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Comparison of "Passive Defense" requirements with the principles of "Sustainable

Urban Development" in protecting Urban Historical Fabrics

Case Study: The Historical Fabric of the 12th District of Tehran

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ABSTRACT:

Since many years ago, many theories and approaches have been presented on how to interfere in the historical urban fabric and how to conserve them, each of which follows certain requirements and principles. Some of the existing perspectives and approaches are of particular importance since they put forward and discuss the main issues in urban development planning. The theory of "sustainable urban development" and the "passive defense" approach are among these perspectives.

Conservation of the historical urban fabrics or the fabrics that carry the cultural heritage of cities, in addition to creating a sense of identity and boosting national pride, also promotes the quality of life of citizens. Since observing both the "passive defense" requirements and the "sustainable urban development" principles are essential in conserving the old urban fabrics, it is necessary to study the principles governing these two approaches. In this process, we discovered that there are differences and contradictions between them. The present study mainly focuses on the study of two important concepts that influence the conservation of urban historical fabrics and comparatively compares the principles that govern them. The purpose of this research is to outline, and attempt to find a suitable solution for, the contradictions and conflicts between the passive defense requirements and the principles of sustainable urban development in the improvement model of the historical urban fabric. The research method is applied in terms of the aim and descriptive-analytical and exploratory in terms of its method of execution. The data collection method involved library and field

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Revista Publicando, 5 No 14 . No. 2. 2018, 224-256. ISSN 1390-9304 survey methods and the analyses were carried out using GIS software (ArcGIS) and the binary comparative analysis method. The historical fabric of the 12th district of Tehran, with a further emphasis on the historical element of 'museums', is the case study of this article, which has made it possible to achieve the results of the research. The results of the research show that in order to find the most suitable model of intervention in the historical fabric – i.e. "improvement" which brings about the least change in the valuable historical fabric - we should, while emphasizing compliance with the requirements of passive defense and the principles of sustainable urban development and determining the priorities for changing the land use, moderate and minimize any kind of paradox and conflict in the approaches.

Keywords: Urban Historical Fabric, Passive Defense Requirements, Principles of Sustainable Urban Development, District 12 of Tehran.

Case Study: The Historical Fabric Of The 12th District Of Tehran Revista Publicando, 5 No 14 . No. 2. 2018, 224-256. ISSN 1390-9304 INTRODUCTION

Historical fabrics, or the fabrics with the cultural heritage of cities, include past works that are irreplaceable and can be effective and helpful in informing societies of their cultural and past values. Therefore, preserving them, in addition to boosting national pride and creating a sense of identity, also improves the quality of life. According to scientific evidence, the importance and necessity of conserving the historical fabrics and restoring them, not only as symbolic phenomena but as the living memory of the evolution of urbanization and urban civilization, the preservation of the identity and originality of cities, and the foundation of urban life, has always been considered important.

To conserve the urban historical fabric and offer the appropriate intervention model, observance of the principles of passive defense is considered especially important. In the event of non-natural (man-made) events such as wars, the need for defense is very serious, important and strategic for every country, and passive defense is a strategy to reduce vulnerability and increase resilience against various types of hazards. In the principles of passive defense, special emphasis is put on the urban fabrics and construction planning, and, in terms of importance, separation of land uses is one of the most important principles governing passive urban defense.

Consolidating the existing critical spaces of the country against threats, blinding the enemy's information system through camouflage, creating protective coverage in classified plans and programs, and using deception, initiative, and diversity in the implementation of programs are among the actions that if employed, the goals of passive urban defense can be achieved.

The use of passive defense principles has many benefits since it can prevent financial losses to critical military and civilian facilities and reduce human casualties or reduce the amount of these losses to the minimum. These principles protect the lives of people, guarantee the security of citizens, preserve territorial integrity and national sovereignty against any circumstances and any aggression at all times, ensure security and sustainable development, and guarantee the continuity of fundamental activities, the provision of vital services, continuity of service provision, and facilitating the

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Revista Publicando, 5 No 14 . No. 2. 2018, 224-256. ISSN 1390-9304 administration of the country under conditions of threat and crisis, and maintaining the defense base in case of other countries' attacks. Furthermore, it should be emphasized that the use of passive defense measures can deter the motive of a military or terrorist attack on the country, as it leads to the elimination of the vulnerable elements of the country and turns them into capability and sustainability (Sarvsar; 2017:1).

On the other hand, as to how a sustainable city should be or should be defined, there is an agreement among almost all the experts: a sustainable city must be managed in such a way that it meets the current requirements without compromising the ability of future generations to meet their needs.

Achieving high standards of quality, comfort, and safety, which actually provides human health in the long run, is one of the most important goals of sustainable urban design (Hosseini, 2015:1). In general, the goals of urban design in the context of sustainable development emphasize the simultaneous conservation of the natural environment and the human-made environment. According to the views of theorists, the following three principles can be briefly and tentatively introduced as "The Three Principles of Sustainable Urban Design":

- Prioritizing the recycling of buildings, facilities, infrastructures and the network of existing roads by adjusting them to new requirements and needs. In fact, the conservation and improvement of existing urban monuments and fabrics is greatly emphasized in sustainable urban design.
- Sustainable urban design is concerned with conserving natural resources, the natural landscape of the land, and the wildlife. Therefore, any new building materials must be obtained from local sustainable sources.
- Sustainable urban design is concerned with reducing energy use in the development of new urban areas (such as the construction of new neighborhoods and cities). This goal is pursued through the application of proper urban anatomy, suitable building patterns, suitable spatial distribution of the land uses, and the use of optimal compaction. In other words, energy saving can be achieved by establishing closer ties between different urban land uses as well as by controlling the design of buildings in terms of energy consumption efficiency (Golkar, 2000).

