

Final Architectural Design Studio
Design of

R3 REKA
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RUANG

Merdeka Cultural Center

*Adaptable Cultural Center for Cultural Development
in Bogor with Open Building and Adaptive Reuse
Approach*

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Merdeka Cultural Center

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Figure 1: Existing condition of Jalan Merdeka
Source: Tribunnews Bogor





Authentication Sheet

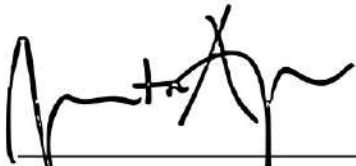
Final Architectural Design Studio Project Titled
Design Of Merdeka Cultural Center
Adaptable Cultural Center for Cultural Development
with Open Building and Adaptive Reuse Approach

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Forewords

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Bogor, 22th July 2021

Author



Abraham Risyad Adikuncoro

STATEMENT OF ORIGINALITY PAGE

I, as the author of this book, declare that all parts of this work except those mentioned in reference, there is no assistance from other parties either wholly or partially in the process of making it. I also say that there is no conflict of intellectual property rights in this work and submit it to the Department of Architecture, Universitas Islam Indonesia to be used for educational purposes and publications.



Bogor, 22th July 2021
Author


Abraham Risyad Adikuncoro

Design Premise

Merdeka Cultural Center

Adaptable Cultural Center for Cultural Development in Bogor with Open Building and Adaptive Reuse Approach

Being connected with local and international culture is important in the modern era to develop our identity and knowledge. Vast knowledge of cultural works and literature widens our world and opens up various possibilities to enrich ourselves to ideas that will lead us to a better future. However, the current reading interest in Indonesia is still facing a crisis, as the reading interest rate is only at 0.001%, putting Indonesia's reading interest rating in 60th place from 61 countries (Ministry of Communication and Informatics, 2016). With globalization and a free market ahead of us, we need to take a step to increase the reading interest to give us a competing chance in the global environment.

The pandemic outbreaks in recent history often brought up significant issues of health protocols and measures that are often overlooked in the design approach of buildings.

With the recent COVID-19 outbreak, we are taken by surprise by the viral contagion of the virus and faced difficulties in adjusting to the situation, resulting in the closing of many public and private buildings with a vast number of them facing uncertainty on their survival in the future. On the other hand, with lockdown and physical distancing protocols going, people need safe recreation and public space to unwind from the stress.

Merdeka Cultural Center aims to accommodate the people with various ways to learn and engage themselves with cultures, even during an unpredictable pandemic outbreak by paying using open building approach to ensure that the building is able to be sustainable with different situations that might occur, and keeping the people engaged with cultures in safety conditions.

Keywords: Cultural Center, Jalan Merdeka, Adaptable, Open Building Approach, Adaptive Reuse Approach

Location



Ex Bioskop Presiden

The design will be located at the site of Ex Bioskop Presiden at Jalan Merdeka. The location is ideal as it is located at the center of the city, easily accessible via train station and bus stops. The location is also situated in the proximity of various schools.

Figure 2: Map of ex Bioskop Presiden and the surroundings
Source: Author's Document

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1 Introductions



Backgrounds

Pandemic-Induced Crisis and The Importance of Adaptability

Although epidemic and pandemic outbreaks are not a new phenomenon in human history, the recent COVID-19 outbreak affected our economy at an unprecedented level. On the other side, the pandemic outbreak reminds us how pandemic resilience is an important part of architecture as we can't predict when it will happen again, the one thing that we can be sure of is that the current COVID-19 outbreak will not be the last pandemic outbreak. For the building to be able to support activities that are crucial for the economy and cultural development for the long term in the future, we need to change our way of thinking when designing buildings from now on.

The pandemic outbreak forced the building around us to be closed to control the contagion of the virus. However, the closure of the buildings is hindering the development of culture, since people are unable to gather to discuss, practice, and therefore develop the cultural activities, along with the downfall of the economy caused

by the limitation on economic activities. Buildings as the place where activities are taking place are important for the national infrastructure in supporting the economy and the culture.

Observing how the buildings around us are unable to remain open with the limitations induced by the healthy protocols, we can see how our infrastructures are not designed with adaptability in mind. Crucial buildings for the national economy and culture such as offices and libraries are only able to operate at a significant reduction in capacity, or remain closed for the case of most library and cultural buildings. Most cultural buildings in Indonesia are built with rigid spatial arrangements, limiting their ability to rearrange and adapt to the situation. In a post-pandemic world where our building infrastructure is able to remain resilient to threats, the adaptability of buildings has to be ensured.

Rising Trend of Adaptability in Architecture

As a “satellite city”, Bogor grows along with the growth of Jakarta. Many people who work in Jakarta find housing in Bogor as a result of the disproportionate growth between the population and housing availability in Jakarta. However, Bogor itself already has a significantly large number of populations with existing building development, pushing the new building developments to build outward to the city, creating an urban sprawl phenomenon. However, developments located at the outskirts of the city are not ideal for cultural development, as it is not easily accessible to the broader community.

In the time where cities such as Bogor are becoming more and more urbanized, building developments in the city center are becoming more attractive to the people for easy access to public transportation and other amenities. With the development of buildings going at

an accelerated rate, there is an ongoing trend in using adaptive reuse approaches to use the existing buildings to accommodate new functions, such as the case with the adaptation of chinese shop-houses in Suryakencana that have become more popular to be reused for new functions.

The trends of reused chinese shop-houses and contemporary shophouses also ensure that the developments are able to adapt and be more sustainable with the time, they are designed to be able to switch functions with ease. It is a fact that the functions of the buildings change more often than the building itself, and the use of open building approach are favourable for the buildings to avoid abandonment and disuse of the building, allowing them to be used for a longer duration of time and be renovated easily when it is necessary.

Reading Interest in Indonesia

According to data obtained by UNESCO, reading interest in Indonesia is currently facing a crisis as only 1 in every 1000 Indonesian has a high interest in reading. This fact is not connected to the citizens' literacy rate, as in 2018 the adult literacy rate in Indonesia reached 95.66%. This means that the majority of adults can read and write, but their interest in reading in their leisure time is low.

In January 2019, wearesocial released the data for time spent using the internet based on a survey. The data show that Indonesians spent 8.5 hours surfing the web, putting Indonesia on the 5th country with most internet usage just below Colombia. To give some perspective, the USA with more population spent 6.5 hours using the web.

In these modern times where information is easy to access, people must have critical thinking skills for the development of culture. It is easy for people to accept a culture by its face value without considering the implications that might occur. As it can be observed in our society, the culture of Indonesian people on the internet is not at its ideal position, with people giving their raw opinions for any topics and might give some form of harm to other people. People need to develop critical thinking skills to be better and acceptable in developing the country's economy and culture for the future.



Figure 3: Microlibrary Warak Kayu by SHAU Indonesia use interactive spaces to attract children to read
Source: ArchDaily

Significance of Culture for Human Being

Culture is something that plays an important role in the daily life of human beings. In Oxford Dictionary, "culture" is defined as "the customs and beliefs, art, a way of life and social organization of a particular country or group" (Oxford University Press, 2021). In his book *Morfologi Bangunan dalam Konteks Kebudayaan* (Building Morphology in Cultural Context), Marcus Gratiwa (2011) described culture as "collective human knowledge that is used to understand the environment they experienced", while anthropologist Robert H. Lowie (1920) defined culture as "all that individuals develop from the community, such as beliefs, customs, artistic norms, craftsmanship, manners, and expertise". From all three definitions of "culture", we can conclude that culture is developed from interaction with people in a definite group to solve issues and express themselves.

From the definition of culture, we can observe that the scope of culture is wider than traditional dances and paintings. The scope of culture includes how a society or community interact and communicate with each other, and solve an issue that occurs to them, it is an abstract thought as the result of human interaction and can be communicated through various means.

Throughout history, the development of culture has it being distinct into two categories. The first one is traditional culture, or it might also be known as folk culture or official culture, developed in a society that tends to be homogenous. Traditional culture in the modern time is often

used for interaction between people of higher status, or used in a formal setting. On the other hand, popular culture or pop culture is developed in a heterogeneous society, with its root can be traced to the Industrial Revolution when people started to move into urbanized cities. Popular culture is used for interaction between people in the middle class and used in informal settings. The development of pop culture is further increased with the ease of communication between different places in the world with the internet, making people communicate more about topics that they can relate with.

It is often thought that traditional and popular culture is opposite to each other, with people either embracing traditional or popular culture. In reality, popular culture and traditional culture are on a different level of identity, and people can adopt both forms of culture at the same time. People in heterogeneous society are embracing popular culture out of necessity since they often interact with people that come from different backgrounds and origins, and popular culture helps them in finding a common ground to relate with. On the other hand, it is often the case that the people still hold onto their traditional culture as part of their identity, and said culture is often used when people with similar backgrounds and origins interact with each other. Traditional culture can mix with the realm of popular culture if both cultures interact with each other, and becoming more common in said society.

Development of Pop Culture

In Oxford Dictionary, “pop culture” is defined as “modern popular culture transmitted via the mass media and aimed particularly at younger people” (Oxford University Press, 2021), while sociologist Tim Delaney (2007) explained that “pop culture” can be defined as “vernacular or people’s culture that predominates in a society at one point of time, as a result of people’s interaction and/or informed by the media”. The trace of popular culture can be traced to the creation of the middle class in the Industrial Revolution when people started to migrate to an urban environment and leaving their traditional farming life. People started to develop their own culture to communicate and share with their peers, as part of separating from their parents and bosses.

Popular culture became more widespread and globalized with the introduction of mass media and the internet. With communications between different places becoming easier and faster, popular cultures that at the start might become localized within a particular area are able to interact with each other, creating a separation between global pop culture and local pop culture, with each part of pop culture able to influence each other.

Despite the ambiguity of pop culture’s definition, we can get a clear picture of what pop culture is. Pop culture developed with the spontaneous interaction of people in order to build a relationship usually in an urban environment where people are not familiar with each population. Aside from providing the people with a platform for communication, mass media and the internet provided the people with common interests for the people to relate with, and identify themselves in order to find other people with a similar interest. While it is often seen as the opposite of traditional or official culture, in reality, popular culture is on a different level from traditional and official culture, as pop culture is used for communication among peers and provide the people with an easier way to relate with each other, while traditional and official culture is used for communication with high-status people and used in more formal settings.

Perception of Pop Culture in Indonesia

Pop culture in Indonesia had been stigmatized as a threat to society, with several mainstream media and scholars denouncing it as a threat to traditional culture and national identity. To understand the problem, we have to understand the perspective of said parties.

The stigma of pop culture in Indonesia often comes with the argument that the values of popular culture are not in tune with the values in Indonesian culture that has to be preserved in the daily life of the people. Istiqomah (2020) mentioned that popular culture is worried to disturb the national stability and loyalty that will blur the identity of Indonesian people, and an effort to control the access to pop culture has to be officiated to preserve the Indonesian culture.

Although the worries and perspectives of the parties that are against free access to pop culture can be understood, these arguments are often pessimistic and one-sided. Culture is not an absolute truth that stops developing after a specified amount of time, as it keeps developing with human interaction and issues that occur throughout the world. Therefore it is not wise for a soci-

ety to completely reject the development of the world, as it might alienate them from the outside world and hinder the development of said society.

Preservation of traditional culture and values is something that can be beneficial to a nation's identity. However, these values that are ingrained within the traditional culture have to be filtered along with the world progression, as well as the popular cultures have to be filtered before adopted into the mainstream of society. Traditional values in some cases might cause harm and discrimination against genders, races, ethnics, and religions.

In light of popular culture and national identity, the understanding of how pop culture can be received for the benefits of Indonesian started to become common within the population, with local entrepreneurs adapting and mixing traditional and popular culture as a way to educate the people, and bring Indonesian culture to an international level.

Traditional Culture in Bogor

The culture of Bogor developed along with the history that took place in the area. Sundanese culture was the first one that became a majority in the area since the city was under the reign of Sunda Kingdom, and became the capital city of the kingdom under the name of Pakuan Pajajaran until it was razed in 1579 and became uninhabited for years. However, Sundanese culture stayed with the people around the area that would later inhabit the city.

Sundanese culture is known for its religiousness. Unlike the popular belief that people in the kingdom were believers of Hindu, the reality was that Hindu was only absorbed in the Sunda Wiwitan or Sunda Pajajaran belief. In the pantheon of Sundanese people, the Hindunese gods were lesser gods than their *Guriang Tujuh*, the spirits of wisdom that were the embodiment of *Sang Hyang Jatiniskala* that was believed to be the most powerful god in their belief.

The religiousness of the culture is applied to the rituals and their everyday lives. In Sundanese culture, the role of praying was given to the women of the house, as the shrine to the gods in each house is arranged and used by the women, and the men are forbidden to enter the room. The women's roles are also becoming prominent in the other rituals that were done with dances to communicate with the gods. Dances also became prominent in public ceremonies, such as weddings and house-building ceremonies.

The culture in Bogor then became enriched during the colonial period when the Dutch East Indies Company started to inhabit the abandoned Pakuan region and develop the area as the designated area for agricultural industry under the Buitenzorg administration. During this time, various infrastructures were built in the city to accommodate the research and production of agriculture for the VOC. The city was inhabited by Sundanese, Chinese, European and Arab settlers among other ethnics that contribute to the diversity of culture in Bogor that become a familiar scene in the modern-day.

The cultural development of this time created the identity of Bogor in the modern-day, with the mixing of each culture with the social and natural environment of the city at the time. Culture starts to form in the way that we know it, with visual art developing in the European and native-Asian side. European resident brings in the style of paintings that became popular in Bogor, inspired by the landscape scenes, while the native and Asian culture brings in the development of Batik Bogor that developed from the mixing of West Java style of batik with the bright colors and the pattern deriving from natural scenes and a little Chinese touch. Ceremonies are also being celebrated in the community, such as harvest ceremonies conducted by the native Sundanese people, and the well-known *Cap Go Meh* festival by the Chinese that is still conducted in the modern-day Bogor.

Development of Traditional Performing Arts in Bogor

According to Oxford Dictionary, “performing art” is defined as “forms of creative activity that are performed in front of an audience, such as drama, music, and dance” (Oxford University Press, 2021). The essence of performing arts lies in the connection that is created between the performers and the audiences, therefore the accommodation of performing arts will require a specific form of space to ensure that the bond between the performers and the audiences can be created.

In Asian culture such as Indonesia, there is a tendency that the society uses performing art as a form of art and ritual, with forms of traditional music and dances incorporating delicate sound and movement. Jun'ichirō Tanizaki (1933) in his books *In Praise of Shadows* explained that the value in Asian music lies in its silence between sounds, allowing the performer and the audience to enter a contemplative and meditative state in its performance, with the same can be said to delicate Asian dances, showing that performing arts such as music and dances have a spiritual value in Asian society such as Indonesia, along with the entertainment purpose.

Although other forms of performing arts such as theater groups can be found in Bogor in small numbers, traditional performing arts in Bogor are recognized by the dances. The popularity of traditional dances can be connected with the Sundanese culture that are devout believers of Sunda Wiwitan. Dances are often conducted at the time of spiritual ceremonies as a way for the people to communicate with the gods. Aside from that, dances are a symbol of status during wedding ceremonies and other important events. These traditional dances from Sundanese culture are often developed and re-choreographed in the modern times by various dance studios.

Katumbiri Dance

The name Katumbiri is derived from Sundanese, which means "rainbow", as the 7 dancers performing the dance are carrying different colors of fabric following the color of the rainbow. The dance tells the story of 7 nymphs going down from heaven to take a bath at a pond, a familiar scene in Sunda and Javanese folktales. The movement of the dancers are dynamic, following the music of Sundanese gending repertoire.



Figure 4: Katumbiri dance telling the story of 7 nymphs, familiar in local folktales
Source: CORE

Maung Lugay Dance

Maung Lugay dance is the derivative from Jaipongan dance that is well-known as the dance of Padjajaran. However while the Jaipongan dance is known for its delicate and sensual movement, the movements in Maung Lugay dance are bolder with strong movement, mimicking the movement of a tiger. Maung Lugay incorporated movement from traditional Pencak Silat into the mix, despite the dance being performed by women.



Figure 5: Maung Lugay dance with movement mimicking tigers
Source: GPS Wisata Indonesia

Visual Art Scene in Bogor

In Oxford Dictionary, “visual arts” is defined as “creative art whose products are to be appreciated by sight, such as painting, sculpture, and film-making (as contrasted with literature and music)” (Oxford University Press, 2021). The value of visual art form lies in the idea that is communicated through skills involving visual (painting, sculpting, and filmography), compared to performing art that requires performers to be communicated to the audiences. This communication method of visual arts allows people to enjoy it without any specific schedule for an indefinite amount of time, making contemplating and interpreting visual art more accessible to the mass public. The contemplating of visual art done by the people in enjoyment of the artworks require a specific space to keep the focus of the audience undistracted by other elements.

Visual art in Bogor is different from the performing art scene as it has little to no connection to the Sunda or Pajajaran Kingdom, but rather it is developed during the colonial and post-colonial period, with the art of paintings brought over to then Buitenzorg by the Europeans and become common practice with artists in Bogor. Then there is Batik Bogor that was brought over from Sundanese from other cities during the periods, before being repopularized in the relatively recent 2006.

Landscape Painting in Bogor

Along with the European developing cities and industries in West Java, they bring along their art of paintings as their leisure activity. The landscape scene of Bogor at that time inspired many painters to come and document it for various purposes. One of the painters that came to Bogor was Antoine Payen, also known as AAJ Payen, a Belgian painter that would later be known as the mentor of Raden Saleh.

AAJ Payen was commissioned by Dutch King William I to document the flora for Lands Plantentuin as well as the scenery of East Indies, one of which is exhibited in Rijksmuseum in Amsterdam until today. During his stay in Buitenzorg, he met young Raden Saleh, who he took as his apprentice for 10 years while painting the landscape of Buitenzorg and the surrounding places



Figure 6:
Een markttafereel in een bergachtig landschap nabij Buitenzorg by AAJ Payen (year unknown) documents the human activity with the background of nature
Source: Indonesian Visual Art Archive

Development of painting in Bogor continued well after the Independence, with various painting studios and street artists being prominent and a familia scene in Bogor. One of the artists that has been well known in the international scene is R Yan Mulyana, also known as Adum. R Yan Mulyana's artworks depict the natural scenes and human interest, although his works are often combined with folklores.

Figure 7: R Yan Mulyono with painting in an exhibition at Lippo Plaza Keben Raya
Source: Tribunnews



Cultural Development in Bogor

As one of the satellite cities that provide housing for the Jakarta Metropolitan area, Bogor is populated mostly by young adults and teenagers that plays an important role in the development of culture in the city. The young people are often from a community within which they share their interest in a particular form of culture and develop it. Exploring around the city, we might find gathering, collaboration, and exhibition of such communities in public area such as parks, cafes, and malls

One example of such a community is Batu Tulis Bogor. Formed in late 2014, the community is focused on the development and teaching of calligraphy and hand lettering through workshops and exhibitions in order to keep the culture of calligraphy alive, and give the people means to express and empower themselves, with members of the community further develop their interest into something that can be enjoyed by the mass public such as fonts, illustration, websites, and other relevant medias.

With the example of Batu Tulis Bogor and other communities that are interested with arts and culture in Bogor (graffiti, doodles, photography, and other form of arts), we can see that the young people in Bogor interested in the development of popular culture in Bogor and combining it with the traditional form of culture. Such development is important for the city, as it helps define the identity of the city to the international scale, and brings benefits for the people by opening opportunities to grow.



Figure 8: Batu Tulis Bogor sharing the art of calligraphy and handlettering through workshops and exhibitions
Source: Instagram (@batutulisbogor)

Bogor as a Creative City

Although it is not as well-known as other cities such as Bandung and Bali, the creative industry in Bogor is developing at an accelerated rate. At the start of 2019, there are 200 creative businesses operating in the city, ranging from culinary, fashion, design, music, and other creative sectors. With the increasing understanding of on-line social media and marketplace platforms, these businesses are able to promote their products to other cities such as Jakarta, Bali, and Palembang, business owners also start to sell their products internationally -although in small scale- using on-line platforms such as Etsy.

Bima Arya, the mayor of Bogor, expressed in his response speech during a creative economy convention that such potential is an asset to the city, and cooperation between the businesses and the city administration is important in order to build the economy through their programs such as Bogor Motekar Program that had been started since 2018, building cooperation between the administration and the local creative industries, and promoting them through national and international events.

Figure 9: Bima Arya promoting local batik
Source: Tribunnews Bogor





Figure 10: Bogor Sketchers community limiting the scale of the exhibition due to lack of dedicated exhibition space
Source: Instagram (@bogorsketchers)

Lack of Cultural Facilities

Although the rising potential of creative industry and cultural developments, the city still does not have a dedicated space to accommodate the interests. Various art communities are needing the space to exhibit their artworks, and resorting in making use of cafes, parks, and malls as a venue for small-scale exhibitions. Existing facilities to accommodate the people are becoming more inefficient throughout the time, for example the development of Taman Corat Coret in order to accommodate the graffiti and mural communities that have been stagnated due to mismanagement and start to become a redundant space.

An effort to accommodate the cultural development had been initiated in the early 2019, and projected to be finished in the late 2020. However, this effort is hindered during the pandemic, in order to control the spreading of COVID-19 virus

A new development for a cultural center is crucial for the city, as culture development requires a space where people could interact and share their ideas. The new cultural center needs to be accommodating for the functions, accessible for the community, and flexible to be able to adapt to various situations.

Landmarks of Bogor

Understanding the landmarks in the city is important in understanding the identity of the city itself, as Bogor is one of the newly developed cities during the colonial time instead of being constantly inhabited before the Dutch developed it. Many of the landmarks in the city are heritage buildings from colonial times, or a symbol from Sundanese culture that inhabit the area as it is being developed.

Istana Bogor

Located at the center of the city, the palace is one of the first buildings to be built in the city; its early stage of development as the residence of Regent of Buitenzorg. The building since then has become an icon of the city, still being used to this day for governmental function and being open to the public once every year at the time of the city's jubilee.



Figure 11: *Het paleis van de gouverneur- generaal in Buitenzorg* (1882-1889) documents Istana Bogor at the time of colonial period
Source: Collectie Stichting Nationaal Museum van Wereldculturen

Stasiun Bogor

Built by the *Staatspoorweg* (state railway) in 1872, Stasiun Bogor is an important building that connects the city to other places until this day. The original intention of the station is to connect between Buitenzorg and Batavia in order to transport agricultural products to the harbor. The building is styled with Dutch Indies style, with high ceiling and white plastered walls.



Figure 12: *Het perron van station Buitenzorg* (1904) shows the situation of the station at 1904.
Source: Collectie Tropenmuseum



Figure 13: Tugu Kujang shortly after it is built.
Source: Sejarah Bogor

Tugu Kujang

Probably the most famous landmark of the city, Tugu Kujang was built in 1982 as the city's landmark in place of *Witte Paal* that was demolished in 1958. The monument depicts Kujang, a farming tool that was prominent in the time of Sunda Kingdom that was used as a weapon during the colonial era. The monument acts as a welcoming sight for visitors, as it is located at the opposite side of Kebun Raya Bogor from Istana Bogor, and the first thing the people see when they enter the city.

Jalan Merdeka and Bioskop Presiden

Named after the son of the Independence Hero Kapten Muslihat, Jalan Merdeka is one of the most important areas in Bogor. The area is a busy commercial area with various banks, local businesses, and trade centers such as Pusat Grosir Bogor located in the area, and supported by its proximity to Pasar Anyar and Stasiun Bogor.

One of the spots that were famous for recreation spot is Presiden Theater, or as it is known by the people, Bioskop Presiden. The theater is well known back in the colonial era when it was still named Maxim Theater for screening local and foreign films such as those that originated from Hollywood and Bollywood. The theater is famous when President Soekarno used the site for his oration, being a prominent movie theater in Bogor, and even used to screen G30SPKI propaganda regularly. Unfortunately, with movie theater chains such as 21 become more prominent in the 90s and the monopolizing of the imported films being held by those movie chains, Bioskop Presiden cannot keep the business running and close down in the late 90s. The building of Bioskop Presiden is since abandoned and generates several problems such as squatters in the area.



Figure 14: Existing condition of Jalan Merdeka
Source: Tribunnews Bogor

Bioskop Presiden as a Place of Cultural Significance

Although it tends to be overlooked, the Bioskop Presiden played a significant role in introducing and developing contemporary art and culture in Indonesia, especially Bogor. The film theater can be estimated to be built in the early 20th century under the Dutch East Indies government, by a film theater company Maxim.

During the colonial years, Bioskop Presiden, or as it was known back then as Maxim Theater / *Bioscoop Maxim*, was the place that screens various imported movies that started to be a novelty at the time, with various domestic film production company also screened their documentaries at the same theater, although it is noted that the popularity of said films was not able to compete with foreign film production. The production of fictional films in an effort to compete with foreign films started in 1926 with *Loetoeng Kasaroeng*, a fiction film based on Sundanese folktale produced by Java Film. The film was directed by L. Heuvel-dorp and partly funded by Wiranatakusumah V, the regent of Bandung, in order to promote Sundanese culture. Although the reception of the film was noted in various national publications to be poorly received, the film triggered the production of domestic films with stories that revolved around folklore, romance, and drama that define the Indonesian movie genres in the modern era.

The current name of Bioskop Presiden was officiated in the 1980s when the building was reopened by an Indian Sikh entrepreneur. During that time, the theater screened mainly popular Indian, Malayan, and domestic films and frequented by members of local music orchestras to memorize the popular songs to be replayed in events. Aside from the fictional movies, the theater also screened historical documentaries such as Usmar

Ismail's "Darah dan Doa" and the well-known G30SPKI propaganda film that was screened annually before the theater's bankruptcy in the late 1990s.

Films in the history of Indonesia before and after Independence are an important form of media along with radio broadcast and printed media, as local folklore such as Sundanese are mostly passed down as oral tradition and rarely written. In the colonial era, films were used as a way for the people to document those folklores to be shown to the people and adapted into other forms of art such as theater plays and music. With Indonesian film experiencing a renaissance in current times, we should regard past independent movie theaters as a place of cultural importance, inspiring filmmakers and storytellers to bring the story of Indonesia to the international scene.



Figure 15: Maxim Theater in colonial era
Source: Indonesian Cinematheque

Timeline

**Early 20th
Century**



The theater was built as Maxim Theater, screening imported films as well as domestic documentaries

1926

First screening of domestic fictional film, *Loetoeng Kasaroeng* by Java Film. The theater was used for private screening for the regent as well as public screening. This film triggers a wave to local production of fictional films.

1940s

Native Indonesian directors start to become common in the film industry.

1950



After independence, the theater was screening national independence documentaries, such as the iconic Usmar Ismail's *Darah dan Doa*. The theater also used by Soekarno for his speech.

1980s



Reopening of the theater by an Indian Sikh entrepreneur, rebranding the name as Presiden Theater. The original building was covered by extensions, leaving only the roof to be visible.

Late 1990s



Presiden Theater was closed due to monopoly of film by bigger movie theater chains. The building was kept, but became abandoned.

Problem & Issue

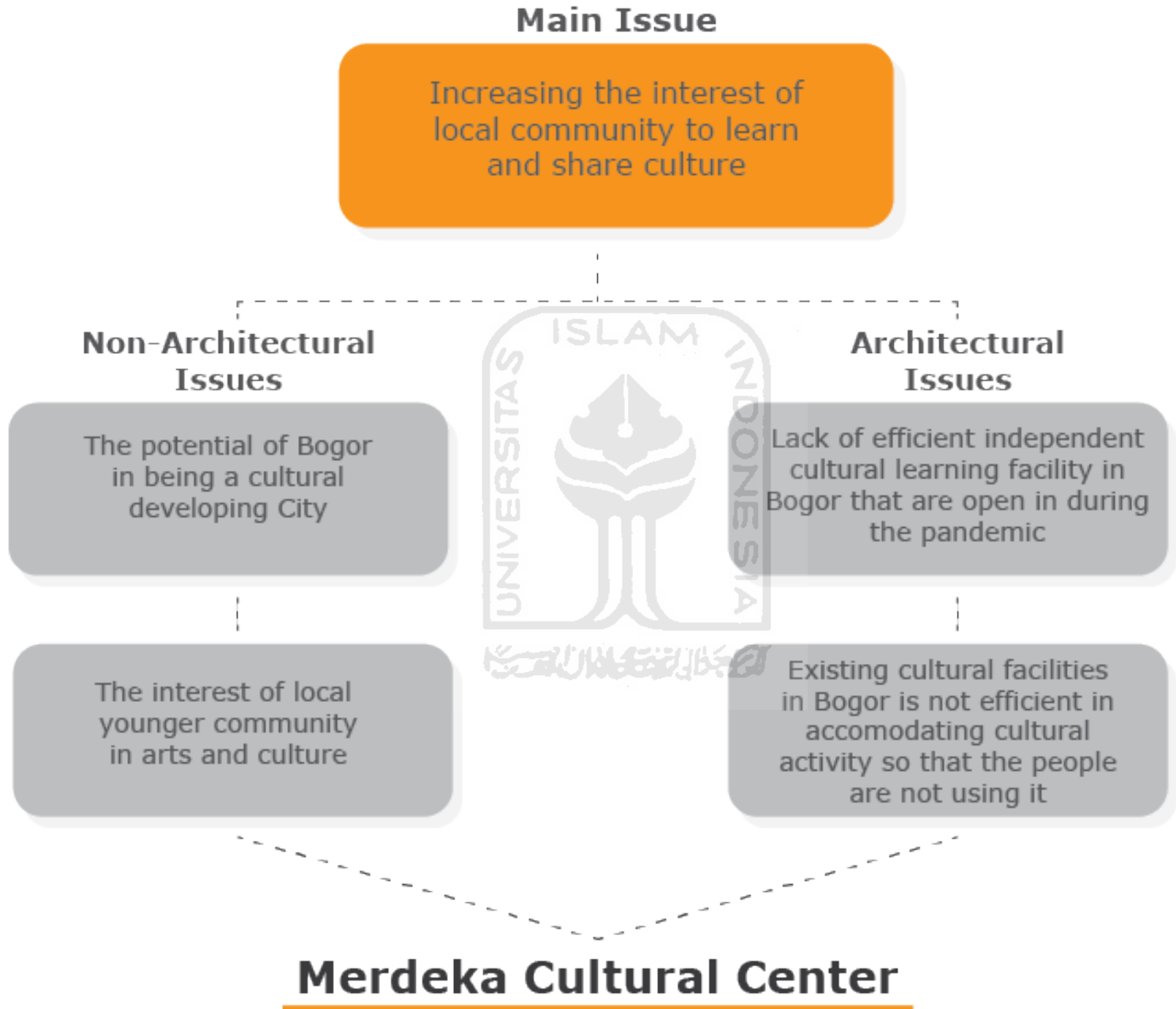


Figure 16: Architectural and non-architectural issues in the problem formulation

Problem Statement



How to design a cultural center that is able to accommodate cultural development in Bogor by using open building approach?

Specific Problems

- How to program spaces in cultural center to decrease the risk of virus contagion for the users.
- How to choose facilities and materials to achieve airborne virus resilience.
- How to design form and envelope of the cultural center to comply with airborne virus resilience principle using open building approach while still providing the lighting and thermal requirements of the cultural hub
- How to apply airborne virus resilient architecture principles into the activities, buildings, and landscapes using open build approach.

Scope of Problems

This building is designed to solve the problem from architectural standpoint by addressing the adaptability of the space programming

Aims

The design is aimed to accommodate the development of culture of young communities in the area regardless of the situation.

Objectives

- To design Cultural Center that is able to raise people's interest to engage with culture while still give the people sense of safety and health in most situations by applying Virus Resilient principles
- To apply Open Building Approach in order to develop a sustainable building by ensuring that the building can adapt and change to keep up with future technology, social climate, and urban development within the building's lifetime.

Design Method

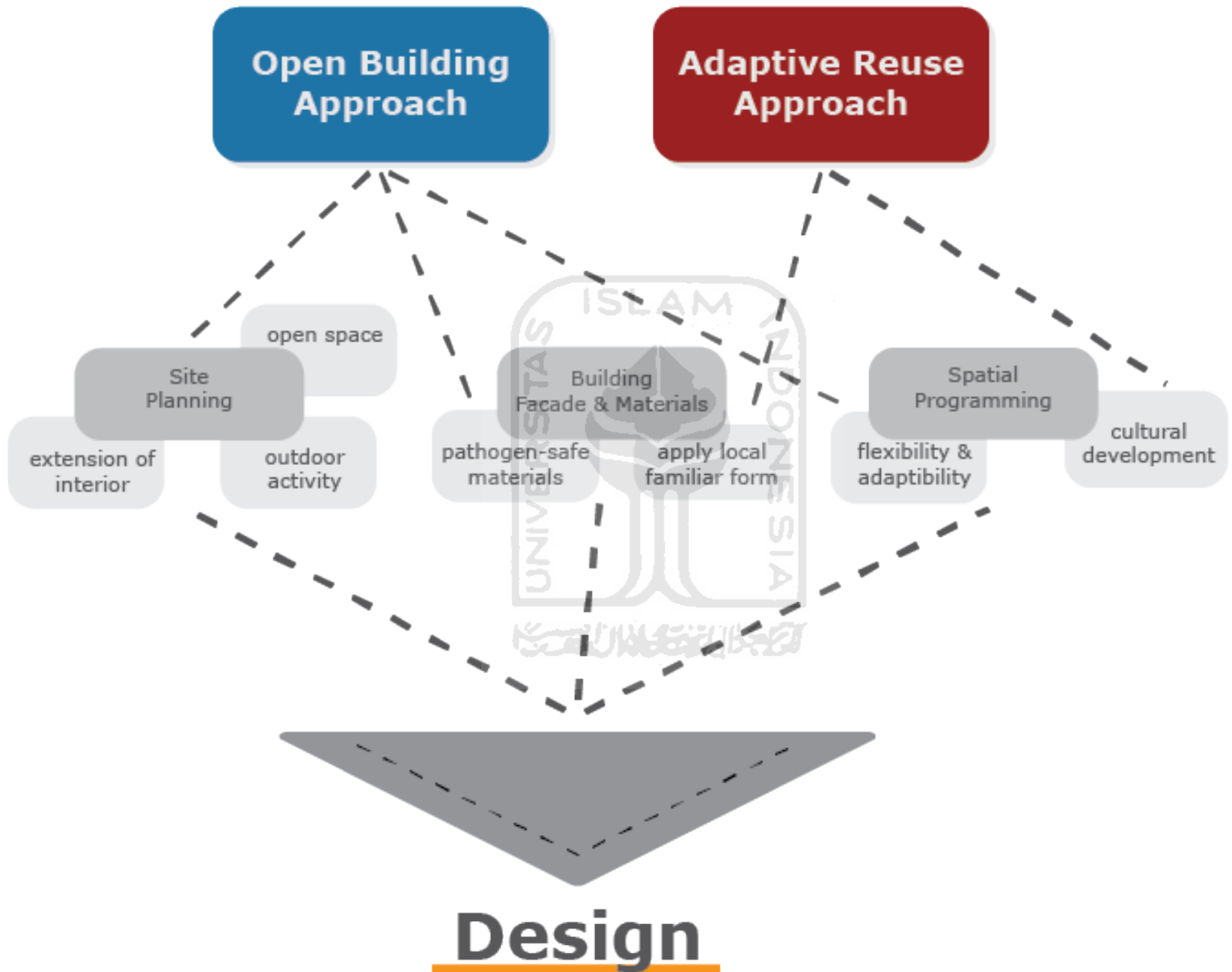


Figure 17: Method Diagram

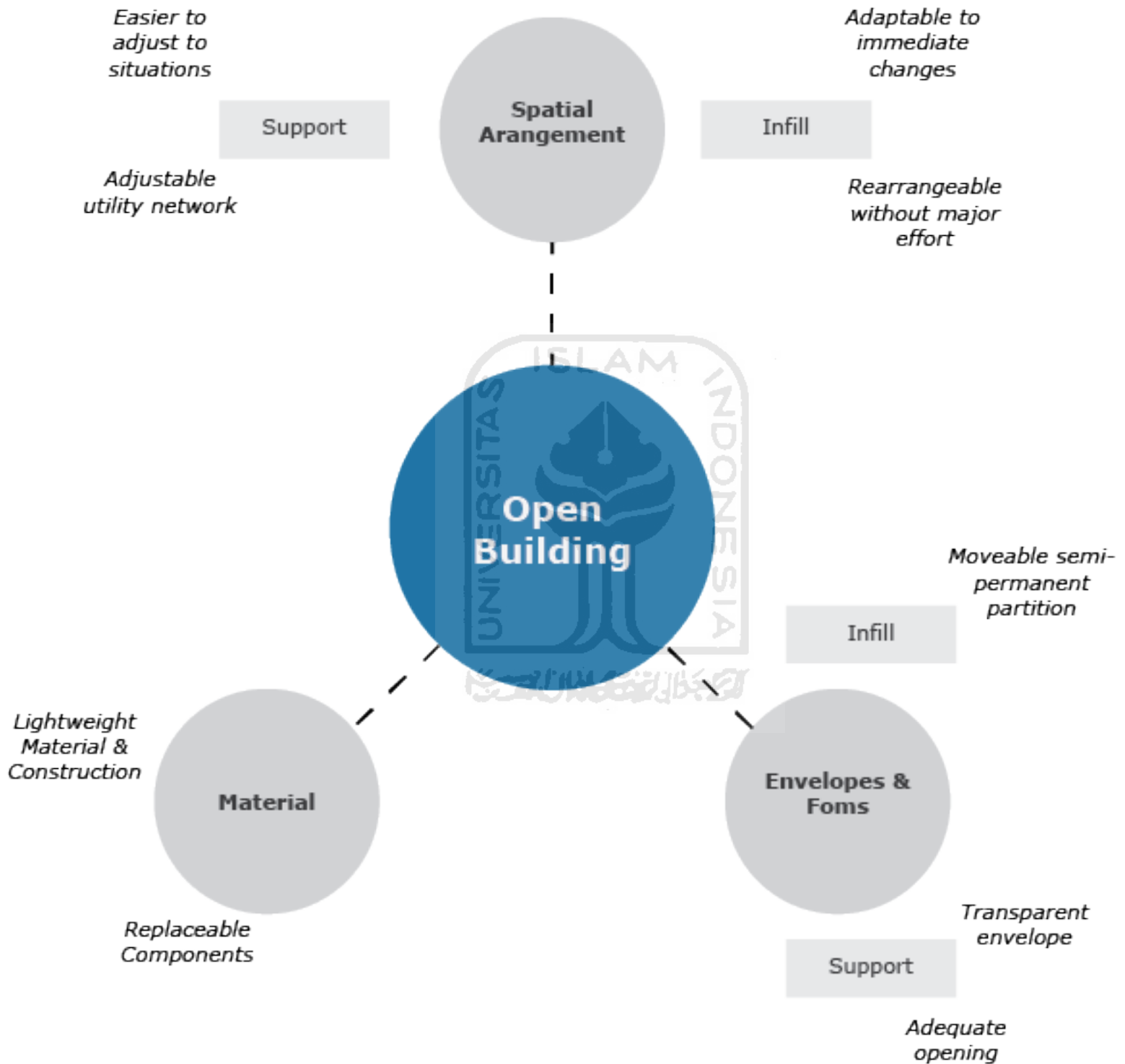


Figure 18: Adaptation of Open Building to solve the problems

Originality & Novelty

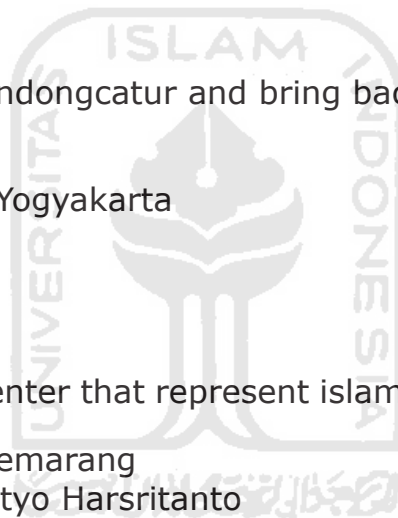
Title : Design of Magelang Arts & Cultural Center
Writer : Astrid Dea Octavanya
University : Universitas Islam Indonesia
Typology : Cultural Center
Approach : Critical Regionalism
Problem : How to design a cultural center that is able to accommodate local art and culture with "Culture vs Nature" Critical Regionalism Approach

Title : re-Vitalization Condongcatur Common Market
Writer : Ridho Pawenang
University : Universitas Islam Indonesia
Typology : Market
Approach : Open Building
Problem : How to revitalise Pasar Condongcatur and bring back its existence with using Open Building (OB)

Title : Islamic Cultural Center in Yogyakarta
Writer : Sinta Ambarukmi
University : Universitas Diponegoro
Typology : Cultural Center
Approach : Critical Regionalism
Problem : How to design a cultural center that represent islamic value with Critical Regionalism

Title : Japan Cultural Center in Semarang
Writer : Bangun Indrakusumo Radityo Harsritanto
University : Universitas Diponegoro
Typology : Cultural Center
Approach : Neo Vernacular
Problem : How to design a cultural center that represent Japanese culture with neo vernacular approach

Title : Textile and Garment Production Center Design in Tulungagung Regency with Open Building Approach
Writer : Anovi'aturrosydhah
University : Universitas Islam Negeri Maulana Malik Ibrahim Malang
Typology : Production Center / Public Factory
Approach : Open Building
Problem : How to design a textile and garment production center that can accommodate the people's need for apparel production, while using open building approach



2 Design Studies



Site Context Studies

Current Condition

In the current day the building itself is still owned by the original owner, an Indian entrepreneur known by the name Mr Ram, and maintained by Mr Wawan that has been the warden of the building since 2012. Interview with the building's warden revealed that the owner had to plan to sell to redevelop the building into another function in the future, leaving the building open for future development.

Figure 19: The parking space at the front of the building is used for the public



According to an article by Tribun (2017), the city government expressed an interest to obtain the building and use it for a use that will benefit the city. However, the government faces a difficulty in the budget to buy the building. The city government representative said that it is hoped that the condition of the building is maintained according to PERWAKO No 69 Tahun 2019, explaining that significant buildings with the age being more than 50 years have to be maintained and bring a beneficial use for the people. The building fall into a loophole because of the renovation in the 1980, however, the building will obtain its historical building status in a few more years.

Figure 20: The current use of the building is not good as the potential



After the closure of the building in the late 1990s, Bioskop President fell into disuse. After more than 20 years of abandonment, parts of the building started to fall apart. Most noticeably, the front zincalume facade started to rust and rot, with the facade slowly deforming. However, deformities are more serious at the side of the building where it is less noticeable.

Figure 21: Deformities at the side of the building where the zincalume start to fall apart





The original building's exterior can be seen from the front facade. However, due to disrepair the gable roof-wall at the back of the building is already deformed and falls apart.

Figure 22: Gable roof-wall at the back of the building is missing the top part of the building due to disrepair

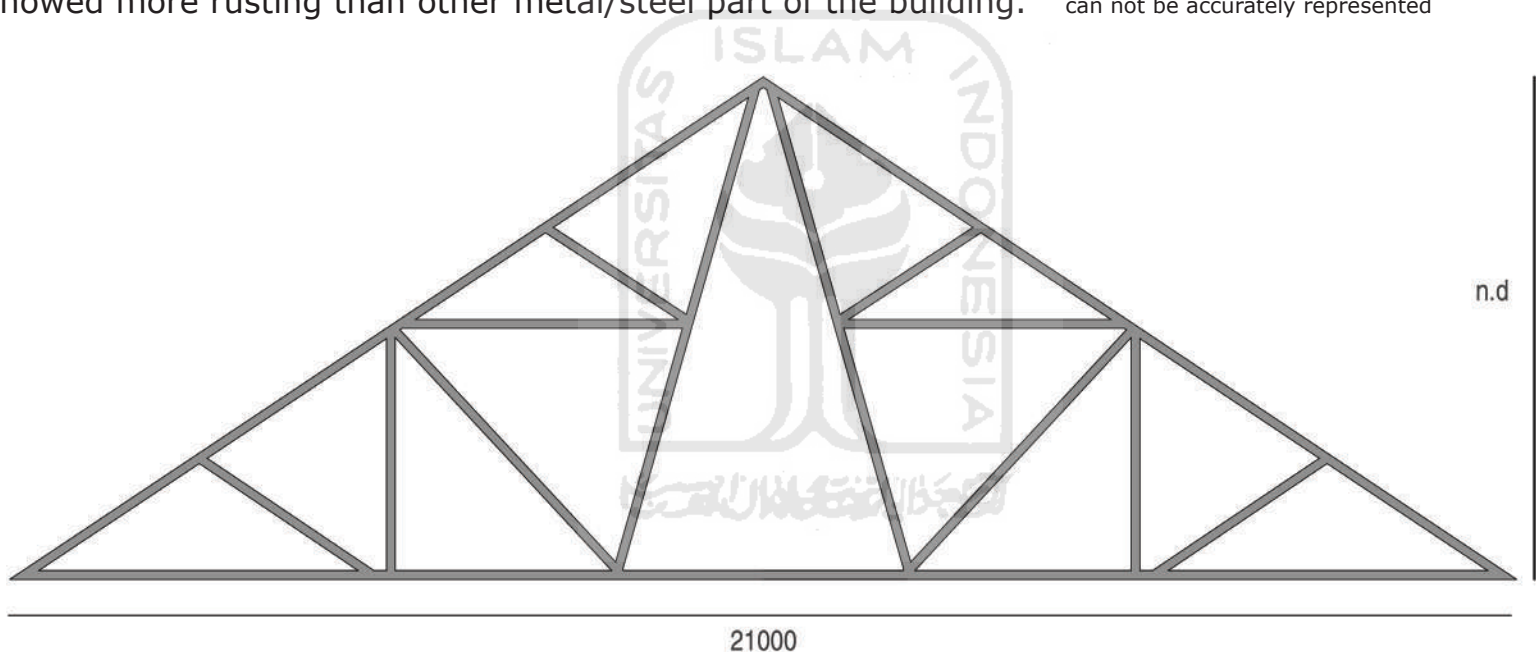


The interior of the building itself is still mostly intact, with paint being peeled off the wall and wild moss growing at the wall due to long abandonment. While the original furniture of the building had been removed along with the projection room, the building itself is used as a storage place for the community, with various furnitures and other things such as becak being stored here. The building is locked away during the day and night to keep squatters to sleep in the building, only opened during the morning when there are activities at the parking lot of the building. The interior shows changes made after the renovation in the 1980s, namely the closure of doors at the side of the building.

Figure 23: Sketches of the interior of the building disregarding the clutter of goods and furniture stored within it, shows that most of the bricks are being exposed, and the metal of the roof frames are heavily rusted

The roof and the roof-frame of the building are still standing, although it is noted that some parts of the roof fell apart, and the roof frame has been experiencing intense rusting due to the disrepair. It can be observed that the roof is not the original roof built with the Maxim Theater, the material used is zincalume, the same material that used for the facade of the building as Bioskop Presiden, on the other hand, the roof-frame is questionable since it is in line with the industrial style of building at the time of Maxim Theater, and it showed more rusting than other metal/steel part of the building.

Figure 24: Schematic drawing of the building's roof frame. The drawing only shows the pattern as the dimensions can not be accurately represented





Despite the condition of the building, it still has a significant role for the community around it. Aside from being used as storage space, the parking lot of the building is used as an informal market for vegetables fresh from the farmers at the outskirts of the city. The informal market is open from early at 5 AM until 9 AM, where the stalls are being torn down and the garbage is cleaned.

Figure 25: Informal market being cleaned after 9 AM

Building Plan

Through site survey and Google maps to obtain measurements of the building, a rough plan of the building is generated to analyse the interior space of the building. It is noted that photographs of the interior itself is forbidden by the warden of the building.

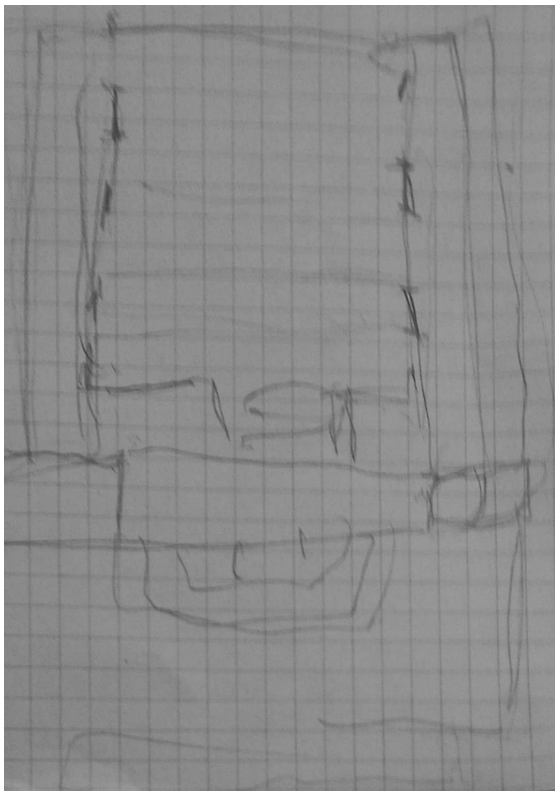


Figure 26: Rough sketch produced during the survey

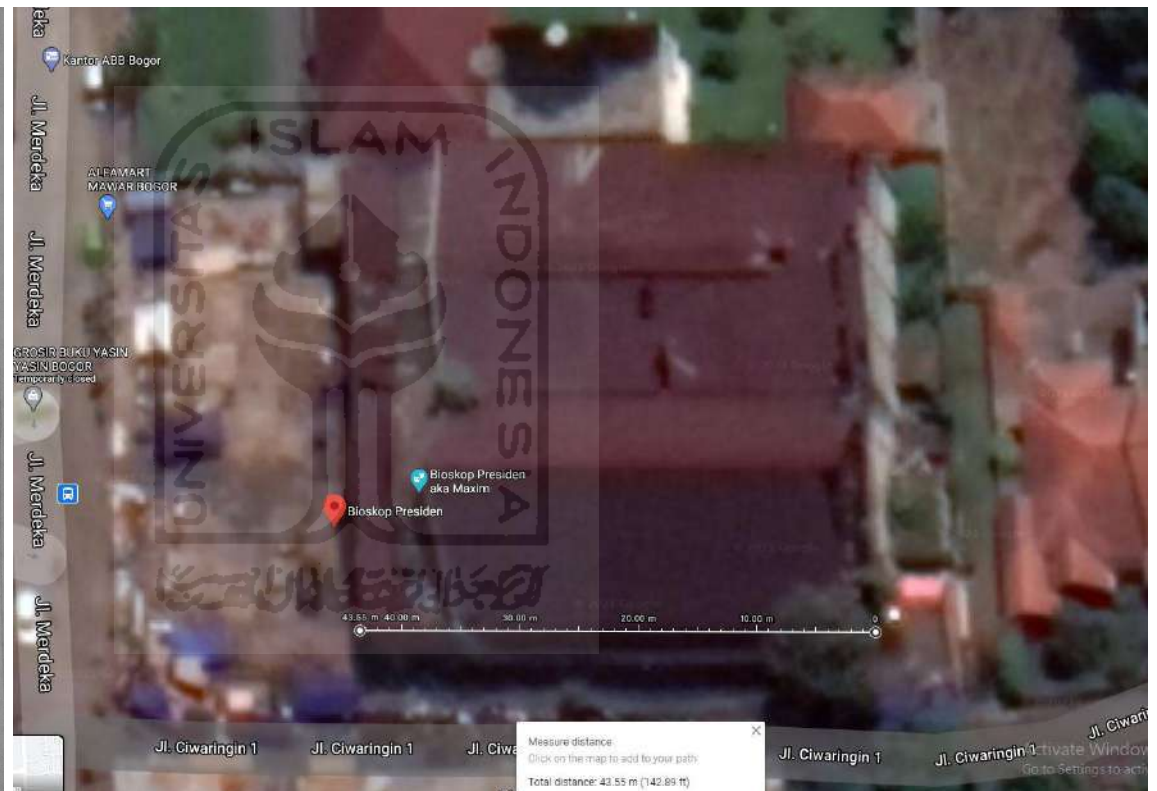
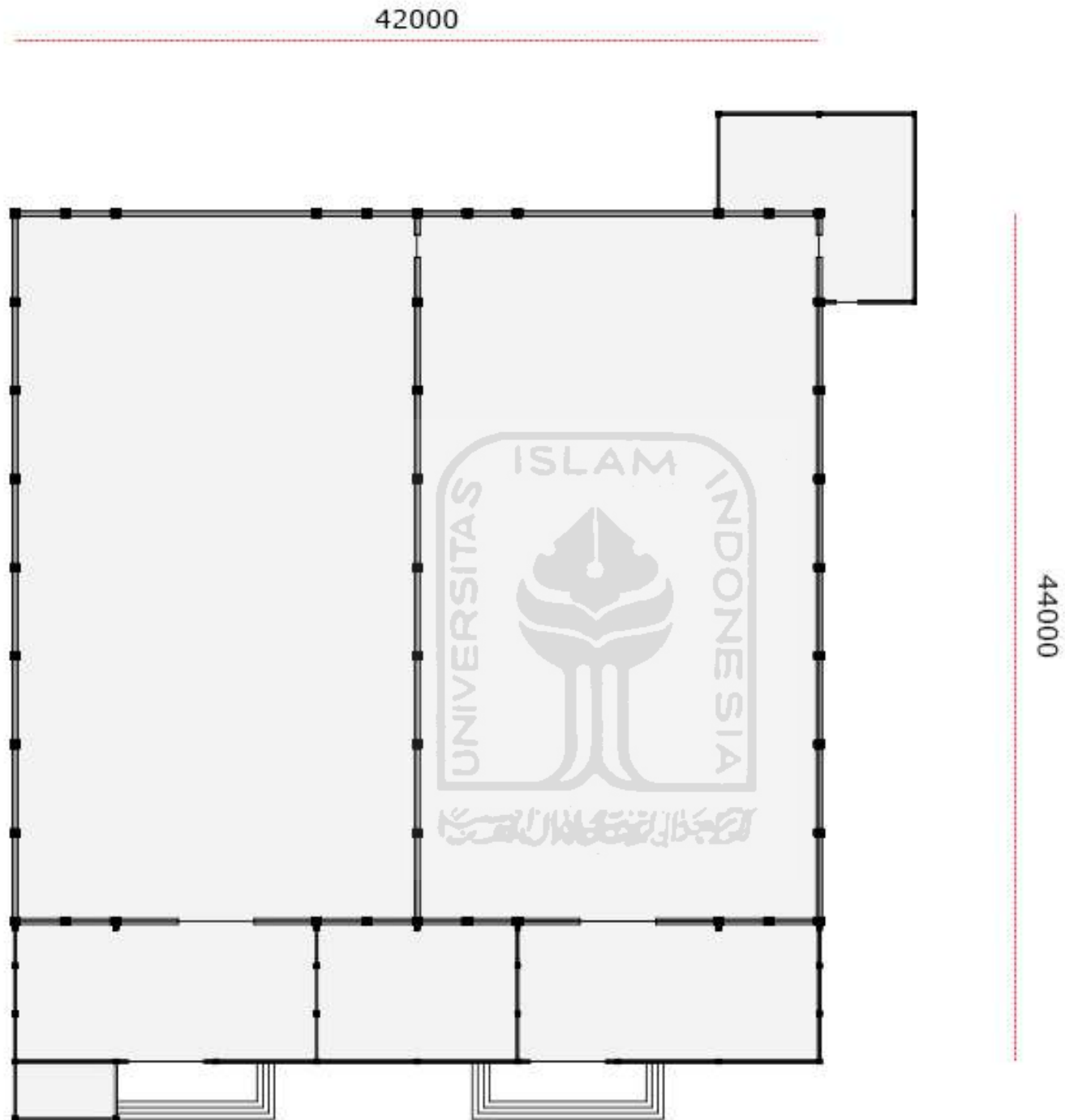


Figure 27: Measurements of the building taken from Google Maps
Source: Google. accessed in 21st March 2021



The interior space of the building is separated into 2 main spaces, with the original building used for theater, and the extension is used for billiard hall. Entrance hall before the main spaces is connected to the ticketing office.

Figure 28: Schematic plan of the existing building

Building Elevation



Figure 29: Schematic elevations of the existing building

Building Section

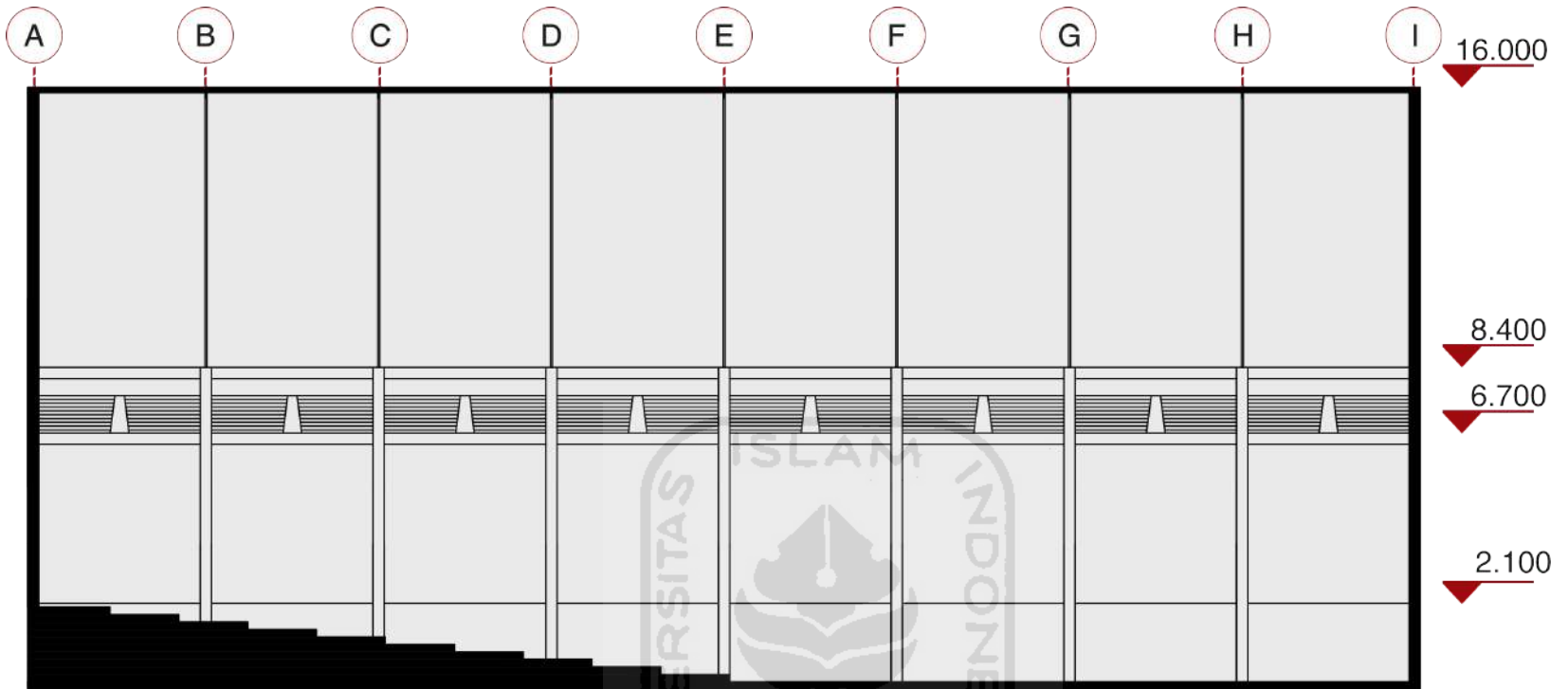
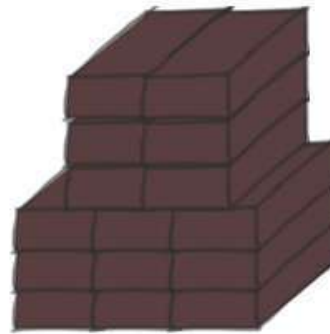
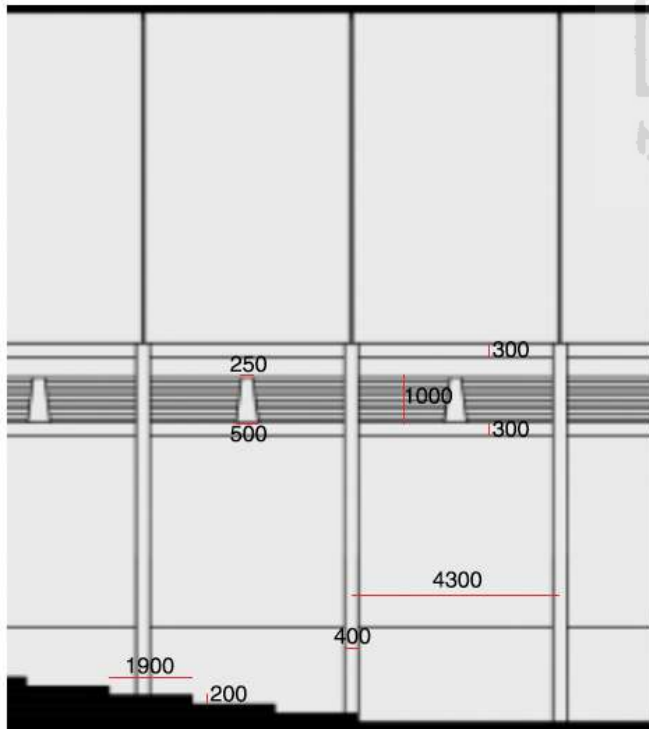


Figure 30: Section of the building showing the incline used for seatings

Figure 31: Detailed section showing the measurements of elements within the interior as well as the brick layering of the wall

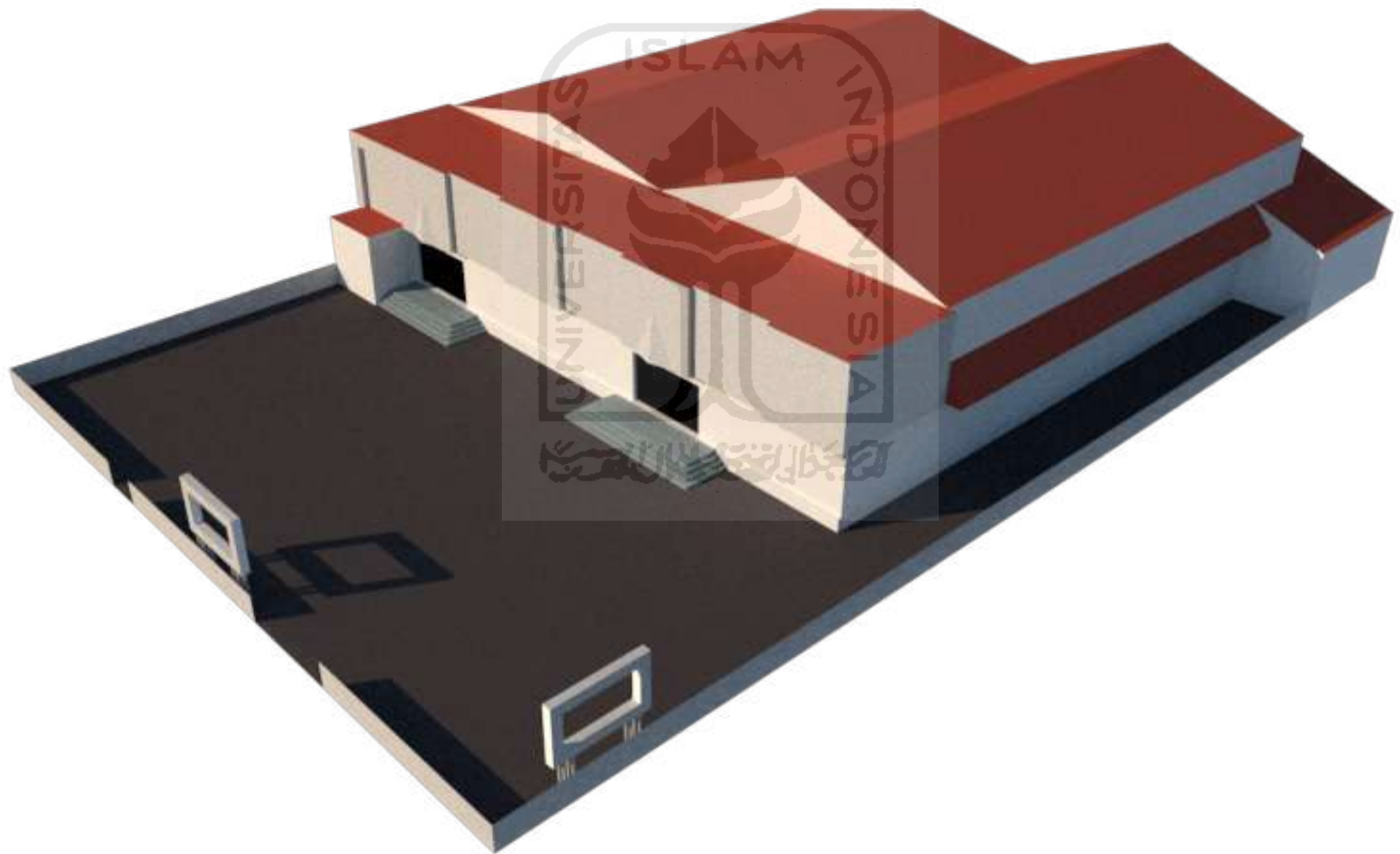


The wall of the building is consisted of 3 layer of bricks at the bottom, and two layer of bricks at the top, as with the trend of Dutch colonial buildings at the time, using shear walls as the walls of the buildings.

Site Plan

Within the site, the building has 21 x 44 m parking area that is used for informal market in the modern day. It can be noted that the billboards that used to show the movie posters are still standing although it is falling to disrepair.

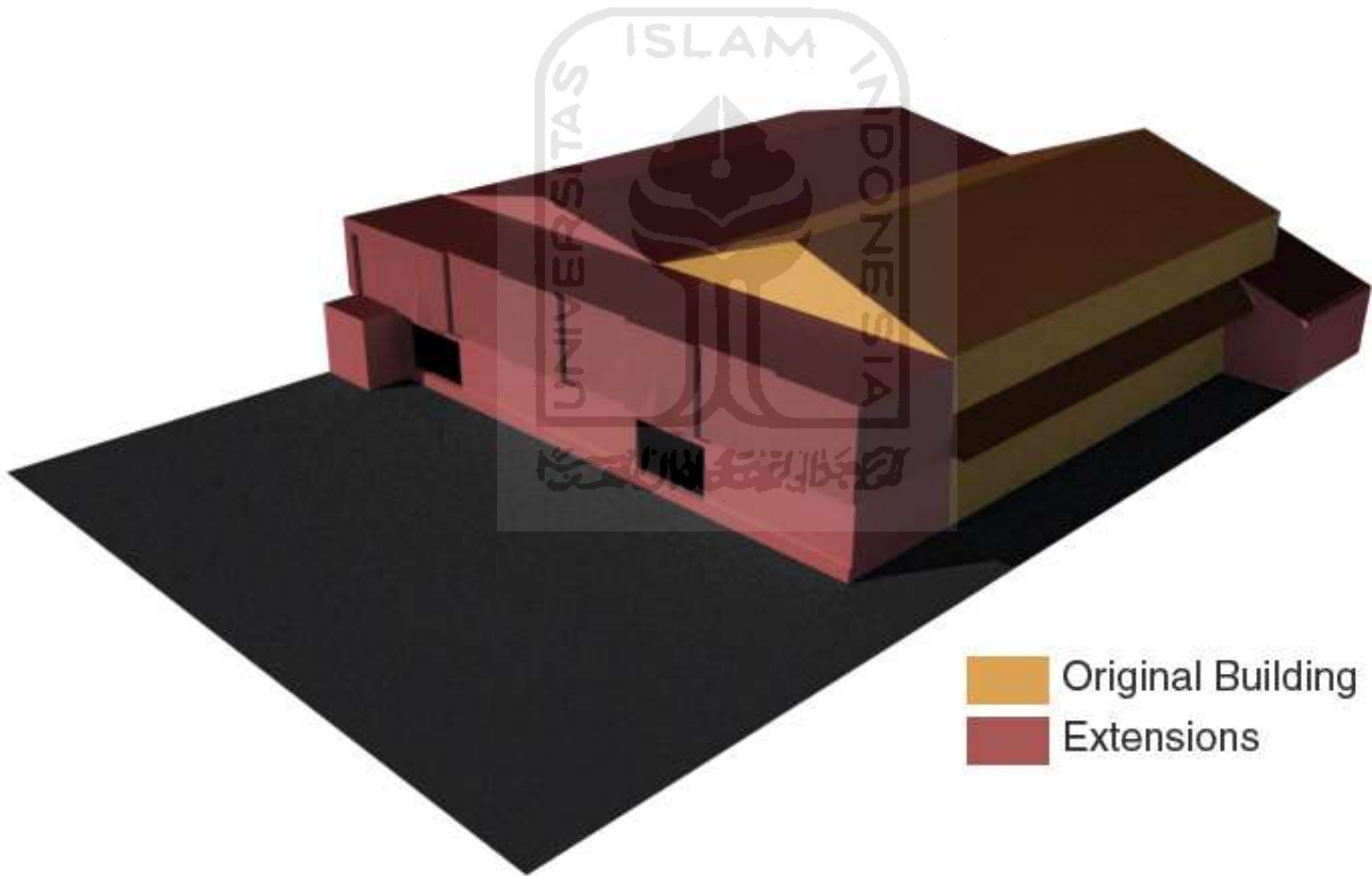
Figure 32: Axonometry site plan of Bioskop Presiden.



Building Mass

The current building is the result of renovation when the building was reopened in the 1980s. From the building mass we can see that there is a division between the original building and the extension added during the renovation. The original building is almost entirely covered with facade and lobby added in the renovation. A second building is built at the side of the original building to accommodate the function of billiard hall and second studio.

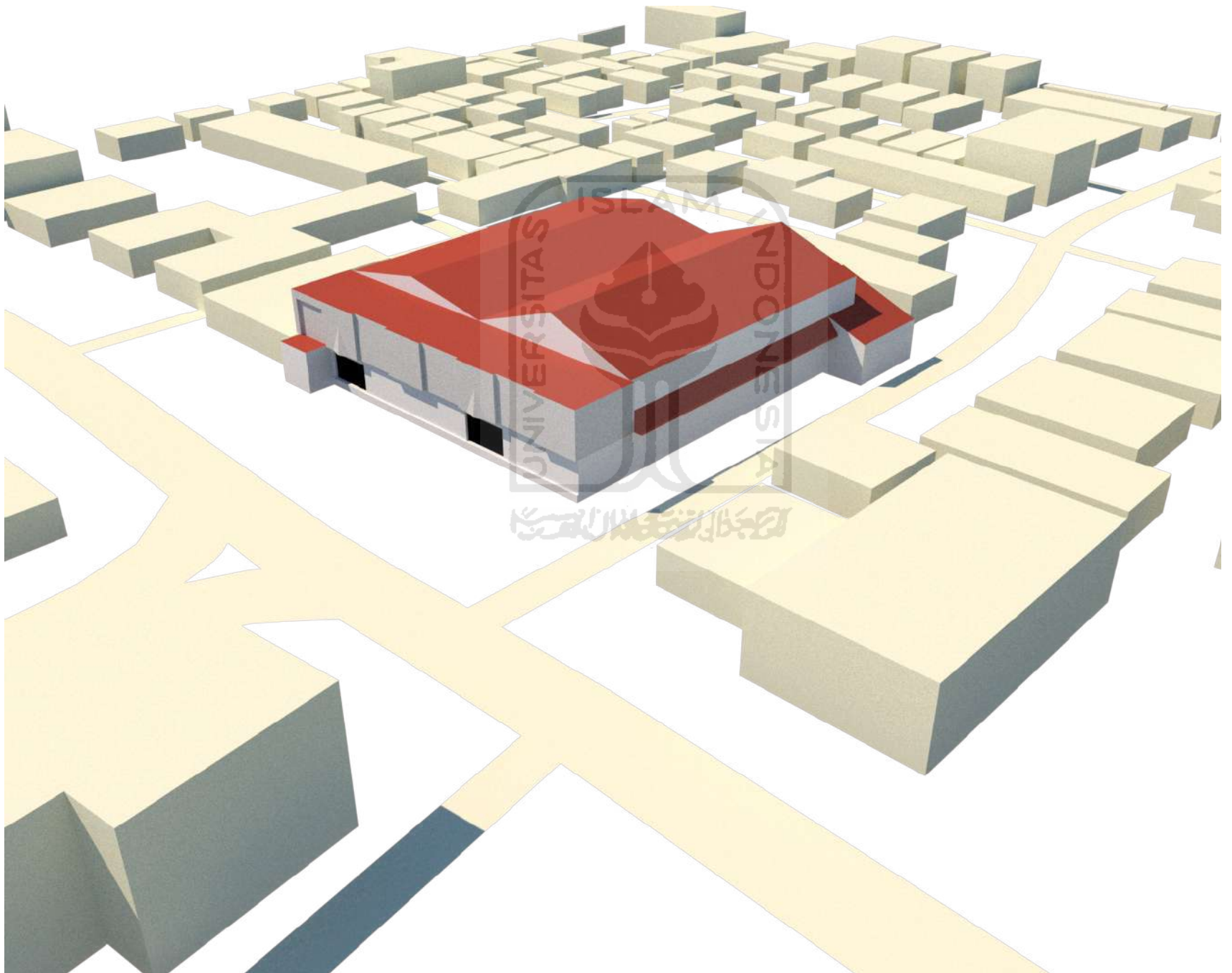
Figure 33: Diagram of the original building and extensions



Neighborhood Context

The building is surrounded by other low-rise residential and commercial building, making it noticeable in the neighborhood. It is located at a major junction for the area, as it connects with routes to other major residential areas.

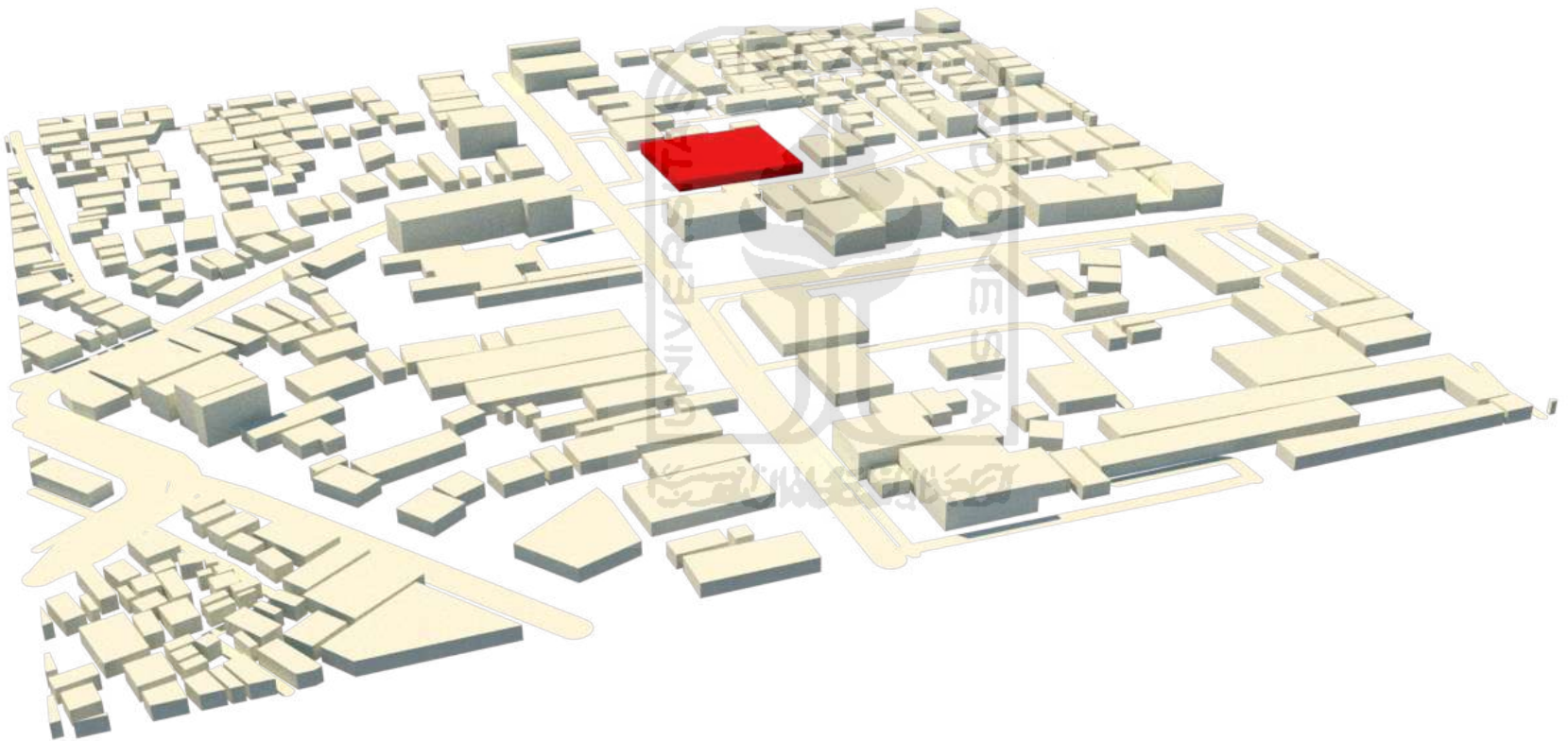
Figure 34: 3D model showing Bioskop President with the buildings around the neighborhood



Surrounding Contexts

The site is located in a low density area, with the height of the buildings not exceeding 5 storeys. The low skyline of the area allow the community to get a clear view to Mount Salak that is respected by the community.

Figure 35: 3D rendering of the surrounding block plan, showing the low density of the area
Source: cadmapper.



Surrounding Buildings of Notes



- 1** SMK YKTB 1
Kemenag Kota
Bogor Haji Alwi
- 2** Pasar Mawar

- 4** PGN Bogor
Puskesmas
Bogor
- 5** Puskesmas
Bogor

The site is surrounded by several important buildings in the immediate surrounding, ranging from educational, official office, prominent market, utility companies, and medical care along with other retails. These buildings are important assets to the community.

Figure 36: Map of buildings of note in the immediate surroundings
Source: Google Maps

Surrounding Land Use Map



Residential



Commercial



Proposed Site

The site is surrounded with residential area that developed from the colonial times when Bogor was expanding and become famous among immigrants. Aside from that, the site is located along major commercial area and markets.

Figure 37: Map of land use around the site
Source: Google Maps and Pemkot Bogor

Site Regulations

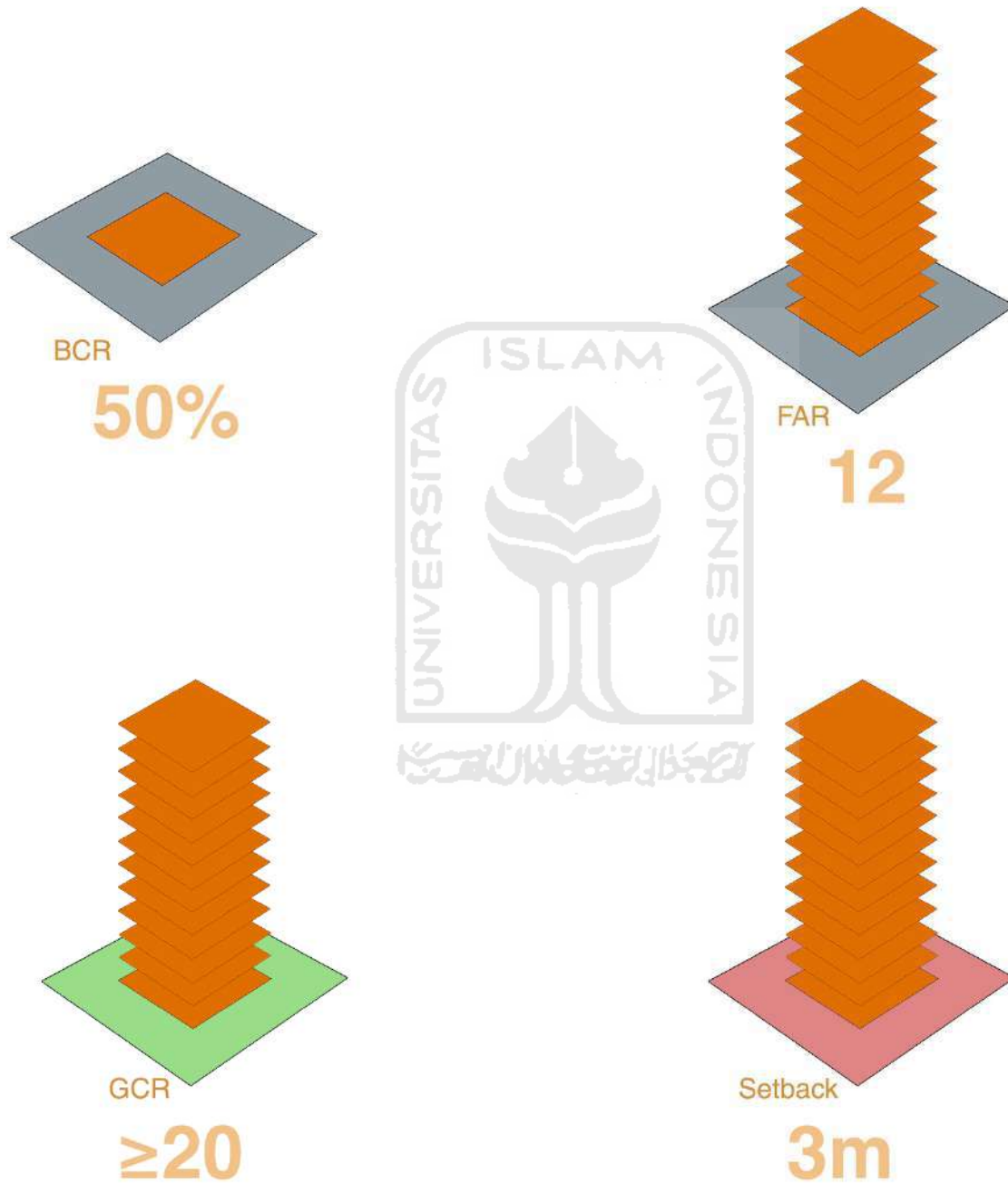


Figure 38: Site regulations regarding planning.
Source: Pemkot Bogor

Future Scenario

By learning about the history of the building's renovation and usage, as well as observing the current condition of the building itself, three scenarios can be projected to project the future of the building and its effect for the community.

Status Quo

The status quo scenario, the building stayed in the current condition where no changes and plans are applied to the building. According to the current condition, the function of the building itself will only bring benefit to the community in the immediate surrounding, with the building not functioning according to the potential to provide a means to improve for the people, the economy will be stagnated in the area. The identity of the building as a place of cultural significance will slowly fade as the building goes further into disrepair and ruin (Wawan, 2021), along with other historical buildings in the area that already had fallen into disuse.

Demolition

The demolition scenario predicts that the building will be demolished because of disuse and disrepair, stripping the community of their identity as one of the oldest communities in the city, builded during the colonial period when the city was first developed (based on map of Buitenzorg; Centrale Bibliotheek, 1867; and 1900). As the community loses their sense of identity as a community, the value of the area will be decreased significantly as the community will become less productive as it was before and hinders the development of the city (Rasyidi, 2017).

Reused

The scenario predicts the impact of the building if the building is being reused for another function. As the building is being restored and reused for another function, the identity of the surrounding community will be restored and reinforced, and as the community comes to appreciate the identity, they will feel the need to restore the other historical buildings around the area and maintain them. Reusing the building as a cultural center will provide the people with accessible public leisure and education facilities, meaning that the people will have an accessible means to improve themselves and bring the local economy along with the improvement. The function as a cultural center will not only be beneficial for the surrounding community, but also to the city itself, as it will be usable by various people in the city, and help improve the city's economy (Rasyidi, 2017).

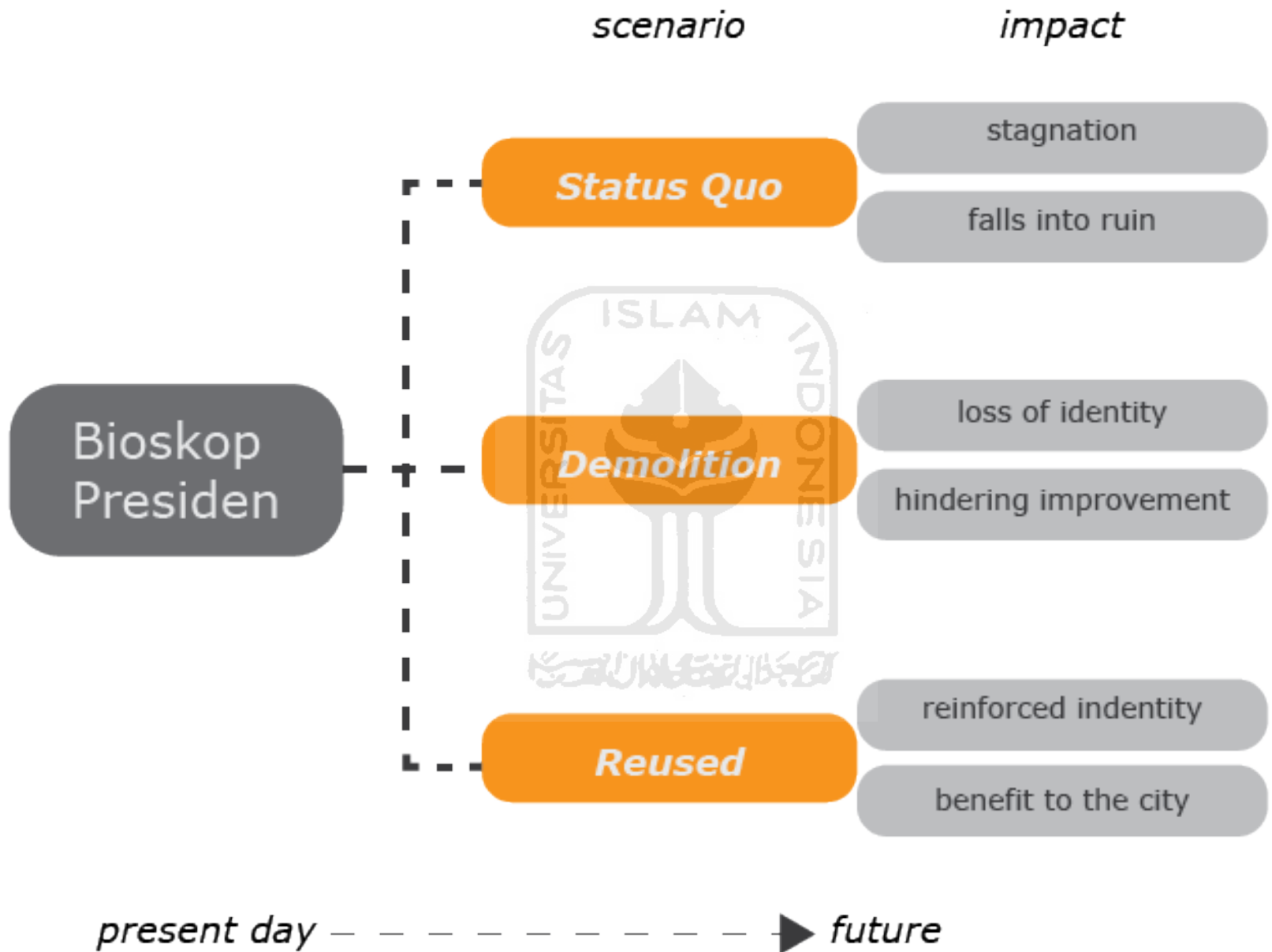


Figure 39: Projection of different scenarios based on the past and present conditions.

Literature Review

Adaptability in Architecture

In the time where sustainability is focused on the short-term reduction of carbon reduction, the understanding of the broader characteristic will establish the sustainability of spaces over the longevity of time. As the world progresses through technological innovations and economic prosperity, our understanding of time has become shorter with highly specialized buildings becoming more common and limiting the lifespan of the buildings despite the innovation of adaptable buildings also becoming more prominent.

Adaptability as a design characteristic involves strategies in the spatial, structural, and services design that will allow for levels of flexibility in the physical artifact, responding to changes in operational parameters that might occur over time. The understanding of the shifting strategies involves the perception of buildings not as a finished work separated from the technological development, but instead as imperfect objects which forms are in constant changes evolving to fit the technological, functional, and aesthetic metamorphoses in society, adapting the design decision to incorporate time in the developments (Schmidt III, Eguchi, Austin, & Gibb, 2010).

