DESIGNING THE FLOATING MARKET CENTER AS A TOURIST ATTRACTION

Located in Lok Baintan, South Kalimantan.

Meinora Dewi Nurhaliza
20512075
Supervisor: Ir. WIryono Raharjo,. M.arch.Ph.d

Laboratorium Pemodelan Arsitektur & Perkotaan

DEPARTMENT of ARCHITECTURE



Designing the Floating Market Center as a Tourist Attraction Meinora Dewi Nurhaliza 20512075

UNIVERSITAS ISLAM INDONESIA

DEPARTMENT of ARCHITECTURE

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PERANCANGAN PUSAT PASAR TERAPUNG SEBAGAI DAYA TARIK WISATA

Lokasi di Lok Baintan, Kalimantan Selatan

Meinora Dewi Nurhaliza
20512075
Dosen Pembimbing: Ir. WIryono Raharjo,. M.arch.Ph.d

Laboratorrum Pemodelan Arsitektur & Perkotaan



Perancangan Pusat Pasar Terapung Sebagai Daya Tarik Wisata Meinora Dewi Nurhaliza 20512075

LEMBAR PENGESAHAN

Studio Akhir Desain Arsitektur yang Berjudul :
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Nama Lengkap Mahasiswa : **Meinora Dewi Nurhaliza**
Student's Full Name

Nomor Mahasiswa : **20512075**
Students Identification Number

Telah diuji dan disetujui pada : **Yogyakarta, 28 November 2024**
Has been evaluated and agreed on ***Yogyakarta, November 28th 2024***

Pembimbing *Supervisor*	**Penguji 1** *1st Jury*	**Penguji 2** *2nd Jury*
Ir. Wiryono Raharjo, M.Arch., Ph.D.	**Prof. Dr.-Ing. Ar. Ir. Ilya Fadjar Maharika, M.A., I.A.I.**	**Assoc. Lecturer. Johanita Anggia Rini, S.T., M.T., Ph.D.**

Diketahui Oleh/*Aknowledged By*
Ketua Program Studi S1 Arsitektur
Head of Undergraduate Program in Architecture

UNIVERSITAS ISLAM INDONESIA
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
YOGYAKARTA

Ir. Hanif Budiman., M.T., Ph.D.

CATATAN DOSEN PEMBIMBING

Penilaian Buku Studio Akhir Desain Arsitektur :
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Nama Lengkap Mahasiswa : **Meinora Dewi Nurhaliza**
Student's Full Name

Nomor Mahasiswa : **20512075**
Student's Full Name

Kualitas Buku Studio Akhir Desain Arsitektur :
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Dilingkari salah satu

Pembimbing
Supervisor

Ir. Wiryono Raharjo, M.Arch., Ph.D.

LEMBAR PERNYATAAN KEASLIAN

Saya yang bertanda tangan di bawah ini :
Final Architecture Design Studio Book Assessment:

Nama Lengkap : *Full Name*	**Meinora Dewi Nurhaliza**
Nomor Mahasiswa : *Students Identification Number*	**20512075**
Program Studi : *Department*	**Sarjana Arsitektur** *Bachelor of Architecture*
Judul Perancangan : *Design Title*	**PERANCANGAN PUSAT PASAR TERAPUNG SEBAGAI DAYA TARIK WISATA DI LOK BAINTAN, KALIMANTAN SELATAN** *DESIGNING THE FLOATING MARKET CENTER AS A TOURIST ATTRACTION IN LOK BAINTAN, SOUTH KALIMANTAN*

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Bismillaahirrahmaanirrahiim

Assalamualaikum Wr. Wb.

Dengan ini, menerangkan Bahwa:

Nama	: MeinoraDewiNurhaliza
NomorMahasiswa	:20512075
Pembimbing	:Ir.WiryonoRaharjo,M.Arch.,Ph.d
Fakultas/Prodi	:Teknik Sipil dan Perencanaan/Arsitektur
JudulKaryaIlmiah :	DESIGNING THE FLOATING MARKET CENTER AS A TOURIST ATTRACTION

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UNIVERSITAS ISLAM INDONESIA
DIREKTORAT PERPUSTAKAAN
YOGYAKARTA

Muhammad Jamil, SIP.

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1.1 PREMISE

The design of the Floating Market Center in Lok Baintan, Banjarmasin, South Kalimantan, considers its unique geographical context, located above the river where many boat vendors operate in the morning. By integrating traditional Banjar elements and capitalizing on the distinctiveness of this location, the architectural design strives to establish a market center that serves not only as a trading hub but also as a focal point for cultural activities in Banjarmasin.

This study explores architectural design incorporating traditional Banjar elements with contemporary touches, creating multifunctional spaces serving as both a market and communal areas for cultural appreciation in Banjarmasin. Emphasizing sustainability, eco-friendly technology and practices are utilized to bolster local economic development. The building's location will be above the Lok Baintan river.

Emphasizing a distinctive experience for visitors while preserving the genuine ambiance of the floating market. Sustainable design takes precedence, incorporating green technology and eco-friendly materials in line with the ethos of conserving the river environment and local traditions. Positioned strategically and deeply rooted in cultural values, the Floating Market Center is envisioned to function not only as a local economic focal point but also as a tourist attraction, showcasing Banjarmasin as a unique and enriching cultural destination.

Keywords: Vernacular Architecture, Floating Market, Cultural Centre

ABSTRACT

The development of the floating market in Lok Baintan, Banjarmasin, as a socio-preneur learning space and tourist attraction aims to enhance the well-being of local communities and boost tourism. This endeavor integrates key aspects of MSME education and tourism advancement through a collaborative design methodology. The design process unfolds in four phases: preparation and inception, data gathering and analysis, design and strategizing, and execution and assessment. Local customs like baahui pantun on a boat and baahui as communal collaboration serve as the primary influences in embedding indigenous cultural principles into the market's design. Socio-preneur learning components encompass an entrepreneurship curriculum, hands-on workshops, mentorship, and the provision of amenities such as a small library and technological access. Simultaneously, the tourism expansion focuses on cultivating cultural allure, tourist amenities, and efficient promotional initiatives. By adopting a comprehensive and participatory strategy, this initiative is poised to elevate community welfare and position the Lok Baintan floating market as an engaging and enlightening tourist spot.

ABSTRAK

Pengembangan pasar terapung di Lok Baintan, Banjarmasin, sebagai ruang belajar wirausaha sosial dan objek wisata bertujuan untuk meningkatkan kesejahteraan masyarakat setempat dan mendorong pariwisata. Upaya ini mengintegrasikan aspek-aspek utama pendidikan UMKM dan kemajuan pariwisata melalui metodologi desain kolaboratif. Proses desain berlangsung dalam empat fase: persiapan dan inisiasi, pengumpulan dan analisis data, desain dan penyusunan strategi, serta pelaksanaan dan penilaian. Adat istiadat setempat seperti baahui pantun di atas perahu dan baahui sebagai kolaborasi komunal menjadi pengaruh utama dalam menanamkan prinsip-prinsip budaya adat ke dalam desain pasar. Komponen pembelajaran wirausaha sosial mencakup kurikulum kewirausahaan, lokakarya langsung, bimbingan, dan penyediaan fasilitas seperti perpustakaan kecil dan akses teknologi. Secara bersamaan, perluasan pariwisata difokuskan pada pengembangan daya tarik budaya, fasilitas wisata, dan inisiatif promosi yang efisien. Dengan mengadopsi strategi yang komprehensif dan partisipatif, inisiatif ini siap untuk meningkatkan kesejahteraan masyarakat dan memposisikan pasar terapung Lok Baintan sebagai tempat wisata yang menarik dan mencerahkan.

1.2.1 The relocation of the capital city of South Kalimantan to Banjarmasin was accompanied by severe poverty.

8,333 families in Banjarmasin are classified as extremely impoverished.
Innovative solutions are required to assist the residents of this community.



Link: https://stikeshb.ac.id/kota-banjarmasin-kalimantan-selatan/

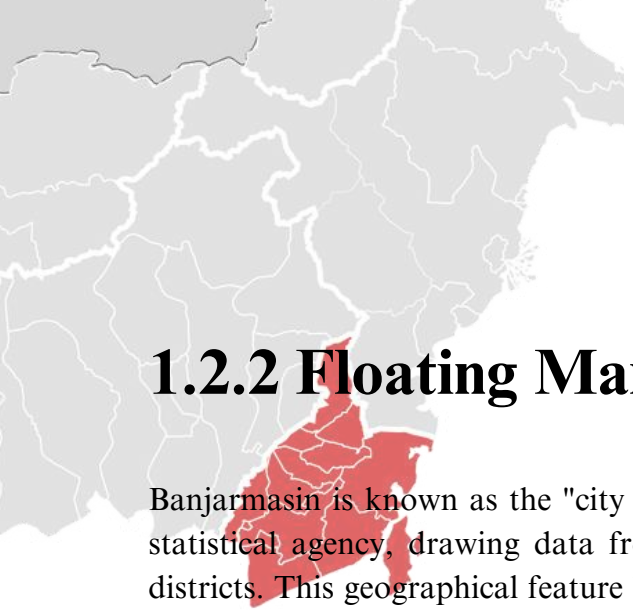
The capital of South Kalimantan was recently relocated from Banjarmasin to Banjarbaru due to various reasons, such as environmental and topographical constraints like limited land and population issues, as well as inferior accessibility compared to Banjarbaru. The relocation of government offices from Banjarmasin to Banjarbaru commenced in 2011, with the official inauguration of the new capital scheduled for 2022. If Banjarbaru assumes the role of the government center and maximizes its vast area, Banjarmasin will be transformed into a commercial hub, including river tourism facilities, as proposed by Member of Commission II DPR RI, Rifqynizami Karsayuda.

What is the current situation of Banjarmasin residents?

Banjarmasin's aspiration to boost tourism revenue appears to be a distant goal. The latest data from the central government reveals that 8,333 families in Banjarmasin City are living in extreme poverty. The local government is actively working to address this issue through direct aid and support for entrepreneurial endeavors. A program has been established by the Banjarmasin City Government to foster new business owners, aiming to enhance the local economy and generate additional job prospects.



https://kalsel.antaranews.com/berita/369210/banjarmasin-sulit-telusuri-ribuan-kk-miskin-ekstrim-sesuai-data-pusat



1.2.2 Floating Market History

Banjarmasin is known as the "city of a thousand rivers" due to its location at the confluence of numerous waterways. The city's official statistical agency, drawing data from the Banjarmasin City Public Works Department, has documented 290 rivers spanning all sub-districts. This geographical feature has shaped the local way of life, with residents traditionally relying on the rivers for various livelihood activities. The Lok Baintan Floating Market holds a significant historical and cultural value in the coastal communities along the Martapura River in Banjarmasin, South Kalimantan, Indonesia. Originating from a time when river trade was predominant in the area, the market served as a gathering place for traders from neighboring villages and the hinterlands, exchanging agricultural produce, goods, and crafts from their boats and rafts. Over time, the Lok Baintan Floating Market has evolved to meet the demands of modernization and changing societal trends. Despite encountering challenges from contemporary economic advancements and lifestyle shifts, the market endures as a vital cultural legacy for locals and a popular tourist destination. Today, the Lok Baintan Floating Market symbolizes the traditional riverbank life of South Kalimantan. While undergoing infrastructure and layout modifications, the market retains its distinctive charm and allure. Many visitors perceive a trip to the Lok Baintan Floating Market as an opportunity to immerse themselves in the area's rich historical and cultural tapestry.



Image: Creator

Marketplace

Banjarmasin is commonly linked to the iconic floating market, benefiting from its numerous rivers and fertile land suitable for cultivating various fruits. Inadequate community involvement in waste management contributes to waste issues. Litter is frequently sighted in public areas, notably traditional markets, where activities generate substantial waste from unsold goods and discarded items. Improper waste disposal poses environmental and health risks to traders, visitors, and consumers, especially those who habitually discard waste in rivers.



MAJORITY OF OCEAN PLASTIC ORIGINATES FROM RIVERS. CAN LARGE-SCALE DEBRIS BARRIERS PREVENT IT?

Rivers are the primary source of marine pollution, as they gather waste from numerous sources and transport it to the ocean. Efforts should be made to intercept waste before it reaches open water.



Figure 1. Condition of the Lok Baintan floating market (direct survey)

1.2.3 EMPOWERING MICRO, SMALL, AND MEDIUM ENTERPRISES (UMKM) TO ADDRESS URBAN ISSUES.

URBAN CHALLENGES

1. **Rapid urbanization may result in increased poverty, as municipal authorities struggle to deliver services to the entire population.**
2. Concentrated energy consumption results in increased air pollution, significantly affecting human health.
3. Vehicle emissions elevate lead levels in urban air.
4. **Substantial amounts of uncollected waste pose numerous health risks.**
5. Urban development may amplify the risk of environmental hazards like flash flooding.
6. Pollution and physical obstacles to root development contribute to the decline of urban tree canopy.
7. Animal populations are constrained by toxic substances, vehicles, and the loss of habitat and food sources.

URBAN SOLUTION

Addressing these challenges involves implementing sustainable urban development practices. Prioritizing inclusive planning enables local governments to ensure all residents have access to improved trading facilities. Attracting tourists, investing in cultural heritage promotions and promoting recycling initiatives can mitigate health risks linked to untreated waste. Collaborative efforts and community engagement can pave the way for a healthier and more equitable future for all.



Figure 3. Condition of the Lok Baintan floating market

WEALTHY CITY IMPOVERISHED COMMUNITY?



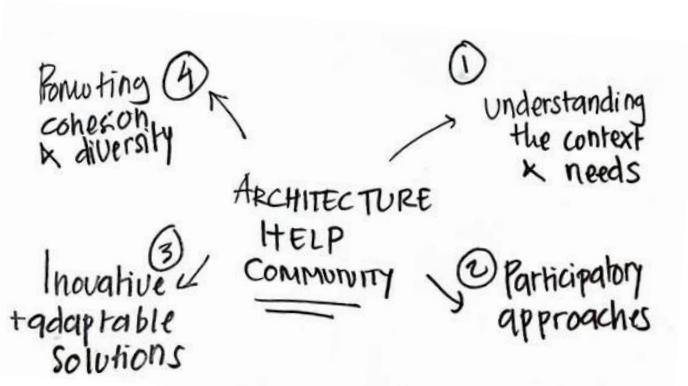
Image: Creator

Figure 2. Condition of the Lok Baintan floating market (direct survey)

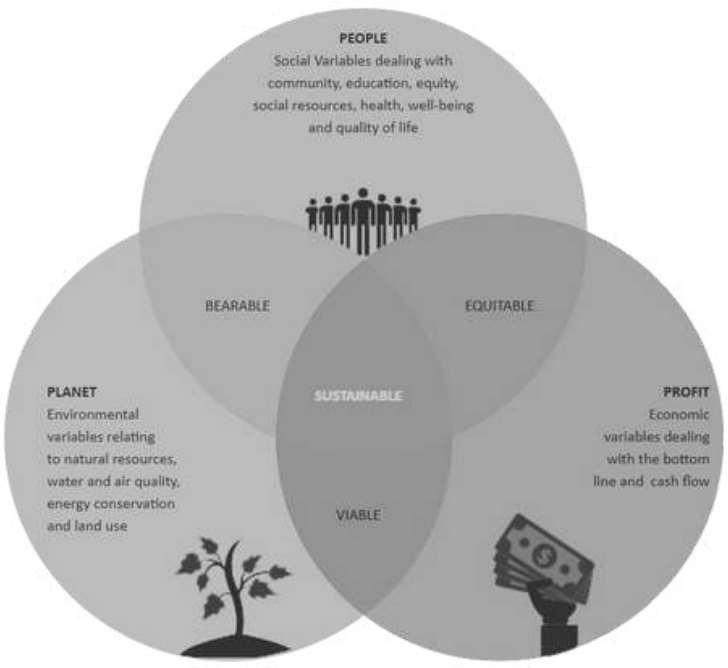
The Banjarmasin region is endowed with abundant natural resources. Local residents depend on agriculture and gardens as their primary source of income. Lowland areas are characterized by peatlands and swamps that harbor a variety of freshwater fauna. In contrast, certain highland areas are rich in natural tropical forests that receive protection from the government. The biodiversity in Banjarmasin is truly remarkable and an integral part of the local community's existence. Despite this richness, many individuals still experience poverty, particularly those who persist in trading along the river, even though it is no longer the primary mode of transportation for most people.

Architecture aids individuals.

By creating sustainable eco-tourism programs that highlight the natural beauty and wildlife of the region, job opportunities are also offered to the local community.



Establishing collaborations with conservation organizations and sustainable businesses can aid in conserving the environment and fostering economic development. Moreover, supporting education and skills development for the local community can enable them to utilize natural resources responsibly and sustainably. Cultivating a culture of environmental stewardship and entrepreneurship within the populace, Banjarmasin can strive to diminish poverty rates and cultivate a flourishing, environmentally conscious society.



Venn diagram on sustainability

Environmentally Conscious Community

Communities concerned with the environment strive to minimize adverse effects on the natural world by adopting eco-friendly practices, conserving resources, utilizing renewable energy, and endorsing sustainable products. Typical activities embraced by these communities involve reducing waste, preserving natural resources, employing renewable energy sources, and promoting environmentally sustainable goods and services.

P R O B L E M S T A T E M E N T

Designing a Socio-preneur Learning Space and Tourist Attraction.

How to Design a floating market and boat ports to improve the Lok Baintan community with a Neo vernacular Approach?

Non-architectural issue

The poverty of Lok Baintan residents does not align with the abundant natural resources surrounding the river, coupled with low education levels.

ARCHITECTURAL ISSUE

Polluted river and aging dock, limited visitors, ultimately impacting the sustainability of tourist destinations.

Problem Formulation

Designing the floating market center in Lok Baintan as an optimal socio-preneur learning space and tourist attraction involves providing adequate infrastructure, complete supporting facilities, sustainable economic empowerment programs, and attractive tourist attractions to enhance the welfare of local communities and draw tourists.

LIMITATION OF THE ISSUE

The design focuses on creating fundamental infrastructure, auxiliary facilities, uncomplicated learning spaces for vendors, tourist attractions based on local culture, and small-scale economic empowerment initiatives, all within the Lok Baintan floating market area, with a commitment to environmental sustainability and a practical budget.

APPROACH

MSME Educational Institutions and Infrastructure

Offer training to traders on business management, marketing, and culture to boost sales.

Attraction for Tourists

Attracts visitors with an extended duration of attraction and diverse facilities.

Improving Floating Market

Establishing a forum to enhance the potential of floating markets by streamlining the distribution of goods from farmers to consumers, offering floating market schools to assist sellers in boosting sales and drawing in tourists.

Farmers as Distributors — **VENDORS AT FLOATING MARKETS** — **TOURISTS**

Methodology

Participatory design involves investigating, understanding, reflecting, building, developing, and supporting one another within a community (Robertson & Simonsen, 2012). It values all forms of knowledge, whether gained through professional training or life experience.

problems

Original Concept

Establishing a socio-preneur learning space will enhance the entrepreneurial abilities of local communities, enabling them to maximize the economic opportunities presented by trading activities at the floating market.

PHASE 1

Perform observations and interviews with vendors at the floating market to recognize patterns and trends, employing SWOT analysis (Strengths, Weaknesses, Opportunities, Threats).

PHASE 2

Seek dependable data and statistics, engage in conversations with residents to ascertain their needs and desires to enhance the floating market's potential.

PHASE 3

PROTOTYPING

Based on all acquired data, analyze it to generate multiple alternative designs until identifying the one that aligns best with the current pattern, incorporating feedback and revisions.

IMPLEMENTATION

By adhering to this participatory design process, the Lok Baintan floating market development project can meet the requirements and ambitions of all stakeholders, while creating ideal socio-preneur learning environments and tourist destinations.

Those most knowledgeable about the needs are the residents themselves.

An architectural design blending traditional and modern elements, along with sufficient supporting facilities, will enhance the comfort and appeal of the Lok Baintan floating market. Establishing a socio-preneur learning space will enhance the entrepreneurial abilities of local communities, enabling them to maximize the economic opportunities of trading at the floating market. Introducing new tourist attractions rooted in local culture will boost tourist numbers and prolong their stays. Economic empowerment initiatives integrated into architectural planning will guarantee a fairer distribution of economic advantages to local communities.

Regulation

In Banjarmasin, which is famous for its floating market, regulations related to the construction and operation of tourist buildings follow national regulations as well as regional regulations specific to South Kalimantan and Banjarmasin City. Here are some local regulations that are relevant to tourism architecture projects, such as floating markets:

1. Banjarmasin City Regional Regulation Number 5 of 2013 concerning the Banjarmasin City Spatial Planning Plan 2013-2032
- Regulates spatial planning in Banjarmasin, including the arrangement of water areas and the designation of tourist locations such as floating markets. This regulation is important to ensure that the location of the floating market is in a zone suitable for tourism.

2. South Kalimantan Provincial Regional Regulation Number 9 of 2014 concerning the Coastal Area and Small Islands Zoning Plan (RZWP3K)
- Regulates the zoning of coastal areas and water areas in South Kalimantan. The floating market in Banjarmasin is also regulated in this RZWP3K to maintain the sustainability of the water area and its use for tourism activities.

3. Banjarmasin City Regional Regulation Number 4 of 2016 concerning Building Construction
- Refers to the standards of safety, comfort, and suitability of buildings in Banjarmasin City. This regulation regulates the IMB (Building Construction Permit) specifically for tourist buildings on water, such as floating markets.

4. Banjarmasin City Regional Regulation Number 21 of 2011 concerning Waste Management
- Regulates the management of waste generated by activities in floating markets to maintain river cleanliness and environmental sustainability. Floating markets must have an effective waste management system to avoid water pollution.

5. Banjarmasin City Regional Regulation Number 10 of 2012 concerning Environmental Management
- Regulates the environmental permits required for the construction and operation of floating markets. This includes environmental impact analysis and waste management requirements in water areas.

6. Banjarmasin Mayor Regulation Number 18 of 2019 concerning River Protection and River Tourism
- Regulates the use of rivers for tourism, including floating markets, with provisions to protect river ecosystems. This regulation also covers aspects of safety for visitors and environmental management around rivers.

7. Banjarmasin City Regional Regulation Number 3 of 2015 concerning Tourism Implementation
- Regulates the development of tourism in Banjarmasin, including the development of environmentally friendly facilities and infrastructure. Floating markets, which are Banjarmasin's signature tourist destinations, must comply with these provisions to maintain their attractiveness and environmental sustainability.

These regulations aim to maintain the safety, comfort, and environmental sustainability of floating markets in Banjarmasin, which are one of the city's tourism icons.

	Formal Problem	Practical Problem	Symbolic Problem	Radical Problem
REGULATION	1. Banjarmasin City Regional Regulation Number 5 of 2013 concerning the Banjarmasin City Spatial Planning Plan 2013-2032 - Regulates spatial planning in Banjarmasin, including the arrangement of water areas and the designation of tourist locations such as floating markets. This regulation is important to ensure that the location of the floating market is in a zone suitable for tourism.	2. South Kalimantan Provincial Regional Regulation Number 9 of 2014 concerning the Coastal Area and Small Islands Zoning Plan (RZWP3K) - Regulates the zoning of coastal areas and water areas in South Kalimantan. The floating market in Banjarmasin is also regulated in this RZWP3K to maintain the sustainability of the water area and its use for tourism activities.	3. Banjarmasin City Regional Regulation Number 4 of 2016 concerning Building Construction - Refers to the standards of safety, comfort, and suitability of buildings in Banjarmasin City. This regulation regulates the IMB (Building Construction Permit) specifically for tourist buildings on water, such as floating markets.	7. Banjarmasin City Regional Regulation Number 3 of 2015 concerning Tourism Implementation - Regulates the development of tourism in Banjarmasin, including the development of environmentally friendly facilities and infrastructure. Floating markets, which are Banjarmasin's signature tourist destinations, must comply with these provisions to maintain their attractiveness and environmental sustainability.
USERS	harmonious design with the aquatic environment and traditional elements of South Kalimantan. The structure must be visually appealing to enhance tourist appeal, and consider good spatial flow so that tourists and traders can easily move between the trading area and the resting place.	support accessibility for traders and tourists, especially in the water. The design should make it easy for traders to carry their goods, provide adequate storage areas, and consider shaded spaces and seating facilities to keep tourists comfortable for longer. Water transportation systems, boat parking, and access to floating markets are also taken into consideration.	must reflect the local culture and identity of the Banjarmasin community, including maintaining the traditional elements of the widely known floating market. The building should be designed so that tourists can experience the typical floating market experience and see authentic local culture.	In the context of the floating market in Lok Baintan, the radical problem can be the application of environmentally friendly technology, such as an independent waste management system or the use of waterproof materials that are also aesthetic. The design can adopt a more modern or innovative concept of “floating architecture” to increase attractiveness without sacrificing local wisdom.
CLIENTS	Buildings must be iconic and visually appealing to attract more tourists, while still being in keeping with the local environment and culture.	The design must be efficient for operations, including easy access for merchants and tourists, sufficient area for storing merchandise, and facilities that are durable in the water.	This building needs to reflect a strong cultural identity, strengthening the image of Lok Baintan as a typical South Kalimantan tourism destination.	Innovations that increase competitiveness, such as environmentally friendly technology and unique market concepts, so that this project becomes a leading sustainable tourism destination.
DESIGNER	Arranging aesthetic elements that are harmonious with the water environment and local culture, while still creating an iconic building that is attractive to tourists.	Creating a functional and comfortable space for traders and tourists, ensuring smooth circulation in the market area, and choosing materials that are resistant to water conditions.	Inserting local cultural elements into the design, so that this floating market reflects the unique identity of Banjarmasin, thus providing an authentic experience for visitors.	Integrating sustainable innovations, such as environmentally friendly materials and technologies, and implementing modern and relevant floating design concepts for sustainable tourism.

1.2.6 What is Floating Market Centre

Floating market center is a space for people and tourists to enjoy the floating market. For villagers, this is a space to learn to do business better, and a space to sell applying the knowledge they have learned, for tourists this is a space to enjoy the floating market for a longer time, here they can enjoy the museum, the market facing the river, after the floating market is finished, they go to this building to see the history of Banjarmasin.

Why floating market should exist

There should be a floating market center to make it easier for people to sell their goods at the floating market, then after the floating market ends, the market can still operate and there should also be a learning center for people to learn business for their trading needs.

Neo Vernacular Approach

The neo-vernacular architectural approach is very appropriate to be applied to the design of the Lok Baintan floating market because it combines local wisdom with modern needs. Traditional Banjar architecture, which is famous for its adaptation to the river environment and wet tropical climate, provides a strong foundation for presenting a design that is responsive to the geographical context. By using this approach, local cultural identity can be preserved through distinctive elements such as ironwood materials, stilt house structures, and traditional spatial patterns, while still meeting modern functional needs, such as the presence of a warehouse to facilitate the management of merchandise. In addition, this approach provides an authentic aesthetic appeal for tourists, creating a unique experience and extending their visit time. Overall, neo-vernacular allows the floating market to become a space that is not only functional and sustainable, but also culturally meaningful.

Neo Vernacular

Using a neo-vernacular architectural approach in the design of the Lok Baintan floating market provides a number of significant benefits, both culturally, environmentally, and functionally. Here are some of the main benefits:

Preservation of Cultural Identity
This approach preserves the distinctive elements of traditional Banjar architecture, such as the stilt house structure and the use of local materials, thus maintaining the cultural characteristics of the river community. This also strengthens the historical and symbolic value of Lok Baintan as a cultural tourism destination.

Response to the Environment
Traditional Banjar architecture is designed to deal with geographical conditions and tropical climates, such as flooding and high humidity. With the adaptation of neo-vernacular, the design can be more environmentally friendly through the use of local materials and sustainability principles, such as natural air circulation and efficient water management.

Tourist Attraction
The combination of traditional and modern aesthetics creates a unique visual experience, attracting tourists looking for something authentic but still comfortable. This helps increase the competitiveness of the floating market as an iconic tourist destination.

Flexibility and Modern Function
This approach allows the integration of modern facilities, such as warehouses to support trader logistics, without eliminating traditional values. This creates more efficient spaces, facilitates commercial activities, and increases user comfort.

Social and Economic Sustainability
By empowering local materials and traditional construction techniques, this approach supports the local economy while preserving architectural heritage that is relevant for future generations.

The neo-vernacular approach strikes a balance between tradition and modernity, creating a design that is not only aesthetic and functional, but also relevant and sustainable.

1.2.7 Ecological Architecture

According to Heinz Frick in the book Ecological Architecture by Tri Hesti Mulyani, explains that Ecological means the science that studies the reciprocal relationship between living things and their environment. So in another sense Ecological architecture is an approach in the design and planning of buildings that require sustainability and reduction of environmental impact. The main goal is to create structures that are not only aesthetic and functional, but also environmentally friendly and efficient in the use of resources.

Some of the key criteria of ecological architecture include:

1. Energy Efficiency: Optimizing energy use with designs that maximize natural light, cross-ventilation, and thermal insulation. Renewable energy sources, such as solar panels, are also often integrated.
2. Water Management: Implementing rainwater collection and utilization systems, wastewater treatment, and other water management techniques to reduce water consumption and pollution.
3. Eco-Friendly Materials: Using sustainable, recycled, and low-impact building materials, such as bamboo, sustainably sourced wood, or recycled materials.
4. Bioclimatic Design: Adapting building design to local climate conditions to reduce additional energy requirements. This includes building orientation, window size and placement, and the use of shading to regulate temperature.
5. Carbon Footprint Reduction: Minimizing carbon emissions throughout a building's life cycle, from construction to maintenance and demolition.
6. Integration with the Surrounding Environment: Designing buildings to blend in with the local landscape and ecosystem, while minimizing disruption to natural habitats.

Ecological architecture aims to create buildings that are more sustainable, efficient, and integrated with the environment, while supporting the well-being of their occupants and the planet as a whole. Here are the criteria for healthy and ecological buildings according to Heinz Frick's book on ecological architecture, namely:

1. Building green areas between buildings.
2. Choosing a suitable building site.
3. Using locally produced building materials.
4. Optimizing the use of natural ventilation in buildings.
5. Choosing materials for walls and ceilings that allow water vapor to flow.
6. Ensuring that buildings do not cause environmental problems.
7. Using renewable energy sources.
8. Designing buildings to be usable by all age groups.

Hypothesis Design

An architectural design blending traditional and modern elements, along with sufficient supporting facilities, will enhance the comfort and appeal of the Lok Baintan floating market.

Establishing a socio-preneur learning space will enhance the entrepreneurial abilities of local communities, enabling them to maximize the economic opportunities presented by trading activities at the floating market.



Figure 4. Traditional lanting house shape)

Building typology "lanting"

Lanting House showcases a straightforward rectangular design situated parallel to the river to reduce the impact of water currents on the building's integrity. Supported by a bamboo foundation, the structure is relatively slim. It consists of three main sections: a dining area, a bedroom, and a kitchen; all with views of the river and surrounding land, connected by pathways on every side. Moreover, there are terraces overlooking both the river and the land, with one serving as a swimming spot and the other as a laundry area. This layout enables the living space to have diverse functions, providing vistas of both the river and the land (Dahliani et al., 2015).

Baahui



Figure 5. Experience selling with residents (direct survey)

Baahui is a practice where the residents of Banjarmasin engage in responding to rhymes while on a boat. This activity typically takes place in a laid-back setting or during specific occasions like weddings, syukuran, or other cultural events. The rhymes commonly convey moral lessons, humor, guidance, or simply serve as entertainment.

An individual who comprehends the societal issues in their vicinity and utilizes their entrepreneurial abilities to instigate social transformation, particularly in the realms of welfare, education, and health (Santosa, 2007). Social entrepreneurs do not solely prioritize profits. They also concentrate on the local community, enhancing the environment, and striving for business sustainability, with the goal of empowering individuals in the designated community, augmenting valuable human resources, and establishing a virtuous cycle. Sociopreneurs are seen as persons capable of effecting social change on a large scale by engaging grassroots communities (Praszkier et al., 2009).