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In the meantime, organizing the city based on the requirements of passive defense, in order to deal with crises (natural and/or human-made) and minimize the risks and hazards in cities, requires conditions and standards whose observance, in some cases, has explicit contradictions with the principles of designing a sustainable city.

The reason and necessity for addressing this subject in the article is that intervention in the historical fabric of cities, in order to conserve and protect them, is essential due to the importance of historical fabrics. Paying due attention to the principles of passive defense in this intervention ensures their safety and security to an acceptable level. The observance of the principles of sustainable urban design is also important for urban designers in order to build a city for a healthy future (Register, 1987). The problem emerges when we realize that some of the principles of sustainable urban design and the passive defense in the cities have obvious contradictions with each other.

Therefore, identifying the factors of passive defense and the principles of sustainable

Therefore, identifying the factors of passive defense and the principles of sustainable urban development and the paradox between these two concepts and assessing the impact of each of them on the model of intervention in the historical fabric of cities are among the goals of this research.

The most important criteria studied and evaluated in this study are conservation, comfort, compactness, coordination, collaboration, and comprehensiveness.

Extensive studies have been separately and individually carried out in the areas of passive urban defense principles and the principles of sustainable urban design, some of which will be briefly discussed in this article. However, a simultaneous and comparative study of these two domains and the study of the paradoxes between the two concepts of passive defense and sustainable urban design with the aim of finding the best improvement model for historical urban fabrics is considered a new study and approach. In an article entitled "Assessing the safety of urban space with an emphasis on passive defense indicators", Shahrbanoo Kazemi and Nazanin Tabrizi try to study the safety of urban space in accordance with the principles of passive defense in the city of Amol and offer methods to rebuild and improve deteriorated urban fabrics in line with the above principles (Kazemi, 2015: 11). Hasan Kamran et al. conducted a study aimed at the spatial analysis of the old fabrics of cities based on the principles of passive defense in

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Revista Publicando, 5 No 14 . No. 2. 2018, 224-256. ISSN 1390-9304 order to achieve a sustainability model (Kamran et al., 2012:1). In a study conducted by Zaynab Mohammad Salehi et al. on the improvement of the central fabrics of Khorramabad city using a sustainable urban development approach, it has been concluded that physical problems, in particular, and then, environmental, social, economic and managerial problems, respectively, make up the highest percentage of problems. And since the goal of sustainable development is to achieve a sustainable city and urban development will be sustainable only if it provides a high quality of life for all its inhabitants, to this end and in order to improve the quality of life, 'improvement' has been emphasized as a guide to decision-making, a tool for the planning action, and the creator of a link between decision-making and implementation factors (Mohammad Salehi et al., 2013:73). Hamed Shahsavari et al. have written a paper to extract the principles of urban cellular planning with a passive approach according to the needs and exigencies of the country. In the above study, the authors conclude that by dividing the city into smaller components such as neighborhoods, while giving an identity to the cities, the conditions for fuller and more appropriate use and the various tools and facilities in the field of crisis management are better provided (Shahsavari et al.; 2015: 384). Nazanin Alizadeh and Mohammad Reza Mahbhout, in a study entitled "A Study of the Principles of Sustainable Development in Explaining the Status of a Sustainable City", outline the goals of sustainable urban development and examine the criteria and conditions for achieving the quality of life and sustainable urban development. In an article titled "Passive Defense and Sustainable Urban Development with an Emphasis on the Threatened Land Uses of the City of Tabriz from the Perspective of War," the authors have tried to outline the principles of passive defense in urban planning with an emphasis on critical facilities as threatened land uses to explain the achievement of safety and security in urban spaces by accepting a defensive role. Hosseinzadeh Delir et al. selected the metropolitan city of Tabriz as a case study and analyzed the distribution and the method of establishing strategic land uses in Tabriz, as a historical-cultural city and the economic hub of the northwest of the country, with an emphasis on the concentration of threatened and hazardous land uses and identified the

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Revista Publicando, 5 No 14. No. 2. 2018, 224-256. ISSN 1390-9304 central regions and the outskirts of the southwest and northwest of the city as unsatisfactory and critical.

In this research, the historical fabric of the 12th district of Tehran, which contains approximately half of the historical monuments of the city, has been studied. The main issue in this research is the contradictions and paradoxes that we face in analyzing the improvement model of the urban historical fabric. There are some principles of sustainable urban design from which the requirements of passive defense are different or even contradictory. Given the fact that the present research is exploratory, a particular hypothesis cannot be presented and it suffices to put forward the research questions:

- 1) Do the requirements of the passive defense and the principles of sustainable urban development affect the improvement model of the urban historical fabric?
- 2. What are the differences, similarities, and contradictions between the requirements of passive defense and the principles of sustainable urban development?
- 3. How far does the paradox between the principles of passive defense and the principles of sustainable urban development affect the improvement model of the historical urban fabric?
- 4. How can the improvement model of the urban historical fabric be able to provide both the passive defense requirements and follow the principles of sustainable urban development?

1. THE STUDIED DISTRICT

The 12th district of Tehran is the case study of this study. This district is one of the oldest in Tehran, located almost in the center of the city, and has six regions with an area of 16.91 square kilometers (Fig. 1). Fifty percent of the historical places and tourism centers of Tehran are in district 12. There are numerous historical buildings and monuments in this district that are the cultural heritage of the country and hold a unique status in the world. Therefore, in this article, one of the components of the historical fabric of the district (i.e. the museums) has been studied, which can be generalized to all urban historical fabrics.