In making the decisions for adaptable buildings for sustainable development, the strategies that can be included in the design are:

- Adjustable, involving the possibility of changes in the task accommodated, with the scope includes the rearrangement of furniture within the space
- Versatile, involving the change in the space to accommodate a broader range of activities, the scope of the changes is broader than adjustable parameters and with a longer cycle by including the rearrangement of the furniture and space itself.
- Refitable, involving changes in the performance of the building, with the scope of the strategies includes the space, services, and the skin of the building, allowing the building to fit technological and aesthetic innovations that might happen in the time-range of 7 years.
- Convertible, involving changes in the function of the buildings. The scope of the changes involves broader rearrangement of the space, service, and skin necessary to fit a new function assigned to the building within 15 years time-range.
- Scalable, involving changes in the size of the building. The scope of the changes is interchangeable with convertible parameters, with the addition of the structure to be adjusted to adapt the building capacity over the 15 years range.
- Movable, involving the location changes to fit a better context and function. The scope of the changes includes changes in the structure and site to allow the buildings to apply other strategies in the new location.



Figure 40: Illustration on strategies involved in Building Adaptation Theory
 Source: Schmidt III, Eguchi, Austin, & Gibb (2010)

Open Building Approach

In architecture, open building is an approach that takes into consideration possible changes and adaptations during the building's lifetime in line with social, technological, or other relevant issues. In an interview for green-technology.org, Stephen Kendall (2017), Emeritus Professor of Architecture for Ball State University stated that the principles of open architecture are not something that is new, but it is forgotten in modern times. Built environments that have sustained themselves have always exhibited some kind of balance between changes and stability, between individuals and collective design decisions.

The term "open building" was coined by John Habraken, an educator for Technische Universiteit Delft in 1961. It is first used in Habraken's criticism of the mass housing situation at the time. His critic of the housing situation is that they are developed without clear and direct involvement of the inhabitants, thus creating rigid, uniform, and unsustainable housing development. The problem can be solved if the inhabitants have the ability to be involved and control their own "fit-out".

Just like other architectural approaches, the open building approach is not something that is founded or discovered, but rather it is adopted from the way vernacular buildings are built. The main incubator of the open building approach is the Netherlands and Japan. The open building predecessor can be found in Amsterdam, where buildings such as houses and warehouses along the canal have similar typology to them, yet each building is unique, with their own facade, windows, and plans that are fitted to the needs of each occupants. While in Japan their predecessor can be found in the way they built their traditional housing, and especially noticeable in their hous-

ing built after the World War 2, where the shape of building tend to be uniform in term of their form, yet the interior plan of the building can be easily interchangeable with the use of movable partition walls that can opens up the space into an open plan. This philosophy from the predecessor still can be found in the modern residential units throughout Japan (Kendall & Teicher, 2010).

The design philosophy of open building is to equate the level of individuals' control with environmental levels and use (Habraken, 1999). The theory estimates the amount of fine-grain changes that might occur during the buildings' lifespan, the estimations then used as the time factor in the design and separate the levels accordingly. These levels can be categorized as **urban**, **support**, and **infill**.

The urban level of open building concerns more on the wider public realms, such as urban pattern, street placement, parking, and utility network. This level tends to have less frequent major changes that might need significant refurbishments, however major changes might occur when a technological advancement might require the implementation of a new utility network, therefore these networks tend to be designed to adjust to such changes by utilizing easy to access networks.

Within the urban structure, independent changes and decisions might be made on the supports (base building), involving the parts of the building that are shared within the occupants of the buildings, such as load bearing structure, mechanical systems, and public area although it can be different according to the context.

Individual tenants have the liberty to make decisions on their own unit, or infill (fit-out) lev-

el. Changes in infill level can happen frequently within the building's life span, depending on various factors, such as the tenants' requirement change, technical upgrade, or simply change of tenants. Therefore the design of the infill level is able to be differentiated from the support level, as the changes done in infill level should leave the support level unaffected (Kendall & Teicher, 2010).

The different levels of decision making means that the rigidity of each level are designed accordingly and distinguishable from each other. These decisions are meant to make it easier for the architects who were involved in the changes are able to determine their parameter of changes according to the need. The supports tend to be

more permanent than the infill, and acts as the frame for the infill of the building. However this does not mean that the supports are not flexible to changes, as often the case are the situations calls for extensions, renovations, and modifications within 25 - 50 years time frame.

The ability to change and adapt is important in order to develop sustainable buildings that are able to last with only minimal alteration. Applying an open building approach can benefit developments in the long run, especially with the recent pandemic outbreak that reminded us that unpredictable issues can result in drastic measures for buildings to ensure the safety of the users and the effectiveness of the functions.

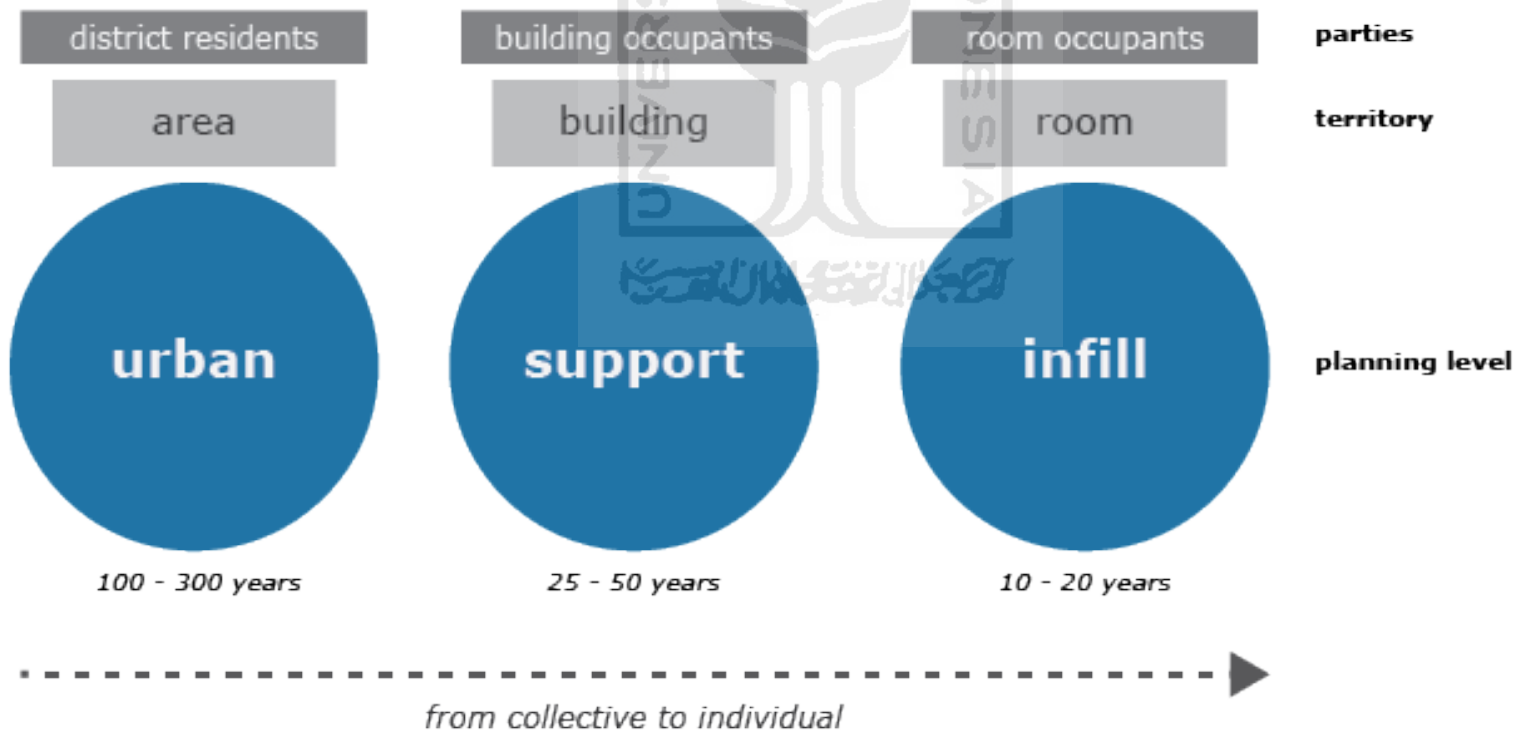


Figure 41: Adapted planning and decision making level in Open Building Theory
Source: Kendall (2010)

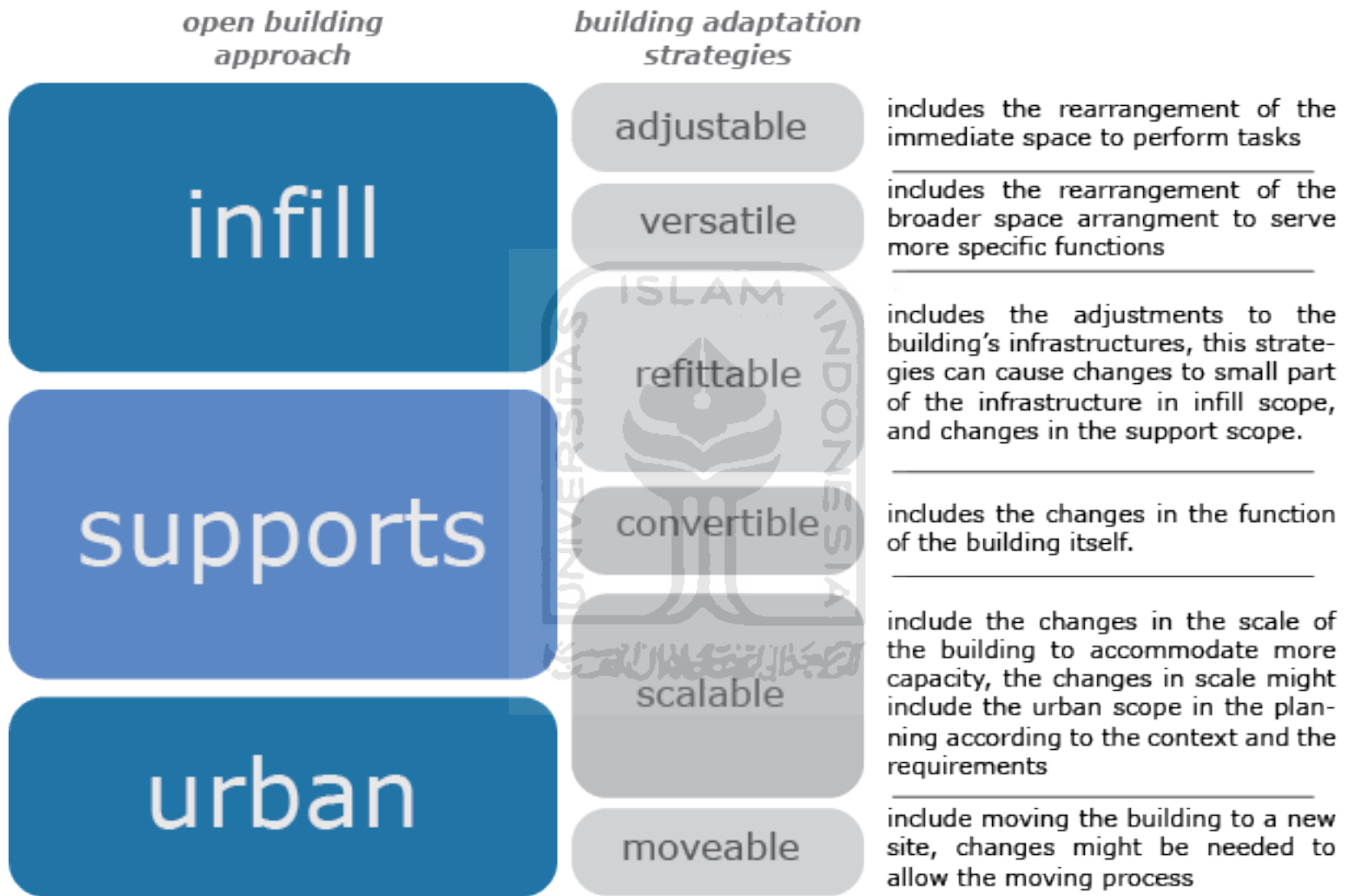


Figure 42: Strategies of adaptability in Building Adaptation Theory combined with Open Building's decision-making level
Source: Kendall (2010), Schmidt III, Eguchi, Austin, & Gibb (2010)

Adaptive Reuse Approach

The architecture scene throughout the world is changing with sustainability becoming a major concern in the built environment industry, as the industry is generating 40% of global emission and carbon footprint that is causing damage to the global climate, and generating proportional amounts of wastes. Climate change adaptation is about practically minimizing our impact on the environment as one of the efforts to respond to the changing climate (Burton, et al., 2005). A major contribution of the built environment is making effective use of the infrastructure that we already have.

Existing buildings that are obsolete or rapidly approaching their lifetime are a potential "mine" for resources, however, we can use these buildings more effectively by assigning a new function to the buildings, leaving the basic structure and fabric intact, and modify the buildings to fit the newly assigned functions and the sustainable standard. The approach is called "Adaptive Reuse", to reduce the need for building demolition and new buildings, while keeping the identity of heritage and/or historic buildings intact for the community.

Adaptive reuse is a relatively new approach in architecture, as the redevelopment of existing buildings does not emerge as an alternative to built environment development until the second half of the 20th century (Douglas, 2006). The approach concerned more with converting buildings into other more effective and efficient uses, both in terms of its effectiveness to satisfy the needs of the occupants and efficiency in its performance to overcome the potential obsolescence and redundancy in buildings. As it is often the case that old buildings are built with the considerations that are actual to the time of their construction, and

the considerations can change along with technological and social advancements (Bullen & Love, 2011).

Changes in the building uses can happen from one type of building to another (i.e. residential to commercial) or within the building type itself with the changes applied due to changes caused by various factors. Changes in capacity are the most common factors that require a building to change, especially with demands in residential and office spaces rising, then adaptation in existing buildings can be applied to supply the demands.

Another common factor is technological advancement, especially with information technology is impacting society at an accelerated pace, existing buildings have to adapt to the building infrastructure needed to accommodate the usage of the technology. The principle also applies to the usage of independent sustainable energy sources such as solar panels to minimize the carbon footprint, as it requires installation and modification to the building's electrical network.

Applying adaptive reuse to an existing building, the effort not only retains the building, but also the historical and architectural values of the building that are built from the skills and dedication of the original builders. Heritage and historical building often are perceived by the surrounding community as a part of their identity, Pickard (1996) contends that a sustainable application of adaptive reuse in heritage or historic building should reflect the local life, increasing the community's quality of life, develop the collective responsibility to the heritage or historic assets, and empower the action and involvement of the community.

Bullen and Love (2011) conducted a series of interviews with buildings stakeholders to study the stakeholders' perception of adaptive reuse application on heritage and historic buildings, in the result of the interviews it is concluded that people tend to feel a connection to their local surroundings and identity through heritage and historic buildings, as they are perceived as cultural icons and their preservation impacts the community well-being, sense of place, and therefore social sustainability. It is also concluded that the benefit from the preservation of heritage and historic buildings in most cases outweigh the economical factor in justifying the effort.

Additionally, application adaptive reuse might involve the making of extension to the heritage and historical buildings in addition to restoring the building and rearrangement of interior spaces. These extensions usually used materials similar to the original building or complementary to them. However, if the design is not done in a proper way it could result in reducing the value of the original building. A good example of an extension to adaptive reuse building can be seen in King's Cross Station and Tate Modern in London among other prominent buildings.

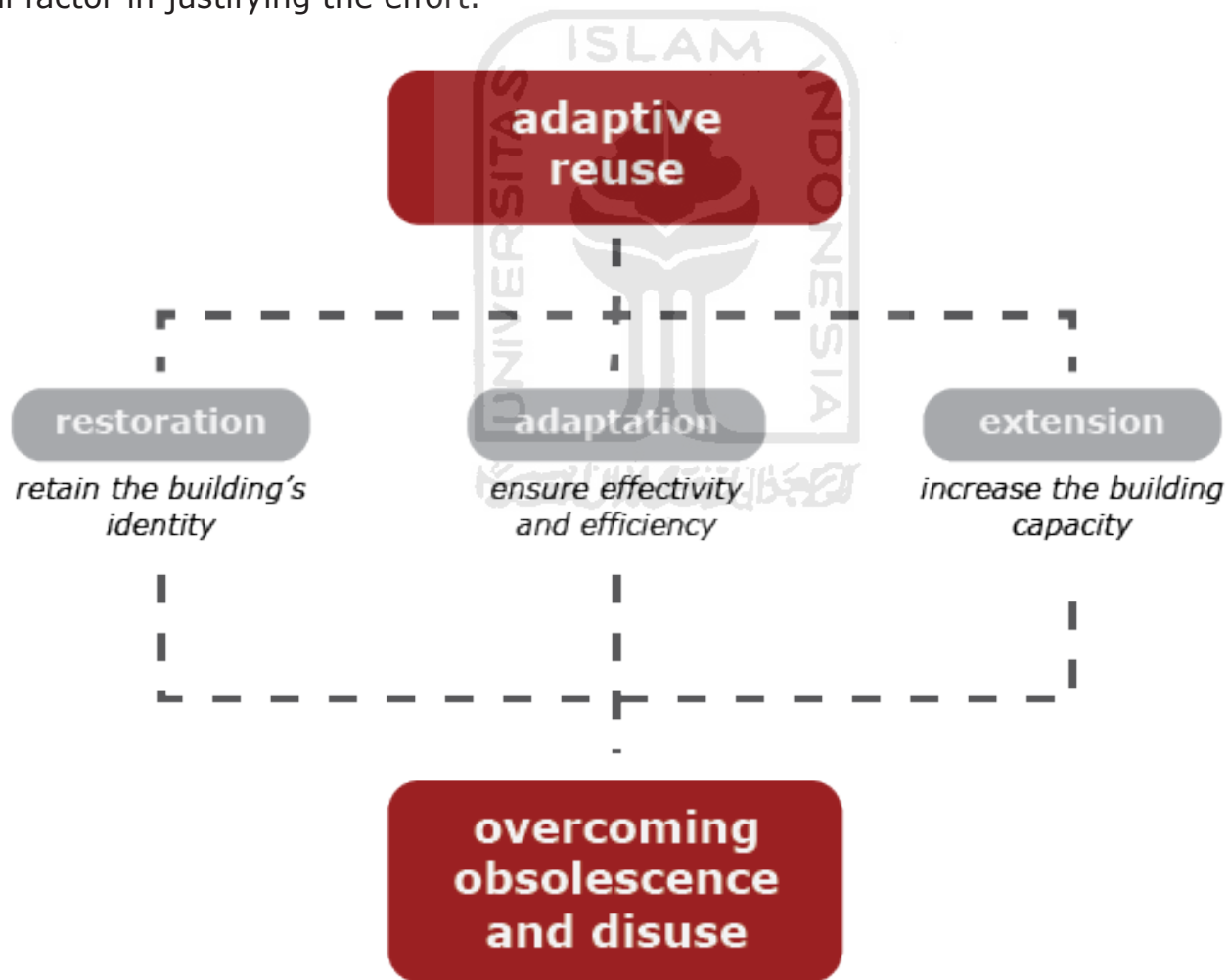


Figure 43: Illustration of the application of adaptive reuse
Source: Douglas (2006)



Figure 44: Basic options for adaptive reuse
Source: Kincaid (2003)

Insertion

Insertion is a way to insert new spaces and buildings into an existing building using various considerations, including the location, size, and aesthetic.

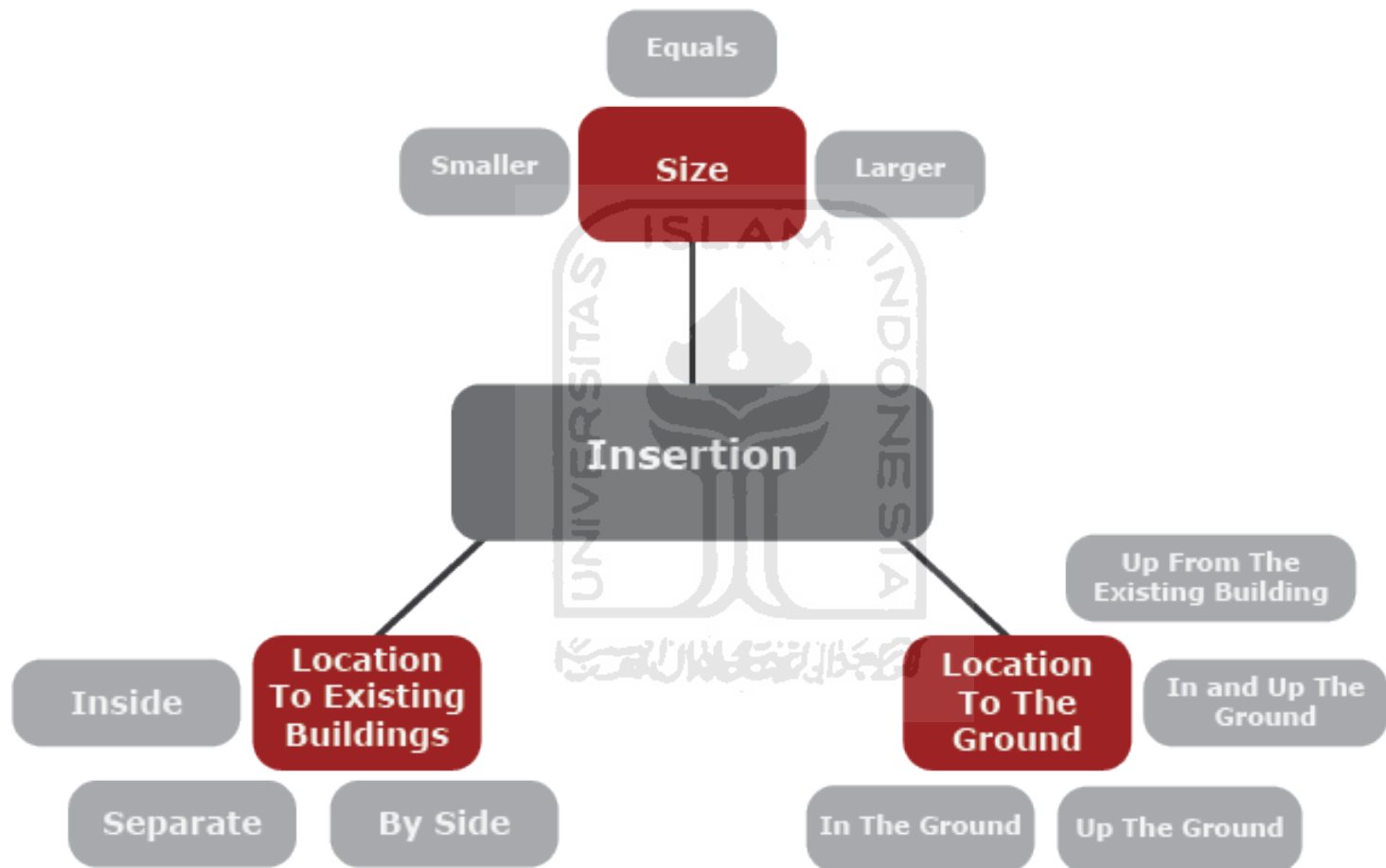


Figure 45: Formulae for Insertion
Source: Ardiani (2005)

For the aesthetic of insertion buildings, Norman Tyler (2001) categorized it into 4 strategies:

- **Matching:** The new building is designed using the same architectural style as the existing building, imitating the building elements and materials.
- **Contrast:** The new building is designed using materials with simple yet modern style, contrasting to the existing building
- **Matching Compatible:** The new building is designed using similar visual elements to the existing building, but simplified compared to its original.
- **Contrast Compatible:** The new building is designed with similar mass to the existing buildings, but the composition is contrasted, especially in the shape and facade.

Figure 46: Aesthetic for designing insertions
Source: Tyler (2001)



Adaptive Reuse and Open Building: Adaptation for Changes in The Present and Future

Throughout the last decades, architects and engineers are realizing the importance of adaptability in the built environment as the result of rapid urbanization, technology advancement, and sustainability issues. Applying adaptability as a major consideration in designing a building will be beneficial in the long run as technology keeps advancing and developing with different infrastructure requirements that it might need to operate.

Sustainability in the built environment is not limited to usage of sustainable energy, water conservation, and other parameters that tend to require us to rely on the development of other fields. As architects, we can play a direct role in sustainability by planning a viable way for buildings and spaces to be able to operate for their designated lifespan before being assigned a new function (Douglas, 2006).

With the recent COVID-19 pandemic happening throughout the world, we are faced with issues that raise a more urgent need for adaptability, especially in public buildings. Emergencies such as what occurs with the widespread use of COVID-19 will need specific protocols to be applied to buildings for them to be able to operate. Buildings that are not designed with adaptability and flexibility in the considerations are facing issues to comply with these protocols, as it can be observed during the pandemic.

Closure and prolonged limitation of the buildings that do not possess the ability to adapt can increase the rate of obsolescence and disuse of the building, which can be harmful to the community's economy and well-being. The identity of a community is connected to their sense of

place, especially with public spaces being a way for them to gather, socialize, and go on their leisure activities.

Open building and adaptive reuse approaches are developed as a way to apply adaptability to buildings, with the aim of both approaches are to ensure that buildings can keep up with the state of the art technology, contemporary social situation, and relevant issues that might require them to adjust. Both approaches provide architects and planners with a framework for adaptability to overcome a building's obsolescence and disuse while prolonging the lifespan of the buildings.

The principle of open building is separating the elements within the building according to the level of decision making by the parties with the aim to make future changes and adaptation easier with minor efforts. On the other hand, the principle of adaptive reuse is to refurbish and restore the functionality of an existing building with the aim of adapting the building into the contemporary standard of in terms of functionality and technology. In other words, adaptive reuse is applied to adapt the buildings into the present day, while open buildings are applied to prepare the buildings to changes that will happen in the future.

Combining adaptive reuse and open building can be beneficial in the modern time where empty lots are starting to become harder to find. With urbanization going at an accelerated rate, architects and planners have to redevelop the existing buildings to meet the demands for residential, commercial, and other functions that are increasing as more and more people move from

their hometown to urban areas. The combination of these two approaches will ensure that the value of the existing buildings is restored and equals with the other building in the area, while the building also ensured to be able to easily adapt to future changes that are projected to happen in an estimated amount of time. The combination of adaptive reuse and open building is especially important to be adopted in the redevelopment of heritage and historic buildings that might fall into obsolescence and disuse, while still having connections with the community identity and potential historic value.

cupant buildings to convert them into multi-occupancy buildings, and with the pandemic going on, many of these buildings such as ruko and other low-to-mid rise developments are threatened to close along with the businesses. With these threats to the existing buildings, there is a potential for the application of adaptive reuse and open building approach to these buildings to ensure the sustainability of urban areas and help the development of the country to be easier in the long run.

In a developing country like Indonesia, there is an ongoing trend to demolish single-oc-

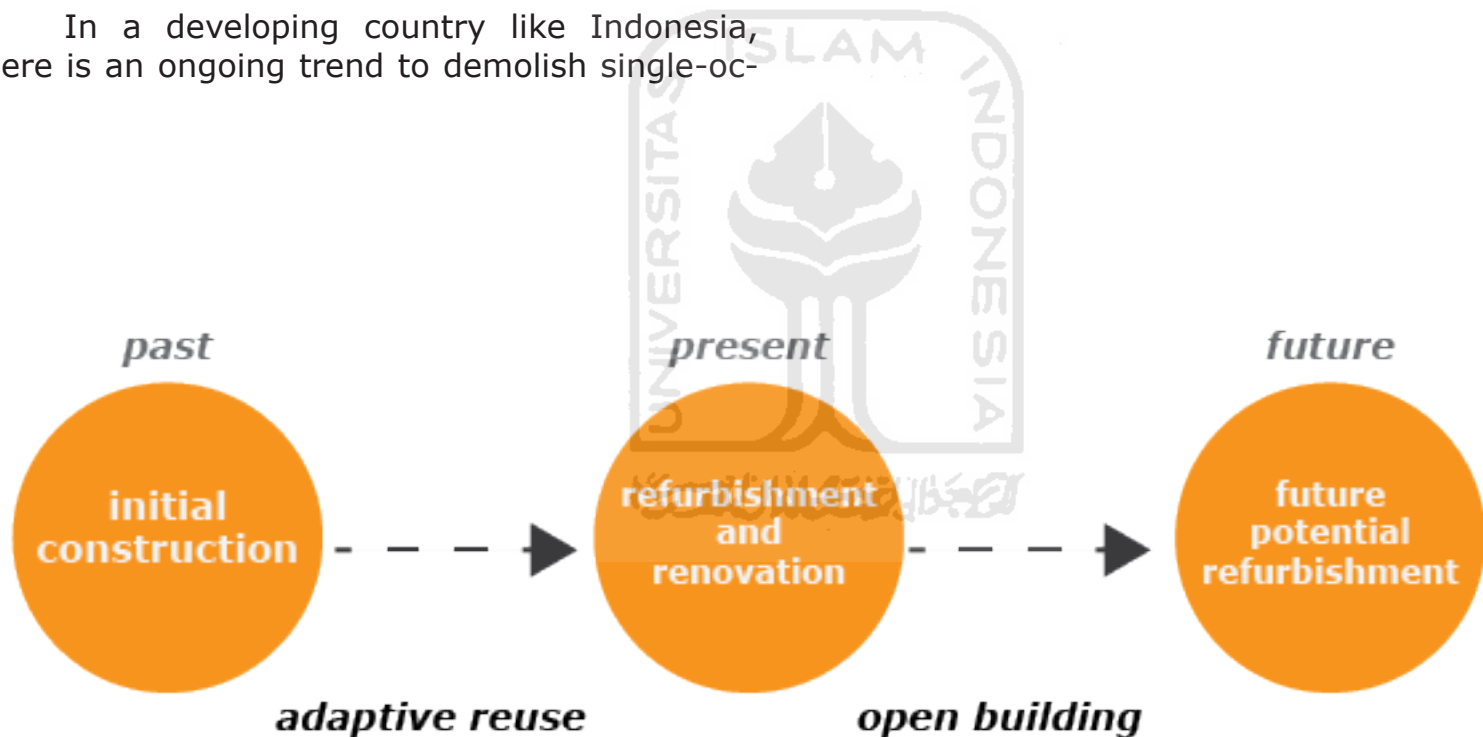


Figure 47: Connection of adaptive reuse and open building, with each approach adapting the building into the present and future changes
Source: Kendall (2010) and Kincaid (2003)

Adaptability to Build Sustainable Resilience

The recent COVID-19 outbreak shook the world in various ways and pushed us to develop our knowledge to adapt to the new situation. As architects, we are faced with the reality that we need to change the way we design our buildings. Most of the building built previously with “function-focused” concepts in mind -especially those built under the functionalism movement- are becoming more obsolete (Schmidt III, Eguchi, Austin, and Gibb; 2010), and it became even more so with the pandemic as health protocol force the buildings to limit the building’s capacity down to 25%, or even closed the building until it is deemed to be safe to be reopened.

The limitation and closure of the building can eventually lead to the tenants not being able to keep the rights to use the building, causing the buildings to be abandoned and lose their value. While office, commercial and residential buildings can be easily emptied and refitted to accommodate new tenants and functions, the same cannot be said for cultural buildings such as theatres, cinemas, art gallery museum can not be easily refitted for other functions without doing a major renovation and alteration to the building, and in some cases, the buildings are demolished (Kendall, 1999).

The renovation and demolition of such buildings not only will cost a significant amount of money, but also a significant amount of carbon emission as the process of renovation and demolition -followed with rebuilding in some cases- will result in carbon emission through transport, production, and assembly. The process also will need a significant amount of materials to be done, while only a small amount of materials are recycled to be used again. To develop truly sustainable developments, buildings need to be designed with time as a consideration to allow the buildings to adapt for the

future (Kendall, 1999).

Adaptation is one of the keys to keep buildings to stay operating during pandemic health protocol. Applying engineering control by reducing exposure or separating the occupants from the hazards, taking the form of physical intervention such as spatial, material, and ventilation-related solutions (AIA, 2020). This solution is a necessary step as the elimination control solution such as indefinite social isolation can not be conducted effectively in a long consecutive duration due to economic and mental health constrain, and although the distribution of the vaccine had been started, it will need at least 4.7 years to achieve 75% vaccination rate needed to build herd immunity globally (Bloomberg, 2021). Re-planning and redesigning the building according to health protocols and code can be important in making sure the building can remain open, and let the economic and education activity take place at a more effective rate.

American Institute of Architects (AIA) and International Code Council (ICC) published guidelines and assessment tools for architects and interior designers to make sure that the buildings are suitable to be reopened by mitigating the risk of contagion. From those publications, we can conclude that important aspects in avoiding pathogen contagion are:

- Spatial arrangements
- Ease of sanitation
- Ventilation and plumbing

The criteria mentioned above are applicable using architectural means such as spatial programming, material choice, and other relevant methods. However, it is unwise to apply these “new normal”

criteria as static elements in the design as it will limit the sustainability of the building.

Applying the new normal protocols as static elements in a new design is not sustainable for the building, as these protocols are meant to be temporary measures at the time of the pandemic. The protocols are designed to limit the capacity of existing buildings down to 25% by giving up some aspects of its efficiency and functionality to minimize the risk of contagion during the pandemic. Permanently applying these protocols is not sustainable for the buildings. In the long run as it means that the buildings are not operating up to the potential capacity when the situation goes back to normal. To build a sustainable resilient in new building development, the building needs to be able to be adapted with minimal efforts.

Developing a new building in this new normal situation will require us to apply adaptability as a consideration in the design. The building needs to be able to apply the "new normal" protocols and then apply the optimal spatial programming with minimal time and effort.

Open building is an approach where the buildings are designed to change along with the activity, technology, social situation, and other relevant issues (Kendall, 2017). In other words, using open buildings as an approach allows the building to be adaptable when it is needed. The approach is first used as a response to the Post World War 2 mass housing boom to allow residential buildings to be refitted according to the occupants' needs. Along the time, more and more buildings start adopting the approach, we can see it applied in most office buildings around the world, with tenants that are able to design their own needs. In the time where we are facing the facts that we need to start designing with

viral viruses in mind, adopting the open building approach can be a key to build a sustainable resilient building for the future.

Adapting the principles of open building approach can be important in the current pandemic situation to build the buildings of the future. Open Building provides us with the starting point on how the building should be designed with changes in mind, with separated decision making levels to the buildings that can be adapted to the possible changes that will occur with health protocol. Obvious thing to do is to adapt the infill level to comply with the health protocols, as it is the most flexible part of the building. At the support levels, adaptation can be made to back the changes applied in the infill level. These changes to the protocol are outside the estimation that are calculated in the conceptualization of open building approach, as such changes in the situation are difficult to predict, therefore several alterations are needed in applying the open building approach.

As architects, we can not take a direct role in eliminating the virus, what we can do is to make sure that our buildings are adjusted to address the possibility that a pandemic can happen anytime and they have to be able to adapt to comply with the protocols. With this "new normal" time, it is time for us to change our way of thinking for the better.

Design Typology

Cultural Center

In Oxford Dictionary, "culture" is defined as "the customs and beliefs, art, a way of life and social organization of a particular country or group" (Oxford University Press, 2021). In his book *Morfologi Bangunan dalam Konteks kebudayaan* (Building Morphology in Cultural Context), Marcus Gratiwa (2011) described culture as "collective human knowledge that is used to understand the environment they experienced", while anthropologist Robert H. Lowie (1920) defined culture as "all that individuals develop from the community, such as beliefs, customs, artistic nooms, craftsmanship, manners, and expertise". From all three definitions of "culture", we can conclude that culture is developed from interaction with people in a definite

group in order to solve issues and express themselves.

As a whole, "cultural center" is defined as "a public building or site for the exhibition or promotion of arts and culture, especially of a particular region or people" (Oxford University Press, 2021). In modern times, cultural centers not only play a role to preserve traditional cultures, but also to develop and communicate new culture as it changes throughout the time. In order to efficiently achieve its aims, a cultural center has to be able to accommodate several functions, such as: research, education, development, recreation, and administration.

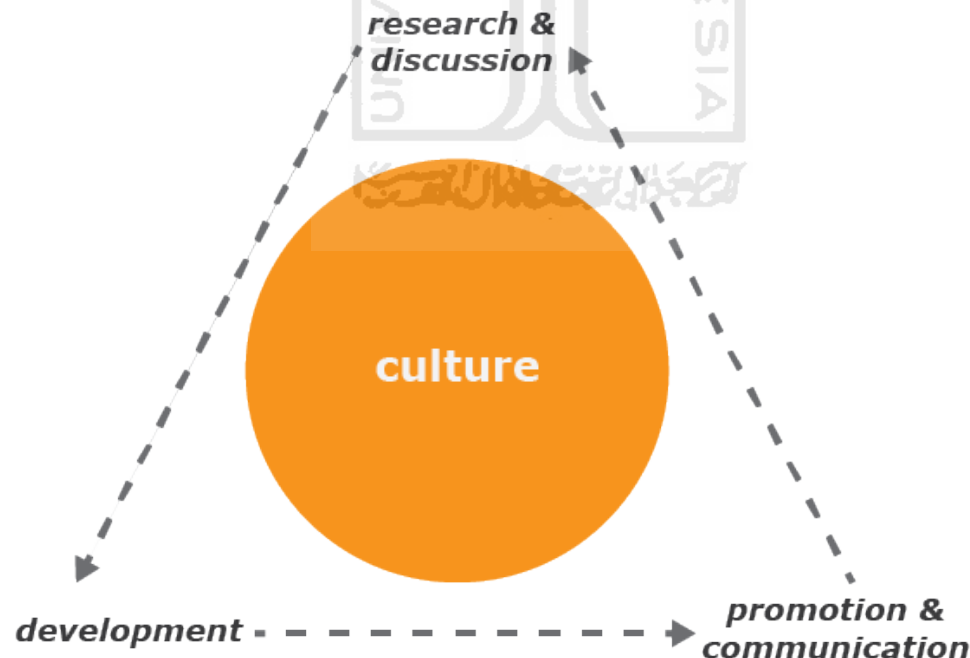


Figure 48: Illustration on cultural development process cycle.
Source: Lowe (1920)

The function of research and development in a cultural center often are connected and are important aspects of the building as are the functions that are important for cultural development. One of the examples of such functions is artist residency, that accommodate artists with an environment to reflect, research, and experiment. This function is crucial to be accessible to the relevant people so that culture can be influenced and be influenced by various other cultural backgrounds. Research and development function is important in the success of a cultural center as the generator of culture for the community.

The functions of communication, education, and recreation is important in the promotion of culture to the community. Cultural concepts are important to be promoted to be able to be accepted as the norm by the people, as the idea of culture is that it affects people's habit and daily life. These functions are also important to encourage discussion and inspiration within the community, keeping the cultural development cycle going to retain the identity of the community.



Figure 49: Art residency allows artists to be in a new environment for cultural development
Source: Swatch Art Peace Hotel (n.d.)

Cultural Research and Development Facility to Boost Local Economy

The accommodation of cultural research and development facilities for the people is an important part of the design, as it will open an opportunity for the people to develop and improve themselves, whether it is culturally, academically, and/or economically.

Although obtaining informations had been made easier with the use of the internet, access to the internet are still limited to an extend for some people, especially taking the consideration of limited internet network in places where the infrastructure for it has not been well developed and access to the devices that might not be the same for all people. It is also worth noting that some people might find that learning through the internet might be ineffective as compared to other methods, as occurs in some parts of Indonesian culture where knowledge is being passed down through oral traditions instead of written ones.

By providing the public with a cultural research & development facility, the people will have an accessible way to learn about new knowledge and skills that can be applicable to their everyday business and life, the people will be encouraged to use creative and critical thinking to solve issues that might occur, and develop their own way to learn more effectively.

By being a public facility, the cultural center development opens the opportunity for the people to start discussion with other people that might have different backgrounds and skill sets. The sharing of knowledge and skills will encourage the development of cultural outputs such as visual arts, performing arts, and designs. Taking an example from Bandung and its success as a creative city, the success of the city is determined by the ease of access to references, means of pro-

duction, and people with skills that are becoming key elements for the creative industry to grow, as it will minimize the effort to realize ideas to make it profitable and beneficial for the public.

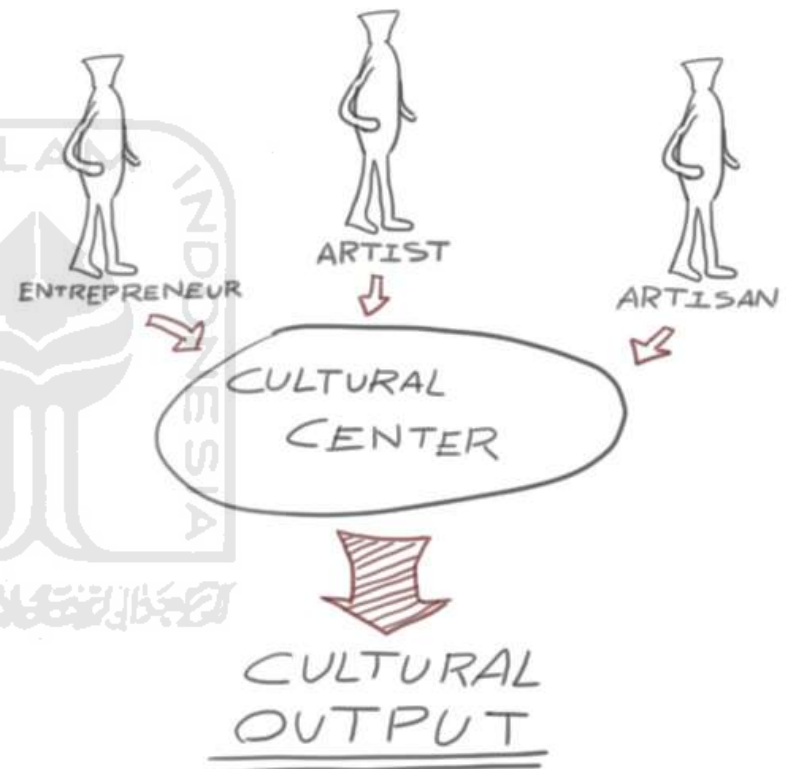


Figure 50: Research and development function in the cultural center is opening opportunity for people with different skill sets to meet and discuss in creating cultural outputs

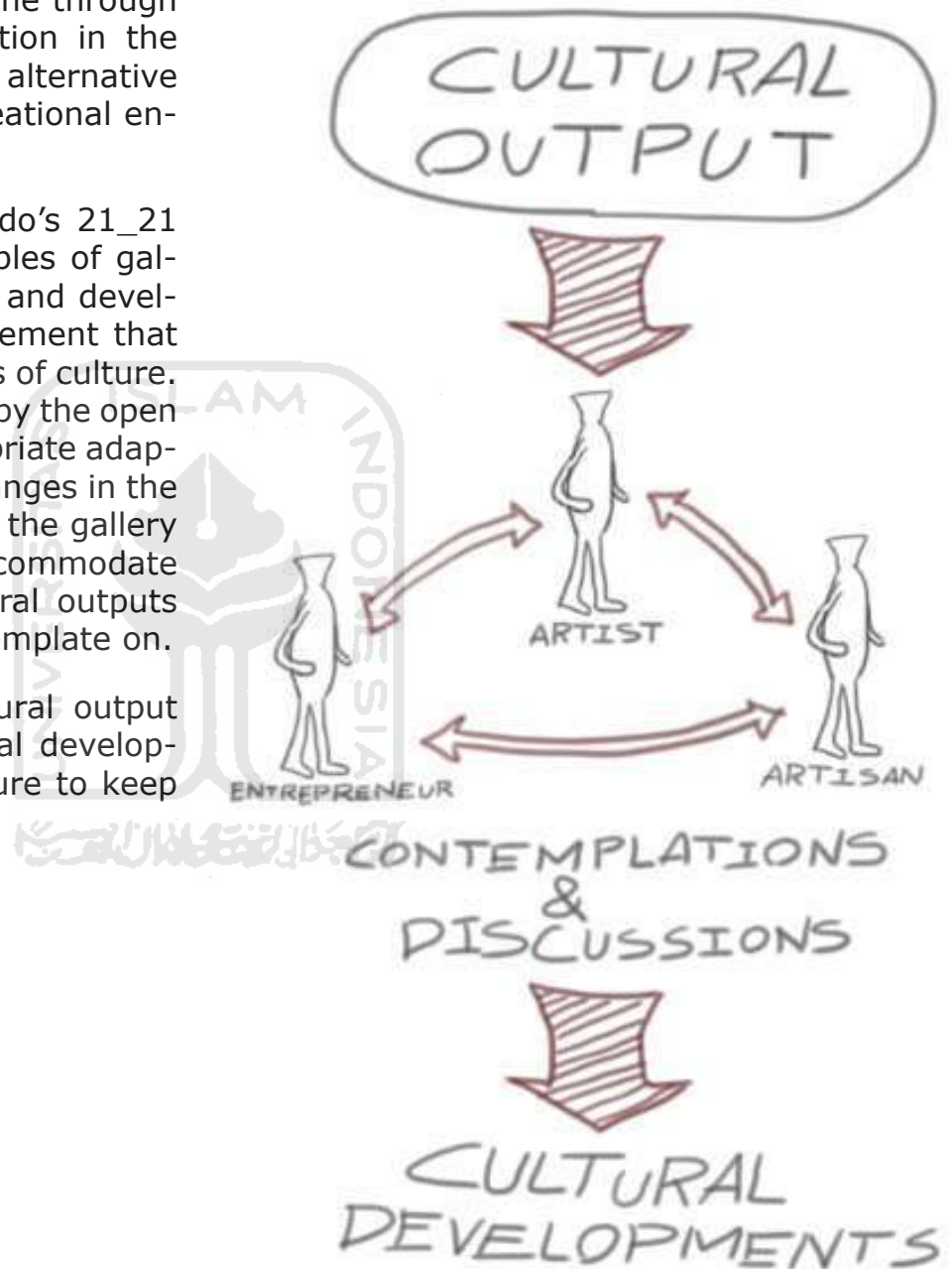
Communication Facility to Promote Cultural Development

In a time where information is easy to spread through the internet, learning can be done through various mediums. Communication function in the cultural center is designed to provide an alternative way to learn in an educational and recreational environment.

Taking precedents from Tadao Ando's 21_21 Design Sights and other relevant examples of galleries, designing for cultural promotions and developments require a special space arrangement that is able to accommodate various mediums of culture. This special arrangements can be solved by the open building approach by applying the appropriate adaptation strategies and authorization of changes in the functions, as it is shown in the design of the gallery spaces are versatile and refittable to accommodate the promotion of various form of cultural outputs that will invite people to come and contemplate on.

Contemplations and discussion on cultural output are key elements in keeping the cultural development cycle going and progress the culture to keep up with the time and sustain it.

Figure 51: Communication function in cultural center encourage people to contemplate and discuss cultural output with each other to keep the cultural development going



Precedent Study

21_21 Design Sights

Location : Tokyo, Japan

Architect : Tadao Ando & Associates

21_21 Design Sights is a manifesto of Japanese art and culture, originated from a conversation between designer Issey Miyake, architect Tadao Ando, and sculptor Noguchi where they discussed the need for a place where Japanese design could be discovered, promoted, and shared. The project then took shape of 21_21 Design Sights, located in Roppongi, Tokyo Midtown where the local art and design scene has been given a boost with the opening of various art museums in the area.

Figure 52: The entrance of the building shows the building's low profile characteristic, and complementing to the environment

Figure 53: From the outside, the building does not take the attention away from the surrounding park and hiding the space underground.

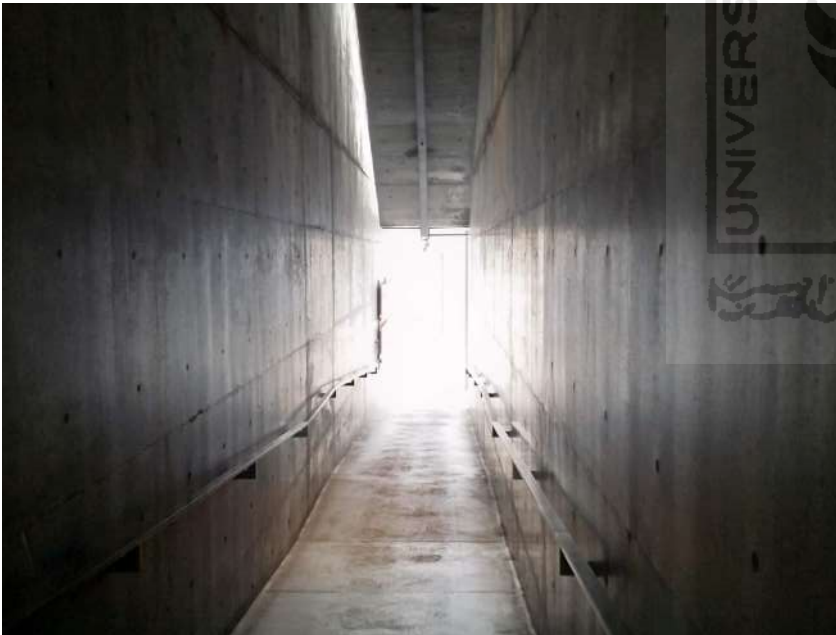


Representative Design

The design of the building is inspired by Tadao Ando's vision to create an art gallery that would be representative of Japan, working from an architectural design rooted in the inspiration of discovery. The building consists of one ground floor and one underground floor. Most of the volume of the building, which has a unique form made of giant steel plates that slope gently down to the ground, is buried underground as an effort to assert the structure as a design museum without disturbing the ambience of the natural environment surrounding it. Inside the low rise structure, the interior space opens out on spacious gallery spaces given the unobstructive exterior.

Figure 54: Gallery 3 located at the ground level provide adequate space for exhibition

Figure 55: The ambient of the gallery provide the uses with the correct set of mind for cultural development



Designing for Cultural Development

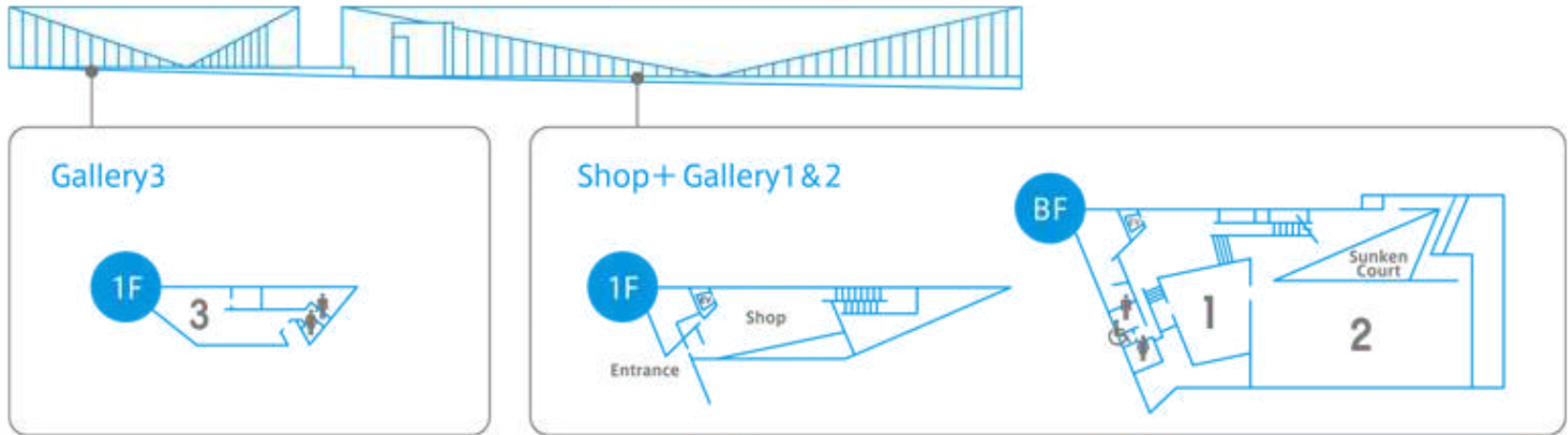
21_21 Design Sights is designed more as a research center for design than a museum, a place to think about design and designing buildings. It is aimed as a space for various parties to share opinions and ideas, generating a movement that will promote interest in design and the understanding of it.

As A gallery, 21_21 Design Sights applied a great chance for changes in the infill level, by providing open space in the form of 3 gallery spaces. However, changes at the support level is really limited due to the mass being underground, therefore changes at such a level will need major efforts. 21_21 Design Sights provide a great example for cultural center typology



Figure 56: Building plan
Source: 21_21 Design Sight

Figure 57: The gallery space is design with quick changes cycle in the infill level



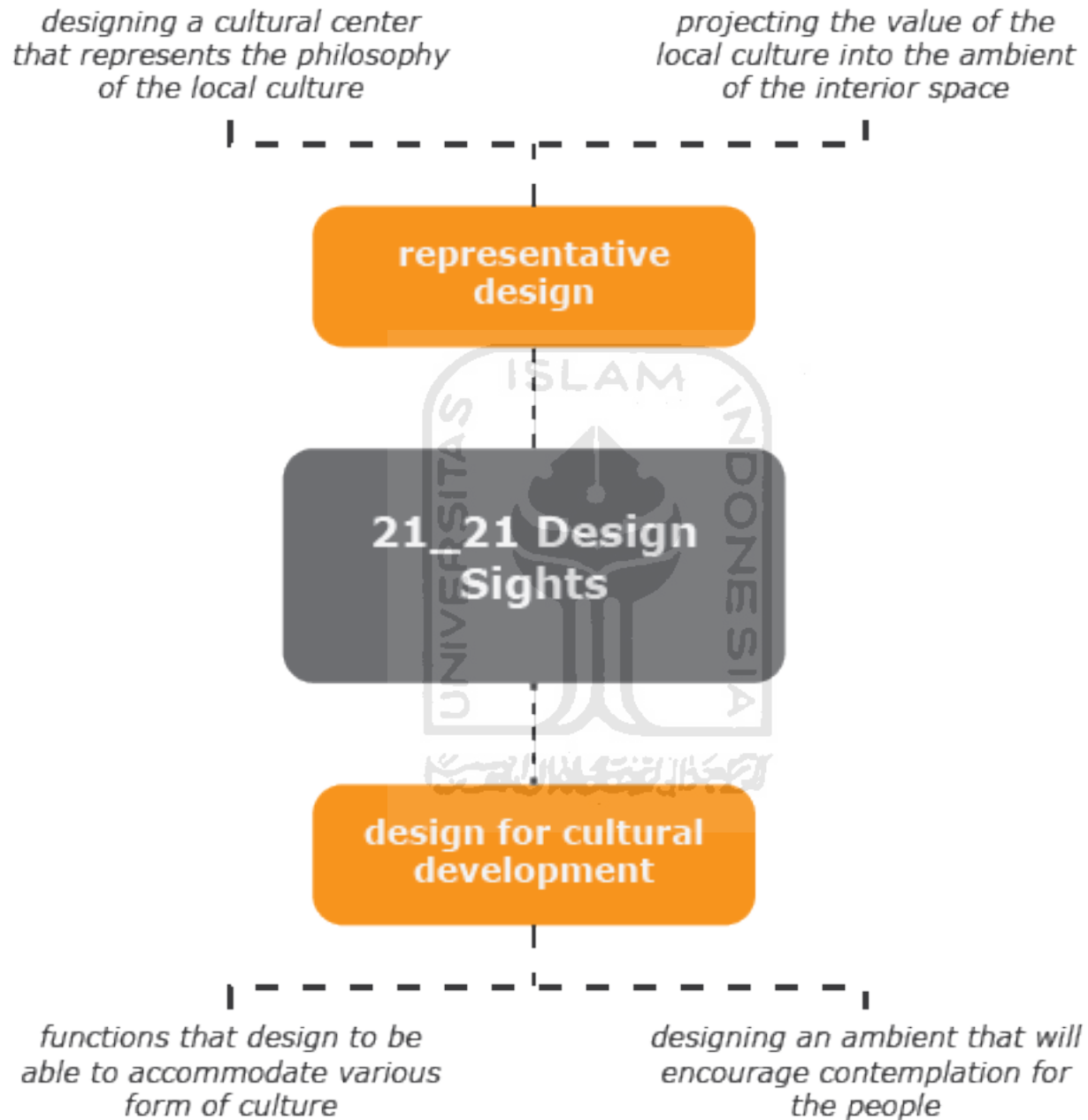


Figure 58: 21_21 Design Sights give an example of a cultural center design for cultural development by representing the value of the culture, and creating an ambient for contemplation and discussion

Fa Chang Cultural Activity Center

Location : Heyuan, China

Architect : CCDI Dongxiying Studio

Fa Chang Cultural Activity Center is designed to be a center for community education and activity center in Fa Chang Village, Heyuan. The population of the village are mostly the elderly people and their children, as the young adults are now becoming migrant workers in the city. The new community center has become an important building for the population as the village is lacking in public buildings where the community can gather on an everyday basis, especially for the elderly where socialisation is important in their daily activity.

Figure 59: The building section show the flexible of use within the space, and the blurred boundary between indoor and outdoor spaces

Source: ArchDaily (2021)

Figure 60: The entrance of the building is design to be easily accessible and inviting for the elder and the children

Source: ArchDaily (2021)



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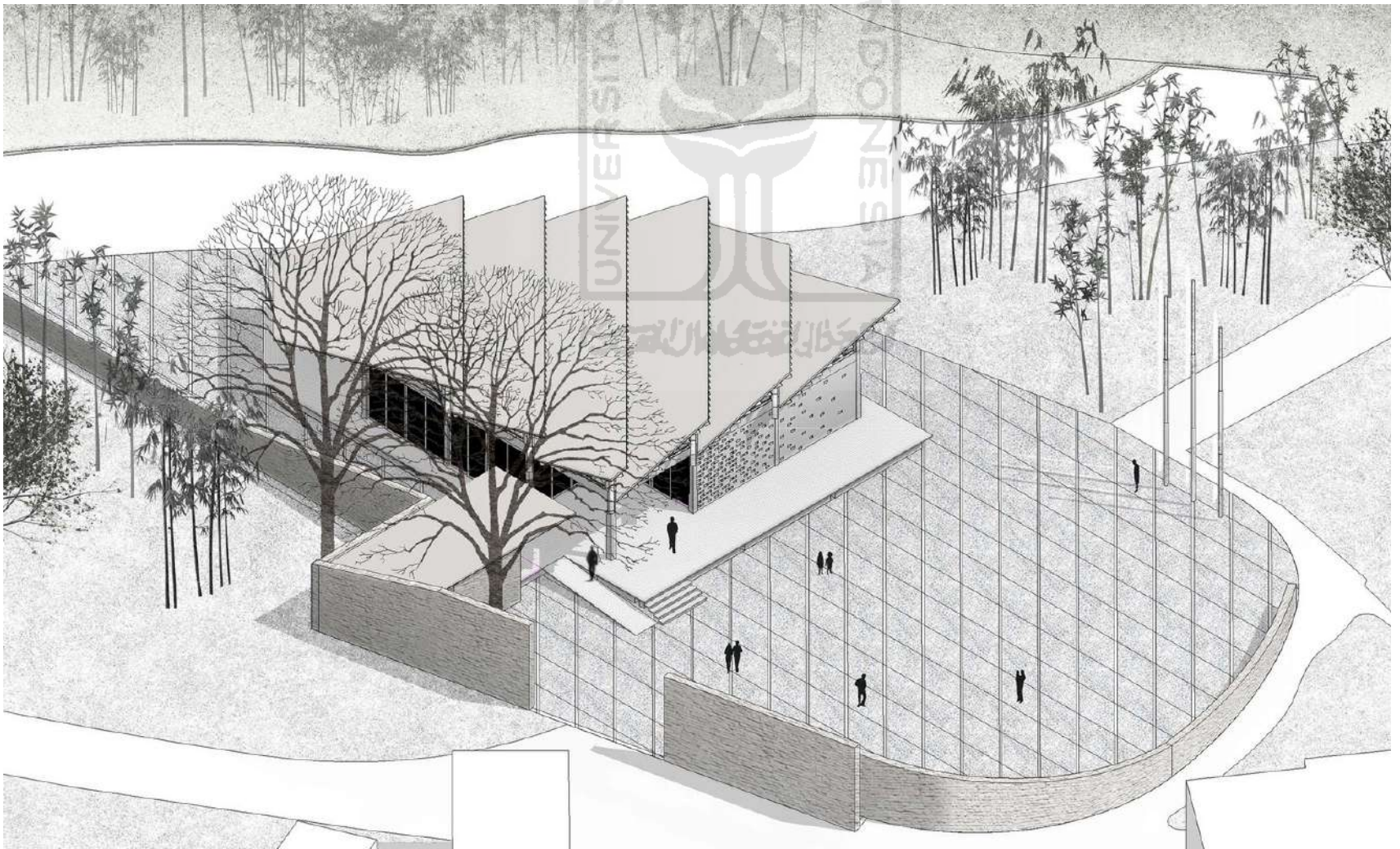
Flexibility in the Program

The space programming of the community center is designed to accommodate any kind of possible activity that might take place in the community. The main building is placed on an elevated wooden floor in the center of the land, with consideration of its elderly and children users in mind to connect the elevated floor seamlessly with the outdoor. The interior of the building can be divided and rearranged flexibly to adapt to its uses by utilizing light non-permanent furnitures and replaceable envelopes. The brick wall and concrete cobblestone pavement on the northeast site of the rural road enclose a half moon square that can be used for multi-functional activities such as open-air cinema.



Figure 61: Axonometric with surrounding context show the building's relationship with the environment
Source: ArchDaily (2021)

Figure 62: Outdoor space can be for socialization by the users without entering the building
Source: ArchDaily (2021)

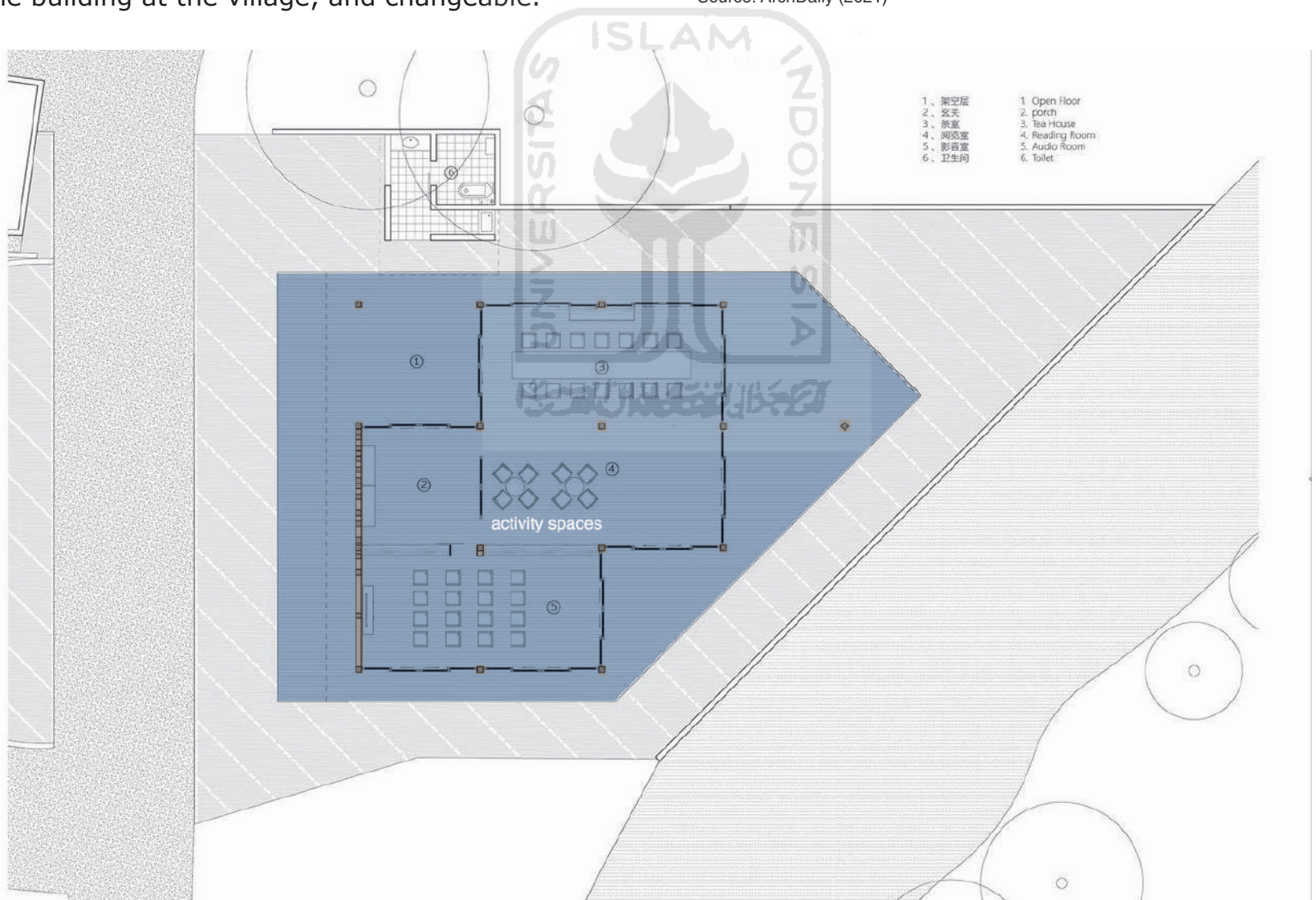


Application of Open Building

Although the application of open building approach in this building is likely not premeditated, the principle can be observed in how the spatial arrangement is designed, along with the form of building itself. As it has been explained earlier, the design makes use of light furniture and replaceable envelopes as the infill level, this makes the spatial arrangement more flexible, and able to extend or rearrange it according to the need of space. The building also makes sure that the change in support level is easy to be done, with the usage of timber structure, it made the building stand out from the building at the village, and changeable.

Figure 63: The site plan show how the envelope is developed with minimal amount of permanent and rigid construction and instead make use of moveable envelope and light construction

Source: ArchDaily (2021)



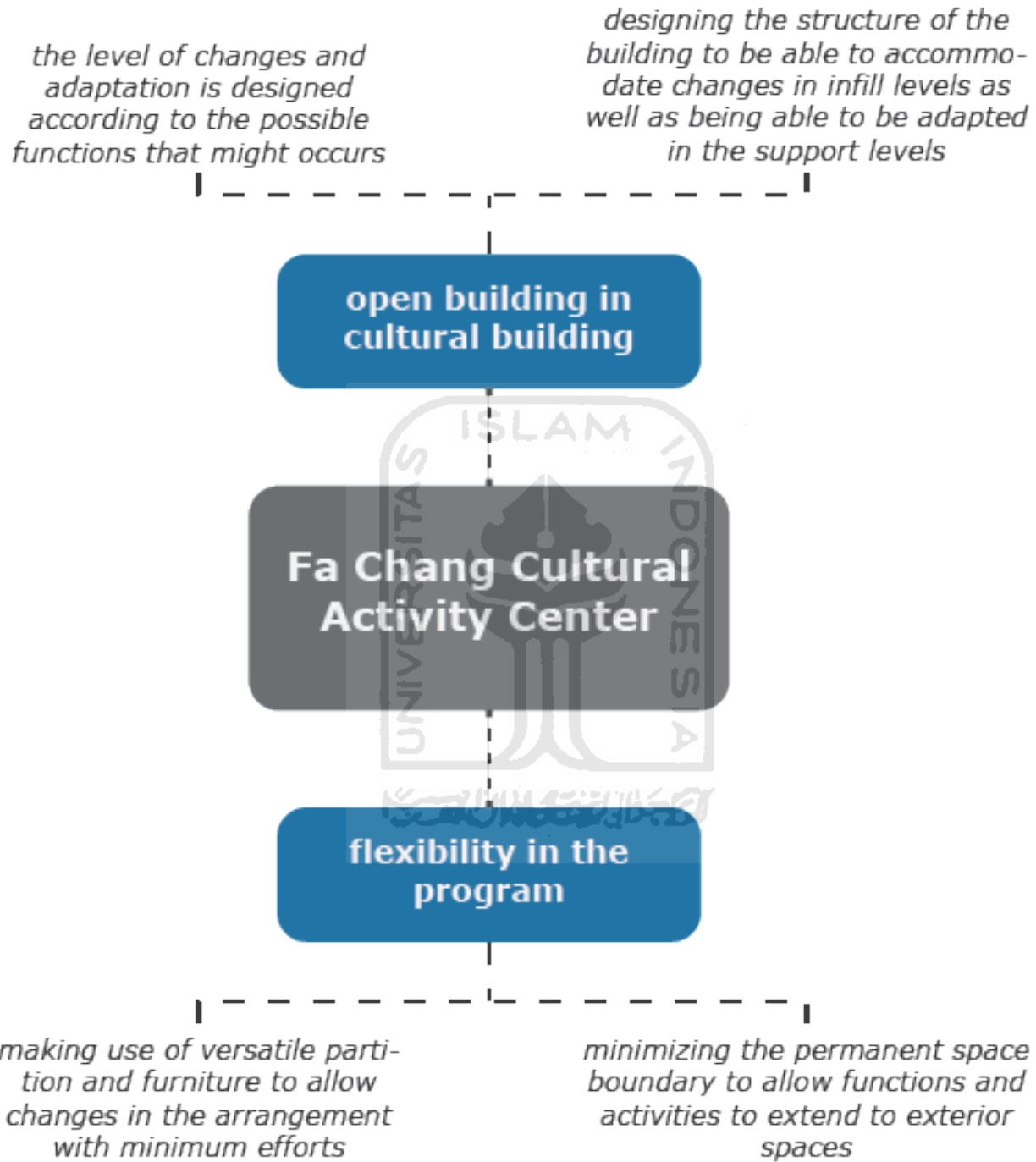


Figure 64: The design of Fa Chang Cultural Activities Center is tailored to the flexible arrangements that can accommodate the activities in the building

Central Park Hall 3 Cultural Center

Location : Valencia, Spain
Architect : Contell-Martínez Arquitectos

Figure 65: The front facade of the building shows the historical value of the area, especially in railway buildings
Source: ArchDaily. Accessed on 24th March 2021. https://www.archdaily.com/956717/adaptation-of-hall-3-of-the-central-park-to-cultural-facilities-contell-martinez-arquitectos?ad_source=search&ad_medium=search_result_all

Central Park Hall 3 Cultural Center is an adaptation from a railway house located at Valencia Central Park. Built in 1917, the railway house has fallen into disuse, with the old railways being dismantled in the building of the central park. However, with the building itself being an important historic building for railways in Spain, especially Valencia, demolition of the building is not the option. The building is adapted to be used as a cultural center, accommodating both visual and performing arts.



Flexibility of Functions

The design of the cultural center allows versatility for various functions simultaneously. The building is separated into five spaces, divided into each privacy needs and flexibility, with 3 of the spaces being a multipurpose space for cultural activities. The separation of the space into two stories allows both multipurpose space to be used for different purposes. The multipurpose space at the ground floor is equipped to accommodate functions such as the exhibition hall and performing stage, with partitions and equipment for the stages being stored at the metal lockers located at every sides of the space.

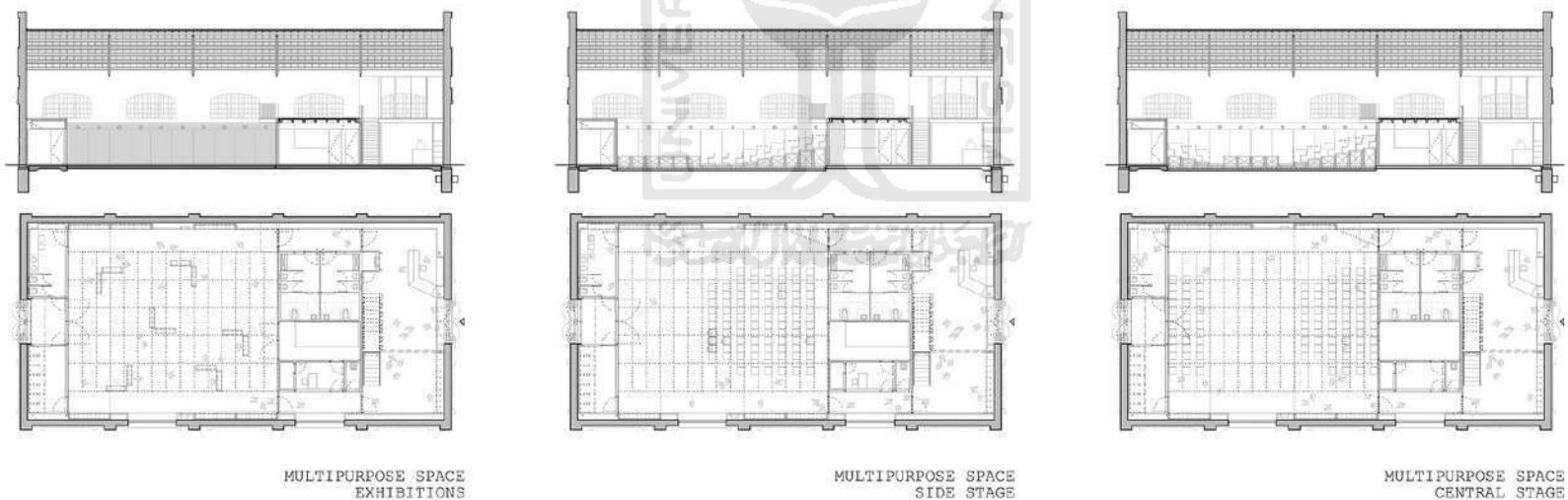


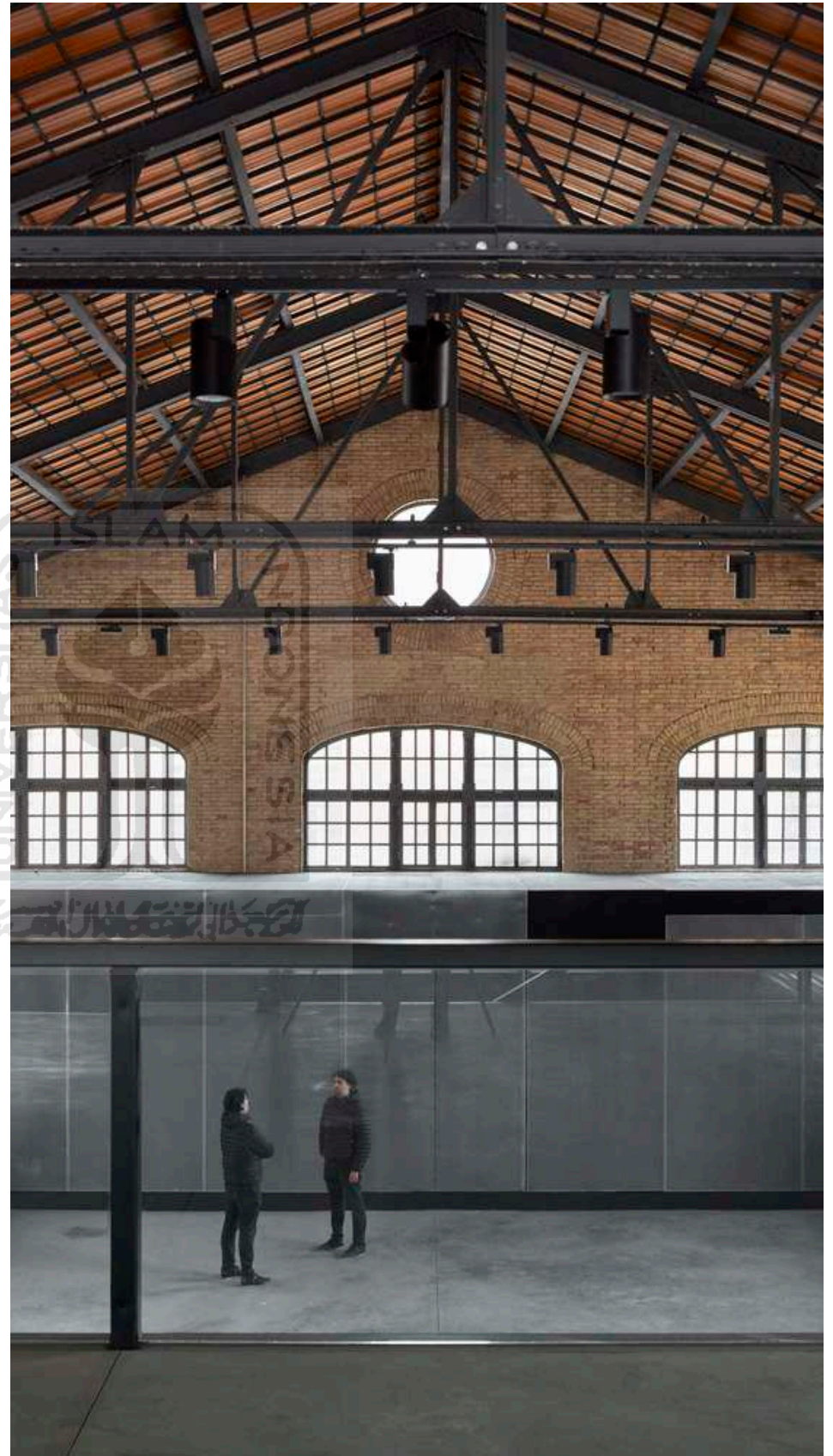
Figure 66: Plans and sections of the building shows how the space can be rearranged for various functions
Source: ArchDaily, Accessed on 24th March 2021. https://www.archdaily.com/956717/adaptation-of-hall-3-of-the-central-park-to-cultural-facilities-contell-martinez-arquitectos?ad_source=search&ad_medium=search_result_all

Figure 67: Metal lockers used to store partitions and other equipments
Source: ArchDaily, Accessed on 24th March 2021. https://www.archdaily.com/956717/adaptation-of-hall-3-of-the-central-park-to-cultural-facilities-contell-martinez-arquitectos?ad_source=search&ad_medium=search_result_all

Materials and Aesthetics

The materials chosen for the intervention are complementing the original building, and reflecting the previous function. The usage of steel for the intervention contrasted with the brick building, while also modernizing the industrial style of the building. The metal component also plays an important role in maintaining the acoustic of the building as well as distributing the ventilation and air conditioning throughout the space. To reflect the old function, train rails are being reproduced and used as architectural elements such as railings and semi-permanent partitions.

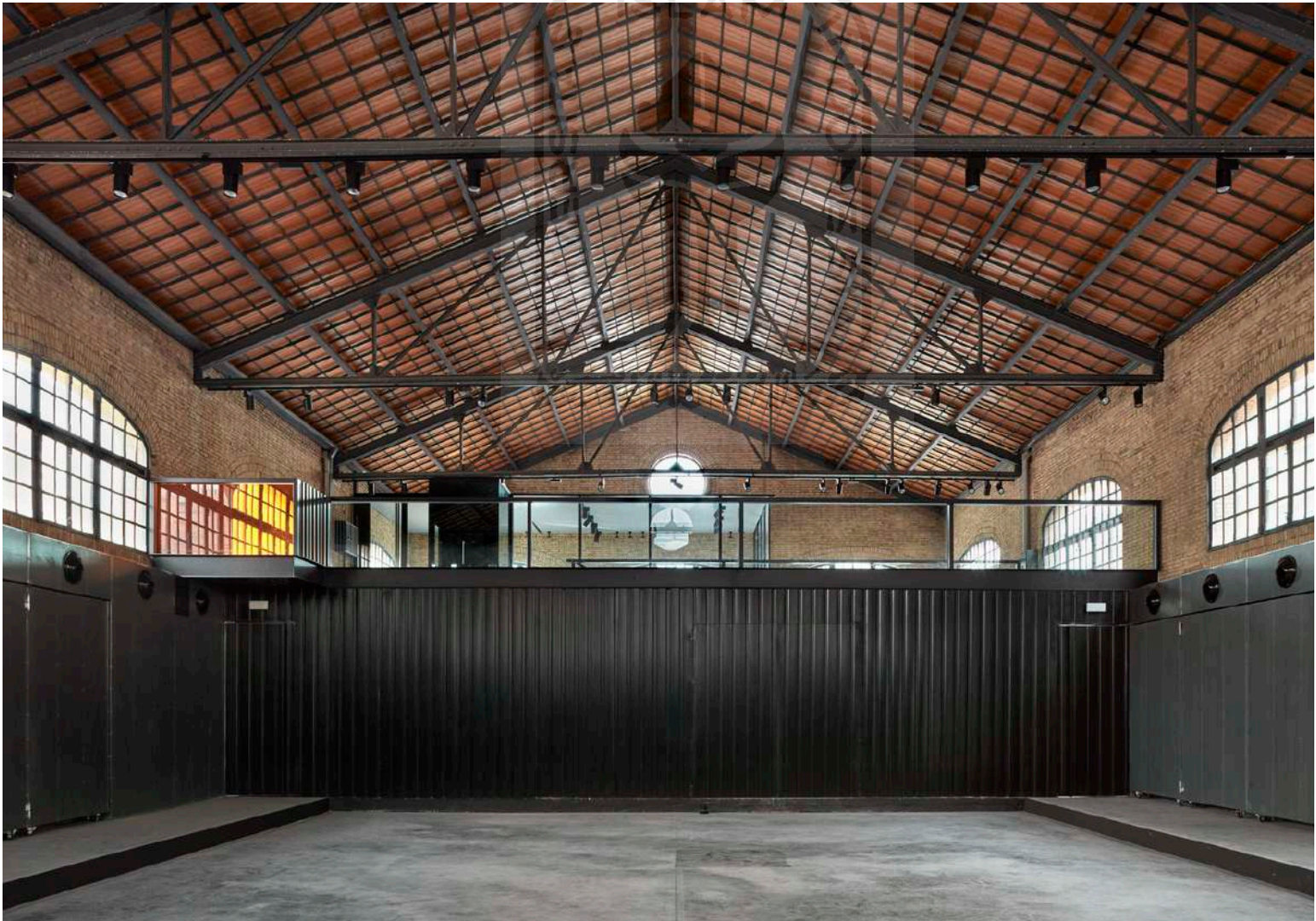
Figure 68: The design incorporate usage of materials that complement the building and pay tribute to the previous function
Source: ArchDaily. Accessed on 24th March 2021. https://www.archdaily.com/956717/adaptation-of-hall-3-of-the-central-park-to-cultural-facilities-contell-martinez-arquitectos?ad_source=search&ad_medium=search_result_all



Adaptation in the Design

The design not only shows a great application of adaptive reuse, but also shows how adaptation can be adopted as the main consideration in designing to give benefit to the stakeholders. The building application of adaptation can be observed ranging from the adjustable to convertible strategies. As it is mentioned earlier, the multipurpose space is a good example of flexibility as the application of adjustable and versatile strategies. The refitable strategy is adopted in the way the infrastructure elements are not planted within the building, but rather exposed and enclosed within the interior structure, that are separated from the structure of the building itself to allow easier change of function as the adoption of convertible strategy/ The application of these adaptation strategies allow the building to be more sustainable in the long run, keeping the historical values while still ensuring that it can function properly.

Figure 69: The building allows easy changes in the task as the adoption of adjustable and versatile strategies.
Source: ArchDaily. Accessed on 24th March 2021. https://www.archdaily.com/956717/adaptation-of-hall-3-of-the-central-park-to-cultural-facilities-contell-martinez-arquitectos?ad_source=search&ad_medium=search_result_all



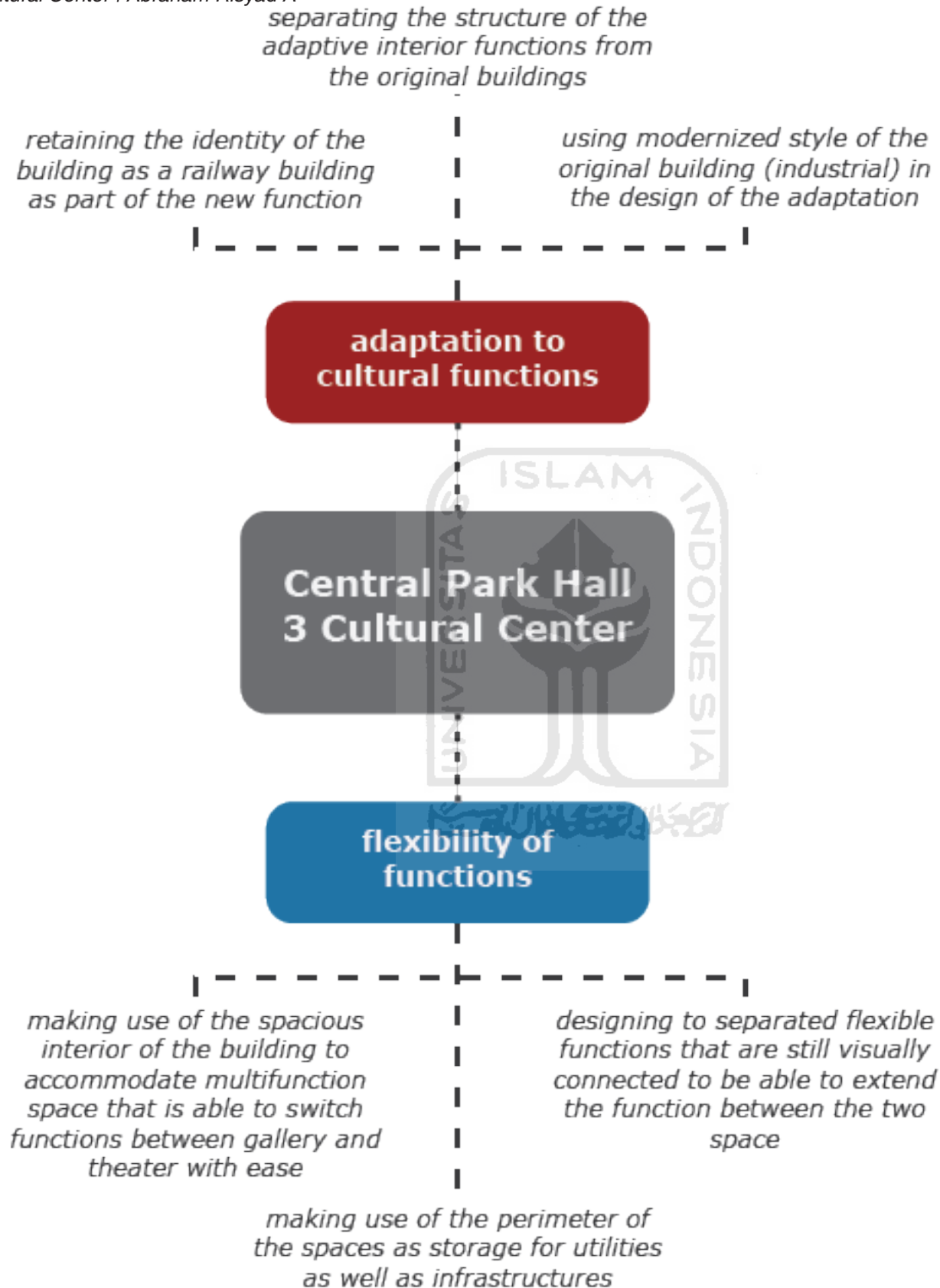


Figure 70: Central Park Hall 3 Cultural Center give an example on similar building typology and approaches, with a dedicated multifunction hall for frequent changes that comes with cultural activities

Re-ainbow

Location : Duc Tho, Vietnam
 Architect : H&P Architects

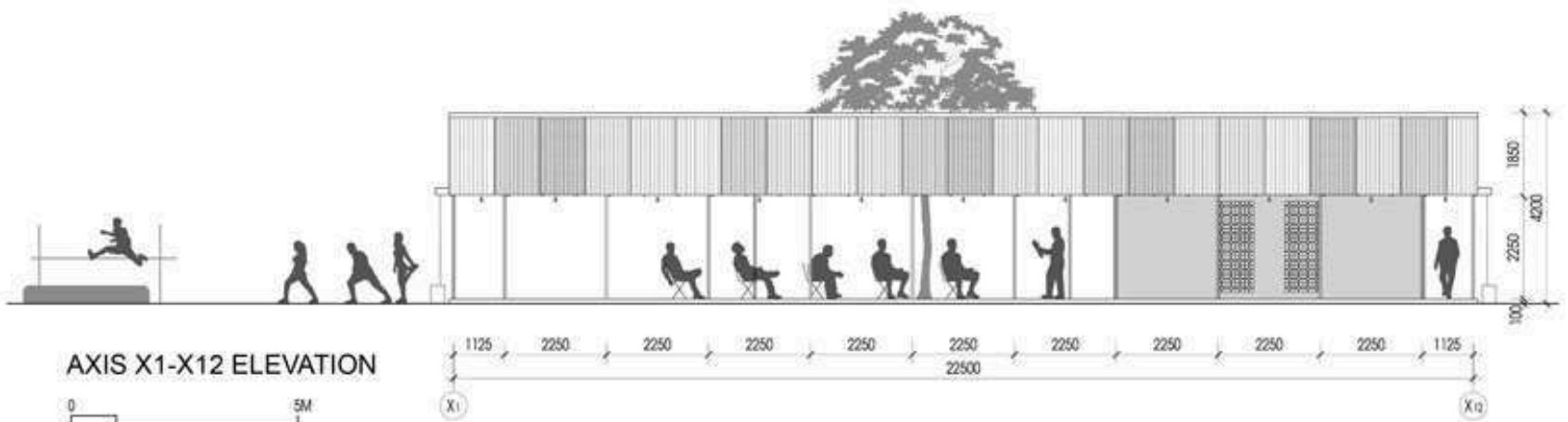
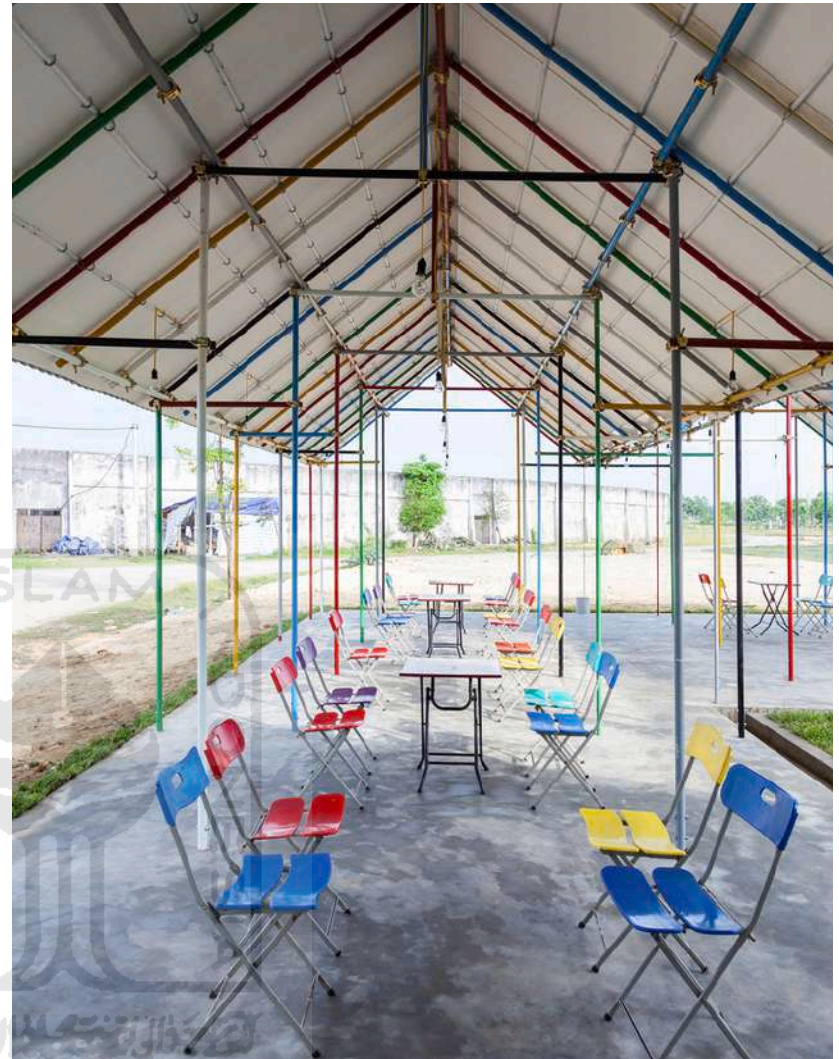
Located at the side of closed Duc Tho Stadium, Re-ainbow is a multifunctional construction for the community. The construction consisted of "static" and "dynamic" elements in order to help improve public capability to adapt and respond to changes in an area that is prone to natural disasters. The static elements consisted of key facilities for the communities, such as health station, public restroom, and ancillary areas, while the dynamic elements around the central garden is a multifunction space that can be used as a classroom, art performance theater, meeting space, and an emergency shelter in the case of natural disaster.

