

Architectural Alchemy: Transforming Constraints into Opportunities



Columbia University GSAPP
MSAAD 2023 - 2024

PALLAVI JAIN

FORWARD

In the realm of architectural endeavor, where creativity meets constraints, and innovation thrives on limitation, there exists a transformative alchemy. It is within this crucible of challenge and opportunity that our journey unfolds, shaping not only our designs but also our very selves. As I reflect on my time at Columbia University GSAPP, I am struck by the profound and unexpected nature of the experience. Each day brought forth new encounters, new lessons, and new revelations, leading me down paths I never anticipated traversing.

The journey through GSAPP was not merely an academic pursuit; it was a journey of self-discovery. Through the exploration of diverse design projects and the forging of connections with fellow students and faculty, I unearthed hidden facets of my own creativity and resilience. Among the projects that defined my time at GSAPP, "Speculation" stands out as a poignant reflection of contemporary architectural discourse—a reminder of the power of image and perception in shaping our built environment. "Maison Terra" challenged me to reevaluate traditional construction methods through the lens of sustainability and design, igniting a passion for innovation and responsible practice. "Flood Farm Flow" that left the most indelible mark on my journey—a project that mirrored the struggles and triumphs of my own life and work. In confronting the challenges of flooding and environmental resilience, I discovered a reservoir of inner strength, learning how to transform obstacles into opportunities for growth and transformation.

In hindsight, I realize that life and work at GSAPP were not constraints to be overcome, but rather, opportunities to be embraced. It was here, amidst the whirlwind of deadlines and design critiques, that I found the raw materials for my own architectural alchemy—the ability to transform constraints into catalysts for innovation, to turn adversity into advantage.

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01

SPECULATION

Summer 2023
Critics

Contributors
Site

Architecture Compression
Corneel Cannerts &
Michiel Helbeig
Yilin Huang & Jinyue Han
Undefined

Architecture has always been deeply linked to values - be it moral, religious, social, political, environmental, symbolic, military, commercial, economic, monetary – the recent impact of digital technologies has led to novel forms of speculation. While in highbrow architectural culture claims strive for values far removed from commercial speculation, architectural practice thrives on monetary investment for design and construction.

Architecture is a speculative discipline out of necessity, since the relative slowness of architectural production, architectural design is projective, anticipating potential build futures and their values. Images play an increasing role in architecture through the recent proliferation of digital technologies. We can see this internally in the design tools and media architects use to produce images, as well as externally in the ubiquitous spread of social media, blogs, smartphones... through which architecture is experienced and disseminated.





SPECULATION

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This field guide looks into how architecture is complicit in processes of speculation and how digitalisation of architectural practice and its relationship with a general public is mediated through images. We look into architectural competitions, as an investment and speculation on potential future architectural stardom, and how this desire is exploited; how project developers use architectural imaging as form of branding fuelling real estate speculation; how architectural offices and practices actively produce images and direct their online brand; how architects can gain clout by learning from social media and influencers, by embracing contemporary ways of sharing images and interacting with viewers;

FIELDGUIDE

Image + Clout + Users

Four areas in which the cultural impact of Minecraft can be felt.

#Influence on social media

Not only did an endless series of videos of impressive digital buildings end up on YouTube, but also complete film scenes and parodies that had been recorded in the world of blocks.

#References far beyond the game world

The characters Rick and Morty of the animated series of the same name play the game several times and in an episode of South Park the parents of the main characters become addicted to Minecraft. An episode of The Simpsons opened completely in the style of Minecraft:

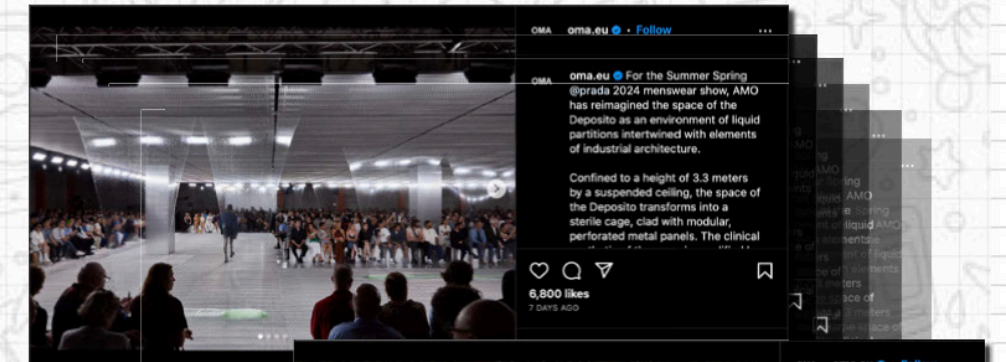
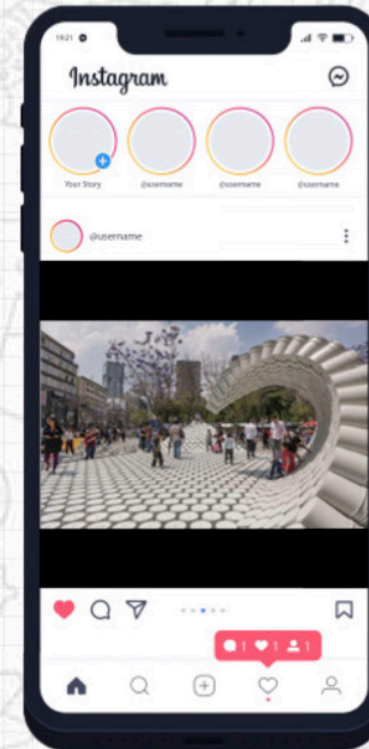
#Useful in the classroom

An enormous number of educational projects have arisen in the virtual block world. In this way, children with RoMinecraft were able to copy Roman buildings on the basis of archaeological facts, as a history lesson. Museum GeoFort is leading the GeoCraft project, in which the whole of the Netherlands is copied in Minecraft, from the Dam to the Euromast to the neighbourhood around the corner. This is used for online educational activities such as treasure hunts and workshops to develop spatial insight.

#The game industry changed forever

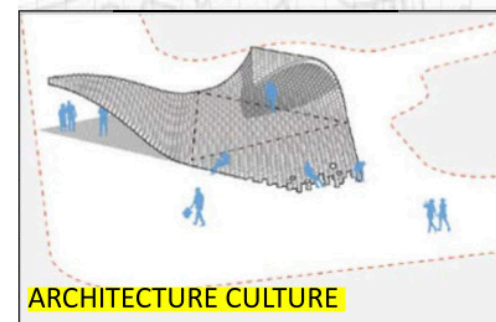
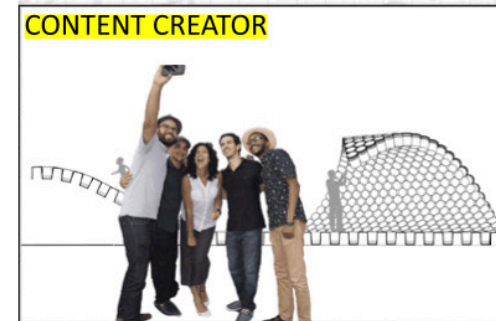
Digital Architecture like Minecraft wasn't so much a complete package that you could play off, Verschoor continues. It's more of a platform, which also has the characteristics of a social medium. Players meet each other in their self-made worlds.

DIGITAL PRESENCE

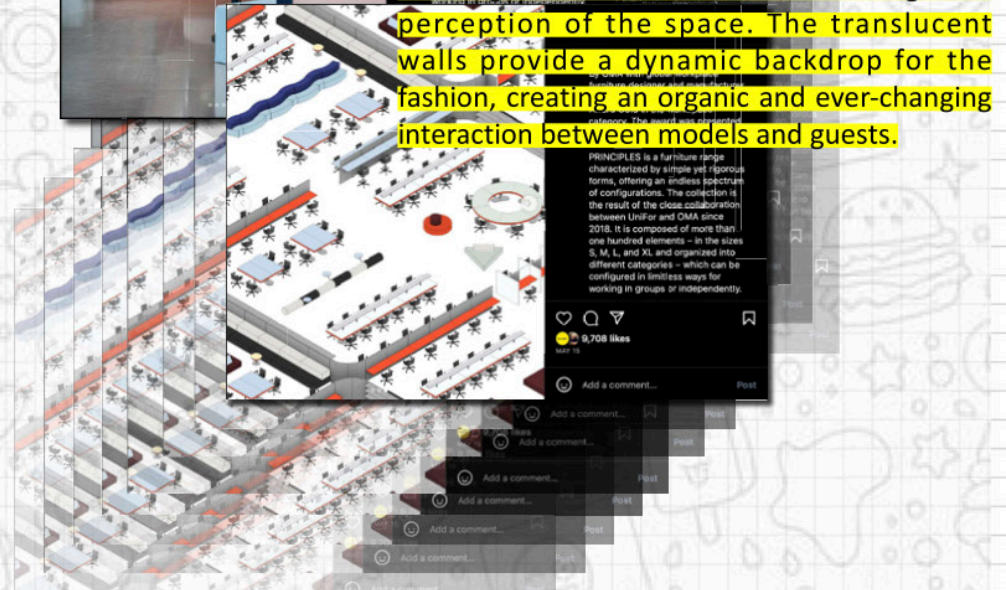
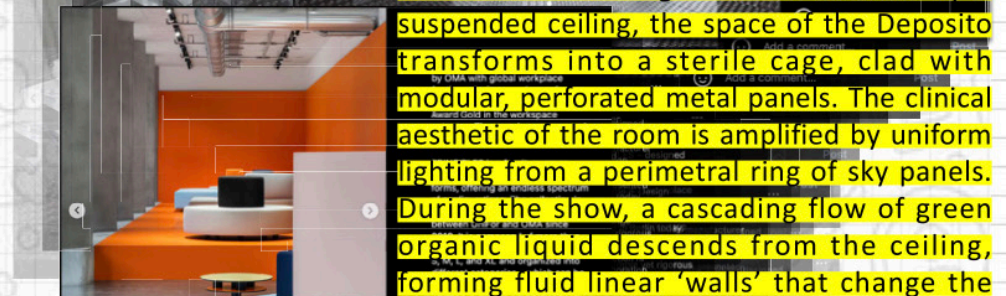


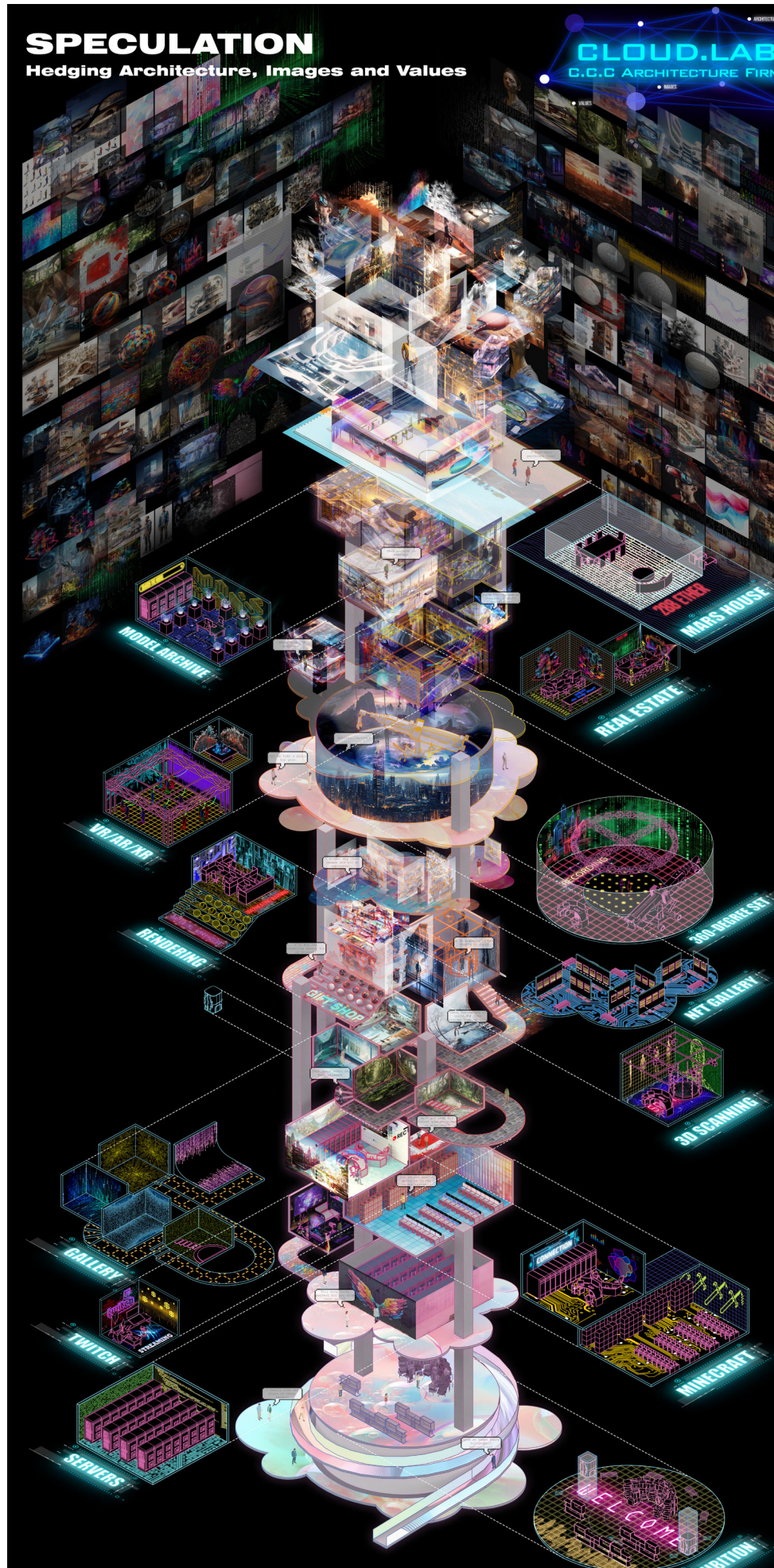
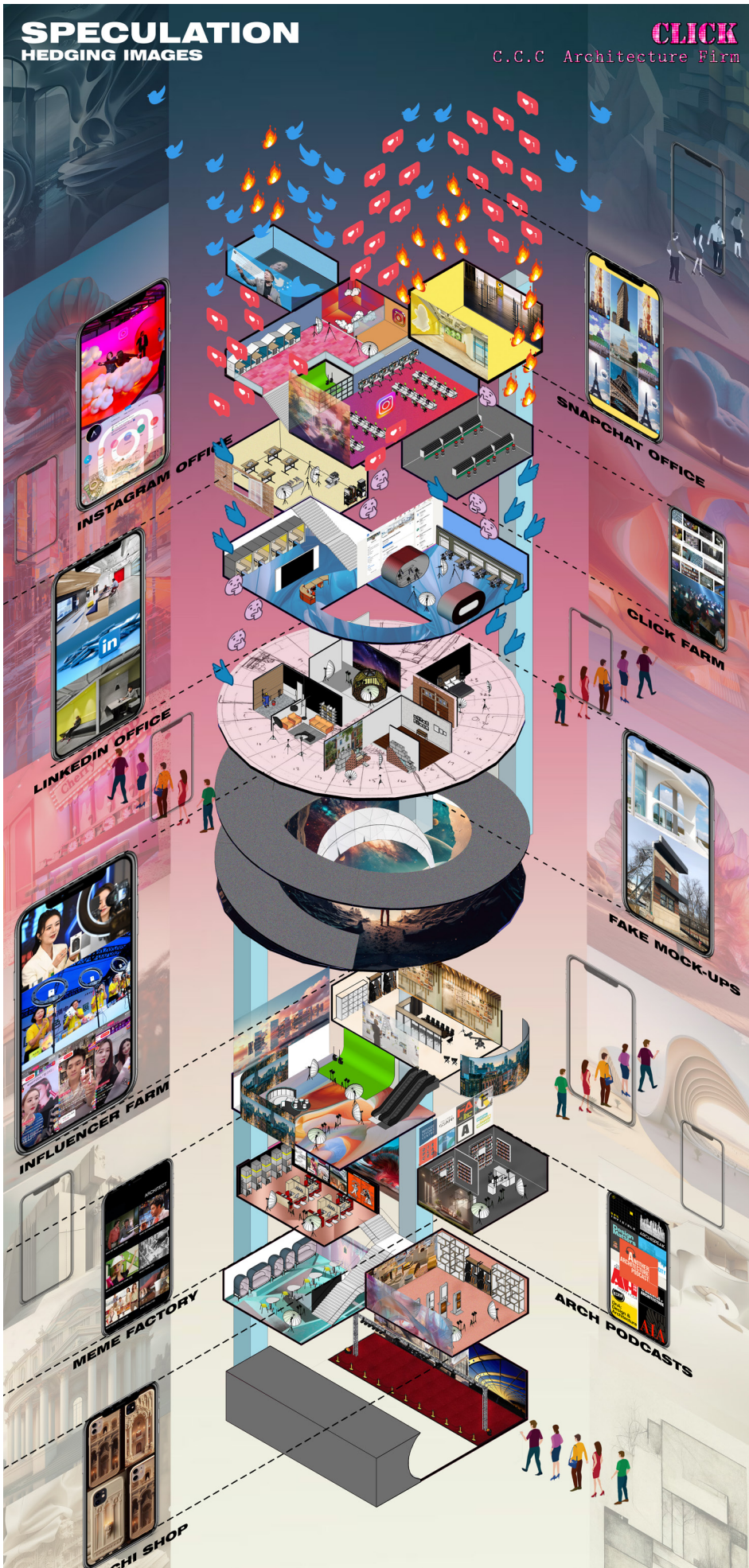
Confined to a height of 3.3 meters by a suspended ceiling, the space of the Deposito transforms into a sterile cage, clad with modular, perforated metal panels. The clinical aesthetic of the room is amplified by uniform lighting from a perimetral ring of sky panels. During the show, a cascading flow of green organic liquid descends from the ceiling, forming fluid linear 'walls' that change the perception of the space. The translucent walls provide a dynamic backdrop for the fashion, creating an organic and ever-changing interaction between models and guests.

CONTENT CREATOR



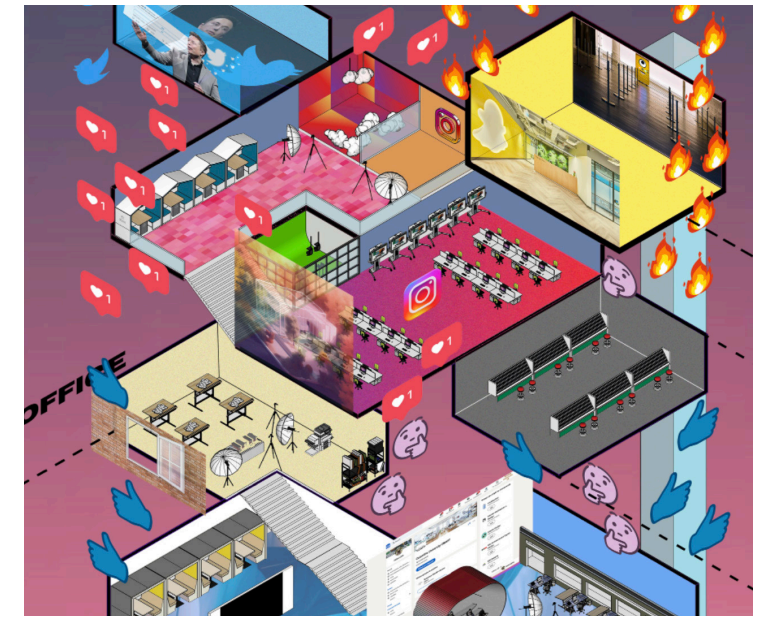
ARCHITECTURE CULTURE



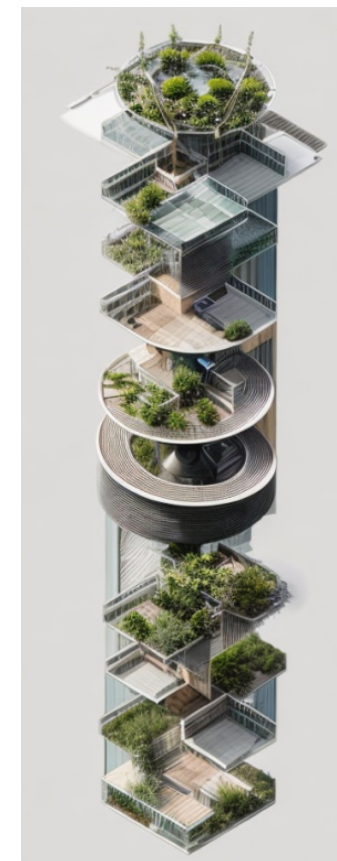
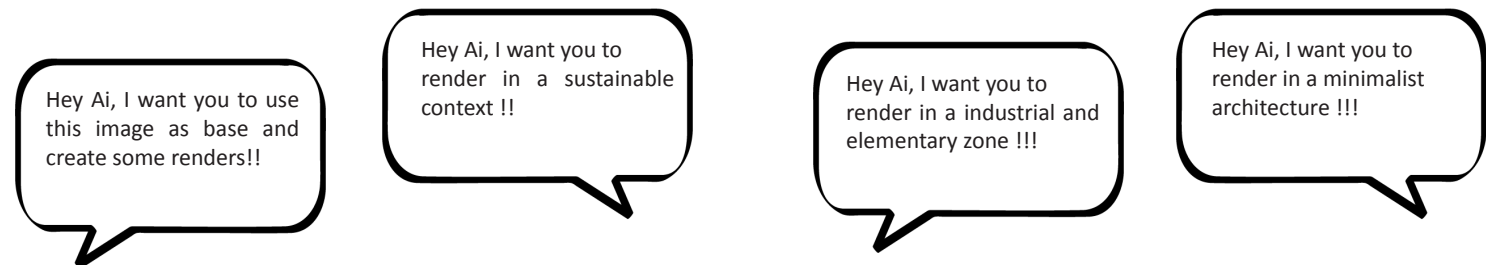




The concept behind this endeavor was to reimagine the social media department within an architecture firm, reflecting on the contemporary reality where architecture is increasingly defined by its visual representation. It underscores the notion that in today's context, architectural practice is inexorably linked to the creation and dissemination of images. The proposed design for this department is conceived as a testament to this paradigm shift, where the very fabric of the space is saturated with imagery, each meticulously generated by artificial intelligence.



