



**PORTFOLIO**

**CHANAKAN CHORMAI**

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# CHANAKAN CHORMAI

A junior architect, who has experiences in various types of work, seeks for a place that can fulfill her curiosities and aspiration in design aspects as well as becoming a good designer that can enhance people's lives and communities.

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## SOFTWARE SKILLS



REVIT



AUTOCAD



SKETCH UP



RHINOCEROS



GRASSHOPPER



LUMION



ENSCAPE



VRAY



PHOTOSHOP



ILLUSTRATOR



MICROSOFT OFFICE



INDESIGN



## OTHER SKILLS

SKETCHING ●●●●●●●●●●●●●●●●●●●● 80%

PAINTING ●●●●●●●●●●●●●●●●●●●● 70%



## LANGUAGES

THAI ●●●●●●●●●●●●●●●●●●●● FLUENT

ENGLISH ●●●●●●●●●●●●●●●●●●●● IELTS 6.5

CHINESE ●●●●●●●●●●●●●●●●●●●● BEGINNER



## STRENGTHS

FLEXIBILITY

EAGERNESS TO LEARN

CREATIVITY

POSITIVE THINKING

TEAMWORK

SELF-MOTIVATION



## EDUCATION

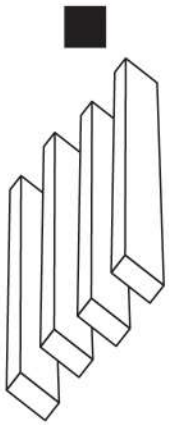
**2019** ● **King Mongkut's Institute of Technology Ladkrabang (KMITL)**  
Bangkok , Thailand  
August 2014 - June 2019  
Bachelor degree of Architecture (B.Arch) with a GPA of 3.43  
Senior Project: Applied Mathematics and Algorithm Museum

## WORK EXPERIENCES

**2020** ● **Junior Architect : 3 - month Contract**  
VIRTUARCH Ltd., Bangkok, Thailand  
June 2020 - August 2020  
- Cooperated with stakeholders and assist team to works on time breakdown  
- Developed the design, 3D models and post-process results  
- Coordinated construction documents and details

**2020** ● **Junior Architect**  
VARY Design Ltd., Bangkok, Thailand  
Oct 2019 - May 2020  
- Involved in schematic design and facade design  
- Developed the design with material and color  
- Developed 3D models and post-process results

**2018** ● **Architectural Intern**  
Creative Crews Ltd., Bangkok, Thailand  
May-July 2018  
- Developed the design guideline based on physical and geological information  
- Involved in research, concept, and schematic design  
- Cooperated with stakeholders and addressed arising issues  
- Developed 3D models and post-process results

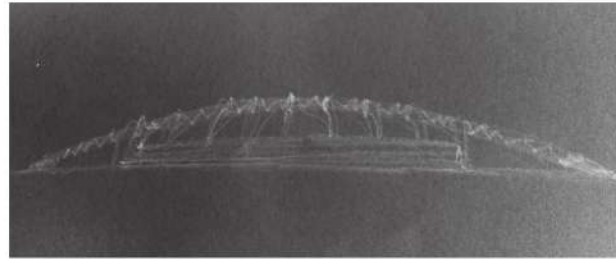


# PROJECT INDEX.

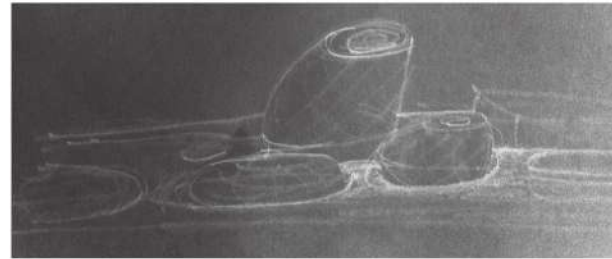
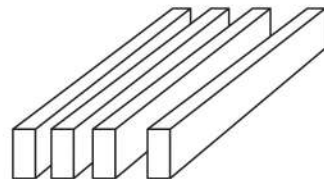
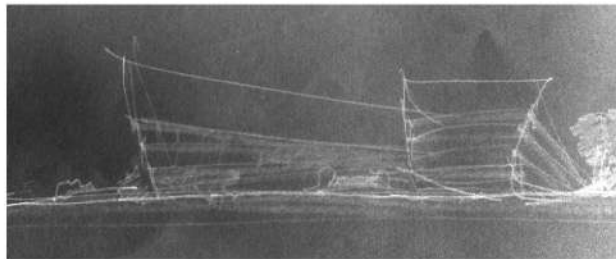
**I.**  
Thai Royal  
Army Museum  
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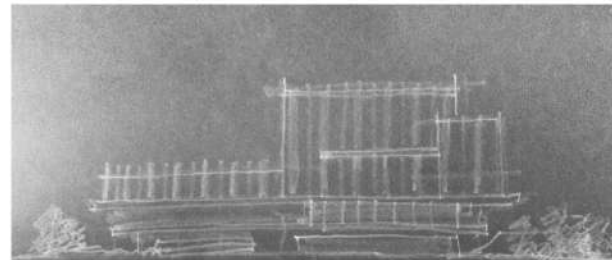
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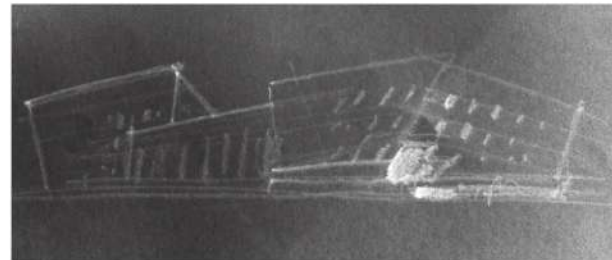
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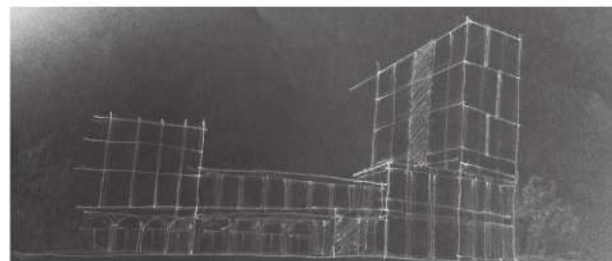
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# Thai Royal Army Museum

Location : Sara buri,Thailand

**Thai Royal Army museum** told stories awakening our perceptions to see all aspects, the friendships, the braves and the losses of being soldiers during the long ride journey sacrificed to the motherland, located in Sara buri, where was the old main station of the royal army.



Building area : 10,536.97 sq.m.

Total floor : 3 floors

DESIGN CONCEPT

# INTERSECTION



To make people understand the army and historical situations, Mass form was the intersection of 2 rotated axes which were brave and fear with the circulation simulated the fighting journey divided into 3 parts,

### I.The Origin

This part told the Thai Royal Army by its history through clothes, badges, songs, vehicles, and weapons.

