenassi ' publication, Tehran, 1981.



Figure 117: A view on high-rise apartments in Malek-Shahr new town.  
Source: Author

### - The New Town of Majlesy

This new settlement is a part of the comprehensive plan for the Isfahan region approved by the 'Architecture and Town Planning Council' of Iran in 1986. This new town is located in 65 kilometres southwest of Isfahan city, on the main Isfahan-Brojen access route, 5 Kilometres from the steel complex of Mobarakeh, and 17 kilometres from Mobarakeh city. Considering its strategic location, it is forecasted that this new town of 15 hectares, will in the long run (25 years), give homes to 500 thousand persons that mainly work in industrial centre of the Mobarakeh Steel complex. The aims of the foundation of this new town in this part of the region are:

- Providing homes for nearly 12 thousand workers of industrial plants in the steel complex and their families.
- Attracting investment in industrial activities, education and research programmes.
- Redistribution of immigrants to the Isfahan region
- Attracting a part of the spill over population of Isfahan city
- Protecting agricultural land of the Zayandehrud River

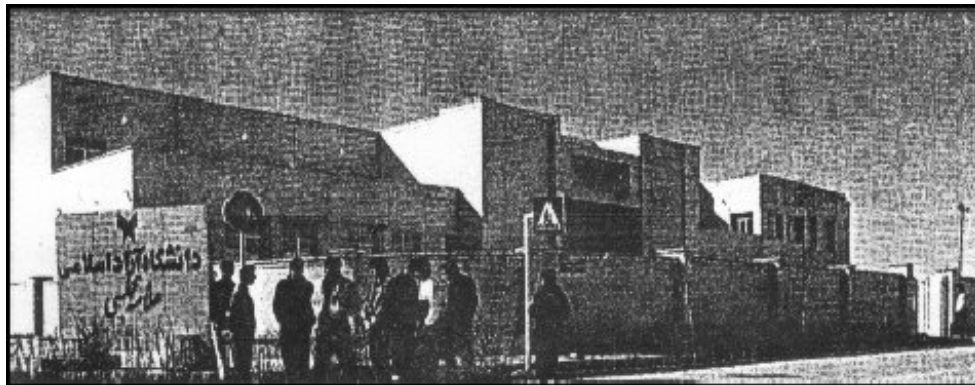
With these aims, construction of the first phase of the Majlesy new town began in 1989 and two years later 1500 housing units were ready for the initial occupation. It provided infrastructure up to 1995, and was able to give home to 10 thousand people. The infrastructure and equipment such as water, electricity, sewage and water treatment system will enable the city to be self-sufficient in providing primary needs of future residents.

Possible access of the town to existing industrial centres of the region, and planned industrial zones round the town, will help Majlesy new town to be more attractive than other large cities of the region. One of the main attraction of this town is the 'Free Islamic University' that is able to accept students in many different subjects. There is the hope that this university will be able to accept 4000 students each year and help the new town.

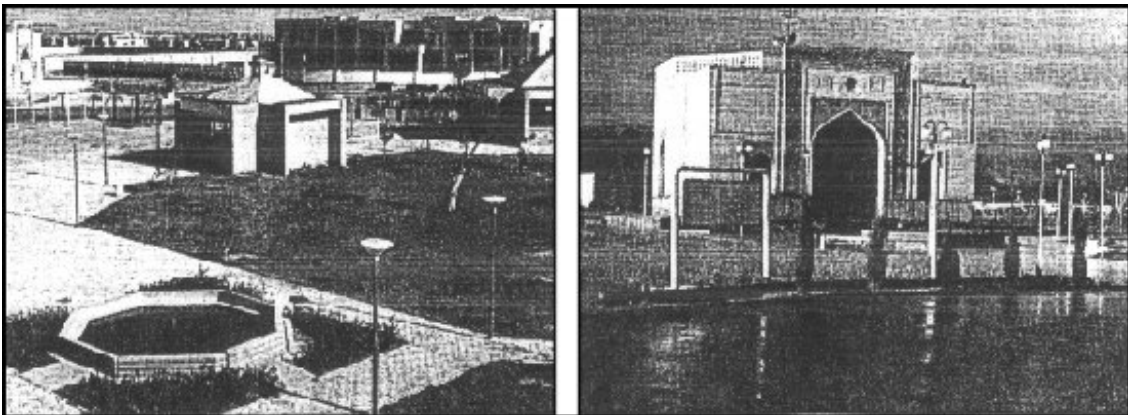
Since the beginning of the new planning activities in this region, this is the first town where traditional design methods have been partly considered. The construction method is simple and local building material is used in construction of housing units and the facade work of public buildings. The housing units are mainly one to two story houses with courtyard. Although this town has just begun to take shape, its planners believe that it will be a modern residential environment using traditional urban design elements. (35)



**Figure 118: Majlesy new town in general view.**



**Figure 119: The Islamic University of Majlesy.**



**Figure 120: Modern and traditional building design methods in contrast.**  
Source: 'Hamshahry newspaper', Oct. 1995.

## **- Baharestan New Town**

Baharestan new town is one of three new settlements (Baharestan, Majlesy and Poolad Shahr) the establishment of which were approved in framework of the comprehensive plan of Isfahan region in 1986. The new town of Baharestan is situated 15 Kilometres south west of Isfahan city on the main axis of Isfahan-Shiraz. The favourable location of the urban area, and beautiful natural environment of Baharestan and proximity to Isfahan city made this town to develop quicker than other similar cities and new towns in the area. On the basis of the forecast, for a period of 22 years between 1994 and 2016, more than 350 thousand inhabitants will be accommodated in 62 thousand dwellings. (36)

Previously this area was chosen as housing project of members of the army. But very few members of the army were interested to live in this location, out of Isfahan city, without urban infrastructure and services. In 1986 the same location suggested for a new town. The general plan of Baharestan new town was approved in October 1993, and its construction programme began the same year. The occupation of this new town began in 1994. In spite of existing shortages in urban infrastructure and scarcity of water, this new town turned out to be one of the successful planning projects in recent years in Iran. (37)

The main objectives for the foundation of Baharestan new town were as follows:

- Attractions for the spill over population of the Isfahan region to an area separate from Isfahan city and in an appropriate distance from the centres of industries.

- Development of a city of secondary size in the region and attraction of parts of productive activities exclusively centred in Isfahan.

- Transferring the ever-increasing population of the region to barren and unused land, particularly the land situated south of Isfahan, and leaving the surrounding agricultural lands untouched.

- Attraction of the population of Isfahan to an area completely detached from Isfahan so that the historical structure and elegance of this historic city is kept intact.

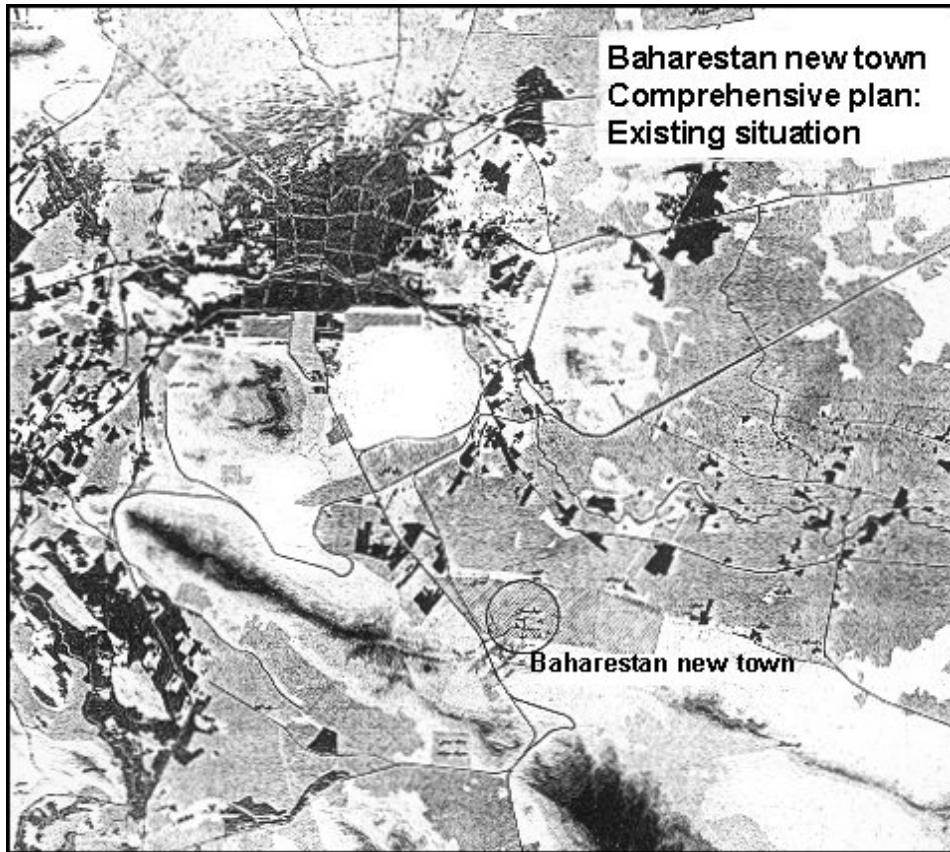
- Using private investment (besides government investment) for the development of the city. The private investment will be accepted either from future residents or from other private sources.

-Development of services and cultural centres in order to become independent from Isfahan.

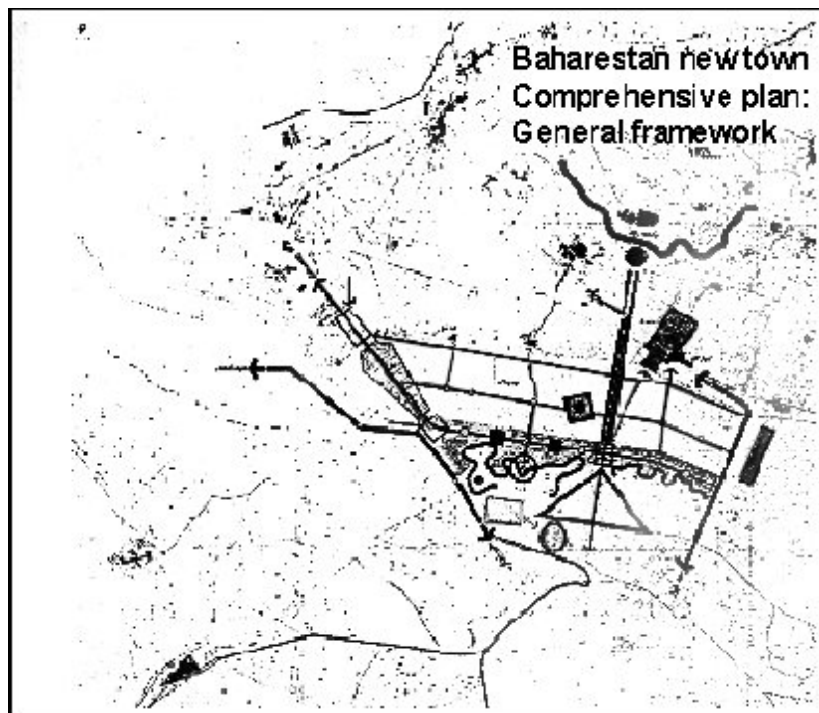
All necessary infrastructure and urban services, even the metro system were planned for this new town in the hope to reduce the pressure on Isfahan city. The population will come from different social groups. The houses are designed in the form of bungalows and apartments. The land for these houses is shared between different organisations whose members are working in Isfahan city. The main aim is to provide opportunities for low-income groups to have access to a suitable residential unit on the one hand, and to attract residents of Isfahan city to this newly developing area.

In the first phase of the development plan, Baharestan new town has been able to house 100 thousand people in 8700 one-storey independent units, and 3600 apartments. In October 1995, 18800 dwellings were occupied, and 8700 single Houses and 3600 apartments' units were under construction. Obviously, existing and future infrastructure will increase the population of the city to 500 thousand and more. (38)

The planned area of the town is 22 hm<sup>2</sup>, but based on its future physical development, the area could expand to 3000 hectares by the year 2015. Meanwhile to control future planning programmes around this town, an area of 12000 hectares as control boundary has been considered. Besides a comprehensive development plan for Baharestan, studies on the possibility of attracting and developing heavy and light industries to this area have been completed. Considering development potentials, this new town will be one of main active cities of the region and its anticipated economic development will help to make it a self-sufficient and independent city. (39)

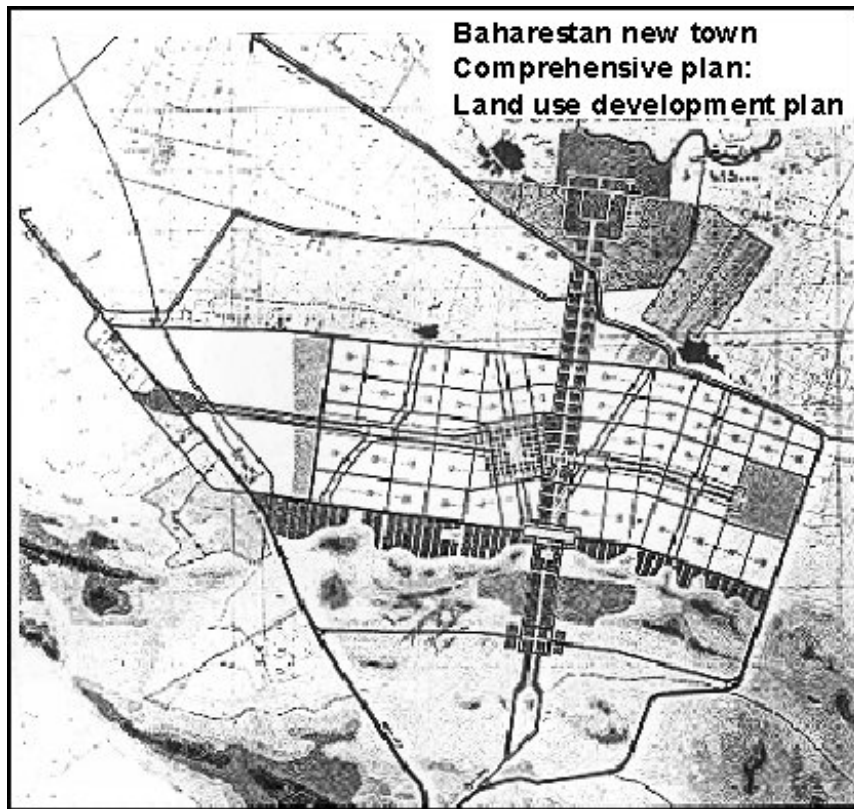


**Figure 121: Location of Baharestan new town in south west of Isfahan city.**



**Figure 122: General structure of Baharestan new town.**  
**Source: Report on Baharestan new town, Ministry of Housing and Urban Development**





**Figure 123: Comprehensive plan of Baharestan new town**



**Figure 124: Example of apartment houses in Baharestan new town.**  
**Source: Report on Baharestan new town**

#### ***4.7.4 New Towns in the Tabriz Region***

The historic city of Tabriz, the third largest city after Tehran, is the centre of the east Azarbaijan province, in the north east of the country. This city is one of large historic cities of the country, which because of its fast growing urban population, has come under consideration for the development of new towns. Sahand was one of the first new towns in this part of the country following an approval of the new policy of the government in 1983.

##### **- Sahand New Town**

The new town of Sahand is located 20 kilometres southwest of Tabriz city. Basic geological and climatic studies, and provision of plans and aerial photos were started in the winter of 1987 by consulting companies. The predicted population of the city for the year 2001 and 2006 is 70 thousand and 200 thousand, and in the last step 500 thousand persons.

The main criteria in choosing the location of this new town were:

- Existence of job possibilities in the area
- Existence of non-agricultural land
- Suitable access to Tabriz city
- Possibility of land control.

The new town will be able to accept the spill over population of Tabriz city. Development projects of the town consisted of residential areas, public utilities, development of an industrial region and the development of an industrial university and a research centre. (40)

Topography, climate and environmental factors of the area have important role in shaping the physical structure of the town. Existing beautiful landscape in the northwest and south east of the town provides a desirable environmental design. Planning and provision of the necessary technical infrastructure such as water supply, sewage, power supply, gas-supply, telecommunications, transportation, (water supply and sewerage system), water treatment, surveying and soil mechanics as well as public services e.g. educational, commercial, cultural, sports facilities and green areas will help the new town to be less dependent on Tabriz city. Housing units are planned in form of single units, two storey dwellings and apartments. Apartments are mainly designed in form of small low-cost units. On the basis of the report of the Sahand new town Development Company, in the first and second construction phases special single storey units were allocated to privileged social groups such as doctors,

engineers and university professors which contributed to a social mix in this town. Just now, various development projects are under construction. In the housing projects different private and public investors such as housing co-operatives and mass producers are the main investors. One of the privileges of this town is the Industrial University and the research centre, which will attract the young generation and increase job possibilities in the town.

### **- Industrial region**

Another development project is the industrial region, called 'Akhola', located at 24 kilometres south west of Tabriz city, a short distance from Sahand new town. The industrial attraction of Tabriz city, the existence of numerous industrial plants in the area, the availability of regional transportation routes, will support the industrial area of Sahand city, responding to the industrial and employment requirements of Tabriz city as well.

The prepared site for industrial activities is approximately 344 hectares and is divided between 34 factories. . Although the different elevations between the town and the industrial site will protect the town from air pollution, the green area projects will cover the main entry, and the southwest areas of the town in the form a green belt between the town and industrial area. (41)

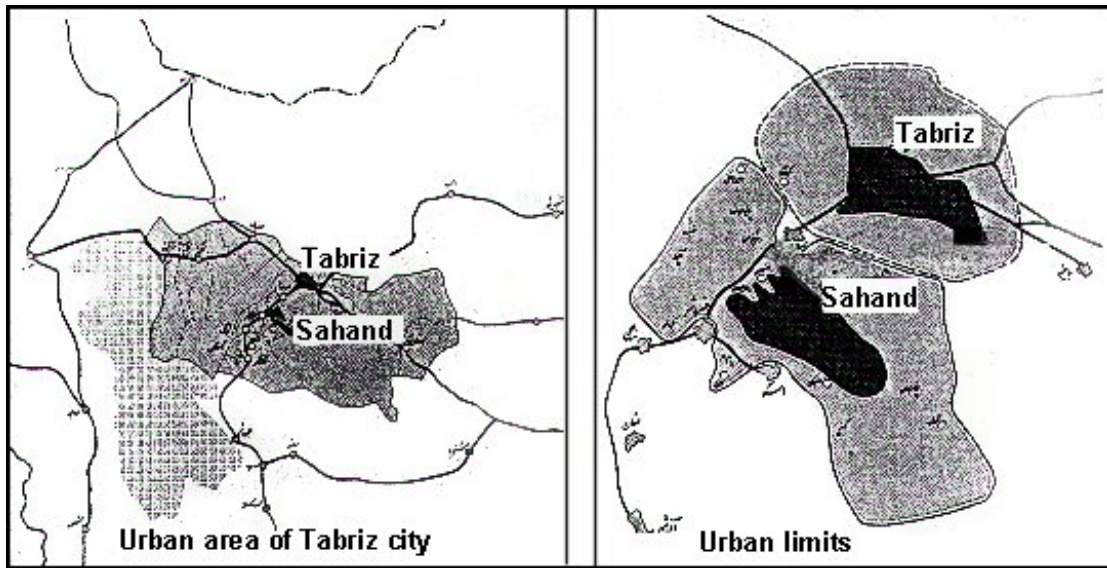


Figure 125: Location of Sahand new town about Tabriz city.

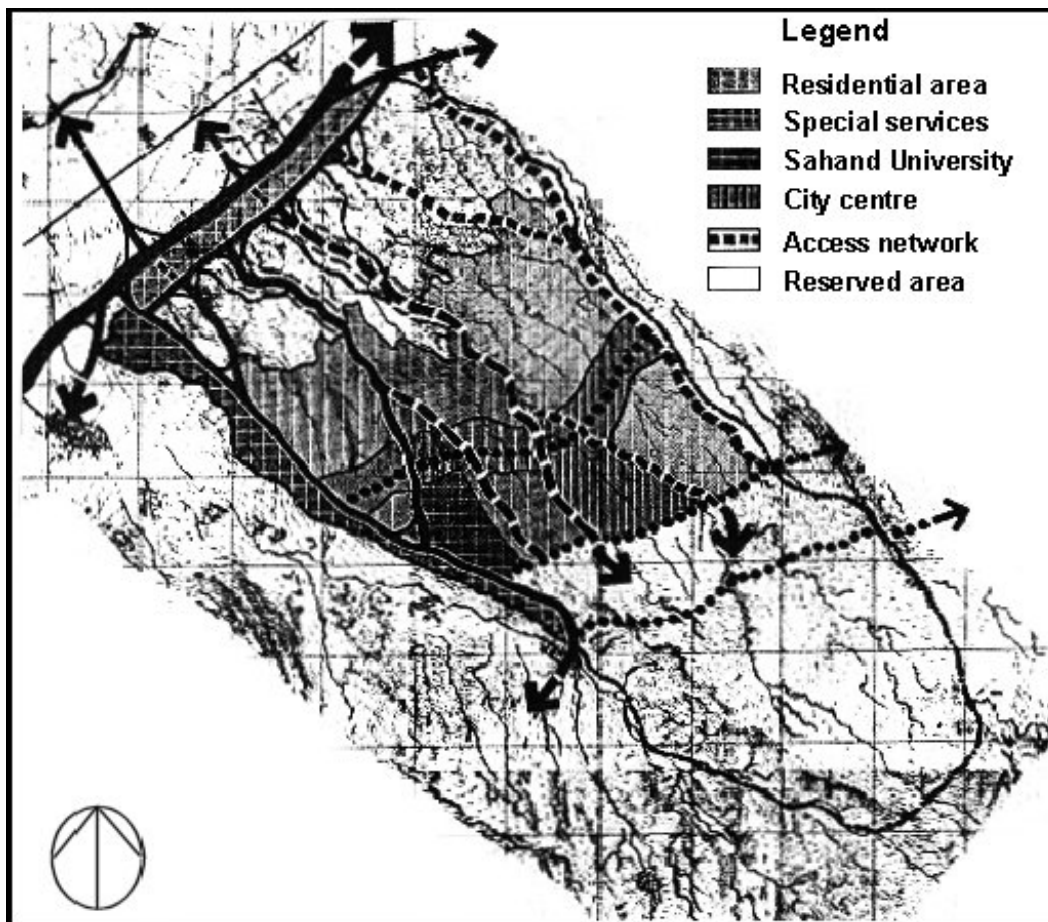


Figure 126: Development possibilities of Sahand new town

Source: Report on Sahand new town, Ministry of Housing and Urban Development

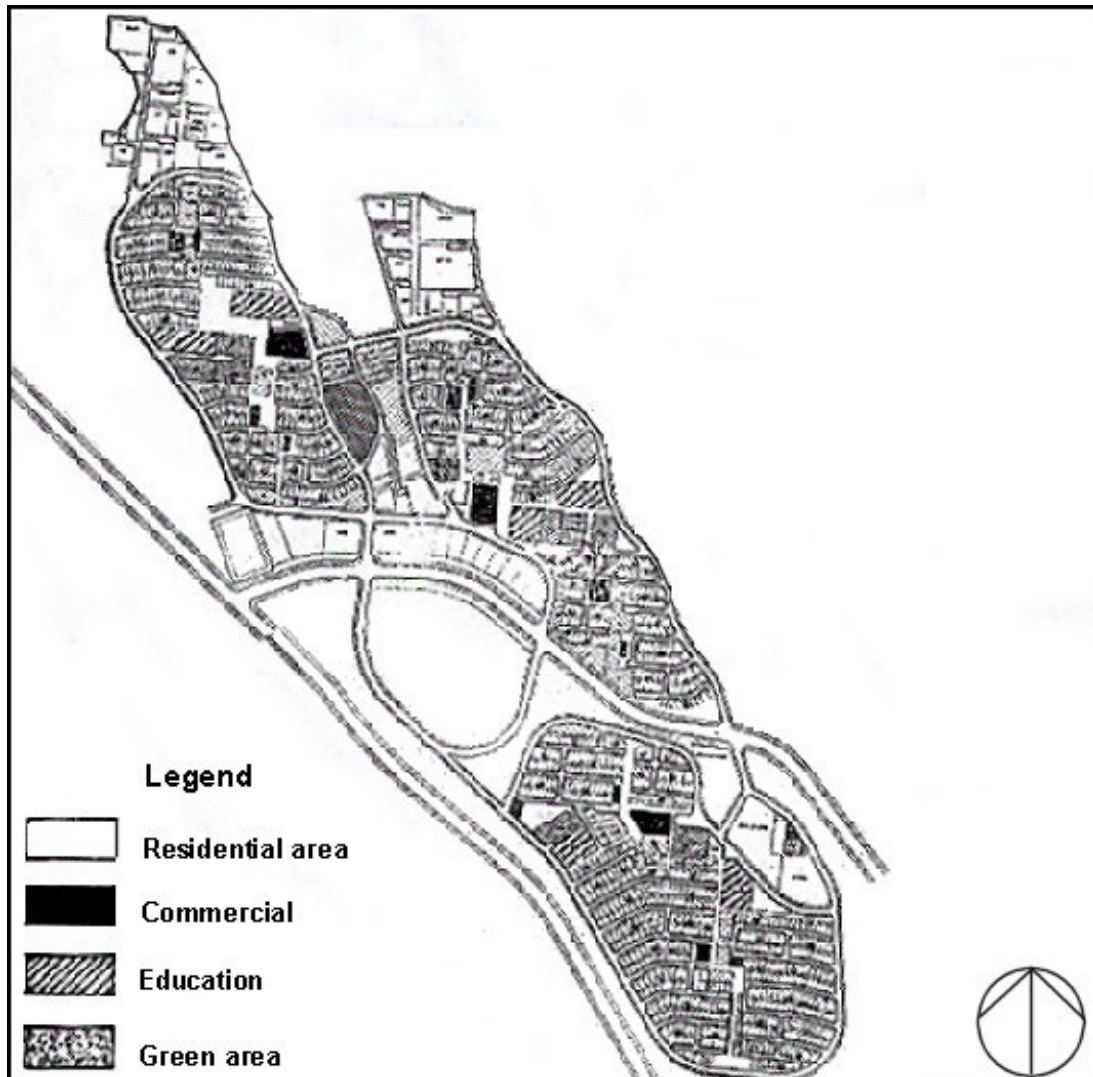


Figure 127: Land-use plan of Sahand new town

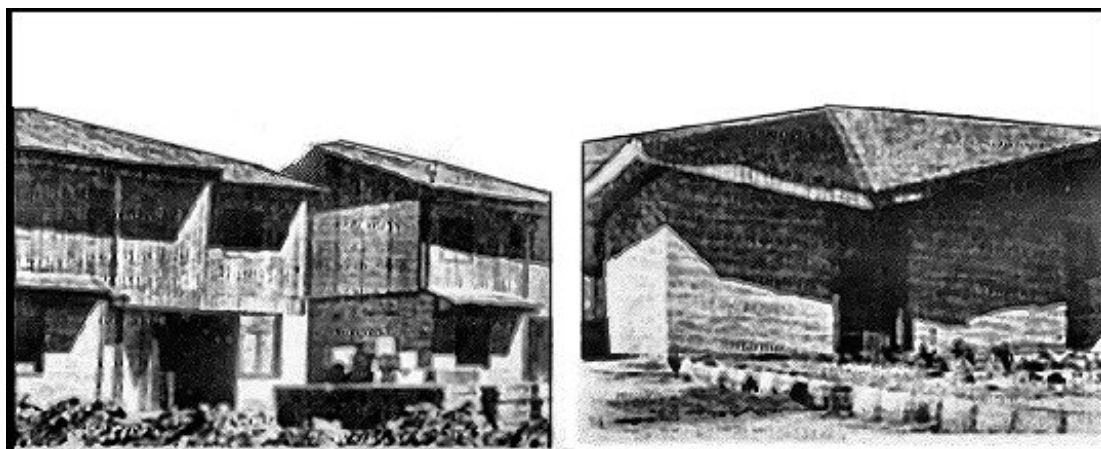
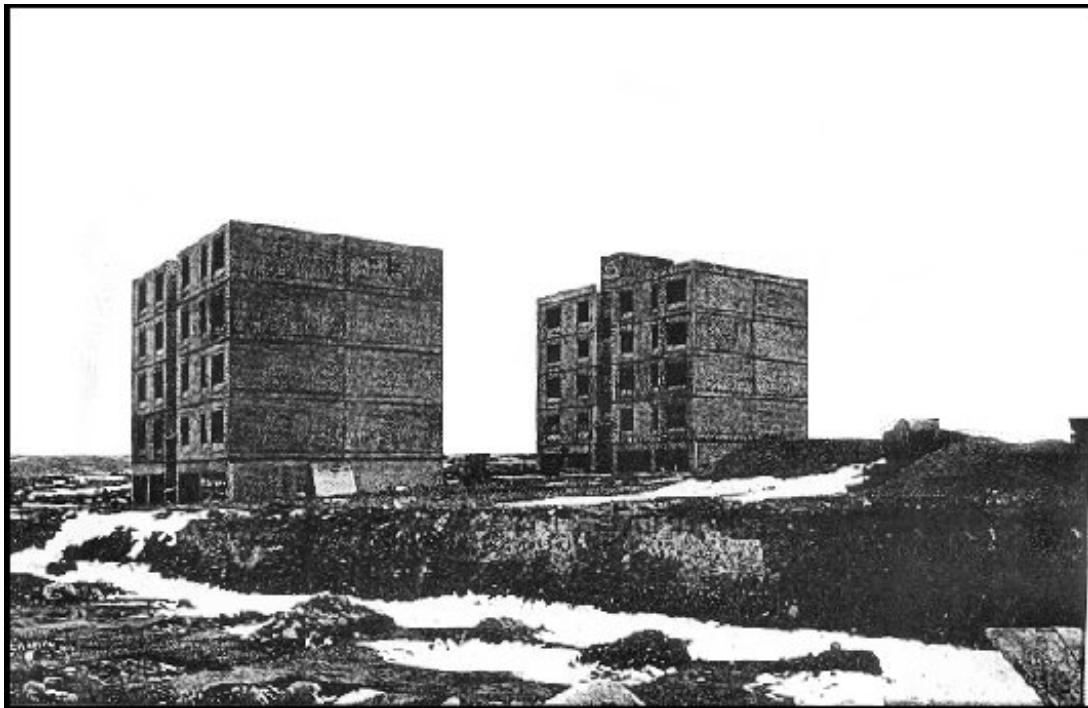


Figure 128: Single and two storey Houses.  
Source: Report on Sahand new town



**Figure 129: Housing units under construction**



**Figure 130: Example of low-cost apartments**  
**Source: Report on Sahand new town**

#### ***4.7.5 The New Towns of Bandar-Abbas Region***

Bandar Abbas is the central city of the Hormozgan province in the south of Iran. This city is one of the main ports of Persian Gulf. Specific physical constraints limit the population of Bandar Abbas to about 500 thousand. Considering the unique and strategic location of this city, and the existence of many industrial and economic enterprises, it is estimated that housing facilities for a further one million people will be required in the urban region of Bandar Abbas.

In about 20 years time in order to fulfil the future housing needs, the necessity for a new town within the urban region of Bandar Abbas became evident. Before site allocation studies were undertaken, the approval of the 'High Council for Urban Development' was obtained for Alavi New Town in the proposed location and with a population of 300 thousand within a period of 20 years. (42)

##### **- Alavi New Town**

Alavi new town is located 20 km north west of Bandar Abbas in an area of 8 thousand hectares. In the east, the area is connected to the Kal river, and in the south, the existing mountains separate it from the industrial area, and protect it from pollution. Natural attractions and existing gardens surround the area as a green belt and provide a desirable living environment in and around the site. To prevent connected development in the area, Alavi new town will physically develop towards the north where enough land for future expansion is available. Alavi new town has an important role in the future development of the whole area. The location of this new town has been considered as a part of the urban and regional comprehensive development planning.

The main aims in choosing the location of Alavi new town are:

- Response to the fast development in the region.
- Redistribution of over-population of Bandar Abbas.
- Preventing scattered development of new settlements.
- Preserving agricultural land and natural environment.
- Development of a medium sized settlement within the hierarchical urban system of the country.
- Need for an organisational set-up system, between small urban settlements, and the rural areas around the mother city of Bandar Abbas.

Specific objectives in location of Alavi new town:

- Suitable distance, 30 to 60 minutes to mother city of Bandar Abbas

- Ten to fifteen kilometres distances from industrial areas and employment centres.
- Taking advantage of existing routes to industrial areas.
- Advantage of access to main railway links, and other cities.
- Development potential of the area and existence of building material.
- Fertility of land to grow vegetables and plants locally.
- Strategic defence possibilities.
- Better local climates compared to Bandar Abbas.

