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ORIGINAL ARTICLE

Designing A Residential-Hydrotherapy Complex In Ziarat Village In Gorgan, Iran, With An Organic Architecture Orientation

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Abstract: Today's world is developing regarding elegance and beauty in physical atmosphere, which is sometimes considered as the major factor to attract customers. In developed countries, attracting tourists has become as a major and beneficial industry, and it can be seen that there is a rising income through tourism even in some countries lacking natural resources. Saving energy is now a crucial cultural and educational topic in Iran. Since there is a direct relation between designing buildings and optimizing energy consumption, there should be more attention to this subject. Despite having great potential in attracting tourists, Gorgan lacks appropriate hotels and residential buildings for tourists. In Ziarat village that has a spectacular waterfall, a hot spring and a breathtaking natural views is a unique place to visit in Golestan province, Iran, there is such shortage for visitors. Now, in order to proper exploitation of water, especially mineral water, as a national capital and a revenue source, and also for attracting more tourists to the region and converting it into an international tourism target, it is necessary to establish a residential-hydrotherapy complex in the pristine nature of Ziarat village. Moreover, the environmentally-friendly approaches and materials should be utilized for this purpose as much as possible, to develop the views about the living environment and its conservation. Overall, in addition to a designing with regard to organic architecture, there are some main goals in this project, including developing a connection between the human and the nature, finding a solution for physical mental fatigue of the citizens, relieving stress-related pressures resulting from daily life in crowded cities, preserving architectural, environmental and cultural indices of the region, and also teaching consistency in a simple way. As a result, it would be possible to present more convenient municipal services in order to conserving the environment, improving the views of local people and establishing suitable conditions for tourists and local residents.

Keywords: Residential complex, Hydrotherapy, tourism, Hot water spring, Ziarat village, Gorgan.

Introduction

Natural architecture does not merely focus on cultural and social aspects, but also considers physical and mental aspects of the human and the relation between people and their surroundings. Since today's architecture is strongly dependent on

economy, technology and regulations, the natural architecture combines them with biological, cultural and mental aspects of human. Tourism industry, as one of the major phenomena in the third millennium, has experienced a sharp growth in the past decades and had a great impact on economic prosperity and cultural exchanges among different countries. Many experts call the current century "the century of tourism". However, like the global development, development in this industry has not taken into account the fundamental elements and potentials, and only has noticed the benefits and welfare it would bring about. This has caused some deleterious consequences, and has result in an undesirable views on the relation between tourism and environment. So, there has been many statements, point of views and conferences worldwide in order to direct this industry toward sustainable development and to preserve the environment.

Considering the location of Golestan province, and the city Gorgan, and historical village of Ziarat, as a tourism target in Iran, and also some natural characteristics such as Caspian Sea, Ashouradeh bay and the continuous Alborz mountain range besides ethnic diversity of the region, make it an especial place to attract native and foreign visitors. Therefore, in this project it has been tried to choose a topic in the field of tourism in agreement with natural orientation architecture. Apparently, such attitude is an attempt to develop architectural elements, respect to consumers, the aimed building site and eco-friendly life.

Analyzing Tourism Industry in Iran

Humankind essentially like traveling, visiting new places and experiencing novel phenomena. The history of traveling dates back to beginning of human civilization. Traveling and immigration have always played a major role in the course of history. Based on the remaining from ancient civilizations of Iran, Rome, Greece and China, the people and thinkers had a particular viewpoint. However, in the past it was difficult to travel for a long time and to a distant place; so only the rich could afford it. On the other hand, there is a great emphasis on traveling and visiting new places. Islamic history is full of different travels that had chief influences on human civilization. For example, the trip known as "Hejrat" that the prophet Mohammad took from Mecca to Medina, immigration of some Muslims from Mecca to Ethiopia, and travels of Islamic missions through the other countries some of them. Moreover, the holy book Koran contains several pieces of advice on traveling to observe consequences of the way the previous people live on the Earth to learn about them; which indicates the importance of this activity. However, in recent decades, due to growing technologies and more convenient modes of transport, fundamental changes have occurred in traveling that have created tourism industry in the world. In recent century, advent of car, train, airplane, etc. has made is easier for people to move from a place to another on the planet.

