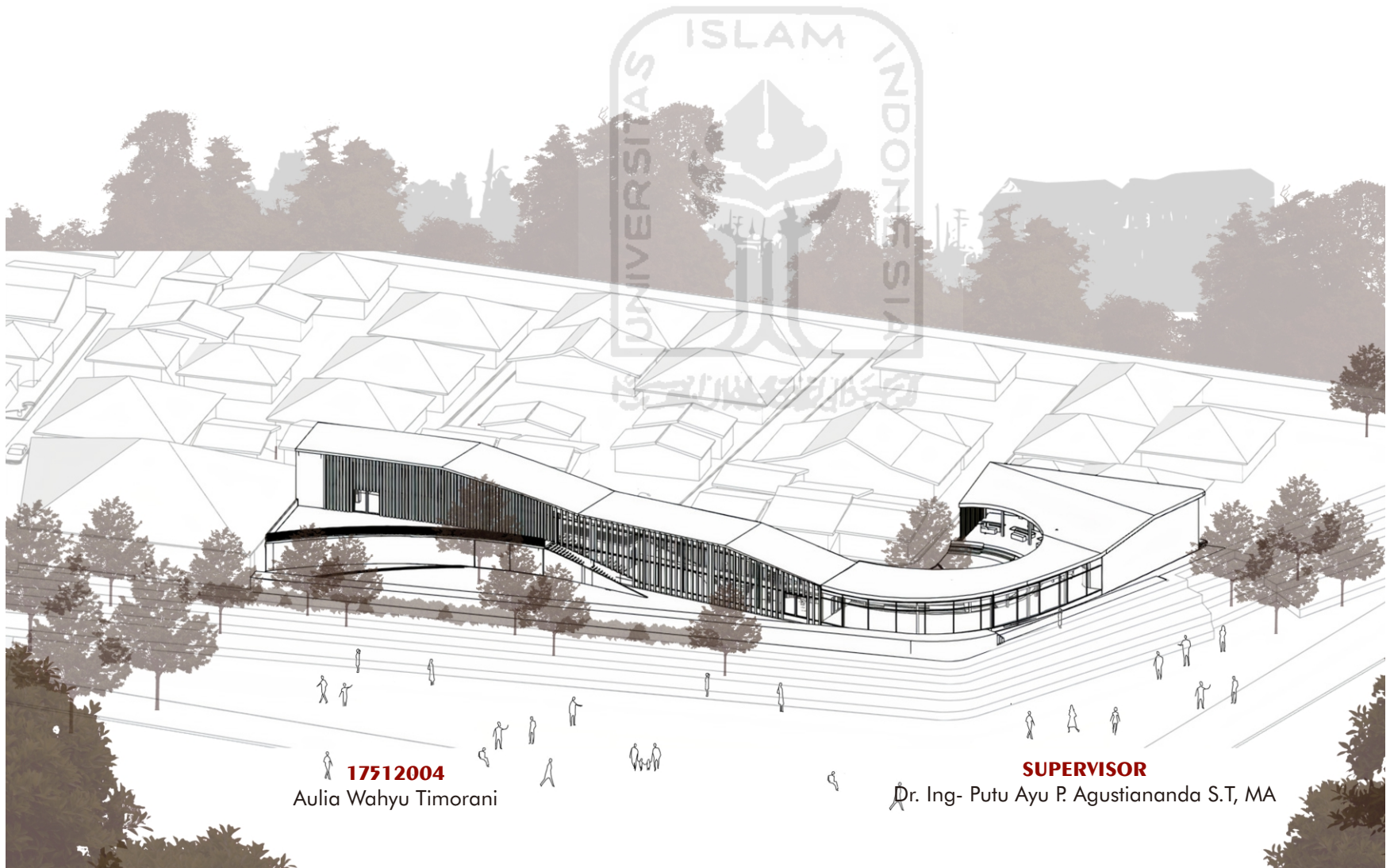


Design of
BENTENG CEPURI HERITAGE CENTER
IN KOTAGEDE, YOGYAKARTA
Using Insertion Strategies to Restore Cultural Significance



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FINAL ARCHITECTURAL DESIGN STUDIO

Design of

BENTENG CEPURI HERITAGE CENTER

Restoring Cultural Significance using Insertion Strategies



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PAGE OF APPROVAL

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Using Insertion Strategies to Restore Cultural Significance**

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PREFACE

Praise and gratitude to Allah SWT who has given His mercy and love, so that I can complete my study at the Department of Architecture at the Islamic University of Indonesia by completing my final undergraduate project entitled "Design of Benteng Cepuri Heritage Center: Restoring Cultural Significance using Insertion Strategies". I realize that the process of preparation and implementation of this undergraduate final project could not be done without the support of many parties, therefore I would like to express my appreciation and gratitude to:

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9. And last but not least, my beloved siblings: Kak Sasha, Raihan and Rizal whose existence alone has given me the strength to complete my final undergraduate project.

I am fully aware that this work has not been separated from the word perfect, therefore all constructive criticism and suggestions for the perfection of this undergraduate final project are highly expected. Hopefully this final project can also be useful for writers and for all of us.

STATEMENT OF AUTHENTICITY

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I confirm that this Final Architectural Design Studio report that I wrote is truly my own work, not an expropriation of other people's writings or thoughts that I acknowledge as the result of my own writings or thoughts.

If in the future it is proven or can be proven that this Final Architectural Design Studio product is a plagiarism, I am willing to accept sanctions for such actions.



Yogyakarta, July 12th 2021

Writer,

Aulia Wahyu Timorani

ABSTRACT

BENTENG CEPURI HERITAGE CENTER Preserving and Restoring Benteng Cepuri's Historical Significance

Kotagede is one of the areas in Yogyakarta which is full of historical and cultural values. The distinctive cultural and social characteristics of Kotagede which are still preserved today are the legacy of the Mataram Islamic kingdom which once occupied the Kotagede area. The existence of the Mataram Islamic kingdom in Kotagede today can still be seen and felt through existing culture, social relations between communities and physical elements such as the grand mosque, narrow alleyways and also the remains of the fortress.

One of the physical components of Kotagede which is a legacy from the time of the Mataram Islamic kingdom is the Cepuri fortress. Cepuri fort is a thick wall that separates the community of ordinary people and residents of the palace. This fort was also presumed to function as a protector of the palace. Currently, there are still several parts of the Cepuri fort that remain, one of which is Bokong Semar, which is the curved part of the Cepuri fort in the east. although it has been recognized as a heritage site, Bokong Semar has not been developed to become a tourist destination. The existence of Bokong Semar is currently overshadowed by the increasing number of settlements so that many tourists are unaware of the existence of this heritage site.

To revive the existence of the Cepuri fort and its historical significance, in this design the writer plans to reconnect the remaining historical remains of the Cepuri fortress and interpret it into an architectural form. With the revival of Cepuri fort, it is hoped that it can increase the attractiveness of Cepuri fort as one of the historical tourist destinations in Kotagede and help the local economy.

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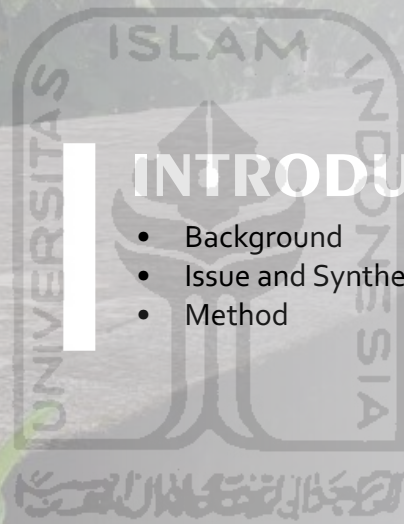
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02

INTRODUCTION

- Background
- Issue and Synthesis
- Method



BACKGROUND

Kotagede is an area which historically is said to be the forerunner of the founding of the city of Yogyakarta which began with the presence of Mataram Islamic Mataram kingdom. This city was once a lush forest which was gifted by the ruler of Pajang (an Islamic kingdom whose center is 100km from this forest) to Ki Gede Pemanahan after he successfully put down the rebellion. because the forest is lush and had good water sources, many people came to settle in Mataram, forming a small city. This condition invited traders from outside to come and eventually grew the economy in this place. The settlements then later grew to become the city of Mataram led by Pemanahan.

After Pemanahan's death, Mataram's leadership was continued by his son, Senapati, who then expanded the territory by conquering major part of Java. Enemies came along with the increasing power of Mataram. Therefore, Senapati ordered Mataram people to build a strong, thick wall to become a fortress that protected the city. But, after the fort was built, there were only a few insignificant battles that occurred in Kotagede (Sentosa, 2007. cited from greg 2014). therefore, the function of the fort was not fully utilized. This fortress then functioned more as a symbol that separated the nobility and royal family from the common people outside.

During the governmental period which lasted for about half a century, Kotagede as the center of government was arranged with pattern and components as any other city center of the Islamic kingdoms which consists of markets, mosques, squares and palaces as the center. These components are evidence that can reflect the social, economic and

cultural conditions of the community (Atmsudiro, 2002). Currently, there are only a few relics of the Mataram Islamic kingdom that we can see in Kotagede such as mosques, markets and the remains of the Cepuri fort.

Cepuri is a fort that was build surrounding te palace. The original form of the Cepuri fort was an asymmetrical rectangle, with a curved eastern side resembling Semar's butt (a Javanese mythological character that often appears in wayang performances). At present, only a few ruins of the Cepuri fortress remain, including Bokong Semar which has been considered a heritage site and is part of the historical tourism of Kotagede.

Other than the historical value, Kotagede is also known for its rich culture that were passed down from their ancestors like art and ceremonies. Art festivals and cultural celebrations are ways for Kotagede people to revive their culture and conserve heritage (Utomo & Gregorius, 2014). Currently, there are so many art groups that were formed in kotagede such as dance, karawitan, kethoprak, theatre and keroncong. These groups are usually utilizing open space as their creative space. In Purbayan, there are many art and community events that were held to promote local activities and support tourism.

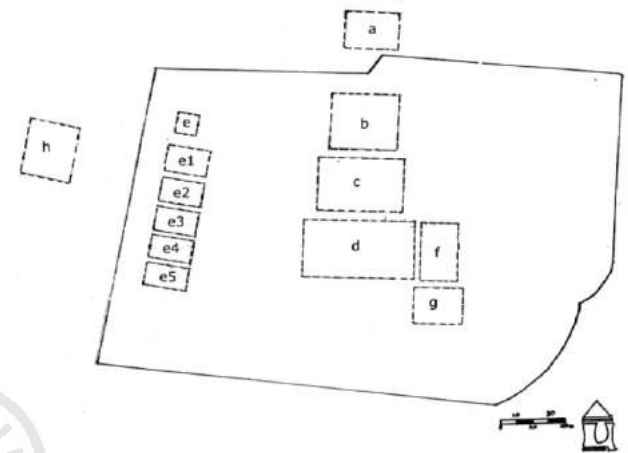
Through this final architectural design studio project, the author will propose a new facility in the Bokong Semar area which aims to revive the cultural significance of Benteng Cepuri in Kotagede and provide facilities for the activities of local residents so that this area can develop as a historic tourist destination that can bring benefits to local residents as well as respecting and maintaining the existence of heritage objects on the site



BENTENG CEPURI

Many years after being occupied by the Mataram Islamic kingdom, the Kotagede region is regarded as a 'walled city'. This is due to the existence of walls that were built around the city. The construction of the fort began during the reign of Senopati, which at that time felt the need to make a clear definition and stronger protection for Kotagede. so, he ordered to collect bricks and build a fortress. history records that this city has 3 layers of fortress, which is Negara fort, the Baluwarti fort and the Cepuri fortress. The innermost layer of the fort serves to protect the core of the palace which is also called Cepuri.

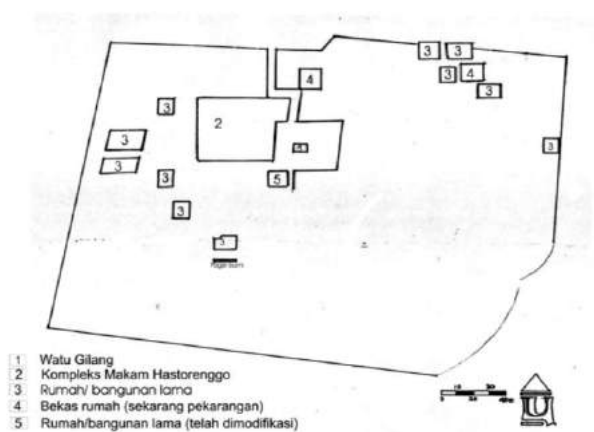
Cepuri is the core of the palace which is surrounded by thick and sturdy walls. This Fort that surround the palace was built of bricks and white stones which were arranged as high as 3.5 metres with a width of about 2 metres. The space of the fort is asymmetrical rectangle with curve on the east side that still remain until now and is known as 'Bokong Semar'. On the west, east and south sides there is also a moat or Jagang which further strengthensthe notion that this fort was a fortress.



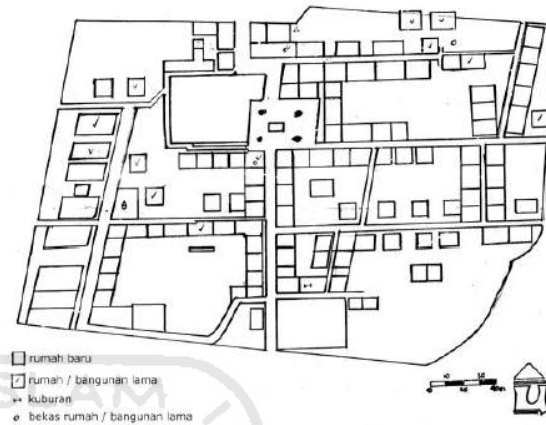
1ST PERIOD
(1578-1640)

1ST PERIOD

In the first period, a fort was built around two villages, namely Desa Ndalem and Desa Kedathon. at this time, the cepuri area was considered sacred and only used for members and royal relatives



2ND PERIOD
(1640-1934)



NOW

Figure 1. The Development of Cepuri from the 1st Period until Now
Source: Sugeng & Chawari, 2013

2ND PERIOD

NOW

when the royal capital was moved from Kotagede to Plered, several spatial changes were found. After the move of the capital, Cepuri, which was originally the seat of the sultan, was no longer a core part of the palace so its spatial values began to shift. even so, people still do not have the courage to settle in this area because it is still considered sacred (Sugeng & Chawari, 2013).

After 'Siti Sanggar' was opened for Hamengkubuwono VIII's Family burial ground, people began to dare to settle in cepuri. settlements grew along the main road, and began to fill the cepuri area, except for the eastern part of the fort, namely the Bokong Semar area which still had empty land (Sugeng & Chawari, 2013)

BENTENG CEPURI'S SIGNIFICANCE IN KOTAGEDE

The fading historical significance of the Benteng Cepuri among other heritage objects in Kotagede

Kota Gede is currently one of the main destinations for historical tourism in Yogyakarta. The existence of the remains of the Mataram Islamic kingdom which is still well preserved is evidence of the birth of this Islamic kingdom in Indonesia. even so, there are also some legacies that have begun to be disturbed along with urban growth. one of them is the ruins of the Cepuri fort which is currently experiencing a fading historical significance.

The lack of public attention to the existence of Cepuri Fort can be seen from the popular tourist routes that are often taken by the tourists. Currently, tourists who want to take historical tours usually start their journey by visiting the Mataram Gedhe Mosque, then continued by the Royal Cemetery in the same area, then to between two gates and ended with a culinary tour that has recently become popular in Monggo Chocolate Factory.

As can be seen in the picture, tourists are still not interested in extending their exploration route to the ruins of the Cepuri Fortress, the existence of the Cepuri Fort still cannot provide a memorable experience so it has not become the main goal.

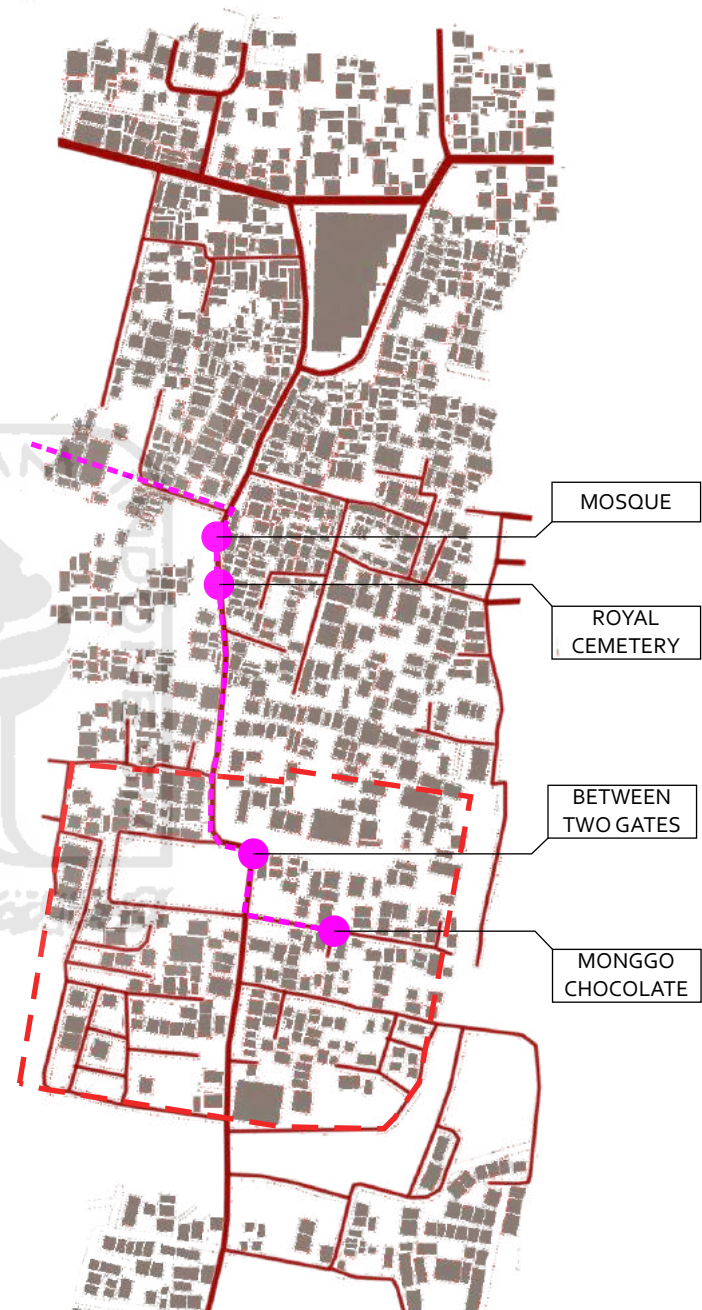


Figure 2. common tourism route in Kotagede
Source: Writer's document, 2021

- Benteng Cepuri Remnant
- Common Tourism Route

STATE OF BENTENG CEPURI HERITAGE SITE

Current issue and problem of Benteng Cepuri

Currently, there are only a few parts of the Benteng Cepuri that remains, including the east part of the fort that is known as Bokong Semar. Although the remnants of Benteng Cepuri are recognized as cultural heritage sites by the government, the efforts to make this site a tourist destination have not yet been implemented. This reflected by the number of new buildings around the site that have not been managed properly. The recently constructed buildings are also no longer following the traditional house principles, making the congeniality between the houses disturbed.



Figure 3. Bokong Semar Heritage Site
Source: Writer's document, 2021

The constructions of the buildings around Bokong Semar were done without considering the existence of the heritage site and environment, even on the west side of Bokong Semar there are school buildings that were built by cutting off the fort. Residential developments in the Bokong Semar area also resulted in the heritage site being overshadowed by the settlements and giving the impression of being poorly maintained. The absence of residents' emotional attachments towards this site makes them ignore their obligation to maintain the environment around the fort. as the result, the vacant land that should have been maintained has shift its function into a garbage dump.

The lack of knowledge of tourists about the Benteng Cepuri could also be caused by the improper access and poor visibility. to reach Bokong Semar heritage site, they need to go through narrow alleys and people's front yard. Also, this area does not yet have a parking lot that can accommodate a large number of vehicles if it was to be developed into tourism destination.



Figure 4. Bokong Semar Seen from Singosaren field
Source: Writer's Document, 2021



Figure 5. Settlement around Bokong Semar
Source: Writer's Document, 2021

CHANGES CAUSED BY URBAN GROWTH

How rapidly growing settlement affects Benteng Cepuri's accessibility and visibility

Currently, public awareness of the historical significance of Fort Cepuri is still very low. This can be seen from the existence of the remaining untreated fort Cepuri, even in some places people built their houses on top of the fort and also used fortress bricks to build their houses.

Another thing that can be seen is the condition of the environment around the fort that is not well maintained and some of the area even turned into a garbage dump, making it more difficult for tourists to appreciate the existence of the fort.

The new building around Bokong Semar has started to lose its identity. They were no longer following the principles of Javanese traditional house. The houses were also built so close to each other so they cannot have their own empty space. Consequently, they need to use empty spaces in front of their house to hang their laundry, making the area appear slum.

The growing settlement area has also affected the access and visibility in the Bokong Semar area. Although Bokong Semar can be seen quite clearly from the neighbouring district Singosaren, people that come from the main road will not be able to see the site since it is blocked by the houses. And because the houses around this area were built so close to each other, there is only limited space that can be used as access. People who want to visit this place need to walk between the buildings to reach the Bokong Semar site.

DEVELOPING BOKONG SEMAR AS TOURISM DESTINATION

Benteng Cepuri's Historical Value in Bokong Semar



As one of the districts that holds a lot of historical evidence, Kotagede continues to strengthen their identity as tourism destination by developing their heritage site potency. Kotagede offers do many tourist attraction, including historical, cultural and pilgrimage that have been popular with tourists since long time ago.

The preservation and development of heritage sites including Benteng Cepuri, of course, must be balanced with the provision of facilities that can support the tourism activities of the tourists.

According to the head of the community empowerment agency (LPMK), Mr. Alfn, the Bokong Semar area has been planned to be developed into tourist attraction in Kotagede. Bokong Semar's historical value and its location close to the main road are considered very suitable to be developed into a new tourism magnet of Kotagede.

The provision of facilities that can highlight the existence of Benteng Cepuri and the potential that exists around this area such as nature, culinary and culture is expected to attract the attention of tourists and promote the historical values of Benteng Cepuri. Mr. Alfn and the local authorities also expressed their aspiration to make a tourism facility that can be used by family so that Purbayan will not only be a special-interest tourist destination, but also general tourism without reducing its heritage value.

The development of Benteng Cepuri Heritage site, specifically in Bokong Semar area into a tourist destination is also expected to enliven the surrounding residents and bring new business opportunities for the people around the tourist area.

POTENTIAL OF PURBAYAN SUB-DISTRICT

Purbayan's Potential that is still overlooked

Kotagede, although known as a historical city, they also have a lot more potential. culture and art are things that also contribute to the development of Kotagede tourism. In the arts sector, Kotagede has many activities that are still commonly carried out within the community such as wayang, shalawatan and also dance and theater performances which are usually held at village events or important celebrations. One of the sub-district in Kotagede, which is Purbayan, actually has many art groups. however, due to the lack of enthusiasm from the community to participate in organizing events, they still do not have regular events for the artists to express themselves. as a result, they have to wait for events held outside the area or events from the local government to showcase their work.

Another potential of Kotagede that currently began to fade, is the silver craft. Although Kotagede is known as the city of silver, in fact the number of silversmiths in Kotagede is decreasing. according to the head of the community empowerment agency (LPMK) Pak Alifn, The number of silver craftsmen in Purbayan is currently declining. this is because the public's interest in silver has decreased and many craftsmen have switched to other materials that are easier to acquire and more appealing to the younger generations.



Figure 7. Art Events in Kotagede
Source: Travel Tempo.co



Figure 8. the silversmith in Kotagede
Source: Bisnis Tempo.co



Figure 9. Between Two Gates, one of the well-known historical tourism destination in Kotagede
Source: Google Maps

Mr. Alfin also said that, currently, the tourism sector in Purwayan has not been able to bring significant economic benefits to local communities. Popular heritage asset in Purbayan such as Between Two Gates are already well-known among local and foreign tourists, but because they are managed by certain community groups, they have not been able to provide benefits to the wider community. Pak Alfin as a community leader in Purbayan hopes that by developing BS into a center for historical and cultural tourism, it can not only improve the economy of the surrounding community and bring new opportunities for the people but can also preserve and introduce the potential that exists in Purbayan to the wider community.

INTERVIEWEES



Drs. Miftchul Alfin

Head of the community empowerment agency (LPMK)

The number of silver craftsmen in Purbayan is currently declining. this is because the public's interest in silver has decreased and many craftsmen have switched to other materials that are easier to acquire and more appealing to the younger generations.

At present, existing heritage sites in Purbayan can only provide benefits for groups who manage heritage assets and have not been able to provide economic benefits for the wider community yet.

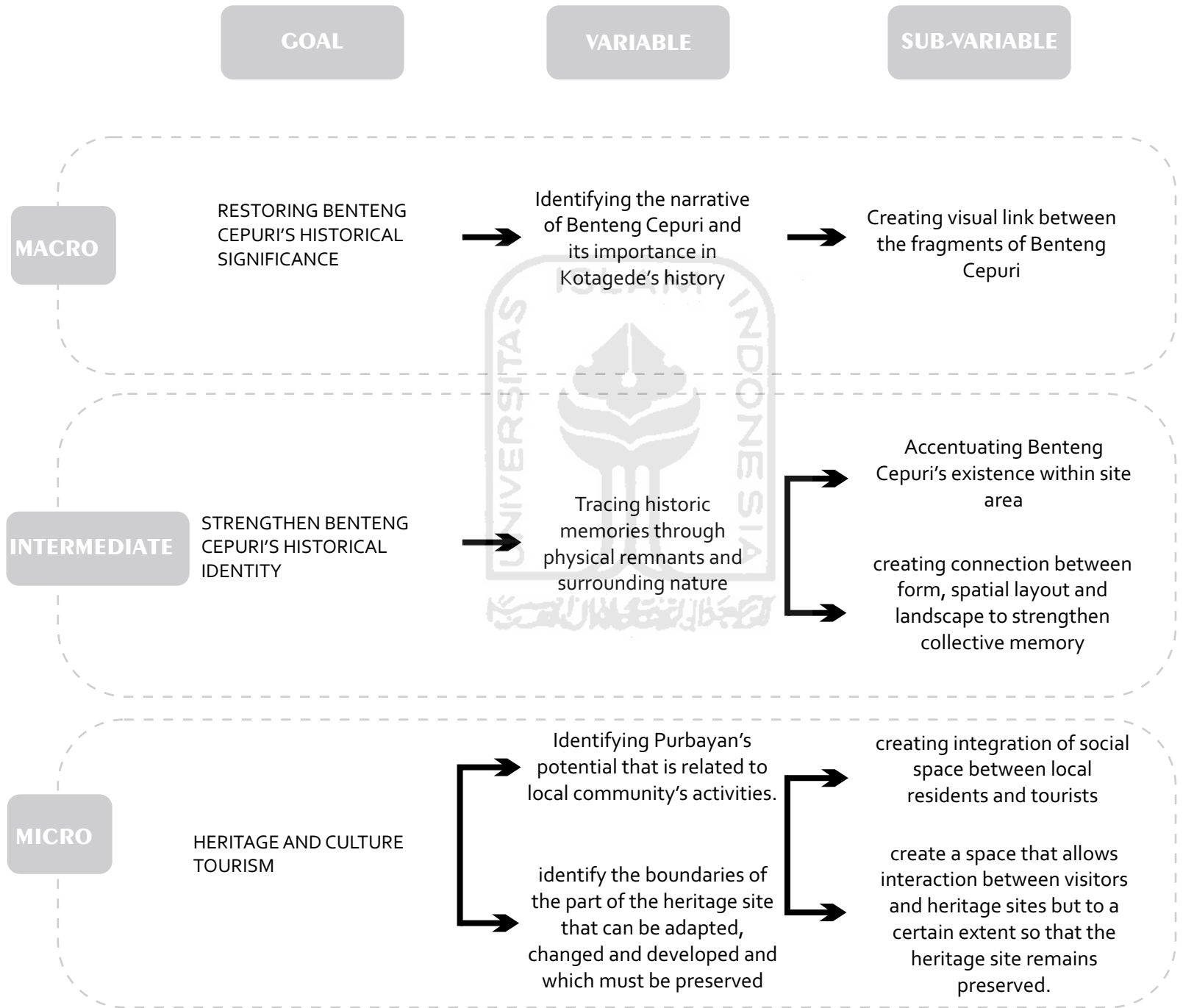


Mr. Erwito Wibowo

cultural heritage area management agency

Currently, public awareness of the existence of Cepuri fort as a heritage site is still low, so that many new houses were built without considering the existence of Cepuri fort.

GOALS AND VARIABLES



PROBLEM FORMULATION

BACKGROUND ISSUE

- Kotagede is a well-known heritage district in Yogyakarta
- Kotagede has various potentials such as arts, culture, culinary and also historical relics
- The existence of cultural heritage assets in Kotagede needs to be maintained and preserved so that it does not fade over time

NON-ARCHITECTURAL ISSUE

- the forgotten existence of the Benteng Cepuri as one of the historical evidences of the formation of the kotagede
- Population growth in Kotagede, especially Purbayan diminishes the significance of heritage objects
- community empowerment agency (LPMK) plans to develop Bokong Semar into a tourism destination.

ARCHITECTURAL ISSUE

- the need for facilities that can accommodate tourist's needs and activities
- the lack of utilization of the Bokong Semar area which has great historical potential
- Integrating the new building with the presence of the Bokong Semar heritage site

GENERAL PROBLEM

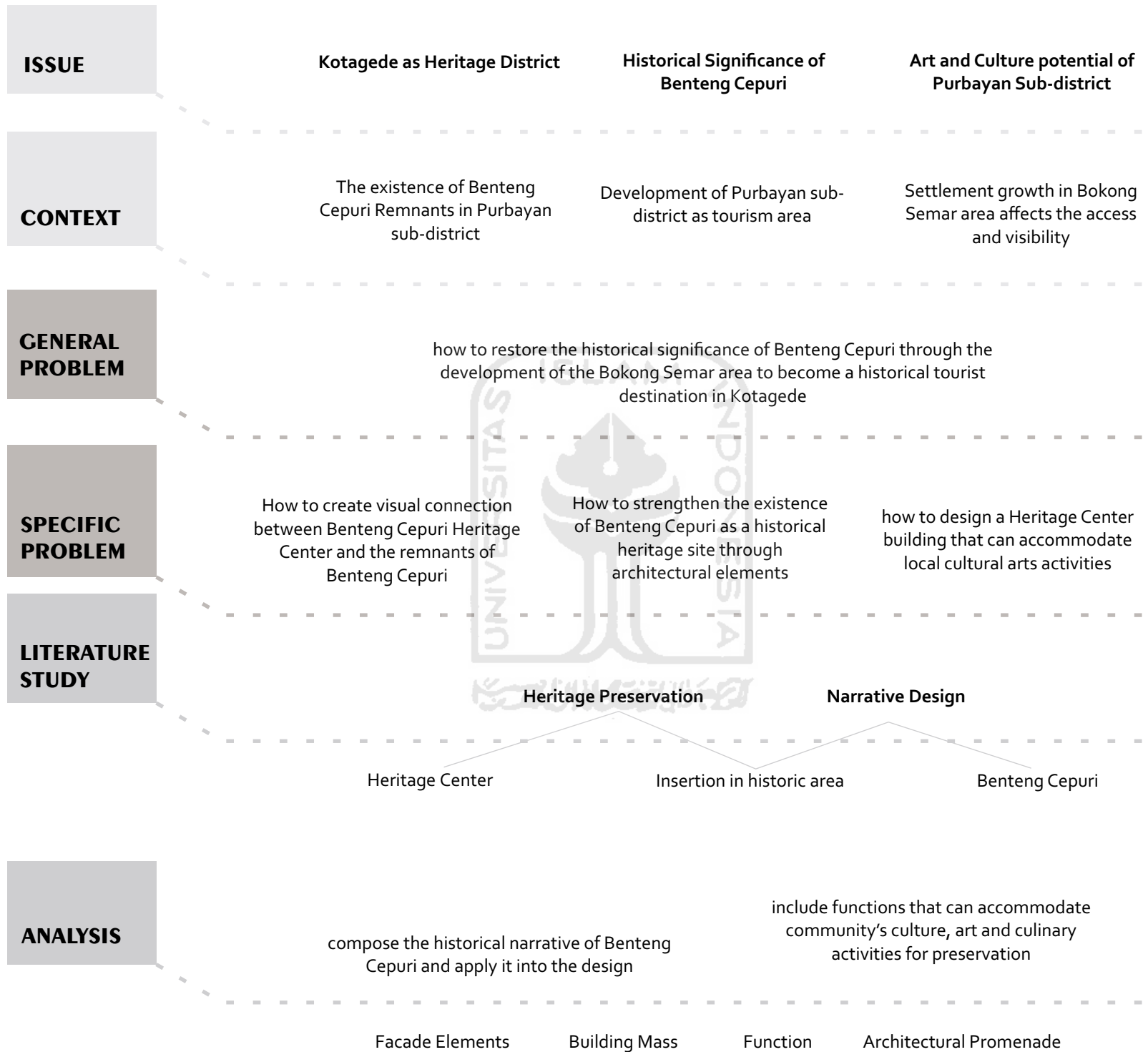
how to design a cultural center building in a heritage area with a contextual architecture approach to create harmony between buildings and other historical attractions in Kotagede?

SPECIFIC PROBLEM

- how to design a cultural center building that can strengthen the existence of the Bokong Semar site through a contextual architecture approach?
- How do you design a cultural center that can accommodate Kotagede arts and culture activities with a contextual architecture approach so that it is in harmony with the surrounding environment?

DESIGN FRAMEWORK







PROJECT LOCATION

PURBAYAN SUB-DISTRICT

Kotagede, Yogyakarta

Purbayan Sub-district



Bokong Semar Heritage Site

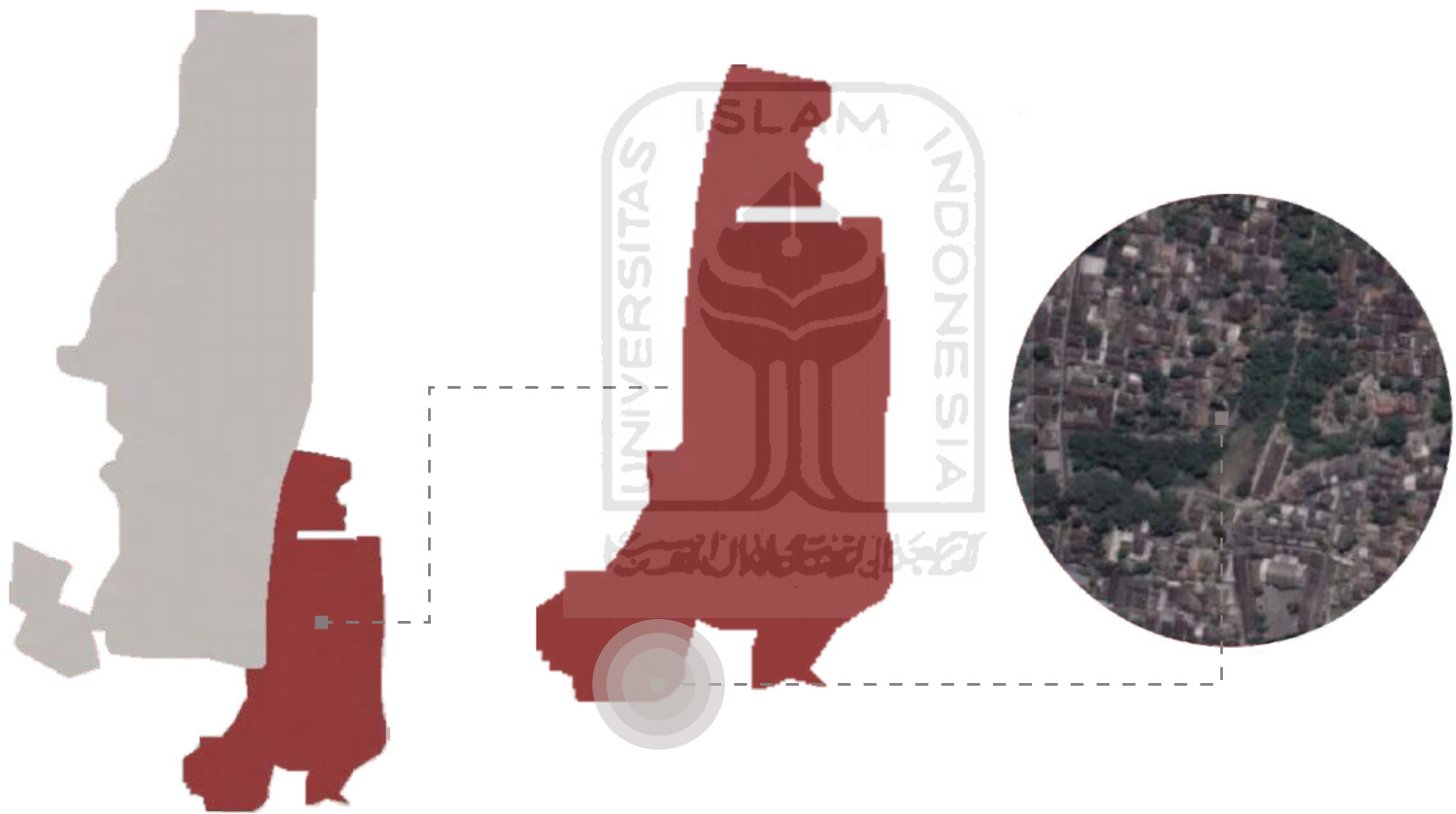


Figure 10. Site Location
Source: Writer's Document, 2017

PURBAYAN SUB-DISTRICT

Kotagede is a historical city in Yogyakarta which was once occupied by the Mataram Kingdom. The project site is located in one of the heritage areas on the southern part of Kotagede, Purbayan sub-district.

Purbayan boundaries:

- **North:** Banguntapan Village, Banguntapan District, Bantul Regency
- **South:** Singosaren Village, Banguntapan District, Bantul Regency
- **West:** Jagalan Village, Banguntapan District, Bantul Regency and Prenggan Village, Rejowinangun Village, Yogyakarta City
- **East:** Banguntapan Village, Banguntapan District, Bantul Regency

This area is part of the heritage city of Kotagede which has various kinds of potential for the prosperity of its people, such

as the potential for art, culture and also history. In this area, there are many historical relics that were left from Mataram's reign, such as the remains of the Cepuri fortress, Watu Gilang and Watu Gatheng, as well as old-style houses.

These artifacts are included in a series of historical tours in Kotagede.

Specifically, the site used in this project is included in the area of Kampung Alun-Alun. The site is located in a strategic location, connected to the main road of the Grand Mosque. The area is a dense residential area with several home-based businesses that sell foods, services and handicrafts. Although there are no big industries in Purbayan, economic activity is still moving with the existence of the silver handicraft industry in and around Purbayan sub-district.

SITE CONTEXT

- 1 Site Location
- 2 Watu Gilang and Watu Gatheng
- 3 Tomb of Hasta Renggo
- 4 Coklat Monggo
- 5 Benteng Cepuri
- 6 Between Two Gates
- 7 Masjid Gedhe Mataram
- 8 Kotagede Market

The location of the site is 750 m from the Kotagede market. In this area, there are so many potentials available, both those that are well known to the wider public and those that are still not widely known.

Near the site, there is the tomb of Hasta Renggo which is part of the Kotagede pilgrimage tour. then, there are also historical relics such as Watu Gilang and Watu Gatheng as well as the remains of the Cepuri fort. Other than that, we can also see the life of the local people who still maintain their traditional culture. This can be felt through the beautiful village atmosphere and friendly community.

On average, along the road to the site is still occupied by residential houses. there are also several small commercial buildings such as warungs, restaurants, and also a jewelry shop. The new buildings along the Jalan Masjid Besar mostly have a modern architectural style, with a maximum height of 2 floors.





Figure 11. Road to Kotagede Market
Source: Google Maps, 2017



Figure 12. Near Hasta Renggo Cemetery entrance
Source: Google Maps, 2017



Figure 13. Buildings along Masjid Besar Street
Source: Google Maps, 2017



Figure 14. Kotagede's Tourism Destinations
Source: Writer's Document, 2017

MACRO ANALYSIS

HISTORICAL LANDMARKS IN KOTAGEDE

Bokong Semar is a part of Benteng Cepuri which is a legacy from the Mataram kingdom era, this fort used to surround the core part of the palace which was once the center of the Mataram kingdom in Kotagede. cepuri was also one of the 4 components of the city in the principle of 'Catur Gatra Tungga' (4 components in one unit) together with the Mataram Gedhe Mosque, the Market, and also the town square.

Usually, visitors explore Kotagede through several routes: spiritual, historical and architectural tours. The most famous and visited landmarks are the Grand Mosque and the Royal Cemetery which are also often used as starting points for exploration of Kotagede. Then, there is also between two gates which displays the architecture of Javanese houses that are still well preserved. Meanwhile, there is also the remnant of the Cepuri fort which is still visible to the south of the Royal Cemetery, namely '*Benteng Jebolan Raden Rangga*' which is often passed by visitors.



Kotagede Marke



Masjid Gedhe Mataram



et



Benteng Jebolan
Raden Rangga



Royal Cemetery



Watu Gilang and Watu Gatheng

MACRO ANALYSIS

ARCHITECTURE OF KOTAGEDE

MATARAM MOSQUE



The grand mosque complex of Dikotagede is an old complex located south of the Kotagede market. Until now, this building is still well maintained as it was when Kotagede was still the capital of Mataram. as a whole, this building tends to use the *Keraton* architectural style.

Characteristic:

- Three-tiered pyramid-shaped roof
- Rectangular Plan
- Have Porch (Serambi)
- Javanese(4 pillars, form)-hindu(gate) architectural style

ROYAL CEMETERY



Then, as a link between the mosque and the cemetery, there is a gate which is an architectural element that stands out and attracts many tourists. Besides the gate that connects the mosque and the tomb, there are also 2 other gates on the north and south sides.

Characteristic:

- Gate that can be seen in ancient Javanese and Balinese architecture.
- gate is divided into 3 parts, namely the head, body and feet

TRADITIONAL JAVANESE HOUSE



Kotagede is an area that still adheres to the Javanese tradition. This can be seen from the existence of traditional Javanese houses that are still well preserved. In general, traditional Javanese houses can be divided into 4 depending on the shape of the roof, namely Joglo, Limasan, Kampung and Panggang Pe.

Characteristic:

- Saka guru in the center of the building
- The basic plan of a Javanese house is a square.
- Proportional wood arrangement.

KALANG HOUSE



According to legend, the Kalang people were prisoners of war brought by the great sultan in the early 17th century.

Even though they are isolated, these people can still connect with the community because their skill is still needed. Because of their skill, the Kalangs by the Sultan Agung were placed in a special position, no wonder that most of these people have houses that tend to be nice and luxurious.

Characteristic:

- Following Javanese and Indisch architecture style.
- Giving big and luxurious impression.

MICRO ANALYSIS PROPOSED SITE



Figure 15. Site Location within Benteng Cepuri
Source: Writer's Document, 2021

The site to be used is a 1,772 m² land located in Purbayan Village, Kotagede. precisely to the west of the ruins of Benteng Cepuri which are still intact and commonly referred to as Bokong Semar. This land is land that is planned to be purchased by the village community empowerment agency (LPMK) financed by Danais and is planned to be developed into a new tourist destination in Kotagede, especially in Purwayan village.

The geographic location of the site is on the border between Kelurahan Purbayan and Kelurahan Singosaren in Bantul. The boundary line of the site in the southeast and south follows the form of Bokong Semar archaeological heritage, in the west it is bordered by Ndalem Elementary School building and in the north it is bordered by a village.



Figure 16. Zoning of Bokong Semar Area
Source: Google Earth, 2021

1



The south side of the Bokong Semar wall is directly adjacent to a field that enters the Singosaren area, Bantul. The position of the field is lower than the site, so we can see a wider view from the site.

2



The housing located around the site is a simple one-story house with brick walls and a triangular clay roof.

3



The buildings that are located along the main mosque road consist of modern residential buildings and several small shops. There are some buildings that have two floors. Many houses' walls are coloured with striking colours.

MICRO ANALYSIS SITE CONDITION



6

3

2



1

4

5

4



The site is a freehold land which mostly still empty. however, there is one house that belongs to a resident that has been built there.

5



The land is still filled with large fruit trees such as bananas, oranges, guavas, etc. there are also grass plants that grow on the edges of the land, following the curved shape of the Bokong Semar fort.

6



The local people's sense of responsibility are still low, so the empty land around Bokong Semar Heritage site is converted into garbage dump. the picture shows the garbage that scattered around the site.

MICRO ANALYSIS VIEW

Because the location of the site is higher than the Singosaren area in the east, we can see a wider view of the houses and field in Singosaren which is said to have been a moat or '*jagang*' during Maratam Era as a whole. to the west of Bokong Semar, the view is covered by lush trees, while in the north the view is only the houses of residents





UNIVERSITAS IS
DON

MICRO ANALYSIS
ACCESSIBILITY



		MAIN STREET (JL. MASJID BESAR)
		ALLEYWAY
		SITE

1



Figure 17. Masjid Besar Street
Source: Writer's Document, 2021

Although Masjid Besar street is the main street, the width itself is not really wide, only about 5-6 meters. it can be passed tightly by 2 cars. the street uses rectangular paving block.

2



Figure 18. Access to the site from west
Source: Writer's Document, 2021

To access the site from west, we need walk through the alley between people's houses. the road already uses paving block like the main street. the width is only about 1,5-2 meters and can only be passed by 2 people or 1 motorcycle.

3



Figure 19. Access to the site from north
Source: Writer's Document, 2021

The road that connects the site to the narrow alley in the north is included in the site area. the width is only about 1,5-2 meter. Although the north alley can be accessed by car, the pathway that leads to the site can only be accessed by motorcycle or 2 people.

MICRO ANALYSIS

CONDITION OF BOKONG SEMAR

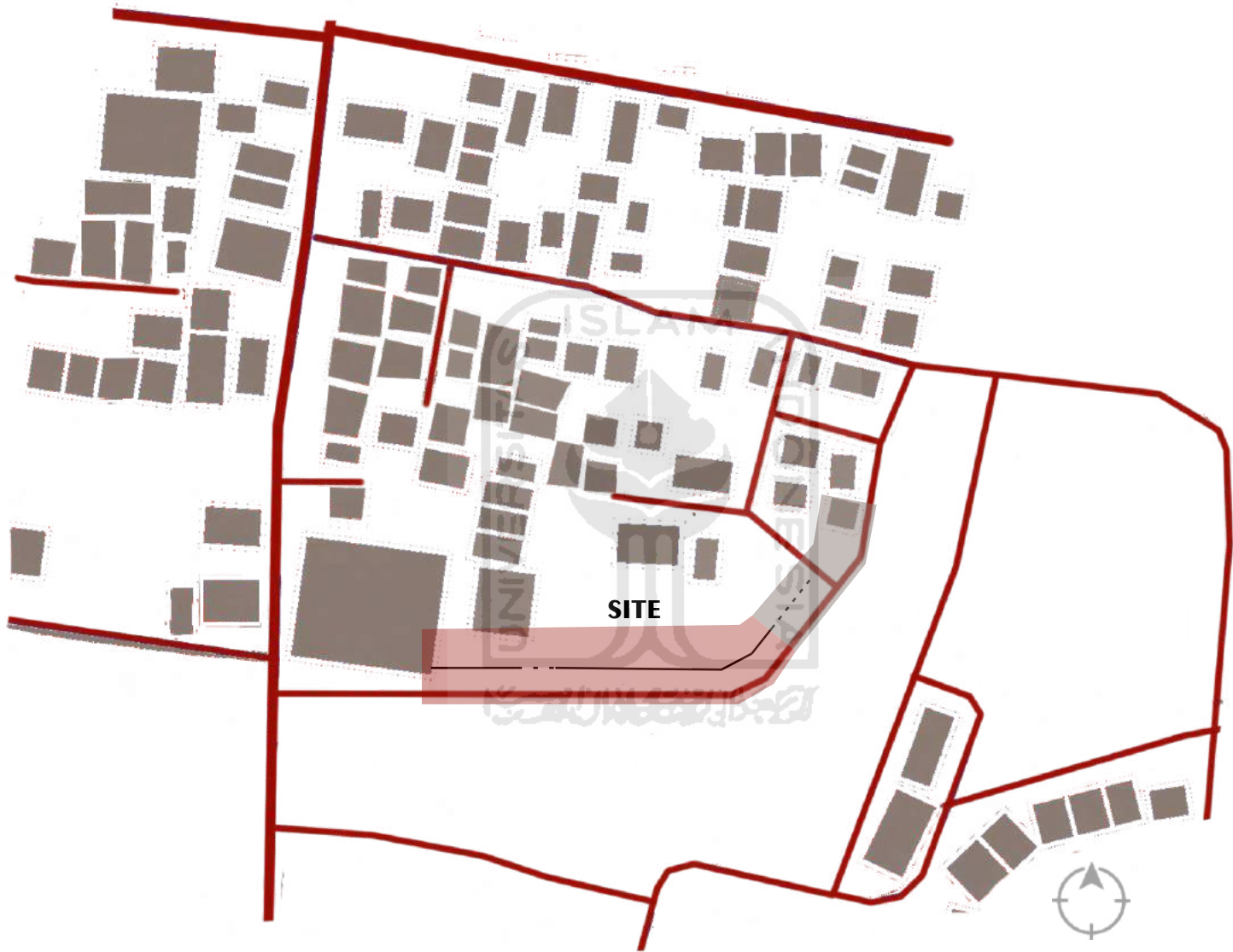
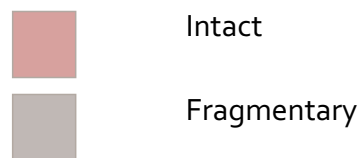


Figure 20. Bokong Semar in Benteng Cepuri
Source: Writer's Document, 2021





although there are some parts that are not intact, almost all parts of the Bokong Semar are still preserved and can be seen clearly. Bokong Semar can be seen from 2 sides, namely from the north where the site is located and from Singosaren, Bantul in the south.

From the site, we can see that the part of the fort that is not intact leaves only 20 cm high fort wall while in the part that is still intact, the height of the fort is approximately 1 meter from the ground surface of the site. Currently, the existence of the fort is preserved by providing 50cm border on the right and left side of the fort to prevent new building from disturbing the heritage site.

On the east side or in the Singosaren area, there is a bunch of bamboo trees that grows. According to local residents, these bamboo trees used to grow thickly along the fort and were part of the fort's existence, but were later felled by the local government.

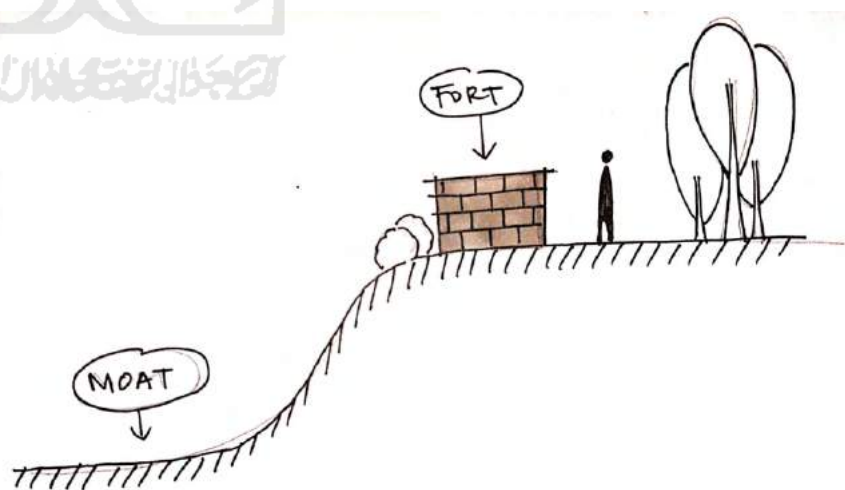
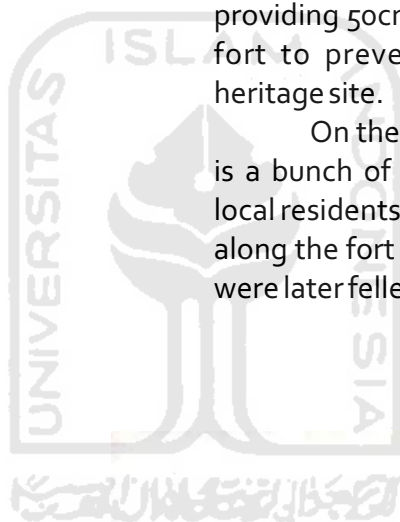


Figure 21. Contour section that shows the existence of 'jagang' or moat that used for defense purpose
Source: Writer's Document, 2021

SWOT ANALYSIS

NON-ARCHITECTURAL

S

Kotagede, A historic old city that is recognized as a cultural heritage area, has various kinds of artistic, cultural and historical potential that can be developed into tourism destinations.

W

Lack of public awareness and participation in the preservation of heritage sites in their environment has resulted in the loss of historical significance of heritage sites.

