

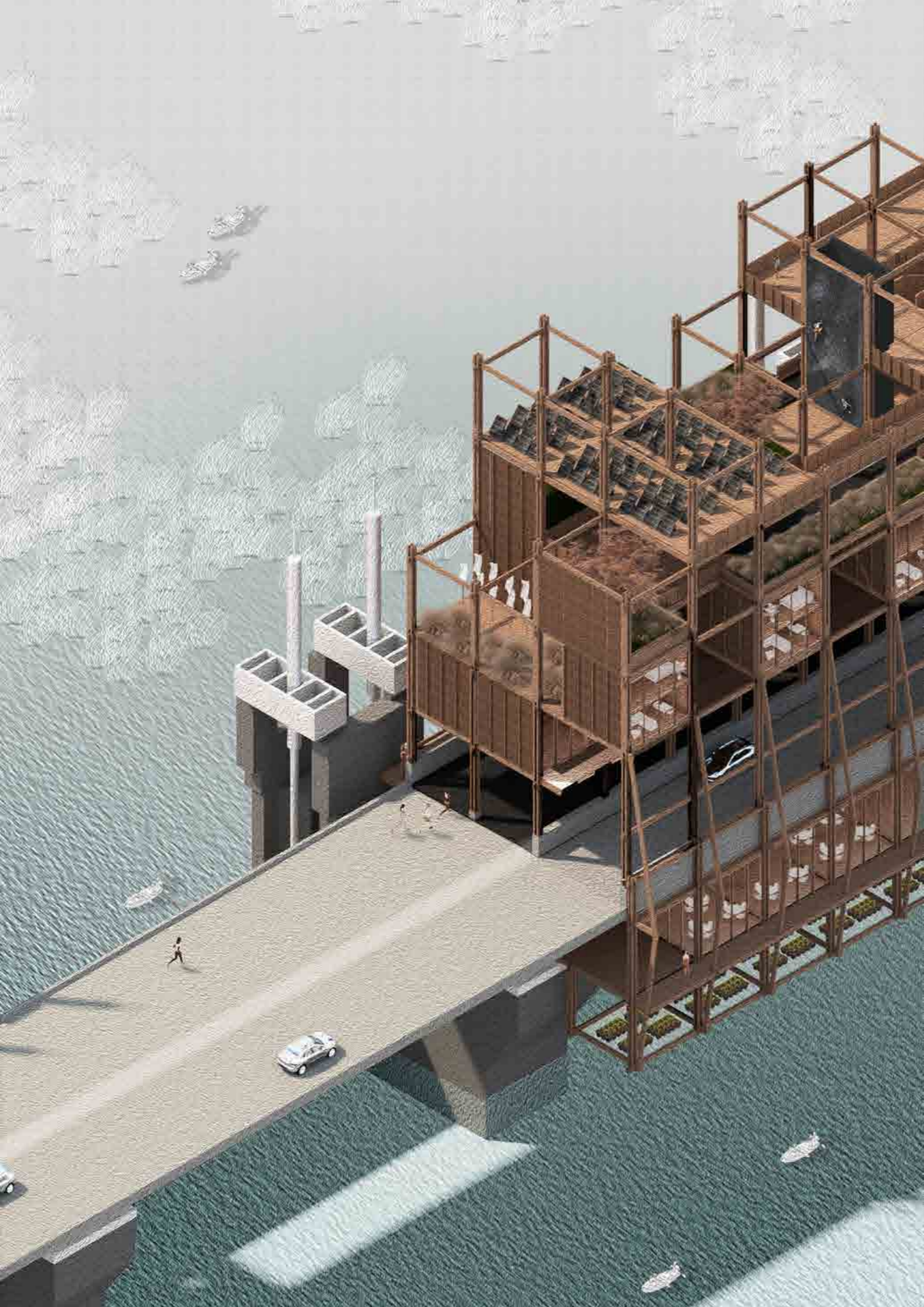
ARCHITECTURE  
PORTFOLIO

*Selected works*  
2016 - 2023

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- Min -

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## 01

### The Living Barrier

The architectural adaptation of Zeeland's existing flood barriers through new biodiversity synergies.

Location: Oosterscheldekering , Zeeland, The Netherlands.

Type: Academic Project / Master Thesis / Individual Work

Year: 2022-2023

 Pre-selection of Academic year 2022 - 2023  
BK-Archiprix 2024.  
Delft University of Technology, The Netherlands

#### Keywords

Sea level rise, The Delta works, Flood barriers, Future adaptation, Adaptability, Multifunctionality, Hybridity.

The living barrier is the project investigating the further innovative stages, and future adaptation of the existing flood barriers in the Delta works dealing with the acceleration of the rising sea level. A consequence of the elevated water level would entail the Zeeland estuaries' permanent closing and the ecological cycle's termination. The project explores how to maximize the potential of multifunctionality and hybridity of the existing flood barriers on all scales and how this potential can help with future adaptation and Sea level rise while supporting Zeeland's local economy and ecosystem.

To cope with the unpredictability and volatility of the future, architectural adaptation throughout time, from the urban scale to the detail, is becoming increasingly vital. The prototype approach could potentially be customized for different conditions, places, and purposes, which would be the future alternative for the architectural world.

## COASTAL REGION AND THE SEA LEVEL RISE

Due to the geographical location of the Netherlands, about one-third of the ground is below sea level in Dutch history. Consequently, the Netherlands inevitably has to cope with the tidal current and water level uncertainties. For more than 600 years since the 14th century (History | Dutch Dikes, n.d.), natural barriers such as “Dikes” were operated to protect the country from the water. These circumstances drove the Dutch to have flood control and land reclamation expertise. Nevertheless, that is before climate change. At the beginning of climate change, formed in the early 19th century (IPCC, 1988), an uncontrollable greatest catastrophe struck and devastated part of the Netherlands in 1953 from the North sea. The extreme floods in the Netherlands’ southwestern delta, especially in the Zeeland region, are the turning point of the outstanding Dutch achievement in flood protection. “The Delta works.” The massive project includes three locks, six dams, and four storm surge barriers to cope with the future extreme disaster (Ministerie van Infrastructuur en Waterstaat, 2021). From 1960 to 1987, 13 flood barriers were built, safeguarding the Dutch coast from the sea for more than 60 years. Eventually, flood protection in the Netherlands was never complete due to the dynamic change of the future. If one day all these flood barriers reach their capacity and expire due to the material and structure life span. The next innovation step must be taken into account.

- |                   |                        |
|-------------------|------------------------|
| 01 Algerakering   | 08 Oosterscheldekering |
| 02 Zandkreekdam   | 09 Philipsdam          |
| 03 Volkerakwerken | 10 Oesterdam           |
| 04 Veerse Gatdam  | 11 Markiezaatskade     |
| 05 Gravelingendam | 12 Bathse Spuisluis    |
| 06 Haringvlietdam | 13 Hartelkering        |
| 07 Brouwersdam    | 14 Maeslantkering      |

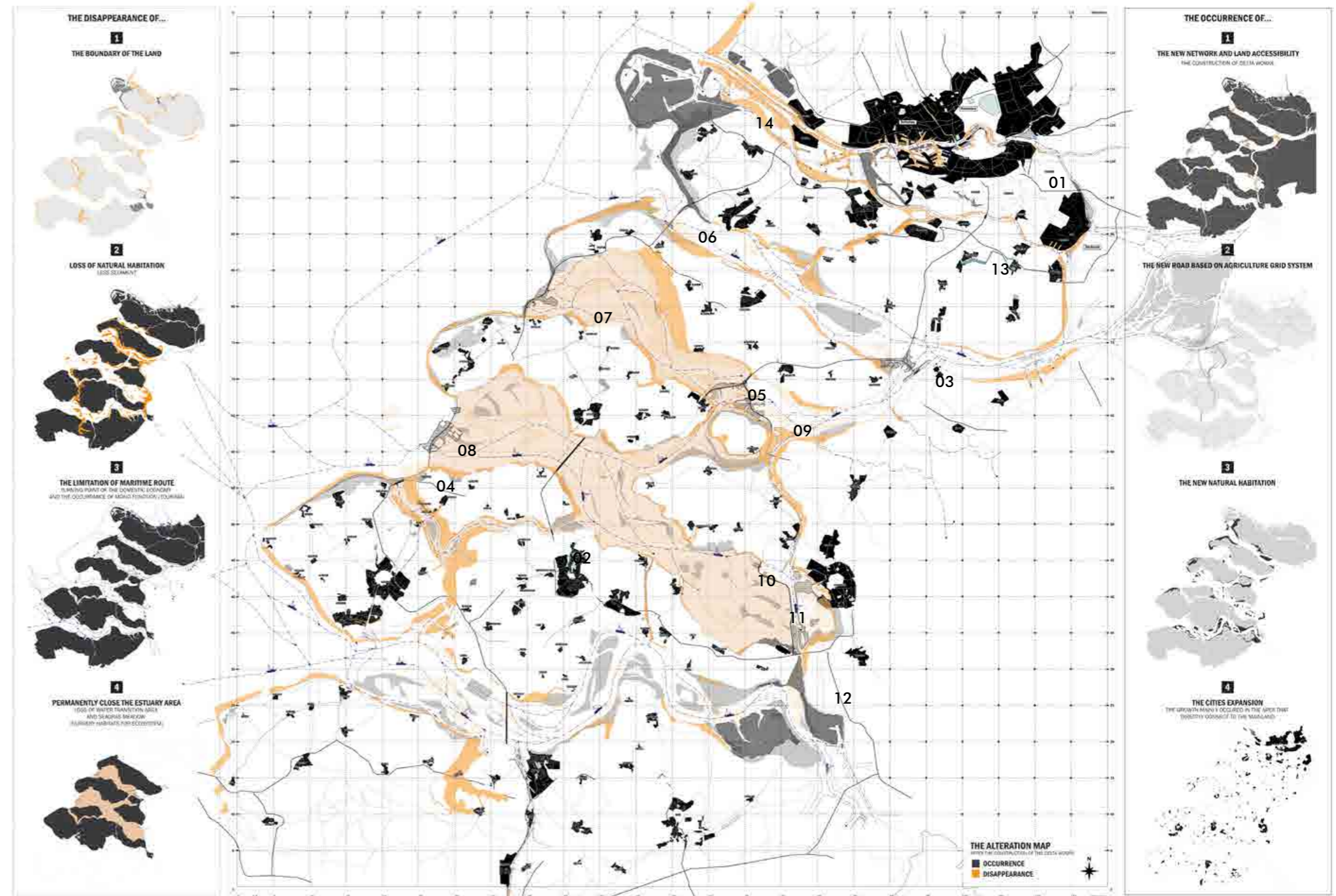
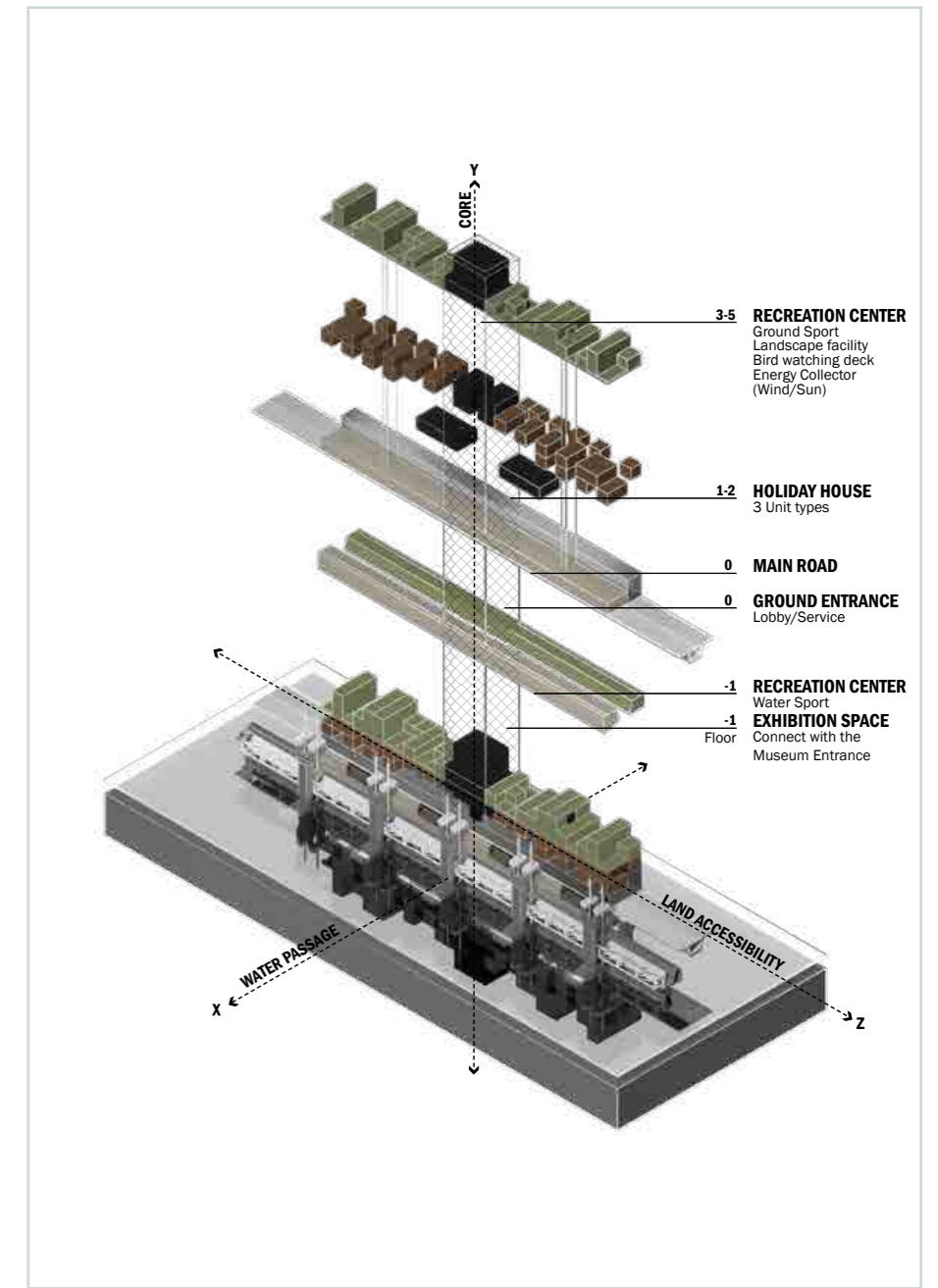
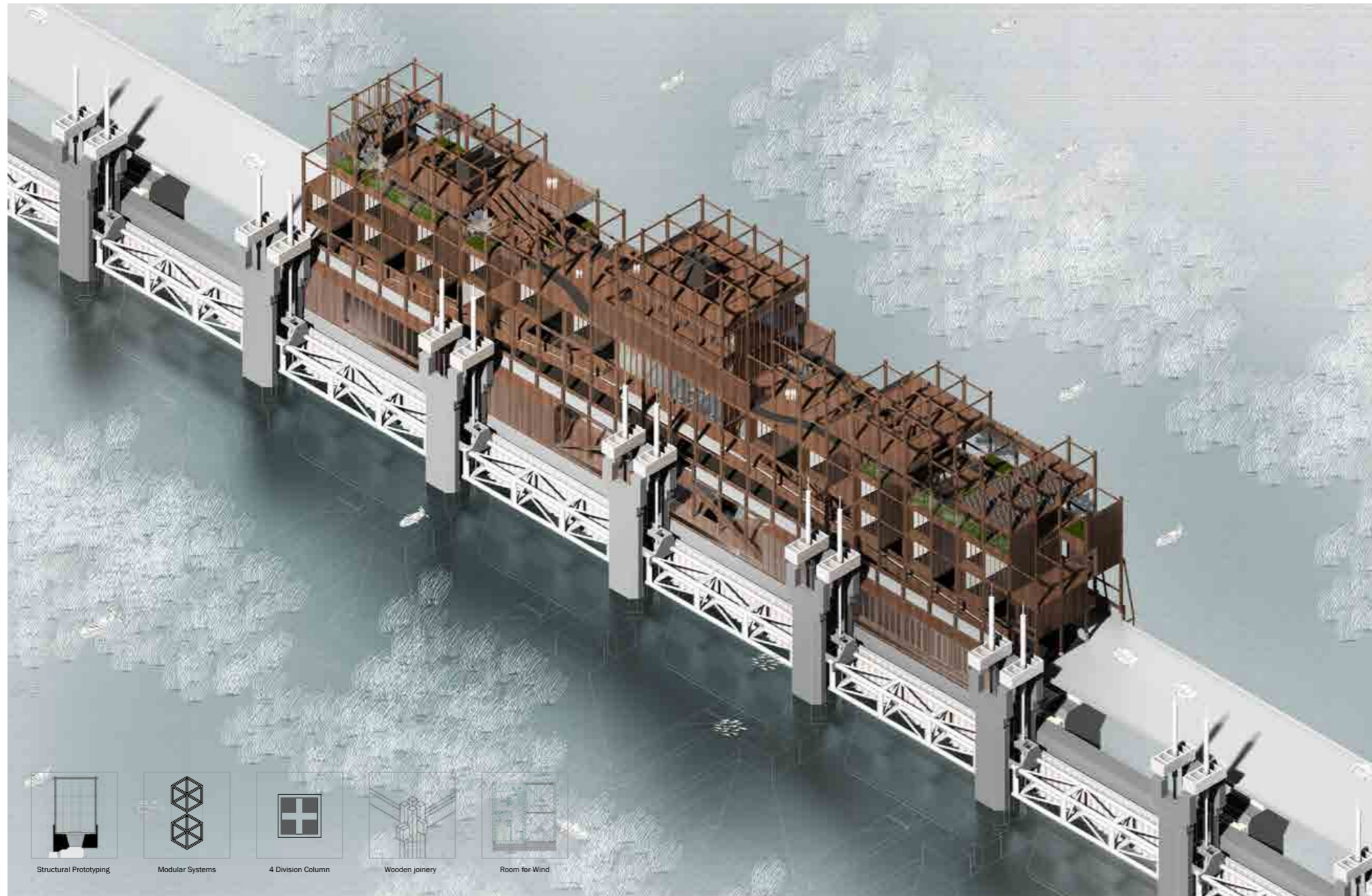