Characteristics of a social-entrepreneurial society:

1. **Innovative and creative,** always seeking novel and imaginative solutions to social and economic challenges.
2. **Social Impact Orientation, f**ocusing on generating positive social impact and sustainability.
3. **Collaboration and participation** involve working together with different parties and engaging local communities in the decision-making process.
4. **Based on values and ethics,** maintaining integrity, transparency, and ethical business practices**.**
5. **Emphasizing empowerment,** offering opportunities to enhance skills and foster economic independence within the community.
6. **Adaptable and Responsive,** Capable of adjusting to changes and being responsive to community needs.
7. **Entrepreneurial,** possessing an entrepreneurial mindset, and strong business management abilities.

Community-Based, prioritizing the needs of local communities and focusing on sustainable community development.

Hypothesis Design

To imbue the Lok Baintan floating market community with a socio-preneurial essence from an architectural standpoint, a design must be crafted to foster entrepreneurial education, draw in tourists, all the while prioritizing sustainability and indigenous culture.
Market design should incorporate dedicated areas for education and training, like versatile halls for workshops and seminars. Additionally, supporting amenities like information centers and mini libraries should be included to grant access to pertinent resources and information. The design should promote cooperation and engagement among traders and visitors by offering adaptable open spaces for exchanging knowledge and experiences. Community areas can serve as venues for gatherings and social events, enhancing connections among traders.



Figure 6. Condition of the Lok Baintan floating market at 6 am (direct survey)

The kiosk or stand design must be flexible and easily modified to allow traders to display new products. Public facilities such as rest areas, clean toilets, and easily accessible paths must be provided for visitor comfort. Community empowerment can be achieved by using local building materials and Banjar cultural motifs in architectural design. Green areas and a good waste management system also need to be considered to maintain the cleanliness and beauty of the environment. To increase awareness and promote the market as a tourist destination, the design must include iconic landmarks and art installations that reflect local culture. Finally, the design should provide space for feedback and adjustments as well as facilities for monitoring the progress of the merchant's business and its impact on the community. With this architectural approach, the Lok Baintan floating market can become a dynamic center for social entrepreneurship and an attractive tourist attraction, improving the welfare of local communities in a sustainable manner.

Developing additional tourist attractions based on local culture will enhance tourist numbers and prolong their stay.



Figure 7. Lok Baintan Pier before the floating market starts)

Incorporating economic empowerment programs into architectural design will guarantee a fairer allocation of economic advantages to local communities.



Figure 8. Lok Baintan Pier before the floating market starts)

Storage Warehouse

The storage warehouse includes agricultural products and residents' plantations, so a comfortable container is needed for vegetables and agricultural products, the function of the storage warehouse is so that farmers can directly provide their agricultural and garden products to this architectural building, and sellers can directly pick up agricultural and garden products and immediately resell them at the floating market, this will certainly speed up the distribution of vegetables, and make it easier for sellers and distributors at the floating market.

The book "Architecture of the Vegetable Garden: Designing and Building Structures for Sustainable Food Production" by Margaret Roach how to design structures that support vegetable production and storage. Here are some criteria generally recommended in the book, which can be applied to the architecture of vegetable storage sheds:

1. Sustainable Design:
(a) Eco-Friendly Materials: Choose materials that are sustainable and environmentally friendly. This includes materials that are recyclable or have a low carbon footprint.
(b) Energy Efficiency: Design buildings to minimize energy consumption, including utilizing renewable energy sources where possible.

2. Microclimate Control:
(a) Temperature Control: Implement a system that maintains a stable temperature inside the warehouse to ensure optimal storage conditions for vegetables.
(b) Humidity Control: Design a system to control humidity, prevent condensation and rot, and keep vegetables fresh.

3. Ventilation and Air Circulation:
(a) Natural Ventilation: Use a ventilation design that allows for good air circulation to prevent moisture buildup and reduce the risk of spoilage.
(b) Efficient Air Circulation: Design an interior layout that supports even air flow throughout the storage area.

4. Integration with the Environment:
(a) Adaptive Design: Ensure that the storage warehouse blends with the local landscape and climate. Consider a layout that takes advantage of the surrounding environment for maximum efficiency.
(b) Importance of Orientation: Orient the building to make optimal use of sunlight to help regulate the temperature inside the warehouse.

5. Construction and Maintenance:
(a) Durability of Materials: Choose materials that are durable and easy to maintain. Also consider protection from environmental elements that can damage the structure.
(b) Ease of Access: Design access that allows for routine maintenance and inspections and repairs when necessary.

6. Modular and Flexible Design:
(a) Space Flexibility: Design the warehouse with the ability to adjust storage space as per changing needs. Modularity can help in the layout and reorganization of storage space.

7. Health and Safety:
(a) Building Safety: Ensure the design provides adequate security against potential theft or damage.
(b) User Health: Implement features that ensure the health and comfort of users, such as good ventilation and adequate light.

8. Resource Efficiency:
(a) Water Management: Integrate rainwater collection and use for non-potable or irrigation purposes around the warehouse.
(b) Waste Management: Consider ways to efficiently manage waste and residues from vegetable storage operations.

Museum

The benefits of museum standardization to improve the quality of museum management in providing services to the community, are expected to help museum managers to meet the requirements of museum management standardization in accordance with the mandate of Government Regulation Number 66 of 2015 concerning Museums. Article 3 paragraph (2), namely:
a. vision and mission;
b. collections;
c. location and/or building;
d. human resources;
e. fixed funding sources; and
f. name of the museum.

In general, the organization of space in a museum building is divided into five zones/areas based on public presence and these zones include:
Public Zone - Without Collection
Public Zone - With Collection
Non-Public Zone - Without Collection
Non-Public Zone - With Collection
Collection Storage Zone2

Standard Area of Exhibition Object Space
In terms of the area of the exhibition object, it will require more wall space (in relation to the floor area) compared to the provision of a large room, this is very necessary for large paintings where the size of the room depends on the size of the painting. The human perspective (54° or 27° from a height) can usually be adjusted to a painting that is given light at a distance of 10m, meaning the height of the painting hanger is 4900 above eye level and approximately 700 below it.

2.1 PHASE OF DESIGN STUDY

DESIGN STUDY

TARGET PLANNING

In line with the Republic of Indonesia Law Number 10 of 2009 regarding Tourism, the advancement of tourism is essential to promote fair distribution of business opportunities and benefits, and to address the challenges posed by local, national, and global societal transformations.

Small boat sellers require safe and convenient access for loading and unloading merchandise. Solutions should consider their specific needs and constraints when operating small boats.

Visitors: The primary objective is to offer a comfortable and seamless experience for visitors transitioning between small boats and large boats. Well-defined and orderly access will enhance the appeal of the location as a tourist destination.

Tourism: The inclusion of amenities like parks and lounging areas along the river can attract tourists to prolong their stay at the location. The objective of the design is to establish an appealing and visitor-friendly setting.

Local Government: The local authority is tasked with overseeing the construction of infrastructure and public facilities at the site. They are essential stakeholders responsible for ensuring that proposed solutions adhere to relevant regulations and policies.

Local Involvement: Engaging community members in the design and implementation process is crucial for ensuring project sustainability and acceptance within the local community. Additionally, they may serve as primary users of the constructed facility.







PROBLEM FORMULATION

How to Design an efficient and effective floating market and boat ports to improve the Lok Baintan community with a Neo Vernacular Approach?

2.2 Data Collection



Figure 9. Buying and selling activities on the floating market



Figure 10. Interview the needs of residents at the pier

Number of boats owned by residents of Lok Baintan (based on Government data from Lok Baintan Village)

The following results were obtained based on interviews conducted directly with several sources.
Information from a business actor (Mr. Izul)
Approximately 100 Jukung (non-motorized boats) are present in Lok Baintan Village.
There are 24 water buses in Lok Baintan village. Information regarding Lok Baintan Village Apparatus (General Head - Mrs. Anisa).
Approximately 300 Jukung (non-motorized boats) are present in Lok Baintan Village, with only about 150 actively operating at the Floating Market.
There are 24 watercraft in the village.

Government proposals for the development and improvement of the Floating Market. The following results were obtained based on interviews conducted directly with multiple sources.
Full restoration of the Floating Market Pier flooring.
Repairing the bridge connecting the land to the pier.
Acquisition of Floating Docks
Installation of railings along the bridge connecting the land to the pier, encircling the pier structure, and along the gangway from the pier to the ship.

Quantity of vessels at the floating market as per direct surveys

	TIME	Boat Quantity	
		Boat Seller	Tourist Boats
	06.00 -06.15	20	4
	06.15 -06.30	13	7
	06.30 -06.45	55	5
	06.45 -07.00	10	-
TOTAL		98	16

2.3 BOAT PARKING BEHAVIOR



Figure 11. Lok Baintan village where every house has a private boat parked

Agricultural materials like vegetables are sourced from local communities and some from surrounding villages. The traditional food available is also from local communities. Handmade crafts for sale are crafted by local village communities, while others are bought from the markets of Banjarmasin city and the district.

B. Hasil Tanaman Dan Luas Tanaman Buah-buahan		
Jeruk	63,00 Ha	472,00 Ton/ha

Jenis Tanaman	Luas (ha)	Hasil panen (Ton/ha)
4. Pemasaran Hasil Tanaman Pangan Dan Tanaman Buah-buahan ...		
Dijual langsung ke konsumen		Tidak
Dijual ke pasar		Tidak
Dijual melalui KUD		Ya
Dijual melalui tengkulak		Ya
Dijual melalui pengecer		Tidak
Dijual ke lumbung desa/kel		Ya
Tidak dijual		Ya

2.4 NEO VERNACULAR

The methodology employed at this cultural and tourism development center is Neo Vernacular Architecture. It is rooted in a Post Modern architectural philosophy that integrates traditional or vernacular architectural features into contemporary design. This approach honors local culture, history, and craftsmanship, while meeting modern requirements and sensibilities.

At the cultural and tourism development center, the Neo Vernacular Architecture approach will integrate the past with the present, establishing a harmonious space that reflects both tradition and innovation. Embracing this architectural philosophy will transform the center into more than just a physical structure but a vibrant embodiment of the region's diverse cultural heritage.



Neo-vernacular refers to a local language spoken in a new manner. Neo-vernacular architecture involves utilizing current architectural elements, both physical (form, construction) and non-physical (concept, philosophy, spatial layout).

With the goal of preserving local elements that have evolved empirically through tradition, which is subsequently updated to a more modern or advanced form while still honoring traditional values.

2.4 NEO VERNACULAR

Based on what is mentioned on colorbond.id, what differentiates neo-vernacular architecture from vernacular architecture are:

1. Grounded with Local Architecture
Buildings not only function as physical structures, but also as a reflection of local cultural values. Therefore, neo-vernacular architecture must be adaptive and able to integrate traditional elements with modern needs.

2. Harmonious Integration with the Surrounding Landscape
Neo-vernacular architecture places the importance of harmonious integration with the surrounding landscape. Buildings are not separate entities. The building must also be able to blend with the surrounding environment, especially in the geographical context and physical conditions of its environment.

3. Anticipation of the Future
Neo-vernacular architecture not only considers current needs, but also explores sustainable and adaptive solutions for the future. So it is not surprising that neo-vernacular buildings tend not to be outdated by time and remain relevant to changing times.

4. Abstract Expression of Cultural Traditions
Neo-vernacular buildings do not simply imitate traditional forms, but reinterpret cultural meanings through a modern perspective. This results in a design that is not only aesthetic but also meaningful.

https://colorbond.id/colorbond-stories/mengenal-perbedaan-arsitektur-neo-vernakular-dan-vernakular

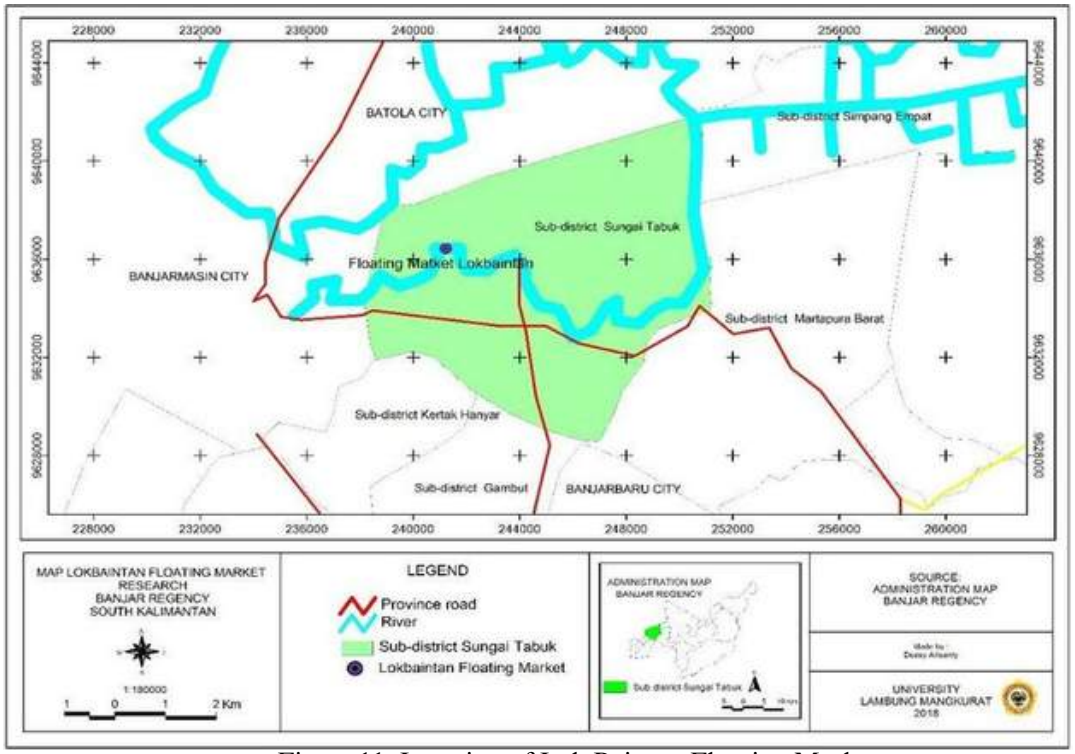


Figure 11. Location of Lok Baintan Floating Market.

These images depict the precise location of the floating market center within the village in South Kalimantan.

The floating market center nestled in the village in South Kalimantan is a vibrant hub of activity, where local traders gather to sell their goods from colorful boats navigating the waterways. The picturesque setting of the floating market creates a unique and bustling atmosphere, with the sounds of bargaining and laughter filling the air. Visitors can immerse themselves in the rich culture and traditions of the region as they explore the market and sample delicious local delicacies. It is truly a mesmerizing sight, capturing the essence of community and commerce intertwined in a beautiful waterborne spectacle.

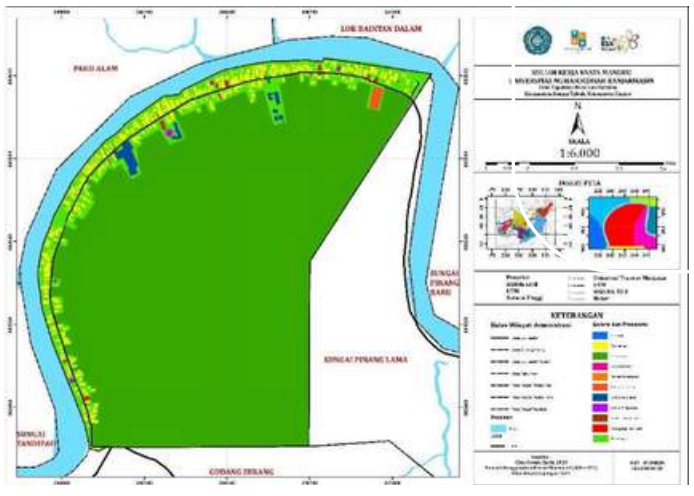


Figure 12. Map of Lokbaintan village

The Martapura River is encircled by Lok Baintan residents who work as vegetable and food traders.

Moreover, Martapura River is recognized as a prominent tourist destination in South Kalimantan. The pristine river water and stunning natural surroundings attract both local and international visitors. Furthermore, the vicinity of the river frequently serves as a venue for diverse art and cultural festivals, enhancing the overall tourist experience. Martapura River stands out as a captivating location offering a variety of activities and natural charm.

Building typology "lanting"

Lanting House showcases a straightforward rectangular design situated parallel to the river to reduce the impact of water currents on the building's integrity. Supported by a bamboo foundation, the structure is relatively slim. It consists of three main sections: a dining area, a bedroom, and a kitchen; all with views of the river and surrounding land, connected by pathways on every side. Moreover, there are terraces overlooking both the river and the land, with one serving as a swimming spot and the other as a laundry area. This layout enables the living space to have diverse functions, providing vistas of both the river and the land (Dahliani et al., 2015).

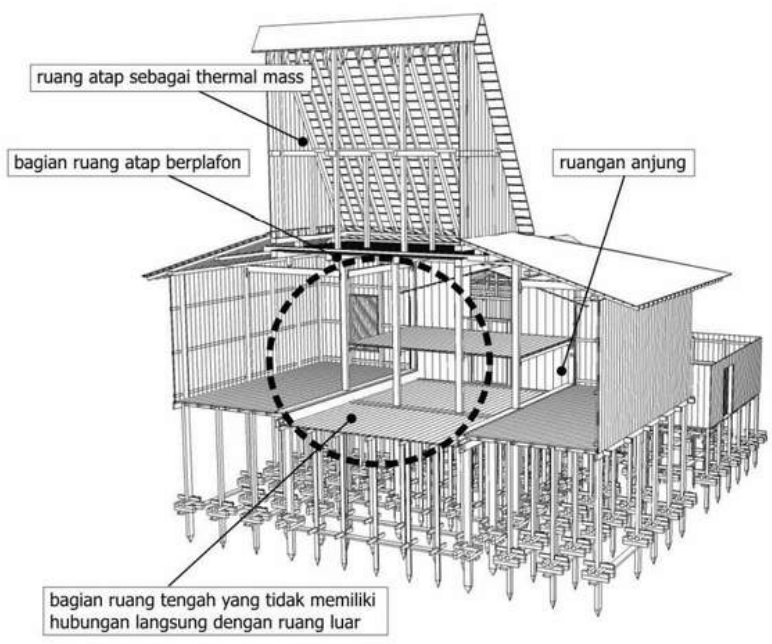


The vernacular architectural approach of Bubungan Tinggi in Banjarmasin reflects adaptation to local environmental and cultural conditions. These houses are constructed using robust and long-lasting ironwood, featuring high, steep roofs that facilitate rapid rainwater drainage and enhance air circulation for thermal comfort in tropical climates. The design of the Bubungan Tinggi house also considers local aesthetics and symbolism, including carvings on the walls and pillars that mirror the beliefs and traditions of the local community.

Elevated Ridge

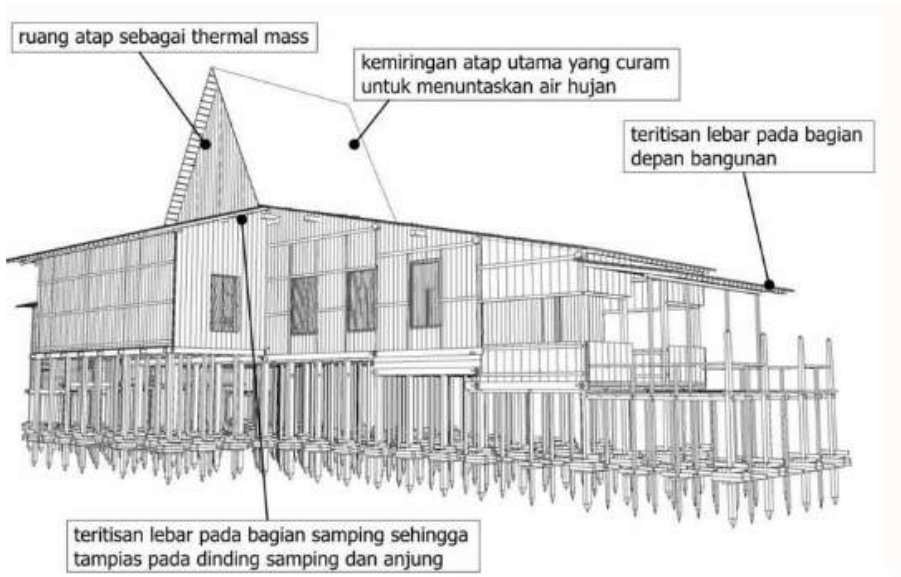


The climate and geography of South Kalimantan, characterized by a humid tropical climate in a wetland area, also influence the construction of the Bubungan tiggi House.



source: ALFIRA IZZA AULIA 200606110111 - KELAS D - ARSITEKTUR NUSANTARA

Managing climate heat.

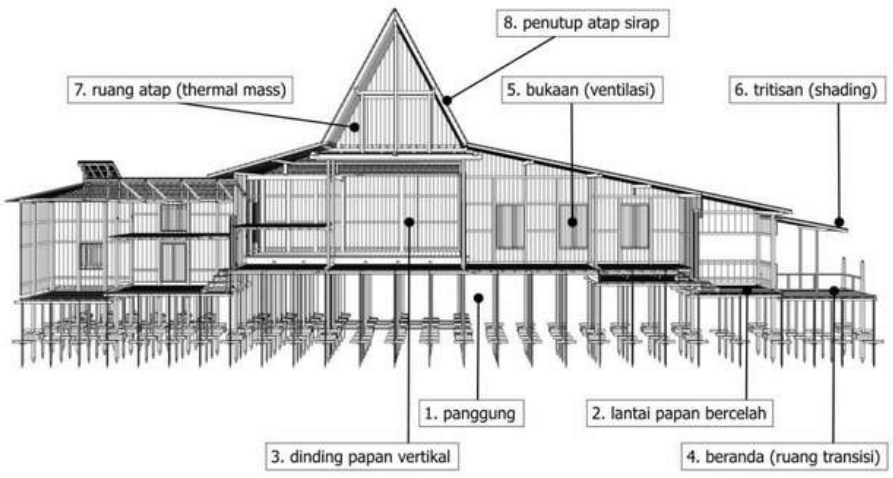


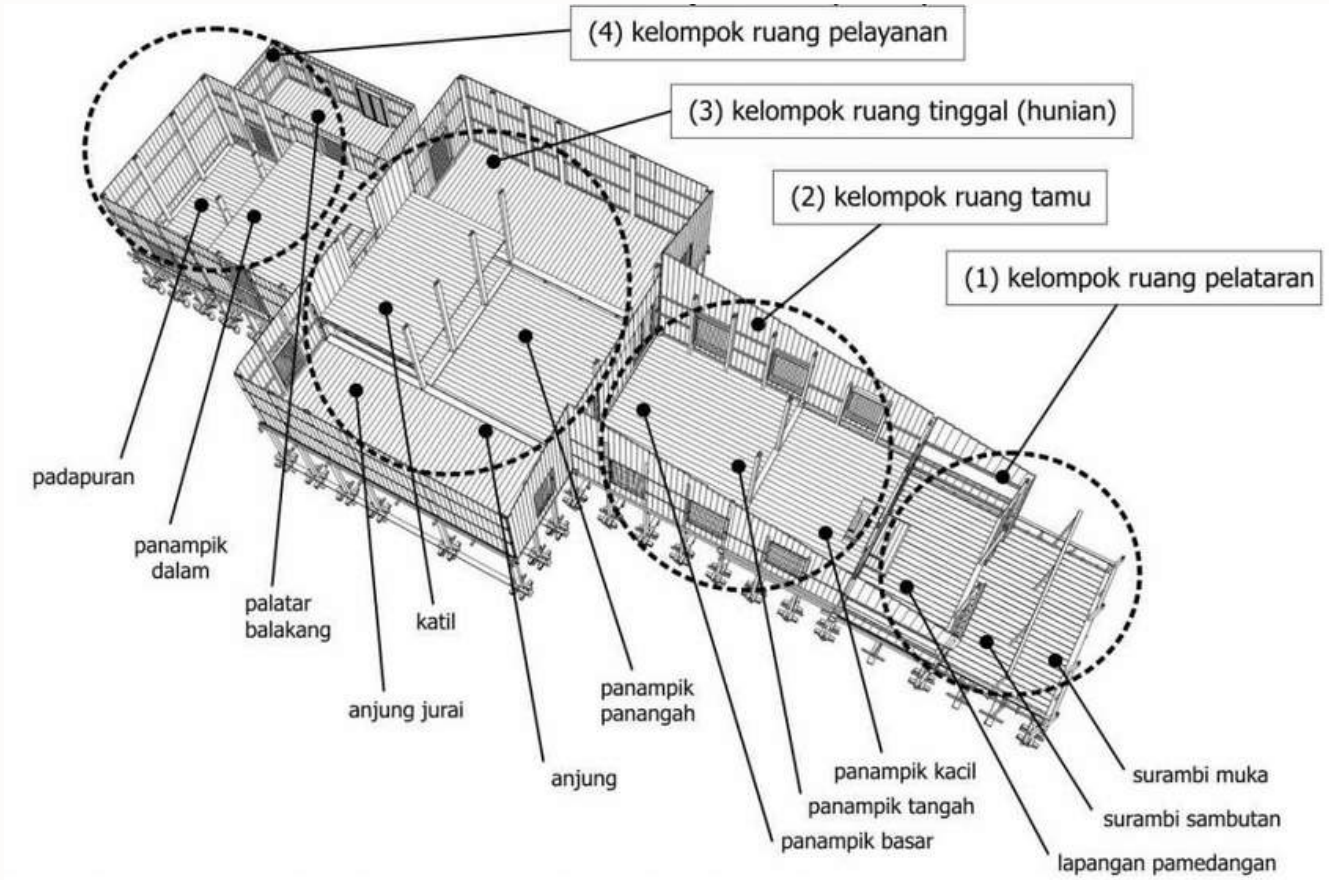
The primary roof, with a substantial volume, functions as heat storage (thermal mass) to release warmth into the room during the night. A steeply pitched roof facilitates rapid rainwater drainage. Broad eaves are situated solely at the front of the structure, sheltering the veranda.

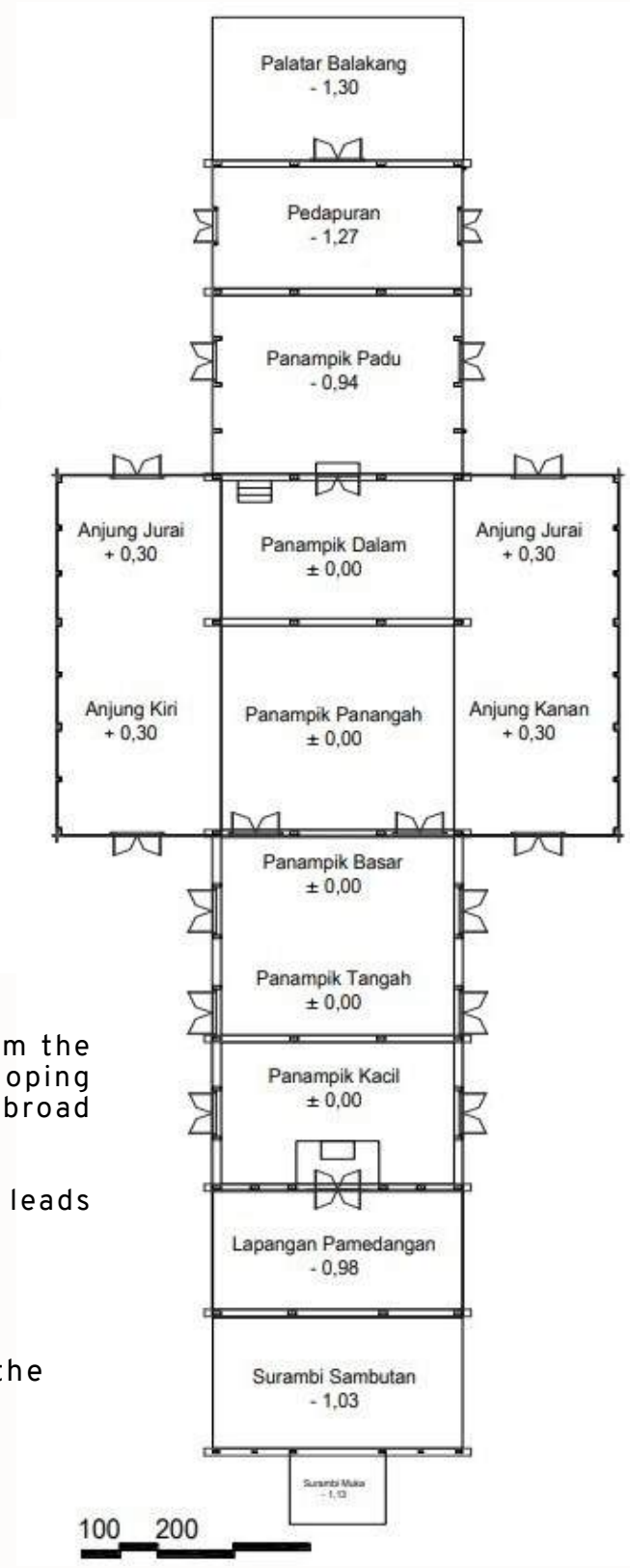
The Bubungan Tinggi House lacks broad eaves, particularly on the left and right sides of the building leading to the Anjung, leaving these areas of the walls exposed to direct sunlight.

High Ridge Material

The materials utilized in the Bubungan Tinggi House are tailored to the local climate. Wood is the primary material employed due to its plentiful supply in the forests of South Kalimantan. Two types of wood are exclusively used in this High Ridge House: galam wood and ironwood.







The house features an elongated structure with a widened center resulting from the inclusion of platforms on both the right and left sides. It is topped with a sloping roof, where a sizable roof volume ascends at a specific angle and extends into broad eaves.

Rhythm: Besides the longitudinal pattern of the house, the central section that leads to the semi-private area is taller than the front and the pedapuran.

The design is intended to implement the described structure, incorporating the roof's usage proportion, the thermal mass function, and the rhythm of the baanjung house heights.

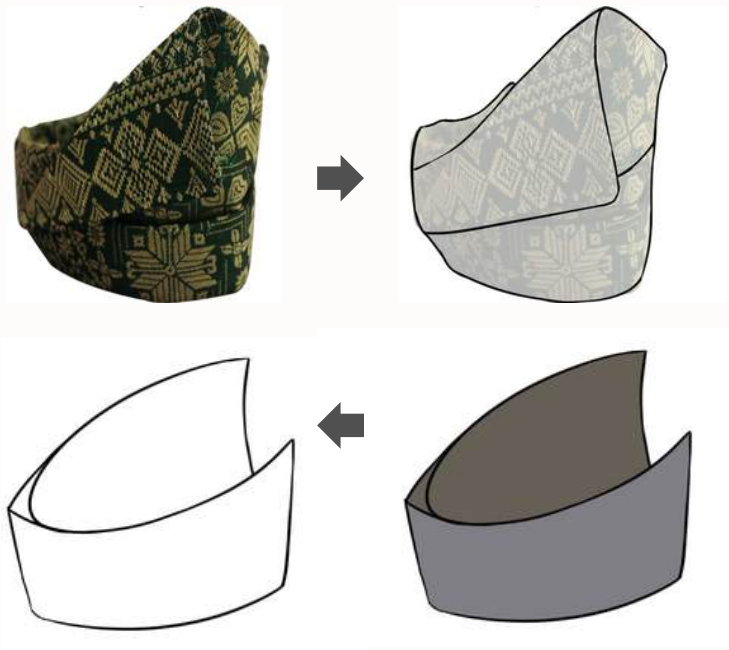
source: ALFIRA IZZA AULIA 200606110111 - KELAS D - ARSITEKTUR NUSANTARA



Preserving Indonesian culture

Above is the traditional Banjar clothing commonly worn by the Malay community, often this traditional clothing is used for weddings worn by the groom and bride. What should not be missed is the tanjak, although in this era since the kingdom was merged with Indonesia, the tanjak has been replaced by the peci, this head covering is equally important in the Banjar traditional costume. Being on the head with a symbol of high hierarchy, it would be a shame if it had to be replaced by the peci.