Each isometric space is showing a display of possible spaces in a social media department of an architecture firm. You can see all the camera and light installation in every space to record it for sole purpose of creating an image. Right side is showing a whole dedicated to different platforms like Instagram, Facebook, Snapchat and LinkedIn, where this image is circulated and appreciated or trolled.



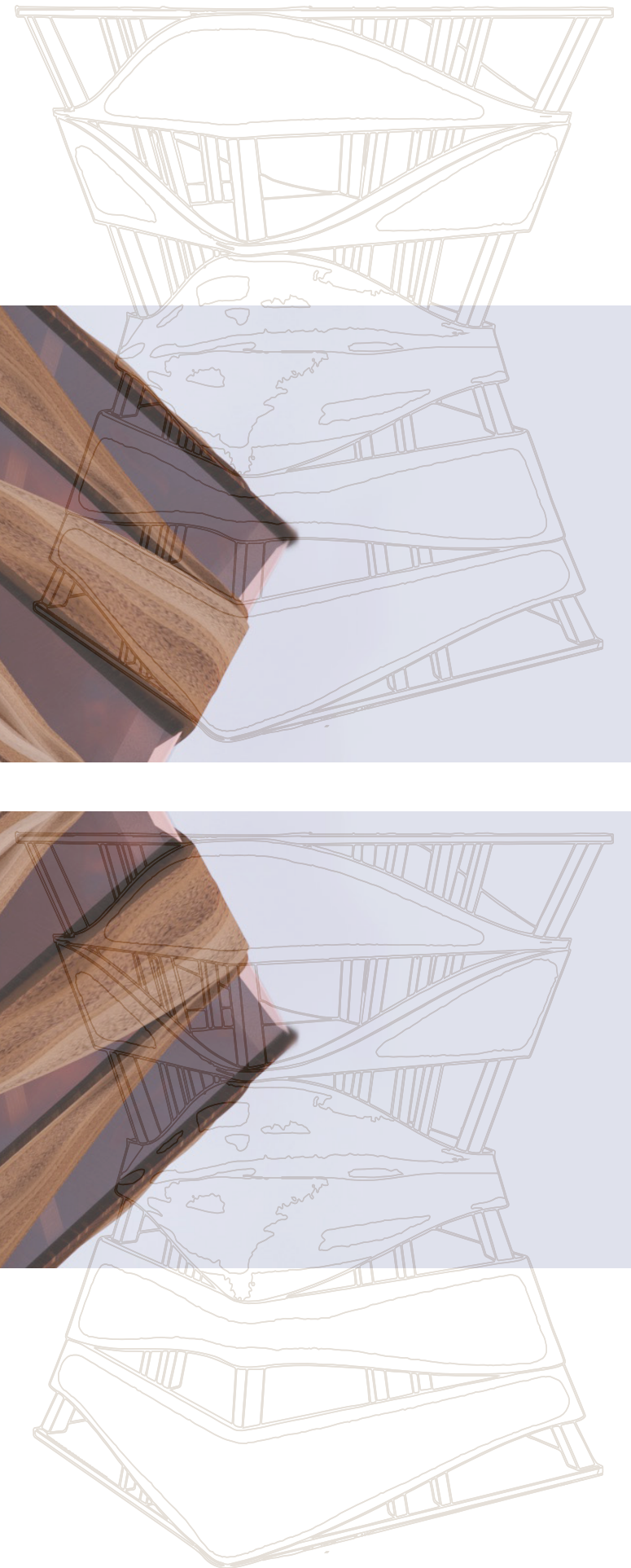
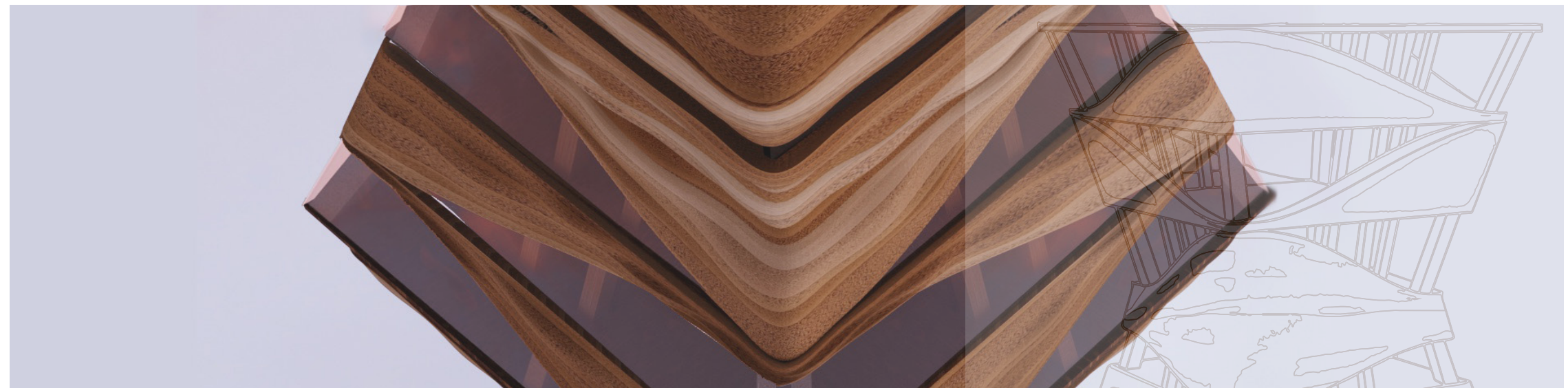
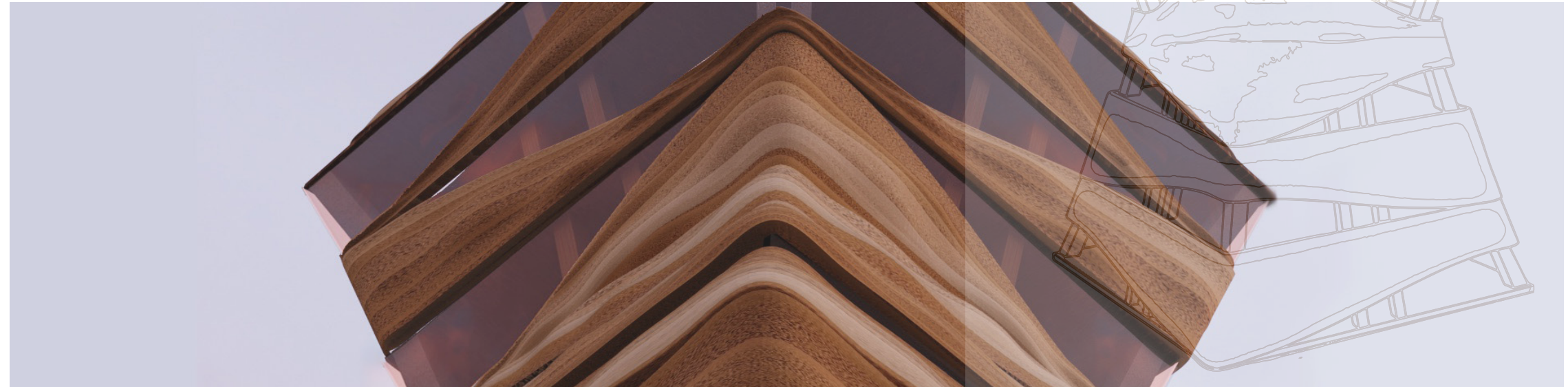
02 MAISON-TERRA

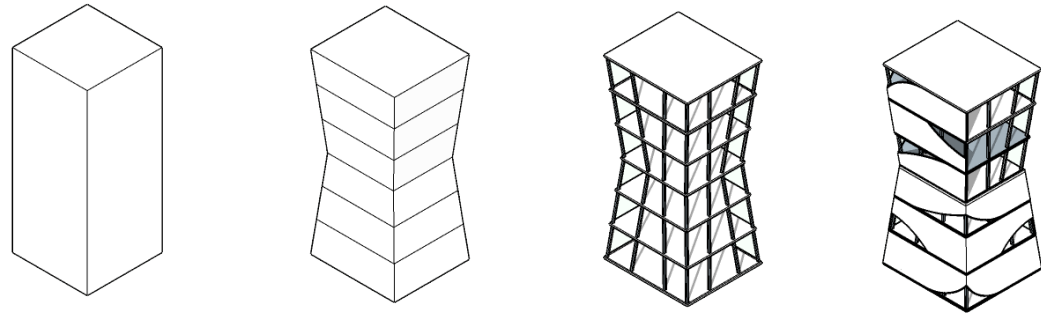
Fall 2023
Critics
Site

Maison Studio
Gordan Kipping
Undefined

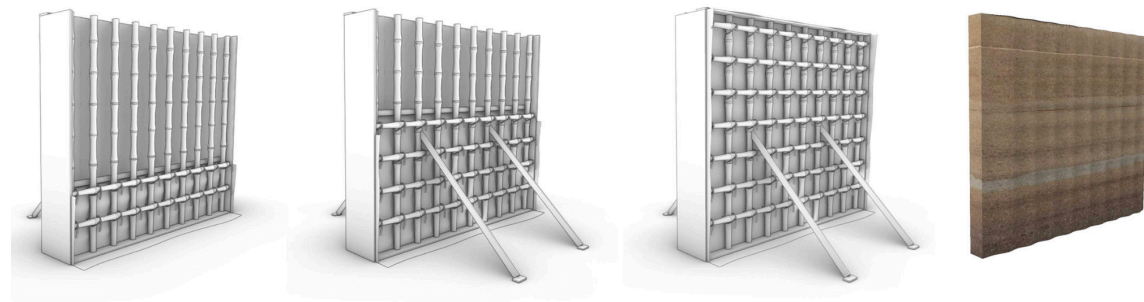
Maison Terra explores the potential of rammed earth as a sustainable construction material, examining its unique advantages and properties for both low and high-rise structures. Rammed earth, an ancient building technique, has witnessed a resurgence due to its eco-friendly nature, energy efficiency, and cultural significance. The research delves into the material's inherent properties, such as thermal mass, durability, and aesthetic appeal, and demonstrates how these attributes can contribute to the creation of energy-efficient and environmentally responsible buildings.

The study investigates the domino effect of incorporating rammed earth into contemporary construction practices, emphasizing its positive impact on reducing carbon footprints and promoting sustainable development. It discusses the challenges and solutions associated with integrating rammed earth into modern construction methods, addressing concerns related to structural integrity, seismic performance, and cost-effectiveness.





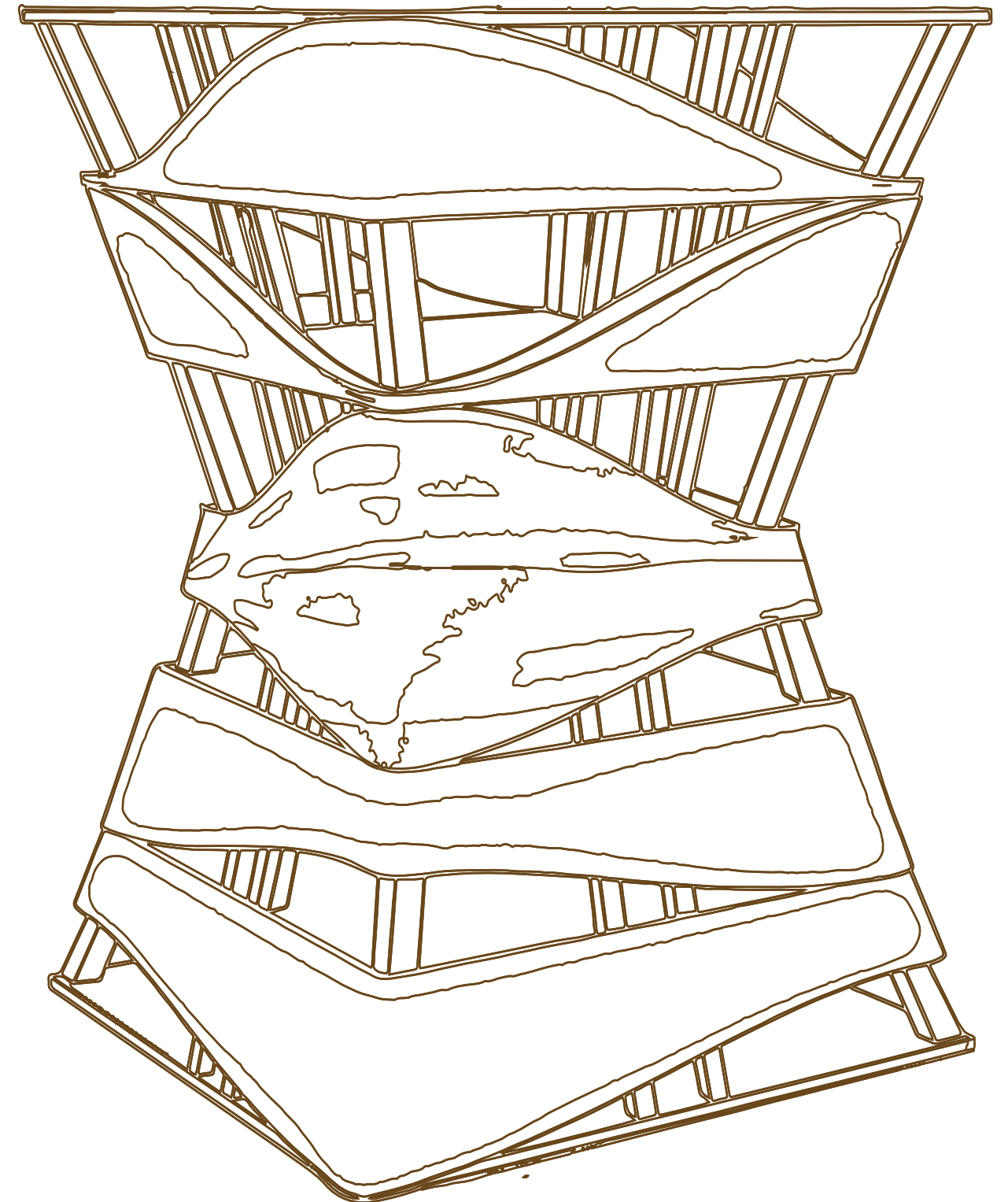
Module Development - Reenvisioning a basic structure, we incorporate slanted walls with a fabric-formed profile, not only enhancing aesthetics but also optimizing heat deflection.



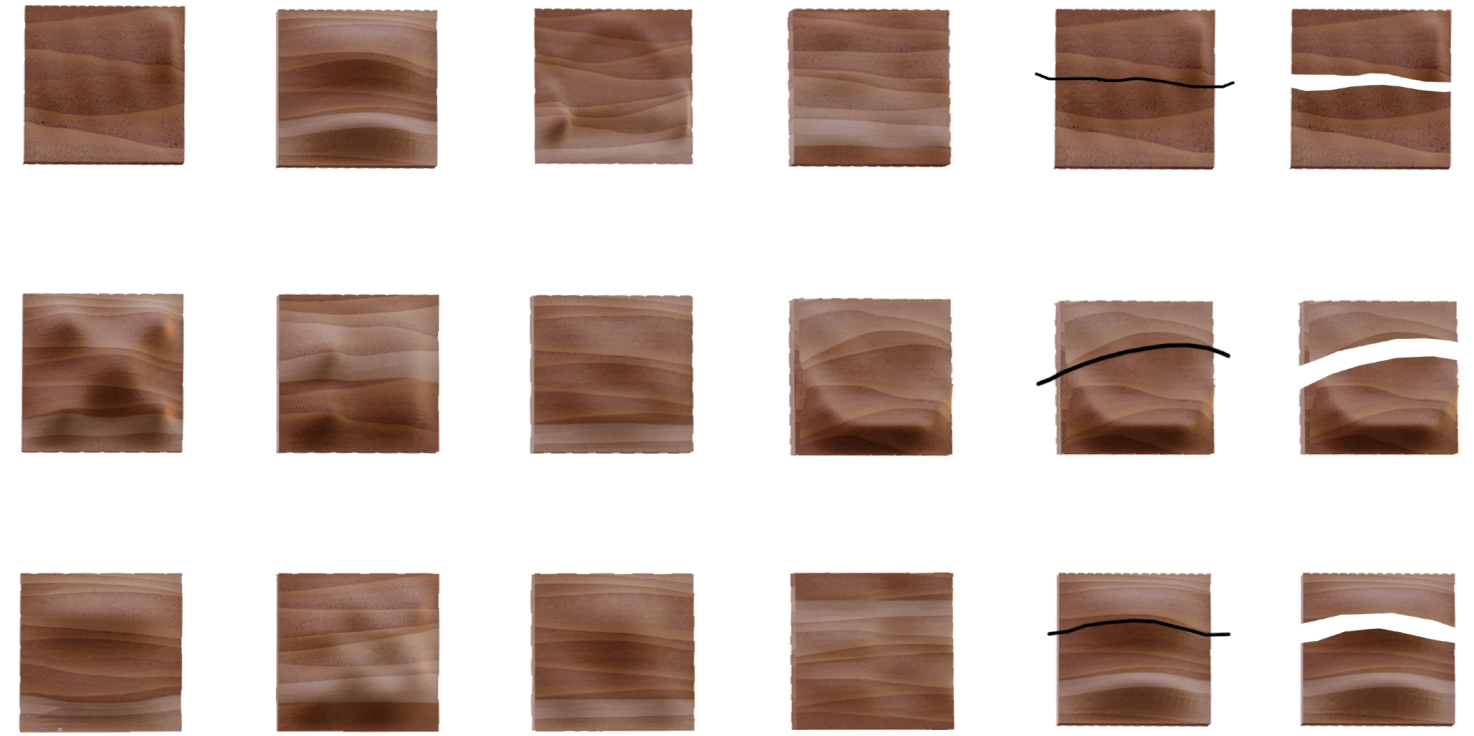
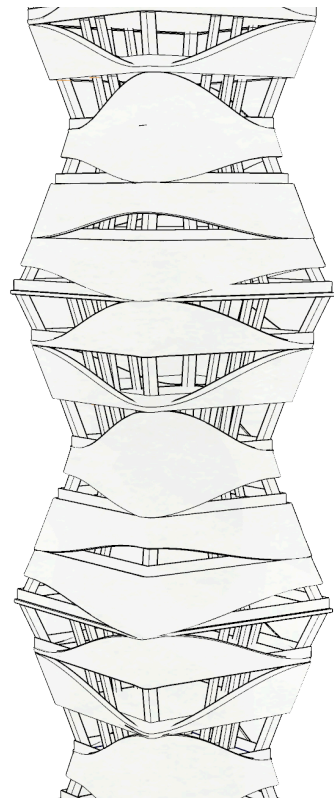
Bamboo is strategically employed in a grid pattern to serve a dual purpose: providing structural support for the fabric while also imparting shape and design to the overall structure.



Scalibility of Material - this is showing how rammed earth is applied to walls, ceilings, staircase and floors.



