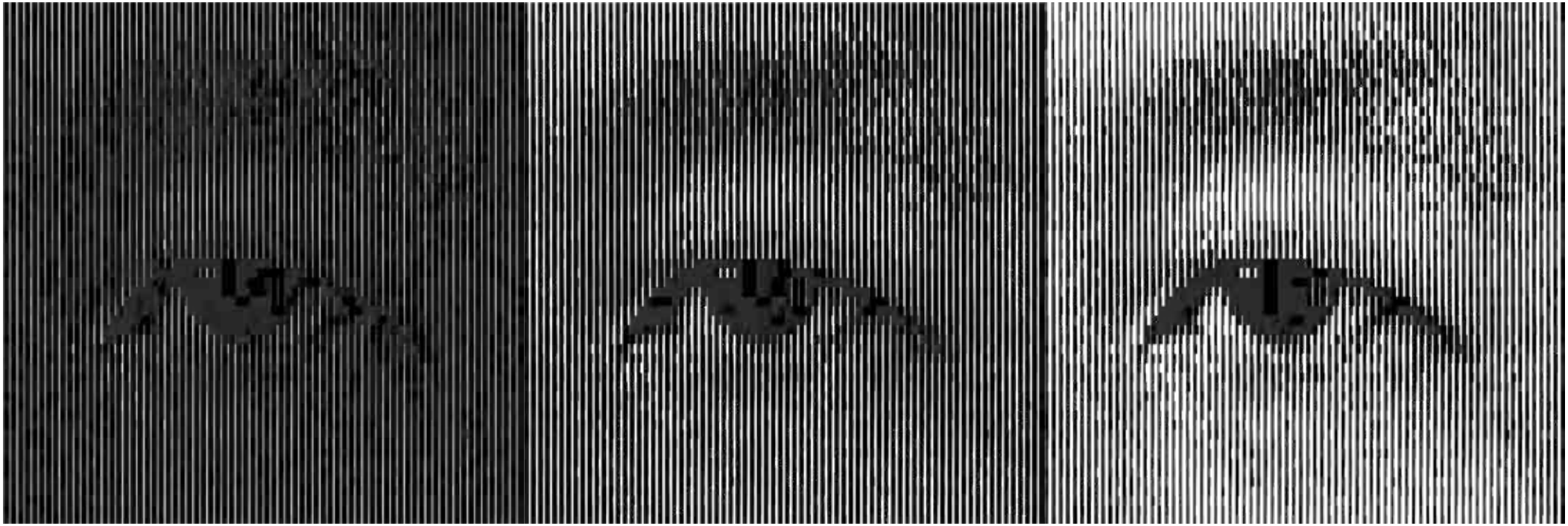
PORTFOLIO



KARNPONG LAPTIKULSARN
ARCHITECTURE GRADUATE

RESUME
CURRICULUM VITAE
PORTFOLIO

ABOUT ME

KARNPONG LAPTIKULSARN
Architectural Designer, Drafter & Bim Modeler,
Computational Designer

Hello!!!!!
My name is Karnpong, I'm an architecture graduate from Rangsit University, Pathumthani, Thailand

I'm glad to submit my portfolio for your consideration. This portfolio Captures several selected projects that reflect my experience of The last ten years in the field of architecture

Architectural designer with 6 years of experience in a full-time role and 10 years of experience as a freelancer in developing architectural designs, drafting for construction drawings, and Architecture visualization. Committed to great interpersonal skills, punctual, and able to work as a team.

INFO
125 Buesifai Street
Mueang District, Phichit
Thailand
+66 91 805 5918
imager9090@gmail.com

EXPERIENCE

2018 - Present — **Freelancer at Prynaa Architect**, Bangkok, Thailand
- **Assistant Designer** : Planning, Urban Design, etc.
- **3D Visualizer** : 3d Modeler, Rendering
- **Drafter** : Construction Drawing

2018 - Present — **Freelancer at Archiplusi**, Bangkok, Thailand
- **3D Visualizer** : 3d Modeler, Rendering

2021 — **Freelancer at 4B Architect**, Bangkok, Thailand
- **3D Visualizer** : 3d Modeler, Rendering

2012 - 2018 — **Full time at Raktawan Design & Built**, Prachuap Khiri Khan, Thailand
- **Assistant Designer** : Developing, Functional, Facade design, etc.
- **3D Visualizer** : 3d Modeler, Rendering
- **Drafter** : Construction Drawing

Oct - Dec 2018 — **Assistant Reseacher to PH.D. Student**, Bangkok, Thailand
- **Computational Designer** : Analysis Modeler

2013 - 2015 — **Freelancer at Creative Great Design**, Bangkok, Thailand
- **3D Visualizer** : 3d Modeler, Rendering

May - Jul 2010 — **Intership Student at P.M.Design**, Songkhla, Thailand
- **Asistant Designer** : Planning, Functional, Facade design, etc.
- **3D Visualizer** : 3d Modeler, Rendering
- **Drafter** : Construction Drawing

May - Jul 2008 — **Intership Student at 350 Architect**, Songkhla, Thailand
- **3D Visualizer** : 3d Modeler, Rendering
- **Drafter** : Construction Drawing

SKILLS

Software Skills	**Beginner<----------->Proficiency**
Rhinoceros	
Grasshopper & Other plug in	
3d studio max	
Sketch Up	
Autodesk Autocad	
Autodesk Revit	
Dynamo	
Graphic Soft Archicad	
Lumion, Rendering & Animation	
Vray, Rendering	
Corona, Rendering	
Adobe Photoshop	
Adobe Illustrator	
Adobe Indesign	
Ecotect, Analysis	
Microsoft Word, Excel, Point	
Blender	

Soft Skills
Hard working
Passionate
Positive Thinking
Mindfulness
Interpersonal

Personal Skills
Architectural Rendering
Computational Designer
Drawing & Sketching
Design & Develop
Musical
Sport(Football, other)
Driver's License(Local)

LANGUAGES

Thai - Native

English - Basic conversation

CERTIFICATIONS & AWARDS

2014 : Garage Life Competition / 13 final teams
Audi Garage

2013 : New Faculty of Architecture Rangsit Unversity/ 3rd Prize
Concept Design

2013 : Library Competition Rangsit university / 3rd Prize
Rom Yen Library

2012 : Thailand House Steel Contest / 3rd Prize
Coexist House

2011 : B1 Green Innovative House / 10 final teams
Build Return World

2010 : Thaksin ASA Competition / 5th Mention Prize
Lovely Natural House

EDUCATIONS

2011 - 2019 : Rangsit University in Thailand (worked during the study)
Bachelor of Architecture Degree (5 years)

2008 - 2011 : Songkhla Technology College in Thailand
Architecture Diploma Certificate (2 years)

VOLUNTEER

Dec 14 2015 — **volunteer**, Chiang Rai, Thailand
- **Learning** : Adobe Brick
- **Making** : Making adobe brick
- **Community** : Contributed to the local people of the village

RESUME & CURRICULUM VITAE

CONTENTS

ACADEMICS

05

COMPETITIONS

20

PROFESSIONALS

32

ACADEMICS

01

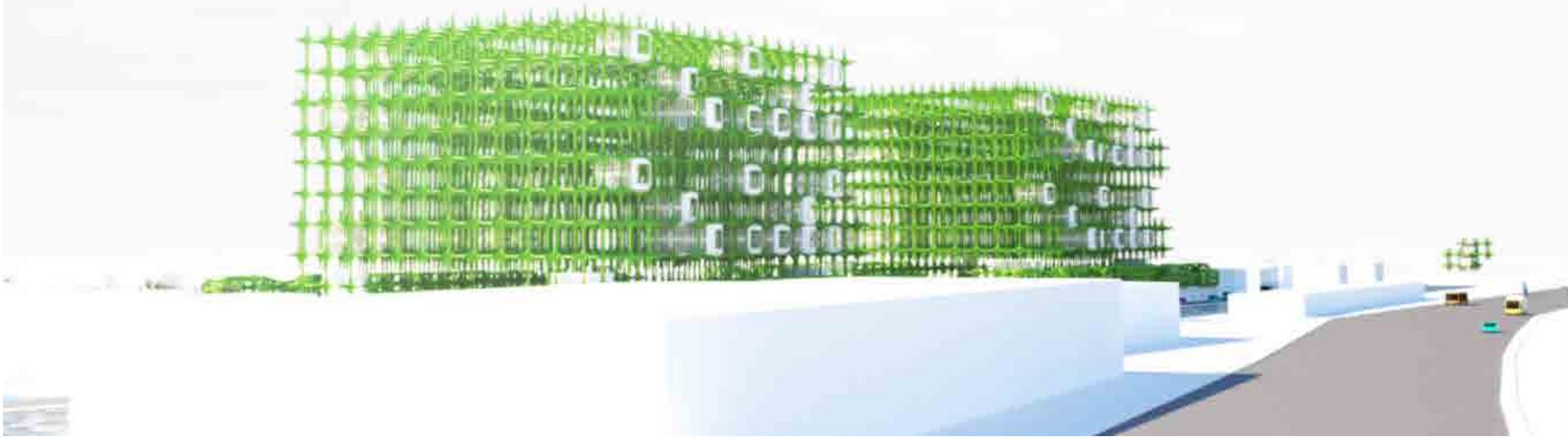
ALTERNATOPIA HOUSING,
THESIS 5TH YEARS

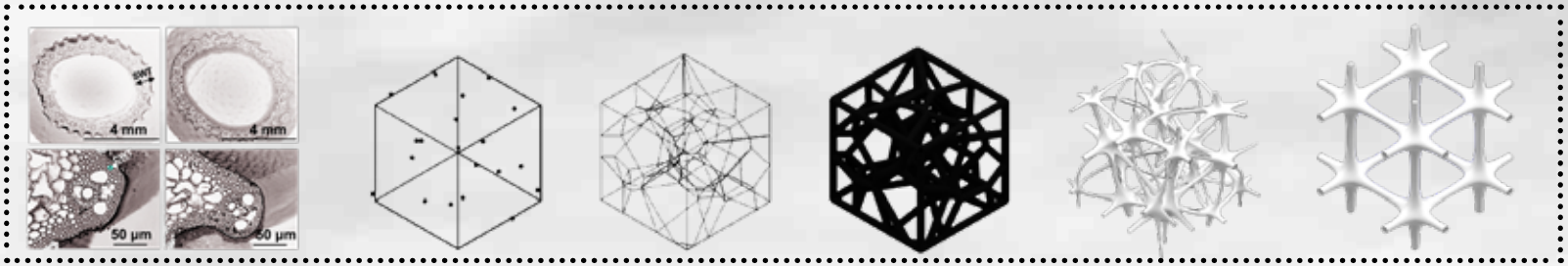
Faculty of Architecture Rangsit University
Advisor **: Mr.Paiboon Kittikul**
Year **: 2019**
Location **: Chatuchak , Bangkok , Thailand**
Programme **: Housing , Residence**

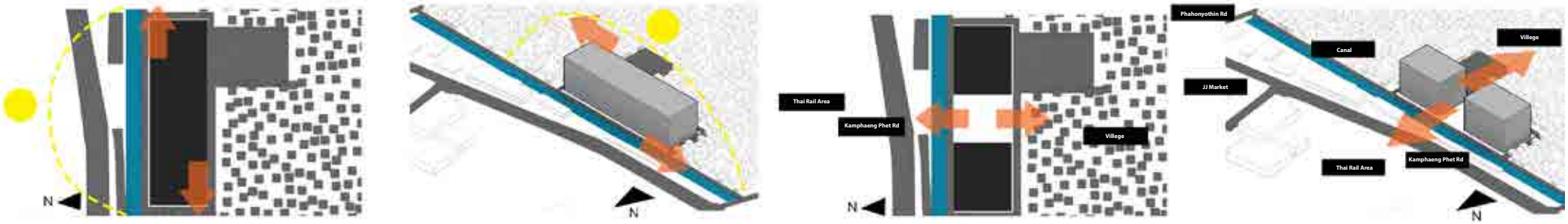
The alterna topia housing project began with the question of people in Thailand. Can we have a better quality of life? The term quality of life from research. There are two things: humans and the environment. Currently, research has shown that humans. There are 3 types:

1. Extroverts are people who like to socialize
2. Introverts are people with a high personal world
3. Ambiverts are collectors

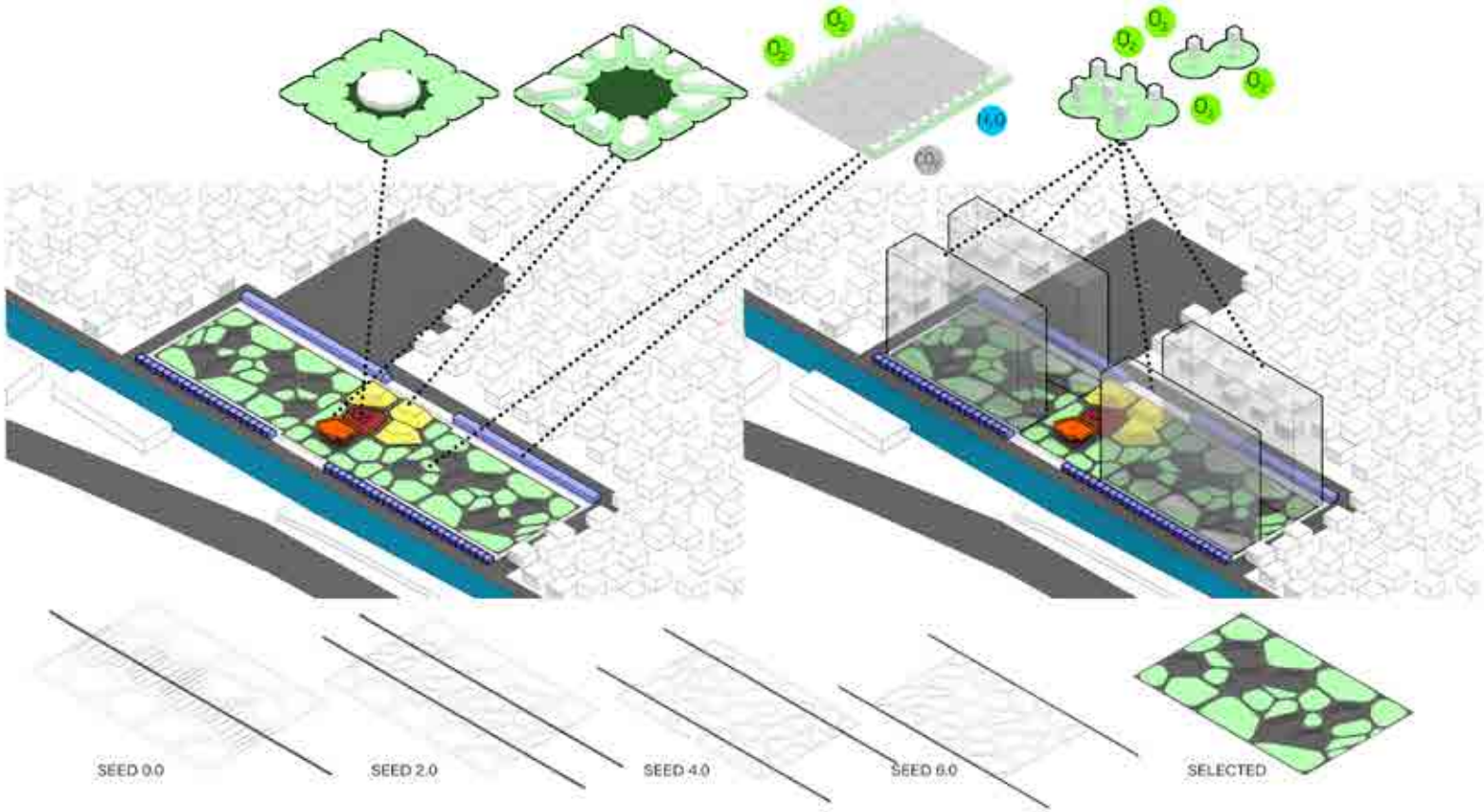
The current residence is not able to meet these behavior enough.
Most will choose to live in the existing real estate market.
While supporting the housing of the household extension for beginners
Come to live in Bangkok, for example, come to find work,
Still not live able to meet the size of the space sufficiently from the
Survey results worldwide, homes per 1 person must have 40 - 50
Square meters or more referenced in The housing market for beginners
Or middle income in Bangkok is 24 - 30 square meters.
That is the current environment. Major cities such as carbondioxi
And 2.5 PM mainly come from construction and road cars, one of
The components that make the quality of life get worse
Residential Alternatopia has more choices and is suitable for the closest
Persian architecture will help to absorb pollution and change to energy and
creates oxygen back to the environment as well



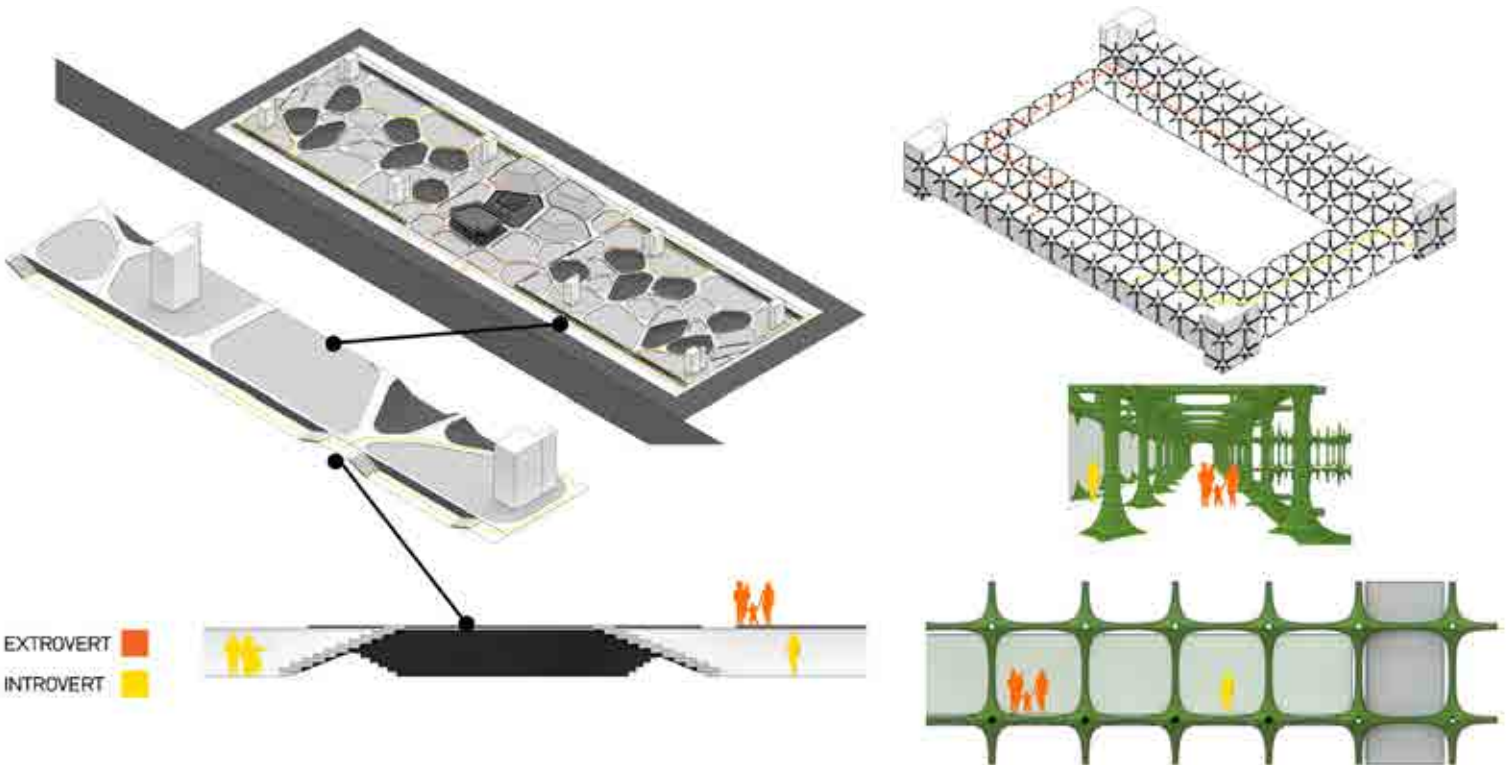

4 mm
4 mm
50 µm
50 µm



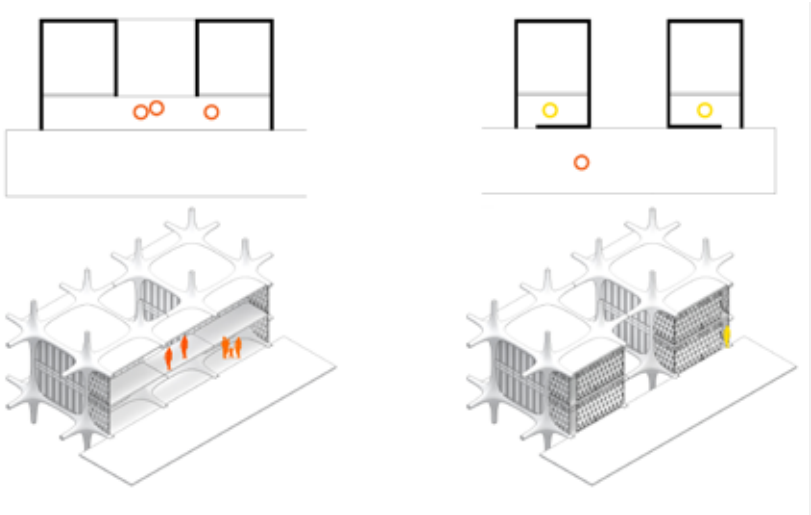
The building orientation & Connect between the 2 neighborhoods



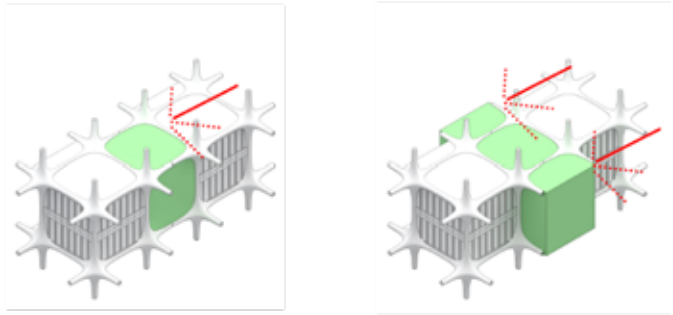
Finding the master plan with algorithm modeling