Figure 71: Multifunction space makes use of easily moveable furniture and envelope in order to make sure the programming to change easily.

Source: ArchDaily (2015)

Figure 72: Building elevation shows how the static and dynamic space are easily distinguishable, but still connected.

Source: ArchDaily (2015)



Separation of Elements

The division between static and dynamic elements means that the building is able to act as a post-disaster response center as well as an emergency center for the community with sufficient facilities. The static elements provide the people with essential facilities in time of disaster, such as a medical clinic, public kitchen and public restroom to ensure that the community's needs are fulfilled while in evacuation. The dynamic elements are multifunctional spaces that are able to be refitted in short time to accommodate the people in refuge, by utilizing light constructions and moveable walls to shape the layout according to the situation.

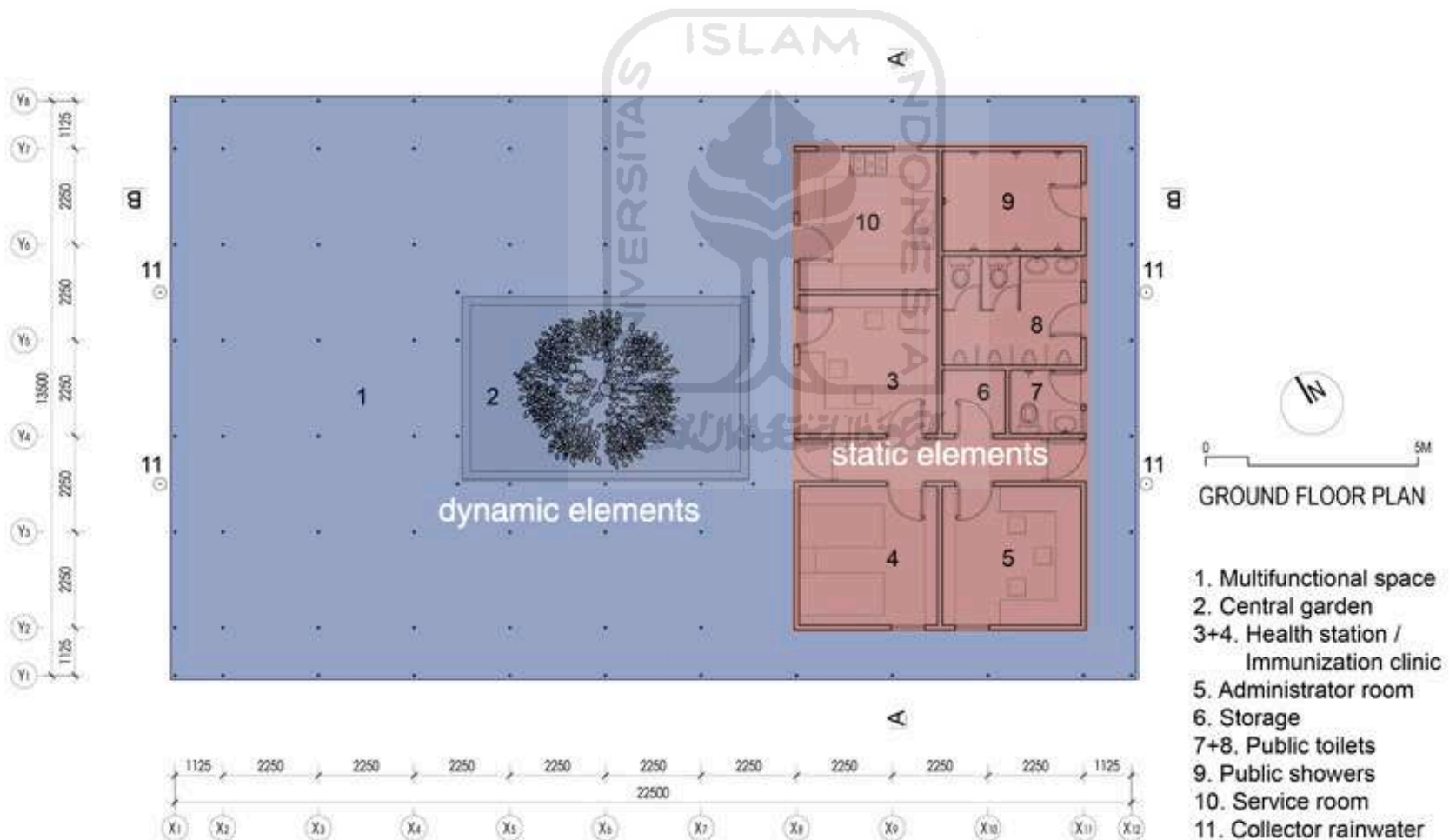
Figure 73: The space around the central garden is a designated dynamic space for changing uses
Source: ArchDaily (2015)



Application of Open Building

The application of open building in this design is adapted for changes that are faster and more frequent than the normal pace, by making the infill level as flexible as it could, and serving as a multifunction space that can be changed daily according to the situation and needs. The support level are gathered in one place to make sure that functions that need specific infrastructure such as clinic, kitchen and shower can be accommodated without limiting the flexibility of the building.

Figure 74: Building plan shows how the static elements are gathered in order for the dynamic element to retain its flexibility.
Source: ArchDaily (2015)



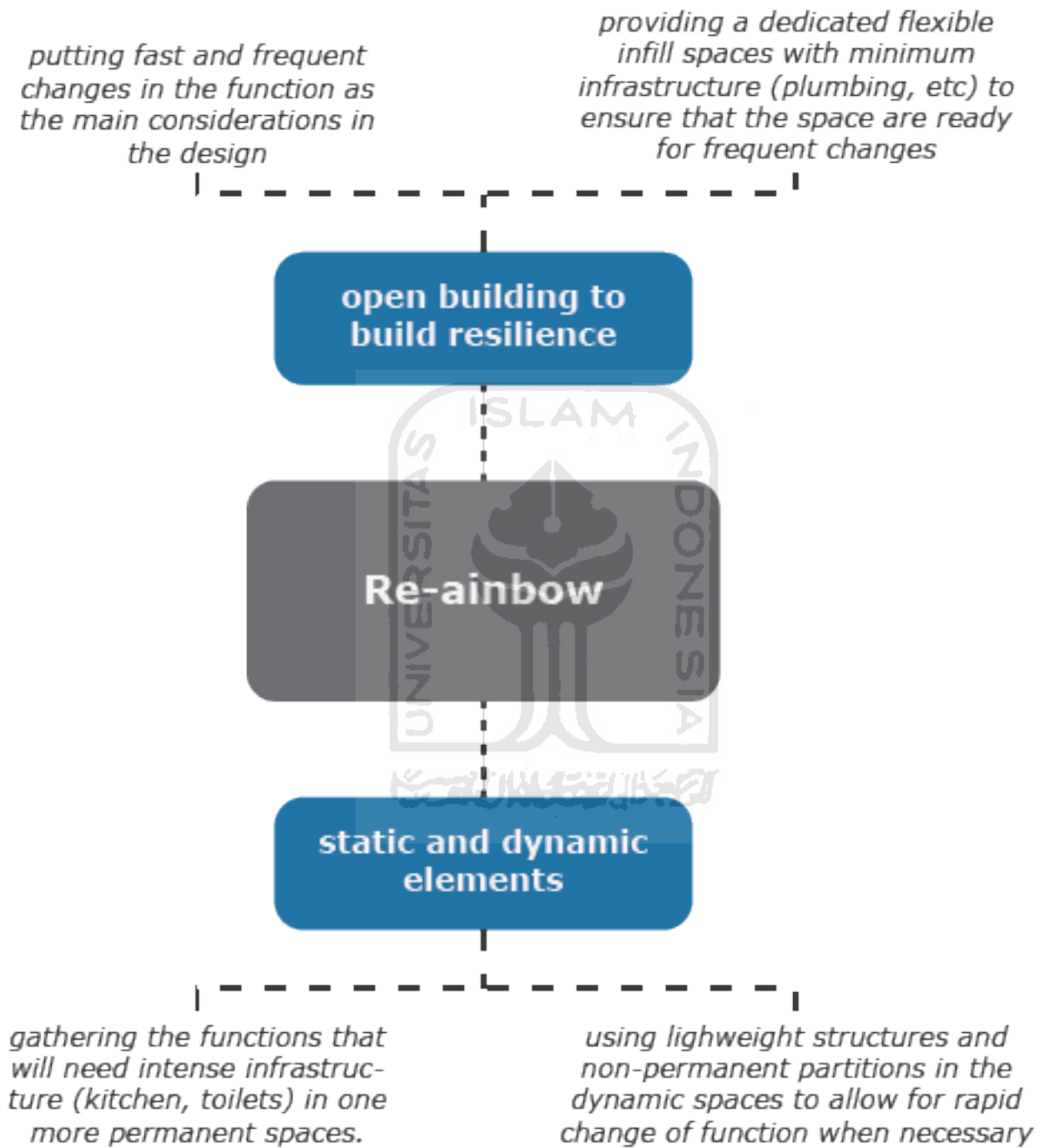


Figure 75: The application of open building approach in Re-ainbow is designed with frequent changes, by designing a dedicated dynamic infill elements for rapid changes.

King's Cross Station

Location : London, United Kingdom
 Architect : John McAslan + Partners

King's Cross Station is one of the most important places in British history, especially with the British being a civilization that is well-known for being mobile throughout the world, it is a staple of British innovation since the Industrial Revolution. The station held its significance to this day, being the interchange station between 5 UK train lines, the London Underground, and the Eurostar; connecting not only London with the rest of the UK but also connecting the UK with Europe and the rest of the world. The station is also popular in mass media, being the start of Paul Theroux's cross-continental journey documented in *The Great Railway Bazaar* and *Ghost Train to Eastern Star*, as well as being the site of Platform 9 ¾ in *Harry Potter*.

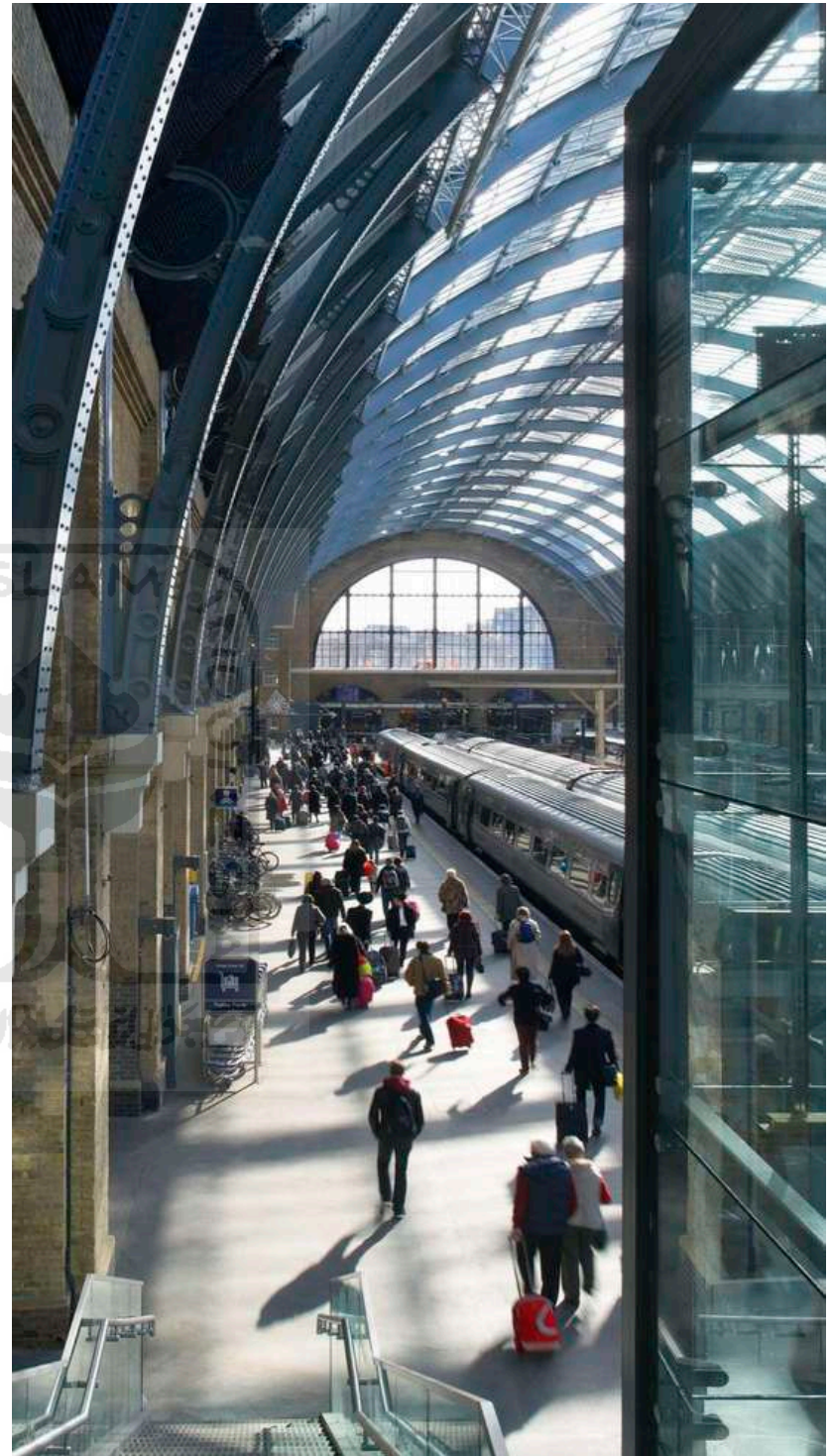


Figure 76: Adaptive reuse in the train shed make use of material complementary to the original.
 Source: ArchDaily (2012)

Figure 77: The adaptation to the train shed building increase the circulation between the platforms.
 Source: ArchDaily (2012)

Methods of Adaptation

Redevelopment of the train station is done through 3 different styles of architecture: reuse, restoration, and new build extensions. The train shed and range buildings have been adapted and re-used, while the facade of the building that was previously obscured has been restored with precision. The newly built extension is built as part of the West Concourse, serving for ticketing, commercial area, as well as connection to the Underground and other public transport. The redevelopment is aimed to increase the capability of the station to serve more people in a better effectivity, especially with the London Olympic brought over visitors from across the world.

Figure 78: Reuse of the train shed with using skylight as natural lighting
Source: ArchDaily, accessed on 18th March 2021.
https://www.archdaily.com/219082/kings-cross-station-john-mcaslan-partners?ad_source=search&ad_medium=search_result_all



Application of Adaptive Reuse Approach

King's Cross Station is one of the good examples of how an adaptive reuse approach should be adopted to a historic building. The use of the approach is handled with care, therefore it is successful in highlighting the iconicity of the original building, while still making an extension. It can be observed how the material used in the adaptation within the original building is complementary to the original materials, using steel and transparent materials such as glass. The extension to the building is done by using material that is contrasting to the original building, therefore not taking the attention away from it, retaining the historical value of the building.

Figure 79: Extension on the West Concourse built with frame material
 Source: ArchDaily, accessed on 18th March 2021. https://www.archdaily.com/219082/kings-cross-station-john-mcaslan-partners?ad_source=search&ad_medium=search_result_all

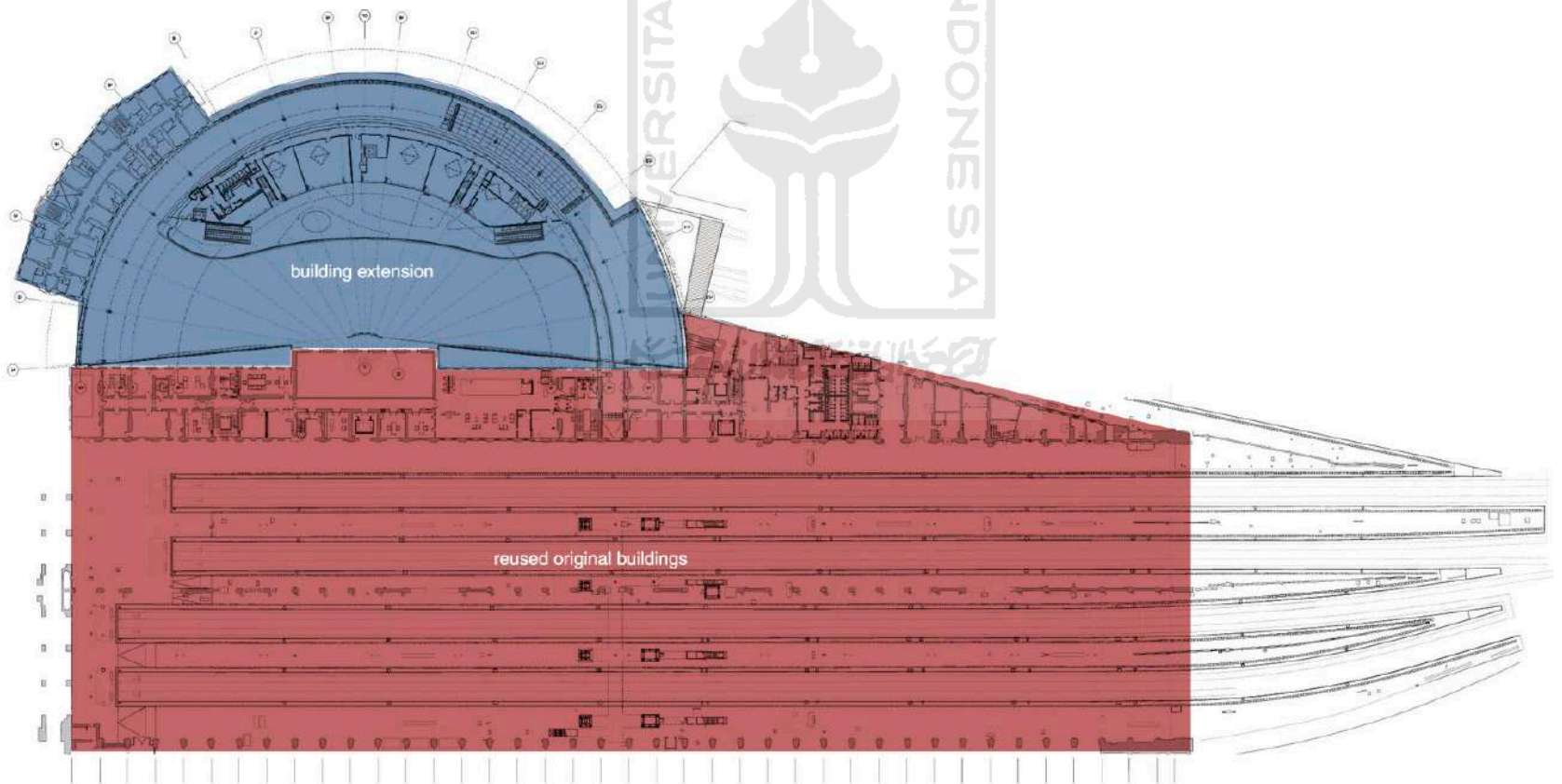


Figure 80: The plan of the building show how the new extension provide the ticketing and other function to fit bigger capacity.
 Source: ArchDaily, accessed on 18th March 2021. https://www.archdaily.com/219082/kings-cross-station-john-mcaslan-partners?ad_source=search&ad_medium=search_result_all

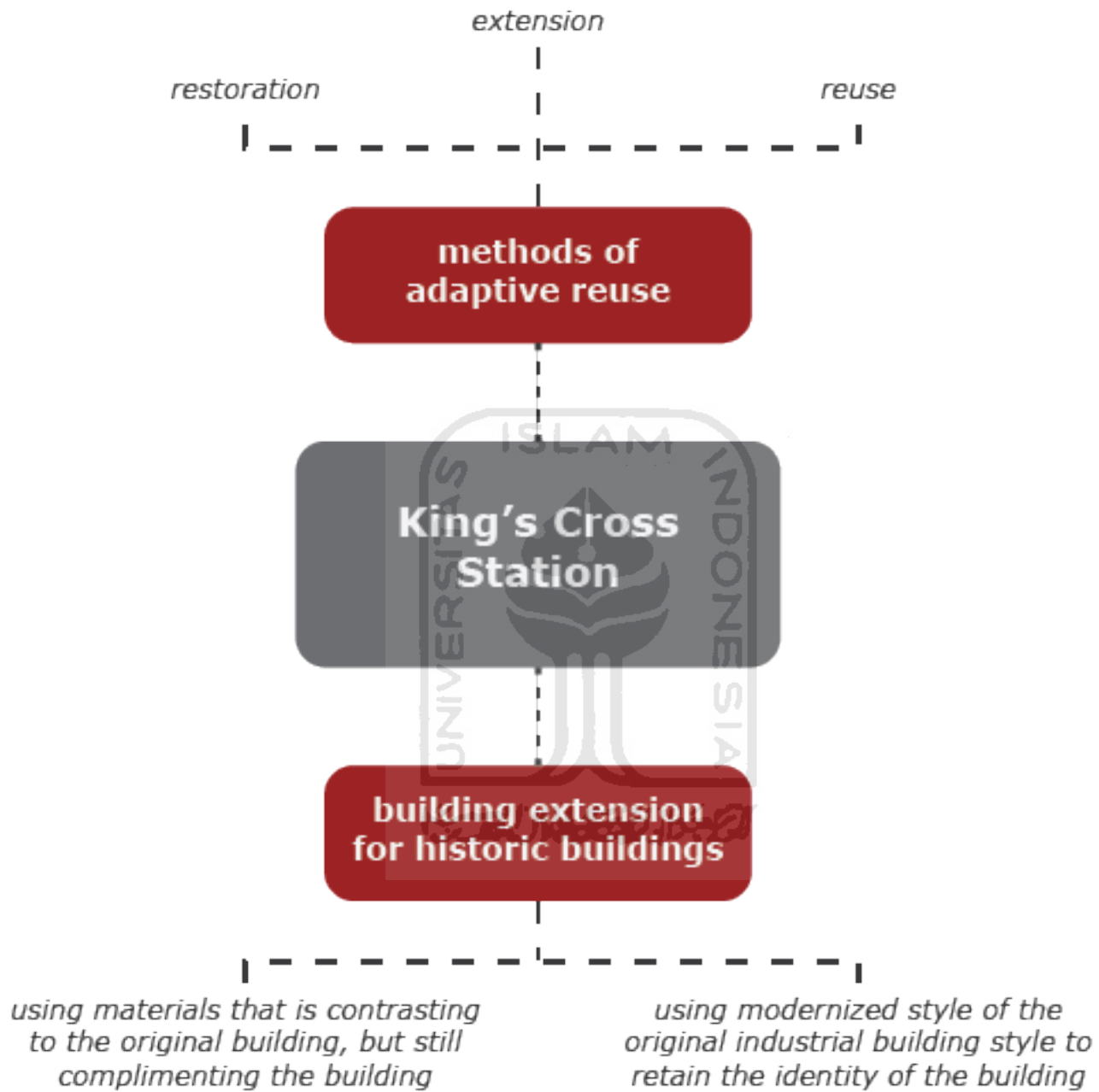


Figure 81: King's Cross Station is an example of adaptively reused buildings that applies three methods in the adaptation successfully, with emphasize on the extension

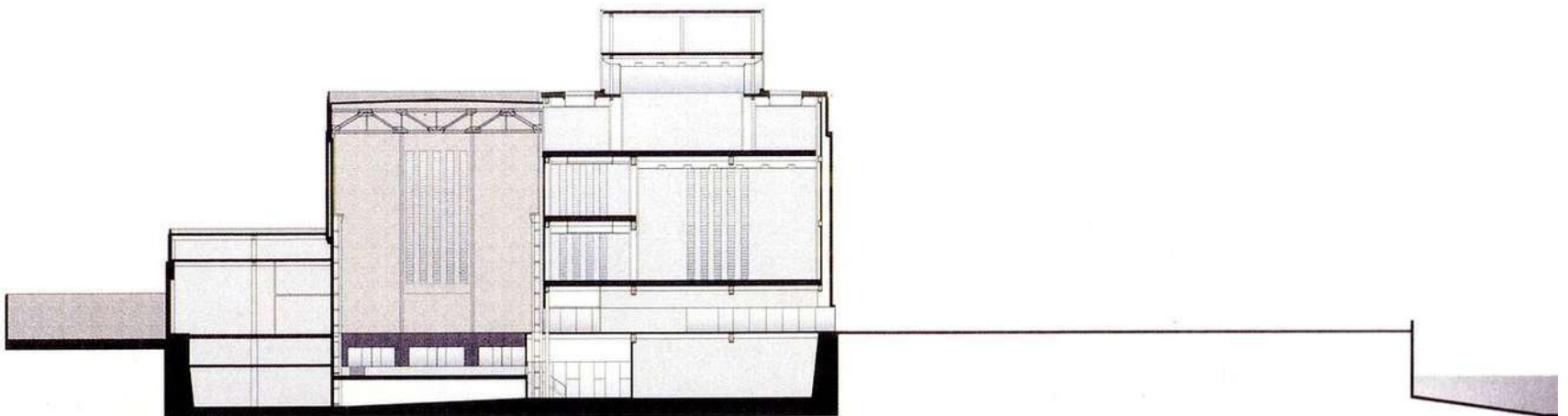
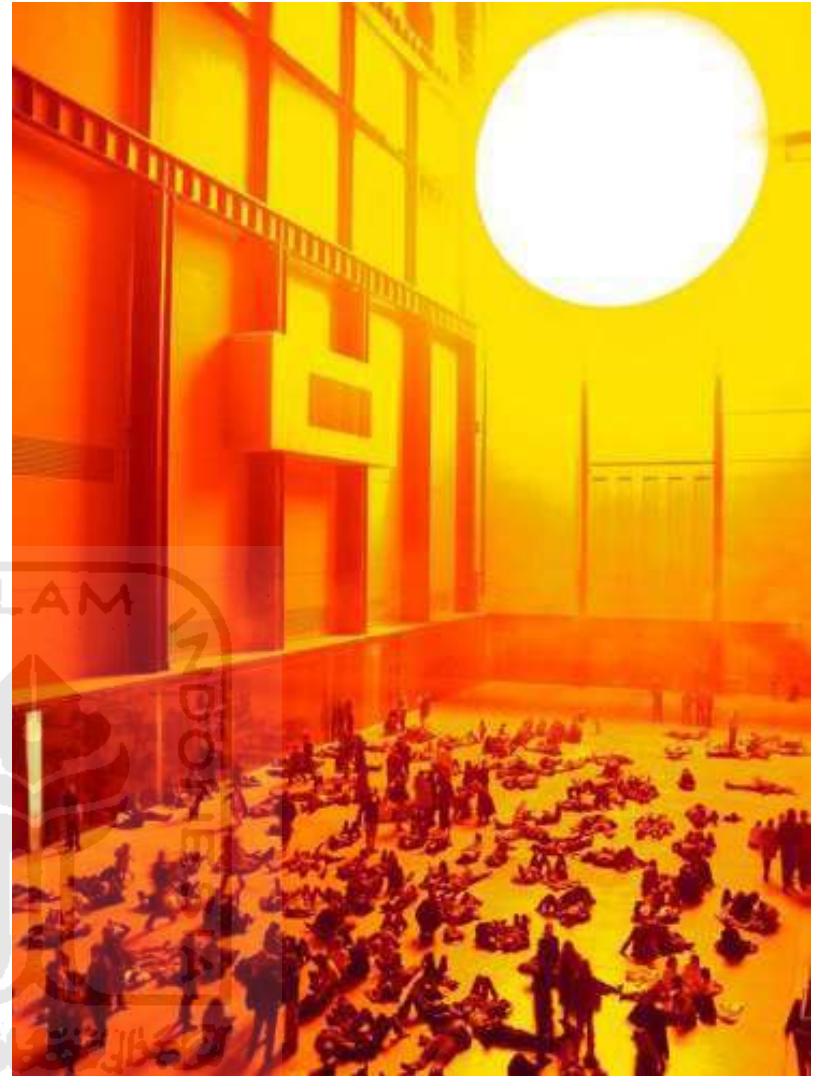
The Tate Modern

Location : London, United Kingdom
 Architect : Herzog & de Meuron

The Tate Modern is redeveloped from London's Bankside Power Station, by rearranging the interior of the building to fit the function of public space, with plaza, gallery, and museum while still retaining the exterior of the building that is iconic for the community, revitalizing the formerly sequestered industrial neighborhood. The redevelopment also opens up the surrounding landscape of the building as a park, highlighting the building and its material as an inviting public space for the people. Herzog & de Meuron enhanced the urban character of the building in the redevelopment without making a major alteration to its form, allowing the building to be an experiential and visual piece for the users.

Figure 82: The interior of the building serve as a visual experience for the user, further supporting the cultural development that might happen within the building
 Source: ArchDaily (2012)

Figure 83: The section of the building shows how the intervention carefully retains the structure in order to keep its character.
 Source: ArchDaily (2012)



Harmonized Intervention

Alterations in the exterior are only done with the addition of the light beam on top of the roof, giving it a contrast to the towering chimney, accentuated by the translucent glass that differentiates it from the original masonry and brickwork facade. The interior of the building adapted seamlessly to the style of the building, with the extreme intervention being avoided to keep the focus of the user to the artworks and how it is highlighted by the architecture. The usage of heavy stairs, cast iron grills, and unfinished wooden flooring is in harmony with the original industrial aesthetic, that has been perceived as the identity of the neighboring community.



Figure 84: The exterior of the building is retained, with alteration to the surrounding landscape to make it more inviting

Source: ArchDaily. accessed on 18th March 2021. <https://www.archdaily.com/429700/ad-classics-the-tate-modern-herzog-and-de-meuron>

Application of Adaptive Reuse Approach

The Tate Modern shows how adaptive reuse can be used to give a much needed public space and an identity to the community by converting an industrial building into a cultural building. The dramatic change of the interior tells a story of London's progression throughout the years, starting from an industrial place with heavy smoke, and evolving into a place of cultural development and economic significance. The harmony of the intervention is done carefully with the choice of material and spatial arrangement, such effort in preserving the building's value is highly appreciated by the community around the building.



Figure 85: The wide-span structure provide th epeople with public plaza as a way to gather and socialize.
Source: ArchDaily (2012)

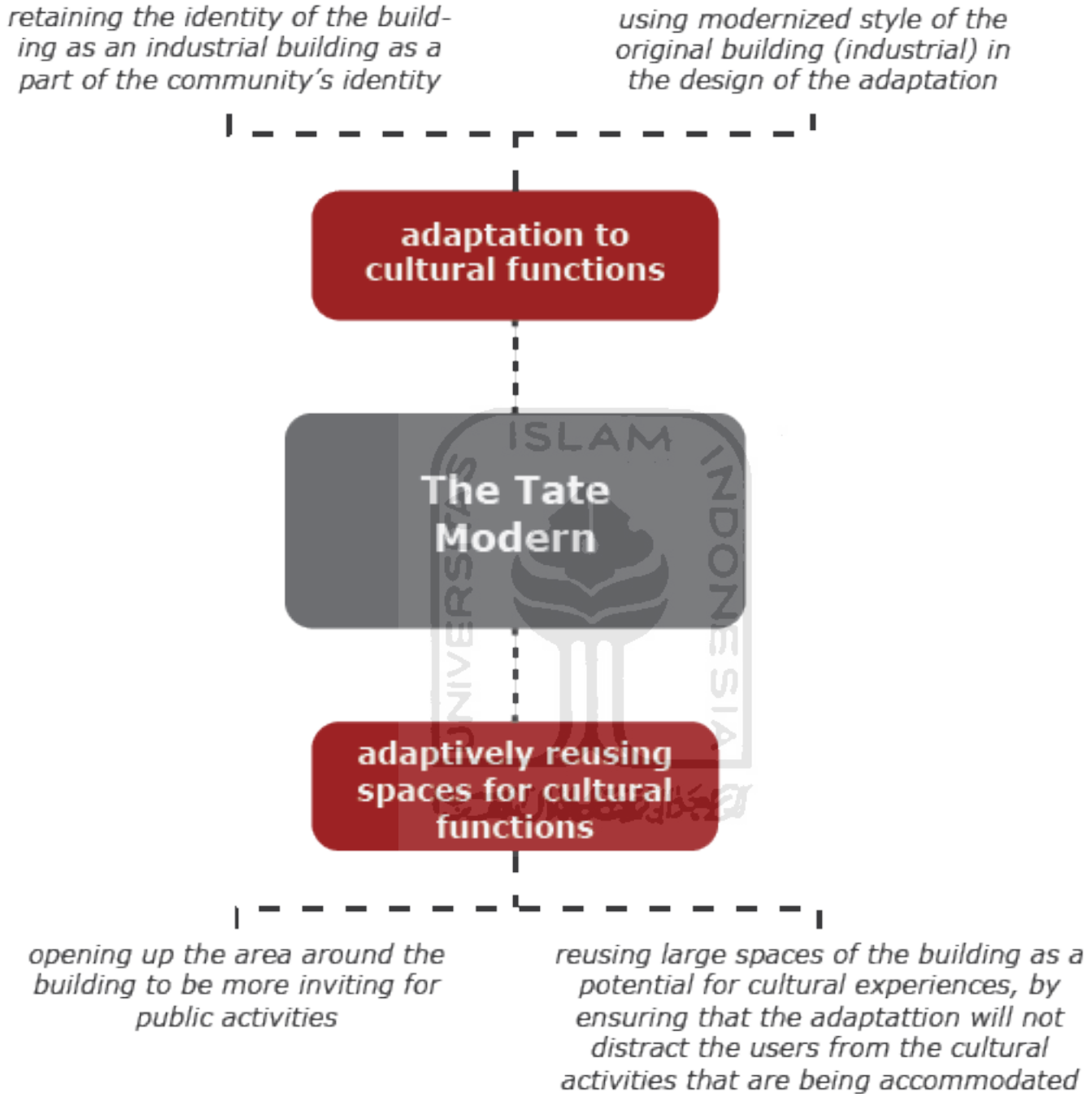


Figure 86: The Tate Modern serves as an example of adaptive reuse that fully retain the exterior of the original building, while only making use of the interior spaces

**Design Problem
Study**

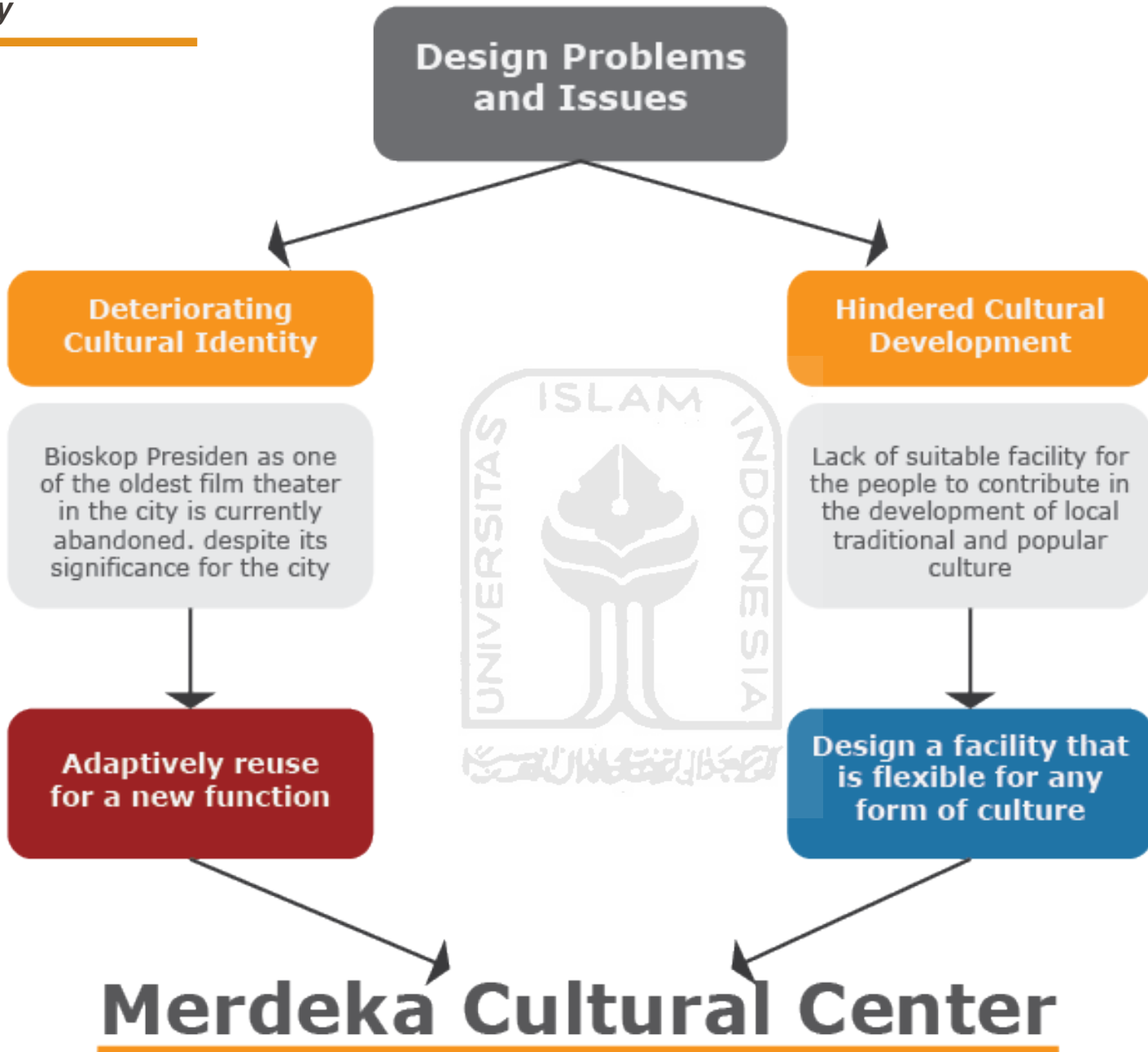


Figure 87: Design problem and hypothesized solution flowchart

3 Analysis and Explorations



Site Analysis



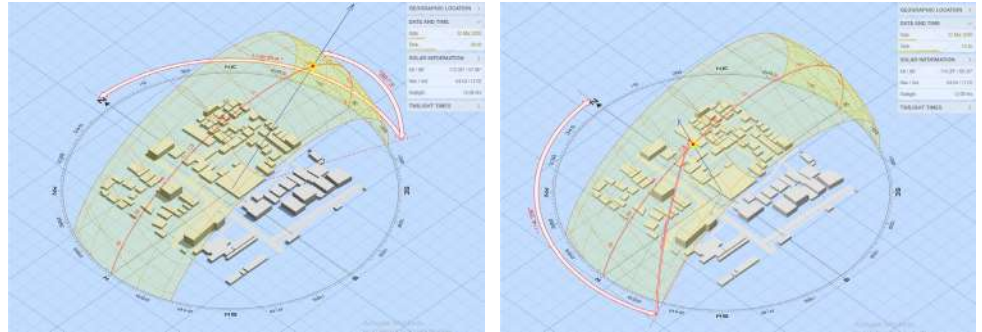
Climate

Sun Movement

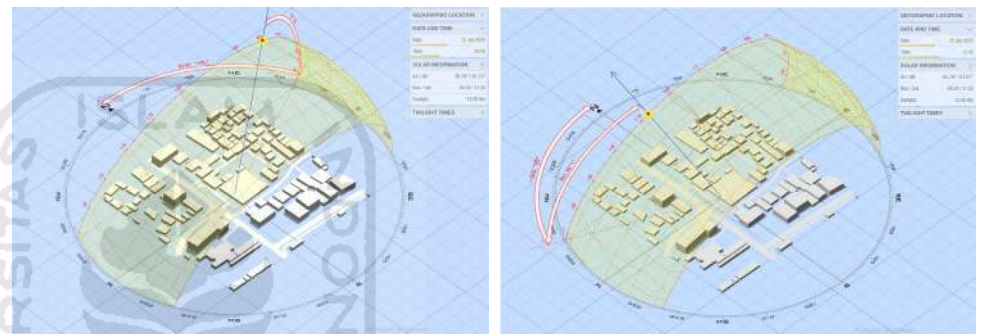
In order to understand the climate of the area, data for the sun movement is taken based on the location. The site itself is located near the equator line, precisely at the coordinates of $6^{\circ}35'22.2''S$ $106^{\circ}47'16.7''E$. Using 3D Sun-Path (Marsh, 2014), data of the sun movement at the extreme times (March, June, September, and December at 09:00 and 12:45), with the note that the sun angles do not take into account the weather in the area.

Figure 88: Sun movement simulation shows that at the extremes the altitude of the sun is ranging from 59 to 61.76 degree.
Source: Marsh (2014)

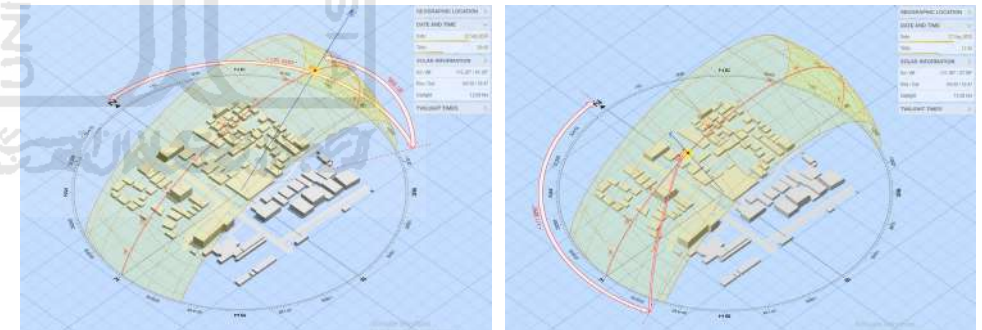
March



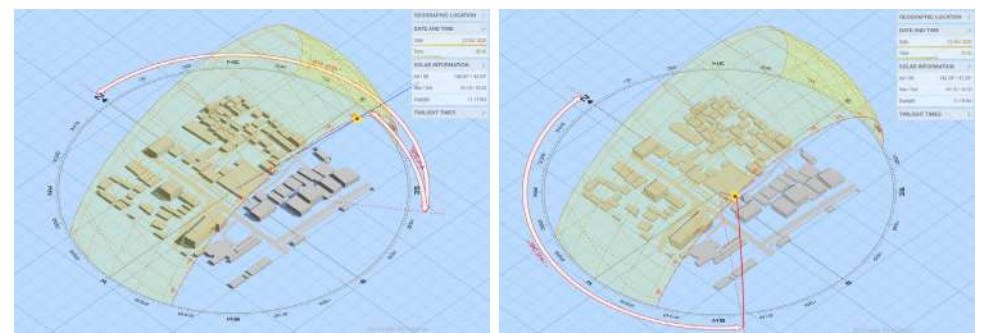
June



September

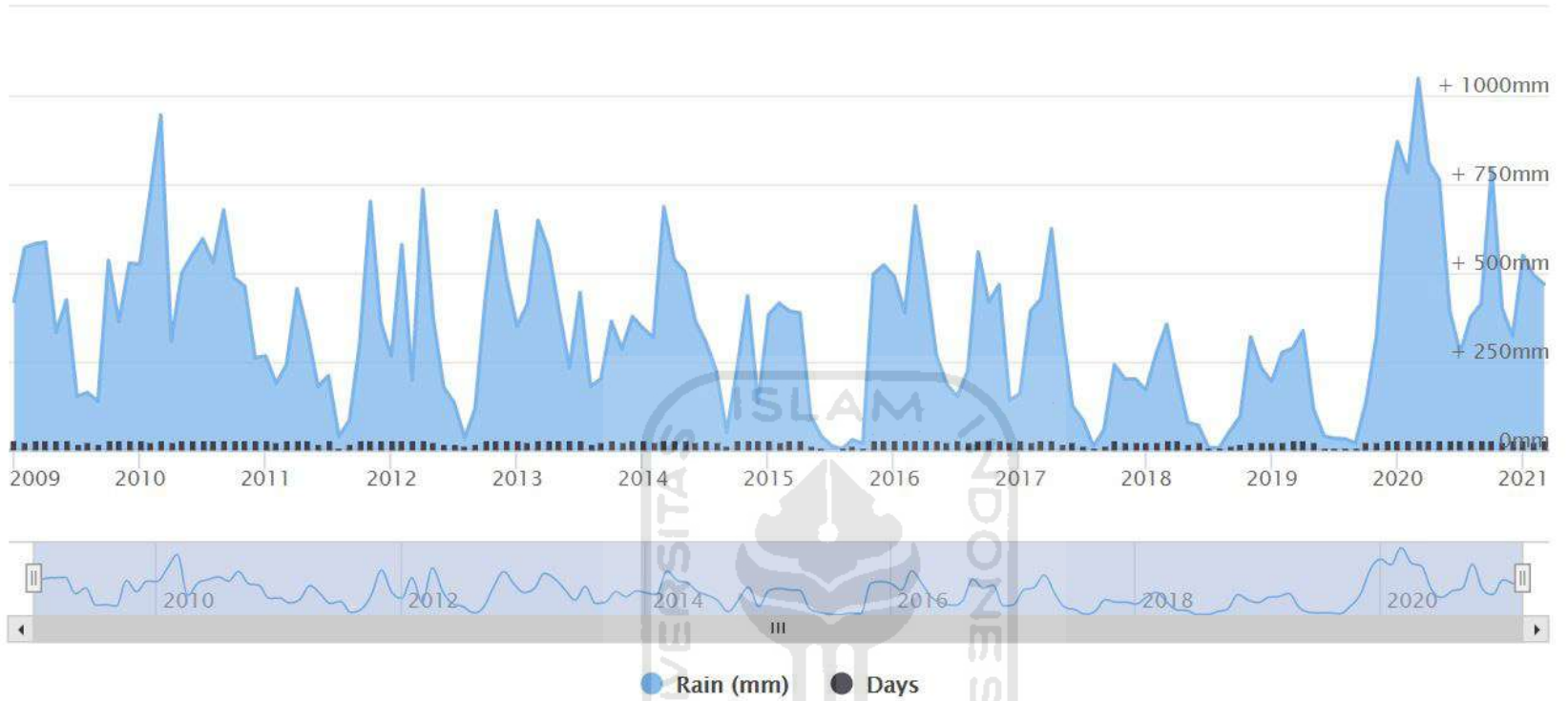


December



Average Rainfall Amount (mm) and Rainy Days

Zoom 1m 3m 6m YTD 1y All

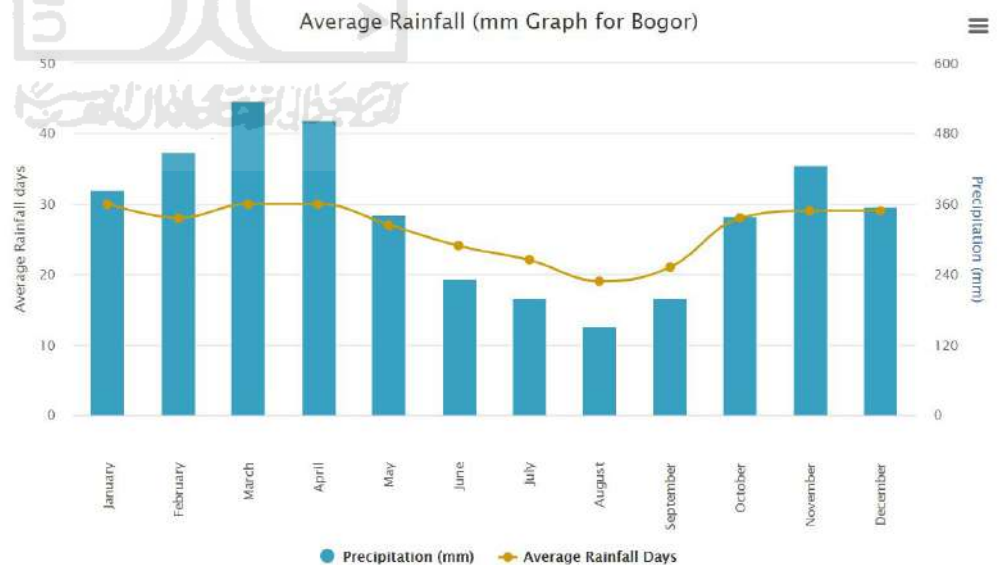


Rainfall

Known as “the city of rain”, Bogor has a high rainfall average and rainy days as shown in the figure (worldweatheronline, 2021). It can be seen that from 2019 Bogor is experiencing an extreme rise in rainfall, however in the monthly averages throughout the year it can be seen that the highest rainfall can be found between February to April, with March as the peak (536 mm with 30 rainy days).

Figure 89: Data from weather station shows that Bogor is experiencing an increase in rainfall, with the average peak happening in March

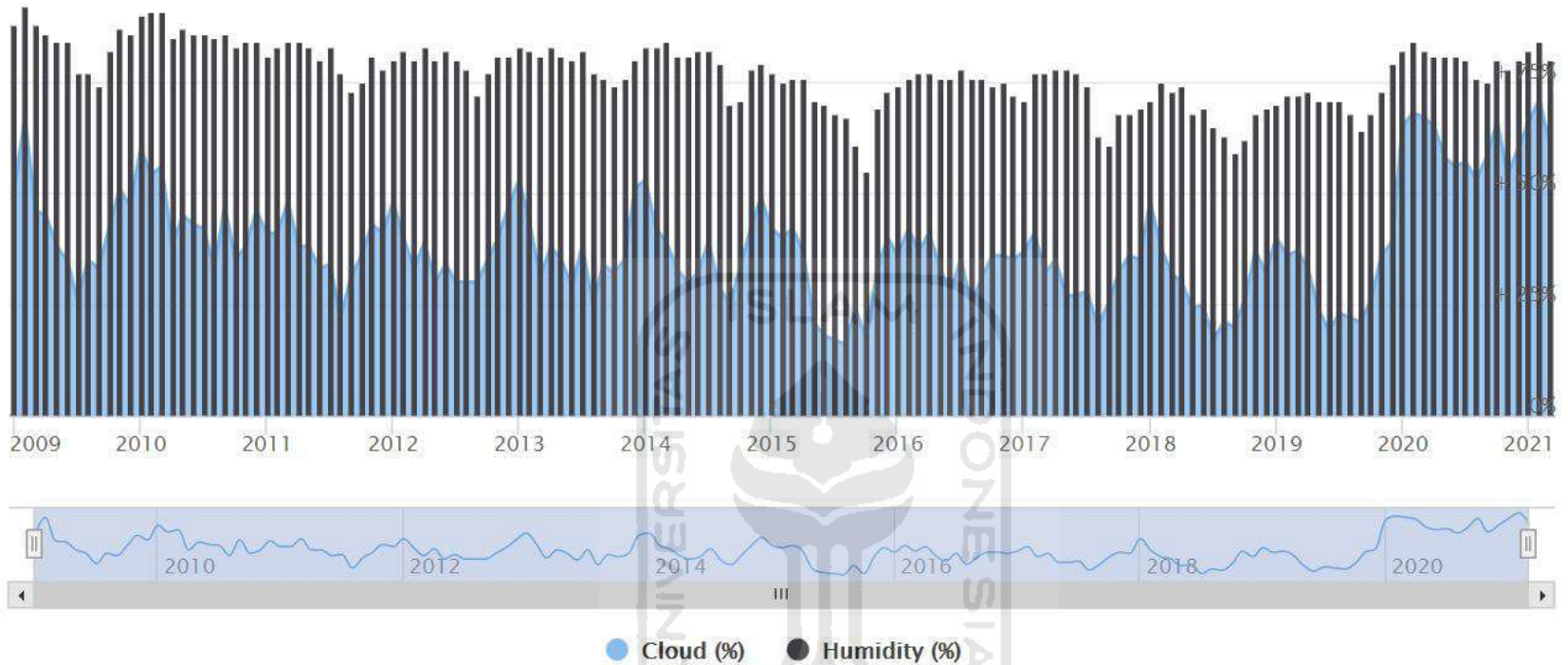
Source: worldweatheronline (2021). Accessed in 6th April 2021. <https://www.worldweatheronline.com/bogor-weather-averages/west-java/id.aspx>



Bogor

Average Cloud and Humidity (%)

Zoom 1m 3m 6m YTD 1y **All**



WorldWeatherOnline.com

Humidity and Cloud

The average humidity in the area is relatively stable as shown in the figure (worldweatheronline, 2021), with the highest humidity reaching 92% in February 2009, while the average cloud percentage is experiencing a rise following the rainfall from 2019 with the recent average peak being 71% in February 2021.

Figure 90: Data from weather station shows that Bogor has a relatively stable humidity, while the cloud percentage follows the rainfall trend.
 Source: worldweatheronline (2021). Accessed in 6th April 2021.
<https://www.worldweatheronline.com/bogor-weather-averages/west-java/id.aspx>

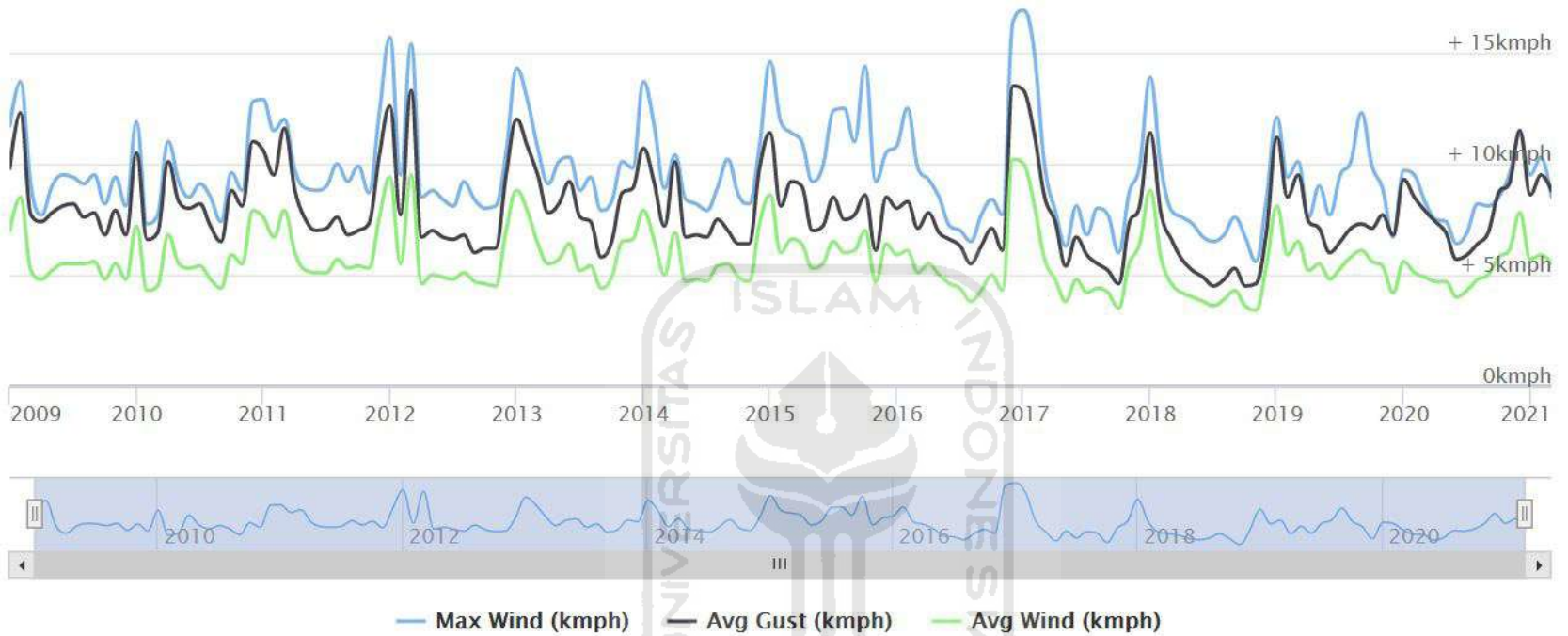


WorldWeatherOnline.com

Bogor

Average and Max Wind Speed and Gust (kmph)

Zoom 1m 3m 6m YTD 1y All

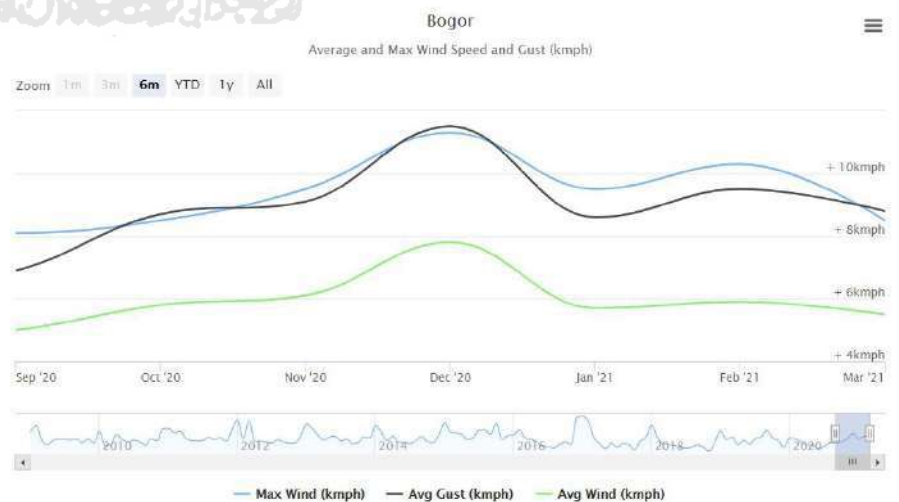


WorldWeatherOnline.com

Wind and Gust

The wind and gust in the area is relatively high, with the average ranging from 5 to 7.8 kmph in the last 6 months as shown in the figure (worldweatheronline, 2021). From the data it can be seen that the rise of wind speed and gust often happens at the end of the year, approximately with the start of wet season in the area.

Figure 91: Data from weather station shows that Bogor has a relatively high wind and gust, with the rise start at the approximate start of wet season
 Source: worldweatheronline (2021). Accessed in 6th April 2021. <https://www.worldweatheronline.com/bogor-weather-averages/west-java/id.aspx>



WorldWeatherOnline.com

Regulation

Land Use



Residential



Commercial



Proposed Site

Figure 92: Map of land use around the site
Source: Google Maps and Pemkot Bogor

Size and Building Area

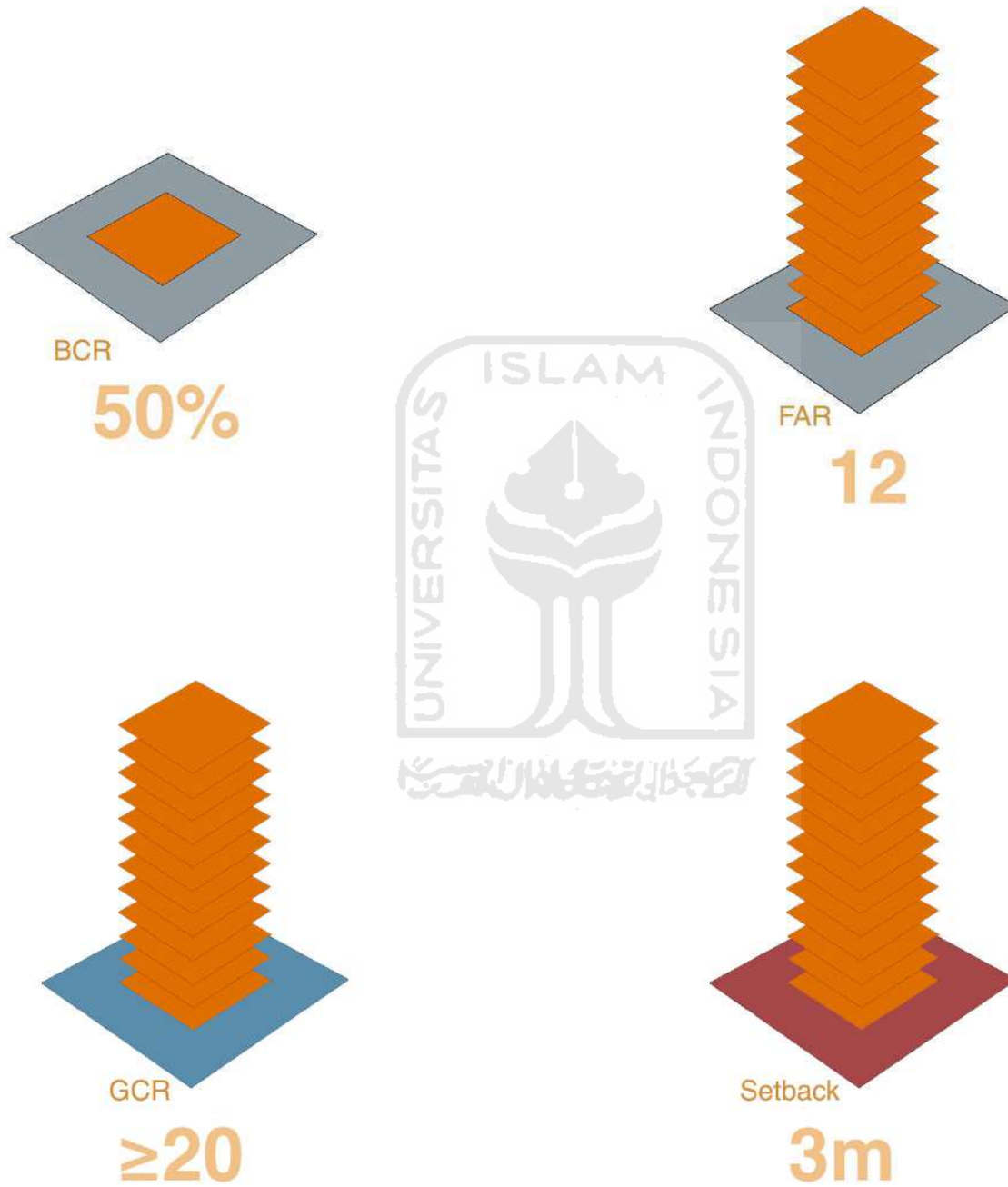
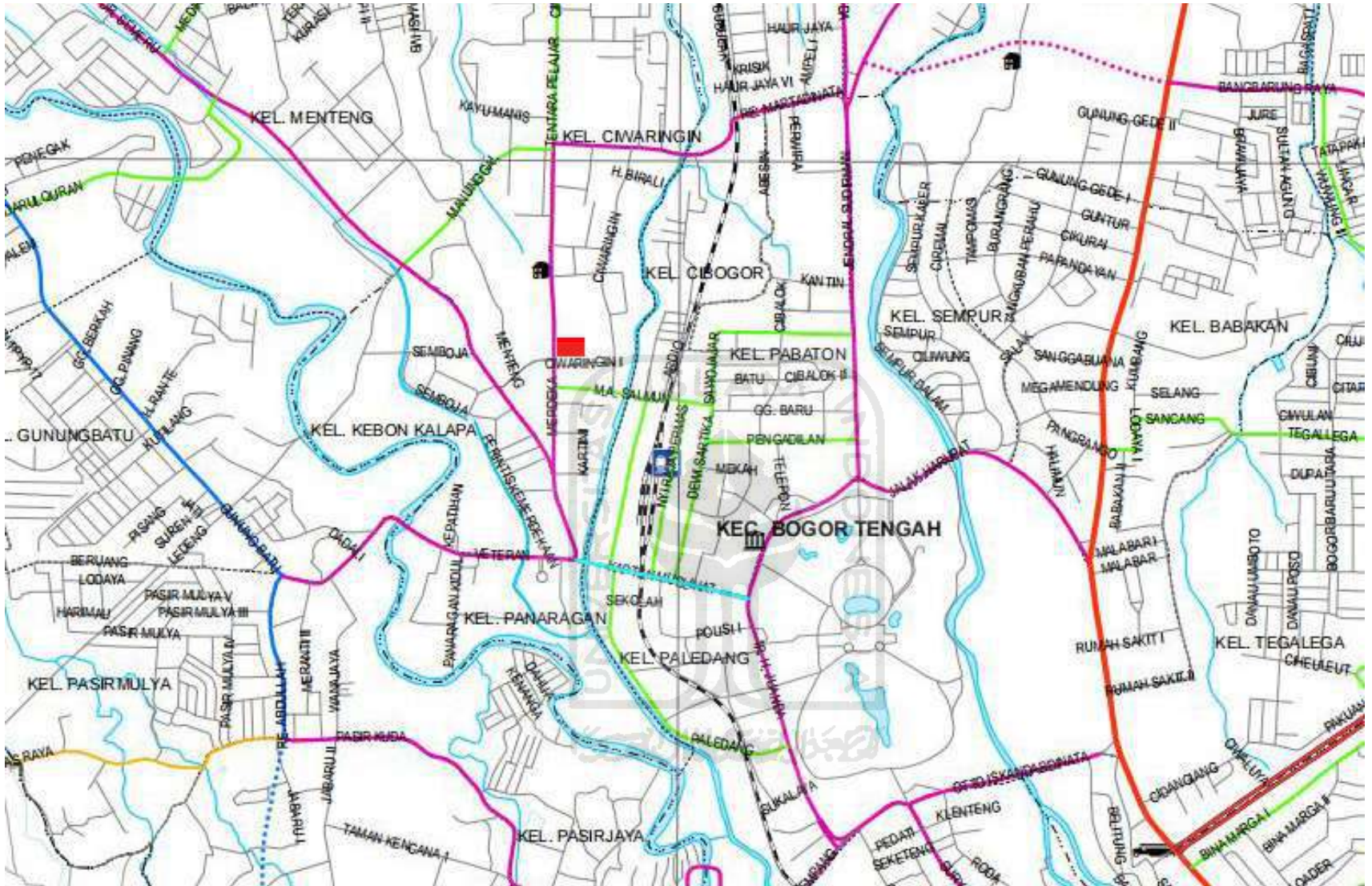


Figure 93: Site regulations regarding planning.
Source: Pemkot Bogor

Circulation & Traffic

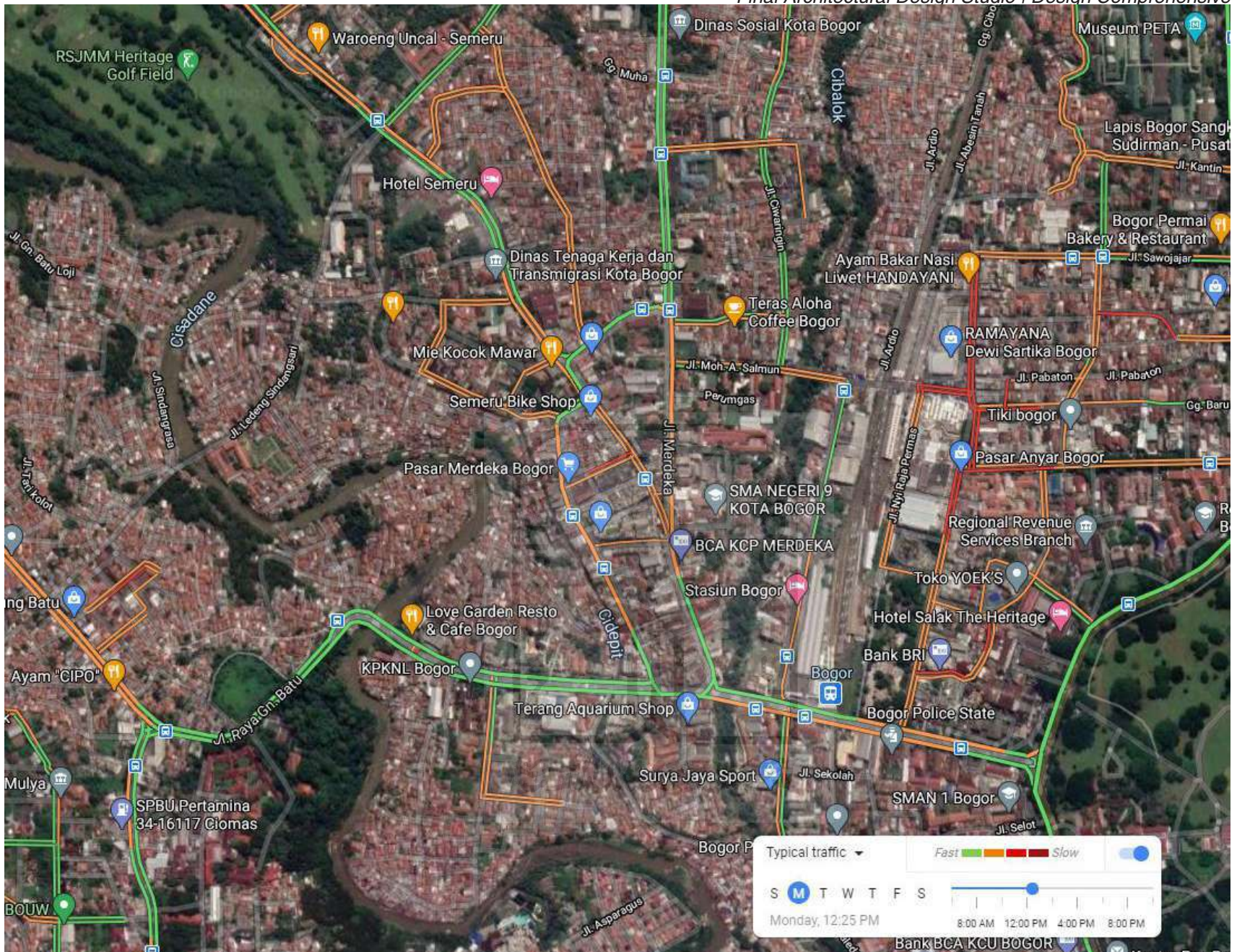


Circulation

The site is located at JL Merdeka, listed under the category of secondary artery street that connects Central Bogor with Western Bogor, making it important in the transportation of goods and people.

Figure 94: Map of transportation and circulation
Source: Pemkot Bogor

KETERANGAN	
Batas Administrasi	Jaringan Jalan Kewenangan Kota
Batas Kota	Jalan Arteri Sekunder
Batas Kecamatan	Jalan Kolektor Sekunder
Batas Kelurahan	Jalan Lokal Primer
Kantor Pemerintahan	Jalan Lokal
Kantor Walikota	Rencana Jalan Arteri Sekunder
Kantor Kecamatan	Rencana Jalan Kolektor Sekunder
Jaringan Sungai dan Perairan	Jaringan Rel Kereta Api
Sungai	Rel Kereta Api
Danau/Situ	Infrastruktur Transportasi Darat
Jaringan Listrik	Terminal
SUTT	Rencana Terminal
Jaringan Jalan Kewenangan Nasional	Terminal Agribisnis
Jalan Tol	Stasiun Kereta Api
Jalan Arteri Primer	Stoplot Kereta Api
Rencana Jalan Tol	Rencana Terminal Barang
Jaringan Jalan Kewenangan Provinsi	
Jalan Kolektor Primer	
Rencana Jalan Kolektor Primer	



Traffic

Despite the location being at the secondary artery street, the traffic in the area is still categorized as medium traffic, with congestion happening mostly because of major intersections, and people stopping at the market.

Figure 95: Average traffic data in the area taken at Monday at 12:25 PM
 Source: Google Maps. Accessed 7th April 2021. <https://www.google.com/maps/@-6.5912067,106.7924695,1931m/data=!3m1!1e3!5m1!1e1>

SWOT Analysis

Non-Architectural

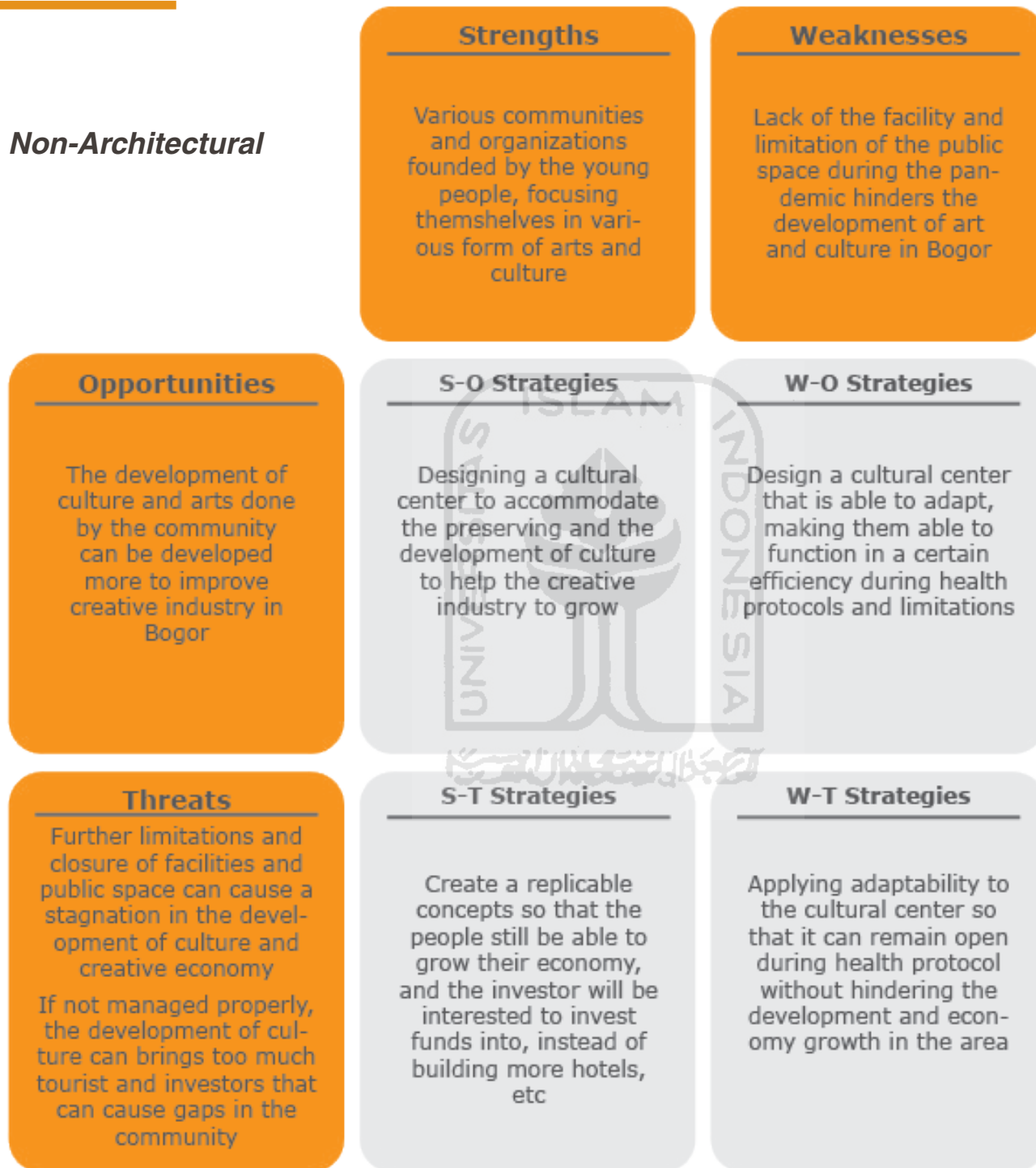


Figure 96: Non-Architectural SWOT Analysis

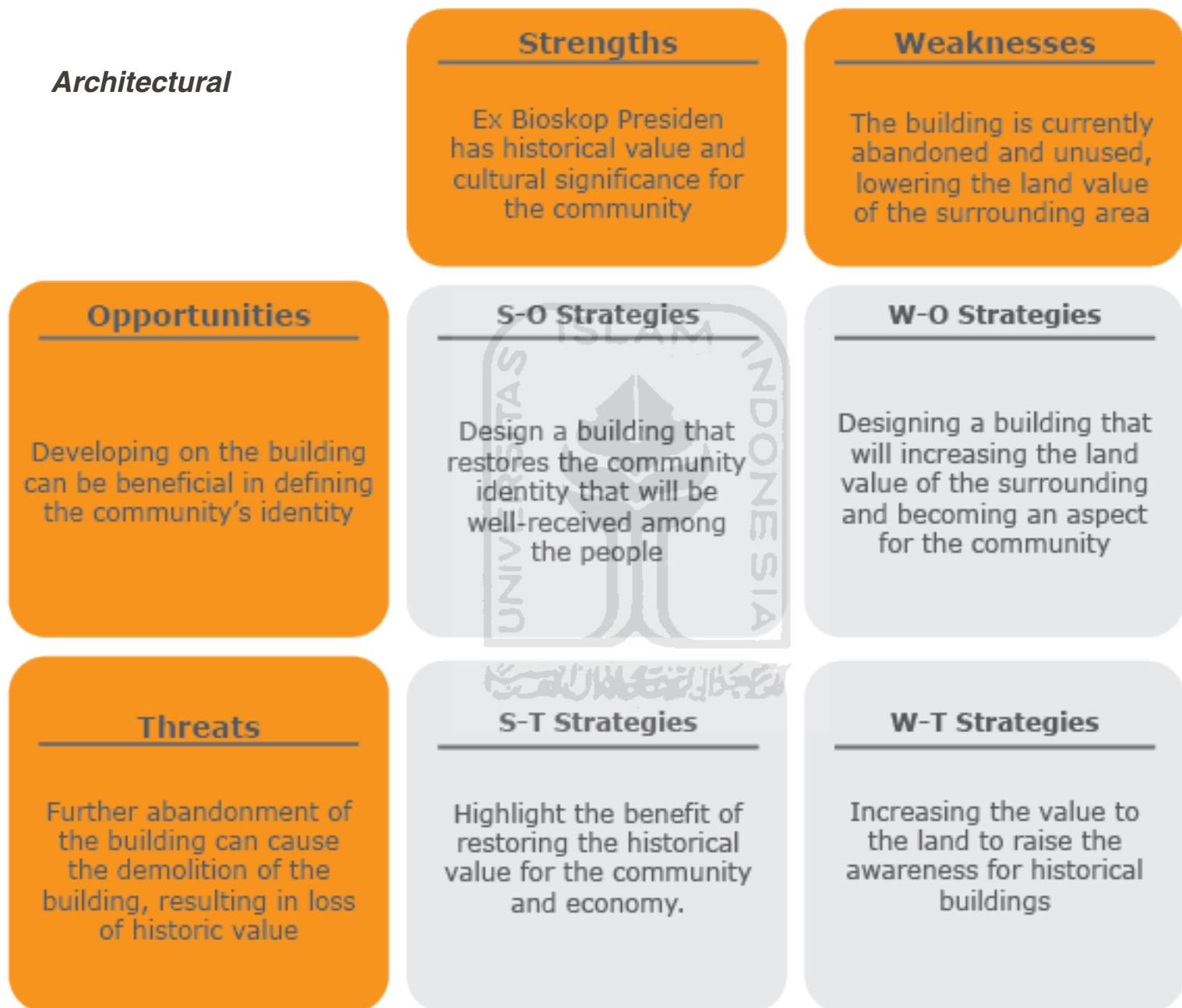


Figure 97: Architectural SWOT Analysis

Typology Analysis



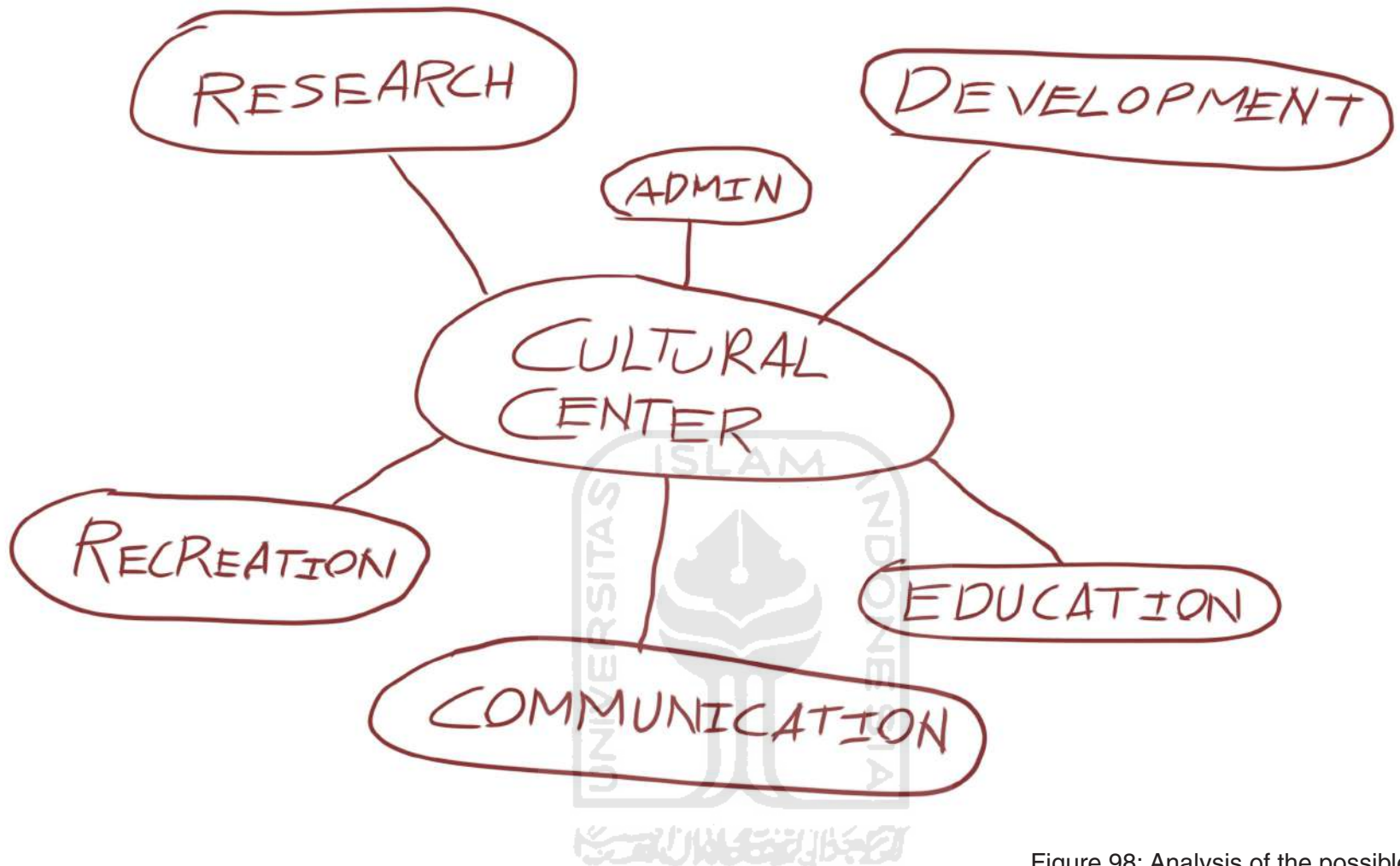


Figure 98: Analysis of the possible functions in a Cultural Center

Flexible Functions

Possible spaces are separated based on the functions that might need to be accommodated, without using a too specific functionality to avoid inflexibility in the designing process. Some of these functions can be observed to be more flexible in the usage of space such as communication, education, and recreation; while some are more rigid such as research and administration.

Flexible Programming

The programming of the building will be designed as an open plan building with overlapping functions, allowing customization in the spatial arrangement according to the function that will occur in the room. This will be beneficial for the building's function as a place for cultural development, allowing the user to use the building as they see fit, while also this reinforces the ability for the building to adapt to changes that might have to occur due to health protocol or other situation.

