



SOVONA GHATAK

Portfolio | 2023

Existence, a term that circumscribes a being's origin, cause, reason, significance, and relevance, is a 'phenomenon' that is at a constant flux. One encounters these questions almost every single day. "What is the reason behind this phenomenon?", "What is its relevance?", "How was this substance or element formed?" or "What is its origin?"... the list of such questions is interminable. The origin, cause, and reason form the concomitant intangibles of a being, the order of which still continues to be a big question. The universe we dwell in consists of a plethora of such 'beings' and their idiosyncrasies, some of which are yet to be discovered by the human civilization. The ones already found are complex enough which make our eyes squint, put our brains in deep contemplations and perhaps, make our whole body think. This process of comprehending a foreign idea involves a distortion of meaning that breeds new concepts and questions, and this particular distortion, which embraces the immensity of the complexities of a being, interest me. Architecture is a narrative-loaded complex system that houses within itself several layers of meaning. These ideas and questions fuels my architectural works.

"...human habitation is a characteristic of all buildings, while architecture transcends building because of its aesthetic aspiration." - Nikolaus Pevsner, The Language of Architecture



PHOTOGRAPH OF ME WITH SPACE ANFRACTUOUS DRAWINGS

CONTENT

+ SPACE ANFRACTUOUS

Pavilion Khora	1
Lumacast X Anfractuous - Lumacast Office	5
Sculpture Resort, Udaipur, India	7
Synesthesia Contemporary Art Museum	11
Playground Phantasmagoria	15
Banditto Art Gallery Exhibition	19
Lumacast X Space Anfractuous Fruit Tray	20
Other Anfractuous Projections	21
Soliloquies	25
Space Anfractuous Painting	27

+ACADEMIC

Song of the Infinite and Frozen - Bathhouse, Iceland	35
Adaptive Quality, Boston	49
Ethereal Enclosures - Boston Public Library	35
Continuance Commercial Center	49
Metamorphosis Group Housing	53

+PROFESSIONAL

Ru-Urban Baori	57
Serendipity Pavilion	61
Regal Stores	65
Residence Woods	69

+MISCELLANEOUS

AAVS Workshop, Mumbai	73
Design Morphine Workshop, Athens, Greece	75
Models	77

SPACE

ANFRACTUOUS

Space Anfractuous explores different characteristics of spaces, architecture, environment, aesthetics, and questions the 'conventionals' that exist in our realm and attempts to provide suggestions and exceptions, some of which raise new questions in the process. It tries to fuse multifarious features and idiosyncrasies in search of a new language of architecture and while doing so suspends the notion of style - a rigid framework which puts architectural works into specific categories - and tries to unveil the combination of various styles and details that any architectural piece houses within itself. In a nutshell, it forms a mixture of various styles rather than become an epitome of one definite style. Space Anfractuous is a metaphor for a smooth mixture of ambiguities and ambivalence - like ethereal forms, juxtapositions, and multilayered folds of meanings - that exists in perhaps every possible substance and it wraps these several frames and forms morphologies out of these.

- + PAVILION KHORA - Competition Entry, 2019
- + LUMACAST OFFICE, SAN DEIGO, USA - Commission Project, 2020
- + SCULPTURE RESORT, UDAIPUR, INDIA - Commission Project, 2021 - Present
- + SYNESTHESIA CONTEMPORARY ART MUSEUM - Conceptual Project, 2021
- + PLAYGROUND PHANTASMAGORIA - Conceptual Project, 2021
- + BANDITTO ART GALLERY EXHIBITION, TUSCANY - Invited Competition, 2021
- + LUMACAST FRUIT TRAY CUM SCULPTURE, SAN DEIGO - Commission Project, 2019
- + OTHER ANFRACTUOUS PROJECTIONS
- + SOLILOQUIES
- + SPACE ANFRACTUOUS PAINTINGS



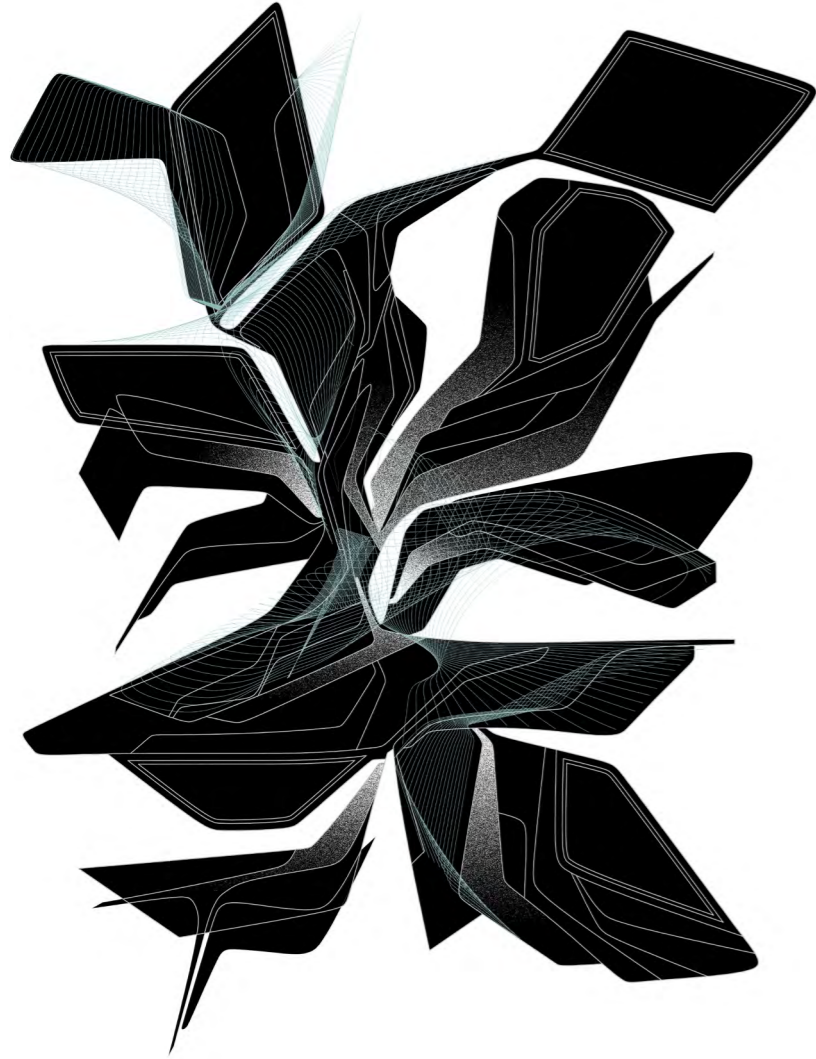
www.spaceanfractuous.com



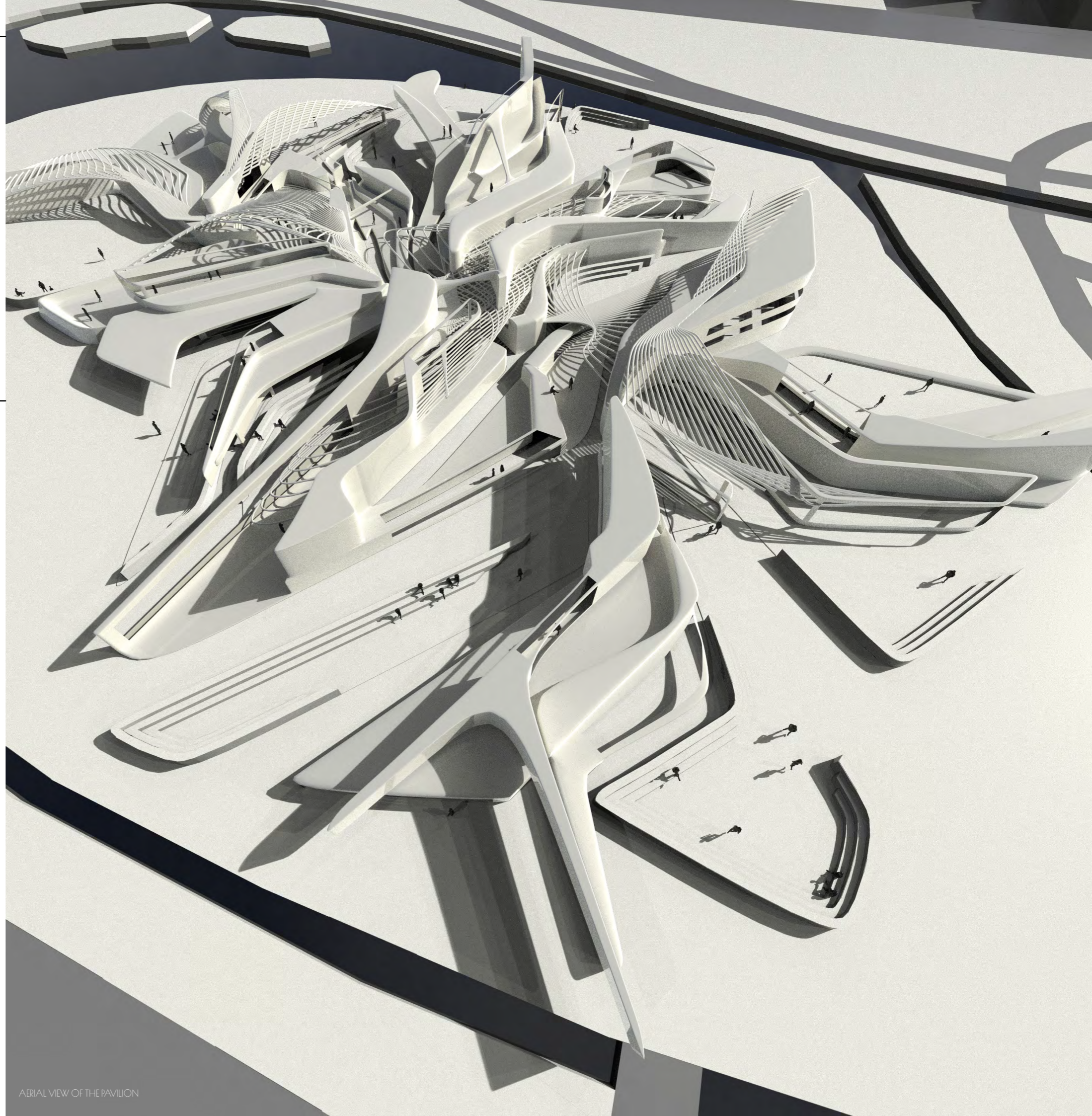
PAVILION KHORA

Space Anfractuous | Competition | Individual | 2019

Pavilion KhÔra intends to construct a new context that strives to uplift the strong cultural and artistic identity of Amsterdam. It deconstructs the concept of precedent, time and exposes the 'inseparabilities' of the terms separated by the 'separatrix', for instance - signifier/signified, and/or inside/outside, black/white, visible/invisible. The pavilion's form dissolves the Euclidean plane -the separatrix which defines X, Y and Z planes. The transition of phases from a visible to invisible, from solid to void and vice versa as can also be seen in the design. KhÔra is a pavilion that is a combination of the opposites or contradictions that exist together, constantly trying to dissolve the boundaries between them.

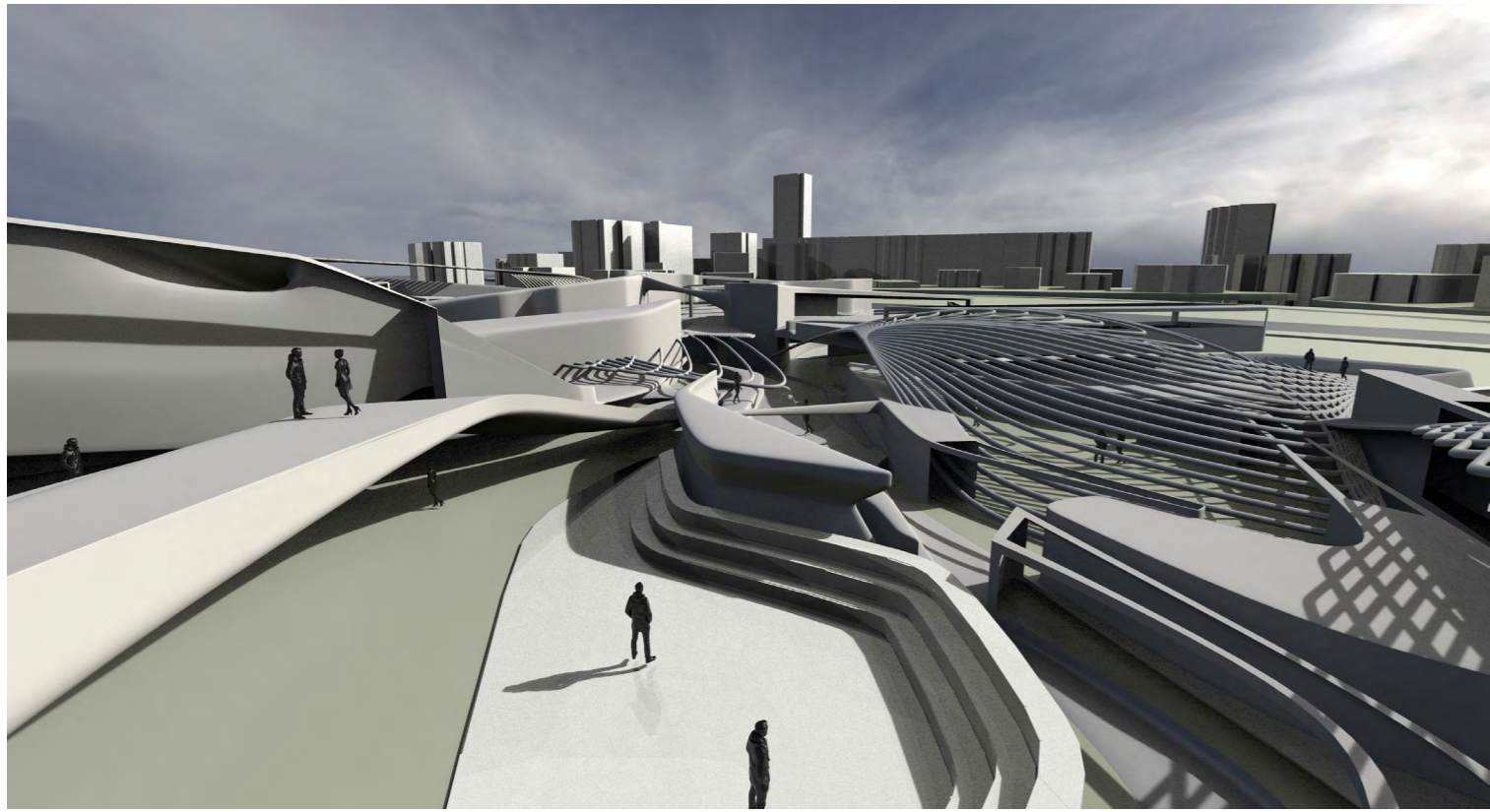


CONCEPTUAL DRAWING FOR THE PAVILION

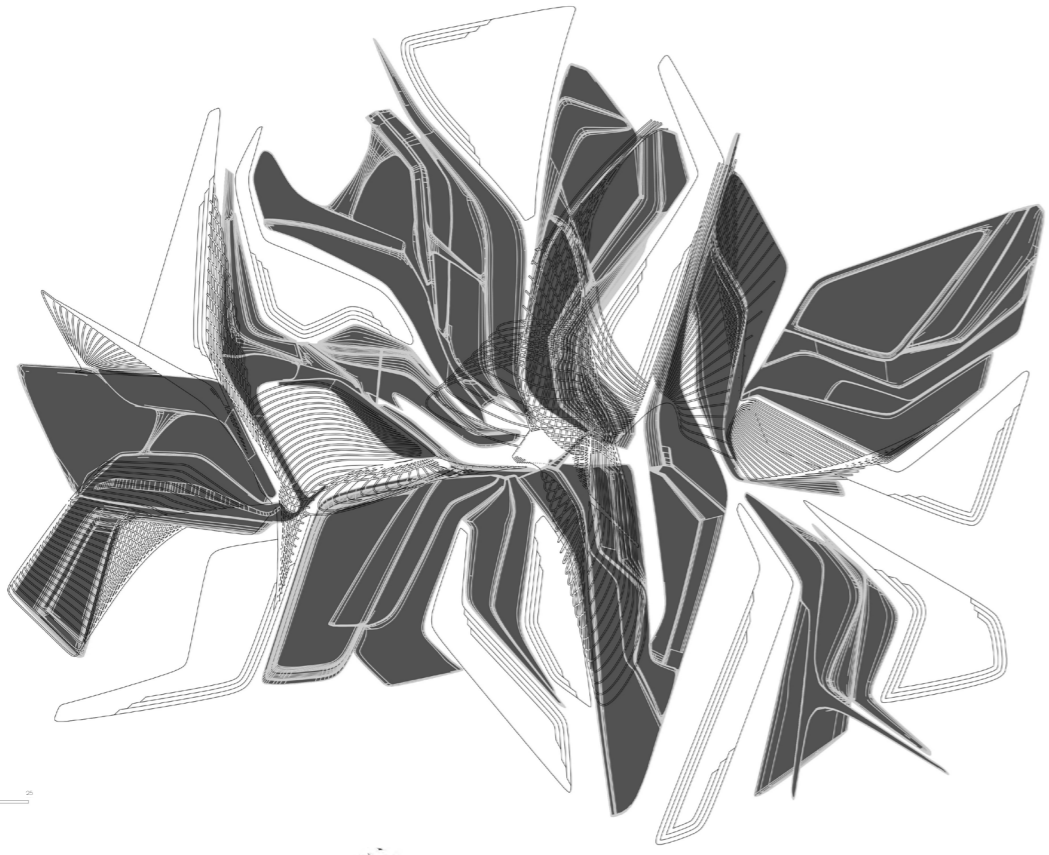


AERIAL VIEW OF THE PAVILION

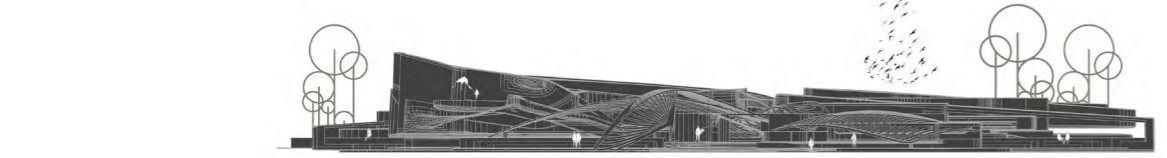
The formal language of the pavilion is an aftermath of mixing the language formed by the fabric of Vondel Park, the logic of curvilinearity, the abstraction of Picassos' sculpture and the surrounding museums, forming a reference point for the art it is surrounded by. The pavilion refuses to become the symbol of the precedent and rather tries to take a stance of the sign which is neither a finite void nor an infinite form. It tries to mimic the qualities of a 'sign' that is ever-changing, an ambiguous multi-layered entity. The pavilion appears to have different qualities at different times, not surrendering to one character and function. There is always a tension in play between the 'container' and 'the contained'. It welcomes the distortion of meaning involved in the process of perceiving a foreign ambiguous idea that breeds new concepts and innovation, such distortion which forms a favorable new meaning.



VIEW OF PAVILION KHORA



PLAN



ELEVATIONS



EXPLODED ISOMETRIC DIAGRAM

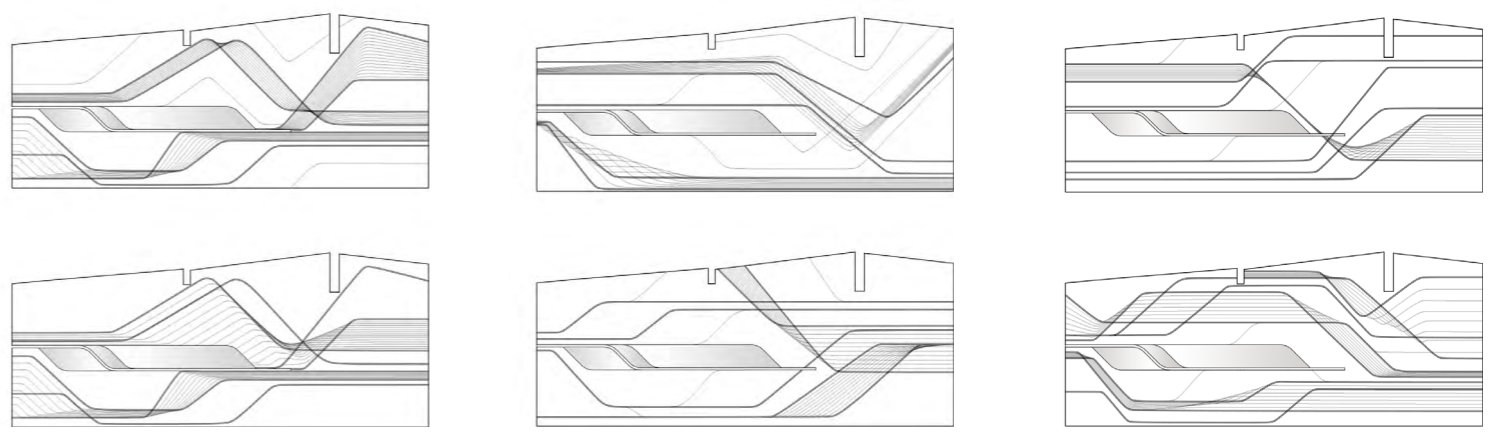
LUMACAST X ANFRACTUOUS LUMACAST OFFICE, SAN DIEGO

Space Anfractuous | Commission Project | Individual | 2020

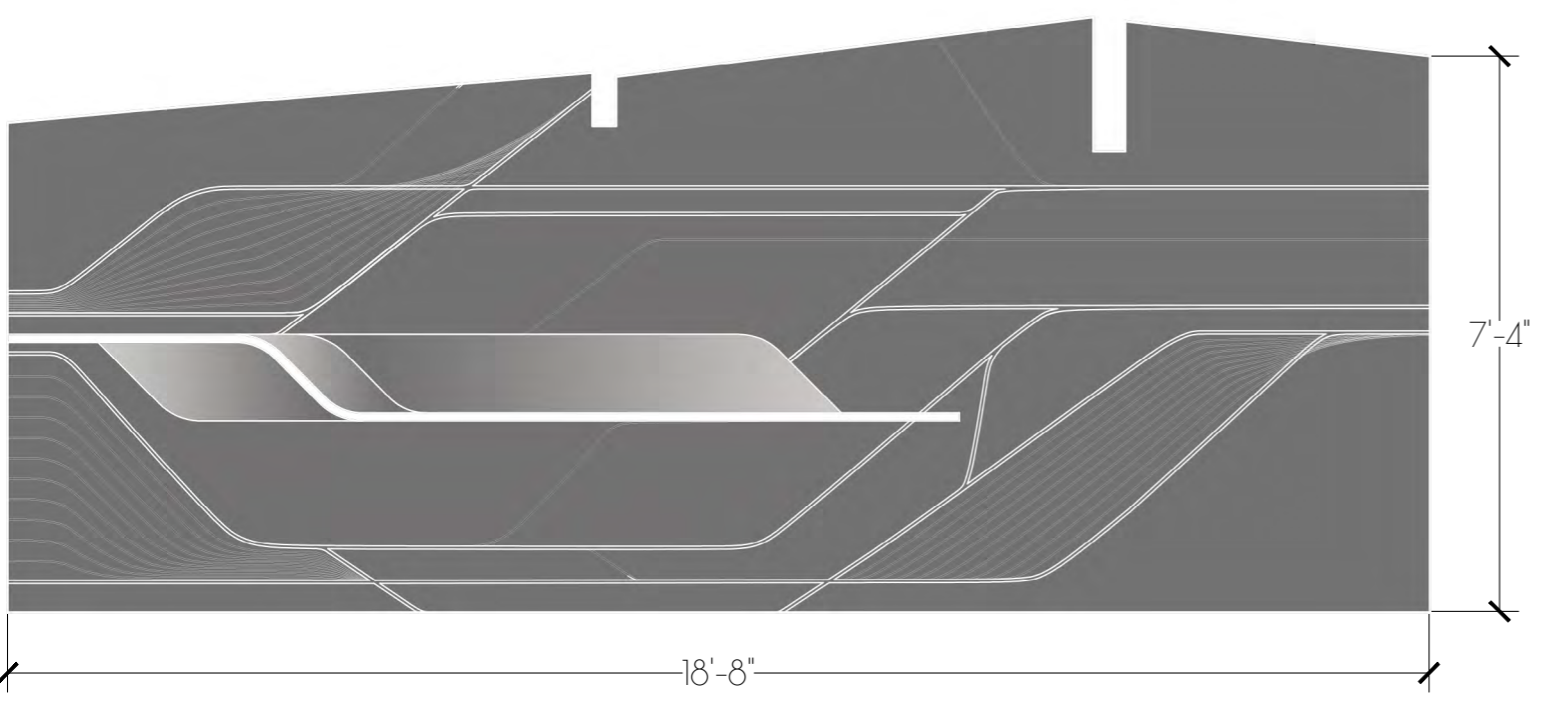
LUMACAST is California's premiere provider of concrete Fire and Living features. Their architectural products and furniture are individually hand-crafted in San Diego. Their products are made up of lighter weight concrete innovated by the company itself. LUMACAST concrete is more durable and is made by using 30% recycled materials which makes their products more sustainable. The project brief was to design a 3D concrete wall mural which would be the backdrop for a 900 pound concrete floating table.