### II.The Fight

This part presented the fight or the wars by using a virtual battle-field making audiences feel the edge of life and death.

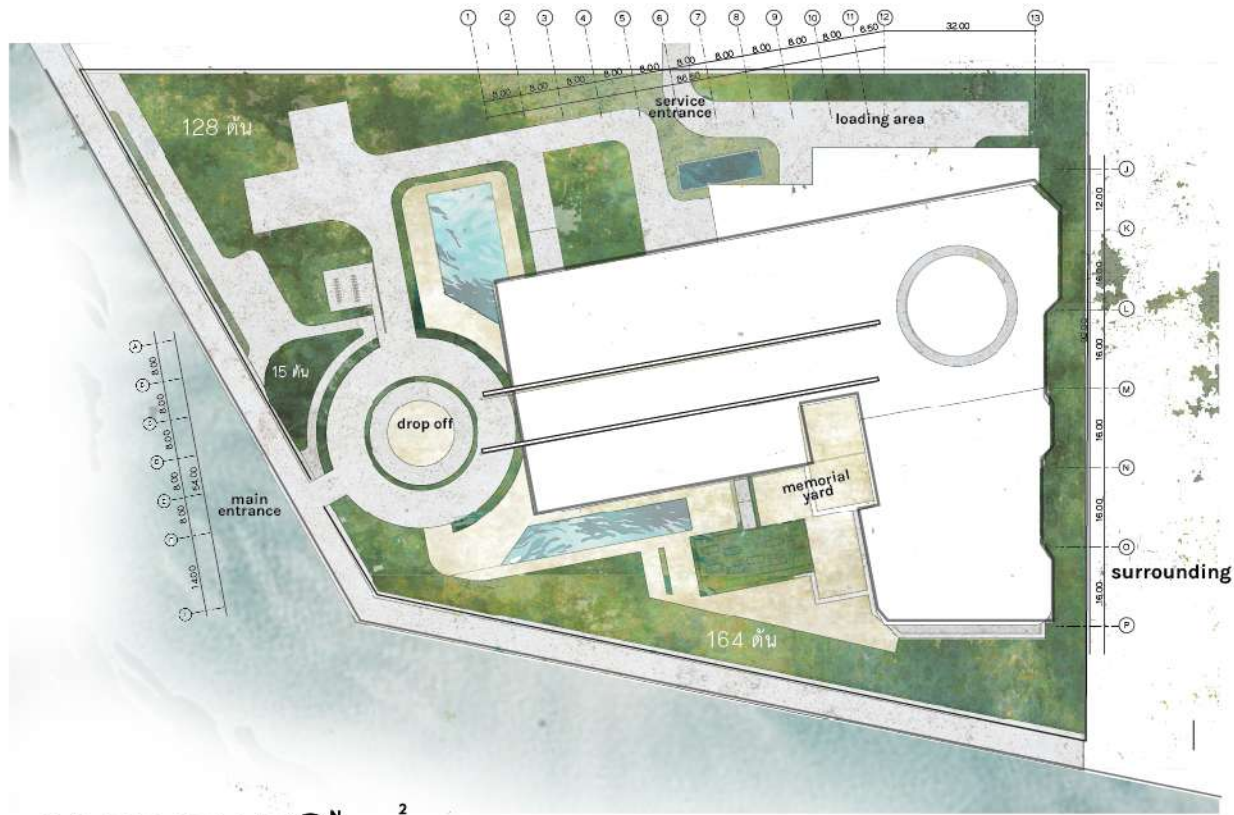
### III.The Memories



The last part flashed back the stories to all braves, friendships, and losses during they fought for their mother-land.

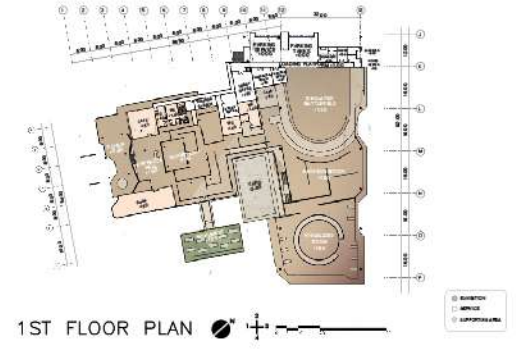


STIMULATE 5 SENSES

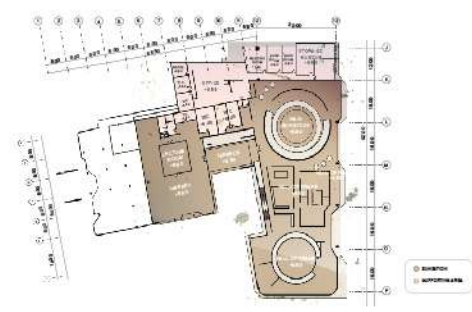





LAYOUT PLAN  



1ST FLOOR PLAN 

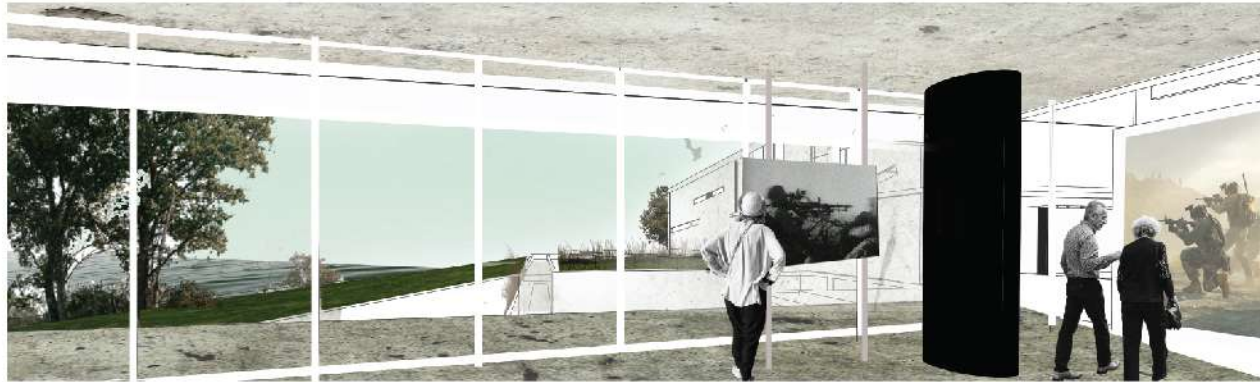


2ND FLOOR PLAN 





**TO EDUCATE  
TO REALIZE  
TO UNDERSTAND**



**Exhibition space** when audiences watched the last exhibition, space would gradually getting natural light from the- memorial, where located the story beneath the land, as their bodies were still foundations of the nation, and their braveries were an inspiration to us all.

