

LANDSCAPE ARCHITECTURE IN ARCHAEOLOGICAL OPEN-AIR
MUSEUM (AOAM) DESIGN: A FRAMEWORK FOR ARCHAEOLOGICAL
HERITAGE CONSERVATION

by

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I would like to express my deep appreciation to my parents and my wife for their unconditional support and encouragement over the past years.

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Abstract

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Open-air museums provide an opportunity for landscape architects to engage with historical and cultural landscapes and collaborate with museums, archaeologists, and historians to create educational resources for the general public. While many open-air museums are comprised of archaeological sites made available for public and educational visits, not all AOAMs are designed to provide a meaningful and well-managed way of accessing the site as a cultural landscape. Landscape architecture is a link between people and place, a nexus between art and nature, and, even more, between art, nature, and technology (Rogers, 2001). The design of open-air museums focuses on interpreting historical uses of the landscape that explore the long-lasting connections between people and places.

Archaeological open-air museums (AOAMs) create a new and direct approach to museums, allowing the public to experience the physical environments and contextual components of the past. At AOAMs, there are no glass cases but direct contact; visitors can live, breathe, and feel the atmosphere of history through realistic reconstructions of daily events in settings of ancient civilizations (Magelssen, 2004).

This thesis will focus on one design case study to demonstrate the ways that landscape architects can contribute to the development of AOAMs. The archaeological site of Gohar Tepe in northern Iran is a valuable cultural landscape that documents life in the middle of the Bronze Age (Andy, 2011). Archaeologists believed that Gohar Tepe was once a complicated urban civilization, dating back about 5,000 years (Andy, 2011). This active archaeological site is inaccessible and suffers from a lack of management. In its present condition, the dig site is open to the air, only covered by a tarp. It is threatened by the encroaching agricultural activities that take place directly adjacent to and around the excavated portion of the site.

The goal of this design study is to use landscape architecture to propose an integrated framework based on four main concepts: 1) landscape integrity, 2) (re)construction strategy, 3) reference landscape and landscape identity, and 4) the AOAM itself.

The landscape design will address issues critical to AOAMs by balancing the need to protect the cultural landscape with the desire to provide public access to the area. To achieve this balance, the design proposes ways to manage the following issues at Gohar Tepe: the lack of a holistic approach to the main components of the site; the agriculture industry around the site; the lack of security for the museum and safety of visitors; the absence of determined pathways, design structures, and visitor and educational facilities; and the exposed dig site open to the air. Landscape architecture, through its holistic approach, is uniquely positioned to offer strategies for the creation of AOAMs that interpret the archaeological dig site as part of a dynamic cultural landscape.

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1 Introduction

There are many different design approaches of AOAMs (Falk & Sheppard, 2006). The early idea of constructing AOAMs dates back to the end of the nineteenth and early of twentieth centuries and focused on preserving and presenting archaeological remains (Sevan, 2008). AOAMs showcase past heritages and are part of a community's identity (Zeidler, 2015).

The diversity of AOAMs makes it difficult to put them in a defined group; they have different contexts and history and use different names (Paardekooper, 2012). AOAMs are the subject of multidisciplinary studies such as tourism, architecture, landscape architecture, heritage, education, social identity, archaeology, and history (Hitchcock & King, 2003). Each of these disciplines focuses on different aspects of an AOAM (Bennett, 2013). As a result, AOAMs are considered fragmented systems that are often inadequate to address the preservation of archaeological sites (Kobylinski et al., 2015). Considering AOAMs as fragmented systems presents the following challenges: the lack of identification of ideal planning protocols for AOAMs, inadequate design framework, and management and maintenance complexities.

AOAMs should be analyzed with a larger landscape perspective because AOAMs are affected by their location and interaction with the landscape and community around them. There are numerous factors in today's landscapes that affect landscape in future and the need to preserve the site for future generations (Turner, 2015).

By using a specific case study, this thesis presents a general framework for the design of AOAMs as a crucial way to preserve cultural landscape heritage and the formation of its context in an integrated landscape system. The proposed integrated framework is based on four main fundamentals: 1) landscape integrity, 2) (re)construction strategy, 3) reference landscape and landscape identity, and 4) the museum itself, the AOAM.

1) Landscape Integrity

This approach examines the interaction of the site with its surroundings, including its ecosystem, economic and cultural context, and history (Nüsser, 2001).

2) (Re)construction Strategy

The (re)construction strategy helps to redesign the historic site in its original context (Moreira et al., 2006).

3) Reference Landscape and Landscape Identity

The original condition of the cultural landscape during the excavated site's period of significance is called the *reference landscape* (Moreira et al., 2006). Also, identity is the sense of uniqueness of place (Lynch, 1960).

4) AOAM

AOAMs provide a contextual bridge in understanding the culture of the ancient world with that of contemporary society. AOAMs provide a way to examine the values and experiences of distant cultures as they relate to contemporary and future generations (Paardekooper, 2012).

1.1 Integrated Model

The proposed framework aims to integrate the AOAM with the reference landscape and considers the AOAM in a time continuum. Secondly, this framework suggests the adoption of a (re)construction strategy that articulates said time continuum. Thirdly, identity or sense of place is established in this thesis as a crucial point in the management of archaeological sites that display relics in their original historical context.

AOAMs offer a way to preserve cultural landscapes. Legibility and coherency in the design framework of AOAMs should be integrated with the aforementioned requirements to shape the (re)construction strategy used.

For the first time, an attempt has been made to develop a generic framework, which includes the landscape and its subsystems and identity, vertical and horizontal relationships in a time continuum, and historical

layers in chronological order. The result is an integrated AOAM design based on a holistic approach.

1.2 Study Area

Gohar Tepe, a 50-hectare region, is one of the most crucial archaeological sites in northern Iran. Archaeological evidence reveals that Gohar Tepe had a complicated urban civilization about 5,000 years ago (Andy, 2011). Based on studies of the site done over the past few decades, the existence of Gohar Tepe dates back to the middle of the Bronze Age, continuing to the Iron Age (Andy, 2011).

1.3 Research Method

This research uses a case study to propose a design solution to the neglected archaeological site of Gohar Tepe. Developing the design required the creation of a framework for approaching cultural landscapes and archaeological sites, review of archaeological evidence from Gohar Tepe, a site inventory, and an analysis based on reference-landscape. This research analyzes the site to create a program, using the principles of AOAMs and study precedents established by other AOAMs.

1.4 Research Objectives

This thesis examines the role landscape architects play in creating AOAMs and the ways that they can complement the expertise of archaeologists investigating a site. Generally, each discipline looks at

AOAMs from their point of view, and the reference landscape is neglected when archaeologists create AOAMs. This thesis demonstrates the ways that landscape architects can contribute to the development of AOAMs by considering the reference landscape as the base context for creating a (re)construction strategy for a site.

1.5 Research Questions

1.5.1 How can landscape architecture augment the design process for AOAMs that are more inclusive of the cultural landscape?

1.5.2 Can landscape architecture provide a framework for an approach to AOAM design that is broadly applicable?

1.6 Significance and Limitations of This Research Study

1.6.1 Significance

This thesis proposes an integrated framework for the design of AOAMs to be used by designers, architects, archaeologist, planners, and engineers. This framework suggests ways for the entire cultural landscape to contribute to the educational mission of an AOAM rather than the dig site alone.

1.6.2 Limitations

Because the dig at Gohar Tepe is ongoing, interpretation of evidence from the site is necessarily incomplete and based on conjecture. Also, most of the existing studies in this domain are conducted by archaeologists and

architects, so there is very little background from the point of view of landscape architecture. This thesis depends on a single case study; the application of the proposed framework on additional case studies is necessary to produce more in-depth results.

2 Literature Review

2.1 Definition of Key Terms

Archaeological sites originate from landscapes in certain time continuums. Cultural landscapes are created when humans interact with the landscape. The definition of these basic terms help us to have a better understanding of the AOAM design process. This section presents the main terms used in AOAMs.

2.1.1 *Landscape*

The European Landscape Convention (2000) defines landscape as “an area, as perceived by people, whose character is a result of the action and interaction of natural and/or human factor” (p. 2). Landscape structures have some values that can be found in historical time layers (Antrop, 2005). Human and landscapes are in constant interaction (Stobbelaar & Pedroli, 2011), and cultural landscapes are shaped by the long-term relationships of human and nature (UNESCO, 2002). These landscapes provide neighboring communities with natural resources, wildlife habitats, economic benefits (Merlo & Croitoru, 2005), and, cultural heritage.

Archaeological sites need to be integrated with the landscape to understand the greater culture of the landscape during historical times. The landscape should be considered for all biotic, abiotic, and cultural dimensions as well as tangible and intangible factors in a holistic system.

2.1.2 Archaeological Open-Air Museums

AOAMs are the intermediary between the people and culture of the past. AOAMs transfer cultural values to observers and make direct connections between visitors and relics. AOAMs provide a sense of place and identity for the community that hosts the museum (Paardekooper, 2012). AOAMs present archaeological heritage in its original context, emphasizing place identity (Uzzell, 1996). An AOAM is not just a collection of buildings in a landscape. The original setting provides values that show the story of the past.

AOAMs and interpretive exhibitions have a crucial role in giving visitors a sense of the identity of the place they are visiting. This model of cultural landscape preservation can help articulate archaeological heritage in an overall context by truly understanding the landscape and place identity (Uzzell, 1996). In fact, AOAMs narrate a scenario of human and nature relationships over time and the significance of the landscape in that relationship. The original context contains values that can communicate the story of the past. In some cases, an AOAM cannot adequately show an area's originality because of the lack of information available or the continually changing information discovered at the archaeological sites.

Museums and heritage interpretation generally need to strive for a better connection of the past, present, and future and to understand not only

the continuous and ongoing links between all three (Wallace, 1987) but the interconnectedness between the AOAM and the main landscape system as well. If an AOAM's role is informing people about a place, its past, and people's position in both, then an AOAM should also be about enhancing historical knowledge, improving the archaeological experience, enriching entertainment areas, increasing local and national pride, and presenting educational, scientific, and economic benefits. This integrated framework provides a base to meet these goals.

2.1.3 Cultural Landscape

In 1992, the World Heritage Convention was the first international legal instrument to recognize and protect cultural landscapes (Rössler, 2000). A *cultural landscape* is defined as an interaction between nature and humankind over time. “[Cultural Landscapes] are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal”(Mitchel et al., 2009, p. 19).

2.2 Integrated Framework Fundamental Factors

2.2.1 Landscape Integrity

Landscape integrity refers to the idea that a landscape may or may not embody the ideas, uses, and natural systems that are reflective of its

inherent values. Landscape integrity refers to the process of assessing changes in scale and boundaries across time. (Jianguo & Taylor, 2002). It aims to create a balance in the landscape system to articulate changes in a complex system, especially when human law and social practice ignore natural processes (Khaniki et al., 2015) and fail to recognize community resources (Spirn, 2005). When planning for the future, identifying this process is the primary step in meeting human needs while simultaneously maintaining ecological processes and biodiversity. This integrated approach tries to manage changes in a dynamic network within the landscape and reveals the structural and functional dimensions of changes and their consequences (Antrop, 2004).

2.2.2 *(Re)construction Strategy*

(Re)construction strategies depend on either landscape restoration or landscape rehabilitation. “*Landscape restoration* can be defined as the process of assisting the recovery of a landscape that has lost diversity, coherence, and identity. This might prove difficult or even impossible, depending on the degradation stage in comparison to the reference landscape, besides changing tastes and various socio-economic drivers” (Moreira et al., 2006, p. 220). By contrast, *landscape rehabilitation* is used when restoration is not possible and the recovery is partial (Moreira et al., 2006; See Figure 1).

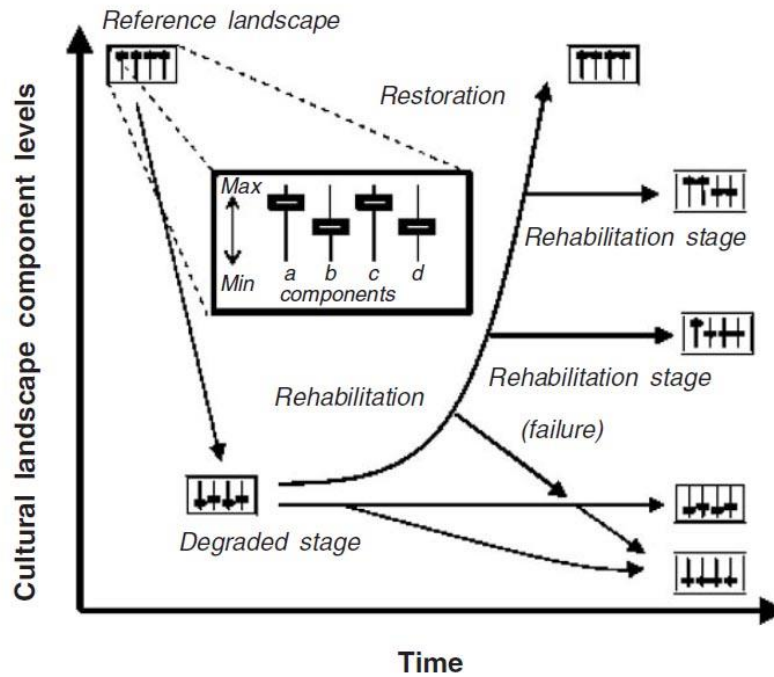


Figure 1. The “mixer board” landscape model and evolution of cultural landscape degradation and restoration/rehabilitation over time (Moreira et al., 2006, p. 221)

(Re)construction strategies emphasize that relics should be preserved in their original site as part of the site’s history and should aim for full restoration whenever possible. New facilities based on the site’s needs, such as museums and tourist facilities, are also part of reconstruction strategies.

