



## Siak River Port

*Pekanbaru City, Riau As A Melayu Cultural Hub In The Former Port Area With An Adaptive Reuse Approach & In-Fill Design*

Supervisor  
Ir. Tony Kunto Wibisono, M.Sc

DESAIN REVITALISASI ..... Robby Setiawan 20512150



# Pelabuhan Sungai Riak

*Kota Pekanbaru, Riau Sebagai Pusat Budaya Melayu di Kawasan Bekas Pelabuhan Dengan Pendekatan Adaptif Reuse & Desain In-Fill*

Dosen Pembimbing :  
Ir. Tony Kunto Wibisono, M.Sc



UNIVERSITAS  
ISLAM  
INDONESIA

## INTERNATIONAL UNDERGRADUATE PROGRAM IN ARCHITECTURE



한국건축학교육인증원  
Korea Architectural Accrediting Board



BOARD OF ARCHITECTS MALAYSIA  
LEMBAGA ARKITEK MALAYSIA





***Final Architecture Design Studio***

Robby Setiawan

*Supervisor By:*

Ir. Tony Kunto Wibisono, M.Sc.

Lab. Komunikasi dan bisnis arsitektur  
Architectural Communication and Business Lab.

Architecture Study Program  
Faculty Of Civil Engineering and Planning  
Islamic University of Indonesia





UNIVERSITAS  
ISLAM  
INDONESIA

# LEMBAR PENGESAHAN

**Studio Akhir Desain Arsitektur yang Berjudul :**

*Final Architecture Design Studio Entitled*

Revitalisasi pelabuhan sungai siak kota pekanbaru, Riau sebagai pusat budaya melayu di kawasan bekas pelabuhan dengan pendekatan adaptif Reuse & Desain In fill

Revitalization Design of siak river port pekanbaru city, Riau as a melayu cultural Hub in the former port area with an adaptive reuse approach & In fill design

**Nama Lengkap Mahasiswa** : **Robby Setiawan**

*Student's Full Name*

**Nomor Mahasiswa** : **20512150**

*Students Identification Number*

**Telah diuji dan disetujui pada** : **Yogyakarta, 6 Agustus 2025**

*Has been evaluated and agreed on*

**Pembimbing**  
Supervisor

**Ir. Tony Kunto Wibisono, M.Sc.**

**Penguji 1**  
Examiner 1

**M. Kholif Lir Widyo Putro, S.T., M.Sc**

**Penguji 2**  
Examiner 2

**Dr. Ar.Jarwa Prasetya Sih  
Handoko, S.T., M.Sc., IAI., GP**

Diketahui oleh / Acknowledge by  
**Ketua Program Studi S1 Arsitektur**  
Head of Undergraduate Program in  
Architecture



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



UNIVERSITAS  
ISLAM  
INDONESIA

## LEMBAR CATATAN DOSEN PEMBIMBING

**Studio Akhir Desain Arsitektur yang Berjudul :**

*Final Architecture Design Studio Entitled*

Revitalisasi pelabuhan sungai siak kota pekanbaru, Riau sebagai pusat budaya melayu di kawasan bekas pelabuhan dengan pendekatan adaptif Reuse & Desain In fill

Revitalization Design of siak river port pekanbaru city, Riau as a melayu cultural Hub in the former port area with an adaptive reuse approach & In fill design

**Nama Lengkap Mahasiswa** : **Robby Setiawan**

*Student's Full Name*

**Nomor Mahasiswa** : **20512150**

*Students Identification Number*

**Kualitas Buku Studio Akhir Arsitektur** :

*Final Architectural Design Book Quality*

Sedang❖) Baik❖) Sangat Baik❖)

Sehingga,

**Direkomendasikan / Tidak Direkomendasikan (\*)**

untuk menjadi acuan produk Studio Akhir Desain Arsitektur (\*)

Dilingkari salah satu

Pembimbing  
Supervisor

**Ir. Tony Kunto Wibisono, M.Sc.**



UNIVERSITAS  
ISLAM  
INDONESIA

## LEMBAR PERNYATAAN KEASLIAN

Saya yang bertanda tangan di bawah ini :

*Final Architecture Design Studio Entitled*

**Nama Lengkap Mahasiswa** : Robby Setiawan

*Student's Full Name*

**Program Studi** : Arsitektur

*Departement*

**Judul Perancangan** : Revitalisasi pelabuhan sungai siak kota pekanbaru, Riau sebagai pusat budaya melayu di kawasan bekas pelabuhan dengan pendekatan adaptif Reuse & Desain In fill

*Design Title*

Revitalization Design of siak river port pekanbaru city, Riau as a melayu cultural Hub in the former port area with an adaptive reuse approach & In fill design

Dengan ini saya menyatakan bahwa Tugas Akhir saya berjudul "Revitalisasi pelabuhan sungai siak kota pekanbaru, Riau sebagai pusat budaya melayu di kawasan bekas pelabuhan dengan pendekatan adaptif Reuse & Desain In fill" sepenuhnya merupakan hasil karya saya sendiri, kecuali pada bagian-bagian yang secara jelas dicantumkan sumber referensinya, dan tidak melibatkan bantuan pihak lain baik secara keseluruhan maupun sebagian dalam proses penyusunannya. Saya juga menyatakan bahwa karya ini bebas dari konflik hak kepemilikan intelektual, serta memberikan kewenangan kepada Jurusan Arsitektur Universitas Islam Indonesia untuk memanfaatkannya bagi kepentingan pendidikan dan publikasi.

Demikian Pernyataan ini saya buat, hasil akhir sepenuhnya diserahkan kepada Jurusan Arsitektur Universitas Islam Indonesia untuk dapat digunakan bagi kepentingan pendidikan dan publikasi

Yogyakarta, 26 Juli 2025

**Robby Setiawan**

# KATA PENGANTAR

Puji Syukur kami panjatkan kepada Allah SWT, serta shalawat beriring salam kami tuturkan kepada baginda Rasulullah Muhammad SAW, beserta keluarga dan sahabatnya, karena hanya dengan rahmat dan karunia-Nya saya dapat menyelesaikan dengan baik buku Studio Akhir Desain Arsitektur yang berjudul “Desain Revitalisasi Pelabuhan Sungai Siak Kota Pekanbaru, Riau Sebagai Pusat Budaya Melayu di Kawasan Bekas Pelabuhan Dengan Pendekatan Adaptif Reuse & Desain In-Fill”.

Dalam proses pembuatan hingga penyelesaian buku ini tidak terlepas dari berbagai pihak yang memberikan dukungan secara moril, maupun materil, oleh karena itu penulis mempersembahkan kata pengantar ini untuk memberikan apresiasi sebesar - besarnya dan penghargaan kepada semua pihak yang telah berkontribusi. Kepada Bapak Toni Kunto Wibisono, M.Sc., GP selaku dosen pembimbing, Bapak Muhammad Kholif Lir Widyoputro., S.T., M.Sc. selaku dosen penguji 1, dan Bapak Dr. Jarwa Prasetya Sih Handoko., S.T., M.Sc. selaku dosen penguji 2 dimana telah memberikan kesempatan kepada penulis untuk mengerjakan dan menyelesaikan buku Studio Akhir Desain Arsitektur ini, Atas bimbingan, arahan serta saran maupun kritik oleh beliau - beliau membuat penulis lebih memahami terhadap dunia Arsitektur, serta membuat penulis lebih percaya diri dalam menyelesaikan buku ini hingga menjadi produk buku yang baik.

Penulis menyadari bahwa Tugas Akhir Sarjana ini masih jauh dari kata sempurna, maka kritik dan saran sangat diharapkan untuk mengembangkan ilmu Arsitektur, Akhir kata dari penulis, semoga apa yang ada di dalam buku ini dapat bermanfaat bagi semua yang membaca.

# FOREWORD

Praise and gratitude we offer to Allah SWT, and prayers and greetings we convey to the Prophet Muhammad SAW, along with his family and friends, because only with His grace and blessings can I complete the book Studio Akhir Desain Arsitektur entitled "Revitalization Design Siak River Port Pekanbaru City, Riau As A Melayu Cultural Hub In The Former Port Area With An Adaptive Reuse Approach & In-Fill Design".

In the process of making until the completion of this book cannot be separated from various parties who provide support morally, or materially, therefore the author presents this foreword to give the greatest appreciation and appreciation to all parties who have contributed. To Mr. Toni Kunto Wibisono, M.Sc., GP as the supervisor, Mr. Muhammad Kholif Lir Widyoputro., S.T., M.Sc. as the examiner 1, and Mr. Dr. Jarwa Prasetya Sih Handoko., S.T., M.Sc. as the examiner 2 who have given the author the opportunity to work on and complete this Studio Akhir Desain Arsitektur book, With their guidance, direction and suggestions and criticisms, the author has become more knowledgeable about the world of Architecture, and has made the author more confident in completing this book to become a good book product.

The author realizes that this Bachelor's Final Assignment is still far from perfect, therefore criticism and suggestions are very much expected to develop the science of Architecture. Finally, the author hopes that what is in this book can be useful for all who read it.

# ABSTRACT

The Riak River Port in Pekanbaru City, Riau, is a historical area that has strategic value in the development of Malay culture and trade. However, along with changes in the function of the city and the development of infrastructure, this area has experienced degradation, both physically and functionally. This study aims to design the revitalization of the former port area as a center of Malay culture by applying the adaptive reuse and in-fill design approaches.

The adaptive reuse approach is used to maintain existing historical elements, such as old buildings and port structures, by providing new, relevant functions. Meanwhile, in-fill design is applied to integrate new buildings with the existing environmental context, so that harmony is created between tradition and modernity.

The design process includes an analysis of the historical, cultural, and ecological potential of the area, as well as a literature study related to culture-based revitalization. The design concept involves the development of culture-based public spaces, educational facilities such as museums and art galleries, and modern recreational spaces that still maintain the characteristics of Malay architecture. In addition, the design also pays attention to environmental sustainability through the application of ecological principles to the riverbank area.

The design results are expected to revive the former Riak River Port area as an icon of Malay culture that not only functions as a place for historical preservation but also becomes a center for the creative economy and a leading tourist destination in Pekanbaru City. Thus, this revitalization can have a positive impact on strengthening local identity, improving the quality of life of the community, and the sustainability of the area.

**Keywords:** revitalization, adaptive reuse, in-fill design, Melayu culture, Pekanbaru City

# ABSTRAK

Pelabuhan Sungai Siak di Kota Pekanbaru, Riau, merupakan kawasan bersejarah yang memiliki nilai strategis dalam perkembangan budaya dan perdagangan Melayu. Namun, seiring perubahan fungsi kota dan perkembangan infrastruktur, kawasan ini mengalami degradasi, baik dari segi fisik maupun fungsional. Penelitian ini bertujuan untuk merancang revitalisasi kawasan bekas pelabuhan tersebut sebagai pusat budaya Melayu dengan menerapkan pendekatan adaptive reuse dan desain in-fill.

Pendekatan adaptive reuse digunakan untuk mempertahankan elemen historis yang ada, seperti bangunan tua dan struktur pelabuhan, dengan memberikan fungsi baru yang relevan. Sementara itu, desain in-fill diterapkan untuk mengintegrasikan bangunan baru dengan konteks lingkungan yang sudah ada, sehingga tercipta harmoni antara tradisi dan modernitas.

Proses perancangan mencakup analisis potensi sejarah, budaya, dan ekologi kawasan, serta studi literatur terkait revitalisasi berbasis budaya. Konsep desain melibatkan pengembangan ruang publik berbasis budaya, fasilitas edukasi seperti museum dan galeri seni, serta ruang rekreasi modern yang tetap mempertahankan karakteristik arsitektur Melayu. Selain itu, desain juga memperhatikan keberlanjutan lingkungan melalui penerapan prinsip ekologi pada kawasan tepi sungai.

Hasil rancangan diharapkan dapat menghidupkan kembali kawasan bekas Pelabuhan Sungai Riak sebagai ikon budaya Melayu yang tidak hanya berfungsi sebagai tempat pelestarian sejarah, tetapi juga menjadi pusat ekonomi kreatif dan destinasi wisata unggulan di Kota Pekanbaru. Dengan demikian, revitalisasi ini dapat memberikan dampak positif terhadap penguatan identitas lokal, peningkatan kualitas hidup masyarakat, dan keberlanjutan kawasan.

**Kata Kunci:** revitalisasi, adaptive reuse, desain in-fill, budaya Melayu, Kota Pekanbaru

## **CH. 1 | INTRODUCTION**

- 1.1 DESIGN PREMISES
- 1.2 BACKGROUND
- 1.3 ISSUES REVITALIZATION
- 1.4 SWOT REVITALIZATION
- 1.5 PROBLEM MAP
- 1.6 PROBLEM STATEMENT DESIGN
  - 1.6.1 The General Problem Formulation
  - 1.6.2 The Specific Problem Formulation
  - 1.6.3 Design Objectives
  - 1.6.4 Design Targets
  - 1.6.5 Design Limitations
- 1.7 DESIGN PROBLEM SOLVING METHOD
  - 1.7.1 Observation (Site Survey)
  - 1.7.2 Problem Identification
  - 1.7.3 Theme and Concept Determination
  - 1.7.4 Data Analysis
  - 1.7.5 Design Exploration
  - 1.7.6 Design Development
  - 1.7.7 Final Design
- 1.8 FRAMEWORK OF THINKING
- 1.9 DESIGN EXCELLENCE, ORIGINALITY

## **CH. 2 | DESIGN PROBLEM RESEARCH & SOLUTION**

- 2.1 LOCATION STUDY AND ANALYSIS
  - 2.1.1 Geographical Location
  - 2.1.2 Macro Site
- 2.2 STUDY SITE ANALYSIS
  - 2.2.1 Micro Site
  - 2.2.2 Site Location
  - 2.2.3 Climate Site Condition
  - 2.2.4 View and Vista
  - 2.2.5 Regulation
  - 2.2.6 Circulation, Access, and Traffic
  - 2.2.7 Facility Analysis
  - 2.2.8 Environmental Architectural Overview
- 2.3 STUDY & ANALYSIS OF BUILDING TYPOLOGY APPROACHES AND DESIGN PROBLEMS
- 2.4 STUDY & ANALYSIS OF DESIGN PROBLEM APPROACHES AND PLANS

## **2.5 STUDY AND ANALYSIS OF DESIGN ADVANTAGES**

- 02 2.6 ISSUE MAP
- 03 2.7 PRECEDENT STUDY

## **CH. 3 | PROBLEM SOLVING**

- 08 3.1 DESIGN RESPONSE
- 09 3.2 DESIGN CONCEPT
  - 10 3.2.1 Design Concept Response
  - 10 3.2.2 Exploration of Zonning Concept
  - 10 3.2.3 Activity Analysis
- 10 3.3 PROPERTY SIZE
  - 10 3.3.1 Property Size Table
  - 10 3.3.2 Spatial Relationship Bubble diagram
- 11 3.4 CONCEPT DEVELOPMENT
  - 11 3.4.2 Building Function
- 11 3.5 SITE DEVELOPMENT
- 11 3.6 SCHEMATIC DESIGN
  - 11 3.6.1 Schematic Site
- 11 3.7 BUSINESS MODEL CANVAS (BMC)
- 11 3.8 CONSTRUCTION COST ESTIMATION (RAB)

## **CH. 4 | DRAWING ENGINEERING DESIGN**

- 12 4.1 Situation
- 13 4.2 Site plan
- 4.3 Floorplan
- 15 4.4 Elevation
- 15 4.5 Section
- 16 4.6 Structure
- 17 4.7 Detail Architecture
- 17 4.8 Utility System
- 18 4.9 Natural Ventilation & Lighting Scheme
- 19 4.10 Safety and Fire protection
- 21 4.11 Berrier Free
- 22 4.12 Render Exterior & Interior

## **CH. 5 | DESIGN EVALUATION**

- 24 5.1 Pekanbaru City
- 26 5.2 Study, Analysis, of Building Typology & Design issues Pekanbaru city
- 27 5.3 Property Size
- 29 5.4 Existing Port Building
- 5.5 Axonometry Site

## **BIBLIOGRAPHY**

178

## **Ch. 1 | Introduction**

**Figure 1.** Traditional Melayu clothes

**Figure 2.** Traditional Melayu musical instruments

**Figure 3.** Welcoming dance

**Figure 4.** PELINDO 1 Port Siak River, Pekanbaru

**Figure 5.** PELINDO 1 Port Siak River, Pekanbaru

**Figure 6.** PELINDO 1 Port Siak River, Pekanbaru

**Figure 7.** Condition of the port after being abandoned

**Figure 8.** Condition of the port after being abandoned

**Figure 9.** Condition of the port after being abandoned

**Figure 10.** News about the support of (parekraf) actors for the revitalization of the former Pelindo Port on the Siak River

**Figure 11.** News of support from the Indonesian Tour Guide Association (HPI) Riau for the revitalization plan

**Figure 12.** News of initiated by the Governor of Riau and the Director of BUMN.

## **Ch. 2 | Design Problem Research & solution**

**Figure 13.** The Current Situation at Pelindo 1 Pekanbaru Port

**Figure 14.** The View and Vista

**Figure 15.** Microclimate Analysis of Site (Sun)

**Figure 16.** Temperature of Pekanbaru City

**Figure 17.** Wind Direction

**Figure 18.** Sirculation and Access

**Figure 19.** Environmental Architectural Overview

**Figure 20.** Melayu Tribe's Dress Tradition, Melayu Tribe's Traditional Wedding Ceremony, Gambus

**Figure 21.** Selembayung, Bunga bayam peraksi (Ornaments and air lattices)

**Figure 22.** Traditional House Of Melayu

**Figure 23.** Traditional Malay food

**Figure 24.** Riau Province Arts and Tourism Events Calendar

## **Ch. 3 | Problem Solving**

**Figure 25.** Site location

**Figure 26.** Selembayung

**Figure 27.** Bunga Bayam Peraksi

# TABLE

## **Ch. 1 | Introduction**

**Table 1.** SWOT Revitalization Siak River Port

**Table 2.** Problem Map

**Table 3.** Problem Statement Design

**Table 4.** Design Excellence and Originality

## **Ch. 2 | Design Problem Research & solution**

**Table 5.** Regulation site

**Table 6.** Facility Site

**Table 7.** User

**Table 8.** Issue Map

**Table 9.** Development Concept

**Table 10.** Activities & Space Requirement

## **Ch. 3 | Problem Solving**

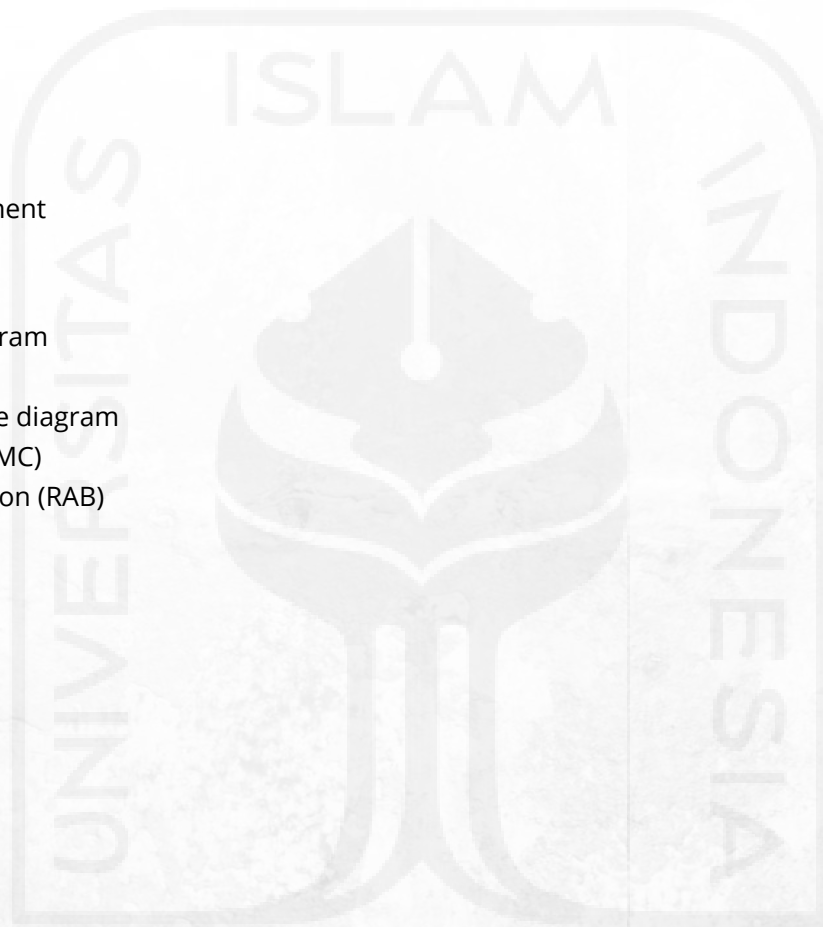
**Table 11.** Concept on Buildings Program

**Table 12.** Property Size

**Table 13.** Spatial Relationship Bubble diagram

**Table 14.** Business Model Canvas (BMC)

**Table 15.** Construction Cost Estimation (RAB)



01



INTRODUCTION

## 1.1 DESIGN PREMISES

In the era of rapid globalization, city development is not only focused on economic growth, but also on preserving culture and strengthening local identity. In this context, Pekanbaru City, which is rich in **Melayu cultural heritage**, sees a great opportunity to create a **Melayu Culture Hub** as a cultural center that combines tradition with the needs of modern society. One important initiative is the **revitalization** project of **historical buildings** on the banks of the **Siak River**, which aims to transform them into centers of cultural, artistic, and creative activities. **This project not only aims to repair the physical buildings, but also creates spaces that connect the community with their Melayu heritage**, while encouraging the growth of the creative economy and cultural tourism.

This **culture hub** is designed to be the center of community life, with dynamic spaces that accommodate various cultural activities such as art performances, exhibitions, and festivals. From a port that was once a center of trade, now the place will transform into a meeting point between the past and the future, a place where **Melayu traditions** are respected and strengthened as an important part of Pekanbaru's identity. With an **adaptive reuse development** and **In-fill design** approach and active community involvement, this project reflects an effort to build an area that is not only aesthetic, but also has a positive social and economic impact.

This revitalization is expected to enrich the daily lives of the people of **Pekanbaru** by providing public spaces that **encourage social interaction** and **the preservation of Melayu culture**. In addition, this project also aims to **increase** the city's **tourist appeal** and strengthen Pekanbaru's role as a **center of Melayu culture in Riau Province**.



Figure 1. Traditional Melayu clothes



Figure 2. Traditional Melayu musical instruments



Figure 3. Welcoming dance Melayu

Figure 1,2,3. PELINDO 1 Port Siak River, Pekanbaru

## 1.2 BACKGROUND

### THE FORMER PELINDO 1 PORT SIAK RIVER, PEKANBARU



The former Pelindo 1 Port on the Siak River, Pekanbaru City, Riau, is one of the historical areas that played an important role in the development of the economy and regional transportation in the past. This port used to be the main gateway for trade along the Siak River, connecting Pekanbaru with other regions, both nationally and internationally. However, with the shift of the economic center to land routes and the emergence of modern transportation technology, this port began to lose its role, leaving the area now underutilized. According to the Riau Pos report, this area has great potential to be developed into a cultural tourism destination and community activity center. Support from the government and local communities shows that revitalizing this area can have a positive impact on preserving history while encouraging the growth of the creative economy. (Source: Riau Pos)

In addition, a report from Antara News revealed that the Riau regional government has designated this former port area as part of a Malay culture-based tourism development program. This approach not only focuses on preserving historical buildings but also creating new spaces that are relevant to the needs of modern society, such as art galleries, cultural performance spaces, and public areas. (Source: Antara News)

According to the news on Pekanbaru.go.id, the existence of this port not only has historical value but also offers great potential to increase tourism in Pekanbaru. With a strategic location on the banks of the Siak River, this area can become an icon of Malay culture that represents the richness of Riau's traditions and history. Revitalization of this area, through an adaptive reuse and infill design approach, is expected to be able to integrate old buildings with new structures without eliminating its historical essence. (Source: Pekanbaru.go.id)

The revitalization of the former Pelindo 1 Port is expected to transform the area into a dynamic, inclusive, and sustainable cultural center, as well as a destination that supports the development of tourism and the creative economy in Pekanbaru City.

Figure 4,5,6. PELINDO 1 Port Siak River, Pekanbaru

## THE FORMER PELINDO 1 PORT SIAK RIVER, PEKANBARU



Figure 7,8,9. Condition of the port after being abandoned

Pelindo 1 Port Siak river in Pekanbaru is one of the strategic ports that has existed since 1920 during the Dutch colonial period in the Riau region, Indonesia. Located along the Siak River with a length of around 370 km, this port plays an important role in supporting transportation and economic activities, especially in the trade and logistics sectors. The Siak River itself is one of the major rivers in Riau Province which has direct access to the Straits of Malacca and Singapore, one of the busiest international shipping routes in the world.

At that time, the simple port on the Siak River began to function as the main point for exporting agricultural products, such as rubber, copra, and other forest products. The increasing trade activity encouraged the colonial government to develop port infrastructure to be able to handle larger ships and increase transportation efficiency.

After Indonesia's independence in 1945, the management of this port was transferred to the Indonesian government. In the following decades, this port experienced various management changes and modernization, especially after the formation of PT Pelabuhan Indonesia (Pelindo) in the 1960s. Pelindo 1, which is responsible for managing ports in the northern part of Sumatra, took over the management of the Siak River Port. Which is also one of four state-owned companies that manage ports in Indonesia.

In the 1970s to 1990s, the Siak River Port underwent significant modernization. With the development of the national and regional economy, this port became an important center for the export of palm oil and rubber, two main commodities produced in Riau.

Port facilities were improved to accommodate the increasing volume of cargo, including the construction of new piers and improvements to loading and unloading equipment.

Entering the 21st century, Pelindo 1 continues to increase port capacity and technology to meet the challenges of globalization and the increasing demand for international trade. However, now the Pelindo 1 Siak River Port has moved and is now equipped with various modern facilities, such as container terminals, storage warehouses, and other supporting facilities. So now the Pelindo 1 Port at the end of Jalan Saleh Abbas has been abandoned and only its branch office remains.

Currently, this port is no longer functioning like a port like in its heyday. Now this port is just an empty and old building that has been destroyed by time. People usually use the area for sports activities such as jogging, playing ball, fishing, taking selfies, and relaxing while enjoying the sunset on the banks of the Siak River. The location of this port is right on the banks of the Siak River and is directly adjacent to the houses of the old village community and the Pasar Bawah of Pekanbaru City. Around it there are also several historical tourist destinations (Cultural Heritage), namely the TUAN KHADI Transit House (Sultan of Siak) and also the Kampung Bandar Rumah Tenun.

## 1.3 ISSUE REVITALIZATION THE FORMER PELINDO 1 PORT SIAK RIVER

Former port areas are often an important part of a city's history and development, but many have faced declining functions over time. One example is the former Pelindo 1 Port area in Sungai Siak, Pekanbaru, Riau. In the past, this area was a strategic trade and transportation center that connected local economic activities with the outside world. However, with the development of modern transportation systems and the shifting focus of the economy, this area began to lose its relevance and was neglected.

According to news reported by Riau Pos, this former port area has great potential to be revitalized into a cultural and tourism center. Support from various parties, including local governments, tourism industry players, and cultural communities, shows that revitalizing this area can provide significant economic and social impacts. This revitalization approach is designed to revive the area by integrating local historical and cultural values with the needs of modern society. (Source: Riau Pos)



### Pelaku Parekraf Riau Dukung Revitalisasi Eks Pelabuhan Pelindo Jadi Tempat Wisata

Minggu, 12 Juni 2022 22:02 WIB

Bagikan Halaman Ini : [f](#) [t](#) [g+](#) [e](#) [p](#)



Pelabuhan eks PT. Pelindo Pekanbaru (Arsip Dokuminfo Riau)

PEKANBARU (CAKAPLAH) - Pelaku pariwisata dan ekonomi kreatif di Pekanbaru, Riau menyambut positif rencana pembangunan destinasi wisata di lokasi eks pelabuhan PT. Pelindo Pekanbaru.

Lokasi pelabuhan tersebut tak jauh dari Pasar Bawah yang merupakan pasar wisata di Pekanbaru. Tepatnya di Jalan Saleh Abbas, Kecamatan Senapelan. Berhadapan langsung dengan sungai terdalem di Indonesia, yakni Sungai Siak.

Ketua Badan Riau Creative Network (BRCN) Rizky Bagus Oka menyampaikan bahwa BRCN akan mendukung rencana tersebut. Menurutnya, rencana kawasan wisata tersebut nantinya akan membangun kesadaran anak muda dan pengusaha muda agar selalu menggelar sesuatu yang unik dan kreatif di lokasi itu.

Diungkapkan Oka, bahwa sangat banyak potensi event kreatif yang dapat dilaksanakan untuk bisa mempromosikan tempat tersebut. Baik itu untuk sektor musik, film ataupun bidang seni lainnya.

"BRCN berharap, dengan adanya kawasan ini dapat dimanfaatkan bagi para insan kreatif di Pekanbaru semakin keren dan menampilkan karyanya. Sehingga Pekanbaru menjadi barometer kota kreatif di Pulau Sumatera," katanya di Pekanbaru, Ahad (12/6/22).

Oka menuturkan, BRCN sangat mengapresiasi pertemuan lanjutan Gubernur Riau dengan Menteri BUMN mengenai pengembangan kawasan pelabuhan PT Pelindo.

Hal senada juga disampaikan founder Komunitas Pekanbaru Heritage, Bayu Amde Winata. Dia menyambut baik rencana revitalisasi bekas Pelabuhan Pelindo menjadi destinasi wisata yang menonjolkan ciri khas Melayu.

Bayu berujar, kawasan itu diharapkan mampu menjadi wadah atau sarana yang berfungsi baik untuk masyarakat, pelaku kreatif lokal, pemerintah daerah dan pemerintah pusat.

"Pekanbaru Heritage pastilah menyambut gembira rencana ini. Kami dengan komunitas lain yang peduli, meletakkan harapan besar, bahwa pembangunan ini kelak akan menjadi sebuah bangunan yang sungguh berfungsi secara menerus tanpa henti," ujarnya.

Ketua Dewan Kehormatan DPP Himpunan Pramuwisata Indonesia (HPI) Riau sekaligus Master Asesor Pariwisata, Osvlan Putra mengatakan, pihaknya sebagai pentahelix sektor pariwisata, siap mendukung eks pelabuhan PT Pelindo Pekanbaru dijadikan sebagai kawasan parekraf di Kota Pekanbaru.

"Kami siap mendukung sesuai dengan tugas dan fungsinya untuk memberikan informasi dan pemanduan kepada para wisatawan yang berkunjung nantinya,"

Dijelaskan dia, DPP HPI Riau juga siap mendukung sesuai dengan tugas dan fungsinya untuk memberikan informasi kepada para wisatawan yang berkunjung nantinya.

"Kami siap mendukung rencana tersebut [pengembangan wisata eks pelabuhan PT Pelindo]," katanya.

Master Asesor Pariwisata ini menyebutkan, ide untuk membangun kawasan wisata waterfront city sudah lama muncul, akan tetapi baru kali ini bisa mencapai tahapan di mana sedikit lagi akan segera diwujudkan.

Menurutnya, kekuatan Sungai Siak sebagai ikon dan urat nadi transportasi Kota Pekanbaru semenjak zaman dulu, berpadu dengan banyaknya situs sejarah di sekitar kawasan itu.

Kemudian, ditunjang lagi dengan beberapa bangunan ikonik yang menjadi latar belakang kawasan tersebut seperti jembatan Siak III dan IV menjadi daya tariknya tersebut.

Oleh karena karena itu, Ketua Dewan Kehormatan DPP HPI Riau berharap nantinya zona pariwisata ini akan sama kelasnya dengan tepian sungai Huang Pu di Shanghai, Sungai Thames di London atau sungai Seine di Paris.

"Dengan ini maka Riau bisa mewujudkan salah satu visi pembangunannya untuk mengembangkan sektor wisata sebagai salah satu urat nadi perekonomian ke depan," tutupnya.

Pelaku ekonomi kreatif Riau, Rino Dezapaty menyampaikan, bahwa rencana pengembangan kawasan wisata tersebut sangat menarik. Lebih lanjut, ia membeberkan, bahwa kawasan tersebut nantinya bisa benar-benar dijadikan sebagai waterfront city.

Sehingga diharapkan dapat mendongkrak pertumbuhan ekonomi kreatif (Ekraf). Baik itu di bidang kuliner, seni pertunjukan, media, pameran maupun amarchandise.

Rino juga menyampaikan apresiasi atas sambutan baik dari Gubernur Riau untuk menjadikan eks pelabuhan PT. Pelindo sebagai kawasan wisata. Menurutnya, ini merupakan langkah awal setelah pandemi agar Ekraf semakin tumbuh di Provinsi Riau khususnya Pekanbaru.

"Semoga ini menjadi tempat etalase beberapa hasil kreatif dari seluruh lini. Saya sangat mendukung sekali. Dan ini berperan penting untuk meningkatkan pertumbuhan bidang sektor ekonomi kreatif di Riau," kata Rino, Composer dan Founder Riau Rhythm.

Dia berharap, di lokasi tersebut nantinya juga dilengkapi dengan fasilitas panggung, sound system, maupun perangkat tata cahaya. Dengan demikian, kata dia, tempat wisata di tepi Sungai Jantan itu juga bisa jadi tempat perputaran ekonomi di bidang musik dan seni pertunjukan.

Sementara, Ketua GenPI Riau Suta Wijaya juga menyambut dan mendukung pembangunan destinasi wisata di pelabuhan tersebut.

"Kami dari GenPI menyambut baik dan mendukung pengembangan destinasi wisata di area eks pelabuhan Pelindo Pekanbaru. Ini seperti impian masyarakat Pekanbaru yang menjadi kenyataan. Mempunyai tempat rekreasi yang atraktif dengan aksesibilitas di tengah kota," kata Suta, Sabtu (11/6/2022).

Menurut dia, kawasan tersebut akan menjadi ikon baru di Riau, khususnya di Kota Pekanbaru. "Apalagi saya lihat desainnya menampilkan desain khas melayu. Ditambah kawasan ini dekat dengan pasar wisata pasar bawah. Jadi seperti one stop tourism destination. Kami dari GenPI mengucapkan terima kasih kepada Pemerintah provinsi Riau dan BUMN yang telah mewujudkan destinasi wisata baru ini. Dan kami siap berkolaborasi dalam pengembangannya," tandasnya.

Kepala Dinas Pariwisata (Kadispar) Riau, Roni Rakhmat mengungkapkan, lokasi bekas pelabuhan Pelindo sangat strategis. Total luas lahannya mencapai 2,2 hektare. Berdekatan dengan destinasi wisata di sekitarnya. Sehingga diharapkan mampu berdampak positif pada pelaku ekonomi kreatif.

"Lokasinya strategis, dekat destinasi wisata belanja Pasar Bawah, wisata kuliner, Rumah Tenun, Masjid Agung Senapelan, Makam Marhum Pekan, Rumah singgah Tuan Kadi, Perkampungan Melayu dan destinasi sejarah lainnya.

Roni mengaku, pihaknya siap berkolaborasi memberikan dukungan optimalisasi pelabuhan Pasar Bawah Pekanbaru menjadi destinasi andalan di kota Pekanbaru. "Kami siap mendukung optimalisasi pelabuhan ini. Semoga hasilnya bisa berdampak positif kepada masyarakat dan pelaku pariwisata dan ekonomi kreatif di Riau" ujar Roni Rakhmat.\*\*\*

**Penulis** : Rilis  
**Editor** : Jef Syahrul  
**Kategori** : Pemerintahan, Riau, Kota Pekanbaru

Figure 10. News about the support of (parekraf) actors for the revitalization of the former Pelindo Port on the Siak River

News about the support of Riau tourism and creative economy (parekraf) actors for the revitalization of the former Pelindo Port on the Siak River into a tourist area shows enthusiasm for utilizing historical assets as attractive destinations. Parekraf actors assess that this transformation has great potential in supporting local economic growth, creating business opportunities, and promoting Malay culture which is the identity of the region.

With a revitalization concept that combines history, culture, and modern innovation, this area is expected to become a leading tourist attraction that revives the dynamics of the Siak River as a center of community and tourist activities.

## HPI Riau Dukung Eks Pelabuhan Pelindo Jadi Kawasan Pariwisata

Moral Riau - Juni 11, 2022  
PEKANBARU



Desain destinasi wisata Melayu di eks Pelabuhan Pelindo Pekanbaru (Arsip PT. Pelindo)



PEKANBARU, MORALRIAU.COM – Dewan Pimpinan Daerah (DPD) Himpunan Pramuwisata Indonesia (HPI) Provinsi Riau sebagai *pentahelix* sektor pariwisata, siap mendukung eks pelabuhan PT Pelindo Pekanbaru dijadikan sebagai kawasan pariwisata di Kota Pekanbaru.



Ketua Dewan Kehormatan DPP HPI Riau sekaligus Master Asesor Pariwisata, Osvian Putra mengatakan, bahwa nantinya pihak DPP HPI Riau juga siap mendukung sesuai dengan tugas dan fungsinya untuk memberikan informasi kepada para wisatawan yang berkunjung ke Pekanbaru.

"Kami siap mendukung rencana tersebut [pengembangan wisata eks pelabuhan PT Pelindo], sesuai dengan tugas dan fungsinya untuk memberikan informasi dan pemanduan kepada para wisatawan yang berkunjung nantinya," kata Osvian di Pekanbaru, Sabtu (11/6/22).

Osvian Putra juga menyampaikan apresiasi rencana pengembangan bekas lahan pelabuhan yang dikelola PT Pelindo di area dekat Pasar Bawah Pekanbaru tersebut.

Ia mengungkapkan, sejatinya usaha ke arah pengembangan ini sudah dimulai semenjak empat sampai lima tahun yang lalu. Akan tetapi karena adanya beberapa kendala, akhirnya baru sekarang mulai digagas kembali.

"Sebuah proses tentu memakan waktu dan kini saatnya *detailed engineering design* di *launching* untuk jadi pedoman bersama. Agar ke depan kawasan ini berkembang menjadi pusat wisata baru yang mencerminkan kota Pekanbaru yang modern," sebutnya.

Master Asesor Pariwisata ini menyebutkan, ide untuk membangun kawasan wisata *Waterfront City* sudah lama muncul, akan tetapi baru kali ini bisa mencapai tahapan di mana sedikit lagi akan segera diwujudkan.

Menurutnya, kekuatan Sungai Siak sebagai ikon dan urat nadi transportasi Kota Pekanbaru semenjak zaman dulu, berpadu dengan banyaknya situs sejarah di sekitar kawasan itu.

Kemudian, ditunjang lagi dengan beberapa bangunan ikonik yang menjadi latar belakang kawasan tersebut seperti jembatan Siak III dan IV menjadi daya tariknya tersebut.

Oleh karena karena itu, Ketua Dewan Kehormatan DPP HPI Riau berharap nantinya zona pariwisata ini akan sama kelasnya dengan tepian sungai Huang Pu di Shanghai, Sungai Thames di London atau sungai Seine di Paris.

"Dengan ini maka Riau bisa mewujudkan salah satu visi pembangunannya untuk mengembangkan sektor wisata sebagai salah satu urat nadi perekonomian ke depan," tutupnya.

Untuk diketahui dari pemberitaan sebelumnya, pembangunan atau optimalisasi eks Pelabuhan PT. Pelindo menjadi destinasi wisata merupakan hasil kesepakatan Menteri BUMN Erick Thohir dan Gubernur Riau Syamsuar.

Sebelumnya, Erick Thohir bersama Syamsuar menyepakati, bahwa optimalisasi kawasan tersebut harus menonjolkan desain Melayu.

Kemudian, tersedianya venue permainan rakyat tempatan dan venue untuk atraksi kebudayaan Melayu, dan harus dalam konteks berkelanjutan. (\*)

Figure 11. News of support from the Indonesian Tour Guide Association (HPI) Riau for the revitalization plan

News of support from the Indonesian Tour Guide Association (HPI) Riau for the revitalization plan of the former Pelindo 1 Port of Sungai Siak in Pekanbaru into a tourism area reflects an important collaboration in developing cultural-based tourism destinations. HPI Riau assesses that the transformation of this area into a tourism center can strengthen the identity of Malay culture and attract local and international tourists. This support is also in line with government and community efforts to increase economic potential through the history and culture-based tourism sector.

With the revitalization, this area is expected to become a new tourism icon in Pekanbaru that not only preserves local cultural values but also creates jobs and improves community welfare.

The revitalization of the former Pelindo 1 Pekanbaru Port building initiated by the Governor of Riau and the Director of BUMN is a strategic effort to optimize the economic and cultural potential in Pekanbaru. However, this revitalization process is not free from various challenges and problems that need to be resolved.

One of the main problems is the condition of the port building which is old and has experienced a decline in physical quality. These buildings, although they have historical value and are culturally significant, require in-depth structural repairs to be reused. Technical challenges such as damage to basic infrastructure, environmental problems due to sedimentation and pollution of the Siak River, and the need for modern technology are important issues in this revitalization.

In addition, there is a challenge in maintaining a balance between preserving melayu culture and developing the area for modern economic needs. There is concern that revitalization that focuses too much on commercial aspects can ignore local cultural elements that should be maintained and highlighted. The decision to change the function of the former port into a cultural tourism area requires careful planning so that economic goals do not eliminate the melayu cultural identity inherent in Pekanbaru. Social issues are also a concern, especially how to involve local communities in the revitalization process. Communities around the port and traditional economic actors who depend on the area need to be given space to continue to participate and enjoy the benefits of this revitalization. In addition, there is a need to ensure that the revitalization project not only benefits large parties, but also provides a positive economic impact for local communities, including the creation of new jobs and business opportunities.



Another issue that arises is funding. Although the revitalization is supported by the local government and state-owned enterprises, the project requires a large investment to transform the former port into a modern yet authentic cultural tourism destination. Therefore, collaboration between the public and private sectors, as well as effective resource management, are very important in running this project sustainably. With this background problem, the revitalization of the former Pelindo 1 Pekanbaru Port building must be carried out with a holistic approach, involving cultural, social, economic, and technical aspects to achieve sustainable success.

## 1.4 S.W.O.T

### REVITALIZATION OF THE FORMER PELINDO PORT 1



Table 1. SWOT  
Source: Writer (2024)

## 1.5 PROBLEM MAP

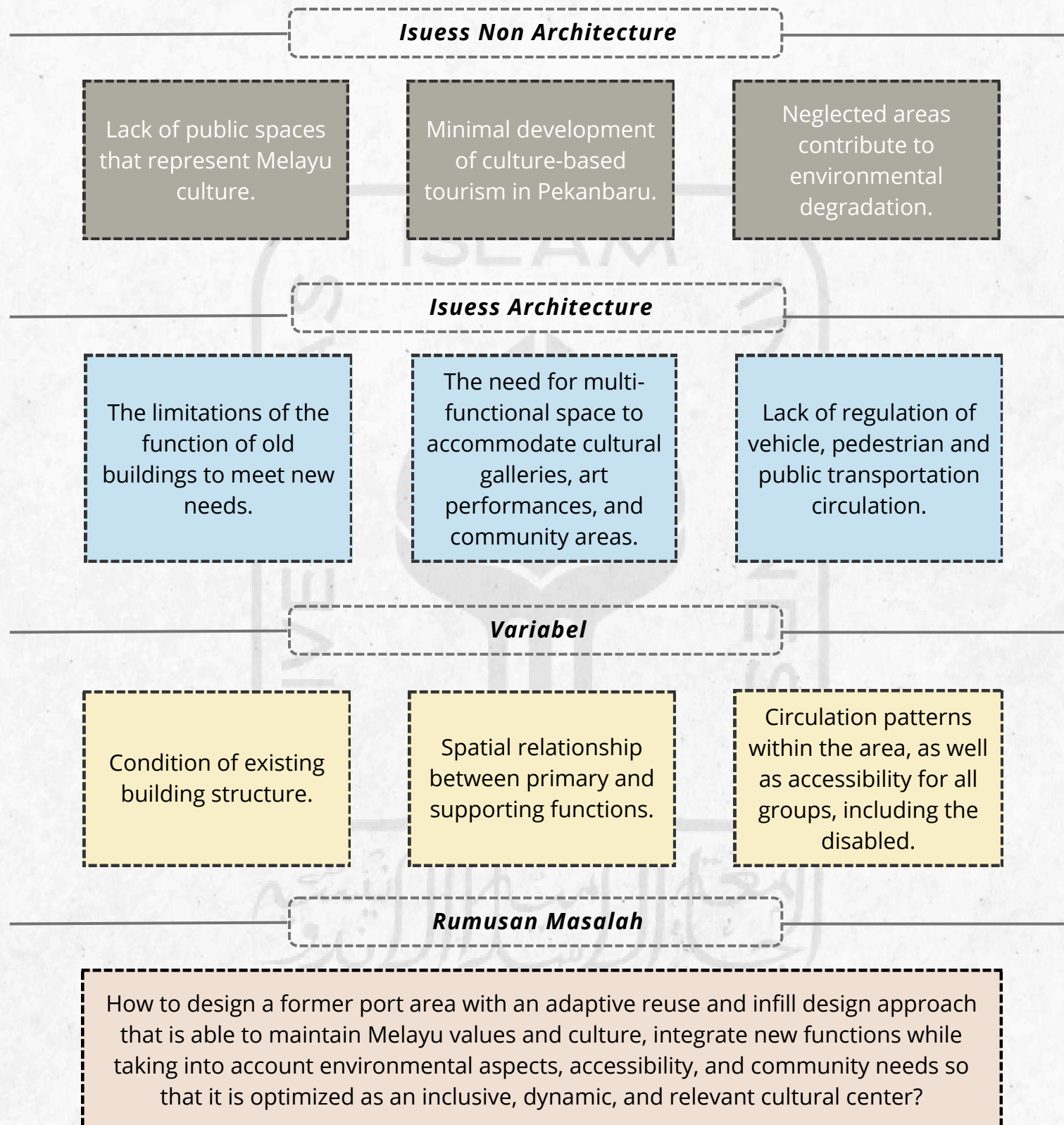


Table 2. Problem Map  
Source: Writer (2024)

## 1.6 PROBLEM STATEMENT DESIGN

### The General Problem Formulation

How to revitalize the former Pelindo 1 Port area on the Siak River into a Melayu Cultural Hub that maintains historical value, supports modern functions, and prioritizes inclusivity and interactivity through an adaptive reuse and in-fill design approach?

### The Specific Problem Formulation

1. How to adapt old buildings to keep them functional without losing their historical value?
2. How to organize zoning to balance public, commercial, and cultural spaces?
3. How to create comfortable and integrated access between pedestrians, vehicles, and river transportation?
4. How to improve thermal comfort with passive design and local materials?

### Design Objectives

1. Revitalizing the port area as a Malay Culture Hub.
2. Strengthening the structure of old buildings with adaptive reuse techniques without destroying historical elements.
3. Arranging clear zoning to support cultural functions, creative economy, and public spaces.
4. Increasing accessibility for all users with pedestrian paths, disabled-friendly, and integrated transportation.
5. Improving thermal comfort, natural lighting, and ventilation with local materials

### Design Targets

1. Blending modern design with strong Melayu cultural elements.
2. Creating inclusive and disabled-friendly public areas.
3. Ensuring energy efficiency and sustainability in building design.
4. Providing flexible spaces that can be used for various cultural activities.
5. Rehabilitating Old Buildings with Safety and Comfort.

### Design Limitations

1. Must maintain the main structure of the existing building.
2. Must comply with regulations related to the environment, land use, and development in cultural heritage areas.
3. Pay attention to existing conditions around the location (such as land, elevation, and city planning).
4. Must use supporting local materials.

*Table 3. Problem Statement Design*  
*Source: Writer (2024)*

## 1.7 DESIGN PROBLEM SOLVING METHODS

The design method is a systematic approach used in the process of designing buildings, or environments. This method involves a series of steps starting from initial data collection, needs and problem analysis, determining themes and typologies, data analysis, concept development, to implementation of solutions and final designs.

### **1. Observation (Site Survey)**

Conduct a site survey to be designed to collect data on physical conditions, land characteristics, environmental conditions and existing ones around. Conduct documentation and understand potential problems or opportunities that may affect the design of building conditions around the location while feeling the surrounding atmosphere.

### **2. Problem Identification**

Identifying problems on the site, both architectural and non-architectural issues. and these issues are formulated in a problem formulation map as a design limitation to be developed.

### **3. Theme and Concept Determination**

Determine the right theme and concept which are then developed at the site location based on the problem. and it is expected to be able to solve design problems by emphasizing the right design approach, so that the design can have direction and be realized according to what is desired.

### **4. Data Analysis**

Data Analysis is carried out to facilitate the design process both in terms of physical and operational buildings by considering certain aspects in order to make the right, effective planning decisions. General data analysis is needed such as site analysis, activity analysis, user analysis, space analysis, regulatory analysis, climate analysis, and building form analysis.

### **5. Design Exploration**

Design exploration is the process of finding the form of design to be developed. Design exploration is made in a visual form that can be measured. Design exploration will include exploration of mass, footprint, spatial layout, circulation, and structure to be designed to find the best solution.

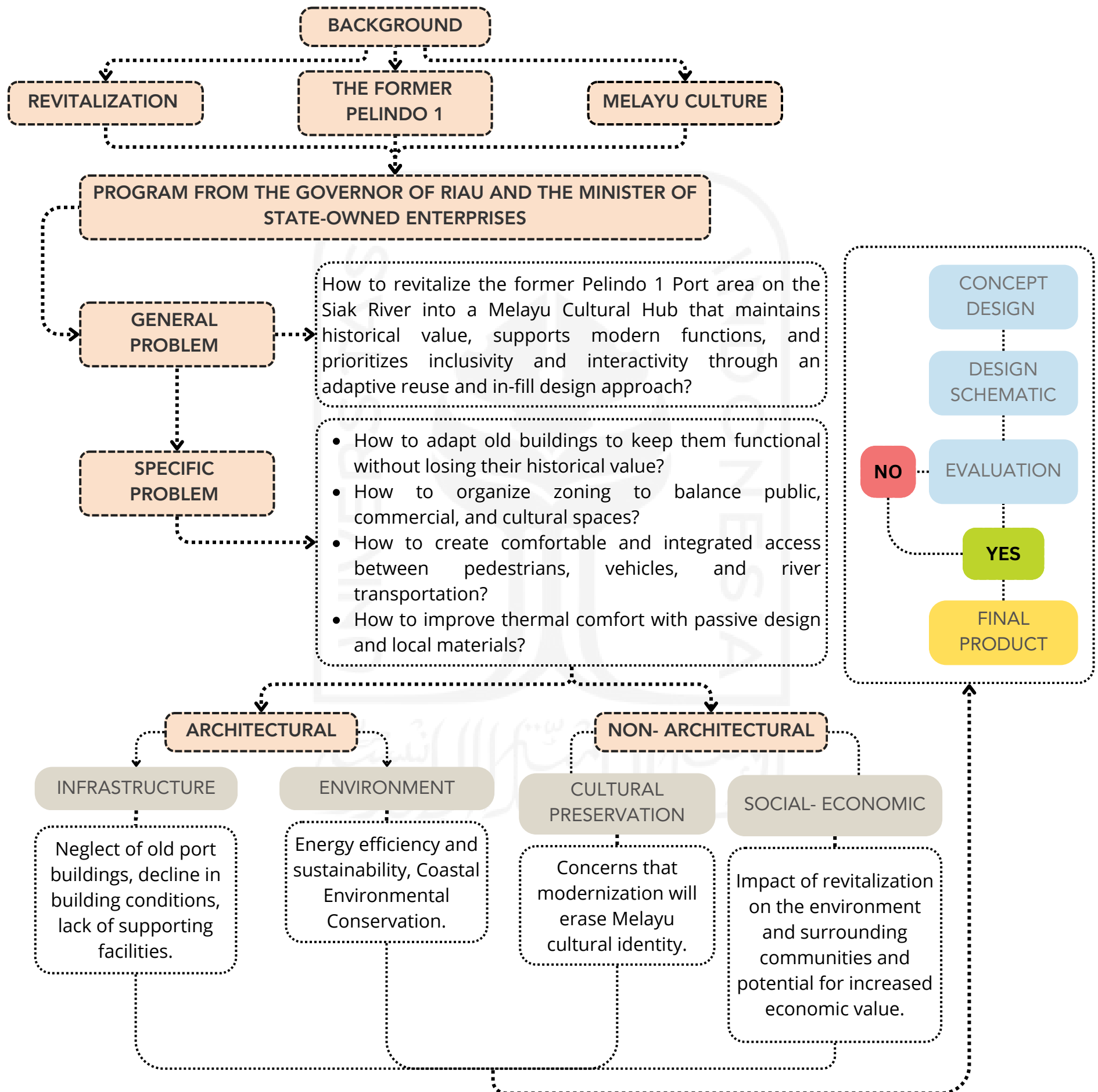
### **6. Design Development**

Determination of the appropriate design is based on the results of design exploration which is then developed into a more structured and refined design. Design development is done in 3D, so that the visuals of the design will look more realistic in terms of the suitability of the shape and the surrounding environment.

### **7. final design**

In this final process, which is the completeness of the design that has been perfected. the completeness is the result of all design steps and is also equipped with a design book and a visual design video that makes it easier for readers to understand the design.

## 1.8 FRAMEWORK OF THINKING



## 1.9 DESIGN EXCELLENCE, ORIGINALITY

Architectural design is always based on a theoretical approach, references or precedents, problem issues, and the goals to be achieved. So in reality architectural design has several similarities and differences with other designs.

The following are several design titles along with their similarities and differences:

No.	Title	Write By	Year	Similarities	Differences
1.	Eemhuis, A New Culture Hub in the Netherlands	Neutelings Riedijk	2013	Function	Location Approach Building Typology
2.	Strategi Penerapan Konsep Adaptive Re-Use pada bangunan tua studi kasus: Gedung PT P.P.I (Ex. Kantor PT Tjipta Niaga) Di Kawasan Koa Tua Jakarta	Retdia Sofiana, Ari Widyati Purwantiasning, Anisa	2014	Approach Building Typology	Location Function
3.	Revitalisasi Pelabuhan Lama di Tepi Sungai Siak Pekanbaru: Studi Preseden	Melania L. Pandiangan	2015	Location Building Typology	Approach Function

*Table 4. Design Excellence and Originality  
Source: Writer (2024)*

02

DESIGN PROBLEM RESEARCH & SOLUTION



## 2.1 LOCATION STUDY AND ANALYSIS

### 2.1.1 Geographical Location



#### *Geographical Conditions, Population, & Livelihood*

Geographically, Riau Province is located between 01 degrees 31'-02 degrees 25' LS (South Latitude) and 100 degrees-105 degrees BT (East Longitude).

According to the BKN Pekanbaru website, its area reaches 107,932.71 square kilometers. The land area is around 89,150.15 square kilometers, while the ocean is 18,782.56 square kilometers. The land area is in the form of the slopes of the Barisan hills to the Strait of Malacca.

This has apparently brought the strategic position of Riau Province which is a local and international trade route. Apart from that, the Riau Province is divided into 12 regencies/cities named Kuantan Singingi, Indragiri Hulu, Indragiri Hilir, Pelalawan, Siak, Kampar, Rokan Hulu, Bengkalis, Rokan Hilir, Meranti Islands, Dumai, and Pekanbaru.

Looking at the data on the Housing & Residential Areas website, the population of Riau in 2016 reached 6,500,971 people. Those who live there consist of Javanese, Minangkabau, Batak, Chinese, Banjar, and Bugis tribes. Meanwhile, the largest composition of the population is dominated by the Malay tribe at around 37.74 percent. In terms of livelihood, they have many natural resources. Among them are gold, oil, gas, and forestry and plantation products.

#### *Map of Riau Province and Its Boundaries*

When viewed through the map, the land and sea of Riau Province covers several specific territorial boundaries. First, the north is bordered by North Sumatra Province. Second, the south is bordered by Jambi Province.

Then, the western part borders the administrative area of West Sumatra. Finally, the east is bordered by the Riau Islands Province.



## 2.1.2 Macro Site

### *Pekanbaru City*

Pekanbaru is the capital of Riau Province, located on the island of Sumatra, Indonesia. Pekanbaru is known as one of the cities with the fastest economic growth in Indonesia, supported by the trade, services, and industry sectors. The city is also the administrative and business center of the Riau region, especially in the oil and gas industry and palm oil plantations, which are the main commodities of this province.

Pekanbaru has a history that is closely related to Melayu culture. The city was once the center of the Siak kingdom, which had a strong influence on the development of Melayu culture in Riau. This influence is still visible in the traditions, architecture, and arts in this city, even though Pekanbaru has developed into a modern city.



The population density in Pekanbaru City, the capital of Riau Province, continues to increase along with rapid economic growth and urbanization. As a business and industrial center, Pekanbaru attracts many immigrants from various regions to work and settle, so that the city's population continues to grow. This causes challenges in managing infrastructure, housing, and public services, especially in the city center area. Although this population growth reflects the dynamics of a growing economy, Pekanbaru needs to face the challenge of ensuring the quality of life of its citizens is maintained through sustainable and innovative city planning.

## 2.2 STUDY SITE ANALYSIS

### 2.2.1 Micro Site



Figure 13. The Current Situation at Pelindo 1 Pekanbaru Port

The location of the former Pelindo 1 Port building of Sungai Siak is very appropriate for revitalization because of its strategic location on the banks of the Siak River, close to the center of Pekanbaru. This position allows the area to become a tourist icon and center of Malay culture, considering the importance of the Siak River in the history of trade and the development of the city. In addition, revitalization can revive inactive areas, creating public spaces that function as tourist destinations as well as places for arts and creative economic activities, which have the potential to attract visitors and boost the local economy.



#### PELINDO 1 Port Siak River, Pekanbaru

Location: Jl. Saleh Abbas No.3, Kampung Dalam, Kec. Senapelan, Kota Pekanbaru, Riau (28155), Indonesia.



## 2.2.2 Site Location

### Topographic Conditions

- Ground Height:

The former PELINDO 1 Port area is located on the banks of the Siak River, with flat topography and a slight slope towards the river.

- Soil Type:

The dominance of alluvial soil, which is the result of sedimentation from the Siak River, tends to be fertile but is susceptible to erosion in riverbank areas.

- Environmental Conditions:

Being close to the river makes this area have the potential for waterlogging during high tides or high rainfall.

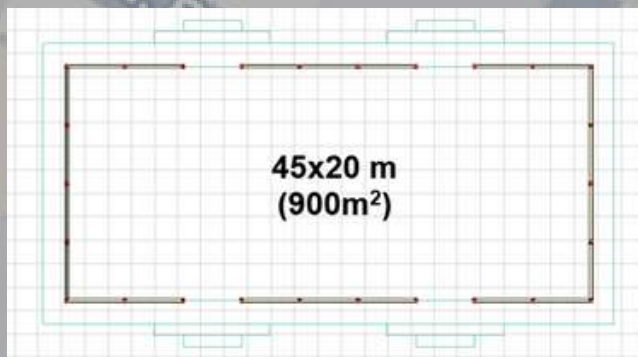
*The Port Warehouse Building area  
3D Model*



Pelabuhan Pelindo I Pekanbaru



45x20 m  
(900m<sup>2</sup>)



Jl. Kampar

Jl. Perdagangan

## 2.2.3 Climate Site Condition

### Sunpath

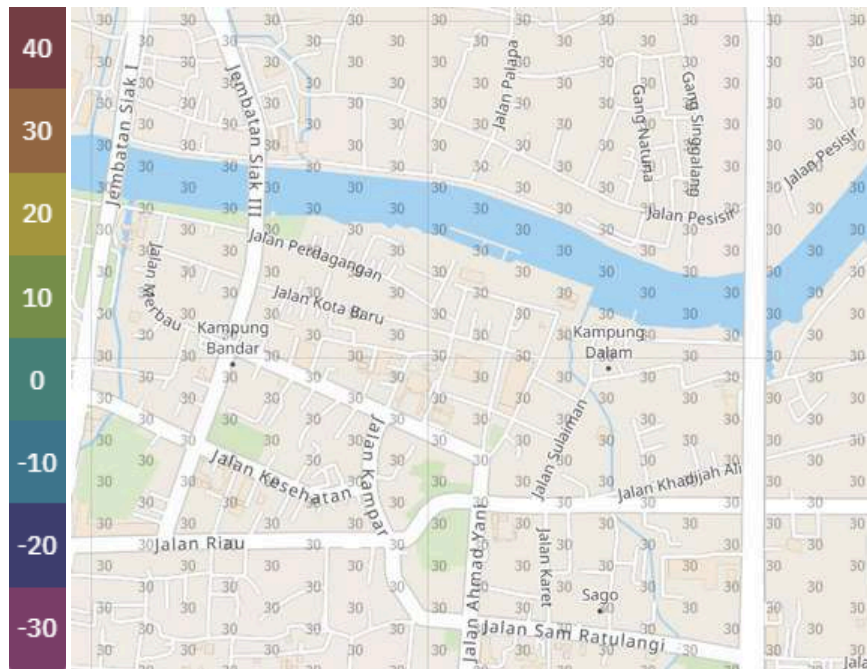
Sunpath analysis is the basis for determining the orientation of the building mass, opening models and thermal comfort for site users

Three times were chosen to analyze the sunpath, namely at 9 am when the morning sun from the east directly exposes sunlight to the building, then at 12 noon when the sun is at its highest point, then at 3 pm when the sun begins to set.



Figure 15. Microclimate Analysis of Site (Sun)  
Source: SunCalc.com

## Temperature



Data iklim Pekanbaru, Riau, Indonesia													
Bulan	Jan	Feb	Mar	Apr	Mei	Jun	Jul	Agt	Sep	Okt	Nov	Des	Tahun
Rekor tertinggi °C (°F)	36 (97)	35.7 (96.3)	36 (97)	37.2 (99)	36.7 (98.1)	39.8 (103.6)	36.7 (98.1)	39.6 (103.3)	37 (99)	36.5 (97.7)	35.4 (95.7)	35.7 (96.3)	39.8 (103.6)
Rata-rata tertinggi °C (°F)	31.7 (89.1)	32.4 (90.3)	33 (91)	33.4 (92.1)	33.4 (92.1)	33.3 (91.9)	33 (91)	32.9 (91.2)	32.7 (90.9)	32.8 (91)	32.4 (90.3)	31.7 (89.1)	32.72 (90.83)
Rata-rata harian °C (°F)	27.1 (80.8)	27.5 (81.5)	27.8 (82)	28.2 (82.8)	28.3 (82.9)	28.1 (82.6)	27.8 (82)	27.7 (81.9)	27.6 (81.7)	27.8 (82)	27.5 (81.5)	27.2 (81)	27.72 (81.89)
Rata-rata terendah °C (°F)	22.5 (72.5)	22.5 (72.5)	22.6 (72.7)	22.9 (73.2)	23.1 (73.6)	22.9 (73.2)	22.5 (72.5)	22.4 (72.3)	22.7 (72.9)	22.7 (72.9)	22.6 (72.7)	22.6 (72.7)	22.67 (72.81)
Rekor terendah °C (°F)	18.7 (65.7)	15.5 (59.9)	18.4 (65.1)	17 (63)	18.4 (65.1)	19 (66)	18.5 (65.3)	17.5 (63.5)	18 (64)	19 (66)	19 (66)	14.6 (58.3)	14.6 (58.3)
Presipitasi mm (inci)	212 (8.35)	152 (5.98)	221 (8.7)	231 (9.09)	185 (7.28)	130 (5.12)	125 (4.92)	139 (5.47)	161 (6.34)	126 (8.9)	279 (10.98)	255 (10.04)	2316 (91.17)
Rata-rata hari hujan	16	13	18	19	15	10	9	11	14	17	20	19	181
% kelembapan	83	82	82	82	82	80	81	81	82	81	82	84	81.8
Rata-rata sinar matahari bulanan	146	150	119	117	168	170	174	151	144	123	114	137	1.713

Figure 16. Temperature on Pekanbaru City  
Source: Weatherbase/ Climate-Data.org

The former Pelindo 1 Port area in Pekanbaru has a tropical climate with air temperatures that tend to be high throughout the year. Temperatures in this area range from 24°C to 34°C, with fairly high humidity, often above 80%. The weather is generally hot and humid, especially during the day, while quite high rainfall occurs especially during the rainy season months, such as from August to March. These climate conditions need to be considered in planning the revitalization of the area, especially in terms of building design aspects that support natural ventilation and protection from heat.