O

Plan to provide tourist facilities in BS by the Community Empowerment Institution (LPMK) financed by the Special Fund (Dana Keistimewaan).

T

The development of the Bokong Semar site into a cultural tourism area can bring in large numbers of tourists who can potentially damage the environment and Heritage Site's existence.

SWOT ANALYSIS

ARCHITECTURAL

S

natural potential in the site and the existence of a Bokong Semar heritage site that has historical significance as part of Cepuri Fortress.

W

despite being located near the main road, access to the site is still inadequate. there are only narrow roads that can only be traversed by pedestrians and motorbikes

O

the existence of a heritage site on the site can provide an interesting tourist experience for tourists. if combined with art facilities, it can become a place of preservation of art, culture and history.

T

The unavailability of parking space and good access can interfere with the comfort of visitors and can lead to misuse of residents' land by tourists as parking and circulation

TYPOLOGY STUDY

HERITAGE CENTER

"Heritage" according to the United Nations Educational, Scientific and Cultural Organization (UNESCO) is the unique identity of a person or group in the form of values, traditions, culture and artifacts passed down from previous generations.

Heritage Center in general means a facility that accommodates cultural heritage in one place. according to the Indonesian heritage preservation charter which Ciloto declared in 2003, heritage is an heirloom or something that inherited from generation to generation. Indonesia's heritage which covers natural heritage, cultural heritage and landscape heritage. In this context, heritage can be in the form of folklore, dance, culinary, traditional music, buildings and so on.

Heritage Center buildings have several functions, including:

- Place to care for, maintain, develop and preserve heritage assets
- Place to show evidence of the high value of culture and heritage assets
- Place of study and research activities
- Place for information and education sources
- Place for tourism
- Place to unite people in fostering a sense of togetherness and love, caring for cultural heritage
- Place to accommodate cultural activities

In this project, a heritage center is defined as a place that can educate visitors about the existence of heritage objects of Benteng Cepuri and other cultural heritages in Purbayan such as craft, music and dances which can still be found in Kotagede, especially Purbayan Village. The heritage center in this project also provides supporting facilities based on Purbayan's potential such as a place to rest and eat that provides traditional Kotagede food to introduce local culture to tourists and enhance the visiting experience.

SUPPORTING FACILITIES: MUSEUM

At the International Council of Museums (ICOM) conference, a museum is defined as an institution that is not for profit, permanent in serving the community related to community development and open to the public, which obtains, cares for, exhibits for the purposes of learning, education and recreation.

Function

The function of the museum which is located at Benteng Cepuri Heritage Center refers to the 11th ICOM General Conference in 1974 which explains that the museum has the following functions:

1. conservation and preservation
2. Collecting and safeguarding cultural heritage
3. documentation
4. distribution and distribution of knowledge to the public
5. introduction to culture
6. Visualization of cultural heritage

Museum Collection

The collection displayed in the museum at the Cepuri Fortress Heritage Center is the existence of the Cepuri Fortress heritage site which is equipped with a gallery that explains the history of the fort since it was built during the Mataram Islamic kingdom in Kotagede, the restoration process and its condition to this day. the delivery of Historical stories are also supported by using digital screens and pictures that arranged sequentially to illustrate the journey of Benteng Cepuri.

The way to visualize or convey the heritage object on the site is done in a way that allows visitors to observe the heritage object clearly but still with certain limitations to avoid physical damage to the fort.

Circulation

Although the main object on display is an immovable object, which is Benteng Cepuri, the written information delivery technique is arranged sequentially. circulation is one of the most important objects in the room layout. circulation affects the movement space of visitors in arranging a showroom or display space. in his book *Museum Building*, Laurence V. Coleman (1950) explains that there are several types of circulation that can be applied in museum buildings:

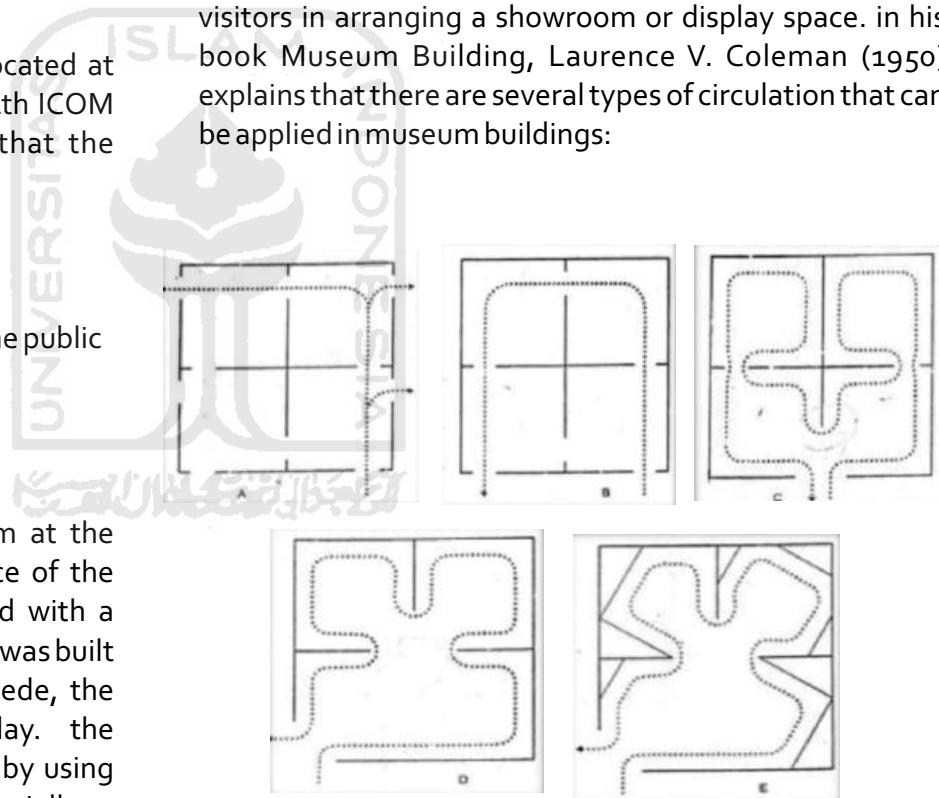


Figure 22. Types of Circulation in Museums
Source: *Museum Buildings*, 1950

SUPPORTING FACILITIES: OUTDOOR STAGE

The Minister of Tourism of the Republic of Indonesia Number 17 of 2015 defines a performance space as the provision of a place indoors or outdoors equipped with facilities for art performance activities. The vital space in the performance space that accommodates the performers and spectators' activities is called the stage.

Stage setting is also called scenery. The warning at the place where the play takes place is manifested by the stage and performance. the arrangement of the stage must be adjusted to the activities displayed, therefore, before carrying out the arrangement of the stage, the stage stylist needs to learn about the performance hall.

StageType:

Stage based on shape:

(A). Arena: According to Santoso in *Seni Teater jilid II*, the arena stage is a stage where the audience is in a circle around the stage. the goal is so that all players can be seen from every side.

arena stage is usually made openly (Outdoor). The essence of using the arena stage is to bring the audience and players closer together.

There are several developments from the circular arena stage which, although they are different from one another, still have the same goal of bringing the players and the audience closer together.

(B). Proscenium

The proscenium stage can also be referred to as the frame stage because the audience witnesses the actors' performances in the play through the proscenium frame or arc. This frame, which is attached with a screen or curtain, separates the acting area of the performer and the audience, resulting in a one-way show.

with this separation, preparatory activities backstage can be carried out without the knowledge of the audience.

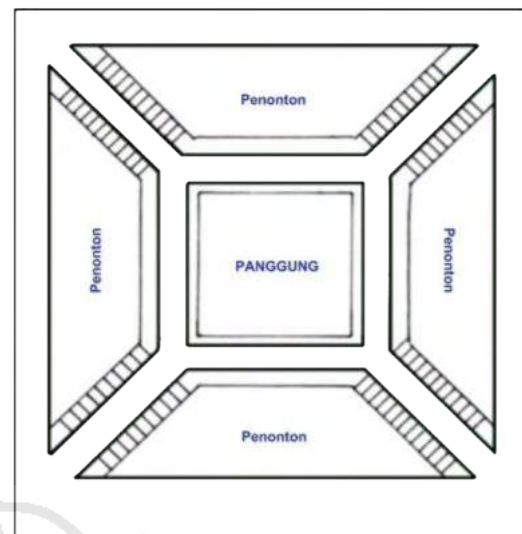


Figure 23. Arena Stage
Source: Seni Teater Jilid II

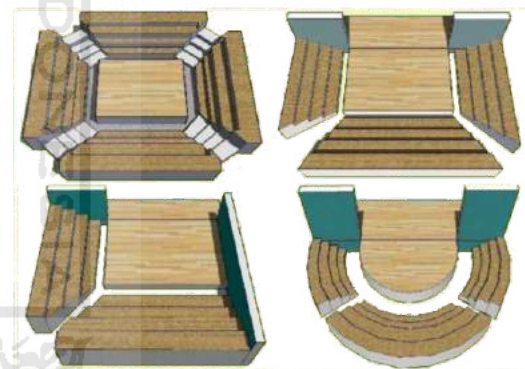


Figure 24. Arena Stage Types
Source: Seni Teater Jilid II

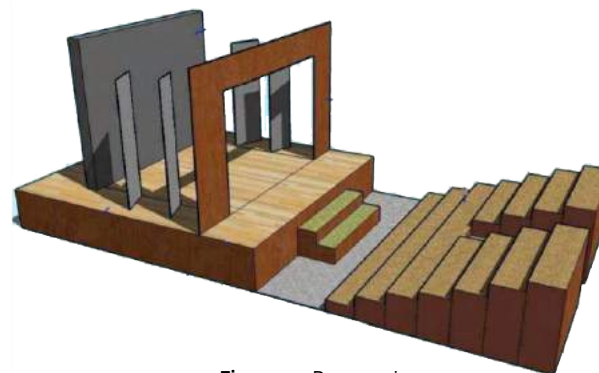


Figure 25. Proscenium
Source: Seni Teater Jilid II

PURBAYAN'S POTENTIAL **ART ACTIVITIES**

Besides being known for its history, Kotagede also has a lot of art and culture potential which is still preserved by its people. Cultural festivals and celebrations are the community's attempt to maintain their culture and actualize local identities. Until before the 2020 pandemic, the Kotagede community routinely held the Kotagede Festival. This festival is held to preserve and also provide education about arts and culture in Kotagede. This festival is also expected to advance the Kotagede economy by displaying the potential that exists.

there are several art performances that often held in Kotagede:

FESTIVAL BUDAYA KOTAGEDE

The Kotagede Cultural Festival is an event held as a means of developing and promoting the potential for arts, culture and history in Kotagede. activities that are usually carried out in this event include carnivals, art performances, seminars, painting competitions, etc.

SRAWUNG KAMPUNG

srawung kampung is the culmination of the anniversary celebration of the city of Yogyakarta in Kotagede. Activities that are usually carried out in this event are parades, art performances and competitions between villages to show the artistic potential of each village.

ANNIVERSARY CELEBRATIONS

The event to celebrate Indonesia's anniversary is always crowded with all villagers. Besides ceremonies, competitions and performances are usually held to enliven the event

PURBAYAN'S POTENTIAL ART PERFORMANCES

Besides being known for its history, Kotagede also has a lot of art and culture potential which is still preserved by its people. Cultural festivals and celebrations are the community's attempt to maintain their culture and actualize local identities. Until before the 2020 pandemic, the Kotagede community routinely held the Kotagede Festival. This festival is held to preserve and also provide education about arts and culture in Kotagede. This festival is also expected to advance the Kotagede economy by displaying the potential that exists.

there are several art performances that often held in Kotagede:

1. Srandul

Srandul, which is a distinct version of Ketoprak, a folk dance-theater performance with spontaneous dialogue between the audience and the actors, developed following the reform era (Utomo, 2014). Srandul performances are actually attached to the local community because they are usually performed at large community events such as circumcisions, weddings or welcoming guests. Currently, Srandul is also often shown for tourism purposes.

Srandul is usually played by 15 people, 6 musicians and 9 players. but can be adjusted according to existing events. This performance is also held during the night time. one of the interesting part of the performance is the use of torch (Obor) or *Oncor*. in the beginning of the performance, Srandul Performer will dance around the oncor while singing *Tembang* (Javanese traditional song) that contains prayer so the show will run smoothly. Then, these oncor will be used as lighting throughout the show.

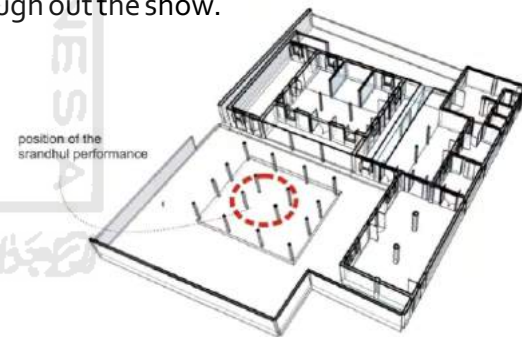


Figure 26. Srandul Performance space in *pendapa*
Source: Utomo, 2014



Figure 27. Srandul Performance
Source: purbyankel.jogjakota.go.id

2. Keroncong

keroncong is a typical Indonesian musih which in its appearance uses string, flute and vocal instruments. Keroncong comes from the Portuguese music that was introduced in the archipelago since the 16th century. Nowadays in Kotagede, keroncong music is one of the most popular arts in the community. this can be seen from the holding of the Keroncong Kotagede Market. According to the head of the DIY tourism office, quoted from the Jogja Daily website, Kotagede keroncong music is the forerunner to the growth of keroncong music in Yogyakarta so that it can become a big capital to become a tourist attraction for Kotagede.



Figure 28. Keroncong Performance in Kotagede
Source: phinemo.com

3. Wayang Tingklung

Wayang Tingklung is an art performance originating from Kotagede, Yogyakarta. This traditional art is also often referred to as 'Wayang Cangkeman' because all parts of the performance such as the *nyinden* (singing), *ndalang* (puppet) and *nggamel* (gamelan) are performed by the Dalang. in other words, all the sounds in this performance come from the dalang's mouth without any other instruments. although it sounds unique, nowadays Wayang Tingklung performance is rarely heard. this is because in the Kotagede area, the Wayang Tingklung performance is only performed simply in the middle of a residential area. this show is usually only held in a Joglo building without tents and chairs. It seems that the procuring of this show is only came from the initiative of residents who still care about the existence of Wayang Tingklung.



Figure 29. Wayang Tingklung
Source: jagalan.bantulkab.go.id



Figure 30. Sanggar Kegiatan Warga Sukowati
Source: Google Maps



Figure 31. Balai Pintar Maharani, Purbayan
Source: Purbayankel.jogjakota.go.id



Figure 32. Living Museum Budaya
Source: Zunan Arief in Google Maps, 2018



ART AND CULTURAL FACILITIES IN PURBAYAN

Currently, in Purbayan there are several multipurpose facilities that are often used for art performances, some of which are the Sanggar Masyarakat Sukowati in RW 05, Pendopo Maharani in RW 04 and Living Museum Budaya. for larger events, it is usually held in the field with a non-permanent stage. although there are several pavilions that can be used as stage space and also space for residents' activities, no space specifically used as a community stage space has not been provided.

PURBAYAN'S POTENTIAL CULINARY

Kotagede also has various types of specialties. some typical foods are still easy to find today, but some are rare.

Some of the typical foods that can be found in Kotagede are:

1. Kipo

Kipo is a Kotagede food that has existed since the typical days of the Mataram kingdom. This food is a snack made from rice flour and has a coconut sugar filling.

2. Legomoro

This traditional snack is made of sticky rice wrapped in banana leaves and tied with bamboo rope. This food is also a snack that often appears at weddings.

3. Kue Kembang Waru

This food is a snack that was once a response to luxury food. the shape is similar to the flower of the eight-petaled hibiscus tree. Currently, Roti Kembang Waru is still easy to find in Kotagede.

4. Ukel and Banjar

Ukel and Banjar in the interviewee are the same food. the only difference is the refined sugar finishing on the ukel. This cake, which is a typical Kotagede food, is a snack made from wheat flour and eggs.



Figure 33. Kipo, Kotagede's traditional snack
Source: abaditour.com



Figure 34. Legomoro
Source: kelakarsenja.sg



Figure 35. Roti Kembang Waru
Source: seputarmakanan.com



Figure 36. Ukel and Banjar
Source: Telusuri.id

LITERATURE STUDY

HERITAGE CONSERVATION

DESIGN THEORIES

HERITAGE CONSERVATION

Conservation is a process to maintain and manage changes in a heritage asset in a way that is appropriate to increase its significance. Basically, what can be called conservation is all means done to prevent damage in this goal also includes management of changes and object presentation so that its value is easily understood without distortion (Feilden, 2003).

conservation (or preservation, in a more precise sense) of sensitive and important buildings or sites sometimes requires absolute physical preservation, but this is rarely done because most heritage assets are capable of being adapted and cultivated without losing their significance. This is indeed very important, considering that changes are often made in the development of heritage assets so that they continue to develop and receive investment.

Besides maintaining the significance of heritage objects, sustainability is also something that must be considered in the design system. In 1983 the United Nation's Brundtland Commission defined sustainable development as "development that meets the needs of the present without compromising the ability of the next generation to meet the needs of the future. **Sustainable development will contribute to the protection and enhancement of the historical environment. To carry out sustainable development can be done by seeking existing positive improvements in the historic environment.**

In the scope of cultural heritage, the value of preservation is critical in determining what should be preserved and how. **Different ways of implementing preservation can lead to different values such as artistic, aesthetic, historic and also economy.** Of course, the main purpose of preserving heritage objects is to maintain their significant value. however, many agents involved in the preservation process such as property owners, investors and governments are concerned with the economic aspects of preserving heritage assets.

Cultural heritage can be assessed in many ways, both in terms of beauty, emotional satisfaction that comes from experiencing a heritage site, to the value that brings income, employment and training opportunities (Heritage Counts, 2003). One of the economic values that comes from heritage preservation can be developed through heritage tourism. At present, it is believed that heritage tourism is one of the leading sectors in this post-industrial economic era, and its products are offered through 'experiences'. what is clear, identification, protection and enhancement of cultural heritage is the basis of the success of tourism.

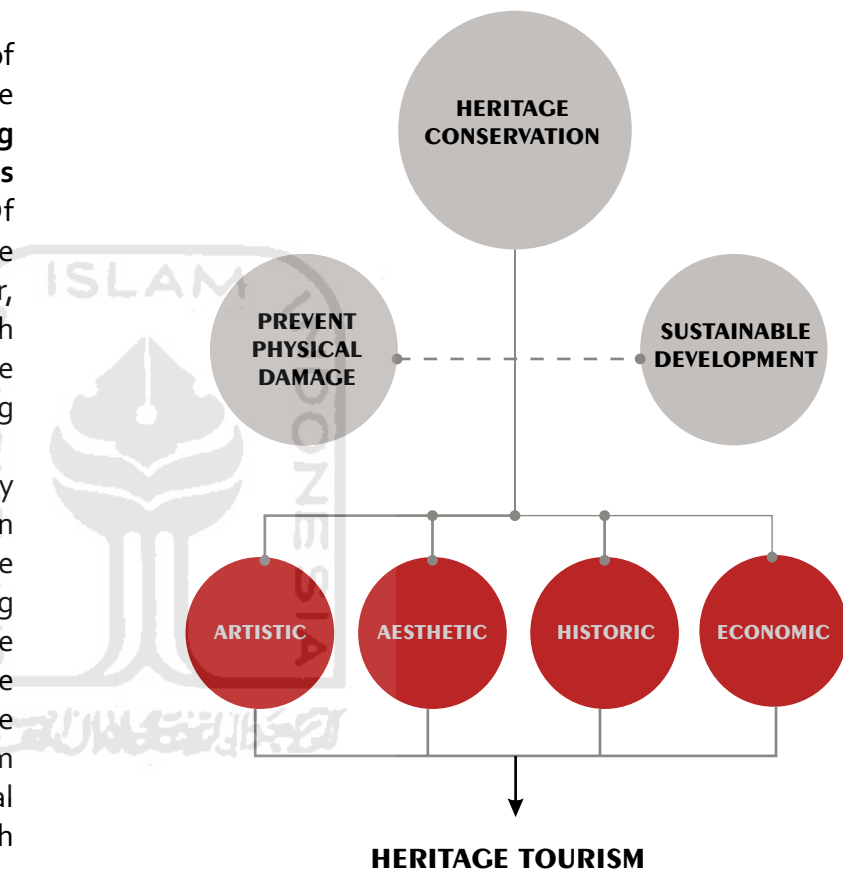


Figure 37. Heritage Tourism as An Attempt to Conserve Heritage Assets
Source: Writer's Document. 2021

LITERATURE STUDY

DESIGNING IN HISTORIC AREA

Knowing the relationship between the building and the environment is very important in architecture. it is necessary to consider the surrounding context and environment in the process of building design so that there is no contradiction in terms of function, proportion, material, etc. (Abedi and Iravani, 2015).

Contextual does not allow a building to stand in a place without paying attention to the objects around it. Contextualism in architecture consists of physical and symbolic elements by considering the human connection to real and intangible elements such as spiritual and conceptual elements (Widati, 2015).

INSERTING NEW BUILDING IN HISTORIC AREA

When adding a new building to a historic area, we need to consider carefully the context of the area where the building will stand and how our building will fit in between the old buildings.

Norman Tyler et.al (2018) said that in general, there are 3 approaches that can be taken in adapting a new building to its surroundings, namely Matching, Contrasting and Compatible

- **Matching:** in the matching approach, the architecture follows or replicates the old building. When making additions, the design used will have the same style as the old building which was realized through the use of similar materials, and detailing at least on the exterior. Some critics question this approach, saying that the new building cannot be seen clearly among the old buildings, and can trick observers into thinking that the new building is an old construction. even so, there are also those who think that this approach is the right approach to be applied in historical buildings because it is easy to accept and appropriate.
- **Contrasting :** the contrasting approach holds the principle that the old building must be different from the new building because both are products of their respective times. this approach is often seen using simple, modern surfaces to contrast with the details of old buildings. buildings designed with this approach usually have an identity of their own, and architects rarely pay attention to the context because they think that one day the new building will become a part of history itself.

The contrast of buildings in a historic setting can produce two possibilities: they may become vocal points in an area and increase the value of the area, or if planned improperly can destroy the rhythm and layout of the area in which they stand. Although it is risky, this approach can be applied to certain sections to accentuate the interesting features of a building. for example, through the shape and composition of the building mass

- Compatible: compatible design is the most commonly applied approach. this approach demonstrates the new design sensitivity of a compatible historic structure in terms of size, scale, color, materials and character of the surrounding buildings. for example, historical buildings that have unique details are simplified in the application of compatible designs. This approach is considered to be a middle ground between matching and contrasting because it follows the principles of the existing building but still has its own character.

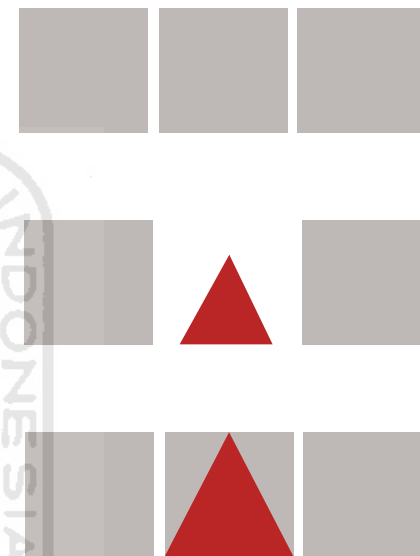


Figure 38. 3 Approach of Designing in Historic Context by Norman Tyler: Matching, Contrasting and Compatible
Source: Interpretation by Writer from Norman Tyler (2018)

FACADE ELEMENTS

	OPENING PROPORTION	MATERIAL	COLOR
MATCHING	repetition of building opening use the old building facade ornaments	Using the same material as the surrounding building	Using the same color as the existing building
CONTRASTING	the proportion of openings does not follow / differ in the pattern of openings in the surrounding buildings	Using new and different material that contrast to the material of existing building	Using different/contrasting color as the existing building
COMPATIBLE: -Harmonious	using similar facade elements for example, repeating the rhythm of the heights of the openings	using the same building material, but minimized in ratio or pattern	Using similar color/color within the same shade
-Contrast	the proportion of openings does not follow / differ in the pattern of openings in the surrounding buildings	Using different building materials from the surroundings that have the same motive but simplified.	Using different/contrasting color as the existing building

BUILDING MASS

	HEIGHT	BORDER	FORM
MATCHING	the height of the building is the same as the height of the existing buildings.	the boundary distance is the same as the existing building	the building form has the same ground figure as the existing building
CONTRASTING	The height of the building is 50% -70% higher or lower than the existing building	does not conform to the surrounding borders	Abstract mass formation and the formation of a new figure ground that is different from the existing building.
COMPATIBLE: -Harmonious	Adjusts to the average height of existing building	the boundary distance is the same as the existing building	the building form has the same ground figure as the existing building
-Contrast	the height of the building is not higher than the existing building	the boundary distance adjusts to the height of the building and existing boundaries	the building form has the same ground figure as the existing building

Figure 39. Application of 3 Approaches of insertion in Historic Context
source: Writer's interpretation from Adriani (2009)

NARRATIVE DESIGN

In an effort to convey the historical value of a heritage object, media is needed that can connect the past memories contained in the object with human existence in the present. Sophia Psarra in her book *Architecture and Narrative* (2009) examines the relationship between the concept of experience through architectural narratives that can be applied to cultural institutions such as museums and galleries.

Narrative comes from the word 'narratio' which means story.

There are two aspects that connect the story and narrative: 1) the story itself, the content, and the conversation. 2) expression, or the way the narrative is delivered. In architecture, narrative is applied to give context and story/meaning to a space.

characteristics of narrative architecture (Tissink, 2016:20-28):

1. linking

linking environment and identity. By creating a narrative or story about an event or memory, a person can feel a connection to his environment to form an identity.

2. structuring

Narrative in architecture also plays a role in forming the framework of the story in the experience of space. With this framework, the architect can determine the space program, as well as the physical form of the building that is adapted to the storyline.

3. Framing

framing is an attempt to manipulate the perception of visitors through architectural elements to direct visitors to a certain perspective through a route that has been designed by the architect.

REMNANTS OF KOTAGEDE AS WALLED CITY

BENTENG CEPURI

Kotagede is known as the Walled City until more than two hundred years since the Mataram Kingdom was founded (Santosa (2007). The nickname as a walled city is related to the existence of the fort surrounding Kotagede which was founded during the Mataram kingdom. Based on the results of an interview with Mr. Erwito who is active in activities related to cultural heritage in Kotagede, there are several reasons why Kotagede is known as a fortress city. According to the records of the Dutch who visited Kotagede, De Lons, during the position of Mataram Kingdom, Kotagede had three layers of fortress, namely the State Fort which was the outermost layer, Baluwarti Fortress, and the last Cepuri Fortress which was the layer that protected the core of the palace.

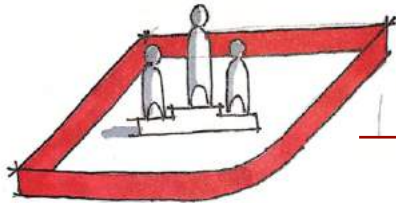
The existence of three layers of this fort strengthens the defense of Mataram kingdom in Kotagede, so this city by Van Mook (a person who once served as Lieutenant Governor General of the Dutch East Indies) is called as a fort city or Bacingah city.



ISLAM THE BEGINNING OF FORTIFICATION

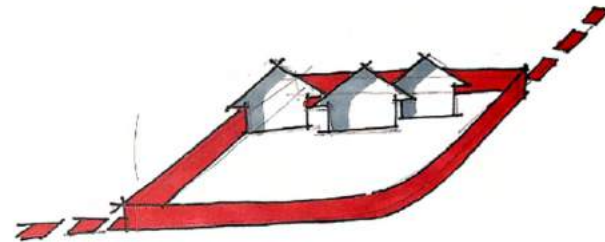
In the last quarter of the 18th century, the crown prince of Yogyakarta, who is a descendant of Mataram, submitted a proposal to his father who was then serving to build a wall around the city, which was equipped with a moat and cannons to protect the interior of the capital where the rulers, relatives and servants lived (Santosa, 2007). This is mentioned in Babad Mangkubumi, a royal chronicle which was probably written by the crown prince himself.

The fort was built with several types of bricks, from white limestone to baked clay bricks of various sizes. The Dutch who visited in 1623 describe this place as a populous city with wide and beautiful roads surrounded by walls about 7-9 meters high along with a river, most probably the Gajah Wong River.



BENTENG CEPURI AS THE SYMBOL OF HIERARCHY

Although some say that the function of the fort is as a means of protection as evidenced by the existence of trenches at several points around the fort, Santosa (2007) states that only a few minor wars which were insignificant occurred in Kotagede so that the function of the fort as a means of protection was not very visible. as a result, the existence of the fort was more felt as a wall separating two groups of people, which are the aristocracy (consisting of royal members, relatives, subordinates and also their servants), and also commoner that resided in the city. The inner part of the Cepuri fort, namely Kedathon, is also proof that Kotagede was once the center of government and economy.



DETERIORATION OF BENTENG CEPURI'S SIGNIFICANCE

Many years after the capital city of Mataram was moved to Pleret, the function of the inside of the Cepuri fort changed, the local people who were not able to occupy the inside of the Cepuri fort because it was considered sacred, began to settle there. The settlement which continued to expand until now resulted in the loss of the fort's significance. after its function is lost, its physical presence continues to be eroded along with the number of residential houses that continues to increase, new houses are no longer built with respect to the fort, even some houses are built on the construction of the fort as the foundation. Today, only a few fragments of the fort can still be seen in Kotagede, some of which have undergone restoration, while others are left so that their defects can be seen clearly.

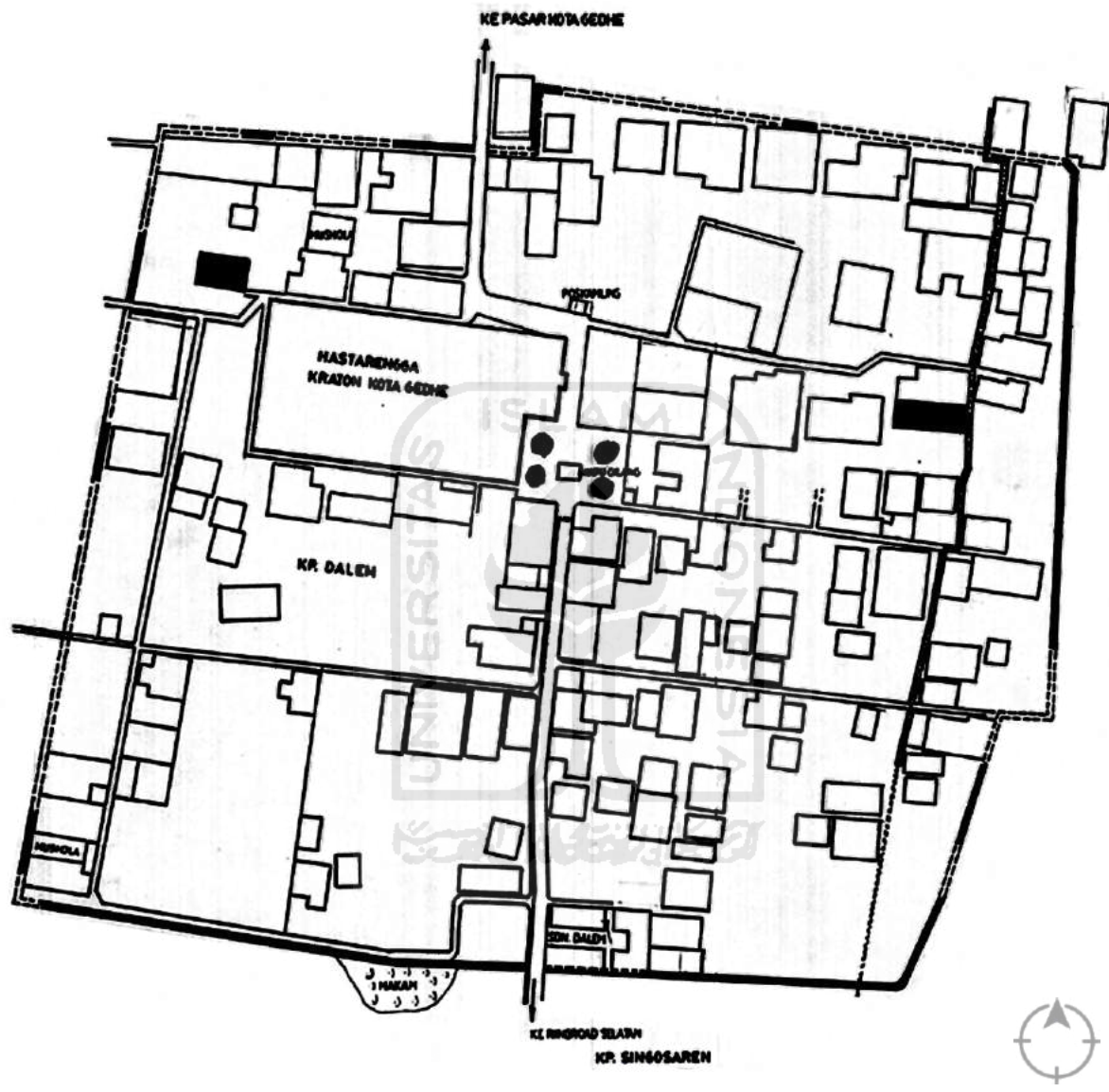
DESIGN NARRATIVE

FRAGMENTS OF BENTENG CEPURI

The existence of the Benteng Cepuri currently can still be seen through its fragments that scattered inside formerly cepuri area. There are remains of the fort that are located in the middle of residents' housing and its original form is no longer visible, but some are still preserved and can be seen clearly.

The population growth which is rapidly increasing and the lack of socialization to the residents who build houses around the heritage site has threatened the physical condition of the remaining Benteng Cepuri. Some residents even built their houses on top of the fort remnants.

According to history, the original height of the Cepuri fort can reach 4 meters. This can be seen from one of the remains of the fort that is still being preserved which is commonly called "*Benteng Jebolan Raden Rangga*" (Fort Broken down by Raden Rangga). This fortress has a broken part which is said to have been caused by Raden Ranga's kick. even though the fort is not intact and only has 50m left, we can still see how tall the fortress is.



- ==== INTACT REMNANTS
- == == MISSING REMNANTS

Figure 40. Remnants of Benteng Cepuri in Kotagede
 Source: Kemdikbud.go.id

DESIGN NARRATIVE

FRAGMENTS OF BENTENG CEPURI

FRAGMENTS OF BENTENG CEPURI: *BENTENG JEBOLAN RADEN RANGGA*



Figure 41. Benteng Jebolan Raden Ranga
Source: Writer's Document, 2021

'Benteng Jebolan Raden Ranga' is one of the fortress fragments that is still remaining today. This section is the northern side of the Cepuri fort which is located to the south of the Royal Cemetery. It is said that the form of 'Raden Ranga Jebolan Fort' which looks like a broken wall is said to have been caused by Raden Ranga's kick when he was a child. Raden Ranga's ability to break through a one meter thick wall shows how portentous the members of the Mataram royal family were at that time.

FRAGMENTS OF BENTENG CEPURI:
BOKONG SEMAR



Figure 42. The Bokong Semar on the east part of Benteng Cepuri
Source: Writer's Document, 2021

Bokong Semar is the remnant of the Benteng Cepuri that is located in the east. This part of the fort is curved to resemble the butt of Semar, a famous wayang figure, so that the local people call this part of the fort, Bokong Semar. This section is the largest and most complete remnants of Benteng Cepuri where we can see the original shape and dimensions of the Cepuri fortress

FRAGMENTS OF BENTENG CEPURI:
MISSING PART



Figure 43. Damaged part of Benteng Cepuri on the north
Source: Writer's Document, 2021

The missing part of the Cepuri fort is flat in the middle of the settlement, where houses were built close together. There are parts that are completely missing, but some can still be seen, but it doesn't look like a historic fort anymore because it merged with the surrounding housing.

FRAGMENTS OF BENTENG CEPURI

MATERIAL

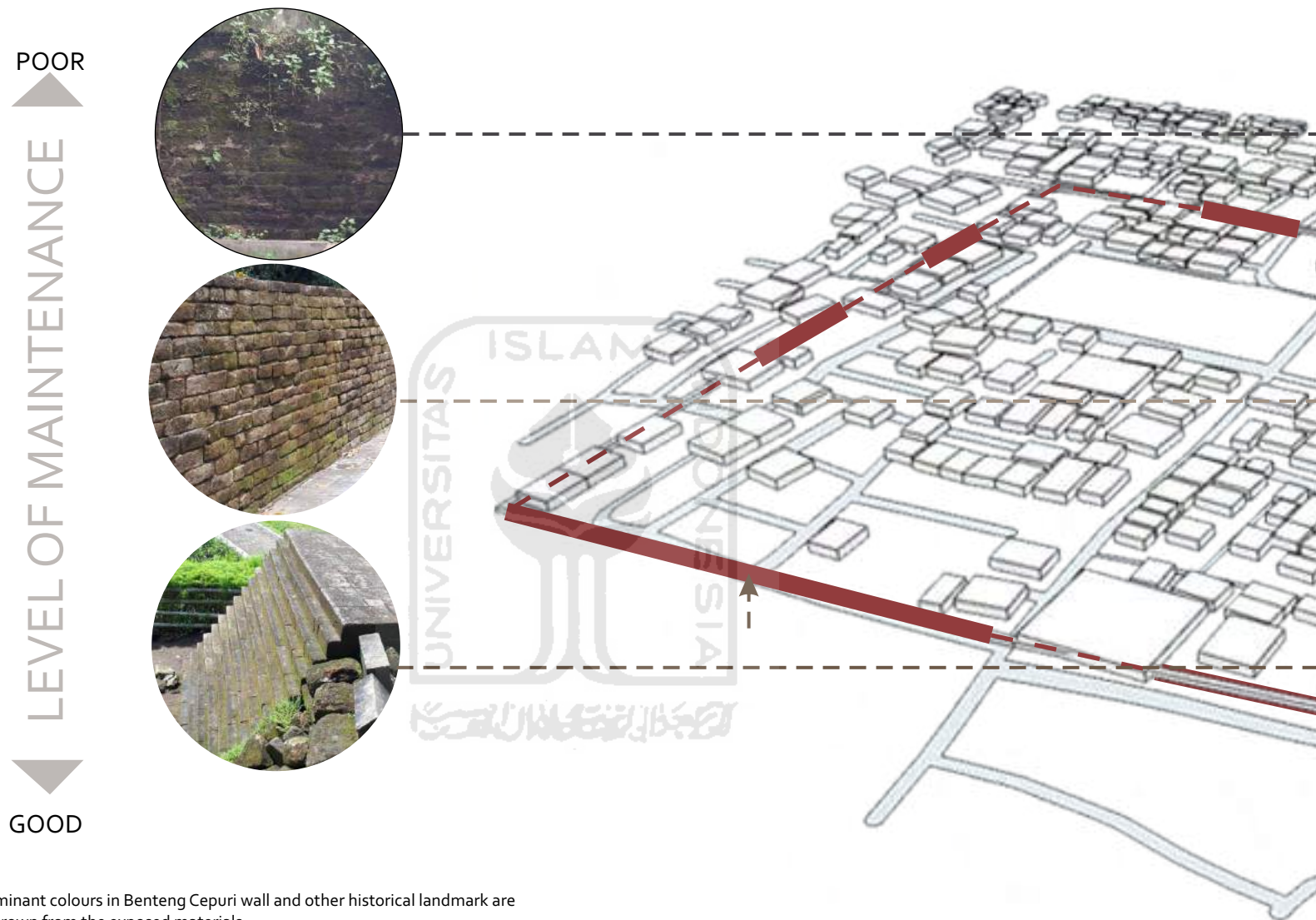


Figure 44. the dominant colours in Benteng Cepuri wall and other historical landmark are natural grey and brown from the exposed materials
Source: Writer's Document, 2021

Even though it has gone through several restoration and repairs, the original material of the Benteng Cepuri, namely white stone arranged in masonry construction, is still preserved. As can be seen in the image above, there is a difference between the original material and the new one, as a result of the restoration in 2002.

— INTACT
- - - NON-EXISTENT

FRAGMENTS OF BENTENG CEPURI COLOUR

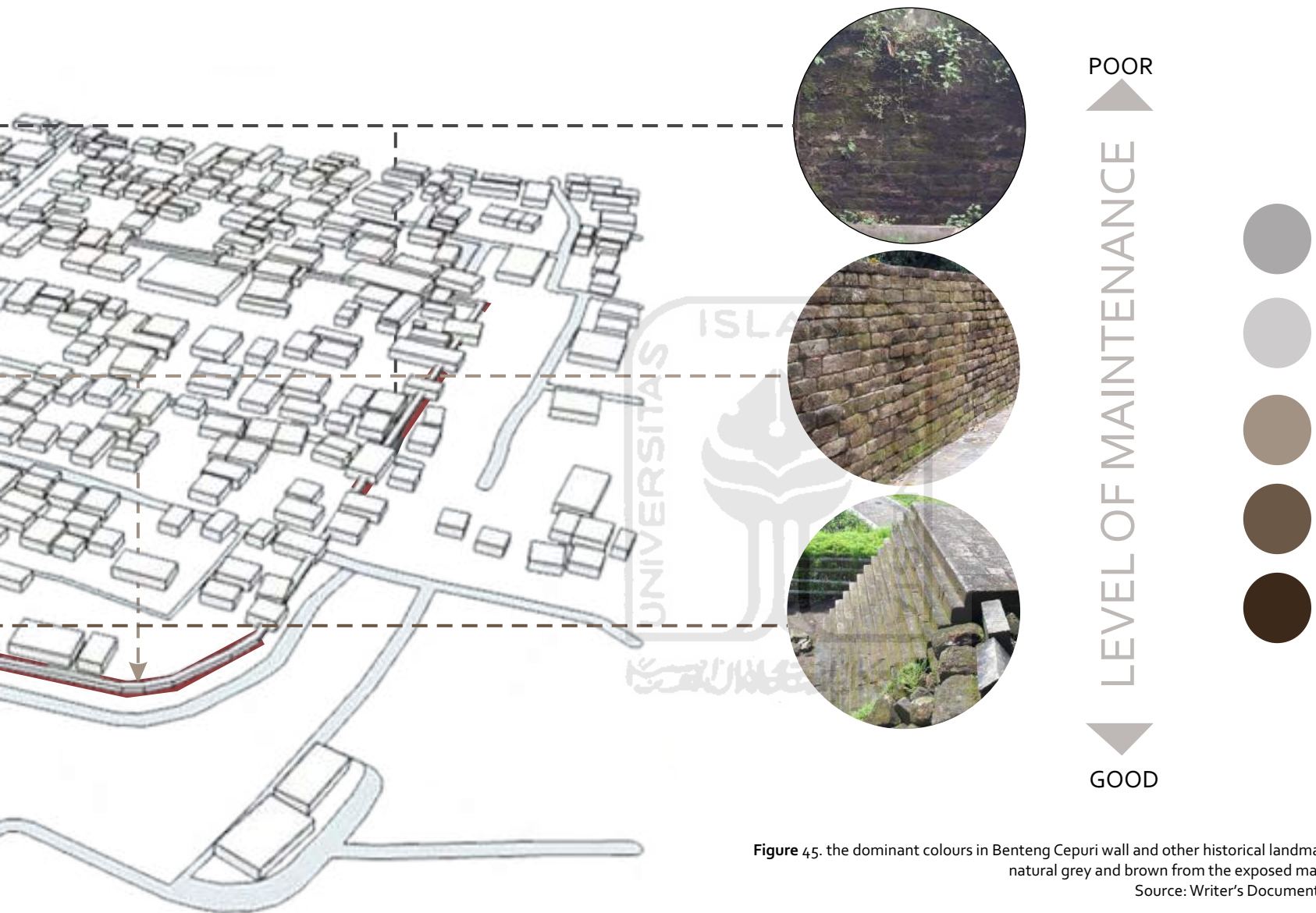


Figure 45. the dominant colours in Benteng Cepuri wall and other historical landmark are natural grey and brown from the exposed materials
Source: Writer's Document, 2021

The colors that dominate the walls of the fort and other historical landmarks are earth tone colors that come from natural materials such as wood brown or earth brown. although it is the same as using bricks, the color of the walls of the Benteng Cepuri that is in Bokong Semar looks more gray because it is made of white stone.

CONCEPT ANALYSIS

MATERIAL

The materials and colors that are applied to the building design are used as a link between the existence of the fort and other historical landmarks. In choosing the material, the texture that comes from the use of brick masonry can be applied to align the fort and the king's burial gate which is already known in Kotagede. In addition, more plain materials such as plaster walls that can be found in mosques and people's houses can also harmonize new buildings with their surroundings.



Figure 46. Materials of the historical landmarks Kotagede
Source: Writer's Document, 2021



Figure 47. Colours of the historical landmarks Kotagede
Source: Writer's Document, 2021

COLOUR

Historical landmarks in Kotagede, namely the gate of the royal cemetery, mosque and traditional Javanese house have several similarities, which are exposed material elements that result in a variety of natural colors such as brown wood used in mosques and Javanese houses, as well as exposed red bricks used in the gate of the Gedhe Mataram mosque.

CONCEPT ANALYSIS

MATERIAL

Based on the material analysis carried out, it can be seen that the main material for Benteng Cepuri is brick made of white stone which is arranged by the masonry method to form a linear pattern from the arrangement of the bricks. the use of materials with plain finishing without a pattern in new buildings can create a contrast between the new building and the Cepuri fort so that the Benteng Cepuri whose surface has a special pattern can look more prominent. however, the masonry-patterned brick surface accent can still be used to harmonize the building with other historical landmarks such as the gates of the Royal Cemetery.

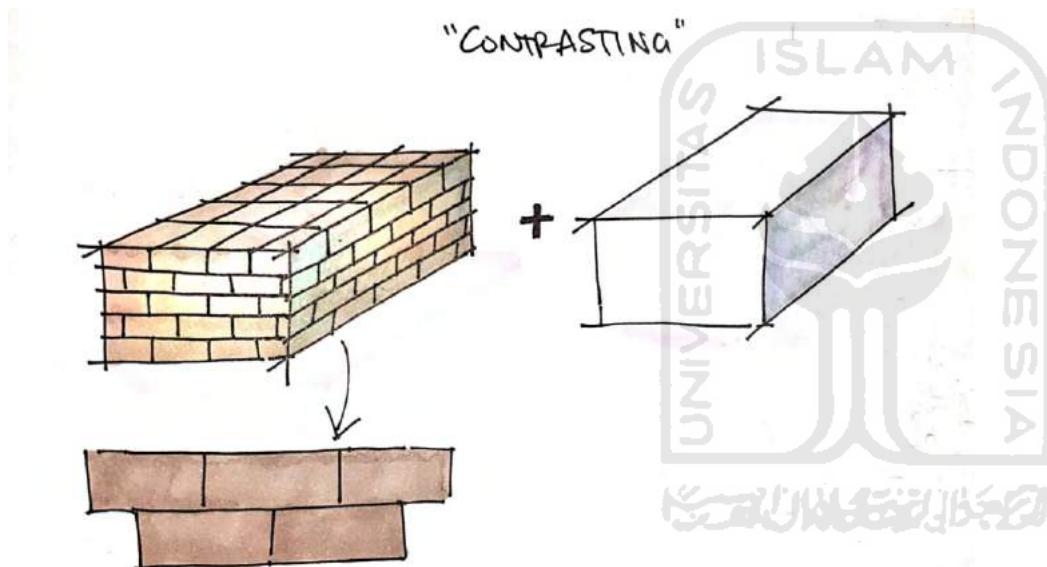


Figure 48. Minimum pattern against the fort's masonry brick brings visual contrast
Source: Writer's Document, 2021

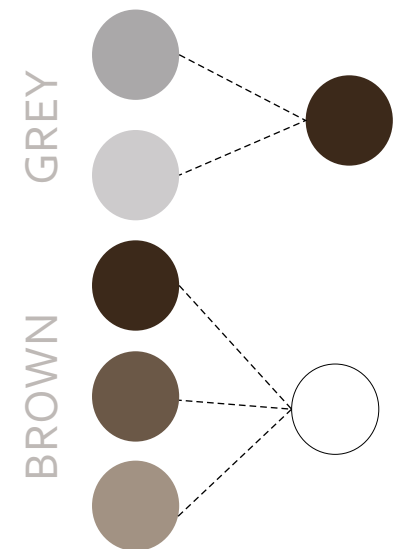


Figure 49. Colour Combinations that bring contrast
Source: Writer's Document, 2021

CONCEPT ANALYSIS

COLOR

Just like materials, one way to accentuate the existence of the Cepuri fort is to provide a contrasting color to the new building. Because the base color of the Cepuri Castle is light gray, new buildings can use a darker, contrasting color such as brown. Brown colour from wood material can be used to create contrast but it is still compatible with Javanese buildings which are one of the features of Kotagede architecture

PRECEDENT STUDY MUSEE DE LOUVRE - PARIS

The Louvre Museum has undergone various changes to become what it is today. This museum was once a fortress that was built around 1190-1202. After losing its function as a fortress, the Louvre turned into a royal residence. Over the years, its shape has slowly changed and expanded more and more. Several sides of the fort were preserved, while the rest was dismantled. When it was used as a royal residence, the moat part of the fortress remained which was then used as a dungeon. Today, the remains of the castle walls can still be found in the Louvre Museum. The stone walls are exhibited as part of the museum walls. Visitors can still see the circular shape of the castle tower and the original stones from the medieval era. Then, in 1984, the Louvre Pyramid was built in the inner courtyard area. **The existence of this building improves the circulation of the Louvre museum which was previously considered bad by creating a transitional space that connects heritage buildings with the surrounding area.** This landmark was also built with due regard to the contextuality of the building's heritages through the selection of colors and materials so as not to disturb the perception of the historic building by the visitors.

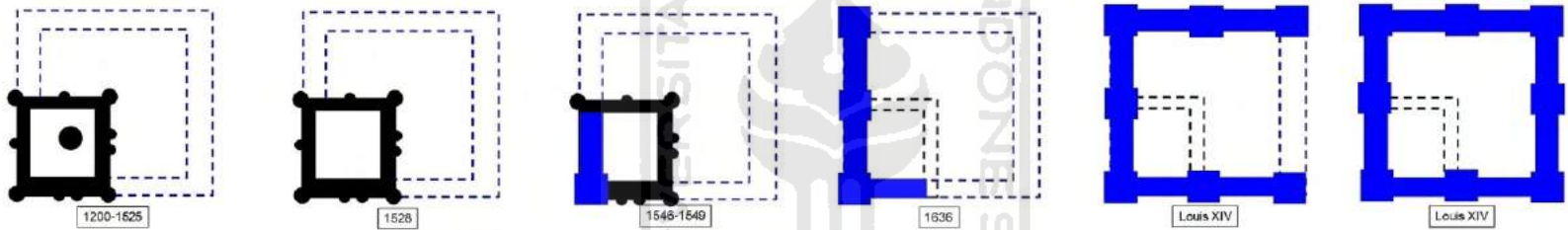
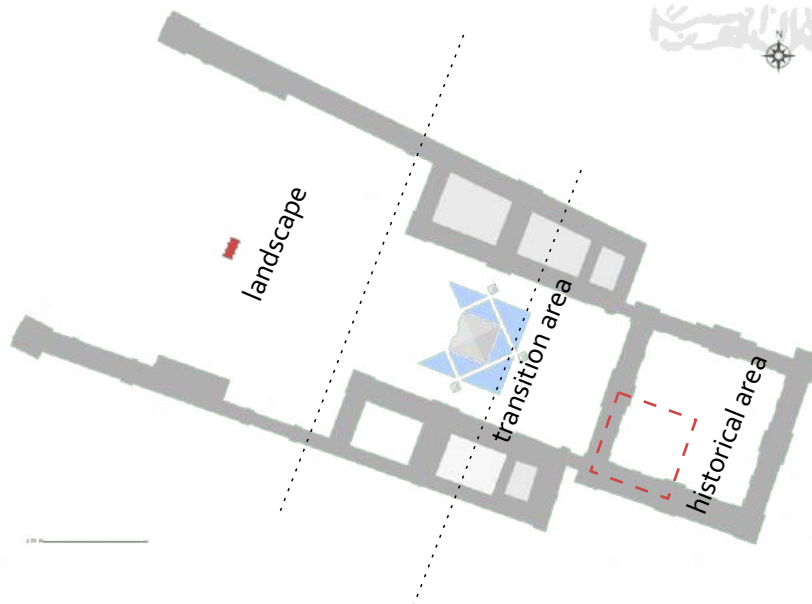


Figure 50. Louvre Pyramid position on the courtyard of existing building
Source: Pei Cobb Freed & Partners



The cultural center building that will be built in the fort area can also be a bridge that connects other historical attractions of Kotagede and the remnants of Cepuri fort to maintain the historical value.

Figure 51. How Louvre pyramid connect the historic area with the surrounding by creating transition area
Source: wikipedia with modification



Figure 52. The remnants of the fortress below Louvre museum shows the original condition of the fort, using it as part of the museum experience
Source: Wikipedia



Figure 53. Louvre Pyramid position on the courtyard of existing building
Source: Pei Cobb Freed & Partners

PRECEDENT STUDY KOLUMBA MUSEUM

Kolumba museum is a building designed by respecting the ruins of st. Kolumba Church. after getting bombed in the second world war, many churches were destroyed and only leaving the remains of exterior walls.

