

**Rohan Parekh  
Portfolio**

Columbia University  
Graduate School of Architecture  
Planning and Preservation

Advanced Architectural Design 2019-2020



## **PROJECT I**

### **ART INCUBATOR**

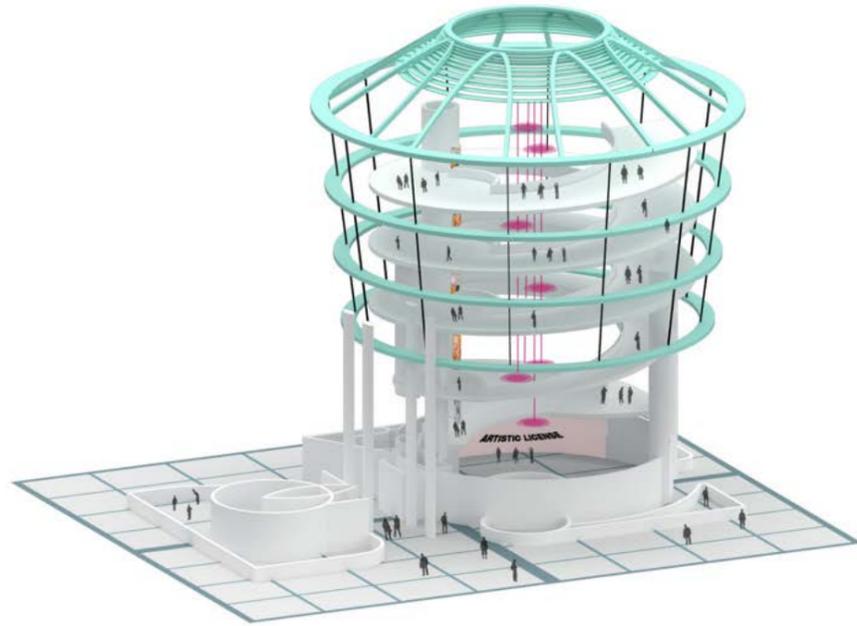
*Studio: The Museum Stripped Bare By (Or To?) it's Galleries; with Instructor Mimi Hoang, Eric Bunge*

*Partner: Ghaidaa Gutub*

As with most cultural and technological shifts, the transformation of the museum as a type has been gradual enough to go largely unnoticed, or at least incrementally accepted, by the public.

Meanwhile, the development of new art forms either outpaces or is sometimes constrained by the spatial and technical capacities of the spaces in which they are displayed or enacted to the public. Has the museum as a building type grown too complex? Or should we, as architects, embrace this increasing complexity?

This studio proposes both a brief and counter-brief — envision a hypothetical art museum without galleries or envision a hypothetical art museum with only galleries.



*Guggenheim & The Louisiana Museum  
without their Galleries*

### Gallery Analysis and Void Representation

Our approach to tackle the counter brief with this proposition was to concentrate on Collection, Conservation and Display. Our precedents were the Guggenheim and the Louisiana Museum of Modern Art.

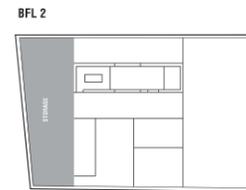
Our proposition is to rethink the museum space as an art warehouse/ storage, in which we are proposing to provide storage capacity and holding space for other city museums which do not have the means to store large scale or multiple small scale paintings ; as well as provide a range of viewing experiences with our design or the art that we are storing for the public, by opening up this compact idea.

The sheer volume of art itself provides a learning opportunity, as one moves from landing to landing we recall the elements of the seamless landscapes of the Louisiana as landing impersonates landscape, making it and the armature of the art within it the display and recalling the flow of the guggenheim which allows for multiple viewing opportunities of the art .

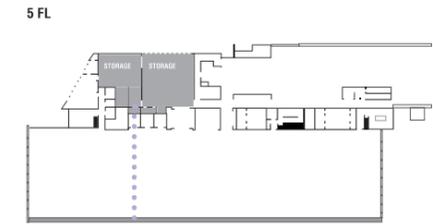
We are challenging the efficiency and compactness of a regular storage facility where art is generally stored by rather providing an ornamental meandering manner of viewing it.

### Storage Accomodation:

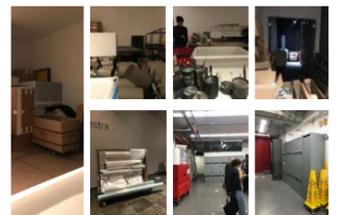
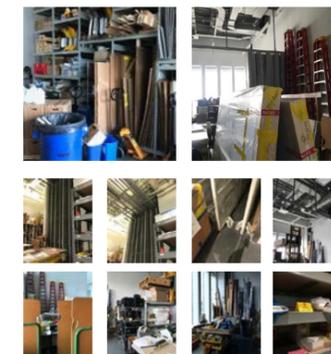
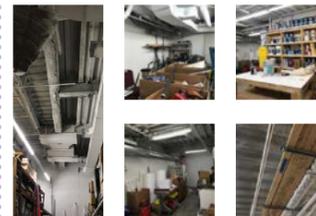
*New Museum*



*Whitney*



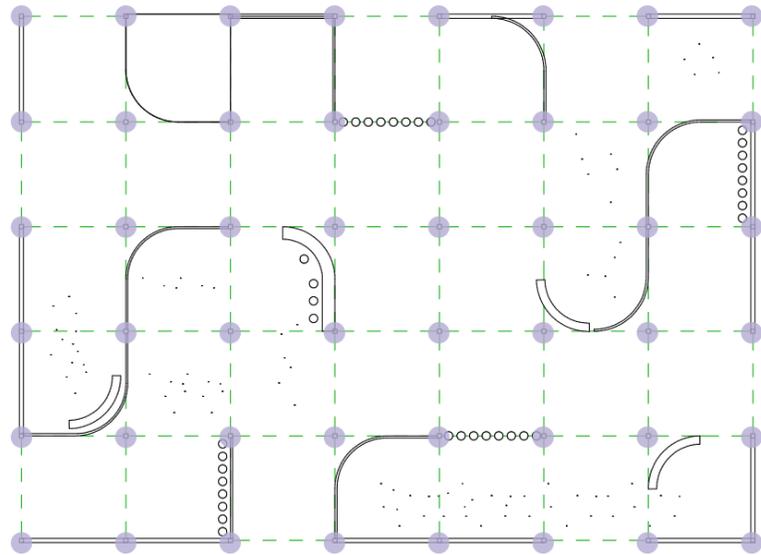
*MET Breuer*



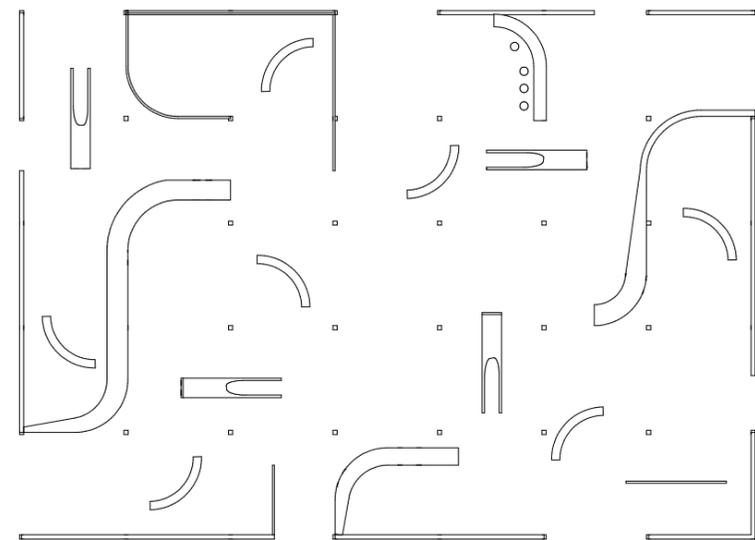
### New York Museum Storage Study

We also visited some of New York's most celebrated museums. We learned that there is little room for storage and most of their art storage was off site and in a storage facility.

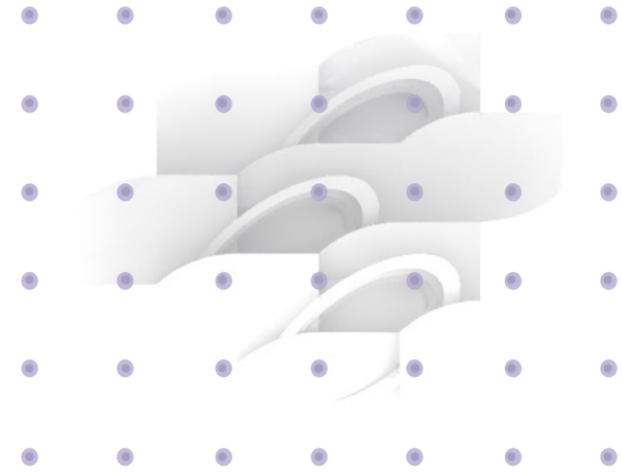
POINTS & CURVES



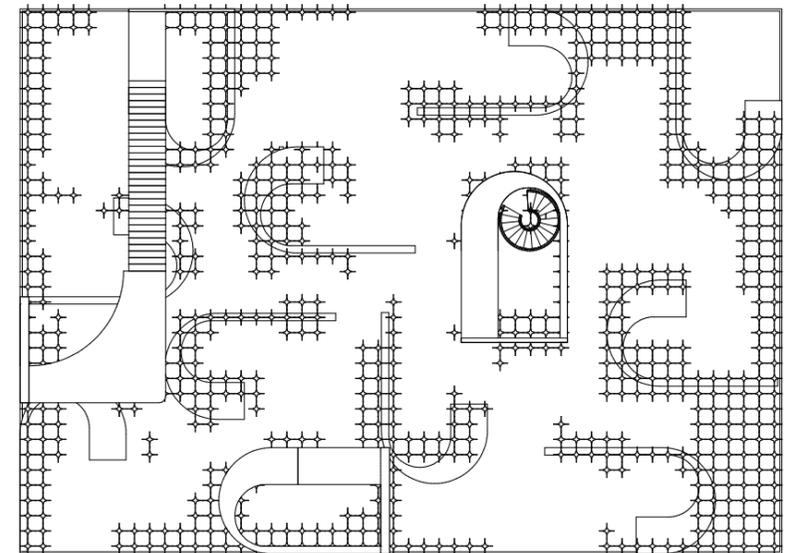
RAMPS & DIVIDERS



UNIFORM FLOOR PLATE CONCEPT DESIGN1



ART ARMATURE & SUPPORT

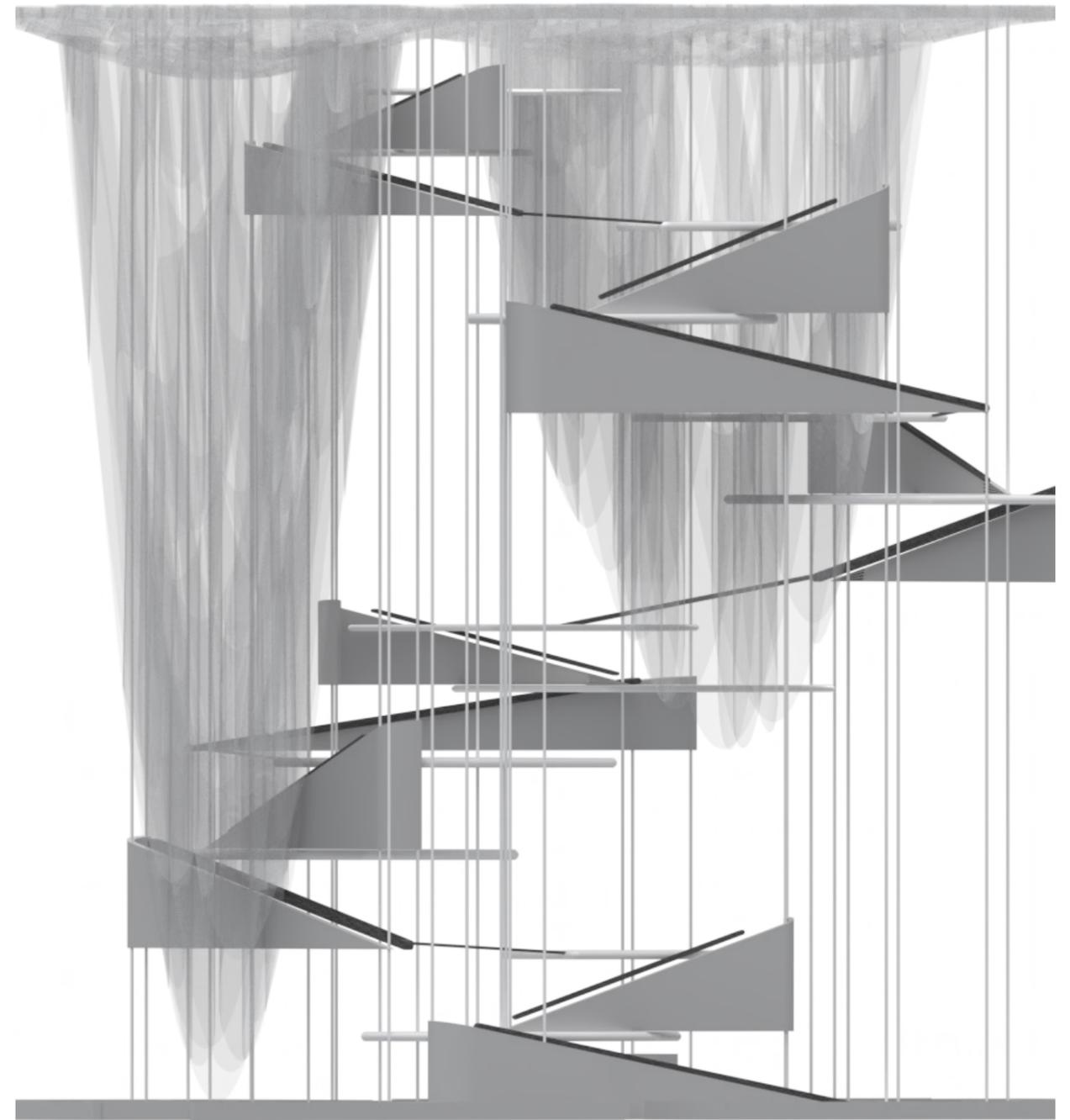
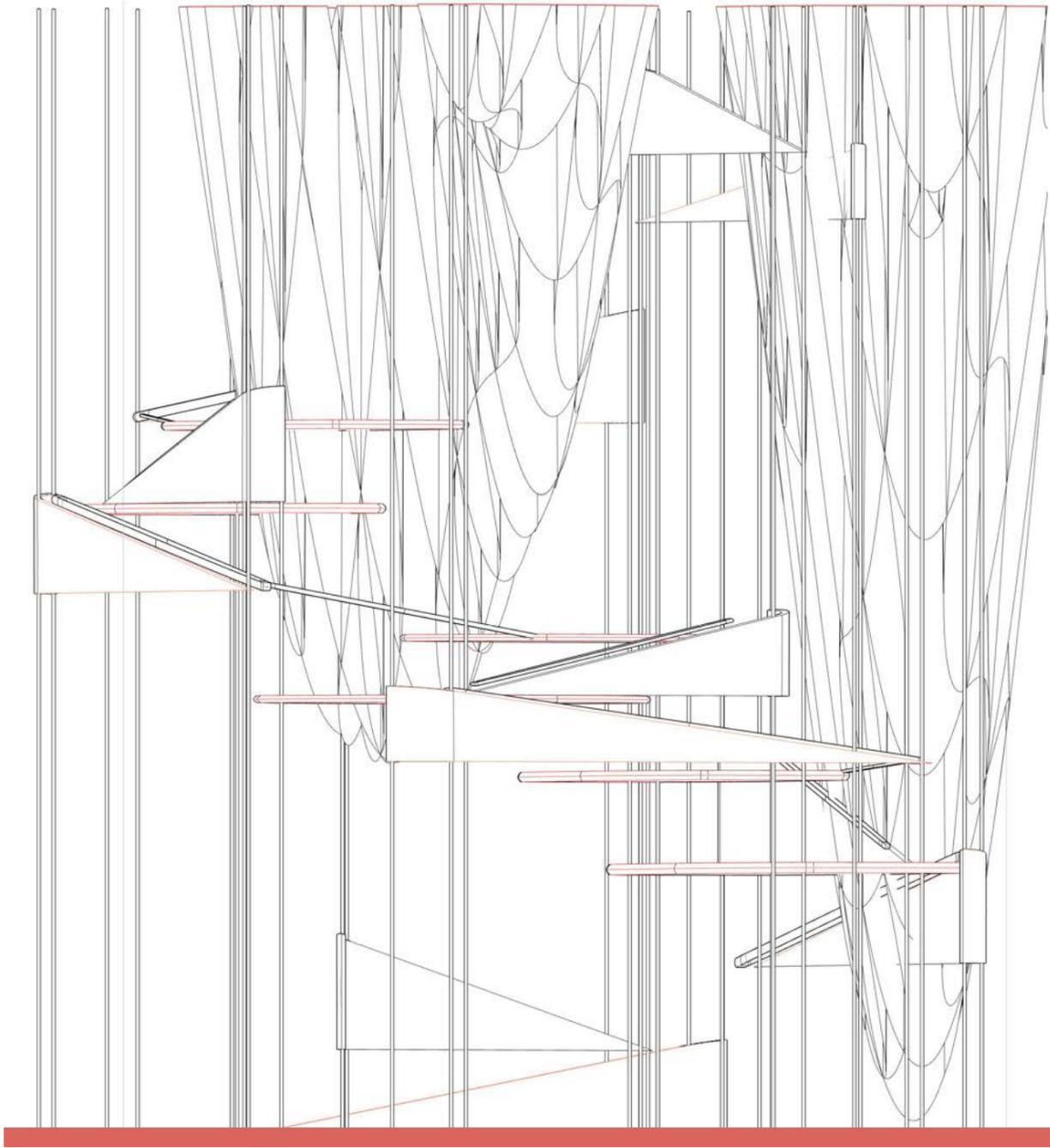


### Site Division Strategies

Points and curves to track and create the seamless nature of multiple entries and exits. Deriving from the Louisiana and it's multiple accessways and meandering topography.

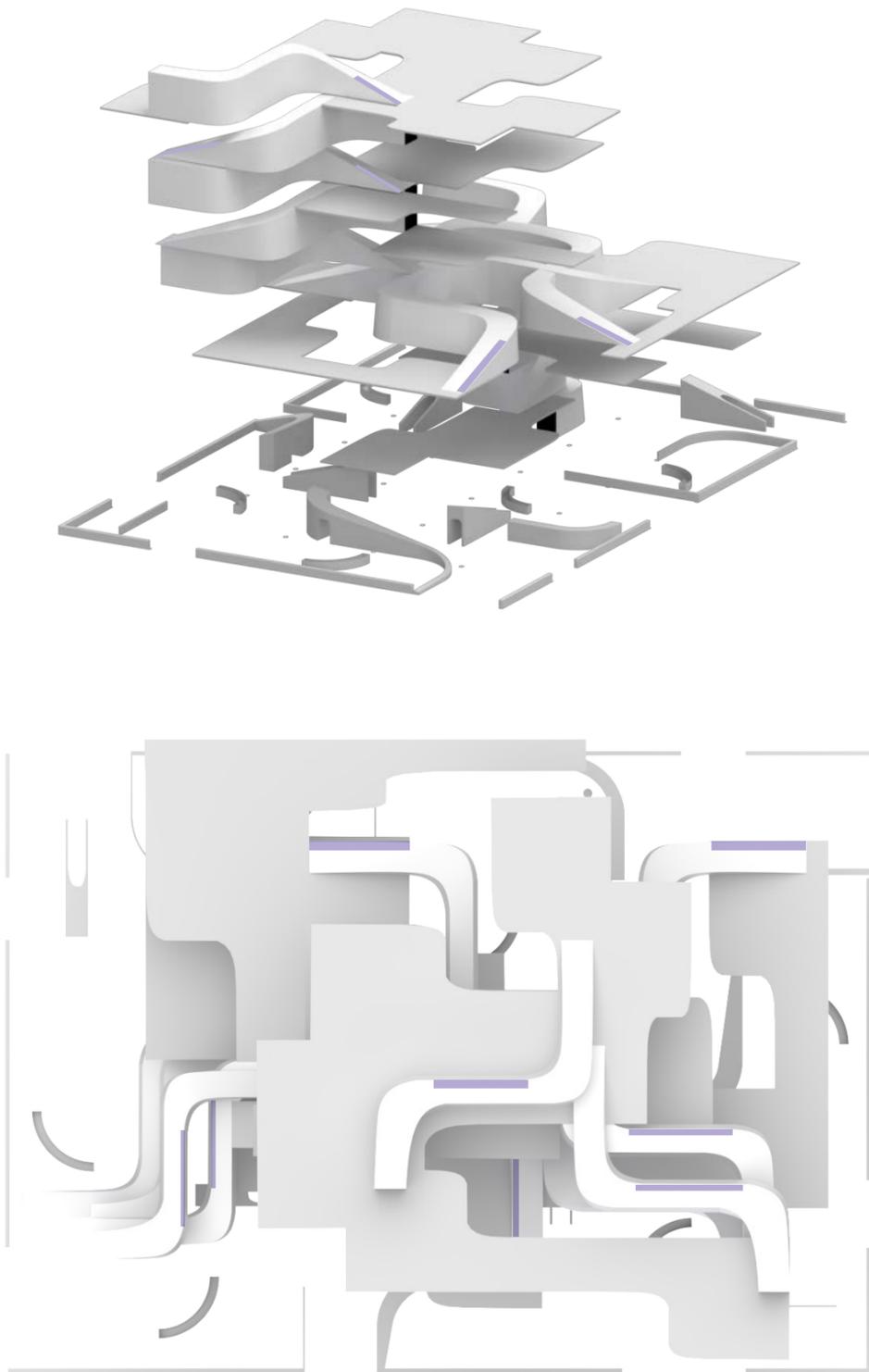
### Cross level viewing studies

Semi Rigid Frame with looping ramps derived from Study 1  
Steel Armature filled in within the potential negative space created from the ramps from Study 2.



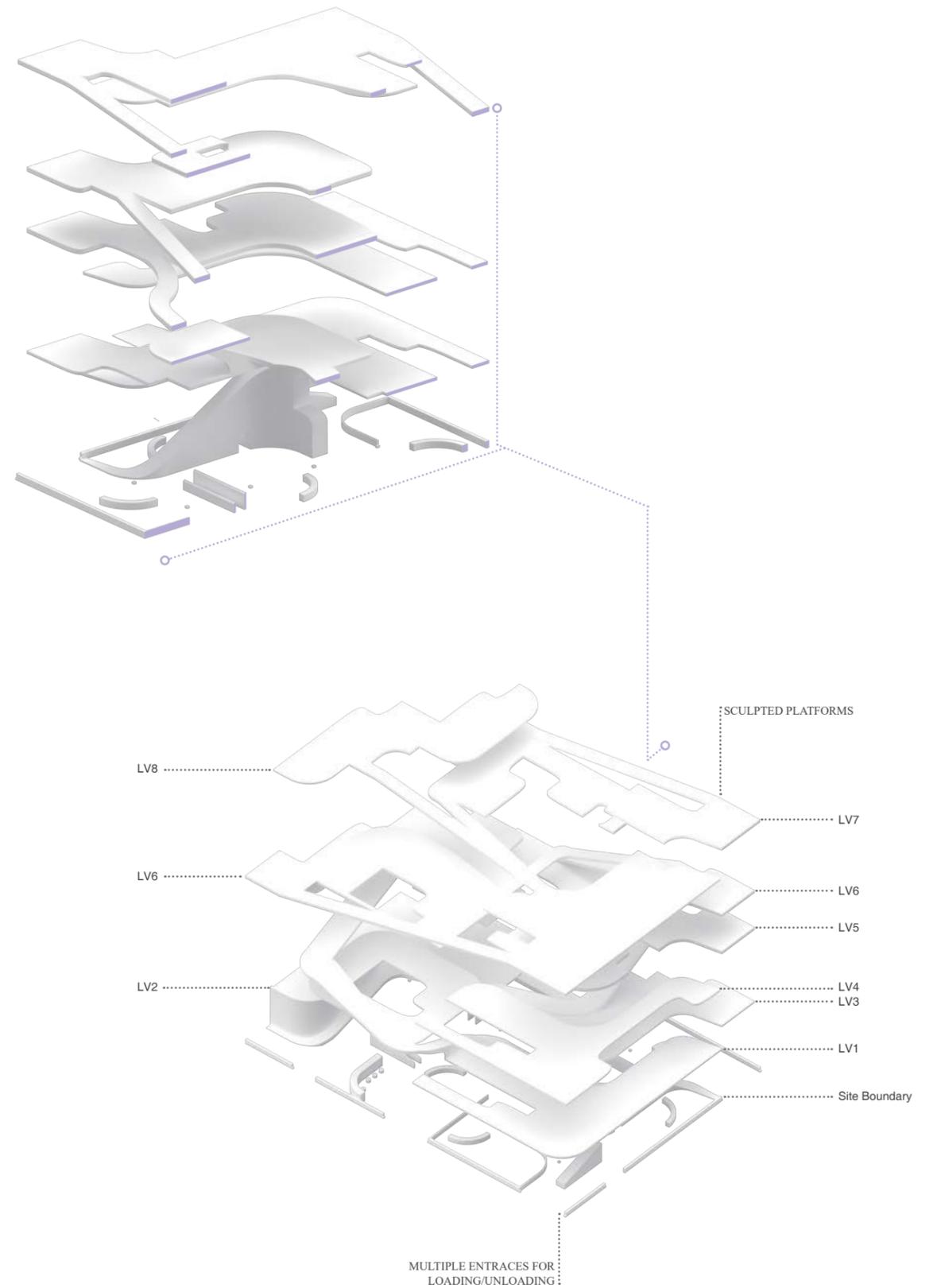
**Closer Look at Study 2**

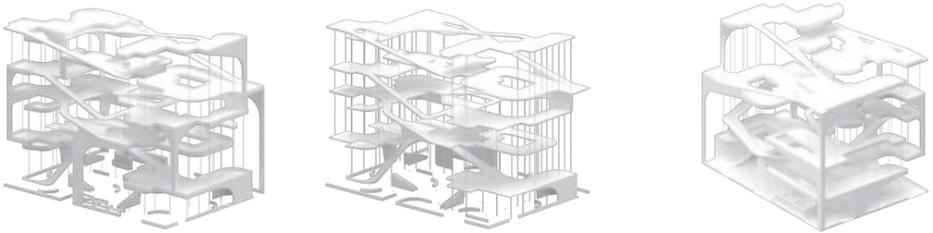
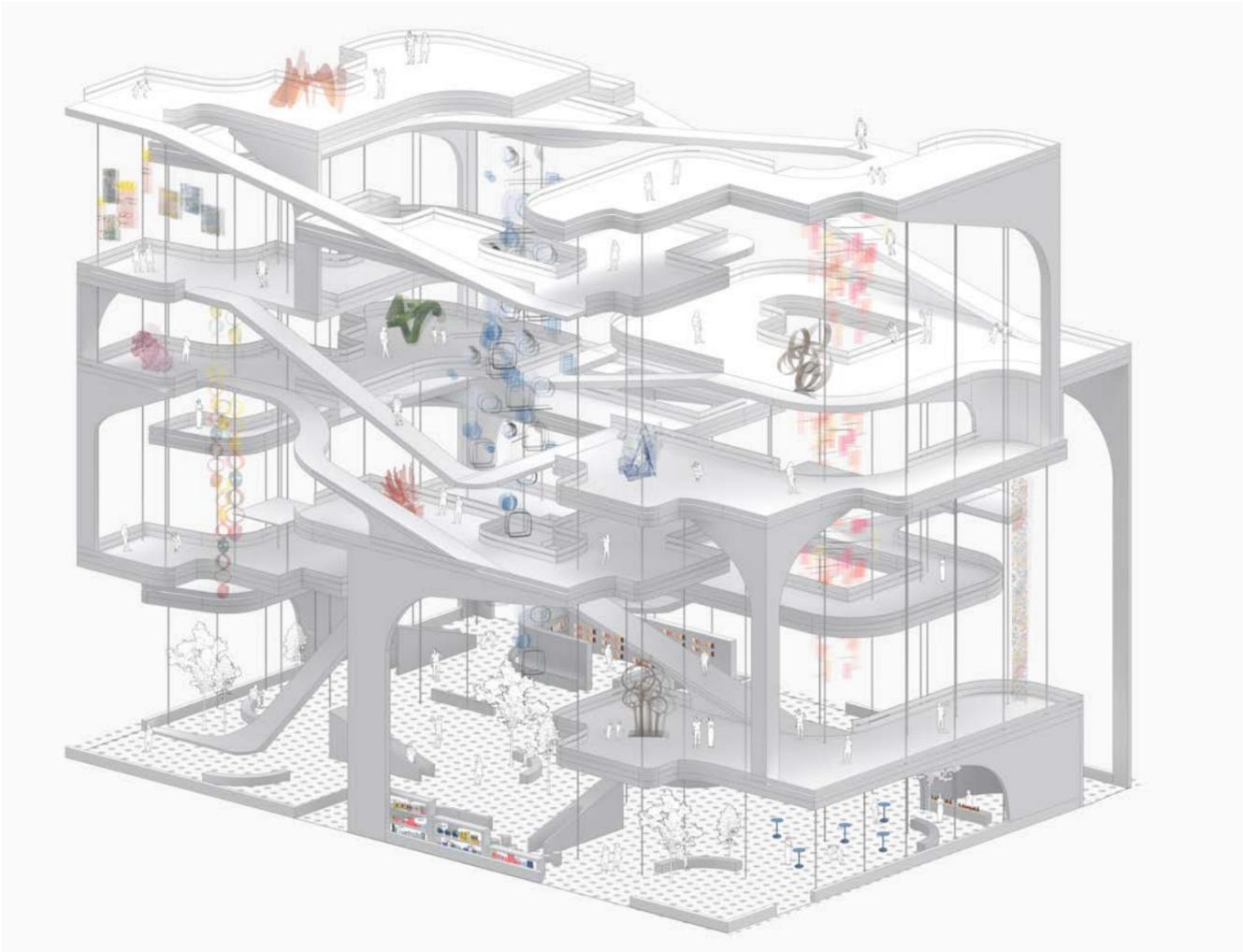
Waffle life steel structure meandering through the entire space creating partial and filtered viewing experiences as showed