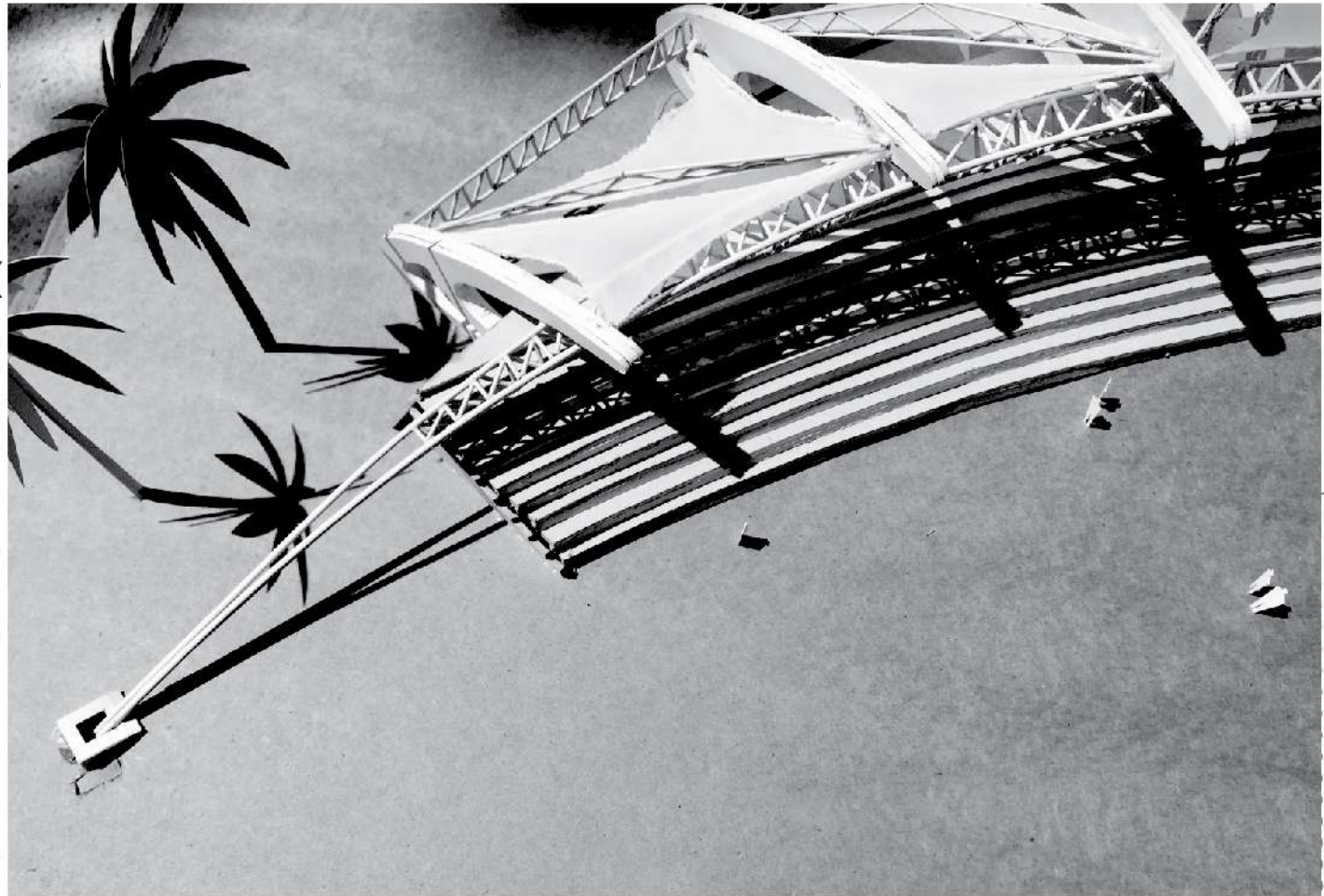
Capacity : 1,800 seats

# Aquatrax Stadium

Location : Jomtain beach  
Pattaya, Thailand

Jet Ski World Cup is the biggest jet ski annual tournament holded at Jomtian beach,Pattaya city ,with worldwide fanbase , over 1,800 seats shoreside, the biggest of its kind, and the cheering crowd rooting for their favorite riders.

**Aquatrax Stadium** aimed to express this sport by dynamic shape using curve, structures and durable material fit to its location where the heat and humidity were the main parts to be concerned.







Using dynamic wave curve to be a prototype of the main structure



Using the curve of riding path to represent the outlining plan and dynamic shape

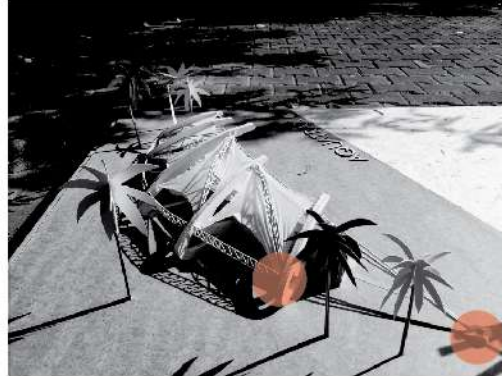
DYNAMIC WAVE CURVE

MOTION CURVE

The structure combination is the key, making form and function stands out as one, and also protects sunlight and humidity directed to the surface of structures.



Using built-up sections, as rigid frames to be the main structure, benefited in abilities in a curving and having lighter weight compared with concrete structure.



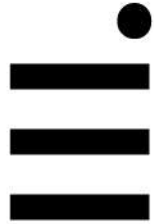
The space truss arches which support loading from the roof structure to the end of the arches.



Combining structure to make gray space within the stadium by the white fabric tension covering the seats can protect sunlight during competitions and also feel comfortable because the gaps between each tension ventilate the heat to the atmosphere.

Building area : 44,730.17 sq.m.

Total floor : 5 floors



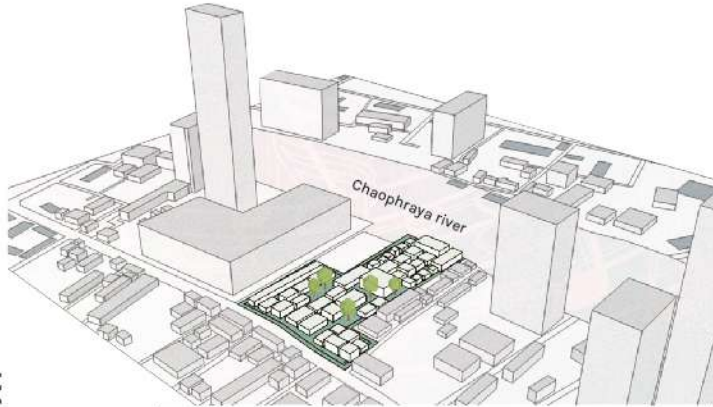
# Thai National Theater

Location : Bangkok, Thailand

Music and performances, the products of cultural civilization, have been forced to meet challenges of its direction through times.