Being a historical land, Iran has extensive opportunities for tourism. It can be said that this country is a collection of all kinds of attractiveness for tourists. There are different climatic conditions and diverse geographic positions. Such as long beaches, deserts, mountain ranges, etc. throughout the country. Having a 10000 year history and a rich culture, Iran is the origin of a great civilization and is renowned to possess its unique style of architecture. Even now thousands of Iranian people whose job is animal husbandry, frequently change their living place through the year to feed their animals properly. Since, it is not acceptable that Iran has a low ratio of the global tourism industry and do not benefit from its

opportunities. It is believed that Iran is able to become as one of the most favorite countries to visit for tourists in the near future. But, surly this dream will come true, provided that there is a serious and purposeful management. To develop tourism industry, all countries have similar parameters.

Experiences of other thriving countries in tourism such as France, Spain, Italy, the U.S., and also recently Turkey and Ukraine, illustrates that it is necessary to invest in order to activate the tourism sector. On the other hand, managing this part of economy is a changing, precise and scientific task. Knowledgeable directors are required to open new doors of Iran's tourism using their creativity and new scientific findings. Expanding this sector, in addition to growing national presentation, will enhance economic development through creating more job opportunities and more revenue, lowering poverty level and increasing equal social services and welfare. As a matter of fact, investing in tourism could lead to more investment in the other economic sectors, provided that this business take parts in the global chain of tourism and collaborate with great organizations around the world. There are various tourism capacities in Iran, and numerous climatic and geographic conditions allow for all kinds of tourism, such as cultural, religious, geographic, natural, regional, economic tourism.

Copying From the Nature

New development in scientific fields, and also in understanding natural phenomena, have broadened new visions to man. Besides showing the elegance and miracle of the nature, these new visions have revealed many achievements in stabilizing human civilization (Fakhr Tabatabaii, 1996). Creative work is always made by joining numerous factors which were not apparent before. Copying from the nature has distinct benefits. Evolution has led to some mechanisms that could be copied. In order to copy from the nature, it is not necessary to apply all details of the natural model, but natural principles and processes should be utilized (Anthoniades, 2007). Nowadays, a trend to ecology is evident because of the need for saving energy. The robotic technology and improved materials allow to make curve forms as simple and cheap as direct forms. Ecology and the trends which are made to create curve forms and organic shapes, are not considered as a great change, but they are gradual movement from hitech to organitech type (Jencks, 2003). It is possible to answer the questions through suggesting hypotheses and process of trial and error. Nature is a rich reference which could answer to the human questions. So it is human's duty to discover the answers step by step.

General Principles in Designing a Hotel

Different types of hotels, have different standards and facilities. They can be such sections of a chain and dependent on each other, or perform independently. If a hotel is part of a chain, it may need especial designing specifications. Different hotel types include municipal hotels, holiday hotels, clubs, apartment hotels and inns. Allocating space in hotels is usually is in a way that hosting facilities like rooms, restrooms, bathrooms, especial shower rooms, corridors and entering halls occupy 50 to 60 percent of total area. Public spaces, reception section, corridors and restrooms occupy 4 to 7 percent, especial section for guests including meeting and conference halls, 4 to 12 percent, administration, manager and secretary rooms, 1 to 2 percent; maintenance and repair section, 4 to 7 percent; recreational spaces, sports, stores and barbershop, 2 to 10 percent. Some particular parts may be considered for health centers and outside facilities that need

different spaces. There are numerous national classification systems which are compulsory or in a volunteer way based on regional categorization and the method of design (letters, numbers, stars, crowns, etc.). Over 100 classification systems for hotels are applied for hotels, which are based on the World Tourism Organization (WTO).