Tanjak Melayu



Tanjak is a head covering that is usually combined with Malay traditional clothes, in Kalimantan itself, it is usually used by men. In this design, the shape is inspired by the Malay tanjak, the curve will be applied to the building model

Using the Malay tanjak as an inspiration for the floating market building form in Lok Baintan provides several significant architectural values:

1. Local Cultural Identity
The Malay tanjak reflects a strong and relevant cultural heritage for the people around Lok Baintan and South Kalimantan. Its form can strengthen cultural connections and enhance the authentic appeal of the floating market as a tourism icon.

2. Symbolic and Iconic Aesthetics
Visually, the unique and layered form of the tanjak can produce iconic and easily recognizable architecture. This creates a landmark that attracts tourists, giving a deep impression while distinguishing it from other floating markets.

3. Flexibility of Form for Function
The form of the tanjak can be translated into architecture with flexibility. For example, the towering tanjak element can be utilized as a roof to protect from heat, create shade, and guide air circulation, providing comfort for traders and visitors.

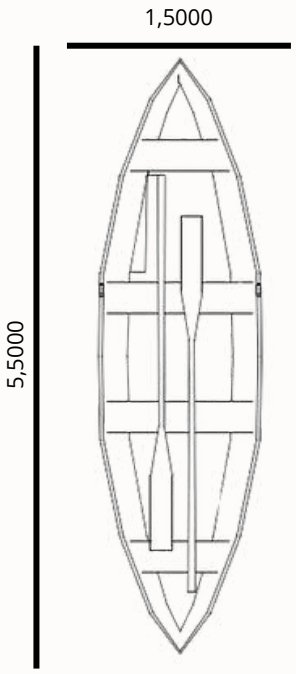
4. Expression of Tradition in Modern Design
Adapting the tanjak in an architectural form allows for a fusion of tradition and innovation. This creates a building that is modern but still rooted in culture, fulfilling travelers' expectations for a unique and authentic experience.

Jukung

Jukung or also known as cadik in small wooden outrigger boats from Indonesia It is a traditional fishing boat. Its size is quite small, which is around **400–500 cm × 45–60 cm × 40–50 cm**. Jukung is divided into two parts, namely jukung ketir and fishing boats/jepitan. Jukung ketir refers to boats with ropes on the right and left, while fishing boats refer to boats that have two outriggers.







ukung, a traditional boat from South Kalimantan, has great potential to be an inspiring element in designing the architectural landscape of the Lok Baintan floating market. Here are some ideas on how jukung can be applied in design:

1. Form and Structure
Roof and Canopy: The smooth curved shape of jukung can be adapted into a roof or canopy design for buildings, creating a dynamic and harmonious architectural impression with the river environment.
Facade Elements: The silhouette of jukung can be processed into a motif for a building facade or fence, providing a strong local identity.
2. Material and Color
Use natural materials such as ironwood or bamboo, which are often used in making jukung. These natural colors will blend with the river landscape and floating market.
The combination of bright colors such as red, yellow, and green, which are often seen on jukung, can be applied to design elements such as signage, outdoor furniture, or pedestrian paths.
3. Function and Layout
Floating Seating Area: The design of a floating seating area that resembles a jukung can provide a unique experience for visitors.
Bridges and Pedestrian Paths: Pedestrian paths over rivers can be designed to resemble a series of jukung, as if visitors were walking on boats.
4. Interaction Space
Floating Stage: A performance area shaped like a jukung can be the center of cultural activities, such as traditional dances or Banjar music.
Education Zone: An open learning space about the history and how to make jukung can add to the appeal of educational tourism.
5. Landscape Elements
Water Park: Landscape elements such as ponds or water parks can be designed with jukung-shaped installations to present a playful impression but still with a local nuance.
Art Installations: Sculptures or art installations shaped like jukung, both on a small and large scale, can be icons around the floating market area.
6. Ecological Sustainability
Jukung which are often used on rivers remind us of the importance of maintaining water ecosystems. Landscape design can include natural conservation areas or mangrove plants as education for visitors about environmental sustainability.
7. Lighting
Lighting installations that imitate the shape of jukung or the shadow of jukung in the water can create a magical night atmosphere at Lok Baintan.
By using jukung as the main inspiration, the landscape design will strengthen the identity of Lok Baintan floating market as a unique, culturally relevant and attractive destination for both domestic and international tourists.

https://p2k.stekom.ac.id/ensiklopedia/Jukung

2.5 PRECEDENT STUDY

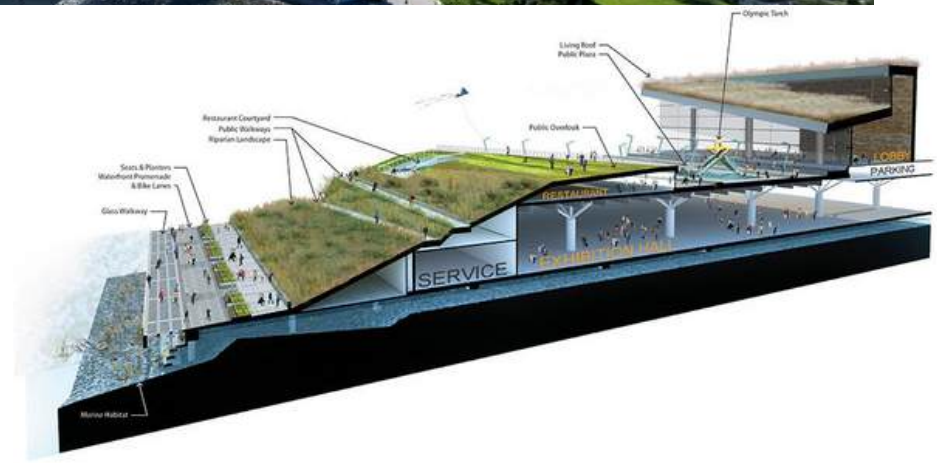


VANCOUVER CONVENTION CENTRE

The world's first LEED Platinum convention center, Vancouver Convention Centre West fully integrates the urban ecosystem at the intersection of a vibrant downtown core.

The iconic living roof, visible from throughout the city, forms the terminus of a chain of waterfront parks that rings the harbor and creates continuous stepping-stone habitat between the convention center and Stanley Park. Less visible but equally productive,

an artificial concrete reef drops below the waterfront promenade, designed in collaboration with marine biologists to restore the ecology of the natural shoreline.



SUSTAINABILITY

- The West building's six-acre living roof – the largest in Canada and the largest non-industrial living roof in North America – features more than 400,000 indigenous plant and grasses. Unique roof is designed to act as an insulator, reducing heat gains in the summer and heat losses in the winter.
- A restored marine habitat is built into the foundation of the West building. Water quality in the area has improved dramatically, with the growth of a large variety of sea life.
- Sophisticated black water treatment plant recycles grey and black water that goes back into washrooms for toilet flushing and is used for rooftop irrigation during warmer weather.
- Seawater heating and cooling system takes advantage of the adjacent seawater to produce cooling for the building during warmer months and heating in cooler months. Natural light and ventilation are maximized throughout the facility.

https://www.vancouverconventioncentre.com

Sydney Park Water Re-Use Project designed by Turf Design Studio in Sydney, Australia.



A severe drought in the early 2000s prompted the city of Sydney to adopt a new approach to water conservation and management. One initiative to decrease water usage was the development of a park designed to capture and treat stormwater. By incorporating meticulous planning and purification methods like aeration devices, pollutant traps, and wetlands, the city successfully integrated the functions of a stormwater treatment plant with a public recreation area. This endeavor enables Sydney to reuse more than 8 million gallons of stormwater annually. This not only enhances the city's environmental awareness but also prevents untreated water from directly entering Botany Bay, as it previously did.

Whitney Water Purification Facility and Park designed by Steven Holl Architects.



Every day, the Whitney Water Purification Facility treats 15 million gallons of water. Similar to the Sydney Park Water Re-Use Project, identifying the purpose of these facilities by merely passing by the building is challenging. The location was created to serve as both a public recreational area and a treatment plant. The undulating terrain conceals a significant portion of the subterranean infrastructure. The visible part of the facility consists of a sizable hall shaped like a zipper and covered in metal.

Bamboo Stadium

Designing with Nature. Material & Standardization

There is a local leading effort to start using the bamboo areas and turn them into a reliable source of building material. By transforming the site into a local supply, we propose an evolutive system – from a bamboo forest and stadium to a checker-board infield pattern, composed of built blocks and yards, alternating between them.

Bamboo grown on the whole site will become the dominant building material, transformed in standardized profiles that will bear the platforms and roof-structures, between yards and bridges. Patterned units make the construction process extremely efficient and cost effective. The building act becomes possible in situ, offering the flexibility to change form, add or retain pieces on short notice. Looking forward, a local grow and support of the direct participation of dwellers in the design work can raise awareness and repel the exit, reduce carbon emissions or heat in the process.

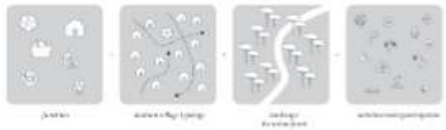




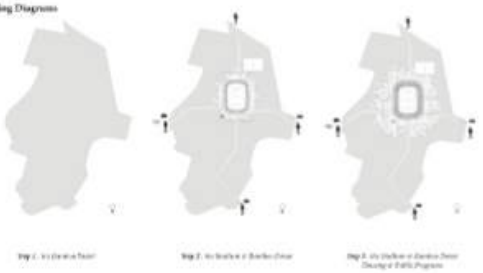




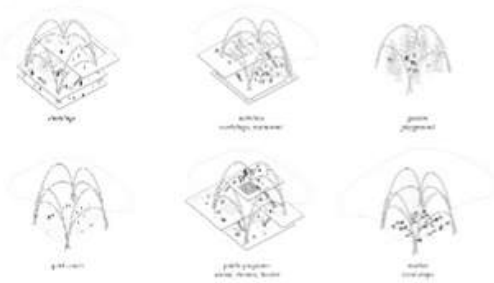
+ Conceptual Diagrams



+ Phasing Diagrams



+ Programmatic Diagrams





Stadium Village Typology

Given the looming transformation of the former landfill, the proposal seeks to return the football game to its roots as a natural meeting
place for the local community, without forgetting the worldwide public. While existing an iconic and monumental structure, the
ensemble presents itself as a network of small scale units which create diversity and unexpected connections.
Taking into account the dwelling issue Lagos is facing, the village typology offers the possibility to introduce flexible and easily erected
housing units, together with public facilities: market, school, cinema, sports courts, local shops, restaurants or workshops.
The perimeter of the stadium becomes a blend of social spaces, dedicated to the fans for enjoying the sport on game days, as well as to
the local community, extending the urban fabric with programs to be enjoyed 365 days a year.

Modular System

The stadium generates the plan of the system, in terms of economics or urban thoughts of orientation, zoning, and infrastructure. The
aggregation can grow in each direction by adding further units, to meet all needs and demands of various situations.
By creating a blank canvas, the system opens up to the influence and speculations resulted from the needs and self-organizing gestures
of the community, leaving a simple-to-use material to be interpreted in any possible way.

Transformation and After-Use

People strolling through the park and between the forms are constantly surrounded by nature and home-grown resources. The system
addresses an important topic of fast developing countries, and it creates a path where nature, architecture, and people live in an ecological coexistence.
In the aftermath of a local or international football match, the structure will transform into a communitarian ensemble of programs. Its
capacity and densely designed modular dimension pass easily back and forth between the needed functions. The project can be continued, if desired, by its expansion at the scale of a neighborhood or a city.

The stadium serves as the organic gathering spot for the community: an adaptable, versatile, and modifiable bamboo-based structure. Bamboo grown on-site is utilized as the primary construction material. A combination of communal areas for sports events, residences, and community facilities cater to the local population throughout the year, harmonizing within the compact framework. The structure can expand in any direction to address diverse requirements, potentially multiplying to encompass the needs of the neighborhood or city.

ZERO ENERGY BUILDING



figure 1. an illustration of building and air pollutant
Source: Meinora

A Zero-Energy Building (ZEB) is a building with net zero energy consumption, meaning the total amount of energy used by the building on an annual basis is equal to the amount of renewable energy created on the site

or in other definitions by renewable energy sources offsite, using technology such as **heat pumps**, **high efficiency windows** and **insulation**, and **solar panels.**

The goal is that these buildings contribute less overall greenhouse gas to the atmosphere during operations than similar non-ZNE buildings. They do at times consume non-renewable energy and produce greenhouse gases, but at other times reduce energy consumption and greenhouse gas production elsewhere by the same amount.

The development of zero-energy buildings is encouraged by the desire to have less of an impact on the environment, and their expansion is encouraged by tax breaks and savings on energy costs which make zero-energy buildings financially viable.

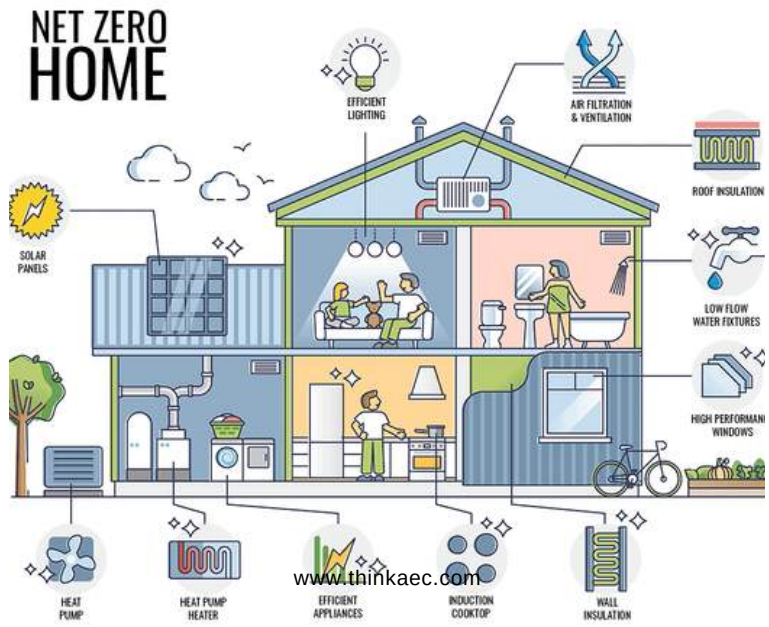


Figure 2. Pictures showing Net Zero Home Criteria

The main parameters of net zero building include:

Energy Efficiency: Maximize efficient energy use with good insulation, efficient HVAC systems, and advanced technology.

Renewable Energy: Use renewable energy sources such as solar panels or wind turbines to supply the required energy.

Emission Reduction: Reduce carbon emissions through the use of environmentally friendly materials, waste management, and other reduction strategies.

Monitoring and Management: Monitor and manage energy consumption and emissions to ensure net zero achievement.

User Involvement: Engage occupants in efforts to reduce the building's carbon footprint.

MVRDV'S LANKUAIKEI HEADQUARTERS



figure 11. a picture of terraced style of building Lankuaikei
Source:Arcdaily.com

Sustainable Growth Concept:
Lankuaikei Headquarters is designed to reflect the continued growth of technology companies. Apply this concept in your building design by considering the flexibility of space which allows tenants to adapt and develop their space over time.

Open Space Integration:
The building has a large roof garden that connects the various parts of the building. I consider using open spaces, such as green roofs or shared terraces, which improve the quality of life for users and promote social interaction.

Utilization of Natural Light:
MVRDV makes good use of natural light in the design of Lankuaikei Headquarters. I learn about how they integrate natural lighting into buildings to reduce energy consumption and create a comfortable working environment.

Iconic Architectural Design:
The building has a unique and iconic shape which creates a strong corporate image.I want to consider unique architectural elements for rental office building that will differentiate it from others and promote the tenant's brand.

"Green Building" Concept:
Lankuaikei Headquarters emphasizes sustainability by integrating many green elements, including a green roof and plants spread throughout the building.I consider sustainable design with environmentally friendly technologies, such as energy saving systems and the use of sustainable building materials.

Use of Local Based Materials:
MVRDV often uses local materials in their designs. We can adopt this approach by considering locally available building materials for rental office project, which can reduce environmental impact and procurement costs.

Space Flexibility:
The design of Lankuaikei Headquarters includes adaptable spaces for various functions. I can think of ways to create flexible spaces to easily suit your tenants' needs.

Advanced Technology Integration:
In this project, advanced technology is used to manage lighting, temperature and energy use. You can consider integrating similar technology to optimize comfort and energy efficiency in my rental office.

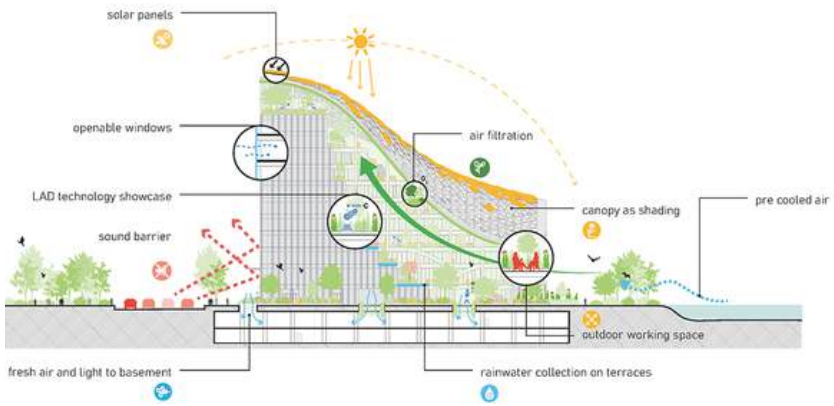


figure 12. a picture of building performance in Lankuaikei
Source:Arcdaily.com

NUS COLLEGE OF DESIGN AND ENGINEERING



figure 8. a picture showing contemporary design of NUS
Source:NUS.edu.sg

Lesson Learned:
One contemporary architecture design which demonstrates a deep understanding of the tropical climate of Singapore. The design concept incorporates a large overhanging roof, which together with the double facades on the East and West of the building, shade it from the sun's heat and provide a cooler interior.

The building design also makes use of the architectural concept of "floating boxes", where its shallow plan depth and porous layout allows for cross-breezes, natural lighting and views to the outdoors. Weather permitting, rooms can also be opened to natural breezes, and air conditioning is used only where it is needed, reducing the electricity usage of the building. The result is an architecture that seeks to offer a deeply biophilicbiophillic experience that connects NUS staff and students to the campus' natural surroundings.

THE PUEY UNGPHAKORN CENTENARY HALL



figure 9. a picture of terraced style of park in puey hall
Source:Arcdaily.com

Lesson Learned
The Puey Ungphakorn Centenary Hall, situated at Thammasat University in Bangkok, Thailand, is not only a remarkable architectural landmark but also an exemplar of sustainable design principles. In addition to its multifunctional nature and cultural significance, sustainability is a notable aspect of this structure:

Eco-friendly Design: The hall incorporates eco-friendly features, such as energy-efficient lighting and HVAC systems. Large windows and strategic placement of greenery maximize natural daylight and ventilation, reducing the need for artificial lighting and air conditioning during the day.

Green Building Materials: The construction materials used in the hall prioritize sustainability. This includes recycled and locally sourced materials, which lower the environmental footprint associated with transportation and production.



figure 10. a picture shows building eco behavior in puey hall
Source:Arcdaily.com

Water Conservation: Sustainable landscaping and water-efficient fixtures contribute to reduced water consumption. Rainwater harvesting systems may also be integrated to further enhance sustainability.

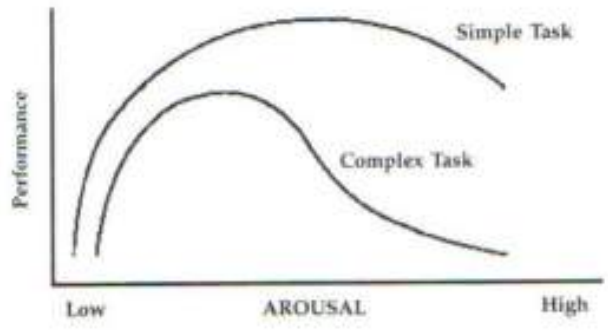
LEED or Green Certification: The Puey Ungphakorn Centenary Hall may have sought certification from organizations like LEED (Leadership in Energy and Environmental Design) or its local equivalent, demonstrating a commitment to sustainable building practices.

Educational Aspect: The hall can serve as an educational tool for the university community and visitors, showcasing sustainable building practices and encouraging eco-conscious behavior.

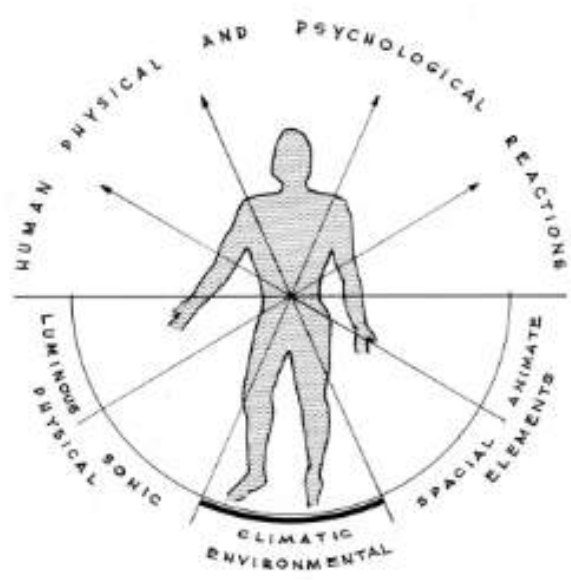
Incorporating sustainability into the design and operation of the Puey Ungphakorn Centenary Hall aligns with global trends in green building. It not only reduces the environmental impact of the structure but also promotes awareness and the adoption of sustainable practices within the university and the broader community.

2.6 HUMAN BEHAVIOUR AND SPACE

The physical and ambient elements of the built environment can influence human behavior and experience in public spaces. Buildings, streets, landscaping, land shapes, and architectural components are examples of physical features, while sound, smell, temperature, and illumination are examples of ambient features. Other characteristics, such as age, gender, culture, and ethnicity, have also been found as having an impact on how people respond to the environment.



Because of people's physiological and psychological processes, the characteristics of public spaces influence their behavior. Physical and environmental cues affect behavior and emotions in predictable ways, according to Mehrabian and Russell (1974), but the intricacies of how they do so differ from theory to theory. The most common theoretical approaches argue that people's behavior is linked to their:



• arousal levels (increased brain activity), • capacity to integrate physical and ambient cues, • real or perceived environmental control, • ability to adapt or adjust to the environment, • responses to environmental stress, and • awareness of their surroundings

When planners and designers understand how their decisions affect people's behavior and experiences, they can apply what they've learned to their daily work practices. It is thought that a better understanding and appreciation of the application of environmental psychology to public areas can improve the built environment's quality.

3.1 Contextual Analysis Phase

3.1.1 PLANNING PURPOSE

Tourism positively impacts the economy, enhancing the well-being of local communities (Oonowska, 2016). The aim of designing within the outlined challenges is to develop solutions that address the difficulties encountered by sellers with small boats, visitors, and tourists along the Lok Baintan river. Specifically, the design's objectives may encompass:

Enhancing Efficiency and Safety: Ensuring that proposed solutions for boat ports and visitor access not only enhance efficiency in the process of loading and unloading merchandise but also provide a sense of security and comfort for all parties involved.

Enhancing Visitor Experience: This objective involves enhancing the enjoyment and convenience for visitors transitioning between small and large boats. Improved accessibility and supplementary amenities like parks can enhance the appeal of the site for visitors.

Enhancing Tourist Attraction: By developing supplementary attractions along the river, like a floating market center with parks and convenient waiting facilities, the aim is to enhance the appeal of the location for tourists and prompt them to prolong their stay in the area.

Enhancing Local Community Welfare: This objective involves offering direct advantages to local communities by enhancing infrastructure and public amenities to elevate their quality of life and create improved economic prospects.

Public Policy Achievement: This goal involves ensuring that proposed solutions comply with relevant regulations and policies, supporting development goals established by local governments.

By attaining these objectives, the design can positively contribute to the development of the Lok Baintan river site as an appealing and sustainable tourist destination.

3.1.2 COMMON ISSUE

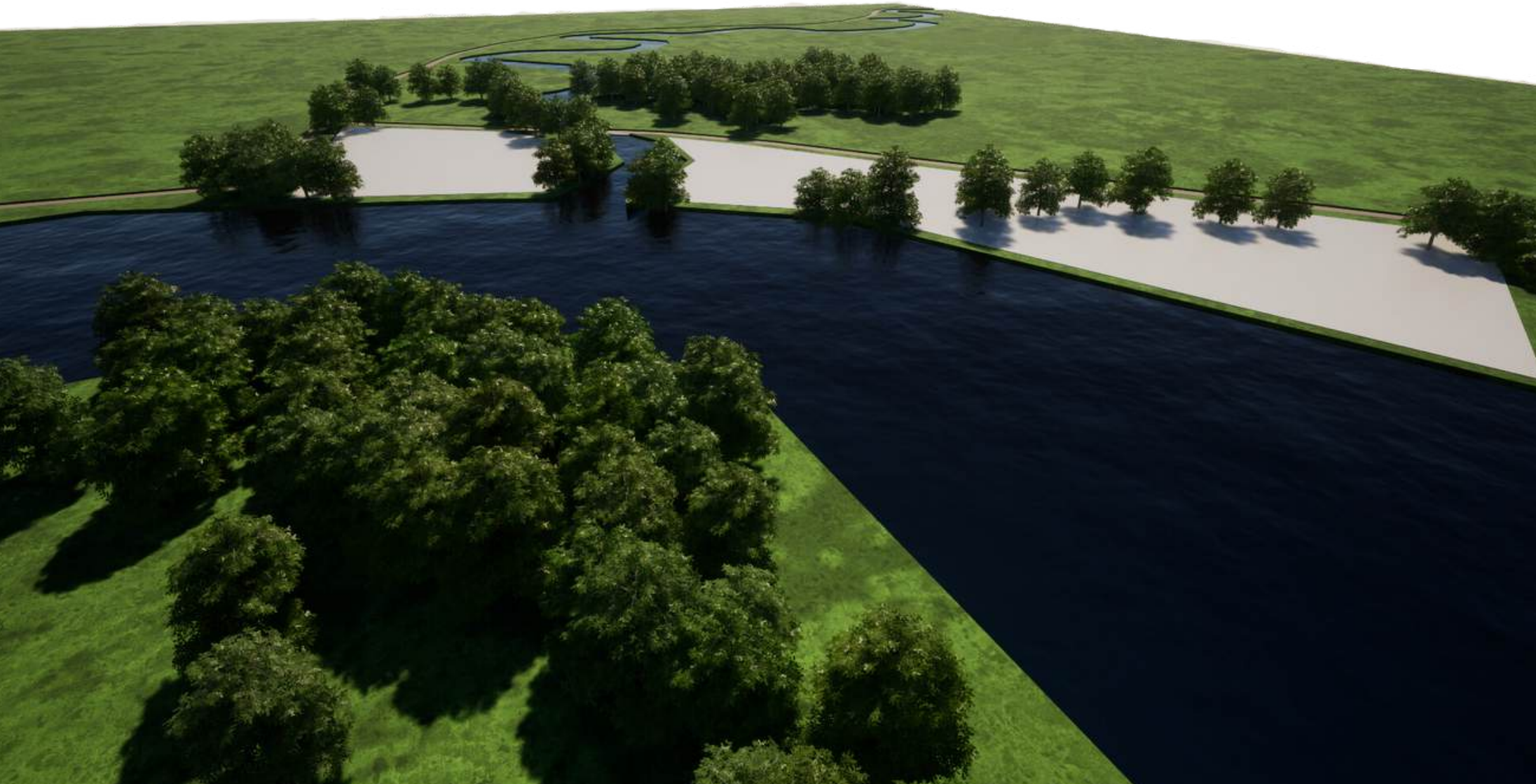
Integrating facilities in the area will encourage tourists to enjoy the visit, impacting their length of stay and spending.
Various forms of tourism development exist:

Construct an attraction that previously lacked appeal.
Construct an attraction where there was a cultural attraction.
Total redevelopment will be achieved through the creation of attractions designed to appeal to a broader audience, attracting more visitors and gaining new market shares.
The redevelopment of attractions aims to enhance facilities for visitors and forecast attendance by encouraging increased spending by visitors.
Developing a new activity or phase of an activity that transitions from one location to another, necessitating structural modifications to the activity.

Unique Matters

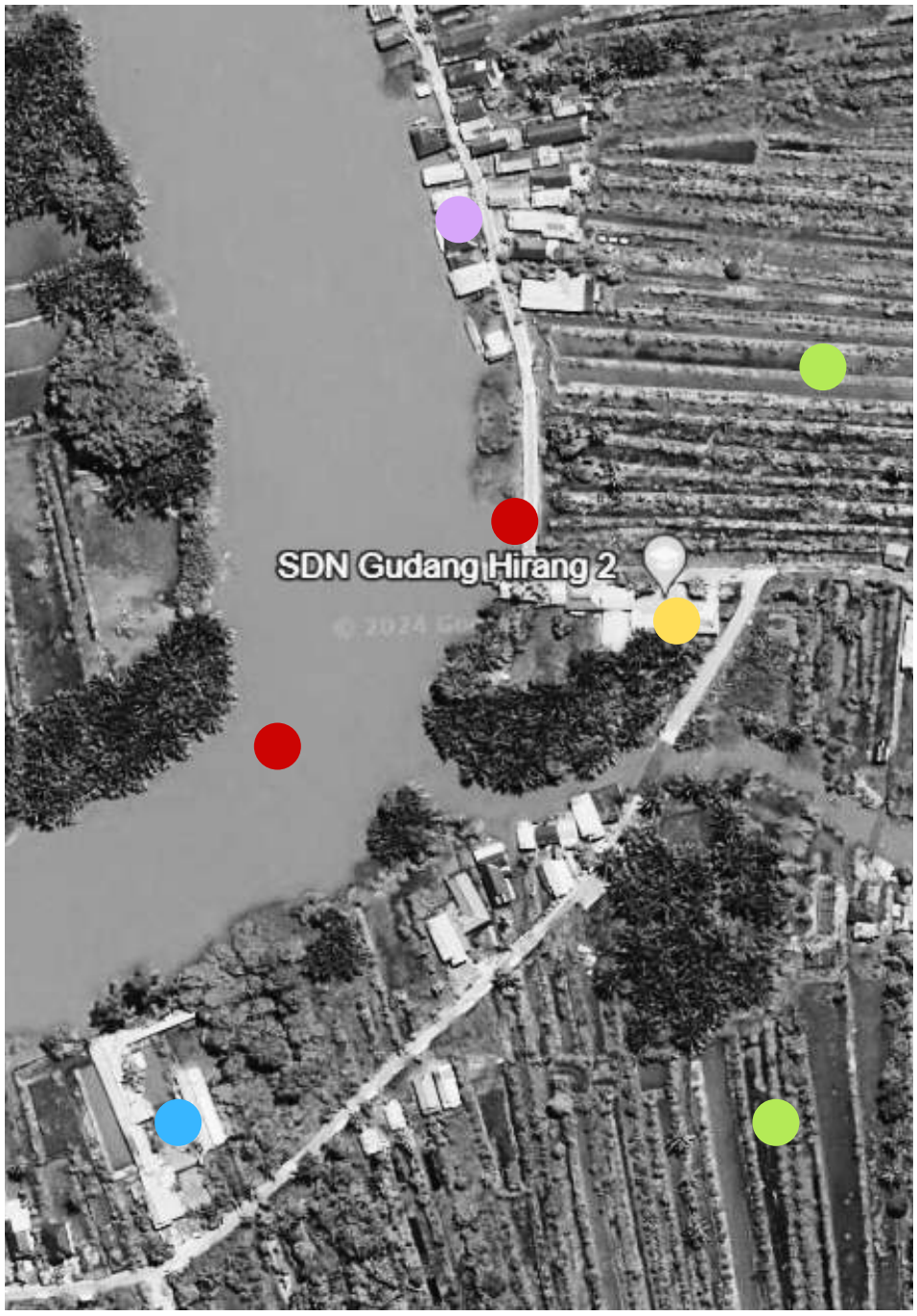
Based on my interim survey results, the underutilization of the floating market's potential is evident. Operating solely in the mornings, the market lacks comfortable and consistent facilities for vendors. Therefore, my primary focus will be on these key issues.

