



Tianyu Lyu (DK)

Advanced Architectural Design 2023-2024

About Me

Tianyu Lyu (DK)
吕天羽

A Male
An Asian, and A Chinese
A Son, A Family Member, A Friend, and A Boyfriend
A Student Graduated from Syracuse, and Columbia
An Angler, A Gamer, A Reader, and A Movie Lover
A Cynic, A Drifter, and A Determinist
A Smoker, and A Drinker
A Nobody

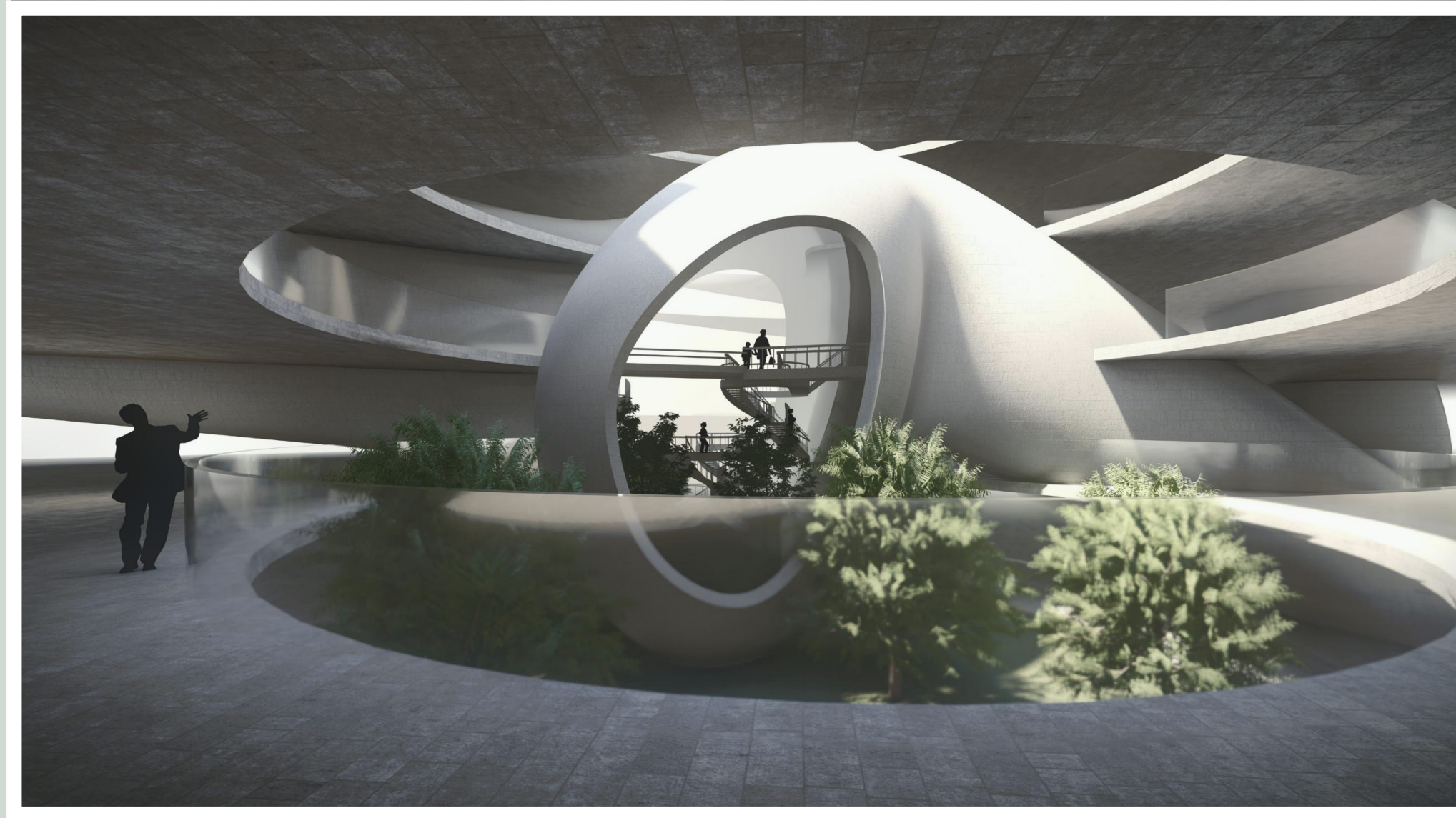
Studio Works

Oasis Verdant Arcade

Earth-Based Green Wall

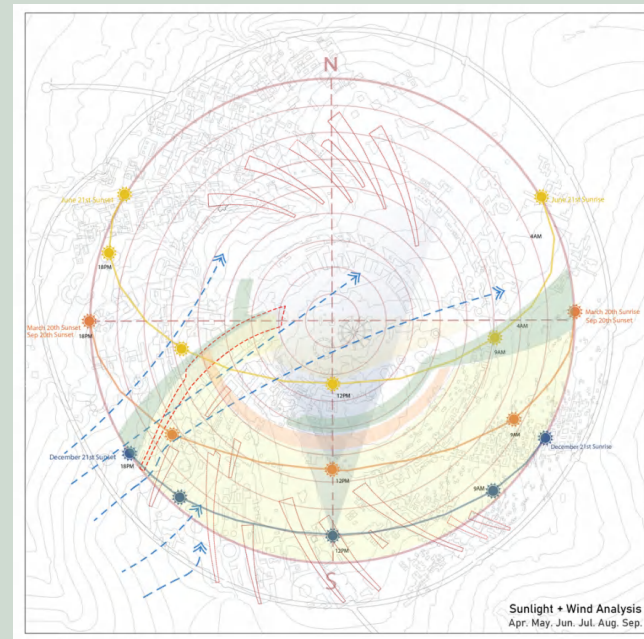
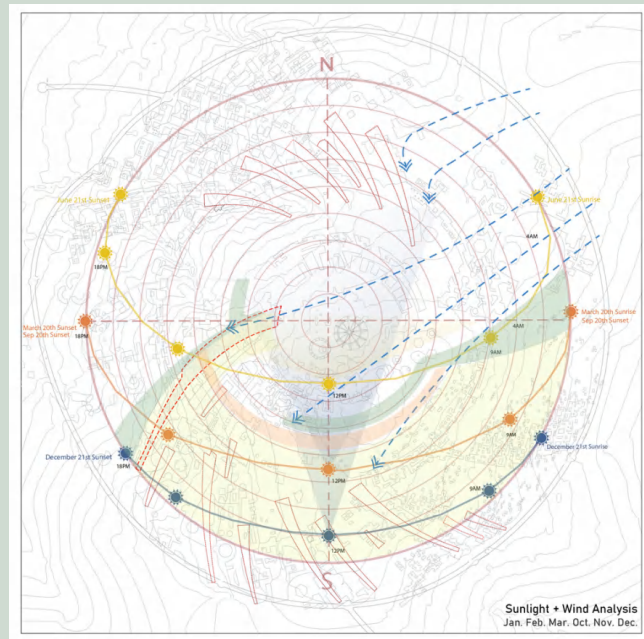
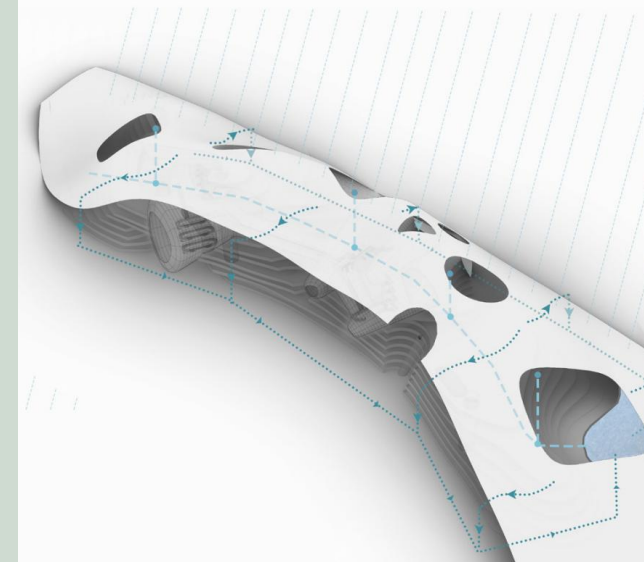
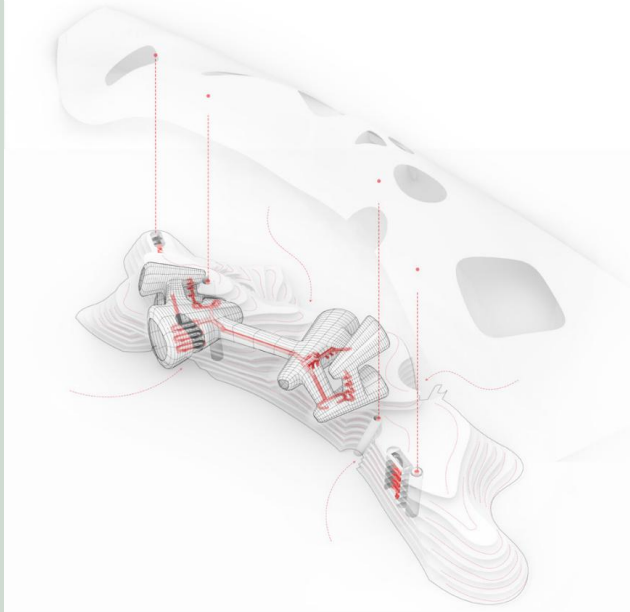
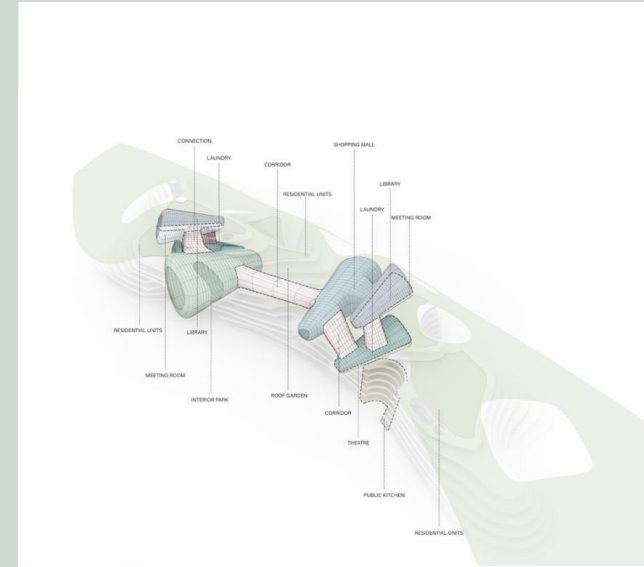
My Journey Inward

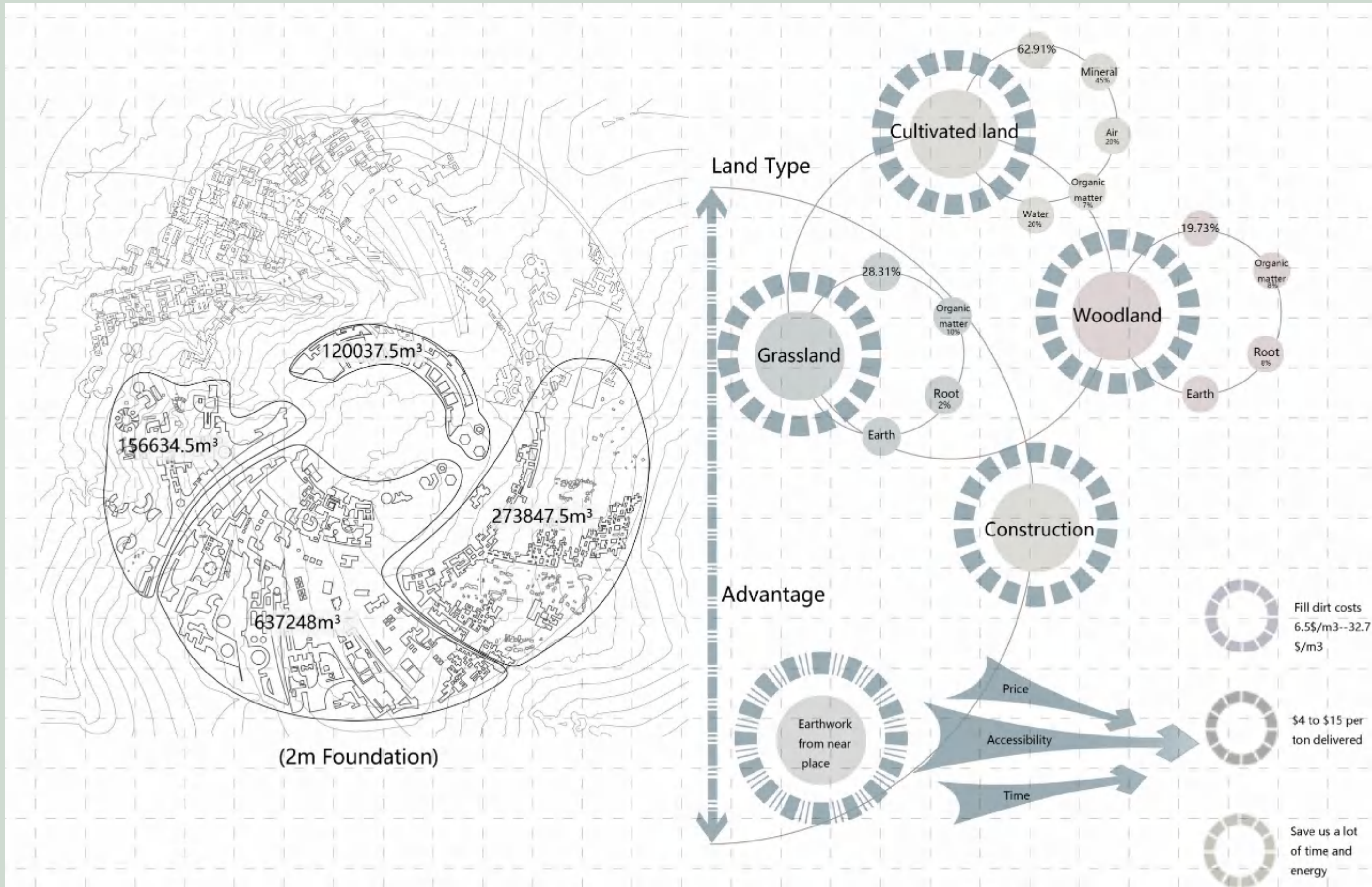
Oasis Verdant Arcade

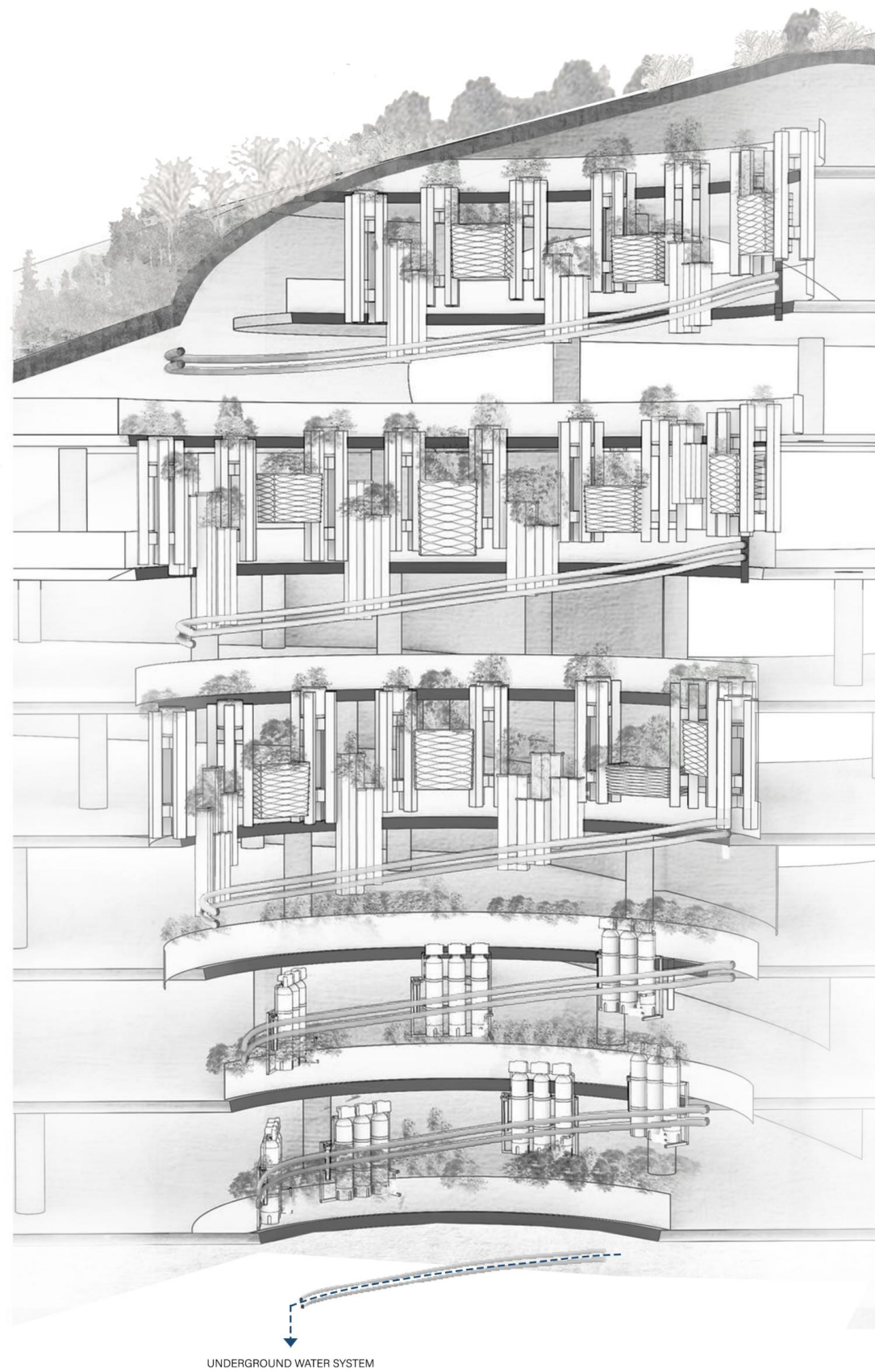


Tianyu Lyu (DK)
He (Oliver) Ma

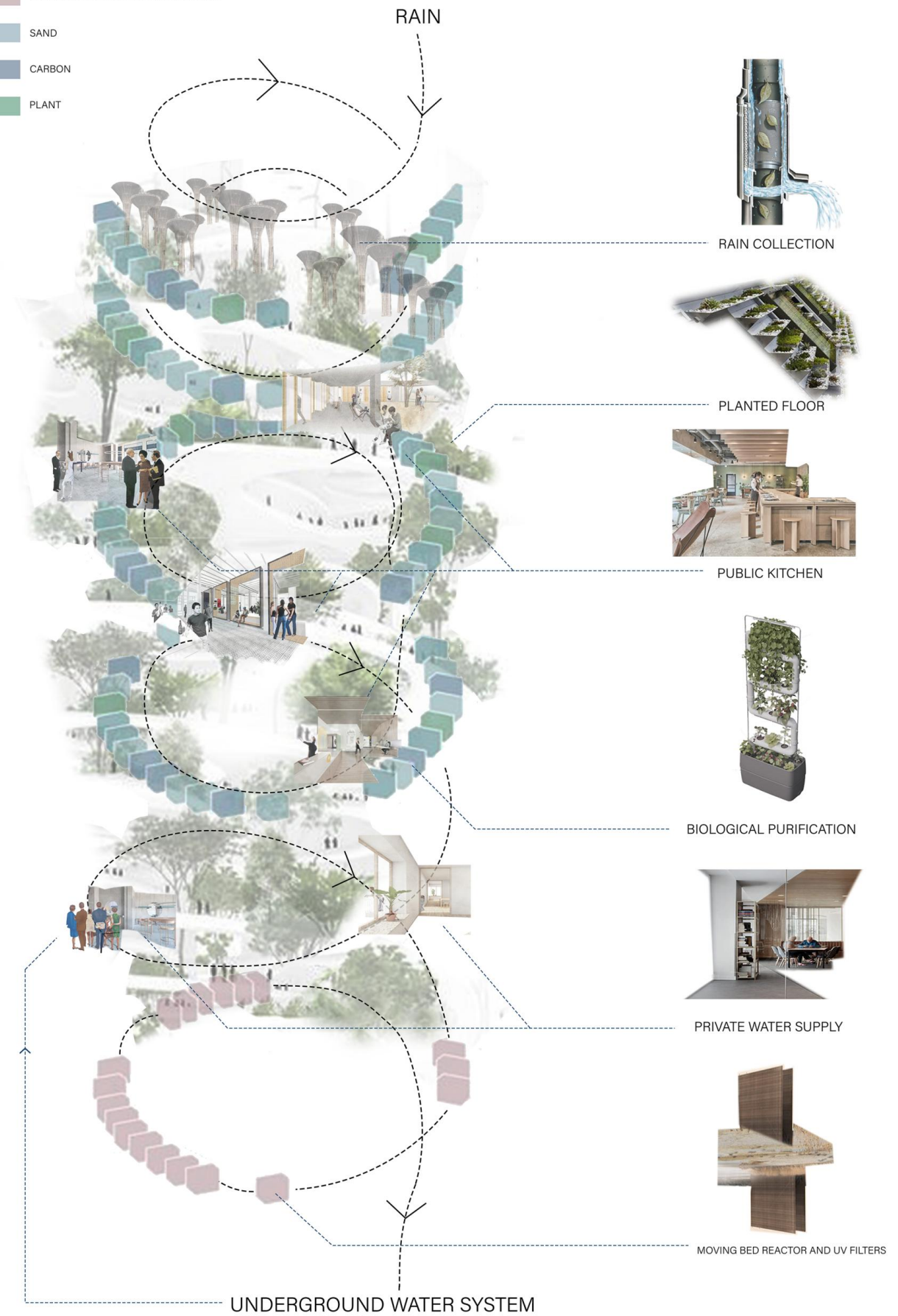
Summer 2023
Professor: Anupama Kundoo TA: Emily Ruopp