Reynolds made clear the term *reconstruction* implies a spurious degree of certainty (Reynolds, 1999). The same can be said for the term

restoration. To emphasize the degree of uncertainty, the phrase (re)construction is used instead (Paardekooper, 2012).

2.2.3 Reference Landscape and Landscape Identity

The original condition of the cultural landscape during the excavated site's period of significance is called the *reference landscape*. Understanding the reference landscape is necessary to establish restoration objectives (Moreira et al., 2006).

Landscape identity is “the perceived uniqueness of a place. *Perceiving* is both a personal and social matter, and that *uniqueness* is based on the interaction between spatial factors and social factors” (Stobbelaar & Pedroli, 2011).

The identity that people derive from the landscape to a certain region is called *place identity* (Olwig, 2006). Landscape identity is composed of existential and spatial identities. *Existential identity* is considered an inherent quality of the landscape as perceived by people (Stobbelaar & Pedroli, 2011). On the other hand, *spatial identity* is related to the characterization of the landscape and ascribing identity of an environment; also, colors, and even sound and smell can comprise spatial identity (Hendriks. & Stobbelaar., 2006).

Archaeological sites have a cultural-spatial landscape identity from social and cultural components found at the site (Stobbelaar & Pedroli,

2011). These sites can be characterized by features that distinguish one region from another (Antrop, 2000).

2.2.4 Archaeological Open-Air Museums

AOAMs are the intermediary between the present and the past. They transfer cultural values to observers, make direct connections between visitors and heritage relics, pursue educational, scientific, and economic goals, and create a sense of place and identity for the museum (Paardekooper, 2012).

2.3 Integrated Framework

Integrated framework is guided by the four fundamental basics: 1) landscape integrity guides the process of design by identifying landscape structures, functions, and changes that enclose landscape values, 2) the identity directs integrated landscape design by analyzing and reinforcing existential and spatial identity, 3) the (re)construction strategy steers the integrated landscape design by presenting a character of landscape in a temporal continuum. Therefore, the (re)construction strategy coordinates the integrated AOAM design in a landscape context, and 4) AOAM sites are the context of the design. The integrated design approach leads to a culmination of identity and integrity due to the reference of landscape values. All these factors show a spiral process to AOAM design approach (See Figure 2).

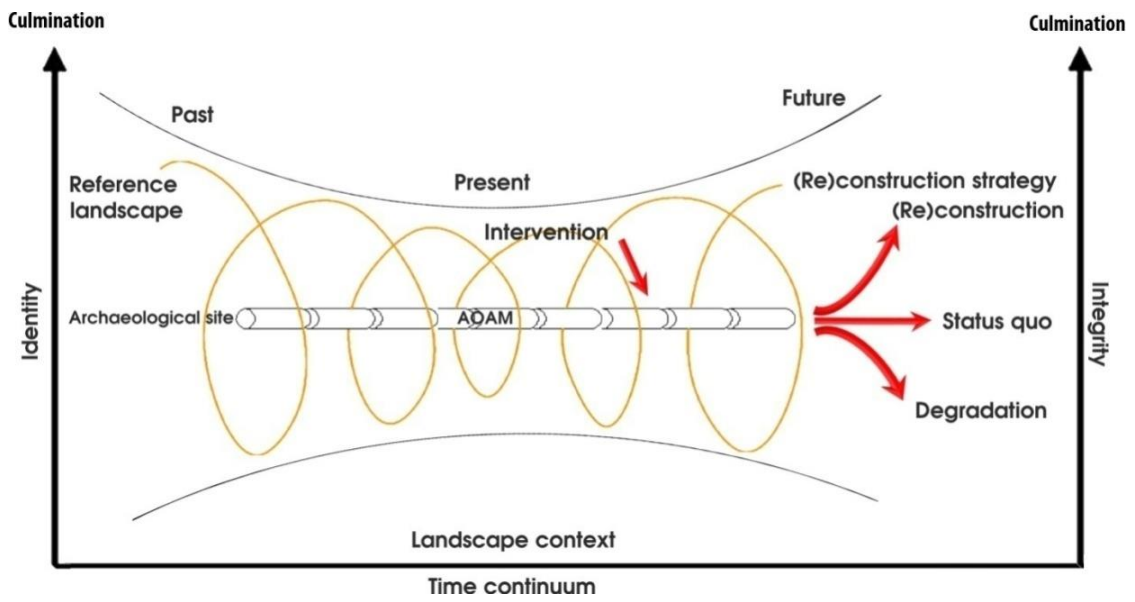


Figure 2. *The integrated design model construction, adapted from (Moreira et al., 2006)*

3 Research Methods

3.1 Introduction

The literature review provided contextual information in verifying the importance of AOAMs and the current design methodologies and gaps that need more attention from a holistic perspective. In this chapter, I discuss the methods used to develop the program and design for an AOAM at Gohar Tepe. This chapter also outlines the data used for spatial analysis in GIS and the process of integrated model application in my case study. Also, this research uses chronological data to understand the impacts of time on my case study and the gap between the reference landscape and the site status quo. The variables for this study are identified in the literature review chapter.

3.2 Research Design

3.2.1 *Site Selection*

The archaeological site of Gohar Tepe is a valuable cultural landscape that documents the history of northern Iran in the middle Bronze Age (Andy, 2011). This unique archaeological site is suffering from a lack of management and attention. In its current condition, the dig site is open to the air, only covered by a tarp, and is inaccessible to the public. It is threatened by the agricultural activities that take place directly adjacent to and around the excavated portion of the site. The conditions present in

Gohar Tepe make it an ideal case study to design an AOAM using the proposed framework.

3.2.2 Methodology

3.2.2.1 Chronological data

This method looks for patterns, signs, artifacts, and findings in the original landscape that provide evidence of how people lived in order to establish the reference landscape. This study depends on chronological and historical information found by archaeologists and historians to reveal the way that Gohar Tepe's population lived thousands of years ago and gives a clue of finding some cultural landscape components to feed the (re)construction strategy framework.

3.2.2.2 GIS data

Since archaeology looks at the unfolding of historical events through geography, time, and culture, the results of archaeological studies are rich in spatial information. GIS is adequate for processing these large volumes of data, especially that which is geographically referenced.

GIS data is used to analyze the status quo of Gohar Tepe. These data help to find the environmental and physical conditions at Gohar Tepe to provide reference landscape clues. This evidence will feed the integrated framework to help the AOAM design process. GIS data was acquired from the municipality of Rostam Kola City located in the Gohar

Tepe district. These data include information about site accessibilities, land use, historical sites around Gohar Tepe, vegetation, site territory, and hydrology.

3.2.2.3 Integrated framework application

Identifying the reference landscape is the first step of applying the framework to the design process. The second step is the recognition of changes on Gohar Tepe and on the site relationship with the surrounding landscapes. A crucial point in this step is interpreting and evaluating the scale of changes and recognizing the impact of these changes on the reference landscape. The next step is responding and coping with changes by determining a future vision of the AOAM site. Finally, the integrated AOAM design process can be presented as shown in Figure 3.

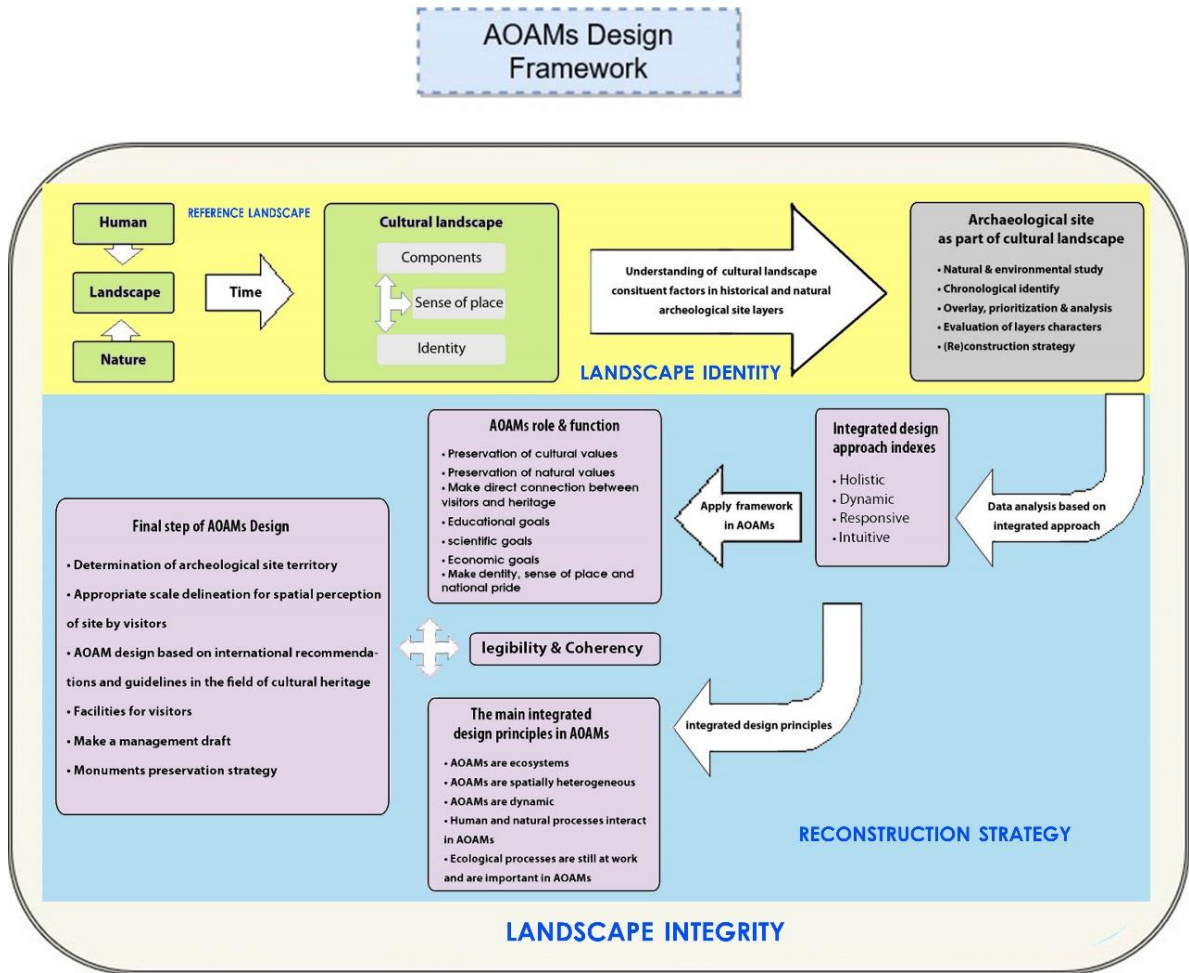


Figure 3. *Integrated AOAM design approach conceptual framework*

3.3 Limitation of the Methodology

This research study is done by analyzing and comparing historical data in Gohar Tepe, Mazandaran. The limitations of this methodology include the quality of given data used for spatial analysis as well as some parts of the historical report based on archaeologist and historian

conjectures, which are not 100% accurate. Moreover, the integrated model may work differently in different archaeological sites based on the availability of data and evidence.

4 Chapter 4: Analysis and Findings

4.1 Introduction

The integrated design model is based on sequential analysis. The first sequence identifies the reference landscape. Second, data inventory is required in landscape nodes and in relation to the archaeological site, is based on holistic (local and regional) views. Analysis of Gohar Tepe requires a considerable local scale with regard to the archaeological, natural, and historical layers of site components. Identifying the reference landscape offers a basic point for evaluating the current site conditions and an estimate of the degradation of Gohar Tepe's landscape.

At Gohar Tepe, I identified the reference landscape by studying evidence that has been found by archaeologists from 2000, 2002, and 2003. These reports reveal the lifestyle of Gohar Tepe's people, including their original landscape, urban structures, materials, foods, handicrafts, art-crafts, vegetation, animals, and style of burials.

However, the prioritization of landscape components for (re)construction and preservation is essential (Bolliger, Schulte, Burrows, & Sick, 2004). It is remarkable that the future landscape is much different from the present. Thus, AOAM (re)construction necessitates ascertaining the future landscape as a whole and adopting existing and added value and components to the site. The (re)construction strategy needs to be

reconfigured over time based on the present and future of the site requirements.

4.2 Site Inventory

4.2.1 Case study (Gohar Tepe)

4.2.1.1 Location

Gohar Tape is one of the largest archaeological sites in the northern province of Iran, Mazandaran. It is located 20 miles away from the capital of Province, in the south part of the Caspian Sea. The overall area of settlement extends across almost 120 acres and is surrounded by 25 acres of main hills (Piller, 2009). See Figure 4.