A temporary port that accommodates sellers with small boats for loading merchandise is lacking, necessitating the design of boat ports.
There is no provision for visitors to pause temporarily to transition from small boats to large boats, making access crucial.
After the floating market hours end, there are no other attractions on the Lok Baintan River, so sales activities only take place in the morning. Therefore, having a floating market center design, which includes a market, a park, and a comfortable waiting area for tourists, would be beneficial.



3.1.3 Data of the site



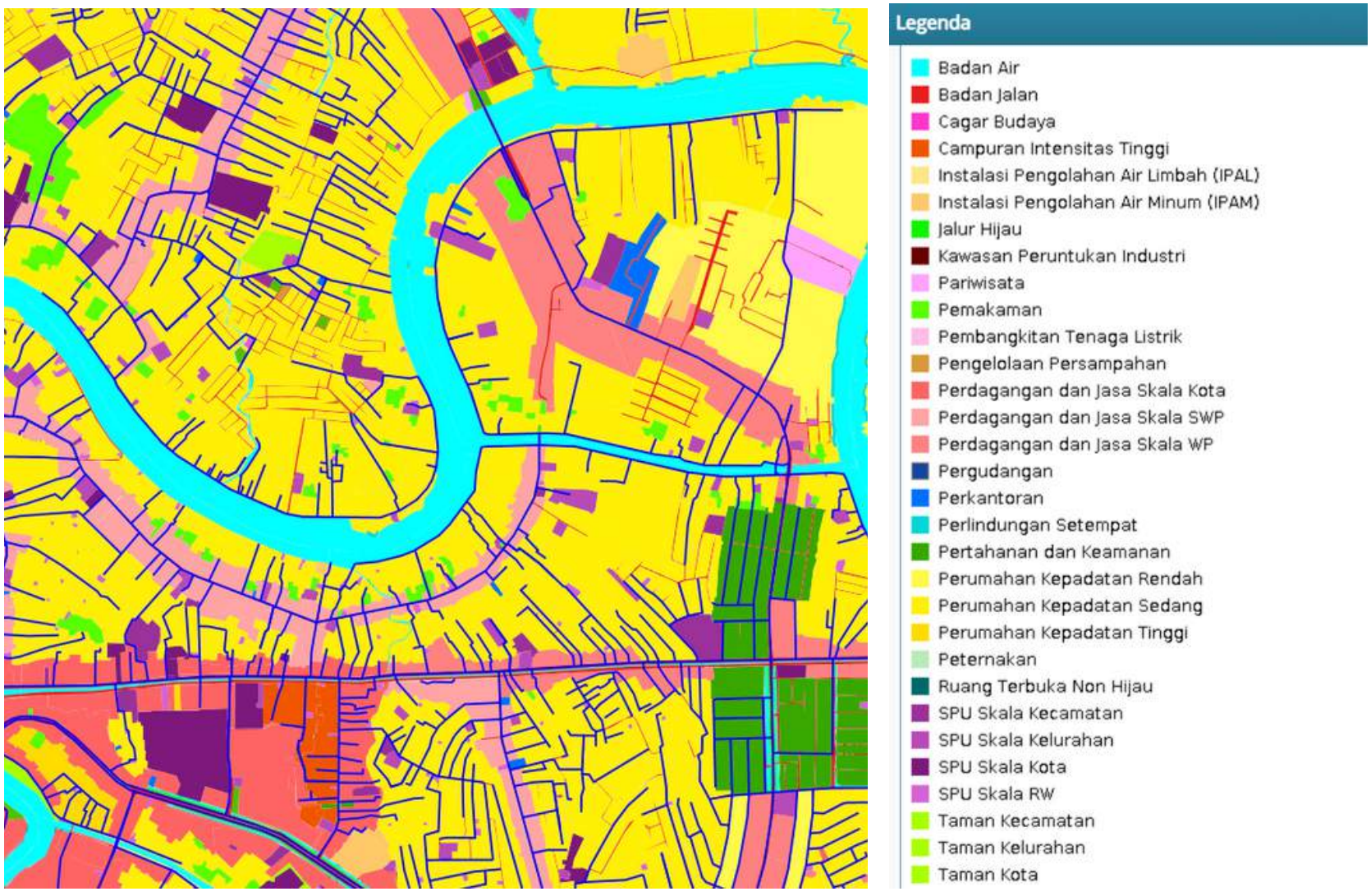


Location
Lok Baintan Floating Market Pier in Lok Baintan, Banjar Regency, South Kalimantan

- Rice Field and Farming
- Floating Market Zone and Dock
- Housing Development
- School
- Chapel

3.1.4 Land Use and Regional Regulations

Banjarmasin RDTA



The RDTR in Banjar Regency focuses on the Simpang Empat urban area in Martapura. Its preparation aims to support sustainable and structured regional development, as well as facilitate economic and infrastructure development in line with spatial planning plans.

Within the river area, there are residential properties characterized by low and medium density. The WP Scale Trade and Services Sub Zone designates space within the cultivation area for the advancement of trade and service activities, workspaces, commercial establishments, entertainment venues, and recreational facilities, all within a planned service scale.

Regulatory framework

Purpose: Tourism, trade, and services Existing: Residential settlements

GSB: 6 meters (west and south) & 2 meters (east and north)

KDB: Maximum 60%

KDH: Maximum 20%

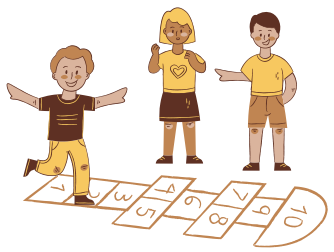
Lok Baintan Village

3.1.5 Time and Human Behavior Analysis

Lok Baintan Village in Banjarmasin is famous for its historic and iconic floating market. Located on the Martapura River, this market is a major tourist attraction where traders sell various goods, especially agricultural produce, from traditional boats called "jukung." Market activity starts early in the morning, creating a colorful and dynamic scene. The village not only offers a unique shopping experience, but also provides an in-depth insight into the lives of local people who depend on the river for transport and trade, preserving traditions that have lasted for centuries









Morning

In the morning the river area is used for selling (floating market), and usually the children start going to school and everyone starts their day

On weekends, more tourists usually come to the floating market here

Day

Because of the heat during the day, traders usually start to stop selling, most children also choose to stay at home, school children usually use empty land to play football. some residents work as farmers

Evening

In the afternoon the villagers, especially men, go fishing to relax. and mothers also cook at home, there are no selling activities

Night

At night there is no specific activity, residents from lok baintan village usually use it to rest.



Comprehending the context and requirements

The sizable population in Banjarmasin City significantly affects the job market. Rapid population growth correlates with reduced job availability, leading to a surge in the workforce that constrains employment prospects. Consequently, the elevated unemployment rate in Banjarmasin City is inevitable.



Rice Field and Farming Region

Residential Area

Primary School and Municipal Library

SITE LIMITS

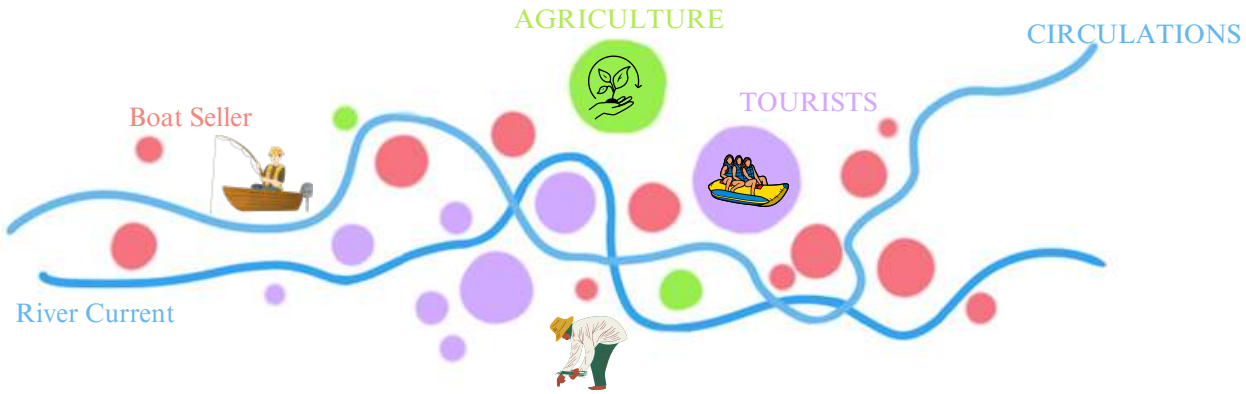
North: Village road and elementary school South: Footpath East: Village road dividing rice fields West: Martapura River and pier

Government regulations:
Purpose: Tourism, trade, and services
Existing: Residential settlements
GSB: 6 meters (west and south) & 2 meters (east and north)
KDB: Maximum 60%
KDH: Maximum 20%
KLB: 4 floors

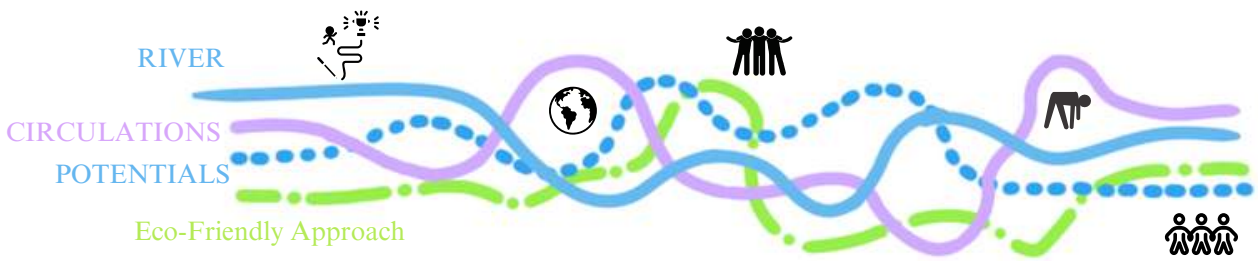
Residential Area

Rice Field and Farming Region

ABSTRACT NOTION



Space Partitioning



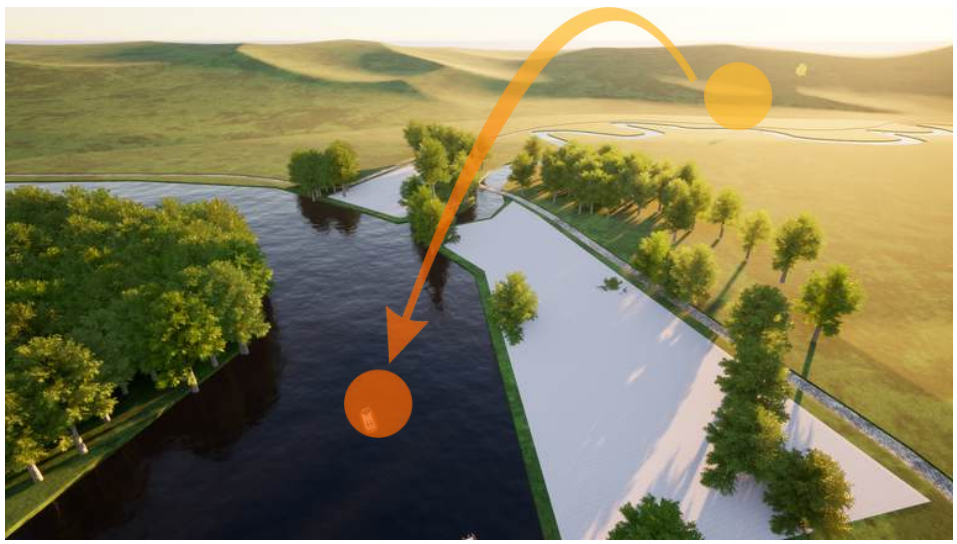
Allocation of Functions



Onsite Application



3.1.7 Analysis of the Site



SOLAR INFLUENCE ON CLIMATE

The primary orientation of the site is towards the west, allowing the building to capture the afternoon sunlight and the river breeze.



SITE VIEWING

The site is visible from the west (Martapura River), south (North Kuin Road from the city center), and north (North Kuin Road from South Alalak Road).



ACCESS

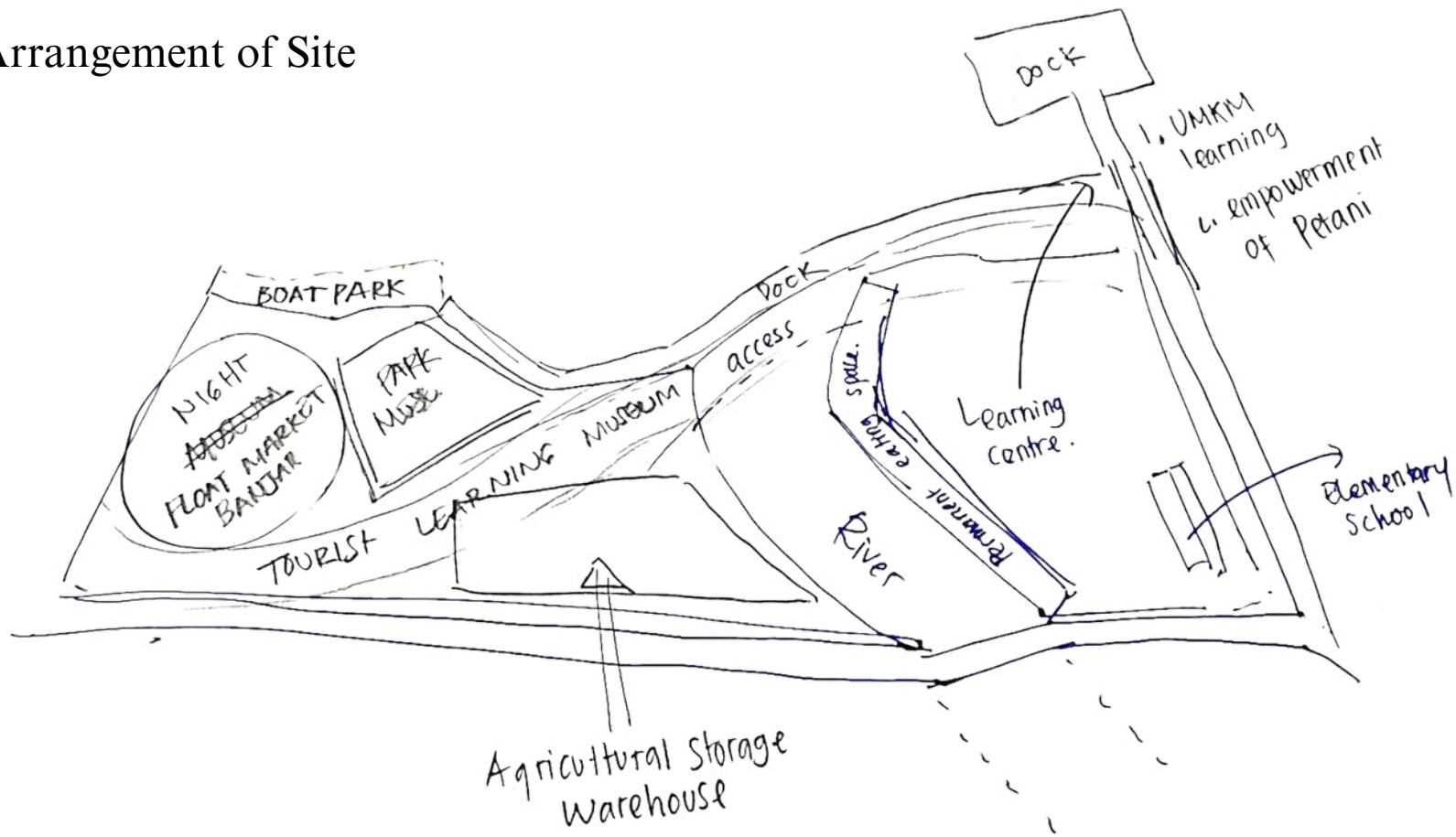
Visitor entry is situated on Jalan Kuin Utara to the west of the site, with the main road serving as the exit on Jalan Kuin Utara to the south of the site. Service entry and exit access are both on the village road to the north of the site.

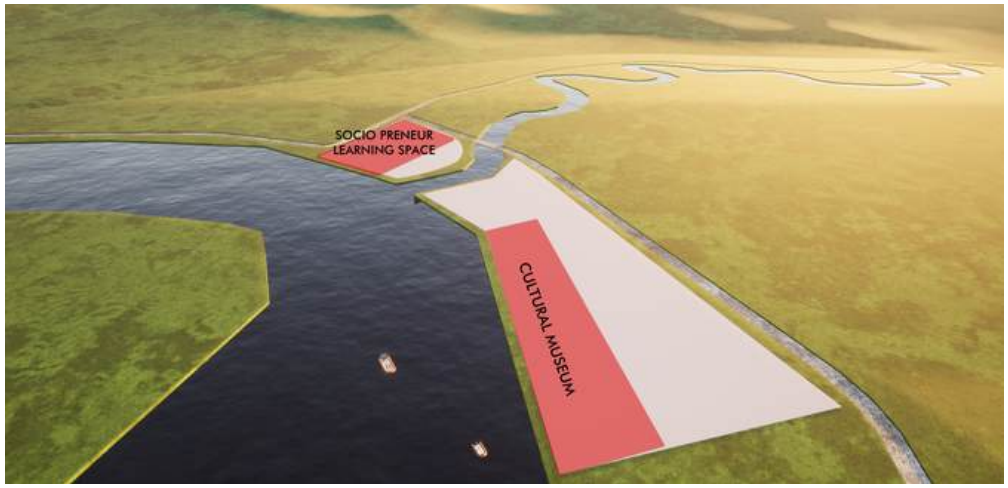


PERSPECTIVE FROM LOCATION

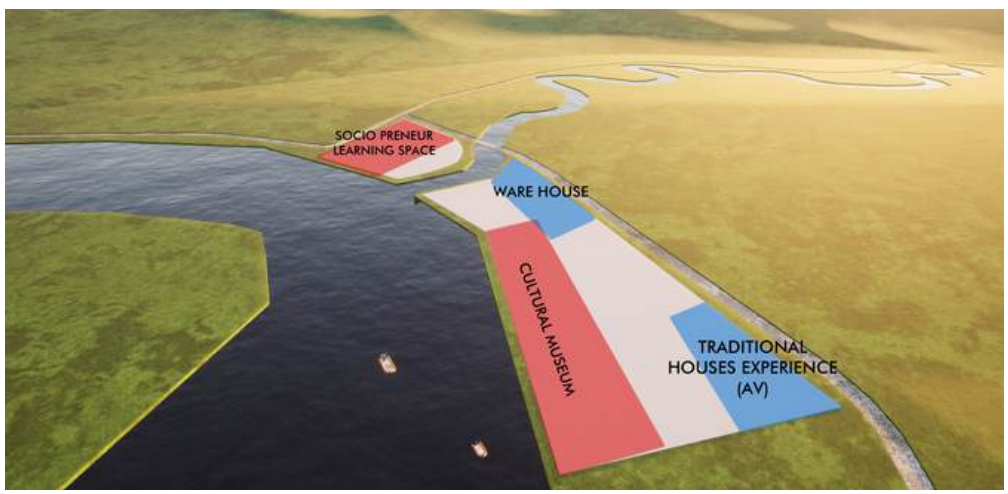
The optimal view from the location is towards the river in the western, northwestern, and southwestern directions.

3.1.8 Arrangement of Site





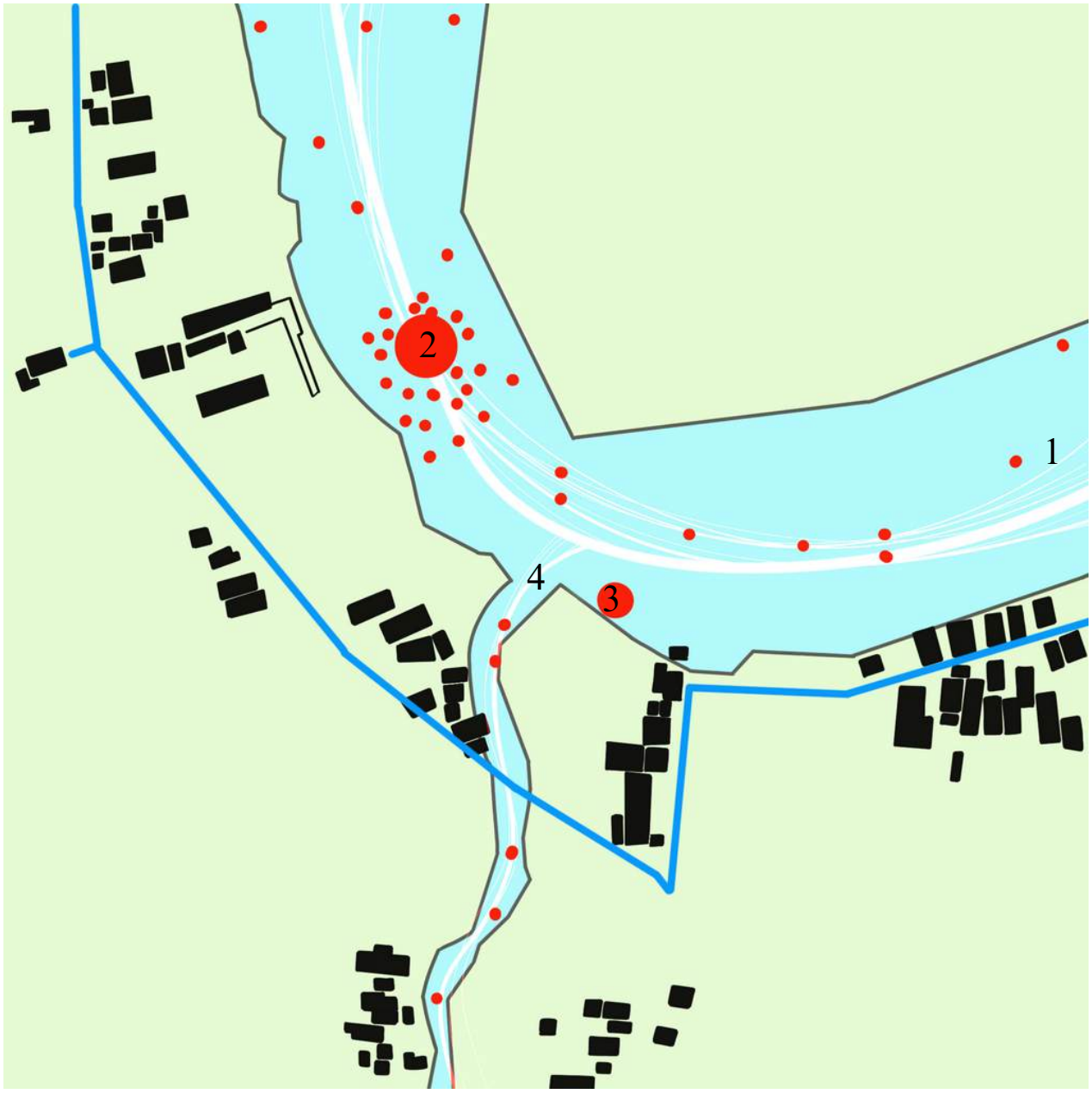
1. The Learning Space is situated near the elementary school, with the goal of consolidating all learning spaces in one area to avoid disrupting learning activities.
2. The cultural museum, situated in the western area overlooking the Martapura River, is designed to offer all visitors a view of the building and the floating market.



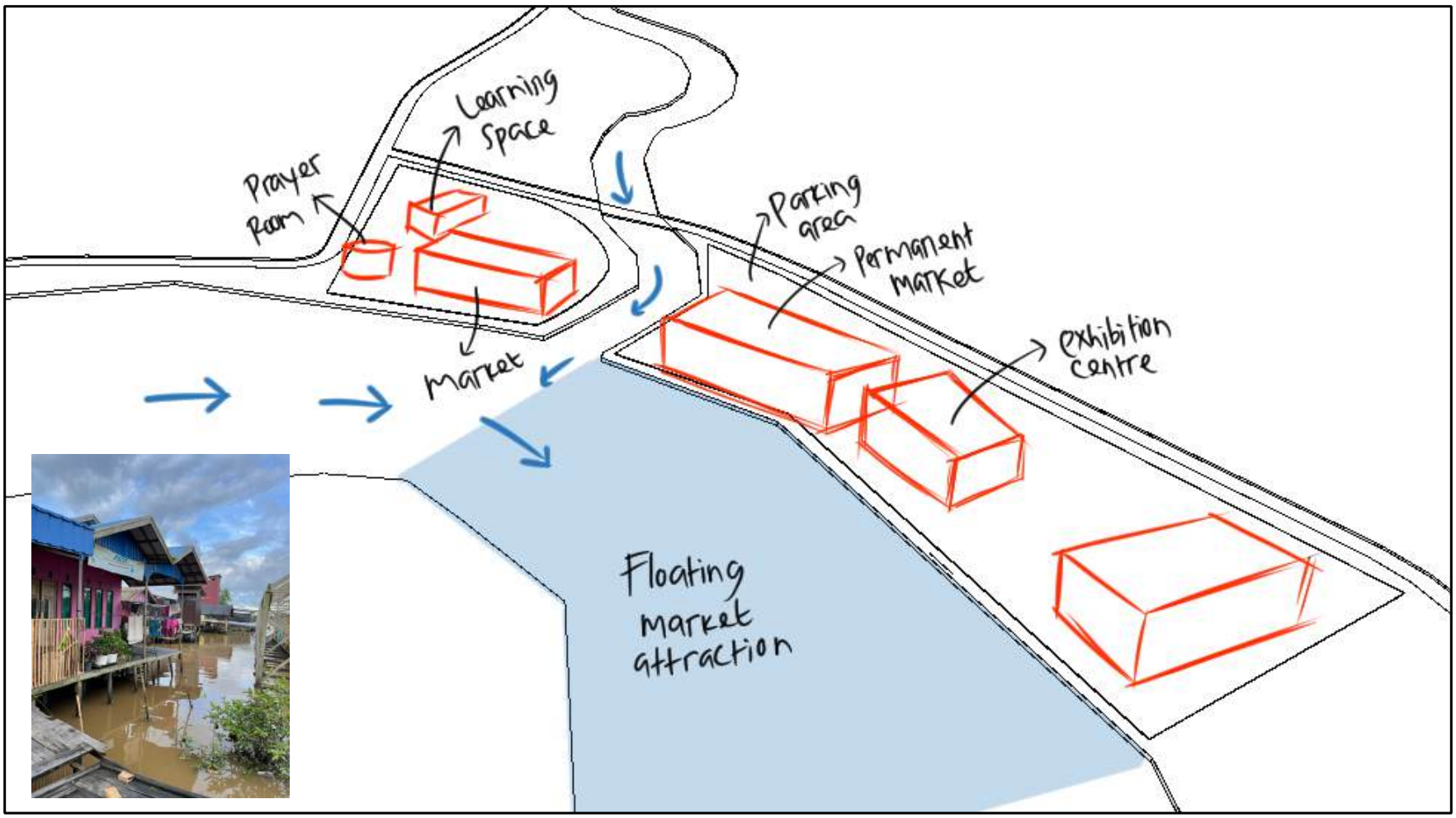
1. The distributor's crop storage warehouse is situated on the eastern side of the site due to its function as a back office and its proximity to the rice fields. Additionally, its location provides easier access and is near the northern river, allowing sellers to deliver goods directly to the floating market area.
2. A traditional house serves as an audiovisual space for film screenings, seminars, workshops, and other multimedia-related activities. It is designed to embody the distinctive features of traditional Banjar architecture.

4.1 PHASE OF DESIGN CONCEPT

SCENARIO BEFORE THE ENHANCEMENT



1. Tourists sail from the hotel along the Martapura River to reach the floating market sales center, where the focus is on the sailing experience.
2. The floating market commences after the morning call to prayer and concludes at 8:30 (9 if it is cloudy).
3. Land visitors will journey from the village and embark on a boat upon reaching Lokbaintan dock.
4. The small red dots denote vegetable sellers who individually acquire merchandise from distributors based on their sales.

