

Thesis on the reconstruction of left wing of Queen palace, Persepolis, Iran

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DAD Department of Architecture and Design Master degree architecture for heritage and active preservation master thesis; Persepolis museum



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CHAPTER ONE
INTRODUCTION AND GEOGRAPHICAL FRAMEWORK

Abstract

Persepolis, stands as the sole surviving ruin of one of history's most powerful civilizations. Despite its monumental significance, it is not afforded the respect or cultural attention it deserves. Following the destructive fire set by Alexander the Great and centuries of abandonment, only a single palace—believed to be the Harem of Xerxes or the Queen's Palace—has been partially reconstructed for museological purposes. This specific site was chosen for its minimal need for structural restoration. However, this thesis raises a critical question: what if the very absence, fragmentation, and chaotic incompleteness of the ruins could be embraced as an architectural essence rather than a limitation?

This research proposes a speculative reconstruction of the unbuilt western wing of the Queen's Palace. Rather than attempting a literal historical reconstruction, the design adopts the inherent disorder of the remaining footprints and planimetry as conceptual and spatial drivers. The project seeks to establish a new museological flow that integrates absence, memory, and ruin into the visitor experience—highlighting how loss can shape presence, and how incompleteness can become a foundation for contemporary architectural intervention.

Introduction

A Masterpiece of the Ancient World, Persepolis, or Parse, known in Greek as Perse Polis, stands as one of the most remarkable achievements of ancient art and architecture. Built primarily during the reigns of Darius I, Xerxes, and Artaxerxes I, it was further adorned during the Sassanid period, underscoring its cultural resonance across eras. The site has captivated historians, geographers, and archaeologists alike, serving as a symbol of the artistic and imperial sophistication of the Achaemenid Empire.

While Persepolis stood as the ceremonial heart of the empire, the Achaemenid rulers utilized other capitals for administrative and symbolic purposes. Susa served as the primary administrative center, while Babylon and Ecbatana represented the empire's inheritance of earlier civilizations, reinforcing the authority and legacy of the Achaemenids. Persepolis, however, retained its unique role as the site of imperial ceremonies, even as the importance of Babylon diminished under Artaxerxes I. Additionally, Pasargadae, the earlier capital established by Cyrus the Great, remained integral to royal coronations, emphasizing the continuity of Achaemenid traditions



Introduction

The abandonment of Persepolis after its destruction left it largely forgotten until the 20th century when systematic excavations began. Starting in 1931, archaeologists such as Ernst Herzfeld and later Erich Schmidt, under the Oriental Institute of the University of Chicago, uncovered and documented the site's architectural and artistic treasures. These efforts revealed the scale and intricacy of Persepolis's construction, contributing significantly to our understanding of Achaemenid culture.

In modern times, the significance of Persepolis has been reasserted through conservation and research initiatives. A notable example is the "From Palace to Town" project launched in 2008 as a collaboration between Iranian and Italian institutions. This project not only sought to preserve the site but also aimed to understand its urban and regional context. As part of this initiative, detailed surveys of the stone materials were conducted to assess their condition and inform sustainable preservation practices.

Persepolis's layered history, from its Achaemenid origins to its Sassanid reinterpretations, showcases its enduring role as a cultural and symbolic centerpiece of Persian identity. Its architectural and ceremonial legacy continues to inspire, making it a subject of fascination for historians, archaeologists, and art enthusiasts alike.



Intentions to choose persepolis

The selection of Persepolis as the focus of my research is driven by its profound significance in the history of architecture, culture, and heritage preservation. As one of the most iconic archaeological sites of the Achaemenid Empire, Persepolis represents not only an architectural masterpiece but also a symbol of Persian identity and imperial power. This project intends to contribute to the ongoing efforts of preserving and enhancing the site's value, particularly by exploring innovative museographic approaches that can transform Persepolis into a dynamic and accessible active museum while maintaining the authenticity of its monumental structures.

The preservation of historical monuments is an essential aspect of any restoration project, as outlined by international standards for heritage conservation. However, the local conditions and complexities of ancient sites such as Persepolis present challenges that may influence the application of these preservation principles. Historical documentation, including excavation records and architectural plans, provides crucial insights into the original conditions of the site. However, the reliability of these

sources can be problematic, as they often require extensive analysis and verification. Despite these challenges, Persepolis offers a unique opportunity to investigate how modern restoration practices can be harmonized with the site's historical and cultural significance.

The political context in Iran, along with limited infrastructure for tourists and the lack of adequate support facilities, has hindered the full potential of Persepolis as a modern heritage site. Additionally, while significant efforts were made to preserve portions of Persepolis's structures by relocating them to museums around the world, this practice has resulted in the disconnection of some artifacts from their original context. This underscores the need for a more integrated and comprehensive approach to museography, one that not only preserves but also reintegrates the site's artifacts and structures in a way that respects their historical and cultural context.

A notable example of early restoration work is the museum established within the Harem of Xerxes, which was adapted during the early 20th century under the direction of Ernst Herzfeld and Friedrich Krefter. While this space was initially de-

Intentions to choose persepolis

-signed for a different function, its adaptation for museum purposes reveals both the possibilities and limitations of such interventions. as part of the current research strategy, I intend to evaluate the possibility of establishing an additional museum space alongside the existing one at Persepolis. This consideration stems from the recognition that the current facility does not offer sufficient space to effectively exhibit the full range of historical artifacts.

The aim is to explore whether a new museum can be designed in a way that complements the architectural language of the existing structure, aligns with the broader historical and cultural context of Persepolis, and adheres to contemporary principles of museum design. In this process, I will be analyzing the capacity and limitations of the current museum, while also investigating the spatial, architectural, and cultural feasibility of introducing a new structure that both honors the site's heritage and enhances its ability



The rise of persepolis

Persepolis, the royal residence of the Achaemenid kings, represents a significant historical site. Located in southern Iran, it was part of the ancient state of Pers (Persia), centered in Shiraz.

Cyrus the Great was the one who founded the Achaemenid Empire. Under his rule and that of his successors, including Darius the Great and Xerxes, Persepolis became the empire's capital and a symbol of its power.

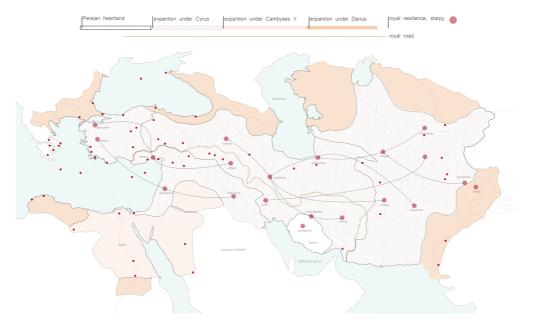
The Achaemenid dynasty lasted until Alexander the Great's conquest, after which Persepolis saw various repairs and additions, particularly during the reigns of Darius III and his successors. This version condenses the key points while maintaining the chronological flow and major historical details. The territory of the Achaemenid state was very wide that is, it covered from the Indus River in India to the Nile River in Egypt and Benghazi region in Libya today.



The rise of persepolis

from the Danube River in Europe to Central Asia. In this great country, many ethnic groups lived with their own customs and traditions and promoted and protected their state and ethnic culture, and there were 20 states or political-economic provinces in the country.

A map illustrating the rise and evolution of the Achaemenid Persian Empire (from the name of Achaemenes, an ancestor of the empire's founder, Cyrus the Great) from its origins in around 550 BCE. The Achaemenid Empire, founded by Cyrus II of Persia after conquering the Medes, reached its peak under Darius I around 500 BCE, uniting Mesopotamia, the Nile Valley, and the Indus Valley under one government. As one of history's largest empires, it thrived for over two centuries as a hub of culture, religion, science, art, and technology, until its conquest by Alexander in 329 BCE.



Uploaded by Simone Netchev/redraw by author

Geographical Context of Persepolis

Persepolis, the royal residence of the Achaemenid kings, represents a significant historical site. Located in southern Iran, it was part of the ancient state of (Persia), centered in Shiraz. Takht-e Jamshid, or Persepolis, was constructed in the heart of Fars province on a rocky terrace at the foot of Mount Mehr (Mount Rahmat), approximately 57 kilometers northeast of Shiraz and at an elevation of 1,770 meters above sea level, this site holds immense historical and cultural significance.





Geographical Context of Persepolis



The Accessibility Corridor to Persepolis/By author

An ancient capital of the kings of the Achaemenian dynasty of Iran (Persia), located about 57 km northeast of Shiraz in the Fars region of southwestern Iran.

The journey from Shiraz to Persepolis, located near Marvdasht, typically begins on the Shiraz-Marvdasht Road, a well-maintained highway that connects the two locations. This route spans approximately 60 kilometers and offers a smooth drive through the scenic landscapes of Fars province.

Travelers heading to Persepolis from Shiraz can follow the Fars-Bushehr Road (Route 65), continuing toward Marvdasht. Upon reaching Marvdasht, clear signage directs visitors to Persepolis, situated about 10 kilometers northeast of the city center. The site is accessible via a dedicated road leading to the historic complex, with parking facilities available near the entrance.

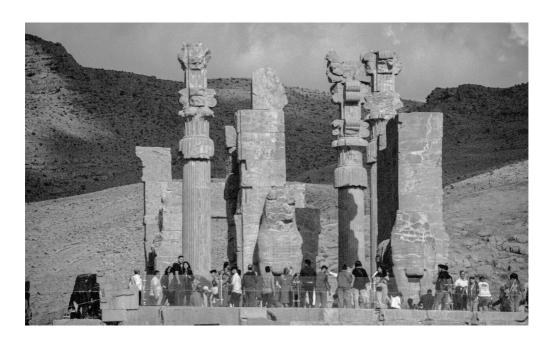


Natural Landscape and Ancient Architecture

The natural landscape of different regions of Iran, including valleys, mountains, plains, and other topographical features, has played a significant role in shaping ancient architectural structures such as palaces, castles, and barracks. In particular, Persepolis demonstrates a distinctive synthesis of the surrounding mountainous terrain with the principles of ancient Iranian architectural design. The landscape of Persepolis reflects

a unique integration of natural and historical elements. The region's distinct climatic and natural characteristics, combined with its strategic location on the expansive Farvardin Plain and the surrounding mountainous terrain, create a fortified natural setting. Additionally, its position along the royal road highlights its significance as the capital of the Achaemenid Empire, marking the transfer of the seat of rule from Pasargadae.

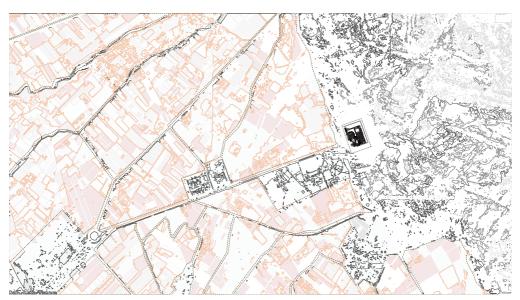
Documenting the Historical Landscape of Persepolis" by Dr. Aminzadeh and Engineer Samani



Geomorphological and Hydrogeological Insights

Given that Persepolis is surrounded by agricultural lands, most of which are owned by local residents from the nearby villages, the region faces unique challenges. Each year, between July and September, farmers burn their fields after the wheat harvest to prepare for the new cropping season. This practice generates dense smoke, which adversely affects both the archaeological complex and its surrounding environment. Establishing two-way monitoring and fostering interaction between decision-makers and local residents is essential for paving the way toward sustainable development in Persepolis.

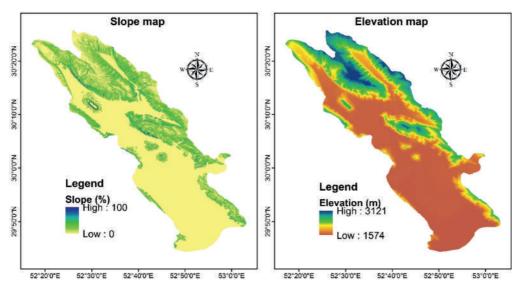
Furthermore, the recent subsidence of land in the first-class sanctuary zone of Persepolis—caused by excessive extraction of groundwater for agricultural purposes—has underscored the critical role of the native population in preserving the site. These factors highlight the undeniable importance of empowering local residents and involving them in the decision-making and management processes of this globally significant heritage site



Agricultural land surronding persepolis in the main road accessibilty from marvdasht to persepolis

Elevation Model in Marvdasht

The Digital Elevation Model (DEM) of the Marvdasht plain, with a resolution of 10 × 10 meters, was obtained from the agricultural research service of Fars province. This dataset was used to analyze elevation and slope factors, which are crucial for understanding the region's geomorphological and hydrological characteristics. Elevation in the study area ranges from 1574 to 3121 meters above sea level, reflecting significant topographical variation that influenced the strategic placement of Persepolis. Situated on an elevated terrace, Persepolis was positioned to take advantage of natural topography for visual prominence, effective drainage, and protection from potential flooding. The terrace's construction, the use of advanced engineering techniques, demonstrates the Achaemenid Empire's integration of architecture with the landscape. This analysis highlights the relationship between Persepolis and the Marvdasht plain, emphasizing the importance of natural features in its design. These findings enrich the museographic interpretation of the site, contributing to its heritage preservation by showcasing its environmental and architectural harmony

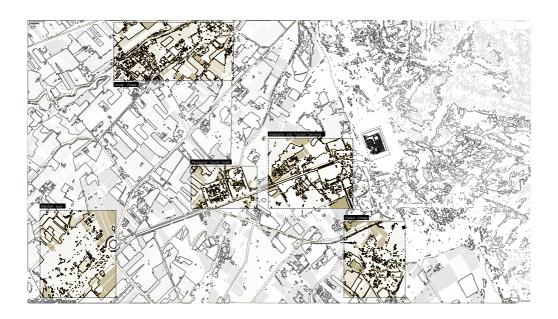


Topographic maps,including elevation and slope maps of the study area. Marvdasht

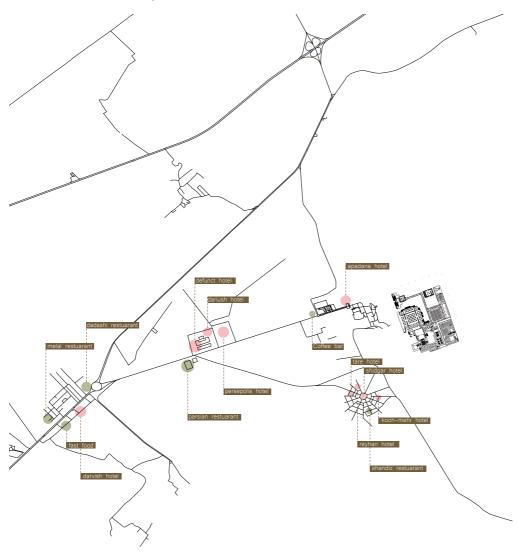
Touristic Hubs and Urban Nodes Surrounding the Persepolis Complex

Surrounding Persepolis, population several clusters are present. reflecting the persistence of rural settlements with relatively low population densities despite the site's distance from major urban centers. These clusters highlight the interplay between the region's historical significance and its ongoing human habitation. Considering the immense touristic value of the Persepolis complex, various facilities have been developed to support and enhance the visitor experience. These include small-scale accomodation service to travelers, a primary hotel complex for accommodation, parking areas, a tourist center offering informational and logistical services, a recreational park, and a coffee shop providing leisure and refreshments. However, these services and facilities still require greater integration and concentration to ensure a cohesive and well-organized approach to tourism management and local engagement.

In the map below, the spatial distribution of these population clusters and their relationship to Persepolis can be observed, illustrating the regional dynamics and the need for further development in this area.



Tourism Service Map



Spatial Analysis of Persepolis Citadel and Persepolis West

As a reflection to the emphasis on the layout of Persepolis, the integration of surrounding zones, and the Achaemenid approach to urbanism according to Sébastien Gondet (2018: 201-202), we can say the Achaemenid settlements of Persepolis and Pasargadae were expansive urban projects spanning several square kilometers. These settlements were characterized by a unique "diffuse urbanism," blending built and unbuilt spaces dominated by gardens and green areas (Gondet 2018; Callieri forthcoming b; Matin in press).

The urban plan consisted of low-density building clusters interspersed with green spaces, reflecting a distinct Persian approach to urbanism.

Evidence of well-organized canal networks, revealed through geophysical surveys, high-lights the importance of green spaces and their integration into the broader urban landscape. The Persepolis settlement extended approximately 6 km from the Terrace, which served as the citadel's core, towards the surrounding areas, including the Northwest and West (and possibly South).

The Terrace itself was separated from adjacent urban zones by a belt of gardens enclosed within a protective wall (Askari Chaverdi, Callieri 2012: 230-231, 238-239; 2017: 1-3, 286-288; Boucharlat, De Schacht, Gondet 2012; Matin in press).

The closest urban area to the Terrace, known as Persepolis West, lies approximately 500 meters away and features a high concentration of archaeological remains, likely corresponding to commoner settlements (Sumner 1986: 8–9). Geomagnetic surveys and archaeological evidence suggest that the urban zones surrounding Persepolis were highly organized, with networks of ditches or canals that likely served both irrigation and drainage purposes.

These features point to distinct patterns of land use within the settlement, with some zones housing denser clusters of buildings and others dominated by green spaces or open areas. The architectural elements found across these zones indicate a large-scale construction effort, possibly tied to a single overarching project (Tilia 1978: 71-92).

This heterogeneous urban layout, integrating monumental and residential spaces with expansive green areas, highlights the Achaemenid vision of urban planning and their ability to harmonize the built environment with the surrounding landscape.

Spatial Analysis of Persepolis Citadel and Persepolis West Urban

This broader title incorporates the themes of spatial organization, urban planning, and the reconstruction efforts focused on the citadel and the adjacent Persepolis West zone. It emphasizes not only the analysis of the spatial layout but also the integration of the surrounding areas into the urban framework of Achaemenid Persepolis.



Historical Overview and Geographical Description of the Ancient Citadel

Takht-e Jamshid, or Persepolis, is the citadel of the ancient city of Parse, covering over 125,000 square meters. It was constructed on a rock plateau facing Mehr Mountain (Rahmat Mountain) to the east. The city featured official and ceremonial palaces, private residences, the royal treasury, and protective fortifications in two valleys created by mountain floods. Persepolis was inhabited for approximately 200 years,

but with the exception of a few remnants, much of the site has been destroyed, and its surrounding areas have been used for agricultural purposes, lowering the heights of the ruins.

Persepolis can be divided into three main sections: the mountain fortification, the terrace (or Takht), and the plain surrounding the terrace.

("Mt. Royal," part of the Kuh-e Rah-mat range) and constructing using tightly

fitting blocks in a polygonal or "cyclopean" technique to build massive walls rising up to 18 meters above the plain.

This innovative construction method not only ensured the stability and durability of the structure but also reflected the sophisticated engineering and architectural skills of the Achaemenid Empire.

On the west side of the terrace, a monumental double staircase with a crenelated parapet provides the main access, serving as a symbolic and practical gateway to the ceremonial and administrative center of Persepolis.

These features illustrate the grandeur and complexity of the site, which was designed to convey power and reflect the grandeur of the Achaemenid dynasty.



Homeland of the Achaemenids. Situated on a rock plateau at the base of one of the foothills of Mount Mehr (also known as Mount Rahmat), the site lies approximately 57 kilometers northeast of Shiraz at an elevation of 1,770 meters above sea level. The Marvdasht Plain, surrounding Persepolis, has been a cradle of civilization since ancient times, hosting both local and Elamite cultures.

Around 518 BCE, Darius the Great selected a prominent rock formation on the northwest side of Mount Mehr to establish a royal pavilion. Over time, this site became home to the magnificent structures of Persepolis, constructed under the rule of Darius, his son Xerxes, and his grandson Artaxerxes I. Darius the Great clarified that his intention in building this complex in the land of Persia was not to establish an administrative or political capital center.

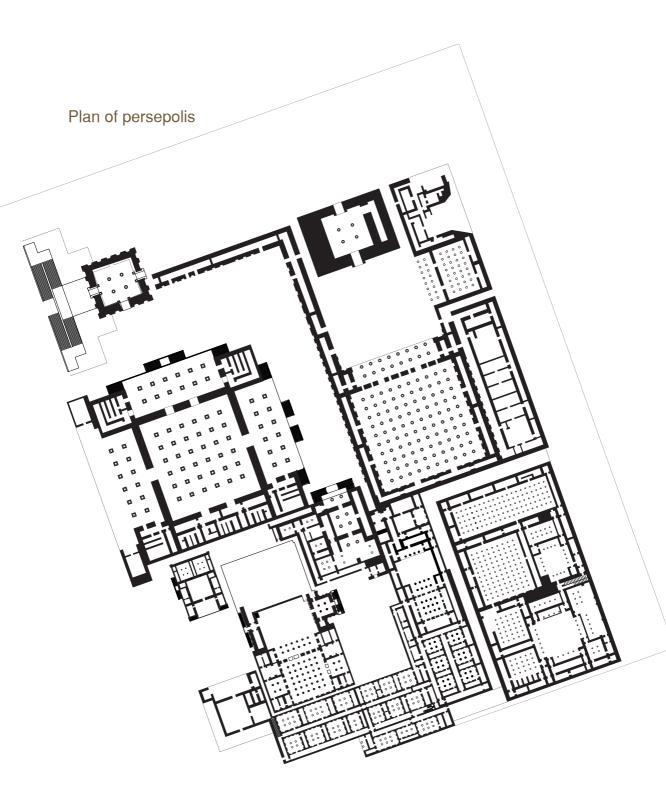
Persepolis: A Ceremonial Landmark in the Heart of Fars

as the location was distant from the governmental center.Instead, his purpose was to create a ceremonial hub, deeply rooted in historical significance and symbolic of the Achaemenid dynasty's homeland.

Persepolis was used exclusively for special occasions and celebrations. Notable scholars such as Ernst Herzfeld, Arthur Pope, Erich Schmidt, Roman Ghirshman, and Arthur Upham Pope have suggested that Persepolis primarily served as the site for the Nowruz festival—a royal holiday and a national ritual.