**Refined Cross Access Viewing Study**

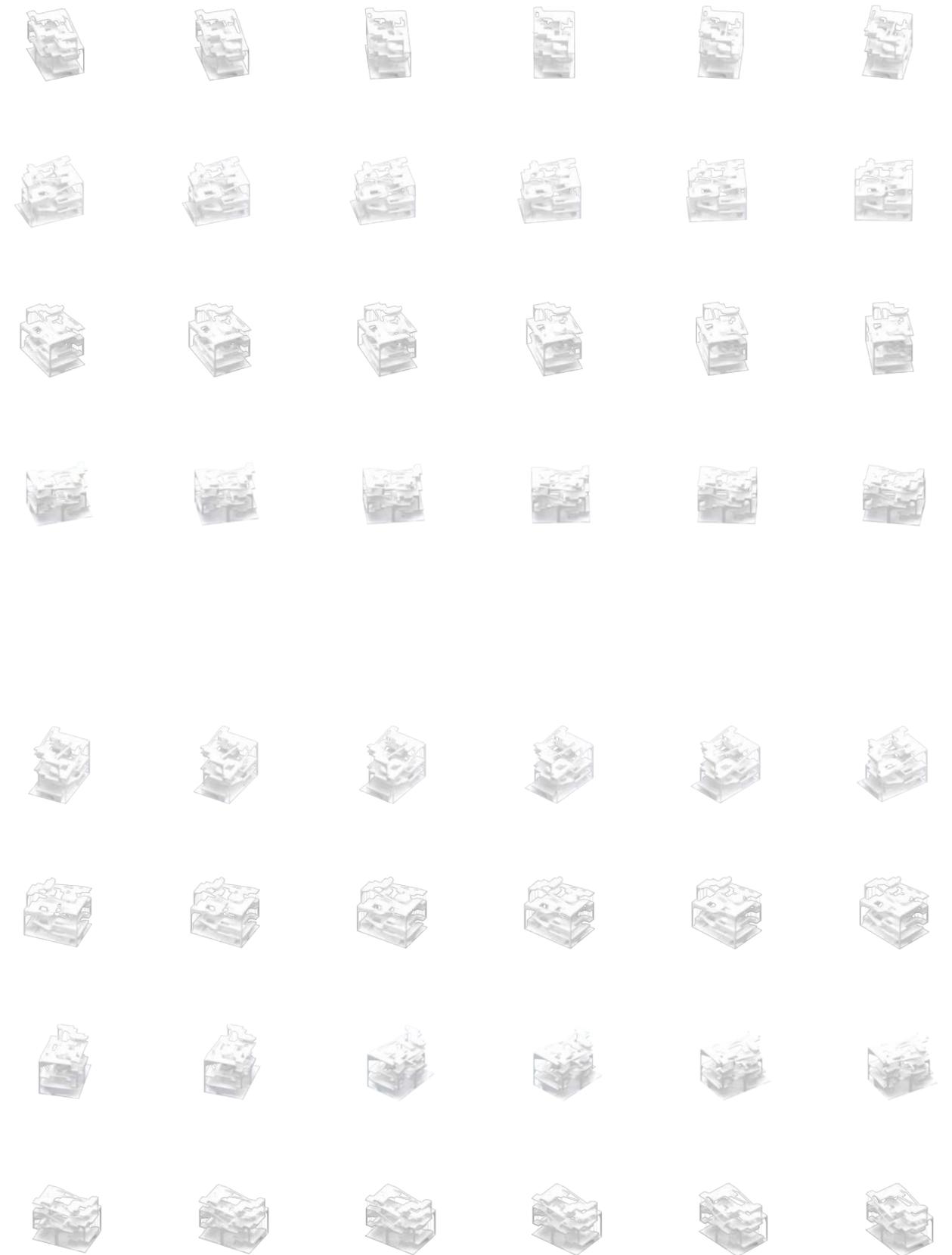
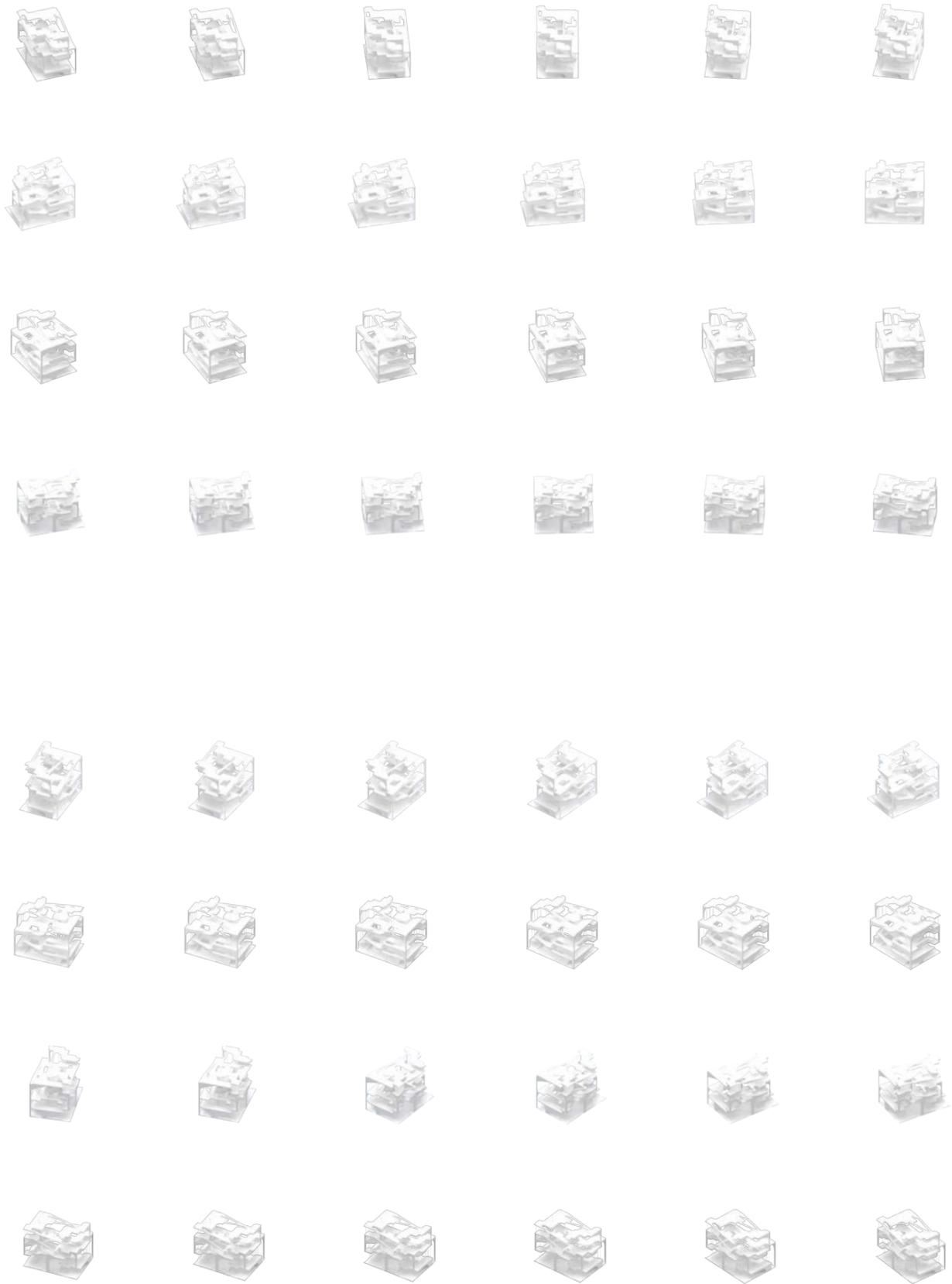
Plates shaped from a combination of the studies with curved voids, allowing for multiple vantage points to view upper and lower levels. Slab Ramps starting to curve along the perimeter of the curved floor plates, connecting the levels. Storage to go on the perimeter rather than filling in.

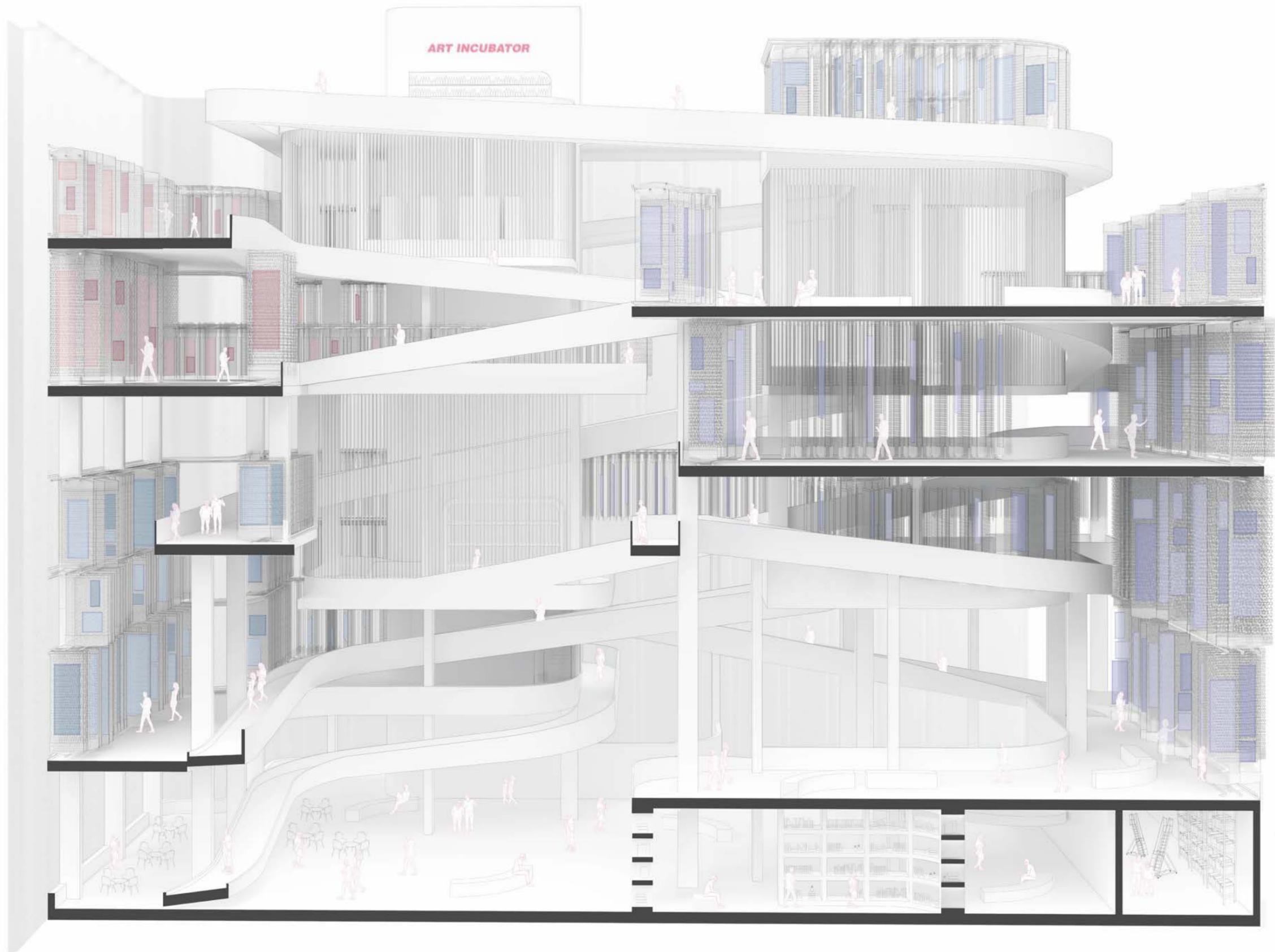




**Blanket Approach to Seamless Circulation and Multiple Viewpoints Across Levels**  
 Plates reshaped to include outward flowing ramps and ramps smoothly crisscrossing through staggered floorplates, all along the perimeter to create a gradual drop in the plan.

**Section Through Length of the Site**

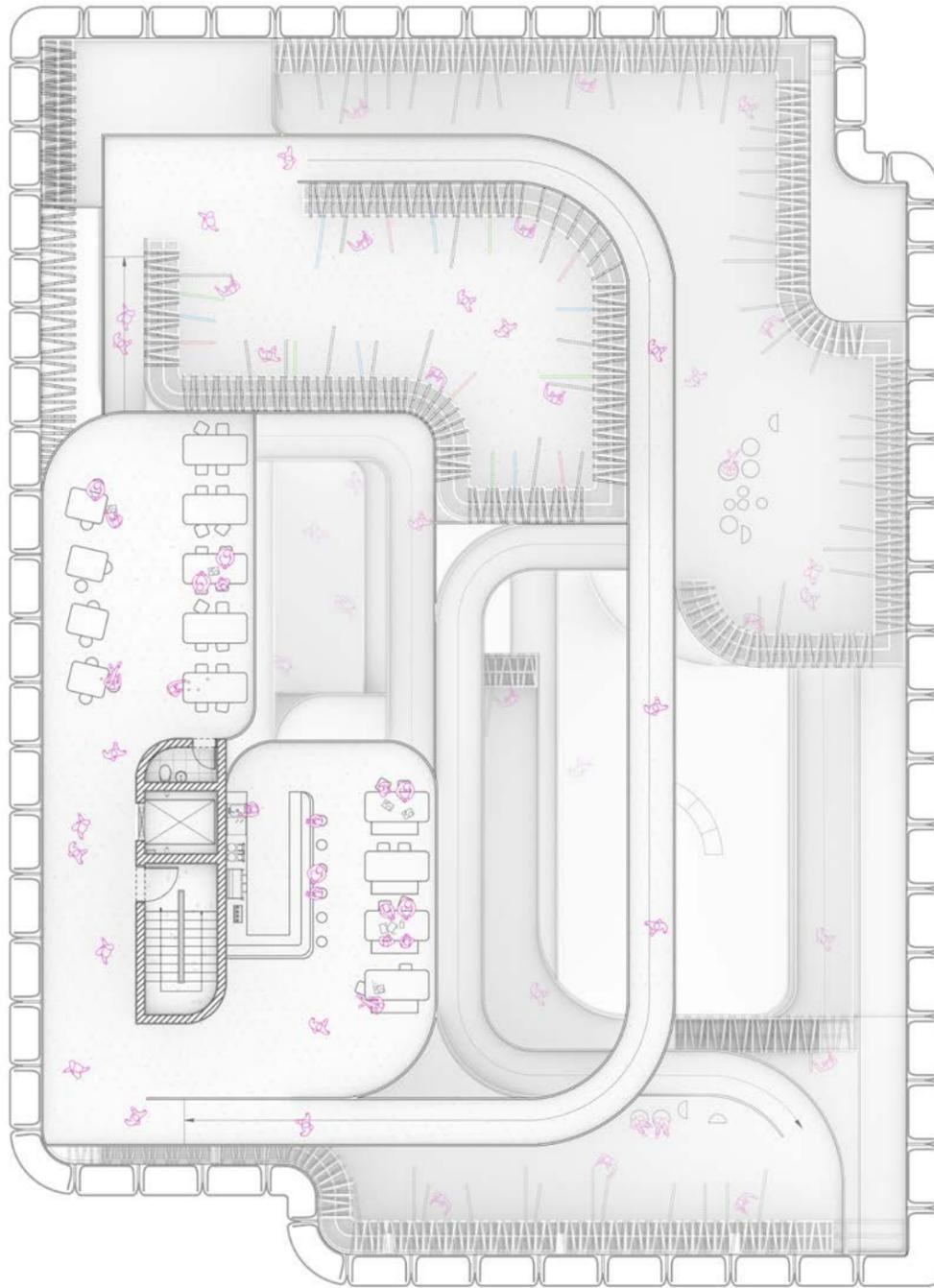




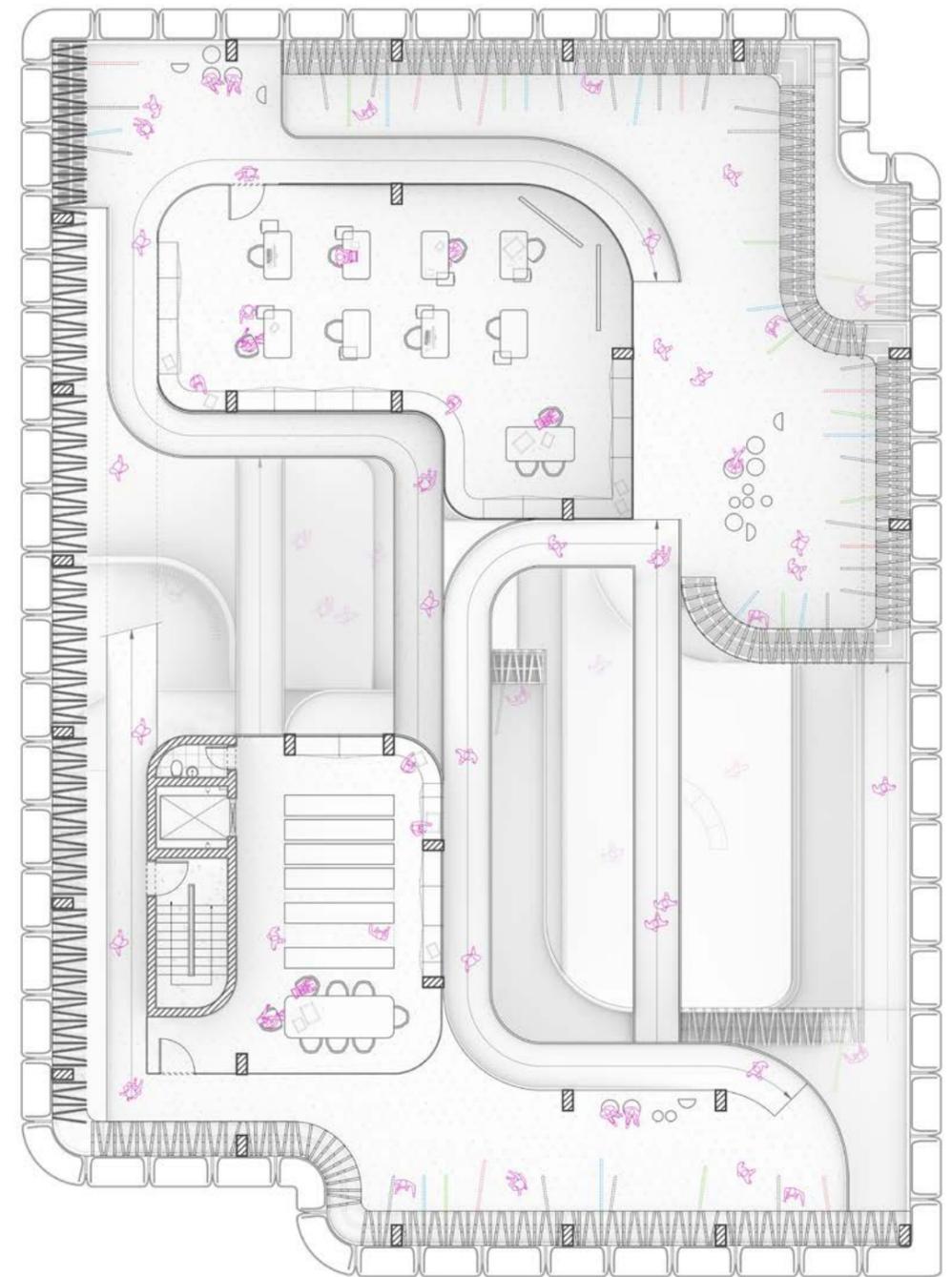
**Section Through the Length of the Site**

Showing the Criss Cross of Ramps and layering of enclosures, art infrastructure and movement systems in place.

Top Floor Plan



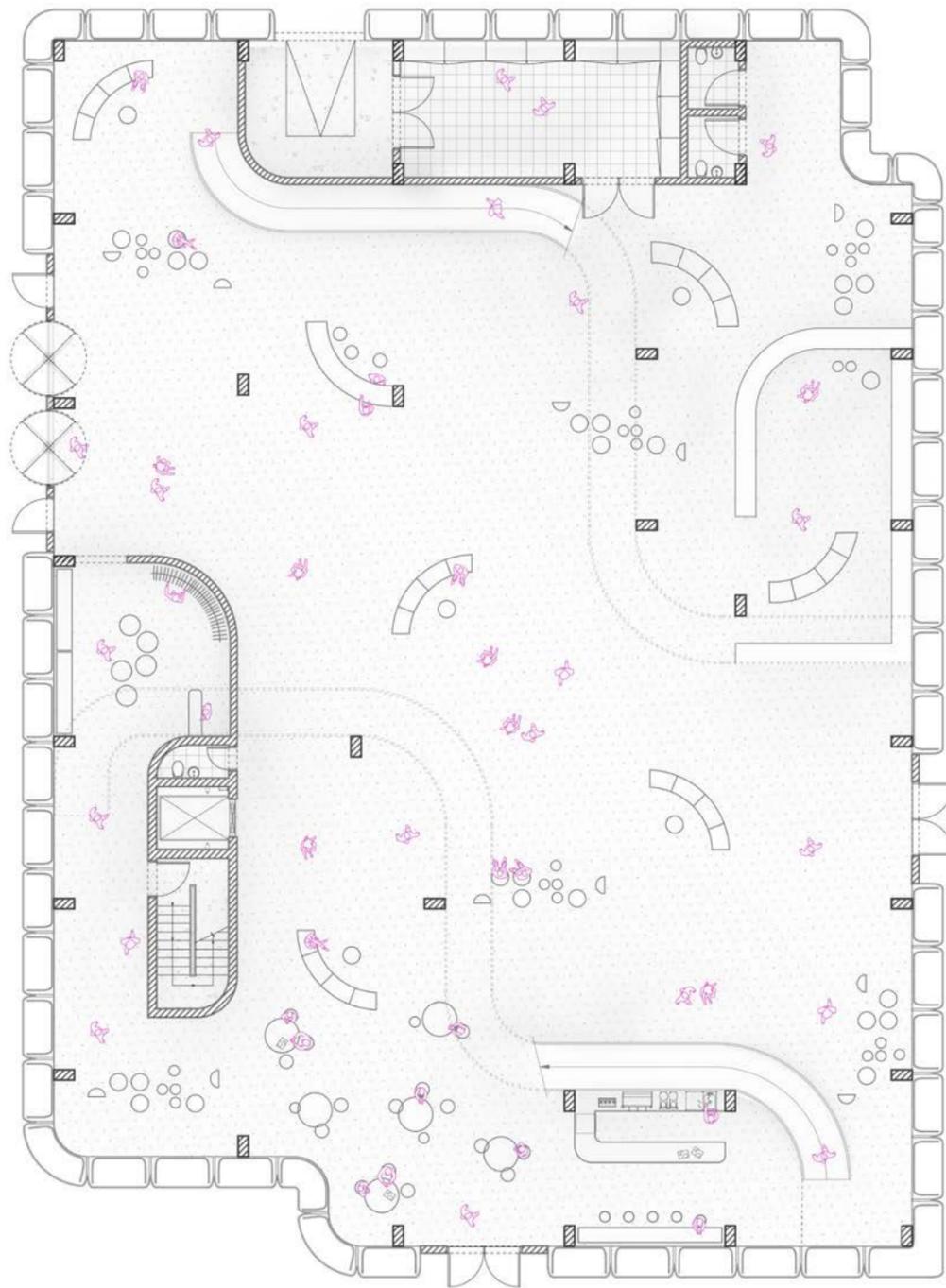
5<sup>th</sup> Floor Plan



**Art Storage on Movable and Operable Shelves**

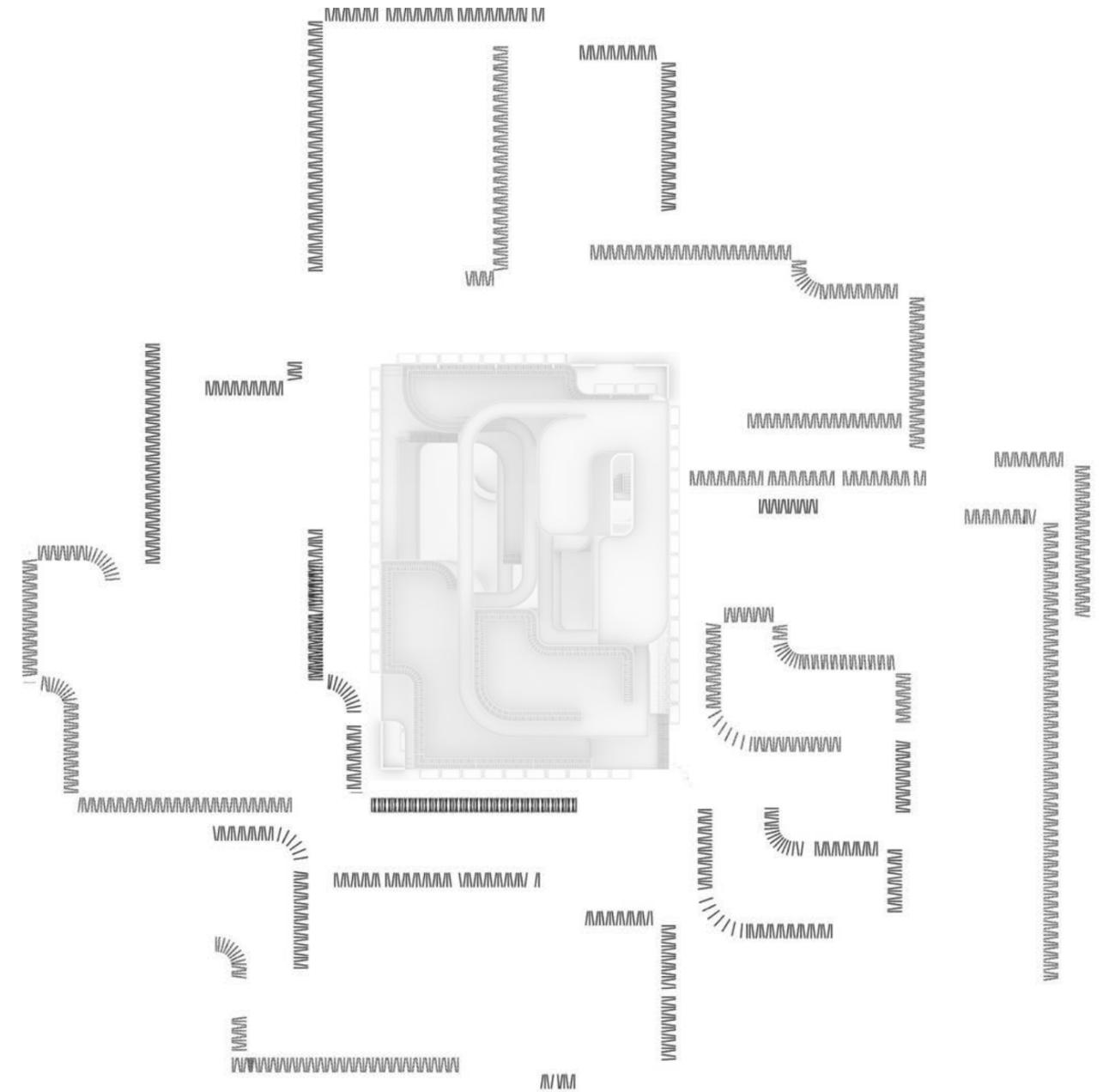
Arranged across the perimeter of the floorplate marked away for the ramp exit and entry. The filtration of light through the moving of art frames and shifted ramps allows for interesting and unique environments on each level.