## Wind Direction

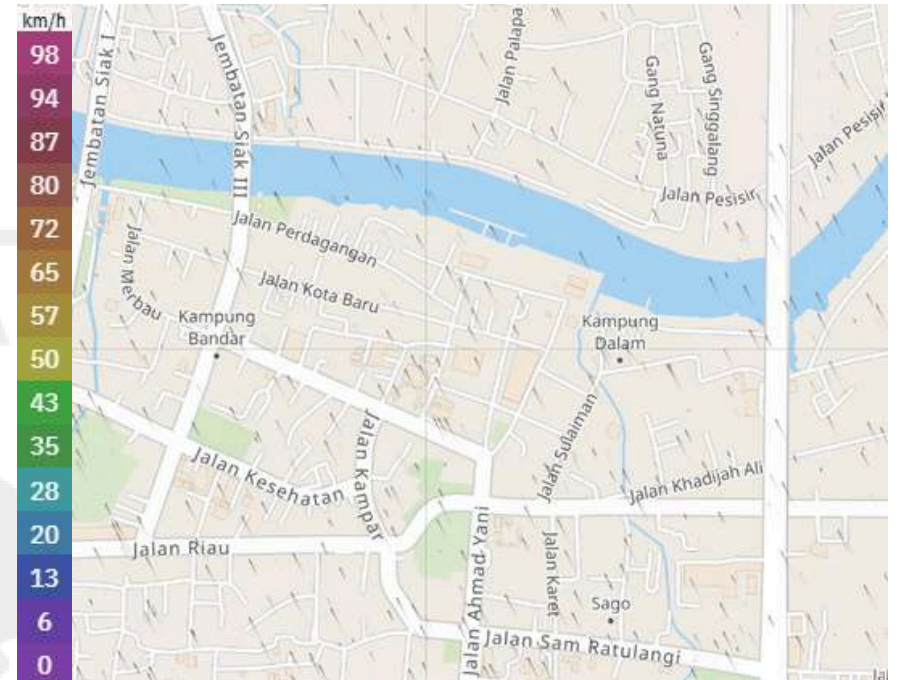


Figure 17. Wind Direction  
Source: Weatherbase/ Climate-Data.org

In the former Pelindo 1 Port area of Pekanbaru, wind direction is generally influenced by the prevailing monsoon wind patterns in Indonesia. The wind usually blows from the northwest to the southeast, depending on the season. In the rainy season (October to March), the wind tends to come from the northwest, while in the dry season (April to September), the wind generally blows from the southeast.

Wind speeds in this area are relatively moderate, ranging from 5 to 15 km/h. Wind speeds can increase during bad weather or heavy rain. This information is important in planning building design and spatial planning in the revitalization area, especially to consider aspects of natural air circulation and building protection from strong winds.

## 2.2.4 View and Vista



North

South

East

West

Sungai Siak

Jl. Perdagangan

Jl. Perdagangan

Jl. Kamar

Jl. Kp. Dalam

Figure 14. The view and Vista  
Source. Googlemaps (processed by the author, 2024)



## 2.2.5 Regulation

ASPECT	RULE	LEGAL BASIS
Land Allocation	The area is used for the development of Melayu culture-based tourism and creative economic space.	Pekanbaru City Regional Spatial Planning Plan (RTRW) 2021-2041.
Basic Building Coefficient (KBC)	Maximum 60% of the total land area.	Pekanbaru City Regional Regulation No. 7 of 2018 concerning RTRW.
Basic Green Coefficient (GBC)	A minimum of 30% of the total land area must be used as green open space.	Law No. 26 of 2007 concerning Spatial Planning; PU Regulation No. 05/PRT/M/2008 concerning Green Open Space.
Building Floor Coefficient (KLB)	Maximum 5 floors ( $\pm$ 20 meters), adjusted to the mixed function of culture, creative economy, and tourism.	Pekanbaru City Building Regulations, referring to Government Regulation No. 36 of 2005 concerning Buildings.
River Conservation	Maintain a minimum distance of 15 meters from the river boundary line.	Government Regulation on River Conservation Areas
Accessibility	Must provide inclusive access, including paths for pedestrians, cyclists and the disabled.	Law No. 8 of 2016 concerning Persons with Disabilities; PUPR Ministerial Regulation No. 14/PRT/M/2017 concerning Accessibility.
Preservation of Cultural Heritage	Old buildings that have historical value must be preserved and can only be modified adaptively.	Law No. 11 of 2010 on Cultural Heritage.
Environmental Management	Waste management systems must comply with applicable environmental standards.	Law No. 32 of 2009 concerning Environmental Protection and Management.
Circulation System	Vehicle and pedestrian circulation must be integrated with the spatial planning of the area.	Pekanbaru City Spatial Plan 2021-2041; Government Regulation No. 34 of 2006 concerning Roads.
Building Materials	It is recommended to use local, environmentally friendly materials.	PUPR Ministerial Regulation No. 02/PRT/M/2015 concerning Green Buildings.
Area Zoning	The area is divided into a cultural zone (galleries and museums), a creative economic zone, and an open public zone.	Pekanbaru City Spatial Plan 2021-2041; Riau Regional Regulation on Tourism Management.

Table 5. Regulation site  
Source: Authors (2025)

## 2.2.6 Circulation, Access, and Traffic

Traffic circulation and access to the former Pelindo 1 Port area in Pekanbaru are quite strategic, considering its location close to the city center and on the banks of the Siak River. The main access to this area is supported by city roads that connect the port with the central business and residential areas. However, traffic around this area can be congested, especially due to the high activity in the urban area and the lack of adequate road infrastructure.

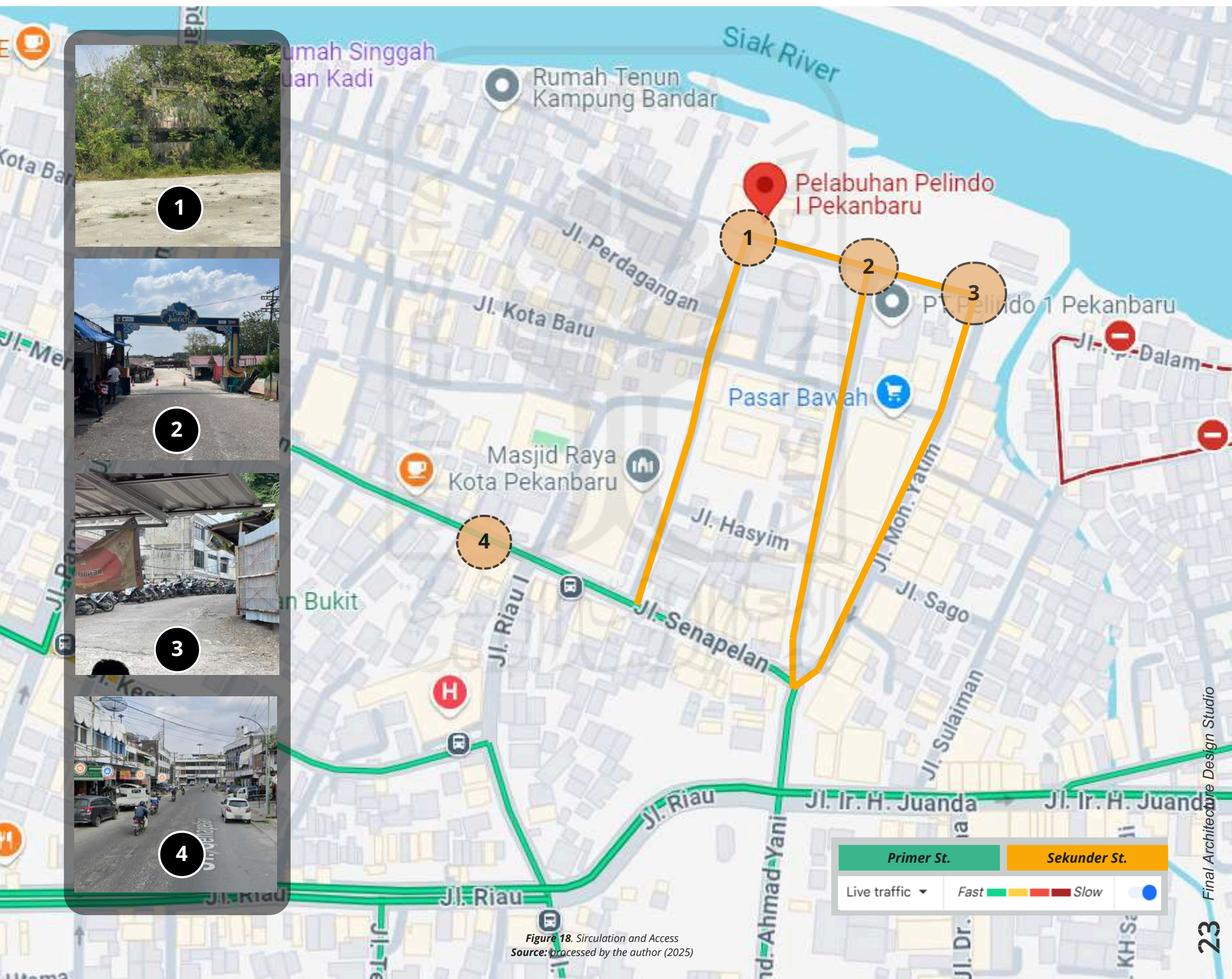


Figure 18. Circulation and Access  
Source: processed by the author (2025)

## 2.2.7 Facility Analysis







Facility	Existing	Analysis
 <p>Accommodation/Lodging</p>	<p>There is one place to stay in the form of a hotel located around the lower market area.</p>	<p>There is no need to add accommodation facilities because the study location is adequate, and there are many other accommodation facilities within a 1 km radius of the study location.</p>
 <p>Rest</p>	<p>There are seats along the sidewalk as well as inside the park.</p>	<p>There is a need to add gazebos around the tourism area, especially on the banks of the Siak River, so that visitors can rest after walking while enjoying the beautiful view of the Siak River Bridges I, III, and IV.</p>
 <p>Worship Place</p>	<p>There is a place of worship, namely a mosque, which is located on the banks of the Siak River.</p>	<p>There is no need to add worship facilities to the mosque because they are already adequate.</p>
 <p>Security</p>	<p>There is a police security post in the lower market area.</p>	<p>The need to establish guard posts around tourism areas to ensure visitor safety.</p>
 <p>Parking lot</p>	<p>There are several parking lots spread across several points. However, locals and visitors still often park their vehicles on the shoulder of the road.</p>	<p>There is a need for a plan to add well-organized parking areas so that visitors do not park their vehicles on the shoulder of the road, especially at points where attractions are located.</p>
 <p>Public Toilet</p>	<p>There is one public toilet unit available in the study area.</p>	<p>The need for additional public toilet units around the study objects, especially at tourist attraction locations.</p>

Table 6. Facility site  
Source: Writer (2024)



### *Eating and Drinking*

There are many grocery stalls and street vendors selling along Jl. Perdagangan, but the condition is not organized.

Arrangements are needed for street vendor stalls located around the study object so that they do not disturb pedestrians and do not cause traffic jams.

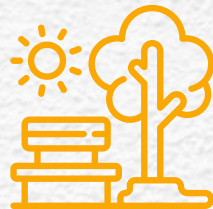
The need for additional restaurants serving typical Pekanbaru City food.



### *Gift shop*

There is no souvenir shop

It is necessary to add souvenir shops as providers of souvenirs or gifts from the old city area of Pekanbaru City.



### *Open Space / Garden*

There are three parks on the banks of the Siak River, namely the Siak Riverside Park, the Tuan Kadhi House Park, and the Cultural Heritage Park under the Siak III Bridge.

It is necessary to add open space facilities



### *Sign System*

The number of information boards in tourism areas is very minimal and quite a few of these information boards provide unclear or even inappropriate directions.

The need for information improvements on the Kampung Bandar area sign system

## 2.2.8 Environmental Architectural Overview

- **Existing Building:**
  - The port warehouse building is simple in shape with a steel and concrete structure, and a gable roof typical of colonial-era port architecture.
  - The physical condition of some buildings requires repair, but their historical value can be maintained.
- **Surrounding environment:**
  - This area is surrounded by residential areas, trade facilities, and supporting infrastructure such as a modern port.
  - Buildings around the area tend to have a modern character without highlighting local cultural aspects.
- **Aesthetics:**
  - The lack of integration between building design and Malay cultural elements creates an opportunity to revive local identity through revitalization.



*Figure 19. Environmental Architectural Overview*  
*Source: processed by the author (2025)*

*The former PELINDO 1 Port area has great potential to be transformed into a Malay cultural center. With supportive topography, regulations that lead to sustainability, and good accessibility, the revitalization project can be an example of a design that integrates historical, cultural, and modern values in one area.*

## 2.3 STUDY & ANALYSIS OF BUILDING TYPOLOGY APPROACHES AND DESIGN PROBLEMS

### A). STUDY AND ANALYSIS OF BUILDING TYPOLOGY

#### 1. Original (Existing) Building Typology

*Building Type:*

- Port warehouse with a simple structure, usually using materials such as reinforced concrete, wood, or light steel.
- This building tends to be elongated, with large natural ventilation for storing logistics.

#### 2. Architectural Characteristics:

- Utilitarian buildings, without ornamentation, but some may have local influences such as the typical Malay gable roof.
- Materials tend to be resistant to humidity because they are in a river environment.

#### 3. Physical Condition:

- The building structure may have been damaged due to age and lack of maintenance, especially on the roof, walls, and floors.
- Supporting facilities such as docks or access roads may be inadequate.

#### 2. New Building Typology (Plan)

a. *Building Type:*

- Multifunctional building: Museum, art space, cultural gallery, restaurant, and public space.
- The architectural approach uses a combination of adaptive reuse for existing buildings and infill design to add new functions.

b. *New Architectural Characteristics:*

- Combining modern architecture with typical Melayu elements, such as curved roofs, wood carvings, and the use of natural colors.
- Focus on flexibility of space to support a variety of cultural activities.

### B). USER ANALYSIS

#### 1. User Segmentation

- *Local and International Tourists:*
  - Seeking a unique Malay cultural and historical experience.
  - Requires facilities such as interactive museums, restaurants, and performance areas.
- *Local Communities:*
  - Using the space for cultural activities such as traditional arts, crafts, and training.
  - Requires workshop facilities, art stages, and gathering places.
- *Creative Economy Actors:*
  - Craftsmen, artists, and local MSMEs who utilize the space to promote and sell Malay cultural products.
- *Students and Academics:*
  - Requires access to libraries, documentation centers, and educational programs to learn about Malay culture.

#### 2. User Needs

USER	REQUIREMENT	FACILITIES
Local and International Tourists	Cultural information, interactive experiences and recreation space	Museum, art stage (amphitheatre), restaurant, promenade
Local Communities	Cultural expression space, workshops and community events	Art studio, craft center, exhibition space
Creative Economy Actors	Promotion and workshop space	Craft stalls, creative gallery, exhibition space
Students and Academics	Historical data access, learning facilities	Library, digital archive, seminar room

Table 7. User  
Source: Writer (2024)

## **C). DESIGN PROBLEMS**

### **A. Physical Problems**

#### 1. Existing Structural Damage:

- Old building structures that are weathered or do not meet modern safety standards.
- Solution: Structural audit and re-strengthening with modern materials without damaging aesthetics.

#### 2. Environmental Conditions:

- The port area is prone to flooding due to its position on the banks of the Siak River.
- Solution: New drainage system and building elevation in certain areas.

#### 3. Accessibility:

- Lack of access for the disabled and good connectivity to other areas around.
- Solution: Addition of ramps, lifts, and pedestrian bridges.

### **B. Functional Problems**

#### 1. Mixed Function:

- Integrating new functions (museum, gallery, restaurant) into the old structure without sacrificing aesthetics.
- Solution: Vertical or horizontal zone separation with efficient circulation.

#### 2. Sustainability of Function:

- Risk of being neglected due to lack of community participation or sustainable funding sources.
- Solution: Collaboration with local communities and the private sector through CSR programs or investment.

### **C. Aesthetic Issues**

#### 1. Harmony of Old and New:

- Uniting modern architecture with traditional Malay style so that they do not conflict.
- Solution: Utilizing local motifs and materials in new elements.

#### 2. Cultural Image:

- Presenting a strong Malay identity without looking stiff or too traditional.
- Solution: Using a contemporary design approach with a touch of local culture (ornaments, colors, patterns).

### **D. Operational Issues**

#### 1. Space Management:

- Risk of conflict over the use of space between tourists, communities, and event managers.
- Solution: Clear zoning and flexibility of space.

#### 2. Maintenance:

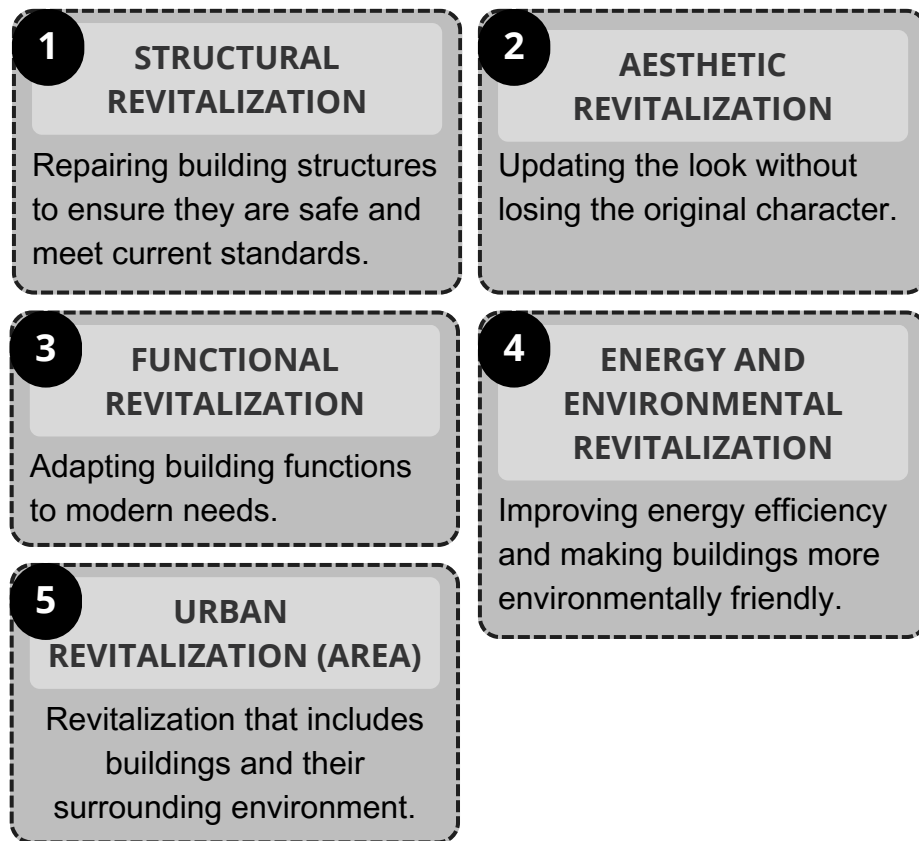
- Historic buildings require regular maintenance to prevent damage.
- Solution: Providing special funds for maintenance through entrance tickets, kiosk rentals, or donations.

## 2.4 STUDY & ANALYSIS OF DESIGN PROBLEM APPROACHES AND PLANS

### 2.4.1 REVITALISASI

Building revitalization is the process of restoring, developing, and readjusting old buildings to keep them relevant to the needs of the times without losing their historical value or original character. This process is often carried out on historic buildings, old buildings, or areas that have experienced a decline in function and aesthetics.

There are several types of building revitalization:



According to PU Regulation No. 18 of 2010 concerning Guidelines for Area Revitalization, revitalization is an effort to increase land value through redevelopment in an area that can improve the function of the previous area. Meanwhile, according to the Department of Settlement and Regional Infrastructure of the Ministry of PUPR, revitalization is a series of efforts to revive areas that tend to die.

In addition, revitalization is to increase the strategic and significant vitality values of areas that still have potential. Another meaning of revitalization includes controlling areas that tend to be chaotic due to degradation.

Revitalization has various aspects in its implementation. Here are three stages:

#### 1. Physical Intervention

Physical intervention is carried out in stages, including repairing and improving the quality and physical condition of buildings, green planning, connecting systems, sign or advertising systems and open spaces in the area. In addition, environmental issues are important, so physical intervention should also pay attention to the environmental context.

#### 2. Economic Revitalization

Short-term physical improvements to an area are expected to accommodate formal and informal economic activities. Thus, this can provide added value to the area.

#### 3. Social Revitalization

Revitalization in an area will be measured if it is able to create an attractive environment, not just making a nice place. This activity must have a positive impact and can improve the dynamics and social life of the community/residents.

#### Initial Of Design Idea

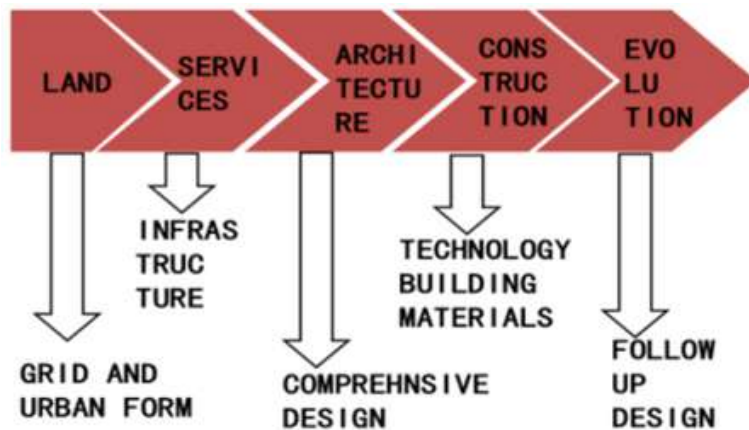
This research uses a mixed approach involving field surveys, interviews with several people, historical data analysis, and conceptual modeling. Quantitative and qualitative data were collected to evaluate social, economic, and environmental aspects of revitalization.

##### 1. Revitalization Strategy

The revitalization process involves developing a master plan that maintains the original building structure while adapting it to contemporary needs. The use of green technology, public art and public facilities are introduced to create a sustainable and eco-friendly environment.

One of the best examples of industrial architecture from a bygone period is the Siak River Port Warehouse structure. The structure, with its massive windows, high ceilings, and robust brickwork, is a testament to the architectural style that was popular when it was built. Its historical value and roomy interior make it a prime choice for adaptive reuse, turning it into a multipurpose lifestyle space.

Its historical value and roomy interior make it a prime choice for adaptive reuse, turning it into a multipurpose lifestyle space.



Source: Wainer et al. 2016

## 2. Revitalization Impact

The impact of revitalization on local communities involves increasing employment opportunities, improving the local economy through tourism, and increasing the community's sense of pride in their cultural heritage. Apart from that, this revitalization has improved the image of the city of Pekanbaru as an attractive lifestyle destination.

## 2.4.2 ADAPTIVE REUSE

### **Design Approach**

#### *a. Adaptive Reuse*

*The adaptive reuse approach focuses on reusing old buildings for new functions without losing their historical identity. In this context, this approach involves:*

- *Conservation of Historical Elements: Identifying architectural elements such as steel structures, gable roofs, and distinctive open spaces.*
- *Function Transformation: Adapting industrial spaces into art galleries, cultural workshops, and art performance areas.*
- *Sustainability: Minimizing demolition and using new materials to support ecological sustainability.*

### **Problem Analysis**

1. **Incompatibility of Old Space with New Function:** The former port space was designed for logistics, so it requires adjustment for public and cultural functions.
2. **Structural Damage:** The old structure may experience material degradation, such as steel corrosion and concrete cracking.
3. **Balance Between Modernization and Tradition:** Blending modern design elements without losing cultural identity.

### 2.4.3 INFILL DESIGN

The infill design approach is used to add new structures to empty or unused areas, completing functions that cannot be fulfilled by the existing building.

This strategy involves:

1. **Integration with the Old Environment:** Designing a new building that is harmonious with the existing structure.
2. **Use of Additional Functions:** Adding spaces such as cultural pavilions, small theaters, or creative economy facilities.
3. **Modern Aesthetics:** Bringing contemporary design elements that still reflect the philosophy of Malay culture.

### **Problem Analysis**

1. **Suitability of Scale and Proportion:** The new structure must be visually balanced and not dominate the old building.
2. **Flexibility of New Functions:** Providing multifunctional spaces that can be adapted for various cultural and community activities.
3. **Interaction of Old and New Spaces:** Creating smooth circulation and connectivity between the old building and the infill structure.

## 2.4.4 CULTURE HUB

Culture Hub is a concept of space or activity center designed to support and bring together various aspects of culture, art, and creativity. Culture Hub functions as a place where individuals and communities can interact, share, and collaborate in various activities related to the preservation, development, and promotion of culture. This concept is often applied in the context of regional revitalization or as part of the development of public facilities that prioritize local cultural values.

Functions of Cultural Centers:

1. Cultural Preservation  
Being a place to document, exhibit, and maintain local traditions and cultural heritage.
2. Education and Awareness  
Raising Organizing educational programs such as workshops, seminars, and training to improve public understanding and appreciation of culture.
3. Creative Community Development  
Helping local communities develop through support for artists, craftsmen, and cultural actors.
4. Cultural Tourism Destination  
Culture Hubs can attract tourists, both domestic and international, who are interested in the uniqueness of local culture.
5. Creative Economy Center  
Stimulating the local economy by creating business opportunities in the cultural and arts sectors, such as craft production, arts entertainment, and other creative industries.

### Implementation Example

- **Taman Ismail Marzuki** (Indonesia)

Taman Ismail Marzuki (TIM) is an arts and culture center located in Jakarta, Indonesia. Inaugurated in 1968, TIM is home to various arts activities, ranging from theater performances, art exhibitions, film screenings, to music concerts. This area is also equipped with modern facilities, such as theaters, art galleries, libraries, and cinemas, which support community creativity.

After the revitalization that was completed in 2021, TIM now appears with a new face that combines elements of traditional culture and modern architecture. This place continues to be a symbol of Jakarta's culture, attracting various groups to participate and enjoy various forms of art.

- **The Esplanade – Theatres on the Bay** (Singapura)



The Esplanade, affectionately known as “Durian” for its unique architecture resembling the skin of a durian fruit, is an iconic performing arts centre in Marina Bay, Singapore. Opened in 2002, it is home to world-class art performances, including concerts, theatre and dance. With facilities such as the 1,600-capacity Concert Hall and the Theatre that can accommodate up to 2,000 spectators, the Esplanade is not only a symbol of arts and culture but also a popular tourist destination that enriches the Marina Bay panorama. Its strategic location and open public spaces make it a gathering place for residents and tourists.

- **The Barbican Centre** (Inggris)



The Barbican Centre is one of the largest arts complexes in Europe, located in London, England. Established in 1982, the centre is home to a variety of art forms, including theatre performances, music concerts, films, visual art exhibitions and other cultural events. The complex is also home to the London Symphony Orchestra and the Guildhall School of Music & Drama. Known for its Brutalist architectural style, The Barbican Centre features a unique concrete structure and open spaces with gardens, water bodies and public areas. It serves not only as an arts centre but also as a community space that promotes creativity and collaboration.

## 2.4.5 MELAYU CULTURE IN PEKANBARU CITY

Melayu culture in Pekanbaru City is an integral part of the identity and history of the local community. Pekanbaru, which is the capital of Riau Province, is known as one of the centers of Meulay culture in Indonesia. This cultural heritage is clearly visible in various aspects of daily life, from language, customs, to art and architecture. The Melayu language that developed in Pekanbaru is the root of Indonesian, which is currently used nationally.

Melayu customs are highly respected in Pekanbaru, especially in the values of politeness, mutual cooperation, and respect for others. This culture is reflected in traditions such as traditional ceremonies, weddings, and religious events, where Islamic norms also strongly influence local culture.

In addition, Melayu arts such as traditional music, zapin dance, and pencak silat are still maintained and promoted as part of the city's cultural identity. In the culinary field, typical Melayu foods such as patin fish curry and lemang are a special attraction. Pekanbaru, as a rapidly developing modern city, still maintains traditional Melayu values, even integrating them into the creative economy and tourism sectors, making it a strong cultural attraction for locals and tourists.

The following are some important elements of Melayu culture:

- **Melayu Language**

Melayu is the main language used in daily communication in the Melayu region. This language is also the basis for several official languages such as Indonesian and Malaysian. As time progressed, Malay was also influenced by Arabic, Persian and Indian through trade and the spread of Islam.

- **Arts and Literature**

Melayu culture has a rich literary tradition, especially through forms such as pantun, syair, and saga. Melayu stories, such as the "Hikayat Hang Tuah" and the "Hikayat Raja-raja Pasai," reflect the heroic values, morals and customs of Melayu society. Apart from literature, music and dance also play an important role, with traditional musical instruments such as the psaltery, tambourine, gambus and flute often used in traditional ceremonies.

- **Ethnicity (Adat Istiadat)**

In Melayu culture are a system of values that regulate the social life of society, known as "adat bersendi syarak, syarak bersendi kitabullah." This means that customs and religious law support each other and are based on Islamic teachings. Traditional ceremonies such as weddings, circumcisions and celebrations of the Prophet's birthday are usually characterized by special rituals and distinctive traditions.



Figure 20. Melayu Tribe's Dress Tradition, Melayu Tribe's Traditional Wedding Ceremony, Gambus



Figure 21. Selembayung, Bunga bayam peraksi (Ornaments and air lattices)



Figure 22. Traditional House Of Melayu



Figure 23. Traditional Malay food

- **Religion**

is the dominant religion and greatly influences various aspects of Melayu society's life. Islamic teachings permeate art, customary law, and everyday life. Malay customs often reflect Islamic teachings, such as in terms of ethics, dress code, and religious ceremonies.

- **Arts and Crafts**

Traditional Melayu arts encompass a variety of art forms, including weaving, carving, and jewellery. Songket, a gold woven cloth that is often worn in traditional events, is a symbol of the greatness of Malay culture. Intricate and detailed Melayu wood carvings are often seen in traditional Melayu houses and mosques in the Melayu region.

- **Architecture**

Traditional Melayu architecture is known for its stilt houses supported by tall pillars. This serves to protect against floods, wild animals, and insects. The towering roof and symmetrical shape of the building also show a typical Melayu aesthetic. Selembayung is also called selo buyung and tandukbuang which is a decoration that is located crosswise at both ends of the Riau Malay traditional building perabung in Riau Province.

- **Culinary**

Traditional Malay food is heavily influenced by local ingredients such as coconut, spices, and fish. Malay dishes such as rendang, nasi lemak, gulai, and satay very famous and often served in traditional and daily events.

# KALENDER EVENT KESENIAN DAN PARIWISATA PROVINSI RIAU



Figure 24. Riau Province Arts and Tourism Events Calendar

- Berikut daftar 127 Kalender Pariwisata Riau 2024:
- Launching Kalender Event Pariwisata Kampar 2024 (20 Januari 2024) di Kampar.
- Fashion Week Festival (03-04 Februari 2024) di Rokan Hilir.
- Bagholec Godang (03-06 Februari 2024) di Kampar.
- Haul Syekh Abdurrahman Siddiq (12 Februari 2024) di Indragiri Hilir.
- Festival Perang Air (10-15 Februari 2024) di Kepulauan Meranti.
- Kirab Budaya (Cuilak), (15 Februari 2024) di Kepulauan Meranti.
- Haul Syech Said Ali Abdurihman Al Idrus (25-26 Februari 2024) di Rokan Hilir.
- Tahlil Bianyut (02-03 Maret 2024) di Pelalawan.
- Mandai Ulu Taon (04-05 Maret 2024) di Rokan Hulu.
- Festival Lomba Sampan Telaga Air Merah (05 Maret 2024) di Kepulauan Meranti.
- Potang Balimau (09 Maret 2024) di Rokan Hulu.
- Petang Belimau (10 Maret 2024) di Pekanbaru.
- Balimau Kasai (10 Maret 2024) di Kampar.
- Ziarah Makam dan Potang Belimau (10 Maret 2024) di Rokan Hilir.
- Tahura SSH Forest Soundrenalin Festival (15-17 Maret 2024) di Tahura Minas.
- Wisata Religi Cheng Beng (Sembahyang Kuburan), (4 April-5 Mei 2024) di Rokan Hilir.
- Festival Lampu Colok (07 April 2024) di Pekanbaru.
- Festival Lampu Colok (7 April 2024) di Bengkalis.
- Festival Lampu Colok (7 April 2024) di Kepulauan Meranti.
- Festival Meriam Buluh (8-9 April 2024) di Rokan Hilir.
- Alam Mayang Super Show (10-14 April 2024) di Pekanbaru.
- Naik Rumah Godang Hari Raya Kedua (11 April 2024) di Kecamatan Sentajo Raya, Kuantan Singingi.
- Festival Pacu Sampan Tradisional (12-14 April 2024) di Tepian Sialang Lotung Desa Sialang Jaya, Lirik, Indragiri Hulu.
- Pacu Sampan (13-14 April 2024) di Danau Rawang Udang, Kecamatan Benai, Kuantan Singingi.
- Pacu Sampan (13-14 April 2024) di Sungai Kelelawar, Kecamatan Hulu Kuantan, Kuantan Singingi.
- Wisata Religi Atib Koambai (14 April 2024) di Rokan Hilir.
- Festival Hari Raya Enam (15 April 2024) di Baserah, Kecamatan Kuantan Hilir, Kuantan Singingi.
- Perahu Baganduang (15 April 2024) di Kuantan Singingi.
- Rayo Onam (18-19 April 2024) di Kampar.
- Tahura SSH Forest Camp (21-23 April 2024) di Tahura Minas, Siak.
- Mahligai Festival (24-26 April 2024) di Kampar.
- Pesta Rakyat (27 April 2024) di Dumai.
- Festival Zapin (28-29 April 2024) di Bengkalis.
- Festival Lancang Kuning (01-04 Mei 2024) di Pekanbaru.
- Karnaval dan Pawai Budaya (01-04 Mei 2024) di Pekanbaru.
- Pekanraya Pekanbaru (01-04 Mei 2024) Pekanbaru.
- Gebyar Seni Bandaraya Melayu (01-04 Mei 2024) di Pekanbaru.
- Subayang Festival (10-12 Mei 2024) di Kampar.
- Festival Sungai Bukit Batu (12-13 Mei 2024) di Bengkalis.
- Pemilihan Bujang Dara Indragiri Hulu (14-18 Mei 2024) di Indragiri Hulu.

- Dendang Ramadhan Rohil (15-25 Mei 2024) di Rokan Hilir.
- Bandaraya Ekraf Festival (17-19 Mei 2024) di Pekanbaru.
- Pemilihan Bujang Dara Kota Pekanbaru 2024 (18 Mei 2024) di Pekanbaru.
- Festival Reog (18-19 Mei 2024) di Kuantan Singingi.
- Siak Marathon 10 KM (19 Mei 2024) di Siak.
- Pesta Rakyat Pesisir (19 Mei 2024) di Dumai.
- Pemilihan Bujang Dara Bengkalis (22 Mei 2024) di Bengkalis.
- Pemilihan Bujang Dara Rokan Hulu 2024 (25 Mei 2024) di Rokan Hulu.
- Bandar Khayangan Trail Run (02 Juni 2024) di Pekanbaru.
- Pemilihan Bujang Dara (04-07 Juni 2024) di Rokan Hilir.
- Pemilihan Bujang Dara Kepulauan Meranti (08 Juni 2024) di Kepulauan Meranti.
- Julang Bermasa (09-10 Juni 2024) di Bengkalis.
- Festival Batang Gangsal (13-16 Juni 2024) di Indragiri Hulu.
- Silat Pangean (17 Juni 2024) di Kuantan Singingi.
- Pemilihan Bujang Dara Kampar (20 Juni 2024) di Kampar.
- Festival Bakar Tongkang (20-22 Juni 2024) di Rokan Hilir.
- Pekan Raya Wisata (29-30 Juni 2024) di Pekanbaru.
- Festival Sungai Siak (04-07 Juli 2024) di Siak.
- Gema Muharram (07-16 Juli 2024) di Indragiri Hilir.
- Mamucuak (13-14 Juli 2024) di Kuantan Singingi.
- Transmigrasi Kampar (14-16 Juli 2024) di Tapung Raya, Kampar.
- Festival Pacu Sampan Tradisional (18-21 Juli 2024) di Tepian Trio Amanah, Rengat, Indragiri Hulu.
- Parade Tari (20 Juli 2024) di Pekanbaru.
- Asita Run 2024 (20 Juli 2024) di Dumai.
- Lomba Kuliner (26 Juli 2024) di Pelalawan.
- Pemilihan Bujang Dara Pelalawan (27 Juli 2024) di Pelalawan.
- Bandaraya Jazz Festival (27-28 Juli 2024) di Pekanbaru.
- Festival Permainan Rakyat (30 Juli 2024) di Bengkalis.
- Merawang (05 Agustus 2024) di Kuantan Singingi.
- Kenduri Rakyat (09 Agustus 2024) di Pekanbaru.
- Pameran Kain Nusantara (09 Agustus 2024) di Pekanbaru.
- Mangonang Kampuung Lamo (09-11 Agustus 2024) di Kampar.
- Pacu Pompong Tradisional (10-11 Agustus 2024) di Indragiri Hilir.
- Riau Expo (10-15 Agustus 2024) di Pekanbaru.
- Hari Konservasi Alam Nasional (11 Agustus 2024) di Pekanbaru.
- Festival Pacu Sampan Tradisional (15-18 Agustus 2024) di Tepian Titian Komang Desa Pematang, Kecamatan Batang Peranap, Indragiri Hulu.
- Lomba Menjaring Ikan Patin (20-22 Agustus 2024) di Pelalawan.
- Tunggang Langgang Fest (20-23 Agustus 2024) di Rokan Hilir.
- Kuliner Run Festival (21 Agustus 2024) di Kuantan Singingi.
- Festival Pacu Jalur Tradisional (21-25 Agustus 2024) di Kuantan Singingi.
- Festival Sampan Tradisional (22 Agustus 2024) di Bengkalis.
- Festival Kesenian Tradisional (22-23 Agustus 2024) di Kuantan Singingi.
- Festival Seni Kabupaten/Kota (22-25 Agustus 2024) di Kuantan Singingi.
- Festival Budaya Etnis (22-25 Agustus 2024) di Kuantan Singingi.
- Siak Serindit Boat Race (29 Agustus-1 September 2024) di Siak.
- Dragon Boat Festival (2-8 September 2024) di Kampar.
- Kenduri Melayu (8-9 September 2024) di Bengkalis.
- Tradisi Ghatib Beghanyut (10 September 2024) di Siak.
- Lomba Mancing (12 September 2024) di Pelalawan.
- Pagelaran Sepak Rago Tinggi (21-22 September 2024) di Kuantan Singingi.
- Festival Budaya Bahari (21-22 September 2024) di Bengkalis.
- Festival Rupa & Running 10 K (26-29 September 2024) di Bengkalis.
- Equator Festival (28-29 September 2024) di Kampar.
- Rohil Bersenandung (2-5 Oktober 2024) di Rokan Hilir.
- Festival Mandi Safar (3 Oktober 2024) di Bengkalis.
- Tour de Muara Takus (4-6 Oktober 2024) di Kampar.
- Jelajah Rimba Rohul (5 Oktober 2024) di Rokan Hulu.
- Pameran Temporer (7 Oktober 2024) di Pekanbaru.
- Festival Makan Durian (7 Oktober 2024) di Rokan Hulu.
- Festival Bagan Heritage (9 Oktober 2024) di Rokan Hilir.
- Kuansing Batik Carnival (09-11 Oktober 2024) di Kuantan Singingi.
- Festival Siak Bermadah (9-12 Oktober 2024) di Siak.
- Festival Sastra Sungai Jantan (14-15 Oktober 2024) di Siak.
- Pekan Budaya (20-21 Oktober 2024) di Siak.
- Pawai Budaya (22 Oktober 2024) di Siak.
- Festival Benteng Tujuh Lapis (23 Oktober 2024) di Rokan Hulu.
- Kenduri Riau (24-27 Oktober 2024) di Pekanbaru.
- Batu Tilam Adventure (24-27 Oktober 2024) di Kampar.
- Haul Akbar Kesultanan Siak (29 Oktober 2024) di Siak.
- Kejuaraan Sepatu Roda (2-3 November 2024) di Siak.
- Milad Syech Abdul Wahab Rokan (03 November 2024) di Rokan Hulu.
- Boom Bagan Festival (4-7 November 2024) di Rokan Hilir.
- Rohul Creative Carnival (10 November 2024) di Rokan Hulu.
- Festival Gasing Siak (14-17 November 2024) di Siak.
- Festival Kampung Patin (15-17 November 2024) di Kampar.
- Festival Danau Sei Soriak (16-17 November 2024) di Kuantan Singingi.
- Tour de Siak (22-25 November 2024) di Siak.
- Festival Sungai Bokor (28-29 November 2024) di Kepulauan Meranti.
- Festival Bekudo Bono (5-7 Desember 2024) di Pelalawan.
- Pacu Sampan Siak Hulu (6-8 Desember 2024) di Kampar.
- Festival Film Pendek (7 Desember 2024) di Siak.
- Lomba Kicau Burung Nasional (8 Desember 2024) di Dumai.
- Festival Lalang Tempo Doeloe (14-15 Desember 2024) di Siak.
- Festival Ilie Berakik (15 Desember 2024) di Rokan Hulu.
- Festival Hari Pantun Dunia (17 Desember 2024) di Pekanbaru.
- Festival Lomba Mancing (26 Desember 2024) di Kepulauan Meranti.
- Festival Sampan Layar di Desa Bandul (30 Desember 2024) di Kepulauan

## 2.5 IN-DEPTH STUDY AND ANALYSIS REGARDING THE ADVANTAGES OF THE PROPOSED DESIGN

### **Design Excellence**

#### **a. Historical Preservation through Adaptive Reuse**

- **Superiority:**
  - a. *Preserving City Identity: The design maintains historical architectural elements, such as the structure and materials of the old port buildings, thus maintaining the historical narrative of Pekanbaru city.*
  - b. *Respect for Local Heritage: Old design elements are recontextualized to support cultural functions, creating an emotional connection between the community and history.*
  - c. *Material Efficiency: Reducing the need for new materials and utilizing old materials for sustainability.*
- *Implementation Example: Elements such as the original facade or old steel structure can be integrated into the new design as a symbol of the continuity of Malay history and culture.*

#### **b. Infill Design as a Modern Transformation**

- **Superiority:**
  - a. *Harmonization of Old and New: The new design is designed in harmony with the old buildings, maintaining the visual and aesthetic continuity of the area.*
  - b. *Complex Additional Functions: The addition of cultural pavilions, public open spaces, and commercial facilities supports the needs of modern society.*
  - c. *Space Efficiency: Optimizing empty areas for new functions without disturbing the old structure.*
- *Implementation Example: Empty areas in the port are filled with modern structures such as small theaters or flexible creative economy areas.*

#### **c. Strengthening Local Culture**

- **Superiority:**
  - a. *Malay Cultural Expression: Traditional Malay ornaments are applied to facades, interiors and landscape elements to strengthen cultural identity.*

- c. *Cultural Education Center: There are galleries, workshop spaces, and traditional performance areas to preserve Malay culture and introduce the younger generation to their traditions.*
- d. *Enhancing Cultural Tourism: The plan is to create a tourist attraction by highlighting unique elements of Malay culture.*

- *Implementation Example: The interior design uses Malay songket motifs on the walls or ceilings, and the performance area is designed to accommodate traditional arts such as Zapin or kompong.*

#### **d. Optimal Circulation and Accessibility**

- **Superiority:**
  - a. *Connected Space: Integration of old and new buildings through clear and ergonomic circulation.*
  - b. *Universal Access: Addition of universal access paths such as ramps and user-friendly pedestrian paths.*
  - c. *Improved Connectivity with the City: The design takes into account access to and from the area via public transportation and private vehicles.*
- *Implementation Example: A connecting bridge between old and new buildings, as well as a pedestrian area that blends with the surrounding landscape.*

#### **e. Ecological Sustainability**

- **Superiority:**
  - a. *Carbon Footprint Reduction: Revitalization reduces the overall need for new construction.*
  - b. *Green Space Enhancement: The port area is transformed into a green public space, supporting environmental sustainability.*
  - c. *Energy Efficiency: Integration of environmentally friendly technologies such as solar panels, natural lighting, and passive ventilation.*
- *Implementation Example: Adding vertical gardens or green roofs to new structures to reduce the urban heat island effect.*

## 2.5 ISSUE MAP

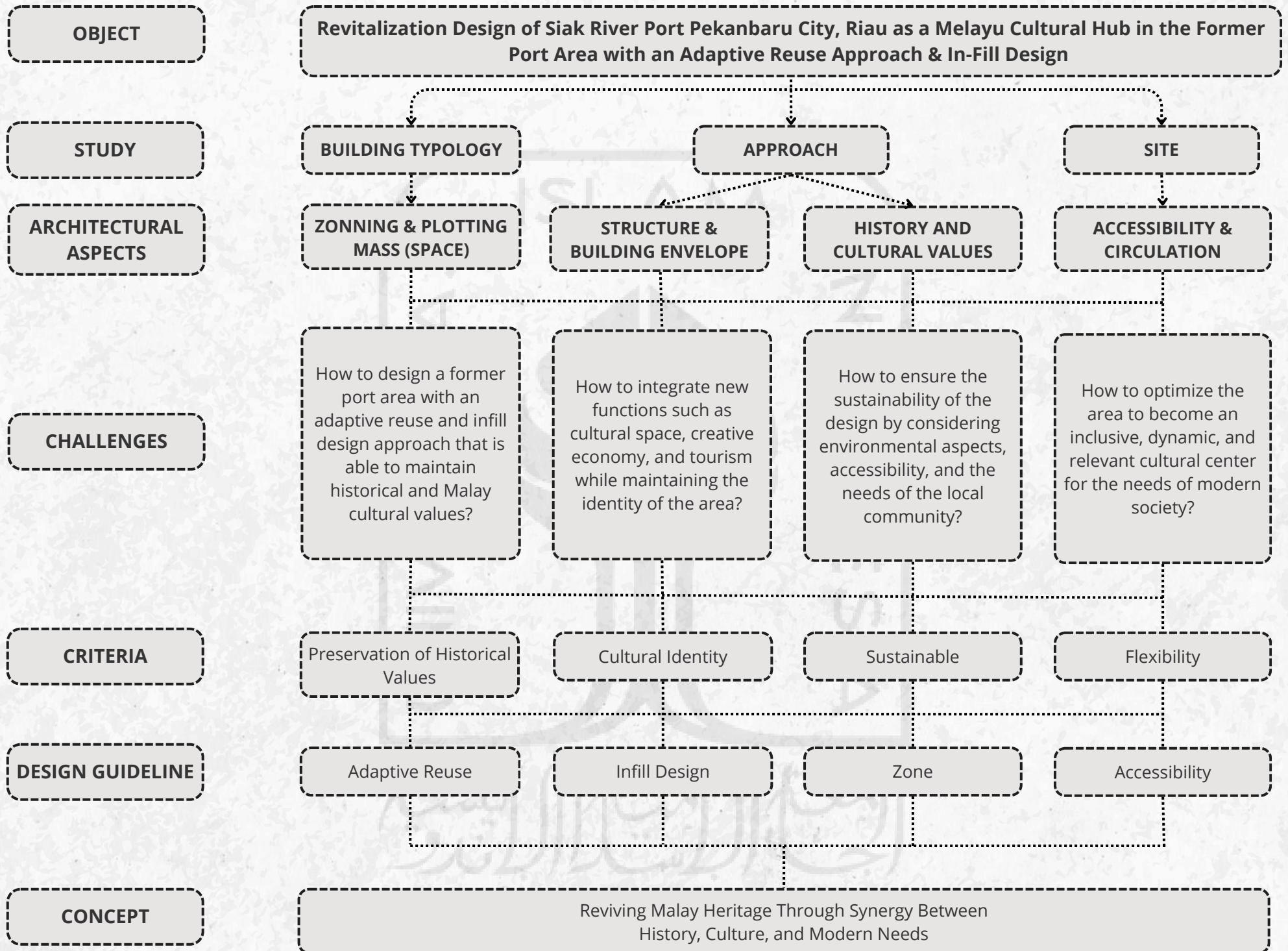


Table 8. Issue Map  
Source: Writer (2025)

## 2.6 PRECEDENT STUDY

### 1. The Tate Modern, London, Inggris



**Location** : Bankside, London, UK  
**Director** : Karin Hindsbo  
**Original Building** : Bankside Power Station  
**Function**  
**Approach** : Adaptive reuse and infill design.



*Location within Central London*

The Tate Modern is one of the most famous examples in the art world of transforming an old power station into a highly successful modern art museum. This revitalization not only created exhibition space, but also a public space that connects people to art, history and culture. The infill development added modern elements that blended into the old structure, such as new galleries and public spaces that enrich the visitor experience.

#### ***With a respon for Cultural Aspect***

This transformation shows how industrial buildings can be re-purposed as spaces that enrich the cultural and artistic life of the community. The existing local cultural context can be maintained by inserting elements that respond to modern needs without ignoring the history of the building.

#### ***Lessons Learned***

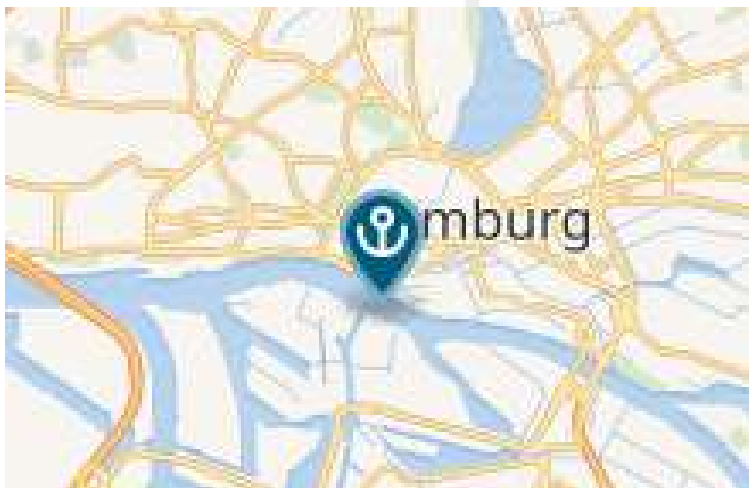
This project teaches the importance of respecting history in design and integrating modernity to create a place that can accommodate a variety of cultural activities, from art exhibitions to other public events. The public space obtained from the integration of infill design can become a place for social and cultural activities of the community.

- **Local Identity:** Just as The Tate Modern maintains the characteristics of its old buildings, the revitalization of the Siak River Port can reflect Malay culture in its design.
- **Dynamic New Functions:** The port area can be utilized for cultural, educational, and recreational purposes, enriching the lives of the Pekanbaru community.
- **Regional Transformation:** This project has the potential to transform the area into a regionally and internationally recognized icon of Malay culture.

## 2. Hamburg Harbor City, Hamburg, Jerman



**Location** : Hamburg, Jerman  
**Land area** : 43.31 km<sup>2</sup>  
**Size** : 73.99 km<sup>2</sup>  
**Original Building** : Warehouse and port area  
**Function**  
**Approach** : Adaptive reuse and infill design



*Location*

This port area revitalization project transformed old warehouses and industrial areas into a modern commercial and residential area. While many of the old structures were retained, infill design was used to add public spaces such as galleries, restaurants, and commercial spaces that are relevant to the current context.

### ***With a respon for Cultural Aspect***

The port, once bustling with trade and shipping activities, is now transformed into a cultural and economic hub that is connected to the community. **Local cultural elements** such as art, architecture, and the history of the port can be retained and combined with new spaces that enhance the experience of local people and visitors.

### ***Lessons Learned***

Using historical elements as a basis for introducing new **cultural and economic activities** is key to maintaining the balance between sustainability and modernity. **Integration with the environment** and **connection with the local community** are essential to creating a space that can accommodate future cultural and economic needs.

- **The Role of Local Identity:** Just as Hamburg Harbor City retains elements of its old port, Siak River Port can integrate traditional Malay elements to reflect Pekanbaru's cultural identity.
- **Economic and Tourism Enhancement:** This project can support local economic growth through cultural activities, the creative economy, and tourism.
- **Utilization of Old Areas:** By utilizing existing old buildings, revitalization can provide an efficient and sustainable solution.

### 3. The High Line, New York, Amerika Serikat



<b>Location</b>	: Manhattan, New York City, U.S.
<b>Type</b>	: Elevated urban linear park; public park
<b>Original Building</b>	: Disused railroad tracks
<b>Function</b>	
<b>Approach</b>	: Adaptive reuse and infill design.

The High Line is a former railroad track that has been transformed into an urban park that includes open public spaces that engage with art, culture, and education. The existing building is maintained within the context of the green space development, with infill elements added to create new spaces that can be used by the community, such as art galleries or performance venues.

#### ***With a respon for Cultural Aspect***

This project responds to the need for public spaces that not only enhance the city but also introduce the community to contemporary art and culture. The High Line is an example of how an industrial element that was once used for transportation is now transformed into a space that enriches culture, art, and social space.

#### ***Lessons Learned***

Conservation and modernity can go hand in hand. Using infill design and adaptive reuse to create spaces that can accommodate cultural activities as well as green spaces can create a strong connection between the community and the restored historical space.

- **Utilization of Old Structures:** Like the High Line, the old structures at the Siak River Port can be repurposed for exciting and relevant new functions.
- **Social and Cultural Space:** This project can create spaces that encourage social interaction while preserving Malay cultural traditions.
- **New Tourism Icon:** The revitalization of the Siak River Port has the potential to become a major tourist attraction, strengthening Pekanbaru's city identity.

## 2.7 DEVELOPMENT CONCEPT

### 2.6.1 Development Concept

No.	Indicator	Variable	Parameter	Design Concept
1.	Cultural Conservation	Local cultural identity	Representation of Malay cultural elements through ornaments, materials, and colors.	Integrating Malay motifs into the facade, interior and landscape with a contemporary approach.
		Cultural activities	There is space for cultural activities such as art performances, cultural galleries, and traditional workshops.	Designing multifunctional spaces to support cultural activities, such as small theaters, art galleries, and workshop areas.
2.	Functions and Activities (Zoning Space)	Flexibility of space function	The ability of space to adapt to various types of cultural activities, creative economy, and tourism.	Using modular design to allow flexibility of space function.
		Creative economy support	Provision of space for creative economy actors such as cafes, souvenir shops, and collaborative work spaces.	Designing a creative economy area with an open concept and easy access from public areas.
3.	Accessibility	Universal accessibility	Providing access for all groups, including paths for people with disabilities.	Provide ramps, accessibility, and dedicated parking areas.
		Inter-zone connectivity	Integration between zones within the region to support a seamless user experience.	Designing zoning that is connected to pedestrian paths and public spaces.

Table 9. Development Concept  
Source: Writer (2024)

No.	Indicator	Variable	Parameter	Design Concept
4	Public Space (Zoning Area)	Openness and inclusivity	Providing open space that can be accessed by all groups.	Designing a multifunctional public plaza and park, integrated with cultural and commercial facilities.
		Community activities	There is space for community activities such as bazaars, festivals, and arts events.	Designing a flexible open space for various community events, equipped with supporting facilities such as a stage (amphitheater) and seating area.

### 2.6.2 Concept Development inspiration precedent

No.	Indicator	Variable	Parameter	Design Concept
1	Precedent study	The Tate Modern, London	Integration of new elements without losing the old character; flexibility of space for various artistic activities.	Utilizing old structural elements and adding new spaces to support arts and cultural functions.
		Hamburg Harbor City, Jerman	Organized zoning for the integration of cultural, commercial, and public functions; emphasis on accessibility and connectivity of the area.	Create clear zoning for each main function (culture, creative economy, tourism) with easily accessible circulation.
		The High Line, New York	Utilization of linear space with attractive landscape design; integration of public space with historical elements.	Create pedestrian paths that connect cultural zones with public areas and highlight historical elements through signage and art installations.

Table 9. Development Concept  
Source: Writer (2024)

## 2.7 ACTIVITIES & SPACE REQUIREMENT

### 2.7.2 Table Activities & Space Requirement

NO.	ACTIVITY	USER	SPACE REQUIRED	CRITERIA ACTIVITY	SPACE REQUIREMENTS
1	Art Exhibition	all users	Art studio	Public, high noise level, many sub-activities	Spacious, good ventilation, lighting, and acoustics
2	Culture Showcase	all users	Mini Museum		
3	Dancing	Actor and Artist	Studio Amphitheater		Open, easily accessible to users
4	Playing music	all users	Studio	High concentration	Spacious, good ventilation, lighting, and acoustics
			Amphitheater	required	Open, easily accessible to users
5	Performing Arts	Actor and Artist	Studio		Spacious, good ventilation, lighting, and acoustics
			Amphitheater		Open, easily accessible to users
6	Crafts (skills)	all users	Workshops	Public, low noise level, many sub-activities, high concentration required	Spacious, good ventilation, lighting, and acoustics
7	Seminars	all users	Auditorium	Public, low noise level, many sub-activities, high concentration required	Spacious, good ventilation, lighting, and acoustics
8	Meetings (community, group)	all users			
9	Buy and sell	all users	Store	Public, high noise level, many sub-activities	Open, easily accessible to users
10	Gathering	all users	Auditorium	Public	Open, easily accessible to users
11	Walk	all users	Promenade	Public	
12	Sitting	all users	Promenade		
13	Eating	all users	Food tenant and Cafeteria	Public	Open, easily accessible to users
14	Sport	all users	Indoor court, Promenade	Public, high noise level, many sub-activities	Open, easily accessible to users
15	Fishing	all users	Port		
16	Play Area	all users	Playground.		
17	Document Storage	Manager and Staff	Document Storage	Private, lots of stuff	Closed, not everyone can access
18	Storage of Goods	Staff	Storage	Semi Private, lots of stuff	
19	Guarding	Staff	Guard Post	Public, high noise level,	Open, informative, easily accessible to users
20	River Tour	Manager and Staff	Port	many sub-activities	Open, informative, easily accessible to users

Table 10. Activities & Space Requirement  
Source: Writer (2025)

3



PROBLEM SOLVING

## 3.1 DESIGN RESPONSE

### 3.1.1 RESPON CONTEXT SITE

The Governor of RIAU and the Minister of BUMN as well as support from the DPP of the Indonesian Tour Guide Association (HPI) Riau have had a program regarding the revitalization of the former Siak River port into a parenkraf area. In this project, several parts of the program are being developed by considering several problem conditions and the location of the context. Located in Pekanbaru City which is a trade zone, housing, public services, etc.

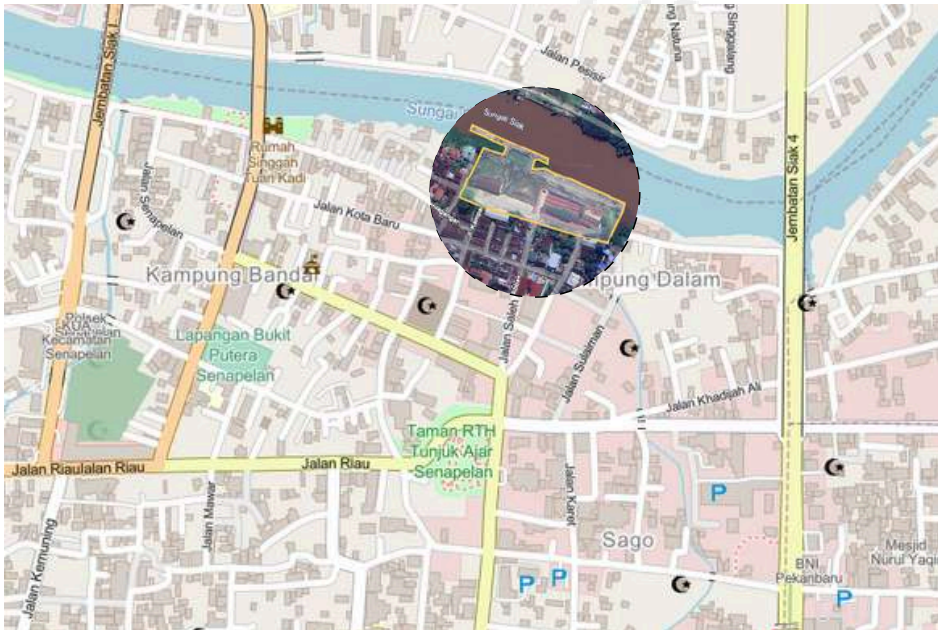


Figure 25: Site location  
Source: Authors, 2025

The proposed program is one part of the Pekanbaru government program with the Minister of SOEs, namely the revitalization of the former PELINDO 1 Sungai Siak port building into a tourism and creative economy area initially, but there was no continuation related to the project. Therefore, I was sent to design the Culture Hub building. **So the program that I will develop is based on assumptions and study results and follows cultural developments regarding the lack of cultural and artistic space to preserve Malay culture and the surrounding economy by adding business and economic aspects.** Activities that will preserve Malay culture and art and generate financial sources for both the community and the income of the city of Pekanbaru.

### 3.1.2 CONCEPT ON BUILDINGS PROGRAM

*The Revitalization Program of the Former Pelindo 1 Port of Sungai Siak aims to revive this historic area into a Malay Cultural Hub.*

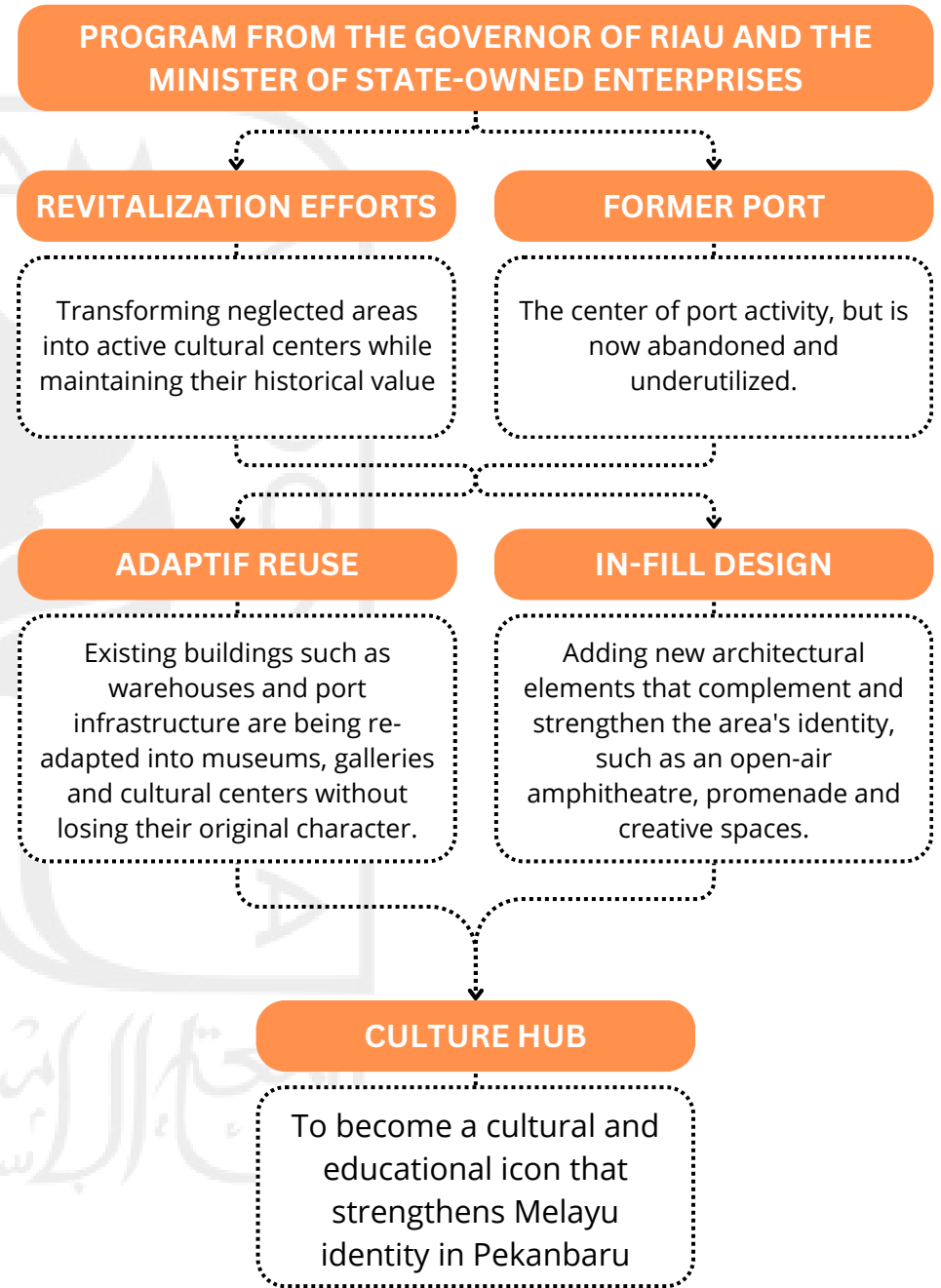


Table 11. Concept on Buildings Program  
Source: Writer (2025)

## 3.2 DESIGN CONCEPT

### 3.2.1 Design Concept Response

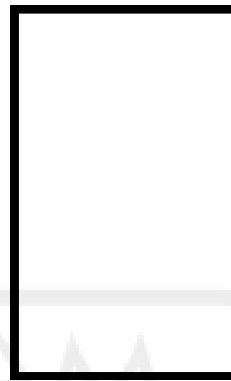
The concept of the revitalization design of the former Pelindo 1 Port area of Sungai Siak focuses on reviving historical heritage with a harmonious approach between modern design and Malay cultural identity. This area is designed to be a center of social, cultural, and economic activities that are inclusive, environmentally friendly, and support the lives of today's urban communities. Through the application of the adaptive reuse concept, old buildings that have historical value are maintained and adapted to function as public spaces, art galleries, and cultural centers. Meanwhile, new design elements are carefully integrated through an infill design approach, ensuring a visual and functional balance between the past and the present.

