Change with/versus Conservation:

Architectural Interventions and their Effects on the Character of the Historic Urban Patterns: A Case Study on Historic Urban Site of Izmit, Turkey

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1. Introduction

> *"... the qualities we inherited from the past can become a discipline for change today... A town's past, its present and its future must combine to create a recognizable unit, so that its growth can be seen and felt to be continuous."*[1]

Change and continuity, although they seem contradictory at the very first look, are strongly interrelated factors that should be considered together when the preservation of a historic city is concerned.

As the society and its demands grow rapidly, and the existing physical setting can not fulfill the requirements of the changing society, change becomes a need, and seems to conflict with the preservation. However, it is not the change but the speed and the scale of it what threatens the need for continuity. Moreover, the act of conservation requires change to some extent, if it is "*the process of preserving something in being, of keeping something alive*".[2]

Therefore, the equilibrium between these two social needs can only be achieved by handling the change and directing the possible trends in a way based on the individual character of each city, in other words by defining the future of the city depending on the continual character of it.

It is clear that the identity of an urban context is not only composed by the sum of the elements which constitute it, but also through the visible and invisible ties that bring them together through a complex system of relationships which is reflected as different qualities in different scales. Thus, the conservation, in its widest sense including both the change and the continuity in a realistic balance, should be based on the complete consciousness of that context, and all kinds of variables contributing in its formation.

In this paper, it is intended to discuss the mutual relationship of change and preservation, and their effects on the visual character of an urban context, discussing the different types of interventions and their impacts in different scales on the specific case of Izmit, one of the most important historic cities in Turkey with its history dating back to 2500 years ago.[3]

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[1] WORSKETT, Roy. The Character of Towns. An Approach to Conservation. The Architectural Press. London, 1970. p.10

[2] CANTACUZINO, Sherban. "A Policy for Architectural Conservation" Architectural and Urban Conservation in the Islamic World. Vol.1. Dhaka,1989. p. 14

[3] This case was studied as a part of the masters thesis realized by Hicran Topçu in 1996. (TOPÇU, Hicran. "A Street Scale Conservation Project for Cukurcesme Street, Izmit" Unpublished master thesis.

2. Case Study: Historical urban pattern of Izmit

Izmit: A brief history

Izmit, taking place on the natural way from Europe to Asia, had been a settlement place for various cultures all through the history. The earliest settlement known in the area dates back to 12th Century BC, while the golden age of the city had been lived during the Roman period, after its conquest by the Roman Empire in 74 BC until the 3rd century.[1]

In the year 395 when the Roman Empire was divided into two, the city was left in the boundaries of Eastern Roman Empire until its conquest by the Ottoman Empire in 1337.[2]

Due to its location of near Istanbul, Izmit has kept its importance all through the Ottoman period. Various monumental buildings -such as caravansaries, khans, and baths- were constructed in İzmit in order to fulfill the needs of caravans going towards Istanbul.[3]

From the historical sources it is known that Izmit had suffered from various disasters all through the history. In the year 1509 an earthquake which effected on Istanbul and Izmit for 45 days, resulted in the destruction of the major part of the buildings. Other earthquakes occurred in 1766, and 1894 had also caused serious damages in the city.

By the end of the 19th Century, Izmit began to be one of the most important industrial cities of the country. The richness of water and timber resources caused large amount of investments to be directed there, while the improvement of the transportation facilities also supported the industrial and commercial development of the city, which resulted in a great extent of migration from Anatolia to İzmit, especially after the 1960's.[4]

As a result of that unexpected degree of population increase, the high-rise apartments took place of the modest traditional houses of İzmit. Until 1979, when the site has been taken under the control of the Protection Board, numerous traditional buildings were demolished. Between 1985-1994, the decision of the Protection Board was modified several times, first narrowing the boundaries of the historical site, and then by eliminating it completely and reducing the conservation activity to the individual registered buildings. Therefore, until 1994, when the historical site boundaries, and registration of several buildings were renewed, the erosion of the cultural values in Izmit has continued.