Figure: The alteration mapping before and after the Delta work construction in Zeeland — illustrator: the author  
Source: The Storm Surge Barrier in the Eastern Scheldt: For Safety and Environment, (n.d.)



**“DAM NEVER ONLY JUST A DAM ”**

*It always combined with other function such as infrastructure.*

**Multifunctionality**

**“How to maximize the potential of multifunctionality of the existing flood barriers on every scale?”**

In order to explore how this potential can helps with the future adaptation, Sea level rise and at the same time support the local economy and ecology of Zeeland.

Multifunctionality is a central topic of the design phase, uncovering the potential for future adaptation of the existing flood barriers. The beginning of the study is to identify a case study of infrastructure that provides more than simply transportation. The preferred case study is the Ponte di Rialto in Italy, the Kraanspoor in the Netherlands, and Refurbishment Viaduct Arches in Switzerland. Three of these case studies exemplify multifunctionality by applying and reusing the massive infrastructure. The methodology from these case studies inspires the topic of this phase. Such is multi-function, the second life of the existing structure, and densification. All these methods could be a solution for the new adaptation.

The third stage of the study is the transition between research and design, in which the research finding intentionally overlaps both parts. Following the conclusion of the principle of the Delta works in phase one and the relationship to the surrounding in phase two, the last step investigates the possibilities of integrating the current structure with the new multifunctionality. This phase’s data is derived from the two preceding phases and experimental design with the existing structure. Regarding site selection, the subsequent step thoroughly analyzes the specified flood-barrier dimensions, components, and materials and evaluates the potential uses for the location. According to the research about biodiversity relationship in phase two, the

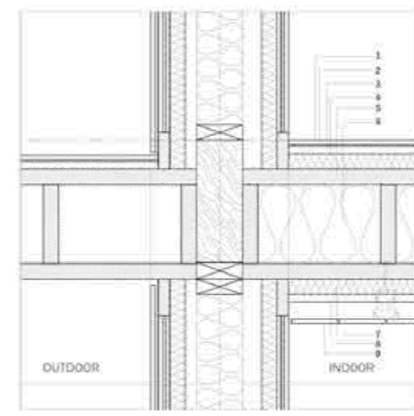
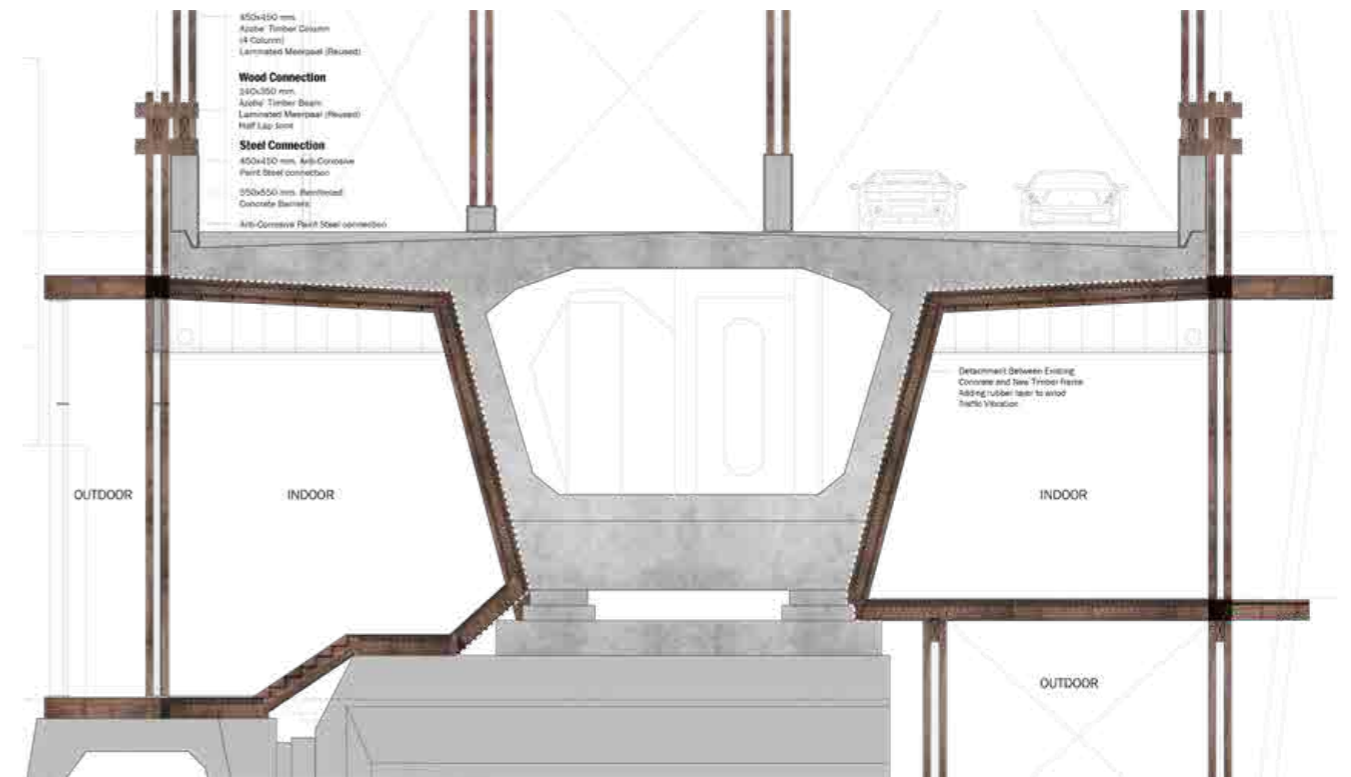
inquiry of the function includes human, animal, and plant users. The desired outcome is a list of functions associated with the site and surroundings, such as the principal function in the city, Zeeland’s local function, and animal and plant function. Ultimately, the experimental of spatial and operation is the research by design. First, initiate the spatial experiment by defining the space above, below, in between, and around from barriers proportion. Then, after understanding all the information about the current structure, new possible functions, and space. All these data will experiment with the three operations of the flood barriers, which are to strengthen the components, remove some of the barriers for the water flow, or adapt to the new multi-functions.



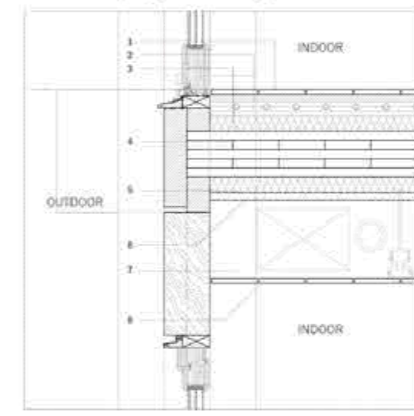
OVERALL GRID SYSTEMS	MAIN STRUCTURE	INFILL
MAIN STRUCTURE	UPPER STRUCTURE	UNDERNEATH STRUCTURE
CONSTRUCTION TYPES ORDER ASSEMBLY	CUSTOMIZED	MODULAR SYSTEMS
JOINERY	WOOD CONNECTION	STEEL CONNECTION
FLOOR SYSTEMS	KERTO-RIPA	CLT
THREE CORE LOCATION BRACING	MAIN CORE	2 SUPPORT CORE

## STRUCTURAL STABILITY | HYBRIDITY

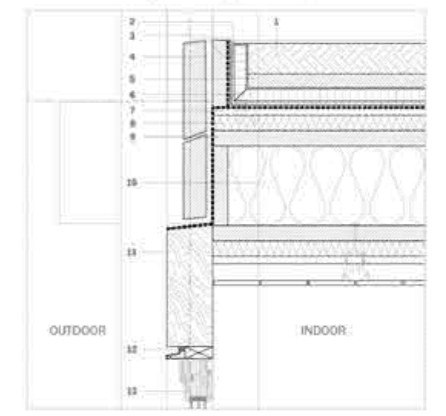
In order to construct the architecture of the current flood barrier in response to harsh weather conditions such as high winds and storms, structural stabilization is required. The hybrid systems' two diverse qualities are the keys to coping with nature's dynamic.