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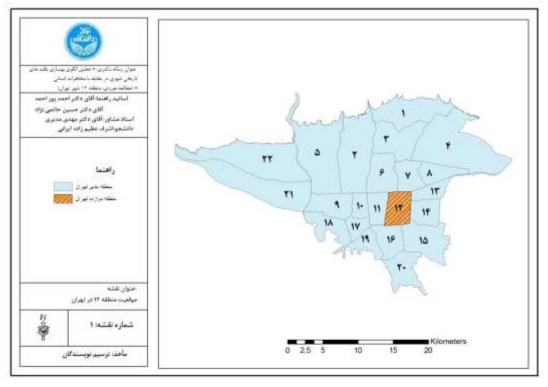


Figure 1 - Location of the 12th district in Tehran

RESEARCH LITERATURE

3.1.Comparative Comparison:

The comparative comparison is one of the scientific methods in explaining and analyzing phenomena. In principle, 'comparison' has a central place in human thought and is also the methodological core of the scientific method. Studies show that scholars and researchers have long regarded the comparison as a fundamental method in their studies.

A comparative comparison is a research method that compares the phenomena and analyzes them in order to find the differences and similarities. Comparative studies are also applicable to the principles and systems governing different approaches. In other words, through comparative study and comparison, we can choose the most appropriate and optimal ideas, theories, and scientific and practical proposals.

In a comparative study, comparing two or more phenomena (the subject or problem) in a specific domain (determining the research axes within the different aspects of that phenomenon) is carried out to discover their similarities and differences and to achieve

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Comparative studies lead to the understanding of a phenomenon in the light of comparison and are implemented through describing and explaining the similarities and differences (Qaramaleki, 2006).

3.2.Paradox:

In logic, a paradox is a supposedly true statement that leads to a contradiction or is not in accordance with the evidence. At the same time, contradictory and even opposing statements that express a single truth are also called paradoxes. In other words, a paradox is any proposition or conclusion that contradicts the preceding propositions in the same theory or the theoretical apparatus, or one of the former strong beliefs, rational intuitions, or general beliefs.

William Quine has divided logical paradoxes into three categories:

- 1. **Real paradoxes**: Real paradoxes offer us results that, although seemingly nonsensical, strange, or unexpected at first glance, are in fact correct and there are no flaws or inconsistencies in their assumptions or arguments. The paradox of gender belongs to this category.
- 2. **Virtual paradoxes**: Virtual paradoxes not only seem nonsensical, but the assumptions or arguments used in them are indeed incorrect. Problems with a result such as 1 = 2 belong to this category.
- 3. **Contradictions**: Paradoxes that do not belong to any of the above categories are usually contradictions. These paradoxes lead to contradictory results using the accepted principles of logic (W. V. Quine; 1962: 84-96).

Sustainable development: (The dictionary of) Dehkhoda defines sustainability as the state of being durable and lasting. The current meaning of the term sustainability, which is also considered in this discussion, is "what can last into the future". The concept of sustainability in development means "continuing to renew and produce resources and consumables for current and future generations without causing environmental

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Revista Publicando, 5 No 14. No. 2. 2018, 224-256. ISSN 1390-9304 damage." In Childe's view, sustainable development is a development that can last for a long period of time without causing environmental damage.

The term sustainable development has been used since the mid-1970s and after the 1973 oil crisis. Sustainable development is one of the most important and commonly discussed international issues today. Environmental organizations and institutions all over the world, as well as the United Nations, are among the most important organizations involved (Azizi; 2001:5).

Sustainable development refers to a development that meets the needs of the present without compromising the ability of future generations to meet their needs. The World Commission on the Environment and Development (also known as the Brundtland Commission), created by the United Nations General Assembly, defines sustainable development as follows: a process of change in which the use of resources, investment policies, and the direction of technological development, and institutional change are consistent with the needs of the present and future.

Sustainable development is a complex concept that involves the Triple Bottom Line of environmental, social and economic sustainability. In sustainable development, goals should be considered in three respects as follows:

- -Sustainable development should provide social development in which the needs of all individuals are met.
- -The environment is protected effectively and the natural resources are consumed carefully.
- -This development should lead to sustained economic growth and economic prosperity (Kamali, 2015: 3613).

3.3.Sustainable Urban Development

In recent years, sustainable urban development has dominated the literature on urban development and urban development research throughout the world. A big part of the discussion on sustainable development is concerned with cities (Salehifard, 2001). The theory of sustainable urban development is the result of the discussions of environmentalists on environmental issues, the urban environment in particular, which was presented following sustainability theory to support environmental resources. In

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Revista Publicando, 5 No 14. No. 2. 2018, 224-256. ISSN 1390-9304 this theory, the issue is to conserve resources for the present and future through the optimal use of land and incurring the least hazard to non-renewable resources. Urban development as a spatial concept can be defined as changes in land use and compactness levels to meet the needs of urban residents in terms of transportation, housing, leisure, food, etc. Or it is a development that concurrently promotes all social and economic aspects in the city. In sustainable urban development, the question is to maintain resources for the present and future through the optimal use of land and incur the least hazard to renewable sources. Sustainable urban development raises issues of preventing urban and regional environmental pollution, reducing the production capacities of the local, regional, and national environment, supporting recycling, preventing harmful developments, and eliminating the gap between the poor and the rich. It also considers urban, rural, regional and national planning and the all-inclusive support of the government of such planning as the key to accomplish these goals (Ziari, 2003: 17).

n short, the theoretical basis of the concept of sustainability in the city and the district includes the following: reducing pollution, preserving natural resources, reducing the urban waste, increasing recycling, reducing energy consumption, increasing the number of useful living creatures in cities and the countryside by creating a forest community, urban trees and greenspace, urban decentralization and reduction of dispersion, increasing average density in the suburbs and small towns, reducing communication distances, creating local employment, diverse development of housing in employment centers, developing small towns to reduce reliance on big cities, balanced community structure, public transport and road traffic cuts, unrecyclable waste management, and the provision of local sustainable food. Firstly, by replacing and renovating resources and the adoption of a proper land use policy, land conservation will increase; secondly, sustainable urban development will be achieved through urban and regional planning and space organization (Nasiri, 2000: 20).