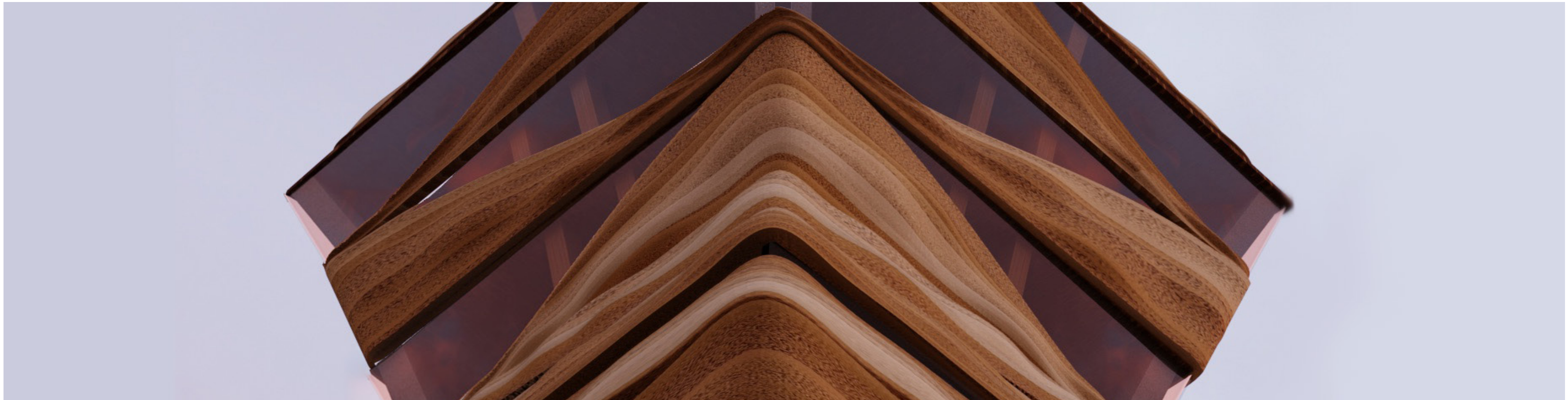
The schematic sketch delineates the fundamental structure of a module for Rammed Earth + Fabric Formwork construction. It comprises concrete slabs featuring RCC columns positioned at the corners, supplemented by Glulam columns interspersed throughout to provide additional support. The walls are constructed using pre-fabricated Fabric Formed Rammed Earth panels, marrying traditional rammed earth techniques with contemporary fabric formwork technology.



Pre-fabricated Rammed Earth Walls with Fabric formwork.
 Walls are formed with the combination of fabric on the front side as formwork for casting with the supports of wood formwork from remaining 3 sides. The shape after casting is bulging out, resulting in walls taking shape of fabric, which gives it an aesthetic look as well as it's properties.

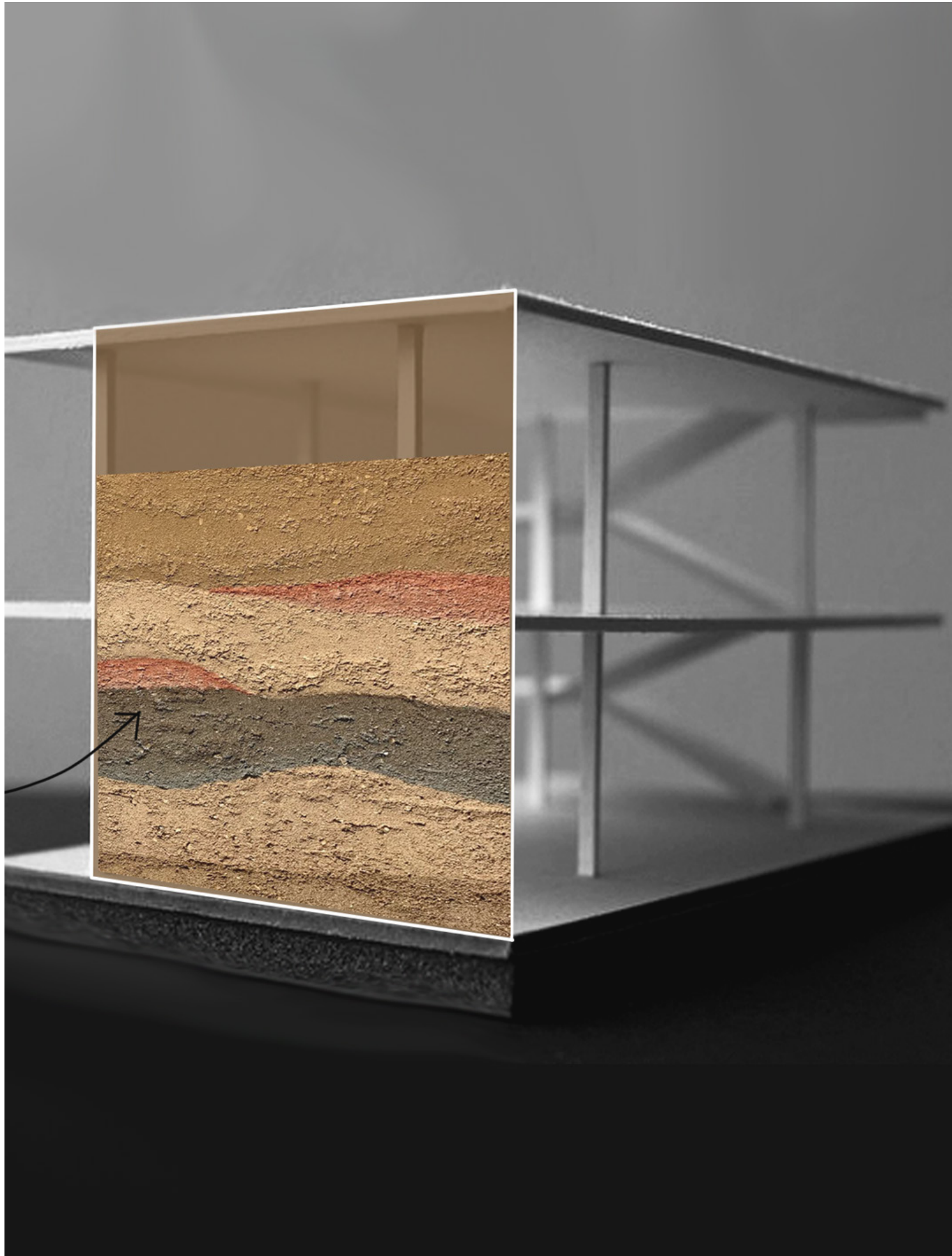
Catalogue of Pre-fabricated Fabric Formed Rammed Earth Walls

Creating irregular openings for fenestration study





Exploring the towering ambitions of budding architects as they redefine the skyline with innovative rammed earth constructions, echoing the timeless allure of earth-based building techniques. Amidst the steel and glass facades of modern cities, these structures stand as bold expressions of creativity and commitment to a greener tomorrow.



Docmentation of experimenting Rammed Earth + Fabric Formwork. Formwork was created with three wooden planks and a fabric supported by some sticks in front. The purpose of stick was to give wall a shape after ramming earth into this formwork. One by one, each layer of earth with different compositions were rammed.

03

FLOOD. FARM.
FLOW

Spring 2024
Critics
Contributor
Site

Floating New York
Laurie Hawkinson
Harshil Shah
South Brooklyn Marine Terminal

“Flood Farm Flow” emerges as a beacon of innovation and resilience in the realm of urban design, poised within the dynamic landscape of a floodplain site. Rooted in the imperative to confront escalating climate challenges, this visionary project reimagines the conventional paradigm of flood management, weaving together elements of communal farming, public recreation, and ecological restoration. At its heart stands a robust pier, crowned by an elevated footbridge, serving not only as a lifeline during inundations but also as a nexus for community engagement and environmental stewardship.

Crafted as a tapestry of interconnected spaces, Flood Farm Flow transcends traditional boundaries, inviting visitors on an immersive journey through a landscape shaped by both nature and human ingenuity. Here, alongside verdant communal farming plots, observation decks offer sweeping vistas of the floodplain’s undulating terrain and the distant silhouette of the New York skyline. Grounded in principles of sustainability and ecological resilience, this visionary endeavor stands as a testament to the transformative power of design, harnessing the ebb and flow of floodwaters to nurture vibrant ecosystems, foster community cohesion, and inspire a shared commitment to a more harmonious coexistence with our ever-evolving environment.

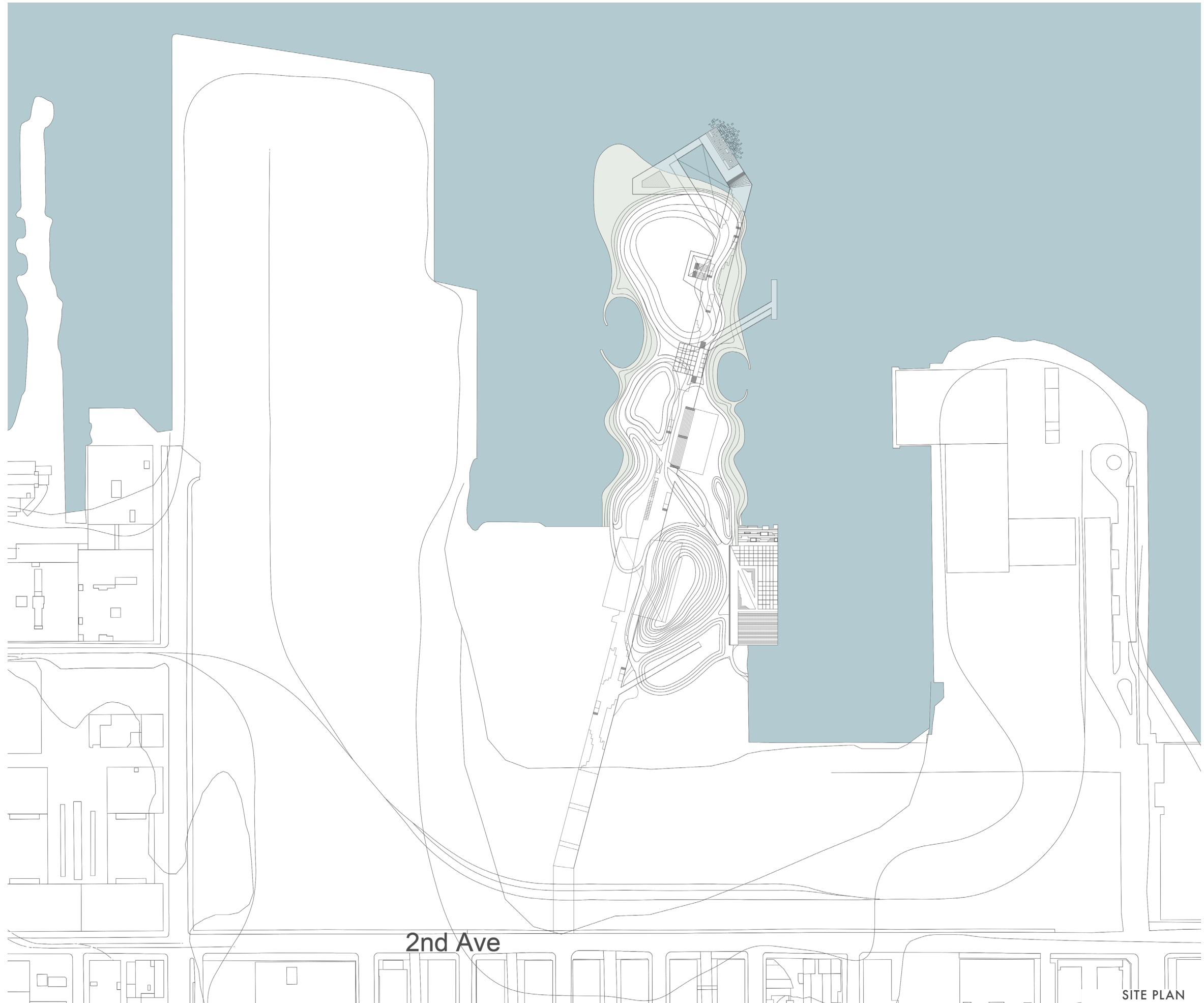


SITE

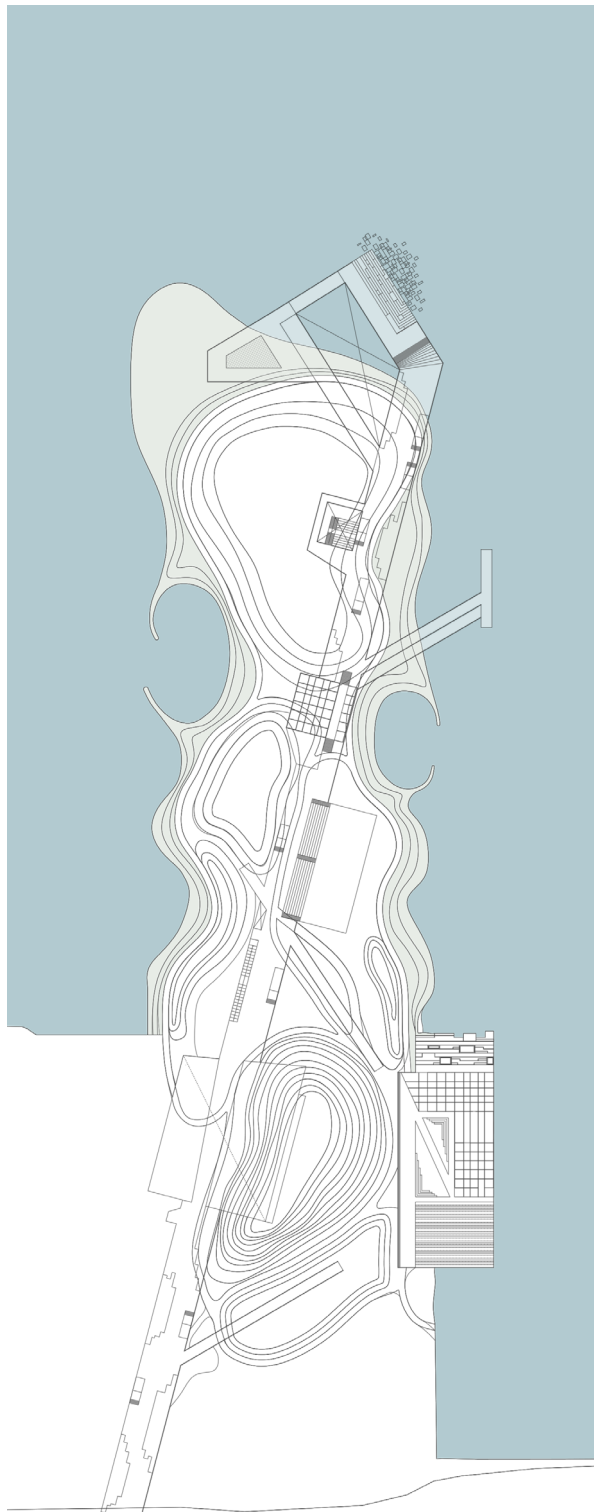
The South Brooklyn Marine Terminal (SBMT), located in Sunset Park, adjacent to Industry City and Bush Terminals serves as the urban site. The designated New York Harbor areas for Empire Wind 1 & 2 (approximately 15-30 miles offshore) serve as the greater site field. The site history as an intermodal shipping, warehouse and manufacturing hub; encompasses 73 acres leased from NYC for a new station port assembly of wind turbine components. The SBMT site will serve as operational maintenance base - with a life span of 25+ years.

Adjacent to SBMT, Industry City and Bush Terminal have long histories of transition from the 1902 Bush Terminal Company and constructed 73 warehouses and 18 factory loft buildings with over 6 million square feet of floor space along with 7 piers. The complex offered economies of scale to a multitude of tenants. Fast forward to today; Industry City and Bush Terminals (renamed Made NY) now include studios for film and TV, fashion manufacturing, Digital NYC, technology tenants, artists' studios, events such as Fashion Week and many other diverse tenants and uses.

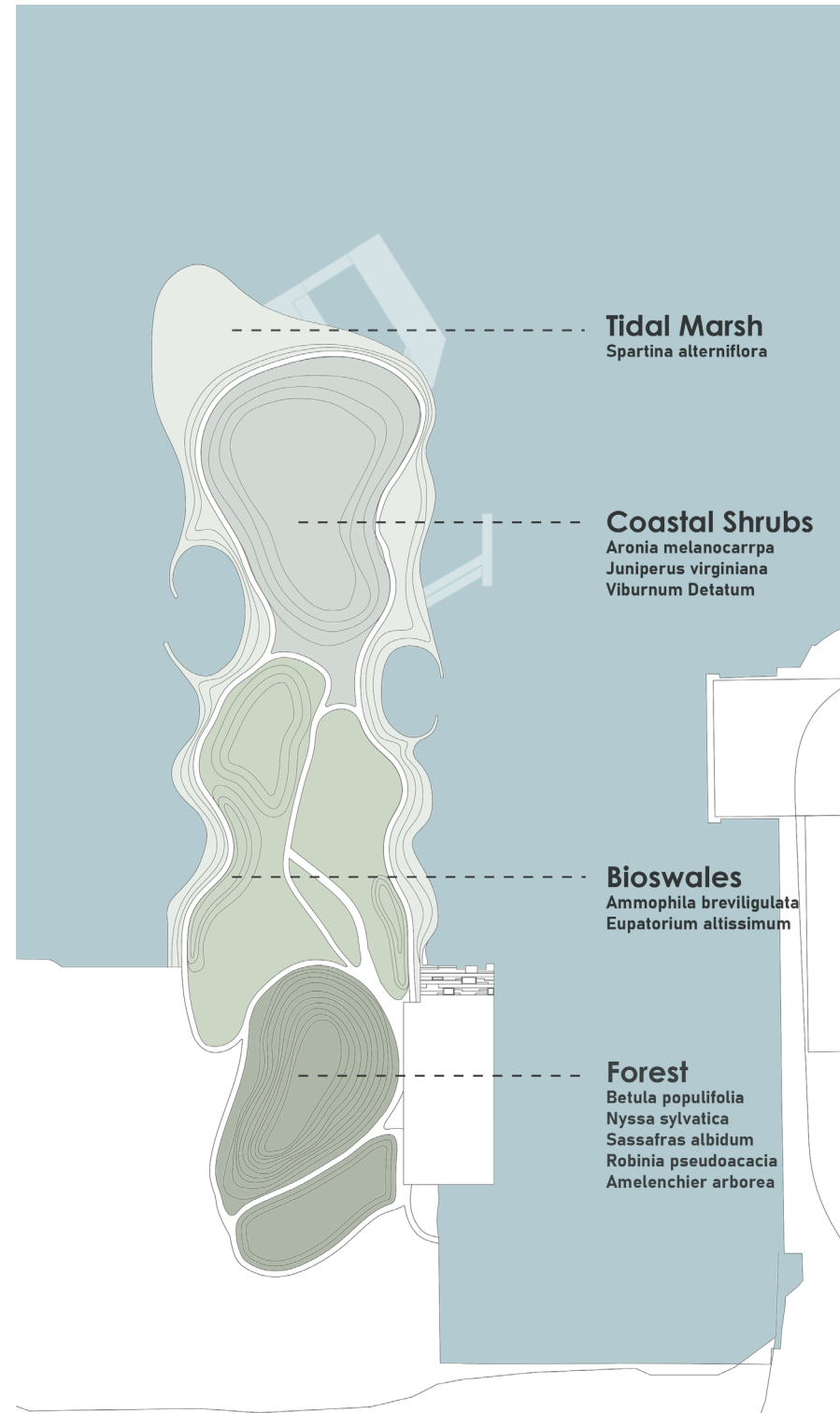




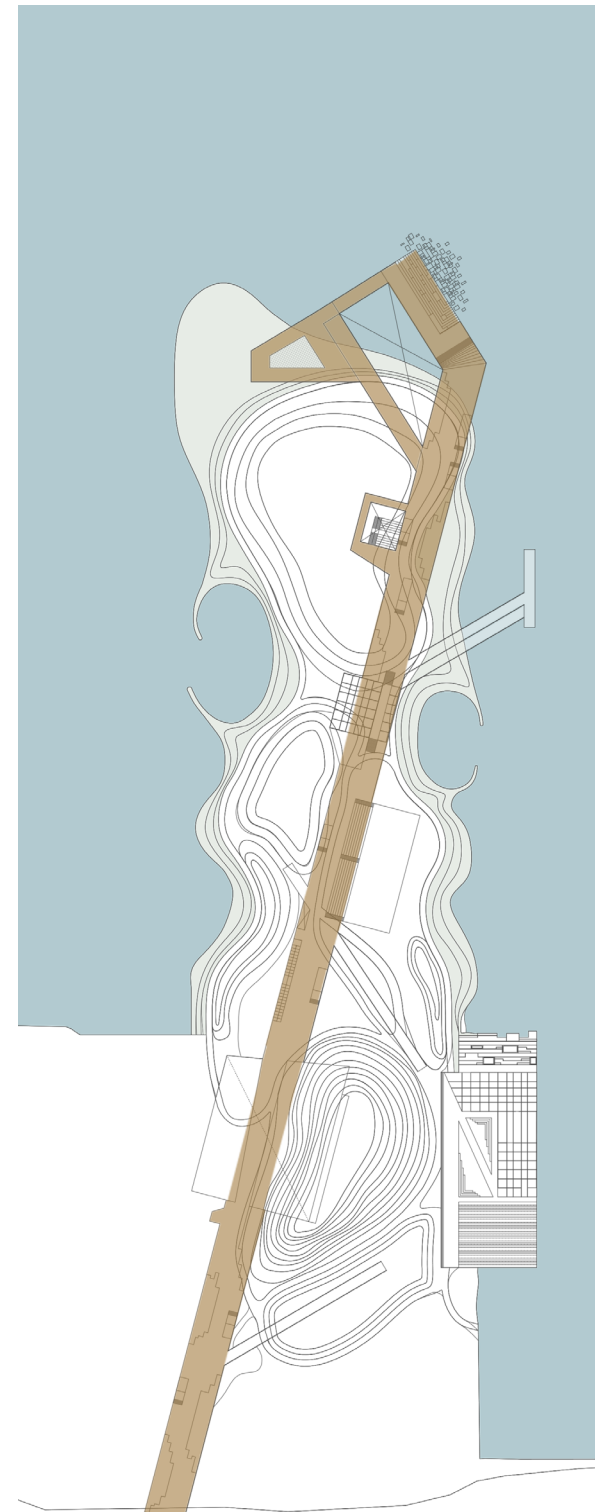
The studio was presented with a sprawling 77-acre site, offering students the opportunity to select specific areas for design exploration. Opting for a section earmarked as an upcoming pier—a quintessential element of New York’s iconic groundline—We envisioned an innovative approach. Leveraging the site’s inherent charm and historical significance, we recognized the natural deterioration along its edges as a unique design parameter. By embracing this organic transformation, we sought to craft an interconnected space that not only revitalizes the pier but also harmonizes with its surroundings, fostering a sense of continuity and synergy throughout the site.