- KERTO-RIPA DETAIL**
- |  |   |
|--|---|
| 1 Wooden Floor   | 5 360 MM Kerto-Ripa Floor Systems (3 Ribs)                  |
| 2 Polyester Membrane   | 6 Thermal Insulation  |
| 3 Gypsum Board (ceiling)                                       | 7 Sound insulation Wood Fiber density 100 kg/m <sup>3</sup> |
| 4 Sound insulation<br>Wood Fiber density 100 kg/m <sup>3</sup> | 8 Plaster Board   |
|  | 9 Wooden Cladding for interior                              |



- CLT FLOOR DETAIL**
- |  |  |
|--|--|
| 1 Wooden Floor   | 5 Insulation<br>Wood Fiber density 200 kg/m <sup>3</sup> |
| 2 Heating Floor  | 6 Plaster Board  |
| 3 Insulation Wood Fiber<br>density 200 kg/m <sup>3</sup> | 7 Air  |
| 4 250 MM CLT Panel - 5 Layer                             | 8 Utility Systems (HVAC Duct/ Pipe)                      |



- GREEN ROOF DETAIL**
- |                                  |  |
|----------------------------------|--|
| 1 Planting Ground cover          | 8 Sound insulation<br>Wood Fiber density 300 kg/m <sup>3</sup> |
| 2 Geo-Fabric Layer               | 9 300 MM KERTO-RIPA System                                     |
| 3 Waterproofing/Protection Layer | 10 Thermal insulation  |
| 4 Overflow                       | 11 150x400 mm, 400x400 Wooden Beam                             |
| 5 Fresh water Carrier Sand       | 12 Stainless Steel Flashing                                    |
| 6 Drainage Cells                 | 13 Polystyrene insulation                                      |
| 7 Gypsum Board                   |  |






## 02

### Architecture on duplexity.

Customisation and Prototype: Structural experimenting on the two identical systems.

Location: Sanamchai Station, Bangkok, Thailand.  
Type: Academic Project / Bachelor Thesis / Individual Work  
Year: 2015-2016

 **Second Prize in Archiprix SEA 2016.**  
Hunter Douglas Awards  
National University of Singapore.

 **Best of Architectural Design.**  
Degree Show 2016  
Bangkok Design Festival, held by Art4d.

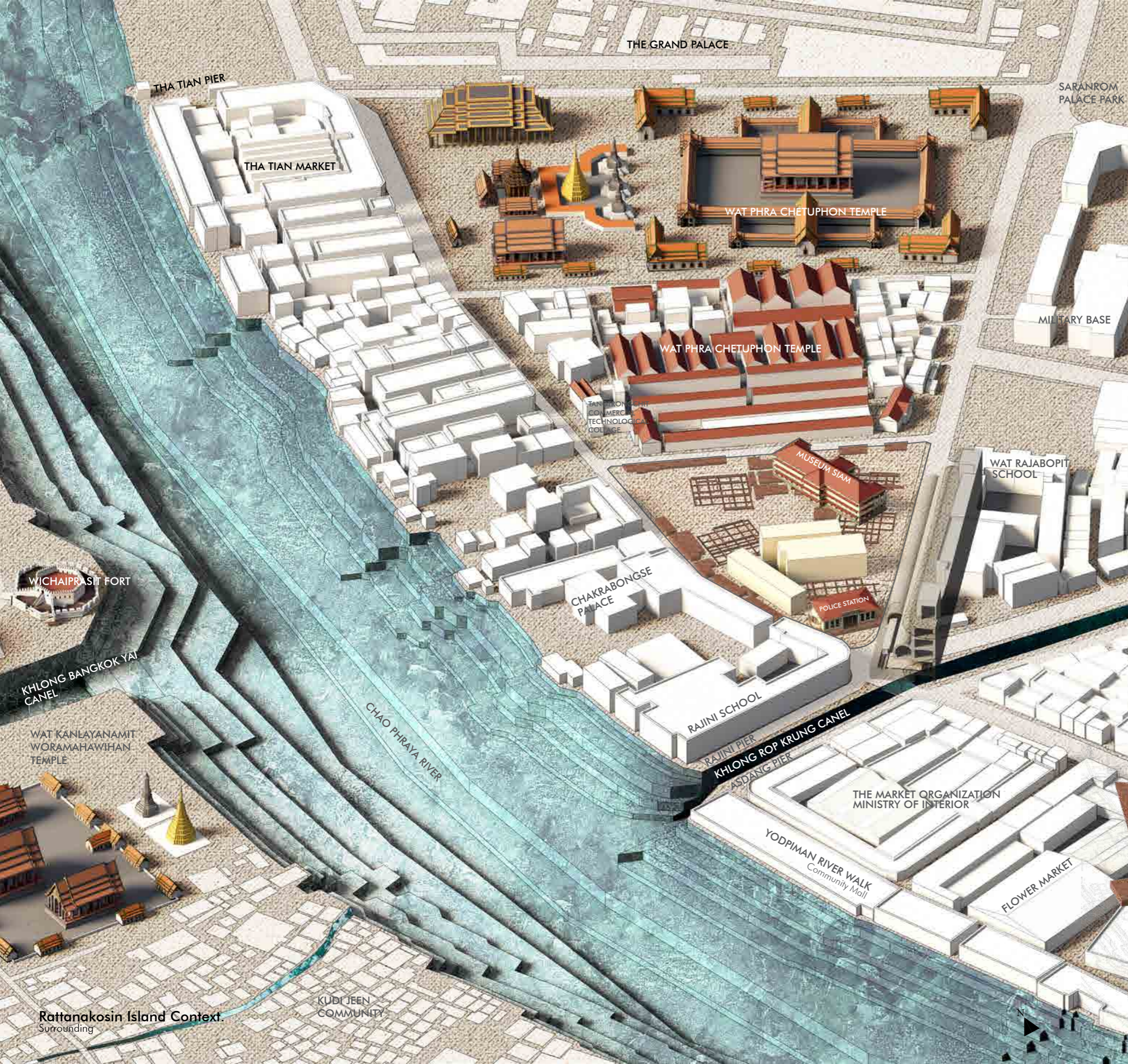
#### Keywords

Museum Siam, Metro station, Archaeological sites, Integration.

Some architecture, especially, on common building typology is always treated as a typical prototype and has always been repeatedly applied to different sites under different context. The obvious is the metro station. What if the architecture has been designed under the condition of surrounding concern and the limitation of architecture ?

The thesis will propose a concern on the duplexity of context that sits in - between the delicacy of preservative historical area (Wang tai wat phrachetupon palace) and the massive construction of metro station (Sanamchai station). It will be an experiment on how to integrate criteria in architecture that are very crucial but being neglected and to be equipped with customization method.

The case in point are raising the conditions in archaeological site and the complexity between construction methods which present to the metro station and finding the appropriateness of such construction for the historical site. The customization - method is divided into three parts which is Exhibition zone, Common zone and Metro Station. The proposal will expose the history of the area that people could recognize its historical space in every part of the site and also could experience them along their movement from the station in order to turn it into the gateway of "Rattanakosin Island"



## THE HISTORY OF ARCHITECTURE IN RATTANAKOSIN ISLAND.

Rattanakosin (AD 1789), Bangkok's historical district along the Chao Phraya River in Phra Nakhon district, centered around the Grand Palace, the Wat Phra Kaew, and the Wat Pho. Location of the site was on a triangular-shaped piece of land at the meeting point of Sanamchai road and Maharat road.

### INFRASTRUCTURE

(AD 2019 - PRESENT)  
Sanam Chai Metro Station.  
Depth level: -30.00 m.

### CONSERVATION BUILDING

(AD 1921 - 2004) 99 years  
The Ministry of Commerce  
(AD 2004 - Present)  
The National Discovery Museum Institute (Museum Siam)  
Depth level: +0.00 m.  
The Ministry of Commerce building was built for the founding of the new ministry in 1920 by order of King Rama VI, the government hired an Italian architect, Mr. Mario Tamagno. Construction commenced in 1920 and completed in 1922. The architecture and decorations are simplified Italian Renaissance style which was designed more simply, being popular in early 20th century. After that Ministry of Commerce still here until 2004 was moved to Nonthaburi, then this land turn into Museum Siam until now.

(AD 1941 - Present) 79 years  
The Phrasachawang police station  
Depth level: +0.00 m.

### ARCHAEOLOGICAL SITE

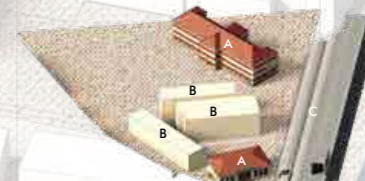
(AD 1800-1910) 220 years  
The area of 5 palaces behind Phra Chetuphon temple  
(Wang tai wat phrachetupon palace)  
Depth level: -2.00 to -5.00 m.  
Part of Department of the Ten Traditional Thai Crafts  
1. Prince Krommaluang Adisorn Udomdej's Palace. (Depth level: -5.00 m.)  
2. Prince Bodinthara Phaisansophon's Palace. (Depth level: -5.00 m.)  
3. Prince Krommamuen Thiwakorn Wongprawat's Palace. (Depth level: -4.00 m.)  
4. Prince Krommakhun Pumindharapakdee. (Depth level: -4.00 m.)  
5. Prince Krommamuen Naruban's palace. (Depth level: -3.00 m.)

(AD 1632-1782)  
The site of a fortress of Bangkok (Pom Wichayen)  
Depth level: -10.00 m.

Modern fortresses of European style were built in the reign of King Narai the Great on both sides of Chao Phraya River. As for the construction, M. Chevalier de Forbin, a French naval officer, was hired to plan and take charge of the construction under supervision of Mr. Constantin Falcon (Chao Phraya Wichayen), Greek Ayutthaya a noble officer. The site of a fortress of Bangkok, or Pom Wichayen, on the Phra Nakhon side had become the location of Ministry of Commerce and the National Discovery Museum Institute nowadays.



**THE MOST RELEVANT ARCHITECTURE ON SITE**  
[ A. Conservation Building ]  
[ B. Archaeological Site ]  
[ C. Metro Station ]



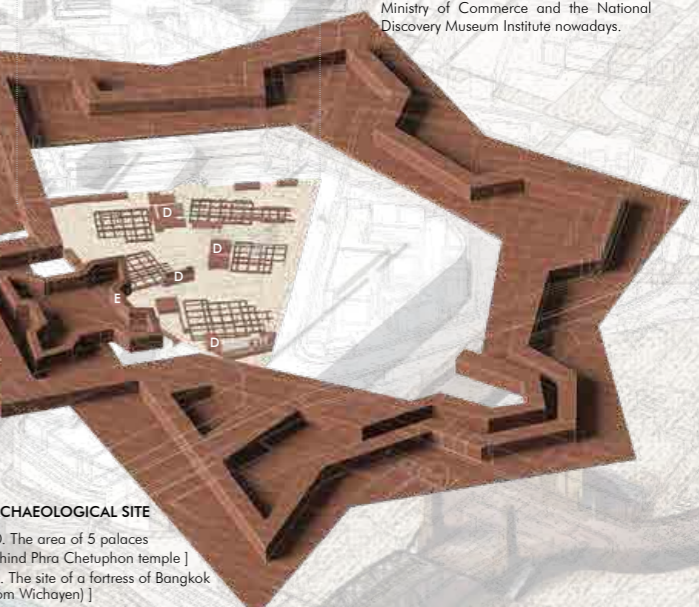
**EXISTING ELEMENT BEFORE EXCAVATION STAGE**  
[ A. Conservation Building ]  
[ B. Residential Building in Police Station area ]  
[ C. The Metro Station ]



**CONSERVATION BUILDING**  
[ 1. Museum Siam - Remaining ]  
[ 2. The Police Station - Remaining ]  
[ 3. Laboratory Pavilion (Department of Science)-Remove ]