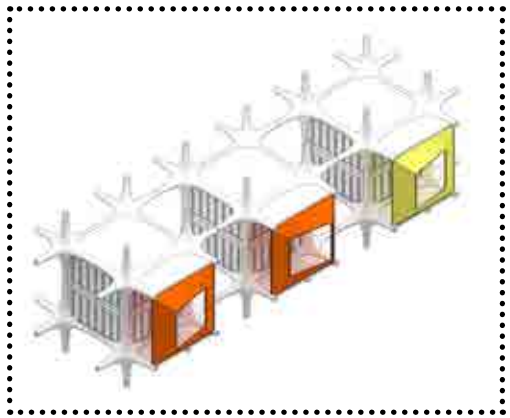


The circulations & Access to be destinations



Coexistence solution for whole behavior types

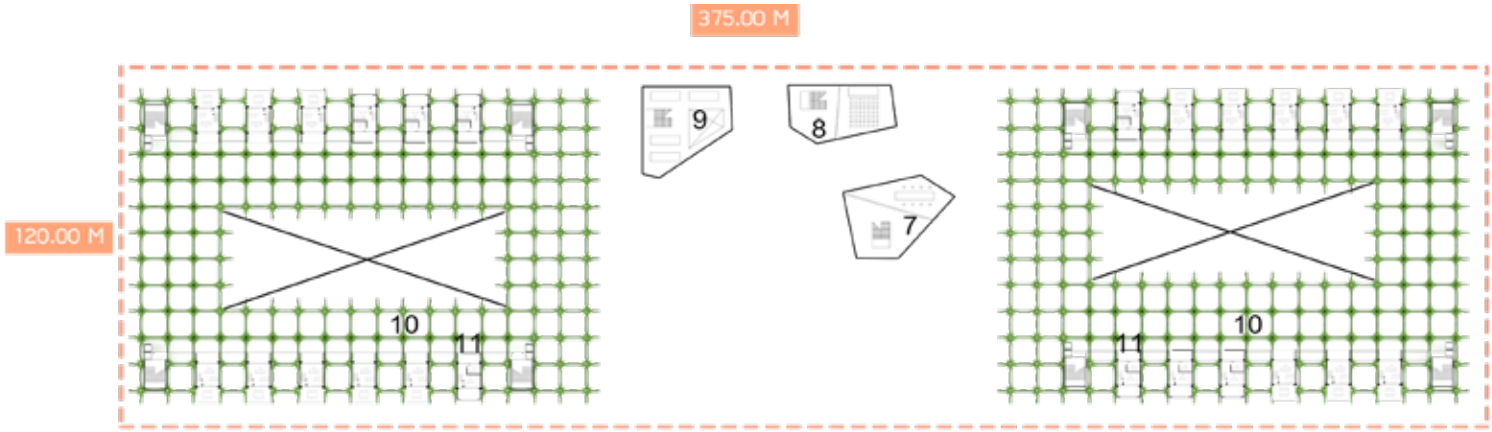




Morphed design with algorithm modeling

GROUND FLOOR PLAN

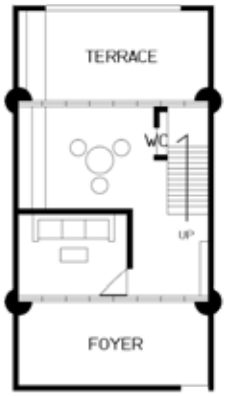
1. Sunken Space
2. 1st Floors of School & Workshop
3. Reception & Lobby
4. 1st Floors of Library
5. 1st Floors of Meeting Room
6. Gardens



2ND - 12TH FLOOR PLAN

7. 2nd Floors of school & Workshop
8. 2nd Floors of meeting Room
9. 2nd Floors of library
10. Room units

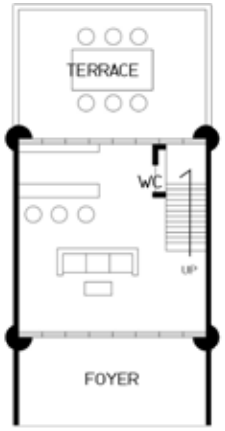
TYPE OF INTROVERT



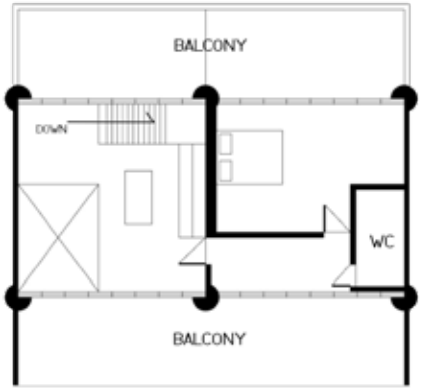
1st Floor Plan

2nd Floor Plan

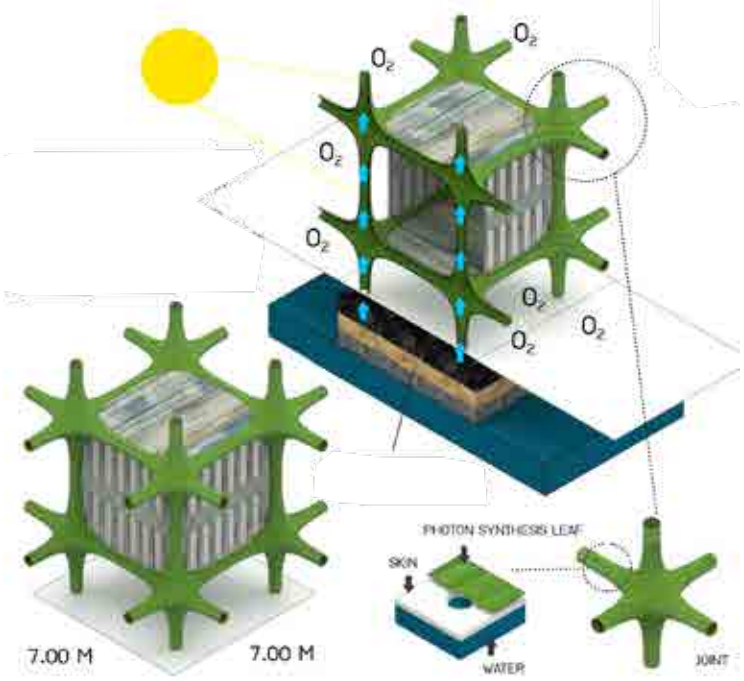
TYPE OF EXTROVERT



1st Floor Plan



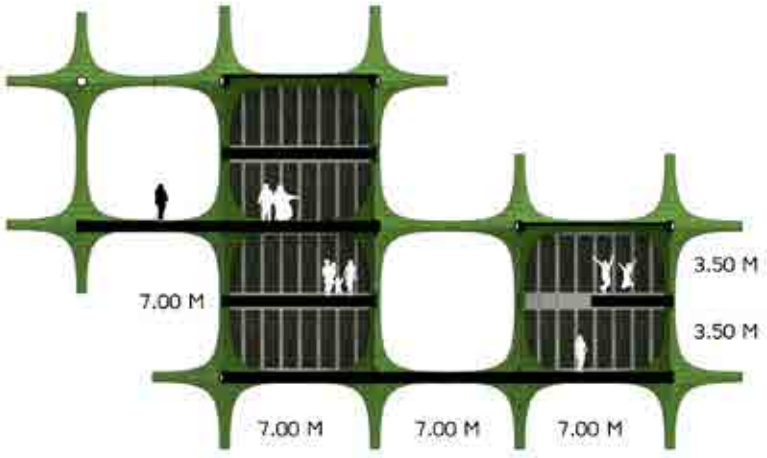
2nd Floor Plan



Process of systems

PHOTON SYNTHESIS OF LEAF

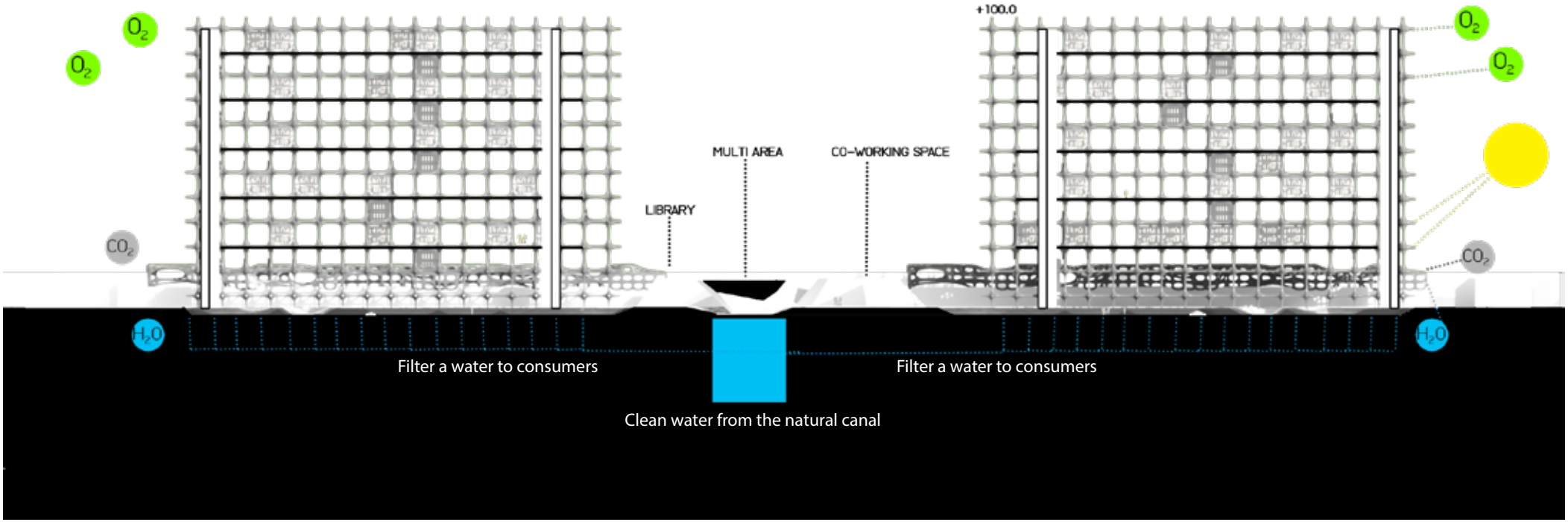
The building structure is a special material that can photosynthesize and produce oxygen like a tree. The process is to use water from natural sources to produce things. This allows the structure to perform other functions as well, such as facade, water pipes and other systems.



Sectional space

Sunken in the garden

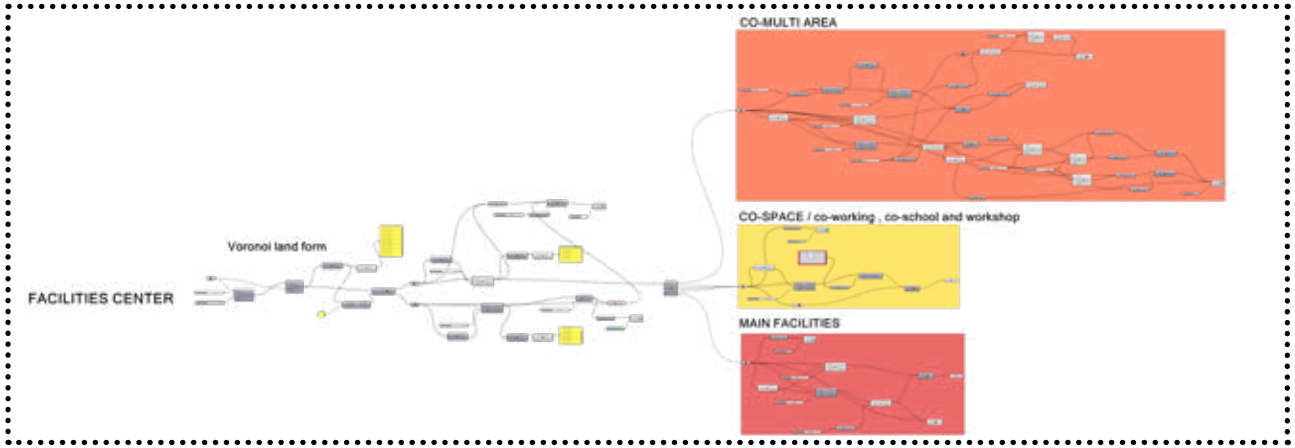
Waterfront



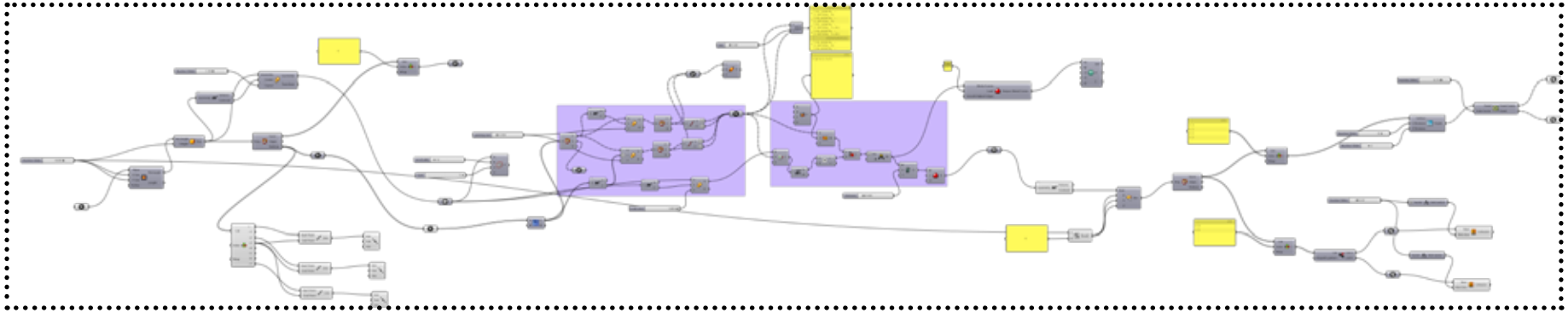
Long Section

ALTERNA TOPIA HOUSE : **BIRD' S EYE VIEW**

DEFINITION OF AREA



DEFINITION OF PROGRAM



DEFINITION OF STRUCTURAL DESIGN

02

THE BALANCE ZEN,
ARCHITECTURAL DESIGN

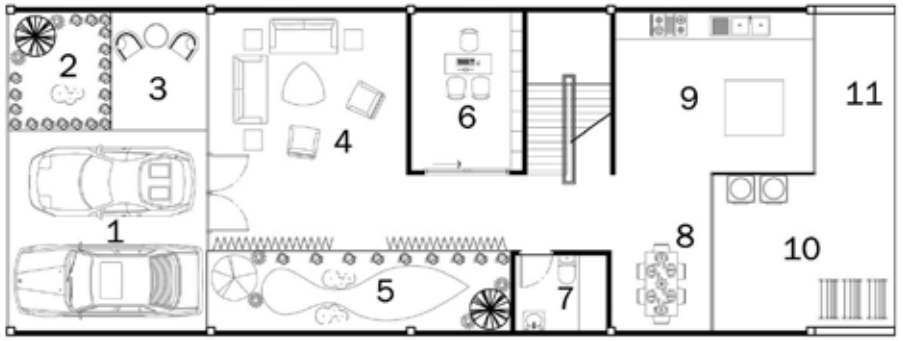
Hadyai Technical College
Year **: 2007**
Location **: Hadyai , Songkhla , Thailand**
Programme **: Housing , Residence**

Currently living in the city Quite limited in many aspects such as repetitive use of space, no privacy, Lack of green spaces, places to relax, etc. Finding a suitable family home is quite rare to some extent. When you find one, there will be no other facilities as well.

This housing project has the problem that The building is located in the southern capital, Hat Yai. Which is a city with 8 months of rain and 4 months of sunshine During hot weather, there are high temperatures. The residence, therefore, needs to have a living space to support it. These family groups of users enjoy recreation and relaxation at the same time. His wife is a Japanese language teacher and has a passion for culture, tradition, and the aura of Japan.

The design of this project starts from the type of residential houses that people of the middle class can touch, namely row houses or Townhouses where land and construction costs are too high to occupy. The next step is to bring the problem to design a usable space. And exterior and interior forms in accordance with usability The highlight of this house is the idea of bringing natural light into the court where it can shine down to the ground floor zen garden. This zen garden has a length to reach the middle of the house to support the relaxation of home users is sufficient As for the usable area, the highlight of a multi-story townhouse can be extra space and a roof deck that can be extended in the future. So this house is called The balance zen.

1. Cars-parking
2. Garden
3. Terrace
4. Living Room
5. Zen garden
6. Working Room
7. WC
8. Dining Room
9. KItchen
10. Washing Area
11. Balcony



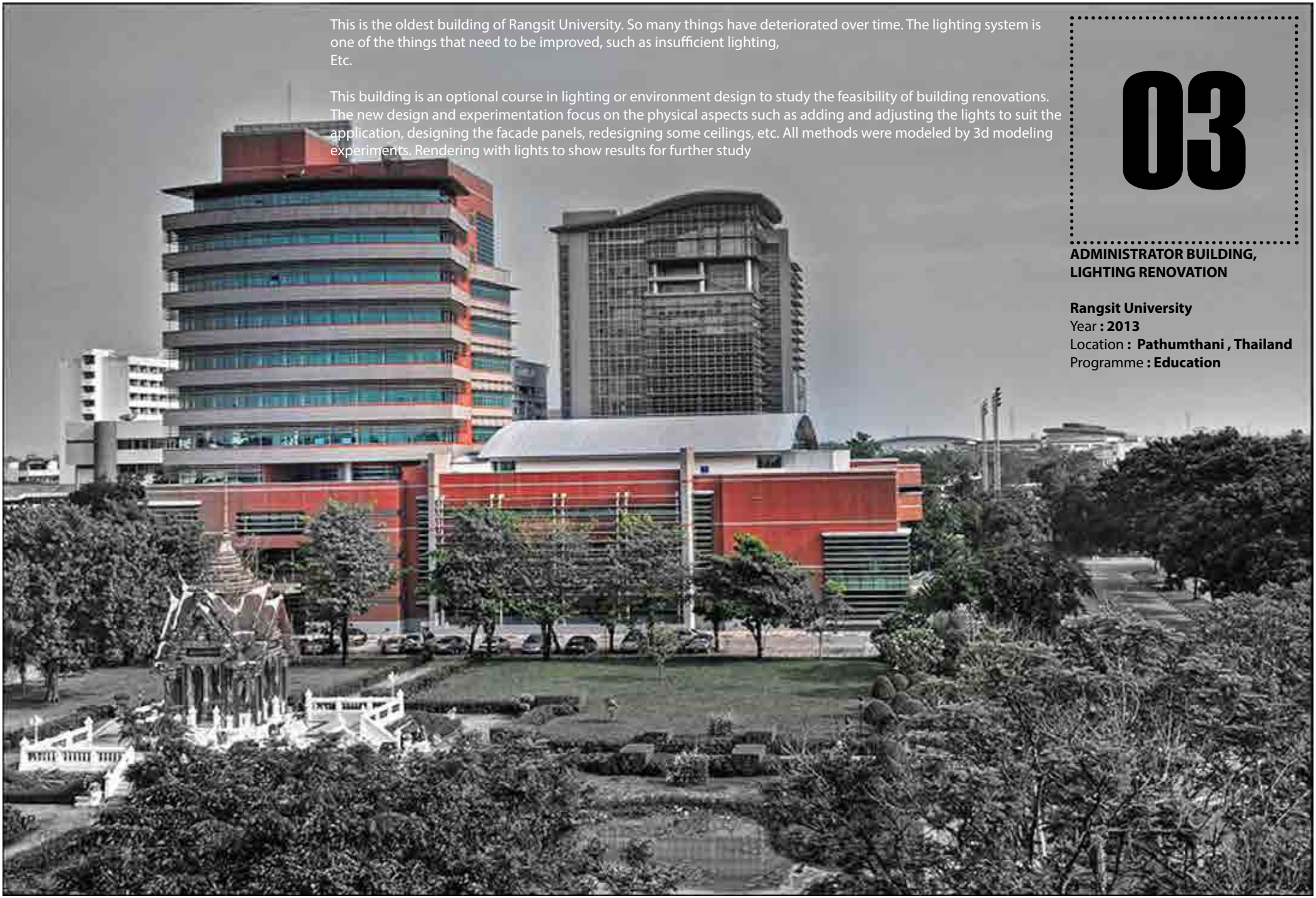
GROUND FLOOR PLAN

1. Hall of stair
2. WC
3. Religion Room
4. Bedroom
5. Walk in closet
6. WC for master
7. Master Bedroom
8. Balcony

2ND FLOOR PLAN

1. Hall of stair
2. WC
3. Multipurpose Room
4. Relaxing Room
5. Deck Area

3RD FLOOR PLAN



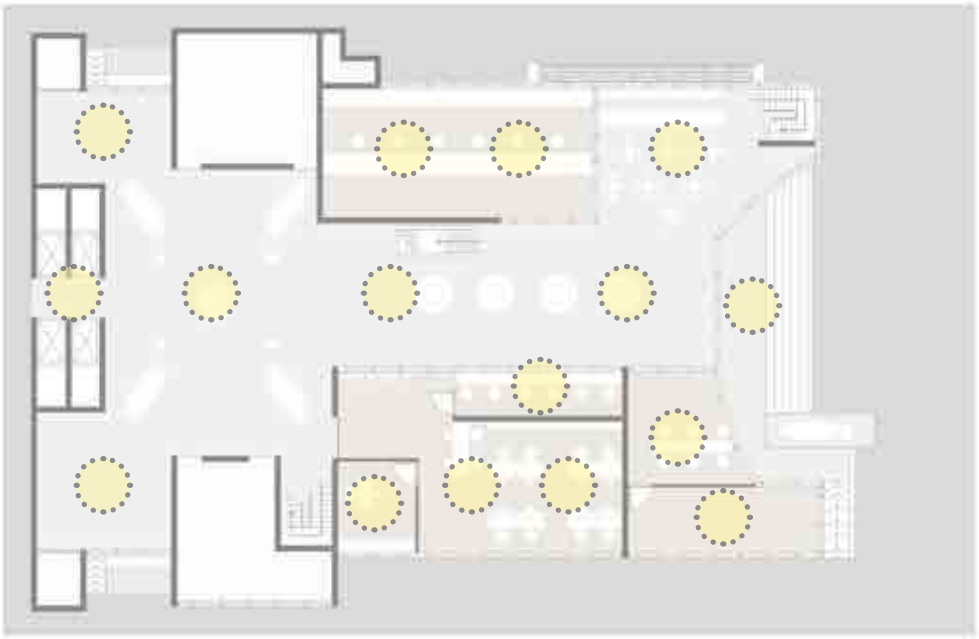
This is the oldest building of Rangsit University. So many things have deteriorated over time. The lighting system is one of the things that need to be improved, such as insufficient lighting,
Etc.