Additionally, researchers like Ostad and Lentz have proposed that Darius the Great designed the orientation and spatial layout of Persepolis based on astronomical alignments. The position and axes of the complex, they argue, align with specific solar events, such as the angle of sunlight on key dates throughout the year, further emphasizing its ceremonial and symbolic significance.





Developments in Persepolis During the Achaemenid Era

Persepolis serves as a remarkable example of Achaemenid urbanism and architecture, showcasing the empire's political, cultural, and technological accomplishments. Its development spanned multiple reigns, beginning with Darius I, who established the site as a royal and ceremonial center, followed by significant contributions from Xerxes I, Artaxerxes I, and later kings. Key features include the grand terrace, monumental buildings such as the Apadana, the Treasury, and the Throne Hall, as well as intricate defensive systems and advanced drainage infrastructure.

The urban layout reflects a sophisticated integration of residential, administrative, and ceremonial spaces, connected by green zones and gardens that underscore the Persian aesthetic of harmonizing architecture with nature. Surrounding zones like Persepolis West reveal its role as not just a royal center but a broader urban settlement accommodating workers and officials.

Founding of Persepolis

Darius I (550-486 BCE): The foundation of Persepolis is attributed to Darius I, who transformed the site into a royal complex. Construction began around 520 BCE, with the establishment of the terrace, a vast platform that served as the base for the site's monumental buildings.

Key constructions under Darius include: **Apadana Hall**

Used for grand receptions and cere-

Used for grand receptions and ceremonies.

The Council Hall (Tripylon):

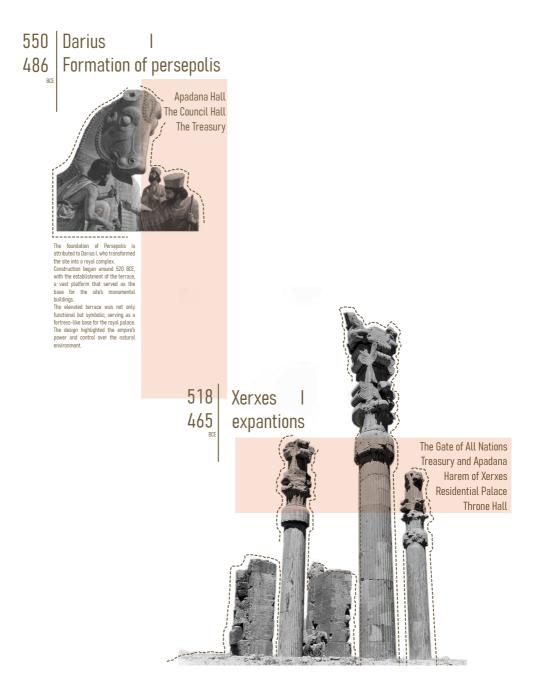
A symbol of administrative control.

The Treasury

Served as the empire's financial and resource hub. The construction of canals, cisterns, and drainage systems ensured the site's sustainability.



Timeline of development and excavations



Pahlavi's effort for conservation and e x c a v a t i o n

1922: Reza Shah Pahlavi initiates excavation and conservation efforts at Persepolis with Ernst Herzfeld, sponsored by the Oriental Institute of Chicago.

1971: Persepolis hosts the 2500th anniversary celebrations of the Persian Empire.

1973: The Institute of Achaemenid Research is founded at Persepolis to oversee excavations.



Artaxerxes Later Additions Completed during his reign, this grand hall was initially intended as an audience hall but evolved into a manufacture showcasing the empire's weath and treasures. Records suggest the inclusion of ritual objects and administrative tools, indicating the continued importance of the Treasury in Achaemenid governance. Artiserses Is additions included modifications to existing structures and the maintenance of gardens and irrigation systems. Xerxes I, son of Darius, expanded and refined the site maintained Persepolis's dual function as a political-administrative hub and a center for elaborate ceremonial activities. and he did the Completion of Dariuss, unfinished projects, including modifications to the Treasury and Apadiana.

History of the platform

1. The plate of Persepolis

Persepolis is built on a plain that has a little more than one hundred and twenty-five thousand square meters.

The terrace of Persepolis, situated against Koh Mehr (Mercy Mountain), reaches a height of up to 15 meters in various sections (Tavangar Zamin, 1393). This expansive platform extends into the Marvdasht plain, presenting an irregular quadrilateral shape with dimensions approximating 455 meters on the west, 300 meters on the north, 430 meters on the east, and 390 meters on the south. Darius I's inscription on the southern front wall confirms that no structures existed at this site prior to his reign, marking the commencement of construction around 518 BCE. The terrace's preparation required extensive engineering efforts, including the leveling of uneven rock surfaces and the integration of polygonal boulders, which were carefully fitted without the use of mortar. These stones were reinforced with iron clamps and covered with lead to ensure stability-however, many were later looted. The materials utilized consisted primarily of gray limestone sourced from the surrounding hills, alongside black marble-like limestone

extracted from mines in Majd Abad, approximately 40 kilometers west of Persepolis. To address water management, a highly sophisticated drainage system was implemented. Canals were excavated along the slopes of Rahmat Mountain, directing rainwater into large ditches behind the eastern wall.

These underground waterways facilitated the flow of rainwater through courtyards and palaces, channeling it into the plain beneath the southern wall. Portions of these systems, including gutters and drainage channels, remain visible and functional today, effectively managing water during heavy rainfall.

The western and southern fronts of the terrace were reinforced with smooth stone walls several meters in height, providing substantial protection against external threats. Above these walls, simpler parapet structures with multi-tiered steps

were constructed on flat foundation walls, enhancing the defensive architecture of the site.

These elements demonstrate the Achaemenid Empire's advanced engineering and urban planning capabilities, blending functional needs with symbolic grandeur.

1. The plate of Persepolis



2. Entrance stairs

The entrance to the terrace of Persepolis is accessed via a pair of similar staircases embedded in the western wall near the northern corner.

In front of the wall, an area measuring 10.5 meters in length and 7 meters in width has been elevated 10 cm above the plain and paved with large, well-hewn stones. Two rows of stairs have been constructed along the transverse sides, each staircase consisting of 63 steps leading to a wide landing.

The stairs then twist 180 degrees, continuing with an additional 48 steps in the opposite direction, reaching a final height of nearly twelve meters above the ground. Thus, the two staircases combined have 111 steps each, with dimensions of 90.6 cm in length, 38 cm in width, and 10 cm in height.

The irregular and large limestone stones used in the construction of these twin staircases were stacked without mortar, connected instead with nearly rectangular blocks, displaying characteristics attributed to the reign of Xerxes. It is highly probable that these grand staircases were constructed during Xerxes' rule, reflecting the empire's sophisticated architectural techniques and attention to both functionality and ceremonial use.

The relatively low height of the steps allowed a large number of administrative and military officials to climb easily in groups, making the design practical for mass movement. Alongside the stairs, a parapet of elegant four-step congresses was constructed, some of which remain intact today. Each congress stands 64 cm high and features a rectangular niche on its wide front.



Entrance stairs. Photo by institute of shiraz. Shiraz Iran 1403



Entrance stairs. Photo by Osveh Heidari Shiraz Iran 1403

3. Gate of the Nations

The Gate of All Nations, located 22 meters east of the Jelokhan staircase, served as a grand ceremonial entrance to Persepolis, symbolizing the unity of the diverse tribes of the Achaemenid Empire. Founded by Darius the Great and completed under Xerxes, the gate consists of a central hall with adobe walls, three monumental doorways, and four towering columns, each approximately 16.5 meters high. The hall covers an area of 612.5 square meters, with each side measuring around 75.24 meters. Its roof rose 18 meters above the Jelokhan staircase and 33 meters above the plain, creating an imposing structure visible from afar.

The columns of the Gate of All Nations are among the finest examples of Achaemenid craftsmanship. Two original columns stood until 1965 when a third was reconstructed using fragments from the others, making it the most complete column in Persepolis today. Despite extensive damage, the intricate details of these columns, including carved bull capitals, reflect the artistic sophistication of the time.

The gates themselves exhibit unique dec

orative features. The western and eastern gates, each measuring 10 meters high and 3.82 meters wide, are flanked by monumental figures. The western gate features colossal bulls with raised-scaled curls, floral necklaces, and natural quadrupeds, standing firmly on platforms 1.5 meters above the ground. These bulls face west, greeting visitors as they approach the gate. In contrast, the eastern gate features sphinxes with human heads, bull bodies, and eagle wings adorned with parallel feather designs. These sphinxes face east toward the mountains, symbolizing protection and grandeur. The southern gate, though taller, is simpler in design and opens to a large courtyard north of the Apadana.

Inside the hall, a polished black stone platform was designed for the seating of nobles and dignitaries. The northern platform includes a raised projection resembling a throne or dais, likely used for important court officials or ceremonies. The layout emphasizes the gate's dual role as a ceremonial space and a display of the empire's architectural mastery. Beyond the eastern gate lies Sepahian Street, a 92-meter-long and 70.9-meter-wide road leading to the

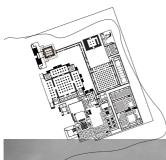
3. Gate of the Nations

northern courtyard of the Hundred Pillar Palace. Thick clay walls with niches spaced 7 meters apart line the street, likely serving as positions for soldiers or officers during ceremonies, adding to the street's formal and processional atmosphere.

The columns of the gate have been a subject of scholarly debate. Schmidt estimated their height to be 66.6 meters, while Gette proposed 58.16 meters. Regardless of the precise measurements, the gate stands as a testament to Achaemenid innovation, blending functionality with ceremonial grandeur, and remains one of the most iconic structures of Persepolis.









4. Apadana Palace

The Apadana Palace, also known as the Audience Hall, is one of the most remarkable and extensive constructions of Persepolis. Initiated by Darius the Great and completed under Xerxes, the palace is a testament to the architectural and artistic achievements of the Achaemenid Empire. It consists of a central hall, porches, and surrounding auxiliary structures, each with unique architectural and functional characteristics.



General view of the Apadana (Audience Hall) founded c.518 BC

4. Apadana Palace | Architectural Layout | Central Hall

The central hall measures approximately 50.60×50.60 meters, creating a large, square space. This spatial layout emphasizes symmetry, a hallmark of Achaemenid architectural design, which seeks to create order and harmony within monumental structures.

There were originally 72 columns supporting the roof, arranged in a grid of six rows and six columns. Over time, the number of columns has been significantly reduced due to decay and destruction. Today, only 14 columns remain standing, with one reconstructed column in the northeast corner of the eastern porch.

These columns not only support the roof but also function symbolically, often adorned with double-headed animal capitals, such as bulls and lions. These motifs reflect Achaemenid iconography, symbolizing strength, protection, and divine authority.



Apadana palace . Photo by S.Melkin



4. Apadana Palace | Architectural Layout | Porches

North porch has a dimension of 20 x 25 meters, it features 12 columns, arranged in two rows. These columns are elaborately decorated with scroll leaves and palm ivy motifs at the bases, while the capitals are shaped like oxen, evoking themes of fertility, strength, and abundance. Additionally, the twin-sided staircase is adorned with intricate carvings of soldiers, sphinxes, and winged lions. This symbolic representation aligns with Achaemenid ideals of military power, protection, and universal rule. The artistry here showcases a high level of skill in both sculpture and stonework.

The west porch is elevated over 14 meters, offering a commanding view of the surrounding plain. The columns here feature bell-shaped bases with vertical grooves, which are unique styelements reflecting the refinement of Achaemenid architectural design. A distinctive element is the unfinished prewall, which indicates that the design was altered mid-construction to accommodate the existing landscape or structures nearby. This is a testament to the flexibility in Achaemenid construction practices. The east porch, with its 12 columns, mirrors the artistic excellence seen in the other porches. Carvings include delicate and refined reliefs, and twin staircases with balustrades, adding a sense of grandeur and accessibility to the structure. These elements further reflect the emphasis on functional and aesthetic beauty in Achaemenid architecture.



An illustration from reconstruction of the facade of the Apadana, from the official website of Dr. Kayeh Farrokh.

4. Apadana Palace | Architectural Layout | Towers

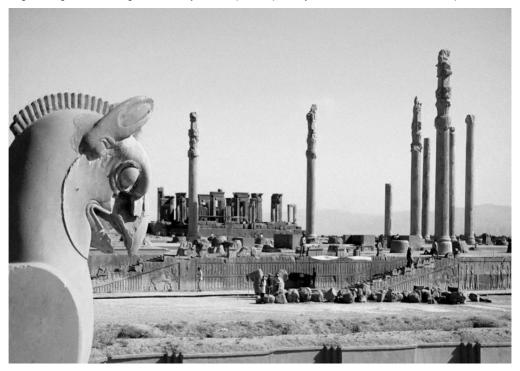
Four square towers are positioned at the corners of the central hall, built using adobe walls—a material prevalent in ancient Persian architecture for its availability and thermal regulation properties. Guardians: At the entrances of these towers, black stone guardian dogs are placed, symbolizing vigilance and protection against both internal and external threats. Internal Design: Inside the towers, internal staircases constructed from clay, brick, or wood allowed movement between levels. These multi-story towers demonstrate Achaemenid engineering ingenuity, blending utility with symbolic grandeur.



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4. Apadana Palace | Auxiliary Structures and Courtyards | Apadana Courtyard

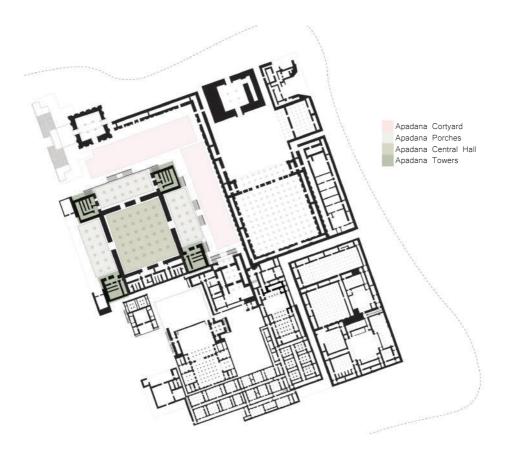
The Apadana courtyard is 167×34 meters on the eastern side and 152×50 meters on the northern side, making it an expansive and multifunctional space. These dimensions emphasize the grandeur and scale of the palace complex, catering not only to administrative functions but also to ceremonial and recreational activities. Underground Waterways were carved into the rock foundation to manage drainage, particularly in the northern and northwestern sections. This demonstrates Achaemenid innovation in hydraulic engineering, showcasing their ability to adapt complex systems to fit natural landscapes.



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4. Apadana Palace I Auxiliary Structures and Courtyards I Apadana Courtyard

These areas were utilized for various practical purposes, such as guard stations, arsenals, and storage facilities. For instance, the long guard room connects the Apadana courtyard with the northern courtyard of the Hundred Column Palace, reinforcing the strategic and defensive role of the palace complex.



4. Apadana Palace | Auxiliary Structures and Courtyards | Apadana Courtyard



4. Apadana Palace | Construction and Historical Context

The Apadana Palace, a monumental centerpiece of Persepolis, embodies the architectural, artistic, and cultural achievements of the Achaemenid Empire. Its construction began around 515 BCE under Darius I and was completed approximately 30 years later during the reign of Xerxes, showcasing the empire's enduring commitment to grandeur and excellence. The palace was conceived not only as a functional space for imperial ceremonies and governance but also as a symbol of Achaemenid power and unity.

The Apadana Palace rests on a rock foundation, elevating it about three meters above the surrounding courtyards. This elevation not only enhances the visual prominence of the structure but also ensures its stability on the rugged terrain. Such a foundation underscores the Achaemenids' advanced understanding of engineering and their emphasis on creating enduring monuments. The construction materials reflect the extensive trade networks of the empire, with imported cedar timber forming key structural elements. This choice of material highlights the far-reaching influence of the Achaemenid Empire, spanning regions as distant as Lebanon and India. The palace's columns and capitals are masterpieces of craftsmanship. The double-headed capitals—depicting bulls, lions, and other sacred animals—serve both structural and symbolic purposes, representing strength, protection, and divine authority. The intricately carved column bases and decorative reliefs blend functionality with artistic expression, emphasizing the empire's ability to harmonize utility and aesthetics.

The artistic features of the Apadana Palace vividly reflect the cultural ideology of the Achaemenids. Carvings and motifs throughout the structure depict subjects from various regions of the empire, symbolizing a diverse but unified realm under a central authority. The reliefs, particularly those on the staircases, portray figures of soldiers, envoys, and tribute-bearers in intricate detail, reinforcing the themes of loyalty, peace, and order.

The architectural elements of the Apadana Palace, such as the unique column capitals and elaborate bas-reliefs, demonstrate a high degree of sophistication. The carvings balance ornamental beauty with storytelling, capturing the empire's values and traditions. For example, the double-headed capitals were not

4. Apadana Palace | Construction and Historical Context

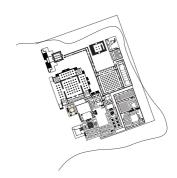
merely decorative; they were integral to the structural integrity of the palace while simultaneously representing Achaemenid ideals of duality, balance, and strength.

he Apadana Palace stands as a monumental testament to the architectural ingenuity, artistic mastery, and cultural ambition of the Achaemenid Empire. Its elevated foundation, grand columns, and intricate carvings encapsulate the empire's ability to project power and unity through its built environment. The palace's construction and design reflect a civilization that seamlessly blended practicality with symbolic richness, leaving an enduring legacy of Persian heritage and imperial grandeur.



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5. Tachara Palace | Historical Context

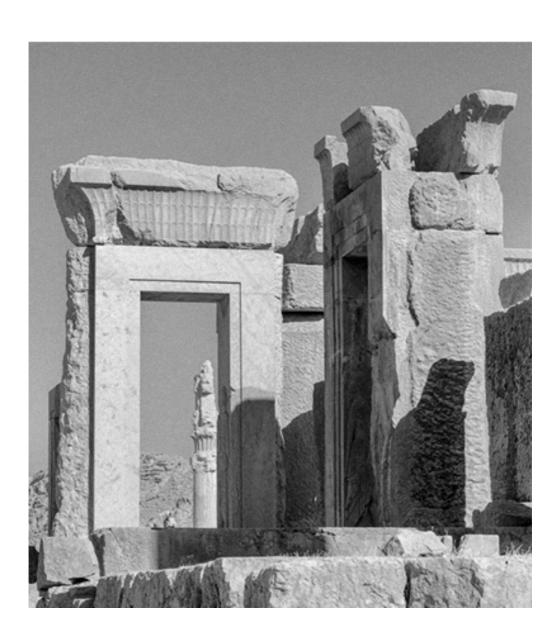


The Tachara Palace, also known as Darius's Palace or the Mirror Hall, stands as a remarkable structure within Persepolis, distinguished by its unique architectural design, historical significance, and well-preserved condition.

The Tachara Palace was among the first palaces constructed on the terrace of Persepolis, positioned southwest of the Apadana and facing southward, symbolically toward the sun. Built under the reign of Darius I, the palace carries his name in inscriptions, referring to it as "Thacher." This name, derived from Old Persian, remains in modern Persian as "Tjer" or "Toor," meaning "winter house." Despite this translation, there is no

definitive evidence to suggest the palace served as a winter residence. Historical texts and interpretations speculate that the palace might have been intended as Darius's official workplace, potentially serving administrative and ceremonial purposes. However, these interpretations, based on contemporary merchant accounts and historical observations, remain open to debate.

The construction of Tachara began under Darius but was completed by his son and successor, Xerxes, after Darius's death in 486 BCE. Later, Xerxes III added a western gate with a staircase in the third quarter of the 4th century BCE, further enhancing the palace's design.



5. Tachara Palace | Architectural Features

The Tachara Palace is built on a rectangular platform elevated 3 meters above the Apadana courtyard, emphasizing its prominence within the Persepolis complex. The structure follows a north-south longitudinal axis, measuring approximately 40 meters long and 30 meters wide. Two square rooms with four columns each are located in the northern part of the palace.

These rooms are bordered by narrow and long lateral chambers, enhancing the symmetry and functionality of the design.

An 8-column porch, arranged in four rows of two, dominates the southern side, connected to the adjacent rooms. The porch is accessed by a twin staircase on the southern facade, allowing entry from both sides. The staircase is adorned with decorative motifs, imitating the designs of the Apadana staircase, a tribute to the grandeur of the larger palace.

The gray, highly polished stones of Tachara earned it the

nickname "Mirror Hall", as their reflective quality was so striking that images appeared on their surfaces. Unlike other structures at Persepolis, Tachara survived the destruction wrought by Alexander the Great in 330 BCE. Its stone components endured while wooden elements, such as beams, have vanished over time.

The decorative patterns on the western staircase, built by Ardashir III, emulate the designs of the Apadana staircase, reflecting continuity in Achaemenid artistic traditions even during later periods.

Reliefs and inscriptions on the palace walls showcase Achaemenid artistry, emphasizing themes of power, unity, and divine authority. The well-preserved state of Tachara offers valuable insights into Achaemenid architectural techniques and material choices, making it an important monument for understanding the artistic and functional priorities of the period.

5. Tachara Palace I Function and Legacy

The exact function of Tachara remains a subject of scholarly debate. While some believe it served as Darius's administrative center or ceremonial workplace, these interpretations are speculative. Nevertheless, its durability and resilience suggest a role of lasting significance within the Persepolis complex.

Over the centuries, Tachara witnessed additional enhancements, such as the western staircase by Xerxes III and decorative additions by subsequent rulers. These changes reflect its evolving role and continued importance in Achaemenid royal architecture.

Even today, the Tachara Palace stands as a testament to the ingenuity and enduring legacy of Achaemenid architecture. Its design, materials, and historical layers offer a window into the grandeur and vision of Darius I and his successors, making it a vital component of Persepolis and Persian heritage.