It is forecasted that this town because of its location, will be able to house employees from Bandar Abbas city. It can also take the role of an internal market between the free port of Ghesm (in the Persian Gulf, south of Bandar Abbas), and the inner parts of the country. Considering the limited development capacity of Bandar Abbas, the new town of Alavi will be able to become the second largest city of Hormozgan province in 20 years. (43)

The character of the local architecture of the region was considered by architects and planners of this new town. Housing units were designed in the form of single houses or small groups of apartments. Although the attention of designers has concentrated on the transport system of the town, the attention to local architecture and the importance of cultural and social aspects of community life is noticeable in the design of simple buildings and housing areas.

Housing areas are subdivided into small groups with green areas in between. The transport system serves each housing group, but the community life is separated from it. The internal design of each housing unit is based on cultural needs and climatic condition. (44)



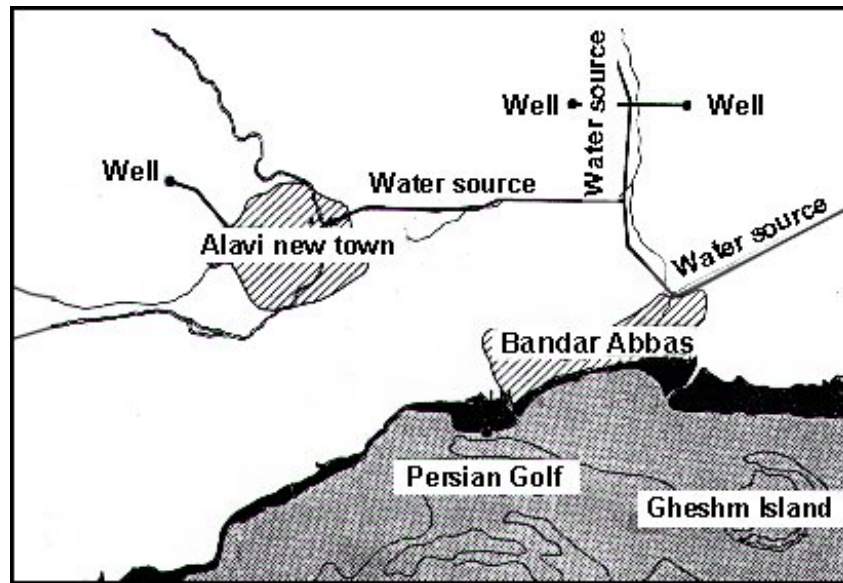


Figure 131: Location of Alavi new town in the northwest of Bandar Abbas area.

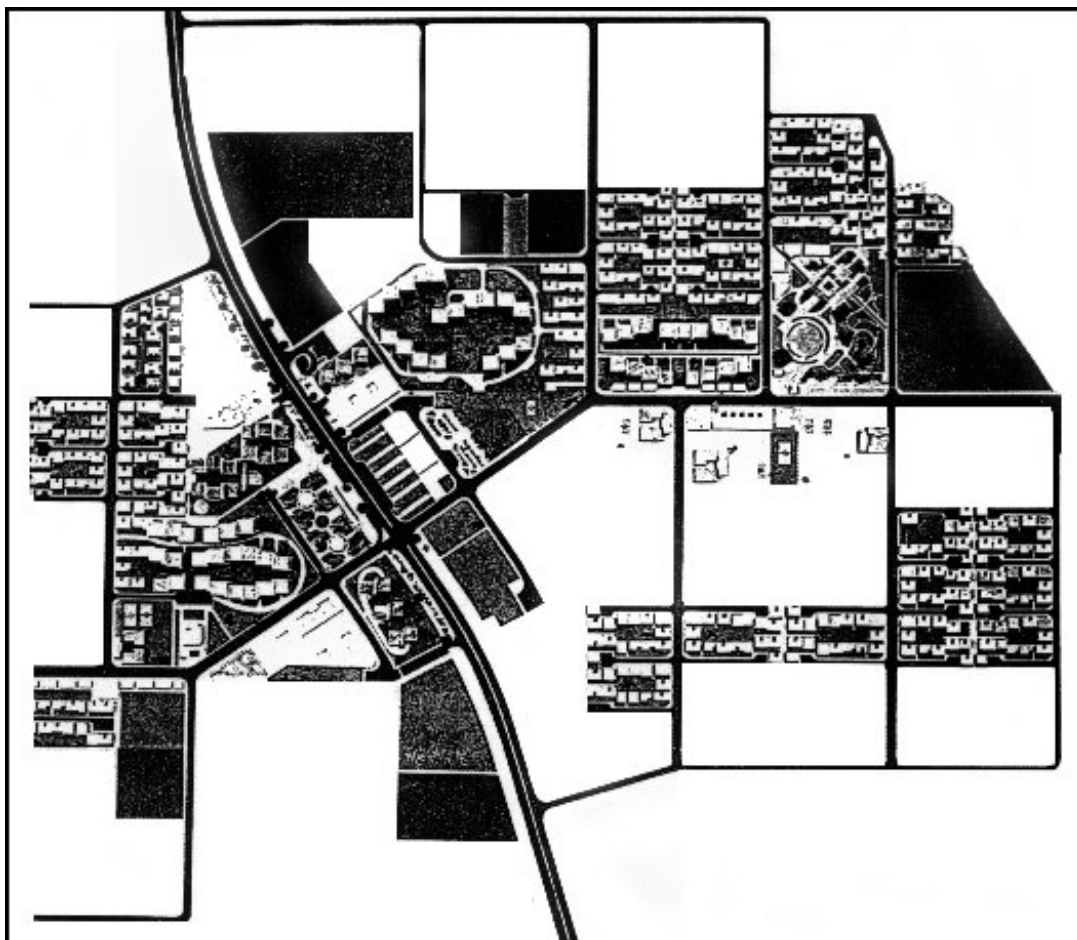
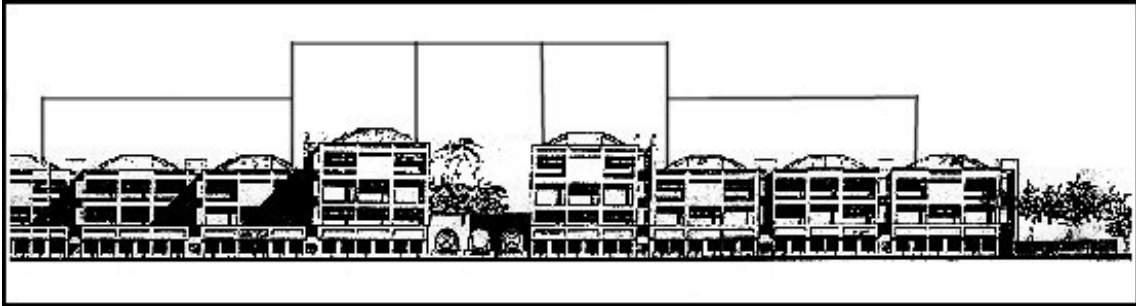
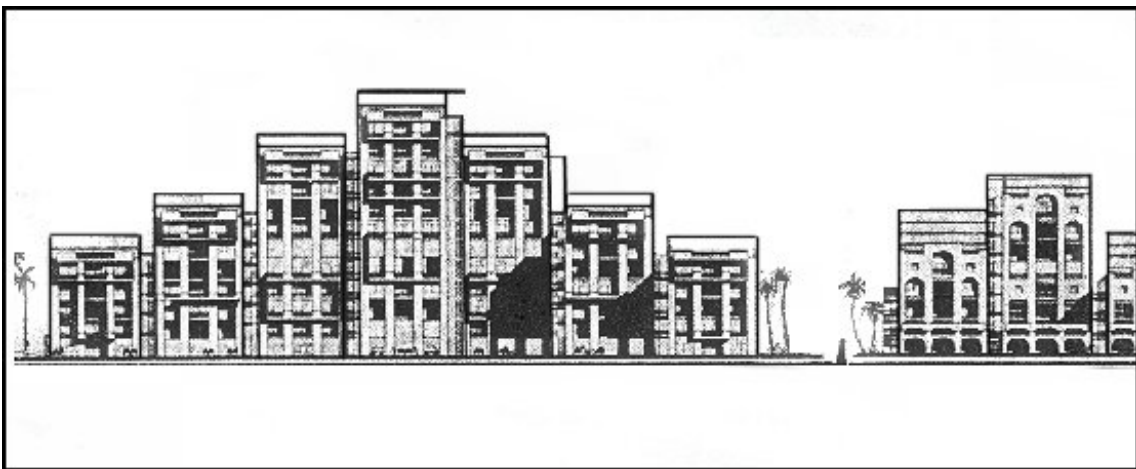


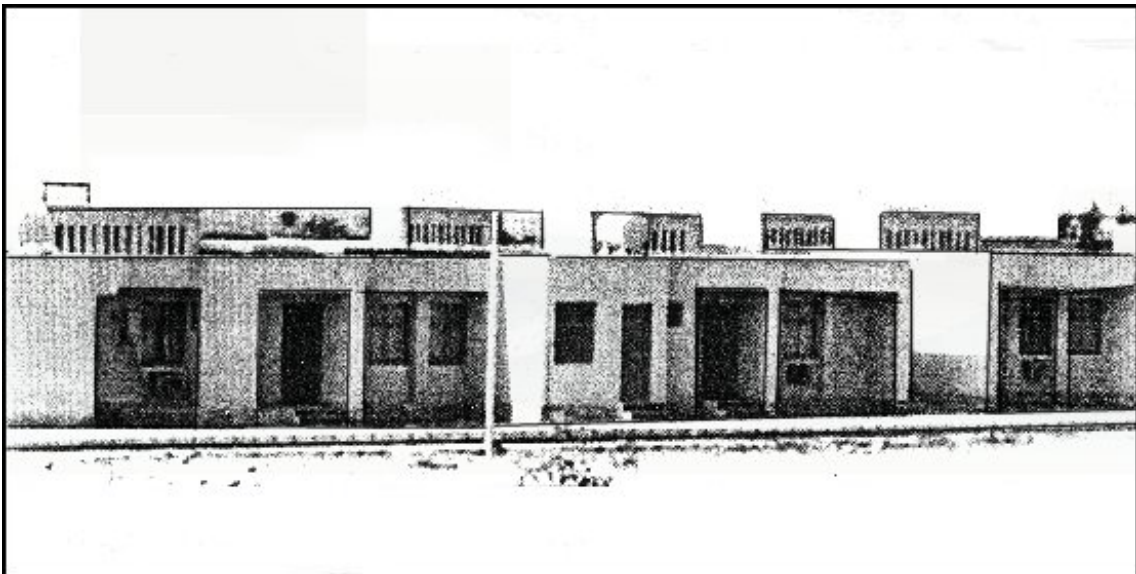
Figure 132: Design and land preparation for the first community.  
Source: Report on Alavi new town.



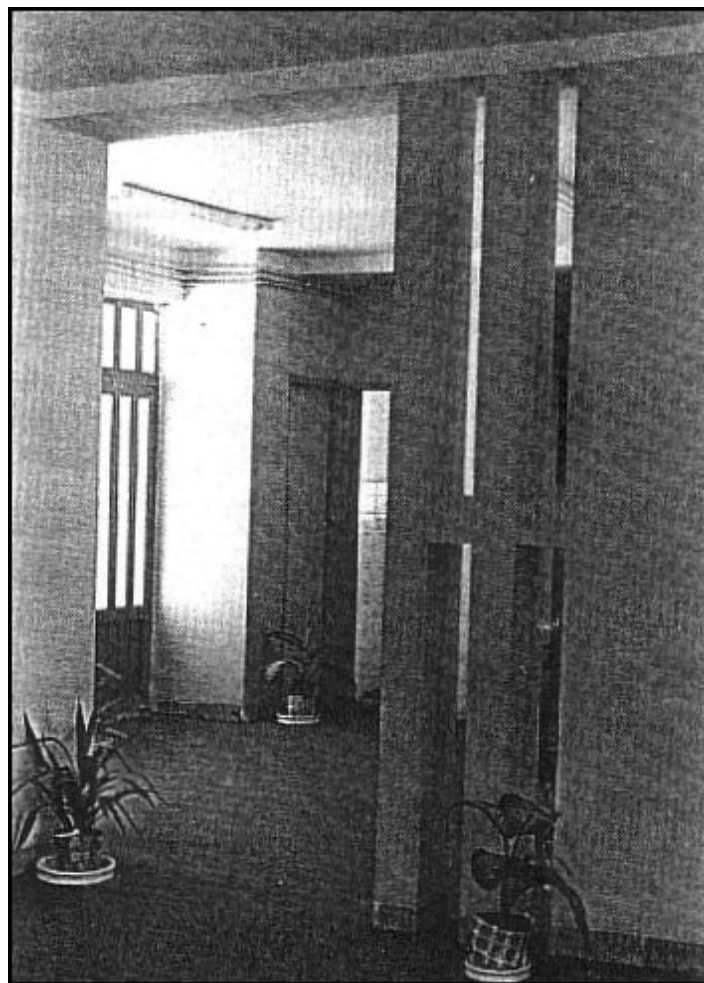
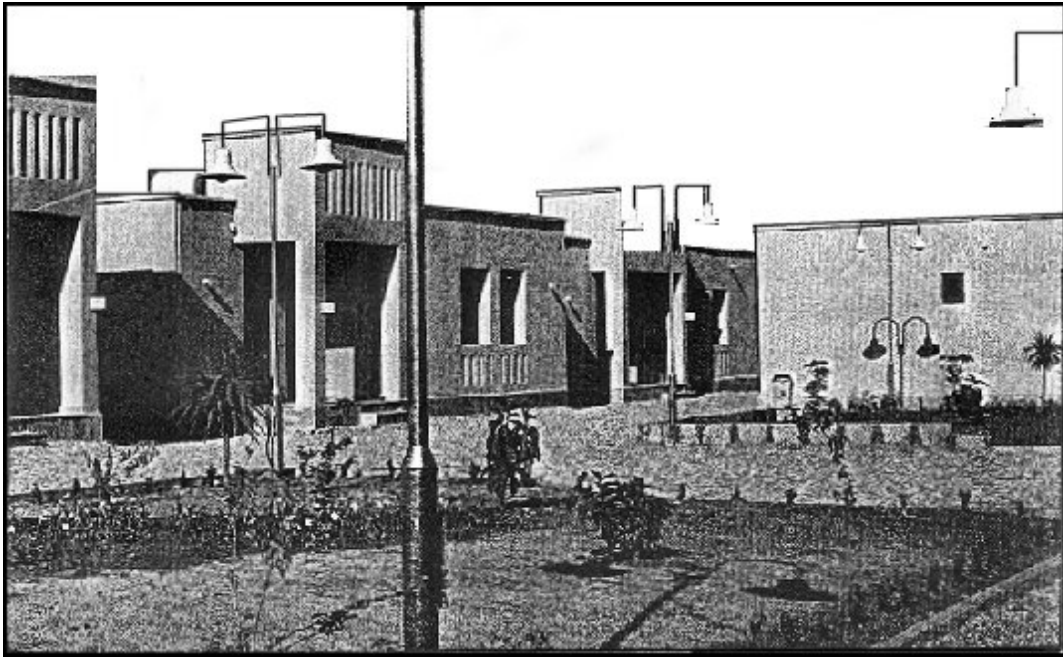
**Figure 133: View of urban spaces and facades of commercial buildings.**



**Figure 134: High-rise residential buildings in the urban skyline.**



**Figure 135: Some of the residential clusters in the first community.**  
**Source: Report on Alavi new town.**



**Figure 136: Design of interior and exterior spaces in residential clusters are compatible with indigenous architecture.**  
**Source: Report on Alavi new town.**

#### **4.7.6 *Khozestan Province***

##### **- Shushtar New Town**

The project of Shushtar new town in the Khozestan province in the south west of Iran (Figure 1, page 5) is one of the rare examples of attention to indigenous urban planning and architectural design principles. This project tried to make the new physical development compatible with traditional urban fabric. At first view the plan seems to be nothings special like many other modern new towns, but many details indicate harmony in form, building material and space between the new town and the old city.

To develop agricultural resources, the central government of the last Shah of Iran constructed the Dez Dam in northern Khozestan province during the 1970's. With land reclaimed from the river basin, a major sugar cane production and refining industry was undertaken. Jobs created by the new industry were expected to attract a suitable work force. To provide housing and community facilities for the workers and their families, coming mostly from rural settlements in the region, the government commissioned the architecture and planning firm of 'Kamran Diba and the' Partners, an Iranian consultant group, to design and carry out a Master Plan for a town intended to accommodate 30,000 workers and their families. (45)

Shushtar new town is located across the river from the existing old town of Shushtar, and is connected by a bridge. The urban design has been highly influenced by the rich topography and existing character of the site. The old city of Shushtar and two neighbouring cities, Shush and Dezful, are densely built-up, irregularly formed settlements that are known for their ornamental brickwork. Materials such as brick, traditional patio house types, and neighbourhood configurations similar to those of old Shushtar were therefore adapted to the satellite new town.

Of particular interest in the Shushtar project was the comprehensive nature of the planning and design of a company town for newly urbanised proletariat in a traditional Moslem culture. The aim was to project an urban fabric that included residential, commercial and socio-cultural facilities, in such a way that the rural population coming to live in Shushtar would not be shocked. The new town is sympathetic to cultural values of Iranian society and maintains a traditional continuity. Its outstanding characteristic is a tightly knit fabric physically reminiscent of Islamic vernacular architecture that encourages a high degree of social interaction.

The design of the town began in 1975. Its execution took place in 1976-78, and the first occupancy was in 1979-80. The complex constructed as phase 1, before the Iranian revolution, was composed around a central spine, an east-west pedestrian boulevard with gardens, paved squares, arcades, fountains and shops. One major street feature is the pedestrian and social 'spine'. All activities and all roads eventually lead to that space, and neighbourhoods are designed to encourage the people to move in the direction of the main spine. Schools and bazaars are also situated along the main spine.

The streets and spaces respond to the climatic conditions, with narrow streets and small courtyards to preserve the coolness of the night during the hot humid daytime. The contrast between the narrow treeless neighbourhood streets and the verdant spine is a striking image. It is also a highly practical design, because the maintenance of growing trees and landscaping of private streets would have been too costly and luxurious for Shushtar. Thus, the planting of trees in private neighbourhood streets was avoided, but private gardens were situated so that their vegetation could create shade and lend a bit of greenery to the streets and provide a microclimate in private spaces.

With due respect to their function as corridors, streets were designed to generate a life of their own. In older cities, streets often serve as a kind of playground or meeting place. In emulation of this in this new town a number of dead-end streets were created which preserve privacy and identity. This design method is able to segregate automobile from community life as much as possible, as all parking places are concentrated in strategic areas.

Although the street network reflects a rectangular pattern of rational installation for urban infrastructure, planned irregularities occur, such as differences in street levels (with the help of the topography of the site), setbacks of facades, and use of semi-public corridors in buildings to break up the monotony of repeated units.

In the design of housing units, concentration has been on houses rather than apartments. 80 percent of the dwellings are one or two-story houses, and all units are provided with a familiar courtyard and a garden that is designed as a roofless outdoor room. Each housing unit is organised along narrow lanes on either side of the main axis in a continuation of the way of life of this arid and hot region. The focal point is a taller structure with four storey walk-up apartments around an enclosed plaza, now used as a market place. Particularly noteworthy is the arrangement of blocks of houses formed by pairs of houses back-to-back. The western notion of a house as an agglomeration of living room, dining room and bedrooms was abandoned at Shushtar. This plan has concentrated on the traditional concept of the room as a flexible unit, and

provides large spaces that are multi- purpose and potentially dividable. The double rows of houses back-to-back houses allow the combination of units into four, five or six-room dwellings as the family's standard of living improve.

The construction method employed in new Shushtar is simple and labour intensive. Brick is used as the main building material, produced locally. Unskilled and skilled local labour forces executed most of the construction work. However masons produced ornamental brickwork patterns on exterior facades wherever possible.

New Shushtar is situated in a region affected by war. When major construction slowed down to half in 1979-80, nearly 650 housing of phase 1 capable of sheltering some 4000 people, were completed and other sectors partially too. The uncertain situation slowed down the development of the agro-industrial complex and many refugees arrived seeking shelter.

In spite of all these problems, a view on the town after being inhabited, gives evidence that new Shushtar lives. Adaptation of the dwellings to the residents' desires is occurred, wall paintings reflecting the times have appeared as they do everywhere, but one senses an acceptance and respect for the quality of the physical environment that has been offered. The new town integrates different income groups, although it was designed primarily for employees of a single firm. The uncomfortable stigma of low-income housing has been avoided in the basic design concept of the provision of open-ended units, able to expand as necessary. In this way, social and architectural growth is secured within the existing fabric.

This example of urban housing is relatively unique. Large-scale new town conceived and produced by local designers and builders as opposed to imported ones, and attempts to respond to indigenous life-styles and contemporary goals of industrial development.

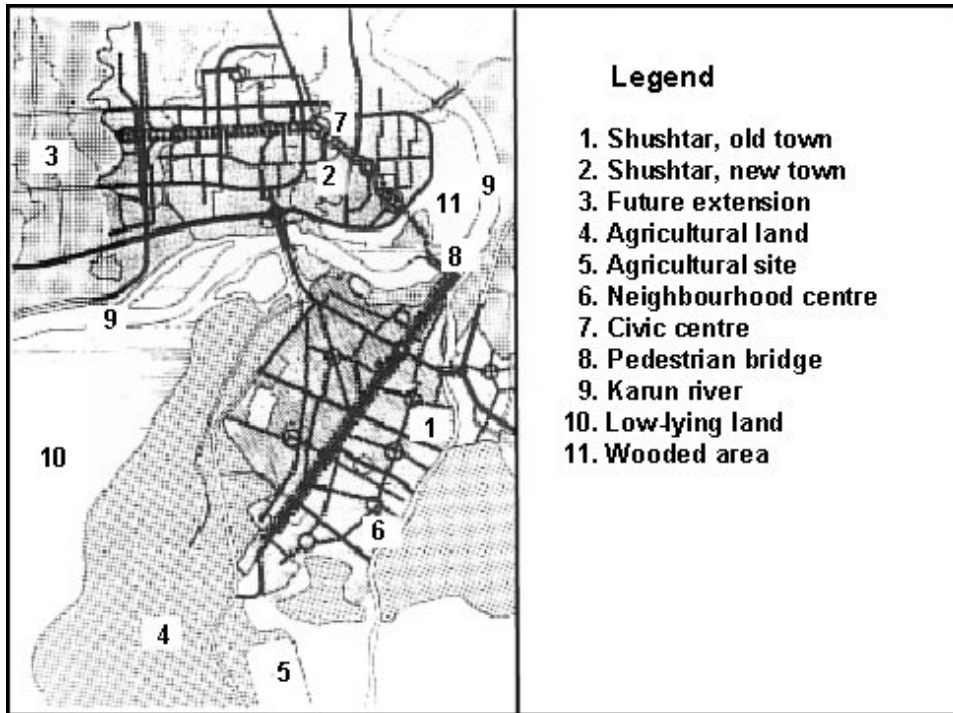


Figure 137: Unified structure plan showing old and new townships and environs.

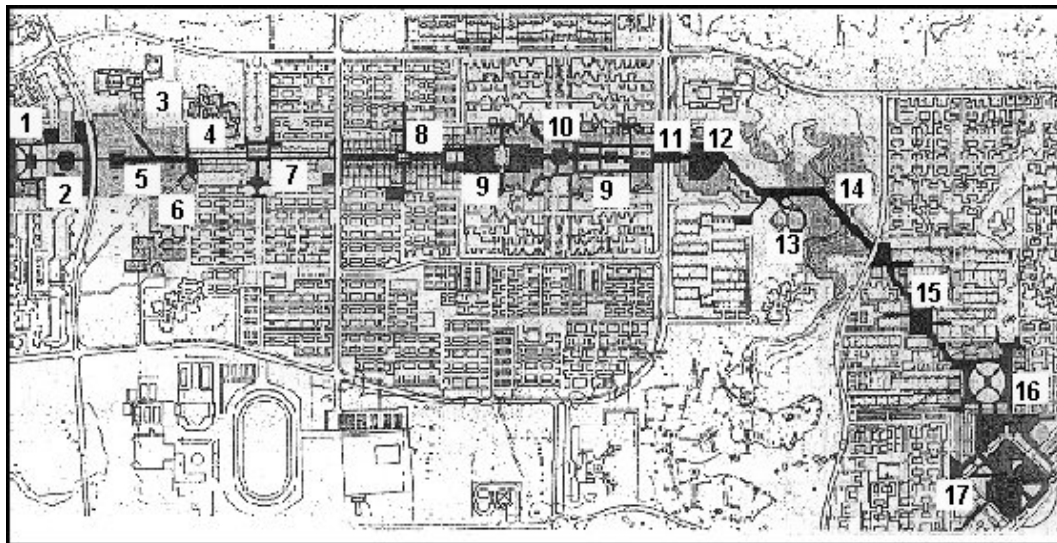


Figure 138: Shushtar, new town plan  
Source: 'Design concepts of Shushtar new town'.

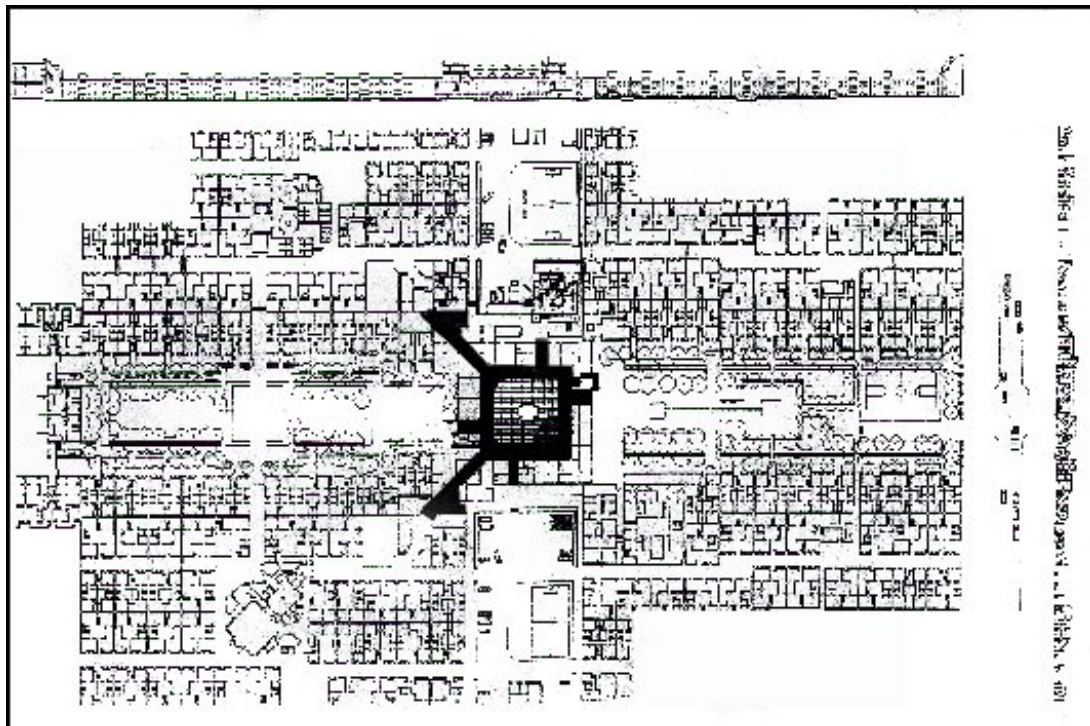


Figure 139: Overall site plan of phase 1 construction, in new Shushtar.

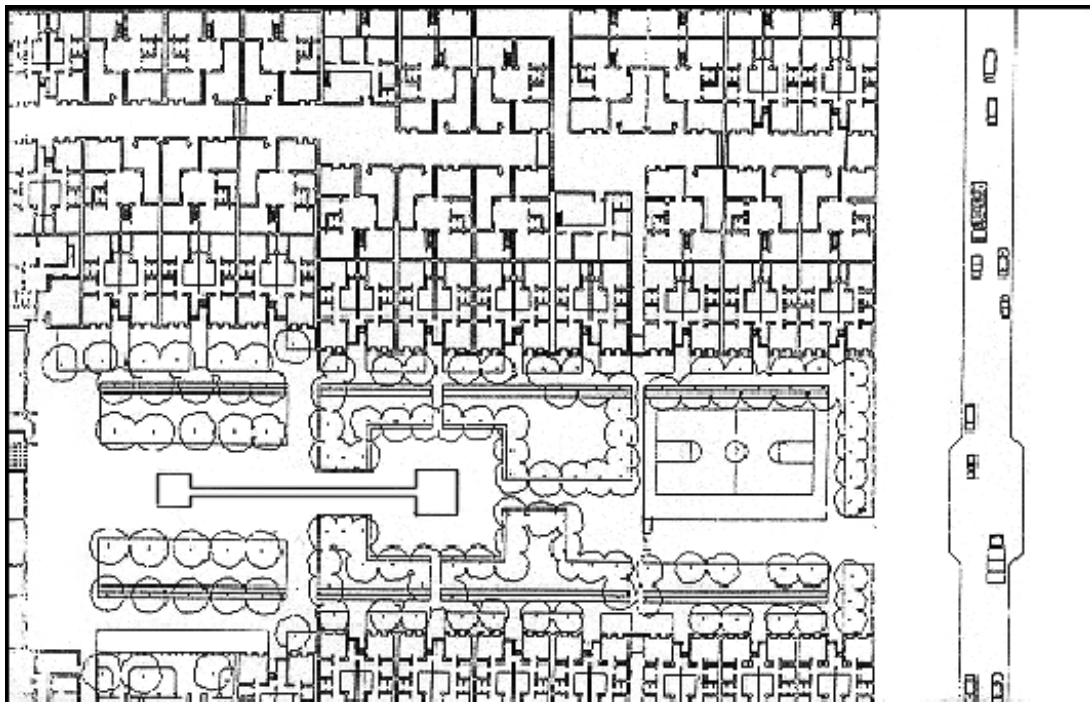


Figure 140: Part of phase 1 in more detail.  
Source: Diba, K., 'Building and projects', Stuttgart 1981.



## **- Design characteristics**

The design criteria of Shushtar new town for the whole town, and for the residential areas could be summarised as follows:

### **A-For the city**

-The structure of the new town is in principle a continuation of the old city. The new town design is based on the main design principles of the traditional city of Shushtar, adapted to modern life and living standards.

-Designing the main square of the town as the connecting point and unifying urban space between old and new Shushtar.

-Effect of topography in the internal design of the town to break up the monotony of repeated units.

-Giving special image and identity to Shushtar new town through using traditional building methods and materials.

-Using the market place with its four storeys tall building as an urban symbol and point of identification.

-Design of the market place as a closed public place, surrounded by high walls to provide sense of security in an open space.

-Using an east-west pedestrian boulevard as the main urban axis, and a replacement of the traditional bazaar. Narrow alleys are designed to connect each housing group to this pedestrian axis.

-Designing secondary access in residential areas in the form of narrow alleys to respond to local architecture and climatic condition in this part of the country.

-The use of indigenous brickwork on external facades of public and private buildings to create harmony and adaptability with the surrounding environment.

-The use of local building materials in paving streets and alleys to help the microclimate and traditional image of the living environment.



Figure 141: Texture of old and new town of Shushtar.