**Ground Floor Plan**



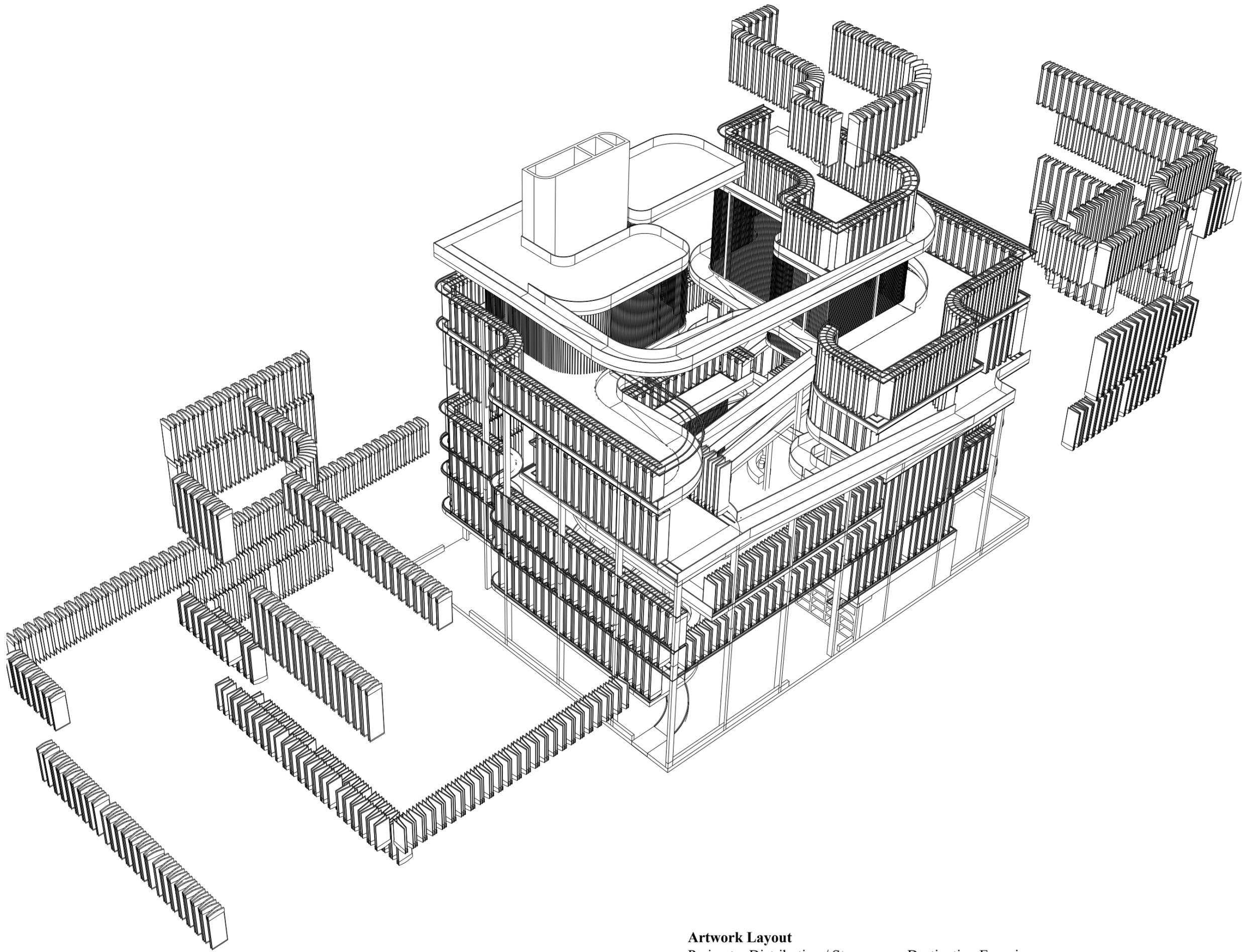
**Open Ground floor Layout with Library and Loading Dock**

Smooth entrance and movement to the higher levels with a gradual rise in the two entry ramps

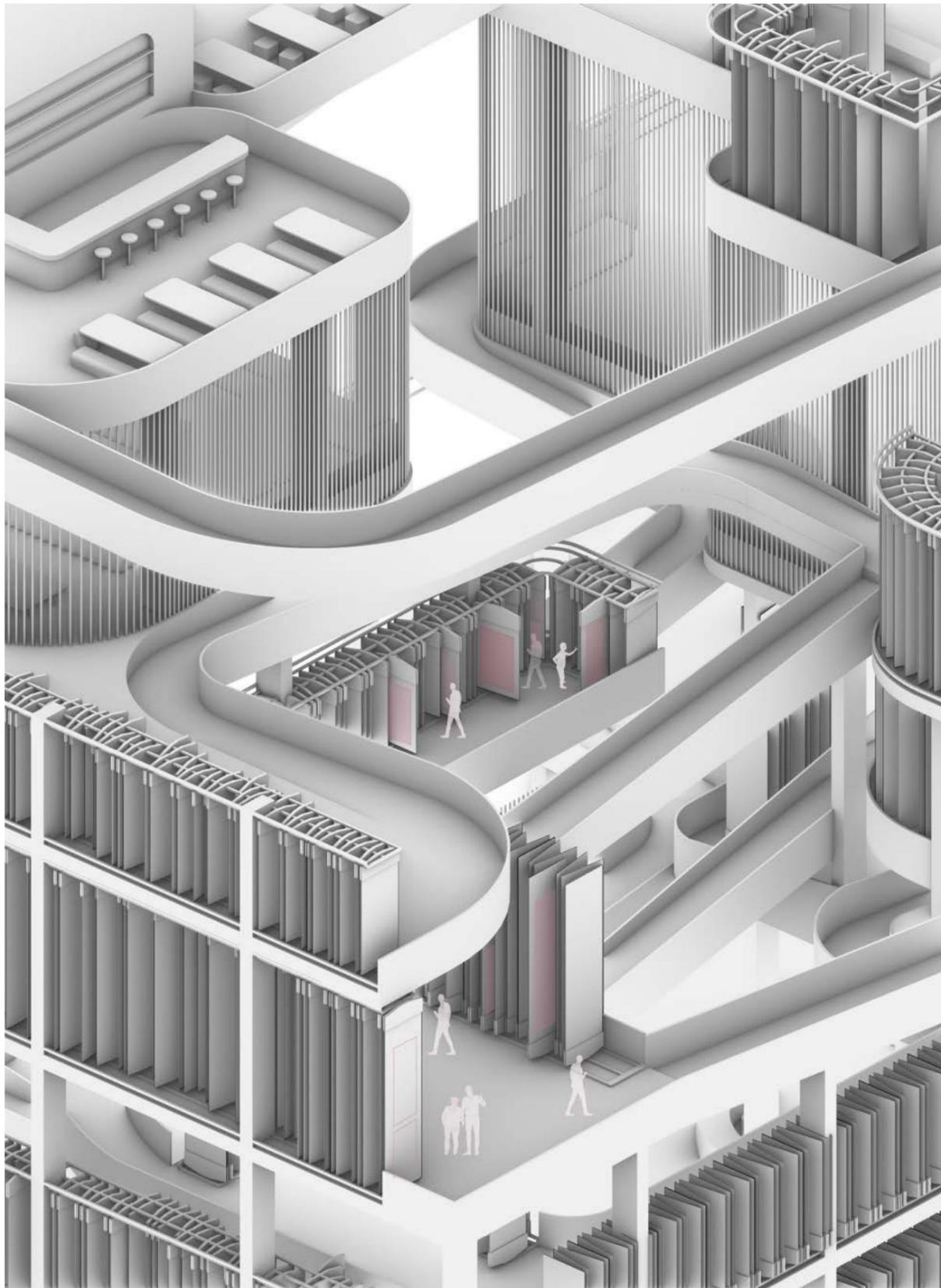


**Artwork Layout**

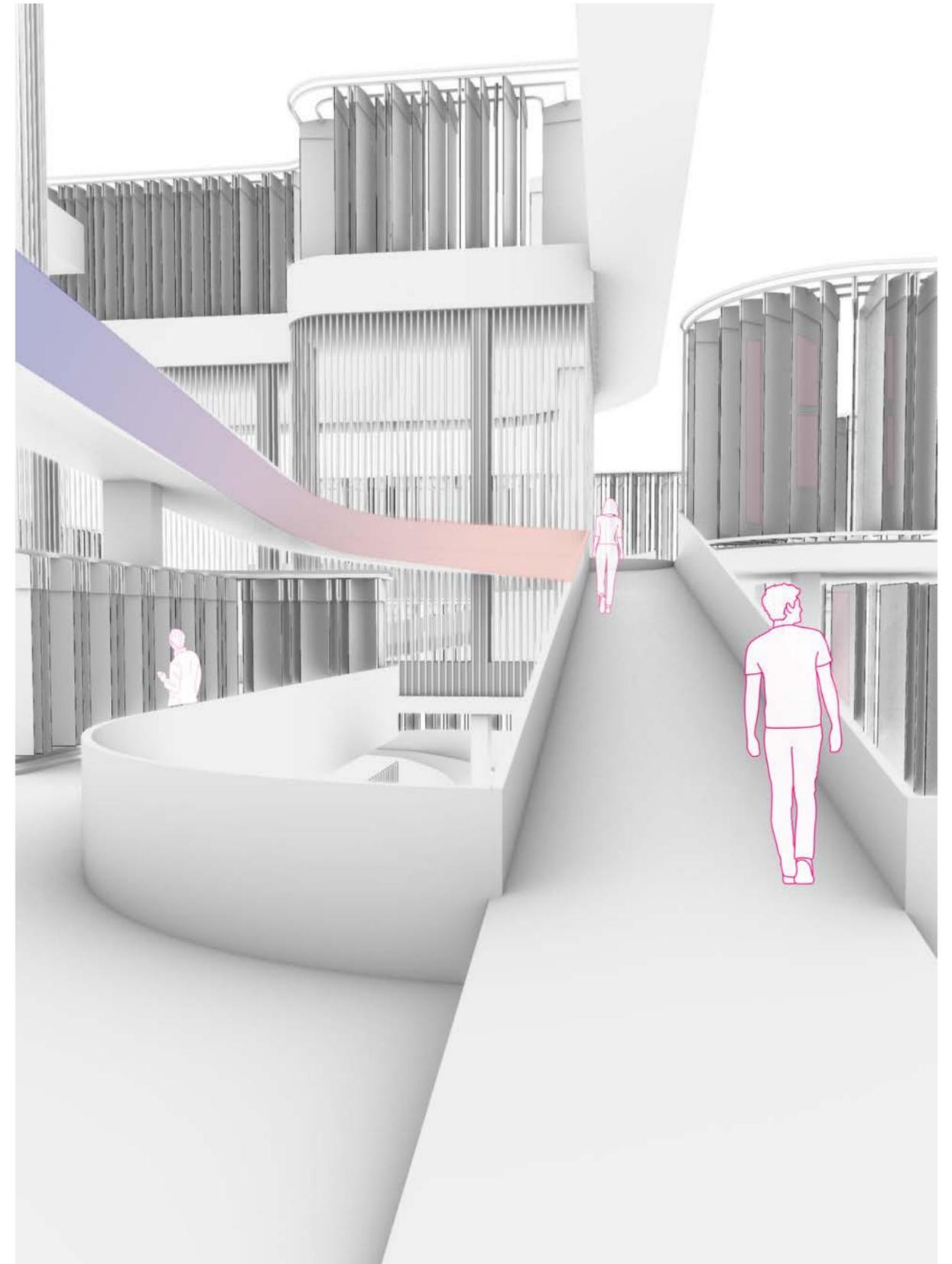
Perimeter Distribution / Storage as a Destination Experience



**Artwork Layout**  
Perimeter Distribution / Storage as a Destination Experience



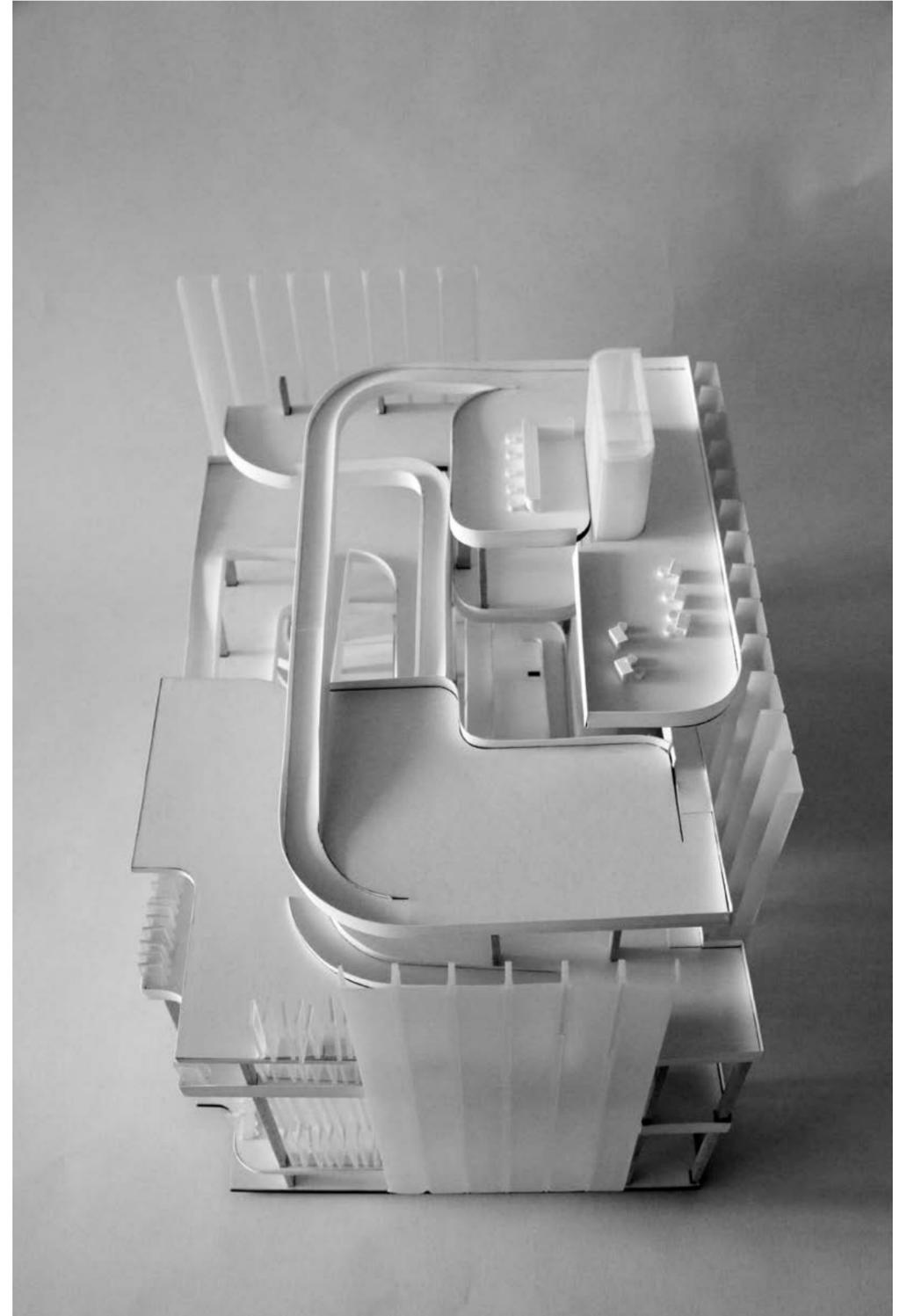
**Immersive Axonometric / Interactive Scenario**  
Looking into the higher levels and cross ramp access.



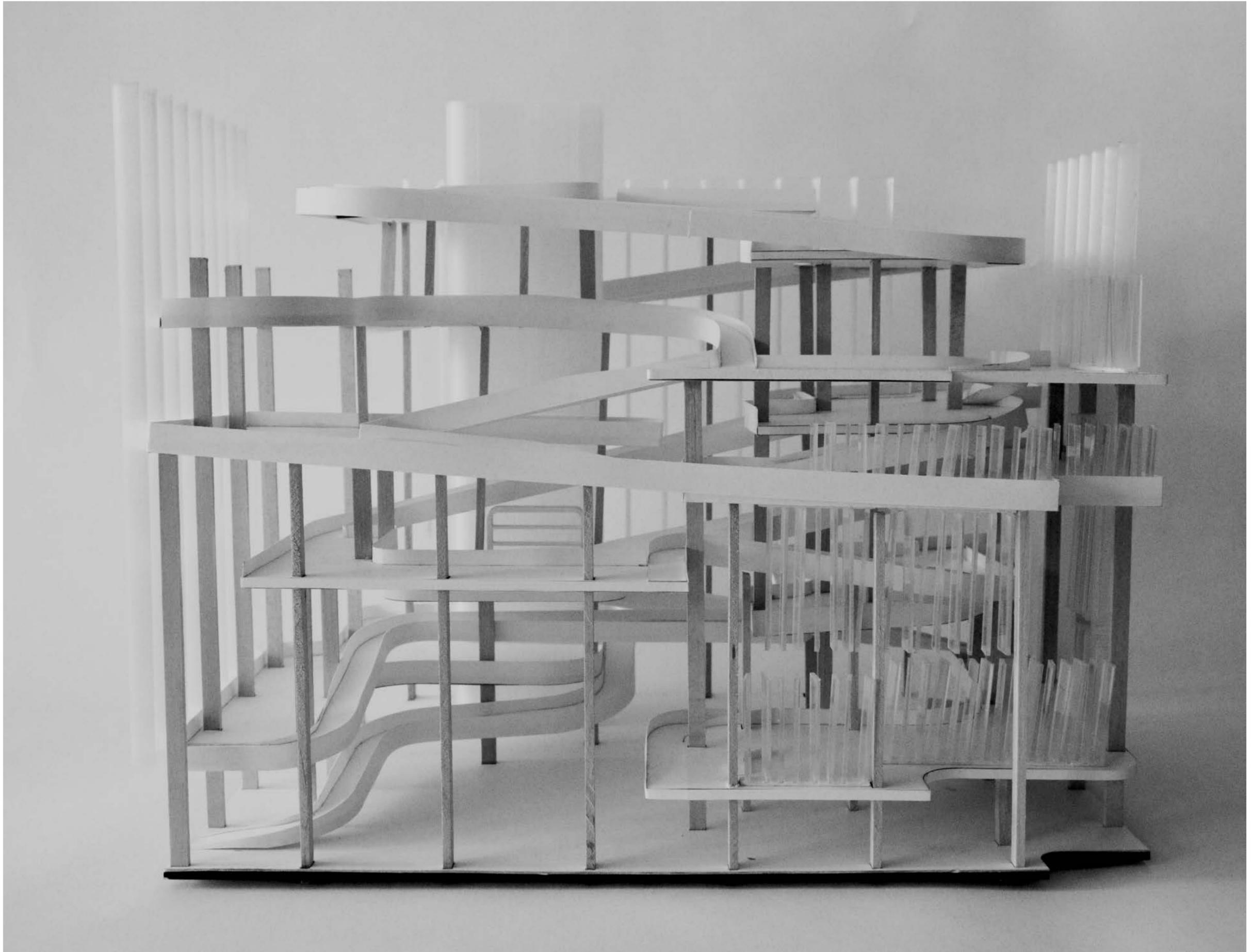
**Ramp Walkthrough**  
Moving from level 5 to 6, looking over a cross connected ramp. Clear sight and viewpoints in multidirectional angles and other galleries.



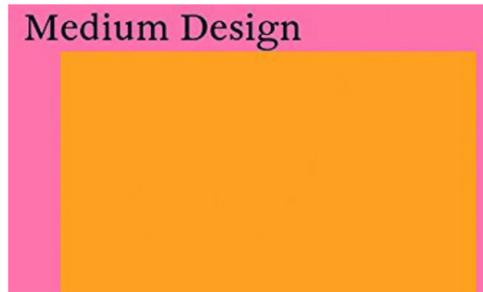
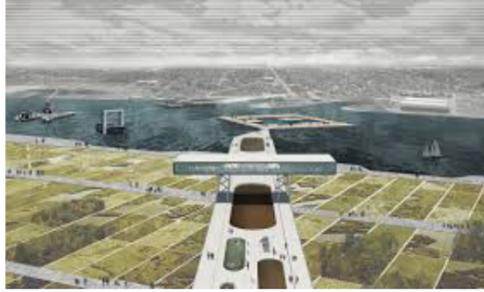
Section Model 1:500



Section Model 1:500



Section Model 1:500



**PAPER I**  
**THE ARCHITECTURE OF CLOSED WORLDS**

*Seminar: Arguments Discussion Series with Prof Jonah Rowen*

*Collectively Written with Aayushi Joshi*

The history of twentieth century architecture, engineering and design has been strongly linked to the conceptualisation and production of closed worlds. (Kallipoliti, 2018, p. 15). There lies a significant shift in the adaptation of the ideology in establishing a system that is self contained and detached from the external world- 'the desire to shrink the world, to populate it (Barthes, 1957, p.66) in a way that all the bodies can be monitored in this very ecosystem, without its reliance on the world outside. Design and technology, post world war, became more self-centric, trying to retain its self-dependency and power to regenerate, manipulate and control its own environment, without interference. Planning for this utopia wasn't as far-fetched as one would have thought. Two of these strong examples lie in the planning of EPCOT, Florida and the Biosphere 2, Arizona. EPCOT was planned to be a living prototypical blueprint of the future developing solutions to city problems. Inhabitants would live in a 50-acre climate controlled snow globe where they'd be protected from rain, heat, cold and humidity. The sphere shaped community acted as a wheel with the hub of transportation located in the center and routes branching out from here to all sectors of the city. While this planning was chalked out, it did not materialise the way it was visioned. The next example- the Biosphere 2 was originally meant to demonstrate the viability of closed ecological systems to support and maintain human life in outer space. The underlying philosophy was that biological systems are self-organizing and self-regulating on a global scale, a notion that met with considerable skepticism in the scientific community. (Dan, 1996). These real-life architecture manifestos portray the attempts to implement the vision of closed systems into reality but the contention emerges of the feasibility of these very implementation in the practical realm. Is it prudent to the development of civilization as a whole?

Investigating into details of the functioning and the careful planning of these two closed systems, there have been stages on which the two architectural visions haven't been congregated as one would imagine. Walt Disney's idea of covering the EPCOT city with a spectacular clear shield dome, as one similar to the Buckminster Fuller's Manhattan dome was ridiculed as impractical and over-ambitious. The project has now been built as entertainment center, rather than a prototypical futuristic city module for several sites in America. Similarly, Biosphere 2, after being unmanageably maintained by the founding researchers, was transferred to Columbia University. Columbia University changed the virtually airtight, materially closed structure designed for closed system research, to a flow-through system, and halted closed system research. They manipulated carbon dioxide levels for global warming research, and injected desired amounts of carbon dioxide, venting as needed. (Crook, 2018). The Biosphere 2 demonstrated depletion of oxygen levels, biographic imbalance and constant dependence on external sources to maintain the once ambitioned closed system. Closed worlds might be reflecting political proposition. It has become profitable real. Closed worlds might be reflection a commitment to a deeply rooted fantasy of architecture producing nature, yet they are fully integrated within the very fabric of reality, In a way, all buildings and large chunks of cities are closed worlds- atmospheric enclosures that define collectives (Kim & Carver, 2015, p.11). But does the choice of being shut out from the external surrounding 'efficient'. When we consider the sick building syndrome, the ventilation restriction was increased from 5 cfm/person to 40 cfm/person on the accounts of generative air pollution by the HVAC systems. This dominantly defines the reliance of a fully integrated office building's reliance with its surroundings even after being in complete control of its environment. So do these facts imply that open systems are better direction to head towards for a sustainable future. Open system, being unlatched, enable the interaction between buildings and their surroundings much more convenient and dependance free. Would it be convenient to stimulate this as an ecosystem to make reliance much more coherent and beneficial.

In an Open system there is room for the 'unexpected' since it is connected to its surroundings and is directly or indirectly affected by them, however in a closed system there is no interaction with the outside world or any exterior factor that could have an impact on the system. If there is any loss of species or an adverse effect to a variable in an open system, there could be several factors that are involved in it's regeneration and it may not even return in the exact same manner. In a closed system the regeneration of new systems occurs from the available sources from within, affecting the structures of the system itself and readjusting the organization of the finite resources available. The system does do an efficient job regardless of the finite amount, since it is emulating the functions of the real world and trying to improve efficiency. Genetic drift is an example that can explain this phenomena; in the case of an unplanned or unforeseeable natural disaster which wipes out certain species, there is a long period of regeneration which takes place that stabilizes the ecosystem to maintain a certain balance.