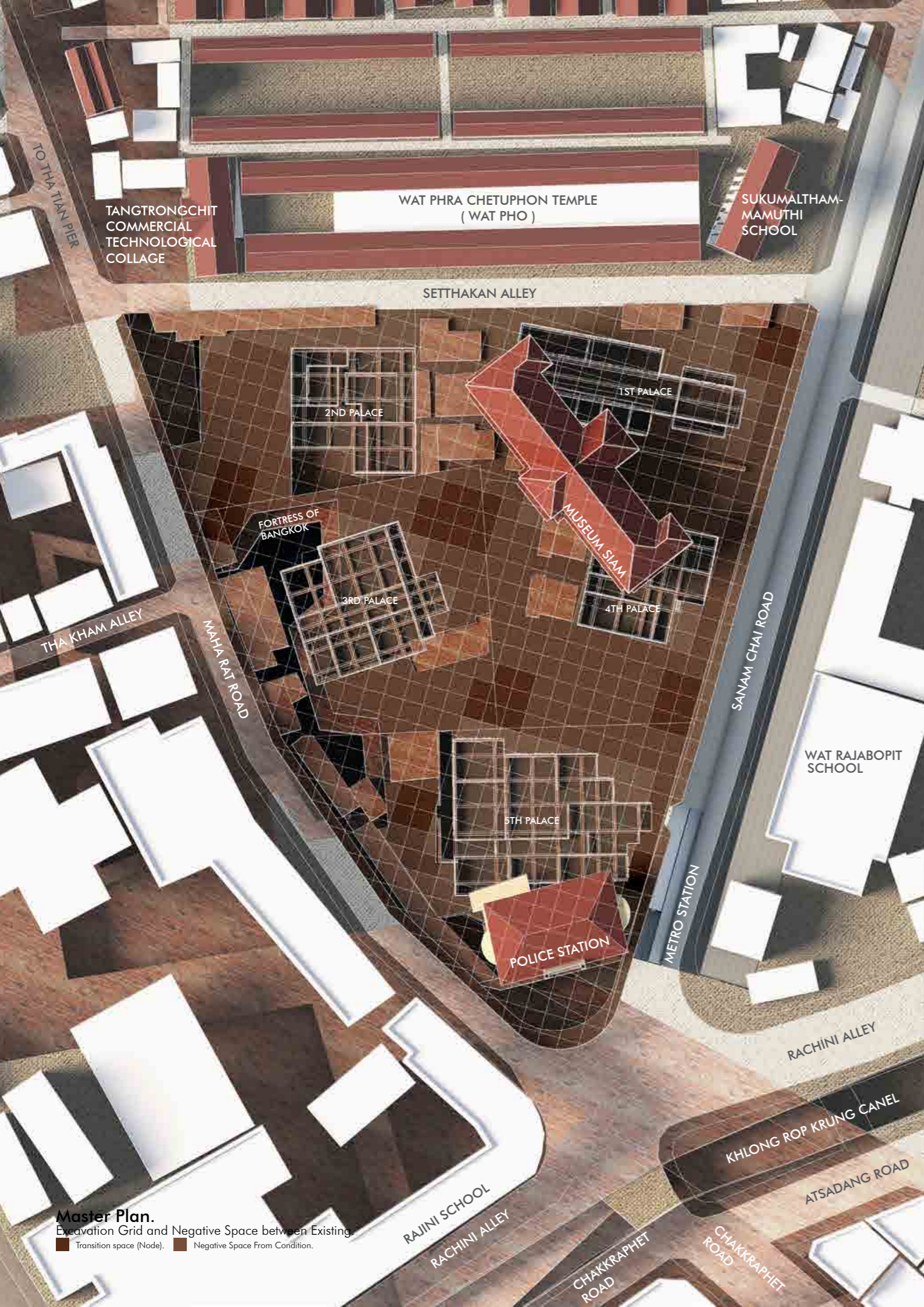


**THE PRESUMPTION OF ARCHITECTURE IN THE FIVE-PALACES AREA IN THE PAST.**



**ARCHAEOLOGICAL SITE**  
[ D. The area of 5 palaces behind Phra Chetuphon temple ]  
[ E. The site of a fortress of Bangkok (Pom Wichayen) ]





## CUSTOMISATION PROCESS

"Architectural design concerned the specific features of design process"

The customisation process is a methodology based on the delicacy of the two distinct systems of the archeological site and its infrastructure, from research to design. The study looked at the structural typologies on-site, from ancient to current approaches, and how all systems were systematized.

### PART I

#### PRELIMINARY DESIGN

"A preliminary design for distinguishing the primary information"

The experiment involves defining the topography of the soil surrounding the archaeological site and developing a preliminary construction system (Top-down and Bottom-up) that is suitable for the delicacy of the historical area and the metro station, as well as analyzing the usage of functions (pre-schematic).



**MODEL TOPOGRAPHY 1**  
The remaining of five palace foundations (+0.00 Meters)



**MODEL TOPOGRAPHY 2**  
The remaining of foundations palace number five and the excavation grid system [5x5 m.] (- 1.50 to -3.00 Meters)



**MODEL TOPOGRAPHY 3**  
The remaining of foundations palace number Three and Four and the excavation grid system (- 2.00 to - 4.00 meters)



**MODEL TOPOGRAPHY 4**  
The topography of the soil in excavation level (archaeological level) (-1.50 to -5.00 meters)



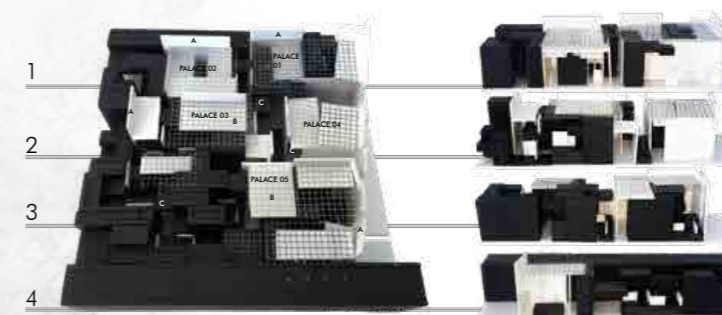
**MODEL TOPOGRAPHY 5**  
The topography of the soil in-between archaeological level and the railway tunnel level (-10.00 to -15.00 meters)



**MODEL TOPOGRAPHY 6**  
The topography of the soil in the railway tunnel level [10x10 m.] (-30.00 meters)

#### TOPOGRAPHY MODEL

The topography model indicates the connectivity of the soil and the possibility of space between the delicate areas and the massive infrastructure such as tunnel.



**A. Main Structure (Vertical plane)**  
as a Diaphragm wall and core.

**B. Main Structure (Horizontal plane)**  
as a Concrete slab and pipe roof

**C. Support Structure**  
as a Column and Partition

#### MODEL STRUCTURE

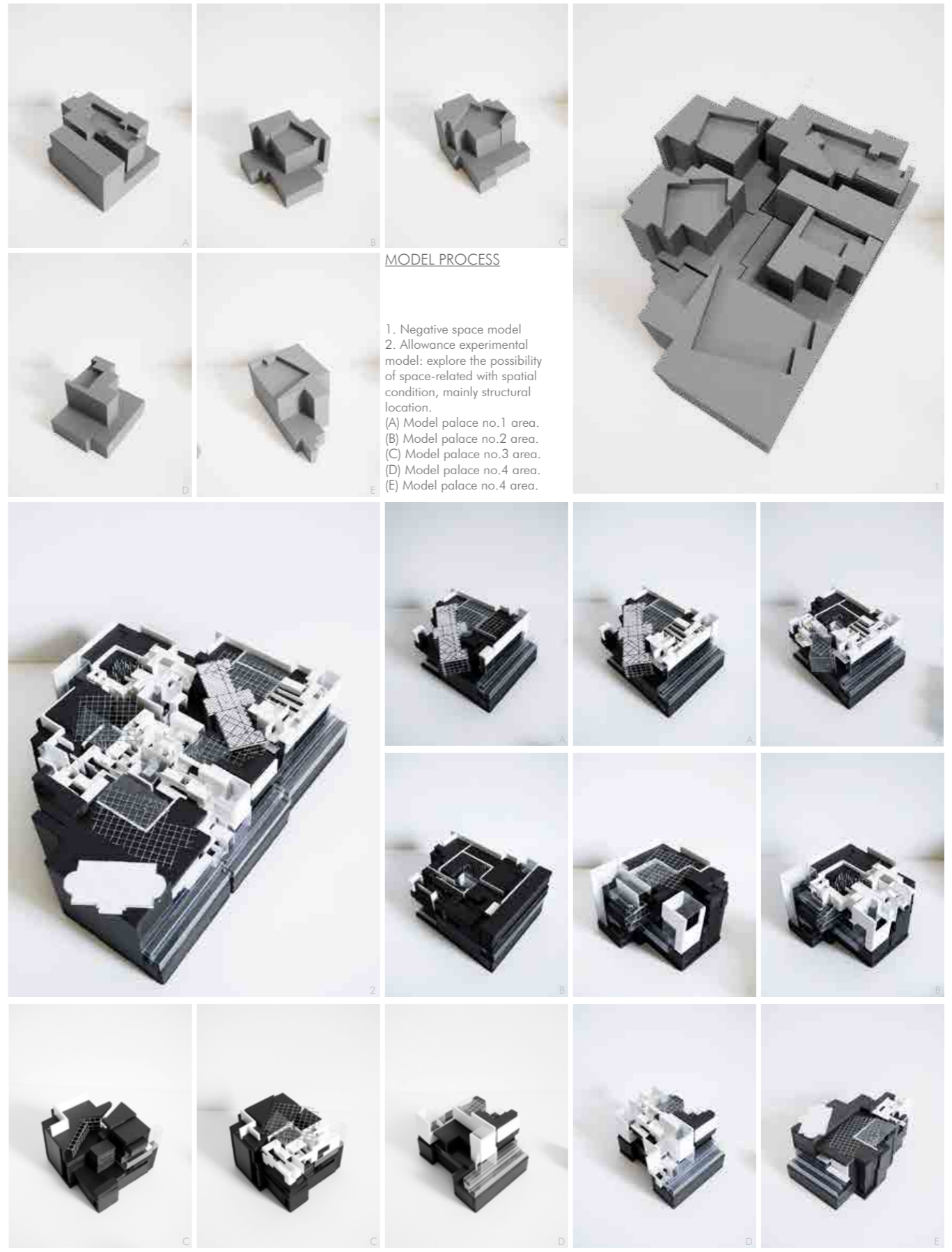
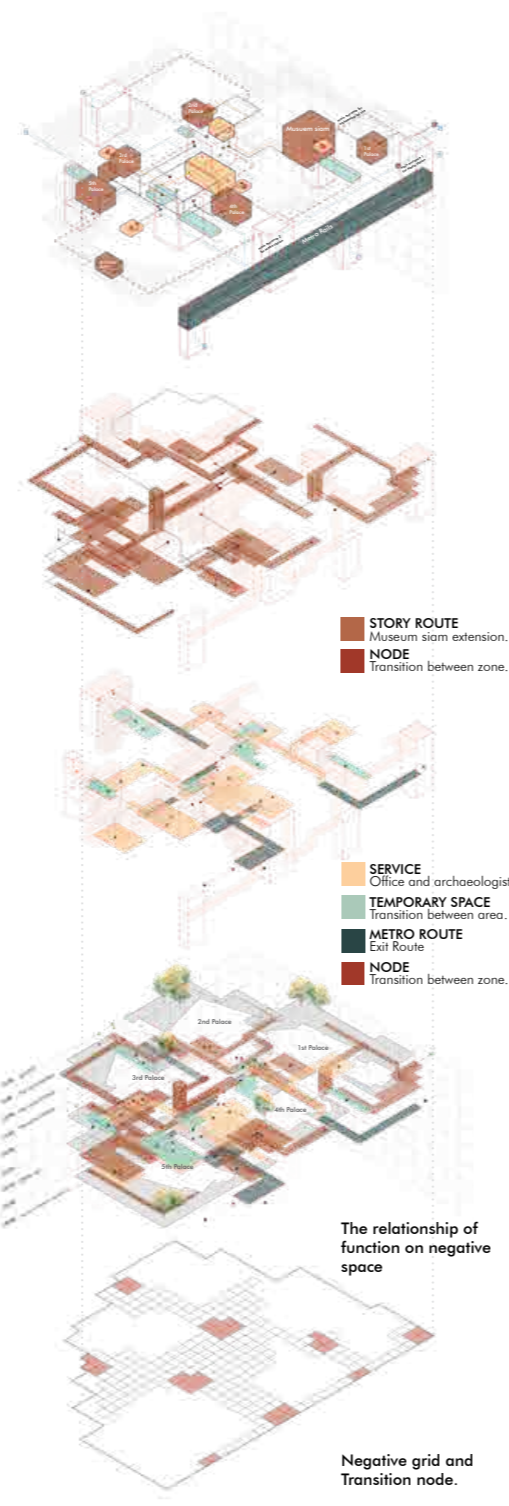
Model experiment the possibility of structure with topography of the soil from ground level (+0.00 m) to underground level (-30.00 m)