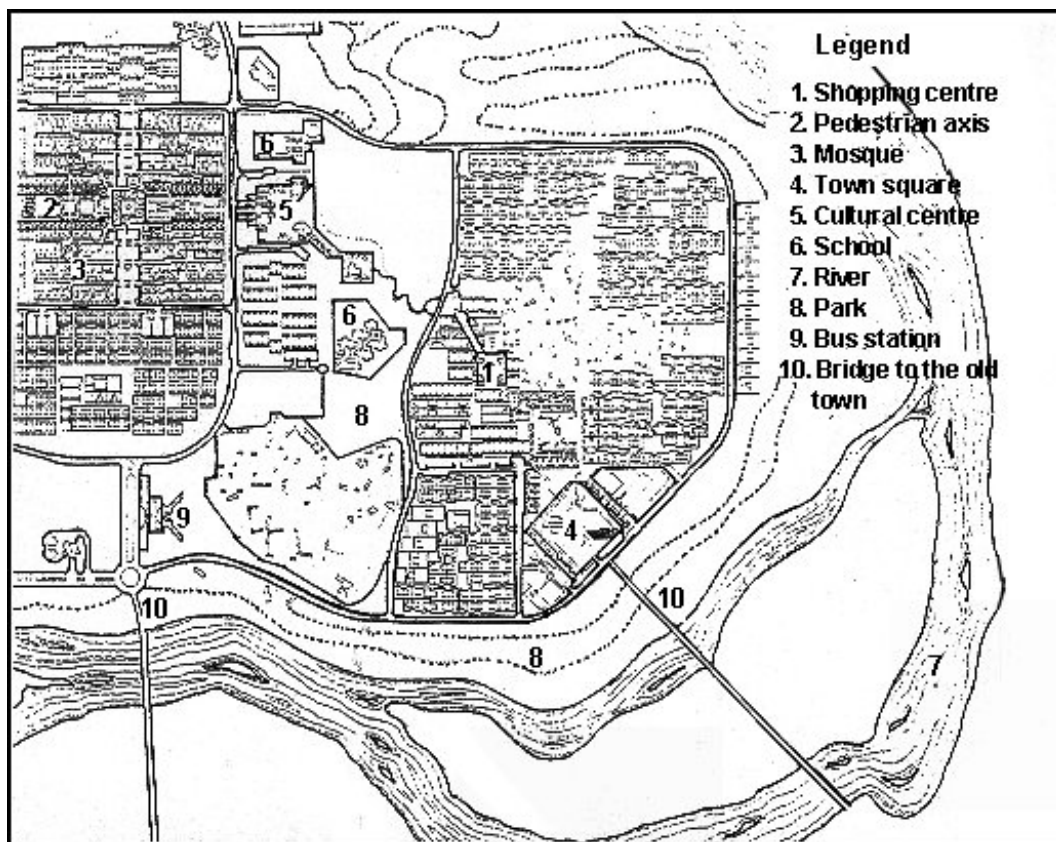
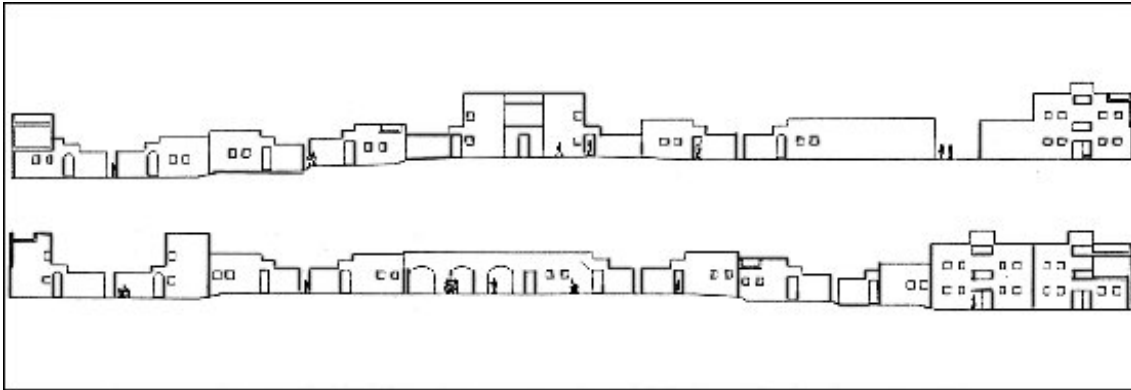
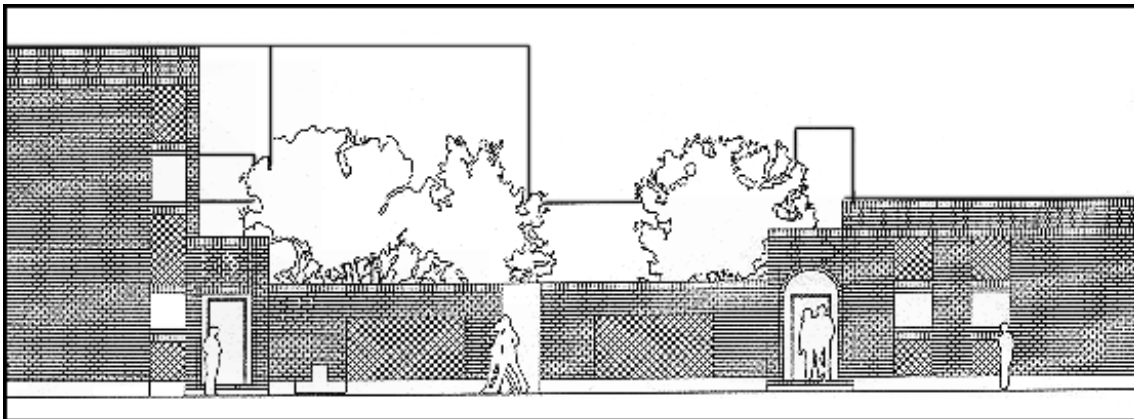


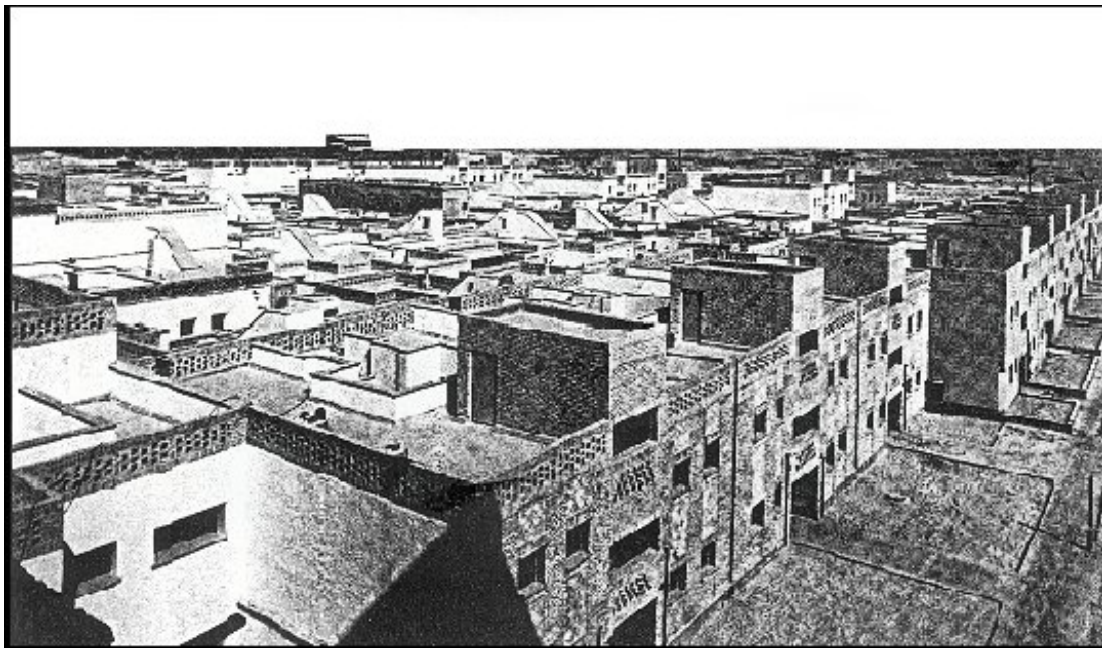
Figure 142: The main square of new town as the connecting point between old and new.  
Source: Buildings and projects.



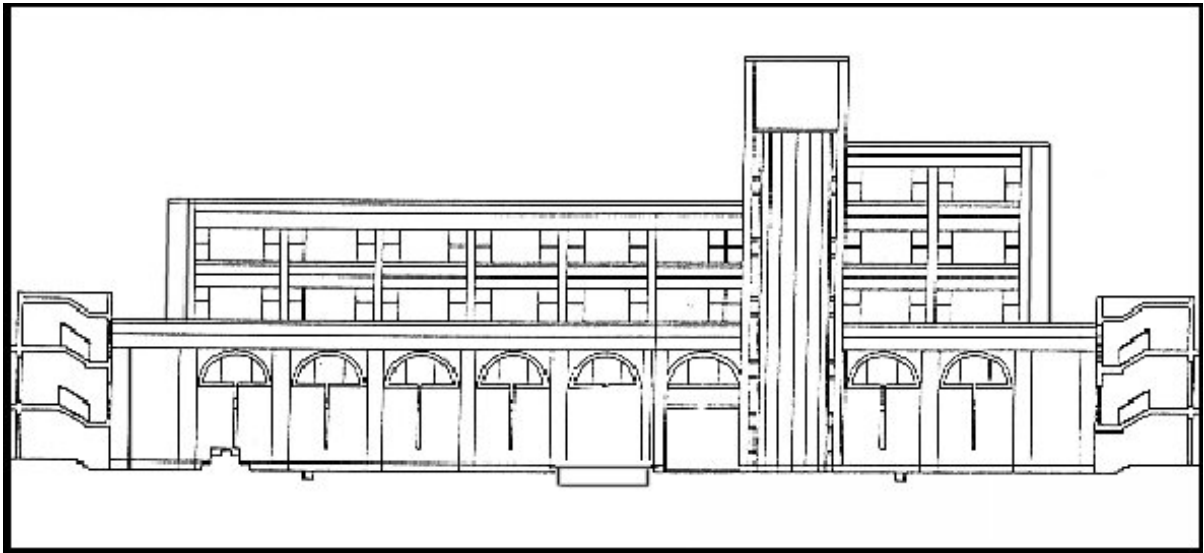
**Internal street elevation**



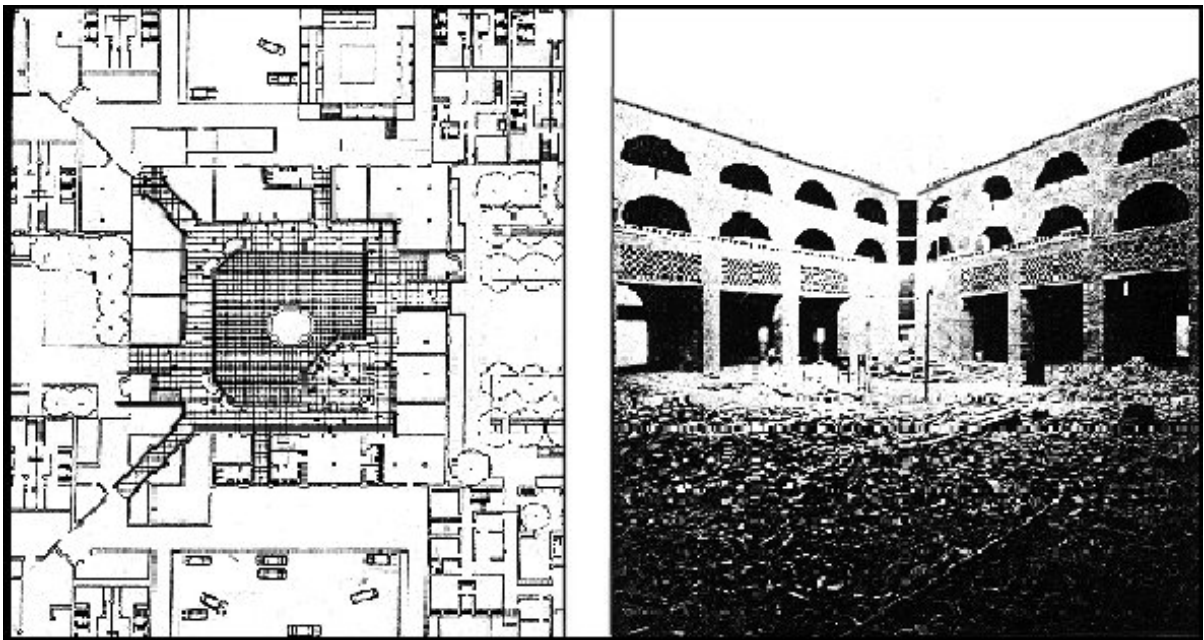
**Figure 143: Differences in street level.**



**Figure 144: Modern new town of Shushtar with traditional images.**  
Source: Buildings and projects.



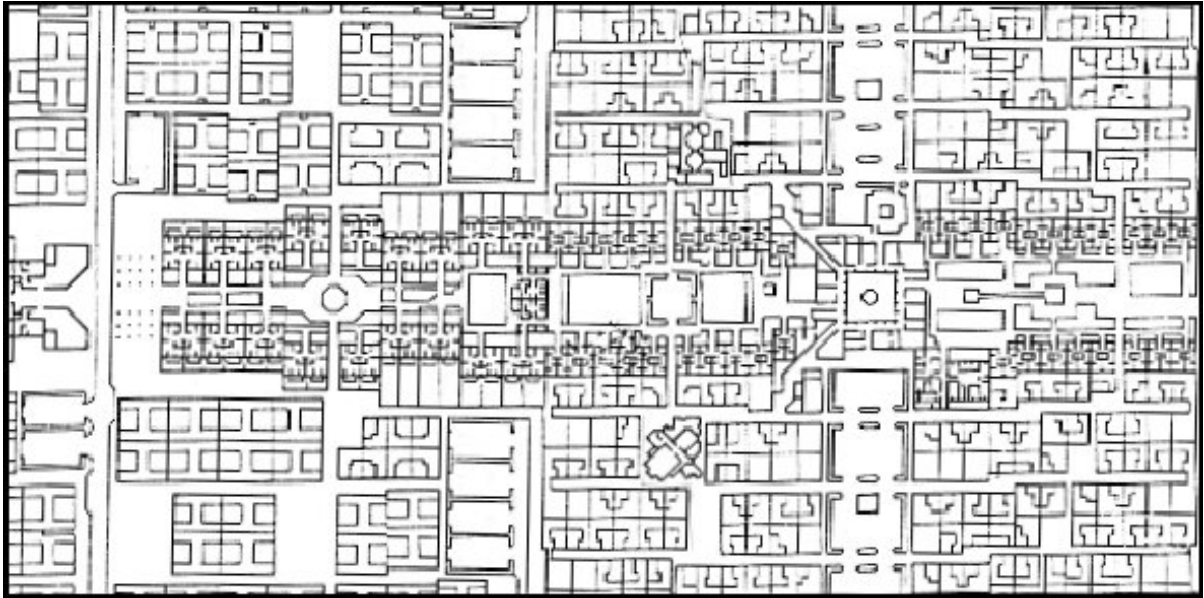
**Figure 145: The plaza of the market place as an urban symbol and point of identification.**



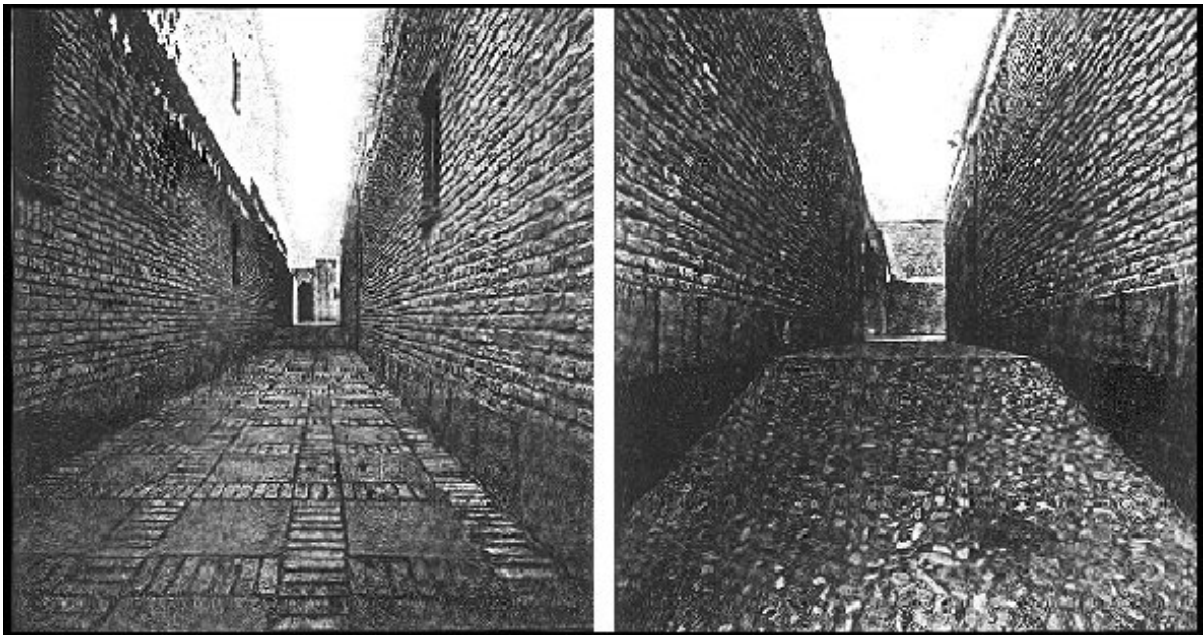
**Layout of market place**

**Market place under construction**

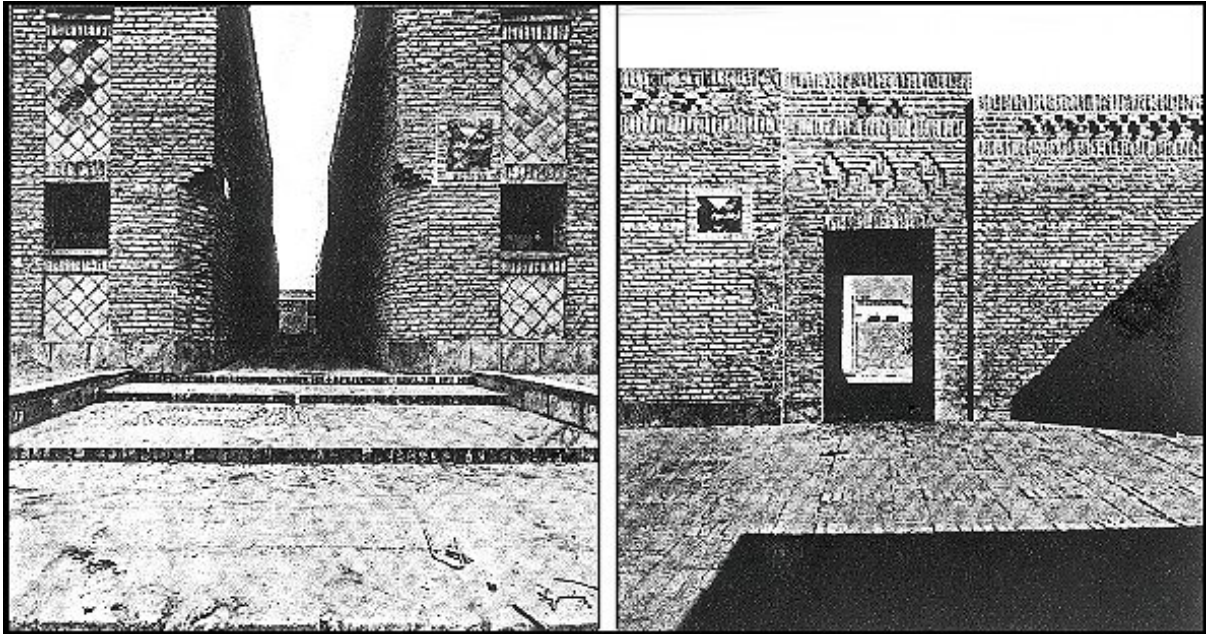
**Figure 146: Market place with its high walls, representative of traditional architecture.  
Source: Buildings and projects.**



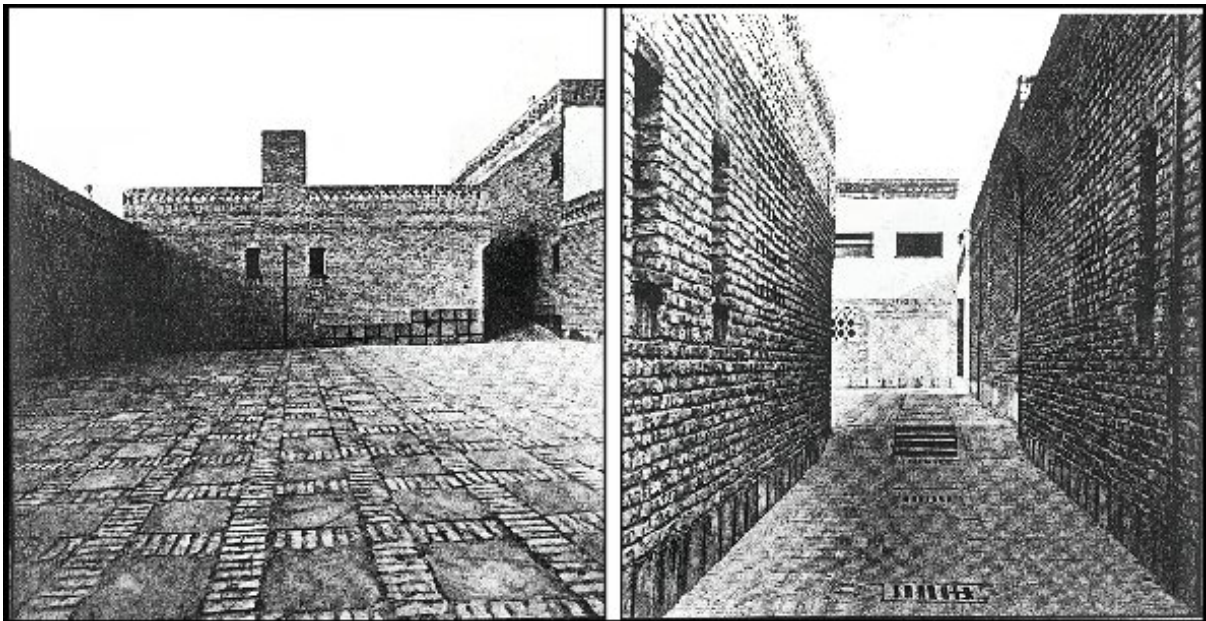
**Figure 147: The pedestrian boulevard as the main urban axis.**



**Figure 148: Narrow alleys with high wall compatible to hot and dry climate of the area.  
Source: Buildings and projects.**



**Figure 149: Quality of indigenous brickwork on exterior walls of buildings.**



**Figure 150: Pavement of access to residential areas with local materials.**  
Source: Buildings and projects.

## **B. For the housing areas**

The design of residential areas exposes the high awareness and respect of architects and planners for cultural aspects and for the way of life of people in this part of Iran. The main principles in designing housing areas are:

- Segregation of automobile from internal community life.
- Considering semi-private spaces as flexible and multi purpose space.
- Designing the pedestrian system in dead-end alleys:

To provide a kind of play ground for children and a meeting place for Residences.

To prepare the Semi-private space as a traditional barrier between private and Public areas.

- c. To preserve privacy and identity of the residents.

-Use of semi-public corridors in buildings to separate semi-private activities from public life . A design idea, which interprets concepts of neighbourhoods in the traditional way of life of the Iranian people.

-Use of half closed entry for a group of housing as a cultural symbols to interpret and respect the traditional aspect of privacy of residents.

-Designing the entry to houses with regard to cultural privacy of interior spaces.

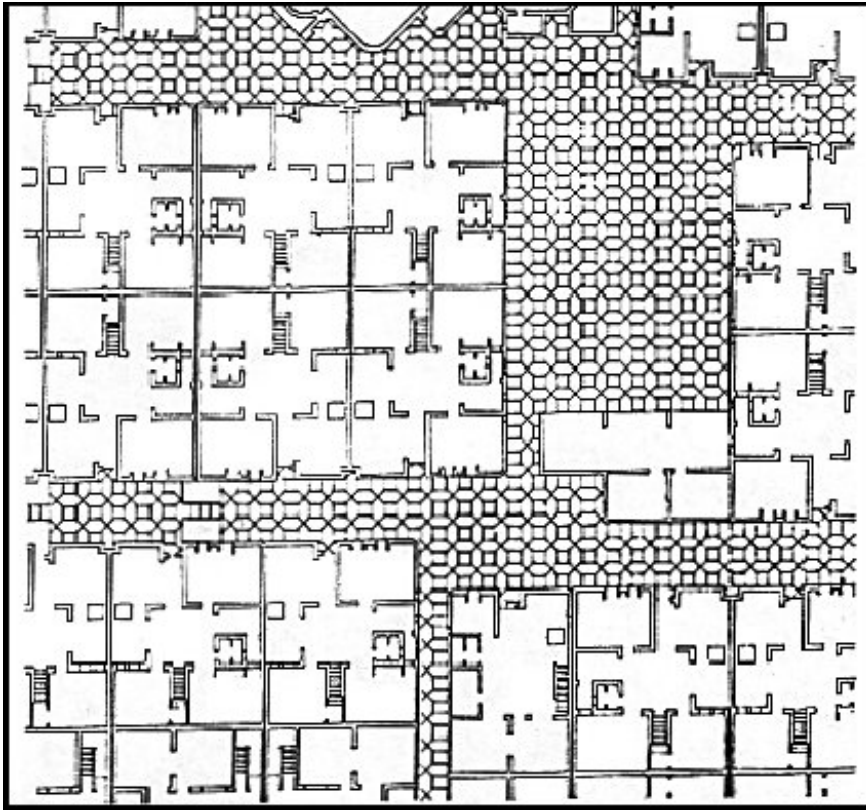
-Use of courtyard as a multi-functional space for private activities.

-The use of roof as an extra space for some private activities such as sleeping place in summer nights.

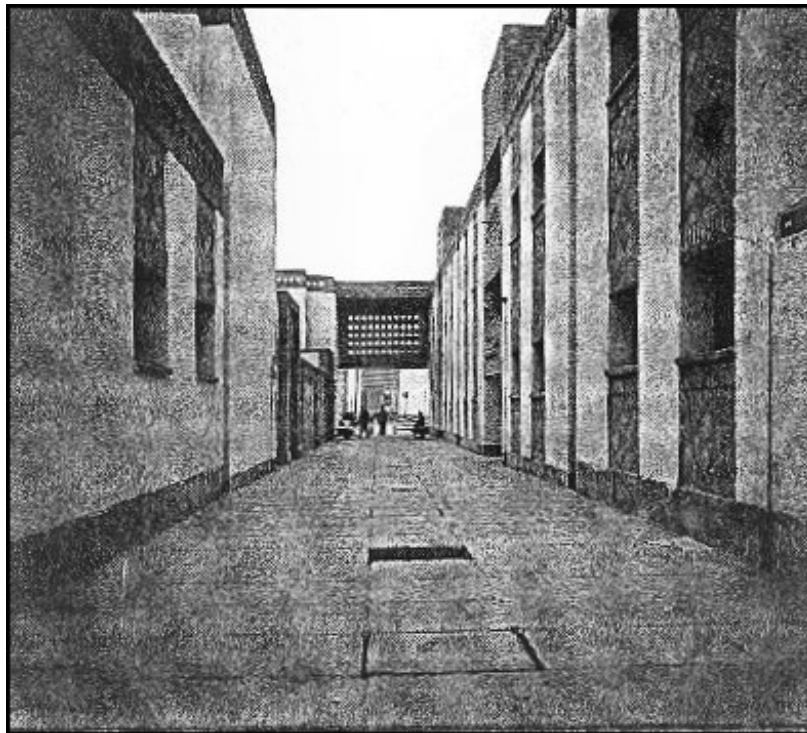
-Design of roofs of houses in form of roof terraces.

-Design roofs terrace moderately screened to provide privacy.

-Use of light colour building materials for the inner facades to reduce heat in private spaces.

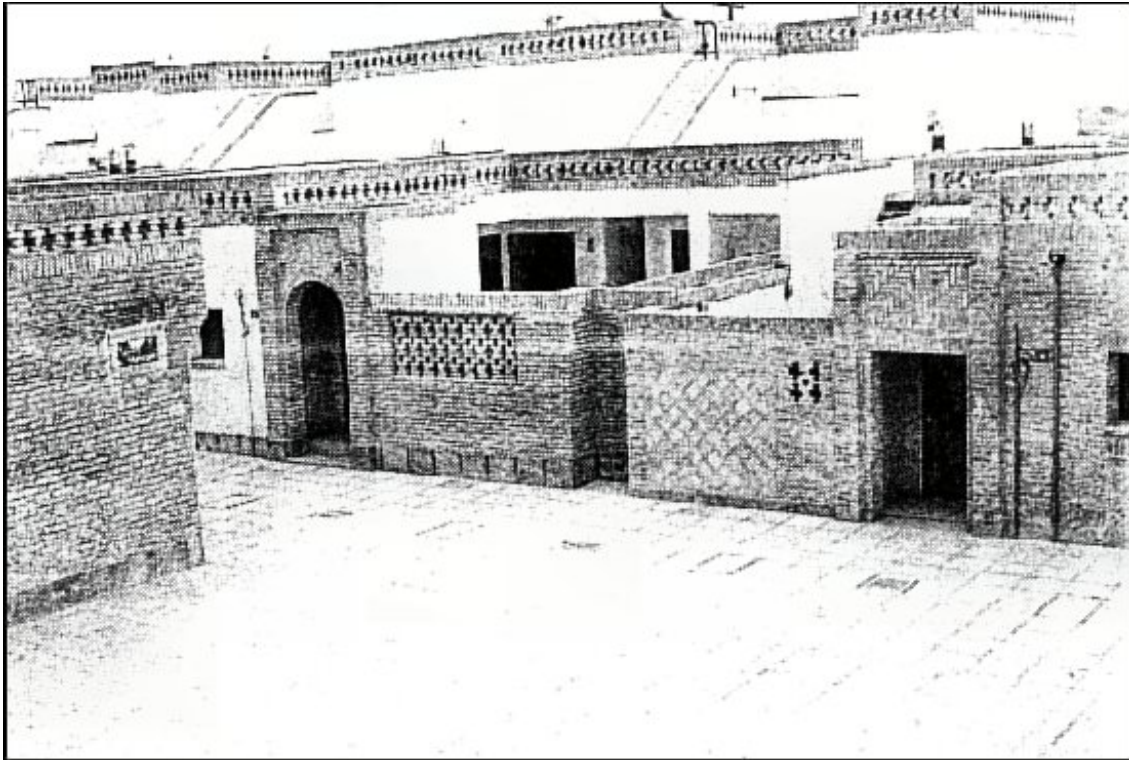


**Figure 151: Plan of a housing group with pedestrian system.**

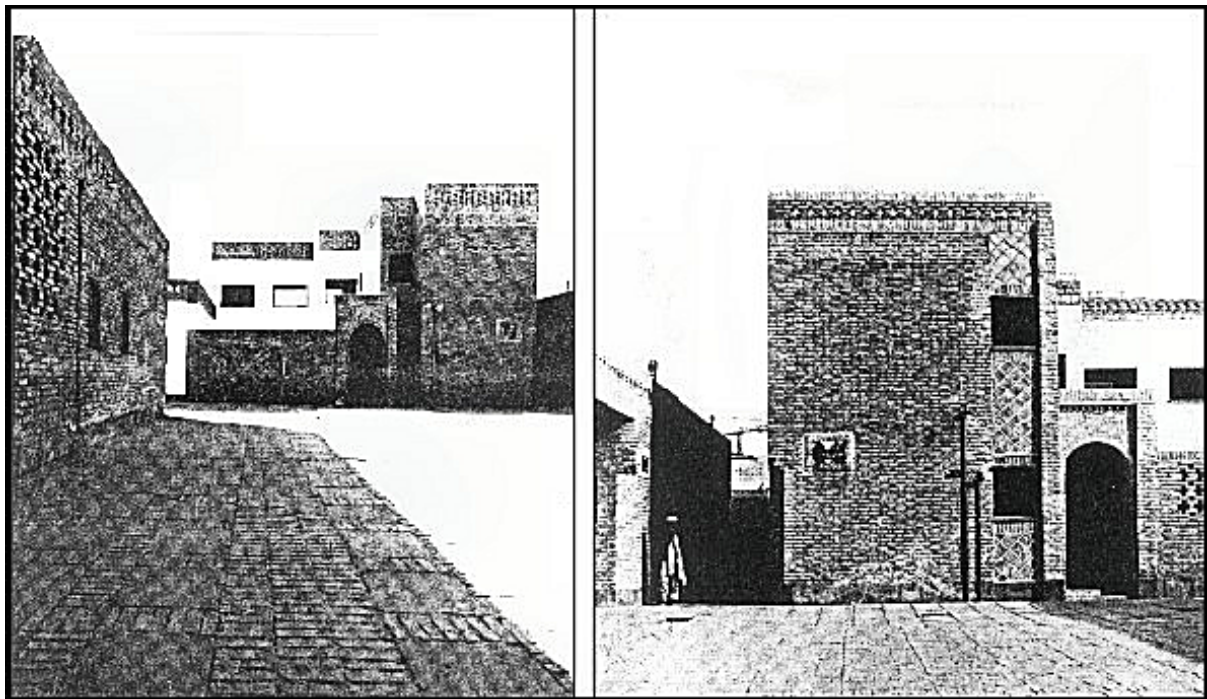


**Figure 152: A pedestrian passage with its multi-functional purpose.**  
Source: Buildings and projects.





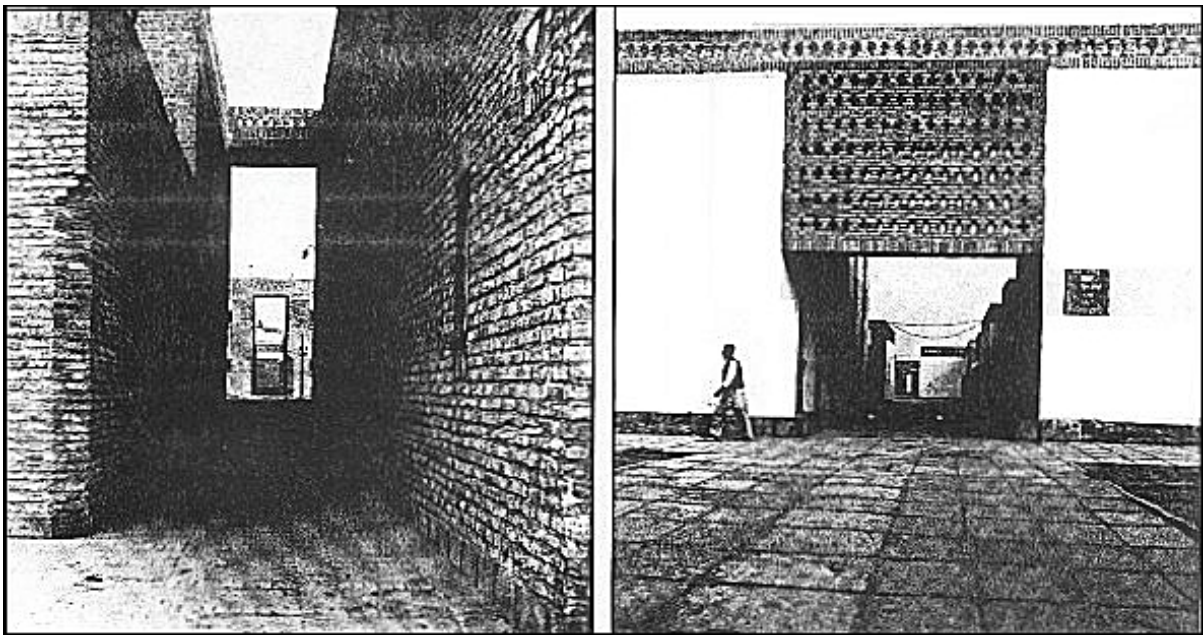
**Figure 153: A semi-private space between groups of houses.**