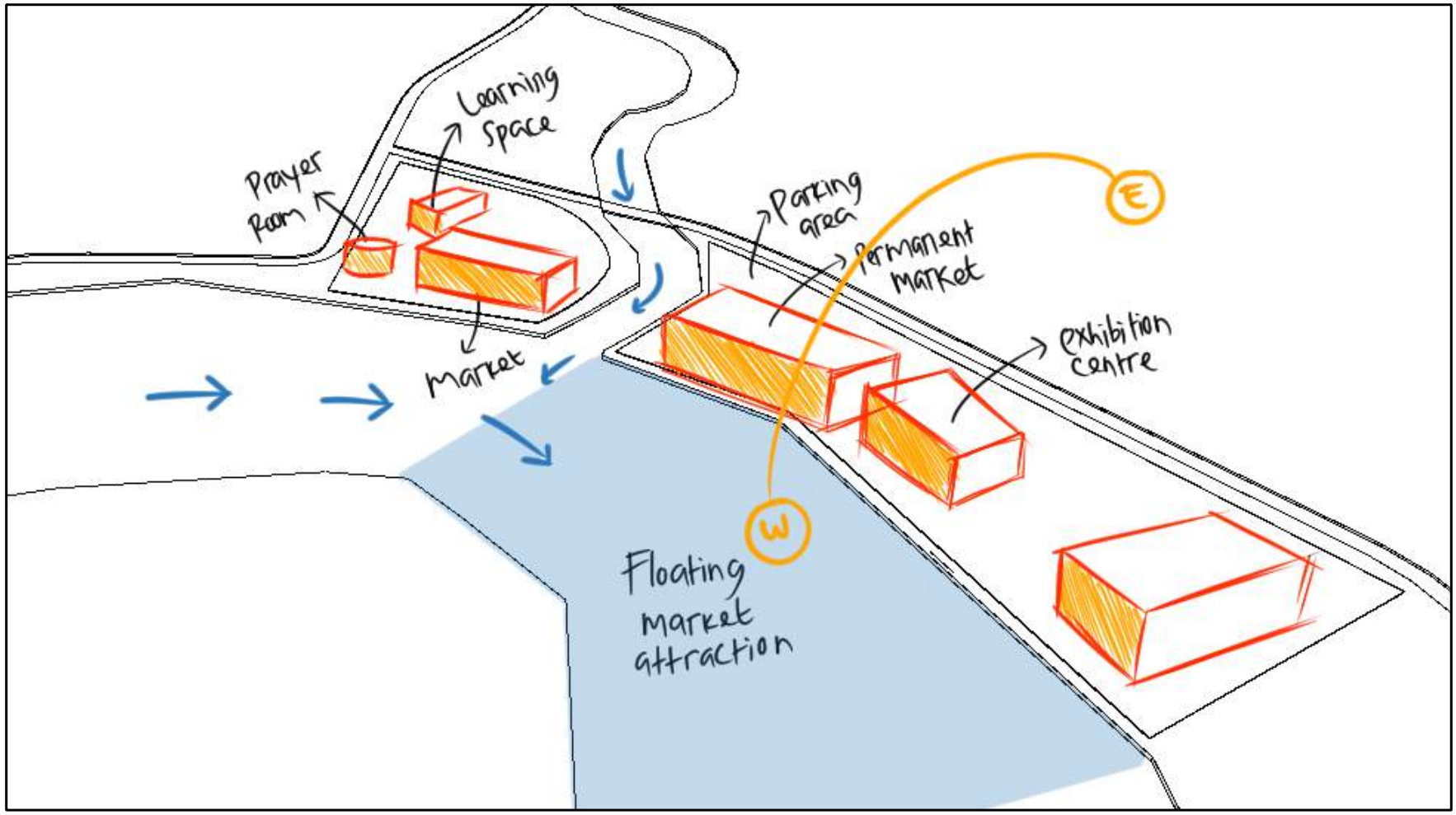






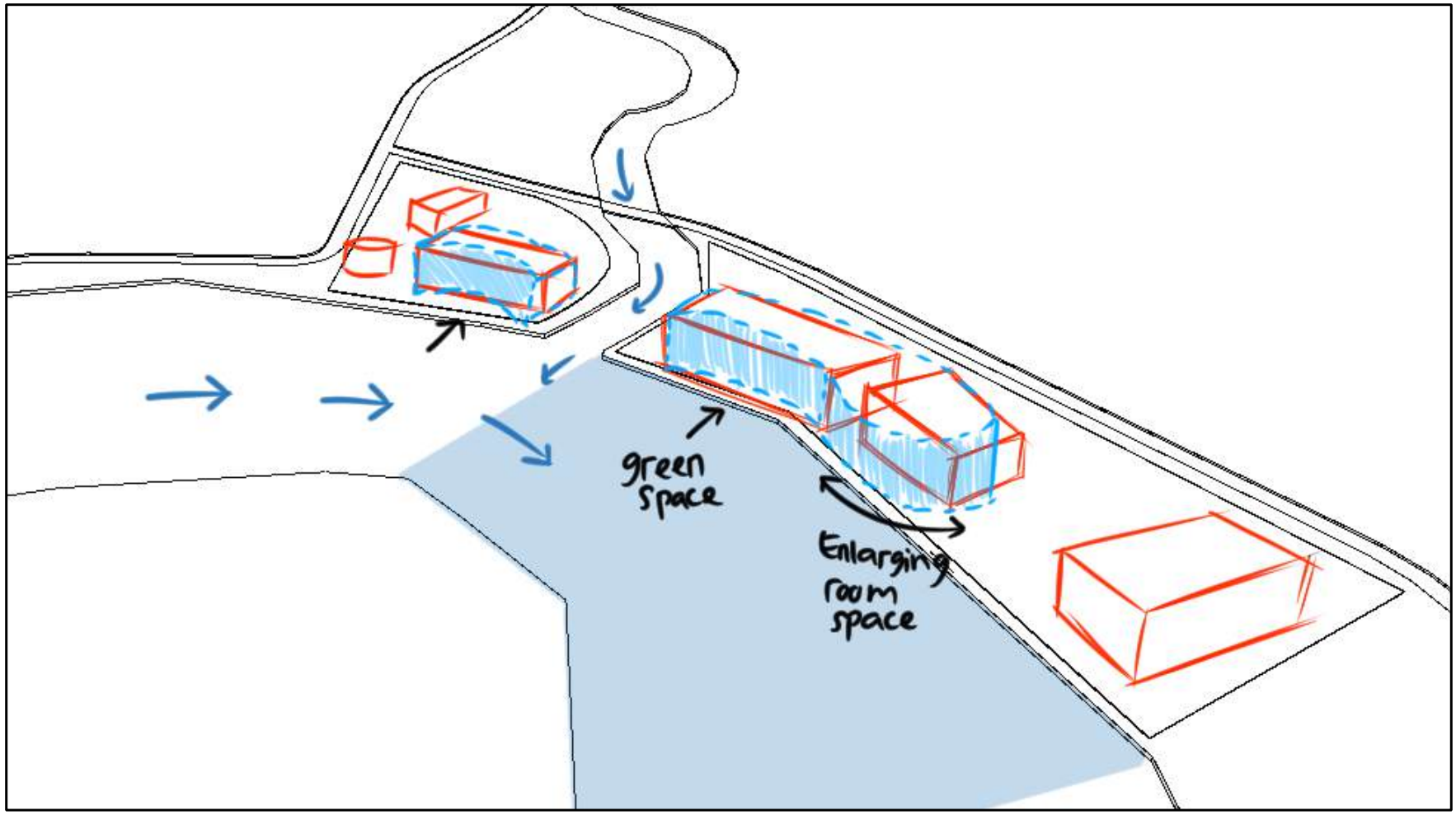
BOATS CIRCULATION FORMATION

The blue arrow indicates the arrival of tourist boats, while the blue arrow from the back indicates the direction of traders' boats coming from their homes. Ultimately, these boats congregated in the floating market area.



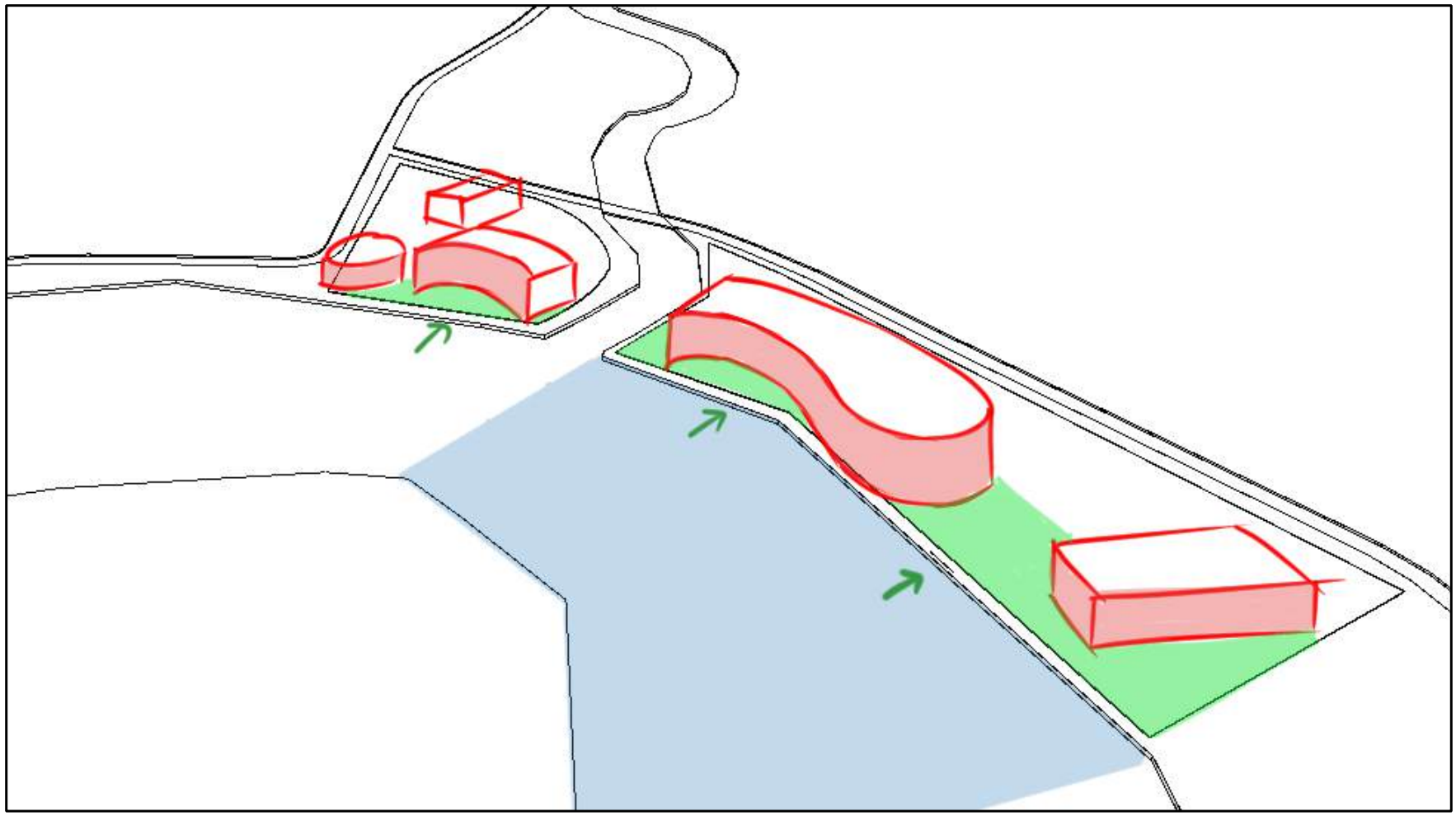
FORMATION: SOLAR TRAJECTORY

The building is designed to face west, with consideration given to excessive sunlight exposure. It is important to avoid direct sunlight exposure by ensuring the building does not directly face the sun.



FORMATION: FLOW-LIKE RIVER

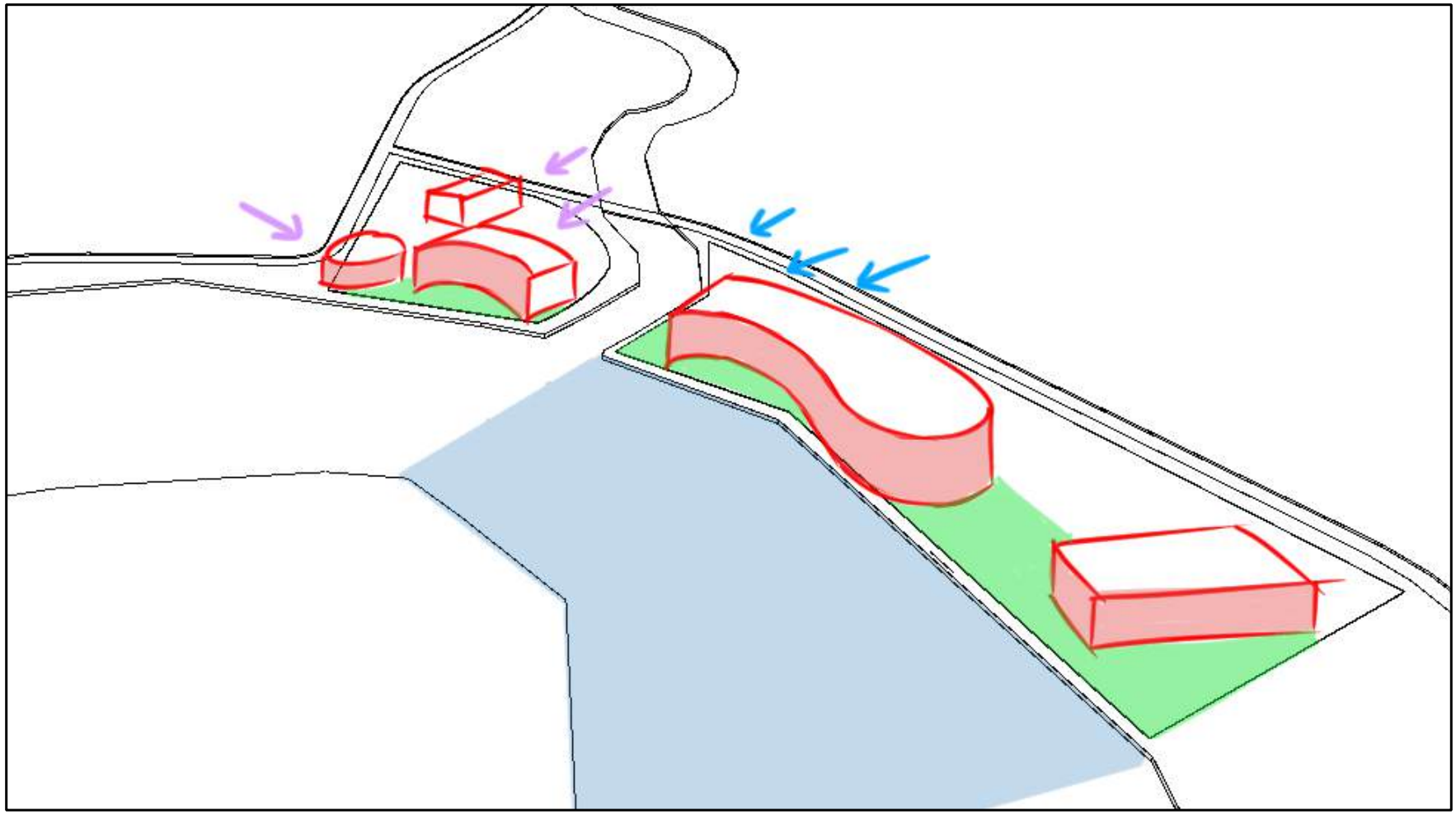
Consideration must be given to both the western and eastern parts of the sun's path. Initially, this area is shaded to prevent excessive sunlight exposure. The structure is oriented away from the west and set back to allow for additional green space.



FORMATION: MASSING

By integrating potential site issues with the original design harmony, the building's left and west sides will be shielded to deter disruptions during peak traffic hours and to mitigate noise infiltration that could disturb visitors.

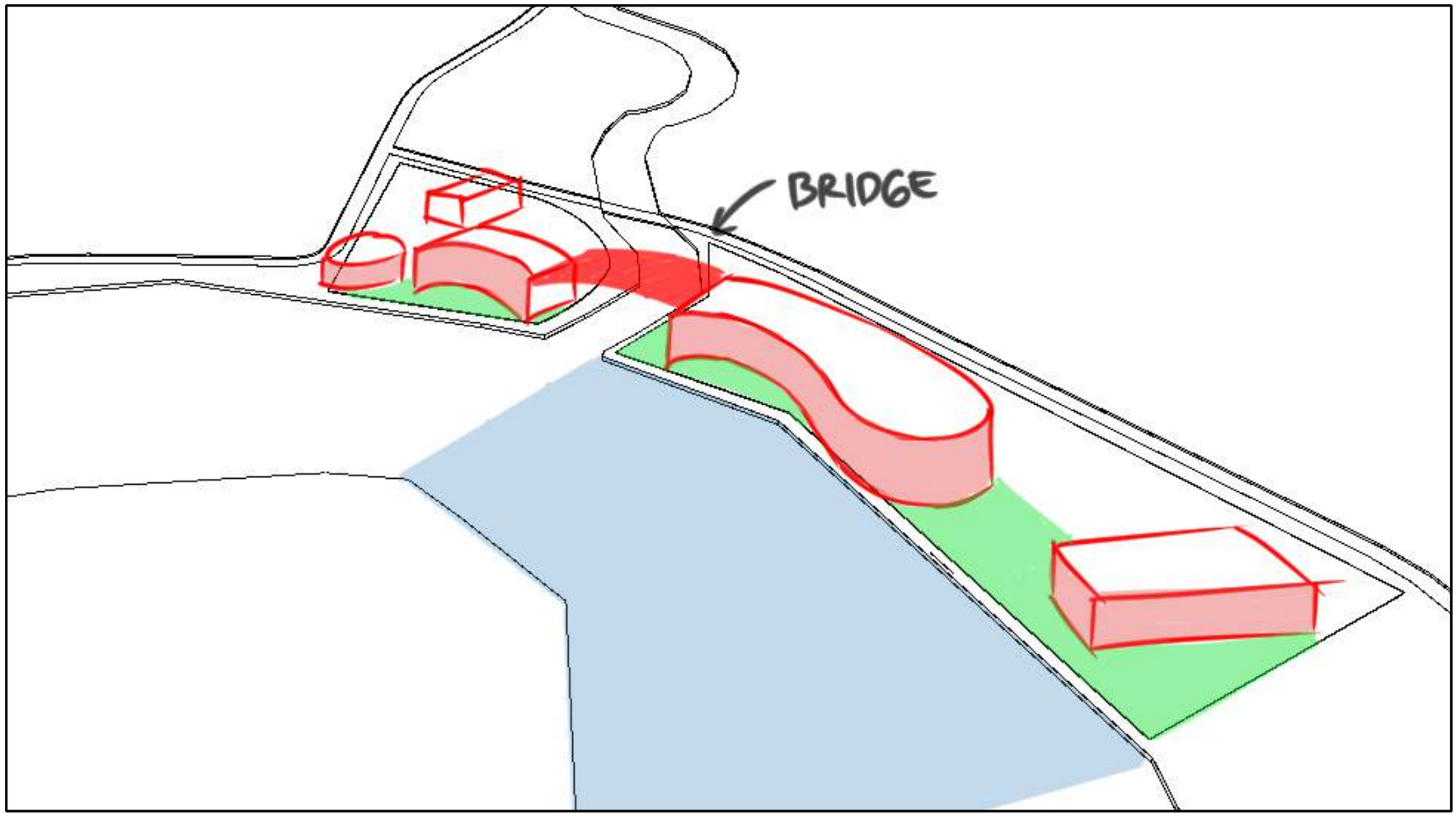
There are additional opportunities for green open space, which is beneficial for mitigating the heat generated by the buildings on the site.



FORMATION: MASSING

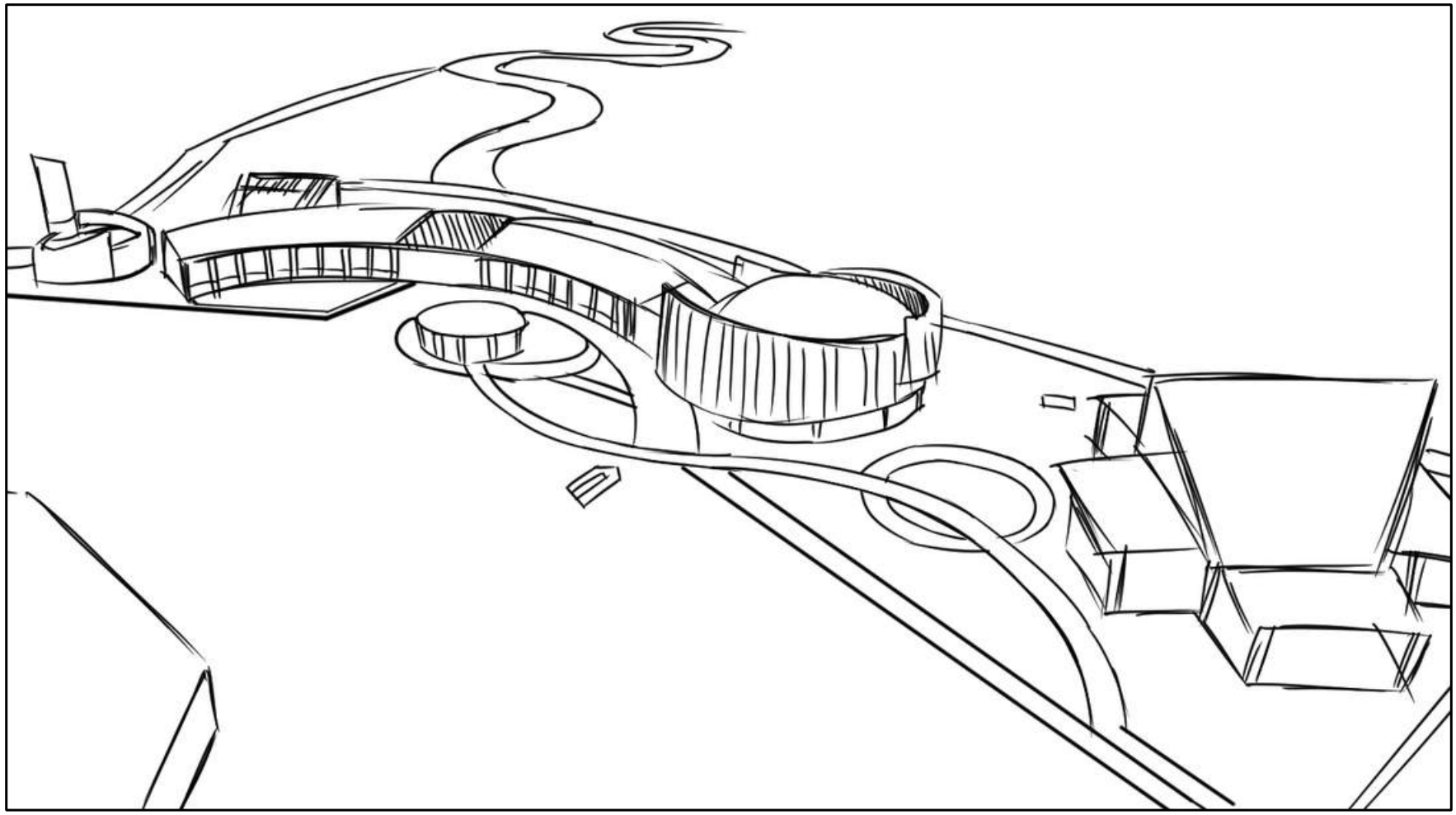
The blue arrow depicts the flow of the next circulation, where the initial traders can transport their agricultural products from the rice fields directly to the warehouse for sale.

The proximity of the residential area to the learning space is indicated by the purple arrow, facilitating easy access for inhabitants to enter the building and study collaboratively.



FORMATION: MASSING

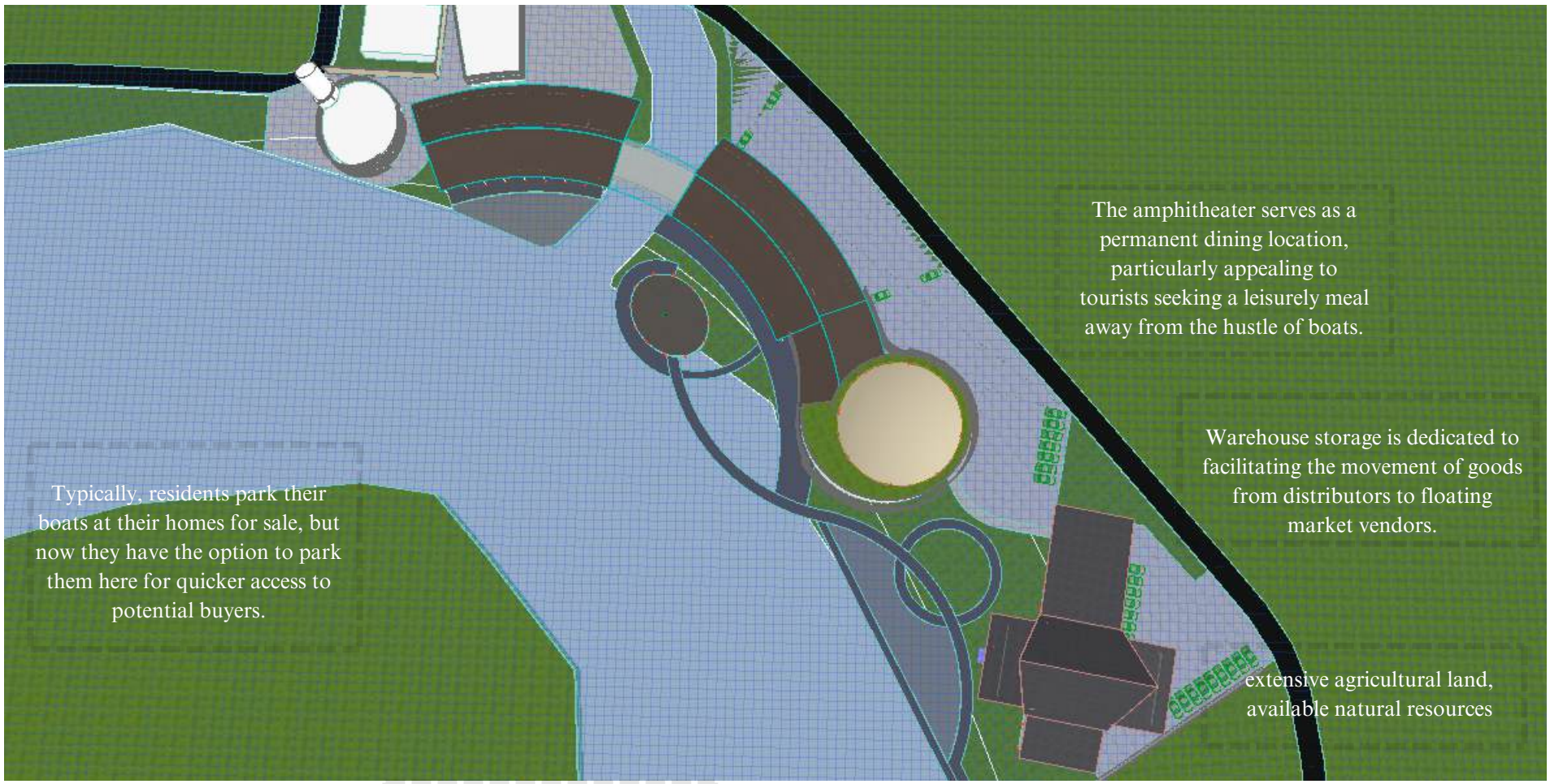
Given the presence of two lands divided by a small river, the necessity arises for a new passage that spans the river. This bridge is designed to offer tourists a unique vantage point to appreciate the river and facilitate movement between different tourist areas without disrupting the village streets.



EVENT: FINAL MASS

After evaluating different factors like climate and community requirements, this architectural design has effectively served the villagers in the area and assisted small and medium enterprises in enhancing their localities with well-designed structures.

Establishing a learning center to educate traders on utilizing rhymes as a distinctive feature of Banjarmasin, empowering socio-preneurs, and innovating social improvement methods.



Tourists can experience the feeling of being in a traditional Banjar house.

Floating market museum that can enhance visitors' attention span.

SCENARIO AFTER DESIGN

1. Individuals arrive at the Martapura River either by boat from another location or by land vehicle.
2. Visitors frequent the floating market to purchase goods.
3. Visitors have the opportunity to experience the bridge, take pictures, and enjoy the rivers.
4. There is a floating market museum for tourists interested in history.
5. Tourists can experience traditional houses in Banjarmasin.
6. There are learning centers available for sellers and tourists interested in learning how to create pantun or enhance their business skills.

DEPARTMENT of ARCHITECTURE

04 Final Design



Designing the Floating Market Center as a Tourist Attraction

Meinora Dewi Nurhaliza 20512075

UNIVERSITAS ISLAM INDONESIA

DEPARTMENT of ARCHITECTURE

KAAB 한국건축학교육인증원 Korea Architectural Accrediting Board

CANBERRA ACCORD

STARS

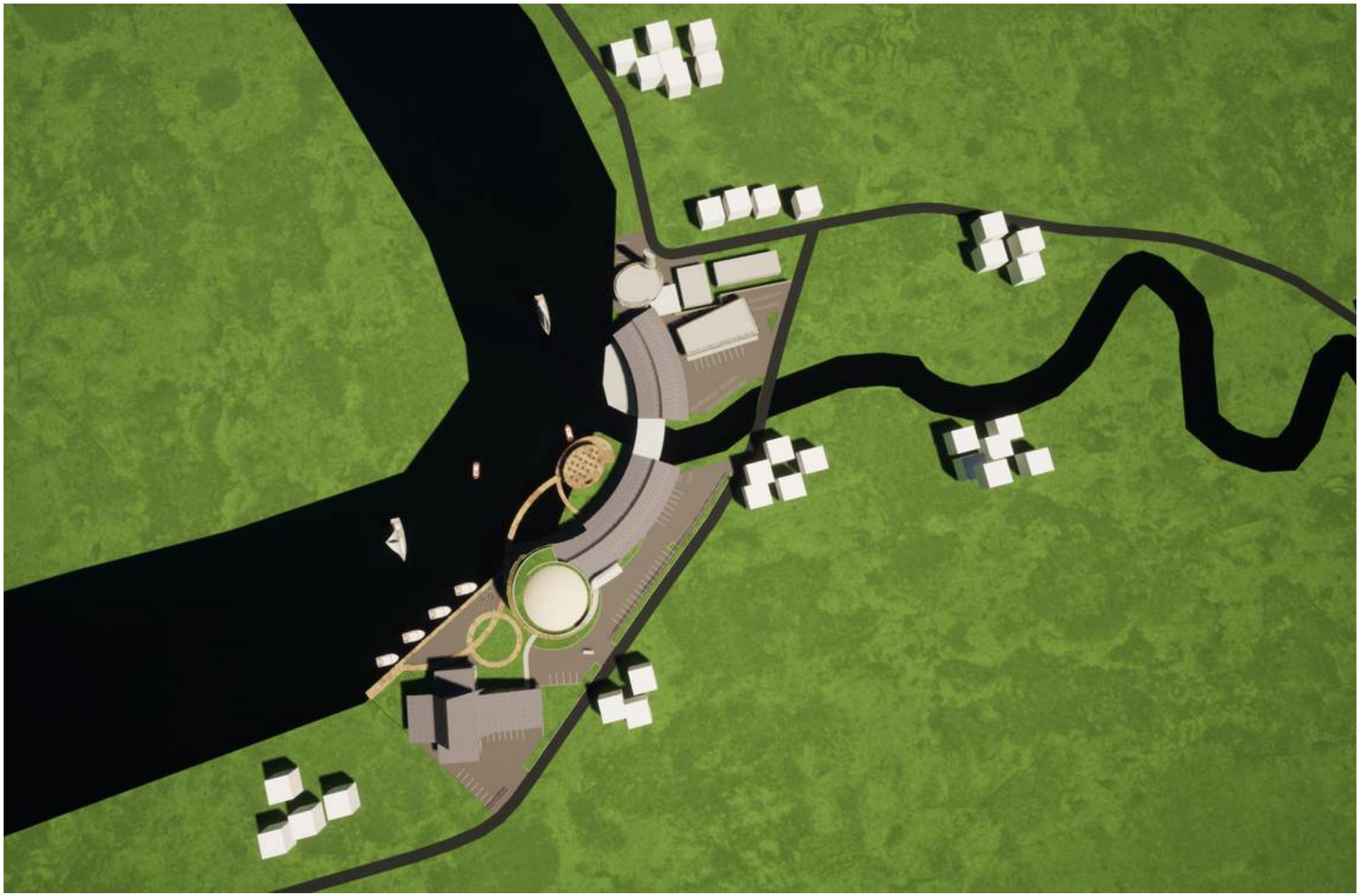
Block Plan

Tourism approaches in this area can focus on developing ecotourism and local culture. By promoting the Lok Baintan floating market as a main attraction, visitors can experience an authentic and immersive experience of local community life.