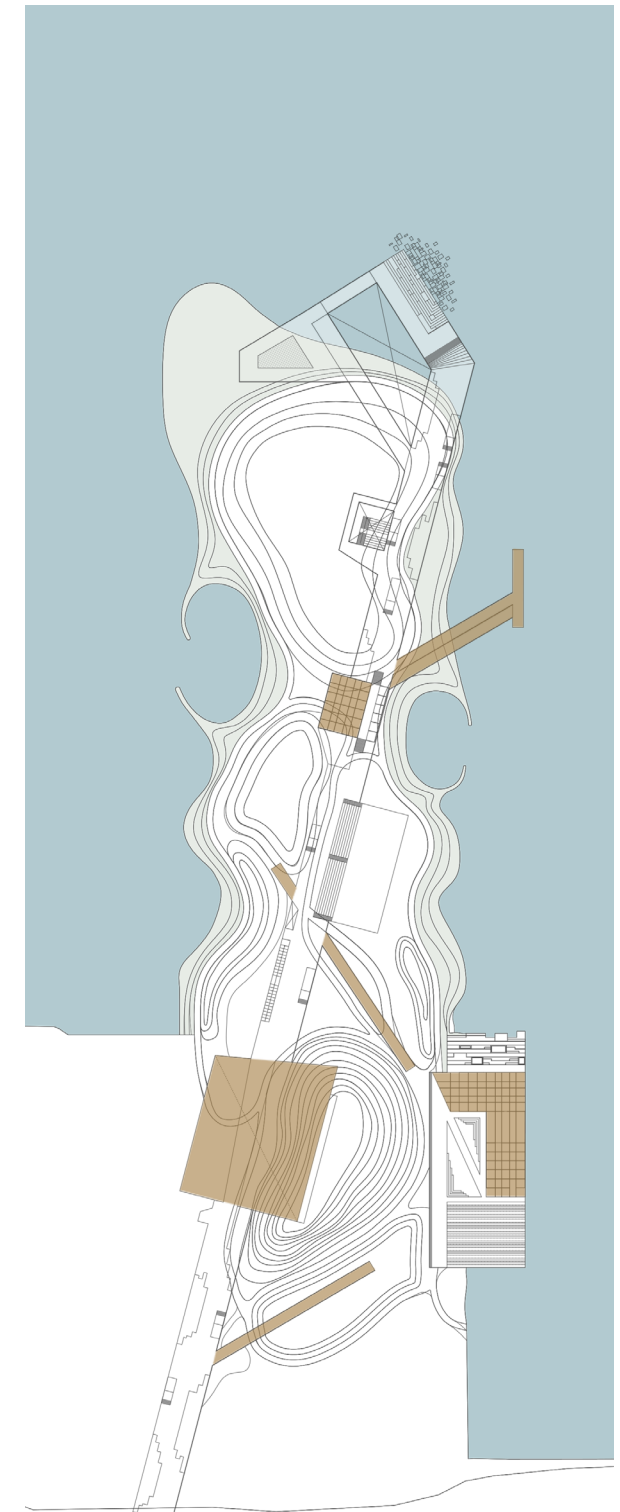
ZONING



GROUND LEVEL

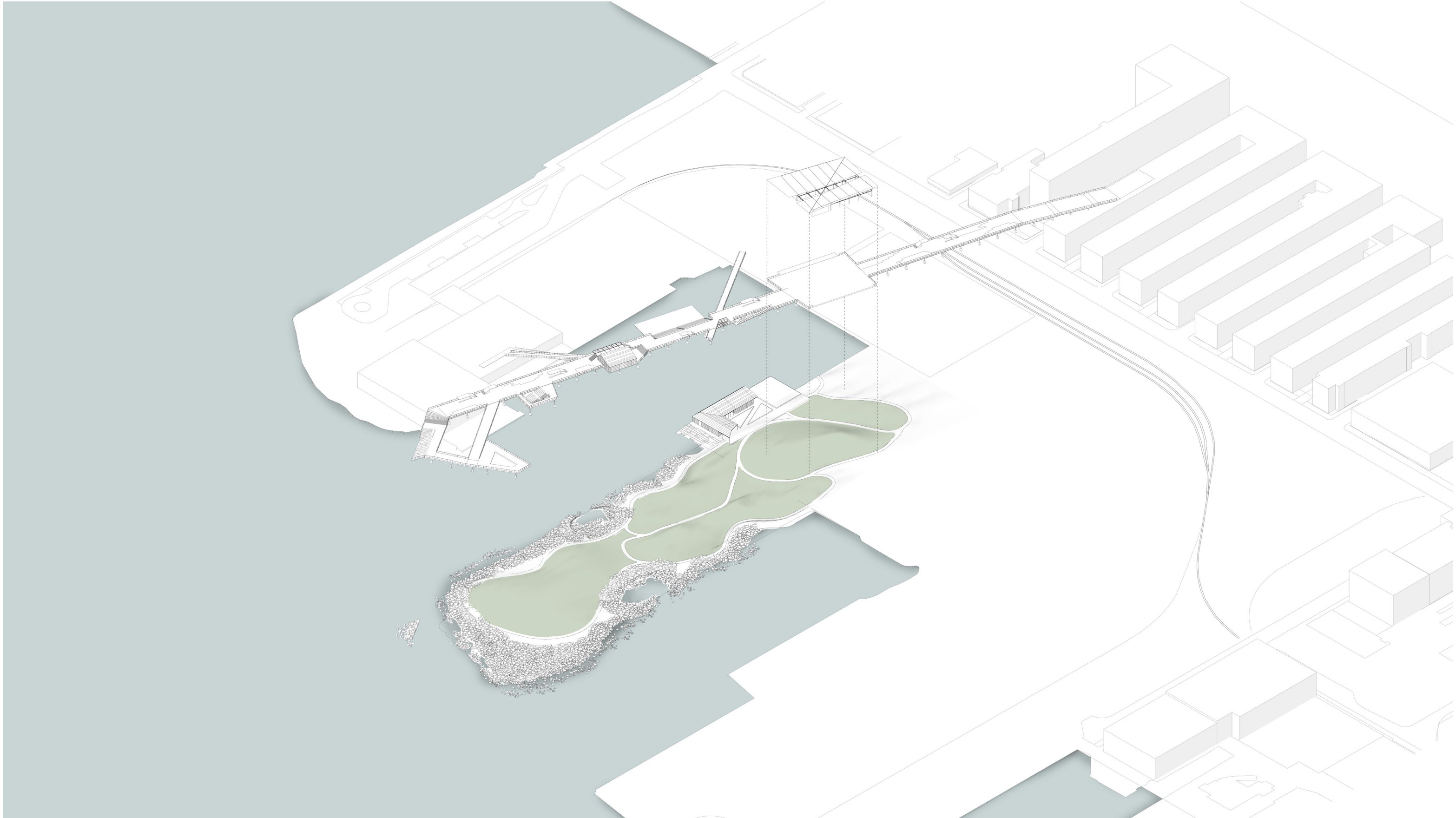


FOOTBRIDGE LEVEL



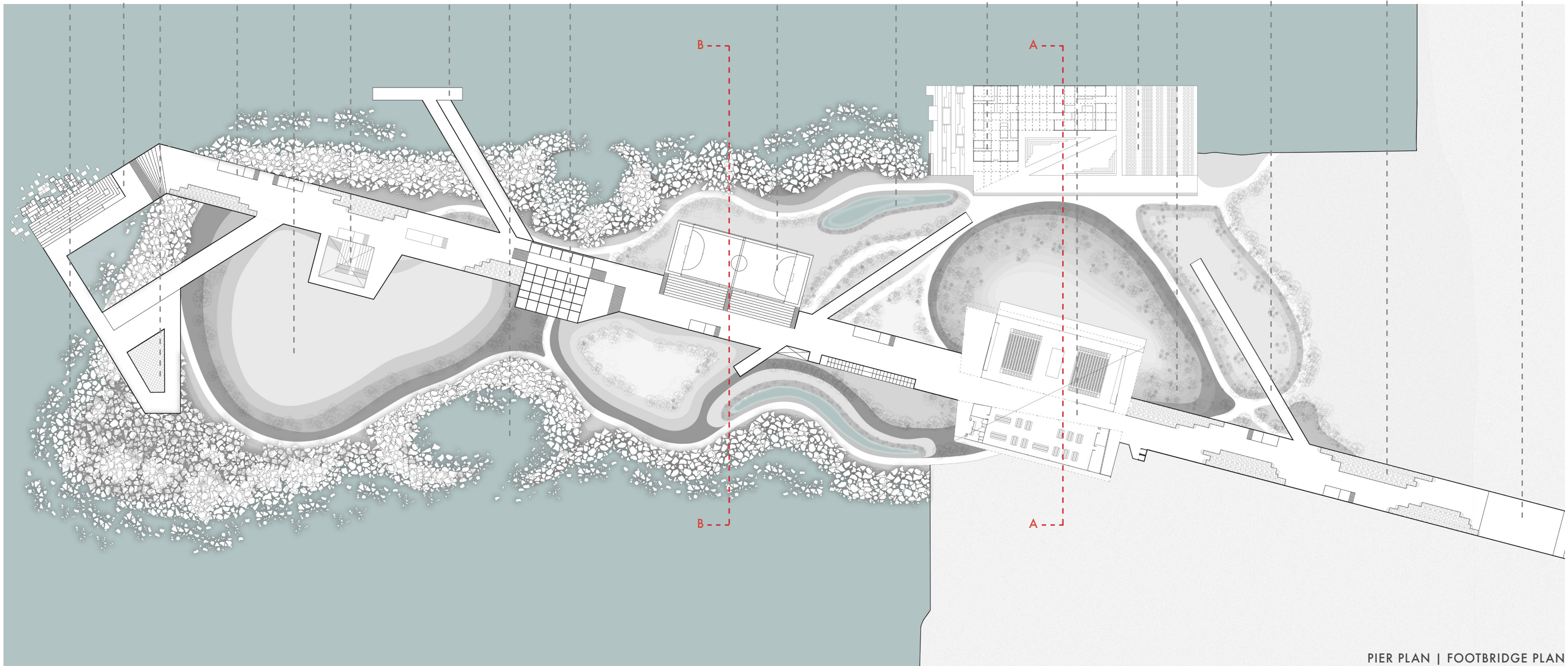
ALTERNATIVE PATHS AND SPACES

The design unfolds in two distinct layers: at ground level, an ecological masterpiece emerges, comprising four meticulously crafted zones—a lush forest area, complete with trees resilient to brackish water conditions; strategically placed bioswales for stormwater management; native coastal shrublands offering stability and habitat; and thriving tidal marshes, vital for flood mitigation and biodiversity. Above, an elevated footbridge gracefully connects the neighborhood directly to the waterfront, opening up previously inaccessible vistas. However, this footbridge transcends mere functionality, serving as a conduit for community cohesion and sustainable farming practices. With communal farming spaces seamlessly integrated into its structure, the footbridge becomes a nexus where urban life and agricultural pursuits intersect, fostering a vibrant synergy between city dwellers and their natural surroundings.



EXPLODED AXONOMETRIC VIEW

- TIDAL MARSH
- OBSERVATION DECK
- LOUNGE NET
- PAVILIONS
- COASTAL SHRUBLAND
- AMPHITHEATRE
- KAYAK LAUNCH
- TIDAL POOL
- GREEN HOUSE
- PLAYING FIELD
- BIOSWALES
- GREEN HOUSE
- EVENT SPACE
- OPEN FARMING AREA
- FOREST AREA
- ALTERNATIVE PATH
- FARMING SPOT
- ENTRANCE RAMP