When there is a similar unplanned scenario occurring within a closed world, it will manage to recreate a similar state of balance by inventing means of homeostasis within the system with the raw materials it has ie it will work on the principles of self sufficiency and self reliance to create balance and order once again. In an open system we create measures for future accountancy and regeneration by institutions and structures such as the Svalbard Global Seed Vault which hosts hundreds of thousands of species of seeds and vegetation to preserve the agriculture umbrella and everything under it to recreate crop growth incase of a natural or manmade disaster.

In a closed world however there is a 100% reuse of all resources and components, even the waste which makes it seem like a renewable ecosystem with individual systems feeding off of the resources and using the energy from it and provide an output to maintain the closed world structure. Since every factor of this equation is calculated, ideally there should be a desired output for the input that is provided, however in this ecosystem there are units that digest the resources that they receive from the feeder and some units vomit creating undesired or unplanned outcomes which make them variables. Those who expel/vomit create room for error even in a closed system and increase the load on other units or individual structures of a closed world to increase efficiency to maintain balance. If Autodigestion is the goal within a 'sustainable' closed world then that would mean every unit in the ecosystem would have to allow for almost no disobedience and create zero waste; using every scrap of compost/output/unwanted resource there is; which even in an ideal case sounds impossible. To bring this example in tangible terms, if our closed world was the subway system, it is available to use for one and all with two rules, buy your correct ticket and maintain the upkeep of the system. Now there are individuals who will follow these rules and allow for smooth operation of the institutions in place and then there are individuals who will look to find loopholes within these rules or break them to create disturbances. The latter causes undesired outcomes in what was conceived to be a smooth system creating a planned output but now will have to have adjusted outputs for everyone. Here comes the need for external aid or help to maintain a smooth system or circular regeneration of the system as was desired early on ie penalties or MTA/NYPD officials to provide correctional aid. This is only referring to one example but what it highlights is the need for some coexistence or interaction between closed worlds and ecosystems to maintain a certain balance.

Our constant existence of being connected yet detached allows us to affirm ourselves by augmenting our containment as something simultaneously interiorizing and exteriorizing. Yet, our new communal existence with public space cannot exclusively be based on mediation of data and comfort of plants. (Kallipoliti, 2018) We are in constant hunt to the question of closed and open worlds while the scale of these very eco-systems are contextual to one another. This interdependency itself exemplifies the deep rooted absoluteness of closed worlds. While being in an ecosystem (closed world) that self-sustains, leaves a minimum impact on the environment and doesn't disturb its neighbours is a delightful ambition. However, the ambition of closed world as a euphoria provides resistance to the development of architecture, design and engineering. Hence, curbing the interdependence, and creating the bubble without 'opening your eyes' will find us in the voluntarily contained decision of interiorisation and resistant relationship with the bubble.

However if we are to benefit the most out of closed world's original intent and such planned efficiency structures, it is almost impossible to not involve multiple smaller / same sized neighboring systems to aid and assist the bigger ecosystem to achieve its goal, while doing so it fails the concept of closeness in its first sense. Medium design is a means of designing for variable rather than the stable ie accounting for the ever changing and this operative manner of thinking during the design process allows for increasing accountancy for the entire system and every interconnected system since there is no right answer but a definite desired goal. Medium design combined with the idea of closed worlds can allow for multiple such closed ecosystems to flourish and converse with each other, sharing information and adjusting, fine-tuning and ultimately working to be better with every iteration that gets generated. To recall our previous example of the Subway system, one city/nation can learn from the successes and failures of the other and improve upon its own and this idea of a feedback loop between organizations or individuals are countless if applied. Medium design allows for the design of the delta in an equation, which a single closed world cannot afford to account for, since there can be no 'planned' variable (unplanned outcomes is still a possibility), but with the addition of a delta there is a possibility for aid and assist to the closed world with whatever resources it might need.



## **PROJECT 2**

### **MURAKAMI ART COMMUNITY**

*Studio: Artist Housing and Artist Community Studio with VPPR Architects*

The studio examines the relationship between the creation of architecture and the creation of an artistic community. It interrogates the meaning of an intentional community through precedent studies and scrutinizes the gap that is invariably formed between the intentions of the architect and the unscripted act of living. The studio develops concepts and tools that can be deployed to design spaces that can allow individuals and communities to flourish on their own terms and accommodate collective and individual needs through a gradient of public to private space.

Murakami has moved frictionlessly among his multiple roles as artist, curator, theorist, product designer, businessman and celebrity. People feel very close to him, they are able to witness and at times enter his work with the manner in which they connect with it.

The themes for this project reflect the workshop culture followed in his studios. At 8:50 every weekday morning, unless he is not in Tokyo, Murakami leads the staff of his art studio, Kaikai Kiki Company Ltd., in a round of calisthenics. Then the employees go off to their various jobs: refining sketches on the computer, daubing paint meticulously onto paintings and sculptures. He makes art and sleeps, Even to the extent of sleeping in the gallery while he is setting up. He'll bring assistants and sleeping bags, and they'll cook there.

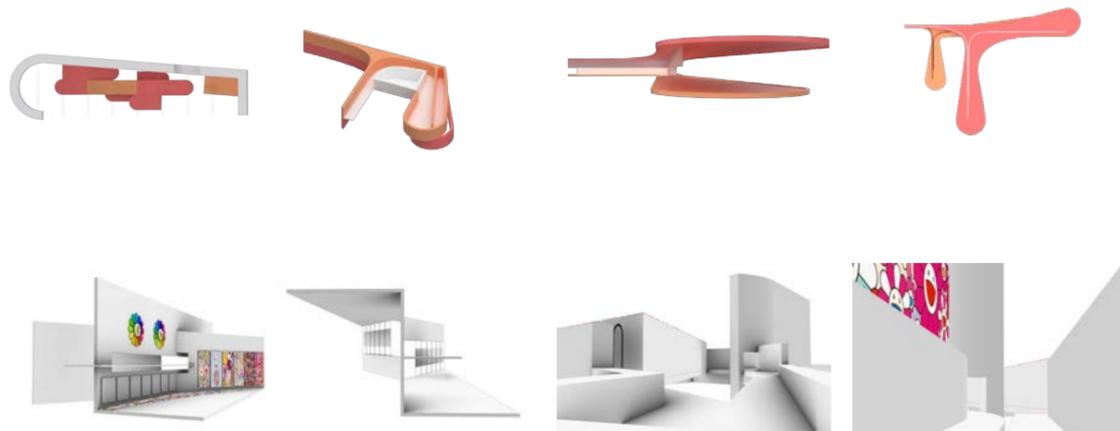
Murakami Artwork



Murakami Artwork- Display



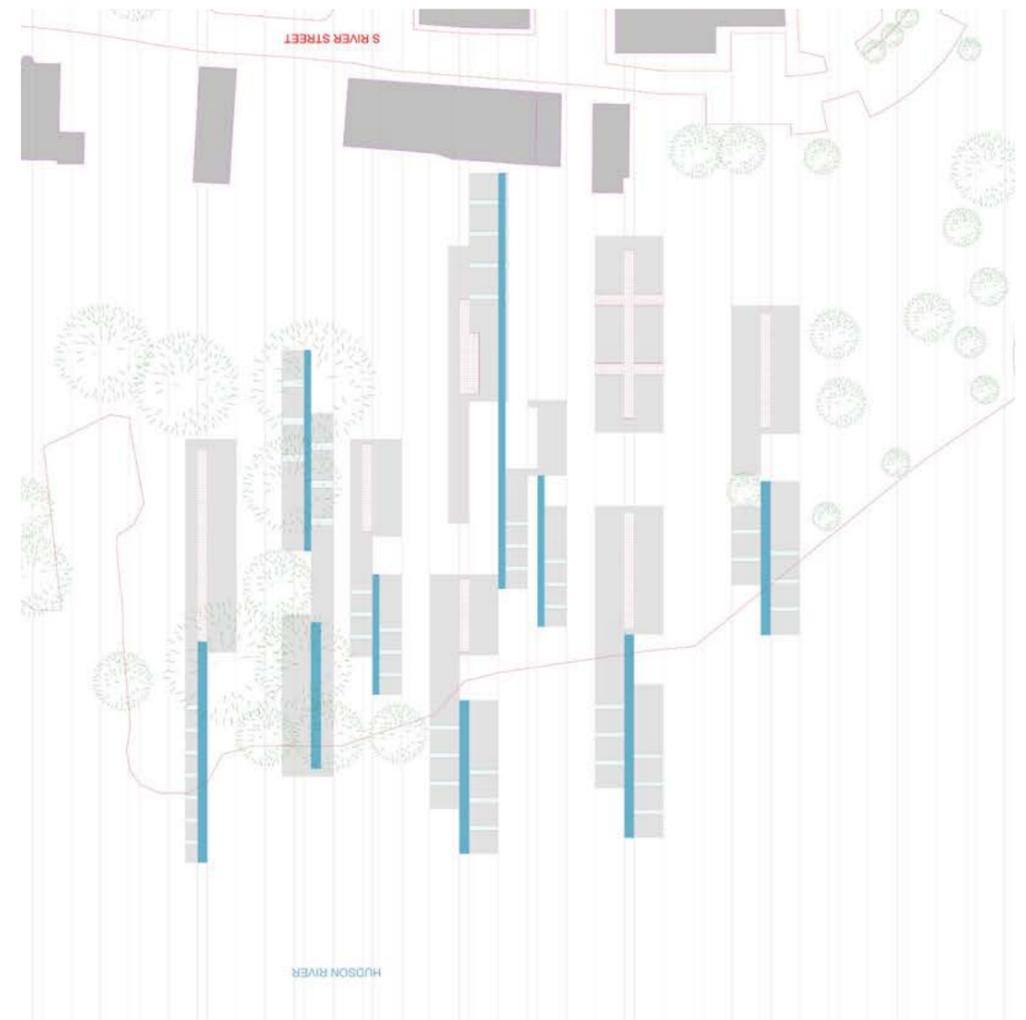
Wall as Display / Immersive Environment Studies



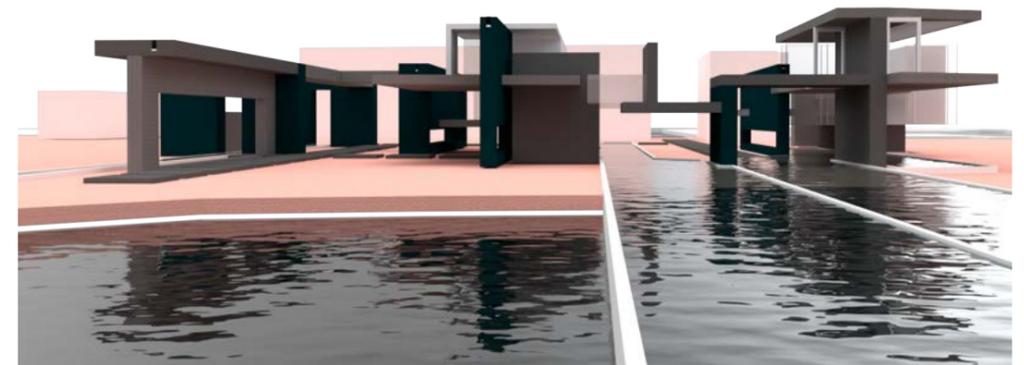
### Early Studies; Lines and Layers to Divide the Levels

Understanding Murakami and his workshop culture to use as gestures to create divisions across the site, levels, walls and spaces.

Site Layout and Distribution Study



Bringing Water In



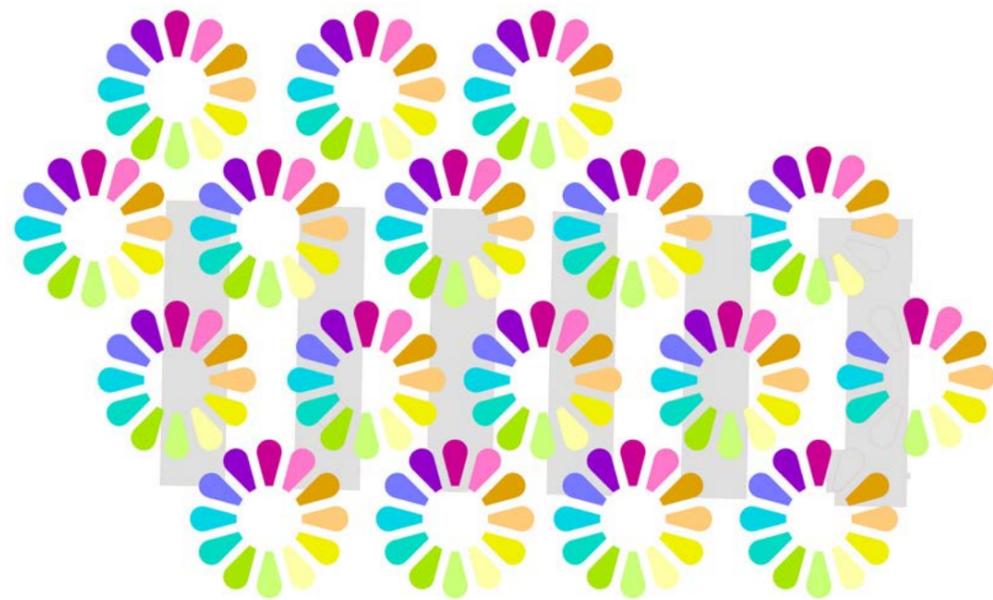
### Site Distribution of Artist Housing with Lines and Points Guide

Using Layers, Lines and points to use as formal moves, to arrange the housing, bring water into the site and create areas of congregation for the community.

The ideas of immersion and collective working spaces which act as both workshops and galleries is what has been taken forward with in the design, attempting to create an art community cum workshop space for his team in Coxsackie.



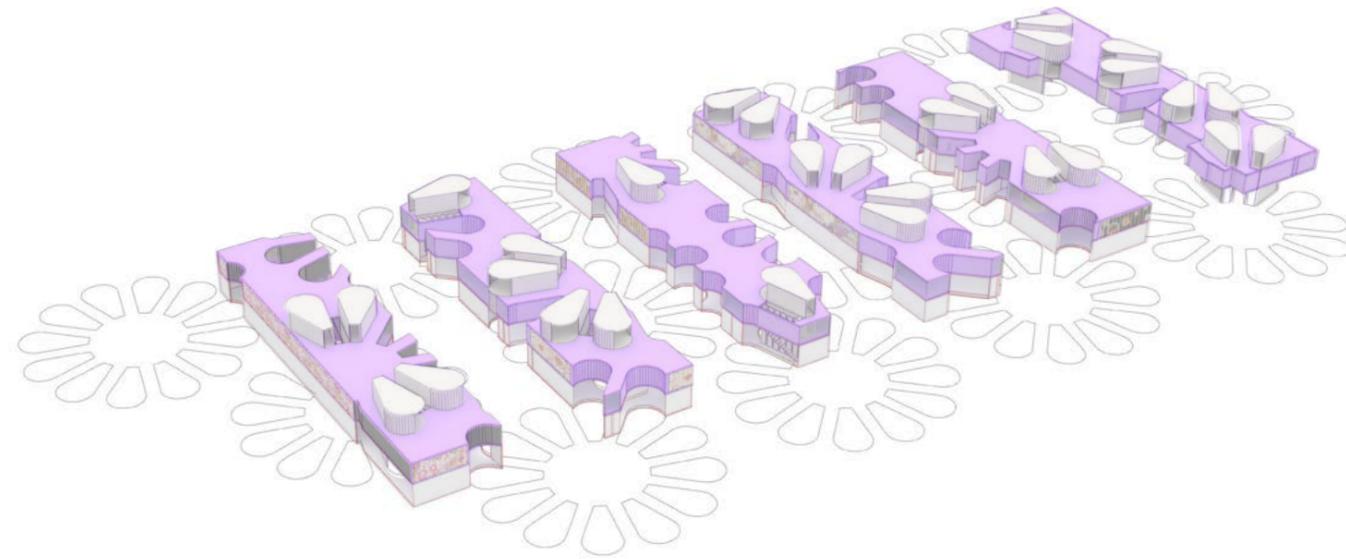
SITE : COXSACKIE NY



#### Critical Site Division

Dividing the Site with respect to the neighboring warehouse and taking into consideration the gesture of immersion for extractions within the blocks.

The ground floor is open to the public and is a gallery space while the second floor is the workshop and the shared living quarters of the artists. The openness of the plan in the workshop space is reminiscent of how his team works as they have a general work and sleep where you work cycle.

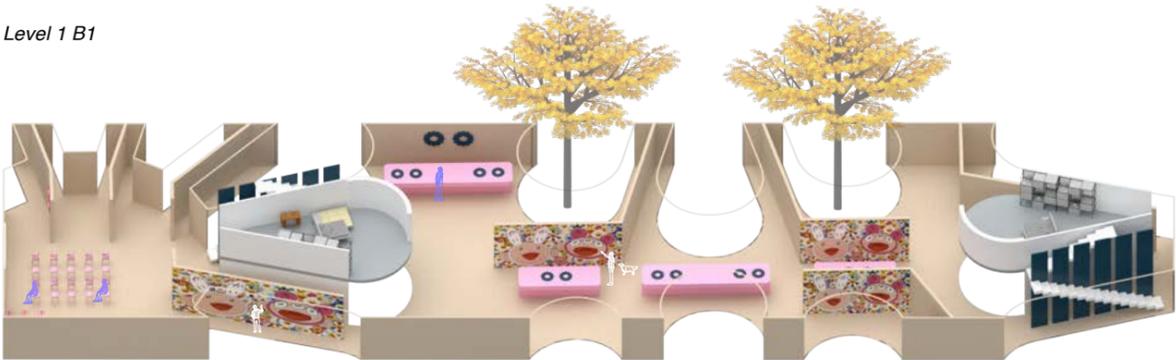


#### Superimposing The Murakami Flower onto the Warehouse Blocks

Using a relatively simple idea of initially superimposing the murakami flower on the stripes and layers that created on the site, regrouped the fragments and categorically divided the spaces.

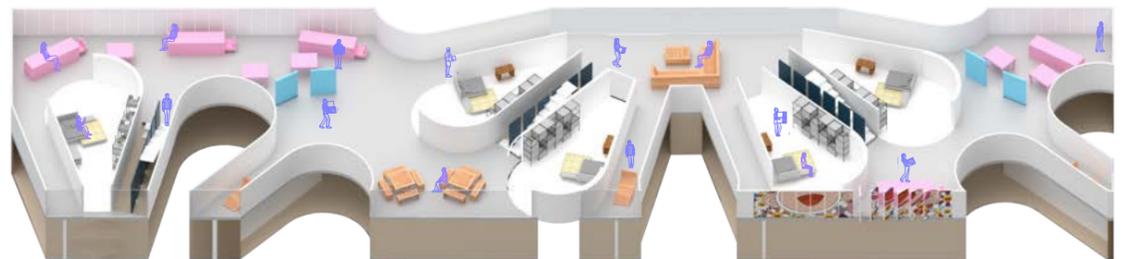


Level 1 B1

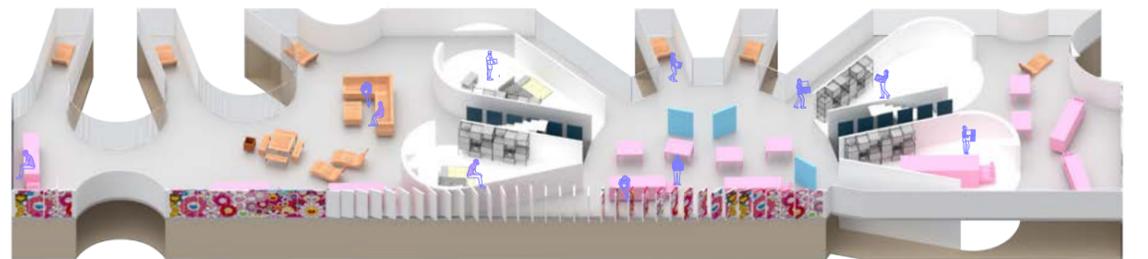


Level 1 B2

**Final Cut Oblique Plans**  
Showing how the artist live and work



Level 2 B3



Level 2 B4

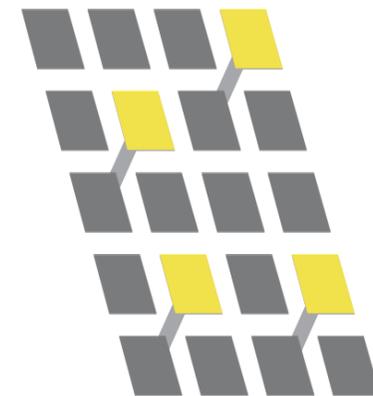
**Final Cut Oblique Plans**  
Showing how the artist live and work



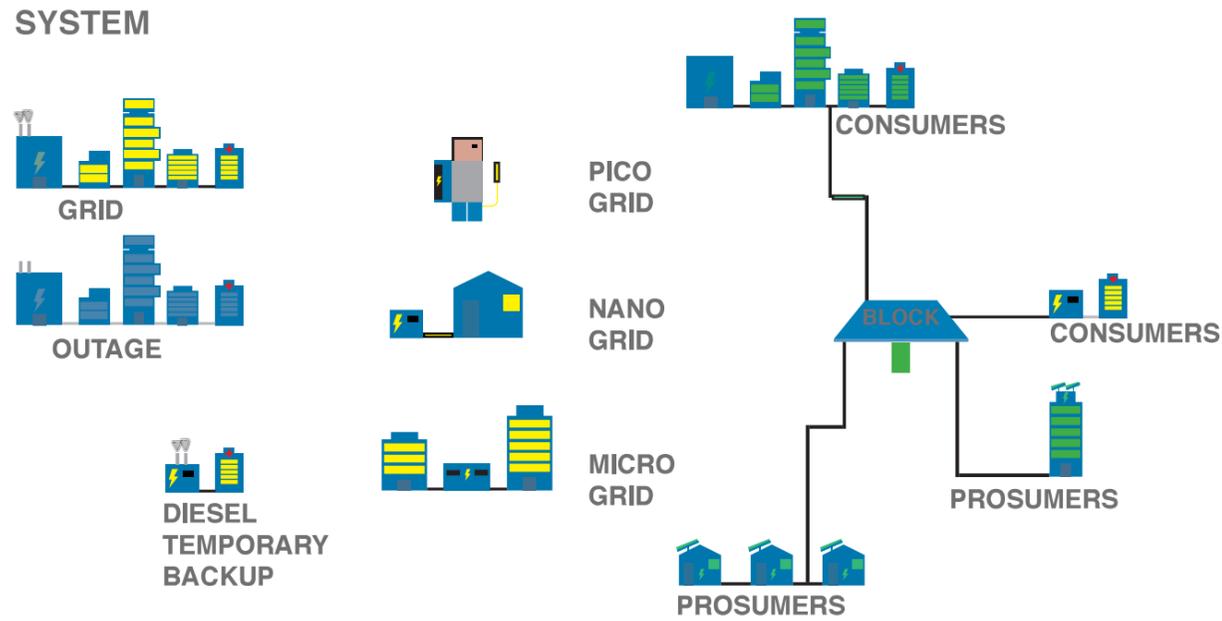
## ***TECHNICAL COURSE I***

### **MAN MACHINE & THE INDUSTRIAL LANDSCAPE**

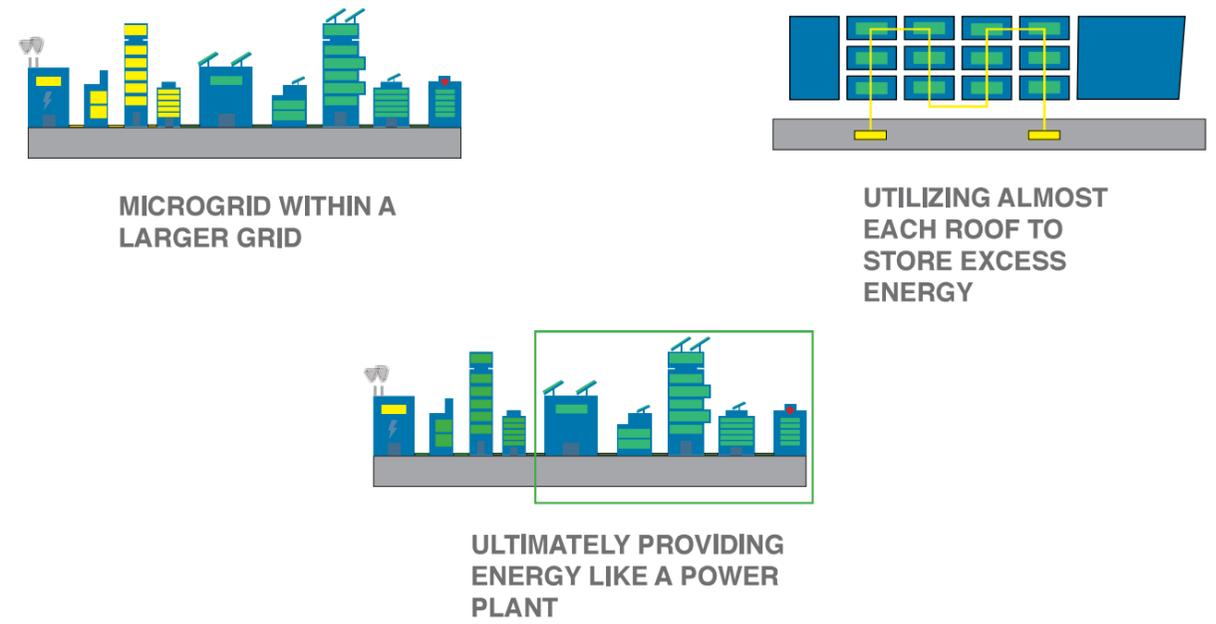
*Seminar: Building Science and Technology Course with Prof Sean Gallagher*



## SYSTEM



## INTERCONNECTED MICROGRIDS



## DISTRIBUTION

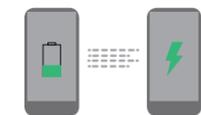
### LEGAL MONOPOLY



The major reason why homeowners cannot sell to each other is that states have provided a legal monopoly over furnishing energy to consumers to the public utility.

The general reasoning behind states providing legal protection for public utilities is that the energy industry is one that leads to natural monopolies, such that large infrastructure and capital costs make it nearly impossible for any company to enter the market, and even then, to sufficiently provide energy to consumers.

### P2P TRADING



There are many consumers who would like to have the ability to produce and consume renewable energy, but unfortunately cannot afford it.

One should have the ability to purchase energy from their solar powered neighbor without having to set up their own system.

The current system unfortunately requires the public utility to play the role of middleman, i.e., third party intermediary, between prosumers and consumers who want renewable energy.

### BLOCKCHAIN

Blockchain is an immutable and irreversible digital public ledger which allows a distributed network of computers to verify the authenticity of transactions without the need for a central authority

In the energy context, blockchain can essentially automate:



Smart contracts are self-executing programs which help in the exchange of value.

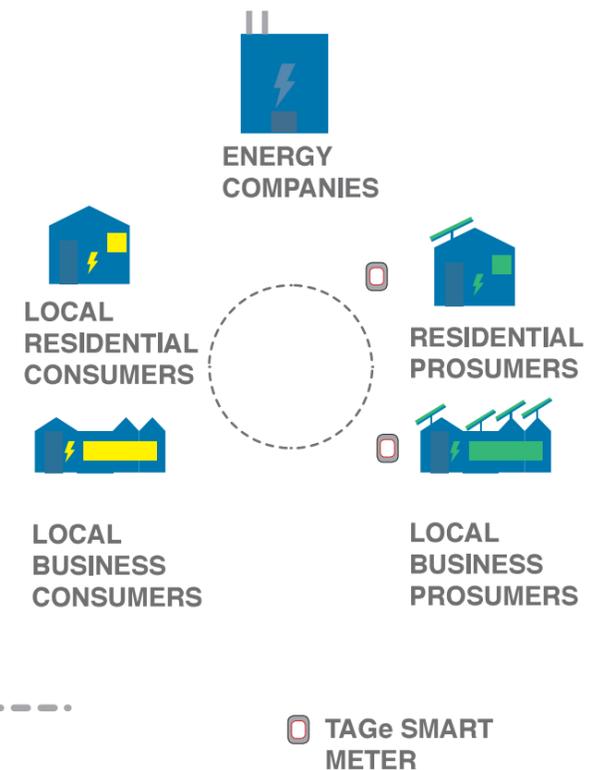
This plus the microgrid can automate energy requirements creating an automated marketplace.