The Kolumba museum is a simple building, but the elegance of its exterior makes it stand out from the context.

The architect tries to emphasize the existence of the original building remains with contrasting materials and shapes, as well as lighting that gives a strong artistic impression so that visitors can feel that this building is designed revolving around the church's ruins.



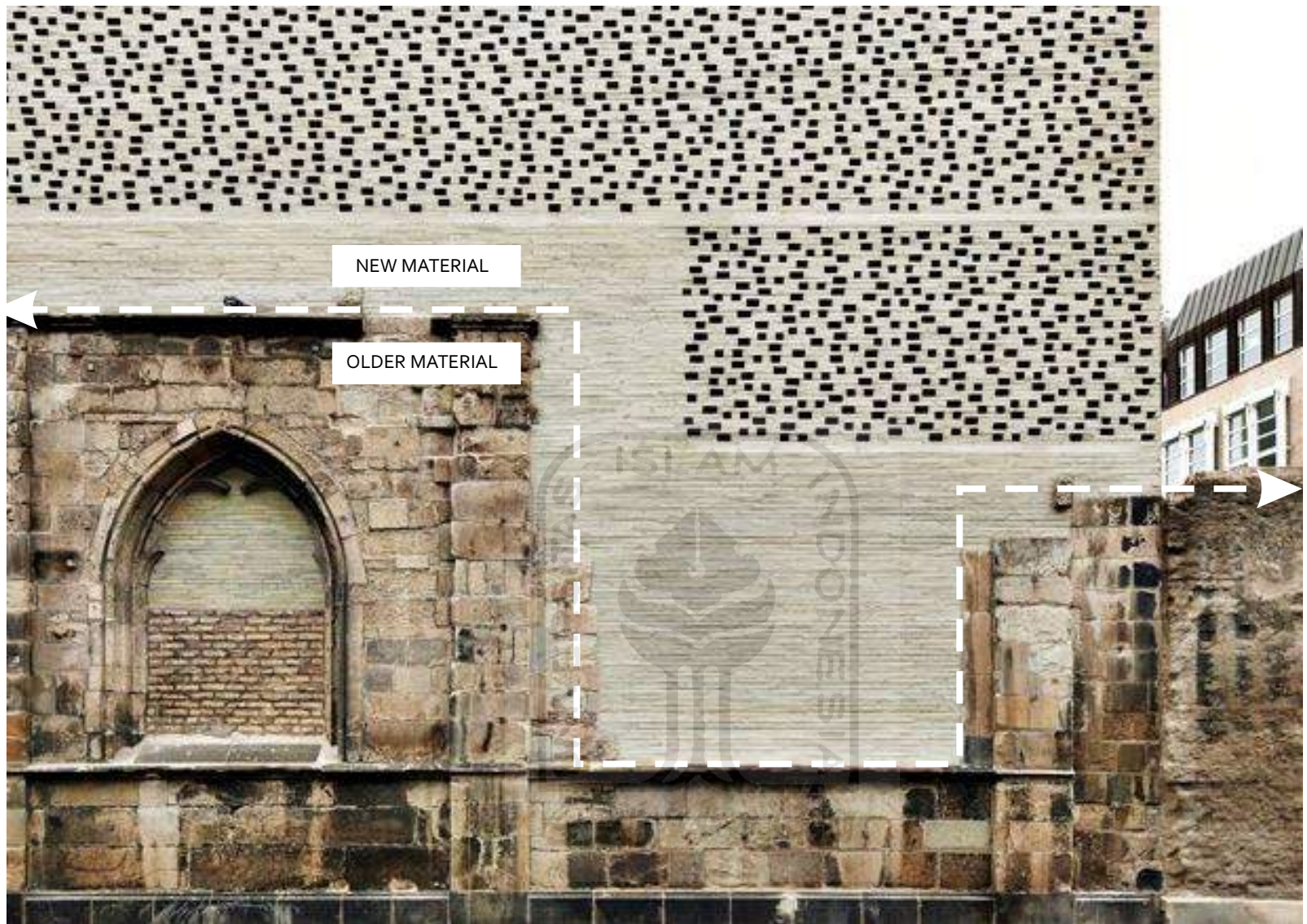


Figure 54. the usage of light grey brick that have the same pattern as the chapel remnants still brings color contrast to differentiate older and new building
Source: Modernheritage.com.au

Compatible-Contrast approach through material

This building uses several approaches to ensure that the old and new construction can exist simultaneously but still clearly shows the time boundary of the old and new construction.

Zumthors chose a similar material, but with different features to create contrasting compatibility, such as the use of light grey brick against the masonry walls of the old building.

PRECEDENT

HOUSE OF ARCHITECTURAL HERITAGE, BAHRAIN

House of Architectural Heritage is a concrete and glass building located in Muharraq, Bahrain. This building is a building that is added by the infill method between the existing buildings with two sides facing an open road, thus forming an alley that can be passed by anyone. The openness of the House of Architectural Heritage has the aim of encouraging public interaction and also removing the boundaries between the building and the neighborhood so that the visible facades of the surrounding buildings can be a part of what forms the space in this building.

The side walls that are in contact with the neighbors are deliberately opened with glass, so that anyone passing by can feel the neighborhood atmosphere as part of the exhibition.

LESSON LEARNED: the use of historical elements in the building as a space to interact can **strengthen a sense of place to the environment in the local community because it builds awareness of their neighborhood identity**



Figure 55. Museum of Architectural Heritage
Source: Archdaily, 2020

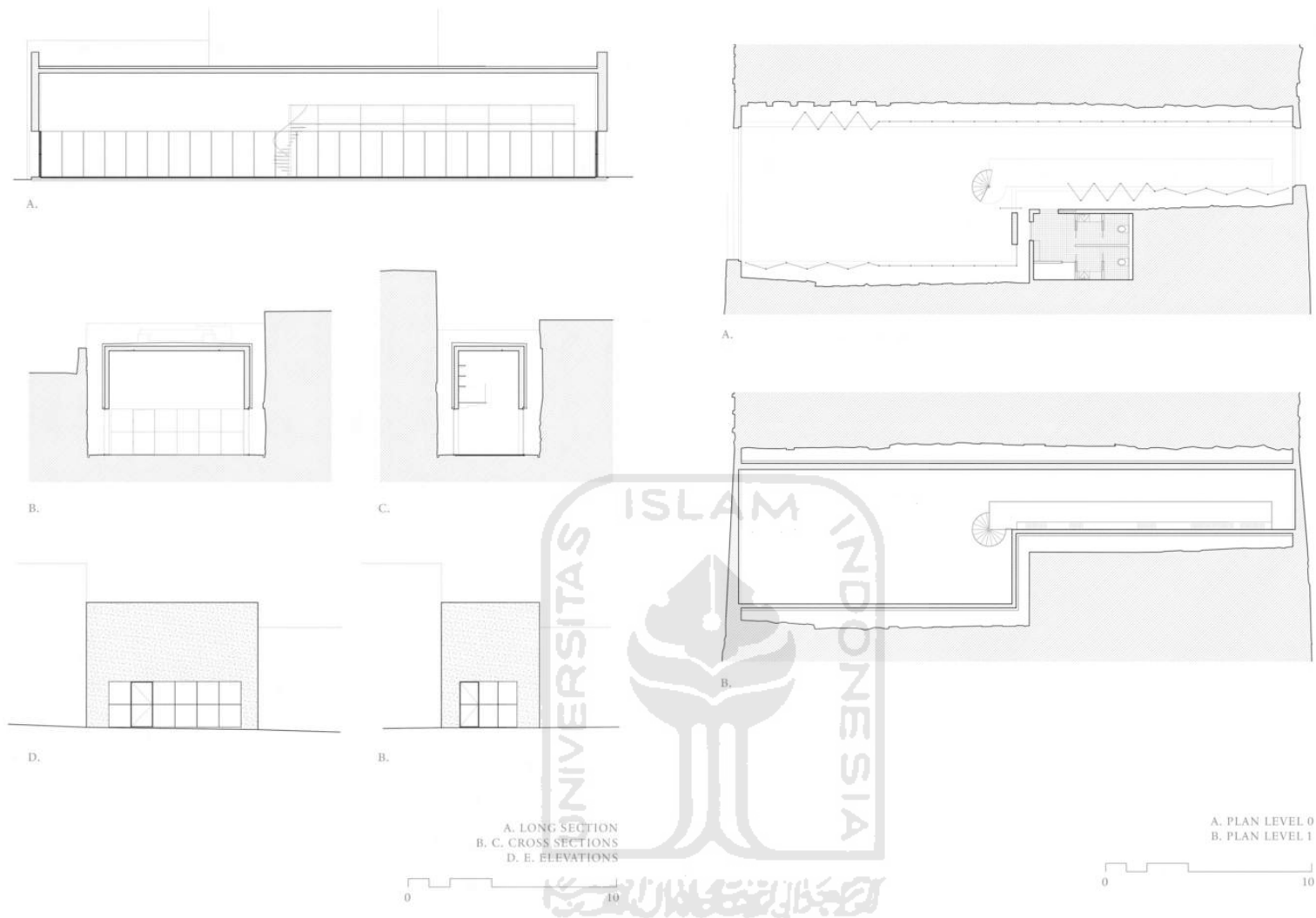


Figure 56. The new construction inserted between the historic wall by exposing the wall texture through transparent glass.
 Source: Archdaily, 2020

Accentuating Historic Features

This building builds on the collective memory of the whole neighborhood by displaying the neighborhood's historic features and accentuating it by bumping minimalist exterior building materials against a textured historic wall. Furthermore, the historic walls and the interior of the new construction are lined with transparent glass which serves not only to expose the walls to visitors but also to protect them from damage.

ANALYSIS USERS ACTIVITIES

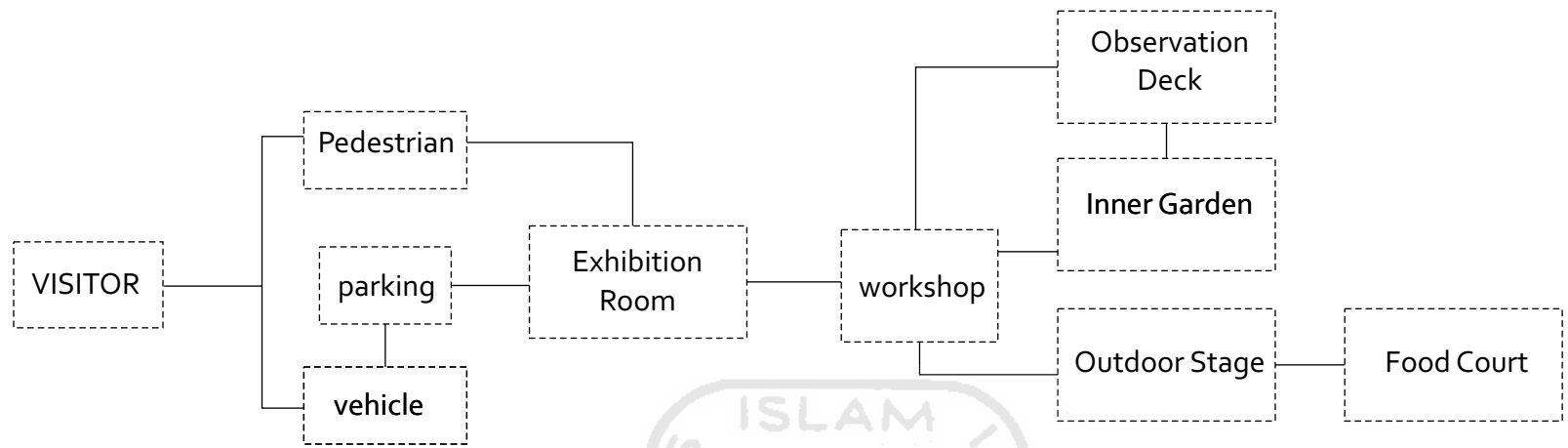


Figure 57. Visitor's movement flow from entrance to exit
source: writer's doument,2021

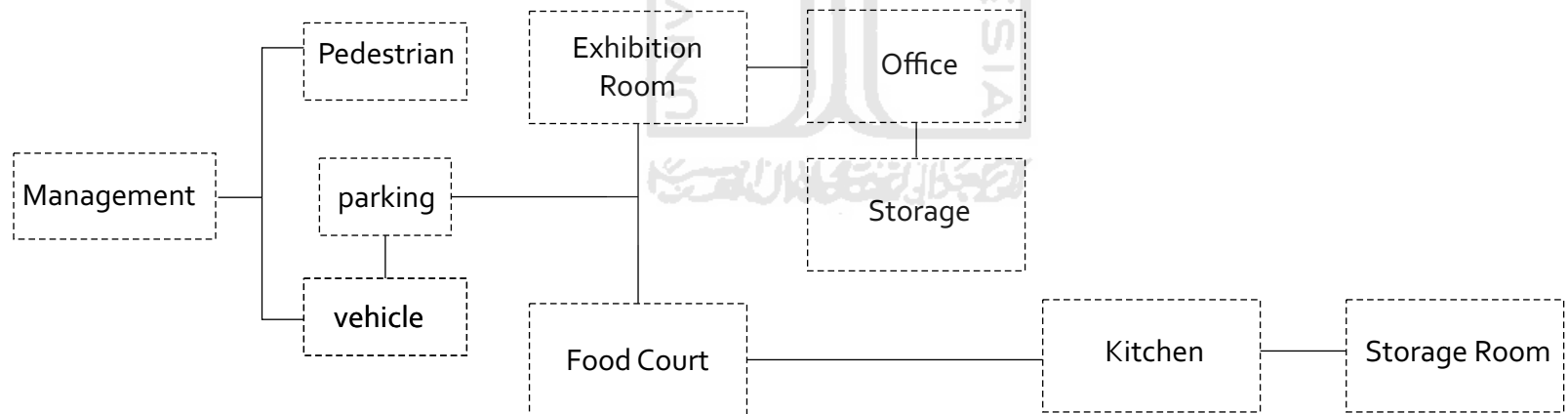


Figure 58. Staff's movement flow from entrance to exit
source: writer's doument,2021

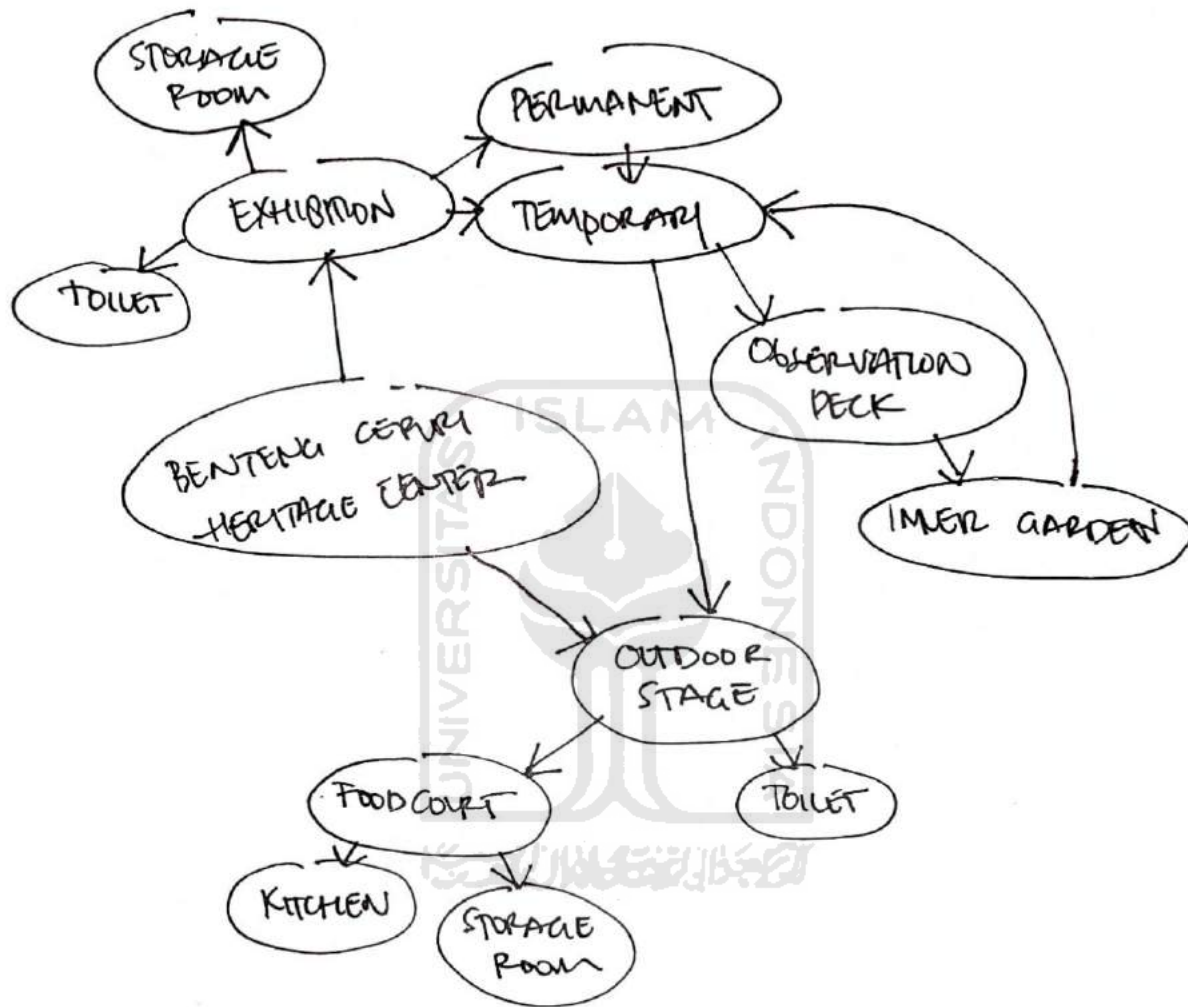


Figure 59. Spatial Connectivity
 source: writer's document, 2021

ANALYSIS

SPACE REQUIREMENT

HISTORIC EDUCATION

Activity	Space Type	Characteristic
Heritage Object's Observation	Outdoor Space	Public, Permanent
Indoor Exhibition	Exhibition Room	Public, Permanent
Storing Equipment	Storage Room	Private, Permanent

ART AND CULTURE

Activity	Space Type	Characteristic
Traditional Dance performance	Performing space, preparation room	Public, Flexible
Musical Performance	Performing space, preparation room	Public, Flexible
Wayang Performance	Performing space, preparation room	Public, Flexible
Workshop	Hall Room	Public, Flexible

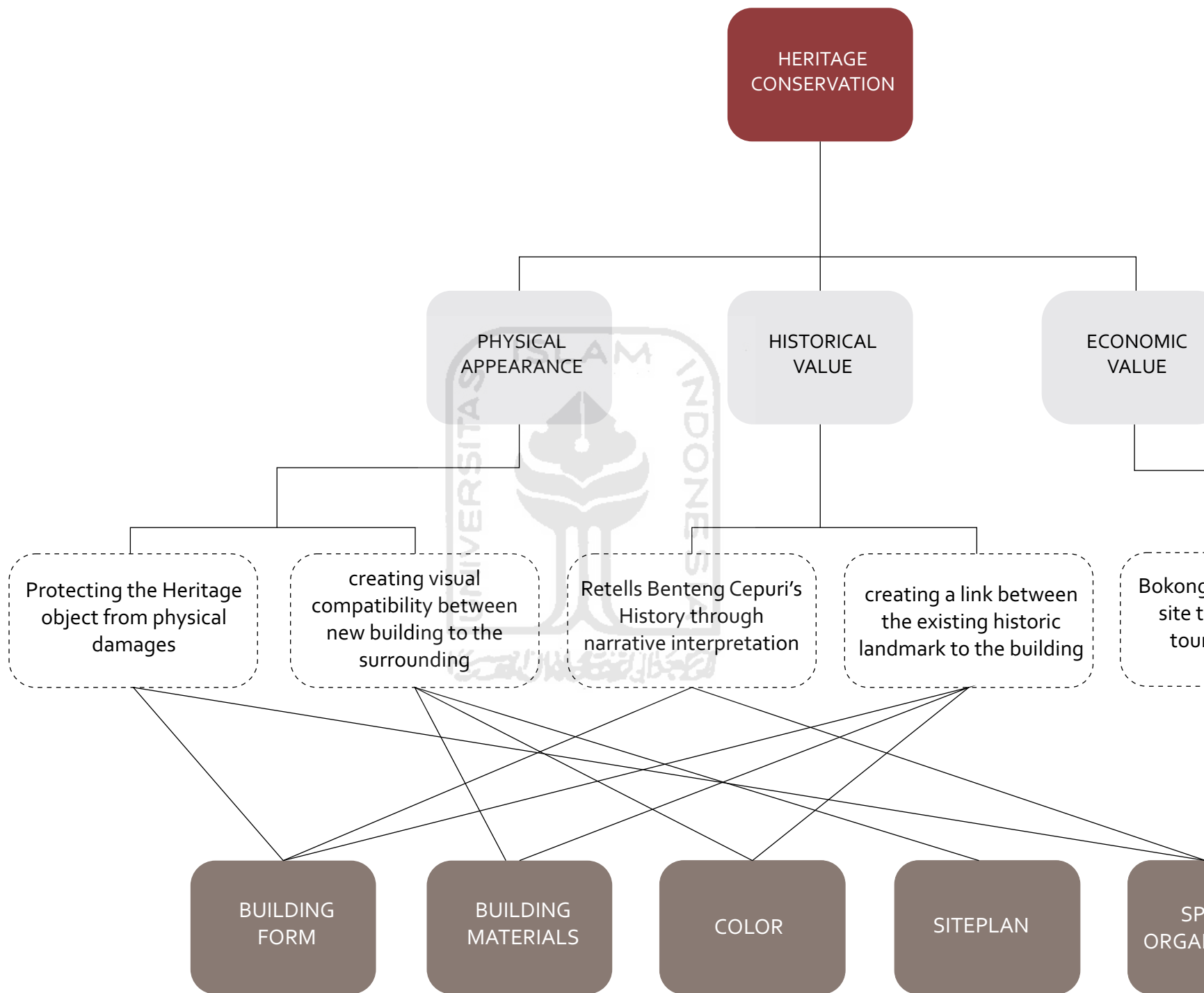
CULINARY

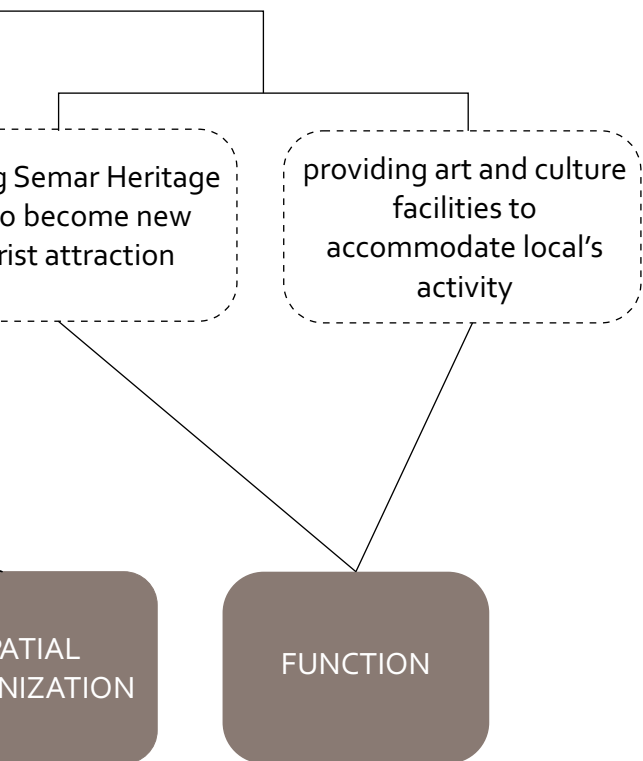
Activity	Space Type	Characteristic
Eating	Dining hall	Public, Flexible
Cooking	Kitchen	Private, Permanent
Storing	Storage	Private, Permanent

SERVICE AREA

Activity	Space Type	Characteristic
Toilet	Toilet	Public, Permanent
Electricity Maintainance	Panel Room	Pivate, Permanent
Water Distribution	Pump Room	Private, Permanent







FRAMEWORK OF THINKING



041

NARRATIVE AND STRATEGY

- General Concept
- Zoning Concept
- Alternative 1:
 - Siteplan Concept
 - Building Form Concept
 - Building Envelope Concept
- Alternative 2
 - Siteplan Concept
 - Building Form Concept
 - Building Envelope Concept
- Schematic Design

GENERAL CONCEPT

BENTENG CEPURI'S NARRATIVE

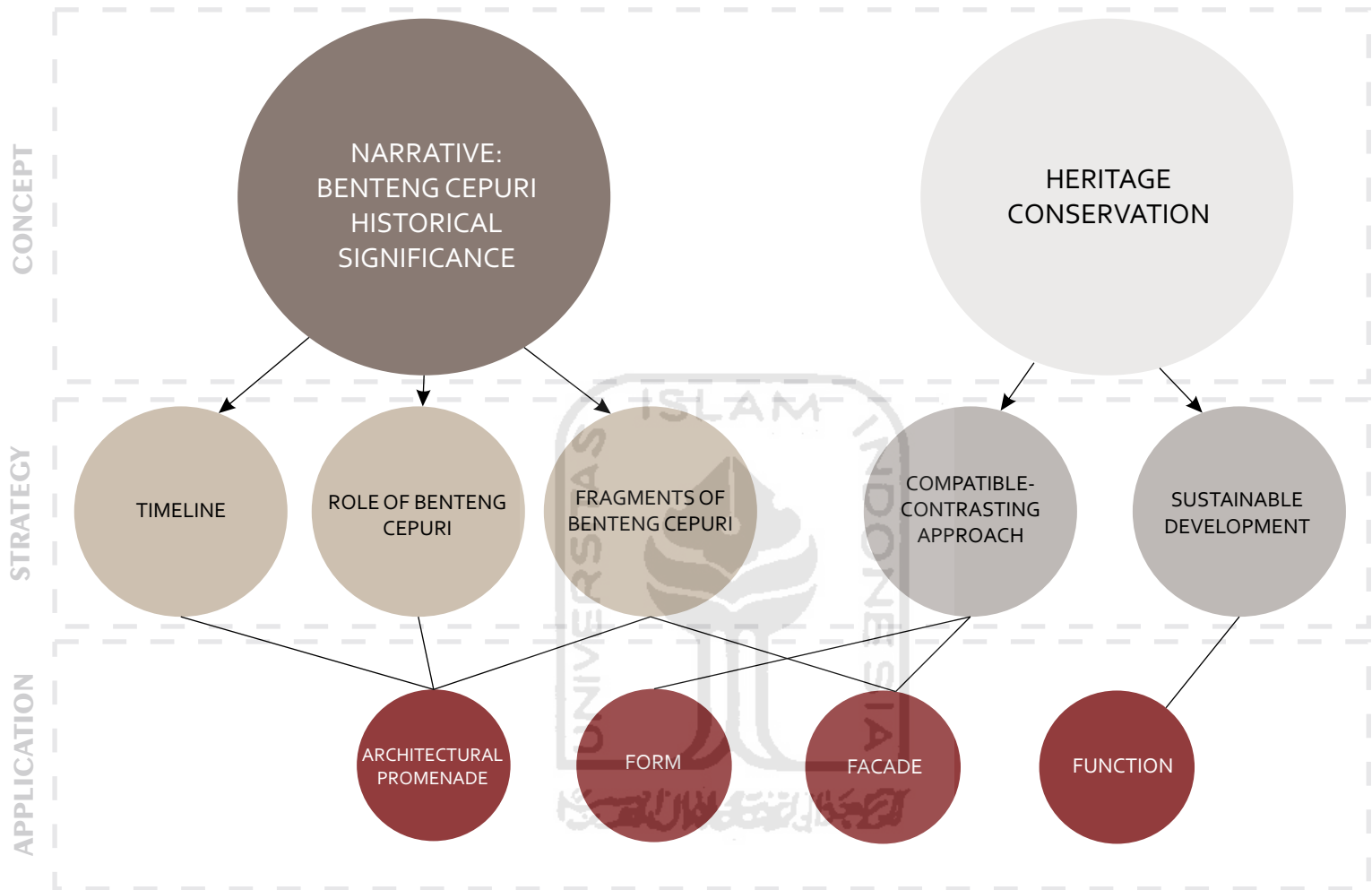
The narrative chosen is the 3 phases of the existence of the cepuri fort from the formation of the fort, its function in the social order to the phase of decline of its existence. This narrative will be applied to create sequences in the building so that a connection is formed between the past memories of the cepuri fort and the building's users. Narrative will also affect the relationship between spaces and the shape and materials of the building, this aims to direct the visitor's perception of the space so that the storytelling process can be carried out and enhance the visiting experience of visitors

COMPATIBLE-CONTRASTING APPROACH

A compatible-contrasting approach was chosen in this design to respond to the context of the historic environment around Benteng Cepuri Heritage Center. this approach was used so that the existence of the new building could be in harmony and did not interfere with the aesthetics of the Benteng Cepuri, but could still accentuate the existence of the fort site. this approach is applied to achieve two objectives:

- New building compatibility with the existing Benteng Cepuri site inside the new building site
- Compatibility with other historic elements in Kotagede.

The relationship between the new building and the Benteng Cepuri site was created with the aim of strengthening the historical significance of the fort to the micro area, while the relationship between the new building and other historic elements in Kotagede was created to strengthen the existence of Benteng Cepuri as one of the historical tourist destinations in Kotagede Heritage District.



DESIGN

GENERAL CONCEPT

CONNECTING THE FRAGMENTS OF BENTENG CEPURI

This design narrative is used to create connection between each fragments of Benteng Cepuri in Kotagede so that the visitors and local residents can feel the presence of the fortress as a whole.

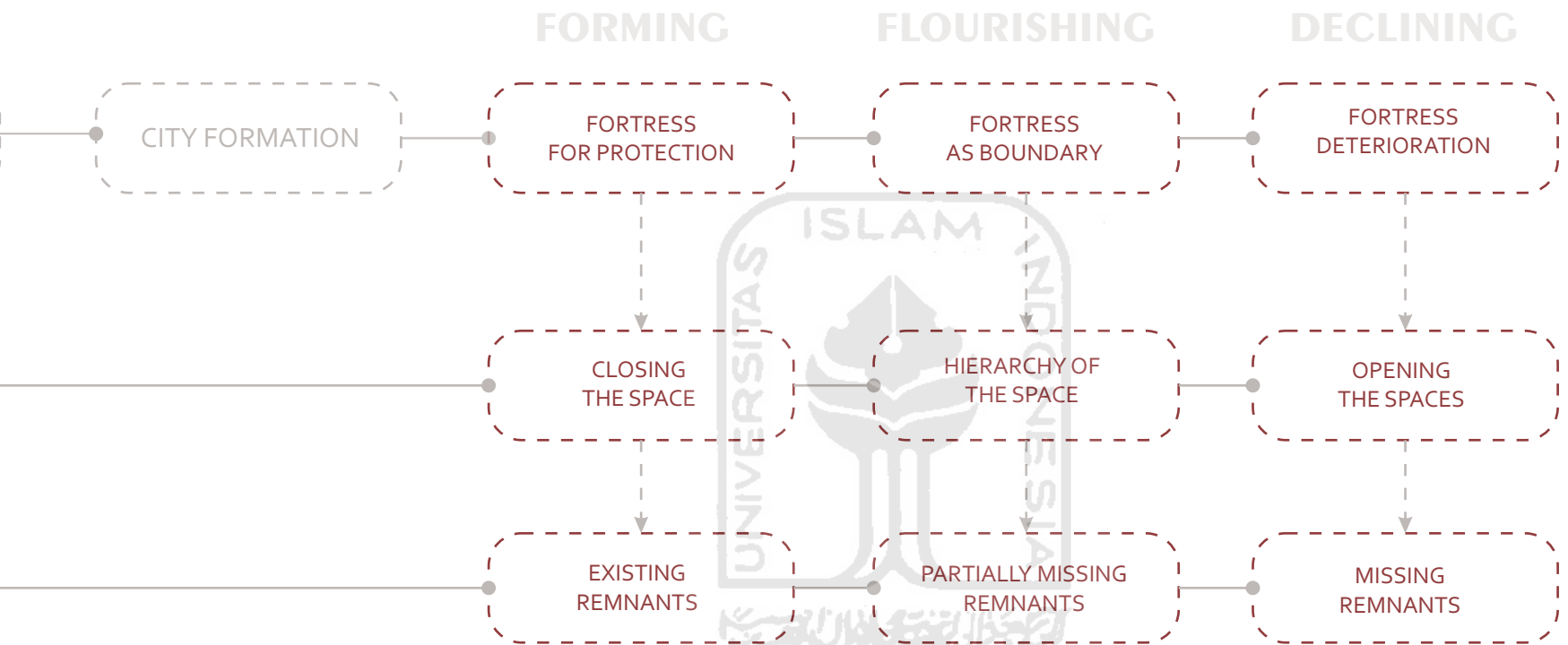
TIMELINE

MENTAOK FOREST

INTERPRETATION

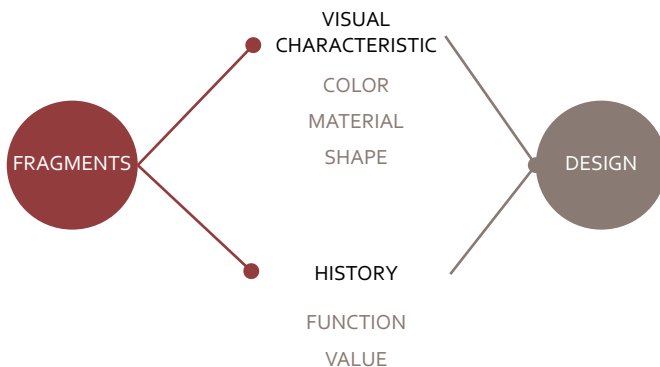
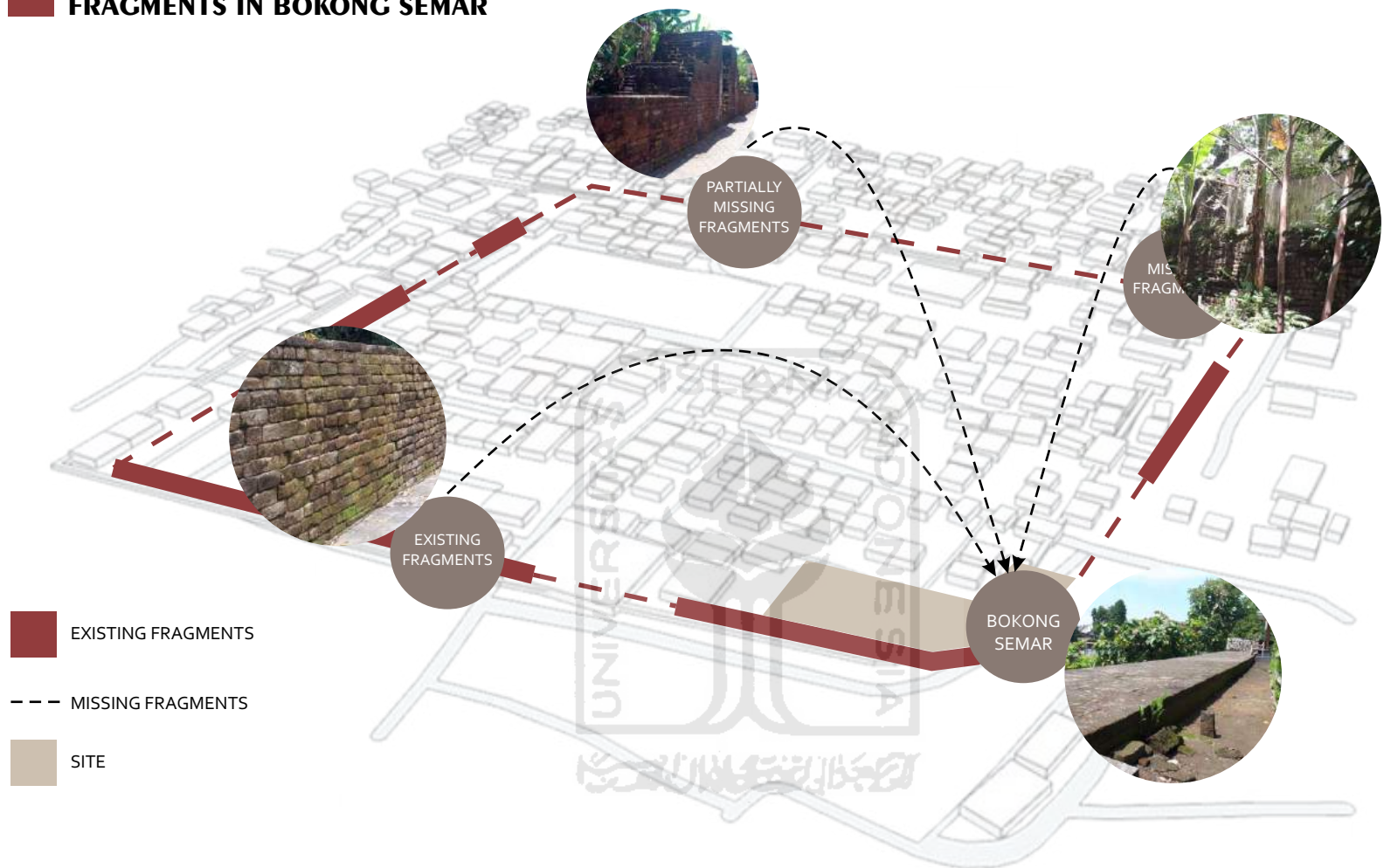
FRAGMENTS





GENERAL CONCEPT

COLLECTING BENTENG CEPURI'S FRAGMENTS IN BOKONG SEMAR



In general, the strategy used in this project is to collect the fragments of the cepuri fort that are scattered throughout the primeval area in one place, namely BS. These fragments are connected into a single unit within the site by analyzing the physical characteristics of each fragment, tracing the historical value they have and then connecting them with the historical elements in the site to form a complete narrative.

Figure 60. Fragment Collecting Strategy
source: writer's doument, 2021

GENERAL CONCEPT

CREATING SEQUENCE FROM NARRATIVE INTERPRETATION



The first area represents the first phase of the Cepuri fort, which is the construction of a wall covering the city and also the core area of the palace which serves as protection.

The second area represents the development phase of Benteng Cepuri which has turned into a wall that separates royal family's living area and the area of commoners.

The third area represents the decline in the significance of the Cepuri fort that has occurred since the royal capital was moved until now, which was originally an exclusive space to become a public space that can be used by everyone.

GENERAL CONCEPT

LINKING EACH SEQUENCE TO THE REMNANTS ON THE SITE



BEGINNING : COMPLETE REMNANT

The ruins of the fort which are on the west side of the site are still intact, so the dimensions and original texture of the fort can still be seen. This section can represent the initial process of forming a strong and intact fortress



FLOURISHING : PARTIALLY INCOMPLETE REMNANT

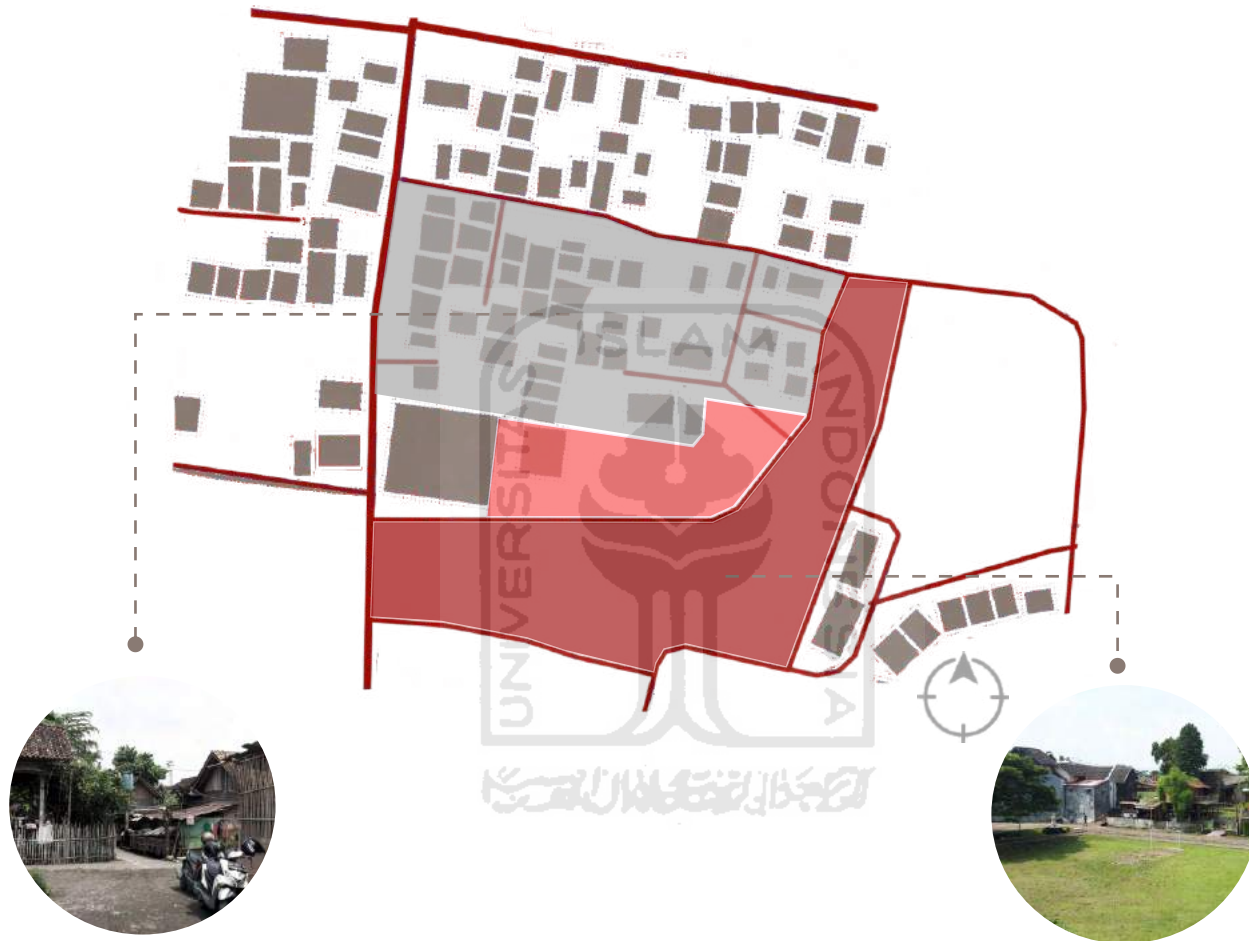
The curved section of the fort is the main characteristic of the Bokong Semar. in this section, we can start to see the damage of the fortress

DECLINING : INCOMPLETE REMNANT

the area to the east of the fort is the only part of the fort remaining. in this area the view towards the moat below is wide open. this section can represent the process of the collapse of the fort.

GENERAL CONCEPT

LINKING EACH SEQUENCE TO THE HISTORICAL ENVIRONMENT



SETTLEMENT AREA

Based on the records, the residential area around Bokong Semar is one of the slowest developing in the cepuri area. After moving the capital city of Mataram to Pleret, people who previously did not dare to live in the Cepuri area slowly began to settle and fill this area to become as crowded as it is now. The site in this project only has two houses on the land. however, the area around it has been built with fairly dense settlements. This housing is evidence of the last phase of the fort, namely the merging of the outer and inner regions of the fort.

MOAT "JAGANG"

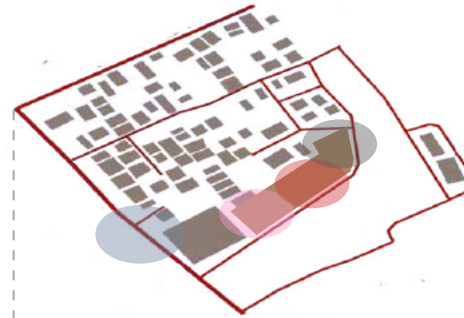
Moat or commonly called Jagang is one part of the fort that serves to prevent the enemy from entering the area within the fort. today, we can still see the remnants of the 'jagang' which is now known as the Singosaren field. This part of the fort belongs to the Bantul region. This environmental element is one of the evidences of the function of the cepuri fort as a defense tool during the Mataram kingdom in Kotagede.

ZONING CONCEPT

TRANSLATING THE NARRATIVE INTO SPACE FUNCTION

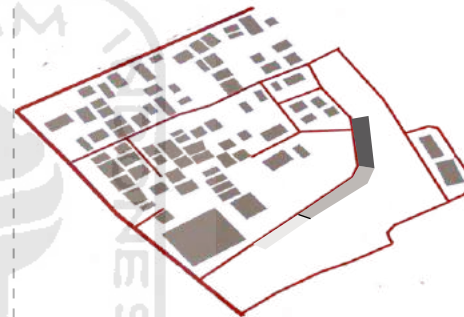
After interpreting the narrative, identifying fragments that exist both outside the site and inside the site, as well as connecting with elements around the site that contain historical value, then the function of the building is determined for each zone to form a sequence that can be passed by building users.

NARRATIVE



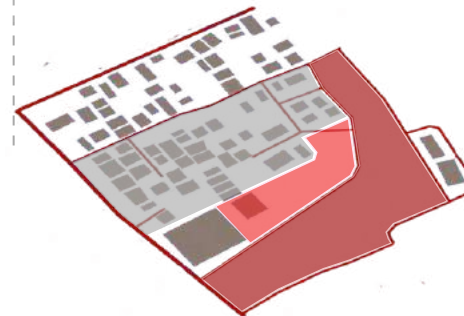
- Prolog
- Beginning
- Flourishing
- Declining

FRAGMENTS

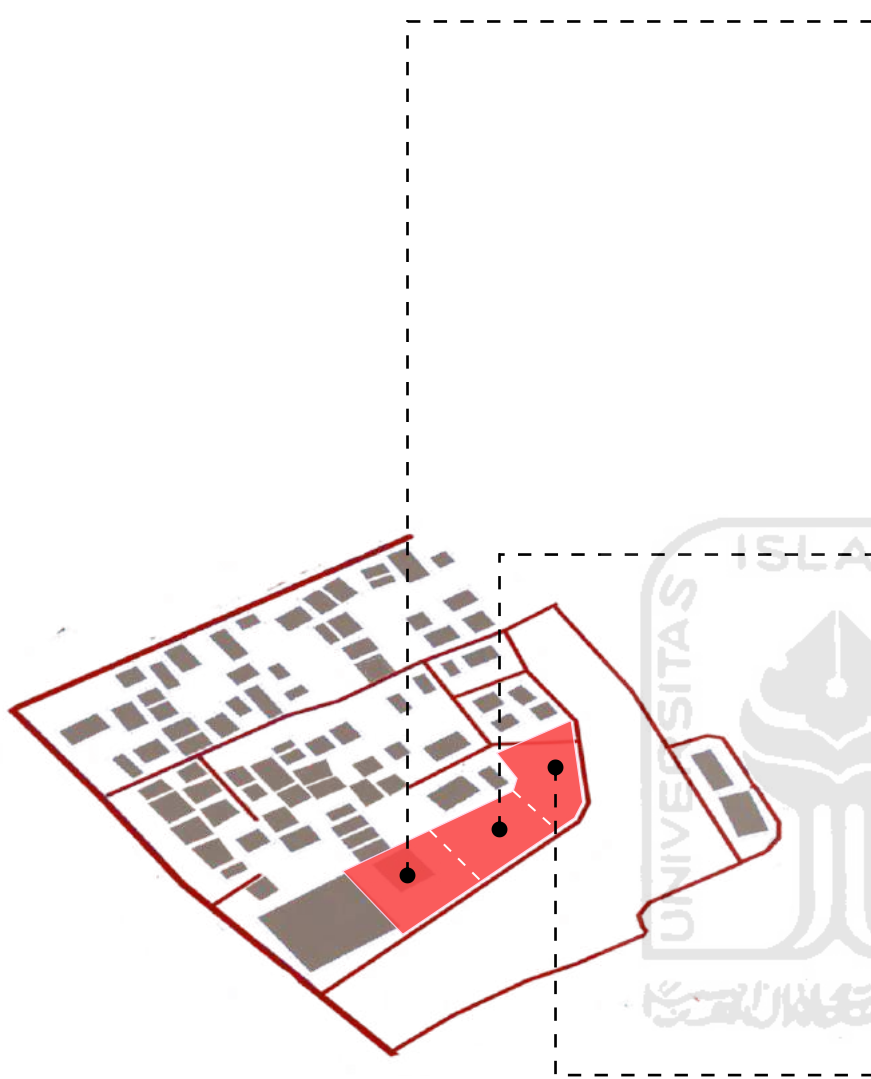


- Complete Fragment
- Partially Complete Fragment
- Incomplete Fragment

ENVIRONMENT



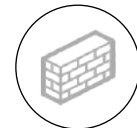
- Site
- Moat
- Settlement Area



ZONE I : EXHIBITION AREA

The beginning area is used as an exhibition space that contains an explanation of the history of the Mataram kingdom in Kotagede, including Cepuri Fortress. to represent a protective function, this space is connected physically with the part of the fort that is still intact and visually with the moat below.

Connected to:



Fortress

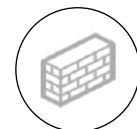


Moat

ZONE II : SOCIAL AREA

the second area is made as a social space where the local community and residents gather to discuss. This space represents the social hierarchy resulting from the construction of Benteng Cepuri, therefore, this room connects the surrounding settlement with the remaining fortresses on the site.

Connected to:



Fortress



Settlement Area

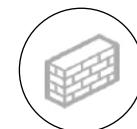
ZONE III : RECREATIONAL AREA

The third area is made as a recreational space that can be used by the whole community, both local residents, artists, and visitors from outside. This area is an open area that connects the historical landscape of the site, the ruins of the fort and the surrounding settlements.

Connected to:



Settlement Area



Fortress



Moat

INSERTION CONCEPT

Response to The Analysis of Benteng Cepuri's Characteristic and the surrounding environment



a compatible-contrasting approach to building design is applied with reference to the shape, texture and character of the Benteng Cepuri. this was done as an effort to create a connection between the new building and the fragments of Benteng Cepuri

FORM :COMPATIBILITY TO THE CURVE

To create compatibility between the new building and the existing cepuri fort on the site and the site itself, the characteristic of Bokong Semar which is the arch is accentuated so that a spatial identity can be formed. The curved shape is also applied to respond to the narrow distance between the new building and the surrounding settlements, so that the stiffness in the circulation path can be eliminated



Figure 61. figure ground of Benteng Cepuri's Fragment in
'Benteng Jebolan Raden Rangga'
Source: Writer's Document, 2021

FIGURE GROUND: COMPATIBILITY TO BENTENG CEPURI

The ground figure of the building is adjusted to the uneven ground figure of the ruins of the cepuri fort in Purbayan. it aims to represent the uneven state of the cepuri fort fragments where there are parts that are intact, missing and only partially remaining. this is also applied to adjust to the ground figure of the fort in BS so that the shape of the new building does not distract the view towards the fort when viewed from the south side.

MATERIALS: CONTRAST BETWEEN NEW AND OLD

The construction of the fort using the masonry system with white stone and brick juxtaposed with new materials to contrast but remain in harmony with the original cepuri fort material. this is useful to provide a clear boundary between the existence of the cepuri fort and new buildings nearby.



ENVIRONMENT DESIGN
PROLOG



**ENVIRONMENT DESIGN:
PHASE BEFORE BENTENG CEPURI**



To revive the existence of the Cepuri fort in Pubayan, the environment around the site is also designed to convey the historical values of the Cepuri fort before entering the main building. The Prolog area is an area outside the heritage center building which was designed with the aim of conveying the historical narrative of the Cepuri fort before the fort was built. The journey starts from the parking area which is a bit far from the entrance.

ANALYSIS ON EXISTING PATHWAY

The narrative before the formation of the Cepuri fort was conveyed through the circulation route from the parking area to the Cepuri Heritage Center. the path that visitors must take to get to the heritage center is a small road that has almost no boundaries with housing along the way.

At this time there are several problems that exist both on the main route and in the alley that visitors will pass before entering the site such as narrow roads, untidy roadsides, etc.



Figure 62

. Problems on the site environment
Source: Writer's Document, 2021

ACCESS TO THE SITE



the parking area is a vacant lot on which stands a semi-permanent building used as a small shop. This area was chosen as a parking lot because of its vacant condition, and its location close to the crossroads leading to the site. the main road and the road around the parking lot have different surfaces, this difference can be amplified to divide the road for vehicles and pedestrians and direct visitors towards the building.

CREATE SIMILARITY THROUGH BRICK

To create similarity between the area around the heritage center building, the heritage center itself and the existence of the cepuri fort, brick elements were added to the roadside border and also the planter. this element is applied along the road leading to the heritage center.