This building is an optional course in lighting or environment design to study the feasibility of building renovations. The new design and experimentation focus on the physical aspects such as adding and adjusting the lights to suit the application, designing the facade panels, redesigning some ceilings, etc. All methods were modeled by 3d modeling experiments. Rendering with lights to show results for further study

03

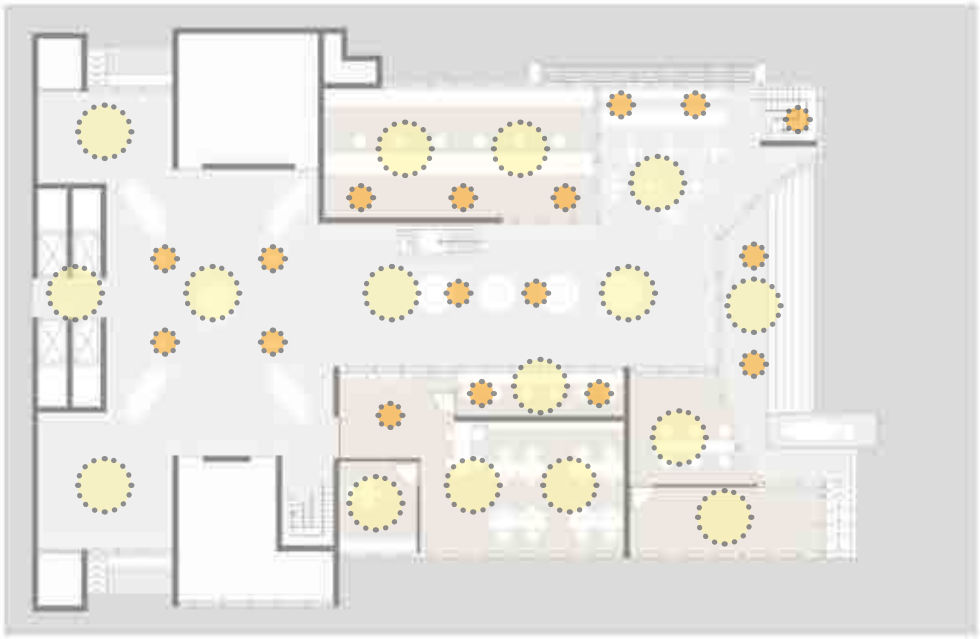
ADMINISTRATOR BUILDING, LIGHTING RENOVATION

Rangsit University
Year **: 2013**
Location **: Pathumthani , Thailand**
Programme **: Education**



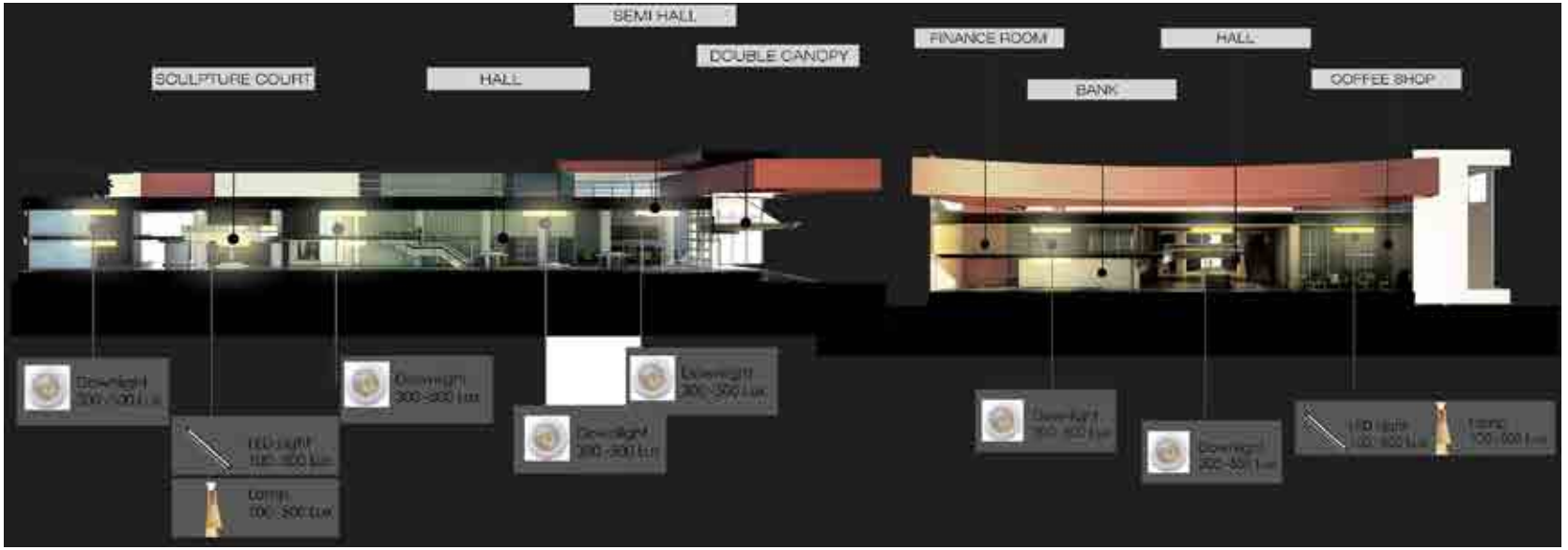
Old Lights New Lights

BEFORE FLOOR PLAN



Old Lights New Lights

AFTER FLOOR PLAN



DOWN LIGHTS
- LED at ceilings
- 1k to 3k SQM.
- 300 to 500 Luxes

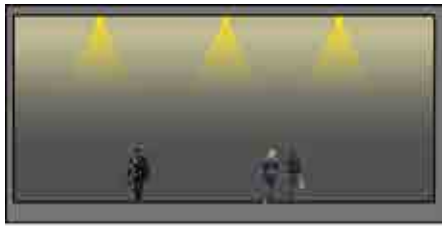
HIDING LIGHTS
- LED at cornices
- 100 to 500 SQM.
- 100 to 500 Luxes

WALL LIGHTS
- LED at walls
- 50 to 100 SQM.
- 100 to 500 Lux

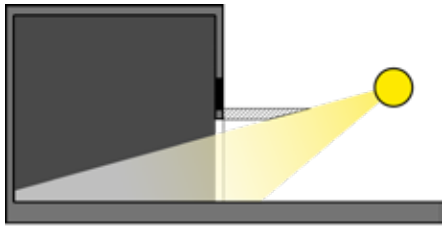
IMPROVEMENT PROCEDURES

Lights were too less

The tone colours was too dark



Lights were too high

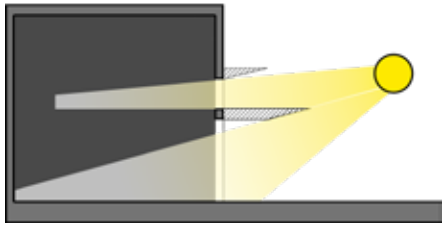


Day lights were too less

Addition lights

Change tone colour was lighter

Ceiling design to be enough lights



Add canopies for be brighter

BEFORE & AFTER

Foyer & Main hall

Double space of Main hall

Coffee Shop

Main Approach

COMPETITIONS

04

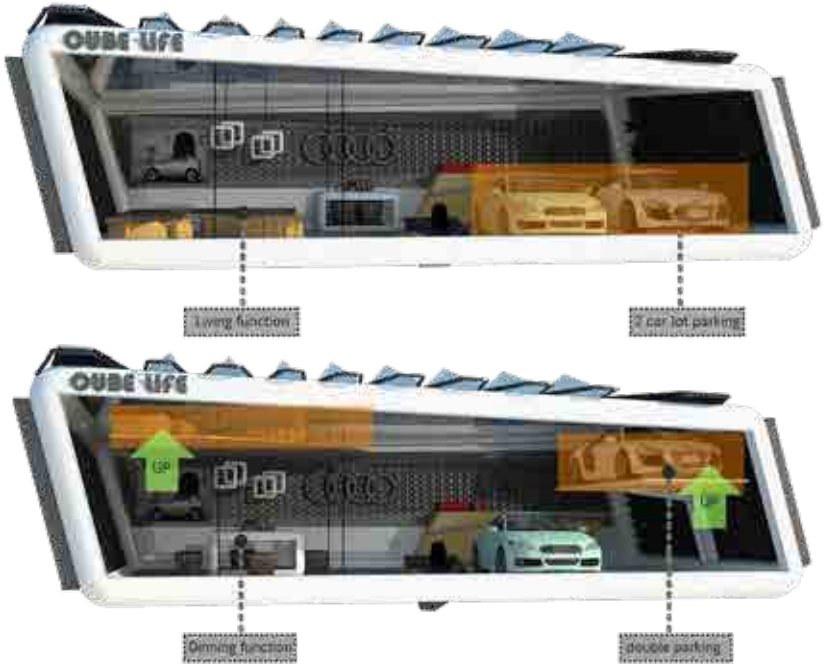
AUDI INSPIRATION GARAGE ,
GARAGE LIFE COMPETTION

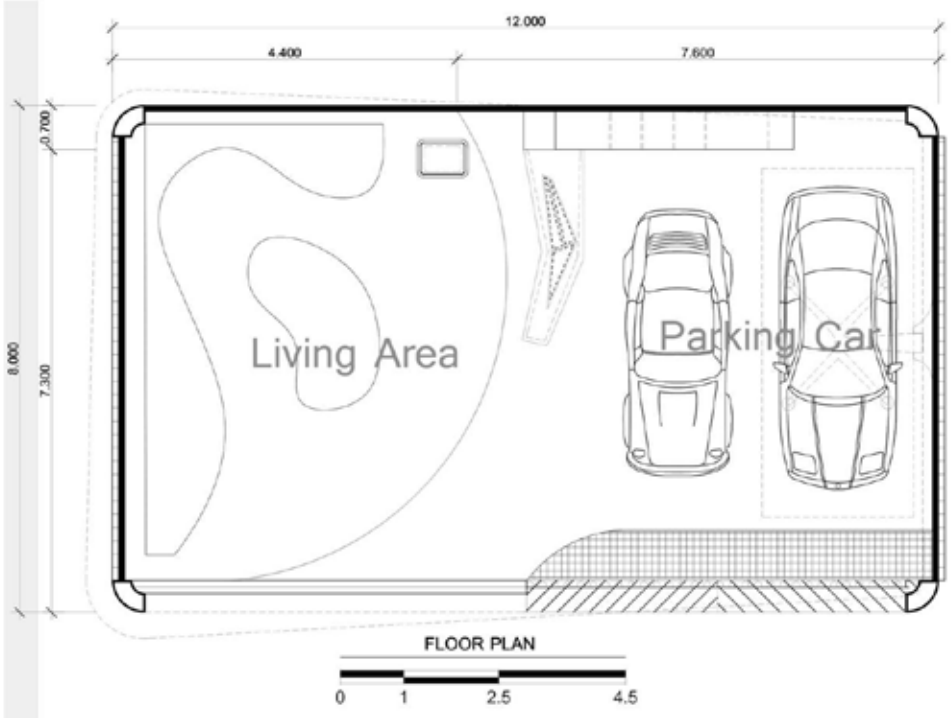
Rangsit University
Year **: 2014**
Location **: Pathumthani , Thailand**
Programme **: Special Typology**

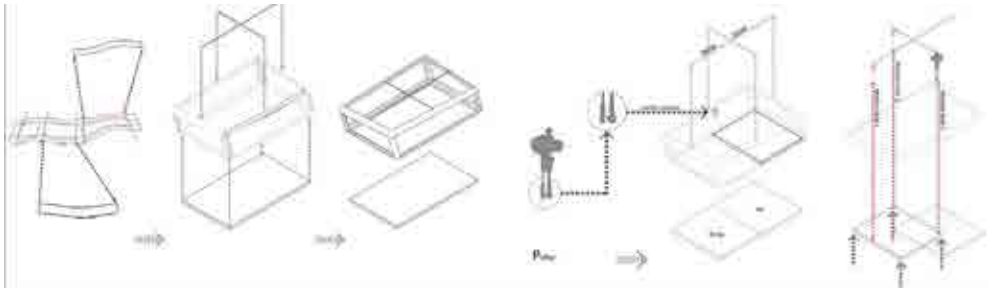
In 2014, there was a dream garage contest that allowed designers to fully imagine. The contest form is organized by a real estate company in Thailand. The organization has an idea that the garage design and real estate business will have new directions in what direction in the future.

The garage in this project is inspired by the Audi car brand which is one of the interesting brands because of its uniqueness. Each element has been applied in several design points, such as the grille pattern, curved section, etc. In addition, automotive innovations, algorithm modeling, and recycling were also used in this project. This is going to be the perfect garage for an Audi fan.


3.10m

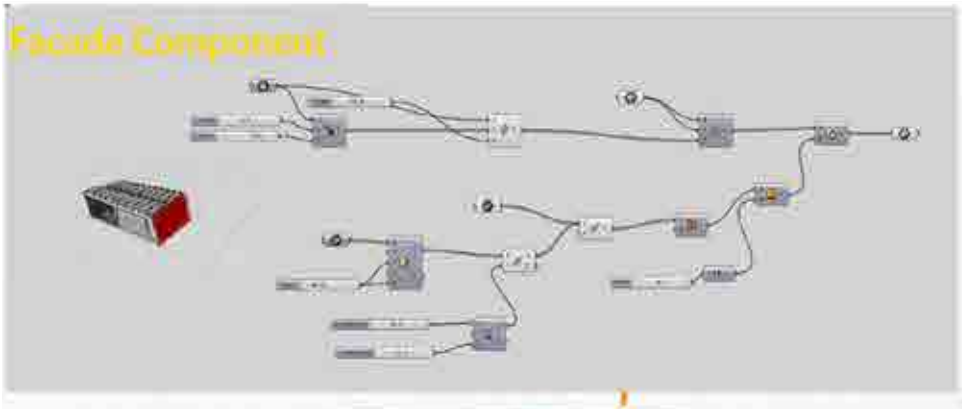

CUBE LIFE
Living function
2 car lot parking
CUBE LIFE
Dinning function
double parking

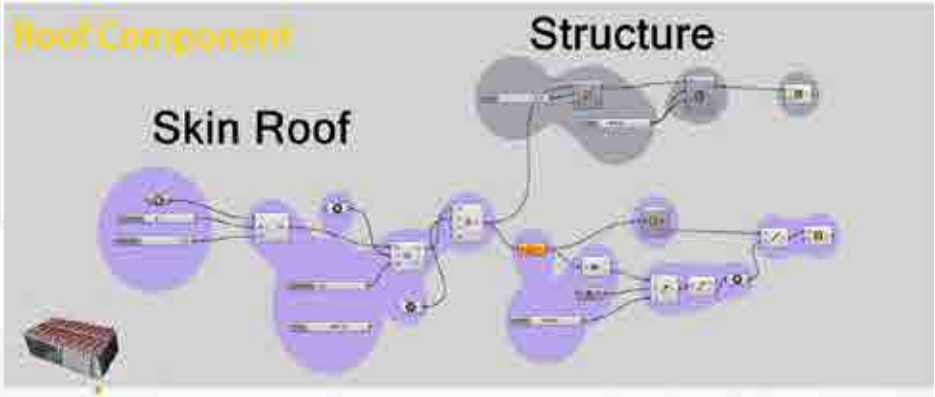

12.000
4.400
7.600
0.700
8.000
7.300
Living Area
Parking Car
FLOOR PLAN
0
1
2.5
4.5



MAKING OF GARAGE

PROCEDURE RECYCLE





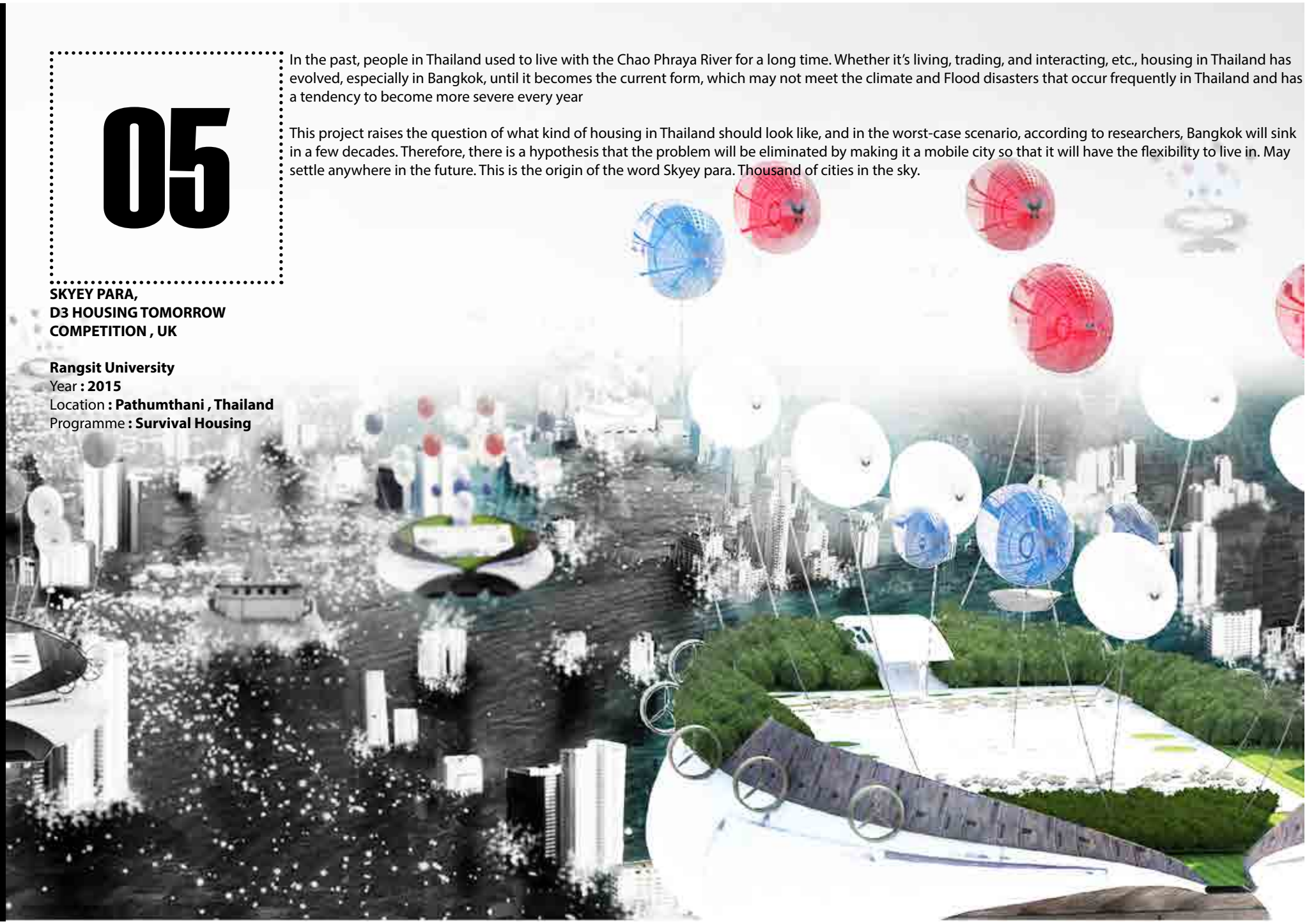
05

SKYEY PARA,
D3 HOUSING TOMORROW
COMPETITION , UK

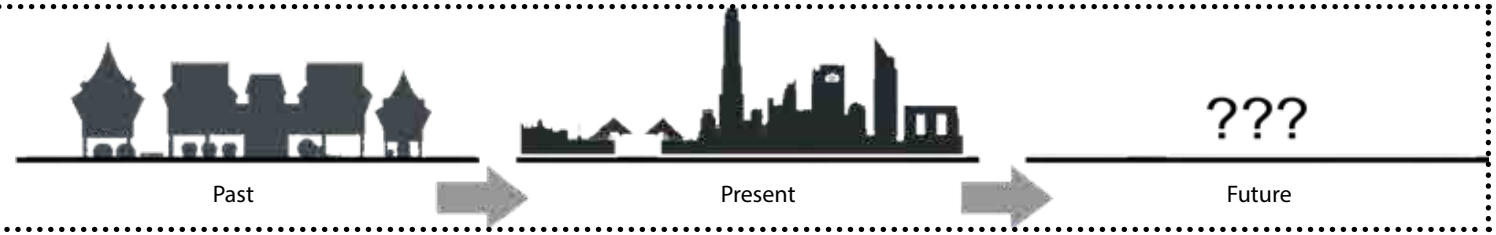
Rangsit University
Year **: 2015**
Location **: Pathumthani , Thailand**
Programme **: Survival Housing**

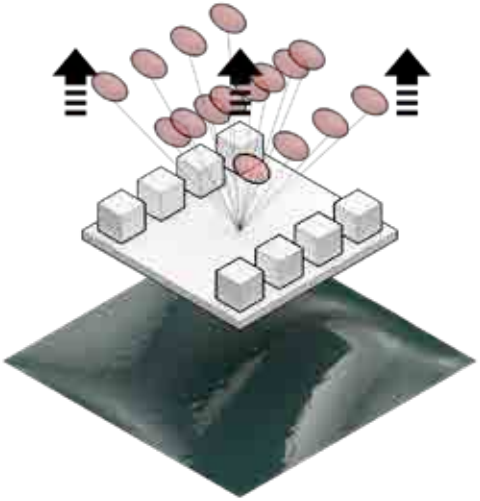
In the past, people in Thailand used to live with the Chao Phraya River for a long time. Whether it's living, trading, and interacting, etc., housing in Thailand has evolved, especially in Bangkok, until it becomes the current form, which may not meet the climate and Flood disasters that occur frequently in Thailand and has a tendency to become more severe every year

This project raises the question of what kind of housing in Thailand should look like, and in the worst-case scenario, according to researchers, Bangkok will sink in a few decades. Therefore, there is a hypothesis that the problem will be eliminated by making it a mobile city so that it will have the flexibility to live in. May settle anywhere in the future. This is the origin of the word Skyey para. Thousand of cities in the sky.