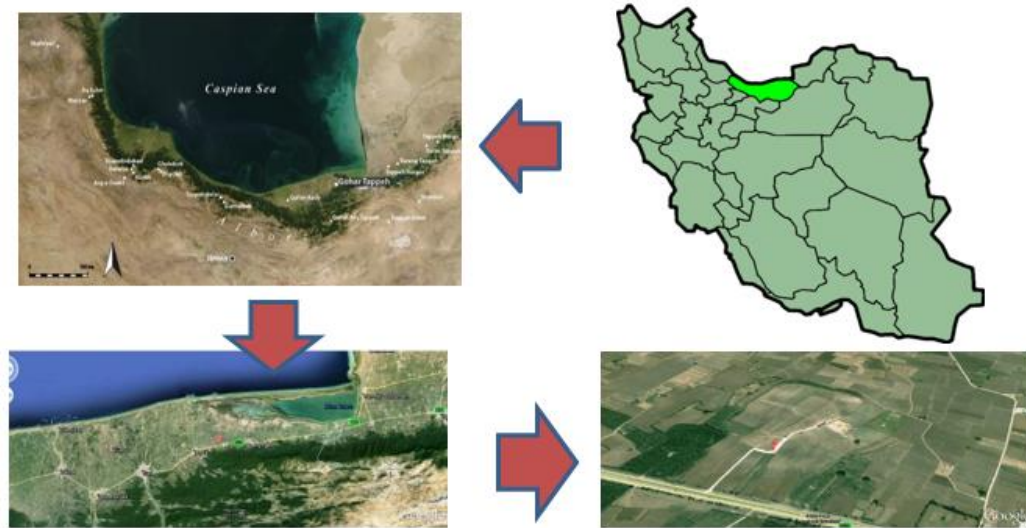


Figure 4. Site location (Source: Google Maps, 2015)

Archaeological documents revealed that urbanized civilizations flourished in this region more than 5,000 years ago (Sadigh, 2006). Investigations in archaeological remains and graves illustrate a continual life in later centuries in this region. (Sadigh, 2006).

4.2.1.2 History of region and site

Paleolithic caves at Hotu, Kamarband, and Komishan are also part of this same region. Also, some sites close to Gohar Tepe exhibit remains of the Early Neolithic period. These findings prove that the coastal plain of Mazandaran had a key role in the neolithification of north-eastern Iran (Piller, 2009). The oldest findings in Gohar Tepe date back to the later part of the Chalcolithic period. The dark red pottery with geometrical paintings marks the beginning of the manufacturing of monochrome grey pottery typically used during the Bronze Age in north-eastern Iran. Also, documents show an immense growth of the settlement in the second half of the fourth millennium B.C.(Piller, 2009).

Gohar Tepe was excavated in 2000, 2002, and 2003. This project was led by the Cultural Heritage Organization of Mazandaran. The University of Munich joined the effort in spring 2009. This area has been an important East-West connection, which took place at Prehistoric and early Medieval times (Sadigh, 2006). Figure 5 shows some panoramic pictures of the current Gohar Tepe.



Figure 5. *Panorama image of Gohar Tepe and its main access*

4.2.1.3 Findings

In general, findings in Gohar Tepe are divided into five groups:

- Architectural structures: Brick, stone, and wood are the main components of the structures in Gohar Tepe (Figure 6).
- Types of burial: Three kinds of burials have been found in Gohar Tepe (Figure 7).
- Potsherds: The technology used in making potsherds displays the economic condition of the people of Gohar Tepe.

- Animal statues: These statues show the importance of animals in the daily life of the people of Gohar Tepe.
- Handicrafts and art-crafts: These arts represent the advance industry and technology of the Gohar Tepe people (Figure 8).



Figure 6. *Gohar Tepe findings (Cultural Heritage Organization of Mazandran, 2009)*



Figure 7. *Architectural structures and burials in Gohar Tepe (Payvand, 2006)*



Figure 8. *Animal statues, art-crafts, stamps, handicrafts in Gohar Tepe (Payvand, 2006)*

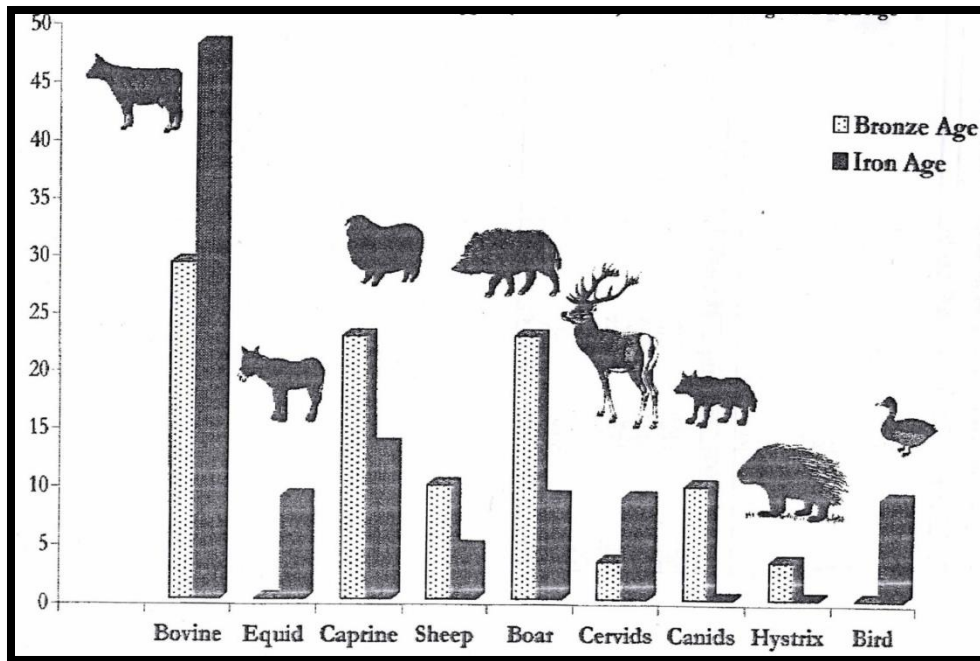


Figure 9. *Fauna distribution in Gohar Tepe (Cultural Heritage Organization of Mazandran, 2009)*

4.2.1.4 Gradual abandonment of Gohar Tepe

Gohar Tepe experienced a complete abandonment, and there are several theories that explain this desertion. The first theory references the geographical changes that took place when the Aral Lake dried out (Piller, 2009). Another theory explains that during the Achaemenid dynastic era (550-333 BCE), the center of power moved to Fars, the heart of the Persian Empire (Piller, 2009). As a result, many people from other major cities during that time moved to the subject area for economic reasons (Sadigh, 2006).

4.2.1.5 Status quo

Currently, nine out of 150 acres of Gohar Tepe were bought by the Cultural Heritage Organization of Mazandaran Province. However, based on expert estimations, agriculture machines have already devastated 50% of Iron Age remains in the area. Recently, the farmers have changed their farmland to citrus orchards and started to use deep wells as a source of irrigation. Farmers used to dig deep wells to gain access to underground water, and the lack of water caused the ground in the region to collapse. These issues must be addressed in Gohar Tepe and its surrounding regions as soon as possible. The Cultural Heritage Organization of Mazandaran is planning on building an AOAM in Gohar Tepe. The plan is to request government funding in order to purchase land from the local farmers. Establishment of an open-air museum at the Gohar Tepe site creates job opportunities for local residents and raises awareness of the significance of Gohar Tepe as a historical site (Sadigh, 2006).

4.2.2 *Accessibility*

Gohar Tepe has significant potential in terms of accessibility as shown in Figure 7. The southern part of Gohar Tepe is directly accessible by a major highway of Mazandaran Province, which is connected west to east. There is a train station, Rostam Kola, about four miles away, and

minor roads between agriculture zones next to the site provide access to a limited number of people (Figure 10).

4.2.3 Regional Land Use

There are three main uses for the land in this region. First, agriculture is the predominant zone in the landscape. Citrus and pomegranate orchards are the second biggest use of the region. Interestingly, the citrus tree was introduced to this area about 200 years ago, and it is part of the cultural landscape of this area. The pomegranate tree is a native tree, and the trees from this particular area produce pomegranates for one of the most popular pomegranate brands in the Middle East. The third zone is an industrial zone, which is mostly based on sand mines and chemical industry in the northern plain, east of Gohar Tepe (Figure 11).

4.2.4 Site Land Use

Gohar Tepe, roughly translated into English, means “big box hill.” It is not clear when the site started to be referred to as Gohar Tepe. However, the evidence shows that local farmers were the first people to have found monuments underground, beneath the hill. The name emphasizes the landscape in this site is different from the rest of the plain area. Currently, there are three excavated spots in the northwestern part of the site, which have temporary structures to cover them. However, the dig site is open to the air, and there is no protection for the monuments and handicrafts found

there. Also, there are two locations of orchards in southwest and southeast of the site. As can be seen in Figure 12, the rest of the site is covered by agriculture as most of Gohar Tepe is owned by farmers.

4.2.5 Historical Places

The Gohar Tepe area is one of the most historic places in northern Iran. The living history of this region dates back more than 7,000 years when the people used to live in caves. In the mountainside of Gohar Tepe, three caves are known to exist and are the source of archaeological interest. Also, after a thousand years, this area became the capital of the Persian Empire around 1600 AC. In the Safavid Kingdom, they made some pleasure gardens in the mountainside of this region located about 12 miles from Gohar Tepe (Figure 13).

4.2.6 Hydrology

In recent decades, Gohar Tepe has faced severe drought. Farmers started to dig water wells and use high power pumps to bring water to use for their farmlands. Because of the over-use of these wells, the ground has started to collapse in some parts of the plain area. It is very critical to stop the wells in the region closest to Gohar Tepe to prevent the destruction of the archaeological area (Figure 14).

4.2.7 Site Territory

Based on the archaeologist report and also the Cultural Heritage Organization of Mazandaran Province, the territory of the site is visible in Figure 15. A part of the site is based on the monument's territory, and a part of it is based on the accessibility to the highway for visitors and educational purposes.

4.2.8 Schematic Section of the Region

As is shown in Figure 16, the section of this region from mountainside to the Caspian Sea includes the Alborz Rainforest, the mountainside forest, the mountainside orchard, the southern plain, the highway, Gohar Tepe, the northern plain and the Caspian Sea.

SITE ACCESSIBILITY



Figure 10



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DESIGN, A NEW PARADIGM FOR ARCHAEOLOGICAL HERITAGE CONSERVATION

CHAIR: DR. KATHRYN HOLLIDAY

COMMITTEE: DR. DIANE JONES ALLEN

COMMITTEE: DR. AMY ARCHAMBEAU

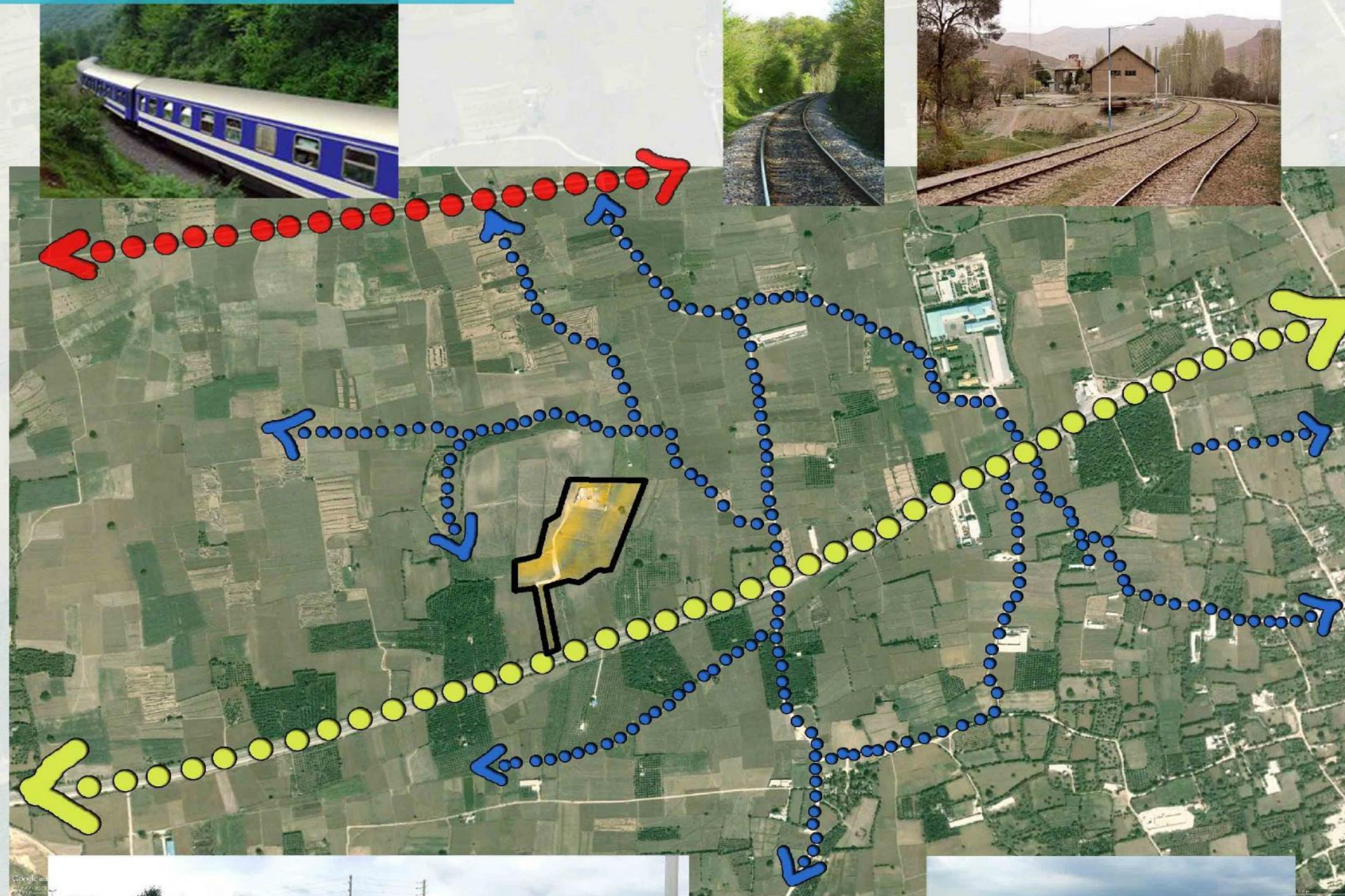
STUDENT: REZA PAZIRESH

PLAN SUBJECT: SITE ACCESSIBILITY

DATE



SCALE
0 1000
FEET



LAND USE








-  garden
-  farm
-  industrial
-  Site location
-  Highway
-  Rail Road
-  Minor Arterial