Panorama of Tachara Palace, Persepolis, Iran



Panorama of Tachara Palace, Persepolis, Iran





The Tachara Palace also holds symbolic significance as an architectural expression of Darius I's vision of an idealized empire, blending functionality with artistic refinement. Unlike the grander Apadana or the heavily adorned Palace of Xerxes, the Tachara's relatively smaller scale and cleaner design emphasize precision and elegance, showcasing the Achaemenid dedication to craftsmanship rather than sheer monumentality. The reflective gray stones, often likened to mirrors, symbolize clarity and permanence, suggesting a deliberate metaphor for the enduring legacy of Darius's rule. Furthermore, the palace's southern orientation, toward the life-giving sun, may reflect Zoroastrian influences, subtly aligning the structure with the spiritual and cosmological beliefs of the time, further enhancing its cultural resonance.

Hadish Palace | Architectural Features

The Hadish Palace, commissioned by Xerxes I, stands as one of the most prominent structures in the Persepolis complex. With its expansive size of approximately 2550 square meters (40 x 55 meters), it was nearly double the size of the Palace of Darius, signifying Xerxes's ambition to surpass his predecessor. Its name, "Hadish," derived from Persian, translates to "dwelling place," underscoring its primary purpose as a private residence for the king. Located south of Persepolis, the palace's elevated platform offers commanding views of Marvdasht, reflecting its symbolic and strategic placement within the imperial compound.

The palace's architectural design show-cases both complexity and grandeur. Its central hall, measuring 36.5 x 36.5 meters, is a focal point supported by 36 columns in six rows of six, emphasizing its monumental scale. The hall is surrounded by smaller rooms and connected to other parts of the palace through porticoes and staircases. A northern portico faced the Apadana and mirrored the decorative elements of Darius's palace, symbolizing continuity in Achaemenid architectural motifs. The southern porch offered access to the plain and subterranean rooms, further

enhancing its functionality. Hadish was constructed with softer stone materials. making it less durable than other structures in Persepolis. Its foundations elevated the palace 18 meters above the plain, creating a sense of exclusivity and grandeur. However, the fire set by Alexander the Great during the conquest of Persepolis in 330 BCE caused significant damage to its wooden doors, windows, and brick staircases. Modern restoration have partially recovered ments such as the northeastern staircase. The Hadish Palace is notable for its detailed and symbolic decorations. The northern portico, aligned with the Apadana, featured intricate carvings similar to those of Darius's palace, blending aesthetic sophistication with imperial symbolism. The arrangement of columns, decorative motifs, and the interplay of space and design reflect Xerxes's intent to create a visually harmonious yet functionally distinct royal residence.

Primarily serving as a private royal residence, Hadish's design incorporated various practical features. Subterranean rooms, situated 7 meters below the main level, were accessible via narrow staircases, possibly for

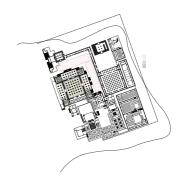
6. Hadish Palace I Function and Significance

storage or discreet activities. The palace's two-way western staircase facilitated access to the Apadana courtyard and the Palace of Darius, while the southern staircase connected the palace to the plain. This interconnectedness reflects the careful planning of Persepolis as an integrated complex.

Built during Xerxes's reign (486-465 BCE), the Hadish Palace exemplified the architectural ambition and royal authority of the Achaemenid dynasty. Despite its grandeur, the palace suffered substantial damage during Alexander's invasion, likely due to its symbolic association with Xerxes's earlier sack of Athens. Its targeted destruction left the stone structures relatively intact, while the decorative elements and wooden components were largely lost. The palace remains a testament to Xerxes's

efforts to enhance Persepolis's significance as both a ceremonial and residential center.

When compared to the Palace of Darius, Hadish stands out for its scale and exclusivity but is notably less preserved due to material vulnerabilities and deliberate destruction. Its elevated position and



commanding views highlight the importance of geographic and symbolic placement in Achaemenid architecture. The decorations and spatial organization of the palace underscore the dynasty's cultural values, blending artistic expression with practical design.

geographic and symbolic placement in Achaemenid architecture. The decorations and spatial organization of the palace underscore the dynasty's cultural values, blending artistic expression with practical design.





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7 . C Palace | Construction and Historical Context



To the south of the southern area of Apadana, east of the Palace of Darius, north of the northern courtyard of Xerxes' Palace, and west of the Three-Door Palace (also known as the Shura Hall), there exists a prominent structure integrated into the rocky mountainside and surrounded by a stone wall composed of raw clay. Today, only minimal remnants of this building remain.

The southern wall of the structure once featured a staircase adorned with engravings depicting soldiers and attendants carrying dishes and food. These engravings were later removed and relocated to the southern courtyard of the Palace of Darius, indicating that the site was likely a significant ceremonial palace rather than a temple. Furthermore, attempts to identify the structure as the "Bagh" or "Firdus" of

Shahi are not supported by sufficient evidence and remain speculative.

Archaeological findings also suggest that this area maintained some level of prosperity until the Sassanid period, as indicated by the discovery of a coin associated with Ardeshir Popakan. The structure was equipped with sophisticated water management systems; beneath the site, deep water supply channels intersected with underground aqueducts connected to Hadish Palace and other nearby buildings. A two-way staircase on the southeast side provided access to the eastern courtyard of Hadish, while a narrow corridor separated the structure from the Shura Hall. Despite its current state of ruin, the remnants of walls and staircases continue to provide valuable insights into its architectural and functional significance within the broader context of Persepolis...



8 . The Queen palace | Construction and Historical Context

The Harem Complex of Persepolis Known also as the Queen palace or the Harem of Xerxes, shaped like the Latin letter "L," was an enclosed residential area situated near the southern section of Xerxes's Palace. This architectural design likely served as private quarters for royal women. The western branch of the structure extended into what is known today as the western harem, while the eastern branch bordered the treasury. Restored in part by Ernst Herzfeld and his colleagues, sections of this complex now function as the Persepolis Museum, and office spaces.



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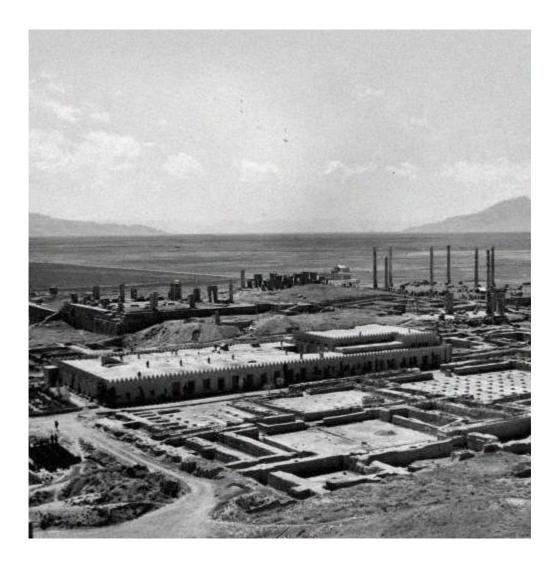
8 . The Queen palace I Design and Functionality of the Harem

The harem was encircled by thick walls, with access restricted via a small entrance on the northwest side, emphasizing its secluded nature. The internal layout included standardized units featuring a four-column hall and one or two side rooms connected by a corridor. This modular design enhanced privacy, aligning with its use as royal residences. To the north of the harem was a rectangular courtyard, adjacent to the northern treasury and the Council Palace, where rooms for staff and auxiliary functions were located.

The southern portion of the harem housed a larger structure with a twelve-column hall, an eight-column porch, and ancillary rooms, now integrated into the museum. The harem's walls were constructed from raw clay, and the foundations were of solid stone. The building's original columns, sourced from nearby southern rooms, were carefully reconstructed to preserve the authenticity of the architectural design. At the heart of the Persepolis complex lies the Three-Door Palace, also called the "Gate of the Kings" or "Council Hall." This small yet pivotal structure functioned as a central pavilion, connecting the main palaces via corridors and three large entrances. The carvings on its stairs depict nobles in friendly interaction with the ruler, underscoring its role as a place for council meetings and audience gatherings. These depictions of informal encounters highlight the political and ceremonial functions of the palace within the Achaemenid court system.

Although traditionally this palace is attributed to Darius the Great, recent scholarship suggests that Ardashir I may have been the principal architect of the Three-Door Palace. Its strategic location and symbolic carvings make it a focal point for understanding Achaemenid governance, communication, and ceremonial practices. The Harem and the Three-Door Palace exemplify the intricate interplay of privacy, accessibility, and symbolism in Achaemenid architecture. They reflect the broader themes of centralized governance, hierarchical organization, and royal protocol. In subsequent chapters, this study will delve deeper into the details of the museum, analyzing the spatial arrangements, decorative motifs, and inscriptions to unravel their significance in the Achaemenid administrative and ceremonial landscape. This exploration will also highlight their architectural innovations and their enduring legacy as masterpieces of ancient Persian craftsmanship.

8 . The Queen palace I Design and Functionality of the Harem



9. Palace of three doors | Architectural Features

The palace features a nearly square floor plan centered around a square hall measuring 15.5 x 15.5 meters, supported by four large stone pillars for structural integrity. The main entrance is located on the east wall of the hall, providing access for the king. Two additional entrances are situated on the south and north walls, offering connections to surrounding spaces.

Eastern Annex

The eastern entrance leads to a large, narrow room running parallel to the hall. with a small chamber to the south and a comparable-sized shoe storage area to the north. From the shoe storage area, a staircase of ten steps-each 10 cm in height-leads to a small room in the northwest section of Xerxes's harem. This room connects to another chamber through an eastern door, accessible via a stone staircase linking to the southern corridor of the "Sad Soton" Palace. Currently, the eastern rooms of the "Shura" hall have been lost over time, leaving only a portion of the northwest staircase of the harem. The staircase in the southern corridor of the "Sad Soton" Palace remains intact.

Northern Access

The northern door of the Council Hall opens into a two-column porch, which connects to the southern area of the Apadana courtyard through intricately carved side staircases. A vestibule in the western wall of this porch leads to the southern area of the Apadana Palace and the Apadana Hall itself, accessed by a few stone steps. The northern staircase features a two-way design connecting the north porch of the Three-Door Palace to the west and east sides of the Apadana courtyard, with a sequence of steps that vary in number, though parts of the staircase have deteriorated over time.

North Porch

The north porch includes a congress wall adorned with two groups of forty Achaemenid soldiers.

all in traditional Persian attire, facing one another, armed with spears and large oval shields. This porch connects to the central hall through the southern gate, flanked by intact walls of dark blue stone.

Central Hall

The walls of the central hall are

9. Palace of three doors | Architectural Features



constructed from raw clay and adorned with colored tiles, while the upper sections feature colorful plaster decorations. In the southwest corner,

a portion of the collapsed roof remains, along with burnt remnants of wood, suggesting a fire in antiquity. At the center of the hall lies a stone slab measuring 75 cm by 71 cm, nearly flush with the floor, engraved with a small ring of 6.5 cm in diameter. Herzfeld referred to it as a measuring index, while research by Professor Lentz indicates its significance in measuring time and calibrating the Achaemenid calendar, marking it as the navel and heart of Persepolis.

Southern Access

The southern door opens to a two-column porch leading to the palace's

backyard, with stone half-beds providing seating for guests. The southern courtyard has two porches, each supported by two small columns adorned with double-headed lion motifs.

A staircase on the southern side

ascends to the eastern courtyard of Xerxes's "Hadish" palace, connecting to the palatial structures of Persepolis. Unfortunately explorers removed this staircase and transported it to the National Museum of Iran. Restoration efforts were made to return it to Persepolis in 1354 and 1355, but the director of the archaeological center prevented its return, even declining to send a cement mold. This staircase stands 90 cm tall, with six steps and a width of 2 meters, featuring curved edges and screens atop the stairs.



10. Treasury of Persepolis I Design, Expansion, and Destruction

Initial Construction and Layout The original master plan of Persepolis included the Apadana Palace and the Ganj Khaneh (Treasury), located in the southeastern section of the platform. Constructed during the reign of Darius I around 507 BCE, the treasury was designed as a fortified rectangular structure,

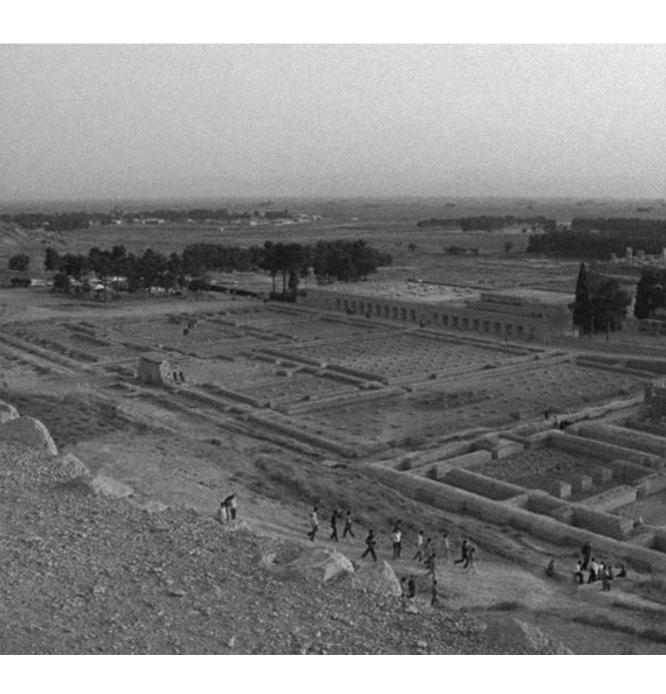
measuring 120 meters by 60 meters. It featured thick brick walls, decorative depressions, and arrow-shaped motifs on the exterior. The interior consisted of large and small rooms, halls with two or four columns, and corridors interconnecting various sections. Two notable halls were a 99-column and a 100-column room, while other rooms had wooden pillars coated with colored plaster, contributing to the grandeur of the treasury.

The treasury's layout was practical yet monumental, including underground water channels and red-plastered floors. A large eastern courtyard surrounded by pillared porches and medium-sized halls underscored its dual purpose: as a secure repository for the empire's wealth and an administrative hub.

Expansion Under Darius I and Xerxes I The original treasury soon proved insufficient to store the immense wealth of the Achaemenid Empire. Darius I began an expansion project, constructing a second treasury to the north. This addition included two 24-column halls and a grand 99-column hall arranged in nine rows of eleven columns. Xerxes I continued and completed these expansions, integrating the treasury with other significant structures like his harem. He also added a third treasury, featuring a massive 100-column hall and additional military buildings, reflecting the empire's growing administrative and storage needs.

These expansions nearly doubled the size of the treasury complex, making it one of the most prominent structures in Persepolis. The northern entrance, added during the second phase, further enhanced its accessibility for administrative purposes.

Symbolism and Functionality
The treasury not only stored the material
wealth of the empire—silver, gold, jewels,
weapons, carpets, and ceremonial items—
but also symbolized the immense power
and reach of the Achaemenid dynasty.





10. Treasury of Persepolis I Design, Expansion, and Destruction



Destruction and Legacy

In 330 BCE, Alexander the Great and his army plundered and destroyed the treasury during the fall of Persepolis. Despite efforts by Persian officials to mitigate the damage, Alexander's forces looted the accumulated wealth of two centuries.

Approximately 120,000 talents of silver—equivalent to 4,400 kilograms—were seized, alongside countless other valuables. The burning of Persepolis by Alexander was both an act of plunder and a symbolic gesture to erase the Achaemenid Empire's legacy and assert his dominance.

11. The Hundred-Column Hall of Persepolis I Overview and Historical Significance

Sad Soton Palace, also known as the "Thorough Hall" or the "Hundred-Column Hall," stands as one of the largest and most intricate structures in Persepolis. Located east of the Apadana Courtyard, the palace's central hall, named for its arrangement of ten rows of ten stone columns, showcases the architectural and ceremonial sophistication of the Achaemenid Empire. Originally referred to as the Throne Hall by archaeologist Ernst Herzfeld, the enduring historical recognition of the "Hundred-Column Hall" solidifies its cultural identity. Construction began during the reign of Xerxes I and was completed by Artaxerxes I around 450 BCE.

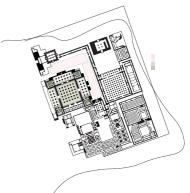
Architectural Layout and Features The central hall, a vast square measuring 68.5 by 68.5 meters, encompasses an area of 4,600 square meters. Its floor, situated 2 meters below the Apadana's level, accentuates its monumental presence. The hall is connected by eight strategically placed doors—two per wall—that open into corridors, adjacent rooms, and external courtyards.

- North: The hall leads to a porch connected to a large courtyard.
 - East: Smaller halls, military warehouses, and corridors extend outward, forming a complex adjacent to the Sepahiyan Street, a parade route for the elite Immortal Guard.

The palace's base walls feature black marble-like stone plinths rising 40 cm, complemented by intricate-ly carved stone doorways and niches.

Column Design and Decoration The hall's columns, arranged in ten rows, supported its expansive roof. These columns, standing approximately 14 meters tall, were adorned with fluted cylindrical shafts and bell-shaped capitals, featuring floral and vegetative motifs. Only two of these columns survive today, their capitals removed to Chicago decades ago. The columns' bases and intricate designs reveal the artisanship and grandeur of Achaemenid architecture.

11. The Hundred-Column Hall of Persepolis



Interconnected Spaces and Functional Elements To the south, two doors conect to a long corridor, leading to additional rooms and staircases: A staircase links the western corridor of the hall to the Palace of Three Doors and the Harem's northern section. Another connects to the southern Apadana Courtyard.



11. The Hundred-Column Hall of Persepolis I Adjacent Complexes and Sepahiyan Street

The northern porch, with two rows of eight columns featuring human-headed capitals akin to those of the Three-Gated Palace, indicates simultaneous construction under Artaxerxes I. Surrounding the porch are small auxiliary rooms and storage spaces. East of the main hall lies a complex of military-oriented buildings, including a north-south corridor, cube-shaped columns, and warehouse-like rooms, likely used to support stationed soldiers.

Beyond this is the Eastern Street of Persepolis, a ceremonial thoroughfare bordered by the defensive platform wall and the mountain, extending 330 meters with a width of 7.5 to 10 meters, serving as a key route for parades and processions.

The Hundred-Column Hall embodies Achaemenid architectural grandeur and ceremonial significance, functioning as a center for royal audiences and military coordination.

Its integration of vast halls, auxiliary complexes, and processional routes highlights the empire's organizational skill. Further research could illuminate its symbolic and practical role within Persepolis, the ceremonial core of the Achaemenid Empire.



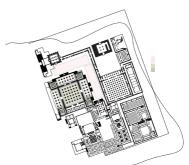
12. The Half finished gate



The Half-Finished Gate, located at the end of Sepahian Street near the Hundred Pillars Yard, stands as an incomplete yet significant architectural element in Persepolis.

Its design features a four-column hall with two main entrances—north and south—and smaller side rooms for guards. Despite its unfinished state, this section highlights the ambitious scale of Achaemenid construction and the challenges faced during the building process.

The northern and southern gates were planned to be adorned with winged bull sculptures, similar to those found at Xerxes' Gate. However, only partial carvings were completed. This incomplete state provides valuable insights into the construction techniques, offering a rare glimpse into the Achaemenid approach to sculpture and decoration. Adjacent to the Half-Finished Gate, a stone dam stretches along the hillside, showcasing advanced engineering in water management. The well-constructed dam highlights the Achaemenid ability to manage water resources effectively, preventing damage to structures and ensuring long-term sustainability of the royal complex



12. The Half finished gate



Source of this image is https://isac.uchicago.edu/gallery/apadana

Architectural Evolution and Early Theories

The study of Persepolis reveals a rich tapestry of architectural evolution, reflecting the grandeur and complexity of the Achaemenid Empire. From the monumental palaces and ceremonial structures to the intricate planning of military and administrative spaces, each phase of construction played a crucial role in shaping the identity of Persepolis as the heart of the Achaemenid world.

Initially established under Darius the Great, the earliest structures, including the Apadana Palace and the Treasury, set the foundation for the empire's grand architectural vision. These early phases were characterized by meticulous craftsmanship, symbolic representations, and a strategic layout designed to reflect power, order, and unity. The Gate of Nations, the Apadana, and the complex of harem buildings exemplified the sophistication of Achaemenid design, with their detailed stonework, colossal columns, and integration of ceremonial spaces.

The expansion under Xerxes and subsequent rulers introduced further architectural innovation, particularly seen in the construction of the Gate of Xerxes, the Hundred-Column Hall, and other structures

like Sad Soton Palace. These additions reflected not only a continuation of ceremonial traditions but also a deeper emphasis on functionality, military presence, and administrative efficiency. The integration of monumental entrances, extensive halls, and auxiliary complexes highlights the empire's mastery over space, symbolizing both its grandeur and its organizational prowess.

Through architectural anomalies, such as the unfinished sections of the Half-Finished Gate and the repurposed southern entrance, we gain insight into the dynamic processes of construction, adaptation, and transformation that defined Persepolis. The evolution from the southern entrance during Darius' reign to the monumental northern gateway under Xerxes underscores the shifts in ceremonial importance and political power.

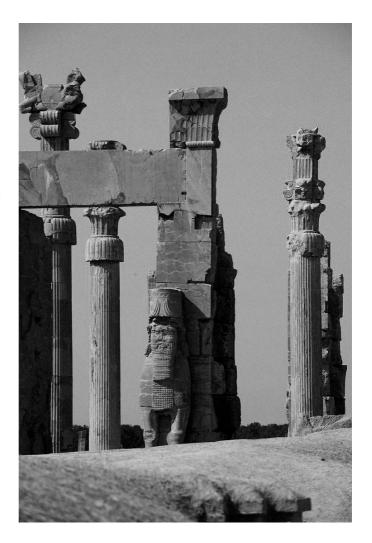
In summary, Persepolis stands as a testament to the Achaemenid Empire's ability to balance ceremonial grandeur with practical functionality, fostering a legacy that continues to captivate scholars and historians. The architectural achievements and strategic planning seen in the various palaces and structures reflect empire's ambition.