PIER PLAN | FOOTBRIDGE PLAN

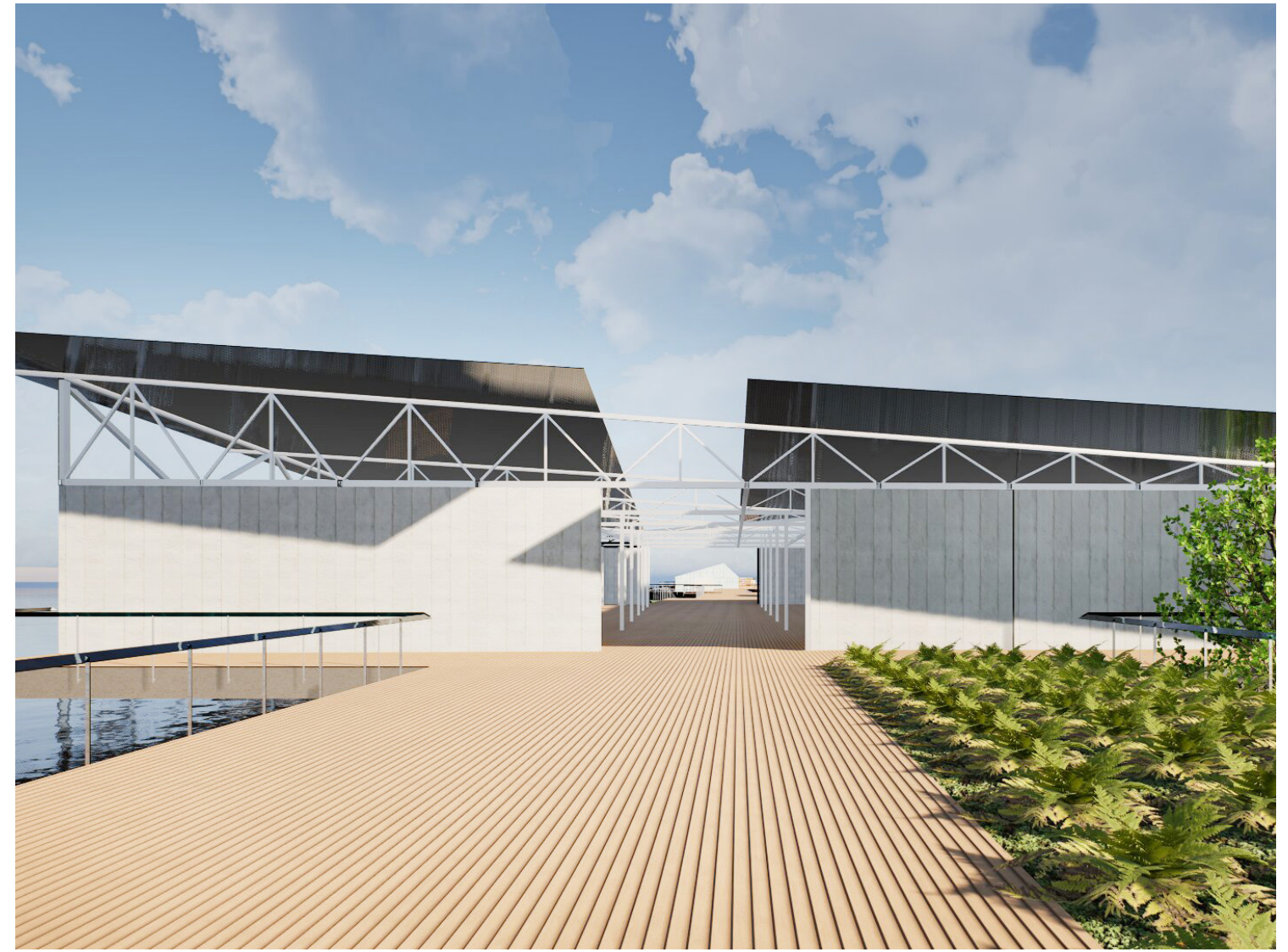




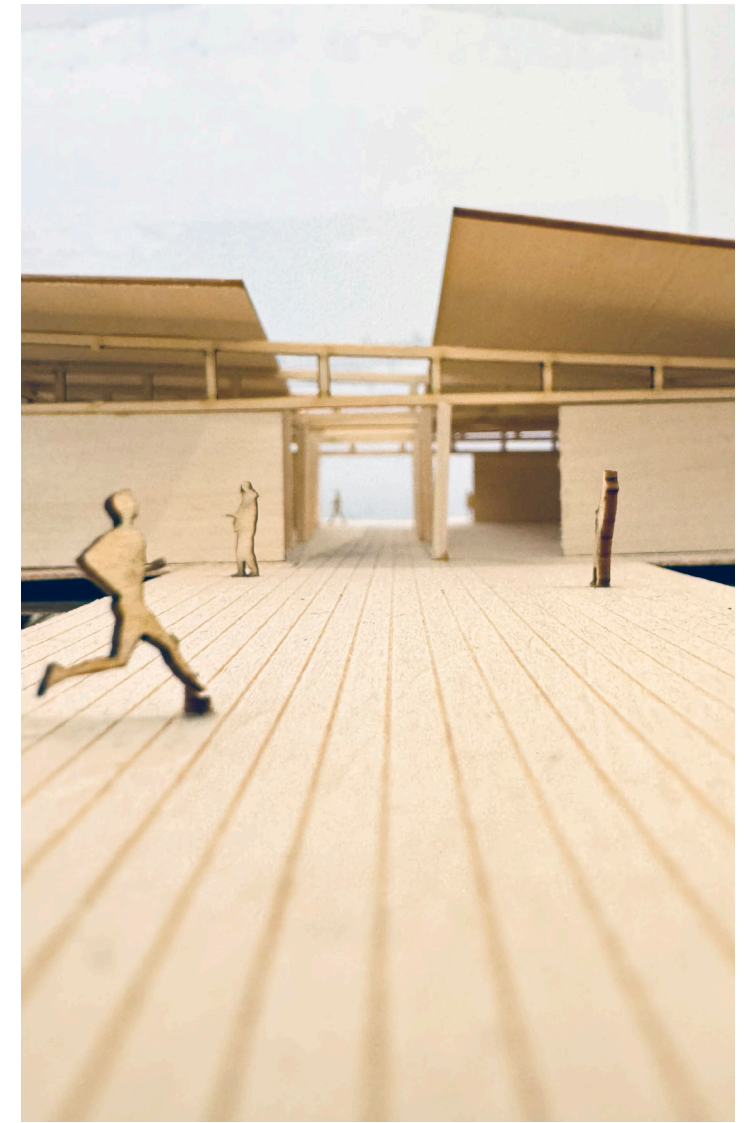
AERIAL VIEW



EVENT SPACE - INTERIOR VIEW



EVENT SPACE - EXTERIOR VIEW



DESIGN MODEL : 1' = 1/16" scale, EVENT SPACE

04

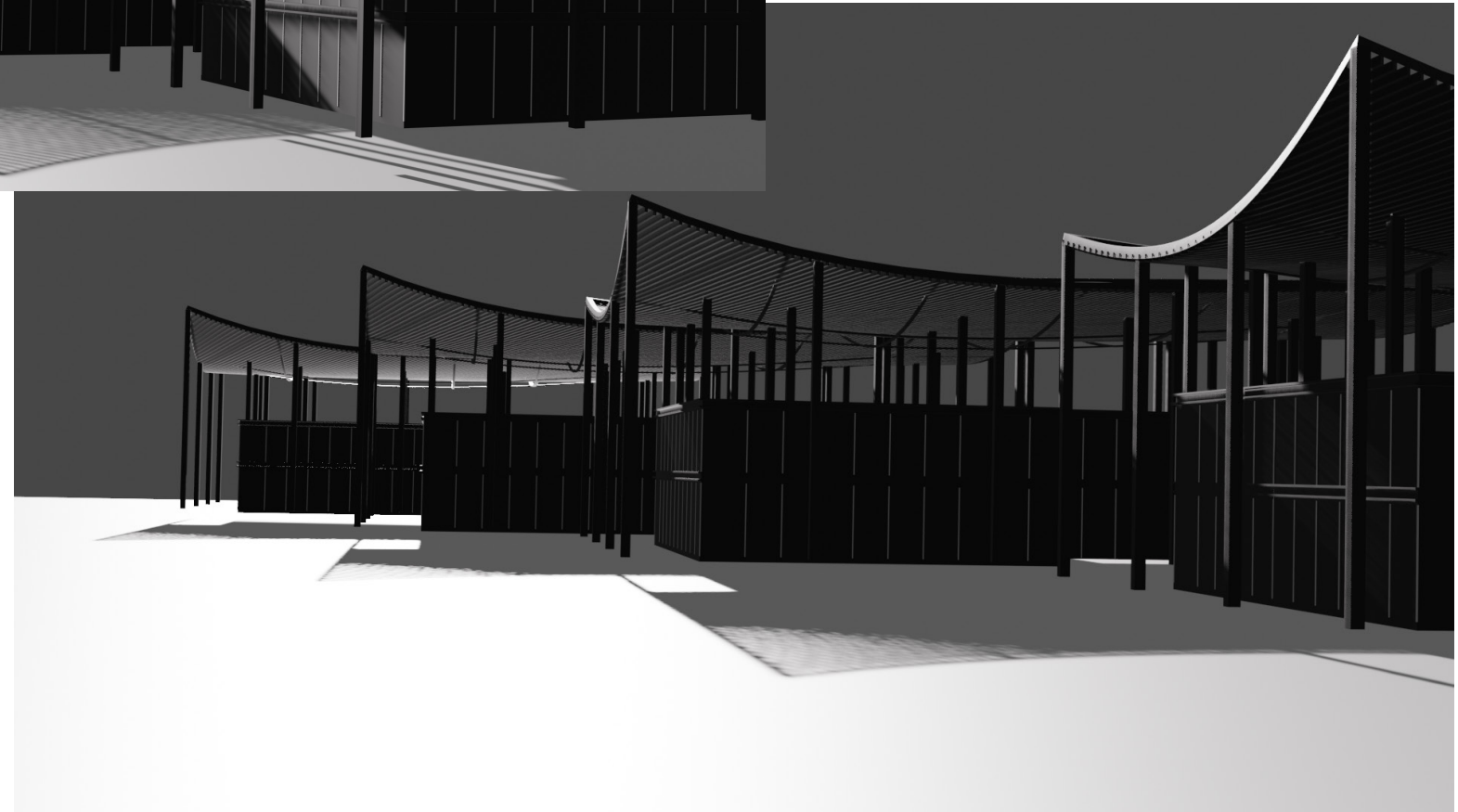
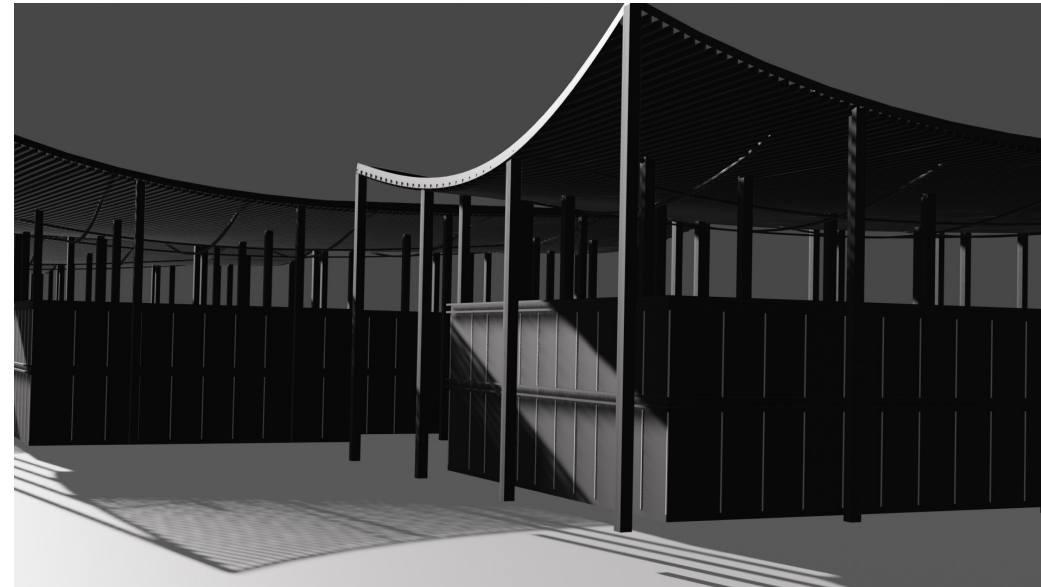
RENDERING
SYSTEMS

Fall 2023
Critic

Visual Elective
Seth Thompson

The model that I chose has some similarities to traditional Japanese architecture which is why I first decided to place it in somewhere in Japan using the Blosm addon. Honestly, I just saw this model and I was like I have to place Mount Fuji somewhere in the background. And I did sort of that with Blosm. I found out that the famous picture of mount fuji that is seen all over was taken from Northern shore of Lake Kawaguchiko and I used those coordinates in Blosm to add that to the background. But while going through mount Fuji pictures on the internet, I was just mesmerized by the lake view and the reflections and I scratched the whole thing to work with water and reflections for my project.

Then I submerged my model in the water to give it the calm look I was going for. But I still had the ick in me with mount Fuji, so instead of mount fuji. I added some mountain models in the background with the landscapes addon that I studied about and then I added some textures on the mountains. I also wanted some foggy reflections and refractions and wanted to add it to the scene to make it more dreamy looking, so I added some glare into my scene in the Composing Tab. I really liked the look I was going for. But then, I wanted to go for a sunset timelapse animation so that I can end in stars; and come on we can all agree that staring into the dreamy night sky full of stars is the ultimate source of calmness and peace that we all yearn for. And then I animated all of the assets, the water, the sky, the sun, the camera and rendered 400 frames in order to make this animation.

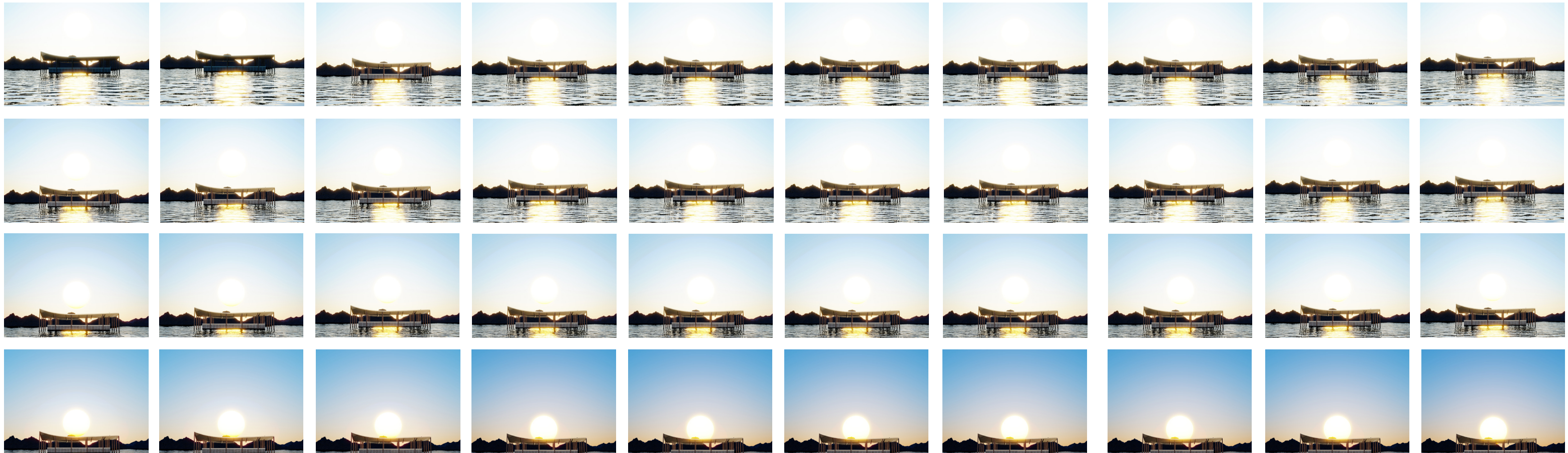




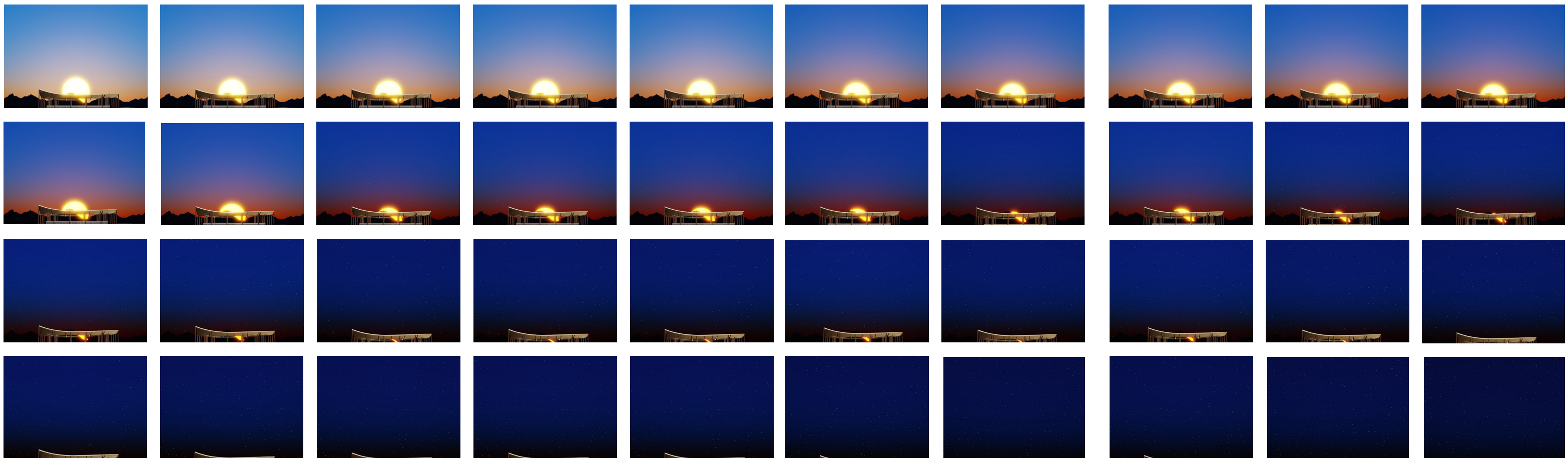
By keeping model in an interior setting, testing it with lights and other environment objects.



UV wrapping materials in this model one by one, giving it its identity and texture.



By creating almost 400 frames to capture sunrise and sunset motion by keeping the object still. Some of the frames are displayed of sunrise and sunset. QR Code here, will lead you to the animation video.





05

HOME IS WHERE THE TOXICS ARE

Fall 2023
Critic

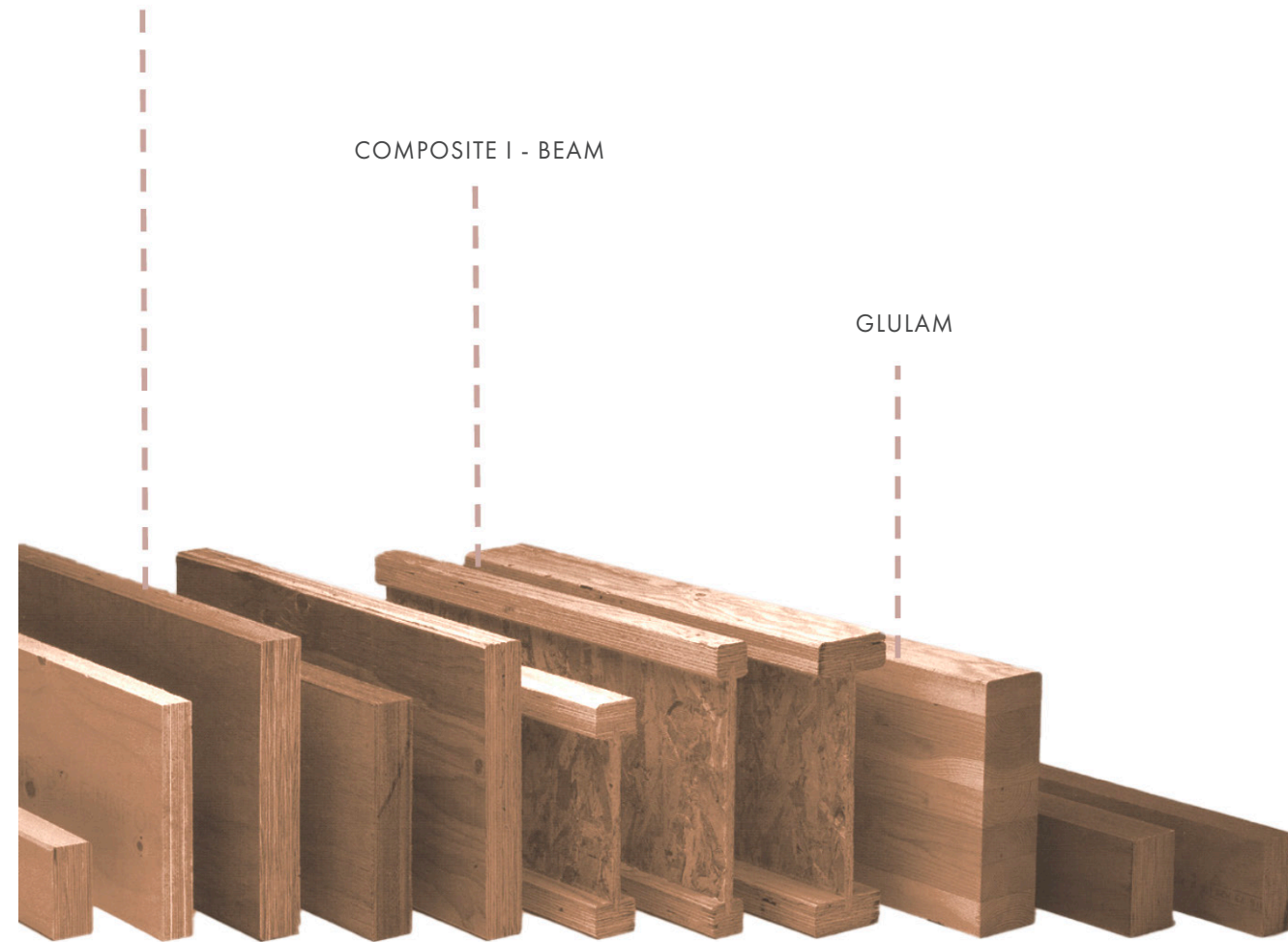
Visual Elective
Marta H. Wisniewska

In the quest for sustainable and eco-friendly alternatives, the spotlight has turned to natural adhesives, particularly those derived from repurposed agricultural residue and food products. As concerns about environmental impact and resource depletion continue to mount, industries, particularly those involved in wood-based products, are seeking innovative solutions that minimize reliance on synthetic adhesives derived from petrochemicals. Harnessing the inherent adhesive properties of agricultural by-products and food waste presents a promising avenue for reducing carbon footprint and promoting circular economy principles within the manufacturing sector. This introduction explores the transformative potential of natural adhesives in revolutionizing wood-based products, offering insights into their sustainability, performance, and potential applications in diverse industries.

LAMINATED VENEER LUMBER (LVL)

COMPOSITE I - BEAM

GLULAM



AND MORE.....

NATURAL ADHESIVES
Repurposing agricultural residue + food products

Wood Market Production
Top 5 countries | 2023 in million USD

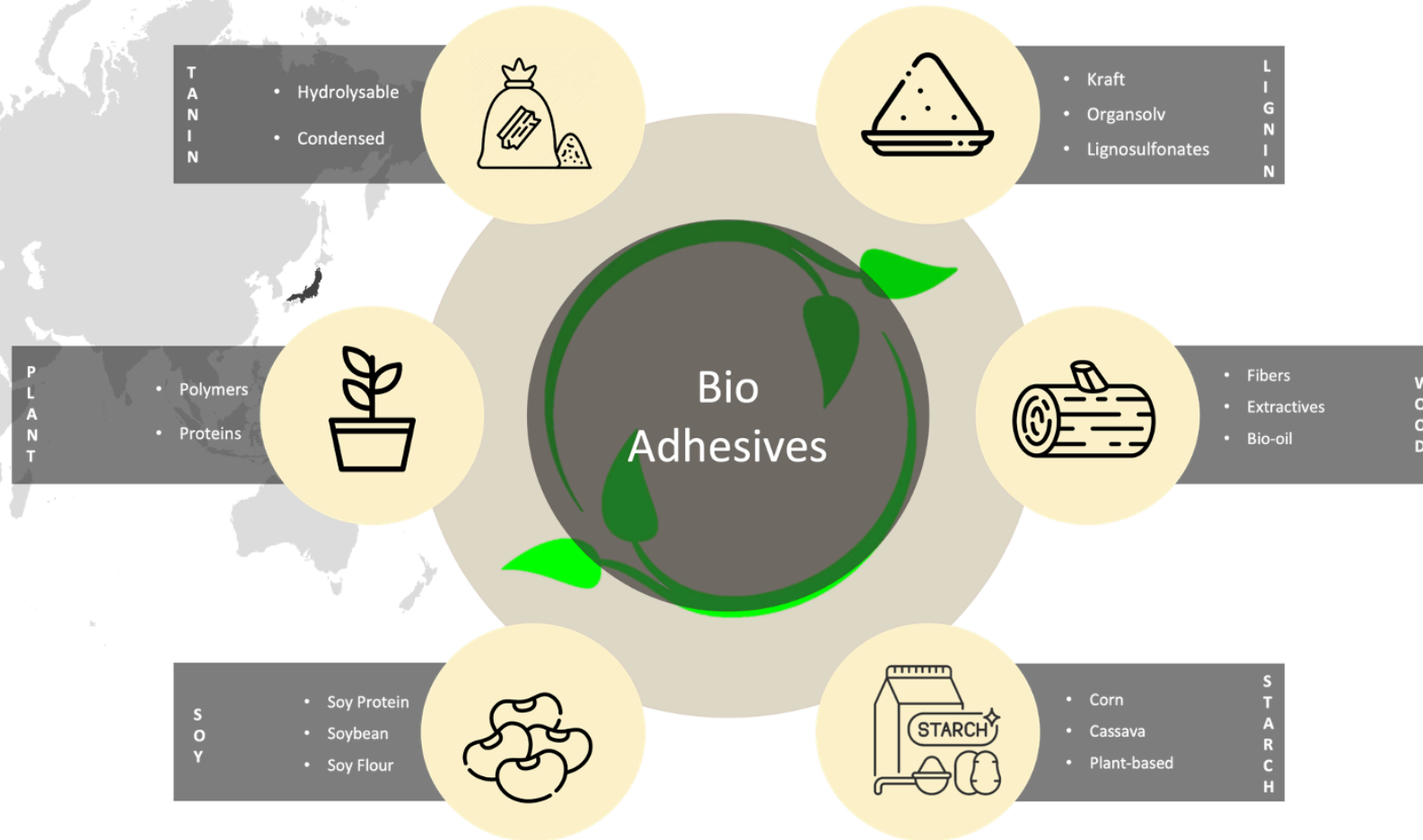
1. United States	51,160
2. Canada	9,762
3. Germany	9,431
4. Japan	8,599
5. United Kingdom	5,563

Value added in the Wood market is projected to amount to US\$160.60bn in 2023. A compound annual growth rate of 3.74% is expected

Global Wood Market Growth
(CAGR) of 6.6%



NATURAL ADHESIVES
Repurposing Agricultural Residue + Food Products



PLYWOOD
Usage: Extensive. Adhesives are used to bond thin layers of wood veneer together under heat and pressure.
Applications: Construction, furniture, cabinetry, and flooring.

PARTICLEBOARD
Usage: High. Adhesives are used to bond wood particles together into a dense board.
Applications: Inexpensive furniture, cabinetry, and as a substrate for countertops.