Figure 11



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:DATE



SCALE
0 100 300
M





-  EXCAVATED ZONE
-  AGRICULTURE ZONE
-  ORCHARD ZONE

Figure 12



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PLAN SUBJECT: SITE LAND USE

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SCALE

SITE LAND USE

AGRICULTURE ZONE



EXCAVATED ZONE



AGRICULTURE ZONE



EXCAVATED ZONE



ORCHARD ZONE



SITE ENTRANCE



-  GOHAR TEPE
-  SAFAVID GARDEN
-  HUTU AND KAMARBAND CAVES
-  KOMISHAN CAVE
-  CIRCULATION BETWEEN

Figure 13



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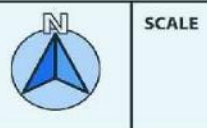
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COMMITTEE: DR. AMY ARCHAMBEAU

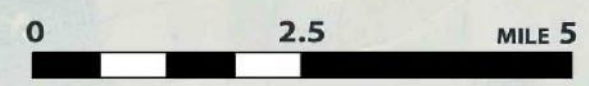
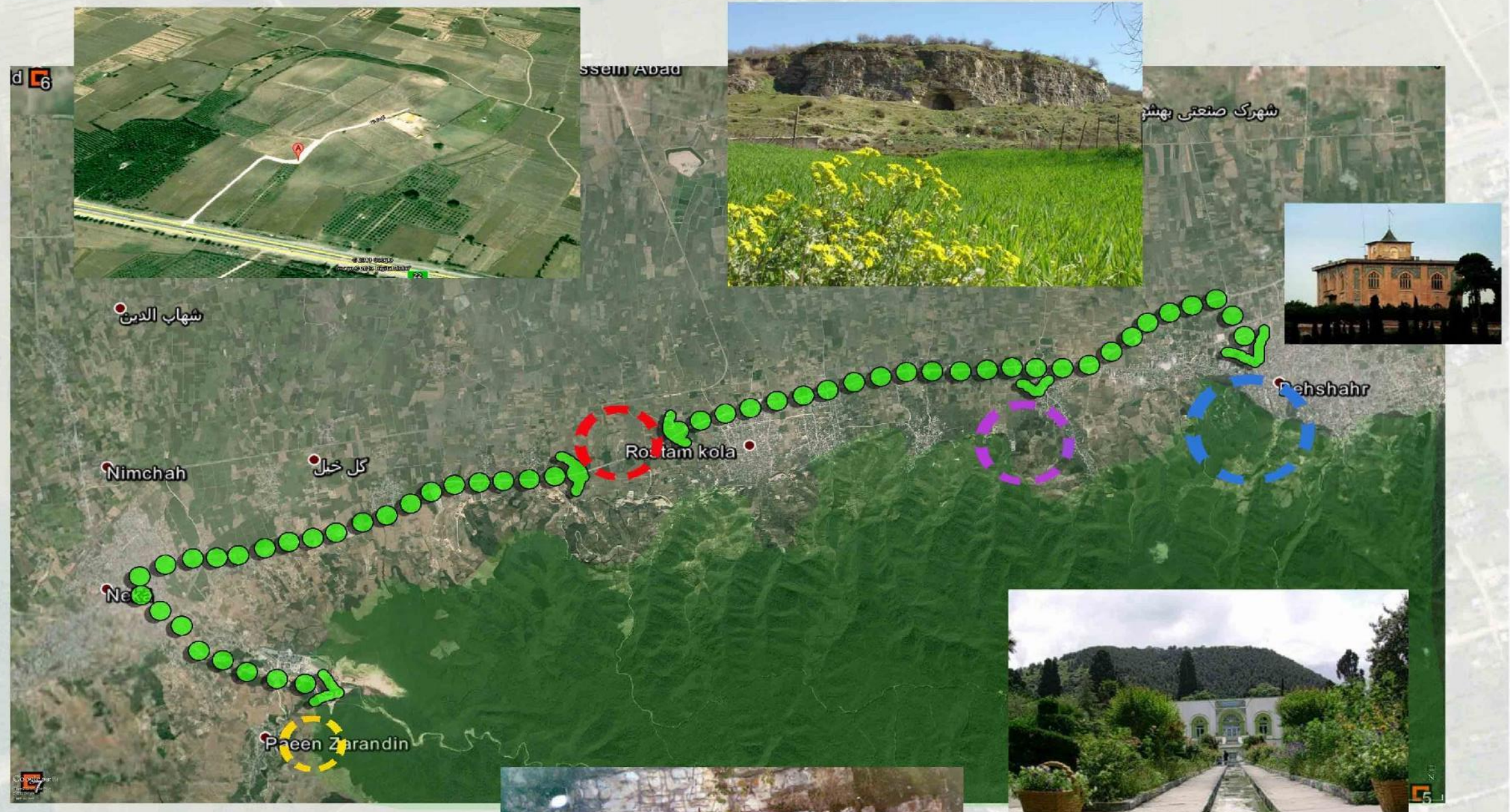
STUDENT: REZA PAZIRESH

PLAN SUBJECT: HISTORICAL MAP

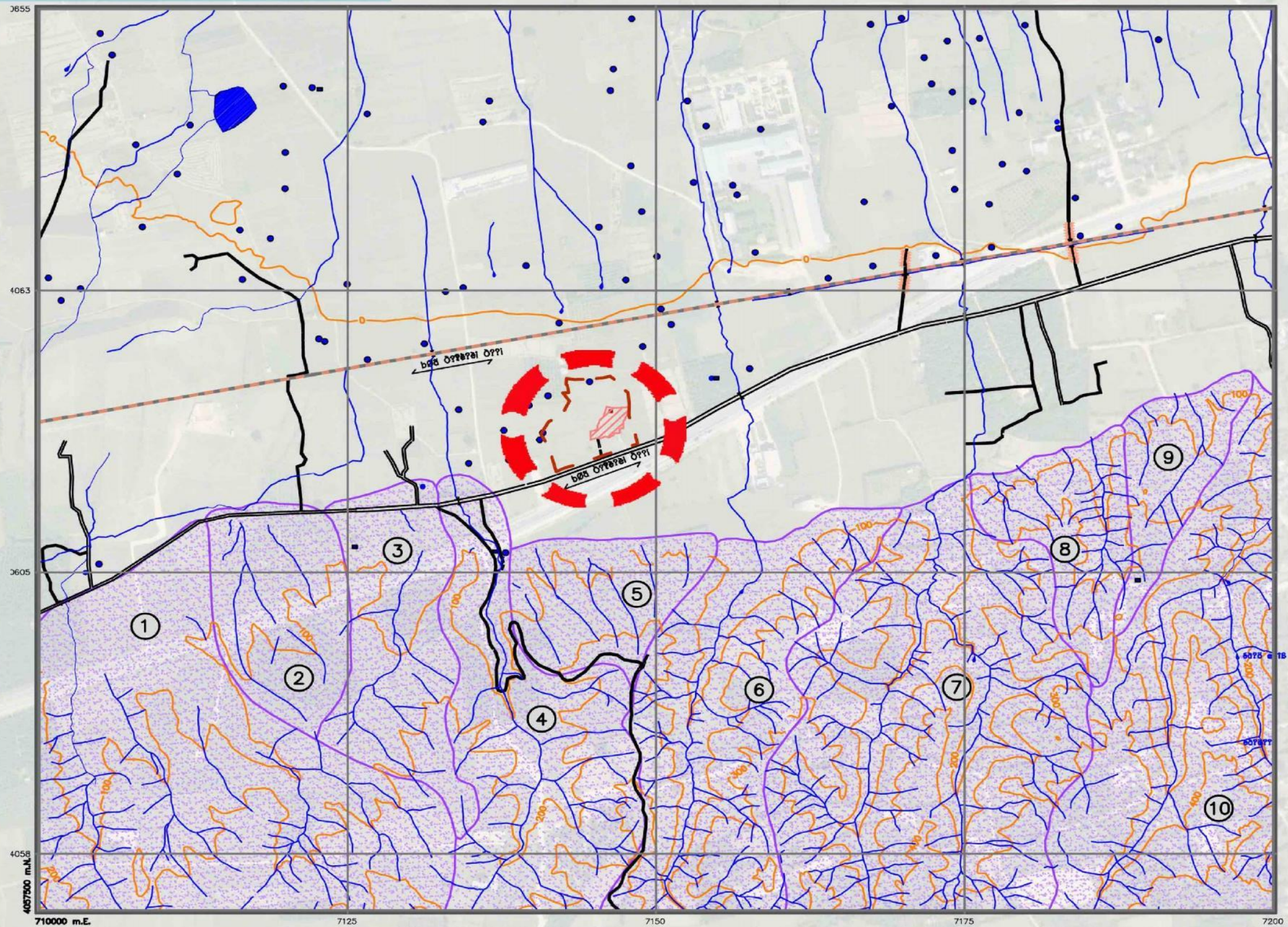
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HISTORIC MAP



HYDROLOGY



- STREAM
- POND
- WATER PUMP
- NATURAL SPRING
- WATERSHED
- WATER SOURCE

Figure 14



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COMMITTEE: DR. AMY ARCHAMBEAU

STUDENT: REZA PAZIRESH

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SCALE



SITE TERRITORY



100 50 0 100 M



60 30 0 60 M

Figure 15



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SCALE

SCHEMATIC SECTION OF REGION

Figure 16



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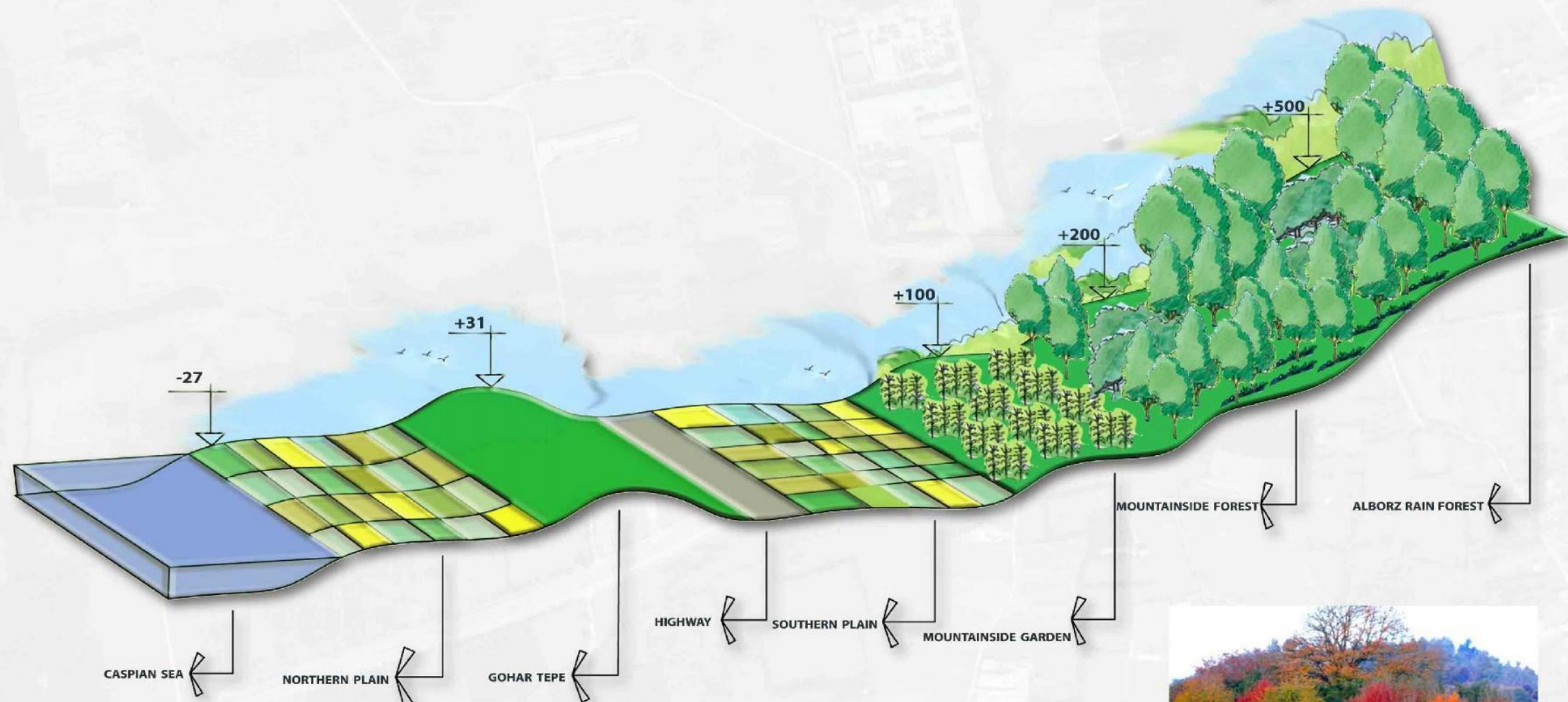
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STUDENT: REZA PAZIRESH

PLAN SUBJECT: SCHEMATIC SECTION

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SCALE



4.3 Site Analysis

4.3.1 *Physical Analysis*

Figure 17 shows a basic analysis of the region based on inventory data that includes the accessibility roads, the vista, excavated zones, and major wind and noise pollution from the highway. The relationship between these factors will help the design process and programming.