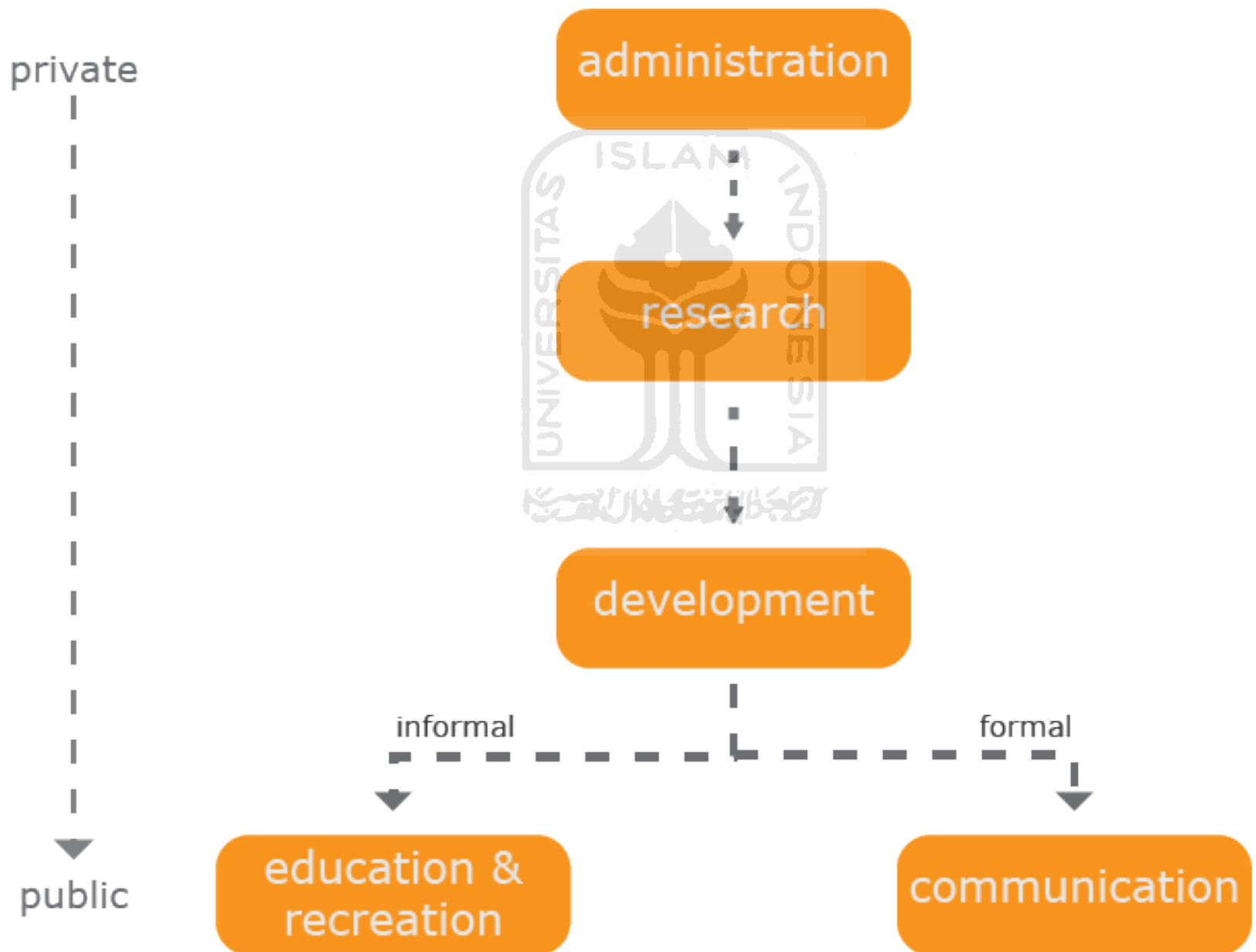
ADMINISTRATION			
Activities	Characteristic	Specific Function	Typology
Administration	Private	Management	Office
Archive	Artificial lighting, controlled humidity	Storage, Study	Storage Space Study Space
RESEARCH			
Activities	Characteristic	Specific Function	Typology
General Study	Sufficient lighting, adjustable studying space	Studying and research	Library Reading Space
Literature and Visual Study	Sufficient lighting, adjustable and spacious studying space	Studying, research, and sketch	Visual Archive Study Space
DEVELOPMENT			
Activities	Room Types / Characters	Specific Function	Typology
Screenwriting	Adjustable immediate working space	Screenwriting, script-reading, blocking	Writing Room
Painting and Sculpting	Controllable lighting, well ventilated, versatile rearrangeable space	Sculpting, painting, paint-mixing	Art Studio Workshop
Storage	Controlled humidity, UV safe	Storage	Art Supply Storage
COMMUNICATION			
Activities	Room Types / Characters	Specific Function	Typology
Exhibition	Controllable and flexible lighting, versatile arrangeable space	Exhibition	Exhibition Hall
Performing Art	Controllable lighting, good accoustic, adjustable audio infrastructure, sufficient audience space and visibility	Performing Arts	Theater
			Backstage
Film Screening	Controllable lighting, good accoustic, adjustable audio infrastructure, sufficient audience space and visibility	Film Screening	Cinema Theater
			Projector
Forum	Controllable lighting, good accoustic, adjustable audio infrastructure, sufficient audience space and visibility	Discussion, presentation	Forum Hall
EDUCATION & RECREATION			
Activities	Room Types / Characters	Specific Function	Typology
Class Studying	Sufficient lighting, adjustable studying space	Teaching, learning, workshopping	Classroom
Small Forum	Controllable lighting, adjustable audio infrastructure, sufficient audience space and visibility	Discussion, presentation	Forum Room

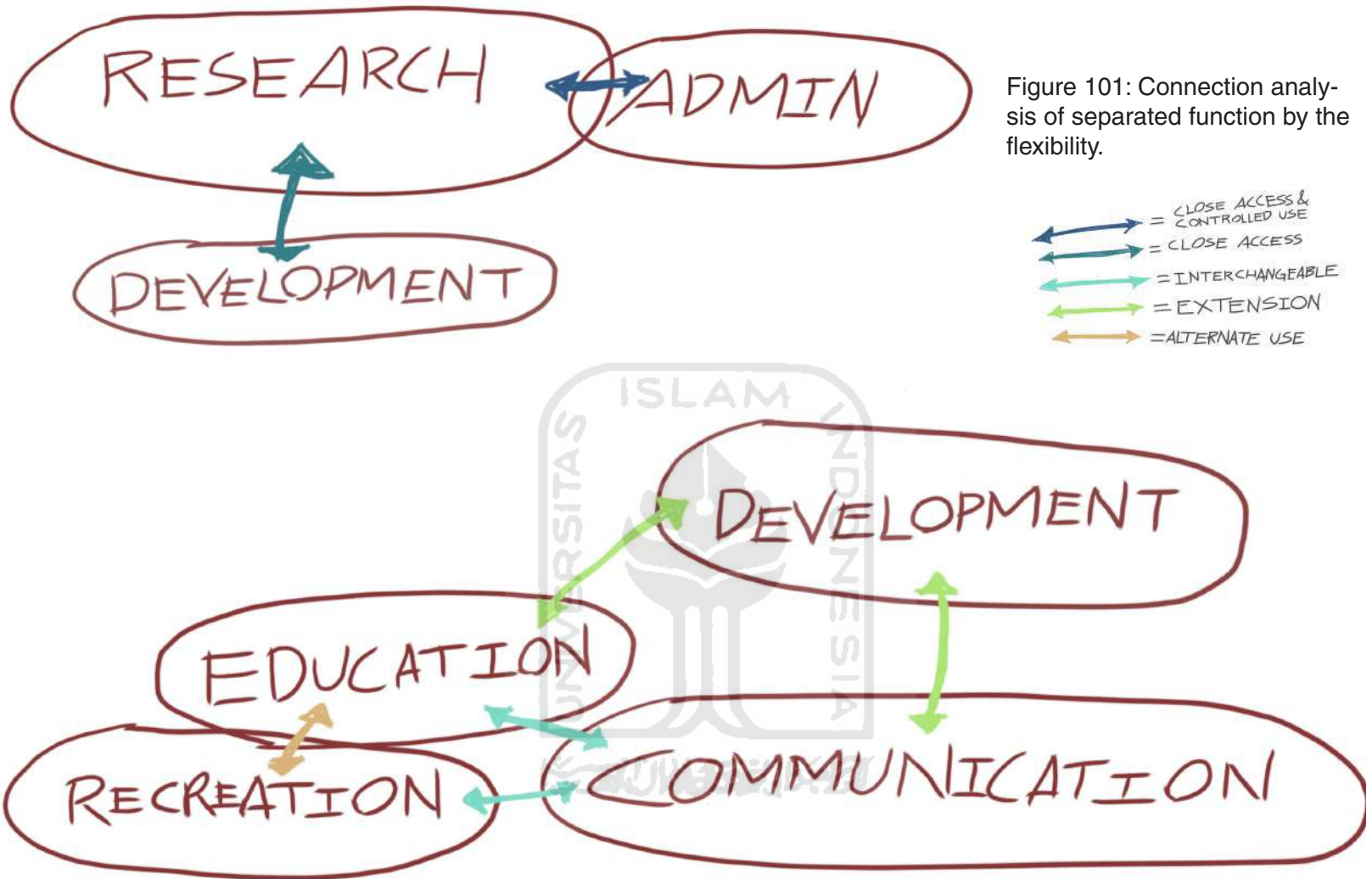
After the main functions already established, the specific activities and function of each functions are laid out in order to find the character of each function, and the connection with each other.

Figure 99: Preliminary programming of the activities in the relation to the characteristic and room typology

Each function has a different level of interaction, ranging from private functions such as research where the interaction between users is done only as necessary, to communication and education functions where interaction is open and encouraged. Communication and education functions also have different levels of interaction, as interaction in communication functions are more formal compared to education & recreation functions.

Figure 100: Analysis of the level of interaction in each functions
Based on: Kendall (2010), Schmidt III, Eguchi, Austin, & Gibb (2010)

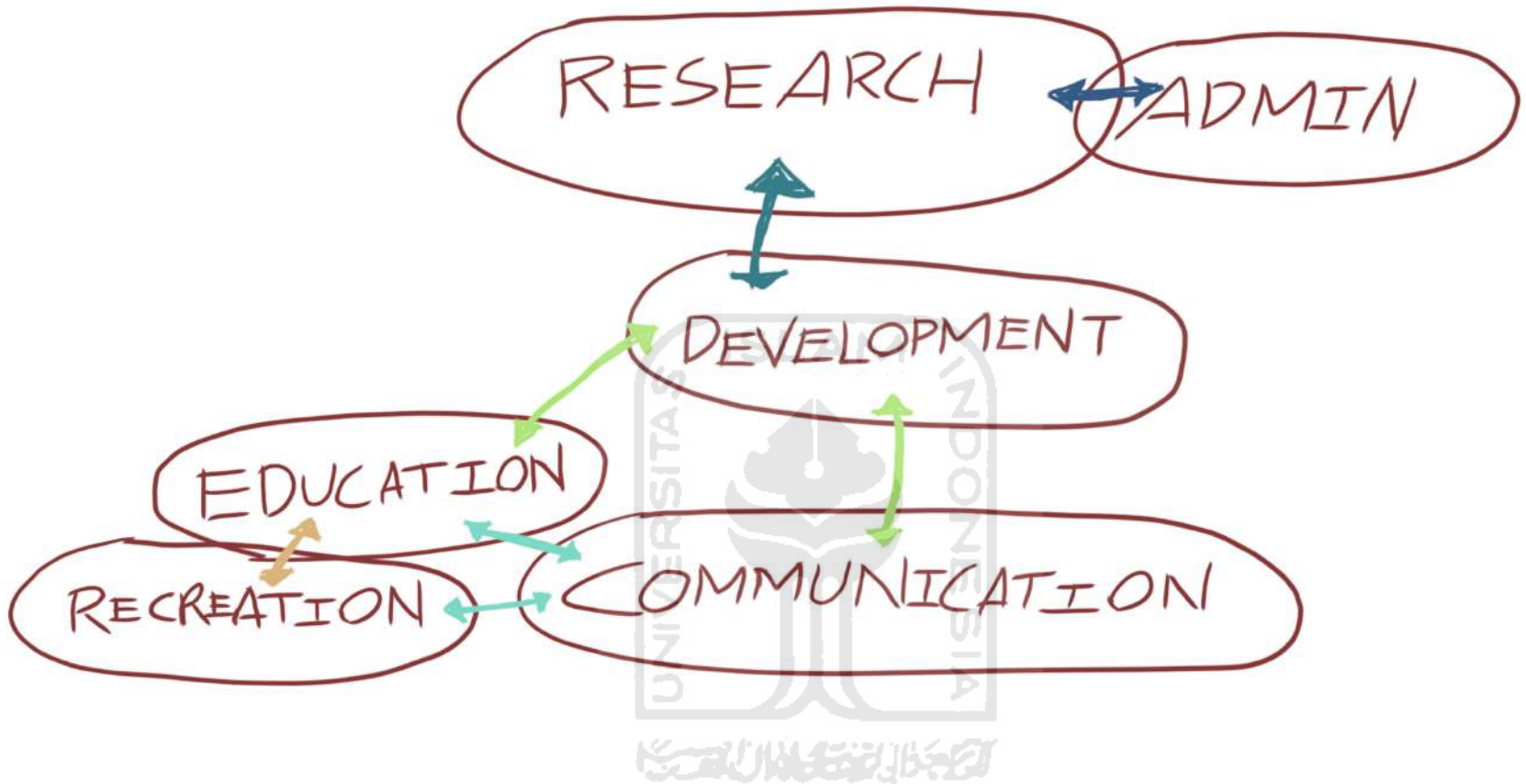




The functions are analysed by the connection and relation to the other functions, it is found that some functions can benefit from having specific connections with another function.

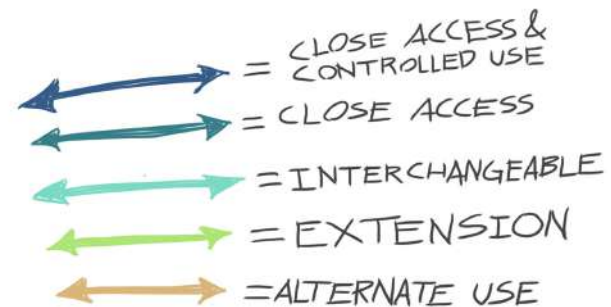
The research function can benefit from administration by having a controlled access to administration's documents storages, benefiting from the records of local data.

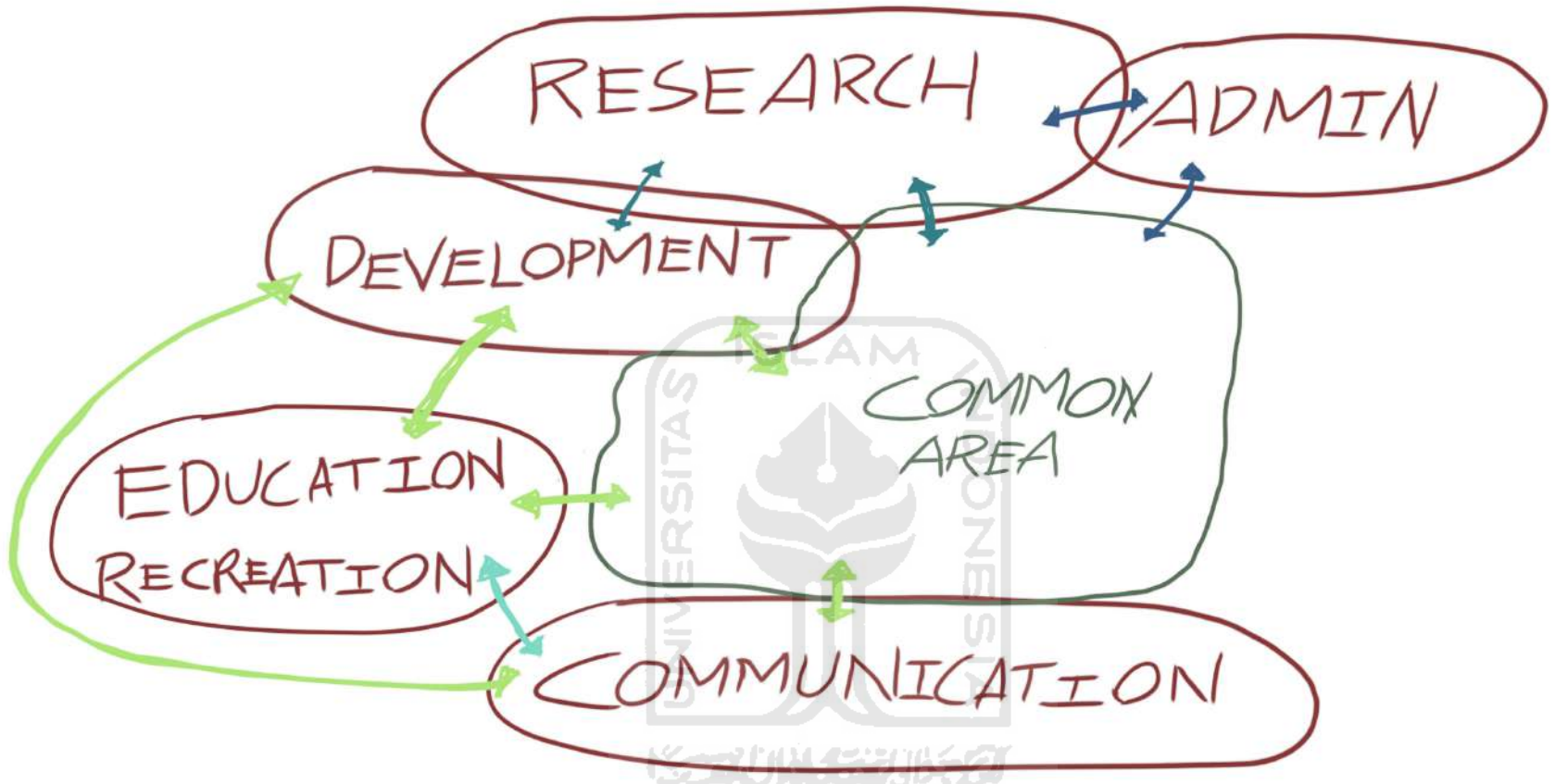
It is also found that functions such as education, recreation, communication and development have interesting connections. Education and recreation functions can be used alternatively, as the two functions are similar to each other. On the other hand, development functions can benefit by extending to the other functions.



The connection of the functions are then put together to fit it as a whole. Here it is found that the development functions can serve as a transition to more rigid function such as research.

Figure 102: Connection analysis of functions as a whole





After the function analysed as a whole, a common area is added and connected to the functions. The common area serve as a public space with complete flexibility as a transition before entering the specific functions

Figure 103: Addition of common area.

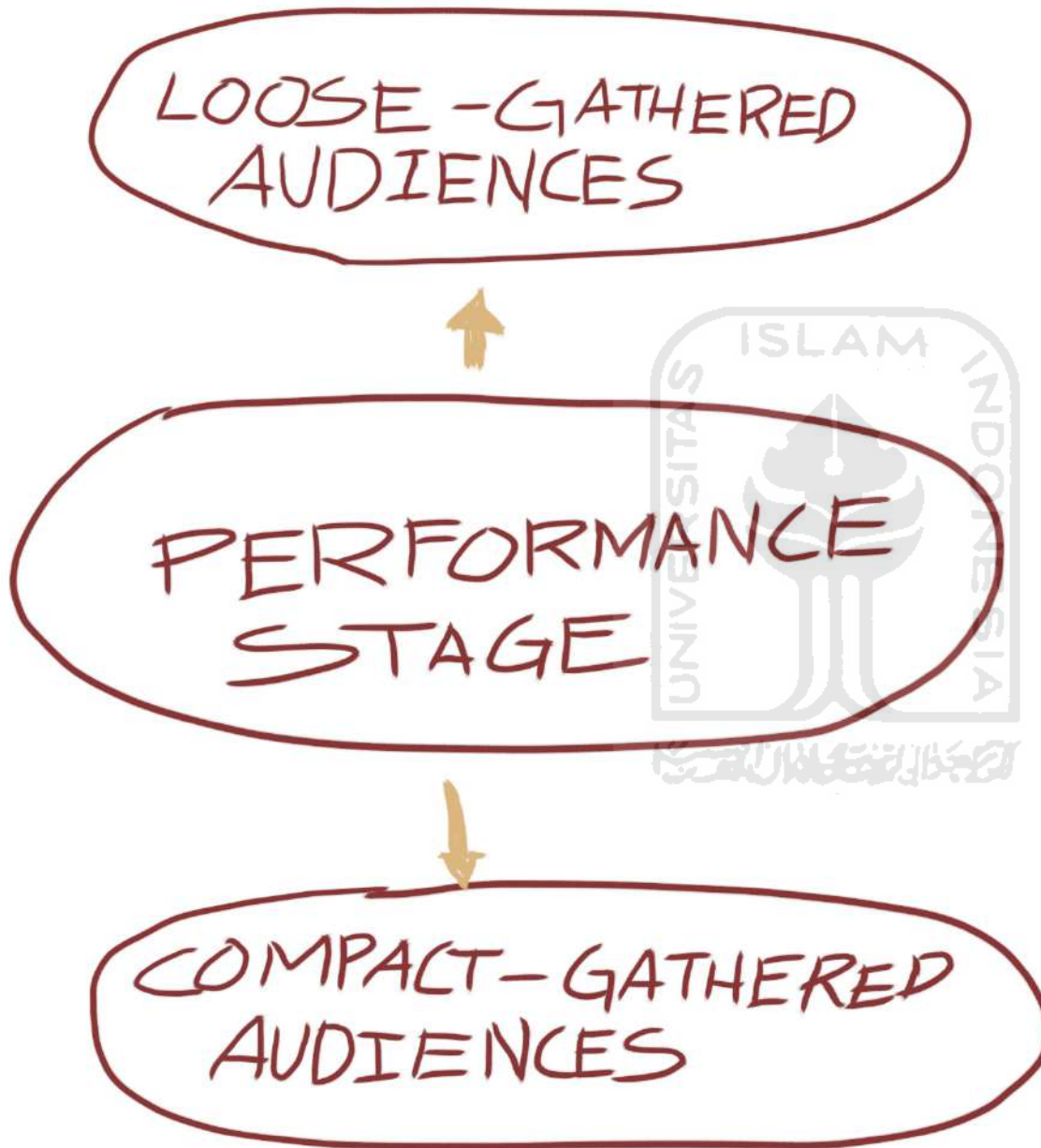
- = CLOSE ACCESS & CONTROLLED USE
- = CLOSE ACCESS
- = INTERCHANGEABLE
- = EXTENSION
- = ALTERNATE USE



The communication function has the potential to hold large public gatherings as it is analysed to be the space where a lot of people are paying attention to one party, either it is an exhibition or a performance. The usage of this function then separated by how it was used in relation with the communicator. Activity that is related to static forms of culture such as visual arts tend to be one sided, and can be altered by limitation and rearrangement. On the other

hand, activities relating to more dynamic forms of art such as performance tend to be two sided, with performers communicating more directly with the audiences. Larger gatherings tend to happen at the audiences side as they are only able to experience it at a specific time

Figure 104: Analysis of the communication function.



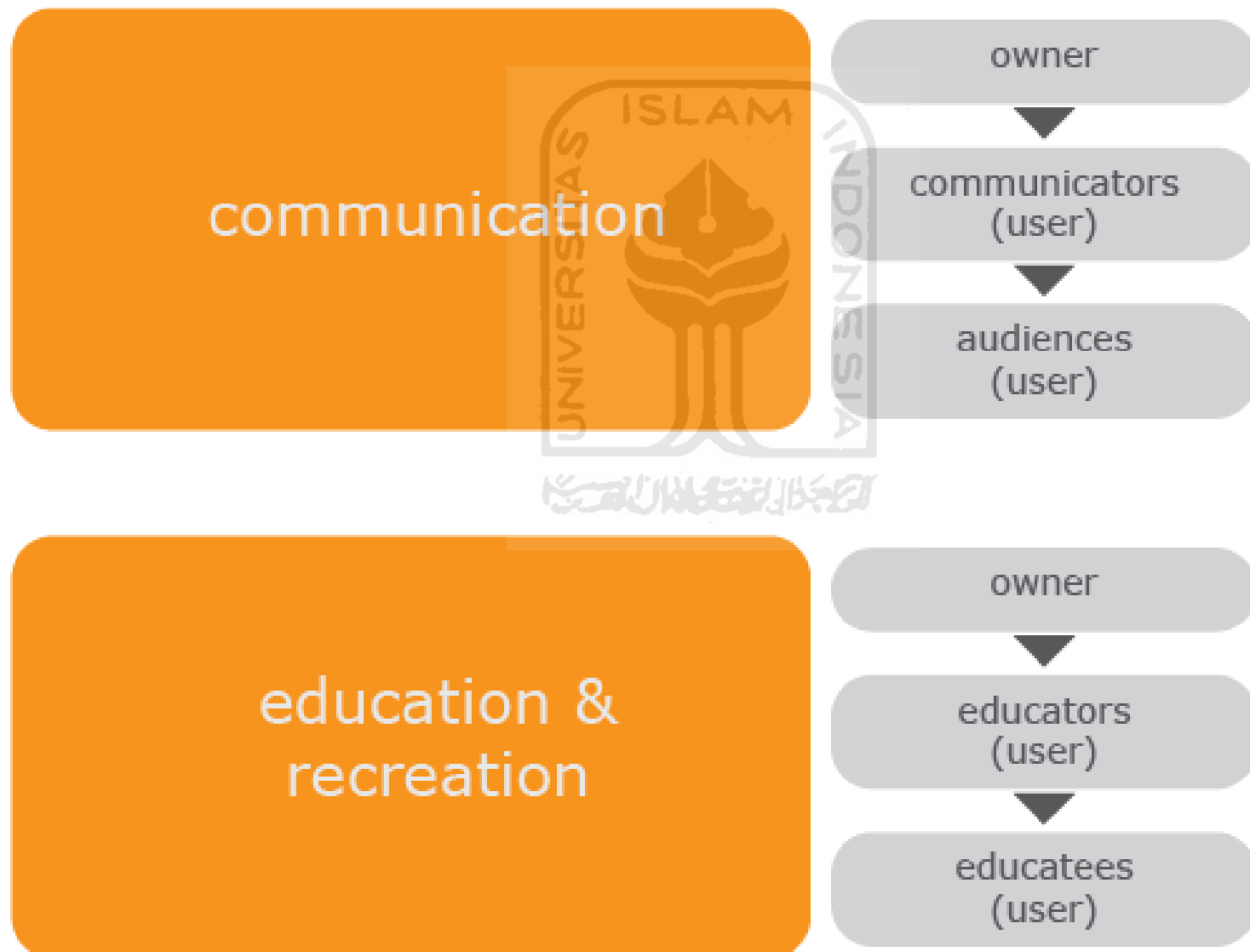
In the case of gathering in audiences' side of performance art, this can be solved by providing two alternatives of audiences gatherings, with one formal viewing area with more rigid arrangement, and a flexible viewing area that allows for rearrangement according to the need.

Figure 105: Audiences' gathering in performance art.

Level of Users

Some functions have multiple levels of functions such as explained in figure. The user is separated into the organizer (communicators and educators) and the guests (audiences and educatees), in this case the guests do not have any authorization to do changes to the spaces, or limited to the adjustable strategy, adjusting their immediate working and studying space.

Figure 106: Analysis of multiple user level in communication and education & recreation functions
Based on: Kendall (2010), Schmidt III, Eguchi, Austin, & Gibb (2010)



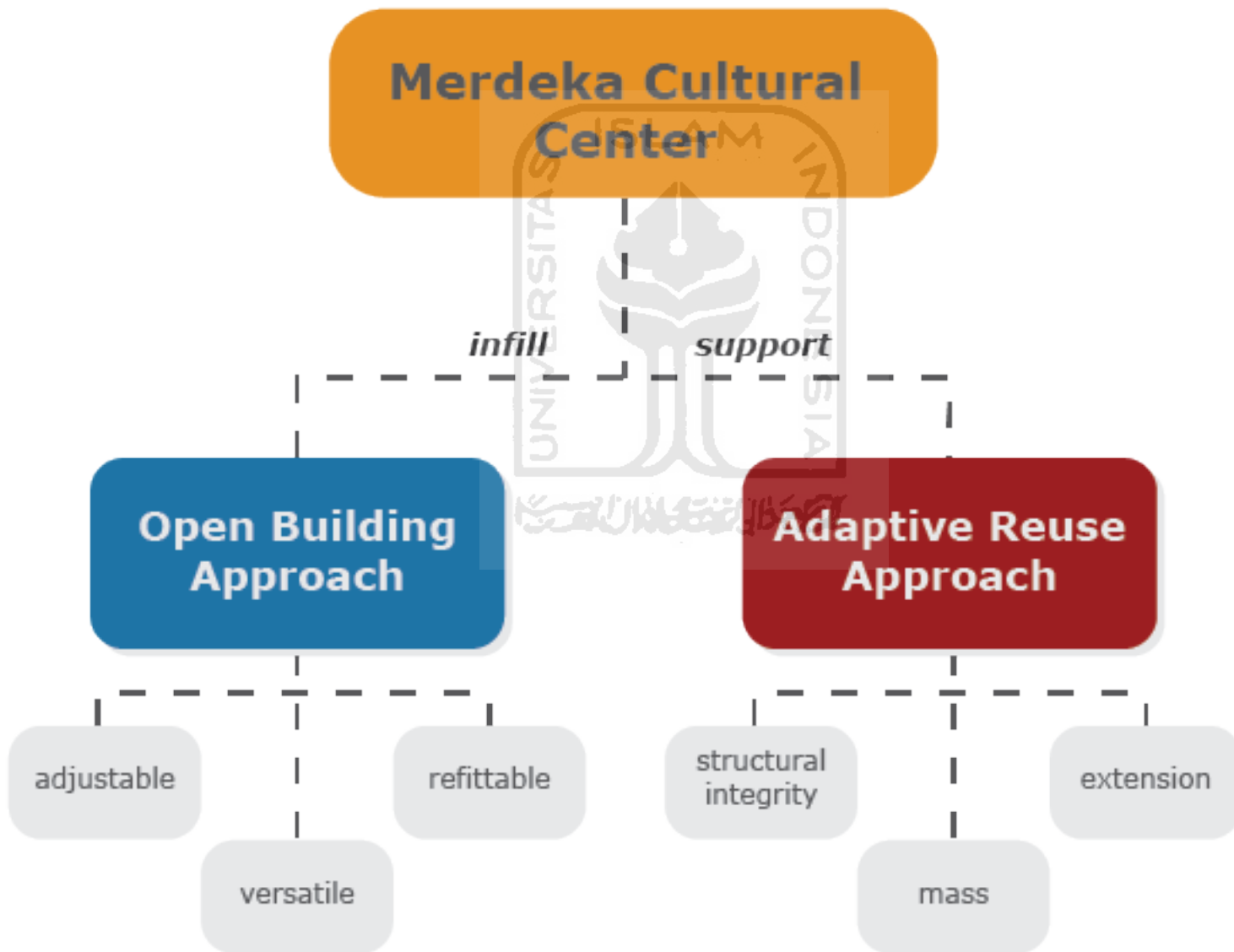
Approaches Studies



Open Building and Adaptive Reuse

Open building and adaptive reuse approach are operating in the same principle, which is to adapt and overcome obsolescence. In the case of the project, adaptive reuse approach is used in the support level where the structural integrity and the identity of the building is critical to be retained, while open building approach is used in the design of the infill level to ensure that the functions is able to be accommodated efficiently with the available spaces.

Figure 107: Application of open building and adaptive reuse method
Based on: Kendall (2010), Schmidt III, Eguchi, Austin, & Gibb (2010), Douglas (2006)



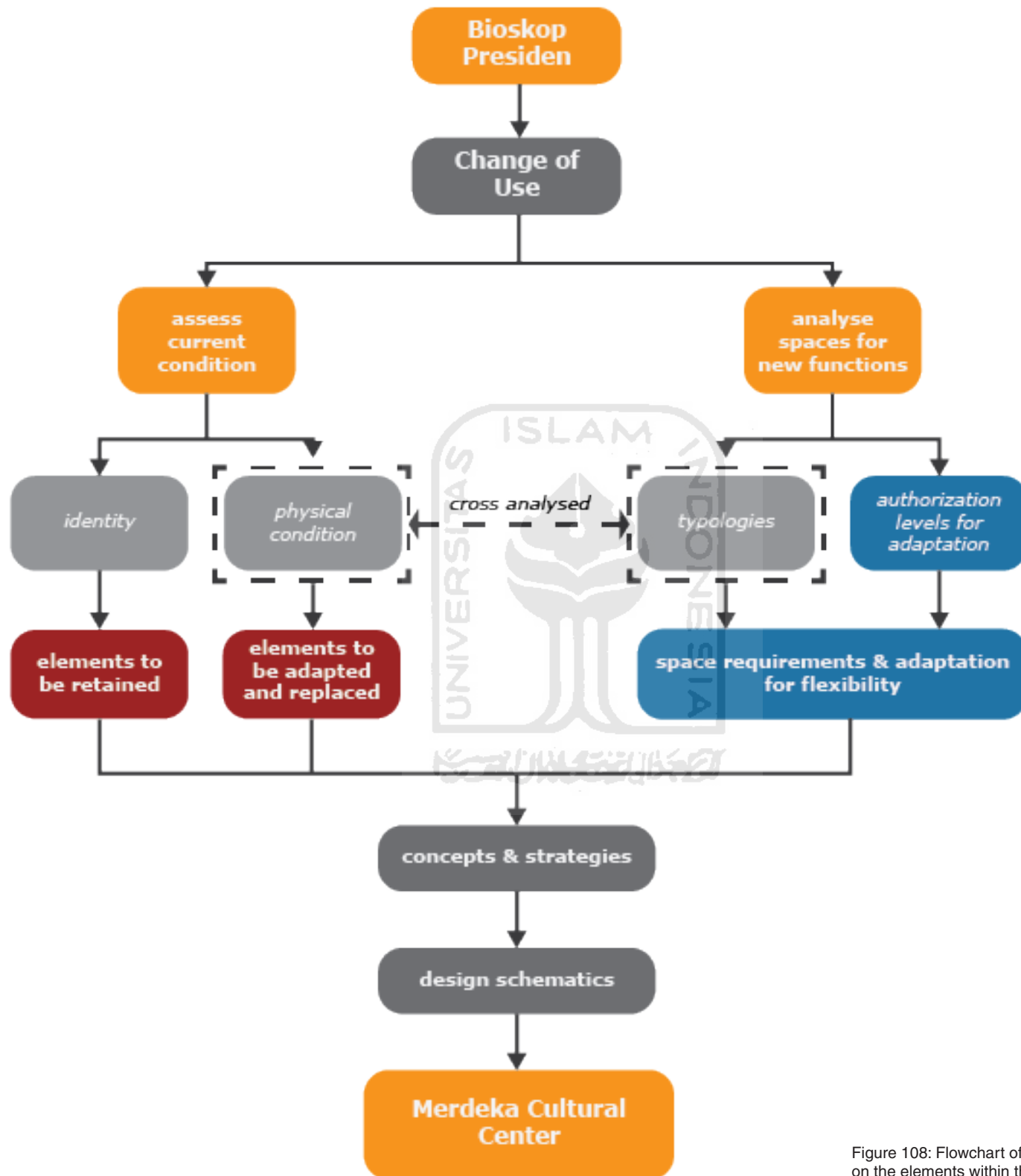


Figure 108: Flowchart of analysis on the elements within the design.

Level of Authority

After the analysis on the multiple user level, level of interaction, and the connection & activity in each function, we can analyse the decision making hierarchy in each function, with note that the authorization is given to the parties who are relevant in the building's context, which are the owner and the user, with the user being the people and organizer that use the building, and excluding guests in the authorization. Each function can have different adaptability strategies that should be optimized in the function, as well as the authorization given to the user and owner to change and modify the building with each strategy for better usage of the space itself according to the activity and tasks that is conducted at the space. Such as the case with the communication function, where the user (organizers) are given more authorization to apply changes not only to the versatile strategies (space arrangements) but also to the refittable strategy (infrastructures such as lighting, acoustic, and other relevant elements), as by having broader authorization to changes the space can be crucial for the success of the activity.

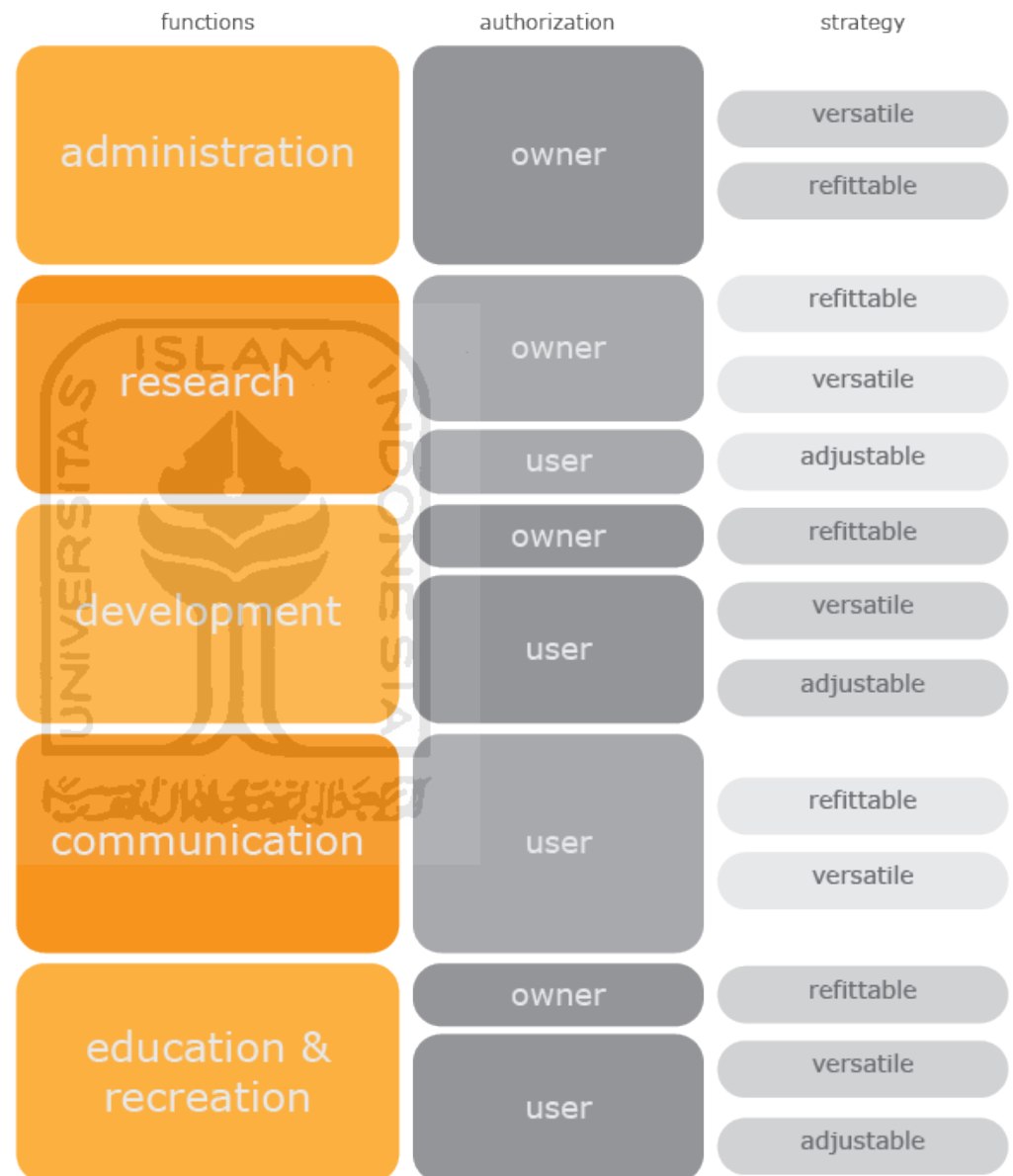


Figure 109: Analysis of the decision making authorization each functions
Based on: Kendall (2010), Schmidt III, Eguchi, Austin, & Gibb (2010)

Adaptive Reuse Analysis

To assess the options available for the building, the current conditions of the buildings are assessed using a dataset gathered from visual and measurements surveys conducted on the building. From this assessment, the options are analysed using Kincaid's (2003) basic option for adaptive reuse.

Figure 110: General assessment on the building based on surveys

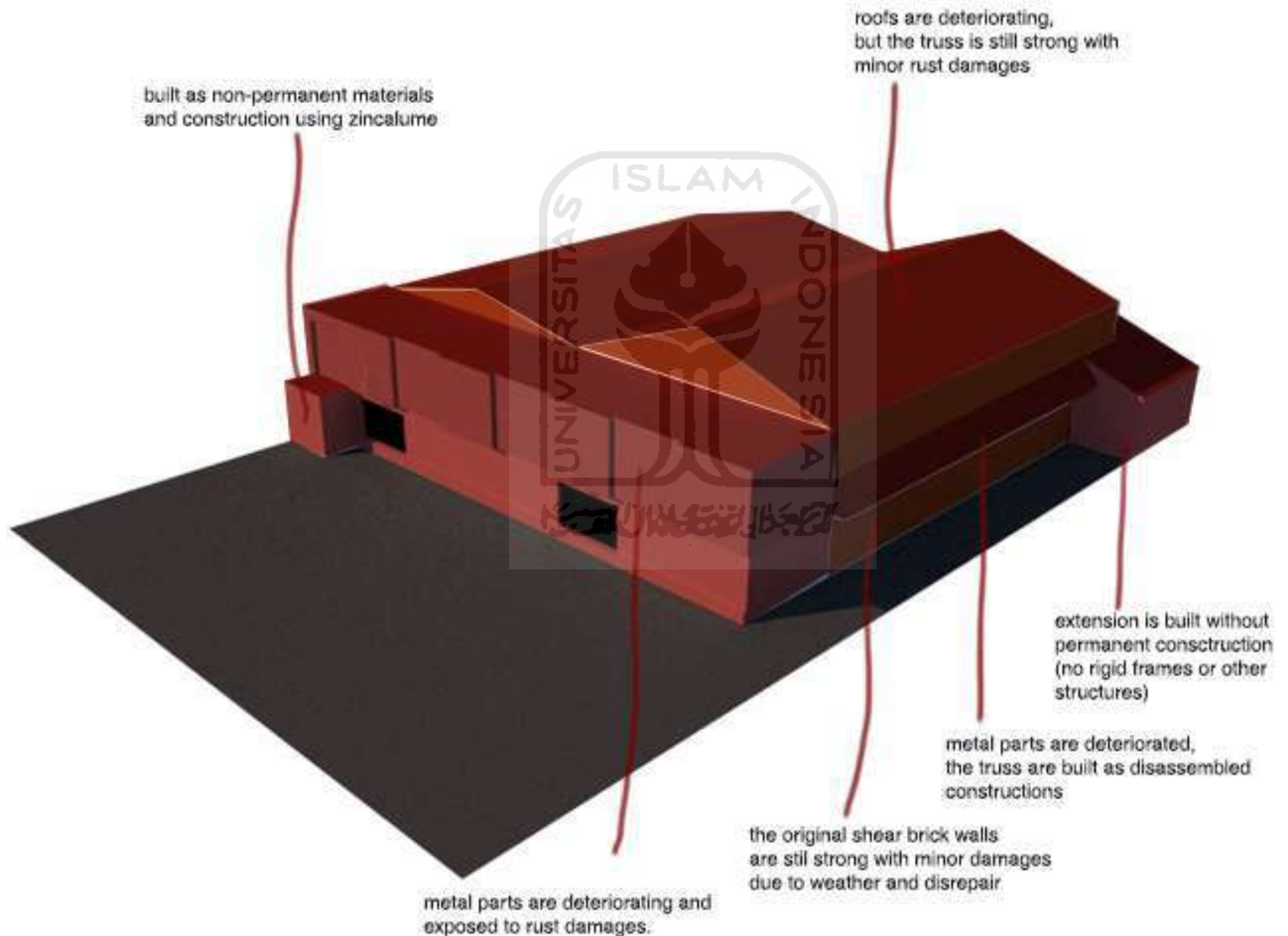




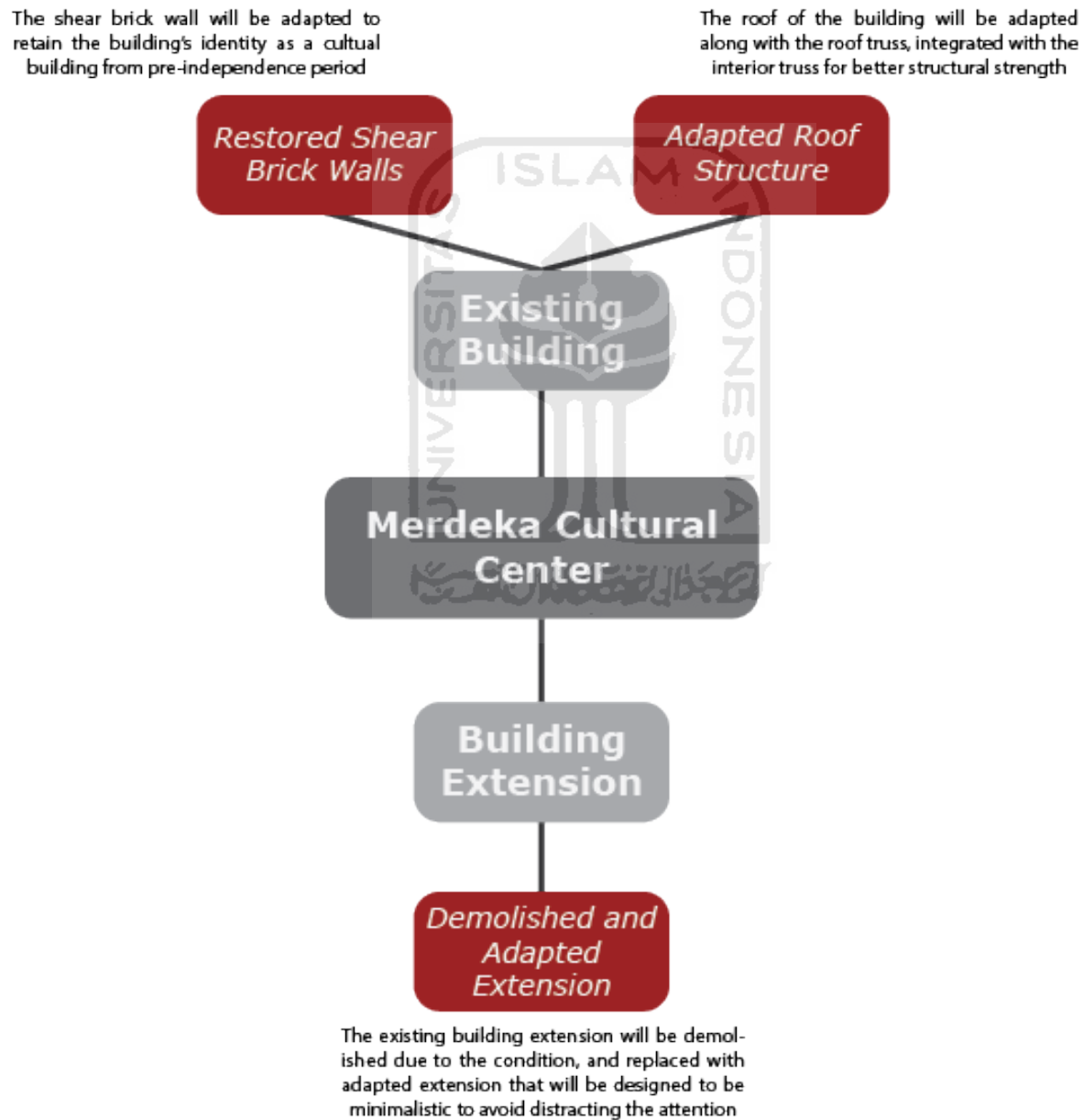
Figure 111: Current condition of the buildings, assessed structurally and architecturally



Figure 112: Current condition of the buildings, assessed structurally and architecturally

After analysing the current condition of the building and its significance to the identity of the building itself, author generate a strategy to adaptively reuse the building to fit the new function and retain the building's cultural significance, as it is showed in the figure.

Figure 113: Strategy on adaptive reuse after analysis on the building condition



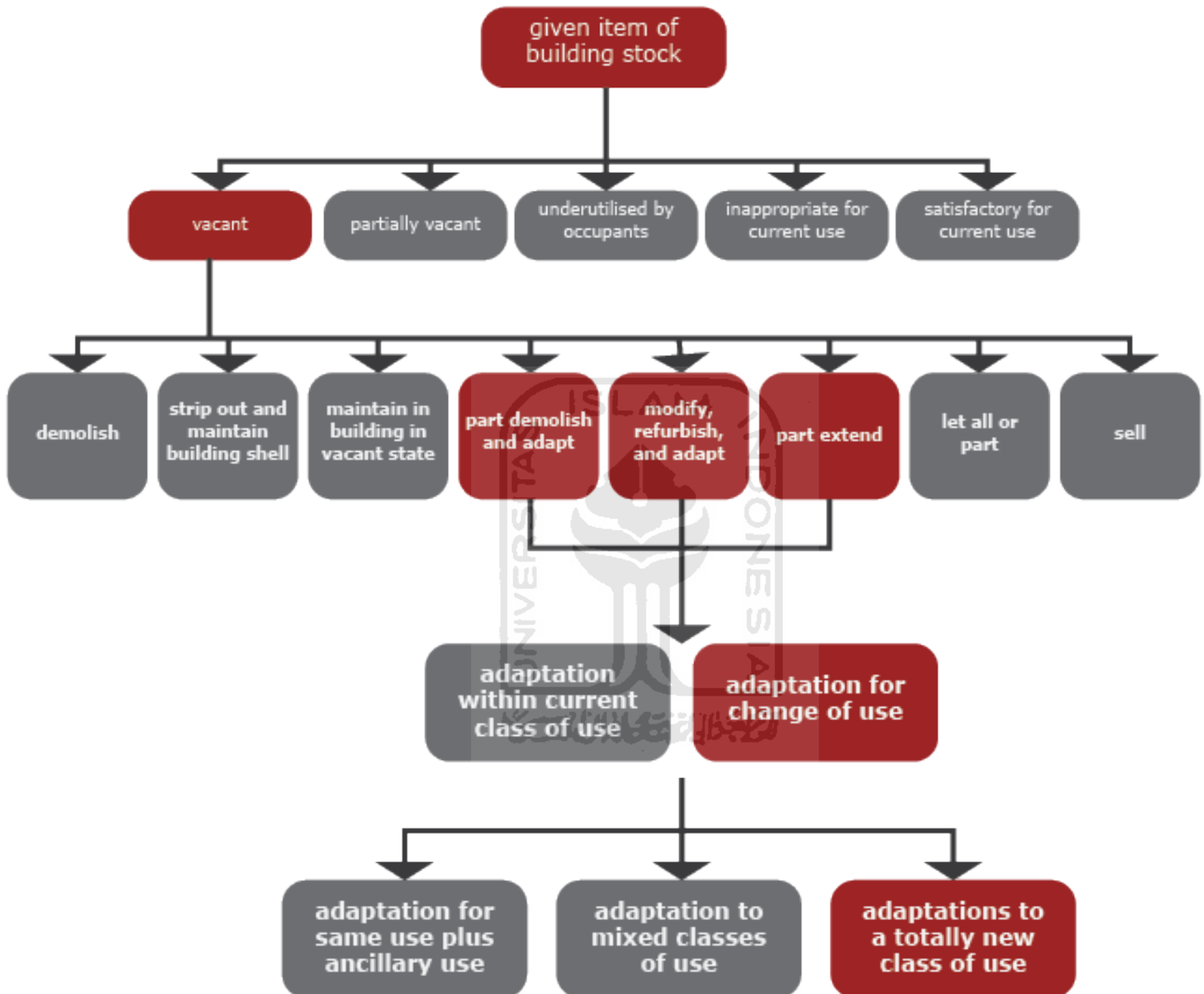
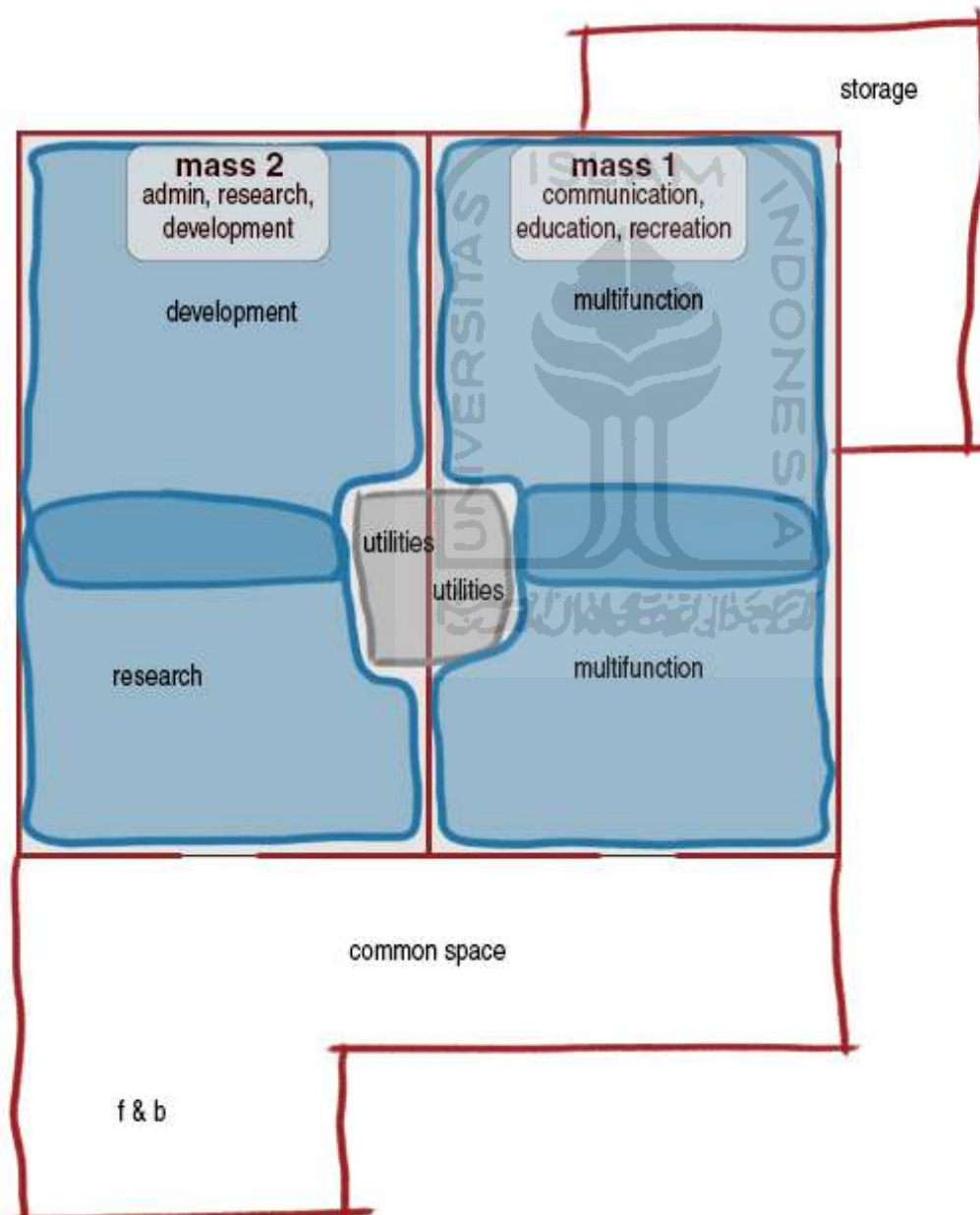


Figure 114: Analysis of the adaptive reuse method that will be done to the building based on the condition
Based on: Kincaid (2003)

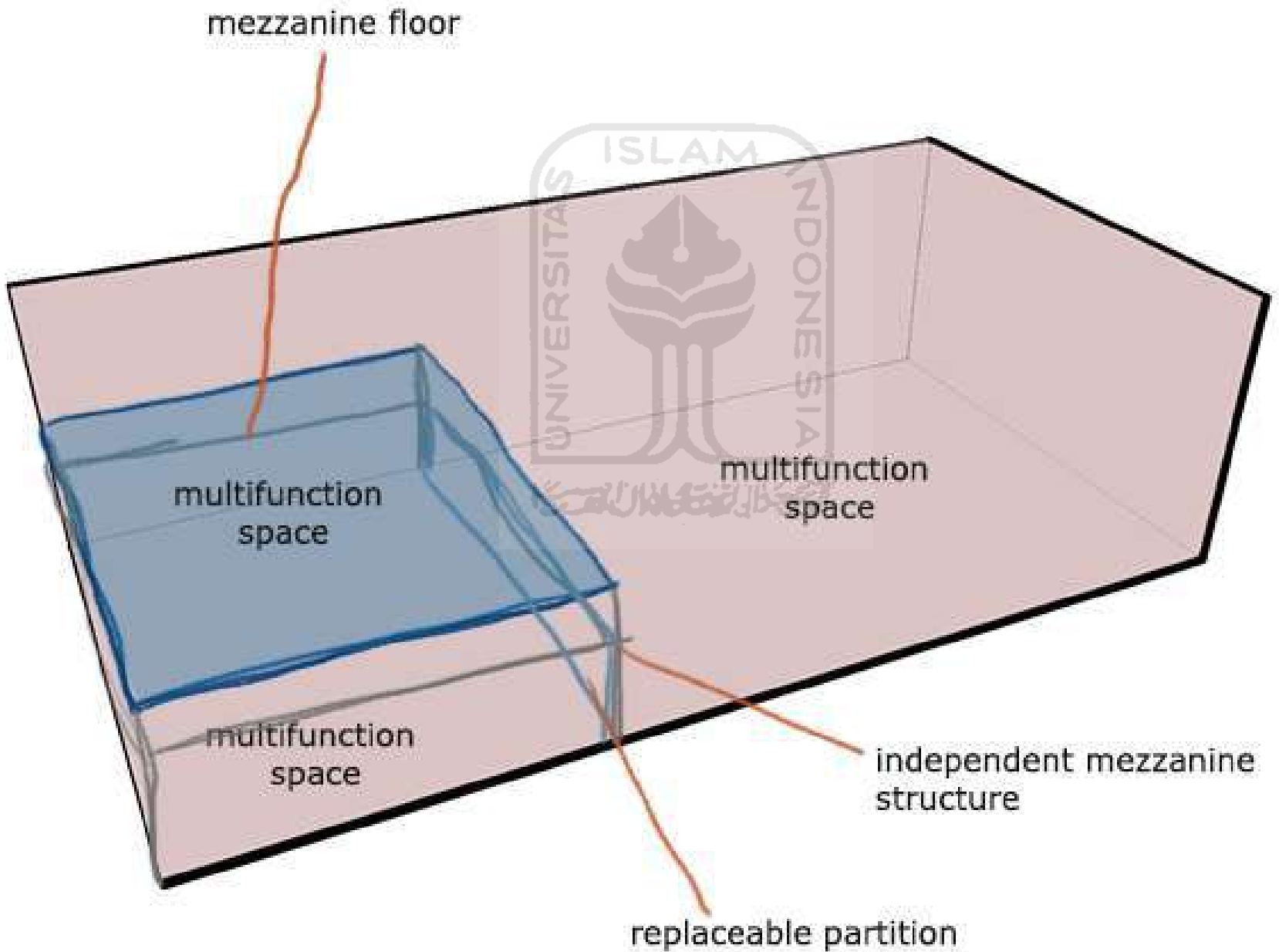
The application of Open Building approach in the existing building is applied to the interior adaptation and the extension, while the exterior of the main building itself is restored and retained. The interior structure is built separately to the exterior structure, to keep the building intact, while ensuring that it can be easily adapted or disassembled when the function changes. The utilities spaces such as toilets are gathered at one area to ensure that the plumbing for the building is easier and does not limit the adjustability of the other spaces.

Figure 115: Distribution of function within the floor plan



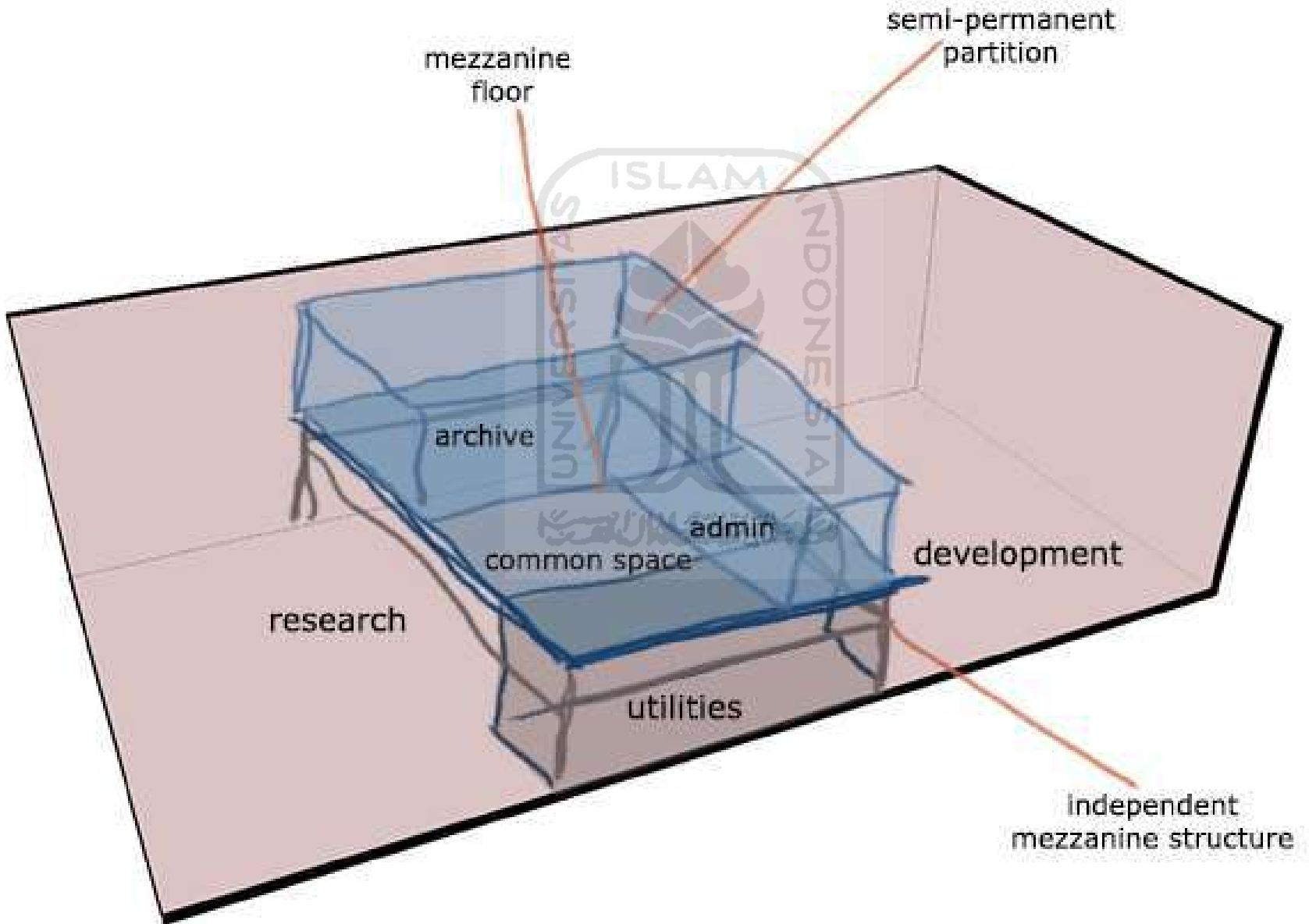
The original main building (Mass 1) is repurposed to accommodate the communication, education, and recreation function that require more flexibility and adjustability, since the building has more vertical space, and has quick access to possible extension for storage. The mezzanine floor is designed to be structurally independent from the building itself, to ensure that it does not affect the main building.

Figure 116: Distribution of function in Mass 1



The main extended building (Mass 2) is designed to accommodate functions that needed more permanent arrangements, such as administration, research, and development. These spaces are separated with semi-permanent partitions, with the mezzanine floor having more enclosure compared to mass 1.

Figure 117: Distribution of function in Mass 2



Distribution of Authorizations

The mass is divided by its distribution of authorizations. The function of communication, education and recreation is integrated into the multifunction halls. The mass consisted of 3 flexible halls that are able to be combined according to the activity. The halls are connected visually and physically to allow it to be extended and combined.

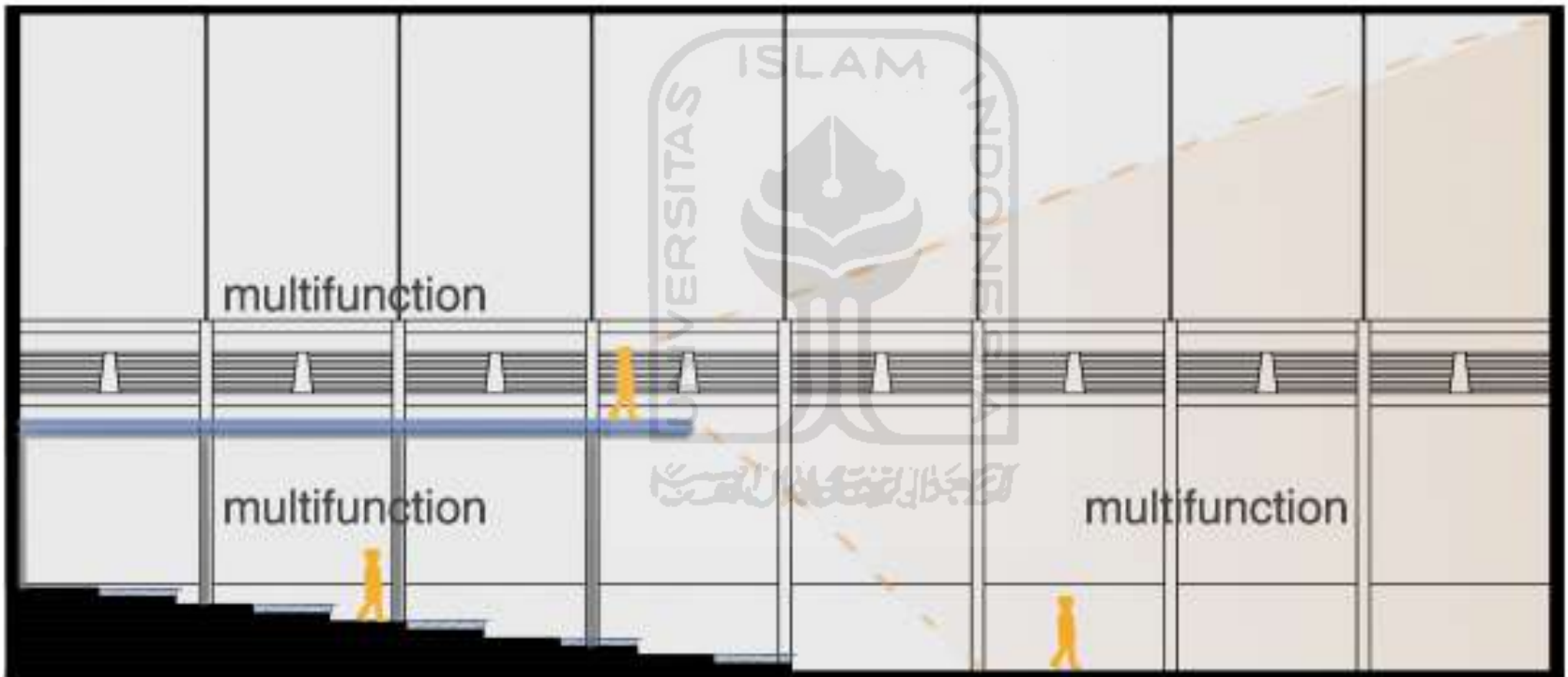


Figure 118: The halls are connected visually to allow extension and combination to happen according to the activity

The function of research, development and administration is joined at one building mass since the functions are tightly connected with each other. Research and development functions are connected physically with no boundary to allow easy circulation between the functions, and extension of each function to the space. The administration function is located in an elevated platform for privacy, but still accessible for the users.

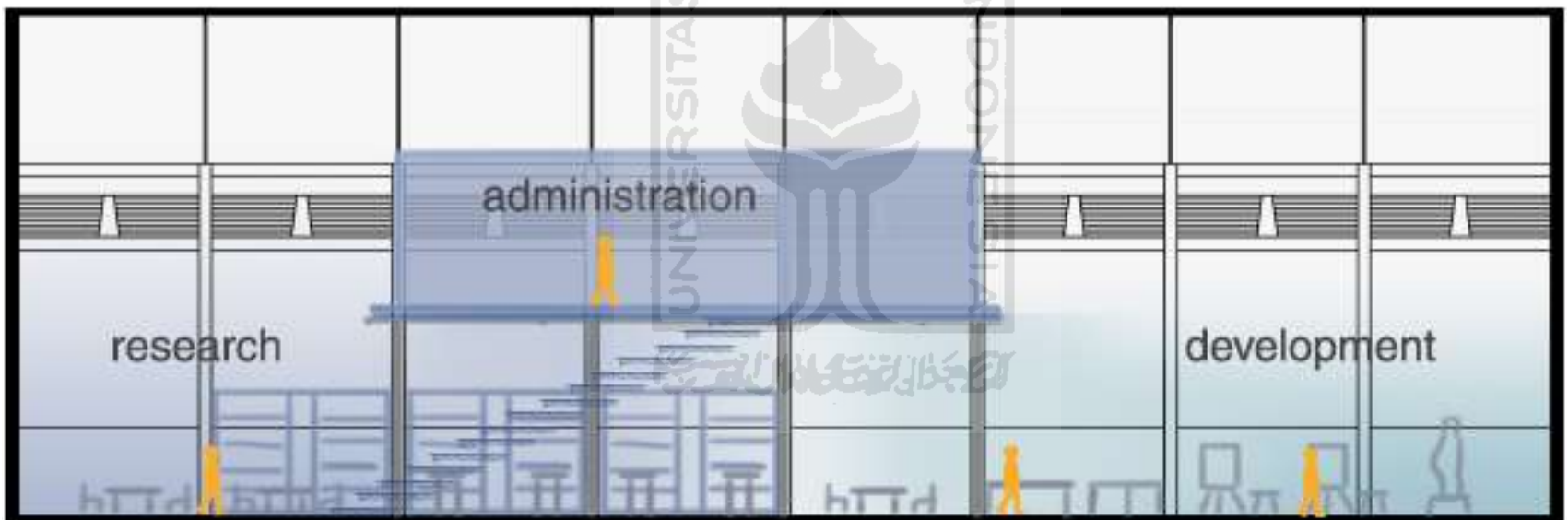


Figure 119: The research and development function is connected physically to allow for circulation and extension, while the administration function is located at the elevated platforms

Theater Function

To accommodate the theater functions, first the space needs are analyzed according to the user and specific functions. Jacobs (2019) creates an analysis and categorization on the common parts of theaters. From this categories, author can analyse the user specific functions.

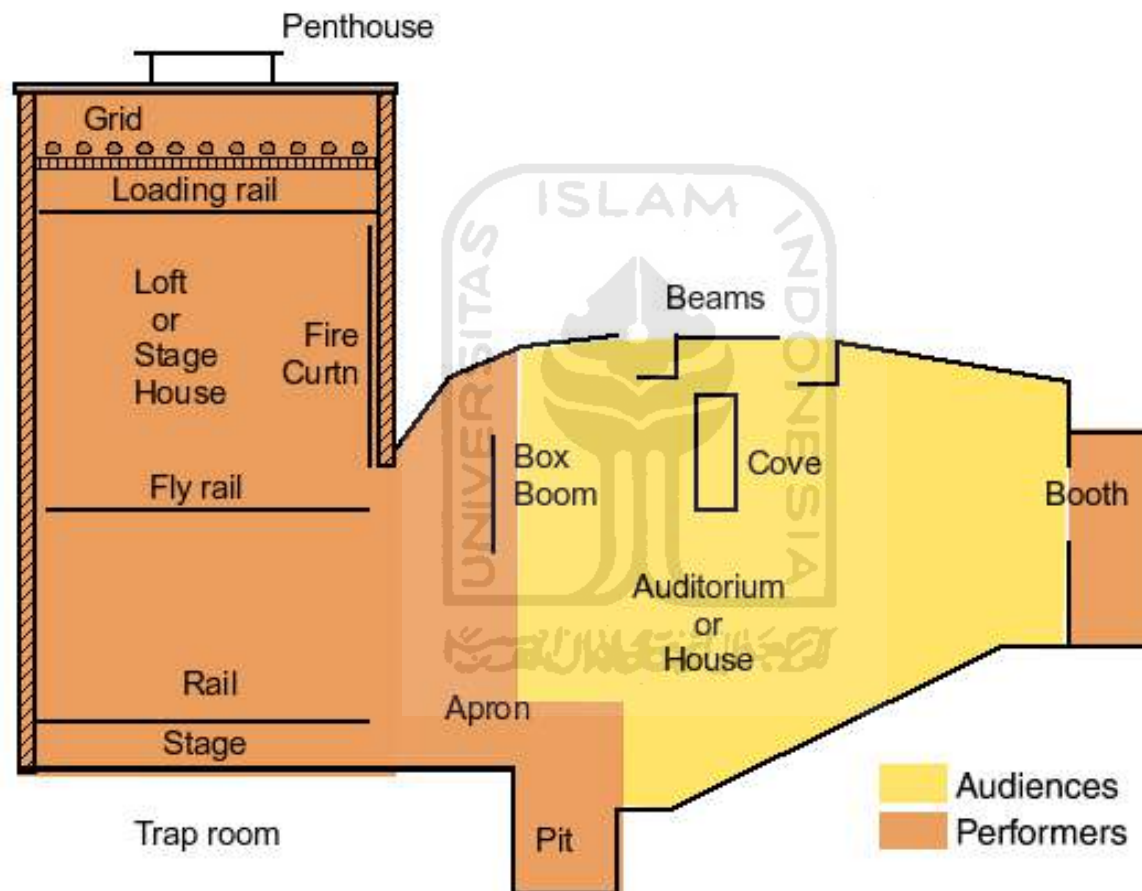


Figure 120: Common parts of a theater and the users
Source: Jacobs (2019)

From Jacobs' (2019) analysis, author analyse the functions that can be related to the specific users. There are separations in the performer side of stages, where they need both spaces for the actors (stage and backstage) as well as space for the production team (set, lighting and sound control).

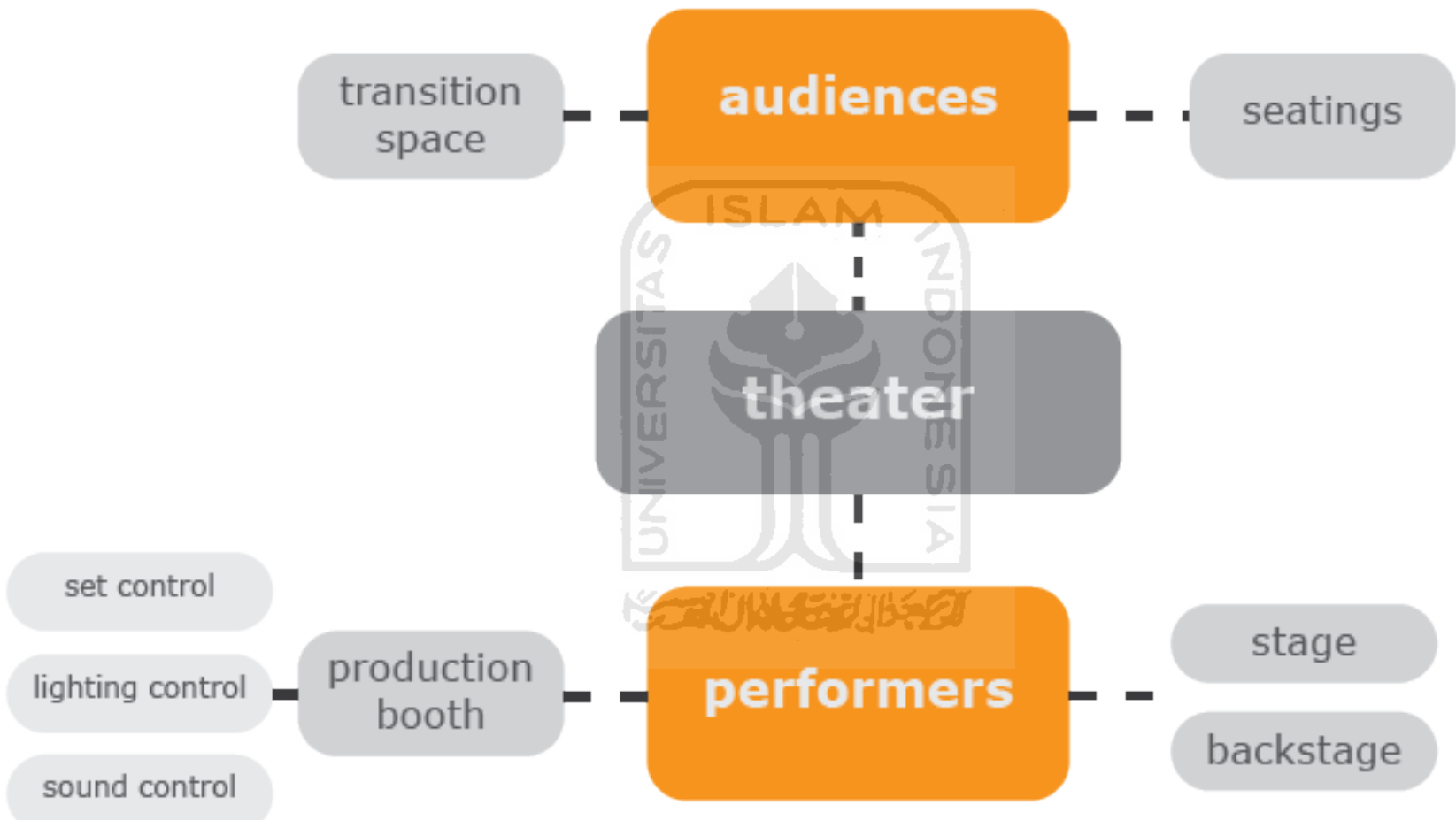


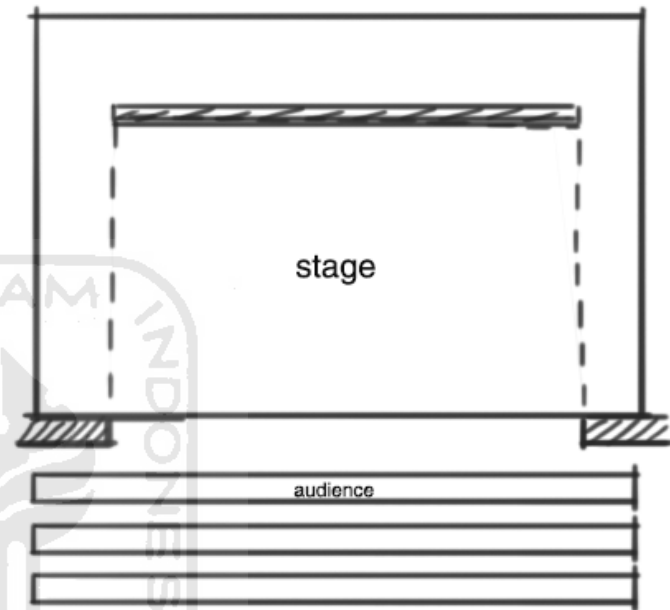
Figure 121: User specific functions and spaces in theater
Based on Jacobs (2019)

The placement of the spaces in a theater can vary according to the typology of the theater itself, the difference between the theater typologies are most visible with the relation between the stage and audience's seating. Examples of common theater typologies are:

Proscenium Theater

Proscenium theaters are commonly identified with the prominence of proscenium, or a "window" that frames the performance taking place on the stage. This typology gives a good view to the audience as the performers only need to focus in one direction, and the proscenium gives advantage of obscuring objects from the audience's view.

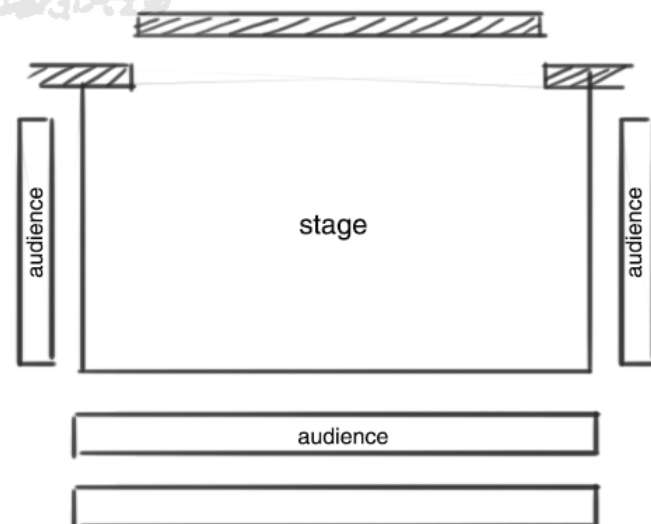
Figure 122: Proscenium theater space arrangement
Source: Jacobs (2019)



Thrust Theater

Thrust theaters are identifiable by its arrangements which consist of being surrounded by audiences on three sides, with the fourth side serving as the background. The performance area often takes a rectangular or square shape, raised and surrounded with raked seatings.

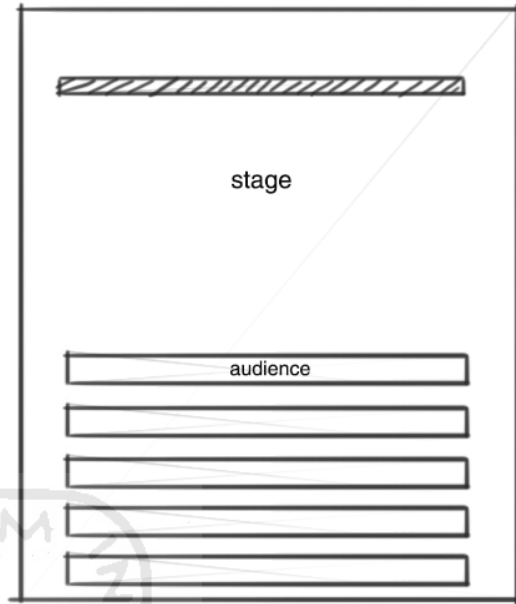
Figure 123: Thrust theater space arrangement
Source: Jacobs (2019)



End Theaters

End stage theaters are similar to thrust theater, but in this case the audience is located only on the front of the stage within the same architectural space. Backstage of the theater is located behind the background wall, without wings to the side of the stage.

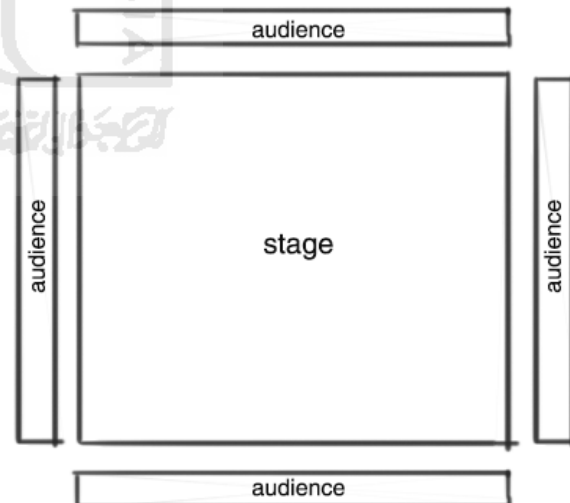
Figure 124: End theater space arrangement
Source: Jacobs (2019)



Arena Theaters

Arena theater is identifiable by a central stage surrounded by audience on all sides, with the stage often being raised to improve sightlines.

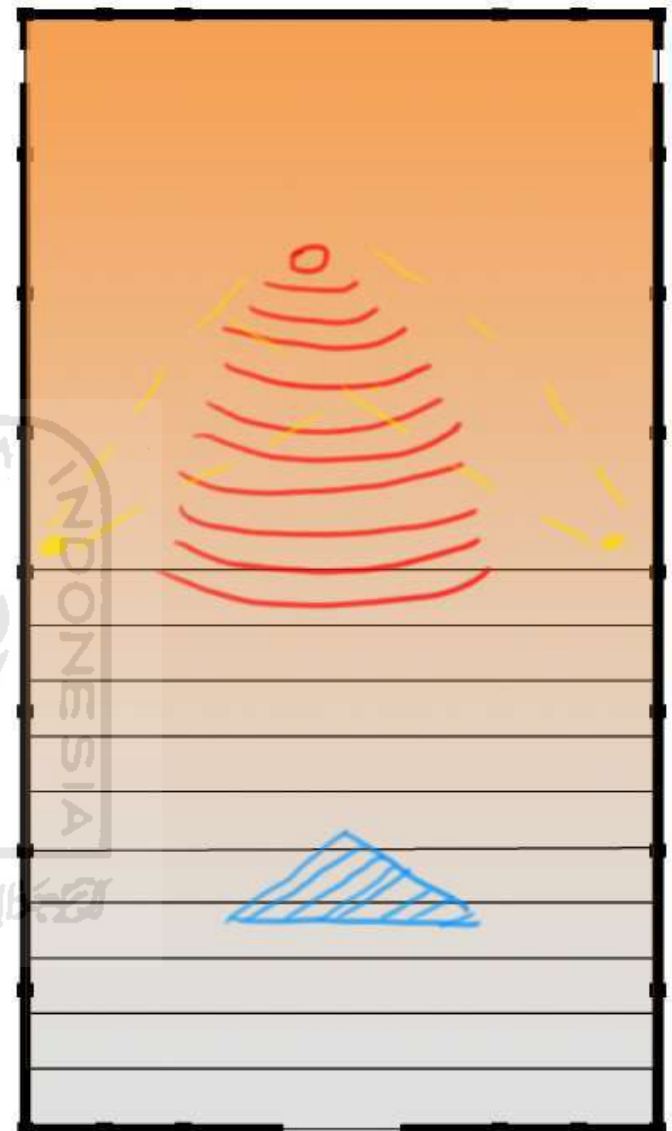
Figure 125: Arena theater space arrangement
Source: Jacobs (2019)



Given limitations of the existing space within the building, the optimal requirements for theater arrangements is analysed. Due to the rectangular shape of the space, the optimal arrangement of the theater is confined to singular sourced theater, including the considerations of audience viewing, sound sources, and lighting direction.

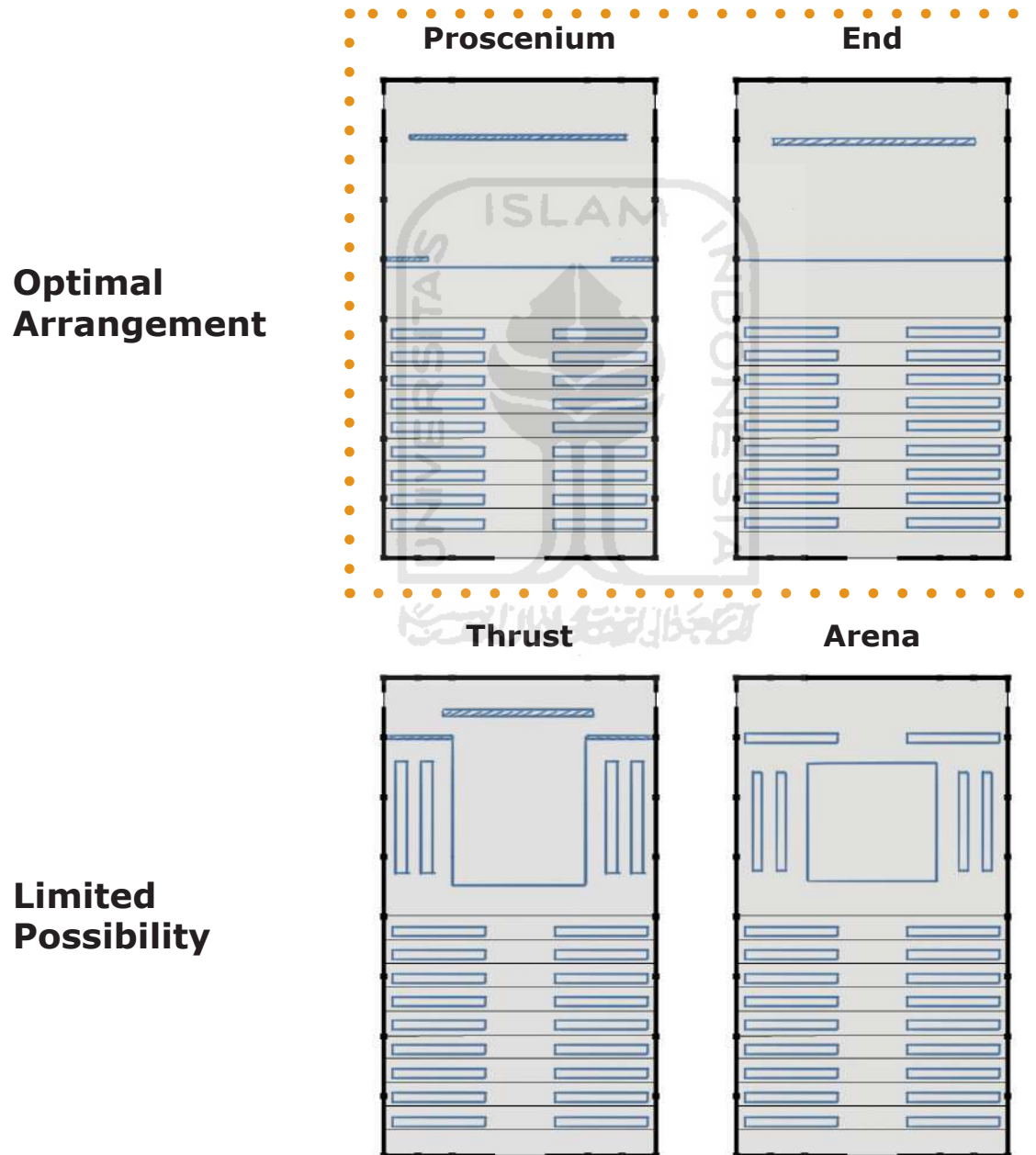


Figure 126: Requirement for optimal theater arrangements



After analysis of each common theater typologies and the space available in the multifunction hall, a schematic of theater arrangements can be conceptualized within the space, with proscenium and end stage theater being most efficient in the space although thrust and arena types are possible with limited capability.