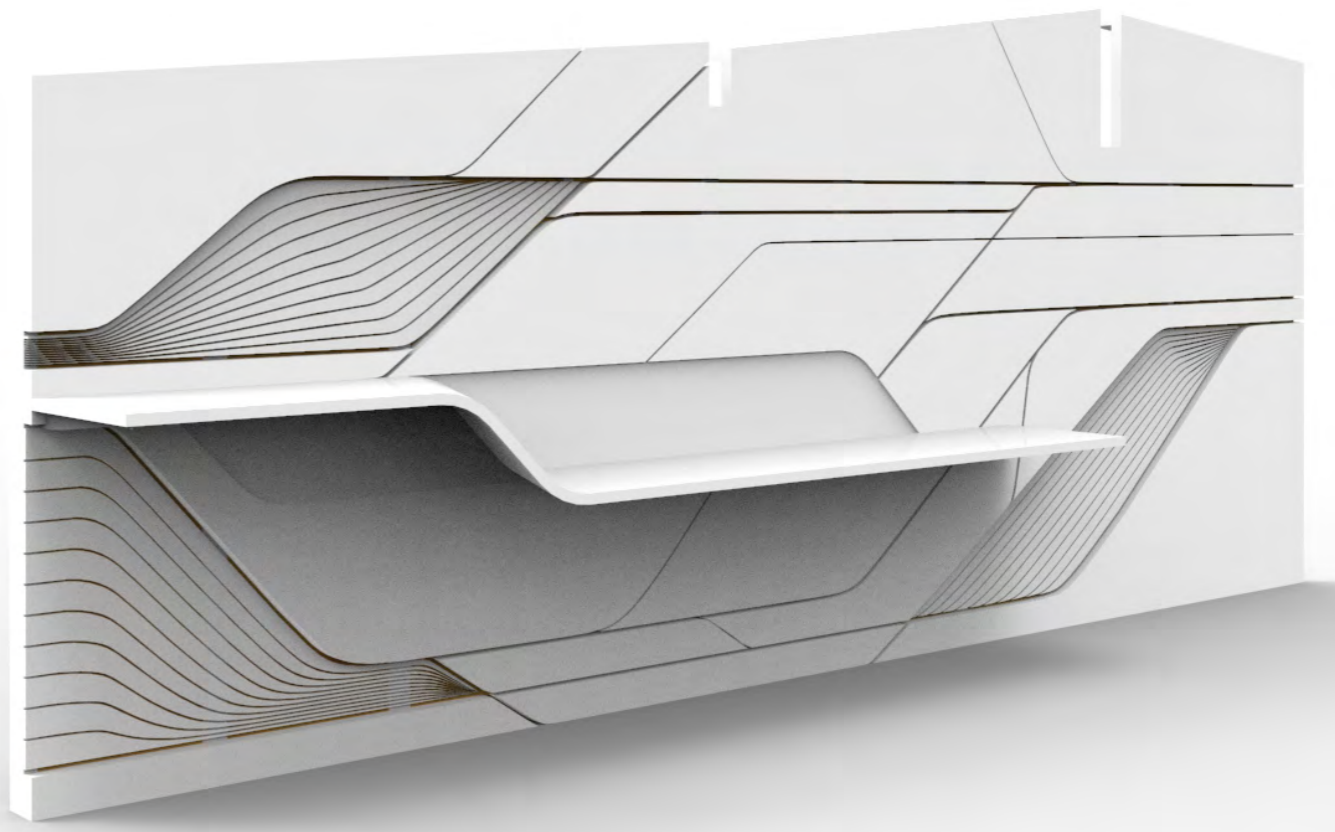
PROJECT EXECUTION



ITERATIONS



ELEVATION

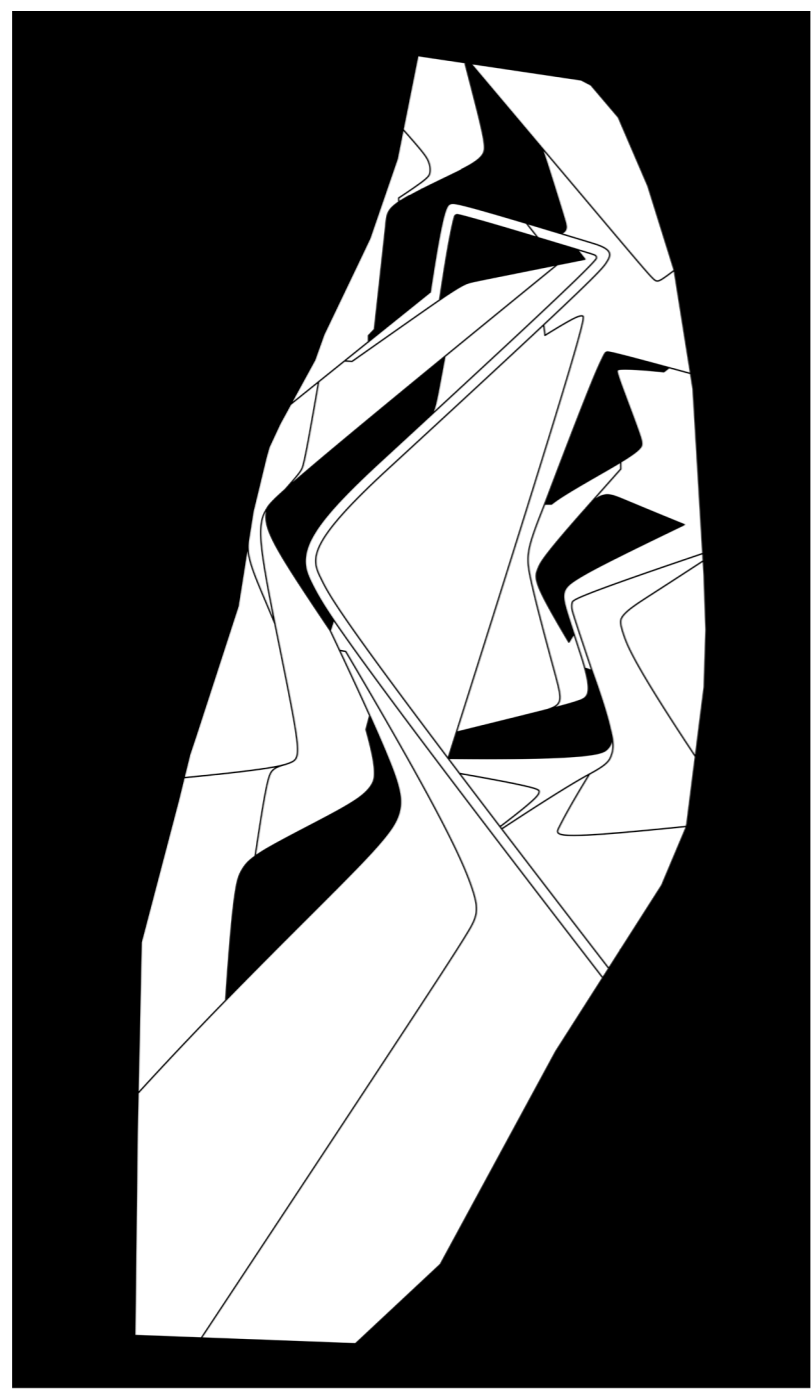
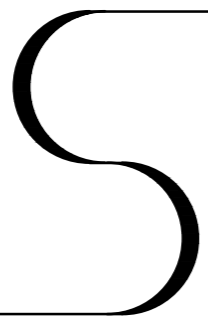


3D VIEW OF THE LUMACAST CONCRETE WALL PANEL AND FLOATING TABLE

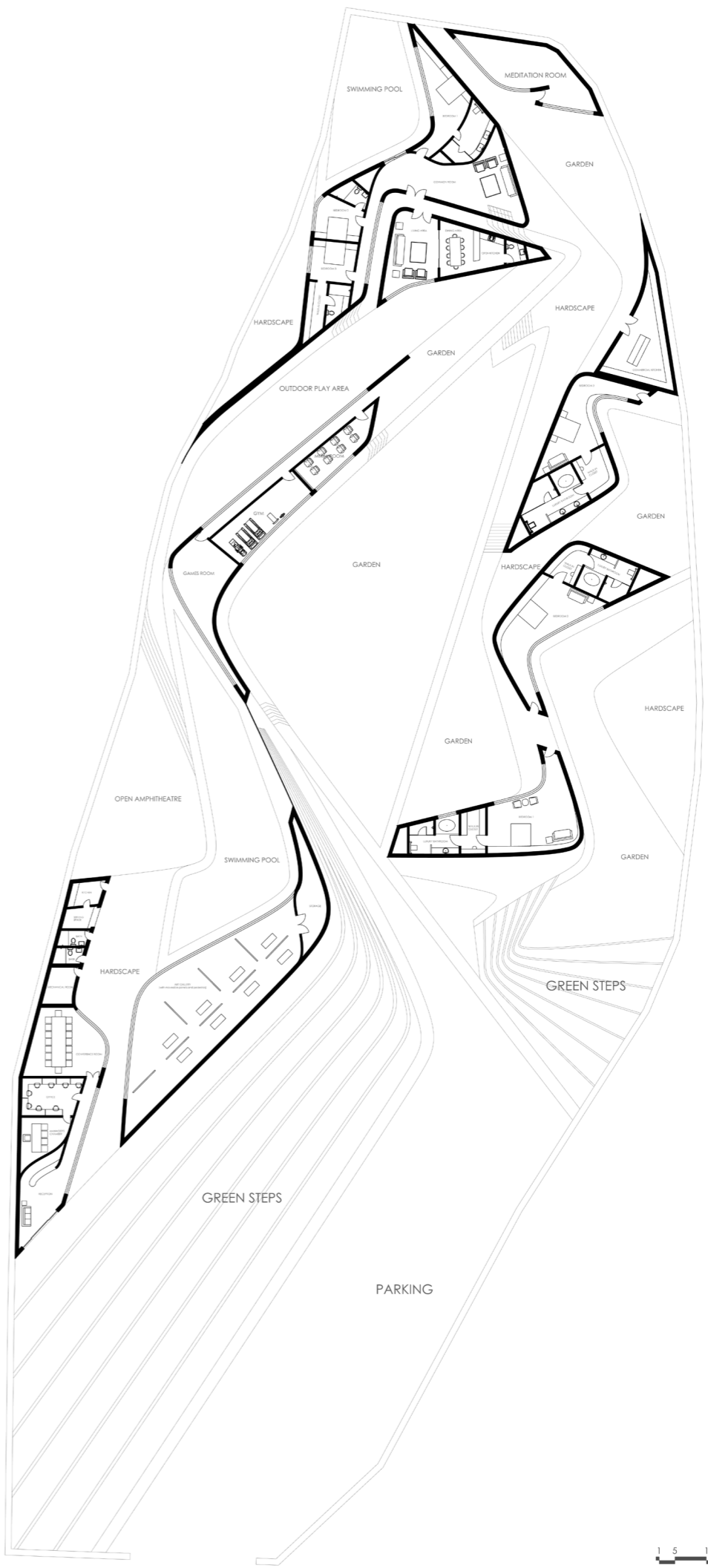
SCULPTURE RESORT - UDAIPUR, INDIA

Space Anfractuous | Commission Project | Individual | 2021 - Present

If the process of designing is a dream, the drawing is the awakening. These soliloquies celebrate the 'infinite' and the curious craft that architecture is. I once read somewhere that 'Drawing can be phenomenological' and that single idea has set my attachment to sketching stronger. Since then I have immersed myself in the process of producing drawings. I call these drawings as 'Soliloquies' because they reflect the conversations I have with myself about spaces, architecture and environment. The soliloquies intend to develop new expressions towards architectural objects and creative atmosphere, so when one see the curves, they are not just curves on paper and restricted to two-dimensional graphics but curves as three dimensional objects floating in the space and sometimes forming the space too.

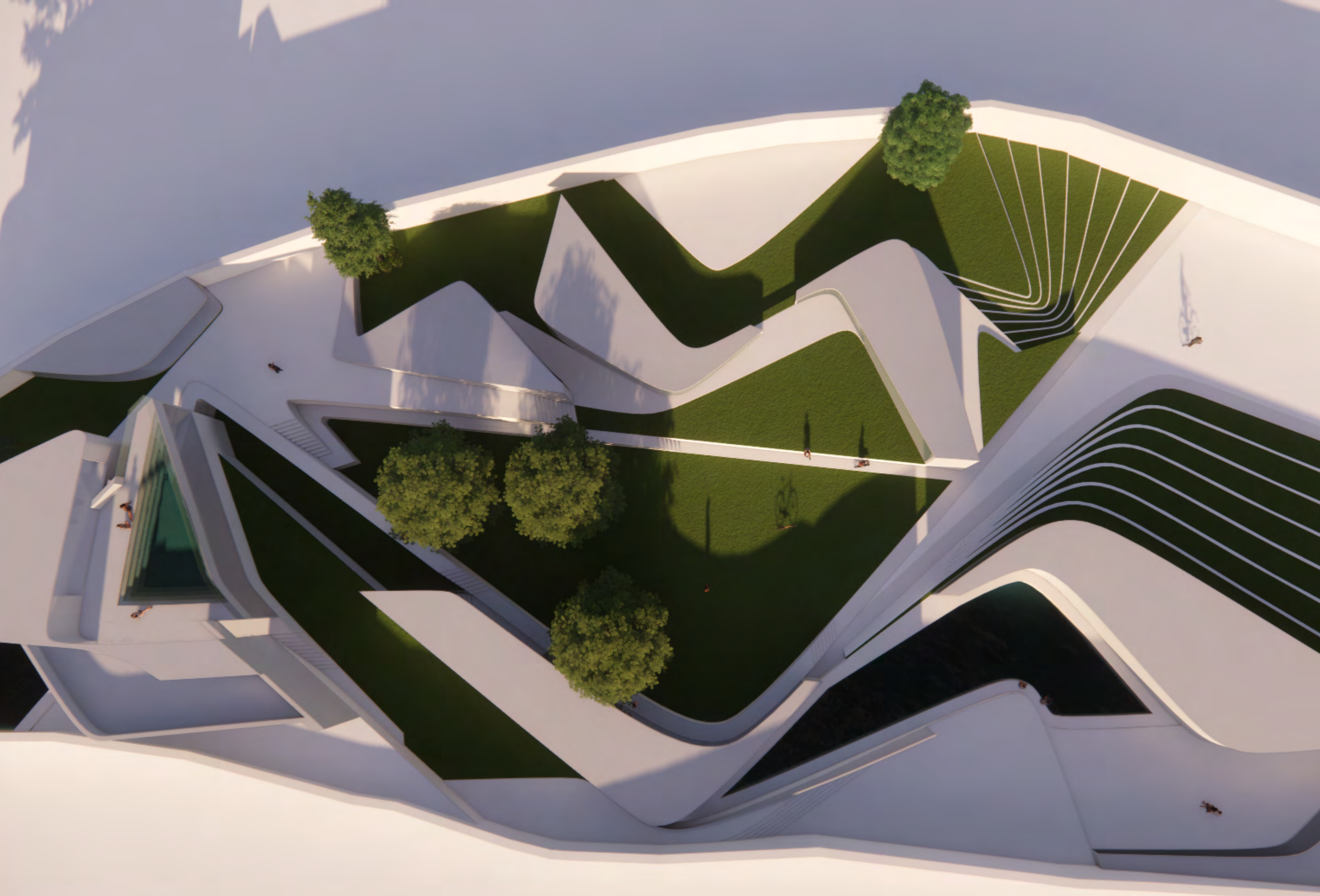


CONCEPT SKETCH



SITE PLAN



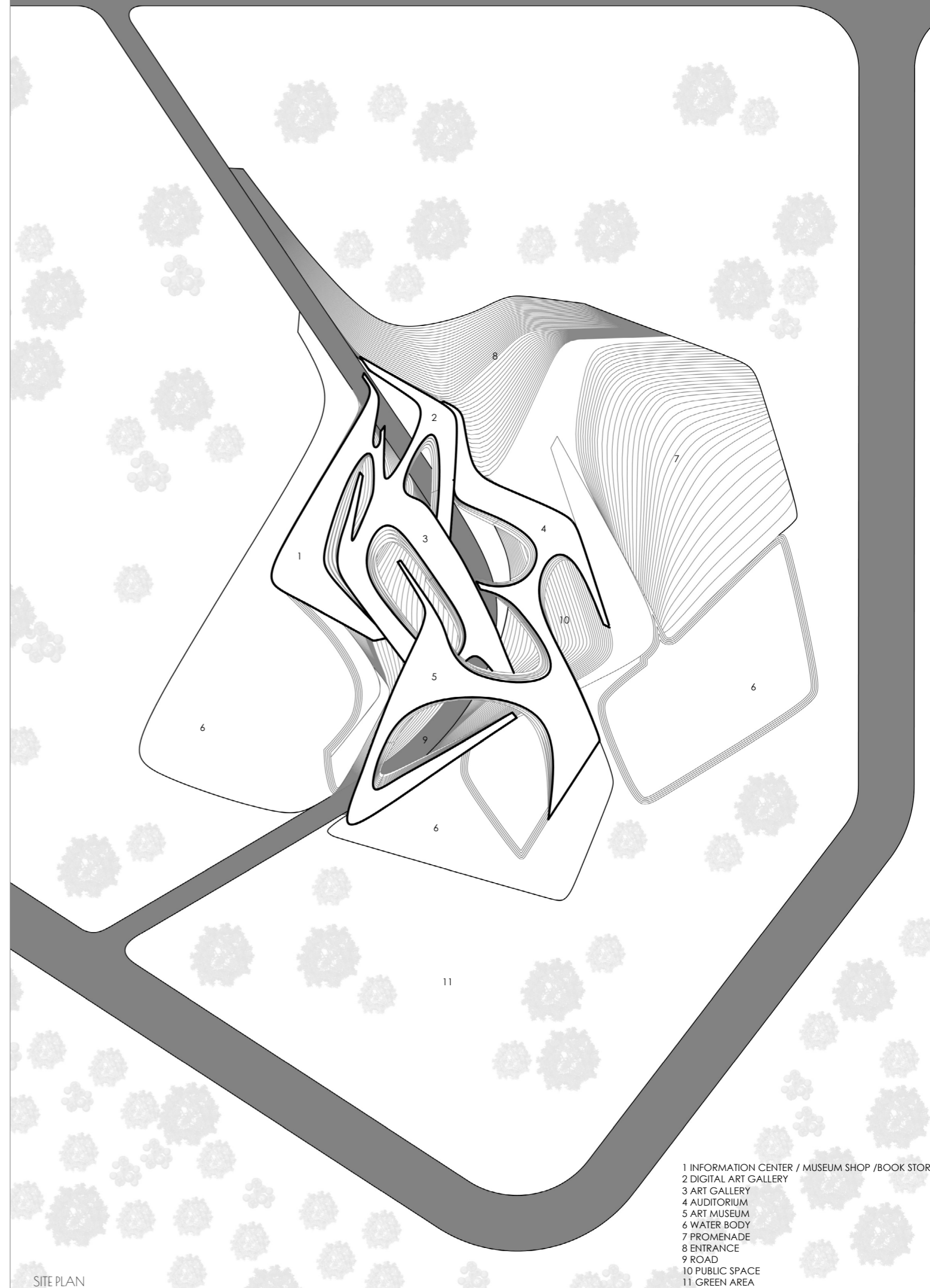
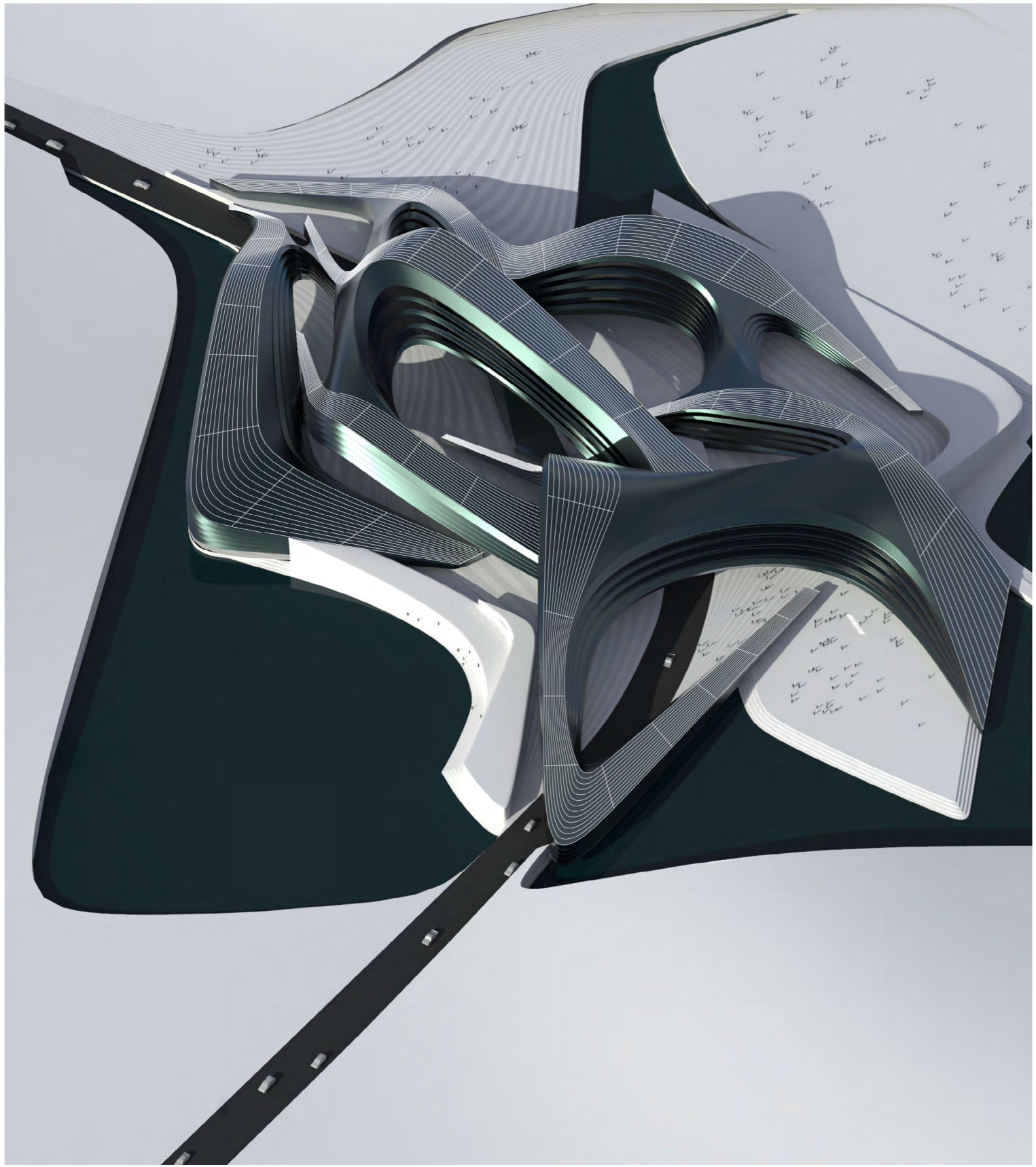


AERIAL VIEW

SYNESTHESIA : CONTEMPORARY ART MUSEUM

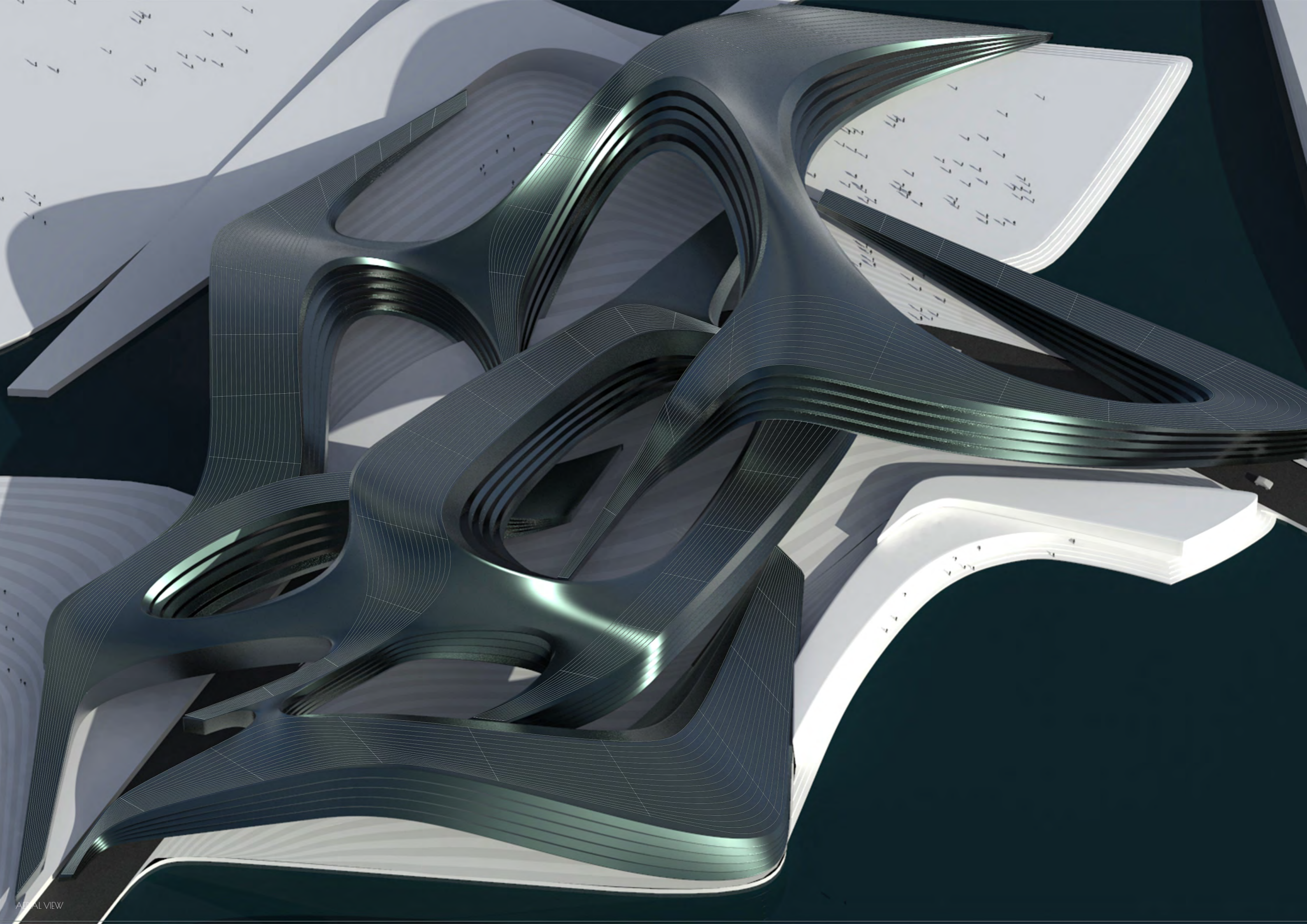
Space Anfractuoso | Conceptual Institutional Building | Individual | 2021

Synesthesia Contemporary Art Museum is a conceptual project that is envisioned to be located within the wetlands of a hypothetical city. The project explores the interaction of complex fluid forms that articulate the elongated galleries of the museum. The project intends to become a cultural venue and a dramatic public space that embodies the integration of art and nature.



- 1 INFORMATION CENTER / MUSEUM SHOP / BOOK STORE
- 2 DIGITAL ART GALLERY
- 3 ART GALLERY
- 4 AUDITORIUM
- 5 ART MUSEUM
- 6 WATER BODY
- 7 PROMENADE
- 8 ENTRANCE
- 9 ROAD
- 10 PUBLIC SPACE
- 11 GREEN AREA

SITE PLAN



PLAYGROUND PHANTASMAGORIA

Space Anfractuous | Conceptual | Individual | 2021

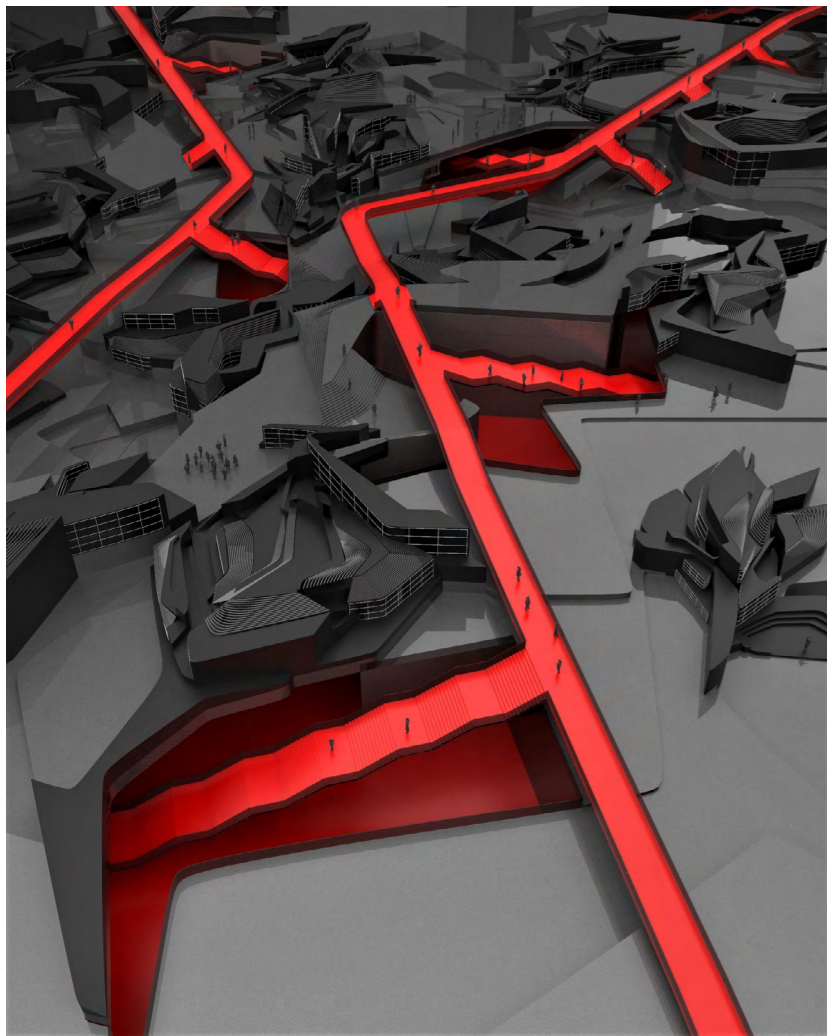
Playground Phantasmagoria is a manifestation of the notion of play, theatre, art form, and audience. It is conceived as a cultural project in an urban setting that hosts artists from various backgrounds. It is a field of 16 nodes, each having a certain character and name to it. The playground is envisaged to function in a certain way. Each node is inhabited by an artist for a specific period, where the artist forms a story around or through the assigned node. It is envisioned as a projective ground that becomes a voice for artists and creators from all around the world. The binding idea of this conceptual project is to function as a political device, working at an intersection of art, fiction, and culture.