4.3.2 *Zoning*

Figure 18 presents the five major zones in Gohar Tepe. Zone A is distinguished by eastern low-land farmland. Zone B is known as the southern, flat farm. Zone C shows the northern, western, and central upland farms. Archaeological monuments and dig sites are located in Zone D. Zone E consists of the western and eastern orchards.

4.3.3 *Perceptual Sequence Analysis*

Perceptual analysis has tried to figure out some specific sense of uniqueness originating from the different sequences of the site based on the configuration of the hill and zoning analysis. The green spot in Figure 19 shows the first and only public entrance to the site. Since the visitor's horizontal view is under the excavated site, they cannot see the monuments. This creates some mystery for the visitors in the area. In the blue spot, visitors can overlook the landscape, as well as see structures on top of the monuments. From there, they can determine the location of

monuments on top of the hill compared to rest of the landscape. There is a sense of discovery in this zone. Visitor's stop and movement are the main characteristics of this zone. In the yellow spot, the visitors can see the monuments and ponder about the lifestyle of the people that existed at Gohar Tepe 5,000 years ago. Curiosity and reflection are the main characteristics of this zone. The red zone is the highest zone on the hill. After seeing the monuments, visitors can go to the top of the hill and see the highest point of the area and enjoy the vista. Finally, the configuration of this unique, hilly landscape provides a smooth transition between different zones, which are represented by the orange spots. These joints give different perceptions of the environment and encourage visitors to stop and look at the hill's landscape. This zone is a great place for a vista (Figure 19).










-  EXCAVATED ZONE
-  MAJOR WIND
-  PANORAMA VIEW
-  HIGH POINT
-  SITE ENTRANCE
-  EXISTING DIRT-ROAD
-  MINOR ARTERIAL AROUND THE SITE
-  HIGHWAY
-  NOISE POLLUTION

Figure 17



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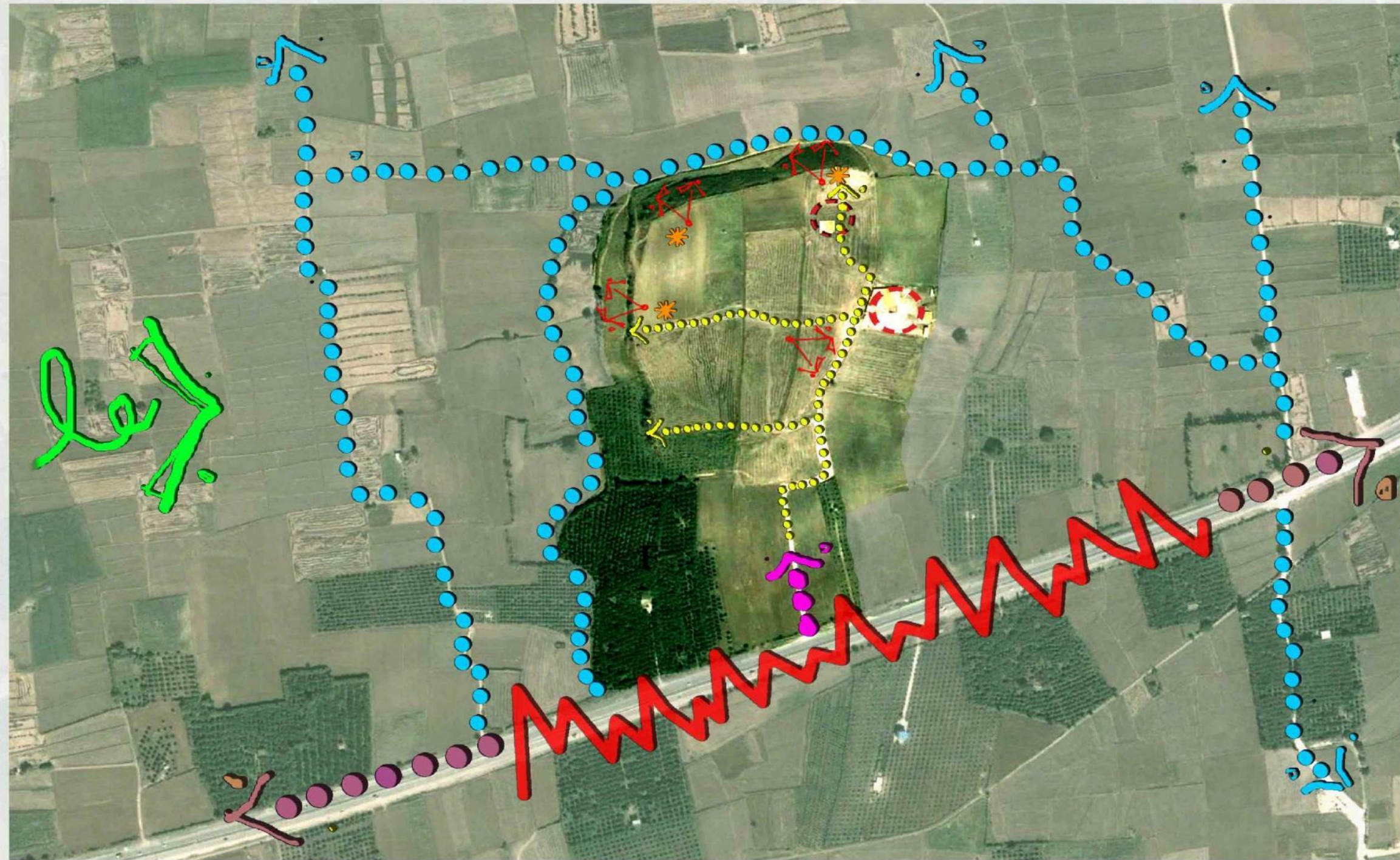
PLAN SUBJECT: SITE ANALYSIS

DATE



SCALE

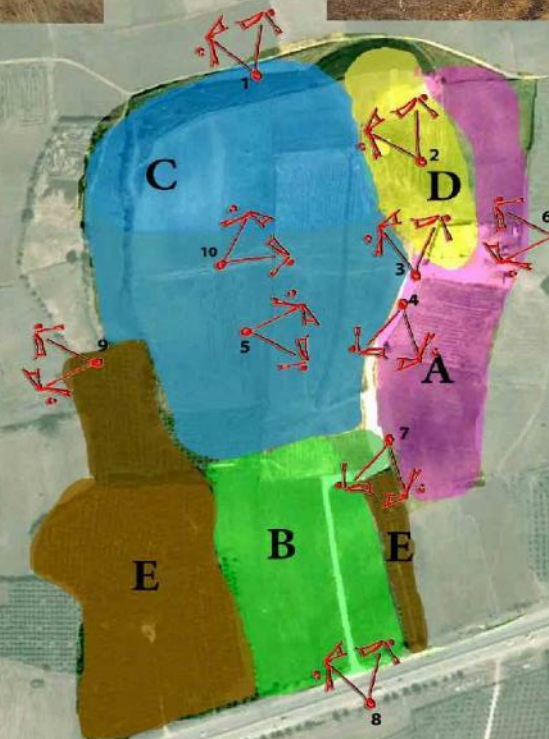
SITE ANALYSIS



ZONING

- A-** EASTERN LOW LAND FARM
- B-** SOUTHERN FLAT FARM LAND
- C-** NORTHERN, WESTERN AND CENTRAL UPLAND FARM
- D-** EXCAVATED ZONE
- E-** WESTERN AND EASTERN GARDEN

Figure 18



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STUDENT: REZA PAZIRESH

PLAN SUBJECT: ZONING

DATE



SCALE

PERCEPTUAL SEQUENCES ANALYSIS

- PEAK AND OVERLOOK SEQUENCE
- DISCOVERY, SEARCH AND THOUGHT SEQUENCE
- DISCOVERY AND QUESTION SEQUENCE
- QUESTION AND MYSTERIOUS SEQUENCE
- TRANSITION BETWEEN SEQUENCES

Figure 19



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STUDENT: REZA PAZIRESH

PLAN SUBJECT: PERCEPTUAL SEQUENCE ANALYSIS

DATE



SCALE

TRANSITION BETWEEN SEQUENCES

CONFIGURATION OF LANDSCAPE IN THIS UNIQUE HILL MAKES SOME JOINT ZONE AS A TRANSITION SEQUENCE BETWEEN DIFFERENT ZONES. THESE JOINTS BECAUSE OF MAKING DIFFERENT PERCEPTION OF ENVIRONMENT ENCOURAGE VISITORS TO STOP AND LOOK TO THE HILL LANDSCAPE. THESE ARE GOOD PLACE TO SEAT AND ENJOY THE LANDSCAPE

PEAK AND OVERLOOK SEQUENCE

THIS ZONE IS THE HIGHEST ZONE IN THIS HILL. PEOPLE AFTER DISCOVERY OF THE MONUMENTS, THEY WOULD LIKE TO COME TO TOP OF THE HILL AND SEE THEIR SELF IN THE HIGHEST POINT OFF HISTORY OF THIS PLACE AND ENJOY FROM THE ENVIRONMENT LANDSCAPE

DISCOVERY, SEARCH AND THOUGHT SEQUENCE

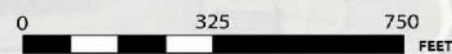
NOW THE VISITORS FIND THE ANSWER FOR ALL QUESTIONS THEY HAVE IN THEIR MIND. THEY CAN SEE THE MONUMENTS AND ALSO THEY THINK ABOUT THE LIFE STYLE OF THE PEOPLE USE TO LIVE HERE ABOUT 5000 YEARS AGO. SENSE OF SEARCH AND THOUGHT ARE THE MAIN CHARACTER OF THIS ZONE

DISCOVERY AND QUESTION SEQUENCE

IN THIS ZONE, VISITORS ARE OVER LOOK TO THE LANDSCAPE AND THEY CAN SEE SOME STRUCTURES ON TOP OF THE MONUMENTS AND ALSO THEY FIGURE OUT THE LOCATION OF MONUMENTS IN TOP OF THE HILL. THERE IS SENSE OF DISCOVERY IN THIS ZONE. STOP AND MOVEMENT ARE THE MAIN CHARACTER OF THIS ZONE

QUESTION AND MYSTERIOUS SEQUENCE

HERE IS THE FIRST AND THE ONLY PUBLIC ENTRANCE ACCESS TO THE SITE. SINCE, THE VISITORS HORIZONTAL VIEW ARE UNDER THE EXCAVATED SITE, THEY CAN NOT SEE THE MONUMENTS. IT MAKES A SENSE OF QUESTION AND MYSTERIOUS IN VISITORS IN THIS ZONE



4.4 Findings

Based on the data from the inventory and analysis study, I recognized the gaps in the literature for, and the potentials of, the Gohar Tepe site. The data helped in the programming and designing process. The determined elements of the cultural landscape can help the reconstruction strategy framework as reference landscape. The inventory and analysis study represent the gaps and status quo of Gohar Tepe. Based on this analysis, the reference landscape at Gohar Tepe is divided into five main factors.

1) Architecture and materials: This factor helps to restore the remaining structures or construct new structures similar to its references.

2) Flora and fauna: This element provides a planting strategy for Gohar Tepe after eliminating farmland, bringing back the natural ecosystem of Gohar Tepe. Moreover, documents will provide information on the diet of the people in Gohar Tepe.