Architectural Evolution and Early Theories By Philippe Chavin (Simorg) - Own work

CHAPTER THREE

The Dawn of Persepolis Preservation: A Journey Towards Revival

Persepolis, a UNESCO World Heritage Site, stands as an emblem of ancient Persian grandeur, representing the architectural, cultural, and administrative heights of the Achaemenid Empire. As an intricate complex of palaces, ceremonial halls, and administrative buildings, Persepolis demands careful attention in terms of preservation, interpretation, and presentation. However, despite its historical and cultural significance, the site faces significant challenges, including poor management, environmental threats, inadequate funding, and misaligned priorities in restoration and conservation efforts.



The Dawn of Persepolis Preservation: A Journey Towards Revival

From Glorious Past to Sustainable Future

the reign of Reza Shah Pahlavi, laid the ideological foundation for national identity through the lens of imperial history. However, it was under the rule of his son, Mohammad Reza Shah, that the unprecedented increase in oil revenues created the economic conditions for large-scale state-sponsored narratives centered around the grandeur of Iran's ancient past. Among these, the idea of celebrating 2,500 years of monarchy emerged in the late 1950s. Although initially delayed due to infrastructural limitations, the concept eventually evolved into a national project that sought to showcase both Iran's glorious past and its aspirations for a modern future.

in this context, Persepolis—long seen primarily as an archaeological site—gained symbolic prominence. The 1971 celebration marked a turning point, when the site was transformed from a field of academic inquiry into a stage for national representation. Modern interventions, including the construction of infrastructure around the site and limited restoration of architectural fragments, aimed to create a visually impressive yet ideologically charged environment.

However, these developments prioritized aesthetic display and political spectacle over long-term cultural sustainability. The preservation of the site was often subordinated to visual impact, with little attention to community engagement, educational value, or sensitive integration of modern needs.

Today, as someone deeply connected to Iran's cultural heritage, I believe the challenges facing Persepolis—and specifically the current museum on-site-require a re-evaluation grounded in both respect for the land and responsiveness to contemporary cultural and educational needs. The existing museum space, though historically significant, lacks the spatial, narrative, and functional capacity to communicate the full complexity and vitality of Persepolis. The disconnection between preserved ruins and curated interpretation limits visitor engagement and hinders the development of a dynamic dialogue between past and present. My proposal centers on the critical analysis of the current Persepolis Museum and the design of a new interpretive space that honors the ancient legacy while embracing innovative approaches to museography

The Dawn of Persepolis Preservation: A Journey Towards Revival

From Glorious Past to Sustainable Future

This future-oriented museum concept envisions a place where architecture and storytelling converge—where visitors can engage with the historical, symbolic, and material dimensions of Persepolis through a design that is both respectful and forward-looking. The new design aims not to dominate the archaeological landscape but to embed itself within it, offering a gentle architectural presence that amplifies rather than competes with the site's natural and cultural atmosphere. By reimagining the museum experience at Persepolis, my goal is not to recreate the past through monumental gestures, but rather to honor the spirit of this ancient place through thoughtful, meaningful design. I believe that heritage should not be frozen in time, but instead allowed to evolve-inviting each generation to find its own connection to the past.

Through this proposal, I aim to present Persepolis not just as a collection of ruins, but as a powerful cultural presence—one that continues to speak to us across millennia.

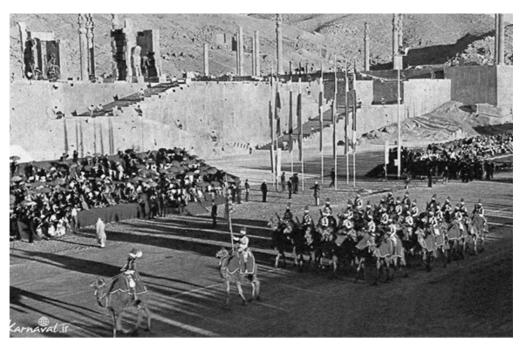
A well-designed, respectful museum can serve as a bridge: connecting the ancient and the contemporary, the tangible and the symbolic, the local and the global.

In this vision, the museum becomes more than a space of display; it becomes a space of dialogue—between architecture and memory, between people and place. It is my commitment that every intervention in this context will be rooted in care, sensitivity, and a deep sense of respect for the land. Persepolis deserves not just to be protected, but to be presented at its best: with dignity, clarity, and a sense of shared cultural pride.



1. Historical Context and the Beginnings of Persepolis Studies

The scholarly study of Persepolis began in the early 19th century with the decipherment of Old Persian cuneiform, a monumental breakthrough that unlocked the history of the Achaemenid Empire. Researchers like Charles Texier, Eugène Flandin, and Pascal Coste produced visual and textual documentation that, despite technological limitations, brought Persepolis into the global historical narrative. The first photographic documentation by Marcel and Jane Dieulafoy in 1881 further advanced understanding of the site. These early studies highlighted Persepolis' importance as an Achaemenid ceremonial center and enriched archaeological and historical perspectives.



Royal Photo Gallery of Iran. Official website of Queen Farah Pahlavi.

1. Historical Context and the Beginnings of Persepolis Studies

Prior to the advent and popularity of photography, visitors to Persepolis in the 18th and early 19th centuries created sketches and drawings of the ruins, which were brought back to Europe. These visual records played a crucial role in establishing Persepolis as a significant historical site, with the earliest visual documents appearing during this time. In 1881, Marcel and Jane Dieulafoy made the first photographic documentation of the site, marking a turning point in the study and preservation of its monuments.

The recognition of Persepolis as an archaeological treasure spurred scientific explorations that significantly advanced understanding of Achaemenid art and architecture. In the early 20th century, archaeological excavations catalyzed national interest in preserving Iranian heritage. These endeavors not only enriched knowledge about the Achaemenid Empire but also provided opportunities for training in excavation techniques, restoration, and interpretative research, laying the foundation for Iran's archaeological development. With the rise of the Pahlavi dynasty, Persepolis

became a symbol of national pride. As early as the 1920s, its influence was evident in Iranian art and architecture, inspiring designs in metalwork, tapestries, and even postage stamps. In the late 1920s, German archaeologist Ernst Herzfeld proposed systematic excavations of Persepolis. His efforts led to the drafting and approval of Iran's first Antiquities Law, which regulated archaeological activities and emphasized the preservation of cultural heritage.

Between 1930 and 1979, Persepolis underwent major archaeological projects led by prominent international institutions. Key milestones include:

1930s:

The Oriental Institute of Chicago conducted extensive excavations and studies, highlighting the site's historical and cultural significance.

1940-1960s:

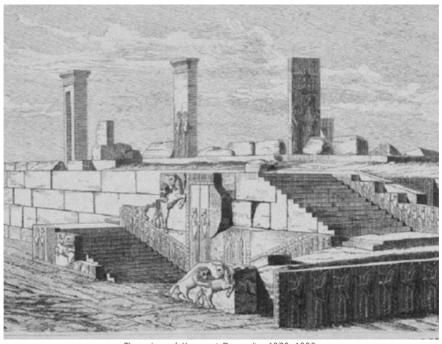
The establishment of the Scientific Bureau of Persepolis advanced research and restoration techniques.

1964-1978:

Italian experts from IsMEO collaborated

1. Historical Context and the Beginnings of Persepolis Studies

During the late 1960s and early 1970s, several programs were launched to support scientific research, conservation, and restoration of Persepolis and nearby monuments. A buffer zone was established in 1968 to enhance site protection, and a major research initiative explored the origins of Achaemenid civilization. In 1971, Persepolis hosted the grand 2,500th anniversary celebrations of the Persian Empire. Two years later, in 1973, the Institute of Achaemenid Research was founded to oversee excavations, restoration work, and scholarly cooperation.



The palace of Xerxes at Persepolis, 1879-1893.

Images of the Ancient World / Persia (Ancient)., Digital ID: 1623960., Picture Collection., Mid-Manhattan Library.



1. Historical Context and the Beginnings of Persepolis Studies

Herzfeld's contributions, starting in the 1920s, were pivotal in shaping modern understanding of Persepolis. As both an architect and archaeologist, he meticulously documented the site, producing detailed photographs, sketches, and measured plans. His work emphasized the site's national and historical significance, which resonated with Reza Shah Pahlavi's vision for Iran's cultural identity. Herzfeld's early documentation laid the groundwork for later conservation and research efforts.

Persepolis' recognition as a UNESCO World Heritage Site in 1979 cemented its status as a global symbol of Iranian heritage. The site continues to inspire scholarly research and remains a testament to the grandeur of the Achaemenid Empire and the enduring importance of cultural preservation.

Ernst Emil Herzfeld at Perspolis, Iran.



2.A Sequential Overview

Herzfeld's Initial Efforts (1920s)

In 1924, Ernst Herzfeld published a report titled "Rapport sur l'état actuel des ruines de Persépolis et propositions pour leur conservation." This report became the foundation for his conservation approach at Persepolis. It included:

- Detailed descriptions of the ruins, such as the terrace buildings, nearby tombs, and fortification walls.
- Proposed conservation measures to prevent further degradation of the ruins.
- Estimated costs and durations for the proposed works.
- Graphic representations and reconstruction essays of the ruins.

Herzfeld recommended excavating and preserving the structures through measures like reopening ancient drainage systems and protecting the site from environmental and human damage. Initially, the Iranian government focused on physical protection by employing guards and constructing enclosures around the site.

Herzfeld's Excavations (1931-1935)

In 1930, Herzfeld secured official permission to begin archaeological work under the Antiquities Law. His focus was on preservation rather than full-scale excavations. Herzfeld's objectives included:

- Clearing the ruined palaces on the terrace.
- Addressing drainage and structural issues to preserve buildings and sculptures.
- Reconstructing one of the palaces to serve as a museum and housing for the expedition team.
- During his tenure, Herzfeld worked on key areas of the site, such as:
- The courtyard between the Hall of One Hundred Columns and the Apadana.
- The Gate of All Lands and the subterranean canal systems.
- The Harem of Xerxes and the southern stairway of the Central Palace.

In 1933, Herzfeld hosted Reza Shah for a site visit, showcasing the progress

2.A Sequential Overview

of his work. However, his emphasis on excavation sometimes left certain preservation measures unaddressed.

Scientific Bureau of Persepolis (1940s-1960s)

After the Oriental Institute of Chicago's departure in 1939, the Iranian government assumed responsibility for Persepolis' preservation. The Scientific Bureau of Persepolis, led by Ali Sami from 1941 to 1961, focused on:

- Completing the terrace's clearance and excavating unexplored areas.
- Restoring mudbrick walls, stone staircases, and other architectural elements.
- Publishing annual "Archaeological Reports" documenting progress.

Key achievements during this period included:

Excavating the northern part of the terrace

- · improving the drainage system to protect the site from water damage.
- Lowering mudbrick walls to 45 cm to mitigate heavy rain damage.
- · Installing a protective wooden roof

over the Apadana's eastern staircase, later replaced by a metallic roof during restorations by the IsMEO.

 Restoring stairways, courtyards, and structural features to their original forms.

Oriental Institute Contributions (1931–1939)

The Oriental Institute's excavations, led first by Herzfeld and later by Erich Schmidt, emphasized:

- Clearing the Hall of One Hundred Columns, the Treasury, and nearby areas.
- Documenting architectural remains through detailed plans and sketches.
- Stimulating broader archaeological interest in the region and publishing findings in academic journals.

Post-1950s Developments

Restoration efforts continued to address vulnerabilities in the uncovered structures. Significant initiatives included:

- Protecting reliefs and architectural fragments from environmental damage.
- Completing the drainage system to channel water away from the site without damaging structures.

2.A Sequential Overview

Conducting parallel explorations at Pasargadae, enhancing the understanding of Achaemenid architecture.

The preservation of Persepolis evolved through several phases:

- Herzfeld's initial proposals in the 1920s focused on excavation and minimal restoration.
- The Oriental Institute's work in the 1930s prioritized excavation and documentation.
- 3. The Scientific Bureau of Persepolis, active from the 1940s to the 1960s, implemented comprehensive excavation, restoration, and drainage measures.
- Continued efforts by Iranian teams and international collaborations emphasized conservation and the study of Achaemenid heritage

These cumulative efforts transformed Persepolis into a well-preserved archaeological site, reflecting both its historical significance and the evolution of preservation practices over the 20th century.

Advanced Documentation and Analytical Techniques

Prior to commencing restoration activities, IsMEO meticulously documented and collected scattered monuments and architectural fragments from the terrace of Persepolis. These investigations revealed discrepancies in previous reconstructions, such as reliefs created by the Oriental Institute of Chicago, which often did not align with the actual dimensions and details of the monuments. This discovery highlighted the importance of accurate documentation for informed restoration efforts.

All phases of the project were thoroughly recorded, including graphic reconstructions of key structures such as the Gate of All Lands and Darius's Palace after consolidation.

In-situ investigations played a pivotal role in the restoration process, encompassing the measurement, mapping, and sampling of scattered fragments. Samples were then sent to laboratories for detailed analyses, which examined the mineralogical composition, textures, and mechanical and thermal properties of the stones.

2.A Sequential Overview

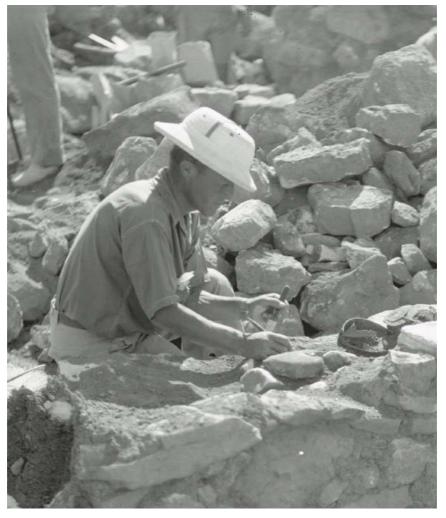


Figure. Archaeologist Erich Schmidt, director of excavations at Rayy, Persepolis, Luristan, and other sites. 1930s.

Courtesy of the Oriental Institute of the University of Chicago.

2.A Sequential Overview



degradations and preservations



Preservation Efforts and Challenges

From the 19th century onward, Persepolis underwent sporadic archaeological excavations. By the mid-20th century, coordinated efforts by international and Iranian archaeologists contributed to preserving fragments of this monumental complex.

However, the complexity of its structures, combined with logistical and financial constraints, meant that much of the preservation work remained incomplete or fragmented.

Key Factors of Degradation

Research shows that Persepolis is vulnerable to natural and anthropogenic degradation. These include

Environmental Factors:

Wind erosion, acid rain, and thermal stresses have significantly worn the stone structures. The lack of adequate drainage systems exacerbates water damage, while the materials used in the original construction (such as locally sourced limestone) are susceptible to environmental decay.

Human Impact:

Unregulated tourism, inadequate visitor facilities, and limited enforcement of preservation laws have further contributed to the complex's deterioration. Additionally, political instability and shifting governance priorities have hindered the long-term strategic planning needed for effective preservation. Seismic Vulnerability:

Located in a region with high

degradations and preservations

seismic activity, the structural integrity of Persepolis is continually at risk. Recent studies using advanced modeling methods suggest that the lack of reinforcements in its ancient structures makes it particularly vulnerable to earthquakes.

Tourism Mismanagement

Overcrowding, insufficient pathways, and a lack of visitor facilities expose fragile areas of the site to unnecessary wear and tear. Unregulated tourism has placed significant strain on both the physical structures and the visitor experience.

Fragmented Conservation Efforts

Decades of intermittent preservation work have led to inconsistency in restoration quality. The lack of a cohesive, long-term strategy has left parts of the site vulnerable to decay, while others remain incompletely restored.

Neglect of Educational Potential

The site's immense historical significance is not adequately communicated to visitors.

Signage, interpretation, and exhibits are outdated or insufficient, limiting the educational impact of the site. Poor Management and Resource Allocation

Persistent political instability and misaligned priorities have resulted in underfunding and inadequate management. Managers have left large portions of the site unattended, and the lack of skilled personnel has hindered comprehensive conservation and outreach efforts.



www.iribnews.ir Photographer: Amin Malekzadeh 2019

degradations and preservations





www.tehrantimes.com





www.iribnews.ir Photographer: Amin Malekzadeh 2019

degradations and preservations

Lichens, a symbiotic organism comprising fungi and algae, have aggressively colonized the stone surfaces of Persepolis. Over time, their growth penetrates the stone, causing structural damage that weakens the carvings and erases intricate details of the ancient reliefs. Reports indicate that some bas-reliefs have already suffered irreparable harm, with their artistic and historical significance lost to the relentless advance of these organisms. Despite awareness of this issue, cultural heritage authorities have yet to devise an effective and sustainable method for eradicating lichens without causing additional harm to the delicate stone surface.

Parallel to the biological threats posed by lichens, urban vandalism has emerged as a manmade assault on Persepolis. The rise in unauthorized graffiti and deliberate defacement of the site reflects a broader issue of insufficient public awareness and enforcement of preservation laws. In some cases, visitors seeking to leave a personal mark on history have etched names or symbols into the stone, further compounding the erosion of its ancient surfaces.

Moreover, urban vandalism signals a cultural disconnect, where the historical and artistic value of Persepolis is overshadowed by transient acts of self-expression.



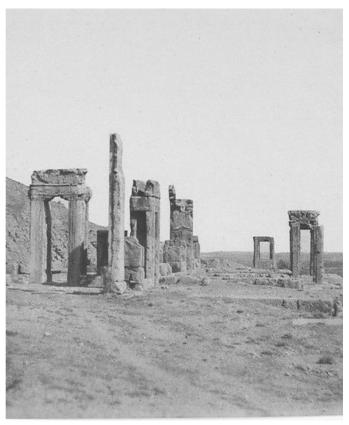


"Management of the World Heritage Site of Persepolis and Nagsh-e Rostam with Emphasis on Crisis Management and Preventive Conservation" by Masoud Rezai Monfared, Mohammad Hassan Talebian, Mohammadreza Nematollahi, and Ghazi Iran.

degradations and preservations

Although the physical degradation of Persepolis caused by natural and human factors remains a pressing concern, it is equally important to recognize the internal vulnerabilities threatening the site's cultural infrastructure.

In particular, the Persepolis Museum, which serves as the intellectual and interpretative bridge between visitors and the ancient complex, faces significant challenges. While conservation efforts have largely concentrated on the monumental architecture, the museum itself has not kept pace with evolving museological standards, exposing a critical gap in the site's overall preservation strategy.



Persepolis before restoration by Luigi pesce

Critical Review of the Present State of the Museum

The Inadequacies in the Design and Management of the Persepolis Museum

While Persepolis has benefited from various restoration and renovation efforts over the years, these initiatives have primarily focused on the physical structures of the ancient complex. The Persepolis Museum, however, has not received the same level of attention or resources. Despite its critical role in interpreting and showcasing the history of the site, the museum's

current state is far from compatible with the standards set by modern museological practices. Its outdated interior design, lack



of advanced preservation current state is far from compatible with the standards set by modern museological practices. Its outdated interior design, lack of advanced preservation technology, and fragmented narrative presentation fail to complement the significance of the site or the progress achieved in other areas of Persepolis' preservation.

The current Persepolis Museum—though modest in scale and outdated in appearance—represents a significant historical layer in itself. It is not merely a space for exhibiting artifacts, but a tangible outcome of the early restoration and conservation efforts carried out with care, precision, and vision by the teams who worked on Persepolis during the mid-20th century. As such, this museum embodies not only a phase of architectural intervention but also a specific cultural and scholarly approach to heritage

Critical Review of the Present State of the Museum

The Inadequacies in the Design and Management of the Persepolis Museum

preservation at that time. Its value, therefore, extends beyond its physical contents to include its very existence as a product of those early safeguarding initiatives.

Recognizing this, I believe that the museum must be preserved as a meaningful architectural and museological artifact in its own right. However, given the current challenges on-site—ranging from the fragile condition of numerous objects to the need for a more coherent and updated narrative framework—it is equally necessary to expand the museum's capacity.



CHAPTER FOUR

Form, Function, Memory



Reconstruction Strategy of the Persepolis Museum

1. Form, Function, and Memory

In the context of reconstruction, an essential question arises: should the goal be to create an entirely new architectural identity, or to add a new layer that respectfully acknowledges and complements the past?

In the case of the Persepolis Museum, the reconstruction approach has been conceived in a way that closely reflects the original architectural footprint and external appearance of the historic structure. The outer façade functions as a full-scale replica, based on informed assumptions and interpretations derived from the remnants of the original building, aiming to visually restore its presence within the archaeological landscape.

Inside, however, a series of calculated modifications have been implemented to accommodate contemporary needs. These include updates to circulation, lighting, and spatial organization—adaptations that serve current museological functions while maintaining coherence with the historical context.

This method represents a hybrid strategy: one that preserves the architectural memory and symbolic value of the original structure through its exterior form, while allowing for internal flexibility and modern functionality. In doing so, the Persepolis Museum acts both as a respectful echo of the past and a relevant, active institution in the present.



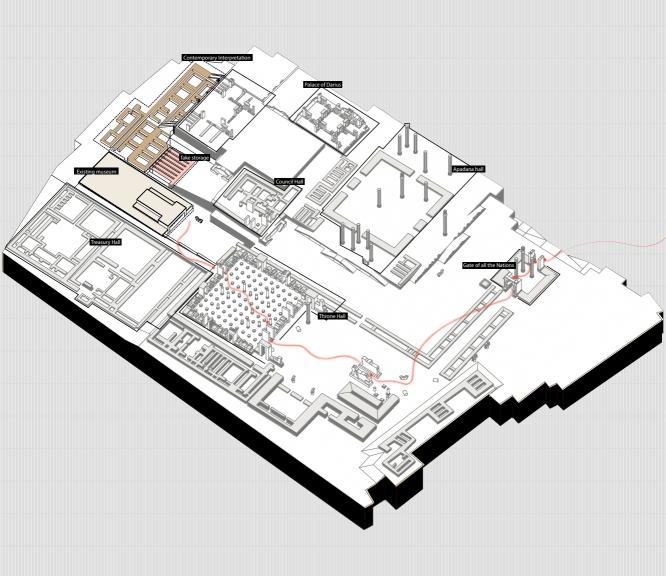
Reconstruction Strategy of the Persepolis Museum

1. Form, Function, and Memory

To develop a meaningful and contextually responsive redesign for the museum, it is essential to first conduct a thorough spatial analysis of the existing structure. Drawing from my study of the current Persepolis Museum, particularly based on archival material and detailed documentation provided in the book on its reconstruction (By Kerfter) I found it necessary to reflect on the modifications that have already been integrated into the structure before proposing any additional architectural interventions.