16 NODES OF PLAYGROUND PHANTASMAGORIA



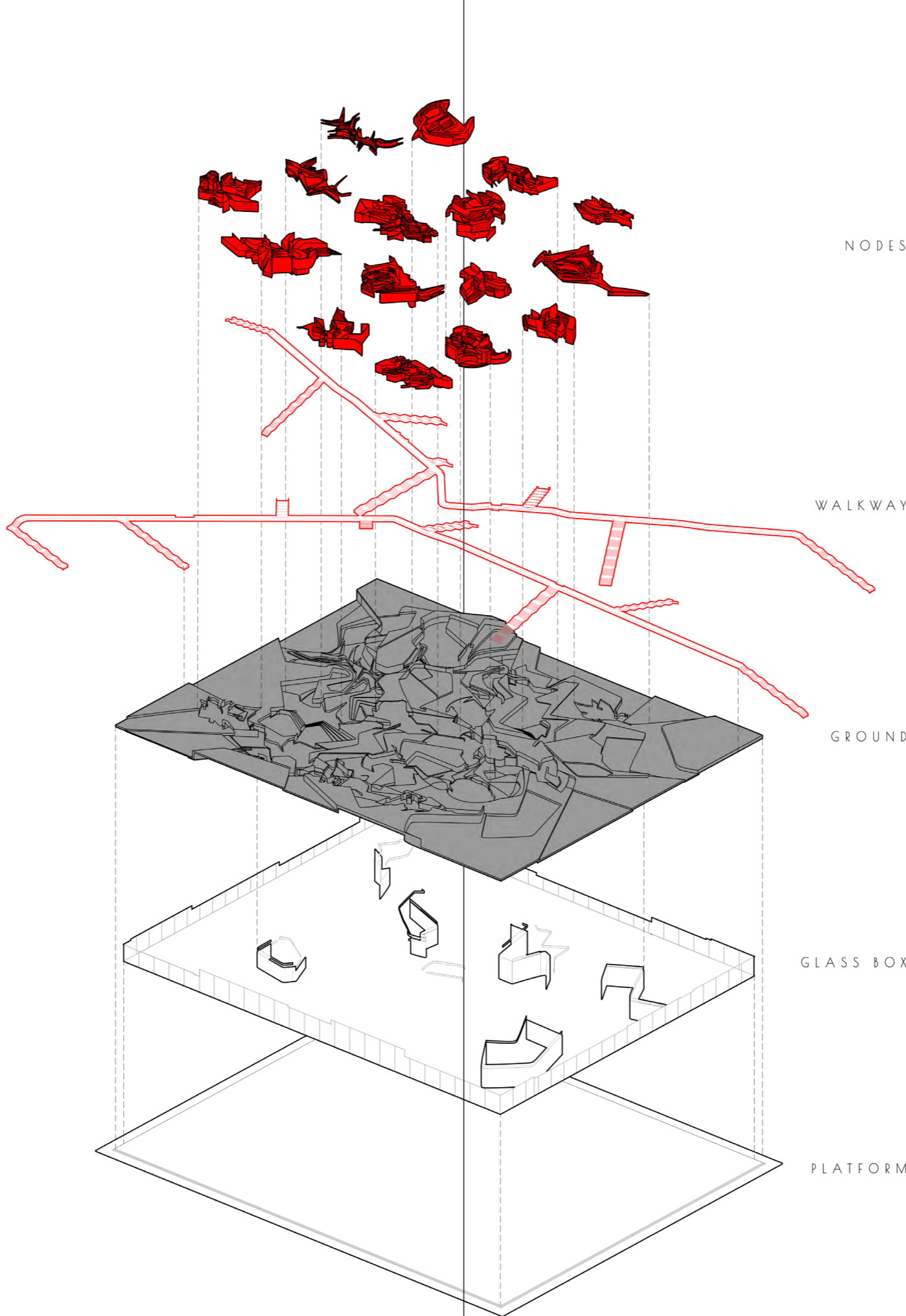
AERIAL VIEW OF PLAYGROUND PHANTASMAGORIA



VIEW OF THE WALKWAY CONNECTING THE NODES WITH PLATFORM



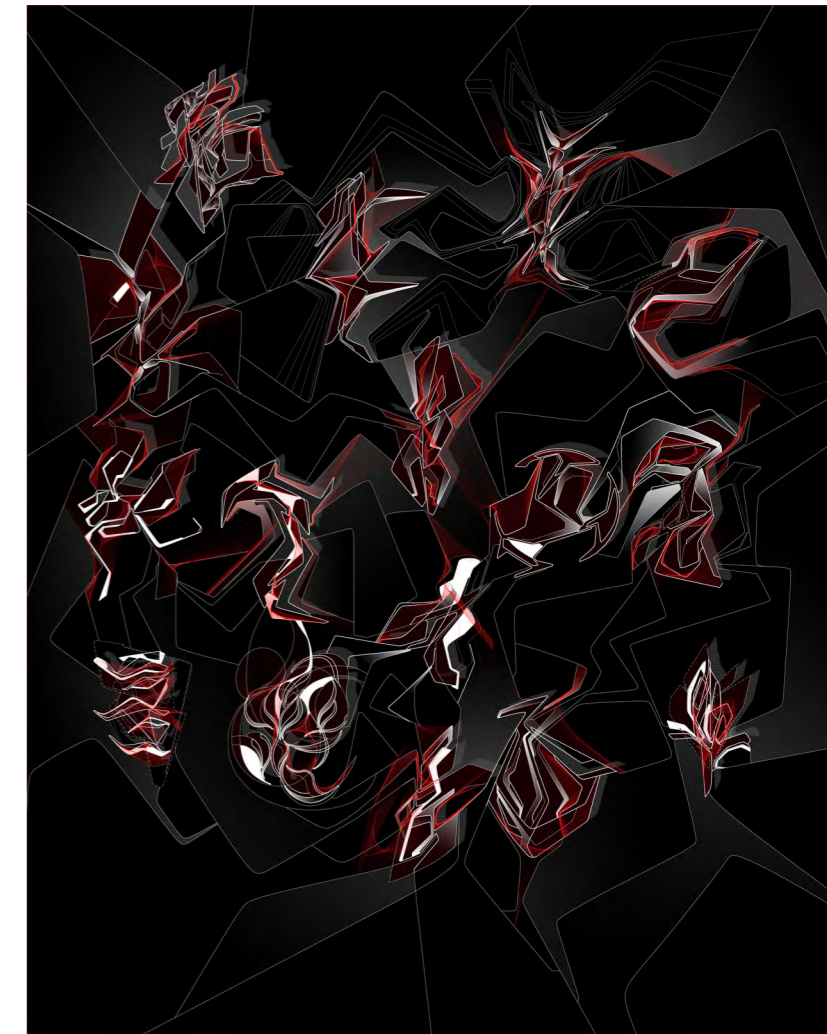
ORTHOGRAPHIC VIEW OF THE PLAYGROUND PHANTASMAGORIA



EXPLODED ISOMETRIC DIAGRAM



PLAN



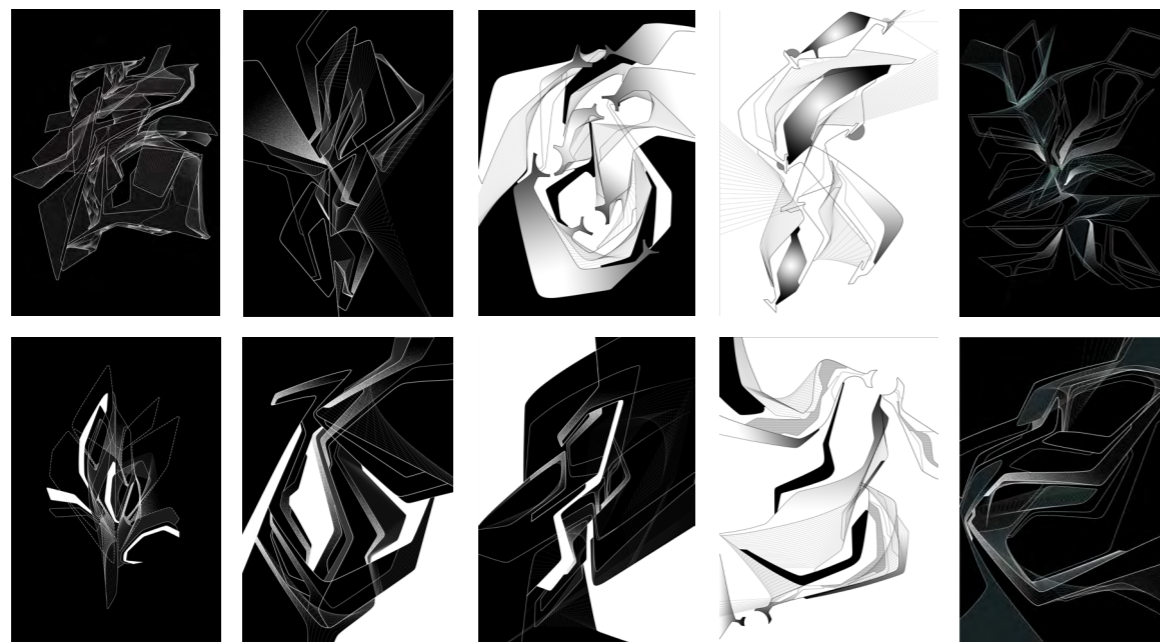
CONCEPTUAL DRAWING

BANDITTO RESIDENCY PRIZE BANDITTO ART GALLERY, TUSCANY

Space Anfractuus | Invited Art Competition | Individual | 2019

In October 2019, Space Anfractuus had an opportunity to participate in an invited competition by Banditto Art Gallery, Tuscany, Italy. The series of work depicts the aesthetics and values that I truly revere.

Through these digital paintings, I explore the different characteristics of architecture, spaces, environments and aesthetics. Some of the explorations question the 'conventional' that exists in our realm and acts as the precedent that informs the Anfractuus projects. These paintings or soliloquies form an intangible part of the works curated by Space Anfractuus.



ITERATIONS



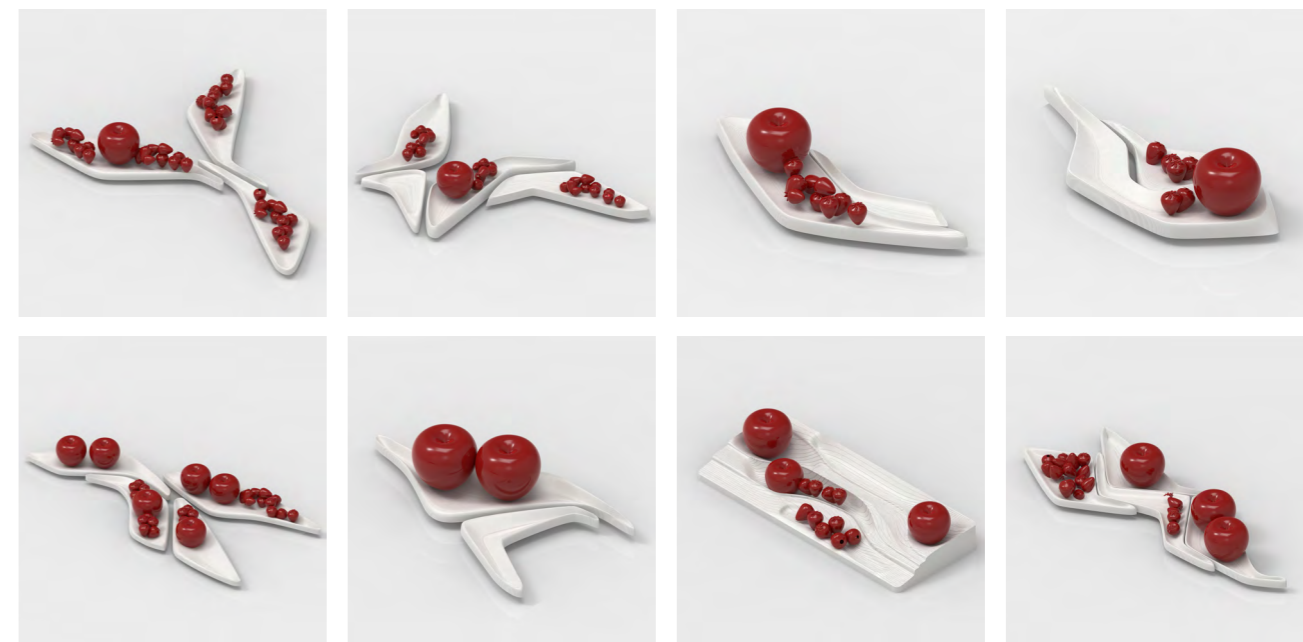
EDITED PHOTOGRAPH DEPICTING THE PROPOSAL FOR BANDITTO ART EXHIBITION

LUMACAST X ANFRACTUOUS FRUIT TRAY

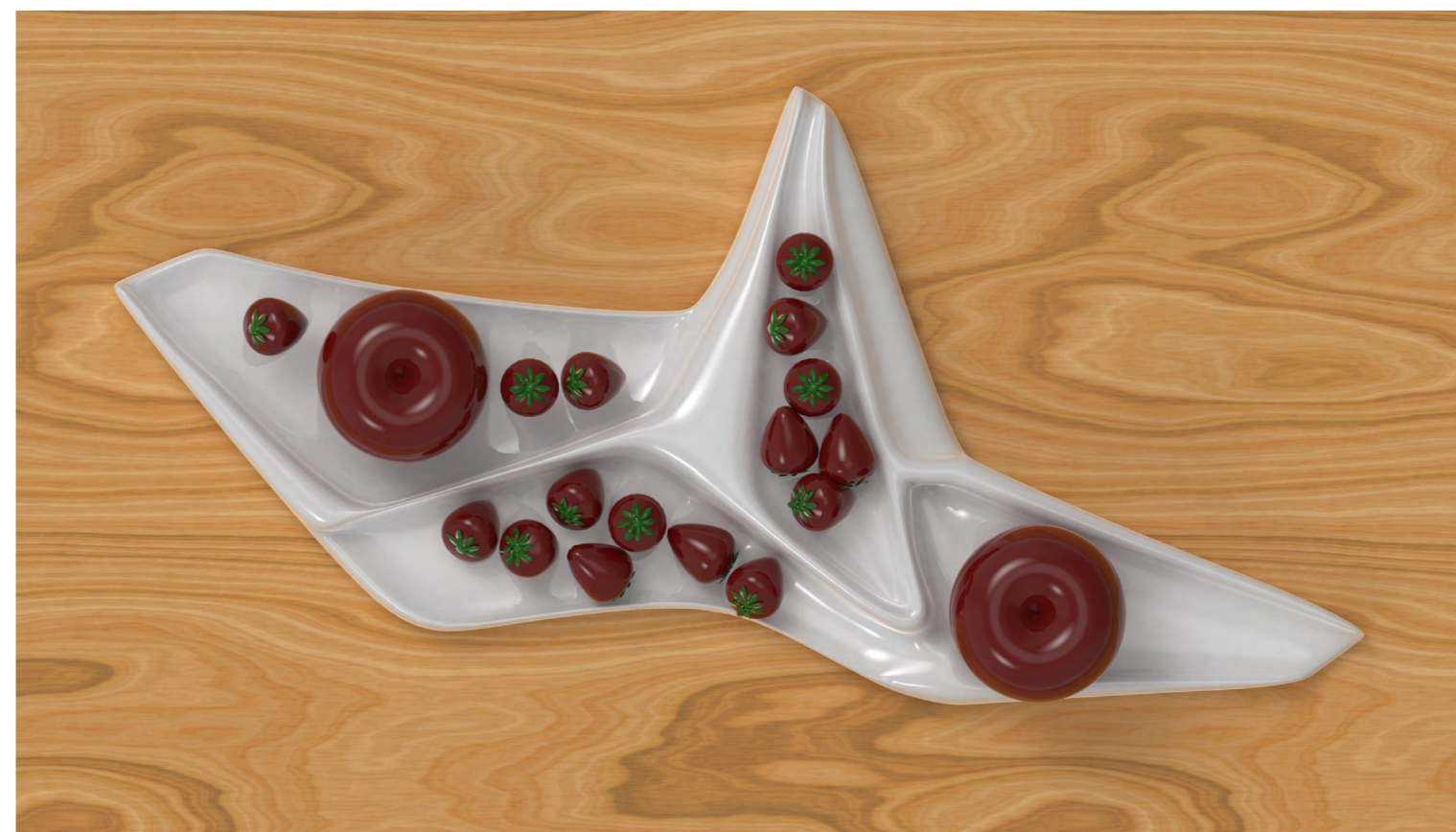
Space Anfractuus | Collaboration Project | 2019

LUMACAST is California's premiere provider of concrete Fire and Living features. Their architectural products and furniture are individually hand-crafted in San Diego. Their products are made up of lighter weight concrete, innovated by the company itself. LUMACAST concrete is more durable and is made by using 30% recycled materials which makes their products more sustainable.

In April 2019, Space Anfractuus got an opportunity to collaborate with them on a project. The goal was to design a concrete sculpture-cum-fruit tray featuring fluid design. The overall dimension of the tray was 20" x 8" with a maximum height of 1-1/2". The idea was to design a sculpture that serves the purpose of a fruit tray. The final product was supposed to be CNC milled, then a rubber mold was to be fabricated for the concrete.



ITERATIONS



FINAL PRODUCT

OTHER ANFRACTUOUS PROJECTIONS

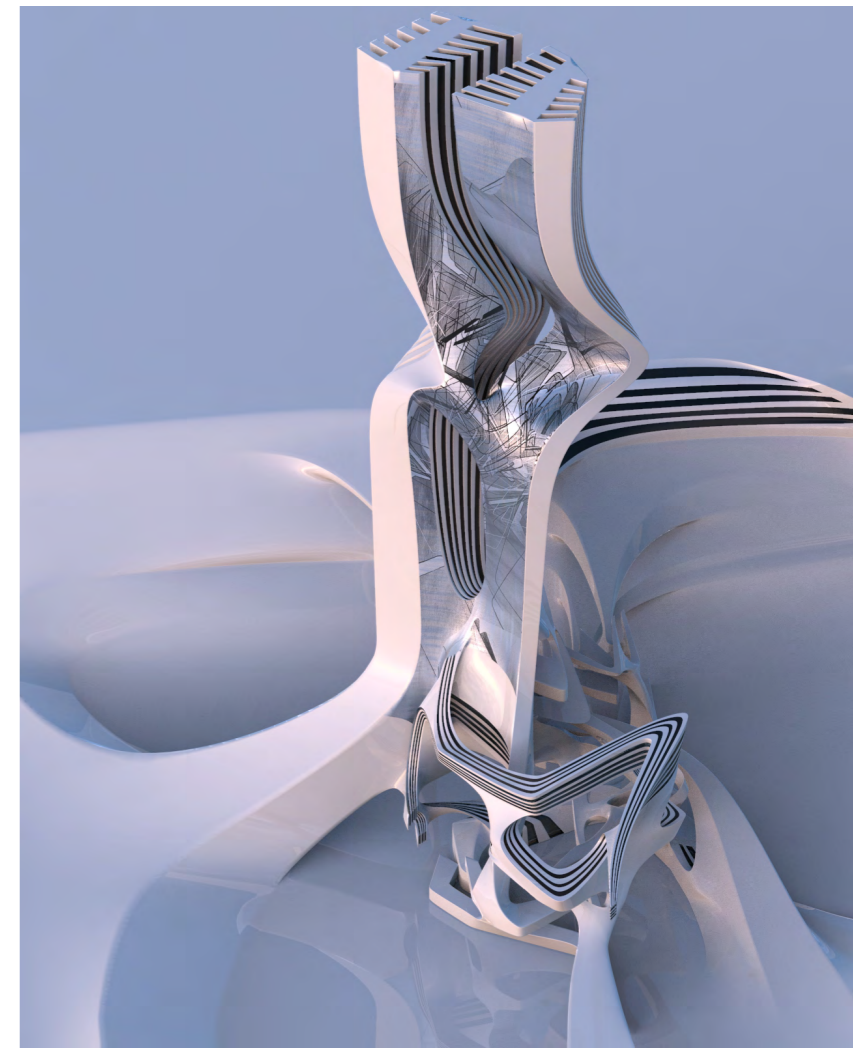
Space Anfractuous | Individual | 2018-2019

Space Anfractuous is a metaphor for a smooth mixture of ambiguities and ambivalence - like ethereal forms, juxtapositions, and multilayered folds of meanings - that exists in perhaps every possible substance. The 'projections' wraps these several frames and forms morphologies out of these. The anfractuous architectural objects resist being reduced to pure geometric forms or figures and rather forms 'anexact morphologies' as expounded in Greg Lynn's 'Architectural Curvilinearity Theory' and the works can be interpreted as expressions of spaces and objects which are set in continuous motion, engulfing, reducing, folding, merging, bending, flowing and spreading, hence the name 'Anfractuous'.



BEYOND MEDIUMS

A conceptual pavilion which combines different mediums and techniques, questioning the materiality of architectural projects.

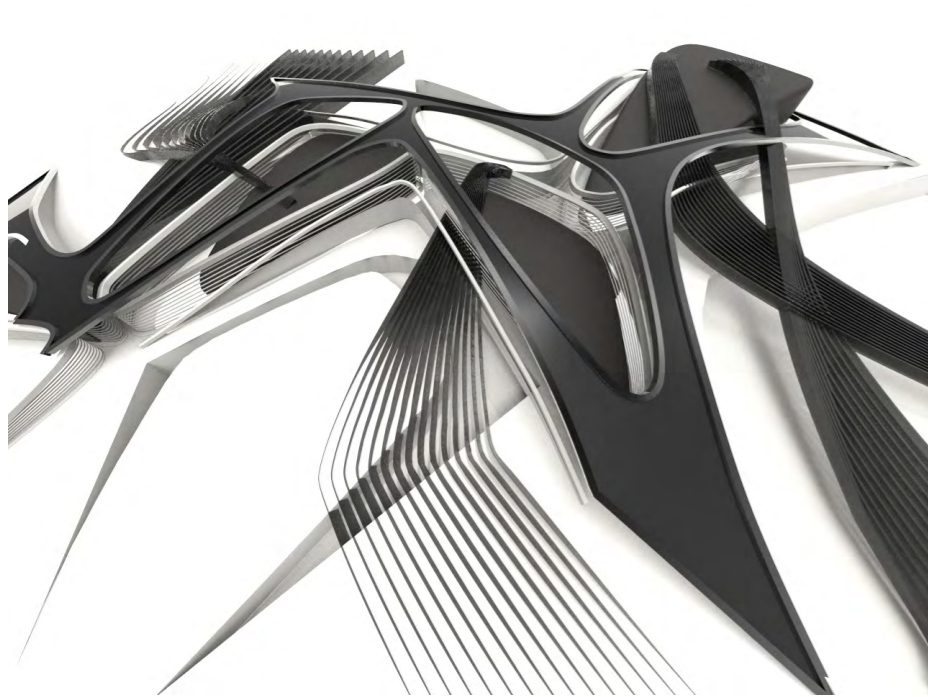


CONFLUENCE OF THE DUOPOLY
A conceptual tower project



PAVILION AETHERIUS
A fluid exploration for a conceptual pavilion

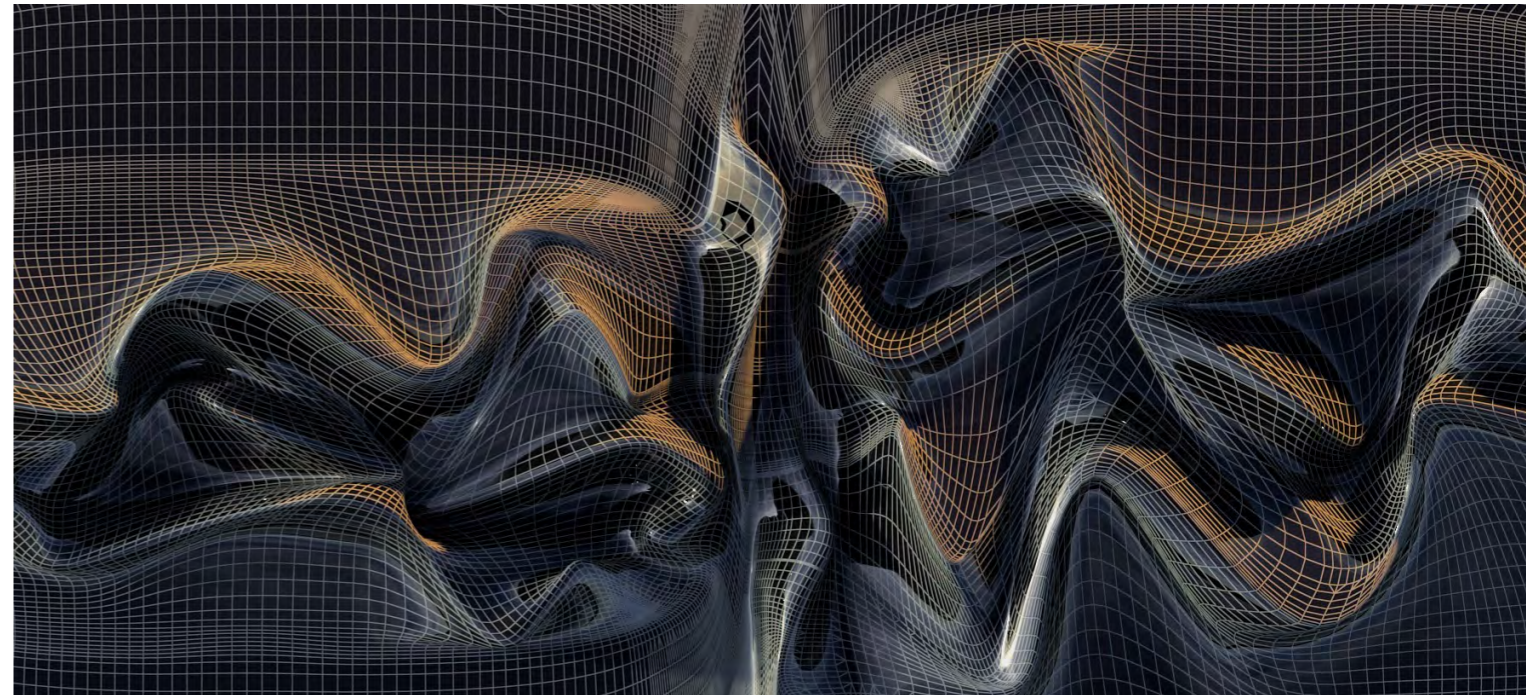
The workflow adopted embraces processes and ideas like free-hand drawings, intuitive ideation, subjectivity, unique idiosyncrasies - the endangered species now - and while doing so questions the world which embraces objectivity and tries to reduce every possible thing down to an algorithm or a script and further tries to find a middle ground between them. These works believe that complex systems shouldn't be immured in one definite thing and our explorations should go beyond the idea of 'either-or' and embrace the idea of 'and-both'.



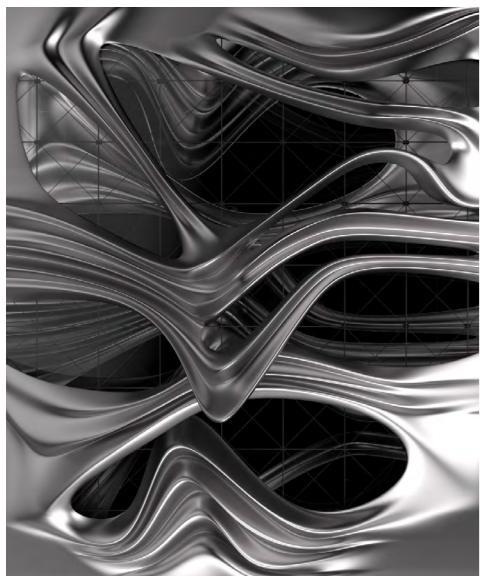
OBJECT FLOW
Object flow explores the relationship shared between the figure and ground, and attempts to blur the boundaries between the masses and the fields.



PAVILION CONTINUANCE
A combination of a continuous one-surface pavilion & a sculpture which tries to provide new spatial experiences to the visitors



PURE ANFRACTUOUS
A series of panels that explore the different characteristics of smooth aesthetics by deforming a surface & making fluid landscapes.