3) Handicrafts: It is important to make a tour for visitors to show them the technologies of the people of Gohar Tepe for educational purposes.

4) Color, smell, and sound: This sensory information helps to reimagine the atmosphere of the past.

5) Landscape configuration: Based on the reference landscape, the northern plain should be grassland, and also, the Caspian Sea was closer to the site (about one mile away).

These cultural landscape factors provide a reference landscape and reinforce the integrated framework. The following items are some key issues that need to be addressed during the design process:

- Agriculture damaging the monuments
- Ground subsidence because of deep wells in the site and around the site
- Monuments open to the air
- Inappropriate glass exhibition
- No educational facility
- Unsuitable access for visitors
- No safety for monuments
- No security for visitors
- No facility for visitors
- No determined territory

5 Design and Conclusion

5.1 Integrated Design Framework

Based on the integrated design model (Figure 20) and the four fundamental factors (landscape integrity, landscape identity and reference landscape, (re)construction strategy, and AOAM), inventory and analysis help identify gaps in the current condition of the site design process and the requirements of the site based on social needs and the relevance of the site to future generations. Understanding the site's current condition and its historical relevance to contemporary society helps identify program elements and amenities.

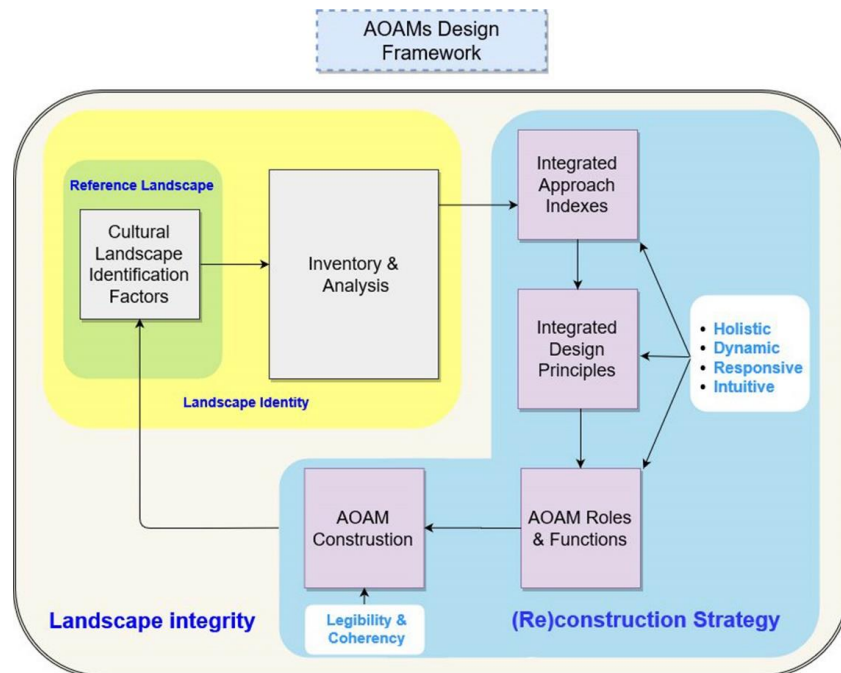


Figure 20. *Integrated AOAM design approach conceptual framework in abstract*

5.2 Programming Process

Based on the four fundamental factors, this research identifies design criteria in Gohar Tepe and informs visitor facility functions and monument management and security opportunities (Figure 21).

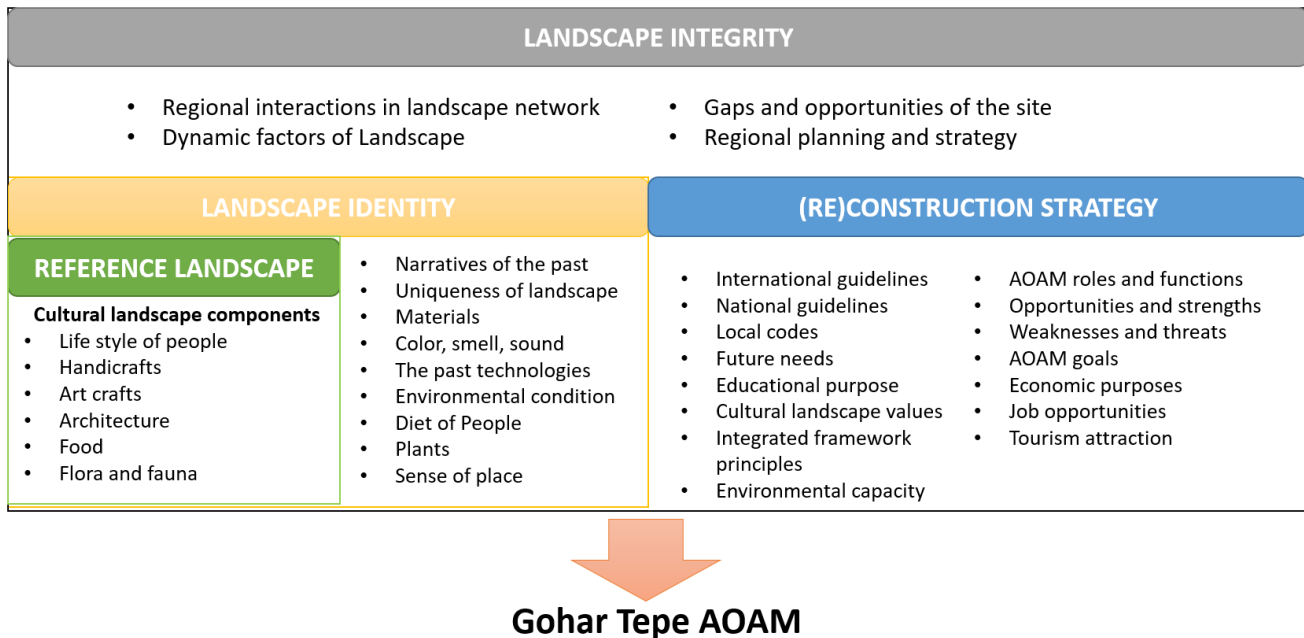


Figure 21. *Integrated AOAM design framework in Gohar Tepe*

5.3 Overlay Layers

Overlaying these processes allows us to make an appropriate programming model for the Gohar Tepe AOAM. The programming process will reveal the design process based on the findings in Chapter 4 (Figure 22).

OVERLAY LAYERS

OVERLAY LAYERS

NATURAL AND PHYSICAL INVENTORY

NATURAL AND PHYSICAL ANALYSIS

PERCEPTUAL SEQUENCES ANALYSIS

ZONING

PROGRAMMING

FINAL DESIGN

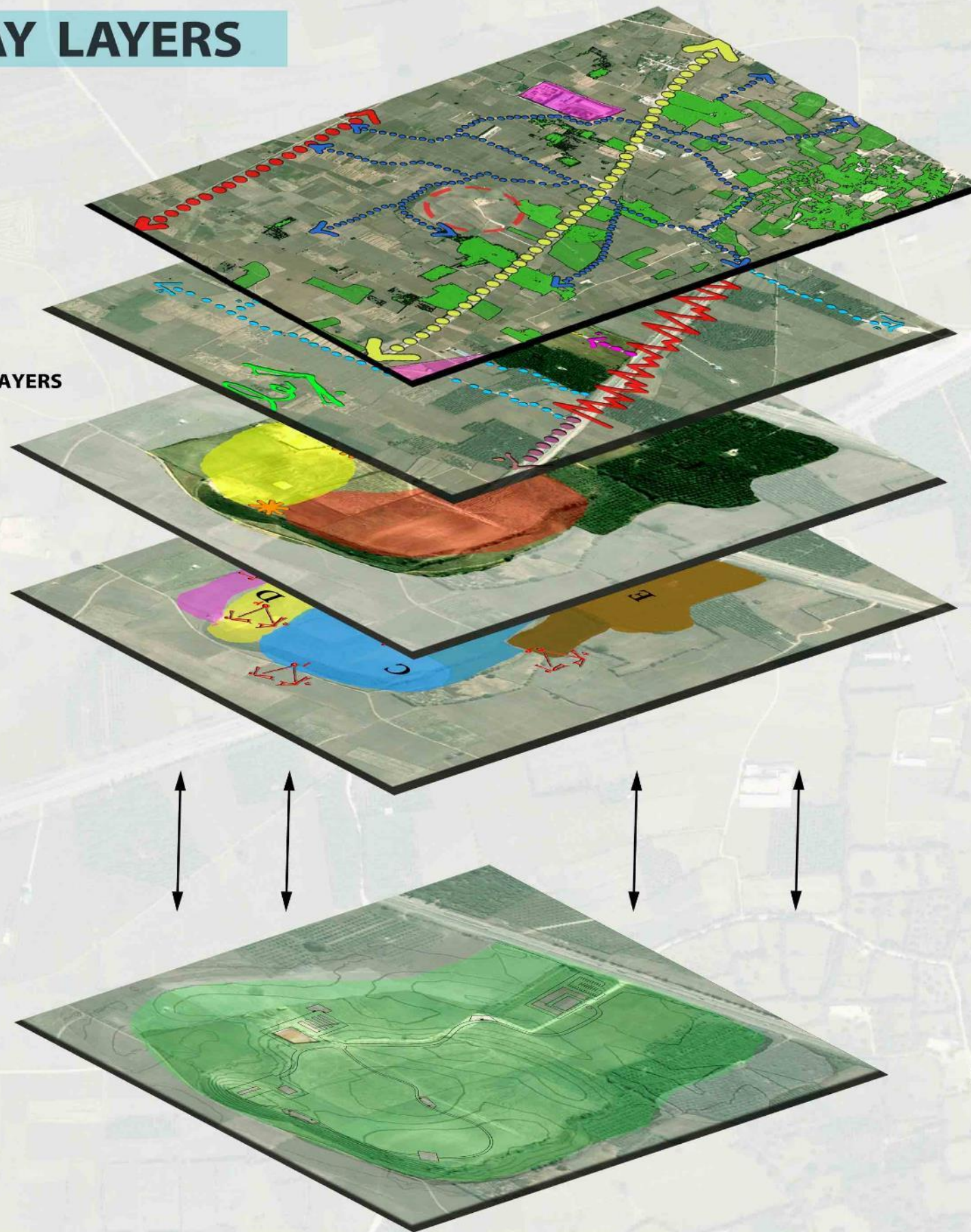


Figure 22



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STUDENT: REZA PAZIRESH

PLAN SUBJECT: OVERLAY LAYERS

DATE



SCALE

5.4 Functional Diagram

Figure 23 provides a functional diagram of the main programmatic components of the proposed AOAM. The diagram emphasizes three categories of functions represented by yellow, green, and blue. Yellow refers to the excavated zone as a main component of the site. The design provides vehicular access to the excavated zone for staff to take care of the dig site and allows archaeologists to have ready access to the active part of the site. The green diagram refers to secondary functions supporting the excavated zone such as parking lots, a research center, a vista, and a place to display new findings. The blue refers to the sub-functions of the green diagram, such as a rest area, entrance, orchard, shaded area, restroom, restaurant, and office.

The entrance is located in the south part of the site directly adjacent to the highway access, proposed parking lot, and research center. The proposed research center is the main building of the museum and consists of an office, restaurant, rest area, exhibition space, and restrooms. Also, there is a place next to the excavated zone to organize and catalog new findings. In keeping with the archaeological nature of the museum, at the highest point of the site, an overlook provides vistas to the landscape inclusive of signage depicting the change in the landscape over time. Like

other interpretive locations on the site, the high vista area has the potential to be excavated in the next phase of the site.

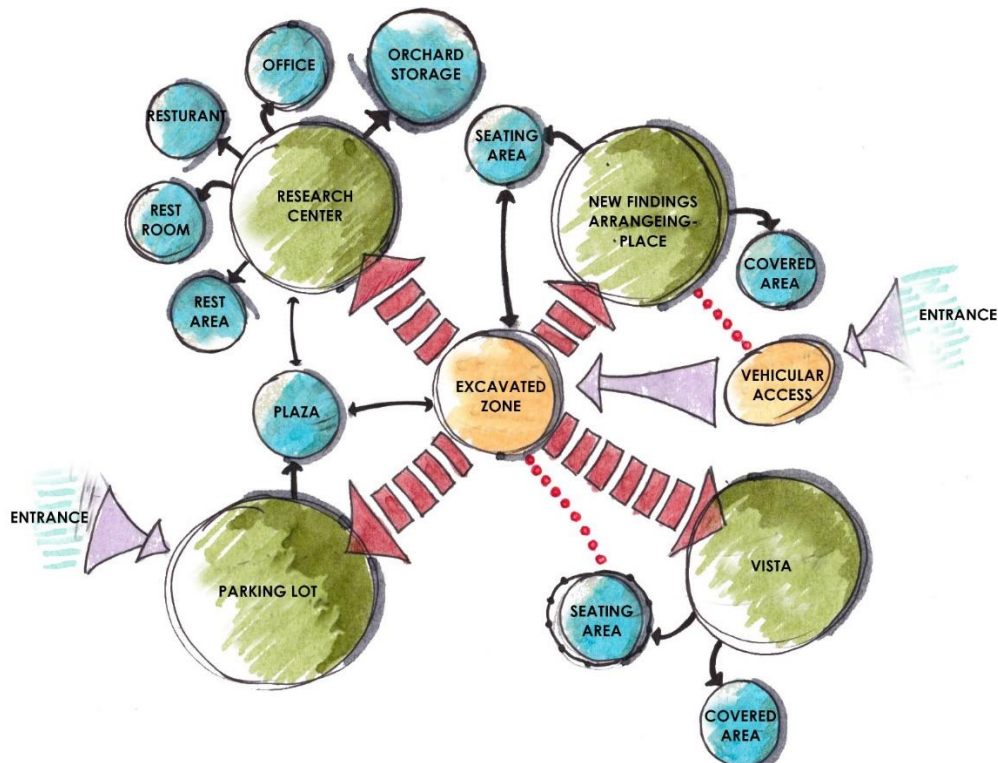


Figure 23. Gohar Tepe functional diagram

5.5 Placing Functions

Gohar Tepe is known for having a unique landscape and configuration. Functions in Gohar Tepe need to be placed based on this unique topography. The recommendations from the integrated framework help in the placement of these functions. The recommendations also help in designing trail and vehicular access using the existing roads around the site (Figure 24).