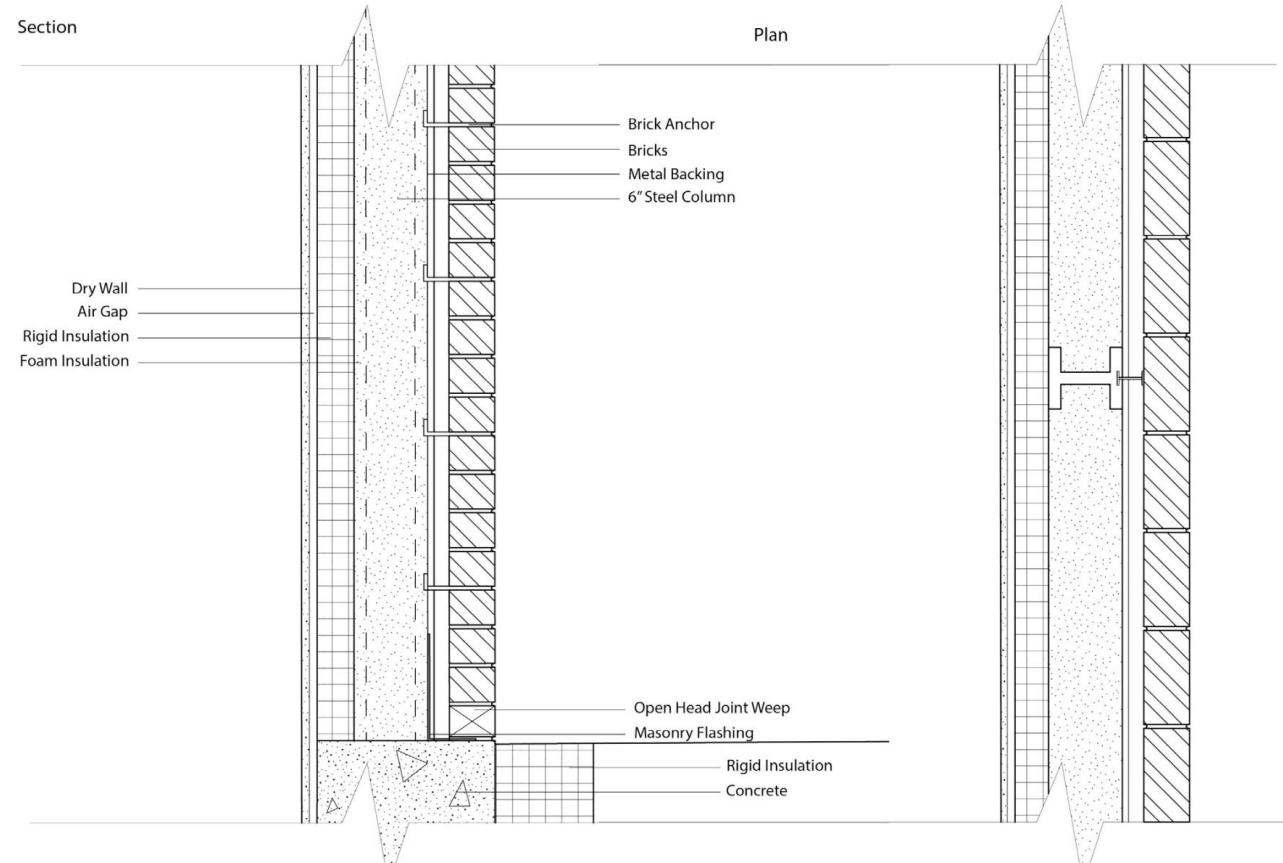




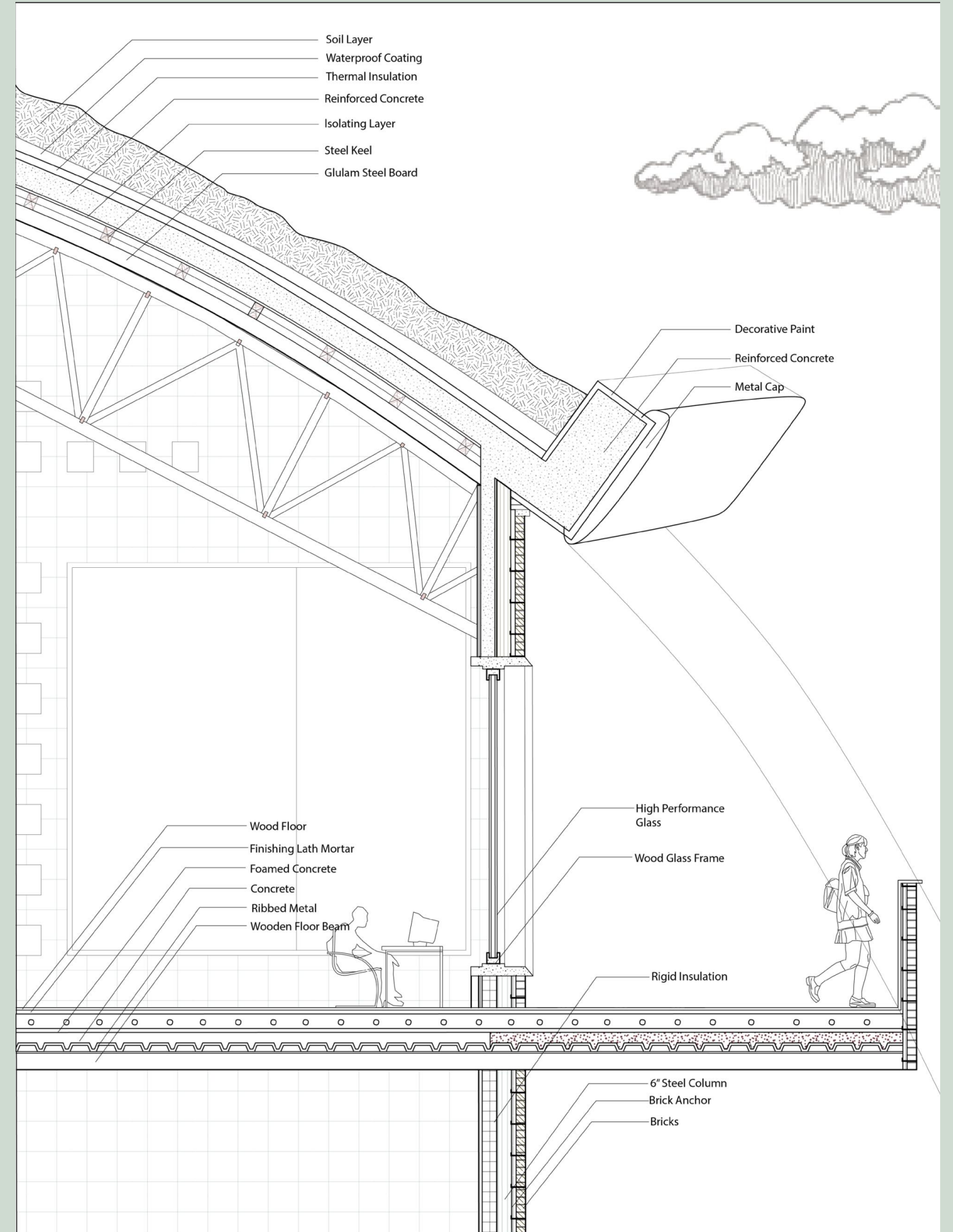
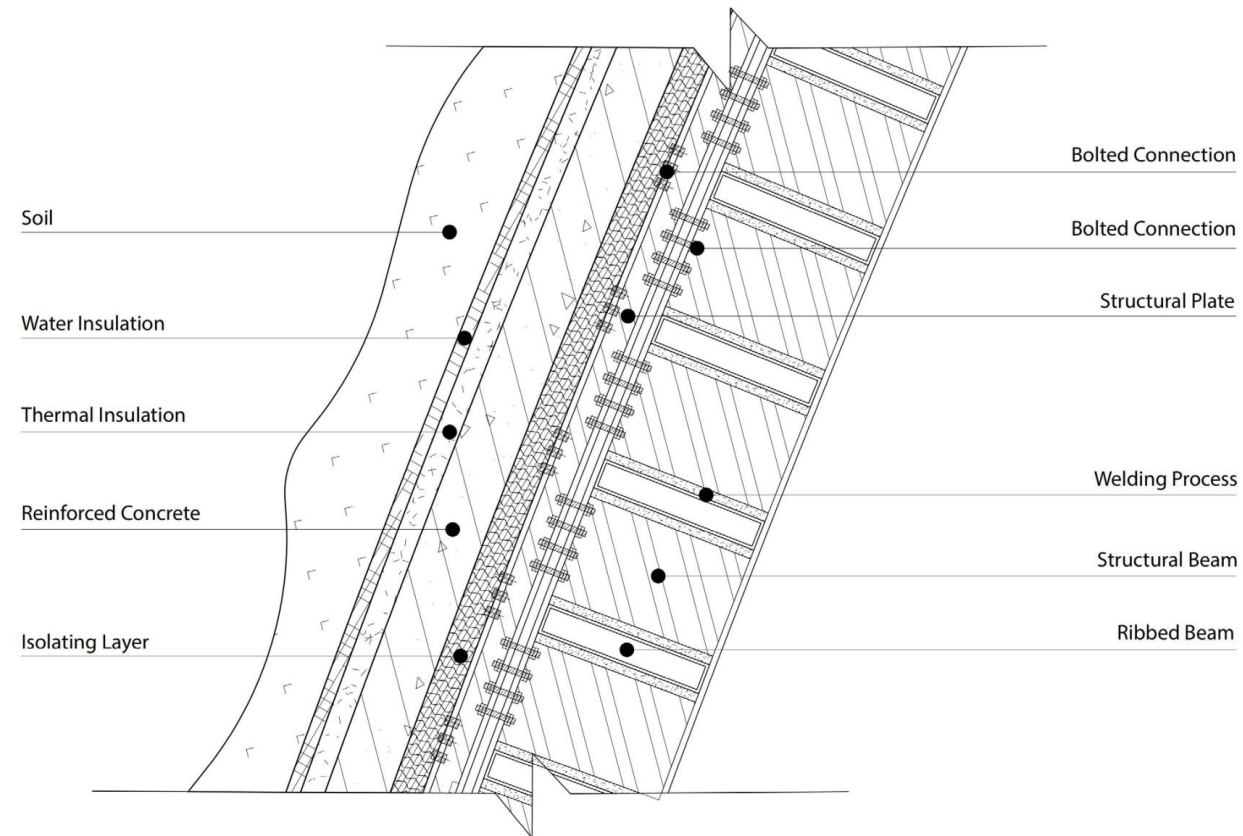
- MOVING BED REACTOR AND UV FILTERS
- SAND
- CARBON
- PLANT

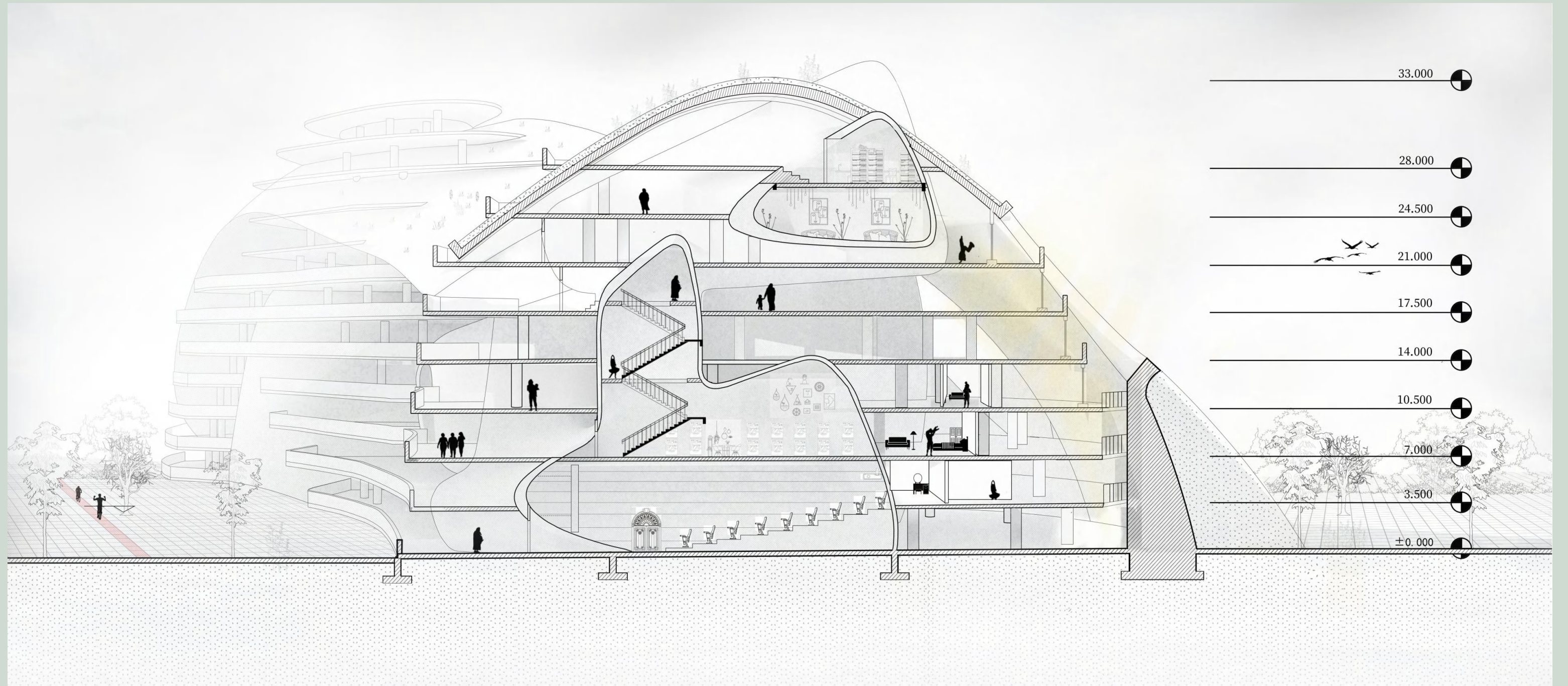


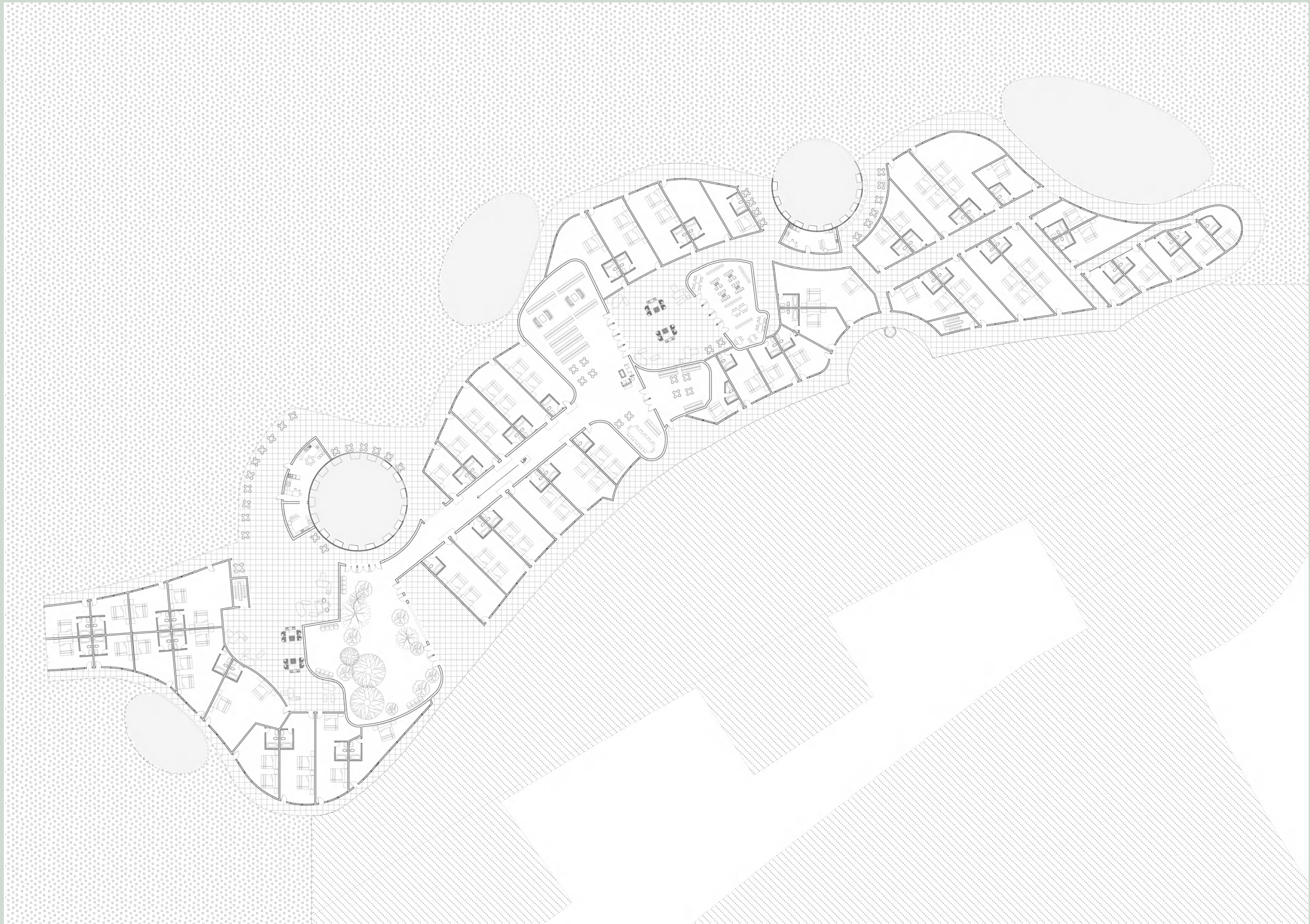
Interior Wall Details

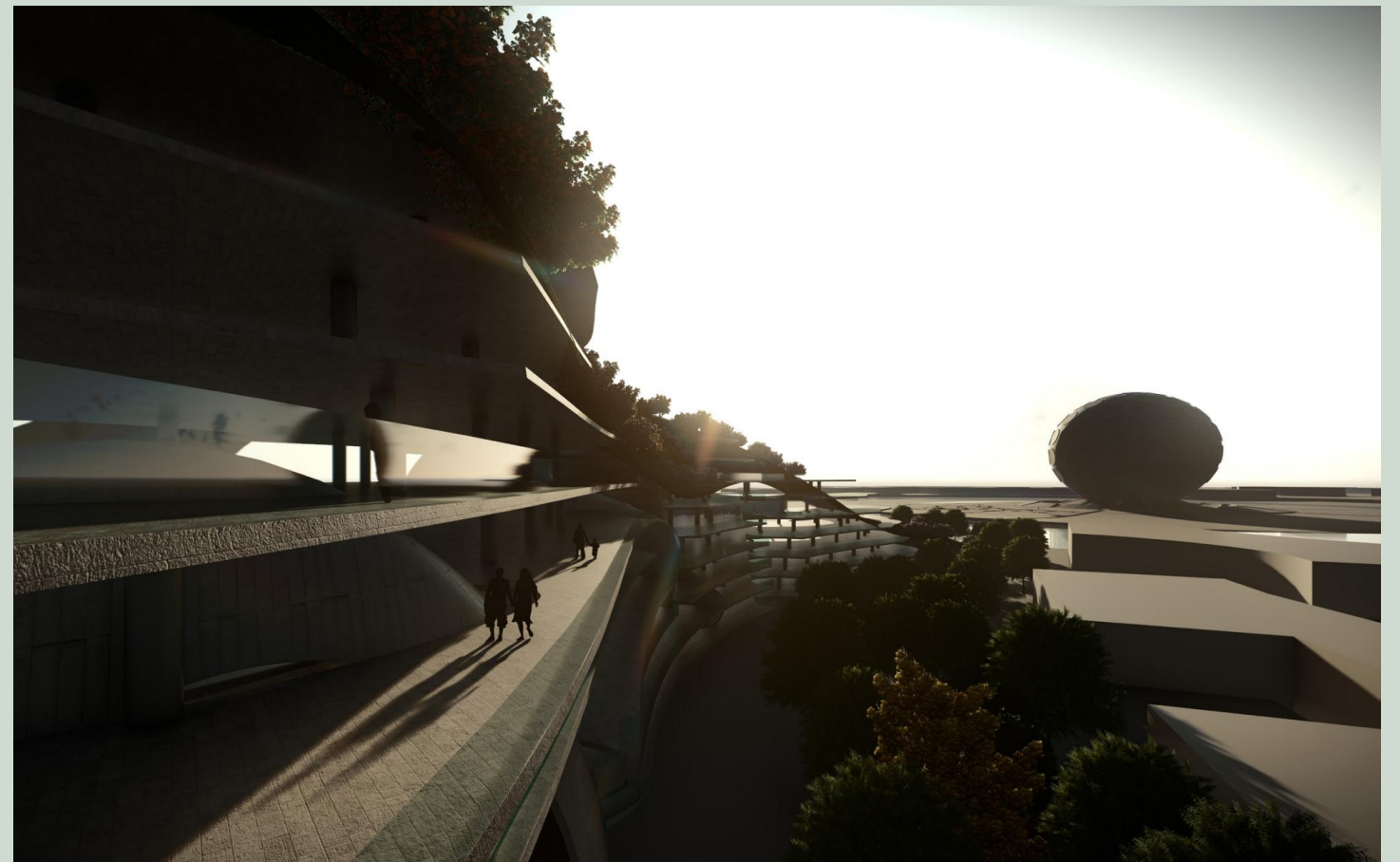
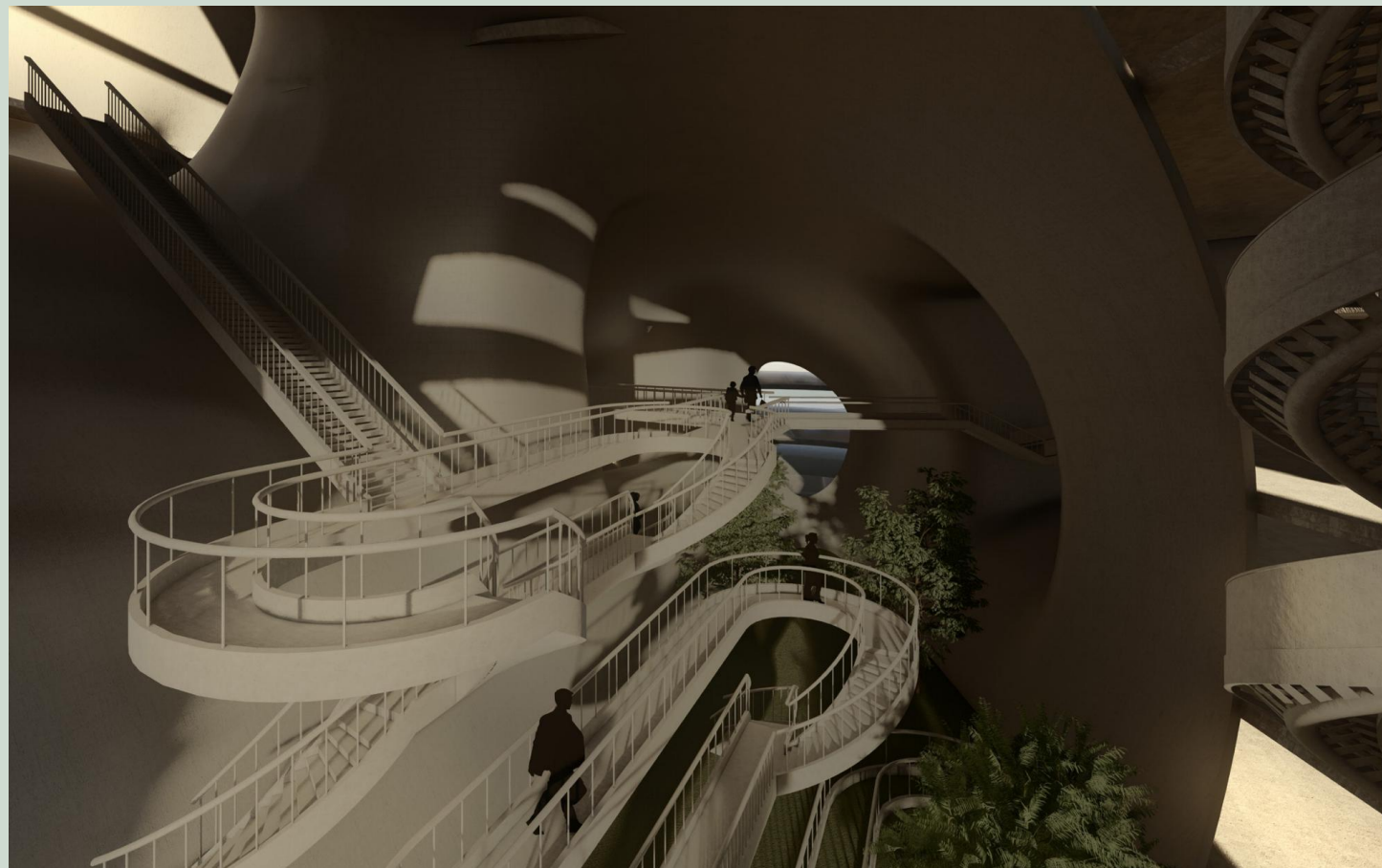