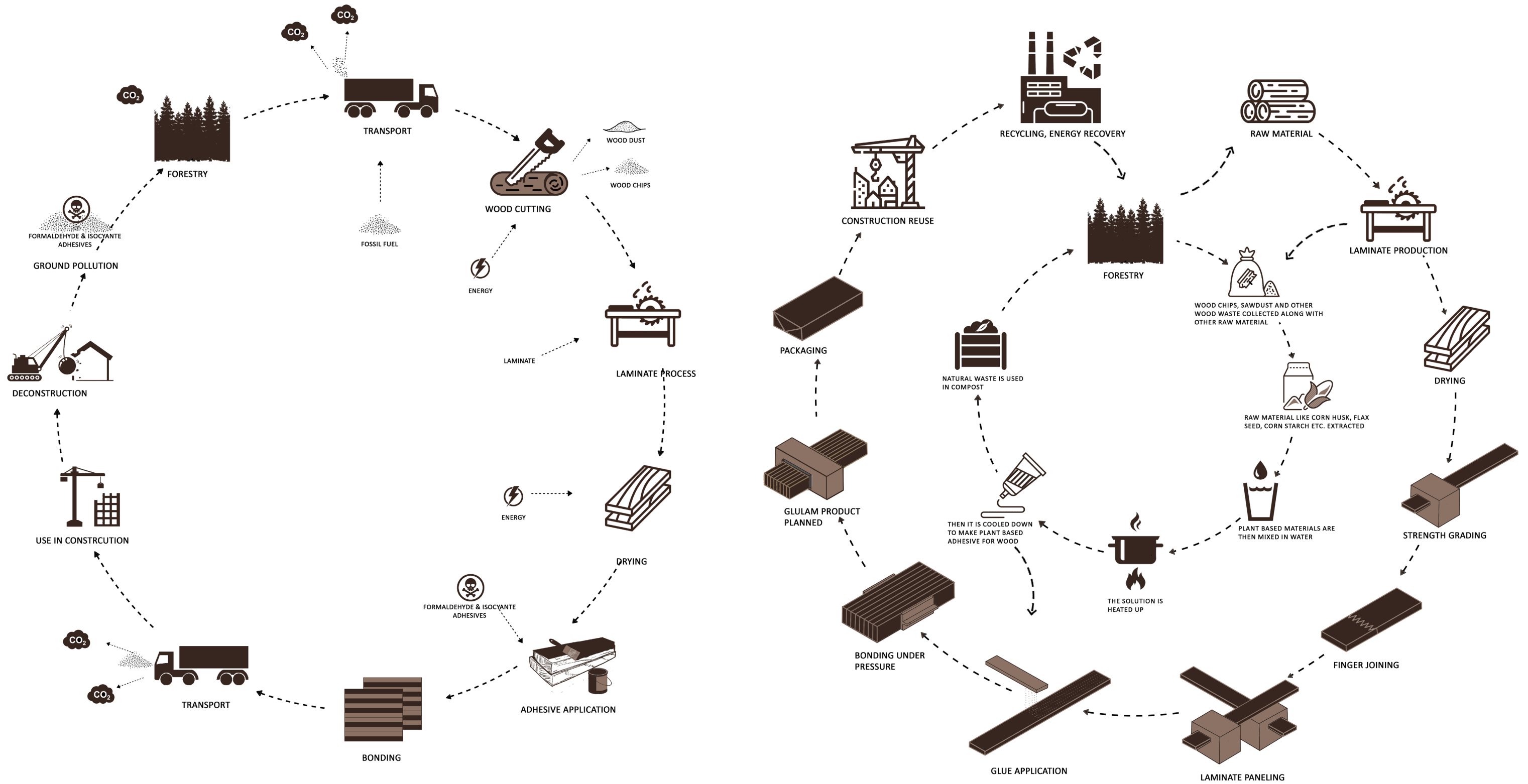
MEDIUM DENSITY FIBERBOARD (MDF)
Usage: High. Involves bonding wood fibers with adhesive under heat and pressure.
Applications: Furniture, cabinetry, molding, and decorative projects.

LAMINATED VENEER LUMBER (LVL)
Usage: Significant. Thin wood veneers are bonded together with adhesives.
Applications: Beams, headers, and structural components.

GLUED LAMINATED TIMBER (GLULAM)
Usage: Extensive. Layers of solid wood lumber are bonded together with adhesives.
Applications: Structural applications like beams, columns, and arches.

Types of Toxic Adhesives Used for Wood Based Products

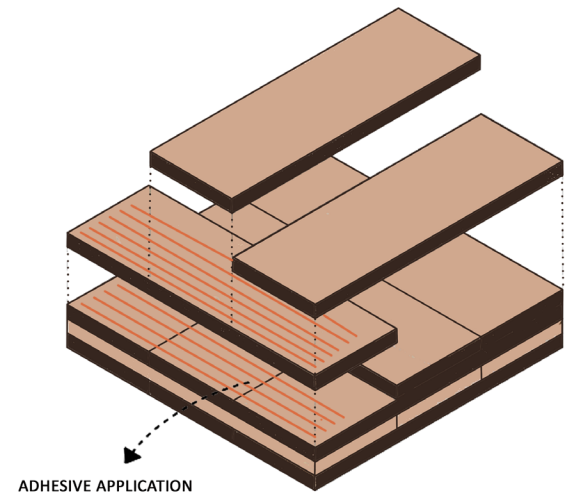
- Formaldehyde Based**
 - Contains carcinogenic formaldehyde. Common in particleboard, plywood, and fiberboard
- Epoxy Resins**
 - Contains BPA and epichlorohydrin. Risk of inhalation and skin contact hazards
- Isocyanate Adhesives**
 - Causes respiratory and skin sensitization. Used in structural wood panels
- Polyvinyl Acetate with Toxic Adhesives**
 - May contain harmful additives. Releases volatile organic compounds
- Solvent-based Adhesives**
 - Contains harmful solvents like toluene and xylene. Risks to neurological and respiratory health



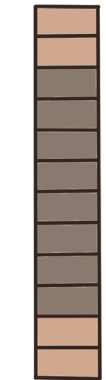
WOOD BASED PRODUCTS LIFE CYCLE

NEW LIFE CYCLE ASSESSMENT

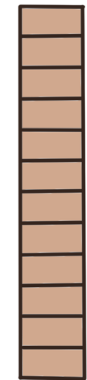
AXONOMETRIC-ADHESIVE APPLICATION



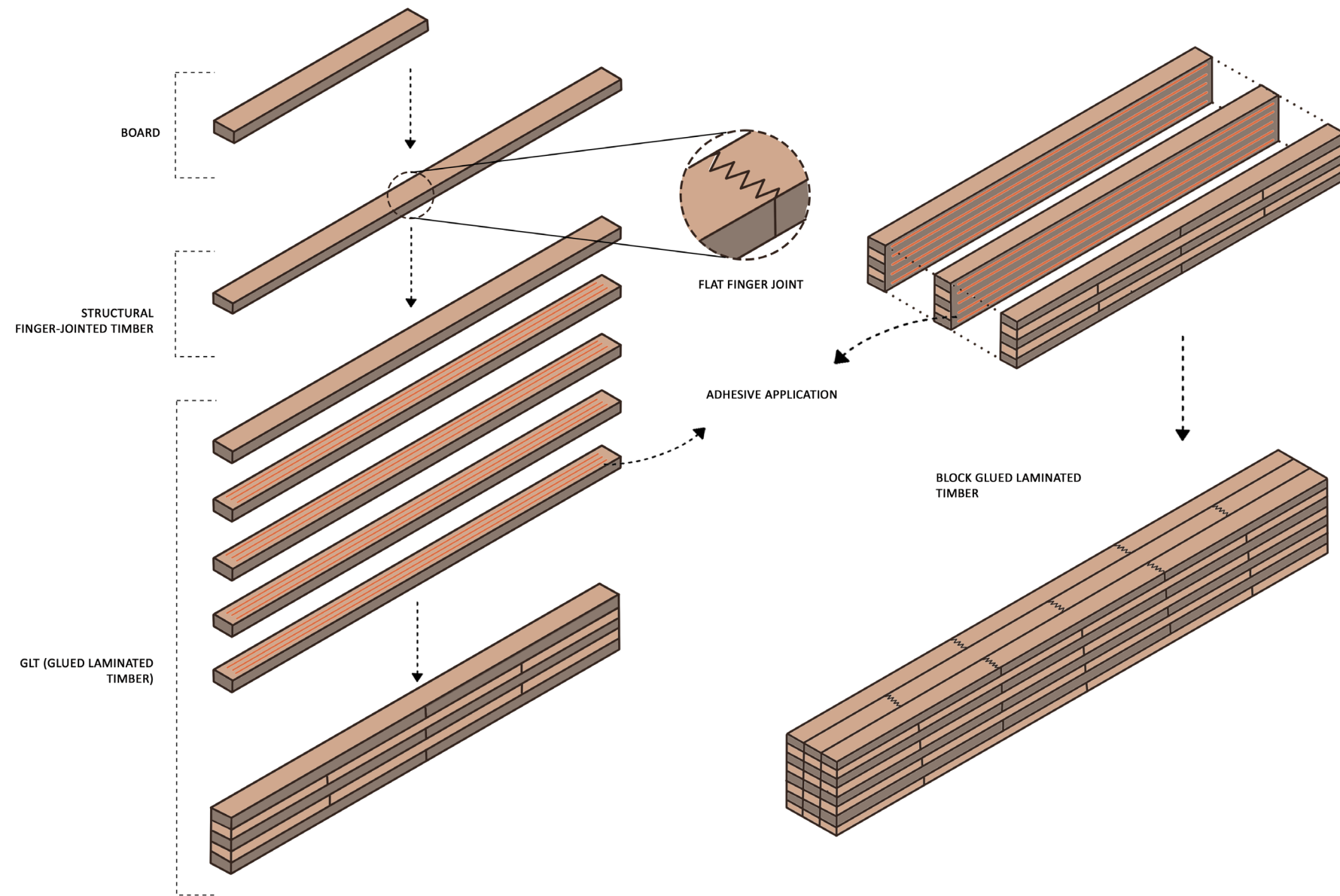
CROSS LAMINATED TIMBER



COMBINED GLT



HOMOGENOUS GLT



NATURAL ADHESIVES

Following are the physical documentation of an experiments of natural based adhesives.



Natural-based adhesives, formulated with food products, represent a pioneering approach towards sustainability within the adhesives industry. By harnessing the inherent adhesive properties of certain food items, these adhesives offer a renewable and eco-friendly alternative to conventional synthetic adhesives derived from petrochemicals. With a focus on repurposing food waste and agricultural by-products, such adhesives not only reduce environmental impact but also contribute to the circular economy by transforming discarded materials into valuable resources. This brief explores the innovative process of formulating natural-based adhesives using food products, highlighting their sustainable attributes, diverse applications, and potential to revolutionize various industries while promoting environmental stewardship.

06

RETHINKING -
BIM

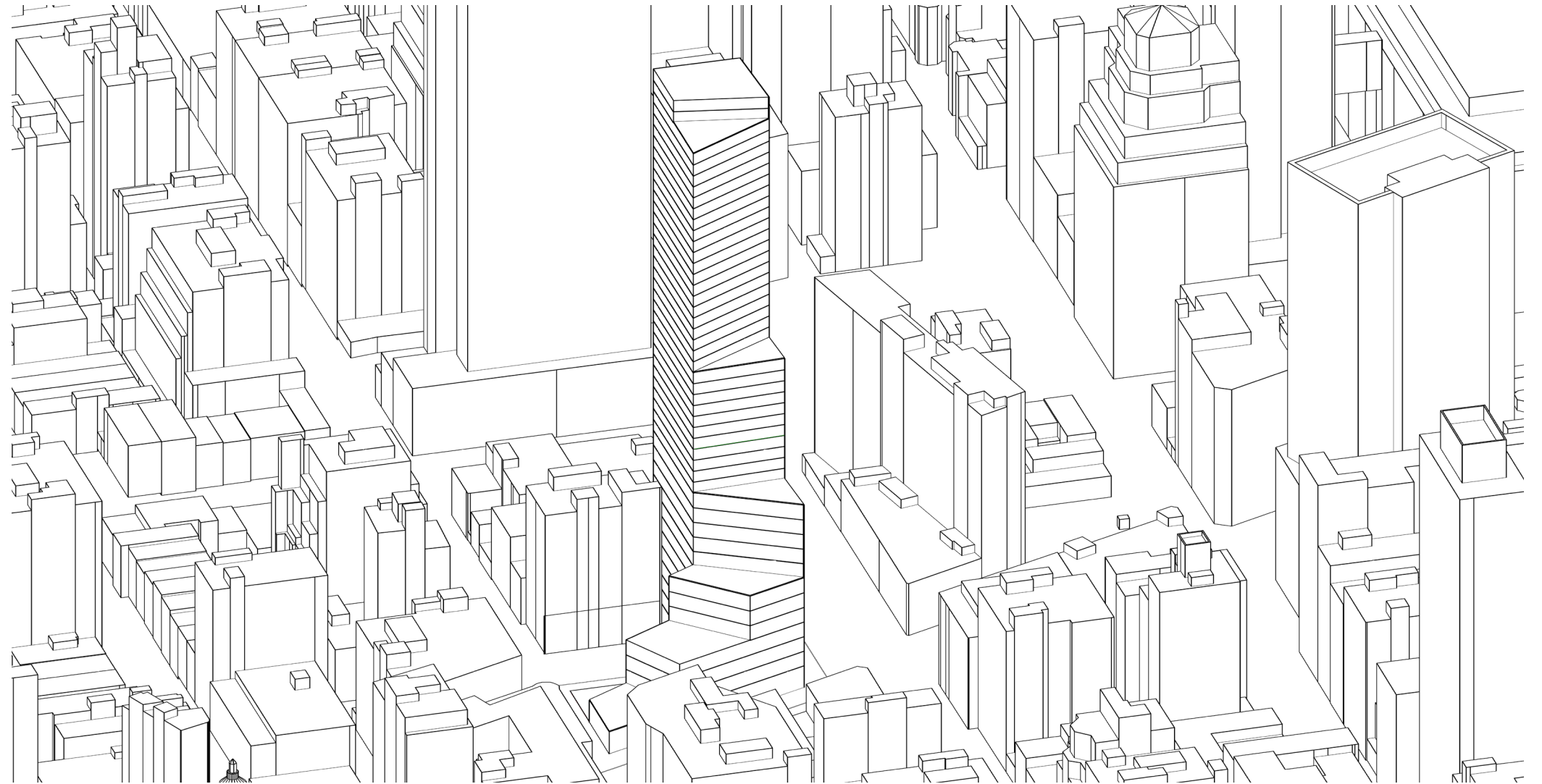
Fall 2023
Critic
Contributors

Site

Visual Elective
Joseph Brennan
Aashka Ajmera, Aishwarya Garg
& Stacey Xiong
Nomad, 1227 Broadway, NY

NOMAD, a neighborhood poised for transformation, lies between Madison Square Park and Penn Station. With a blend of retail spaces, aging offices, and historic residences, NOMAD is undergoing revitalization efforts to enhance pedestrian accessibility and foster retail growth. Our firm has been commissioned by a visionary developer to craft a mixed-use project tailored to the evolving needs of NOMAD's community.

In response, we're tasked with designing a concept that integrates creative office spaces, vibrant retail outlets, and inviting hotel accommodations. Embracing post-COVID work and travel patterns, our design harmonizes functionality with aesthetic appeal while adhering to zoning regulations and optimizing pedestrian circulation. Through meticulous analysis, diagrams, and parametric strategies, we ensure our design not only meets the developer's criteria but also reflects our ability to navigate the complexities of urban redevelopment. With a focus on enhancing NOMAD's existing public plaza and infrastructure, our design aims to redefine the neighborhood as a dynamic destination for workers, tourists, and residents alike.



SITE AREA : 29,900 sqft.

M1-6 FAR : 10.0 = 29,900 sqft.

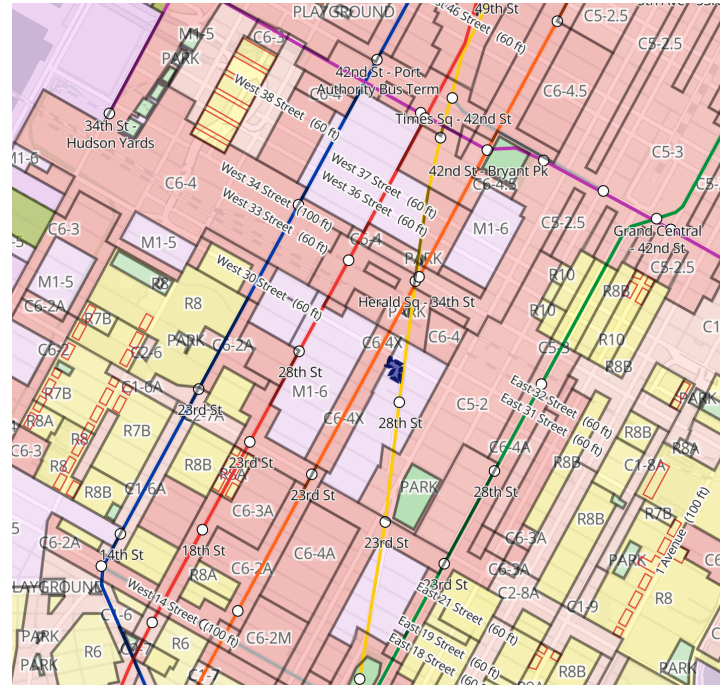
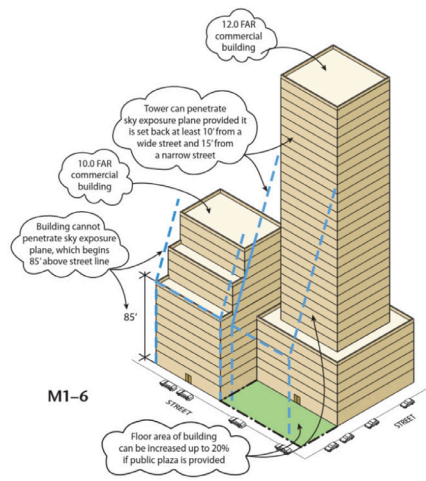
M1-6 FAR with Public Plaza bonus
12.0 = 358,800 sqft.

SKY EXPOSURE : 2R 43-45

Tower footprint max. 40% of lot area
: 11,960 sqft

15 feet from narrow street
10 feet minimum from wide street

PODIUM LIMIT : 85' or 6 stories



M1 Manufacturing Districts						
M1	M1-1	M1-2	M1-3	M1-4	M1-5	M1-6
FAR (max)	1.0	2.0	5.0	2.0	5.0	10.0'
Parking	required	required	required	not required	not required	not required