Nonetheless, due to the linear development of the city depending on the limitations of topography, a part of the historical pattern carrying remains from different periods of the city on the northern hillside was preserved. The area is defined by an outer city wall on the north and Istanbul-Ankara highway on the south and carries Roman, Byzantine, and Turkish remains together. This study is concerned with the relatively more conserved southern section of the historical residential urban tissue, and carried out in three different scales, in order to discuss the traditional features of the pattern and the factors threatening it: the urban pattern, the street scale and the traditional buildings taking place on the street.(Fig.1)

Historical Urban Site: Characteristics and Alterations

Izmit has a natural setting composed of a narrow shore band in 300 m's width and a hilly section on the north of the sea shore, with an altitude that increases up to 1600 m's high. The defined part of the traditional urban settlement takes place on that hilly section, laying on an area that climbs from 25 m's to 90 m's high from the sea level in the south-north direction.

Department of Architecture-Restoration. The Middle East Technical University. Ankara, 1996.)

[1] Yurt Ansiklopedisi. Vol. 7. Anadolu Yayıncılık, Istanbul, 1983. p. 4992;

ARTAR, Aynur. "Uygarlıkların Gizlendiği il: Kocaeli". Tasarım 39, Tasarım Yayincilik, Istanbul, 1993. p.123.

[2] Kocaeli İl Yıllığı. Kocaeli, 1973. p. 13

[3] FIRATLI, Nezih. Izmit Sehri ve Eski Eserleri Rehberi. T.C. Kultur Bak. Eski Eserler ve Muzeler Genel Mud. Yayinlari. Istanbul, 1971. p. 10)

[4] Yurt Ansiklopedisi,1983. pp. 4999-5072

Because of the inclined topography that the tissue sits on, the streets have usually curvilinear forms which follow the natural line of the terrain and linked into each other by means of the stepped passageways passing from the points with suitable inclination.

The ratio of the built up and open spaces in the blocks varies widely through the site. The street borders are defined either by the buildings or the walls, depending on the local topography in the street. At the borders defined by the garden walls, the greenery usually extends towards the street and combine with the wall as the border. The retaining walls in rough stone masonry are inevitable features of the tissue because of the inclination. The small fountains are occasionally placed at some points on these retaining walls as elements enriching the street character.

The junction points of the streets are usually enlarged to create small urban spaces. The monumental buildings, such as *mesjid'* s and fountains which are located usually at the junction points, punctuate these points with their function and enrich the quality of the spaces.