Exterior Wall Details









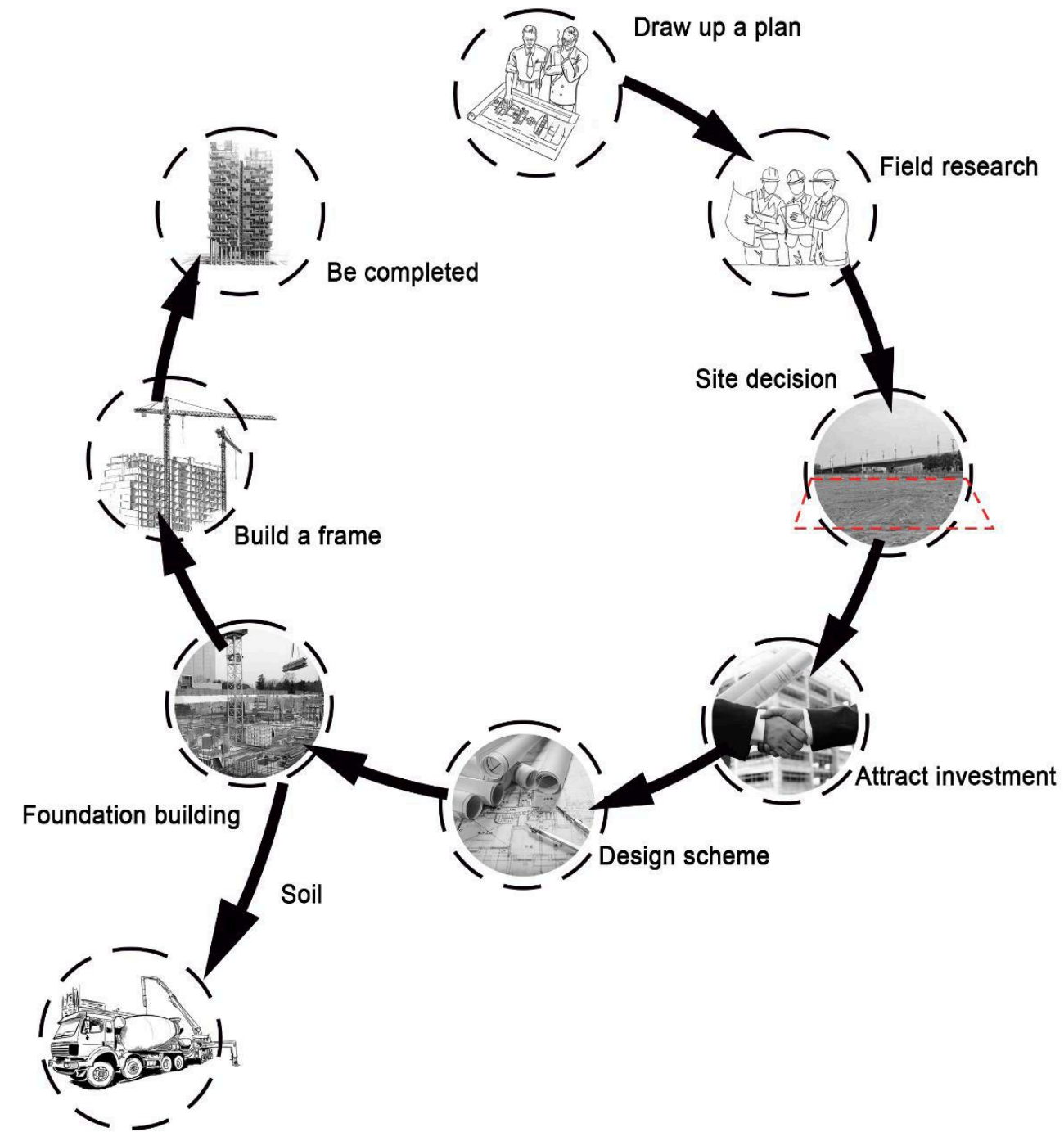
Earth-Based Green Wall



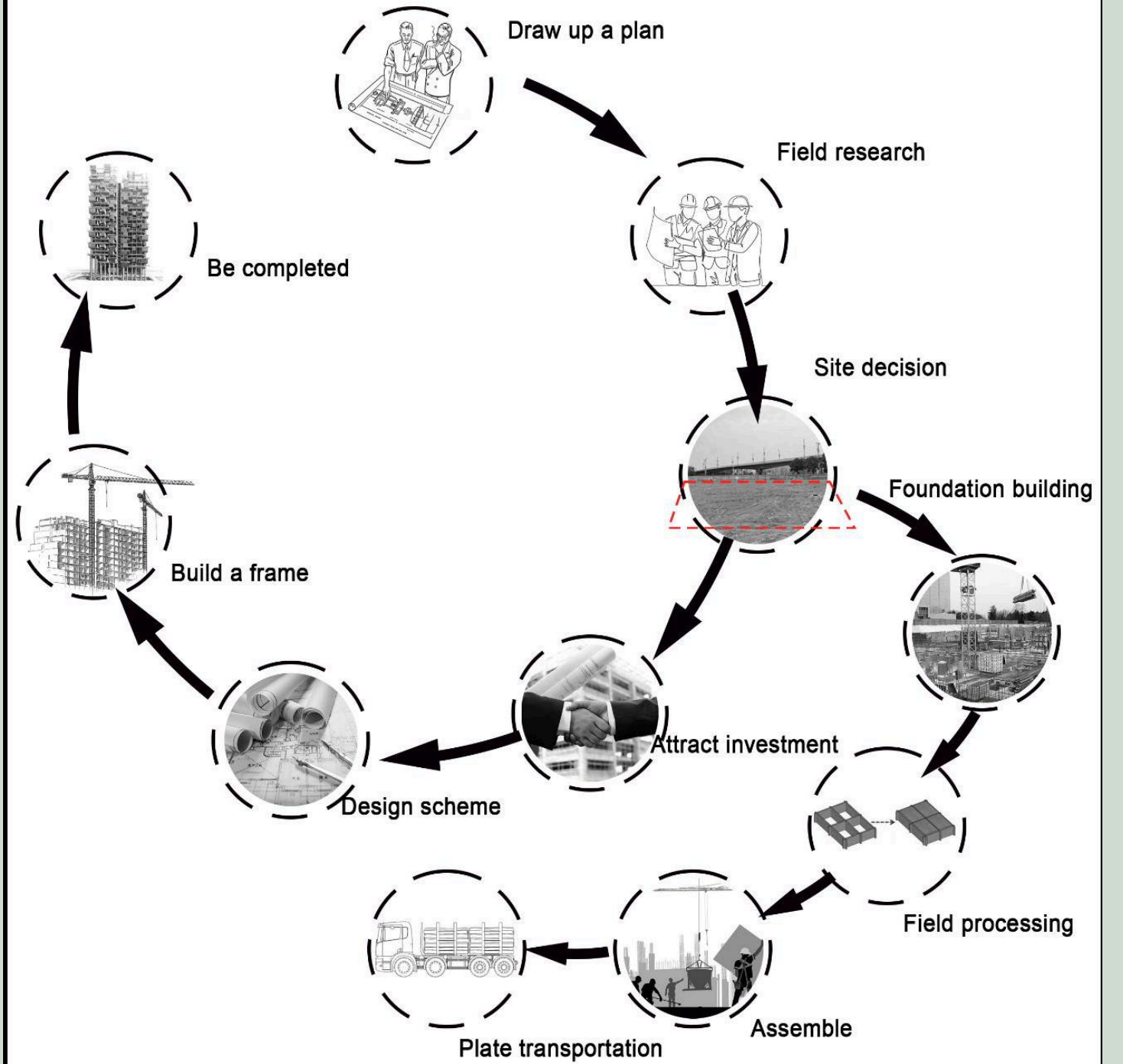
Tianyu Lyu (DK)
Haoran Wu

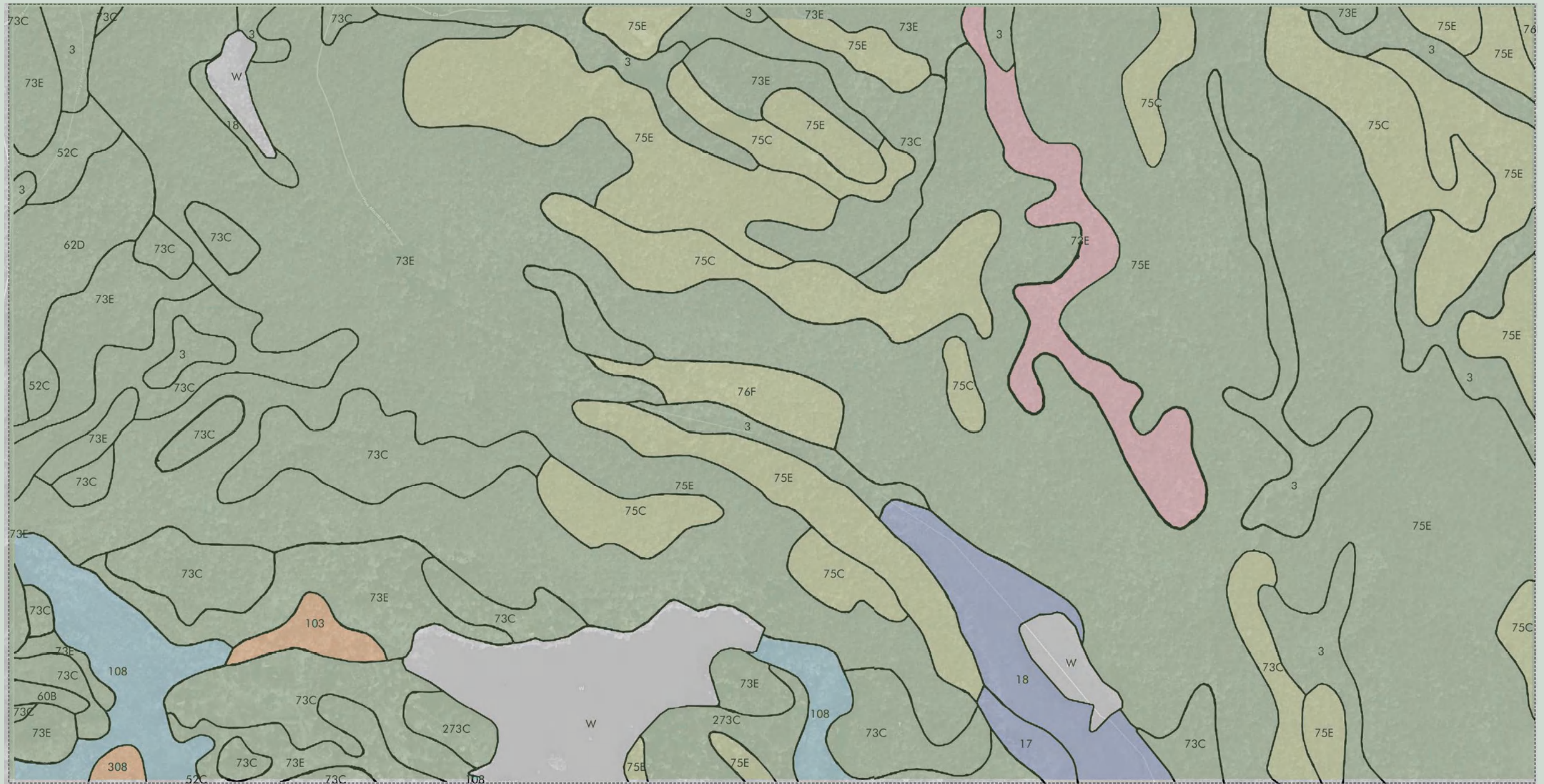
Fall 2023
Professor: Gordon Kipping TA: Steven Lin

CURRENT SITUATION



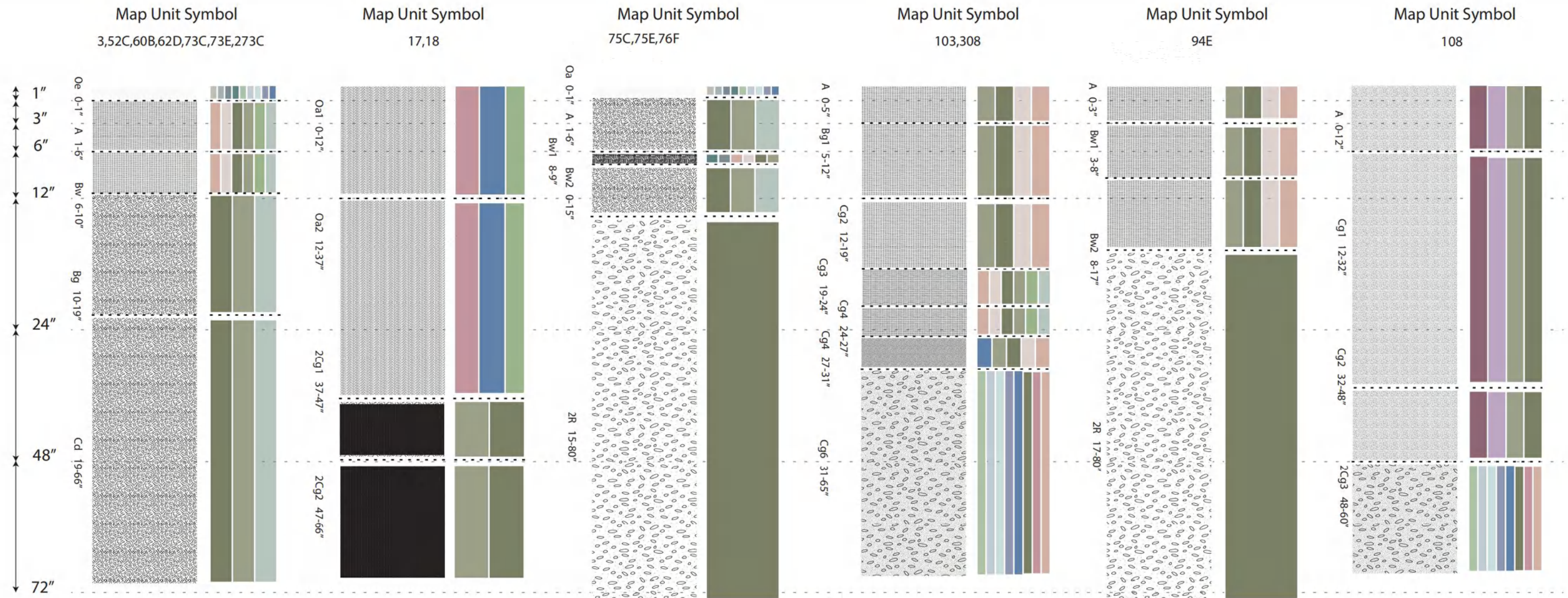
POSSIBLE SOLUTION





SOIL LAYER

Soil Contents in White Plains



- Highly Decomposed Plant Material
- Moderately Decomposed Plant Material
- Fine Sandy Loam
- Sandy Loam
- Channery Fine Sandy Loam
- Gravelly Sandy Loam
- Gravelly Loamy Fine Sand
- Muck
- Bed Rock
- Stratified gravelly Coarse Sand to Loamy Fine Sand
- Loamy Sand
- Silt Loam

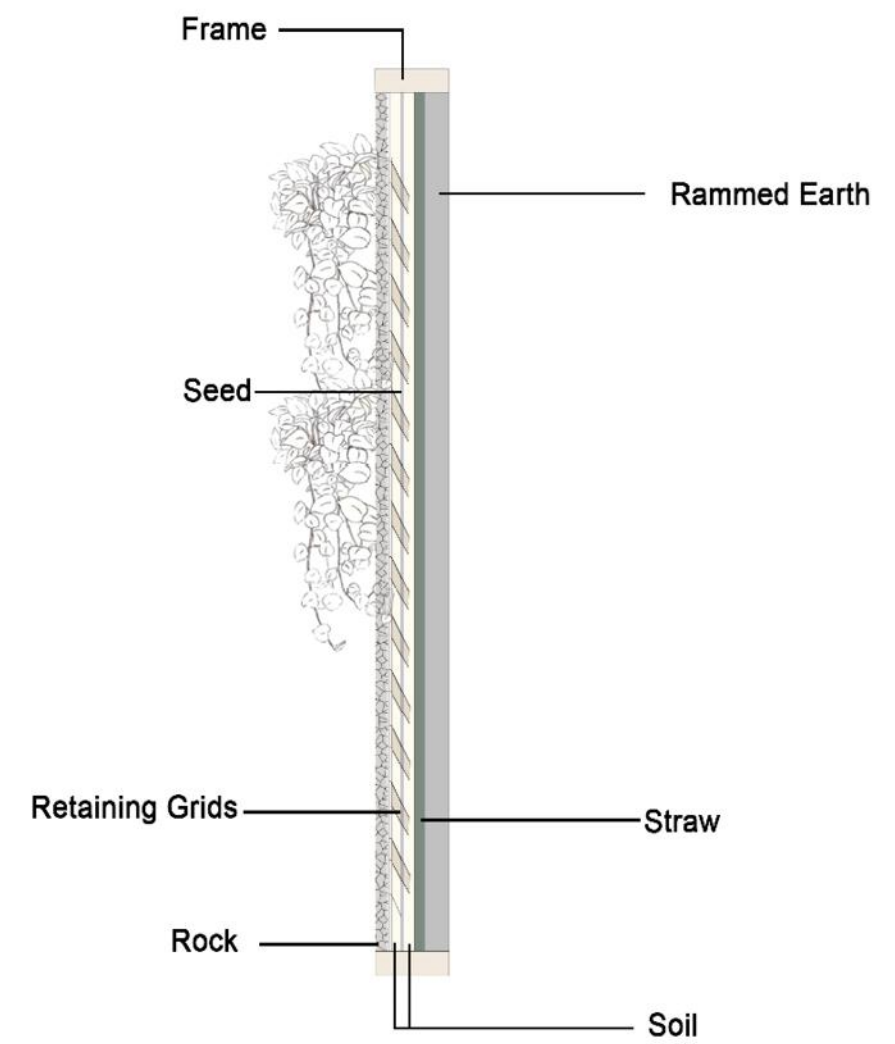
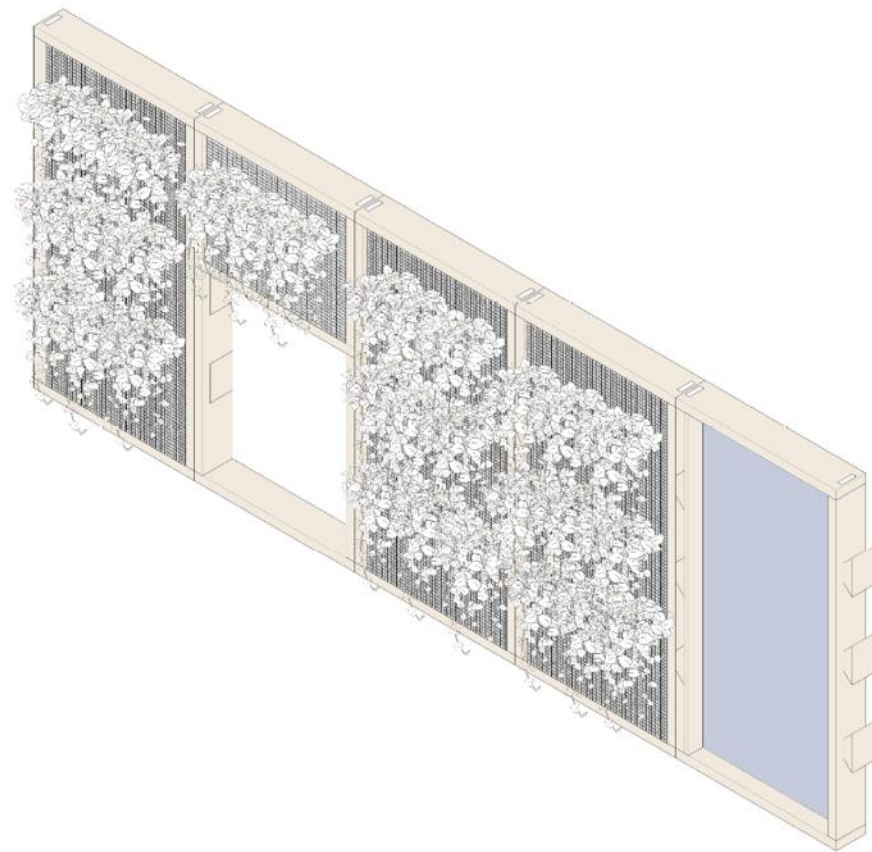


- Carbon(C)
- Oxygen
- Hydrogen(H)
- Sulphur(S)
- Nitrogen(N)
- Sand
- Stones and Gravel
- Quartz
- Feldspar
- Organic Pattern
- Microorganisms
- Plant and Animal residues

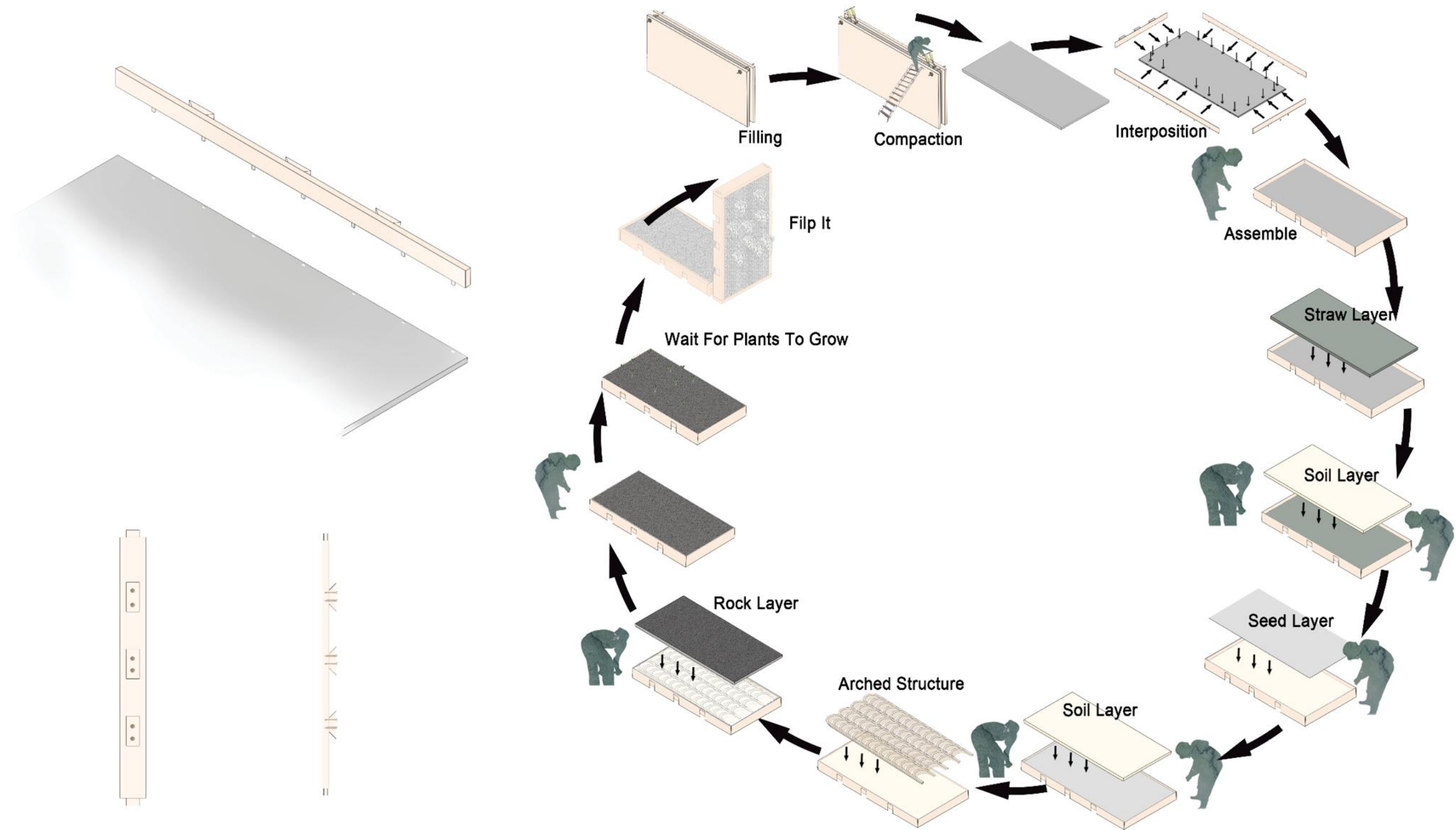
- Phosphorus(P)
- Potassium(K)
- Calcium (Ca)
- Water
- Silt
- Clay