3.4. Principles of Urban Sustainable Design

Sustainable design is the most important tool for achieving sustainability. Sustained design is not an instantaneous and immediate style, and should not be regarded as one,

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Revista Publicando, 5 No 14. No. 2. 2018, 224-256. ISSN 1390-9304 and belongs to all ages. Sustainable design is a comprehensive and integrated endeavor in which each component is a member of a whole and plays a vital role in the success of the project (Jenks & Dempsey, 2005).

Achieving high standards of quality, safety and comfort that actually contribute to human health is one of the most important goals of sustainable design. It should also not be neglected that using past experiences to improve design quality will lead to sustainable design. Improving design quality in a sustainable design is done with the aim of achieving the goal of "comfort." An important point to consider in this type of design is that all the factors involved in comfort are correlated and regarded as a single system. What is included in comfort in its general sense include peace, security, safety, and health. Comfort in sustainable design is ensured by creating the lowest environmental pollution and using natural factors.

Some of the fundamental concepts and basic principles in sustainable urban design are conservation, comfort, compactness, coordination, collaboration, and completeness (Hataminejad, 2015).

3.5.Passive Defense

Literally, the word "defense" is equivalent to the word "deterrence". Defense consists of the two main categories of active and passive defense. In the active defense, all planning and defensive measures require the use of weaponry and combat equipment, while passive defense or deterrence is a set of non-military actions that reduce the vulnerability of human forces, buildings, facilities, equipment, and urban railroads against the hostile and destructive operations of the enemy, which are also possible to apply in case of unexpected natural disasters (Hosseini Amini, 2010: 14). In other words, the passive defense is a kind of "civil defense" and refers to a set of actions that do not require "warfare," and can be used to prevent financial damage to critical military and civilian facilities and human casualties or minimize these damages and losses. In fact, passive defense plans and measures are a way of countering the crisis before it hits (Modiri; 2010:32).

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Revista Publicando, 5 No 14 . No. 2. 2018, 224-256. ISSN 1390-9304 In other words, passive defense means reducing vulnerability during a crisis without the use of military action and exclusively through civilian, technical, and management activities and measures.

Some of the basic principles of the passive defense are: cover, separation and dispersion, movement, deception, location, viability, hardening, camouflage, concealment, glamorous models, and secure designs.

Passive defense affects all spheres of human life in that it counteracts natural or human-made disasters. One of these spheres is the "city" and "urban life". Passive defense is one of the essential requirements in reducing vulnerability and increasing the safety of the infrastructures of cities, making necessary preparations against crises, and its dramatic effect on deterrence (Hataminejad, 2013:13).

Passive defense measures in cities are essential in that they can reduce vulnerability, enhance the safety of cities, and promote the sustainability of citizens in critical situations.

3.6.Improvement

Improvement in urban planning involves actions and predictions to improve the quality of the physical and spatial environment. It means that by creating new facilities, it is possible to improve the spatial environment. There is no significant intervention in the physical attributes in any of the improvement activities. The reason is that the physical attributes are generally in good condition and only by replacing the proper performance of the activity, the erosion of urban space is prevented. Therefore, by making some changes in urban activities, favorable urban spaces could be achieved. It should be noted that improvement consists in contemporizing urban space and not in the reproduction of past urban space. "Improvement" also refers to a set of actions that, with little changes in the activity, can increase the lifespan of an object (Habibi and Maghsoudi, 2002:17). In improvement, the vitality and improvement of the physical attributes of the city are considered (Nazari and Asiaee, 2015: 89).

In improving the urban fabric, the principle is based on "loyalty to the past and the

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with the aim of using the potential and current facilities and reinforcing positive aspects,

conservation of identity forming monuments". Improvement activities are carried out

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Revista Publicando, 5 No 14. No. 2. 2018, 224-256. ISSN 1390-9304 as well as weakening negative aspects through protection, preservation, maintenance, conservation, restoration, consolidation, and repair. Intervention in these fabrics requires compliance with the rules and regulations.

3.7. Urban historical fabric

What has become customarily understood and has turned into a general perception in management is that the historical fabric is the part of the city where the historical monuments are located. If this general perception were to be considered correct, the people who used the term in the past could use the term "historical background" instead of "historical fabric." But when the term "historical fabric" was introduced, the term "fabric" was chosen carefully and intentionally. The fabric means an interconnected entity. It means having a quality of life and historical, cultural and natural implications that are practically intertwined in the life of cities and villages and are readily observable. The term "historical area" could be offered as a synonym for the historical fabric. Thus, there is a substantial difference between the area of the city formed in a natural-historical context based on the interactions resulting from the long-term experience of interacting with the environment and the area that has been made livable through the achievements of modern civilization. In other words, the historical city or the historical fabric of a place has evidence in it that testifies to an intertwined and historical quality of life that the rest of the city does not enjoy. Therefore, the historical fabric is not merely a zone of the city and has its own special and privileged character. It is because of this very same quality that we do not go to the new and modern parts when we want to see and explore the old cities of the world. Because they are practically created based on the requirements of the modern era and are therefore similar in nature. However, these cities are distinguished from each other by virtue of the features that they display in their historical fabric. Therefore, we can say that the history of a city is manifested in its historical fabric. The historical fabric, the historical area or the cultural heritage area refer to the part of a city in which there are valuable architectural and historical buildings and monuments. The historical fabric is legally protected and conserved in some countries.