### MICROGRID

A microgrid can connect and disconnect from the grid enabling it to operate with the grid or in island-mode i.e. on its own.

The distinction between a microgrid and the traditional grid is that a microgrid is an autonomous entity that is connected to the traditional grid, but may disconnect and "operate autonomously"

A community may choose to use a microgrid for various reasons including: backup in case of emergencies; cutting costs; connecting to a local resource that is too small or unreliable for traditional grid use; becoming energy independent; and they are more environmentally friendly.



## Early Studies; Solar Pumping, Block Chain Distribution

Proposing a break from the Legal Monopoly of Electricity Distribution and making it more user controlled and available to all for a cheaper price, while making it decentralized.

GOING AHEAD

PEAK DEAMND : 13400 MW

PROVIDING CAPACITY : 250 MW - 2%



REMOVE ANY RED TAPE

2023 - 3000 MW - 6000 MW

Incentivize developers and landowners with subsidies

Incentivize Builders and Architects with greater Design and LEED control over building Performance and integration

Incentivize owners/residents by providing cheaper RENT and utility cost

100% units and buildings powered by renewable sources

ALLOW FOR PUBLIC INTERVENTION

USE excess stored energy if any for public transportation and power use

Add solar powered infrastructure for example lights and signs which provide excess energy back to the microgrids next to it for later use.

FLOATING PODS IBIDEN



Early Studies; Solar Pumping, Block Chain Distribution

Proposing a break from the Legal Monopoly of Electricity Distribution and making it more user controlled and available to all for a cheaper price, while making it decentralized.



350 W PV PANEL :  
ABOUT 2858 PANLES TO GET  
1 MW



OVER 5 PIERS WITH EACH PIER  
HOLDING UPTO 1000 PANELS



PRODUCING CLOSE TO  
1.8 MW OF ENERGY.



First Proposal For Solar Pods with Multifunctional Zones Along Battery Park

## REIMAGINING THE WATERFRONT



### PROPOSING :

#### 5 HYBRID PIER / DOCKS :

Extending the width of the existing ferry Terminal

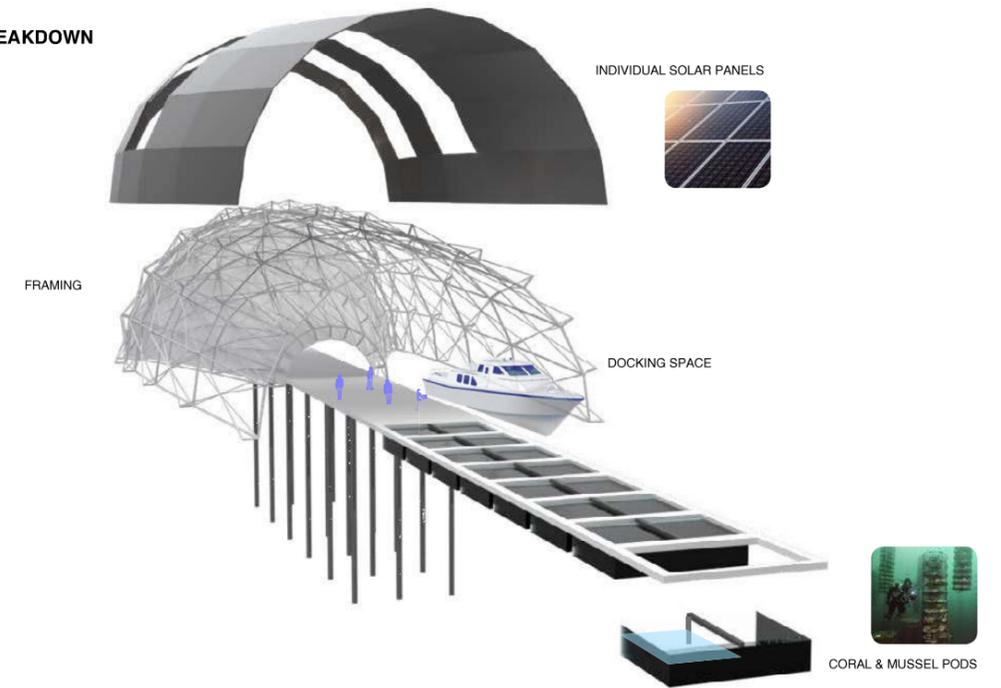
#### SOLAR PANEL COVERED SPACE FRAMES :

Photovoltaics on the roof allow for maximum energy gain from the sun and distribution of stored power amongst surrounding buildings.

#### CORAL AND MUSSEL PODS IN THE PIER :

To further enrich water quality.

## SCHEMATIC BREAKDOWN



### LOCATION AND USE OF PV



West façade BIPV and bulkhead\* (South and West facing walls). Entrance canopy (West)

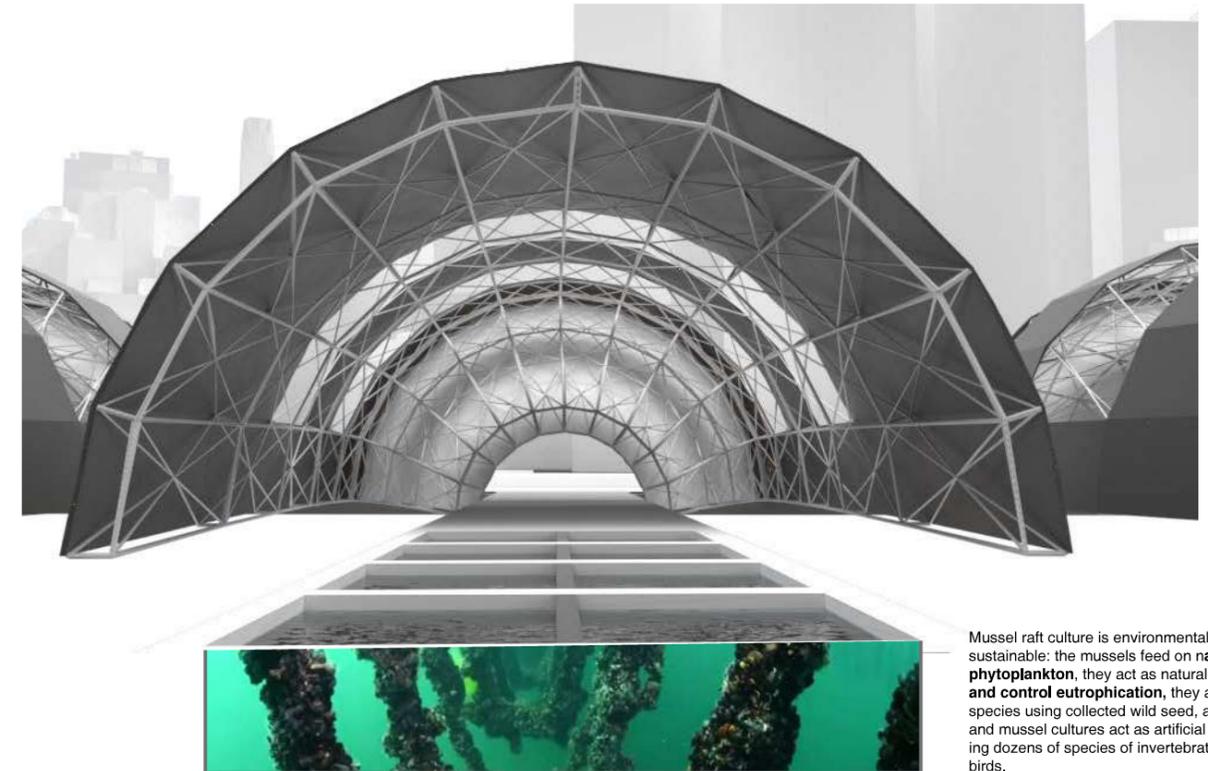
Bulkhead (East, West and South facing walls)

Bulkhead (primarily East and West facing walls)

Bulkhead (West facing wall)

PV tracking array at rooftop level (East, West and South racks)

West and East façade BIPV

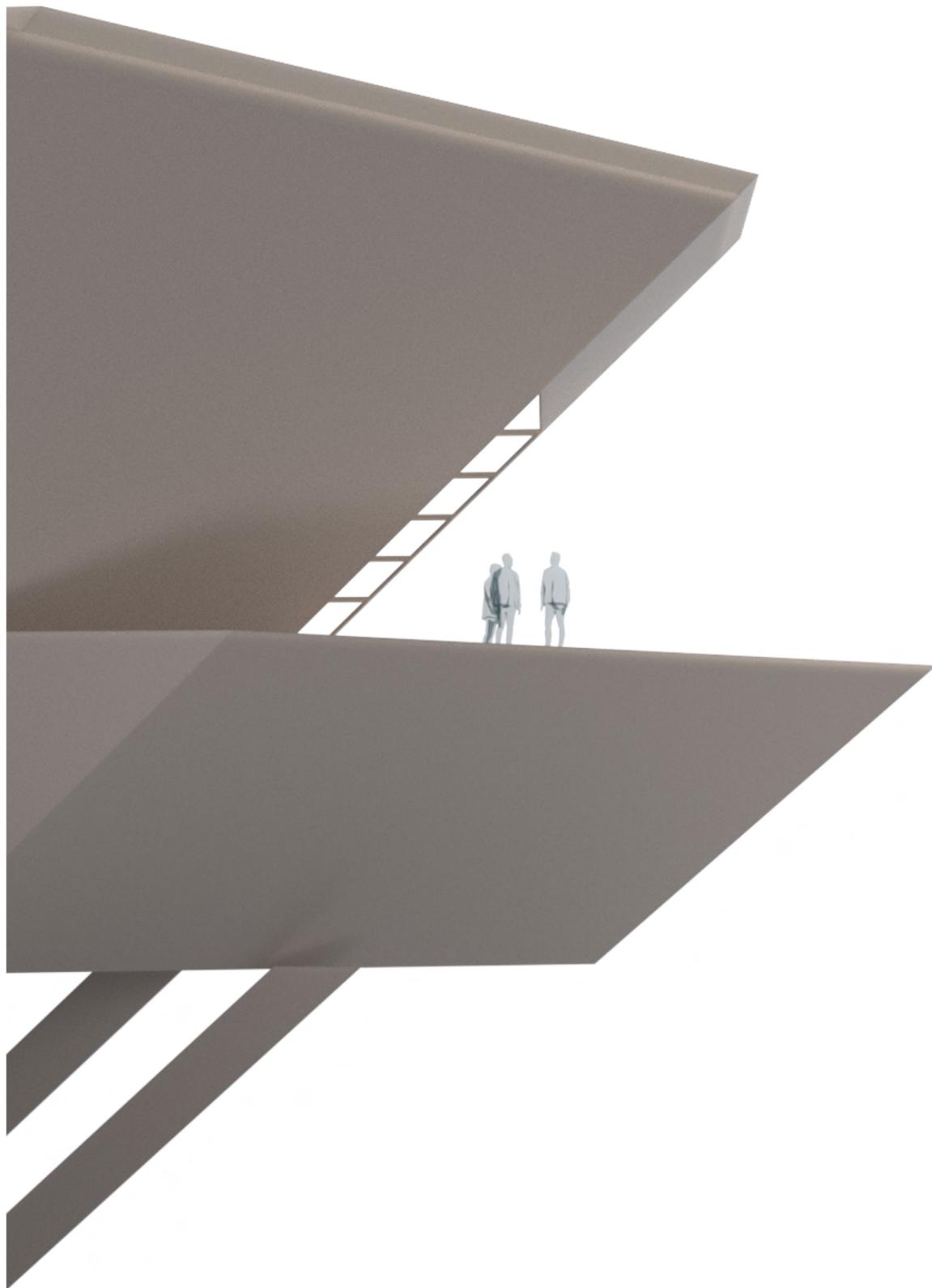


Mussel raft culture is environmentally sustainable: the mussels feed on **natural phytoplankton**, they act as natural **biofilters** and **control eutrophication**, they are a native species using collected wild seed, and the rafts and mussel cultures act as artificial reefs attracting dozens of species of invertebrates, fish and birds.

## Looking At the Current Scenario

Most Buildings in the surrounding areas are equipped with hybrid power systems, showing that they are geared towards sustainable development and will benefit directly from this intervention.

## System Breakdown and Functions



### ***PROJECT 3***

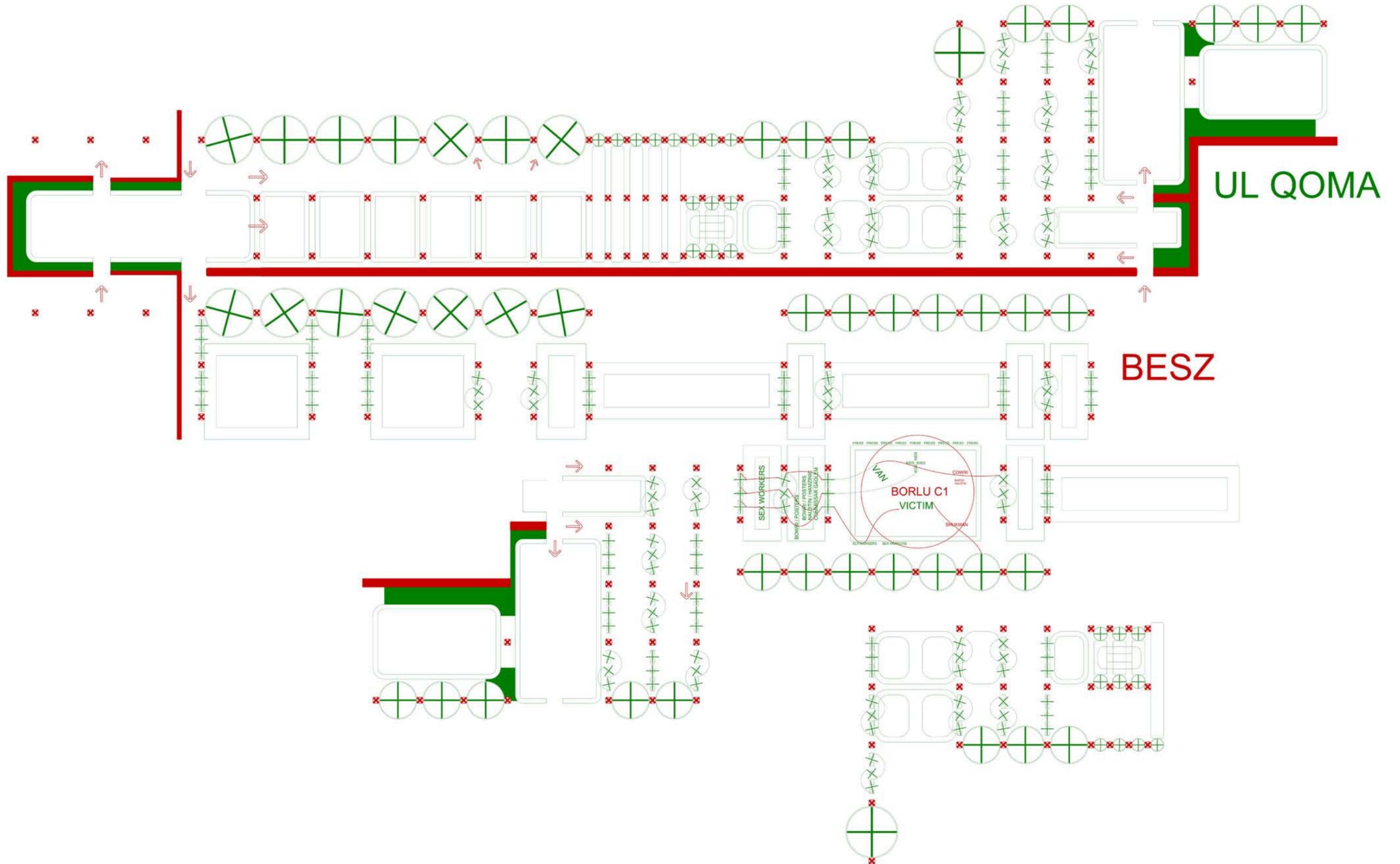
### ***COPULA HALL***

*Studio: Copula Hall with Stephen Cassell and Annie Barrett*

Two oppositional city states partially occupy the same geographic territory. Citizens of both nations coexist side-by-side in an interwoven crosshatch of overlapping borders, yet are forbidden to acknowledge one another's existence due to deep cultural strife. These irreconcilable conditions yield an encrypted urban fabric, a conflicted, yet coincident overlay of opposing architectural languages -- ancient and modernist, east and west -- that conveys the rigid set of behavioral codes and protocols required to maintain the tenuous political conditions of the city/cities.

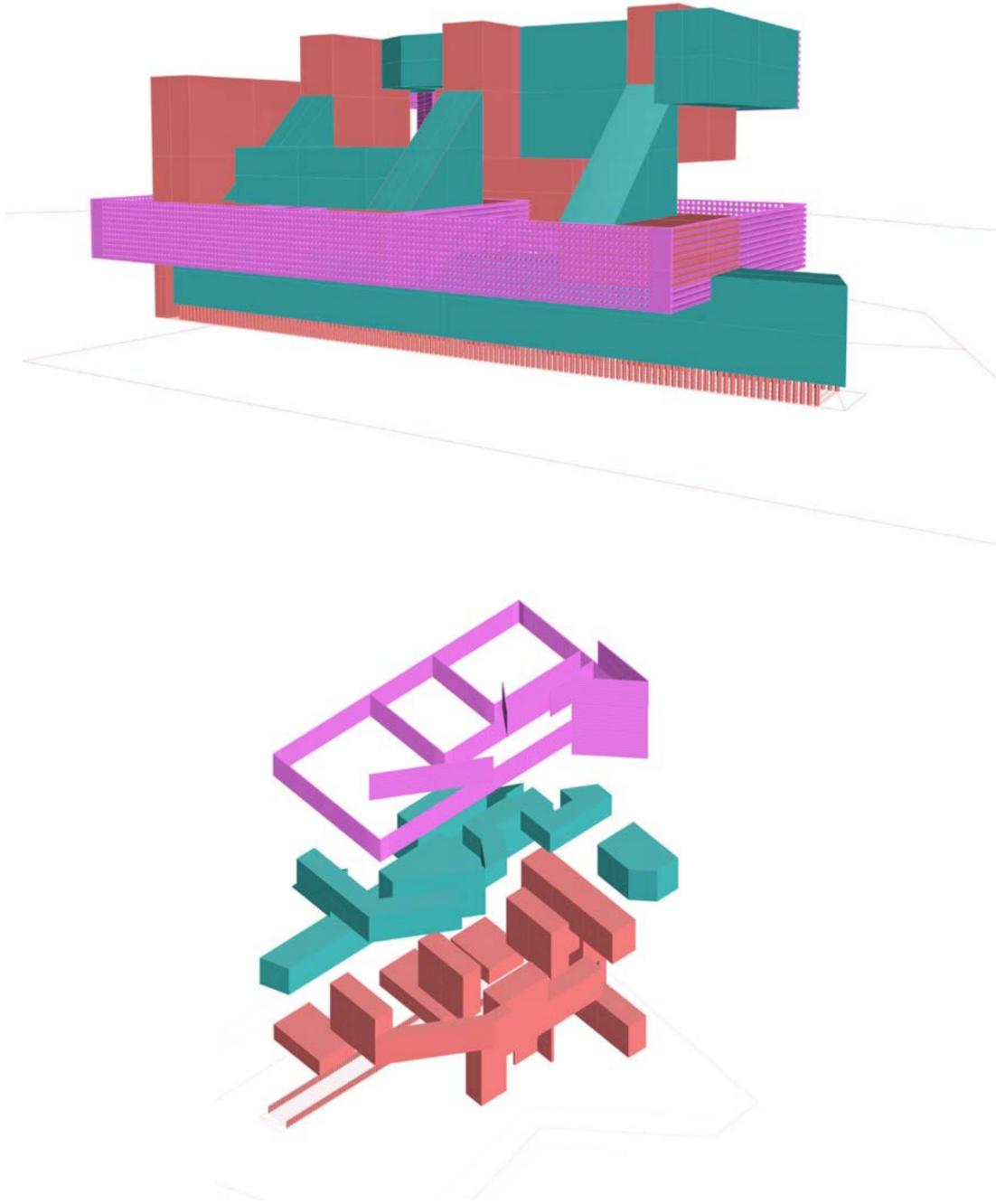
## Mind Mapping

Copula Hall and its current manifestation is a result of threading together moments within the novel which bring forth the critical confusion, infinite interdependencies, the realm of fear, order, and paranoia that the two cities co-exist in.



## ROOTED INTERDEPENDENCE

"Anyway whether in its original or later written form, *Illitan* bears no resemblance to *Besz*. Nor does it sound similar. But these distinctions are not as deep as they appear. Despite careful cultural differentiation, in the shape of their grammars and the relations of their phonemes (if not the base sounds themselves), the languages are closely related they share a common ancestor, after all. It feels almost seditious to say so. Still."

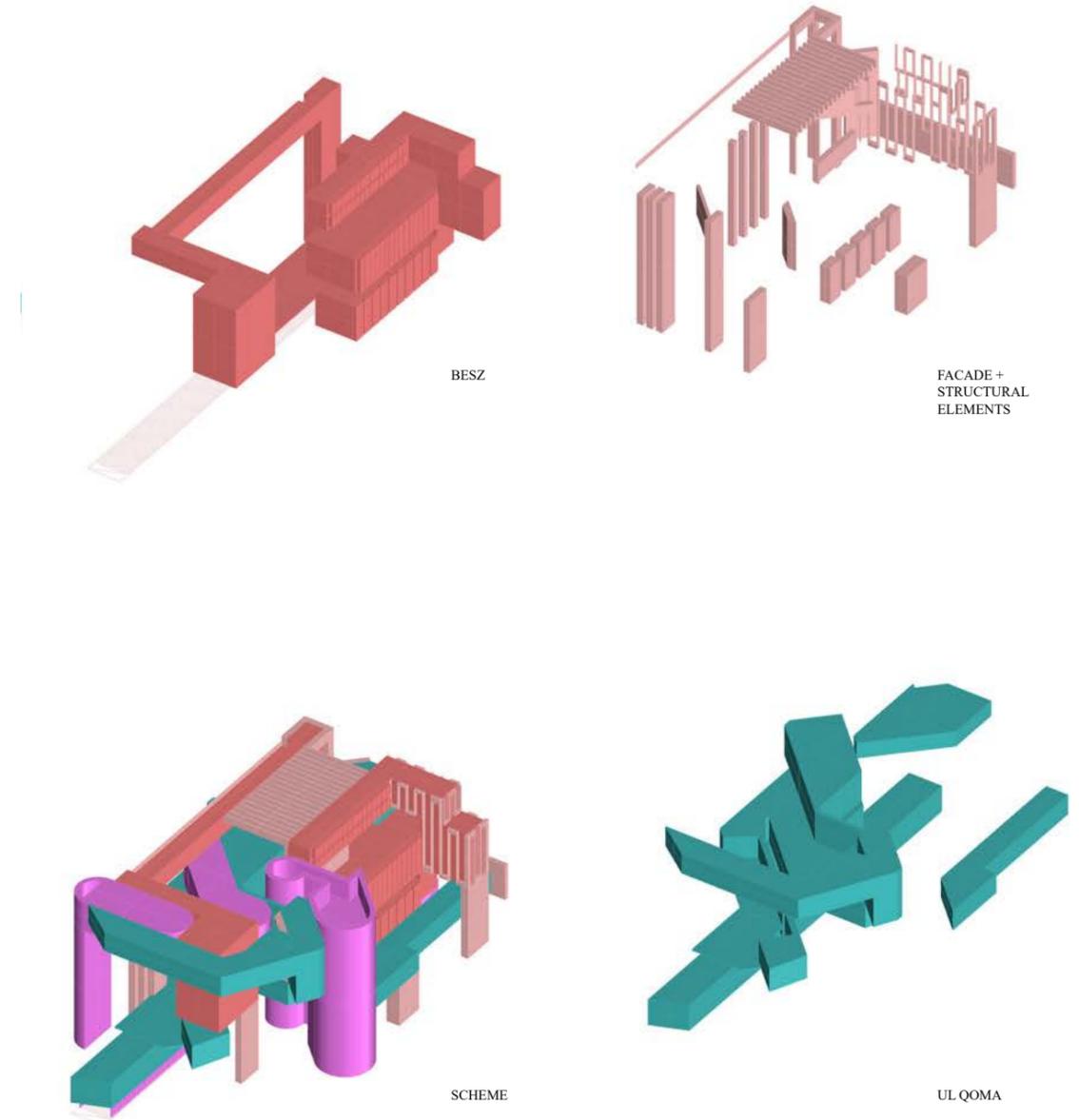


### Points from the Novel

To categorize the three stages of research of the project, these three quotes reflect the complexities and directions the research took. Study 1 Focuses on the three distinct geometries that are formally different however are highly dependent on each other to create movement and ultimately make sense.