Public spaces are designed to be inclusive and accessible to all groups, including the disabled, with environmentally friendly pedestrian paths, comfortable green open spaces, and supporting facilities that support social interaction. Malay cultural values are manifested through architectural motifs, traditional ornaments, and spatial patterns that reflect local wisdom. In addition, the concept of sustainability is an important foundation in the design, with the use of renewable energy, rainwater management, and natural ventilation systems to create an environmentally friendly area.

This area is not just a place, but a dynamic living space that connects the past, present, and future—a meeting point between history, culture, and innovation, which is expected to become a new icon of Pekanbaru City.

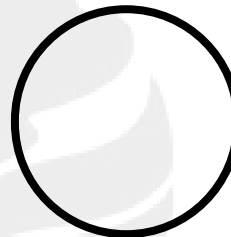
#### Concept of Form

- The design concept for the former Pelindo 1 Port area of Sungai Siak was developed from a simple basic geometric form that was modified to create harmony between function, aesthetics, and local wisdom of Malay culture.



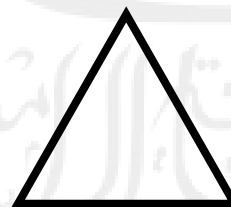
#### Rectangle (Stability and Functionality)

- Properties: Gives the impression of stability, structure and functionality.
- Impact on Space: Produces efficient, easy to organize and flexible spaces for various activities.
- Application in Buildings: Used as a floor plan for cultural galleries, exhibition spaces and multi-function areas, maximizing existing areas with clear and directed circulation.



#### Circle (Openness and Connectivity)

- Properties: Symbolizes unity, inclusiveness, and limitless relationships.
- Impact on Space: Creating interactive spaces, supporting social gatherings, and enhancing visual connections.
- Application in Buildings: Applied to public plaza areas, green open spaces, and amphitheaters, creating activity centers that invite active community participation.



#### Triangle (Dynamics and Direction)

- Properties: Reflects dynamics, direction and movement.
- Influence on Space: Provides strong visual accents, creates orientation, and directs user movement.
- Application in Buildings: Used in roof elements, canopies, or facades as a symbol of “shoot shoots,” a typical Malay motif, which symbolizes growth and new hope.

The Revitalization Design of the former port building into a Culture Hub is as a Malay cultural and arts facility and recreation area using the adaptive reuse and In-fill design approach, where the design takes into account several needs and desires of the Culture Hub facility and recreation area in the design. By implementing aspects of adaptive reuse and In-fill design that can create an area environment to support the preservation and growth of Malay culture as a whole.



Site Area Development Regulation:

- Land Area: **20,200 m<sup>2</sup>**
- Basic Building Coefficient (KDB): 60% (max built area = **12,120m<sup>2</sup>**)
- Green Area Coefficient (KDH): 30% (min green area = **6,060m<sup>2</sup>**)
- Building Floor Coefficient (KLB): 5 floors (± 20 meters) (max total floor area = **60,600m<sup>2</sup>**)

So in this 20,200m<sup>2</sup> area, several other buildings will be revitalized and built to support the need for space and activities in the future. In this area there are 2 former port warehouse buildings and administrative offices. from PT Pelindo with an area of ±1.500 m<sup>2</sup>. has 2 floors with a height of ±10 meters.

Core building:

Floor 1: Exhibition art (studio), Coworking Area and Creative Incubator, auditorium, Craft Center and Artisan Kiosk,

Floor 2: manager office, mezzanine, co-working space for the creative community.

while for the new building (Infill Design) that will be built, this is a Floor 1: history museum, Malay cultural gallery, interactive exhibition space (workshop), and souvenir shop.

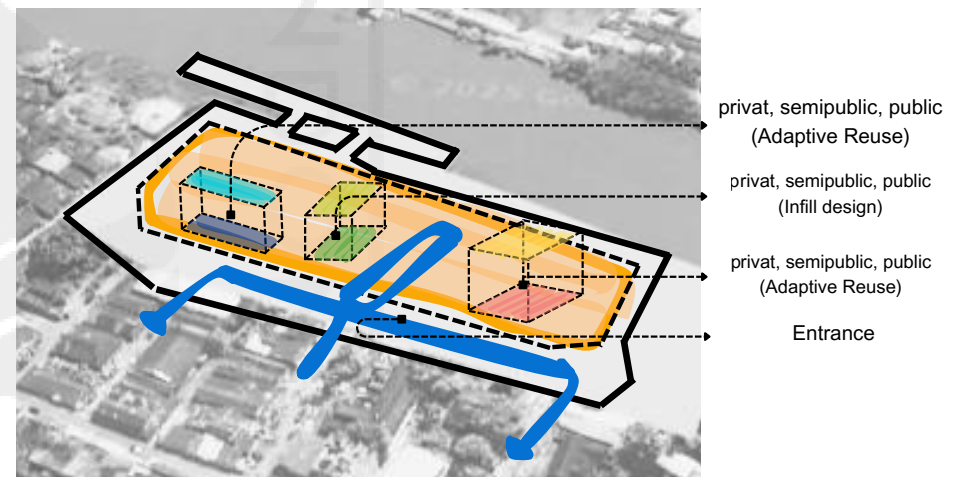
Floor 2: Library and Documentation Center, manager office.

and additional facilities to support cultural functions (MEP, Genset). With a New Building area: ±3,000 m<sup>2</sup>. has 2 floors with a height of 5-12 meters, adjusting to the old building to remain harmonious.

Functions & Spaces:

- Open Amphitheater: Capacity ±200 people for art and cultural performances.
- Promenade & Cultural Plaza: Pedestrian area and public interaction space along the riverbank.
- Creative Economy Zone & UMKM: Kiosks and co-working space for local craftsmen and entrepreneurs.
- Green Recreation Space: Thematic Park with local vegetation and relaxation area.

### 3.2.2 Exploration of Zoning Concept



Based on the layout exploration, the first thing that needs to be considered is the selection of strategic access conditions to maximize the appearance of the building and ease of circulation movement, in this case the appearance of the building in the design faces south so that the main access chosen is also on the south side, in addition to facilitating use for access in and out, consideration of the size of the width of the chosen road also affects access, therefore accessibility in and out is only 1 direction and in the middle there is a road, namely Jalan Tengku Abbas which will be closed and only opened for certain activities or events later

### 3.2.3 Activity Analysis

#### MAIN USERS

**Local communities** are the main users with daily activities such as **gathering, socializing, doing light exercise, and enjoying open spaces**, so comfortable public areas such as plazas, interactive parks, and environmentally friendly pedestrian paths are designed. **Malay arts and culture actors** need space to **create, practice, and perform traditional arts performances**, so art galleries, creative studios, and open stages are provided to support the preservation of local culture.

Meanwhile, **creative economy actors and MSMEs** need flexible space **to sell, exhibit products, and hold creative bazaars**, so modular kiosks, cultural markets, and culinary areas are designed that are integrated with pedestrian paths. **Domestic and foreign tourists** are involved in **cultural exploration activities, historical tours, and enjoy the views of the Siak River**, supported by facilities such as tourist information centers, interpretive paths, and iconic photo spots.

For **students and academics**, this area is a space **to learn, discuss, and conduct research on local history and culture**, so reading rooms, mini libraries, and open discussion areas are provided. Finally, the area **manager** plays an important role in **organizing operations, maintaining facilities, and managing activities**, so an administration room, control center, and other operational support facilities are needed.

#### MAIN ACTIVITIES

The main activities are focused **on social, cultural, creative economy, and recreational activities** that are integrated to revive the area as a center for community interaction. Social activities include **gathering, socializing, and interacting** in public open spaces such as plazas, theme parks, and open amphitheaters. Cultural activities are focused **on art exhibitions, Melayu cultural performances, creative workshops, and educational spaces** that support the preservation of local cultural heritage.

In addition, creative economy activities are supported through **small commercial areas, MSME galleries, and cafes** that provide space for local business actors to develop. Recreational activities such as **walking, jogging, and green open spaces** are also important parts of creating a healthy and environmentally friendly atmosphere. Each activity is analyzed based on **frequency, intensity, and space requirements**, so that the design is able to present a zone that is responsive to user needs, with **efficient circulation, flexible space, and inclusive accessibility** for all groups, including the disabled. The integration of these various activities is expected to create a **lively, dynamic, and relevant** area for the development of Pekanbaru city.

#### Activities & User



Melayu Culture



Education Course



Creative Actors/  
Artist



Local  
Communities



Management



Tenant



Public  
Facilities



Tourist

### 3.3 PROPERTY SIZE

#### 3.3.1 Property Size Table

No.	Department	Group	Room Name	Room Capacity (Person)	Room Dimensions (m2)
1.	Creative Room	Fashion Sector	Fashion Department	0	132
			Ruang Mesin Produksi	0	120
			Ruang Penyimpanan Produk	0	40
			Ruang Workshop	0	140
	Art Sector	Studio Tari	0	140	
		Studio Musik	0	147	
		Studio lukis	0	100	
	Culinary Sector	Caffeteria	0	120	
		Restaurant	0	60	
	2.	Entertainment	Office Sector	Co-working Space	0
Ruang Kantor Sewa				0	685
Education Sector		Perpustakaan	0	180	
		Ruang Diskusi	0	100	
		Auditorium	0	700	
Exhibition Sector		Ruang pameran	0	704	
		Merchandise (souvenir) Shop	0	90	
		Amphitheater	0	80	
		Museum	0	90	
3.	Penerimaan	Entrance	Pos Satpam	0	9
			Drop off Area	0	60
			Lobby utama	0	80
4.	Pengelola	Head Division	R. Ketua Pengelola	0	30
			R. Sekretaris	0	24
			R. Administrasi	0	88

Table 12. Property Size  
Source: Writer (2025)

Source and Event	R. Direktur Anggaran	0	18		
	R. Direktur Pelaksana	0	18		
	R. Anggota Pelaksana	0	55		
	R. Div. Pusat Sumber Daya	0	48		
	R. Div. Pameran dan Event	0	60		
	R. Div. Pengembangan Desain dan Bisnis Kreatif	0	60		
	R. Div. Teknologi Informasi dan Manajemen Fasilitas	0	48		
Support	R. Rapat	0	156		
5. Service	Logistic	Loading Dock	0	255	
		Gudang Penyimpanan Bahan	0	40	
		Ruang Keamanan	0	50	
	MEE	Ruang Staff ME	0	30	
		Ruang Genset	0	40	
		Ruang Panel	0	35	
		Ruang Sampah	0	10	
	Support	Ruang Loker Staff	0	30	
	6. Support	Staff	Ruang Janitor	0	30
			Gudang Penyimpanan Bahan	0	12
Toilet Pengelola			0	16	
Public		Toilet Pengunjung	0	47	
		Tangga Darurat	0	72	
		Titik Kumpul			
		Jalur Evakuasi			
Parkiran					
Promenade					

Table 12. Property Size  
Source: Writer (2025)

### 3.3.2 Spatial Relationship Bubble diagram

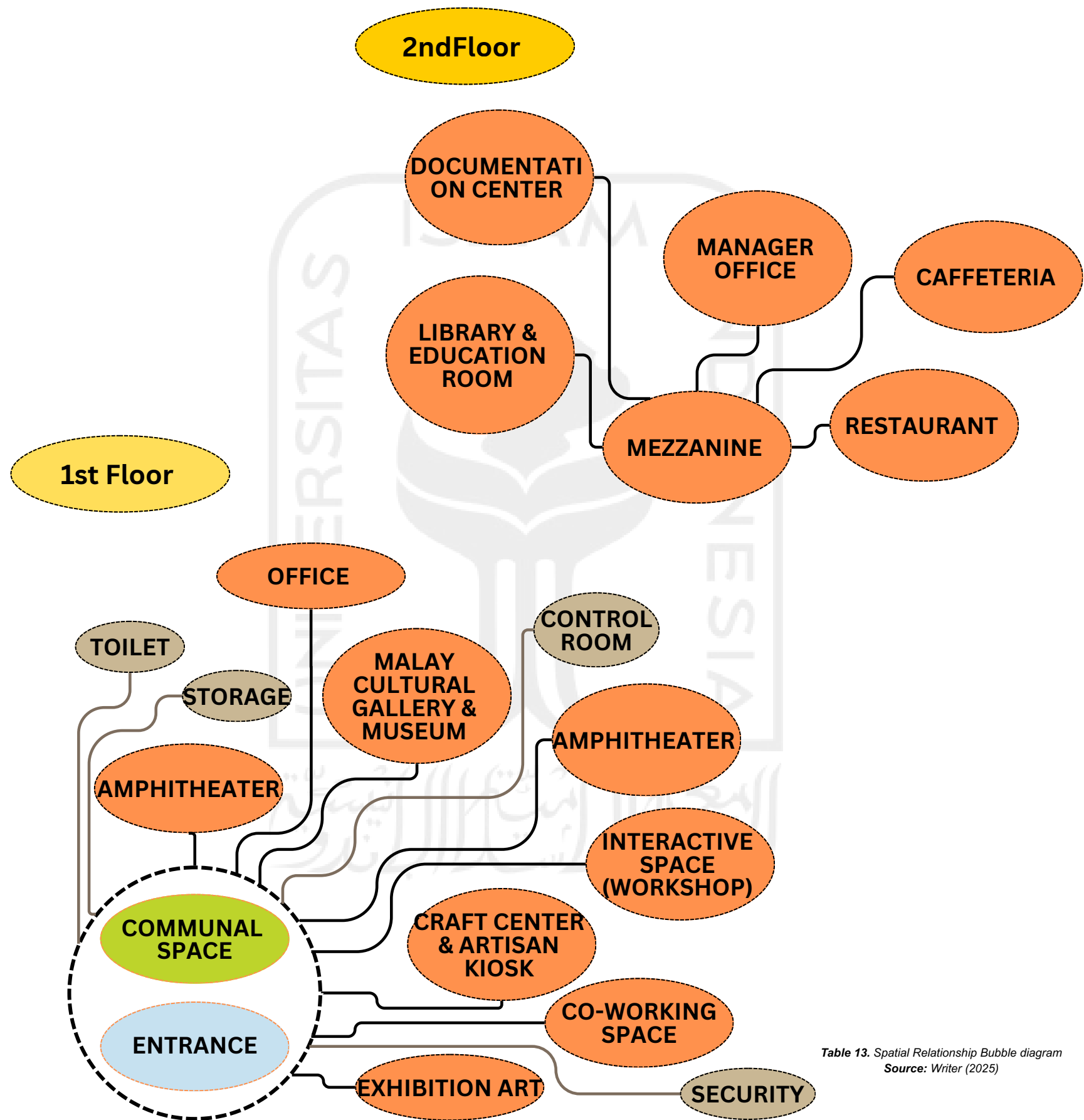


Table 13. Spatial Relationship Bubble diagram  
Source: Writer (2025)

## 3.4 CONCEPT DEVELOPMENT

### 3.4.1 Building Function

#### 1. Melayu Cultural Museum

##### Function:

- Displaying Malay history, art, and culture through permanent and temporary exhibitions.

##### Facilities:

- Interactive exhibition space.
- Digital and physical archives for cultural research.
- Gallery of traditional and contemporary Malay art.

#### 2. Art Gallery and Exhibition

##### Function:

- Space for local and international artists to exhibit works with Malay cultural themes.

##### Facilities:

- Temporary exhibition studio.
- Art workshop for community training.
- Flexible space for arts and cultural events.

#### 3. River Promenade

##### Function:

- Riverside recreation area for walking, relaxing, and enjoying the scenery.

##### Facilities:

- Pedestrian path with seating.
- Malay food and beverage stalls.
- Mooring for small tourist boats.

#### 4. Open Amphitheatre

##### Function:

- Stage for traditional Malay art performances, such as zapin dance, gambus music, and traditional theater.

##### Facilities:

- Open stage with river backdrop.
- Stair-shaped seating for the audience.

#### 5. Craft Center and Artisan Kiosk

##### Function:

- Supporting the local creative economy by selling Malay cultural products.

##### Facilities:

- Handcraft kiosks.
- Live crafting workshops.
- Small retail space for local MSMEs.

#### 6. Library and Documentation Center

##### Function:

- To be a learning center for students, academics, and the general public who want to explore Malay culture.

##### Facilities:

- Collection of books, manuscripts, and historical documents.
- Modern reading room.
- Digital and multimedia archives.

#### 7. Coworking Area and Creative Incubator

##### Function:

- Supporting local artists, culture, and start-ups with collaborative workspaces.

##### Facilities:

- Shared work desks.
- Small and large meeting rooms.
- Fast internet access and creative tools.

#### 8. Malay Restaurant and cafeteria

##### Function:

- Offering a traditional Malay culinary experience.

##### Facilities:

- Modern restaurant with a Malay menu.
- Outdoor dining area facing the river.
- Small cafe for tourists.

#### 9. Open Courtyard and Plaza

##### Function:

- Open space for community events, cultural markets, or local festivals.

##### Facilities:

- Multifunctional open space.
- Circular seating for interaction.
- Tourist information center and bicycle parking area.

## 3.4 ARCHITECTURAL CONCEPT

### DESIGN APPROACH BASIS

1. Adaptive Reuse:
  - Preserving old buildings by adapting their functions to modern needs without eliminating historical value.
  - Implementation:
    - Utilizing the main structure of the port warehouse as a museum or gallery.
    - Integrating typical Malay elements such as carved motifs on the facade or roof.
2. Infill Design:
  - Adding new elements to the existing area that respect the scale, material, and harmony with the old building.
  - Implementation:
    - Building promenades, open spaces, and amphitheaters that are modern in design but inspired by Malay patterns and symbols.
    - Filling empty areas with supporting functions such as artisan kiosks, parks, and community spaces.
3. Melayu Culture as Identity:
  - Each design element reflects Malay cultural values through local forms, motifs, and materials.
  - Implementation:
    - Curved or pointed roofs resemble traditional Malay houses.
    - Use of wood, rattan, and local materials for a traditional touch.
4. Sustainability and Environmental Context:
  - Maintaining the sustainability of the environment around the river, with an environmentally friendly design.
  - Implementation:
    - Adding local vegetation to the park and garden.
    - Utilizing natural ventilation and lighting for energy efficiency.

### ZONING CONCEPT AND SPATIAL RELATIONSHIP

1. Core Zone:
  - Location: Main warehouse building.
  - Function: Malay cultural museum and exhibition space.
2. Supporting Zone:
  - Location: Around the main building.
  - Function: Artisan kiosks, art galleries, coworking space, and restaurants.
3. Public Zone:
  - Location: Riverside promenade and open courtyard.
  - Function: Interaction area, art performances, and recreation.
4. Green and Recreational Space:
  - Location: Rooftop garden and riverside park.
  - Function: Relaxing area, green open space, and Malay pavilion.

### CONCEPTUAL SKETCH

1. Museum and Gallery:
  - Main building with a renovated facade using Malay carving motifs.
  - Modern interior with natural ventilation.
2. River Promenade:
  - Pedestrian path along the riverbank.
  - Seating with pergolas inspired by Malay architecture.
3. Open Amphitheatre:
  - Circular structure with a stage in the middle, facing the river.
  - Open roof with typical Malay patterns on the supporting ornaments.
4. Craft Center and Artisan Kiosk:
  - Small modular building with wood and rattan materials.
  - Layout like a traditional market with a modern touch.

## Building Envelope

### ROOF SHAPE



Rumah Adat Melayu Riau.

This form is obtained from the contextual architectural approach that requires there to be harmony and harmony that appears in the design of the building. This roof shape is always used as a characteristic or identity of Malay traditional buildings that make this building later present the Malay traditional building.



Selembayung

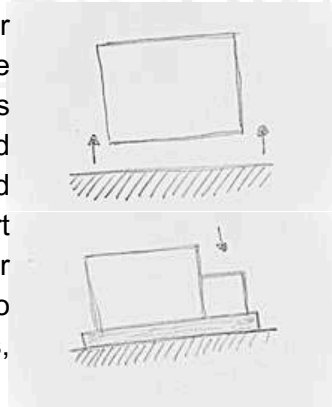
Figure 26. Selembayung

### HOUSE ON STILTS



Rumah Adat Melayu Riau.

Built on stilts to avoid flooding and improve air circulation, the house also features intricate carvings on the pillars, walls, and doors depicting Malay cultural symbols. The curved roof provides protection from the weather and creates an elegant impression. The lower part of the house is often used for daily activities or storage. The stilt house creates a closeness to nature and depicts harmony between humans, nature, and culture.

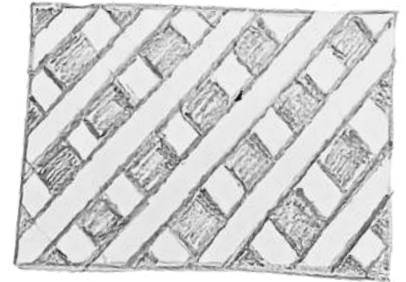


### ORNAMENT SHAPE



Rumah Adat Melayu Riau.

Walls and Windows: The walls of this traditional house are generally made of wood with typical Malay carvings that are intricately ornamented. The windows and doors are made with designs that show the beauty of the carvings and provide good ventilation.

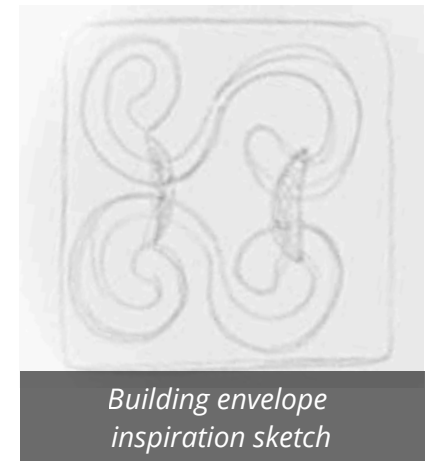


### LATTICE CARVING ON



Bunga bayam peraksi (Ornaments and air lattices)

Figure 27. Bunga Bayam Peraksi



Building envelope inspiration sketch

building envelope which is inspired by the ornaments of the Riau traditional house on the elements of the ventilation grille of the building which has a shape like a plant that has the name of the bayam peraksi flower. has a function as lighting, air circulation, wall ornaments which are usually made of chengal wood.

### 3.4 ARCHITECTURAL CONCEPT

The architectural concept carried in the design of Riau Melayu traditional buildings emphasizes the sustainability of cultural values contained in traditional architecture, while providing space for adjustment to contemporary needs.

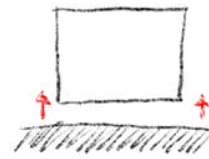
Riau Melayu traditional buildings are characterized by high curved roofs, rich decorative elements, and the use of natural materials such as wood and bamboo. This overall form reflects the balance between function, aesthetics, and harmony with the surrounding nature.

Riau Melayu culture, which is full of traditions of art, music, and performance, influences the design of open, flexible spaces that can accommodate dynamic cultural activities. In this case, the design that refers to the concept of a culture hub seeks to create a place that is not only a center of culture but also reflects the collective spirit of the Riau Melayu community.

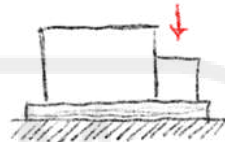
By integrating the typology of traditional buildings with modern elements, it is hoped that this building can become an interactive space that can bring together various aspects of culture, art, and education. Thus, through this design, the building is not only a physical place, but also a center of activity that revives traditional Riau Melayu values in an increasingly advanced global context.



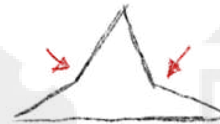
*Rumah Adat Melayu Riau.*



Stage: This traditional house is built on quite high wooden pillars, providing a distance between the floor and the ground. The function of this stage is to avoid humidity and wild animals and to provide better air circulation.

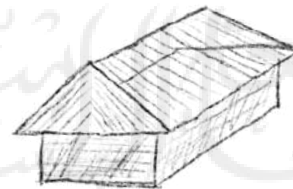
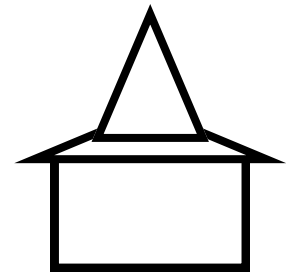
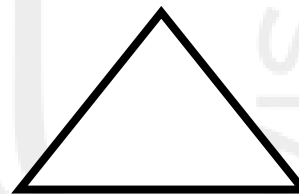


House Shape: Riau Malay traditional houses are generally rectangular with separate rooms based on function. The main room is the living room, which is often located at the front of the house, while the bedrooms are usually located at the back.



This form is obtained from the contextual architectural approach that requires there to be harmony and harmony that appears in the design of the building. This roof shape is always used as a characteristic or identity of Malay traditional buildings that make this building later present the Malay traditional building. And at the top of this plana roof there are ornaments that are also characteristic of Malay traditional houses.

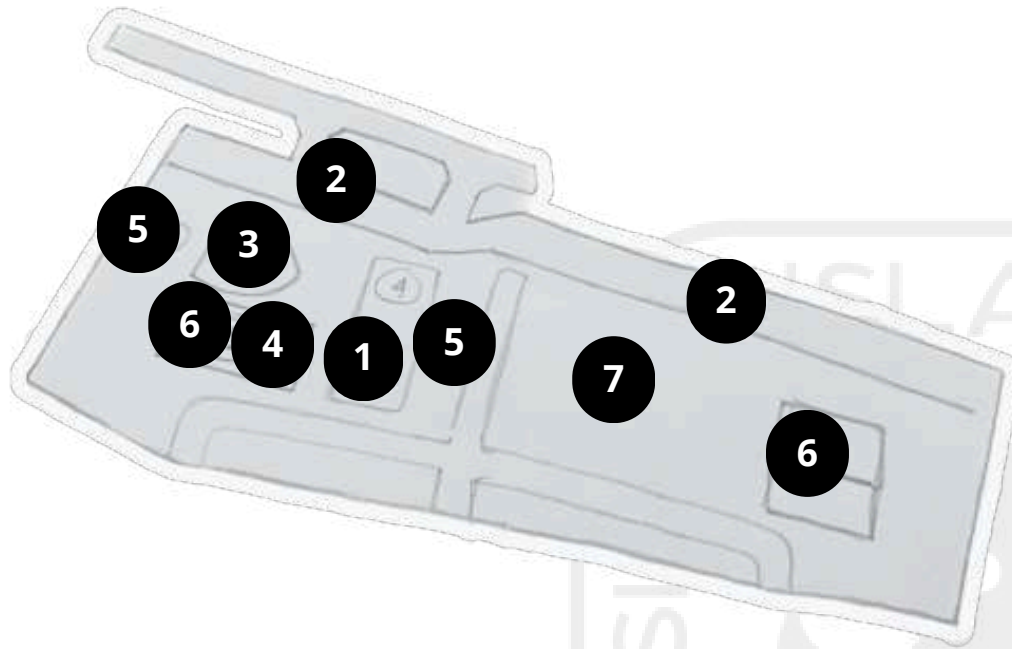
Shape



Roof: The roof of the Riau Malay traditional house is usually curved or called a pyramid roof which functions to drain rainwater well. This roof shape also gives a high aesthetic impression, with the roof tip tapering upwards.

## 3.5 SITE DEVELOPMENT

### 3.5.1 Site layout



#### Site Layout Design

##### 1. Circulation Path:

- Pedestrian paths connect all zones in a circular pattern and focus on the museum as the main center.
- Easy accessibility for all age groups, with disability-friendly paths.

##### 2. Local Vegetation:

- Planting typical Malay plants such as areca nut, coconut, and cananga flowers in the green area.

##### 3. Interaction Area:

- Open courtyard in the middle of the site, used for cultural market activities, festivals, and community events.

##### 4. Design Elements:

- Application of Malay carving motifs on pedestrian paths, building facades, and zone markers.
- Street lights with typical Malay designs.

### 3.5.2 Zoning

1

#### CORE ZONE

Museum and gallery of Malay culture, with permanent and temporary exhibition areas.

2

#### RIVER PROMENADE ZONE

Pedestrian path for recreation with food stalls, seating, and observation space facing the river.

3

#### PERFORMANCE ZONE (AMPHITHEATER)

Open arts and culture performance area, with a circular stage and tiered seating.

4

#### CRAFT AND KIOSK ZONE

Selling typical Malay crafts and a direct workshop for visitors.

5

#### GREEN AND RECREATION ZONE

Green park with local vegetation and Malay pavilion for relaxing.

6

#### COWORKING AND CREATIVE INCUBATOR ZONE

Collaborative workspace and supporting area for arts and cultural activities.

7

#### PARKING AND ACCESSIBILITY ZONE

Areas for cars, motorbikes and bicycles and pedestrian paths that are friendly for people with disabilities.

8

#### PUBLIC FACILITY

Toilet, Guard pos(security)

# IN-DEPTH STUDY AND ANALYSIS REGARDING THE ADVANTAGES OF THE PROPOSED DESIGN

## **Design Excellence**

### **A. Historical Preservation through Adaptive Reuse**

Advantages:

- *Preserving City Identity: The design maintains historical architectural elements, such as the structure and materials of the old port building, thus maintaining the historical narrative of Pekanbaru city.*
- *Respect for Local Heritage: Old design elements are recontextualized to support cultural functions, creating an emotional connection between the community and history.*
- *Material Efficiency: Reducing the need for new materials and utilizing old materials for sustainability.*

Implementation Example: Elements such as the original facade or old steel structure can be integrated into the new design as a symbol of the continuity of Malay history and culture.

### **B. Infill Design as a Modern Transformation**

Advantages:

- *Harmonization of Old and New: New designs designed in harmony with old buildings, maintaining visual and aesthetic continuity of the area.*
- *Complex Additional Functions: The addition of cultural pavilions, public open spaces, and commercial facilities supports the needs of modern society.*
- *Space Efficiency: Optimizing empty areas for new functions without disturbing old structures.*

Implementation Example: Empty areas in the port are filled with modern structures such as small theaters or flexible creative economy areas.

### **C. Strengthening Local Culture**

Advantages:

- *Malay Cultural Expression: Traditional Malay ornaments are applied to the facade, interior, and landscape elements to strengthen cultural identity.*

- **Cultural Education Center:** There are galleries, workshop spaces, and traditional performance areas to preserve Malay culture and introduce the younger generation to their traditions.
- **Enhancing Cultural Tourism:** The design creates a tourist attraction by highlighting unique elements of Malay culture.

Implementation Examples: The interior design uses Malay songket motifs on the walls or ceilings, and the performance area is designed to accommodate traditional arts such as Zapin or kompang.

### **D. Optimal Circulation and Accessibility**

Advantages:

- **Connected Space:** Integration of old and new buildings through clear and ergonomic circulation.
- **Universal Access:** Addition of universal access routes such as ramps and user-friendly pedestrian paths.
- **Enhancing Connectivity with the City:** The design takes into account access to and from the area via public transportation and private vehicles.

Implementation Examples: Bridges connecting old and new buildings, as well as pedestrian areas that blend with the surrounding landscape.

### **E. Ecological Sustainability**

Advantages:

- **Reduced Carbon Footprint:** Revitalization reduces the need for new development overall.
- **Green Space Enhancement:** Port areas are transformed into green public spaces, supporting environmental sustainability.
- **Energy Efficiency:** Integration of environmentally friendly technologies such as solar panels, natural lighting, and passive ventilation.

Implementation Examples: Addition of vertical gardens or green roofs to new structures to reduce the urban heat island effect.

## 3.6 DESIGN SCHEMATIC

### Space arrangement

#### 3.6.1 Ground Floor Plan



#### Description:

- |                           |                                |                                    |                         |
|---------------------------|--------------------------------|------------------------------------|-------------------------|
| 1 Exhibition art (studio) | 6 Office                       | 11 Malay cultural gallery & Museum | 16 guard pos (security) |
| 2 Warehouse (storage)     | 7 Craft Center & Artisan Kiosk | 12 interactive space (workshop)    | 17 Open Courtyard       |
| 3 Ruang Ganti             | 8 Auditorium                   | 13 souvenir shop                   | 18 Pathway              |
| 4 Coworking Area          | 9 amphitheater                 | 14 Toilet Male /Female             | 19 Road                 |
| 5 Control Room            | 10 Parking Area                | 15 River Promenade                 | 20 bundaran             |

## 3.6 DESIGN SCHEMATIC

### Space arrangement

#### 3.6.2 2nd Floor Plan

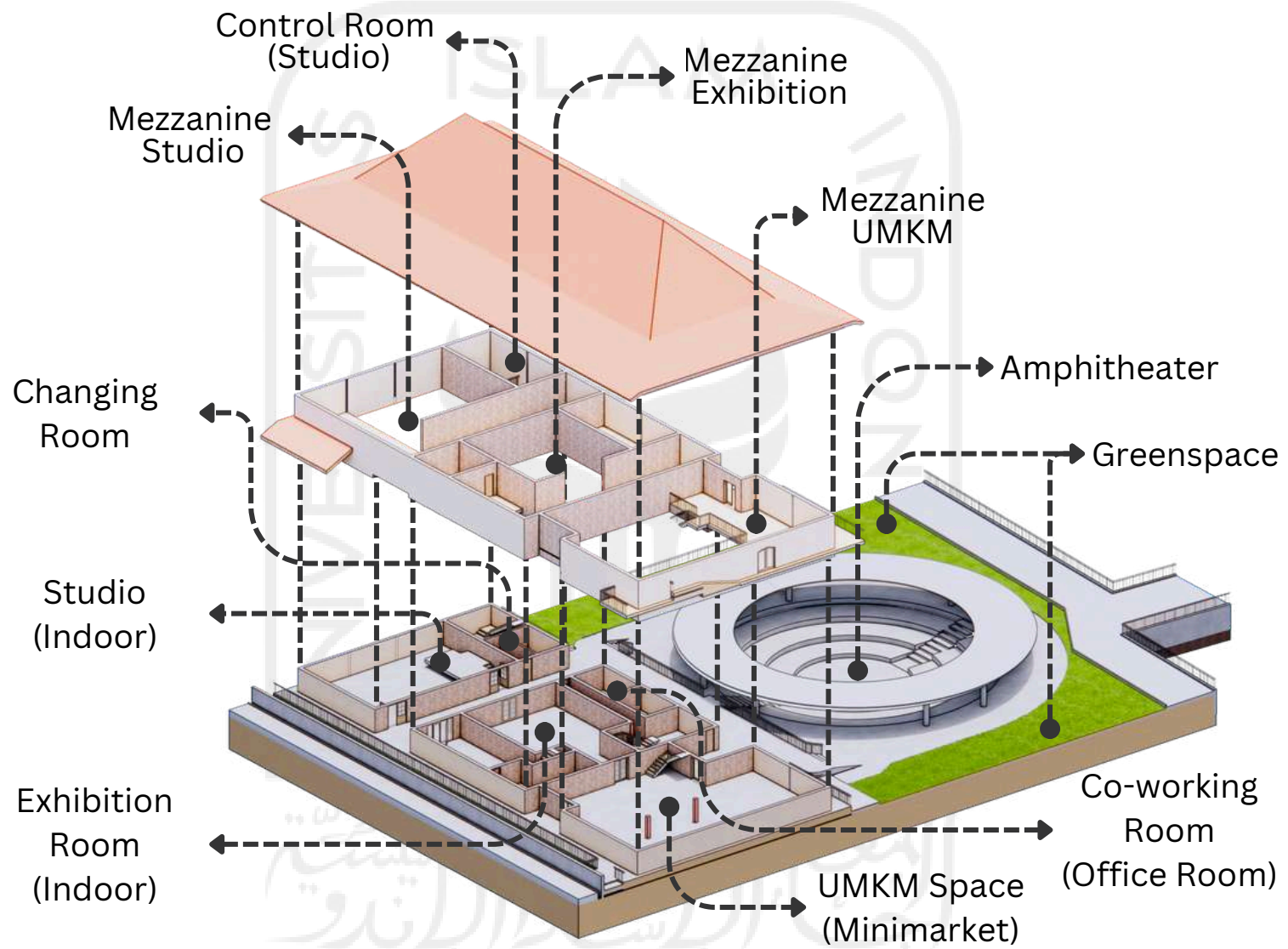


#### Description:

- |                          |                                    |
|--------------------------|------------------------------------|
| <b>21</b> Mezzanine      | <b>24</b> Documentation Center     |
| <b>22</b> Manager Office | <b>25</b> Library & Education Room |
| <b>23</b> Restaurant     | <b>26</b> Caffeteria               |

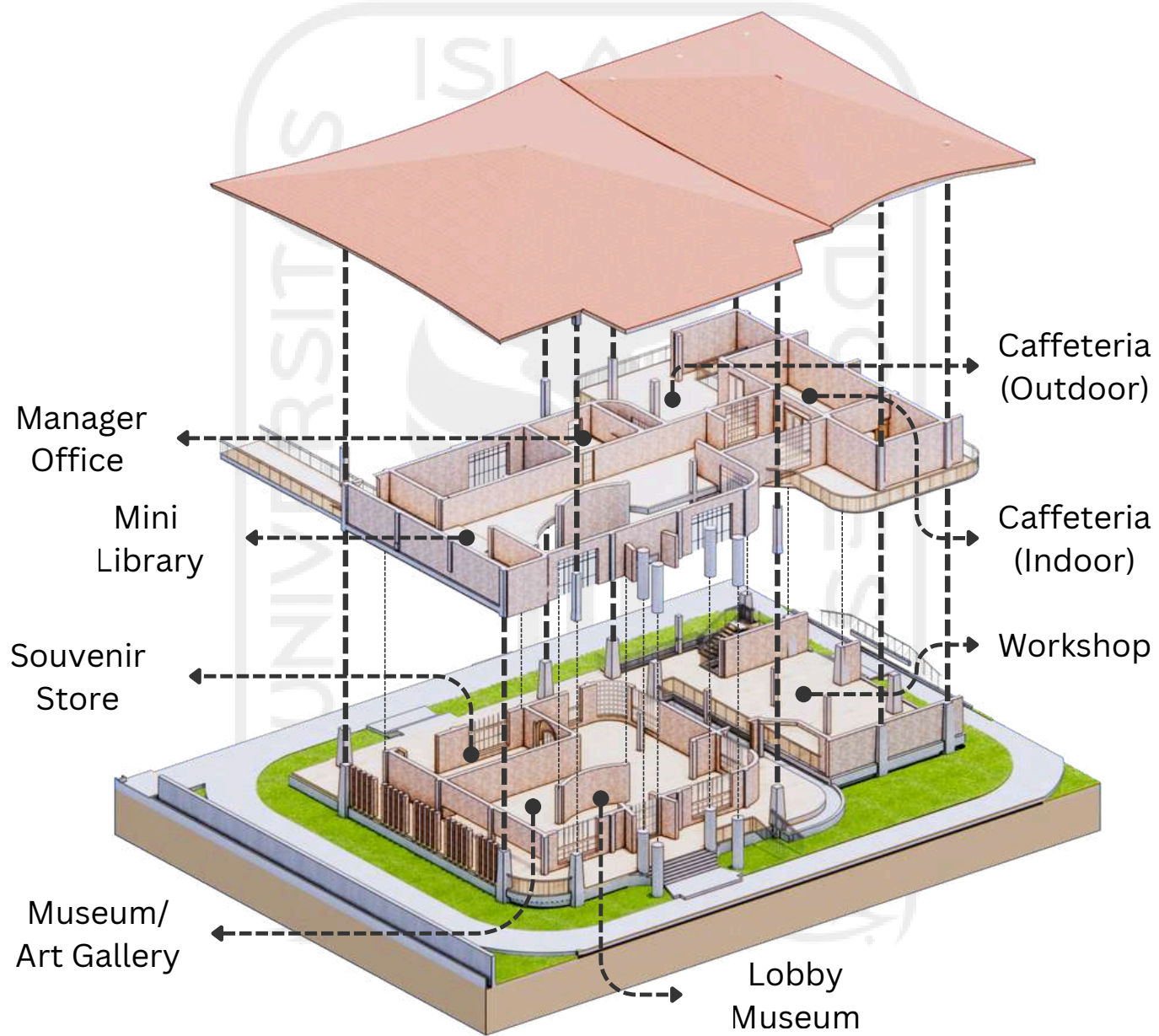
### 3.6 DESIGN SCHEMATIC

#### Exploded A1 Building (ADAPTIVE REUSE)



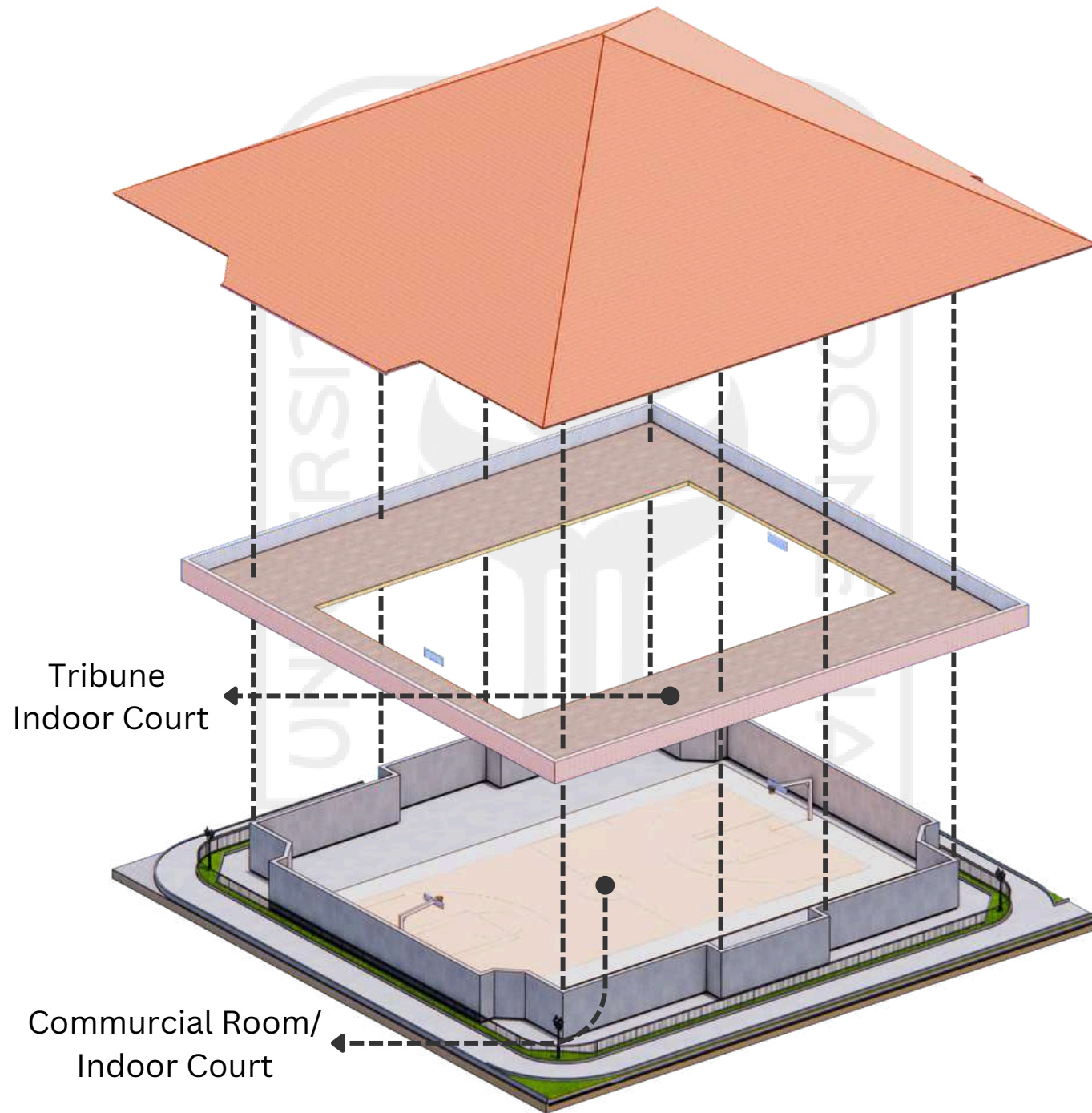
### 3.6 DESIGN SCHEMATIC

#### Exploded B1 Building (INFILL DESIGN)



### 3.6 DESIGN SCHEMATIC

#### Exploded A2 Building (ADAPTIVE REUSE)



### 3.7 BUSINESS MODEL CANVAS (BMC)

**Table BMC**

KEY PARTNERSHIP	KEY RESOURCES	VALUE PROPOSITIONS	COSTUMER RELATIONSHIP	COSTUMER SEGMENT
<ol style="list-style-type: none"> <li>1. Collaboration with Pekanbaru Government.</li> <li>2. Collaboration with UMKM.</li> <li>3. Collaboration with community Melayu cultural and arts studio.</li> </ol>	<ol style="list-style-type: none"> <li>1. Buildings and facilities: Sungai Siak Port Warehouse Building and other supporting infrastructure.</li> <li>2. Employees and staff: Event management, customer service, and cleaning.</li> <li>3. Partner network: Partnerships with local artists, producers, and local businesses.</li> </ol>	<ol style="list-style-type: none"> <li>1. Entertainment and cultural center: Provides local entertainment, arts, and culture to enrich the visitor experience.</li> <li>2. Shopping facilities: Shops and art markets offering local products and unique handicrafts.</li> <li>3. Commercial space: Provides space for local shops, restaurants, art galleries and creative businesses.</li> </ol>	<ol style="list-style-type: none"> <li>1. Personal interaction: Friendly and knowledgeable staff to guide visitors and answer their questions.</li> <li>2. After sales service: Responsive customer service to respond to customer feedback and complaints.</li> <li>3. Online communities: Online forums and groups to facilitate interaction between visitors and entrepreneurs at SCH.</li> </ol>	<ol style="list-style-type: none"> <li>1. Local community: Visitors from Pekanbaru and surrounding areas who are looking for entertainment, shopping, and recreation.</li> <li>2. Tourist visitors: Local and international tourists who are interested in the cultural and artistic heritage of Pekanbaru.</li> <li>3. Entrepreneurs and traders: Local entrepreneurs who wish to utilize commercial space within the PLA for their businesses.</li> </ol>
	<p><b>KEY ACTIVITIES</b></p> <ol style="list-style-type: none"> <li>1. Event organizing: Plan and execute arts performances, concerts, exhibitions, and other cultural activities.</li> <li>2. Commercial space management: Manage leasing and ensure local entrepreneurs get the support they need.</li> <li>3. Marketing and promotion: Conduct marketing campaigns to attract local visitors and tourists.</li> </ol>		<p><b>CHANNEL</b></p> <ol style="list-style-type: none"> <li>1. Website and app: Online platform for marketing events, products, and services on SCH.</li> <li>2. Social media: Use of social media for promotion of events, discounts, and visitor experience.</li> <li>3. Local partnerships: Collaboration with local hotels, travel agents and restaurants to promote SCH to tourists.</li> </ol>	
<p><b>COST STRUCTURES</b></p> <ol style="list-style-type: none"> <li>1. Operational costs: Employee salaries, cleaning costs, and building maintenance.</li> <li>2. Marketing and promotion: Costs of online advertising, event promotion, and website development.</li> <li>3. Partnership fees: Expenses for establishing and maintaining partnerships with local businesses.</li> </ol>		<p><b>REVENUE STREAMS</b></p> <ol style="list-style-type: none"> <li>1. Admission ticket sales: Revenue from sales of admission tickets for events, art exhibitions and performances at SCH.</li> <li>2. Commercial space rental: Revenue from renting shop, gallery, and restaurant space to local entrepreneurs.</li> <li>3. Partnership fees: Revenue from partnerships with local businesses, hotels, and travel agents.</li> </ol>		

*Table 14. Business Model Canvas (BMC)  
Source: Writer (2025)*

### 3.8 CONSTRUCTION COST ESTIMATION (RAB)

Construction Cost Estimation (RAB)					
Culture Hub Cost					
No.	Pekerjaan	Volume	Satuan	Harga Satuan (Rp)	Harga Jumlah (Rp)
<b>A Pekerjaan Persiapan dan Bongkar</b>					
1	Pembersihan Lahan	220.000	m <sup>2</sup>	5.000	Rp1.100.000.000
2	Bouwplank dan Pengukuran	1	ls	30.000.000	Rp30.000.000
3	Galian tanah pondasi	10000	m <sup>3</sup>	85.000	Rp850.000.000
4	Urugan pasir & perataan	12000	m <sup>3</sup>	95.000	Rp1.140.000.000
				<b>Subtotal</b>	<b>Rp3.120.000.000</b>
<b>B Biaya Konstruksi</b>					
<b>1 Pekerjaan Konstruksi Bangunan Arsitektur</b>					
	a. Pekerjaan pondasi beton	5000	m <sup>3</sup>	1200000	Rp6.000.000.000
	b. Sloof & Kolom beton	3000	m <sup>3</sup>	1300000	Rp3.900.000.000
	c. Pelat lantai beton	10000	m <sup>2</sup>	800.000	Rp8.000.000.000
	d. Dinding bata merah	15000	m <sup>2</sup>	175000	Rp2.625.000.000
	e. Plester & Acian	15000	m <sup>2</sup>	40000	Rp600.000.000
	f. Pengecatan dinding	15000	m <sup>2</sup>	30000	Rp450.000.000
	g. Pemasangan keramik lantai	10000	m <sup>2</sup>	150000	Rp1.500.000.000
	h. Plafon gypsum	10000	m <sup>2</sup>	110000	Rp1.100.000.000
	i. Konstruksi rangka atap baja ringan	10000	m <sup>2</sup>	220000	Rp2.200.000.000
	j. Penutup atap (genteng metal)	10000	m <sup>2</sup>	180000	Rp1.800.000.000
<b>2 Interior Work</b>					
	a. Pintu & jendela (kusen+daun)	440	unit	2500000	Rp1.100.000.000
	b. Meubel built-in & display	1	ls	1000000000	Rp1.000.000.000
<b>3 Landscape Work</b>					
	a. Paving jalan dan parkir	20.000	m <sup>2</sup>	300.000	Rp6.000.000.000
	b. Pekerjaan taman dan lansekap	1	ls	900.000.000	Rp900.000.000
	c. Pekerjaan drainase	1	ls	750.000.000	Rp750.000.000
				<b>Subtotal</b>	<b>Rp37.925.000.000</b>
<b>C Pekerjaan Infrastruktur dan Utilitas</b>					
1	Pekerjaan Instalasi listrik & panel	1	ls	1.500.000.000	Rp1.500.000.000
2	Instalasi plumbing & air bersih	1	ls	800.000.000	Rp800.000.000
3	Instalasi AC & ventilasi	1	ls	1.000.000.000	Rp1.000.000.000
				<b>Subtotal</b>	<b>Rp3.300.000.000</b>
<b>D Biaya Lainnya</b>					
1	Biaya Tak Terduga (5%)	1	ls	2.500.000.000	Rp2.500.000.000
				<b>Subtotal</b>	<b>Rp2.500.000.000</b>
				<b>TOTAL</b>	<b>Rp46.845.000.000</b>

Table 15. Construction Cost Estimation (RAB)  
Source: Writer (2025)

### 3.8 CONSTRUCTION COST ESTIMATION (RAB)

#### Income Cost & Break Event Point (BEP)

No.	Area	Quantity	Volume	Unit	Cost/Unit	Cost/Month	Cost/Year	Annual Income Occupancy Rate (100%)	Annual Income Occupancy Rate (80%)
1	Commercial Building	1	1 035.000	m2	Rp30.000.000	Rp480.000.000	Rp5.760.000.000	Rp5.760.000.000	Rp4.608.000.000
2	Tenant	17	16	m2		Rp12.000.000	Rp144.000.000	Rp2.448.000.000	Rp1.958.400.000
3	Port (Tour boat)	1	620	m2	Rp100.000	Rp3.000.000	Rp36.000.000	Rp36.000.000	Rp28.800.000
4	UMKM Market	1	275	m2		Rp7.000.000	Rp84.000.000	Rp84.000.000	Rp67.200.000
5	Souvenir Store	1	50	m2		Rp2.000.000	Rp24.000.000	Rp24.000.000	Rp19.200.000
6	Co-Working Space	3	17.5	m2	Rp500.000	Rp42.000.000	Rp504.000.000	Rp1.512.000.000	Rp1.209.600.000
7	Parking Motorcycle	1	605	m2	Rp2.000	Rp3.200.000	Rp38.400.000	Rp38.400.000	Rp30.720.000
	Cars	1	2.135.000	m2	Rp5.000	Rp2.700.000	Rp32.400.000	Rp32.400.000	Rp25.920.000
	Bus	1	716	m2	Rp10.000	Rp600.000	Rp7.200.000	Rp7.200.000	Rp5.760.000
<b>Total Income</b>								<b>Rp9.942.000.000</b>	<b>Rp7.953.600.000</b>
Laba Kotor Sebelum Pajak detelah Tingkat Okupansi (80%)									
1	Tax (Pajak)						10%		Rp1.014.240.000
2	Insurance (Asuransi)						2%		Rp202.848.000
<b>laba Bersih</b>								<b>Rp8.925.312.000</b>	
<b>Total Investment</b>								<b>Rp46.845.000.000</b>	
<b>Payback Period (year)</b>								<b>5,25</b>	
<b>Payback Period Tingkat Okupansi 100% (year)</b>								<b>4,71</b>	

#### Break Event Point

Culture Hub Expenditure							
No.	Area	Volume	Unit	Cost/Month Management costs+ maintenance costs+ fixed costs+ variable costs)	Cost/Year Management costs+ maintenance costs+ fixed costs+ variable costs)	Annual Expenditure Occupancy Rate (100%)	Annual Expenditure Occupancy Rate (80%)
1	Teknisi & Maintenance	4	Org	Rp40.000.000	Rp1.920.000.000	Rp7.680.000.000	Rp6.144.000.000
2	Keamanan	4	Org	Rp25.000.000	Rp1.200.000.000	Rp4.800.000.000	Rp3.840.000.000
3	Kebersihan	5	Org	Rp25.000.000	Rp1.500.000.000	Rp7.500.000.000	Rp6.000.000.000
4	Perawatan Taman & Landscape	2	Org	Rp30.000.000	Rp720.000.000	Rp1.440.000.000	Rp1.152.000.000
5	Biaya Perbaikan Tak Terduga	1	Org	Rp100.000.000	Rp1.200.000.000	Rp1.200.000.000	Rp960.000.000
<b>Total</b>						<b>Rp22.620.000.000</b>	<b>Rp18.096.000.000</b>

Table 15. Construction Cost Estimation (RAB)  
Source: Writer (2025)

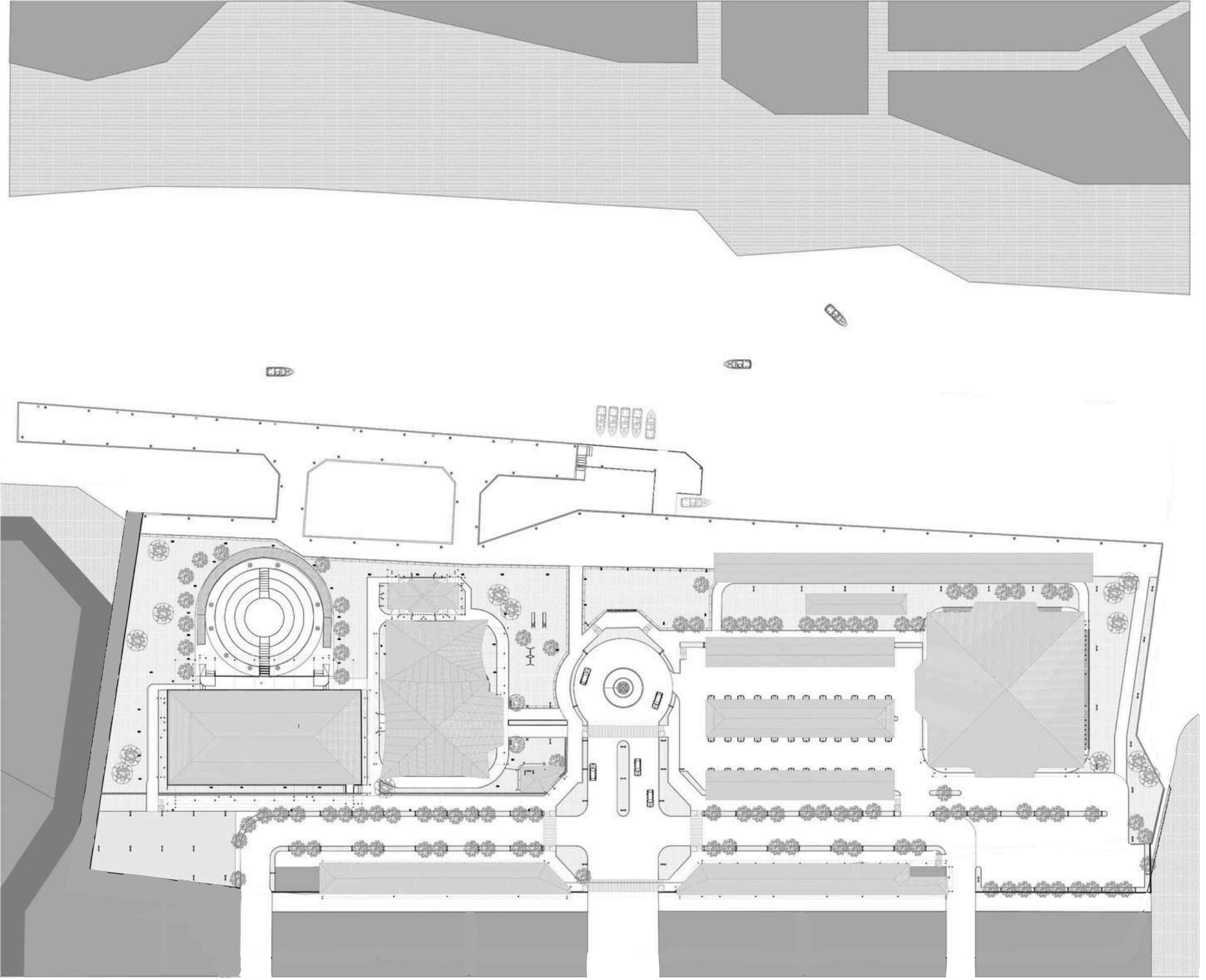
)4



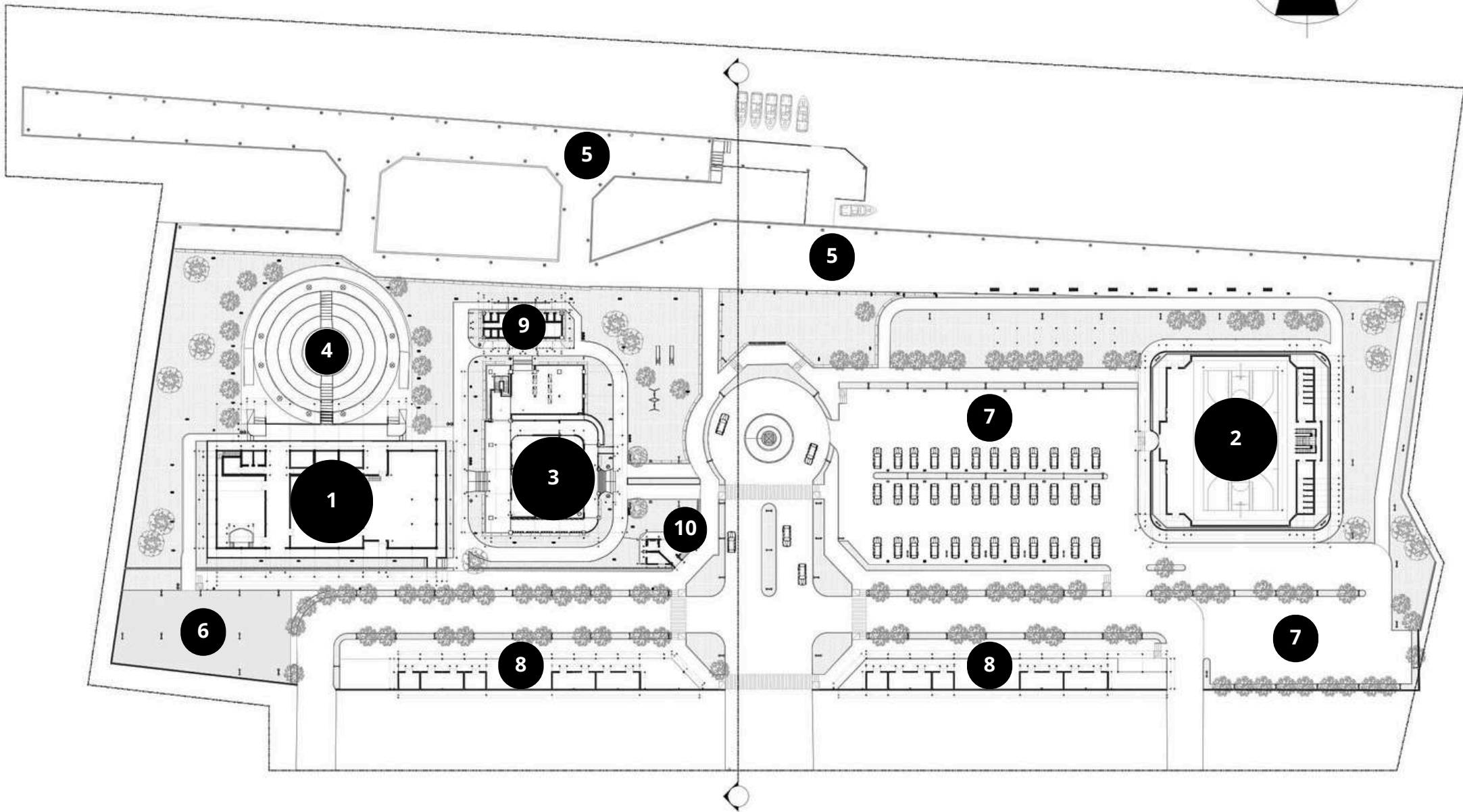
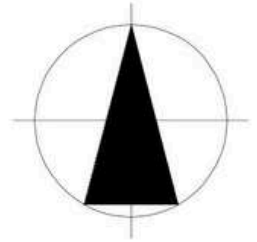
---