Carbon (C), Oxygen, Hydrogen (H) and small amounts of Sulphur (S), Nitrogen (N), Phosphorus (P), Potassium (K), Calcium (Ca)
 Carbon (C), Oxygen, Hydrogen (H)
 Sand(SiO₂), Stones and Gravel(CaCo₃), Quartz(SiO₂), Feldspar
 Mineral Particles, Organic Matter, Microorganisms, Sand(SiO₂), Stones and Gravel(CaCo₃), Quartz(SiO₂), Rocks(CaCo₃), Feldspar Rock types,
 Sand(SiO₂), Stones and Gravel(CaCo₃), Mineral Particles, Organic Matter, Microorganisms, Quartz(SiO₂),
 Stones and Gravel(CaCo₃), Sand(SiO₂), Organic Matter, Microorganisms
 Sand(SiO₂), Stones and Gravel(CaCo₃),
 Plant and Animal residues, Water, Organic Matter, Microorganisms
 Rock types, such as granite, limestone, shale, or others.
 Mineral Particles, Organic Matter, Microorganisms, Sand(SiO₂), Rock types, such as granite, limestone, shale, or others.
 Sand(SiO₂), Stones and Gravel(CaCo₃), Quartz(SiO₂), Feldspar
 Silt, and Clay, Microorganisms, Rocks(CaCo₃), Sand(SiO₂),

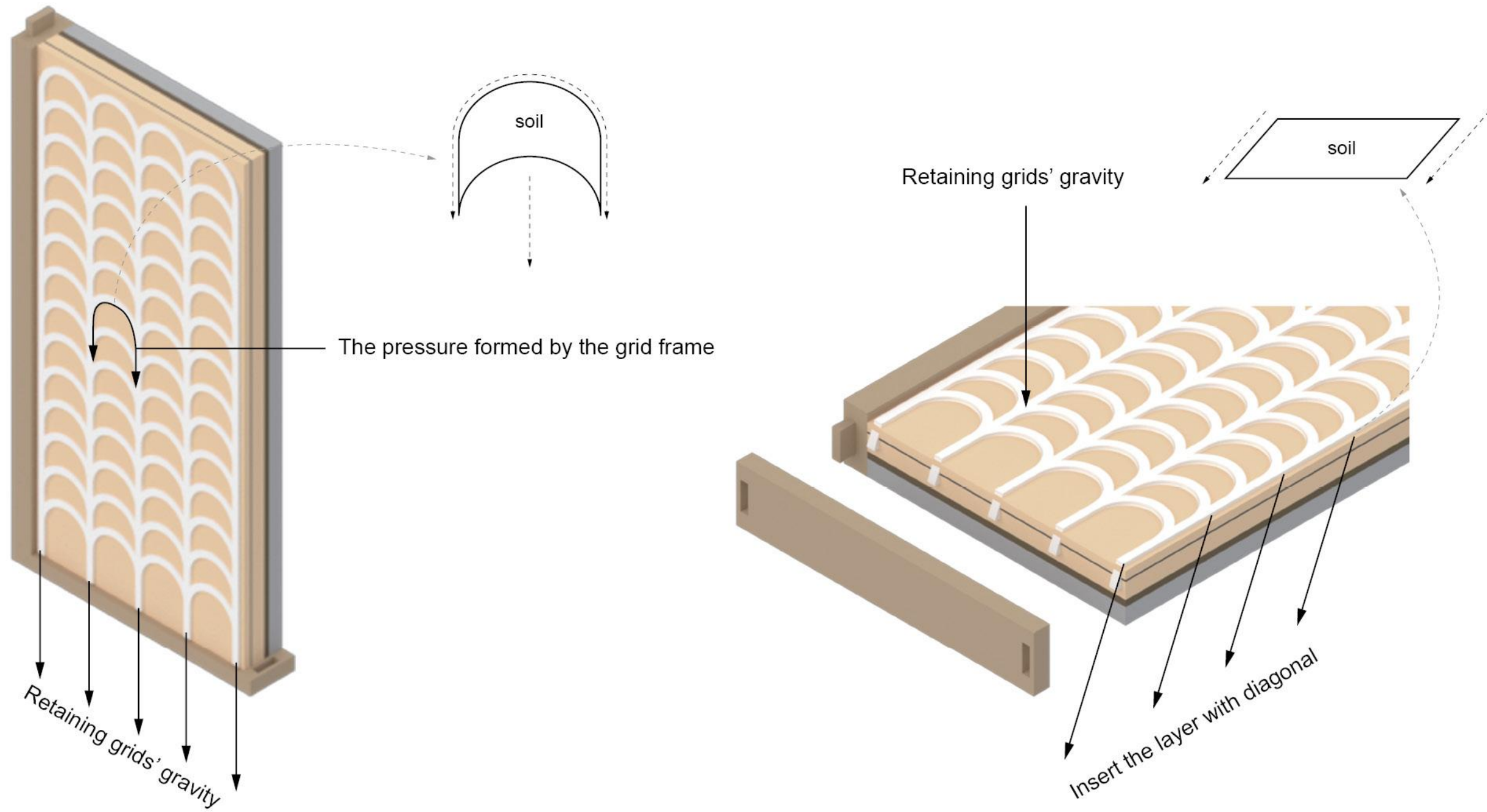
MODULE Wall-General View



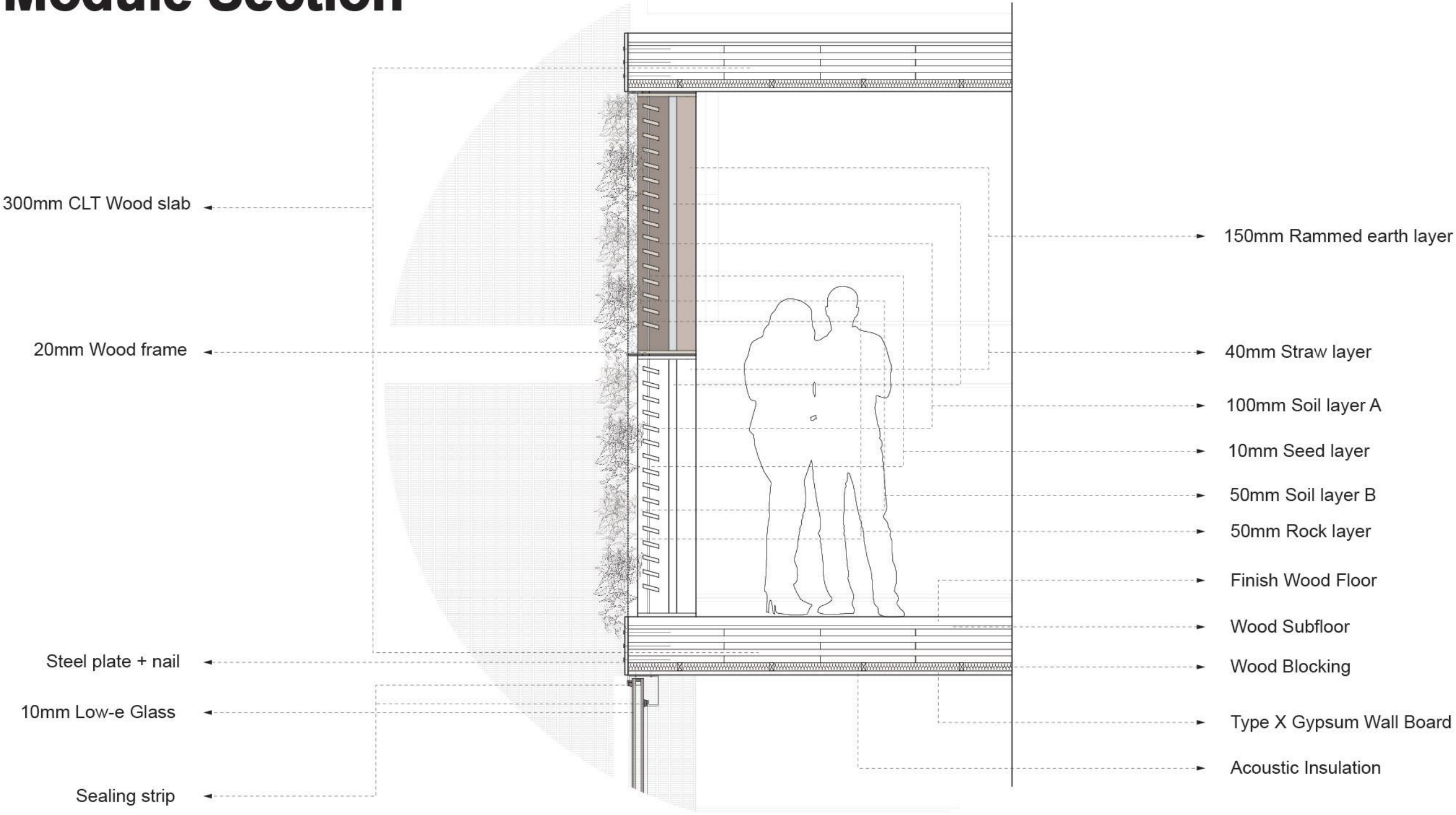
MODULE Wall-Assembling Process



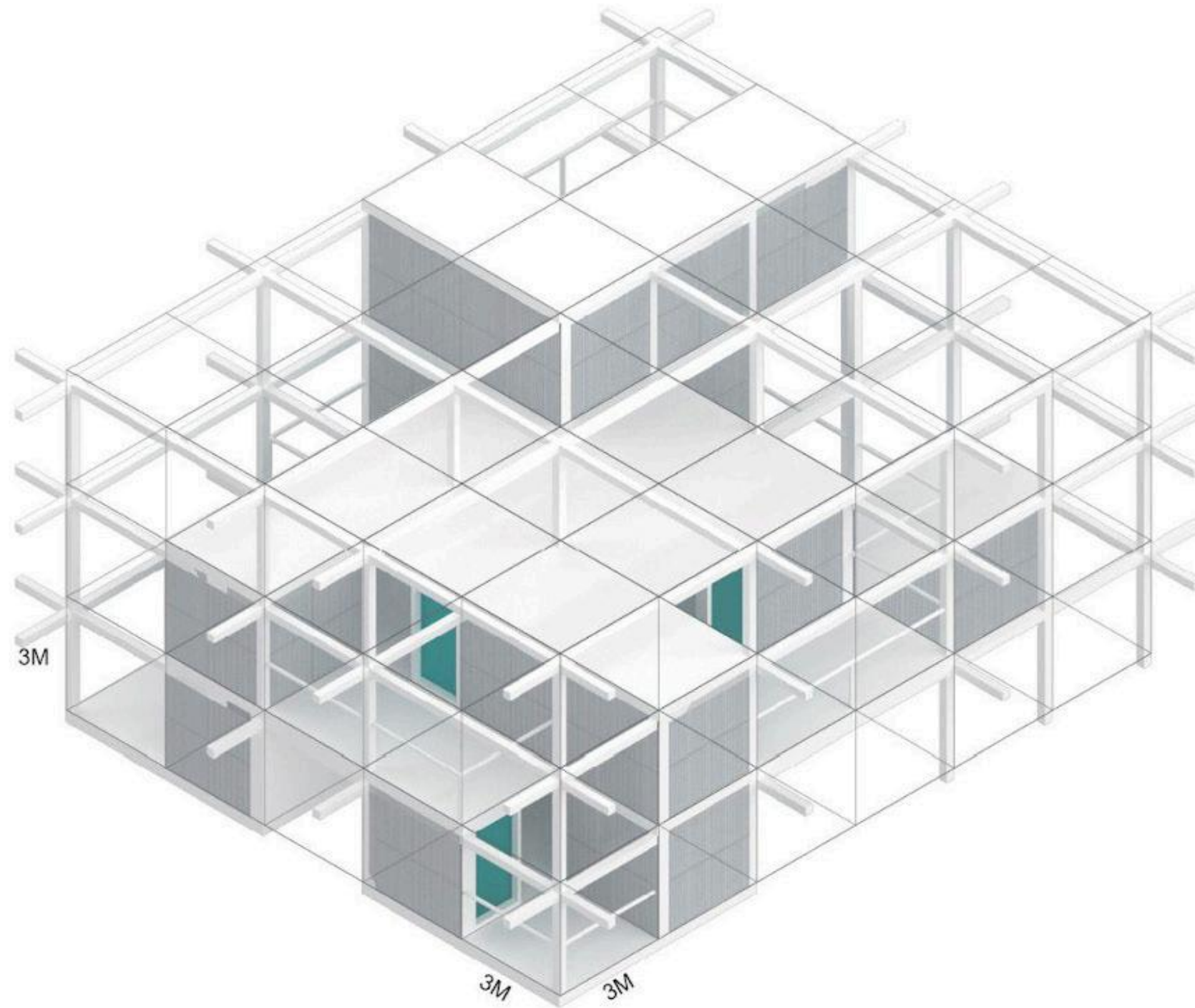
MODULE Retaining Grids- Diagram



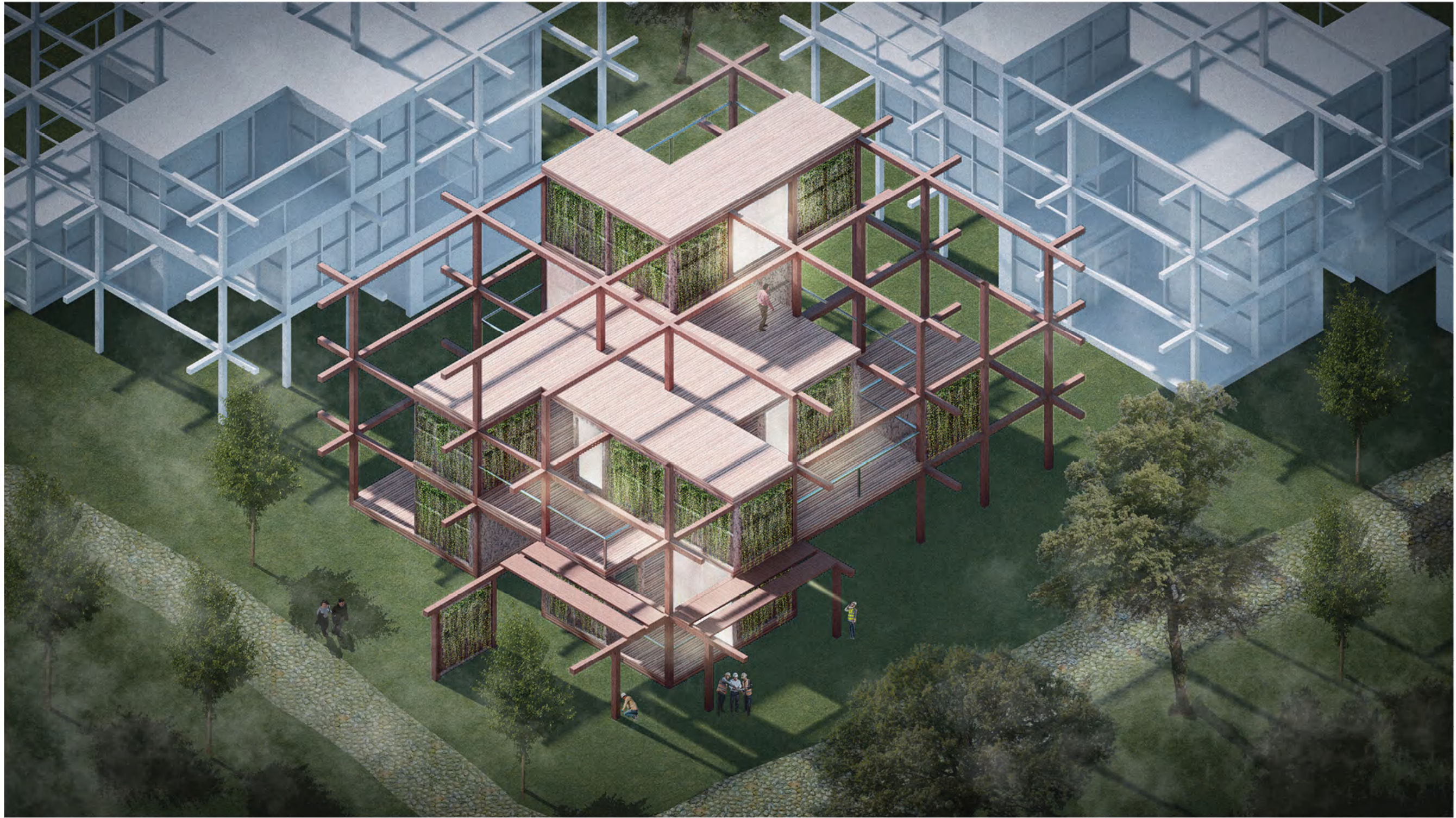
Module Section



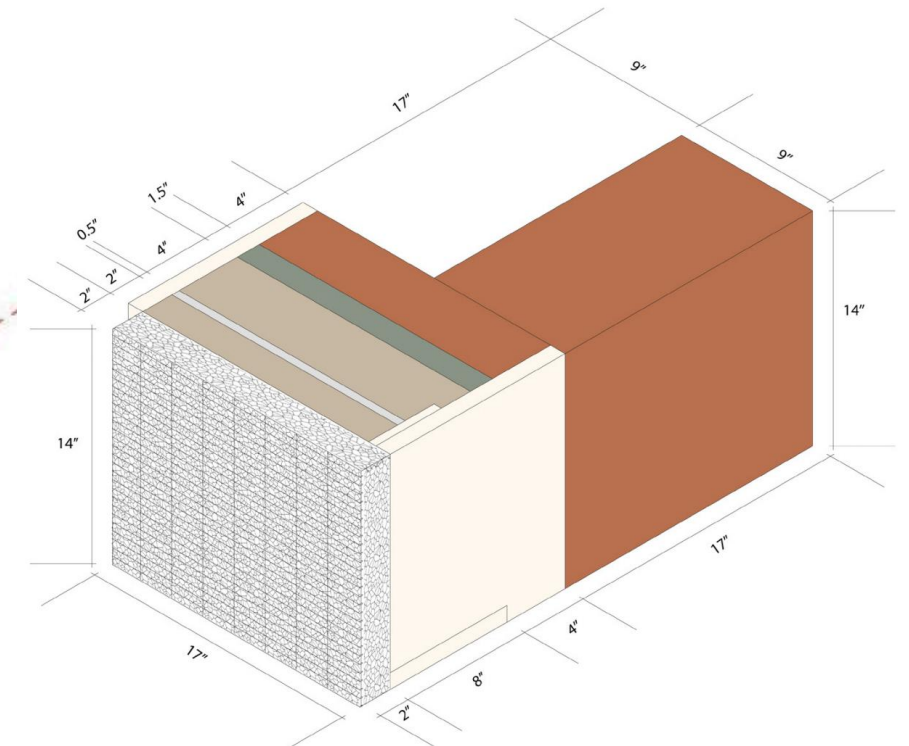
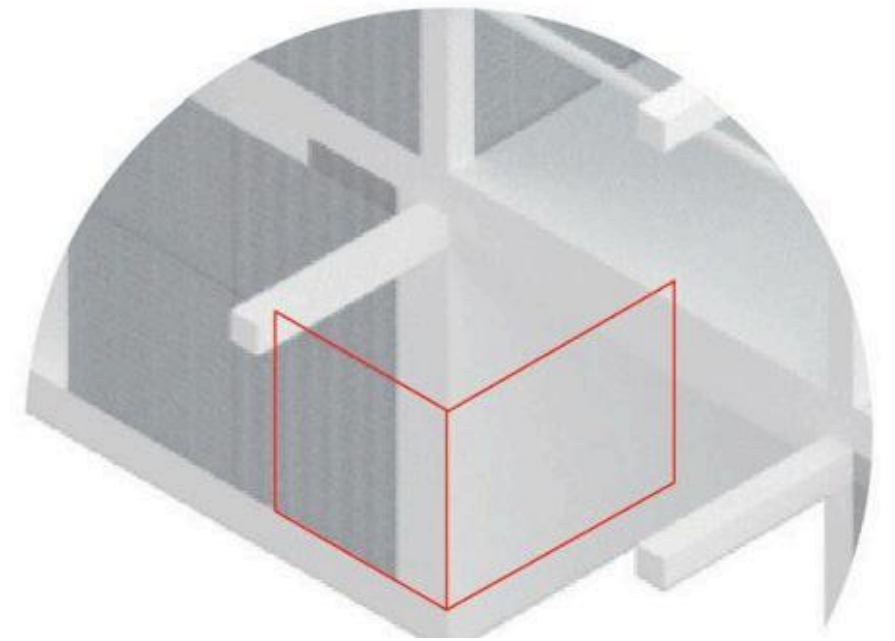
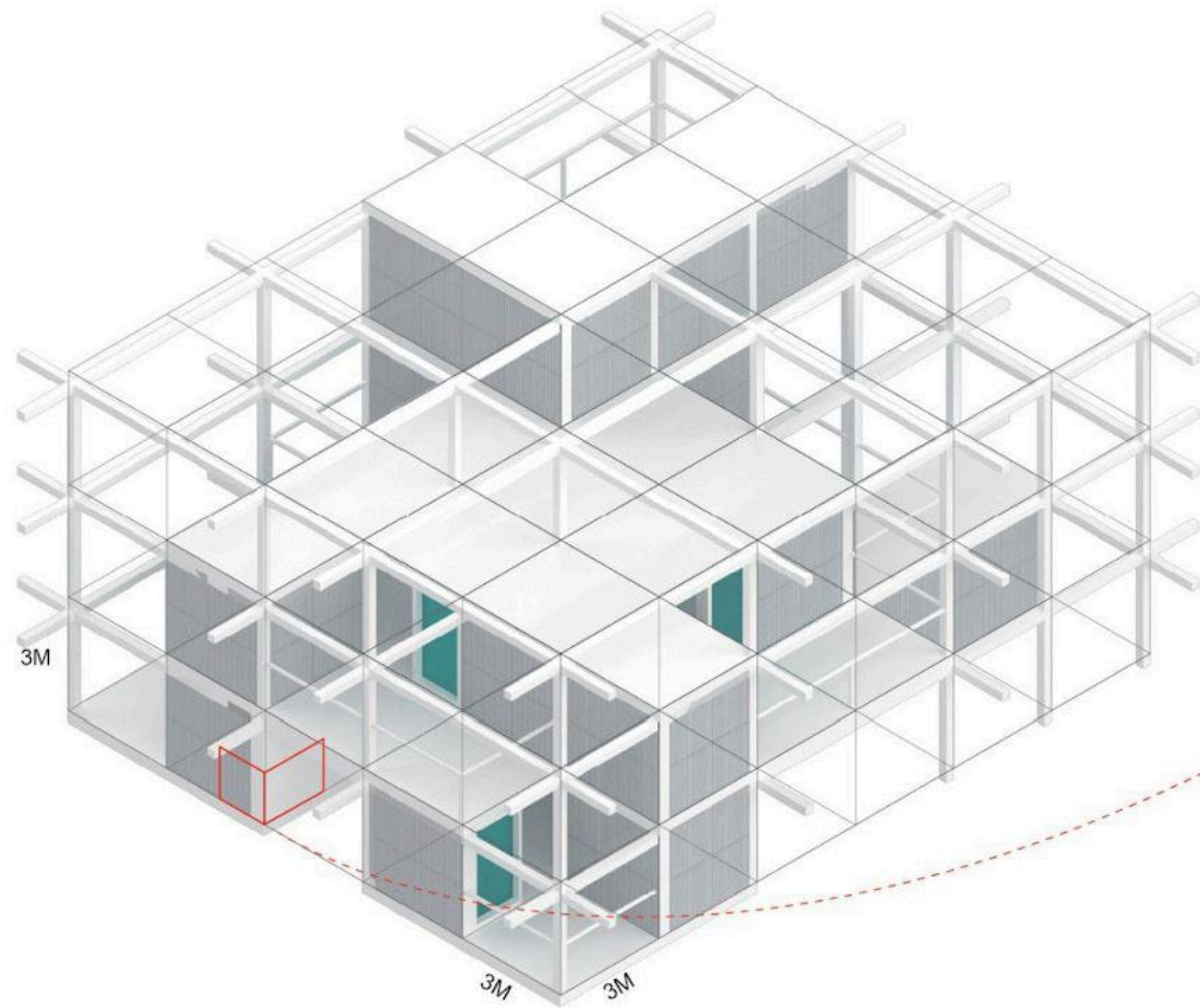
MODULE Design Process