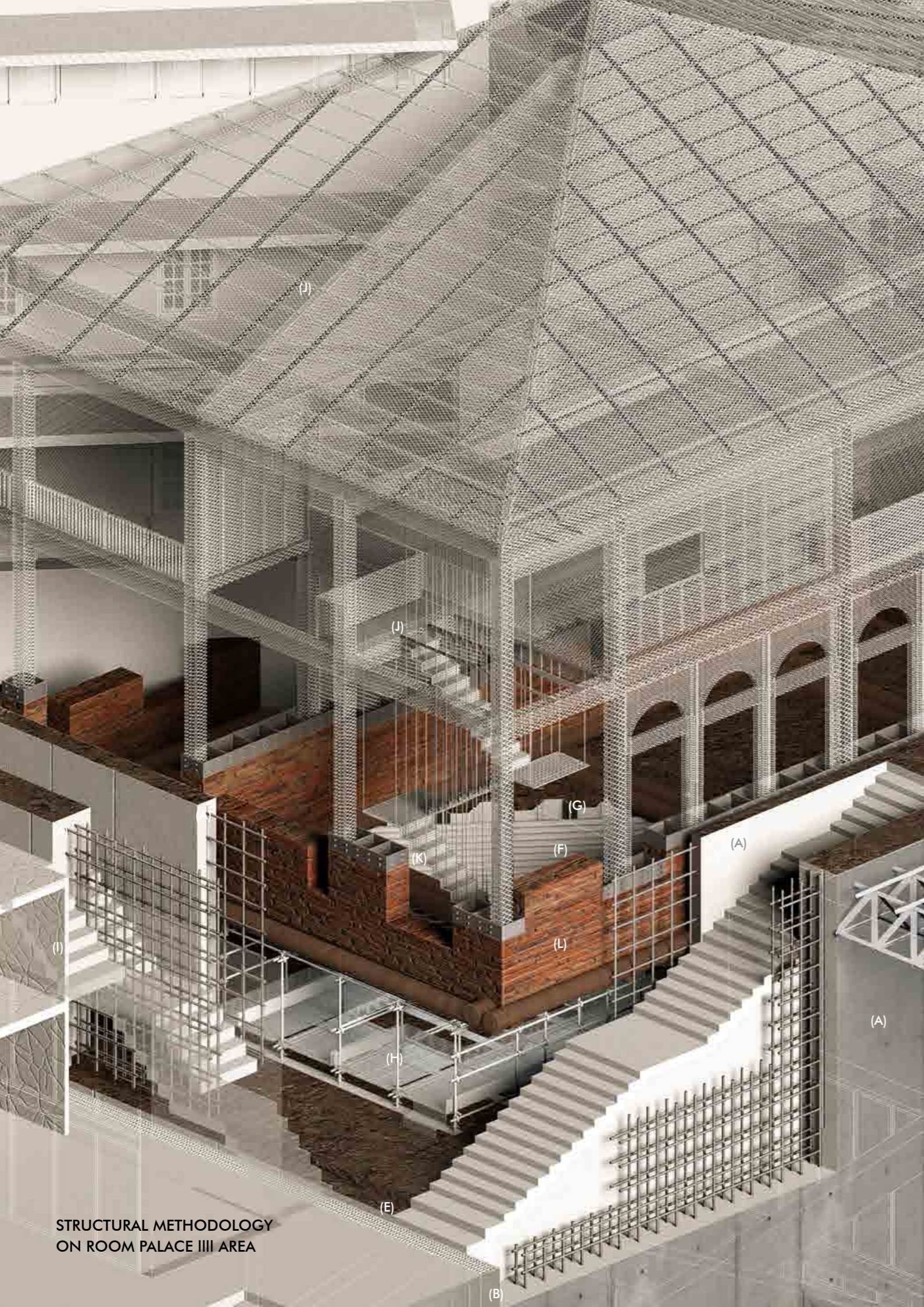
## PART II ALLOWANCE

"The allowance of all possible conditions to define the space at a maximum."

In this stage, the experiment thoroughly all possible conditions and limitations of the site at maximum, which will define the spaces. By specifying negative space, node and classify various types of structures in detail.



The typology of the structure separates into two groups, namely the Main structural ( 1. Core 2. Retaining wall: diaphragm wall and anchored wall 3. Tunnel) mainly support overall construction, and support structure ( 1. Roof pipe (Temporary) 2. Delicated structure: Floating Foundation). These two types of construction apply to the physical model in maximum as the volume of negative space is allowed.



STRUCTURAL METHODOLOGY  
ON ROOM PALACE IIII AREA

## STRUCTURAL METHODOLOGY OF CUSTOMISATION METHOD.

"The adaptation and interweaving of construction methods in-between the duplexity of architecture."

The construction method on this site separates into seven phases from the majority scale in negative space sequences to the minor scale in the delicacy context. Both of the Top-Down and Bottom-Up methods construct into the site.

**Phase 1** Overall Structure  
(Main protection from underground water and soil pressure )

- (A) Diaphragm wall - Vertical
- (B) Bottom slab - Horizontal

**Phase 2** Supporting Structure  
(C) Anchor wall system  
(the internal force resistance)  
(D) Bracing Truss  
(Temporary Structure)

**Phase 3** Wall Double layers  
(E) Drainage system.

**Phase 4** Extension Structure

(F) Roof pipe  
(Under archaeological site)  
The pipe roof technique by opening some significant part of the ground surface (Top-down method) to protect the archaeological sites.

(G) Steel Retaining Wall Sheet Pile

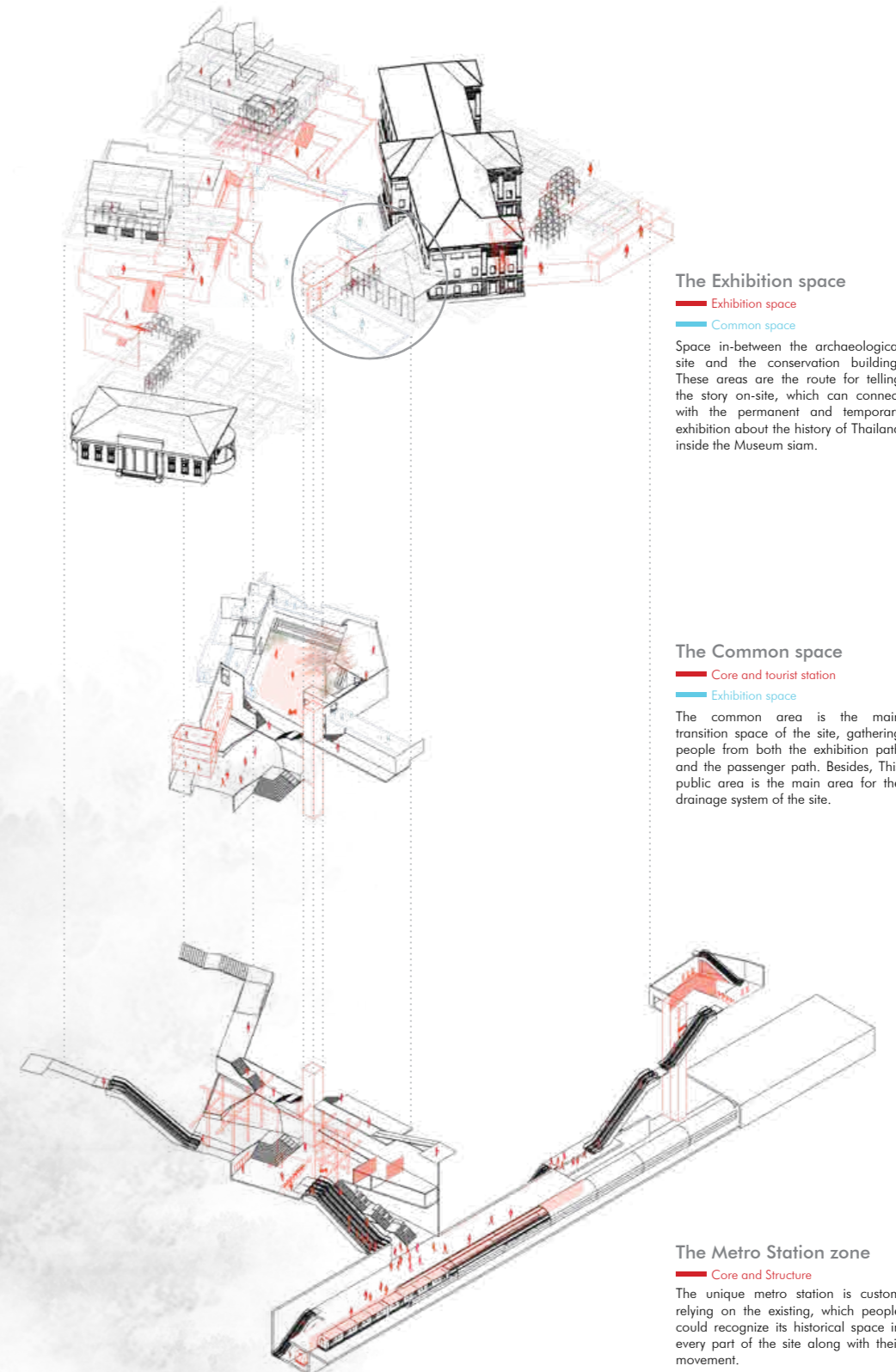
**Phase 5**  
(H) Floating Foundation and Scaffolding

**Phase 6**  
(I) Reinforced Concrete Column, Wall, Stair, and Floor.

**Phase 7**

(J) Wire mesh Sculpture  
(K) Galvanised mild steel plate Foundation.

(L) Archaeological Site  
(Brick Wall and wooden foundation.)



### The Exhibition space

- Exhibition space
- Common space

Space in-between the archaeological site and the conservation building. These areas are the route for telling the story on-site, which can connect with the permanent and temporary exhibition about the history of Thailand inside the Museum siam.

### The Common space

- Core and tourist station
- Exhibition space

The common area is the main transition space of the site, gathering people from both the exhibition path and the passenger path. Besides, This public area is the main area for the drainage system of the site.

### The Metro Station zone

- Core and Structure

The unique metro station is custom relying on the existing, which people could recognize its historical space in every part of the site along with their movement.

The final design of the customization process represent the overall of the appropriate solution of such construction and function for the historical areas and metro station. In which is divided into three different zones which are the exhibition space, the station area and the common space.



## 03

### The Equality

The renovation of Galleries Modernes.

*Why do we need a new typology of art center in Rotterdam ?*

Location: Galleries Modernes, Rotterdam, The Netherlands.

Type: Academic Project / Master project / group Work

Design Partner: Hei Wei Stephanie Wong.

Year: 2021

#### Keywords

Public art center, Renovation, Public building, Hybridity,  
Bottom-up Culture, Private and Public relation.

Many art centers and museums are built around Rotterdam, but public participation is lacking. However, one type of art that allows the community's involvement is "Public art." The identity of public art in Rotterdam, mainly "Graffiti and Sculpture," occurs around the city. Still, not many people recognize it, and the problem of public art is "The bottom-up culture" perspective. So, how could the Galleries Modernes redesign be the place to allow public art to be part of the community and everyday life for people in Rotterdam?

In the heart of Rotterdam, The Galleries Modernes location has the potential as a platform to connect the city, and the existing building as a property of Rotterdam people could represent the public art, especially "Graffiti."