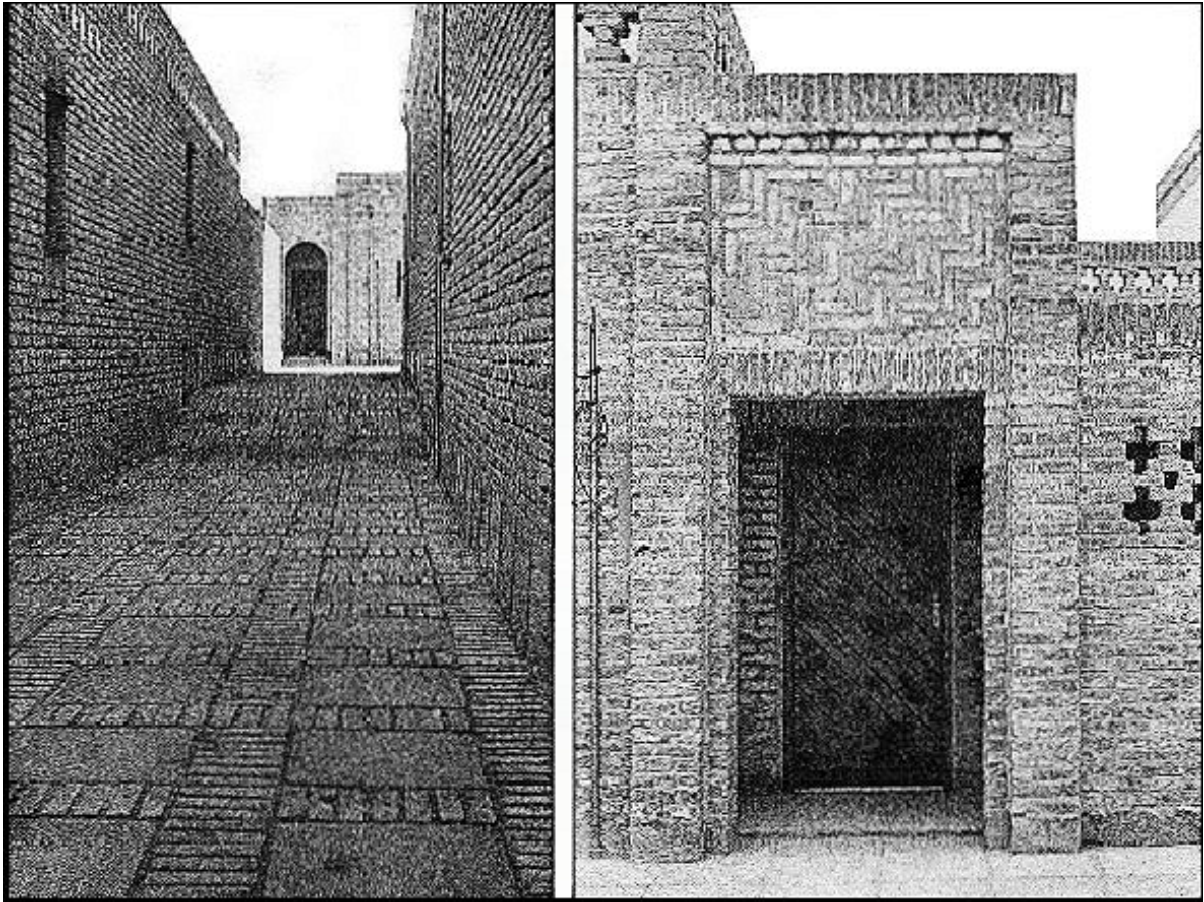
**Figure 154: A preserved semi-private space with identity characteristic.**  
 Source: Buildings and projects.



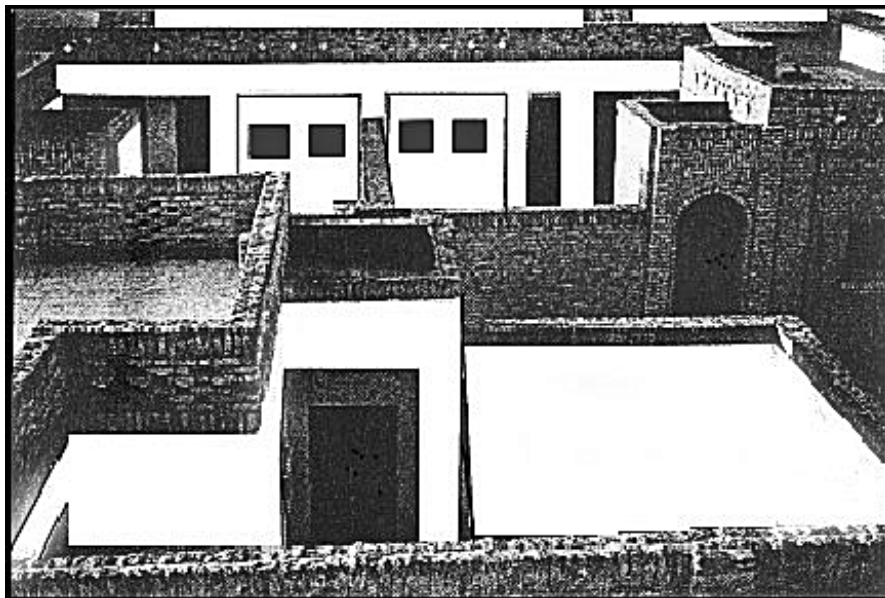
**Figure 155: Entry to a residential complex through semi-public corridors buildings.**



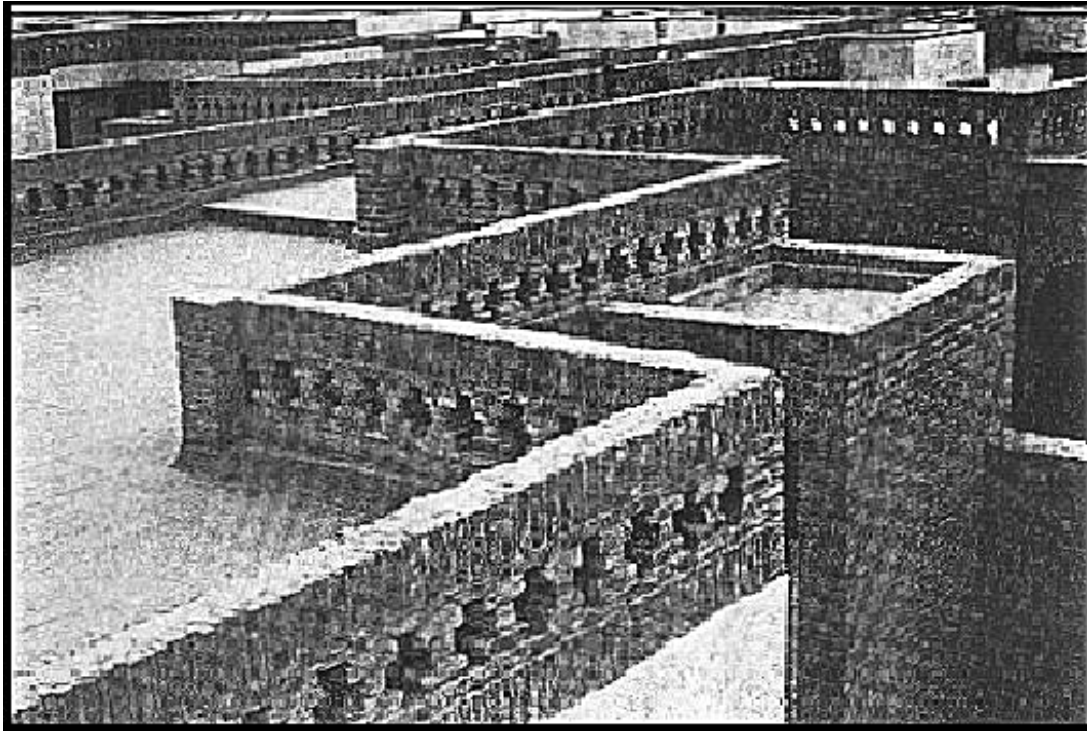
**Figure 156: Use of cultural symbols to emphasis the entrance to semi-private spaces.**  
Source: Buildings and projects.



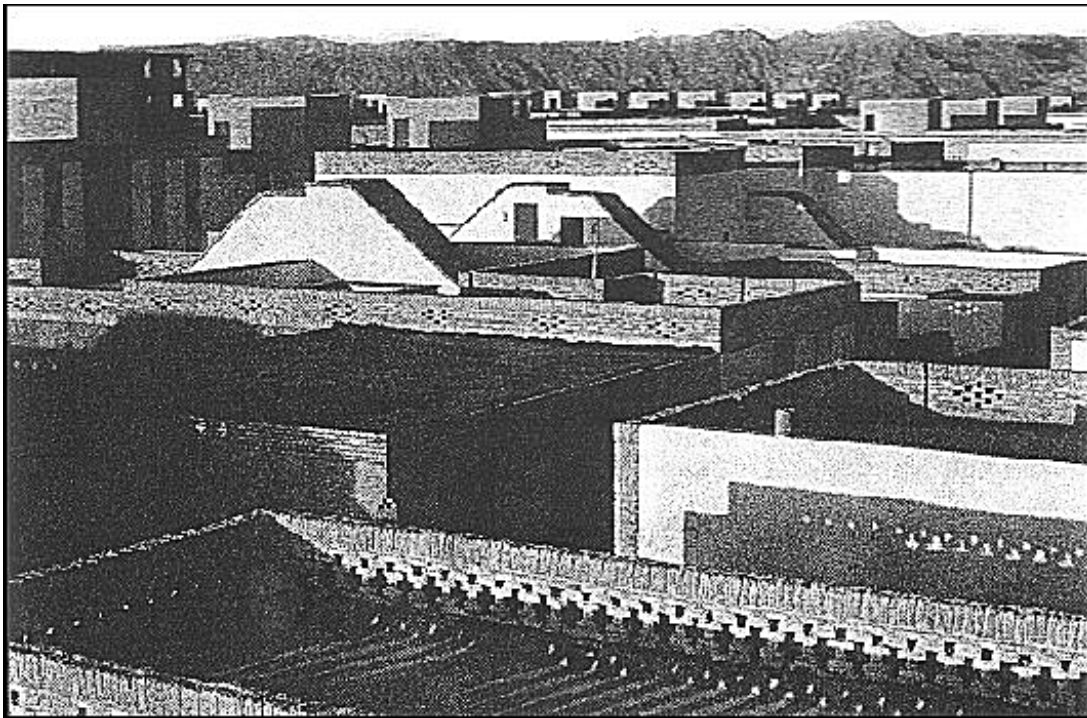
**Figure 157: Private entry of housing units through pedestrian ways.**



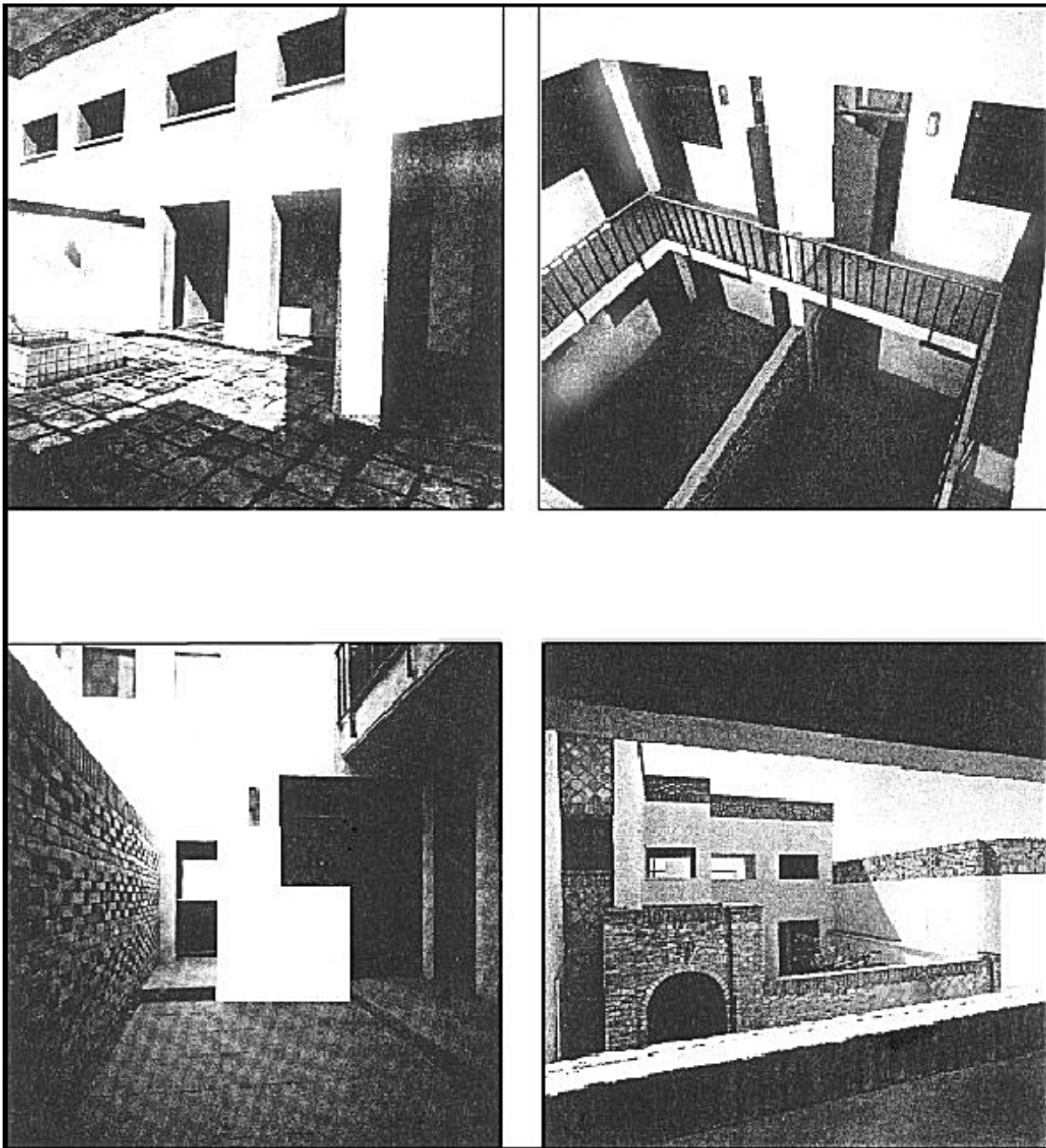
**Figure 158: Courtyard as the most important cultural element of privacy.**  
Source: Buildings and projects.



**Figure 159: Important aspect of designing roofs as roof terraces.**



**Figure 160: Use of traditional and local brickwork for roof terraces.**  
Source: 'Building and projects'.



**Figure 161: Inner facades with light colour building materials.**  
Source: 'Buildings and projects'.

## ***4.8 Analysing the Characteristics and Design Principles of New Towns***

The aim is to analyse the characteristics and design methods of the discussed new towns in relation to the development and design principles of traditional Iranian cities studied in part two. Unfortunately, there are no concrete written documents on characteristics and design methods of traditional cities in Iran. Existing historic cities are the only valuable living documents. Therefore conclusions of part two are used here as the base of this analysis. The study of important factors and elements in making the Iranian cities in chapter two, and the case study of historic city of Nain in central part of Iran in chapter three emphasises the importance of timeless basic design principles of traditional Iranian cities on following urban planning aspects.

- Principles of urban development**
- Principles in Form and structure**
- Principles of urban planning**
- Principles of urban design**
- Principles of design in private spaces**

With regard to Shushtar new town as a modern living environment concerning traditional design principles and methods, this analysis will be a comparison between this town and the other new towns studied in chapter four.

### ***4.8.1 New towns in Tehran, Mashhad, Isfahan, Tabriz and Bandar-Abbas Areas***

#### ***4.8.1.1 General Characteristics***

With looking as the existing new towns it becomes clear that, in these new cities attention to the design principles of traditional Iranian cities has not been the intention of the designers at all. They have planned these new cities along their personal ideas and European standards. They had no intention to study the climatic and ecological conditions in different parts of the country. They believed that planning modern environments of high quality means to ignore traditional urban pattern and it would conform to the needs of modern life in a better way.

The characteristics and design methods and principles in the new cities and towns from the Tehran region to Bandar-Abbas area have been analysed. Apart from their specific differences, their general characteristics can be summarised as follows:

- Apart from few, they are planned in short distance and are residential or satellite towns.
- They offer different standards of living.
- Apart from few examples, traditional urban planning and architectural characteristics of the area was not considered.
- The personal ideas of designers and investors have played the main role in choosing the design methods and criteria.

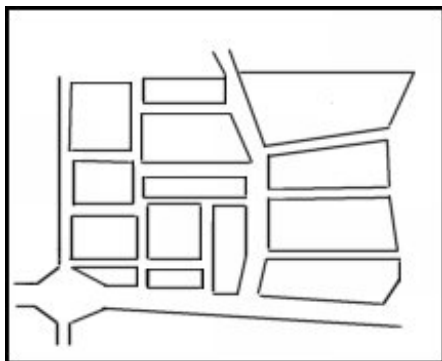
#### **4.8.1.2 Design Principles**

##### **A. Development principle**

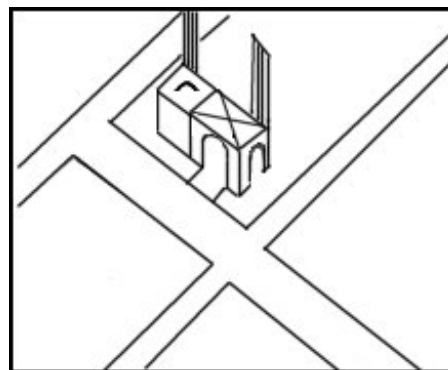
element in the development of the city is not important in the design of new towns in these parts of the country (Tehran, Mashhad, Isfahan, Tabriz and Bandar-Abbas areas). Streets have segregated residential areas and divided the

- The concept of the neighbourhood or the neighbourhood centre as structural towns. In modern new towns separation of semi-public and public space is not of any importance.

- The only urban elements, which still have kept their importance in the development of new towns, are religious ones. As the main religious cultural factor mosques and minarets have still remained the only identifiable urban symbols in modern cities. Besides religious elements, tall buildings play an important role in the skyline of the cities and can be recognised as landmarks.



**Modern development system in grid pattern**



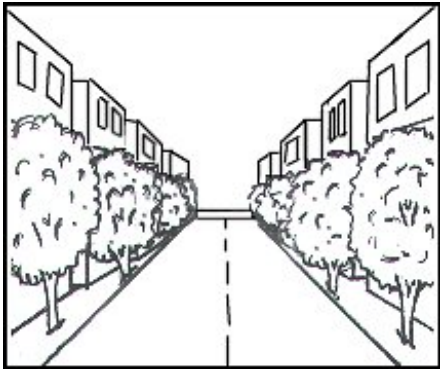
**Mosque as an important landmark**

##### **B. Form and Structure**

In development of the modern new towns, cultural aspects and distribution of services have not played an important role. The residential areas are mainly

organised in form of building blocks. Concern for pedestrians, even in desert areas where the protection has always been a very important aspect, has lost its value. Streets in new towns are designed mainly as boulevards.

-Although traditional design methods have enabled the old cities to overcome many environmental and climatic problems, they have lost their place in modern urban design system. The only elements, which are still noticeable, are courtyards, trees and water.



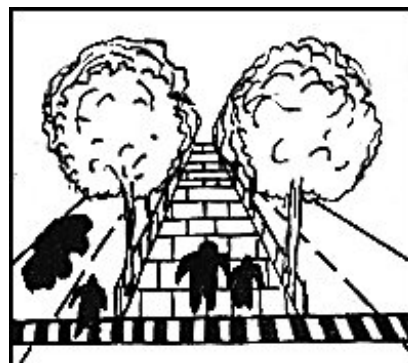
**A modern street**

### **C. Urban Planning**

-New towns are usually organised around major-historic cities. Existing characteristics of the mother city and cultural values of the local people have not played any role in the design of these new towns. Planning a modern new town such as Latian city near Tehran is an example of this case.



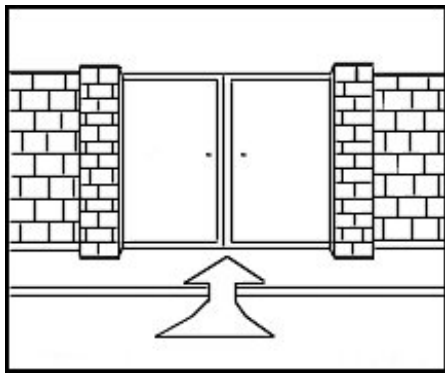
**Cultural confusion in design of new towns**



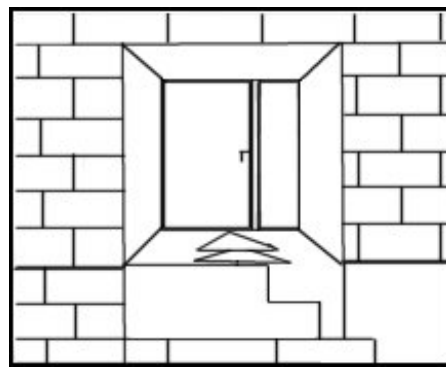
**A desirable street**



Modern design methods do not consider the importance of cultural elements of the urban fabric. The spatial structure of modern cities is more or less similar to each other no matter in which part of the country they are built. Just in rare cases, the socio-cultural aspects of urban life are manifested in the spatial structure. Intention of individuals has a stronger effect on the design criteria of these elements than social behaviour. For example "Hashti" was a barrier between absolute private and public spaces. The direct contact of these two kinds of spaces is a result of individual opinion. In a new town like Shahin Shahr design methods are simpler and more adaptable to the social behaviour of people.



**A modern house entry with direct contact to public space.**

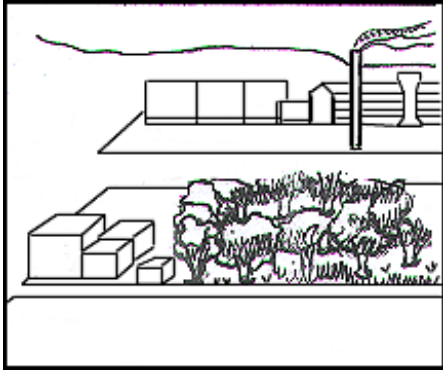


**A modern house entry with indirect contact to public space.**

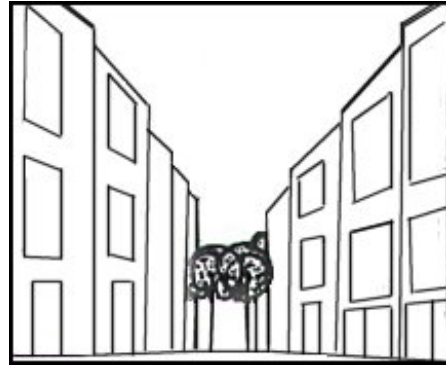
#### **D. Urban Design Principles**

-Green inside or around city plays a vital role in the microclimate of cities in arid zones, and are still considered an important design element in the cities. Trees in arid zones are much more than just an aesthetic design element.

-The concept of security and built-in public spaces is mostly realised in religious elements. In modern urban design, built-in spaces such as squares or pedestrian walk ways are replaced by simple spaces without any special identity. In the design of pedestrian passages, even in hot and dry climates, the important role of protecting pedestrian against harsh climate is forgotten. Passages are wide without any shelter against the sun. The only protection against the sun are the walls of the buildings on both side of the alleys.



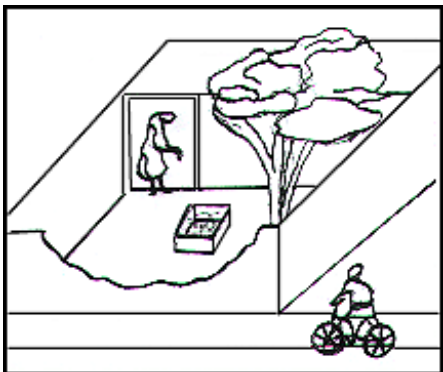
The green wall around city



The proportion of a modern alley

### E. Design principles in private spaces

-The most important aspect of private spaces in arid areas is provision of a desirable climatic situation. Design elements such as deep court yards, high ceilings, central court yards, veranda, trees, water and light colour building materials are among the most common elements. But today water and tree are the only remains design elements in modern cities in arid areas.



A typical house in Shahin Shahr  
New town

### 4.8.2 *Shushtar New Town*

#### 4.8.2.1 *General Characteristics*

Design of this new town highlights the possibility of finding a suitable combination of traditional urban design with the requirements of the modern cities. Designers of this new town have a very good knowledge of the residents, their cultural needs, habits, and social way of life. And their background and knowledge of traditional characteristics of Iranian cities, has given them the ability to develop a desirable environment highly adapted to indigenous life

style of the residents. General characteristics and design methods of the whole town can be summarised as:

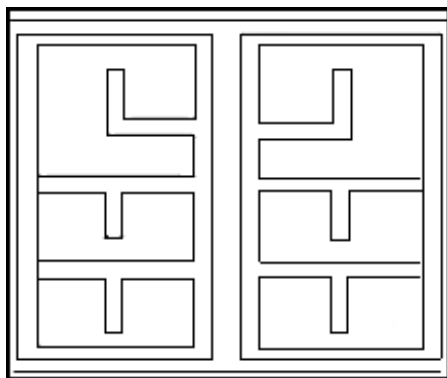
- In the design of the new town of Shushtar, organic extension of the existing urban fabric, has been the main intention of the designers.
- Its standard of living is highly adapted to cultural values of local people.
- Building materials, housing types and neighbourhood layouts are similar to old Shushtar.
- Building materials are produced locally and on site.

#### ***4.8.2.2 Design Principles***

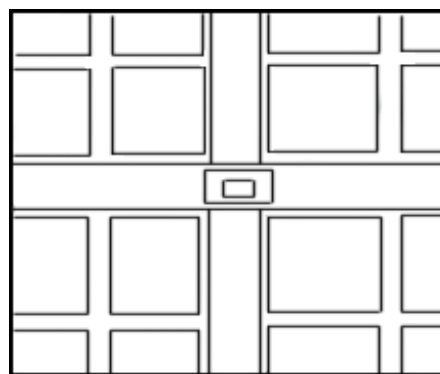
##### **A. Development principles**

-Division of residential areas into groups of housing units reflect the concept of neighbourhood typology of traditional cities. In the new town no Hoseinieh or squares with arches platforms or bazaar with it's high ceiling is planned which reflect the indigenous life style. But the urban planner of Shushtar have used very simple design methods to give this modern town a traditional image.

The town is mainly designed along one main access, which does not pass through residential areas but provides services from different sides. The intention has been to connect housing clusters to the main streets through narrow lanes. Design of this access reminds of traditional bazaar.

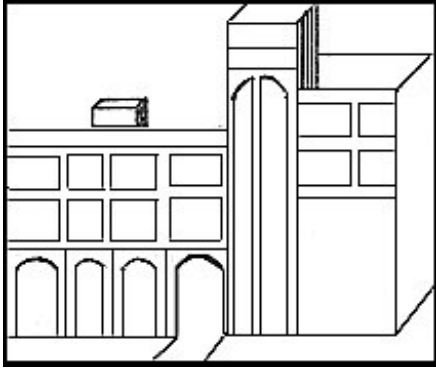


**Division of the town into introverted Housing units**



**The main axis of the town connect residential areas together**

-Shushtar new town in it's small scale has incorporated many design principles of traditional architecture in a very simple way. Apart from the religious elements, a central tall building with its local architectural characteristics is an urban symbol, manifesting the cultural awareness of the designers.

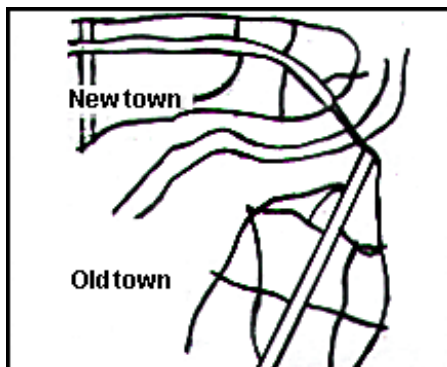


**The central building as an urban  
Landmark**

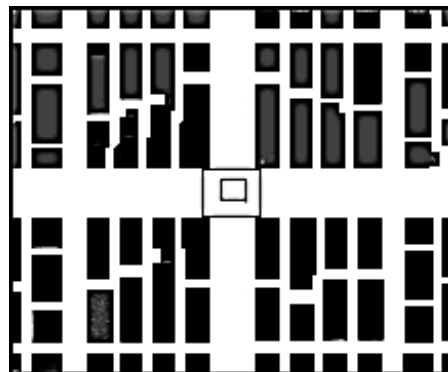
## **B. Form and Structure**

-The new town of Shushtar in form and structure, is a continuation of the old city. The main body of the town is planned around a central spine, as a pedestrian boulevard which through passage ways and streets connects all the neighbourhoods. In the design of the new town, traditional patio house types and neighbourhood configurations similar to those of old city were adapted. Housing units are organised along narrow lanes on either side of the main axis.

-The fabric of the new town is compound of introverted housing units which are connected through the central east-west pedestrian boulevard. Its tightly physical fabric with narrow streets responds to the climatic condition, and to cultural requirements.



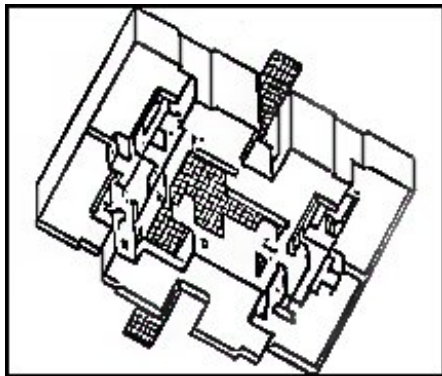
**Form and structural continuity**



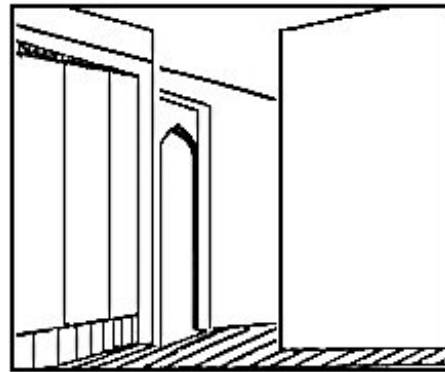
**Tight fabric of Shushtar new town**

### C. Urban planning

From the main pedestrian axis, narrow passages pass through housing clusters and divide them into smaller groups. The existence of such narrow lanes somehow has provided semi-private spaces in-between the public spaces, and housing clusters. The doors of the dwellings do not open directly into the public area, but into smaller spaces, which are shared amongst several houses. Such simple design elements has resulted in a positive response of the people.