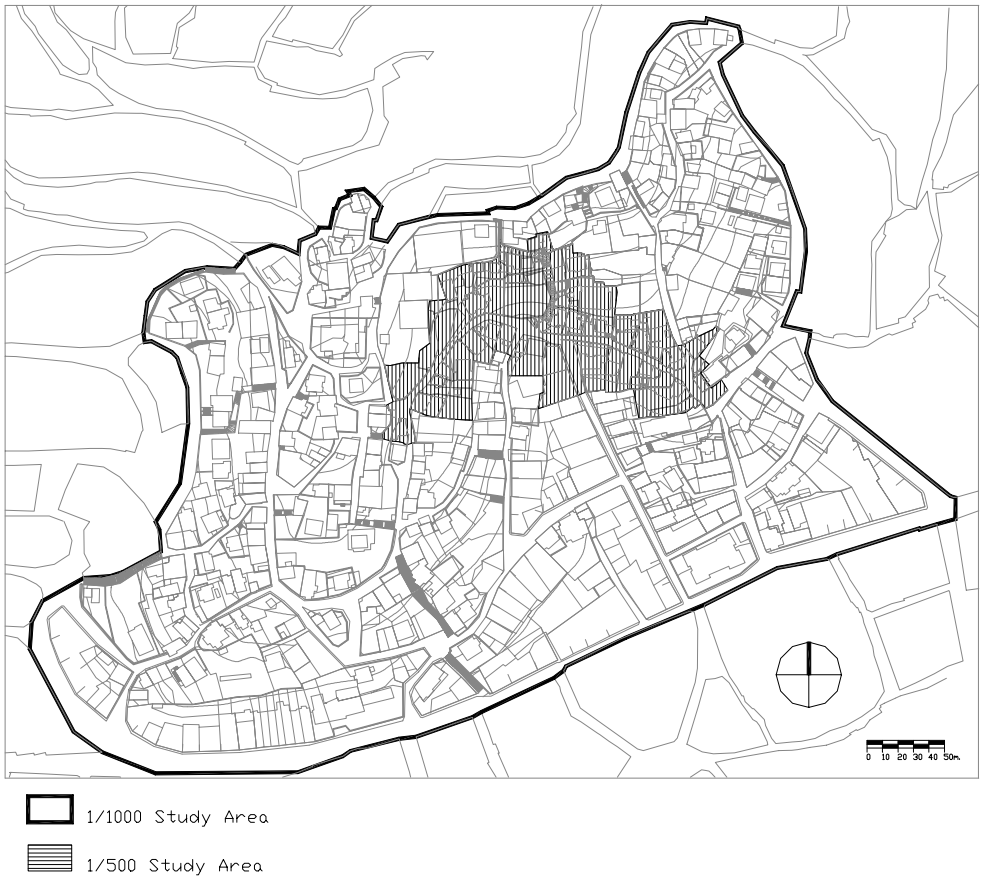

Figure 1. Boundaries of the areas studied in different scales

Because of curvilinear forms of the streets, and by the effect of the topography, the sudden views are created at the bending points of them, which adds a variable visual character to the streets in the site. At some points, the monumental and residential buildings are located at the end of the view point, and compose the focal points of perception.

The building heights represent a great variety in different parts of the site. In the southern part, which is closer to the city center, the buildings are usually 5 to 7 storey high, while in the rest of the study area, the pattern is composed of buildings of 1-4 storey high.

The study area is generally composed of residential buildings and supporting facilities like mosques and fountains that take place at the conjunction points of the streets. The main

commercial and business activities take place on Istanbul Street (south border of the site) which is one of the main transportation and commercial axes of Izmit.

The concentration of all of the city activities in the center creates a northward pressure resulting in a sharp increase in the rebuilding activities in the historical site. As a result of the inconsistency of the conservation policy followed in the site, the building blocks adjacent to Istanbul Street were almost completely surrounded by high apartment blocks, while some of the building blocks at the inner sections of the site are also damaged by the construction of high rise buildings.

As a result of the analyses of the characteristics and the degree of alterations observed in the site, three homogeneous zones were differentiated. (Fig.2)