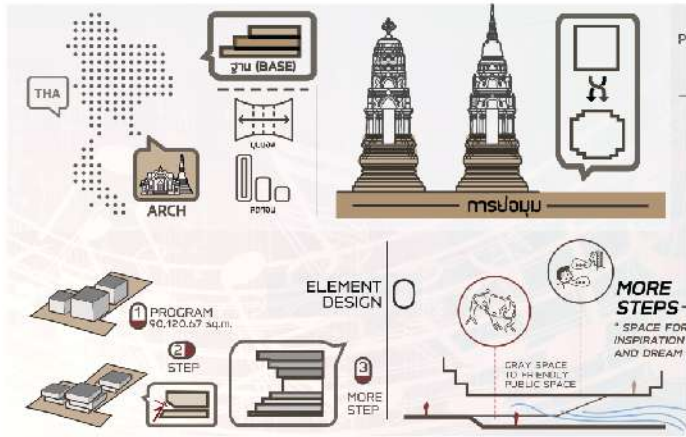
**Thai National Theater**, mix-used project, attempted to bring the traditional elements in Thai architecture, which had a signature in overlapping the base, back to life by fitting new functions as theaters, youth clubs and retails, located at Chaophraya river where Thai life, arts, and culture began, Making nation's treasures, the music, and performances, are more approachable.

CONTEXT

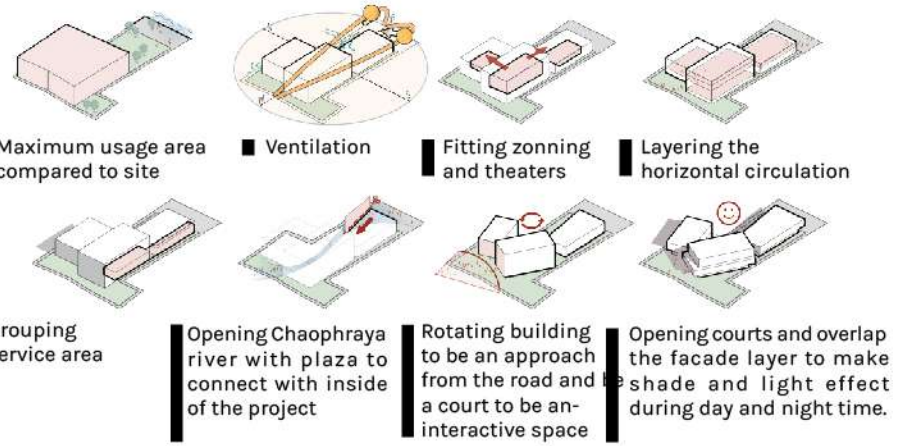


The site is located at Chaophraya riverside which confronted the context between old-historic area and real estate developments spreading on both riversides in the last 20 years.

PLANNING

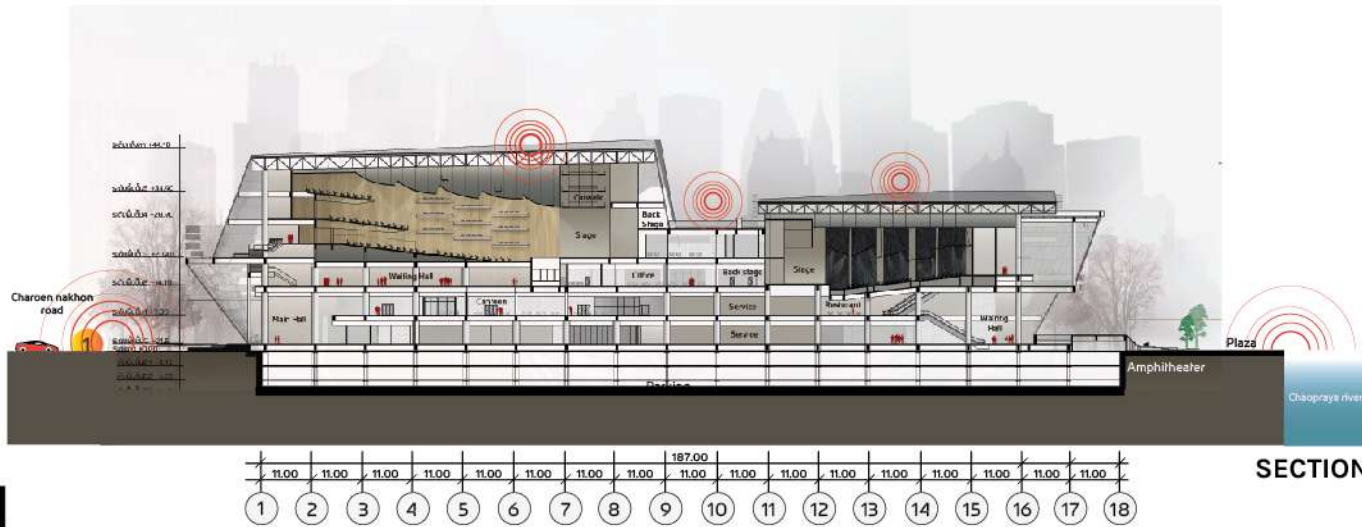
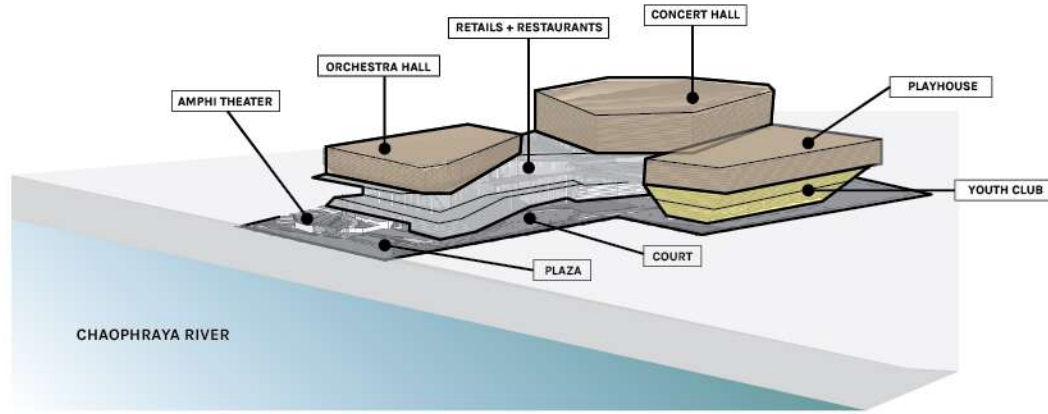


MASS DEVELOPMENT





## ZONING DIAGRAM



## ACOUSTIC DESIGN

Besides site orientation and sun part. Acoustic design, the main part to be concerned for all theaters, decreases noise in 3 levels, first is detecting noise from the street which is front of the site, second is protecting noise from material with double theater wall and the third is to protect extra noise from HVAC system with a noise insulation



Playhouse



Large rehearsal room



Orchestra hall



# The Eternity Headquarter

Department of Mineral Fuel, Ministry of energy

Location : Bangkok, Thailand



LAYOUT PLAN ▲

The Eternity Headquarter aimed to represent the purpose of the ministry of energy using least energy consumption in all aspect of the design, from planning, material, to construction processes and also to make the most efficient in working, which were the most important part in enhancing working life quality.