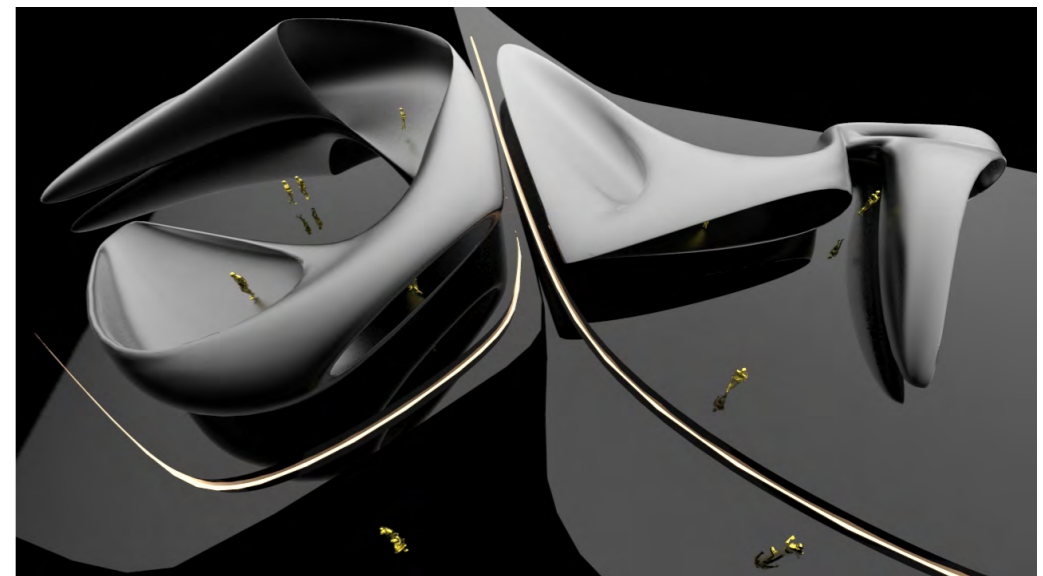
TWO SIDES OF THE VEIL
A take for facade design of a building.



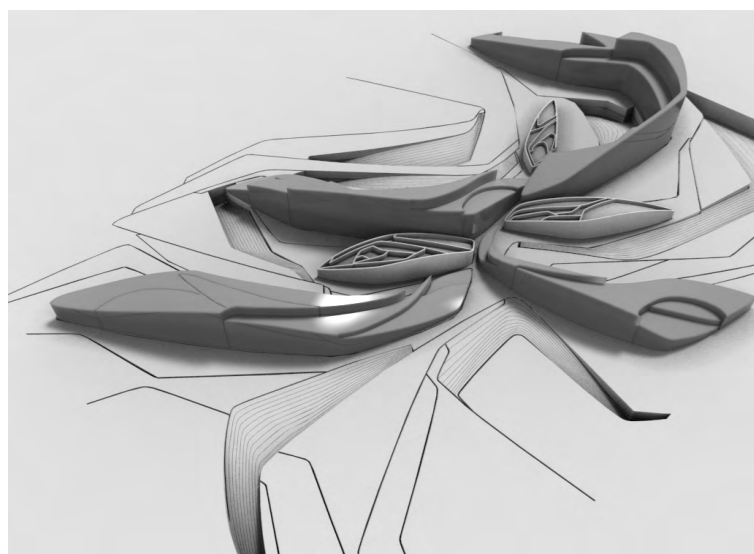
OBJECT NASCENT
This project tries to feature paradoxical quality of painting and the confluence of what is intended, what it becomes and how it is further perceived; the tension and balance between the intention and effect.



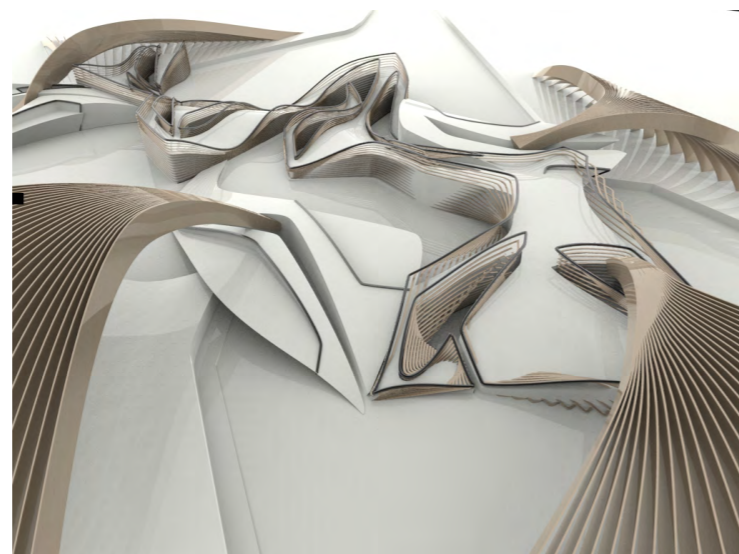
ANEXACT GLASS MURAL
A latent suggestion of "anexact yet rigorous" morphologies as put forward Edmund Husserl



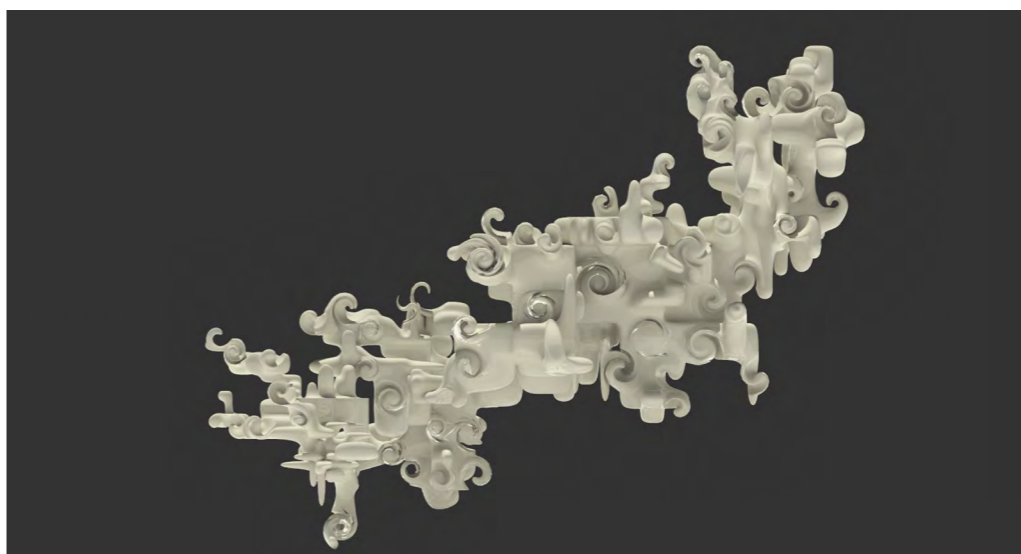
OBJECT OXBOW
An architectural assembly of fluid spaces that house closed and semi-open spaces and are a visual manifestation of how the ground goes up and transforms into a wall and further into an envelope.



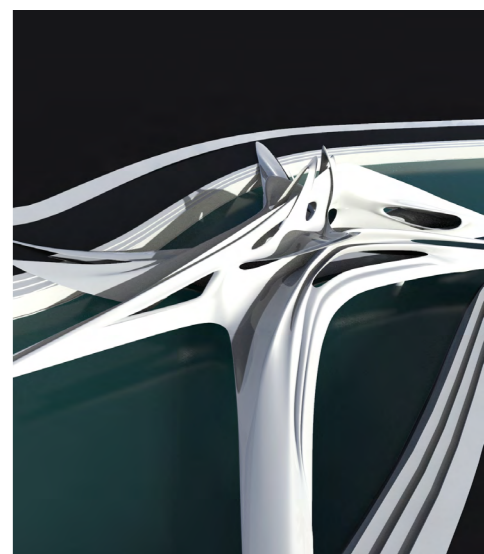
CITADEL FLEXUOUS
A conceptual project that brings elements like program, structure, circulation & aesthetic together to form an architectural assembly of various figures & multifaceted ground.



SPACE ENTANGLED
This space revolves around the idea of different character of masses coming together and interacting with each other in an entangled space.



ABSTRACT ROCOCO
An attempt to abstract the Rococo or Late - baroque ornamentation. The design tries to capture the essence of scrolling curves, gilding, sculpted molding, and trompe l'oeil frescoes to create the illusions of surprise, motion and drama.

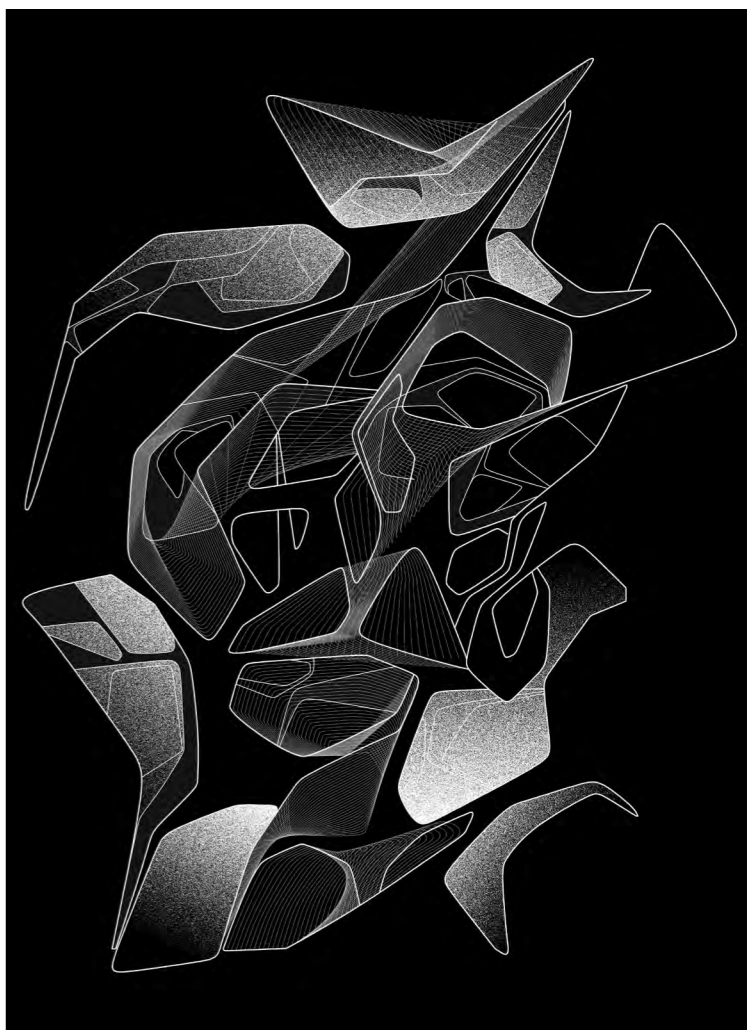
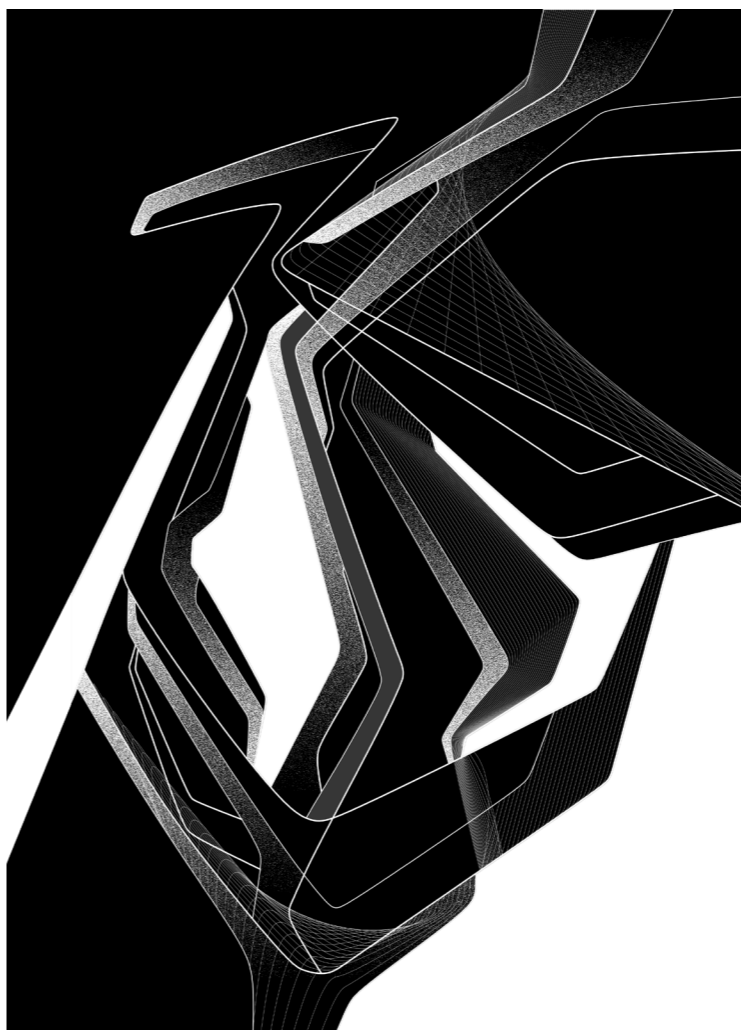
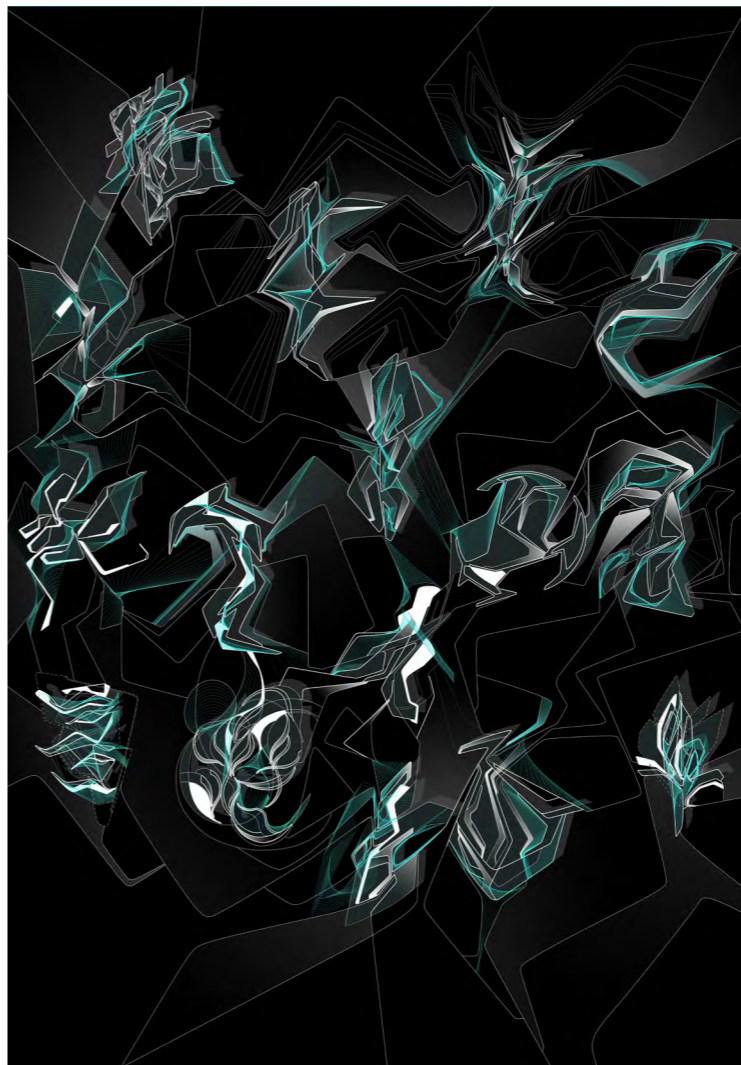
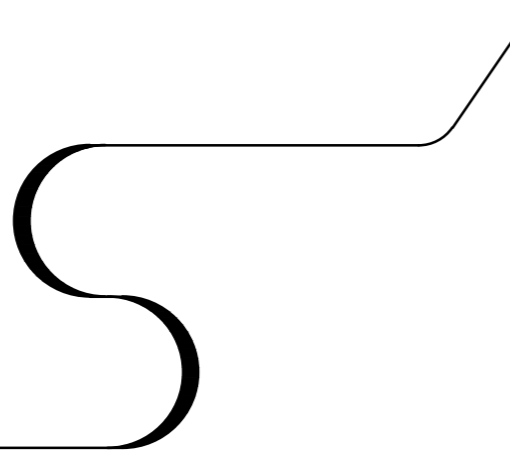


SPACE SFUMATO
Extended single surface exploration for a conceptual art gallery

SOLILOQUIES

Space Anfractuoso | Drawings | Individual | 2018-2019

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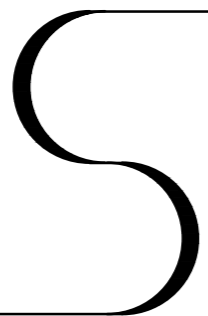


SPACE ANFRACTUOUS PAINTINGS

Space Anfractuous | Paintings | Individual | 2020

Space Anfractuous paintings are an extended version of 'Soliloquies'. The following paintings are a part of 100 Anfractuous paintings series. The paintings and their prints are shipped worldwide and have traveled to many cities including London, New York, Richmond, Mumbai, Ahemdabad etc.

<https://www.spaceanfractuous.com/paintings>
<https://www.spaceanfractuous.com/store>



ECHOES OF CONCINNITAS
Medium: Acrylic on paper
Size: 36 in x 48 in



© SPACE ANFRACTUOUS



BEYOND RESEMBLANCE
Medium: Acrylic on paper
Size: 30 in x 40 in



REINCARNATION OF THE THIRD EYE
Medium: Acrylic on paper
Size: 30 in x 40 in



© SPACE ANFRACTUOUS



AETHERIUS
Medium: Acrylic on canvas
Size: 30 in x 40 in



DELIRIOUS MINDSCAPES
Medium: Watercolor on paper
Size: 16.5 in x 23.4 in



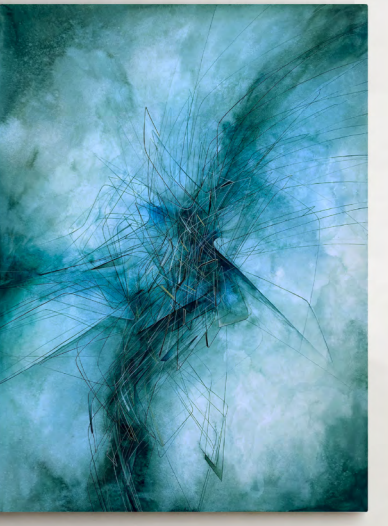
MONTAGE OF THE CONCEIVED, PERCEIVED AND EXPERIENCES
Medium: Watercolor on paper
Size: 16.5 in x 23.4 in



SUBLIME CATHARSIS
Medium: Watercolor on canvas
Size: 20 in x 28 in



SURPASSING THE OTHERNESS
Medium: Watercolor on paper
Size: 23.4 in x 33.1 in



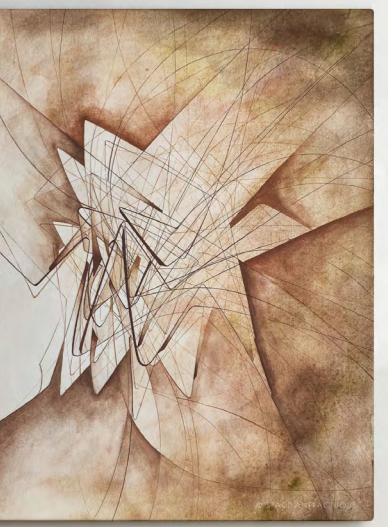
SONG OF THE INFINITE AND UNKNOWN
Medium: Watercolor on paper
Size: 20 in x 28 in



SHADOW OF THE ECLIPSE
Medium: Acrylic on paper
Size: 20 in x 28 in



SYMPHONY OF HALLUCINATIONS
Medium: Acrylic on canvas
Size: 24 in x 36 in



SPACE FOR INCHOATE THOUGHTS
Medium: Watercolor on paper
Size: 16.5 in x 23.4 in

ACADEMIC

+ DREAMSCAPES OF AURORA - SONG OF THE INFINITE AND FROZEN, Harvard GSD, Individual, Fall 2022

+ ADAPTIVE QUALITY - FIELD // FLOW, Harvard GSD, Individual, Spring 2022

+ ETHEREAL ENCLOSURES - ETHEREAL ENCLOSURES, Harvard GSD, Individual, Fall 2021

+ CONTINUANCE COMMERCIAL CENTER, MBS SPA, Individual, 2016

+ METAMORPHOSIS GROUP HOUSING, MBS SPA, Individual, 2015



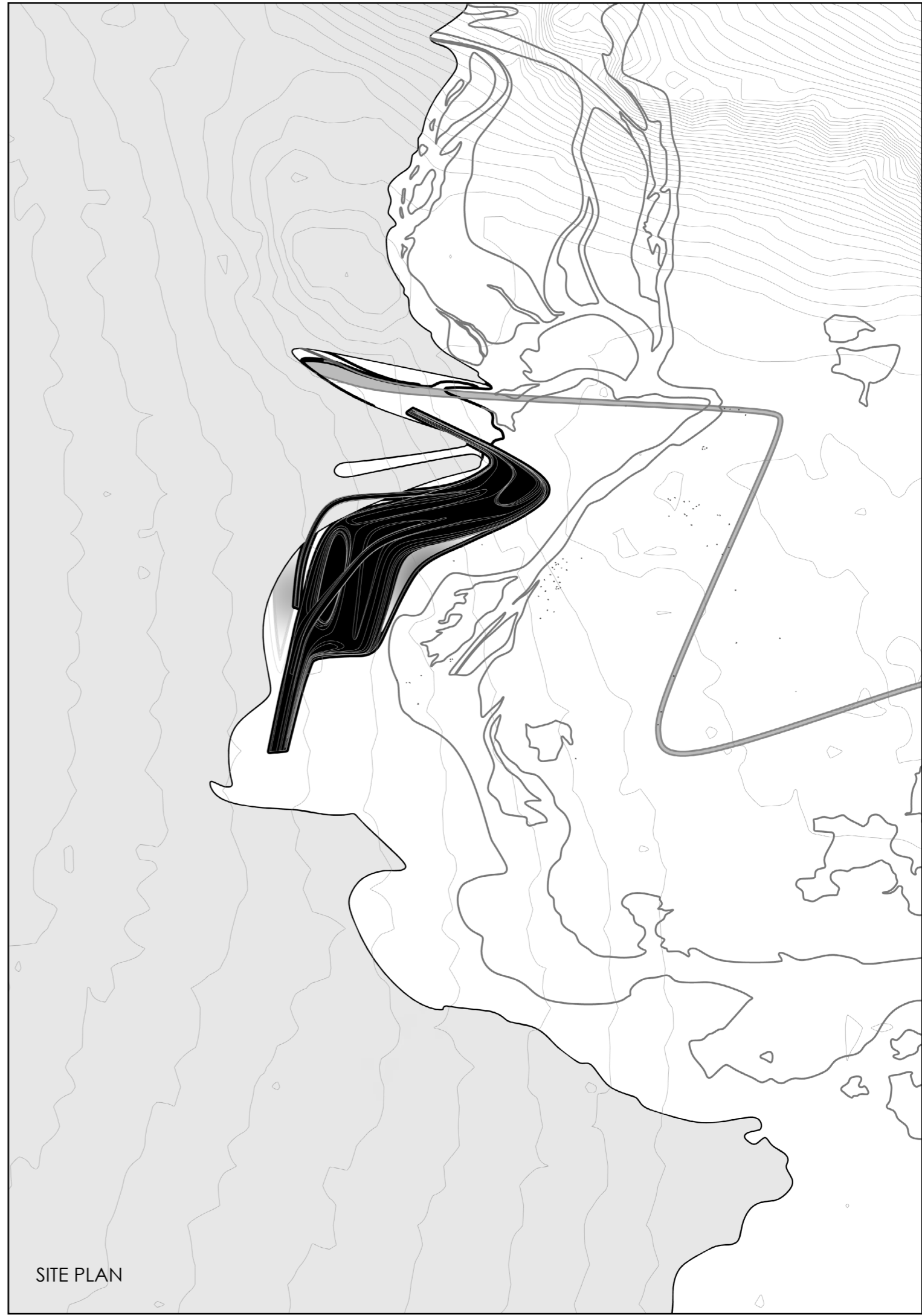
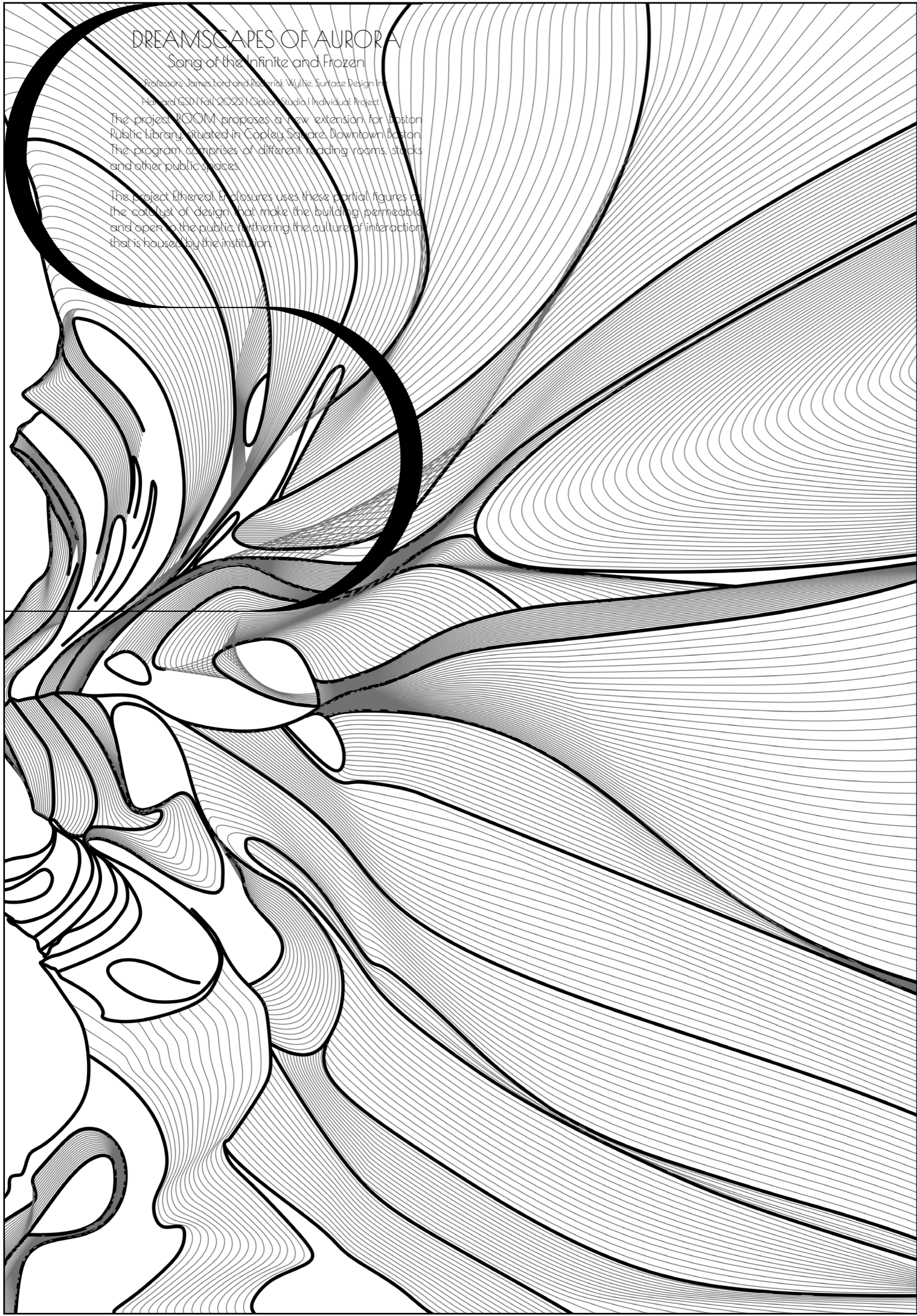
DREAMSCAPES OF AURORA