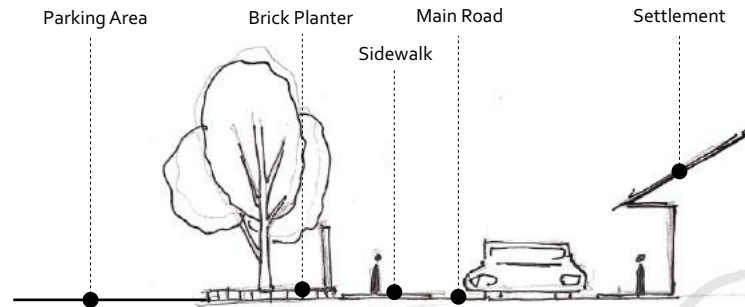


Figure 63. Main Road Section
Source: Writer's Document, 2021

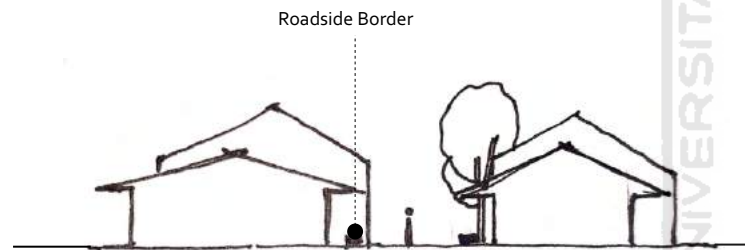
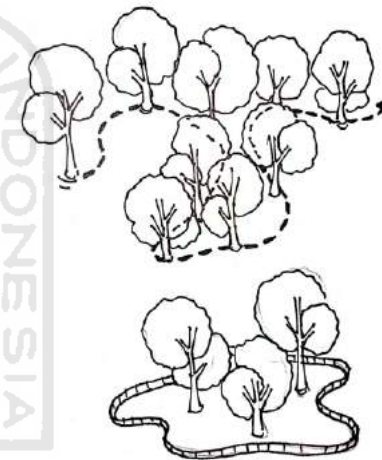


Figure 64. Alley Section
Source: Writer's Document, 2021

Long before the cepuri fort was built, the Kotagede area was said to be a forest that was given to Ki Ageng Pemanahan and was the forerunner of the establishment of the Islamic Mataram kingdom.

This forest is a dense forest which was later opened into a village by Ki Ageng Pemanahan and eventually developed into the center of government.

To describe the dense forest trees, then added vegetation elements in the area along the road from the parking area to the heritage center. The planter form used also uses irregular shapes to describe trees in the forest that grow freely without rhythm or pattern. in the parking area, shady trees are added to reinforce the concept of a dense and shady forest



TRANSLATING THE TIMELINE BEFORE BENTENG CEPURI

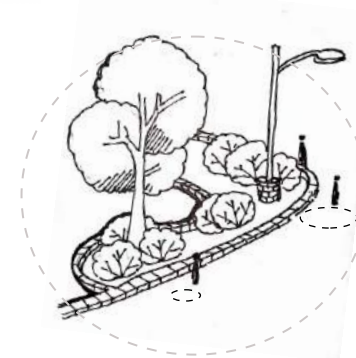
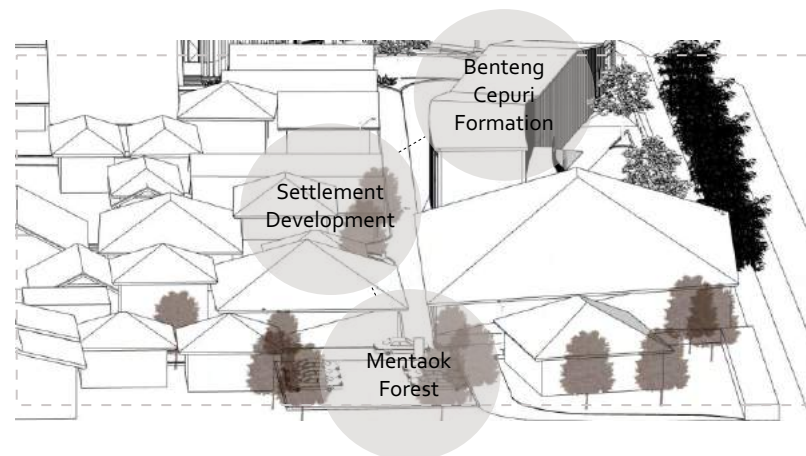


Figure 65. Irregular shape in the planter to depict trees that grows freely on Mentaok Forest
Source: Writer's Document, 2021

TREE DENSITY

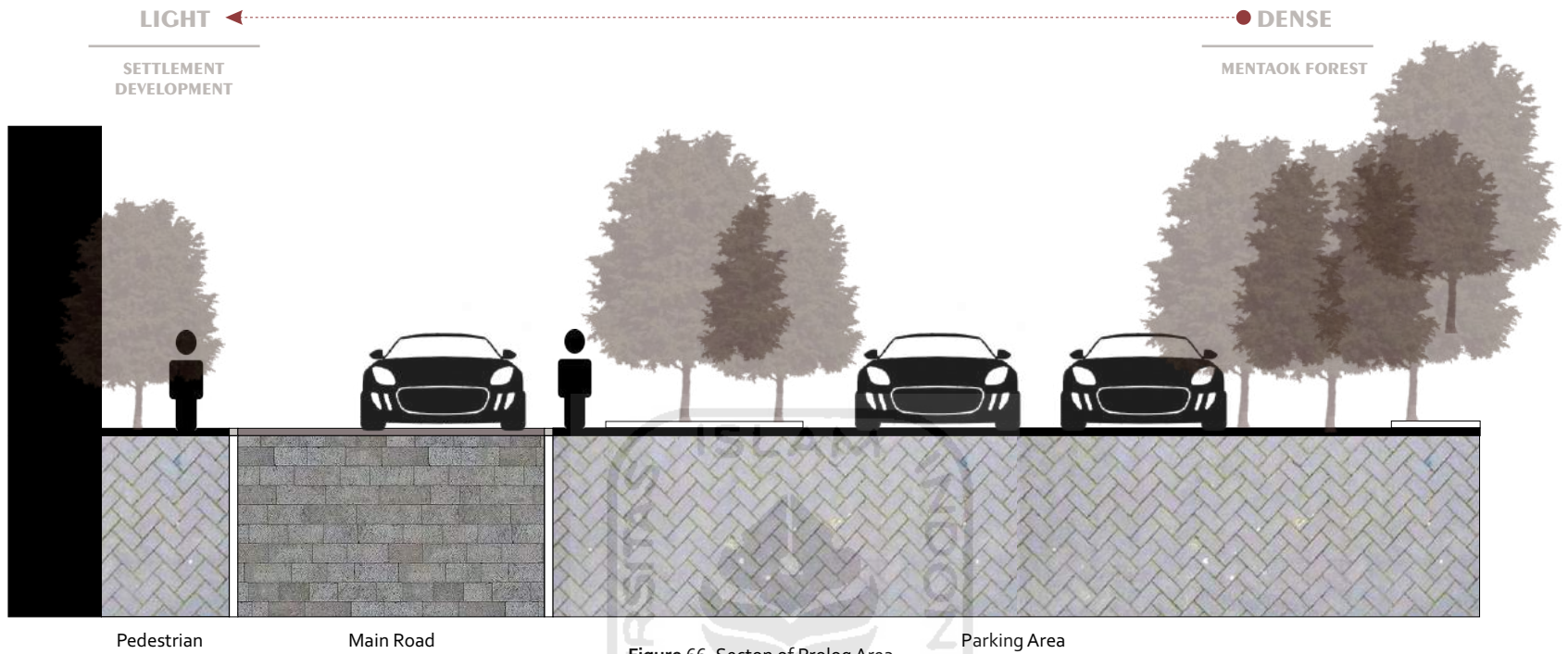


Figure 66. Section of Prolog Area
Source: Writer's Document, 2021

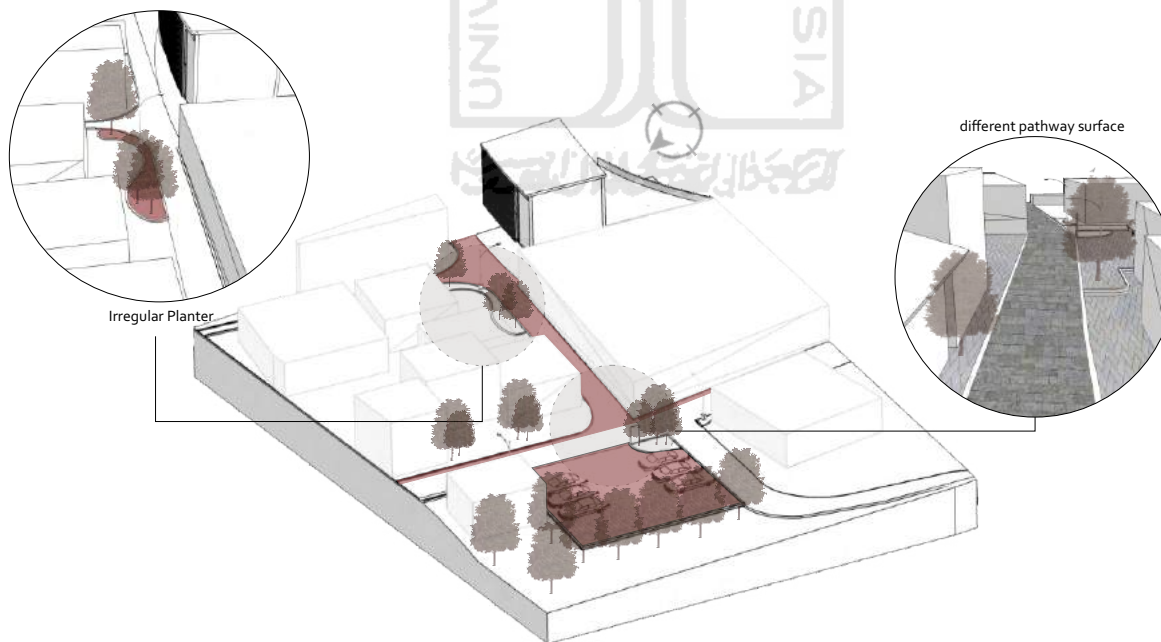


Figure 67. Axonometry of Prolog Area
Source: Writer's Document, 2021



SITE DESIGN

**BEGINNING
FLOURISHING
DECLINING**



ALTERNATIVE 1

SITEPLAN CONCEPT



BEGINNING

FLOURISHING

DECLINING

BEGINNING: EXHIBITION AREA

zone 1 or the beginning zone contains a museum that displays the original physical existence of the cepuri fort. this zone is the first zone entered by visitors.

FLOURISHING: SOCIAL + STAGE

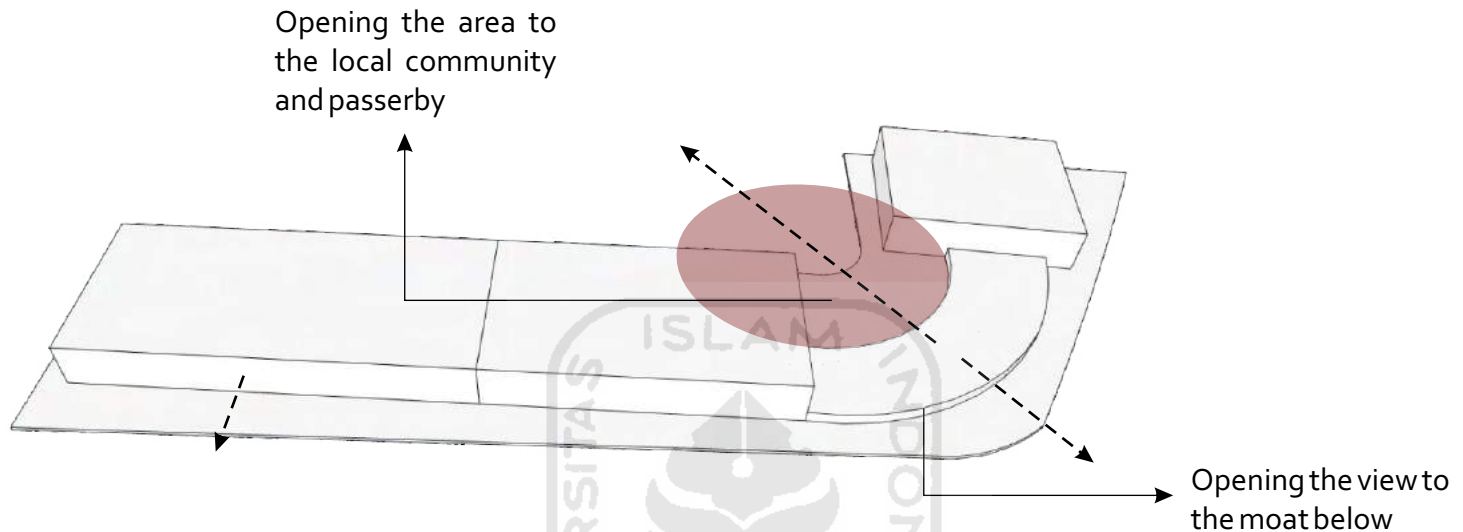
the second zone is a social zone that can be used by visitors and also local residents who need a place to discuss with each other. This area consists of an indoor space and an open stage whose shape accentuates the curve of the Bokong Semar.

DECLINING : RECREATION AREA

This area is the most open area. This openness stems from the disappearance of the Cepuri fort' significance as the capital of Mataram moved from Kotagede

SITEPLAN CONCEPT

Respond to the existence of Benteng Cepuri Remnants and site Characteristic



CONNECTION TO THE FRAGMENTS

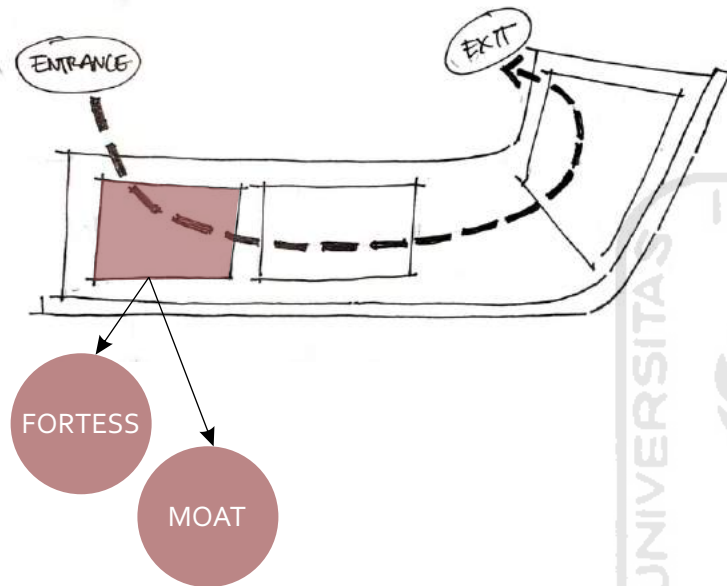
In this alternative, the building is divided into 3, namely exhibition hall, workshop room, stage and recreation room. each area is related to the ruins of the cepuri fort in the site. in the first area, the side facing south is made close to the cepuri fort so that visitors can see the fort more closely, as well as in the second area. Then, in the stage area, parts of the building that are uneven and begin to crumble are shown as the stage background, indicating the process of the collapse of the cepuri fort. and lastly, the recreation room is located along with parts of the fort that are not intact and only a few are left, this strengthens the concept of openness which is a symbol of the beginning of the merging of areas inside and outside the cepuri fort.

ACCENTUATING THE CURVE

In alternative 1, the arch that is characteristic of Semar's buttocks is emphasized by opening up the space and using it as part of the stage. the stage area is the most visible area and is the core of this design alternative. the opening of the arch area also allows visitors and local residents to see the fort directly even though they are not in the site so that their presence can be the focal point of the site

EXHIBITION AREA

BEGINNING Benteng Cepuri as Protection Wall



The first area is the exhibition hall. this space represents the phases of the formation of the fortress that protects the city. the transformation of the building form comes from the pile of bricks which is the main material of the fort. The stacked bricks were converted into a two-story building, this also supports the linkage between the exhibition hall, the fort, and also the view of the moat below the site. the shape of a pile of bricks also describes the process of forming a fort where the fort is still in good condition, intact and strong. The building form in this area is also made massive and closed which represents the closure of the city area into a more exclusive space as a result of the construction of the fort.

To adjust to the surrounding buildings, as well as the tropical site climate, the roof is tilted.

Figure 68. Exhibition area as the Beginning of the Narrative
Source: Writer's Document, 2021

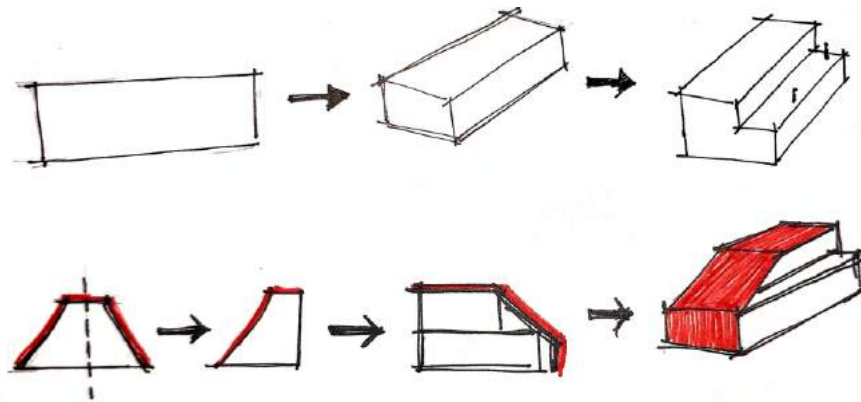


Figure 69. Exhibition area's Building Mass Transformation.
Source: Writer's Document, 2021

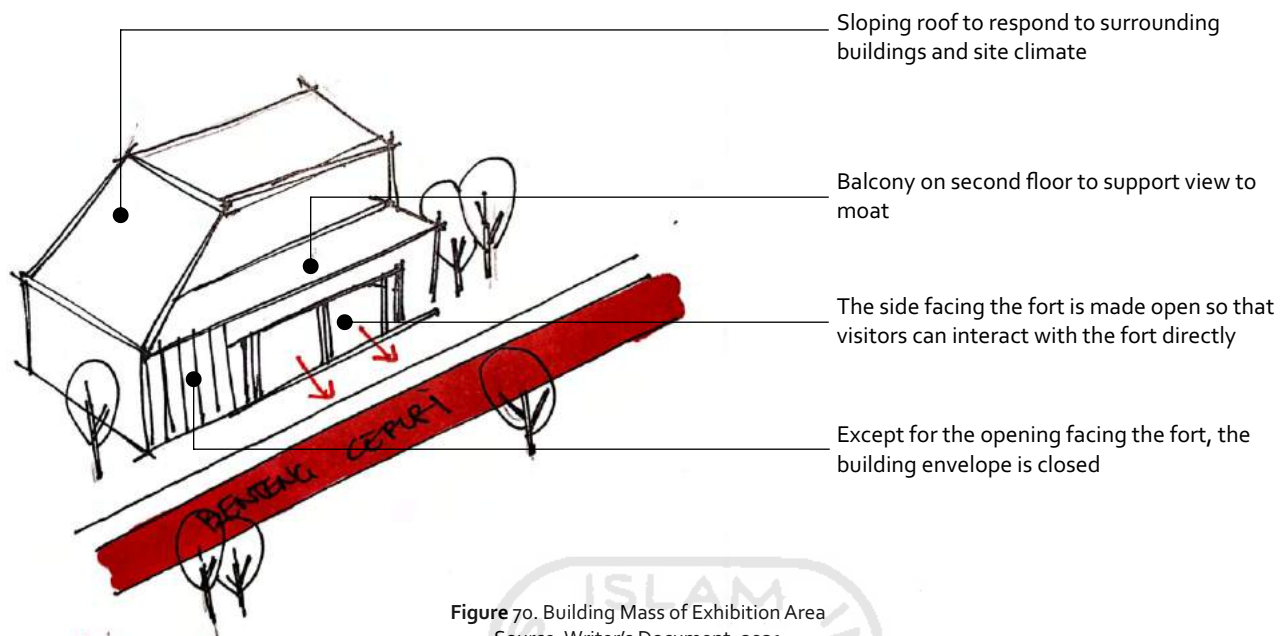


Figure 70. Building Mass of Exhibition Area
Source: Writer's Document, 2021

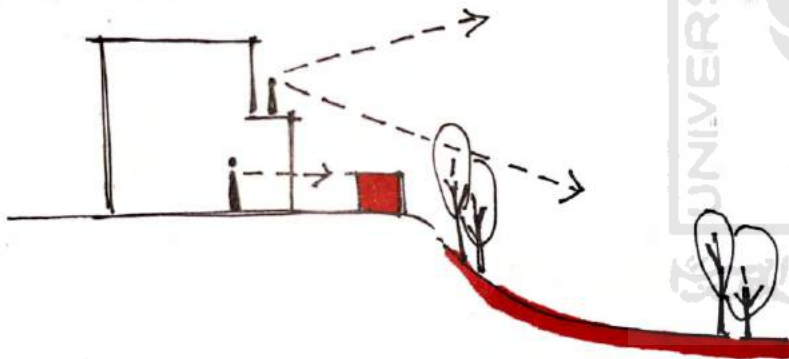


Figure 71. the view was towards the fort on the first floor and to the moat on the second floor
Source: Writer's Document, 2021

on the lower floor, the side facing the fort is intended to directly show off the intact form of the fort so that it can support the storytelling in the exhibition space. Meanwhile, the upper floors allow visitors to see a view of the moat which is a testament to the function of the Cepuri fort as a fortress of protection.

Then, as an area that serves to welcome guests who have just entered, the entrance is slanted, according to the direction of the visitor's entry so that visitors can easily find the entrance.

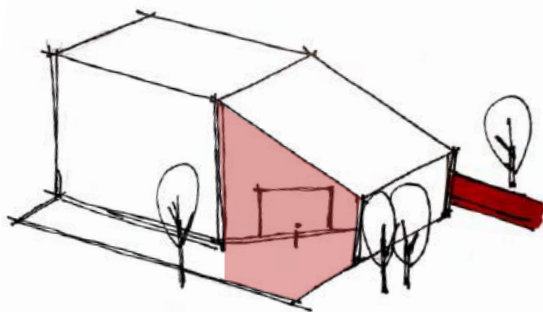
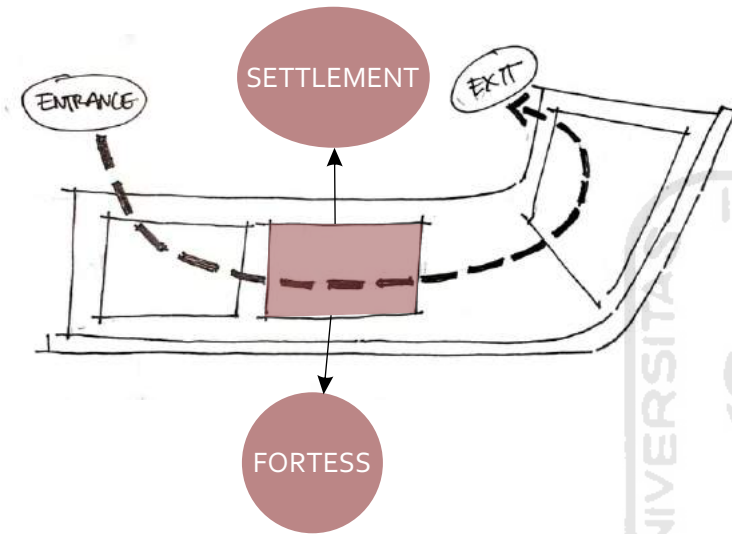


Figure 72. the entrance is adjusted according to the direction of entry of visitors
Source: Writer's Document, 2021

SOCIAL AREA

FLOURISHING
Benteng Cepuri as Spatial Boundary



The second area is a social area that is useful as a discussion space and community activities such as gathering rooms and workshops. This area is an area that symbolizes the second phase of the Cepuri fort, which is when it functions as a dividing wall between the royal family and the commoner. The shape of the building is a transformation of one fragment of the Cepuri fort, namely the 'Fort Jebolan Raden Rangga' in the north which has a history related to the supernatural powers of the royal member, Raden Rangga. the shape emphasizes the part of the fort that is broken and open.

Figure 73. Social area Represents the position of Benteng Cepuri in Social Order
Source: Writer's Document, 2021

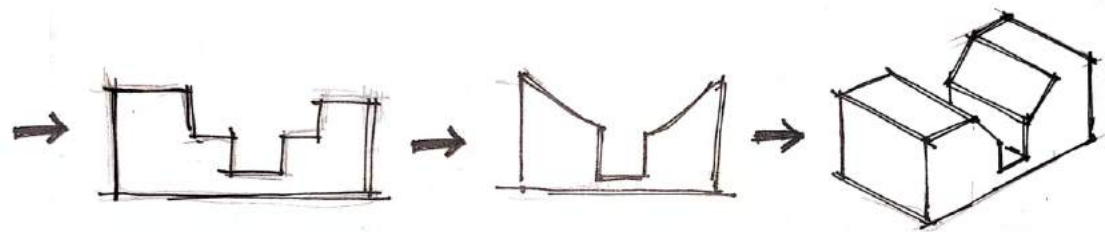


Figure 74. Building Mass of social area was transformed from 'Benteng Jebolan Raden Rangga's' fragment
Source: Writer's Document, 2021

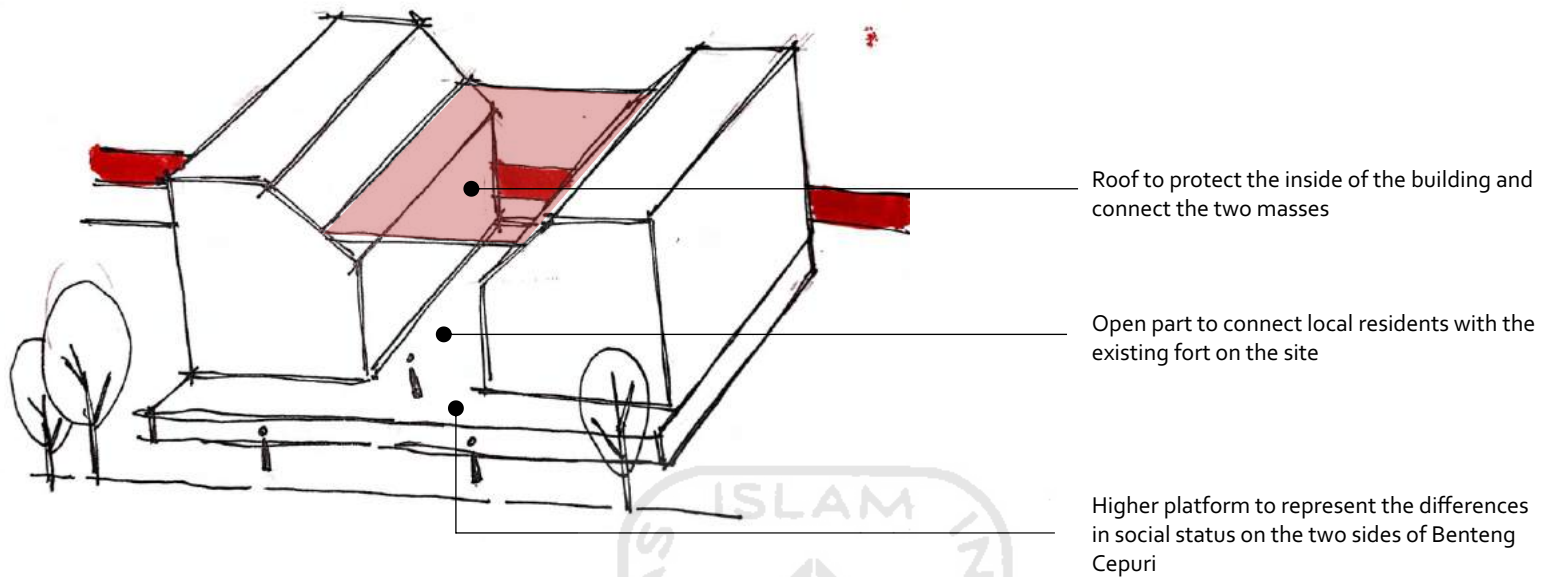


Figure 75. Building mass of Social Area
Source: Writer's Document, 2021

The second area is a social area that is useful as a discussion space and community activities such as gathering rooms and workshops. This area is an area that symbolizes the second phase of the Cepuri fort, which is when it functions as a dividing wall between the royal family and the commoner. The shape of the building is a transformation of one fragment of the Cepuri fort, namely the 'Fort Jebolan Raden Ranga' in the north which has a history related to the supernatural powers of the royal member, Raden Ranga. the shape emphasizes the part of the fort that is broken and open.

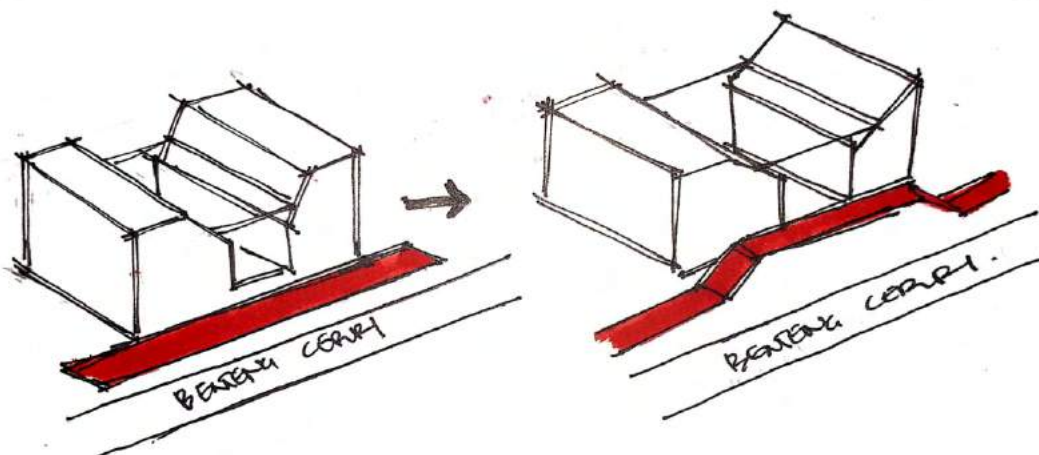
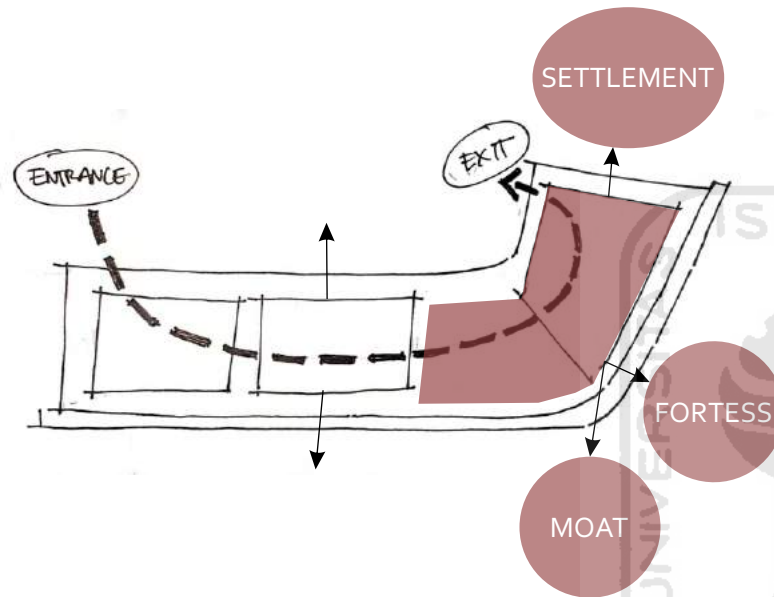


Figure 76. The circulation facing the Benteng Cepuri is made higher for easier observation
Source: Writer's Document, 2021

RECREATION AREA

DECLINING
Benteng Cepuri as Spatial Boundary



The third area is a recreation area that symbolizes the third phase of Cepuri fortress, which is the process of losing the fortification's significance which is marked by the loss of the sacredness of the area within the fortress and the entry of the surrounding community into the Cepuri fortress. This phase is represented by the mass of the building that is open and the shape is curved. This form is not only used to invite the surrounding community to enter, but also strengthens the characteristics of the site and opens the visitor's view to the view of the moat below.

Figure 77. Recreational area Represents the deterioration process of Benteng Cepuri
Source: Writer's Document, 2021

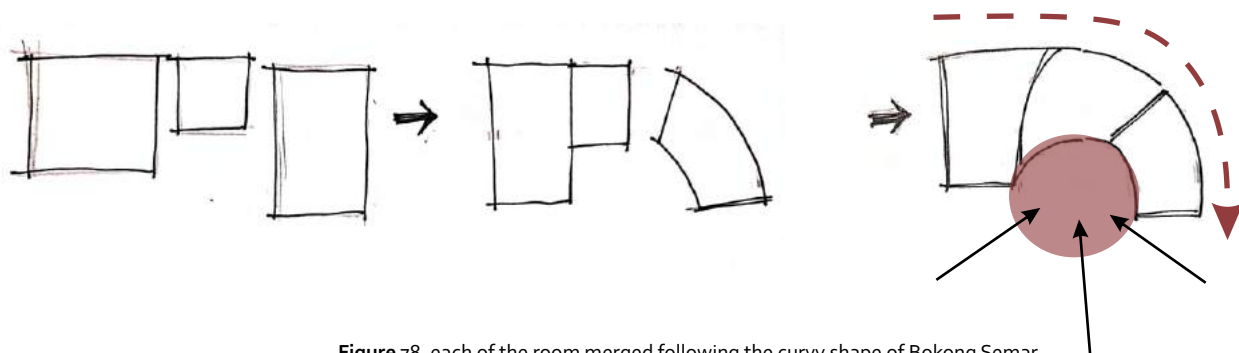


Figure 78. each of the room merged following the curvy shape of Bokong Semar
Source: Writer's Document, 2021

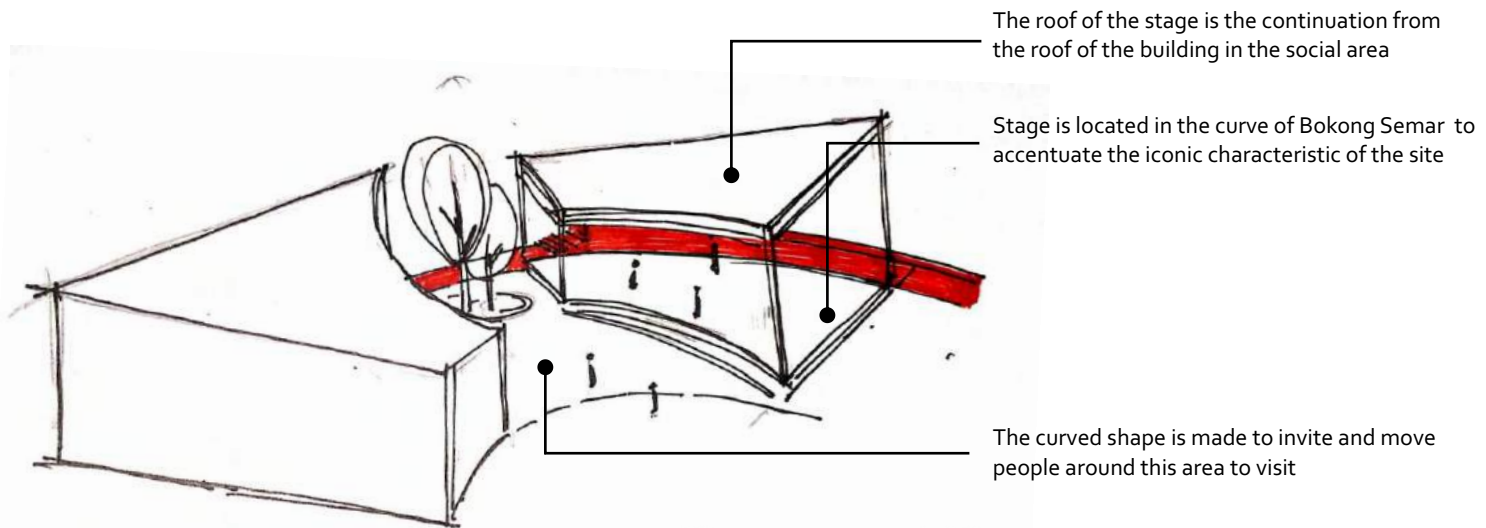


Figure 79. Social area Represents the position of Benteng Cepuri in Social Order
Source: Writer's Document, 2021

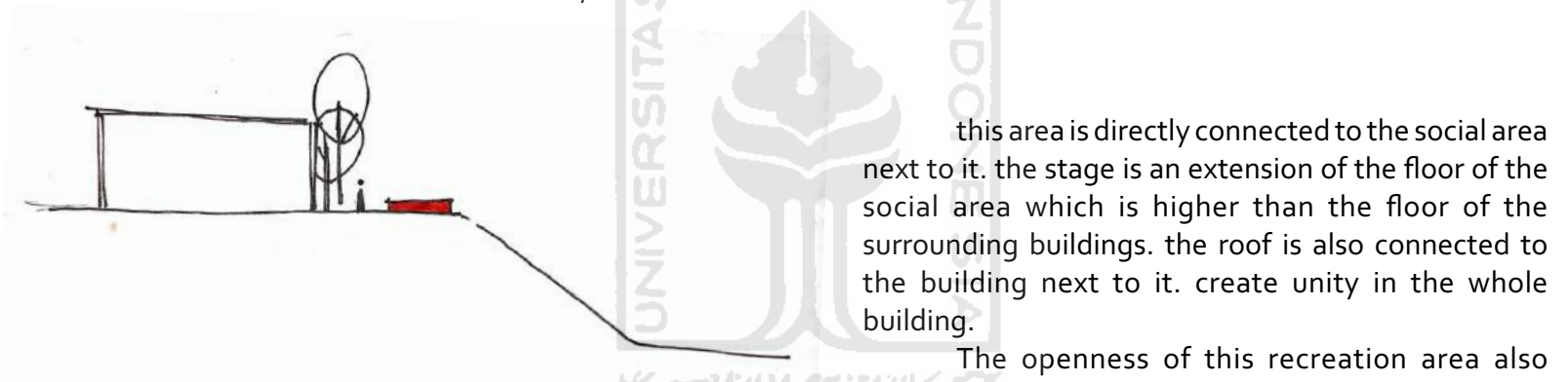


Figure 80. Section of Recreational area and its connection to Historical Landscape
Source: Writer's Document, 2021

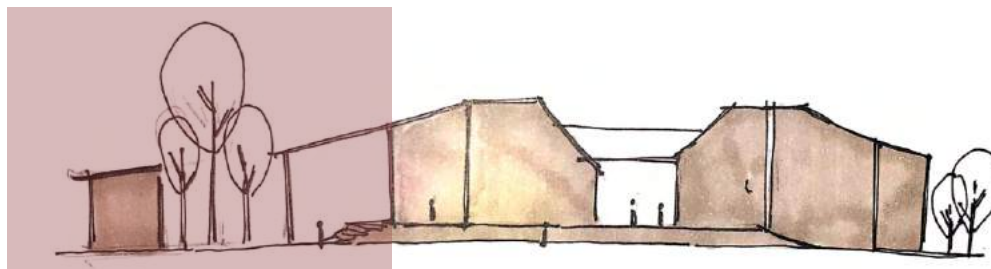
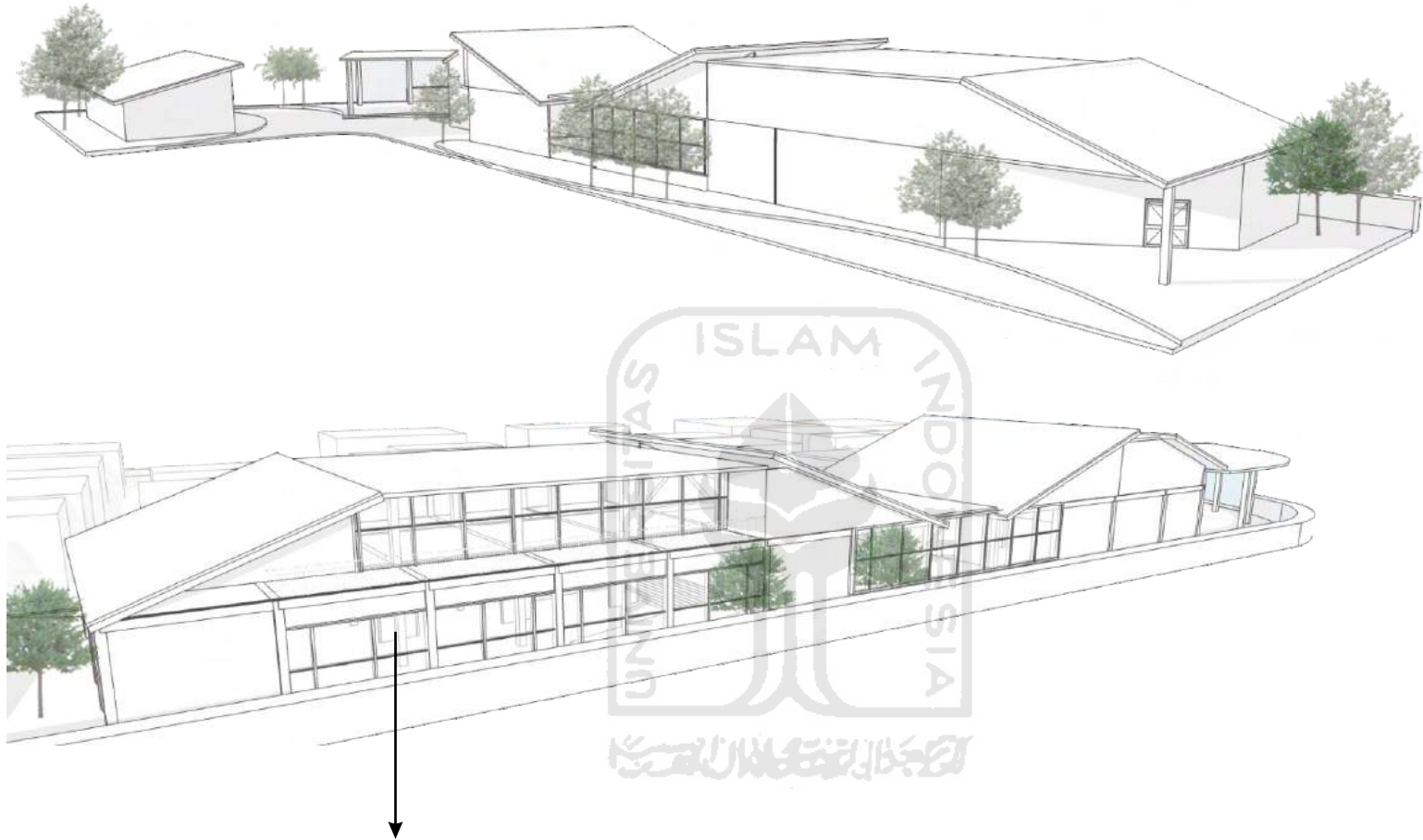


Figure 81. Recreational Area's Position on the entire building
Source: Writer's Document, 2021

OPENINGS



RESPONDING TO THE EXISTENCE OF BENTENG
CEPURI THROUGH OPENINGS

In this alternative, the concept of openings responds to the existence of the Cepuri fort heritage objects located on the site. A large opening is installed in the museum area facing south, so that visitors can see firsthand the condition of the cepuri fort while learning about its history through the displays in the exhibition area. The contrast of the smooth and clear glass when juxtaposed with the rough surface of the cepuri fort can highlight the presence of the fort when viewed from the Singosaren field below.

Openings are also placed in the workshop area so that visitors can observe the dimensions and texture of the fort while in this area.

MATERIALS

■ USING CONTRASTING MATERIALS TO ACCENTUATE BENTENG CEPURI

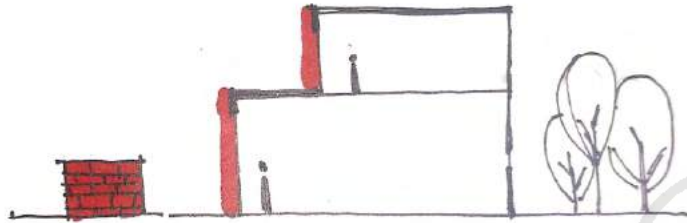


Figure 82. The application of contrasting material in the surface that facing Benteng Cepuri.

Source: Writer's Document, 2021

The concept used is compatible-contrasting which is implemented, one of which is through the material and color of the building surface. In the building envelope, the preferred material is a material that can provide a contrast to the appearance of the Cepuri fort when juxtaposed. the material used is wood which has a smooth surface and is brown in color. this approach is mainly emphasized on the surface facing the cepuri fort, so that it can accentuate the presence of the fort when viewed from the south.

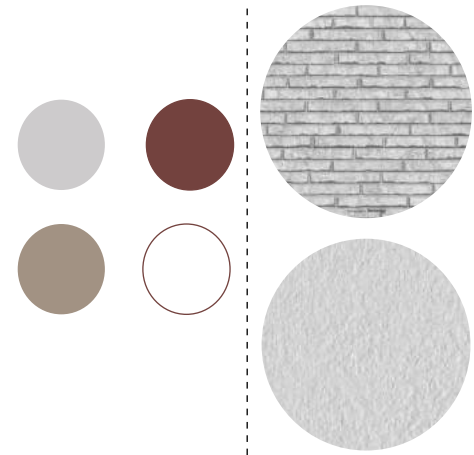
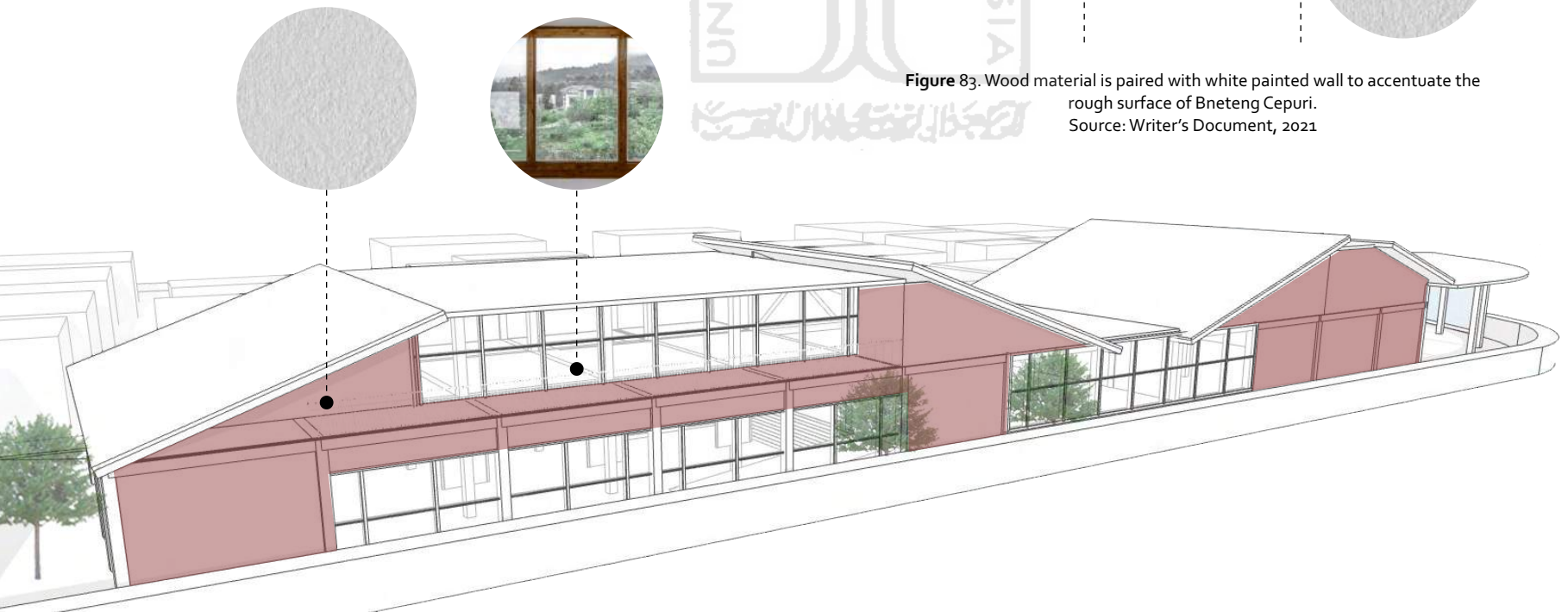


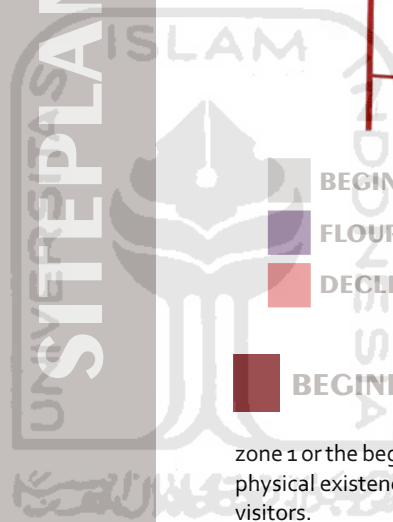
Figure 83. Wood material is paired with white painted wall to accentuate the rough surface of Bneteng Cepuri.

Source: Writer's Document, 2021



ALTERNATIVE 2

SITEPLAN CONCEPT



-  BEGINNING
-  FLOURISHING
-  DECLINING
-  BEGINNING: EXHIBITION AREA

zone 1 or the beginning zone contains a museum that displays the original physical existence of the cepuri fort. this zone is the first zone entered by visitors.

FLOURISHING: SOCIAL

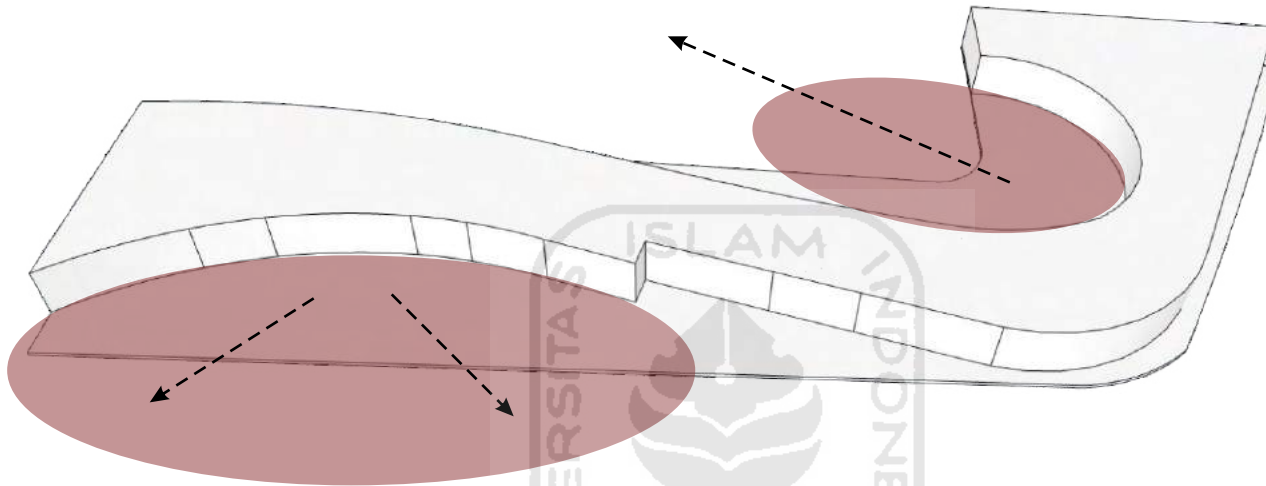
the second zone is a social zone that can be used by visitors and also local residents who need a place to discuss with each other. This area symbolizes the function of the cepuri fort as a barrier between the existence of nobles in the fort and ordinary people on the other side. therefore, this area represents the sacredness of the inhabitants of the cepuri area

DECLINING : RECREATION AREA + STAGE

This area is the most open area. This openness stems from the disappearance of the Cepuri fort' significance as the capital of Mataram moved from Kotagede

SITEPLAN CONCEPT

Respond to the existence of Benteng Cepuri Remnants and site Characteristic



CONNECTION TO THE FRAGMENTS

In the second alternative, the overall building form is more unified, forming a long curved sequence that extends from end to end of the site thus dividing the open area of the site into two parts. The open space in the west forms a park that can only be accessed through the heritage center building. This park is also useful as an observation area that allows visitors to interact directly with the fort in a safe manner. when in this park, visitors can also experience being in an enclosed space protected by a wall.

DRAMATIZING THE CURVE

In addition to forming a park that is used as a recreation area, the arch in the east is also used to accentuate the arch shape that is characteristic of Bokong Semar. The arch is dramatized so that visitors can clearly experience the shape of the space.

This arch is also made facing the residential area to invite the surrounding community to enter and participate in the activities in the building. Meanwhile, the side facing the moat is covered with transparent glass to limit the interaction of visitors with the Cepuri fort site to avoid accidents due to the site's location on a slope.

**EXHIBITION AREA:
CONNECTION TO FORTRESS AND MOAT**

the first zone which tells the process of the formation of the cepuri fort has a close relationship with the existence of the fort and moat. these two elements contain the story that the cepuri fort was once a fortress to protect the city. The exhibition zone consists of 2 parts: a formal learning area in the form of a museum that tells the history of the fort, and an observation area that can visually connect visitors with the fort and moat seen below. The observation area is located at the top, so that visitors can observe historical sights inside and outside the site.