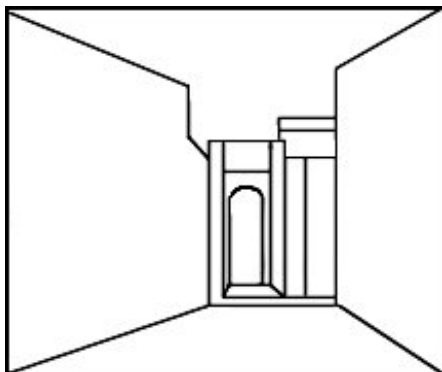


**Pedestrian space between dwellings  
Spaces in housing clusters**



**Conscious design of semi-private**

-Housing entries are obvious examples of designing urban and architectural elements with regard to socio-cultural behaviour of the inhabitants. Although pedestrian passageways provide semi-private space between the buildings, the entry of houses do not open directly to these passageways. There is a small entry hall between a pedestrian passage and the main door, which can be seen as a logical substitution for the 'Hashti' (the covered entry hall for 3 to 6 houses) in traditional cities.

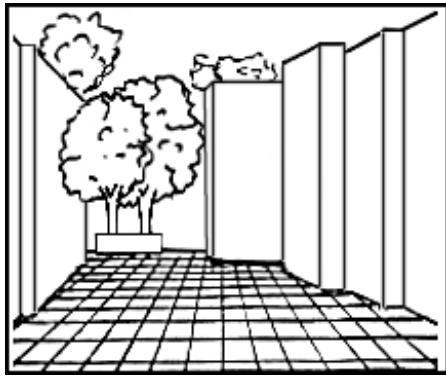


**Designing entrances with regard  
to socio-cultural behaviours**

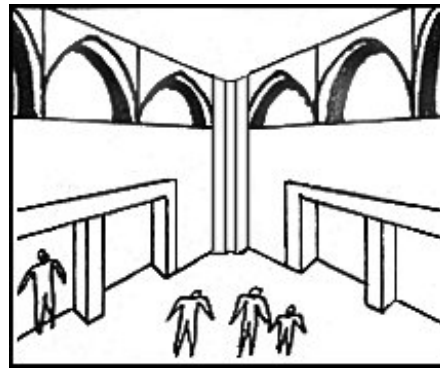
## D. Urban design principles

-The provision of spaces with respect to traditional criteria has been manifested in the very simple design of these passageways. Pedestrian ways which pass through clusters of houses, are often covered. Such pedestrian passage ways give traditional image to the modern new town of Shushtar.

-The physical definition of security has always been an important principle in design of public spaces in traditional cities. The main pedestrian boulevard with trees, the market place between dwellings, the arrangement of buildings around an open space and most of all the design of housing with central courtyard, has exposed the concept of privacy and security in physical form.

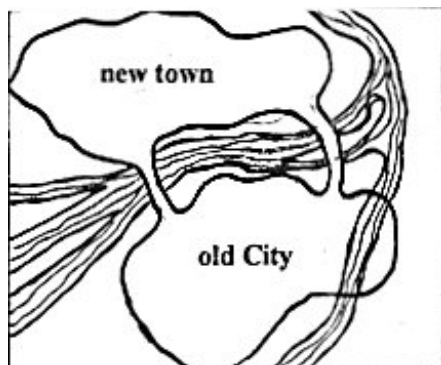


**Pedestrian way between houses as a semi-built-in space**



**Built-in space of the market place**

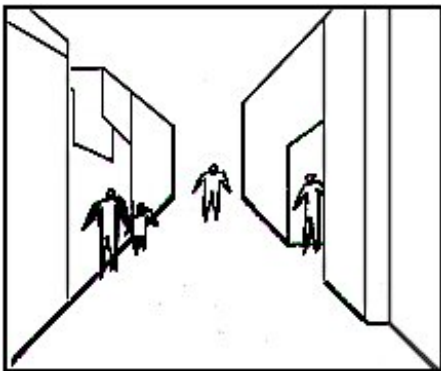
-The choice of the location for the new town across the river was done with respect to the rich topography of the region and the role of the Karun river. The area of Shushtar is surrounded by agricultural land, which contributes to the green image of the town.



**Site of the new and the old town with respect to the topography of the area**

-Human scale and the respect for the privacy of inhabitants have been the two main design principles. The design of passageways has not followed a special proportional rule, but the width and the height of the surrounding buildings provide a human scale.

In the design of the foot paths the interesting aspect is the entries from the main street. The semi-public corridors separate these ways from the main streets. On the one hand, these semi-public corridors in buildings symbolise the beginning of pedestrian ways, and on the other hand they indicate the importance of separation of public and semi-public spaces.



**A typical passage way in Shushtar new tow**

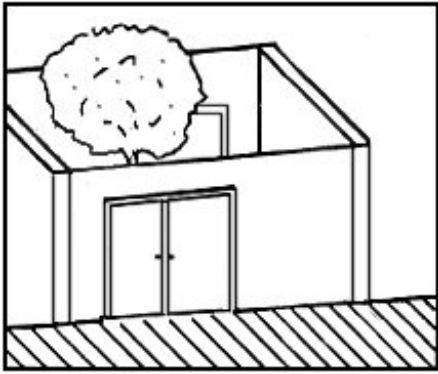


**Semi-public corridors in buildings as cultural elements**

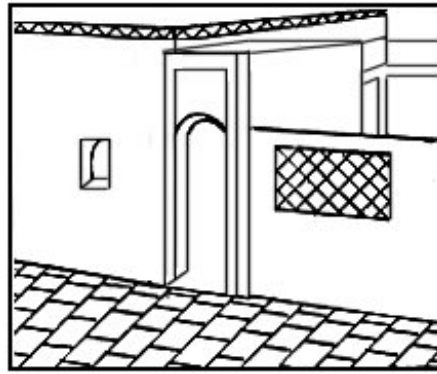
### **E. Design principle in Private spaces**

-The role of the court yard as the centre of houses, and the passage ways as the pedestrian corridors between dwellings, is important. These two design tools correspond to the traditional privacy and give special identity to the residential areas of this town. One or two storey houses with courtyards and gardens correspond to the cultural activities of the inhabitants.

-The use of high ceilings and arches walls in the design of public open spaces such as market places, the entry of houses has contributed to the traditional image of the town. Awareness of the design principle of high ceilings and arches walls in reducing heat in this climate indicates the attention of designers to local architecture.



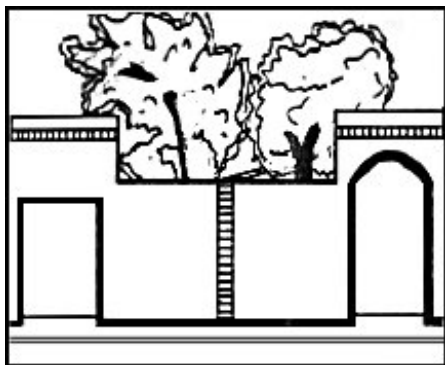
**Courtyard, symbol of privacy**



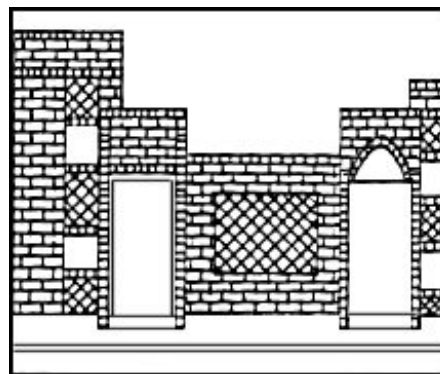
**Arched entry, symbol of the local architecture**

-In arid areas of the country, trees have an important role in providing shadows and micro-climate inside of buildings. The importance of planning narrow pedestrian walk ways in residential areas has not allowed the design of trees, but existence of small gardens inside the dwellings has provided a bit of greenery to the passage ways.

-The main building material is brick produced locally. The use of brick implies local building methods and produces facades of indigenous character. Although the housing units are planned within different heights, there is unity and harmony in building form and use of building materials.



**Tree, a climatic design tool**



**Identity of indigenous facades**



## **4.9 Summary**

The slow and harmonic development of traditional Iranian cities continued up to the modern industrial time. Beginning of urbanization process in Iran is simultaneous with the ruling period of 'Pahlavi Dynasty' and new legislation and the administrative reform.

The concentration of large parts of the population in just a few cities is characteristics of urbanisation in Iran in the second half of 20<sup>th</sup> century. The unequal distribution of population was not an important factor until urban problems appeared in sixties. The main urban problem began when private investors took the control of building sector in large cities. In fact, the existence of the necessary infrastructure for development programmes was one of the reasons that made the large-historic cities the middle punk of urban planning programmes. Although uncontrolled urban development exposed its threatening dimension, it was not an important issue for government of Iran in pre-revolutionary period. They used to approach this problem (population distribution) through simple methods such as reducing the immigration rate from villages and small cities to Tehran. But in reality the execution of such programmes, considering the number of small cities and villages scattered in Iran, and the dimension of financial investment, was not successful.

The threatening situation in the Tehran region was the main reason that brought the redistribution of population under consideration again. The development of new towns around large cities was the only suggested remedy. The main aim behind the development of new towns in Iran was to accept the decentralisation strategy as the main principle of future urban development programmes. This strategy hoped in long run to be able to:

- 1- reduce the population concentration in Tehran and some other large cities.
- 2- to help the reduction of urban problem in these cities.

The future new towns suppose to absorb over spill population of the large cities. And through providing job opportunities reduce the pressure on the mother city. Without any question the development of new towns around large cities since 1977 has helped housing problem in large cities, but enough jobs were offered is questionable. The new towns have not only reduced the problems of large cites, through absorbing more immigrants from small and rural areas have actually increased them.

The studied new towns are proposed for different part of the country. The analysis of their planning methods and design principles (as long as existing

information allow) shows less respect for the local architecture and planning aspects of their region. One of the rare examples of new towns is Shushtar new town in 'Khozestan' province. This new town is designed as a continuation of the old city with particular attention to the design principles and methods of the existing city. The awareness of the traditional way of life of people in this part of the country is the most valuable concept of the work. Attention to human interaction and activities instead of physical dimension is one of the important aspects of design in Shushtar new town. In a living environment such as Shushtar new town, the activity of people and the use of space have more importance than just the functional aspects of the buildings. The arrangement of buildings, providing the needed spaces, and the use of indigenous brickwork indicate the aim of designers and planners to provide a humanised living environment, and to integrate the cultural aspects.

#### ***4.10 Conclusions***

In the modern Iranian planning system the place of new town is not clear. Wherever the population is high, the development of a new town proposes regardless of the role and its effect on the region. The examples of existing new towns indicate that in the development of a new town the basic financial and infra-structural needs are not the important aspects. Development of new towns is not the whole, but a part of urban planning programmes. Urban planning as a system should always be under comprehensive control. All participants should work and plan together. To work with just one of the agents, is progress in one aspect and lagging behind in others. No matter how effective the work is on a single aspect, the development plan will not be successful and the problems remain. The experience of new towns in the last three decades proved this fact. In many cases expensive new towns were planned, but attention to just one or two aspects, has led to the development of unsuccessful residential areas, depending on their mother city.

In development of a city different factors play an important role. The first are the factors which cannot be controlled by urban planning programmes such as population and its rate of increase, economic and industrial changes and environmental possibilities. Secondly are the ones which can be controlled by urban planners such as management and decision making. (46)

The following aspects should be considered in development of new towns:

- Role of new towns in regional and national programmes**
- Financial aspect and the infrastructure required.**
- Their effect on historic part of large cities**

- Quality of life and cultural identity of the new towns
- Role of professions in providing a qualitative living environment

#### ***4.10.1 Role of New Towns in Regional and National Development***

Economic development of new towns apart from the economic trend of the country is related to the geographical situation, and to development programmes of the country. Therefore planning of every new town should be adjusted to a regional and national plan. Location of new towns with regard to industry, services, agriculture, commercial and tourist activities may help in solving the economic problems of the country.

Localisation of a new town as an element of the regional planning system plays an important role in the future development of a region. New towns do not develop in a closed system. The surrounding environment does not only affect them, but they influence it too. Therefore, if location and role of a new town are not part of national and regional development programmes of the country, problems with regard to the location may occur. In most cases, the existing villages around the site of a new town in a region are ignored. Considering large number of villages, and the existing problems and shortages in most areas of the country, the future new towns will be in conflict with rural life. The rural population may move to new town quickly.

#### ***4.10.2 Finance and Necessary Infrastructure***

Apart from other aspects, the main problem in Iranian new towns is lack of financial means to provide the necessary infrastructure. Unfortunately as long as lack of finance is the main issue, the existing large historic cities are the only alternative. We should accept that cities because of natural location and their infrastructure have a limited capacity for absorbing population and developing economic activities.

Studies and research on new towns in developed countries indicate that, in general, new towns have not been a great help in reducing the population of metropolitan cities. Therefore, building of new towns should not be the only solution. Other alternatives such as the reorganisation of the existing large cities, development of living standards and creation of jobs in small and middle-sized cities should be taken into consideration. (47)

Political decisions, population redistribution policy, Decentralisation of industries, development of new towns, all affect the urban development trend in an area. These decisions affect physical developments in other areas too. In

planning decision makings attention to the capacity and adaptability of the area with regard to the proposed development plan, is very important.

### ***4.10.3 New Towns and the Historic Cities***

The growth of the cities in last 50 years has taken place almost exclusively in the outskirts of cities. Mostly in large historic cities, the suburban areas have attracted population in form of satellite new towns and the centres have remained relatively stable. There is no possibility of reversing this trend, or resettling the immigrants either by sending them back or diverting them to other cities. These outer areas are new urban areas. All they lack is urban infrastructure, facilities to live and job opportunities. It should be accepted that historic parts of the large cities are not slums, though communal services in many cases are inadequate. Sometimes it is cheaper and more effective to improve the garbage collection than condemning the dwellings. The notion that just poor people live in traditional houses reflects an image of underdevelopment, of poverty and worthlessness.

There should be a mutual relationship between people and their environment. The traditional areas are still excellent environments functioning efficiently. Intensive development planning programmes can help them to improve, but they should be respected for what they are. Such areas could and should be protected by a simple decision in long term plans. This will help the planner and enable him to direct development into areas that require it. From an architectural point of view historic parts are worthless, compared to new suburban areas with a high standard of living, but without special distinctive building. They should not be compared with any modern places because they have their own special social values. They have identity, provide landmarks; they are a link with the past. They are socially important, and they create the kind of community we need. Stable, civilised and constructive, from the past we can learn for the future. (48)

### ***4.10.4 Design Quality and Cultural Identity***

Attacking urban problems from physical side is seeking more for quantitative solutions that naturally ignore social values and behaviour. Western standards that expose their effects through products, techniques and spatial behaviour, are used to change values in Islamic societies. Accepting these changes in form of modernisation, hardly pass to culture and life characteristics of Islamic nations. Consequently they destroy the identity and their harmonic relation with their natural and social environment.

Existence of spiritless cities has absorbed our attention to the concept of 'identity' in design of new environments. A few people have questioned the concept of imported modernity, but most people did not want to hear or see the consequences. Choosing major historic cities for the location of projects and changing them to metropolitan areas, was wrong. Also concentration of planning projects in a few specific areas instead of distributing them over large regions was a mistake. The high migration of people from small cities and villages to large urban areas was a predictable result. These, and many other problems are the result of this imported modernity, and will for a long time remain a problem.

Fast development of Iranian cities has produced spaces without cultural values. This is inevitable because culture needs time to develop. In the Iranian society, in spite of all rapid social and economic changes, culture still plays an important role in shaping the living environment. In the modern urban planning system of Iran, quantitative needs have overcome the qualitative importance of a living environment. (49)

What has been ignored in modern urban life are very simple aspects of relationships between people to people and people to their living environment. Sense of belongings is an aspect that is lost in modern life. Individuality is more important than needs of a group of people.

The new generation in Iran needs a long time to appreciate the traditional urban architecture. Education is the first step to encourage the consciousness of this generation. This encouragement can help them indirectly to create an architecture and planning system with identity and characteristics adaptable to Iranian culture. Education alone is not enough. The administration, which is involved in development programmes, should take this important aspect under consideration too. We should learn that relationship between architecture and environment, between architecture and urban space, and the relationship between architecture and human nature, create identity. (50)

Jenab and Shahidy in their paper about 'Factors forming the Urban Identity' say 'to have identity is a value in itself. Identity is in fact a way of expressing values and symbols. It is a soundless expression of social communication between members of a group or a society. Existence of an identity in a society depends on existence of the society itself and its culture. Every basic change in culture of a society can destroy its identity'. (51)

#### ***4.10.5 Role of Professionals toward providing a Qualitative Living Environment***

What can the planners and architects do to help the new towns to be a desirable Living environment? This is the question that probably every architect or planner asks himself before he starts his work. Need for a good social knowledge in urban planning cannot be deny. The most important aspect with regard to the pattern for a new town is how can we include in our plans the modern criteria, and how can we satisfy the cultural expectation of the people. When we try to use the same pattern for planning new towns in different parts of the country, we have hidden the identical characteristics of each one behind an external facade.

In a time when residents have little chance to influence their living environment, the role of the planner and the architect, his profession, his education and his knowledge are important. In former times, people were able to design their environment, to choose their neighbours and to determine the level of contact with the others. Their awareness of the characteristics of the physical environment, and the social order and importance of individual needs gave them the ability to design a suitable living environment. Today, this comes under the responsibility of the urban planners and architects, but it exceeds their capacity. The simple techniques of traditional architecture that have responded to the needs in their time have lost their value today.

There is no intention to compare the traditional buildings with new low cost projects, and prove that in reality the traditional ones do not exceed the cost of the others. Iranian architects are trained to import modern architectural concepts into the country rather than exploring traditional concept. They ignore the techniques and construction methods that tradition has preserved. The architect, who comes from a rich culture as the Iranian one, should try to reconcile western experience, techniques, status and profession with the traditional. They should familiarise themselves with the culture that knows how to create such rich and complex architectural typologies as mosques, schools, public baths and bazaars. They should appreciate it and preserve this heritage.

To create a human environment is not necessarily in conflict with modern urban architecture. An architect can contribute more to the well being of people if he puts more importance to the sociological aspect of the architecture than to its physical dimension. Architecture in fact should be seen as a tool to influence and intensify human interaction. Every architect or planner should use his education for understanding his own culture. The Iranian architects should be able to create a new Iranian architecture. Perhaps the most fundamental aspect

would be to see architecture primarily as a vehicle for social change and only secondarily as an object of design and technology.

Respecting what we have increases our self-reliance. When we talk about re-using traditional methods or principles of planning, the first reaction will be negative, but if we consciously review the history of the Iranian architecture and urban planning, we can not deny that native architectural elements, details, materials, colours and symbols have their value and importance. Appropriate planning solutions to human settlements can be developed from indigenous methods of third world countries. It is noticeable that the emergence of new technical design does not automatically invalidate indigenous methods of construction. Very often indigenous methods can solve new problems of today.

Architects and planners should accept a new role in the development of the third world. It requires learning additional skills and developing a knowledge, which is rooted in the culture and the way of life of their people.

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## **5. Summary and Conclusions**

### **5.1 Introduction**

Analysis of design principles and elements of traditional Iranian cities in part two (chapter two and three) proved that planning principles and methods in these cities rooted in the culture of the people. These traditional values have not changed in modern time, but architects and planners ignore them. Since the aim of urban planning is provision of a human and pleasant atmosphere, these principles should be considered.

These design principles and methods have a timeless nature, which can be used today to create socio-cultural identity in modern cities. None of them should be considered as a single aspect, but as part of a system. In this way we would be able to answer questions such as: what type of building can correspond to the need of young Iranian generation? What is the positive role of the traditional way of life? And what will be the effect of building methods in the image of modern towns? In this context we should ask:

-What do we expect of a modern living environment?

-Which part of existing modern methods should be changed or be combined with traditional methods and principles?

-How can traditional aspects of urban architecture and design be integrated into the modern system?

-and finally, which aspects of these timeless elements and principles can be accepted in design of modern living environment?

To answer these questions, firstly a theoretical framework of these timeless elements and principles should be built. This theoretical basis determines the role of each element and principle in a planning system.

The aim of this thesis is to study the possibility of conserving the traditional qualities of old cities, in modern cities, and to develop new towns concepts, which integrate traditional urban qualities and cultural identity by combining modern and traditional urban design methods, elements and principles. To reach this aim, it is necessary to use the results of the previous case studies on traditional cities and new towns in Iran. Bringing these results together, will help to provide a checklist of the main design principles and elements that these cities are built upon. With the help of this checklist the principles and

design tools that can bring more quality of life to modern living environments can be chosen. Finally with the help of chosen design principles and tools, alternative design framework for new towns and modern living environments in Iran will be developed.

## ***5.2 Summary of part two (chapter two and three)***

Topography and water supply, constitute the precondition for the emergence of settlements in Iran. The development of traditional Iranian cities is based on a combination of environmental (such as climate) and cultural (religion, economy and socio-political believes) factors depending on each other.

The analytical study on urban elements (chapter 2), and their importance as morphological factors, indicate that the traditional Iranian city is a response to the religious, economical and cultural attitudes of its inhabitants, and a rational response to climatic characteristics. Throughout the history, the urban form of Iranian cities developed to cope with the climatic conditions. To overcome environmental problems, traditional architects learned to design the city as a solid mass with the minimum of empty spaces. To arrange the buildings to control air movement and heat exchange. To adjust to the hostile climate, traditional Iranian learned to minimise the direct impact of solar radiation, to soften the blow of harmful and unpleasant winds, and to optimise the use of shade, breeze, and water. They learned to designed bazaars and alleys covered to provide a desirable living environment for the people. The planners' objectives were achieved by the adoption of a compact urban form developing special street and alley patterns, and designing houses with court yards. (1)

In the morphology of traditional Iranian cities, the role of the Islamic religion has been very strong. The Islam, along with the environmental factors, has played an important role in making and the spatial pattern of traditional cities. The influence of Islamic values (apart from the urban architectural elements such as mosque and Hoseinieh) is evident in the form and structure of residential areas in traditional cities, for example: preventing direct contact between private spaces with public. The strong desire for privacy and tranquillity has resulted in design of spaces, which act as a barrier between private and public spaces. One of these important spaces is 'Hashti'. The 'Hashti' is an entry hall for 3 to 6 houses (Figure 79 and 80).

Courtyards are recognised as private space, the common space between entries of several houses ('Hashti') as semi-private, and the rest as public space. In a traditional residential area, the door of a house never opens to a public area directly. Contrary to the tendency of present planners, traditional architects

have designed traditional cities for the people, with high respect to the cultural values of the inhabitants. To provide a desirable living environment, they have worked with and not against the natural obstacles. The important factors in formation and development of traditional Iranian cities, and their design principles and elements studied in part two (chapter 2 and 3) summarises in this chapter.

### ***5.2.1 Important Factors and Elements in Formation and Development of Traditional Cities of Iran***

- A. Climate and geography**
- B. Urban elements and urban spaces**
- C. Urban structure**
- D. Skyline**
- E. Architecture and building type**

#### ***A. Climate and Geography***

##### **1. Natural-geographical situation**

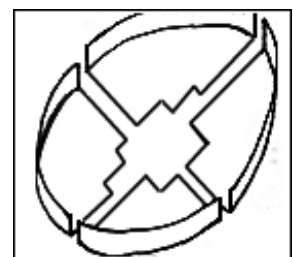
**-Geographical factors:** Shaping and physical development of the old Iranian cities primarily is subject to the micro-natural and the geographical environment.



**-Ecological factors:** Water has always been the condition for the survival of Iranian cities.



**-Defence strategy:** Defending the cities from possible attacks, has been an important factor in choosing the site of the cities.



## 2. Political Religious and commercial factors

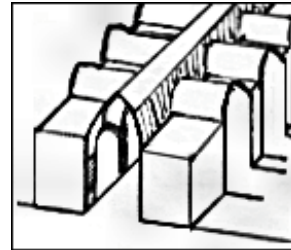
-Administrative and political factor: Geographical situation of Iran has motivated in centralisation of the powers along special political/administrative organisations.



-Religious factors: Some of the cities had important religious aspects. They were known as religious cities.



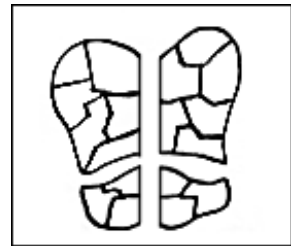
-Commercial factor: Bazaar has been the main urban element of the old commercial cities.



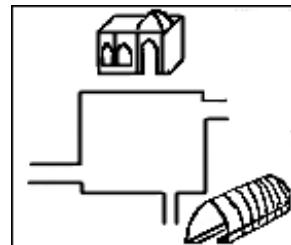
## *B. Urban Elements and Urban spaces*

### 1. Neighbourhood Typology

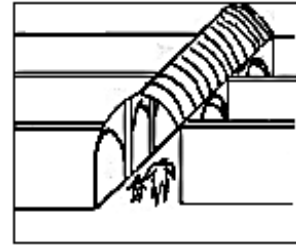
-Neighbourhood: The special urban fabric has helped the traditional Iranian cities to build a strong organisation system.



-Neighbourhood centre: Is a special system in provides the technical and social services in residential areas.

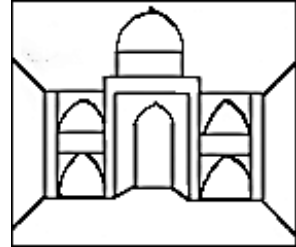


**2. Bazaar:** The bazaar is the most important social axis, and the main spatial link between religion, economy and politic in traditional Iranian cities.

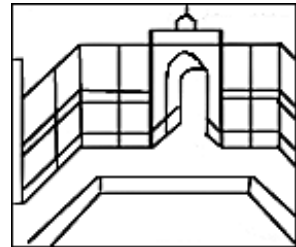


### 3. Religious spaces

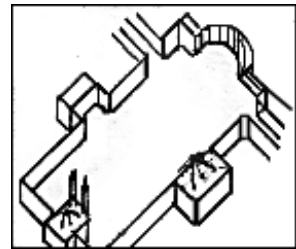
**-Mosque:** is the most important multi-functional religious element in socio-cultural, and physical structure of the Islamic cities.



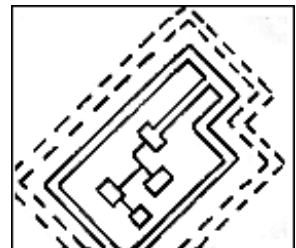
**-School (Madraseh):** Religious schools have always functioned in relation to the mosque.



**-Square:** The administrative military and ceremonial aspect of the square has been the main reason for its existence.

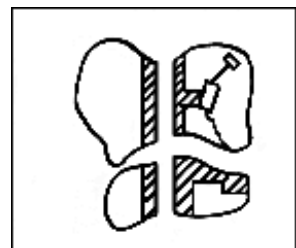


**5. Castle (Arg):** has been a military and a protective urban element against internal and external attacks.

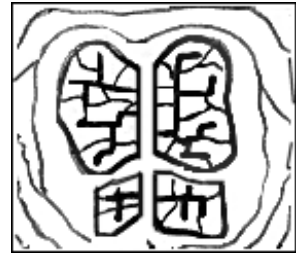


### *C. Urban Structure*

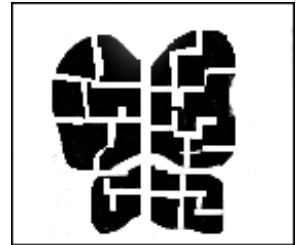
**1. General structure:** The close relationship of the religion, commerce and politic has formed the basic structure of traditional cities. and politic has formed traditional cities.



**2. Urban fabric:** The urban fabric of the traditional Iranian city is a physical reflection to the natural and the geographic situation of the city.



**3. Pedestrian network:** is a multi-functional communication system highly adapted to culture and climatic conditions of Iranian cities.



#### ***D. Skyline***

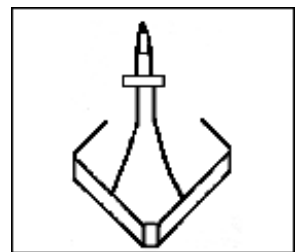
**1. Image of the city:** Effect of environmental factors and cultural characteristics on physical structure has provided the image of the traditional cities.



**2. Urban symbol:** of Iranian city is the main cultural and mental relationship between people and their environment. Urban symbol in traditional

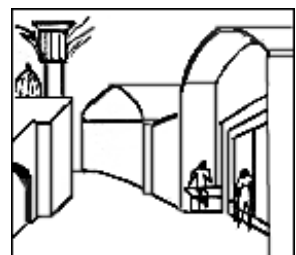


**3. Object of identity:** Character and identity of the buildings build the image, and play important role in the skyline of traditional cities.



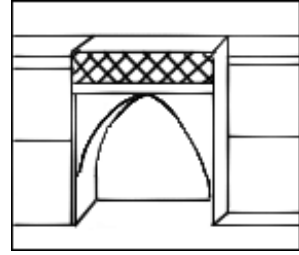
#### ***E. Architecture, Building Type***

**1. Building method:** Traditional building's form is a subject of climatic-geographical factor, socio-cultural behaviour and Iranian way of life.

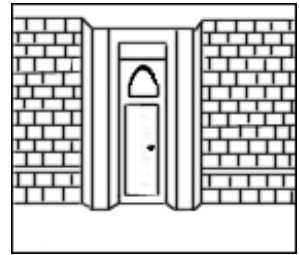




**2. Façade type: Cultural aspects, and the function of each building have highly affected its form and external facade.**



**3. Colour and materials: Unity in building materials and harmony in colour with surrounding environment has created identity and character of traditional cities**



### ***5.2.2 Design Principles and Methods of Traditional Cities in Dry Zones of Iran***

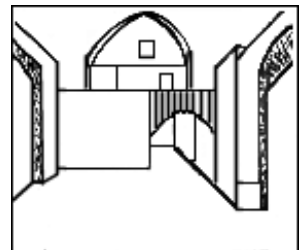
In the development of historic cities, natural-climatic aspects and cultural factors had the highest impact. The important design principles and methods of traditional cities in dry zones of Iran apply to:

- A. Public spaces**
- B. Semi-private spaces**
- C. Private spaces**

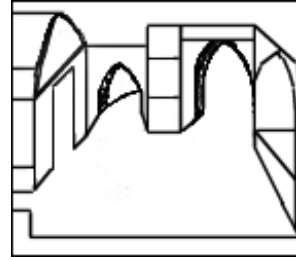
#### ***A. Design Principles of public spaces***

##### **1. Residential area**

**-Neighbourhood: Climatic and cultural factors have created the spatial structure of the traditional cities in hot and dry zones of Iran.**

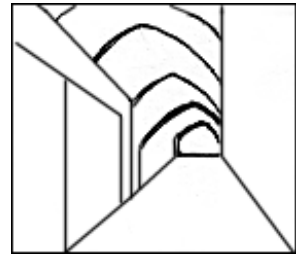


**-Neighbourhood centre:** In traditional cities each neighbourhood is supplied with city infrastructure and services.

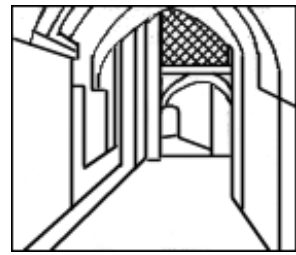


## 2. Pedestrian system

**-Bazaar:** is the economic centre and the main axis of the pedestrian system in traditional cities.

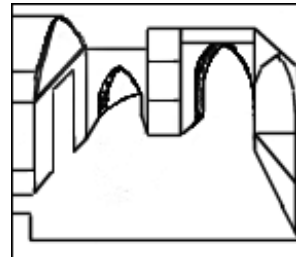


**-Covered passage ways:** The spatial variety of the communication hierarchy is the main characteristics of this organic system.

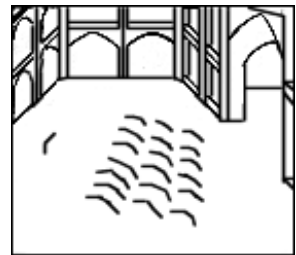


## 3. Square

**-Main neighbourhood square:** The square as the main public space represents services and cultural identity of each neighbourhood.