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Revista Publicando, 5 No 14. No. 2. 2018, 224-256. ISSN 1390-9304 The historical fabric of a city may or may not be consistent with the fabric of the city center. Historical fabric may also be consistent with, or different from, the administrative and cultural-artistic fabric of the rest of the city.

2. DISCUSSION

Observance of "passive defense requirements" as well as the "principles of sustainable urban development" are very important and essential elements in choosing the appropriate improvement model for the old urban fabric. Therefore, in the present study, first, a comparative comparison between these two approaches is made to find the similarities and dissimilarities between them - in some criteria of sustainable urban design.

Conservation: Many studies have insisted on the importance of carrying out urban development plans while taking into consideration the element of conservation and consider the conservation of the resources of the city necessary and the basis for the development. Contrary to the common belief that considers development to be an obstacle to conserving the existing and old parts of cities, the experience of several hundred years of the survival of the traditional Iranian cities suggests that a successful model of interaction between development and conservation can be achieved. (Adeli and Abbasi; 2015:41). For example, the historic city of Yazd lived through six stages of development in the 5th to 13th centuries, in all of which great attention and interaction with the existing components (from the previous periods) is remarkably present. The result of this interaction is the perseverance of the city over time and the formation of the historic city of Yazd. Therefore, the concept of conservation is considered to be the key to sustainable urban development. In passive defense, however, conservation of the old and historic fabric of the city is considered important unless these conservation measures prevent observance of the basic principles of defense (camouflage, concealment, etc.).

Comfort: Cities are like large houses that should have certain qualities and privileges to make living in them desirable and comfortable (Abutaleb, 2016). They should have attributes and features to provide comfort and convenience. Investigating the concept of comfort in sustainable urban development as well as in the passive defense is important

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Revista Publicando, 5 No 14. No. 2. 2018, 224-256. ISSN 1390-9304 in that, from a sustainable urban development perspective, not considering it causes serious disruptions in urban life, and from a passive defense perspective, problems in providing the security of the city occur. Although comfort is achieved following the establishment of security in the city, the methods of achieving comfort are not necessarily consistent with the principles of the establishment of security. Hence, in passive defense, there is no emphasis on the concept of comfort.

Compactness: The form or shape of a city, defined as the spatial distribution model of human activities and one of the basic issues related to urban design, is divided into two main categories of the 'compact city' and 'urban sprawl', and other types of secondary categorizations. Physical compactness in cities is one of the basic principles of sustainable urban development in preventing shapeless horizontal development and the elimination of fertile lands (Sharifnejad et al., 2013). Some studies consider the compact city as the most durable form and conclude that the goals of sustainable development are manifested in urban compactness (Vahidi, 2010). Meanwhile, the dispersion of physical elements is one of the most important issues in the passive defense and is very effective in reducing the damage caused by the enemy's destructive impact. In contrast, in the event that the enemy is present before detection or reconnaissance and reaches the stage of marking and strike in the aggression stages, the focus of the physical and critical elements of the invaded set leads to fewer and concentrated invasive operations and causes the greatest destruction (Babaei, 2012).

Coordination: The coordinated arrangement of buildings and spaces is one of the most fundamental concepts of urban design that is considered both in sustainable development and in the passive defense. Of course, in sustainable urban development, due to its long-term goals, great emphasis has been placed on this concept, but little attention is paid to it in the passive defense. The reason is that the passive defense has a commanding position and is largely incompatible with the issue of coordination due to the serious mission of securing the city in order to cope with the threats of the enemy or the threats posed by other entities.

Collaboration: Sustainable urban development requires the decentralization of duties and responsibilities, the delegation of further tasks from the central government to local

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Revista Publicando, 5 No 14. No. 2. 2018, 224-256. ISSN 1390-9304 governments, and the establishment of joint relations between people and authorities in the process of urban development and collaboration (Mabogaunje, 1996). In sum, and according to the views expressed, it can be argued that the new urban planning model is largely based on the participatory and collaborative role of people and local communities, and considering characteristics such as collaboration, a process approach to planning, increasing people's control over their livelihood and daily life, and presenting plans and programs that are more in line with the needs and conditions of local communities, it can be regarded as a desirable model in urban planning and management. The passive defense, however, has no relation and affinity with the concept of collaboration and, in this sense, is in complete contradiction with the sustainable urban development approach.

Completeness (comprehensiveness): Completeness is another component of sustainable development that includes social, economic, and cultural dimensions and other human needs. The most important quality of sustainable development is its completeness. Sustainable development caters to the human needs and aspirations of not one country and/or region but all people all over the world in the present and in the future. In this approach, humans are the focus of attention and all global phenomena are summoned to collaborate in the framework of the consistency and durability of human life in the present and future. On this basis, sustainable development takes on a comprehensive meaning that embraces all aspects of human life, in the process of which policies in economy, commerce, technology, natural resources, education, health, industry, politics, security, culture, ethics, etc. are designed in a way to guarantee the continuation of economic, social and environmental development (Haghighi; 2011). When we look closely at the concept of completeness in passive urban defense, it becomes clear that defense does not involve just civilian defense preparedness through maneuvering and workshops or camouflaging strategic urban elements but it means much more than attempts and measures to ensure security. In today's world, warfare is increasingly moving from its classical methods to newer ones. In planning for the passive defense, it is desirable to consider all the issues (political, economic, and

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Revista Publicando, 5 No 14. No. 2. 2018, 224-256. ISSN 1390-9304 cultural) and those that can put the city at risk in case of the aggravation of the crisis, and take measures to neutralize them as far as possible (Sharifi; 2016:3).