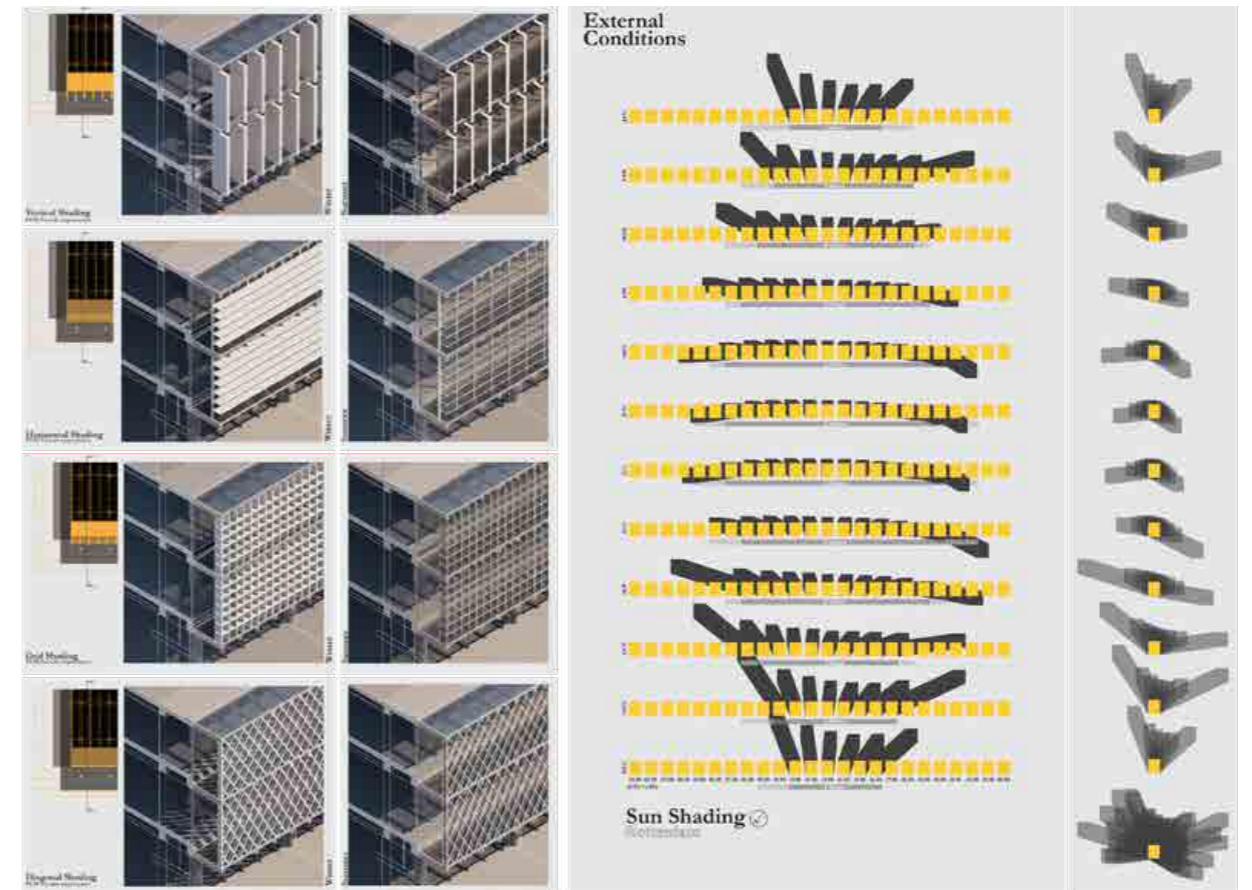
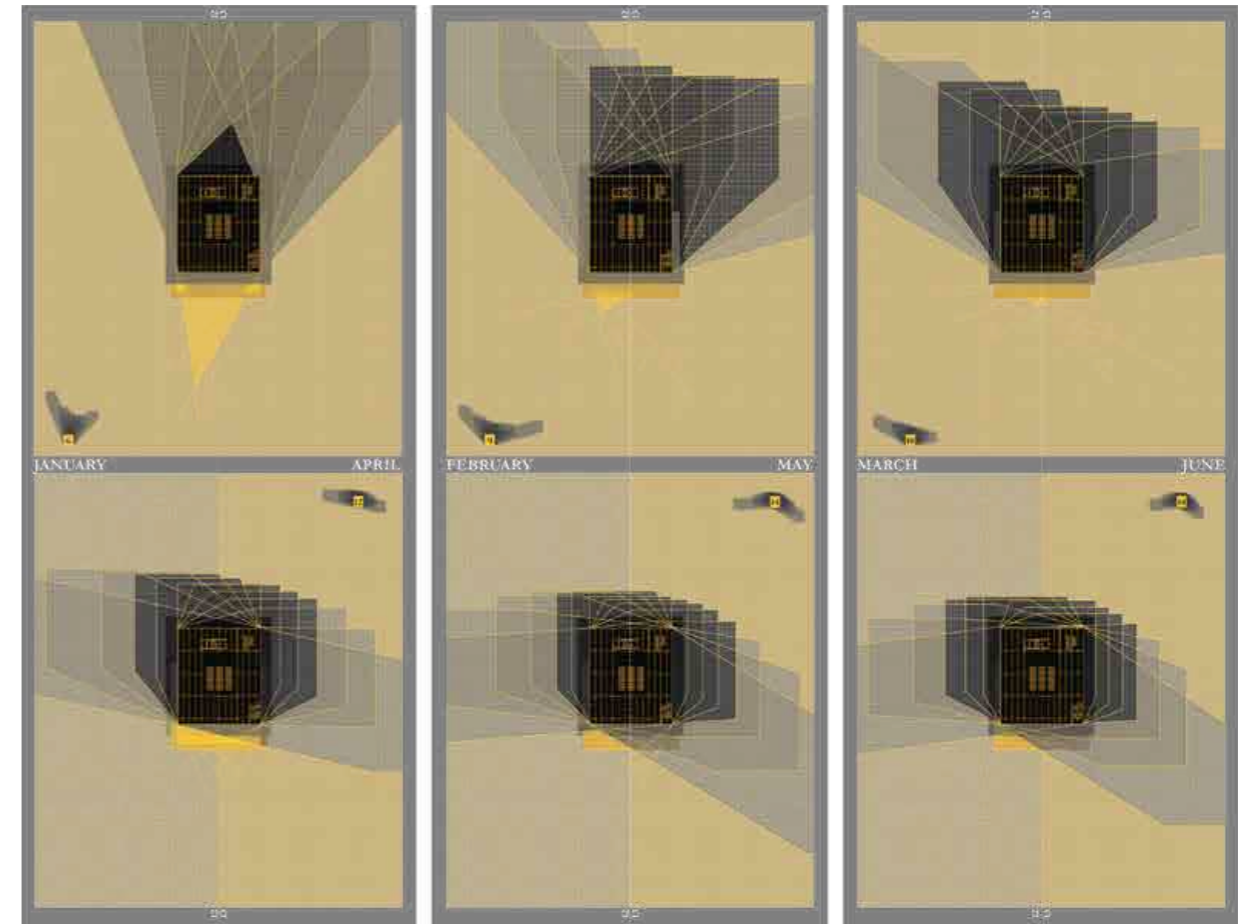
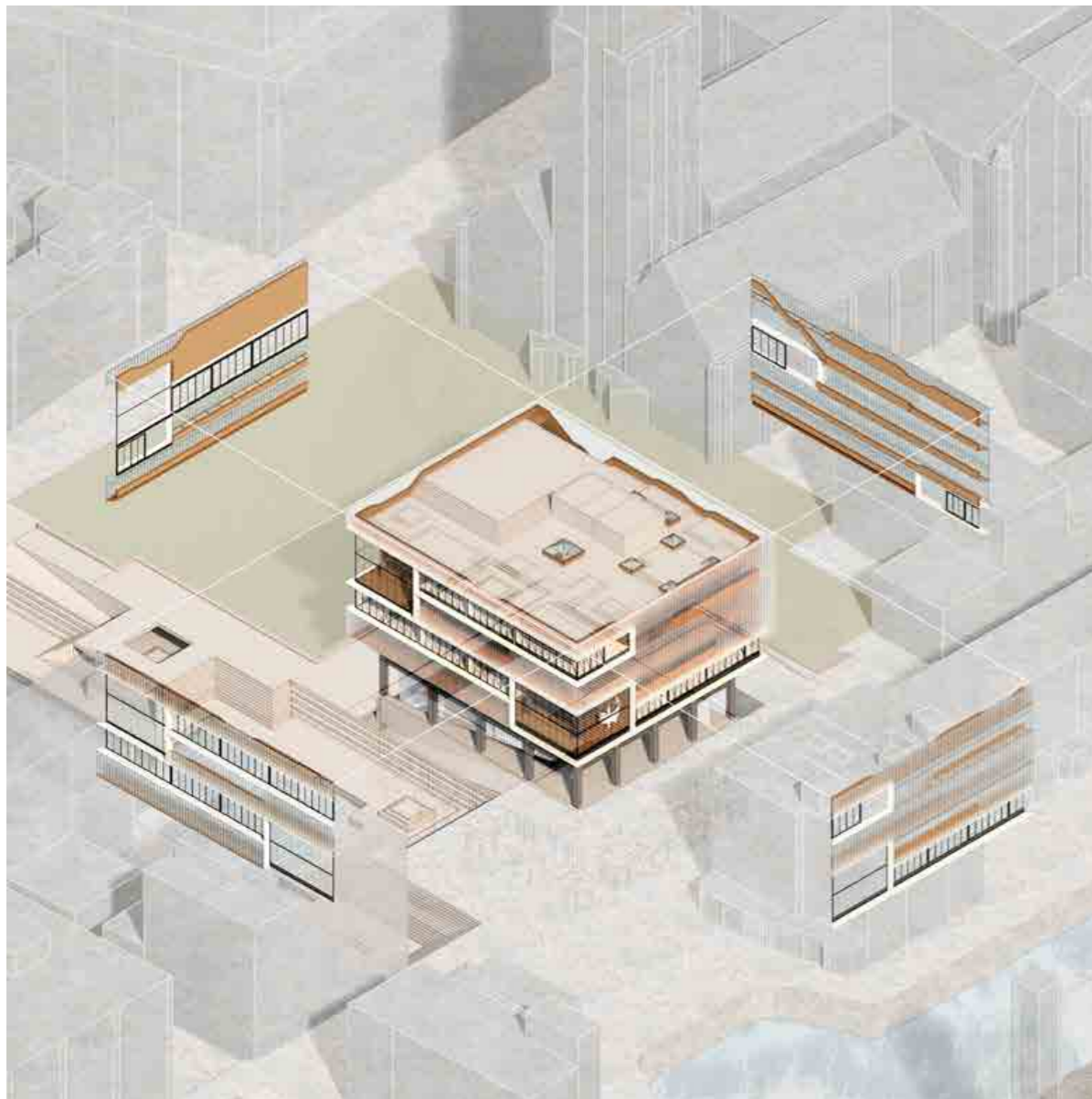
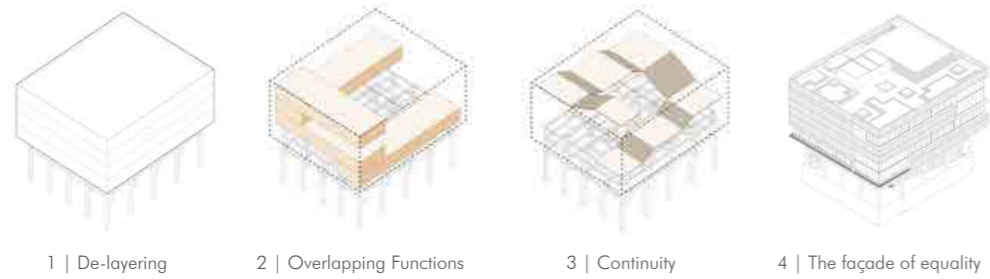
In addition, the amateur art center allows people of all ages and with or without the skill to learn and explore their abilities through four different types of workshops. Not only learning by doing but also by seeing and participating with the artist in residences. The function inside the building represents "Give and take" among artists, locals, and the public. Another identity that characterizes Rotterdam city is "Hybridity." The building has also represented the materialization between the new and old structures. The design of equality in this art center is divided into two parts. First, the lower part indicates the accessibility from all directions and the historical part of Galleries Modernes. In contrast, the upper part shows the equality of the facade that there is no front and back of the building every side are equal and de-layering inside the floor plan to represent that there is no hierarchy of the "Bottom-up Culture" in this building.

## EQUALITY

“Bottom Up Culture | Give and Take”

Public Art and Bottom Up Culture has an indispensable relationship in between.

Furthering the elimination of hierarchy between artists and the public, the proposal takes on the idea of equality through opening up the ground floor space to provide indiscriminate accessibility from all directions, and through a similar application on all four elevations that eliminates the idea of front and back. The ‘de-layering’ of floor plates into a continuous sequence of spaces and split-levels also banishes hierarchy in the art centre. These strategies strengthen the idea of ‘bottom-up’ art culture.



### SUN SHADING IN ROTTERDAM

Understanding the sun's behavior is particularly important from the beginning of the design phase, especially in the isolated site. The influence of the sun's shading through the years and each season defines the amount of opening and closing of the facade, corresponding to the diversity of the building's public and private functions.

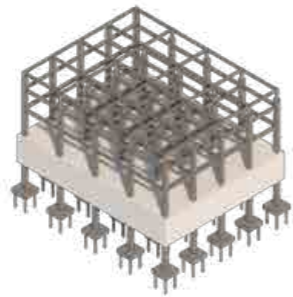
## CONSTRUCTION PROCESS

"A preliminary design for distinguishing the primary information"



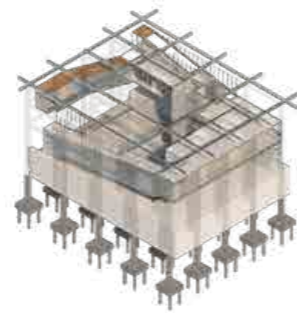
1  
LOWER PART

EXISTING CONCRETE STRUCTURE



2  
LOWER PART

REINFORCED CONCRETE JACKETING AND REPLACED NEW FOUNDATION TO SUPPORT NEW STRUCTURE



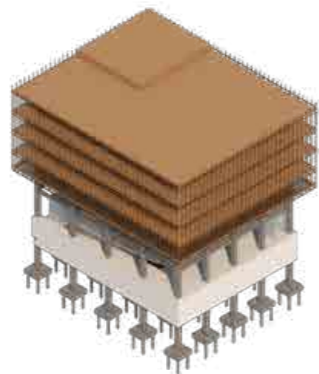
3  
LOWER PART

ADDITIONAL STRUCTURE  
- CABLE SUPPORTING STAIR STRUCTURE  
- NEW STEEL H-BEAM SUPPORTING CANTILEVER FACADE AND CABLE



4  
UPPER PART

ADDED NEW TIMBER STRUCTURE (CHOOSE LIGHTWEIGHT MATERIAL)



5  
UPPER PART

DOUBLE-SKIN FACADE SUPPORT VENTILATION IN UPPER PART PRIMARY STRUCTURE



6  
UPPER PART

DOUBLE-SKIN FACADE- APPLY WITH THE DIVERSITY OF FUNCTION DUE TO LIGHTING REQUIREMENT BY USING DIFFERENT SHADING AND MATERIAL

## BUILDING TECHNOLOGY

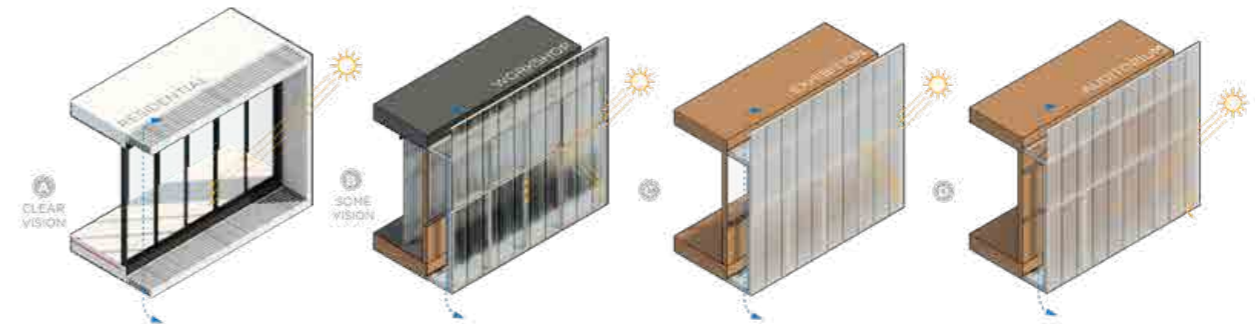
The main concept of the design is to transform Galeries Modernes into a centre of public art, making use of the contrasting materials of the old and new structures.