Song of the Infinite and Frozen

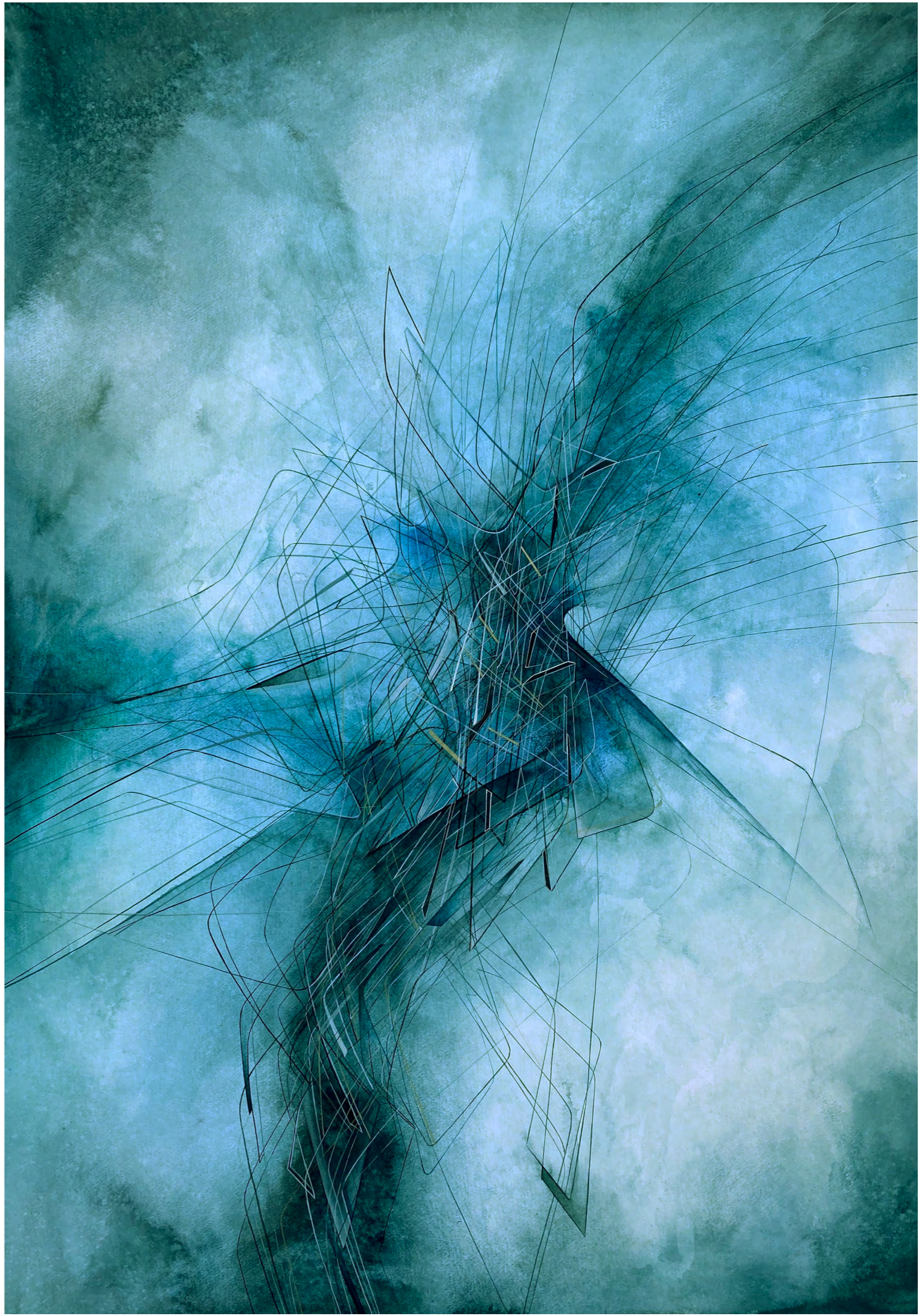
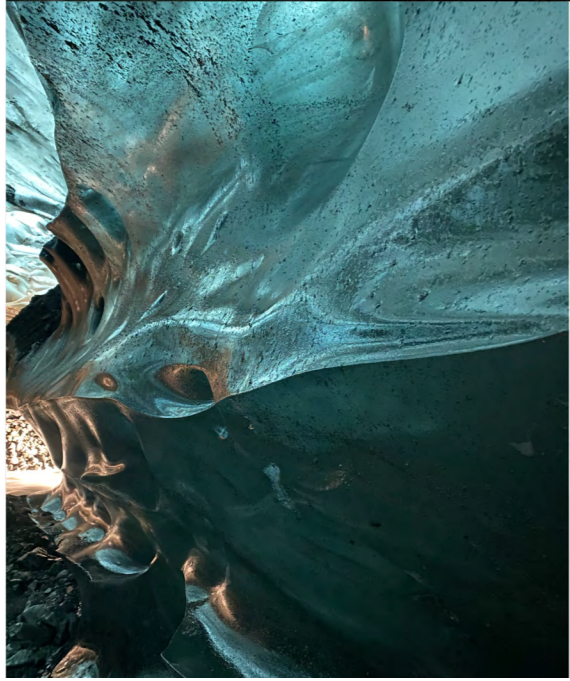
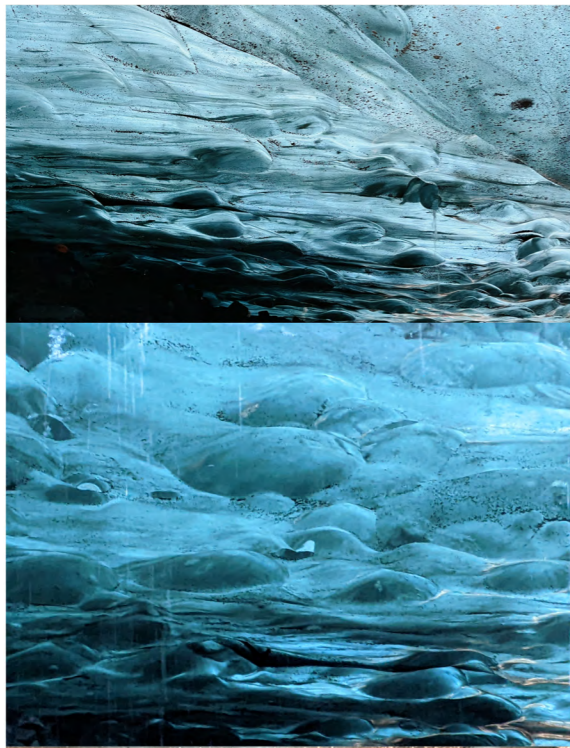
Professors James Lord and Robert Wulke, Surface Design II
Harvard GSD Fall 2022, Cities Studio Individual Project

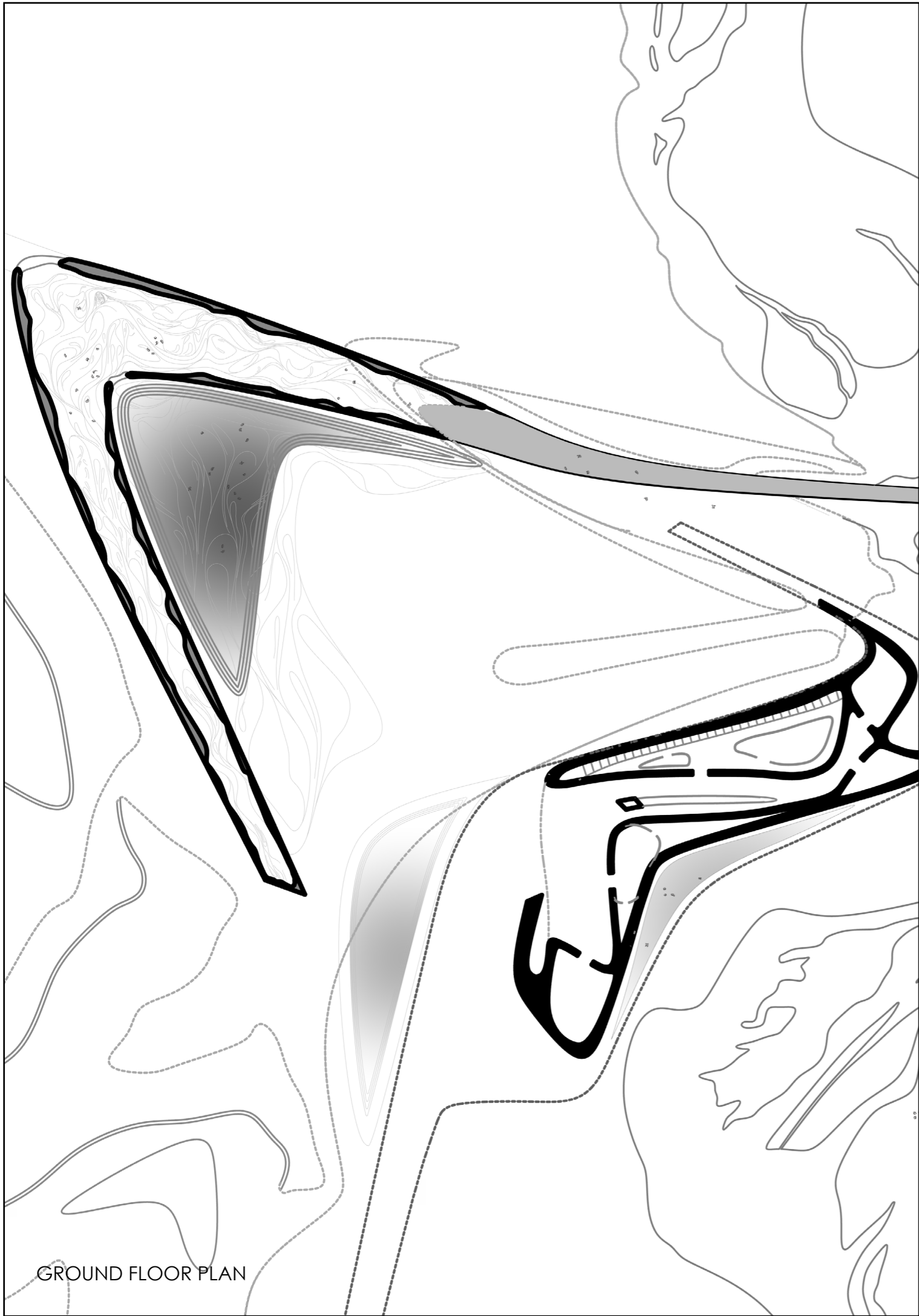
The project "COOLM" proposes a new extension for Boston Public Library, situated in Copley Square, Downtown Boston. The program comprises of different reading rooms, stacks and other public spaces.

The project "Ethereal Enclosures" uses these partial figures as the catalyst of design that make the building permeable and open to the public, furthering the culture of interaction that is housed by the institution.

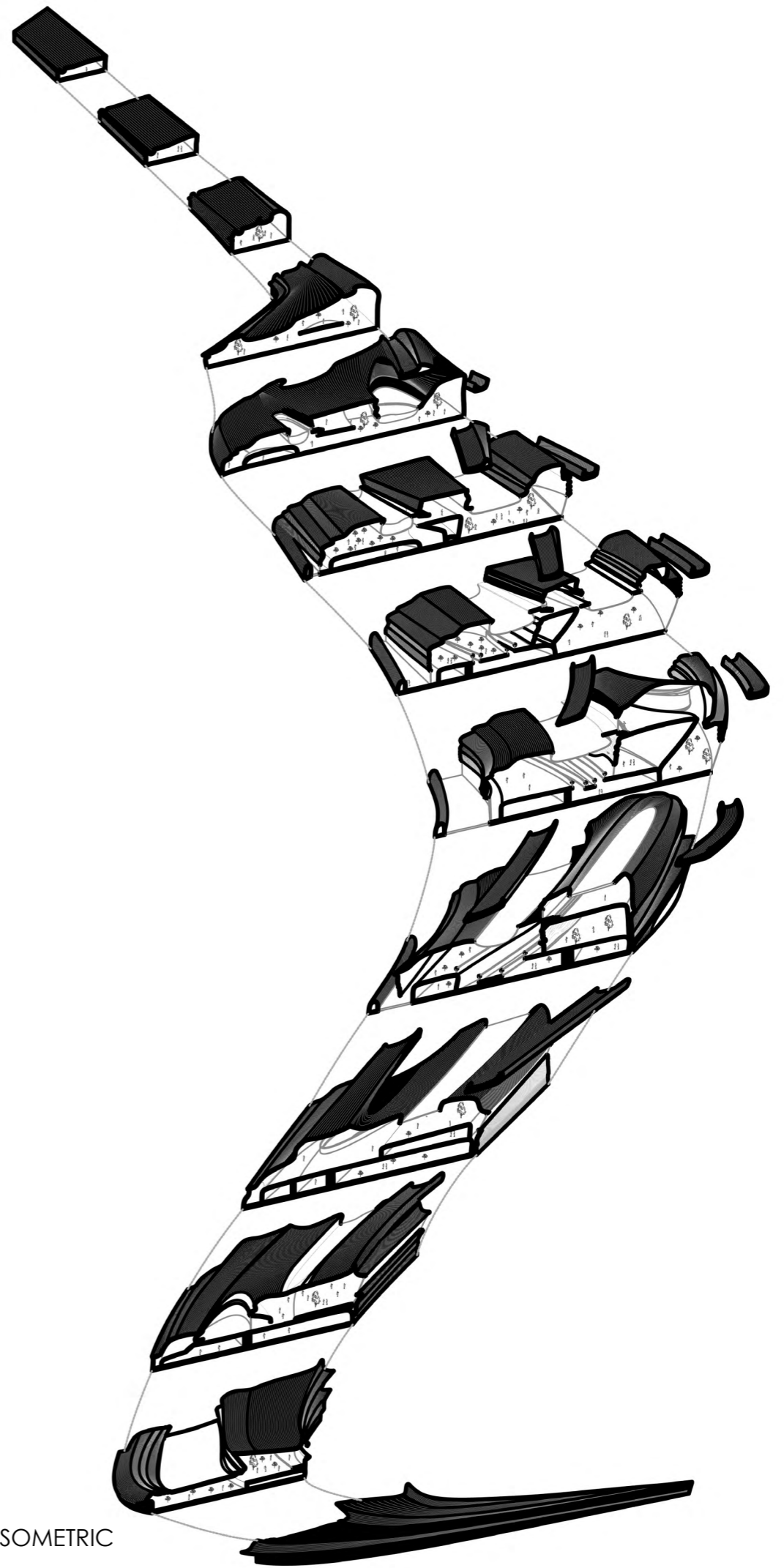


SITE PLAN

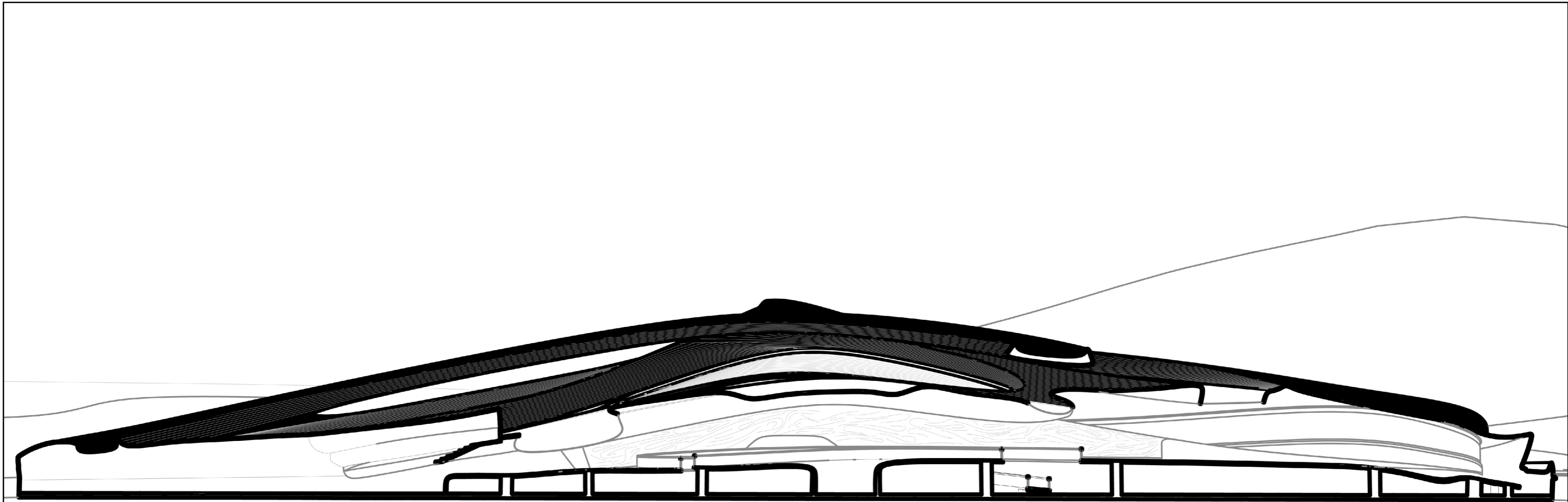




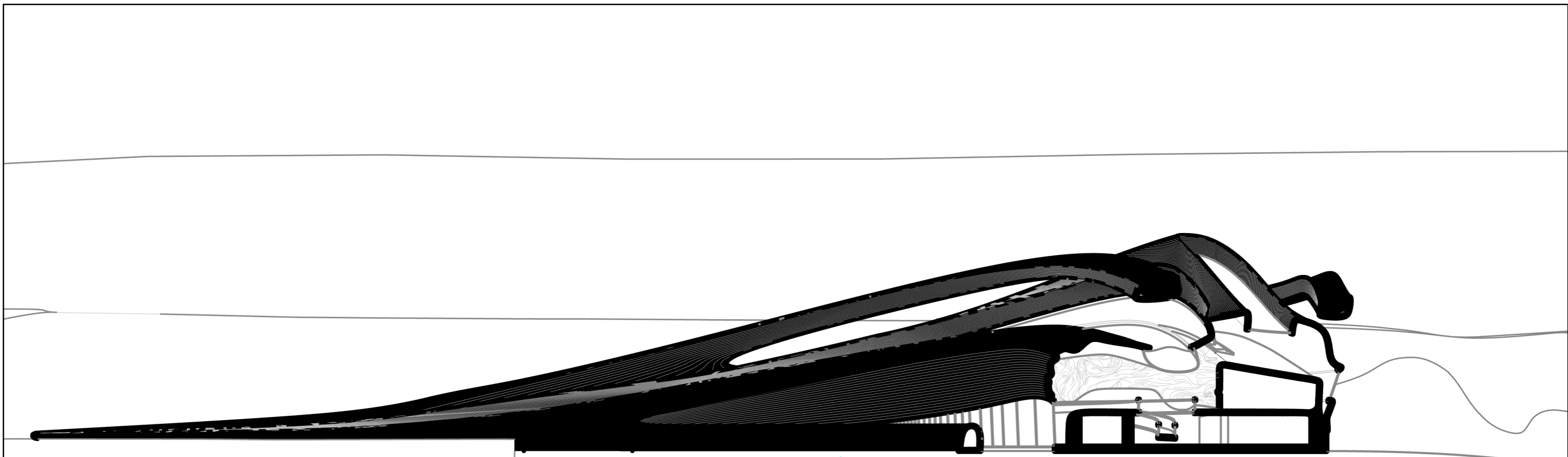
GROUND FLOOR PLAN



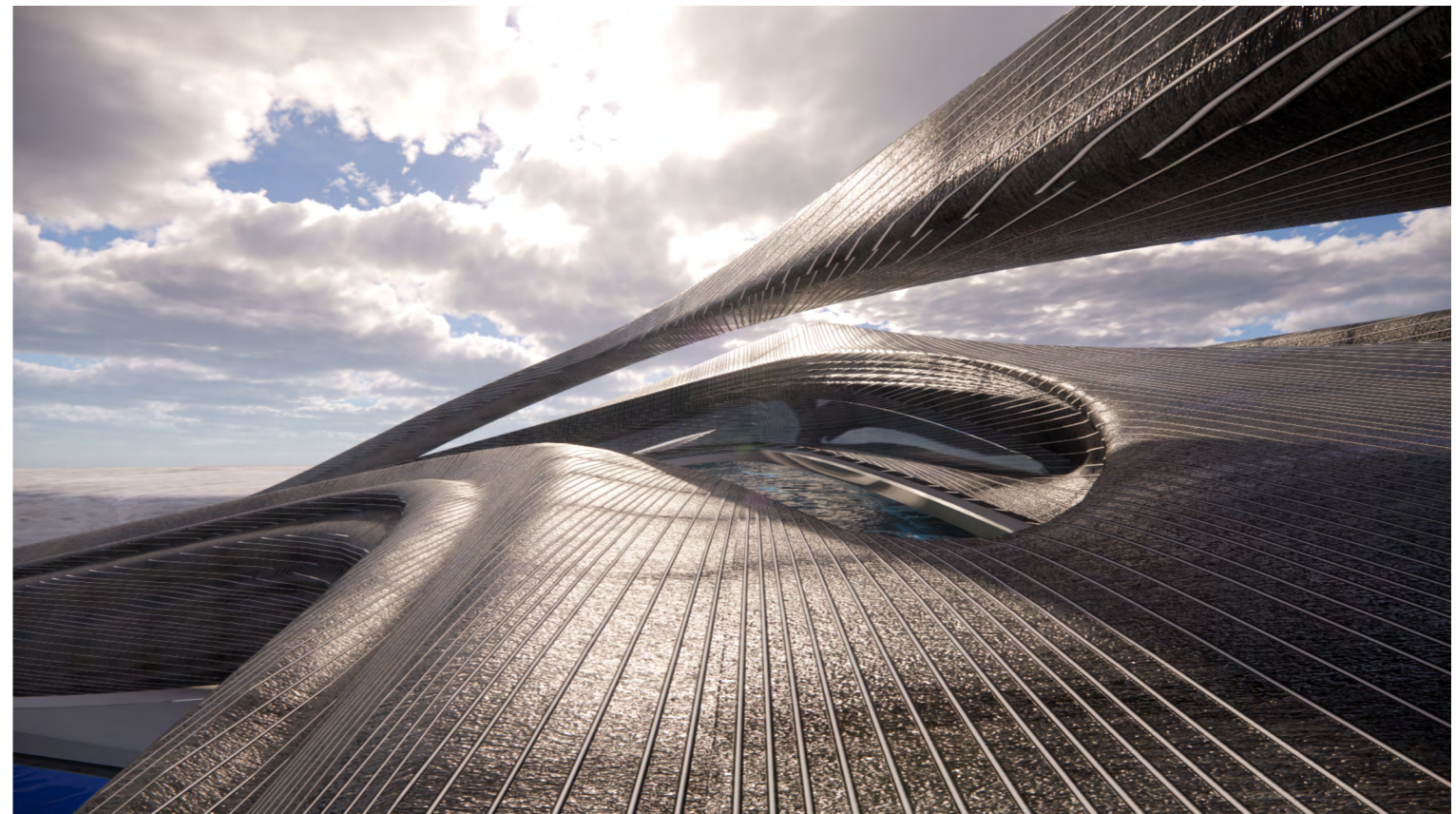
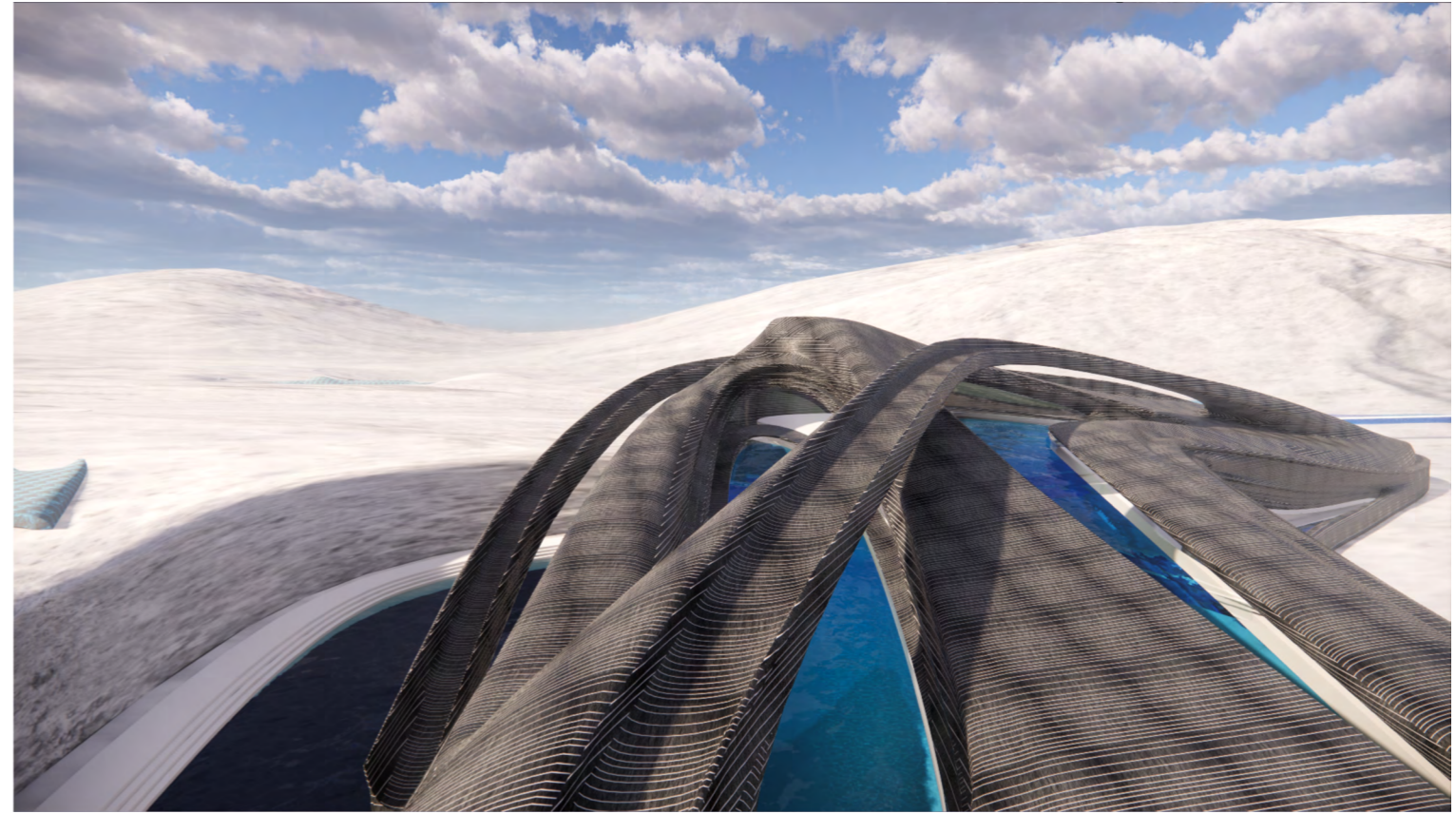
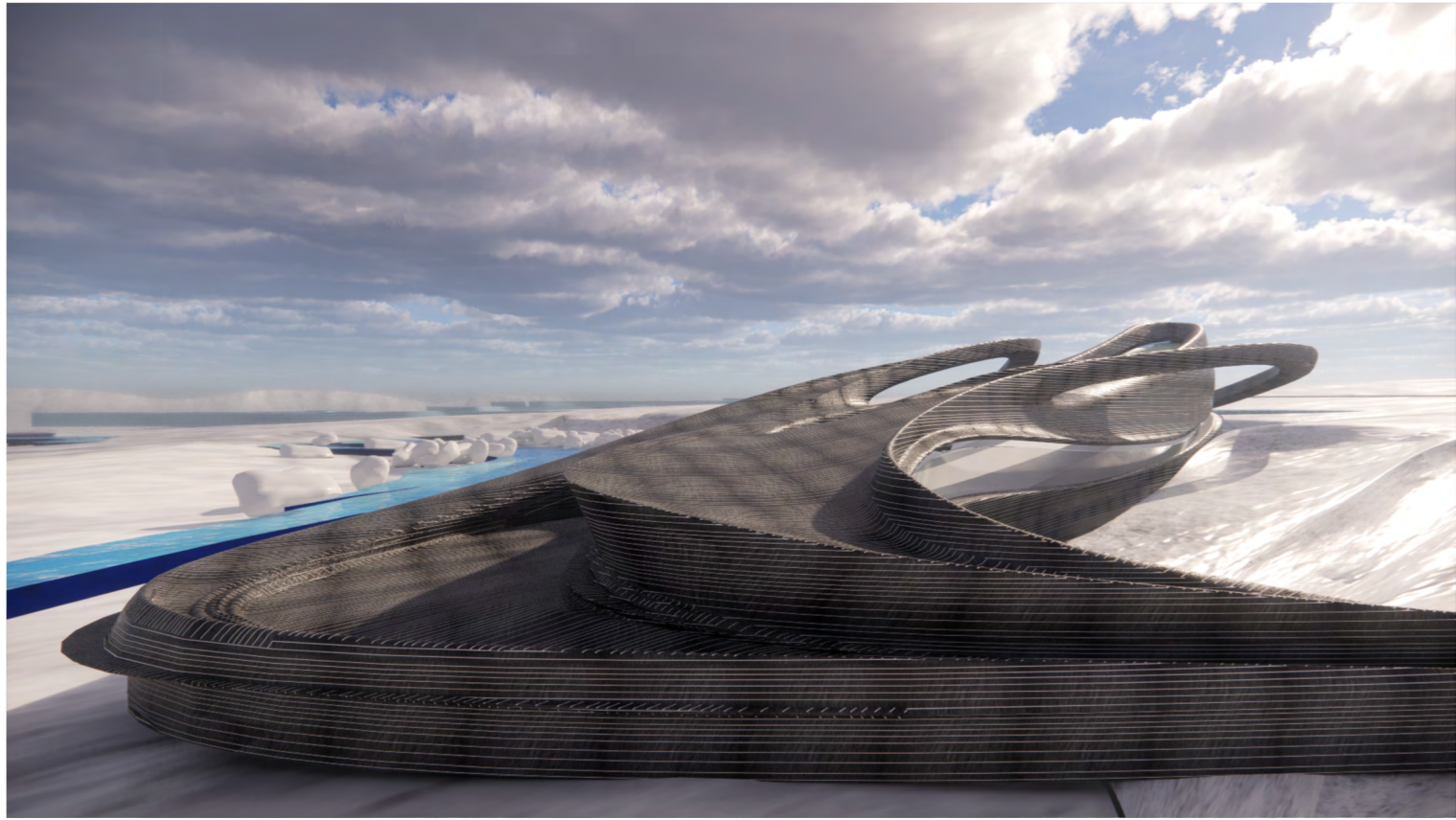
EXPLODED ISOMETRIC