The Minimum Qualifications for Standards of Hotels According To Regulations by Iranian Organization of Tourism and Cultural Heritage:

In this category, hotels are arranged in five levels, having from one to five stars. The minimum qualifications for hotels at the lowest level (one star) are as below

- Considering the minimum level of quality in all parts of the unit.
- A hotel ordinarily should have at least 8 rooms.
- There must be bathrooms and private facilities in 75% of all rooms.
- There must be a place to have breakfast which according to the capacity of the hotel.
- There must be a controllable heating and cooling systems in bedrooms.

Overall Conditions

- One-star: Residential unit has only a few bedrooms. Its general area is limited and just a limited services and facilities of food and beverages are provided. Decoration and appliances may resemble appliances applied at home. Services are presented in an informal way and often by a family or the owner of the hotel.
- Two-star: The hotel may be small or medium-sized, and have less than 30 bedrooms. There is usually a limited general area, but the rooms are more convenient compared to one star hotels. The services and appliances are more formal than one star hotels, and also there are more food and beverages available.
- Three-star: These types of hotels usually contain more than 20 bedrooms along with more convenient services and facilities in comparison with two and three stars hotels. Indoor spaces of the building are more available. In such hotels locating in outside of cities and suburbs, often there are bigger general areas and bedrooms, and moreover, the behavior and appearance of personnel are more formal. They put great emphasis on the quality of services and appliances for guests, compared to low level hotels.
- Four-star: These hotels, provide high quality services and general area with guests. The resident guests have the first right to use hotel spaces, and if the number of people is more than capacity of the hotel, it is allowable to give services to other clients in the areas of these hotels. Restaurants have high standards in their services, and the rooms are very convenient suitable for guests and consist of attached spaces such as some spaces for conference, party, business, health and sports purposes. There must me some places for eating other than the restaurant.
- Five-star: These residential centers, having luxurious facilities, are so large and with higher international standards for their services compared to four-star hotels in terms of food, beverages, etc. Overall, these hotels provide an extensive range of facilities and services.
- Heritage hotels: Heritage hotels are historical buildings which have been recorded in Iranian organization of tourism and cultural heritage, that are recognized as repaired hotels. They must have the minimum qualifications of four-star hotels. Because of their particular nature, the related obligatory regulations must be considered, regarding being a

heritage, building safety and firefighting. According to rules, they have the highest standards of health and safety. The least needs for heritage hotels includes the followings: In all four and five star heritage hotels, quality of all constructions must be distinguished and particular, and provide the minimum services given by four-star hotels. Environmental aesthetics represents higher quality of original and local culture. Types of foods and clothing of the personnel show local styles. Appearance of Furniture and appliances is a sign of quality and beauty of historical, cultural and locale traditions, and also heritage values of the hotel's atmosphere. Bedrooms contain the same appliances as the four star hotels and moreover some other appliances that represent the heritage type of the hotel. A particular decision must be made about heating, cooling and ventilating the air in the building, to provide convenient services besides maintaining traditional characteristics of the complex.

History of Hydrotherapy in Iran

Investigation of mineral waters of Iran started in the second half of 19th century. Some Iranian kings in the past were so interested in using mineral water for treating illnesses. Some of the related evidences near some springs has remained especially from Safavi and Ghajar era. Scientific study of mineral waters of Iran was commenced since 1927, and the first exploitation of mineral water in Iran began in a spring located in the northeast of Tehran, the capital city of Iran. In the years before the World War II, in some parts of Iran, such as Ramsar and Larijan, stations were established to exploit mineral water. In 1970, the Iranian government employed a scientific- engineering board from France and Greece to study the springs of Sarein, Ardabil, which extensively investigate the springs' waters and tested their medicinal properties. As a result of these efforts, modern hydrotherapy was founded.