DED

# SITEPLAN



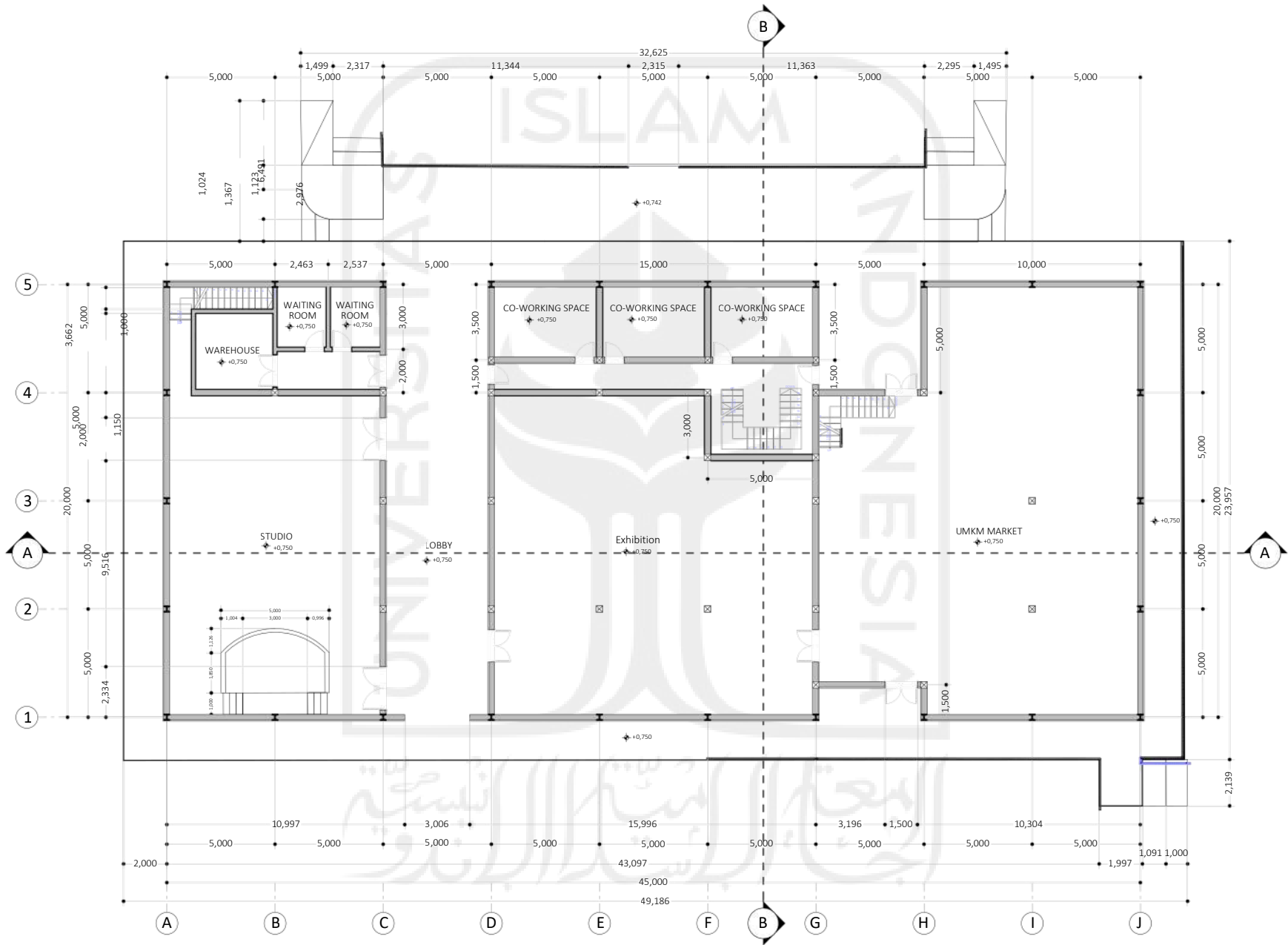
# SITEPLAN



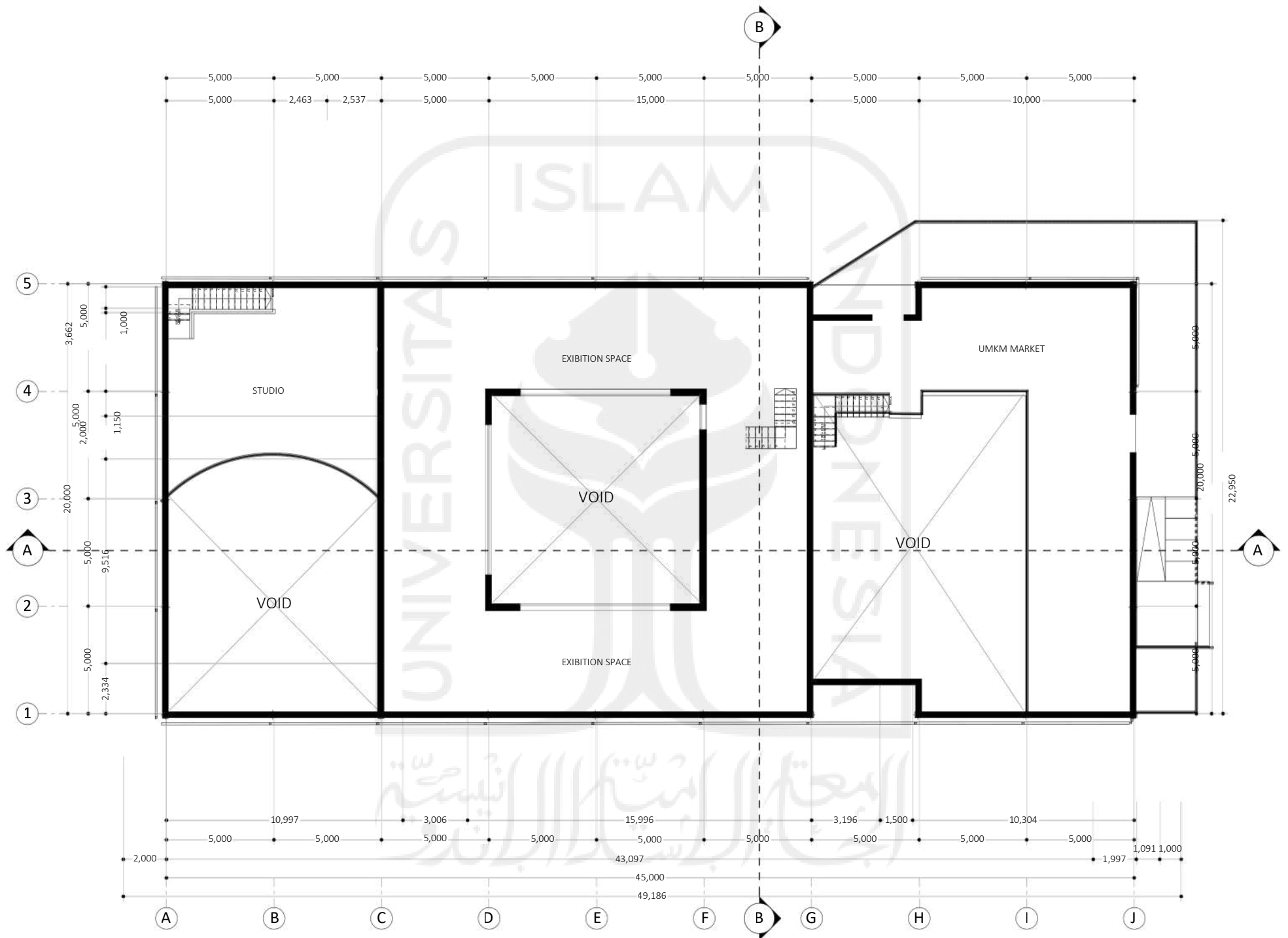
## Description:

- |   |                             |                            |                        |
|---|-----------------------------|----------------------------|------------------------|
| <b>1</b> Studio, Exhibition, UMKM Store | <b>4</b> Amphitheater       | <b>7</b> Parking Car & Bus | <b>10</b> Pos security |
| <b>2</b> Commercial Building            | <b>5</b> Port               | <b>8</b> Tenant            |                        |
| <b>3</b> Melayu museum & Workshop       | <b>6</b> Parking Motorcycle | <b>9</b> Public Toilet     |                        |

# FLOORPLAN 1ST (BUILDING A1)

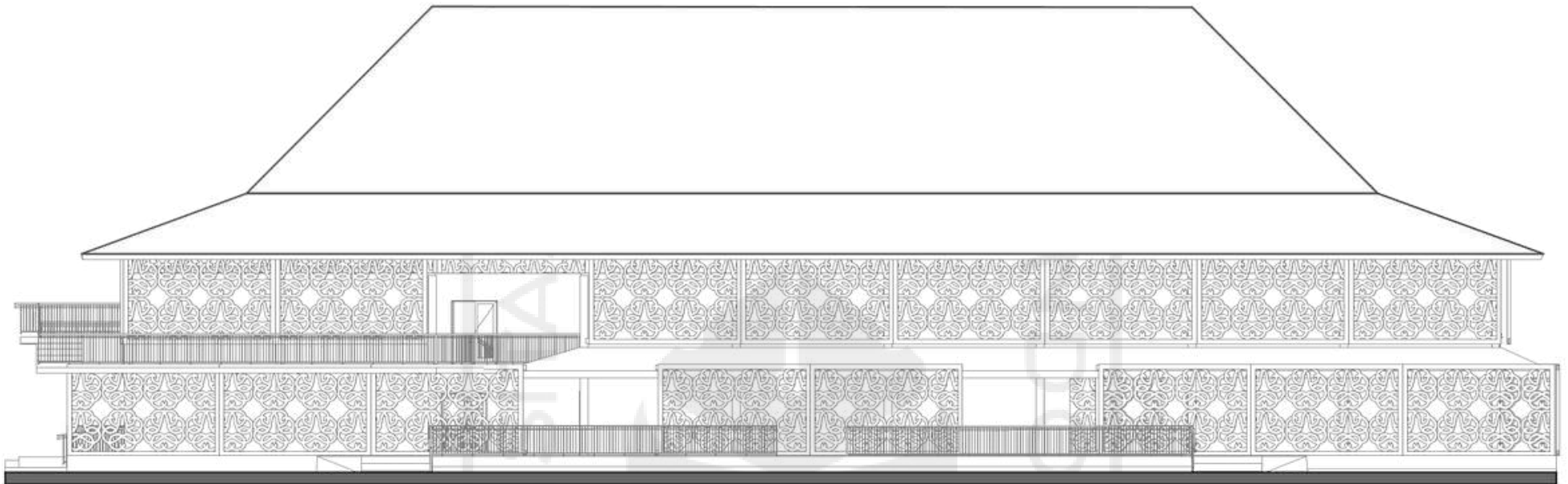


# FLOORPLAN 2ND (BUILDING A1)

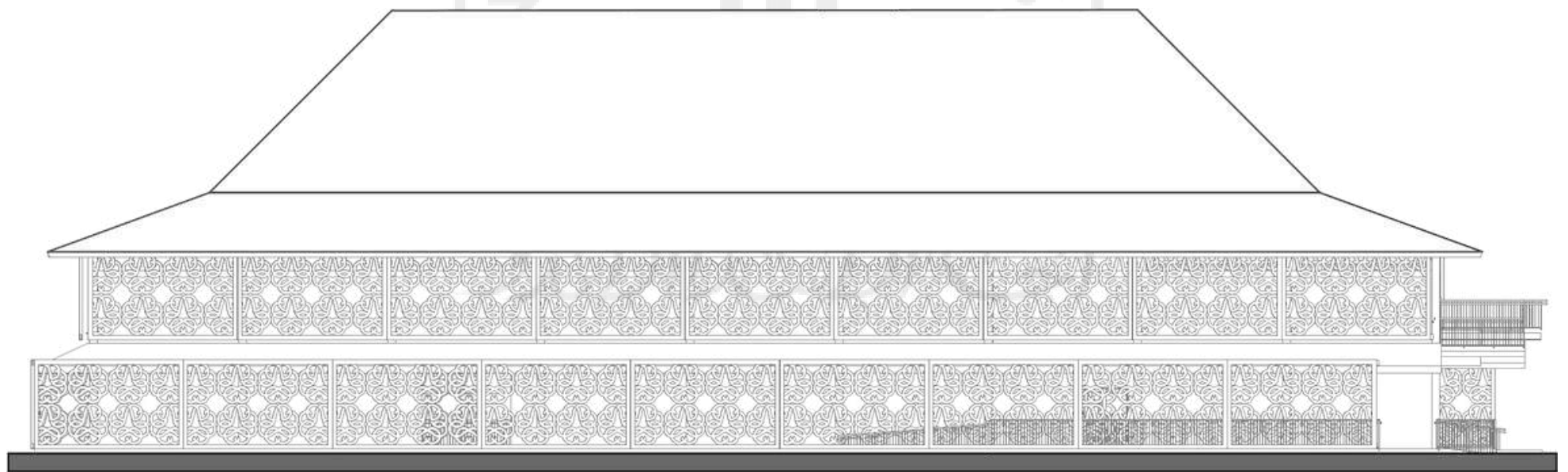


ELEVATION (BUILDING A1)

# NORTH

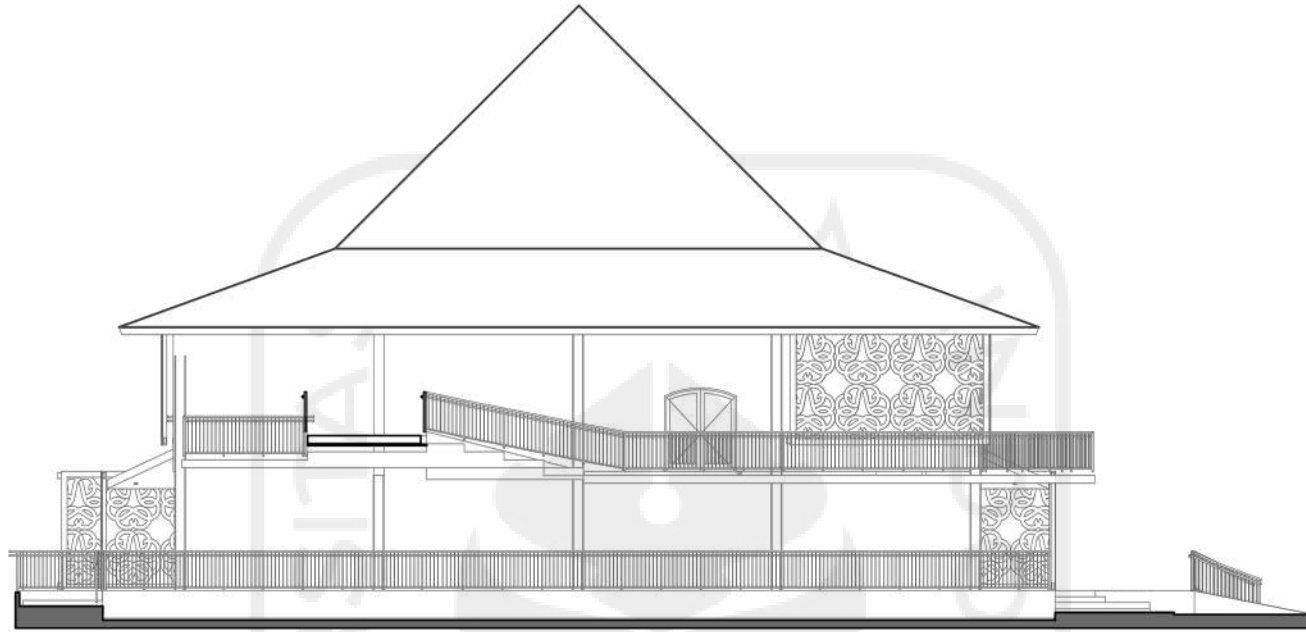


# SOUTH

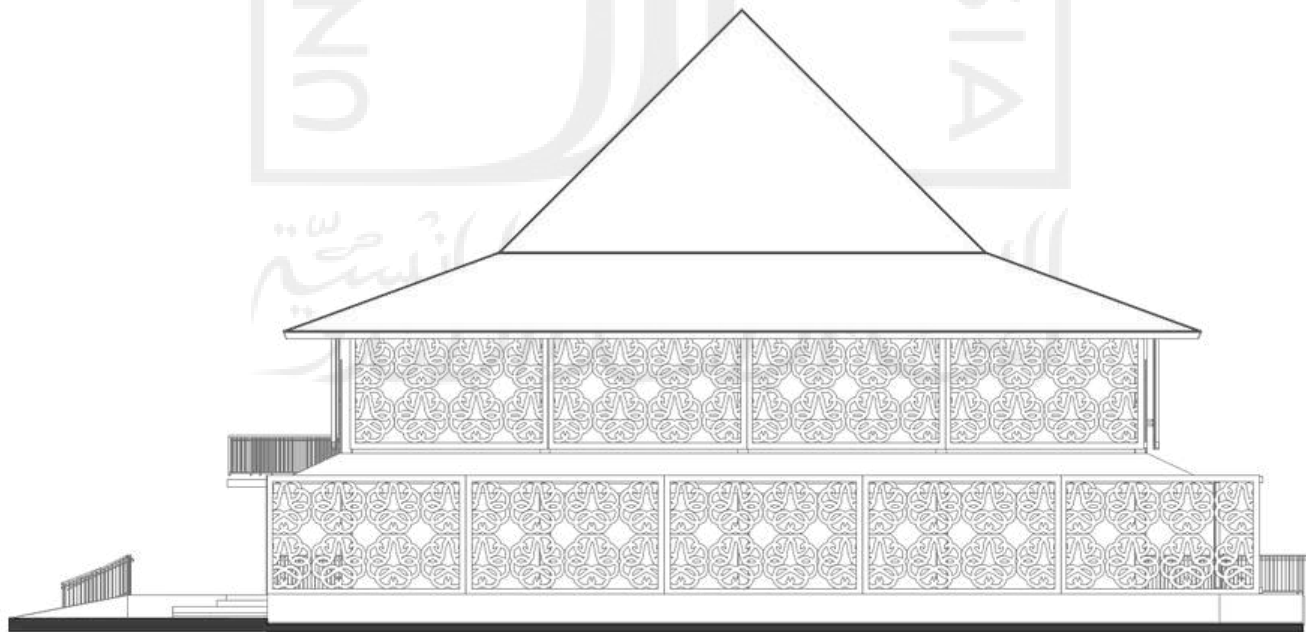


ELEVATION (BUILDING A1)

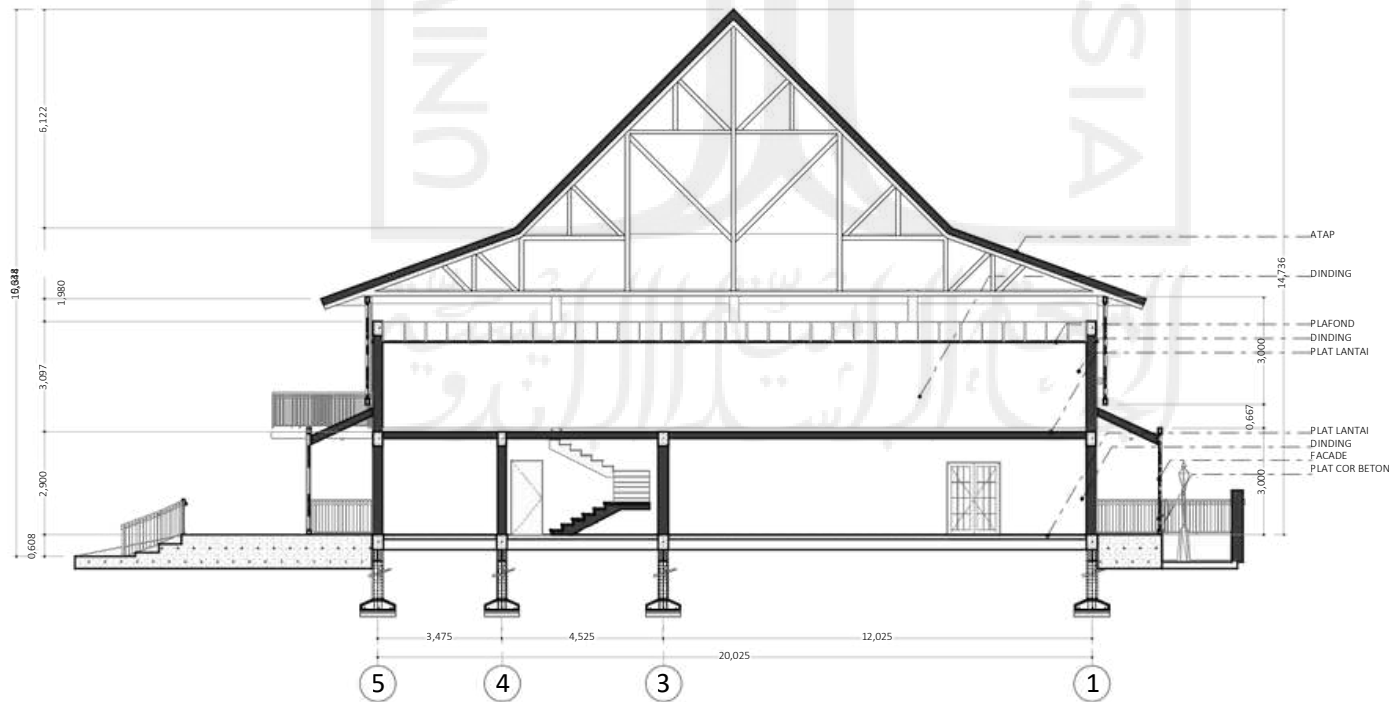
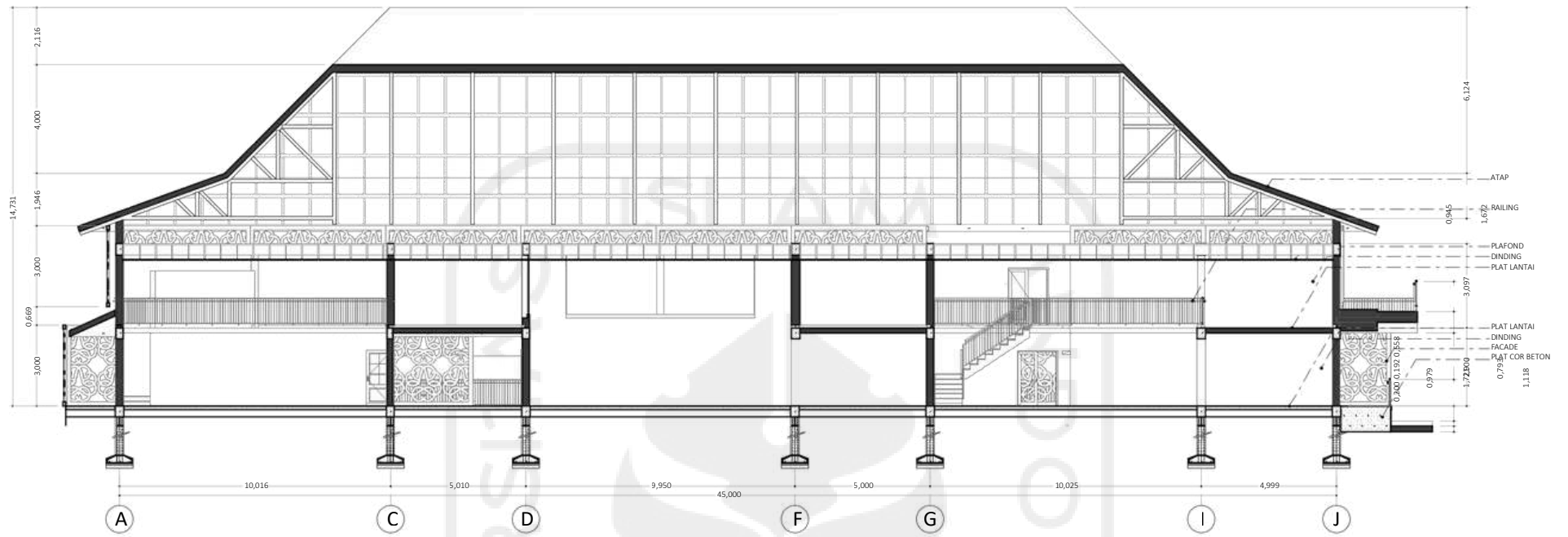
**EAST**



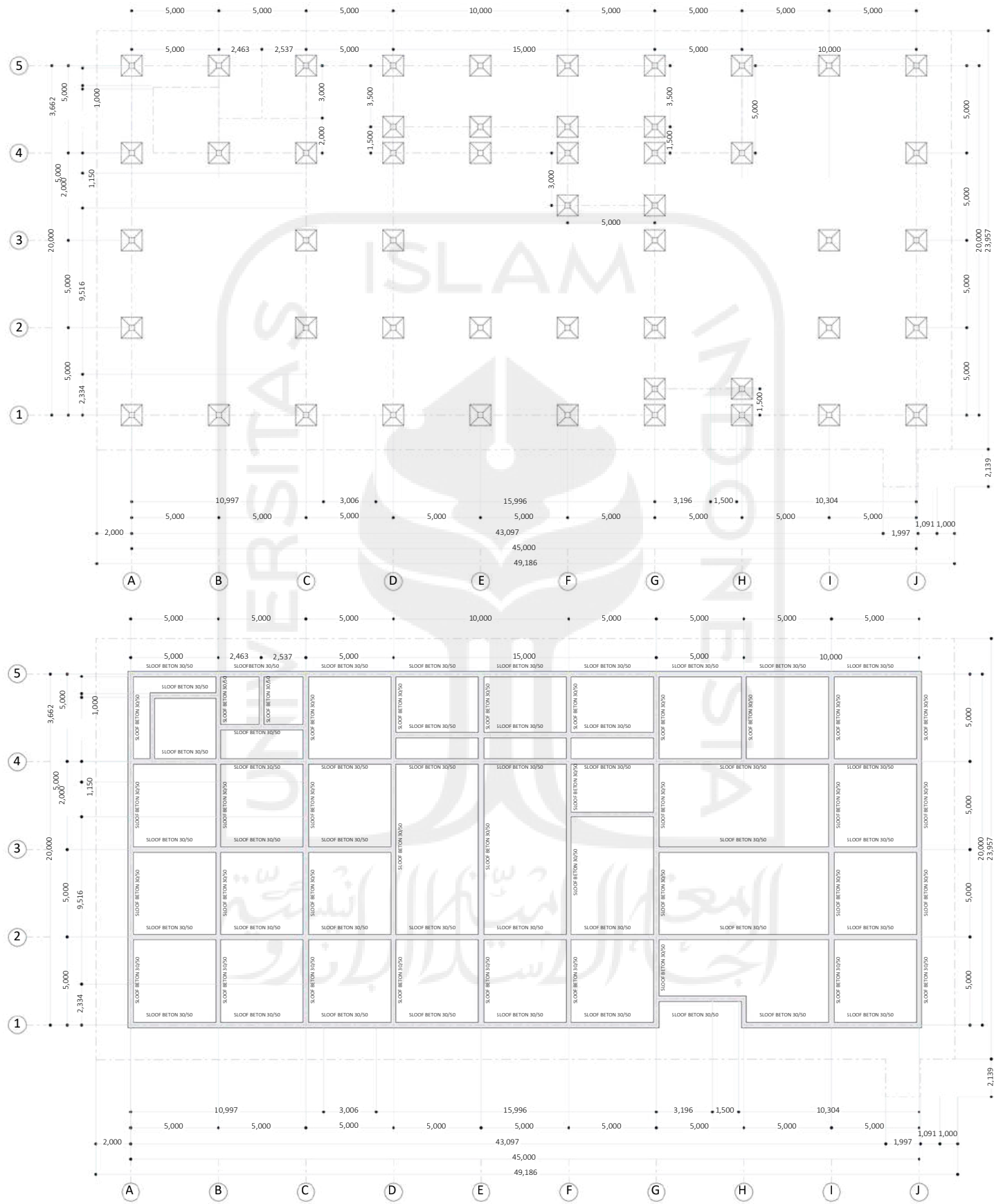
**WEST**



# SECTION (BUILDING A1)

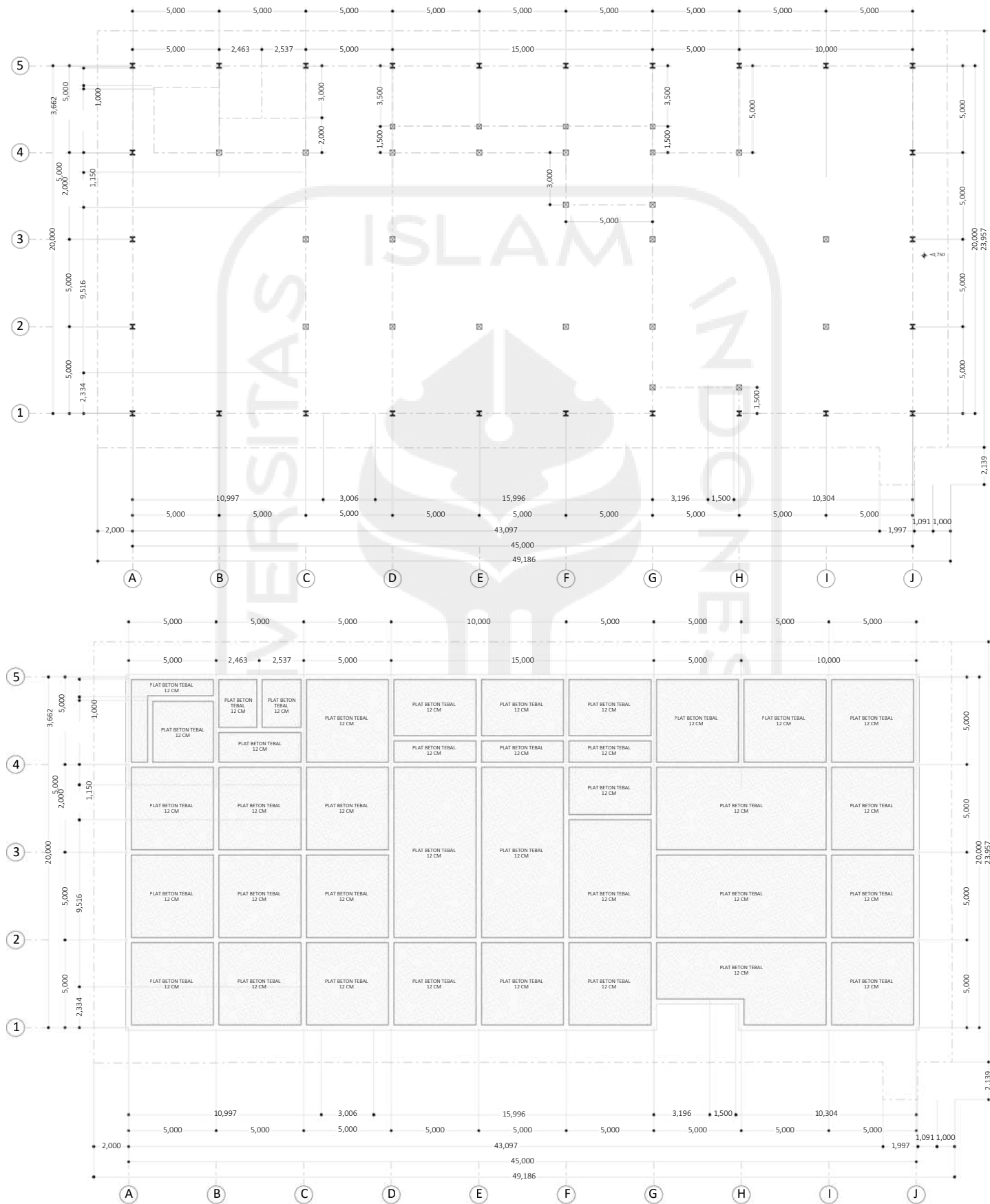


# DETAIL FOUNDATION AND DETAIL SLOOF (BUILDING A1)

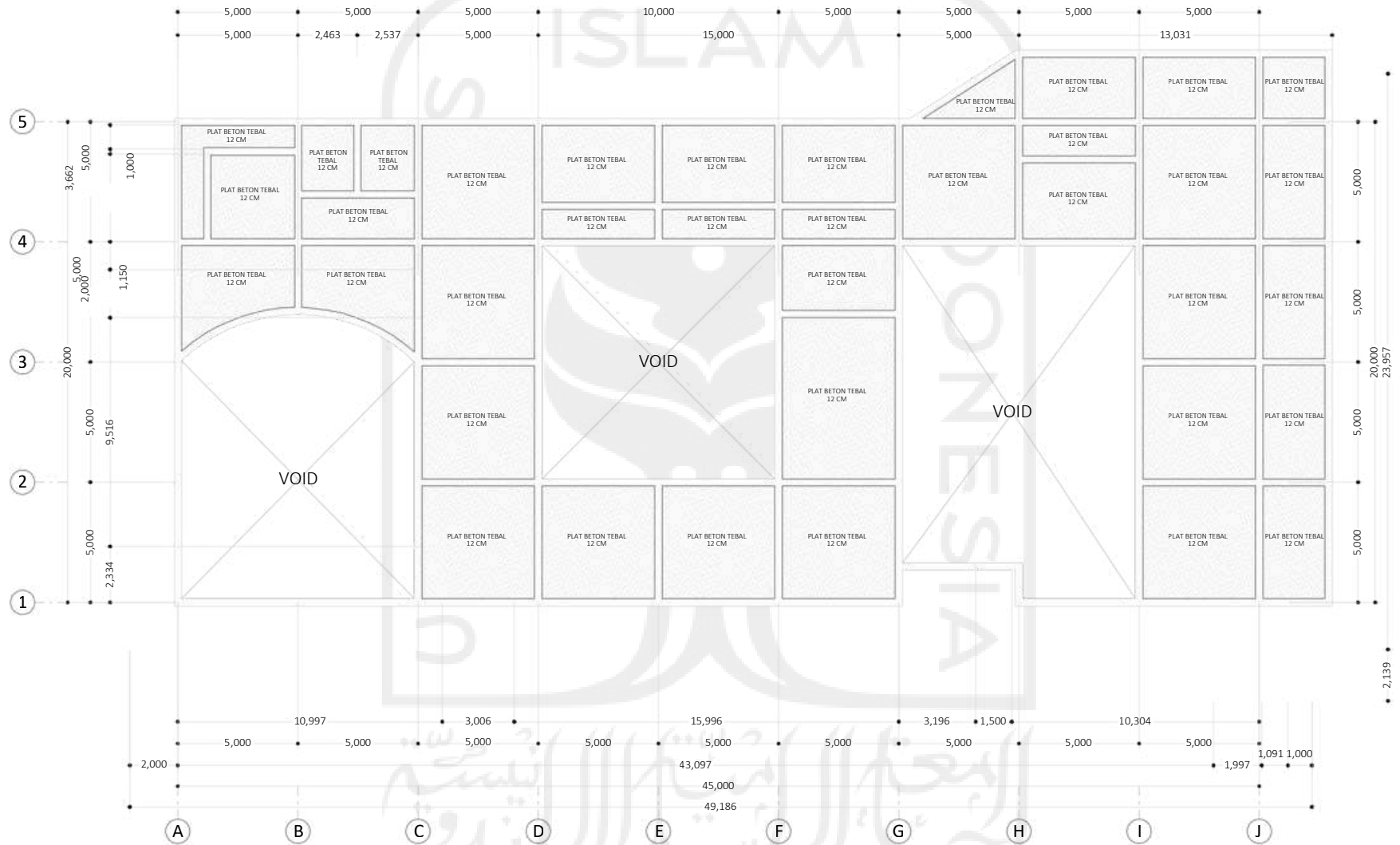


# DETAIL COULUMN & FLOOR PLATE

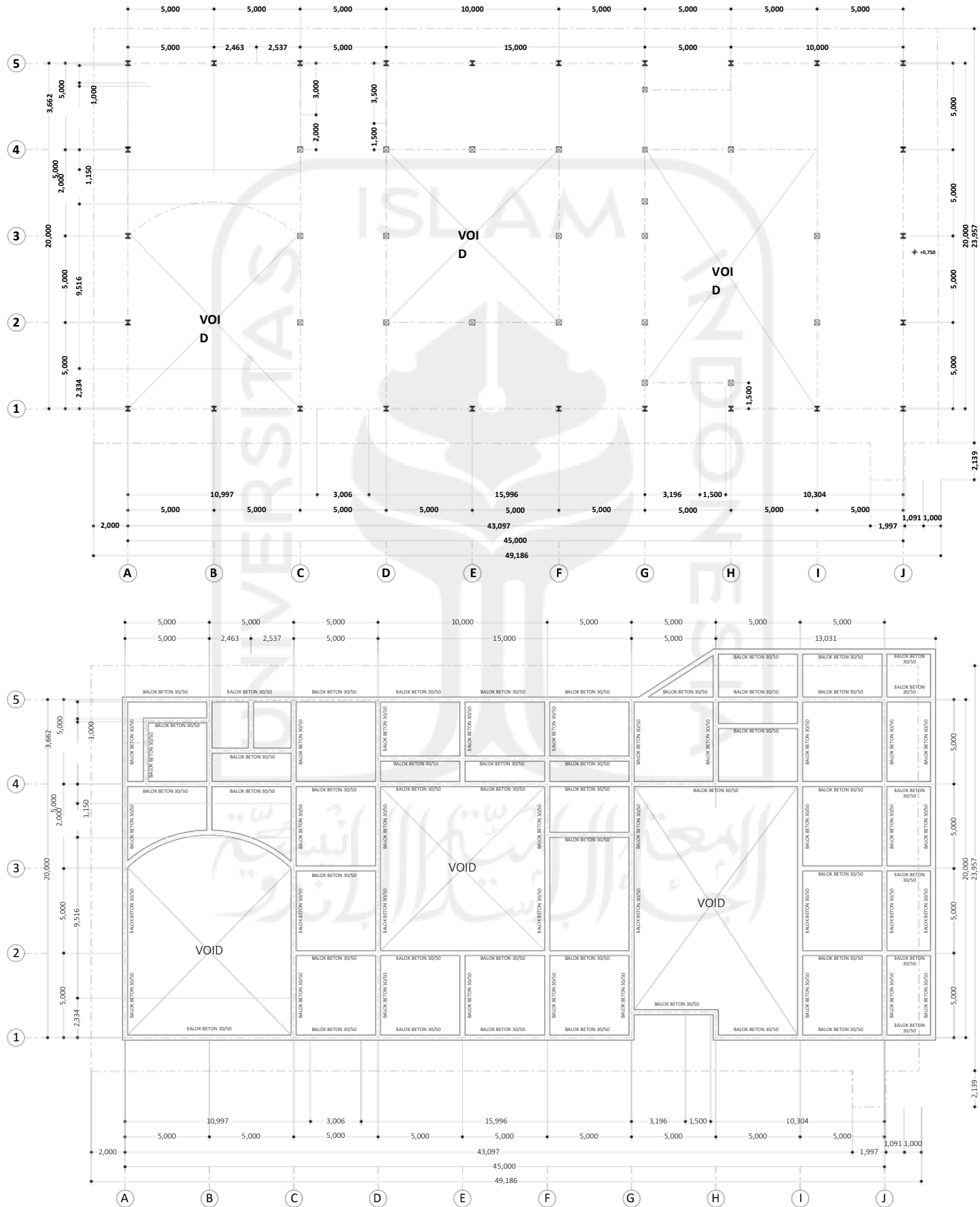
## 1ST FLOORS (BUILDING A1)



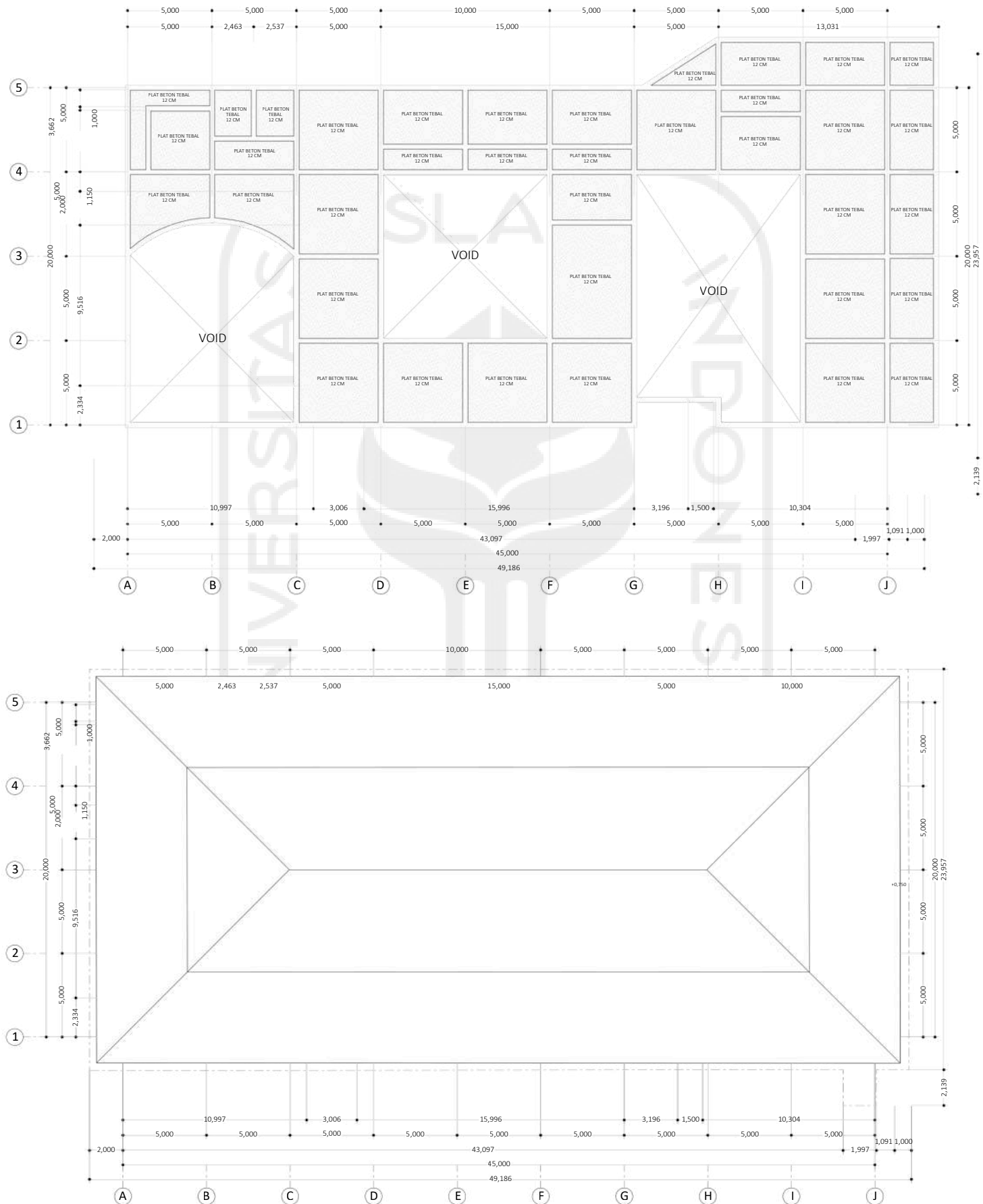
# DETAIL FLOOR PLATE 2ND FLOORS (BUILDING A1)



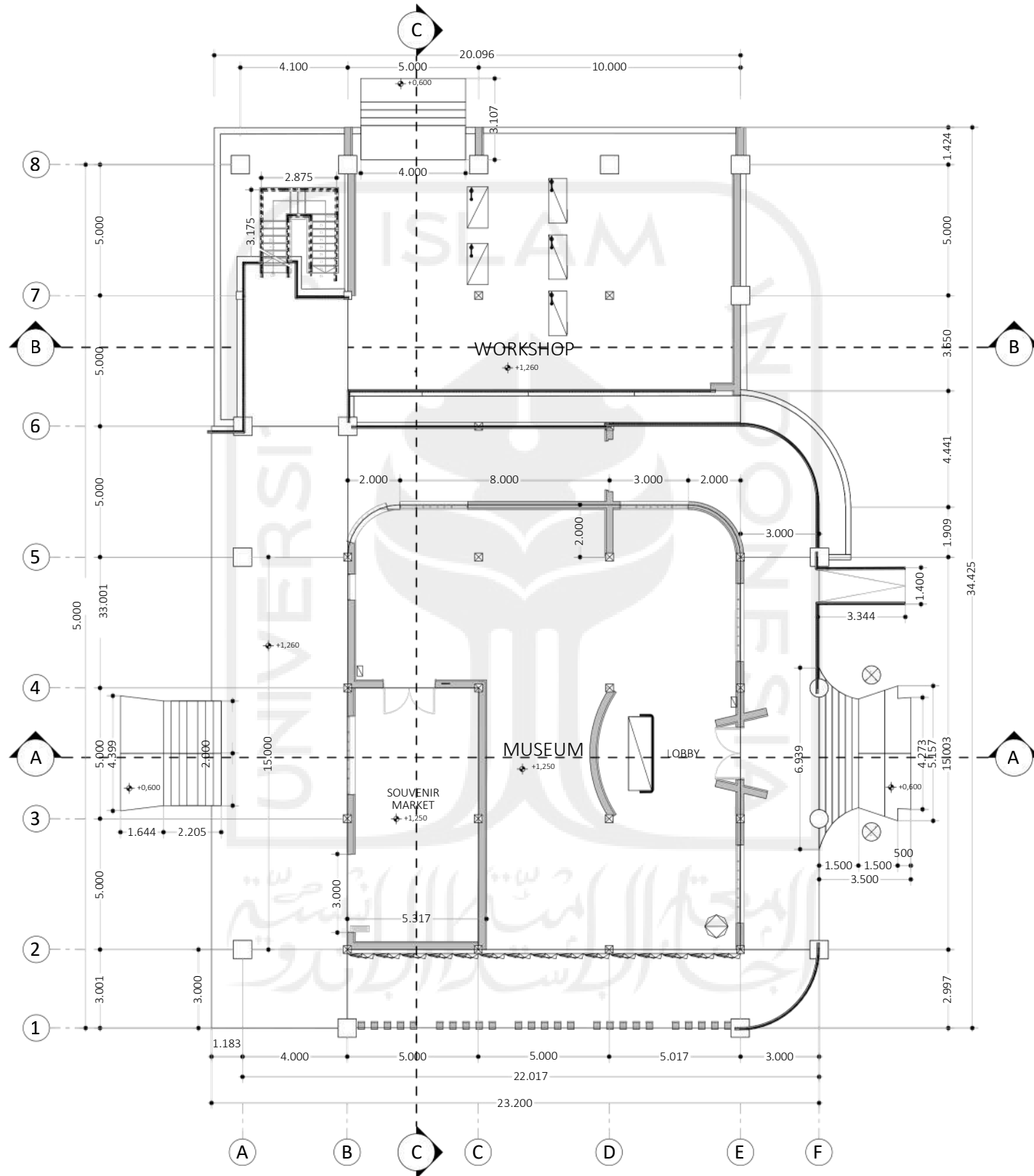
# DETAIL COULUMN 2 FLOORS (BUILDING A1) AND DETAIL BEAM 2ND FLOORS (BUILDING A1)



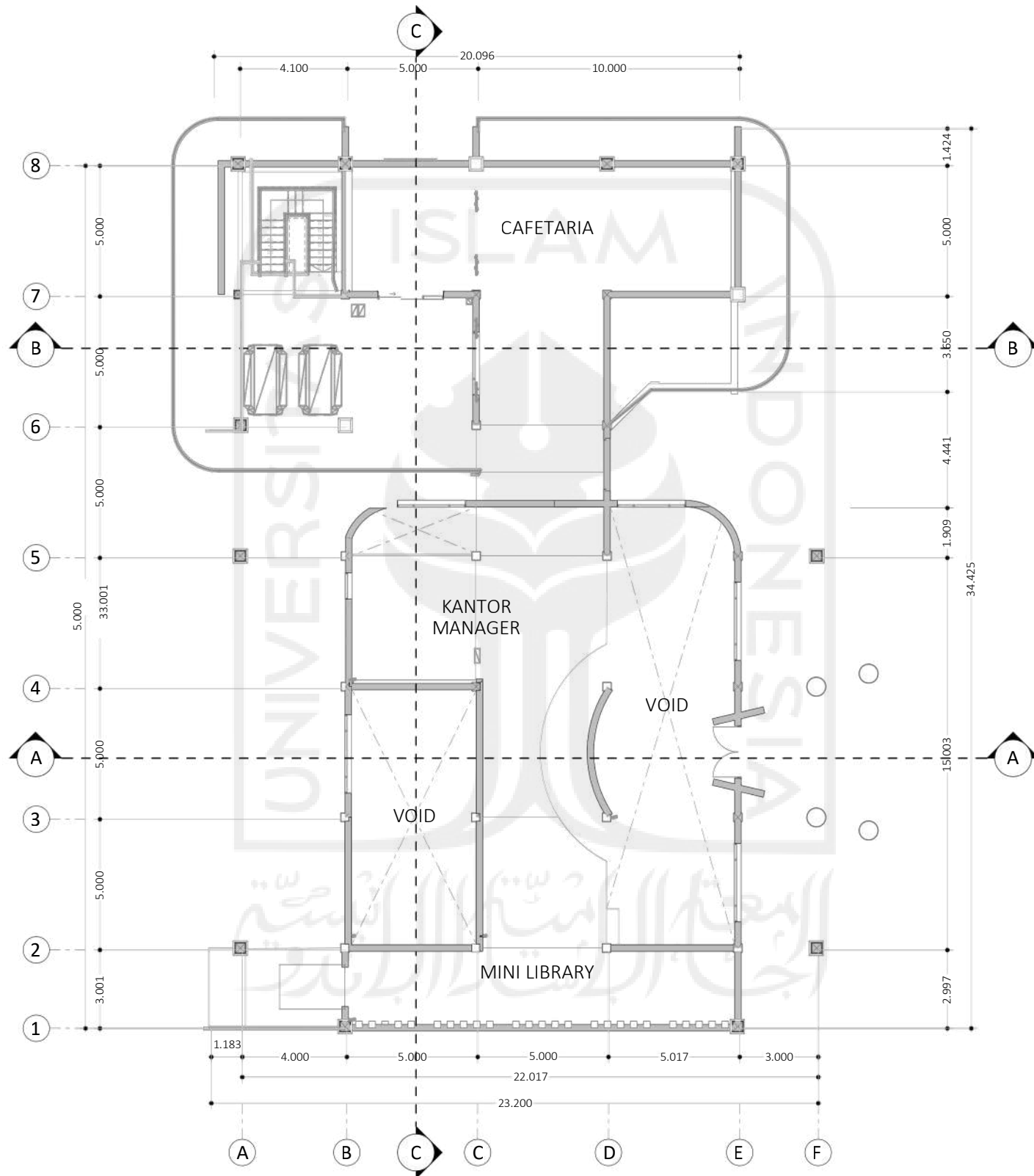
# DETAIL FLOOR PLATE 2ND FLOORS (BUILDING A1) AND DETAIL ROOF (BUILDING A1)



# FLOORPLAN 1ST (BUILDING B1)

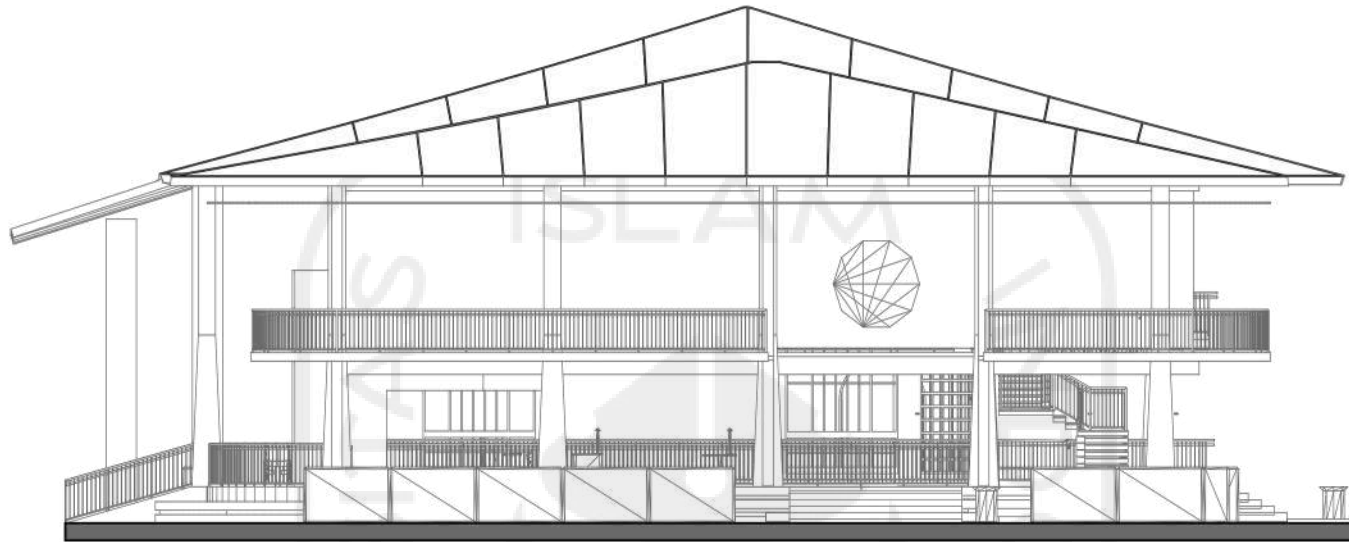


# FLOORPLAN 2ND (BUILDING B1)

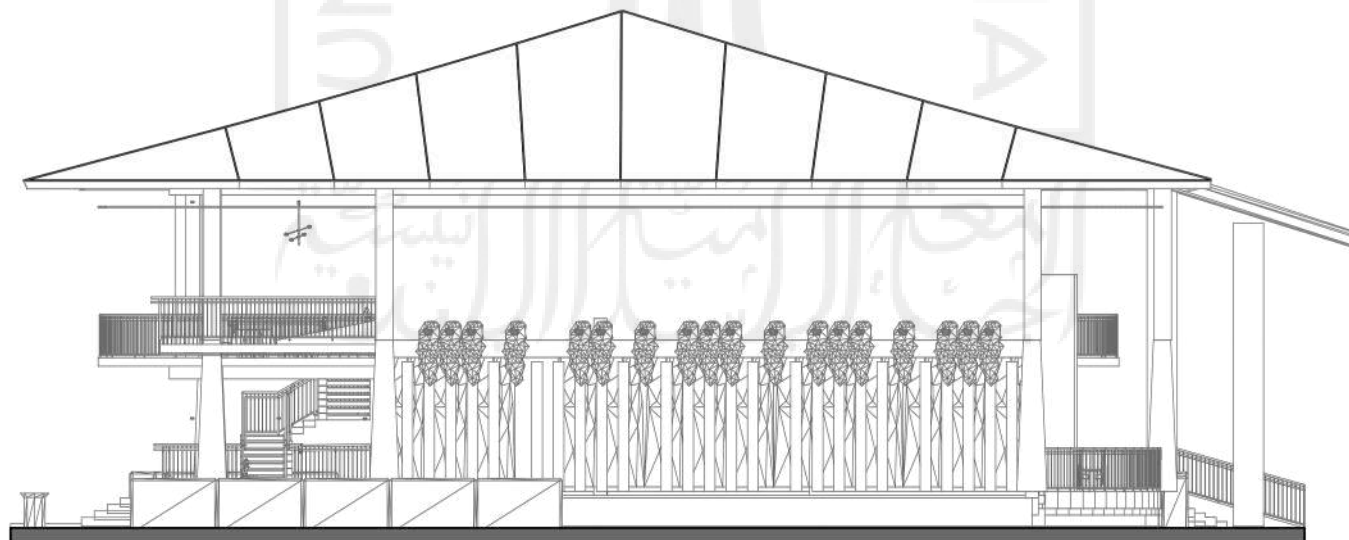


ELEVATION (BUILDING B1).

# NORTH



# SOUTH



ELEVATION (BUILDING B1).

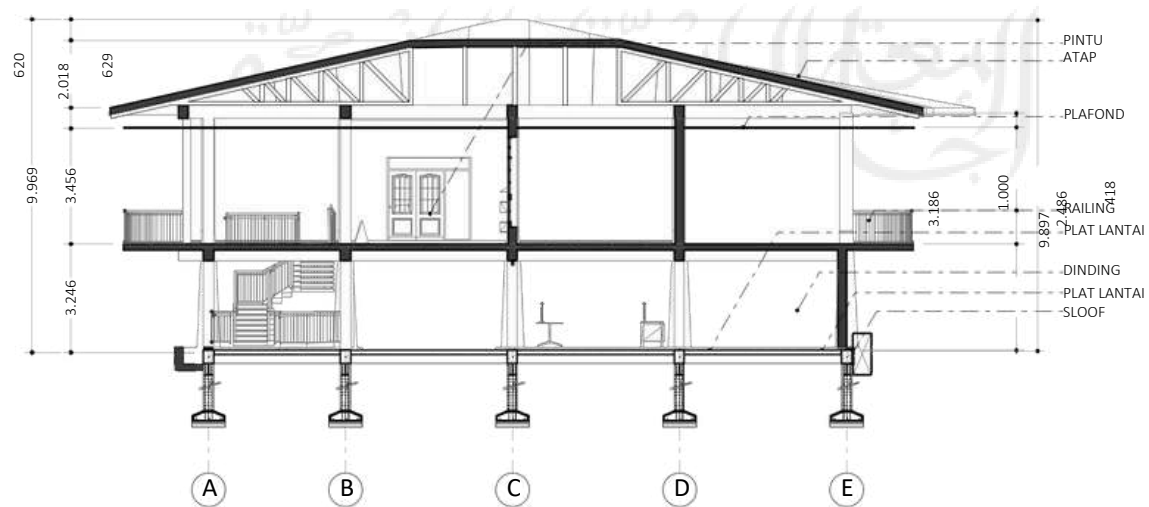
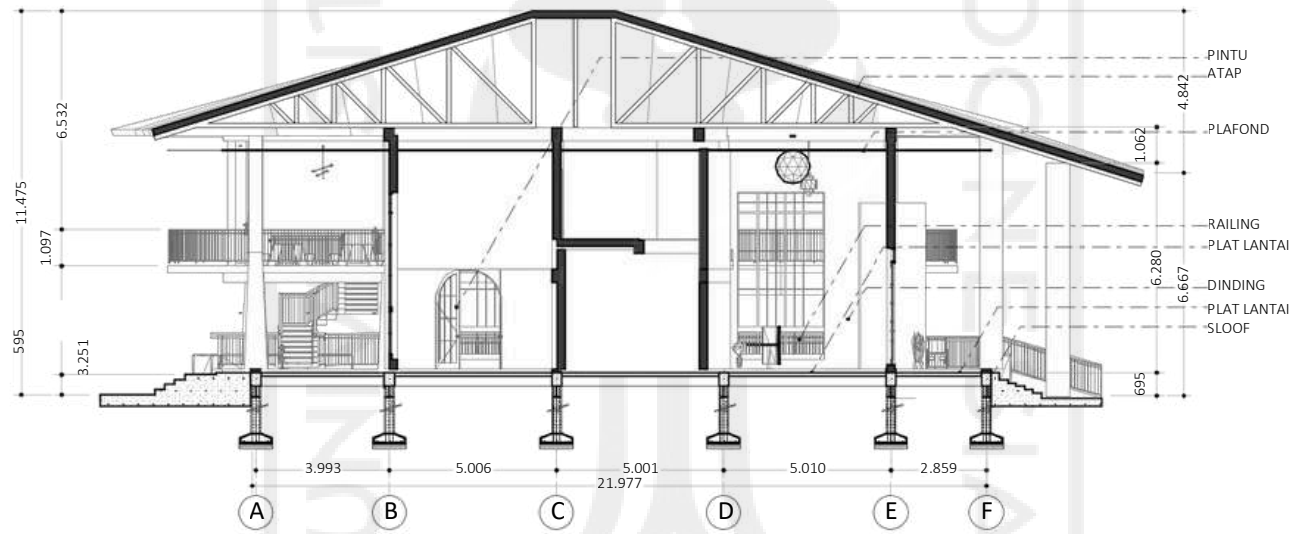
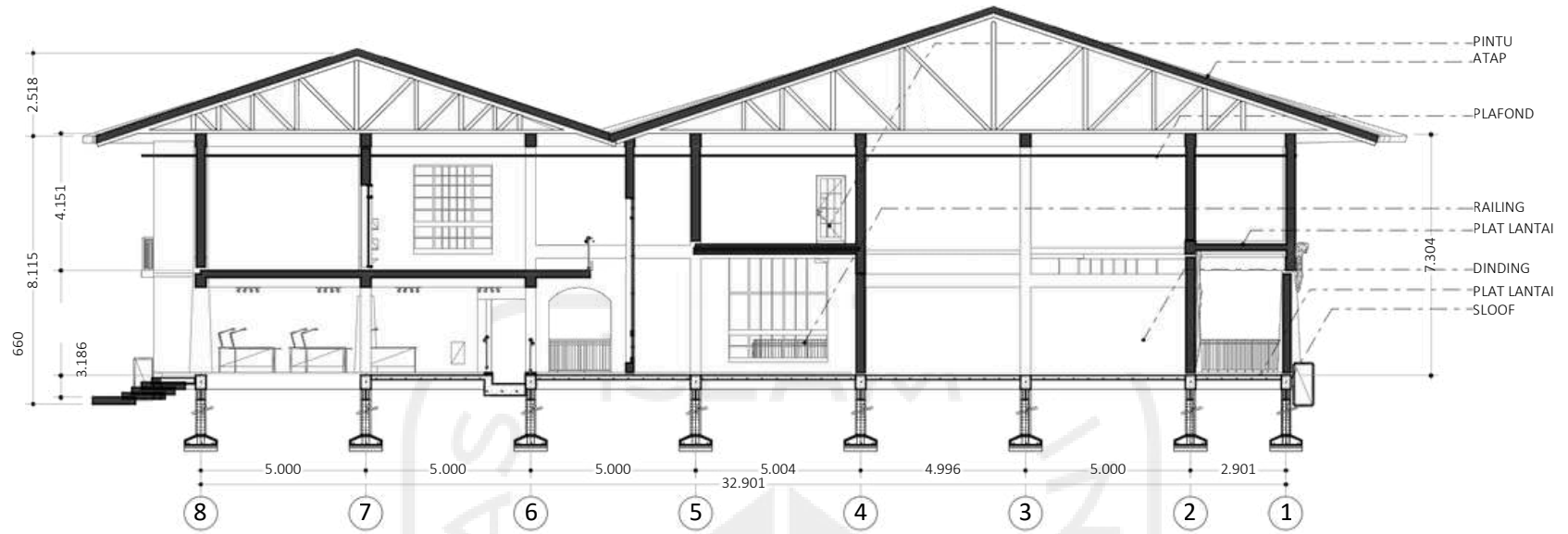
# EAST