# IV.

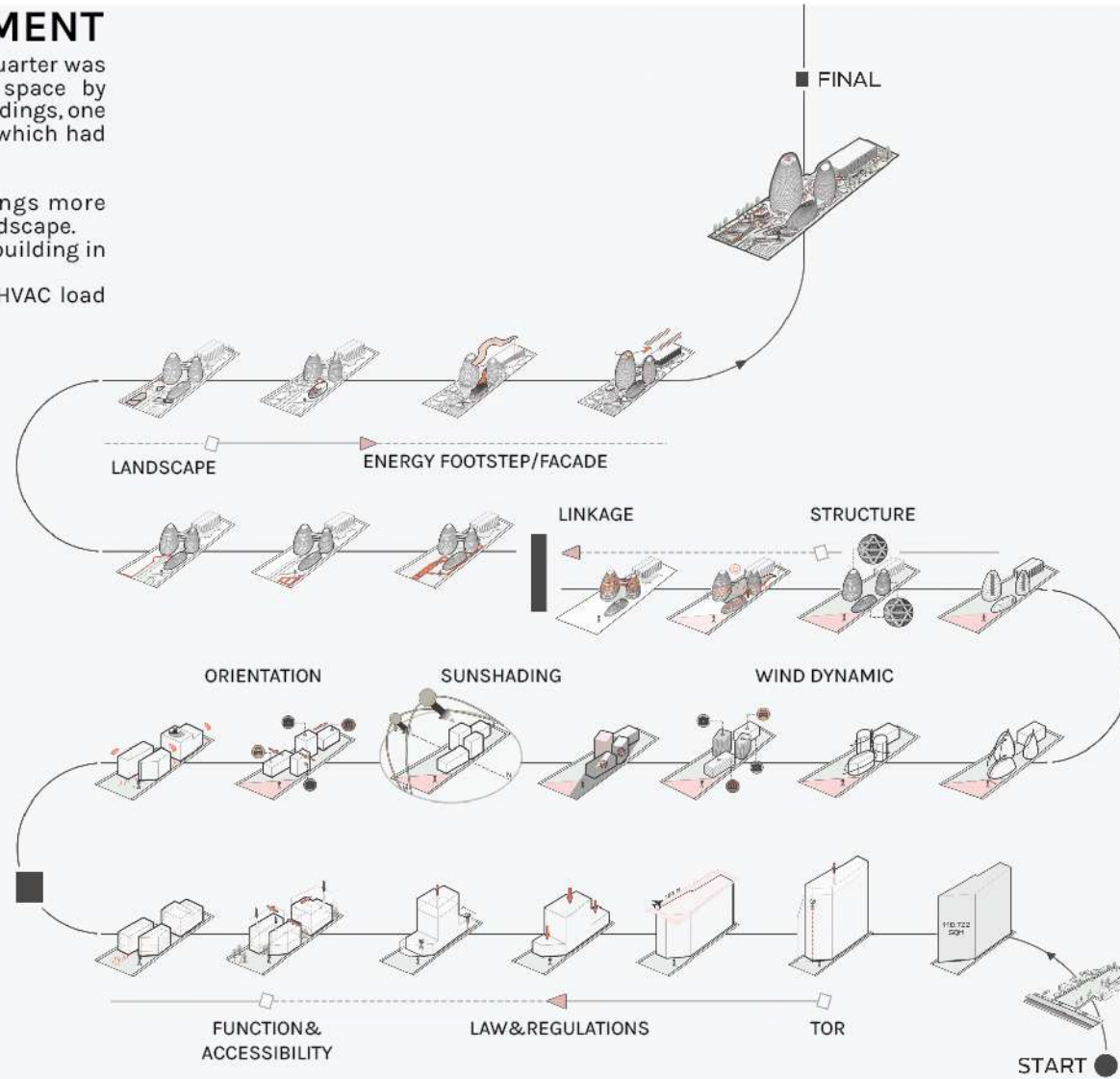
Building area : 50,157.37 sq.m.  
Parking building area : 24,088.52 sq.m.



## MASS DEVELOPMENT

The process of designing this headquarter was to create the most efficient working space by dividing the function into 2 main buildings, one museum and one parking building, which had advantages in

- Decreasing the height which brings more connection to the green area and landscape.
- Getting the sunshade from beside building in the daytime
- Reducing electrical, sanitary and HVAC load usage in controlling individually



Total floor : Building A 15 floors  
 Building B 11 floors  
 Museum 4 floors  
 Parking 8 floors

● OFFICE

1. PROCUREMENT OFFICER ( เจ้าหน้าที่พัสดุ )
2. OFFICE SUPPLIES ( ห้องพัสดุสำนักงาน )

● LEARNING CENTER

1. HALL
2. EXHIBITION SPACE
3. LEARNING CENTER STORAGE
4. COFFE SHOP

● SHOP & RETAIL

1. 7-ELEVEN
2. SOUVENIR SHOP
3. AU BON PAIN
4. MISTER DONUT
5. ORGANIC FOOD
6. WARAPORN SALAPAO
7. INSURANCE
8. BANK 1
9. BANK 2
10. POST OFFICE