Table 1 - Comparison of Some Urban Design Concepts in Sustainable Development Principles and Passive Urban Defense Principles

Similarit ies/confli cts	Passive Urban Defense	Sustainable urban development	Sustainable Urban Design Criteria	Ro w
Little similarity	There is a little emphasis on the concept of 'conservation' in Passive Urban Defense	There is an emphasis on the concept of 'conservation' in Sustainable Urban Development.) Conservation(1
Conflict	There is no emphasis on the concept of 'comfort' in Passive Urban Defense	There is an emphasis on the concept of 'comfort in Sustainable Urban Development.) Comfort(2
Full conflict	There is absolutely no emphasis on the concept of 'compactness' in Passive Urban Defense	There is an emphasis on the concept of 'compactness' in Sustainable Urban Development.) Compact(3
Little similarity		There is an emphasis on the concept of) Coordination(4



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	There is a little emphasis	'coordination' in		
	on the concept of	Sustainable Urban		
	'coordination' in Passive	Development.		
	Urban Defense, and for			
	security reasons, the			
	treatment is generally one-			
	sided and from a			
	commanding position.			
		There is an emphasis		
	There is no emphasis on	on the concept of		
Carefficat	the concept of	'collaboration' in) Callahamtian (_
Conflict	'collaboration' in Passive	Sustainable Urban) Collaboration(5
	Urban Defense	Development.		
		There is an emphasis		
	There is a little emphasis	on the concept of		
Little	on the concept of	'completeness' in		
similarity	'completeness' in Passive	Sustainable Urban) Completeness(6
	Urban Defense	Development.		

The appropriate model for the improvement of the historical fabric: In this paper,

first, the concepts and requirements of the two approaches of the passive defense and sustainable urban development were examined and then the paradoxes between the principles and criteria of each of these two concepts were compared. In order to find the most suitable methods for interfering in the historical fabric, while minimizing the paradox between the passive defense and the principles of sustainable urban development, we should rely on a model that, while taking into account the

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Revista Publicando, 5 No 14. No. 2. 2018, 224-256. ISSN 1390-9304 requirements of the passive defense, does not neglect the principles of sustainable urban development either. That is to say, there should be such harmony in the improvement of the historical fabric that all the principles of sustainable city design and the principles of passive defense are met, observed, and taken into consideration as much as possible, even with regard to the criteria in which these two concepts are completely contradictory, so that the best results are achieved. The historical fabric of the 12th district of Tehran is the case study of this research, in which the museums of the district have been studied as one of the most important components of the historical fabric, so that the results of the study can be generalized to the other components of the historical fabric as well. ArcGIS software is used to analyze information layers. As shown in the map, the museums in the 12th district of Tehran are concentrated in area 1 of this region (Fig. 2).

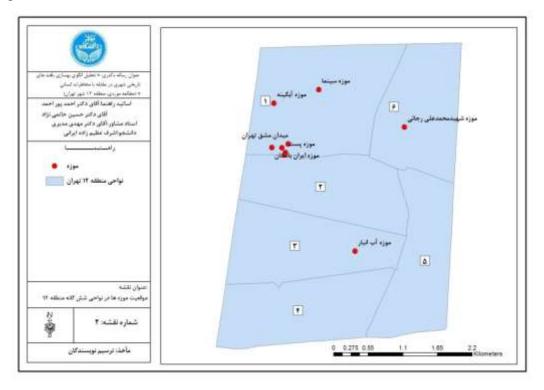


Figure 2: The location of museums in the six areas of the 12th district of Tehran

If we want to implement improvements in the museums of the district, while taking into account the criteria discussed in this article on the requirements of passive defense and the principles of sustainable urban development, so that all the principles of sustainable city design and the principles of passive defense, even in terms of the criteria in which

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Revista Publicando, 5 No 14 . No. 2. 2018, 224-256. ISSN 1390-9304 these two concepts are totally contradictory, are observed, it is necessary to spatially analyze some of the land uses and the influential components of the district regarding the studied fabric (museums) and investigate the improvement model of this historical fabric.

In addition, as discussed in the theoretical concepts and premises of the research, in the intervention of the type of "improvement", actions and predictions have to be made to improve the physical and spatial quality of the environment, and, through the substitution of the proper functioning of activity, prevent the erosion of the urban historical fabric. That is, by making changes in urban activities, appropriate spaces for the conservation of the historical fabric should be created.

Therefore, in order to prioritize the elimination of some land uses in the position of the studied historical element (the museums) from the perspective of passive defense as well as from the perspective of sustainable urban development, we can achieve the most balanced result using the paired comparison analysis method in a way that the paradox between the two approaches is minimized. To do this, first, the importance of each of the studied land uses is investigated from each perspective, through the spatial analysis of the location of that particular land use relative to the location of the museums (Maps 3 to 9). Then we set up a table for each land use in which the perspective of passive defense regarding that land use is compared with the perspective of sustainable urban development based on the relevant criteria and scores 0 to 3 are given based on the degree of importance (Tables 2 to 8).

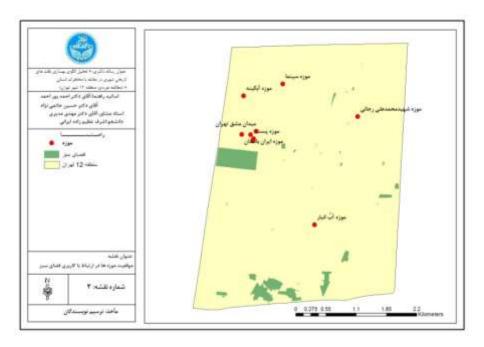


Figure 3 - The location of the museums in connection with the land use of the greenspace of district 12

If we compare the two perspectives of passive defense and sustainable urban development on urban greenspace land use based on the "compactness" criterion, since passive defense considers the dispersion of physical elements effective in the reduction of the damage caused by the enemy's destructive impact, therefore, the highest score in this type of land use will go to the passive defense (Fig. 3 and Table 2). It is because the urban greenspace plays an important role in the dispersion of urban elements as well as the historical fabrics.