FAR bonus up to 20% for a public plaza



View A



View B



View C



View D



View E

Site Surroundings

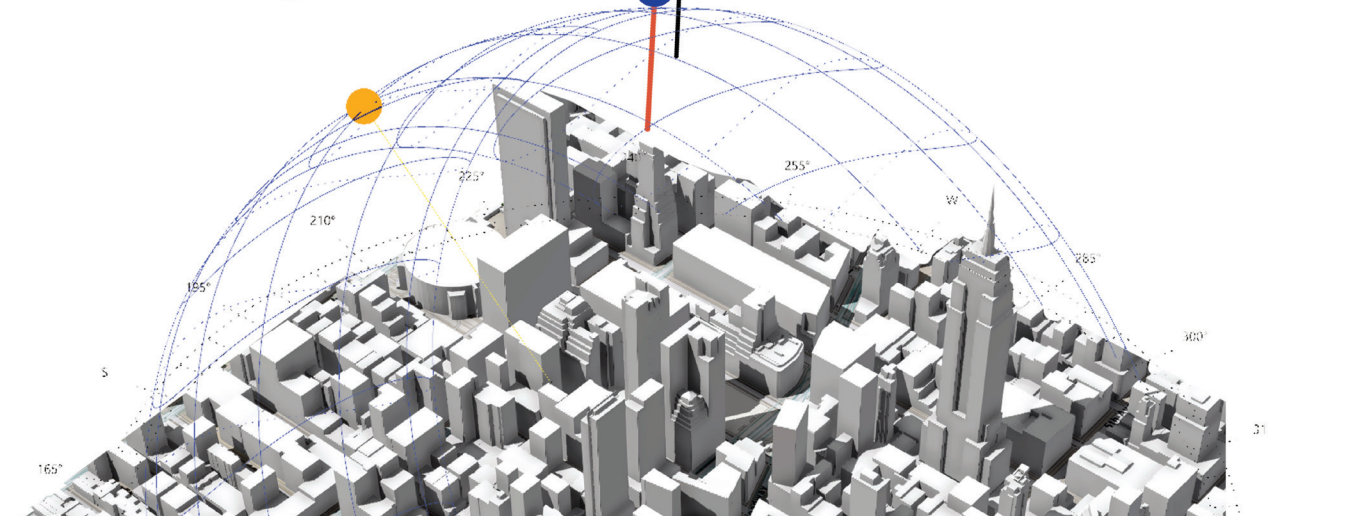
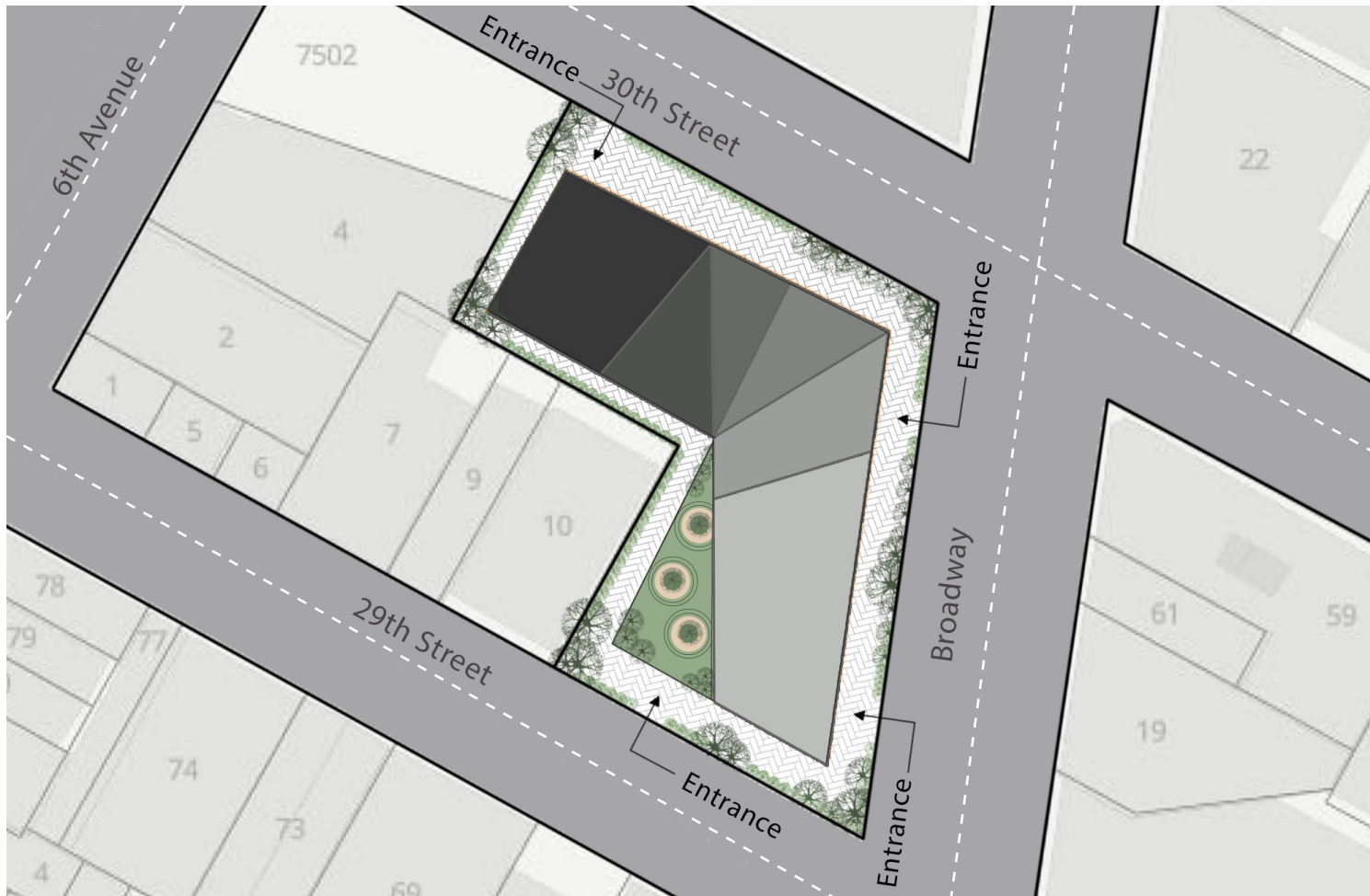
Zoning and Land Use

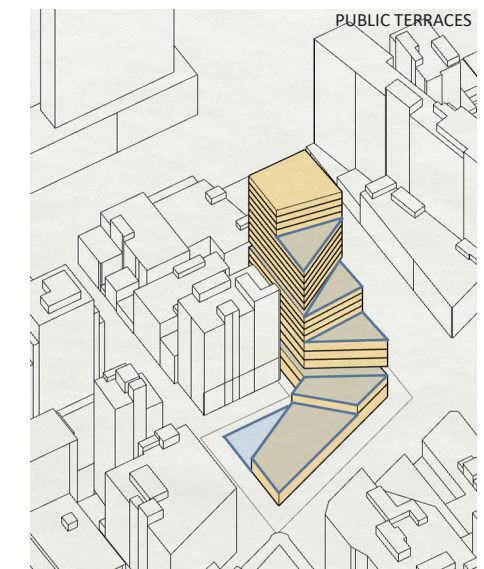
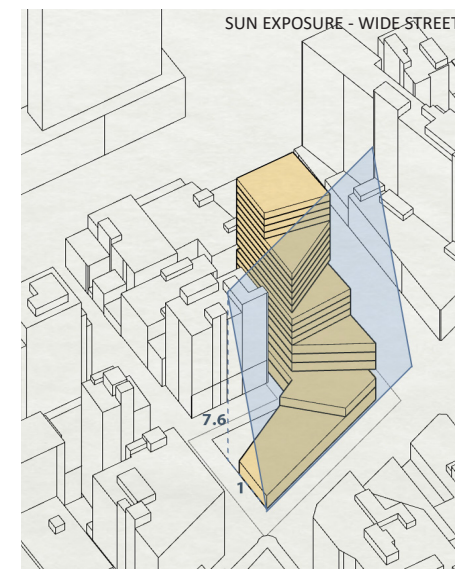
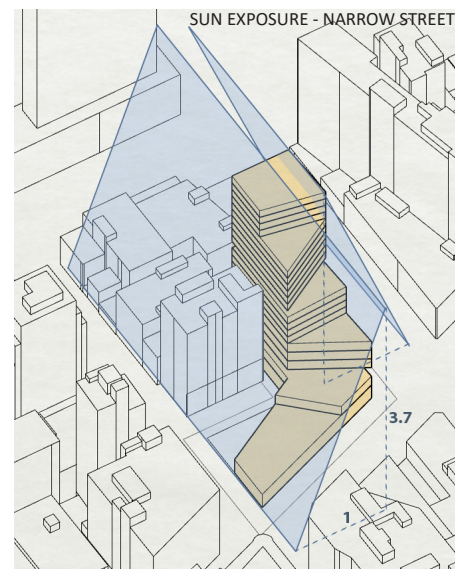
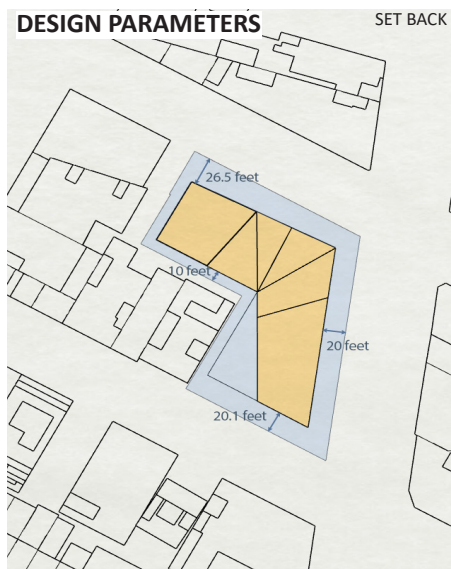
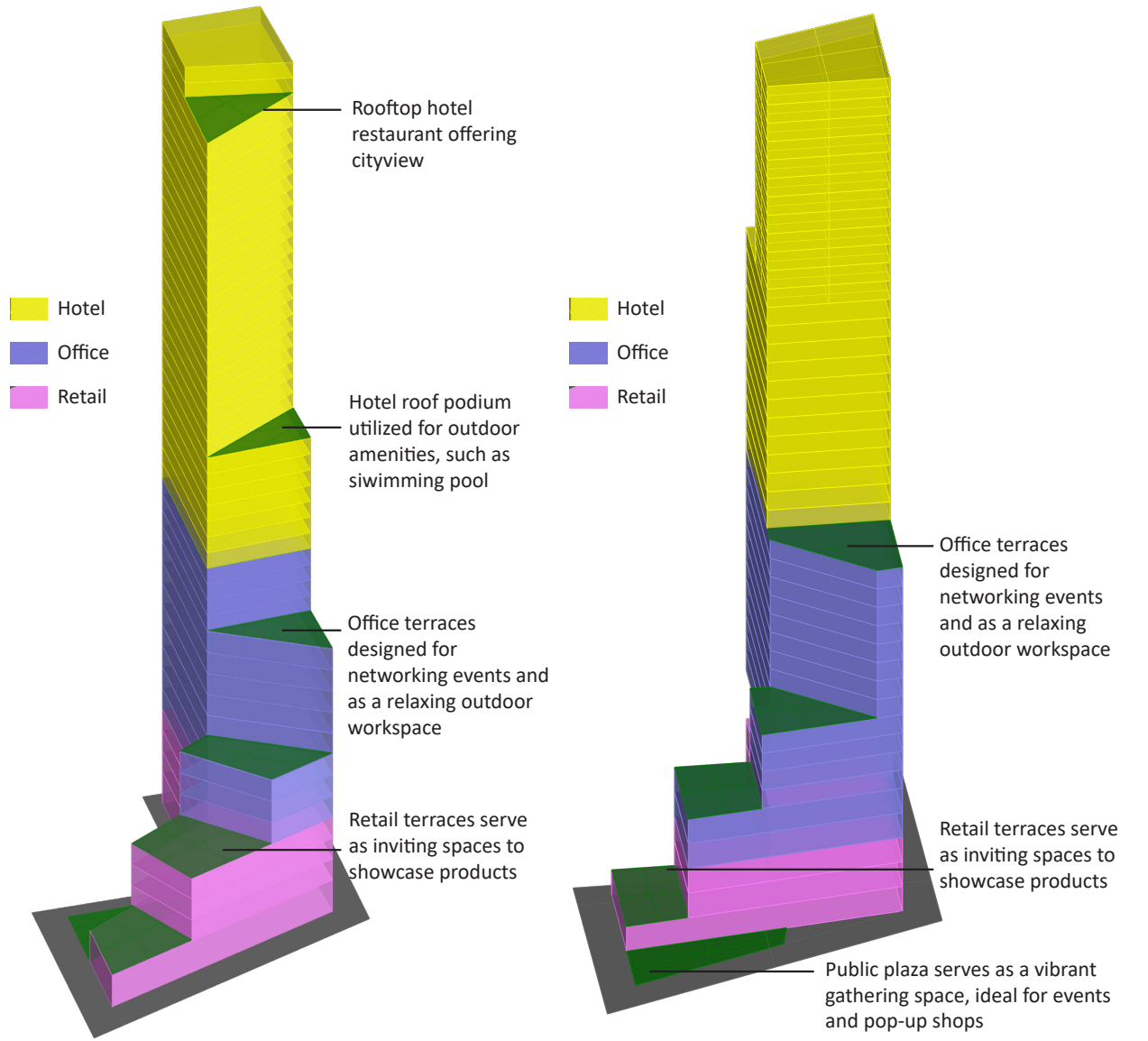
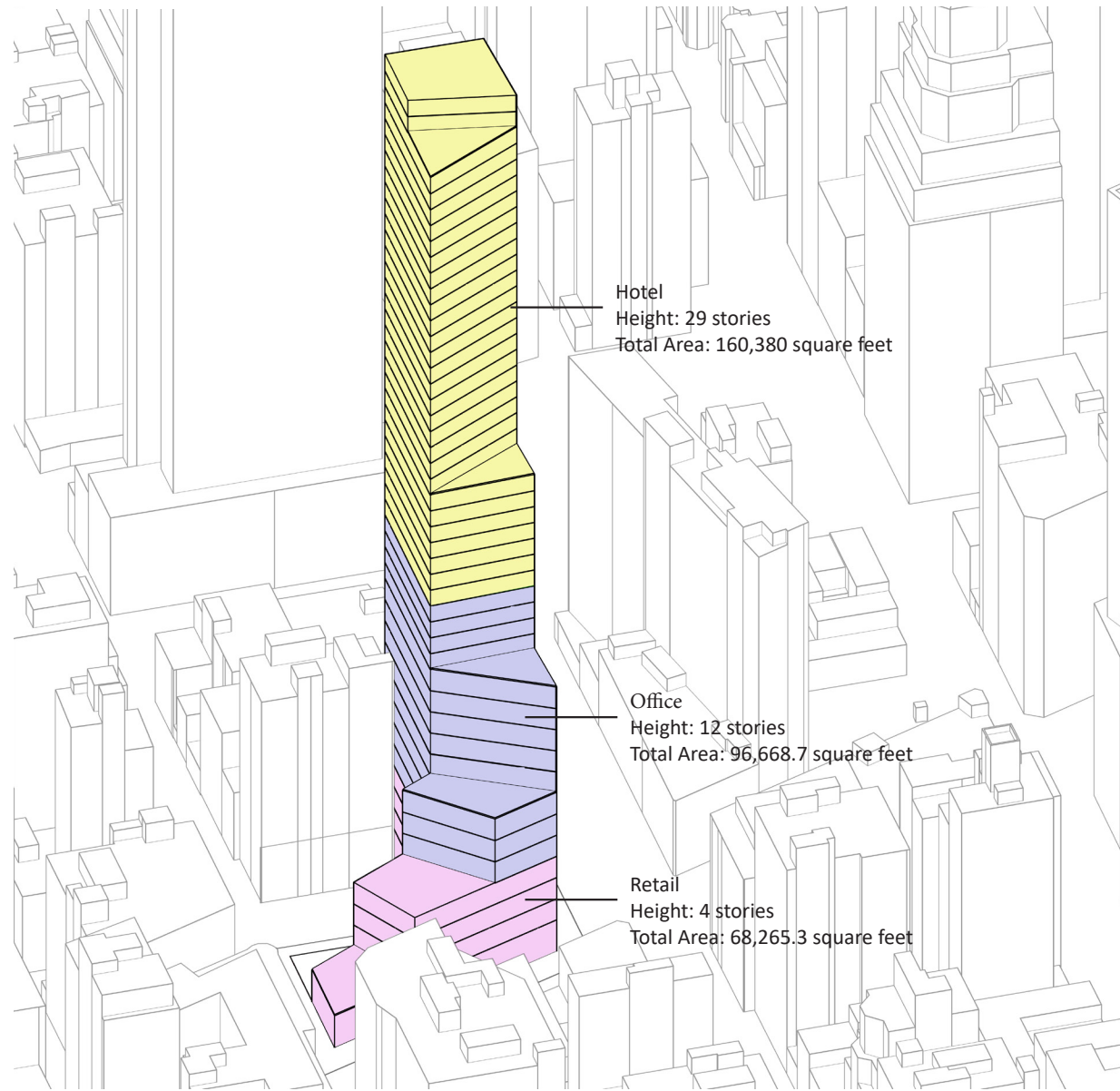
- Tax Lots
- One & Two Family Buildings
 - Multi-Family Walk-Up Buildings
 - Multi-Family Elevator Buildings
 - Mixed Residential & Commercial Buildings
 - Commercial & Office Buildings
 - Industrial & Manufacturing
 - Transportation & Utility
 - Public Facilities & Institutions
 - Open Space & Outdoor Recreation
 - Parking Facilities
 - Vacant Land
 - Other