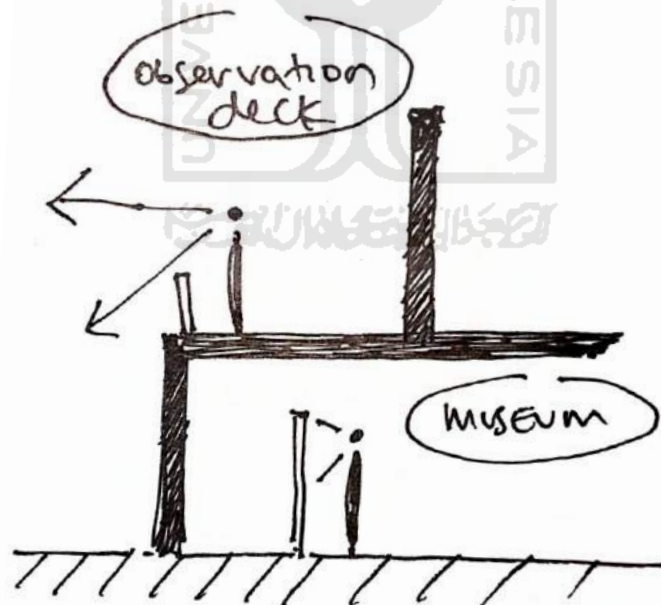
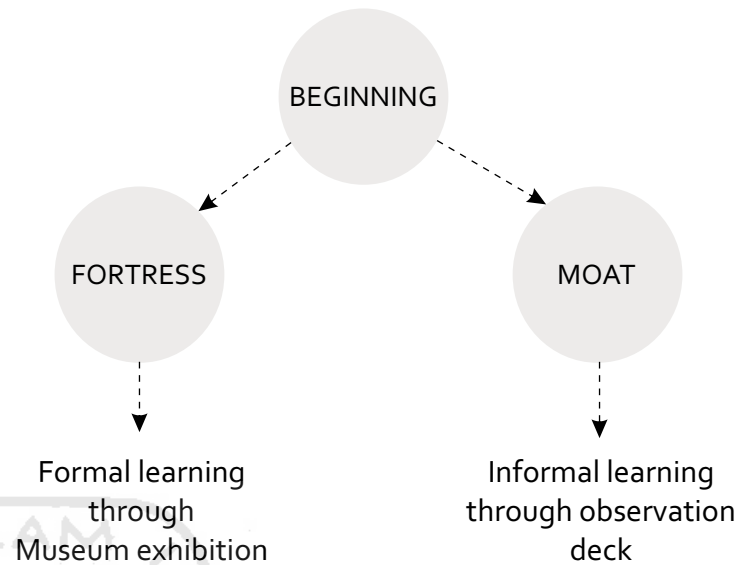
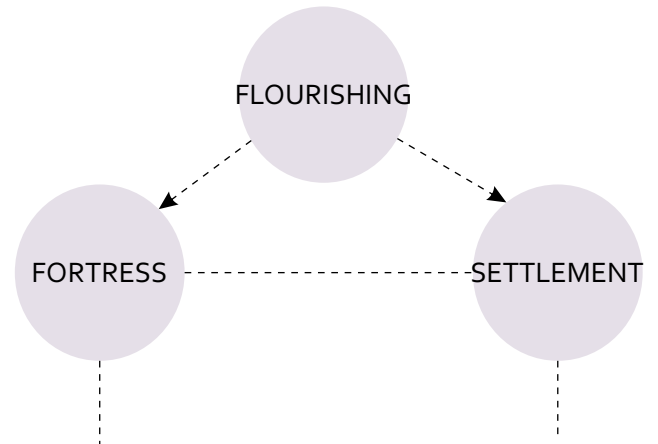


Figure 84. General concept of Exhibition Area
Source: Writer's Document, 2021

**SOCIAL AREA:
CONNECTION TO FORTRESS AND SETTLEMENT**

the second zone which symbolizes the function of the fort as a barrier between two social groups has a close relationship with the existence of settlements around it and also the existence of a fort within the site. In this zone, the walls of the building are left semi-open on both sides so that visitors who are inside can stay connected to both sides of the building, namely the settlements in the north and the park which allows them to interact with the ruins of the cepuri fort in the south. This area is also divided into two rooms: the downstairs room as a semi-permanent discussion room intended for ordinary visitors, and a more flexible discussion room on the second floor that can be used as a meeting room for the local community.



Semi-open space to visually connect to settlement area and fortress remnant on the site

connected to garden so the visitors can interact with the fortress remnant on the site

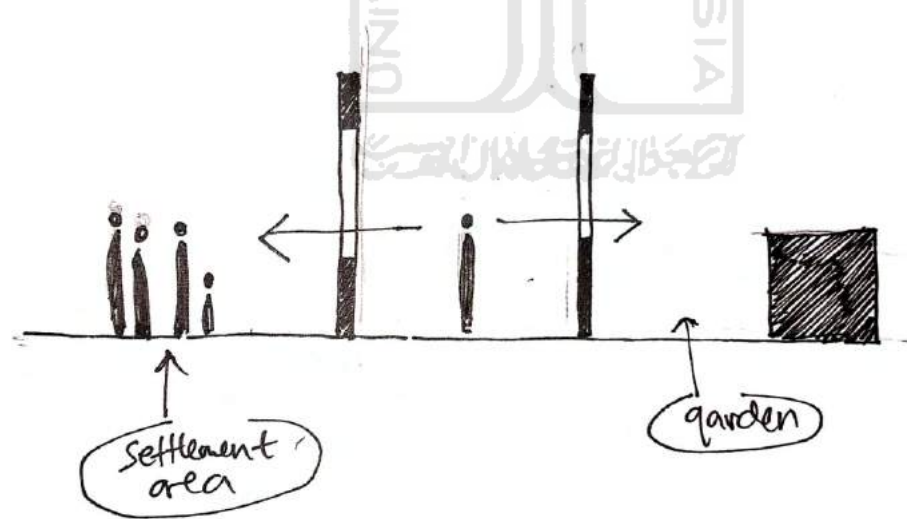
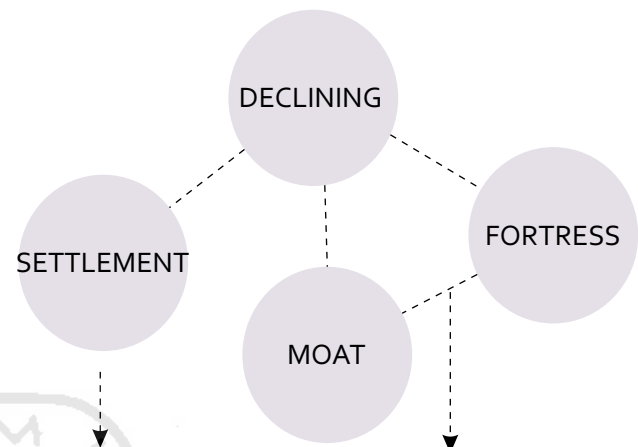


Figure 85. General concept of Social Area
Source: Writer's Document, 2021

**RECREATION AREA:
CONNECTION TO FORTRESS, MOAT
AND SETTLEMENT**

the final zone or recreation area must be well connected with the fort, moat or historical environment as well as with the local community. To connect with the community, the curved shape facing the settlement is opened to invite the surrounding community to enter. Meanwhile, the relationship with the fort and moat was built by opening an area overlooking the view of moat and the crumbling fort so that visitors can experience the historical value in the site. This area is made comfortable and flexible with terraced seating and a simple stage in the middle, considering that art is one of the cultural heritages that can unite outside visitors and local residents.



Opening north area to
invite local
community

putting opening
towards the south
area to visually
connects with moat
and fortress

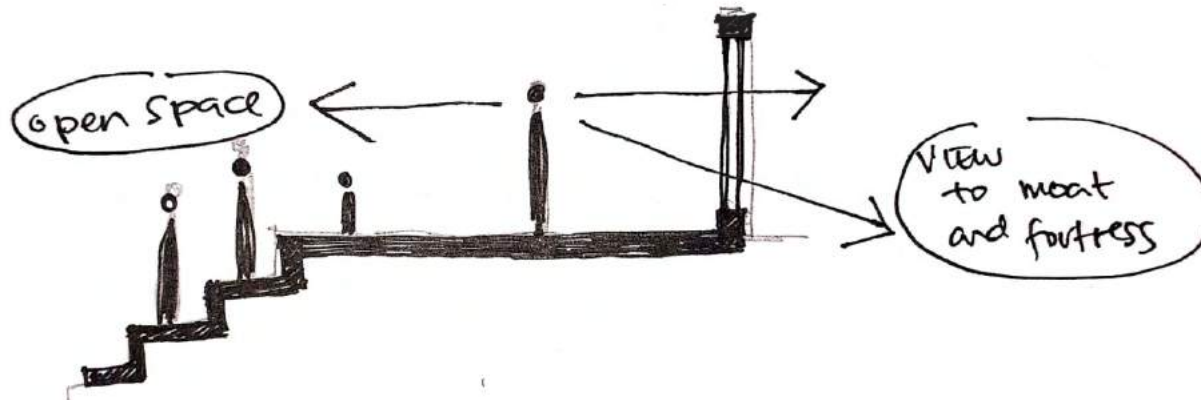
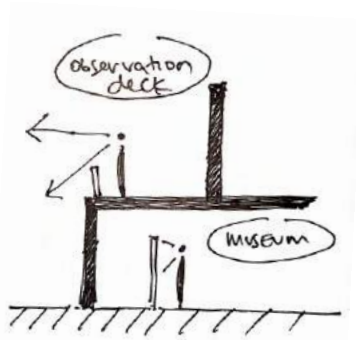
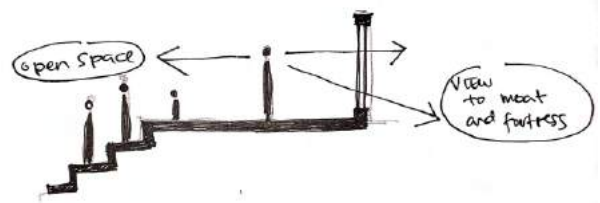


Figure 86. General concept of Recreation Area
Source: Writer's Document, 2021

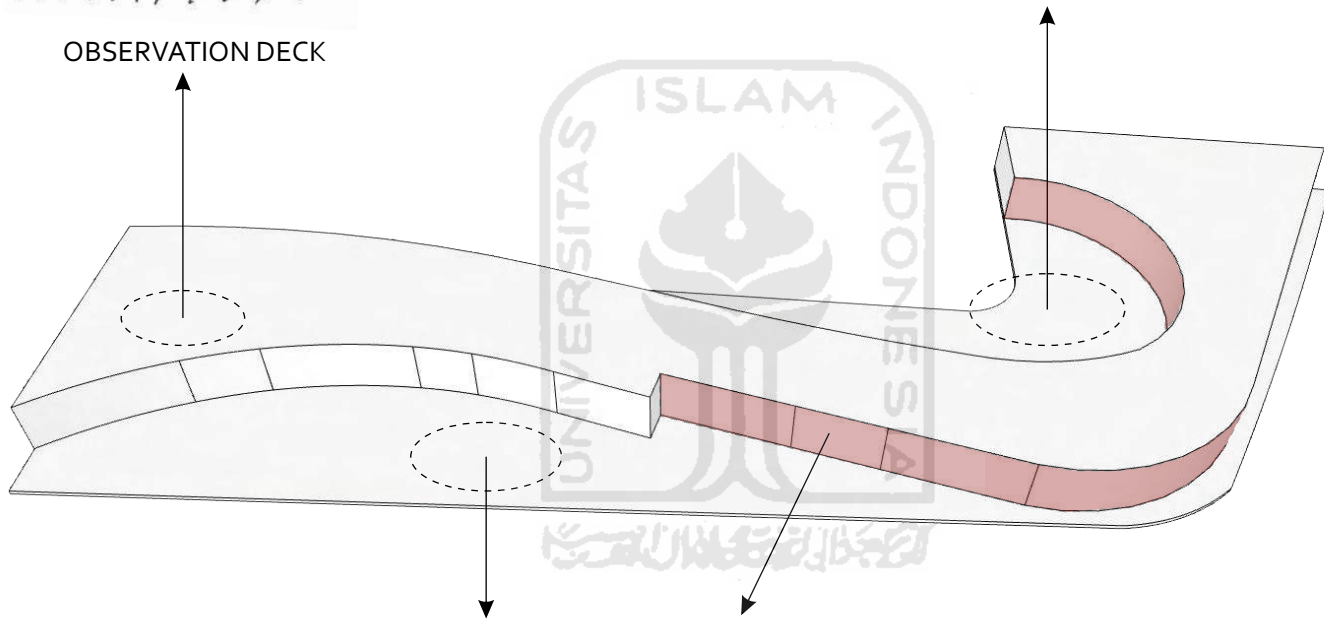
SITEPLAN CONCEPT



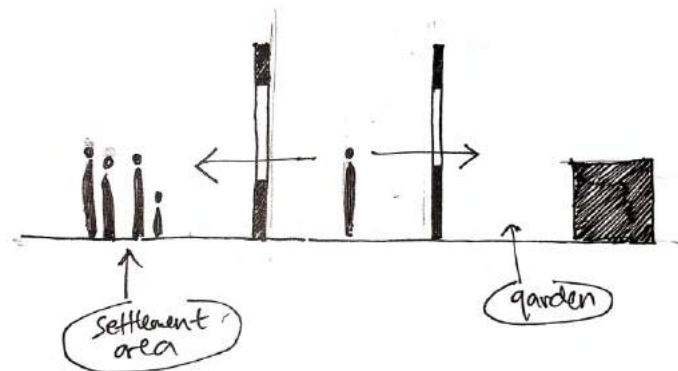
OBSERVATION DECK



OPEN GARDEN ON THE NORTH



SOUTH GARDEN AND SEMI-OPEN SPACE



ALTERNATIVE 2

BUILDING MASS CONCEPT

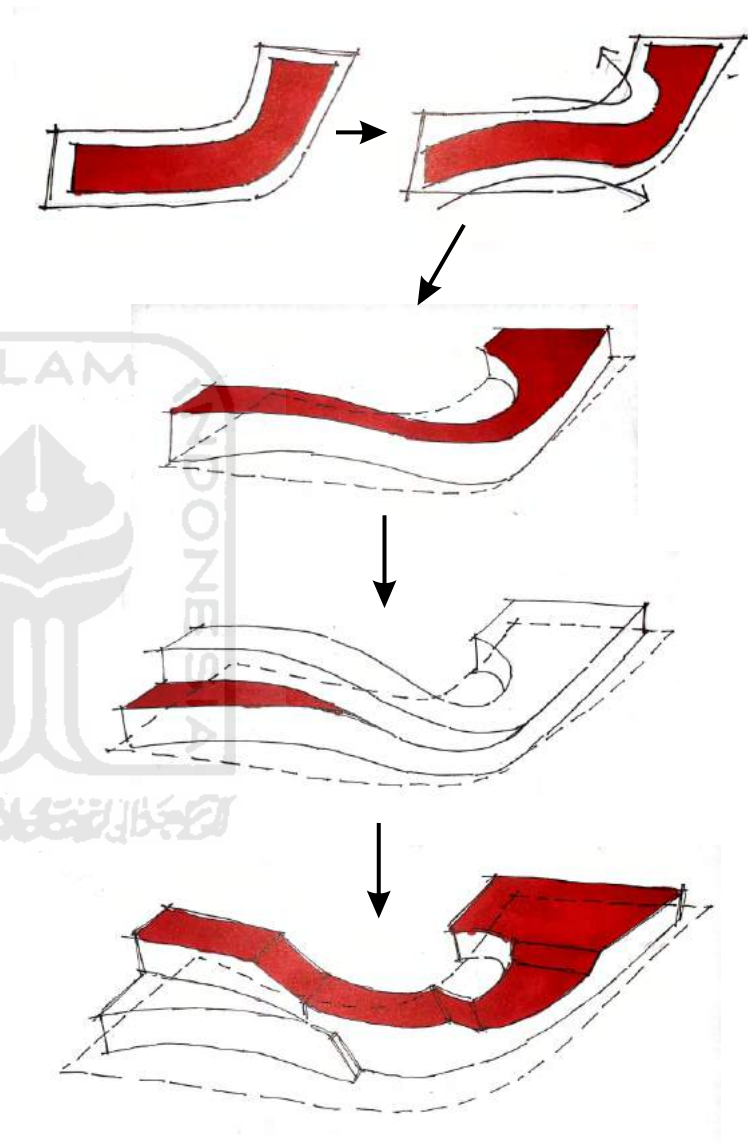


Figure 87. Building Mass Transformation
Source: Writer's Document, 2021

STACKING BUILDING MASSES

The mass of the building is a transformation of the curved site form. This arch is then more emphasized on the curved part of the site to strengthen the character of the site. This arch creates two open spaces in the west and east of the site. This open space is used as a space to support interaction between visitors and the cepuri fort.

Then, the basic shape of the building is branched so that it looks like a stacked impression on the building. this is an adaptation of the Cepuri fort construction system, namely by stacking bricks on top of each other. moreover, by creating a branch on the basic shape of the building, an observation deck is formed which is above the exhibition room on the first floor. this space can help the observation process at the cepuri fort more thoroughly.

ADAPTING BENTENG CEPURI'S FIGURE GROUND

After the basic shape is formed, the skyline of the heritage center building is adjusted to have different heights to describe the existence of various cepuri fort fragments: intact, partially lost and completely lost. This skyline is also adjusted to the ground figure of the cepuri fort fragment in BS so that it looks compatible when viewed from below and emphasizes the existence of the fort on the site.

EXHIBITION AREA

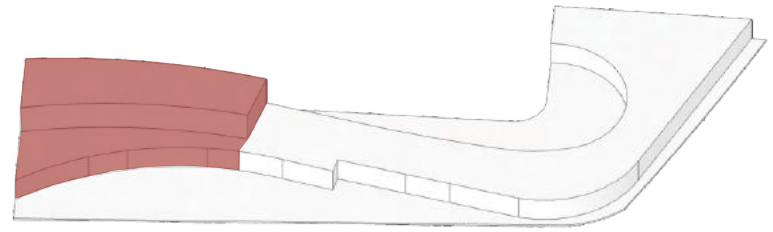


Figure 88. Keyplan - exhibition area
Source: Writer's Document, 2021

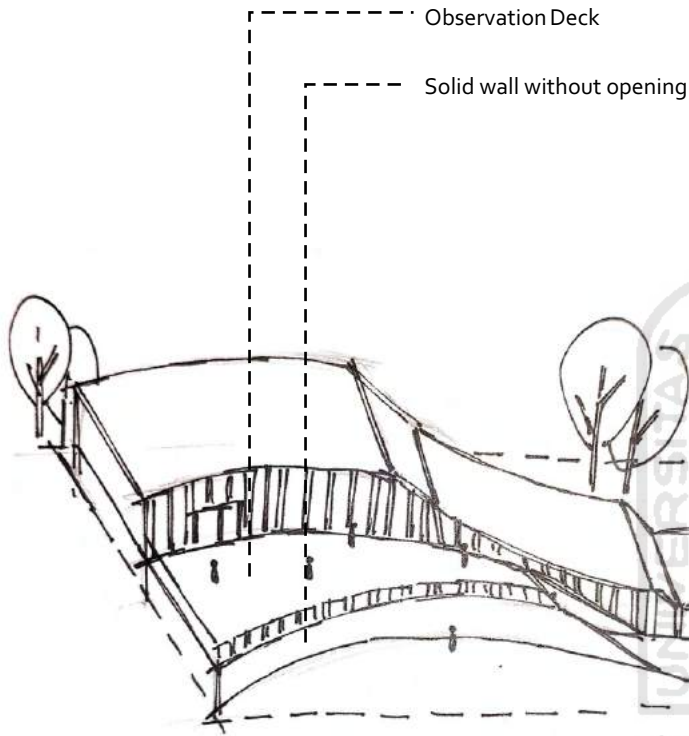


Figure 89 Observation Deck in Exhibition Area
Source: Writer's Document, 2021

CLOSED AREA AND OBSERVATION DECK

The exhibition area in this building design is the first area as well as the entrance for heritage center visitors. The area on the first floor is a closed area as a depiction of the first phase of the cepuri fort, namely the formation process. To realize this concept, the number of openings is minimized, so that visitors can experience the feeling of being surrounded by a protective wall. Then, visitors are directed to the second floor which is also the exhibition area. This area is more open and directly connected to the observation deck which visually connects visitors with the fort and the moat.

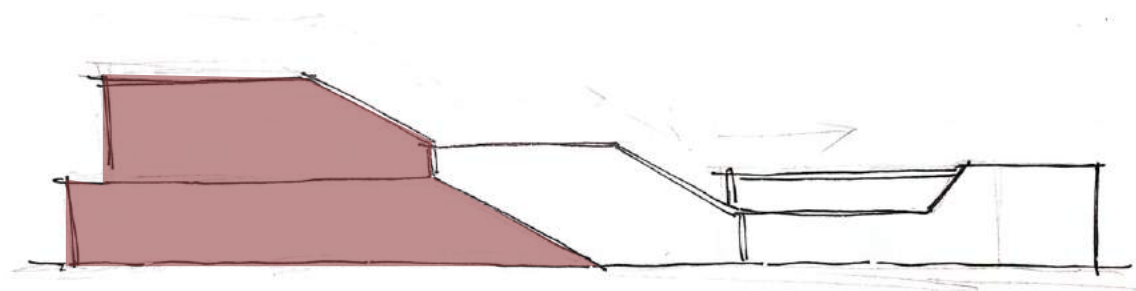


Figure 90. Exhibition area in the Building
Source: Writer's Document, 2021

SOCIAL AREA

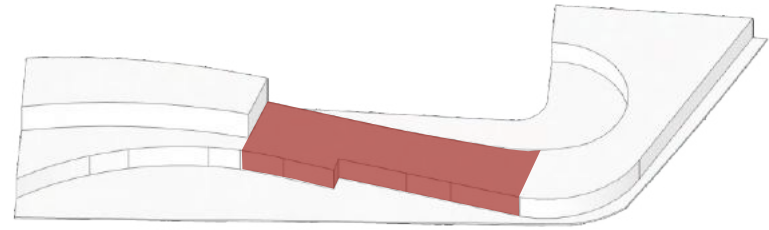


Figure 91. Keyplan - exhibition area
Source: Writer's Document, 2021

■ DEPICTING THE HIERARCHY

After passing through the exhibition area and park, visitors are directed to the social area which is a discussion room. the social area is an area that represents the second phase of Fort Cepuri, when the fort functions as a dividing wall between the royal family and the common people. this room has a higher floor height than the previous museum exhibition space, this is to strengthen the depiction of the hierarchy that exists between the two groups of people who live on both sides of the fort. The difference in authority is also shown by opening the view from the exhibition room on the second floor to the social space below so that visitors above can see the entire social space, but visitors who are below cannot see the entire upper room.

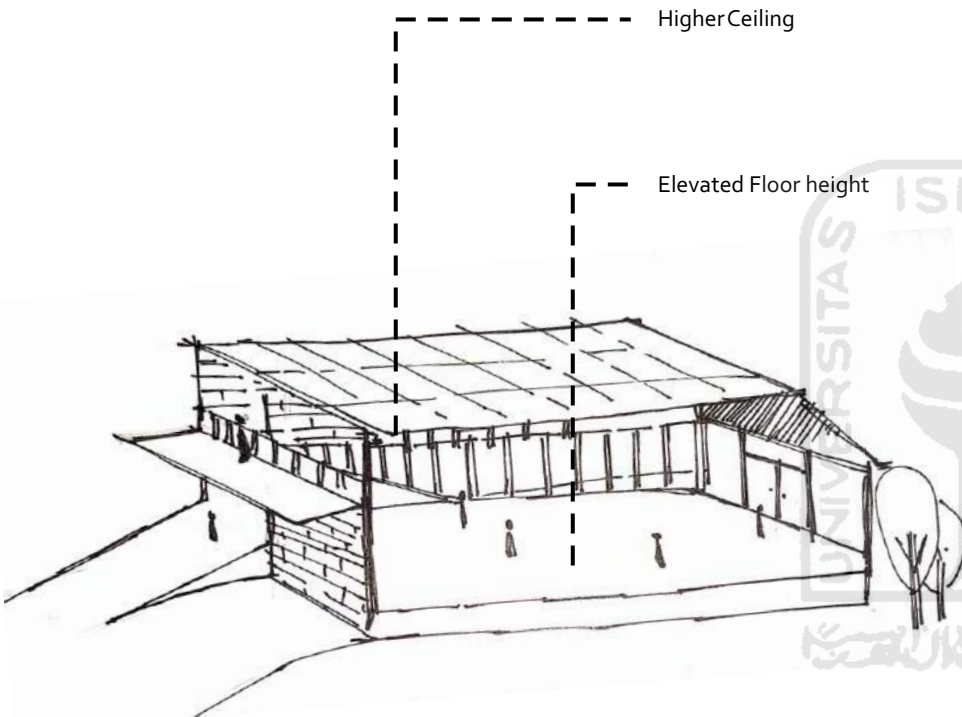


Figure 92. elevating the ceiling and floor to depict the hierarchy
Source: Writer's Document, 2021

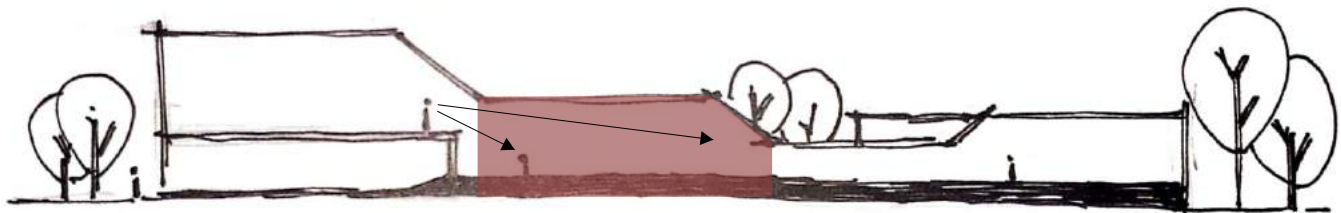


Figure 93. Social Area
Source: Writer's Document, 2021

RECREATION AREA

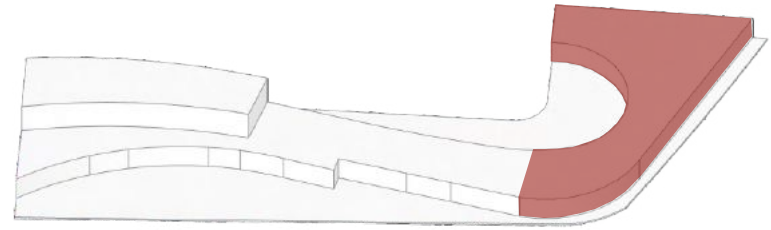
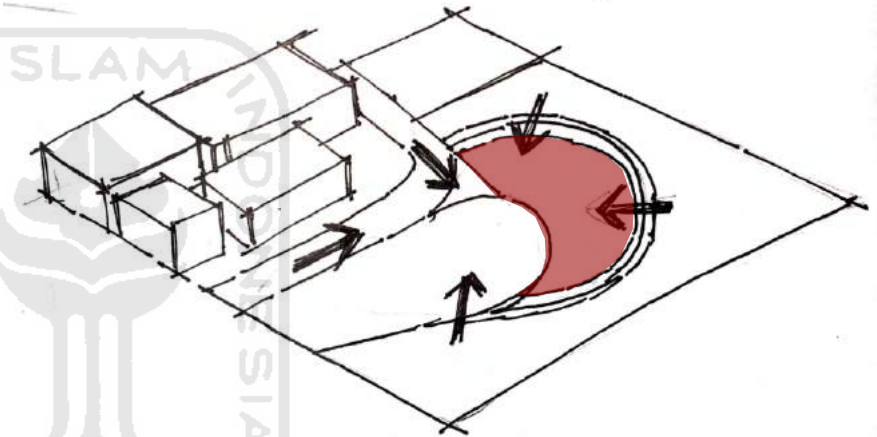


Figure 94. Keyplan - exhibition area
Source: Writer's Document, 2021

DEPICTING DECLINING PROCESS OF BENTENG CEPURI

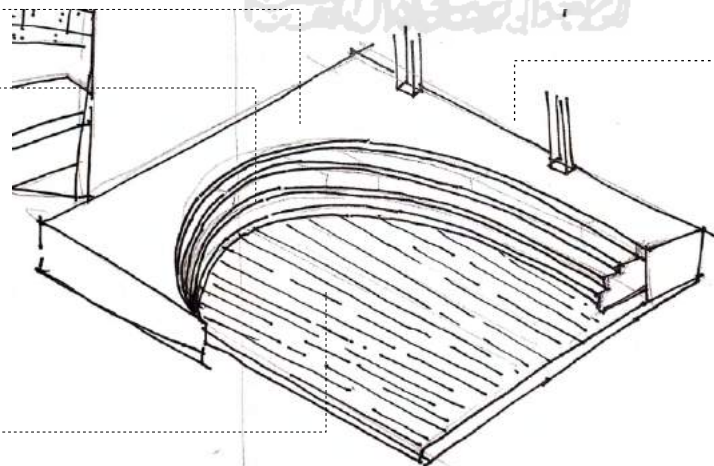
A curved shape is made leading to a residential area to invite local residents to join in on the ongoing activities within the heritage center. Besides that, an open stage is also placed with stairs that surround it to accommodate cultural activities carried out by local artists. The irregular shape of the stairs is designed to describe the 'messed' condition of the remnants of the Benteng Cepuri. In addition, on the east side of the recreation area that is facing the Moat is also opened so that visitors who are moving from the social space to the recreation area can see the view of Moat and the remnants of the fort that is damaged.



The curve shape opens toward the settlements

Stairs depicting the crumbling fortress

Opening the view to the moat below



Open stage to accommodate cultural activities

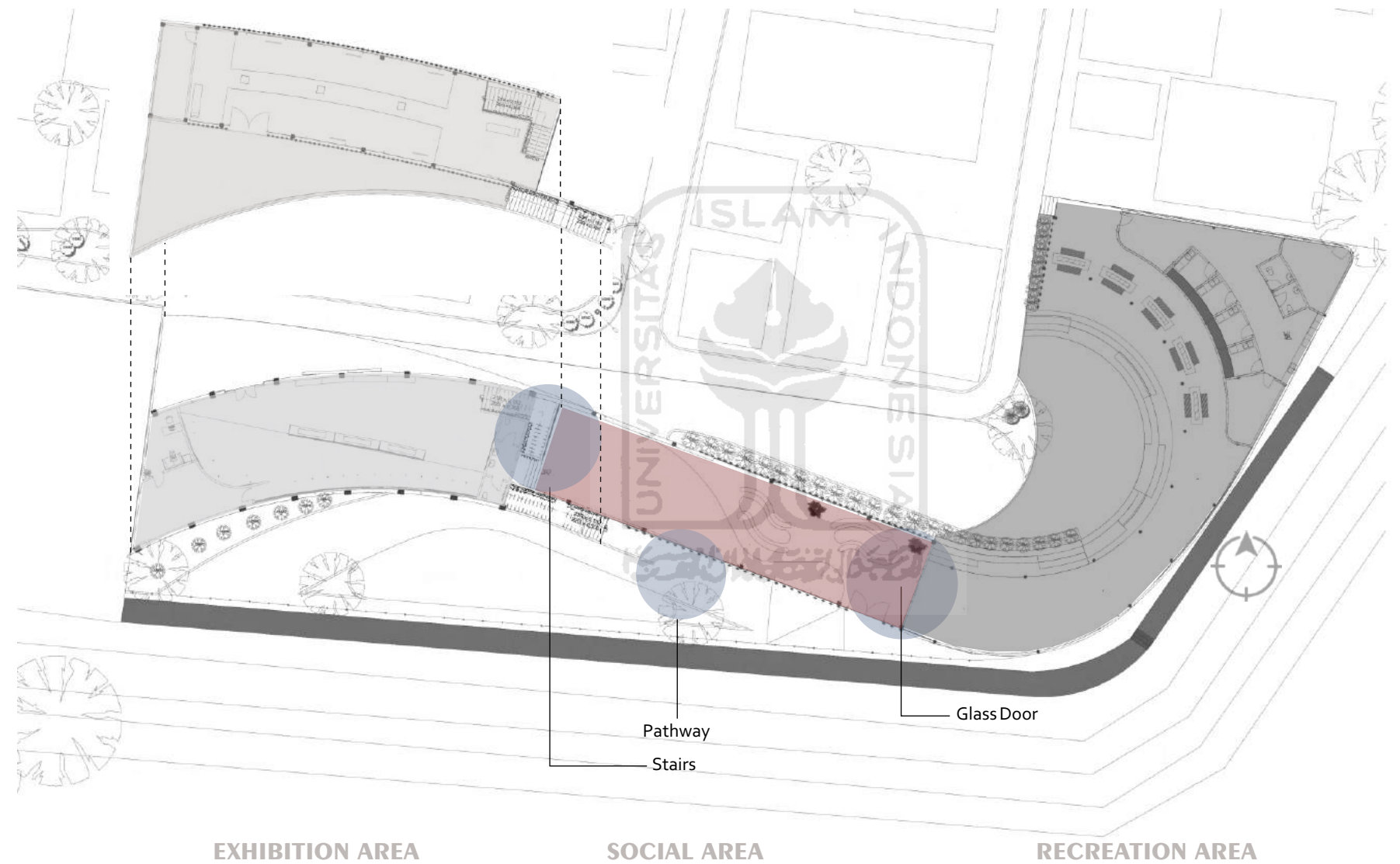
SITE DESIGN

FLOORPLAN CONCEPT



FLOORPLAN CONCEPT

SPATIAL ARRANGEMENT



EXHIBITION AREA

SOCIAL AREA

RECREATION AREA

NARRATIVE DELIVERED IN A SEQUENCE

In general, this building plan is divided into 3 zones, namely the exhibition, social and recreational zones. These three zones are arranged longitudinally, following the shape of the site. each zone represents each phase of the cepuri fort's life:

- **Exhibition zone** that functions as a museum, which is a place for learning about the cepuri fort as a whole. this zone represents the phase of the formation of the cepuri fort.
- **Social zone** is a zone that represents the second phase, when the fort serves as a barrier between the territory of the royal members and the common people. This room is a discussion area, where the visitors and local people can interact.
- **Recreation zone** is a free zone that serves as a place to rest, show and eat. This zone is an open space that can accommodate many visitors from various backgrounds.

CONNECTING EACH SPACE TO BUILD ANTICIPATION

The part of the room that connects each zone is also made so that visitors can really feel the transition process from one room to another.

The staircase between the exhibition hall and the social space is used to connect the two exhibition halls. the stairs are made open so that visitors can see into the social space and build anticipation before moving to the next area.

Visitors move from the exhibition area to the social area by going through the Garden. Semi-open walls allow visitors to see the social areas of the park and vice versa.

Lastly, visitors can transition from the social space to the recreation room through glass doors. Glass doors are used to build excitement for visitors because they can see the open space through the glass doors.

INTERIOR CONCEPT BEGINNING

**EXHIBITION AREA:
CLOSING THE SPACE TO REPRESENT THE
FIRST PHASE OF BENTENG CEPURI**

The interior of the museum area refers to the concept of a closed space which is taken from the interpretation of the phase of the formation of the cepuri fort. in this area, the opening is minimized so as to create the impression of being closed.

This room contains an explanation of the history of the cepuri fort, records of the reconstruction process, and also its existence to date. explanation of the history of the cepuri fort is supported by a miniature fort and a digital screen that contains an introduction to historical figures. wood panels are installed behind the miniature fort to accentuate its presence when paired with the dark wood color. wood panels are also used to partially cover the ceiling.

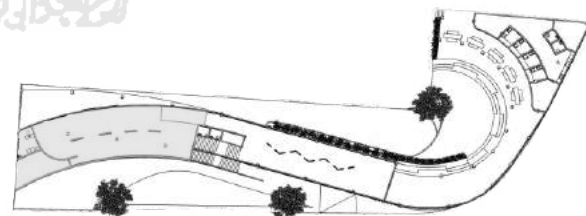


Figure 95. Exhibition area
Source: Writer's Document, 2021

DISPLAY ARRANGEMENT AND CIRCULATION

Digital screen layouts that provide explanations about important figures in the history of cepuri fort are placed in the middle of the room lengthwise according to the movement of visitors. This digital screen is also placed in the middle of the room surrounded by walls to depict the position of these figures who used to live in the cepuri fort. On one side of the wall there is also a miniature wall of the cepuri fort showing the different materials and heights for each phase.



Figure 96. Display Arrangement concept
Source: Writer's Document, 2021

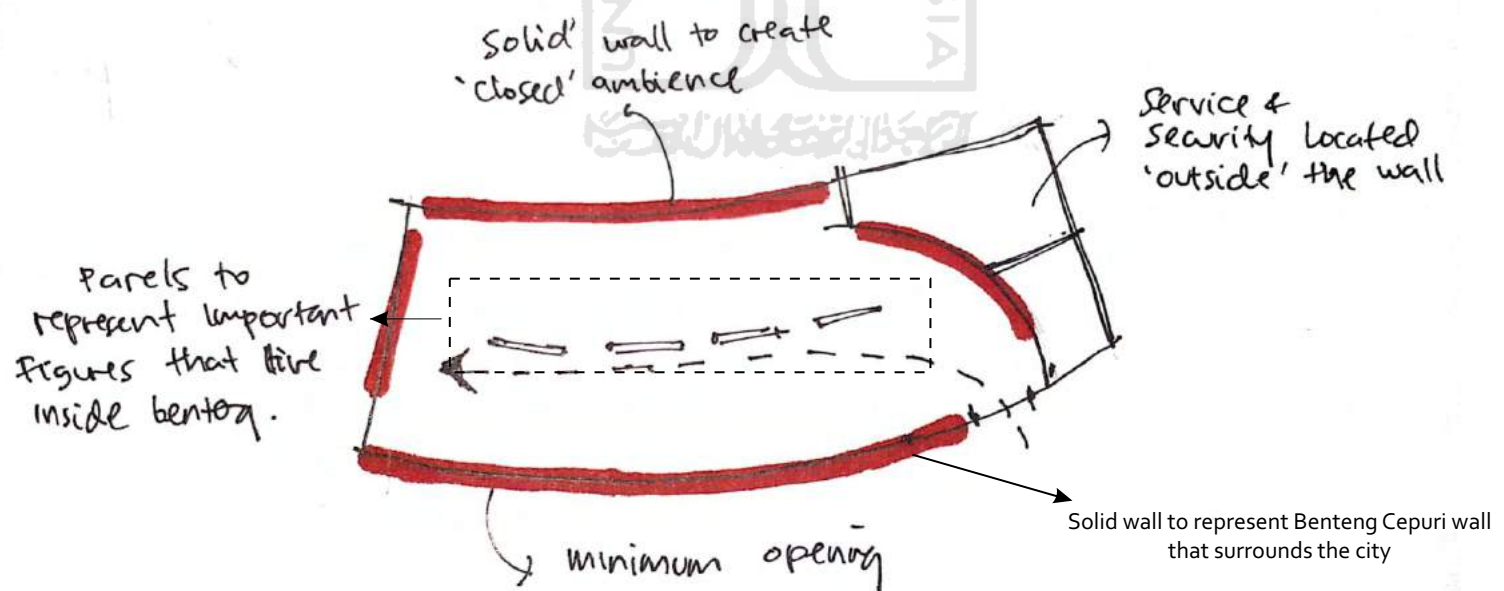


Figure 97. Exhibition area Interior Concept
Source: Writer's Document, 2021

CREATE A WIDER VISUAL RANGE

The two exhibition areas on the upper and lower floors are connected by an open staircase. If the lower exhibition area adopts a closed concept which symbolizes the closing phase of the city by the fort wall, then the exhibition area above takes a more open concept. In this area, the range of view of visitors is expanded so that visitors can feel the experience of observing the surrounding environment from the top of the fort. Because it is more open, the displays placed in this area are displays that must be observed closely, such as boards containing stories of the development of the Cepuri Fort, heritage ornaments, miniatures, etc.

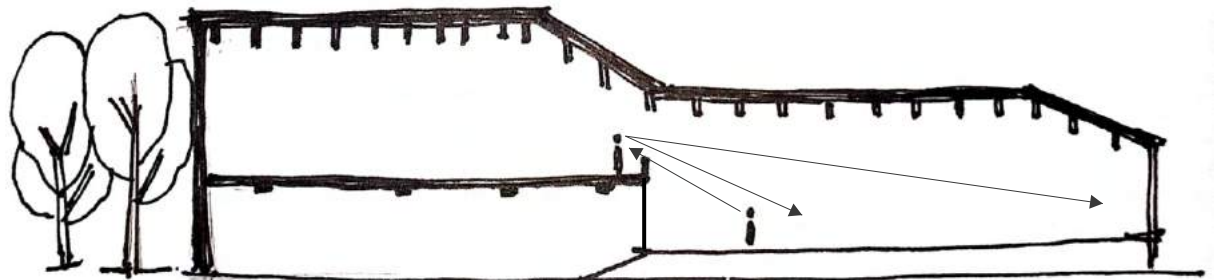


Figure 98. Exhibition area interior concept
Source: Writer's Document, 2021

INTERIOR CONCEPT

SOCIAL AREA

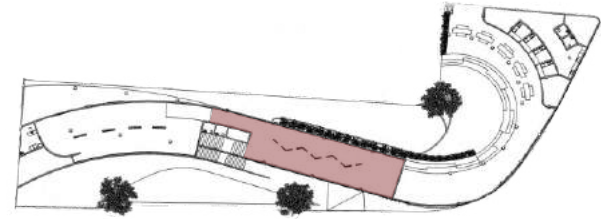


Figure 99. Exhibition area
Source: Writer's Document, 2021

RISING THE CEILING AND FLOOR ELEVATION TO SYMBOLIZE THE 2ND PHASE OF BENTENG CEPURI

the room in the social area is an area that has a high ceiling. The floor in this room is also raised by 75 cm to distinguish it from the previous room. This high ceiling and floor elevation adapts from a traditional Javanese house which usually raises the floor height in a room used for sacred activities. when viewed from the inside, visitors can clearly see the change in the height of the roof.



Figure 100. Ceiling and Floor Elevation
Source: Writer's Document, 2021

EXPOSING THE TRUSS AND USING TIMBER TO STRENGTHEN LOCAL IDENTITY

The roof truss in this building is also left open, so that visitors who are inside can clearly see the wooden truss that supports the roof. In addition to aesthetic reasons, the wood material used for the truss is also used to strengthen the identity of the Javanese building in this building. the wood used in the Heritage Center is combined with modern concrete materials to create compatibility between the old buildings around it and the new ones.

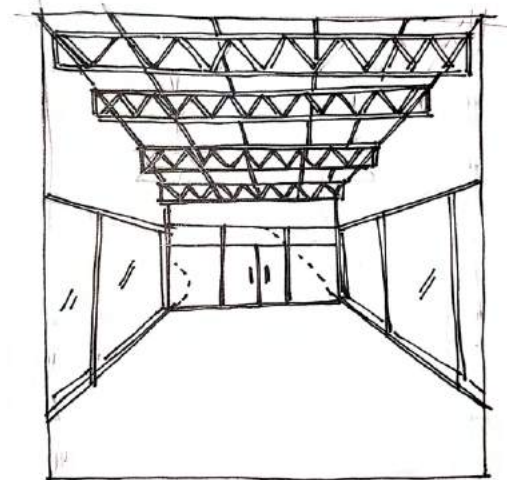


Figure 101. Exposed Ceiling
Source: Writer's Document, 2021

INTERIOR CONCEPT

RECREATION AREA

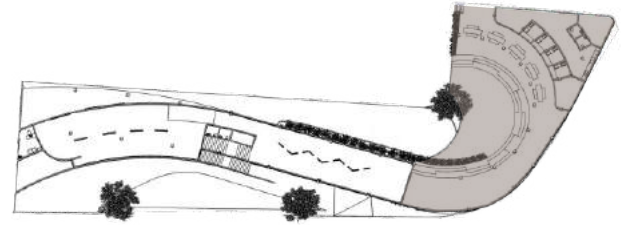


Figure 102. Exhibition area
Source: Writer's Document, 2021

RECREATION AREA: OPENING THE SPACE TO ENCOURAGE INTERACTION

The recreation area forms an arch that faces the residential area to invite local residents and visitors to join in the activities in the heritage center. The focal point of this area is centered on the existence of an open stage in the center of the area. The stage, which is lined with wooden floors, can support cultural activities such as dance performances and other artistic performances. This stage is also surrounded by stairs which can also be used as casual seating, so that all users can easily interact with each other.

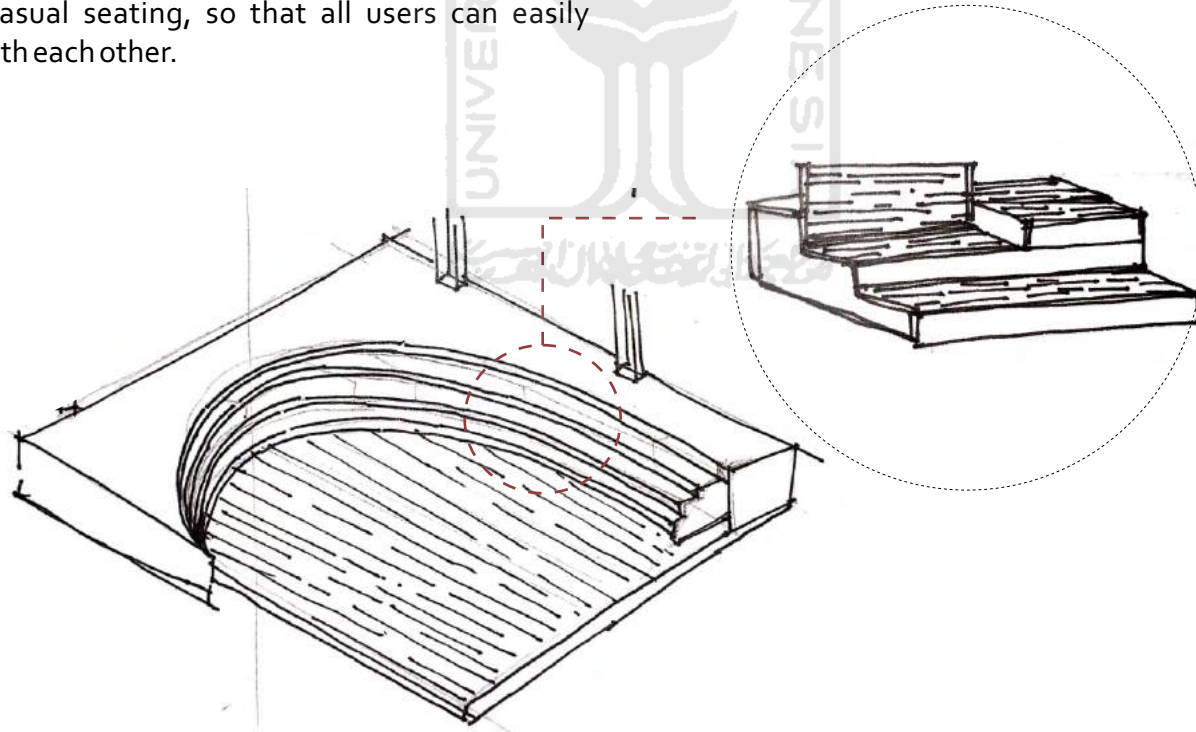


Figure 103. Outdoor Stage Seating
Source: Writer's Document, 2021

RECREATIONAL AREA: FOOD COURT FACILITY

Other than the outdoor stage, this area is also equipped with several other facilities such as an observation area that allows visitors to observe the scenery around the building including the ruins of the fort and the moat beneath it, in addition, in this recreation area there is also a food court that sells Kotagede's Traditional Snacks consisting of: of 4 kiosks that can be rented by the seller. visitors can also enjoy food while sitting in the circular seating area around the stage. In the food court area, the upper wall of the kiosk is left semi-open with a wooden lattice. In addition to adding beauty and creating uniformity with the whole building, this lattice also functions to improve air circulation.

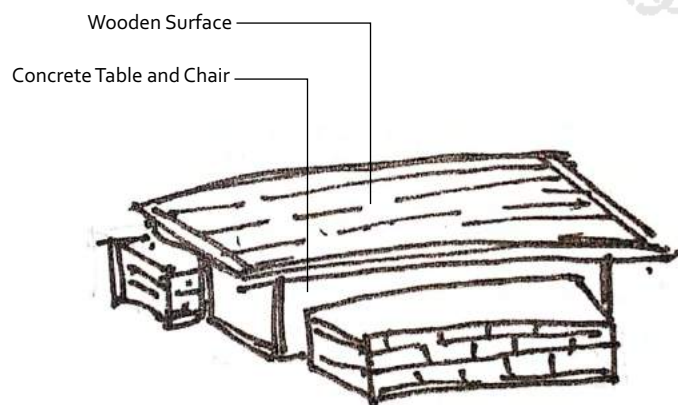


Figure 1. Dining Area
Source: Writer's Document, 2021

Wood Lattice

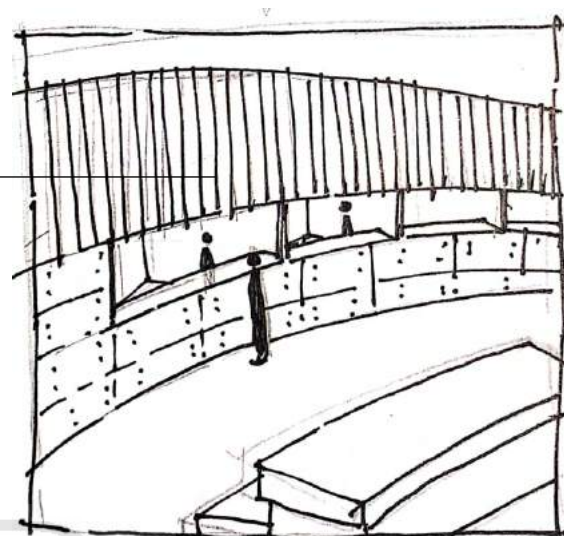


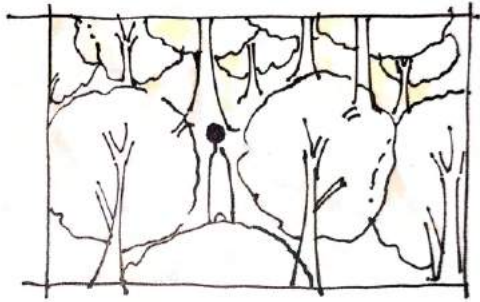
Figure 104. Foodcourt
Source: Writer's Document, 2021



Figure 105. Dining Area Interior Concept
Source: Writer's Document, 2021

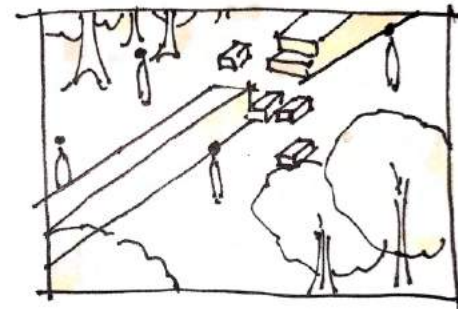
CIRCULATION CONCEPT

RETELLING NARRATIVE THROUGH CIRCULATION



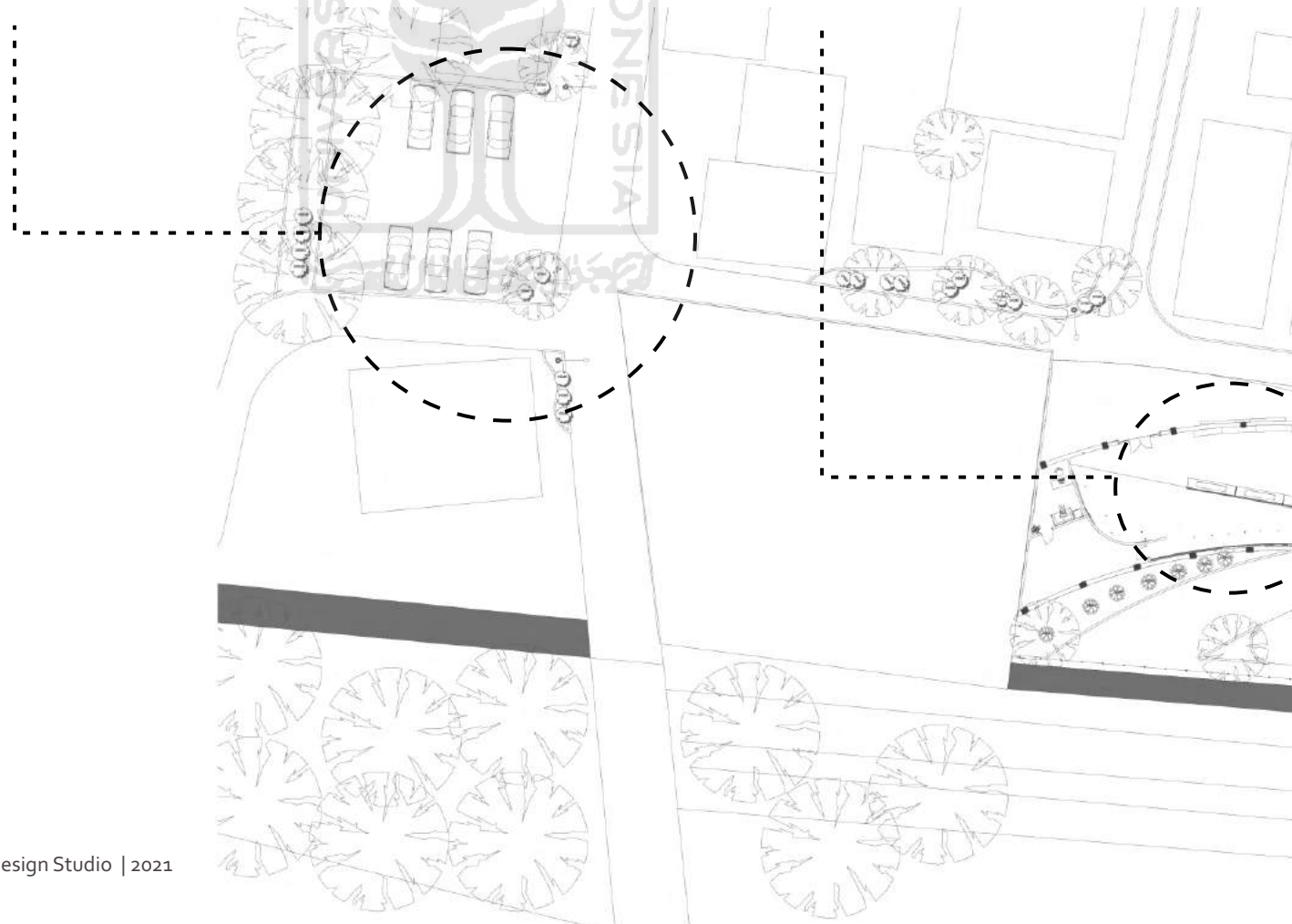
PROLOG | ALAS MENTAOK

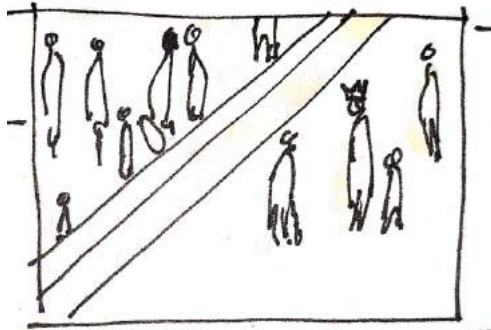
The exploration path starts from the parking lot. the parking area which is a bit far from the site is a depiction of the story before the formation of the fort. the addition of plants and a road border in the form of a curve symbolizes the existence of a pedestal that is still in the form of a forest with irregular plants. these elements lead visitors to the heritage center



BEGINNING | CLOSING THE CITY

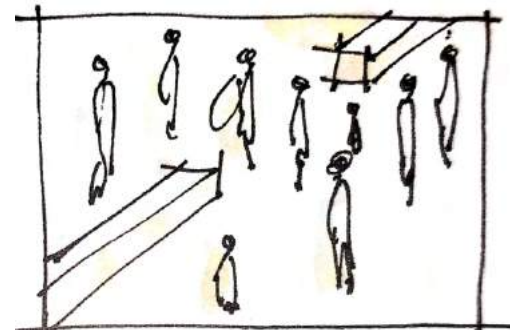
When entering the heritage center building, visitors are immediately directed to the museum area which takes the concept of an enclosed space. this symbolizes the process of forming a fort that surrounds the city.