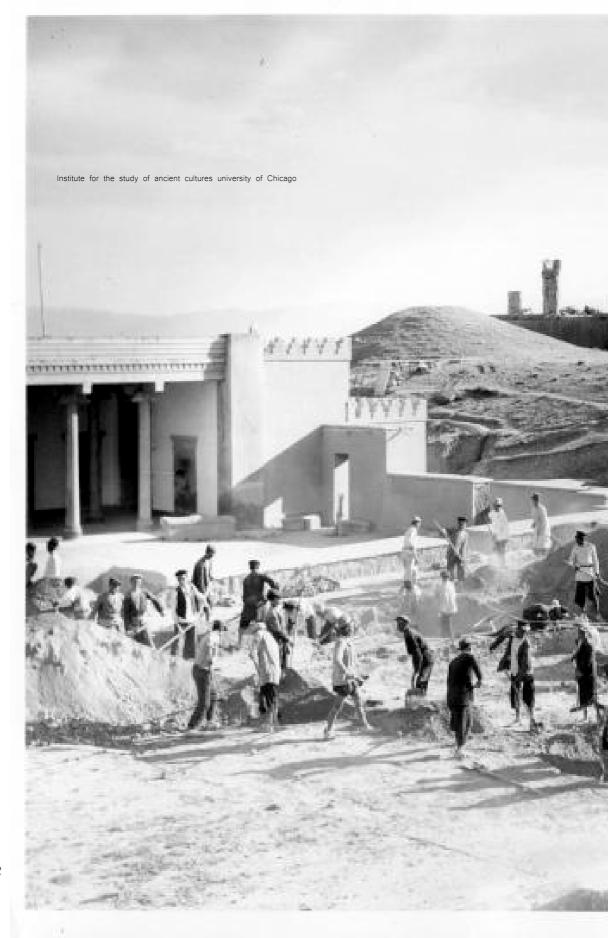
The existing museum underwent a series of intentional changes, such as the removal of selected interior walls to enhance circulation flow and spatial clarity, along with the integration of improved lighting to support exhibition functionality. These decisions reflect a thoughtful adaptation of the historical structure to contemporary museological standards, while preserving the external façade as a respectful echo of its architectural heritage. As such, the current museum stands as a historical layer in itself—one that captures the ideology and technical approach of its own era of restoration.

In line with this understanding, my intention is to follow a similar respectful methodology in the proposed redesign. Just as the existing museum speaks to a specific moment in time and represents an interpretation of Achaemenid space through the lens of its mid-20th-century restoration, the new museum addition should likewise respond to the needs of today while honoring the site's historical and architectural gravity.

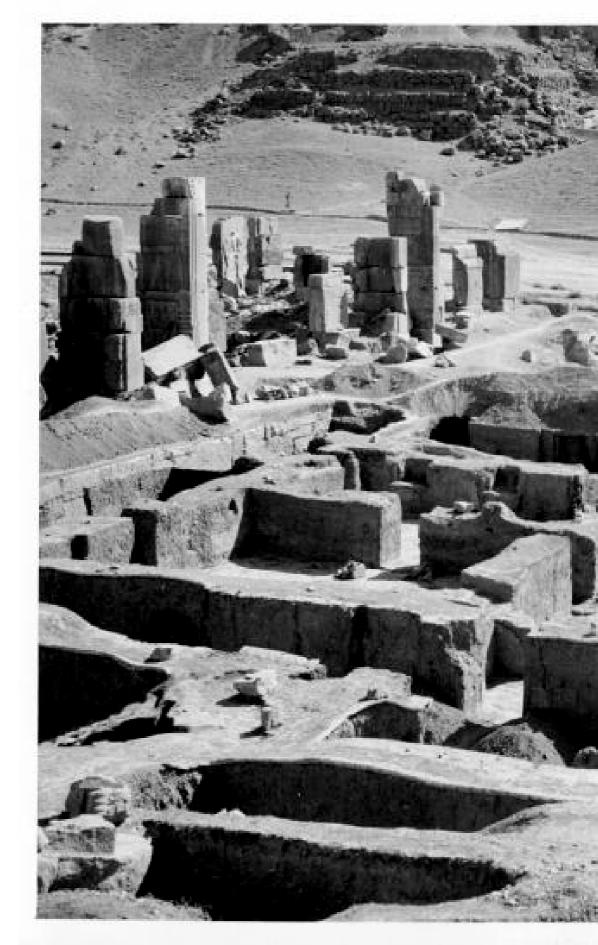










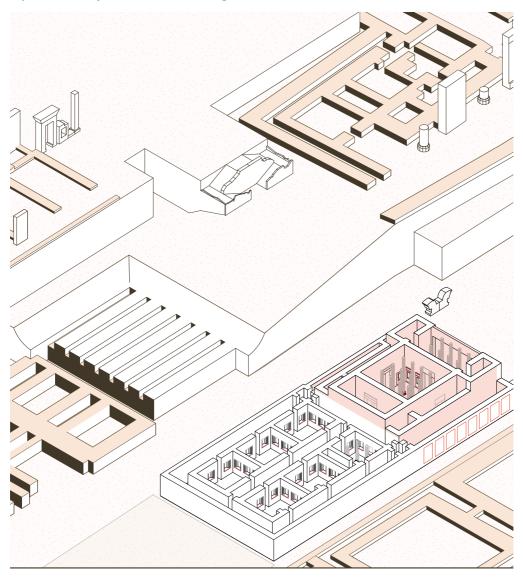






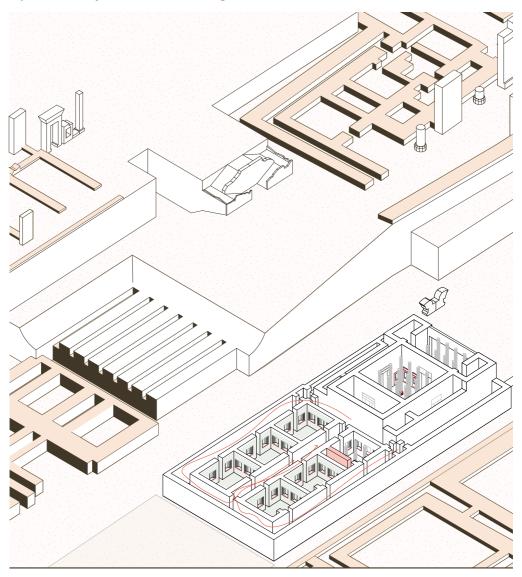


Spatial Analysis of the Existing Museum

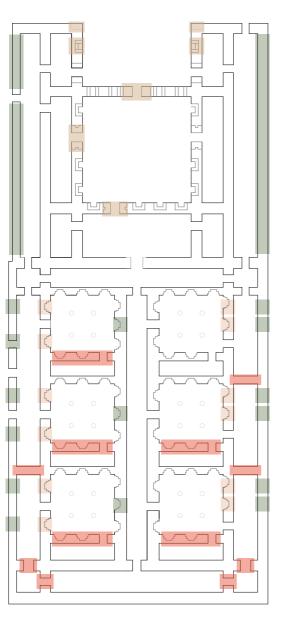


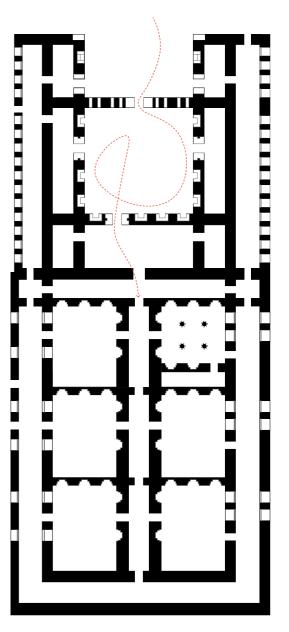
As shown in the image, the current museum lacks sufficient space to properly display historical elements or host exhibitions. Due to this limitation, some artifacts are currently stored along the exterior façade, as highlighted. This not only risks their preservation but also reflects the urgent need for a new extension that can meet the museum's functional and cultural requirements.

Spatial Analysis of the Existing Museum



According to the conducted research, this organization presents a revised plan for the administrative areas, which includes several modifications aimed at aligning the reconstruction with the needs of a modern, functional space. These changes are intended to improve spatial efficiency of the space while keeping the original layout of the historical palace.



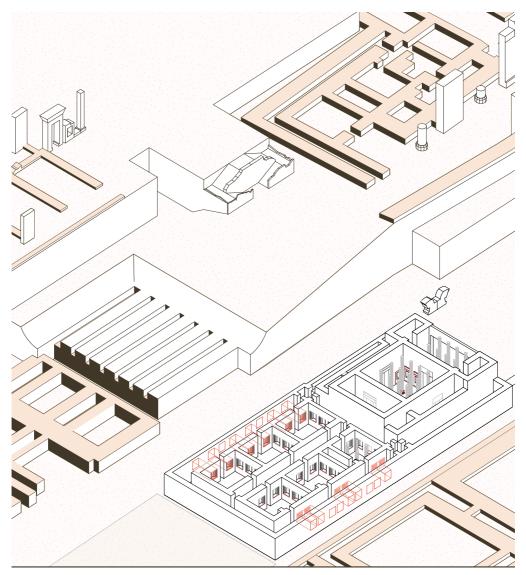


Excavated plans

Present plans

existing blocks	new insertions	eliminations	remanants	modifications
circulations and accessibility				

Spatial Analysis of the Existing Museum

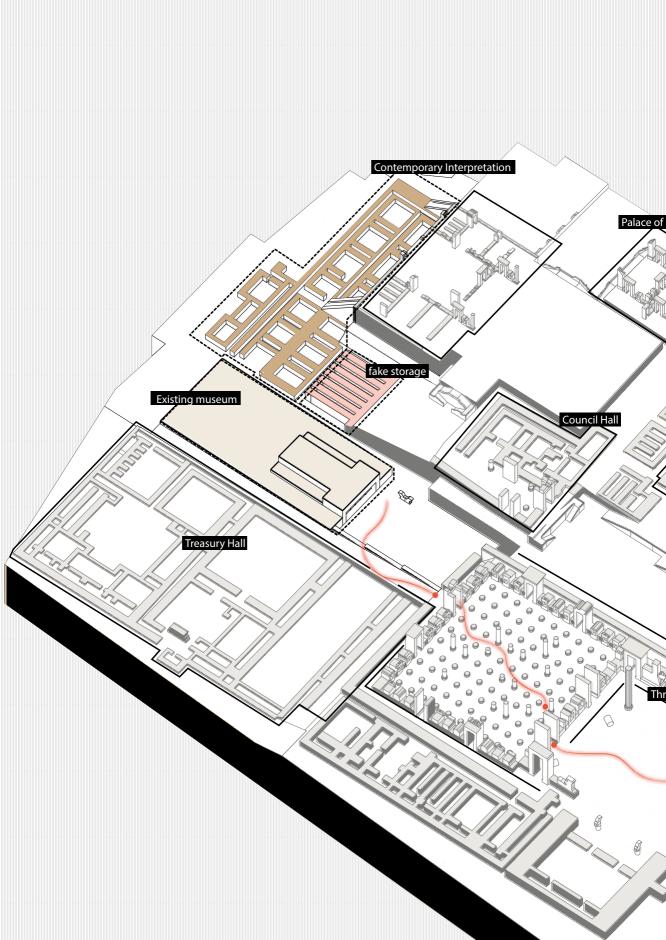


In addition to the revised plan, the reconstruction process also includes the introduction of new openings within the walls to improve air circulation and address lighting issues—particularly in the administrative section of the building. These interventions aim to enhance the functionality and comfort of the interior spaces while remaining sensitive to the original structure.

Toward an Adaptive Museum Extension

The Harem Complex of Persepolis, shaped like the Latin letter "L," was an enclosed residential area located near the southern section of Xerxes's Palace. This architectural layout is believed to have served as private quarters for royal women. The western wing of the structure extended into what is now referred to as the western harem, while the eastern wing bordered the ancient treasury. Partially restored by Ernst Herzfeld and his team, sections of the complex are currently used as the Persepolis Museum, along with administrative spaces.

As revealed through spatial and functional analysis, one part of the complex is currently functioning as a museum with both exhibition and administrative sections. However, another section remains unused, with only some non-authentic replicas placed on top. Based on the comprehensive assessments conducted, it is evident that the current museum and exhibition areas are insufficient in both size and capacity. Therefore, there is a clear need to extend the museum, and accordingly, part of the existing ruins—treated with full respect for the historical value of the Persepolis complex—will be adapted to house the new museum space.





Framing the Intervention: From Concept to Case Studies

In designing the new addition to the harem complex, it is essential to begin with a thorough understanding of comparable case studies. Within this research, particular attention has been given to the Teatro di Sagunto and the Beyeler Foundation and lastly Musealization of the Archaeological Area of the New Square of the Castle by joão luís carrilho da graça. These examples offer valuable insights into how contemporary interventions can be thoughtfully integrated into historically sensitive sites, and they have directly informed the development of the current design strategy. The project occupies a unique position: it is both a continuation of the restoration efforts initiated over fifty years ago and an extension of a structure originally built during the Achaemenid Empire. This dual condition demands a careful approach—one that balances respect for the site's historical significance with the creative potential of contemporary architecture.

This responsibility involves not only responding to the methods and language of past reconstruction efforts but also re-engaging with the original context and spirit of Persepolis itself. In this respect, studying precedents that have successfully addressed similar challenges becomes a critical part of the design process. These references help establish a conceptual and methodological framework, guiding the intervention to be coherent, site-specific, and sensitive to the layered history of the place.

Beyond the architectural and historical considerations, the practical need for a new museum space must also be emphasized. The current museum at Persepolis is limited in terms of capacity and facilities. There is no dedicated space within the archaeological site for temporary exhibitions, conservation laboratories, or secure storage of movable artifacts. As such, the new addition is not merely an aesthetic or academic exercise—it responds directly to a functional gap in the site's current infrastructure. By addressing this shortage, the project aims to support the long-term preservation, display, and interpretation of cultural heritage within Persepolis in a more sustainable and forward-thinking manner.

Beyeler Foundation

The Beyeler Foundation exemplifies a strong dialogue between space and natural light, which is introduced into the interior through a roofing system composed of transparent tiles. This approach serves as a key reference for our project, especially considering the site's context: unlike Beyeler, which is situated within a natural open environment, the unbuilt wing of our museum is surrounded by other buildings and located at a lower elevation. This makes it essential to ensure sufficient, yet controlled and non-harmful, lighting through the roof structure. The Beyeler Foundation's strict, yet open plan is characterized by four massive walls composed of a concrete column grid, with exhibition halls arranged in an open layout that promotes a seamless flow between spaces. The building's roof "floats" above the walls, extending beyond their perimeter to filter natural light gently into the interior. A glazed porch on the west façade acts as a transitional space that limits direct sunlight while maintaining views of the landscape.

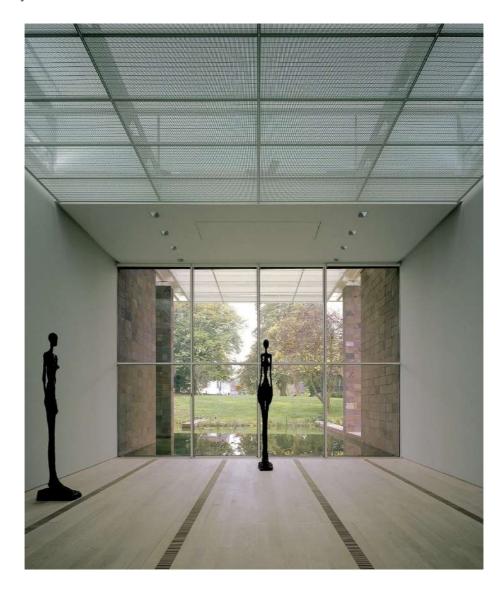
Adopting this strategy, the open plan concept is particularly suitable for our museum, where the existing replica walls—evidence of the past—already define the space. Adding new walls inside the museum would be counterproductive and could disrupt the dialogue with these historic layers. Therefore, following the Beyeler Foundation's example, we propose an open, flexible spatial organization that preserves the replicated walls as a "talking memory" within the museum. This layered approach allows the historical fragments to remain visible, creating a narrative that can be read both physically and imaginatively, encouraging visitors to engage with the history in a spatial and conceptual manner.



Beyeler Foundation



Beyeler Foundation



Teatro Romano of Sagunto

The Teatro Romano of Sagunto represents one of the most debated restoration projects in contemporary architectural discourse, precisely because it challenges conventional expectations of conservation. Rather than treating the ruins as static remnants of the past, the project by Giorgio Grassi and Manuel Portaceli interprets restoration as an architectural act—one that reimagines the ancient structure as a meaningful spatial organism for the present.

The hypothesis here envisages, where necessary, reinforcement or liberation of existing structures, as well as the partial completion of outstanding ancient walls, with the aim of making the theater complex more comprehensible. This involves clarifying its different parts, their relationships, hierarchies, and individual roles, culminating in a complex but coherent architectural form—precisely the Roman theater typology, which has exerted a long-lasting influence on architectural history.

This is carefully done with respect for the archaeological remains, including modest historical overlays, even those recent and debatable, as long as they do not conflict with the characteristic spatial unity of the site.

Through the addition of new elements—particularly the imposing *scaenae frons* and stage wall—the intervention does not erase the identity of the ruin but enhances its spatial legibility and unity. These additions do not mimic the ancient but clarify

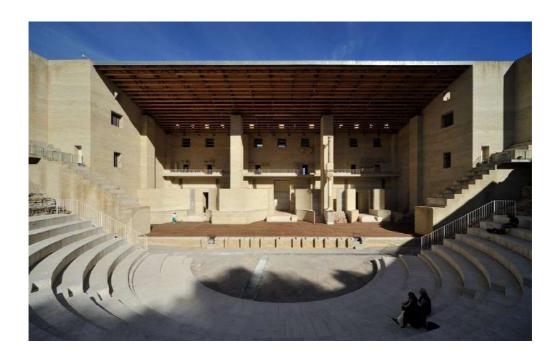
Teatro Romano of Sagunto

its architectural logic through new yet contextually grounded materials and geometries. This approach resonates strongly with the proposed design intervention at Persepolis. In both cases, the goal is not to reconstruct a lost past but to *reactivate its presence* through contemporary architectural language. By employing lightweight materials and reversible construction methods, the new structure at Persepolis is conceived not as a replacement, but as a framework for storytelling—one that acknowledges the replica walls already on site as narrative anchors. Just as Sagunto's restoration establishes a dialogue between original fragments and new spatial hierarchies, the intervention at Persepolis proposes a continuous and respectful narration of time: a space shaped by the past, interpreted by the present, and open to the future.

Because the first section of the Queen's Palace has been restored to function as a museum, we aim to follow a similar approach in the restoration of the left wing of the palace. Our intention is to transform this part, by utilizing the existing ruins and carefully preserving the original layers and stratifications, into a museum space that will be integrated and continuous with the overall complex of Persepolis—much like the restoration at Sagunto respects the original ruins while enabling new spatial uses.



Teatro Romano of Sagunto



Musealization of the Archaeological Area of the New Square of the Castle Jorge / Carrilho Architects

An extensive archaeological excavation of this site, which began in 1986, exposed traces of its successive periods of occupation — Iron Age settlement, medieval Muslim dwellings and a 15th century palace — with the most relevant artefacts having been removed and exhibited in the Castle Museum, leaving the excavation open to intervention for protection and musealisation.

Here, we also find a significant reason for building precisely on the ruins. By constructing directly atop the archaeological layers, the intervention respects and reveals the nature of the site, enabling visitors to experience the complex stratification of history while simultaneously providing a coherent and legible spatial narrative. This approach not only preserves the authenticity of the ruins but also activates their presence within a contemporary architectural framework.

This idea resonates strongly with the intervention at Persepolis and its dialogue with the Roman Theatre of Sagunto. Both projects emphasize a respectful coexistence of new and old, where the architectural additions do not attempt to reconstruct the past but rather to reactivate and reinterpret it. The construction on the ruins becomes an architectural gesture that bridges temporal layers, allowing the past to be read and felt directly in the present. Thus, like the careful restoration of Sagunto that respects the ruin's integrity while enhancing spatial understanding, and the Persepolis project that embraces existing replica walls as narrative anchors, this intervention fosters a continuous and meaningful conversation across time, space, and memory.

Musealization of the Archaeological Area of the New Square of the Castle Jorge / Carrilho Architects





Accordingly, based on the studies carried out on different approaches to the preservation of ancient and historical sites, I identified the most important and defining elements for my project. One key solution is the implementation of an almost transparent roof, which effectively allows natural light to enter the site and the museum stage. This approach has been successfully employed in two case studies: the Museum in Lisbon and the Beyeler Foundation. Although these two projects differ in style and approach, the use of a transparent roofing system proves to be a strong and responsive solution in both cases.