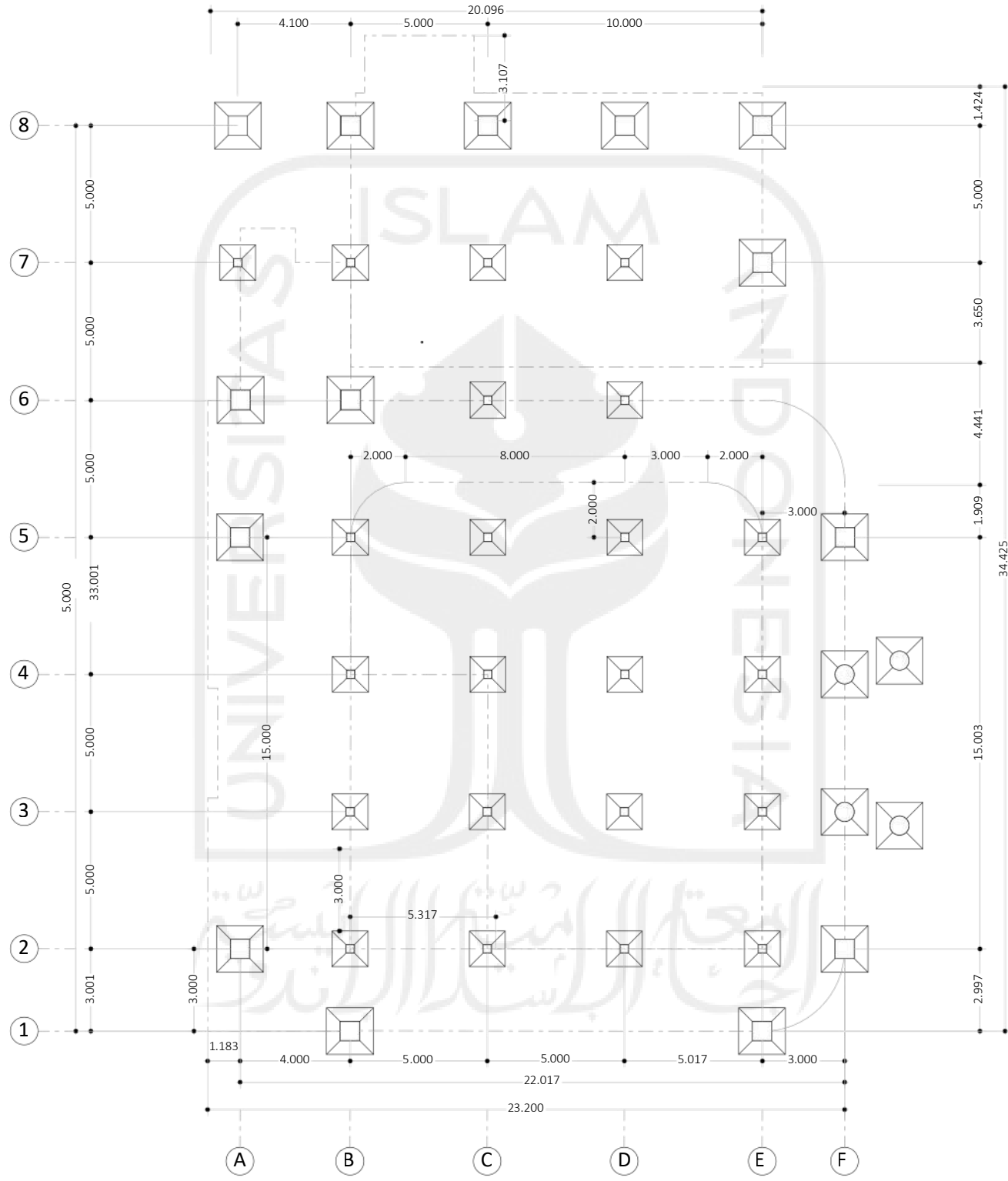
# WEST



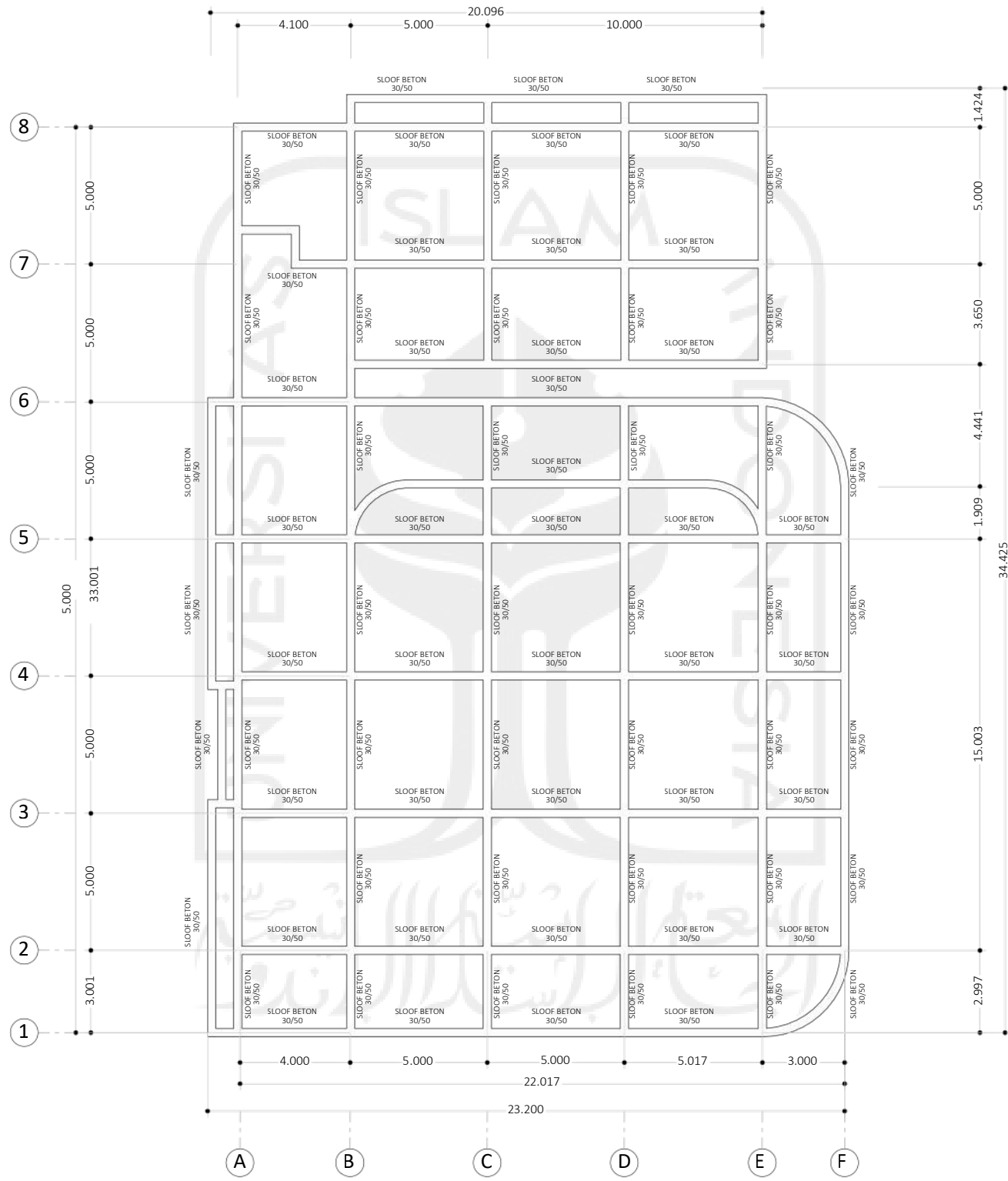
# SECTION (BUILDING B1)



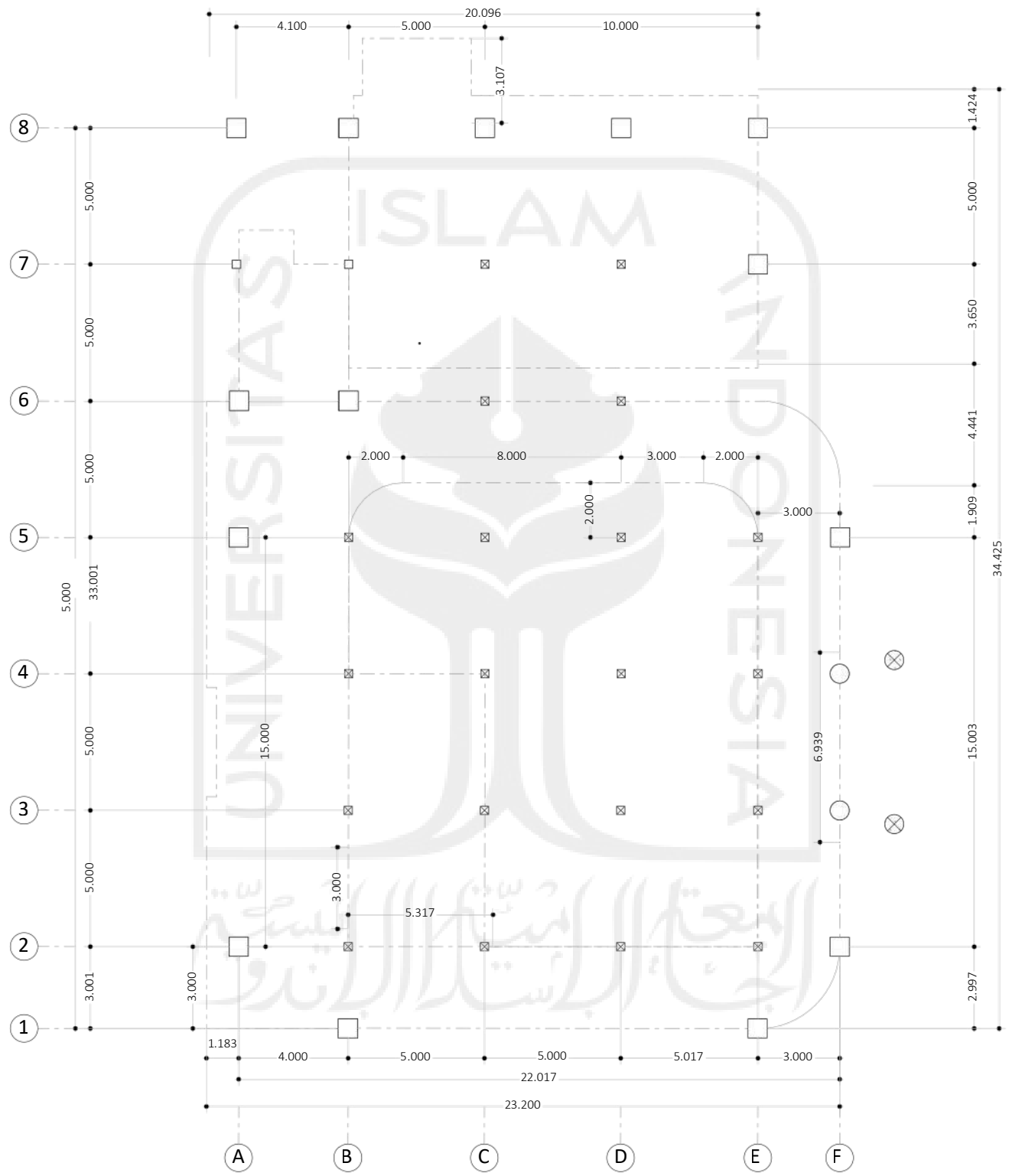
# DETAIL FOUNDATION (BUILDING B1)



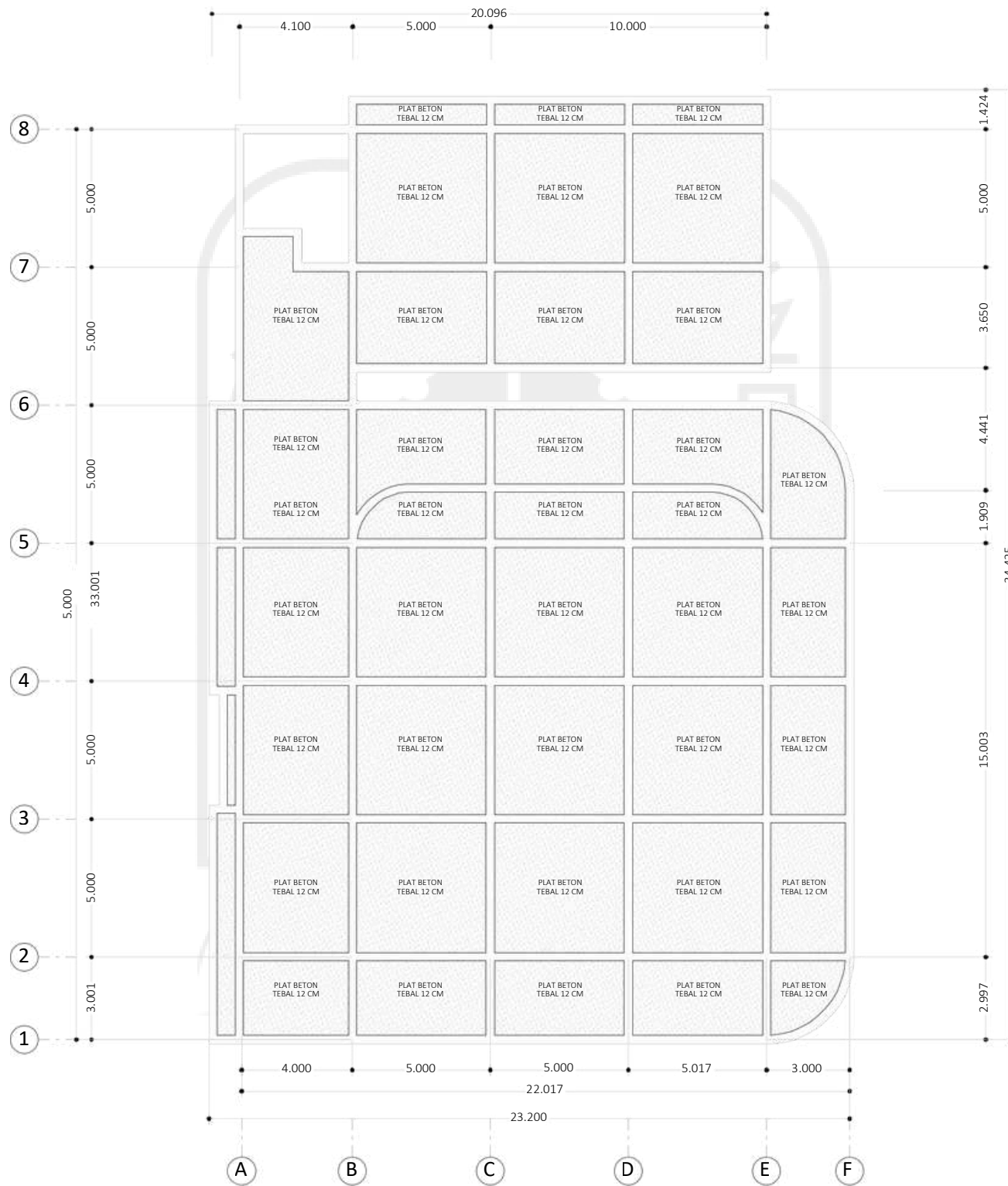
# DETAIL SLOOF (BUILDING B1)



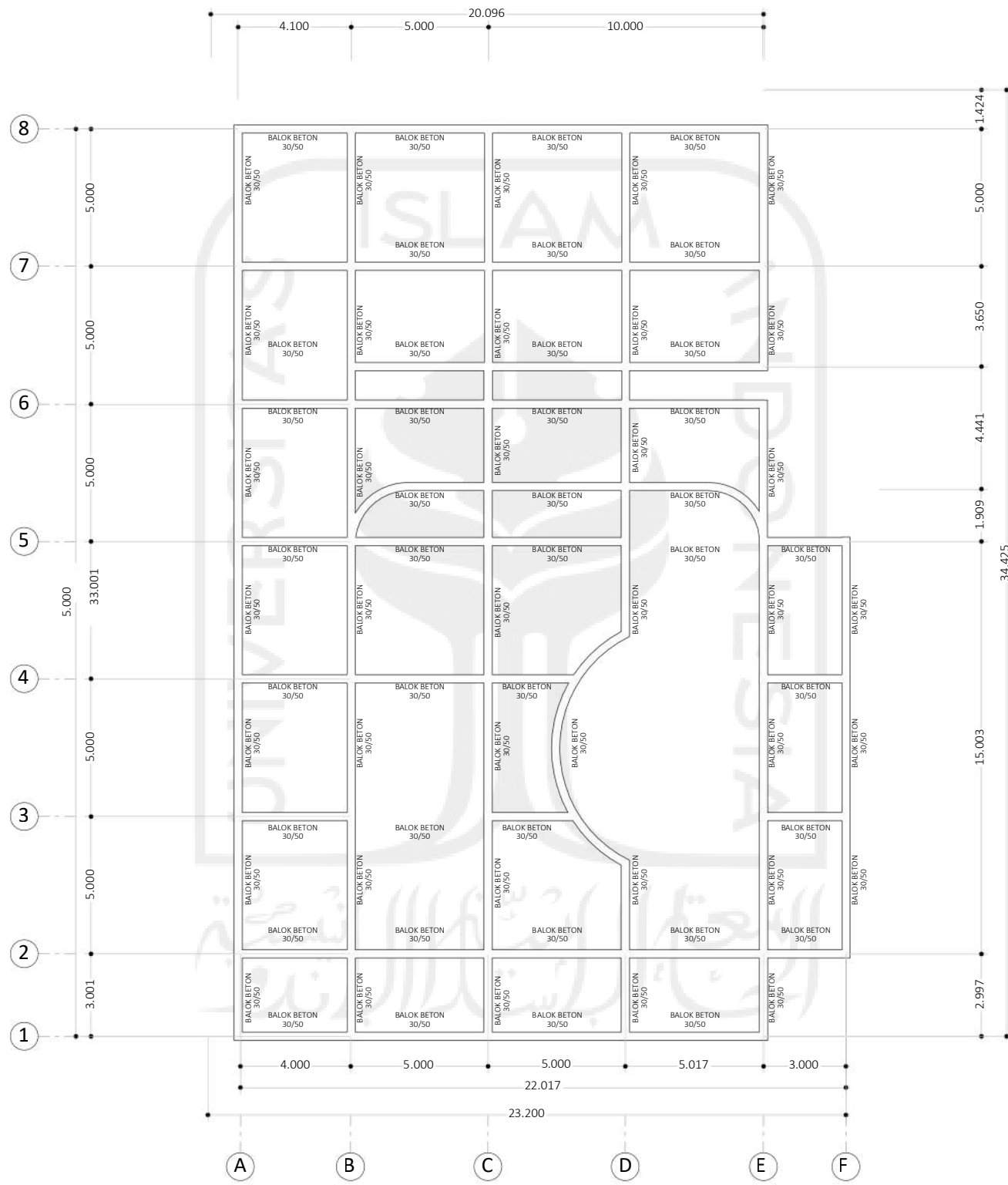
# DETAIL COULUMN 2ND FLOORS (BUILDING B1)



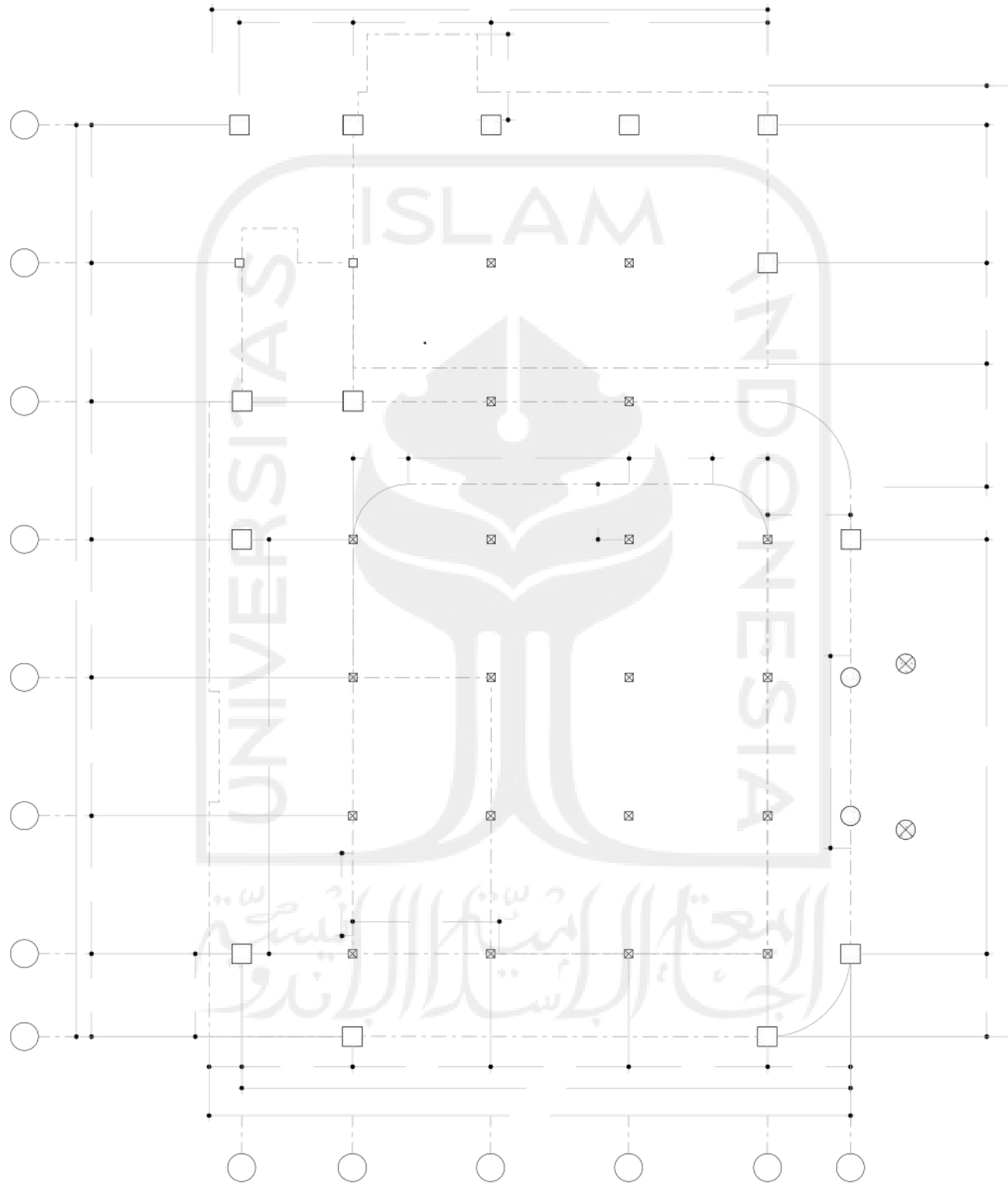
# DETAIL FLOOR PLATE 1ST FLOORS (BUILDING B1)



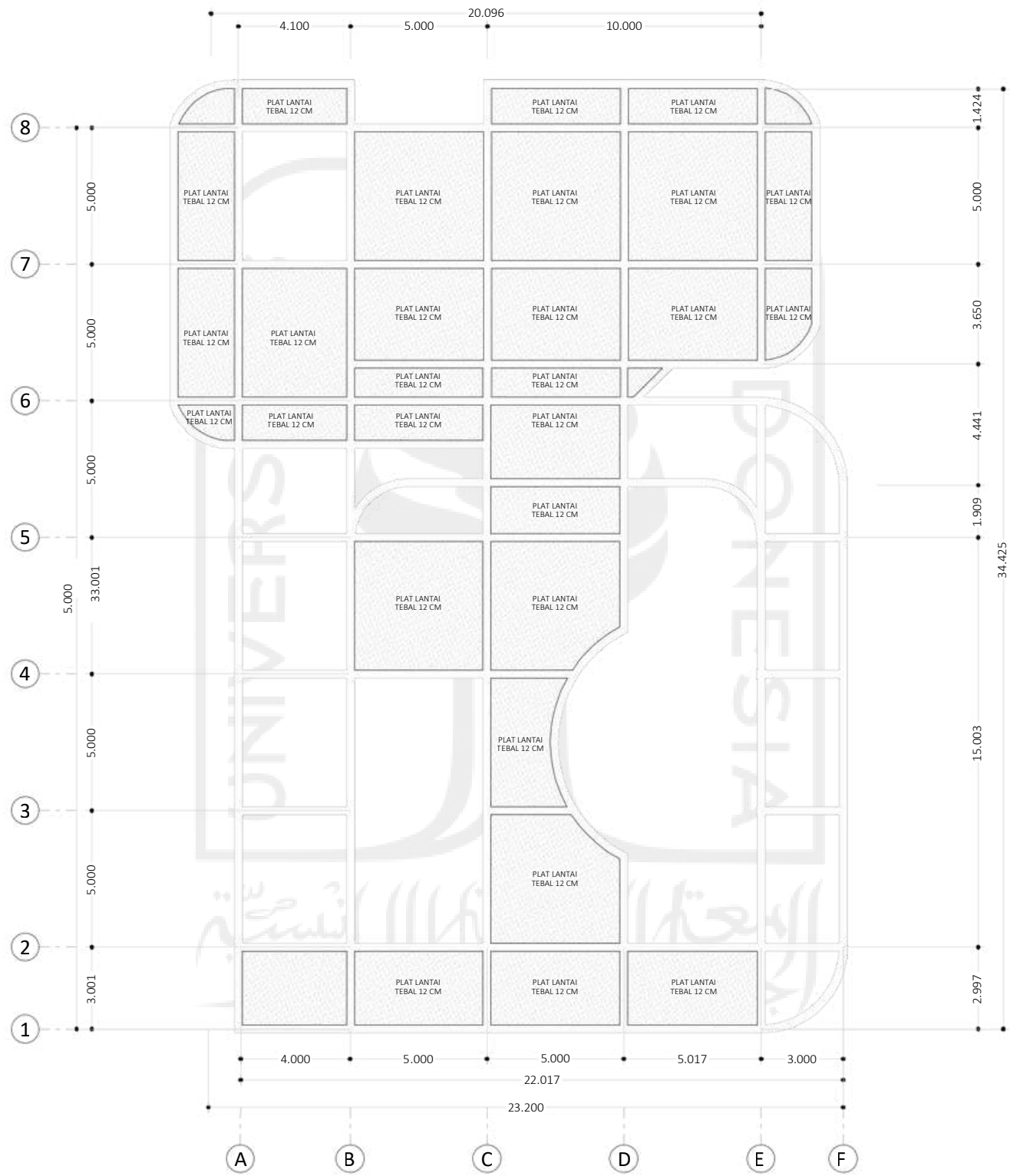
# DETAIL BEAM 1ST FLOORS (BUILDING B1)



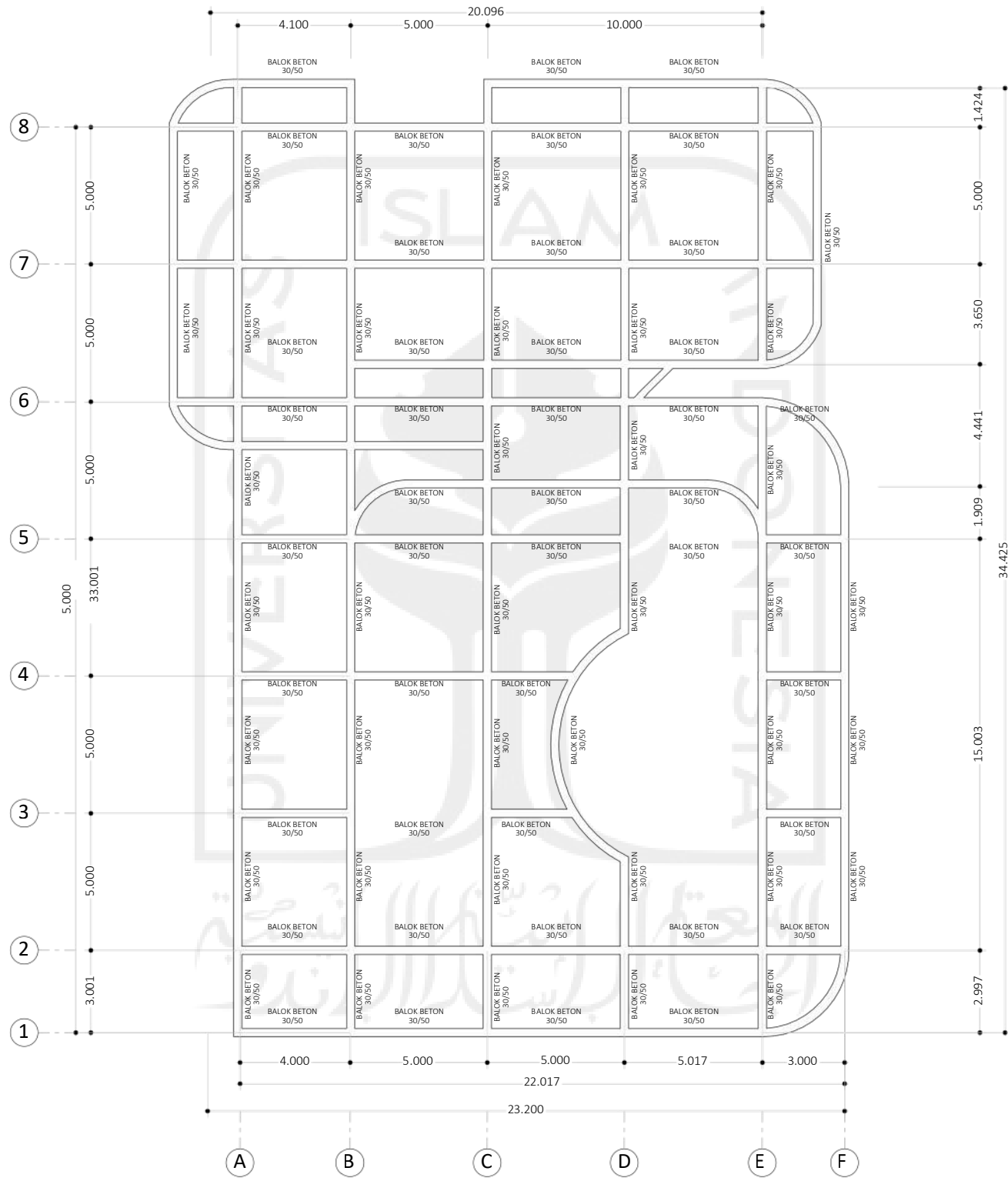
## DETAIL COULUMN 2ND FLOORS (BUILDING B1)



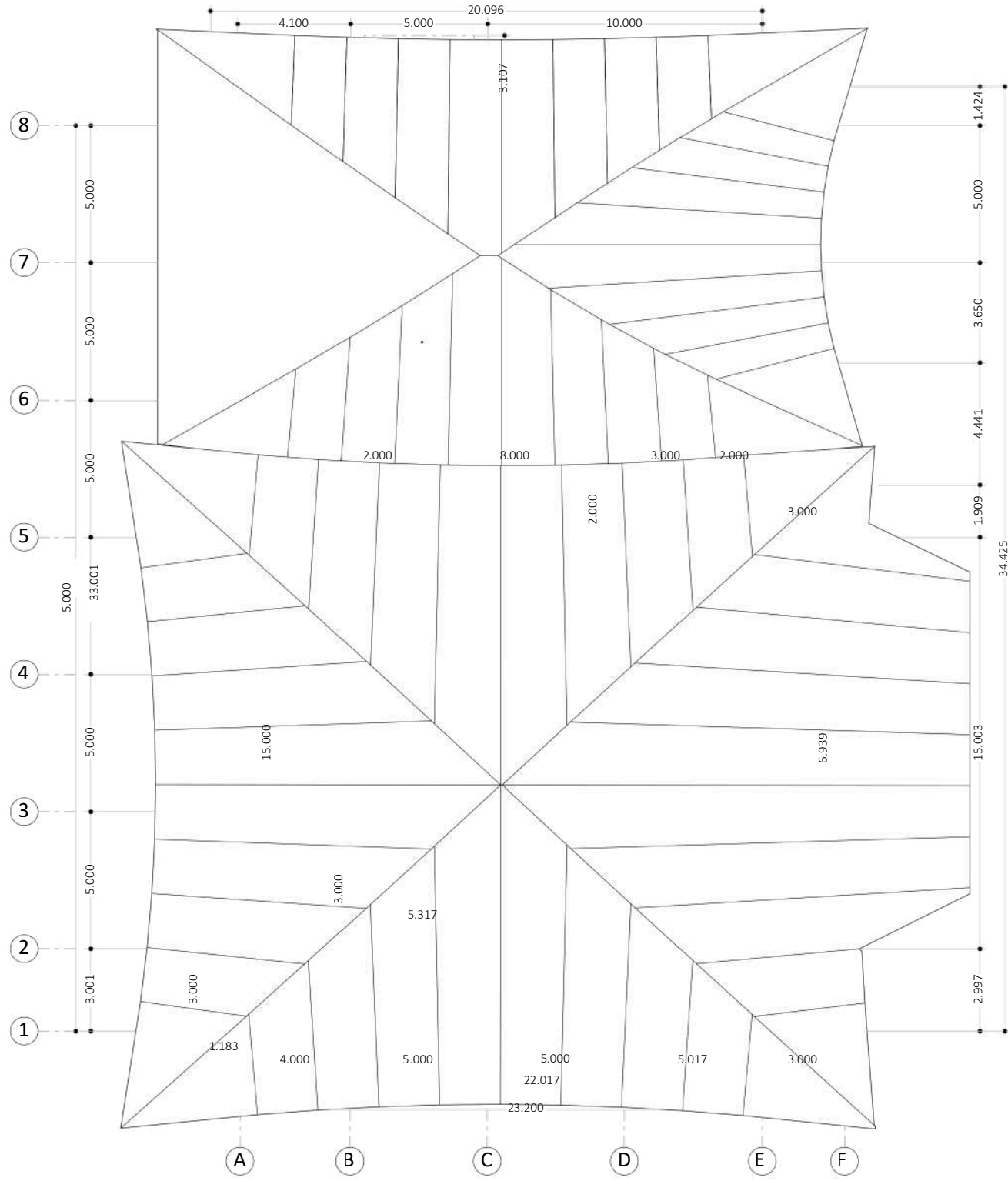
# DETAIL FLOOR PLATES 2ND FLOORS (BUILDING B1)



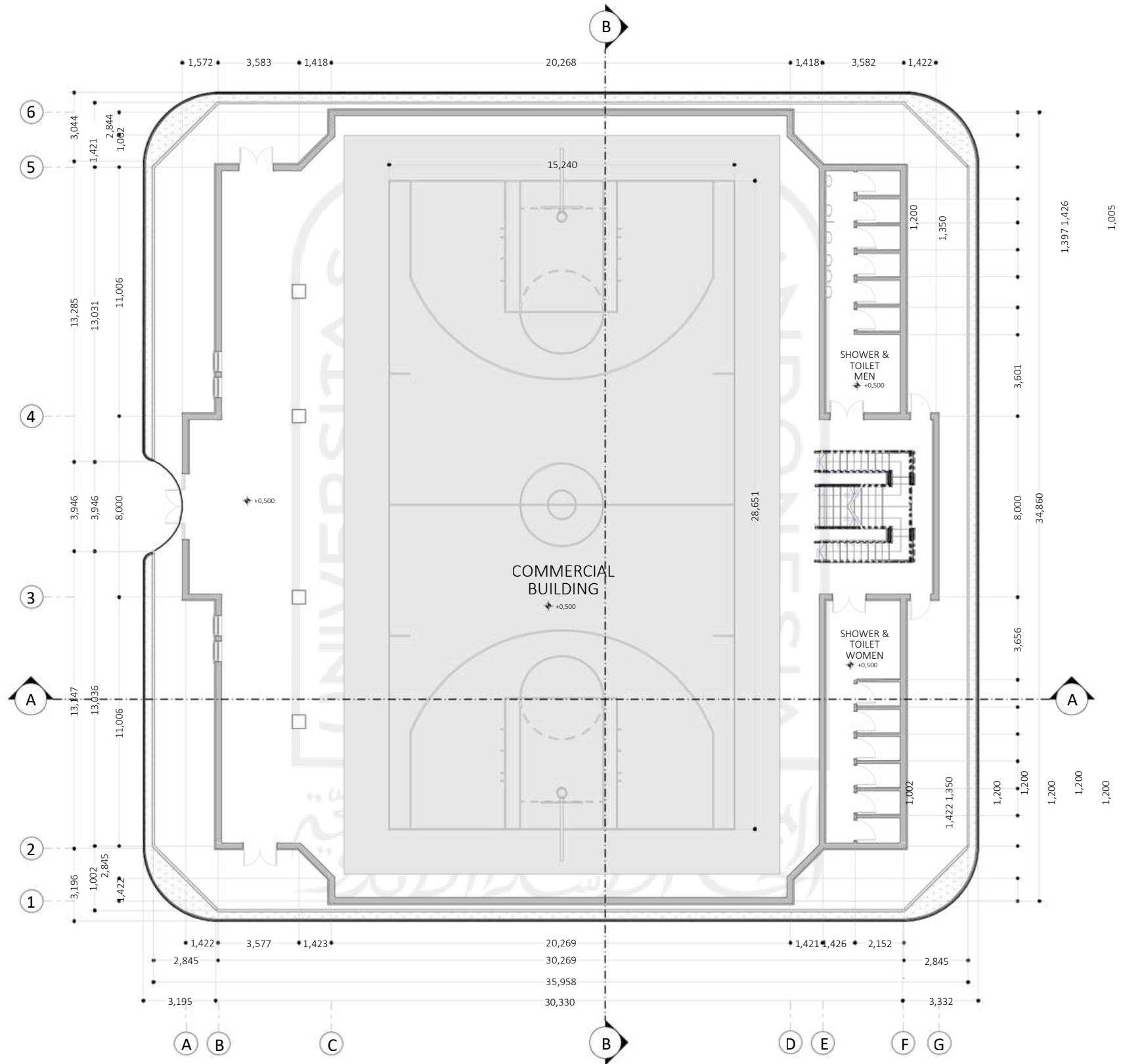
# DETAIL BEAM 2ND FLOORS (BUILDING B1)



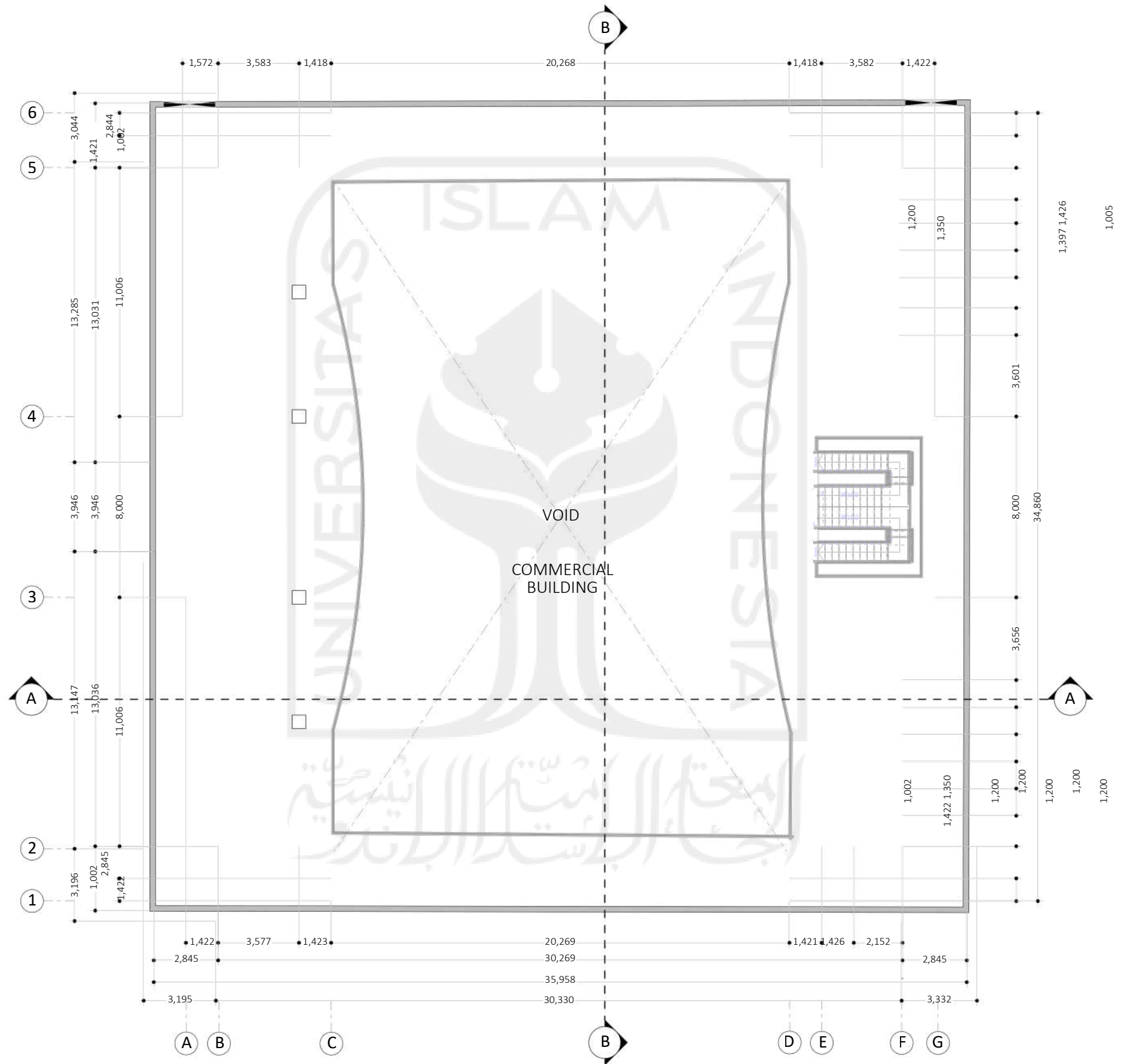
# DETAIL ROOF (BUILDING B1)



# FLOOR PLAN 1ST (BUILDING A2)

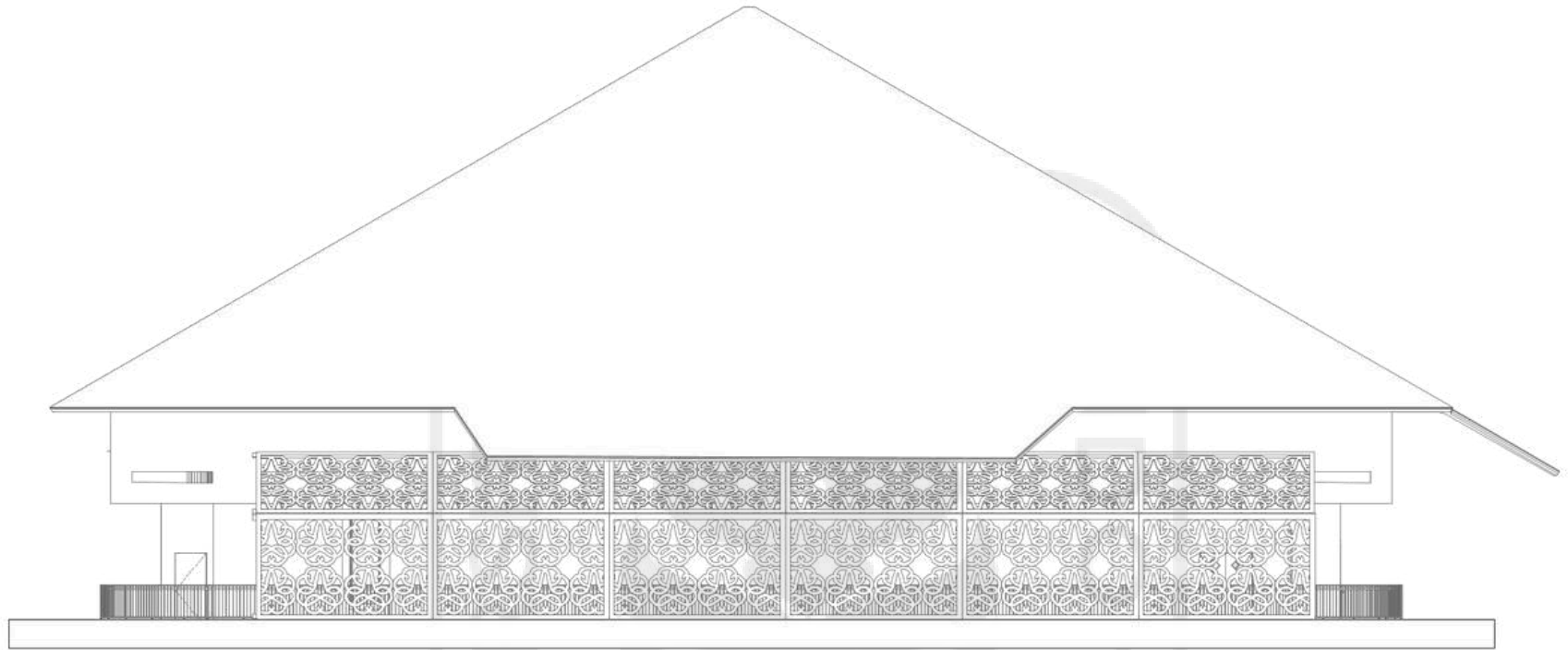


# FLOOR PLAN 2ND FLOOR (BUILDING A2)

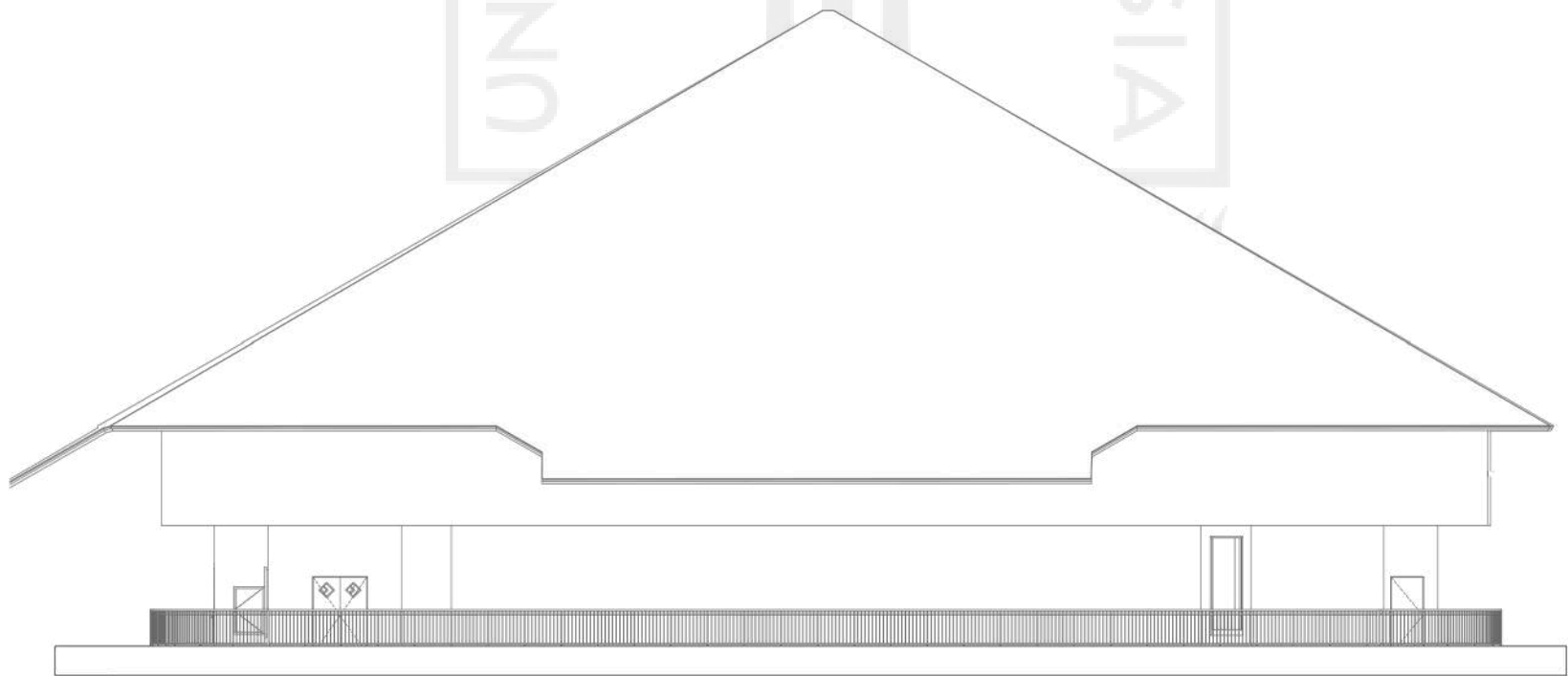


ELEVATION (BUILDING A2)

# NORTH

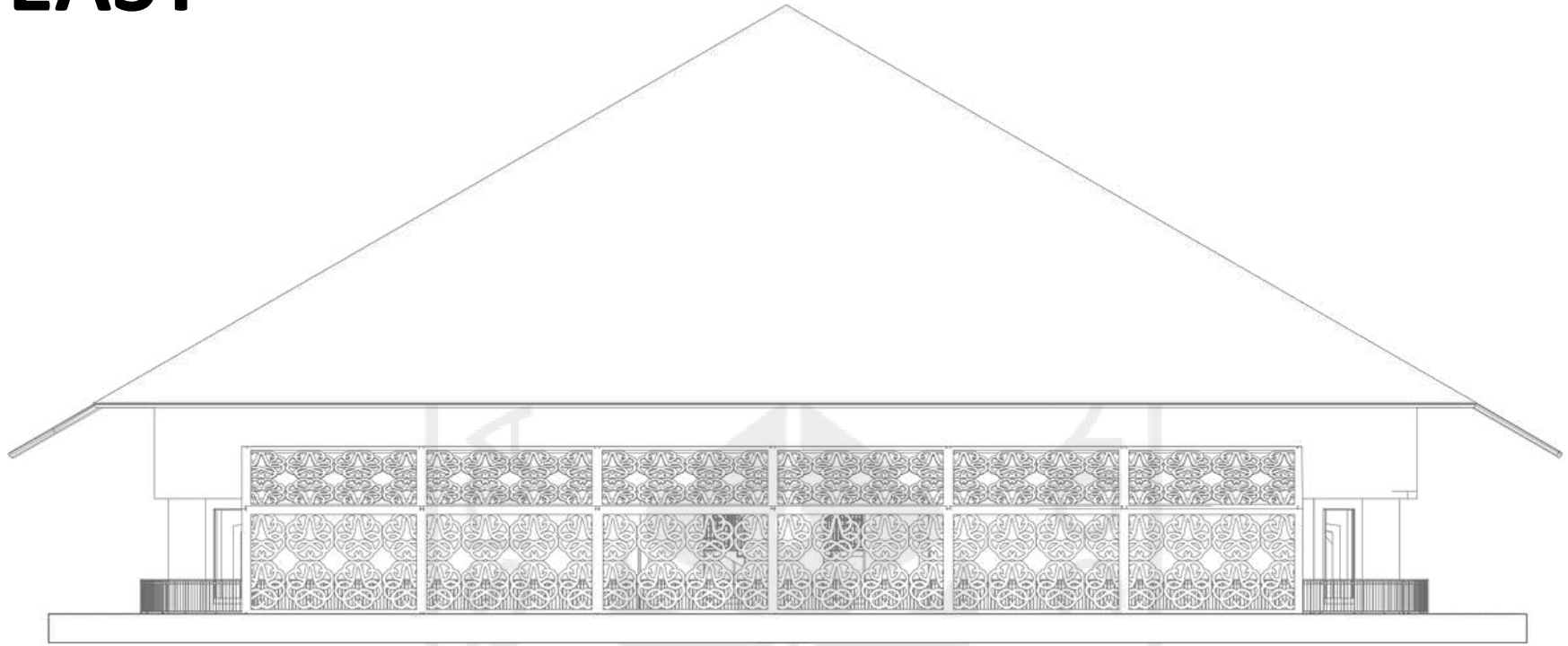


# SOUTH

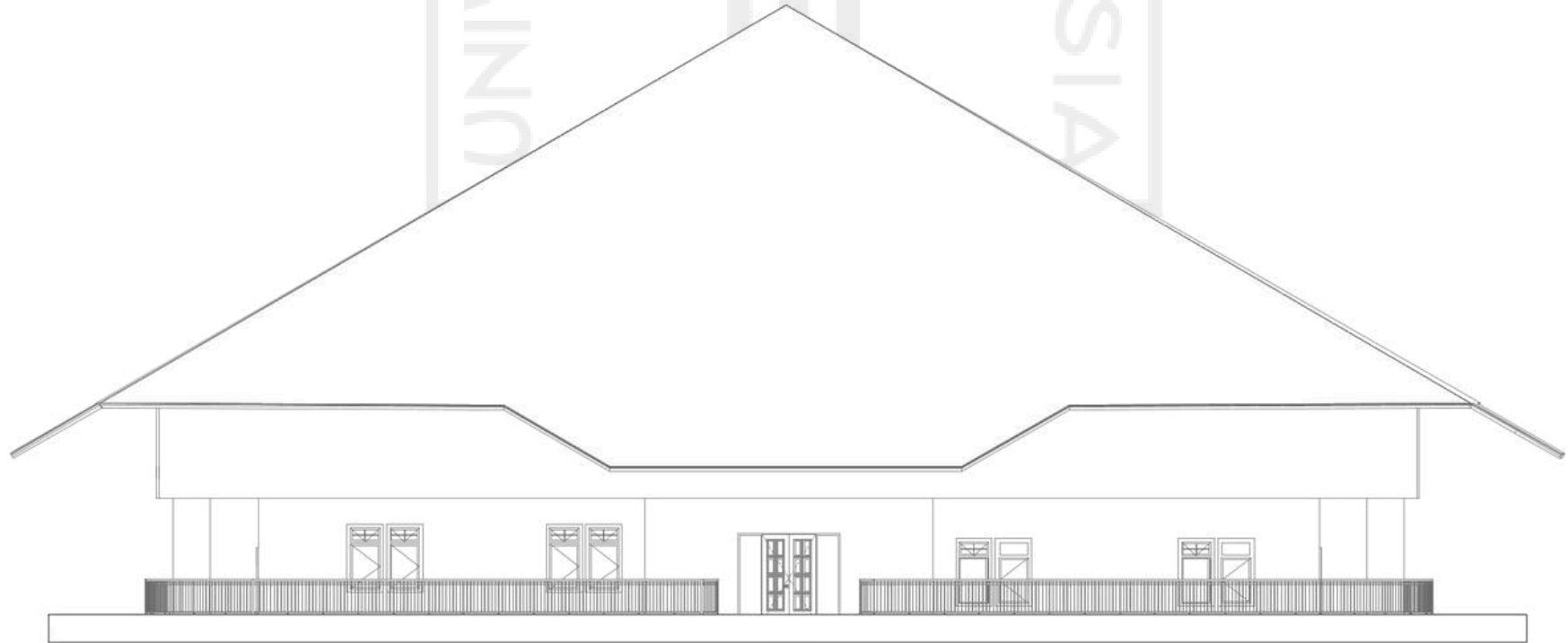


ELEVATION (BUILDING A2)

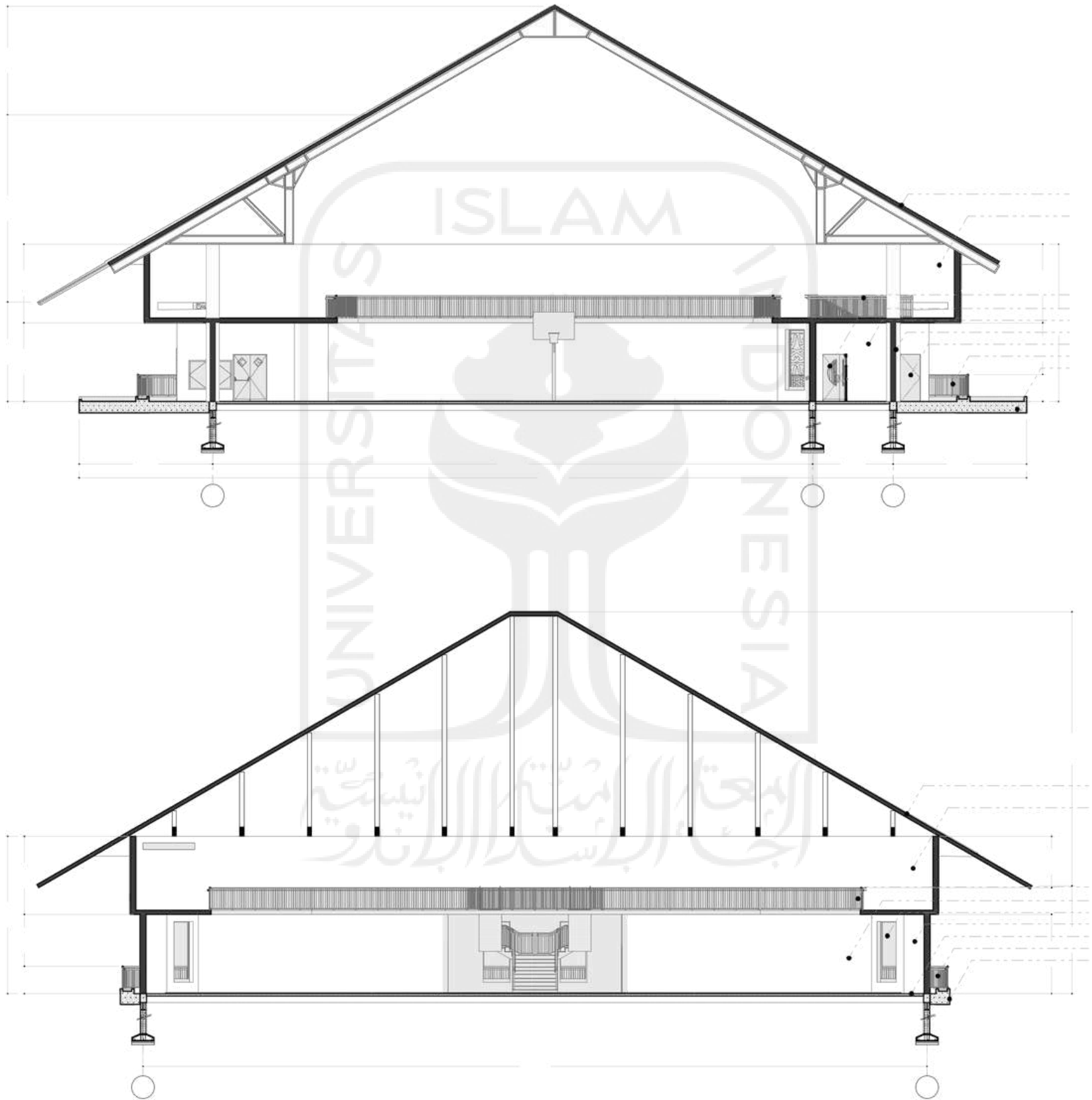
**EAST**



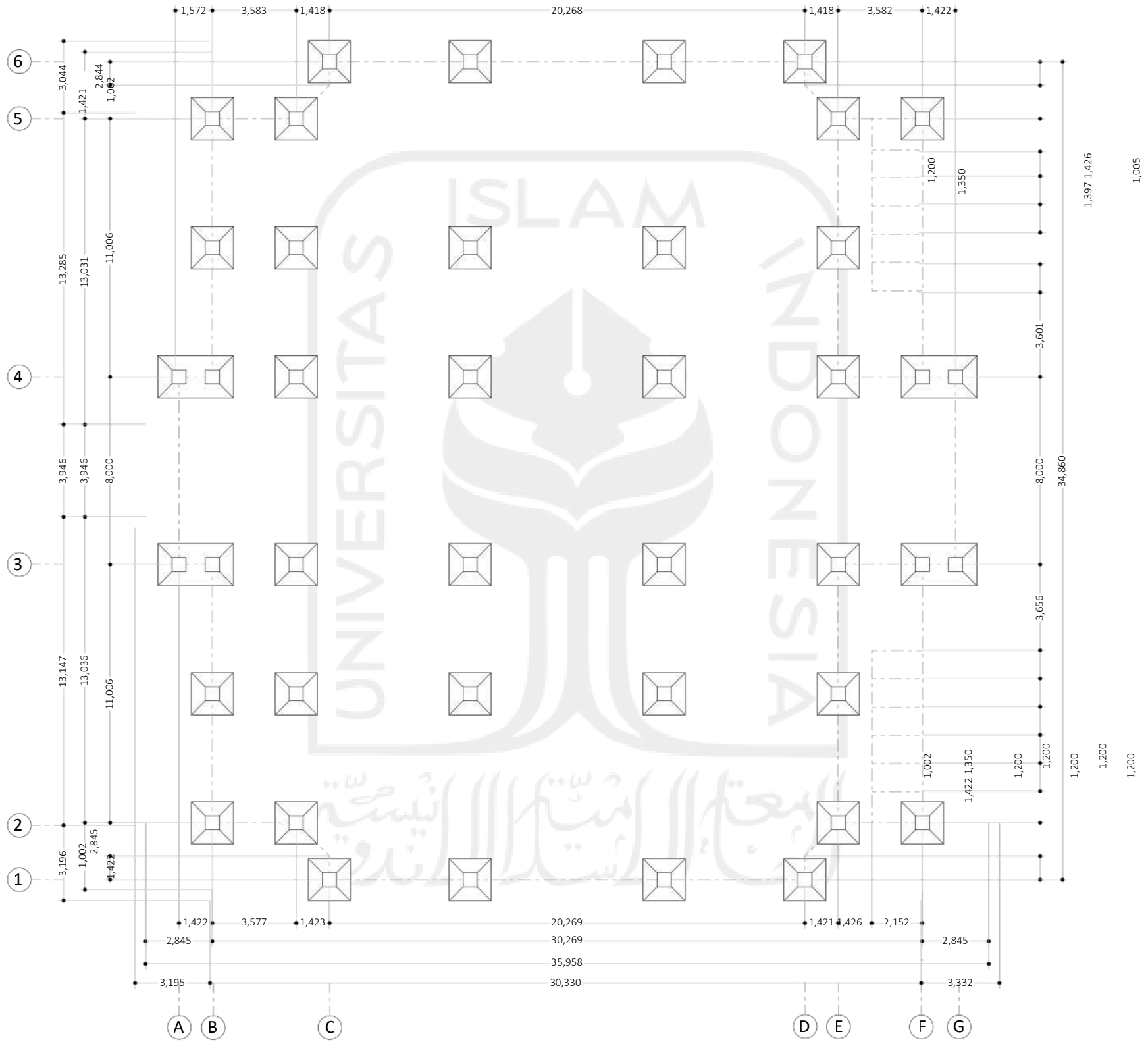
**WEST**



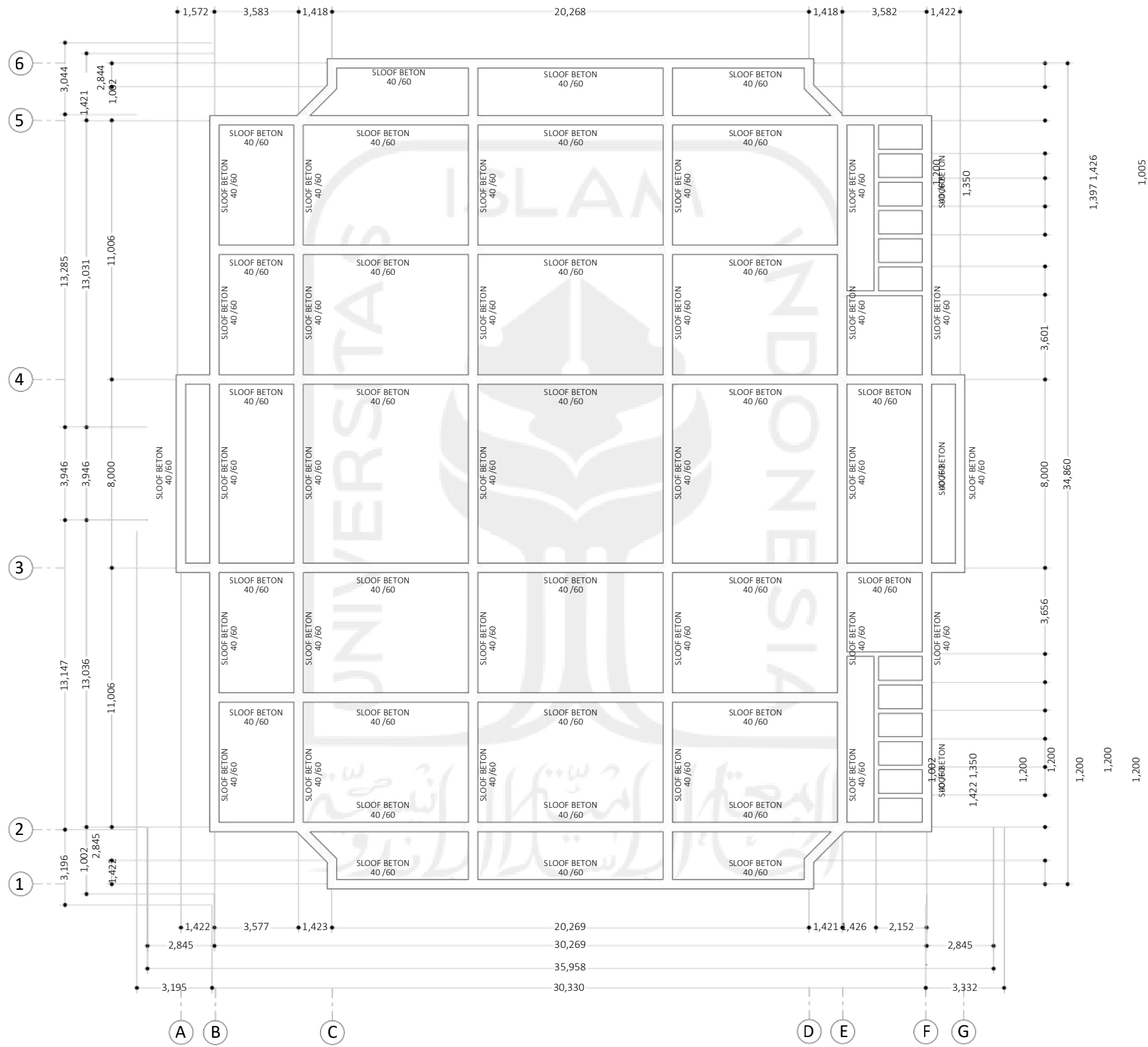
SECTION (BUILDING A2)