Figure 127: Schematic of theater arrangements within the space



One sided theater arrangement allows for the production booth to be located at the elevated second floor for better view to the stage, and saving more space for the seating. This arrangement is significantly limited when used in thrust and arena arrangement due to the orientation of the stages.

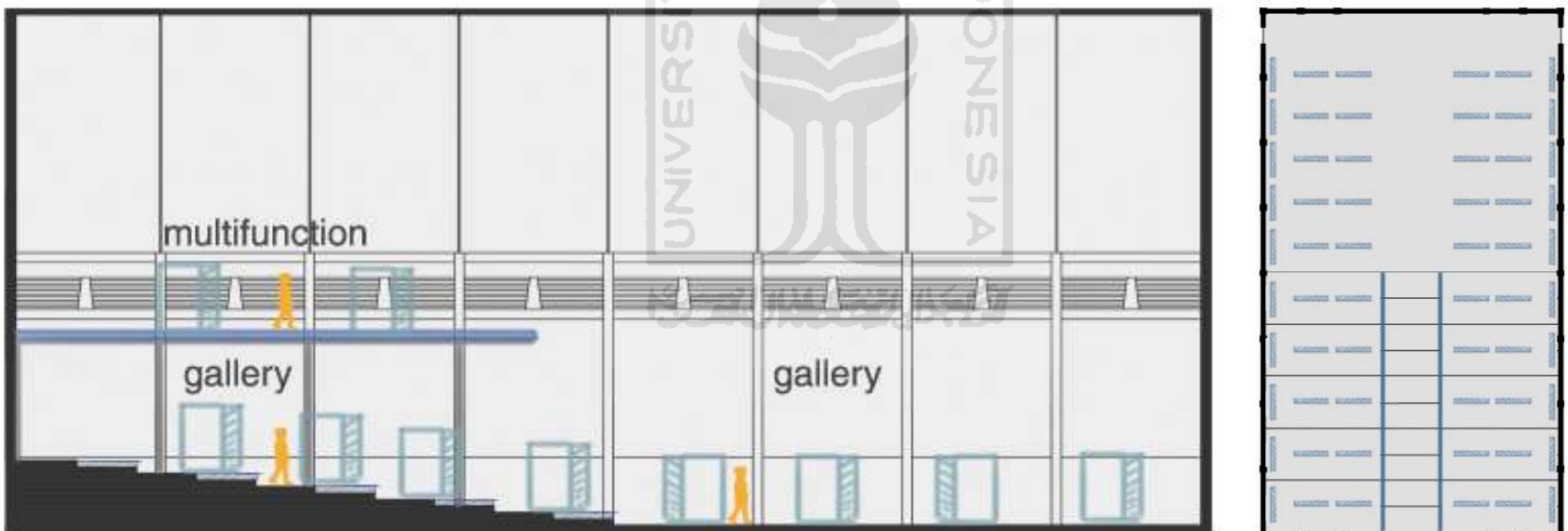
Figure 128: Schematic of theater arrangements within the space



Gallery Function

Accommodating for public gallery function means providing space that can be adjusted according to the context of the exhibition that might take place, therefore it is often the practice to provide a blank exhibition space that can be arranged according to the needs of the artist(s) (O'Doherty, 1999). To accommodate the possible needs, it requires careful thought in the designing process in terms of the flexibility in the space and the infrastructure to be versatile to the changes in every exhibition.

Figure 129: Gallery functions is designed as a blank exhibition space for the artists to arrange the spaces and infrastructures according to their context



Design Strategies



Insertion Strategies

After analysing the building elements and the current conditions, the formula of insertion is generated, with the insertion being located by the side and inside of the existing building, and using contrast and compatible contrast approach for the building aesthetic.

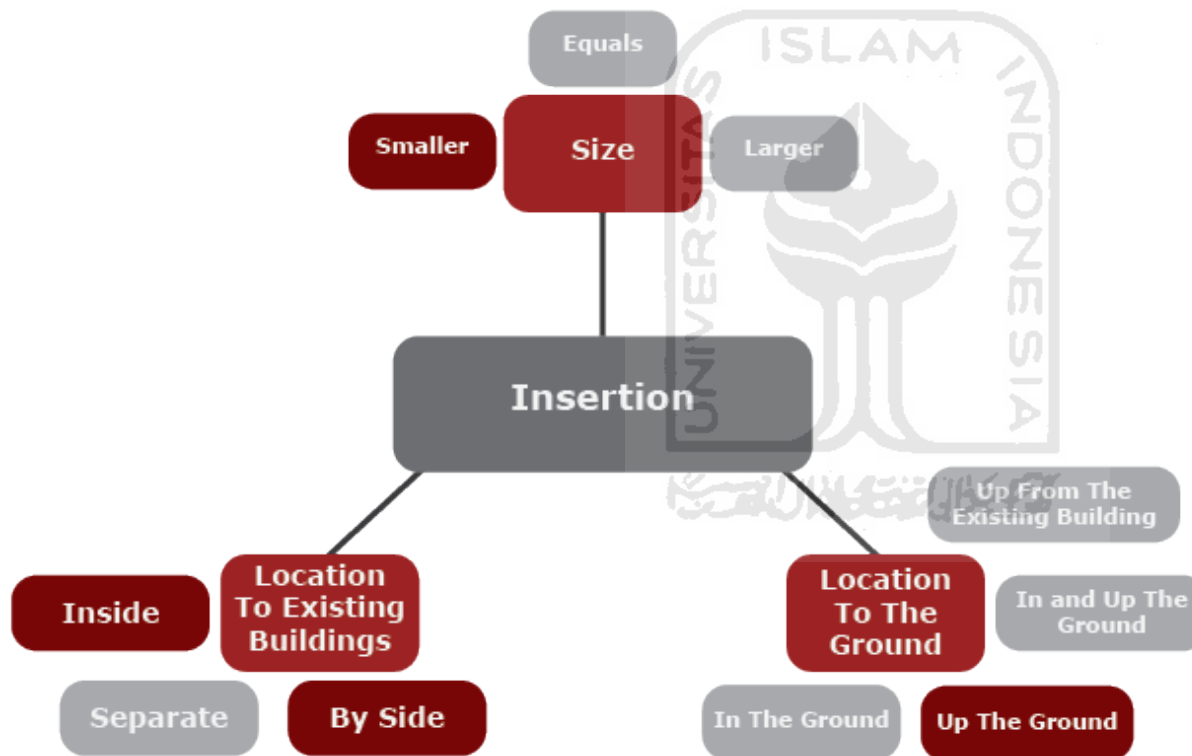
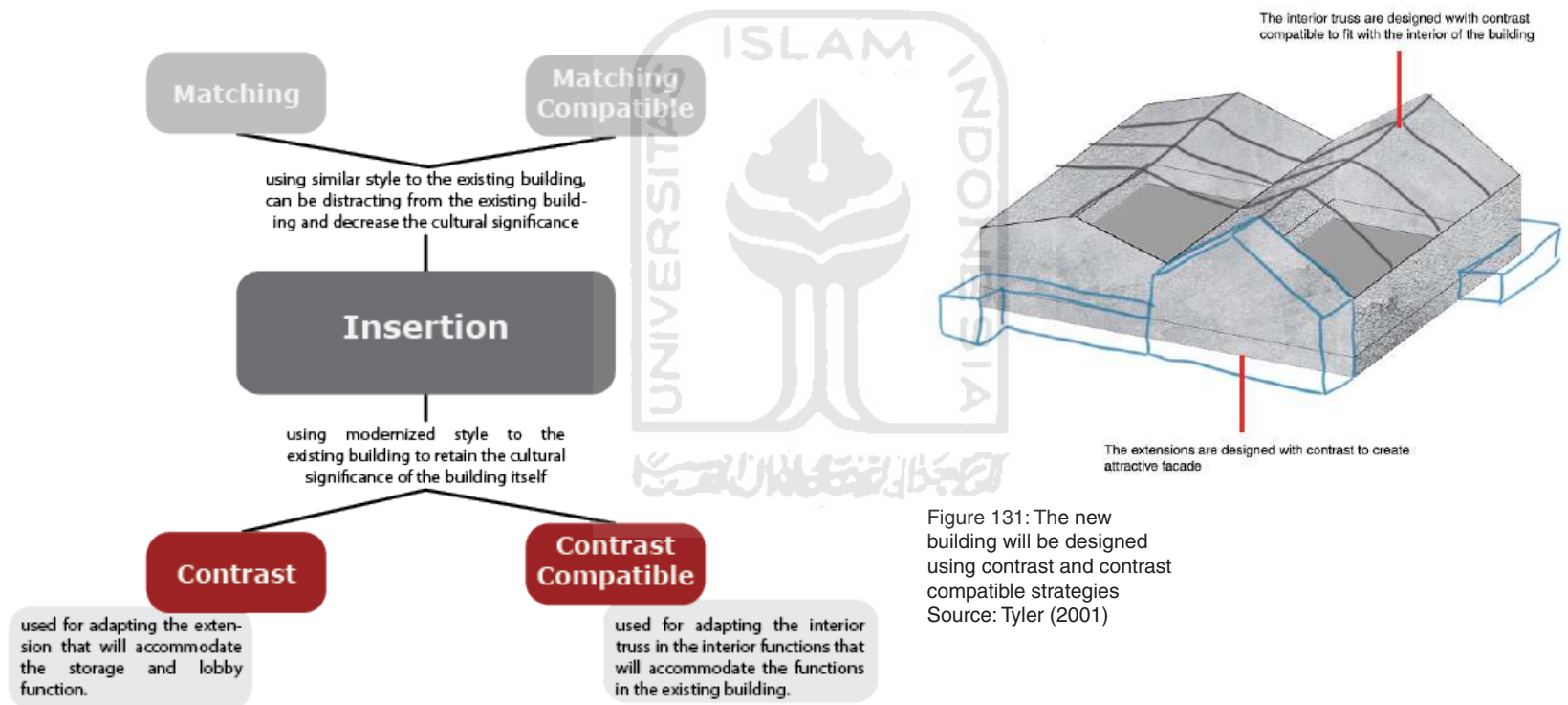


Figure 130: Formulae for Insertion
Source: Ardiani (2005)

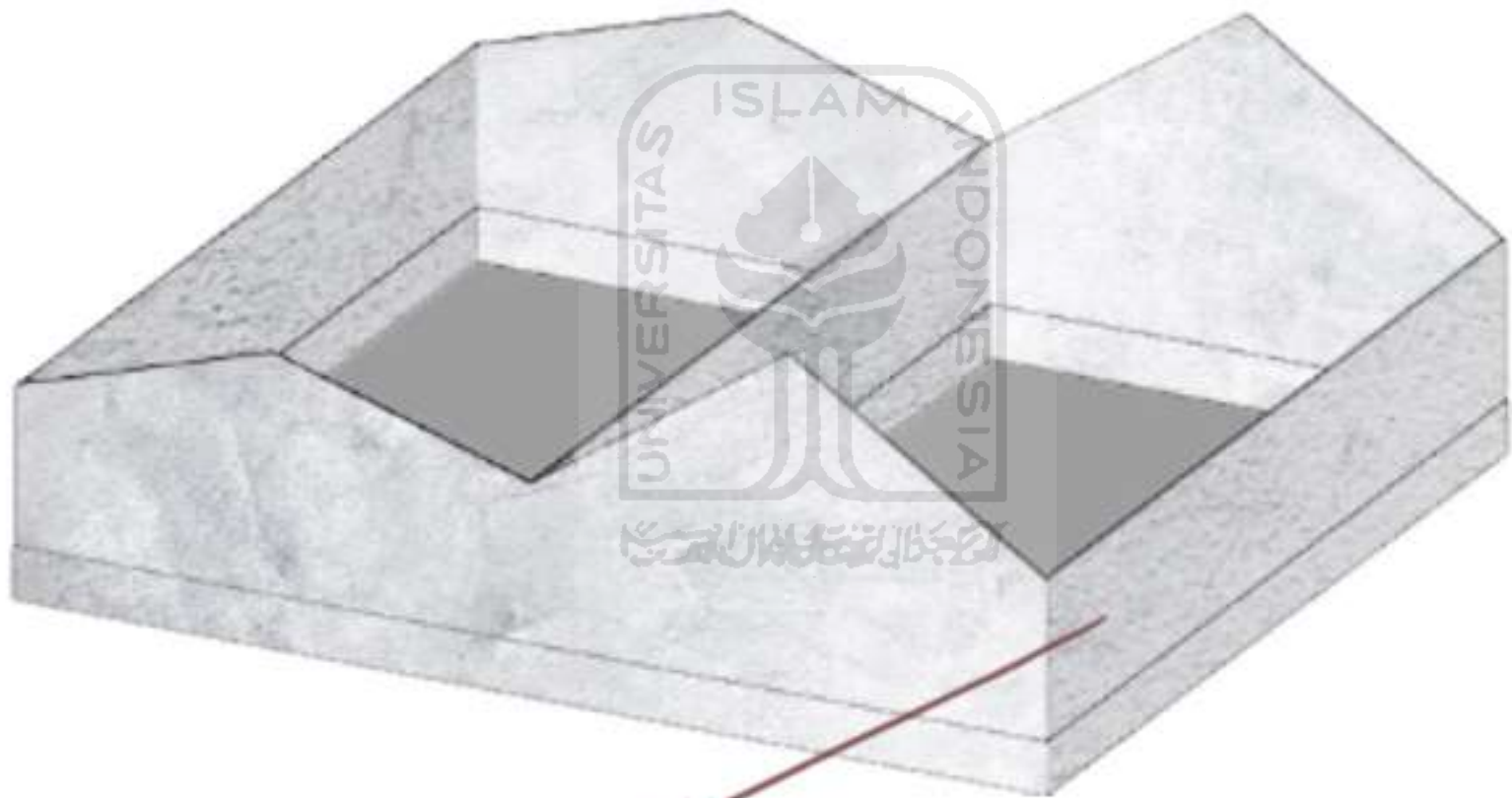
The contrast and contrast compatible aesthetic are used in the adaptation of the building to design an extension and adation in the building that will not distract the attention from the existing building.



Retaining Identity

After analysing the building's elements and structure, it can be concluded that the main identity of the building is obtained with the form that consists of shear walls with reinforced concrete frames that are familiar with the style of Dutch warehouses. To retain the identity of the building, the walls of the building will be restored, while the roof of the building will be adapted to assess the structural strength.

Figure 132: Shear walls of the building as the identity of the building will be retained

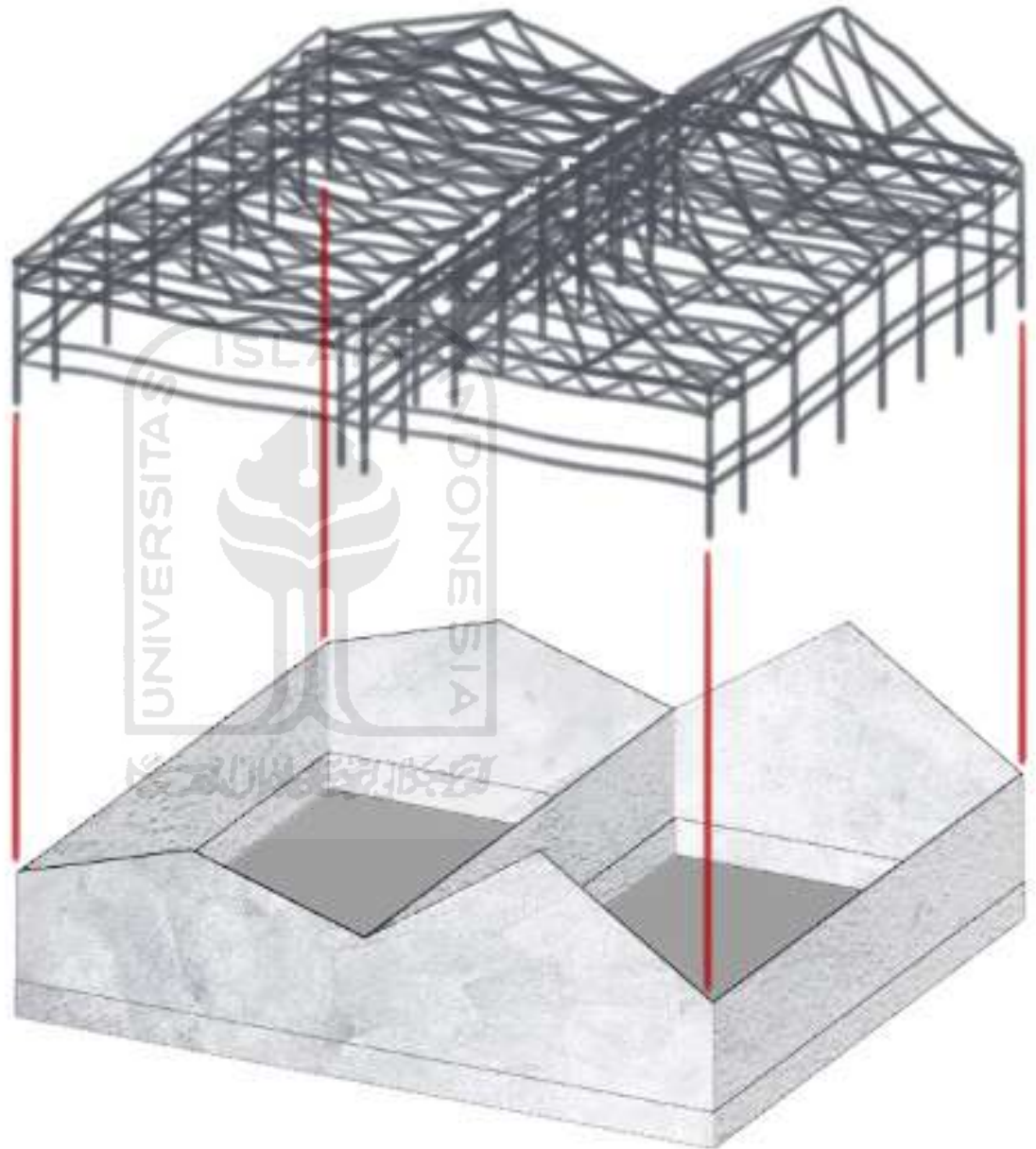


SHEAR BRICK WALLS
WITH RC FRAMES

Interior Structures

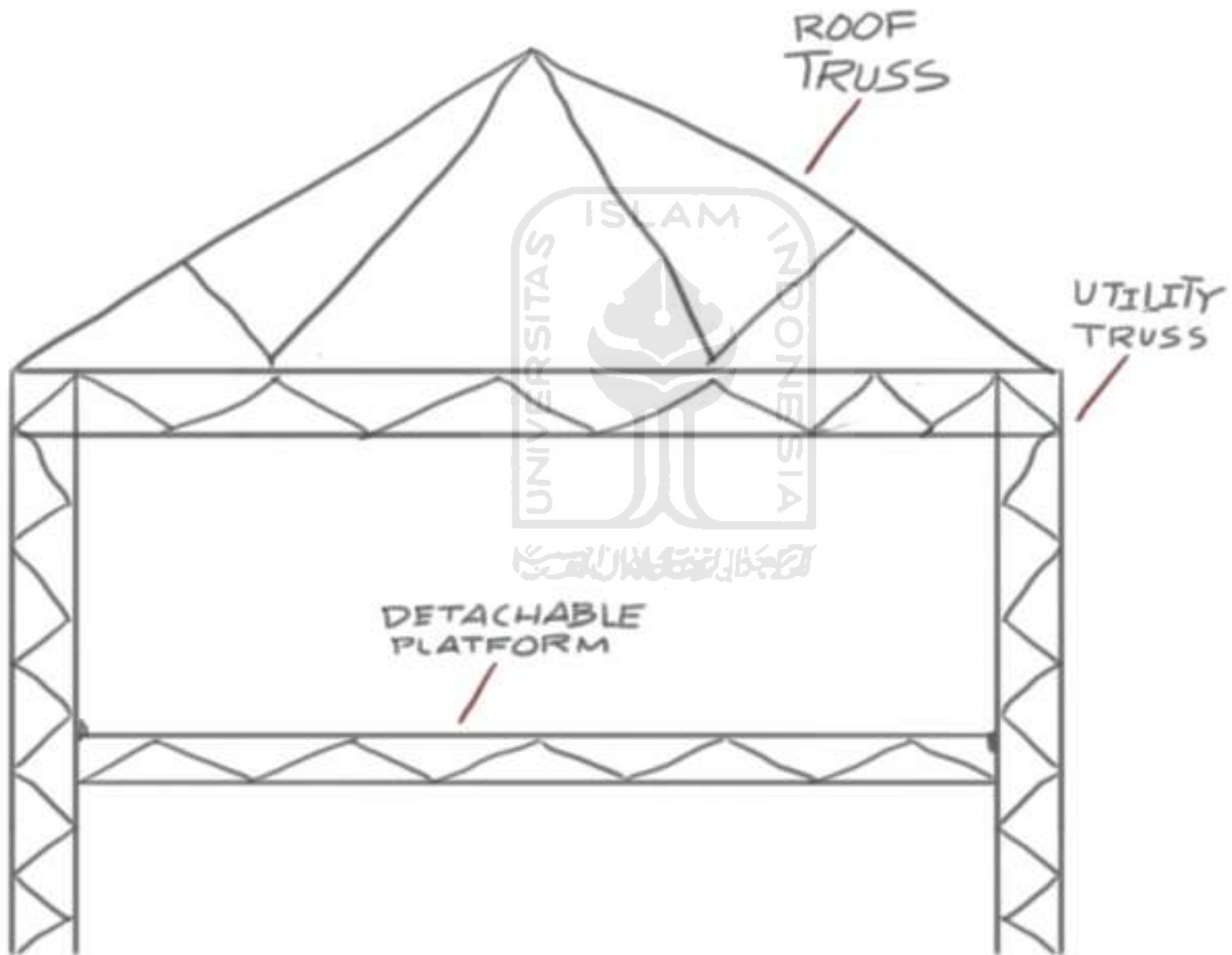
To reinforce the roof of the building, as well as providing supporting elements to accommodate the function, trusses will be used as the interior structure to separate the load from the original shear walls, as well as to allow it to be disassembled when the function of the building needs to be changed.

Figure 133: Interior truss structure will be used to separate the load from the original shear walls



The interior truss frame is designed to handle the load from the roof, as well as holding the infrastructure for the functions, such as lighting, sound systems, and other relevant infrastructures. The truss frame will hold the elevated platform in the masses that will accommodate some functions.

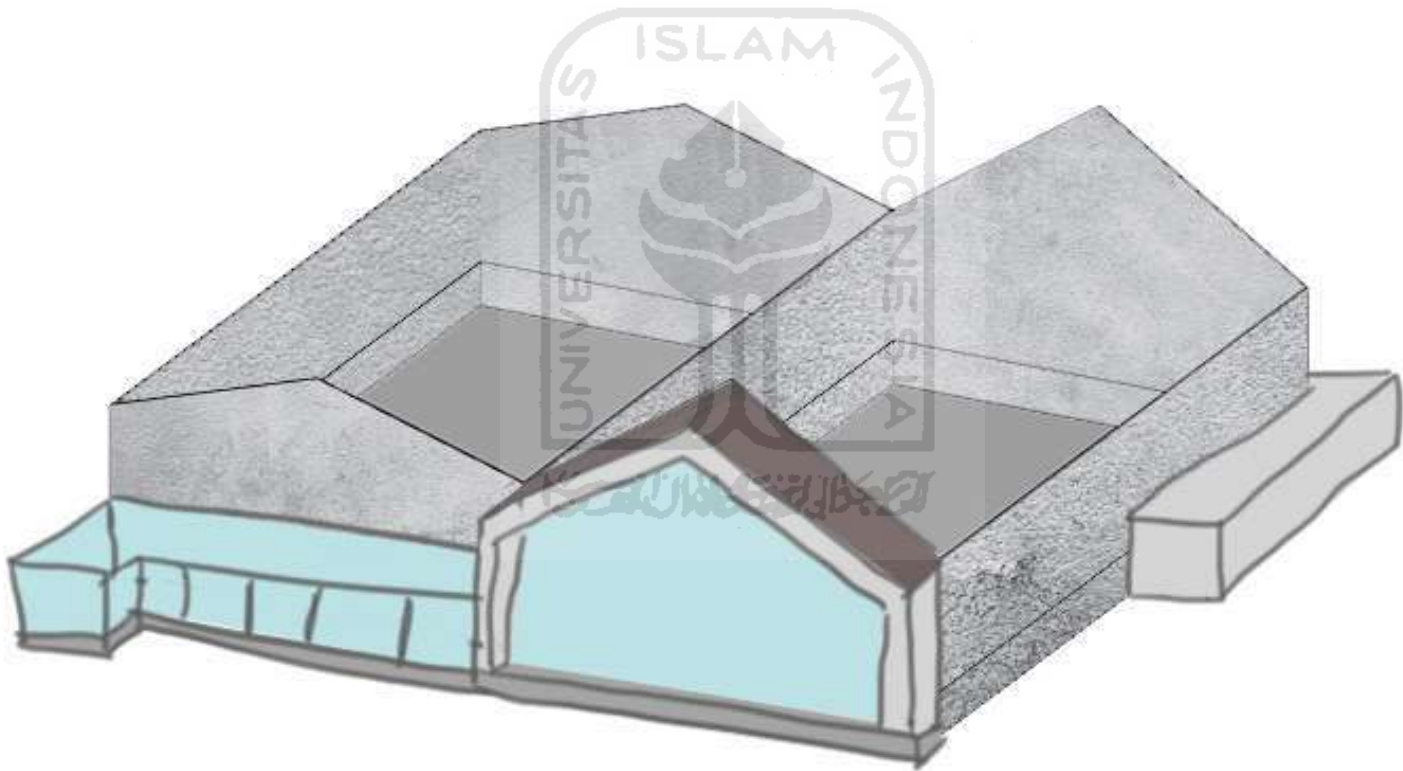
Figure 134: Rough schematic of the integrated truss that will hold the loads from the roof and infrastructures



Scaled Extension

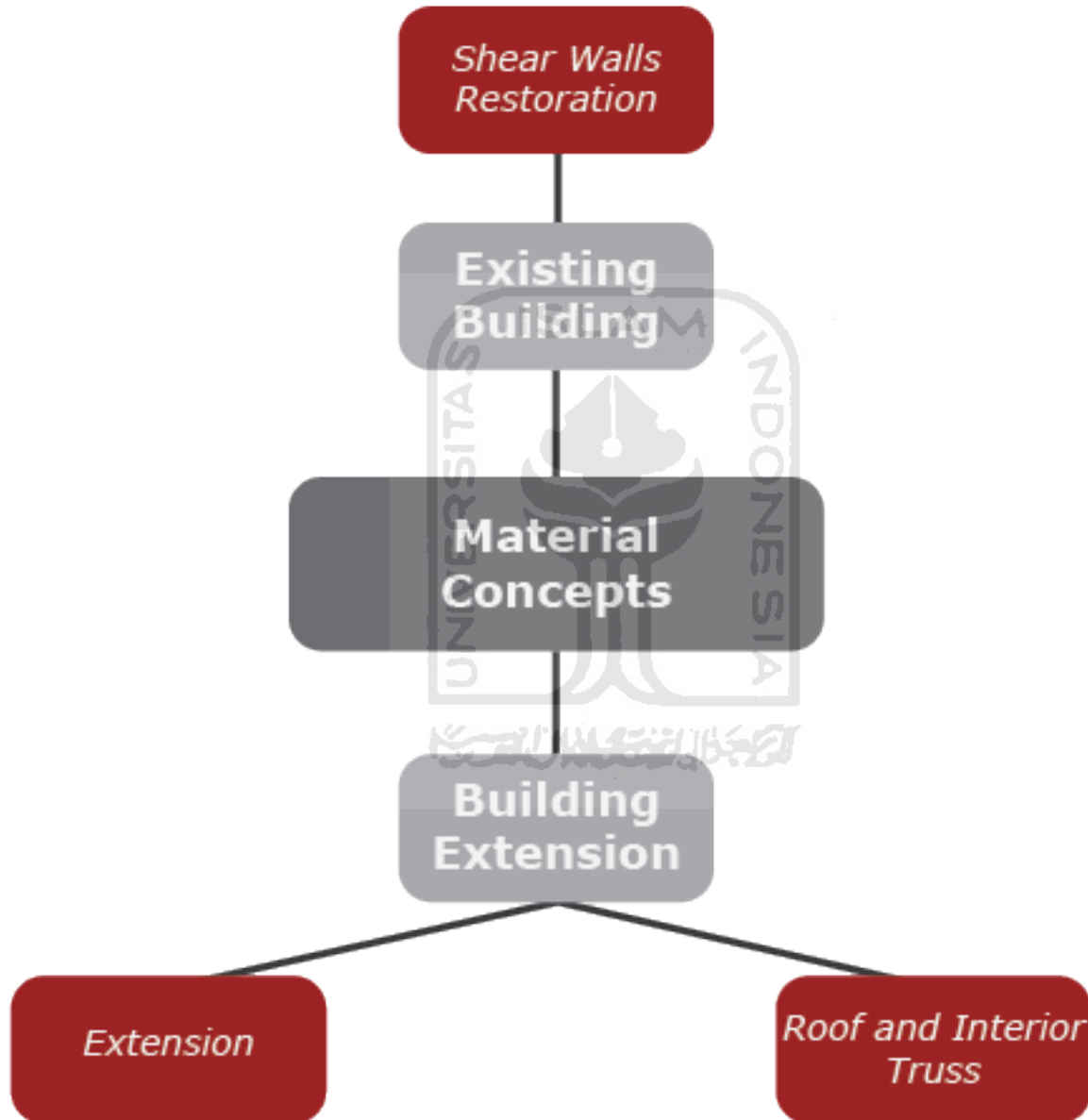
In the front of the building, two different extension will be built accordingly. Welcoming lobby of the multifunction hall will be designed to follow the form of the building and give monumental scale to the space, while the lobby of the R&D hall is designed with more human scale to encourage casual interactions.

Figure 135: An extension will be build at the front of the building using light steel frame structures.



Material Concepts

The shear walls will be restored using similar materials and construction to the existing building to restore the integrity.

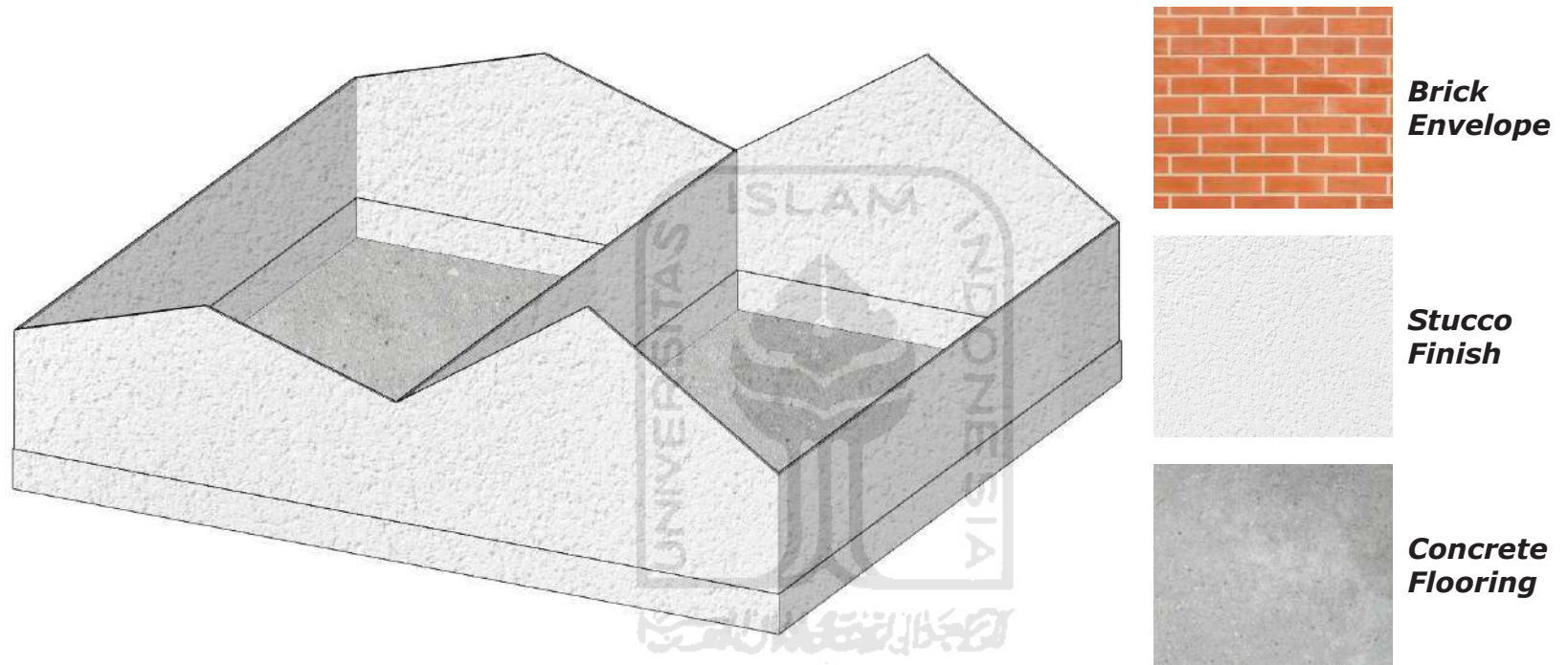


The extension will be built using materials that are able to be disassembled and have low silhouette as compared to the main building.

The truss of the building will be built using steel frame material to be able to hold the load from the roof and other infrastructures that might be needed in the function.

Figure 136: The building will be built using materials that will fit the purposes.

Main Building

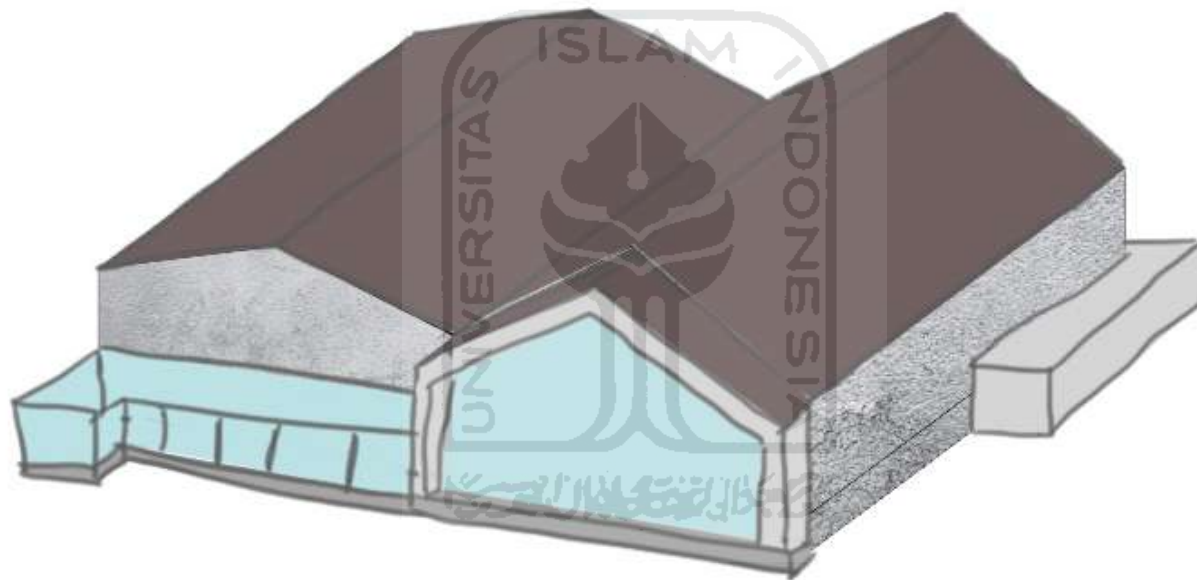


The main building will be restored using the original material used in the existing building, with bricks to fill up and strengthen the existing envelope and finished with white stucco, while the flooring will be covered using concrete flooring that will allow it to be covered by other modular form of flooring when it is needed.

Figure 137: The restoration will use similar materials and constructions.

Extensions

The extension will be built using materials that are able to create a contrast with the original building in the combination. The usage of glass and steel as the majority is meant to create inviting transparency that will attract the people to visit.



**Bitumen
Roofing**



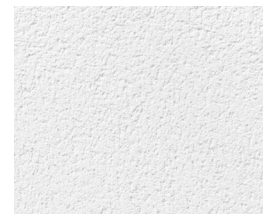
**Frosted
Glass**



**Light Steel
Frames**



**Concrete
Flooring**

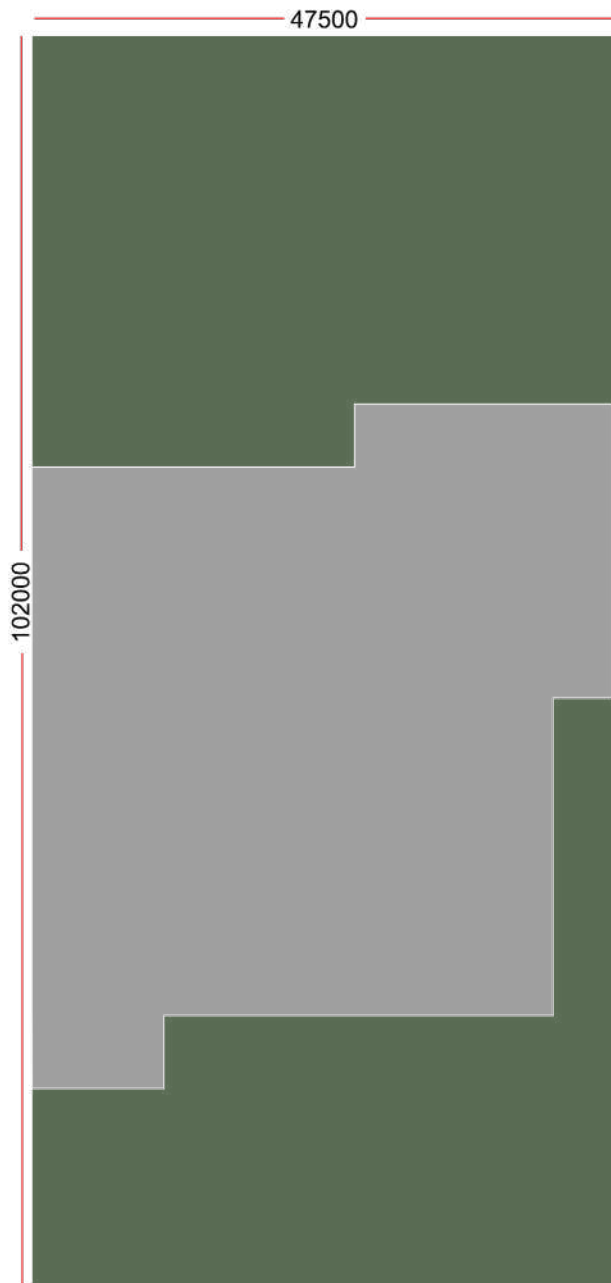


**Stucco
Finish**

Figure 138: The extension will use low silhouette and disassembleable materials

4 Design Development





Property Size

Site Area: 4845 sqm

Building Area: 2125 sqm

The site is rectangularly shaped, taking the original building's site area, with addition of an empty lot at the back of the building. After the development, the building take a total area of 2125 sqm.

Building BCR: 43%

Local BCR: 50%

Building FAR: 1.26

Local FAR: 12

Building GCR: 50%

Local GCR: >20%

The building is designed with the local building regulations in mind. It has already complied with the Building Coverage Ration (BCR), Floor Area Ration (FAR) and Green Coverage Ration (GCR).

The site is developed as an open space, with adequate green area to make it more inviting for public use, and to help with adding greenery to the community, promoting planting of vegetation in public area in order to retain the city's identity and walkability.

Figure 139: Property size of the project

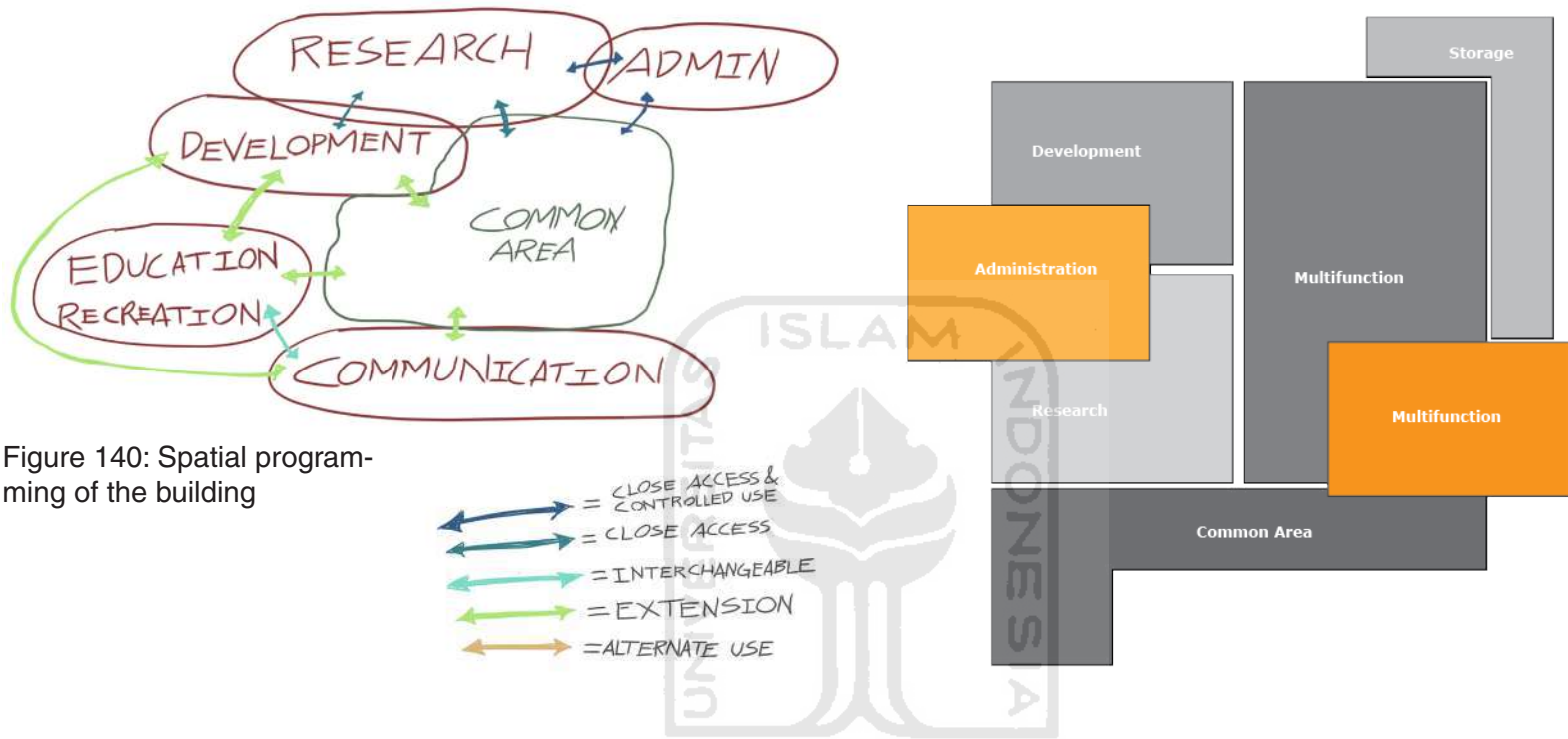
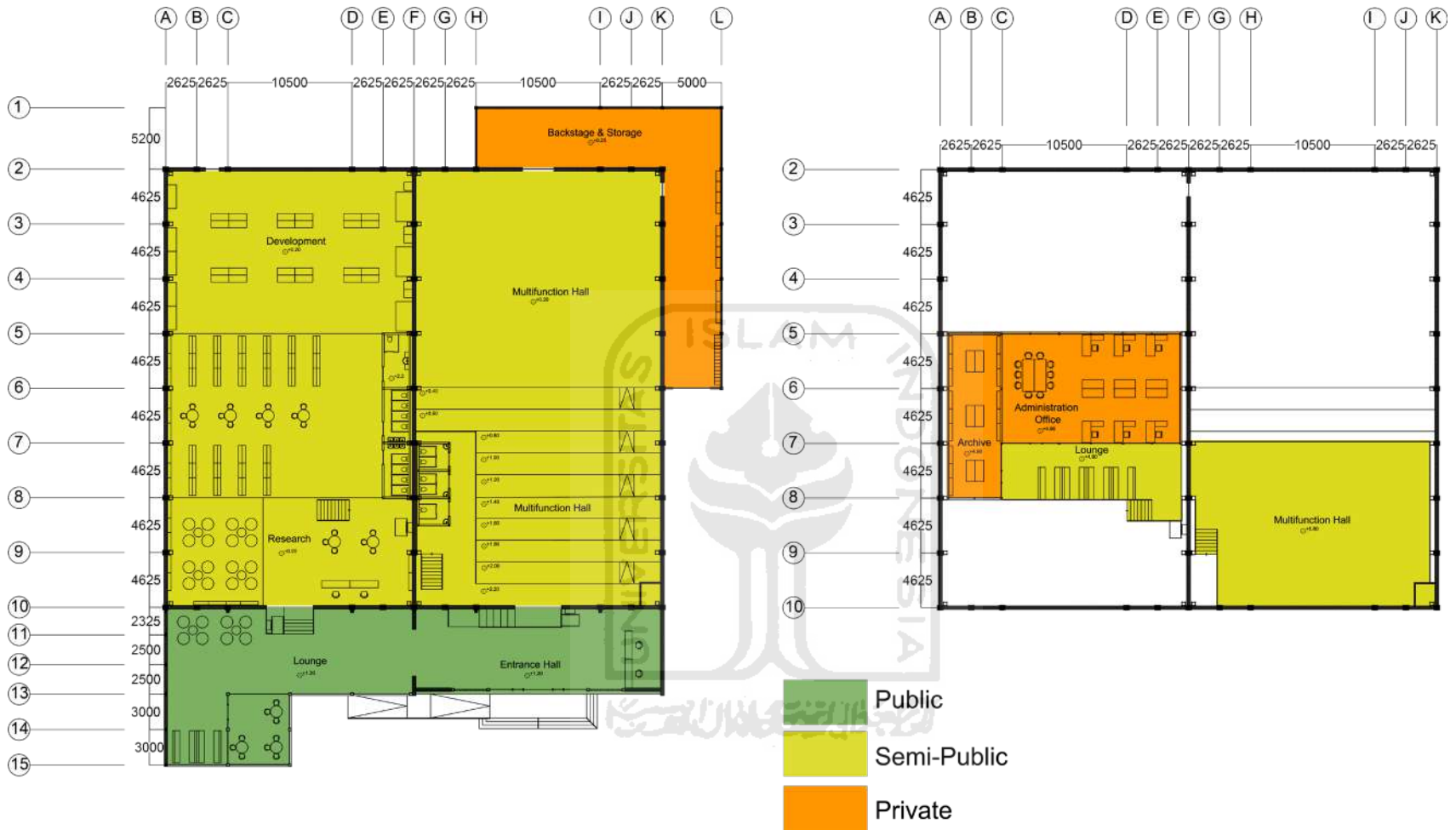


Figure 140: Spatial programming of the building

Spatial Programming

Based on the analysis on the connection between the spaces and its characteristics, connection between each function and the location of each function can be determined as the base of the design.

The function of education, research, and communication are combined into one function that is able to be used for performing arts and visual arts functions according to the context of cultural activity that might happen. On the other hand, the development and research functions are located into one mass to make the activity more integrated



Spatial Zoning

The zoning of the building is separated by the user and the activities, ensuring that the privacy of the activities are still conducive for the activities. User can enter the building through the common area that is designated for the public, while the semi-private area is designated for the limited public, to make it conducive.

Figure 141: Privacy zoning within the site

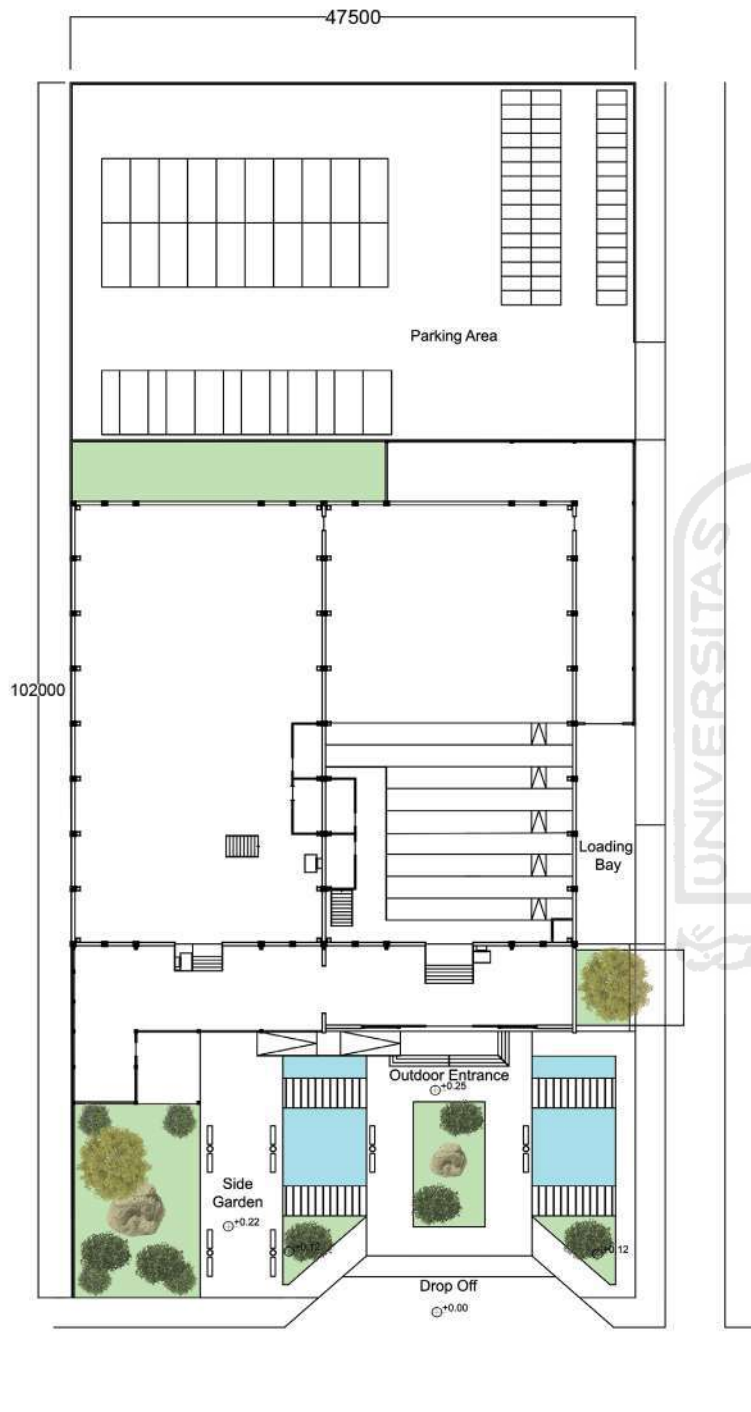


Figure 142: Site Plan

Site and Landscape Design

The site is designed to be used by the public as a place for them to gather and socialize, with providing space for activities and vegetations to grow.

The circulation at the entrance is designed to guide the user directly to the entrance of the building, with straight path and water features.

The vegetation within the site are chosen to not disturb the facade of the building, while still providing adequate shade and greenery in the area.



Figure 143: Before and after photo of the site

Revitalising An Iconic Building

The goal of the design is to bring back the cultural significance back to the people, from the past, as the building is a silent witness of cultural development in Bogor since the Colonial Era.



Figure 144: Before and after photo of the facade

Adding Values to Existing Structures

Using the strategies determined by the insertion and the the material conceptions, values are added to the abandoned building, ensuring that the building is up to date in the functionality and aesthetics.

Figure 145: Illustration of insertions

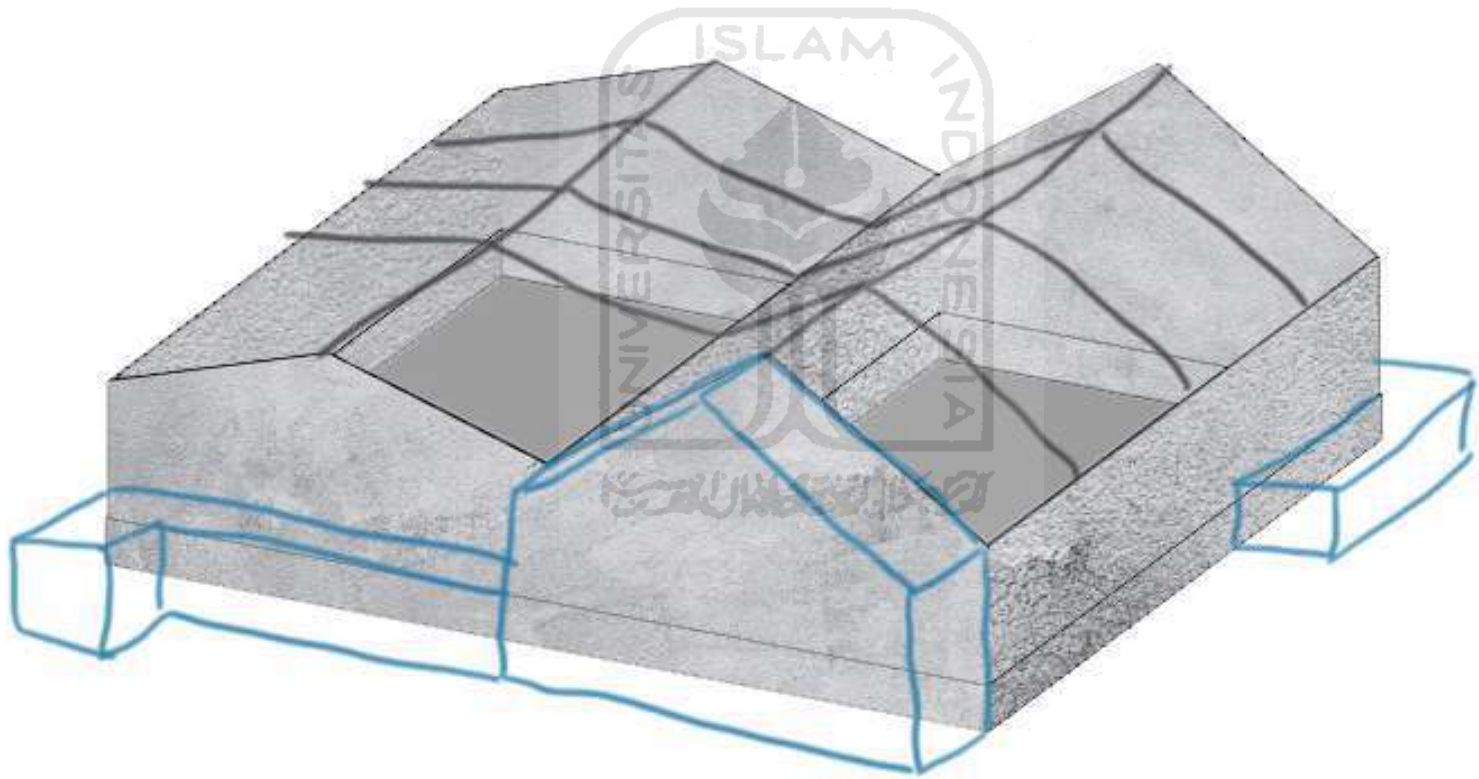
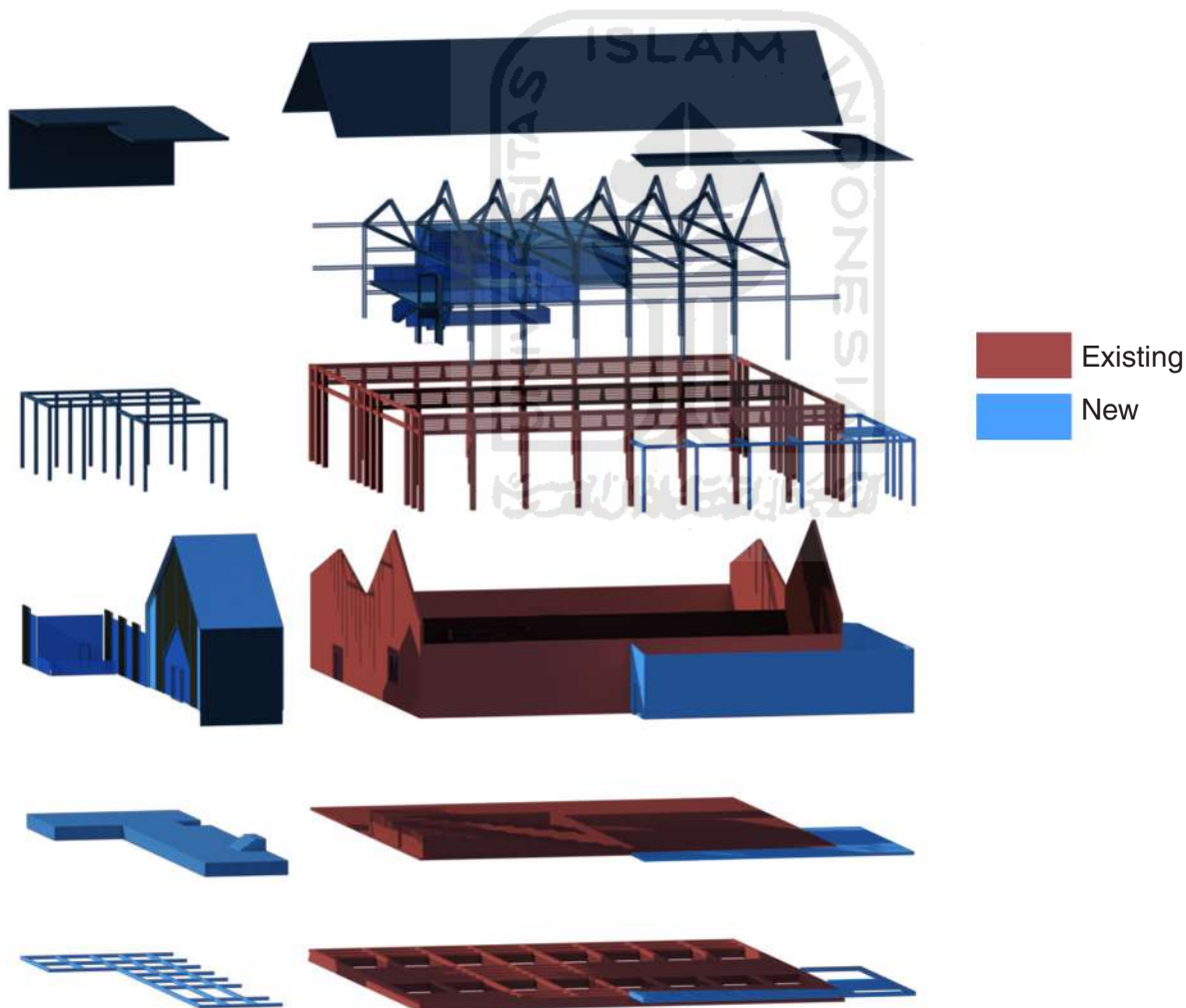


Figure 130: Planned changes in the design

Existing Building As A Building Base

The interior and exterior of the building are designed to make use of the existing structure where it is possible. Interior structures are added to make it more functional, replacing the old roof truss that started to deteriorate. The front extensions are completely replaced with new structures to better represent the culture and advancement in architectural design.

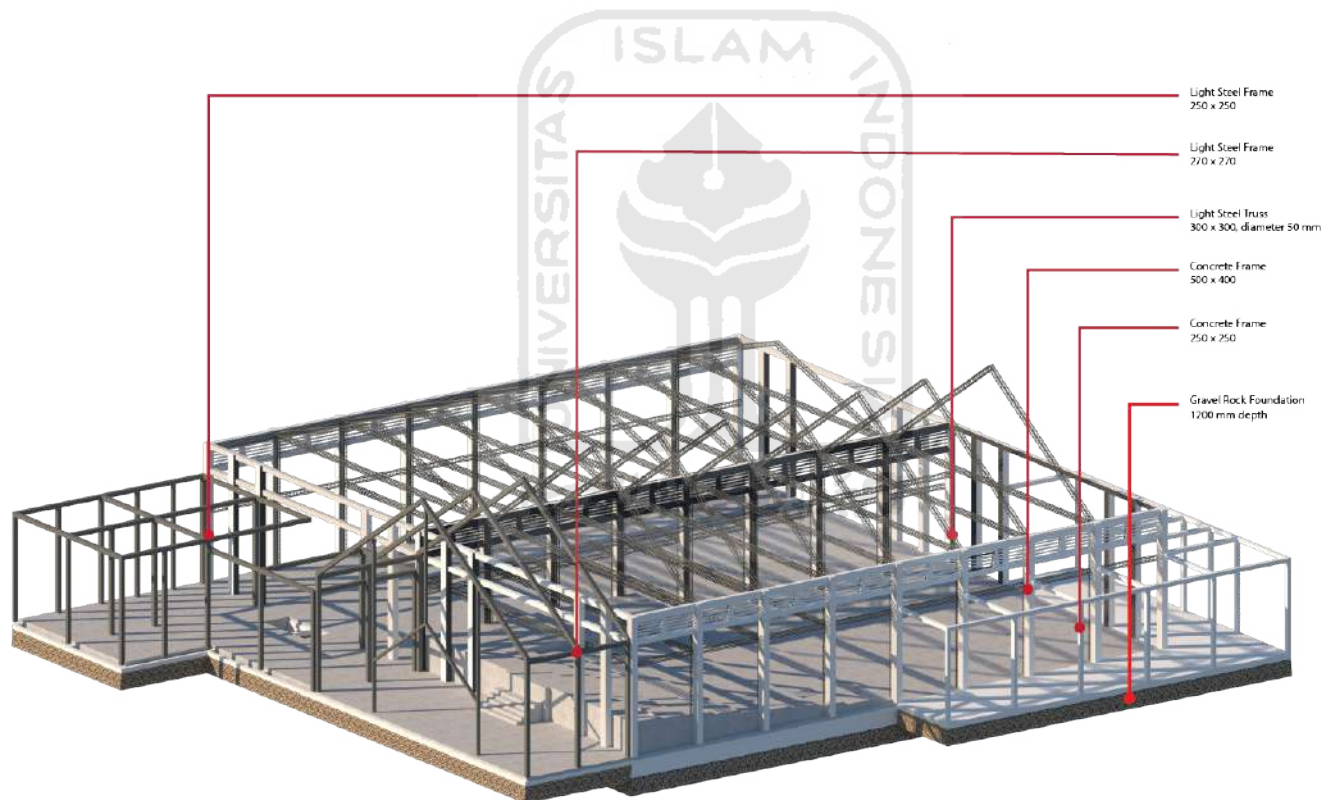
Figure 146: Diagram shows part of existing and new structures



Insertion To Existing Structure

As the design use an existing building as the base, the structure of said building are restored, then new structural elements that are necessary in the context are added to support the functions. The new structure are designed using modular material to make it easier to be disassembled when necessary.

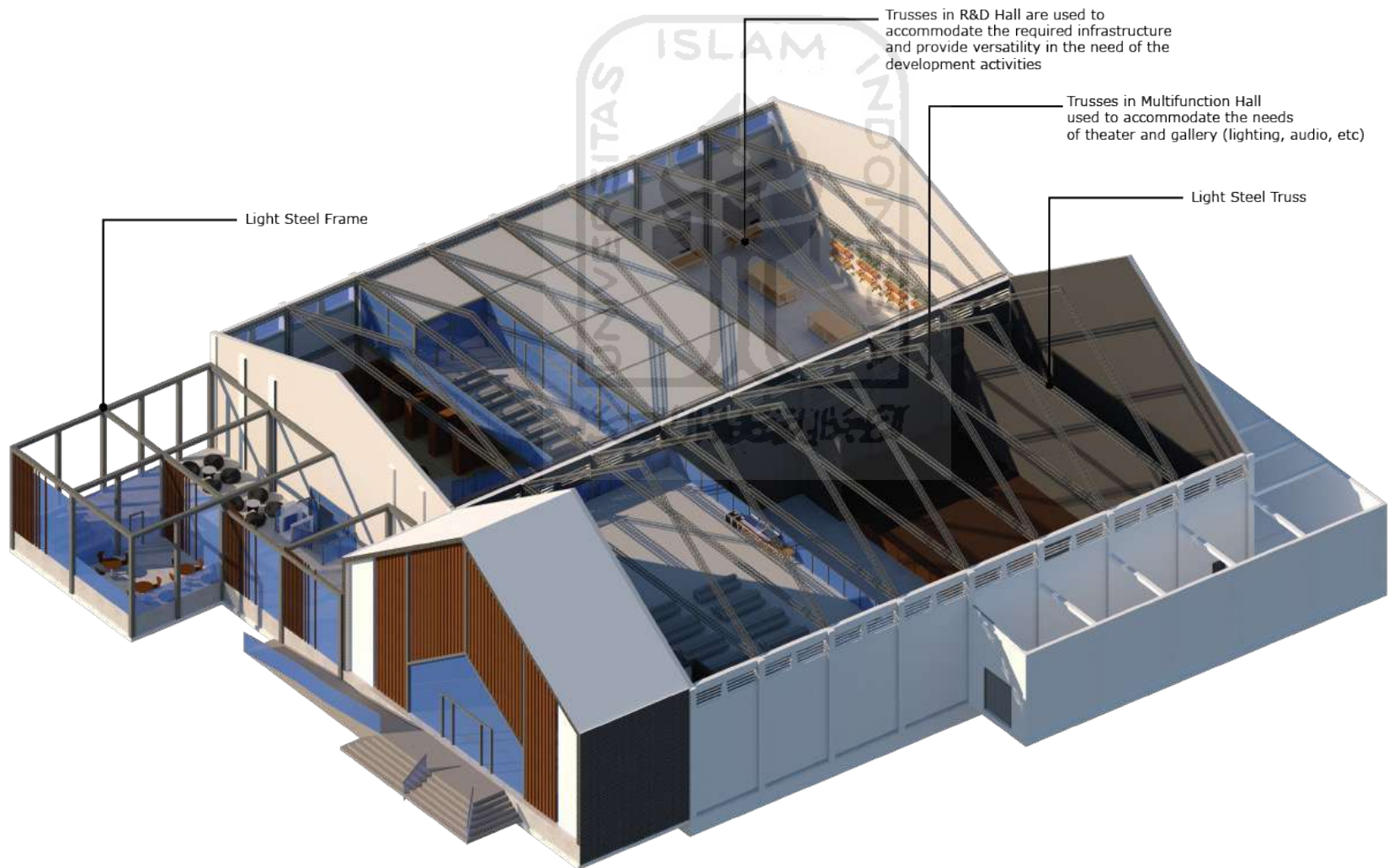
Figure 147: Illustration of structural systems



Structural Overhaul In New The Insertion

Truss and extension, as part of new addition to the building are designed to compliment the existing building, using compatible contrast insertion aesthetic. Both are designed with modernized industrial style, using light steel construction that are able to be dis-assembled when needed.

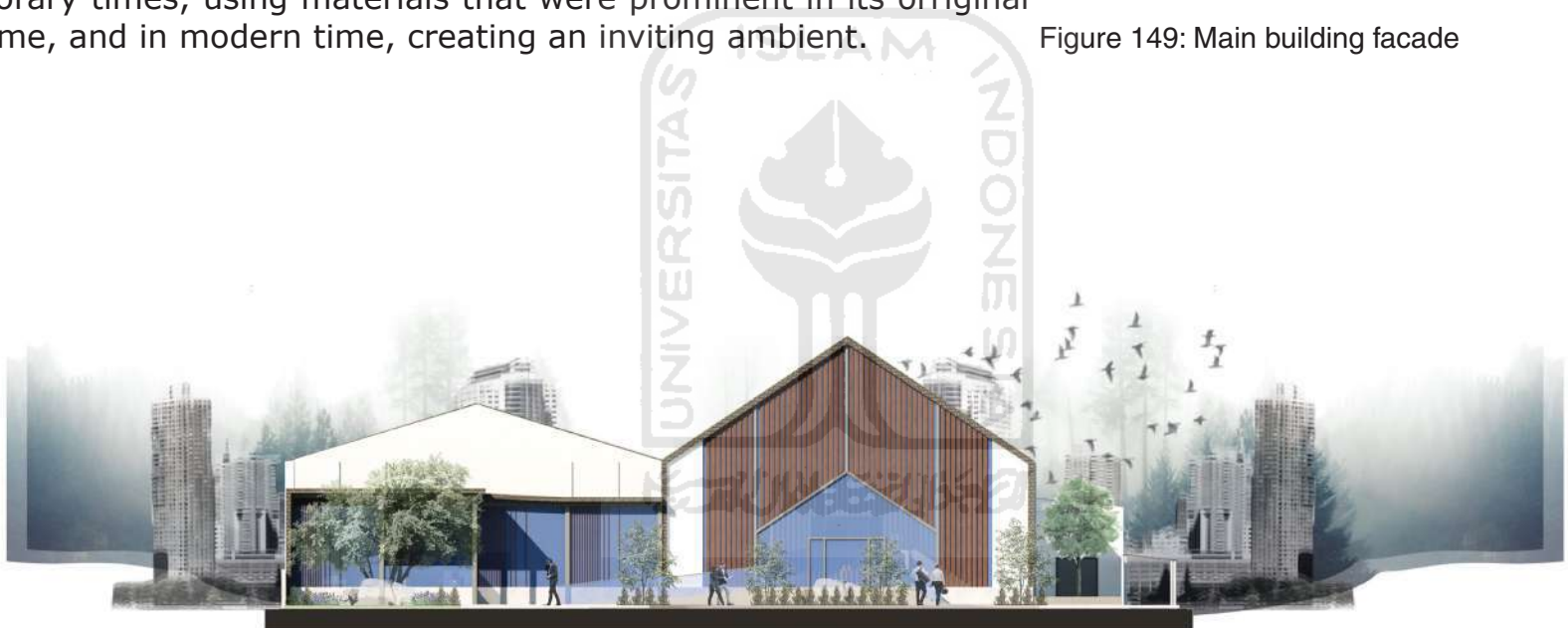
Figure 148: Illustration of structural systems in the insertions

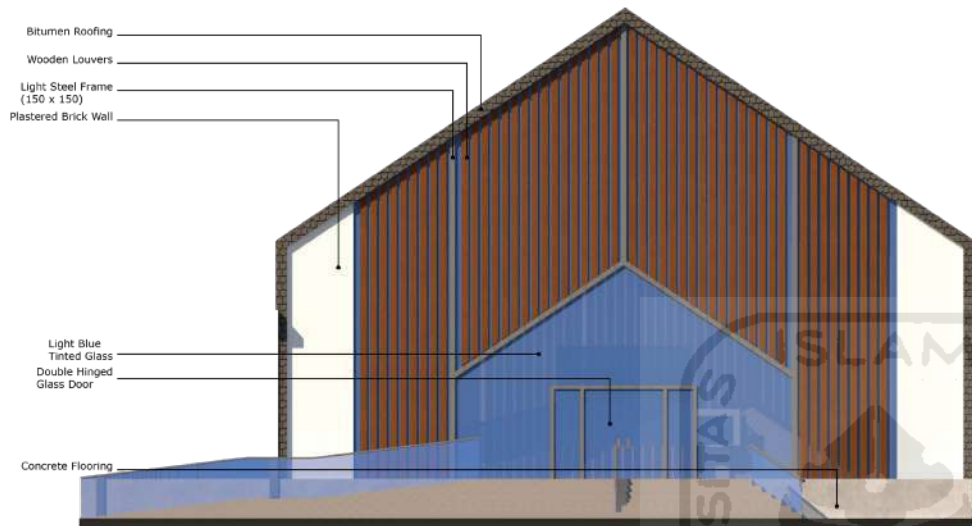


Facade from The History and Contemporary

The facade of the building is designed to compliment the existing shape and features of the building, embracing its identity as a building of cultural significance during colonial times and after Independence time, while reflecting architecture style of contemporary times, using materials that were prominent in its orriginal time, and in modern time, creating an inviting ambient.

Figure 149: Main building facade





Main Entrance Facade

The facade of the main entrance is designed at a monumental space, whole complimenting the shape of the existing building.

The design of the envelope is a reflection of the building's style that has been modernized along with the development of architecture itself.

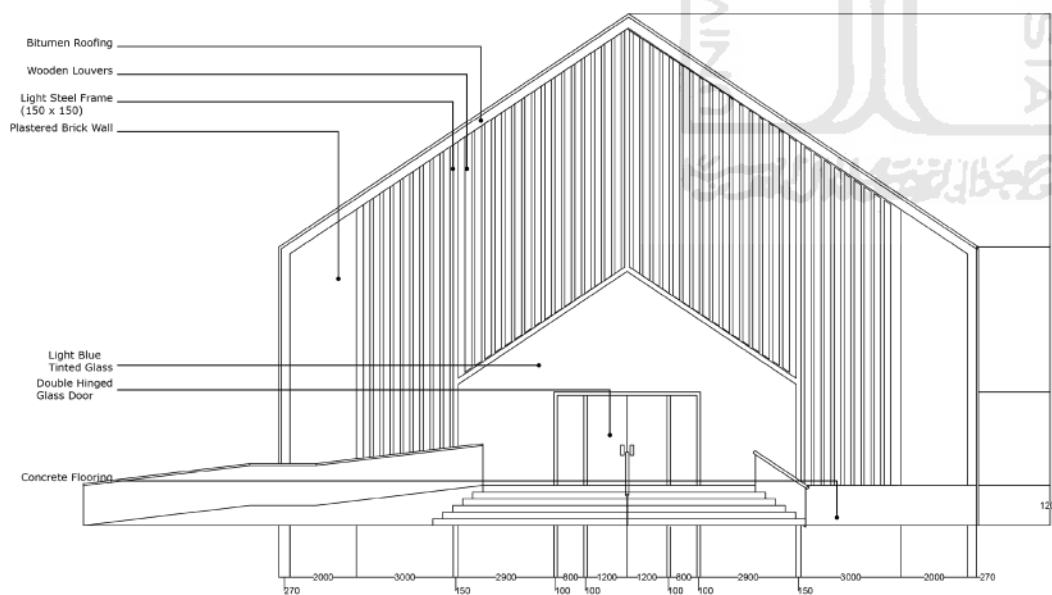
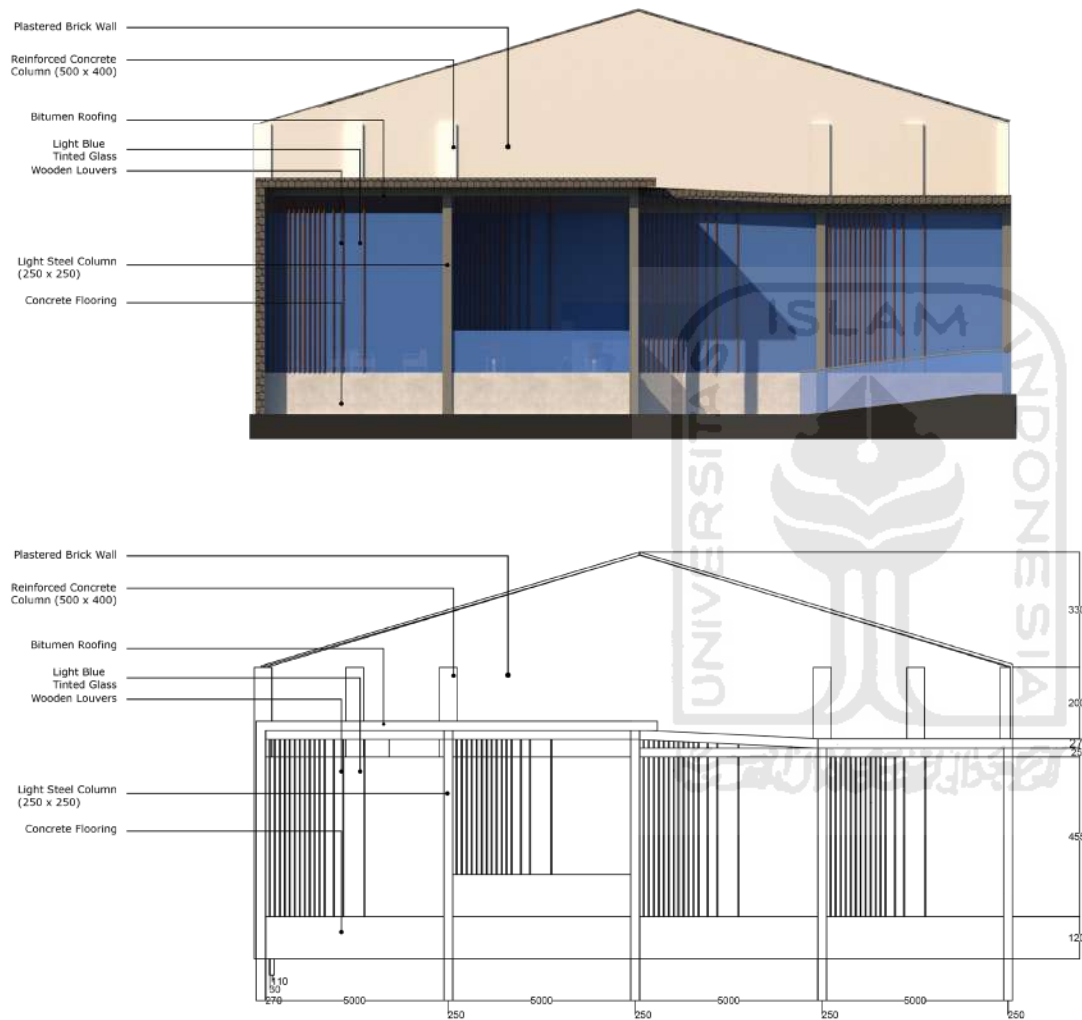


Figure 150: Main entrance facade details



Lounge Facade

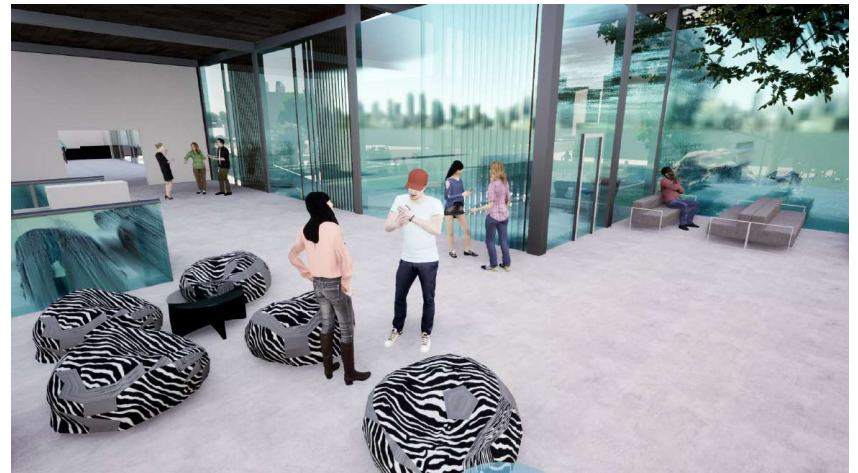
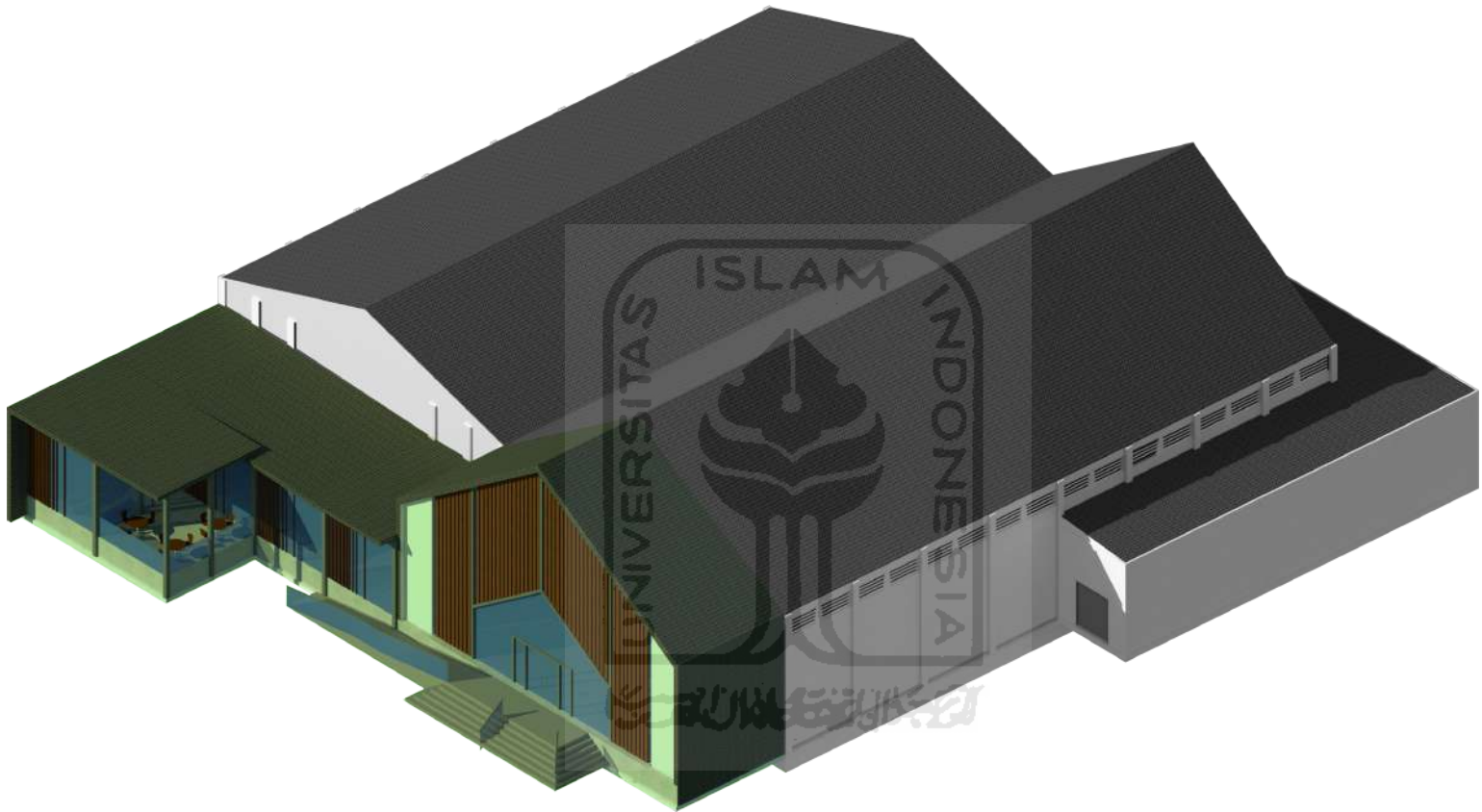
At the side of the main entrance is the facade of the lounge area. This envelope are designed with more human scale that are still complimenting to both the main entrance and the existing building's facade.

Figure 151: Lounge facade details

Monumental and Human Scaling.

The extensions that makes up most of the facade are designed to be inviting and awe-inspiring. The entrance of the building, located at the front of the multifunction hall is designed with monumental scale, while extensions at the front of R&D hall is designed with more human scale to encourage interactions and conversations.

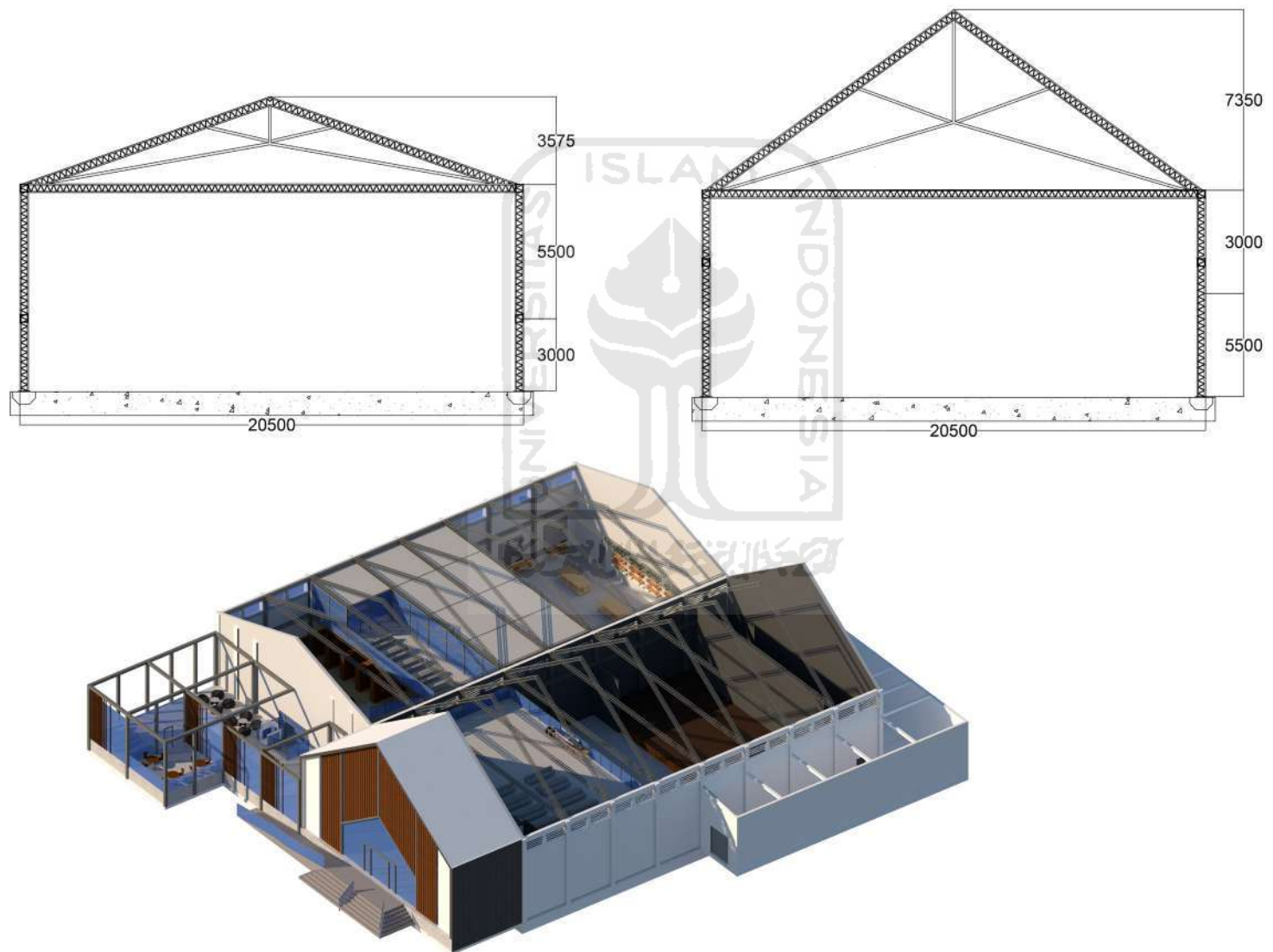
Figure 152: Extensions will be build at the front of the building using light steel frame structures.



Versatile Truss To Accommodate The Equipments

The truss system are designed to be versatile and able to accommodate various infrastructure needs within each respective functions.