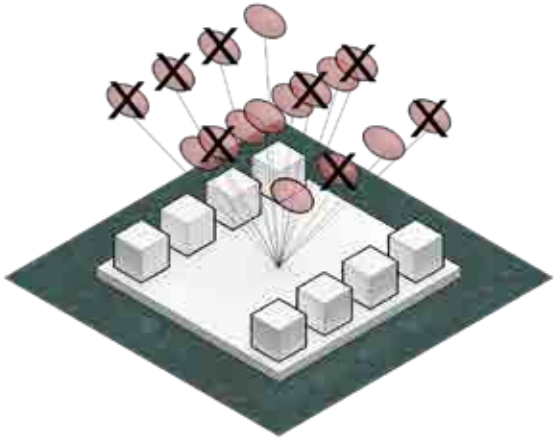


HYPOTHESIS

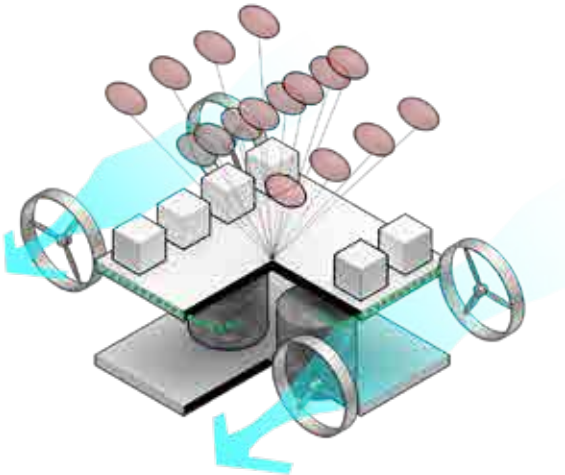




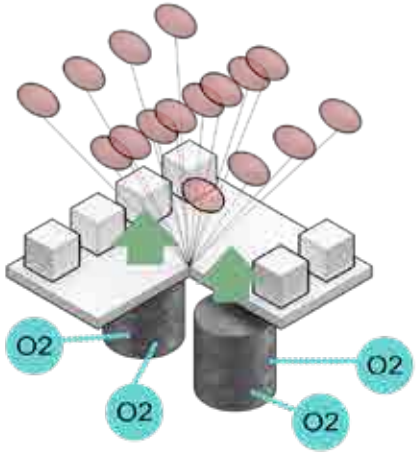
Housings can fly everywhere.



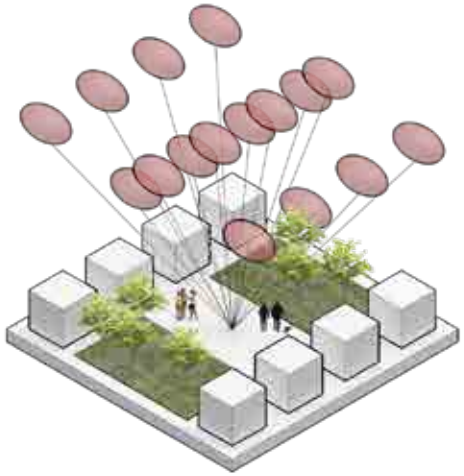
Housings can float, although balloons broke.



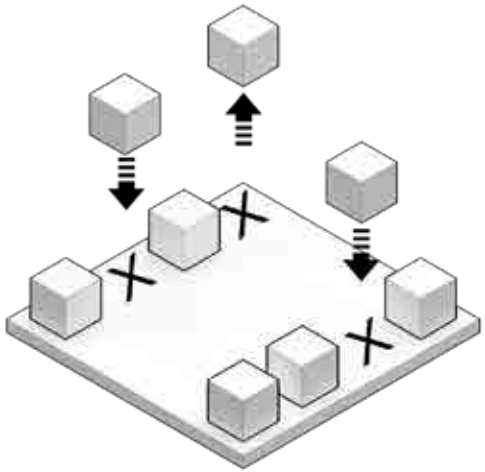
The wind can change to be energized.



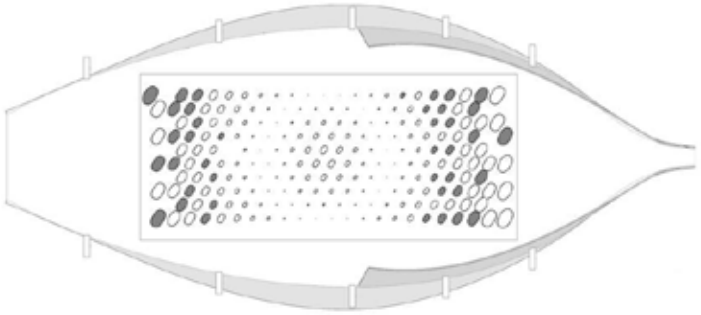
Energies can change to be some hilem.



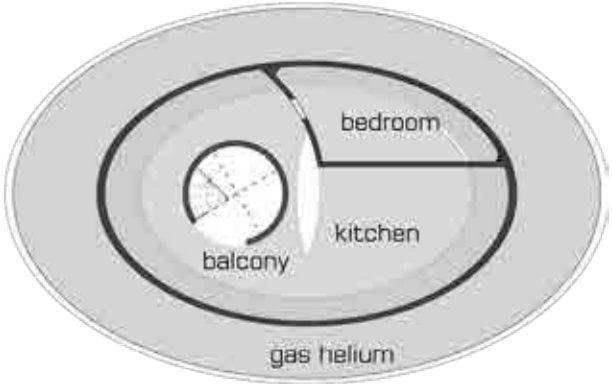
Housings have gardens and mini forests.



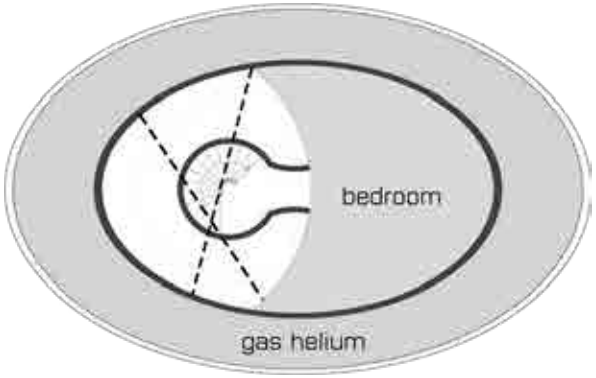
Housings can repair, fix, remove and reinstall.



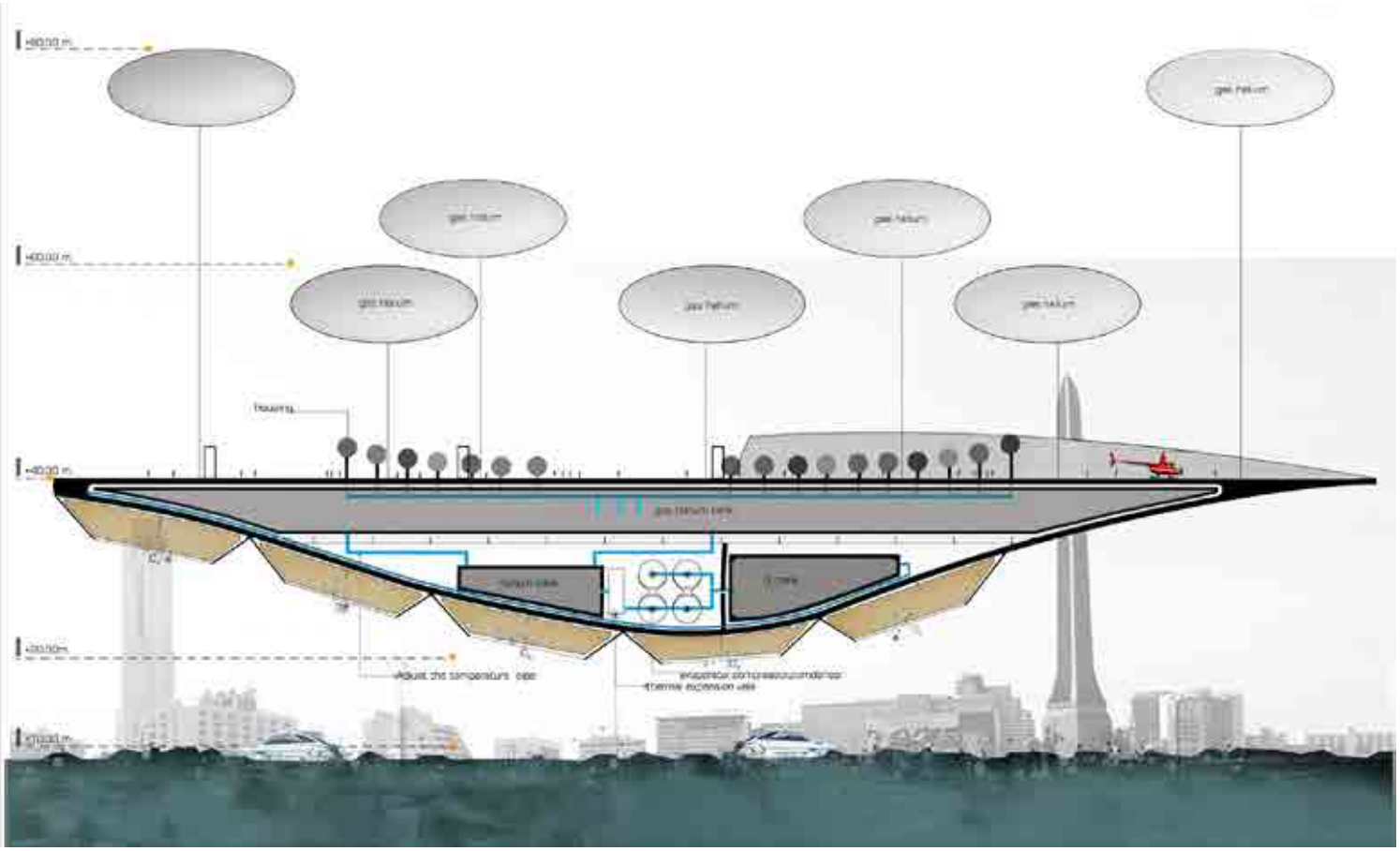
Master plan



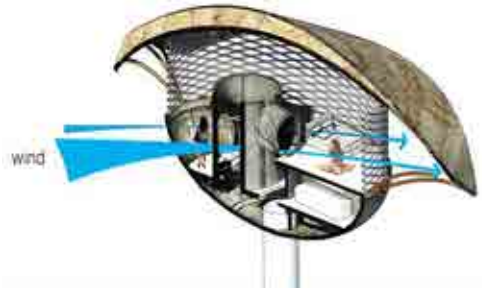
1st Floor Plan of unit



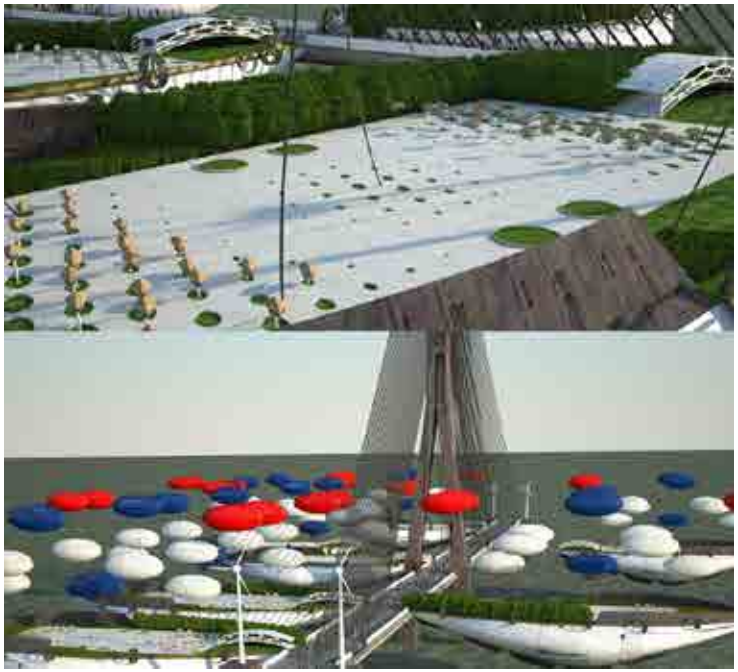
2nd Floor Plan of unit



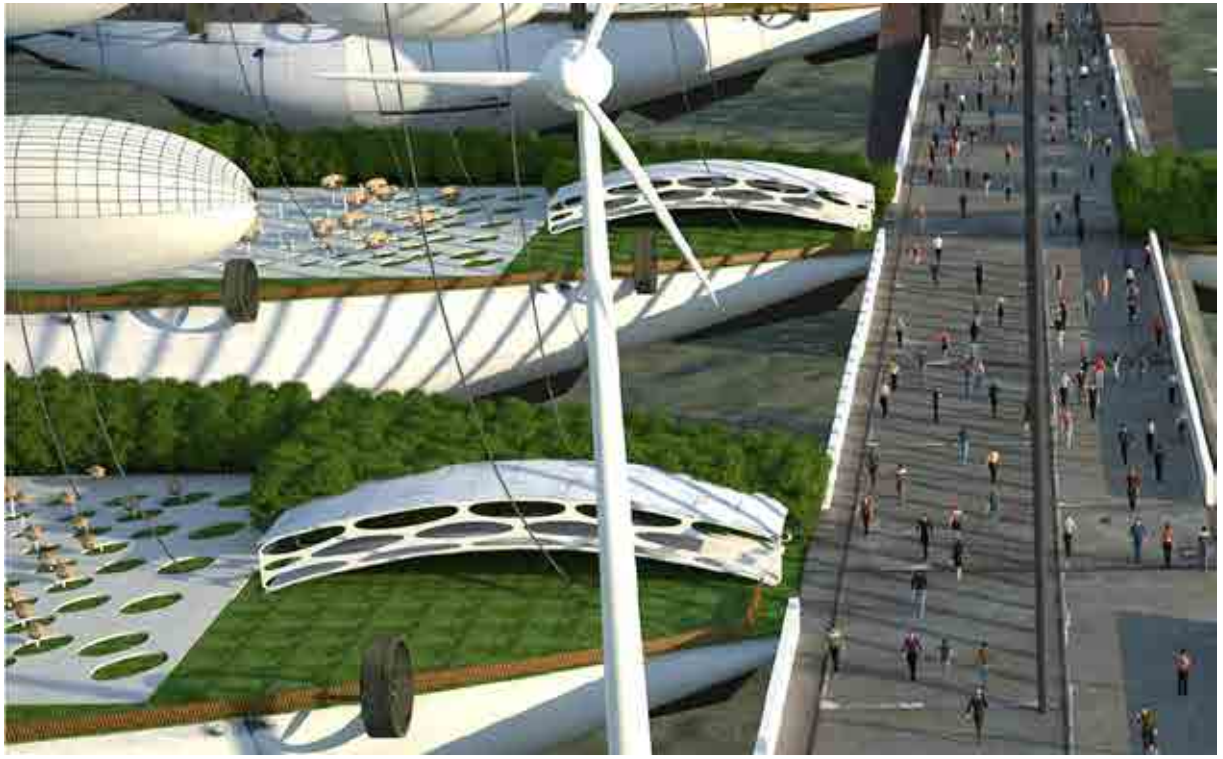
Element of unit

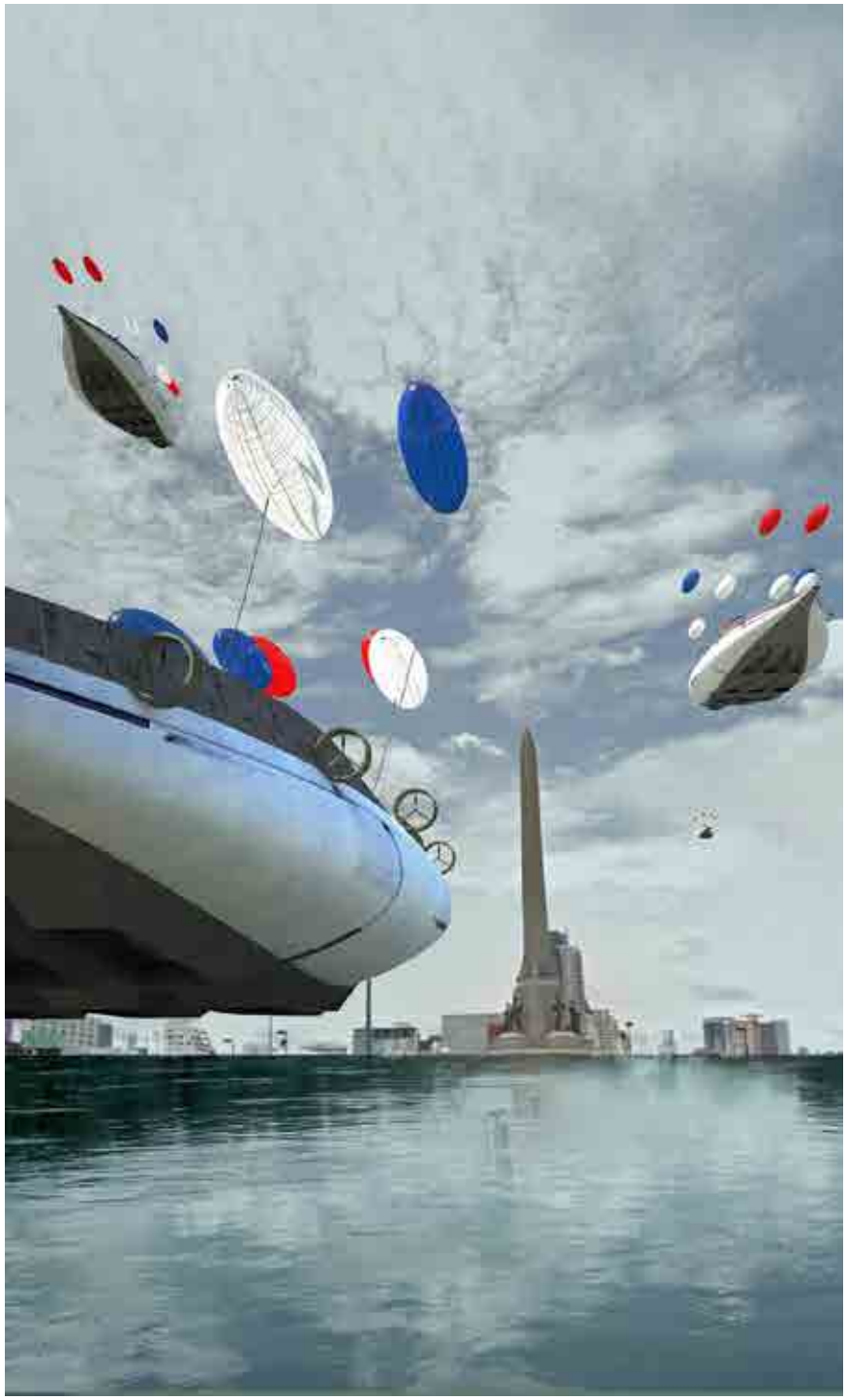


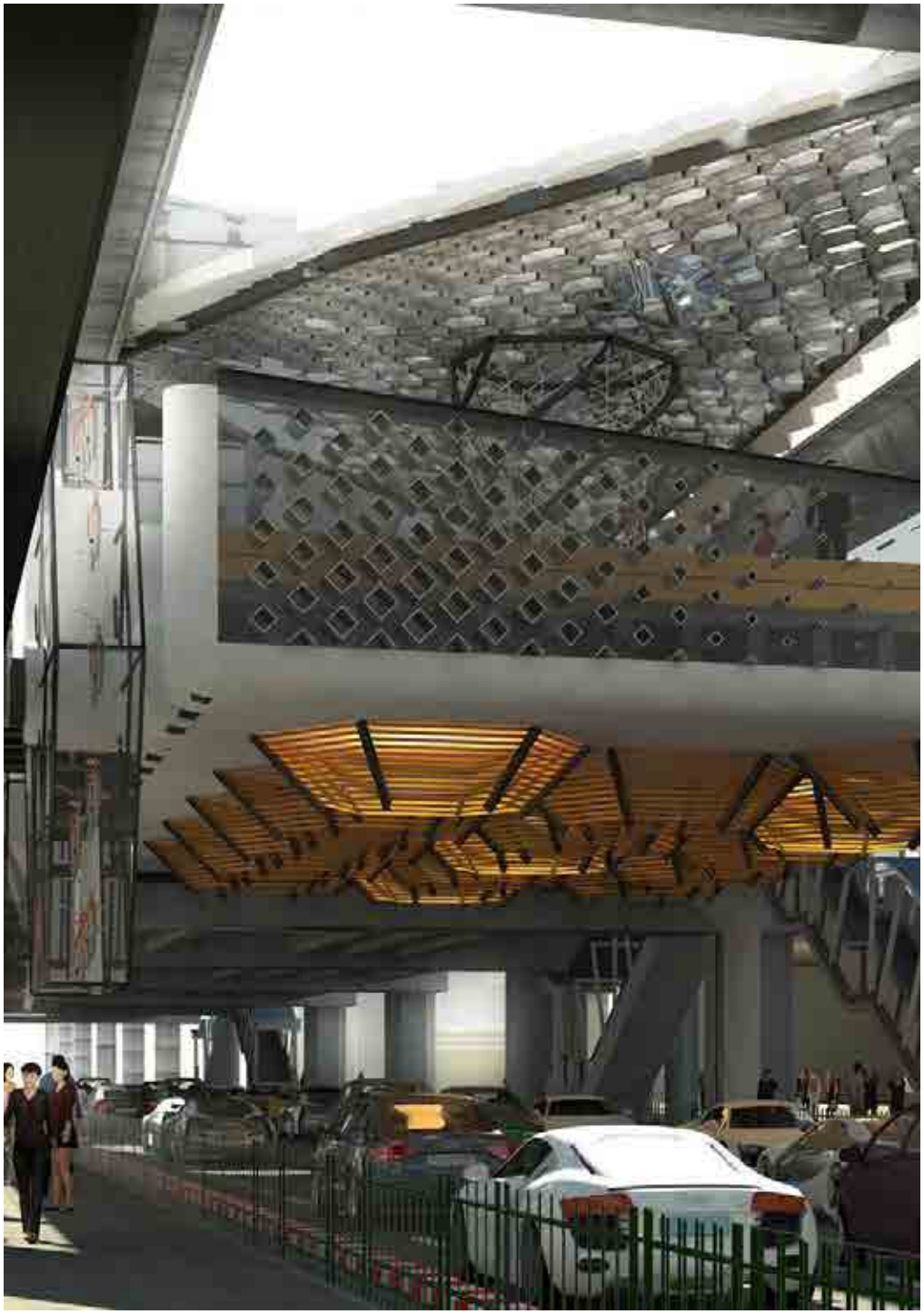
Iso-Section




site location
Bangkok,Thailand







06

CHALOM,
SIAM YAMATO STEEL COMPETITION

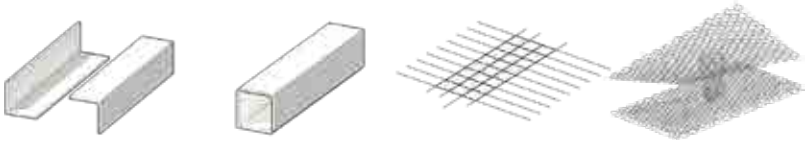
Rangsit University
Year **: 2014**
Location **: Pathumthani , Thailand**
Programme **: Public Area**

Currently, the BTS station In addition to being a transport for people is also a meeting place for people in the city. But there is not enough space for other activities such as waiting areas, meeting spaces to exchange things, etc. Today, tourist attractions in Thailand are known all over the world, especially in the capital city where the BTS Sky-train is the main use in the city. Therefore, it would be better if each station would be developed to be more interesting.