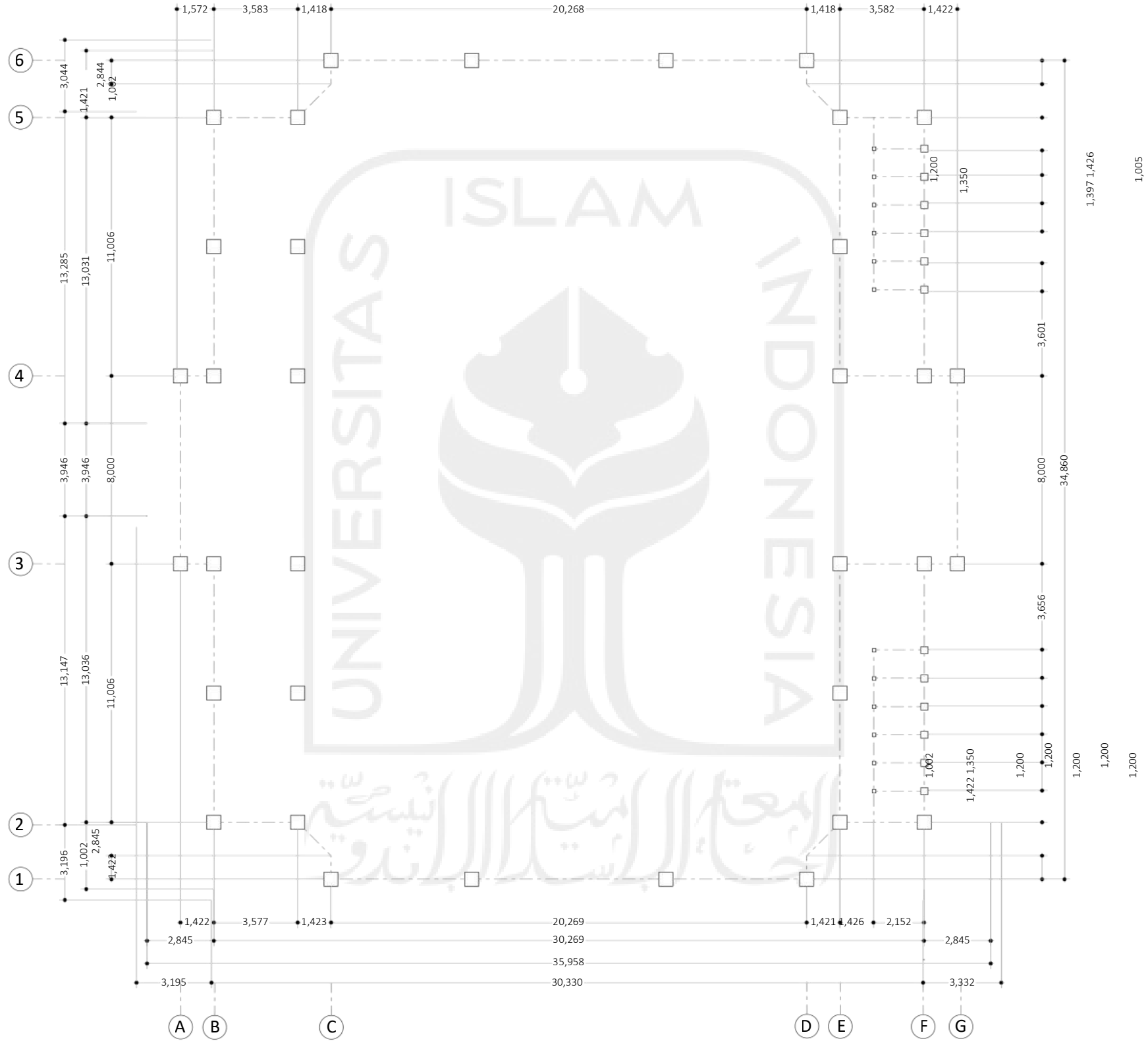
# DETAIL FOUNDATION (BUILDING A2)



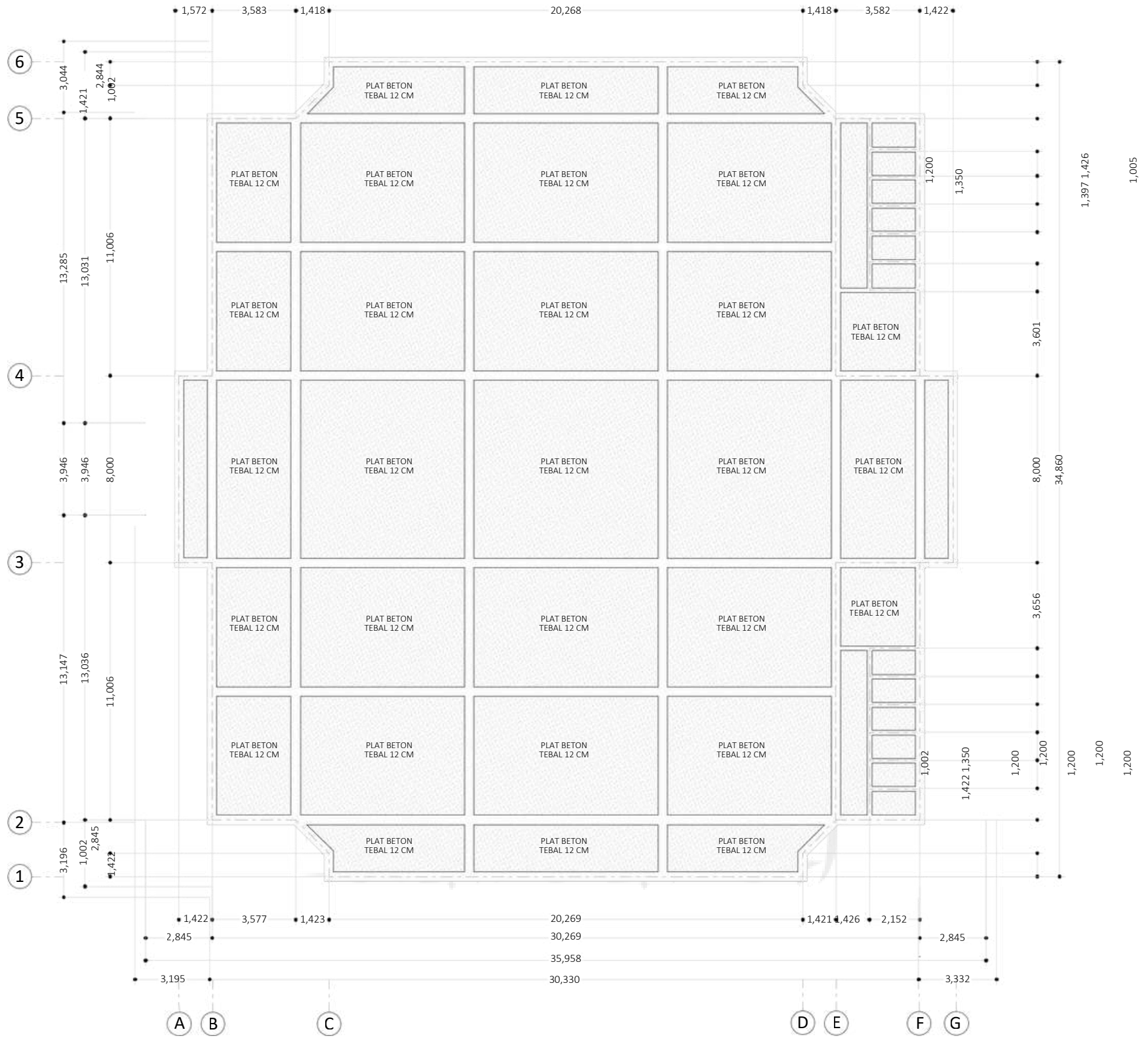
# DETAIL SLOOF (BUILDING A2)



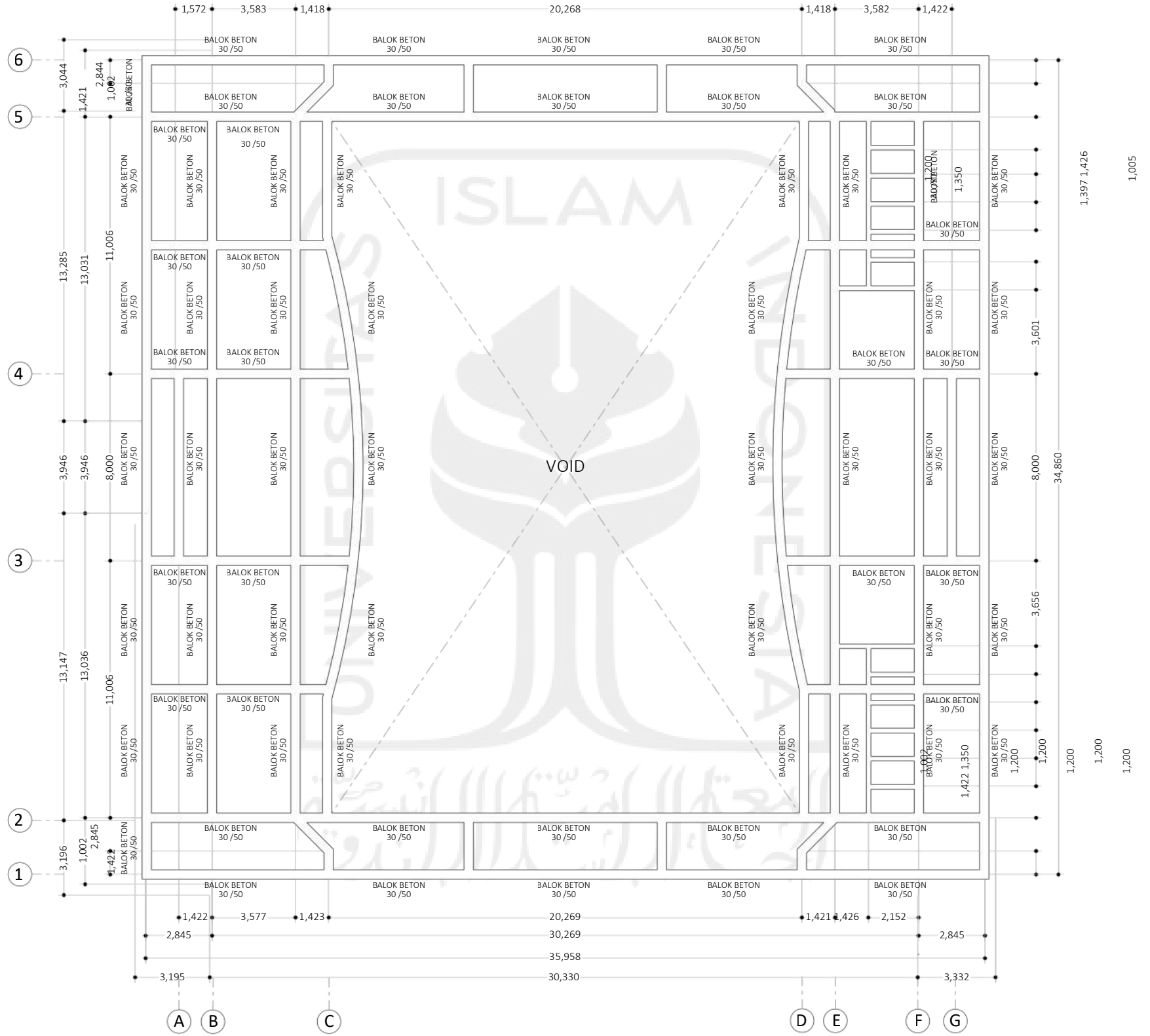
# DETAIL COULUMN 1ST FLOORS (BUILDING A2)



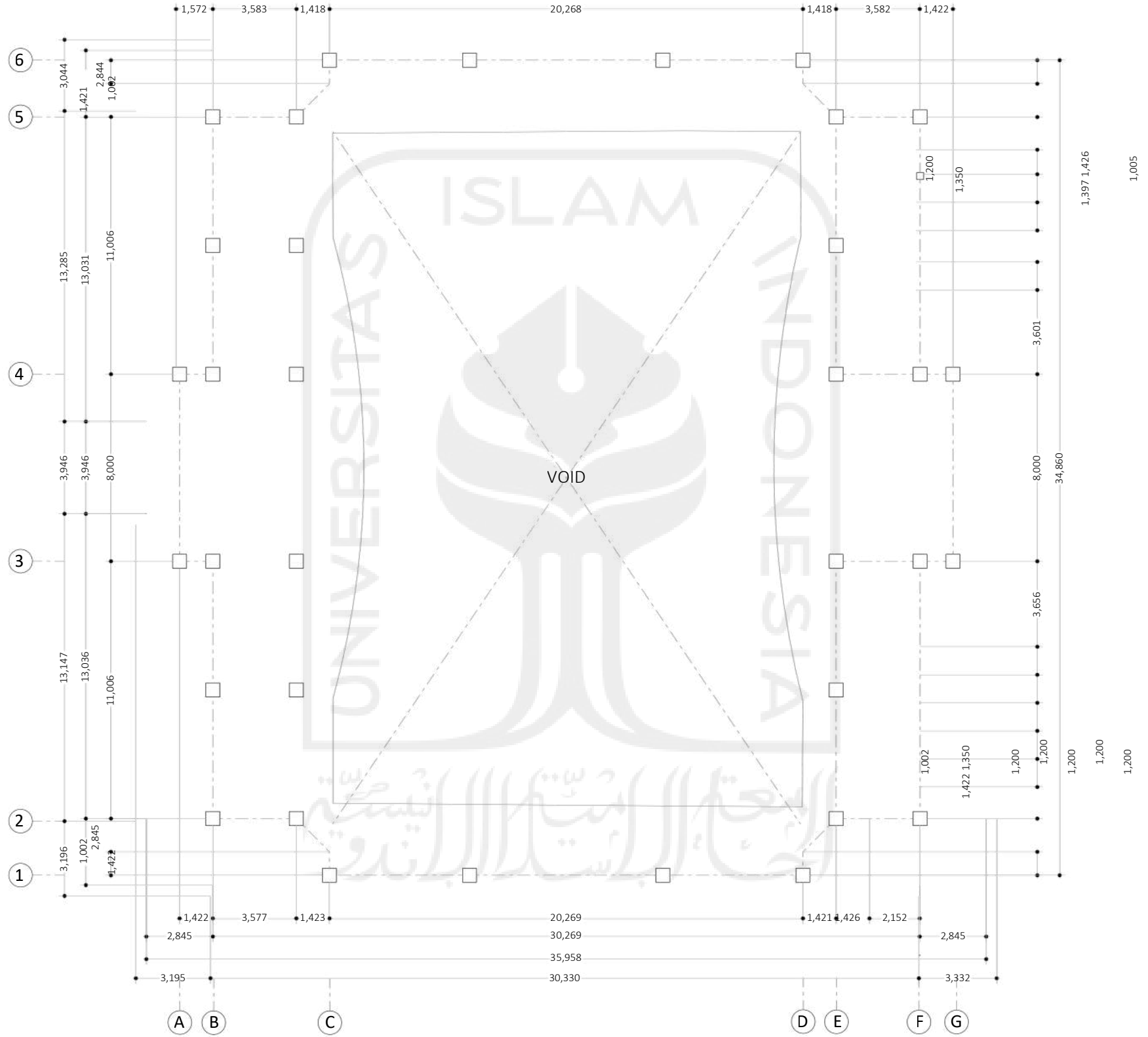
# DETAIL FLOOR PLATE 1ST FLOORS (BUILDING A2)



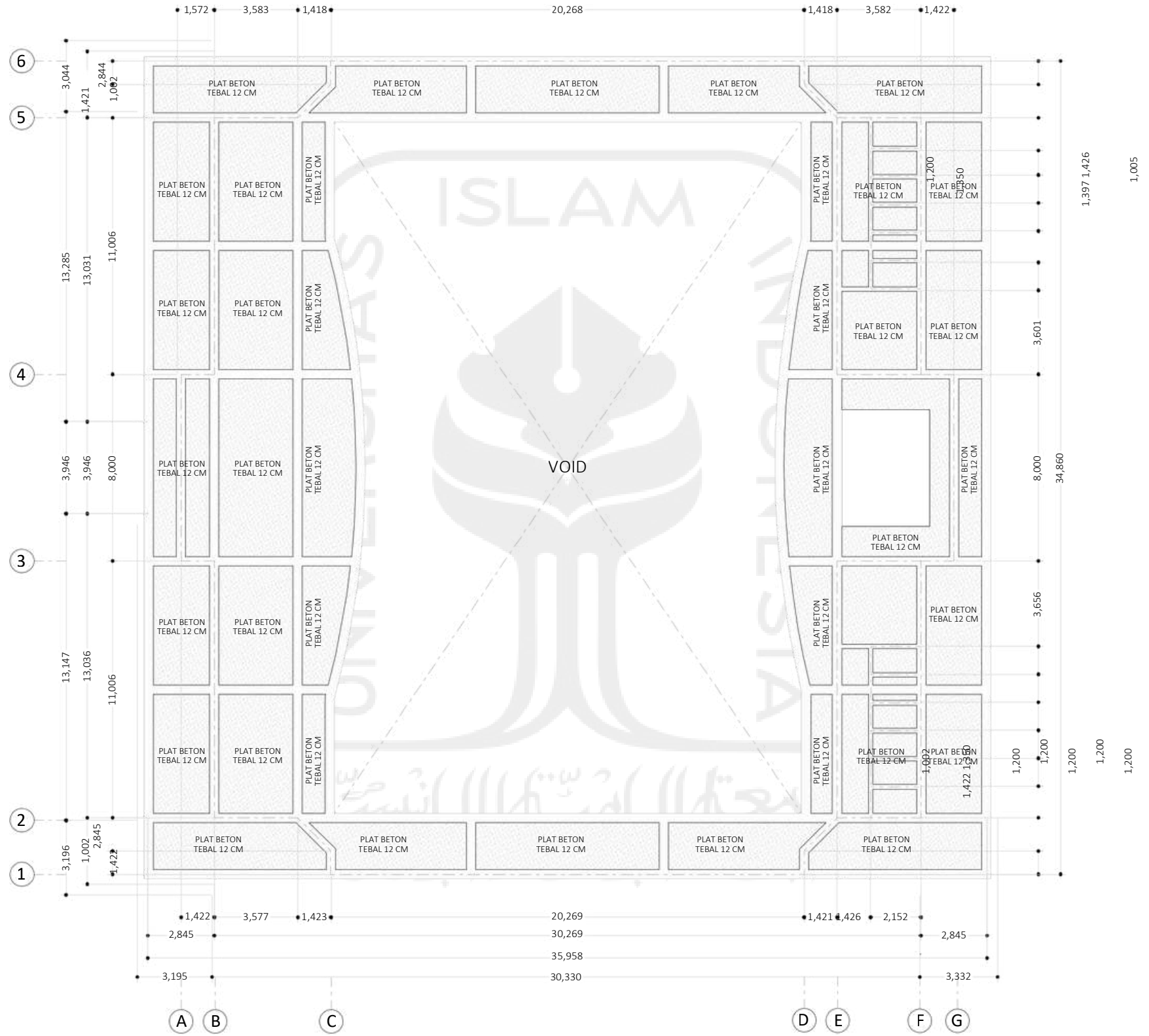
# DETAIL BEAM 1ST FLOORS (BUILDING A2)



# DETAIL COULUMN 2ND FLOORS (BUILDING A2)

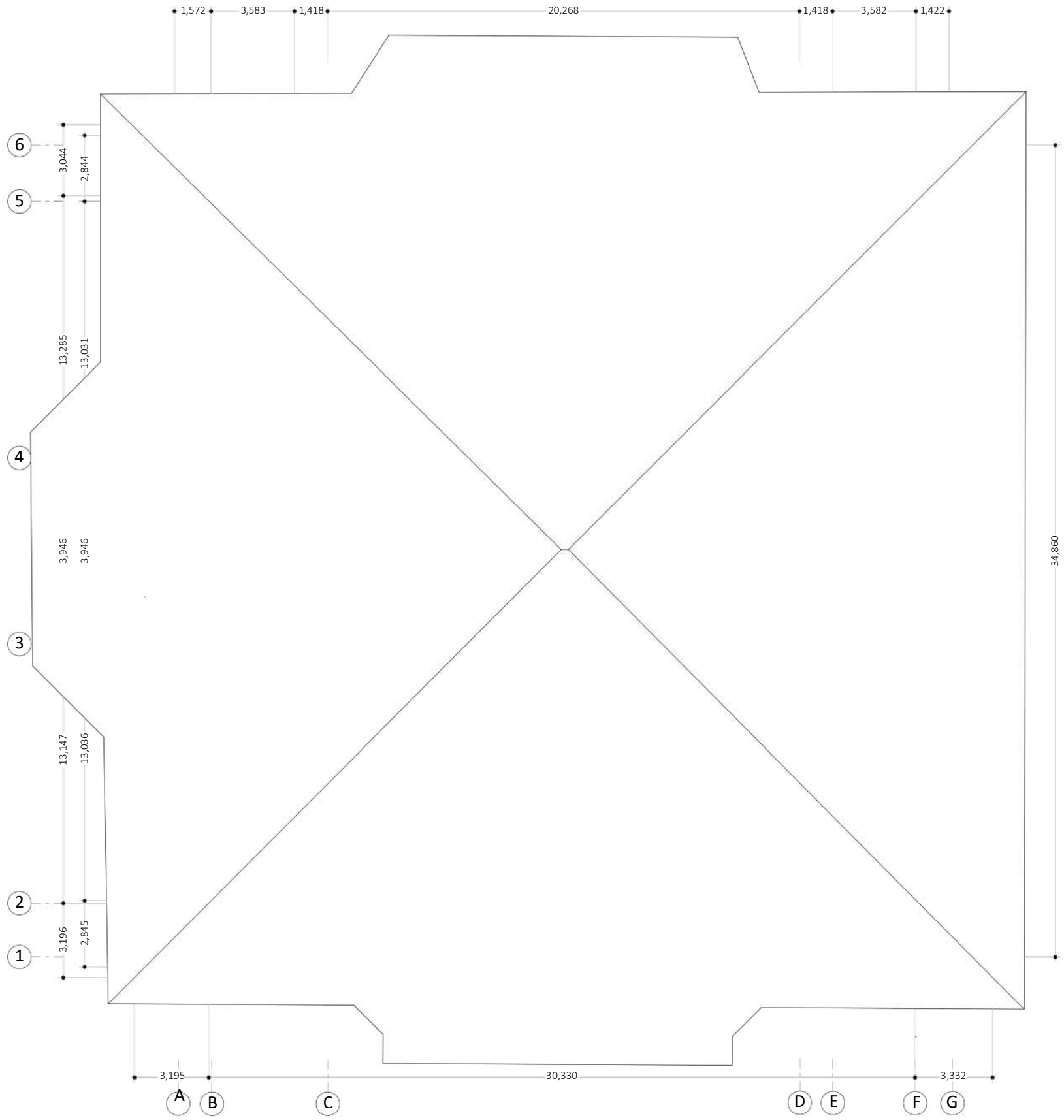


# DETAIL FLOOR PLATE 2ND FLOORS (BUILDING A2)



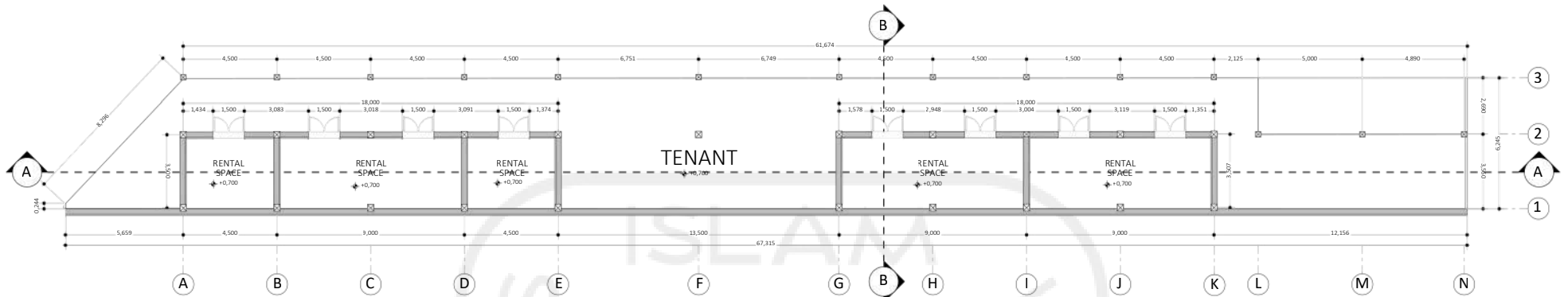


# DETAIL ROOF (BUILDING A2)

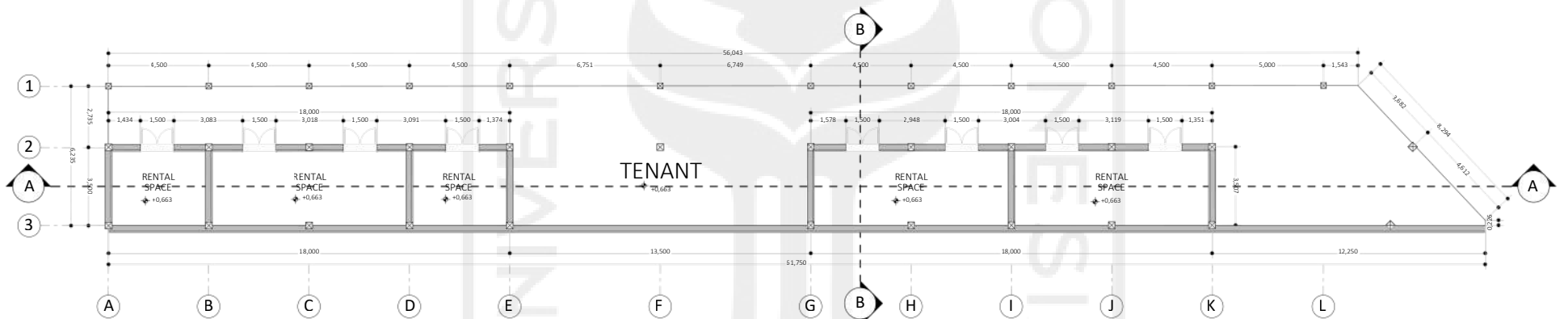


# FLOOR PLAN TENANT

## TENANT 1



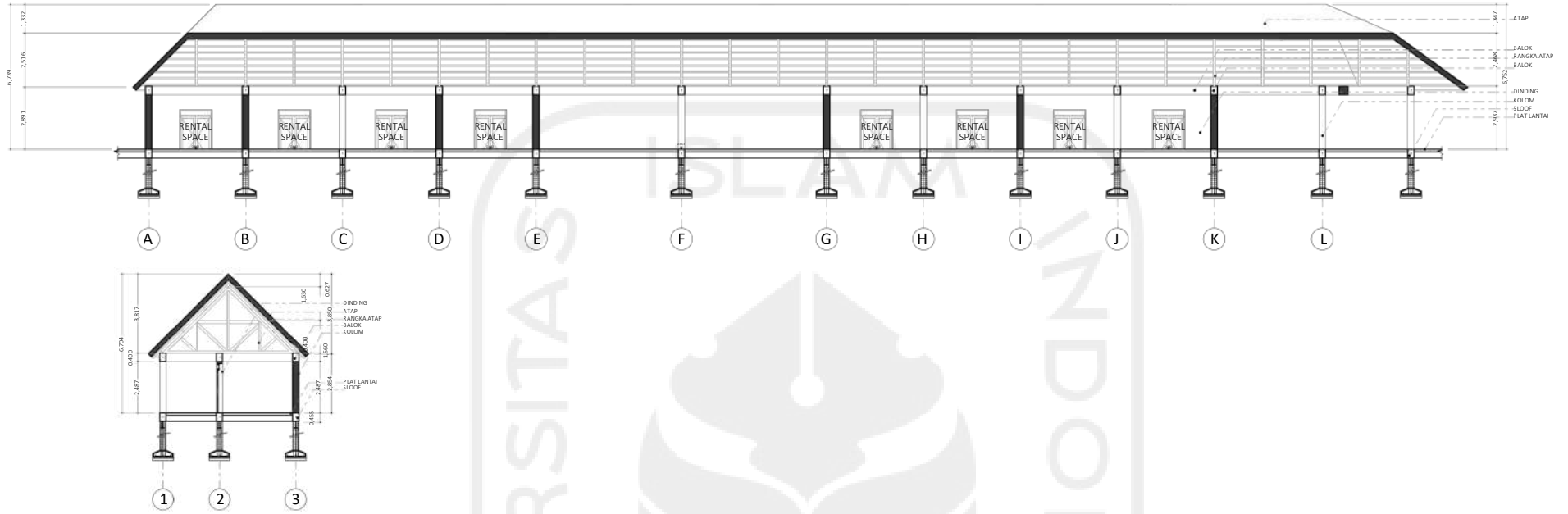
## TENANT 2



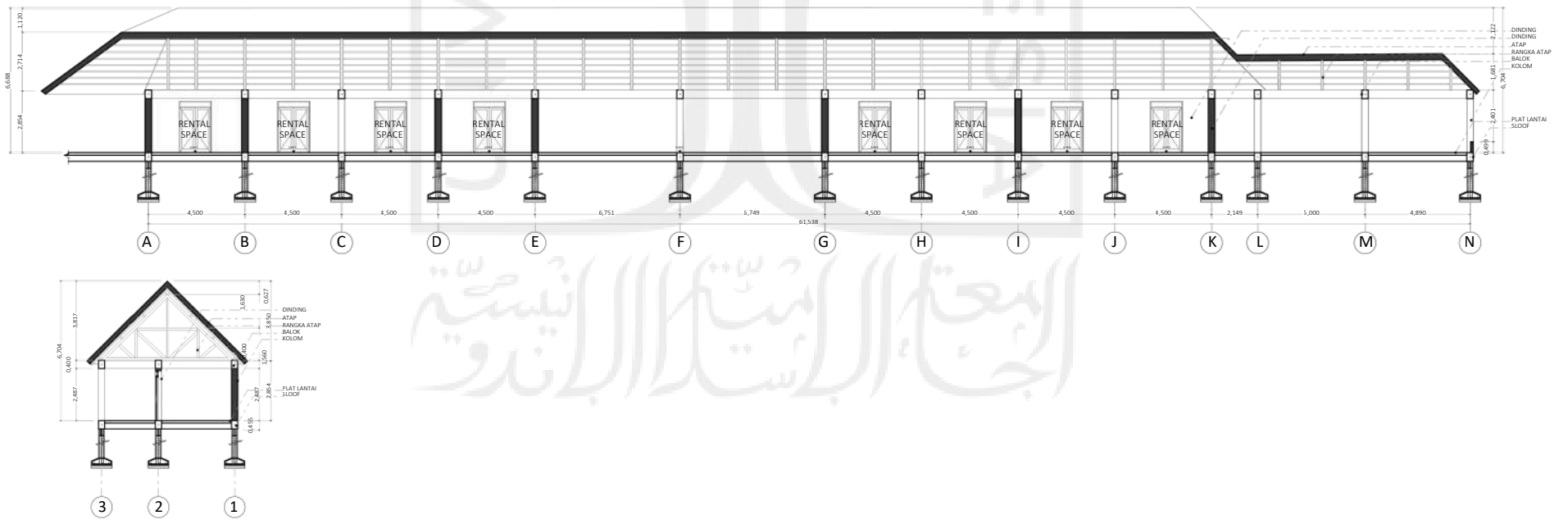
UNIVERSITAS INDONESIA  
الجامعة الإسلامية  
الاندونيسية

# SECTION TENANT

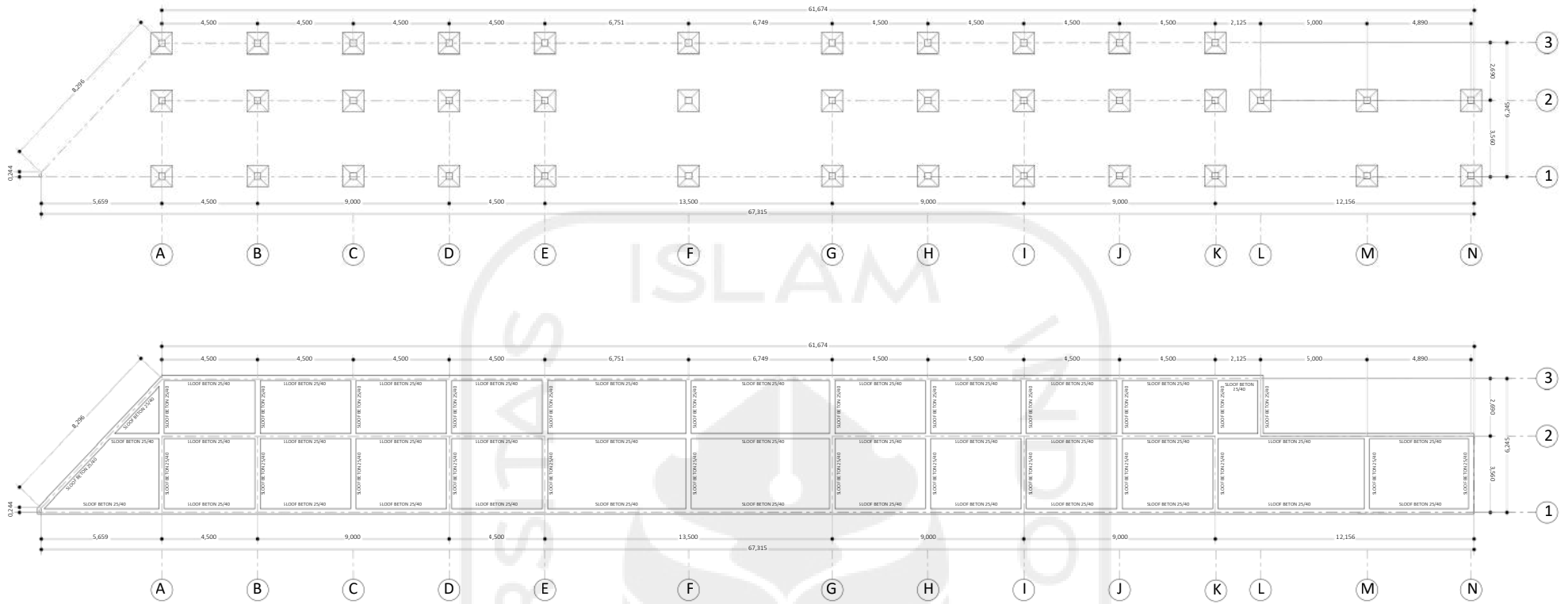
## TENANT 1



## TENANT 2



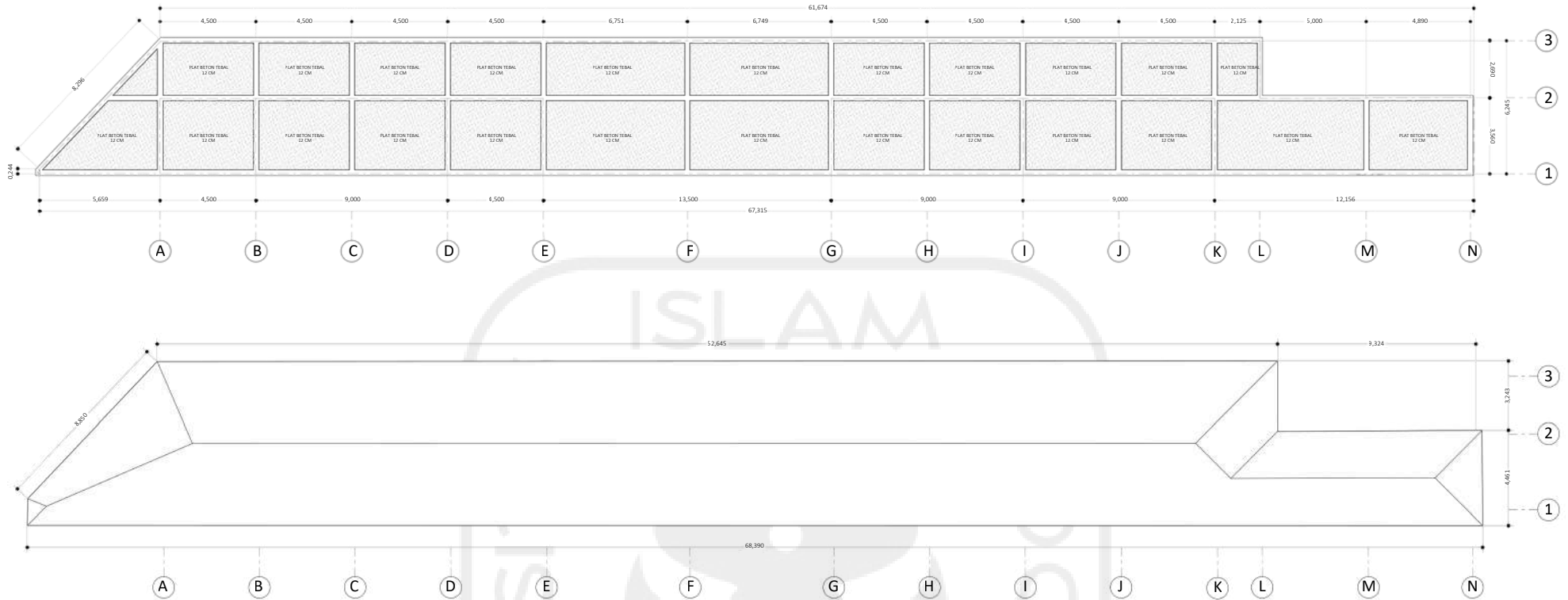
# DETAIL FOUNDATION AND SLOOF TENANT 1



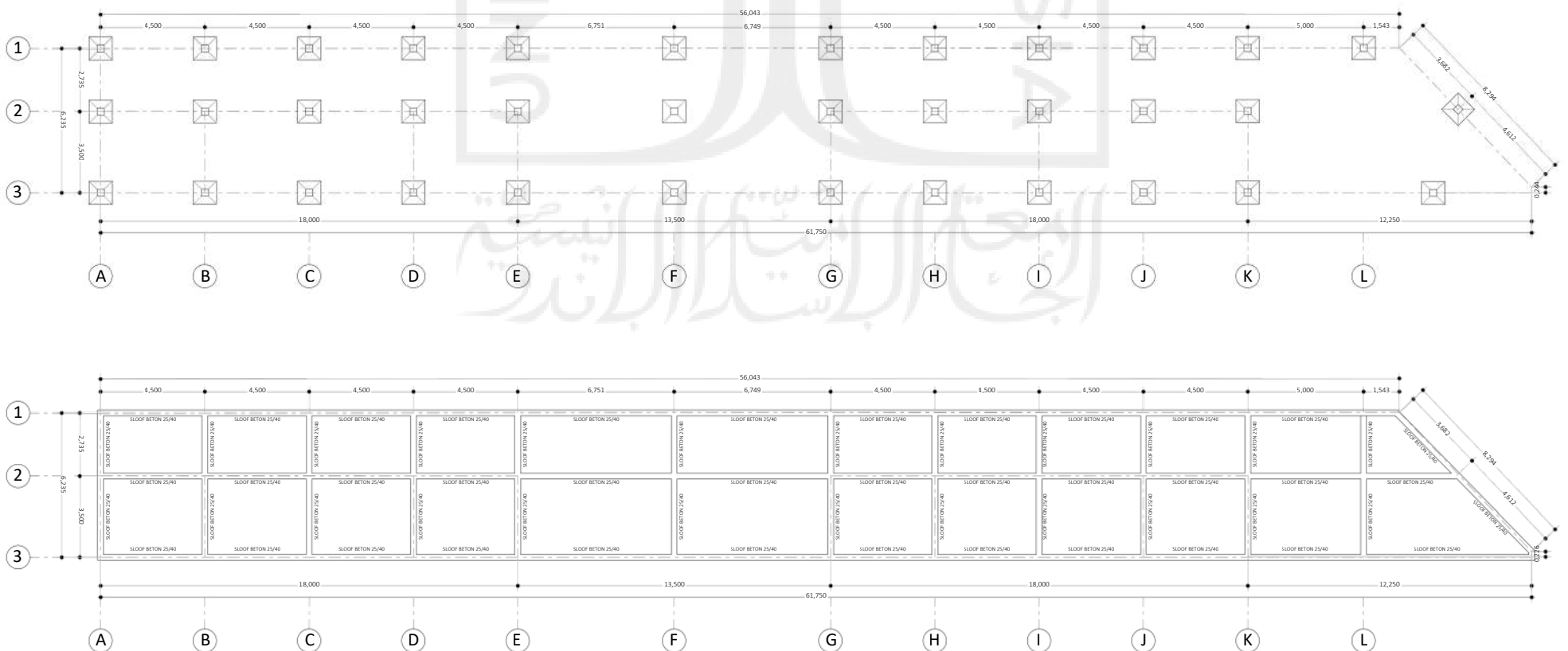
# DETAIL COULUMN AND BEAM TENANT 1



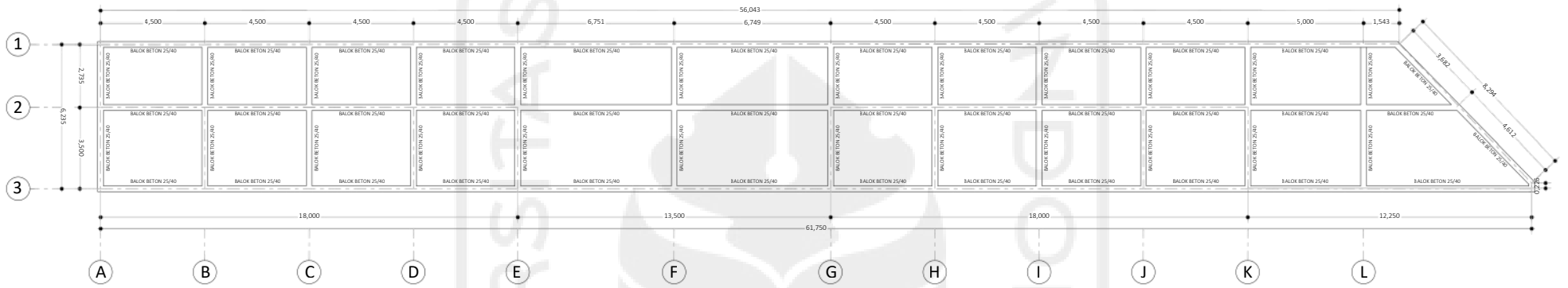
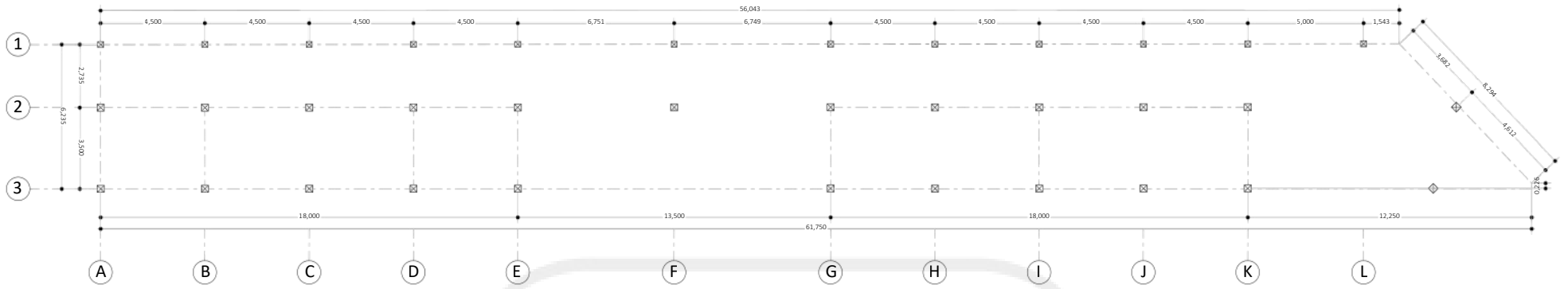
## DETAIL FLOOR PLATE AND ROOF TENANT 1



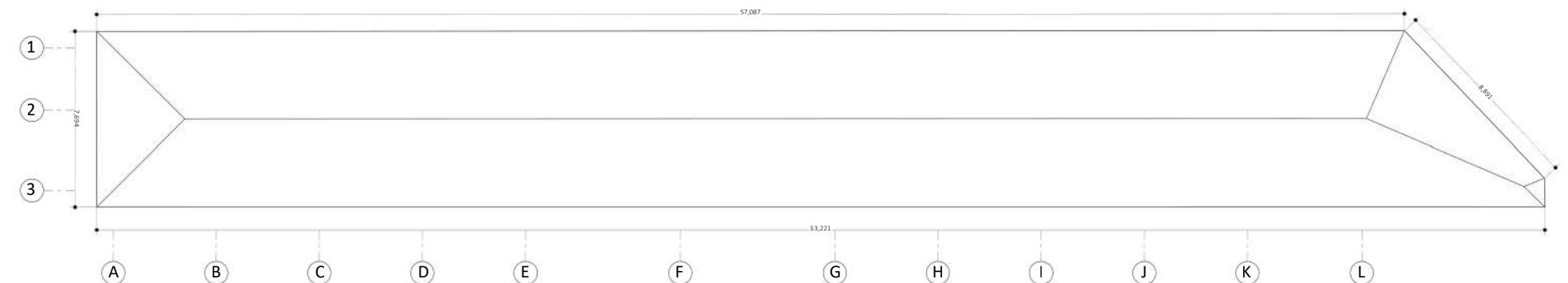
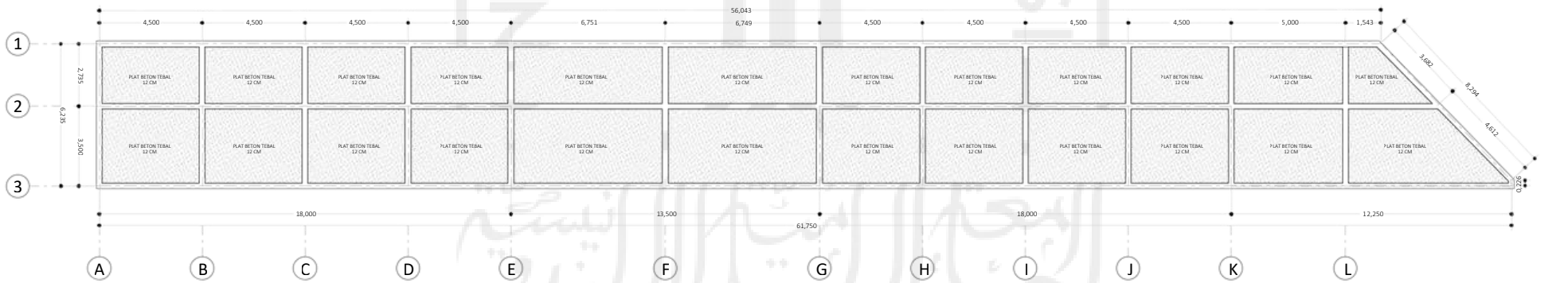
## DETAIL FOUNDATION AND SLOOF TENANT 2



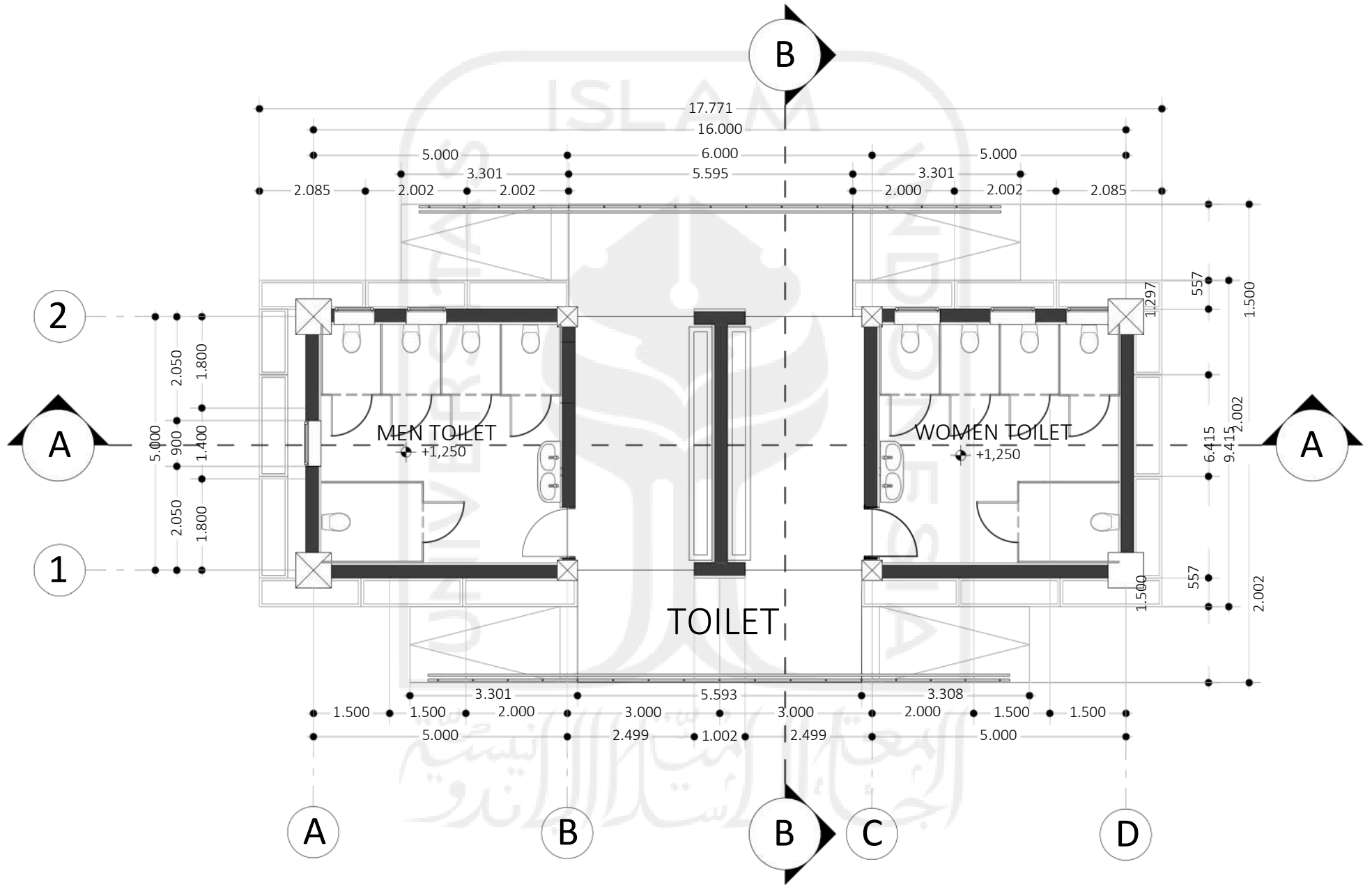
## DETAIL COULUMN AND BEAM TENANT 2



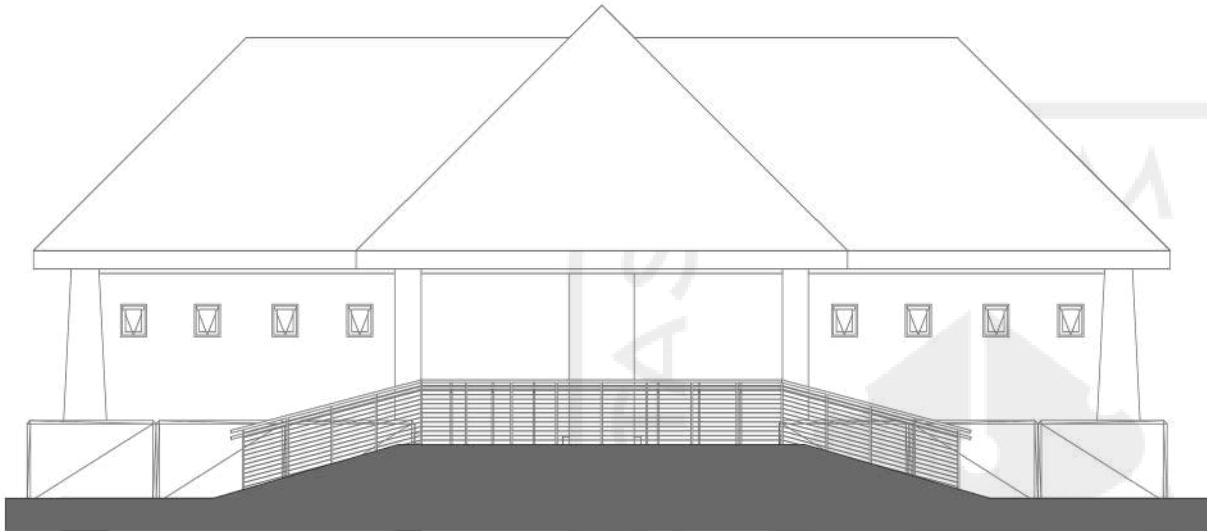
## DETAIL FLOOR PLATE AND ROOF TENANT 2



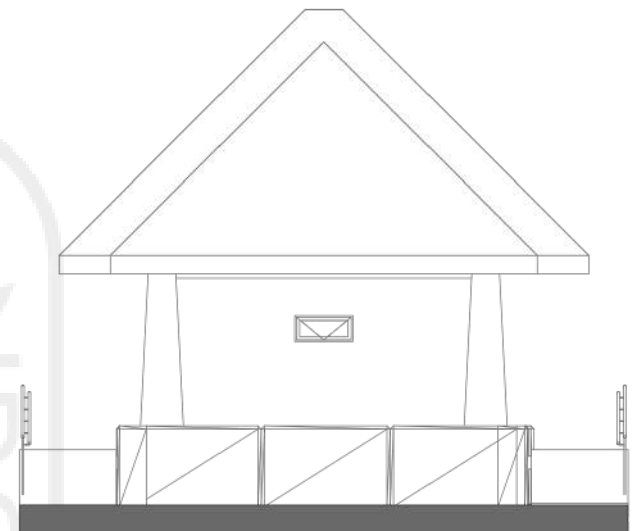
# FLOOR PLAN PUBLIC TOILET



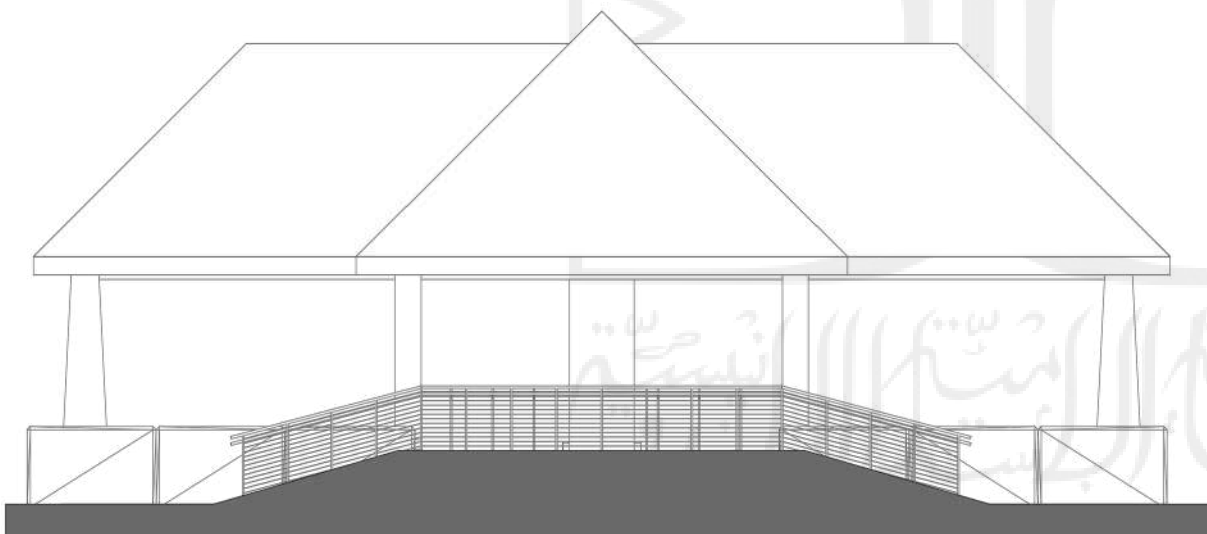
# ELEVATION PUBLIC TOILET



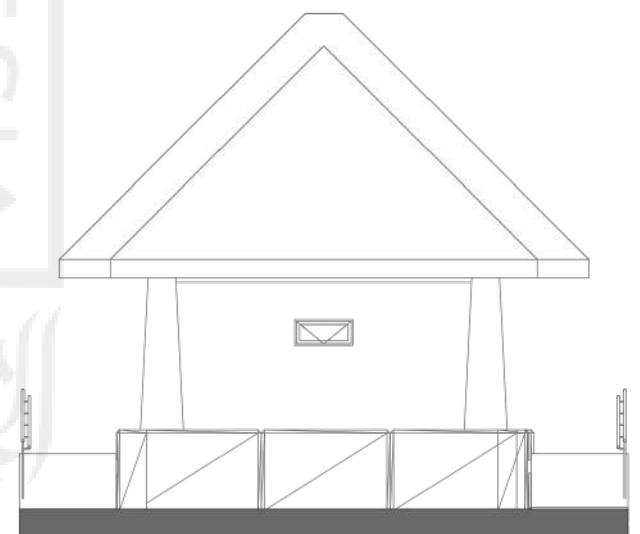
**NORTH**



**EAST**

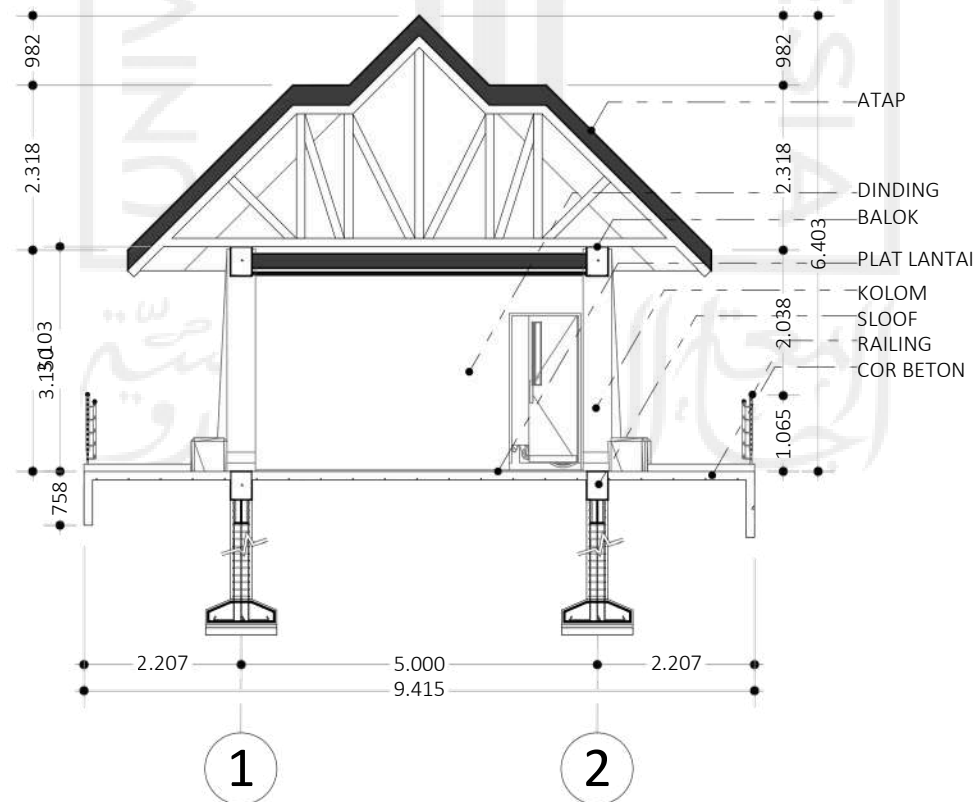
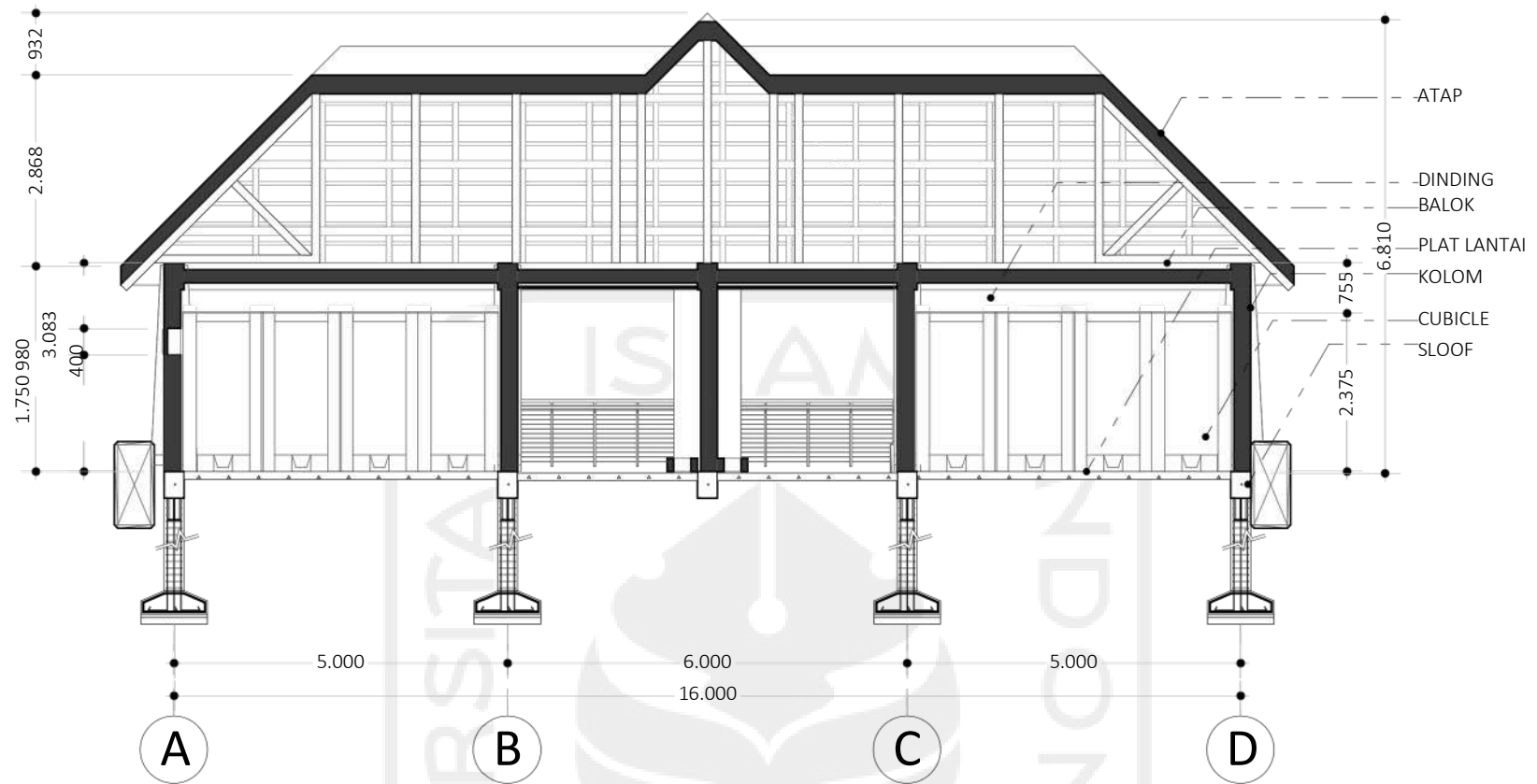