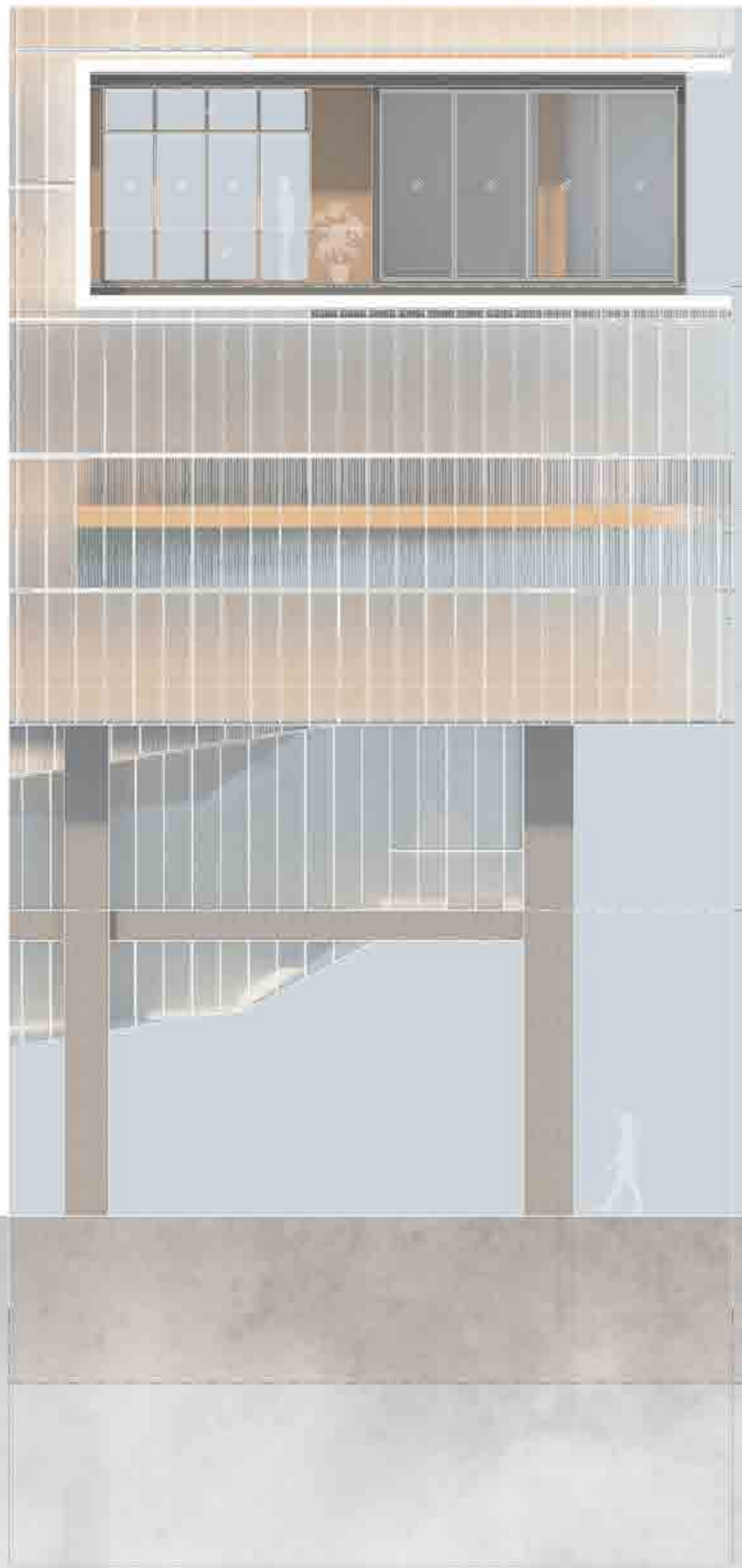
For the city's identity, it is preferable to leave a historical trace instead of wiping off the entire building; the existing concrete structure is thus preserved to endow a second life by opening it up as a canvas for new art to be created by the public. The new extension above the existing structure employs a lightweight timber structure to house the art programmes.

A double facade system with polycarbonate panels is adopted in the extension to limit heat gain and achieve thermal comfort, and contribute to the climate crisis by minimizing energy consumption and thereby enhancing the quality of the building.

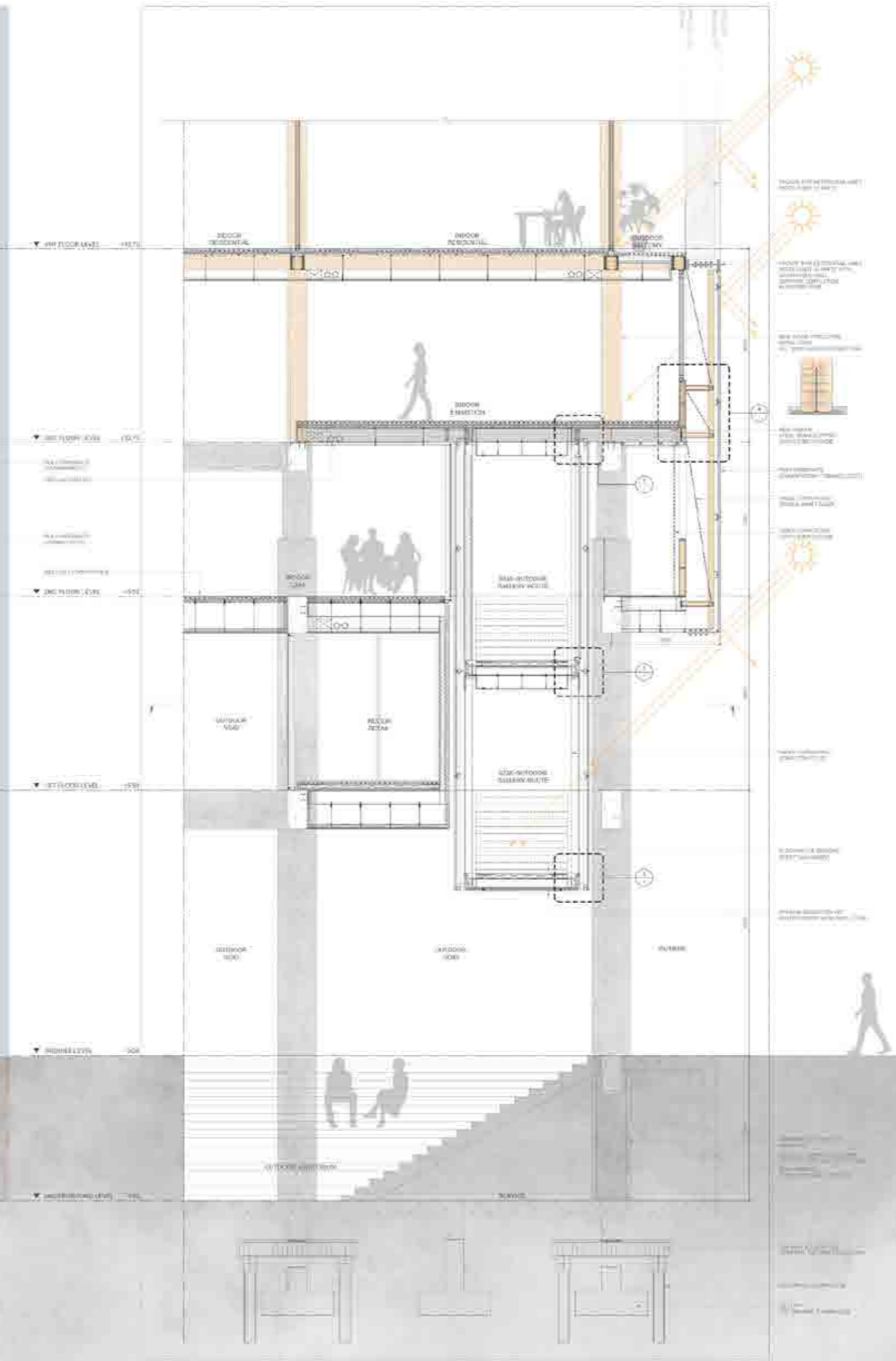


NEW AND OLD STRUCTURE DETAIL

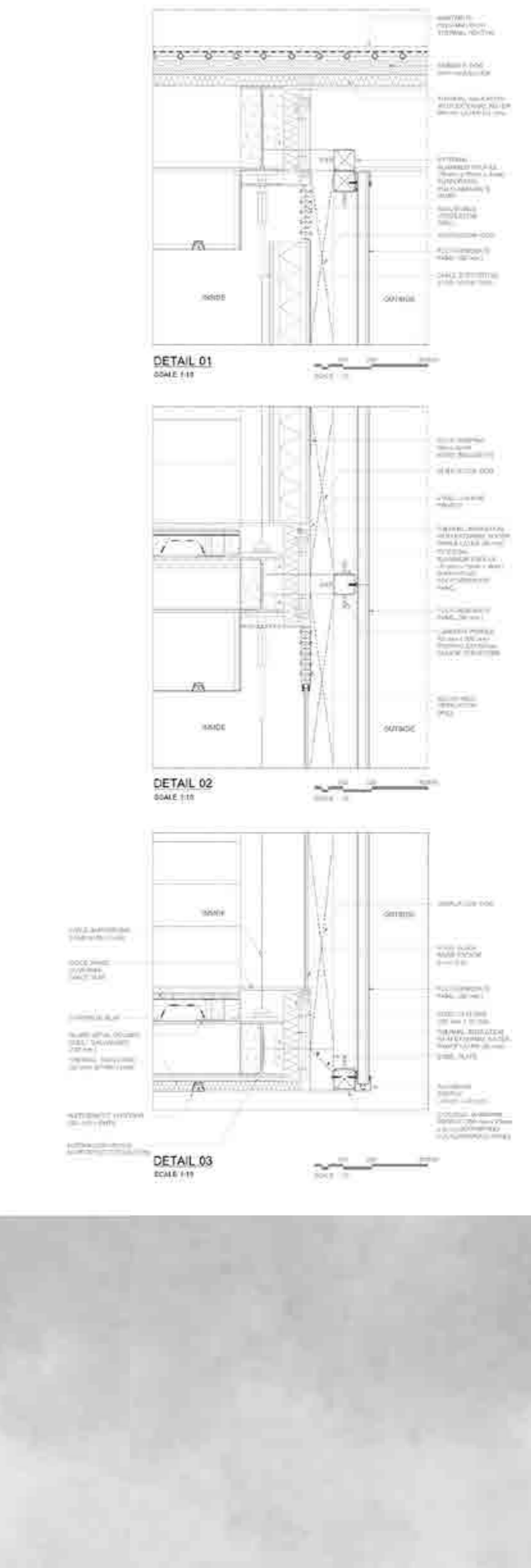




ELEVATION  
SCALE 1/8"



SECTION  
SCALE 1/8"



DETAIL 01  
SCALE 1/4"

DETAIL 02  
SCALE 1/4"

DETAIL 03  
SCALE 1/4"



## 04

### Thai woven fabric center

Crafting architecture and natural integration.

Location: Bangkok, Thailand.  
Type: Professional Work / Project Architect  
Company: Creative crews Ltd.  
Year: 2018 (Completed)

#### Keywords

Industrial heritage architecture, Retail and Office design, interior,  
Natural integration

This project is started from the branch of Chitralada shop was being relocated into a new site at Or-Tor-Kor market. Known for its emphasis on traditional food and craft, compliments Chitralada handwoven fabric and rural products. From these opportunities, the relocation of the chitralada shop would improve public accessibility in the market and deepens public awareness of Thailand's heritage.

In the part of the design solution, The market is mainly laid with concrete and tarmac. By these conditions, the architect and team proposed green space as a transition space and also resting place for everyone visiting Or-Tor-Kor market by reducing the shop footprint nearly half of the entire site area. Furthermore, Both of architecture were carved by these aforementioned green areas, contributing to the occurrence of a new store experience. Another design solution to explore Chitralada's principle is the use of raw materials such as bricks which is the most well-known material in Thailand's traditional architecture as valuable as the history of Chitralada. Besides, the hand-laid brick pattern are resembles a distinctive pattern of Thai woven fabric displaying the organization virtue to all passersby.