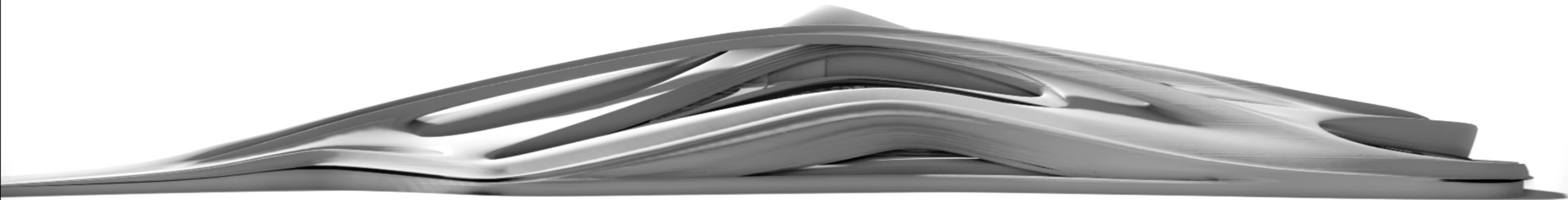
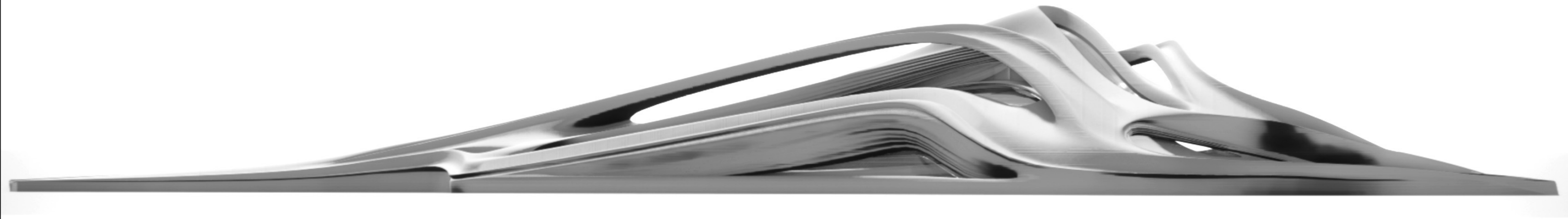


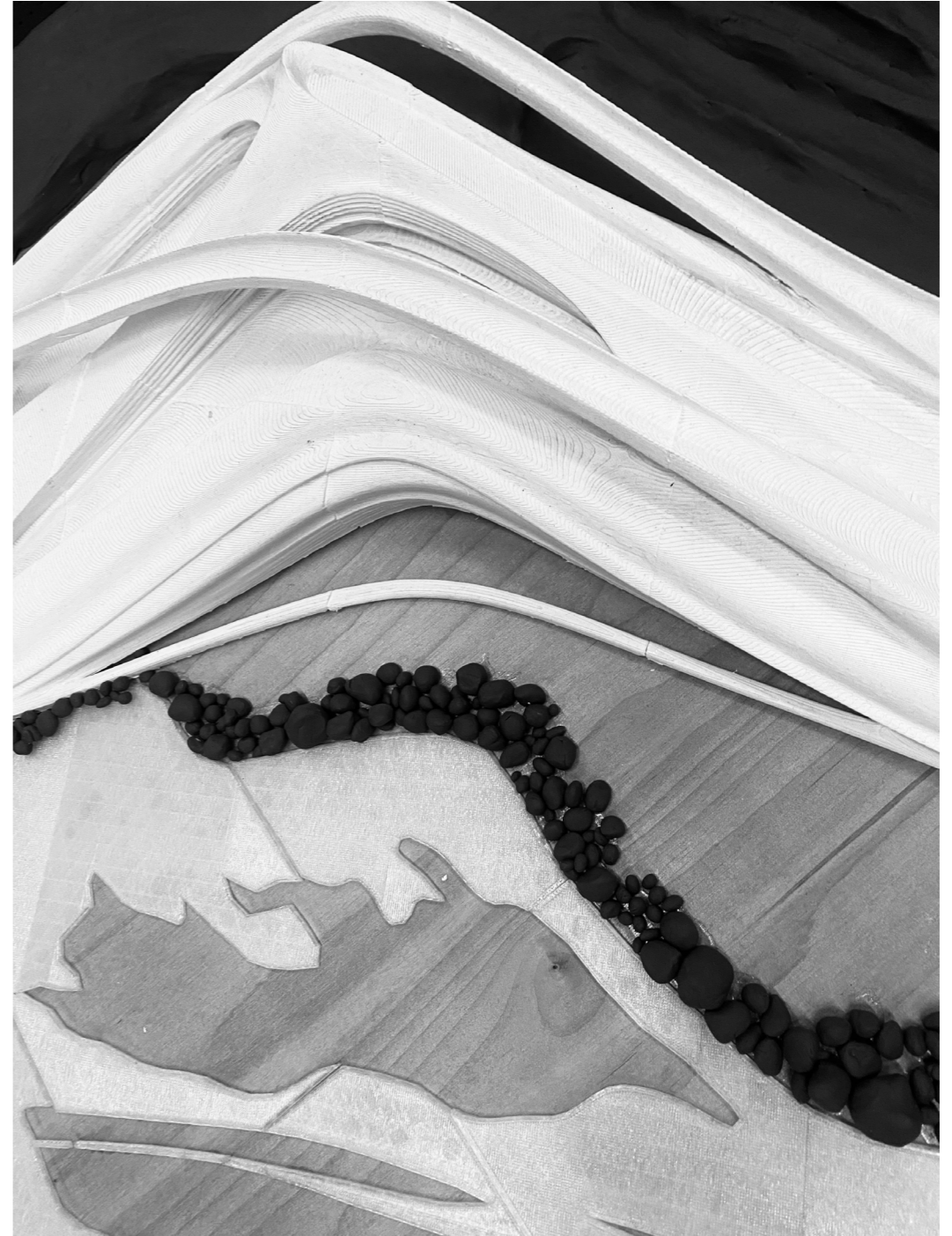
LONGITUDINAL SECTION



CROSS SECTION







ADAPTIVE QUALITY - Field // Flow

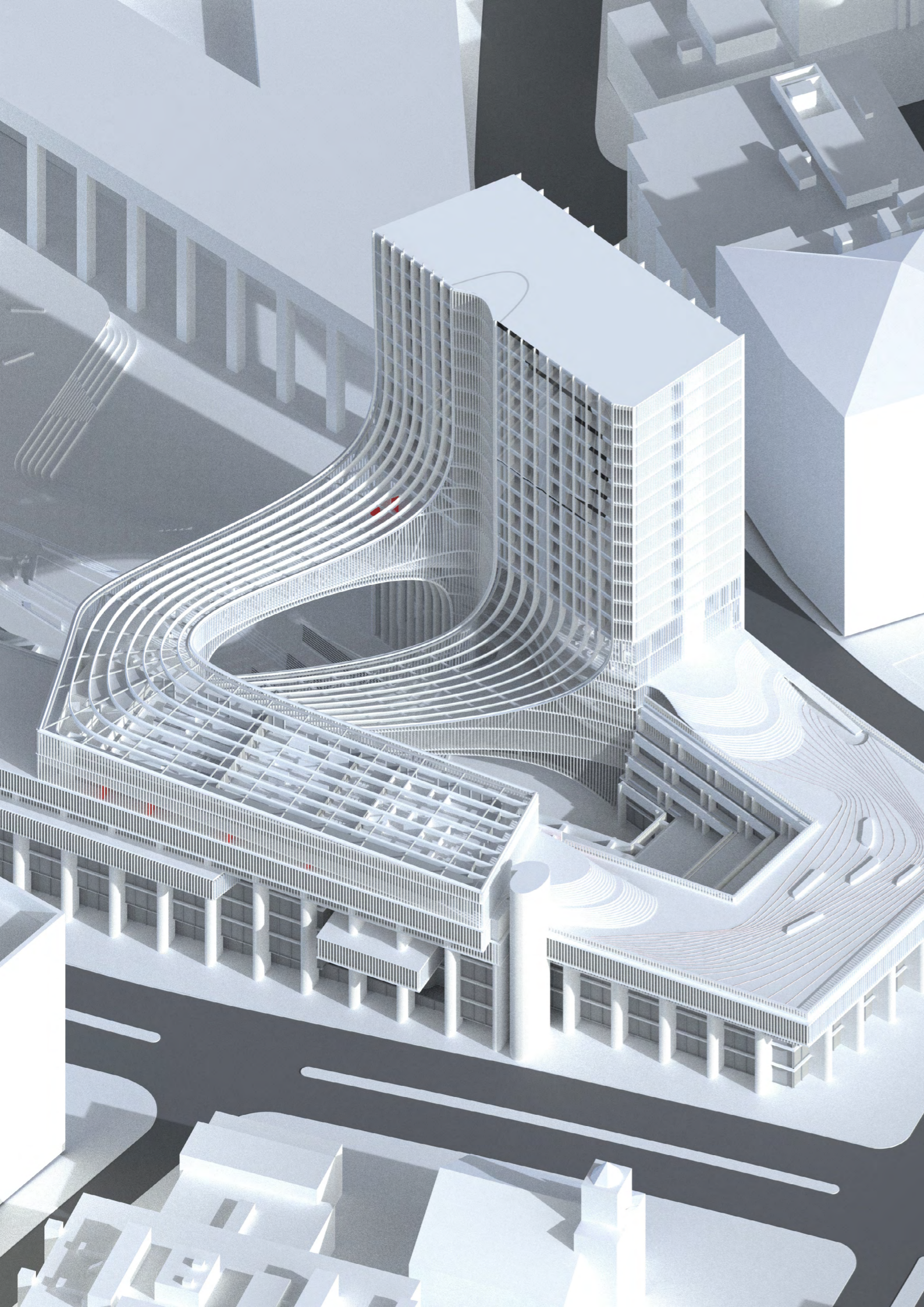
Professors: Jeanne Gang and Anika Schwarzwald

Harvard GSD | Spring 2022 | Option Studio | Individual Project

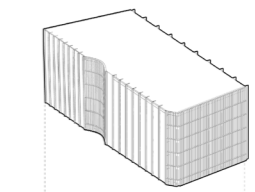
The project ROOM proposes a new extension for Boston Public Library, situated in Copley Square, Downtown Boston. The program comprises of different reading rooms, stacks and other public spaces.

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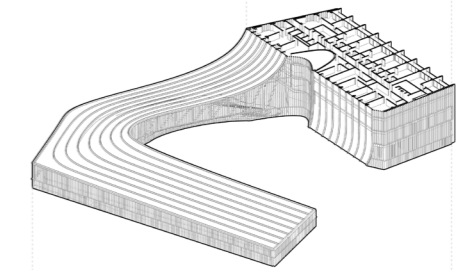
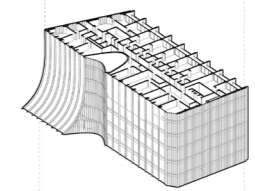




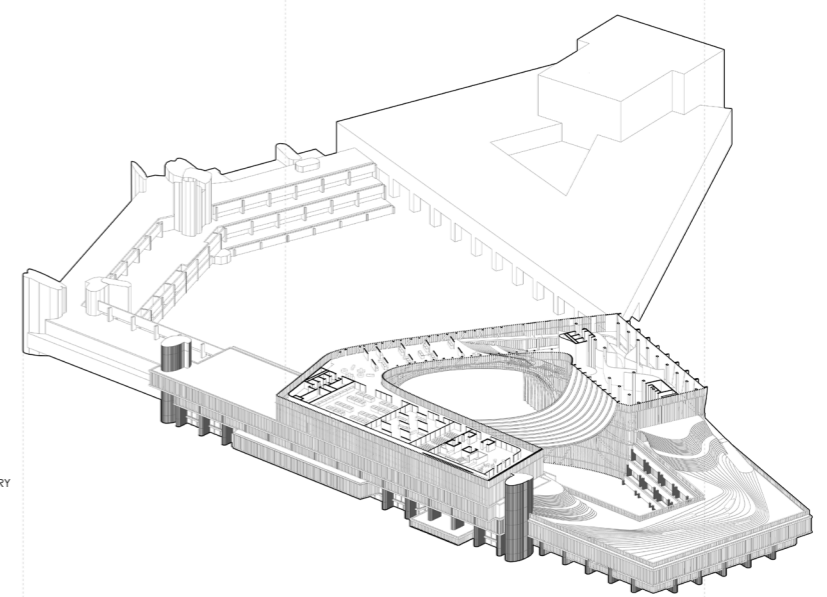
RESIDENTIAL LEVEL



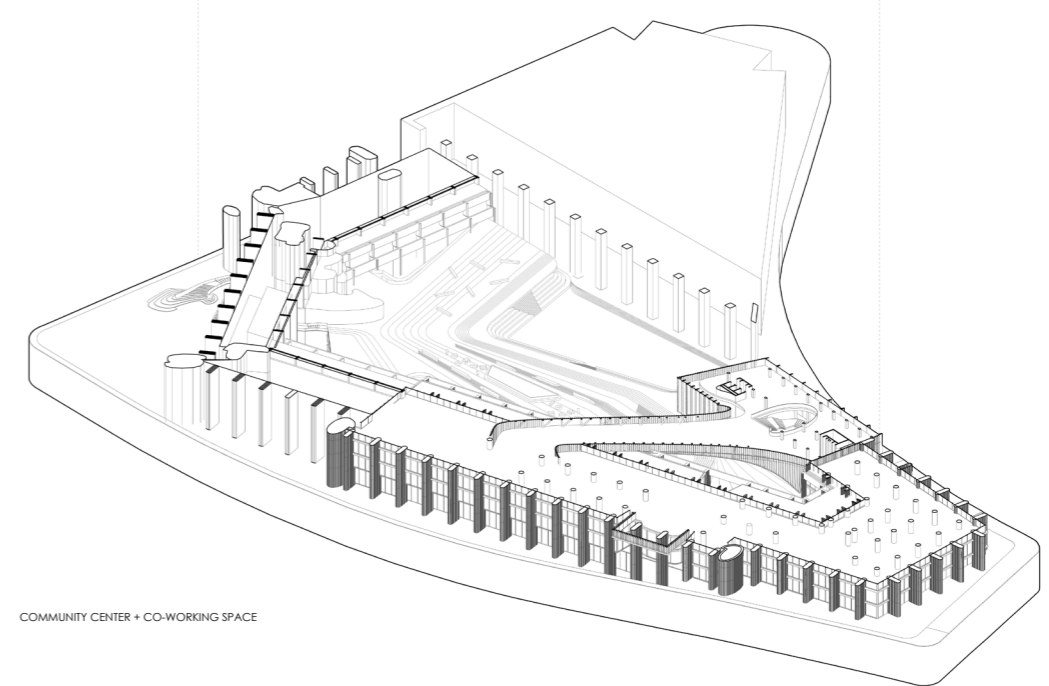
RESIDENTIAL LEVEL



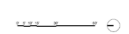
MUSEUM OF BOSTON'S HISTORY

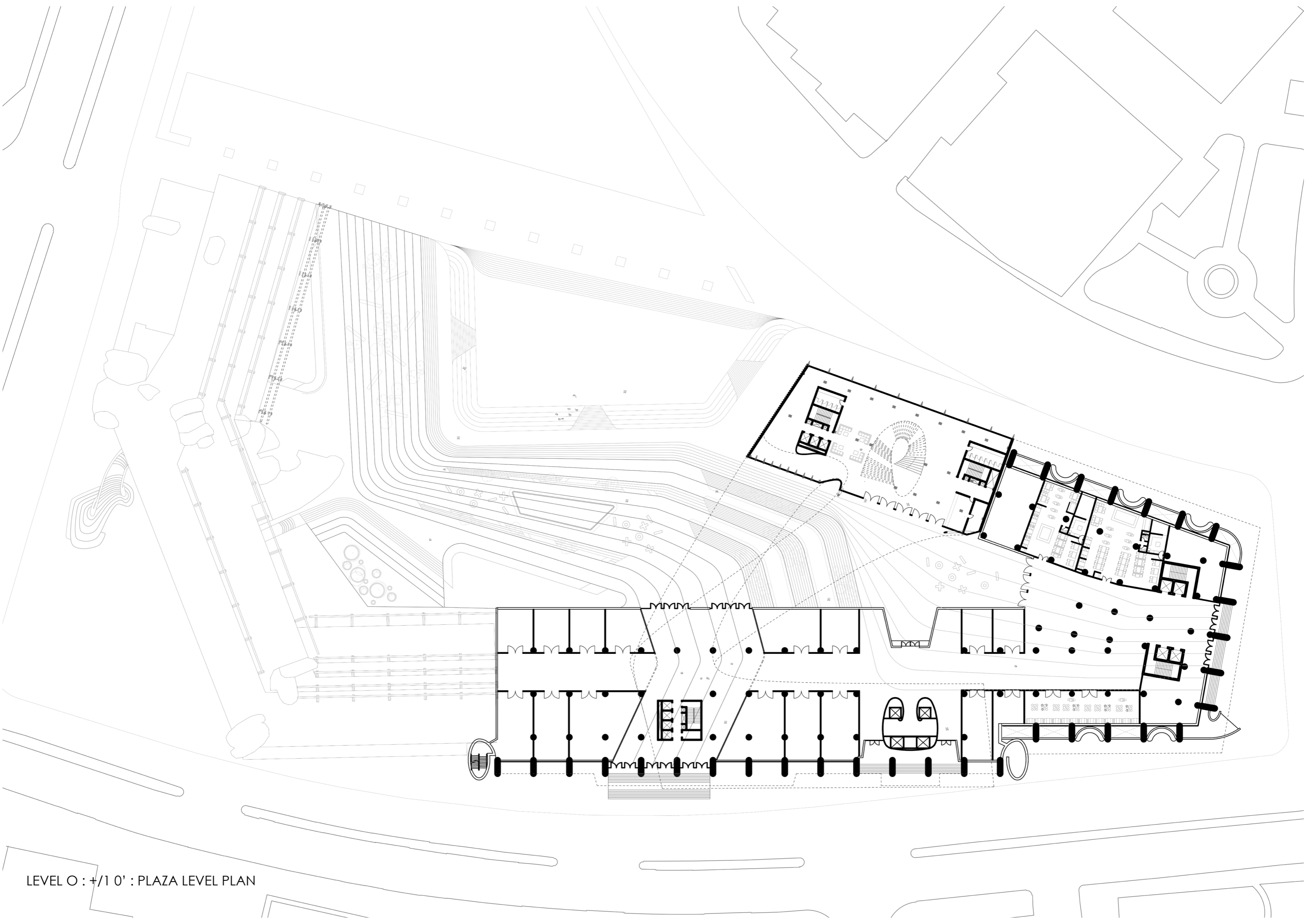


COMMUNITY CENTER + CO-WORKING SPACE

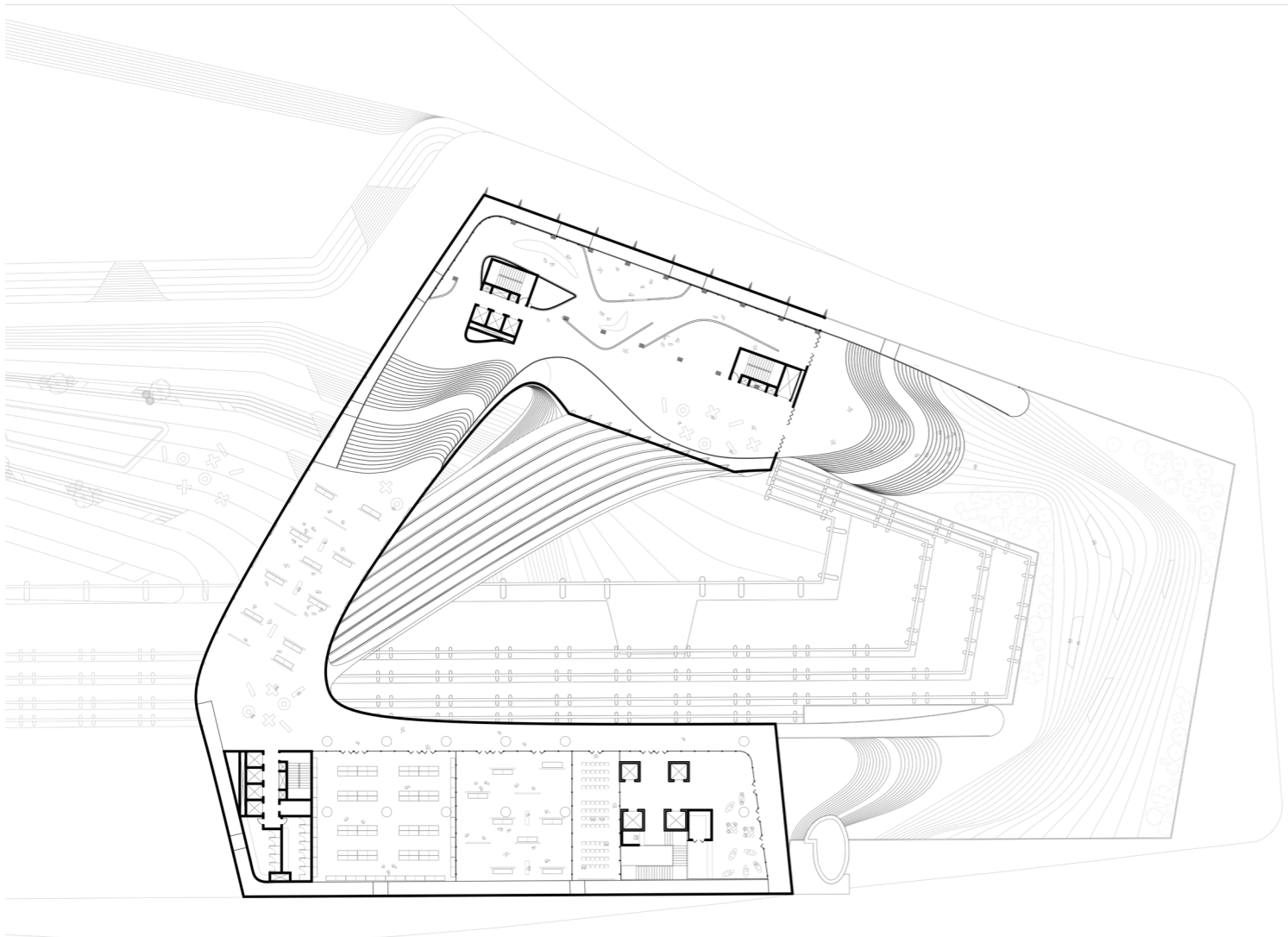


EXPLODED ISOMETRIC

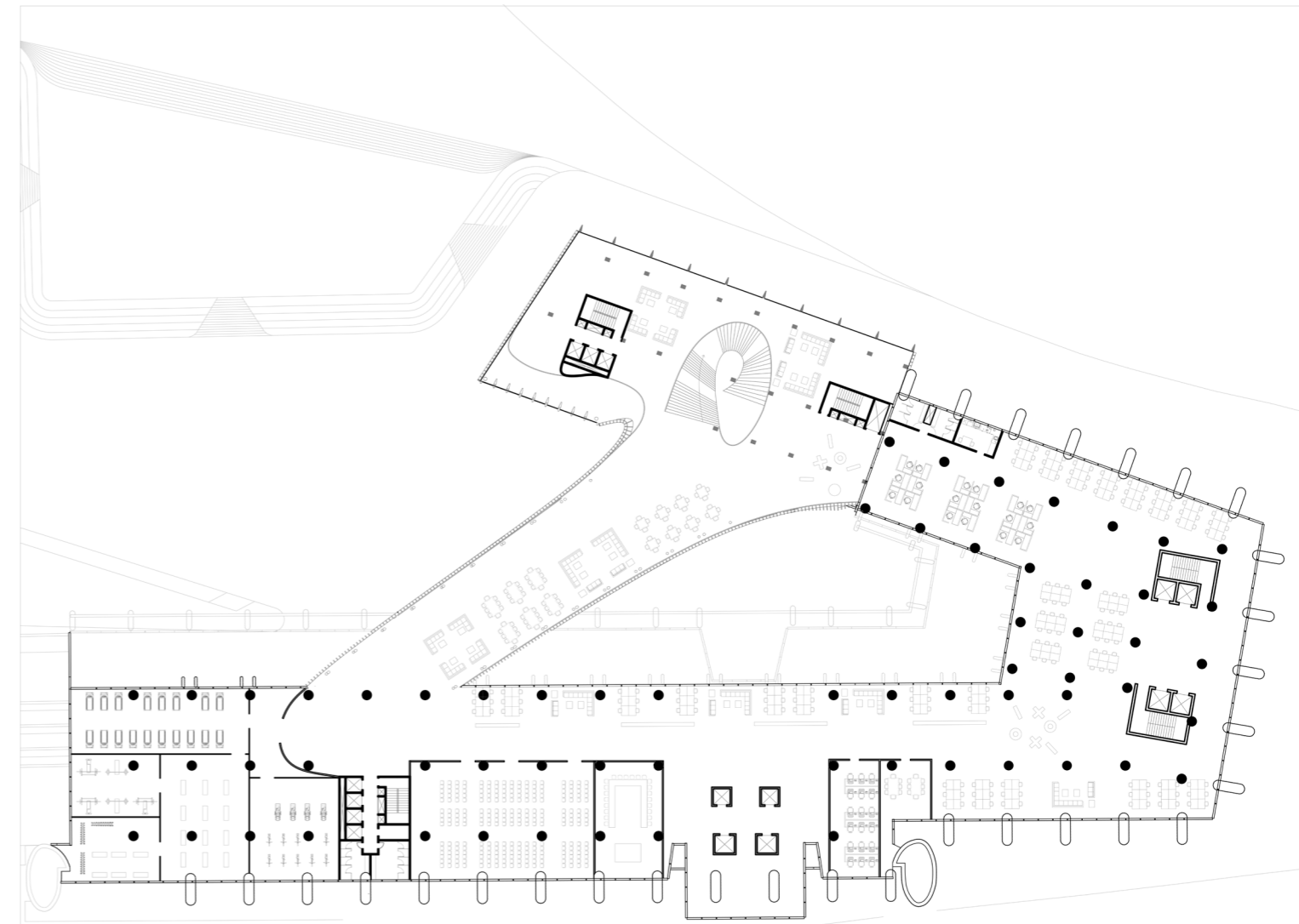
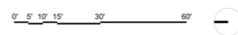