**SOUTH**

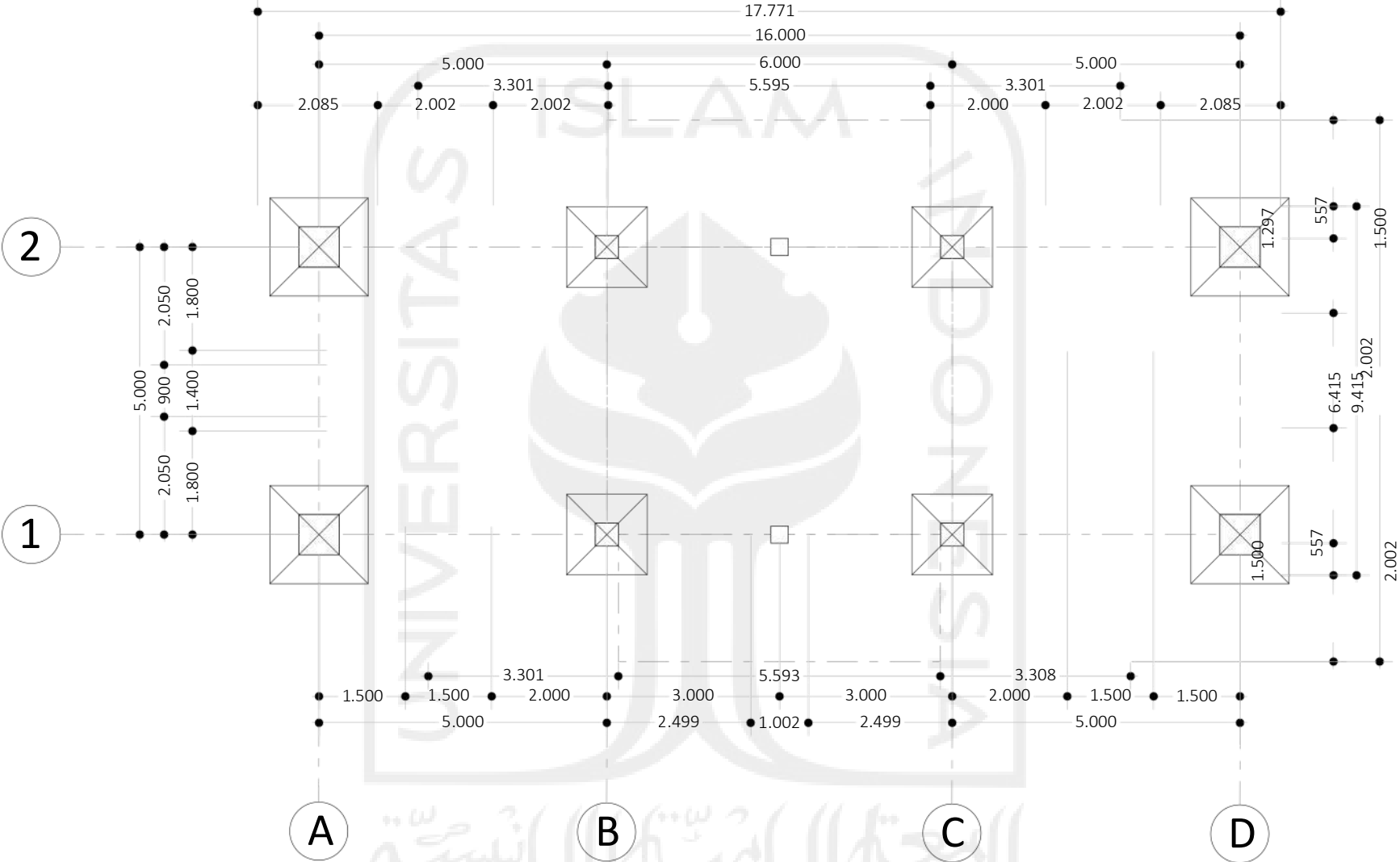


**WEST**

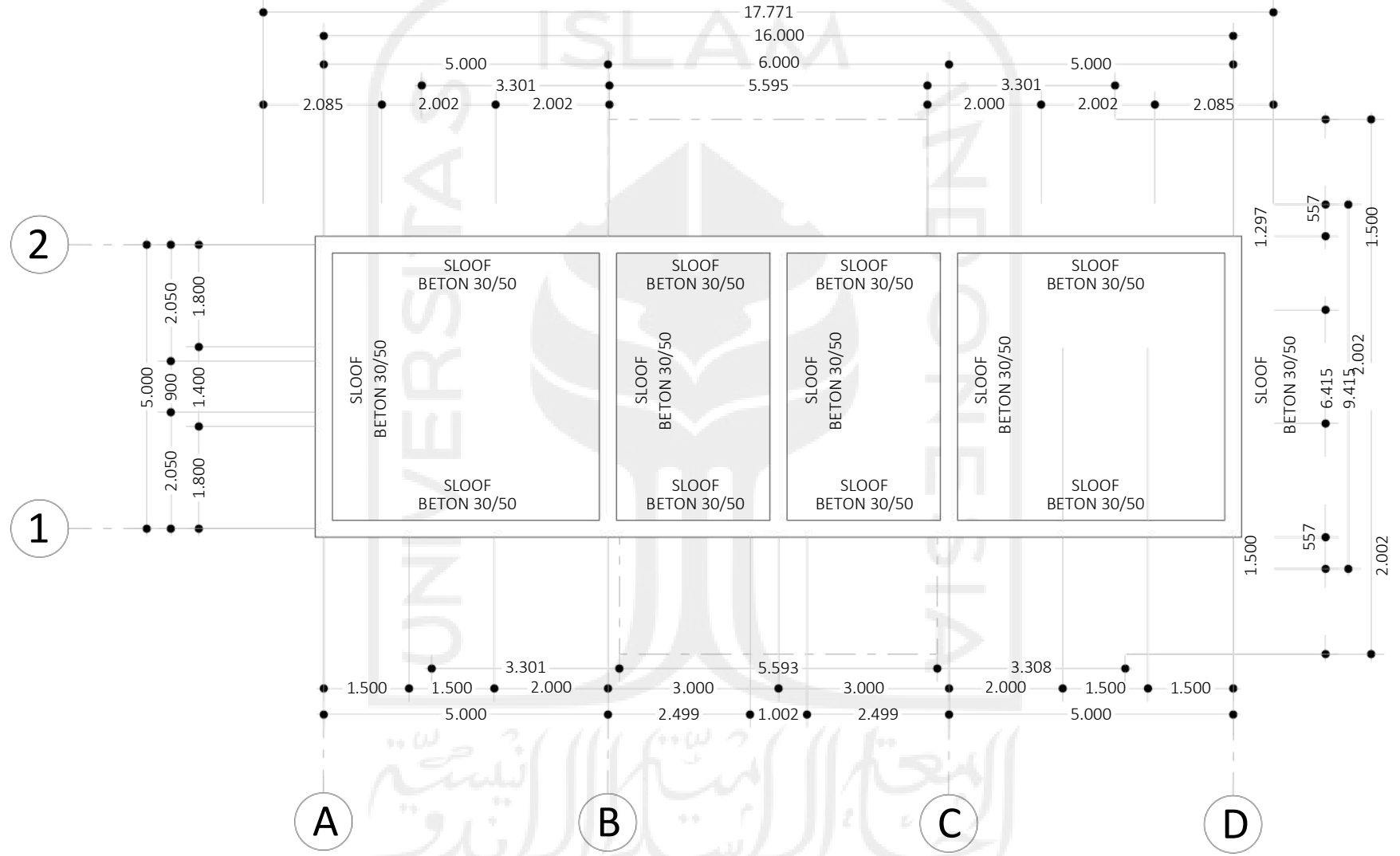
# SECTION PUBLIC TOILET



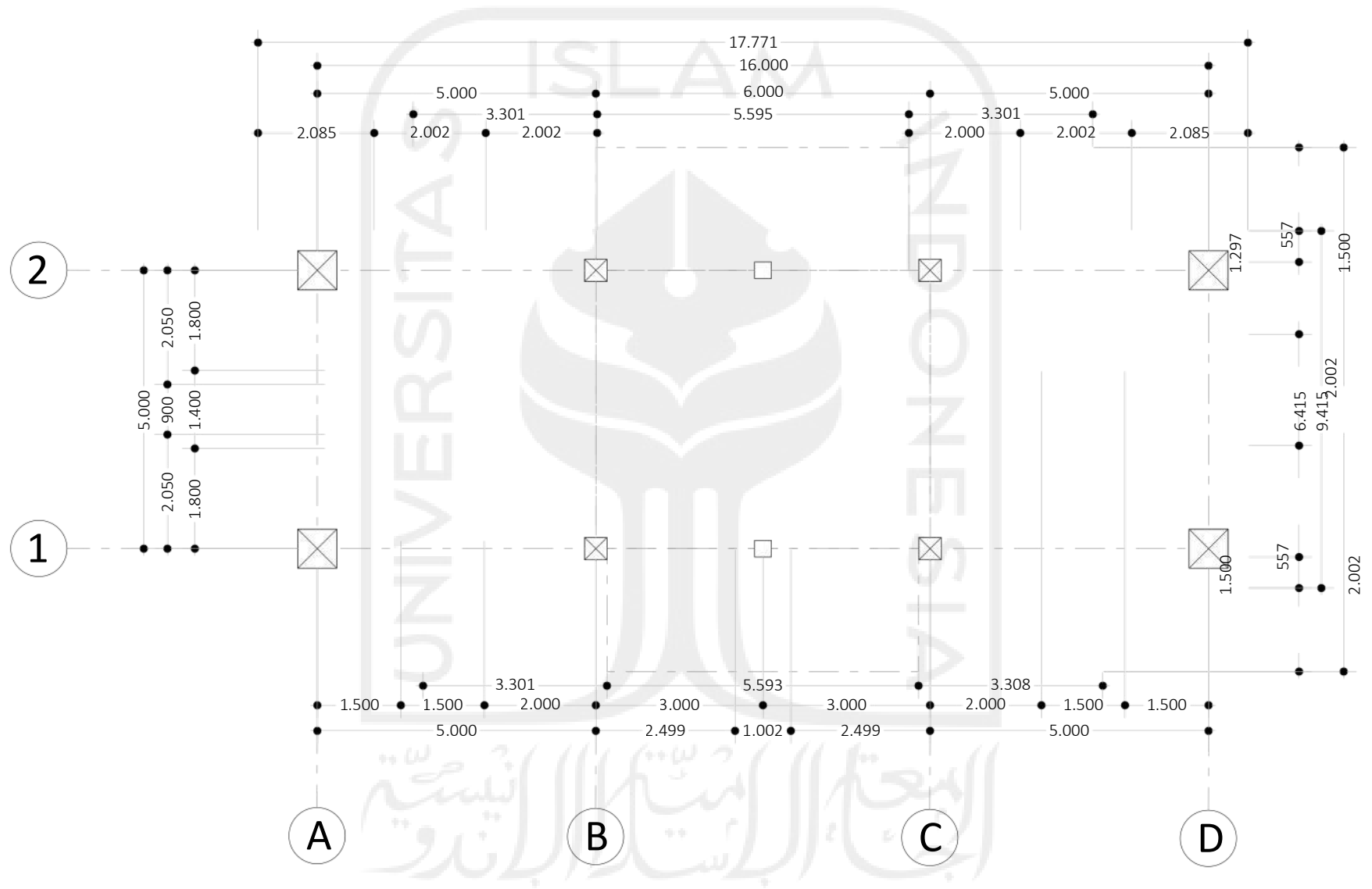
# DETAIL FOUNDATION PUBLIC TOILET



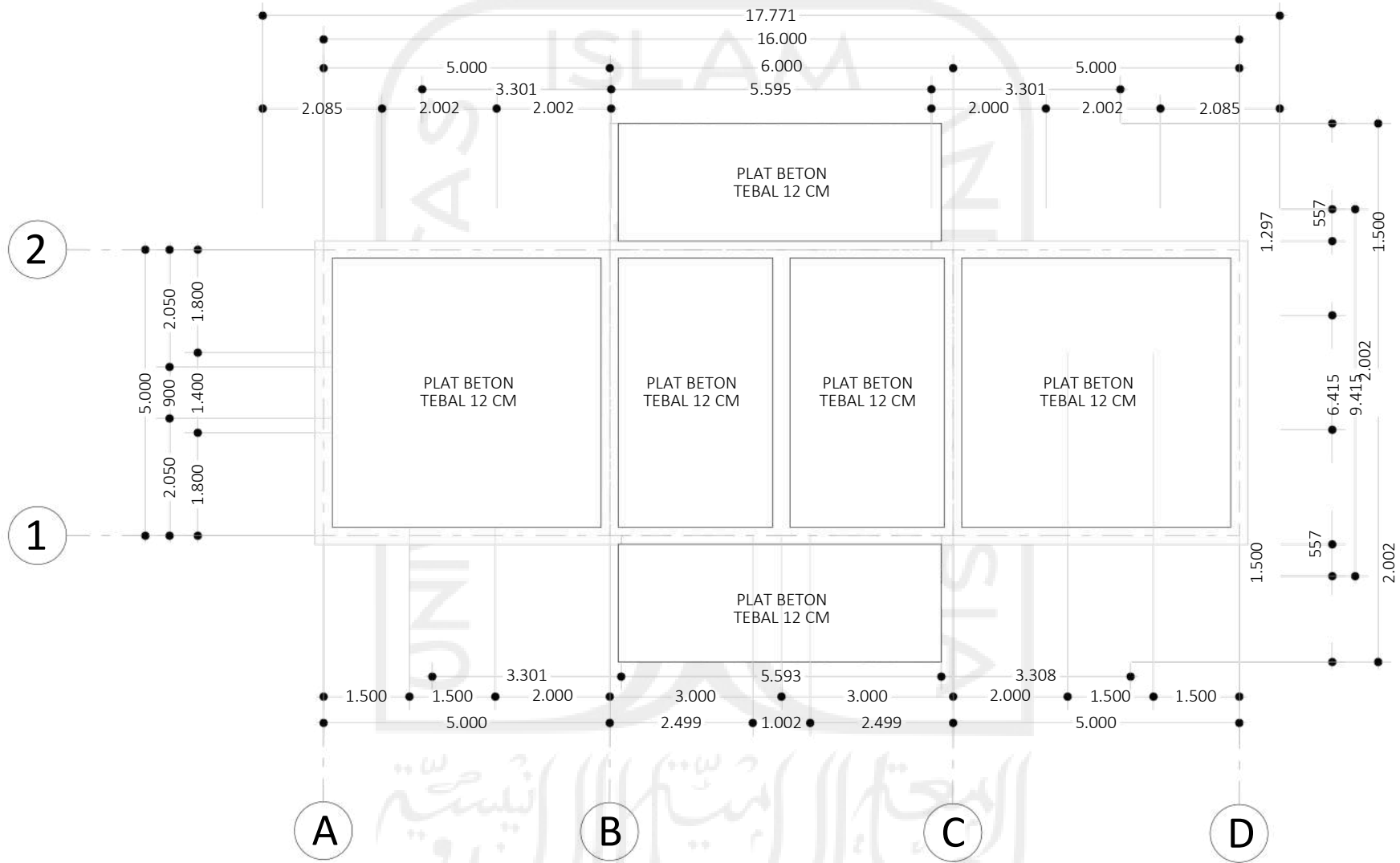
# DETAIL SLOOF PUBLIC TOILET



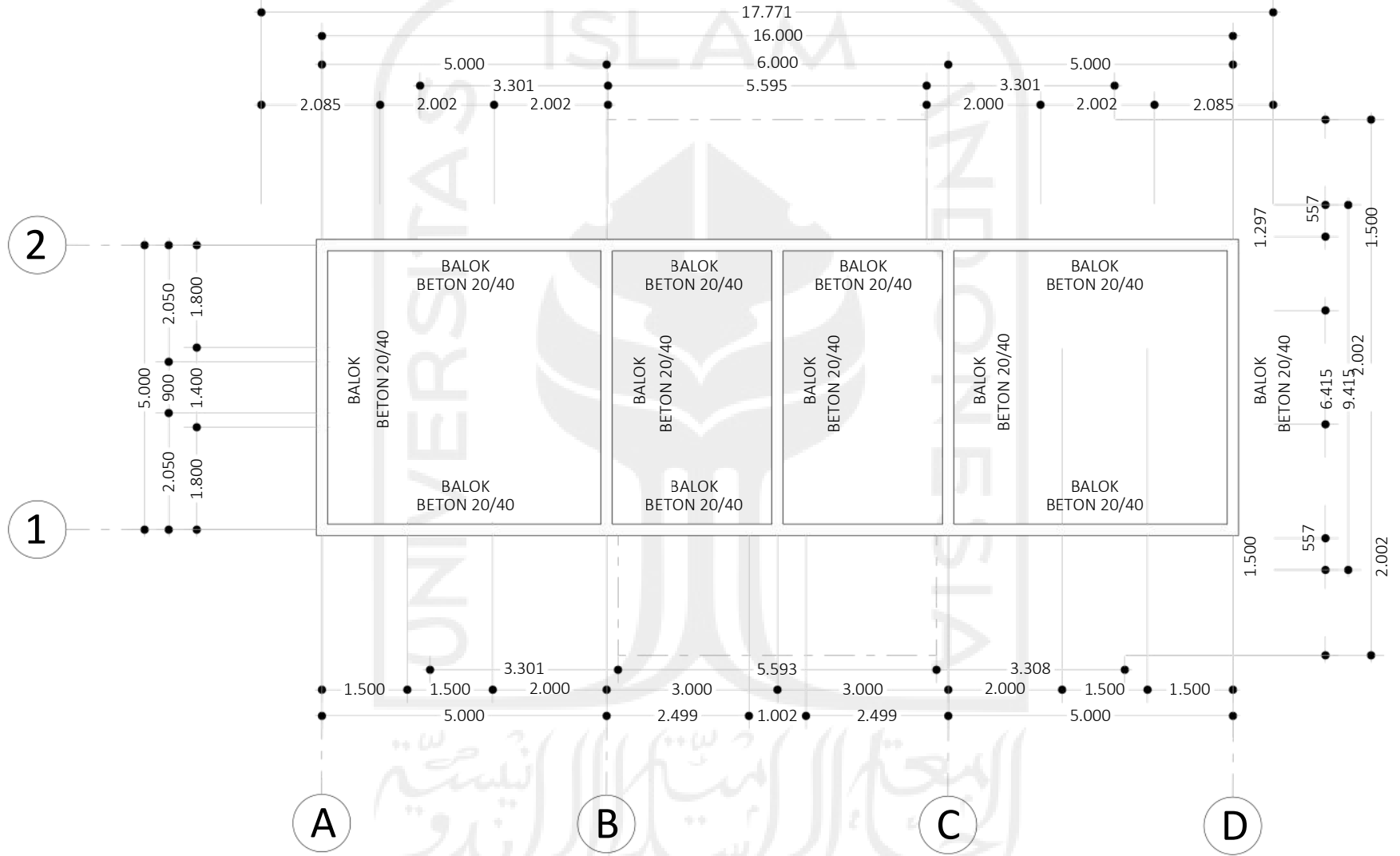
# DETAIL COLUMN PUBLIC TOILET



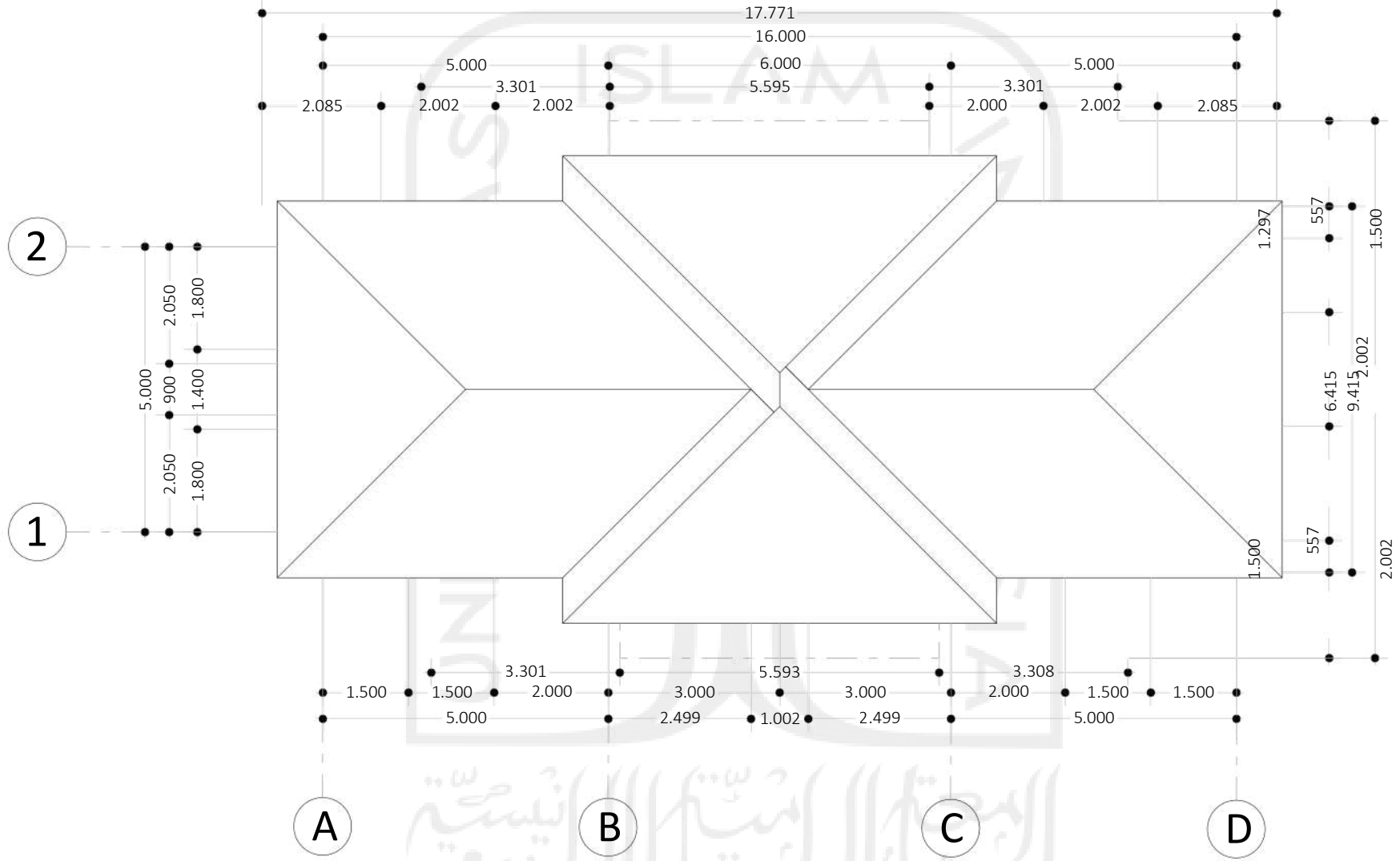
# DETAIL FLOOR PLATE PUBLIC TOILE



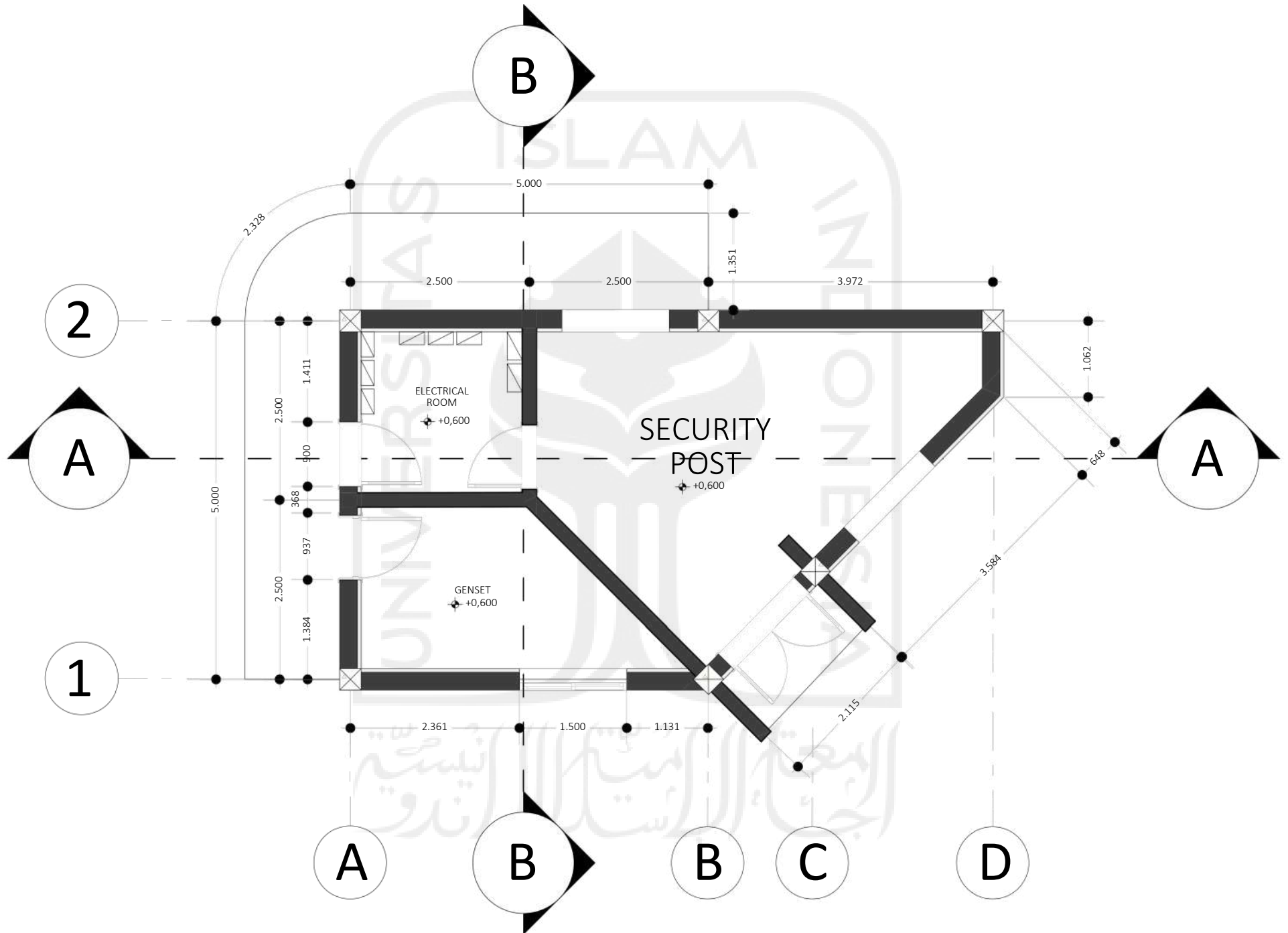
# DETAIL BEAM PUBLIC TOILET



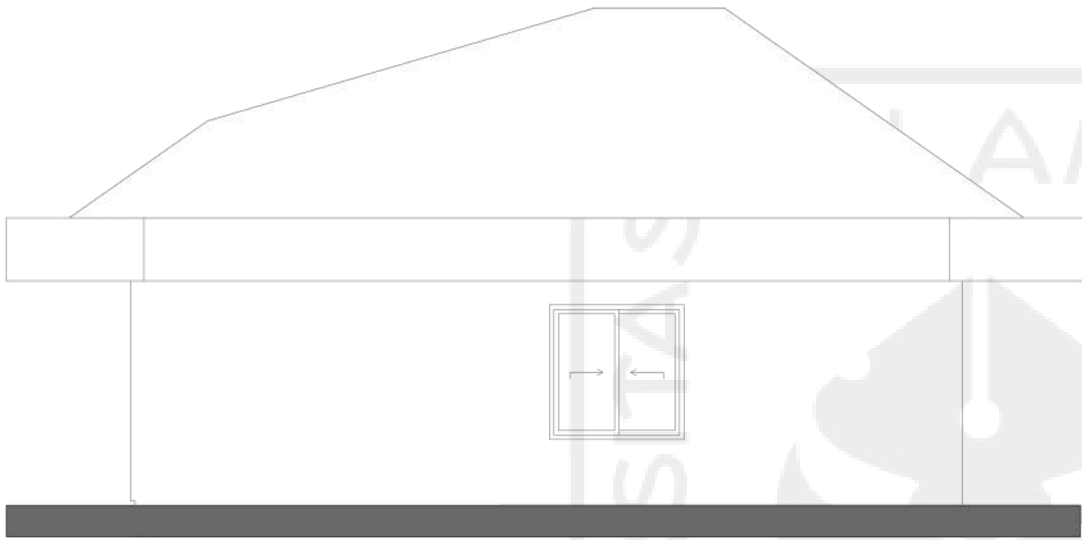
# DETAIL ROOF PUBLIC TOILET



# FLOOR PLAN SECURITY POS



# ELEVATION SECURITY POS



**NORTH**



**EAST**

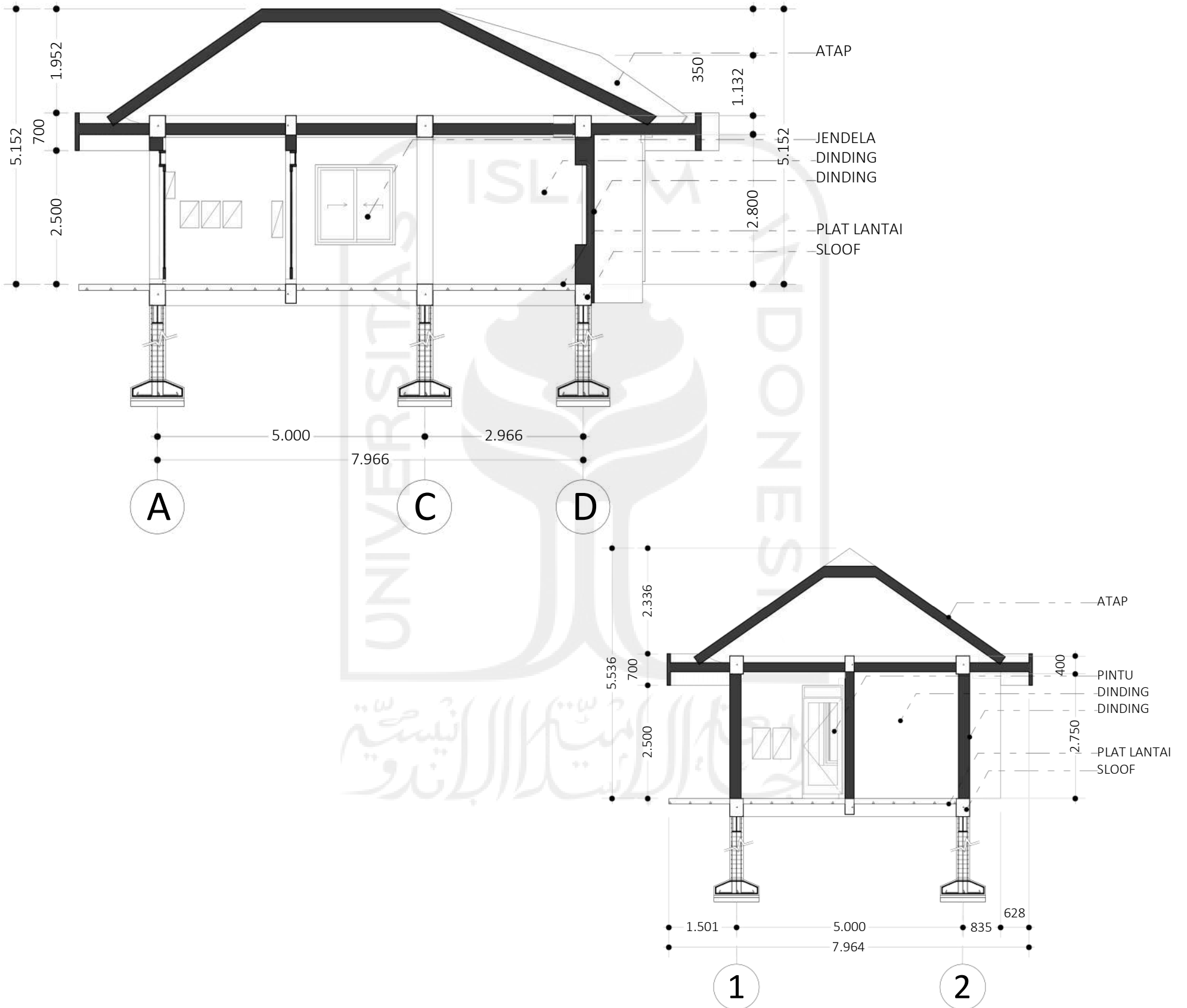


**SOUTH**

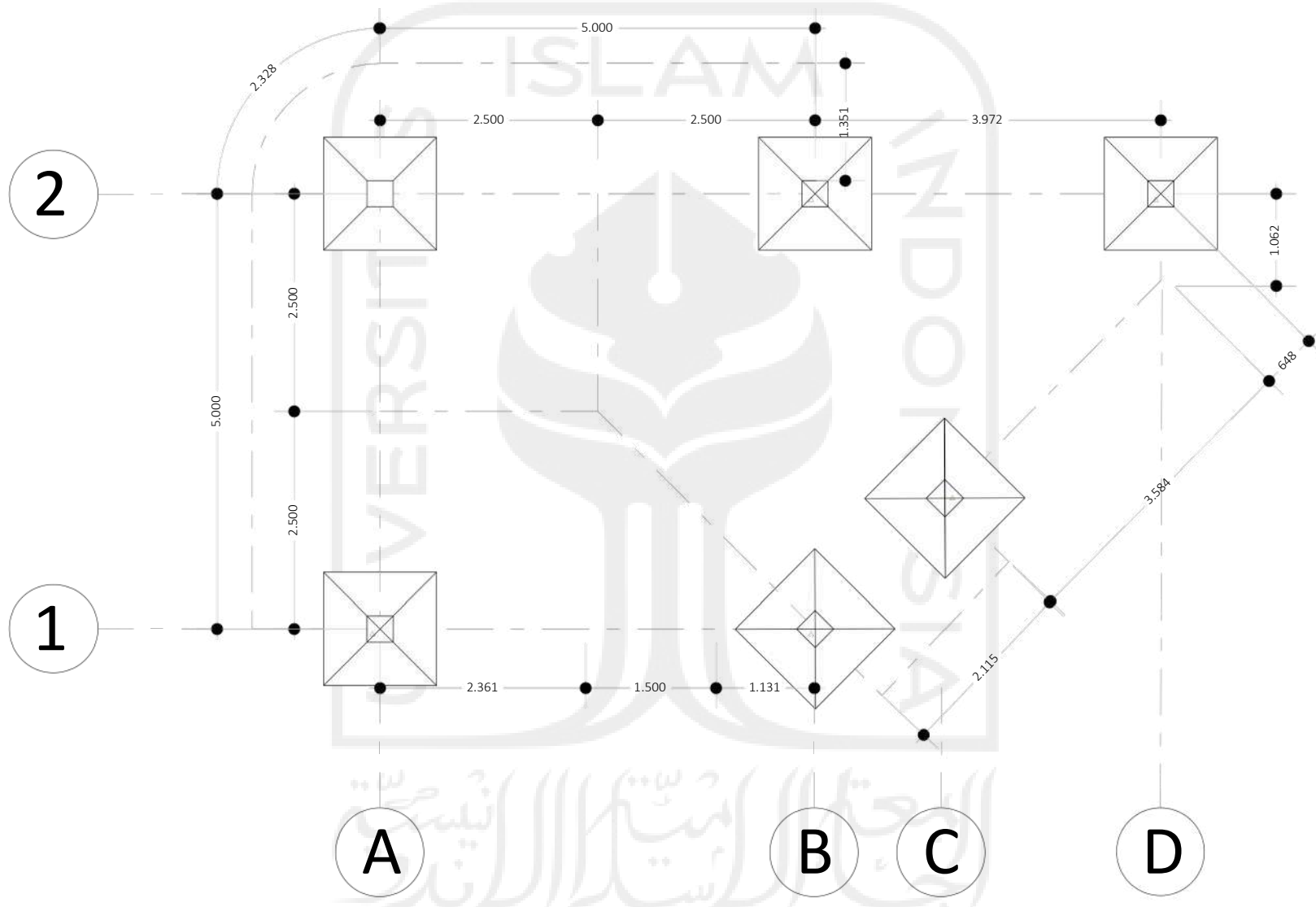


**WEST**

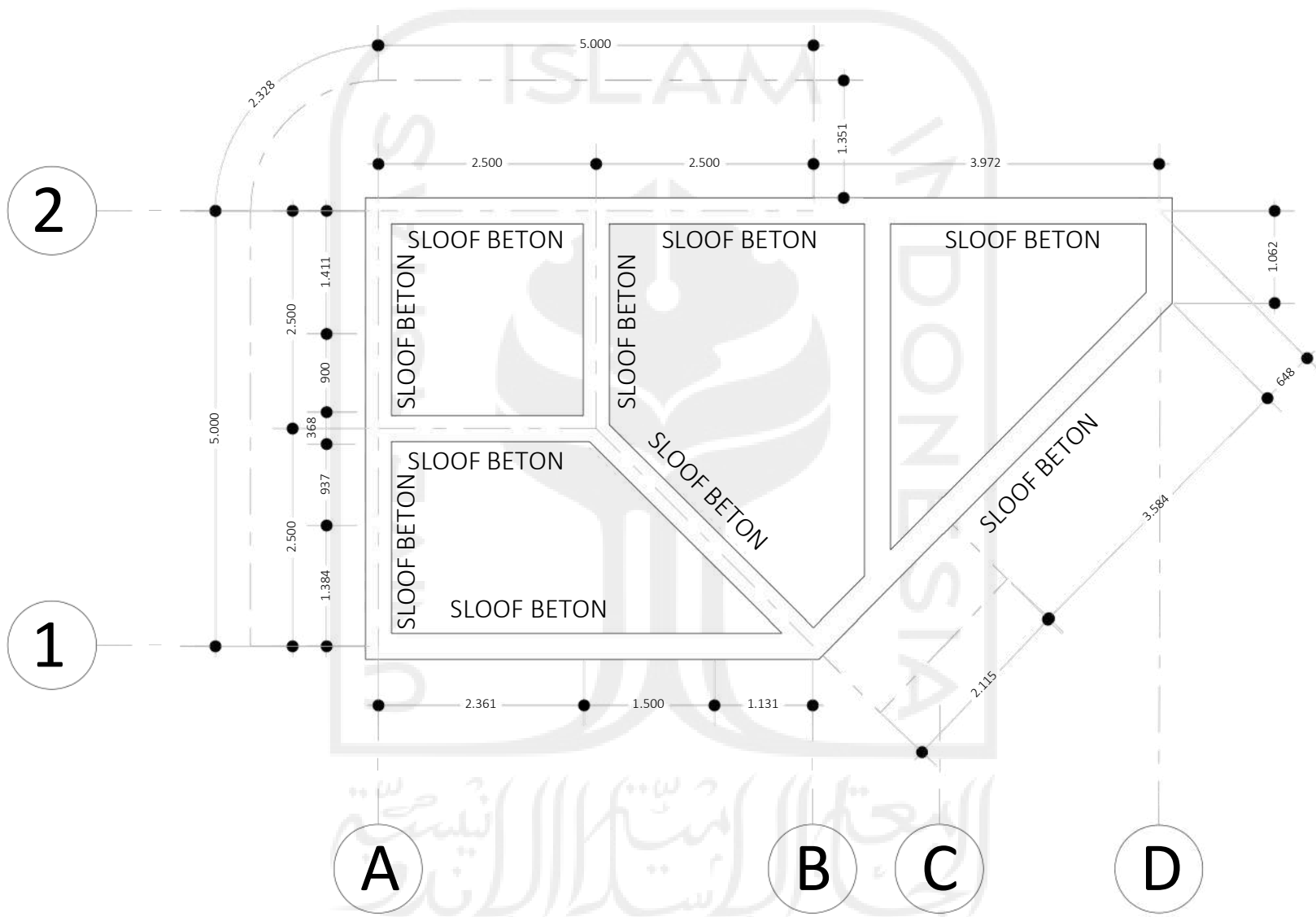
# SECTION SECURITY POS



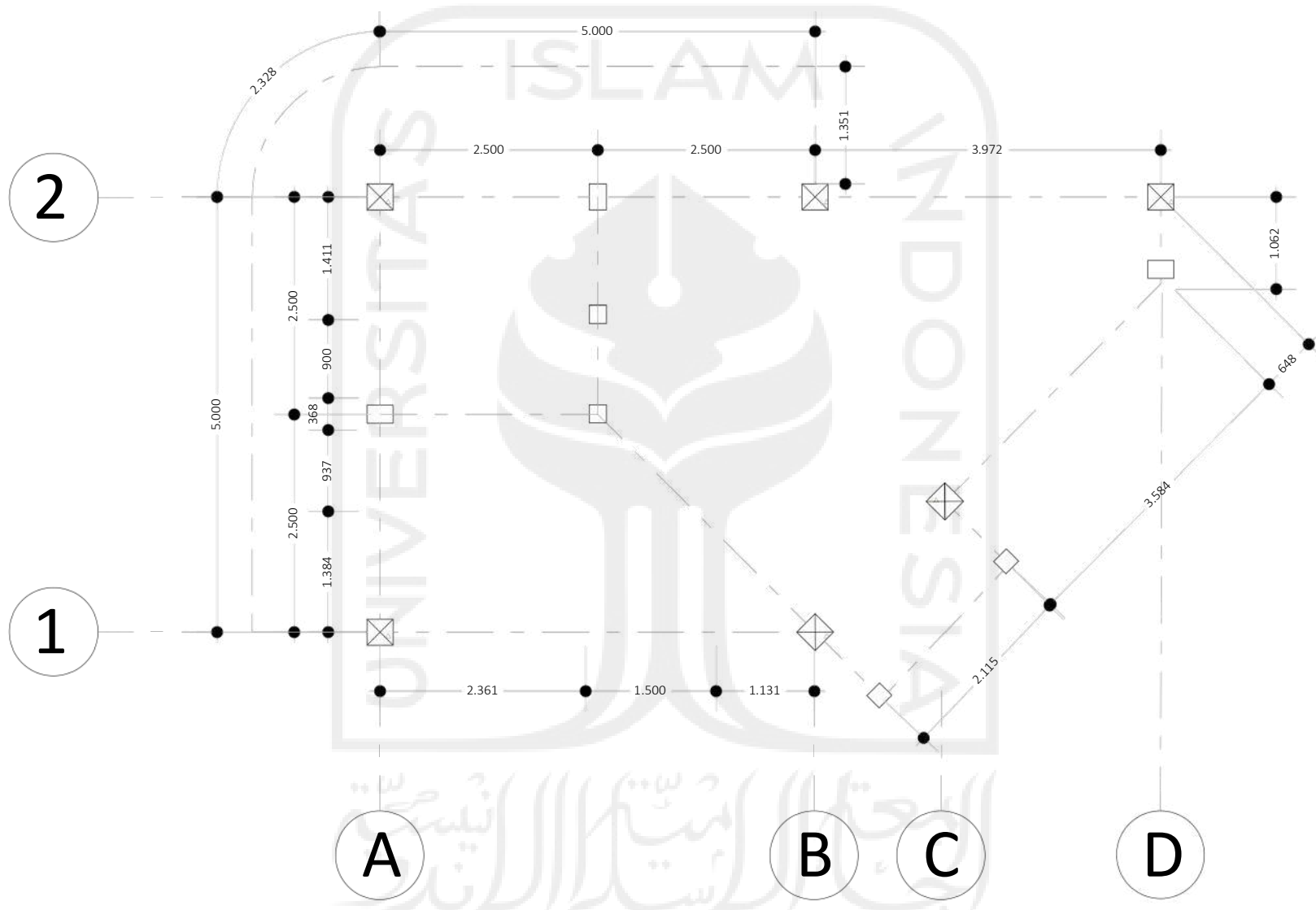
# DETAIL FOUNDATION SECURITY POS



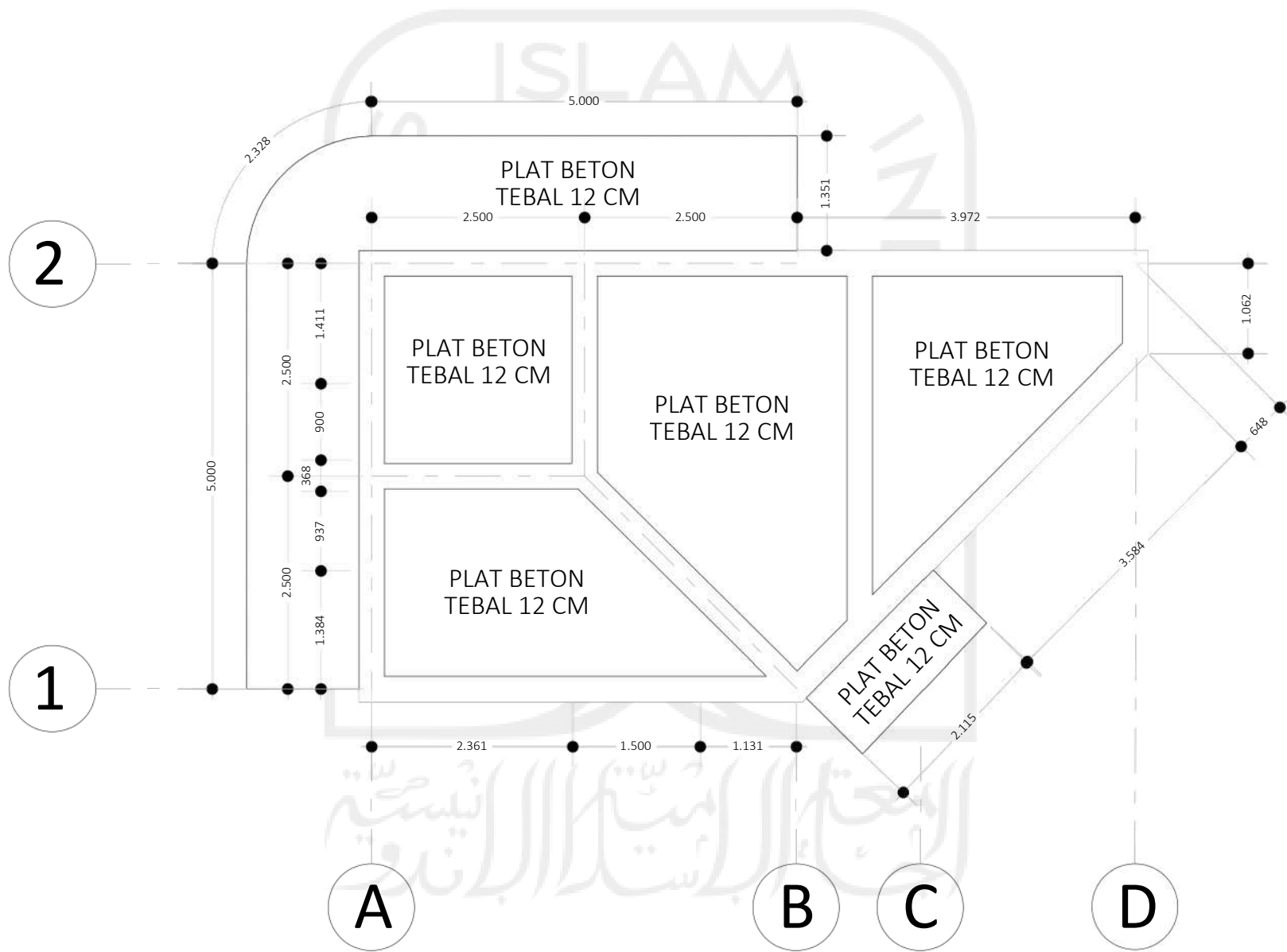
# DETAIL SLOOF SECURITY POS



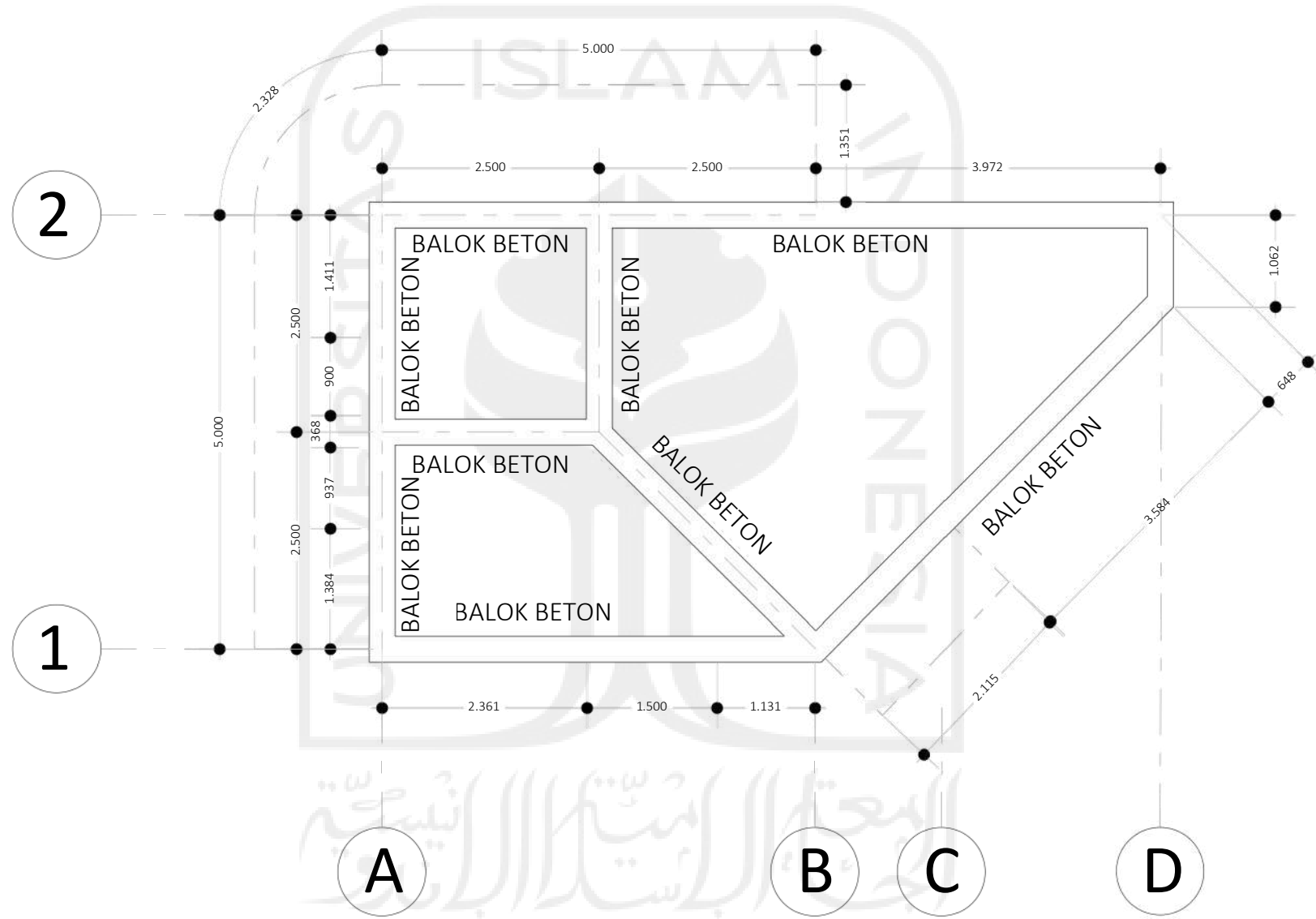
# DETAIL COLUMN SECURITY POS



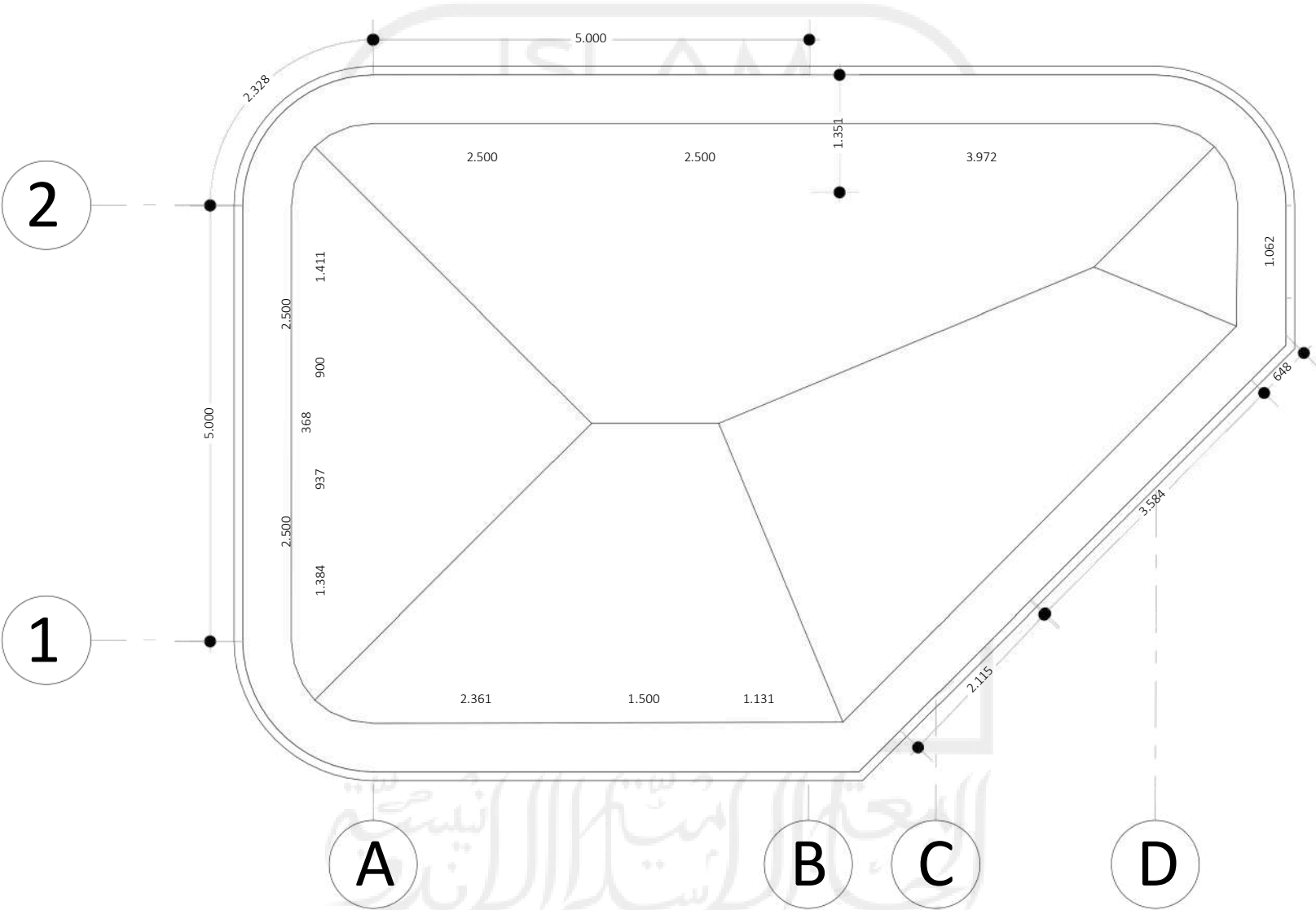
# DETAIL FLOOR PLATE SECURITY POS



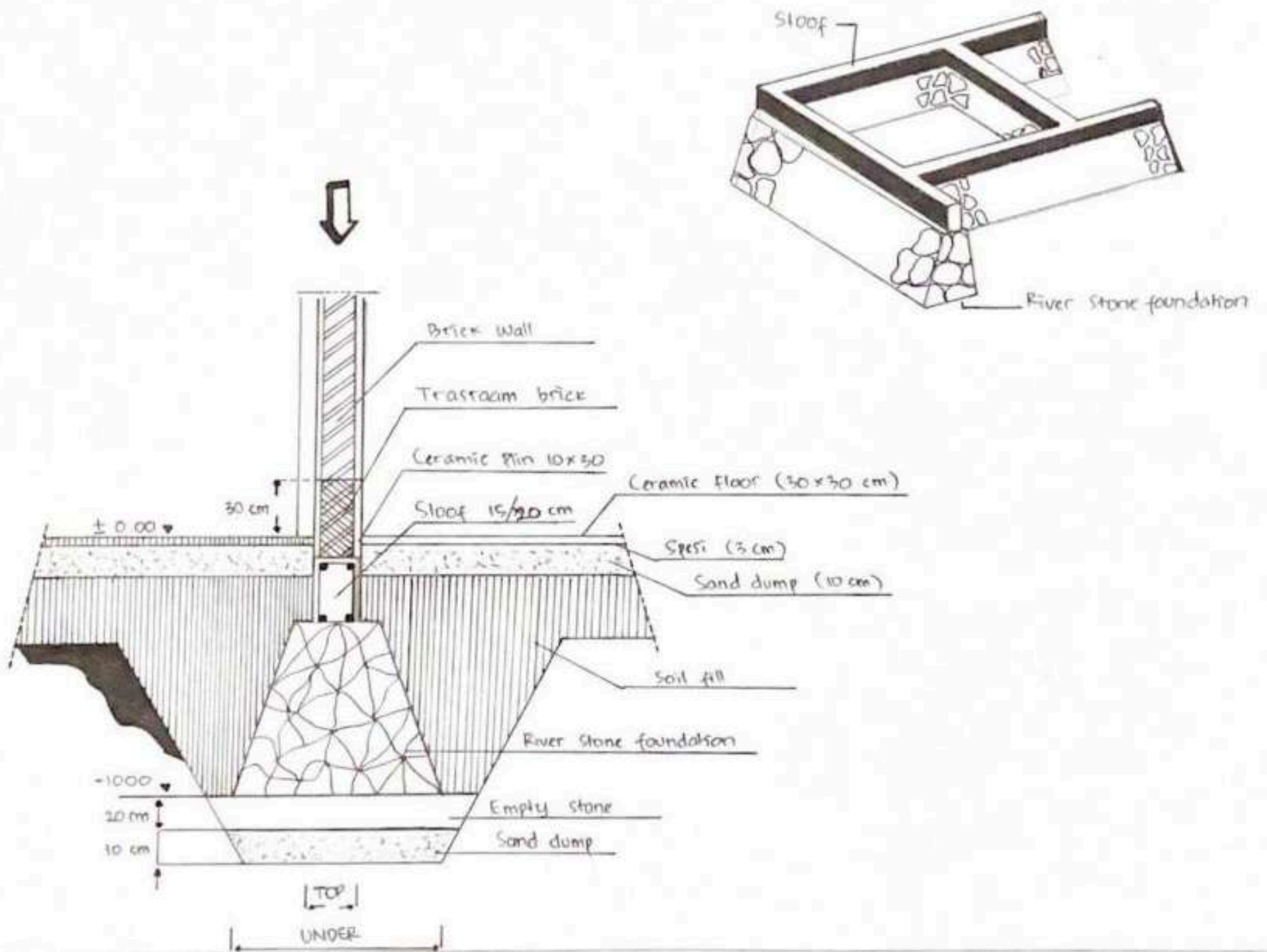
# DETAIL BEAM SECURITY POS



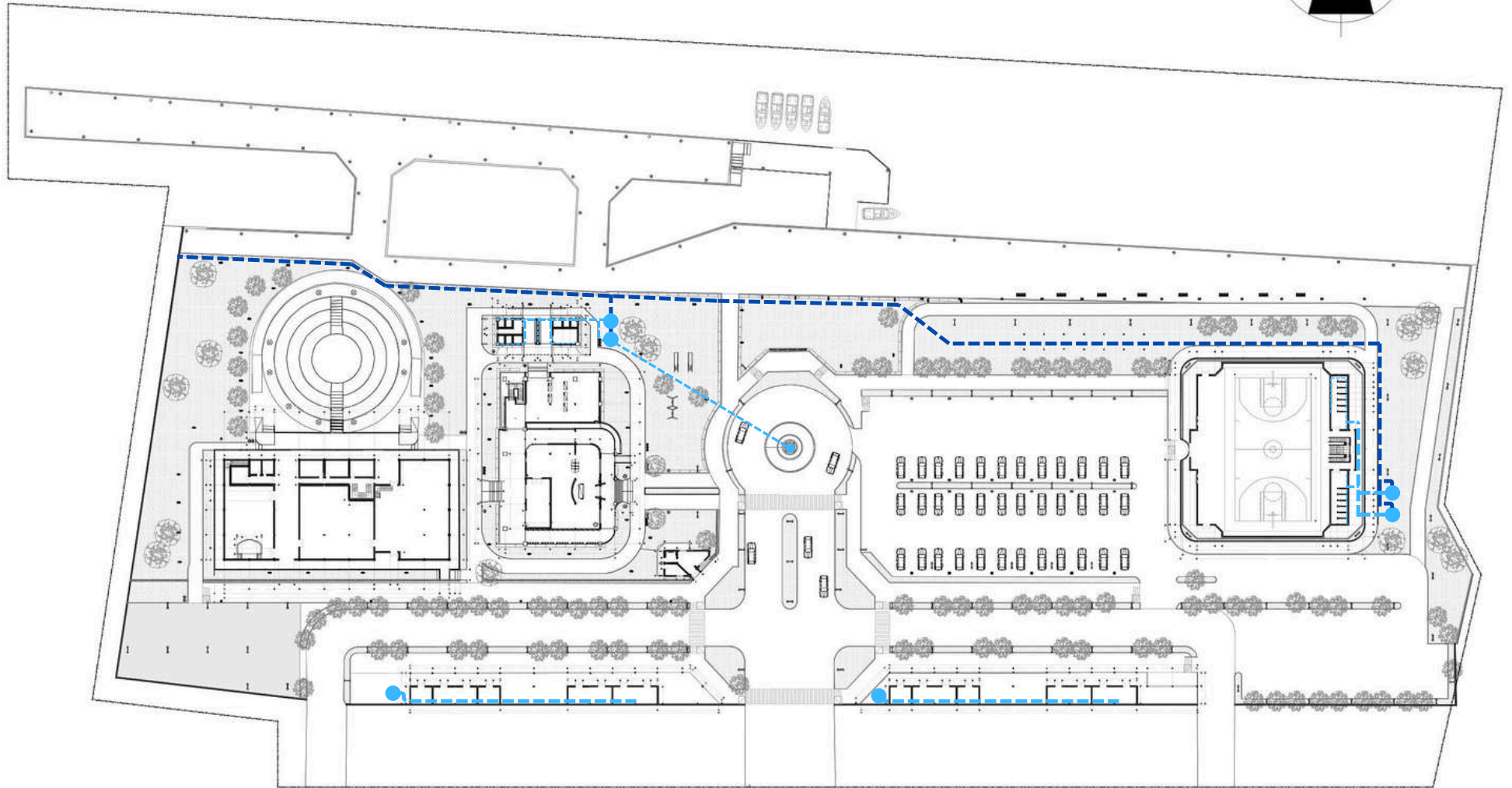
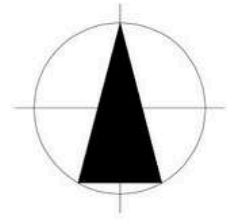
# DETAIL ROOF SECURITY POS



# DETAIL FOUNDATION



# DESIGN SCHEMATIC CLEAN WATER



DESCRIPTION :

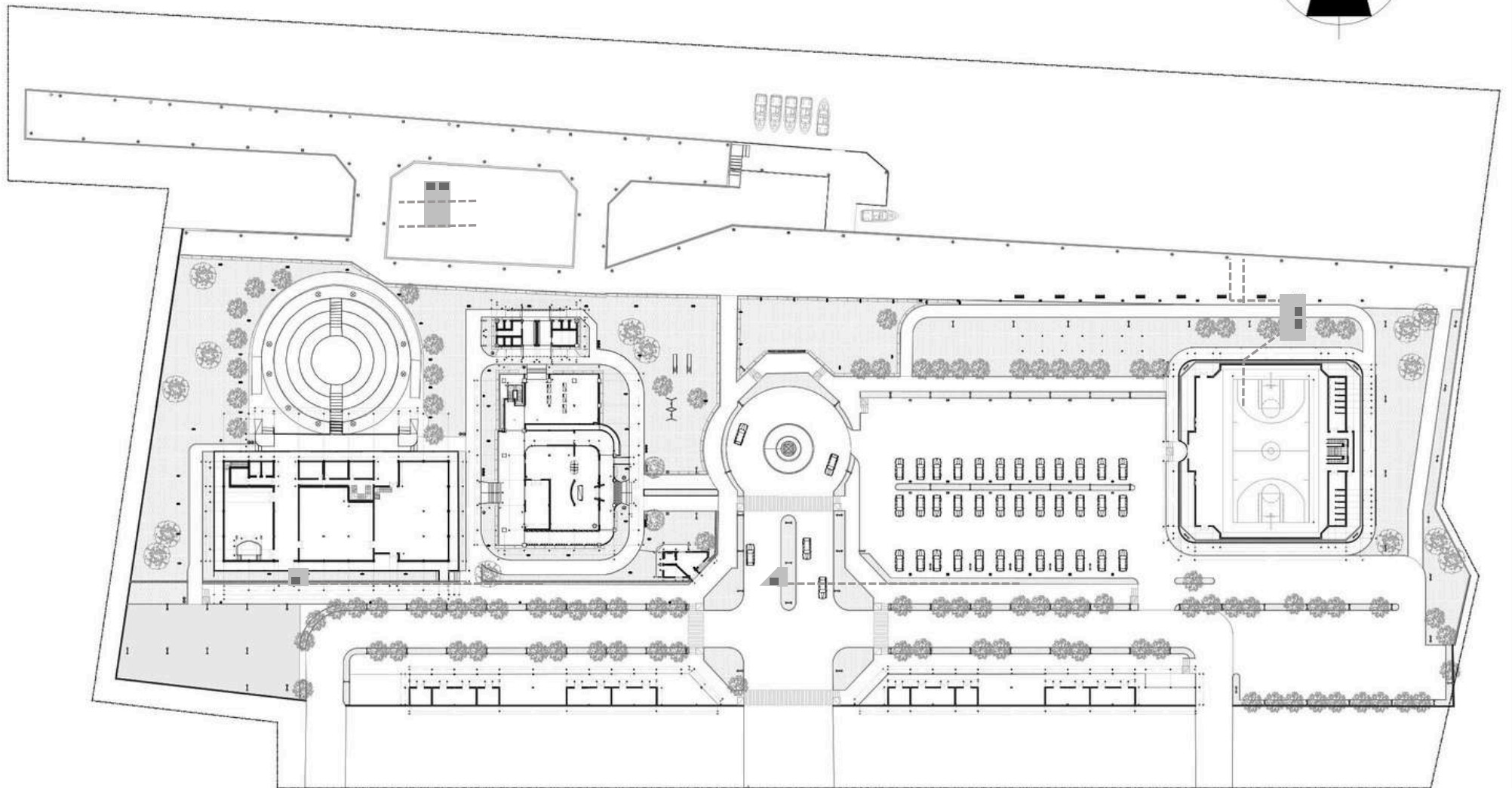
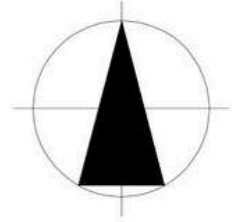
--- Clean water distribution