Secondly, the idea of building directly on existing ruins, as demonstrated by the restoration of the Roman Theatre of Sagunto, strongly supports the concept of revealing a layer of the past exactly as it was—covered by new materials and textures. While this "artificial ruin" might be seen critically by some, I argue that it represents a pure reflection of a historical layer, reinterpreted through contemporary materials and construction methods. Beyond the varying positions in the debate, the project by Giorgio Grassi and Manuel Portaceli stands as a paradigmatic example of the complexity and richness of contemporary architectural culture. It represents a clear and courageous stance that confronts the challenges inherent in restoration practices today. The restored Sagunto Theatre, in its current form, is perhaps an unrepeatable episode of restitution, grounded in a philologically rigorous interpretation of ancient Roman theatre architecture. (Source: ordinearchitetti.mi.it)

Similarly, this approach—though implemented differently—was applied in the intervention at the existing museum of Persepolis and its unfinished wing. By building directly on the ruins, which already include replicated walls representing what once existed, we are not creating fake ruins. Rather, we are offering a new identity that the space can still authentically provide, preserving originality while introducing subtle contemporary touches that enhance its meaning and use.

As mentioned before, the part we are choosing to work on is the unbuilt wing of the Queen palace* also named ad Harem of Xerxes* in many studies.

Accordingly, it is essential to carefully consider the methodology regarding the use of the existing exterior walls and the potentials that the site offers. The proposed modifications should aim to enhance both the spatial quality and the overall potential of the area.

Importantly, the interior walls will not be reconstructed. This is because the objective is to implement a lightweight structure supported by the replicated exterior walls. This approach not only preserves the authenticity of the ruins but also provides flexibility, allowing the space to be reorganized or adapted at any time to meet changing needs. By doing so, the intervention respects the original fabric while offering a dynamic and functional environment that can evolve with future requirements.

The reconstruction of the Persepolis Museum demands a methodology that is both structurally sound and deeply respectful of the site's historical significance. Given the museum's location within a UNESCO World Heritage site and its proximity to the original Achaemenid ruins, all intervention strategies must adhere to the principles of reversibility, minimal impact, and visual subtlety.

-Use of Structural Nailings

A key structural technique in the reconstruction involves the use of structural nailings to attach new walls without applying pressure to either the original or replicated historic surfaces. This method was initially introduced to stabilize new walls on the replicated walls that were reconstructed before. Although these replica walls lack original historical authenticity, they have become part of the site's layered architectural history and therefore require careful and sensitive treatment.

The use of nailings minimizes direct physical interventions on existing materials—whether authentic or replicated—thus preventing damage to the archaeological or aesthetic value of the site. Additionally, this technique ensures reversibility, allowing future conservation efforts to remove or modify the additions without causing permanent harm.

-Lightweight and Respectful Material Strategy

To maintain a light physical and visual footprint, the reconstruction uses a system of double-layer gypsum drywall panels with vertical metal bracing sandwiched in between. This approach strikes a balance between structural requirements and curatorial responsibilities, offering several advantages:

Lightweight Structure: The gypsum-metal assembly imposes minimal load on the building, making it suitable for integration within a delicate archaeological environment.

Acoustic and Thermal Performance: The double-layer system improves sound insulation and thermal regulation, enhancing interior comfort and functionality.

Maintenance and Adaptation: Gypsum Ease boards allow for easv maintefuture reconfiguration of exhibit spaces nance as curatorial needs evolve.

Neutral Visual Language: The subtle and modular appearance ensures the new additions do not compete visually with the historic elements, preserving the spatial dignity of Persepolis.

Conceptual Justification

The overarching design philosophy is rooted in non-invasiveness and transparency. Although the new structure is clearly distinguishable, it deliberately avoids imposing a strong architectural presence, allowing Persepolis's historical narrative to remain central. This approach promotes additions that are both identifiable and harmonious with the existing context.

Despite these technical interventions, the core spatial experience must be preserved. One fundamental goal of the reconstruction is to offer visitors the freedom to explore and engage with the site as simultaneously a ruin, a palace, and a museum. This layered identity is intrinsic to Persepolis and must not be diminished by overly assertive architectural gestures.

To support this, a conscious decision was made to leave the original flooring fully exposed. No material—regardless of its historical significance or modern utility—can authentically replace the tactile and symbolic value of the existing floor, which bears the marks of time and previous interventions. This ensures a direct and uninterrupted dialogue between visitors and the site's historic substrate.

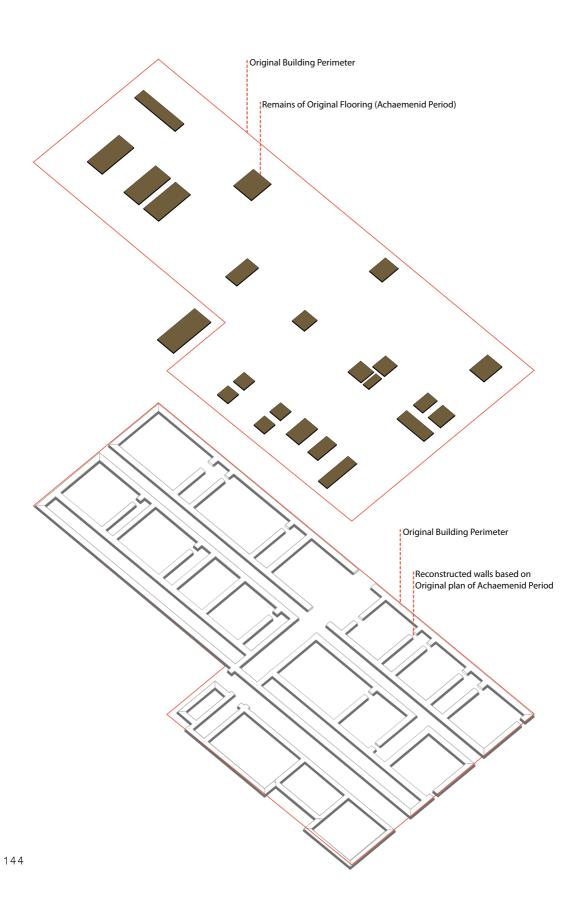
However, to clearly define circulation routes and intuitively guide visitors through the exhibition, a lightweight wooden pathway has been introduced. This elevated walkway rests gently on a metal sheet base, avoiding any anchoring or disturbance to the original surface. Serving both practical and interpretive roles, it articulates the museum's spatial logic without compromising the

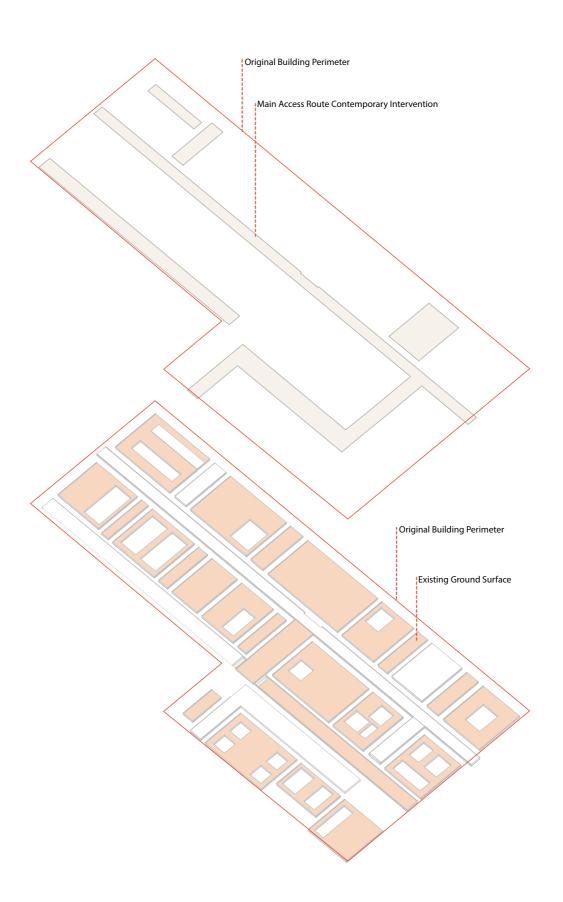
Acoustic and Thermal Performance: The double-layer system improves sound insulmaterial authenticity of the architecture. This solution balances curatorial clarity with conservation ethics, reinforcing the respectful integration of contemporary design within a heritage context.

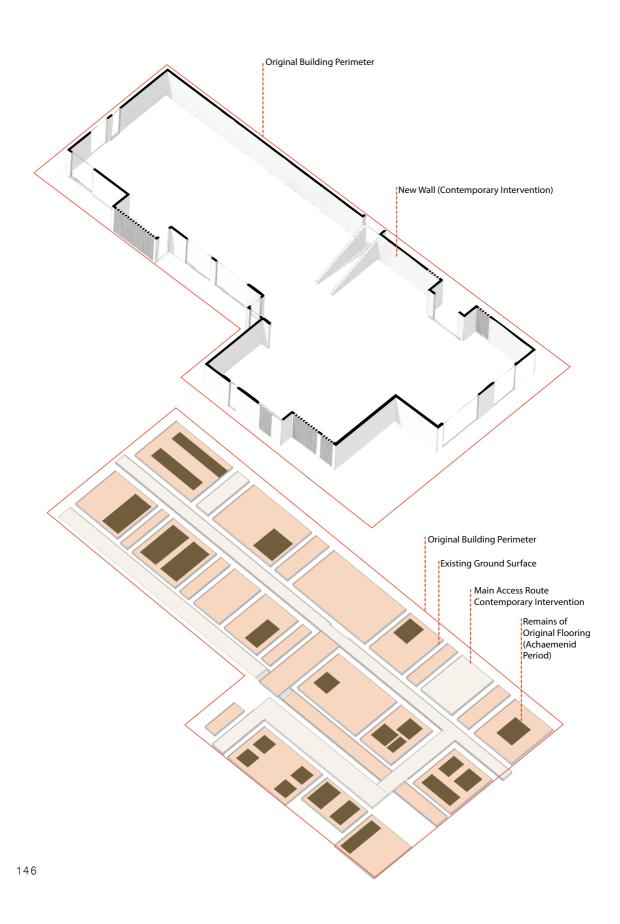






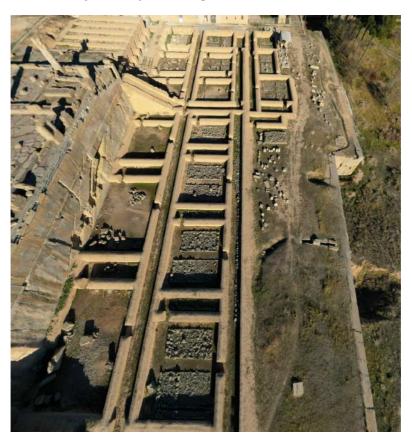




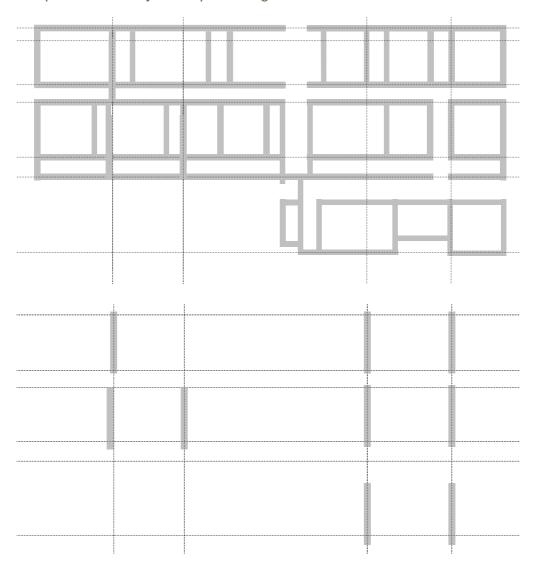


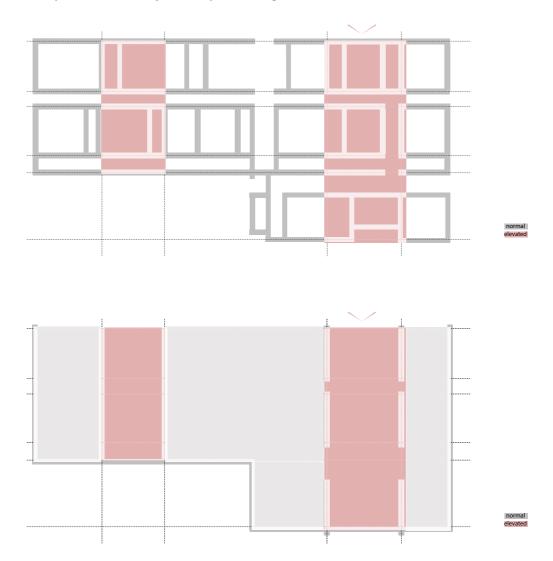
As illustrated in the diagrams, the reconstruction plan aims to preserve the existing flooring system-including areas covered with stones-as well as the replicated walls. These replicated walls share the same height, construction technique, materials, and identical detailing, forming a consistent architectural base across the site. By analyzing the existing grid logic, we are able to define a clear main entrance pathway. However, due to the irregular layout of the replicated walls-which do not follow a standard rectangular geometry but instead form a fragmented and shifting pattern of squares and voidswe have chosen not to impose an artificial order on the plan. Instead, we have embraced the irregularity as a meaningful architectural condition, treating it as a reflection of the site's layered history rather than an error to be corrected. In this way, we avoid turning the final result into a flawless replica; instead, we acknowledge and narrate the site's complexity through architecture. Given the absence of a consistent wall alignment, we allow a certain flexibility in defining the project's main grid system. This freedom becomes essential when designing the spatial rhythm and formal articulation of the museum's volume.



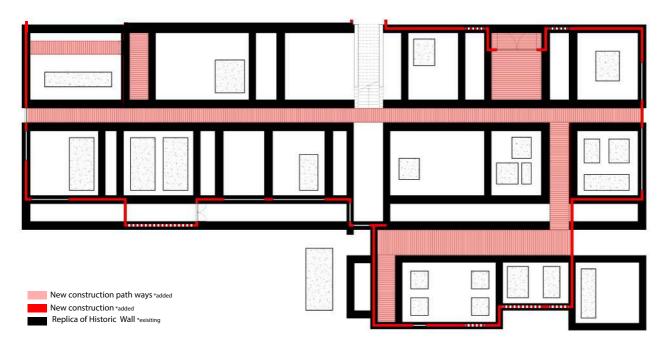


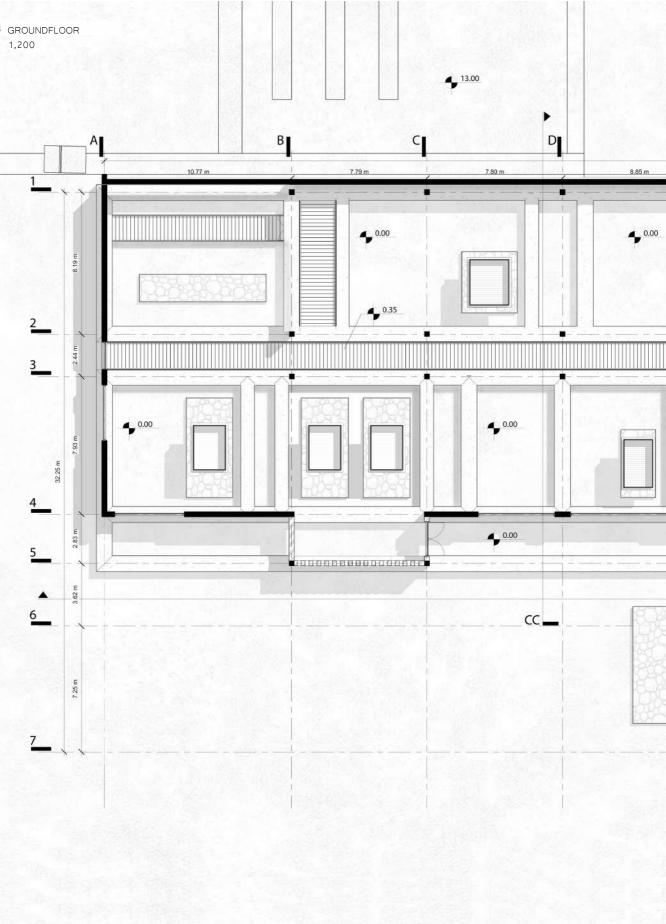
Based on this grid, subtle variations in ceiling height and elevation have been introduced—not arbitrarily, but as a response to the spatial dynamics of the current ruins and to connect them with the massing of the existing museum at Persepolis. Although the plan remains irregular, the design does not dissolve into chaos. The shifting geometry of the roofline and variations in volume create a layered yet unified architectural expression. It is not a reproduction, but rather a contemporary continuation of the architectural language rooted in the existing site's form and logic—a dialogue between irregularity and cohesion, history and reinterpretation.

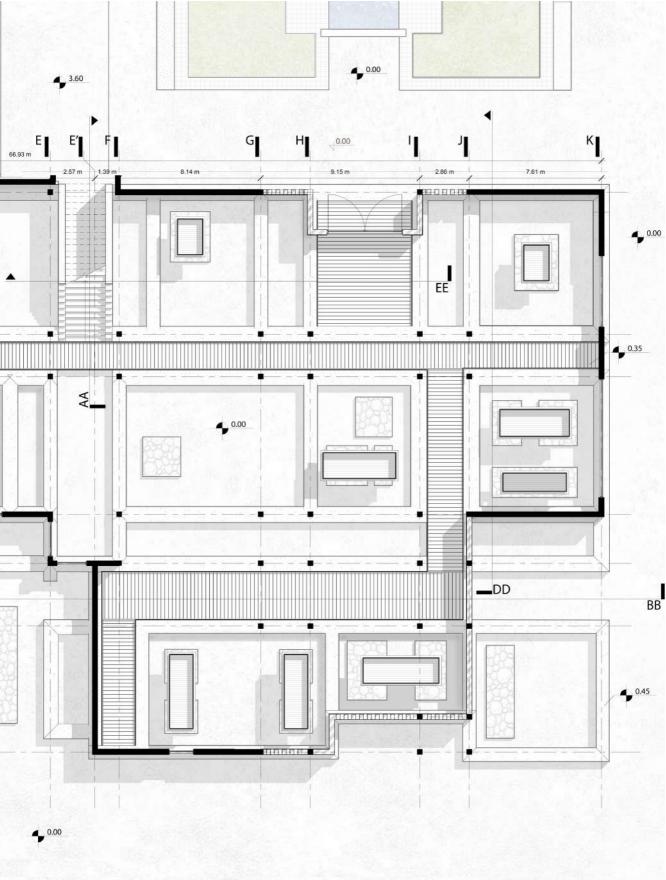


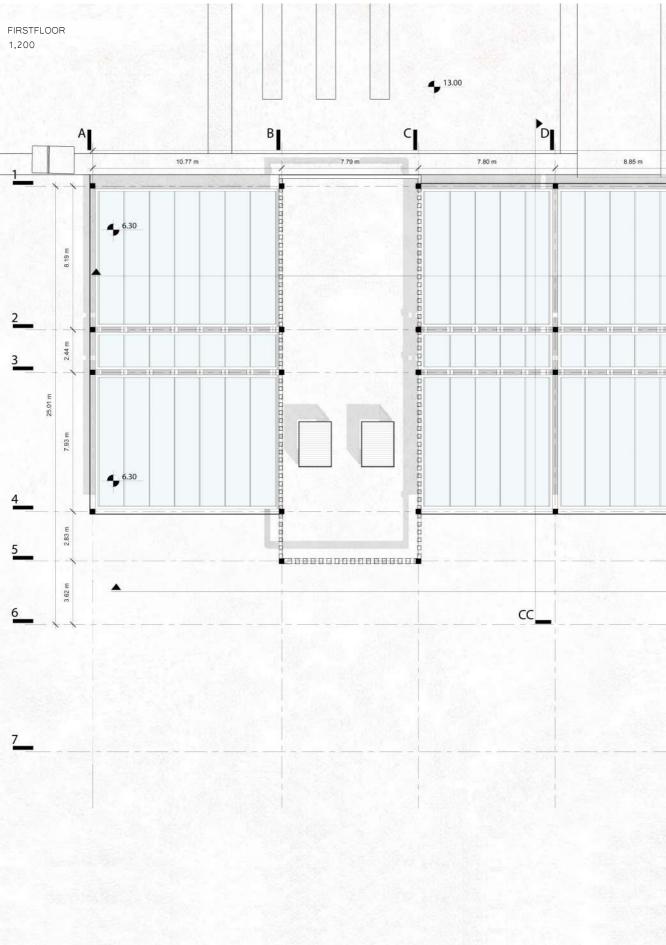


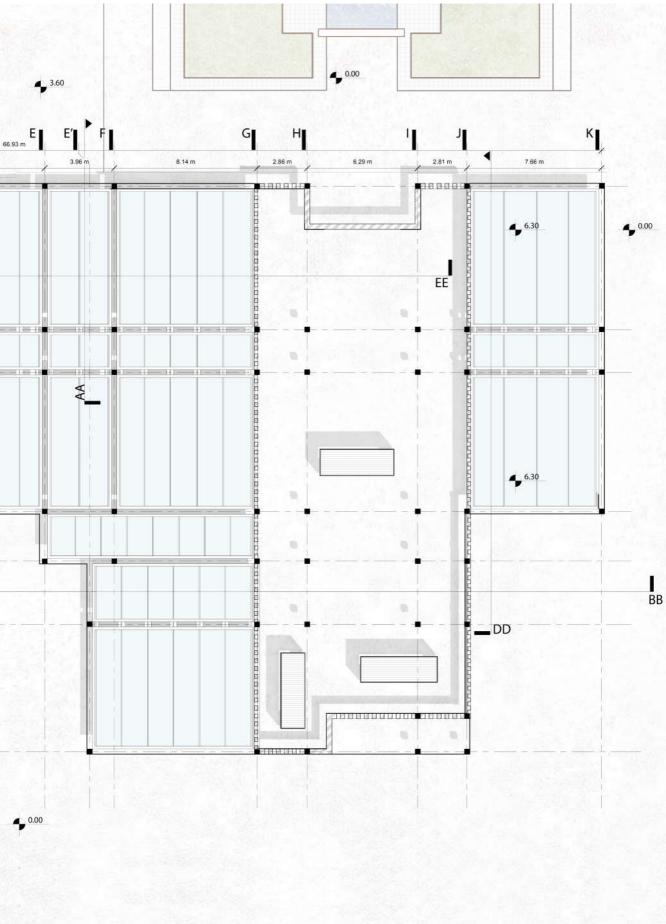
Current framing and reconstruction additions plan