Studying the Examples

Hotels Kyocera and Kagoshima, Japan (Figure 1)

Hotel Kyocera which is located in the center of Technology City and near the airport of the city, is one of the notable examples among the suburb hotels and its design allows to fulfill the needs arising from international trade and recreational trips. The first goal of this hotel is hosting foreigner guests visiting technology city. The second goal is developing the regional activities and providing the required commercial facilities for local institutes and companies. And the third goal is to create such feelings that people have during their stay at a residential place to rest and refresh themselves. This hotel has two floors underground and 13 floors upper ground. That is, the underground floors are devoted to conference center and other social uses, and the ground floor is the lobby. All particular facilities to hold a wedding party are found on the second floor, and the restaurants are built on the third floor, and the main hotel bar and meeting rooms are located in the upper floors. The hotel rooms are arranged around a central atrium that has an oval shape and is in the middle floors. All rooms are wide and big enough and have large windows. From the connecting corridor of the building, there is an exciting view of the activities in the technology city and a spectacular mountains of Kirishima and Kinko bay, which creates feeling of staying in a peaceful hotel. The central atrium, the essential core of the construction, is 60 meters and continues from the lobby through 13 floors up to the highest floor. Wedding ceremonies are held in a small

glass church which is in the shape of a shining cross that resemble a tent and located in the middle of atrium.

Figure 1. Hotels Kyocera and Kagoshima, Japan.

Hydrotherapy Complex of Sabalan (Figure 2)

This is one of the well-equipped hydrotherapy complexes of Iran and is located in Sarein, Ardabil. It has two floors and has built on an area of 7200 m^2 on a land of 52000 m^2, and the first floor which has an entering door towards the south particularly for males; and the second floor is only for females. There are parks and landscapes and parking lots in the north and south parts outside the building, and also some stores inside and outside of it. Furthermore, some other parts have been provided including three swimming pools, 12 hot water ponds with under pressure water that some people could enter it simultaneously, seven simple hot water ponds, four warm rooms and two especial sections for hydrotherapy purposes. This complex will be ready to host visitors in 2015.

Figure 2. Hydrotherapy complex of Sabalan.

Geographic Position of Ziarat Village (Figure 3)

Ziarat is located in a geographic position between 36°, 43', 50" of north latitude , 54°, 29', 11" of east latitude and 36°, 42', 17" of north latitude , 54°, 28', 19" ; and its average height from the sea level is variable from 870 m to 1190 m (Fig. 4). The village

location is 15 km far from central part of the city Gorgan, and 25 km from the center of the village Jelin Olya. The village, from the north ends in the region Naharkhoran, from the south ends in Mt. Talembar, and is surrounded by forest of Minjehezar and Absefid, from east and west, respectively.

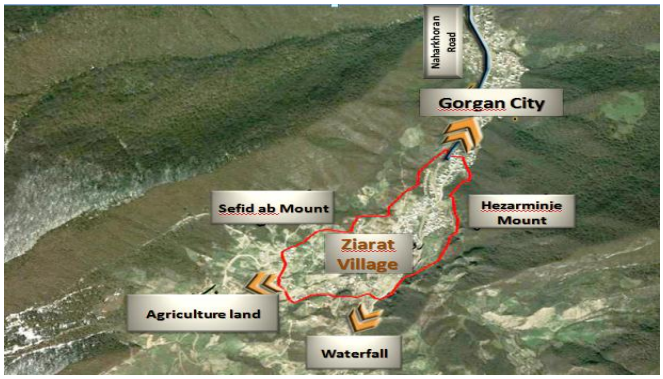

Figure 3. Geographic position of the village Ziarat.

Water Resources in Ziarat Village

Surface Water Resources

Both Gorgan and Ziarat are subjected to Gorgan watershed which has the following properties: Gharasoo in southwest and Gorgarrood in east and middle of this watershed, are two rivers responsible for draining the watershed. Both rivers have mountainous watershed and flat watershed. In addition, Gharasoo watershed is chiefly mountainous and covering with forest, while Gorgarrood watershed consist of both forest and no forest regions.