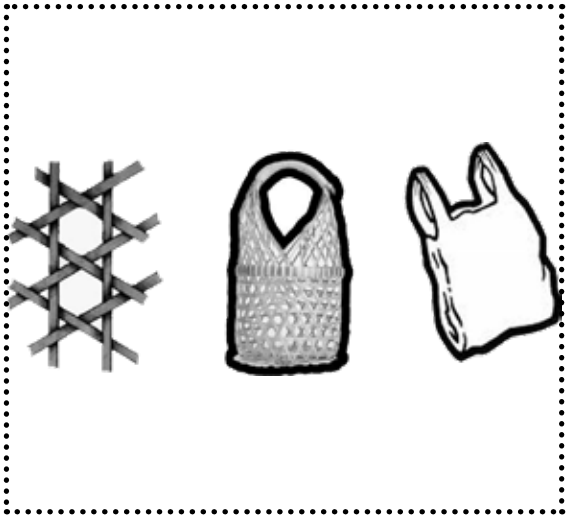
In this project, we have taken one of the products of Thailand called "Chalom" as a container that Thai people have used for a long time to use as a design idea. In this project, metal structures were used to weave a cha-lom pattern and applied to many elements of the building. The project floor has been extended from the area of the original station to increase the usable area, and convenience for users and others.

INSPIRATION

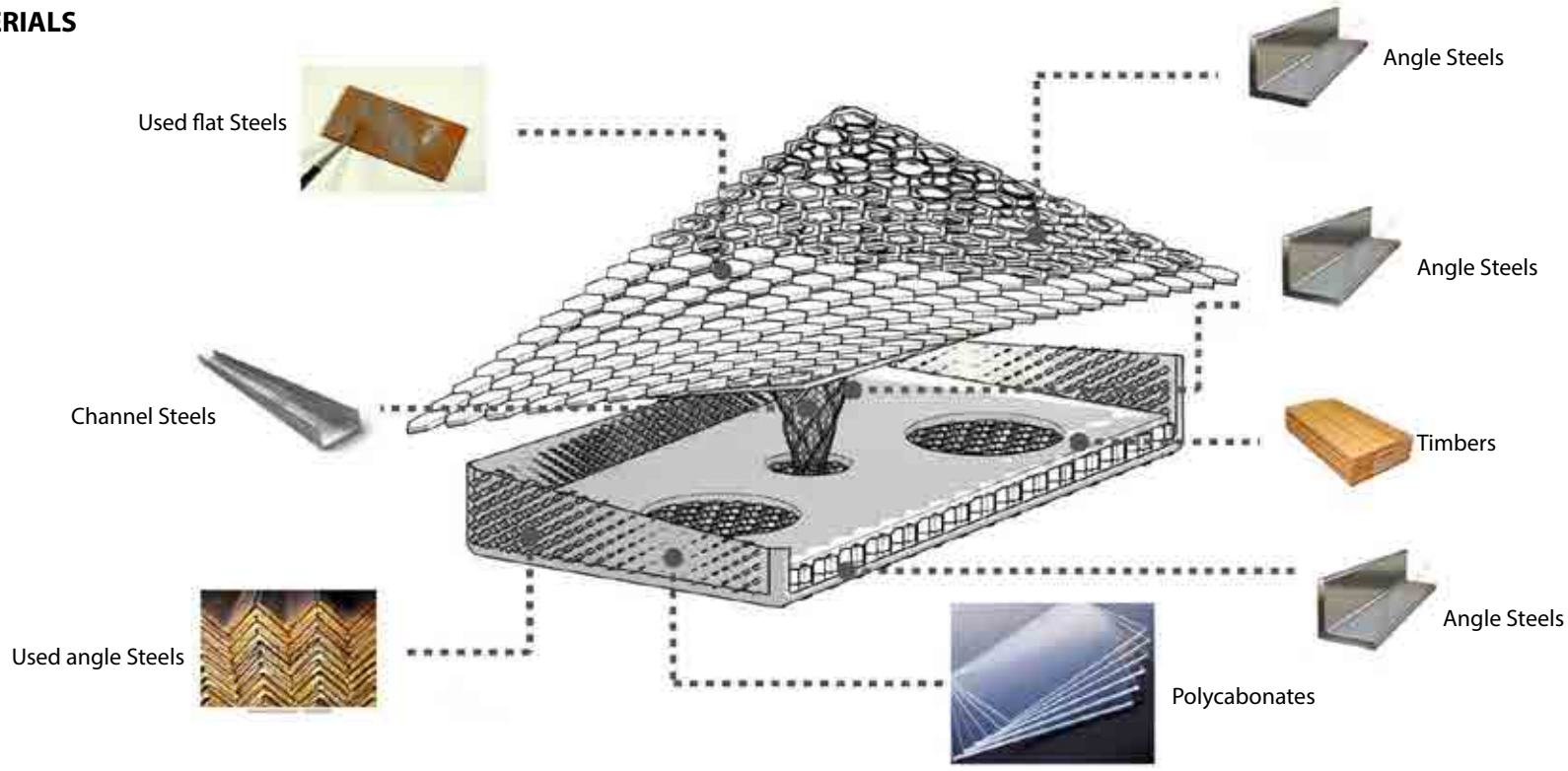
Metaphor of pattern



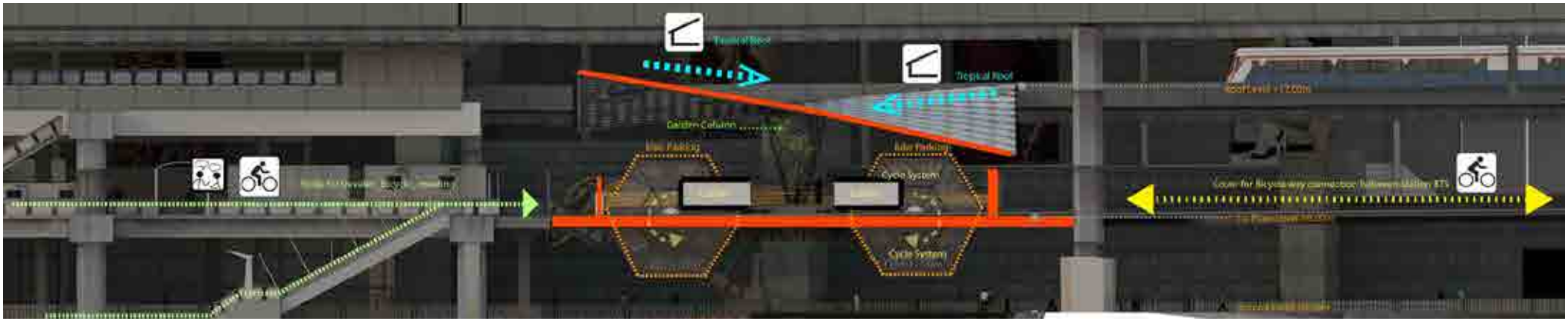
Materials from metaphor of pattern

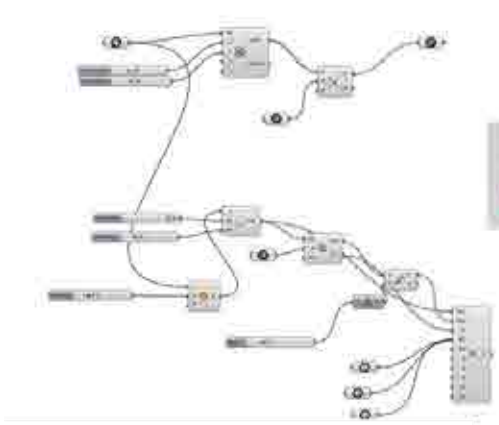


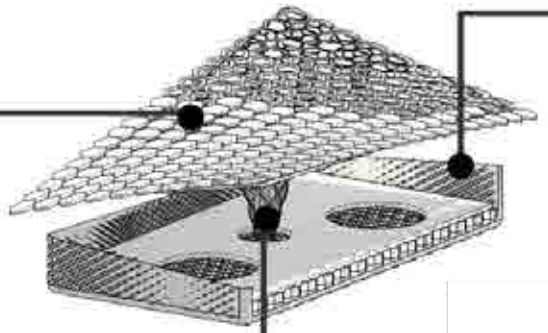
ELEMENT MATERIALS

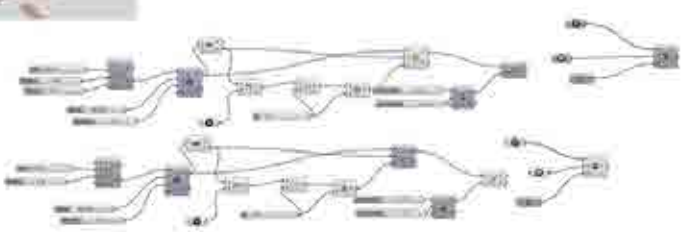


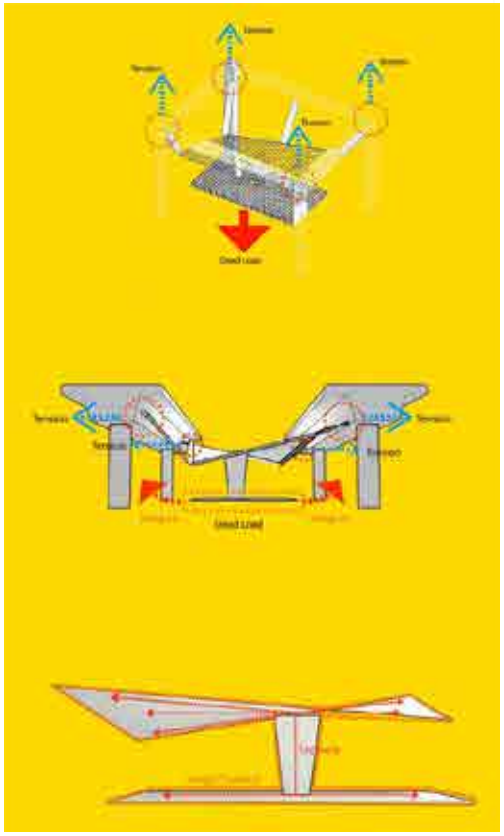

X1
11.250 m.
X2
11.220 m.
X3
M1
8.950 m.
M2
5.150 m.
M3

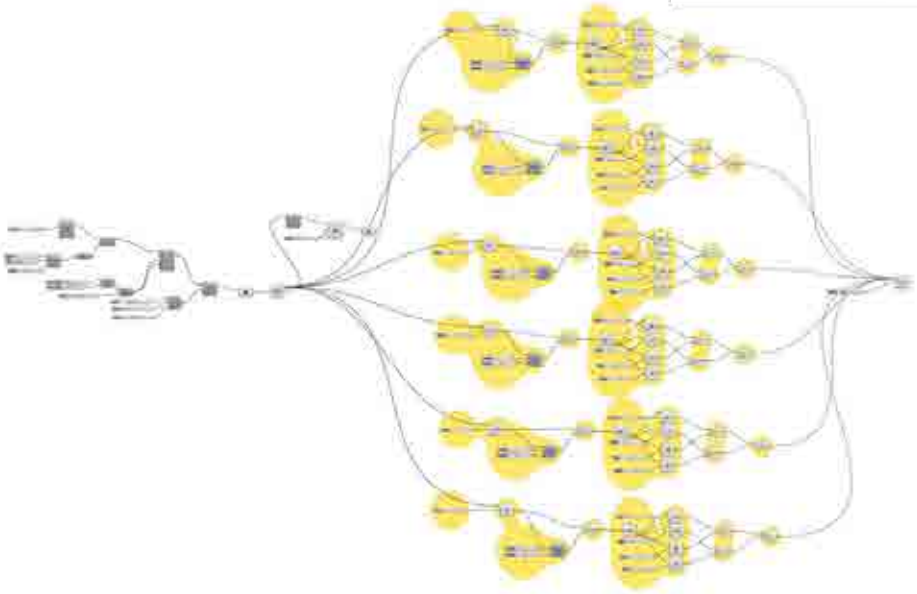

Tropical Roof
Tropical Roof
Garden Column
Bus Parking
Cycle System
Cycle System

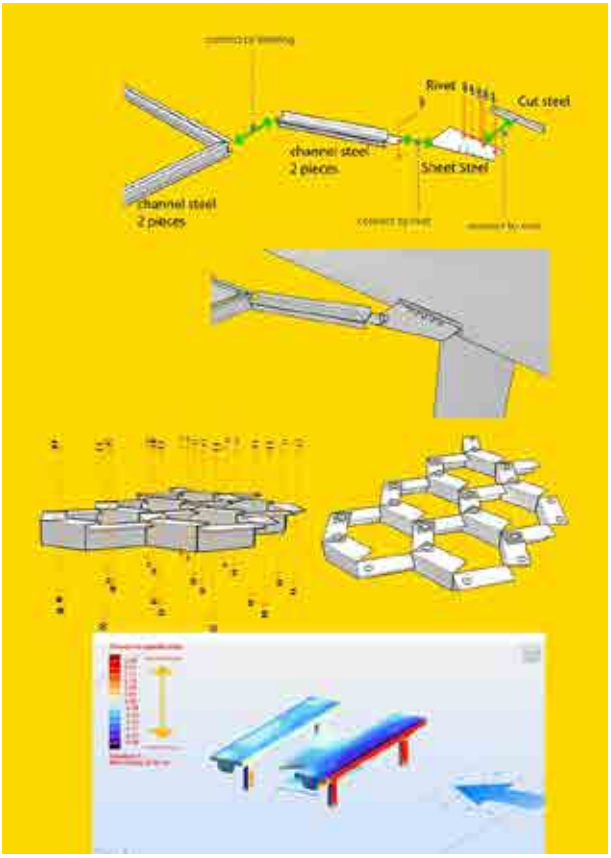







Tension
Tension
Tension
Dead Load
Tension
Tension
Tension
Tension
Dead Load
Tension




Rivet
Cut steel
channel steel
2 pieces
Sheet Steel
channel steel
2 pieces

PROFESSIONAL

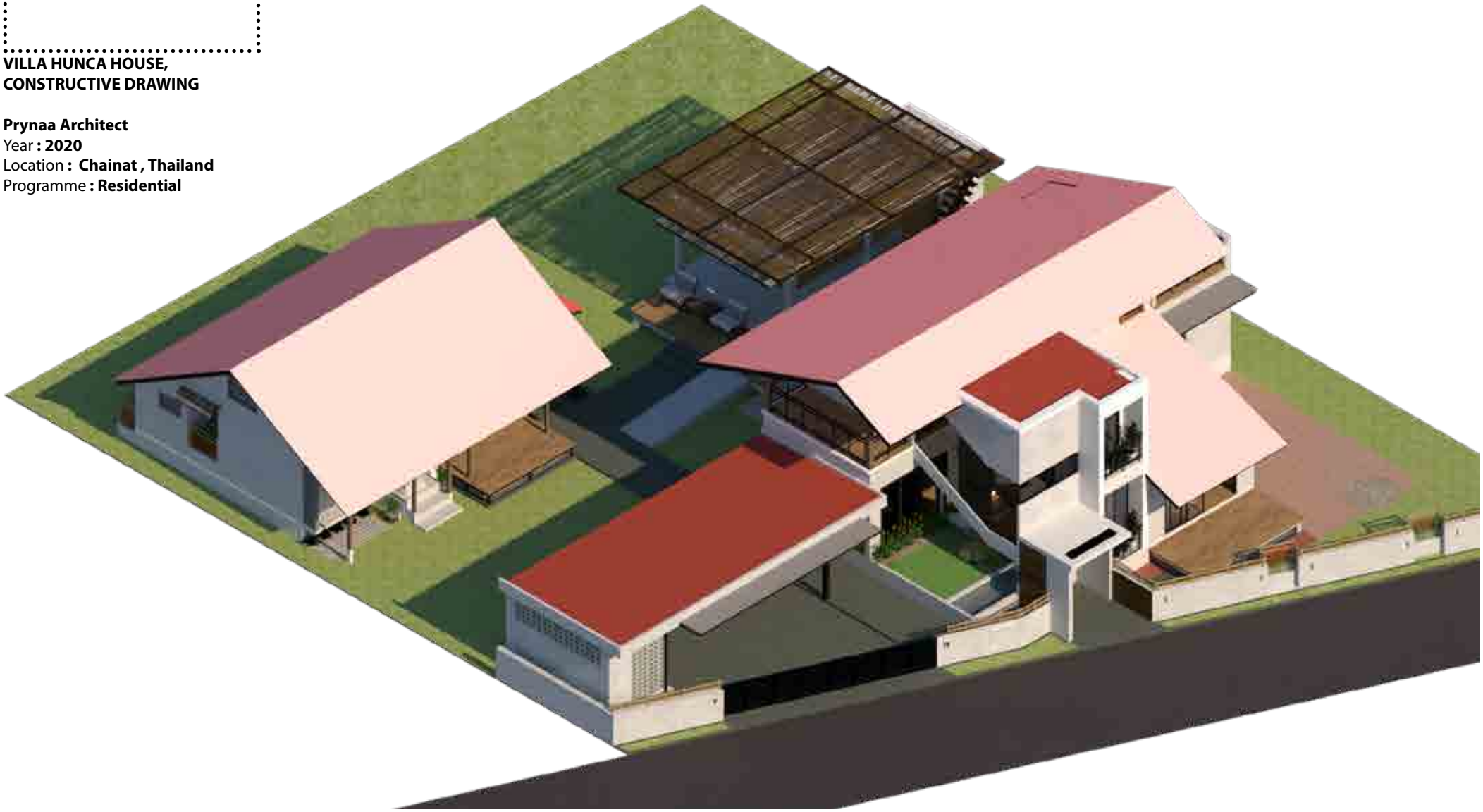
07

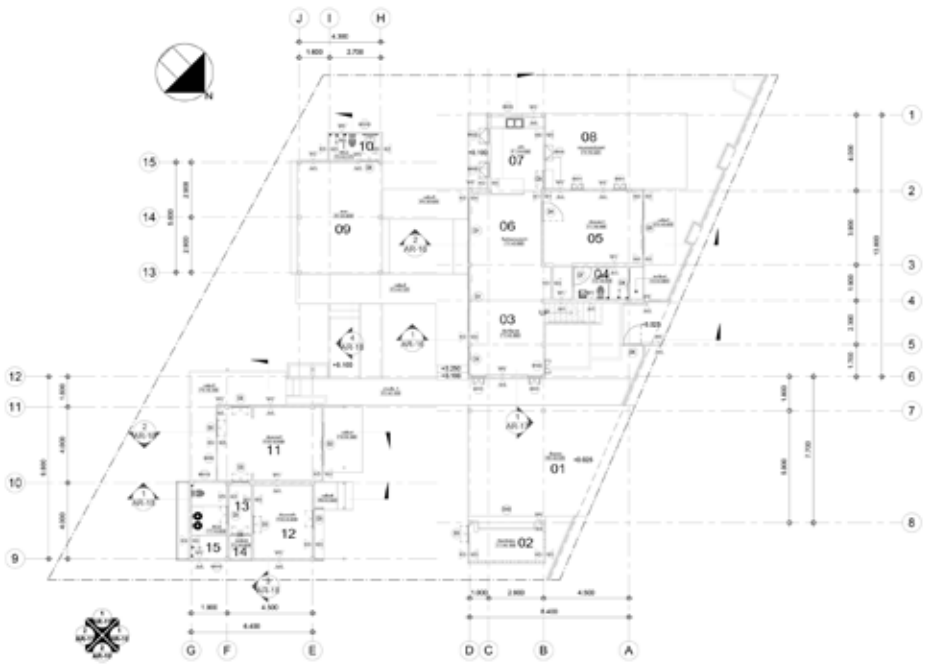
VILLA HUNCA HOUSE,
CONSTRUCTIVE DRAWING

Prynaa Architect
Year **: 2020**
Location **: Chainat , Thailand**
Programme **: Residential**

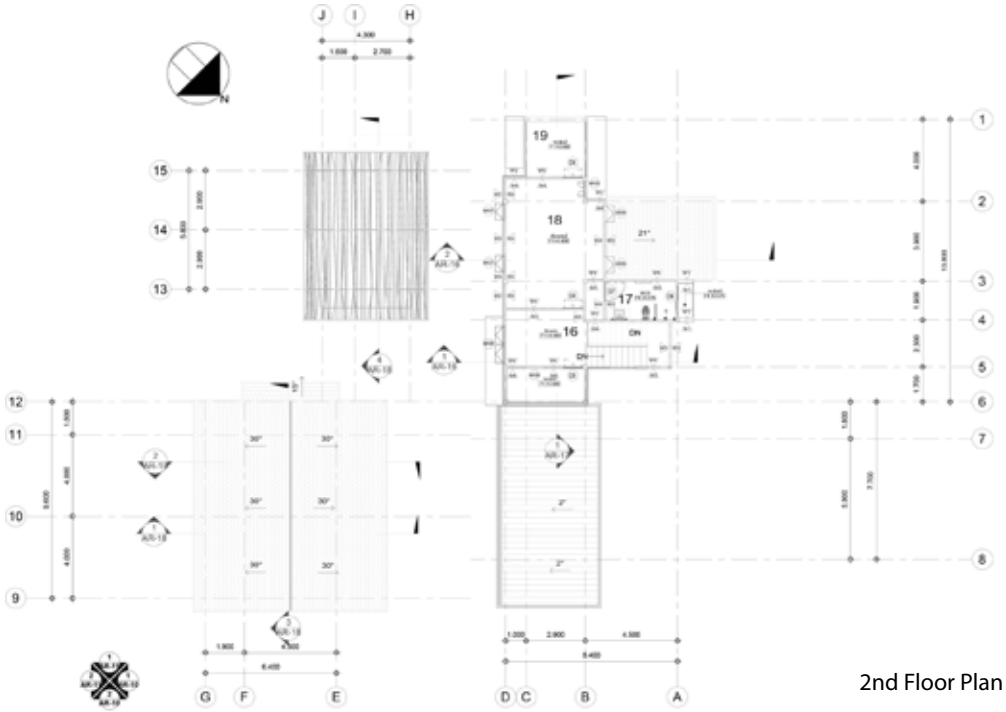
The “Hunca Villa House” project is a 2-story residential house with a variety of contemporary styles. The main theme is that it is a house for use in tropical Thailand. It is decorated with natural wood tones and bare concrete and the highlight is The architect who specializes in bamboo has used bamboo in many parts of this house. The living space of the building is divided into 3 parts to accommodate medium-sized families and up. Each house is filled with space for different activities together. Including the surrounding garden area that can be accessed everywhere as well.