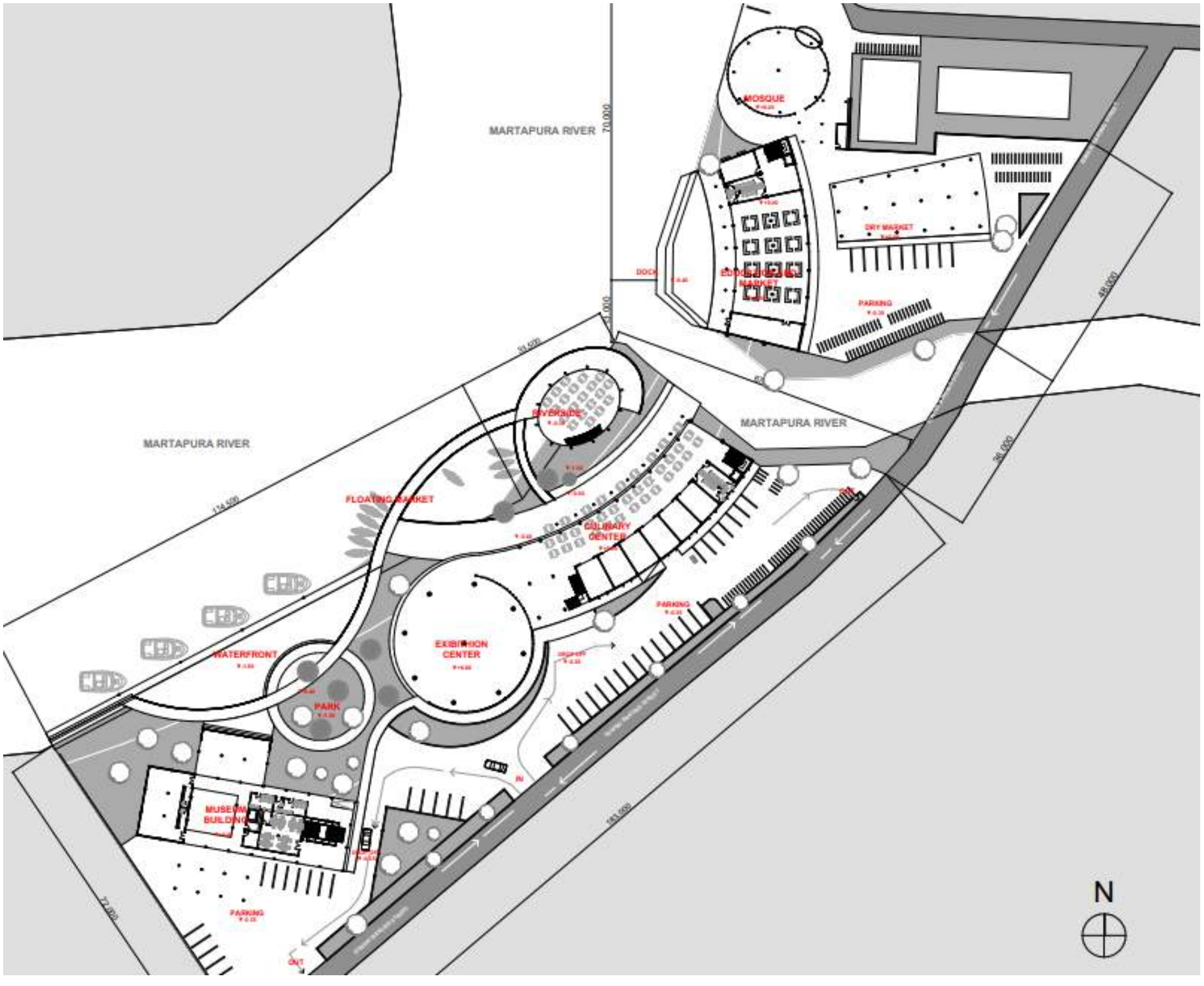
Tour packages can include a traditional boat tour that not only takes tourists along the river but also provides an opportunity to interact directly with local traders. Tourists can learn about the farming process, try fresh fruits, and taste traditional cakes sold at the market.

In addition, cultural activities such as handicraft workshops or art performances can be held to introduce visitors to local traditions and culture. By involving the community in tourism development, not only the local economy will benefit, but also the preservation of existing culture and traditions.

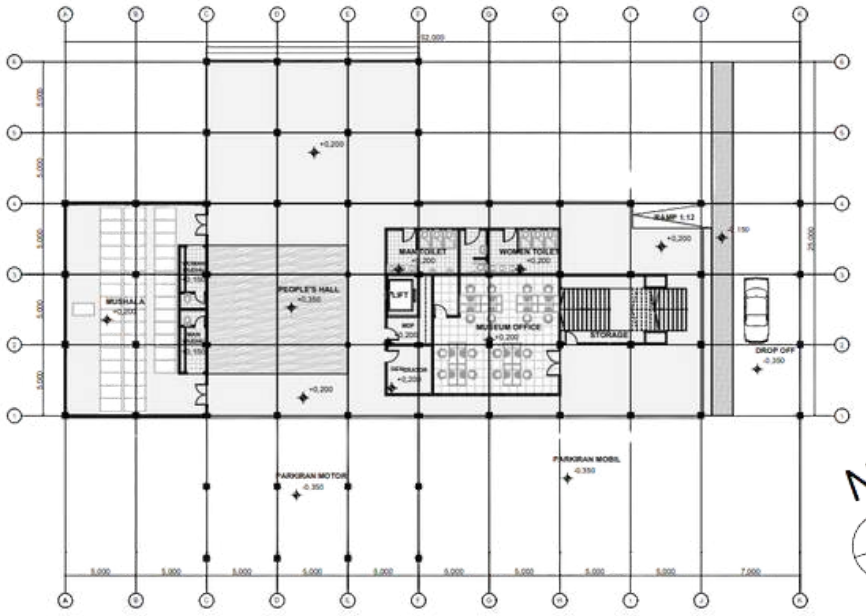
It is important to maintain a balance between tourism development and environmental and cultural preservation, so that the natural beauty and authenticity of the community are maintained while providing a valuable experience for tourists.

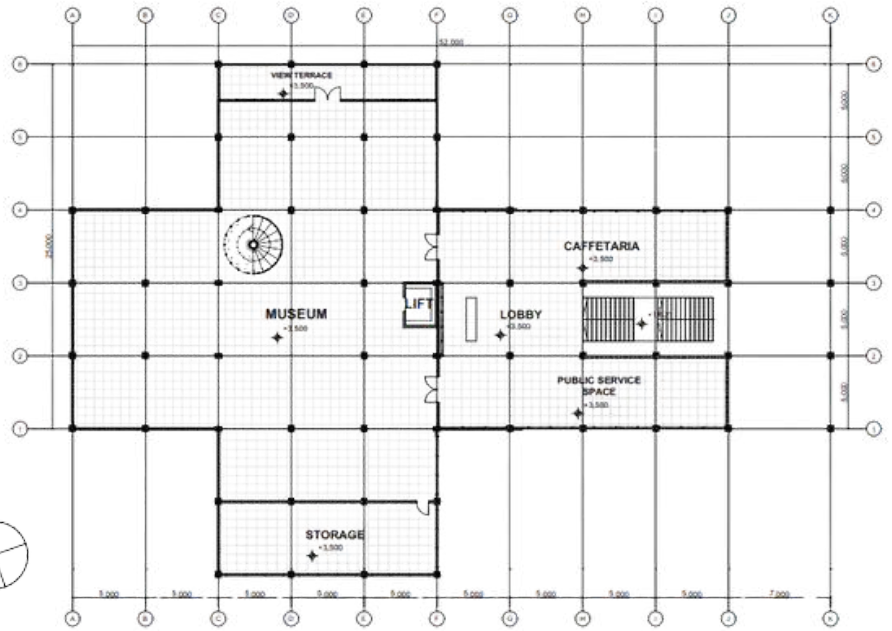


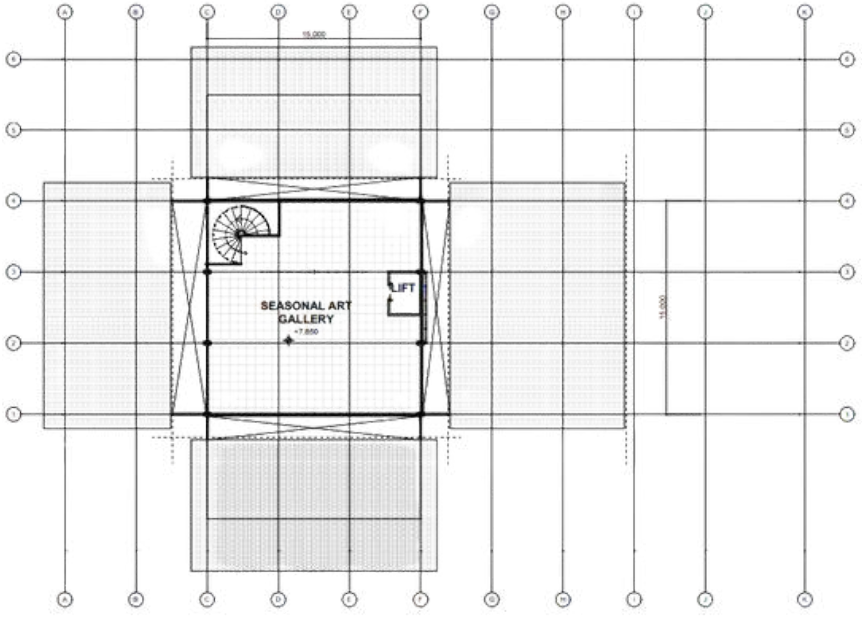
Site Plan


MARTAPURA RIVER
70.000
MOSQUE
DRY MARKET
DOCK
FOOD & SPICES MARKET
PARKING
50.000
33.000
RIVERSIDE
MARTAPURA RIVER
MARTAPURA RIVER
36.000
114.000
FLOATING MARKET
CULINARY CENTER
PARKING
EXIBITION CENTER
WATERFRONT
PARK
IN
MUSEUM BUILDING
PARKING
OUT
72.000
N

1st Building Plan







This building has 3 functions, namely Museum, Communal Space and Art Gallery.

Museums can enhance Banjar tourism by preserving and exhibiting local culture, such as carvings, traditional houses, and floating market traditions. Through interactive experiences and distinctive Banjar designs, museums become educational and visual attractions that extend tourist visits while strengthening the region's cultural identity.

Communal Space intended for villagers to gather to discuss new ideas to be shown to tourists, a gathering space

Art galleries can attract tourists by displaying local artworks, such as paintings, sculptures, and regional crafts. With attractive room designs and interactive exhibitions, galleries provide unique visual and cultural experiences, which make tourists interested in visiting and exploring further.

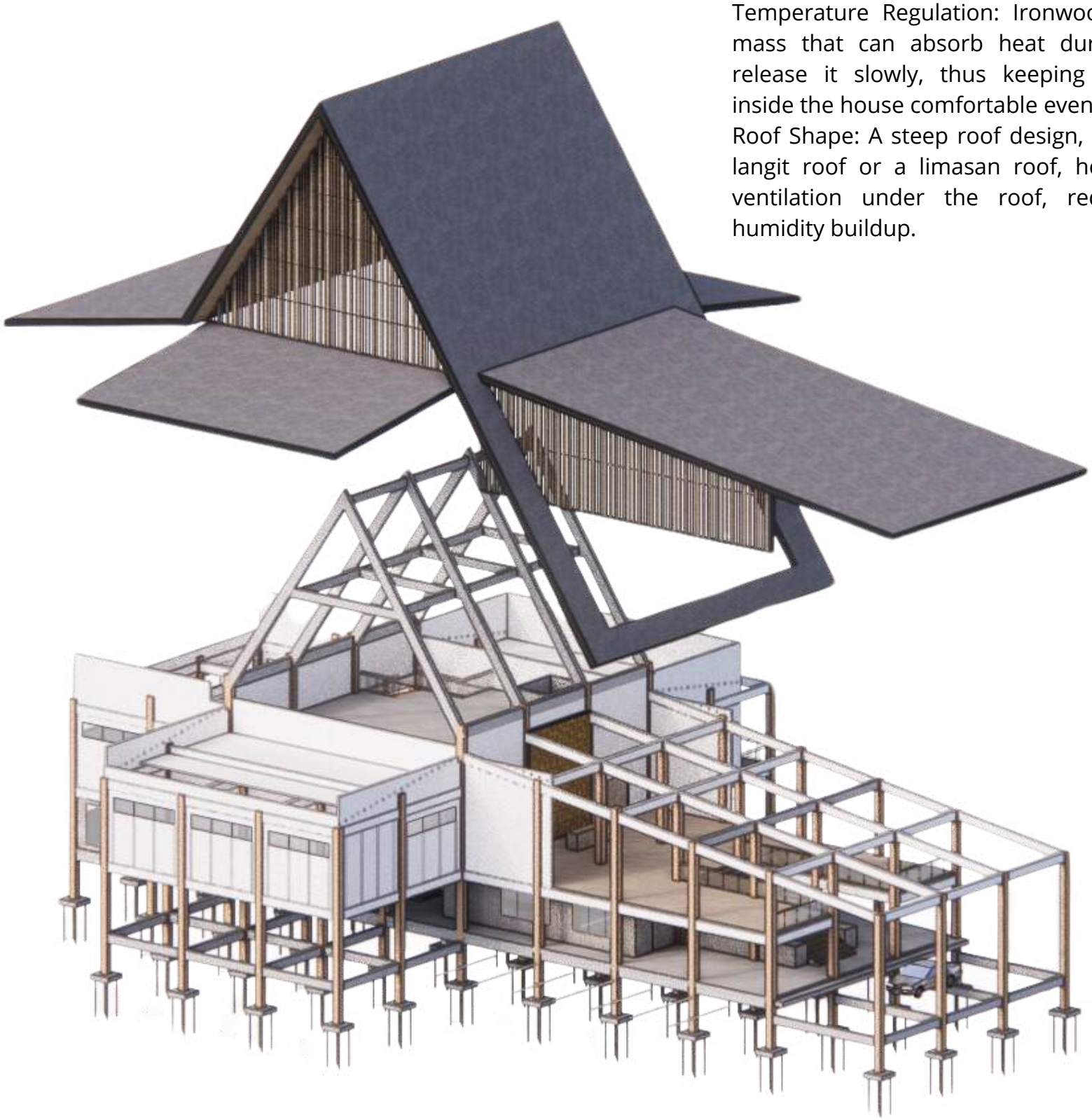
1st Building Elevation

Using a high-ridge building model with a passive cooling concept in an art gallery is very effective in attracting tourists while creating a comfortable and environmentally friendly environment. The high-ridge roof helps to channel hot air upwards, while the wooden lattice design on the walls allows for optimal air circulation, reducing heat without relying on mechanical cooling. The wooden material also gives a natural and aesthetic impression, and helps to keep the indoor temperature cool and comfortable for visitors. This design is not only environmentally friendly, but also strengthens the local character that can attract tourists.



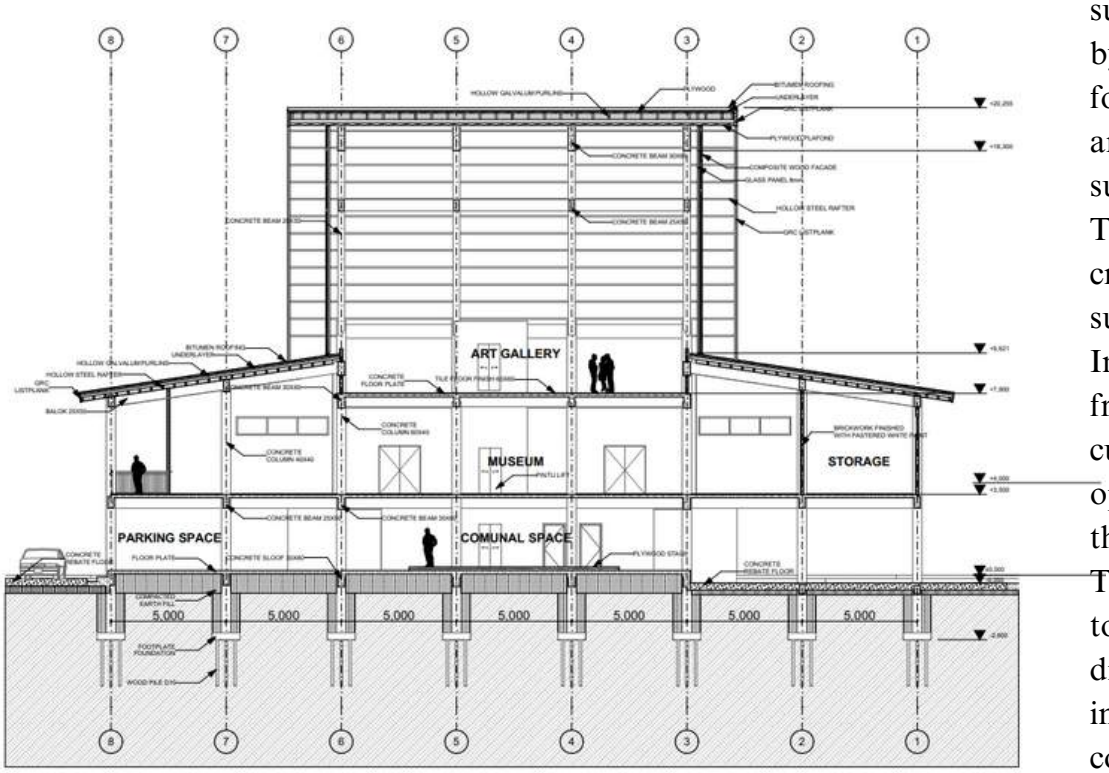


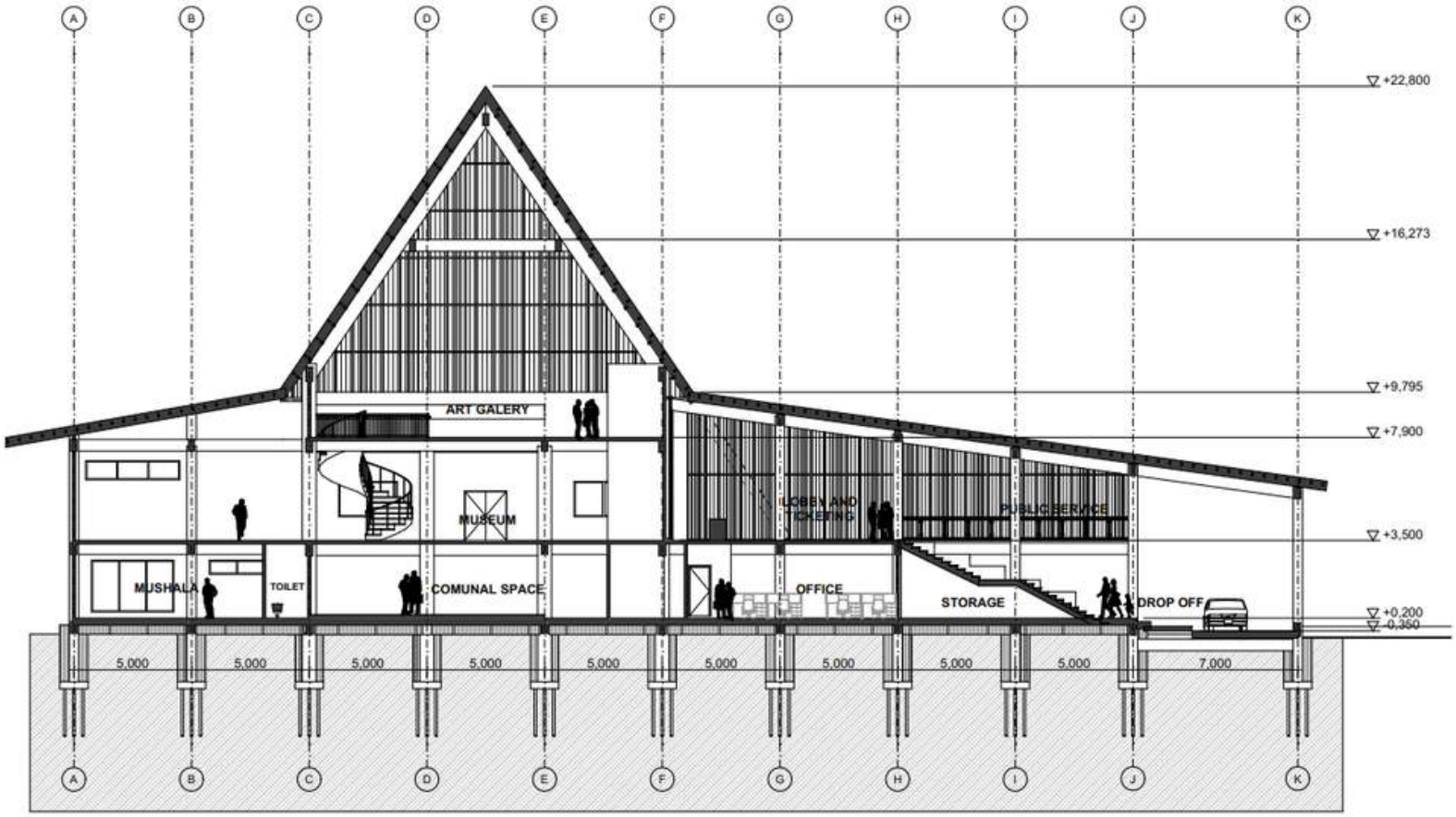
Neo Vernacular Museum



Roof with Thermal Mass Concept
Traditional Material: The roof of a traditional Banjar house often uses ironwood shingles, a local material known for its high durability and good thermal insulation properties.
Temperature Regulation: Ironwood has a thermal mass that can absorb heat during the day and release it slowly, thus keeping the temperature inside the house comfortable even in hot weather.
Roof Shape: A steep roof design, such as a sindang langit roof or a limasan roof, helps maximize air ventilation under the roof, reducing heat and humidity buildup.

Section



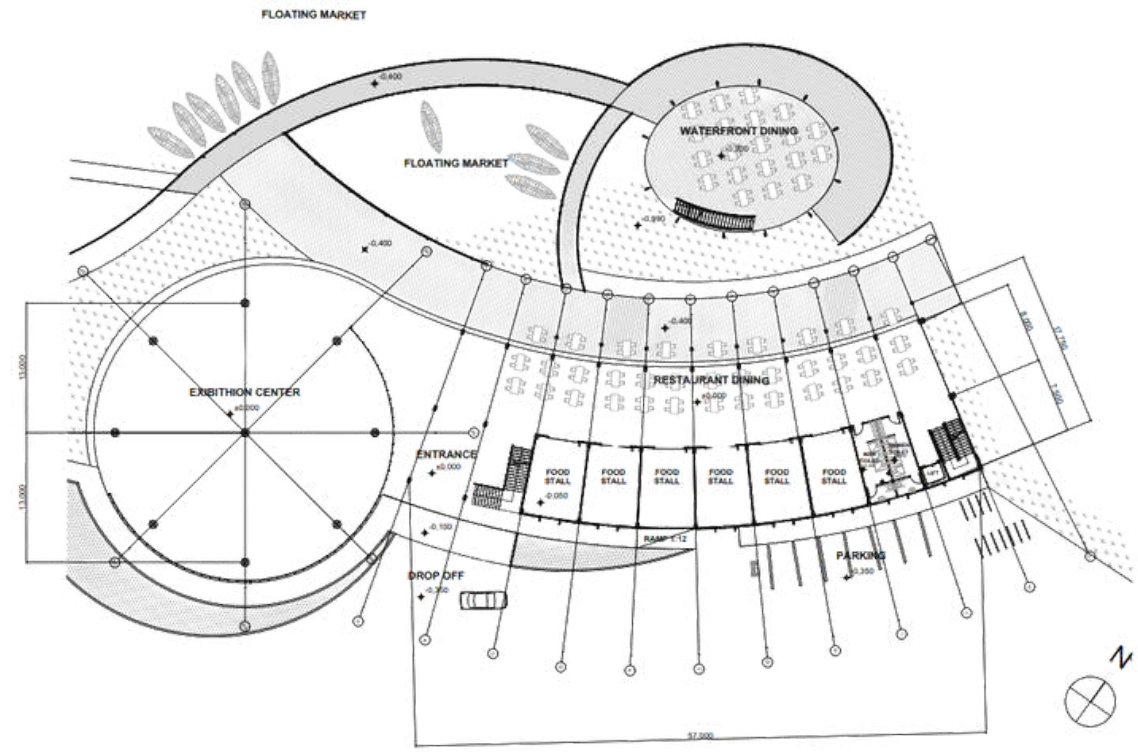


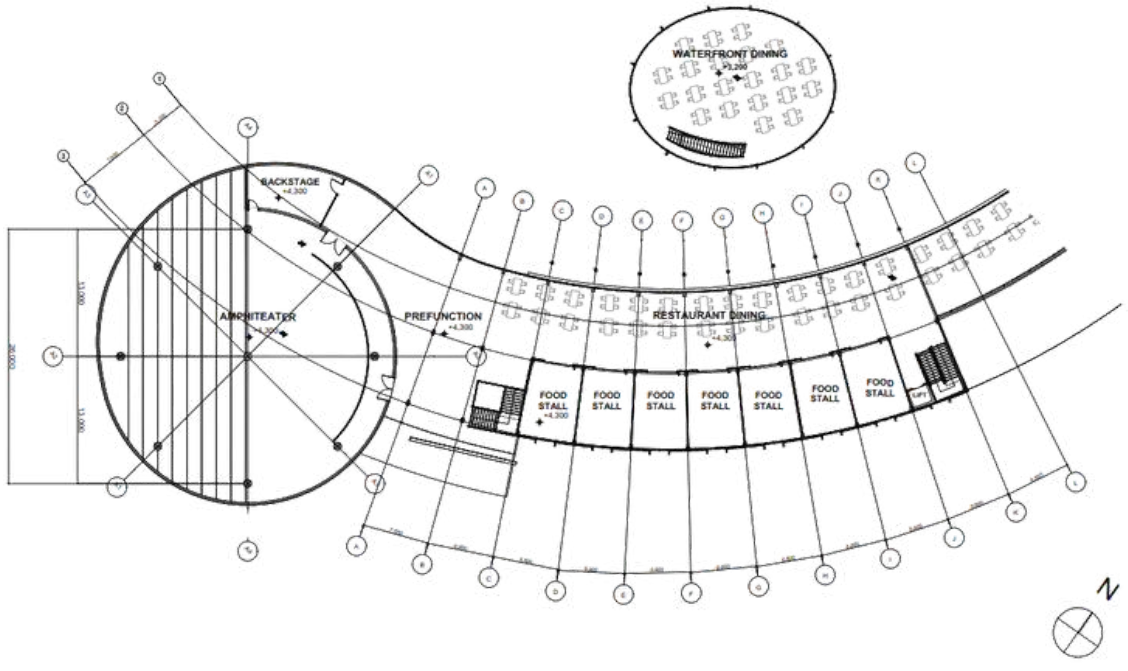
Because it is located in the area of the Lok Baintan River, Banjarmasin is designed in such a way that it is suitable for the environment, with a wooden foundation by looking at the surrounding buildings. There is a lift for the disabled and a large space to display works of art. . This building utilizes local resources and prioritizes sustainability, using environmentally friendly materials. The design combines traditional and modern elements, creating harmony between architecture and the surrounding nature.

Inside, there is a gallery displaying various works of art from local artists, providing space for creativity and cultural expression. In addition, the surrounding green open area offers a comfortable place to relax and enjoy the beauty of nature.

This facility is also equipped with the latest technology to support comfort and energy efficiency. With a disabled-friendly lift and large space, this building is an inclusive and accessible place for everyone, reflecting a commitment to diversity and acceptance.

2nd Building Plan





In addition to functioning as a warehouse landscape made curved, this design also gives an interesting and dynamic aesthetic impression. The curved shape of the landscape creates a soft visual flow, directing the view and guiding visitors to explore the area more naturally. In addition, the curved shape can help reduce the impact of wind and facilitate the flow of rainwater, making it more environmentally friendly. With the integration of natural elements, such as green plants and water elements, this area not only functions as a storage area but also as a refreshing recreation and relaxation space.

2nd Building Elevation

Curved buildings have a number of advantages in architecture, both in terms of aesthetics, function, and efficiency. Here are some of the advantages:

1. Aesthetics and Iconic

- Unique Appearance: Curved shapes create an interesting and different visual impression from conventional buildings, making them more recognizable and memorable.
- Harmony with Nature: Curves often feel more organic, suitable for blending with natural landscapes such as rivers or hills.

2. Structural Efficiency

- Load Distribution: Curved structures naturally distribute loads evenly, making them stronger and more resistant to pressure than straight structures.
- Material Reduction: Smart curved designs can reduce material requirements due to their efficient structural properties.

3. Aerodynamics and Energy Efficiency

- Wind Resistance: Curved buildings are more aerodynamic, reducing wind resistance and increasing stability, especially in open areas such as riverbanks.
- Optimization of Light and Ventilation: With a curved design, natural lighting and air flow can be maximized, supporting energy efficiency.

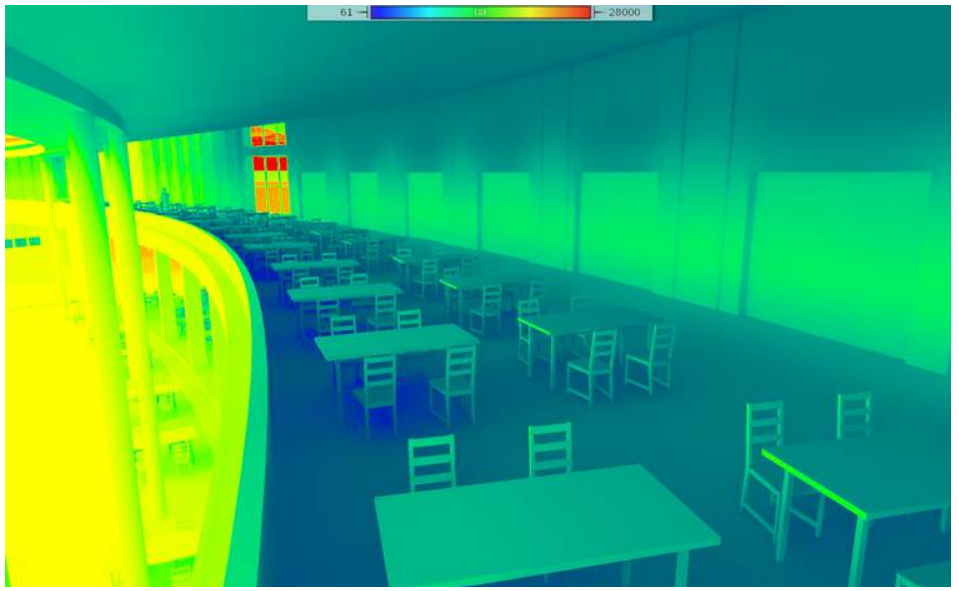
4. Flexibility in Function

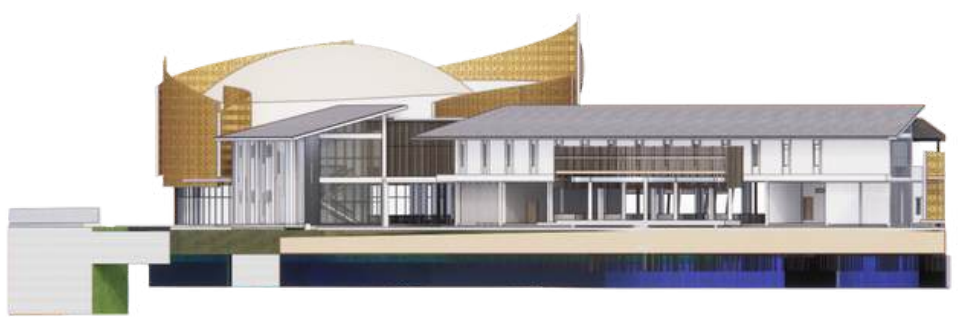
- Space Adaptation: Curved shapes allow for more flexible and dynamic spatial arrangements, suitable for various functions such as warehouses as well as public areas for tourists.
- User Experience: Curves create spaces that feel more friendly, comfortable, and inviting than rigid shapes.

5. Innovation and Creativity

- Opportunity for Experimentation: Curved buildings often utilize modern construction technologies and techniques, demonstrating innovation in architecture.
- Modern and Traditional Inspiration: Can combine modern technology with local cultural elements, giving a contemporary impression while being contextually relevant.

The curved design of the warehouse building in Lok Baintan can be a harmonious solution with the river environment while creating an architectural icon that attracts tourists.