Ziarat River

Ziarat river which flow in the southeast and south of Gorgan city, is a branch of Gharasoo. Two rivers called Abshar and Sute which join in southwest of Ziarat village that is 15 km far from Gorgan, create Ziarat river. The Ziarat River is originated from the mountains Zereshkkooh, Torkmeidan and Mazukosh from a point at 54°, 26', 55" of longitude, and 36°, 39', 47". Actually the earlier narrow originated rivers are Suterood and Khaserood, respectively; which after meeting the other narrow rivers originated from Kolidal and Belaghghol heights, form Ziarat river in the eastern side of Ziarat village. This river supplies the most of the water required for Gorgan citizens, actually after purification. Afterwards, the river flows through Gorgan and also Mohammadabad village, and after roughly 40 km join Gharasoo river at the point in where Gharasoo river and Gorgan road meet each other, that is called “Shoorhaiat Bridge”.

Ziarat watershed is 9755 ha and consists of 6 subwatershed which two of them called Natke, Meydan are non-hydraulogic. Severe thunderstorms, steep slope, many changes of utilization, low permeability and depth of the soil, along with other factors have resulted in some enormous flows in some seasons of the year. The average slope of the watershed is 41.5% that most of it contributes in depositing and making various erosions and mass movements. Ziarat river has the maximum and minimum of water discharge in spring (749 L/s) and summer (332 L/s), respectively.

Ziarat Waterfall

Ziarat waterfall is one of the major water suppliers of Ziarat river (Pars Vista Consulting Engineering Co., 2002). This waterfall is located 19 km far from Gorgan in the south, in the preserved area of "Jahannama". In all surroundings of the waterfall there are floating water-like particles in the air, and due to high humidity surface of rocks are covered with moss and lichen. Nice view, mild and desirable weather conditions, peaceful environment, monotonous and soothing falling of water are the attractive factors bring the nature lovers to this region.

Nevertheless, it is difficult to reach this place through the existing route. Also there is not sufficient recreational facilities in the region. In terms of water quality, rivers in Ziarat watershed on the heights flow through the regions constructed of calcic bicarbonate, bicarbonate in silicate formation, bicarbonate sulphate, discontinuously, and in the lower height they flow through the regions constructed of bicarbonate, sulphate, salty and sulphate bicarbonate.

Underground Water Resources

Underground water resources of Gorgan watershed has the following properties: Shale stones and red sandstone from Precambrian and Infracambrian periods have not that role in enriching underground waters of this watershed. However, clay stones of these eras, due to having many pores and flaws, are a proper to passing underground water. The clay dunite and carboniferous stones have the same properties, too. Spreading clay stones of the second era, particularly upper Jurassic and Cretaceous which are present in Golestan forests and the eastern parts of this watershed in mountains of Bigloo and south of the village Zaav, because of various faults contain flaws and cracks.

So after heavy precipitation that is common in these heights, the downing water flow penetrates these stones and by a dissolving ability forms numerous horizontal and vertical canals which could be appropriate reservoirs to store underground water. Many existing springs suggest these stones are full of water; further, precipitation in the heights especially as snow, and nearly half of the year the clay stones of the heights which are covered with snow. This allows the water resulting from melting snow to penetrate the clay stones. Existing water in clay stones, besides supplying water for the rivers, enriches the underground water reservoirs (Pars Vista Consulting Engineering Co., 2002).

Hot Water of Ziarat

Hot Water of Ziarat is located 15 km far from Gorgan and in the eastern side of the river Khaserood. This spring has four emerging points with 10 to 20 intervals. The first emerging point is under a rock which contains a small written piece in Arabic on it, dating back to 1926. The second emerging point is located 20 m far from south of the first one. There are also two other emerging points in the distance of 10 and 15 meters. Foreign visitors, such as colonel Lewat the British council, have mentioned the sulfuric spring in Ziarat village in that era. Water of the spring is clear without a particular taste and smell, but is desirably and mildly warm. Apparently, it is the only hot water spring in Golestan province. Studying mineral properties of its water could introduce it as a valuable attractiveness of Golestan province for tourists.