LEVEL 0 : +/1 0' : PLAZA LEVEL PLAN

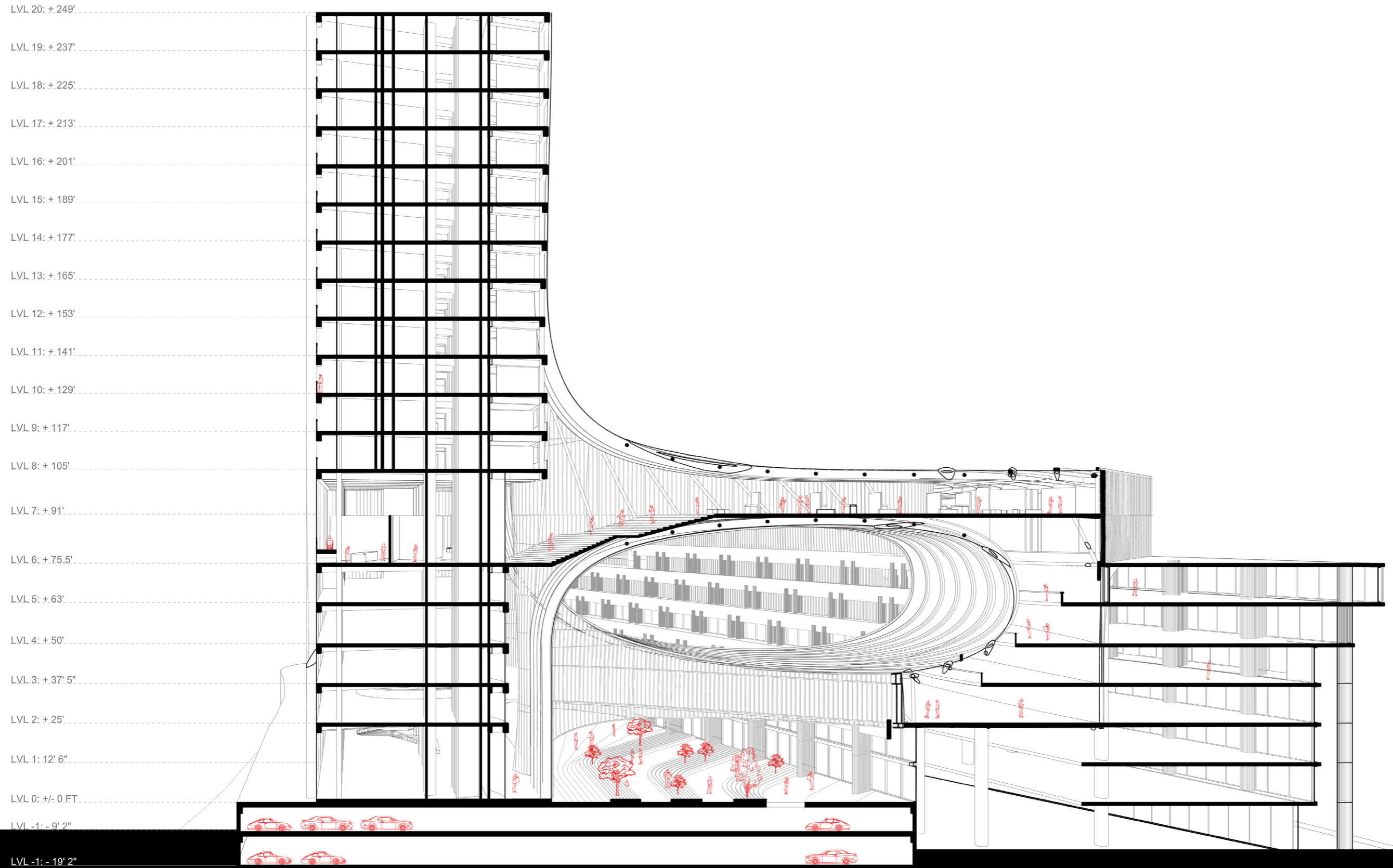


LVL 6 : + 75.5' - MUSEUM LEVEL PLAN

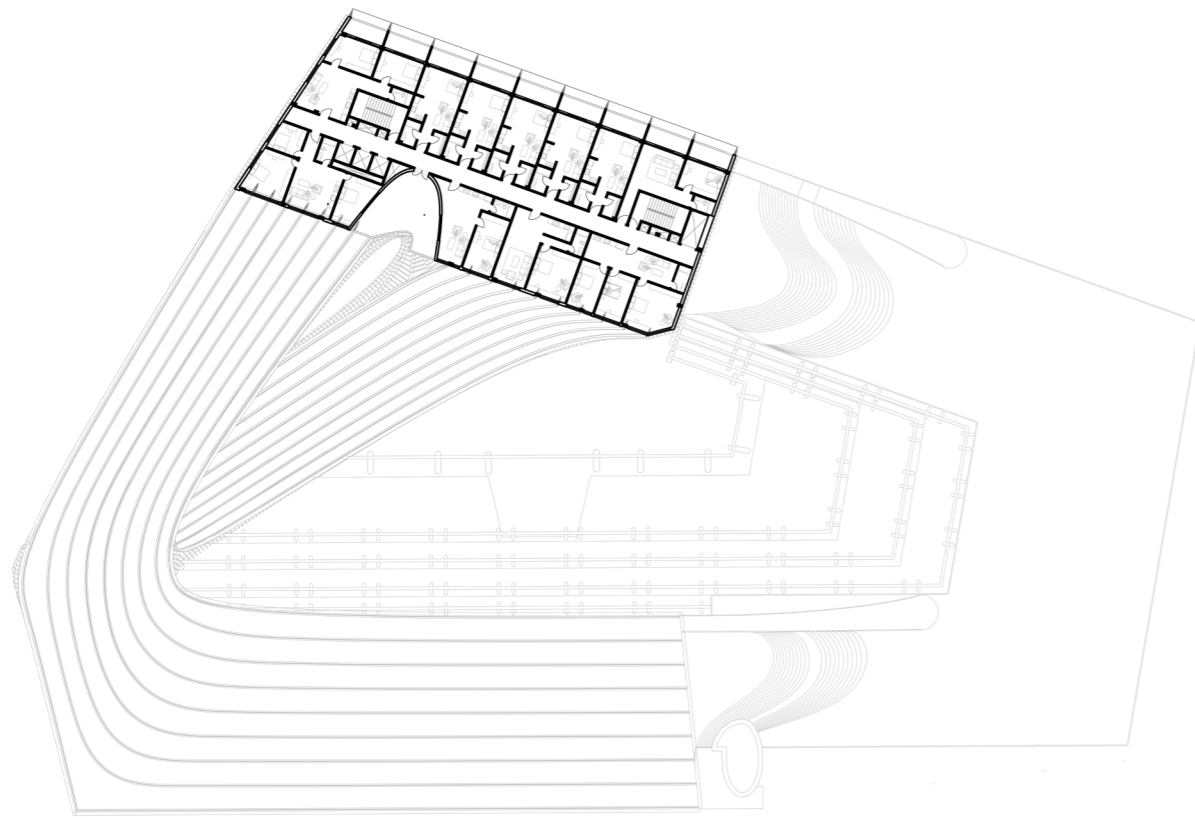


LVL 3 : + 37' 5" - COMMUNITY CENTER LEVEL PLAN

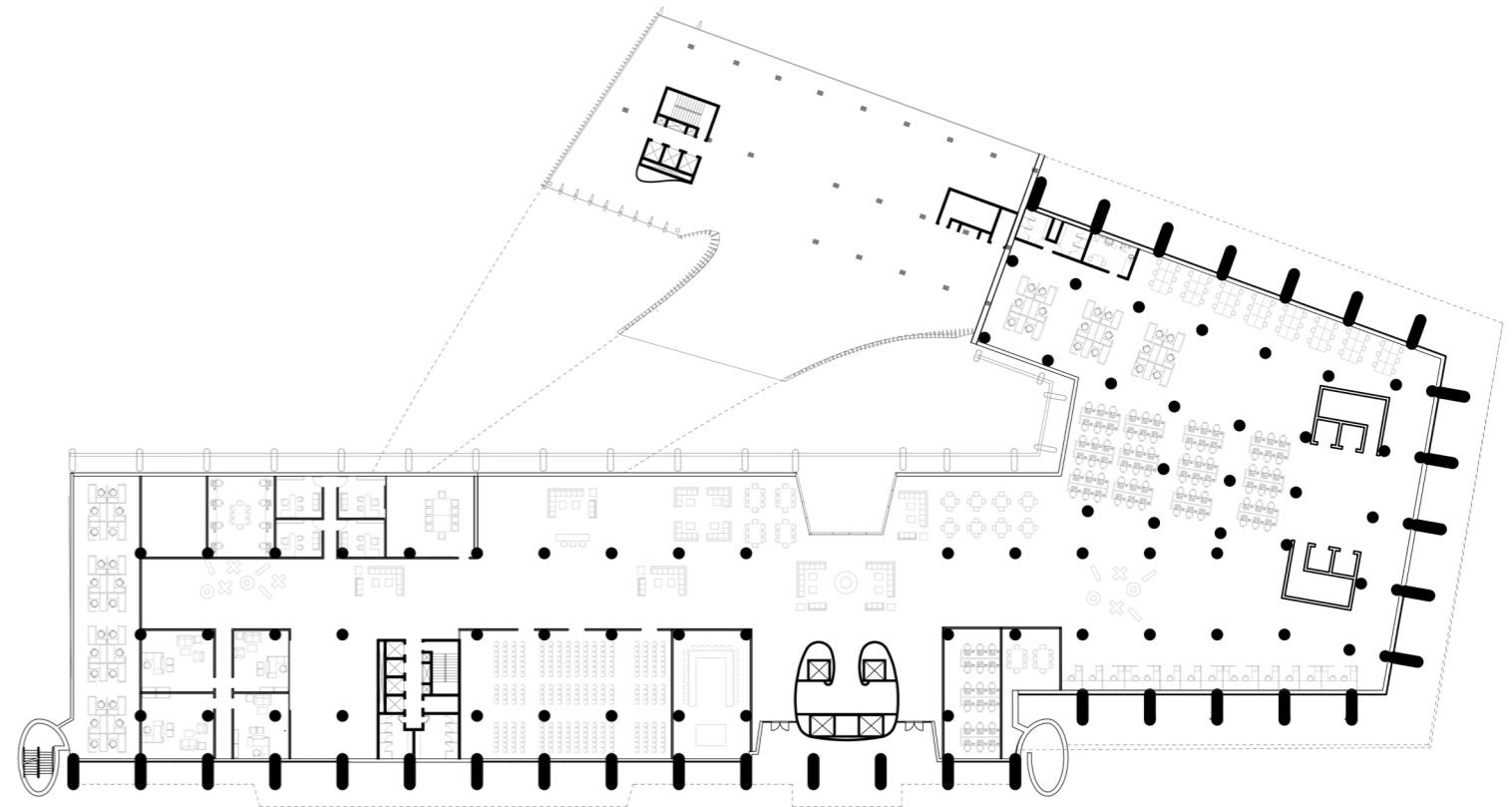
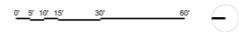




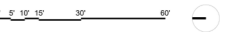
SECTION AA'

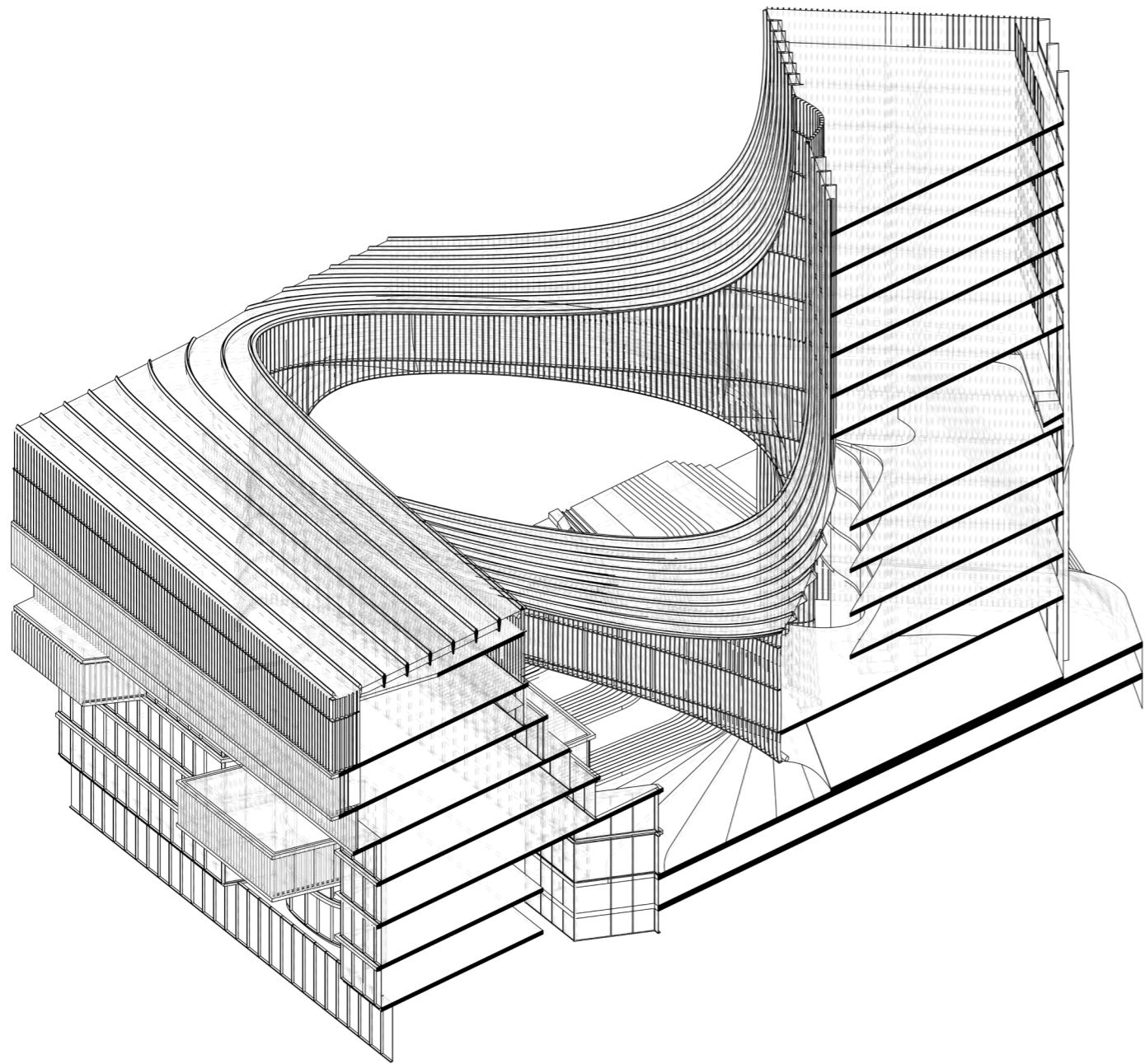


LVL 15: + 189' : TYPICAL RESIDENTIAL FLOOR PLAN

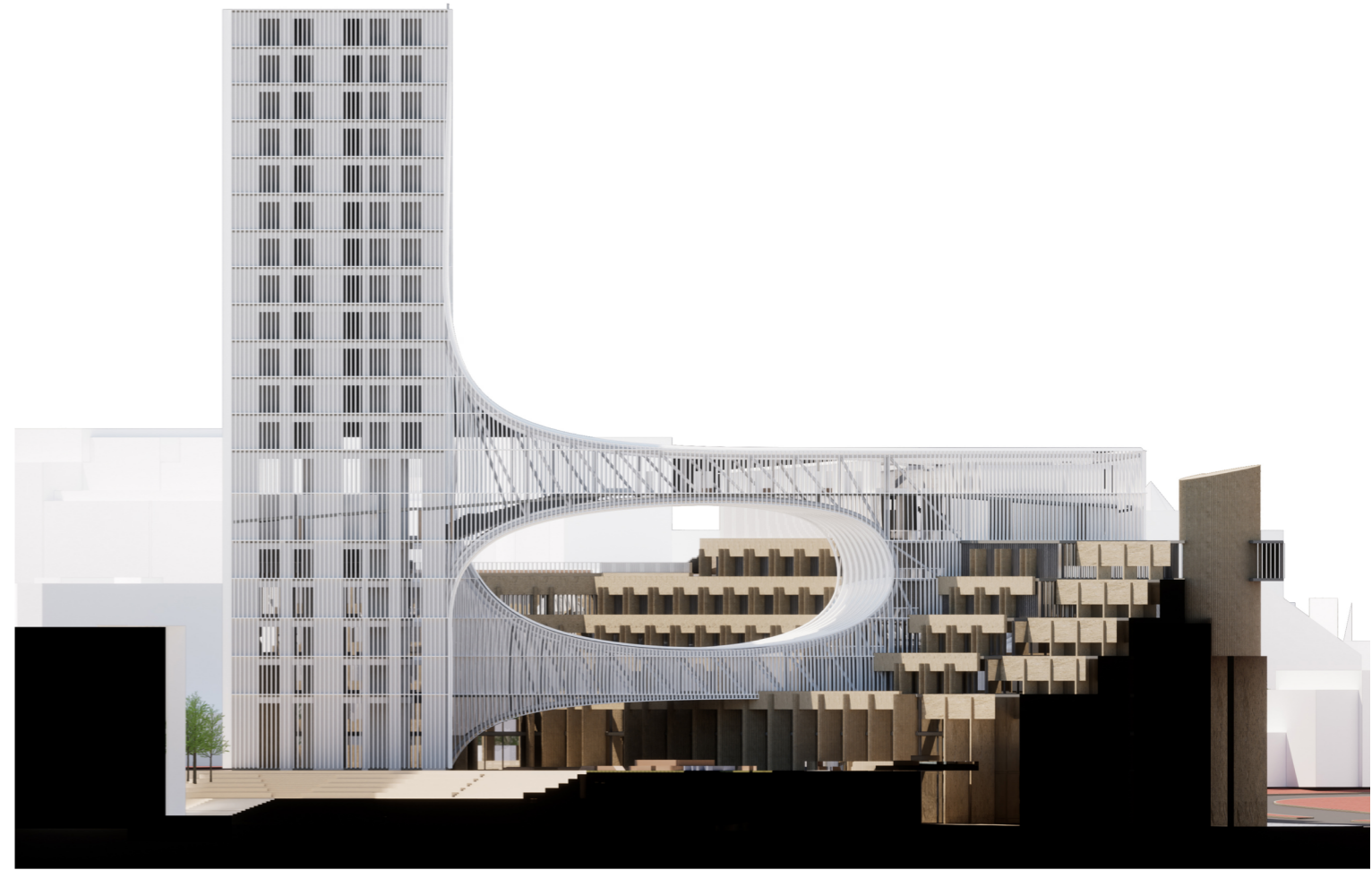


LVL 2 : + 25' - OFFICE LEVEL PLAN

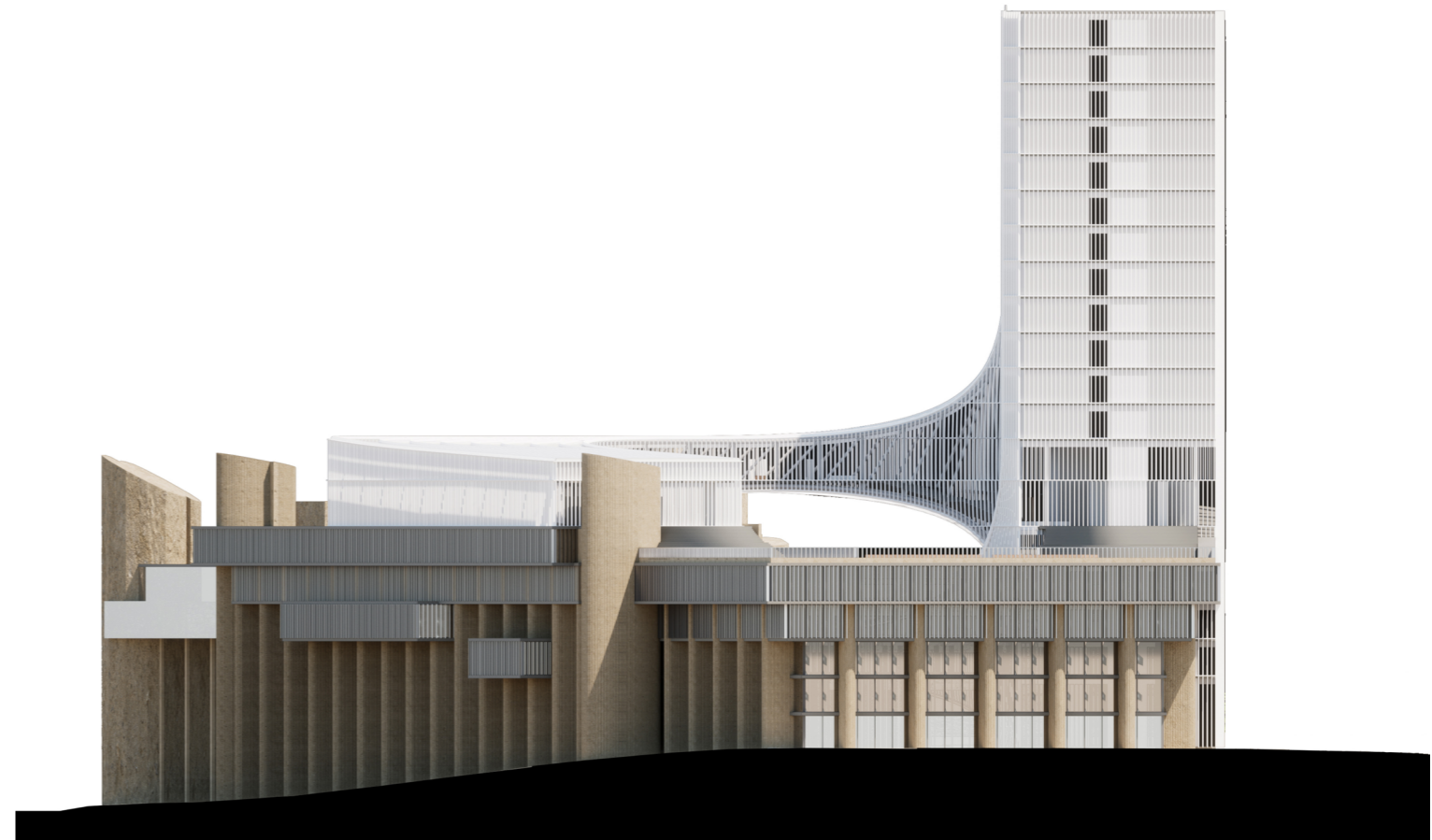




RAZOR DRAWING



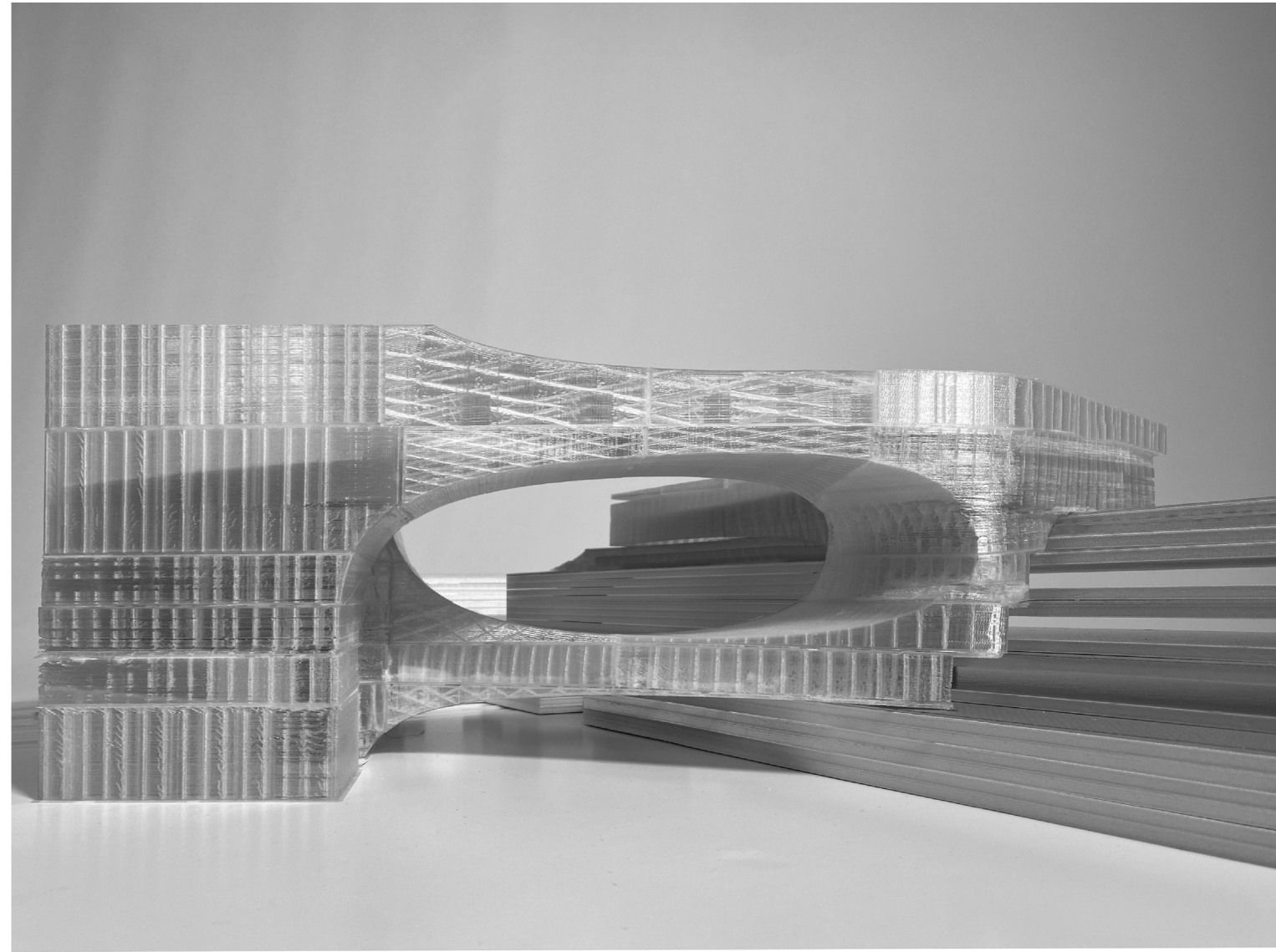
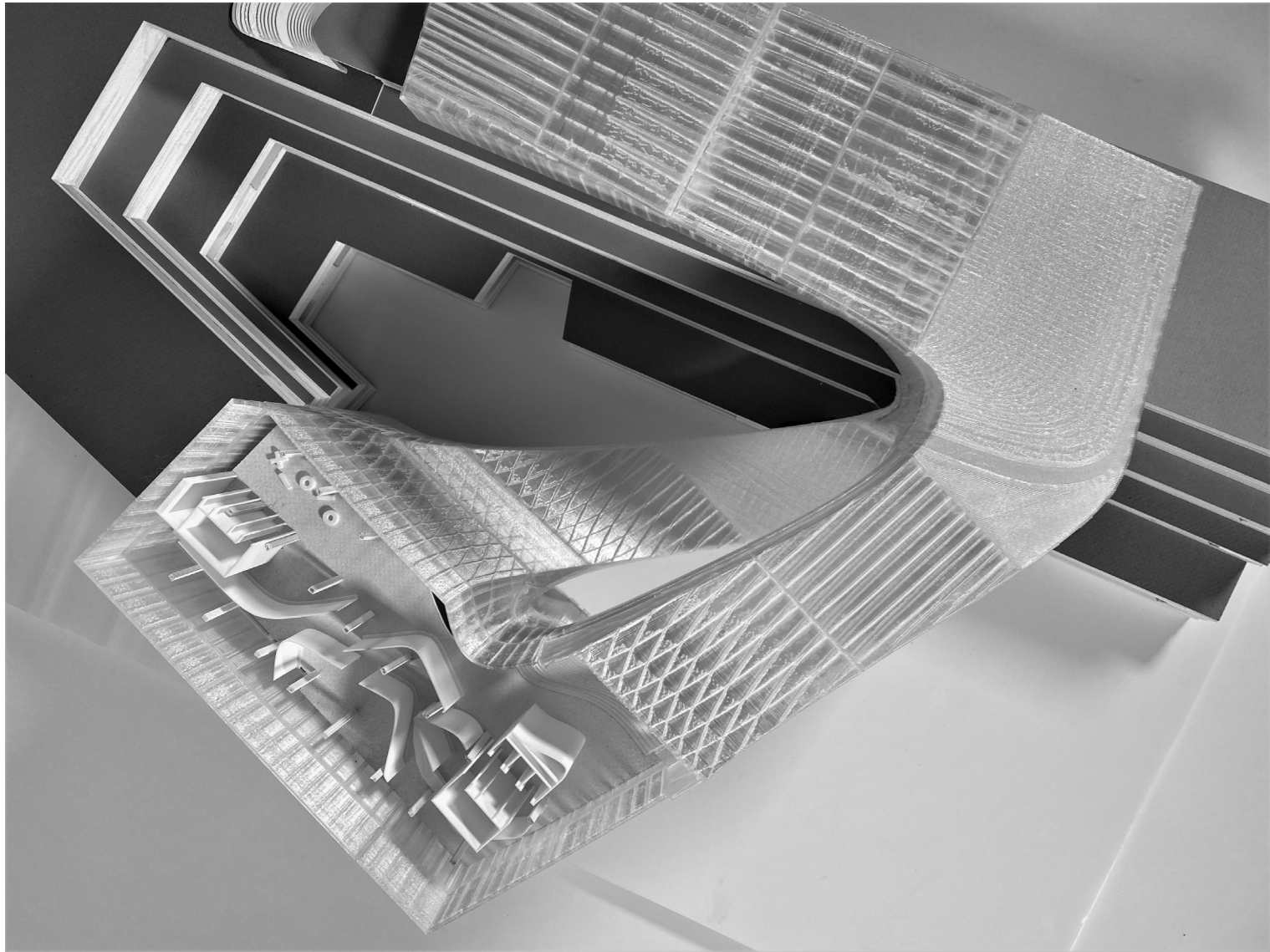
ELEVATION 1