◆ Distribution to pond

● Water Tank

الجامعة الإسلامية  
الاستاد الأندلسي

# DESIGN SCHEMATIC DIRTY WATER

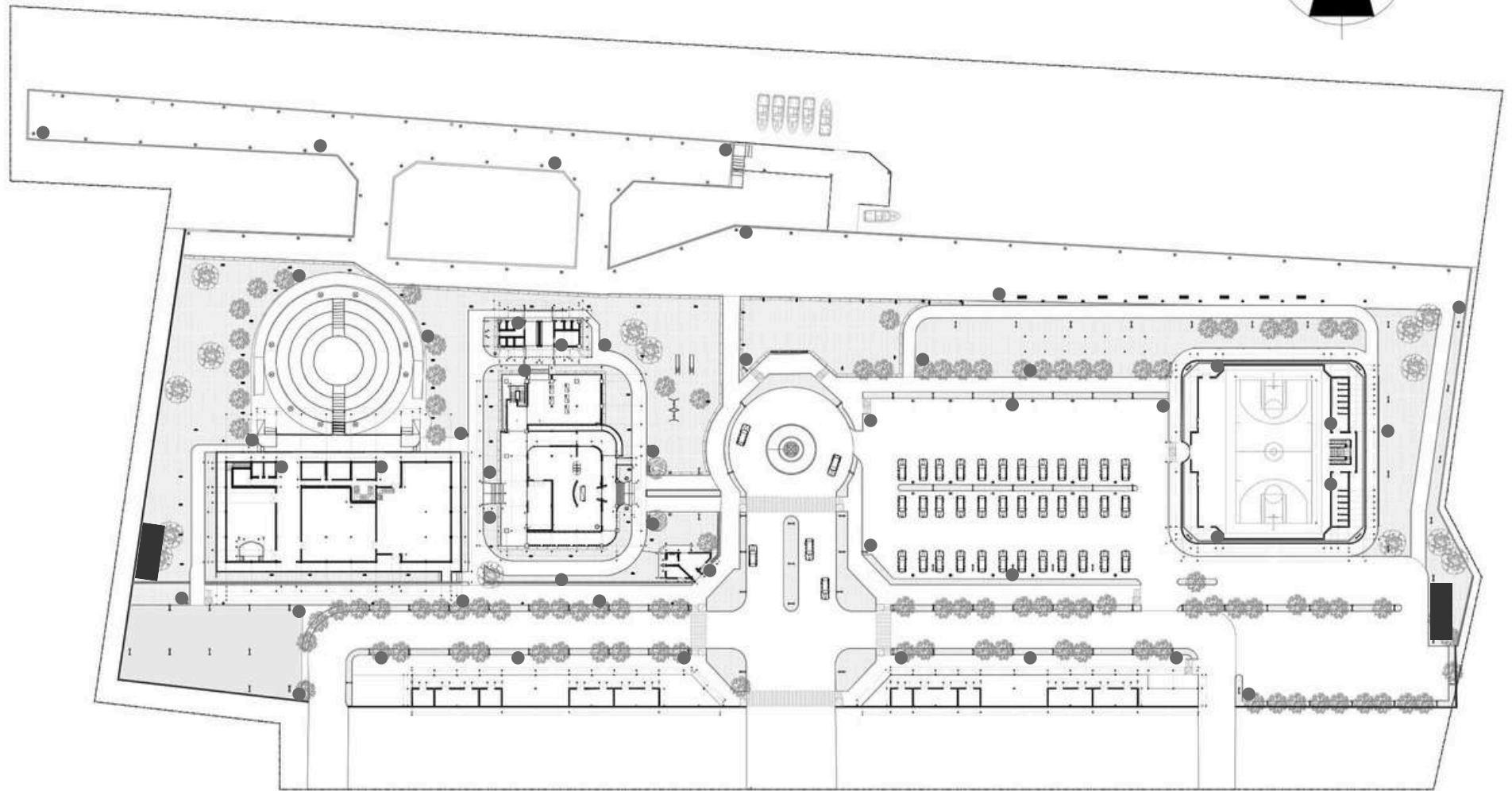
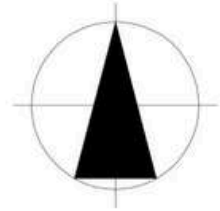


## DESCRIPTION :

- Distribution Dirty Water
- Septic Tank
- Door Septic Tank

الجامعة الإسلامية  
الاستاذ الدكتور

# DESIGN SCHEMATIC WASTE

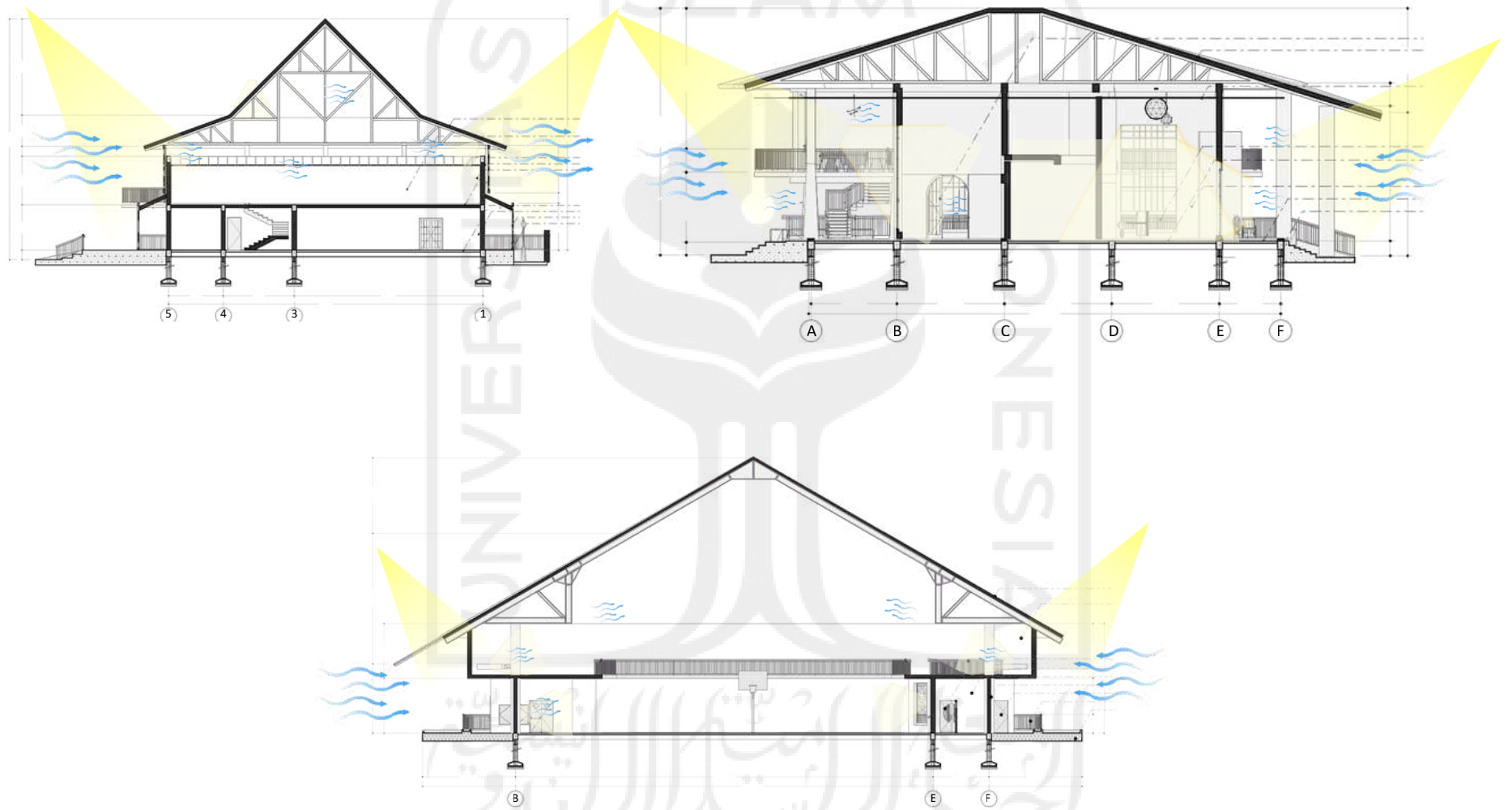


جامعة البصرة

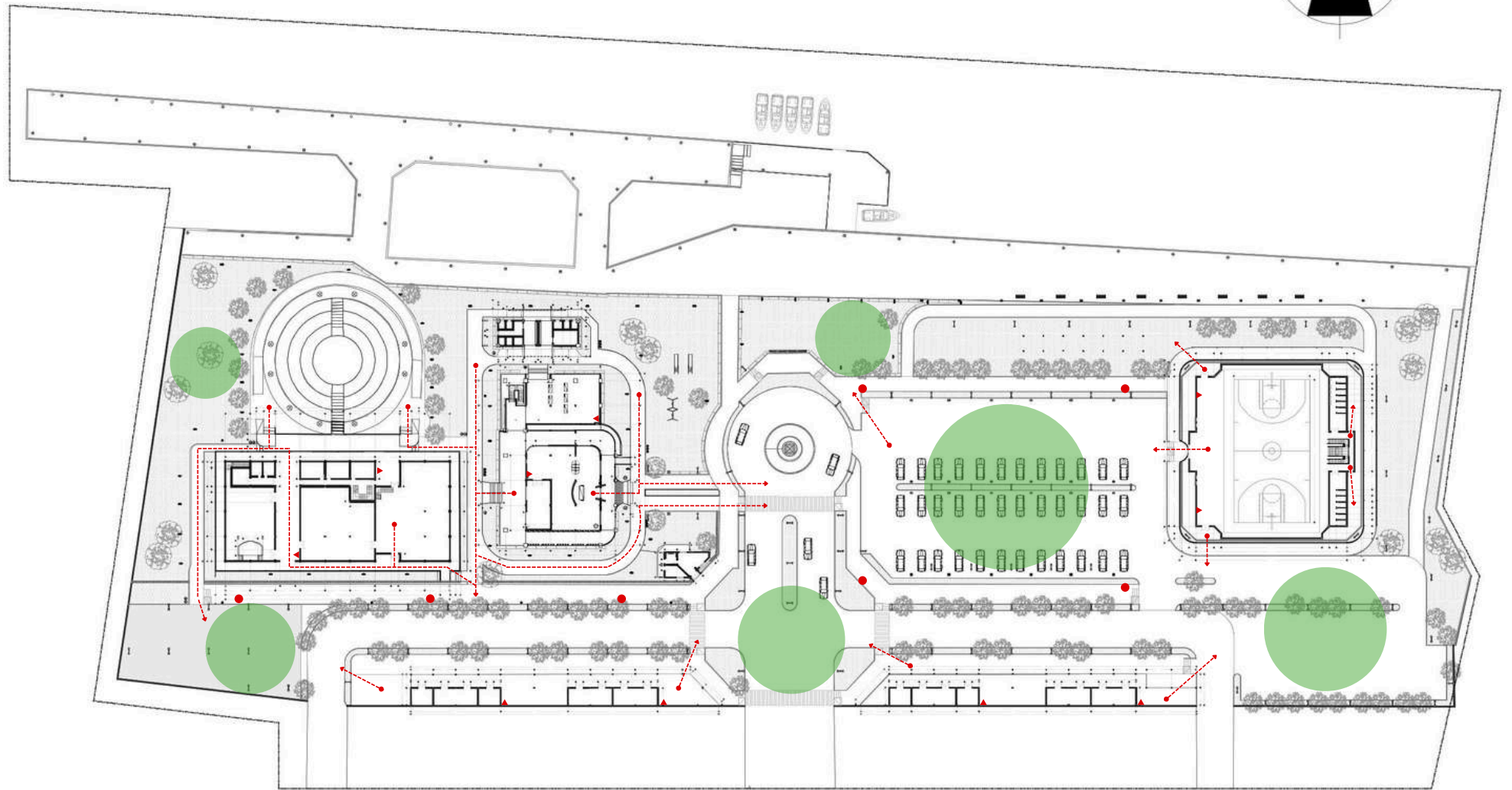
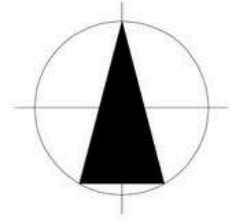
## DESCRIPTION :

- Garbage Tank
- Trash can





# NATURAL VENTILATION AND LIGHTING SCHEME



# SAFETY AND FIRE PROTECTION



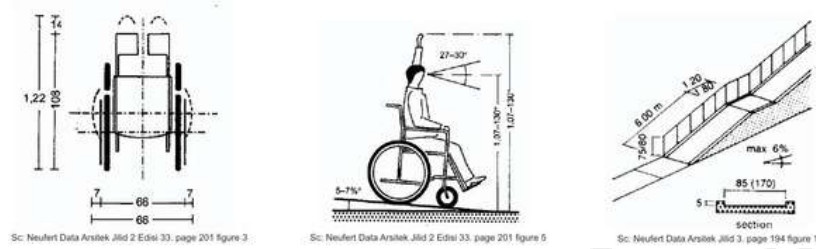
DESCRIPTION :

-  Assamble Point
-  Emargency evacuation
-  Hydrant Pillar
-  APAR

الجامعة الإسلامية

# DETAIL SCHEMATIC BARRIER FREE

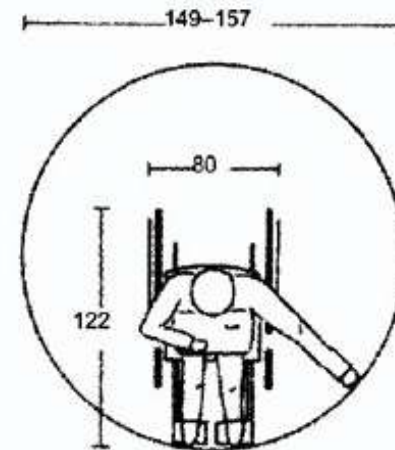
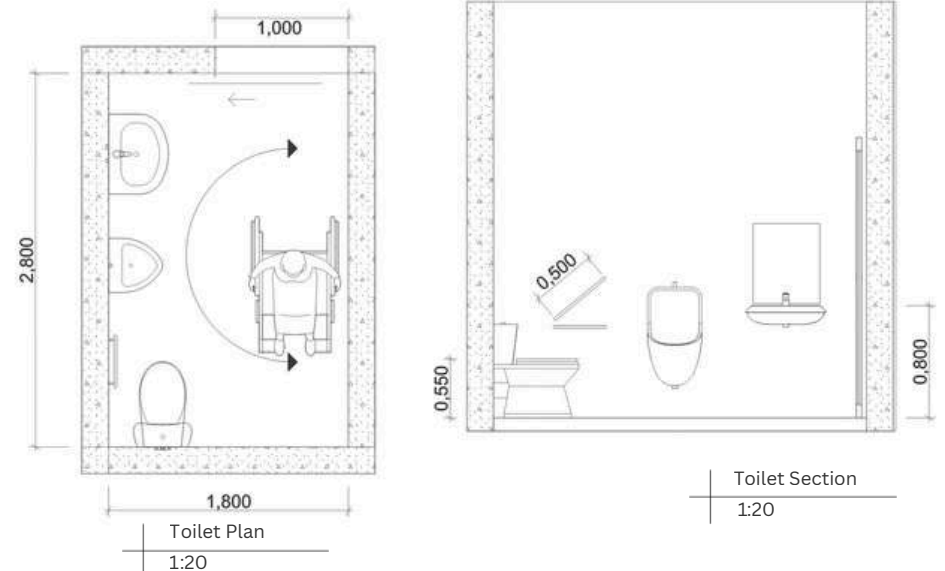
## Ramp (Difabel/Wheel Chair) Principles and Adjustment



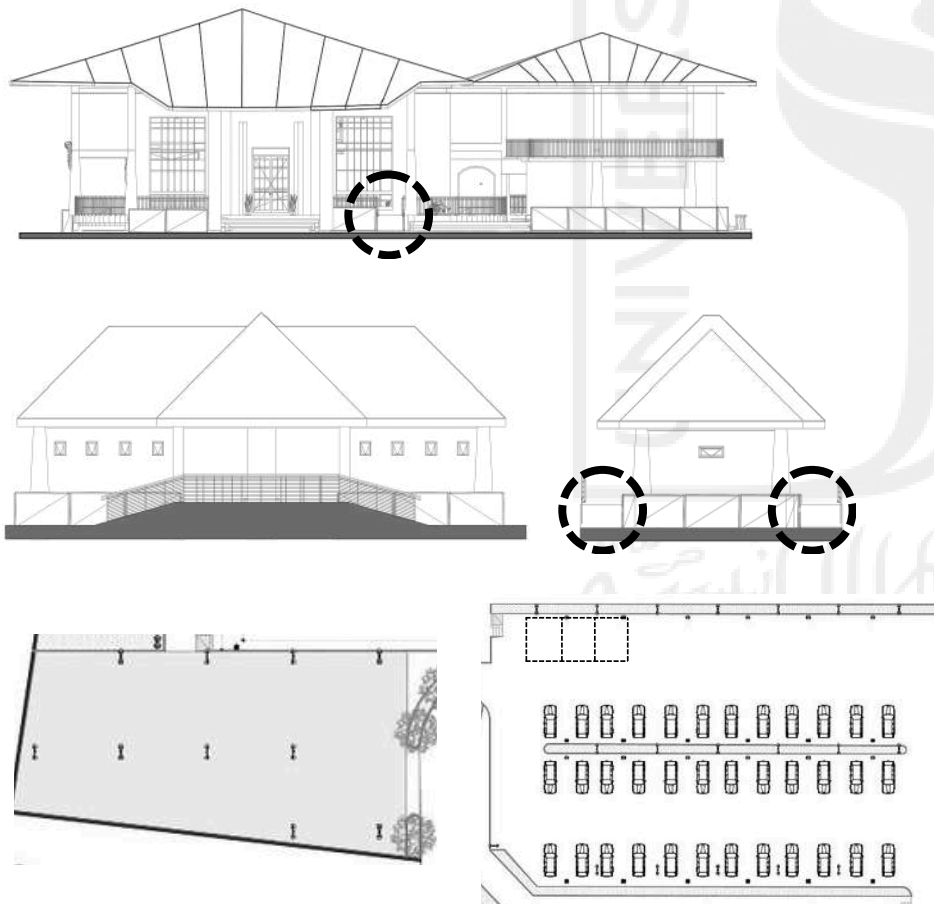
Adjusting the required dimension for ramp based on the principle above, the width must be at least 86 cm to fit 1 wheel chair. The slope for wheel chair around 5 - 7 %, with flat ground every 6 meter and height of railing 75 - 80 cm.

The height from ground to the 1st storey is 70 cm, using 7% slope will require 10 m length of ramp.

## Public Toilet - Difable Friendly Detailed Plan and Dimension



Space recommended from Neufert is 165 cm with 106 cm width for wheel chair. The wheel chair rotation require 149 - 157 cm in diameter. In room efficiency, space for wheel chair rotation made for half rotation, in reason no need 360 degree rotation and 180 degree rotation enough for in - out. But the space for half rotation must add the half of wheel chair width or 40 cm for spacious space. The other requirement inside the toilet is railing in height 80 cm, and basin in height also 80 cm.

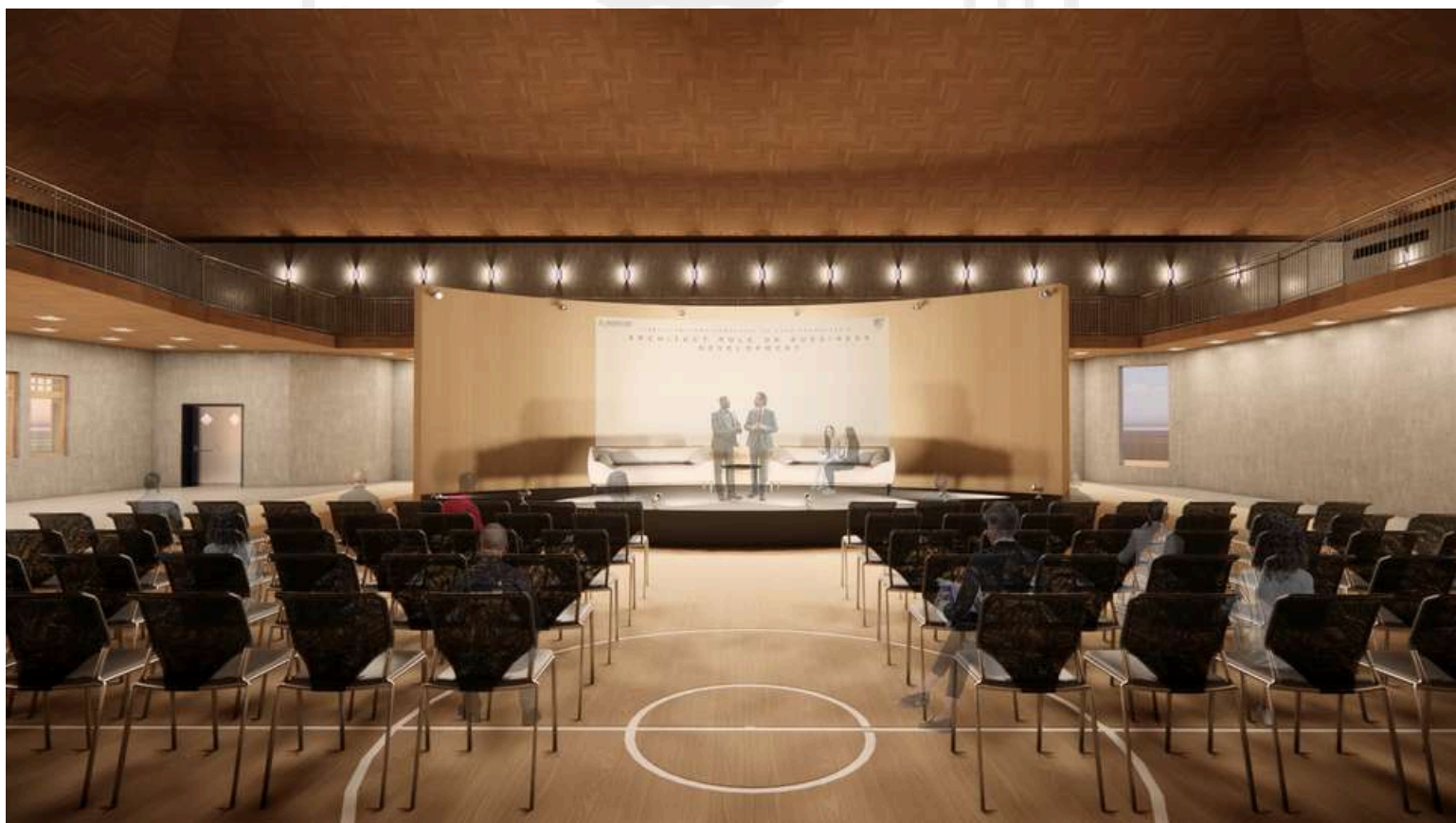


It can be seen from several pictures of the placement of ramps in buildings and special parking areas for disabled-friendly people.

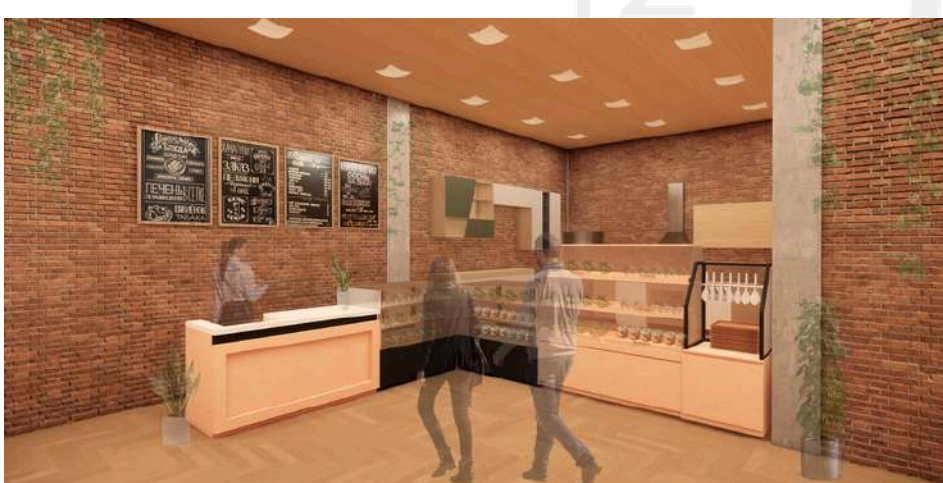
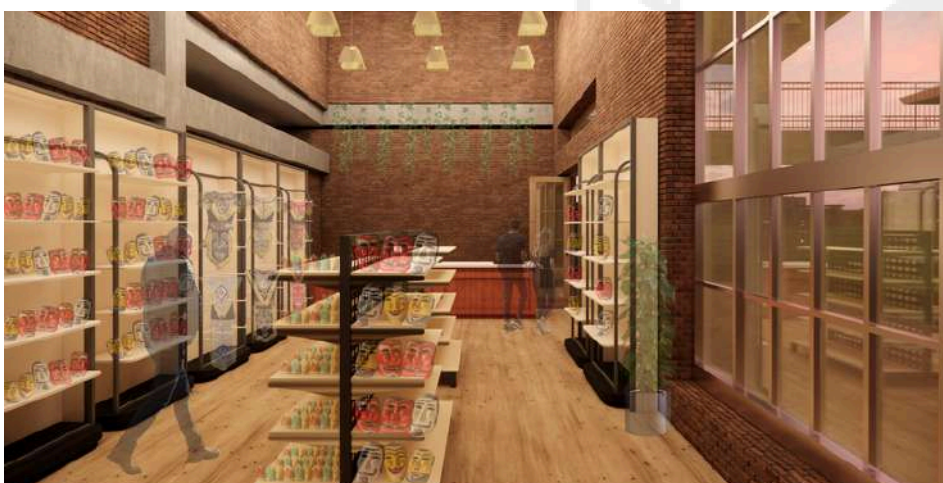
# RENDER INTERIOR (BUILDING A1)



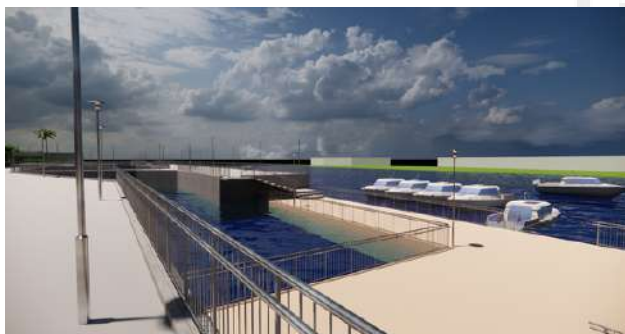
RENDER INTERIOR (BUILDING A2)



# RENDER INTERIOR (BUILDING B1)



## RENDER EXTERIOR (LANDSCAPE)



**PORT**

**STREET & PARKING AREA**

**AMPHITHEATER**

## RENDER EXTERIOR (LANDSCAPE)

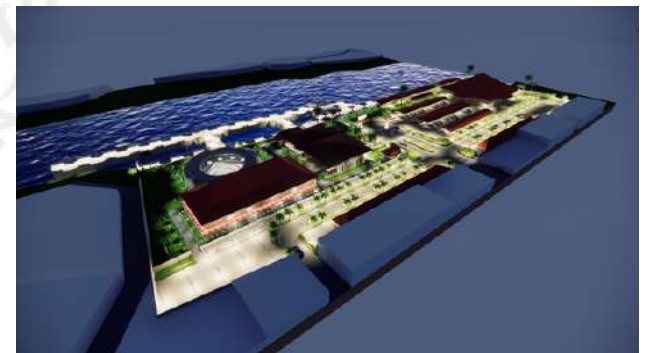
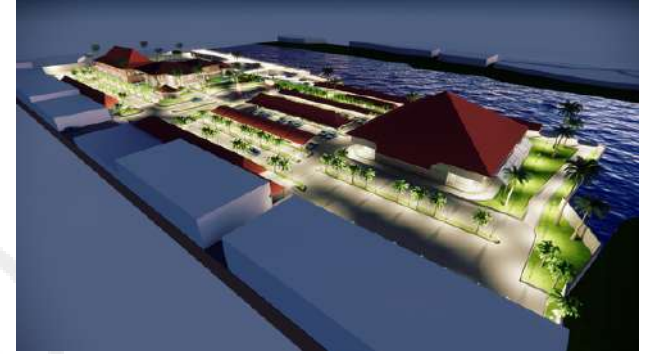


**STUDIO  
(A1 BUILDING)**

**MUSEUM  
(B1 BUILDING)**

**COMMERCIAL  
(A2 BUILDING)**

# RENDER EXTERIOR (LANDSCAPE)



05



---

DESIGN EVALUATION

# DESIGN EVALUATION

## 5.1 Pekanbaru City



Figure 0. Pekanbaru City

is the capital and largest city of the province of Riau, Indonesia. It is one of the largest economic centers on the island of Sumatra and is one of the cities with high growth, migration, and urbanization rates. In mid-2024, the population of Pekanbaru was 1,138,530.

Pekanbaru is located on the banks of the Siak River and was originally a small town with a pekan (market) called Payung Sekaki or Senapelan. In the 18th century, the area that is now Pekanbaru was within the sphere of influence of the Siak Sultanate, and Sultan Abdul Jalil Alamuddin Syah (Marhum Pekan) is widely regarded as the founder of the modern city of Pekanbaru; the city's anniversary was set on June 23, 1784. Pekanbaru became a "small city" in 1948 and a municipality in 1956, before being designated the capital of Riau province to replace Tanjung Pinang in 1959.

Pekanbaru's economy is supported by trade and oil mining. The city has an international airport, intercity and interprovincial bus terminals, and two ports. Pekanbaru's population is cosmopolitan, influenced by its strategic location in the middle of the East Crossing of the Trans-Sumatra Highway. Several ethnicities that have significant populations in this city include the Malays, Minangkabau, Orang Ocu, Javanese, Batak, and Chinese.

The development of this city was initially inseparable from the function of the Siak River as a means of transportation in distributing agricultural products from the interior and the Minangkabau highlands to the coastal areas of the Malacca Strait. In the 18th century, the Senapelan area on the banks of the Siak River became a market (pekan) for Minangkabau traders. Over time, this area developed into a bustling residential area. The 4th Sultan of Siak, Sultan Alamuddin Syah, moved the center of power in Siak from Mempura to Senapelan in 1762. On June 23, 1784, based on the deliberation of the "Council of Ministers" of the Siak Sultanate, consisting of the datuk of four tribes (Pesisir, Limapuluh, Tanah Datar, and Kampar), this area was named Pekanbaru, and was later commemorated as the anniversary of this city.



## Ethnic Groups

Komposisi etnis di Kota Pekanbaru	
Etnis	Jumlah (%)
Minangkabau	37,96
Melayu	26,10
Jawa	15,70
Batak	11,04
Tionghoa	2,5
Lain-lain	6,7

Sumber: Sensus 2010 <sup>[38]</sup>

Table 0. Etnis di Kota Pekanbaru

In 2014, Pekanbaru had become the fourth most populous city on the island of Sumatra, after Medan, Palembang and Bandar Lampung, as well as the tenth largest city in Indonesia. Pekanbaru's rapid economic growth rate has driven its population growth rate.

The Minang ethnic group is the first majority/largest ethnic group with a percentage of around 37.96%. The Minang ethnic group generally works as professionals and traders. The large population has led to the Minang language as a market and social language commonly used by the residents of Pekanbaru as well as the local Malay language which is less dominant but remains the main Indonesian language for inter-ethnic communication.

In addition, ethnic groups that have a large proportion are Javanese, Batak, and Chinese. The relocation of the capital of Riau Province from Tanjungpinang to Pekanbaru in 1959, played a major role in placing the Malay ethnic group in dominating the city government bureaucracy structure, but since 2002 their hegemony has decreased along with the establishment of the Riau Islands Province from the expansion of Riau Province.



Figure 0. Ar-Rahman Mosque Pekanbaru City

## Religion

Islam is the majority religion practiced by the people of Pekanbaru City. Some others embrace Christianity (Protestant and Catholic), Buddhism, Hinduism, and Confucianism are also found in this city.

From data from the Ministry of Home Affairs on June 30, 2024, the number of Pekanbaru residents based on the religion they adhere to is Islam, which is 84.52%. Then the population who adhere to Christianity is 11.86%, with details of Protestantism as much as 10.35% and Catholicism as much as 1.51%. Buddhism is practiced by 3.59% of Pekanbaru's population, the rest adhere to Hinduism as much as 0.02%, and Confucianism as much as 0.01%.

## Tourism

Pekanbaru City has several buildings with typical Malay architectural features, including the Riau Malay Traditional Hall building located on Jalan Diponegoro. This building consists of two floors, on the top floor are displayed several traditional expressions and articles of Gurindam Dua Belas by Raja Ali Haji, a writer of Bugis descent.

Then on Jalan Sudirman there is the Riau Cultural Park Building, this building functions as a place for various cultural and art activities of Riau Malay and other activities. Meanwhile, adjacent to this building is the Sang Nila Utama Museum, a Riau regional museum that has various collections of historical, art, and cultural objects.

In the Senapelan area there is the Pekanbaru Grand Mosque which was previously known as the Alam Mosque,[62] built around the 18th century with a traditional architectural style and is the oldest mosque in Pekanbaru City.

## The Population Density, Pekanbaru City

### KOTA PEKANBARU, RIAU

(Data per 30 Juni 2024)

Jumlah Kecamatan	15
Jumlah Kelurahan	83
Jumlah Desa	
Jumlah Penduduk	1,138,530
Kepala Keluarga	338,854
Perpindahan Penduduk	4,404
Jumlah Meninggal	333
Perubahan Data	944,465
Jumlah Wajib KTP	803,694
Jumlah Rekam Wajib KTP	803,694

#### Kelompok Usia

Usia 0-4 Tahun	76,228
Usia 5-9 Tahun	106,713
Usia 10-14 Tahun	108,948
Usia 15-19 Tahun	83,672
Usia 20-24 Tahun	95,291
Usia 25-29 Tahun	94,747
Usia 30-34 Tahun	95,142
Usia 35-39 Tahun	93,120
Usia 40-44 Tahun	93,338
Usia 45-49 Tahun	80,126
Usia 50-54 Tahun	68,300
Usia 55-59 Tahun	52,668
Usia 60-64 Tahun	38,328
Usia 65-69 Tahun	25,119
Usia 70-74 Tahun	14,597
Usia 75 Tahun ke Atas	12,193

#### Agama

Islam	962,266
Kristen	117,776
Katholik	17,226
Hindu	226
Buddha	40,901
Konghucu	45
Kepercayaan terhadap Tuhan YME	90

#### Penduduk

Laki-laki	572,270
Perempuan	566,260

#### Status Perkawinan

Belum Kawin	569,667
Kawin	515,135
Cerai Hidup	16,928
Cerai Mati	36,800

#### Pertumbuhan Penduduk

Lahir Tahun 2020	20,128
Lahir Sebelum Tahun 2020	1,062,302
Lahir Tahun 2021	19,454
Lahir Sebelum Tahun 2021	1,082,430
Lahir Tahun 2022	20,128
Lahir Sebelum Tahun 2022	1,101,884
Lahir Tahun 2023	19,454
Lahir Sebelum Tahun 2023	1,119,096
Lahir Tahun 2024	19,454
Lahir Sebelum Tahun 2024	1,134,332
Pertumbuhan Penduduk Tahun 2020	2%
Pertumbuhan Penduduk Tahun 2021	2%
Pertumbuhan Penduduk Tahun 2022	2%
Pertumbuhan Penduduk Tahun 2023	1%
Pertumbuhan Penduduk Tahun 2024	0%

#### Pendidikan

Tidak/Belum Sekolah	371,896
Belum Tamat SD	93,086
Tamat SD	84,977
SLTP	113,717
SLTA	321,102
D1 dan D2	9,128
D3	28,240
S1	105,575
S2	10,145
S3	664

#### Usia Pendidikan

Usia Pendidikan 3-4 Tahun	39,582
Usia Pendidikan 5 Tahun	20,767
Usia Pendidikan 6-11 Tahun	129,580
Usia Pendidikan 12-14 Tahun	65,314
Usia Pendidikan 15-17 Tahun	48,442
Usia Pendidikan 18-22 Tahun	92,530

#### Golongan Darah

Golongan Darah A	32,429
Golongan Darah B	32,848
Golongan Darah AB	14,055
Golongan Darah O	70,771
Golongan Darah A+	6,162
Golongan Darah A-	238
Golongan Darah B+	6,370
Golongan Darah B-	244
Golongan Darah AB+	2,228
Golongan Darah AB-	390
Golongan Darah O+	5,730
Golongan Darah O-	2,025
Golongan Darah Tidak Diketahui	965,040

#### Pekerjaan

Belum/Tidak Bekerja	402,530
Nelayan	227
Pelajar dan Mahasiswa	139,029
Pensiunan	8,687
Perdagangan	3,139
Mengurus Rumah Tangga	211,458
Wiraswasta	139,566
Guru	10,173
Perawat	1,656
Pengacara	312
Pekerjaan Lainnya	29

The population density in Pekanbaru City, the capital of Riau Province, continues to increase along with rapid economic growth and urbanization. As a business and industrial center, Pekanbaru attracts many immigrants from various regions to work and settle, so that the city's population continues to grow. This causes challenges in managing infrastructure, housing, and public services, especially in the city center area. Although this population growth reflects the dynamics of a growing economy, Pekanbaru needs to face the challenge of ensuring the quality of life of its citizens is maintained through sustainable and innovative city planning.

## DESIGN EVALUATION

### 5.2 Study, Analysis Of Building Typology & Design Issues Pekanbaru City

#### **Definition of Revitalization**

According to the Big Indonesian Dictionary (KBBI), revitalization is the process of reviving or reactivating.

Revitalization is the process of rejuvenating or restoring an area, building, or infrastructure that has experienced a decline in function, quality, or appeal, with the aim of reviving and improving its function. Revitalization aims to provide better social, economic, and aesthetic benefits to the community that uses or is around the area.

Revitalization is usually carried out on areas or buildings that have historical, economic, or cultural value, but are no longer functioning optimally for various reasons, such as declining building quality, changing community needs, or shifting regional functions. Revitalization projects often involve physical improvements, land use changes, and new developments that still respect existing historical or cultural values.

Some of the main goals of revitalization include:

- **Reviving economic activity:** Revitalization can help recreate economic centers or increase business opportunities in areas that have stagnated.
- **Cultural and historical preservation:** Many revitalization projects aim to preserve cultural heritage or historic buildings, while modernizing infrastructure to suit today's needs.
- **Environmental improvements:** Revitalization can improve public spaces, create more environmentally friendly areas, and improve the quality of life for residents in the surrounding area.
- **Developing tourism:** By improving historic areas or buildings, revitalization often attracts visitors and boosts the local tourism sector.

According to PU Regulation No. 18 of 2010 concerning Guidelines for Area Revitalization, revitalization is an effort to increase land value through redevelopment in an area that can improve the function of the previous area. Meanwhile, according to the Department of Settlement and Regional Infrastructure of the Ministry of PUPR, revitalization is a series of efforts to revive areas that tend to die.

In addition, revitalization is to increase the strategic and significant vitality values of areas that still have potential. Another meaning of revitalization includes controlling areas that tend to be chaotic due to degradation.

Revitalization has various aspects in its implementation. Here are three stages:

#### **1. Physical Intervention**

Physical intervention is carried out in stages, including repairing and improving the quality and physical condition of buildings, green planning, connecting systems, sign or advertising systems and open spaces in the area. In addition, environmental issues are important, so physical intervention should also pay attention to the environmental context.

#### **2. Economic Revitalization**

Short-term physical improvements to an area are expected to accommodate formal and informal economic activities. Thus, this can provide added value to the area.

#### **3. Social Revitalization**

Revitalization in an area will be measured if it is able to create an attractive environment, not just making a nice place. This activity must have a positive impact and can improve the dynamics and social life of the community/residents.

#### **Purpose of Revitalization**

Of course, revitalization has various purposes. According to the Muhammadiyah University of Surakarta (UMS), the purpose of regional revitalization is to increase the vitality of the built-up area. Improvement is carried out through urban interventions that are able to create local economic growth and stability, integrated with the city system, livable with social justice and cultural and environmental insight.

## Examples of Revitalization

Some examples of revitalization can be seen from the development in Jakarta. For example, the revitalization of Kota Tua and JPO Sudirman.

### 1. Revitalization of Jakarta's Old Town

After revitalization, Jakarta's Old Town tourism is increasingly connected to public transportation. This certainly makes it easier for visitors to move around. Old Town Tourism has also implemented a Low Emission Area.

This implementation aims to improve air quality around Old Town Tourism Jakarta. As a result, the number of motorized vehicles around the area is limited. Meanwhile, facilities for pedestrians are improved, for example, sidewalks are equipped with street furniture.

### 2. Revitalization of Sudirman JPO

The reason for the revitalization is because the existing structure of the JPO has been damaged and needs repair. In addition, this JPO is widely used by the public.

After being revitalized, the Sudirman JPO looks more beautiful with the Pinisi Ship theme. This bridge can also be a place to see the Jakarta city landscape from a height.

The JPO is equipped with a 3-ton capacity lift and a load sensor installed on the viewing platform. This sensor functions to limit people who are on the viewing platform. The JPO is also equipped with CCTV.

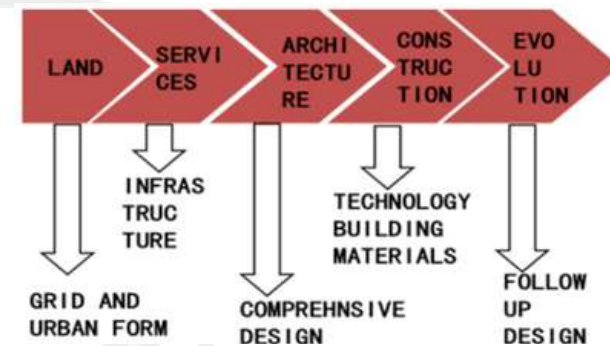
## Initial Of Design Idea

This research uses a mixed approach involving field surveys, interviews with several people, historical data analysis, and conceptual modeling. Quantitative and qualitative data were collected to evaluate social, economic, and environmental aspects of revitalization.

### 1. Revitalization Strategy

The revitalization process involves developing a master plan that maintains the original building structure while adapting it to contemporary needs. The use of green technology, public art and public facilities are introduced to create a sustainable and eco-friendly environment.

One of the best examples of industrial architecture from a bygone period is the Siak River Port Warehouse structure. The structure, with its massive windows, high ceilings, and robust brickwork, is a testament to the architectural style that was popular when it was built. Its historical value and roomy interior make it a prime choice for adaptive reuse, turning it into a multipurpose lifestyle space.



Source: Wainer et al. 2016

### 2. Revitalization Impact

The impact of revitalization on local communities involves increasing employment opportunities, improving the local economy through tourism, and increasing the community's sense of pride in their cultural heritage. Apart from that, this revitalization has improved the image of the city of Pekanbaru as an attractive lifestyle destination.

The PLA project hopes to accomplish the following important goals:

- 1. Preservation of Cultural Heritage:** Maintaining the Siak River Port Warehouse's historical and cultural relevance while adapting it for modern purposes.
- 2. Economic Stimulus:** Establishing a bustling center of commerce that draws companies, craftspeople, and entrepreneurs to promote economic expansion and local job creation.
- 3. Community Engagement:** Assuring that the PLA is a place that the people of Pekanbaru own and appreciate by promoting active community engagement.
- 4. Cultural Exchange:** Organizing celebrations of the diversity of Indonesian heritage through events, exhibitions, and performances.
- 5. Tourism Promotion:** Increasing tourism in Pekanbaru by providing guests with a distinctive experience and exhibiting the city's illustrious past and dynamic present.

## Definition of Adaptive Reuse

Adaptive Reuse is defined as an aesthetic process that adapts a building for a new use while maintaining its historical features. The use of an adaptive reuse model can extend the life of a building, from start to finish, by retaining all or most of the building's systems, including the structure, shell, and even interior materials." From this definition, it can be assumed that the core of the Adaptive Reuse approach is to utilize existing buildings, even quite old, which are mostly abandoned or unused, by filling them with new activities or activities that aim to revive the use of the building.

By city planners, the Adaptive Reuse approach is expected to be able to reduce the growth rate of new building construction, which is expected to reduce the urban sprawl and environmental impacts in the long term. The environmental impact caused by new construction is the need for an operational system in the field that requires a large amount of labor, materials, energy for construction implementation and unused material waste that becomes an environmental burden. Not to mention the problem of the availability of new land to accommodate the new building, which is increasingly rare along with city development.

By revitalizing or reviving abandoned (neglected) buildings, the existing building structure can be used for new purposes that become good resources for channeling goals for the community or its users and enlivening the environment where it is located to be useful and vital. By breathing new life into the structure of an abandoned building, especially one that has high historical significance, it can be transformed into something useful for the surrounding environment, especially by including functions that are in accordance with the development of the times so that it can attract the activity of the function with interesting users.

According to Yung and Chan, reusing existing building structures with an adaptive reuse approach is a new type of rebirth of a sustainable part of the city, because it can extend the service life of a building, avoid waste destruction, encourage recycling of the dynamism contained and provide social and economic benefits, even culturally, to the world of architecture and urbanism.

Adaptive reuse in the former Pelindo 1 Port area of Pekanbaru with a revitalization approach that aims to change the function of old buildings in the port area that are no longer active into cultural centers, public spaces, or commercial facilities, without damaging their historical value. This port area, which used to function as a distribution and trade center, has old buildings with a solid industrial character, but is now underutilized. With adaptive reuse, these structures can be revived with new functions, such as a Malay cultural museum, creative space, art gallery, restaurant, or creative economy center. The adaptive reuse process in this area not only maintains the historical architectural aspects, but also helps reduce the need for expensive new developments that have a major impact on the environment. This approach creates a balance between preserving Pekanbaru's historical heritage and meeting the needs of modern society. In addition, this revitalization will also strengthen the city's tourist attractions, as well as contribute to local economic and social development.

Adaptive Reuse or adaptive reuse is important for the sustainability and sustainability of the community or its users, as well as physically in the context of buildings used as containers for new activities. Things that are fulfilled from the application of Adaptive Reuse are:

### **1. Efforts to maintain cultural heritage**

Adaptive Reuse is considered as one of the efforts to maintain cultural heritage in the form of historical building artifacts, so that this effort can be considered as a form of preserving cultural and historical heritage. Utilization of old buildings, which could be left to rot or abandoned, with new functions can provide space for ideas for using buildings to be more interesting and alive and bring social and economic benefits.

### **2. Slowing down the spread of the city**

New development is very likely to find a new location outside the city, considering that the city center is already filled with old buildings, as well as historical buildings, so that there is very little available empty land. The spread of development that is increasingly moving away from the city center, more or less will become the spread of the city (urban sprawl) which can have various impacts, such as pollution, excessive increase in transportation (and fuel), excessive use of materials, use of energy that is not environmentally friendly and high infrastructure needs.

The adaptive reuse approach will bring several benefits or advantages, including:

### 1. Lower construction costs

The expenditure on new materials will clearly be much less than the construction of new buildings. Costs will be needed for the use of labor. Demolition costs can also be reduced, although this will depend on the existing condition of the old building. Not to mention if government policies have incentives and relief for historic building taxes, or credit for historic development, of course this can ease the burden on owners or builders.

### 2. Shorter processing time

Repairing and rehabilitating old buildings, even if they are abandoned, will still be faster than building new buildings. Even when construction is still ongoing on one part of the building, the other parts of the building can still be operated for the public.

### 3. Increasing awareness and popularity of buildings

Communities and society will gain awareness that old buildings, especially historical ones, still have high value with the adaptation of new functions. Moreover, if it is used for creative functions, the creative community will consider it a popular choice and increase the value of rehabilitation and preservation of buildings and history and can even become a landmark or creative icon.

Adaptive Reuse Example

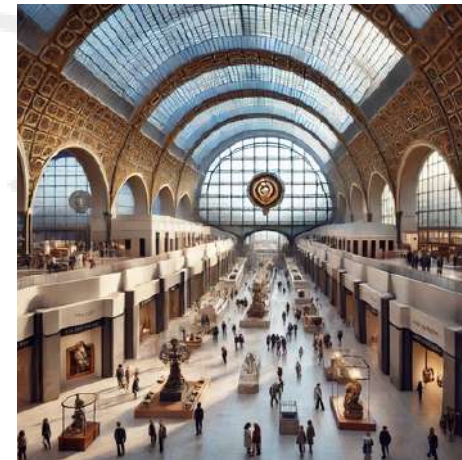
### 1. Industrial Building Becomes Creative Space



Unused industrial buildings are often converted into creative spaces as a form of **adaptive reuse**. This process preserves the original character of the building, such as brick walls or steel structures, while adding modern elements such as glass and artistic murals.

Creative spaces typically include co-working spaces, art galleries, studios, and exhibition spaces, and are designed to support artistic collaboration and innovation. These transformations provide benefits such as preserving historic buildings, creating inspiring environments, and boosting the local economy by attracting artists and visitors.

### 2. Old Train Station Becomes Museum



One of the most famous examples of a train station converted into a museum is the Musée d'Orsay in Paris, France. Originally built as a train station in 1900, the building was converted into an art museum in 1986.

The building's distinctive features, such as the large clock, glass roof, and ironwork, were retained, creating a unique atmosphere that combines history with art. Today, the Musée d'Orsay is home to the world's largest collection of impressionist and post-impressionist art, featuring works by Monet, Van Gogh, and Degas.

### 3. Old Churches Turned into Libraries or Hotels

Old churches that are no longer used as places of worship are often converted into libraries or hotels without removing any of their original architectural elements. This transformation is a form of adaptive reuse that honors history while also providing a new function to meet modern needs.

#### 1. Old Churches Turned into Libraries

- Elements such as stained-glass windows, high vaulted ceilings, and stone walls are retained.
- The interior is filled with bookshelves, reading rooms, and research areas.
- Famous examples: The Selexyz Dominicanen Library in Maastricht, Netherlands, which is a library inside a 13th-century Dominican church.

## 2. Old Church Turned Hotel

- Original structures such as altars and pillars are kept creating a unique atmosphere.
- Spaces are converted into guest rooms, restaurants, or halls.
- Example: The Church Hotel in Dublin, Ireland, which offers a luxurious stay inside an old church.

## Definition of In-Fill Design

In-fill design is an approach in architecture and urban planning that utilizes vacant or unused land in the middle of an already developed urban area. This approach aims to optimize the use of existing space, reduce uncontrolled urban expansion (urban sprawl), and create denser, more connected, and more sustainable environments.

### Main Characteristics of In-Fill

#### 1. Design Limited Land

- Utilization Building on vacant land, former buildings, or inter-building spaces in existing urban areas.

#### 2. Integration with the Surrounding Environment

- The design must be harmonious with the surrounding architectural, cultural, and functional context.

#### 3. Sustainable Approach

- Using existing resources, minimizing the need for new infrastructure, and reducing the consumption of new land.

#### 4. Increased Density

- Supporting vertical or multifunctional development to maximize space without expanding horizontal areas.

### Benefits of In-Fill Design

- **Space Efficiency:** Utilizing vacant land in urban areas for beneficial purposes such as housing, public space, or commercial facilities.
- **Reducing Urban Sprawl:** Helping to protect surrounding areas from being converted into new built areas.
- **Enhancing Connectivity:** Improving relationships between buildings or neighborhoods through integrated design.
- **Enhancing City Character:** With the right design, in-fill design can enhance the aesthetics and function of an area.

### Examples of In-Fill Design Applications

#### 1. Urban Open Space:

- Converting vacant land into parks, plazas, or public spaces.

#### 2. New Facilities in Old Areas:

- Adding buildings such as schools, community centers, or commercial facilities to an already developed area.

#### 3. Revitalizing Historic Areas:

- Building modern structures amidst older buildings with designs that respect the historical context.

### In-Fill Design Challenges

- Maintaining balance between new design and surrounding context.
- Dealing with land constraints, regulations, or local community resistance.
- Designing infrastructure that supports higher densities.

In-fill design is essential to modern city planning because it helps create more sustainable, dynamic, and connected urban environments.

### Conclusion and Relevance for Pelindo 1 Port Pekanbaru

The design precedents above show how **adaptive reuse and infill design** approaches can be used to transform historic buildings that have industrial or commercial functions into cultural hubs. In the case of **Pelindo 1 Port, Sungai Siak Pekanbaru**, a building that used to function for trade and industry activities can be transformed into a cultural hub in a similar way:

1. **Integrating the history of the port** into the design of public spaces that serve as venues for cultural activities such as art, exhibitions, and social events.
2. **Maintaining local cultural values**, such as Malay culture, by adapting a design that maintains the authenticity of the building's historical elements and adding modern elements for cultural functions.
3. Using infill design to introduce **flexible spaces** that can be adapted to the **needs** of the growing **community and culture**, as well as providing better **accessibility** to the public.

This project can inspire the revitalization of Pelindo 1 Port by utilizing historical values as the basis for developing an area that enriches the cultural and social life of the Pekanbaru community.

## DESIGN EVALUATION

### 5.3 Property Size

No.	Department	Group	Room Name	Room Capacity (Person)	Room Dimensions (m2)
1. Creative Room	Fashion Sector		Fashion Department	7	132
			Ruang Mesin Produksi	7	120
			Ruang Penyimpanan Produk	2	40
			Ruang Workshop	7	140
	Art Sector		Studio Tari	20	140
			Studio Musik	20	147
			Studio lukis	25	100
	Culinary Sector		Cafféteria	15	60
			Tenant	100	350
	2. Entertainment	Office Sector		Co-working Space	30
Education Sector			Perpustakaan	10	180
			Ruang Diskusi	10	100
			Auditorium	300	1100
Exhibition Sector			Ruang pameran	45	704
			Merchandise (souvenir) Shop	20	90
			Amphitheater	180	80
			Museum	50	90
3. Penerimaan	Entrance		Pos Satpam	5	9
			Drop off Area	3	60
			Lobby utama	15	80
4. Pengelola	Head Division		R. Ketua Pengelola	1	30
			R. Sekretaris	2	24
			R. Administrasi	2	88
	Source and Event		R. Div. Pameran dan Event	2	60
			R. Div. Pengembangan Desain dan Bisnis Kreatif	2	60
			R. Div. Teknologi Informasi dan Manajemen Fasilitas	2	48
	Support		R. Rapat	15	156

5. Service	Logistic	Loading Dock	15	255
		Gudang Penyimpanan Bahan	3	40
		Ruang Keamanan	2	50
	MEE	Ruang Staff ME	1	30
		Ruang Genset	1	40
		Ruang Panel	1	35
		Ruang Sampah	2	10
6. Support	Staff	Ruang Janitor	5	30
		Gudang Penyimpanan Bahan	3	12
	Public	Toilet Pengunjung	15	47
		Tangga Darurat		72
		Titik Kumpul		
		Jalur Evakuasi		
		Parkiran		
Promenade				

## DESIGN EVALUATION

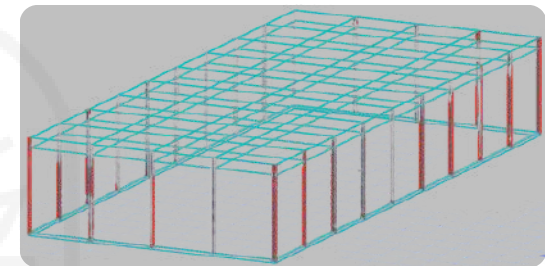
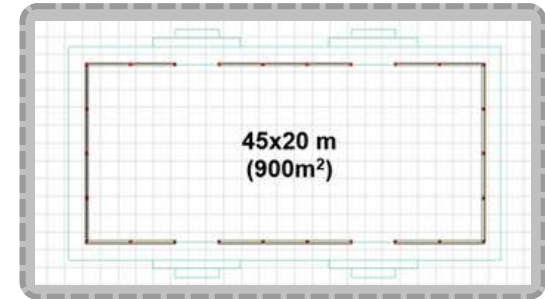
### 5.4 Existing Building

In the existing condition of the remaining construction of the former warehouse building of the former port of PELINDO 1, Siak River, which is still sturdy, but on the outer wall there is a plastering section that has begun to erode and the brick structure is still sturdy.

while for the inside, only the floor has been damaged due to loading and unloading activities during its time.



The Port Warehouse Building existing 3D Model



This former port warehouse building has dimensions of 45x20m and 35x35m using a steel frame structure as the main structure.

#### Structure Building at former Siak River Port

STRUCTURE	EXISTING	ANALYSIS
Floor		Condition of the floor, interior walls, and steel columns of the former port warehouse building.
Wall Outside-Inside		Condition of the floor, interior walls, and steel columns of the former port warehouse building.
Door		The door itself is severely rusted and difficult to reuse. It will be replaced with a more practical one.
Structure Roof		The condition of the roof frame structure, steel structural connections, and light circulation in the former Siak River port warehouse building.

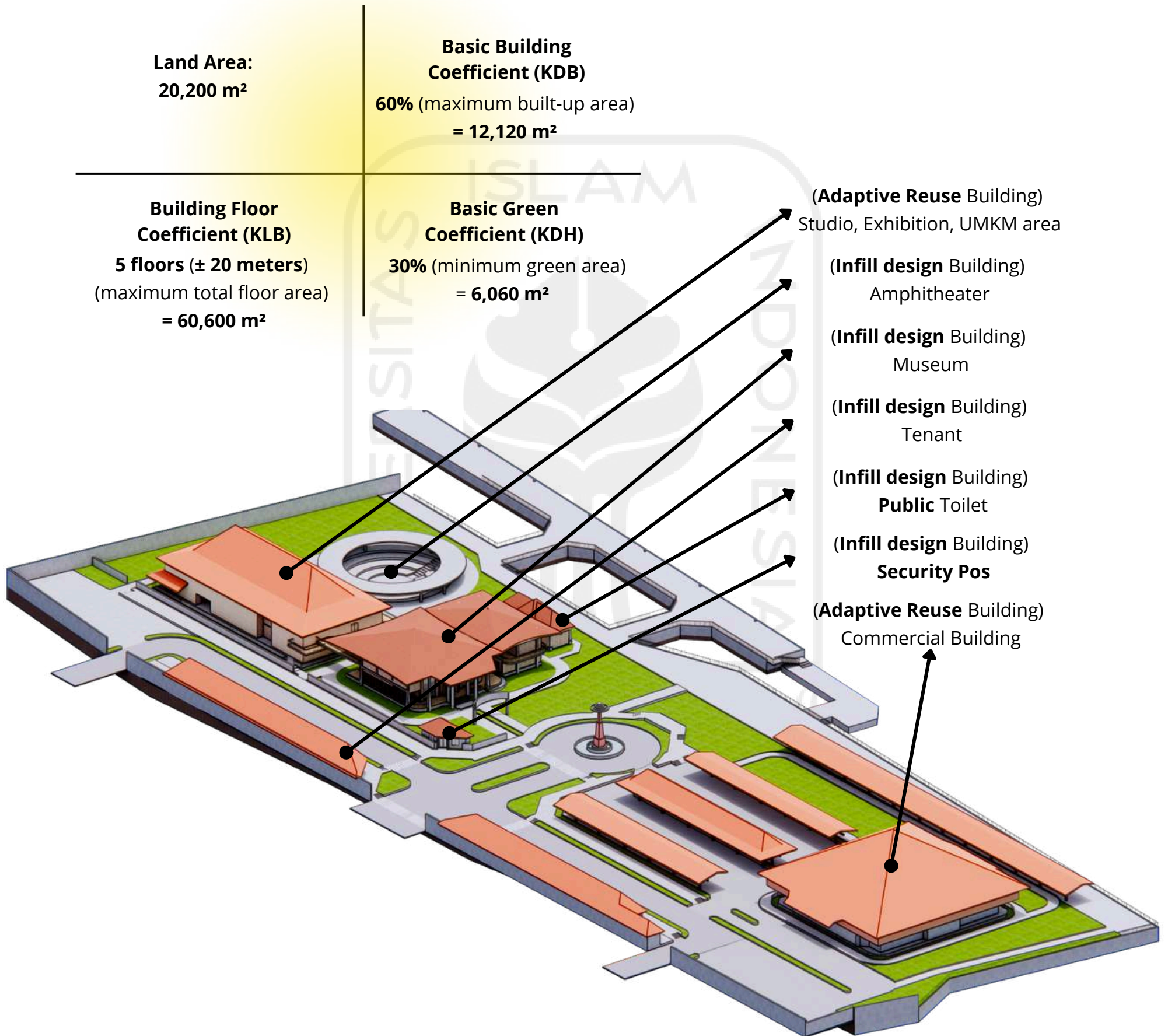
# Situation and Existing on the site at former Siak River Port



# AXONOMETRY SITE

## DESIGN EVALUATION

### 5.5 Axonometry Site





The following is a visual depiction of the studio space in the adaptive reuse building, which has a mezzanine floor at the rear, allowing for larger audiences and viewing from different angles.

**VISUALIZATION**  
**EXHIBITION AND OFFICE (ADAPTIVE REUSE)**

**RENDERING**



Below is a visual depiction of the exhibition space in the adaptive reuse building, which features a mezzanine floor for displaying more artwork. There's also a co-working space available for rent and use as a comfortable office.

## VISUALIZATION UMKM SPACE (ADAPTIVE REUSE)

RENDERING



The following is a visual depiction of the MSME market located in an adaptive reuse building with a mezzanine floor. The lower level is a market area selling various MSME products typical of Pekanbaru and some traditional Malay dishes. The mezzanine provides a relaxing area for enjoying food and snacks.

VISUALIZATION  
MUSEUM (INFILLDESIGN BUILDING)

RENDERING



VISUALIZATION  
MUSEUM (INFILLDESIGN BUILDING)

RENDERING



MINI LIBRARY



SOUVENIR STORE

VISUALIZATION  
COMMERCIAL BUILDING (ADAPTIVE REUSE)

RENDERING



The following is a visual depiction of a multipurpose (commercial) building located in an adaptive reuse building with two floors. The ground floor can be used for various activities or events, such as weddings, seminars, community events, sports, etc. The second floor also has space to accommodate more spectators and provide viewing from different angles.



The following is a visual depiction of the amphitheater located between the studio and museum buildings, which is shaped like a tribune at the bottom and a guard post at the top so that it can accommodate more spectators and can see from a different perspective and enjoy the riverside atmosphere.

# BIBLIOGRAPHY

- <https://eprints.ums.ac.id/102020/11> CO-LIVING DAN CREATIVE HUB DI SOLO BARU DENGAN PENDEKATAN ARSITEKTUR RAMAH LINGKUNGAN
- S Gandini, Alessandro (2015) The Rise of Coworking Spaces: A Literature Review. *Ephemera: Theory And Politics in Organization*, 15 (1). Pp. 193-205. ISSN 2052-1499 [Article]
- [https://id.wikipedia.org/wiki/Kota\\_Pekanbaru](https://id.wikipedia.org/wiki/Kota_Pekanbaru)

## Revitalization & Adaptive Reuse

- <https://pdfs.semanticscholar.org/80b9/2a7ac37781426b843c35f599465c0d51f1ff.pdf>
- <https://media.neliti.com/media/publications/173286-ID-strategi-penerapan-konsep-adaptive-re-us.pdf>
- 

## Pelindo 1 Siak River Port

- <https://idalamat.com/alamat/476775/pelabuhan-pelindo-i-pekanbaru-pekanbaru-riau>
- <https://www.liputan6.com/bisnis/read/4351921/pelindo-i-layani-bongkar-muat-48177-kontainer-di-pekanbaru?page=2>
- <https://jdih.maritim.go.id/permenhub/2022/permenhub-no.-40-tahun-2022>  
Menteri Perhubungan Republik Indonesia

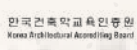
## Precedent

- <https://www.azuremagazine.com/article/new-culture-hub-netherlands-dutch-architecture/>



UNIVERSITAS  
ISLAM  
INDONESIA

## PROGRAM STUDI SARJANA ARSITEKTUR





**UNIVERSITAS  
ISLAM  
INDONESIA**

## **REVITALIZATION DESIGN**

**Siak River Port Pekanbaru City, Riau As A Melayu Cultural Hub In The  
Former Port Area With An Adaptive Reuse Approach & In-Fill Design**

**Robby Setiawan  
20512150**