Analyzing the Site

Understanding characteristics of the land is one of the major factors in designing a

complex which influences the architectural design, and when there is a precise consideration of these characteristics, the architect could produce a successful plan. In this section, the land characteristics and their analysis are presented:

Position of the Intended Site (Figure 4)

The proposed site for the project is in a land of nearly 50000 m^2 in Ziarat village, near the city Gorgan, and at the end of Naharkhoran road.

Figure 4. Position of the intended site

Neighbors of the Site

The northern and eastern side of the site are surrounded by residential buildings and gardens. In the western side and in the south-north direction and in the same direction of slope of the village, there is river with a width of 2m and a very mild slope, about 15 m from edge line of the site. Ziarat hot water spring is located in the southern side of the site on the heights and close to the waterfall. Furthermore, the eastern and southern sides of the site are completely covered with trees and are attached to the forest area.

Connection to the Site

An appropriate connection with a business location is necessary for its development. A network of roads provides such connection. Ziarat village is located at the southern end of Gorgan, in a direction to the forest heights that branch from Naharkhoran road.

Sights of the Site

As it was mentioned before, this site is surrounded among natural beautiful factors. Further, these factors could put a view in a frame, so that the focal point or the intended point become clearer. Golestan forests are considered the most important sight of the region.

Slope and Topography of the Site Land

Many lands of the village are on a slope, because of being on the mountainside. This especial position of the region makes some limitations to construct buildings. However, through proper designing and according to organic architecture, it is possible to apply the nature and sustainable architecture appropriately.

Consideration for designing the project

Separation and space groups, in form of individual floors and volumes, were considered in designing. In this way, in addition to fulfilling physical requirements

of the hotel, the center of hydrotherapy that makes a direct connection between the user and nature, and also separate sections designed.

Availability of the Site for Motor Vehicles

In order to reduce accidents and providing a better and faster traffic an easier way to reach the site, a slow-to-drive minor road with a width of 5 m from side of the main road to the side was designed. In the area of the site, separate paths were allocated for passing service cars, which their slope was 15%. To reduce produced pollutions and noises, the coniferous trees were planted in passing ways and parking lots.

Availability of the Site for the disabled and pedestrians

- In designing spaces of the site, considering different heights in the site, disabled people had a particular position and especial paths with the slope of 7% were devoted to facilitate passing of the disabled.
- The height of all stairs in the site will be 14 cm equipped with railings for more secure conditions.
- In addition, alongside walking paths benches will be established in the landscape for pedestrians to rest. Also trash bins will be put close the benches to decrease probable pollutions.

Green Roof

Because of organic orientation and harmony of buildings with surroundings, green roof on constructions was designed in which particular types of covering plants will be planted so that their roots do not penetrate the construction materials.

Elevators and Stairs

One of the major issues related to hotel designing is securitizing availability in case of fire, that is, in such situation, smoke and fire will not immediately go the other entering paths and to evacuate the people easier and faster. To do so, in vertical availability, elevators and stairs will be established separately.

Plants

- Considering the level of underground waters and climatic conditions of the region, to remove the sewage utilizing absorbing wells is not possible. Therefore, to remove the sewage a system called “sewage elevator” will be established. It works in a way that when the water level get more than a certain threshold, the extra water will be pumped. In the upper parts of the tube, there is a trunk tube which prevent the water from going back. It should to be noted that the produced sewage in swimming pools and ponds could be removed using a hole placed on their floors, considering the natural land slope, a cast iron tube taking sewage out of the building. These holes must be connected to the main tube through side tubes by a 45° angle.
- 2- In order to decrease the costs, a common facility was included for both complexes between them.
- 3- Since the river is a close to the site and the residential section includes the basement, in order to prevent water penetration and probable damage to the construction, walls with minimum height of 30 cm were included in the design. The materials for these walls were waterproof concrete containing galvanized sheets put into the walls to block the rising water.