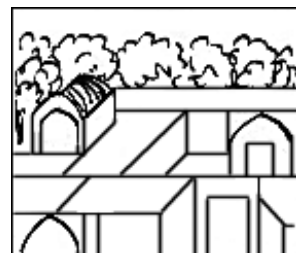


**-Religious open spaces:** such as Hoseinieh, function as secondary square in neighbourhood too.

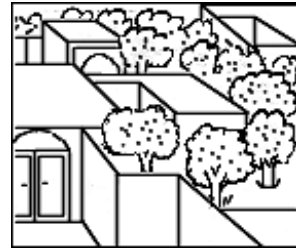


## 4. Gardens

**-Around the city:** Green belts around the living environments in the dry climate, are natural filters between the city and the desert.

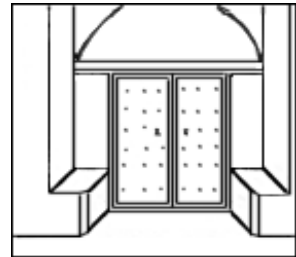


**-Inside the city: Distribution of small gardens inside the city provides a moderate and humid microclimate.**

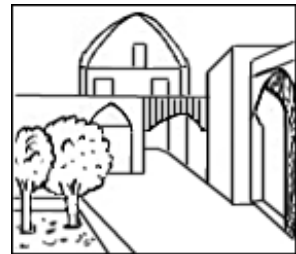


## 5. Architecture

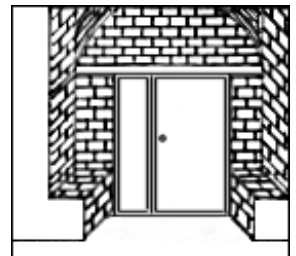
**-Building type: Traditional buildings reflect characteristics of their environment with regard to space form and function.**



**-Building method: Arranging different functional spaces around a central courtyard is the main design principle of public spaces as well as of individual houses.**

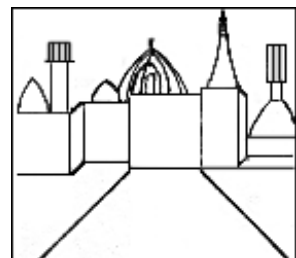


**-Building materials: The use of brick and plaster in façade of buildings create unity.**

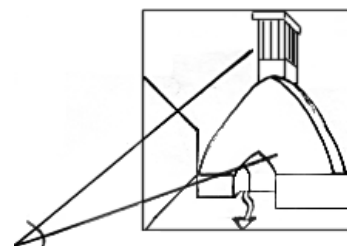


## 6. Individual buildings

**-Urban skyline: Single buildings such as wind towers and domes of the religious spaces are effective elements forming the skyline of the traditional cities.**



**-Urban symbol: Single buildings apart from their main function act as the major communication objects in the cities.**



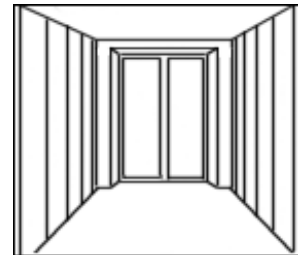
## ***B. Design Principles of Semi-private Spaces***

### **1. Semi-private Spaces**

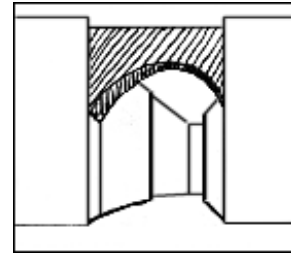
-‘Hashti’: is the main functional element between public and private space in traditional cities. It is a covered entry shared by three to six houses.



-Covered entry hall: Traditional houses have private covered entry halls to avoid direct contact with public spaces.



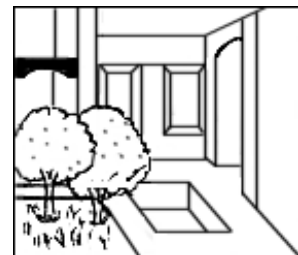
-Single arched roof: acts as visual element which separates the semi-private space of allies from public space of the passageways.



## ***C. Design Principle of Private Spaces***

### **1. Housing units**

-Central courtyard: Traditional courtyard is the centre of private activities. The sense of being secured in an open space is the main design principle of the central courtyard and the neighbourhood centre.



-High walls: apart from their mechanical role in providing micro-climates, guaranty the safety in the private space.



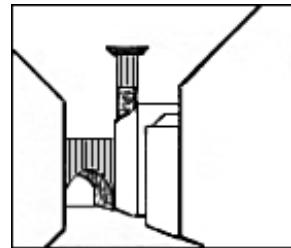
### ***5.2.3 Typical Urban Design Tools in Arid Zones of Iran***

#### ***A. On the level of the city***

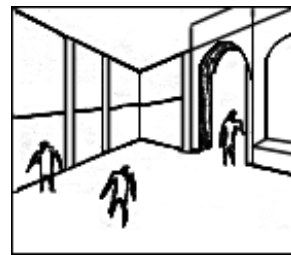
-The use of covered and semi-covered narrow passageways as cultural elements, and a local mechanical system for climatic protection.



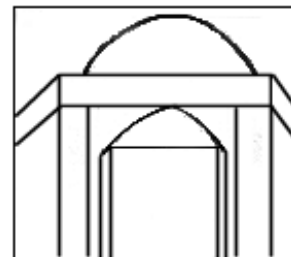
-Use of individual high buildings in forming the skyline of the city, and as an object of identification.



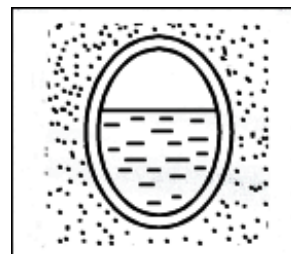
-Using high walls around an open space to provide shade, and a sense of security.



-Use of arched dome to protect against the heat of the surrounding environment.



-Use of underground water channels (Qanat system), to support the climatic to support the climatic balance of the city.

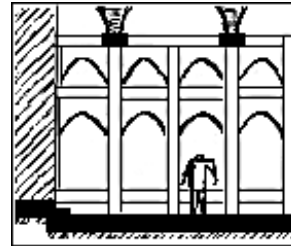


-Using trees as a protecting and filtering element in arid environments.



-Designing the level floor of the bazaar lower than the neighbouring areas to produce better air circulation.

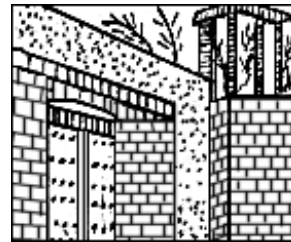
Ground level



-Designing the fabric of the city as a solid system to reduce effect of the desert

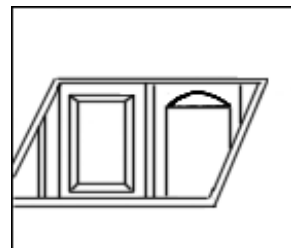


-Local building materials with their natural colour and low thermal capacity respond suitable to the desert climate.



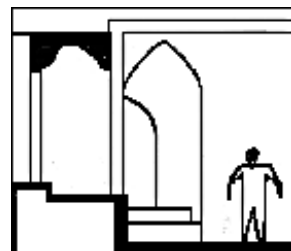
### ***B. In Private Spaces***

-The use of a central courtyard makes the endurance of sun and heat during the day, possible.

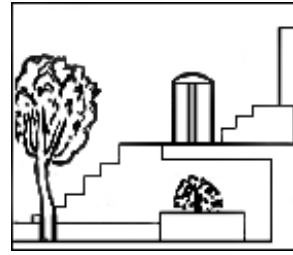


-Designing and building courtyards deeper than ground level as one of the easiest way to react to the local climate inside private spaces.

Ground level



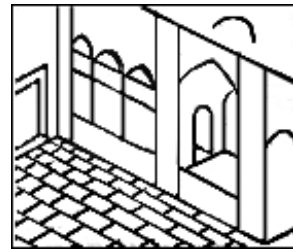
**-Use of shallow gardens inside the dwellings to improve the microclimate in private spaces.**



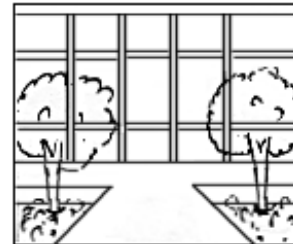
**-Use of high and arched ceilings to improve air circulation inside the closed spaces.**



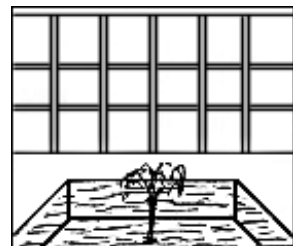
**-Designing the adjacent building elements of the courtyard in form of verandas to improve air circulation in these spaces.**



**-Trees and green as the most effective design element in providing shadow and filtration.**



**-Water as the vital element in life of the cities and a very important design element in providing a desirable microclimate inside the private spaces.**



### ***5.3 Summary of Part three: The Element and Design Principles of New Towns***

The summarized elements and design principles in section 5.2 indicate the importance of their role in formation and development of traditional Iranian cities. But what is important in this study is to find out which of these design principles support timeless nature to be able to reuse in the design of modern new town and cities.

It is obvious that many of these design principles (as Hashti) are not able to continue their traditional role in functional concept of modern planning and design system. But the strong role of Islamic culture in Iranian society make the adaptability of these design principles in design of modern new towns, possible. Design of modern new towns as Shushtar support this idea. In other words, Shushtar new town is an obvious example of the possibility to design modern living environments with traditional image.

The analytical study of the design principles of new towns about the elements and design principles of traditional cities gave a clear image of these modern cities and towns. For many modern architects and planners living in a new town as Shushtar means going backward and living primitive. But for the one who support alternative shelter it is living with “cultural identity”.

To emphasis the absence of cultural identity in modern new towns in different parts of Iran, compare to a modern new town with traditional characteristics as Shushtar, this part will do a comparative study base on the similar design concepts, used in chapter four.

#### **Principles of urban development**

#### **Principles in form and structure**

#### **Principles of urban planning**

#### **Principles of urban design**

#### **Principles of design in private spaces**

The aim of this comparative study is to indicate the power as well as the weakness of each design principle, also it will help to see the effect of each principle and method in design of the modern and Shushtar new towns. And hopefully will be a guide in choosing the right design principles and methods for the alternative suggestions in the next chapter.



**5.3.1 New Town's Design Principles Compare to each other**

**A. Urban Development**

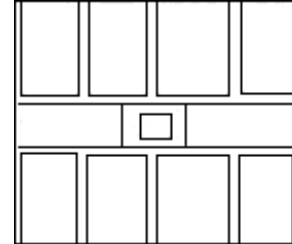
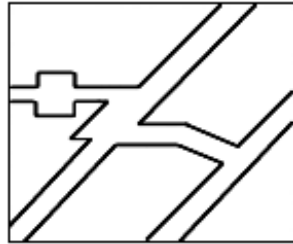
**Other new towns**

**Shushtar new town**

**Develop. Principle**

-City development on the basis of north-south, east-west access.

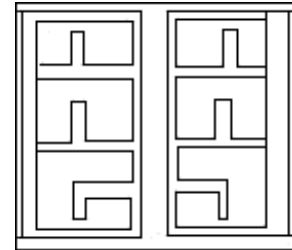
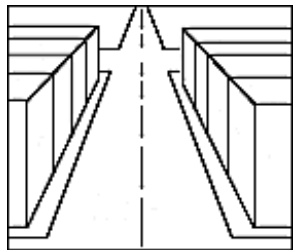
-Central east-west pedestrian boulevard as the main city axis.



**Residential Areas**

-Ignoring necessary separation of housing areas and transit system.

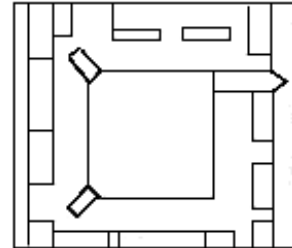
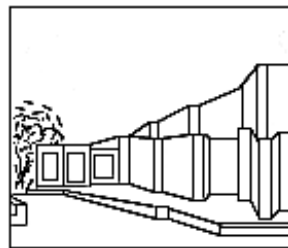
-Dividing residential areas into housing clusters.



**Neighbourhood Centre**

-Edge of the main streets as the modern neighbourhood centres.

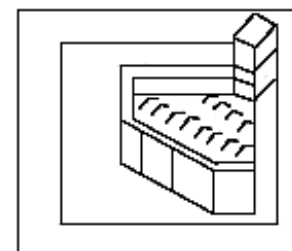
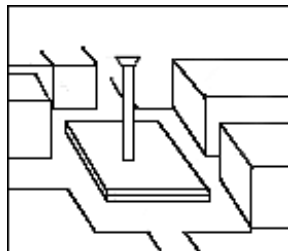
-Designing a central market place for daily shopping.



**Urban Symbol**

-Modern squares as urban symbol

-Religious spaces as urban symbol

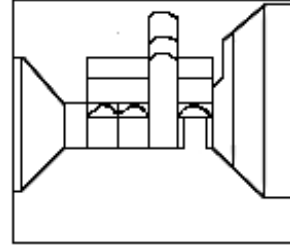
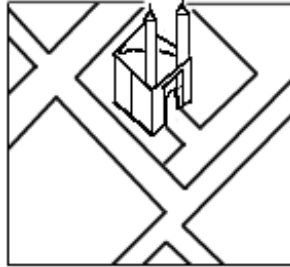


**Other new towns**

**Shushtar new towns**

-Religious elements as object of identity and urban land marks.

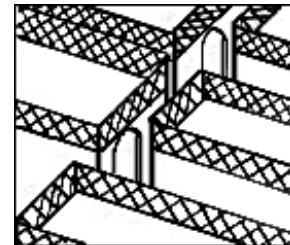
-Designing a central tall building as object of identity.



**Urban Image**

-Personal design ideas, confuse the image and identity of new towns.

-Cultural and climatic factors base identity and image of the city.

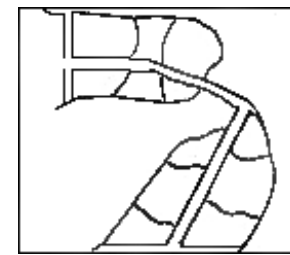
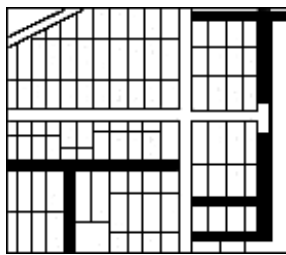


***B. Form and Structure***

**Urban Structure**

-Use of grid pattern, and block building, and wide streets with no concern for the climatic condition.

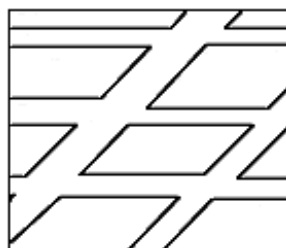
-New town in form and structure is a continuation of the old city.



**Urban Fabric**

-Wide and open urban fabric with straight streets and alleys.

-Housing cluster, tight urban fabric with narrow alleys.

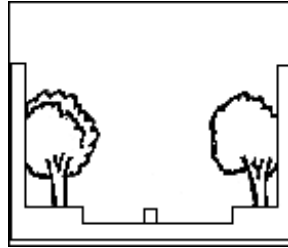


**Other new towns**

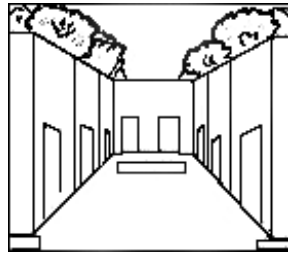
**Shushtar new town**

**Pedestrian System**

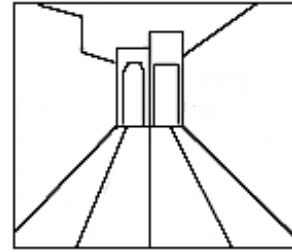
-Providing access is the basic design principle for alleys.



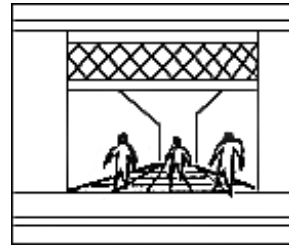
-Reducing contact of automobile with housing area increases community contacts.



-Segregation of the automobile from the internal community life.



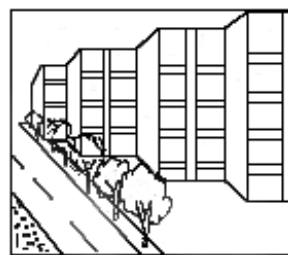
-To create a socio-physical entry conducive to collective community interactions.



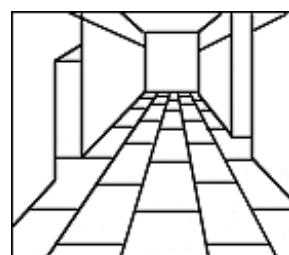
**C. Urban Planning**

**Cultural Aspects**

-Lack of socio-cultural character in spatial structure.

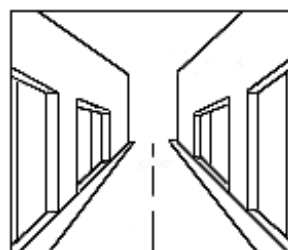


-Adaptability of modern environment with local way of life

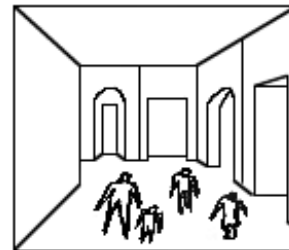


**Semi-p. space**

-Direct contact of private space with public areas.



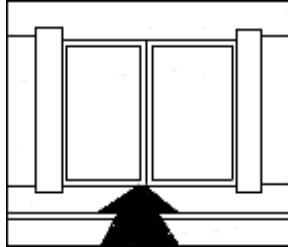
-The small open area between houses as a semi-private space.



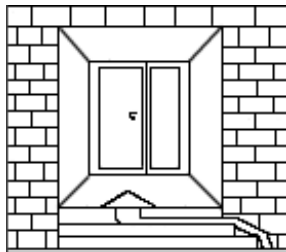
**Other new towns**

**Shushtar new town**

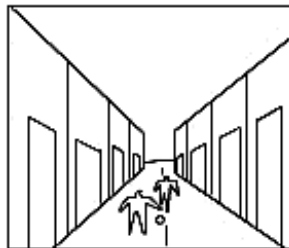
A. Direct contact of private space with public space.



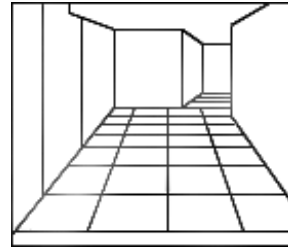
B. Indirect contact of private space with public space.



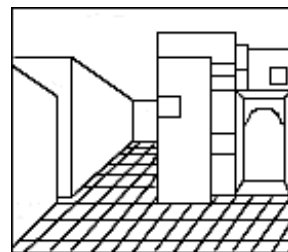
-Confusing the public and semi-private social functions.



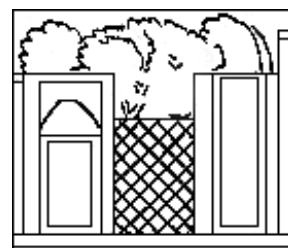
-Designing dead-end alleys to:  
A. Provide semi-private spaces.



B. Preserve privacy and identity of residents.

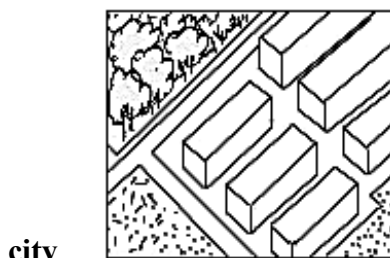


-Manifesting climatic and cultural values in design of buildings.



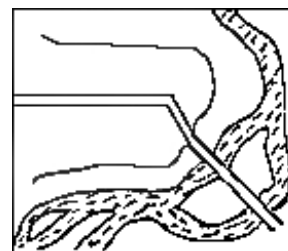
***D. Urban Design Principles***

**Greenness** -Use of greenery as an important urban design tool.



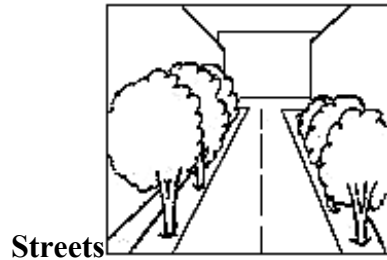
city

-Use of existing natural possibilities as urban design tool.

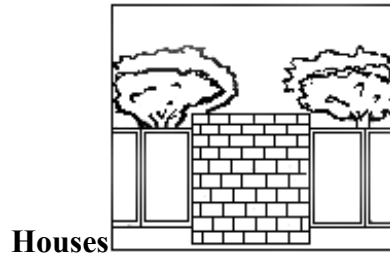
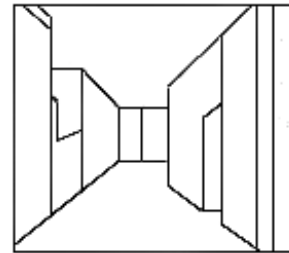


**Other new towns**

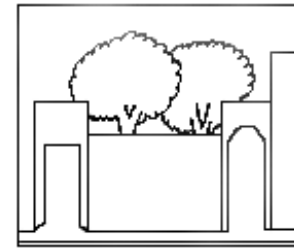
**Shushtar new town**



Streets



Houses



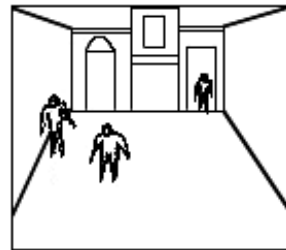
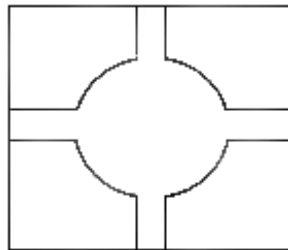
**Public Space**

-Designing open space in form of square:

-Sense of being secure in open spaces with:

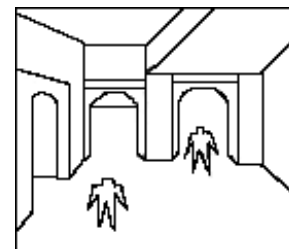
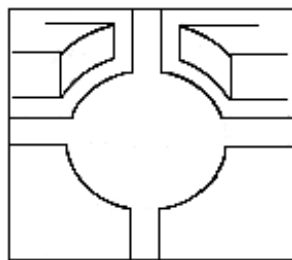
A. without enveloping element.

A. building as enveloping element.



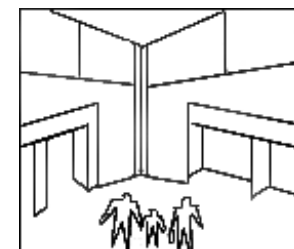
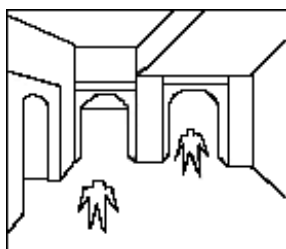
B. building as enveloping element.

B. tree as enveloping element.



-Concept of feeling safe in religious spaces.

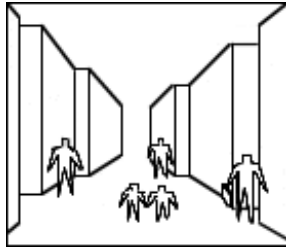
-High walls strength the sense of safety in public spaces.



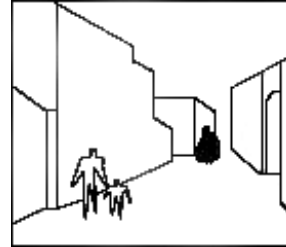
Other new towns

Shushtar new town

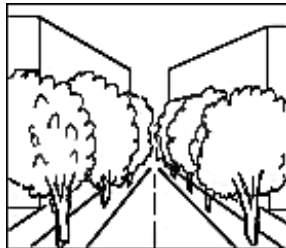
**High walls** -Walls of high rise buildings as protecting elements in modern pedestrian streets.



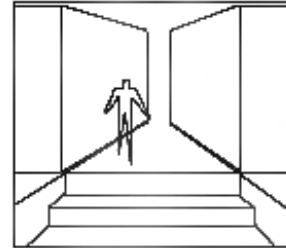
-Use of high wall in pedestrian streets to protect people against heat.



**Mechanic System** -Use of trees to improve micro-climate

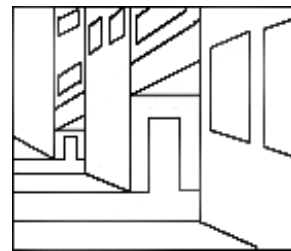


-Designing narrow passage ways to provide more shade in summer.

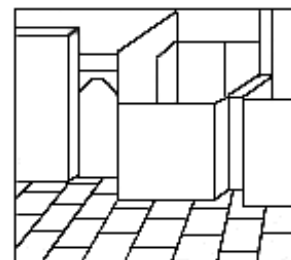


**Cultural-Architectural element**

-Use of semi-public corridors in buildings as cultural symbol.



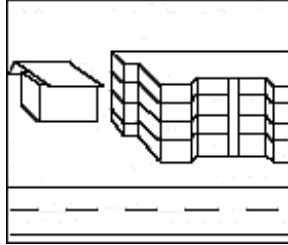
-Arched entry of houses as a cultural and climatic symbol.



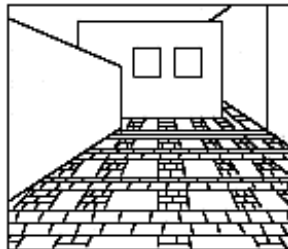
**Other new towns**

**Shushtar new town**

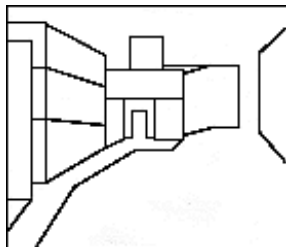
-Use of prefabricated building materials for modern housing .



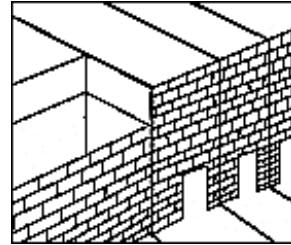
-Paving alleys with local building materials to achieve harmony with environment.



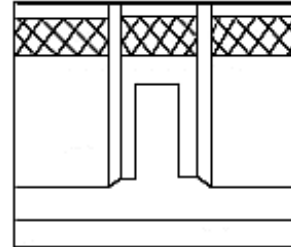
-Lack of cultural harmony in facades of buildings.



-Using local building method and material to achieve unity in form.



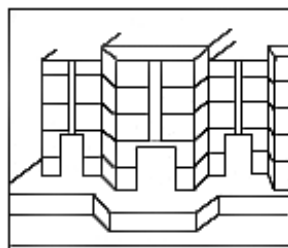
-Use of indigenous brick work to achieve unity in external facade.



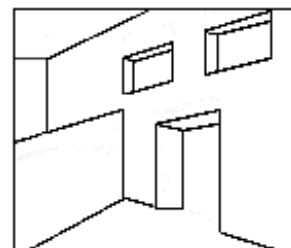
***E. Private Space***

**Court-  
yard**

-High rise apartments as the prevailing form of housing.



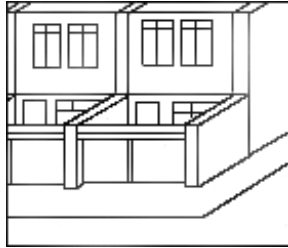
-Courtyard as an open - to - sky room.



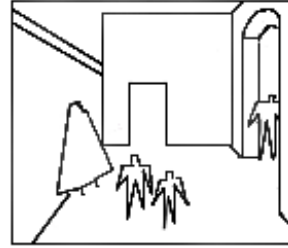
**Other new towns**

**Shushtar new town**

-Court yard as an cultural element and private space.

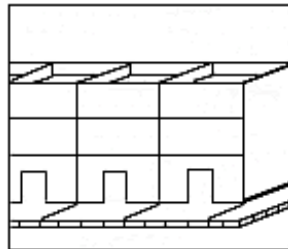


-Using high and arched walls to allow air circulation.

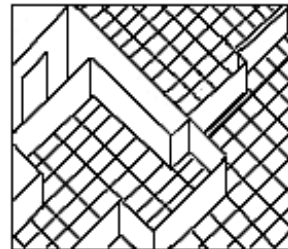


**Roof**

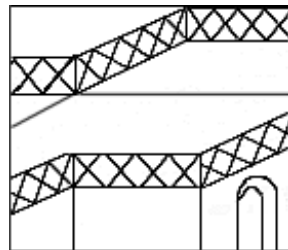
-Roof without any special form and function.



-Roof of the houses in form of roof terrace.

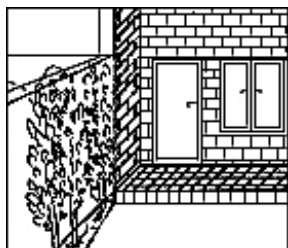


-The roof terrace with screening walls to provide privacy.

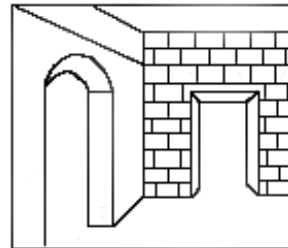


**Colour**

-Normal brick as the most useful decorative element for interior facades.



-Use of light colour building materials on interior facades to reduce heat reflection.



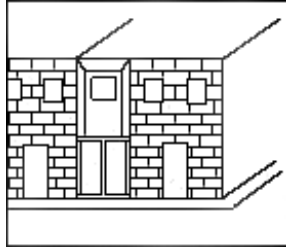


**Other new towns**

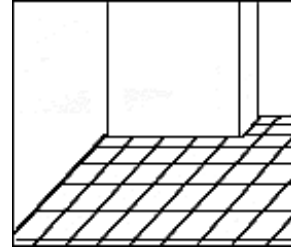
**Shushtar new town**

**Building Material**

-Use of modern building stones on external facades of buildings.

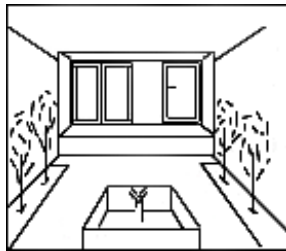


-Use of local material to pave courtyards to improve micro-climate inside private spaces.

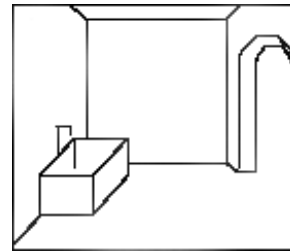


**Water**

-Important design element for improving micro-climate in private spaces.

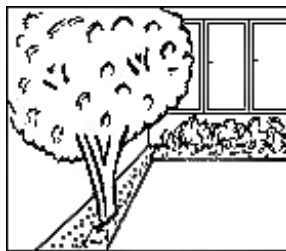


-Important design element for improving micro-climate in

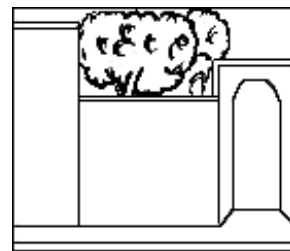


**Tree**

-An aesthetic and inseparable cultural element.



-Gardens as open spaces for multi-function purposes.



## **5.4 Conclusions**

Study of design elements and principles of traditional cities, and the analysis of the design criteria of modern new towns compare to Shushtar new town emphasises the need for a new strategy in planning and design of new towns and cities. For Iran it is necessary to change the strategy of using the past to help towns and cities a political strategy for modern planning system.

The strategy of using the past experiences to help designing towns and cities does not simply mean choosing some of these studied principles and elements and suggest them for designing future new towns or improvement of existing cities. But the important is to consider their role from:

### **A. Planning**

### **B. Urban-Architecture and**

### **C. Socio-Functional**

aspects in design of a new environment. Then, based on individual requirements of each settlement and climatic-geographical possibilities, to choose suitable design principles and elements.

As this study showed, many factors, elements and principles were involved in the qualitative aspect of traditional cities. So it would be logic to choose the factors, elements and principles, which can be adapted to situation and possibilities of each area. The most important ones, which have a timeless nature and should be considered in design of a new living environment, are:

### ***A. Planning aspect***

The main important aspects in planning a new settlement or improvement of a part in a city is attention to the following factors:

- Topography**
- Ecology**
- Local climate**

These factors influence directly the build up structure and fabric of a settlement.

### ***B. Urban-Architectural aspect***

The urban-architectural aspect of a design should be able to express the cultural values of a society in physical form. In this context, attention to the following factors:

- Building type
- Building method and
- Single buildings

build a clear image about the form of semi-private spaces, private spaces and spatial quality of open spaces in a city.

### ***C. Socio-Functional aspect***

The form of each city element should clearly define its function. Each space or building should consider the social and cultural activities of people. Urban spaces in their final form are the social spaces, which should represent the cultural values of a society.