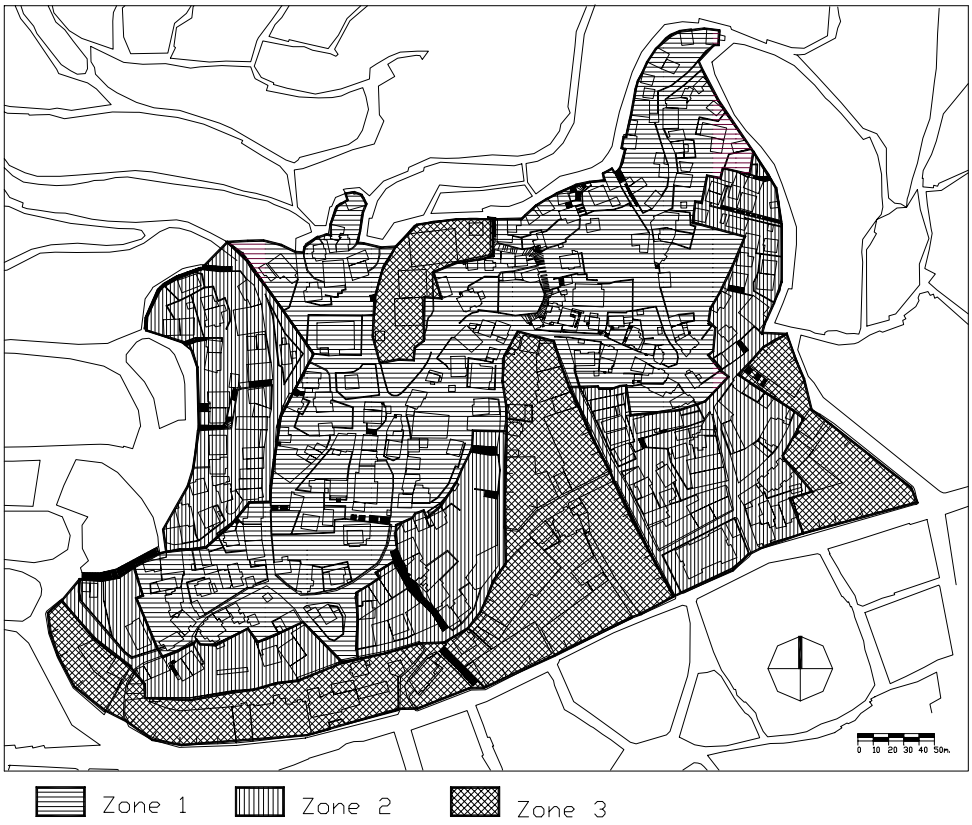

Figure 2. Zones according to the degree of preservation

In the first zone, the tissue characteristics such as the street characteristics with the materials, borders, vistas, the ratio and the dispersion of the open and built-up spaces, and the visual completeness of the area is almost completely preserved. The monumental and traditional buildings of special importance with their location and architectural characteristics mostly take place in this area.

In the second zone, the character of tissue is almost damaged by the construction of the high apartment blocks on the periphery of the blocks. However, there are still some undamaged parts of the blocks with traditional buildings and open spaces in relation with them. Even though the streets in this zone still keep their form, the visual completeness of the street borders are altered.

The third zone consists of the parts of tissue which have been almost completely damaged in their characteristics. The blocks are altered completely by the replacement of the traditional buildings with the high apartment blocks regardless of traditional characteristics. The few traditional buildings which take place in this zone are in the physical pressure of the area surrounding them.

Cukurcesme Street: characteristics and alterations

The second phase of the study is focused on one of the most preserved streets taking place in the historical tissue of Izmit: Cukurcesme Street which constitutes an important example for observing the changes in the street character, since it takes place right in the middle of the three preservation zones differentiated above, where the majority of the values and the problems are concentrated at the same time.

Cukurcesme Street which is approximately 275 meters long, is located almost parallel to the natural terrain of the land. Due to its non-straight character with several bending points, various urban spaces with different form and dimensions are created along the street. The three intersections points created along the street which are enlarged by the recession of the building lots on the border, and enriched by the presence of small monumental buildings.

The curvilinear form of the street creates a series of views for whom walks along it. Some of these views have a special character due to the location and the architectonic characteristics of the elements forming the focal point of the view. At some points, on the other hand, a general view towards the city is provided for the observer.

As a result of the level difference between two sides of the street, the north border is generally defined by the retaining walls, which creates a continuity of the rough stone masonry. The south border is mostly defined by buildings with various heights and architectural characteristics.

All of these visual properties, the slope, the curvilinear form, the variety in the width and the sections of the street, the physical relationships with the other streams, the elements forming the border, or being perceived behind it, the continuity or the discontinuity of the lines, materials and textures, creates a visual completeness – a scenario-- for the observer who walks along the street. Besides the components that make up the street, it is in fact the integrity of three dimensional relationships between them that creates this visual completeness peculiar to the place and thus worth of preservation.

Therefore the alterations on the street are evaluated in relation to their effects on that visual continuity and examined under three main groups: (Fig.3)

Alterations in content*;* The replacement of the street components with others of different type or of the same type but with different characteristics are grouped as the alterations in content.

On the north side of the street, the most common type of alteration in content is the presence of vacant lots due to the demolition of the traditional buildings. As a result, behind the continuous stone masonry stone walls, instead of traditional facades, the buildings taking place on the back of the hill are observed. On the south side, the most common alteration of this type is the replacement of traditional buildings with the high rise apartment blocks.

Alterations in form*;* The form of the street is preserved except two points- at the east end and the middle of the street- where the street was enlarged by elimination of the two fountains taking place on the nodes.

These two alterations in the street form, have negative effects on the visual perception at certain points, as well as the character of the urban spaces once defined by them.

Alterations in materials*;* The most common type of alterations observed in the street are that of material use, as a result of the repair and replacement on the building façades, garden walls and street materials.

The stone street pavement has recently been replaced by a concrete pavement, which broken the continuity of the stone walls with the street pavement. The continuity is legible only in a small portion of the passageway on the street, where the original stone pavement has been kept.

The replacement of the siding timbers with the plaster is also a common type of alteration which damages the continuity of the timber façades observable on the north side of the street.