● FACILITIES

1. BIKE PATH
2. MEETING POINT
3. RELAX SPACE



FIRST FLOOR PLAN

0 5 10 20



● MECHANICAL & EQUIPMENT

1. CHILLER ROOM
2. TRANSFORMER ROOM
3. MDB ROOM
4. GENERATOR ROOM
5. WASTEWATER TREATMENT POND

● MANAGEMENT & SERVICE

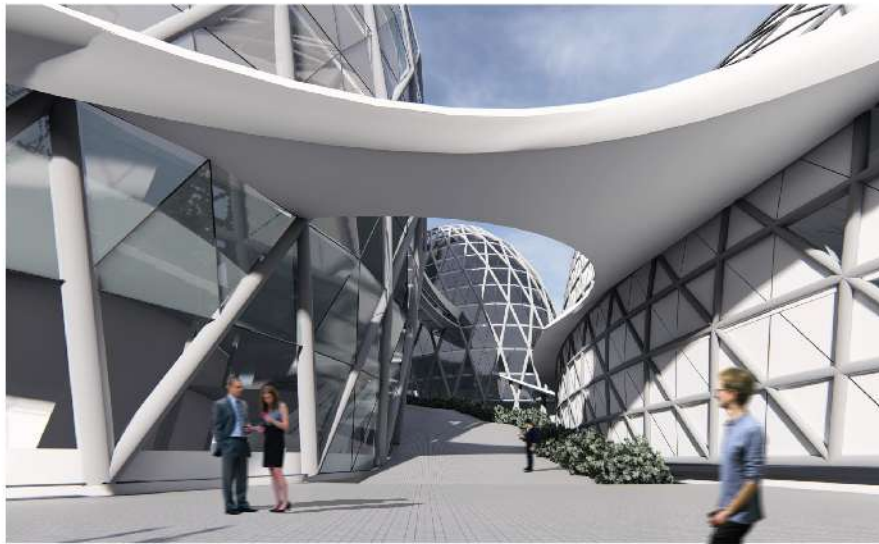
- |                                    |                        |
|------------------------------------|------------------------|
| 1. SOUVENIR STORAGE                | 9. POST-OFFICE SERVICE |
| 2. STAFF ROOM                      | 10. STORAGE            |
| 3. STOCK ROOM                      | 11. STORAGE            |
| 4. BANK SERVICE                    | 12. CONTROL ROOM       |
| 5. BANK SERVICE                    |                        |
| 6. CANTEEN STORAGE                 |                        |
| 7. RETAIL STORAGE                  |                        |
| 8. COURT YARD ( DROP OFF SERVICE ) |                        |

● TOILET - FIRE ESCAPE

1. MEN RESTROOM
2. WOMEN RESTROOM
3. BATH ROOM
4. FIRE ESCAPE

● PARKING

1. OUTDOOR PARKING
2. BUS PARKING
3. BICYCLE PARKING
4. CAR PARK BUILDING
5. SERVICE PARKING



Entrance



Office area





# Maesai Medical Center

Location : Chiang rai, Thailand

Maesai, a small village located at Chiangrai province, is facing its challenges in population balance, which is becoming an aging society. **Maesai Medical Center** aimed to re-generate the interaction between aged patients with cutting-edged design to decrease boundaries between patients and nature, which are the main part of the long term treatment.

# V.

Building area : 34,072.80 sq.m.

Total floor : 12 floors

**"IN BETWEEN"**

reviving all senses to better treatment.

**SPACE**



OVERLAPPING FOR INDIRECT LIGHT

OPENED SPACE IS USED FOR HALL ENTRANCE

**TEXTURE**

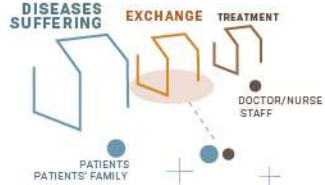
**MATERIALS**



NATURAL TEXTURE COLD MAKE PATIENTS FEEL MORE COMFORTABLE AND MORE RELAX WHICH ARE GOOD TO ACTIVATE SENSE OF VISUAL AND TOUCH.

**COMMUNITY**

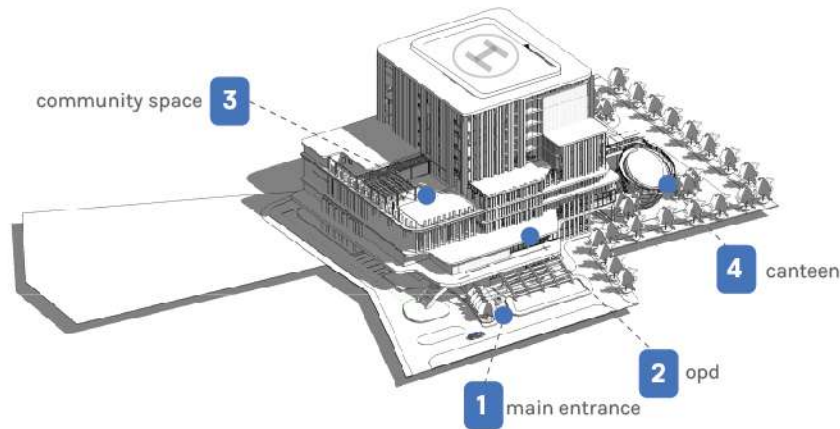
USING THE PROPER SPACE TO ENHANCE THE PATIENTS' EMOTION, AND TO DECREASE THE GAP BETWEEN PATIENTS -DOCTOR /NURSE



more than treatments, but enhance the patients' interactions.

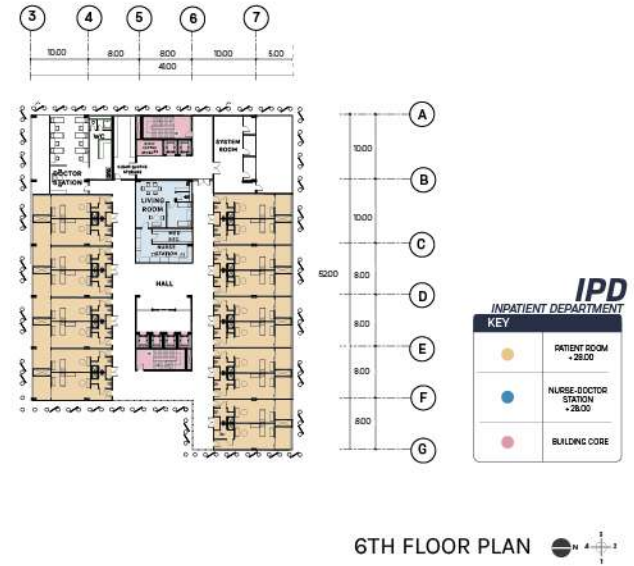
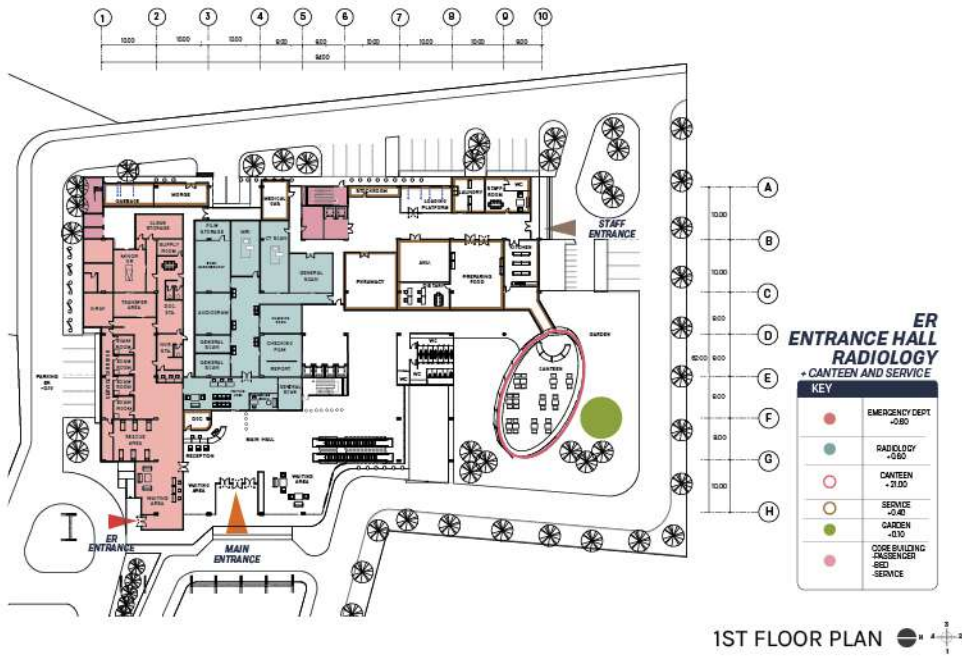