- City elements and
- Pedestrian network

of a residential area should design in response to the daily activities and way of life of the people. Design of these urban open spaces influences the social structure and communication possibilities of the residents.

With regard to these aspects, the suitable design methods and principles in planning and design of new towns can be achieved. Based on the above conclusions a theoretical framework for the chosen timeless design principles and methods in next chapter will be suggested.

### **Footnotes**

1. Kheirabadi, M., *Iranian cities, Formation and Development*, University of Texas, USA 1991.
2. Based on definition of Statistic Centre of Iran, the settlements with more than 5000 populations are recognised as city and can have their own municipality

## **6. Recommendations**

### **6.1 General Considerations**

In every development programme, from designing a new town to renovation of an existing area, the following aspects should be considered as general guidelines.

-Planning for people and not for the cars. Growth shouldn't be the goal, but quality of life.

-Planning should address all income groups, and not low-income people separately.

-Facts and realities should be the basis of every decision making process. In this matter architect and planner should have a good knowledge of environmental factors and the needs and way of life of the inhabitants.

-In renovation of existing parts or designing of a new town, architects and planners should familiarise themselves with the appropriate technology. In creation of spatial entities, they are the responsible persons for choosing the kinds and levels of technology. There should be a positive relationship between the new technologies and the indigenous ones.

-Although design of modern settlement should concern traditional methods and principles, the priorities in every single planning should be recognised.

-It is necessary to recognise that standard of living in every society is different and that it is highly affected by socio-cultural matters.

-Policies and strategies of taxation, new ways of financing, new programmes, and awareness of social benefits can stimulate the development of historic districts and can make rehabilitation and preservation attractive to both private and public investors.

### **6.2 Towards a suitable Environment for Historic Citadels**

The main part of this dissertation concentrated on the past and present situation of major cities. For a successful future planning, experiences from the past are necessary. This dissertation studied the existing problems of the historic cities, and the new towns in context of urban development. Although there may not be a direct relation between these two concepts, both concern the big and the major

urban areas of the country, and play an important role in their development. Concentration only on the development of new towns as the main future planning aim is neglecting the existing old areas. In fact historic centres should not be seen as end and new towns as start in modern urban planning system. Historic cities are the existing truth which can help us to build desirable living environments in present and future cities. Historic citadels are still the cultural symbol and identity of major cities. Creating a historical continuity in modern urban planning without conserving the historic areas is not possible. The revitalisation of the spatial and architectural quality, gained through experiencing the historical nature of the place is a necessary aid to forming the future cities. (1)

Conservation does not mean changing the historic part to a museum, but through new roles it can be reactivating in urban life of the city. The main problems of historic cities can be summarised in few words: poor accessibility, lacking services and badly maintained facilities. As providing access to these areas proved to be destructive, seems to be the only solution, which of course should be tough very carefully. As John Warren says: ‘The most satisfactory answers in conservation are to be achieved by control of modern requirements in such a way as to minimise the change demanded of the historic fabric’. (2)

Since the beginning of 19<sup>th</sup> century, the preservation and protection of historic buildings came under the consideration of some European countries. The French government has been concerned with this issue since the beginning of the 19<sup>th</sup> century, and the interest in historic buildings in Britain also dated nearly the same. (3) ‘Preservation’ and ‘rehabilitation’ are new concepts in Iranian urban planning system. In fact this concept mainly applies to single buildings. Preservation and rehabilitation of an urban area has come recently under consideration. Ministry of Housing and Urban Development in a joint research work with cultural Heritage Organization of Iran on historical citadels explains: ‘an examination of the historic fabric of the traditional cities proved that the decomposition and abandoning of such monuments result from the absence of urban facilities. To provide urban facilities for the inhabitants of dated quarters, the only positive and wise solution is to regard the restoration and reconstruction of these precious buildings in terms of their new utilities’. (4)

Although the main attention is principally on single buildings, the work as ‘Urban Design in Inner Core of the Historic city of Yazd’, and ‘Conservation Programme of Nain city’, and the ‘renovation Jamaleh neighbourhood in Isfahan city’ (Figure 162-173), shows the attention of Ministry of Housing and Urban Development of Iran on the concept of conservation and rehabilitation of old citadels of historic cities. Considering preservation, rehabilitation and renovation issues, the Iranian cities divide into three general categories:

-The first group includes major cities with uncontrolled population growth in the last few decades. Tehran city with its uncontrolled population growth is the only city that comes under this category. Implementation of successful planning programmes for this city seems to be impossible. But taking suitable policies as redistribution of excessive population, or taking planning actions such as renovation and redevelopment programmes in existing urban spaces, can bring order and form in its future development.

-The second group includes the metropolitan and historic cities of the country. These cities in spite of their high population growth still develop in a clear and controllable direction. These cities, because of their historical values, need special attention, to prevent future uncontrolled development, and protecting their historic parts from demolition and attacks under any name.

-The third group are small cities which as discussed before, for different reasons are not still in a fast evolutionary process of socio-economic changes. Their physical structure has kept its traditional forms. Their historical centres possess special potentials, and play important roles in the daily life of the city. This group has a capacity to accept changes. But sudden changes, which may affect their harmonic development, should be avoided.

### ***6.2.1 Considerations for Historic Centres***

#### ***- The planning environment***

The core of every historic city has a life based on many years of history and human experience. This centre is also a living and interesting part of the whole city. These areas need concepts to help them to preserve what is left, nourish them what they lack and need, and develop them as a part of the city. These plans should be able to respond to the needs of a great variety of the people. The plans should serve the communities and should contribute to the revitalisation of the old centre. Such programmes need a mutual co-operation between the organisations involved in planning and the inhabitants. (5)

Apart from some regulations by the Ministry of Housing and Urban Planning and some directions from city municipality, and Cultural and Historic Monument Organisation, there are no other criteria or standards that can be used in repairing, improving or developing programmes in historical areas. In other words, the execution of such programmes relies mostly on personal experience and academic background. Moreover, there is a lack of co-operation between various organisations, preventing the success of such programmes. Considering the existing co-operation problems, there is a need for a committee to act as an

information, resource and assistance centre. This authority, could co-ordinate all activities from of the organisation involved. For the importance of historic areas, following planning aspects should be considered.

--Alternative concept plans should be considered with particular reference to each specific area.

.  
-Working in historic centres needs special interest, and most of all, knowledge of the history.

--The size of planning areas should be adjusted so as to be able to control its preparation and implementation.

--Alternative plans should not contradict the tradition and existing way of life of the people.

--A concept plan should structure the relationship of a renewed citadel based on the important aspects of use, tradition, and share of economic activities.

--A concept plan should combine different aspects of revitalisation, and it should be the result of a dynamic interaction between the physical spaces and the people.

--A plan for a historic core under whatever name, should include the possibility of improving the existing urban system and living environment. Most important is control and management of the implementation.

--A plan should present a structure to be used by people and organisations of the city, in their effort to raise the quality of life for all who live in this historic part.

--In any planning programme, these areas should be seen, as existing valuable re-sources, not some barriers for the modern urban planning.

--The conservation and rehabilitation plan for the historic fabric based on detailed assess of each area.

--The target in a conservation or rehabilitation plan in a historic area should be protecting the integrity of historic fabric.

--The main aim of each concept plan besides improving the quality of life in old areas should be supporting the historic continuity and revitalisation of the traditional way of life. In this way, a historical centre will always remain an interesting part of the city.

### ***- The Physical Environment***

--The old buildings are cultural and national heritages. The urban elements as Mosques, public baths, water reservoirs, are still important urban landmarks.

--Many of these buildings still could be combined with new developments to establish a meaningful linkage between old and new. Preservation, restoration, or recycling play an important role in enhancing the scale of the area, and the character of the environment.

--Old and new must function and support each other. This union of past and present must occur as conscious decision to guide future changes in historic cities.

--In the old areas most of the urban elements or spaces are under-utilised or are left alone to them. Life can come back to them through revitalisation programmes that should not only cover physical aspects, but functional too.

--The historic core of each city should continue to be a good place to live in, and simultaneously, a cultural heart for the city.

--Unused and vacant spaces, and ruined buildings have negative effects on the area itself and on streets and spaces that connect the old and new parts.

--New buildings can begin to fill the vacant spaces, unused areas and empty lands. The existing fabric of these areas should be preserved and new development should produce a more cohesive environment.

--The old area must become an urban neighbourhood, which offers liveability to people of various income levels, not just poor people who have to live there because they do not have alternatives.

--To minimise the damages on structure of historic citadel whether it comes under the name of development, rehabilitation or other physical plans. The existing traditional fabric should be considered with respect to its historic value.

--Rehabilitation of existing repairable spaces.

--Substitution of unprepared and inconsiderable public building and housing units by typologically related new units.

--Reuse of open spaces for residential car parks.



--Re-use of ruined or vacant plots for communal facilities as primary school, secondary school, high school, health facilities or neighbourhood centre.

--Using the typology of various damaged bazaar sections to be reconstructed for open shopping street to covered alleyways.

### ***6.2.2 Examples of recent Renovation and Improvement activities in Historic Cities in central part of Iran***

Since last two decades, the Islamic countries after their fast modernization phase, begun to pay attention to the conservation of their remaining heritages and renovation of the historic areas. Cities as Mecca, Medina, Baghdad, Fez and Aleppo are notable examples of these historic cities. Stefano Bianca studies urban development of these cities in his book 'Urban form in the Arab world'. He accurately illustrates the practical and physical consequences of the current conflict between conventional forms of modern development and the differently structured urban fabric of historic Islamic cities. What he discusses as the results, are not merely technical problems which could easily be resolved at a professional level, but much deeper contradictions, rooted in diverging philosophies, ideologies and cultural attitudes. (6)

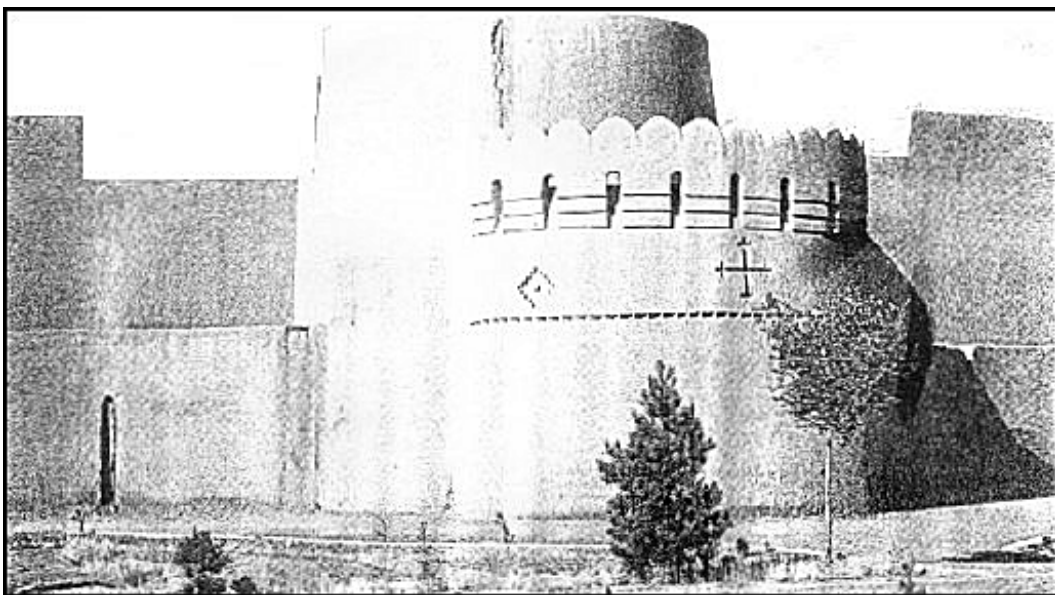
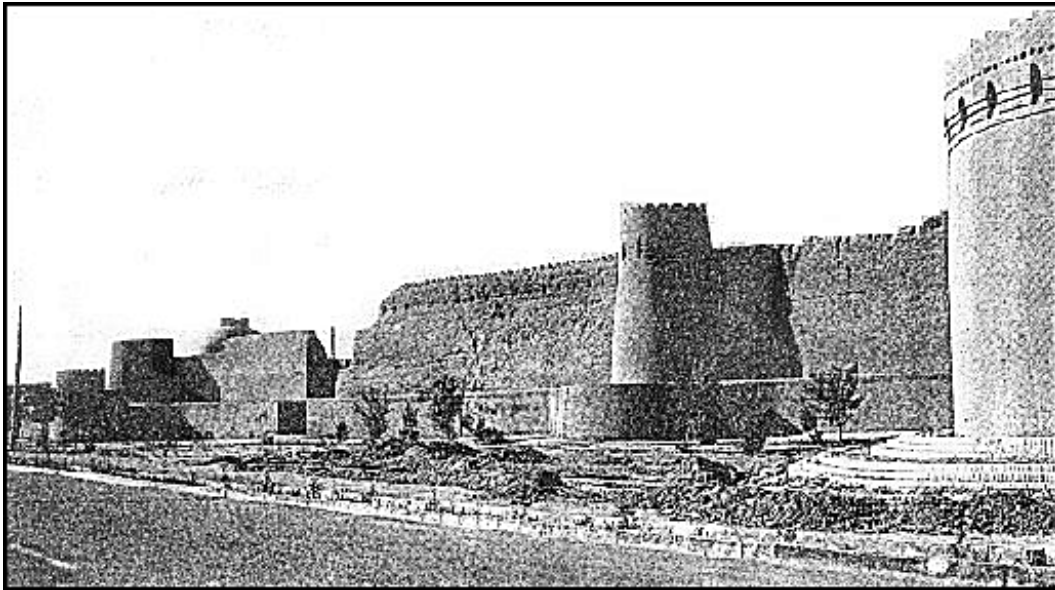
The renovation or improvement programmes in historic areas should not result in unexpected transition. Attention to the cultural attitudes of residents is an important issue in this matter. The main aim in providing development plans for historic cities or areas should not be change, but improving and providing better living standards. Sometimes these aims can be achieved by small and simple actions in a very short time. The main aim should be provision of urban facilities, infrastructure and sanitation of these areas with minimum damage. A very important point in this matter is the size of these activities. Provision and implementation of general plans need time, experts and enormous costs. Considering the size of urban areas on the one hand and economic situation of the country on the hand, provision of general plans for all historic cities even in the long term seems to be far from reality. Therefore, as Dr. Falamaky suggests, it would be more realistic to consider renovation and improvement activities which cost less, and are feasible in shorter time as attention to: (7)

- Technical plans of repair, preservation and sanitation
- Ornamental, decorative plans,
- Reconstruction plans,
- Architectural repair plans for specific areas
- General plans for repair

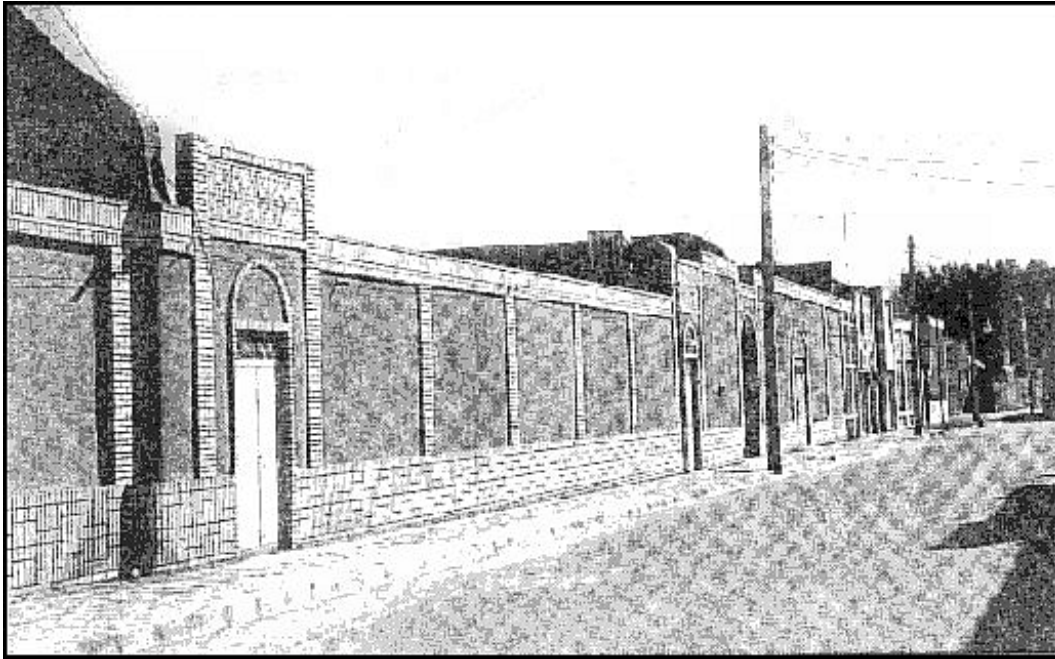
Historic centre of Isfahan and Yazd are between the most important cases in Iran. The aim of the revitalization and renovation plans in these cities has been reviving their past image, restoring the ancient parts, which still survive, and to adapt the traditional fabric to use in modern life.

The important activities have done recently to reach these aims are:

- Restoration the ancient parts, which still survive (Figure 162).
- Redesigning the historical fabric based on its traditional image (Figure 163,164).
- Unity of external facade through use of traditional building materials and local architecture (Figure 165).
- Construction of new buildings with respect to traditional values, building materials and building forms to help the historic continuity of the area (Figure 166,167).
- Improvement and reconstruction of the neighbourhood bazaar in traditional form (Figure 168).
- Repairing and using stones to pave the allies.
- Using existing open and ruin spaces to provide accesses.
- Providing cultural and service requirements through re-using the empty spaces (Figure 169).
- Improving ruin areas to green spaces (Figure 170, 171).
- Repairing and reusing the old citify elements (Figure 172).
- Renovation and improvement of traditional houses for new activities. Reusing of some large houses in the historic centre of Yazd and Isaac is an interesting attempt. One group of contiguous houses is being reused as school of architecture or office; this is an inventive and appropriate use for architectural structures that would otherwise have been abandoned and left to decay (Figure 173). (8)
- Providing parking places through using existing ruins and opens spaces.



**Figure 162: Restoration of the city walls of Yazd**  
Source: Environmental Design, "Iranian Architecture in search for a new identity, 1996.



**Figure 163: Redesign of part of the historical fabric of Yazd city.**  
Source : Environnemental Design, 1996.



**Figure 164: Redesign of historic area behind Naqshe Jahan Square in Isfahan city.**  
Source: Author, 1995.



**Figure 165:** Renovation of the facades of dwellings with local building materials to preserve the image of traditional architecture in 'Jamaleh' neighbourhood in Isfahan.



**Figure 166:** New constructions with local building materials to preserve the historic continuity in 'Jamaleh' neighbourhood, Isfahan city.

Source: Author, 1995.



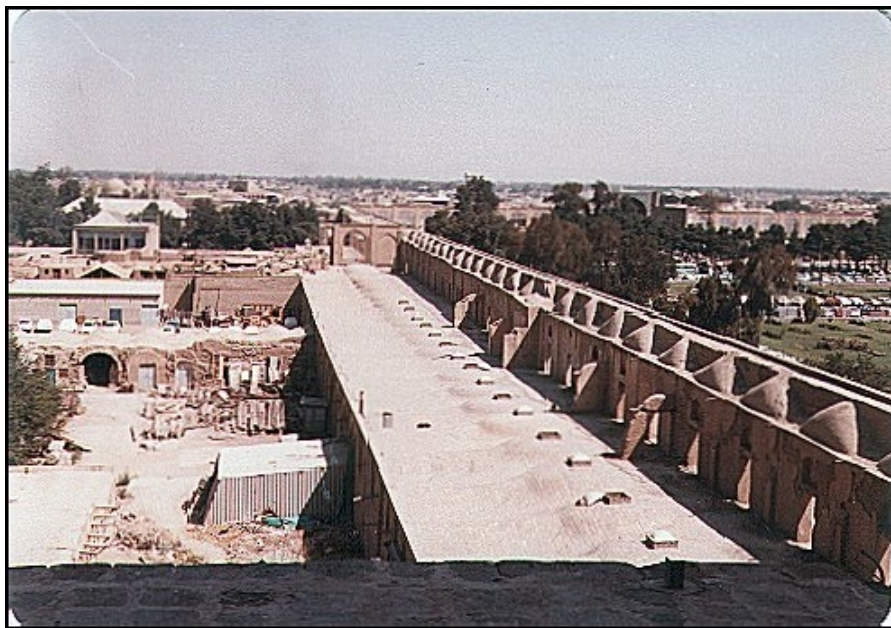
**Figure 167: Construction of new buildings in traditional form. The new Administrative building in Isfahan city.**



**Figure 168: Reconstruction of Neighborhood bazaar with respect to its traditional form in 'Jamaleh' neighborhood in Isfahan city.**  
Source: Author, 1995.



**Figure 169: Providing new functions for under utilized traditional buildings; changing of an old public bath to library, in ‘Jamaleh’ neighbourhood in Isfahan.  
Source: Author, 1995**



**Figure 170: Developing ruin areas to parks and gardens. The ruined background of historical square of ‘Naqshe Jahan’ in Isfahan city in 1981.  
Source: Author, M.phil thesis, 1981**



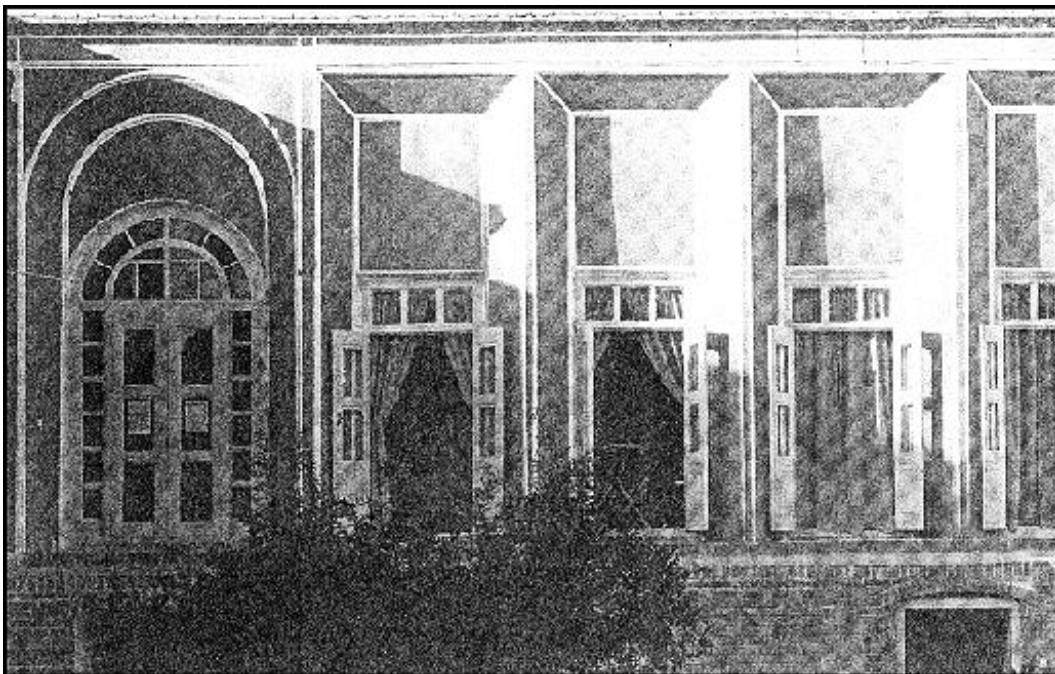
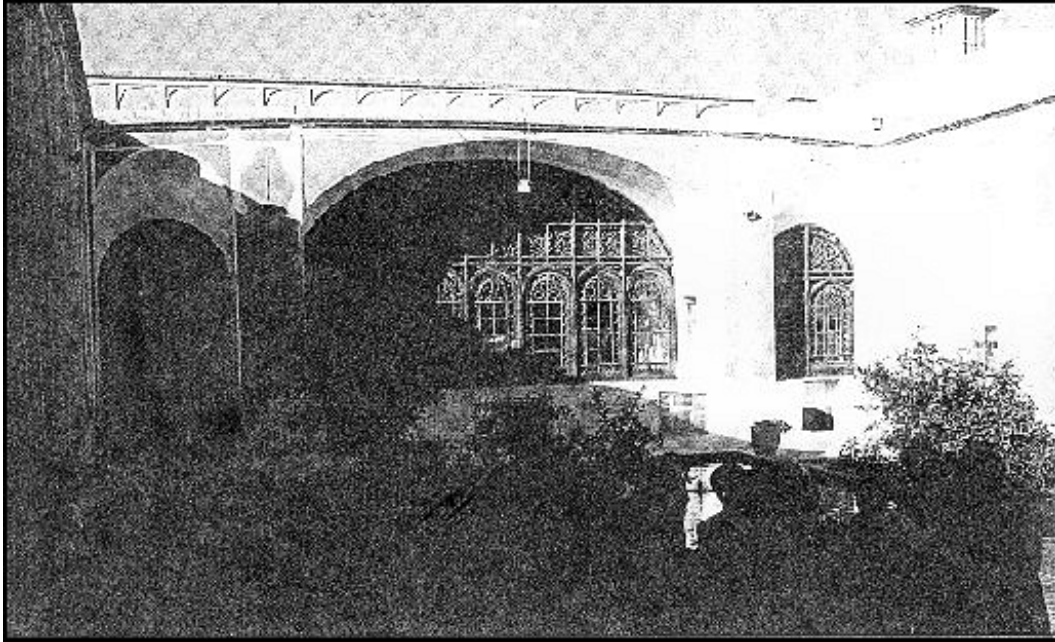
**Figure 171: The background of ‘Naqshe Jahan’ square in Isfahan in 1995. The ruined areas have developed to Recreation Park.**



**Figure 172: Repairing and reusing the traditional urban elements is an effort to bring back the historic identity. Alavi bazaar in Isfahan city.**

**Source: Author**





**Figure 173: Revitalization of a traditional house in the historical centre of Yazd and reuse as a school of architecture is an effort to renovate and improve the valuable traditional houses for new activities.**

**Source: 'Environnemental Design', 1996.**

### ***6.3 Planning and Design Aspects of New Towns***

#### ***6.3.1 Planning Guild lines***

- New towns should be planned as a part of national and regional programmes.
- The need for infrastructure should be clear before any planning action.
- Every new town should be planned as a self-sufficient unit.
- To give more value to qualitative aspects of planning and design, planners and architects should have a better understanding of cultural values and way of life the future residents.
- Design methods and principles of new town should be chosen with respect to cultural and design characteristics of the region.
- A pleasant and human living atmosphere can be provided through using modern architecture combined with traditional elements.
- Public transport is important in the design of new towns. It must be planned and developed with regard to urban public and semi-public spaces.
- Housing clusters should be tight, integrated with transport, and designed for pedestrians containing a variety of spaces and activities.
- The movement of people, not vehicles, must have the first priority in urban transportation planning.
- Streets should be used in a variety of ways.
- Public transport and pedestrian corridors through urban space must be reserved before residents move in.
- Streets and pedestrian walkways are the main elements of public and semi-private spaces of a city.
- The semi-public environment and transitional space must be better understood and should become a fundamental consideration in progressive urbanism.
- Cultural and environmental issues are important when building types and building material is chosen.

### ***6.3.2 Alternative Design Proposals for New Towns in Iran***

The methods adopted here in order to achieve a solution and the techniques used to visualise them are of importance and are therefore summarised here. Based on the conclusions of chapter five (section 5.4), a theoretical framework for the design methods and principles, which contain a timeless nature, is suggested. The concept of this theoretical framework is used to establish the basic structure of proposals, and is used to identify the significance of these timeless elements and principles with regard to function and appearance. Examples of the existing situation and alternatives suggested allowed the investigation of the role of each element and design principle.

Alternative proposals were presented in the form of simple drawings, to assess the visual impact of each timeless element and principle in a desirable environment. Some of these drawings were done based on existing spaces, others were not necessarily related to a specific area.

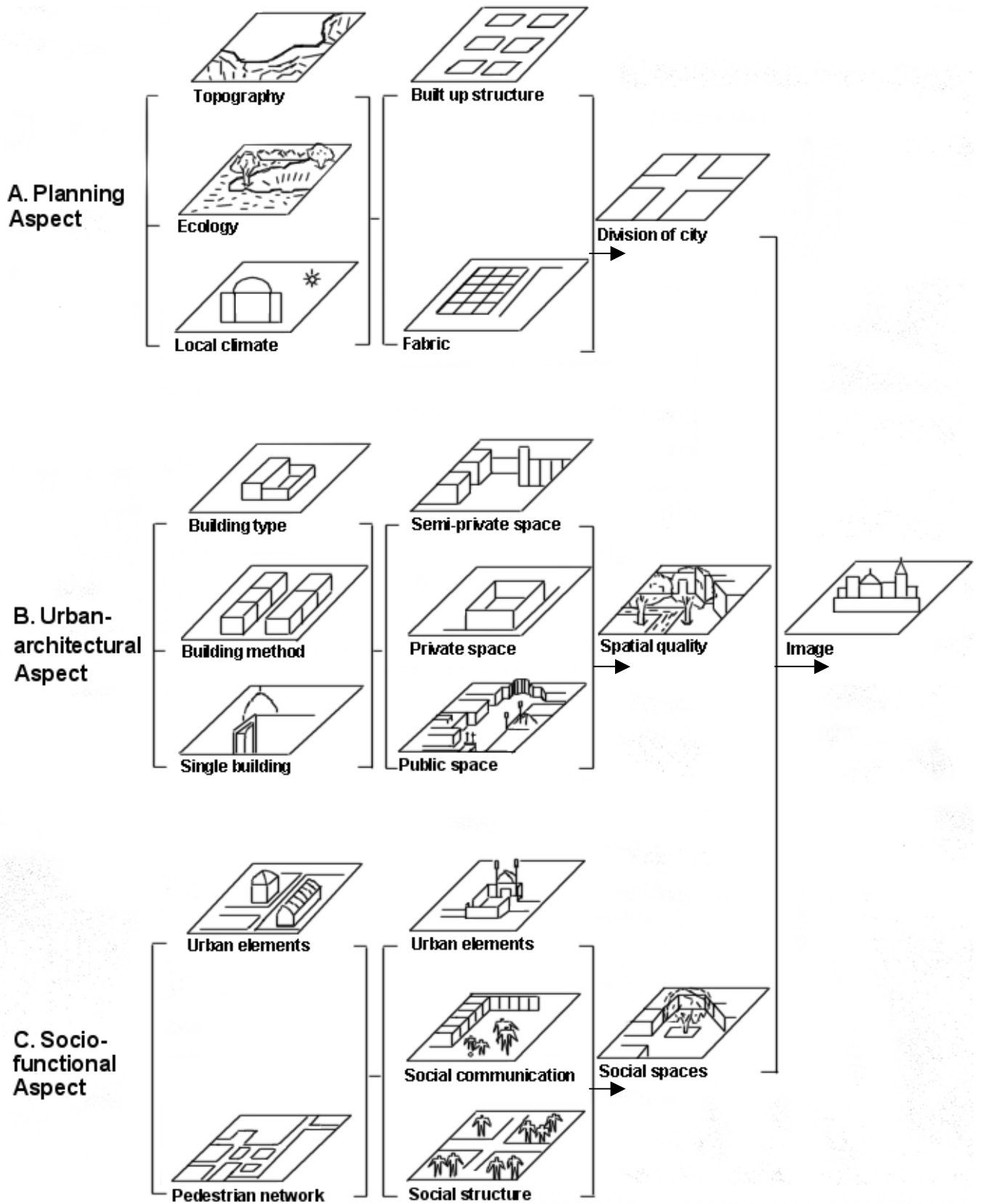


Figure 174: The suggested theoretical framework for timeless principles and design methods of traditional Iranian cities.

### ***A. Planning Aspect***

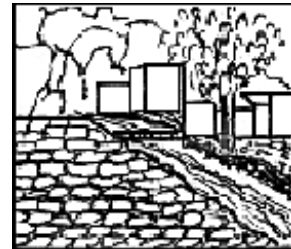
**-Topography:** The location and pattern of settlements in Iran are highly dependent on geographical factors. These factors are interdependent and interrelated. To plan development pattern of new towns in different regions of the country it is necessary to understand the complex of forces, which influence the location of the settlements.

**-Micro-natural and topographical realities basically determine Physical development trend of a city.**



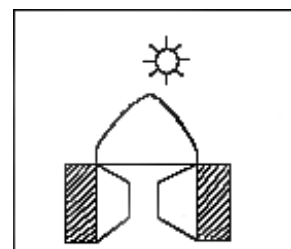
**-Ecology:** Ecology is one of the most important factors in choosing location for a settlement in Iran. This geographical factor is in fact a constraint when considering the optimal location of a new town. In many areas shortage of water (mainly in summer) has put the large cities under pressure. Development of new towns in such areas not only doesn't help the re-organization of population, but also add to the problems.