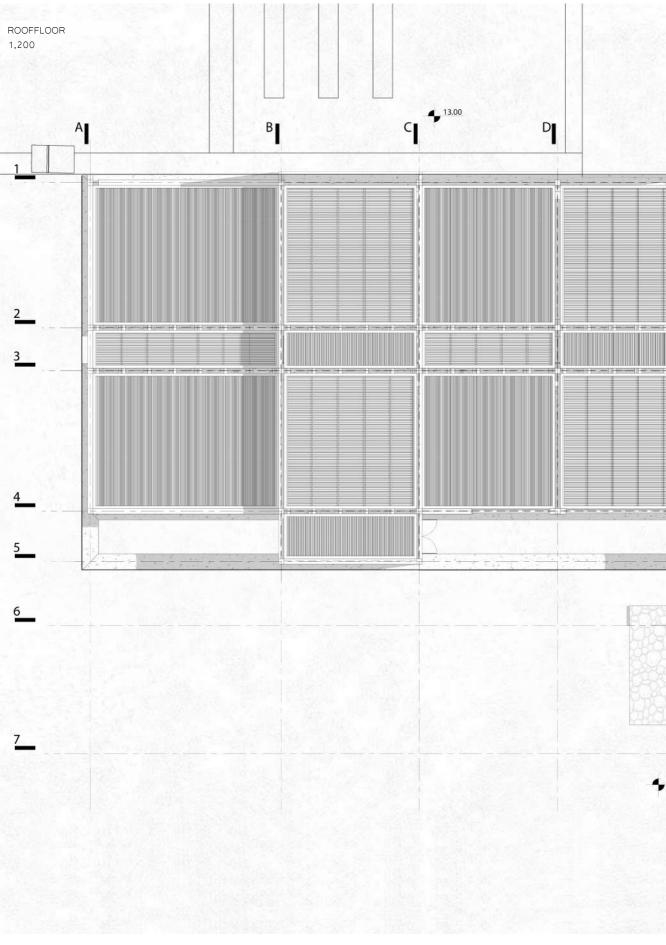


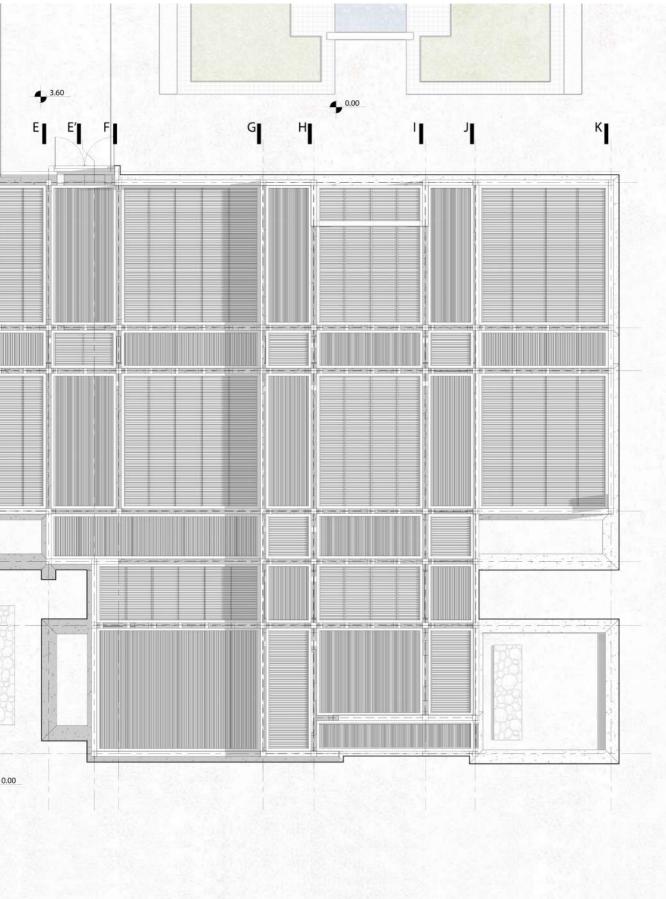






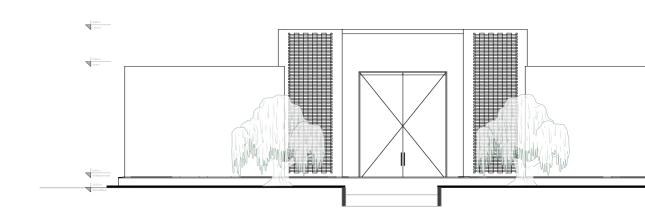


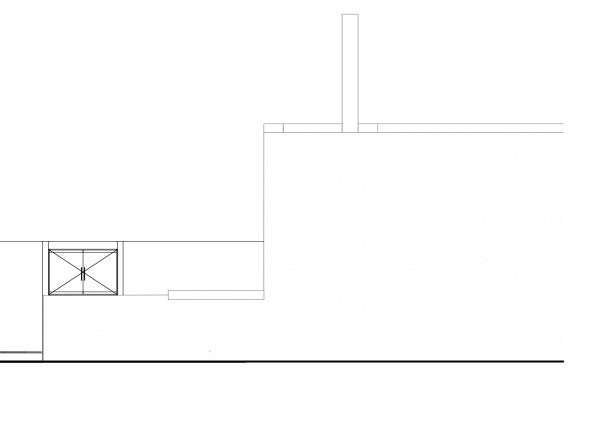


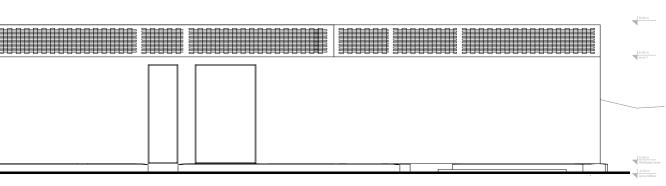


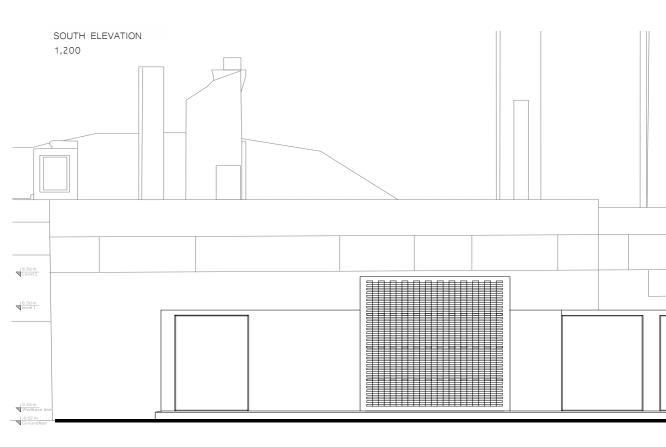
WEST ELEVATION

1,200

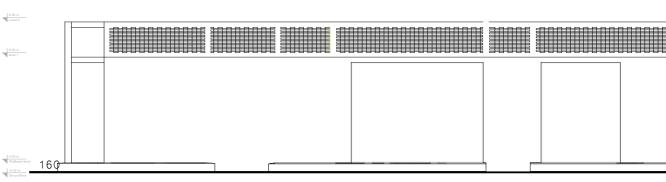


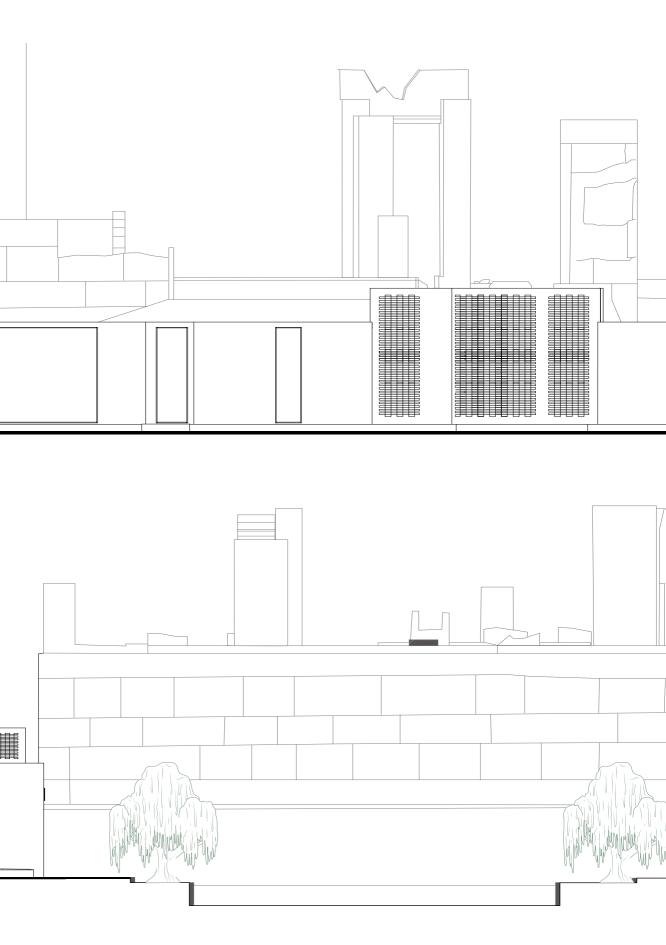






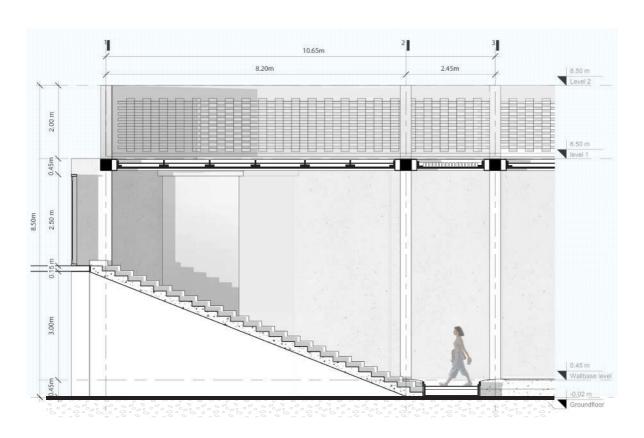
EAST ELEVATION 1,200



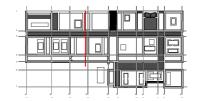


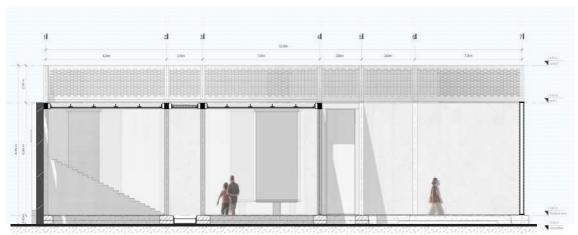
SECTION AA 1,100

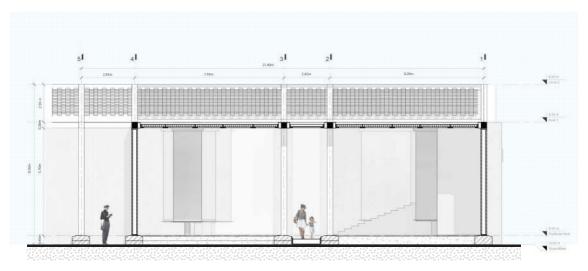








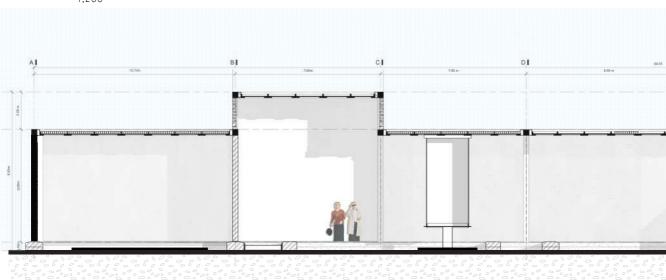




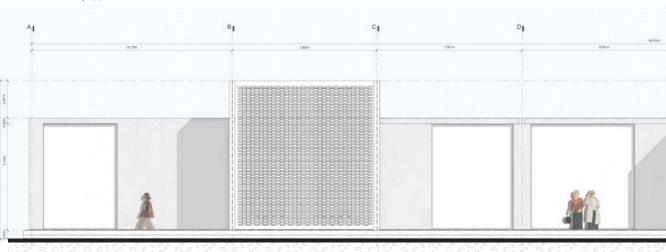
SECTION DD 1,200



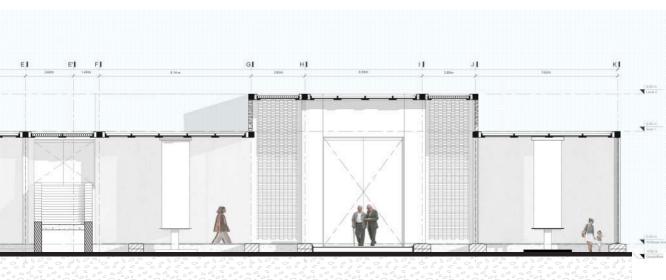
SECTION EE 1,200



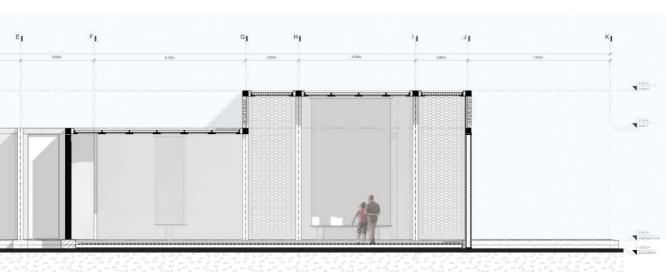
SECTION BB 1,200

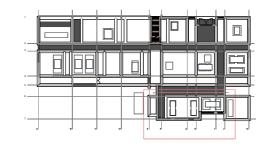


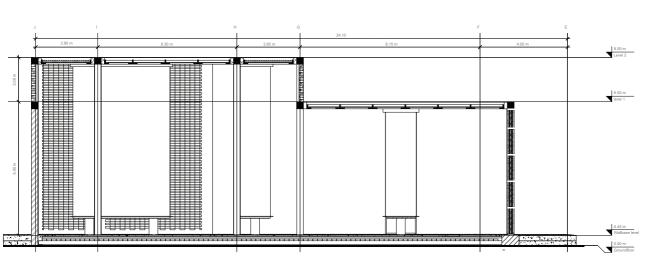


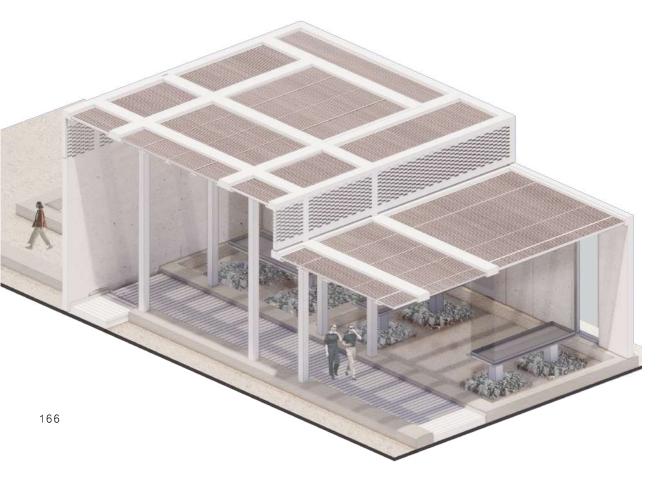


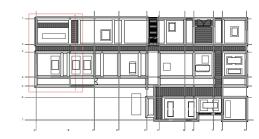


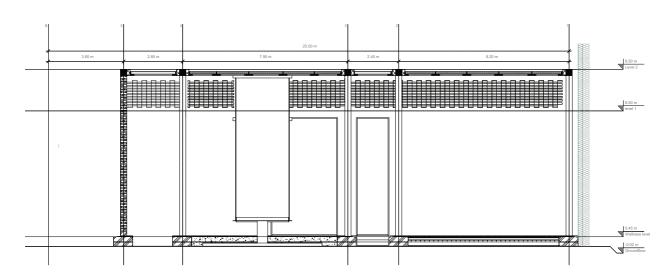


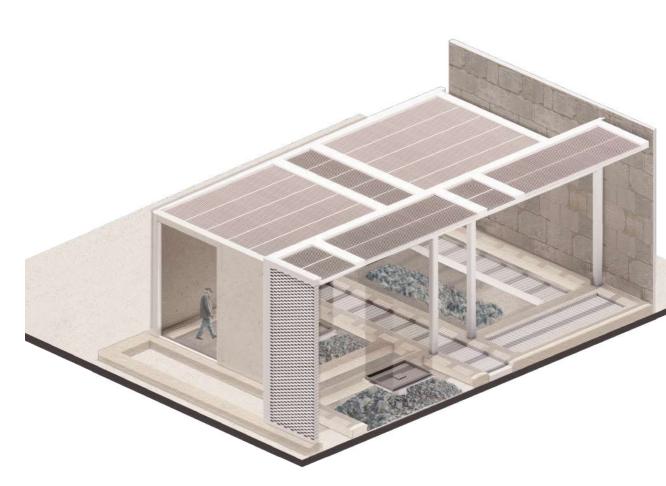


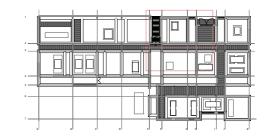


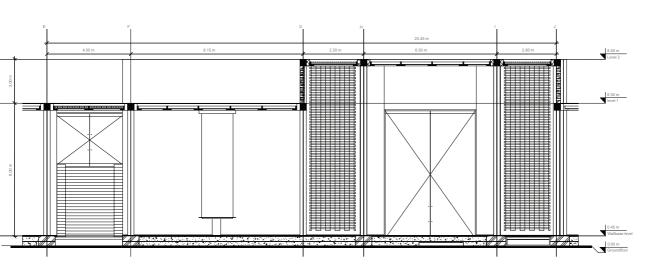


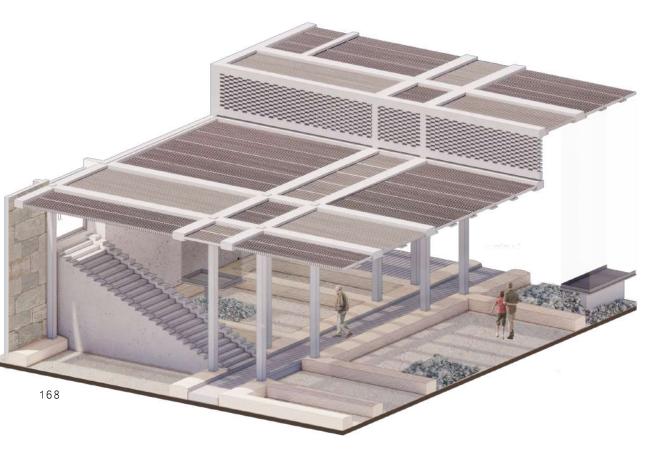




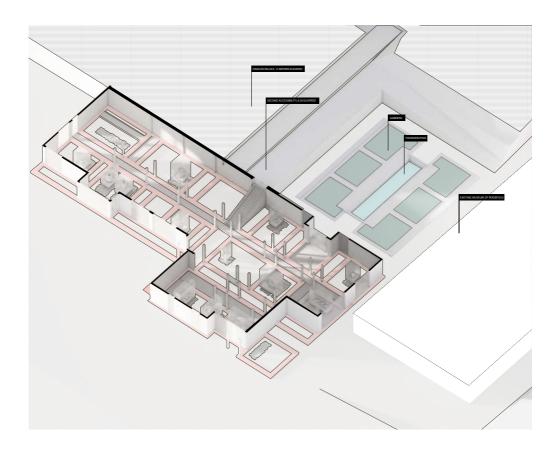








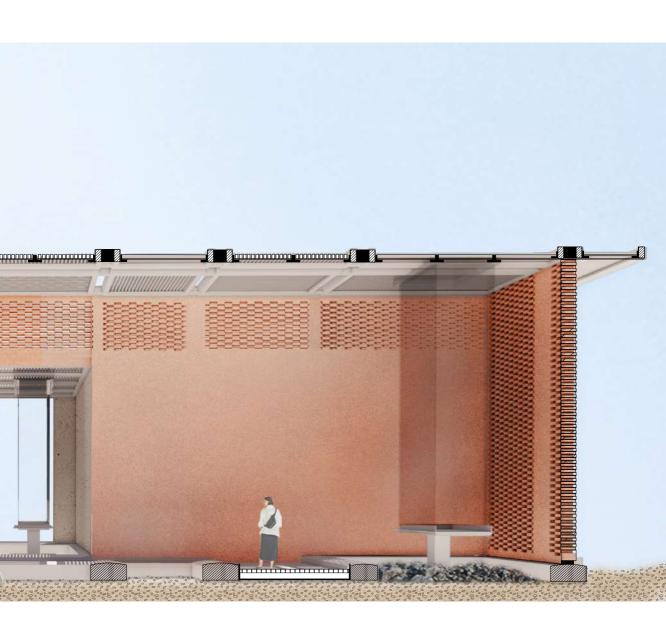
Graphical Illustartion Of Space Organisation