Table 2 - Comparison of the approaches of passive defense with sustainable urban development regarding the use of greenspace in district 12

Sustainable Urban Development (B)	Greenspace
3)A و (0)B(Passive defense (A)

The comparison of the perspectives of passive defense and sustainable urban development while taking into account the "conservation" and "comfort" criteria for subway lines and stations suggests that the principles of sustainable urban development does not deem the passage of subway lines through the old historical fabric suitable due to the fact that it causes a lot of powerful vibration and also great noise pollution, which over time destroys these fabrics and eliminates comfort from the environment.

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Revista Publicando, 5 No 14. No. 2. 2018, 224-256. ISSN 1390-9304 However, the passive defense considers the existence of subway stations an opportunity, due to their function as 'shelters' in the event of the enemy's attack (Fig. 4 and Table 3).

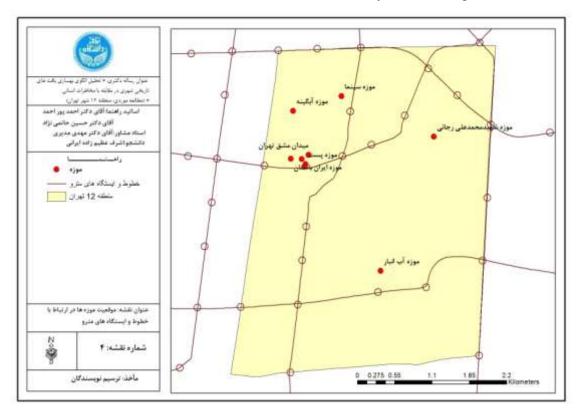


Figure 4 - The location of the museums regarding the subway lines and stations in the 12th district

Table 3 - Comparison of the two approaches of passive defense with sustainable urban development regarding the land use of subway stations

Sustainable Urban Development (B)	Subway lines and stations
2)A y (0)B(Passive defense (A)

With regard to the residential land use, sustainable urban development, taking into consideration the criteria of "conservation", "compactness", "coordination" and "collaboration", deems the existence of this kind of land use essential in the conservation of the historical fabric because with a "human-oriented" approach the historic fabrics that are at risk of destruction are saved. The separation of land uses is

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Revista Publicando, 5 No 14. No. 2. 2018, 224-256. ISSN 1390-9304 one of the most important principles governing passive urban defense (Fig. 5 and Table 4).

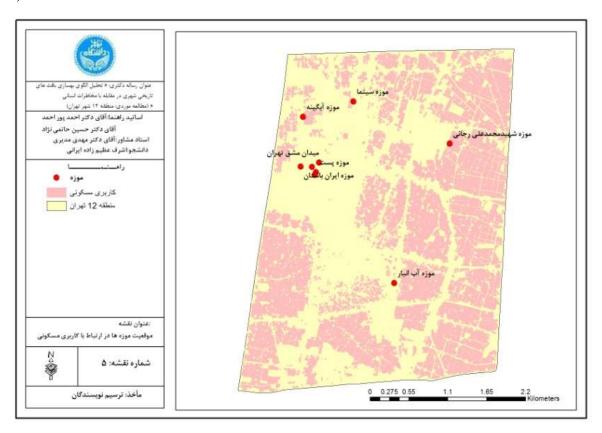


Figure 5. The location of the museums regarding the residential land use of district 12

Table 4 - Comparison of the two approaches of passive defense with sustainable urban development regarding residential land use

Sustainable Urban Development (B)	Residential	
2)B y (0)A(Passive defense (A)	

Passive defense, on the one hand, advocates the use of industries and workshops in the historical fabric, due to the observance of the principles of "cover" and "deception", and, on the other hand, due to the necessity of the minimum observance of the criteria of "conservation", "coordination" and "completeness", similar to sustainable urban

Case Study: The Historical Fabric Of The 12th District Of Tehran

Revista Publicando, 5 No 14. No. 2. 2018, 224-256. ISSN 1390-9304 development approach, does not consider this type of land use suitable in the historical fabric (Fig. 6 and Table 5).

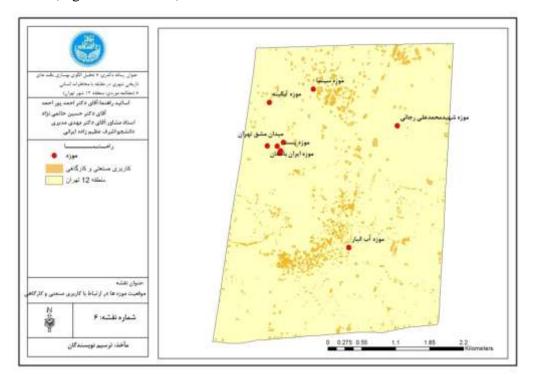


Figure 6. The location of the museums regarding industrial and workshop land use of district 12

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Table 5 - Comparison of the two approaches of passive defense with sustainable urban development for industrial and workshop land use

Sustainable Urban Development (B)	Industrial and workshop		
1)A y (0)B(Passive defense (A)		

Due to the necessity of the observance of the relevant principles and criteria, neither of the two approaches of sustainable urban development and passive defense recommends the commercial and business land use within the historical fabric (Fig. 7 and Table 6). In contrast, the presence of fire stations is recommended by both approaches (Fig. 8 and Table 7).