PLACING FUNCTIONS



- .1 ENTRANCE
- .2 PARKING LOT
- .3 RESEARCH CENTER
- .4 VISTA
- .5 PLAZA
- .6 SEATING AREA
- .7 VEHICULAR PATHWAY
- .8 TRAIL
- .9 EXCAVATED ZONE
- .10 ARRANGE NEW EXCAVATED HANDICRAFTS PLACE
- .11 ORCHARD STORAGE
- .12 NATURAL AMPHITHEATRE FOR VENUE AND FESTIVALS
- .13 SEASONAL FESTIVALS TEMPORARY STRUCTURES

Figure 24



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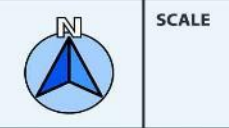
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STUDENT: REZA PAZIRESH

PLAN SUBJECT: PLACING FUNCTIONS

:DATE



5.6 Design Based on the Reference Landscape

Over the time, Gohar Tepe AOAM narrated a scenario of the human and nature relationship in addition to the significance of the landscape. Therefore, Gohar Tepe is more than a collection of buildings and monuments in a museum. The purposes of Gohar Tepe AOAM are enhancing historical knowledge, improving the archaeological, and historical landscape experience, enriching entertainment areas, increasing local and national pride, and presenting educational, scientific, and economic benefits. The Gohar Tepe AOAM provides a base to meet these goals.

In this research, the integrated framework illustrates the process of design by finding the cultural landscape components at Gohar Tepe historic site. However, according to the findings in Chapter 4; the design solution of AOAM at Gohar Tepe may lead the integrated framework in following phases. First, designing the site consist on the reference landscape clues. Second, the preventive actions to address the existing issues. Third, programming based on today and future needs.

As I discussed in Chapter 4, the reference landscape of Gohar Tepe divides into five main tangible and intangible factors: (a) architecture and materials, (b) flora and fauna, (c) handicrafts and industrial technologies (d) color, smell, sound, and (e) landscape configuration. These clues of the

cultural landscape components at Gohar Tepe have direct relationship to the monuments. However, as I discussed in Chapter 2, landscape architects look for the signs that present the interactions between people of Gohar Tepe and their surrounded landscape. For instance; food, water, and material resources. Next, the configuration of urban landscape. Third example is the reason of being in this particular location. Lastly, the role of original and historical landscape (sea, forest and plain area) to shape this Bronze and Iron Age urbanization at Gohar Tepe.

Moreover, preventive actions are part of the design process as an action taken to reduce or eliminate the probability of specific undesirable events from occurring in the future of Gohar Tepe. Preventative actions are generally less costly than mitigating the effects of negative events after they occur in the Gohar Tepe AOAM. Such as; buying the agriculture zone from farmers, preventing and stop the usage of deep water wells and at the same time changing monuments cover structures.

In chapter 4, the reconstruction strategy filters and suggests the functions based on the reference landscape to increase the identity and integrity at Gohar Tepe (Figure 25). Some landscape architecture principles apply to the Gohar Tepe AOAM to represent the reference landscape, which includes; planting and root system hazard mediation, material resources at Gohar Tepe, site grading, topography, landscape configuration, vista and

historical landscape, environmentally friendly material, site programming,
such as; festivals, occasions, and living museum.

Figure 25



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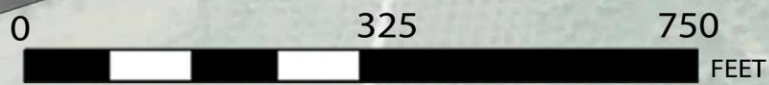
STUDENT: REZA PAZIRESH

PLAN SUBJECT: SITE PLAN

DATE



SCALE



PLANT LIST

CITRUS SP	
EUCALYPTUS	
WASHINGTONIA ROBUSTA	
QUERCUS SP	
CUPRESSUS	
ACER INSIGNE	
LAGERSTROEMIA	
JUGLANS REGIA	
PLATANUS	
MELIA AZEDARACH	

5.6.1 *Eco Bridge*

For a long period of time Gohar Tepe disconnected the rain forest and the south plain due to the construction of the major highway, which is located on the south part of the site. Generally, the north plain, south plain, and the Alborz rain forest become separate areas and they totally have been disconnected in terms of ecosystem and natural resources interactions.

By applying the idea of the *Eco Bridge*, the increase of visitors' access will definitely cause a positive rise of site attractions and it helps to have more attention to the basic construction resources as reference landscapes of Gohar Tepe archaeological site (Figure 26).

One of the purposes of this *Eco Bridge* is too provide a corridor for wildlife. The wild green corridor can enhance diversity of isolated flora and fauna located in the north plain. Despite the creation of the connecting walking pass that blends in with the surrounding environment and the convenience for visitors to explore the landscape. In addition, making a tour for visitors to explore the Bronze and Iron Age material resources in the rain forest of Alborz for wood, clay mine, stone, and also hunting that is 2 miles away from site toward south of the site (Figure 27 and 28).

Due to the large scale of changes in this region, the *Eco Bridge* has a crucial role in making significant ecosystem interactions between north and

south plains and also emphasizes the awareness of people. Figure 26, presents a general concept of this *Eco Bridge* the connection to Gyeongbu Expressway. Mt. Umyeon Urban Nature Park to Maljukgeori Park in Seoul, Korea.



Figure 26. A concept of *Eco Bridge* in Seoul, Korea (Park & Pettus, 2018)



Figure 27. *Making brick from clay mine in South plain of Gohar Tepe, Neka, Iran (Cultural Heritage Organization of Mazandran, 2009)*



Figure 28. *Alborz rain forest and South plain, Behshahr, Iran (Payvand, 2006)*

5.6.2 *Bronze and Iron Age Settlement Living Museum*

Chapter 4 studies indicated the preliminary phases by *archaeologists* and provides unclear evidence due to past history in Gohar Tepe urban civilization. Gohar Tepe analyzed the architectural structures consisted of wood, brick and stone, and there is no a clear image of the actual structures.

As a result, other studies like the Bronze and Iron Age architectural structures helped on the design process to make a conceptual settlement in the site close to the reference landscape of Gohar Tepe. Bringing life to Gohar Tepe AOAM is a major goal for this site to help visitors to visualize the atmosphere and life style of the past.

Figure 29, illustrates a Bronze Age settlement made by stone, brick, wood, and very close to Gohar Tepe's architectural structures. Figure 30, presents an Iron Age Farmers life style. At Gohar Tepe there is an opportunity in southern low land farms, next to West orchards to represent this settlement as a sample of the past. The locals can play a key role to bring life to this living museum.



Figure 29. Bronze Age settlement made of stone, brick, and wood (Turner, 2015).



Figure 30. Iron Age Farmers life style (Peterborough Archaeology, 2018).

5.6.3 *Planting and Root System Hazard*

As it is mentioned in Chapter 4, existing orchards and agriculture zones created several issues in Gohar Tepe. Eliminating part of the orchards impacts the farmer's ability to make a living. However, providing farmers with alternative business models can help mitigate the adverse impact of the encroaching agricultural landscape surrounding Gohar Tepe from plants root system hazards impacting underground artifacts and monuments. The hillside of Gohar Tepe is facing soil erosion. Having some resistant ground cover flora in these zones prevent further erosion. The short shrub called *Punica Granatum Keme* serves as the new defining boundary of the AOAM. This shrub is a native plant that has a very short root system to ensure protection for underground monuments (Figure 31).



Figure 31. *Punica Granatum Keme* (Agriculture Organization of Mazandaran, 2012)

Replacing the agricultural cultivation with native grasses brings the natural ecosystem back to the site and also helps provide a natural habitat for fauna of the region. Figure 32 shows a landscape covered in the natural ground cover of this region known as *Urtica Cannabina*.



Figure 32. *Khaled Nabi, Gorgan; Urtica Cannabina ground cover (Jalali, 2015)*

5.6.4 *Festivals and Occasions*

Northern Iran hosts multiple festivals related to citrus and pomegranate, and the presence of orchards producing these fruits provides an opportunity to incorporate them into the program of the AOAM at Gohar Tepe. Although citrus plants were imported to Iran around 200 years ago and are not indigenous to the site, the citrus production provides cultural landscape references to the land over time. The capital of Mazandaran

province, Sari, is known as the capital of blooming citrus, and the north coastal region of Iran is the only region that can grow citrus. Based on the Cultural Heritage Organization of Mazandaran report and citrus production as a component of the cultural landscape, the orchard will be preserved as a part of the cultural landscape heritage in this region. No relics exist under the orchards. Therefore there is no threat of undermining in the integrity of the monuments or an archaeological site as a whole (Sadigh, 2006). The spring citrus blooming festival encourages visitors to come and see the citrus orchards and surrounding area and to engage first hand in the production of citrus-related byproducts such as citrus blooming essences (Figure 33).



Figure 33. *Citrus blooming festival in Sari (Musavi, 2014)*

In addition to citrus, the mountainside of Gohar Tepe is covered by sweet and sour pomegranate orchards, providing an opportunity for guests to visit in the fall. Gohar Tepe, coupled with the surrounding agricultural tourism, provides ample opportunity for visitors to engage with the landscape. Pomegranate products are widely used in Iran. The fall season is the best time to have visitors in Gohar Tepe because of the pomegranate festivals, which shows people all types of food products made using pomegranates (Figure 34). These festivals help locals sell their products and connect to their heritage with Gohar Tepe and further connect visitors to the history of Iran through the site and its contemporary uses.



Figure 34. *Festival and products; Rostam Kola (Ahmadi, 2018)*

Also, *Lucho wrestling* is a very popular and traditional local game in the north part of Iran. This game is usually held after the rice harvest in this region. This game is played in the grass area in the open air, and the people watch the game from hillside (Figure 35). Thousands of people come to watch this local game from the villages and major cities. Also, in the programming of the site, some typical games can be taught to children and adults, such as Aquz-ka, Rezin-Ka, and Risman Bazi. Gohar Tepe has this potential to celebrate this event by having a large grass area in southern part of the site (Figure 36).



Figure 35. *Lucho wrestling; Lahe, Mazandaran (Homayooni, 2012)*



Figure 36. *Natural grading at Gohar Tepe to make natural amphitheater for the venue*

5.6.5 Site Grading, Topography, and Landscape Configuration

AOAM design must have a minimum of construction, specifically cut and fill. Excessive construction on the site could undermine the contextual integrity of the site's findings and damage valuable artifacts. Following the topography line and making the roads and trails based on the existing dirt road provides a good opportunity to have a minimum slope in a new pathway and to reference the landscape of early settlers. As a new construction, the research center of Gohar Tepe must have a minimum height to maintain the form of the hill. However, the cover structure of the

excavated zone can have a curved shape to represent and emphasize the hill forms of Gohar Tepe, a feature that contributed to the early settlement in the region.

5.6.6 *Vista and Historical Landscape*

During the period of significance, represented by archaeological remains at the site, Gohar Tepe was only one mile away from the Caspian Sea. A reconstruction of the reference landscape suggests that people could easily watch the sea from the top of the hill. Currently, the sea is 15 miles away from Gohar Tepe and is no longer from this area. Therefore, there is a great opportunity to make an interpretive or panoramic image board at the vista location (on the peak of the hill) for people to imagine the historical landscape and compare that to the existing landscape. Also, in the southern plain, which is located in the southern part of Gohar Tepe, there was a low shrub forest covered by *Punica Granatum Keme*. Use of this plant will further reference the historical landscape and the time continuum of Gohar Tepe through plantings (Figure 37).