In the scope of this project, My main duty is to prepare a construction drawing for a municipality permit and develop the next model for the actual construction by building information modeling (BIM), which consists of Architectural and extended designs, engineering (arrangement), sanitation, and electrical systems. In addition, it participated in the extraction of various materials.

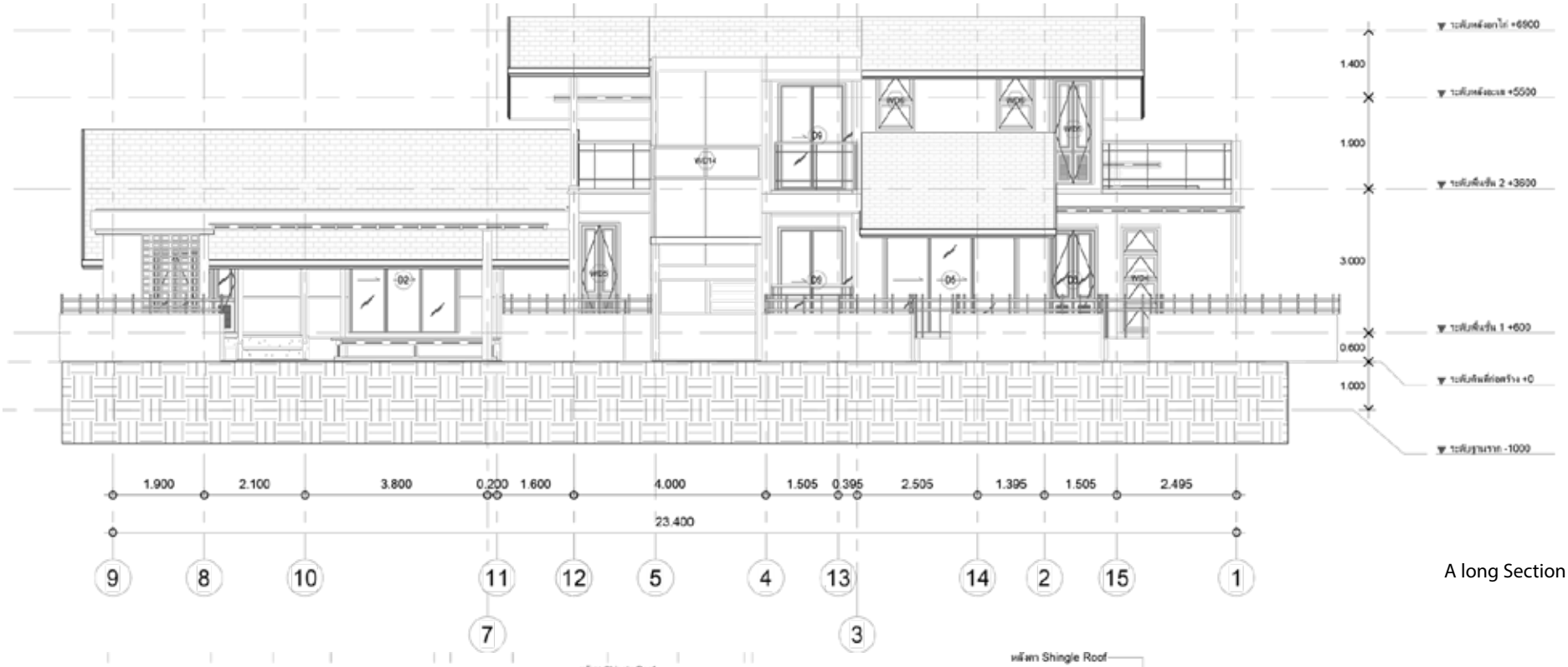




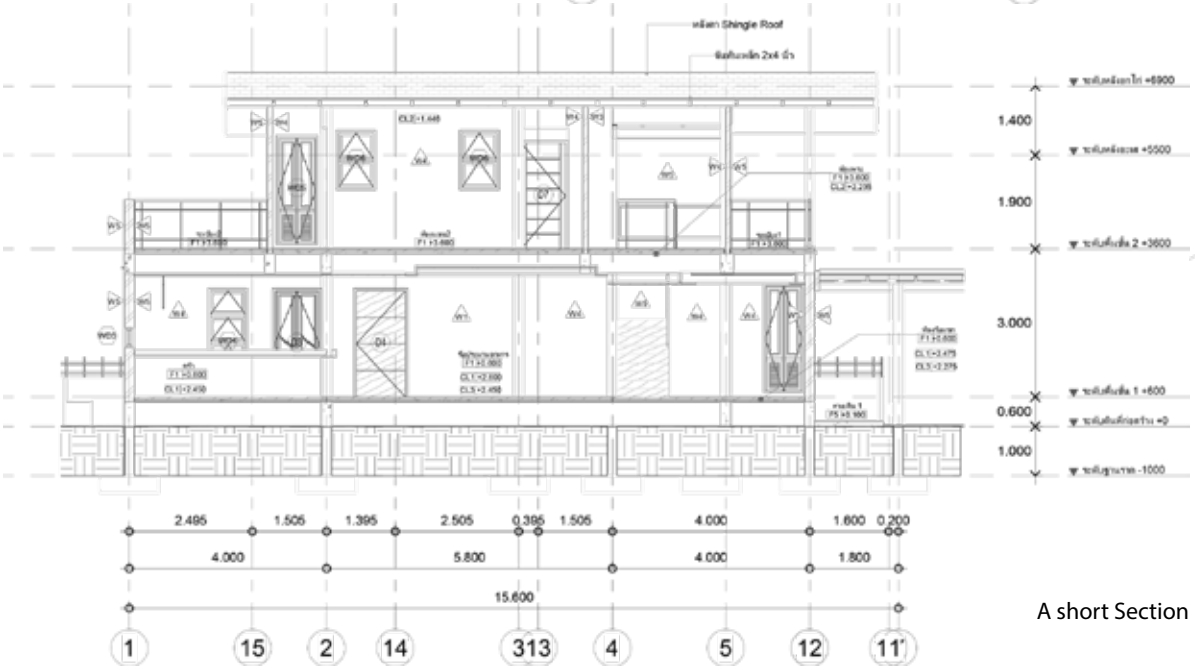
Ground Floor Plan



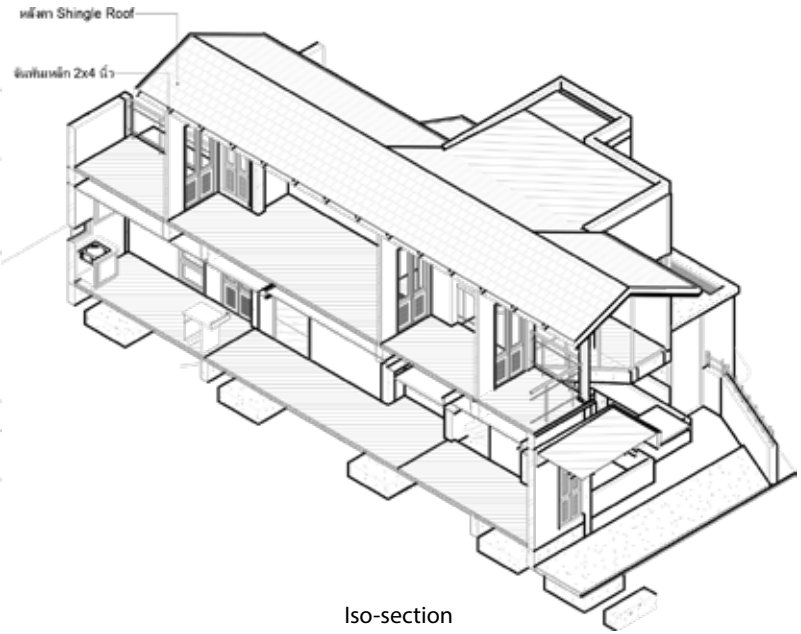
2nd Floor Plan



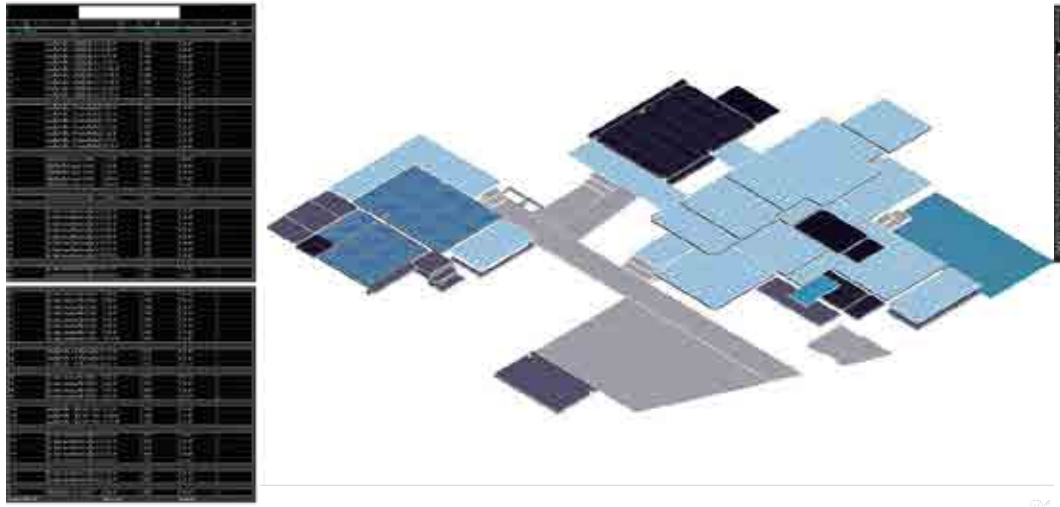
A long Section



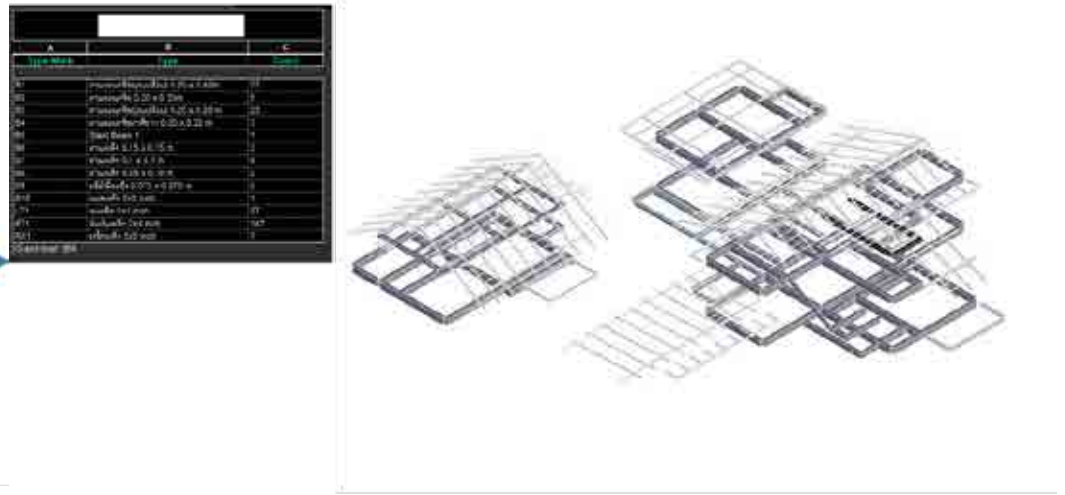
A short Section



Iso-section

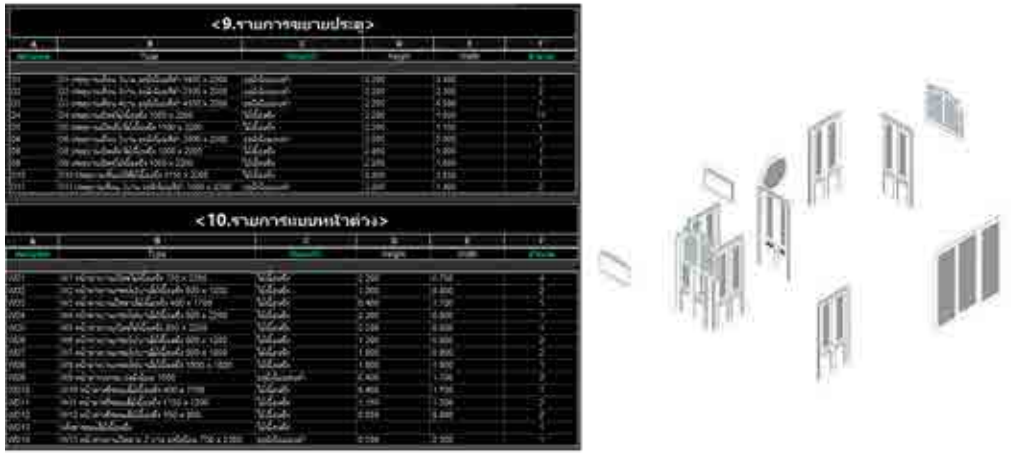


Schedule of floors



Schedule of structural frame

Schedule of foundations



Schedule of opening instrument

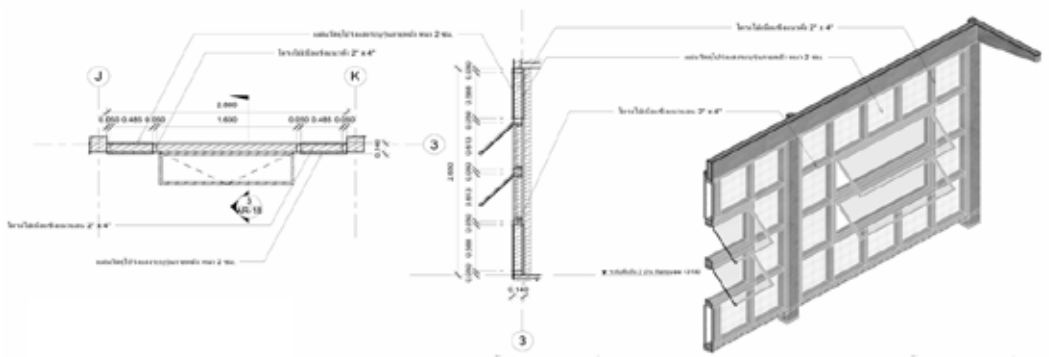
08

ANGTHONG HOUSE,
CONSTRUCTIVE DRAWING

Wat + Kittipat Architects
Year **: 2020**
Location **: Angthong, Thailand**
Programme **: Residential**

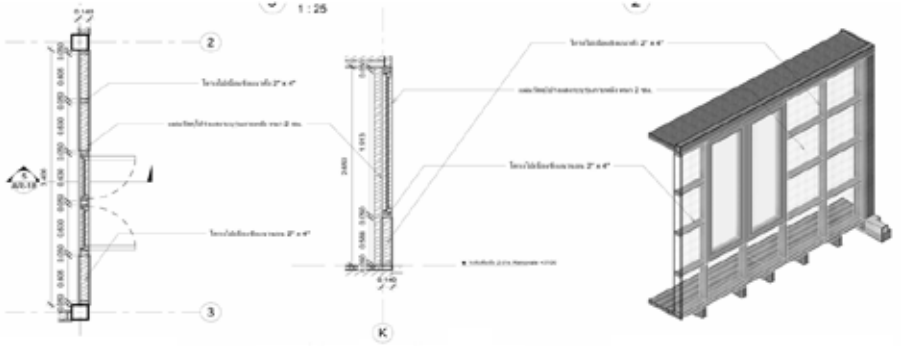
This is a renovation of a house in Ang Thong Province. The style of the original house was a wooden house with a traditional basement. The proposition of this project is to renovate the main house which is a basement house with some additions on the ground floor and take out a new house. The building style combines Thai architecture with modern simplicity with natural teak materials to match the original house. Therefore, this house is still a natural wooden house.

In the scope of this project My main duty is to prepare a construction drawing for a municipal permit with building information modeling (BIM), which consists of Architectural vs. Extended In addition, I participated in the extraction of various materials.



Plan details

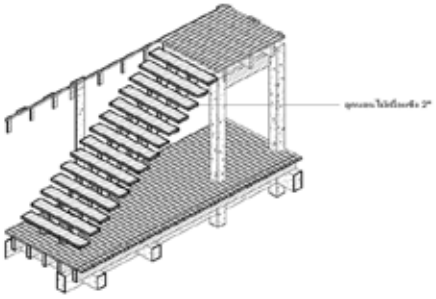
Isometric details



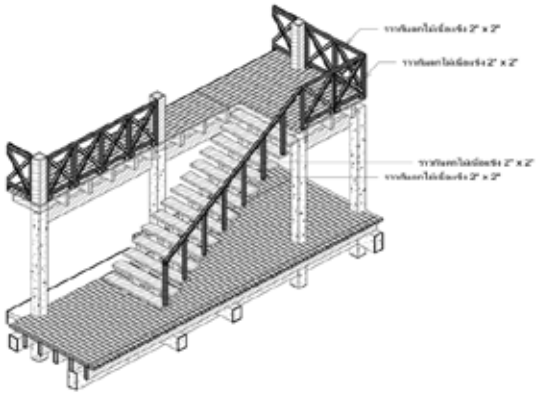
Plan details

Isometric details

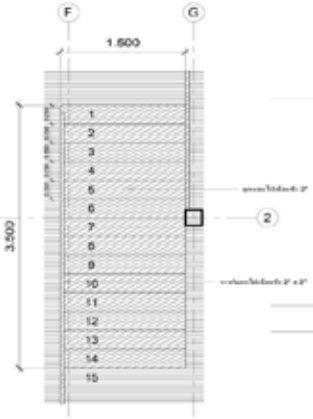
FRAME WALL DETAILS



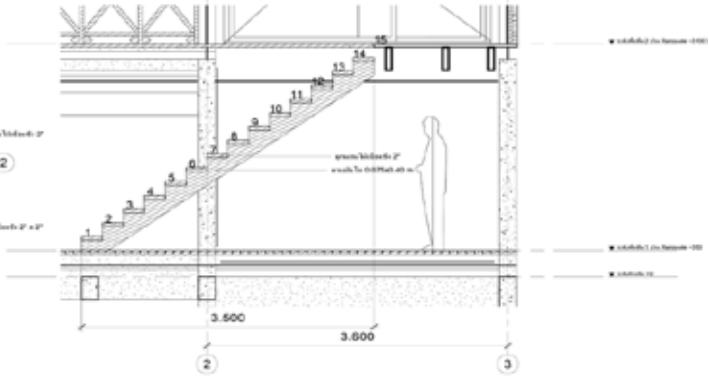
Isometric details



Isometric details



Isometric details



Isometric details

RAILING, STAIR DETAILS

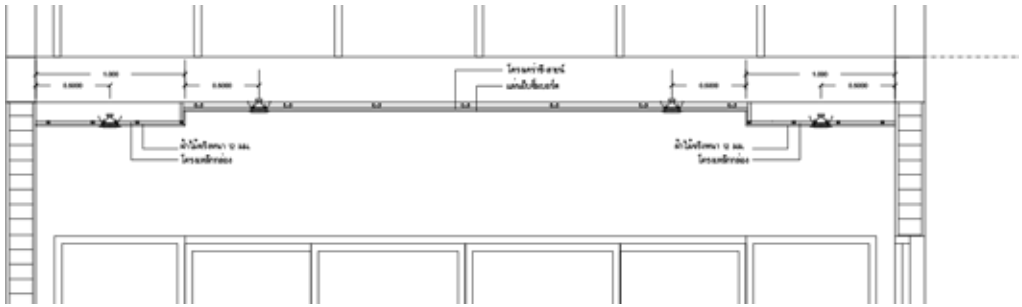
This project is a job that has been hired to design and make interior construction drawings. The owner's desire is a loft style mixed with simplicity. The designer has determined that in each room there will be 1 built-in piece of furniture, in addition to general floating furniture for flexibility of use.

In the scope of this project, I have been involved as a co-designer in production such as 3d rendering, construction drawings, etc. to prepare and present to the employer.