"THE CONNECTION" the Community space on the 5th floor is opened to enhance patients' mental health with the opened air terrace so they can talk to each other and taking the fresh air.





BASED ON THAI REGULATIONS



Getting indirect light from the east makes the indoor area opened space more lively and healthy, also using color to easy recognition to the patients in each department.

FRONT ELEVATION





Building area : 11,556.50 sq.m.

# VI.

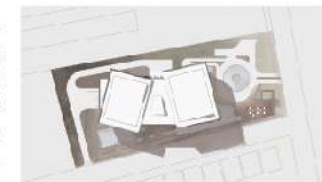


## Applied Mathematics and Algorithm Museum (AMAM)

Location : Pathumthani, Thailand

Total floor : 4 floors

Applied Mathematics and Algorithm Museum provided adaptive contents to everyday life by using mathematics and algorithmic method in the design from grounds to exhibition space and the public area within shadow patterns, where were used for public activities or festivals.



LAYOUT PLAN ▲



### DESIGN CONCEPT

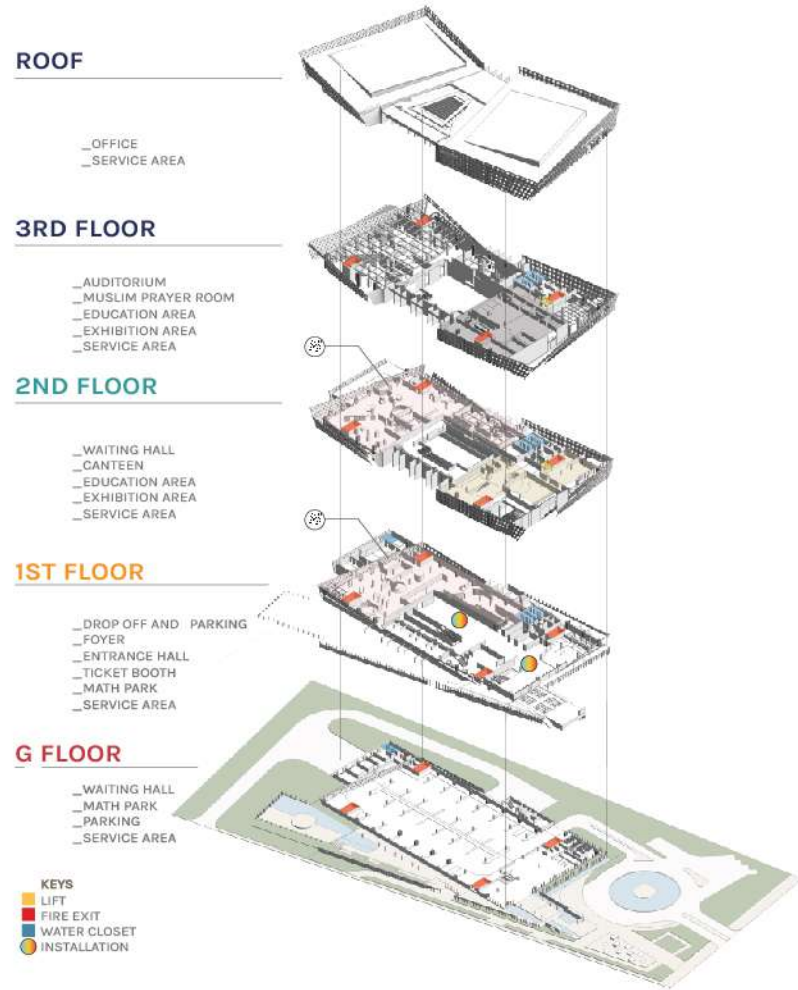
Conceptual design methods in this project were divided into 3 parts. The first was to unfold mathematical thinking within daily content to convince the audience and fun atmosphere during seeing exhibitions. The second was to decode mathematics method within algorithm in oriented-design, circulations and exhibition planning. The third was to unfold the applied mathematics to create the inside and outside-space effect through times.