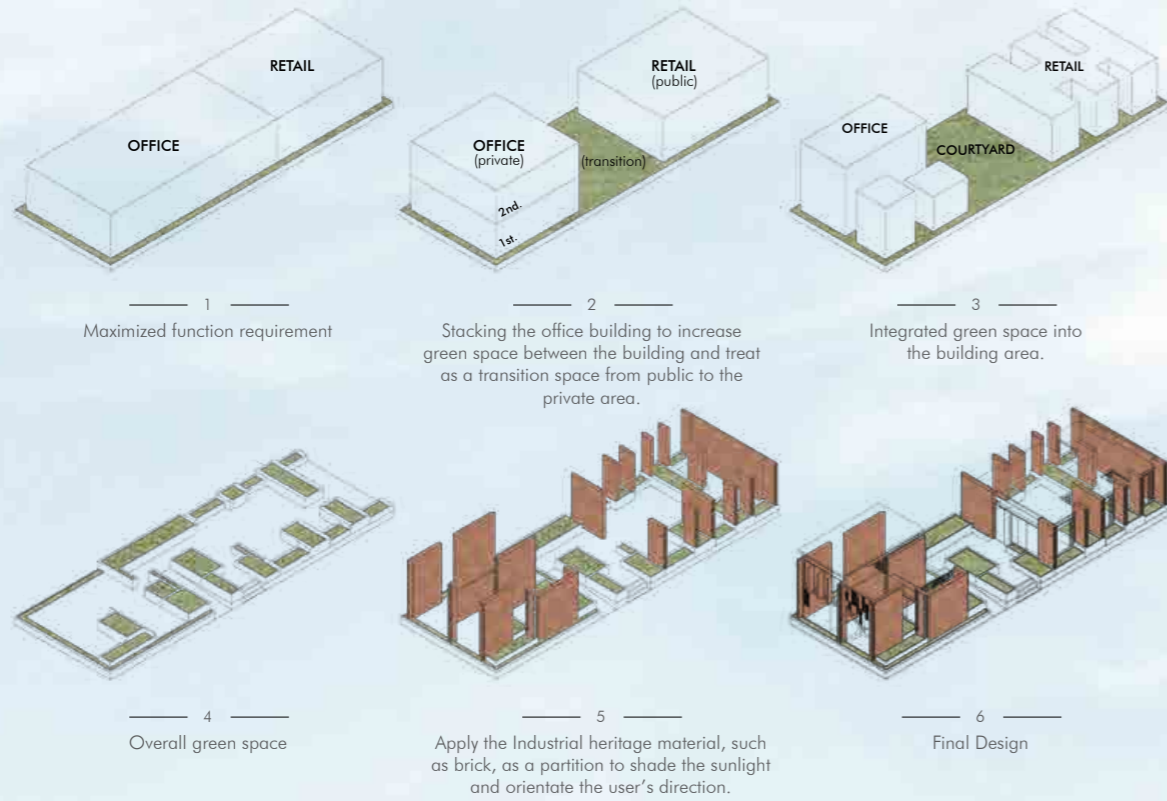
Apart from architecture and landscape design, in order to achieve maximum open public space in a limited site area. Interior part was radically arranged and redesigned with the greenery condition. All shelves and storage spaces were maximized. It had been more than doubled in the previous shop. The shop functions are consist of Traditional handwoven fabric, the original intention, and identity of Chitralada rolls of printed fabric and accessories. Finally, The relocation also allowed designing integrating between architecture, interior, and landscape.



# EMBRANCE NATURE

" Pocket integration between shop and green areas"

Nearly half of the site design as green space, providing natural shading, as well as a meeting and resting place for everyone visiting the Or-Tor-Kor market.





## RETAIL BUILDING

### MAXIMIZED USABILITY

Traditional hand woven fabric, the original intention and identity of Chitralada, are brought to the front of the shop and allocated three times the display space was given previously. In the central section, retractable display shelves were utilized, allowing rolls of printed fabric to be stored efficiently and easily pulled out for display.

#### 1. HANDWOVEN FABRIC ZONE

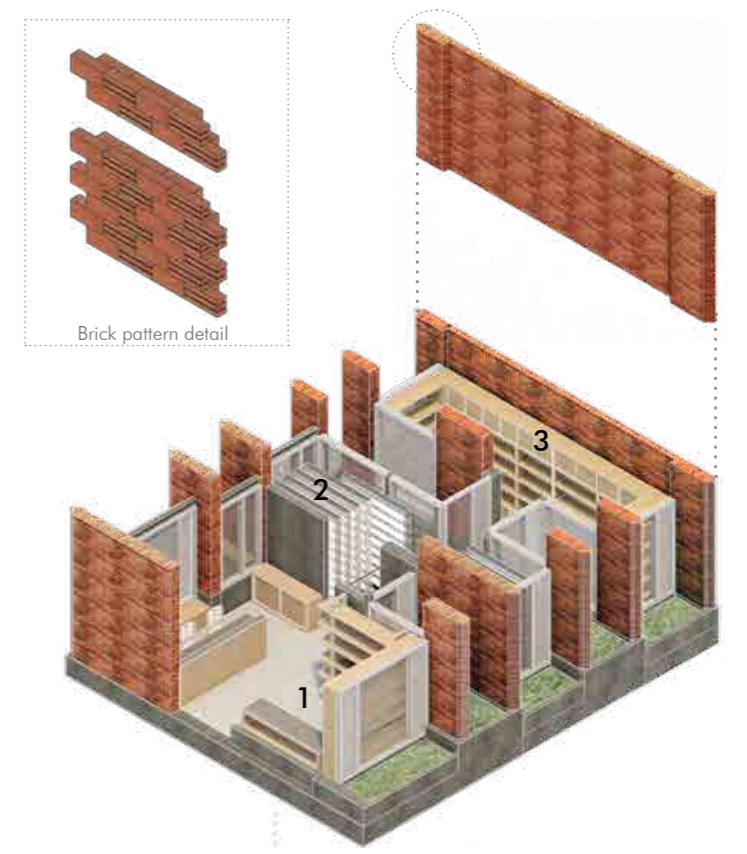
Traditional handwoven fabric, the original intention and identity of Chitralada, are brought to the front of the shop and allocated three times the display space was given previously.

#### 2. PRINTED FABRIC ZONE

In the central section, retractable display shelves were utilized, allowing rolls of printed fabric to be stored efficiently and easily pulled out for display.

#### 3. ACCESSORIES ZONE

At the end of the shop, with abundant shelving space, handcrafted bags, dolls and other decorative items are housed.



### FACADE TYPICAL PATTERN

The original identity of Chitralada is the traditional handwoven fabric, which has a specific waving pattern depends on the local communities in every sector of Thailand. The Lamphun silk brocade has been a unique cultural heritage. The architects reinterpreted this pattern to the brick partitions to represent the identity of Thai silk. This design is a result of an intricate weaving process that requires the expertise of a weaver. Lamphun silk brocade features a visible bulging pattern from a "brocade" weaving technique, which create by lifting and lowering some threads to generate a bulging silk pattern.

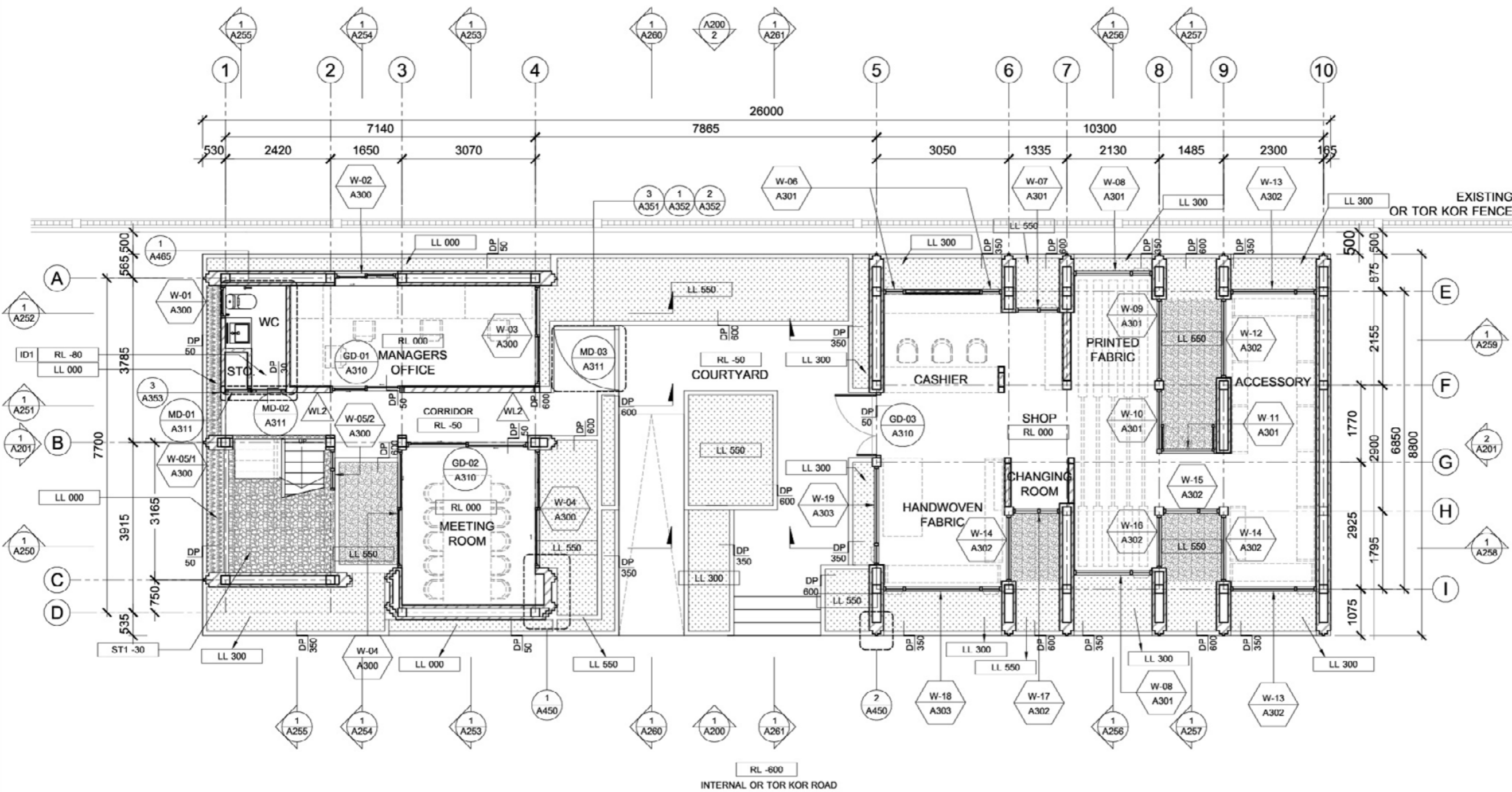


The Lamphun silk brocade



Chitralada Brick Partition






**MAIN PLAN**  
**1ST FLOOR PLAN**

**MATERIAL KEYS**

AL1	ALUMINIUM FINISH TYPE 1 - POWDER COATING IN LIGHT GREY
CC1	CONCRETE FINISH TYPE 1 - POLISHED CONCRETE IN LIGHT GREY
CC2	CONCRETE FINISH TYPE 2 - POLISHED CONCRETE IN MEDIUM GREY
CC3	CONCRETE FINISH TYPE 3 - POLISHED CONCRETE IN DARK GREY
CC4	CONCRETE FINISH TYPE 4 - TEXTURED CONCRETE
CC5	CONCRETE FINISH TYPE 5 - MODERATE TEXTURED CONCRETE
CC6	CONCRETE FINISH TYPE 6 - OFF FORM CONCRETE WATERPROOFING
CL1	CEILING TYPE 1 - GYPSUM PLASTER BOARD CEILING WITH EMULSION PAINT
CL2	CEILING TYPE 2 - MOISTURE RESISTANT GYPSUM PLASTER BOARD
CR1	EXPOSED WATERPROOF TYPE 1 - EXPOSED ROOF

GL1	TEMPER GLASS TYPE 1 - CLEAR
GL2	TEMPER GLASS TYPE 2 - FROSTED
ID1	INTERIOR FINISH TYPE 1 - MATT POLYURETHANE
SS1	STAINLESS STEEL FINISH TYPE 1 - STAINLESS STEEL IN HAIRLINE FINISH
ST1	STONE FINISH TYPE 1 - NATURAL BLACK LOOSE RIVER PEBBLE
TL1	TILE FINISH TYPE 1 - GREY MATT HOMOGENEOUS TILE
WL1	WALL FINISH TYPE 1 - PATTERN BRICK WALL
WL2	WALL FINISH TYPE 2 - BRICK WALL
WL3	WALL FINISH TYPE 3 - PLASTER WALL WITH EMULSION PAINT FOR INTERIOR
WL4	WALL FINISH TYPE 4 - PLASTER WALL WITH EMULSION PAINT FOR EXTERIOR

**FOR CONSTRUCTION**

NORTH	DRAWING
	<b>1 ST FLOOR PLAN</b>
DRAWN BY: WJAW	APPROVED BY: EE
CHECKED BY: EE	DRAWING NO.:
SCALE: 1:100	<b>C/A 100</b>
DATE: 4 AUG 17	JOB NO: CC011
FILE NAME: CC011 A100-102 Main Plan 100	