09

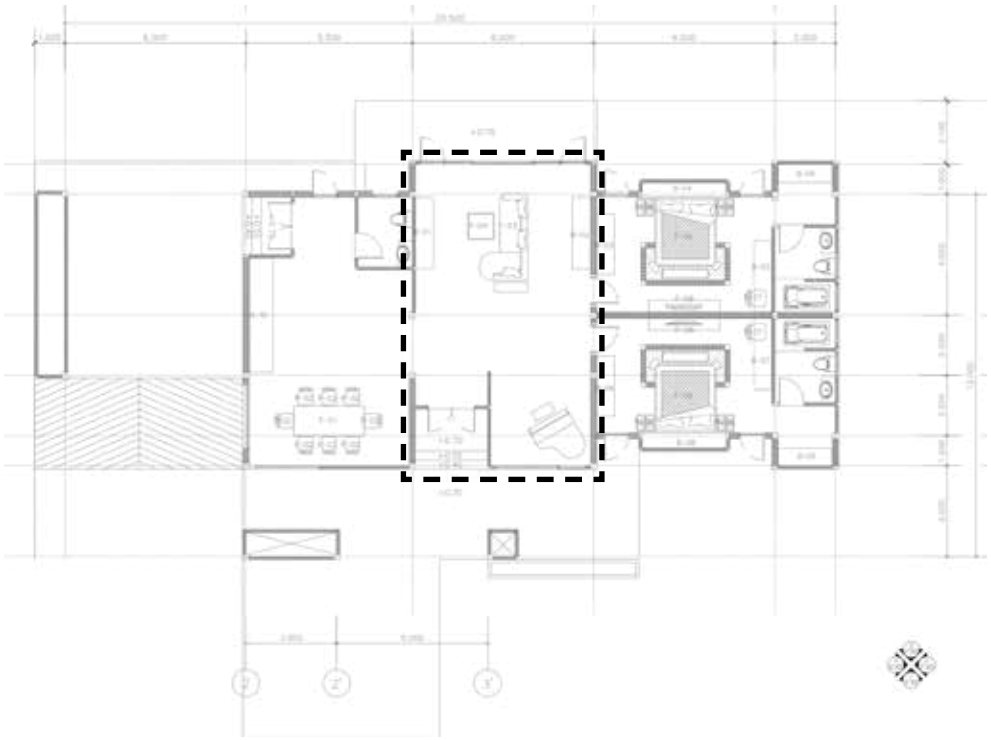
ANON'S HOUSE,
INTERIOR DRAWING

Sippavich Gumbang
Year **: 2018**
Location **: Suratthani, Thailand**
Programme **: Residential**

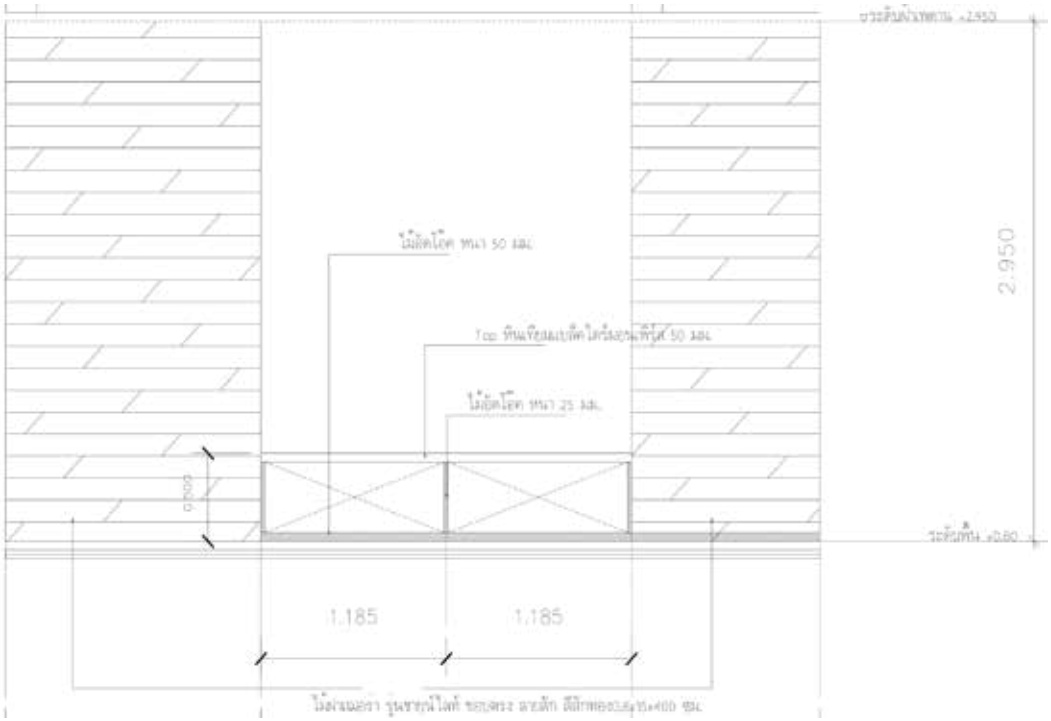


Ceiling Detail

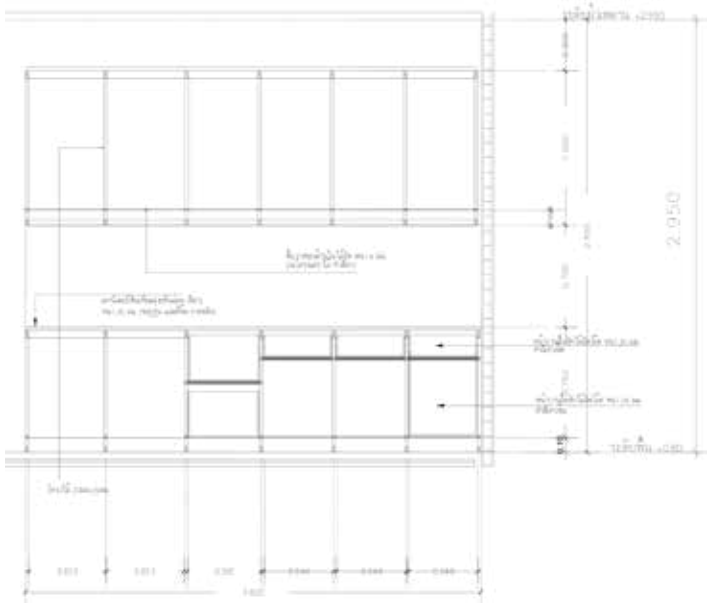
LIVING ROOM



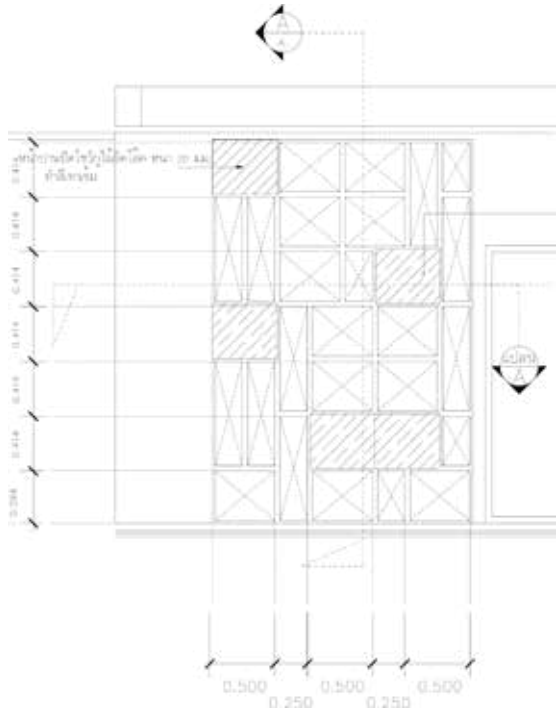
Ground Floor Plan



A built table of detail



Built cabinet detail



Built cupboard detail

7-story office building project in the heart of Bangkok, the capital of Thailand. The designers of this project wanted this office building to be the highlight of this area. It is known that in the center of the capital there are tall buildings of various sizes filled with glass. Allowing architects to design concepts The facade is horizontal to create the dimensions of the glass panels to make it stand out. This project is one of the interesting projects.

In the scope of this project, I was involved as a 3d visualizer in creating an exterior perspective to complement the architectural design work for this architect's office.

10

OFFICE BUILDING 25 Sukhumvit , 3D VISUALIZATION

4B Architect
Year **: 2021**
Location **: Bangkok, Thailand**
Programme **: Office Building**

11

The Coffee Bark project is not just a coffee shop. But there is an area for displaying cowboy collectibles. The building is decorated with what is known as "Truth of Materials", whether it is wood and natural stone and raw materials with the use of iron as a component. The program of this project has a variety of spaces.
Such as coffee shops, skating rinks, vintage garages, semi-museums, etc.

In the scope of this project I was involved as a 3d visualizer in creating an exterior perspective to complement the architectural design work for this architect's office.

COFFEE BARK SHOP,
3D VISUALIZATION

Archiplusi
Year **: 2020**
Location **: Bangkok, Thailand**
Programme **: Commercial**

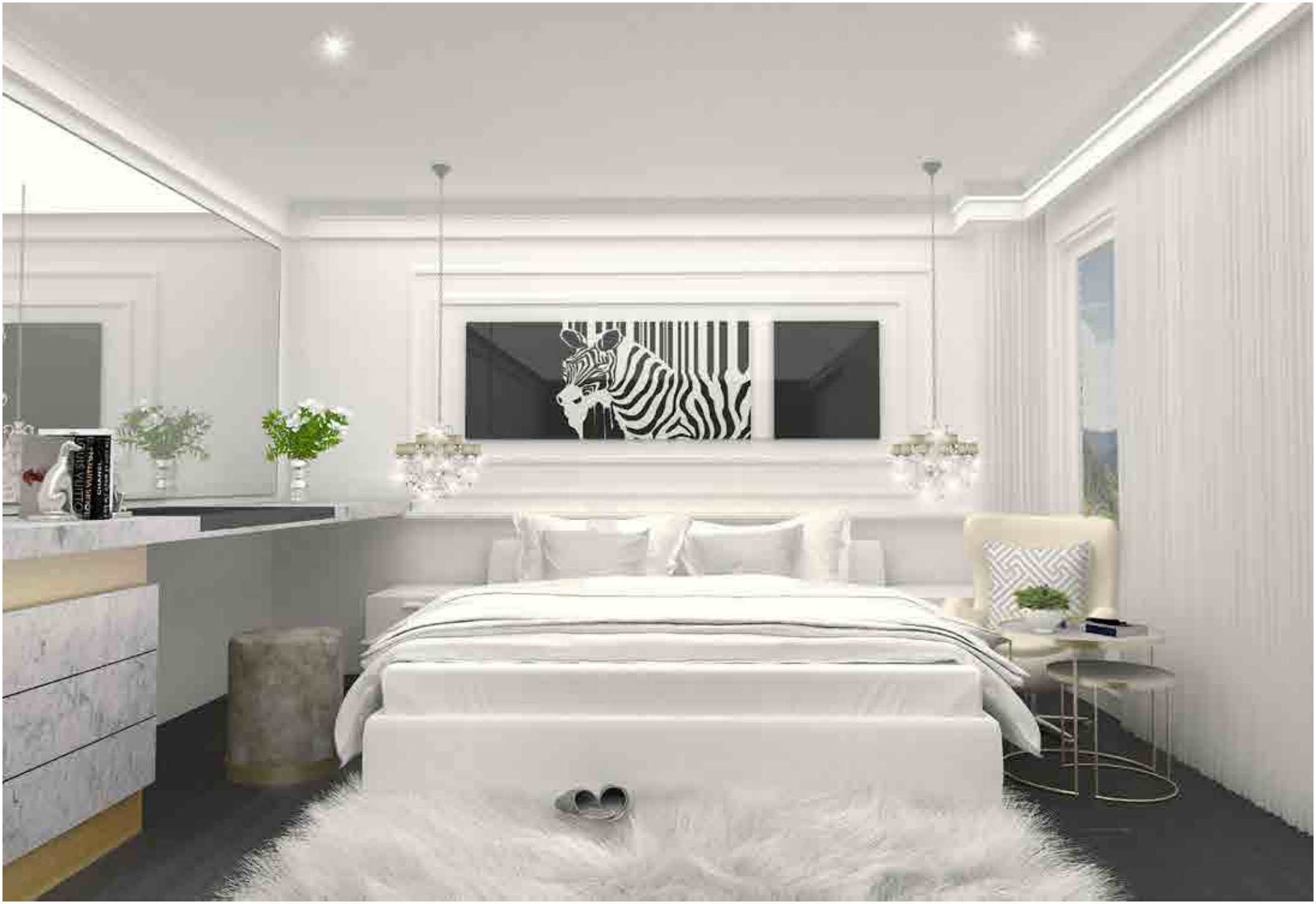
Renovation of this condominium is a commissioned work to design and produce a presentation. The requirement is a modern luxury style. The bedroom will be in bright tones, focusing on white and cream, while the living room focuses on the tones of various elements in gray-white and cut with dark curtains. In both rooms, there will be decoration.
It is a glittering glass material such as a glass lampshade.

In the scope of this project, I have been involved as a co-designer in production such as 3d rendering, etc. to prepare for presentations to the employer.

12

RENOVATE CONDOMINIUM,
3D VISUALIZATION

Jirayuth Architect
Year **: 2019**
Location **: Bangkok, Thailand**
Programme **: Residential**



13

TheKleang Plantation Ville Project is a project with the concept of designing communities and villages to live as a place with a farm-like vibe in the suburbs. This project is full of plants, trees, and various species. Even the lakes and streams that surround the habitat At the same time, there are convenient facilities to support people in the project and the surrounding area. Therefore, this project will answer the question for human beings to have a quality of life. Clean air and good health

In the scope of this project, I was involved as a master planning assistant. Including the production such as making 3d rendering, etc. to prepare for presentation to the employer next.

KLEANG PLANTATION VILLE, 3D VISUALIZATION,URBAN DESIGN

Prynaa Architect
Year **: 2020**
Location **: Rayong, Thailand**
Programme **: Complex, Farm, Housing, Residential**

MASTER PLAN

1. **S** : Small houses 75 units 2. **M** : Medium Houses 28 units 3. **C** : Commercial buildings 15 units 4. **CH** : Club houses 4 units
5. **HT** : Townhouses 10 units 6. **HS** : Small Townhouses 32 units 7. **V** : Floating villas 22 units 8. **F** : Single houses 11 units

Each type of street

3D STREET SECTIONS

Overall : S, M size of Houses

Entrance to the village

Street in village

Street in village

Overall : Villas & Single Houses

The pier in the lake

Entrance to Single Houses

Close up : Villa houses

Overall : Club houses & Commercial buildings

Walk-way around the farms

Commercial buildings from a view' s farm

A lot of farms

Bird' s eye view / the whole scoping

Close up the park

Condominiums from a view' s restuarant

Close up : Walk-way of condominiums

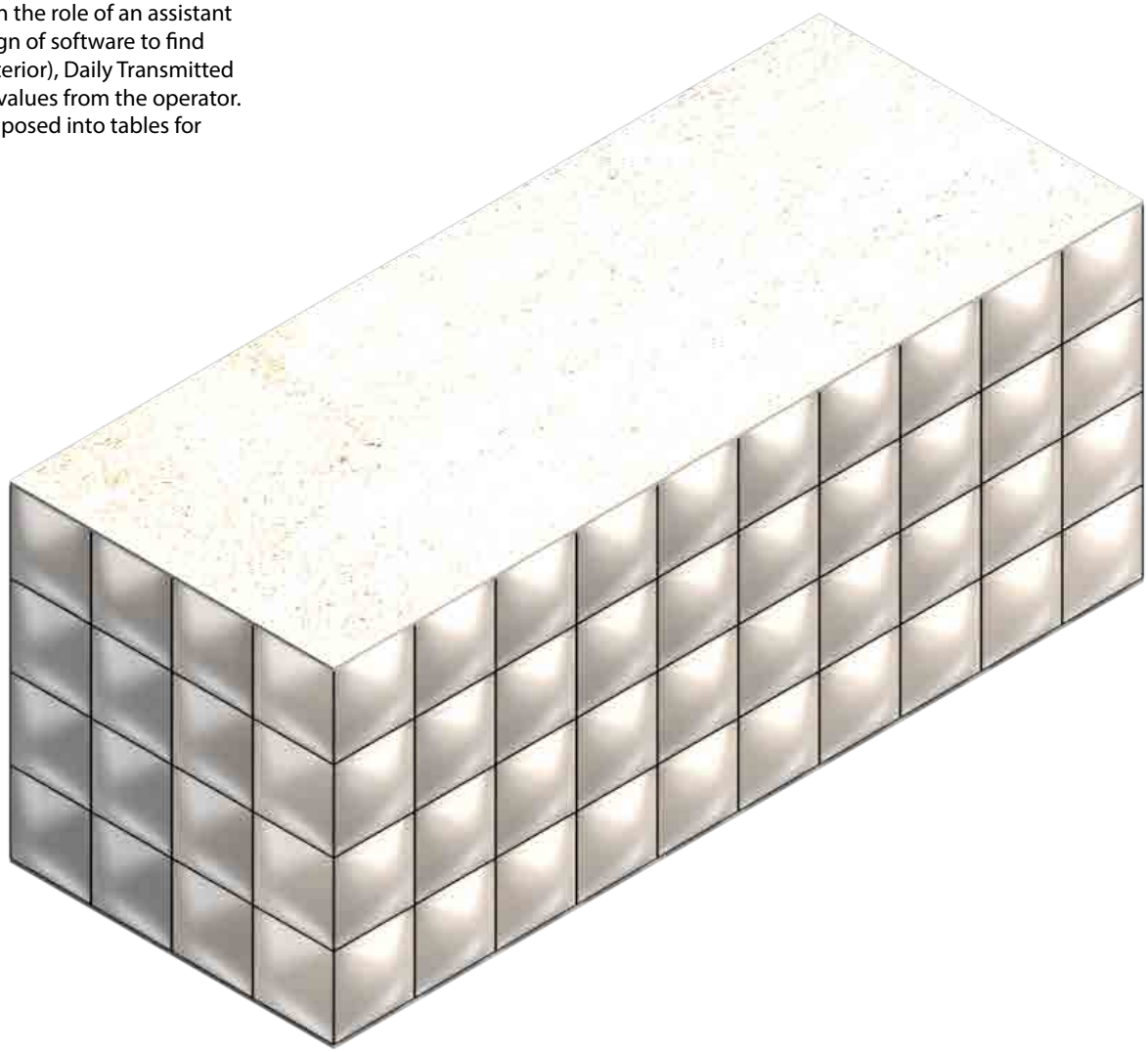
14

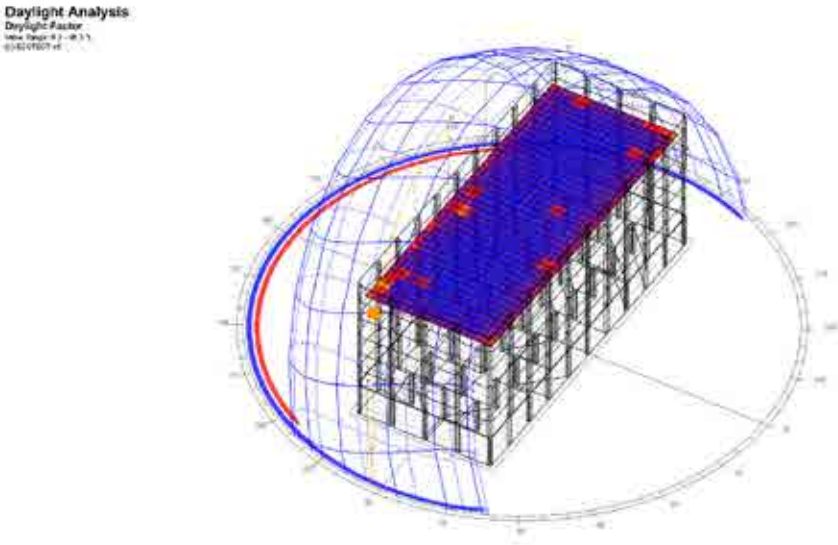
ETFE SKIN TESTING AND ANALYZE , COMPUTATIONAL DESIGNER, ASSISTANT RESEARCHER

PH.D Project by Aj sippavit
Year **: 2019**
Location **: Bangkok, Thailand**
Programme **: Concept, Experiment**

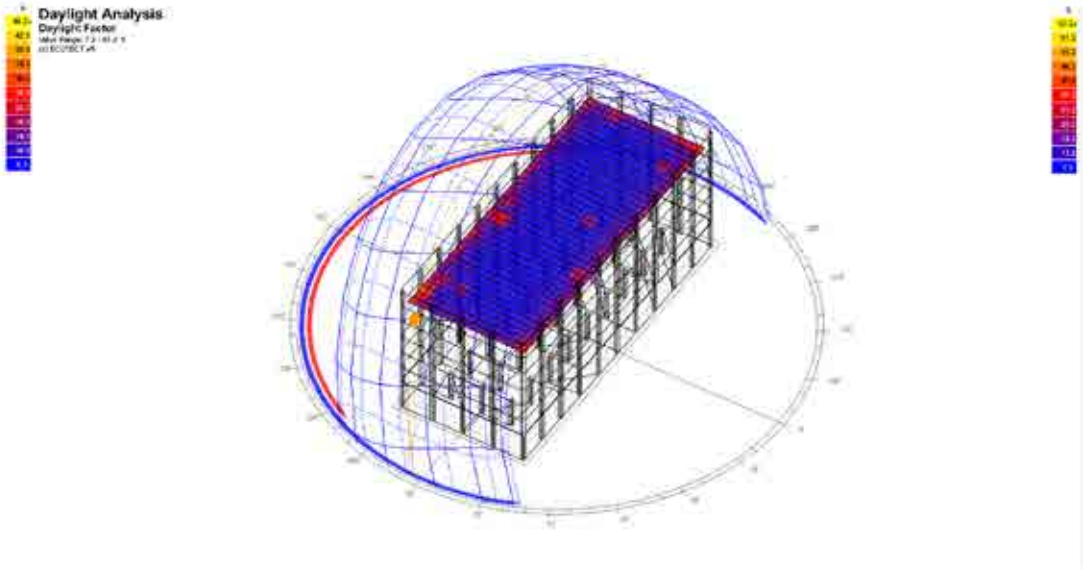
Doctoral students researched a membrane material called ETFE to study its feasibility and properties in detail.
Therefore, the surface of ETFE was tested using software, and classified into 2 types, 2-layer surface, and 3-layer surface. The results were then studied for further use in design or construction.

In the scope of this project, I have been in the role of an assistant researcher as a user. Computational design of software to find values of Daylight factor (Exterior and interior), Daily Transmitted Radiation by entering material property values from the operator. The results were then taken to be decomposed into tables for further submission to researchers.