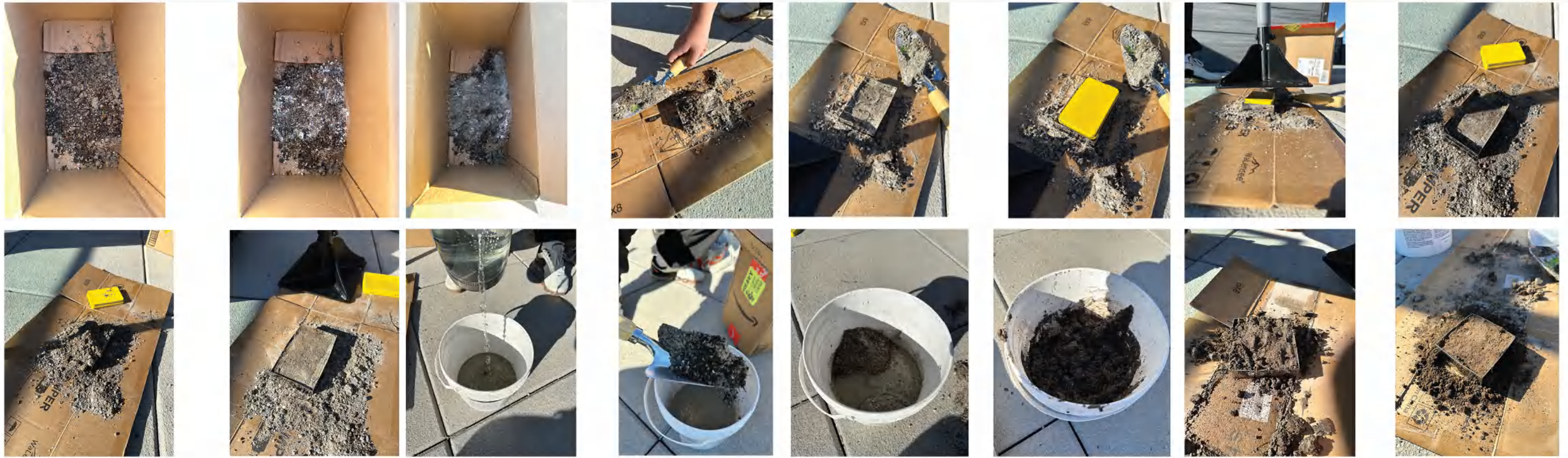
MODULE Render



MODULE Selected Corner



PHYSICAL MODEL Experiments



PHYSICAL MODEL Experiments



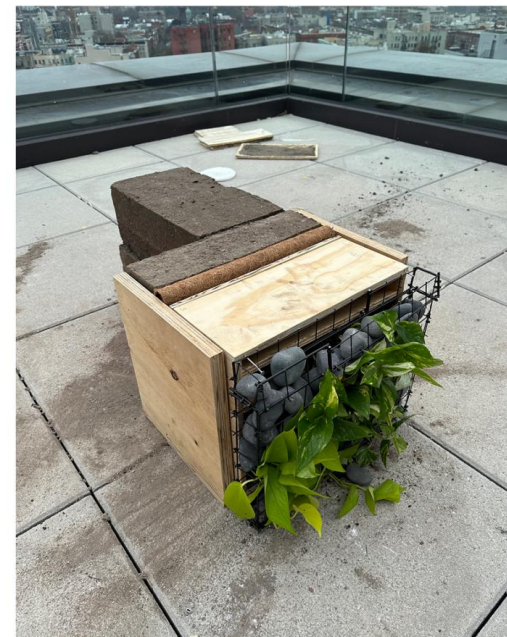
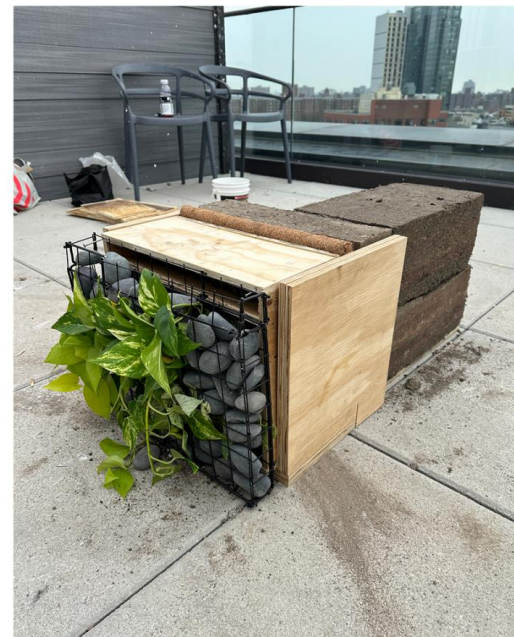
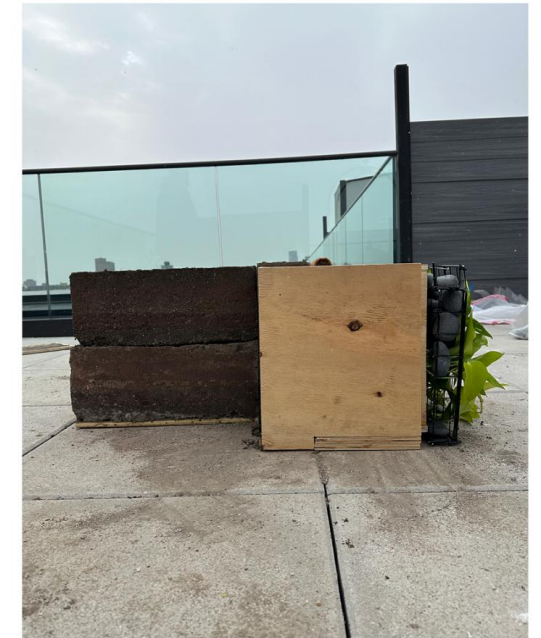
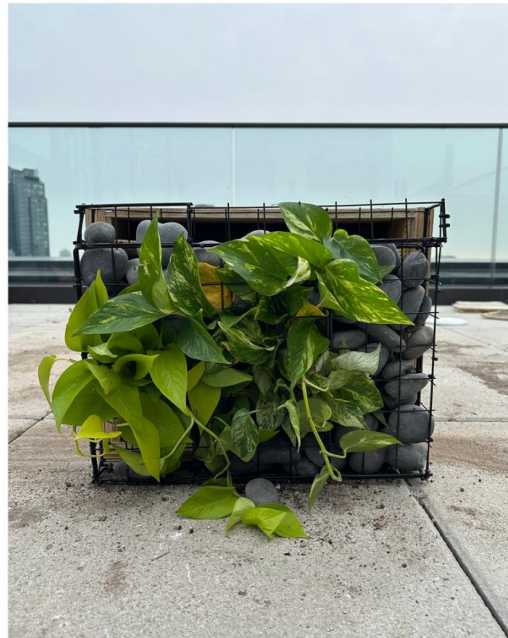
Unit: Cup	Soil	5	5	5	5	5	5
	Rock	0.5	1	3	0	1	2
	Sand	1	3	1	0	1	3
	Lime	2	0.5	0.5	0.5	1	1
	Cement	0.5	0.5	0.5	0	3	2
	Water	0.5	0.5	0.5	0	1	0

PHYSICAL MODEL

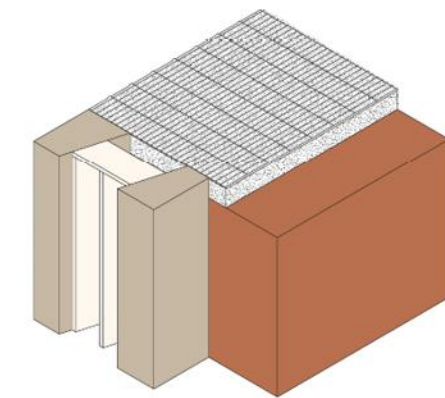
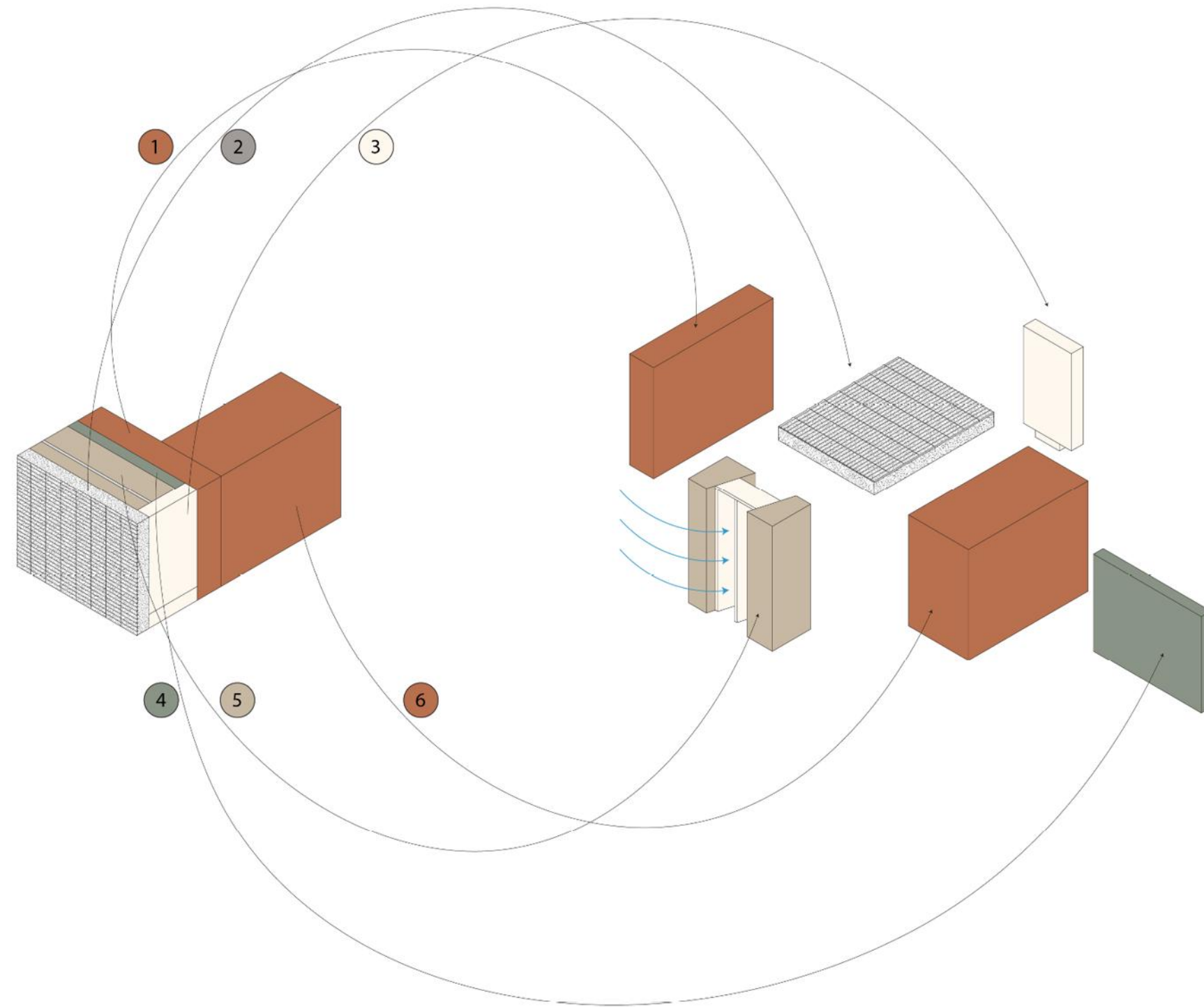
Rammed Earth and Iron Mesh



PHYSICAL MODEL Fragment Wall Mode

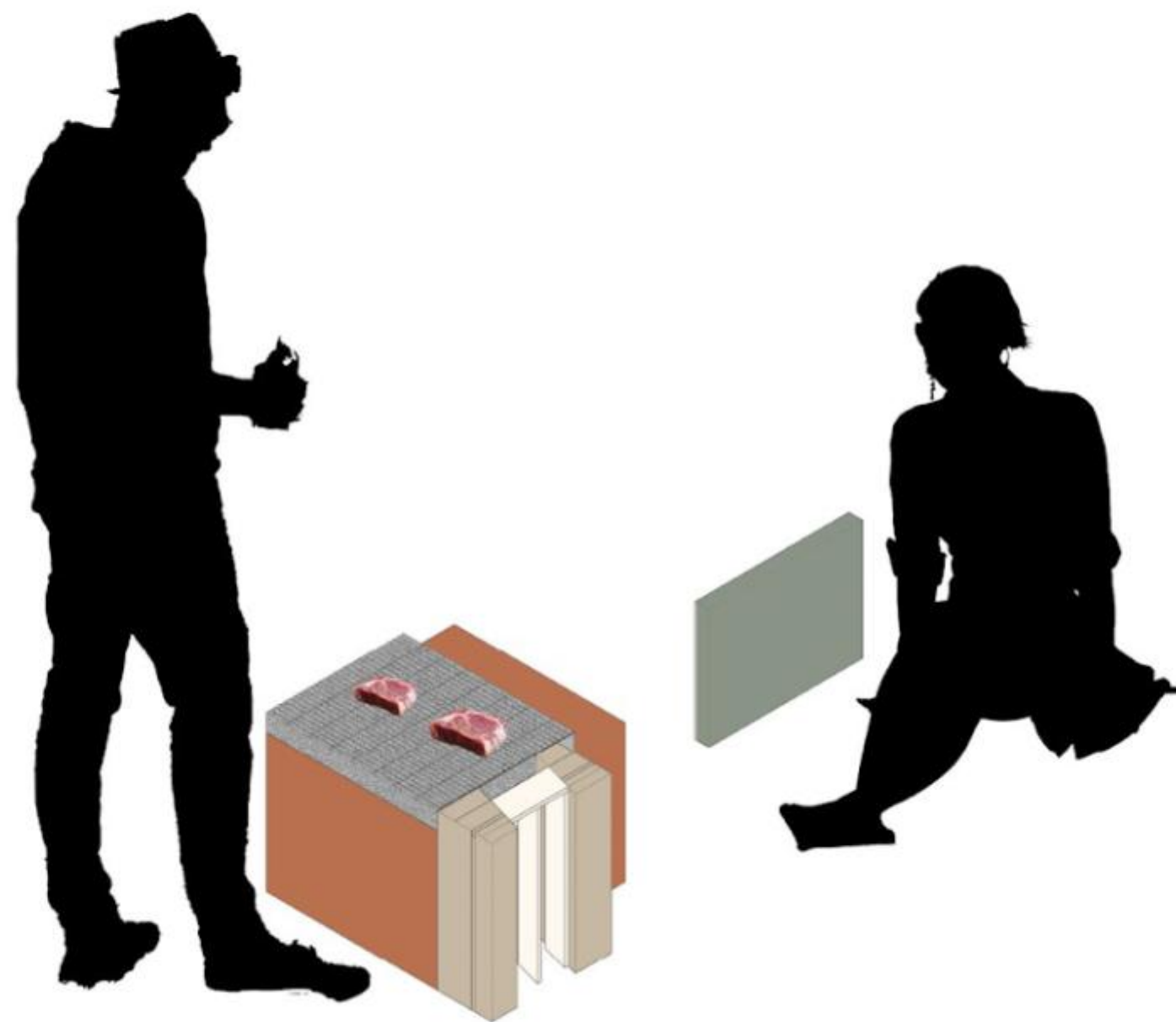


RE-ASSEMBLE Process

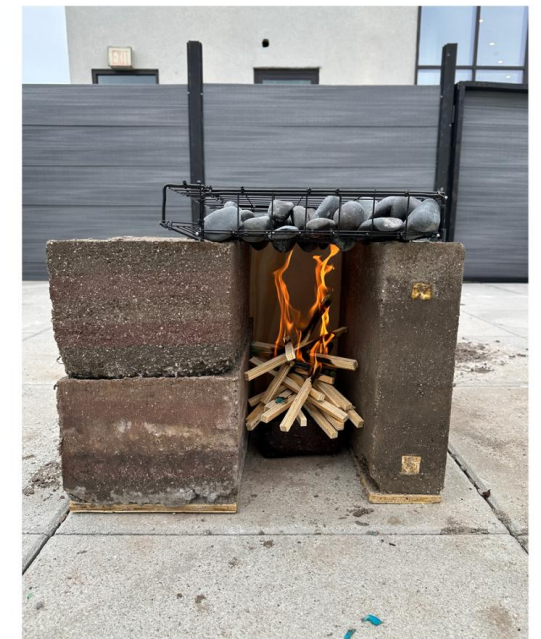


- 1 Rammed Earth
- 2 Rock Cage
- 3 Timber Frame
- 4 Straw Layer
- 5 Planting Earth
- 6 Rammed Earth