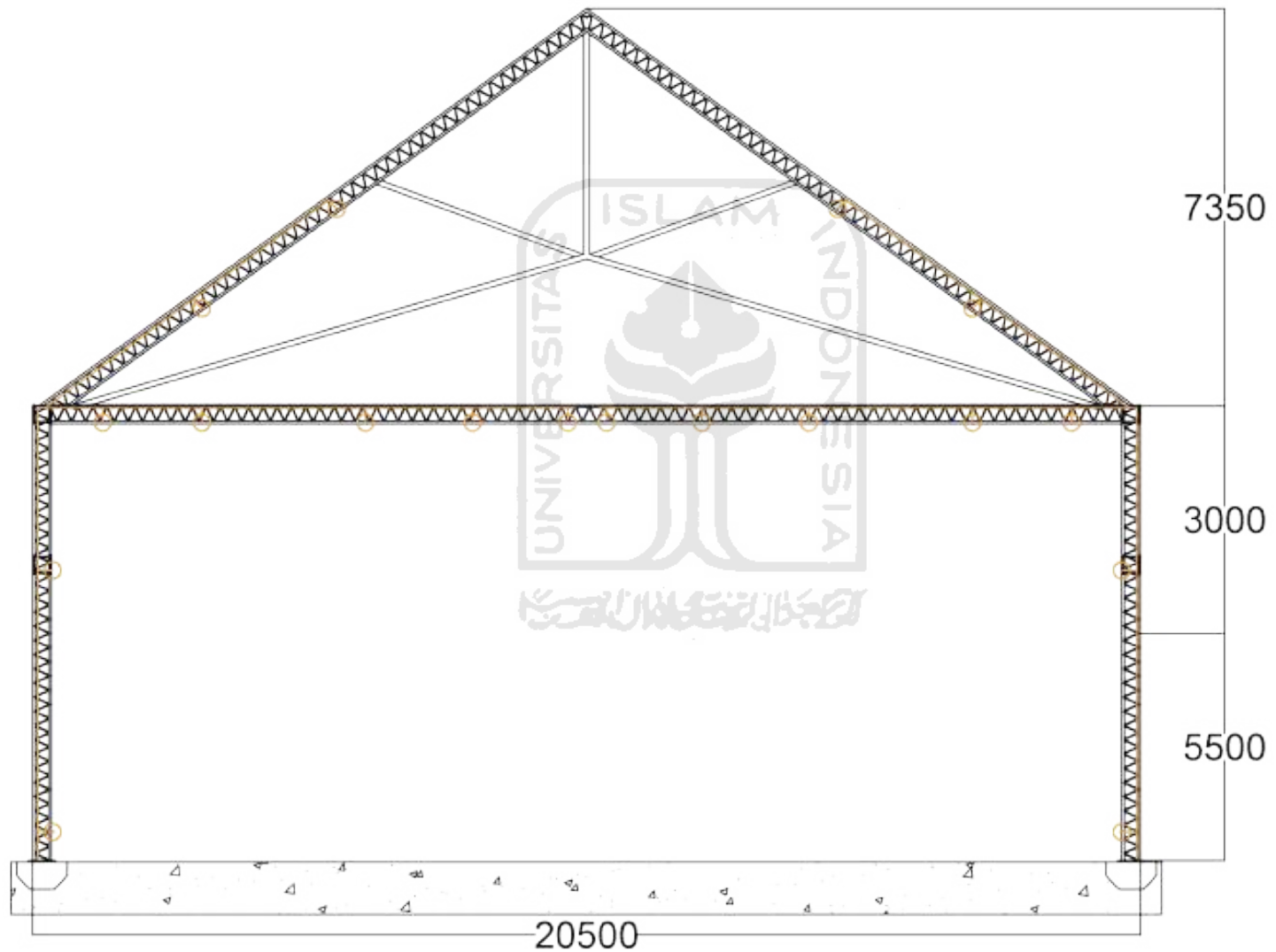
Figure 153: Versatile truss



Flexible Infrastructure Within The Truss

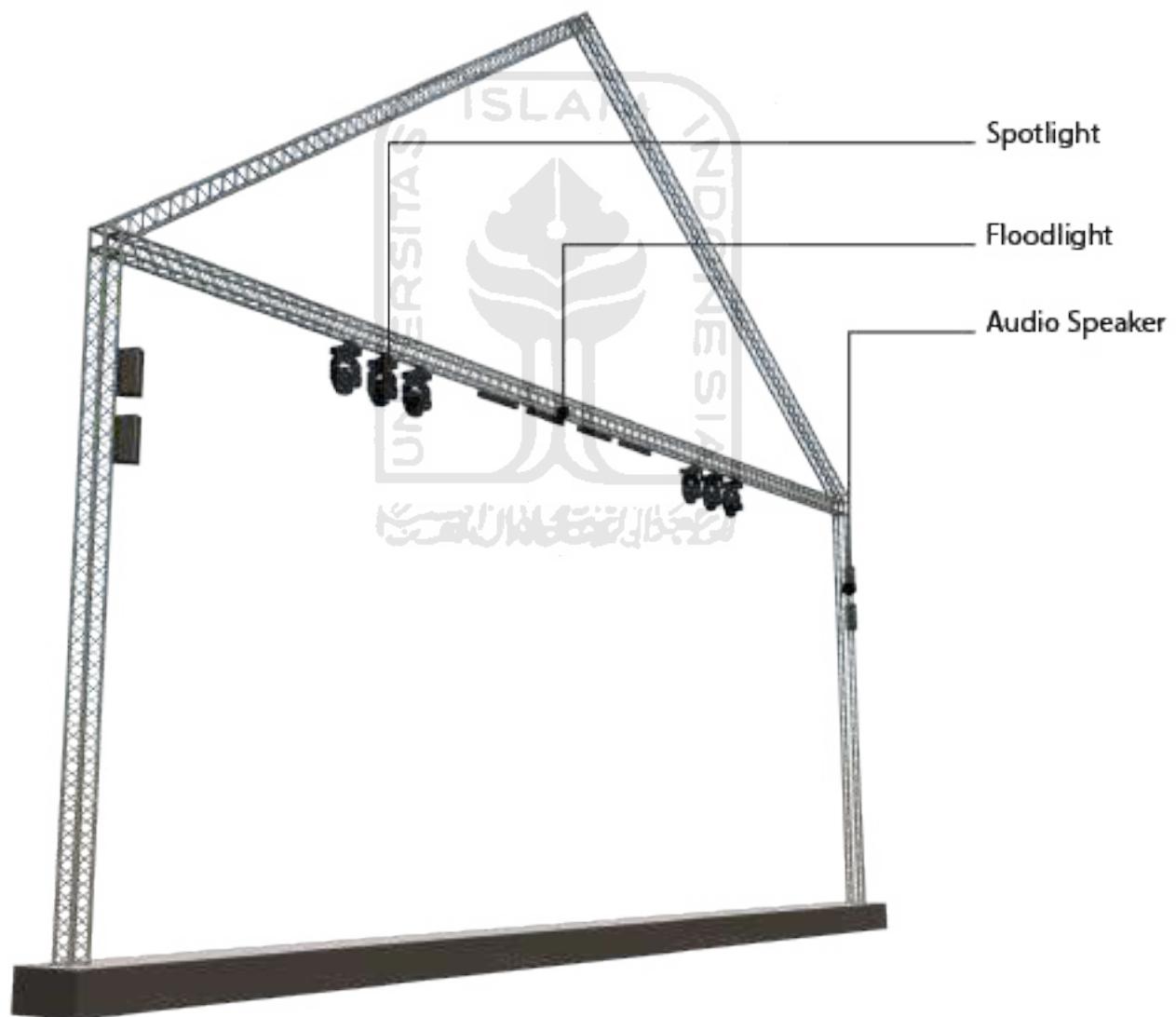
Electricity network is distributed throughout the truss, to ensure that each equipments are able to gain access to electricity.

Figure 154: Electricity within the truss



Aside from holding the loads of roof structure, the trusses also designed to accommodate for the infrastructure, especially in the multifunction hall, where the infrastructure might be needed to be adjusted according to the activity that might take place in the hall.

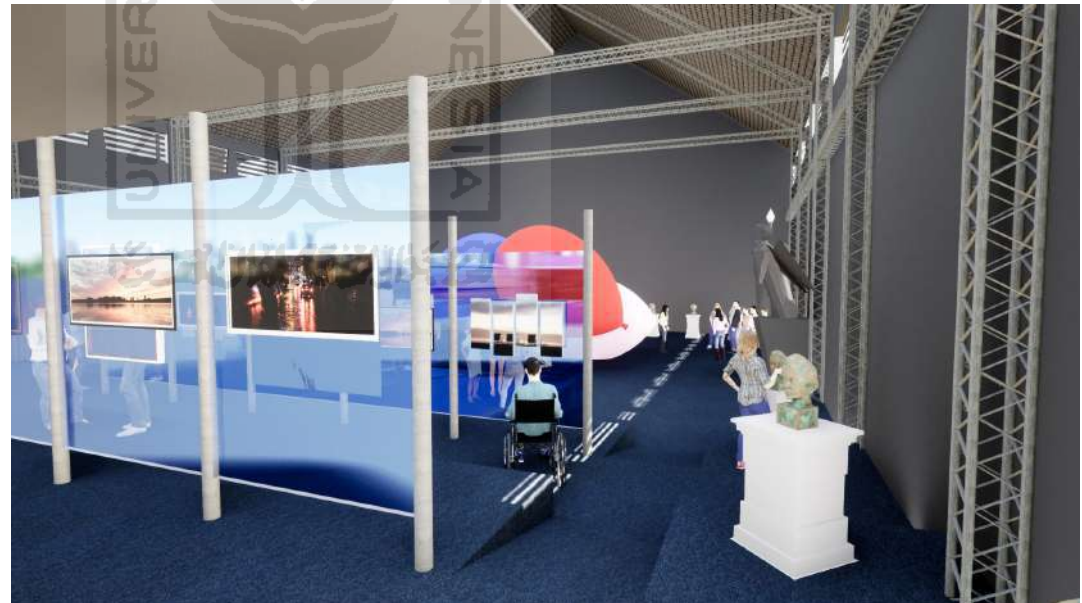
Figure 155: Versatile truss used to accommodate the equipments and infrastructure



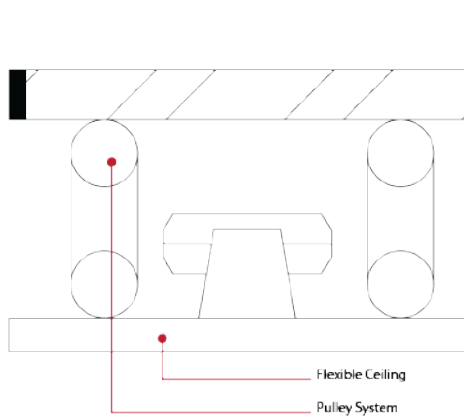
Versatile Space Rearrangement

The multifunction hall is designed to be able to be rearranged between a performing art theater, and a visual art gallery. This is done by making use of moveable and modular elements such as stages, platforms, and other equipments that might be relevant in the context. In essence, the multifunction hall functions similar to a movie set where the arrangement can be rearranged according to the need of the scenes.

Figure 156: Multifunction hall in gallery and theater arrangement



Ease of Rearrangements



Pulley System

The seats of the theater is moveable using pulley system, leaving the space below for gallery space, and giving form to the ceiling.

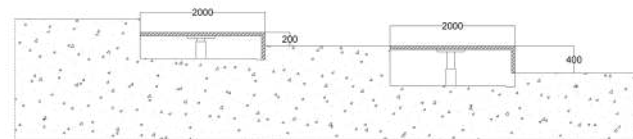
Figure 157: Pulley system for the seatings.



Hydraulic System

The platforms of the hall are designed to be equipped with hydraulic systems to allow the space to give more space for gallery.

Figure 158: Hydraulic system for the platforms.



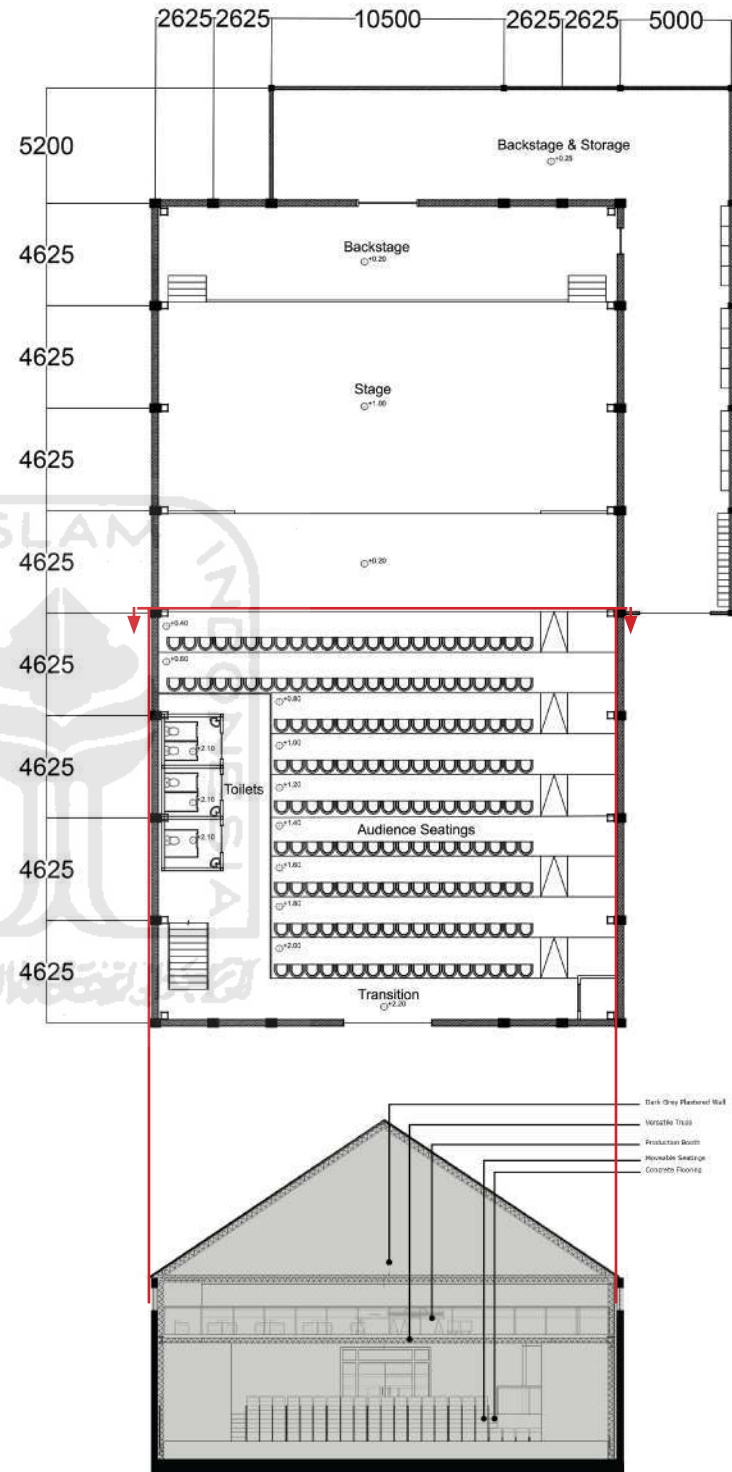
Theater Arrangement

To accommodate for theater function, the space is arranged by assembling moveable seatings into the podium. The modular stage is then assembled at the front of the seatings, with using truss to held the proscenium, curtains, and other relevant elements. The arrangements are able to be varied when the need rises.



Figure 159: Multifunction hall in theater arrangements

Figure 160: Plan and section of theater arrangement



Gallery Arrangement

When used as a gallery, modular platforms are constructed at the podiums to give more space for the exhibition hall, then displays can be arranged at the space according to the context of the exhibition

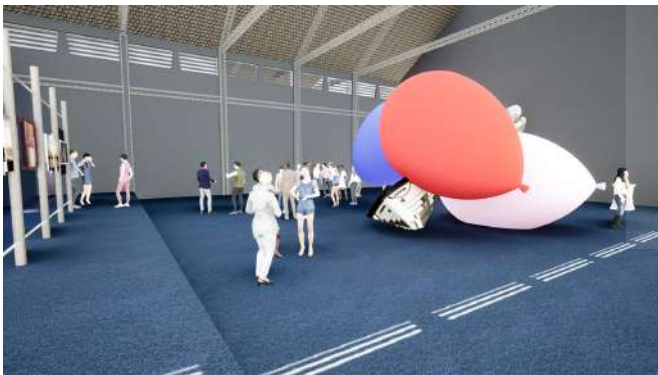
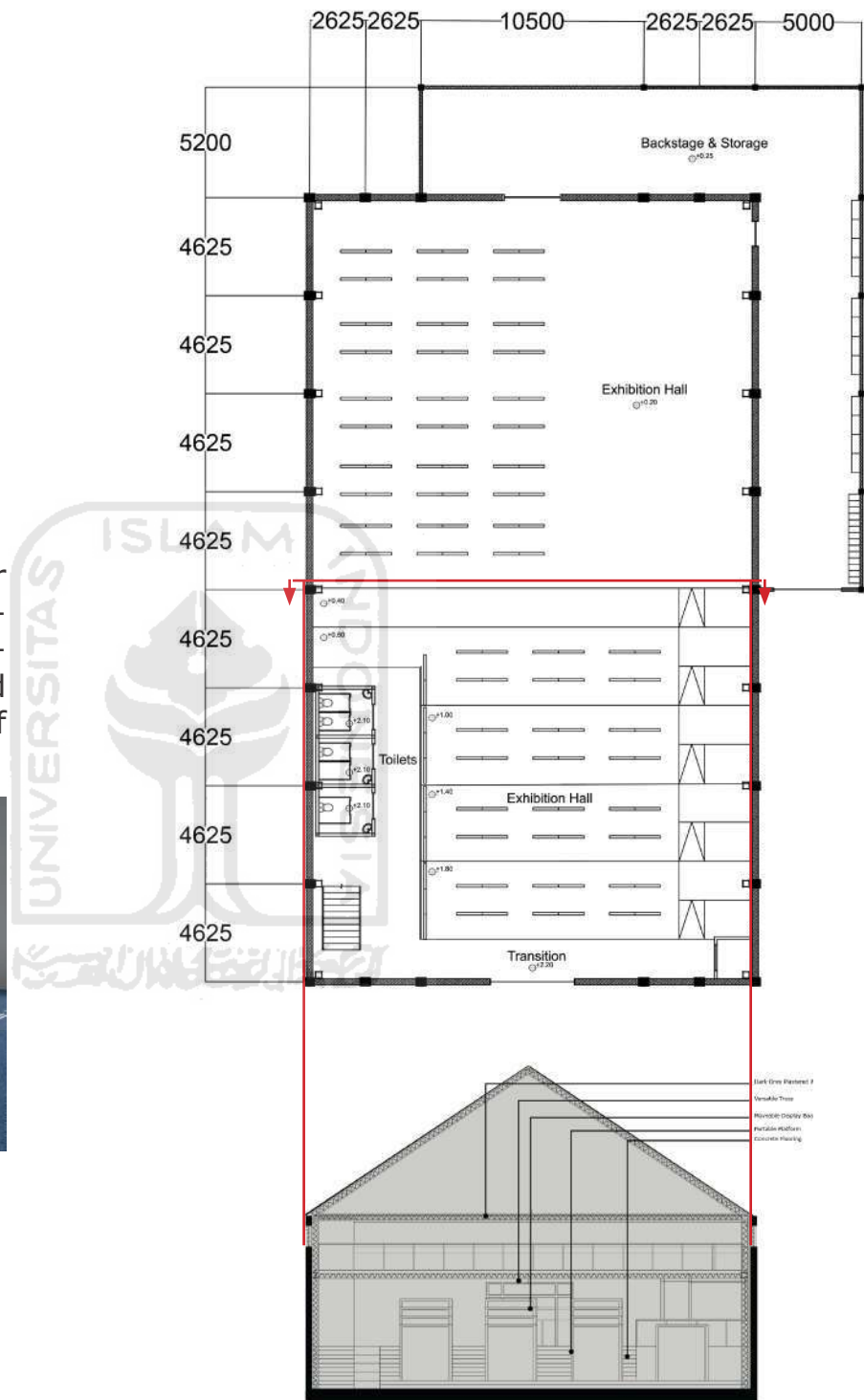
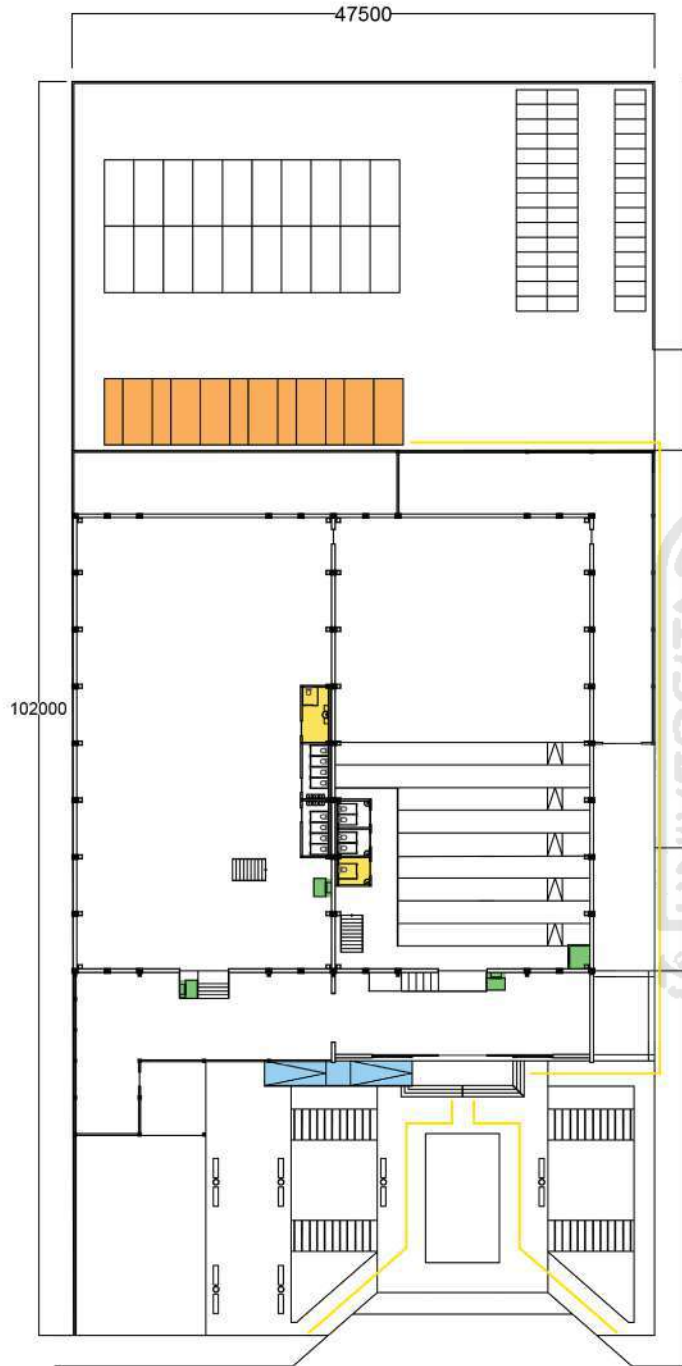


Figure 161: Multifunction hall in gallery arrangements

Figure 162: Plan and section of gallery arrangement





Barrier Free Access

The building is designed with accessibility in mind, by making use of ramps and barrier free elevator.

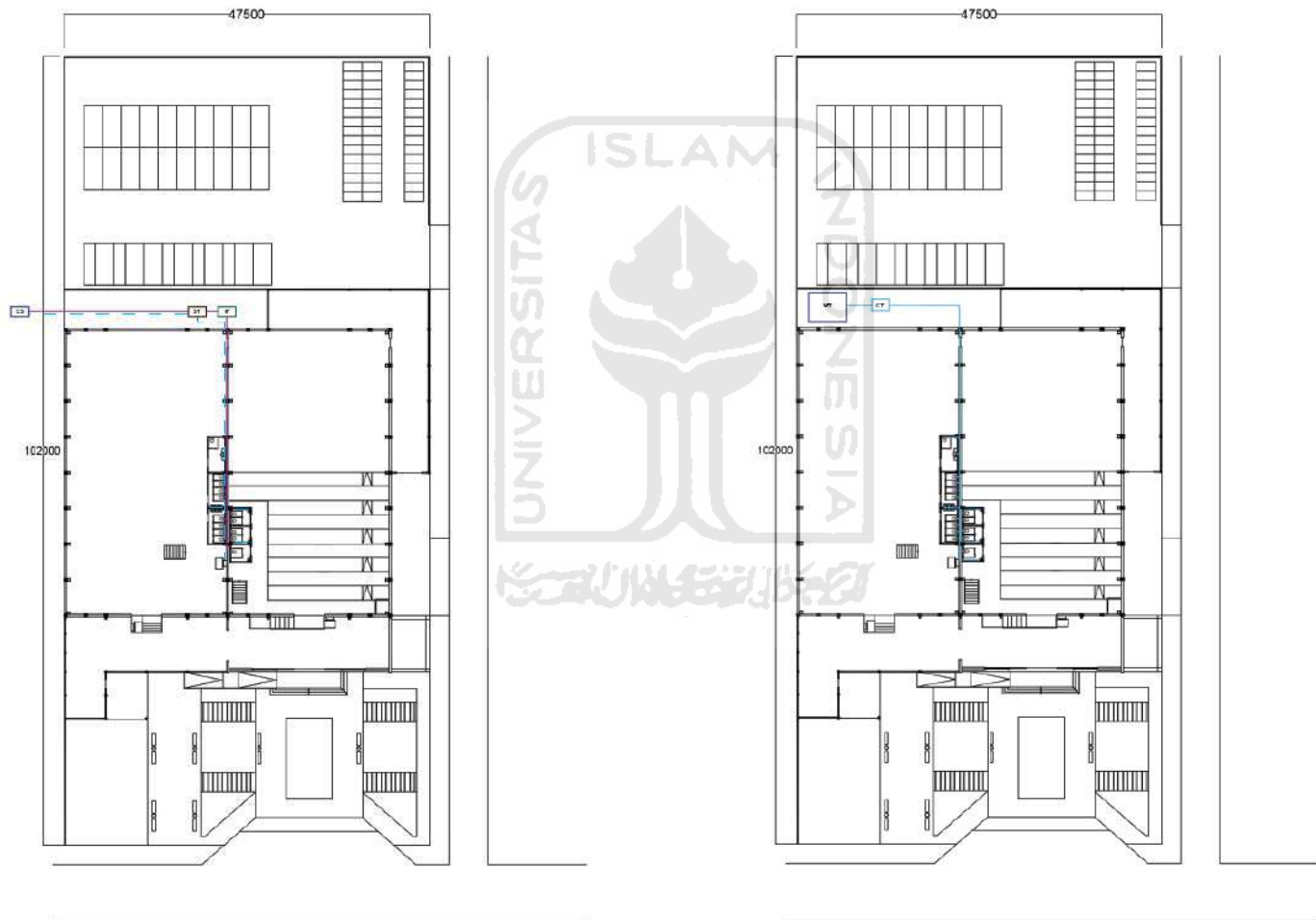
Figure 163: Barrier free scheme

-  Guiding Block
-  Diffable Toilet
-  Diffable Elevator
-  Ramp
-  Diffabled Parking

Water Distribution

The water is distributed using downfeed system, making use a water tower located at the east side of the building. The grey and black water are treated before entering city sewage.

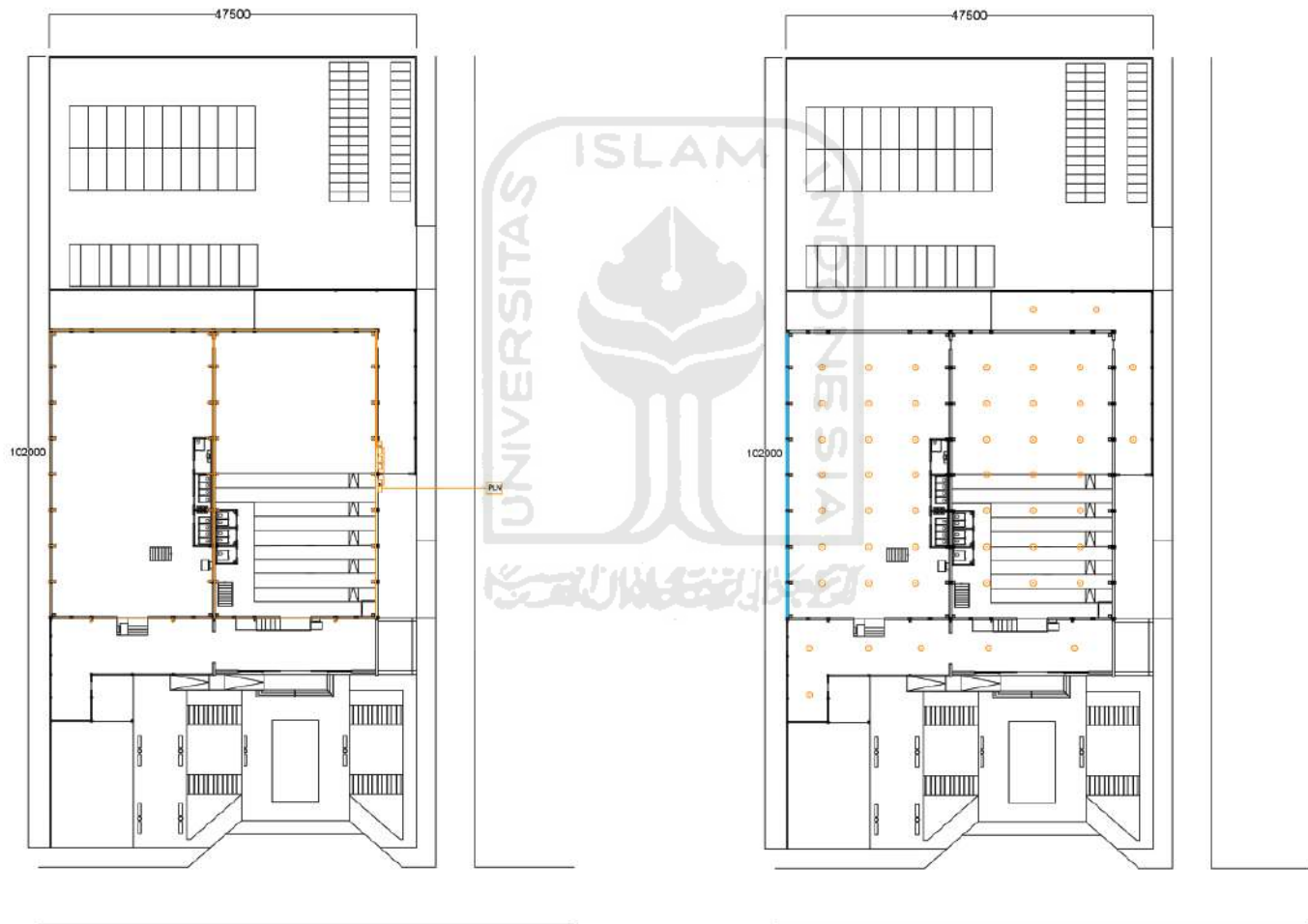
Figure 164: Water distribution scheme



Electricity and Lighting

The electricity within the building is separated into two zones, each with their own SDP. The lighting of the building are making use of ribbon windows, as well as downlight as the general lightings.

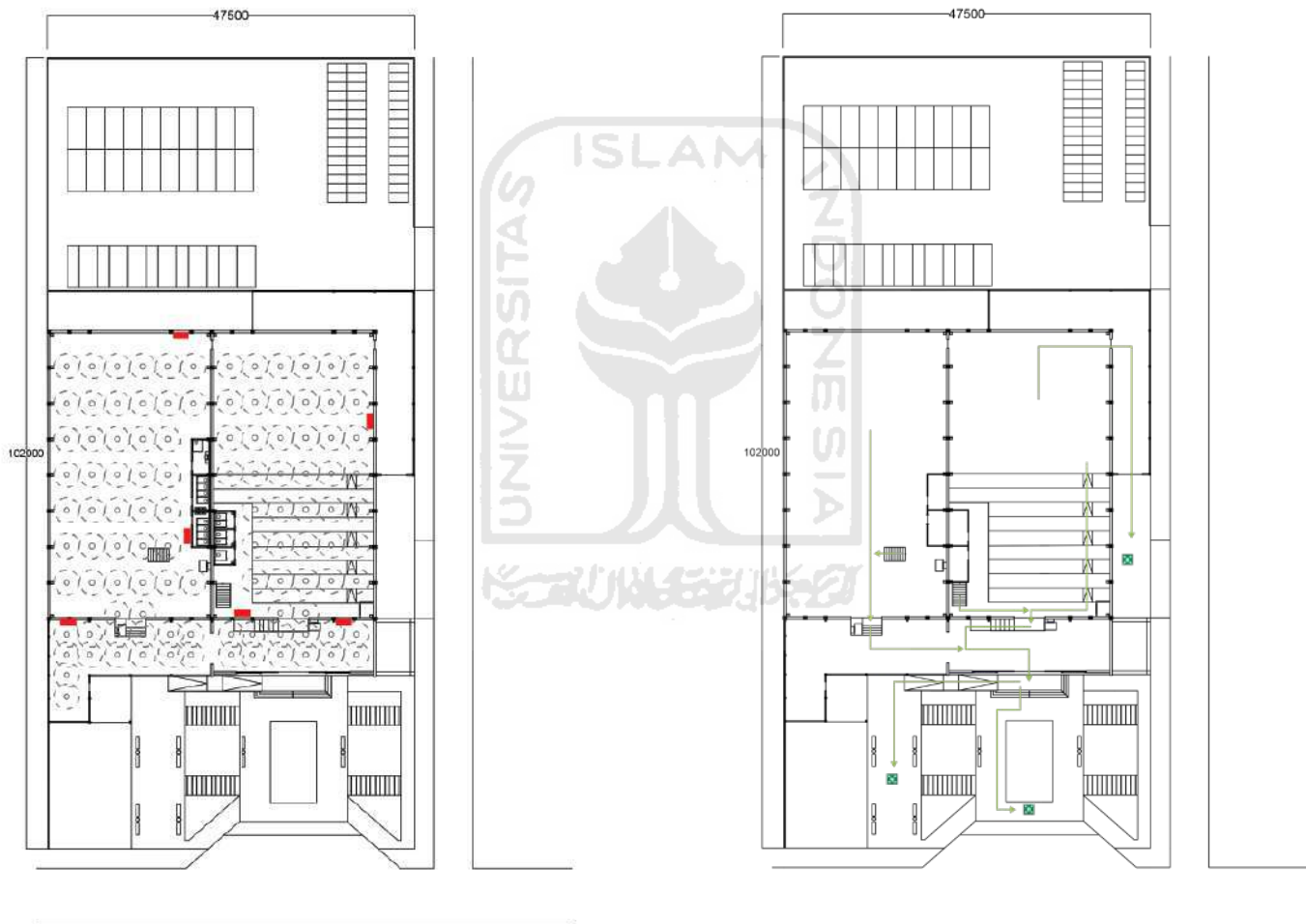
Figure 165: Electricity and lighting scheme



Fire Safety

The fire safety is ensured by the distribution of sprinkler, as well as fire hydrant in the appropriate zonings. The evacuation route is also mapped clearly.

Figure 166: Fire safety and evacuation scheme



**Front Landscaping as a
Public Space for Activities**

*The landscape of the site is
designed as an open space to
accommodate public activity*



Lobby as a Welcoming Space and Social Space

The scale of the lobby are designed accordingly, to inspire the people and encourage socializations



**Space for The Development
of Culture**

*The cultural center is designed
for the public to be able to
have access for them to take
part in culture development*



Cultural Center for The Communication and Promotion of Culture

The multifunction hall is designed for ease of acces from the development hall, communicating the cultural ideas directly to the people

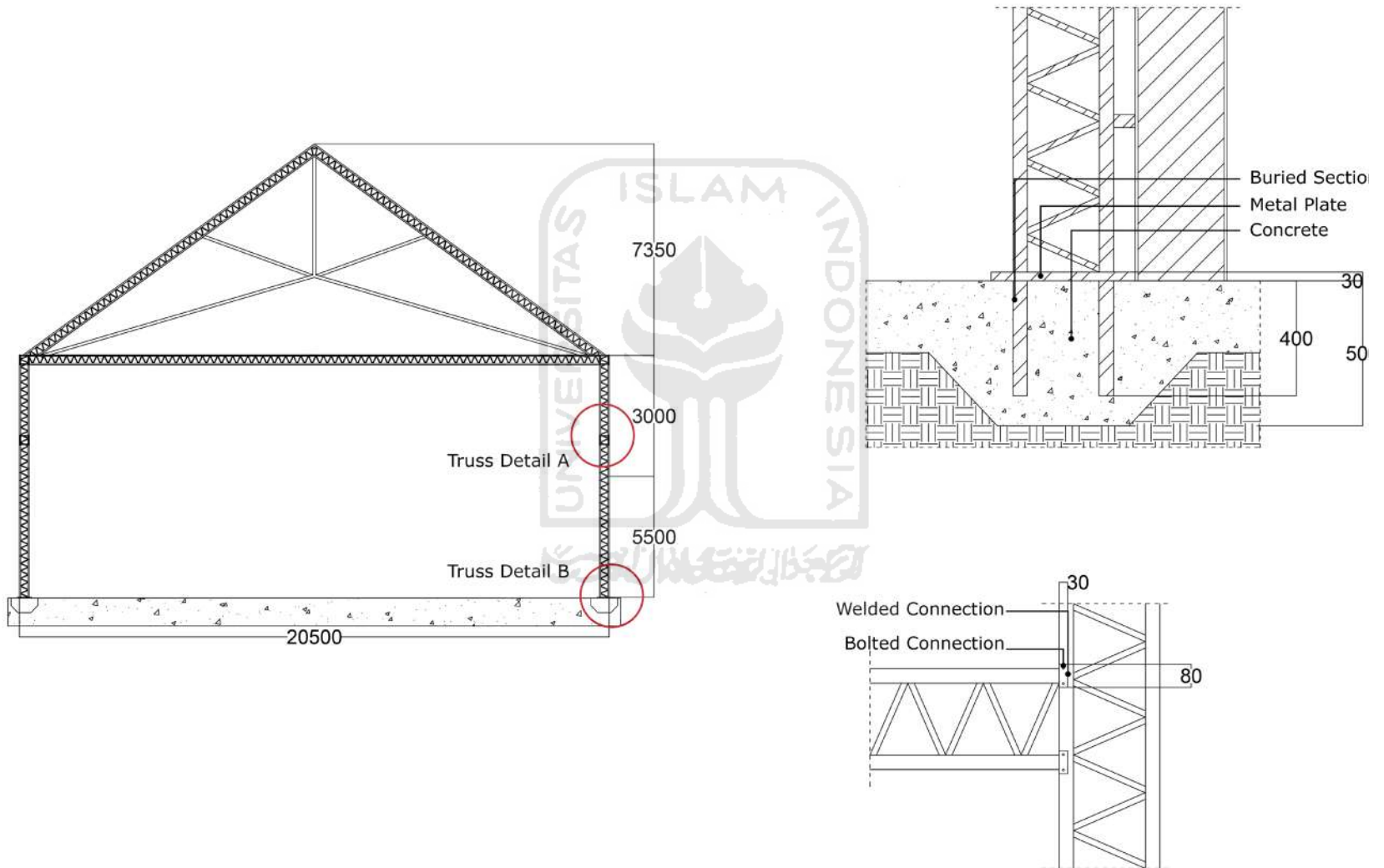


5 Evaluation

Summary of Evaluative Reviews From Supervisor and Juries

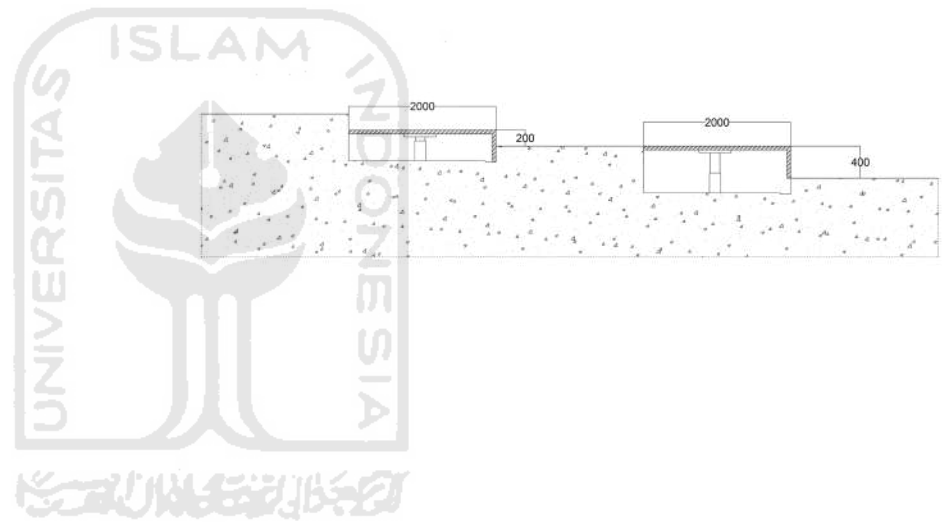
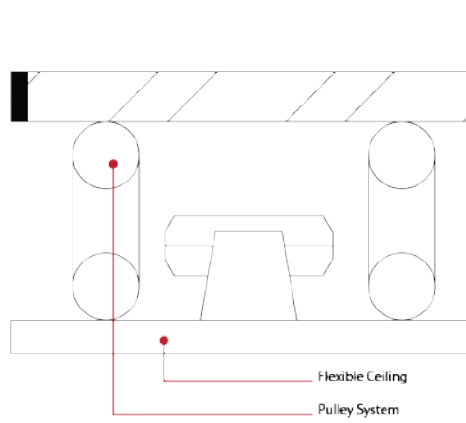
Based on results of evaluation, there are few parts that are reviewed by supervisor and jury. The review are meant to improve the design.

Update to Truss Design



The design of the truss is updated to avoid damaging the original substructure, by connection it to the existing shear walls.

Ease of Rearrangement Strategies



The ease of arrangement is improved by adding pulley and hydraulic system to automate the transition between the two arrangements, widening the level of authorization within the hall.



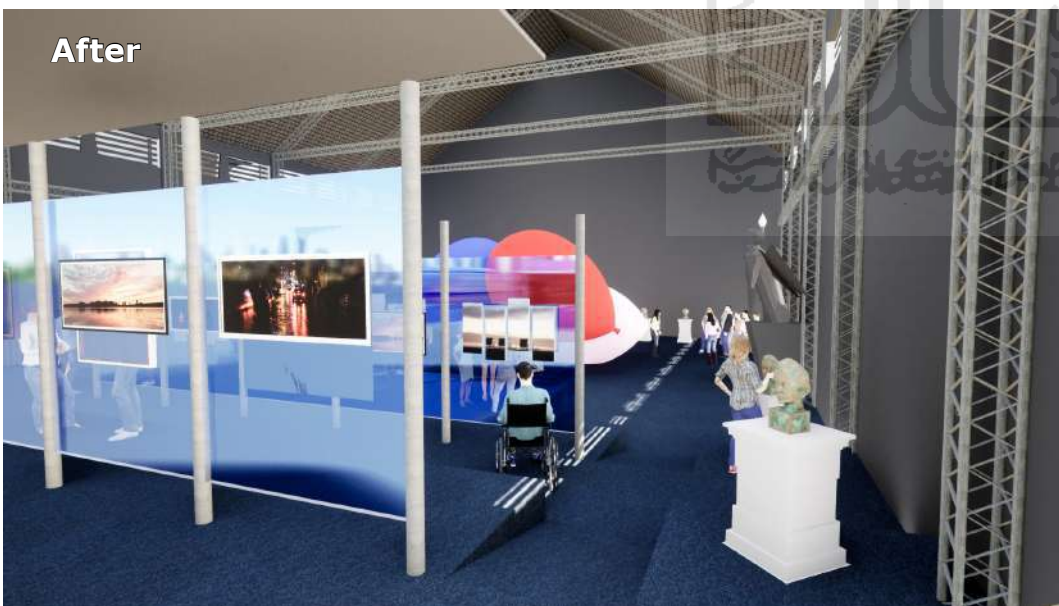
Acoustic Materials

Updated the design of the multifunction hall and theater arrangement to include more sound absorbant material that are beneficial to the acoustic, such as carpeting, wooden flooring, and acoustic panel.



Creative Gallery

Updated the design of the gallery to be more creative, reflecting the exhibition that would take place within it



Conductive R&D Hall

Before

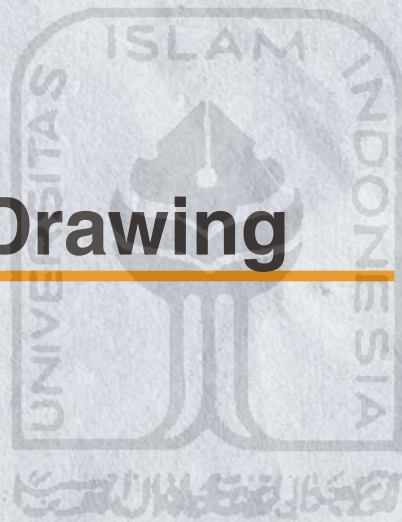


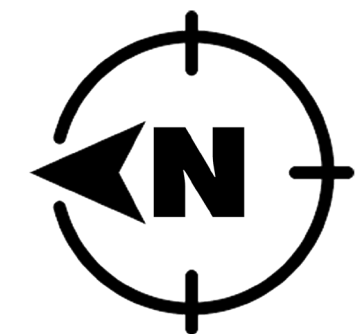
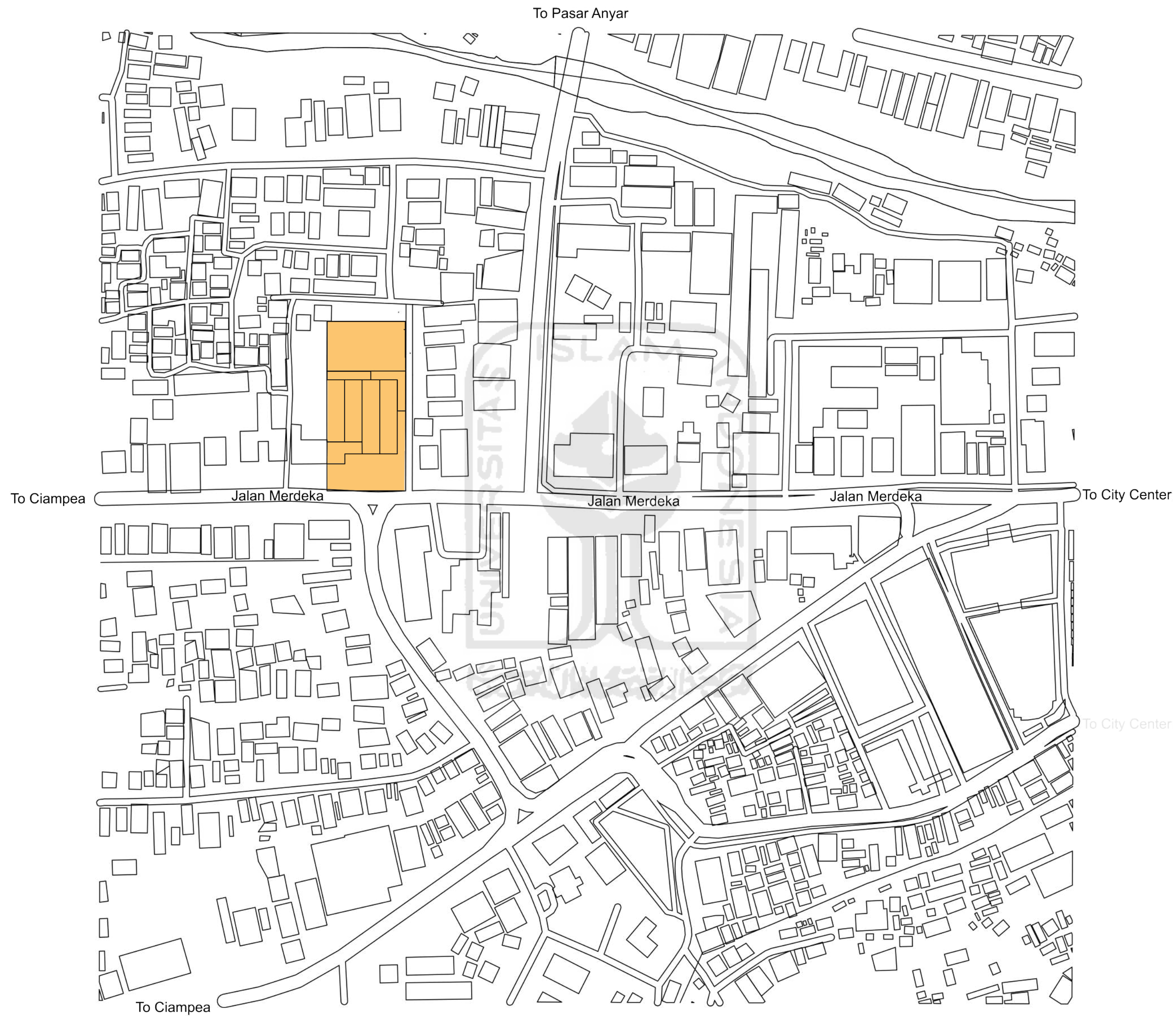
After



Updated the design of the R&D Hall to be more suitable to accommodate creative function such as the development of culture.

Technical Drawing





LEGEND

NOTES

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Supervisor: Dr. Ing. PUTU AYU P. AGUSTIANANDA, S.T., M.A.

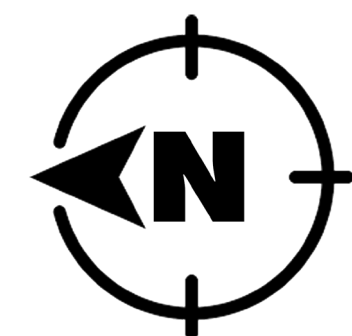
STUDENT NAME	STUDENT ID
ABRAHAM RISYAD ADIKUNCORO	17512102

DRAWING TITLE

Block Plan

SCALE	SIGN
1: 2000	

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SUPERVISOR

STUDENT NAME STUDENT ID

ABRAHAM RISYAD
ADIKUNCORO 17512102

DRAWING TITLE

Situation

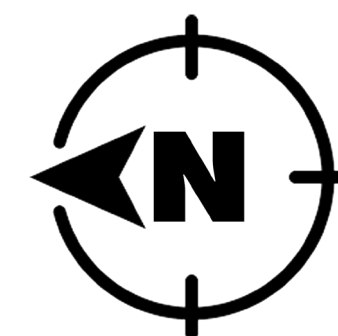
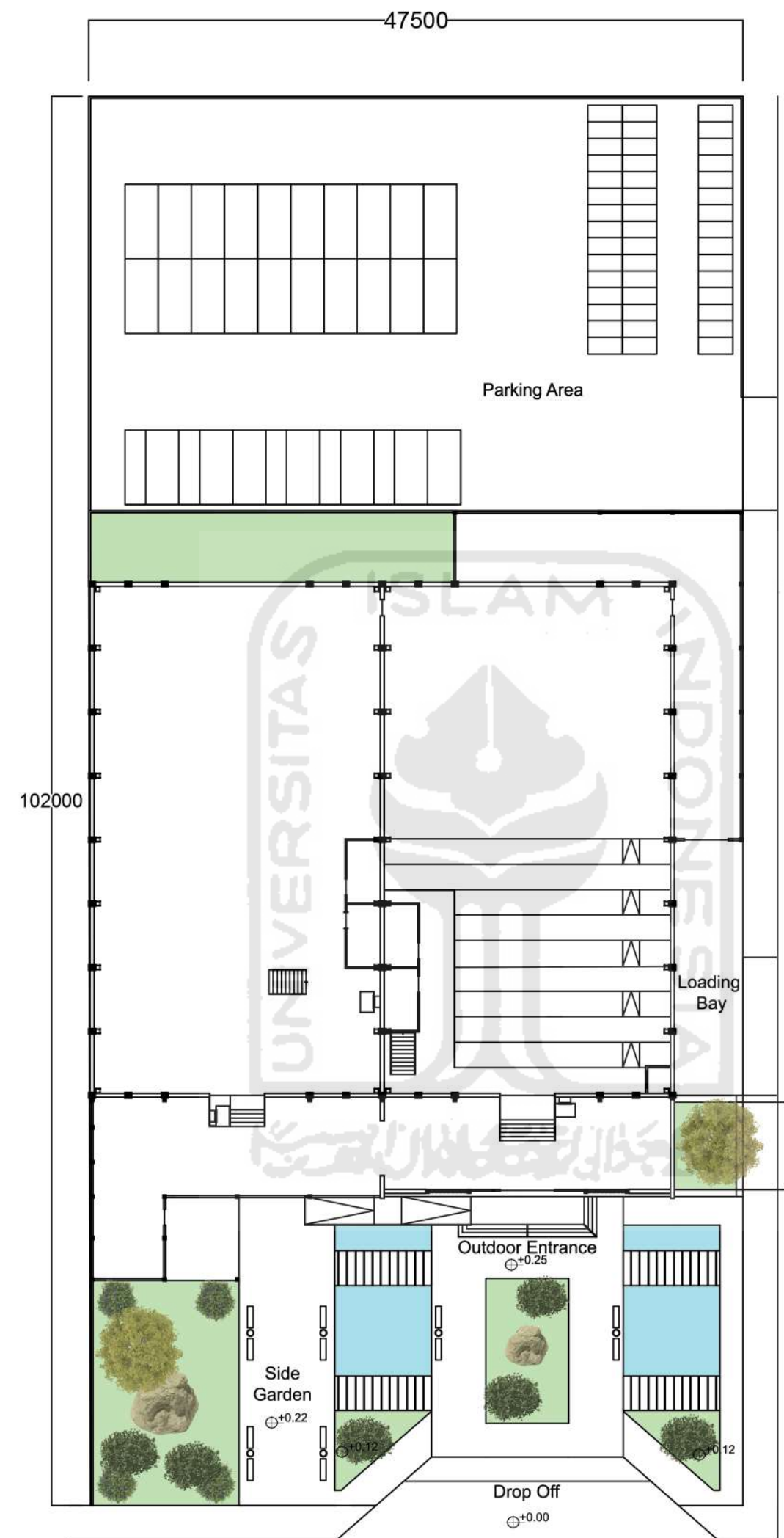
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ABRAHAM RISYAD ADIKUNCORO	17512102

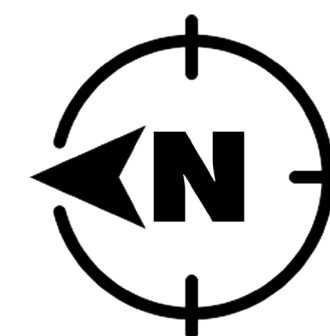
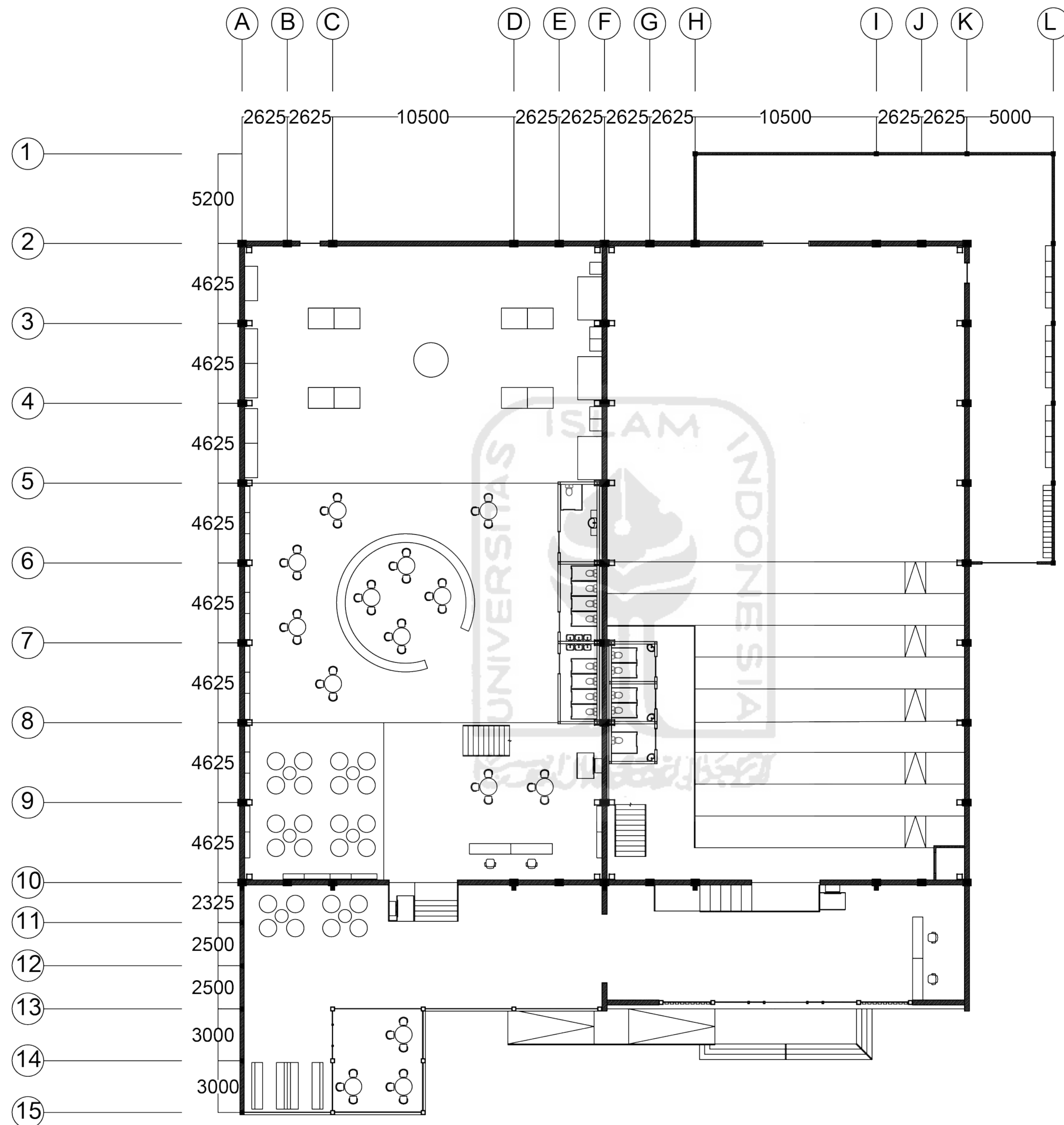
DRAWING TITLE

Site Plan

SCALE	SIGN
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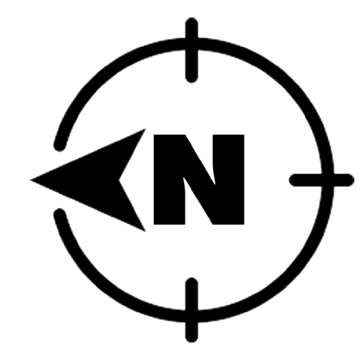
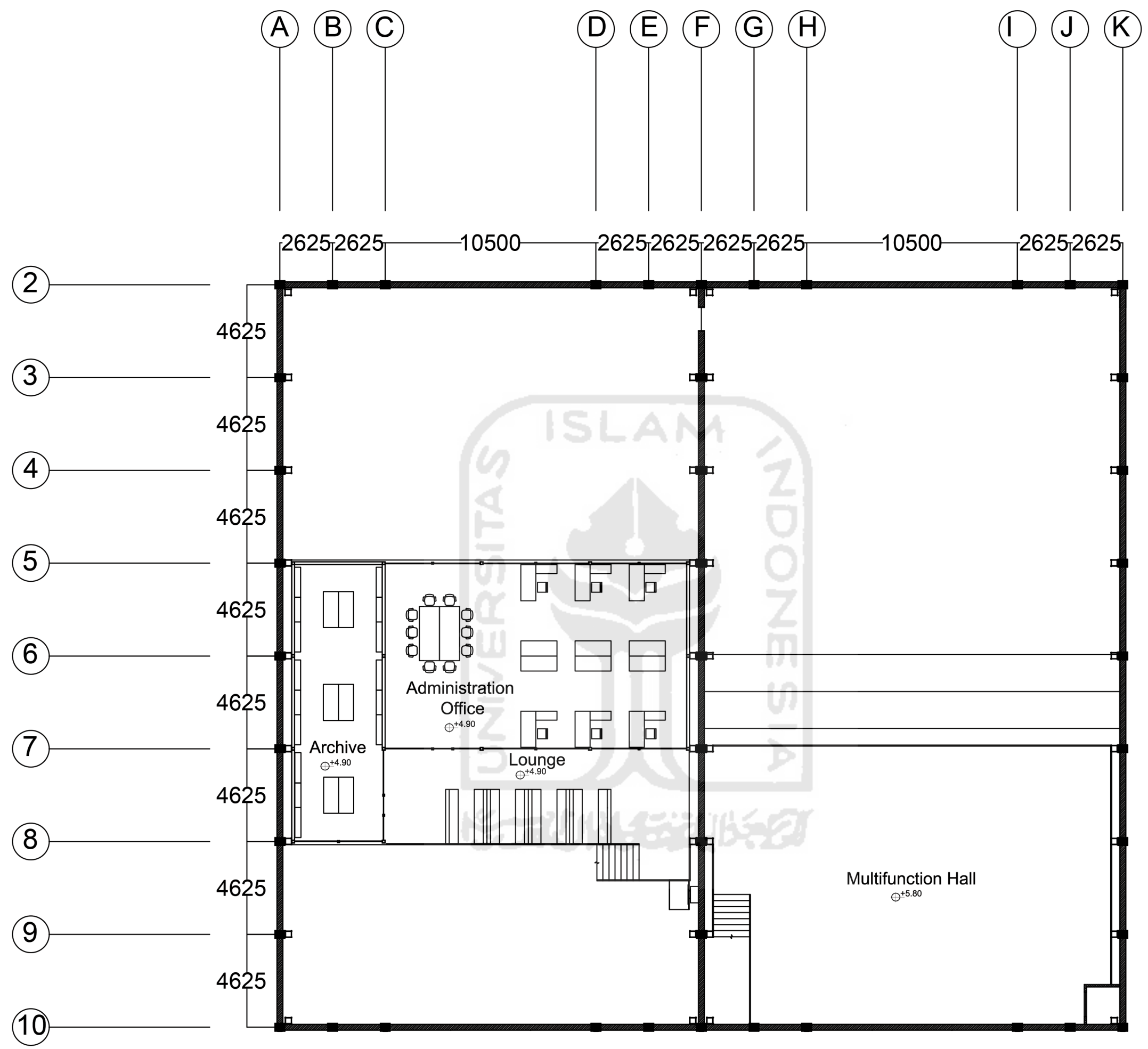
Ground Floor Plan

SCALE SIGN

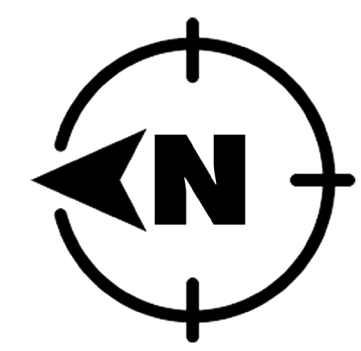
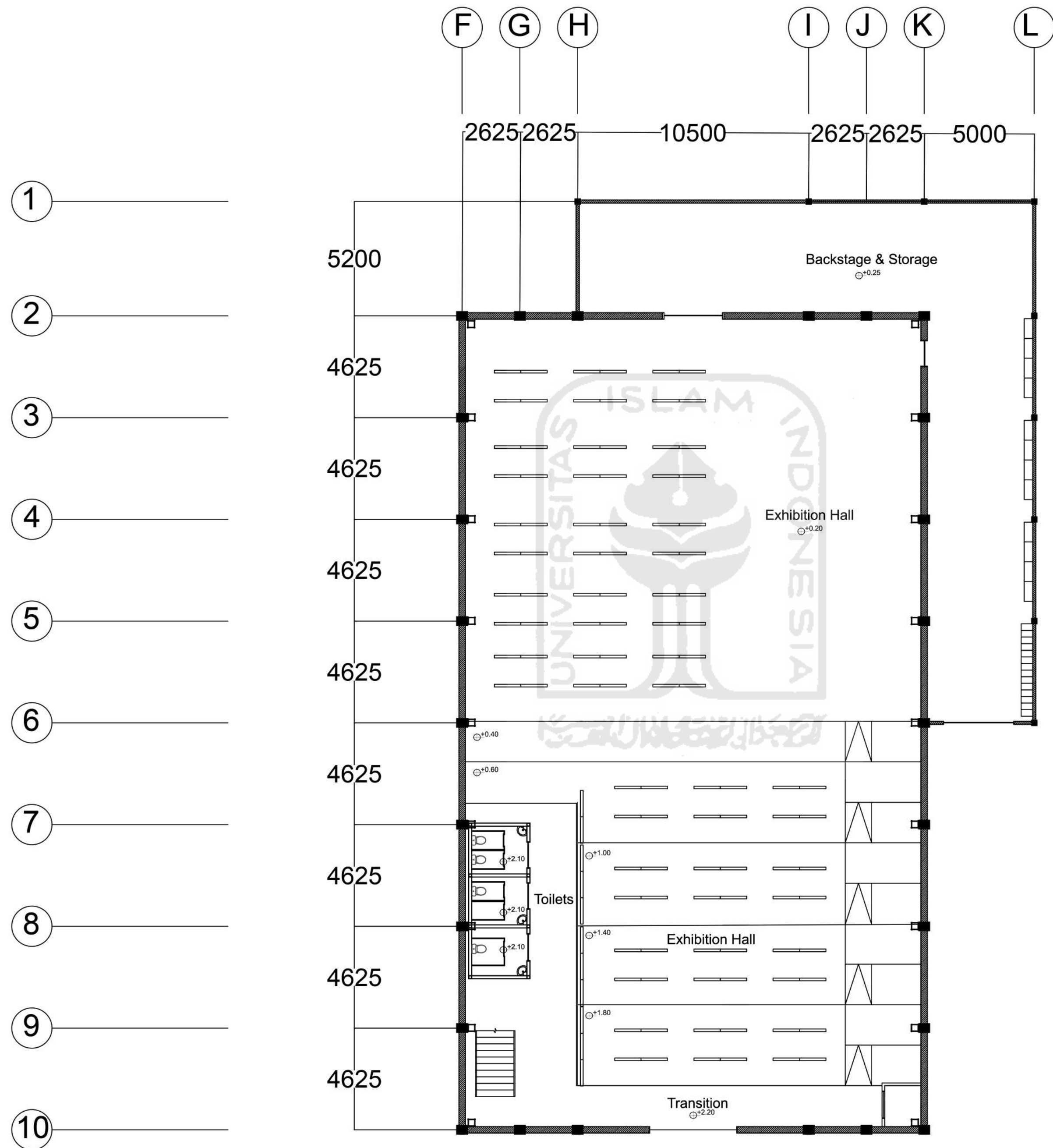
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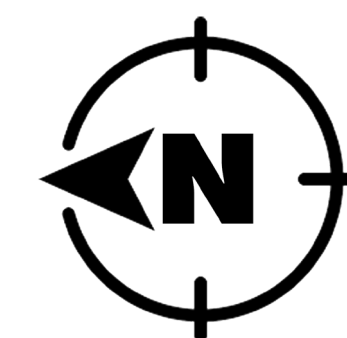
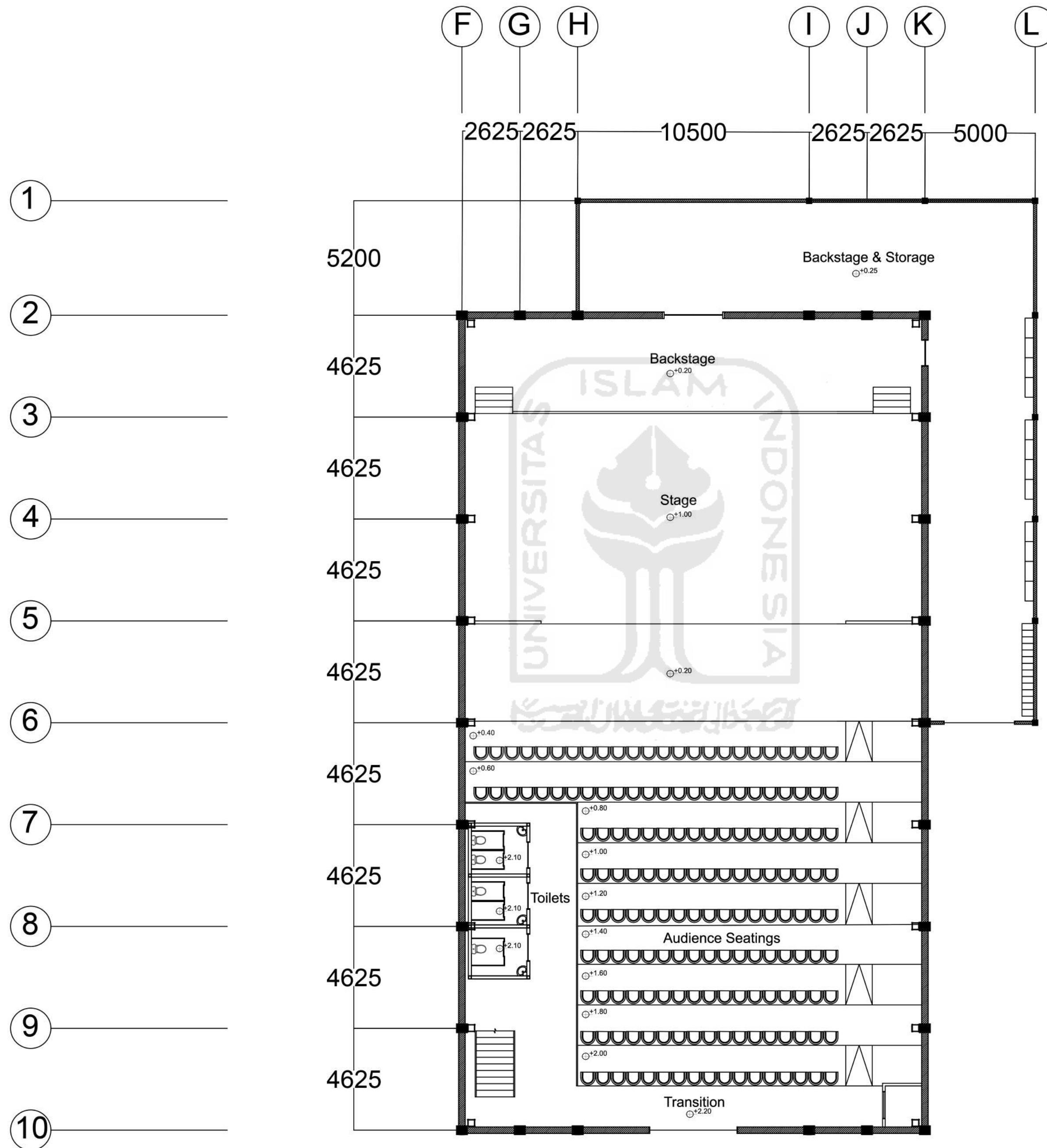
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Dr. Ing. PUTU AYU P. AGUSTIANANDA, S.T., M.A. SUPERVISOR	
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ABRAHAM RISYAD ADIKUNCORO	17512102
DRAWING TITLE	
1st Floor Plan	
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ABRAHAM RISYAD ADIKUNCORO	17512102	
DRAWING TITLE		
Partial Plan - Multifunction Hall Gallery Arrangement		
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ABRAHAM RISYAD ADIKUNCORO	17512102

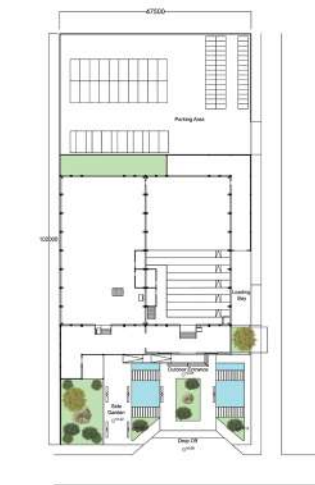
DRAWING TITLE

Partial Plan - Multifunction Hall Theater Arrangement

SCALE	SIGN
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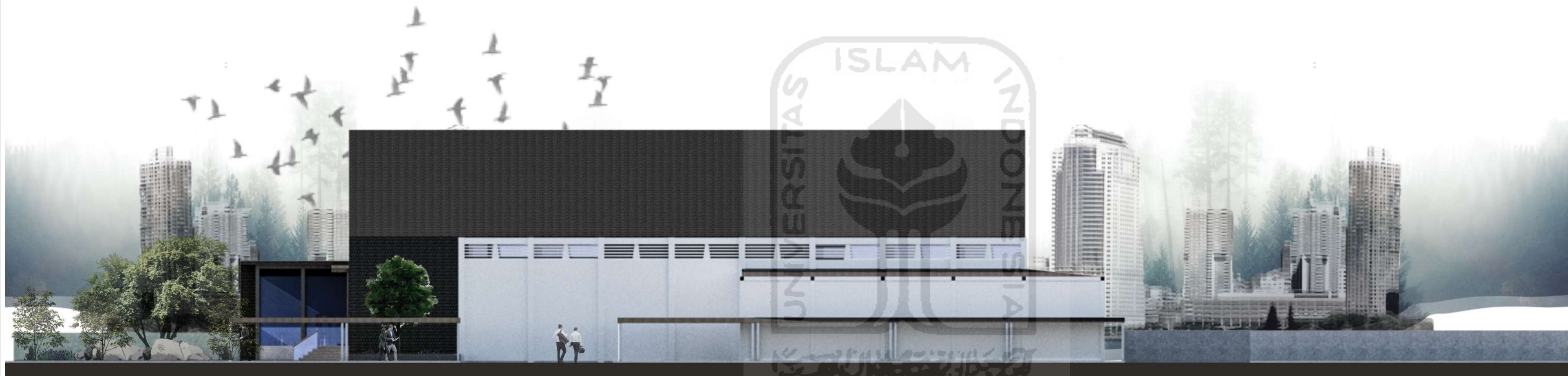
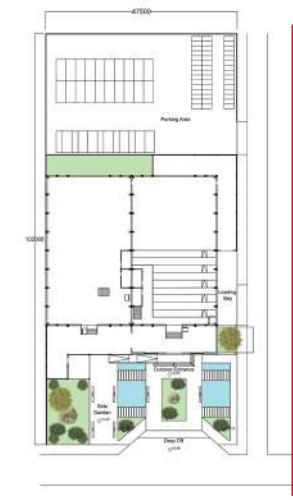
STUDENT NAME	STUDENT ID
ABRAHAM RISYAD ADIKUNCORO	17512102

DRAWING TITLE

West Elevation

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1: 200	

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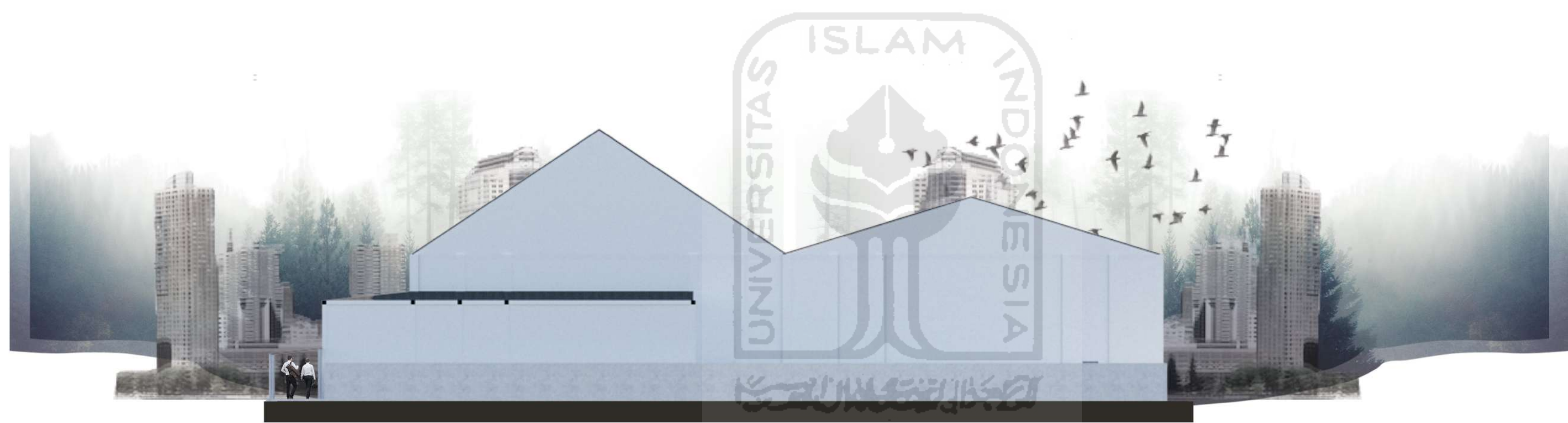
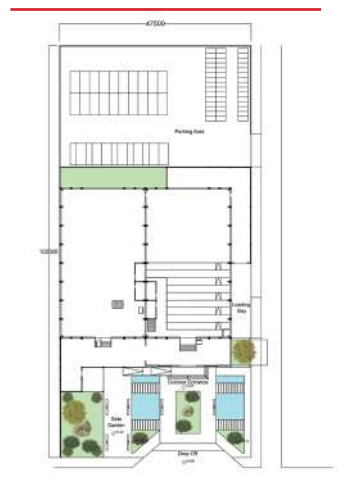
STUDENT NAME	STUDENT ID
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DRAWING TITLE

South Elevation

SCALE	SIGN
1: 200	

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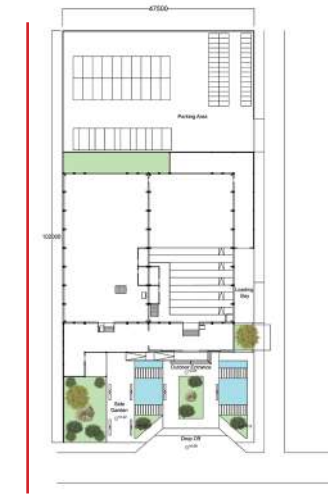
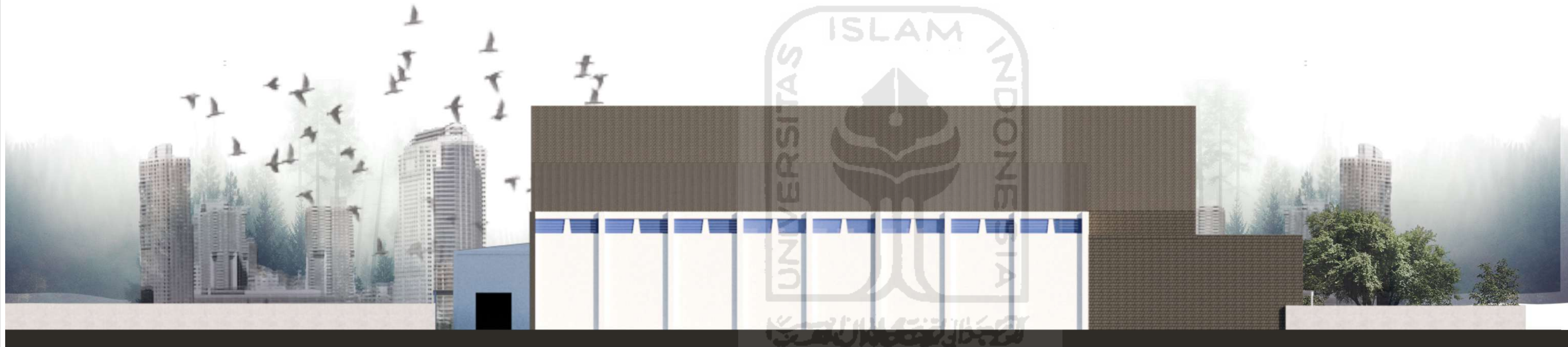
STUDENT NAME	STUDENT ID
ABRAHAM RISYAD ADIKUNCORO	17512102

DRAWING TITLE

East Elevation

SCALE	SIGN
1: 200	

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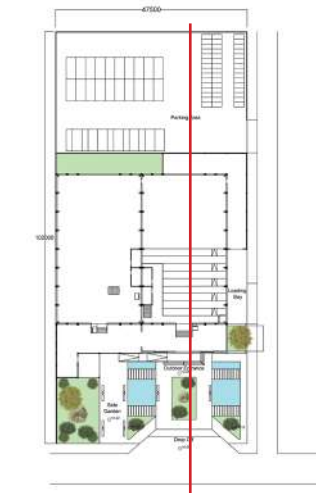
STUDENT NAME	STUDENT ID
ABRAHAM RISYAD ADIKUNCORO	17512102

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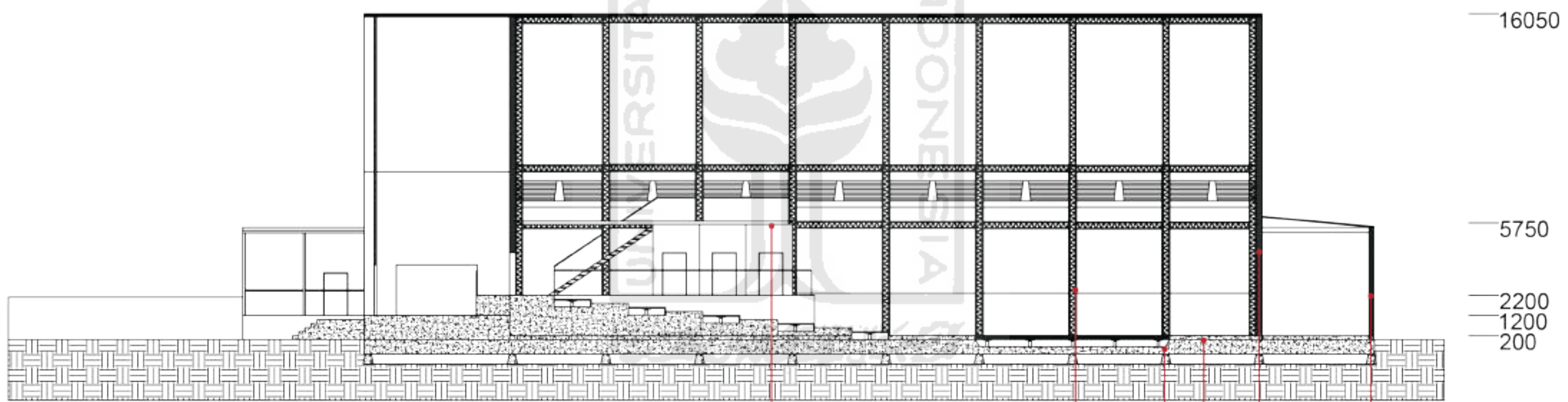
North Elevation

SCALE	SIGN
1: 200	

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15 14 13 12 11 10 9 8 7 6 5 4 3 2 1



- Brick Wall
- Brick Shear Wall
- Concrete Flooring
- Gravel Rock Foundation
- Light Steel Truss
- Light Steel Platform

LEGEND

NOTES

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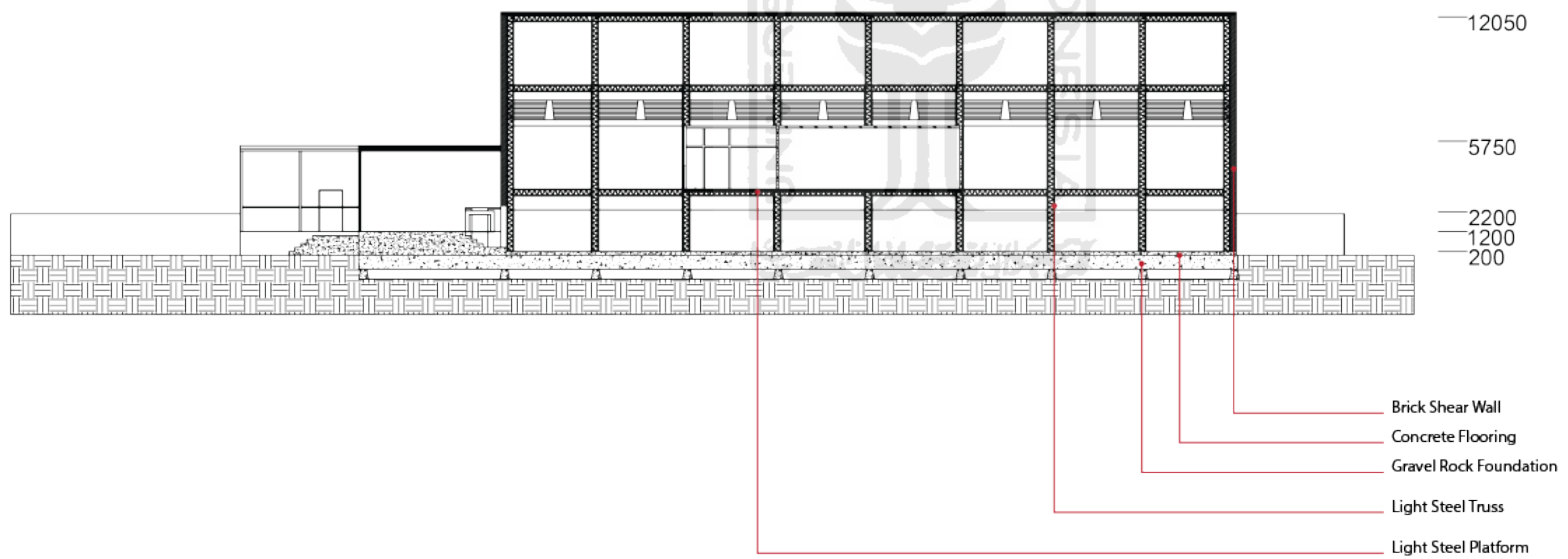
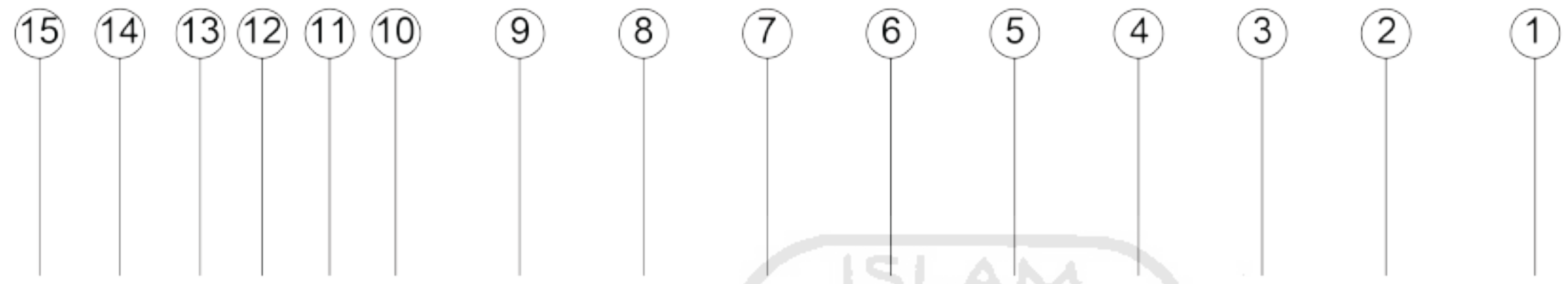
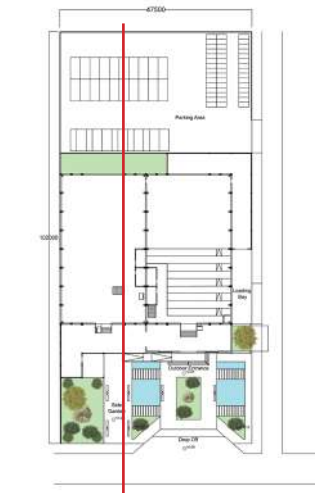
STUDENT NAME **STUDENT ID**
ABRAHAM RISYAD 17512102
ADIKUNCORO

DRAWING TITLE
Section A - Multifunction Hall

SCALE **SIGN**
1: 200

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Supervisor: Dr. Ing. PUTU AYU P. AGUSTIANANDA, S.T., M.A.