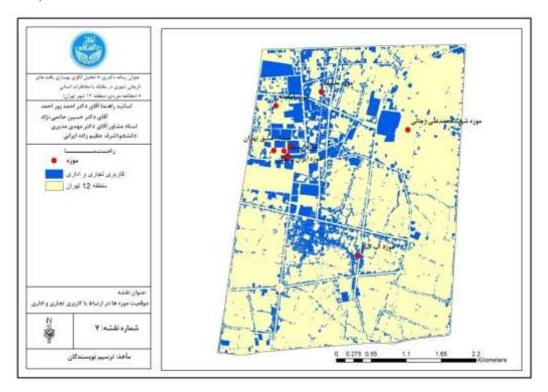


Figure 7. The location of the museums regarding business and administrative land use of district 12

Table 6 - Comparison of the two approaches of passive defense with sustainable urban development for business and administrative land use



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Sustainable Urban Development (B)	Business and administrative
0)A y (0)B(Passive defense (A)

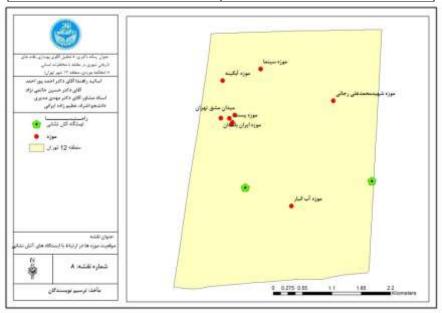


Figure 8. The location of the museums regarding the fire stations of district 12

Table 7 - Comparison of the two approaches of passive defense with sustainable urban development for fire stations

Sustainable Urban Development (B)	Fire stations
3)A ₂ (3)B(Passive defense (A)

The presence of hotels in the historical fabric is recommended by the principles of sustainable urban development, while the passive defense does not comment on the existence of this type of land use within the scope of critical facilities (Fig. 9 and Table 8).



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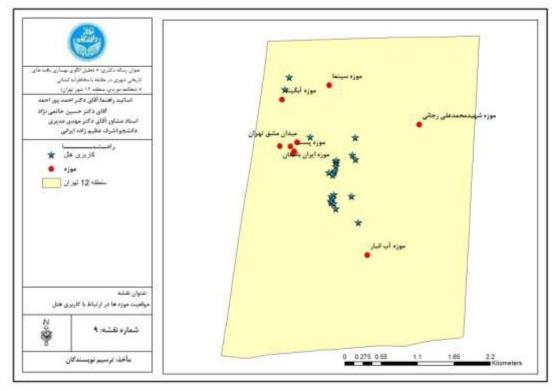


Figure 9. The location of the museums regarding hotel land use of district 12

Table 8 - Comparison of the two approaches of passive defense with sustainable urban development for hotel land use

Sustainable Urban Development (B)	Hotels
3)B ¿ (0)A(Passive defense (A)

3. CONCLUSION

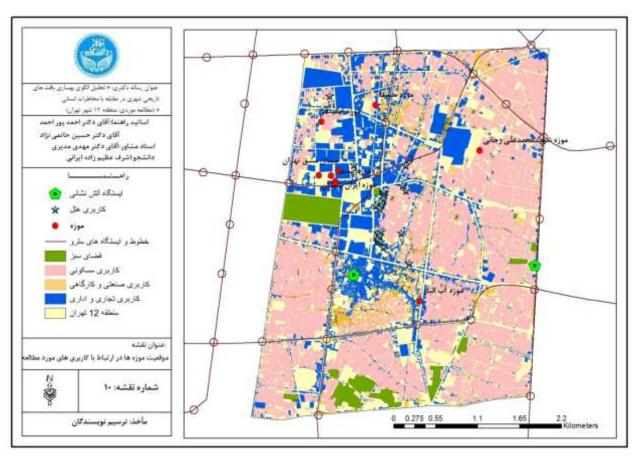
In sum, by scoring the results of the comparison of the two approaches on different land uses within the historical fabric of district 12 (Table 9), and by adjusting the contradictions in the two approaches in order to conserve the historical fabric of the Tehran district 12, the priority of the necessity of changing the land use in the studied improvement model is as follows: Business and administrative spaces are prioritized in changing the land use. After that, the priority goes to changing industrial and workshop land use. Changing the pathway of subway lines and residential land use is the next priority and the land use of greenspace and hotels are the next candidates for the land

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Revista Publicando, 5 No 14. No. 2. 2018, 224-256. ISSN 1390-9304 use change. Fire stations should also not be excluded from the scope of the study (see Table 10).

Table 9 - The total score of each land use in the two approaches of passive defense with urban sustainable development

Ranking (percent)	Total score		Item
0%	0	0)A y (0)B(Business and administrative
2/5%	1	1)A و (0)B(Industrial and workshop
5/10%	2	2)A و (0)B(The subway
5/10%	2	2)B و (0)A(residential
8/15%	3	3)A y (0)B(The greenspace
8/15%	3	3)B و (0)A(The hotels
6/31%	6	3)A) (3)B(The fire stations



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Figure 10. The location of the museums regarding the land uses studied in district

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Table 10 - Prioritization of changing the land uses to conserve the studied fabric (the museums in district 12 of Tehran)

Fifth	Fourth	third	Second	First	Prioritization of changing the land use in the position of the historical element of the museum
Fire stations	Greenspaces - hotels	Residential - subway lines	Industrial and workshops	Business and administrative	The type of land use

Considering the issues that have been raised in the case study, we conclude that despite the underlying contradiction between the "requirements for passive defense" and the "principles of sustainable urban development", emphasizing both concepts in the improvement model of the historical urban fabric is inevitable. Therefore, by adopting the appropriate improvement model and intervention methods, it is possible to conserve the historical fabric by optimally changing some of the land uses.

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