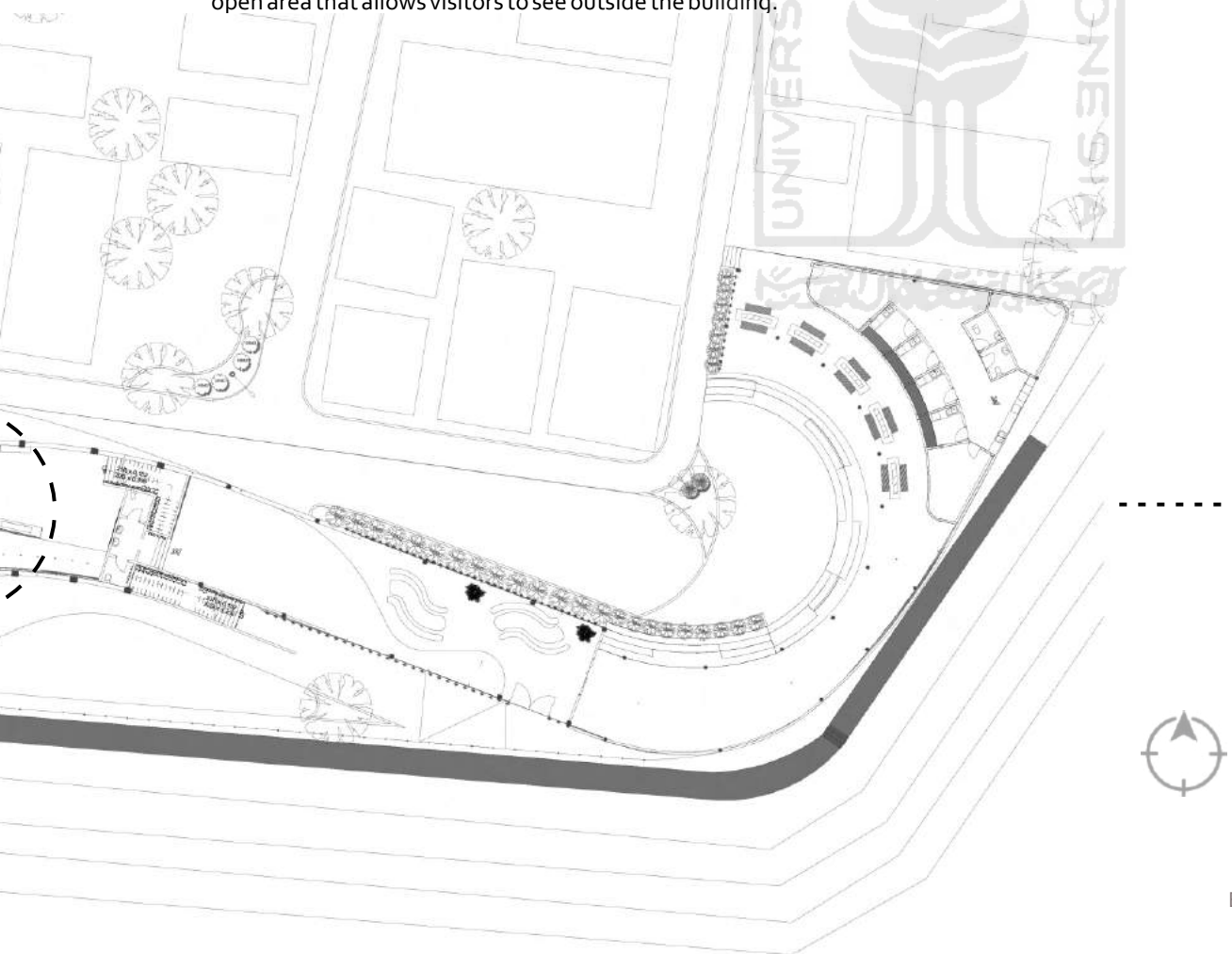
FLOURISHING | SPACE FOR ROYAL FAMILY

Next, visitors will move to a social area that can be used as a discussion room and conduct community activities. This area describes the function of the cepuri fort as a sacred area that only members of the kingdom can inhabit. sacredness is represented by the elevation of the floor elevation, and also a high ceiling. This room is a semi-open area that allows visitors to see outside the building.



DECLINING | THE MERGE OF TWO SIDES

the last area is the recreation area. In this area, interaction between visitors, local residents and artists who carry out art activities is really encouraged. this is a symbol of the process of merging the area on both sides of the fort after the royal capital of Mataram was moved from Kotagede.



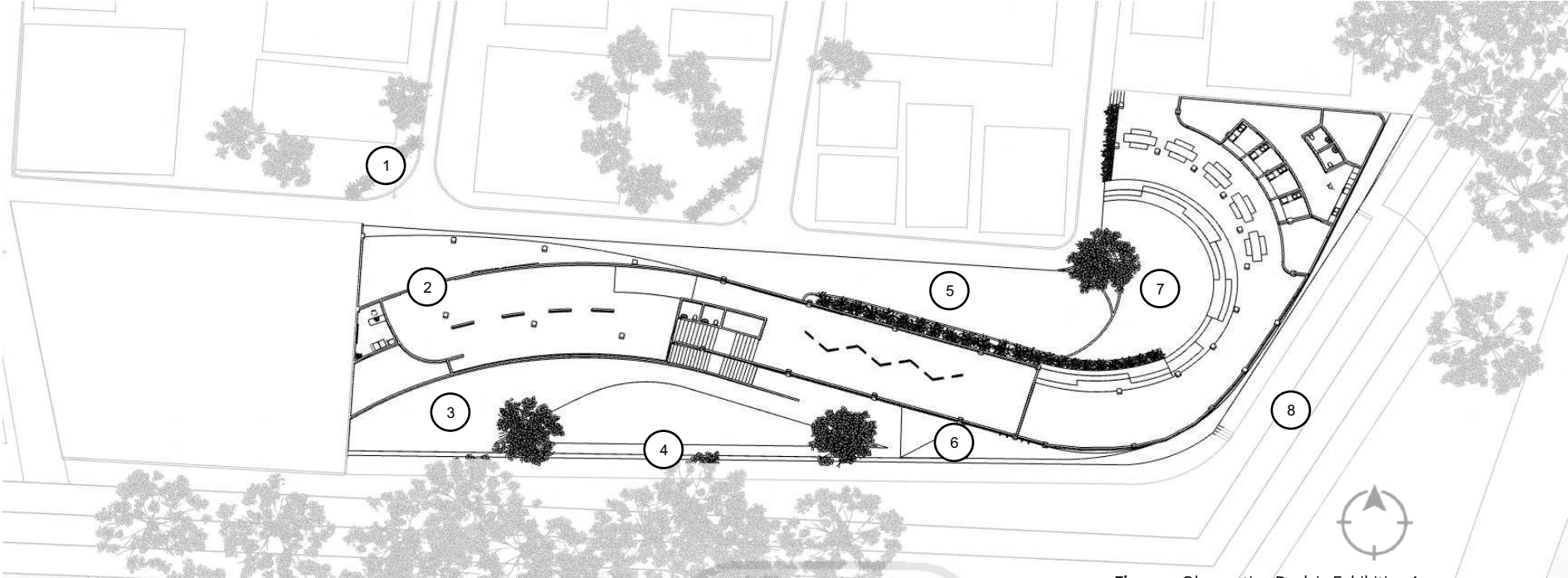


Figure 1. Observation Deck in Exhibition Area
Source: Writer's Document, 2021

DESIGN SCHEMATIC SCHEMATIC SITEPLAN

- 1 Planter
- 2 Entrance
- 3 Inner Garden
- 4 Observation Pathway
- 5 Garden
- 6 Outdoor Ramp
- 7 Outdoor Stage
- 8 Moat

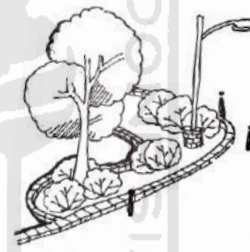


Figure 106. Planter
Source: Writer's Document, 2021

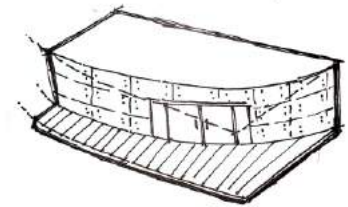


Figure 107. Entrance
Source: Writer's Document, 2021

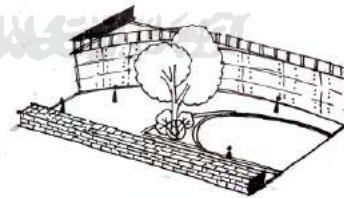


Figure 108. Inner Garden
Source: Writer's Document, 2021

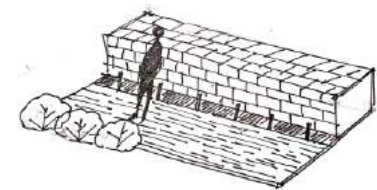


Figure 109. Observation Pathway
Source: Writer's Document, 2021

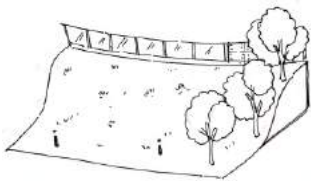


Figure 110. Moat
Source: Writer's Document, 2021

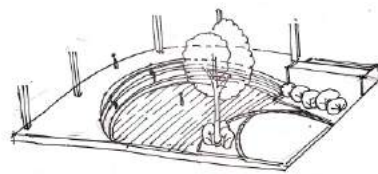


Figure 111. Outdoor Stage
Source: Writer's Document, 2021

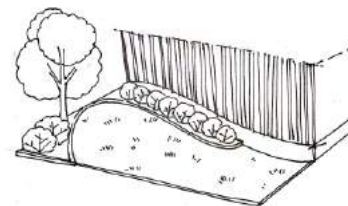


Figure 112. Garden
Source: Writer's Document, 2021

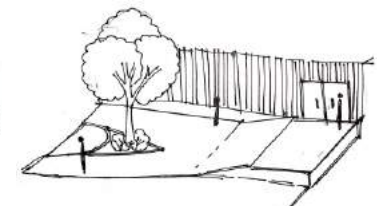
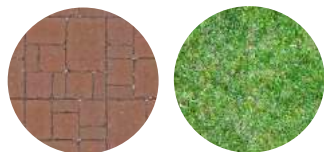
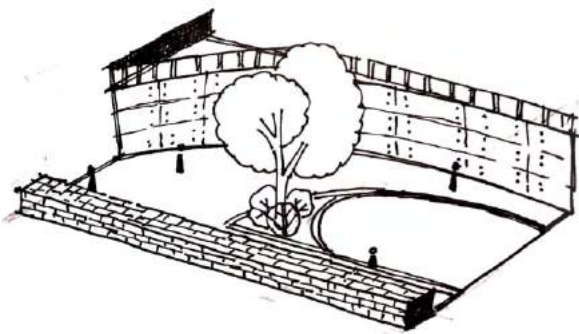
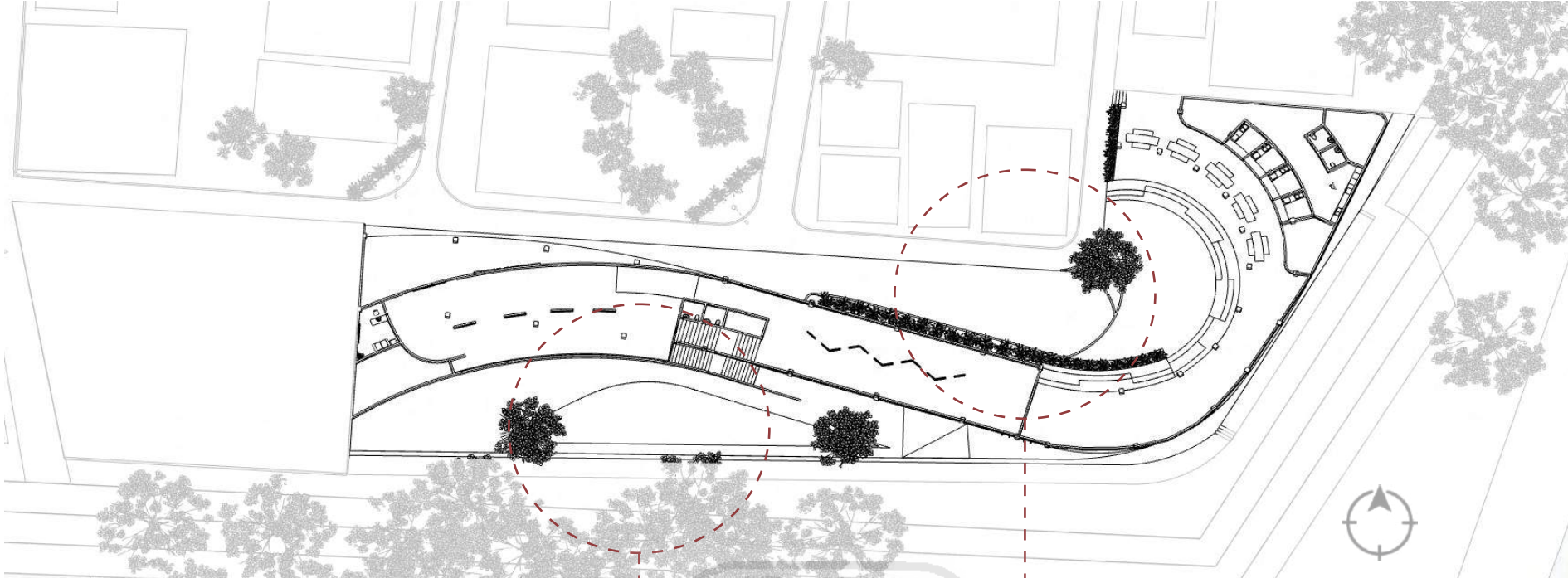
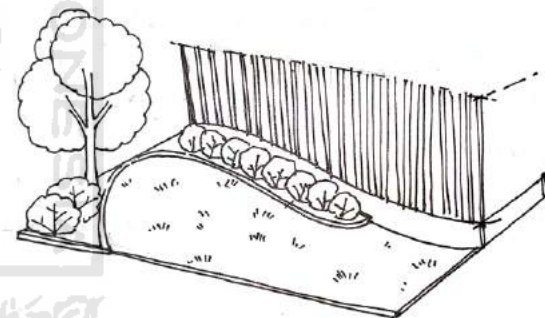


Figure 113. Outdoor Ramp
Source: Writer's Document, 2021



SOUTH GARDEN

South Park is a park with a closed concept because it is located between the walls of the building and the cepuri fort. The main function of the park is an observation area that allows visitors to touch and observe the fort up close and safe. walkways were added along the fort to direct visitors to interact with the fort. This path is made using materials with different colors and textures from the fort to make it look contrast.



NORTH GARDEN

in contrast to the south park, the park in the north adopts an open concept. The curved shape of the garden obtained from the curved shape of the building is used in addition to accentuating the distinctive characteristic of Bokong Semar, namely its arch, it is also useful for eliminating rigid angles so that the narrow path between housing and new buildings can seem wider. The arch that leads to the residential area is also expected to invite local residents to participate in activities in the heritage center.

SCHEMATIC DESIGN

BUILDING ENVELOPE

COMPATIBLE-CONTRASTING APPROACH



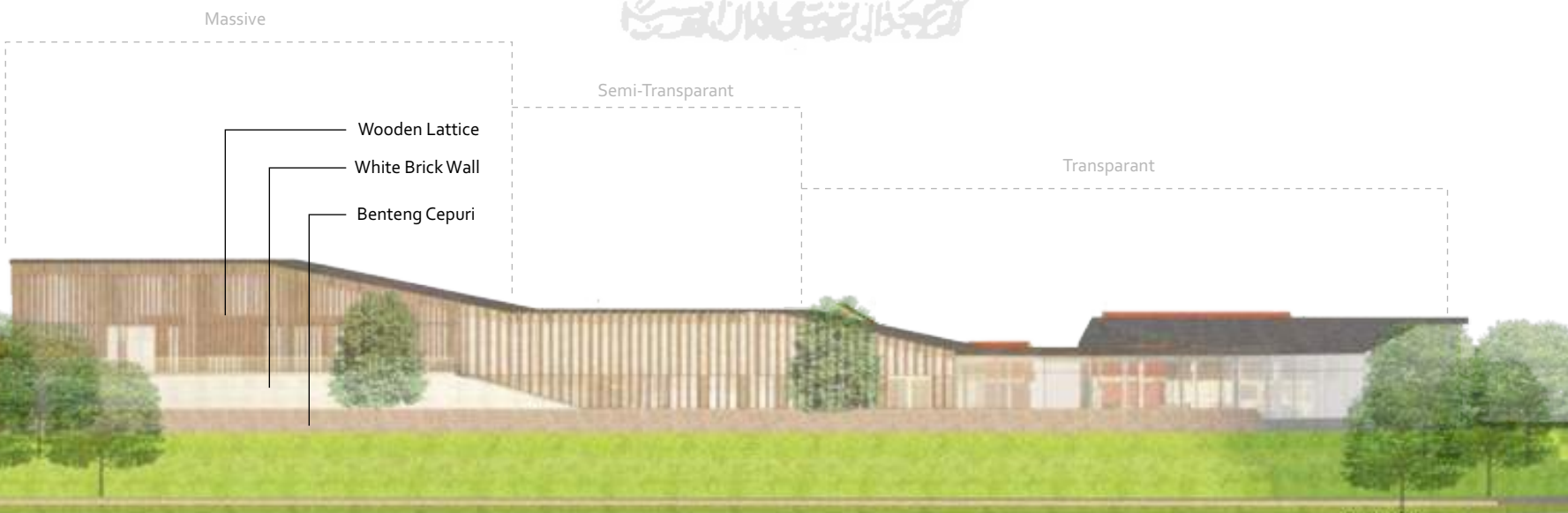
Figure 114. Wood Lattice
Source: Writer's Document, 2021

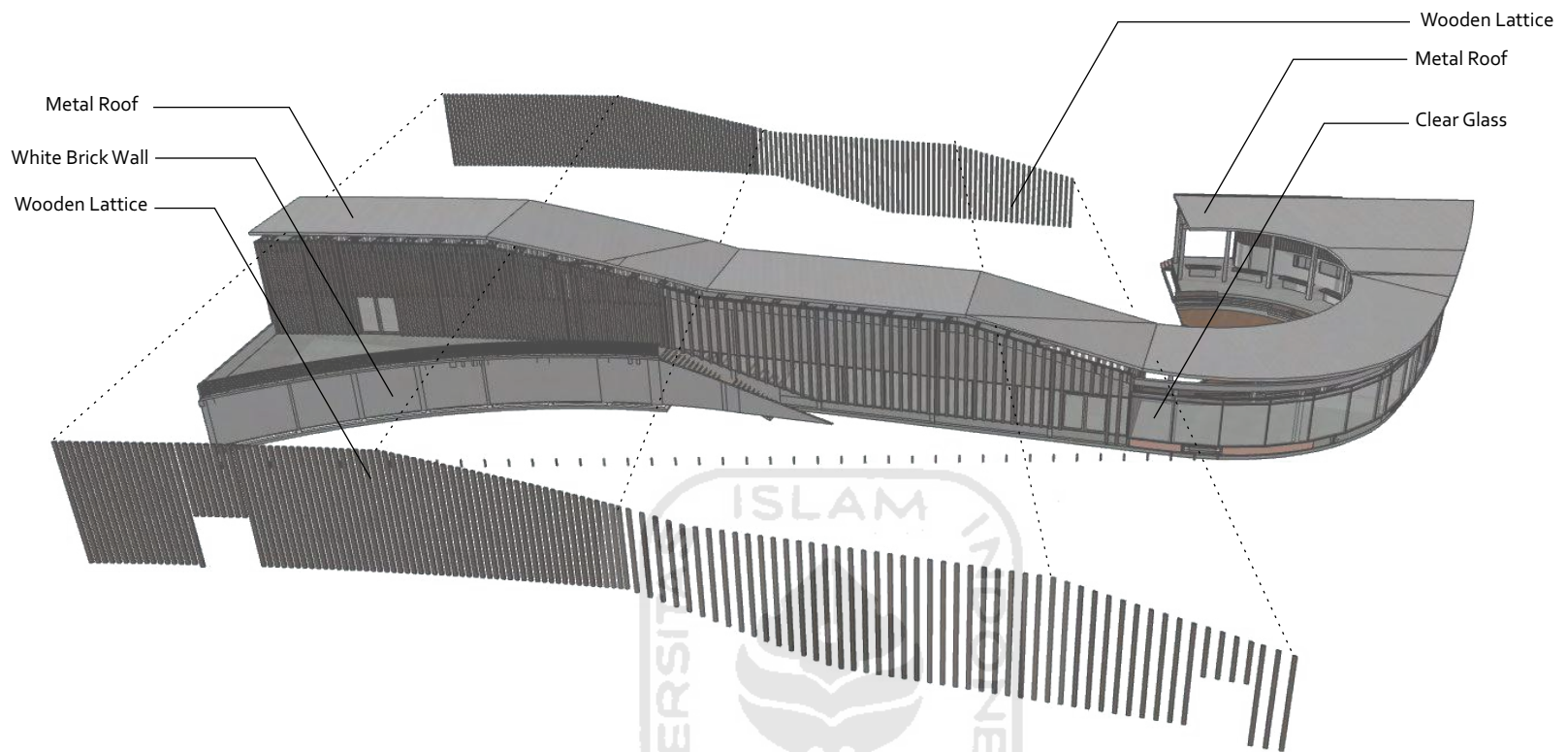
COMPATIBLE-CONTRAST APPROACH

The number of material used in the building envelope is minimized so that the final appearance of the building is not too crowded and does not interfere with the view towards the fort when viewed from the Singosaren field below.

The white brick wall that is similar to the material used in Benteng Cepuri wall is expected to create compatibility and contrast simultaneously to highlight the existence of the cepuri fort. In addition, the contrast can also be seen through the wooden lattice that is installed vertically in the opposite direction as Benteng Cepuri and Heritage Center's Figure ground.

wooden lattices on the second floor and in the social area on the first floor are also installed at different distances. the wooden latticework on the second floor is installed more tightly than the one on the first floor to strengthen the concept of a facade that moves from massive to transparent





EXHIBITION AREA

In the exhibition area, the concept used is enclosing the space, so that in this area white brick walls are used with minimal openings.



Figure 115. Building Materials
Source: Writer's Document, 2021

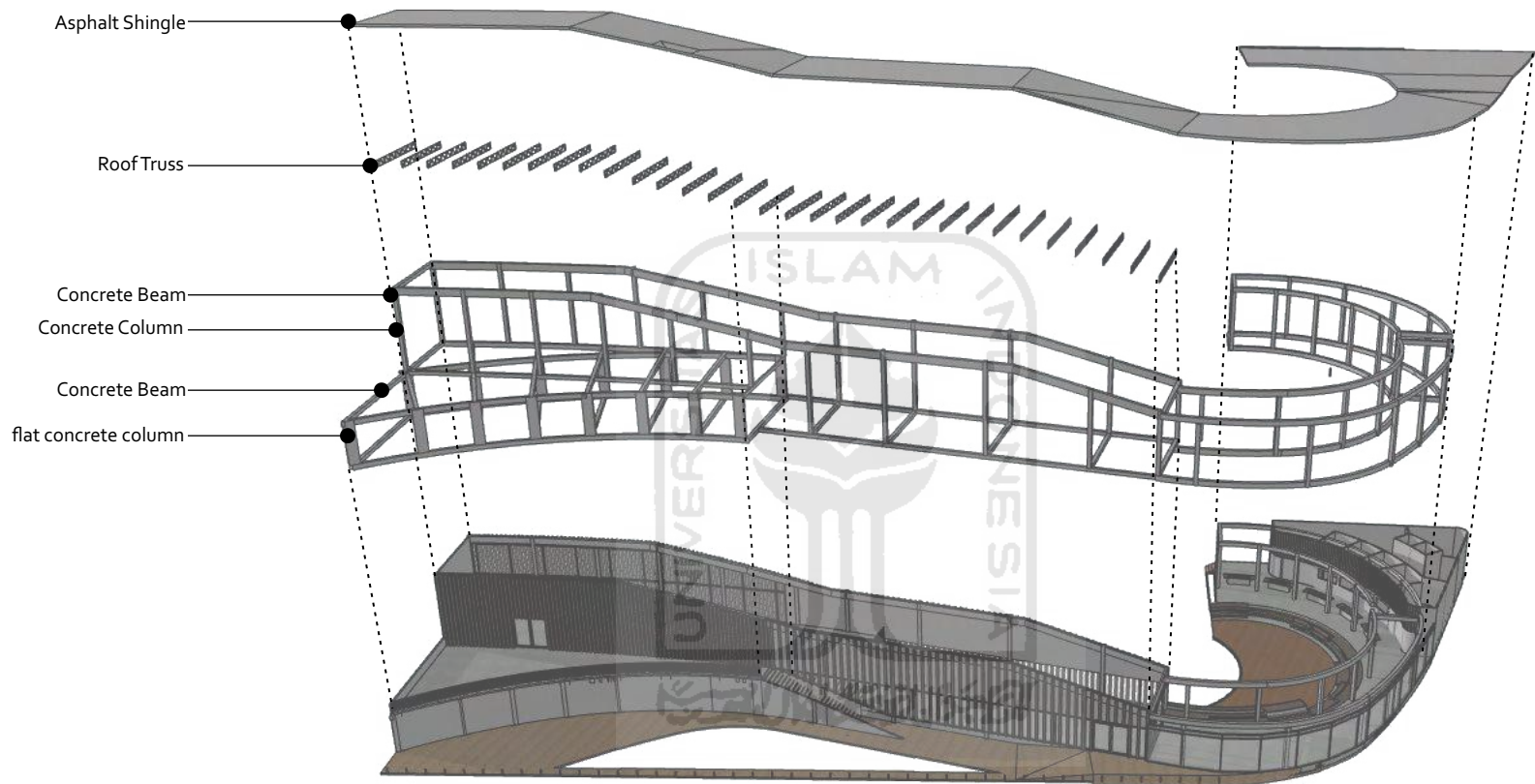
SOCIAL AREA

The concept of the building envelope as a whole is a transition from massive to transparent. If the exhibition space is a massive and closed space, then the social area is a semi-open area. Wooden lattices are installed vertically and spaced so that visitors inside can still visually connect with parks and settlements outside.

RECREATIONAL AREA

In the recreation area, the concept used is openness, so this room is left open, with the side facing the moat covered with transparent glass. In addition to limiting visitors' access to the fort and preventing accidents, transparent glass is also used so that visitors can still see the view of the moat as part of the narrative of the Cepuri fort.

SCHEMATIC DESIGN STRUCTURAL SYSTEM



Asphalt Shingle



Concrete Column & Beam



Concrete Slab

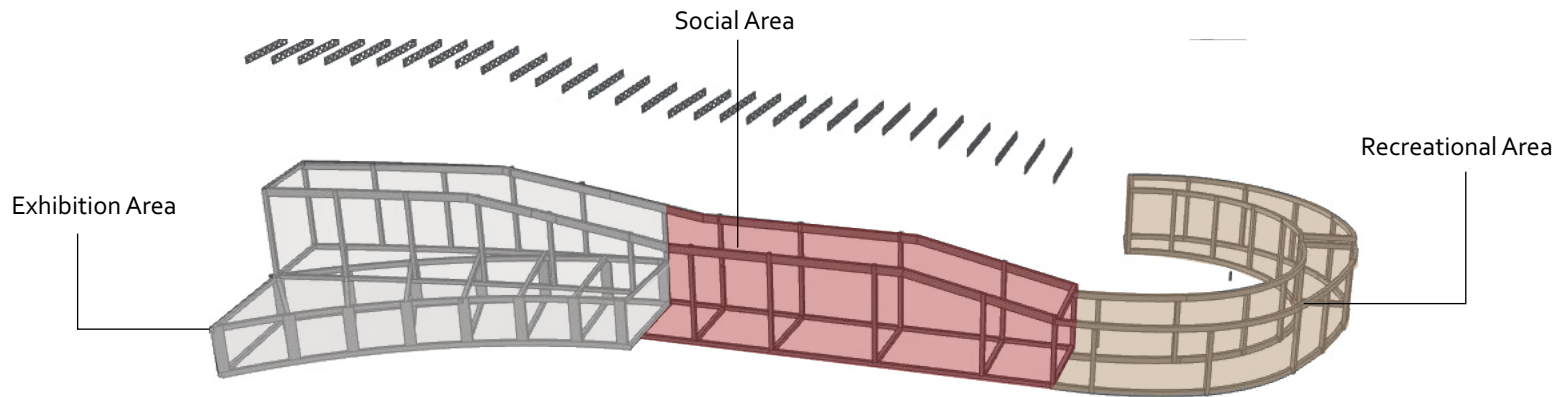


Figure 116. Building Structure
Source: Writer's Document, 2021

EXHIBITION AREA

The building structure in the exhibition area uses flat columns and beams whose thickness is adjusted to the thickness of the walls to get a flat and smooth wall surface. In addition, to be able to support the second floor without adding columns so as not to interfere with the view and circulation in the exhibition hall, the columns, beams and slabs are made thicker to make them stronger.

SOCIAL AREA

In the social area, the exposed height column is used to show the original height of the room. These columns directly support the roof truss which is also exposed to show the original material.

RECREATIONAL AREA

the structure in the recreation area is also connected to the structure in the social area. because this area only consists of one floor, the foundation in this area uses a river stone foundation pondasi

BUILDING UTILITY LIGHTING SYSTEM




ELECTRICAL SYSTEM

This building is equipped with a generator set as a backup power source in the event of a power outage. This is because the museum area mostly displays digital screen displays, so it requires continuous electricity.

The generator set is placed in the service area to the north of the site, this building is slightly separated from the main facility building, so that if the generator is used, the sound does not interfere with activities inside.



Figure 117. Generator Room
Source: Writer's Document, 2021

-  MEE Room
-  Downlight light
-  Suspended Light

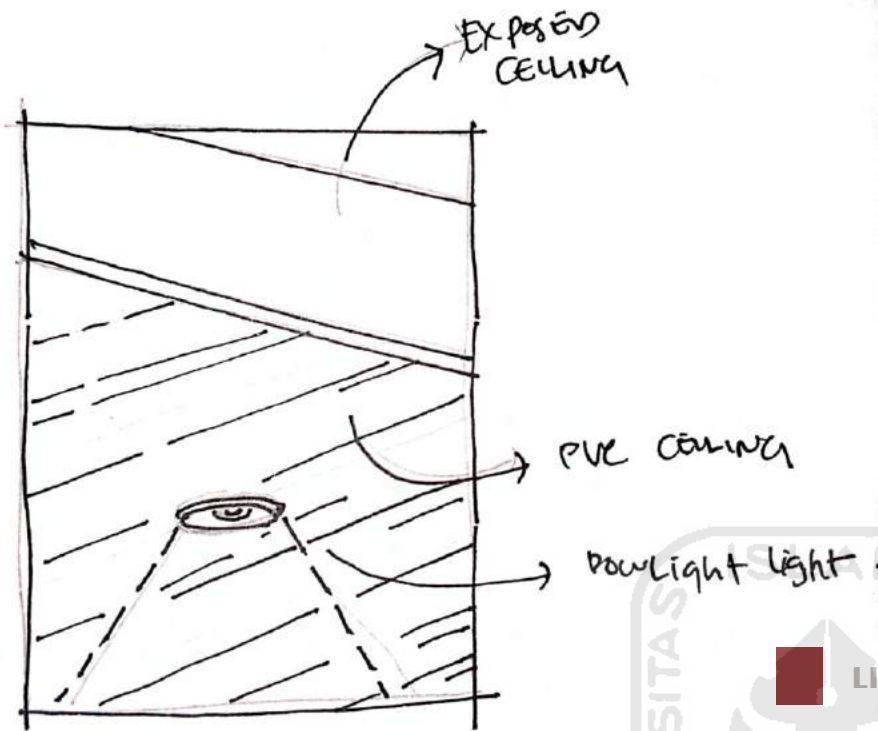


Figure 118. Downlight light installed on PVC Ceiling
Source: Writer's Document, 2021

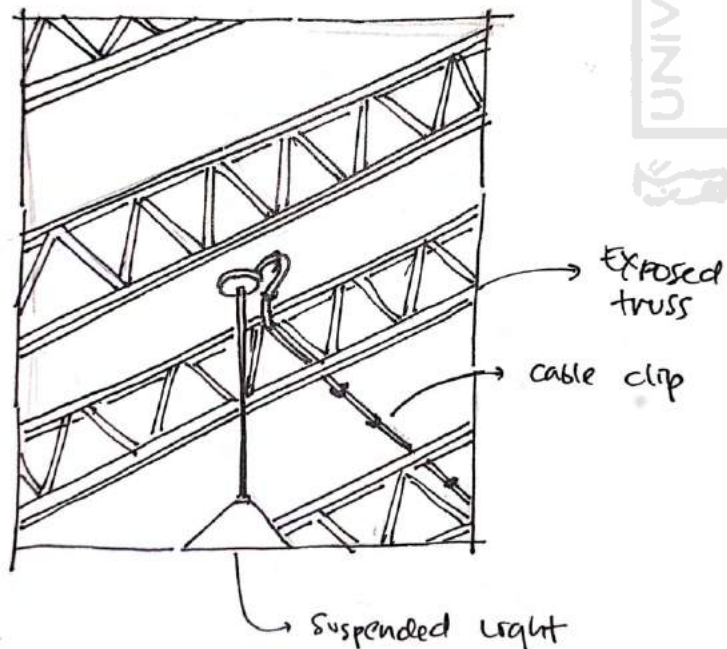


Figure 119. Suspended Light on exposed ceiling
Source: Writer's Document, 2021

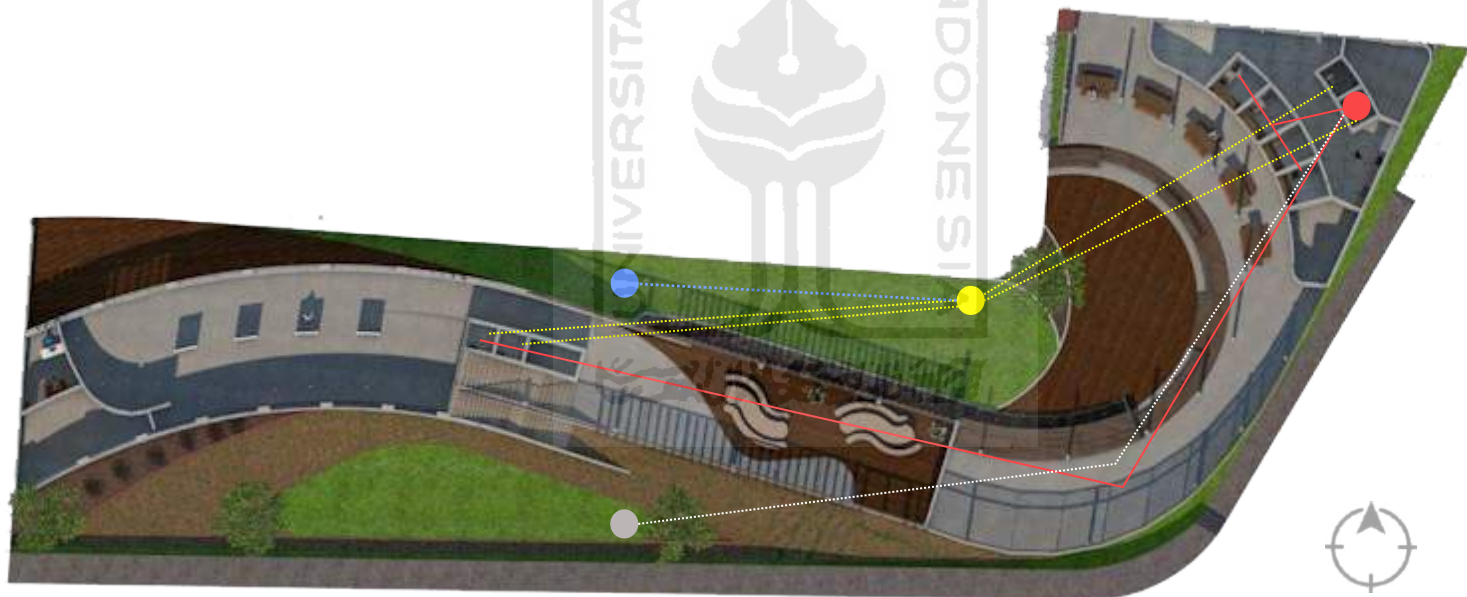
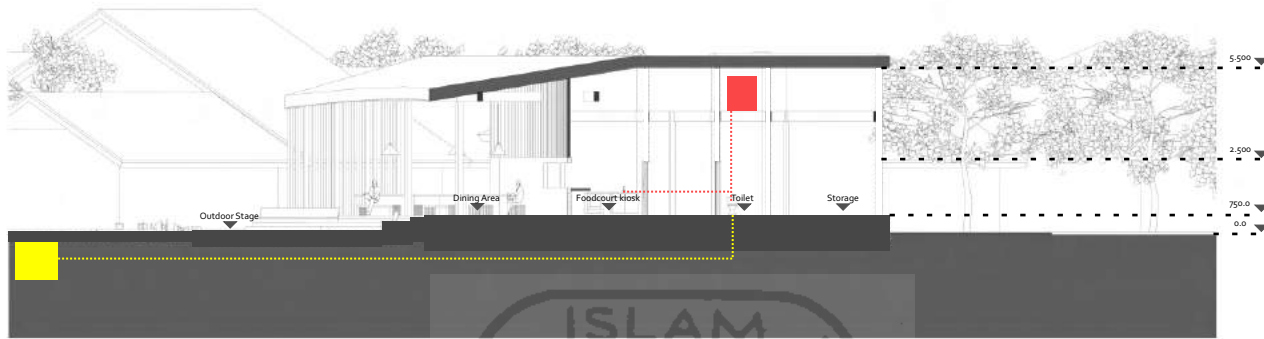
LIGHT ON EXPOSED CEILING

For lighting, the use of the type of lamp is chosen by adjusting the concept of each zone. exhibition zone which has a closed space concept, uses minimal lighting and focuses on the presence of display objects. The lamp used is a downlight that is installed on the ceiling to highlight the miniature object of the Cepuri fort on display.

a social zone that has the characteristics of a high and exposed ceiling using suspended lamps installed between the truss. because the ceiling can be seen clearly, then the power cable is trimmed using a cable clip.

and in the recreation zone, because this zone is an open area, the use of lights is focused on the dining area and corridors to support user activities at night.

BUILDING UTILITY WATER SYSTEM



- Water Well
- Water Tank
- Septic Tank
- Infiltration Well
- Clean Water Pipe
- Black & Grey Water

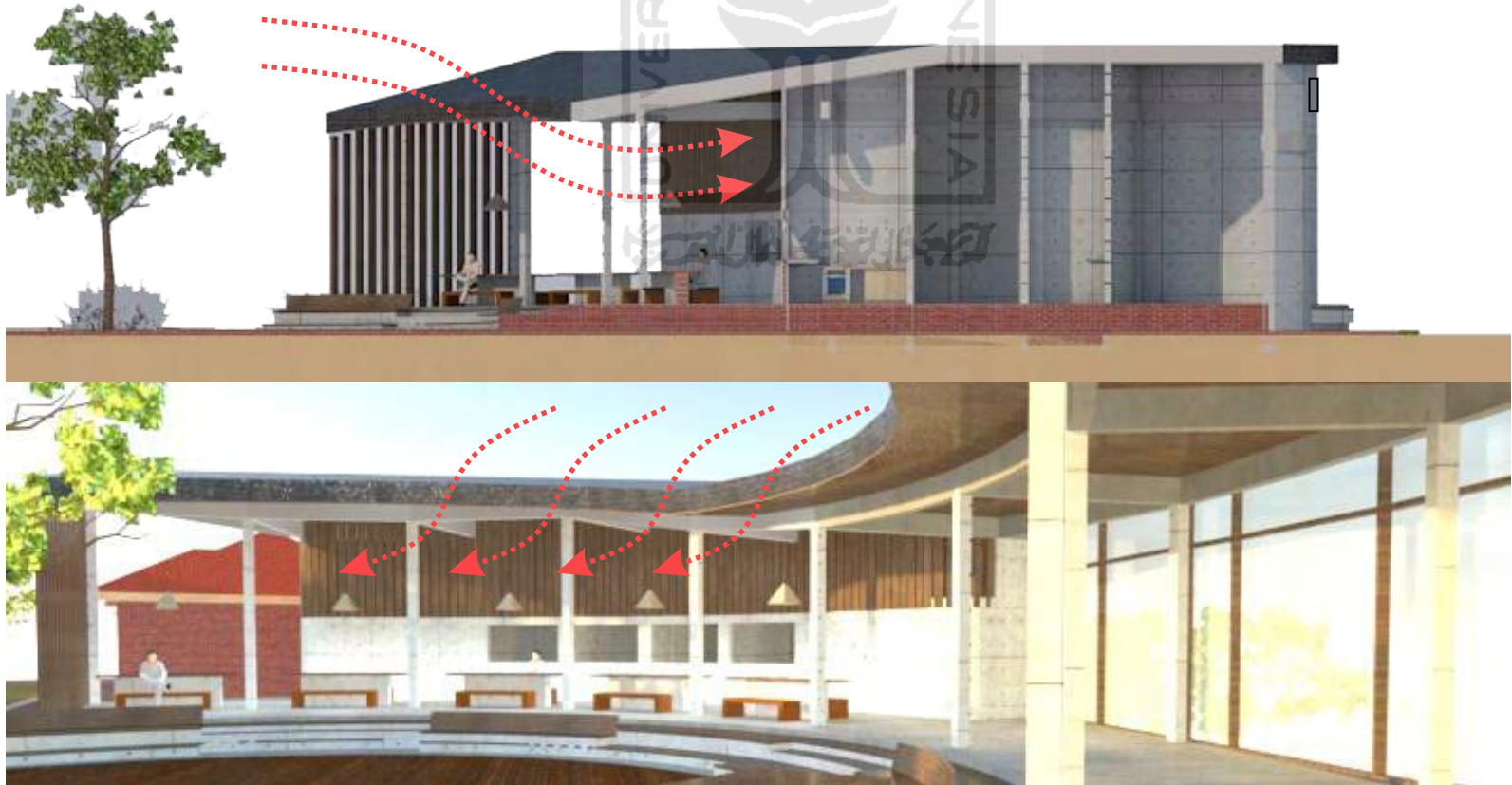
BUILDING UTILITY

AIR CIRCULATION

WOOD LATTICE TO SUPPORT AIR CIRCULATION

Due to the slim shape of the building mass and not too big, this building mostly uses a natural ventilation system. The use of lattice facades that are applied almost throughout the building can help make air exchange smoother, especially in the service area in the north because in this area, there is a kitchen and generator room that requires continuous air exchange.

In the foodcourt area, the top of the food booth is covered with a wooden lattice so that the smoke produced during the cooking process can flow out of the room



DESIGN SCHEMATIC

SAFETY AND SECURITY SYSTEM

ESCAPE ROUTE

Because the shape of the building is long and has a straight circulation, the escape route can be easily recognized by visitors. At each end of the route, visitors can gather in an open area or meeting point, namely outside the entrance and in the outdoor stage area,

HYDRANT

Hydrants are placed in two important areas that are prone to short circuits and fires, namely in the service area and in the museum exhibition area which is closed and uses many digital tools that require electricity.



DESIGN SCHEMATIC

BARRIER FREE DESIGN

BARRIER FREE DESIGN

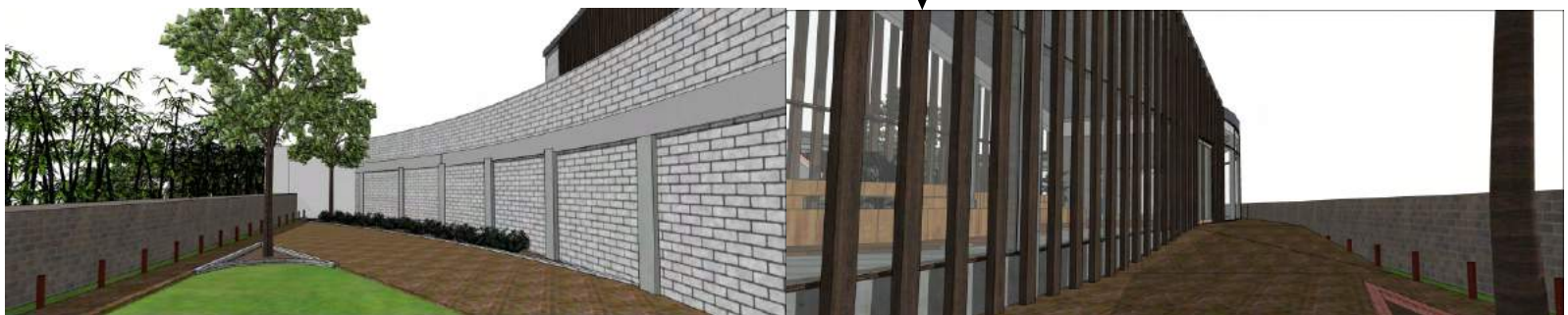
PATHWAY SURFACE

Circulation outside the building especially in the garden area uses pavement conblocks for the surface. in addition to helping the movement of visitors using cane, a flat surface also makes it easier for users who use highheels



RAMP

this building provides two ramp that can help visitor with disability to explore the building easily. the ramp was put between the exhibition and social area, and the other one is in the garden to help people re-entering the building.