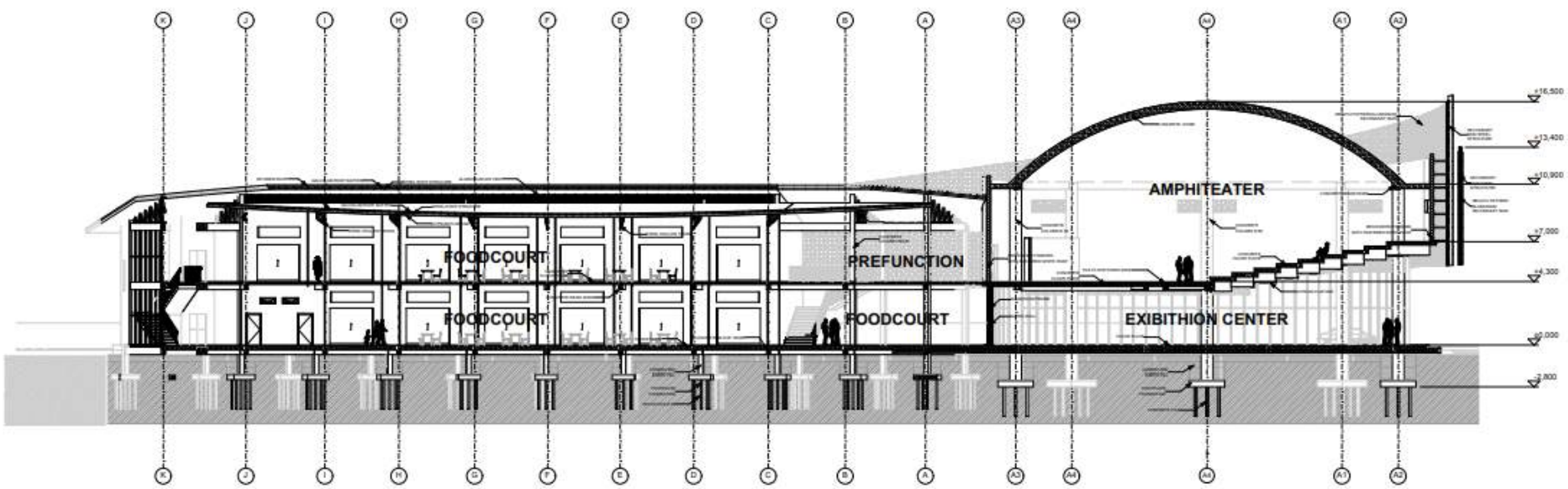


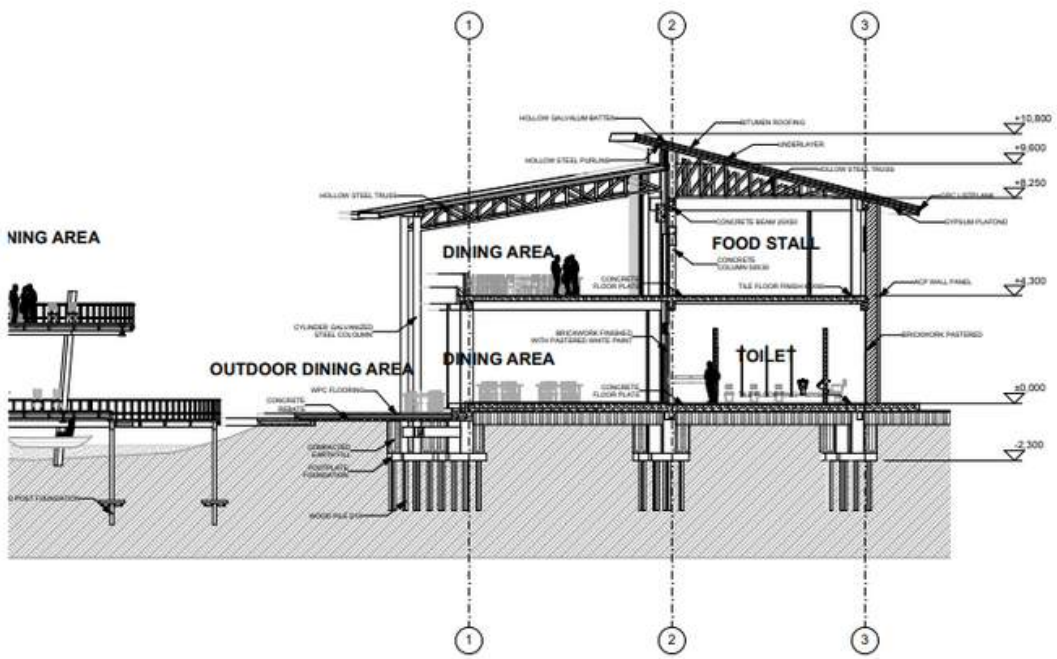






2nd Building Section





Dome roofs are used for wide spans of the room so that there are no columns, in the amphitheater performance area. then the market section has a bitumen roof with a galvalum frame and hollow steel truss. . This combination provides strength and weather resistance, while creating an attractive modern aesthetic. Under the roof, the market area is designed to maximize air circulation and natural light, making it a comfortable place for visitors. In addition, the use of high-quality materials ensures the safety and durability of the building, so that traders and visitors can do their activities calmly. This innovation in architectural design is not only functional but also reflects technological and aesthetic advances in the development of public spaces.

2nd Building Section

The amphitheater is used for traditional dance performances for visitors to the floating market of Lok Baintan Banjarmasin, then there is also a dock to enter visitors into the area, when it is finished operating the floating market center area can also be used in the afternoon and the building will be used as a market. The riverside dining area is used for eating while looking at the river

. The atmosphere around the river is very pleasant, with a refreshing breeze and views of small boats passing by. Visitors can enjoy local specialties while watching the sunset cast a golden glow on the water's surface.

In addition, various souvenir shops are also available, offering local handicrafts and specialty products that can be taken home as souvenirs. Traditional music performances are often held in the evenings, adding to the lively atmosphere and providing an authentic cultural experience for tourists.

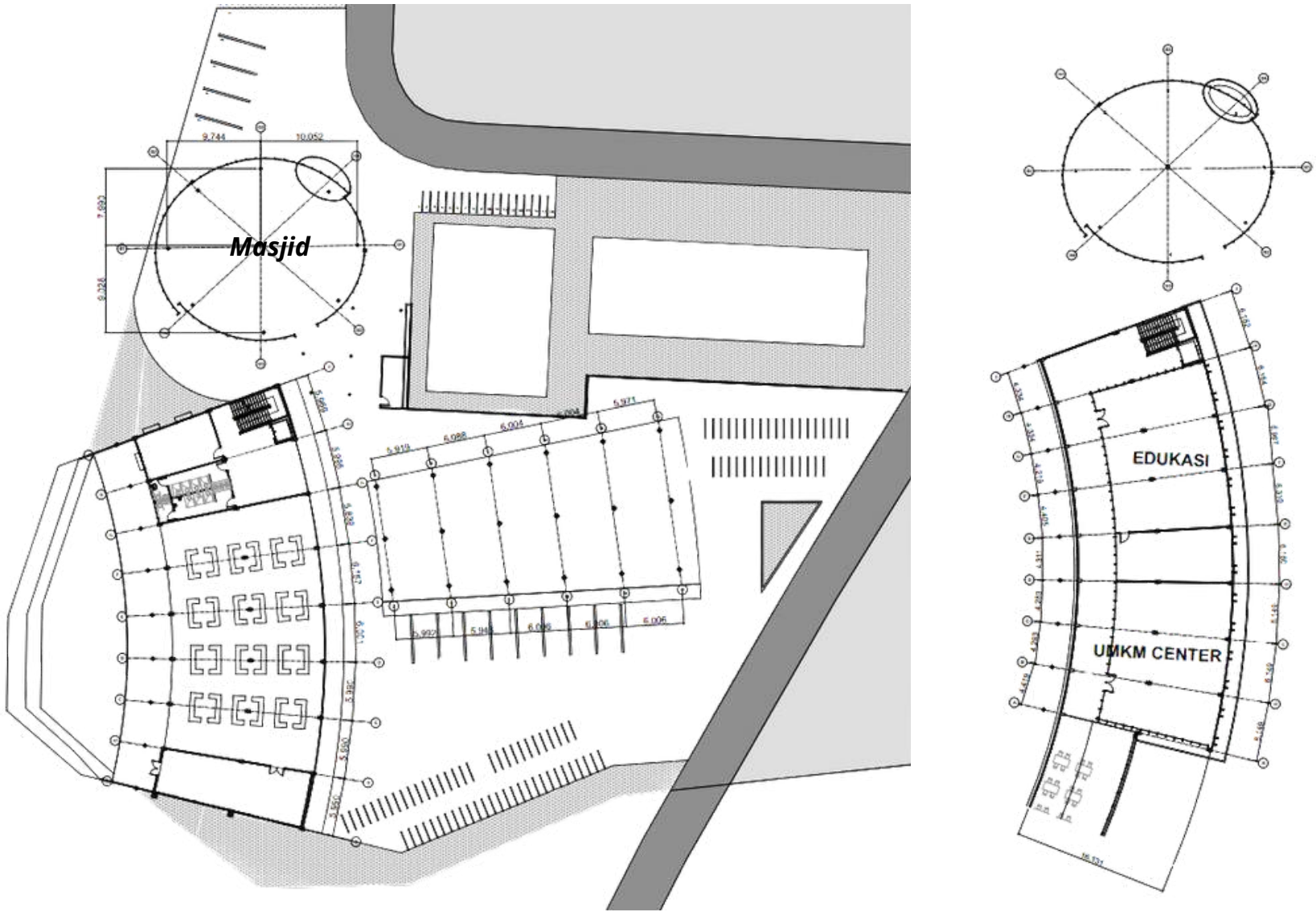
This area is truly an ideal place to spend time with family and friends, enjoying the natural beauty and cultural richness of Banjarmasin.







3rd Building Plan



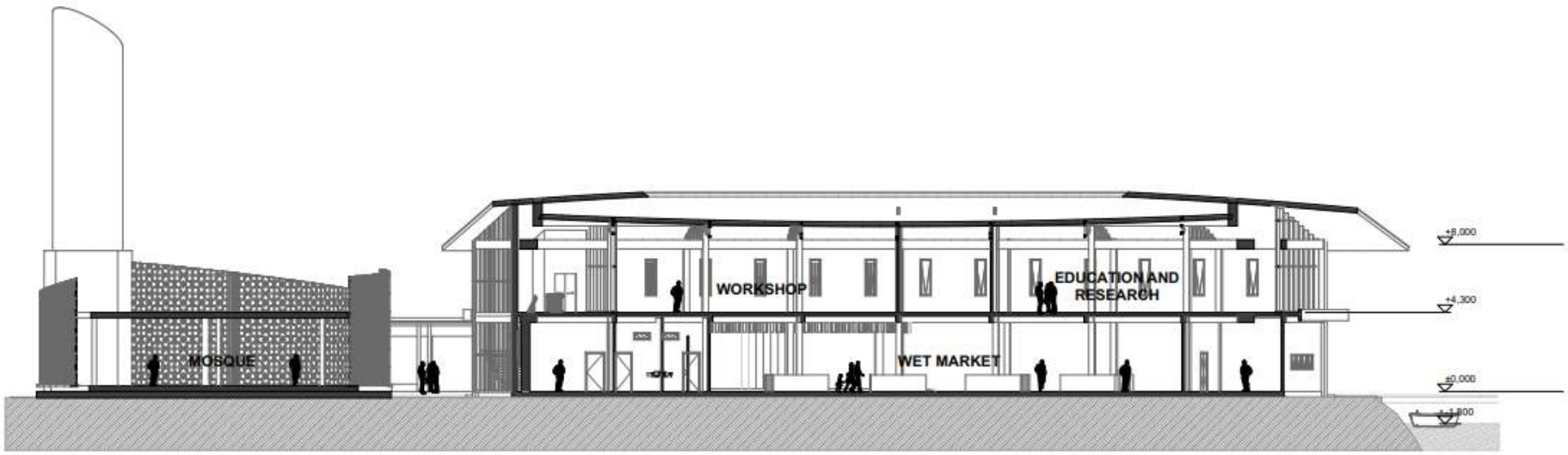
Two islands separated by a river connected by a bridge create the charm of this building, in this building there is also a learning center specifically for sellers to learn business, for example running a business or even learning to recite rhymes to preserve Baahui customs

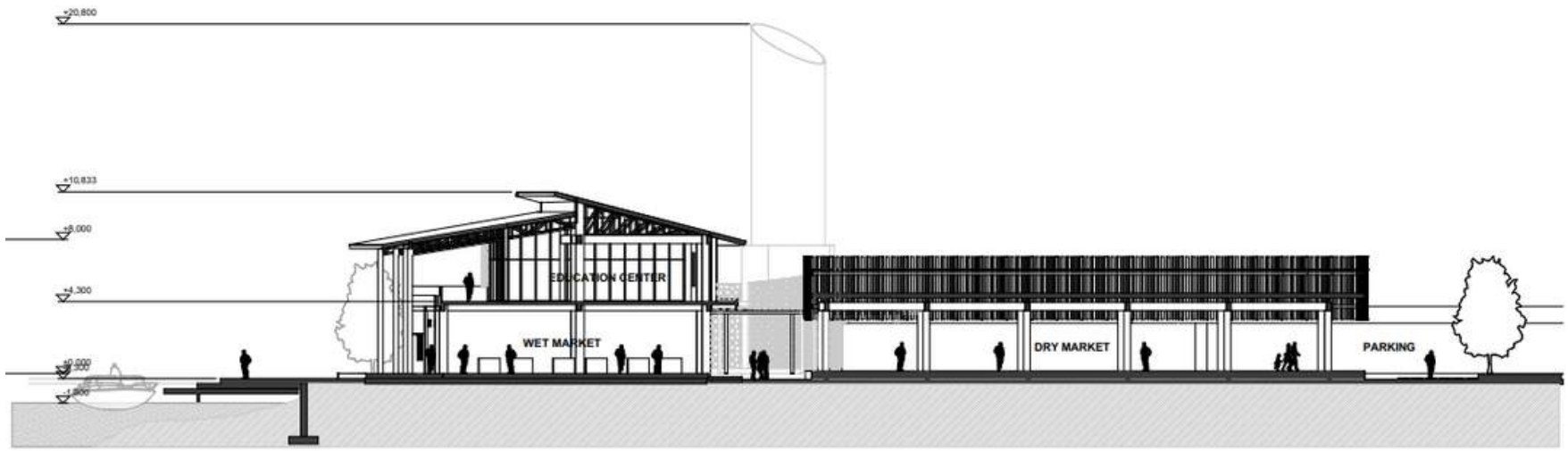
Around the bridge, beautiful gardens filled with local plants, creating a cool and refreshing atmosphere. Every corner of this building is designed with stunning architecture, combining traditional and modern elements.

Visitors can enjoy the enchanting river view while learning at the learning center. Here, sellers can take part in workshops guided by experts to improve their skills. In addition, the recitation session is a favorite, where participants are invited to express their creativity while preserving local cultural heritage.

This building is not only an educational center, but also a gathering place for the community to share experiences and inspiration. With the supporting facilities, it is hoped that sellers can grow together, strengthen the local economy, and maintain traditions that have been passed down from generation to generation.

3rd Building Section





This is an architecture that combines traditional and modern characteristics, with wooden lattice materials and secondary aluminum skin making them in harmony with their surroundings. The soaring roofs give a spacious and open impression, while natural light enters through large windows strategically placed to maximize sunlight. Inside, the spaces are designed with a functional yet artistic layout, creating a warm and inviting atmosphere. Every element, from the texture of the floor to the small details of the furniture, is carefully selected to maintain a balance between aesthetics and comfort. This architecture not only offers visual beauty, but also provides a living experience that blends with nature, modernity, and tradition.

Building Facade

The use of secondary skin with a Malay-patterned aluminum pattern has many benefits, both aesthetically, functionally, and sustainably. Here are the main benefits:

1. Strengthening Cultural Identity
- The Malay pattern applied to aluminum reflects local wisdom and strengthens cultural identity in architectural design.
- This element is a symbol of respect for cultural heritage and provides a distinctive aesthetic touch that distinguishes the building from other modern designs.

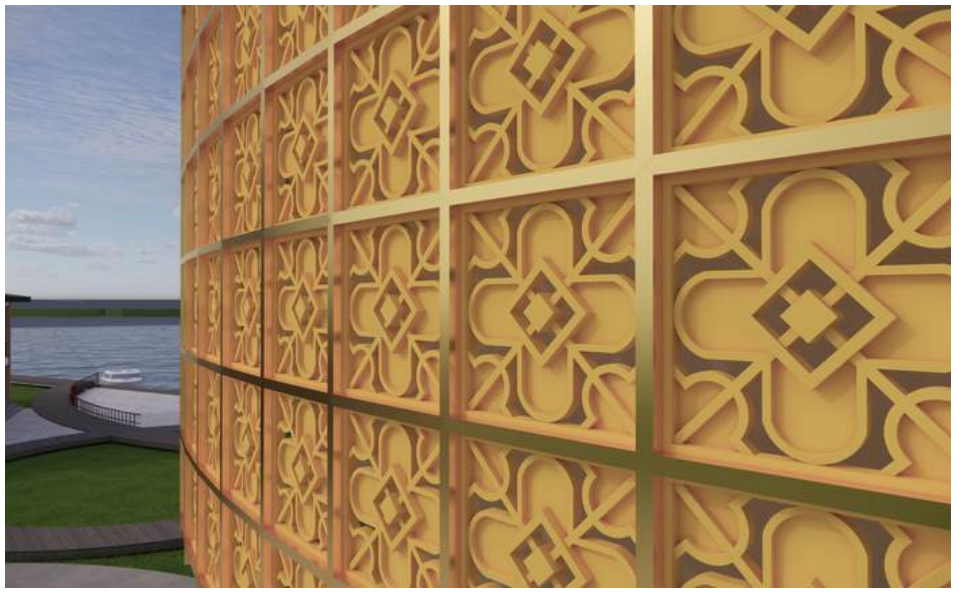
2. Passive Climate Control
- Solar Heat Reduction: The secondary skin acts as a protective layer against direct sunlight, reducing the heat entering the building and creating a more comfortable room temperature.

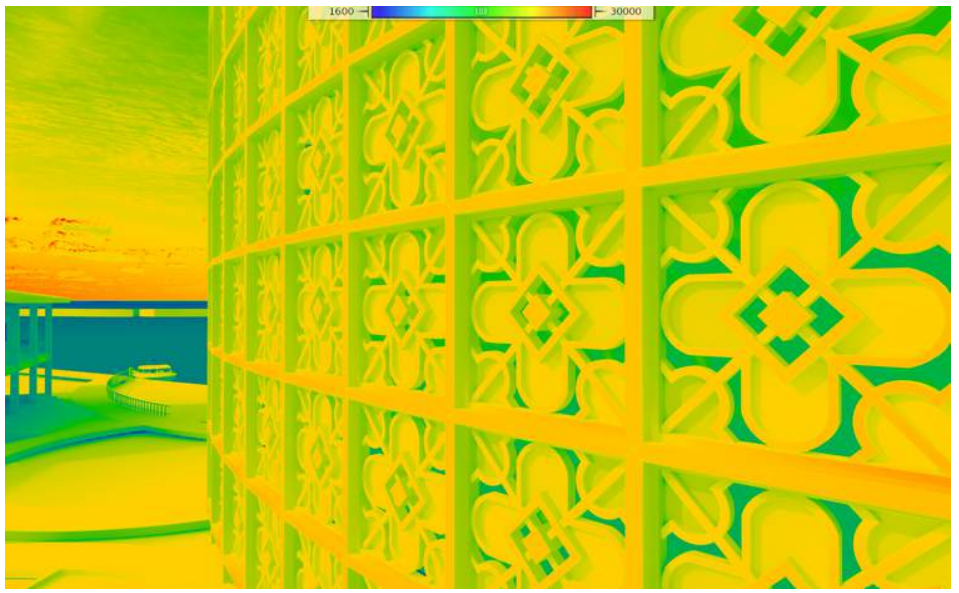
Natural Ventilation: The perforated pattern on aluminum allows good air circulation, reducing the need for air conditioning.

3. Energy Efficiency
- By reducing heat loads and maximizing air circulation, the secondary skin helps reduce energy consumption, especially for room cooling.
- Aluminum as a material is also reflective, helping to reflect light and heat, increasing the thermal efficiency of the building.

4. Modern Aesthetics that are Functional
- Malay patterned aluminum combines traditional and modern elements, creating an aesthetic look that remains relevant to the times.
- The attractive pattern also provides visual appeal, making the building more iconic and recognizable.

5. Durable and Easy to Maintain
- Aluminum is a material that is corrosion-resistant, lightweight, and has a long life. This makes the secondary skin more durable even when exposed to extreme weather.
- It is relatively easy to maintain, only requiring regular cleaning without special treatment.

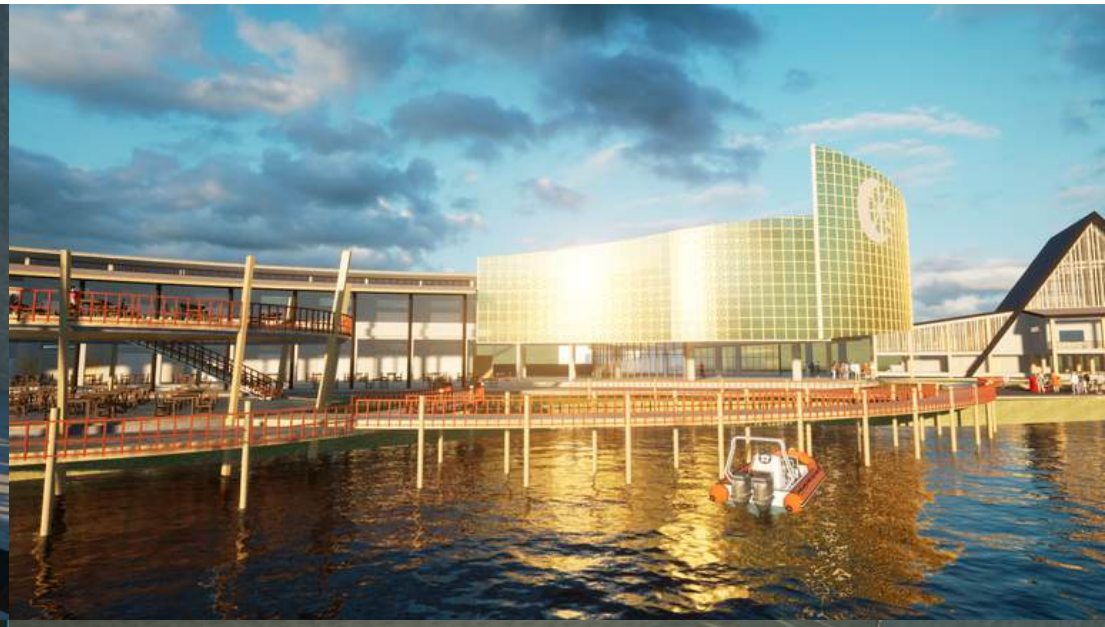


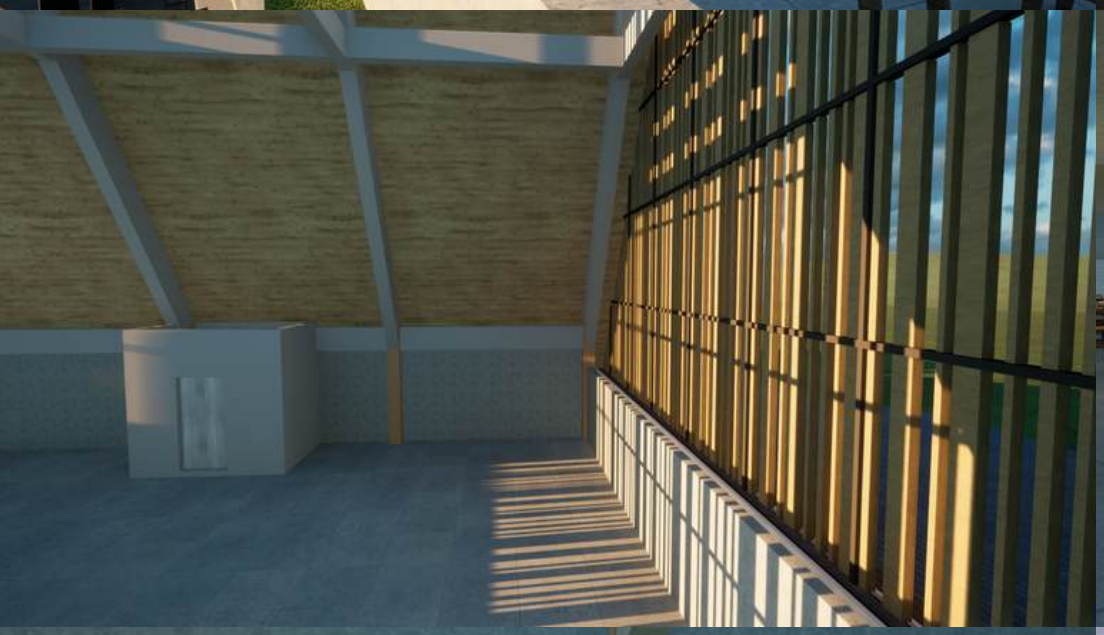


6. Privacy and Security
- The secondary skin provides an additional level of privacy because it limits direct views into the room without blocking natural lighting.
- The dense pattern can act as a physical barrier, increasing building security.

With a combination of aesthetic, functional, and sustainable benefits, the use of Malay patterned aluminum secondary skin is an ideal design solution to strengthen cultural identity while creating comfortable and efficient spaces.



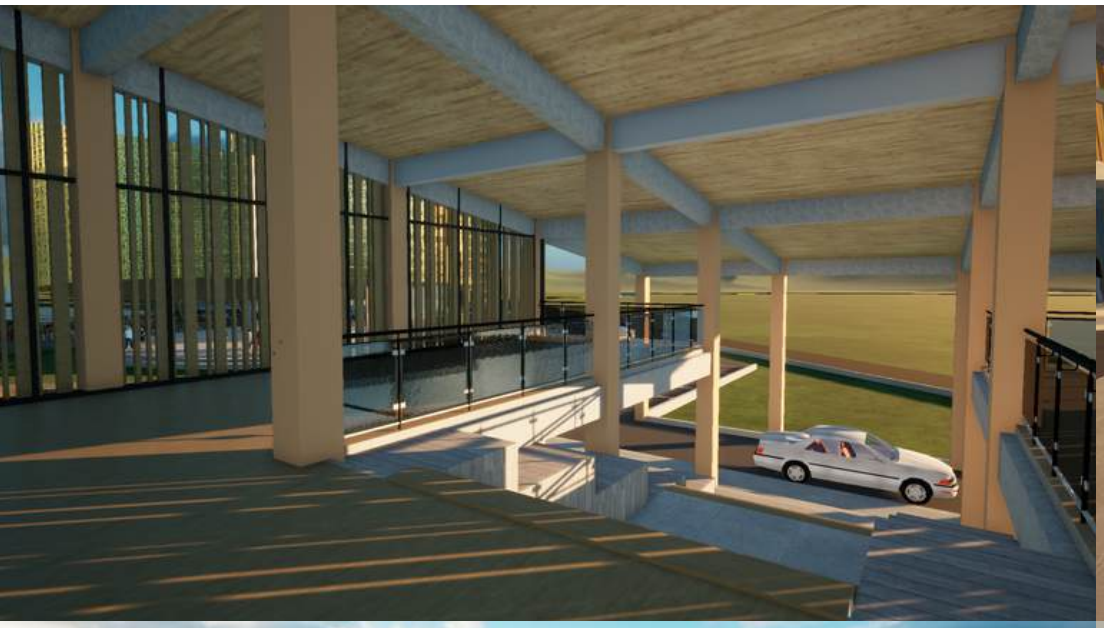






















DEPARTMENT of ARCHITECTURE

Nurhaliza 20512075

05 REFLECTION



Designing the Floating Market Center as a Tourist Attraction

Meinora Dewi Nu

UNIVERSITAS ISLAM INDONESIA

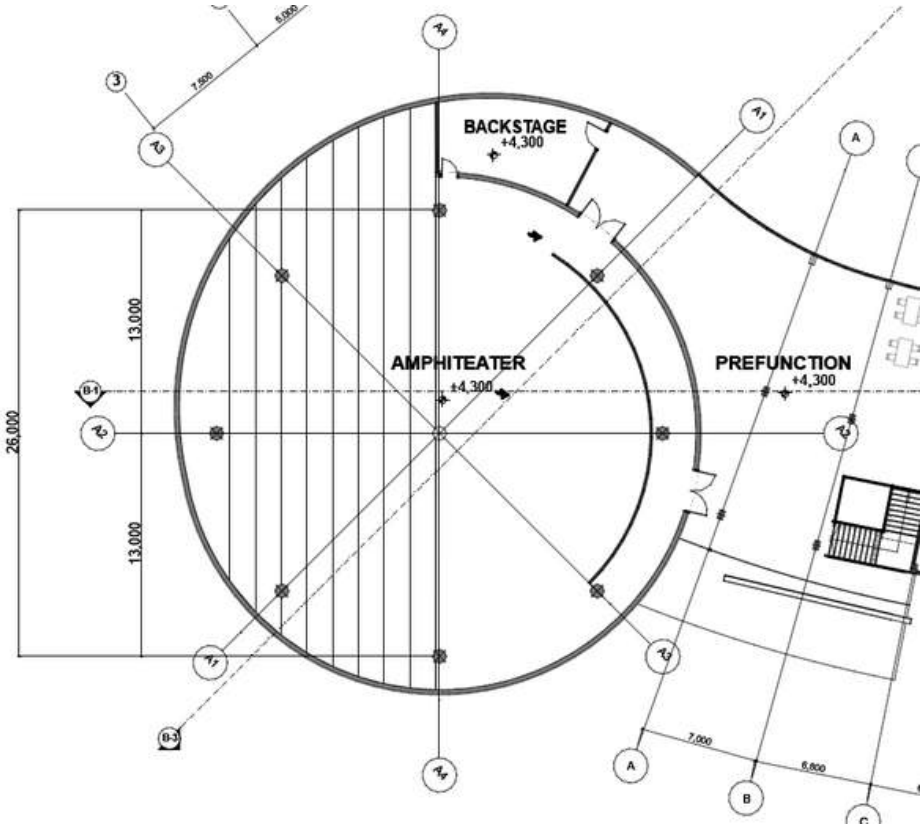
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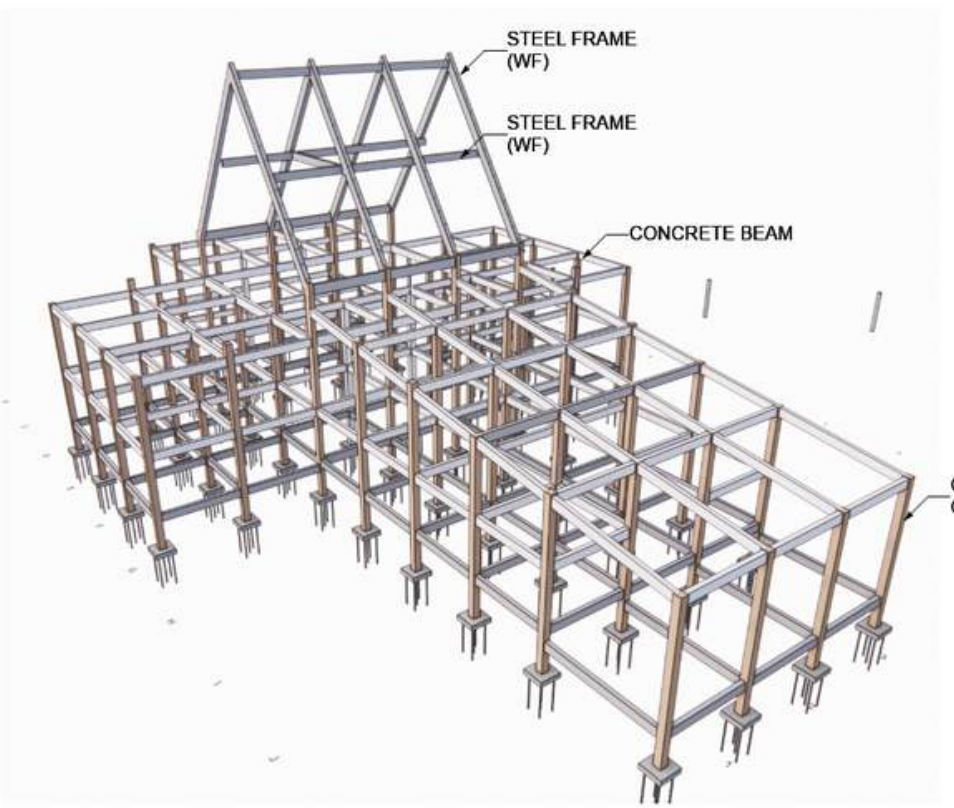
STARS

Door Orientation (Emergency Egress)



Based on the review during the test, the door orientation needs to be changed, from initially opening inward to opening outward, this is important in the event of a fire so that people are not trapped in the room, and can break the door out and evacuate. In addition, changing the door orientation can improve safety and comfort in daily use. With the door opening outward, the space inside the room becomes more efficient because it is not blocked by the swing of the door. It also makes it easier for people carrying large items or strollers to access, reducing the risk of collisions or minor accidents. The implementation of this change must be done by considering the building structure and ensuring that the hinges and door lock system can support the new orientation.