### COLLECTIVE ELEMENT + CIRCULATION

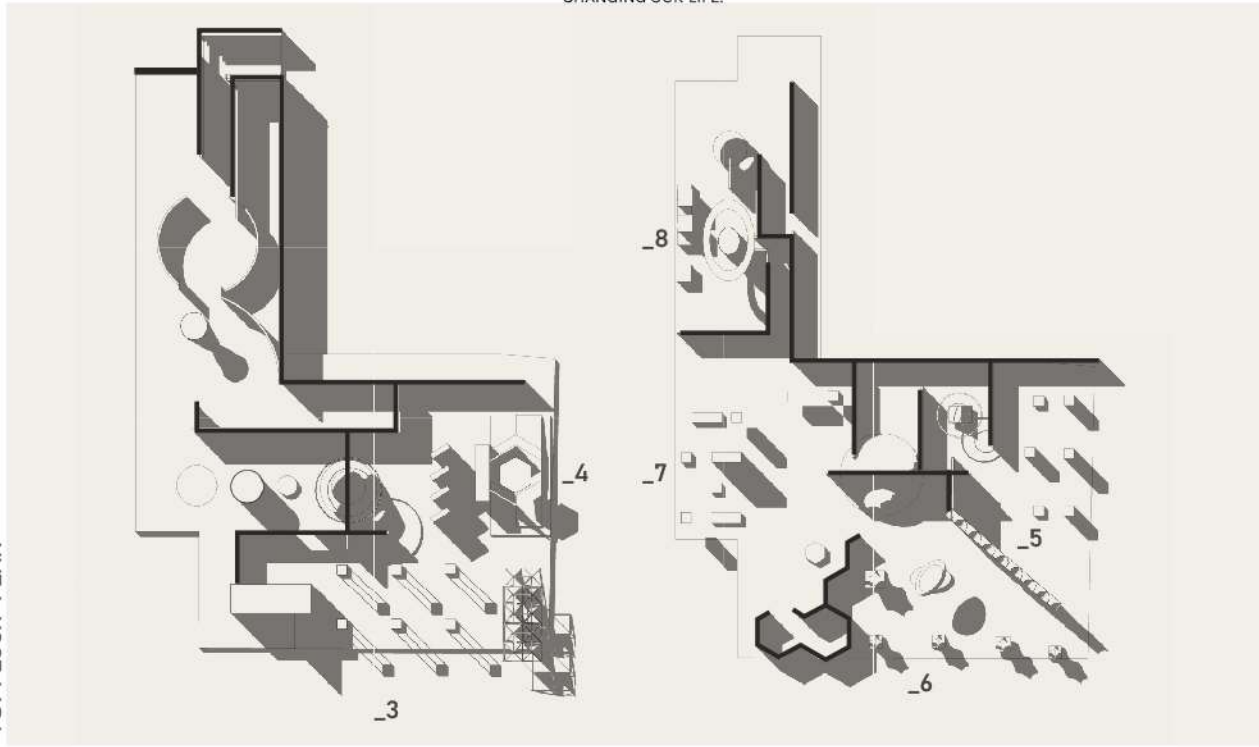


### EXPLODING PLAN FUNCTION





**EXHIBITION SPACE**  
8 STORIES OF APPLIED MATHEMATICS AND ALGORITHM  
CHANGING OUR LIFE.



1ST FLOOR PLAN

2ND FLOOR PLAN

**\_1**  
**APPLIED MATHEMATICS HISTORY**  
MATHEMATICS AND HUMAN RELATIONSHIP  
TIMELINE

TIMELINE  
CHANGING POINT

3 PHRASE IN MATHEMATICS PERCEPTION

VISUALS DECODING FORMULAR  
VISION GEOMETRY GRAPHING

**\_2**  
**BASIC ALGORITHM**  
MATHEMATICAL GAMES  
learning algorithm with mathematical games

TIME

**\_3**  
**APPLIED MATHEMATICS AND BEAUTY**  
THE EYE OF PI  
GOLDEN RATIO  
FIBONACCI SEQUENCE

PI = 1,618

EXHIBIT ENCLOSURE

VISION

FRACTAL IN NATURE    FRACTAL IN MODERN WORLD

**\_4**  
**APPLIED MATHEMATICS AND ENTERTAINMENT**  
FRACTAL GEOMETRY

EXHIBIT ENCLOSURE

VISION

THE ZOETROPE has opened many doors for animation. that if pictures spin faster, and have more frames in the drum it becomes the more smooth animation.

FROM NATURAL FRACTAL TO THE FIRST STEP OF ANIMATION-WORLD

**\_5**  
**APPLIED MATHEMATICS AND MATTER OF CHANCE**

PROPABILITIES GAME THOERY

DRAWING EQUAL AT THE TOP

NOT EQUAL AT THE SIGHT

**\_6**  
**APPLIED MATHEMATICS AND LIFE SURVIVAL**

GEOMETRY FRACTAL MATCHING ALGORITHM DNA

CELLULAR MODULE REPETITION BY REFORMED GEOMETRY

**\_8**  
**APPLIED MATHEMATICS AND NETWORK**

BINARY NUMBER  
ARTIFICIAL INTELLIGENCE  
CLOUD

NETWORK CONNECTING DOTS

**\_7**  
**APPLIED MATHEMATICS AND COMPUTER**

CODING  
BEGINNING OF COMPUTER  
DOT AND DASH

1 1 3 1 1 1 3

WHEN MATHS BECAME THE PROCESS FOR SOLVING PROBLEMS WHICH IS INVISIBLE.

USING PROJECTION MAPPING TO METHAPHOR THE MAKING CODE PROCESS - TYPING





APPLIED MATHEMATICS AND ENTERTAINMENT



APPLIED MATHEMATICS HISTORY



APPLIED MATHEMATICS AND MATTER OF CHANCE



APPLIED MATHEMATICS AND LIFE SURVIVAL



APPLIED MATHEMATICS AND NETWORK



#### RESPONSIBILITIES

- Involved in facade design on commercial part and the hotel
- Worked on presentations
- Developed 3D models and post-process results

# VII.

#### PINGDU RESIDENTIAL PROJECT

Mixed used project , including residential part, commercial and hotel, brought the old and modern atmosphere to the site. Using red bricks as the represent of the industrial era , the project become attractive and unique .



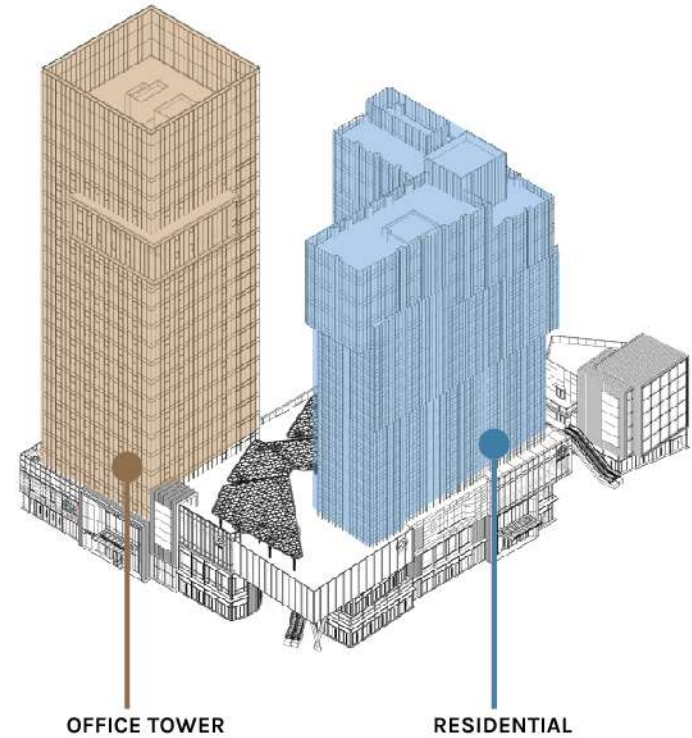


**THE FINANCIAL CENTER**

The financial center came with challenge of its position and surrounding. The outstanding approach with the lifted-up canopy at the corner, allowed the comers look up to the towers reflex to the sunlight through time and the city.

**RESPONSIBILITIES**

- Involved in facade design on commercial part and office tower part
- Worked on facade details and presentations
- Developed 3D models and post-process results







Mass form as the overlapping book stacks made shade and gradient reflection in daytime.



## TIANYI KINDERGARTEN

This project aimed to build the interactive learning space with the courts through the site and classrooms which benefit not only for the learning process but also the friendly and lively atmosphere with nature.

### RESPONSIBILITIES

- Involved in landscape, canopy and facade design.
- Worked on facade details and presentations
- Developed 3D models and post-process results