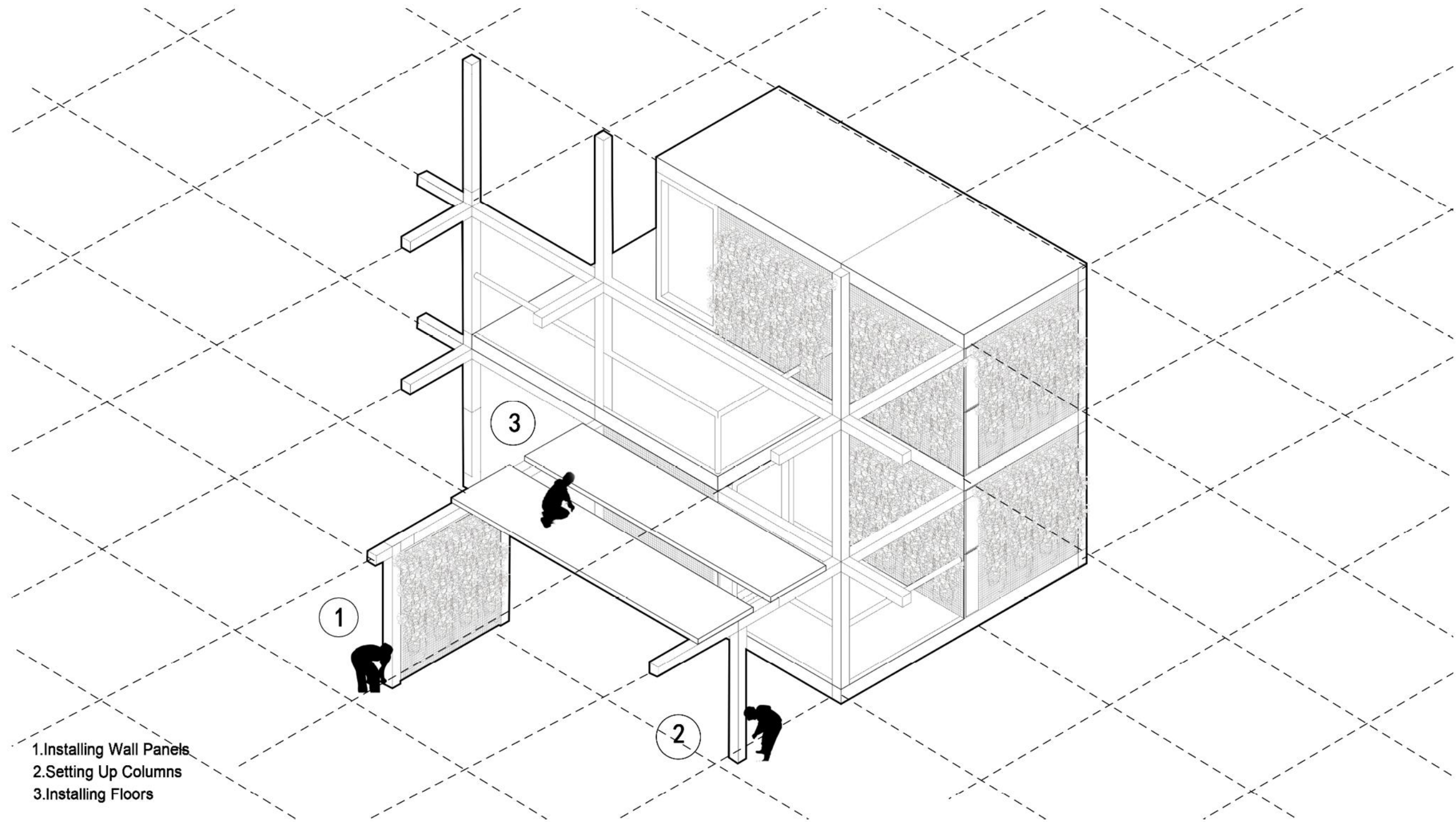
RE-ASSEMBLE Stove



PHYSICAL MODEL Fragment Stove Mode

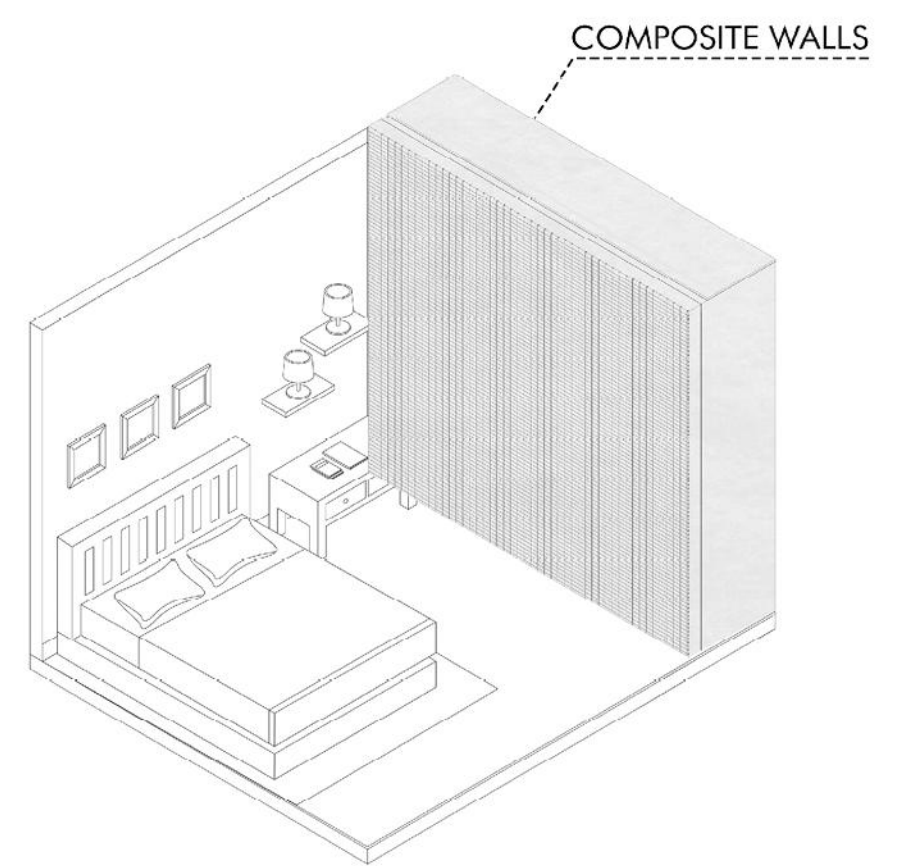
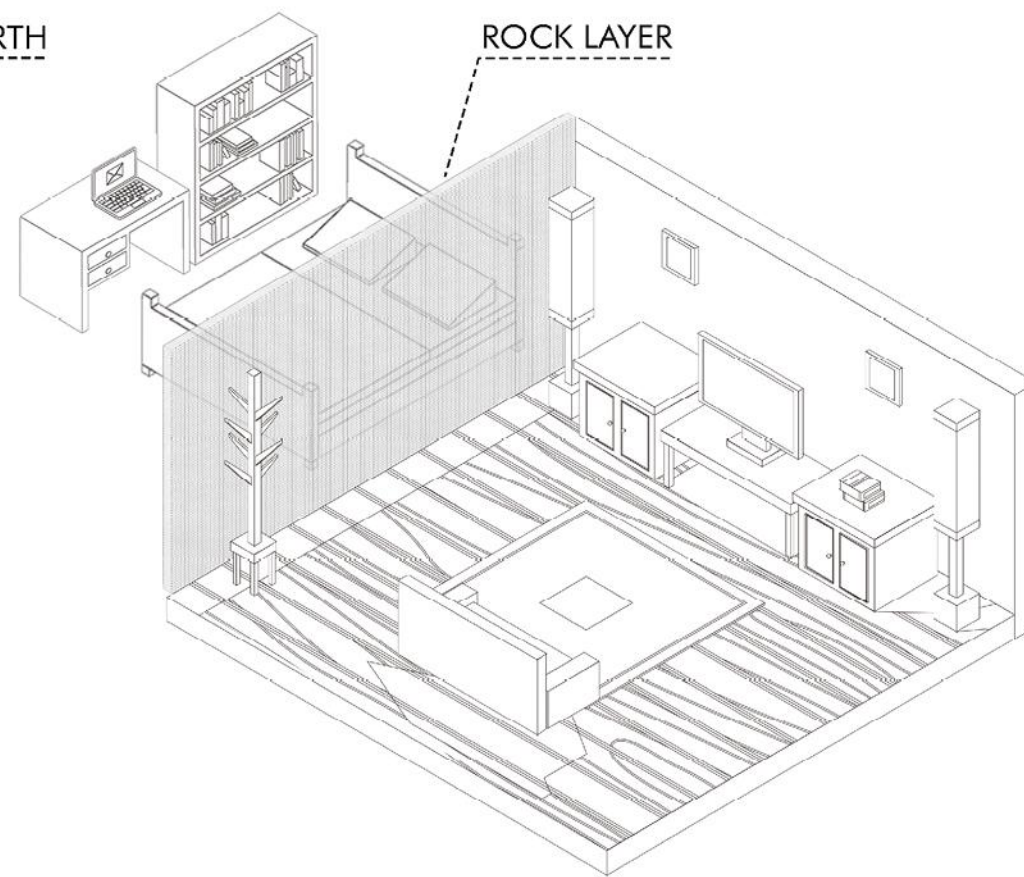
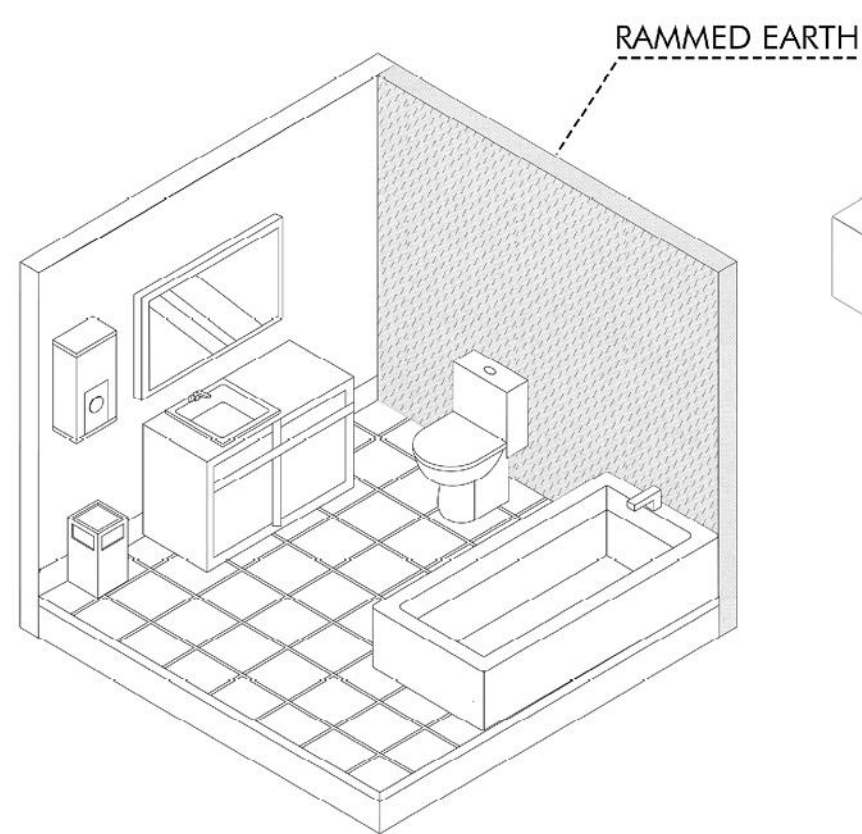


TOWER Principles

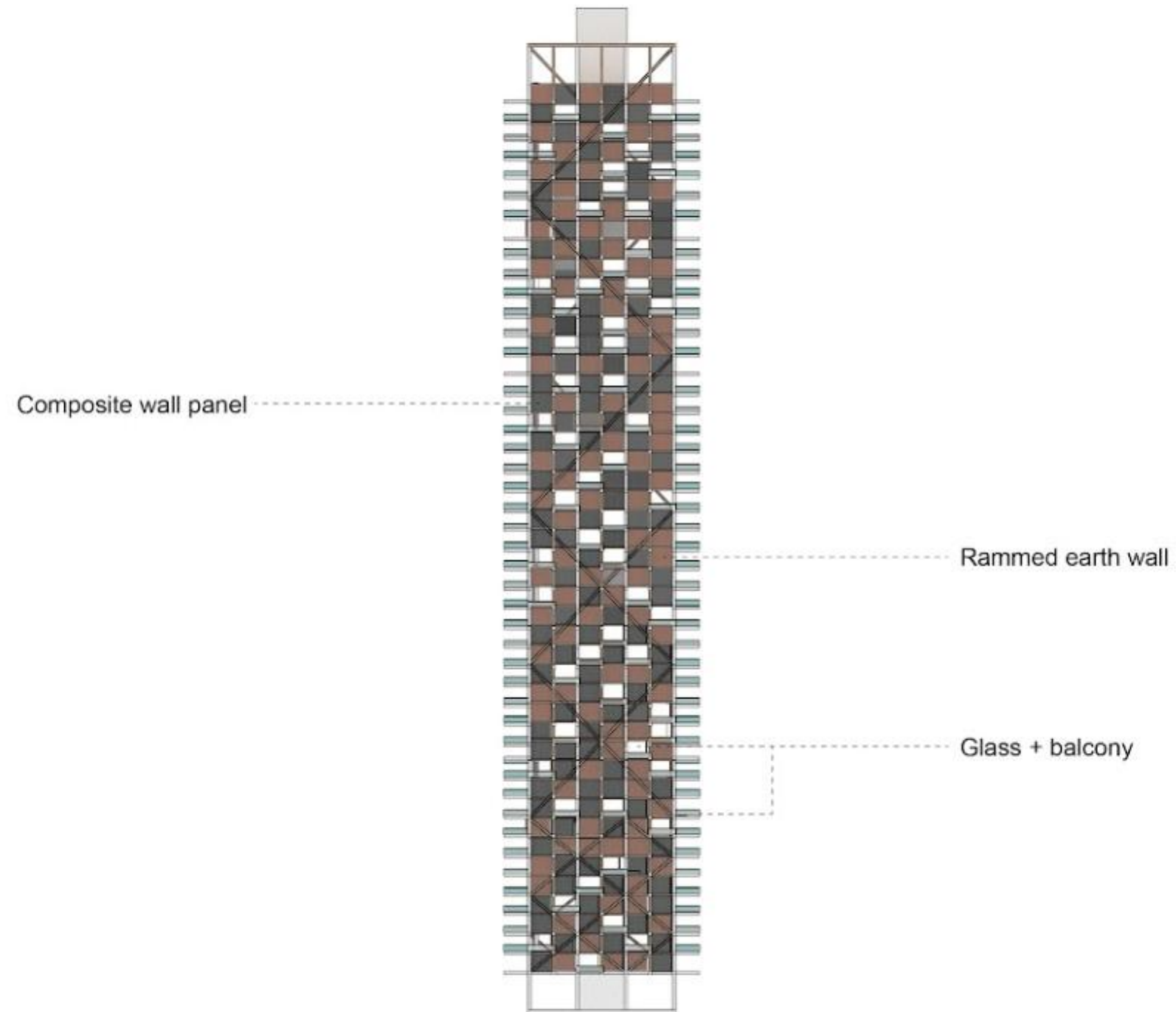


1. Installing Wall Panels
2. Setting Up Columns
3. Installing Floors

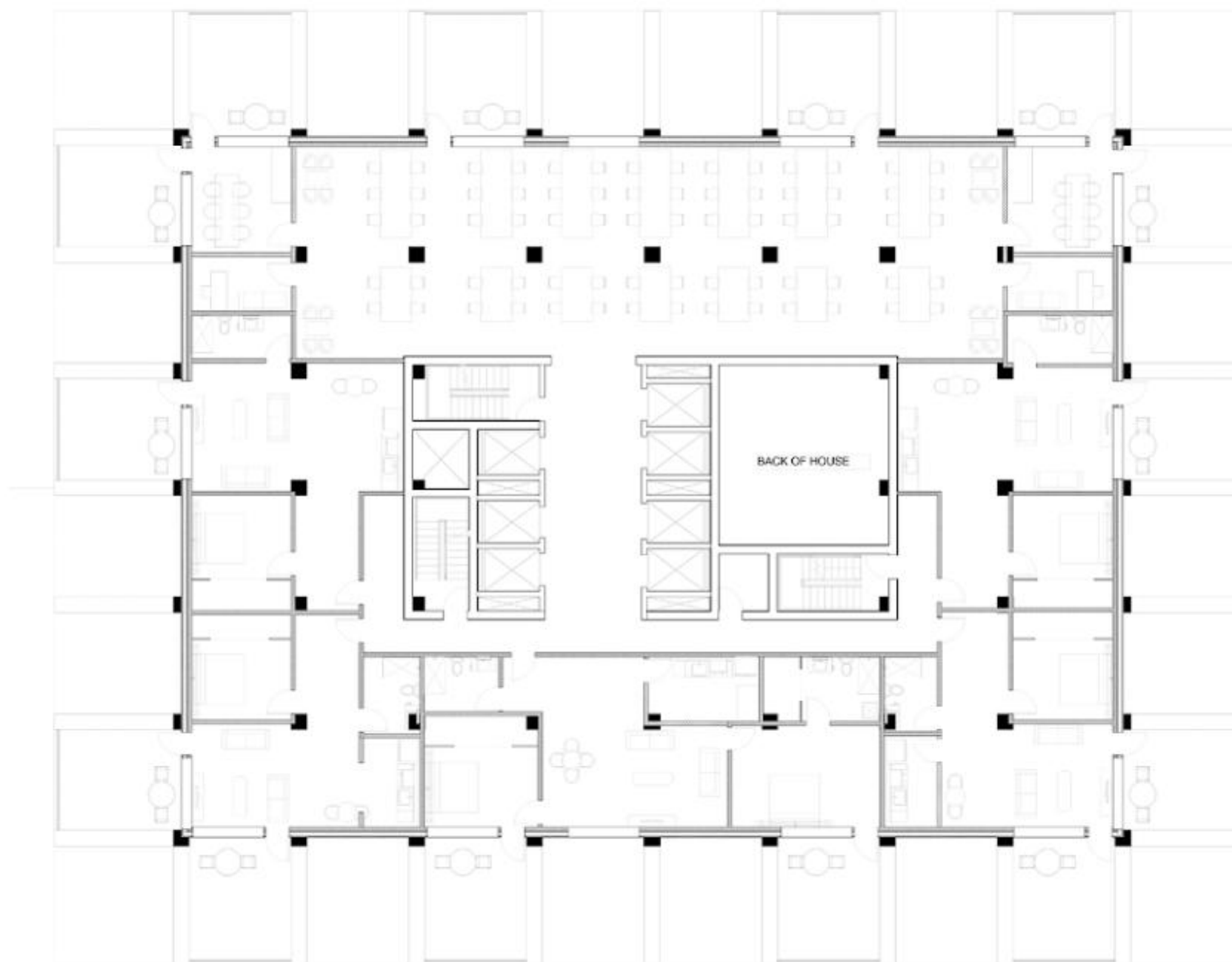
TOWER Principles



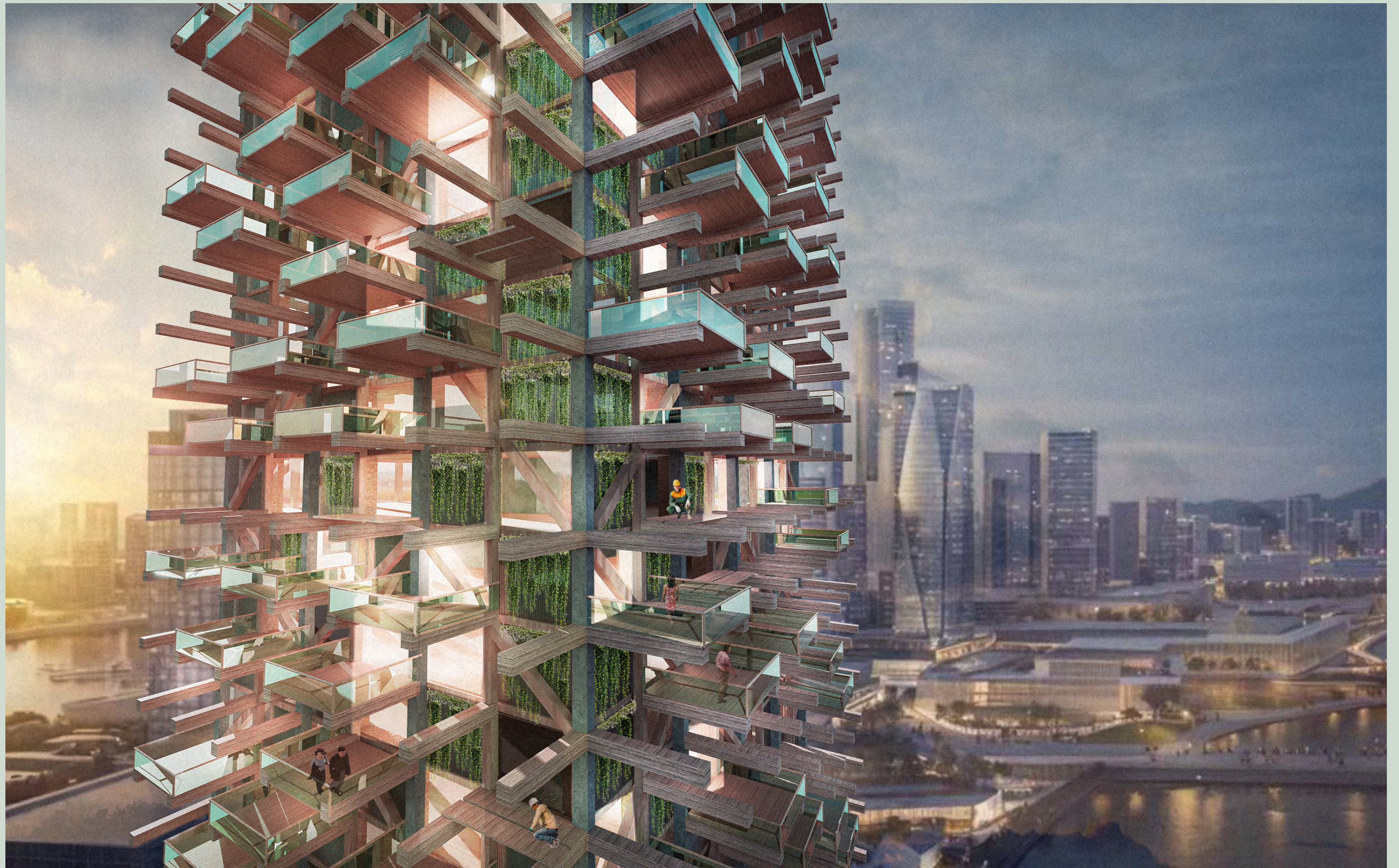
TOWER Elevation



TOWER Plan









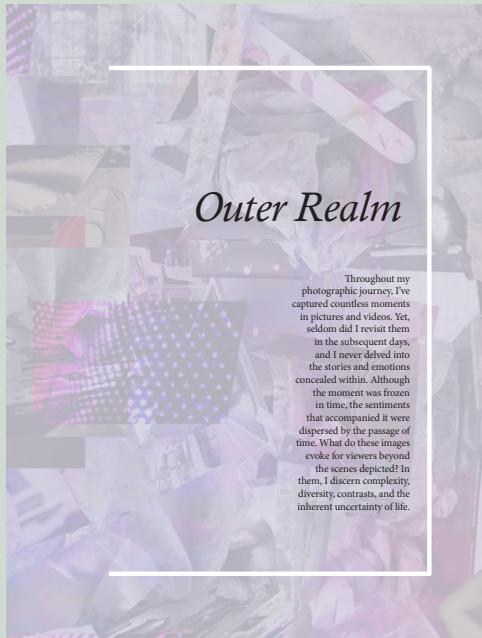
journey
Inward

its

~~your~~

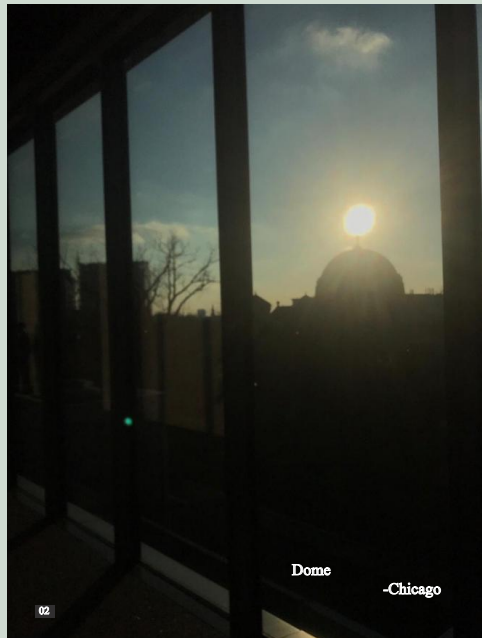
my

~~their~~



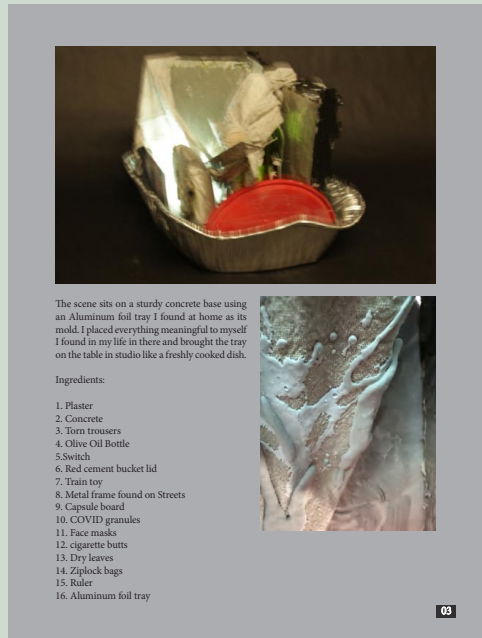
Outer Realm

Throughout my photographic journey, I've captured countless moments in pictures and videos. Yet, seldom did I revisit them in the subsequent days, and I never delved into the stories and emotions concealed within. Although the moment was frozen in time, the sentiments that accompanied it were dispersed by the passage of time. What do these images evoke for viewers beyond the scenes depicted? In them, I discern complexity, diversity, contrasts, and the inherent uncertainty of life.



Dome -Chicago

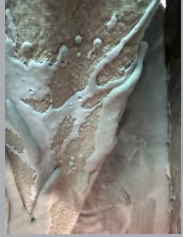
02



The scene sits on a sturdy concrete base using an Aluminum foil tray I found at home as its mold. I placed everything meaningful to myself I found in my life in there and brought the tray on the table in studio like a freshly cooked dish.

Ingredients:

- 1. Plaster
- 2. Concrete
- 3. Torn trousers
- 4. Olive Oil Bottle
- 5. Switch
- 6. Red cement bucket lid
- 7. Train toy
- 8. Metal frame found on Streets
- 9. Capsule board
- 10. COVID granules
- 11. Face masks
- 12. cigarette butts
- 13. Dry leaves
- 14. Ziplock bags
- 15. Ruler
- 16. Aluminum foil tray



03



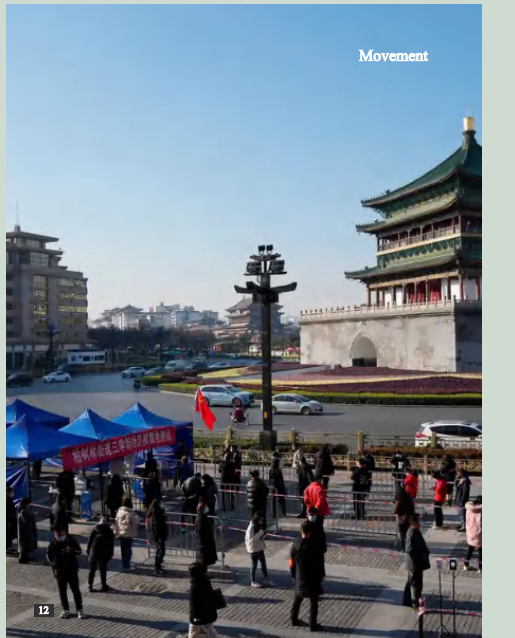
Pablo Picasso?