STUDENT NAME **STUDENT ID**

ABRAHAM RISYAD 17512102
ADIKUNCORO

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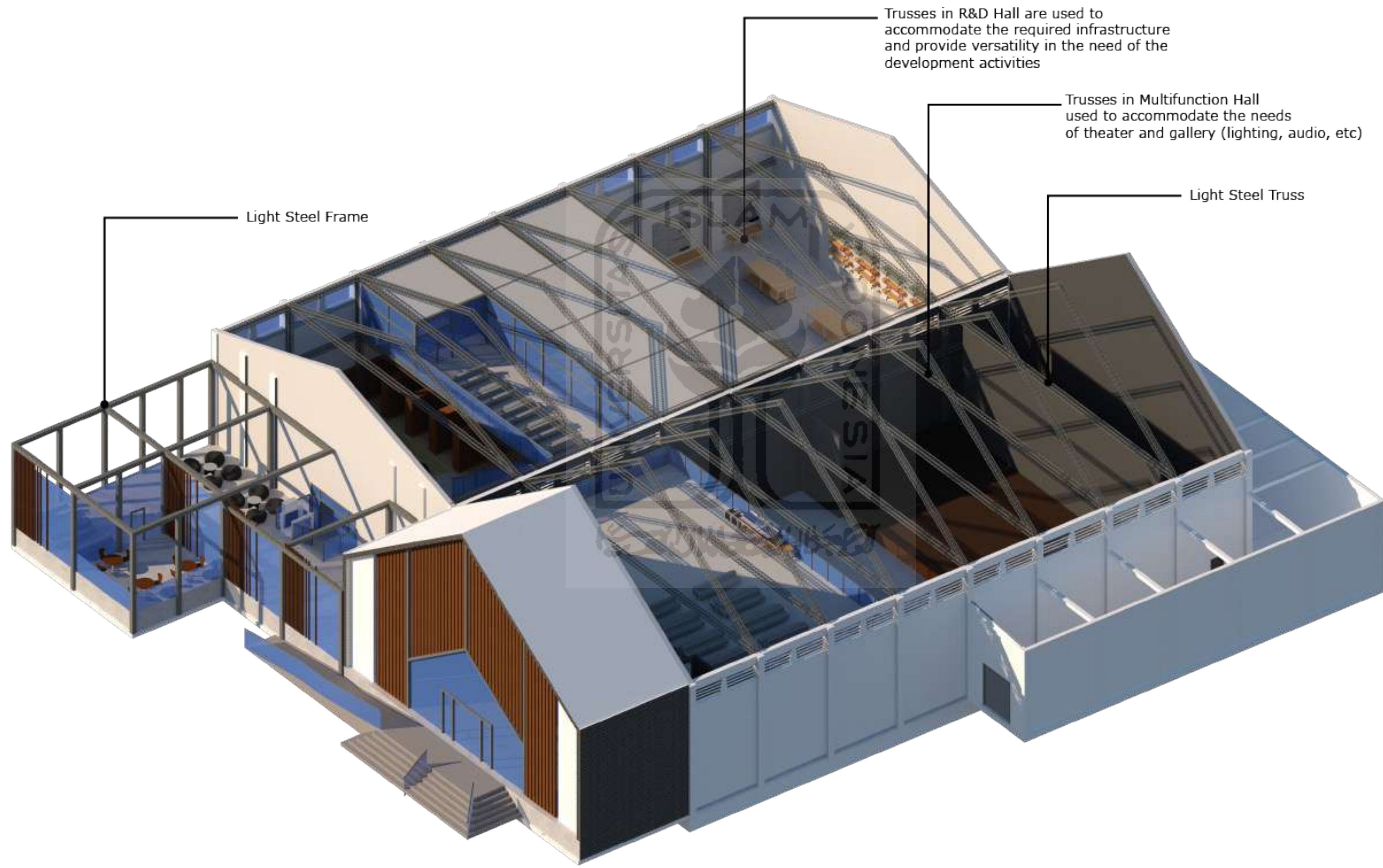
Section B - R&D Hall

SCALE	SIGN
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STUDENT NAME	STUDENT ID
ABRAHAM RISYAD ADIKUNCORO	17512102
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Open Building Scheme - Insertion Scheme

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STUDENT NAME

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ADIKUNCORO

STUDENT ID

17512102

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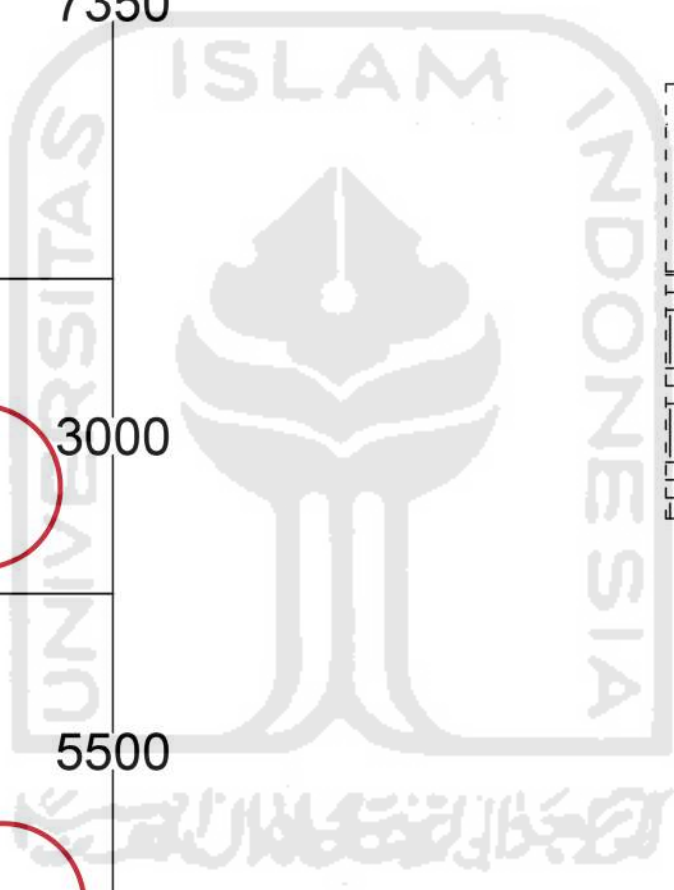
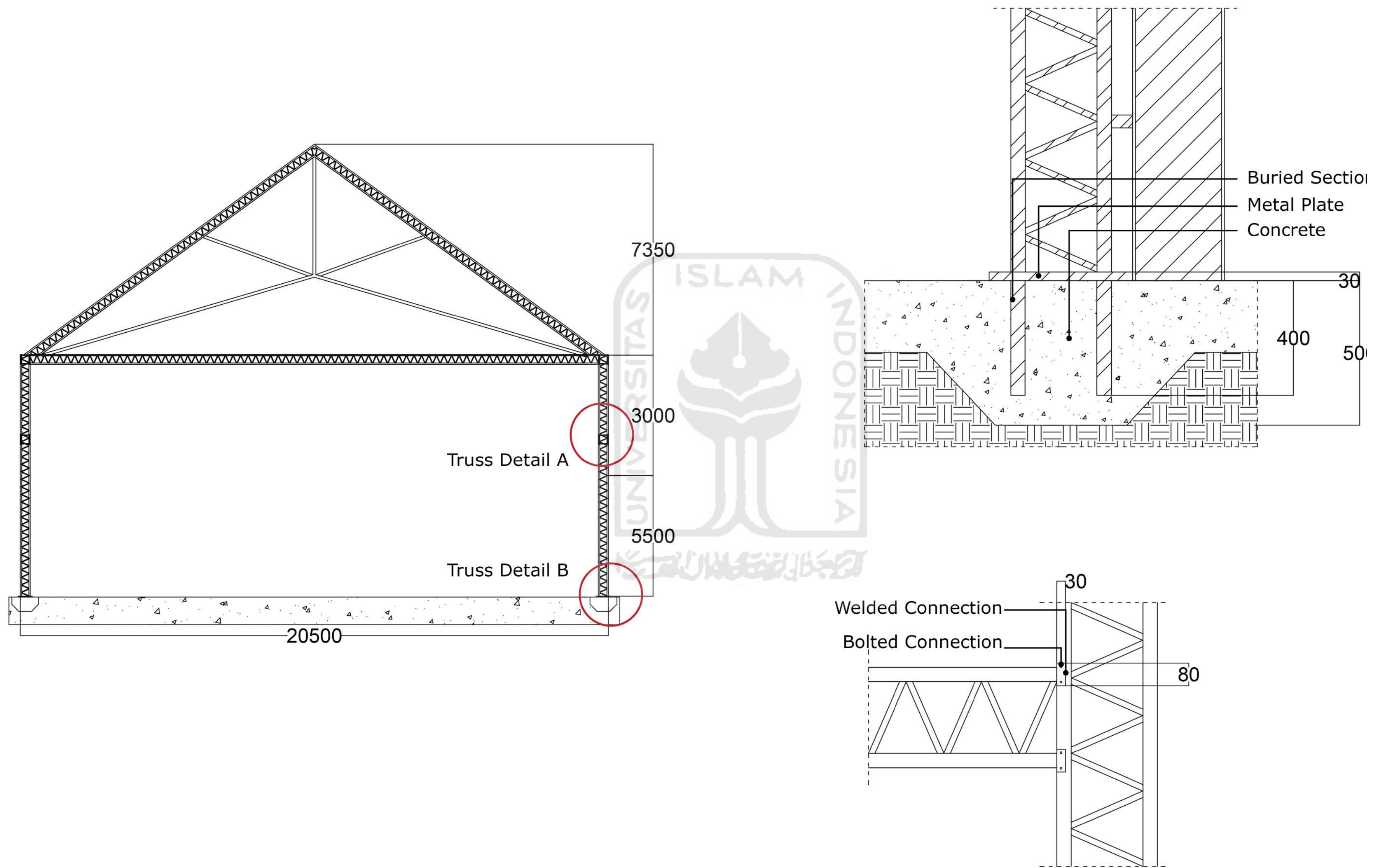
Open Building Scheme - Versatile
Truss System Details

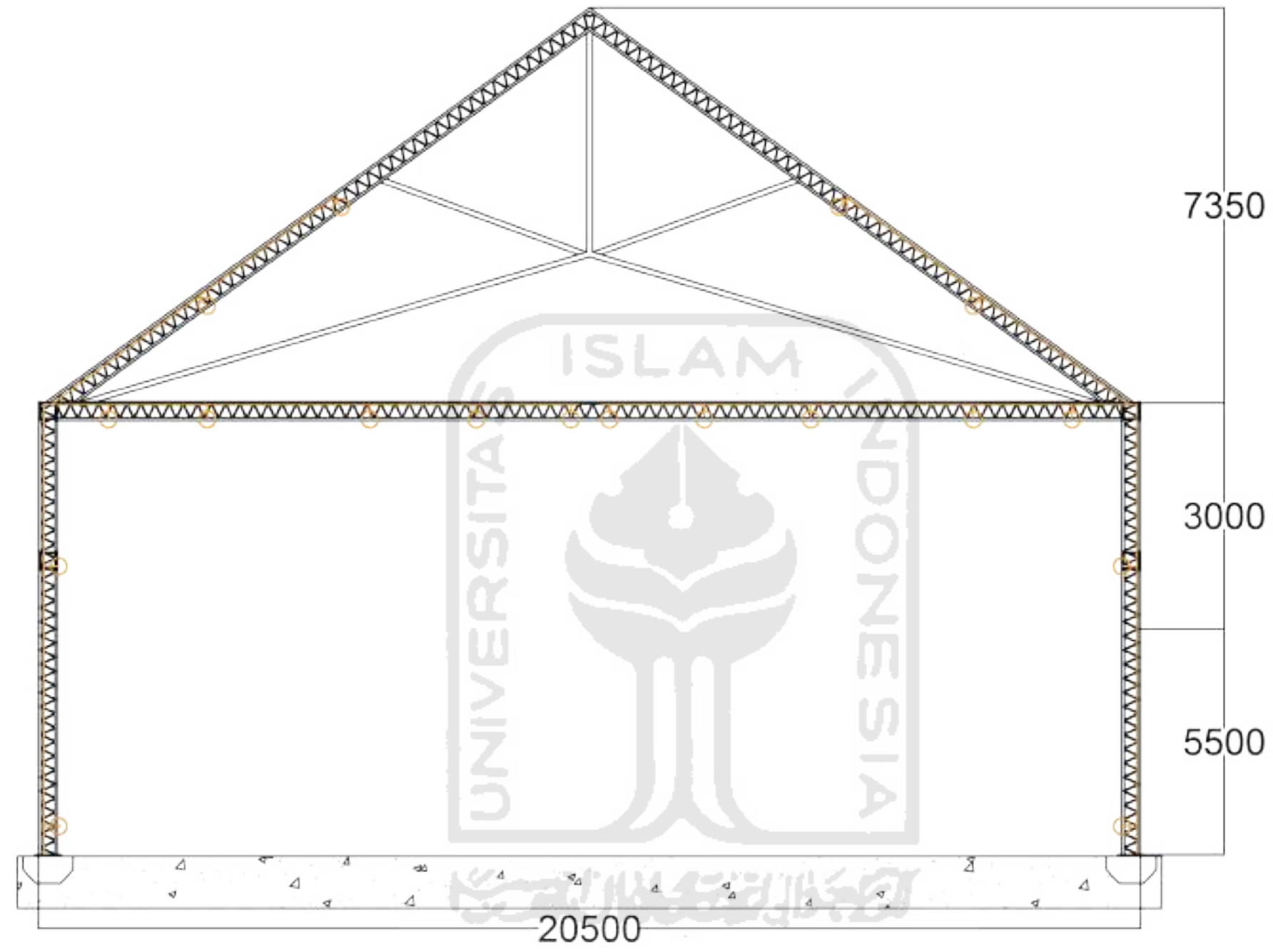
SCALE

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1 : 10



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	NAME	DATE	
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LEGEND

-  Flexible Power Socket
-  Electricity Cable

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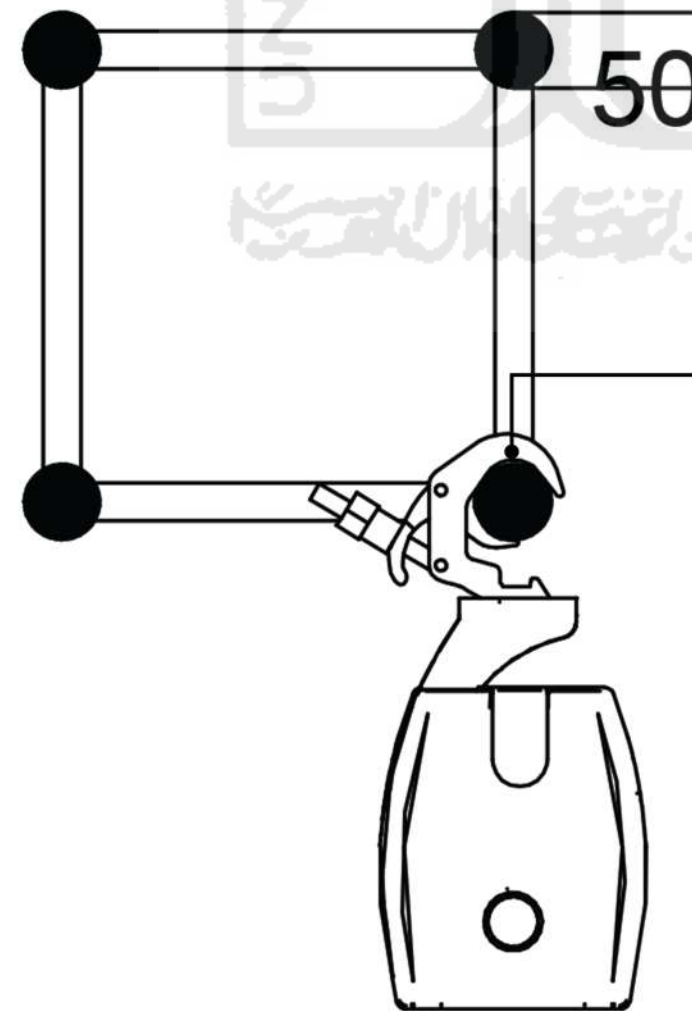
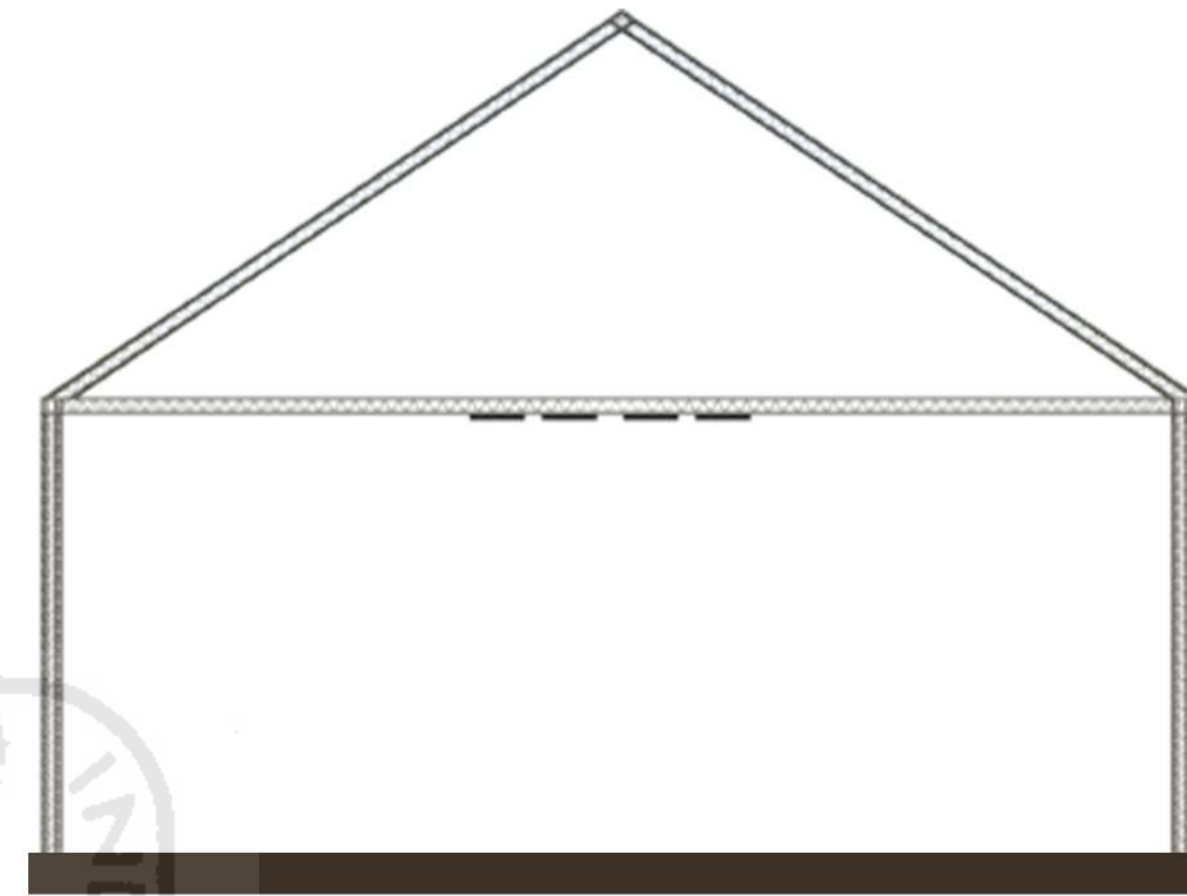
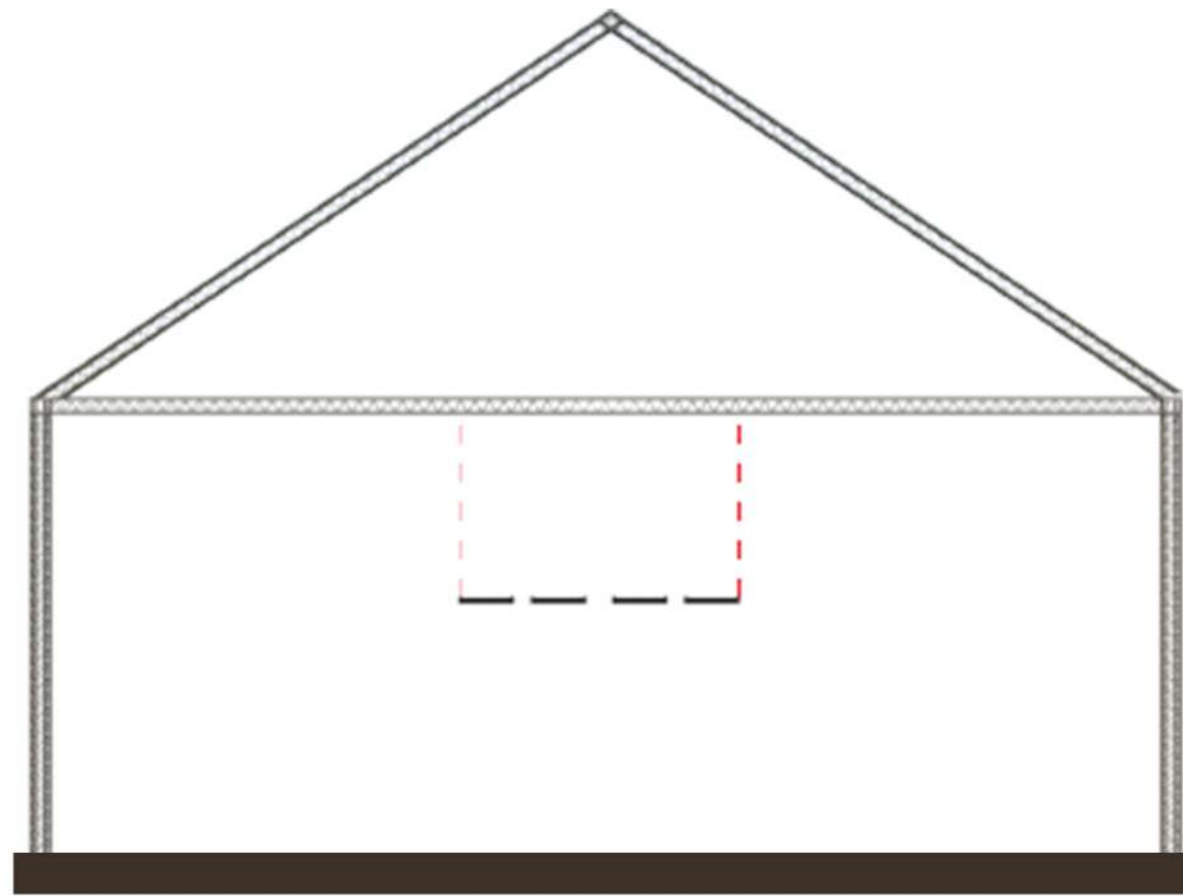
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Semi-Fixed Hanged Fittings

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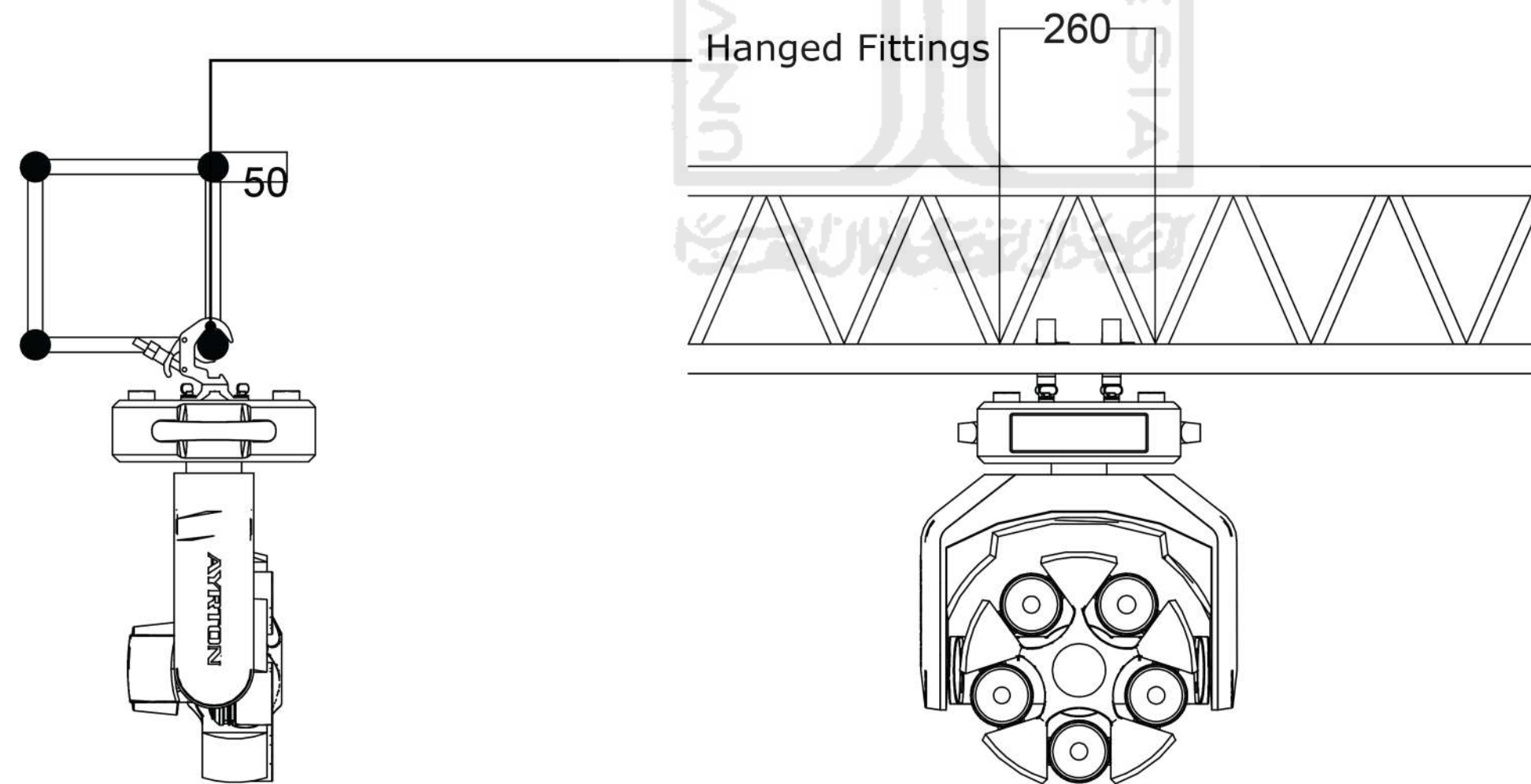
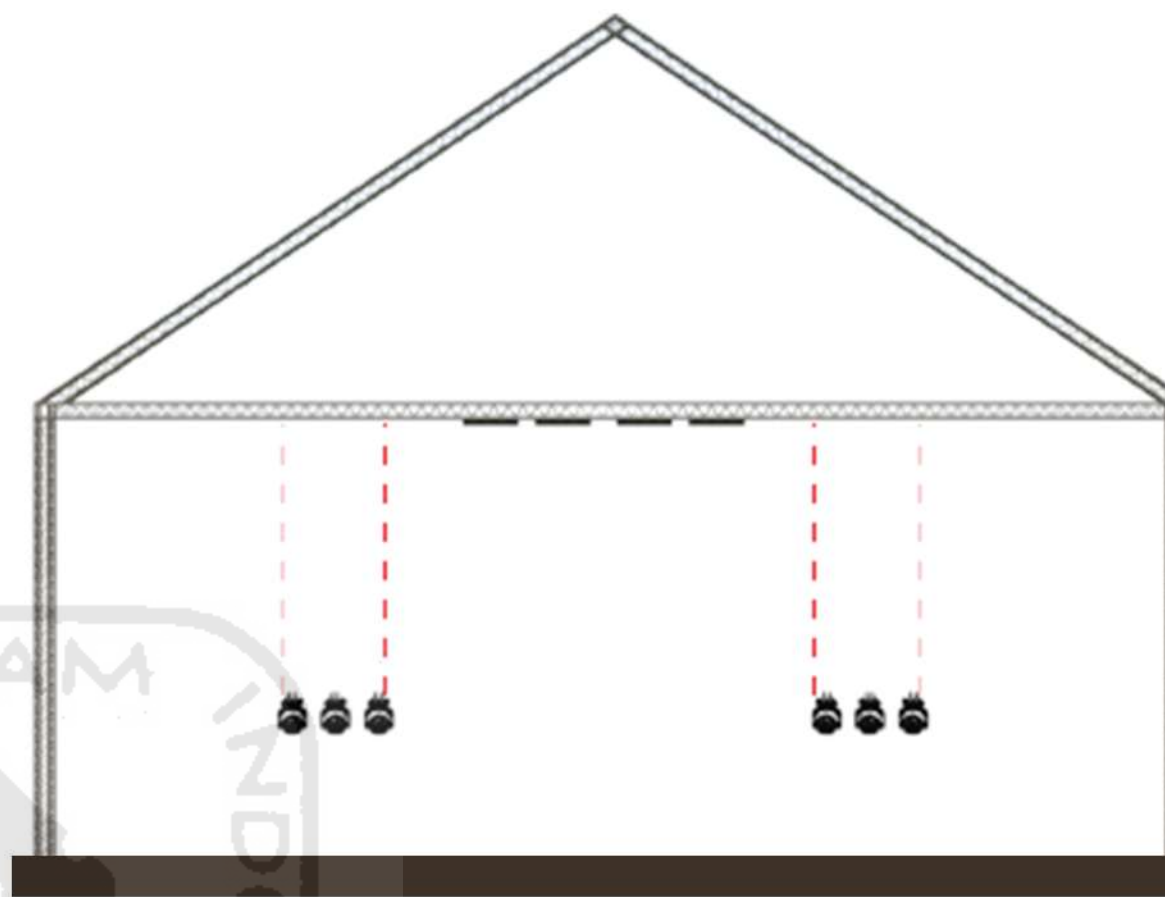
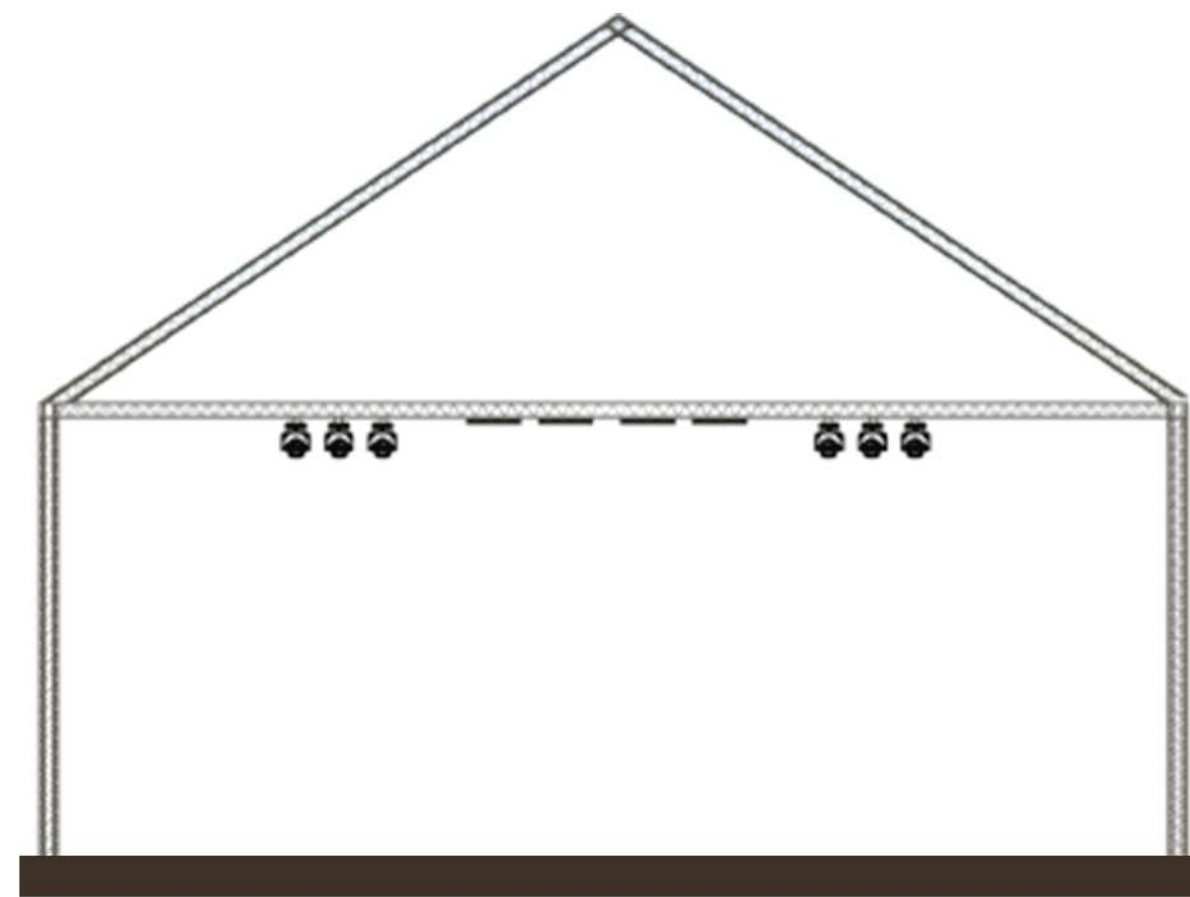
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Open Building Scheme - Versatile
Truss System Floodlight Application
Details

SCALE	SIGN
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ADIKUNCORO

DRAWING TITLE

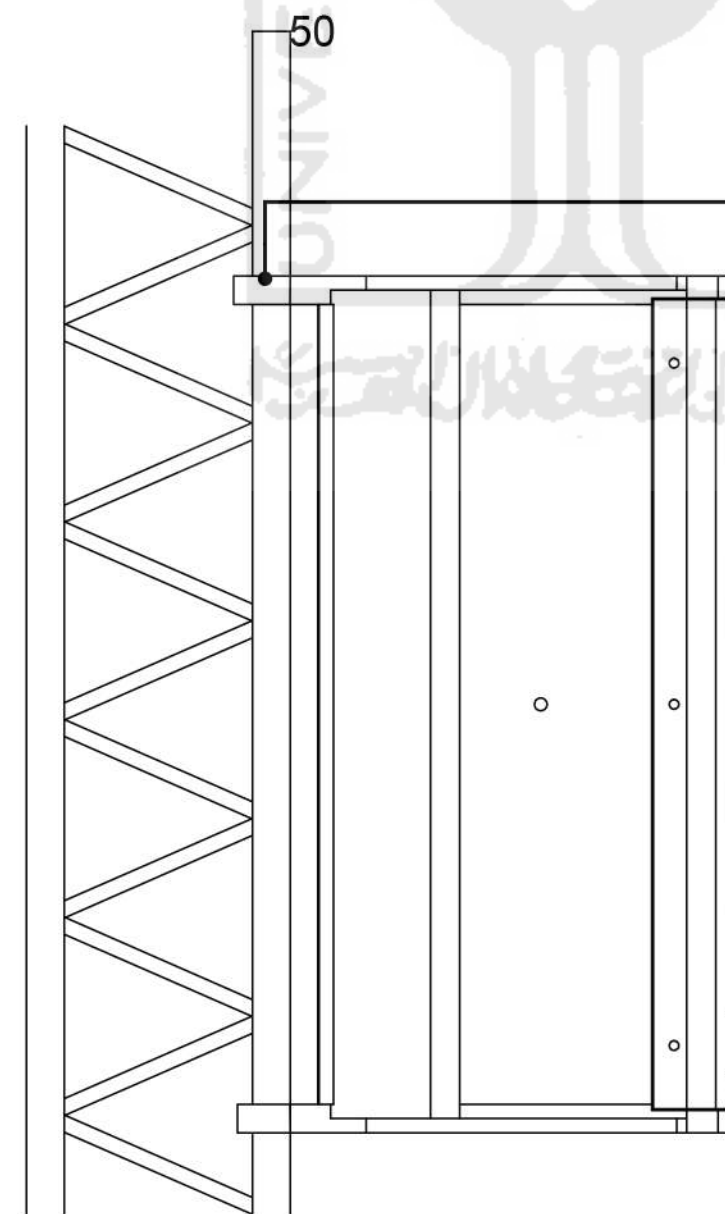
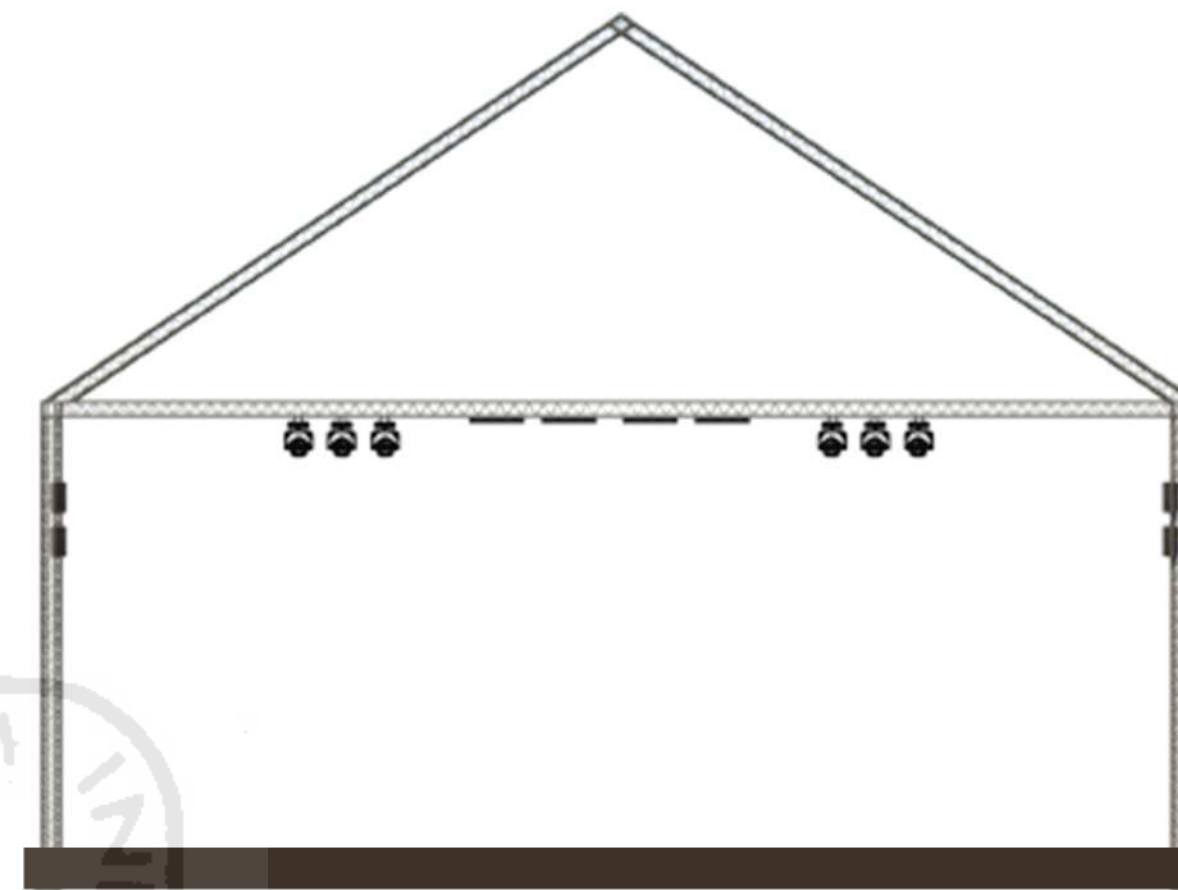
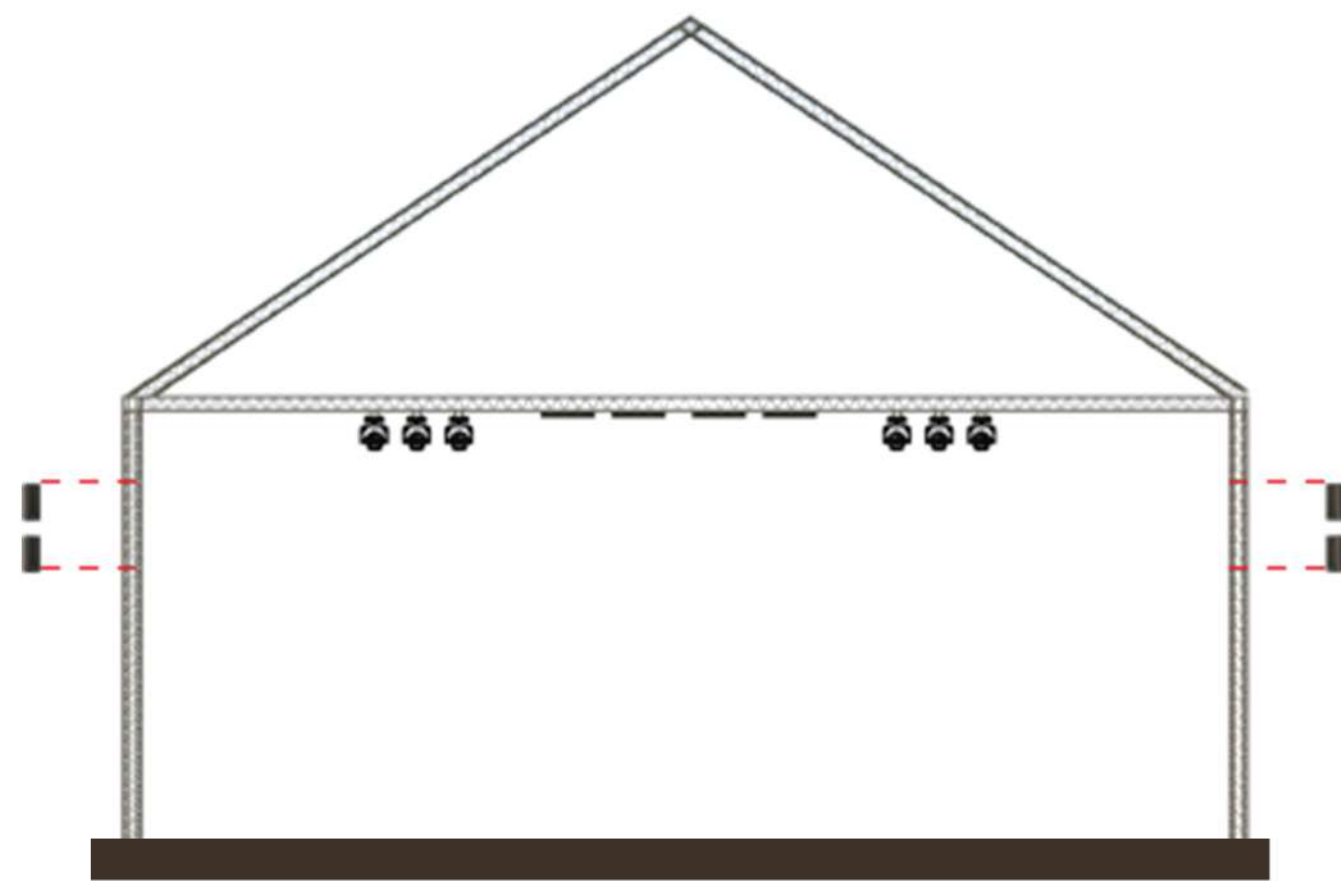
Open Building Scheme - Versatile
Truss System Spotlight Application
Details

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Semi-Fixed Pivoted Fittings

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STUDENT NAME

ABRAHAM RISYAD
ADIKUNCORO

STUDENT ID

17512102

DRAWING TITLE

Open Building Scheme - Versatile
Truss System Audio Speaker Appli-
cation Details

SCALE

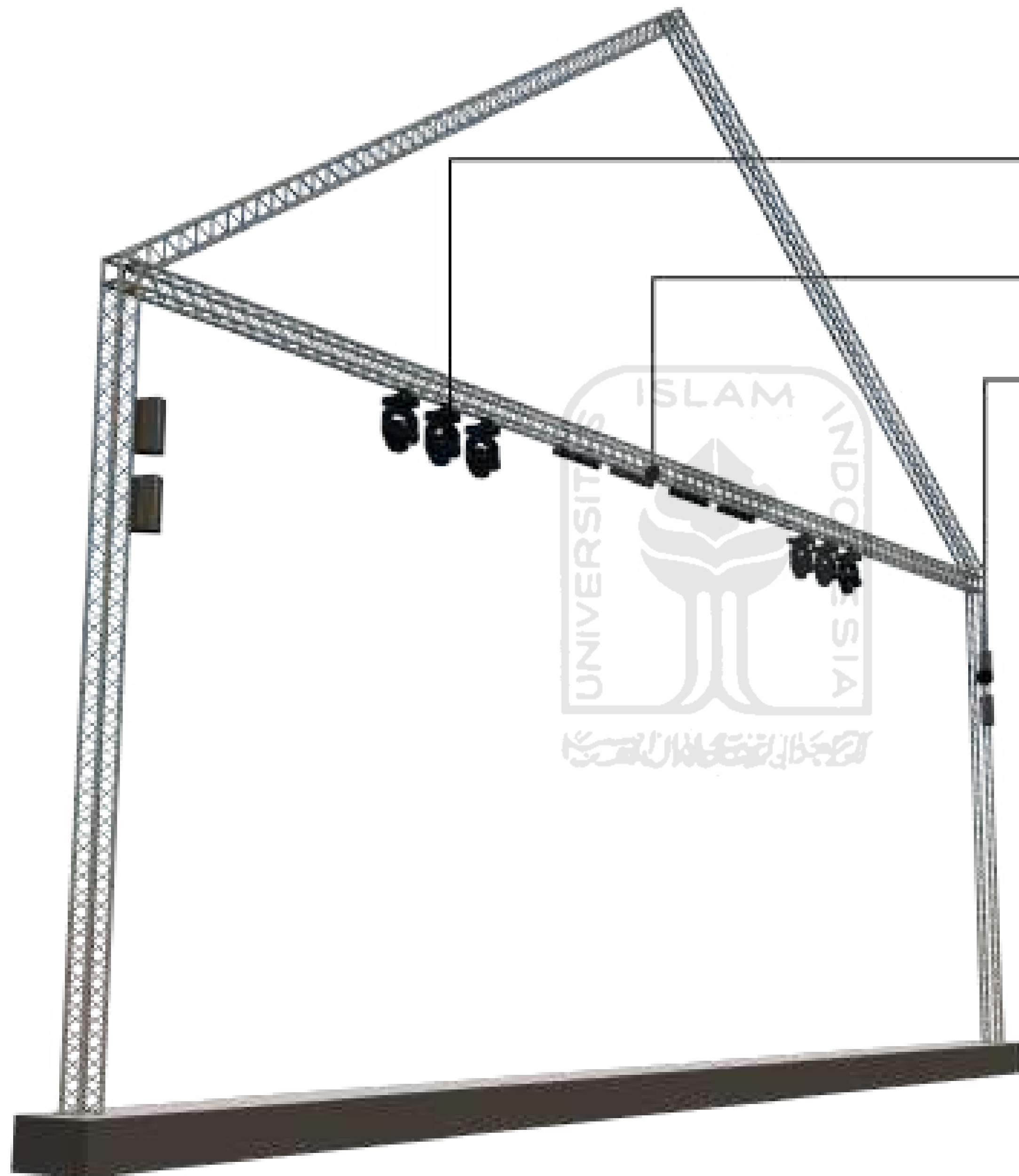
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Spotlight

Floodlight

Audio Speaker

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ADIKUNCORO

STUDENT ID

17512102

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Open Building Scheme - Versatile
Truss System Equipment Scheme

SCALE

N/A

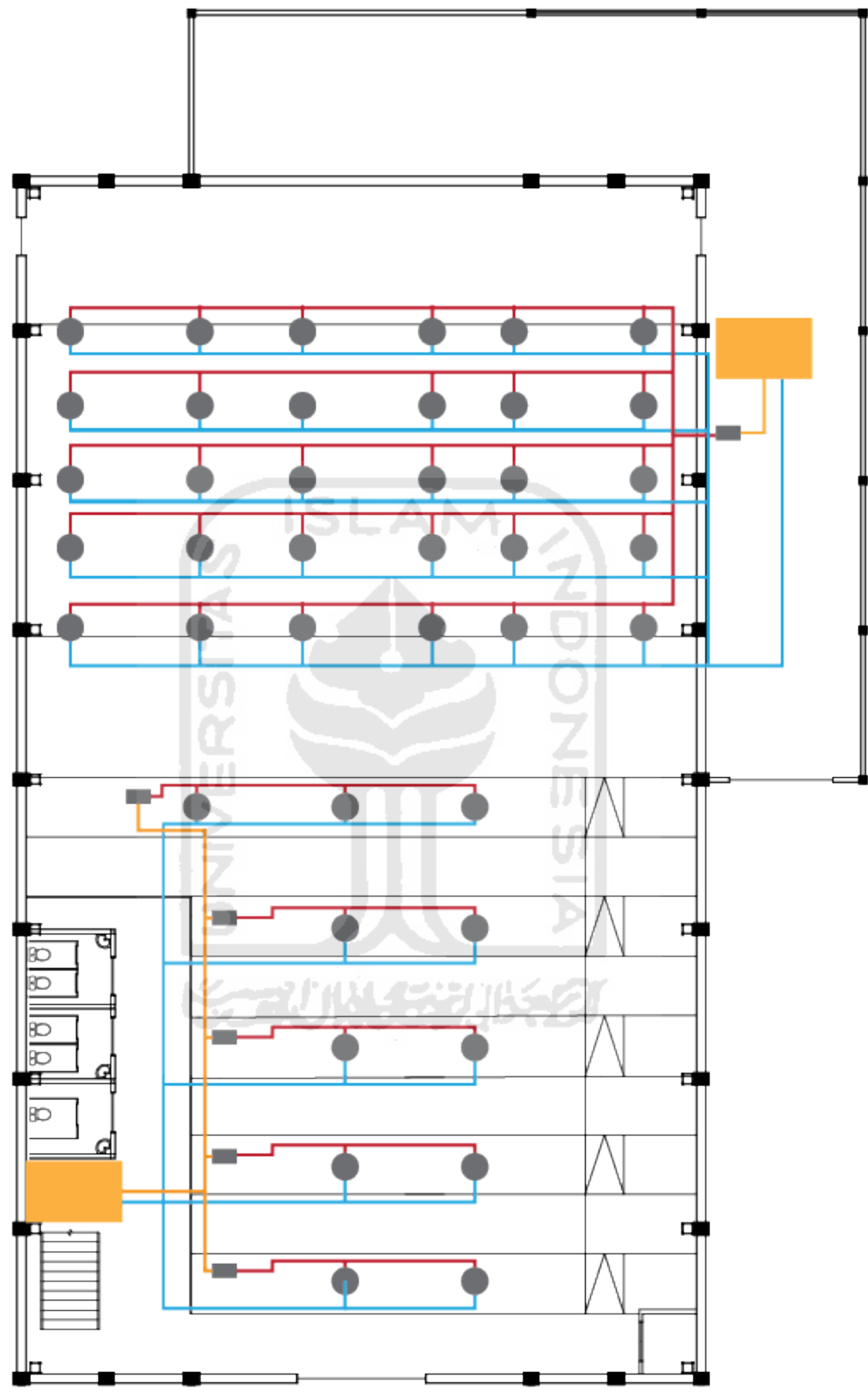
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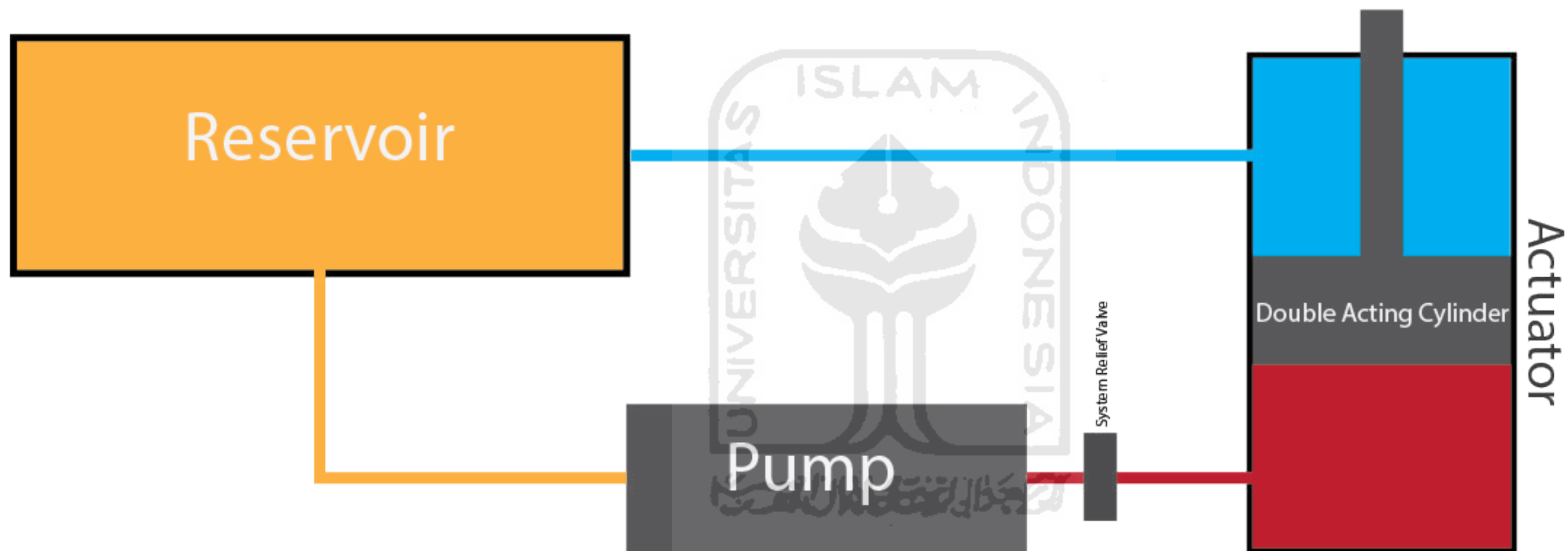
DATE



LEGEND	
	Reservoir
	Pump
	Actuator
	Return Fluid
	Supply Fluid
	Pressure Fluid

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Dr. Ing. PUTU AYU P. AGUSTIANANDA, S.T., M.A. SUPERVISOR		
STUDENT NAME	STUDENT ID	
ABRAHAM RISYAD ADIKUNCORO	17512102	
DRAWING TITLE		
Hydraulic System Plan		
SCALE	SIGN	
N/A		
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LEGEND

- Return Fluid
- Supply Fluid
- Pressure Fluid

NOTES

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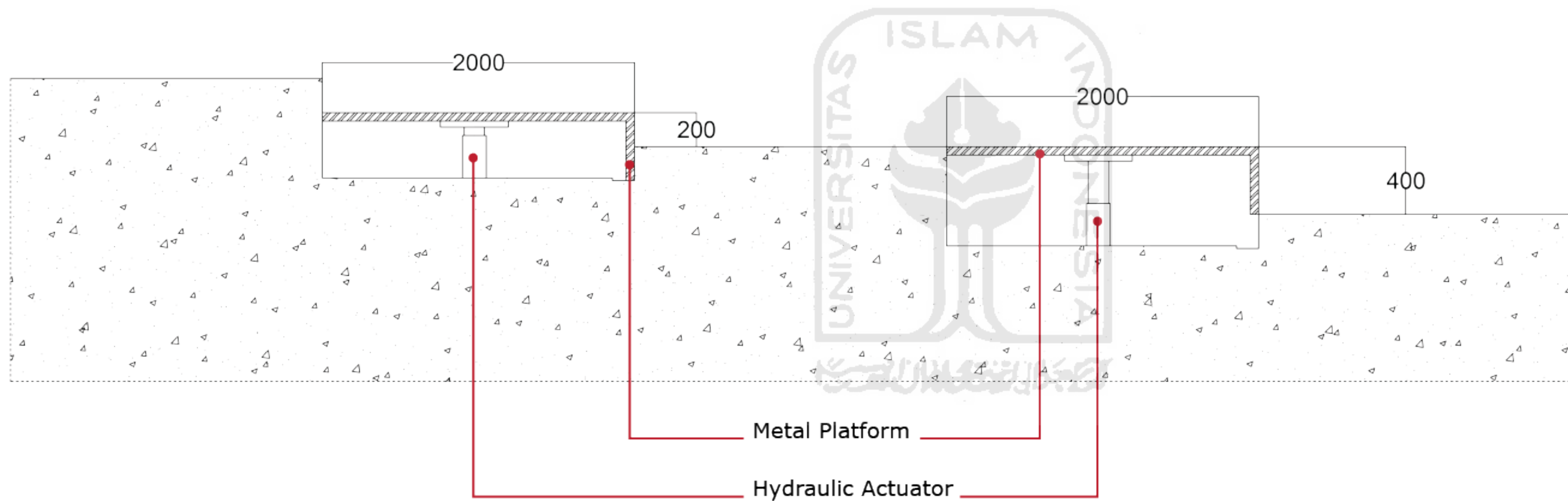
STUDENT NAME	STUDENT ID
ABRAHAM RISYAD ADIKUNCORO	17512102

DRAWING TITLE

Hydraulic System Scheme

SCALE	SIGN
N/A	

	NAME	DATE
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LEGEND

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STUDENT NAME

ABRAHAM RISYAD
ADIKUNCORO

STUDENT ID

17512102

DRAWING TITLE

Hydraulic System Partial Section

SCALE

1 : 20

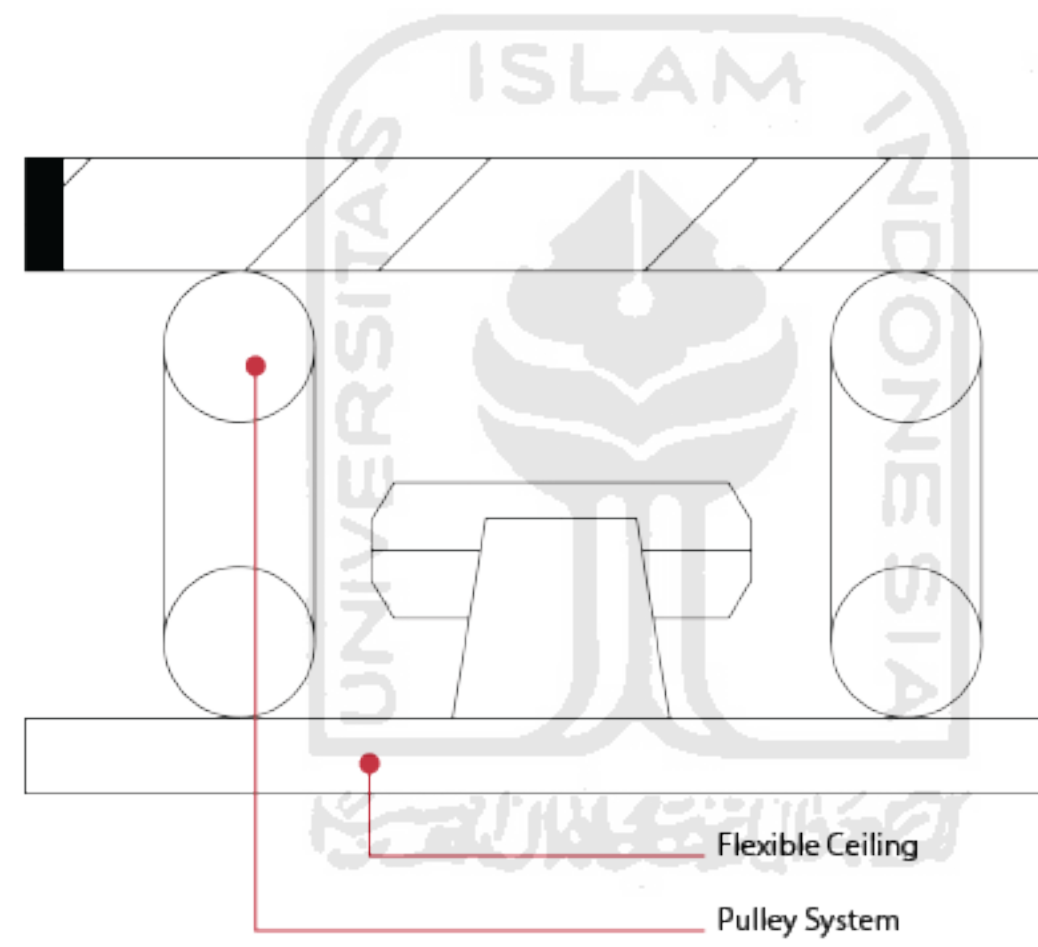
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LEGEND

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STUDENT NAME

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ADIKUNCORO

STUDENT ID

17512102

DRAWING TITLE

Pulley System Detail

SCALE

1 : 10

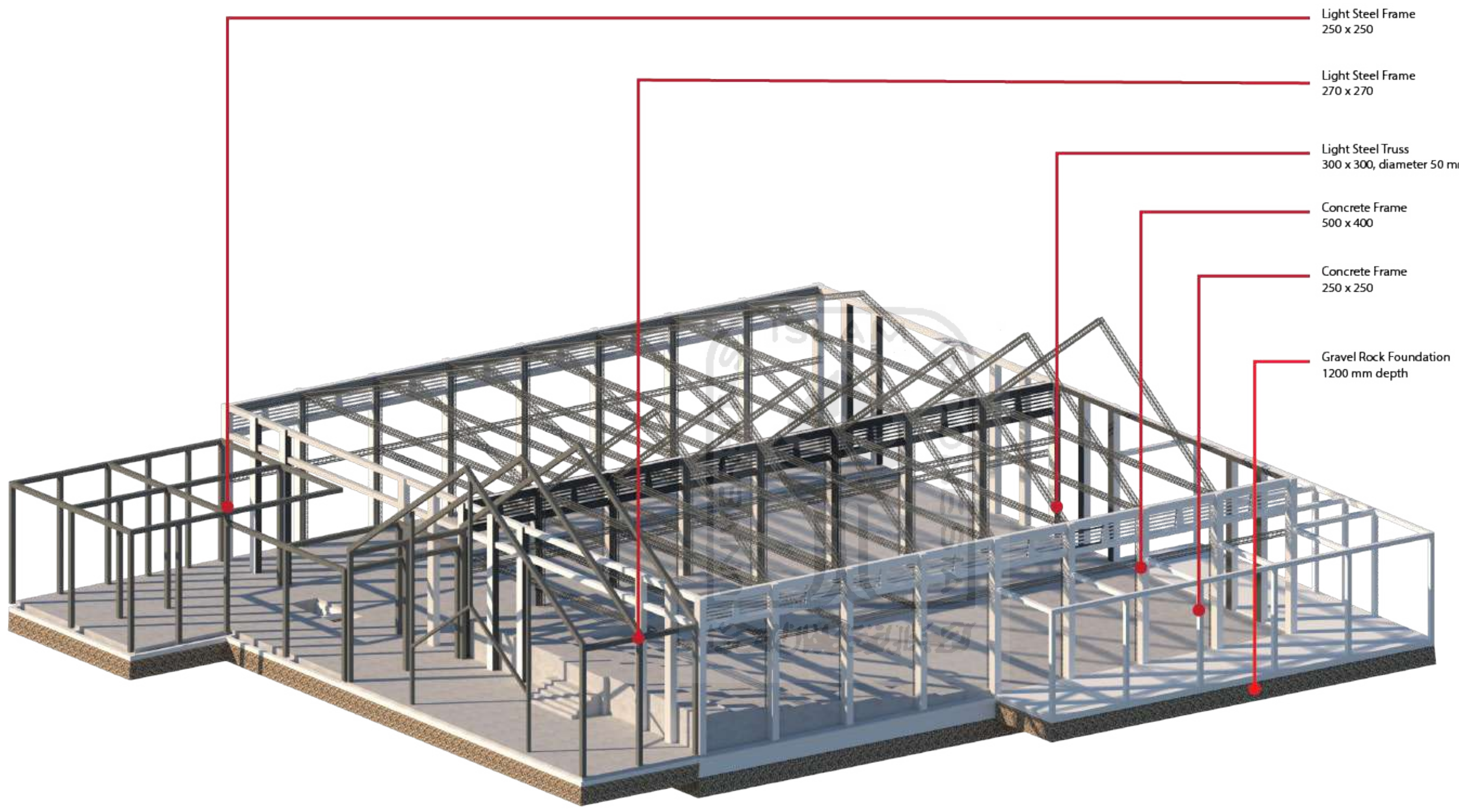
SIGN

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NAME	DATE



- Light Steel Frame
250 x 250
- Light Steel Frame
270 x 270
- Light Steel Truss
300 x 300, diameter 50 mm
- Concrete Frame
500 x 400
- Concrete Frame
250 x 250
- Gravel Rock Foundation
1200 mm depth

LEGEND

NOTES

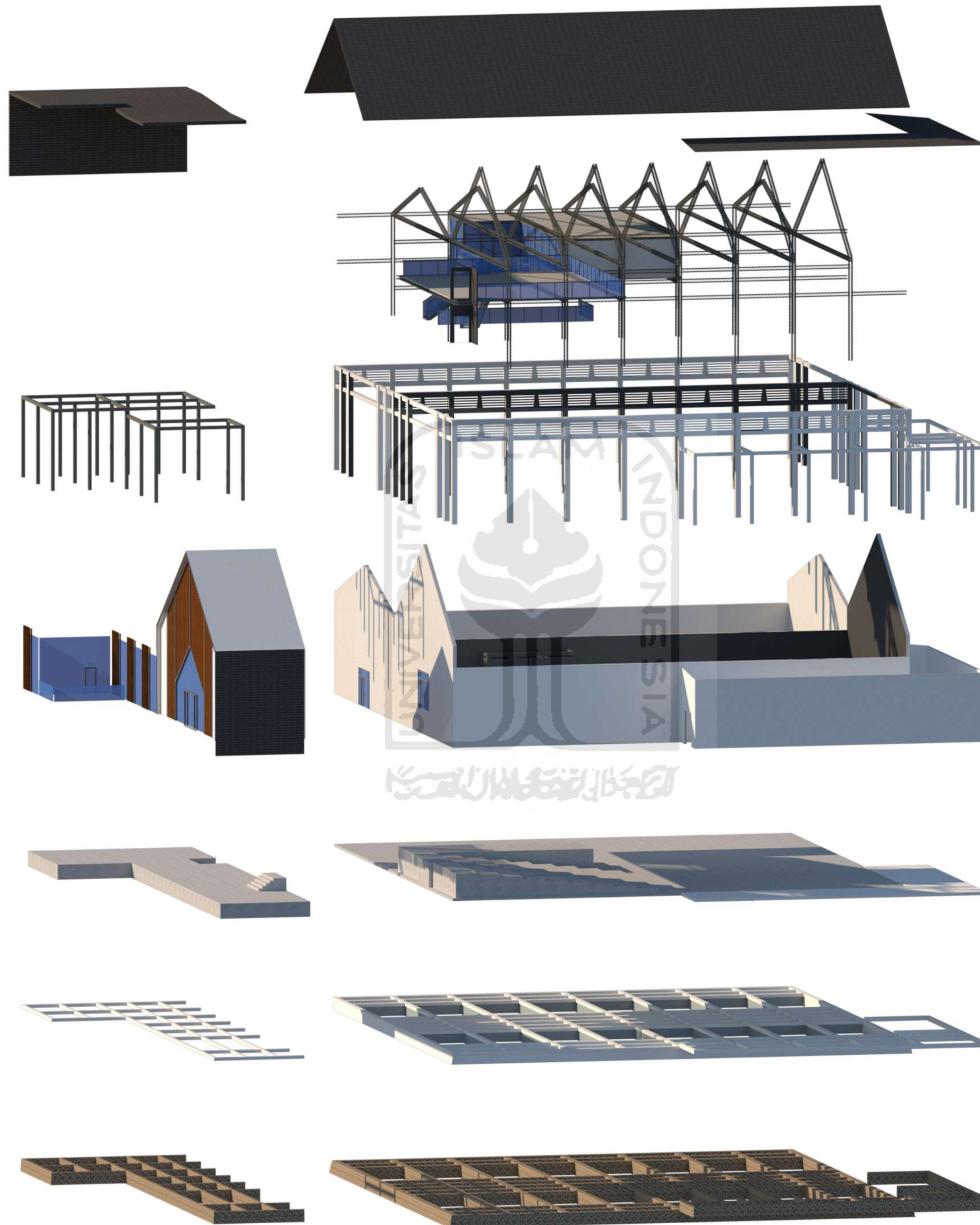
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DRAWING TITLE	

Structural Scheme

SCALE	SIGN
N/A	

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Bitumen Roof

Steel Truss

Reinforced Concrete Frame

Brick Shear Wall

Concrete Floor Slab

Concrete Foundation

Gravel Foundation

LEGEND

NOTES

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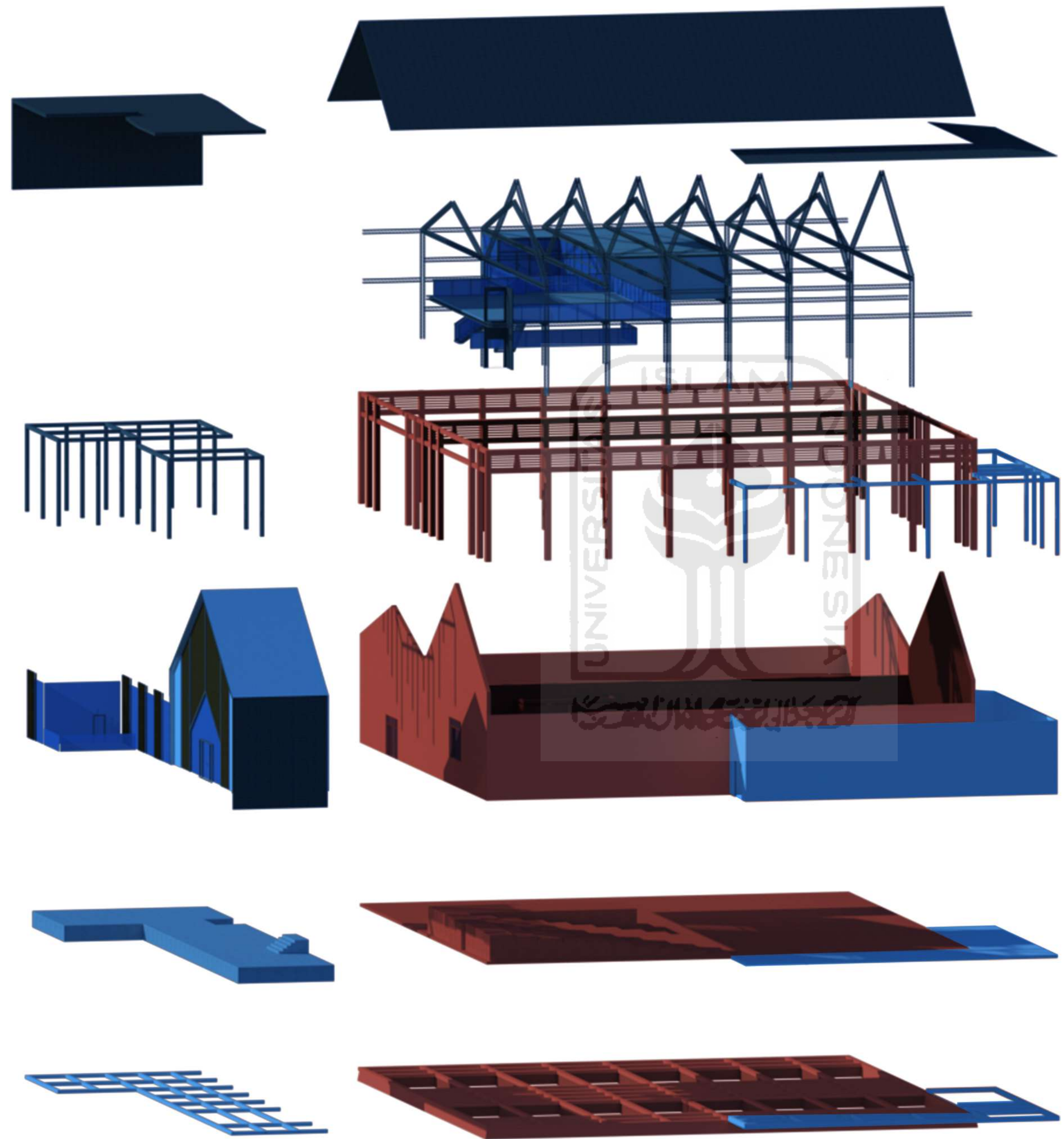
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Structural Scheme - Exploded Axonometry

SCALE	SIGN
N/A	

N/A

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LEGEND

- Adaptive Reuse
- New Building

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STUDENT NAME **STUDENT ID**

ABRAHAM RISYAD 17512102
ADIKUNCORO

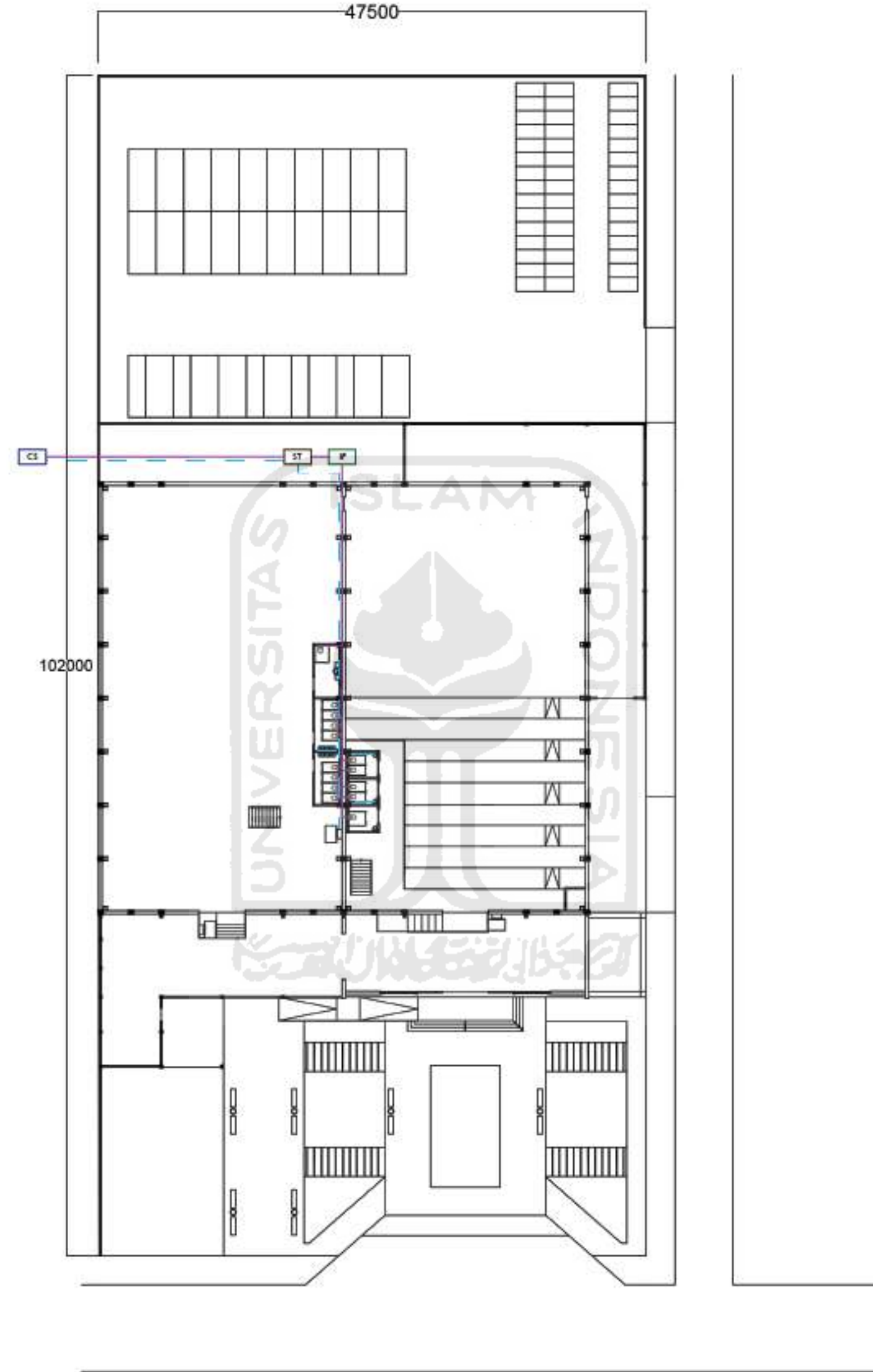
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Adaptive Reuse Scheme

SCALE **SIGN**

N/A

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LEGEND

- CS City Sewage
- ST Septic Tank
- IF Infiltration
- Grey Water
- Black Water

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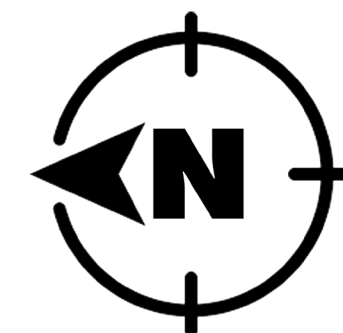
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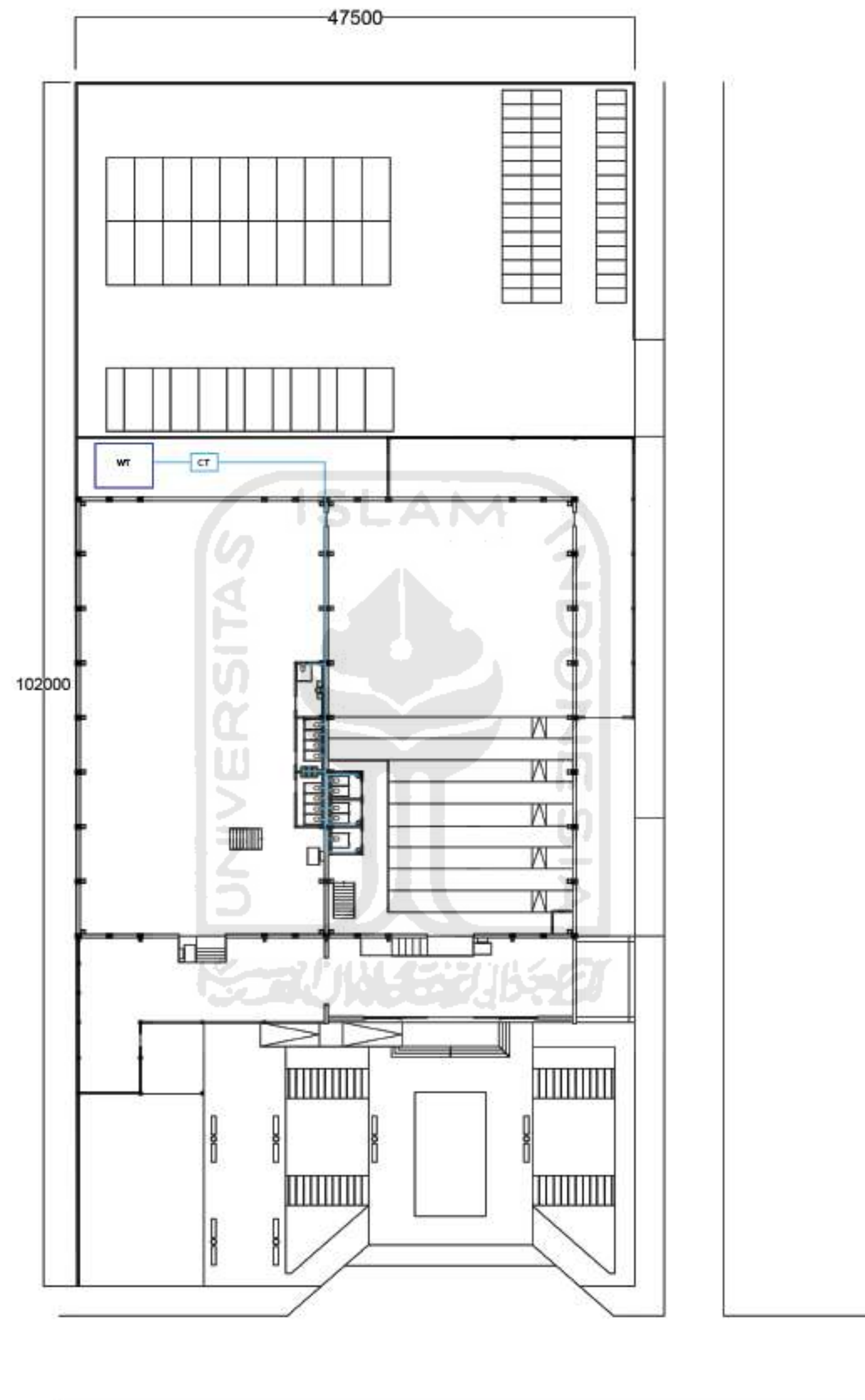
Grey & Black Water Scheme

SCALE	SIGN
1 : 400	

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LEGEND

- WT Water Tower
- CT Control Tank
- Clean Water

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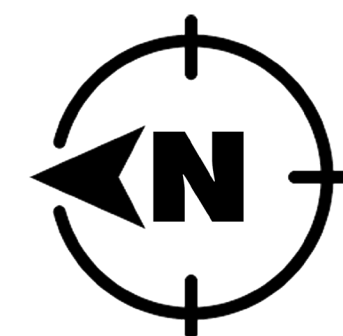
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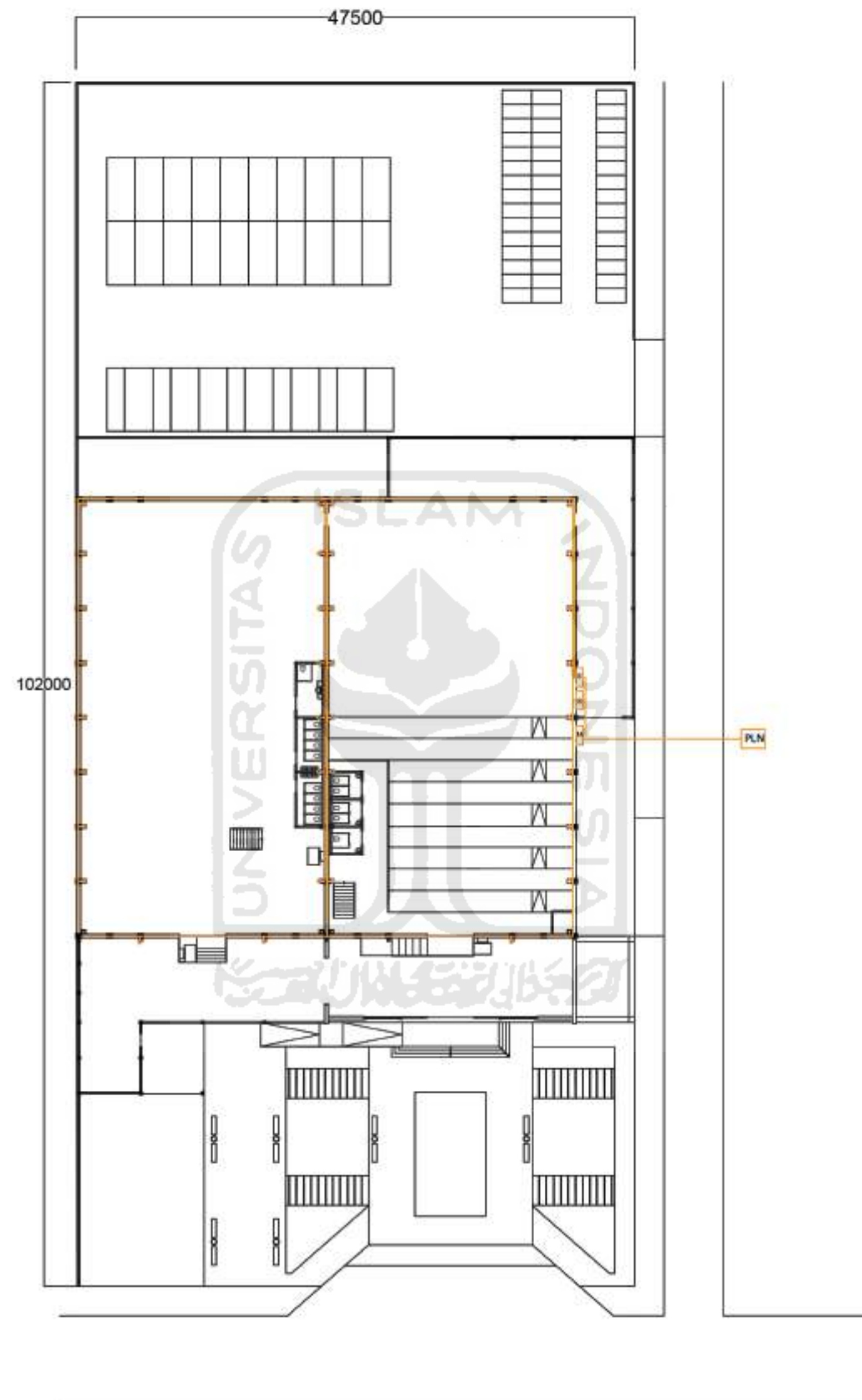
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Clean Water Scheme

SCALE	SIGN
1 : 400	

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LEGEND

S SDP

M MDP

○ Outlet

— Electrical Line

NOTES

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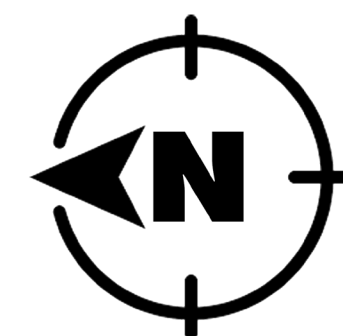
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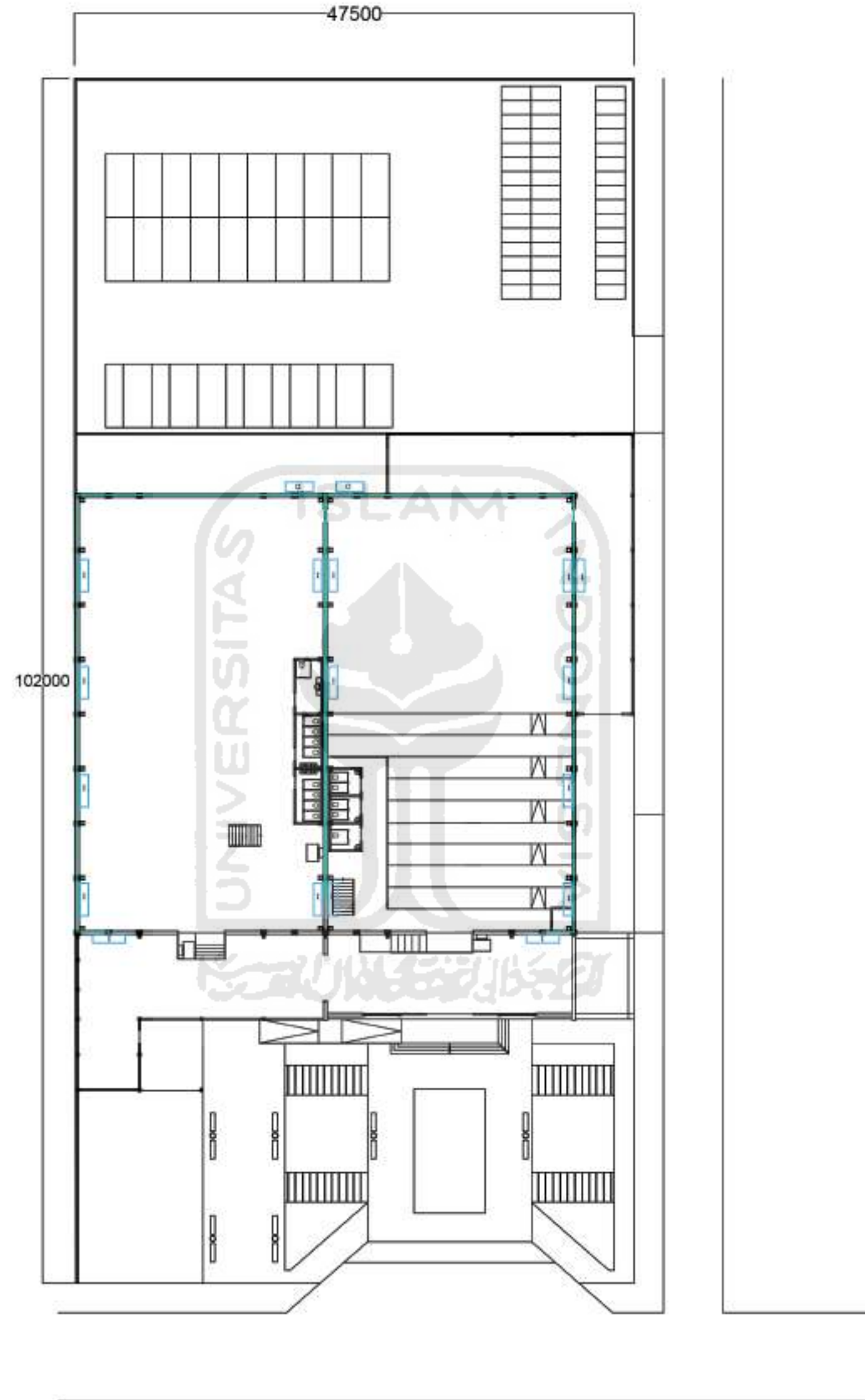
Electricity Scheme