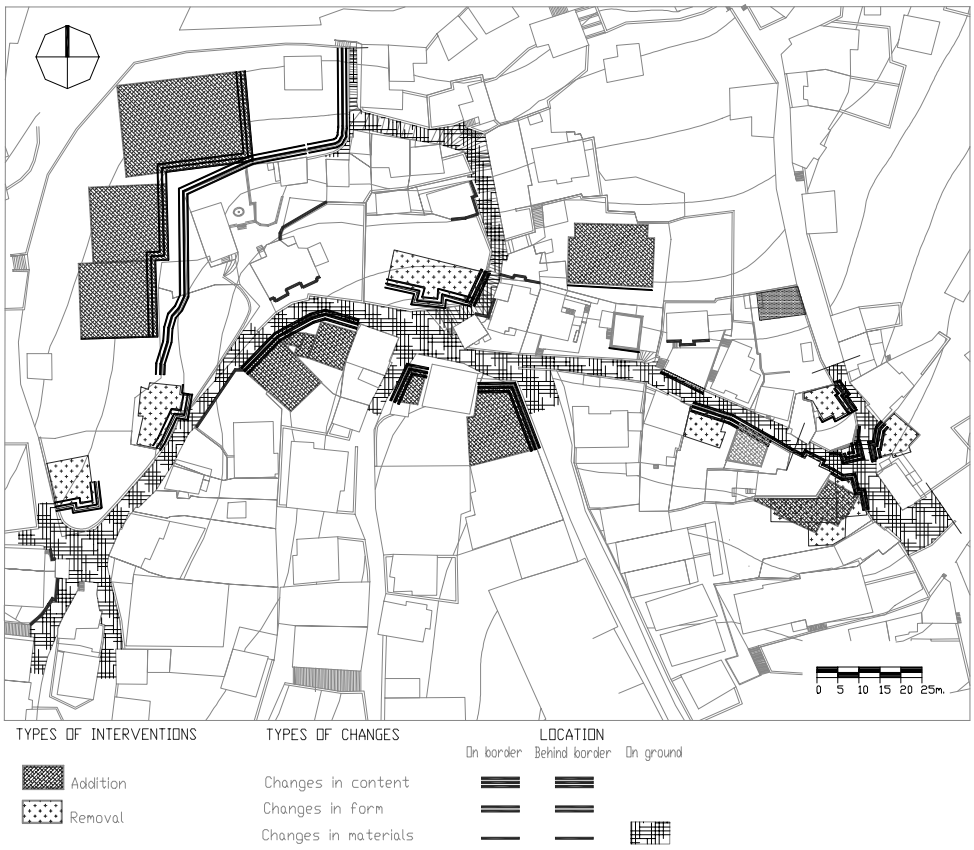

Figure 3. Alteration of street character

Traditional residential buildings taking place on Cukurcesme Street: characteristics and alterations

In the last phase of the study, the traditional buildings that compose the urban pattern are examined with a comparative point of view to see the common points as well as derivations from the original characteristics.

The traditional buildings taking place on the street are 2-3 storey height, except the additional semi floors such as basement, mezzanine and attics commonly observed in the area.

The common structural system is timber frame system standing on a stone basement. There are three types of construction technique. In the first type, the timber frame is covered by regular timber planks and left exposed; in the second type, the frame is covered by arbitrary timber planks and plastered, and in the third type, the frame is filled with brick and the outer surface is plastered.

The placement of building on the lots, varies to a great extent depending on the location, size and the inclination of the building lots. However, in order to provide the privacy, and to get a better view towards the sea, the traditional buildings are never placed face to face; in addition the building on one side of the street is usually recessed back. Therefore the street-building-garden relationship also represents a considerable variety.

The plan types are also effected by the characteristics of the building lots, but the main common point on the main living floors is to have a central living space (*sofa*)- usually placed perpendicular to the street- providing access to rooms taking place on both sides. The interior spaces are usually quite rich from the aspect of the traditional architectural elements such as, seating platforms taking place in front of the windows (*sedir*), the fireplaces, the

cupboards, the shelves surrounding the rooms, the niches, and -in some of the buildings- decorated timber ceilings.

The façades of the traditional buildings represent a great variety, however they are usually in symmetrical order as a reflection of the plan arrangement. The projections, the wide eaves, the windows in 1:2 proportions, the moldings, and brackets are common elements articulating the façades.

Since, the residential use in the buildings of Cukurcesme Street still continues, the interventions realized in the buildings, do not depend on function change, but on the adaptation of the buildings to the current conditions.