10



- 1. Put the oil bottle before poured the mixed cement liquid into the tray was the first Step.
- 2. Wait for 5 minutes so that the cement was half solid. Then put the train toy, ruler, and the red lid in it so that it can stand still.
- 3. Use torn trousers to wrap around various elements after soaking them in cement.
- 4. Pour the rest cement liquid on all the stuffs

11



Movement

12



Sun and Dome -Chicago

04



- 1. Pour the cement into the Sushi plates that are covered by Vaseline.
- 2. Put the cigarette butts and dried leaves on the half solid concrete.
- 4. Wait till it dries and take off the bags.

05



Gap -New York

06



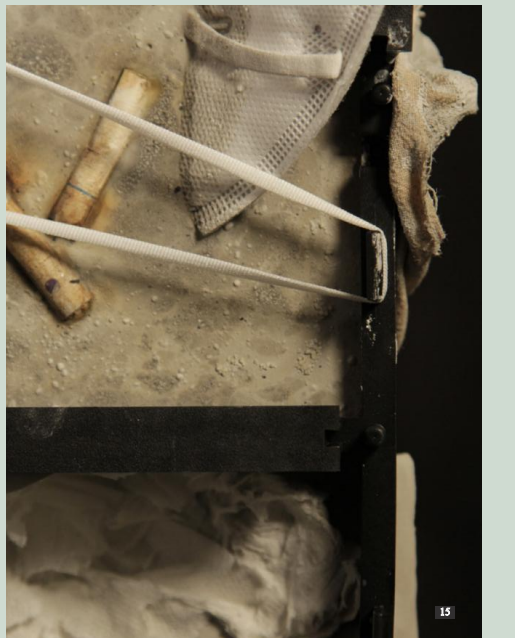
13



New York

The beauty of geometry and proportion is always hidden in the artificial...

14



15



- 1. Pour the cement into Ziplock Bags that are covered by Vaseline.
- 2. Hang the bags on the door handle so that it wouldn't be flat.
- 3. Wait till it dries and take off the bags.

07

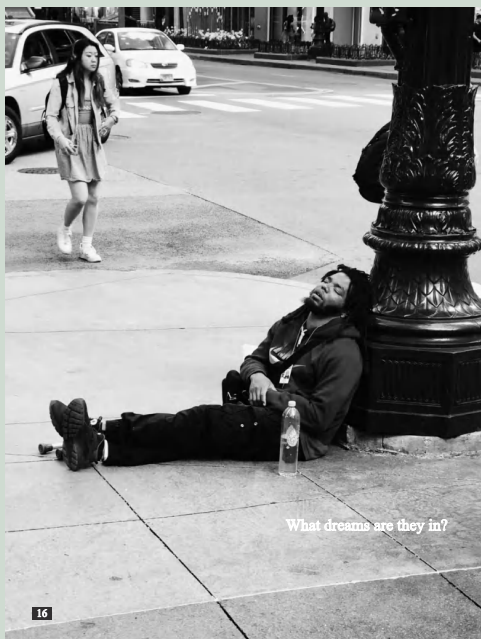


Canopy in a Forest? -Syracuse

08



09

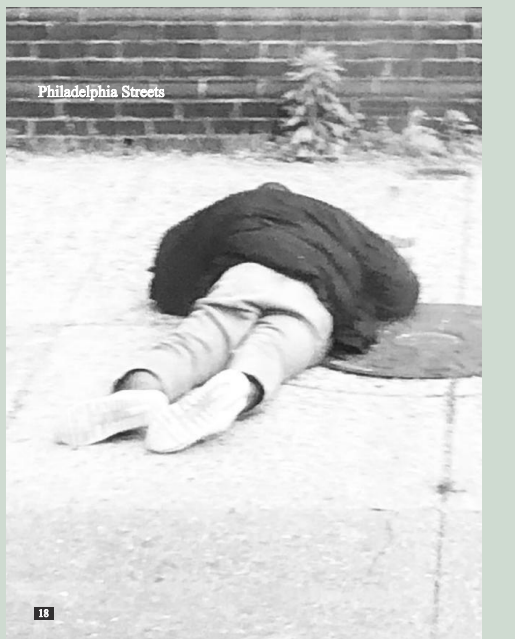


What dreams are they in?

16



17



Philadelphia Streets

18



19



20

Away from the Light



21



28



29



30



22



Closer Ones

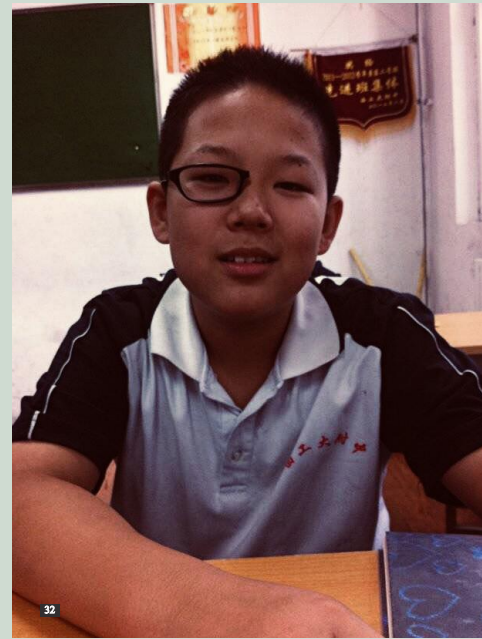
Withdrawing my gaze from the external reality, what is important but full of discrepancy around myself? Since entering adulthood, my life has embraced a blend of business and richness. I have directed my entire focus towards the unexplored and captivating realms of the world, never passing to glance back at the surroundings I left behind. Finally, as I realized I had walked too long on the road to the distant horizon, when I turned back, I couldn't find the familiar youth anymore. All that remained in my eyes were wrinkles, white hair, and graves.



24



31



32



33



25

Ingredients:

- 1. Copper Pipes
- 2. Cans
- 3. Tin Foil
- 4. Steel Scourer
- 5. Metal Folder
- 6. Glue Gun
- 7. Metal Mesh
- 8. Wires
- 9. Steel Pole



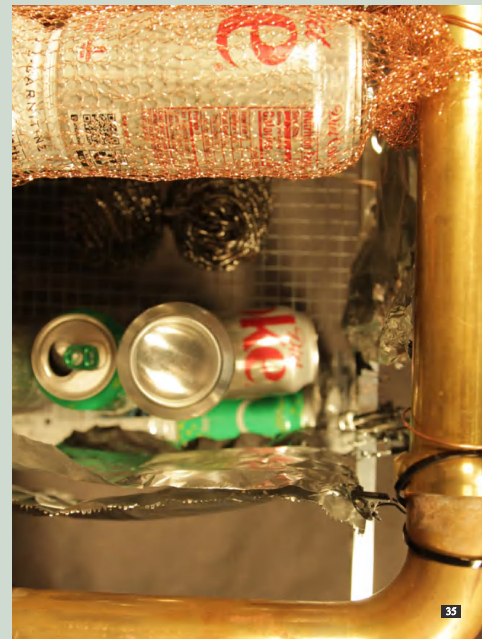
26



27



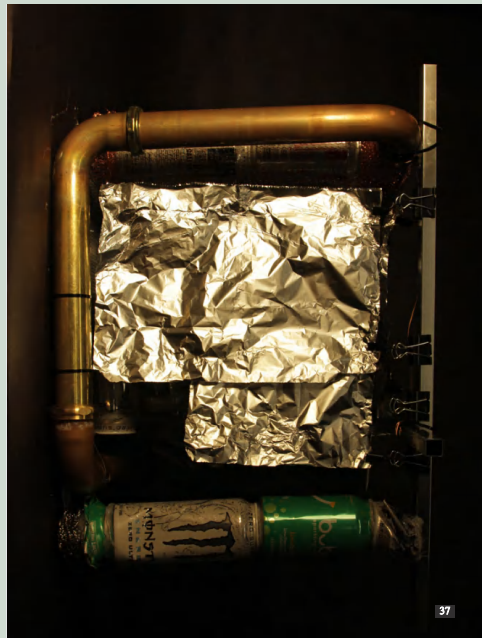
34



35



36



37

In
Remembrance
of
...
庞有良
王康杰
睢眦

38



39



Living Room

46



- Ingredients:
1. Posters
 2. Card Boards
 3. Branches
 4. Cigarette Packs
 5. Liquor Packs
 6. Comic Book Pages

47



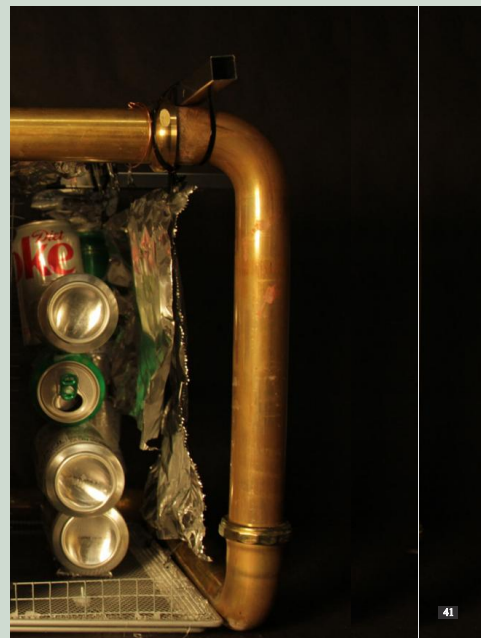
Zoe's Desk

48



—2021

40



41



—2022

42



The space was made in an easy way. The glue gun was helpful during the whole making process.

49



My Fridge

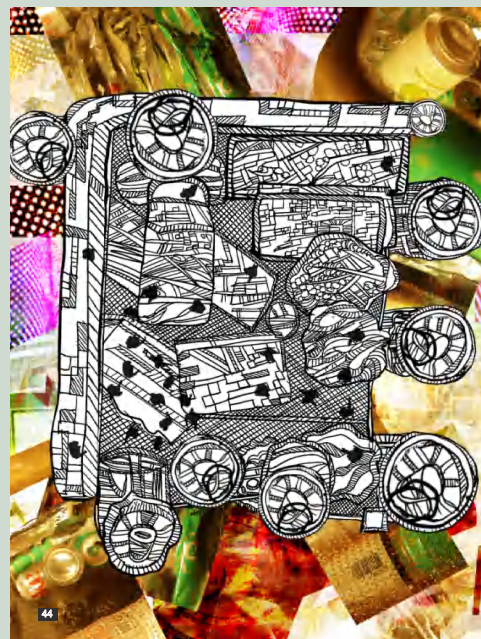
50



51



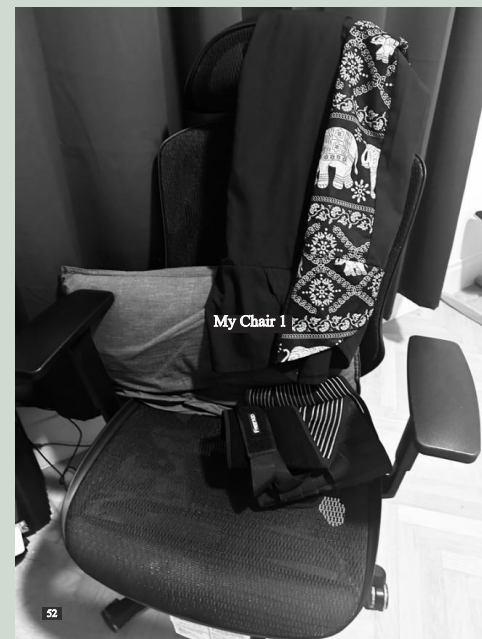
43



44

Ego

What kind of person am I? I tried to explore myself between the superego and Id of mine since the day I learnt the theory of Sigmund Freud, but had no progress at all. I found that it is still difficult to understand myself even if I can list the moral standards I've educated and the deepest desire. After a brief period of confusion, I decided to seek my ego directly in my life instead of trying to construct an empty shell of ego on the basis intertwined by superego and id.



My Chair 1

52



53



Dining Table

54



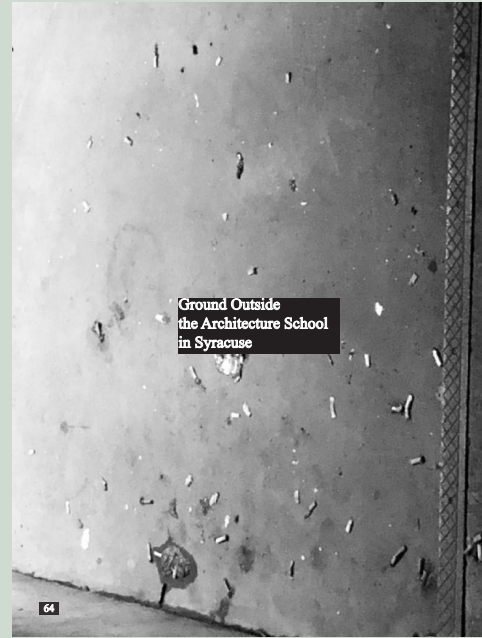
55



56



57



64



65



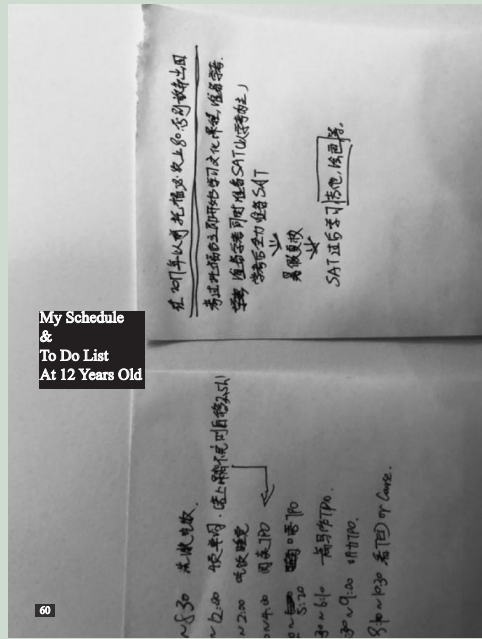
66



58



59



60



Id

I found life itself way more interesting than I thought. Not only because I can seek in joy in every moment of life, but also I enjoy the process of things changing. Something was there, something was not there. Then suddenly something disappeared and something appeared. I found chaos in the cycle, and I seek order in the chaos. Besides, seeking order in the chaos is more fun than bringing order to chaos.



68



Ingredients:

- 1. Plastic tableware
- 2. Wrapping paper
- 3. Straws
- 4. Plastic Tray
- 5. Tape
- 6. Packaging box
- 7. Plastic Food Wrap

69



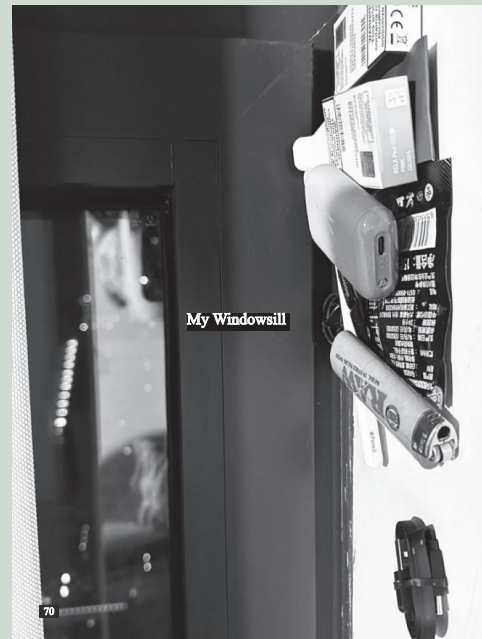
61



62



63



70



71



72



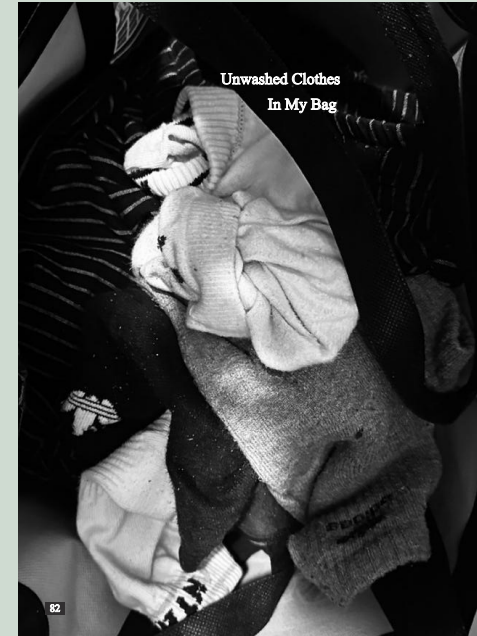
Wrapping the used plastic products with the food wrap and sealing them in the space of the tray.



My Kitchen



75

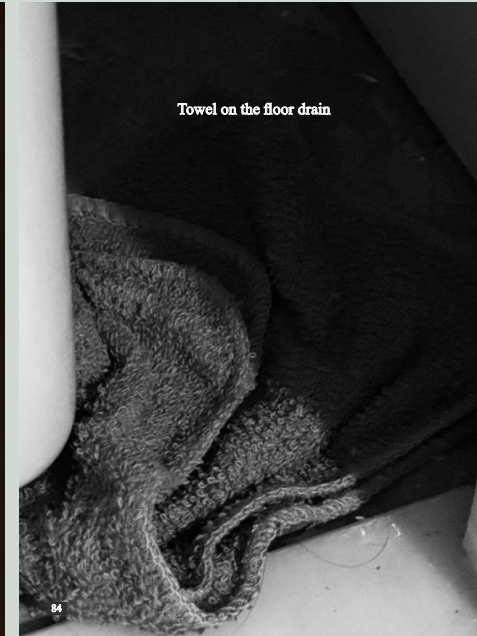


Unwashed Clothes In My Bag

82



83



Towel on the floor drain

84



My Storage Shelf 1

76



77



My Storage Shelf 2

78



85



Range Hoods

86



87



79

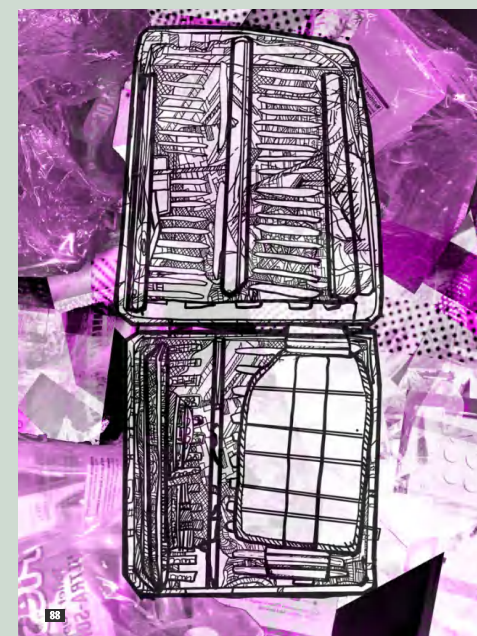


Bottom of My Pan

80



81



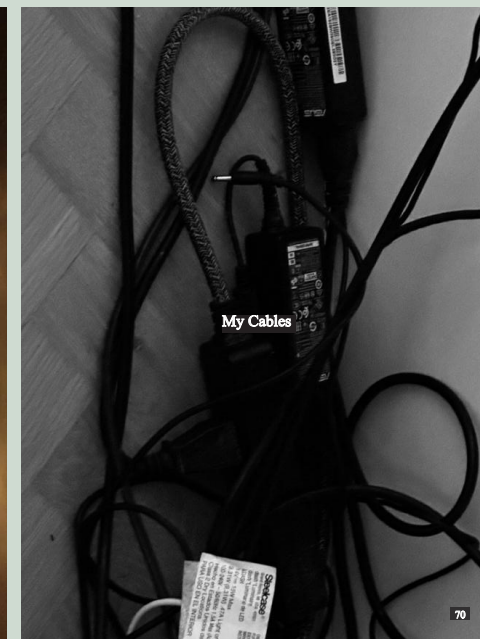
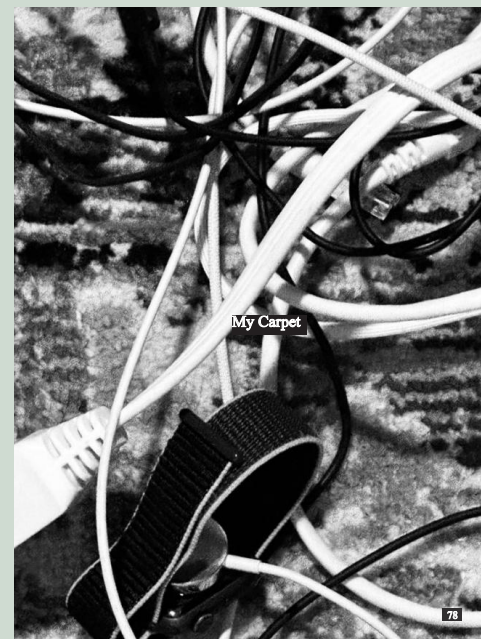
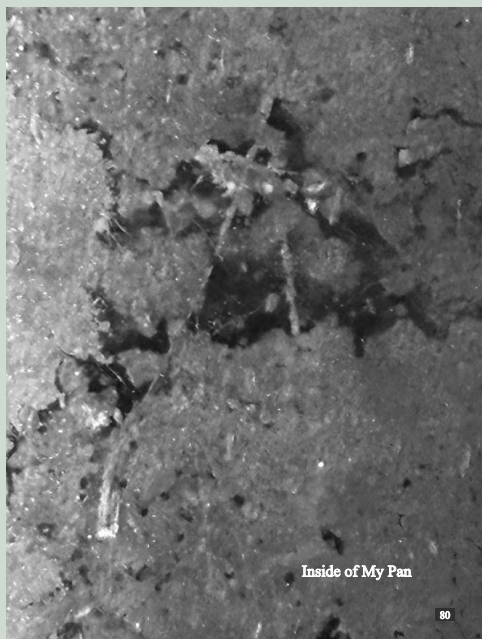
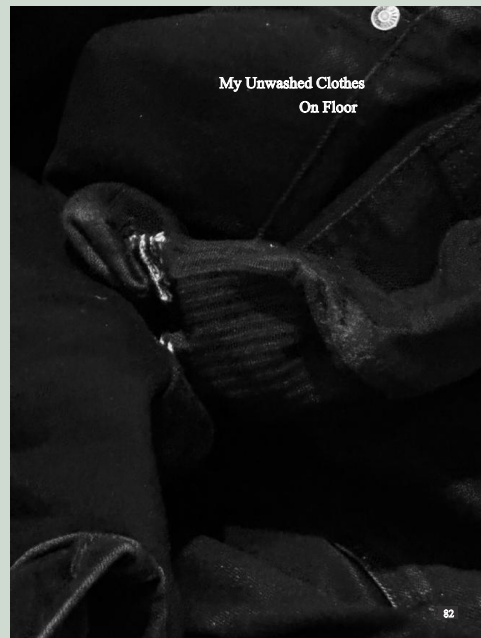
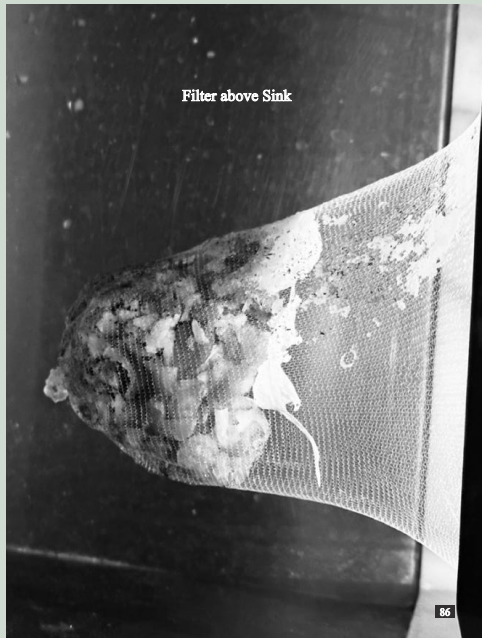
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89