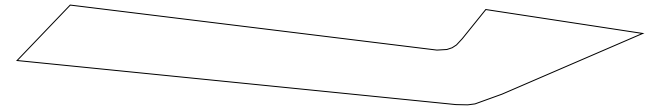
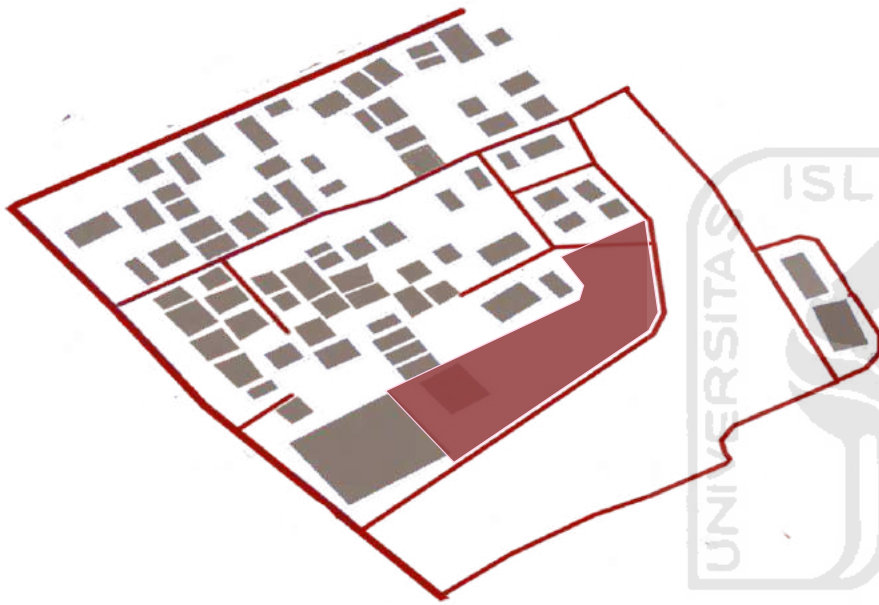
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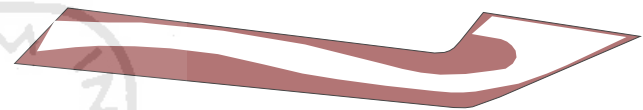
PROJECT DESCRIPTION

- Property size
- Room Programming
- Siteplan
- Axonometry
- Floorplan
- Elevation
- Section
- Interior
- Building Envelope
- Structural System
- Utility System
- Imageries

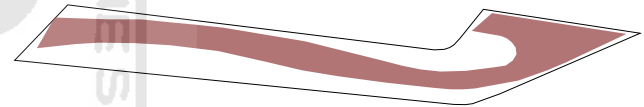
PROPERTY SIZE



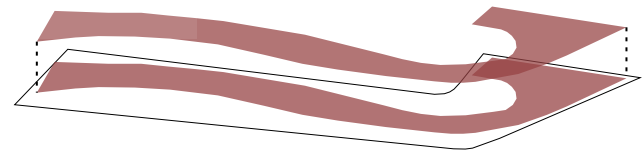
Total site area: 1.772 m²



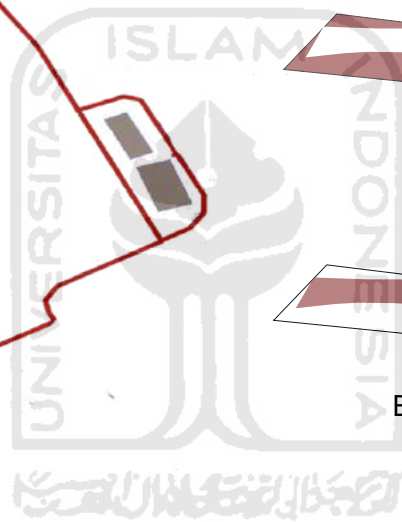
Total Green Area: 664 m²



Building Covered Ratio: 1.118 m²



Maximum Height: 16m



ROOM PROGRAMMING

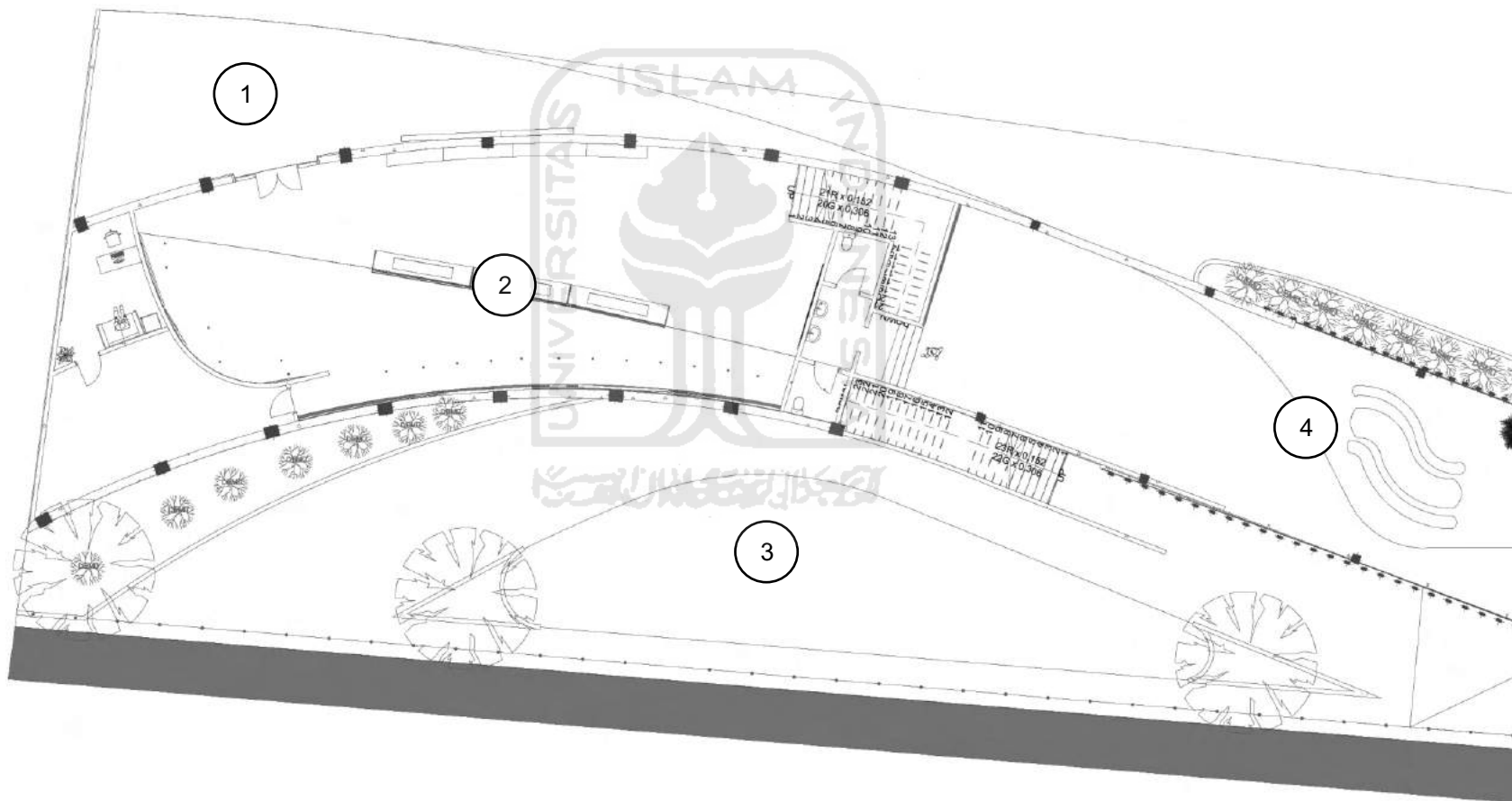
ROOM	STANDARD	CAPACITY	QUANTITY	TOTAL AREA
SERVICE AREA				
1. Toilet	Toilet: 2,52 m ² Basin: 0,3 m ²	4 unit	1 person	15,400 m ² 1,2 m ²
2. Office	9-16 m ²	1 unit	3 person	33,37 m ³
3. Security area	3,2 m ²	1 unit	1 person	14,9 m ²
4. Storage	1,05 m ²	1 unit	1 person	7,15 m ²
5. Kitchen	1,50 m ²	4 food cout booth	6 person	31,61 m ²
SERVICE AREA				
1. Gathering Space	0,87/person	1 unit	1 unit	97,66 m ²
2. Exhibition Area	3 m ²	1 unit	1 unit	216,67 m ²
3. Seating Area	3 m ²	1 unit	1 unit	184,77 m ²
4. Workshop Room	2,2 m ²	1 unit	1 unit	245,55 m ²
5. Garden		1 unit	1 unit	409 m ²
6. Observation Deck	1,20 m ² /person	1 unit	1 unit	125,37 m ²
7. Dining Area	1,50 m ² /person	1 unit	1 unit	134,35 m ²
8. Performing Art space	210 m ²	1 unit	1 unit	121,91 m ²

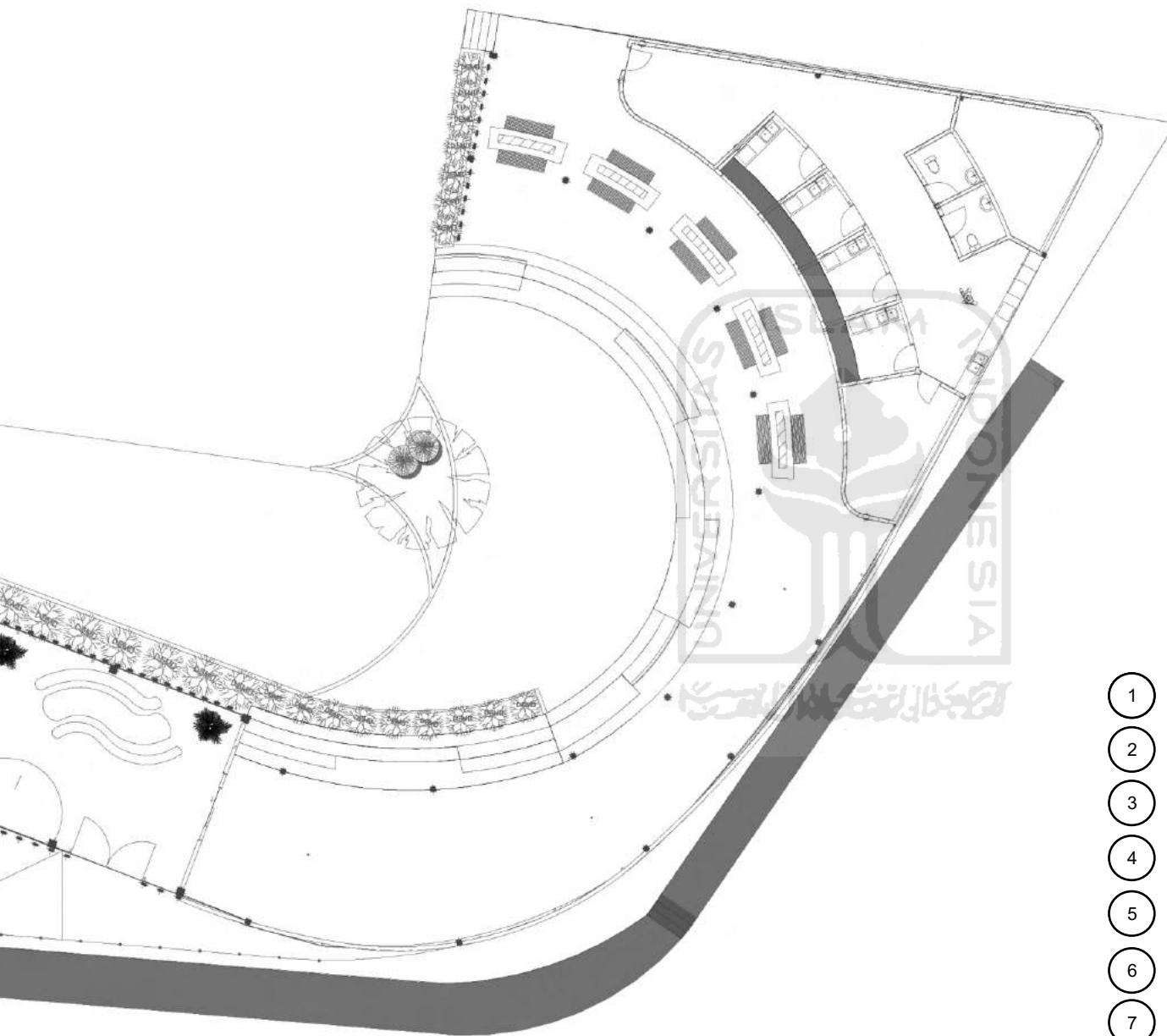
SITUATION PLAN





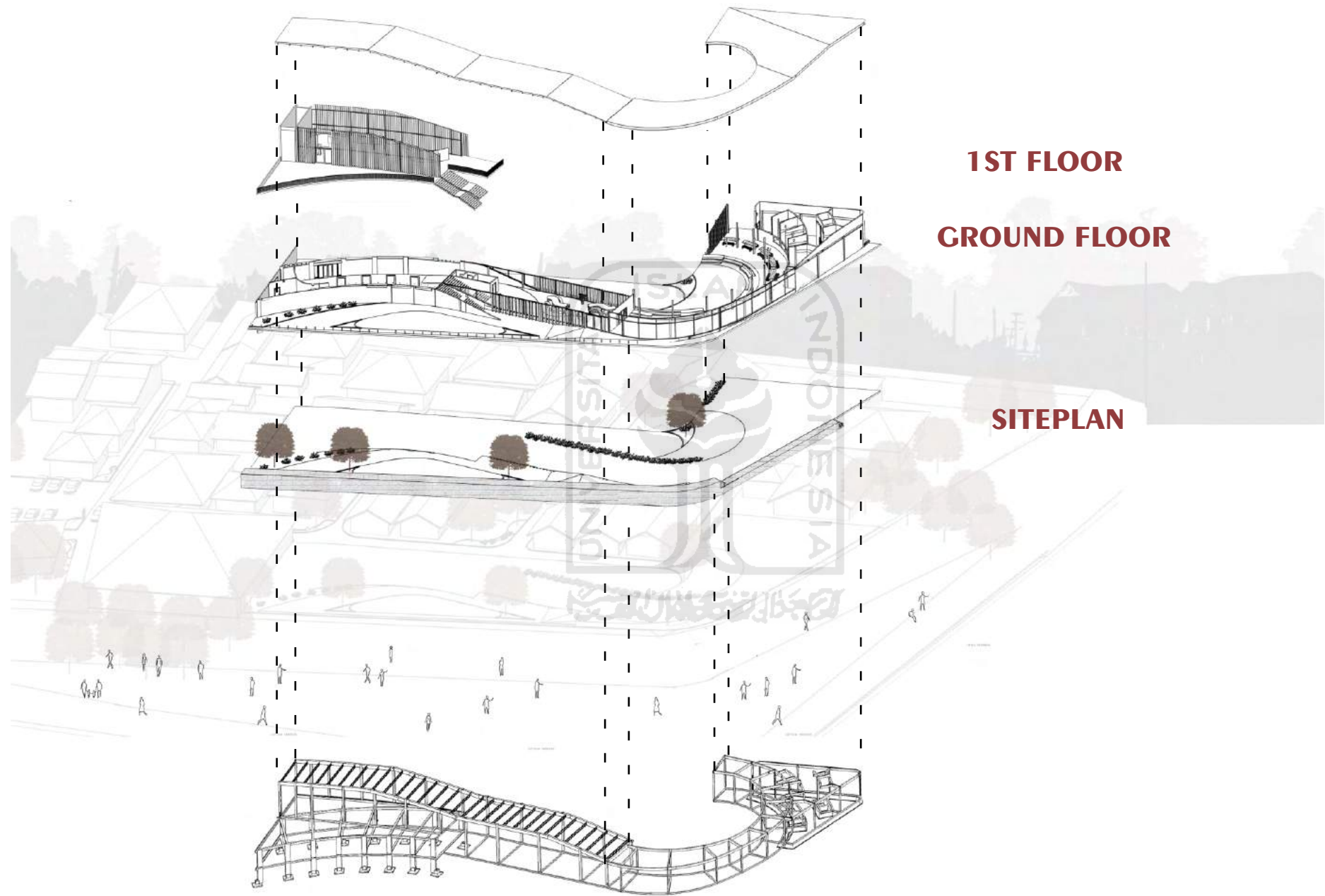
SITEPLAN





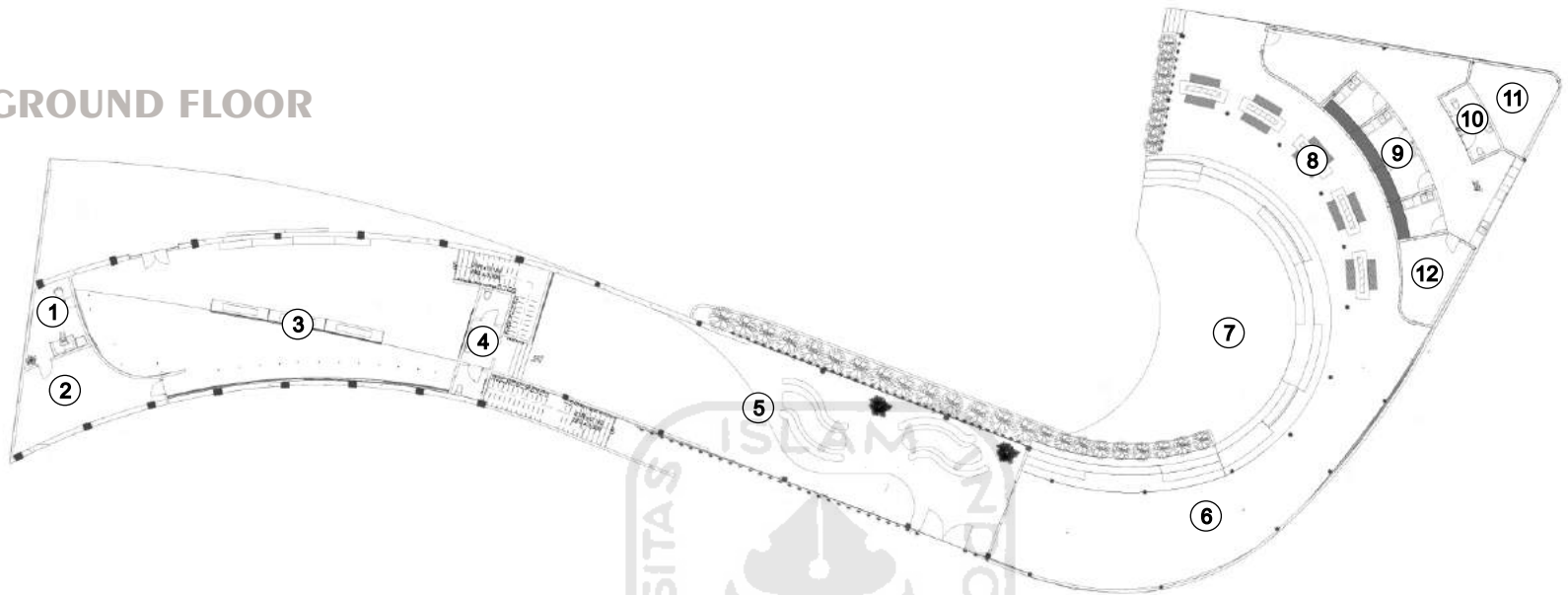
- ① Entrance
- ② Exhibition Room
- ③ South Garden
- ④ Community Area
- ⑤ Observation Corridor
- ⑥ Performance Stage
- ⑦ Food Court
- ⑧ Service Area

EXPLODED AXONOMETRY

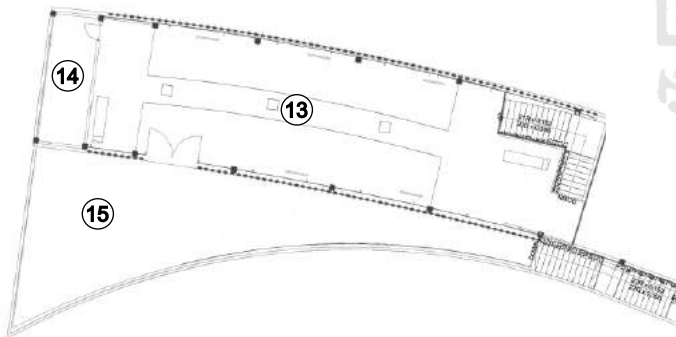


FLOORPLAN

GROUND FLOOR



1ST FLOOR



- ① Security Room
- ② Office
- ③ Exhibition Room
- ④ Toilet
- ⑤ Seating Area
- ⑥ Observation Corridor
- ⑦ Performing Stage
- ⑧ Dining Area
- ⑨ Food court
- ⑩ Toilet
- ⑪ MEE room
- ⑫ Preparation Room
- ⑬ Workshop Room
- ⑭ Storage
- ⑮ Observation Deck

ELEVATION



NORTH ELEVATION



WEST ELEVATION

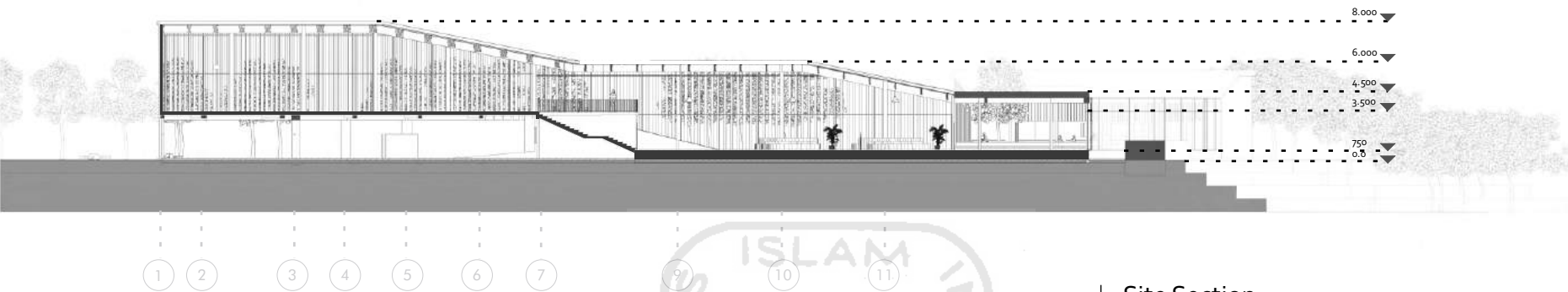


SOUTH ELEVATION

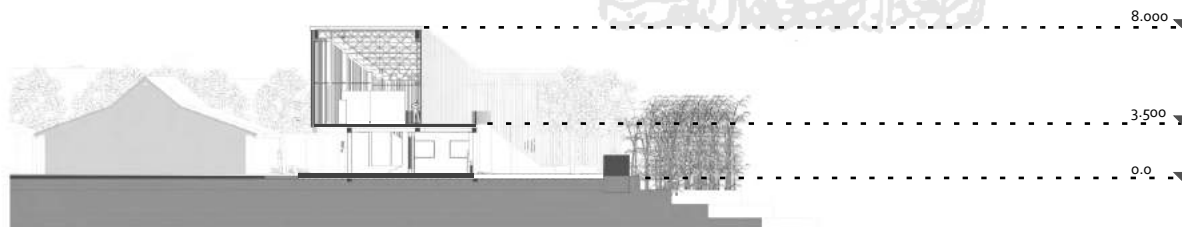


EAST ELEVATION

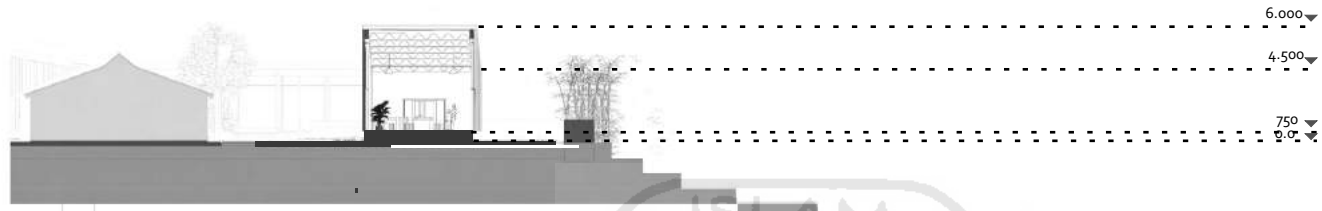
SECTION




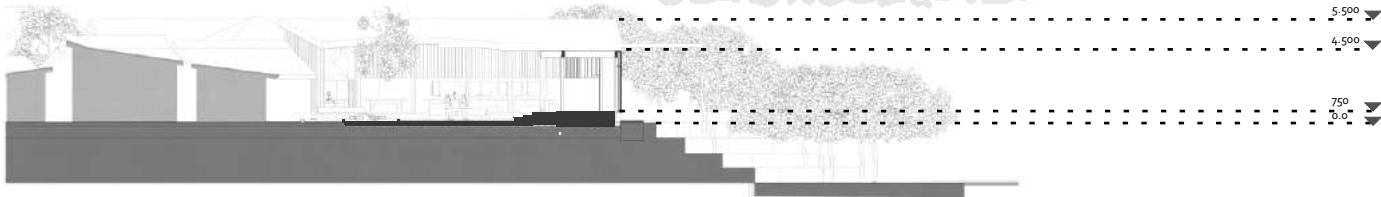
Site Section
1:250




Exhibition Area Section
1:250




Seating Area Section
 1:250




Recreation Area Section
 1:250

BUILDING ENVELOPE

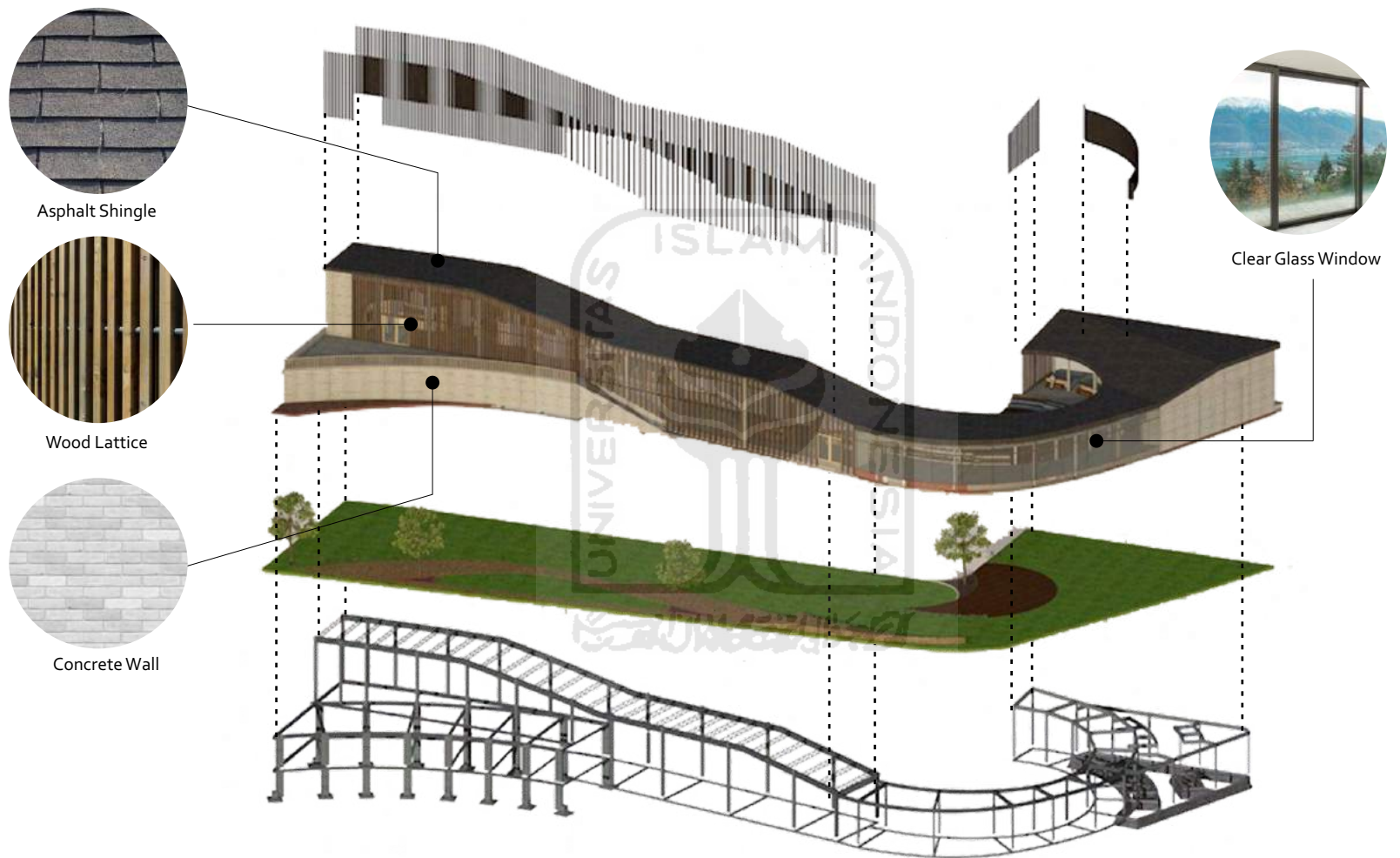


Figure 120. Exploded Axonometry
Source: Writer's Document, 2021

STRUCTURAL SYSTEM

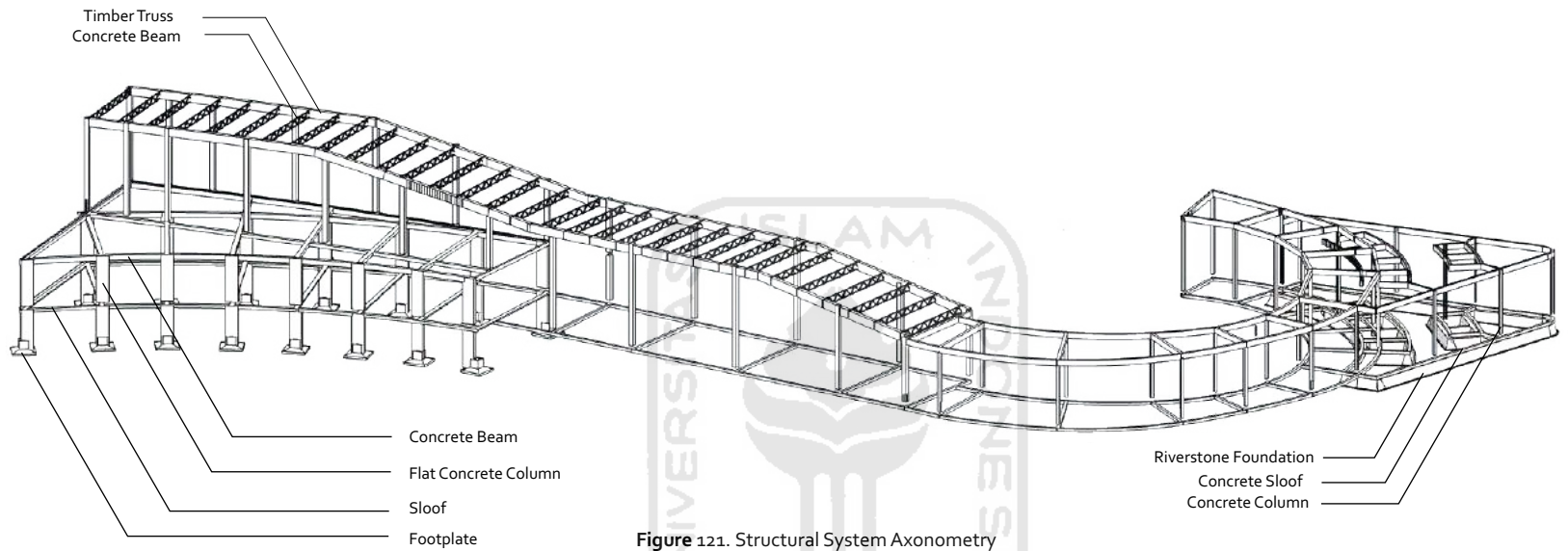


Figure 121. Structural System Axonometry
Source: Writer's Document, 2021

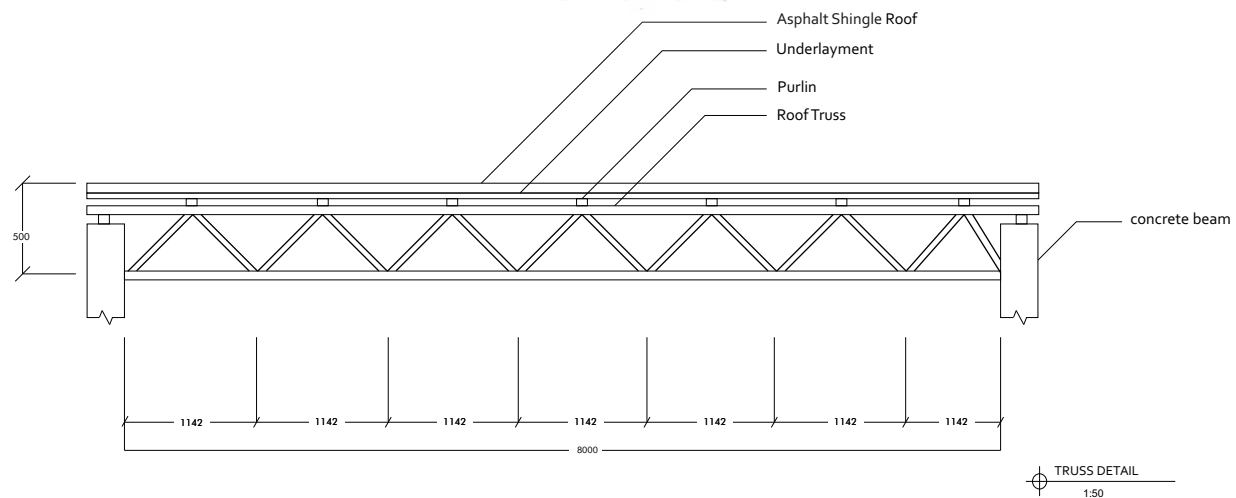


Figure 122. Detail Roof Truss
Source: Writer's Document, 2021

INTERIOR

EXHIBITION AREA

WALL

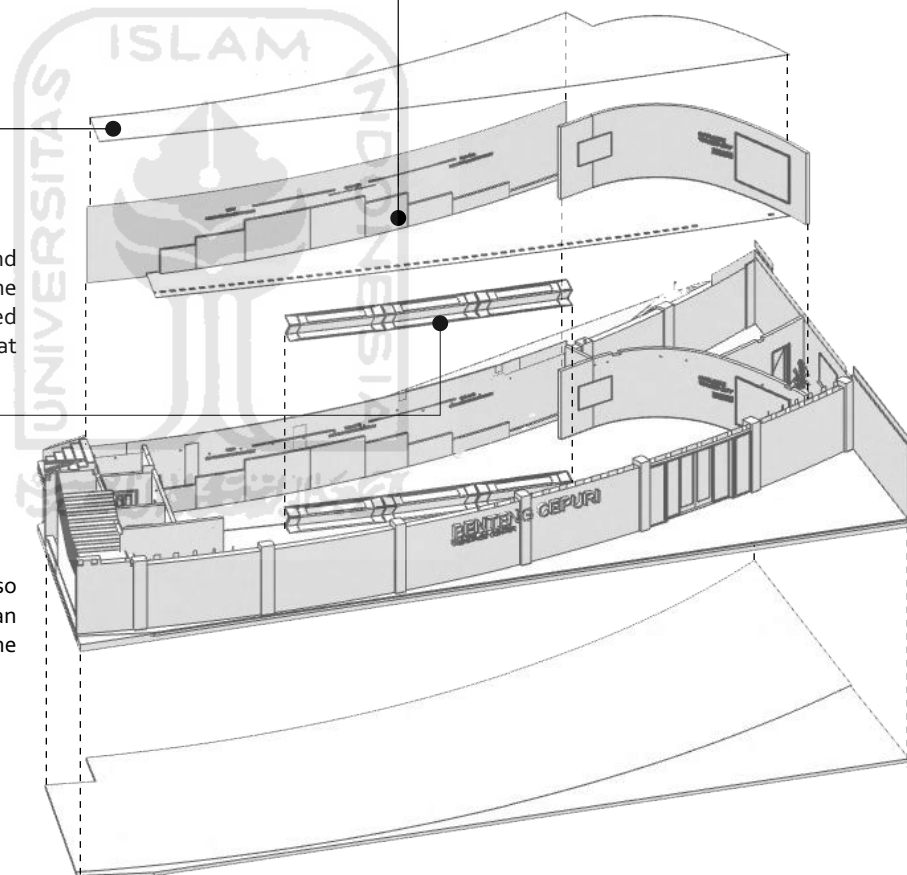
In the exhibition area of the museum, the walls are made as closed as possible to illustrate the process of closing the city by Benteng Cepuri and to provide visitors with the experience of being inside the fort. The walls surrounding the room are made by minimizing the openings, with a miniature fort on one side to explain the story of Benteng Cepuri in each phase.

CEILING & FLOOR COVER

ceiling, floor coverings and walls are made equal and conspicuous on one side to accentuate the miniature display of the fort and direct the movement of visitors. To maintain a closed atmosphere, only a few lights are installed in this area so that visitors can focus on the displays.

DISPLAYS

In addition to the display of miniature forts, this room also uses projectors on the walls and floors to display imageries that can support the learning process, such as maps of the location of the fort and depicting the atmosphere of the past.



SOUTH GARDEN

Figure 123. Museum Exhibition Interior
Source: Writer's Document, 2021

INTERIOR

EXHIBITION AREA 1st FLOOR

DISPLAYS

Meanwhile, for the exhibition area on the second floor, display items used are more like explanation boards and miniatures of important figures during the Mataram kingdom.

FLOOR COVER

This area also uses a wooden floor cover on a concrete epoxy floor to accentuate the items on display and direct visitors to move around in the room.

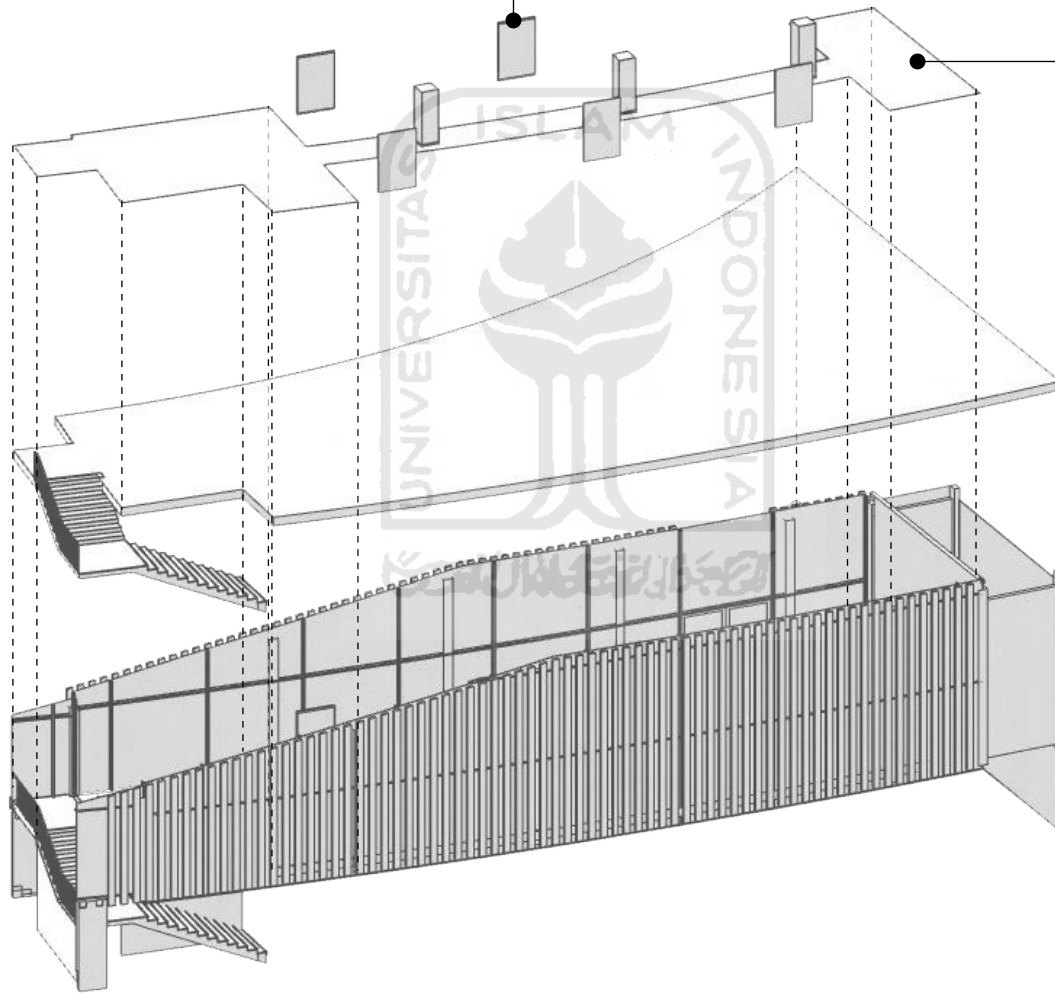


Figure 124. Exhibition area 1st floor interior
Source: Writer's Document, 2021

INTERIOR

SOCIAL AREA 1st FLOOR

SEATING AREA

The first floor which represents the people who lived outside the fort uses curved and irregular shapes in the furniture. it aims to provide freedom of movement and the impression of flexibility in the room.

FLOOR COVER

The wooden floor is installed with a curvy shape to strengthen the impression of flexibility of movement and divide the space without using partition.

COMMUNITY SEATING AREA

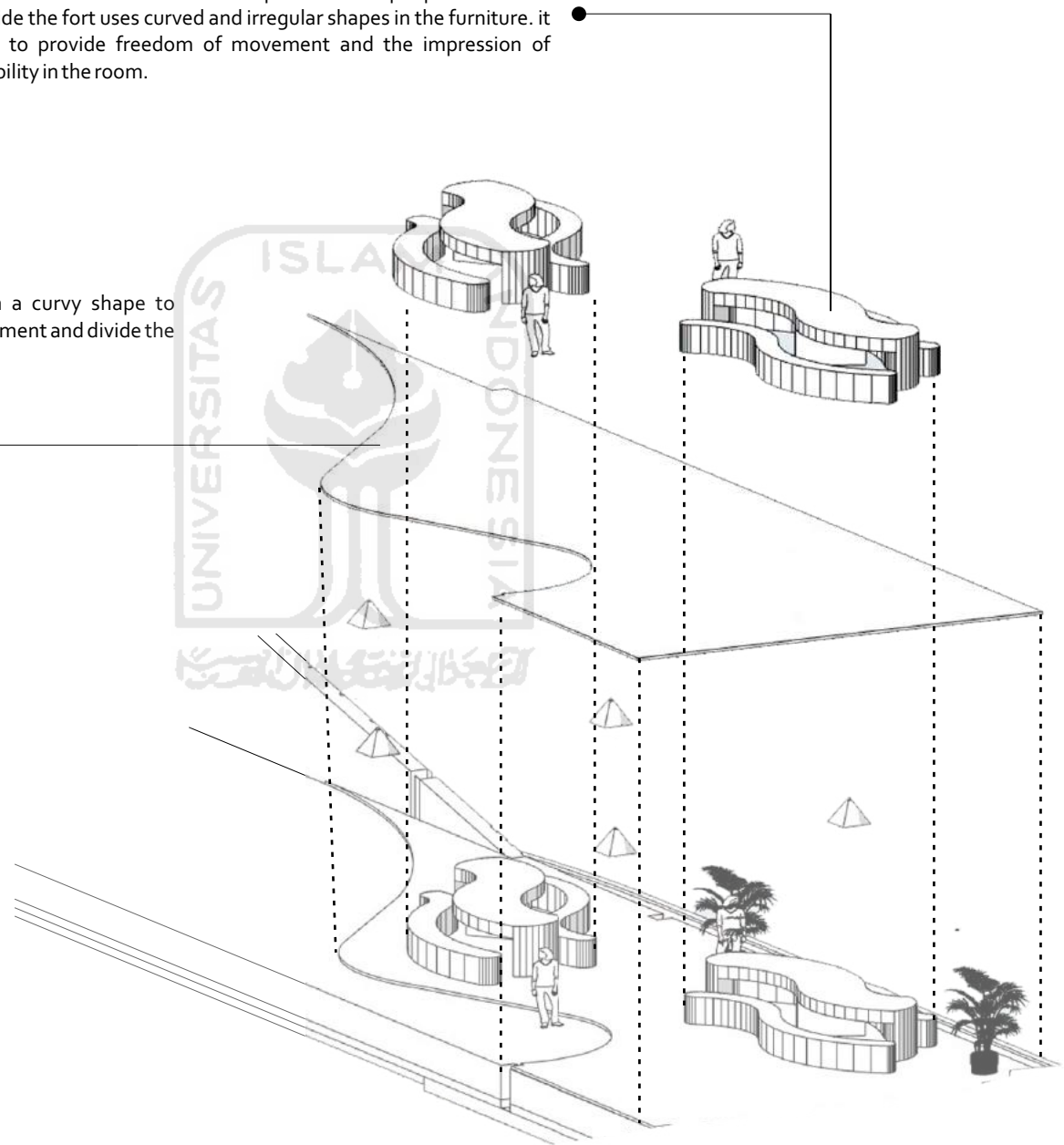


Figure 125. Seating Area Interior
Source: Writer's Document, 2021

INTERIOR

RECREATION AREA

OUTDOOR STAGE

The open area in the recreation zone has a stage that can be used for artistic performances. The stage floor is covered by composite wood material that is suitable for outdoor use.

DINING AREA

In the dining area, tables and chairs are provided that are curved to follow the shape of the edge of the stage. The table is a concrete table and chair that blends with the floor. Each table is illuminated by a suspended light to support activities during the night.

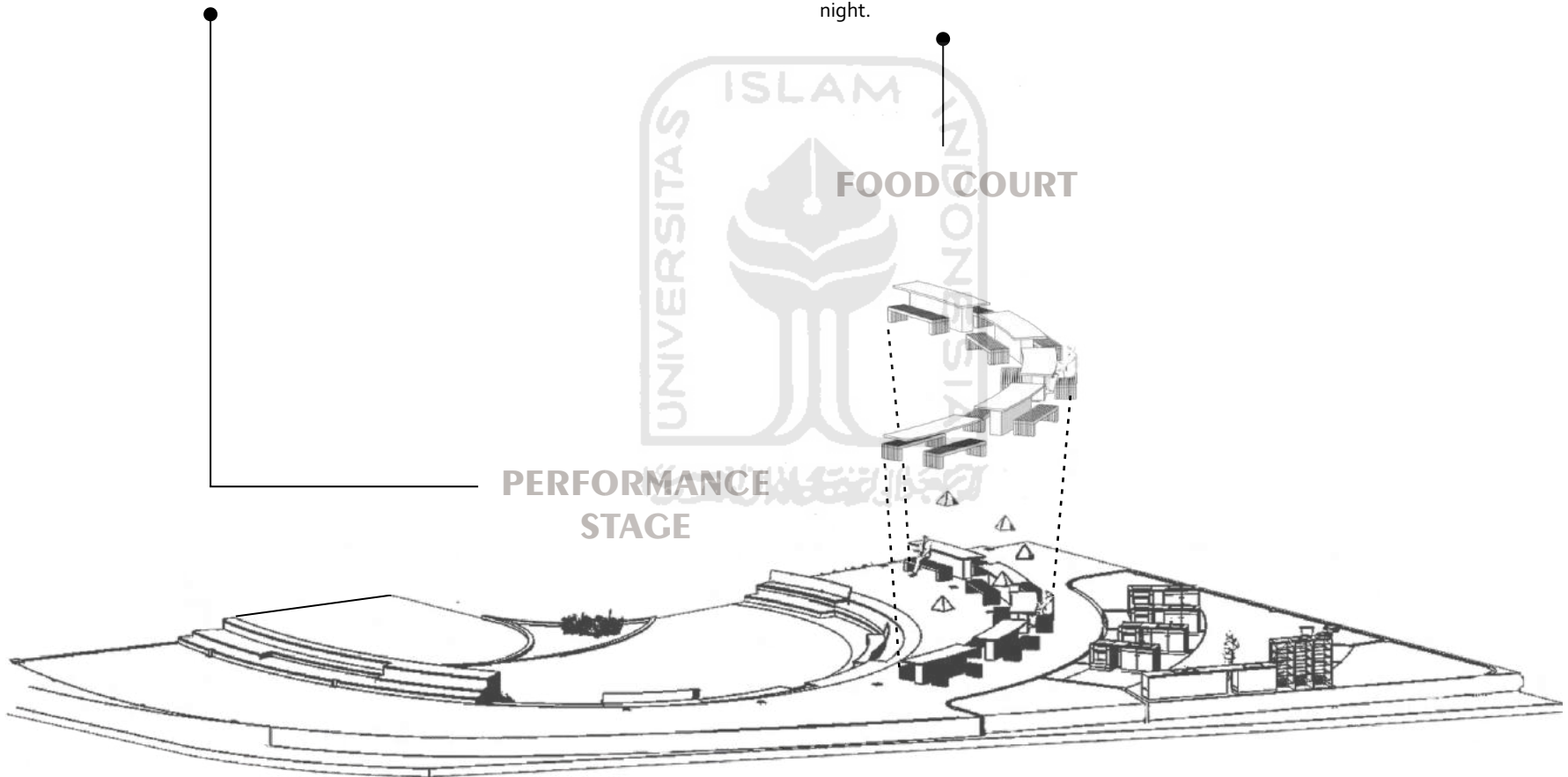


Figure 126. Recreation Area Interior
Source: Writer's Document, 2021

BUILDING UTILITY CLEAN WATER SYSTEM

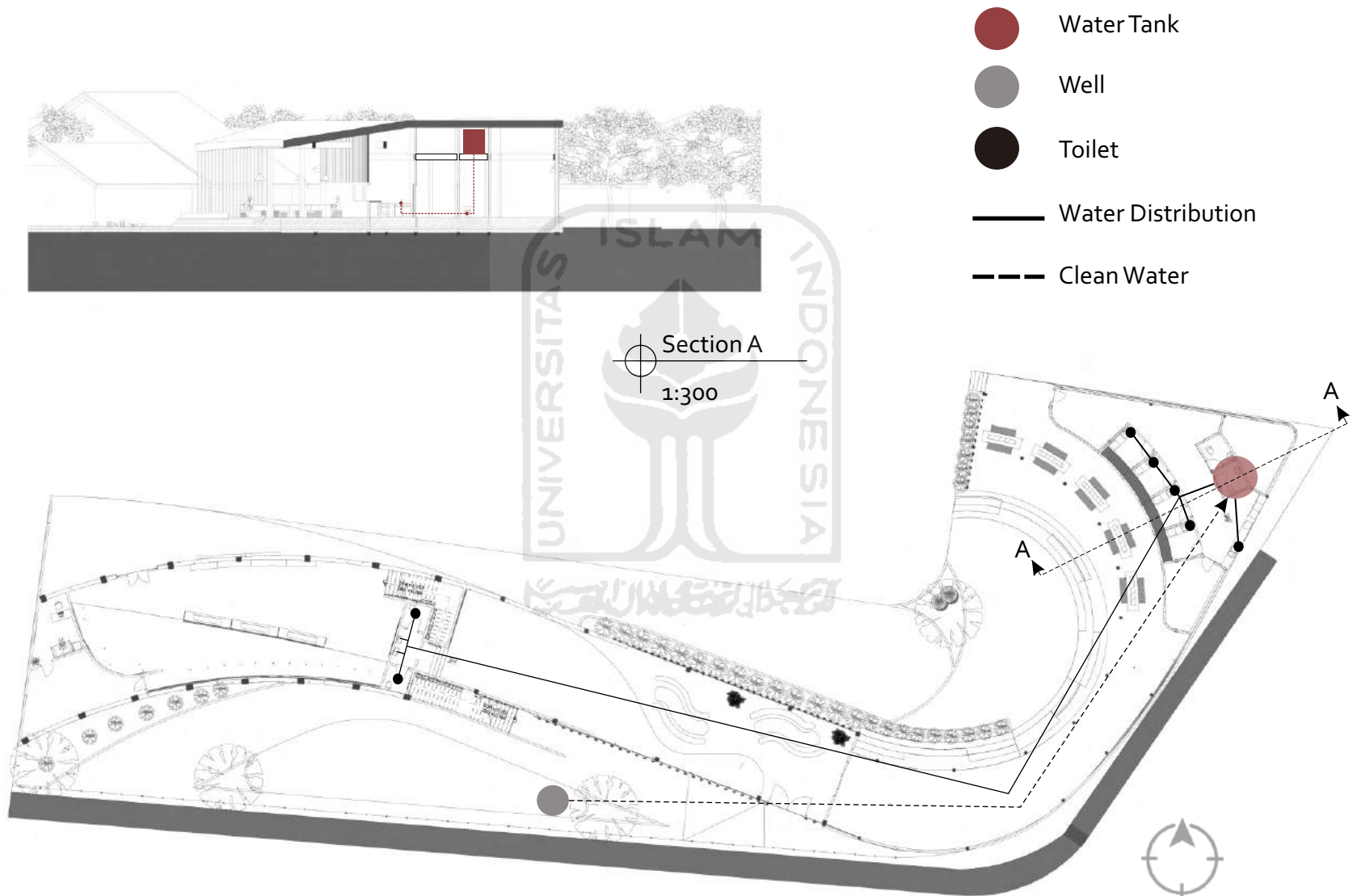


Figure 127. Clean Water System Schematic
Source: Writer's Document, 2021

BUILDING UTILITY WASTE WATER SYSTEM

- Septic Tank
- Toilet
- Infiltration Well
- To Infiltration Well

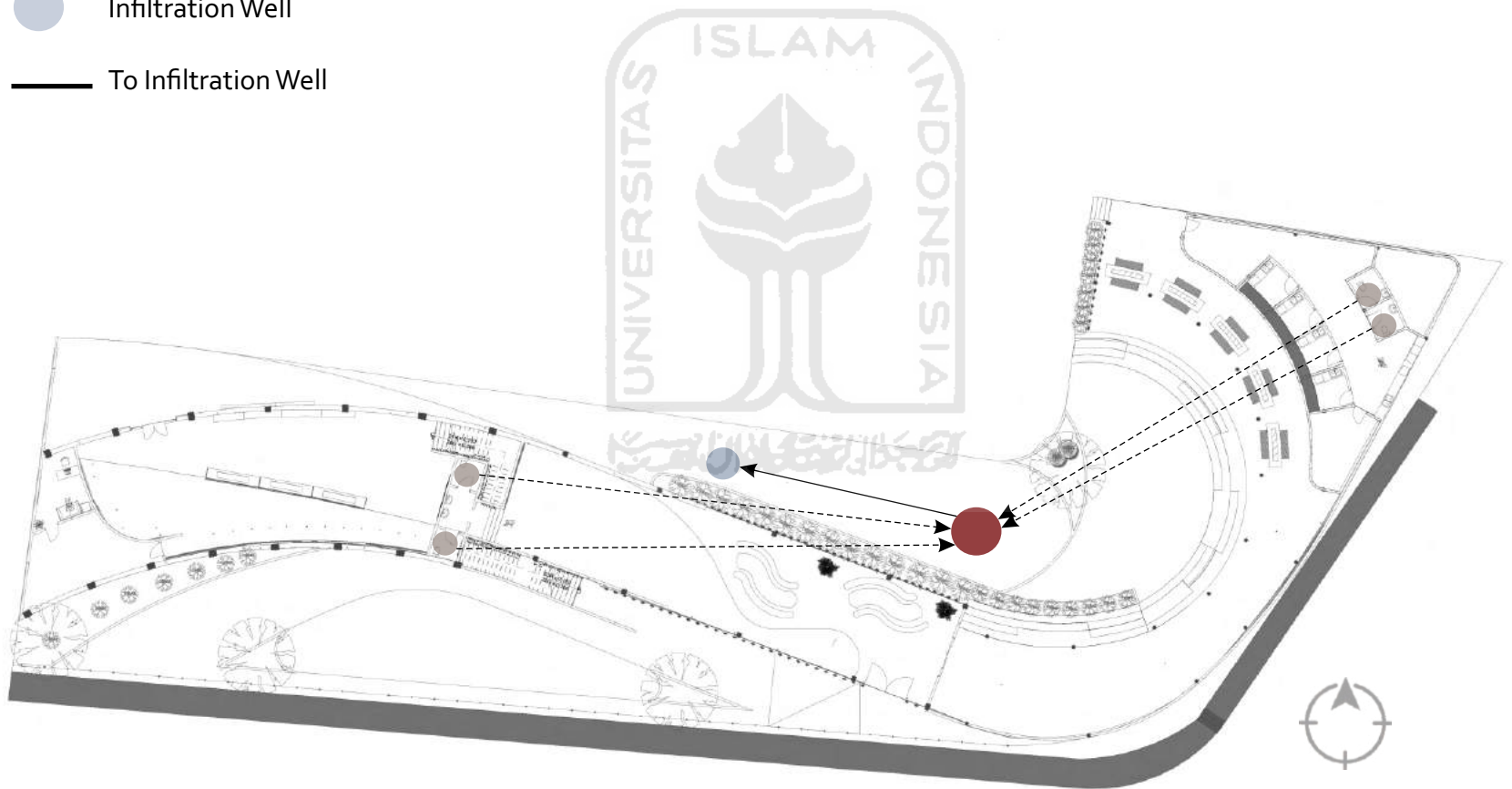


Figure 128. Waste Water System Schematic
Source: Writer's Document, 2021

BUILDING UTILITY

SAFETY AND SECURITY

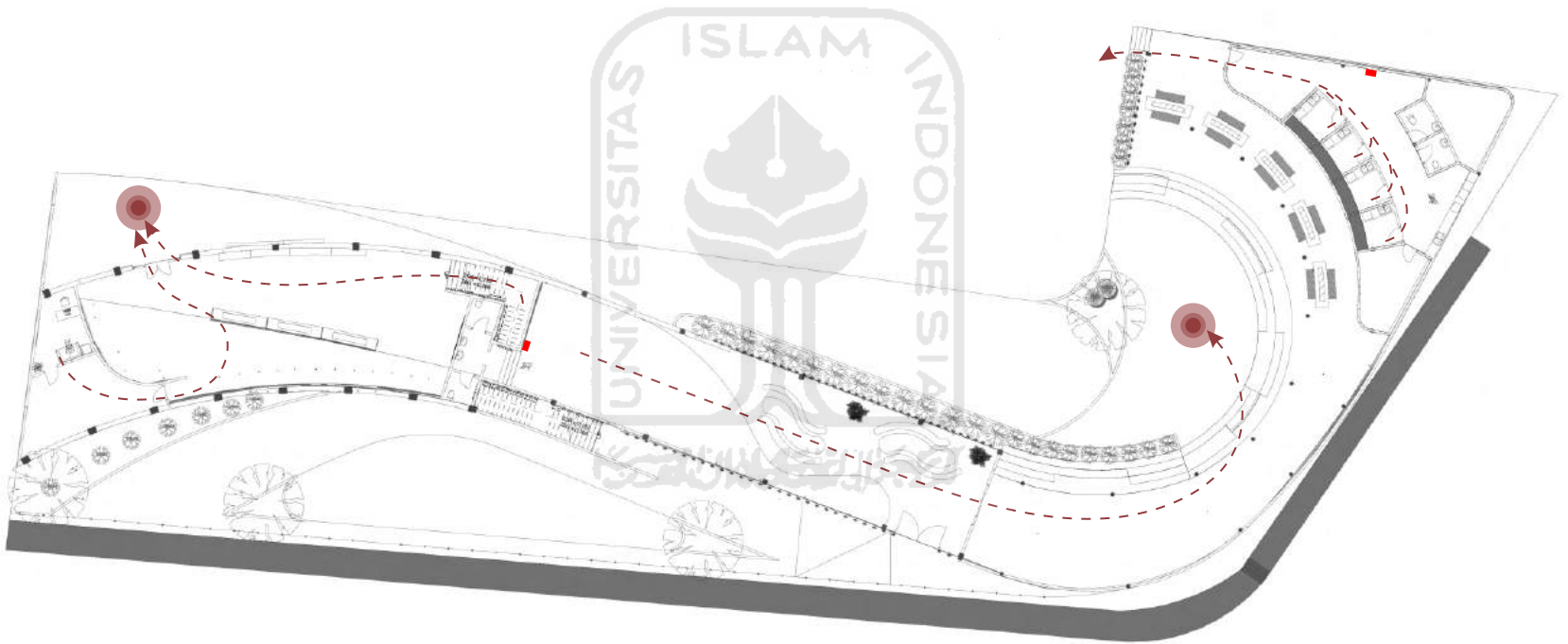
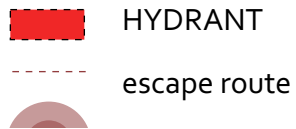