There are three main causes of alterations observed:

1-Inheritance; the traditional buildings have usually more than one owners; so the division is one of the most common types of interventions observed in the site. The type of division and its effects on the original scheme of the building varies depending on the characteristics and the potential of the buildings.

2-Structural problems; the timber frame buildings have various interventions realized by their owners in the past for maintenance and repair purposes. The types of these interventions and their effects on the original characteristics of the buildings vary to a great extent.

3- Changes in life style; the houses on the street which are designed according to the standard needs of their users in the time of their construction, do not satisfy the needs of their current users. Therefore, various interventions have been realized in order to adapt the buildings into current conditions and requirements.

In spite of these common causes, the solution of them, in other words the types and the degrees of interventions in different buildings, vary to a great extent depending on the properties and potential of the buildings. (table 1) (Fig.4)

ALTERATIONS OBSERVED IN THE RESIDENTIAL BUILDINGS										
Causes		Needs	Intervention	Type of alteration						
				mass comp.	plan arrang.	façade arrang.	archit. elem.	usage scheme	mater. use
Inheritance	division-horiz.	separate circulation	division of spaces		*			*	
			removal of connecting elements				*	*	
			door and/or staircase addition			*	*	*	
		service spaces	division of spaces		*			*	
			mass addition	*					
		extra spaces	division of spaces		*			*	
			mass addition	*					
	division-vert.	separate circulation	elimination of connecting elements				*	*	
		service spaces	use of spaces for different functions					*	
			division of spaces		*				
			mass addition	*					
Structural problems		repair and replacement	replacement of surface materials						*
			removal of siding timber planks			*			*
			replacement of architectural elements			*	*		
Changes in life style		more lighted spaces	window addition on ground floor			*	*		
		semi-open spaces	mass addition	*					
		new service spaces	mass addition	*					
		mechanical equipment	installation of new equipments						*

Table 1. The alterations observed in the traditional residential buildings of Cukurcesme Street

Because of the inheritance problems, division of the buildings in horizontal or vertical manner is a common type of intervention, however the effects of this intervention varies depending on the potential of the building. In some buildings that are based on a sloping ground, the building is divided horizontally, only by providing an access directly to the upper

floor (which may exist originally). Similarly, in the buildings which are originally designed as two separate sections, the vertical division of the building is provided only by the elimination of the access in between, so that only the usage scheme of the building is effected by this intervention. In other cases, the needs for separate circulation, and for extra spaces-when the capacity of building is not sufficient- is provided by internal divisions within the spaces, the addition of new volumes, or new architectural elements such as staircases, doors; therefore the volumetric, and architectural integrity of the building is damaged.

The repair and replacement of the building materials and architectural elements is another common type of intervention, caused by the structural problems. In the buildings covered with timber planks, the repair is usually made by filling the spaces between the frame elements with another material such as brick and plastering the exterior surface. In the already plastered materials, this type of intervention does not alter the visual impact of the building, whereas for the timber covered façades, the appearance of the buildings, as well as the continuity of the materials along the street, is completely altered. The replacement of the architectural elements such as windows, brackets, doors are also very common in the buildings. In some of them, they are replaced with similar elements, so that the intervention remains in the scale of the element, whereas in some of the buildings, the material, form, or in some examples even the size of the element is altered, thus the original façade arrangement is altered.

The change in the life style, on the other hand, is reflected on buildings as two different groups of interventions. The first group consists of alterations realized for the adaptation of the buildings into a more extroverted life style of today, such as the addition of balconies, or enlargement of windows in order to get a better view towards outside, so that the façade arrangement and the volumetric properties of the buildings are altered. The second group consists of the alteration of the spaces and architectural elements depending on the contemporary needs, such as the cancellation of fireplaces, or bathing spaces within the rooms, and the installation of the mechanical equipment. These alterations, usually effect the usage scheme and sometimes the plan arrangement of the buildings.

As a result, even though the interventions observed in the surveyed buildings have common causes behind, the solutions applied, and their effects on the original characteristics of the buildings vary from case to case. Some of them cause the loss of the architectural and values of the building, while some others are being tolerated within the potential of the building.

It is an obvious factor that, these buildings have major problems to be solved before being adapted to the contemporary requirements of life. However, any intervention to be applied in such an area, should be designed and evaluated in relation to the characteristics and the potential of each case, avoiding standardization of the solutions.