SCALE	SIGN
1 : 400	

1 : 400

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LEGEND

- o Outdoor Unit
- I Interior Unit
- Refrigerant Pipe

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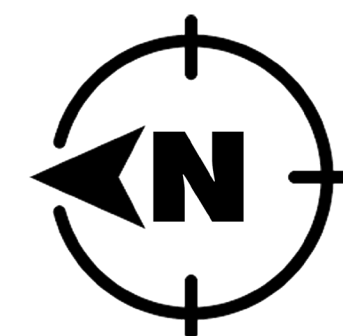
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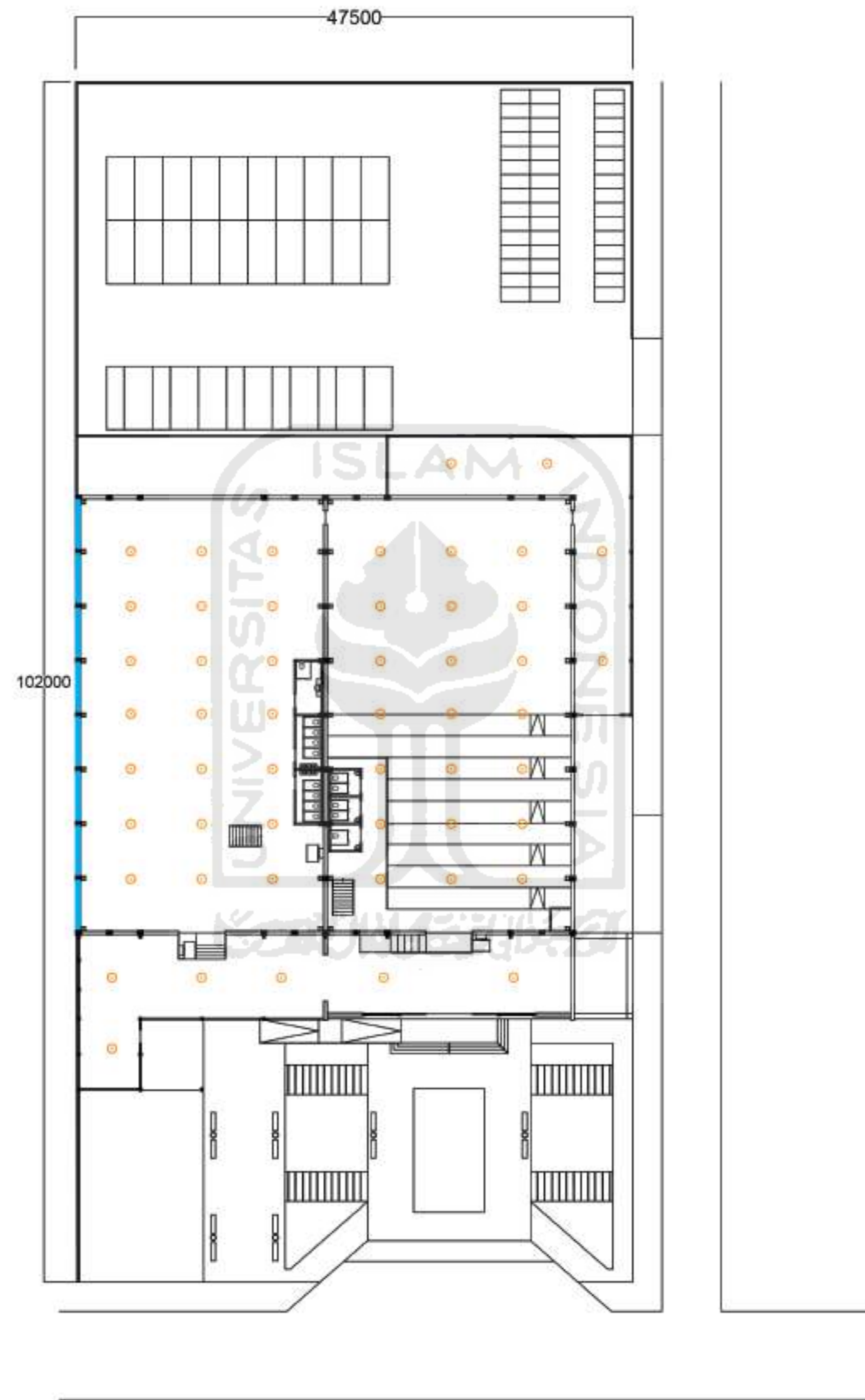
HVAC Scheme

SCALE	SIGN
1 : 400	



1 : 400

	NAME	DATE
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LEGEND

-  Ribbon Window
-  Downlight

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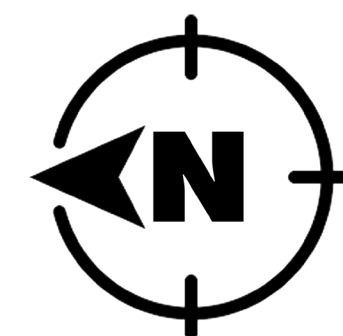
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ABRAHAM RISYAD ADIKUNCORO	17512102

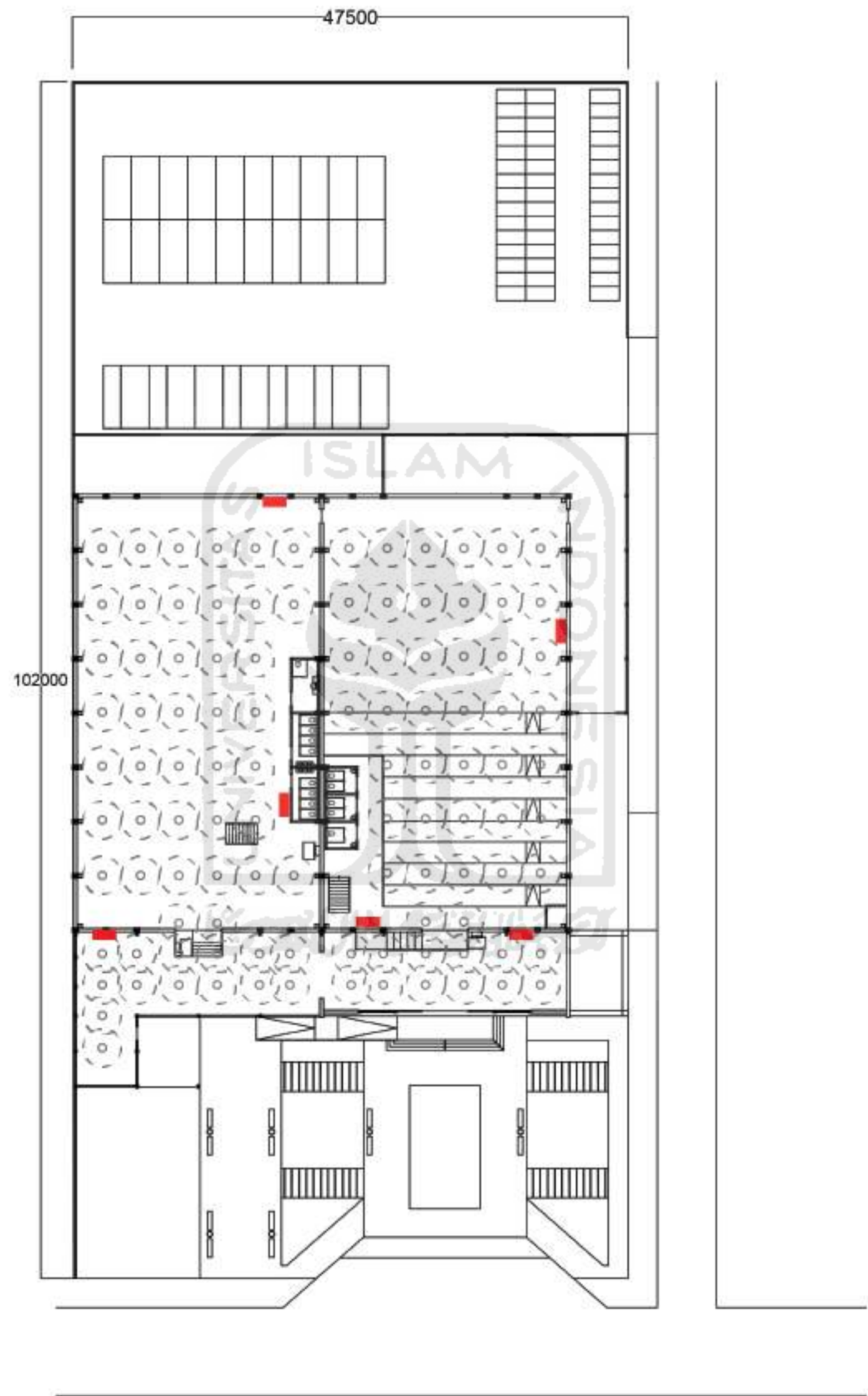
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Lighting Scheme

SCALE	SIGN
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LEGEND

-  Sprinkler
-  Hydrant

NOTES

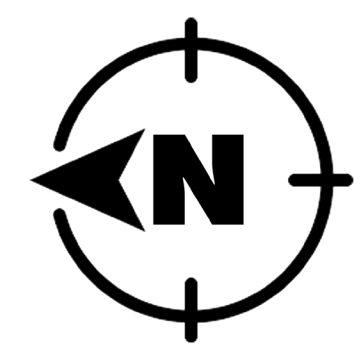
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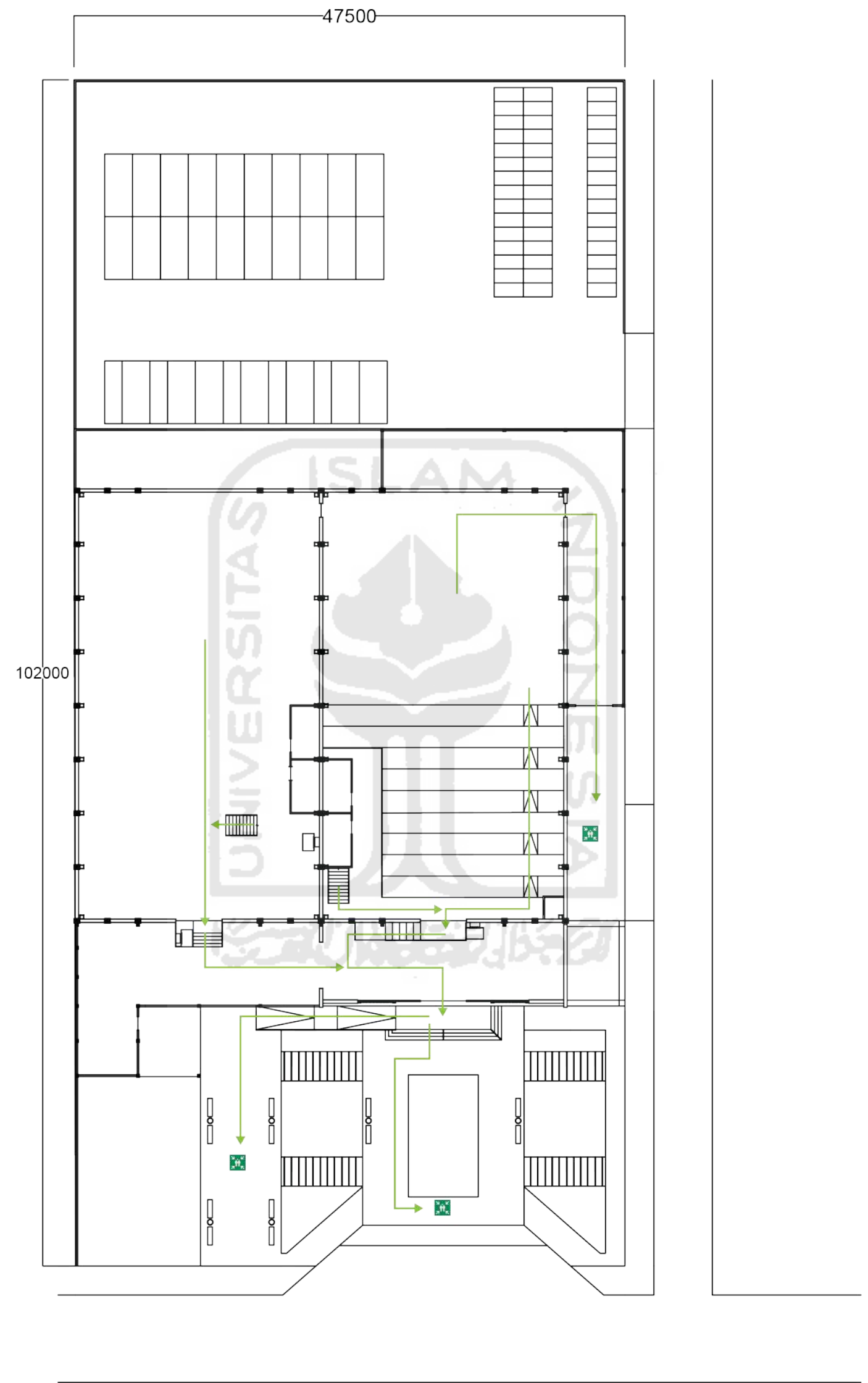
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DRAWING TITLE	

Fire Safety Scheme


SCALE	SIGN
1 : 400	

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LEGEND

 Gathering Point

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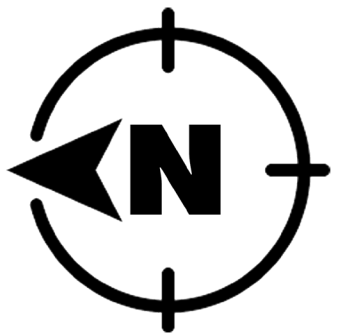
STUDENT NAME	STUDENT ID
ABRAHAM RISYAD ADIKUNCORO	17512102

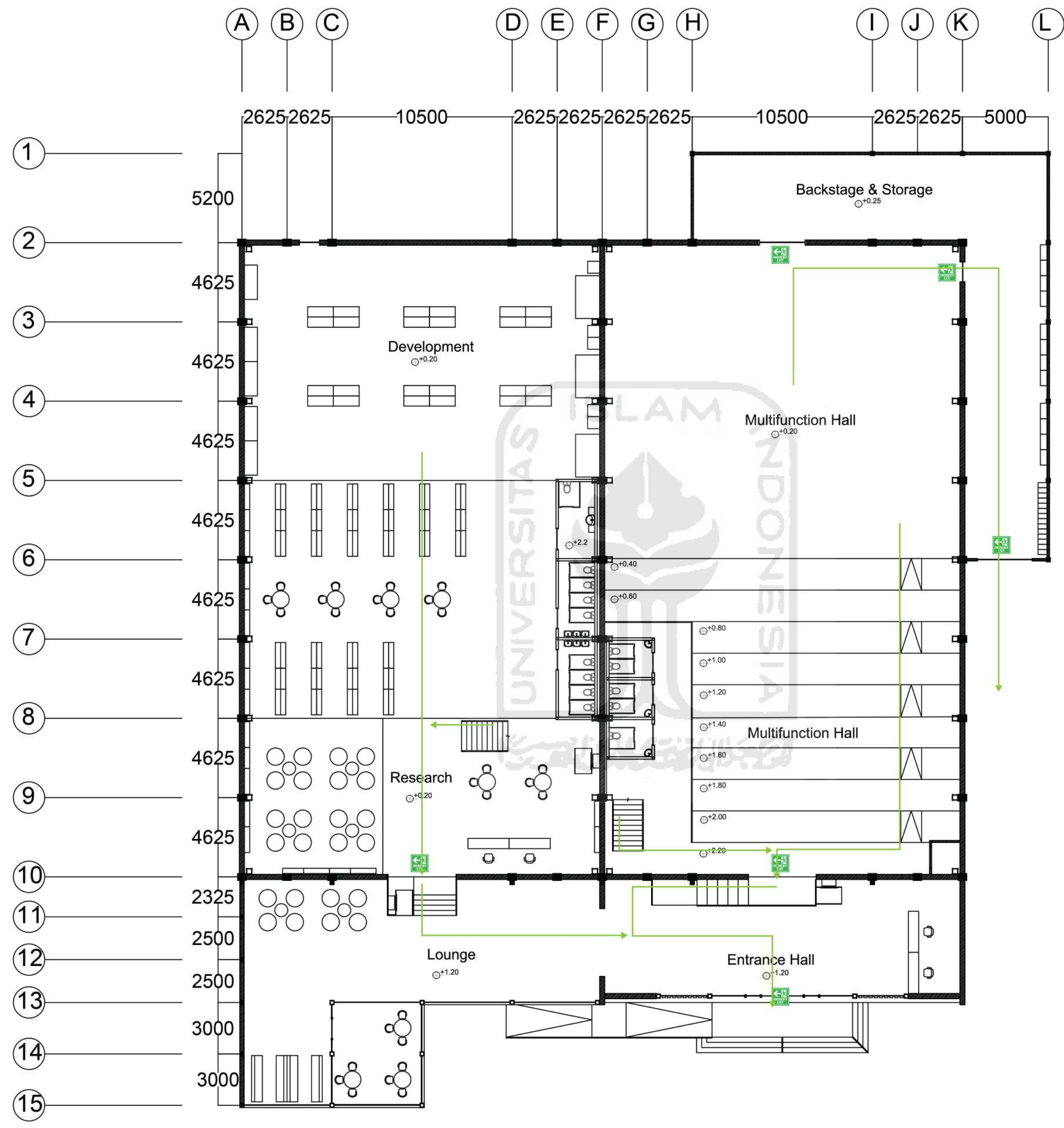
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Evacuation Scheme

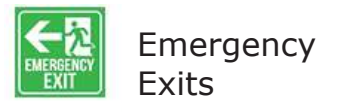
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LEGEND



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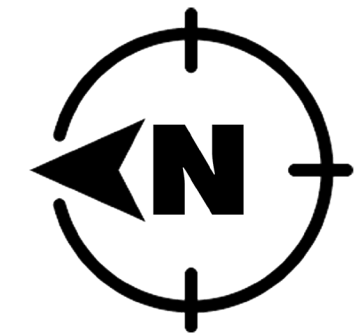
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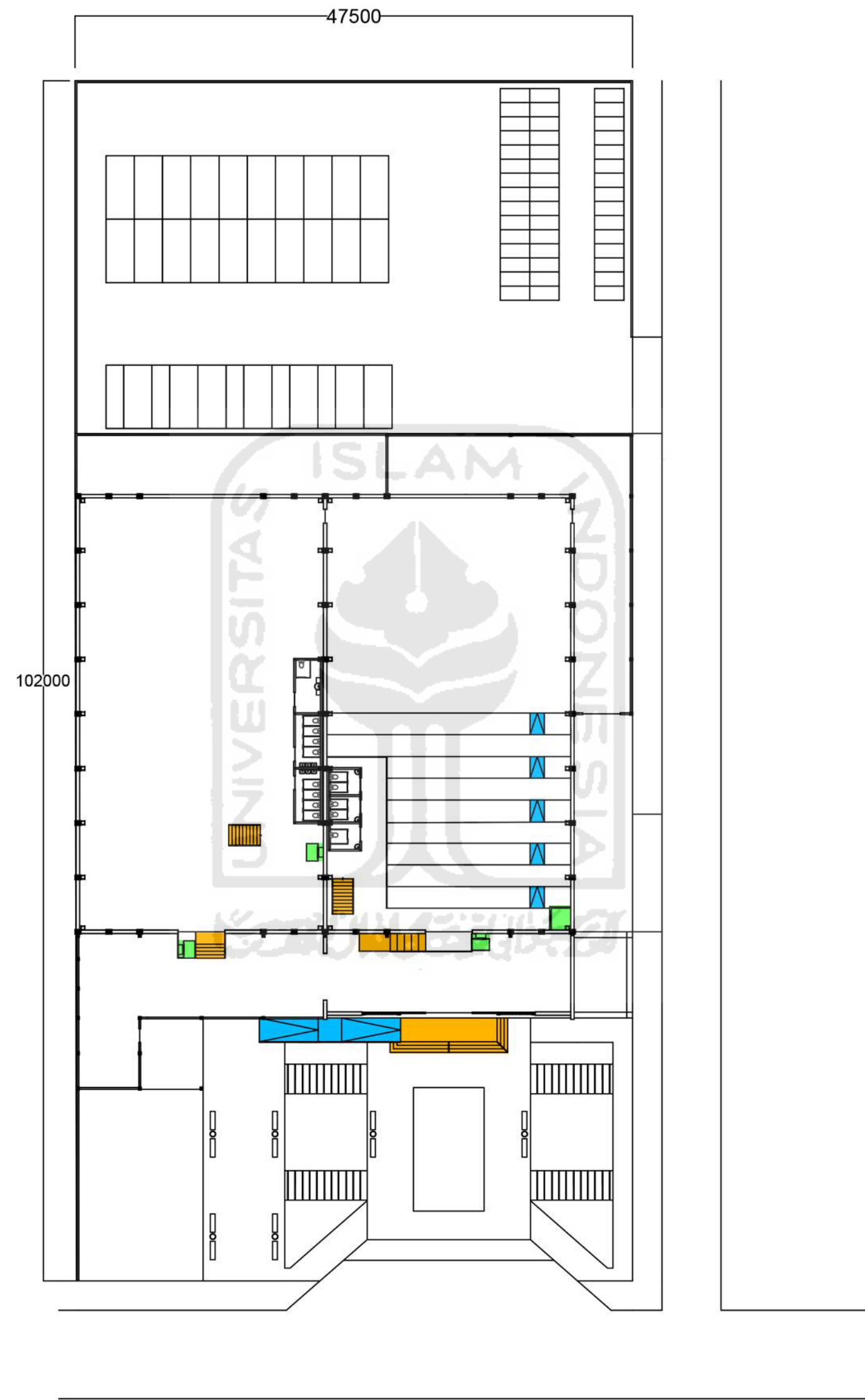
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Emergency Exits Scheme

SCALE	SIGN
1 : 100	

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LEGEND

- Stairs
- Ramp
- Elevator

NOTES

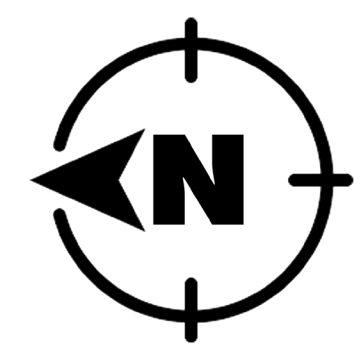
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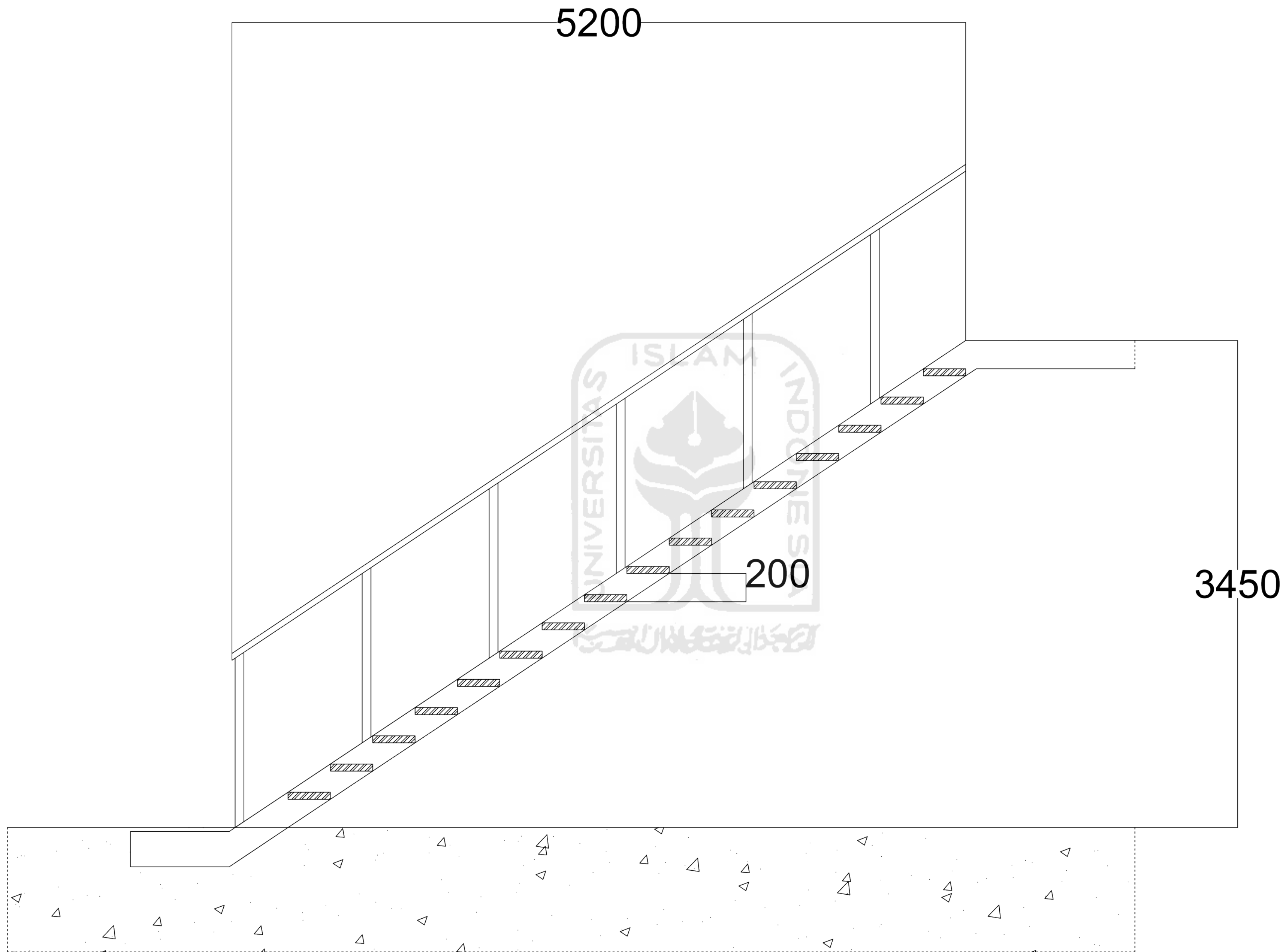
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Vertical Transportation Scheme

SCALE	SIGN
1 : 400	

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LEGEND

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STUDENT ID

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DRAWING TITLE

Vertical Transportation - Stairs
Details

SCALE

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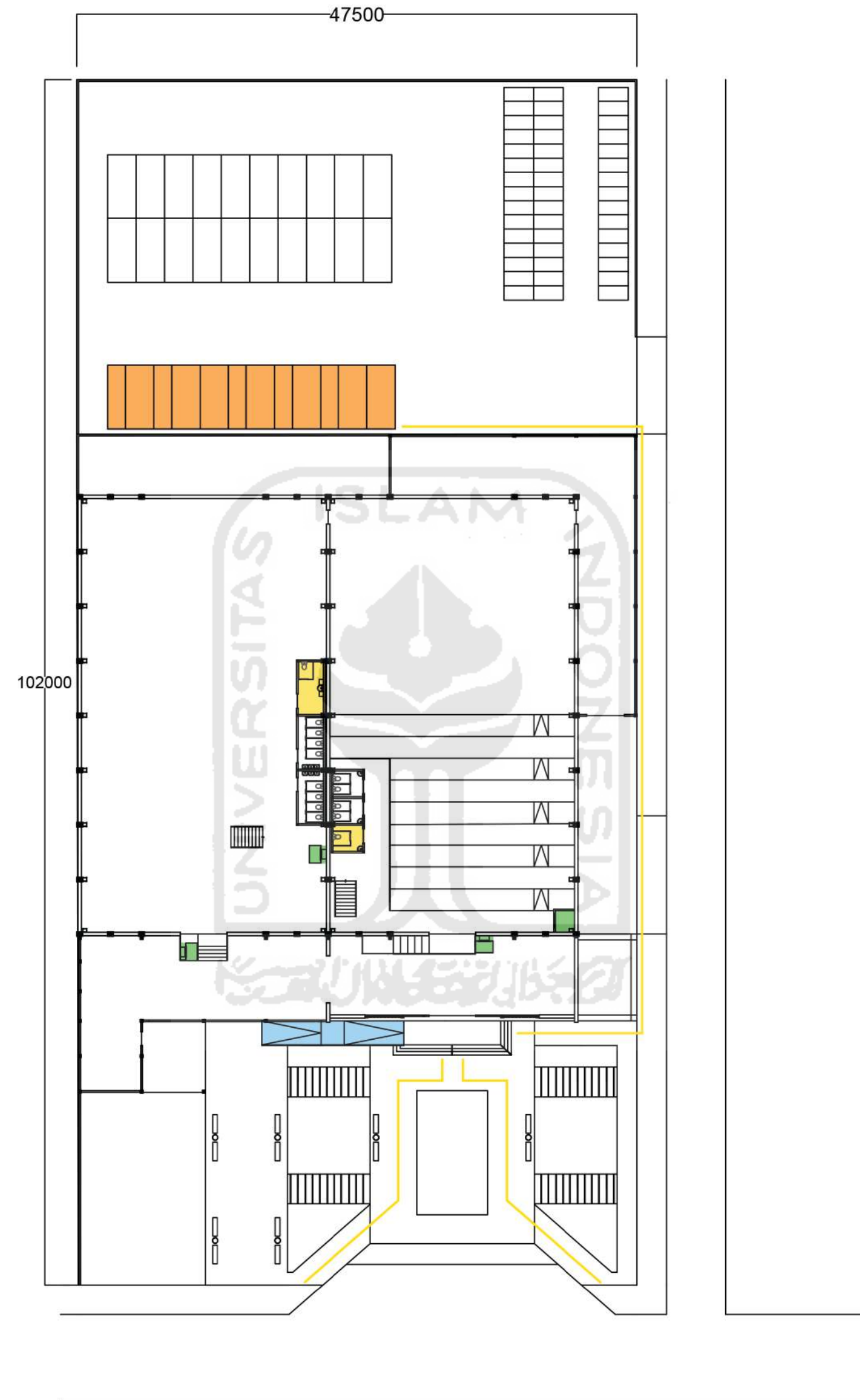
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LEGEND

- Guiding Block
- Diffable Toilet
- Diffable Elevator
- Ramp
- Diffabled Parking

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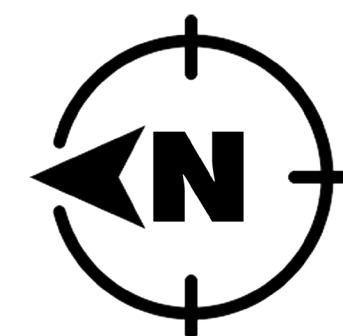
Barrier Free Scheme

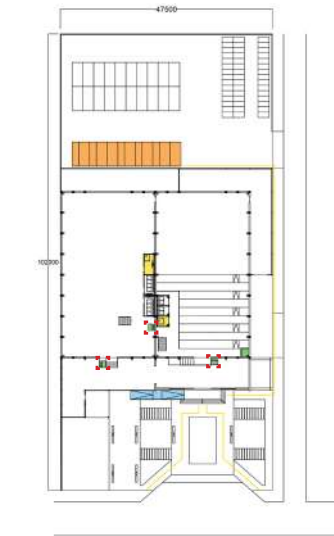
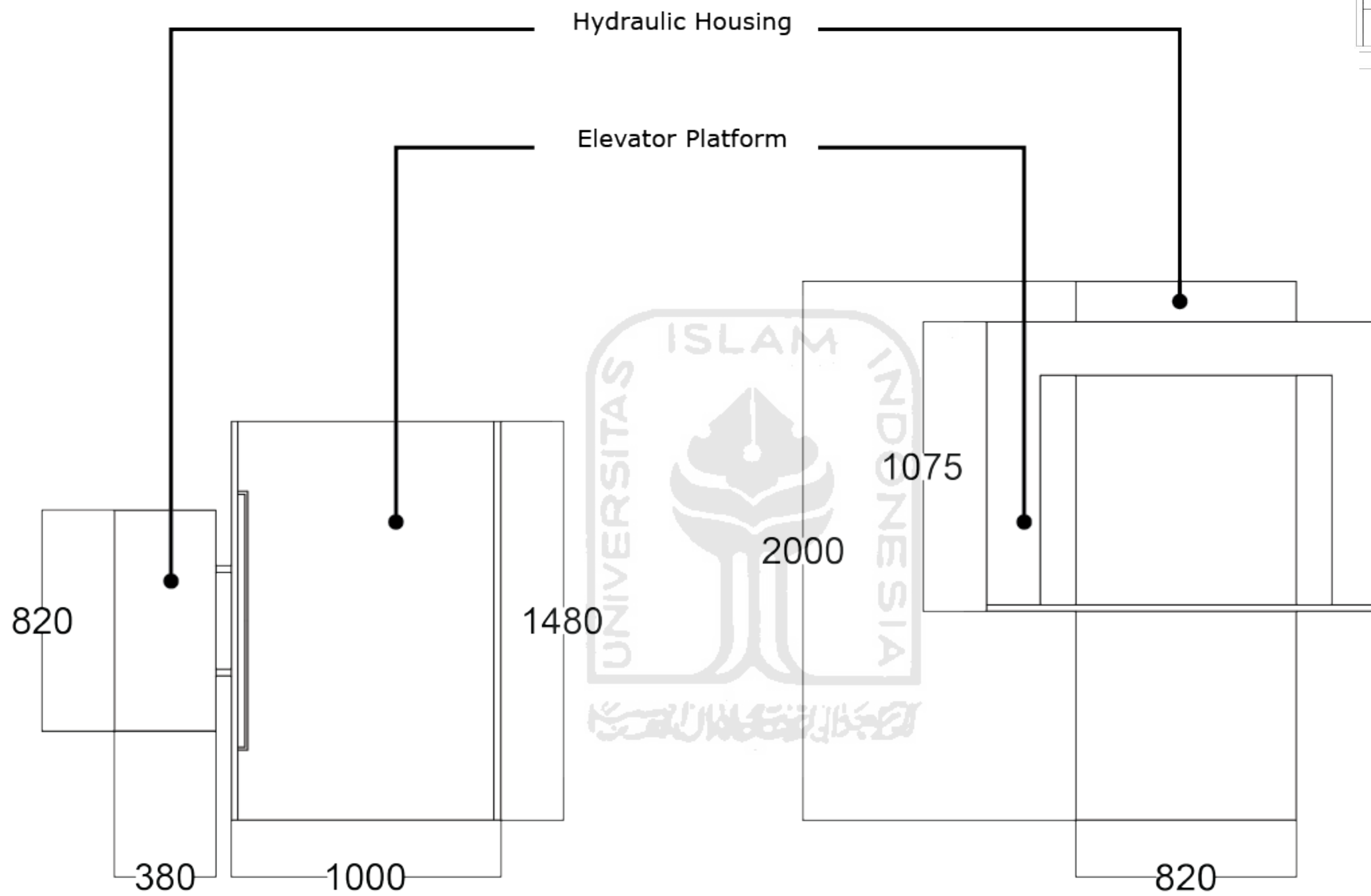
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LEGEND

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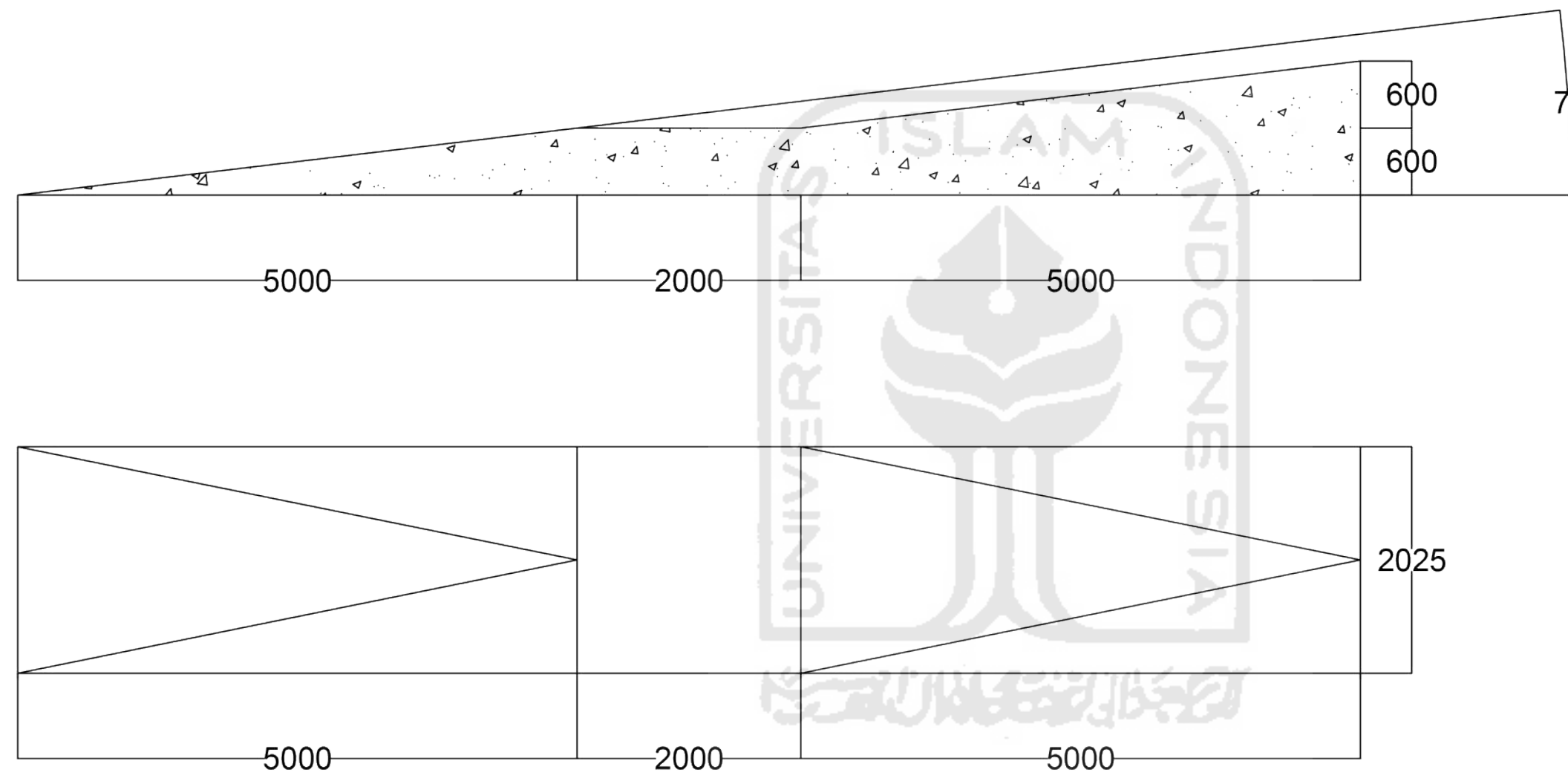
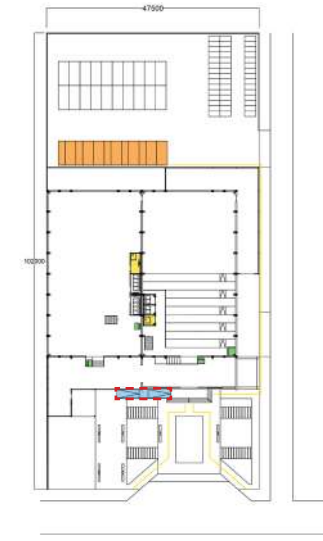
Barrier Free - Diffable Elevator
Detail

SCALE

1 : 50

SIGN

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LEGEND

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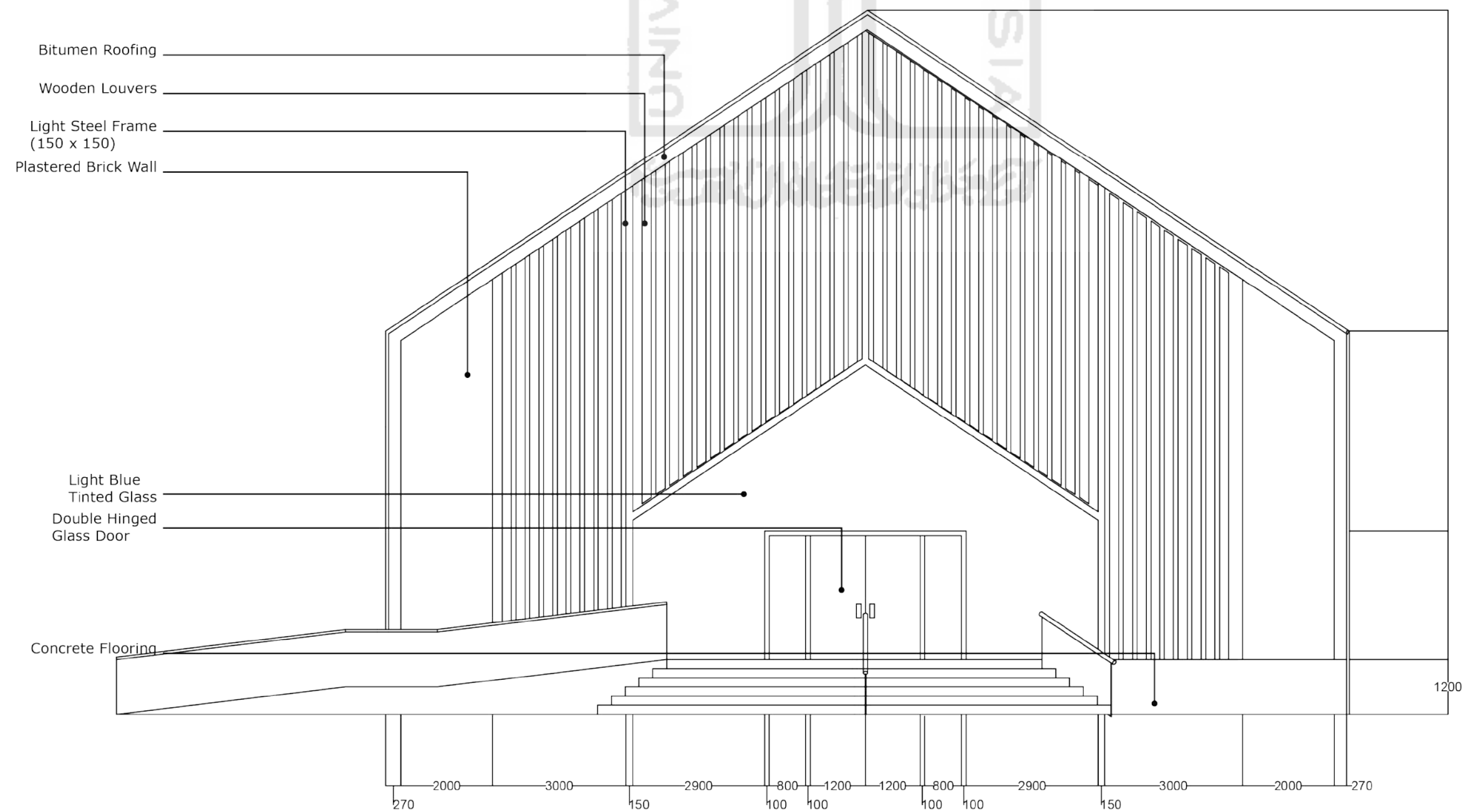
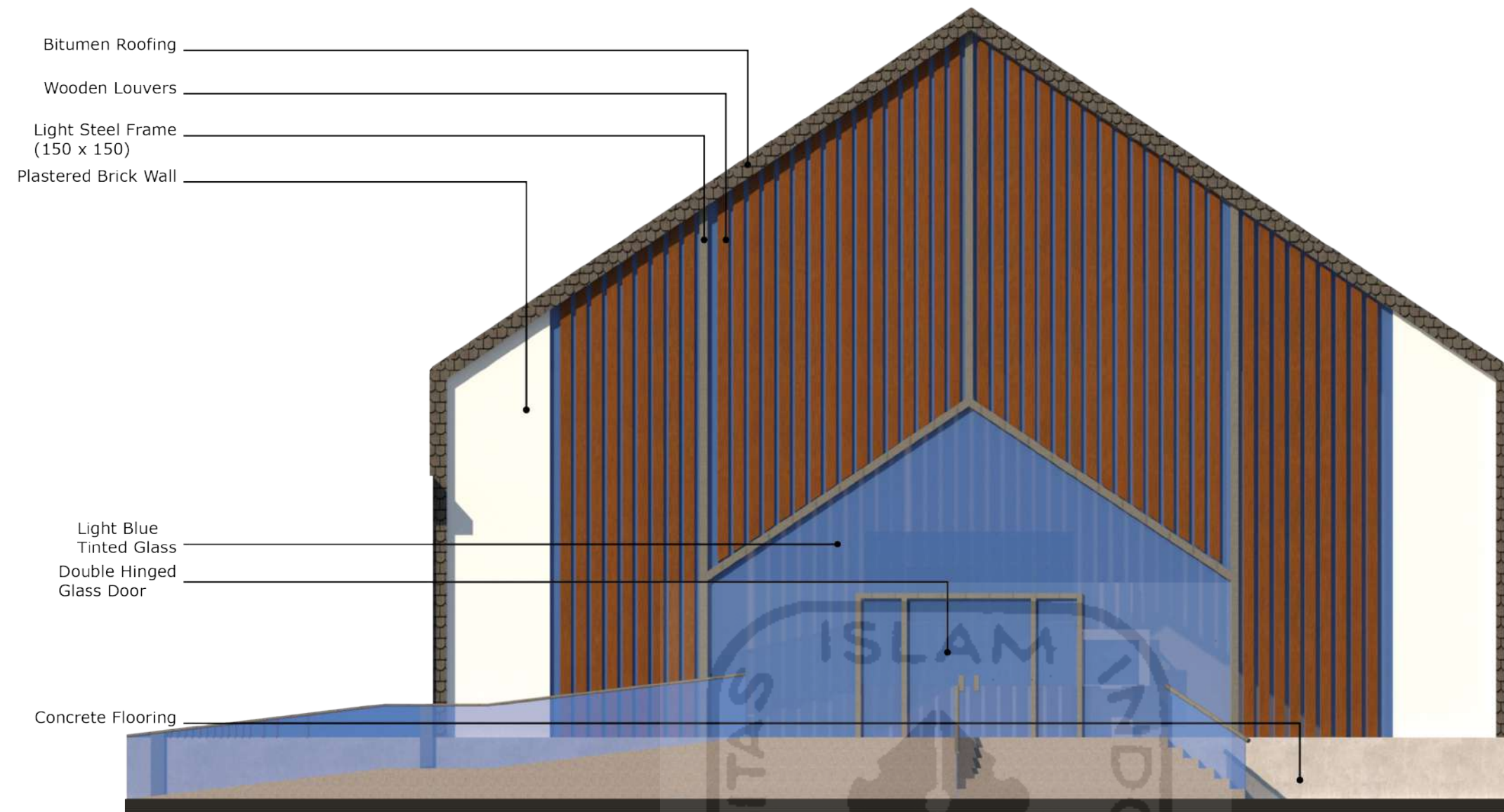
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DRAWING TITLE

Barrier Free - Ramp Details

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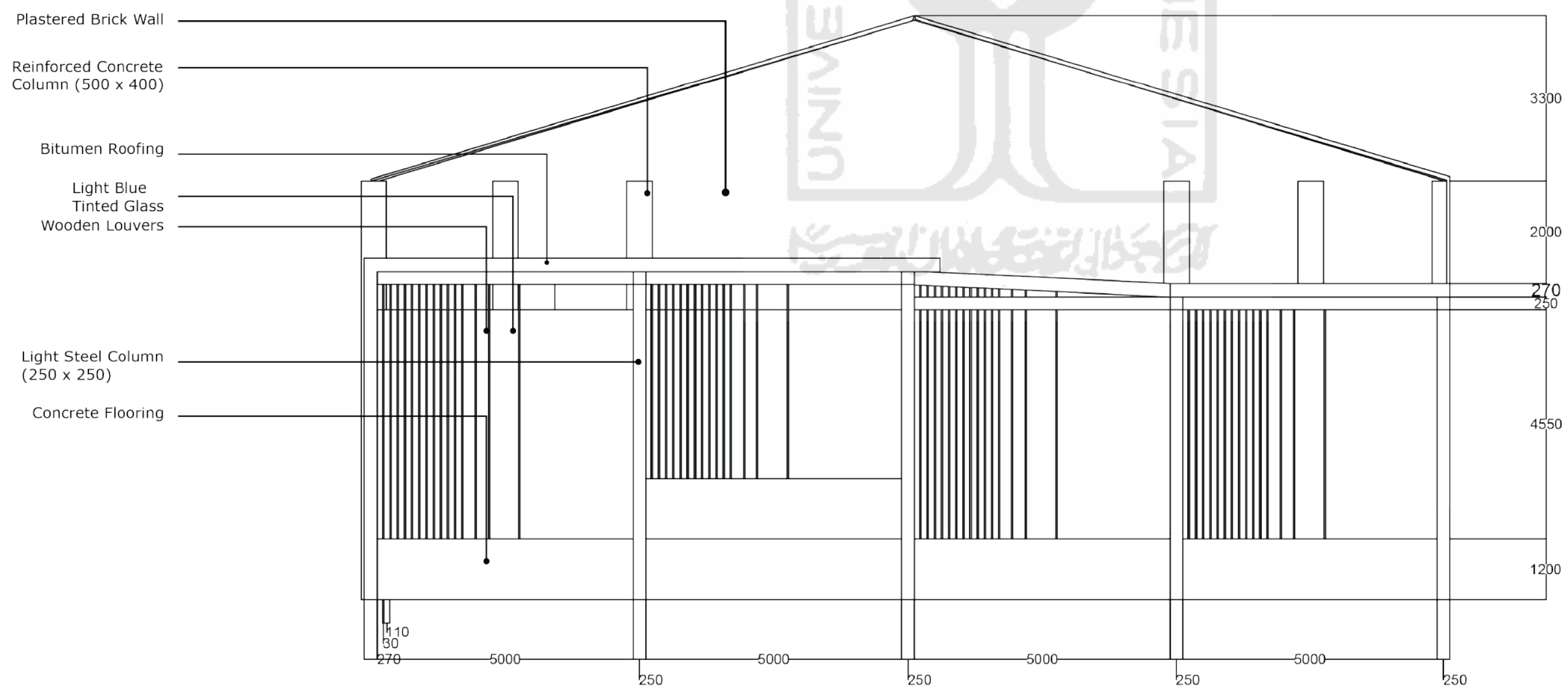
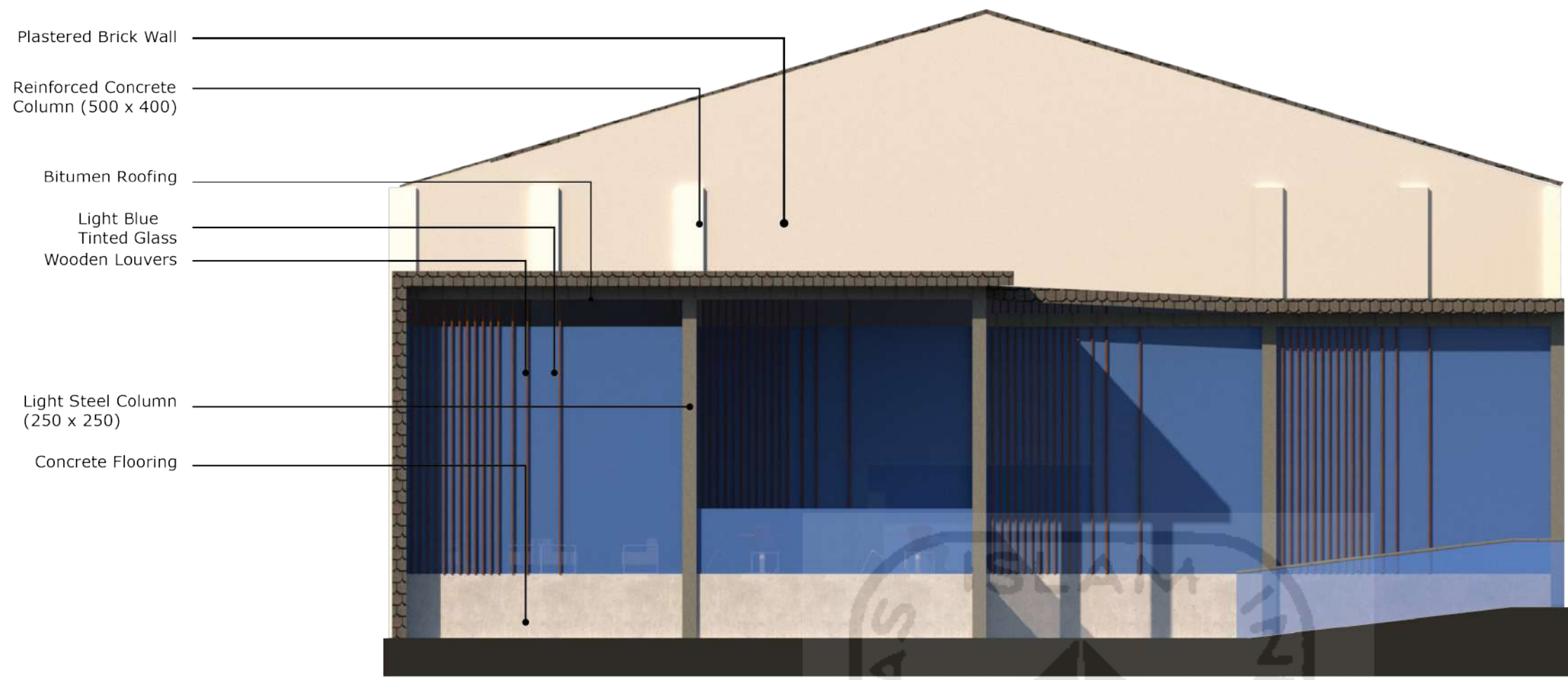
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Envelope Detail - Main Entrance

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ADIKUNCORO

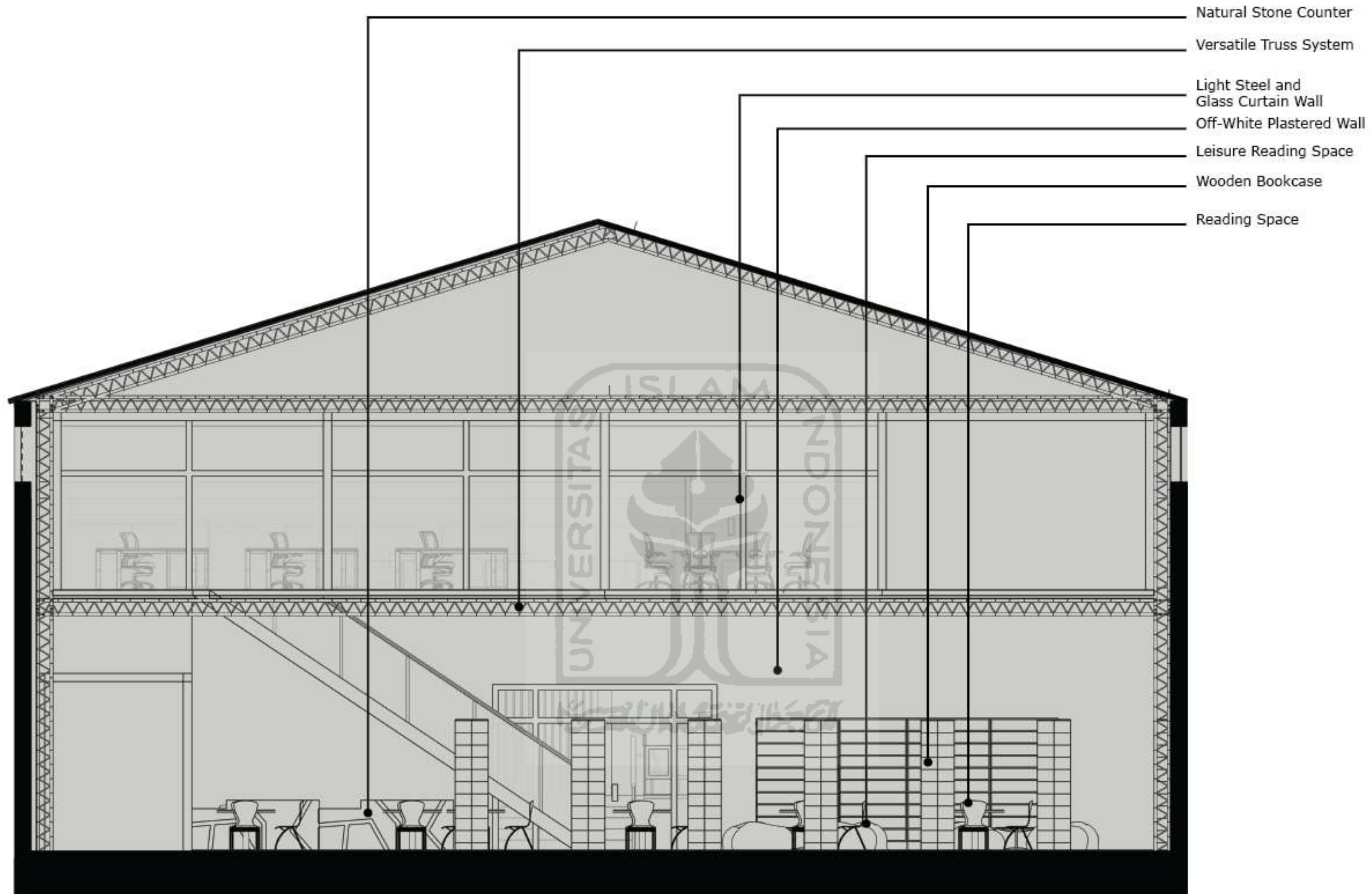
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SCALE | **SIGN**
1 : 100

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- Natural Stone Counter
- Versatile Truss System
- Light Steel and Glass Curtain Wall
- Off-White Plastered Wall
- Leisure Reading Space
- Wooden Bookcase
- Reading Space

LEGEND

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SUPERVISOR

STUDENT NAME	STUDENT ID
ABRAHAM RISYAD ADIKUNCORO	17512102

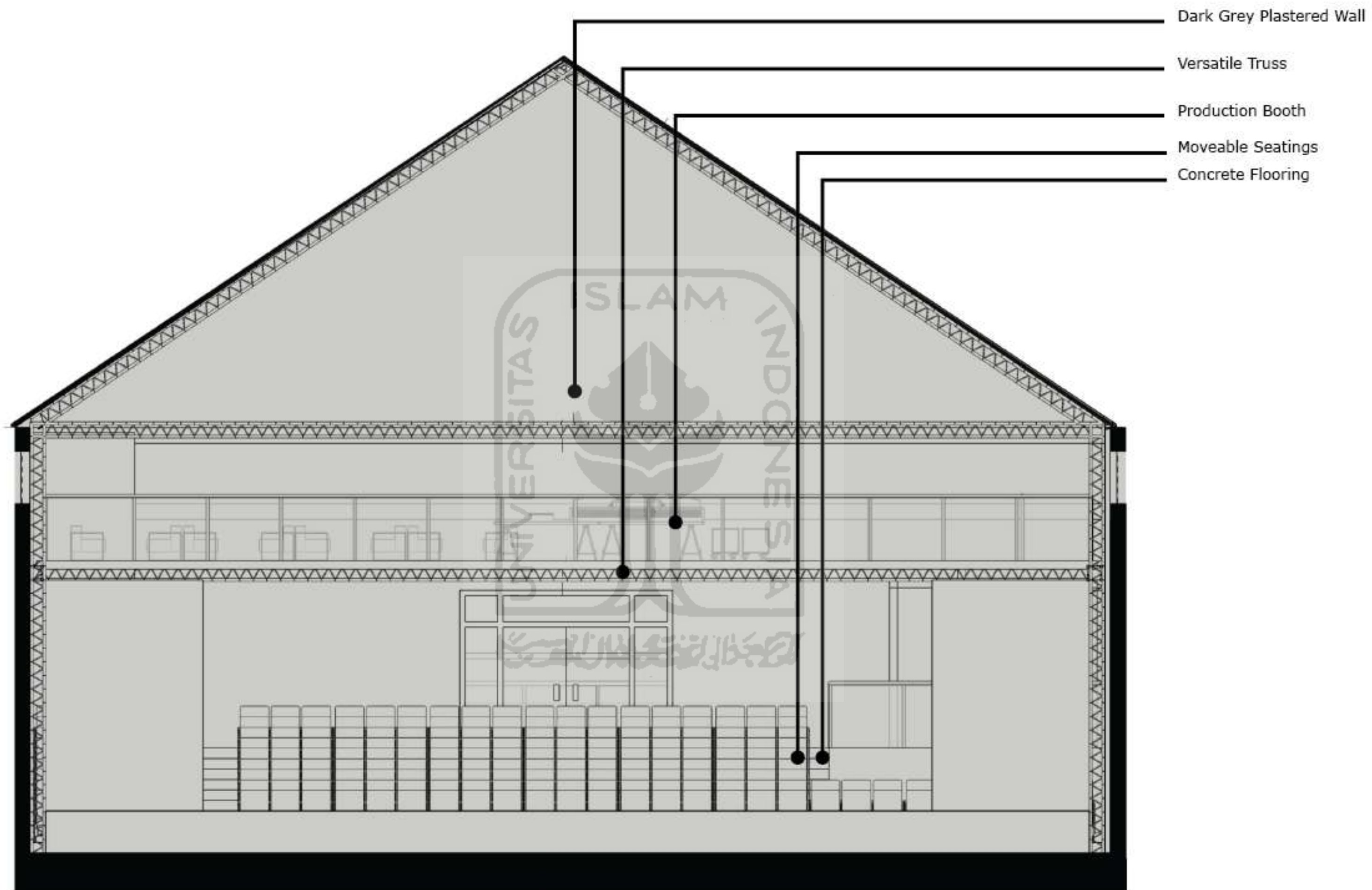
DRAWING TITLE

Interior Detail - Research

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NOTES

FINAL ARCHITECTURAL DESIGN STUDIO

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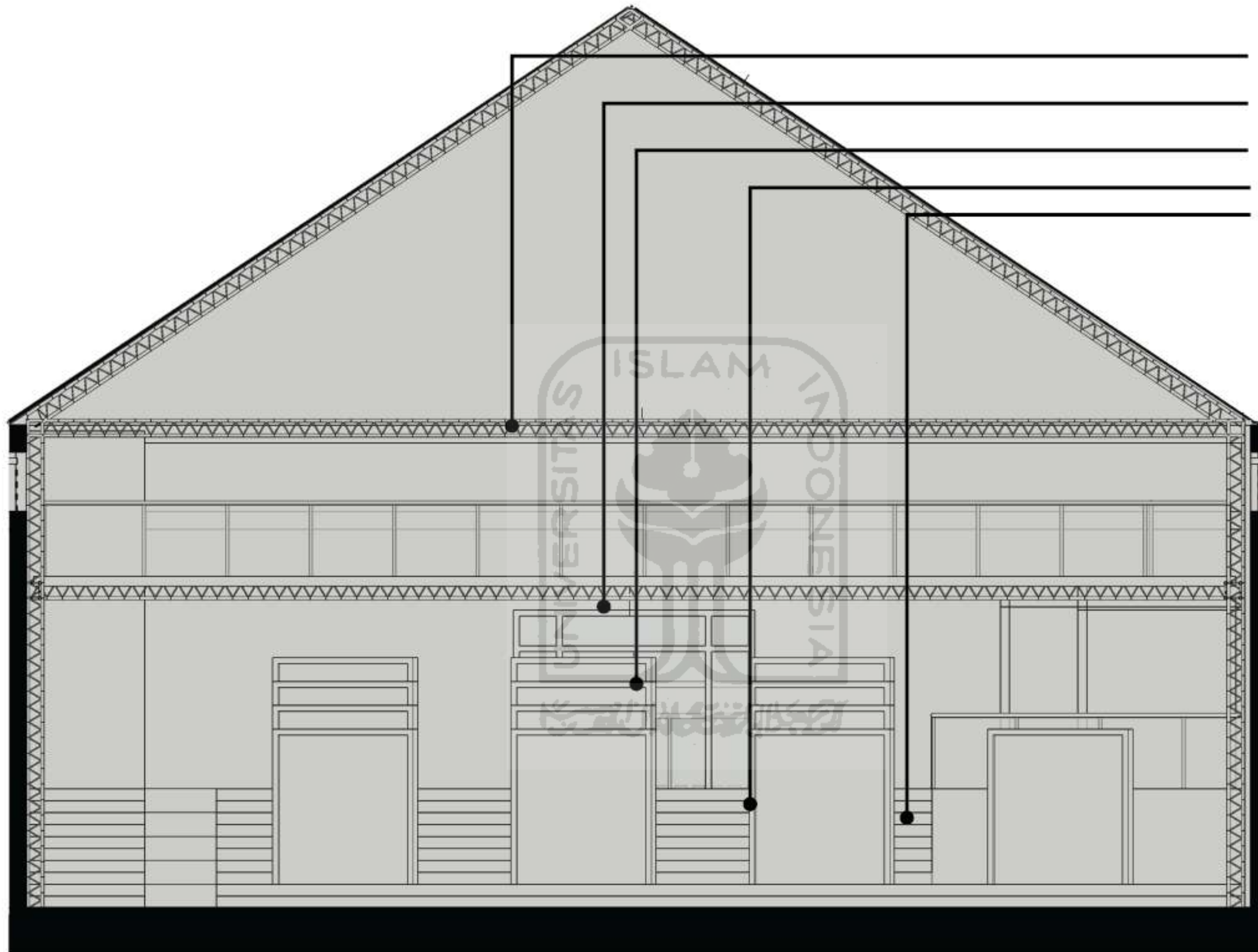
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DRAWING TITLE

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- Dark Grey Plastered V
- Versatile Truss
- Moveable Display Boa
- Portable Platform
- Concrete Flooring

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Interior Detail - Multifunction Hall (Gallery)

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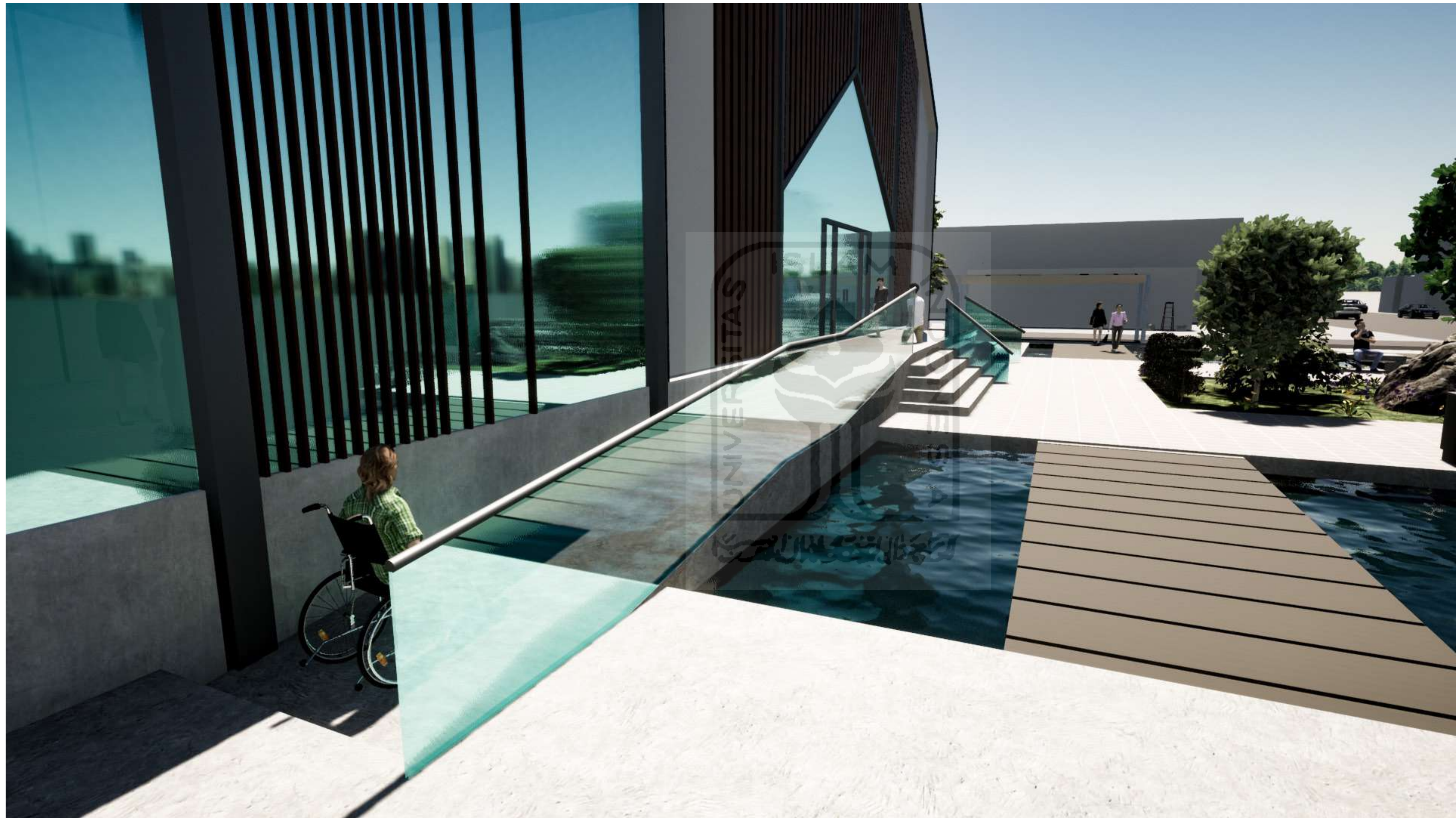
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Interior Perspective - Lobby

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Interior Perspective - Lounge

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Interior Perspective - Development

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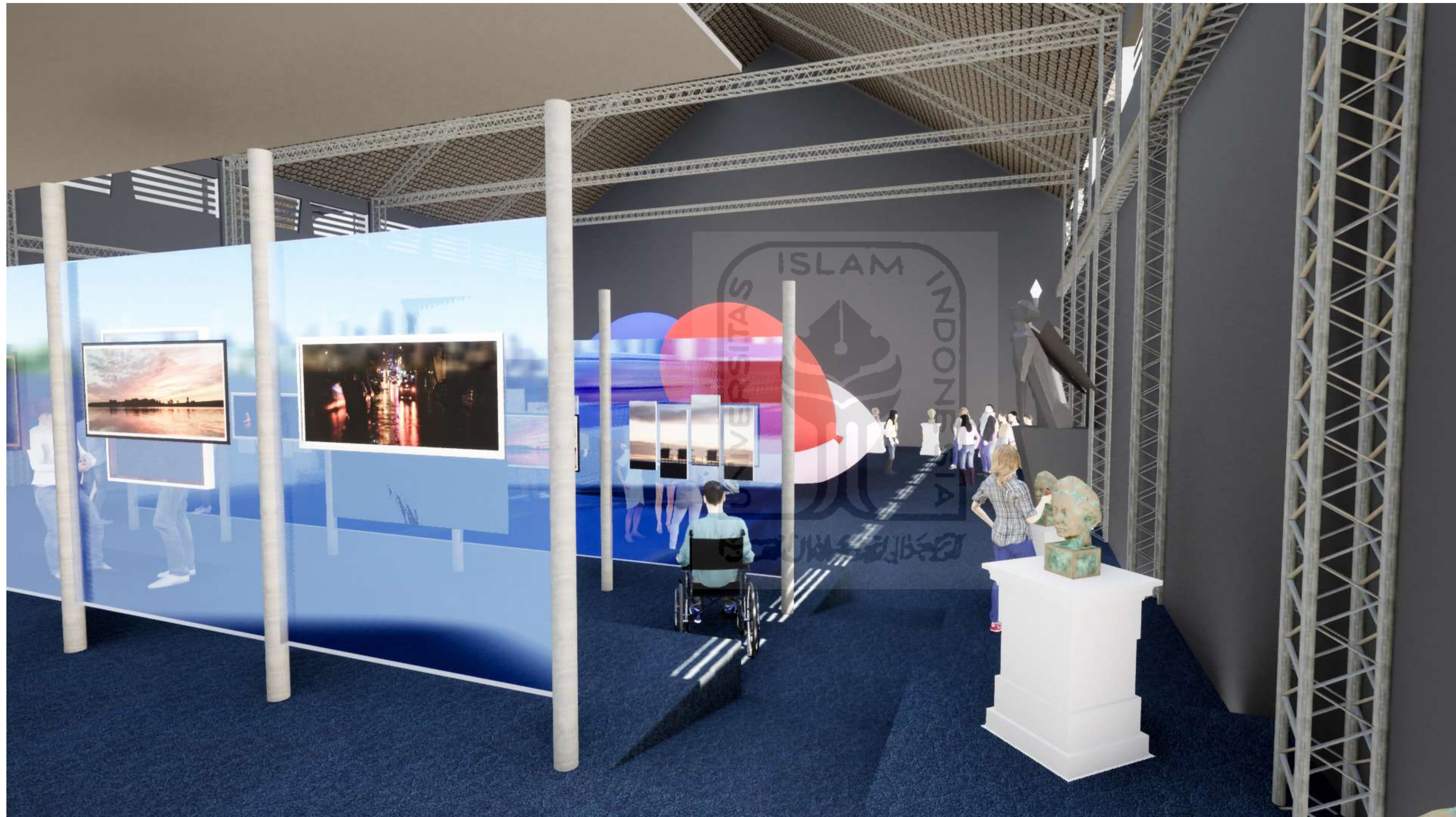
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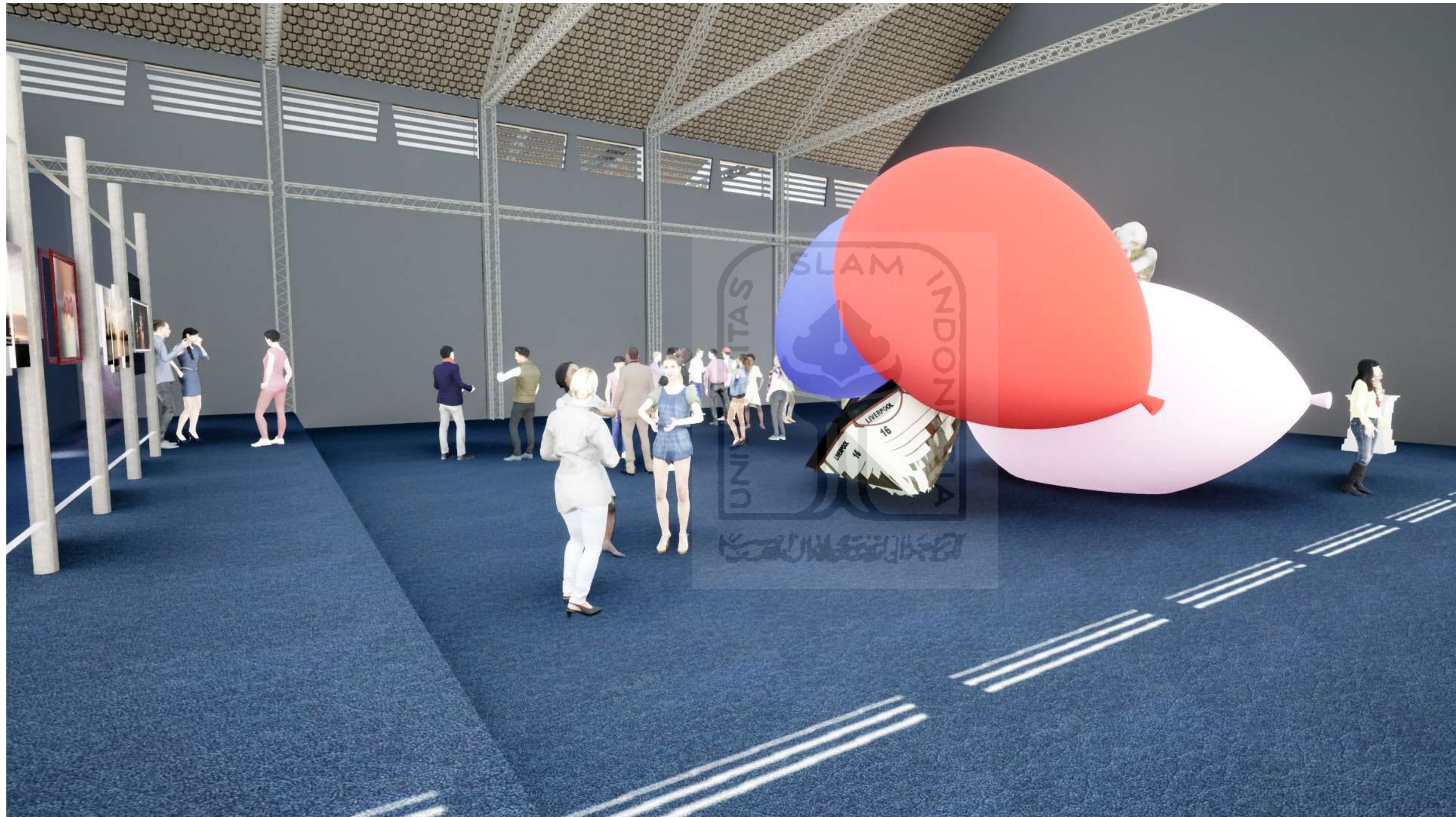
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Attachments



design of

Merdeka Cultural Center

Adaptable Cultural Center for Cultural Development in Bogor with Open Building and Adaptive Reuse Approach

Being connected with local and international culture is important in the modern era to develop our identity and knowledge. Vast knowledge of cultural works and literature widens our world and opens up various possibilities to enrich ourselves to ideas that will lead us to a better future. However, the current reading interest in Indonesia is still facing a crisis, as the reading interest rate is only at 0.001%, putting Indonesia's reading interest rating in 60th place from 61 countries (Ministry of Communication and Informatics, 2016). With globalization and a free market ahead of us, we need to take a step to increase the reading interest to give us a compelling chance in the global environment.

The pandemic outbreaks in recent history often brought up significant issues of health protocols and measures that are often overlooked in the design approach of buildings. With the recent COVID-19 outbreak, we are taken by sur-

prise by the viral contagion of the virus and faced difficulties in adjusting to the situation, resulting in the closing of many public and private buildings with a vast number of them facing uncertainty on their survival in the future. On the other hand, with lockdown and physical distancing protocols going, people need safe recreation and public space to unwind from the stress.

Merdeka Cultural Center aims to accommodate the people with various ways to learn and engage themselves with cultures, even during an unpredictable pandemic outbreak by paying using open building approach to ensure that the building is able to be sustainable with different situations that might occur, and keeping the people engaged with cultures in safety conditions.



Revitalizing A Part Of History And Identity

The design will take place at the site of Bioskop Presiden Bogor. The building has a cultural significance in the area, as it was one of the first movie theater to be built in Buitenzorg in colonial era. The building then continue to be a big part of cultural contributors in Bogor, as it is popular with the people from all background.

Location

Jl. Ciwaringin, RT.02/RW.03, Ciwaringin, Kecamatan Bogor Tengah, Kota Bogor, Jawa Barat 16124

Bioskop Presiden's Timeline

Early 20th Century



The theater was built as Maxim Theater, screening imported films as well as domestic documentaries.

1950



After independence, the theater was screening national independence documentaries, such as the comic Umar Sumai's Darah dan Doa. The theater was used by Soekarno for his speech.

1980s



Reopening of the theater by a Indian Sikh entrepreneur, rebranding the name as Presiden Theater. The original building was covered by extensions, leaving only the roof to be visible.

Late 1990s



Presiden Theater was closed due to monopoly of film by bigger movie theater chains. The building was kept, but become abandoned.



Current Condition

In the current condition, the building is owned by a private party. However, the building had become disused and fall into disrepair. It is currently being used as an informal market and as an informal warehouse for the people.

The government had expressed a desire to purchase the building lot and revitalize it for public use. However, it is still not possible for the government to obtain it.

Because of the disrepair, the damage that occurred from time and climate is easily visible in the elements of the building, showing deterioration in the facade of the building itself.



Problem & Issues

Main Issue

Increasing the interest of local community to learn and share culture

Non-Architectural Issues

The potential of Bogor in being a cultural developing City

The interest of local younger community in arts and culture

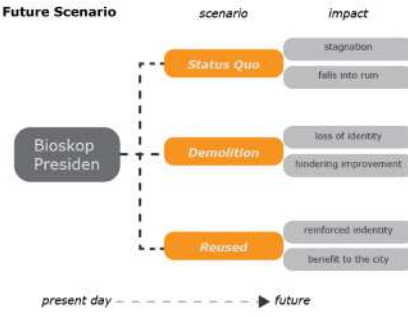
Architectural Issues

Lack of efficient independent cultural learning facility in Bogor that are open in during the pandemic

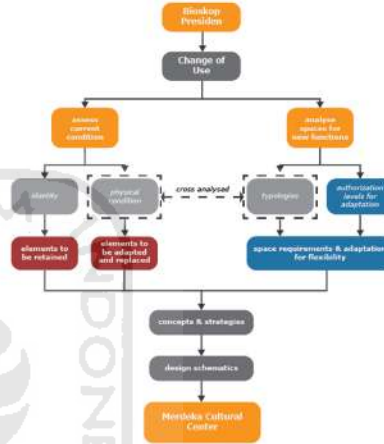
Existing cultural facilities in Bogor is not efficient in accomodating cultural activity so that the people are not using it

Merdeka Cultural Center

Future Scenario



Strategies



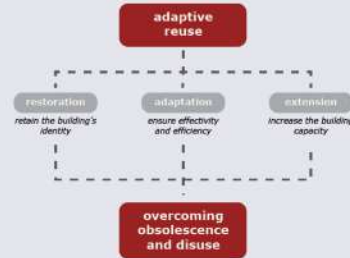
To solve the issues and change the function of the building into a cultural center, adaptive reuse and open building approaches are used in the design considerations. The adaptive reuse approach is used to preserve the building's identity in the community and ensuring that the building is able to fit the new function, while the open building approach is used to ensure that the building is able to be easily changing function when it is needed.



Retaining The Identity For The Community

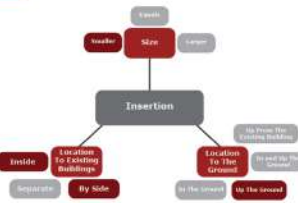
Adaptive Reuse Approach

Existing buildings that are obsolete or rapidly approaching their lifetime are a potential "mine" for resources, however, we can use these buildings more effectively by assigning a new function to the buildings, leaving the basic structure and fabric intact, and modify the buildings to fit the newly assigned functions and the sustainable standard. The approach is called "Adaptive Reuse", to reduce the need for building demolition and new buildings, while keeping the identity of heritage and/or historic buildings intact for the community.



Insertion Strategies

After analyzing the building elements and the current conditions, the formula of insertion is generated, with the insertion being located by the side and inside of the existing building, and using contrast and compatible contrast approach for the building aesthetic.



Structural Overhaul In The New Insertion

Structural Overhaul In The New Insertion

Truss and extension, as part of new addition to the building are designed to compliment the existing building, using contrast insertion aesthetic.

Insertion

new modern style to be inserted into the existing building

new modern style to be inserted into the existing building

new modern style to be inserted into the existing building

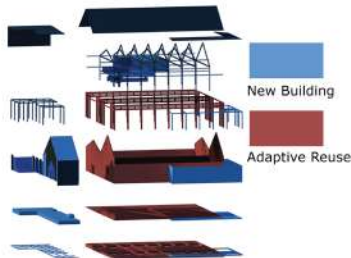
new modern style to be inserted into the existing building

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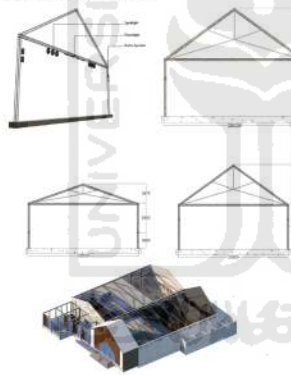
Existing Building As A Building Base

The interior and exterior of the building are designed to make use of the existing structure where it is possible. Interior structures are added to make it more functional, replacing the old roof truss that started to deteriorate. The front extensions are completely replaced with new structures to better represent the culture and advancement in architectural design.



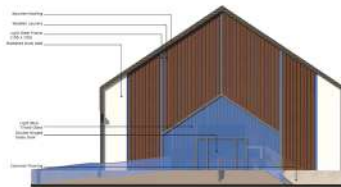
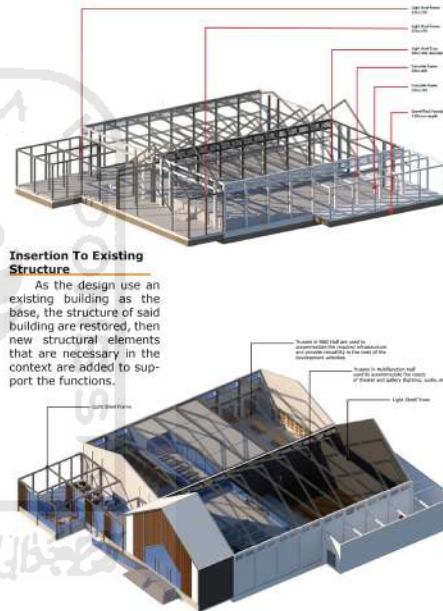
Versatile Truss To Accommodate The Equipments

The truss system are designed to be versatile and able to accommodate various infrastructure needs within each respective functions.



Insertion To Existing Structure

As the design use an existing building as the base, the structure of said building are restored, then new structural elements that are necessary in the context are added to support the functions.



Main Entrance Facade

The facade of the main entrance is designed at a monumental space, whole complimenting the shape of the existing building.

The design of the envelope is a reflection of the building's style that has been modernized along with the development of architecture itself.



Lounge Facade

At the side of the main entrance is the facade of the lounge area. This envelope are designed with more human scale that are still complimenting to both the main entrance and the existing building's facade.

Facade from The History and Contemporary

The facade of the building is designed to compliment the existing shape and features of the building, embracing its identity as a building of cultural significance during colonial times and after Independence time, while reflecting architecture style of contemporary times.

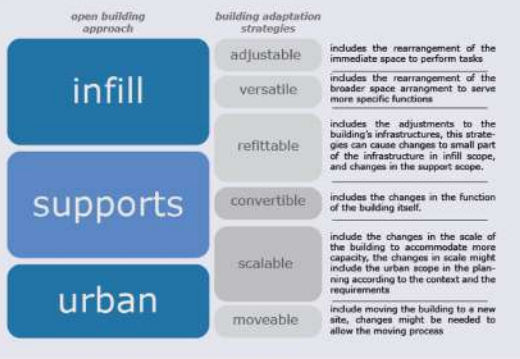


Cultural Center Designed With Flexibility

Open Building Approach

In architecture, open building is an approach that takes into consideration possible changes and adaptations during the building's lifetime in line with social, technological, or other relevant issues.

The design philosophy of open building is to equate the level of individuals' control with environmental levels and use. The theory estimates the amount of fine-grain changes that might occur during the buildings' lifespan, the estimations then used as the time factor in the design and separate the levels accordingly. These levels can be categorized as **urban**, **support**, and **infill**.



Versatile Space Arrangement

The multifunction hall is designed to be able to be rearranged between a performing art theater, and a visual art gallery. This is done by making use of moveable and modular elements such as stages, platforms, and other equipments that might be relevant in the context. In essence, the multifunction hall functions similar to a movie set where the arrangement can be rearranged according to the need of the scenes.



Theater Function

One sided theater arrangement allows for the production booth to be located at the elevated second floor for better view to the stage, and saving more space for the seating. This arrangement is significantly limited when used in thrust and arena arrangement due to the orientation of the stages.



Interchangeable

Theater Arrangement

To accommodate for theater function, the space is arranged by assembling moveable seatings into the podium. The modular stage is then assembled at the front of the seatings, with using truss to held the proscenium, curtains, and other relevant elements. The arrangements are able to be varied when the need rises.



Interchangeable



Gallery Function

Accommodating for public gallery function means providing space that can be adjusted according to the context of the exhibition that might take place, therefore it is often the practice to provide a blank exhibition space that can be arranged according to the needs of the artist(s). To accommodate the possible needs, it requires careful thought in the designing process in terms of the flexibility in the space and the infrastructure to be versatile to the changes in every exhibition.



Gallery Arrangement

When used as a gallery, modular platforms are constructed at the podiums to give more space for the exhibition hall, then displays can be arranged at the space according to the context of the exhibition





Public Landscape

The landscape of the building is designed to be used by the public for activities and socializing, and designed as a green space to encourage the community to plant more vegetation.



Welcoming Area

The welcoming part of the building is designed to be awe-inspiring in the scale, while still being humane to encourage interaction between the patrons.



Resources For Cultural Research

The building is equipped with a library for cultural research, allowing the people to do research for cultural development in a creative space.



Facilities For Cultural Development

The facilities are connected to allow the people to go to and fro between the facilities, giving them ease to develop the culture.





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SURAT KETERANGAN HASIL CEK PLAGIASI

Nomor: 1608333923/Perpus./10/Dir.Perpus/VI/2021

Bismillaahirrahmaanirrahiim

Assalamualaikum Wr. Wb.

Dengan ini, menerangkan Bahwa:

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Karya ilmiah yang bersangkutan di atas telah melalui proses cek plagiasi menggunakan **Turnitin** dengan hasil kemiripan (*similarity*) sebesar **6 (Enam) %**.

Demikian Surat Keterangan ini dibuat untuk dapat dipergunakan sebagaimana mestinya.

Wassalamualaikum Wr. Wb.

Yogyakarta, 18 Juni 2021

Direktur



Joko S. Prianto, SIP., M.Hum

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