Sections in Perspective





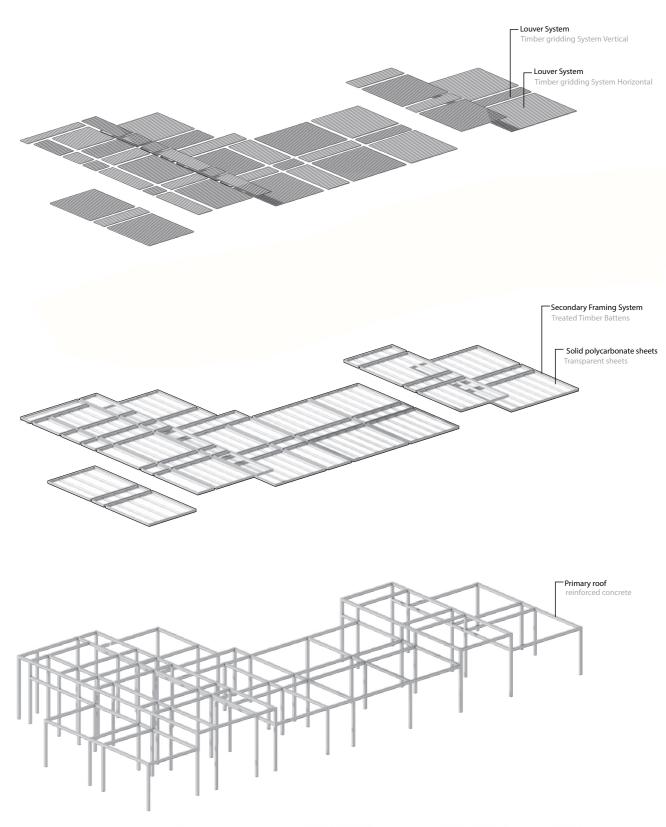


Sections in Perspective

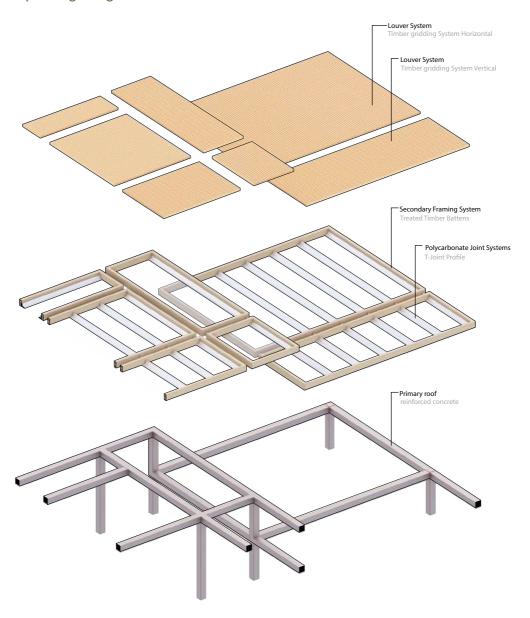








Exploding Diagram Of Roof Structure



Natural Air Ventilation Strategy

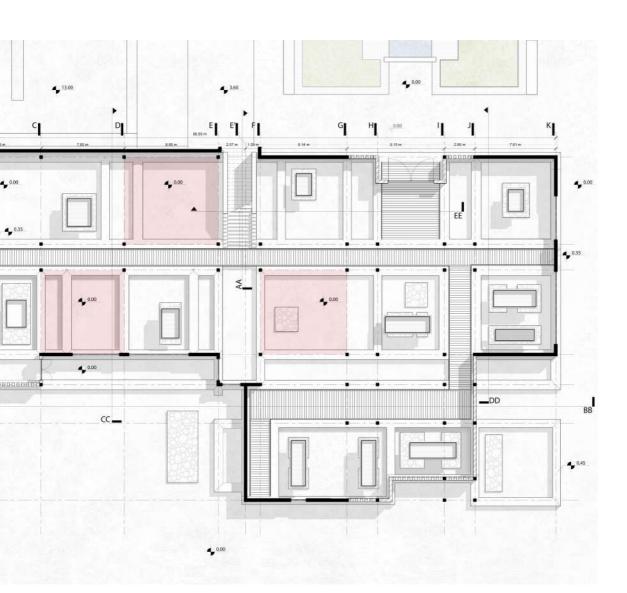
As part of the environmental design considerations for this museum, special attention has been given to the air ventilation system, with the goal of ensuring thermal comfort and sustainable airflow throughout the space. Given the climatic characteristics of Shiraz and the region's architectural traditions, the project adopts a ventilation strategy inspired by local passive cooling methods.

To optimize air circulation, all external elevations of the museum incorporate perforated walls. These perforations are not only a design element but also serve a functional role by facilitating cross-ventilation. This approach allows fresh air to move through the building naturally, reducing the need for mechanical systems and contributing to the building's overall sustainability.

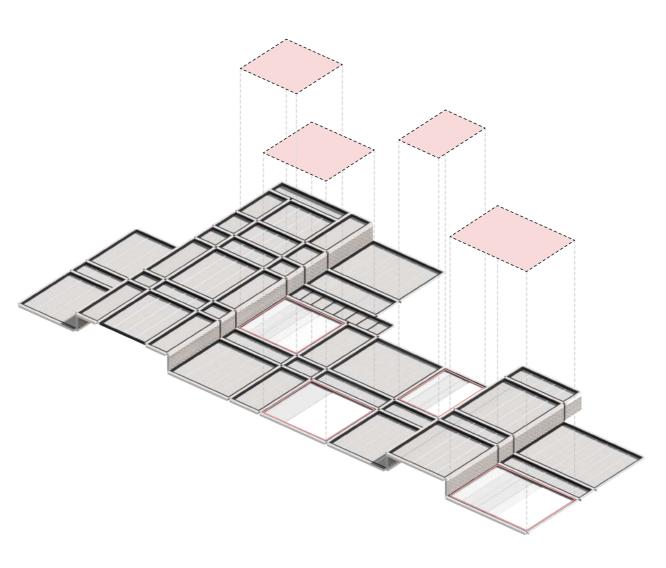
Moreover, in areas of the museum where no sensitive museographic elements are present we have introduced an additional strategy to enhance airflow: certain designated sections of the roof are designed to be sliding and operable. This feature provides the possibility of opening the roof during hot or sunny days to allow hot air to escape and fresh air to enter from above, thereby improving vertical ventilation. When needed—such as during rain or to control internal environmental conditions—these roof panels can easily be closed to protect the interior.

This dual strategy, combining perforations with roof ventilation, ensures that the museum remains well-ventilated in various weather conditions, while also respecting the functional and conservational needs of a contemporary exhibition space. The design reflects a balance between traditional environmental and modern architectural solutions.



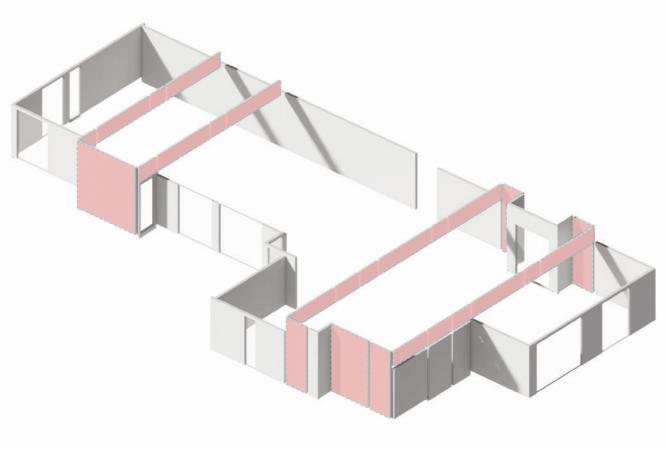


Natural Air Ventilation Strategy

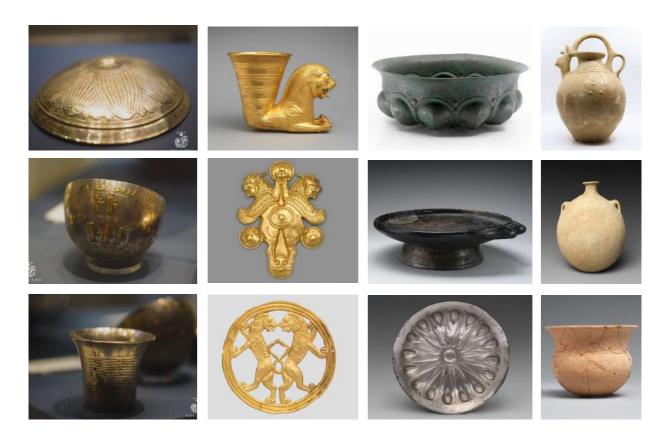


Natural Air Ventilation Strategy

As shown in the diagrams and mentioned earlier, the roof areas not covering museographical elements feature sliding polycarbonate panels. These can be opened or closed as needed to regulate and enhance natural air circulation within the museum. Additionally, indicated exterior walls are perforated to ensure continuous airflow. This dual approach—operable roof sections and perforated facades—supports the goal of achieving efficient natural ventilation, reducing reliance on mechanical systems while responding to the local climate and architectural context.



Catalogue of Achaemenid Artifacts Preserved in the Persepolis



Catalogue of Achaemenid Artifacts Preserved in the Persepolis

The new museum space aims to provide a dedicated and appropriate setting for hosting fragmented pieces of Persepolis currently housed in museums around the world. This space will serve as a platform to exhibit newly excavated reliefs, plates, sculptures, and other Achaemenid artifacts, as well as to replace or rotate items that are currently kept in older institutions. Considering that many valuable objects from Persepolis - including gold bowls and artifacts made of other precious materials — are held by prominent museums such as the British Museum, the Louvre, and others, the establishment of this museum opens up opportunities for international collaboration. It will facilitate the exchange and short-term exhibition of these items, allowing for a more complete and accurate representation of the Achaemenid heritage. Notably, some of these artifacts, which I identified through the official website of the British Museum, could be featured in future exhibitions as part of this initiative.

Most of these artifacts were excavated by Professor Ernst Herzfeld during the early archaeological missions at Persepolis. At that time, the Museum of Persepolis had not yet been established, and there was no suitable facility nearby to preserve or display the findings. As a result, while some fragments remained in Iran, the majority of the restored Achaemenid pieces—particularly those reconstructed from sherds and fragmentary remains—were mandatorily transferred to major museums abroad. This historical context explains why significant portions of Persepolis's material heritage are now housed in institutions such as the British Museum and the Louvre.

Catalogue of Achaemenid Artifacts Preserved in the Persepolis



Fragment of limestone relief: showing an official in Persian dress, wearing a tunic secured with a knotted girdle with the ends hanging down. The figure is advancing left, ascending a staircase and leading a bearded tributary. There is a fragment of a tree to the left side of the relief.

Period. Achaemenid



Fragment of limestone relief: showing a seated bearded male sphinx facing right with raised left forepaw, wearing divine horned head-dress with band of rosettes below the feathered top. The sphinx was originally one of a pair flanking a winged disc figure of Ahuramazda, with paws raised in veneration. The sphinx is between horizontal bands of rosettes, each with twelve petals; behind is a lotus stem. An annular earring supports an elaborate drop. There are traces of green pigment of the earring.

Period. Achaemenid

British Museum. Fragment of limestone relief with a seated, bearded male sphinx facing right, wearing a divine horned headdress (Museum number W 1938-0110-1). London: British Museum

Catalogue of Achaemenid Artifacts Preserved in the Persepolis



Fragment of limestone relief: showing a guardsmen with spears advancing right, wearing 'Persian dress' with bracelets and ear-rings.

Period. Achaemenid



This rare stone fragment bearing the carved profile head of a "foreign delegate" is from the north staircase of the great audience hall known as the Apadana at Persepolis the magnificent ceremonial palace complex of the ancient Persian kings, Darius I (522-486 B.C.) and Xerxes I (486-456 B.C.).

Period. Achaemenid

British Museum. Fragment of limestone relief with a seated, bearded male sphinx facing right, wearing a divine horned headdress (Museum number W 1938-0110-1). London: British Museum

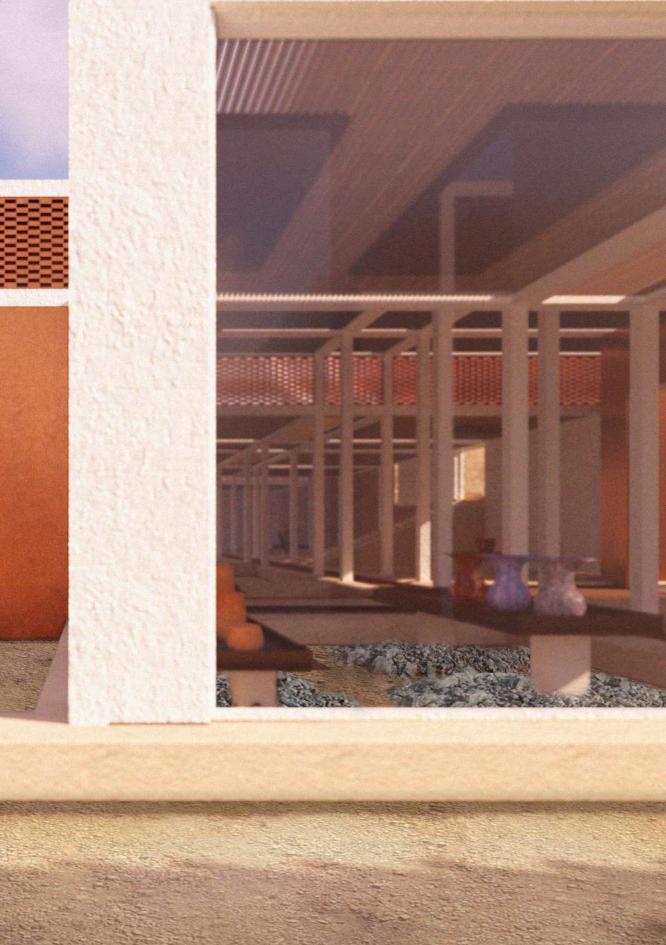












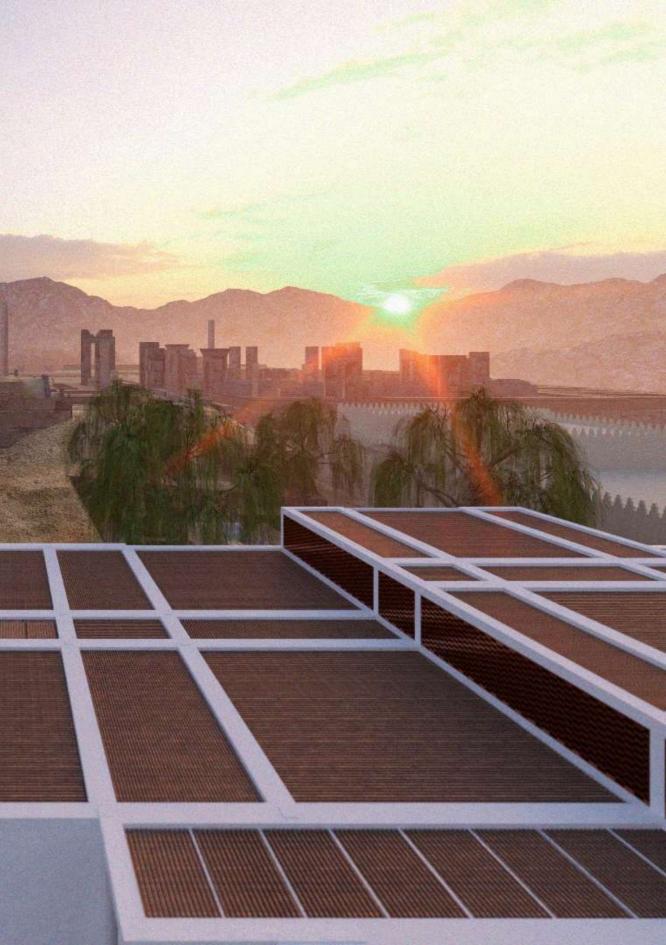






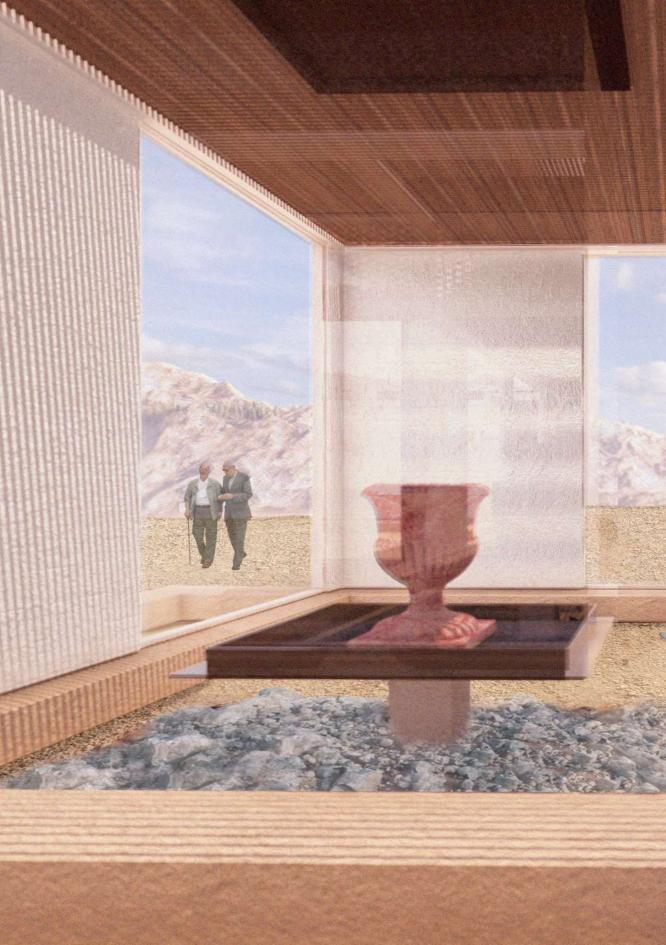




















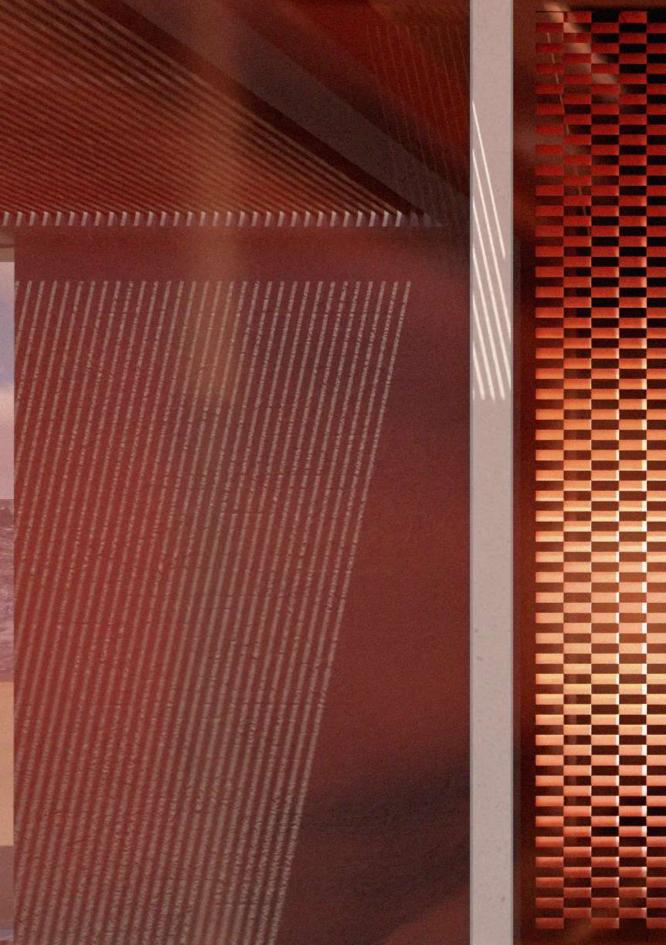


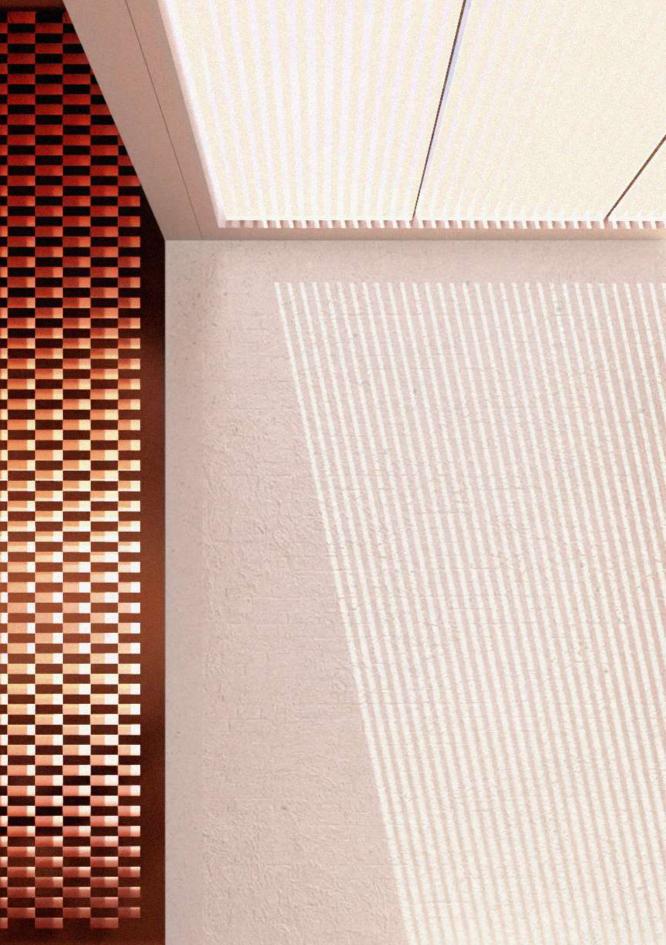












Conclusion

Focusing on the unbuilt western wing of the Queen's Palace at Persepolis, my project proposes an intervention that does not seek to impose a sense of completeness. Instead, it embraces absence, fragmentation, and the layered nature of architectural history. Informed by case studies such as the Museum in Lisbon, the Beyeler Foundation, and the restoration of the Roman Theatre of Sagunto, I aim to demonstrate how architectural presence can emerge meaningfully from what is missing—through careful attention to light, material, and spatial rhythm.

Ultimately, my approach challenges conventional norms of preservation and museography. I seek to establish a respectful yet forward-looking dialogue between past and present, in which the reconstructed wing becomes more than just a space for exhibition. It is envisioned as a living testimony to the resilience of memory, the beauty of incompleteness, and the power of contemporary design to continue, rather than replace, the stories embedded in historical ruins.

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