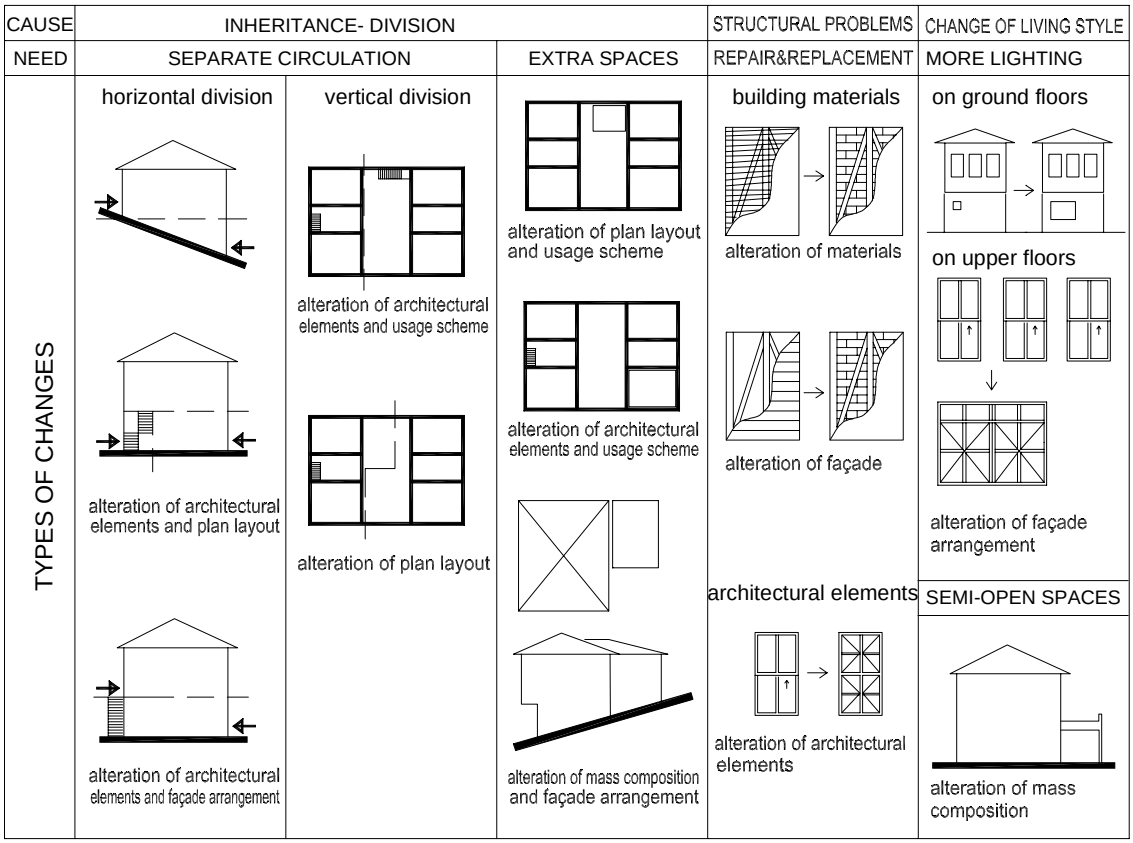

Figure 4. Types of alterations observed in the residential buildings

The problems of Izmit historic urban site, is shared by many historic settlements in Turkey, where the cultural values are being eroded due to the inconsistency of conservation policies, as well as the lack of an effective conservation program.

The historic settlements are worth of conservation not only because of the historic items that they include, but because of their character which is formed by the interrelations between these items, as well as their interaction with the natural setting.

In that sense, the interventions realized in different scales have reciprocal effects. In other words, what is done in the urban context and what is done on the individual items that make it up, are strongly interrelated. This not applies only to the restoration of the historic buildings but also the construction of the new buildings to be introduced to a historic settlement. What integrates a new item to an existing environment, is not its repetition of the common traditional features existing in the site, but the way by which it interacts with the existing context

Thus, all kinds of interventions to be applied in a historical settlement- either in the form of rebuilding or restoring- should be decided, evaluated, guided and realized with a contextual point of view based on the complete consciousness of the area, considering its effects to the site in all scales.