Figure 37. *Comparing the historical landscape and existing conditions at Gohar Tepe*

5.6.7 Environmental Friendly Material

Archaeological evidence revealed that Gohar Tepe's architectural structures were made of wood, stone, and bricks. All of this material can be found in the region currently. Therefore, the new structures and developments should follow this style to reflect the reference landscape. It is clear that in the construction of new structures, we cannot completely follow the original architecture of Gohar Tepe, but it can be at least close to the reference landscape. However, currently the excavated zones are open to the air, and the structures that cover them are of low quality and provide little safety for visitors. New technologies allow us to build structures that cover the monuments and other areas for visitors. This is a very crucial point

to bring personality to the site and to reimagine the form of the hill (Gohar Tepe). Tensile structures are light and safe structures and are one of the best choices to preserve excavated zones. These structures also represent the shape of the hill in Gohar Tepe. The use of a modern shade structure in this first stage of excavation provides an interpretive opportunity as it represents an intervention of modern archaeological efforts to discover historical evidence of past cultures.

5.6.8 Historic Destination General Planning

As mentioned in Chapter 4, there are some historical caves around Gohar Tepe on the mountainside. These historic sites date back to the Stone Age, around 7,000 years ago. Shah Abbas built the Persian gardens nearby around 400 years ago. Proposing a touristic trail between these historic sites will help attract more tourism (Figure 38).

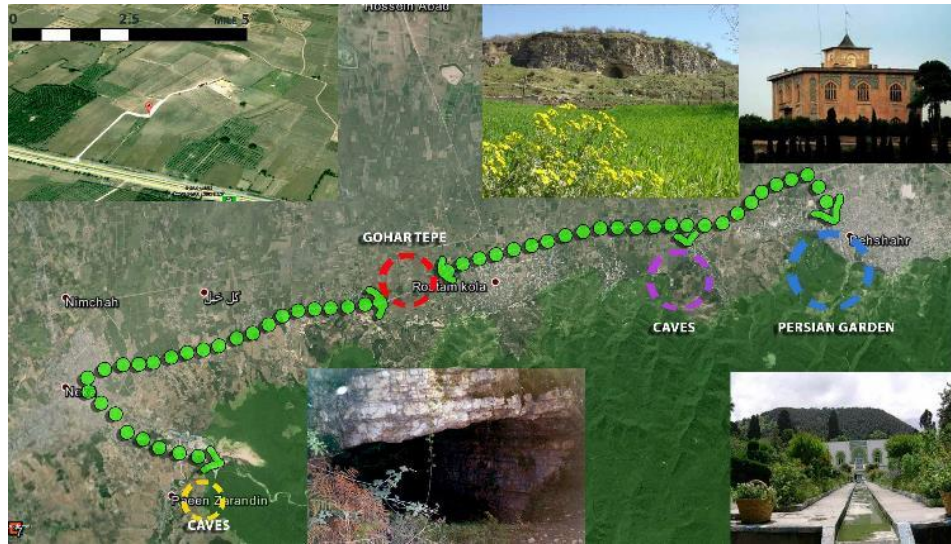


Figure 38. *Tourism destination general planning*

5.7 Site Sections

5.7.1 Section A-A

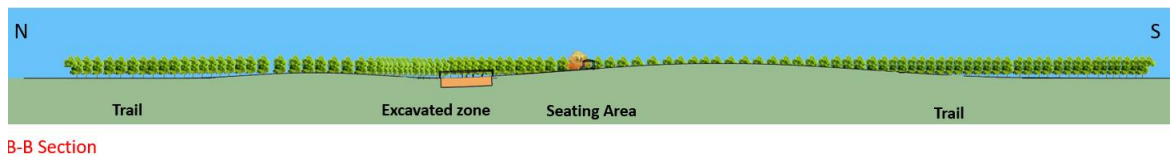
Figure 39 represents a north-south section of Gohar Tepe. On the northern side, there is an excavated zone in the hillside. Towards the south of the site, there is a very gentle slope, orchards, and the research center. To the right, or northern part of the section, a modern shade structure exists to protect the archaeological dig site. The form of the structure speaks to the rolling hills of the site.



Figure 39. *North-south section of Gohar Tepe*

5.7.2 Section B-B

Figure 40 demonstrates the north-south section of the site. The northern side shows the trail and the excavated zone. The seating area is located in the center of the site. Finally, a trail can be seen in the southern part. Slopes in this section are not significant compared to the rest of the site.

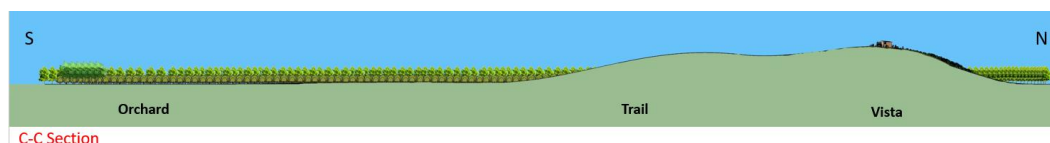


B-B Section

Figure 40. North-south section of Gohar Tepe

5.7.3 Section C-C

Figure 41 shows the south-north section. It starts with orchards and then presents the hillside and peak of the site, which is designed as a vista for visitors.



C-C Section

Figure 41. South-north section of Gohar Tepe

5.7.4 Section D-D

Figure 42 shows the east-west site configuration. There is no significant slope in the southern part of the site. It starts with orchards and continues to the research center and more orchards on the west side.

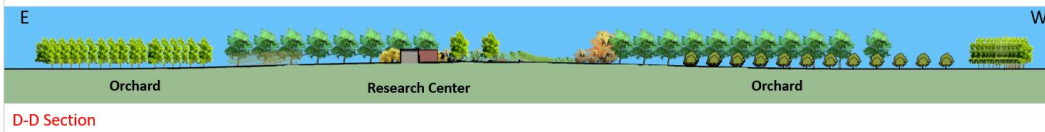


Figure 42. *East-west section of Gohar Tepe*

5.8 Perspectives

The following pages consist of some perspectives of the site based on a schematic plan. It represents a couple of views from key points of the site (Figure 43, 44, 45, 46, and 47).

Figure 43. Research Center



Figure 44. Excavated Zone



Figure 45. New Structures

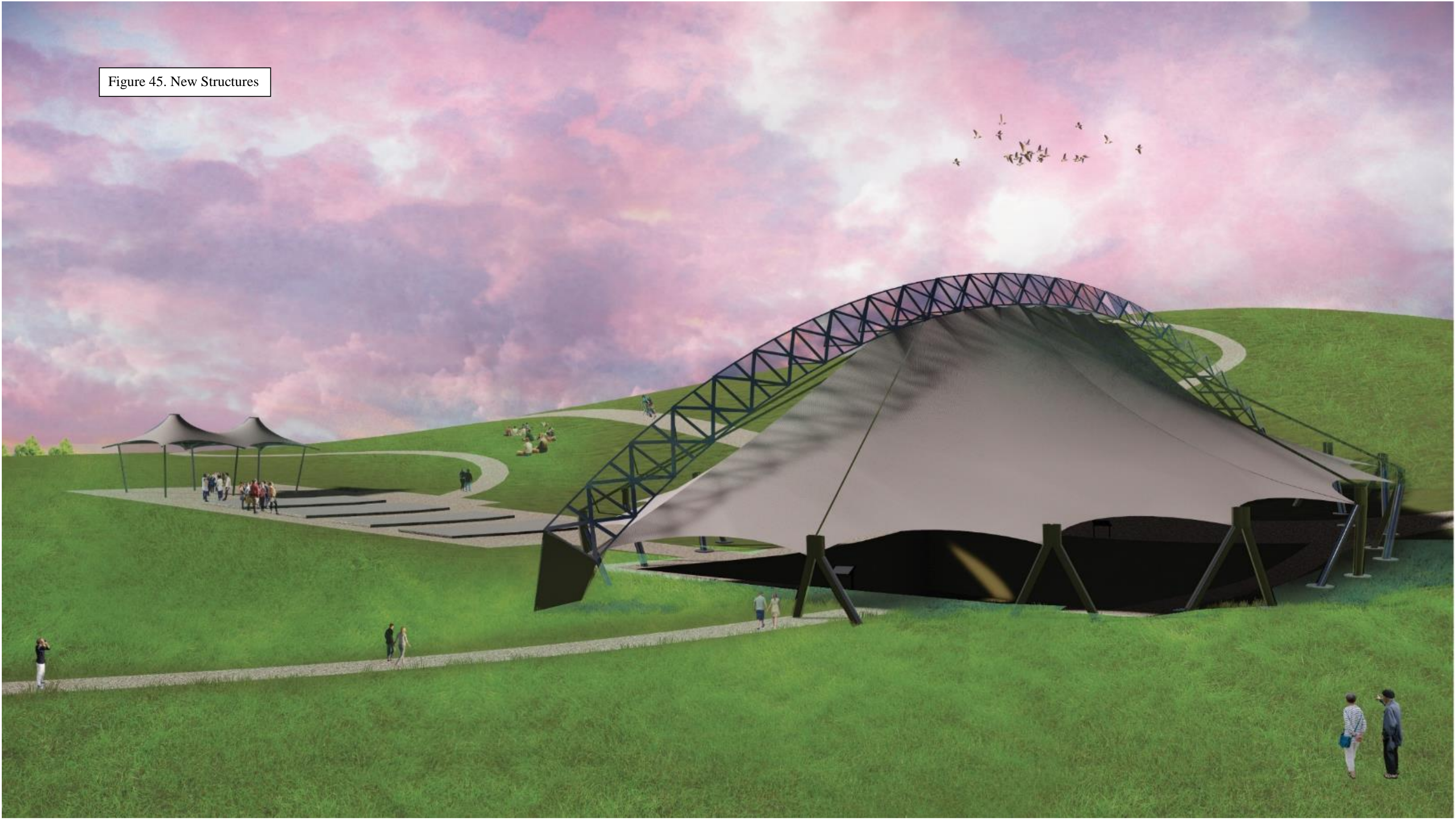


Figure 46. Facilities for Visitors



Figure 47. Vista



5.9 Conclusion

The Gohar Tepe AOAM design suggests that viewing the site as a cultural landscape, analyzing it to reveal the reference landscape, and proposing a reconstruction and rehabilitation strategy can produce results that respect both the landscape and archaeological remains.

The reference landscape at Gohar Tepe is divided into five main factors: architecture and materials; flora and fauna; handicrafts and industrial technologies; color, smell, and sound; and landscape configuration. The reference landscape was found by using archaeologist reports and archaeological site evidence.

The cultural landscape at Gohar Tepe, based on its status quo, includes elements such as its historical landscape, the landscape configuration, the archaeological remains, its flora and fauna, the natural ecosystem, and traditions, foods, and games. These elements were found by studying the status quo at Gohar Tepe.

Reconstruction and rehabilitation at Gohar Tepe were based on the reference landscape. However, because the scale of changes in Gohar Tepe is significant, most of the reconstruction strategy is based on rehabilitation. For example, the dig site cannot reconstruct the original urban area because of lack of information.

The integrated framework attempts to consider the interaction between Gohar Tepe AOAM and the environment and landscape on a large scale, paving the way for educational goals and heritage protection and providing a comprehensive view to the AOAM site. To improve this framework, the concepts need to be applied in reality.

Here are a couple achievements for Gohar Tepe AOAM:

- The proposed AOAM design preserves Gohar Tepe's monuments in their original environment.
- Gohar Tepe is considered a part of the large-scale, dynamic landscape and Gohar Tepe's landscape resources.
- New facilities will provide opportunities for educational purposes.
- The landscape integrity approach maintains the cultural landscape quality for future generations and can bring the identity to the site.
- The AOAM approach creates job opportunities for locals and brings personality and a sense of identity to this region.

5.10 Recommendations

Based on the analysis, results, and findings of the AOAM integrated design framework, this study recommends the following new approaches:

- Environmental impact assessment: By studying this particular parameter, we make sure we preserve the ecological system of the site.
- Design with nature: Nature and environment have a certain tolerances for accepting undesirable effects. We, as planners, designers, landscape architects, decision makers, and politicians, have to keep nature and ecology in mind.
- Management draft: Having a good strategy after designing a site will guarantee the sustainability of the site in the near future.
- Connection: By considering all historical places and important nodes around the site, we will encourage people to participate in AOAM events and festivals to make this asset alive and more functional.
- Public awareness: Raising the public awareness of the importance of AOAM and its educational components is the best way to preserve our cultural heritage.

5.11 Importance to the Profession of Landscape Architecture

This research is a valuable topic in landscape research as it increases the body of knowledge in AOAM design. While other studies have been done by archaeologists and architects, their attention is focused more on the structures and historical remains instead of a holistic approach to the landscape and the original context.

From planning, site selections, site territory, and design to reconstruction strategy and landscape restoration, landscape architects can perform a very critical role by involving planners, designers, consultants, engineers, and architects as well as local and regional governmental sectors, such as the Cultural Heritage Organization. By having landscape architects and landscape planners in early phases, some serious factors of AOAM design can be addressed. Also, after the completion of an AOAM landscape, architects can lead in the phasing restoration of the site and landscape management.

Landscape architects can also engage in the construction phase of a project to make sure the preservation and conservation of living habitats in the AOAM are still active and healthy.

5.12 Future Research

- Apply the proposed framework to additional case studies in other cultures, regions, locations

- Work with a client to pursue the design of an AOAM and see how well this framework works in execution
- Deploy the framework with a collaborative team of archaeologists, architects, and museum educators to see how well it allows for all concerns to shape the AOAM
- Focus more on designing the AOAMs as drawings

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