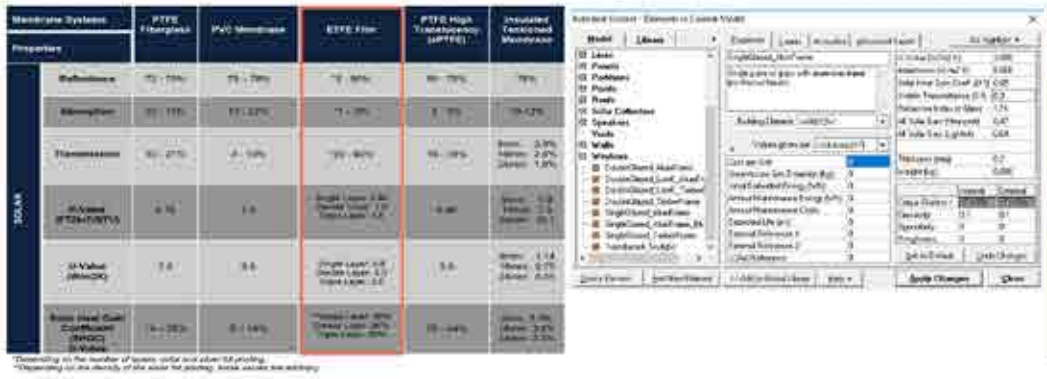




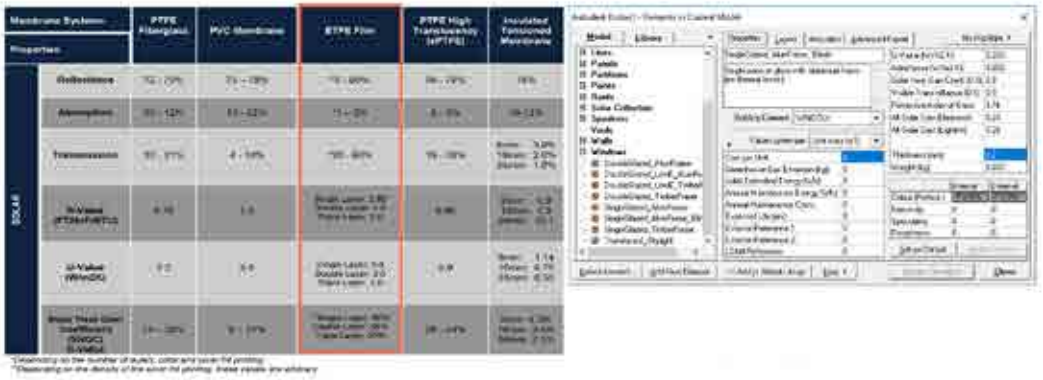
Daylight Factor : Double skins



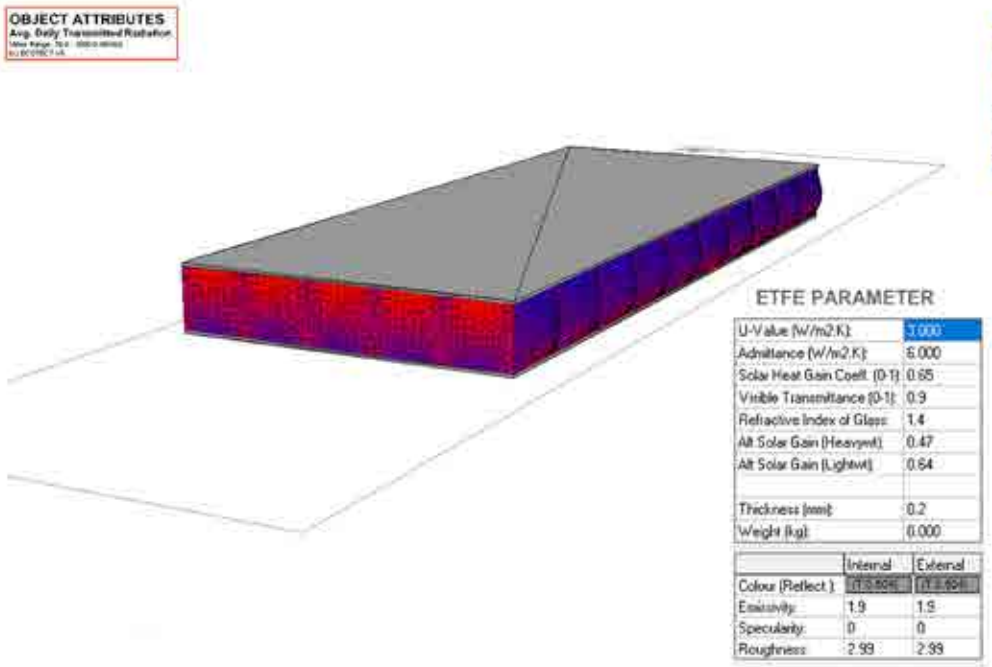
Daylight Factor : Tripple skins



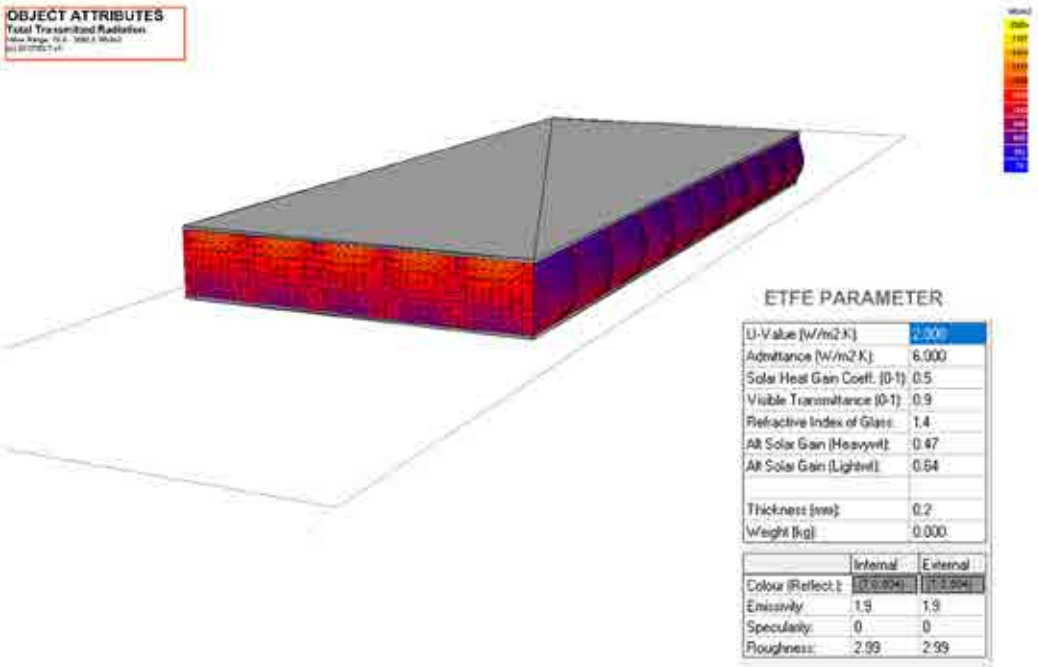
ETFE Materials : Double skins



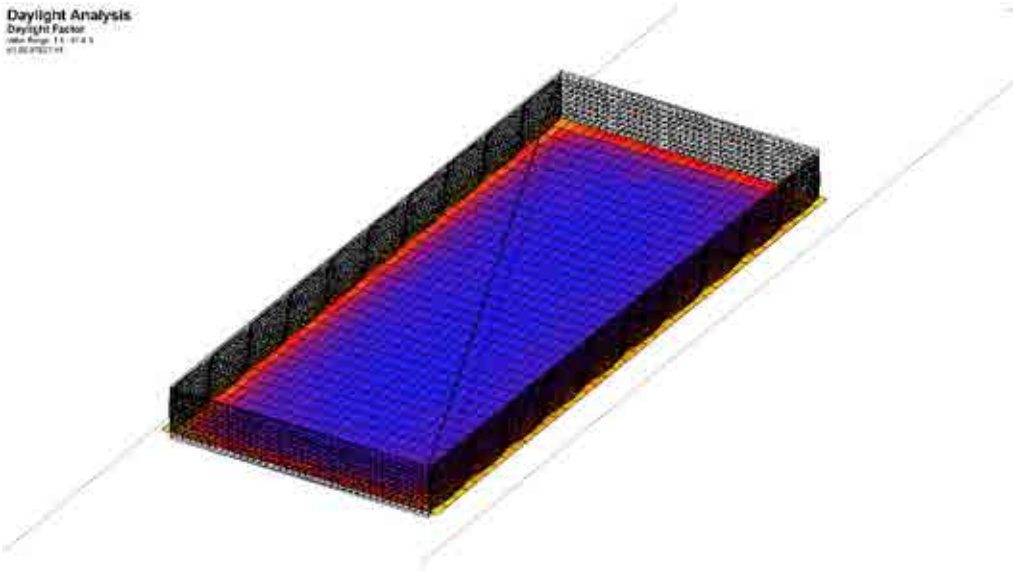
ETFE Materials : Tripple skins



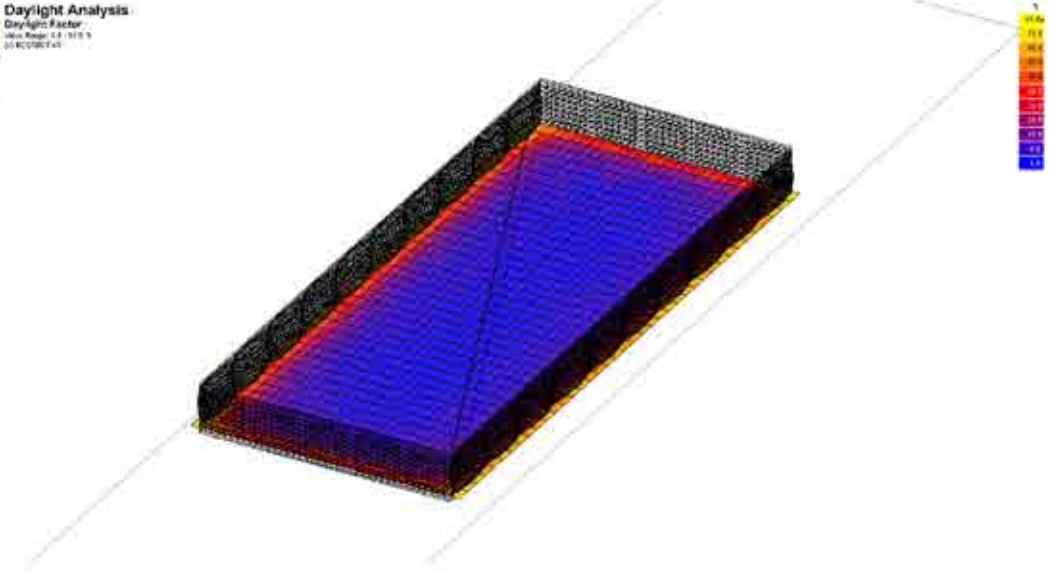
Daily Transmitted Radiation : Double skins



Daily Transmitted Radiation : Tripple skins



Daylight Factor(Interior) : Double skins



Daylight Factor(Interior) : Tripple skins

Avg. Daily Incident Radiation	Double Layer	Wh/m2	Tripple Layer	Wh/m2
North Wall	MAXIMUM	6726.73	MAXIMUM	6928.765
	MINIMUM	1060	MINIMUM	1060
	AVERAGE	3201.134	AVERAGE	3491.992
South Wall	MAXIMUM	6949.412	MAXIMUM	6951.139
	MINIMUM	530.001	MINIMUM	1060
	AVERAGE	2522.882	AVERAGE	3420.487
East Wall	MAXIMUM	6813.705	MAXIMUM	6806.302
	MINIMUM	628.37	MINIMUM	530
	AVERAGE	2685.568	AVERAGE	2386.797
West Wall	MAXIMUM	6813.575	MAXIMUM	6807.359
	MINIMUM	530	MINIMUM	530
	AVERAGE	2903.905	AVERAGE	2939.366

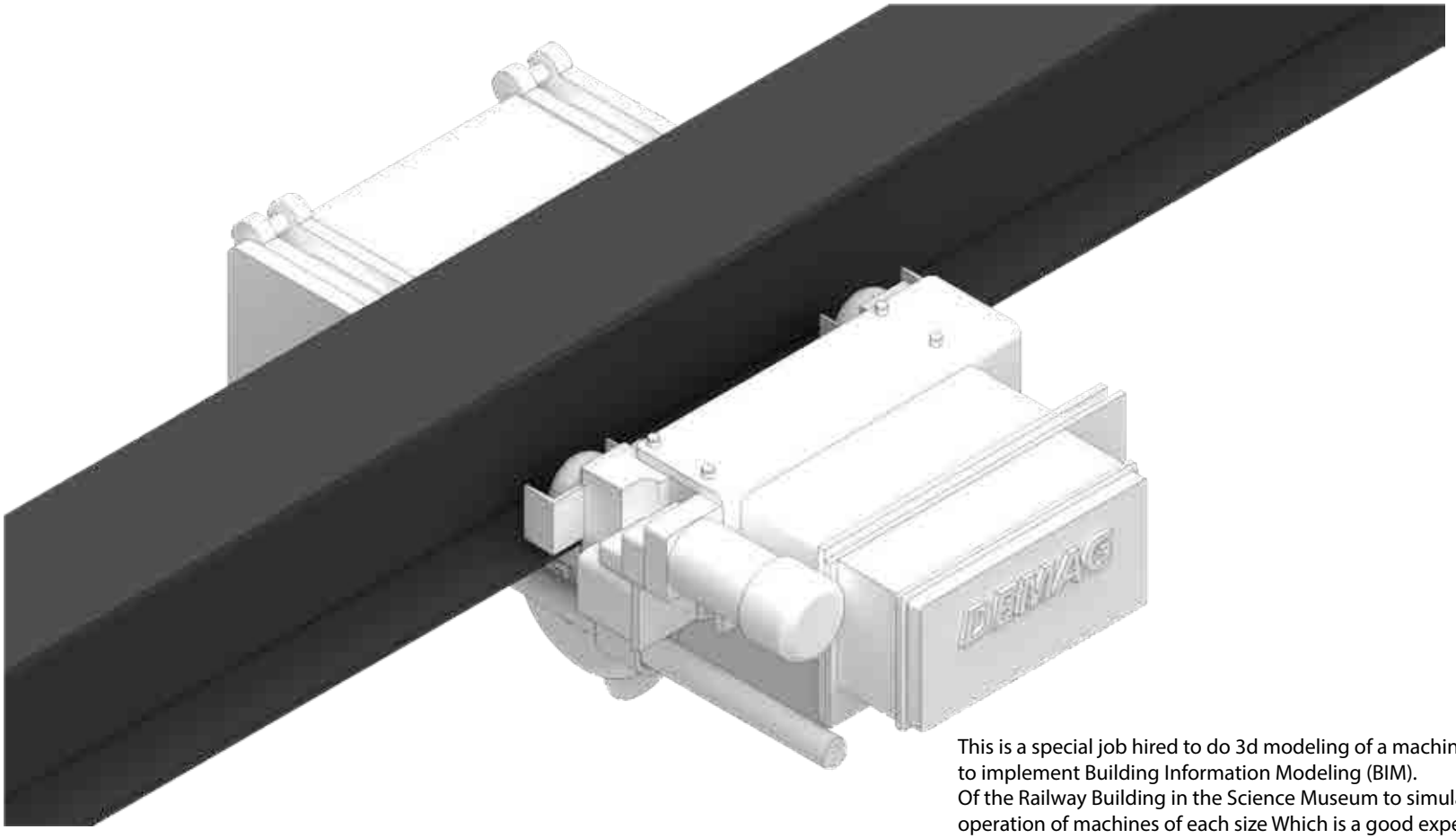
Avg. Daily Absorbed Radiation	Double Layer	Wh/m2	Tripple Layer	Wh/m2
North Wall	MAXIMUM	28472.738	MAXIMUM	40118.594
	MINIMUM	1761.838	MINIMUM	1590.832
	AVERAGE	9755.116	AVERAGE	11816.666
South Wall	MAXIMUM	39911.133	MAXIMUM	40258.129
	MINIMUM	330.541	MINIMUM	1425.265
	AVERAGE	10601.298	AVERAGE	11622.598
East Wall	MAXIMUM	39064.777	MAXIMUM	93.596
	MINIMUM	1638.097	MINIMUM	39018.613
	AVERAGE	10746.357	AVERAGE	330.54
West Wall	MAXIMUM	39063.969	MAXIMUM	39025.203
	MINIMUM	330.54	MINIMUM	330.54
	AVERAGE	11583.075	AVERAGE	11255.292

Avg. Daily Transmitted Radiation	Double Layer	Wh/m2	Tripple Layer	Wh/m2
North Wall	MAXIMUM	2641.295	MAXIMUM	2641.295
	MINIMUM	0	MINIMUM	0
	AVERAGE	330.162	AVERAGE	501.371
South Wall	MAXIMUM	477.001	MAXIMUM	2641.295
	MINIMUM	0	MINIMUM	0
	AVERAGE	53	AVERAGE	469.718
East Wall	MAXIMUM	2609.637	MAXIMUM	2609.637
	MINIMUM	0	MINIMUM	0
	AVERAGE	260.964	AVERAGE	220.474
West Wall	MAXIMUM	477	MAXIMUM	2576.88
	MINIMUM	0	MINIMUM	0
	AVERAGE	43.364	AVERAGE	218.134

Avg. Daily Incident Radiation	Glass Low E	Wh/m2
North Wall	MAXIMUM	6726.73
	MINIMUM	1060
	AVERAGE	2939.146
South Wall	MAXIMUM	6797.588
	MINIMUM	530.001
	AVERAGE	3200.679
East Wall	MAXIMUM	6726.73
	MINIMUM	1060
	AVERAGE	3334.765
West Wall	MAXIMUM	6726.73
	MINIMUM	530
	AVERAGE	2413.621

Avg. Daily Absorbed Radiation	Glass Low E	Wh/m2
North Wall	MAXIMUM	18004.652
	MINIMUM	3087.243
	AVERAGE	8734.154
South Wall	MAXIMUM	38964.266
	MINIMUM	964.353
	AVERAGE	12271.143
East Wall	MAXIMUM	38466.621
	MINIMUM	3087.243
	AVERAGE	13415.097
West Wall	MAXIMUM	38466.141
	MINIMUM	964.35
	AVERAGE	11159.655

Avg. Daily Transmitted Radiation	Glass Low E	Wh/m2
North Wall	MAXIMUM	1344.859
	MINIMUM	0
	AVERAGE	168.107
South Wall	MAXIMUM	242.873
	MINIMUM	0
	AVERAGE	26.986
East Wall	MAXIMUM	1328.74
	MINIMUM	0
	AVERAGE	120.795
West Wall	MAXIMUM	242.872
	MINIMUM	0
	AVERAGE	20.239

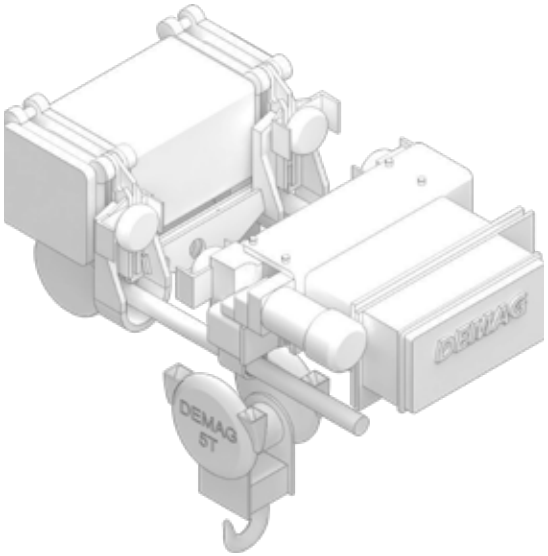


This is a special job hired to do 3d modeling of a machine crane to implement Building Information Modeling (BIM).
Of the Railway Building in the Science Museum to simulate the operation of machines of each size Which is a good experience for this work.

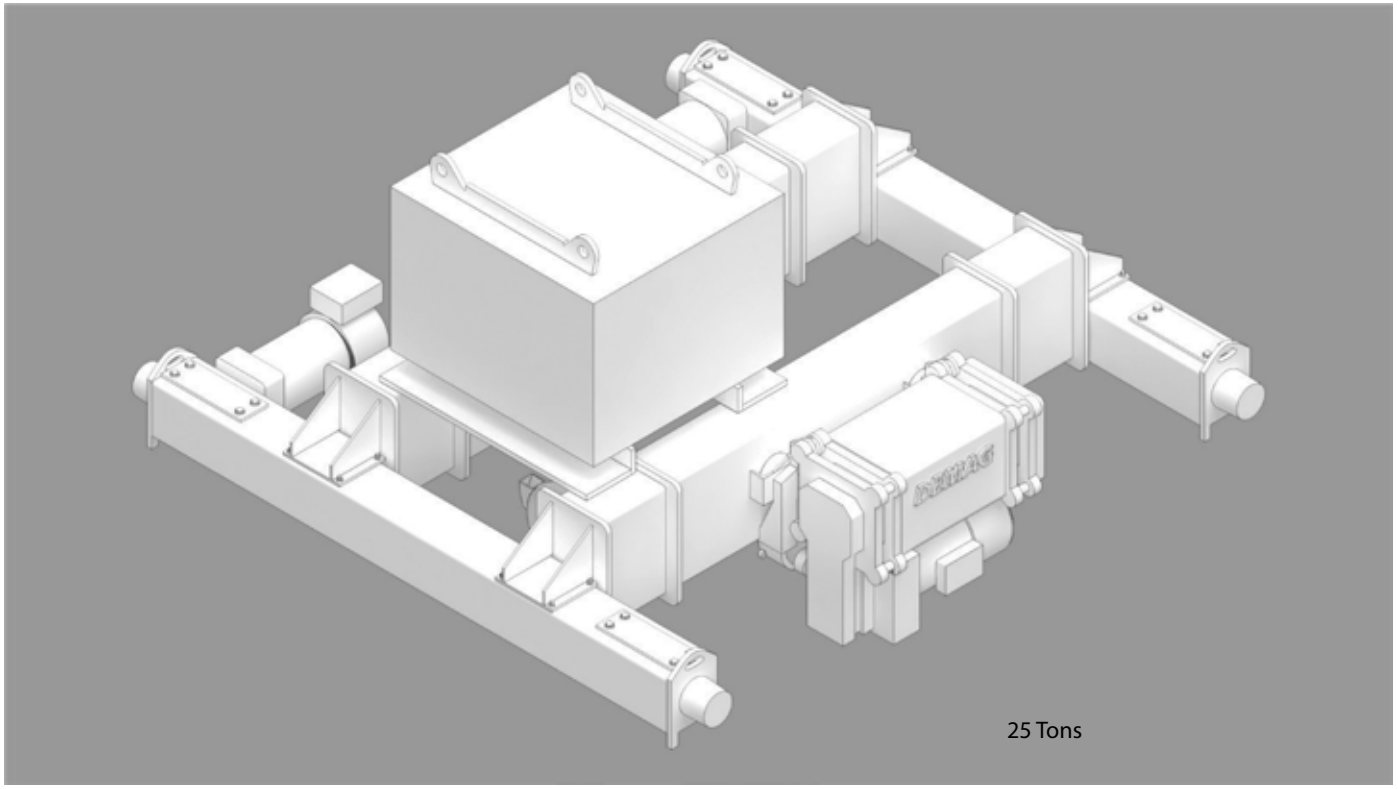
15

CRANE DEMAG
, 3D MODELER

Train Building of Science Museum
Year **: 2017**
Location **: Pathumthani, Thailand**
Programme **: Mechanic**



5 Tons



25 Tons