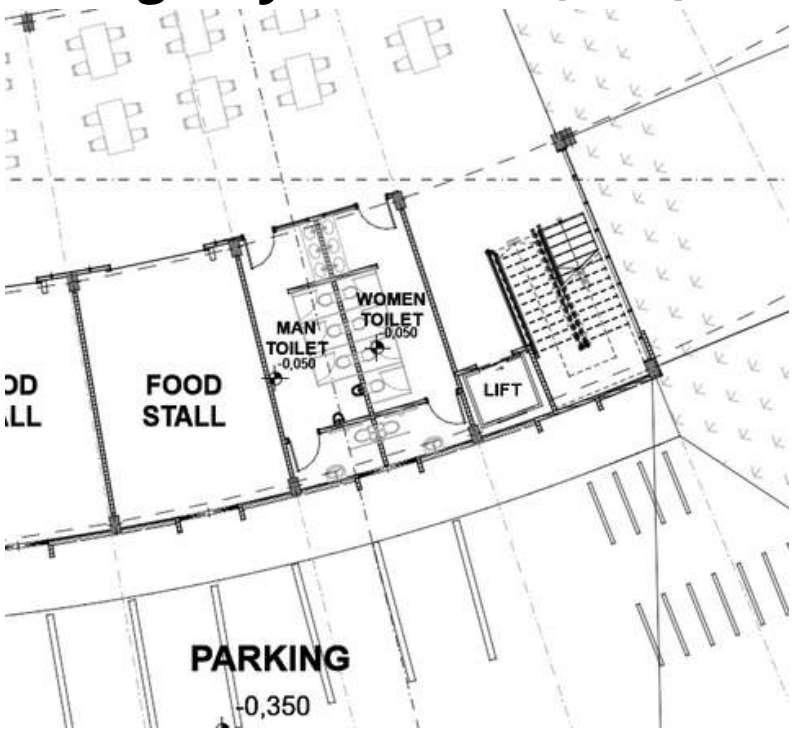
Roof Structure



Based on the review results, it will be difficult if the concrete beam is combined with hollow galvalum, therefore based on the advice of the supervisor, it is better to use concrete for the main structure while the roof structure uses WF Steel Frame. The selection of WF Steel Frame for the roof structure provides a number of advantages, including high strength and durability. WF Steel Frame is able to withstand heavy loads and external pressures, such as wind and rain, thus providing optimal protection for the building. In addition, the use of this material allows for greater design flexibility, allowing architects to create more creative and aesthetic roof shapes.

On the other hand, the use of concrete for the main structure of the building provides the necessary stability and durability, especially in the face of earthquakes or extreme weather changes. The combination of concrete and WF Steel Frame creates a strong synergy, ensuring that the building is not only safe and durable, but also efficient in the use of materials and construction costs.

Emergency ELevator (LIFT)

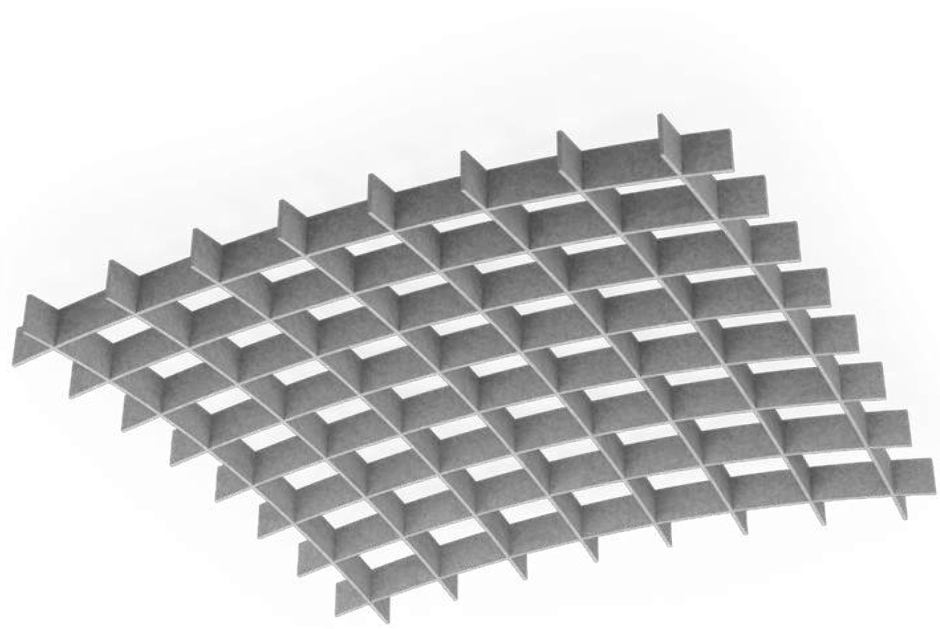


Based on the review results, it is better if the elevator meets the emergency lift standards, this is necessary in case of fire so that people with disabilities can be evacuated more quickly. In addition, it is important to ensure that the elevator is equipped with a sophisticated and easily accessible fire warning system. Elevator doors should be designed to be easily opened in an emergency, and evacuation routes should be clear and free from obstacles. Regular training for security officers and building users on evacuation procedures is also very important to ensure the safety of everyone, especially those with limited mobility. Regular education and simulations can improve emergency preparedness.

Dome Accoustic Panel



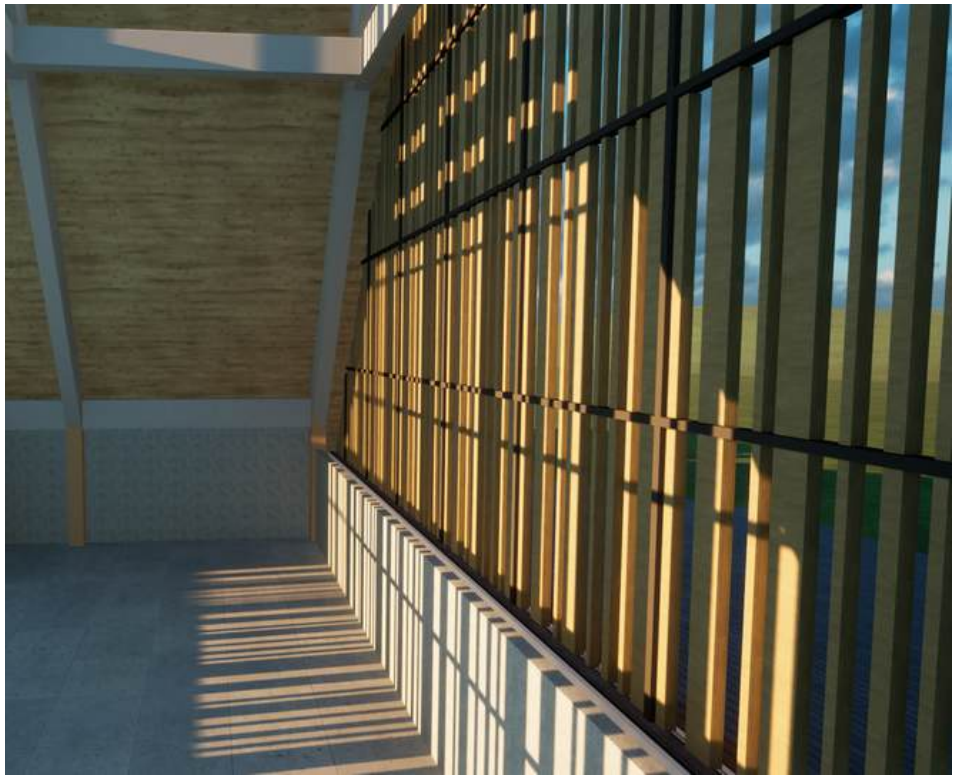


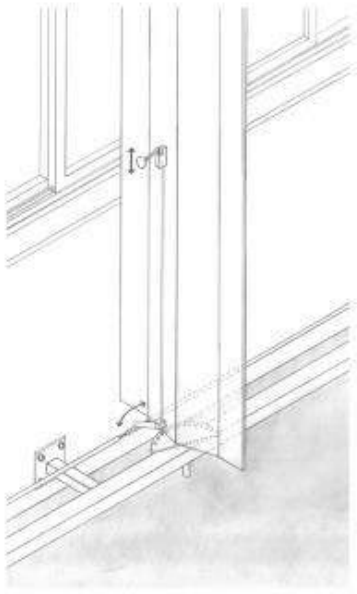


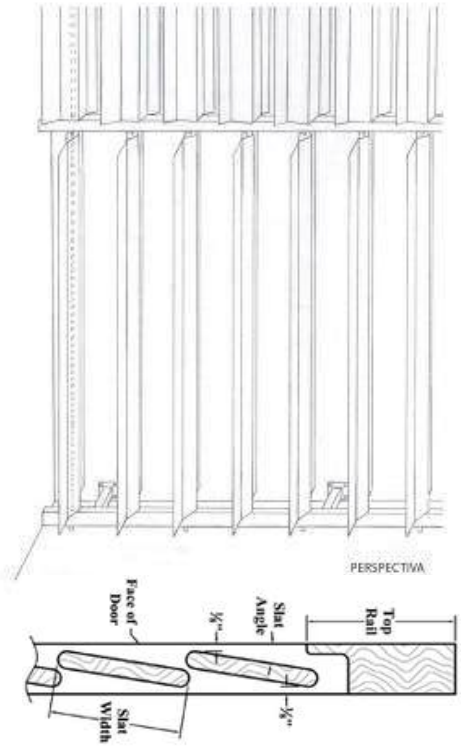
Based on the experience of the Ulil Albab Mosque where the dome affects the building's acoustics badly because it is very echoey, I provide an alternative for installing panels so that the sound of the amphitheater room is better. Dome acoustic panels can help reduce echo and improve sound quality by absorbing excessive sound waves. Installing these panels will not only improve acoustic comfort, but also maintain the aesthetics of the room. In addition, by choosing the right material, acoustic panels can provide an artistic touch that enhances the overall beauty of the interior design. Considerations in choosing the right panel must also include durability and ease of maintenance, so that it can function optimally in the long term. Thus, the use of dome acoustic panels is an effective solution to create a quieter and more comfortable environment.

https://arktura.com/product/softgrid-dome/

Retaining Rain water

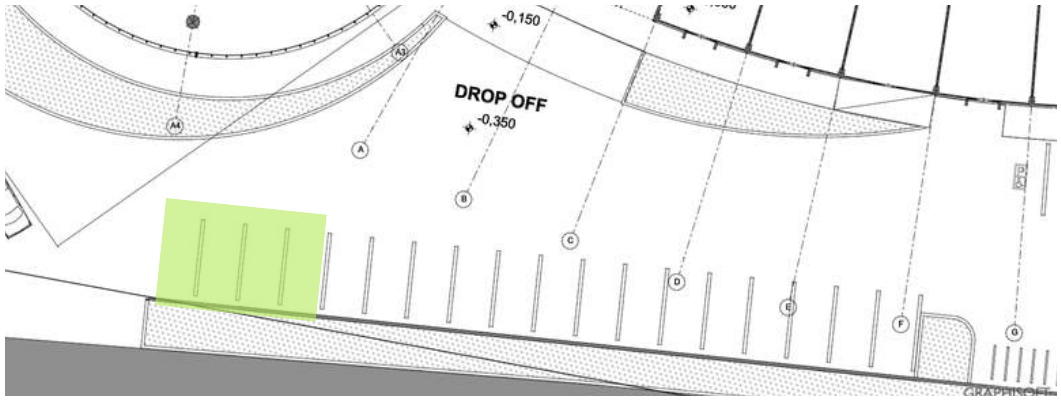


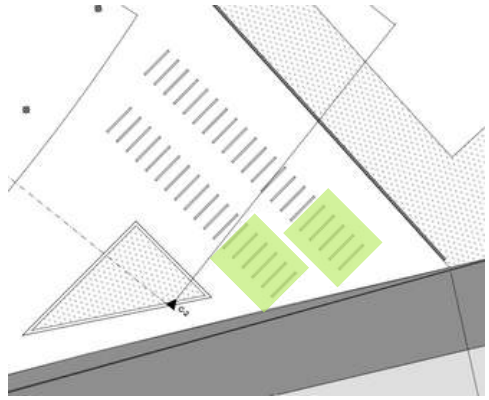




Using louvres that can be closed when it rains so that the museum can place artworks without getting wet. These louvres are designed with a mechanism that allows for angle adjustment, providing flexibility in controlling airflow and light. When the weather is fine, the louvres can be opened to maximize ventilation and natural light, creating a comfortable and energy-efficient environment inside the museum. Meanwhile, when it rains, the louvres can be tightly closed to protect the artworks from moisture and potential water damage. In this way, the museum can maintain ideal conditions for its collections, ensuring that each work is maintained and protected from harmful external elements.

Adding Parking

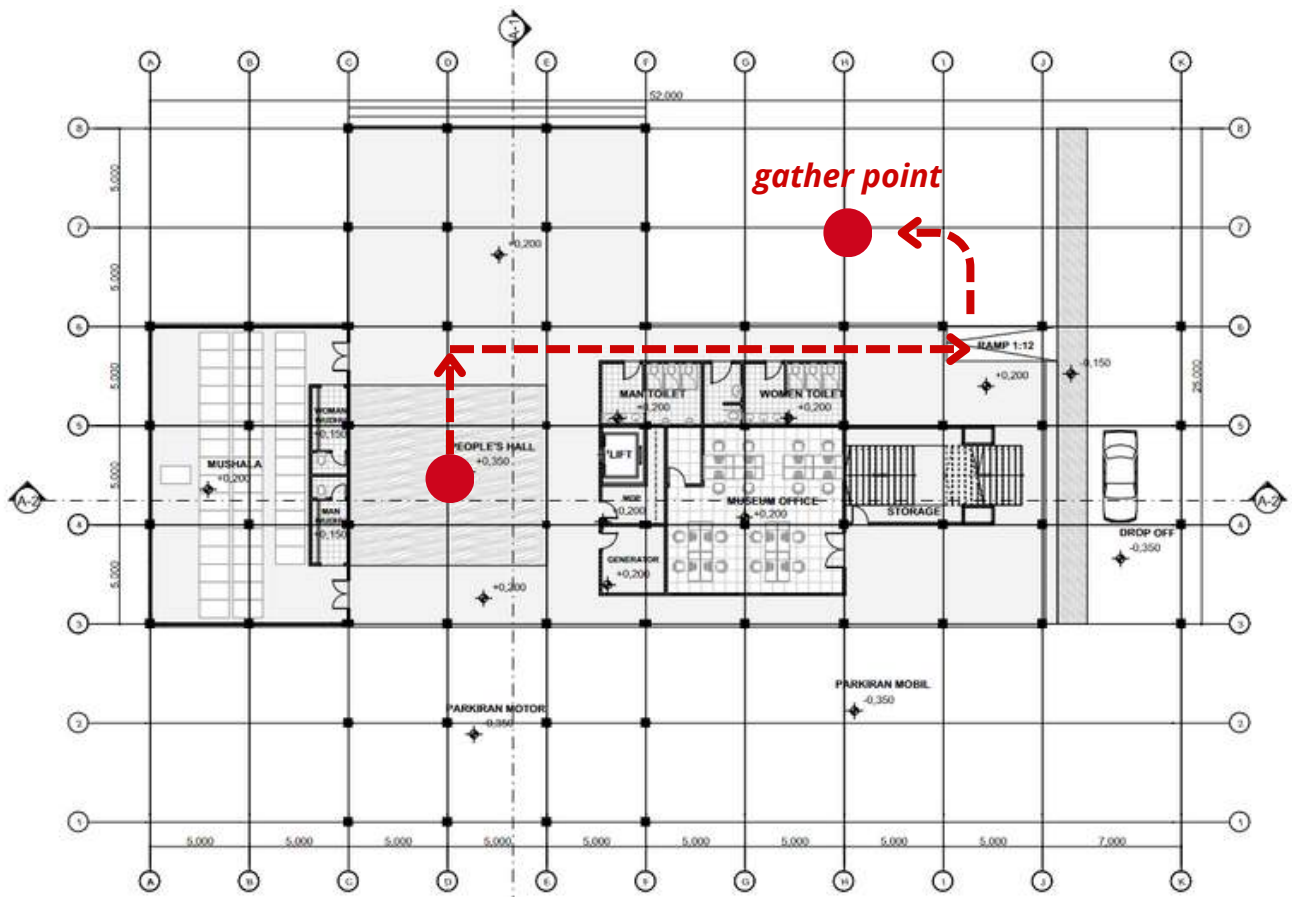


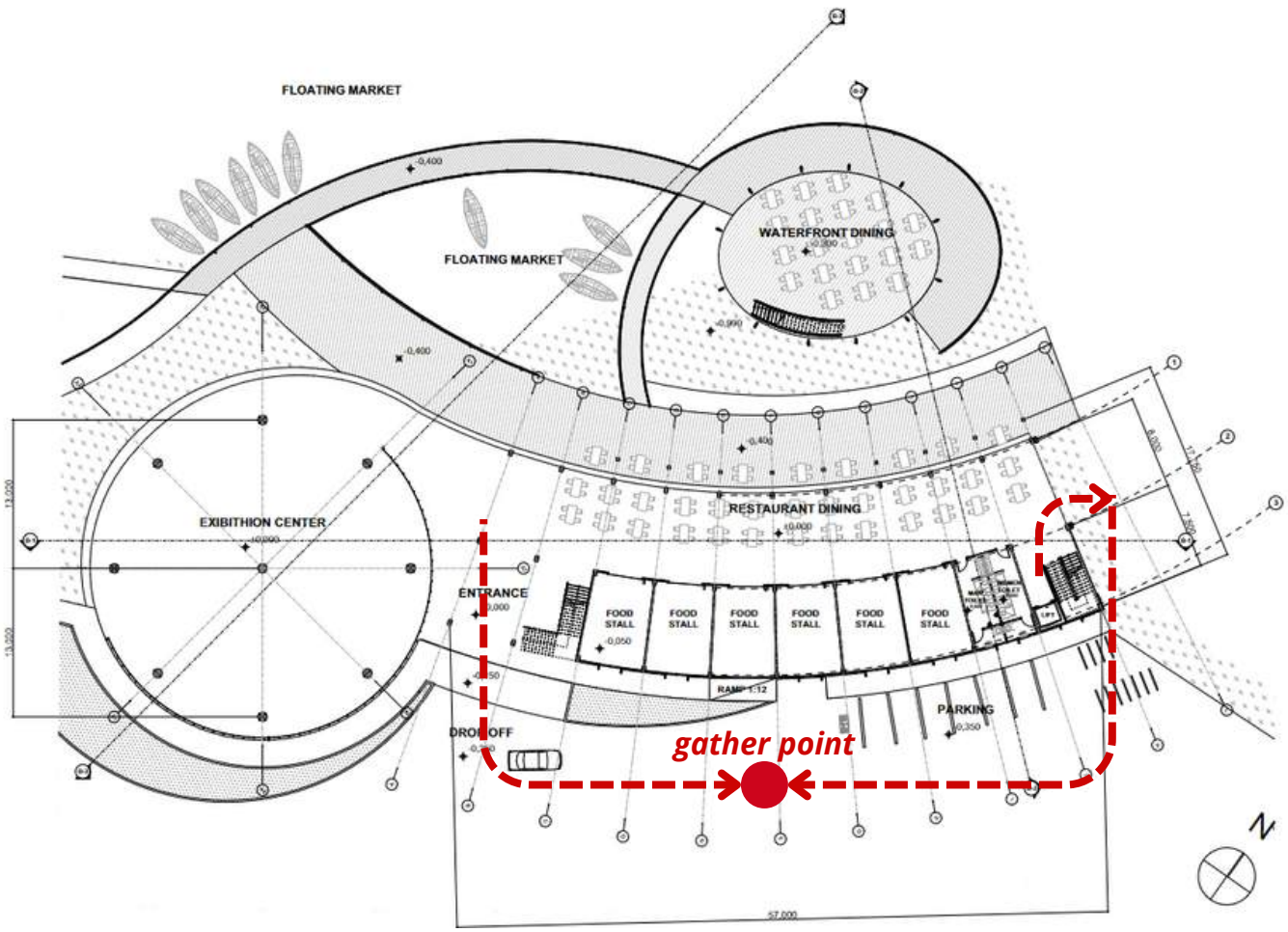


Adding parking for more capacity of people visiting the museum is a strategic step to improve accessibility and convenience for visitors. By providing adequate parking facilities, the museum can accommodate more vehicles, including private cars and tour buses, making it easier for visitors from various regions to come and enjoy the art collections on display.

https://walzcraft.com/products/accent-cabinet-doors/louvered-doors/
https://www.filt3rs.net/case/vertical-louvers-high-school-batlle-roig-500

Fire Evacuation





REFERENCES

Dahliani, Faqih, M., & Hayati, A. (2015). Changes in Architecture Expressions at Lanting House Based on Activity System on the River. History Research, 3(1), 1.

Local Products of Lok Baintan Floating Market in South Kalimantan Province - Scientific Figure on ResearchGate. Retrieved from: https://www.researchgate.net/figure/Lok-baintan-floating-market-location_fig1_324944792 [accessed 10 Mar, 2024]

Santosa Puji, et al. 2007. Elementary School Indonesian Language Materials and Learning. Jakarta: Open University.

Presidential Regulation of the Republic of Indonesia Number 112 of 2007 regarding the Organization and Advancement of Traditional Markets, Shopping Centers, and Modern Stores concerning Traditional Markets Organization Article 1 and Article 2.

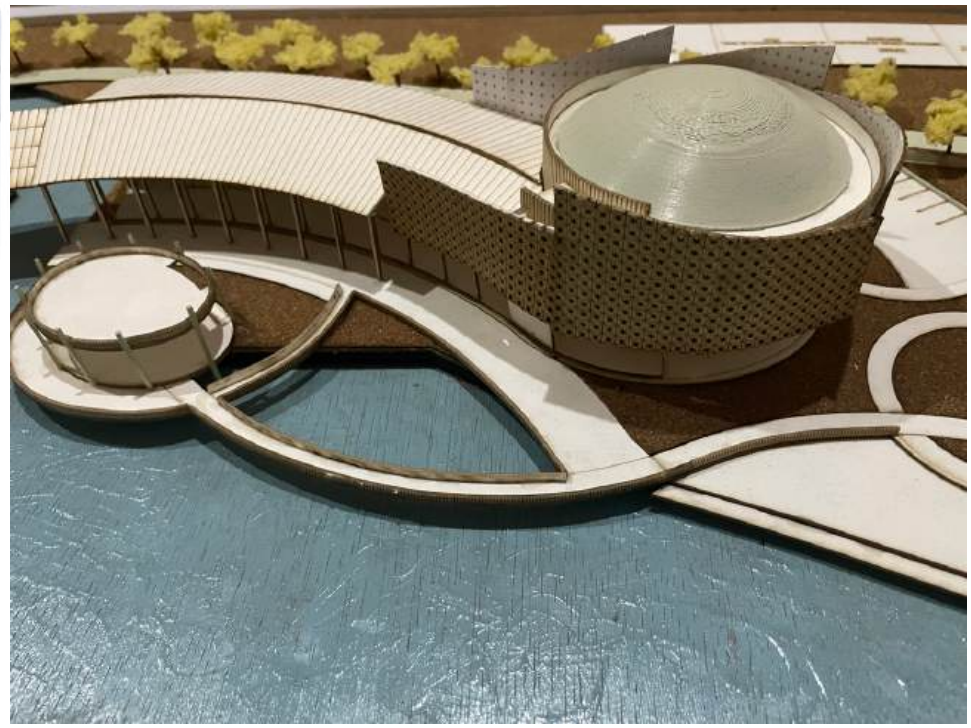
Praszkier, R., Nowak, A., & ZablockaBursa, A. (2009). Social capital constructed by social entrepreneurs and the specific personality traits that aid the process. Psychologia Spo eczna, 42-51.

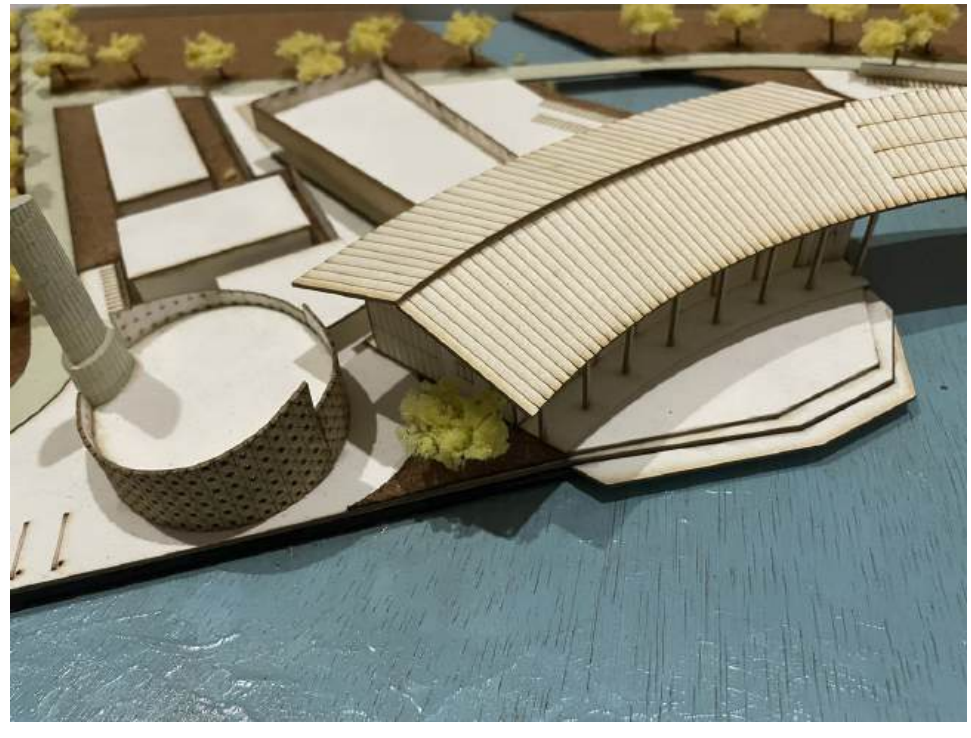
Heinz Frick & Tri Hesti Mulyani, 2006, Arsitektur Ekologis, Konsep arsitektur ekologis di iklim tropis, penghijauan kota dan kota ekologis, serta energi terbarukan, Penerbit Kanisius, Yogyakarta.

https://kalsel.antaranews.com/berita/369210/banjarmasin-sulit-telusuri-ribuan-kk-miskin-ekstrim-sesuai-data-pusat
Venn diagram on sustainability
https://colorbond.id/colorbond-stories/mengenal-perbedaan-arsitektur-neo-vernakular-dan-vernakular
source: ALFIRA IZZA AULIA 200606110111 - KELAS D - ARSITEKTUR NUSANTARA
https://p2k.stekom.ac.id/ensiklopedia/Jukung
https://www.vancouverconventioncentre.com
arcdaily.com
https://arktura.com/product/softgrid-dome/
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https://www.filt3rs.net/case/vertical-louvers-high-school-batlle-roig-500

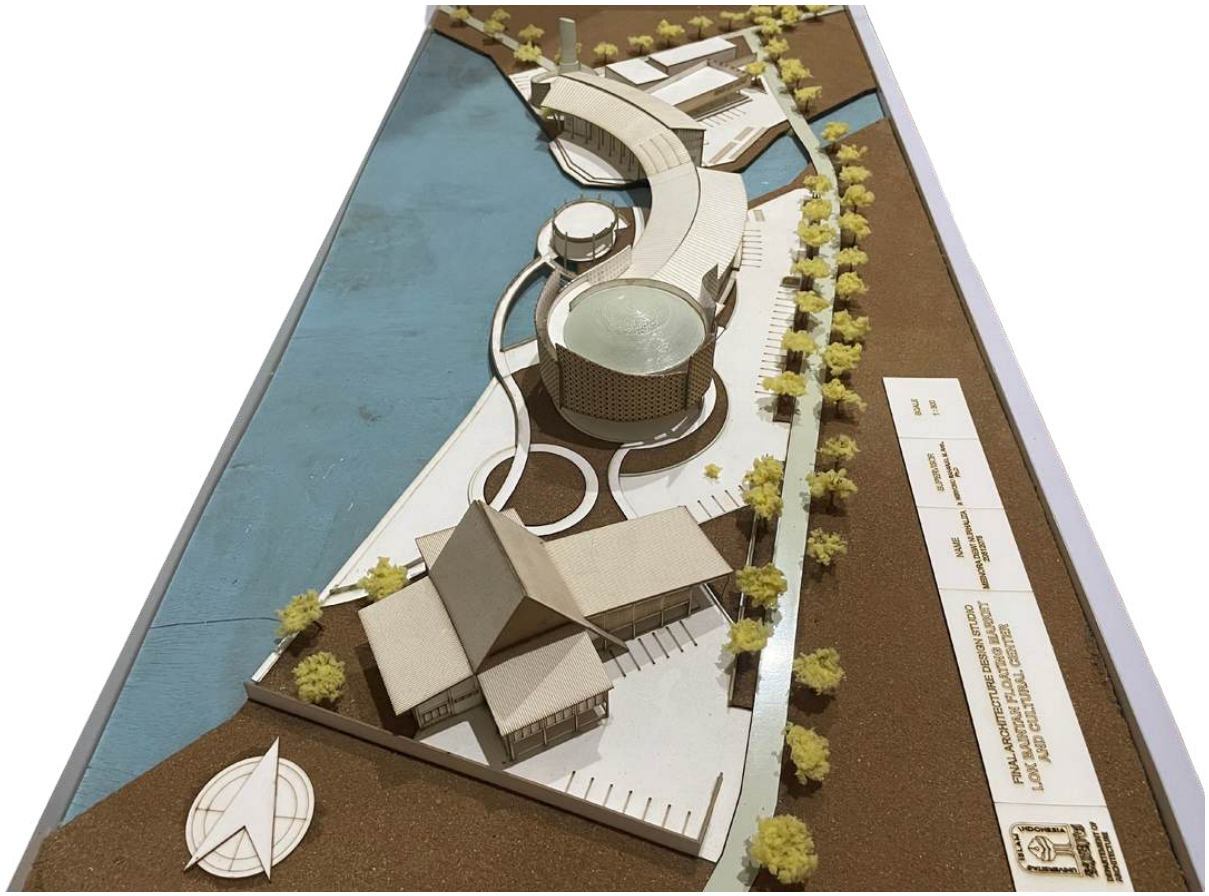
ATTACHMENT







ATTACHMENT


FINAL ARCHITECTURE DESIGN STUDIO
LOK BAINTAN FLOATING MARKET
AND CULTURAL CENTER



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Nama	: MeinoraDewiNurhaliza
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