Figure 129. Safety System Schematic
Source: Writer's Document, 2021

BUILDING UTILITY

BARRIER FREE DESIGN

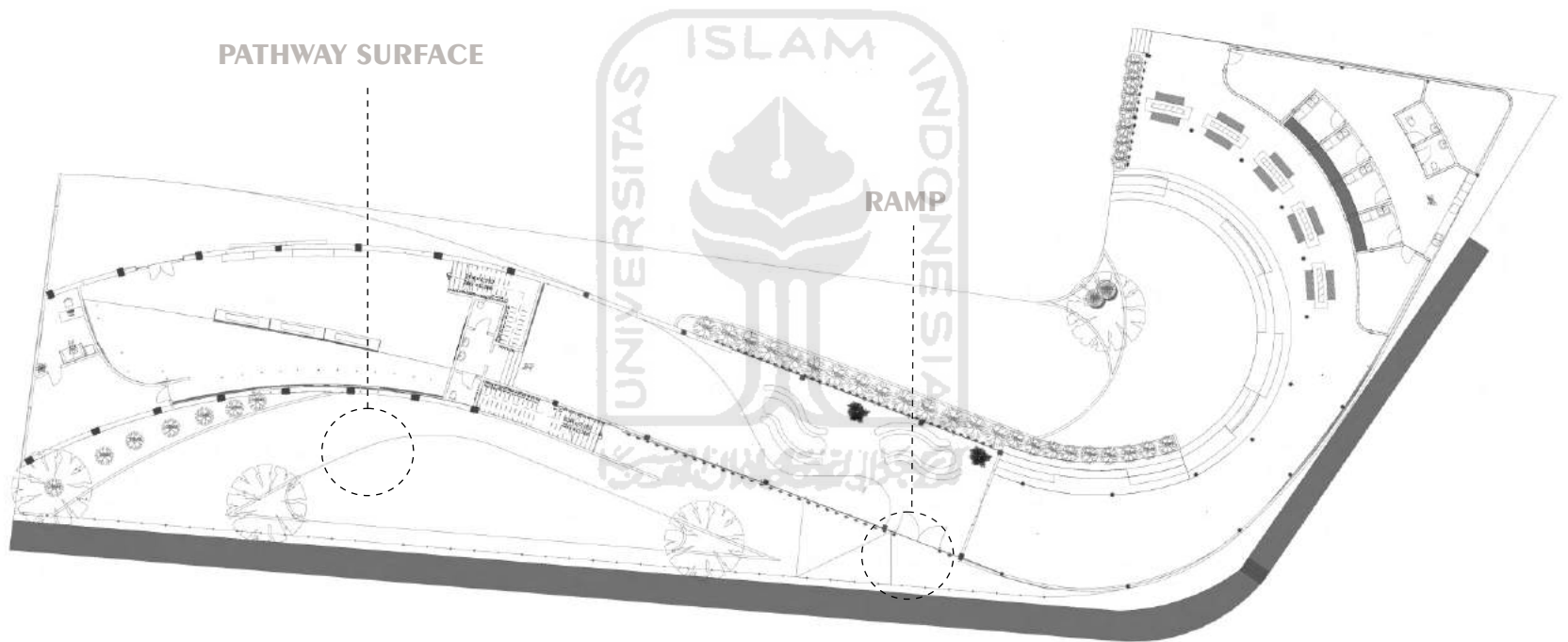
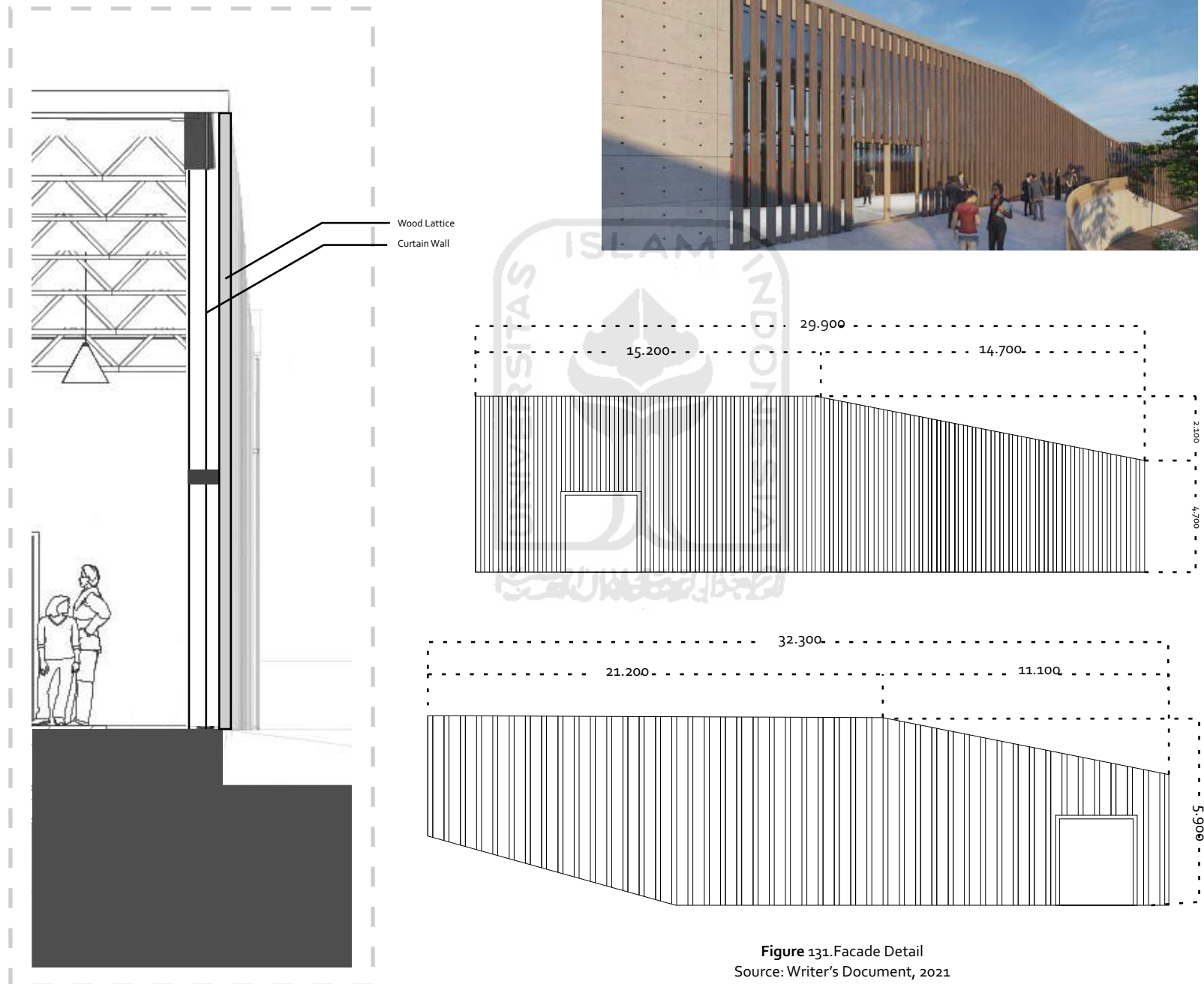


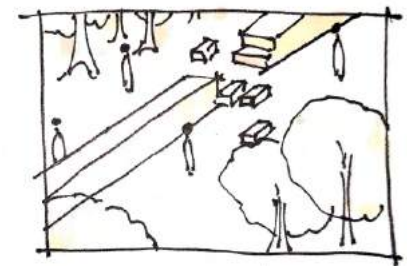
Figure 130. Universal Design
Source: Writer's Document, 2021

ARCHITECTURAL DETAIL

SECONDARY SKIN



3D MODELLING EXTERIOR



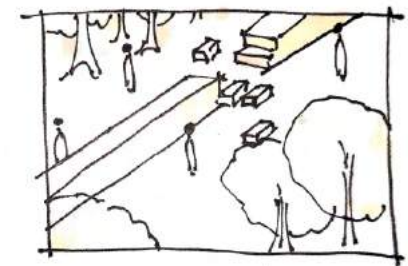
[BEGINNING] EXHIBITION AREA

exhibition area is an enclosed space surrounded by white brick walls to depict the process of building a fort that surrounds the city. contains explanations and information about the history of the Benteng Cepuri

Figure 132. Museum Exhibition
Source: Writer's Document, 2021

Figure 133. Museum Display
Source: Writer's Document, 2021

3D MODELLING INTERIOR



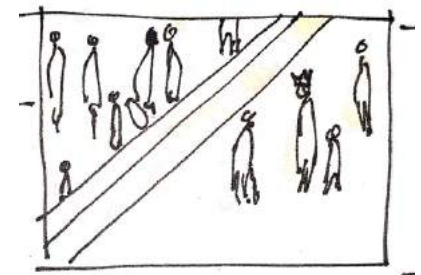
[BEGINNING] EXHIBITION AREA

Transparent glass walls covered with wooden lattices create a semi-open space that allows visitors to observe the surroundings more broadly, connected to the observation deck.

Figure 134. Museum Display 1st floor
Source: Writer's Document, 2021

Figure 135. Observation Deck
Source: Writer's Document, 2021

3D MODELLING EXTERIOR



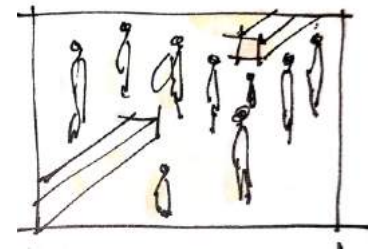
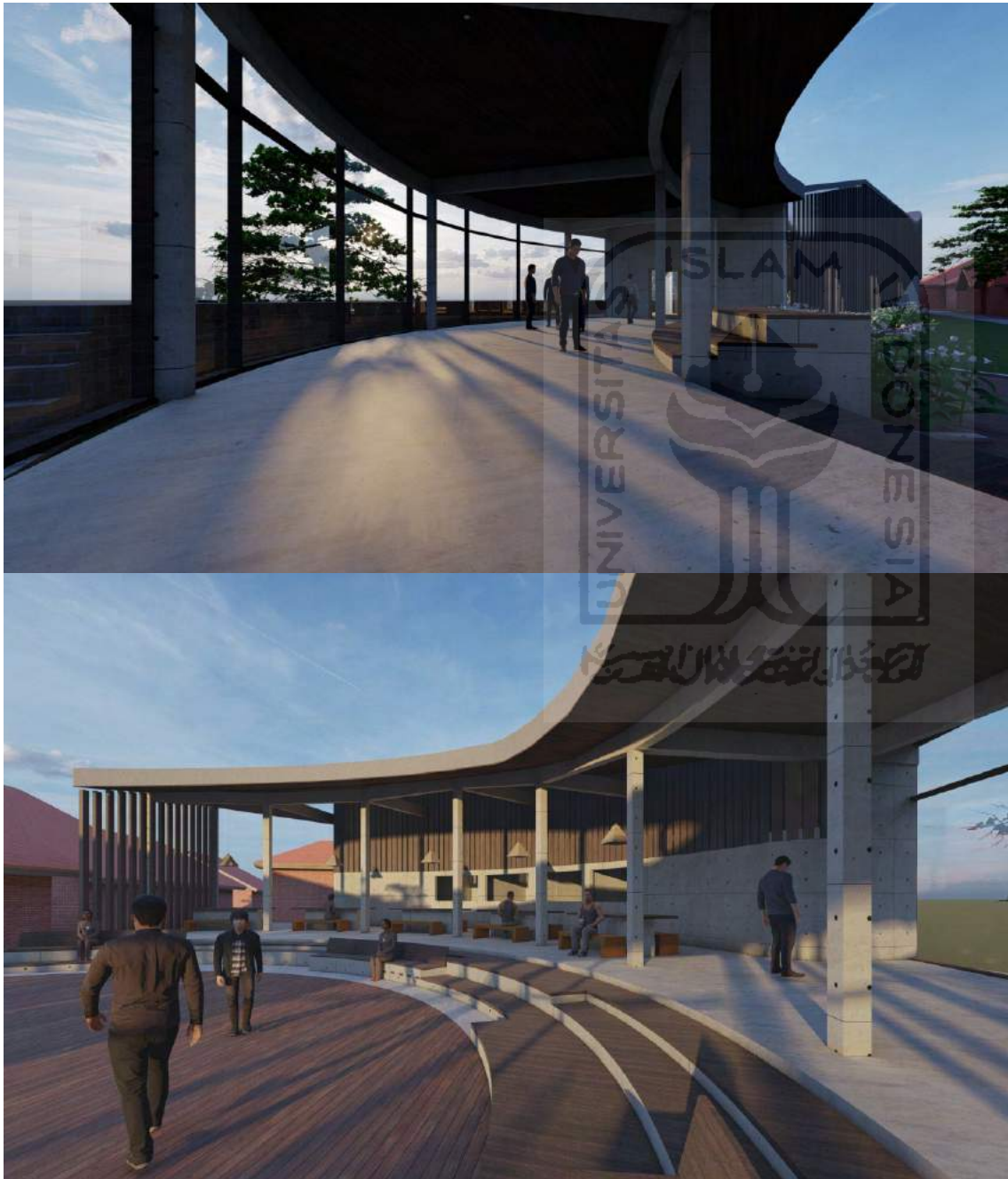
[FLOURISHING] SOCIAL AREA

This space is also a semi-open area that is covered by transparent glass and wooden lattices to connect visitors' views to the garden and settlement area on both sides of the building.

Figure 136. Garden Area
Source: Writer's Document, 2021

Figure 137. Social Area
Source: Writer's Document, 2021

3D MODELLING INTERIOR



[DECLINING] RECREATION AREA

An open area that is curved and faces a residential area. contains facilities that can support interaction between visitors and local residents such as a stage, food court and sitting area.

Figure 138. Exterior Perspective
Source: Writer's Document, 2021

Figure 139. Recreation Area
Source: Writer's Document, 2021

06

DESIGN EVALUATION

- Review from Client
- Review from Jury



REVIEW FROM JURY

Based on the evaluation results by the examiners regarding the harmony between the new building and the surrounding environment. the biggest difficulty in designing Benteng Cepuri Heritage Center is how to design a new building that considers the surrounding environmental conditions so that the building can properly convey the value of Benteng Cepuri but is still well integrated with its surroundings. Furthermore, the examiners also responded to the main facilities of the building, namely the Museum Exhibition, which should be able to better reflect the existence and significance of Fort Cepuri in the history of the Mataram and Kotagede Kingdoms.

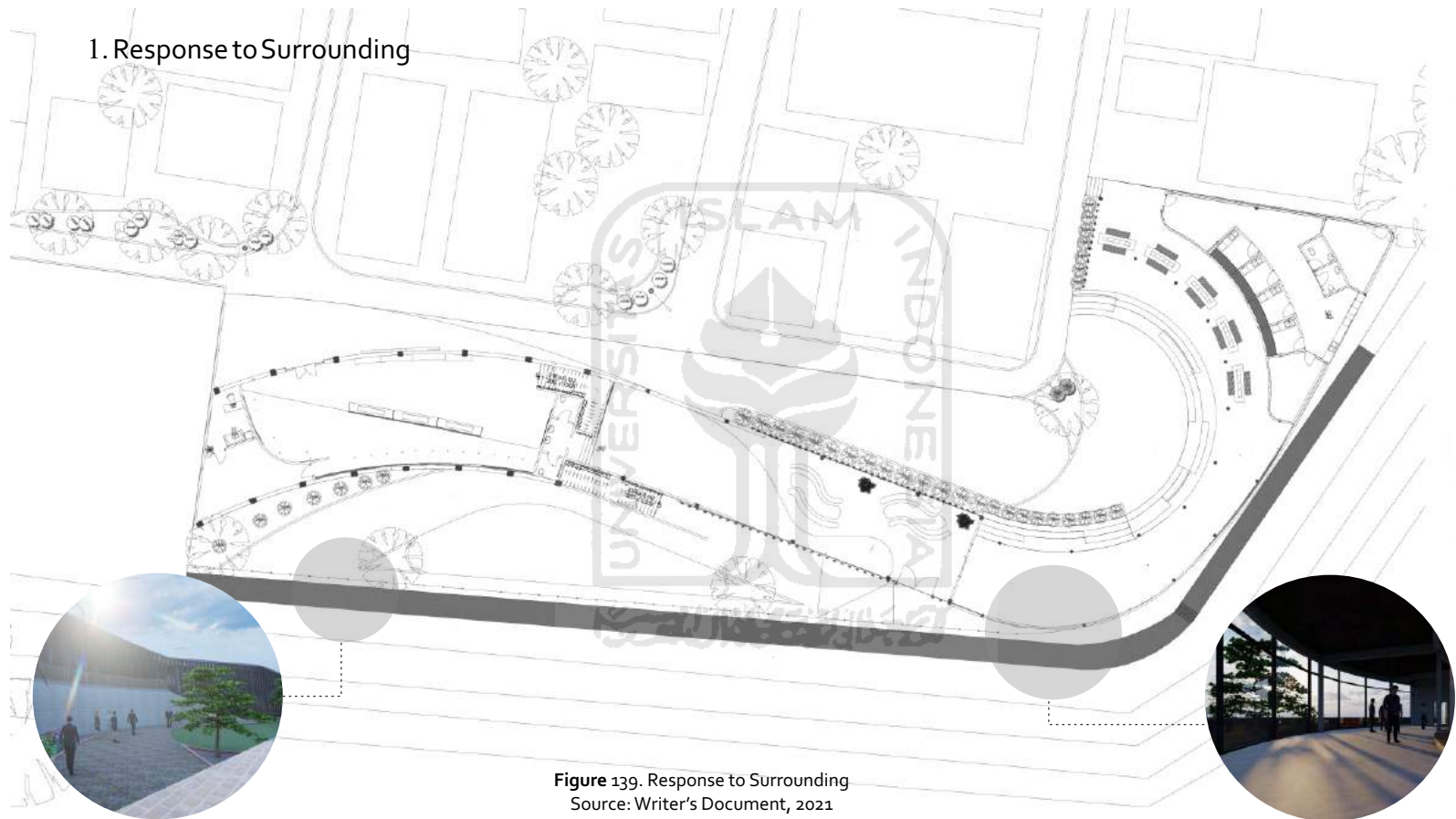


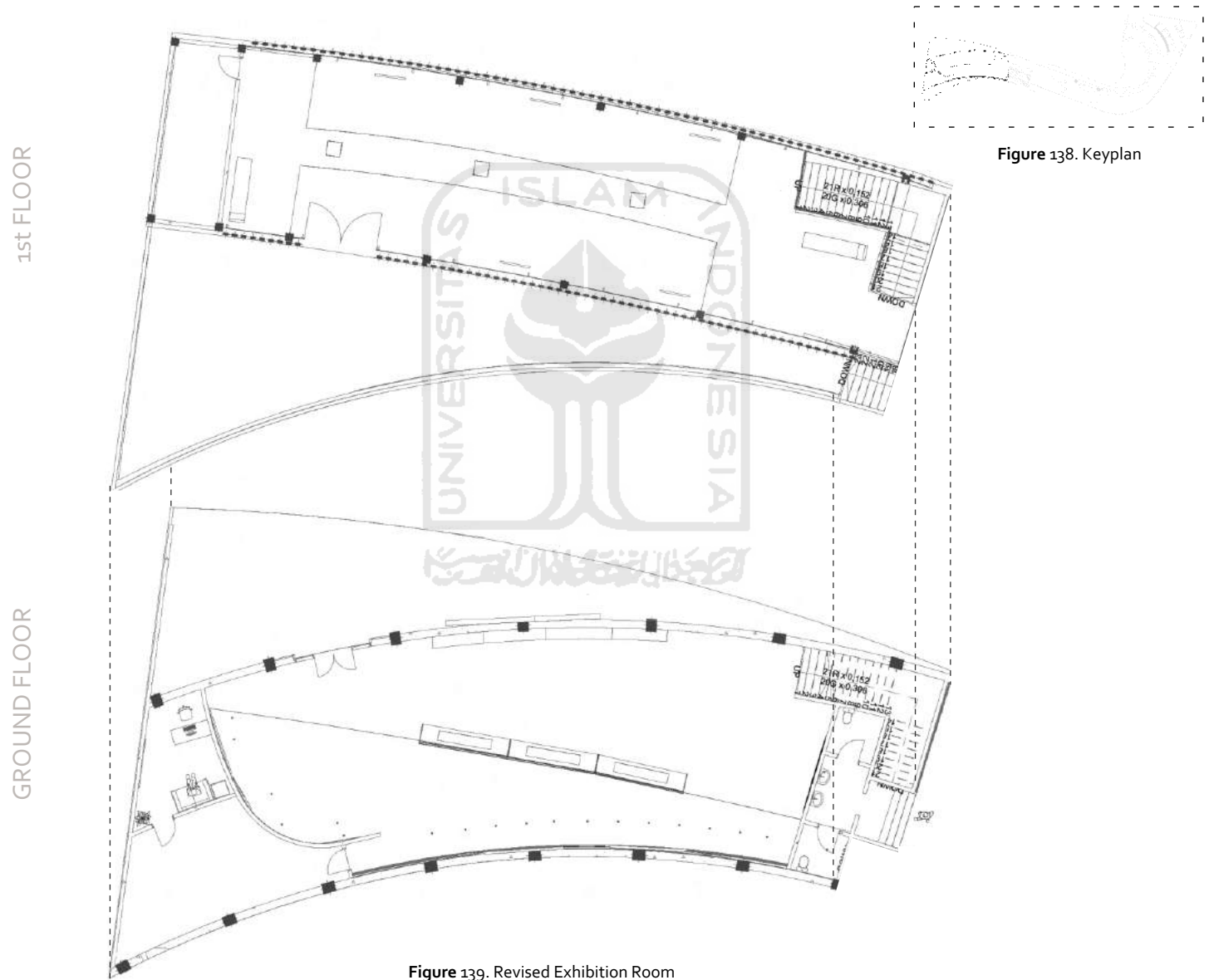
Figure 139. Response to Surrounding
Source: Writer's Document, 2021

The approach chosen in the design is a compatible-contrast approach which aims to harmonize, but still highlight the new building. In this context, the compatible-contrast approach is more applied to the relationship between the new building and the fragments of the Benteng Cepuri. this approach is shown in the curved shape of the building that is adapted from the iconic curve of Bokong Semar to accentuate its characteristic. The shape of the roof which has different heights is also used to match the varying conditions of the fort fragments (intact, partially intact, missing).

Buildings and fort fragments are also linked by creating a garden between the new building and fort fragments so that visitors can physically interact with Benteng Cepuri's remnant within the site. The east area is also opened using transparent glass so that the visitors can see the disintact part of the fort.

2. Spatial Layout of Museum Exhibition

One of the concerns expressed by the jury during the evaluation was regarding the main function of the building, which is the museum that should be able to illustrate the significance of Benteng Cepuri. Personally, the author feels that the existence of the museum is still lacking due to space limitations, so the concepts have not been conveyed properly. Therefore, the museum exhibition area was expanded to the first floor, replacing the workshop room which originally had a flexible layout.



2.a). Ground Floor

Because the museum's exhibition space has been expanded, the concept applied on the ground floor focuses on a closed concept that describes the process of building walls around the city. the wall that represents the Benteng Cepuri is accentuated by using contrasting floor covering, ceiling and also lighting settings that only highlight some sides of the wall so that the experience of being surrounded by walls can be highlighted. The display objects displayed in this room use a projector to enhance the experience of exploring the first phase of Benteng Cepuri



Figure 139. Recreation Area
Source: Writer's Document, 2021

2.b). 1st Floor

The exhibition space on the 1st floor has a semi-open concept. the use of semi-open concept is intended to create a visual connection between the building and its surroundings. this area provides an opportunity for visitors to observe the area around the fort, including the moat which is part of the fort that serves as a protective wall. Display objects displayed in this room are objects that are easy to see such as explanation boards, historical objects, etc



Figure 139. Recreation Area
Source: Writer's Document, 2021

REVIEW FROM CLIENT

1. Material Selection to create harmony between the building and Benteng Cepuri Fragment.

Evaluation by the client is carried out by sending the design document to the head of the Village Community Empowerment Institute (LPMK) as well as the initiator of this project, Drs. Miftchul Alfin. Evaluation was also carried out by An active figure of Kotagede's Cultural Heritage management, Mr. Erwito Wibowo.

Mr. Alfin and Mr. Erwito shared their views on the importance of harmony between new buildings in historical areas which they felt were still lacking in this design. The selection of modern materials is unfortunate because it makes the building appear more prominent than the existence of Benteng Cepuri itself. Therefore, some adjustments were made regarding the selection of building exterior materials so that they are more integrated with the walls of Benteng Cepuri.

Modern materials such as concrete which was originally used for the structure and walls were later only used for the structure, while the wall material was replaced with exposed white brick to create harmony with the Cepuri Fort material which can still be seen. although the white bricks used on the walls of the fort look darker due to age, when this wall is paired with new white brick material, harmony will be created, but still contrasting so that people who see the building from the moat below can distinguish between old and new materials.



Figure 139. Recreation Area
Source: Writer's Document, 2021

CLIENT'S REVIEW

Evaluation by Drs. Miftchul Alfin and Mr. Erwito Wibowo as community leaders in Purbayan and Kotagede were carried out by sending Architectural Poster and Design Report documents containing project background, analysis, concept explanation, technical drawings and also 3d imageries.

In the process of collecting data and surveys, the author notes several plans and views of Mr. Alfin regarding the function and purpose of the building, namely to utilize the BS area so that it can become one of the historic tourist destinations of Kotagede that can bring benefits to local residents. Therefore, the authors include facilities that can accommodate various activities of local residents and visitors such as museums, discussion/meeting rooms and recreation areas.

In terms of design, the design of this building underwent several changes, especially regarding the selection of exterior materials. The results of the evaluation by Mr. Alfin and Mr. Erwito focused on the selection of modern forms, the selection of materials and the harmony between the building design and the presence of the cepuri fort fragments so that they do not collide visually and physically.

The concern of material selection and the alignment of the building with the Cepuri Fort fragment was conveyed so that the building could later raise the significance of the Cepuri fort and avoid damage from the addition of new buildings.

SUPERVISOR AND JURY'S REVIEW

The Supervisor always emphasizes on creating spaces that can enhance the visitors' visiting experience and translate the concepts into buildings clearly so that the stories that must be conveyed to the visitors can be well received. This includes the design of the area outside the site so that visitors can understand the story the author wants to tell before even entering the building.

from the comprehensive stage to the design development, there have been several changes aimed to enhance the visitor's visiting experience and retells the history of Benteng Cepuri.

The examiner commented on creating harmony between the building and Benteng Cepuri's fragments and also the surrounding environment, especially on heritage district of Kotagede. In addition, there are also comments and suggestion about how to convey the concept through architectural elements so that the significance of Benteng Cepuri can be restored, which is by accentuating the existence of the fort.

In the design, this problem has been resolved through the design of the building form that adapts the curve of Bokong semar to highlight the characteristic of this area, the selection of materials to accentuate Benteng Cepuri's physical characteristic and also the spatial arrangement that is adjusted to describe the historical value of Fort Cepuri.

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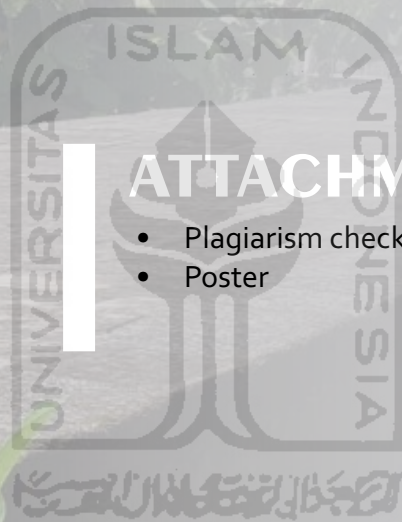
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07

ATTACHMENT

- Plagiarism check
- Poster





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SURAT KETERANGAN HASIL CEK PLAGIASI

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Assalamualaikum Wr. Wb.

Dengan ini, menerangkan Bahwa:

Nama : AULIA WAHYU TIMORANI
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Fakultas / Prodi : FAKULTAS TEKNIK SIPIL DAN PERENCANAAN/ PROGRAM STUDI ARSITEKTUR Program Internasional
Judul Karya Ilmiah : Design of Benteng Cepuri Heritage Center in Kotagede, Yogyakarta:
Using Insertion Strategies to Restore Cultural Significance

Karya ilmiah yang bersangkutan di atas telah melalui proses cek plagiasi menggunakan **Turnitin** dengan hasil kemiripan (*similarity*) sebesar **2 (Dua) %**.

Demikian Surat Keterangan ini dibuat untuk dapat dipergunakan sebagaimana mestinya.

Wassalamualaikum Wr. Wb.

Yogyakarta, 23/08/2021

Direktur



Joko S. Prianto, SIP., M.Hum

BENTENG CEPURI HERITAGE CENTER

Restoring Cultural Significance using Insertion Strategies

Benteng Cepuri Heritage Center is a facility designed with the aim of reviving the existence of one of the historical heritages in Kotagede, Benteng Cepuri whose existence has recently begun to fade. The Heritage Center building is expected to be able to restore public memory about the history of Kotagede, including Benteng Cepuri. The narrative about Benteng Cepuri is conveyed through architectural elements so that visitors can

understand the journey of Benteng Cepuri from its formation to its collapse. This facility is also expected to connect the fragments of Benteng Cepuri that scattered throughout Purbayan. Through this design, it is hoped that the cultural significance of the cepuri fort can be restored and this area can provide benefits to local residents.



LOCATION



The location of the site is 750 m from the Kotagede market. The site is a 1,772 m² land located in Purbayan Village, Kotagede, precisely at the west ruin part of Benteng Cepuri which are still intact and commonly referred to as Bokong Semar. The geographic location of the site is on the border between Kelurahan Purbayan and Kelurahan Singosaren in Bantul.

PROJECT BACKGROUND

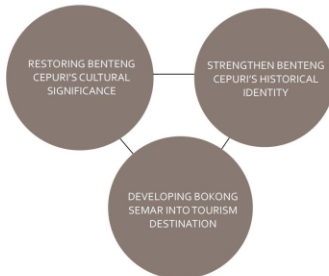


Kotagede is one of the areas in Yogyakarta which is full of historical and cultural values. One of the physical components of Kotagede which evince the Mataram Islamic kingdom existence is Benteng cepuri. Currently, there are still several parts of Benteng Cepuri that remain and scattered throughout Purbayan Sub-District. Although it has been recognized as a heritage site, many people have started to forget the existence of this fort as part of the historic city component. The existence of the remaining forts slowly began to lose its significance along with the rapid development of housing around them.

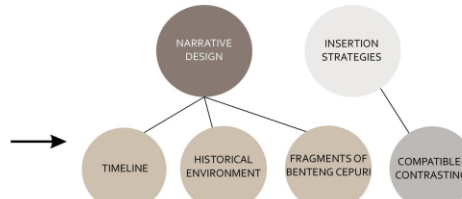
ISSUES



OBJECTIVES



STRATEGY



The strategy used to restore the significance of the cepuri fort and strengthen its identity is to use the insertion strategy in the historic environment. This strategy is used so that the building can be in harmony with the surrounding environment, the presence of fort fragments and also the historical stories in it. The insertion strategy will affect the shape of the building mass, the spatial organization and also the external appearance of the building so that the narrative that need be conveyed through the building can be achieved properly by the visitors.

SITE ANALYSIS

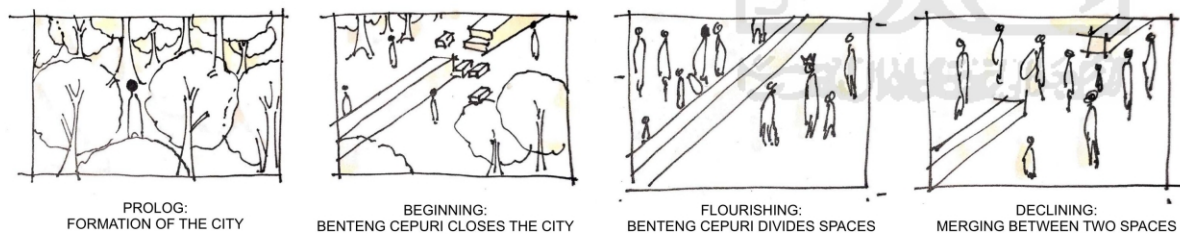


The site is located between dense settlements and natural elements that contain historical values such as moat or 'jagang' to the south of the site which was once part of the city's protective fort.

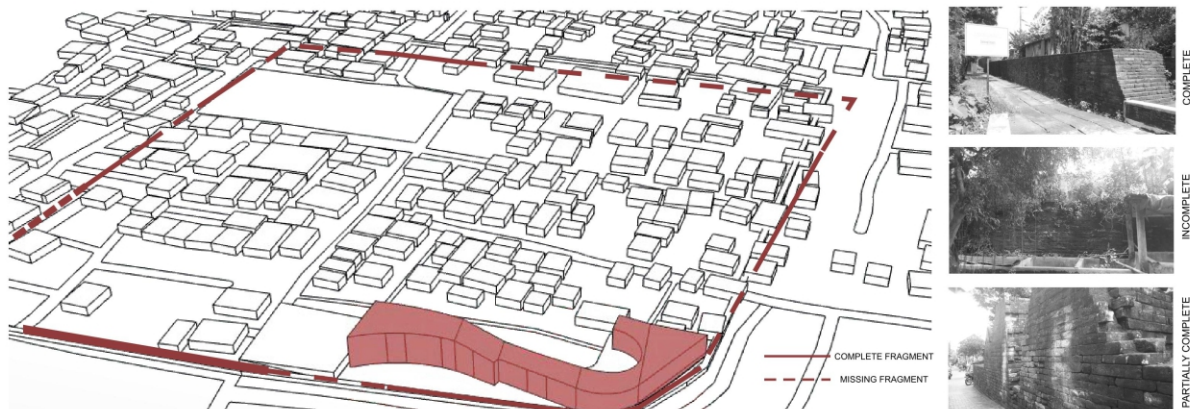
Site located along the fragments of Benteng Cepuri that still left in Bokong Semar, some of the fragments in the Bokong Semar are still complete, while some of them have collapsed and have undergone restoration.

Because it is located in a dense residential area, the site can only be accessed via a residential alley that is connected to Masjid Besar Road, the condition of the alley is very narrow and can only be passed by pedestrians and motorbikes.

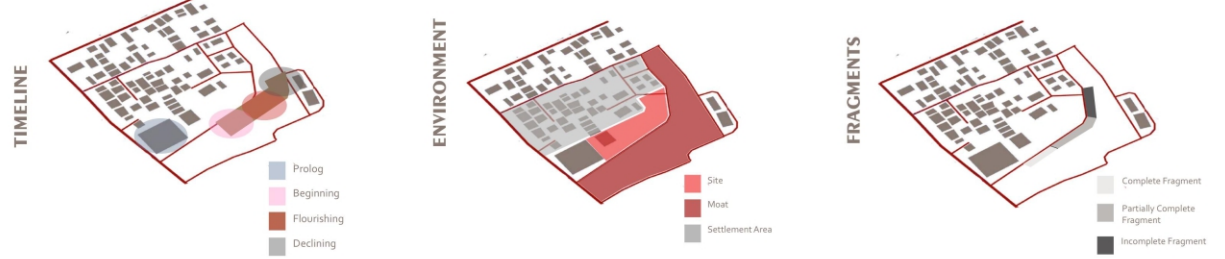
BENTENG CEPURI'S TIMELINE



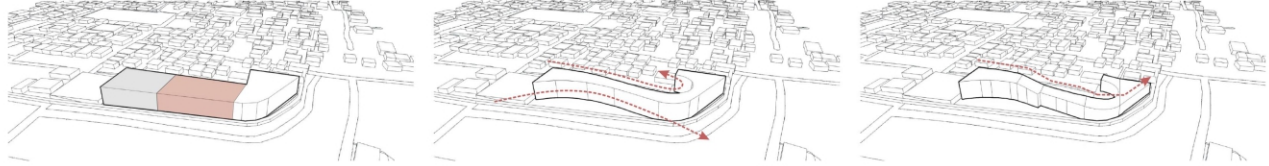
FRAGMENTS



CONCEPT



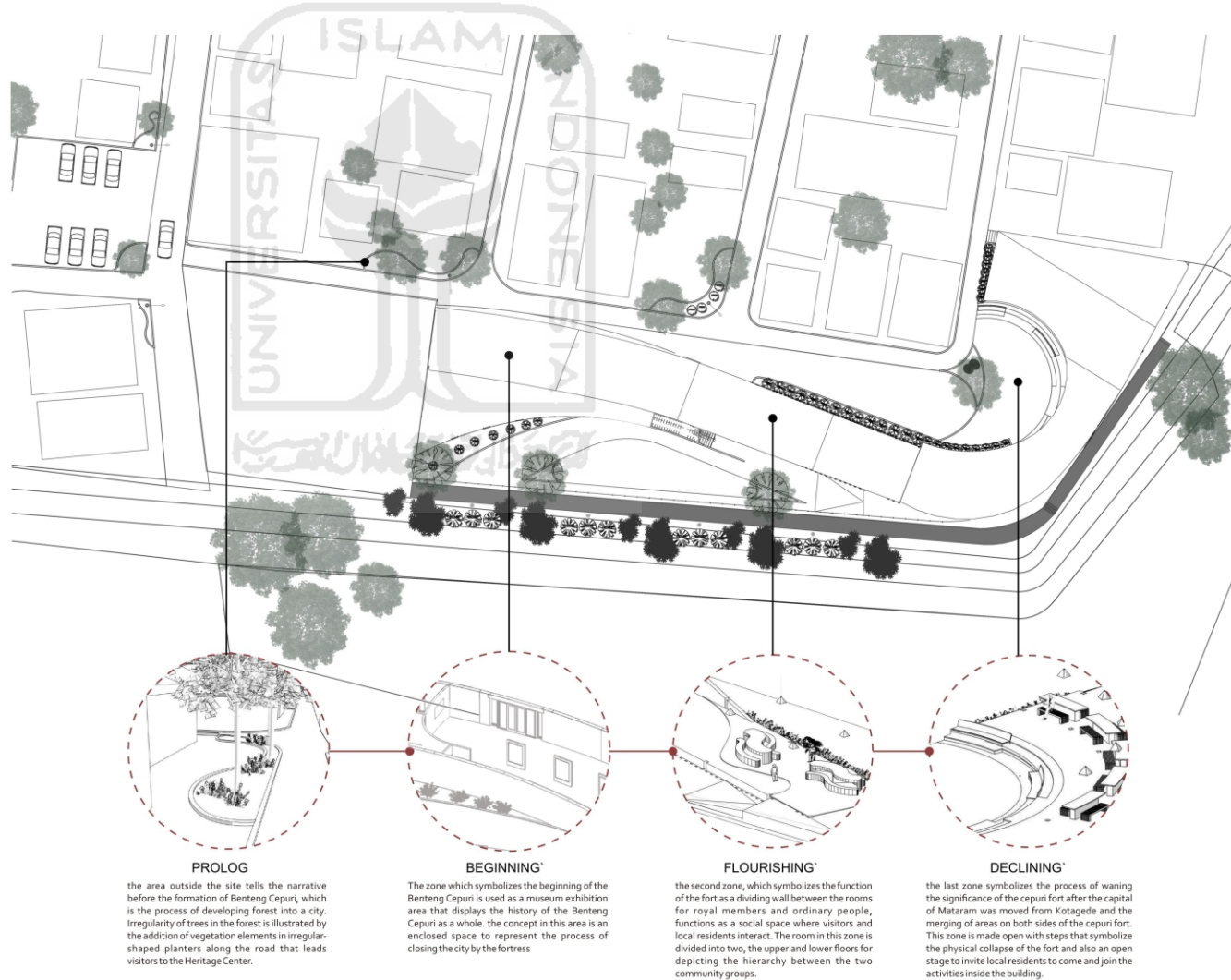
ZONING AND BUILDING FORM



The mass of the building is integrated with the surrounding environment and is divided into 3 zones, each of which represents a historical phase of the cepuri fort. the zone outside the site represents the prologue phase, the first zone inside the site represents the Beginning phase, the second zone represents the flourishing phase and the last zone represents the declining phase.

The curved shape applied during the building form is the result of interpreting the narrative to connect the building with the surrounding environment: Moat, Fort and Settlements. The curve also accentuates the arch that is characteristic of Bokong Semar. From this process, two open spaces were formed: facing the fort remnants and facing the settlement.

Using the insertion strategy, the height line of the roof in each zone is made different to represent the physical condition of the Cepuri Fort fragments in Purbayan which have various shape: some are intact, some are partially intact and some are missing.



PROLOG

the area outside the site tells the narrative before the formation of Benteng Cepuri, which is the process of developing forest into a city. Irregularity of trees in the forest is illustrated by the addition of vegetation elements in irregular-shaped planters along the road that leads visitors to the Heritage Center.

BEGINNING

The zone which symbolizes the beginning of the Benteng Cepuri is used as a museum exhibition area that displays the history of the Benteng Cepuri as a whole. the concept in this area is an enclosed space to represent the process of closing the city by the fortress

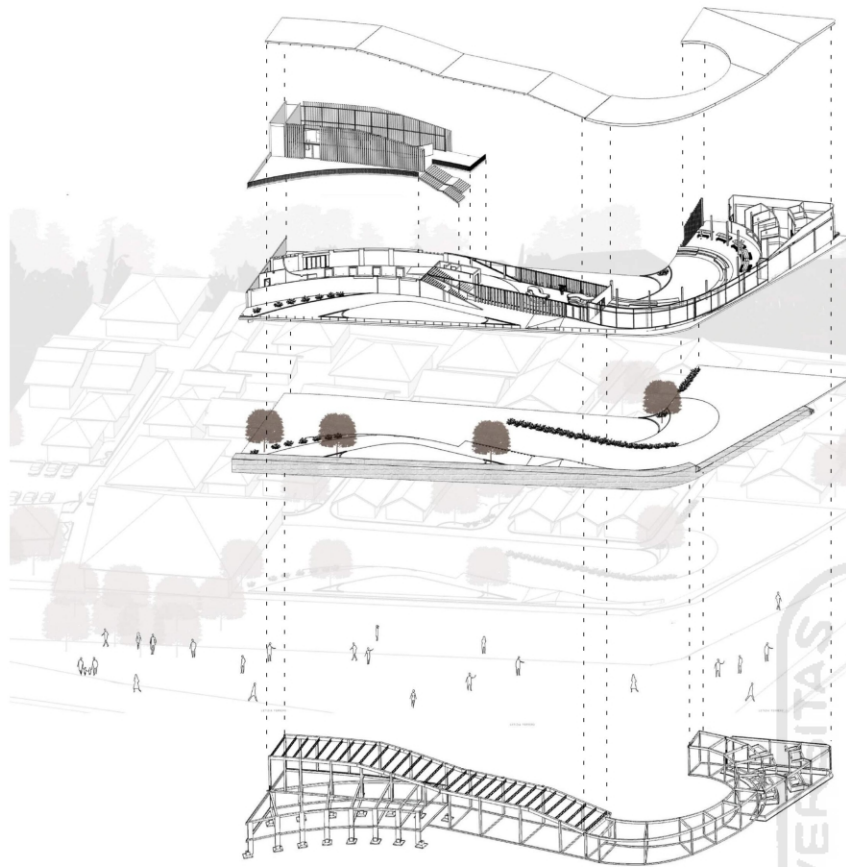
FLOURISHING

the second zone, which symbolizes the function of the fort as a dividing wall between the rooms for royal members and ordinary people, functions as a social space where visitors and local residents interact. The room in this zone is divided into two, the upper and lower floors for depicting the hierarchy between the two community groups.

DECLINING

the last zone symbolizes the process of waning the significance of the cepuri fort after the capital of Mataram was moved from Kotagede and the merging of areas on both sides of the cepuri fort. This zone is made open with steps that symbolize the physical collapse of the fort and also an open stage to invite local residents to come and join the activities inside the building.

EXPLODED AXONOMETRY



1ST FLOOR



Workshop / Temporary Exhibition | Observation Deck

GROUND FLOOR



Museum Exhibition | Discussion Space | Food court

SITEPLAN



NORTH GARDEN | STAGE
Connecting Building with Settlement



SOUTH GARDEN
Connecting Building with Fort Remnant

STRUCTURE



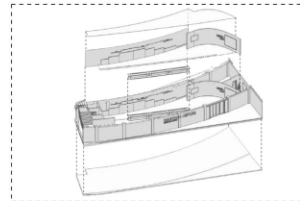
CONCRETE STRUCTURE | TIMBER TRUSS

IMAGERIES AND INTERIOR



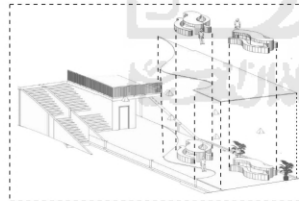
[PROLOG] ENVIRONMENT

To describe the dense forest trees, then added vegetation elements in the area along the road from the parking area to the heritage center. The planter form used also uses irregular shapes to describe trees in the forest that grow freely without rhythm or pattern. moreover, the use of masonry brick was aimed to create connection between the environment to the fort fragments.



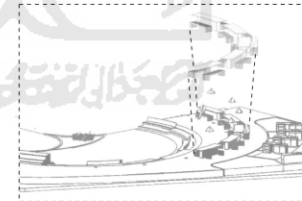
[BEGINNING] EXHIBITION AREA

To describe the process of closing the city with a fort wall, the exhibition space is closed with minimal openings. The displays that contain explanation of historical figures is arranged in the middle of the room to illustrate their life inside Benteng Cepuri.



[FLOURISHING] SOCIAL AREA

To depicts the hierarchy between the royals and commoners, curved line is applied on the furniture and floor plan of the ground floor, the curve was adapted from the overall shape of the building to strengthen the impression of flexibility and freedom in the space.



[DECLINING] RECREATION AREA

In the recreation area, there is a food court with seating area that are arranged following the building's floorplan. the stairs that surround the stage can also be used as seats when visitors want to enjoy the performance on stage

SECTION



BUILDING ENVELOPE

WOOD LATTICE

Creates contrast when it is juxtaposed with the heritage wall



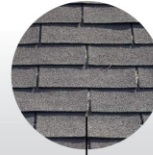
EXPOSED WHITE BRICK

Creates similarity between the new building and fort fragment



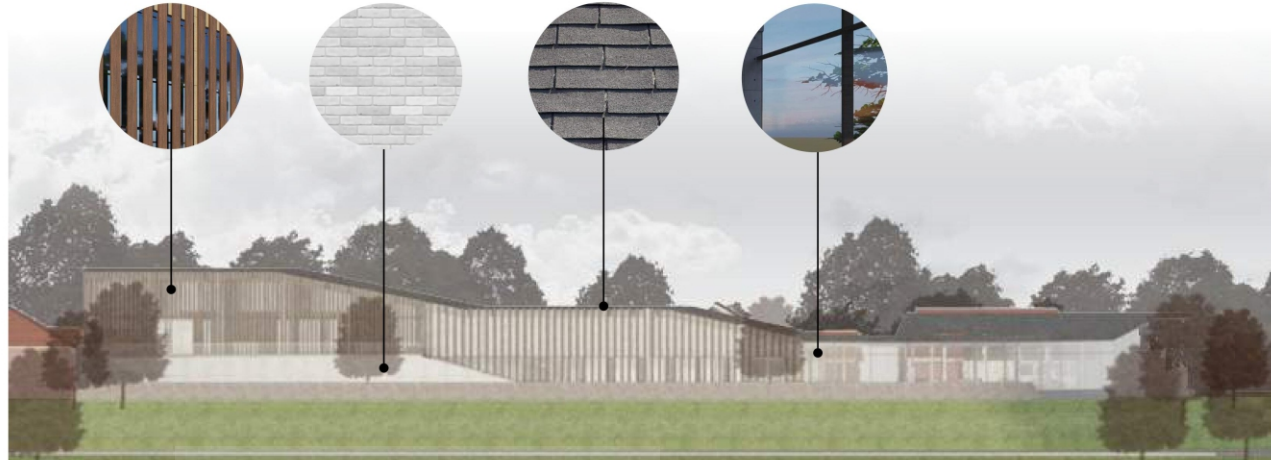
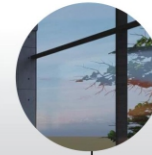
BITUMEN ROOF

Light Material and can be used for the flat section.



CLEAR GLASS

visually connects the visitors inside the building to the view below



[BEGINNING] MUSEUM EXHIBITION

exhibition area is an enclosed space surrounded by white brick walls to depict the process of building a fort that surrounds the city, contains explanations and information about the history of the Benteng Cepuri



[BEGINNING] MUSEUM EXHIBITION

transparent glass walls covered with wooden lattices create a semi-open space that allows visitors to observe the surroundings more broadly, connected to the observation deck



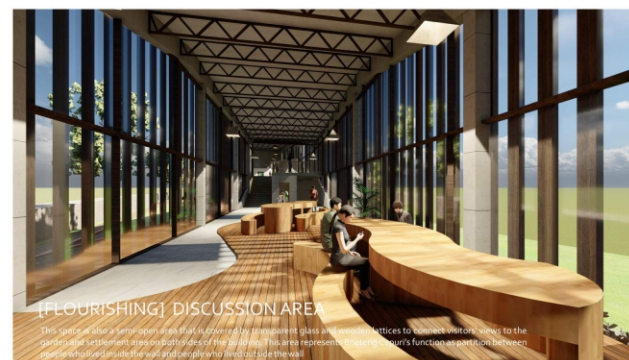
[BEGINNING] OBSERVATION DECK

Observation Deck allows the visitors to view the historical environment as a whole, from this area, visitors can see the fragment of the fort and the moat which is part of the defensive fortress.



[FLOURISHING] SOUTH GARDEN

South Garden is an open area that connects the building with Benteng Cepuri's Fragment that exist within the site, this area allows visitors to see the observation to the Benteng Cepuri's Fragment within the site.



[FLOURISHING] DISCUSSION AREA

This space is also a semi-open area that features transparent glass and wooden lattices to connect visitors' views to the garden and settlement area outside of the building. This area represents the curator's function as a partition between representation and the site and can refer to historical site the wall.



[DECLINING] RECREATION AREA

An open area that is curved and faces a residential area, contains facilities that can support interaction between visitors and local residents such as a stage, food court and sitting area.



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