Construction

The major goal of a construction is surrounding and determining a certain area. Moreover, balancing the construction resistance to imposed loads is a condition for its stability. Various constructions having a certain architecture, through surrounding and defining a particular area, make it ready to certain applications. Overall, benefits of these constructions result from separating a total section or a part of it from the natural environment. A completely surrounded area may not be necessary. The building must have such a form that ensures not to be vulnerable to severe winds or dense crowds. If earthquake be addressed in planning and building a construction, in case of earthquakes, it can help to minimize death toll. Briefly, all essential principles must be considered to build a construction.

Generally, for buildings similar to this ones in this project, two construction systems could be proposed, including metal skeleton and concrete skeleton. As a matter of fact, there are advantages and disadvantages for both systems, and eventually one of them will be chose after analyzing all related parameters. Concrete skeleton is economically more frugal, has a better correlation between all construction parameters, and also more resistant to fire. While, metal skeleton is faster to establish, and more complicated and flexible compared with concrete.

The main construction system aimed for this project is concrete skeleton. Diameter of the selected poles, except for particular cases, was 40 cm, and their shape is variable between circle and square. Putting the poles is according a system of 7×7 network.

Materials

The most appropriate material is armed concrete, in which pressure resistance of concrete and tension resistance of steel are combined. This could be designed and done in various shapes and forms, and consequently adapt itself to imposing loads and the building's architecture. In this way, new facilities and freedoms are provided for designing constructions, which are further to the standard combinations of poles and posts. Arming steel is put between masses of cement, sand and water, like tension strips, and when it is hardens, makes the construction as a resistant and uniform unit. By adding glass particles or metal strips into concrete, a more uniform and even will be obtained. To prevent cracking of the concrete due to exposure and real internal and external appearance, spun concrete will be utilized. This method put concrete under pressure and steel under tension; and the created tension by imposed loads in poles reduces internal pressure of concrete or ultimately neuters it. As a result, the concrete will never be under extreme tension and will not be cracked. Furthermore, it is assumed that the construction materials are of non- inflammable ones.

In designing the buildings' view, some novel materials such as white composite along with local materials such as wood, red brick and glass. In addition, to decrease longevity of the buildings' view, concrete is applied beneath the composite layers.

Procedure of Forming the Project

The idea and concept of the project were originated from green and pristine nature, in such a way that a rock could be placed in this nature. This sense direct the project to an organic architecture and creating an idea based on layered stones (folding architecture). All the lines are towards the lines of the site and the land's topography. The buildings are located in the site according to climatic conditions and direction of the solar radiation and wind blowing.

Initial Idea of the Residential Complex

The form of this construction is like the sedimentary layers within the mountains, which are bent over each other and spun because of internal pressures of earth. While each layer maintains its internal characteristics; however, is involved in close layer and so the layers are curved in a resilient way.

Procedure of Forming the Residential Complex (Figure 5)

In order, from left to right: the overall shape of the construction is in the form of a cube rectangle. Afterwards, this form was divided into three sections regarding space separation. Then, considering the organic orientation architecture, to make the project more organic, the folding and bending stones' forms were degraded through changing the lines in direction of the lines of the site. Finally, considering different available applications in the hotel and the required spaces, the floors were allocated to various requirements. And also, on the roof, the green sections called "Roof Garden" were designed. In the last figure, the riser (vertical availability) could be seen.

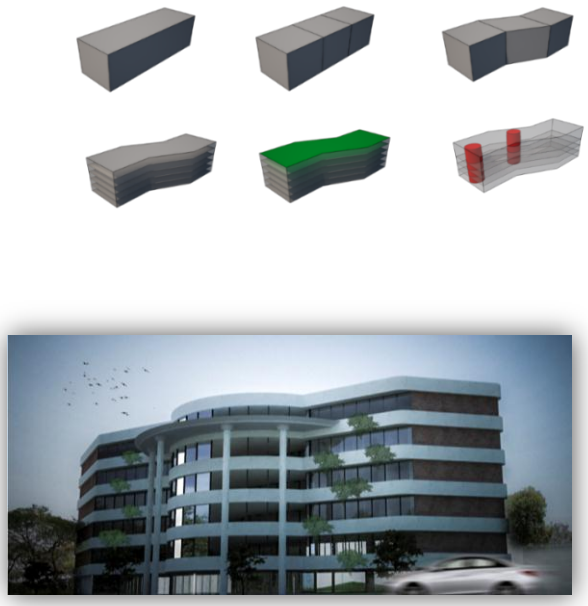

Figure 5. Procedure of forming the residential complex.