## INFINITE POSSIBILITIES/CONTRADICTIONS

"A political irony. Those most dedicated to the perforation of the boundary between Beszel and Ul Qoma had to observe it most carefully. If I or one of my friends were to have a moments failure of unseeing (and who did not do that? Who failed to fail to see, sometimes?), so long as it was not flaunted or indulged in, we should not be in danger. If I were to glance a second or two on some attractive passerby in Ul Qoma, if I were to silently enjoy the skyline of the two cities together, be irritated by the noise of an Ul Qoman train, I would not be taken"

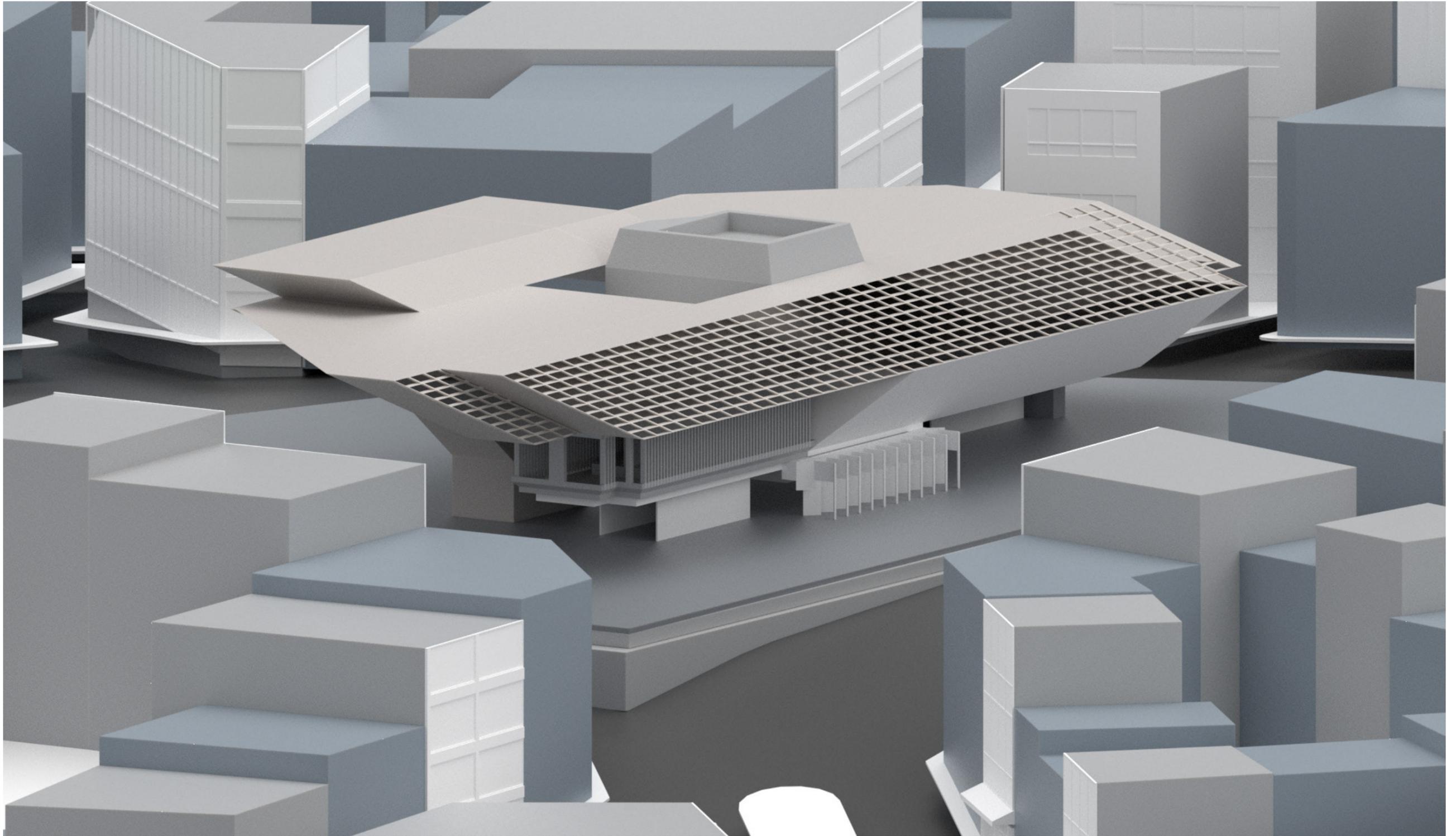


### Points from the Novel

Study 2 continues this idea of 3 separate languages to allow an individual to understand where they are within the structure.

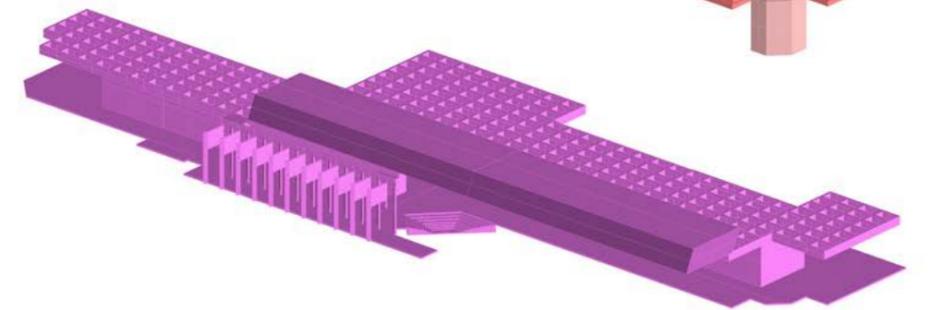
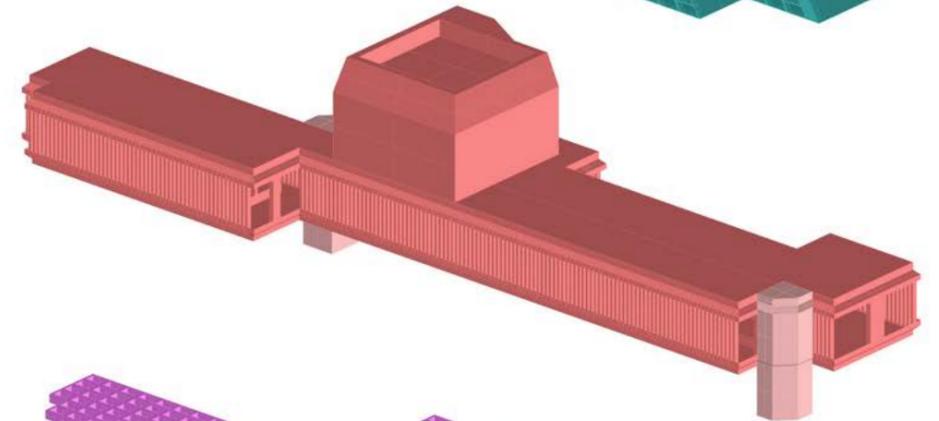
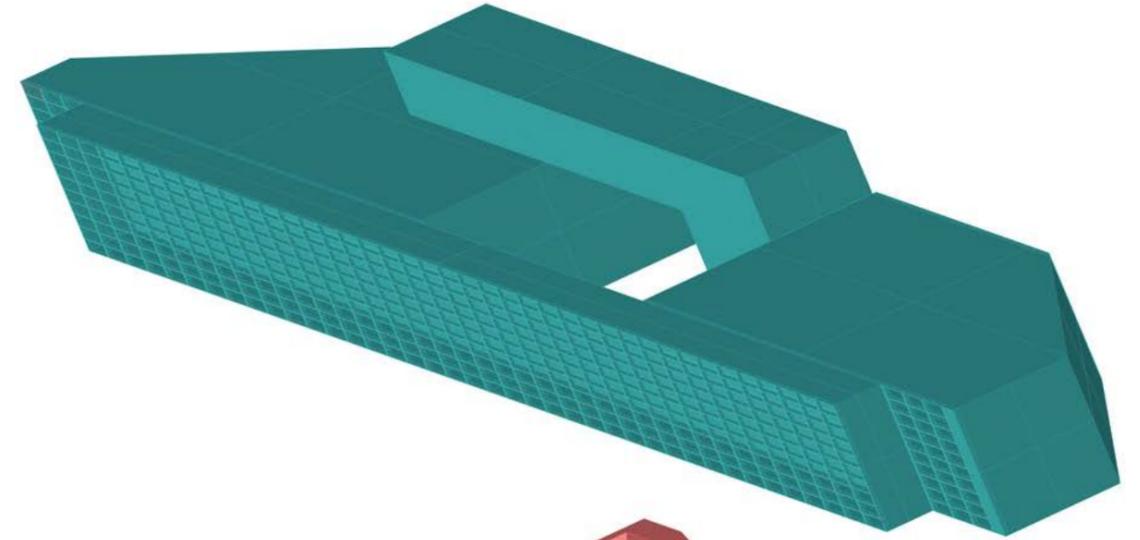
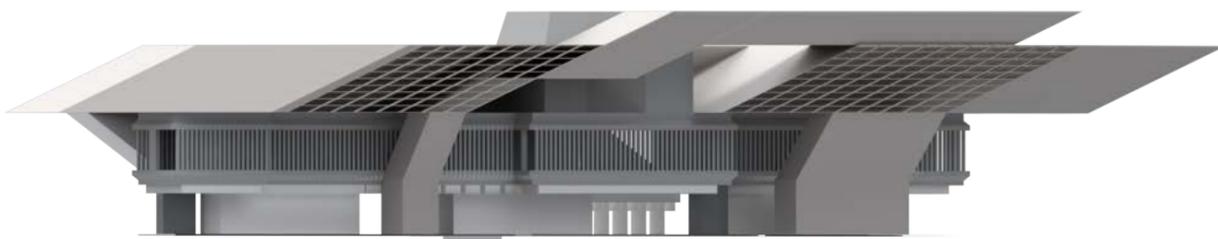
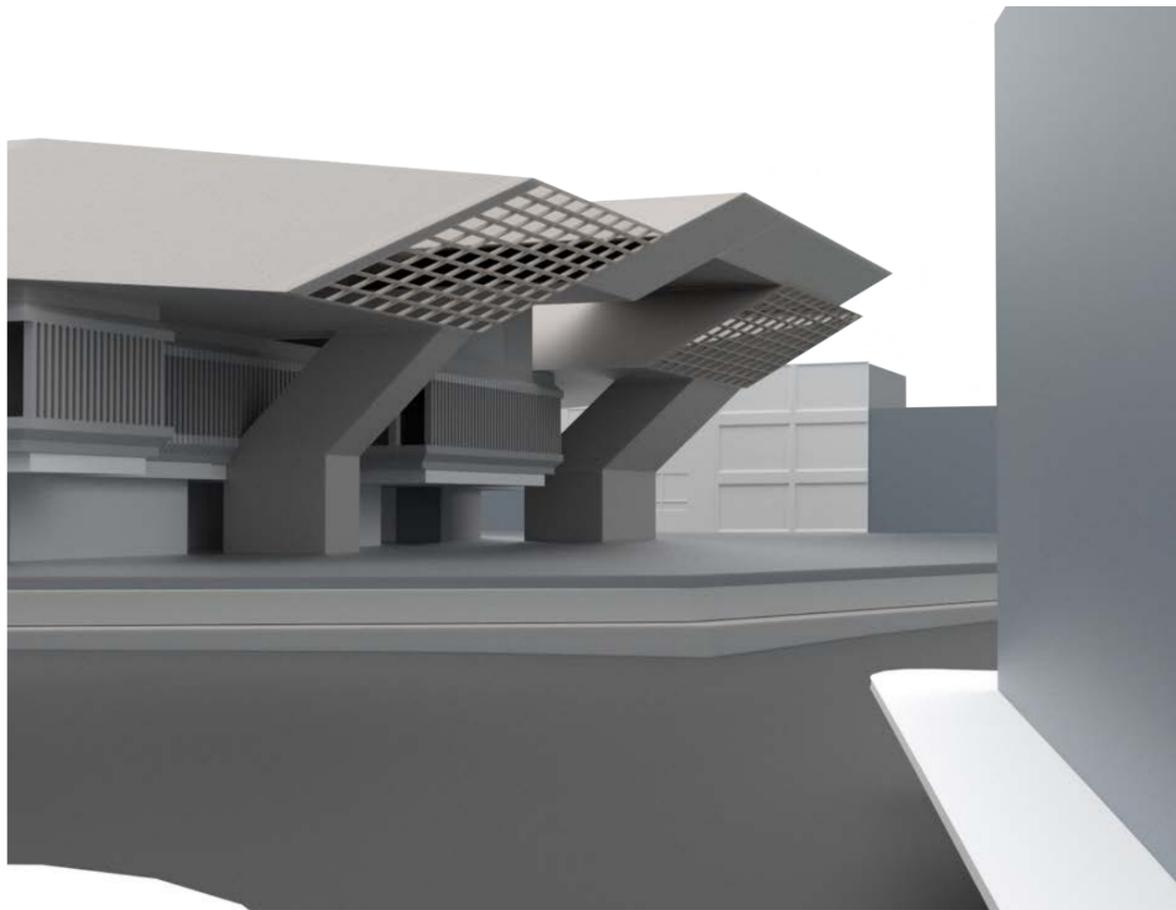
## TRANSCALAR SITUATION

Borlu gets a call about the murder from a man who has a foreign accent, speaking in surprisingly good and Old Fashioned Besz. Upon inquiry on why the caller didn't ring the information line to which he exclaimed, "*Borlu, shut up*". Upon learning that the caller knew of his investigation, Borlu asked him where he was from and the man replied that Borlu already knows, from his accent; he was Ul Qoman.



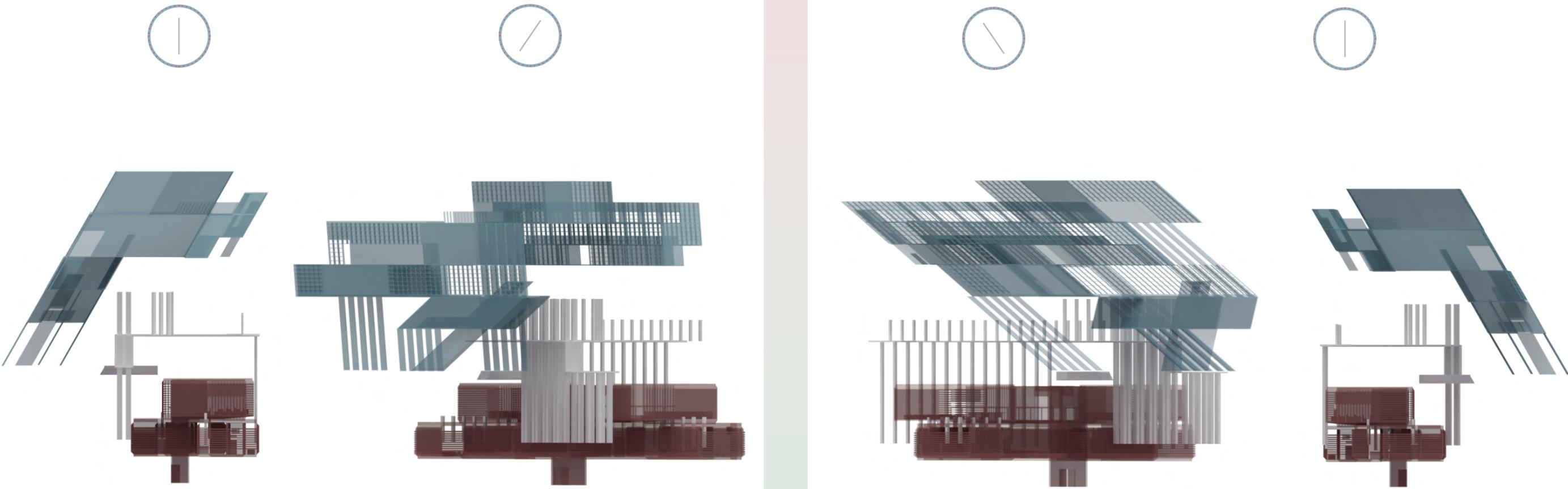
### Points from the Novel

Study 3 evolves the idea of distinct languages of each city to simpler shapes and simpler forms which have a more solidified programmatic notion tied with it. Ulqoma almost collapses on Besz however the subtle changes in the geometries, shows how one originates from the other and the changes in perspective controls the viewpoints across the site



### Scheme Breakdown

The crosshatch Spaces in Pink, provide framework, entrance and the gateway support  
The Besz Spaces in Red are modernist and the chamfers are the angles which create the above shown ULqoman spaces in Blue which collapse on themselves almost

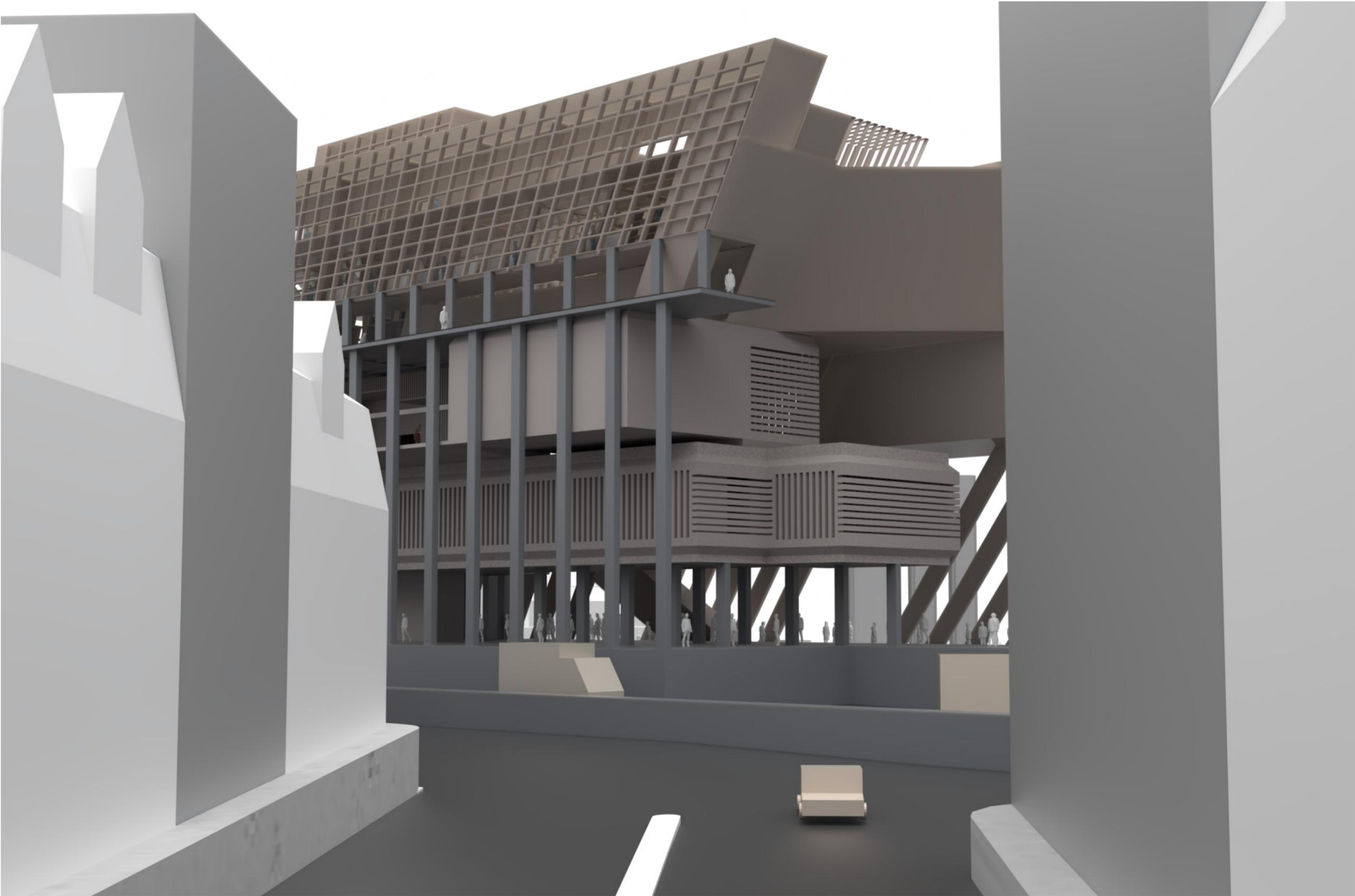


**Range of Views from the Site**

Allowing for a range of views of the project from anywhere across the site due to the nature of the angles, the collapsing shapes, and the lofted spaces.

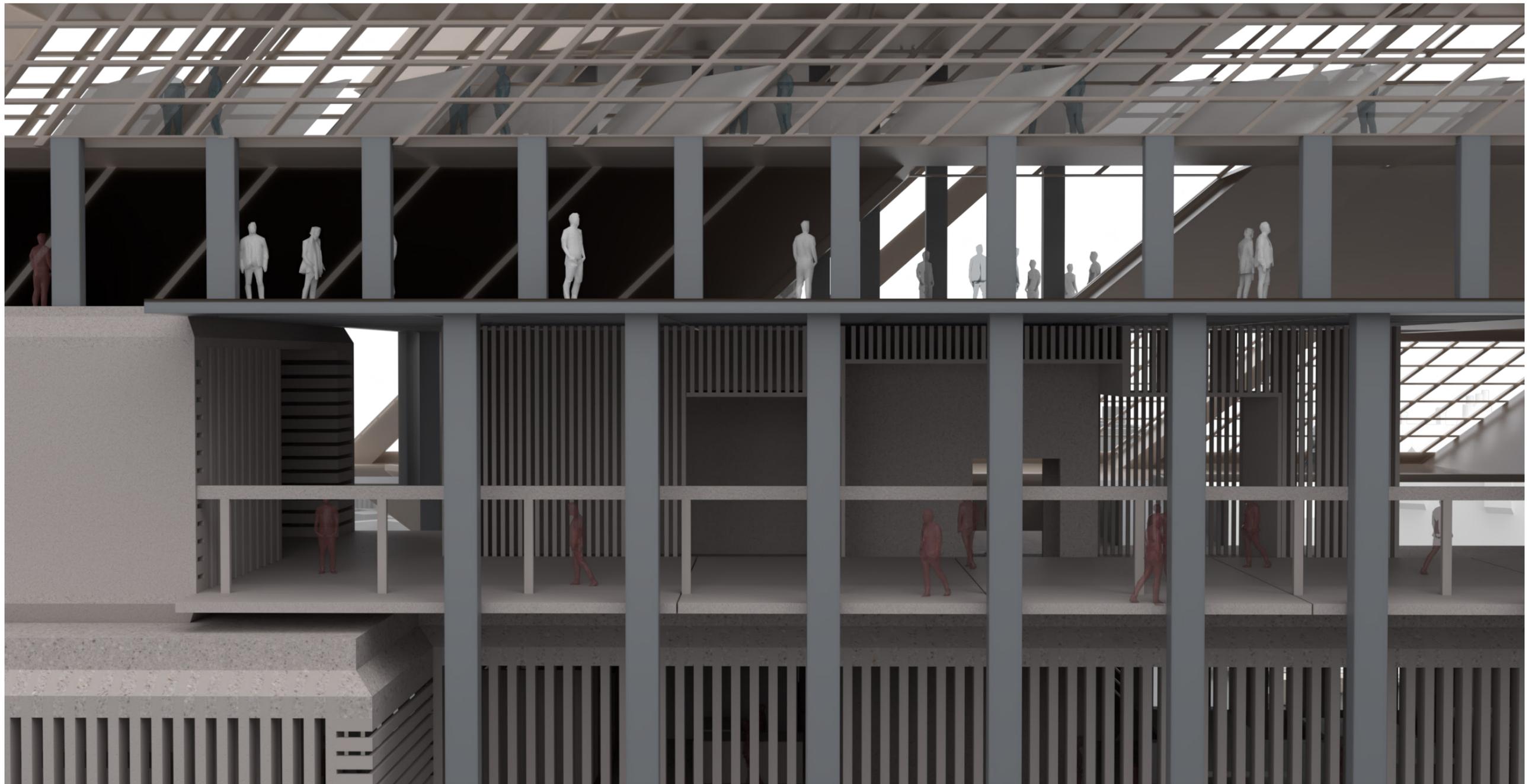
**Approaching Street View**

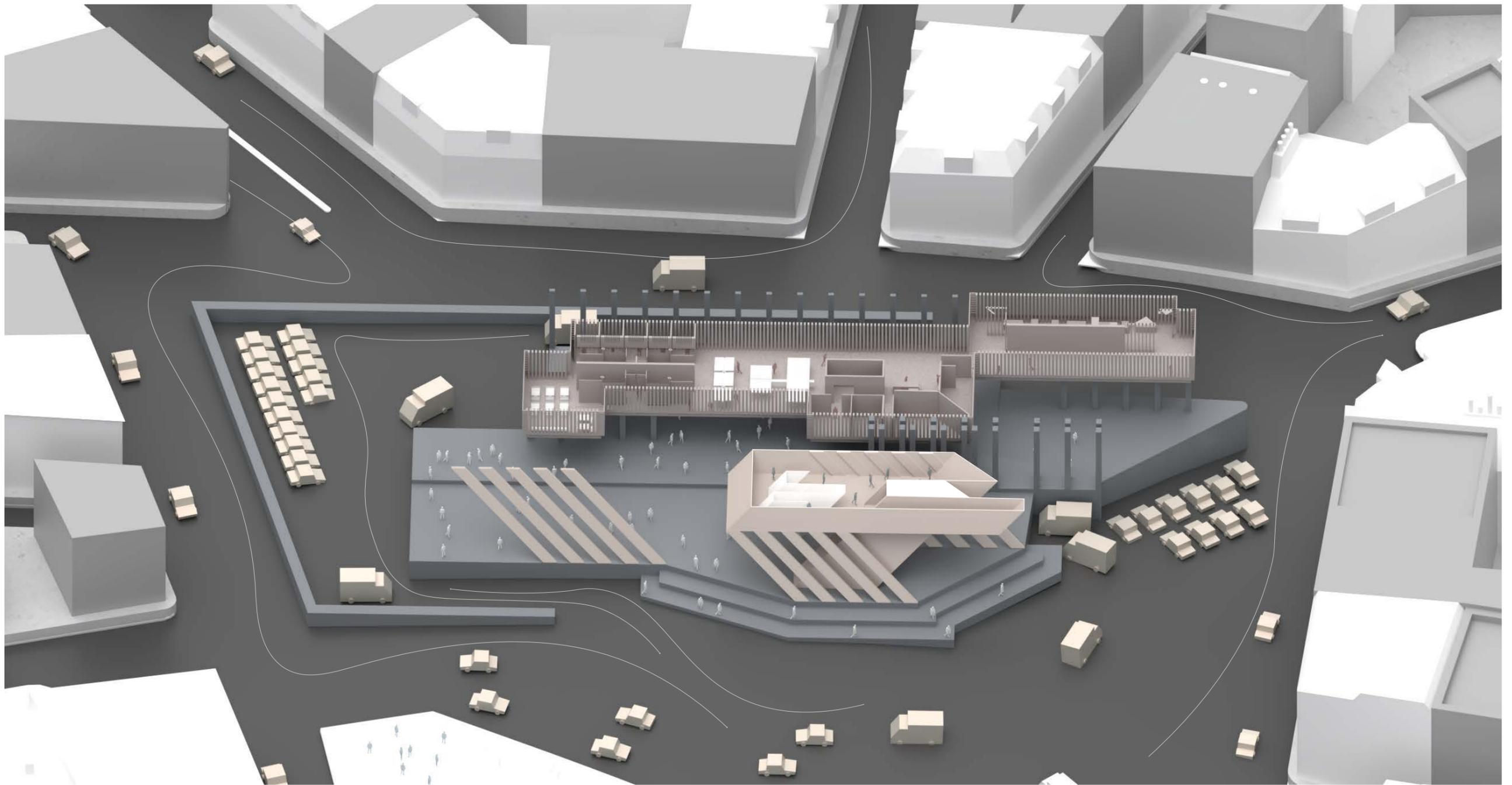
Copula Hall offers Complexity and multiple layers as you approach the structure, shielding the various functions of the building behind several frames and allowing members freedom of outdoor movement at the same time with the private decks



### Looking into Copula Hall

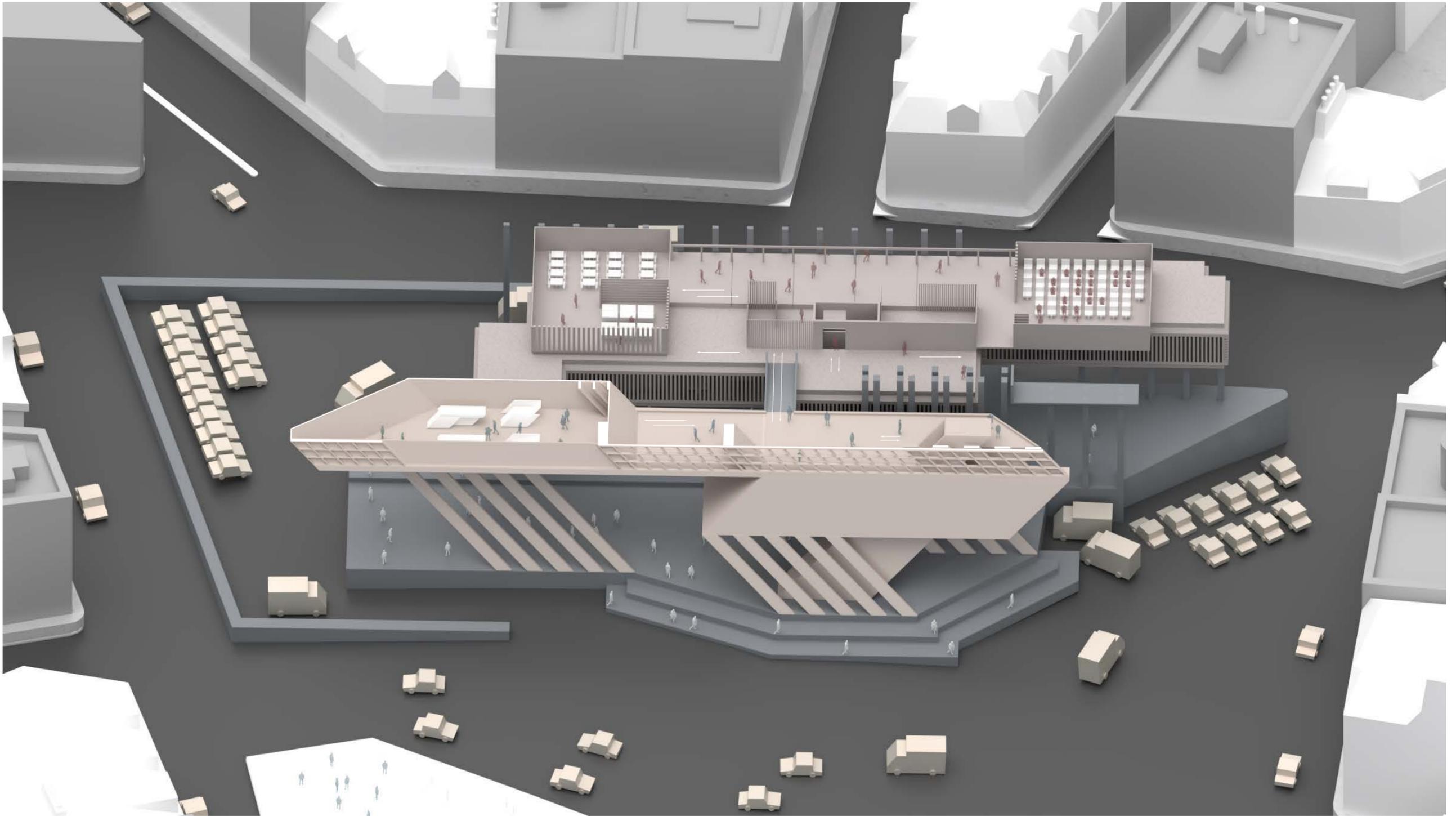
Immersed by the elevation of the Hall, this shows how one might get to look at the structure head on from a neighboring building/balcony.