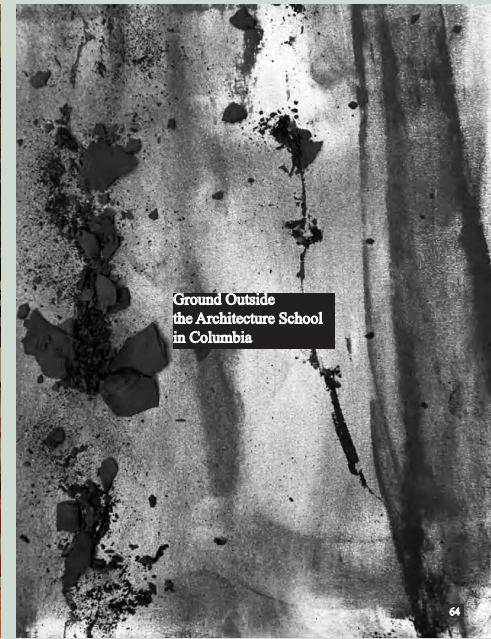
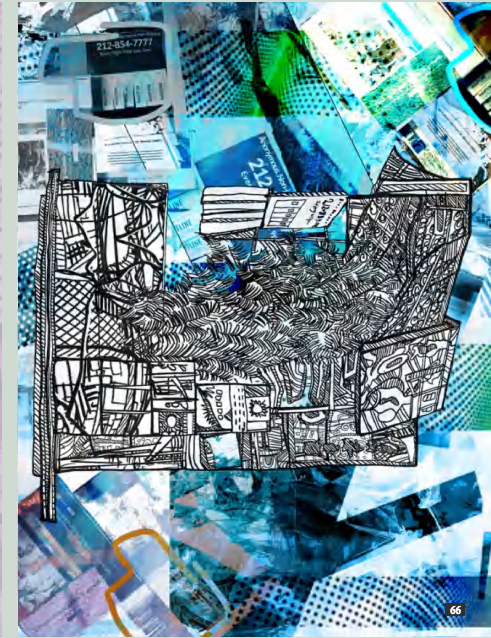
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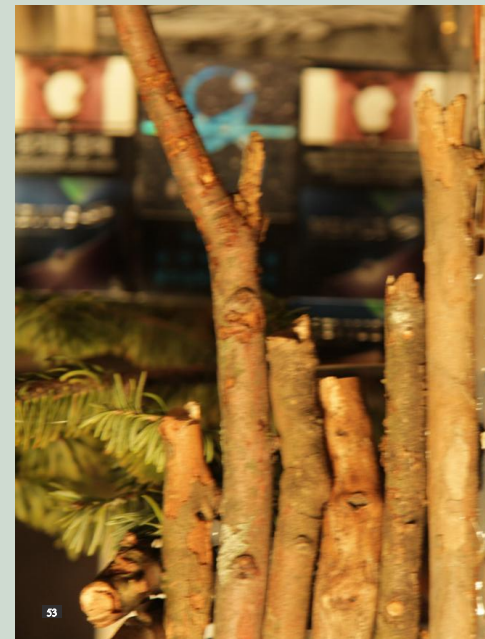


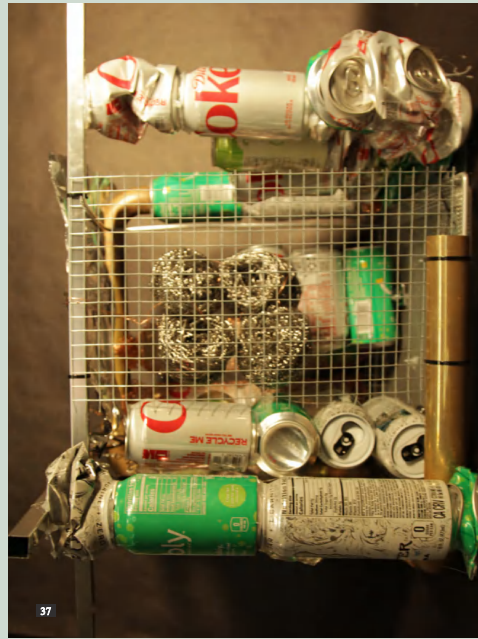
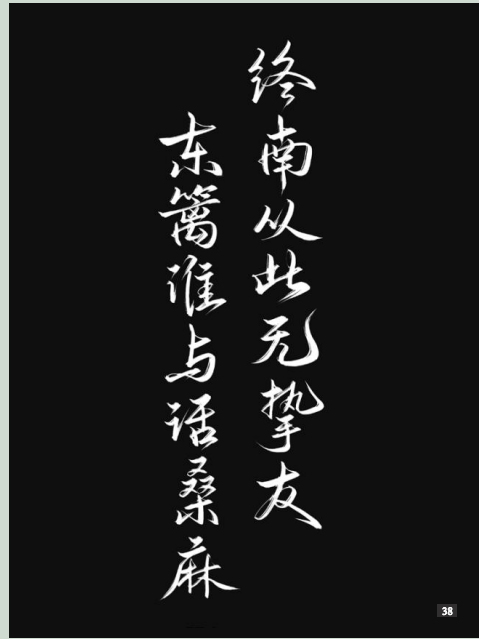
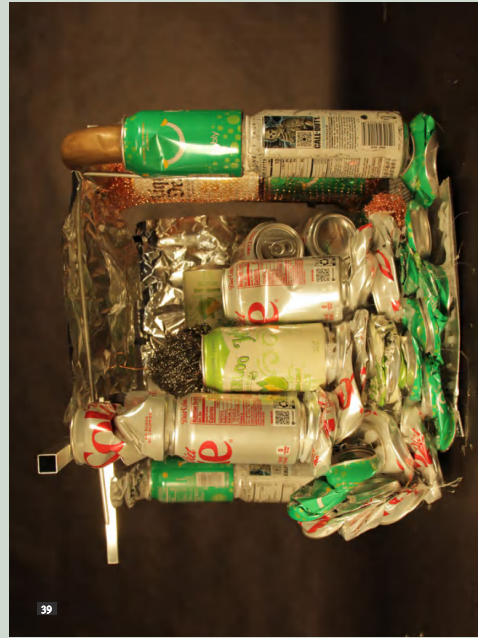
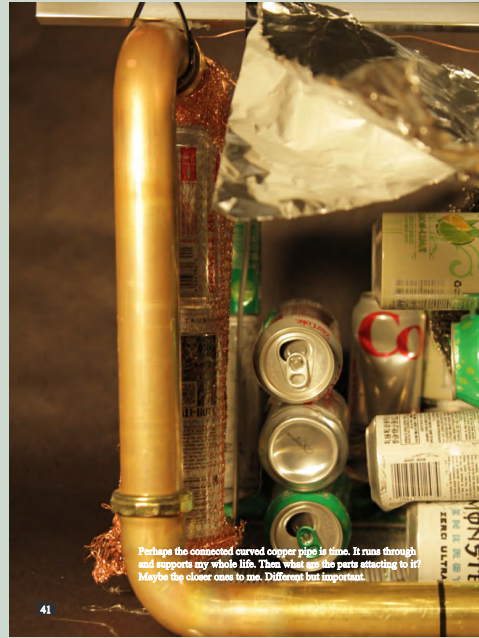
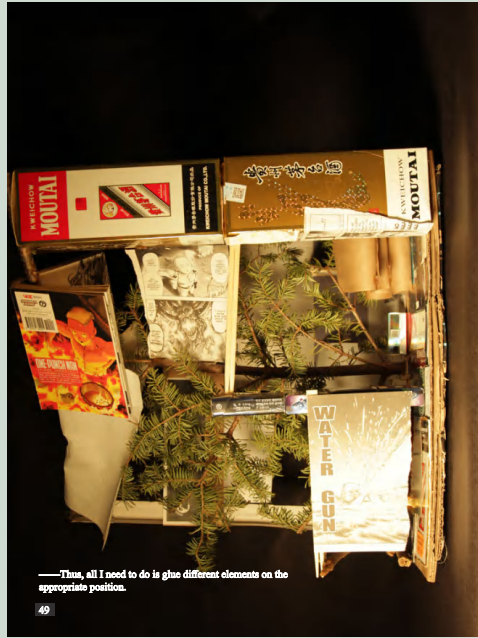
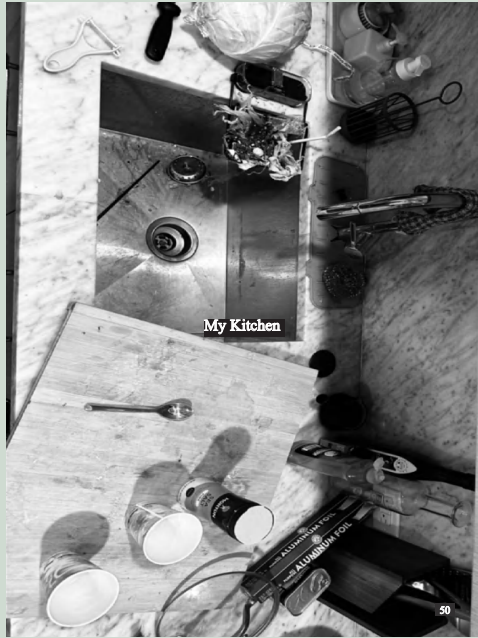
Id

Within the process of examining my own life, I have come to realize that plastic quietly supports human lives. It is ubiquitous, we encounter it at all times, yet we become accustomed to its presence as if it were a natural part of the world, akin to ourselves. However, since I deliberately put the material plastic in my mind, it has become difficult for me to perceive its widespread use as normal. Its prevalence is excessive, and its ubiquity is overwhelming. I began contemplating why do we always ignore it, despite the obvious contrast between its appearance when new and when used. Maybe, maybe it is because we only focus on the commodity beneath the delicate plastic paper when they're new, and consider them as filthy garbage after they are stripped from the goods. However, is that all they're worth?

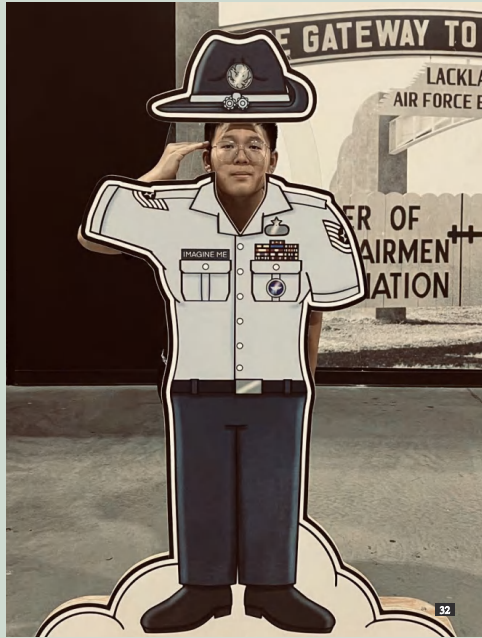


1. Model 模型 — H
2. Modulo Section 改. 加简单 section. — DK
3. Modulo + Ceplade I 改 — DK
4. Process 加加做 — DK
5. 组装椅 加做 (c section) — DK
6. Structure system 改 — H
7. Structure Formwork 改 — H
8. 绿情页改为 Research part — DK
9. 更改各 components 封面 — DK
10. Grid layer Page 加做 — H
11. Rock Quarry 信息网 加做 — H
12. GIS 材料 加做 — ?
13. Modulo 各异 改动 — H 帮
14. 总结 — DK





1. Set up and connect the copper pipes first.
2. Connect the copper structures with the file fold's base.
3. Glue the cans with the glue gun.
4. Glue the nails on the base and put the cans on them.
5. Unfold the steel scourer and put cans in it.

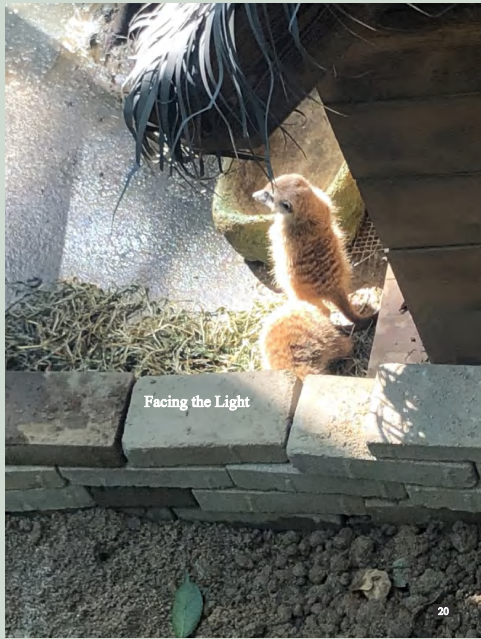
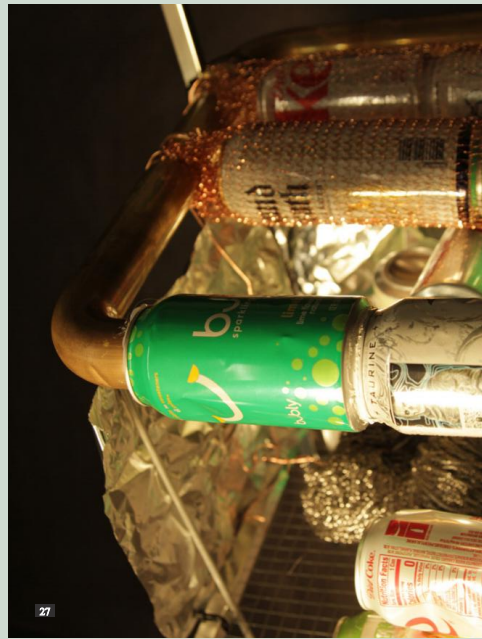
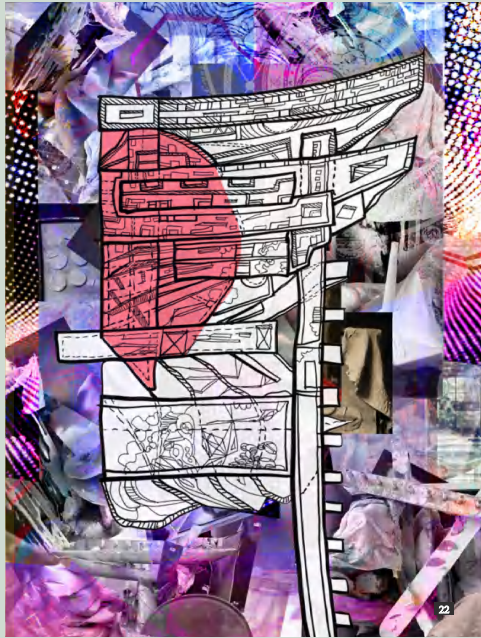


1. Fit the metal pipe with the copper pipes.
2. Fix the metal mesh on the structure.
3. Strip the steel accessories with the wire.
4. Hang them on the structure.

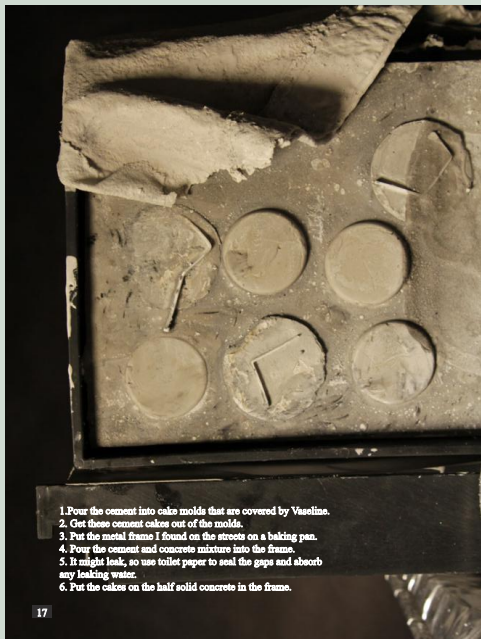
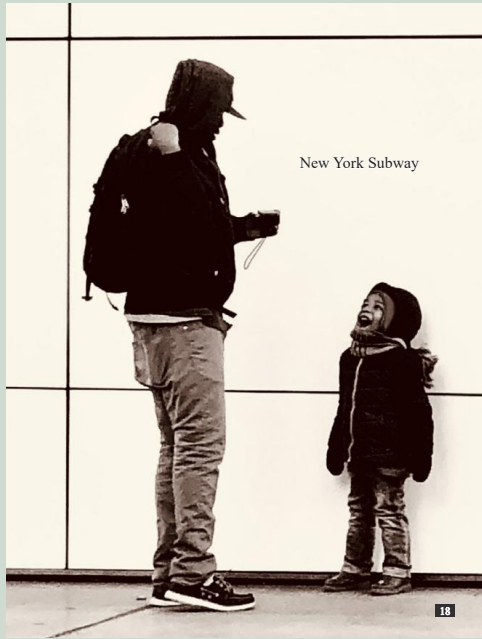


Closer Ones

Sometimes I think about what makes me who I am? As a determinist, I thought about my life over and over and realized that it was the people I interacted with that defined who I was. In this chapter, I try to express myself as the space I want to express, and the different elements that form the space are the different people I meet in my life. Whether these people are rich or poor, failed or successful, closely related to me or just passers-by, they have become a part of me. And just like this handicraft, the various parts inside only need to be simply rotated or repositioned to form a new space. If there were any slight changes in everyone I meet in my life, I might no longer be who I am in this moment.



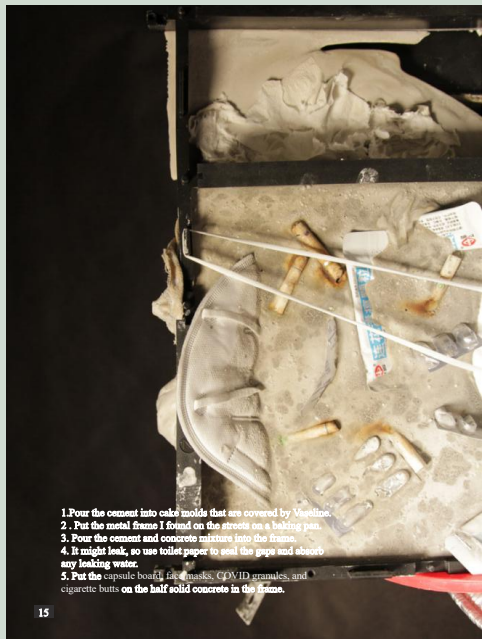
Facing the Light



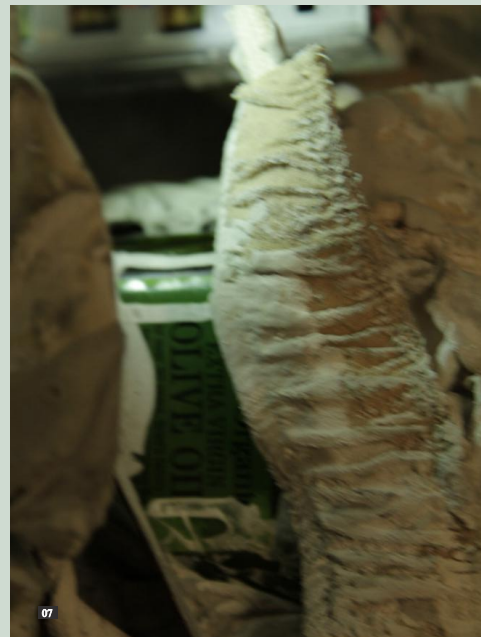
1. Pour the cement into cake molds that are covered by Vaseline.
2. Cut those cement cakes out of the molds.
3. Put the metal frame I found on the streets on a baking pan.
4. Pour the cement and concrete mixture into the frame.
5. It might leak, so use toilet paper to seal the gaps and absorb any leaking water.
6. Put the cakes on the half solid concrete in the frame.



New York

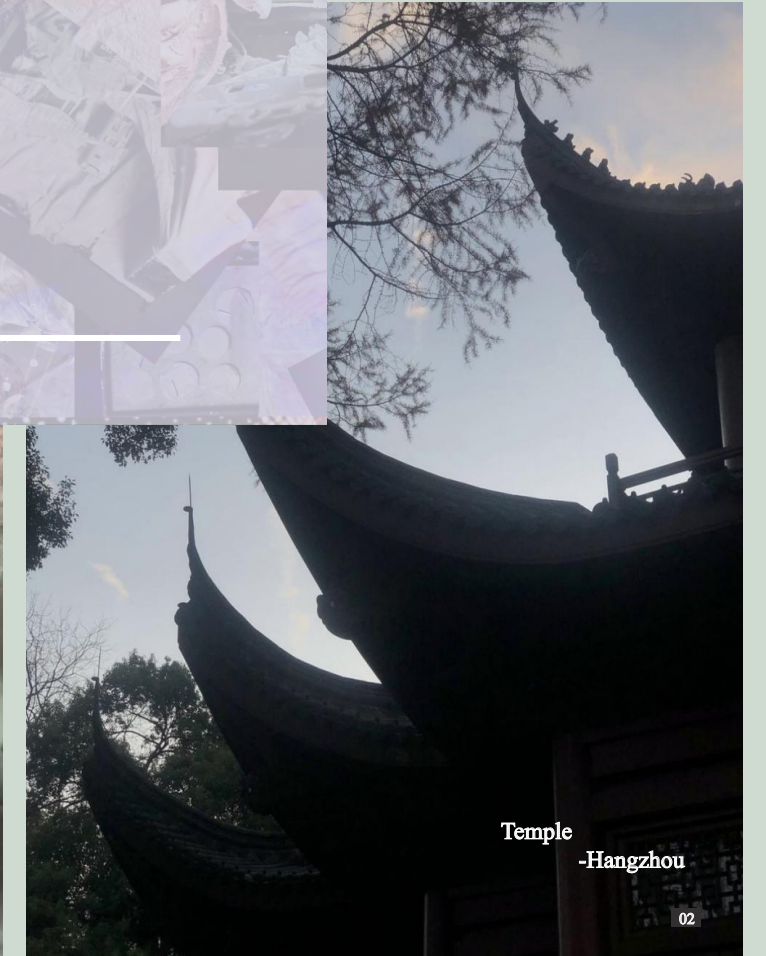


1. Pour the cement into cake molds that are covered by Vaseline.
2. Put the metal frame I found on the streets on a baking pan.
3. Pour the cement and concrete mixture into the frame.
4. It might leak, so use toilet paper to seal the gaps and absorb any leaking water.
5. Put the capsule bottle, the masks, COVID ornaments, and cigarette butts on the half solid concrete in this frame.



Outer Realm

We began with concrete, a widely utilized material that was invented in the early 19th century. People are all familiar with the sight of modern cities constructed with concrete, and even acquainted with scenes of human habitats before the adoption of other traditional materials. However, what would it be like after humans have disappeared from the Earth? With this kind of imagination, we might be able to take a break from the concrete craze and think seriously about what concrete has brought to us.



A lot of gratitude to
Ada Tolla
and
Giuseppe Lignano,
my professors,
and Maclane Regan,
our TA,
whose insightful guidance
and unwavering support
have been pivotal for my
personal growth.

My thanks also go to
my classmates,
Anna Nanju Kim,
Emilie Kern,
Hanouf AlFehaid,
Isaiah Graham,
Kayla Parsons,
Kortney Hinden,
Lucy Baird,
Marika Falco,
He Ma,
Pedro Pablo,
and Vincent Yang,
their suggestions have been
crucial in
shaping this book.