**-Importance of water in existence of settlements in Iran, is a very basic planning fact in choosing the location of new towns.**



**-Local Climate:** Iranian platitude consists of different climates. From Caspian sea in north to Persian Gulf in south, there are remarkable differences in climatic conditions. Each climatic zones has its environmental constrains and problems when concerning development of settlements. For a successful urban planning and design of desirable living environments, the local possibilities and appropriate technology of each region should be studied carefully.

**-Existence of different climatic categories in Iran, emphasis the important role of local climate in design of new settlements in areas.**



**-Build up structure:** Planning a clear general structure prevents confusions in future development. For example in 'Shushtar' new town the central east-west pedestrian boulevard which is planned as the main urban axis, reminiscent of the bazaar in traditional cities.

**-Preventing the use of transport as the main urban structure. Existing natural possibilities such as rivers is a noticeable alternative to an urban axis.**



**-Fabric:** Micro-geography and local climate are among the most important factors in determining the fabric of a settlement. The power of cultural and social aspects of the Iranian way of life proved to be as strong as the other factors in determining the fabric of Iranian cities.

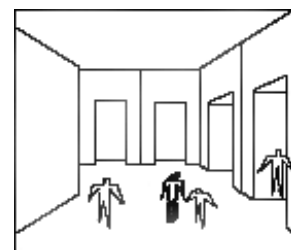
**-Expressing impact of micro - geography and local climate in approaching an organic structure supports the human image of the city.**



**-Division of City:** Division of the physical body of cities into smaller units must be based on an organic system resulting from a clear urban structure and fabric. A simple and clear urban structure is helpful with regard to the distribution of urban services and infrastructure.

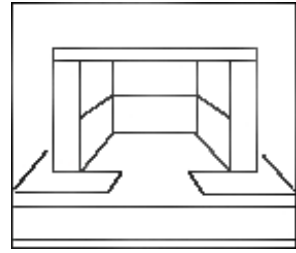
### **-Residential areas**

**-Division of residential areas into small housing groups is a very important urban design principle in organising communities motivating social contacts and activities within each group**

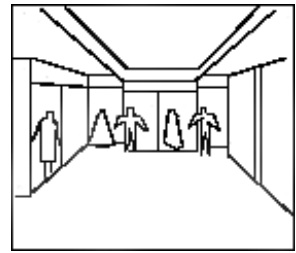


### **-Services**

**-Edge of main streets have taken the roll of traditional bazaars. In some examples, daily supply is offered in small shops in form of shopping centre near the housing areas.**



**-Designing a public open space between groups of houses can act as a daily shopping centre and a pleasant place for neighbours to meet.**

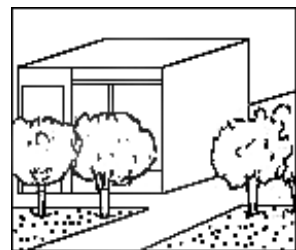


## ***B. Urban-Architectural Aspect***

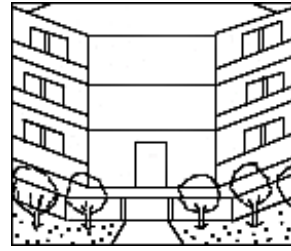
To understand and respect the context of a region and its traditional growth pattern are among the basic urban design principles and methods. In modern time the traditional family structure has changed in Iran, but life style and the religious values have still remained in the midst of a changing and unstable world. That is an important aspect, which demands a link between traditional and modern standards.

**-Building type:** Building type is a subject of climate, geographical factors, cultural behaviour and way of life of people. Although in modern cities, new technology has dominated climatic and geographic aspects in construction of modern houses, cultural behaviour and socio-religious values are still very strong. The aspect of privacy in four walls still is the main cultural aspect, which affects building type and method. One family single storey house with courtyard is still among the most desirable building types in Iran under any climatic condition.

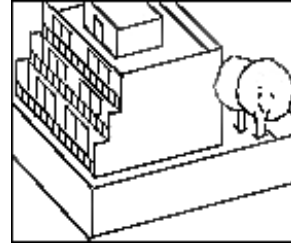
**-Single storey houses in small cities have the perfect adaptability to the religious values and cultural privacy of people.**



**-Low rise buildings without elevator (three to four stories) as family houses in urban areas is an alternative which reduces the physical expansion of the cities.**

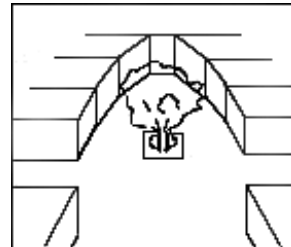


**-New generation is more ready to accept modern way of life. Living in apartments and sharing living spaces seeks its own regulations, which are more acceptable among young generation.**

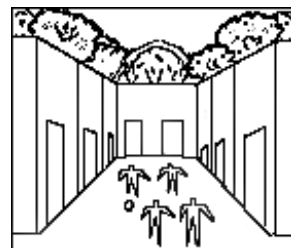


**-Building method:** Arrangement of buildings around a central open space was the most common building method in Iran. The importance of this method in providing a sense of security and comfort, both in private and public spaces, is rooted in the culture of this country. Although we live in modern time, in design of dwellings, these important aspects should be considered. Very simple approaches such as cul-de-sacs and clusters houses around a semi-private open space can answer these cultural aspects.

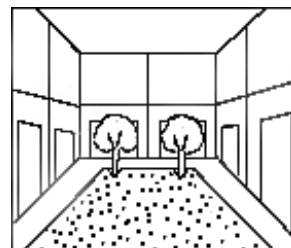
**-Arrangement of houses around a central open space or a cul-de-sac as the main design principle of housing areas, will help providing a desirable and friendly living atmosphere.**



**-Cul-de-sac spaces can function as children playground and provide privacy and identity to each group of residents.**



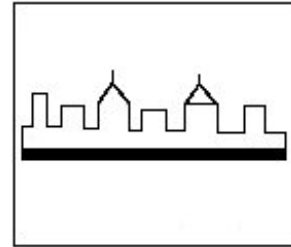
**-Some acceptable examples are arrangements of several houses along a semi-private space.**



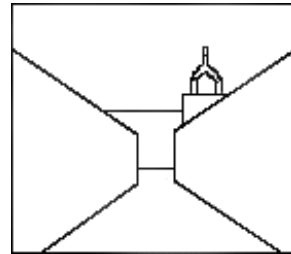


**-Single buildings:** Every building should receive its form as an answer to its function. Individual buildings, with their special forms are objects of identification in traditional Iranian cities. In modern new towns and new developing areas of large cities, bulky development and high towers dominate the skyline. Also the similarity in the form of modern buildings has affected the visual perception of the city.

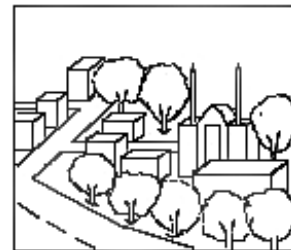
**-Religious buildings are still the main elements of identification of Islamic cities. They should be clearly visible as part of city skyline.**



**-Modern urban spaces can be designed concerning the traditional role of individual buildings as objects of identification.**

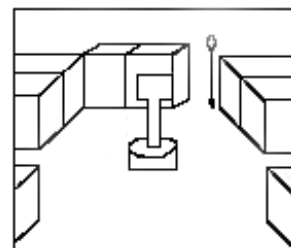


**-In daily expanding modern towns and cities, the single buildings with their special form help self-reliance movement of people in the urban area.**

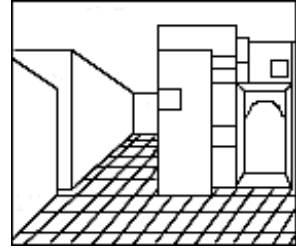


**-Semi-private spaces:** A desirable environment should demonstrate a balance between harmony and variety, and between private and public spaces. From a social aspect point of view, security and comfort in an enclosed space, next to the public space, is still one of the most important principles in designing a private space. Even in modern architecture the spaces, which do not provide this important aspect of privacy, are not acceptable.

**-Designing dwellings in cluster form with a semi-private space in between will provide ideal social contact.**

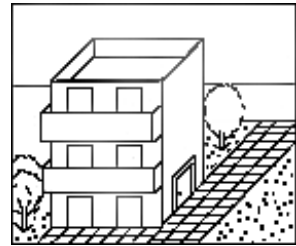


**-Shushtar new town residential areas emphasis the cultural values of semi-private spaces.**

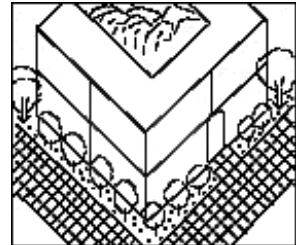


**-Private space:** The aspect of privacy in private spaces has kept its original meaning in modern urban life of Iranian people. The main aim in the design of private spaces is not to be limited to the provision of a home but providing a comfortable atmosphere. This comfort in small cities is subject to climate, ecological and socio-cultural factors. But in large cities, architects and planners use modern technology, and try to overcome these factors.

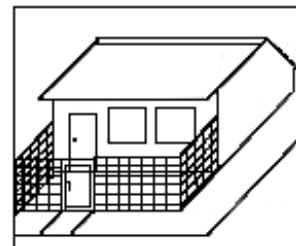
**-Apartment housing project should be built only in large cities, where it is more acceptable and feasible.**



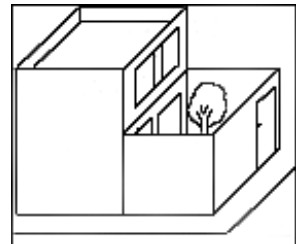
**-With regard to the traditional way of life in Iran, there should be a limit of 2 or 3 stories for family houses.**



**-In some modern areas high walls as protective element were replaced by lower walls or trees. This kind of idea is just suitable in special areas.**

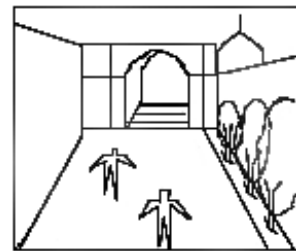


**-High walls remain an important aspect of providing privacy and security in private spaces. The courtyard as the centre of private activities is the only design element which can fulfil this need.**

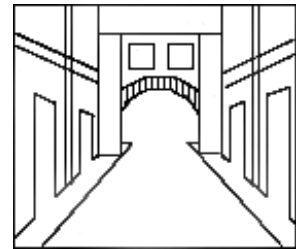


**-Public spaces:** Public space should manifest socio-cultural needs of people in spatial structure. Single urban elements are the important segment of these spatial structures, which in relation to each other are able to determine social and cultural behaviour of the people. Public space can be a covered traditional bazaar, a passageway, a street or a large square surrounded with buildings. No matter how different these spaces in form and structure are, the Islamic aspects of Iranian culture demand special behaviours in any of them. The only way of answering to these behaviours is spatial management of public spaces based on cultural values and local way of life.

**-Design of public spaces in modern new towns should consider local cultural values as design principles which can reflect social & cultural needs of the people in simple and clear public spaces.**



**-Considering modern standards of living in design of new towns should not neglect the cultural values and importance of social behaviours in public spaces.**

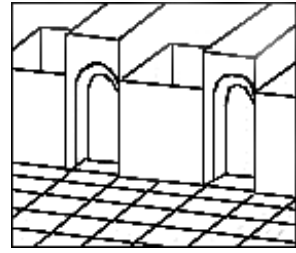


**-Spatial quality:** Quality of space no matter whether an alley, public open space or in private spaces, result from a good knowledge of the local architecture and the combination of climate and way of life of people. Standards or levels of technology cannot describe the quality of a space. The quality of a space understands the interrelation of man and his urban environment. This quality can be described through provision of a sense of security in a close space or protection in a narrow street.

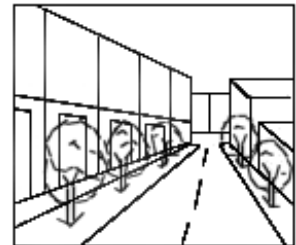
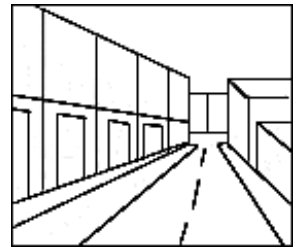
**-Modern environments with help of advanced technology should be able to fulfil certain standards. But urban spatial structures should also be able to expose cultural values of residents too.**



**-Unity in form can be achieved through use of local building methods and attention to climatic aspect in design. Unity in form creates identity.**



**-Quality of space does not necessitate complicated designs methods. For example a simple design tool as tree can change a treeless street to a more beautiful and pleasant space.**

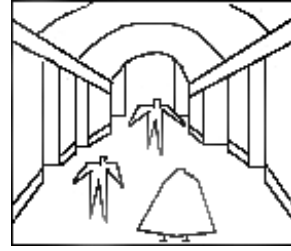


### ***C. Socio-Functional Aspect***

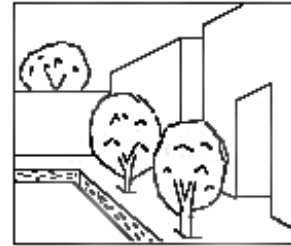
The function of every city determines its physical structure, its transport system, and even the social structure of the inhabitants. The function of a city is the main reason of its existence. In order to create a livelihood new town, the urban design method should propose variety of functions.

Urban elements: The diversity of urban elements reflects the diversity of urban activities. Today many of these elements, which should form the basic structure the modern cities, are not more than symbols of the past. Elements as the bazaar cannot exist in the modern economic life of a city. A square can't act as the center of administrative and political activities, or even green belt and gardens in desert cities are not any more protective elements against desert. But they should be accepted as an inseparable part of the Iranian culture. Their existence, even symbolically can help the modern environments to keep the continuity with the past.

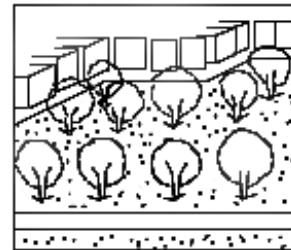
-Variety of urban elements help the city to accept more activities and to produce diverse urban spaces. One of the good examples is design of modern shopping centers as traditional bazaar to regenerate the traditional image.



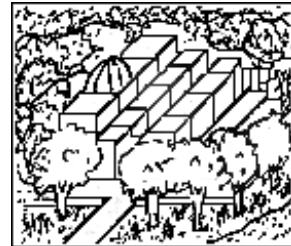
-The use of greenery and water mostly in hot-arid areas, is not only climatic but also symbolic. Trees and greenery inside the city should be seen as an element of environmental quality of Iranian culture.



-Trees are important urban design tool inside and around the cities. Today modern greenery is designed in form of parks in hot and dry countries. The role of trees is not only of aesthetic value.

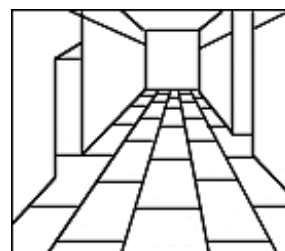


-Green belt mainly in desert cities protects the physical body of the city, against sandy winds of the desert. Greenery is a very important urban design element in environmental quality in hot and dry zones.



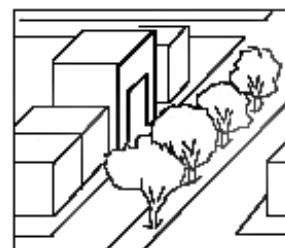
**-Pedestrian networks:** The form of a pedestrian network in each city reflects the social structure and cultural values of people. Ignoring the role and function of this important element in the life of modern cities has led to limitation of the semi-private and public activities. In the design of modern towns, the transport system should have its importance, but the social activities, which help a city to be alive and be a pleasant place, should also receive attention.

**-pedestrian system of Shushtar new town is a clear example for a desirable and alive living environment.**

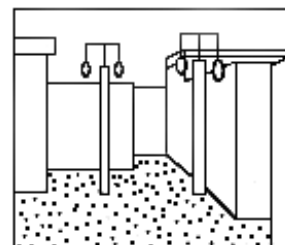


**-Urban spaces:** Public urban spaces present the social characteristics of a city. Streets, squares, even small spaces in residential areas expose the quality of social life in a city. Not only the pattern, structure and functions of these spaces indicate the quality of architectural design, but the attention to façade work, vegetation, light, pavement, building materials and even the kinds of sculptures and benches have an effective role in increasing the quality of urban spaces.

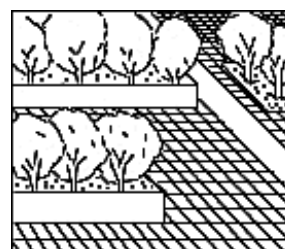
**-In modern planning system, the attention should be given to the spaces not only to the buildings. Apart from important objects, the whole space should have its own quality.**



**-In 'Alavi' new town, attention of planners and architects to design urban spaces with special quality and local identity is noticeable**



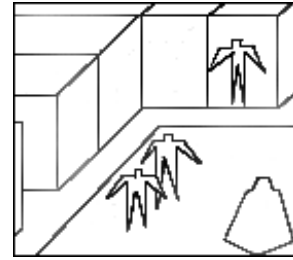
**-Urban space no matter it is of main or minor importance, should have social quality.**



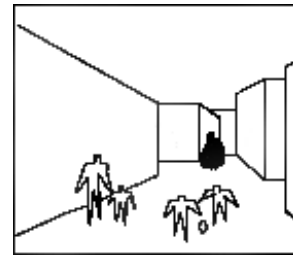
**-Social communication:** In Islamic cities, social communication and community life has its own special importance. In traditional cities the adaptation of the physical structure to the cultural and social needs of the inhabitants has based the background for social communication. In the rich Iranian culture, loneliness has hardly any place. Even in large cities people seek

the possibilities of social communications. In the design of modern towns this important social aspect should not be ignored for the sake of modernity.

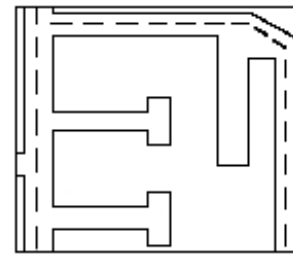
**-Wherever the dwellings are designed in row houses, the possibility of social communication is reduced. In this case the suitable designed local shops, is the only possibility for daily social contacts.**



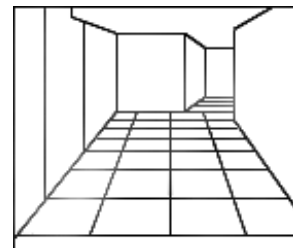
**-To design dwellings around an open space, or using cul-de-sac, increases the possibility of social contact and communication between residents**



**-In 'Alavi' new town priority is given to the transport system. Each housing group has a main access from street, and a secondary access through a semi-closed area. The residents have a better possibility of social contacts.**

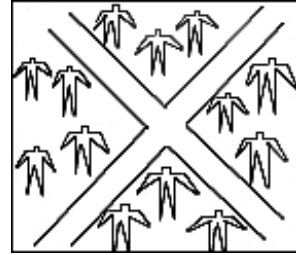


**-Segregation of the transport system from internal community life, supports the role of the pedestrian network in the social communication system of a city.**

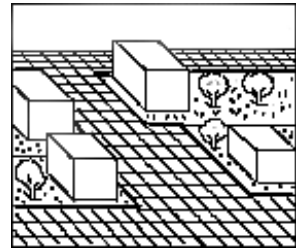


**-Social structure:** The social structure of the people who live in small communities is as important as architectural aspects. In a metropolitan city, differentiation in social structure leads to the development of urban areas with different urban character (building material, building method, size, façade work etc.). New towns should not only be designed for middle to lower classes but with regard to spectrum of different social groups.

**-Harmony in social structure is an important planning aspect of new towns and cities. Suitable design strategies should try to integrate low income groups with the others.**

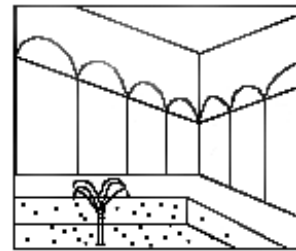


**-Through an appropriate design strategy, different income groups can live together. For example similar types of houses with different sizes can accommodate different social classes beside each other.**

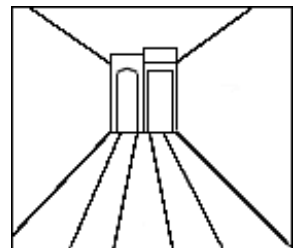


**-Social spaces:** Every space has its own meaning. The relationship of people with their environment reflects this meaning. The meaningful spaces leave their traces as memory. Elements of a meaningful space can be a single tree in an alley, a façade of a house, pathway of a narrow alley or the irregular form of a passageway.

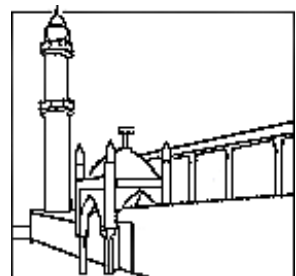
**-Use of local-architectural elements in design of modern spaces is not primitive and it can bring life to modern new towns. Appropriate design approaches, reduce differences between modern and existing environments in an region.**



**-Design of Shushtar new town with high respect to the local methods indicate the aim of designers in reducing the differentiation between old city and the new town in this region.**

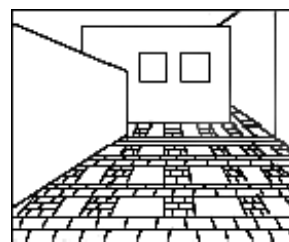


**-Every region has its own special urban design characteristic, which build its identity. Attention to these characters in design of urban spaces, is an important aspect in creating cultural identity.**





-Example of Shushtar new town in using indigenous brickwork in façade of buildings or paving alleys with local building materials in exposing the design character and identity of the region, is noticeable.



**-Image:** The image of a city does not arise just from its physical structure or its fabric or even its architectural appearance, but it is a combination of all the factors that were studied.

The common image of modern new towns is housing compounds in high-rise buildings. New towns should not only provide mass housing, but also pleasant and comfortable environments. Through using the Iranian traditional approaches to design, and with the help of appropriate modern building methods, more meaningful criteria's and standards for new towns can be developed. There is also a need to establish more constructive relationships to the future occupants of such towns. The image of a new town or a renovated urban part should not contrast the existing areas. Attention to the harmony between designs of new towns around a historic city, is the key element of image continuity between old and new.

### **Footnotes**

1. Özaslan, N., *"The historic urban fabric: source of inspiration for the future city form"*, page 96, in Cockburn Charles and Isaiash, *"Development Thro' Conservation: Towards shaping world cities"*, Preceding of the international work shop on Urban Regeneration at the King's Manor, 23-24 March 1995, Institute of Advanced Architectural Studies the university of York.
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## ***-Conclusions***

With the sudden social change at the beginning of the 20<sup>th</sup> century, the upper class people were the first social group absorbed to the European life styles. The entrance of western culture and its acceptance in Iranian society happened much faster through these upper class people. They sent their children to Europe for further education and to learn the western way of life. Way of dressing, social manner and even furniture in their houses, were the sign of their modernity.

The breaking up of cultural values was the first step to social alienation. Acceptance of western values and replacement of traditional Iranian values were a social privilege. During the following decades, these ideas penetrated the middle classes too; and this was one of the reasons why people left the old areas of historic cities to live in modern suburban. Now after more than half a century this alienation and its psychological consequences exist stronger than before. The social flit in large cities is obvious in every single aspect of the way of life of the people, but in smaller settlements, the traditional and cultural values have more power and effect.

The policy of the government in pre-revolutionary period, in working with foreign consultants and powerful investors in building sector increased quantitative than qualitative aspect of the urban development programme in Iran. And it was the main reason for Iranian planners and architects to work with financially oriented activities and business aspects. This system reduced the role of architect/planner, and gave more attention to finance and investment.

In the sixties and seventies, powerful investors got control of the housing market in the cities and high-rise apartments were produced. In these decades the development of new towns as large housing products, not residential environments, were profitable projects. Contracting and building firms without professional architects or planners, mostly developed these projects. This resulted in bad quality of design and of building materials. The quality of design, the choice of material left much to be desired.

In these decades, bureaucracy and big business tended to minimise the role of the architect. Iran in the seventies became highly western-oriented, and anything imported enjoyed a reputation of superiority. This could only discourage Iranian architects from seeking Iranian solutions to their problems, since alien models, however inappropriate to the cultural and social context, were usually preferred to models involving labour intensive, vernacular or 'appropriate' approaches. Although a few projects of high quality carried out by Iranian and international architects, they were isolated examples. (1)

A loss of cultural identity and the social disorientation became inevitable. Modern western society is rooted in a materialistic value system, but there is continuous interaction and feedback within this system. The introduction of such a system in Iran lacks cultural relevance and moral support; a sense of cultural schism and conflict will develop. The newly emerging materialistic value system created confusion and corruption, and when it interacted with the Islamic culture it proved to be unacceptable.

The Iranian Revolution stems from this cultural conflict as well as difference between social classes. The past experiences has shown that the Islamic values cannot be put aside in planning and policy making with regard to urban and community design. This simply means that we must maintain continuity: concepts for new communities should correspond to the existing cultural spectrum. Modernisation and technology should not be allowed to create a style or way of life, which is inappropriate and detrimental to community life.

Today architects and planners must become much more explicit about the skills, methods and knowledge they can bring to bear in the new role they have chosen. They should not be trained merely in an abstract and 'international' ideology of design: they should pay equal if not greater attention to their own culture, not only to the local history of architecture but also to religious, social and aesthetic values. Traditional building materials and methods of construction should not be ignored or sacrificed in favour of prefabricated buildings. There must be a political recognition of the importance of the cultural and aesthetic values inherent in the physical environment, and the need for well-educated planners and designers should be recognised.

Architects and planners should learn to be the true representatives of the user; society should be more aware of his role in the development of the environment. In societies where a lack of cultural awareness prevails, planners and designers should be subsidised by the government, thereby ensuring that precious resources are channelled in a direction, which creates environments sympathetic to culture, tradition and humanity. As long as architects are manipulated by big business and pushed around by government bureaucracies, there will not be any aesthetic quality in urban environments. (2)

The characteristics of the traditional Iranian cities have a special place in the social and cultural aspects of urbanism of Iran. Traditional cities are a physical demonstration of cultural values. This physical way of demonstration cultural values has its roots in the design principles and methods of traditional urban architecture. Chapter two of this dissertation in general, and chapter three in detail explain the value of these cultural elements that are still an inseparable part of the modern Iranian society. The example of the traditional city of Nain

in central part of Iran is an effort to demonstrate the value of traditional design principles in the past as well as in modern time.

Changing social attitudes toward modern standards of living have affected the cultural identity, the cultural and psychological relationship between people and their environment. The study of planning principles and design methods of new town in chapter four supports this issue. Revolution of Iran was a hope to motivate traditionalist design approach among urban planners and architects. Attempts at re-creating Tehran city in the image of the west have not been abandoned even after the advent of a traditionalist revolution. Unfortunately the proposed new towns in 1980s also prove that the urban planning and design attitude of pre-revolution has continued in post-revolutionary period.

The Shushtar new town studies in this dissertation as an example of new town with traditional image is between exceptions. The town is planned completely based on the cultural requirements of its inhabitants. Obviously the existing old city of Shushtar has been the main information source for understanding the way of life of the people. Many urban planners and architects who strongly believe in modern methods would regard such a work as primitive and unacceptable. But such a work not only is not primitive, but it is an attempt to give the necessary social and cultural identity to a new town.

As Jacquelyn Robertson in her work “Shahestan Pahlavi: steps toward a new Iranian centre” argues; the planning field basically concerns the translation of society’s values into an improved environment. To achieve this, planners need a basic understanding of how people’s environmental needs have been met in the past, and what opportunities exist for meeting them today. (3)

As Middleton in introductory of ‘Development through Conservation says; we need recognizable points of reference in our lives. If all is flux and change, the individual becomes disoriented, rootless and alienated from society, with unforeseeable political and community consequences. If we seek-as surely we must, to enrich the quality of life for all, we cannot afford needlessly to discard anything of distinction or beauty which already exists. Apart from our duty to the living, we have responsibilities to those who come after us. (4)

The challenge facing urban regeneration today is to demonstrate that culture and heritage management need to be related to development and conservation. Within the historic town are attitudes and activities that connect people and their environment in a world of changing values, economic and social distinctions. The conservation of such heritage areas need to be based on a erudite and philosophical understanding of the relevant human interest within the specific geographical and social context and not merely on maintaining the fabric. (5)

'Restoration' is a rather new activity in Iran. This activity is known for public buildings as mosque, bazaar and Madreseh. For private houses restoration covers the buildings, which can be reused (as in case of Yazd city), or the ones with special values (as decoration or design). Introduction of preservation and improvement of the whole area instead of individual buildings is an important step toward rehabilitation of historic citadels. The major problem with concentration on individual structures is that it ignores what happen to their context.

The first principle of community design is to recognize the rights of all citizens to have a voice to decisions that affect the places they inhabit, work and linger in.

As this study indicates, Iran needs a new strategy for its modern urban planning system. The new system should clarify the issues discuss in this work and give encouragement to the local authorities wishing to bring appropriate modern designs in historic areas to help them develop along with the modern cities. There need not to be a conflict between preserving the past and building the future, both can be used to promote the image of a city, emphasizing simultaneously tradition, progressed continuity. The public at large appreciated modernity not in opposition to but together with the heritage of the past. (6)

Stefano Bianca in 'Urban form in the Arab world', writes: Cultural continuity can not be achieved by simply reproducing frozen architectural forms, but must be fostered by reviving internal shaping processes. Only then can it lead to the construction of an inspiring built environment reflecting the qualities man needs for his physical, emotional and spiritual welfare. Formation of cultural identity relies on the existence of an integral vision and understanding of reality, shared by the community as a whole. Architects of the future may qualify for this function in the way Islamic craftsmen did in times when the cultural context was so self-evident that no explicit analysis of creative processes was required. (7)

The indiscriminate creation of irrelevant and inappropriate architecture in the Islamic countries should be a concern for anyone who has an interest in history and preservation of the Islamic architectural heritage, which evolved over long periods of trial and error. Knowledge of urban history could be a guide to planners by enabling them to understand better why a city has developed in the way it has. It is probably easier to understand the principles of traditional cities than find an adequate and appropriate solution for planning new towns and cities. The policy of connecting built heritage and urban identity is an important reason to considering historical environment in planning new towns and cities. For Iran as an Islamic society, the rich experiences of the past are necessary

lessons to learn for a better future. Islamic traditions and norms of conduct, the demand for privacy and the forms of prayer, have had critical implications of urban form, which have guaranteed certain points of similarity between the new and old urban environments.

### **Footnotes**

1. D.A.Z. Architects and Planners, *“A Report on Shushtar New town”*, U.S.A, 1985, page 38.
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3. Robertson, J., *“Shahestane Pahlavi: steps toward a new Iranian centre”* Page 44, in *The Aga Khan Award for Architecture: Toward an Architecture in the Spirit of Islam*, Philadelphia, 1978 (first edition), 1980 (second edition).
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## **Personal Records**

### **Study Background**

- 10.12.1955**                      **Born in Shushtar/Iran**
- 1961-1967**                      **Primary school Shushtar/Aghajary**
- High school /Aghajary**
- 1974-1978**                      **B.S.C degree in 'Regional Planning and National Development' at Shiraz (Pahlavi) University/Iran 'Housing for Developing Countries.**
- 1979-1981**                      **two years postgraduate study at school of Architecture, Newcastle University, England for the degree of Master of Philosophy (M.phil.) in 'Housing for Developing Countries'.**
- 1996-1996**                      **Attending 6 month furthering study seminar in Computer Aided Design (CAD)', for architecture and building techniques in Stuttgart.**
- 1992-2001**                      **Doctorate study at University of Stuttgart under supervision of Prof. Dr-Ing. . Michael Trieb.**
- Occupation**
- 1983-1985**                      **Collaborator of Ministry of Housing and Urban Development in Isfahan province, Lecturer at Beheshti Technical Institute' in Isfahan City, and collaborating in Rehabilitation study of historical citadels of Isfahan and Nain cities.**
- 1985-1986**                      **Working as Town Planner with the private consultant Engineer of 'Shahr-va-Khaneh' in Isfahan city. Member of the Planning group of 'Beheshti University' on 'Mobarake Steel Mill' project in Isfahan.**
- 1987-1989**                      **collaborator of 'Stadtbaumatelier', Prof. Dr-Ing. Michael Trieb, Stuttgart.**
- Since 1999**                      **Collaborator of 'Pädagogische Schüler Förderung für Nachhilfeunterricht', Bietigheim-Bissingen**