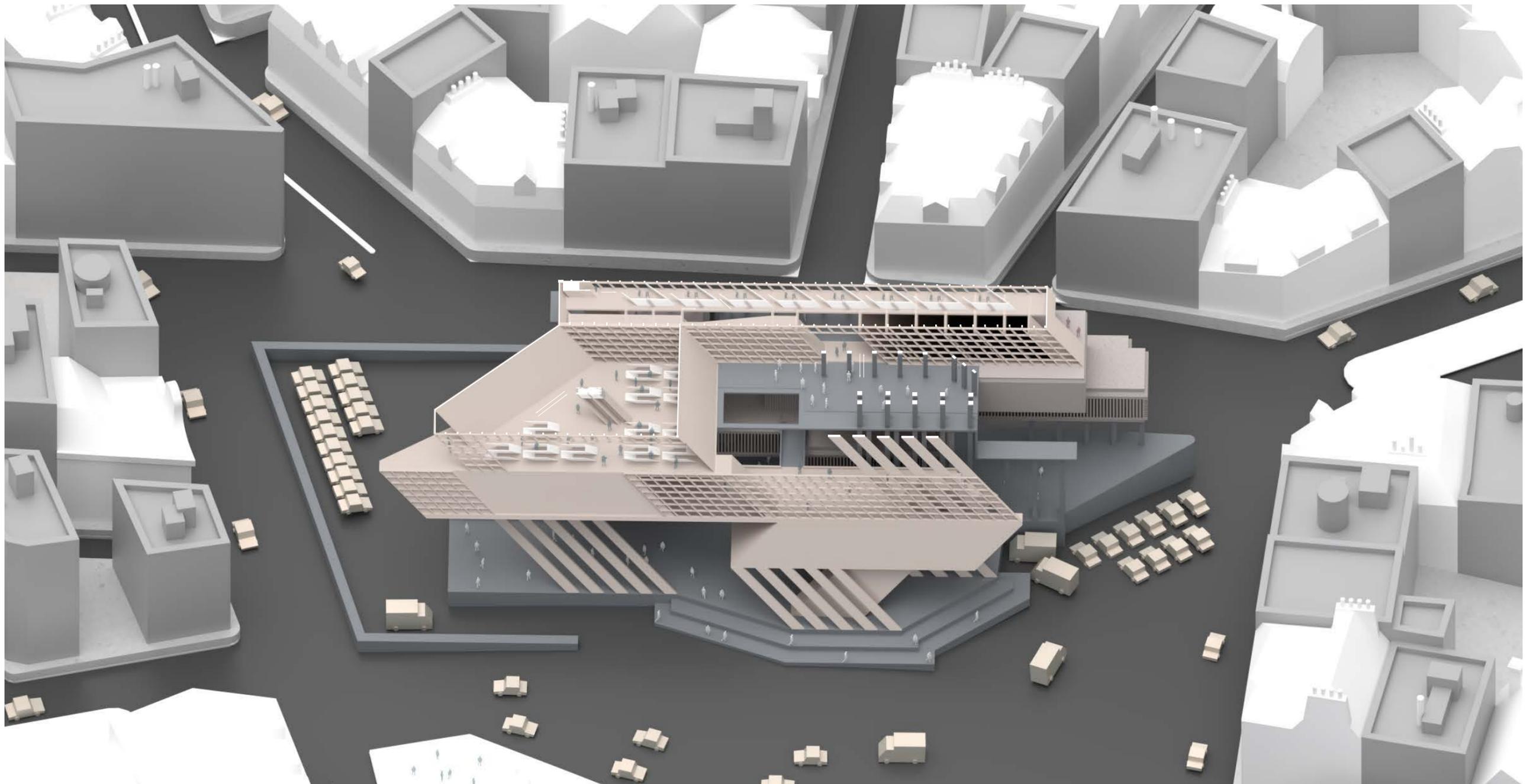
### Plans

Allowing for a range of views of the project from anywhere across the site due to the nature of the angles, the collapsing shapes, and the lofted spaces.



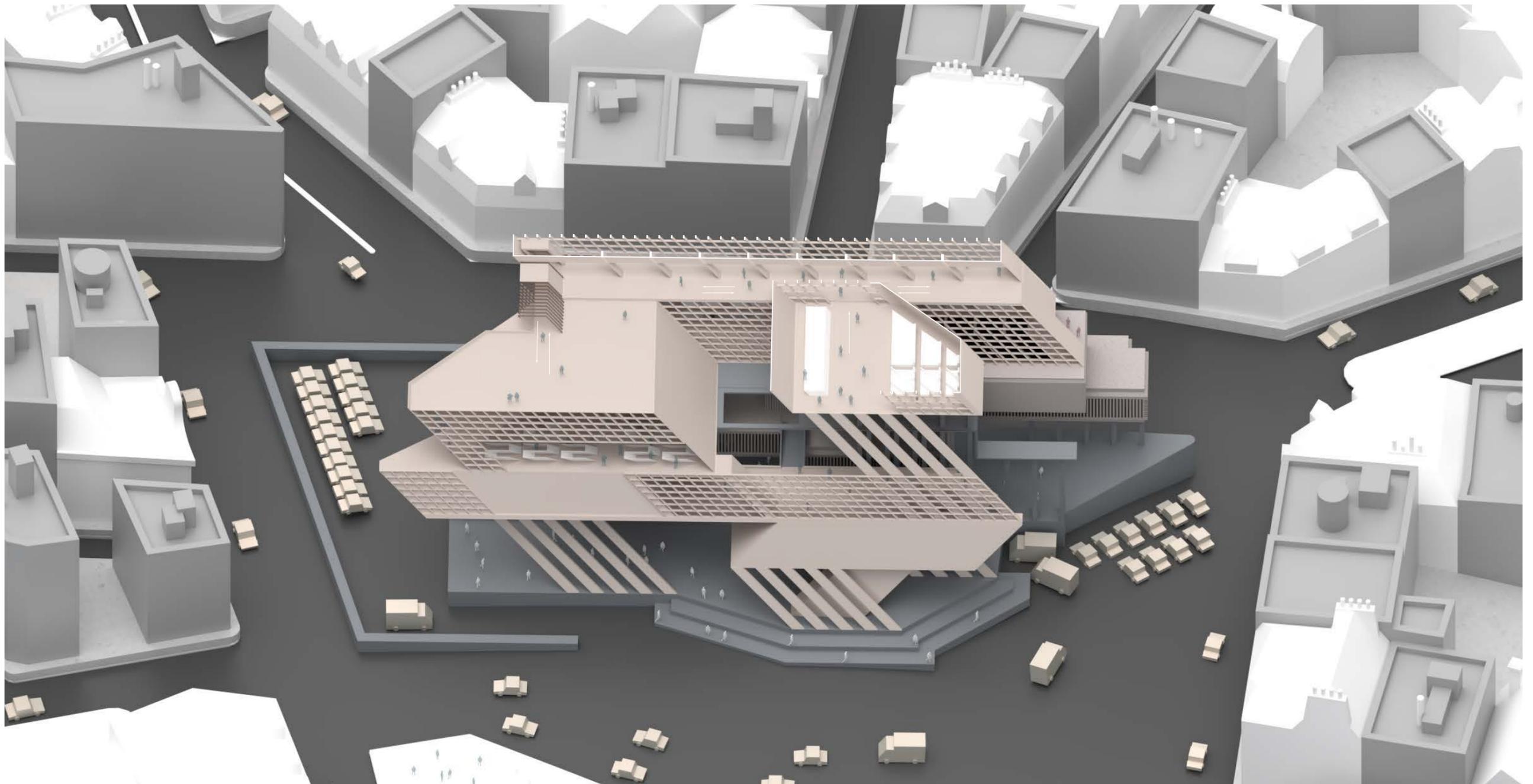
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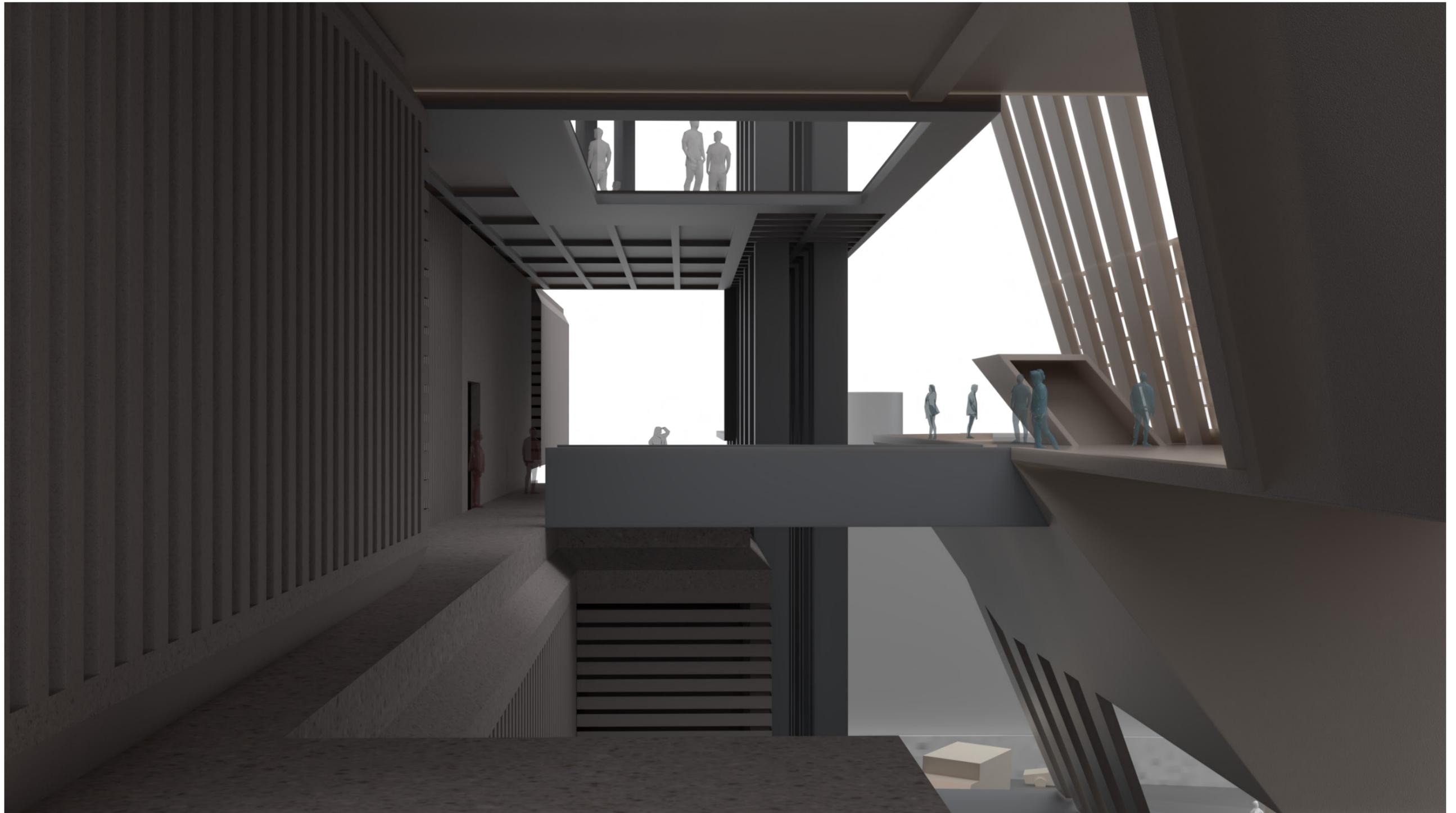
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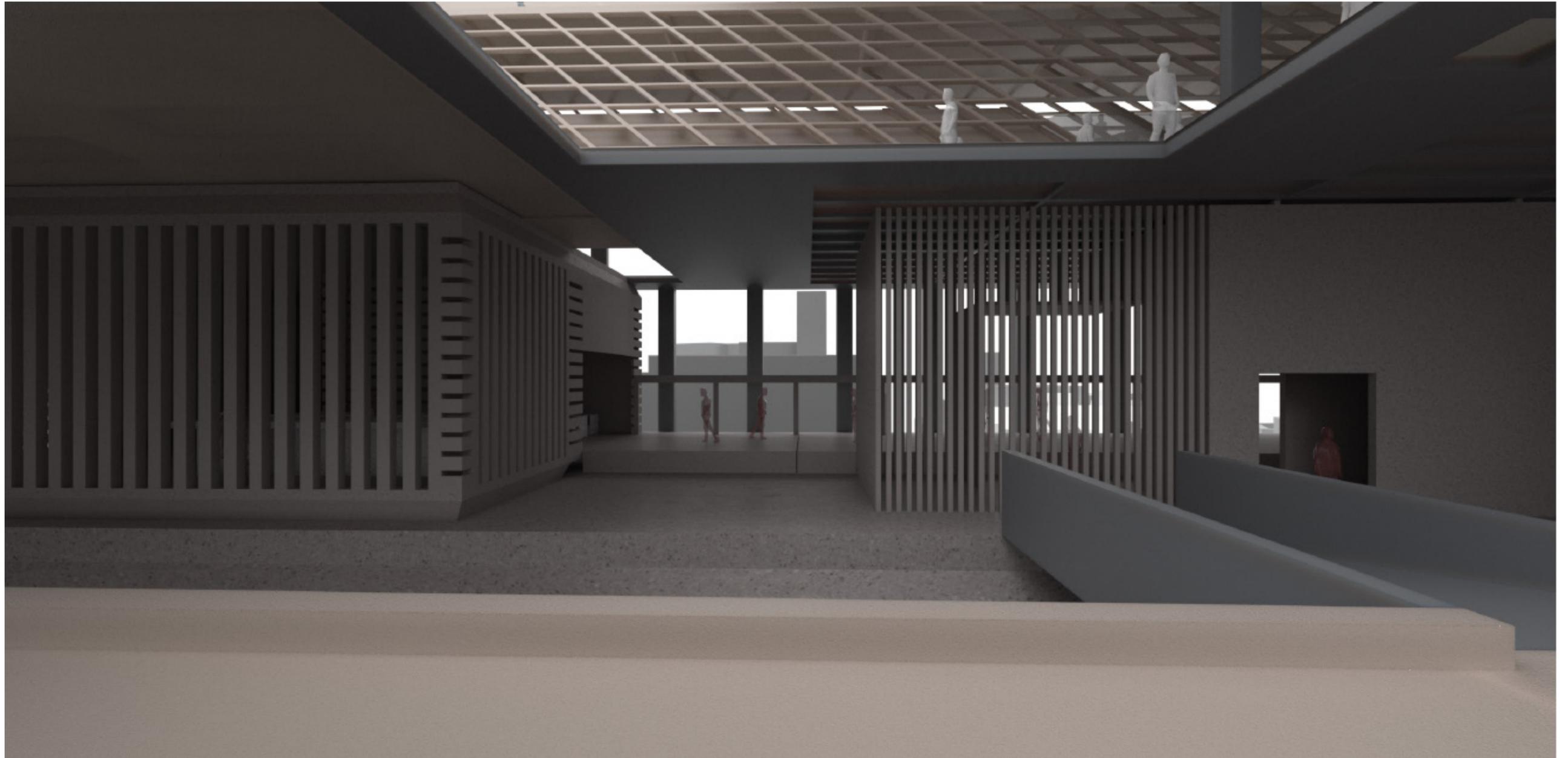
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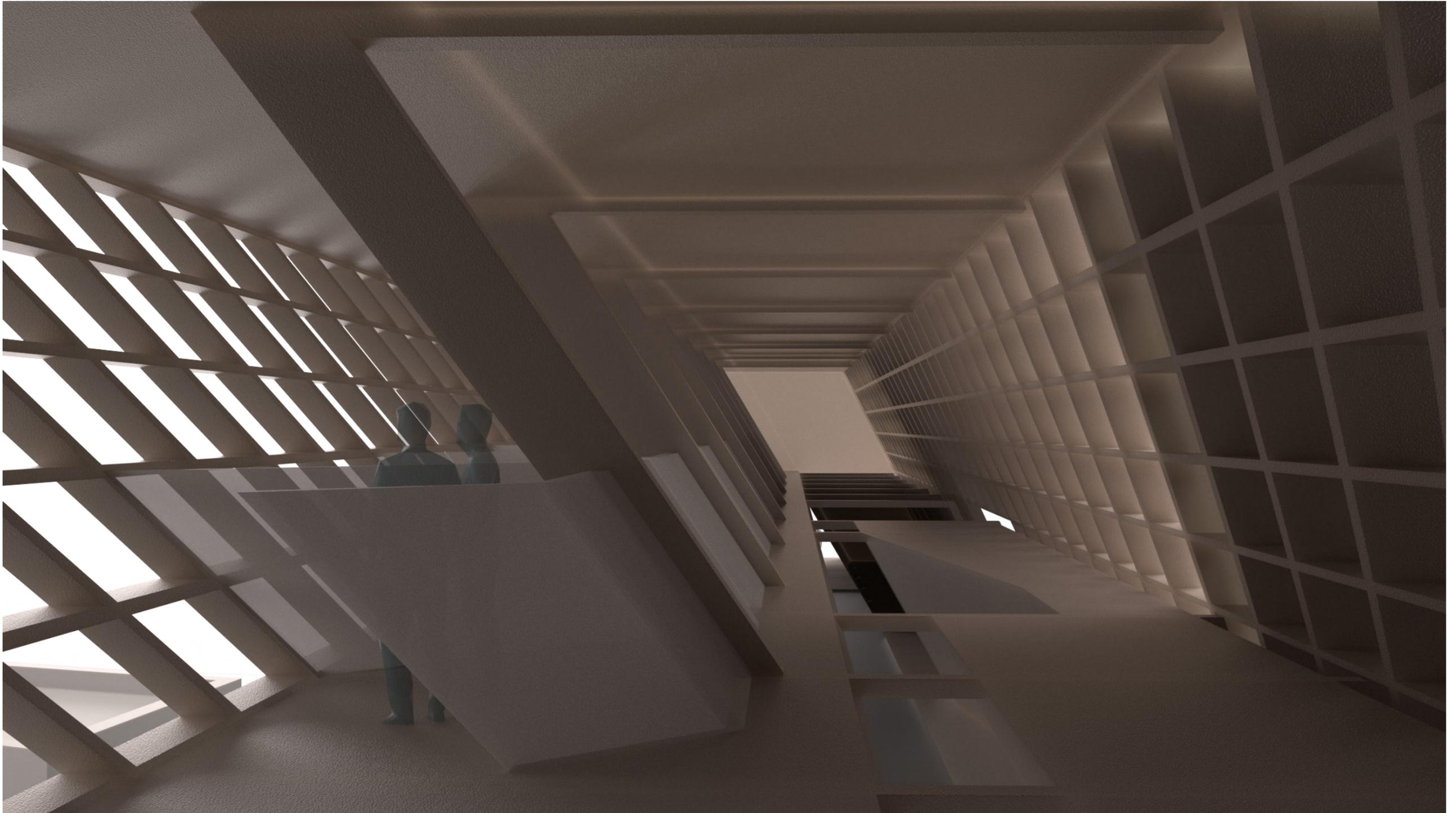
### Interior

Looking through some of the key moments within the space, flowing over of one city to the other, critical crosshatch moments, subtle change of material, the seeing and unseeing of individuals through the double screen systems etc



**Interior**

Looking through some of the key moments within the space, flowing over of one city to the other, critical crosshatch moments, subtle change of material, the seeing and unseeing of individuals through the double screen systems etc



**Interior**

Looking through some of the key moments within the space, flowing over of one city to the other, critical crosshatch moments, subtle change of material, the seeing and unseeing of individuals through the double screen systems etc



***CASE STUDY 1***

***432 PARK AVENUE ANALYSIS***

*Elective: Transcalarities with Andres Jacque  
Partners: Zhang Han, Rui Wang, Helena Urdaneta*

If you buy a postcard at a souvenir shop in New York today, you are very likely to be able to buy one with a photo of the 432 Park Avenue on it. Ironically, this monument-like building wasn't initially meant to be a landmark. Quite the opposite, it was meant to be the perfect viewing platform to enjoy the view of the rest of the city. The buyers, mostly not from New York, paid \$7 to \$95 million per unit so that they can enjoy the view through the 10-foot-by-10-foot windows, even though 80% of the time nobody stands behind these windows to see the views since the buyers actually live somewhere else and they just buy the unit for investment.

However, how did the view of New York City become a luxury and saleable goods? And how did the developer and designer manage to do that? What was the sacrifice to gain the views? Or more brutally, who were sacrificed? By asking and trying to answer these questions, we might be able to unfold a little bit the conflicts within the process of designing, constructing and marketing of the 432 Park Avenue.

It's not that easy to gain the views. Firstly, the developer sells the views by increasing the height of 432 Park Ave. However, the height itself is a mayor conflict for anyone not involved on the development. By buying "air rights" from owners of shorter buildings, developers can add floors to new towers as investments, which is viewed by critics as the Oligarch's Erection—as a catchment for the rich from which to look down on everyone else. An intense conflict happens when developers take advantage from a loophole in the city's zoning laws doubling the height of the mechanical voids to gain extra height for views. Amendments were made by the government to count mechanical floors greater than 30 feet tall, which is criticized by citizens as misguided and obtrusive. The developer of 432 Park Ave feels it's not offensive because "they created a very nice building that fits into the skyline perfectly", where the mechanical void itself is part of the design as intervals, lighting the night of New York and also as the compromise of the architect and structural engineer, functioning as the solution to reduce vibration caused by wind pressure.

The second compromise to gain the views is the window assembly. In order to "frame the views", the developer Harry Macklowe requests for thicker and larger window frames, which is the defining feature of the tower. Although beautiful on the facade, the architect, Rafael Vinoly himself isn't pleased with how they are densely framed and waste space inside; also apologizing for the 24 10-by-10-foot windows on four sides. Ironically, Macklowe wanted the frames to highlight the Central Park views, but apparently tenants are already removing them. Another compromise is that in order to sell the views, the bathrooms are designed at the central part of the units, large enough to maintain this idea of luxury and enjoying the views to the largest extent, which leads to even more cramped layout on the rest of the floor.

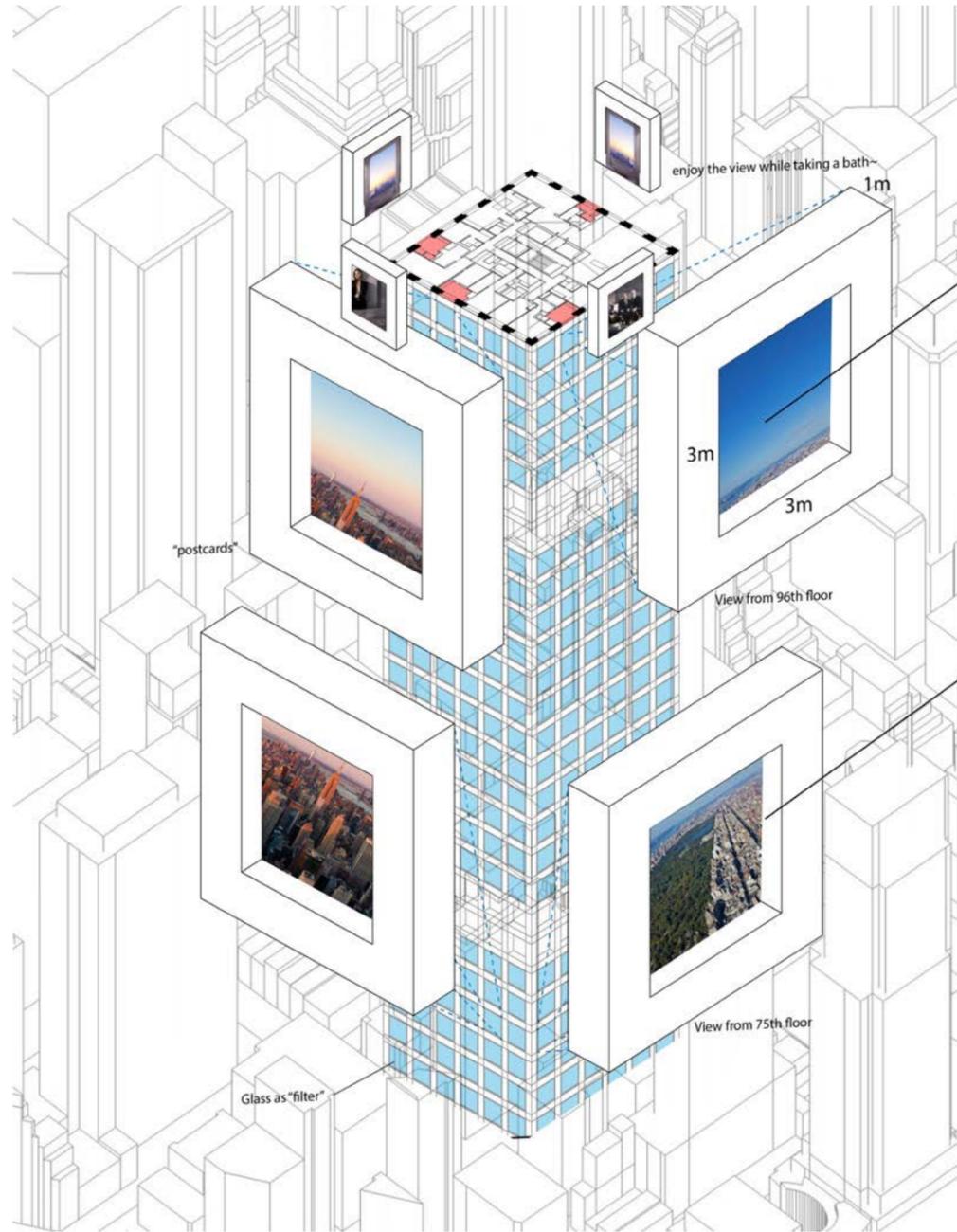
Any skyscraper is going to come with its own set of issues, 432 park however has a longer list than most. Apart from the issues the architect himself mentioned and later had to apologize for, the building is starting to show a real isolation from the city. Most of the apartments are vacant and purchased by wealthy international businesses and this drives their prices up even more. Building a skyscraper this tall casts massive shadows on New Yorkers who have to transit around the building every day of their lives, this development is not for the average New Yorker, this idea is ethically challenging.