Hydrotherapy Complex

Considering cultural and religious beliefs in Iran, in order to facilitate using hot water, two separate complexes were designed to be utilized by men and women, separately but simultaneously. The idea of the entrance and waiting rooms comes from the Iranian bathrooms, in which after going into the entering way that serves itself as a filter, you reach a long waiting room with a pond full

of water within it. This structure creates a sense of movement in Iranian-Islamic architecture. The roof of this section contains a hole for passing the light which make it more desirable.

Procedure of Forming the Hydrotherapy Complex (Figure 6)

In order from left to right: Overall shape of the construction was considered in the form of cube rectangle. Afterwards, according to separation of dry and water sections, the construction was divided into two parts. In figure 6, the red part includes water sections (showers, swimming pools, jacuzzis, ….). Besides this part, an open swimming pool is located outside the building, to provide people with outer views and open air. Also the outside swimming pool is surrounded by some rows of plane trees. The green part of represents the dry sections (entrance, antechamber, cloakrooms, lobby and offices) (Fig. 6). According to available spaces to use hydrotherapy, this section of building are divided into two floors, which consist of restaurant, massage room, body building club, etc. in the second floor.

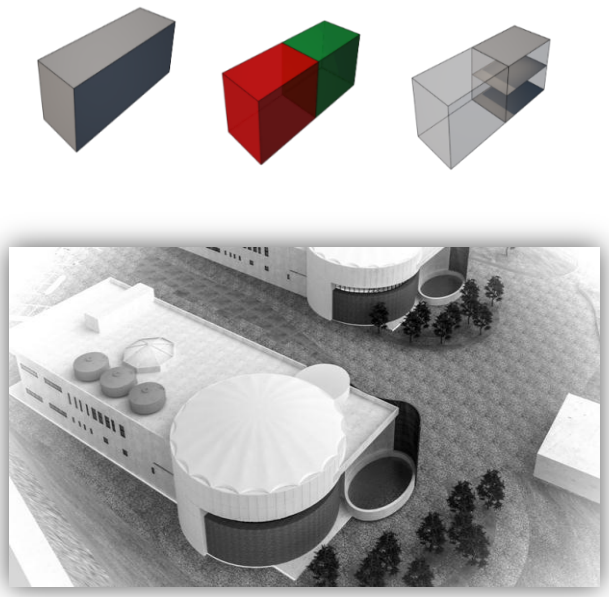

Figure 6. Procedure of Forming the Hydrotherapy Complex.

Landscaping

Landscaping is an important issues in this site. An especial attention was paid to this part of designing, with regard to goal and title of the complex. That is, this landscape could contribute to educational, etc. roles of the complex. Therefore, various parts of the landscape include a network of sidewalks and pedestrians' ways such as recreational paths, pathways around buildings, short ways to reach various places, stairways, ramps and driving paths such as servicing roads, roads reaching the around views, the main road, particular road of the residential complex, particular road of the hydrotherapy complexes, road for carrying goods and fuel.

Kerbs , railings, municipal furniture in the site, brightness of the area, sewage collecting network, portals, guiding signs , various public and private parking lots, and landscape including trees, grasses, natural and artificial covering plants of the hills and sides of streets, all flower pots and flower boxes, etc.

Conclusion

Considering the overall trend of designing and mentioned issues, this project entitled "Residential-Hydrotherapy Complex" was designed with an organic-orientation architecture. It was tried to design all sections according to the existing standards, and total project is based on the natural and eco-friendly architecture. There is a hope that this project could serve to preserve the local architecture of the region and environmental issues.

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