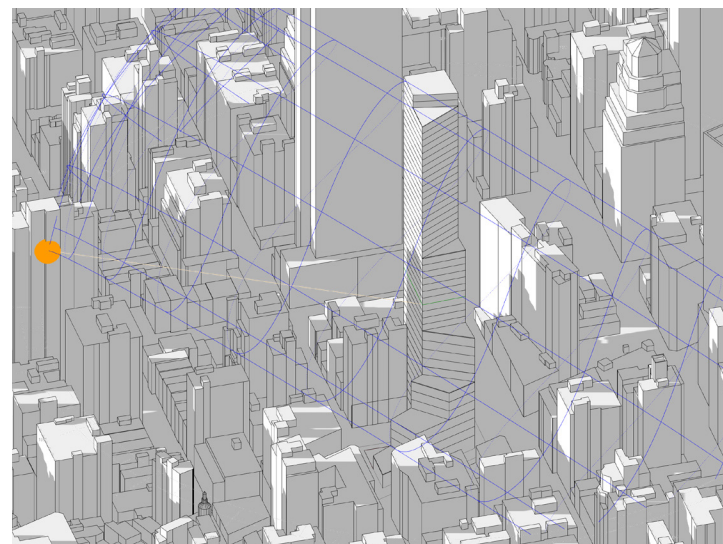
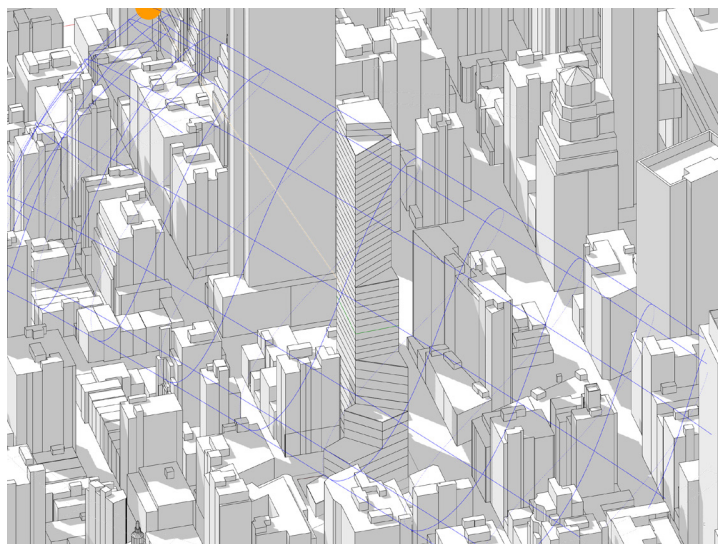
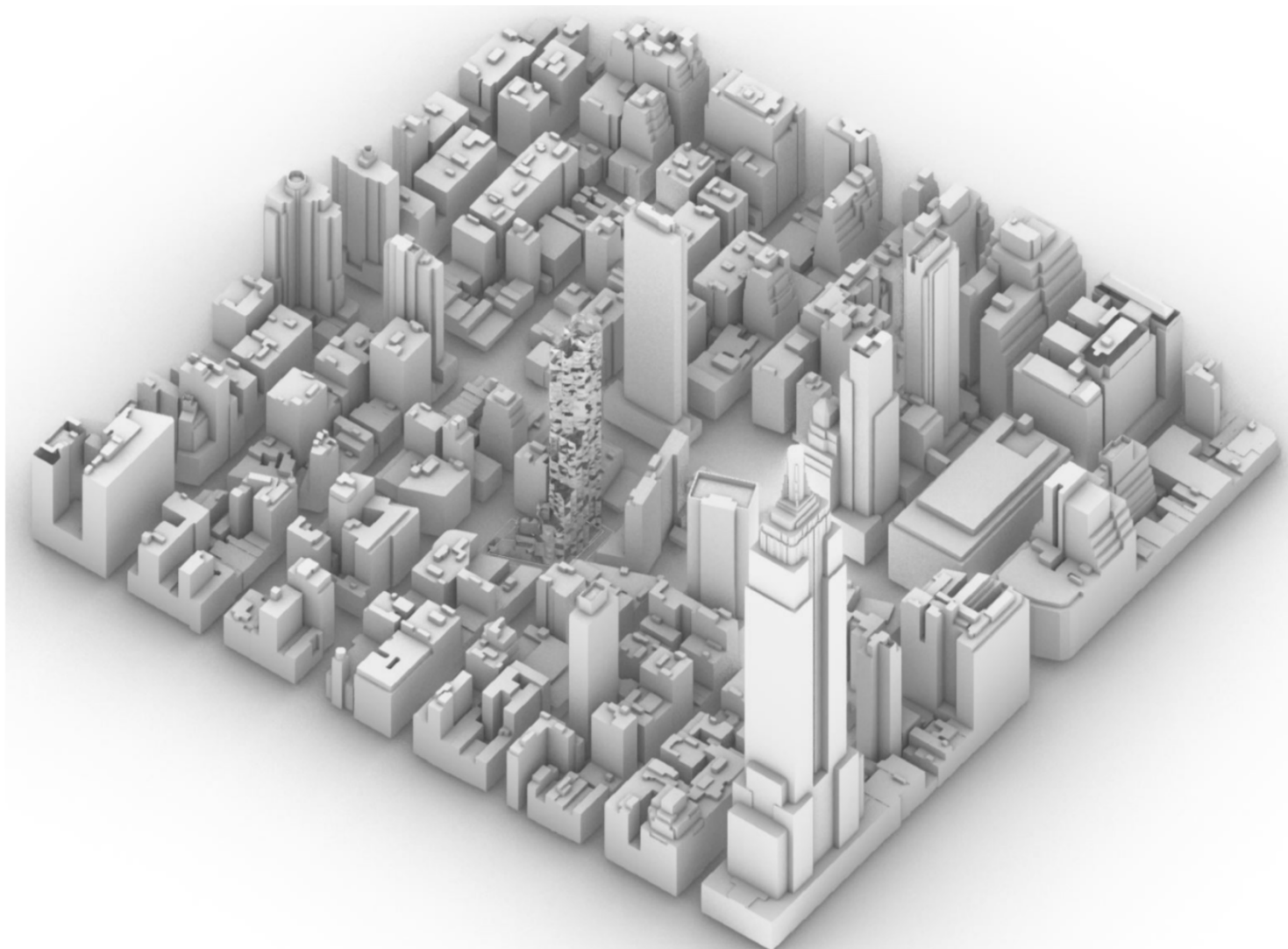
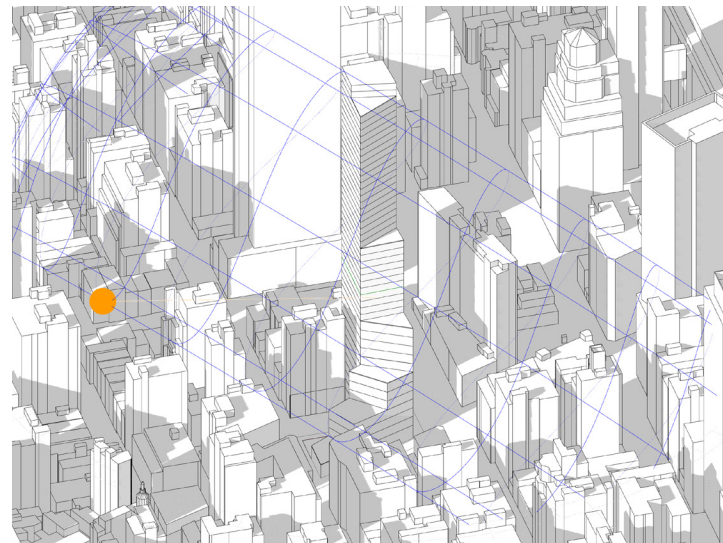
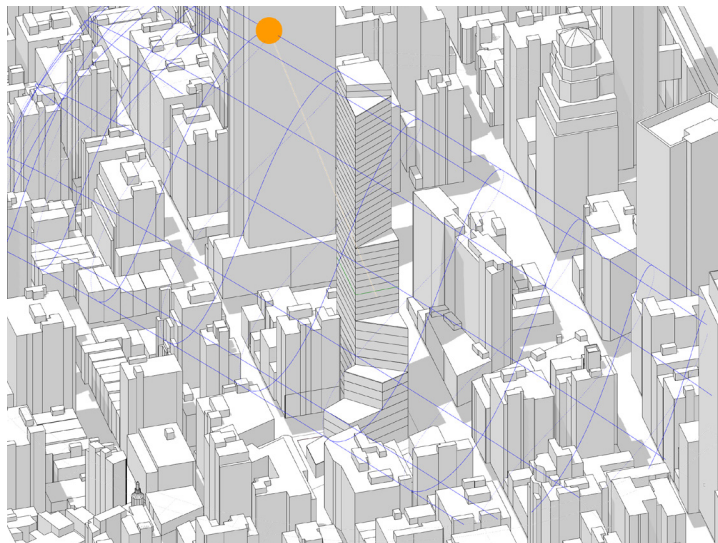
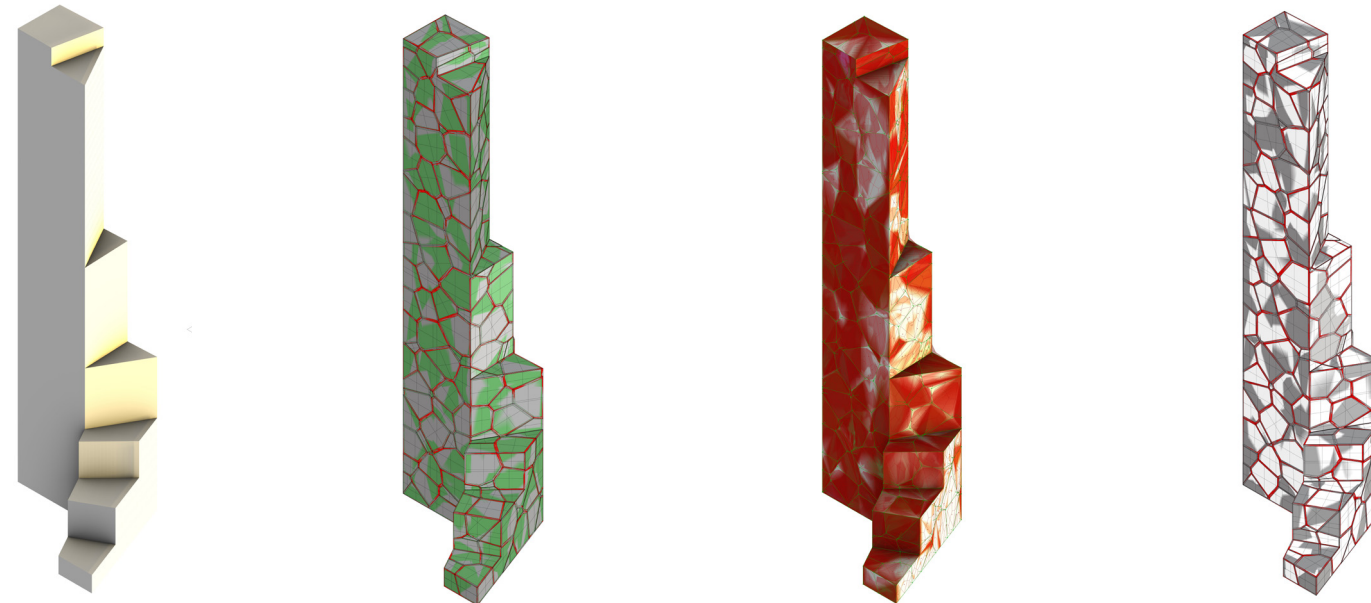
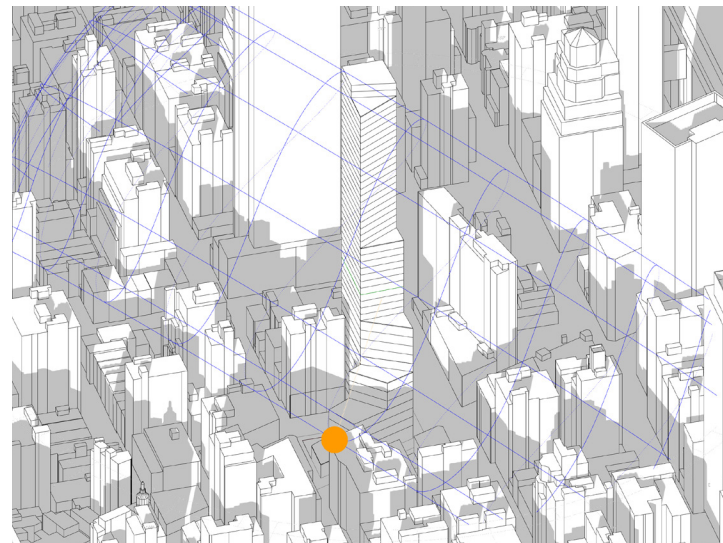
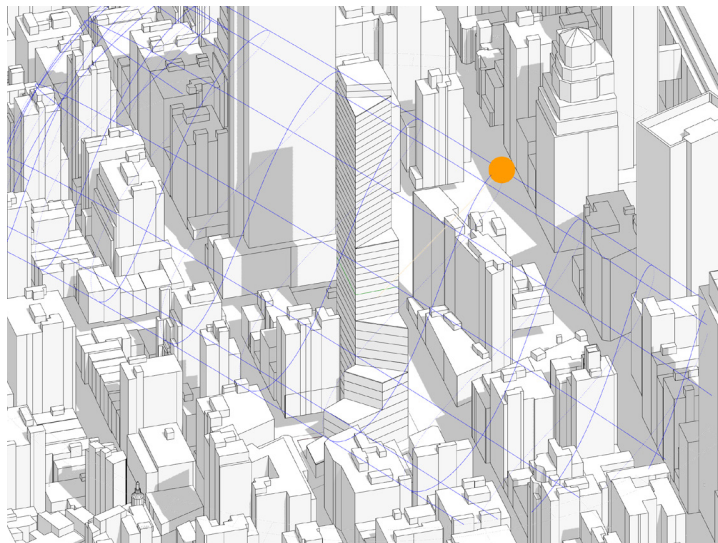
- Zoning Districts
- Commercial Districts
 - Manufacturing Districts
 - Residence Districts
 - Parks
 - Battery Park City

Supporting Zoning Layers

- Transit Zones
- Administrative Boundaries
- Boroughs
- Basemaps
- Subways
 - Building Footprints



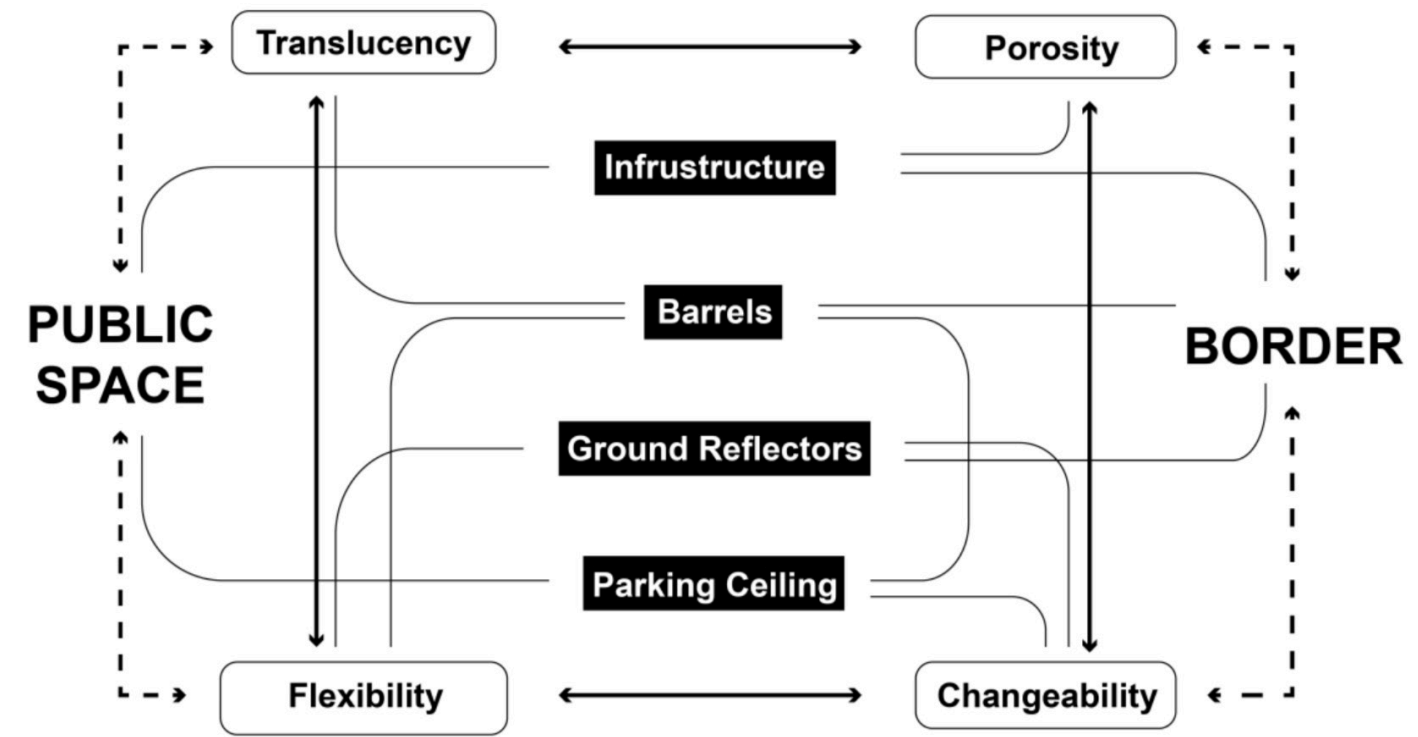




07 TRANSSCALARITIES

Summer 2023
Instructor

History Theory Elective
Alex Kim



Flash Installation : Architect at Rush Hour**Designer : AGENCY****By : Pallavi Jain****Columbia GSAPP****Transscalarities, 2023****Instructor : Alex Lim**

The El Paso traffic barrel installation project is an excellent case study of urban activism that addresses the political conflicts, controversies, alliances, activisms, dissidences, and solidarities of the US-Mexico border. The project aimed to promote equity, accessibility, and cross-cultural interaction to challenge power structures that hinder social, economic, and cultural integration. The project's architects drew inspiration from the challenges of architecture students who commute daily from Ciudad Juarez, Mexico, to El Paso for their architectural design training.

"Borders are much thicker than we imagine," said architect Ersela Kripla. In conversation with AN (*Architect's Newspaper*), Architect explained that "cross-border issues are a daily way of being" for the students. In her and Mueller's fall studios, students range in age from 20-50, and many work full time in addition to their studies. Around 30 percent of students cross the border every day for school. The students at TTU-El Paso play a vital role in realizing the installation, actively contributing their skills and creativity, symbolically bridging the gap between El Paso and Ciudad Juarez, the installation fosters alliances and solidarity with communities on both sides of the border.

Flash Installation² aligns with the goal of tactical urbanism, which aims to make cities more equitable by utilizing simple interventions like traffic barrels to highlight the bureaucratic force that has resulted in the militarization³ of the US-Mexico border.

1. *Architect's Newspaper*, Dec 2015

2. *Agency Architecture*

3. *Architects deploy traffic barrels to make a U.S.-Mexico connection*. (2016, January 19).



It showed how pedestrian infrastructure like traffic barrels could serve as a powerful vehicle to press for social justice and highlight issues of territorial autonomy. Flash Installation blurs the lines between public and private realms. Moreover, its ability to transform underutilized spaces into vibrant hubs encourages social interaction and community engagement. In doing so, Flash Installation challenges preconceived notions of how space should be used and invites individuals to rethink their relationship with their surroundings.

This also highlights how territorial scale operates in real-world issues like immigration and border politics, and how urbanism can facilitate tangible change. The project's impacts go beyond its immediate communities and highlight broader territorial issues influencing integration and mobility policies at national and global scales. It has the potential to resonate beyond its immediate communities and impact policy debates on national and global scales, creating further opportunities to foster developments towards a more just

and equitable society. The mobilization of U.S. borders and the immigration policies have heightened debates on territorial politics, and this project is an example of how small-scale intervention can serve as a harbinger of change.

In conclusion, by focusing on issues of mobility, autonomy, and territorial conflict, the El Paso traffic barrel installation poignantly highlights the power of urban interventions to challenge and create change in power structures that traditionally have limited social, economic, and cultural integration. This project serves as an example of how small-scale interventions can have far-reaching impacts, highlighting the broader debates surrounding territorial politics and their ramifications for border policymaking. Such urban activism provides a template for other interventions and interventions, creating small but practical and powerful incursions into pressing global issues.

References :

1. https://www.archpaper.com/2015/12/el-paso-architects-explore-border-politics-temporary-installation-disused-bus-depot/#google_vignette
2. <https://nextcity.org/urbanist-news/el-paso-tactical-urbanism>
3. <https://agencyarchitecture.com/project/flash-installation/>

1. *Architect's Newspaper*, Dec 2015

2. *Agency Architecture*

3. *Architects deploy traffic barrels to make a U.S.-Mexico connection*. (2016, January 19).

08

ARGUMENTS

Summer 2023
Instructor

History Theory Elective
Gregory E Cartelli

SHARED
PERFORATED
MINIMUM
TEMPORARY
URBAN

LIGHT HOUSE

NOMADIC
HIGH-RISE
FLEXIBILITY
DOCUMENTARY
PROTOTYPE

Columbia GSAPP**ARGUMENTS****Instructor: Gregory Cartelli****Light House by Rachaporn Choochuey****By: Pallavi Jain****UNI: pj2421**

The Light House is a semi-temporary dwelling consisting of several perforated walls that shape the 11.5 meter-squared living space while selectively filtering external elements. Rachaporn Choochuey's architectural creation has garnered attention for its innovative design and intriguing interplay between form and function. While it presents itself as a beacon of ingenuity, a closer inspection prompts to question whether it genuinely addresses the challenges of light and architecture, or if it is merely an arrangement of materials that compromises fundamental aspects like privacy and safety. Additionally, an examination of Choochuey's material choices in relation to visibility, the perception of isolation within the design, and its impact on the surrounding community, reveals both commendable accomplishments and areas ripe for further consideration.

At its core, "Light House" is poised as a bridge connecting the complexities of light and architectural design. However, an argument can be made that this bridge, while architecturally compelling, may not span all the necessary gaps. The compromise on privacy and safety emerges as a notable concern. The design ethos that emphasizes aesthetics and luminosity could potentially overlook fundamental human needs, leaving inhabitants vulnerable. Choochuey's ambition to harmonize light and structure might inadvertently eclipse the very essence of habitation – a space that safeguards its occupants. While the play of light may enchant the senses, the lack of consideration for privacy might cast a shadow over the inhabitants' sense of security. It is crucial to ponder whether the allure of design should outweigh the foundational requisites of human dwelling. The speaker stated that these concerns are subjective and depend on each person's priorities when it comes to comfort and space. However, privacy and safety are fundamental elements that should be consistently considered in every design. It is vital to ensure that the occupants of the living space feel comfortable in their private space without feeling like they are being watched. Therefore, privacy and safety concerns should be addressed in the initial design stage. Moreover, the Light House project raises questions about the choice of materials used in the construction process. One

of the questions asked in the inquiry concerned the factors that influenced the selection of materials used in relation to visibility. Visibility is a critical aspect of the living space that can impact the occupants' comfort and how connected they feel to the outside world. If the occupants feel too isolated from the neighborhood, it can make them feel detached from their surroundings. Therefore, the choice of materials used in the Light House project should be selected with visibility in mind to create a sustainable balance between lighting, privacy, and visibility.

Choochuey's material selection for "Light House" undoubtedly exhibits ingenuity. The scheme is composed of several layers of perforated walls designed to filter external elements and to create the needed semi-transparency of the structure. While such walls allow natural light to enter the living space, they also make it difficult to have a clear view of the outside. This could lead to safety and security concerns, especially in urban environments where it is necessary to have a clear view of the surroundings. Therefore, while the choice of materials and layers of perforated walls help to create a flexible and easily moveable living space, they also create the potential for reduced visibility and security concerns. While affordability is an undeniable driving factor, one cannot help but reflect on the potential of augmenting the materials' combination. However, as astutely pointed out, a nuanced exploration into the combination of solid materiality and translucency could further enrich the design's relationship with visibility. The suggestion of integrating solid materials with fabrics, interwoven alongside translucent elements, introduces a compelling tension between opacity and transparency. This duality reflects the multifaceted nature of human existence – a balance between privacy and connection. The introduction of solid materials into the fabric of the design infuses a sense of groundedness and permanence. It anchors the ethereal quality of translucence, providing a tangible presence that echoes the very essence of shelter and protection. This union bridges the gap between the intangible and the substantial, creating an architectural language that resonates on both conceptual and experiential levels. Translucency, on the other hand, introduces a dance of light and shadow that transcends the conventional boundaries of architecture. The play of light through translucency creates a dynamic interplay that transforms spaces with the passage of time, nurturing an ever-evolving environment. As the sun's rays filter through, the interior is gently bathed in a diffused glow, establishing a harmonious connection between the occupants and the outside world. This interplay fosters an immersive experience, blurring the lines between interior and exterior realms.

The very design that offers a solution to the pressing global housing crisis paradoxically generates a palpable sense of isolation. Although designed to address the global housing crisis, the Light House project seems to reinforce the sense of detachment from the neighborhood, which intensifies the level of isolation. This project focuses solely on providing a dwelling solution and does not consider the impact it has on the neighborhood or how to connect the residents with their surroundings. Therefore, the design could benefit from finding more ways to connect the occupants with their neighborhood and surroundings without compromising their privacy. Among the array of inquiries, the notion of a prevailing sense of isolation stands out as a crucial facet that merits deeper contemplation. It demonstrates a strategic and innovative response to the challenges of light and architecture, simultaneously raises questions about the unintended consequences of its spatial arrangement, particularly with respect to fostering a sense of community and neighborhood integration. In the context of the speaker's talk and the subsequent debate, the issue of isolation seemed to remain overshadowed, perhaps unintentionally, by the focus on functional attributes and practical considerations. However, this facet underscores the importance of engaging with the social and psychological dimensions of architecture, amplifying the narrative surrounding 'Light House'.

Rachaporn Choochuey's "Light House" clearly shows how creative and new its design is, while also dealing with how light and architecture work together. However, it makes us think more deeply. The feeling of being alone that we sense in "Light House" makes us realize how important emotions are in design. It's like a reminder that buildings should also make us feel good and connected, not just look interesting. And this feeling of being alone makes us think again about how this design affects people. It's not just about the people living there, but also about how it fits into the neighborhood and brings people together.

To sum up, "Light House" is a great example of creative architecture. But it also challenges us to look closely and see if there are some things we could improve. It reminds us that architecture is about more than just looks – it's about how we feel and how we connect with each other. So, "Light House" is not only a showcase of clever design, but it also asks us to think hard about its details and how they can have a big impact.