There is a strong pressure on 432, from head-on wind and the unpredictable vortices that exist in cities and is relieved by openings in the concrete on every 12 floors, which expose a circular core for air to flow round.

The building flexes by as much as 60cm — moving more in the middle than at the top. Unusually, 432 Park's concrete skin, the visible fascia, is the main structure and the concrete laced with steel can bend without cracking. However concrete does lose a certain strength over time and the architect has criticized this again by categorizing it as a 'screw up'.

The residence was made with the intention of bringing back postmodern and modern design, however what it really is doing is making the majority of the inhabitants of the city feel more detached and isolated.

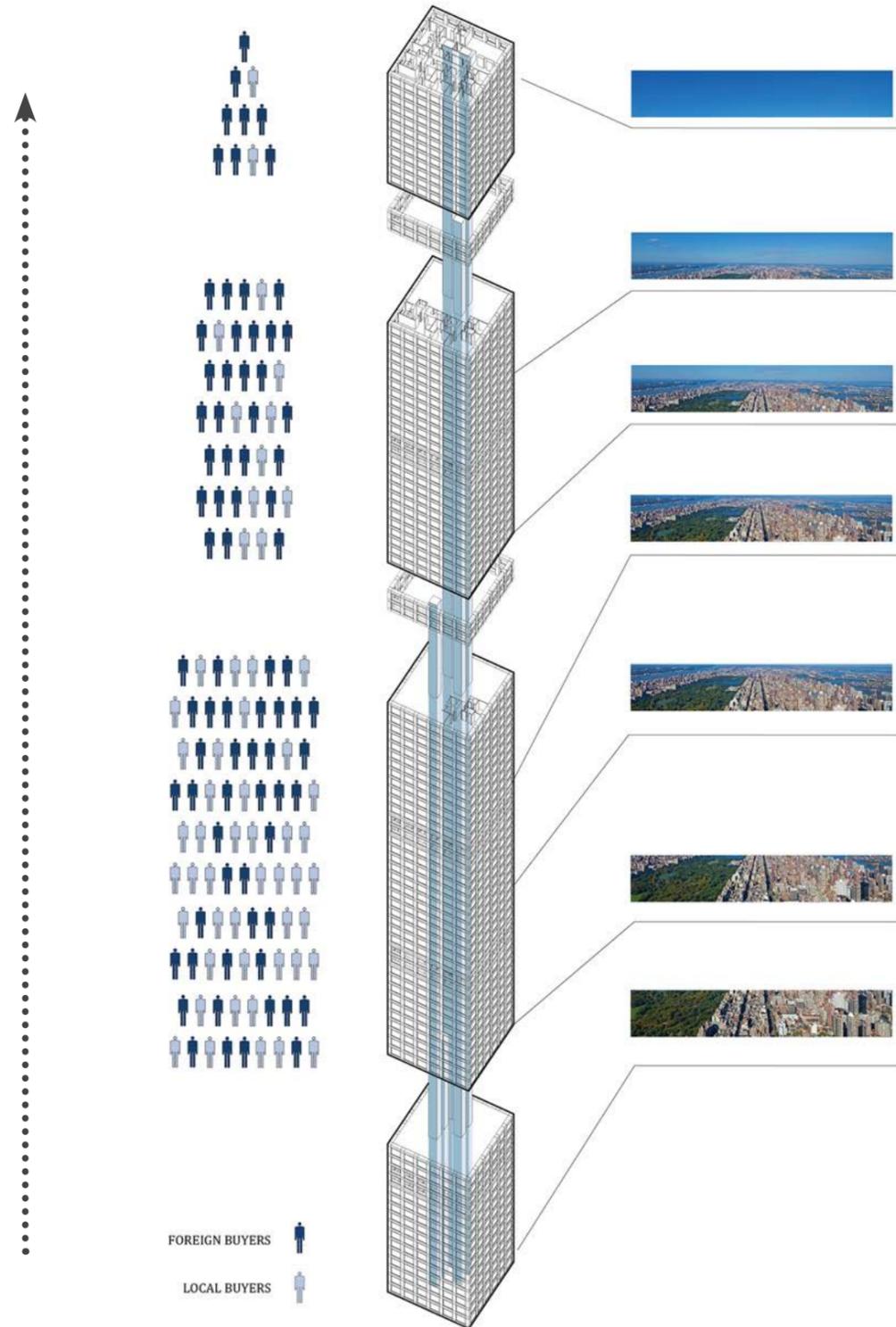




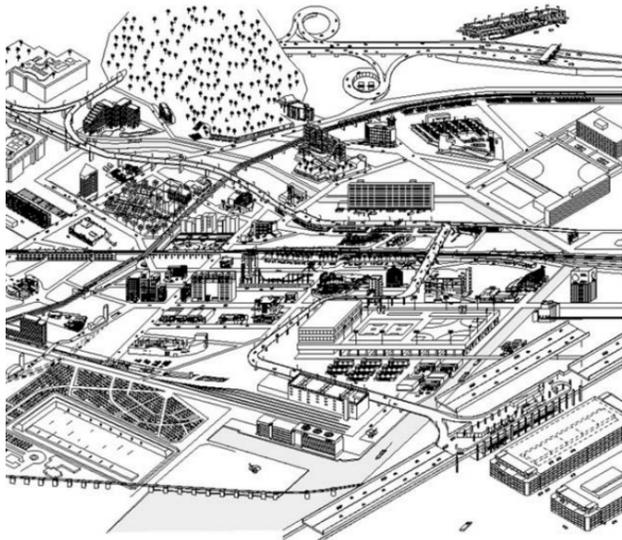
**Transcalar Nature of the Project's Chosen Glass**

The thickness of the glass, filter used and multiple complexities in its materiality that makes the fabricated views as you go higher up.

HIGHER VIEW : GREATER PRICE : FEWER TENANTS



**Building Dynamics with residents and public**  
Fewer Tenants, massive real estate impacts



## *PAPER II*

### **PROGRAM THEORIES**

*Seminar: Program Theories with Prof Enrique Walker*

*Learning From Las Vegas & Made in Tokyo : Collectively Written with Aayushi  
Joshi & Rafaela Olivares*

Program as a tool went from simply being the plan for/of action in a building, to replacing function as a term. This move was initiated to put an emphasis on the interdependence of two dictative components being- form and a function. In this vein, recalling Adrian Forty's definition of function: as a central ideology of the modern movement, yet it seemingly was never properly formulated as an idea, until it was critiqued into the 1960s. Program and the architectural language of a building allowed for discussion of actions within buildings disjoining their interdependence on each other. i.e. Program doesn't imply a form, materiality or function but simply the actions of events that will occur inside a building, upon which a project may be designed. These paradigms of program and its stemming rise of re-thinking its relation to the events it holds, could be analysed through two distinctly different yet closely associated books that have a unique takes on program and it's contextual relevance.

In 1972, Robert Venturi and Denise Scott-Brown, together with a group of students from a research studio at Yale University, published *Learning from Las Vegas*. Venturi and Scott-Brown were interested in evolving the traditional architectural studio into a new tool for teaching architecture, understanding the architectural and urban phenomena directly from the site. The studio was distributed in ten days of field research, analyzing Las Vegas from Las Vegas and the other ten months were dedicated to studio work at Yale University. This investigation was originated as a critic to the Modern Movement, but not directly to the ideals of the movement. At the beginning of the book they express their admiration for the founders of Modernism, but at the same time they criticized the long and unjustified prolongation of the idea of the movement. The architecture of Las Vegas is contrary to the philosophy of modern architecture that seeks to be disconnected from past architectural experiences (in response to the neoclassical style). The vernacular architecture of Las Vegas is an opposite idea to the well known "modern building" that needed to maintain a particular program, hence, the form should follow what is happening inside of the building: function. The type of architecture and urbanism that *Learning from Las Vegas* discovered was a city that completely challenges the typical or desired modern idea of "form follows function". They went to Las Vegas to learn from a city that at that moment was developing a new language of architecture typologies. The ordinary architecture, the one treated as 'ugly, was the type of architecture that Venturi and Scott-Brown were looking for in Las Vegas, that architecture that was authentic from there.

Differently from the modern movement in the case of Las Vegas, form was not necessarily following function or at least the idea of the preconceived program that historically was associated with a specific typology of buildings. One principal idea of *Learning from Las Vegas* was that the architecture of the city was 'symbol in space' rather than 'form in space'. Las Vegas tended to be anti-spatial, the architecture of Las Vegas was a communication system, where buildings through their signs (and not through their form) expressed if they were casinos, hotels, commercial buildings or restaurants. Within the studio, the students created a new way of showing and expressing the urban and architectural phenomena of the city. They created a new way of representation since the typical architectonic drawings were thought for representing space and Las Vegas was not talking about the idea of space, was talking about symbolism and communication.

The idea of the methodology of the studio was not designing the city again, but learning from the original and vernacular architecture of Las Vegas: the commercial strip, the decorated shed, the building as a sign and the idea of symbolism. The idea of the Decorated Shed as a box that doesn't change its form with the program, the only thing that changes was the facade, the billboard or the sign that was decorating the shed, and all of that for being seen from the street form inside of the car. In this case the program is not directly related with the typology of the building. The notion of the piazzas, water channels and other elements symbolises very specific functions in very specific styles of Europe, but when those types of architecture are applied to programs in Las Vegas's Hotels or Casinos, the type is redefined: an Italian Palazzo can be a Casino and a Piazza can be a Shopping Mall. This type of architecture, that in Italy or in general Europe is associated with a specific kind of program, in the United States or specially in Las Vegas is immediately associated with Casinos. Thus, not only the type is re-defined, the program is also re-defined and this new typology of building became part of the collective memory and part of the "original" architecture of Las Vegas. In this case, the type and consequently the program changes depending on the physical, social and political context.

In contrary to *Learning from Las Vegas*, a book that highlighted the disjunction of the type to its program, *Made in Tokyo*, a book published by Momoyo Kaijima, Junzo Kuroda and Yoshiharu Tsukamoto while adapting a very different path of methodology, highlighted the fundamental strategies of architecture development in the city of Tokyo. The format of the book, differing to the research studio compilation approach of *Learning from Las Vegas*, is intended to form a guidebook. The idea of the format stemmed from the fact that Tokyo, being a maze-like city without physical navigational aids such as axes or urban boundary lacked a navigation guide without the burden of having an order to the book, that more or less suited the character of the city. The book is a catalogue of buildings that have small descriptions about them and a picture, resembling a tourist guidebook.

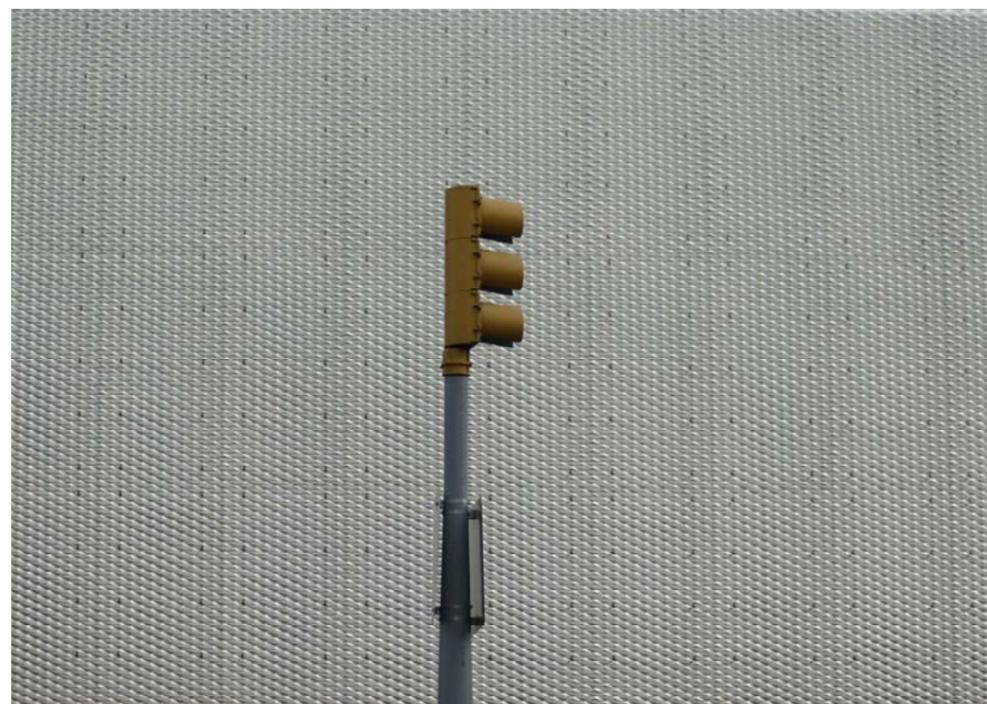
*Made in Tokyo* picks up tools to see architecture, with a sense of 'flatness', that is, thinking of architecture without any preconceptions and having an open eye. The writers of the book were interested in the buildings that gave priority to the stubborn honesty in response to their surroundings and programmatic requirements without insisting on architectural aesthetics and form. These buildings were mostly anonymous, unnatural to architectural cultural acceptance and probably built by the users themselves and not designed by famous architects. They are not perfect examples of architectural planning. They are not A-grade cultural building types. These buildings are B-grade and as they don't have only one component of the program is always not a recognizable program since is a mix of more than one and also because they are all different so it is kind of impossible to put each building in a recognizable category. This is termed as *Da-me Architecture*.

The architecture exposes several programs that emerge to the surfacial platform that are not only interesting, but unique to the city. The book explores various kinds of programs that have emerged into becoming the character of the city. Solely by looking at architecture through its structural, category and the use, a matrix of new types of buildings emerge that hold activities and programs, unique to its kind. Buildings in Tokyo constitute programs of extremely contradictory nature, in one structure that gives the hybrid building a new type. For example a karaoke building, a supermarket with a rooftop football stadium and housing complex that holds a cliff in its position. The book also highlights the emergence of new types of programs by the occurring conflicts between architecture and civil engineering, like a shopping mall right under an expressway bridge. While buildings situated next to each other, the tightly packed city leaves very little scope of architecture between these spaces. The locals, aware of the city's cringing space demand utilise these spaces that could possibly be occupied only by a pet, (hence named pet architecture) to constitute signages, shops, cycle parking, etc. *Pet Architecture* is hence another kind of programmatic development, unique to Tokyo, that has emerged by the constraints of space.

The two books have projects which can be discussed, compared and contrasted with the notions of type that they represent. Venturi and Scott Brown in *Learning from Las Vegas* claimed that, "learning from an existing landscape is a way of being revolutionary for an architect" They were attracted to Vegas architecture and what was considered 'ugly' as an aesthetic and reconditioned it to be studied, understood and examined. To study the city they needed measures as unusual as the city itself. Denise Scott Brown mentions that in her *Form Forces And Function Studio* they proposed that long before architects arrived there were social, natural and technological conditions which established city patterns and these forces exist upto this day, affecting the way we design buildings. They critically analyzed the physics of crowds and herein established their notion of movement while reading Las Vegas architecture. How the exterior of the buildings, the bright ornamental signage and imagery created for mental and seductive routes for the visitors, while the insides of these decorated sheds didn't mimic the intention of the exterior. For them the urban design strategy and making has become more about the use of the insides but the dependance of this use and the ability to access this, is from the outside relationship is the front door and signage; not the innate knowledge of the site itself. Their claim of the architecture moving to a more commercial vernacular where buildings are being designed for man and not people is in support of their attitude towards the modern movement's rejection of ornamental and historical symbolism, they prefer to study the shocking and complex while establishing strong reasons for their existence.

This notion of movement defined by the aesthetic value of signage and how public spaces are mapped through it, is where a parallel can be drawn in the philosophy of Atelier Bow Wow and what they imagine the quality of a public space is. They base the quality of it on people's participation and relate an individual to a customer in a designed marketplace. In their work on Micro Public Spaces they attempt to turn on the program so as to have the individuals participate in the space and hence create movement through it; for example, moving the furniture or having mobile structure allowing the individual to have a curated experience in that amount of space. This experience of an individual in the space is important to Atelier Bow Wow as they mention, from Pet Architecture they learned how 'interesting' spaces were created by occupancy. This gave way for two separate distinctions with which the space can be read, representation of space is the architects vision of the space and space of representation is how the resident uses the space. These two manners of interpretation allows for another notion which they are advocates for which is the redundancy in space. They define this redundancy architecturally as the ability of a designed space to serve as an open program or for a purpose different from its initial purpose so as to serve the environment better in case of 'accidents'. This theoretical understanding can be applied practically by noticing the questionable spatial adjacencies in the buildings of Made in Tokyo, as they don't respond to cultural context or history but they are in 'affordance' to the urban environment. The emergence of expressway-department stores, billboard apartment housing and other such cross category programmatic type buildings which abandon the norm of strict architecture, civil engineering and urban planning but are resultants of urban production as a whole.

Both the books bring the public into the picture while talking about the vernacular nature of the buildings and how vernacular architecture has an expression of its form and program. However, it is important and plenty ways interesting, to notice that even though the territory of conversation has been opened up to discuss vernacular architecture in these two books it is in two different contexts and mannerisms. In their own way the architects are supporters of circumstances leading to different forms of architecture while allowing for movement and events of occupancy to bring narrative into architecture.

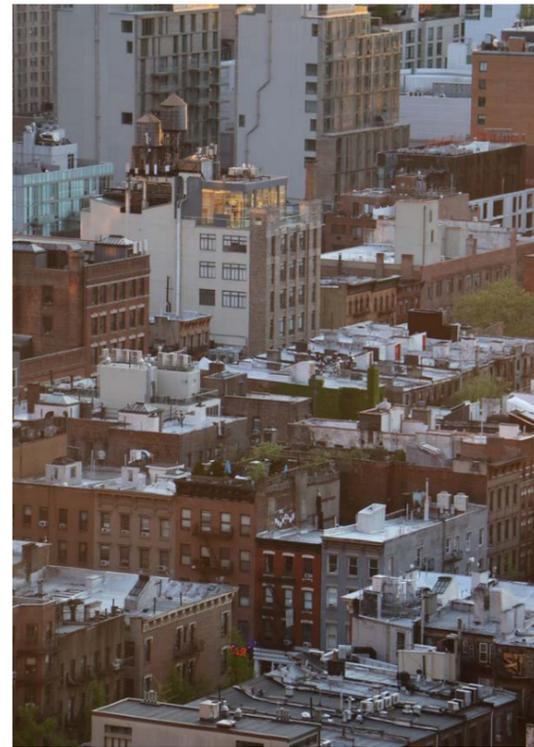
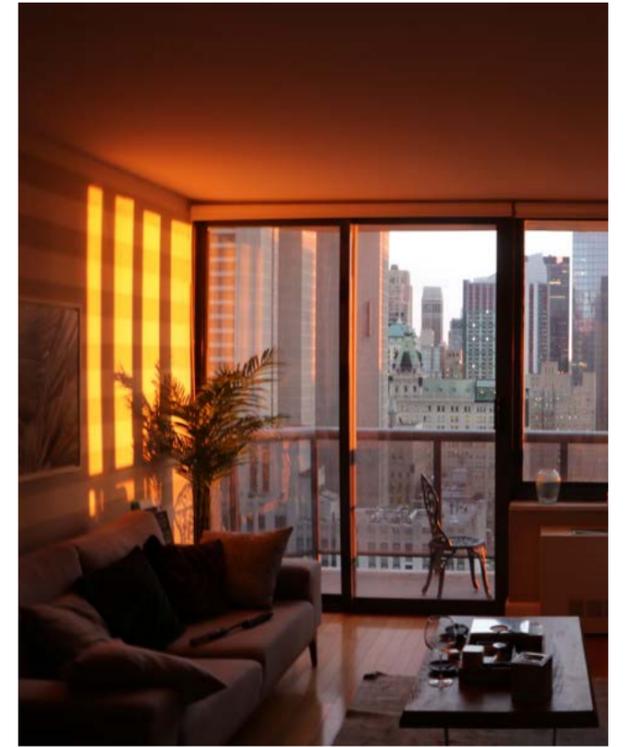
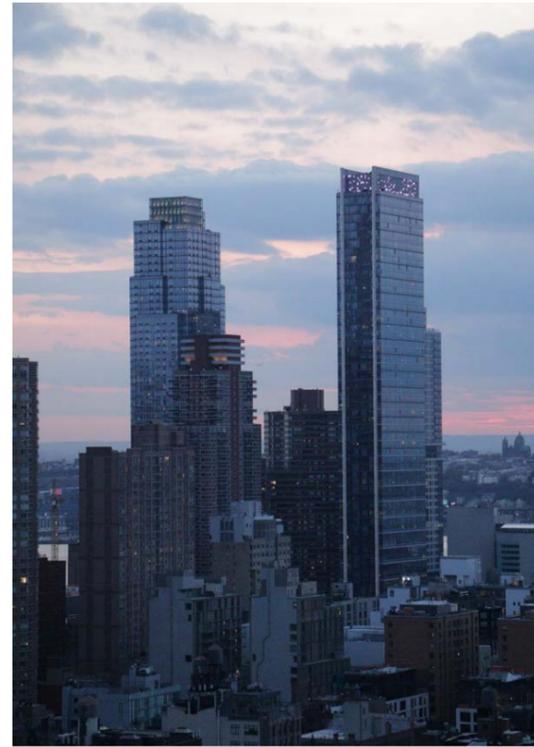
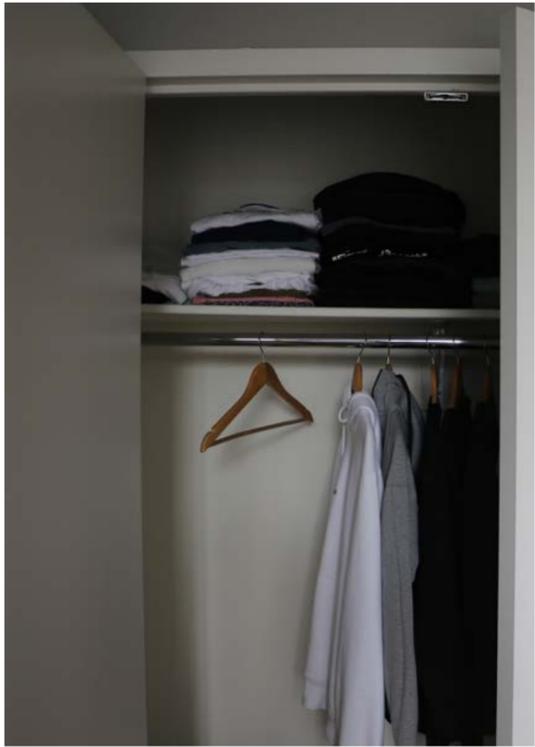


***ELECTIVE***

***ARCHITECTURE PHOTOGRAPHY***

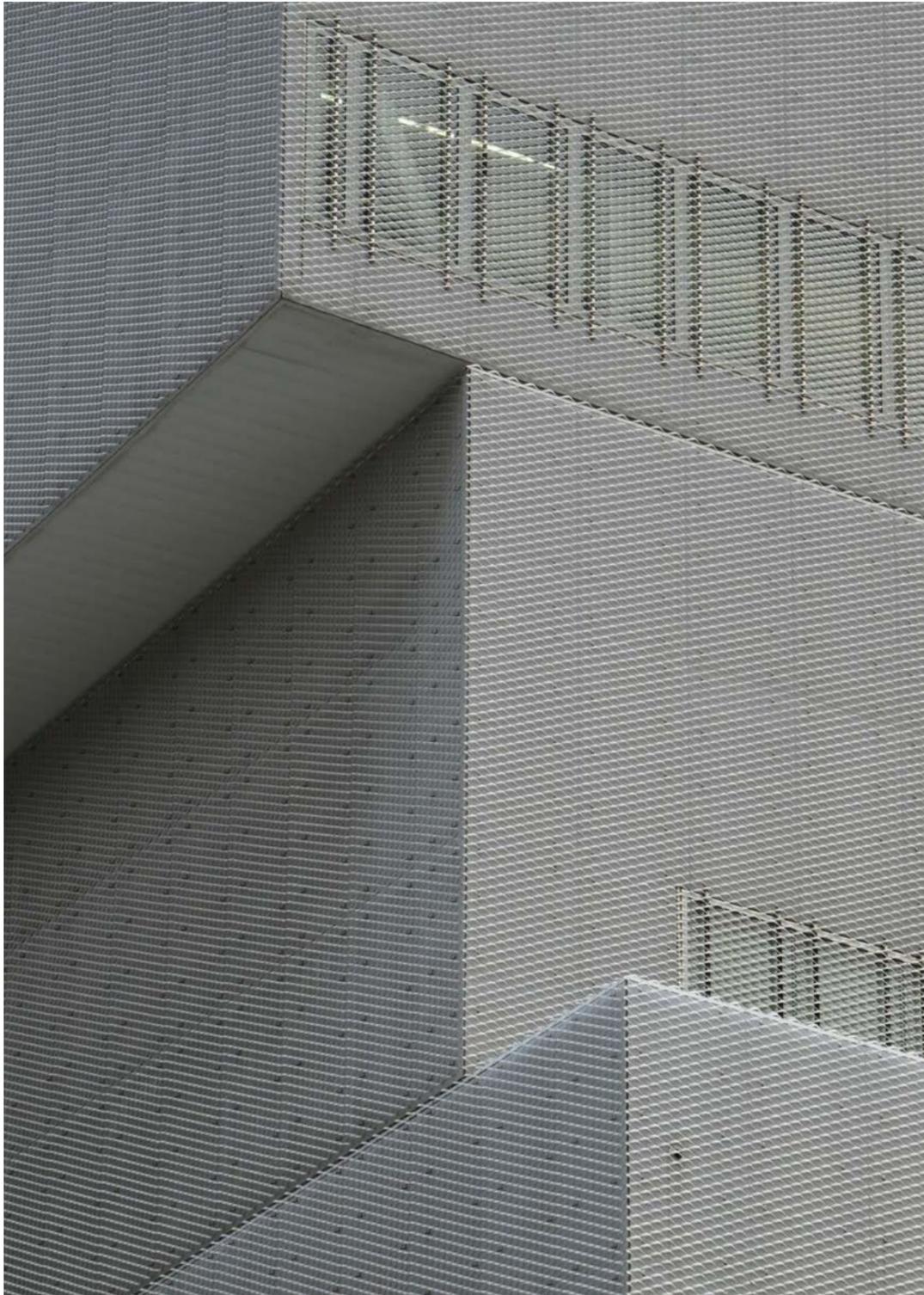
*Seminar: Dynamics of Photography with Prof Michael Vahrenwald*

***Collection of Images from the Normal and Adjusted***



Interior Study

Interior Study



New Museum



Another Room