ELEVATION 2







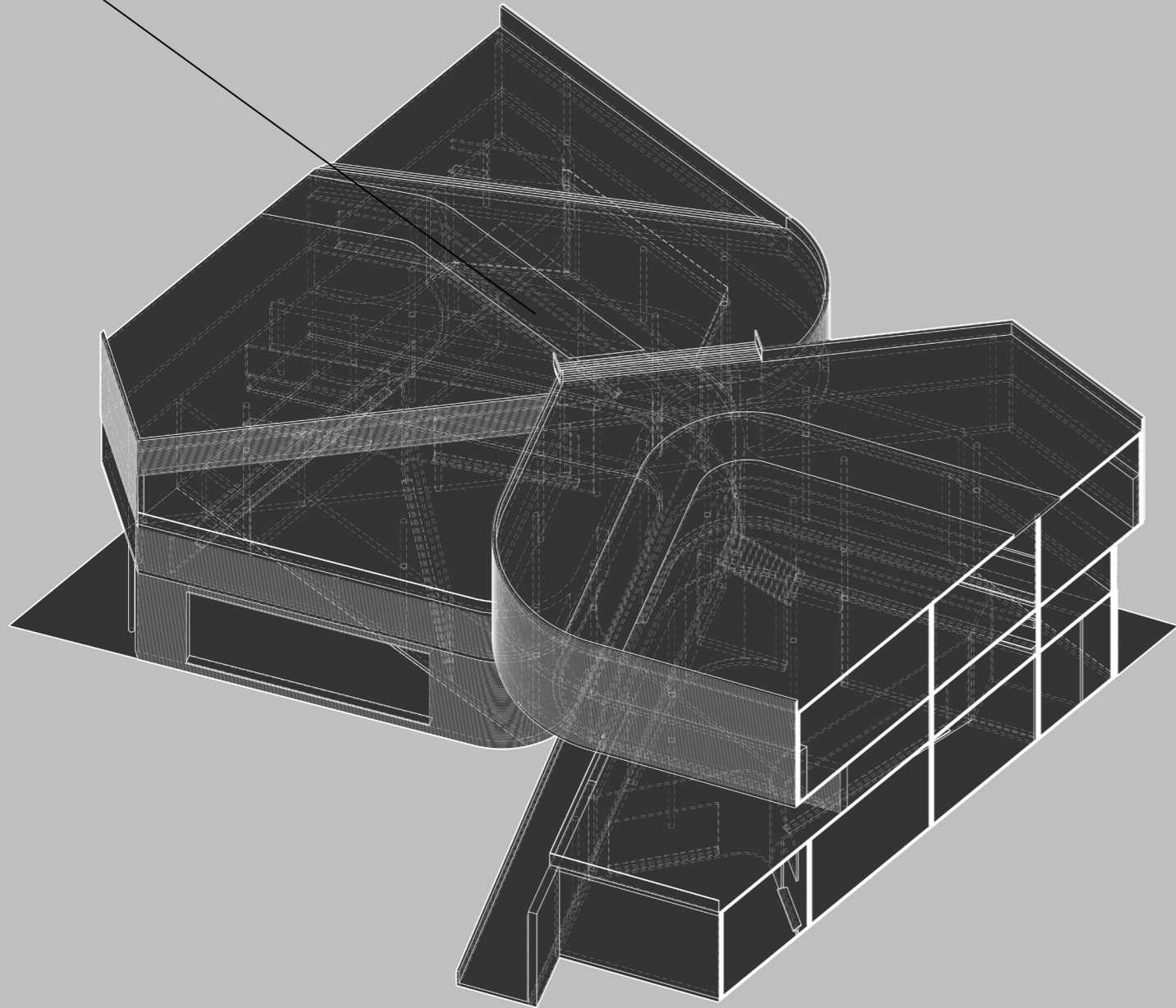
ROOM - Ethereal Enclosures

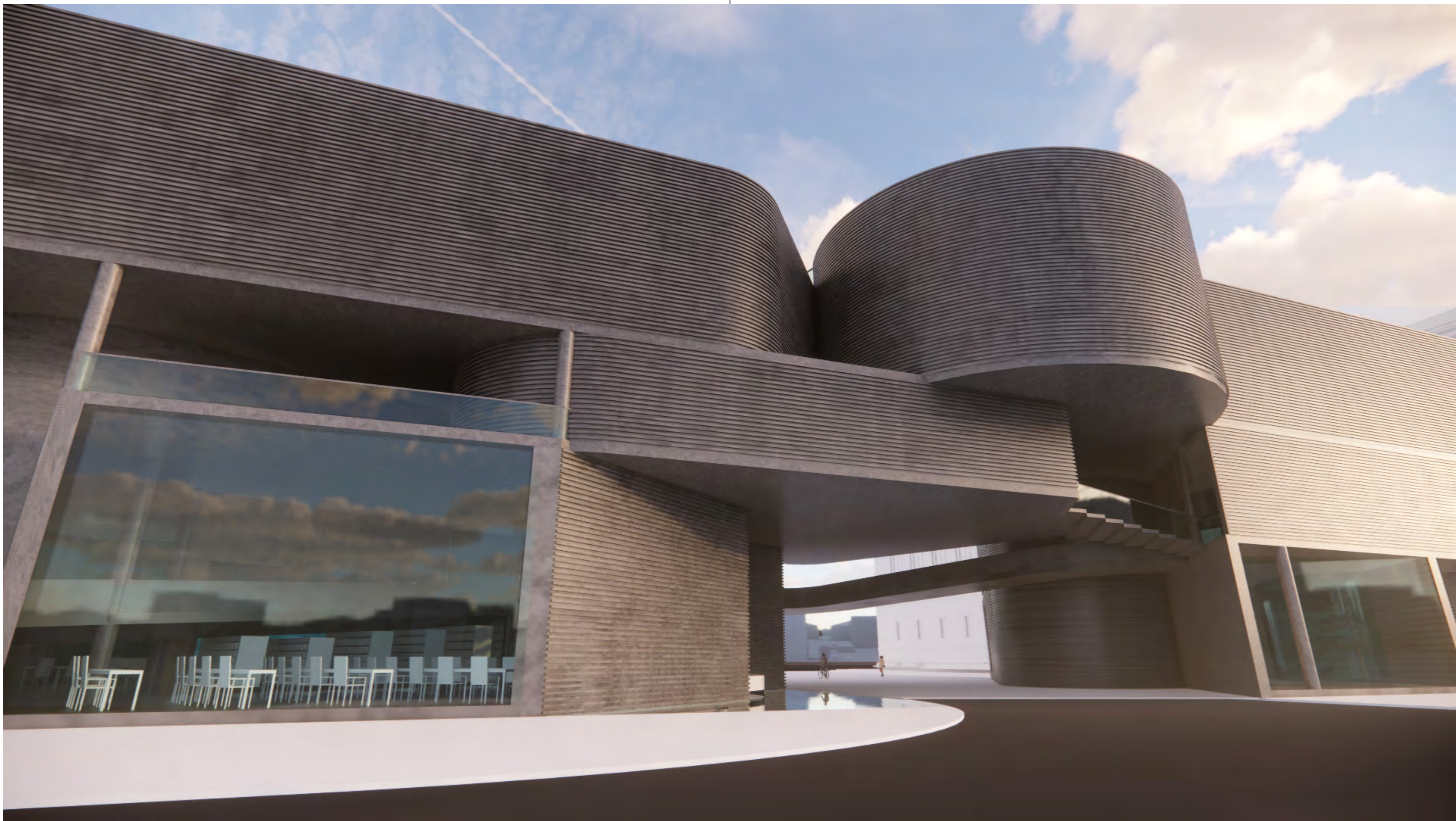
Professor Ron Witte, WW Architecture

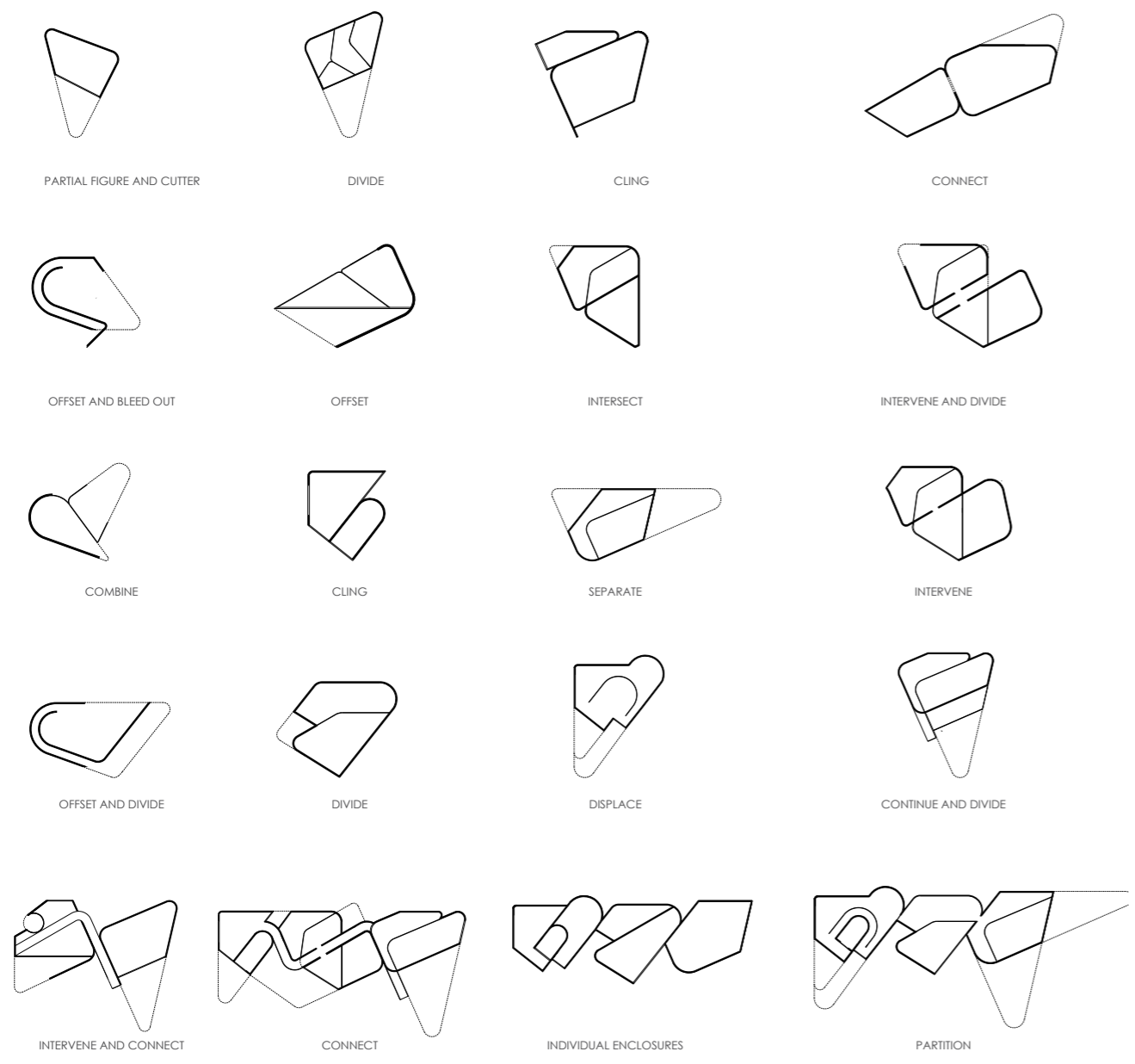
Harvard GSD | Fall 2021 | Option Studio I Individual Project

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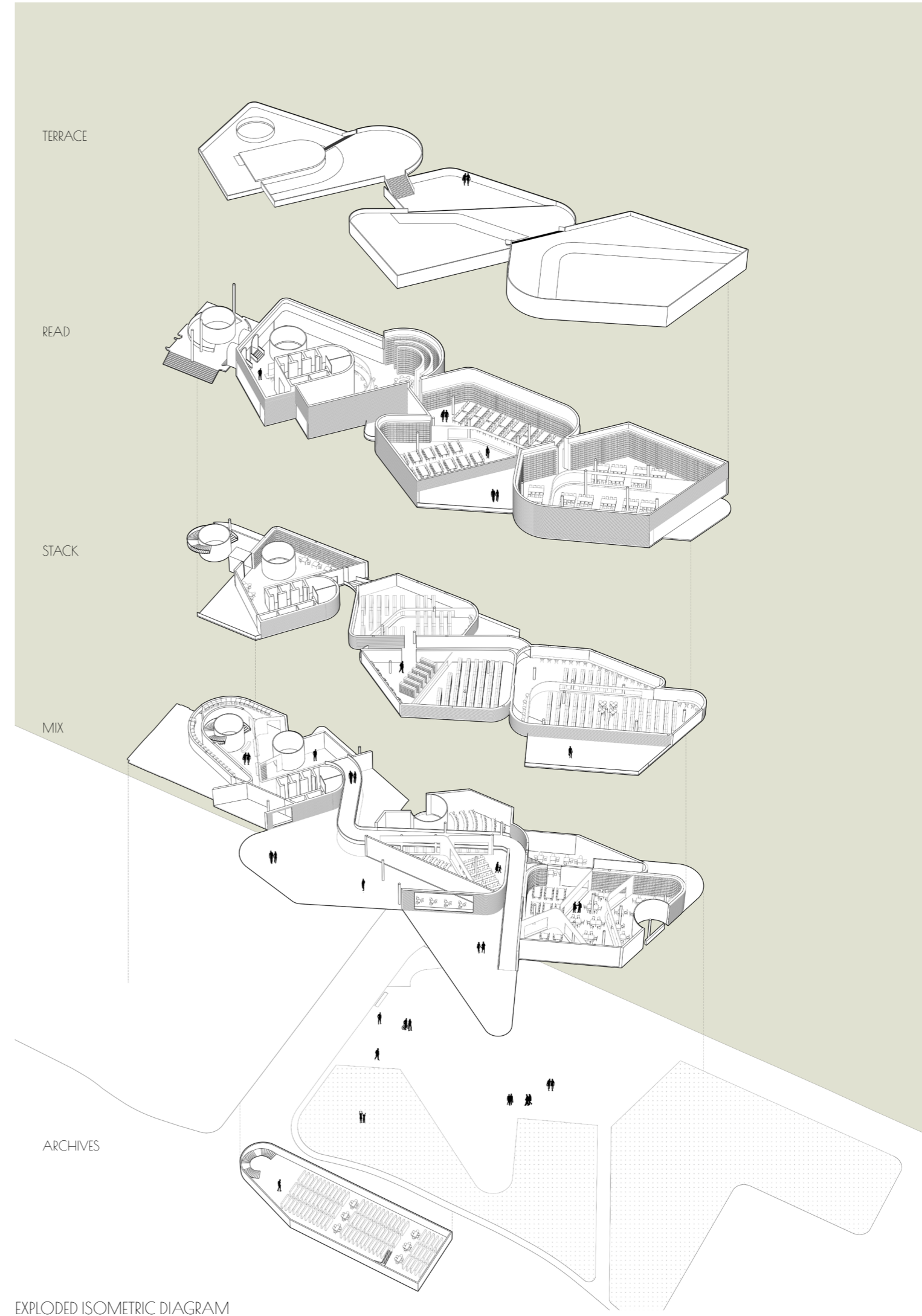




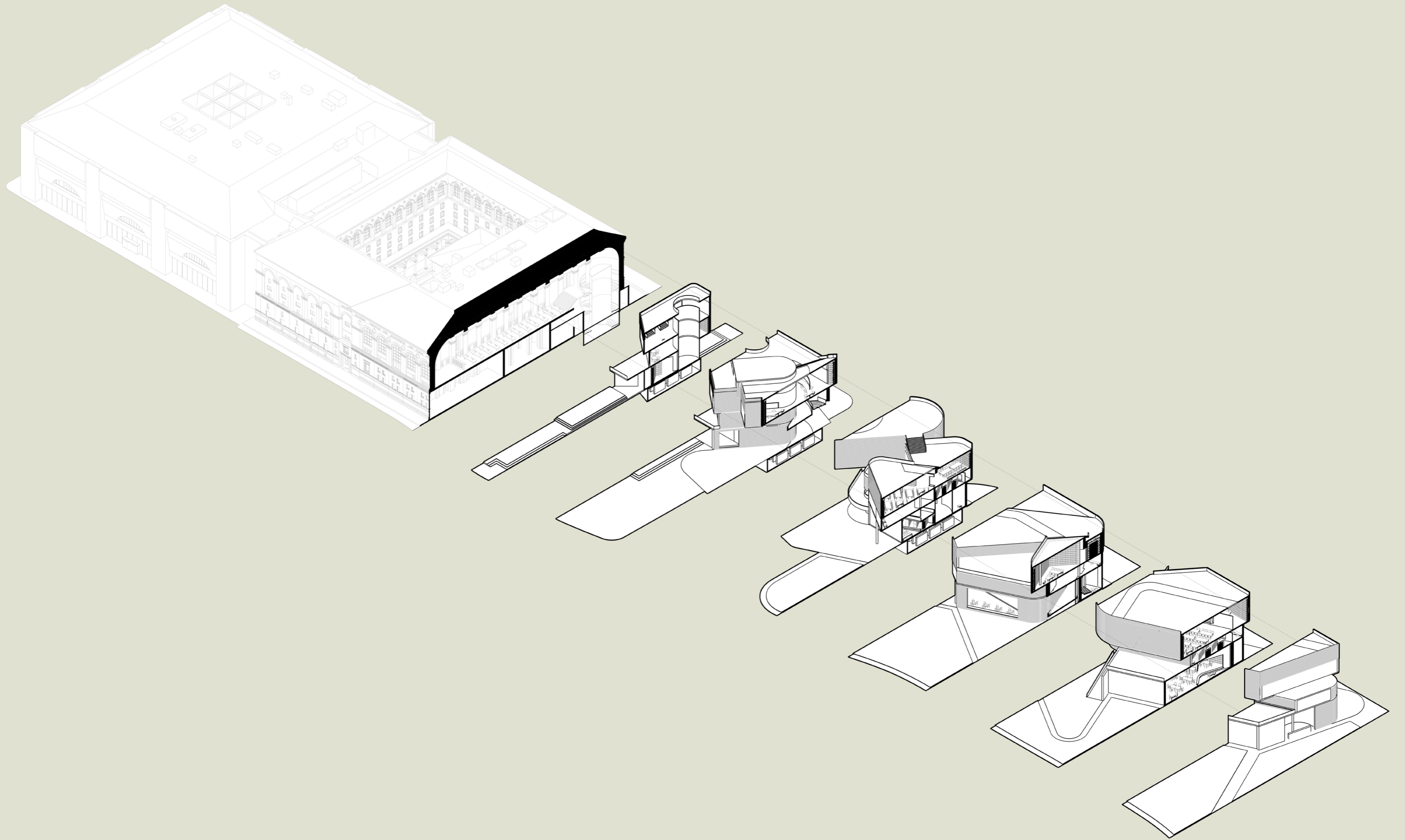
TECHNIQUE

In our studio discussions, we have been talking about the significance of markings on paper, the spatial qualities they engender and how they can influence the culture of the space. A line, be it any sort, is a beginning and ending of a space and this project started with investigating the nature of it. You see, a line doesn't really enclose a space, but as we start adding curvature to it, it starts enclosing an area. This forms a partial figure.

The partial figure sets the stage for the activity happening inside the building, and the line or cutters captures the activity and exposes it out to the public. These figures are delicate and by the virtue of their nature they introduce various nuances of spaces and layered spatial experiences.



EXPLODED ISOMETRIC DIAGRAM



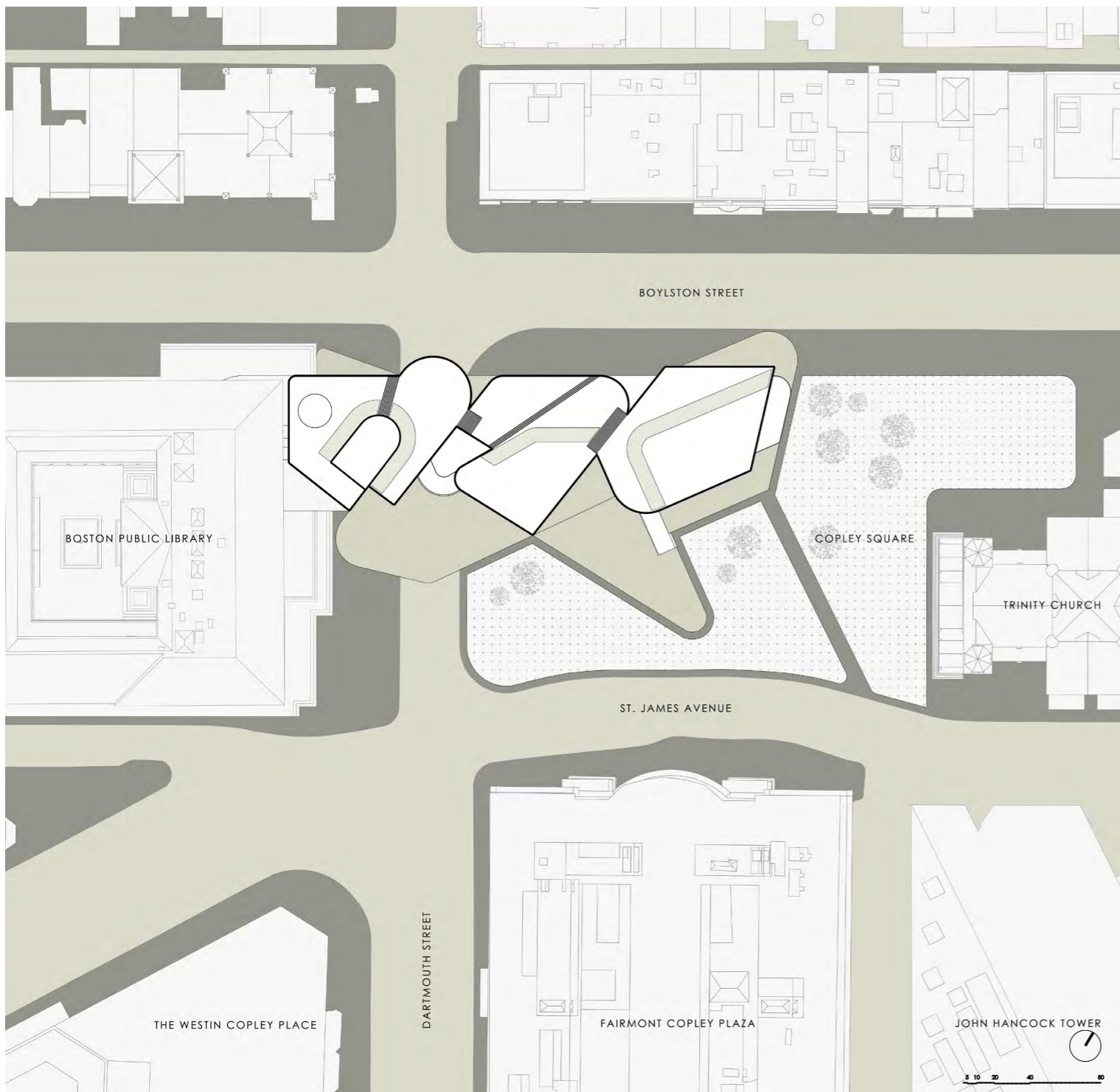
EXPLODED SECTION DIAGRAM



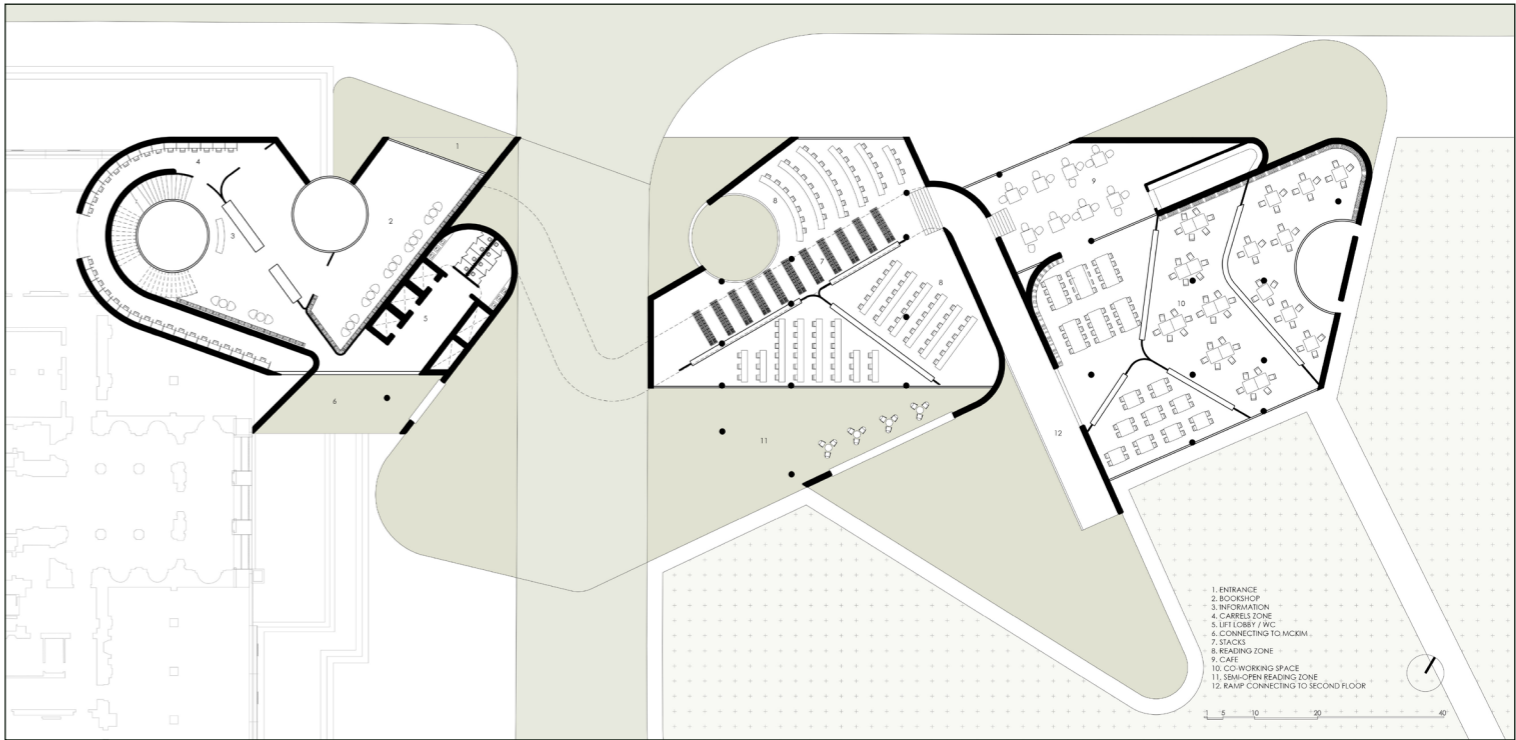
NORTH ELEVATION VIEW



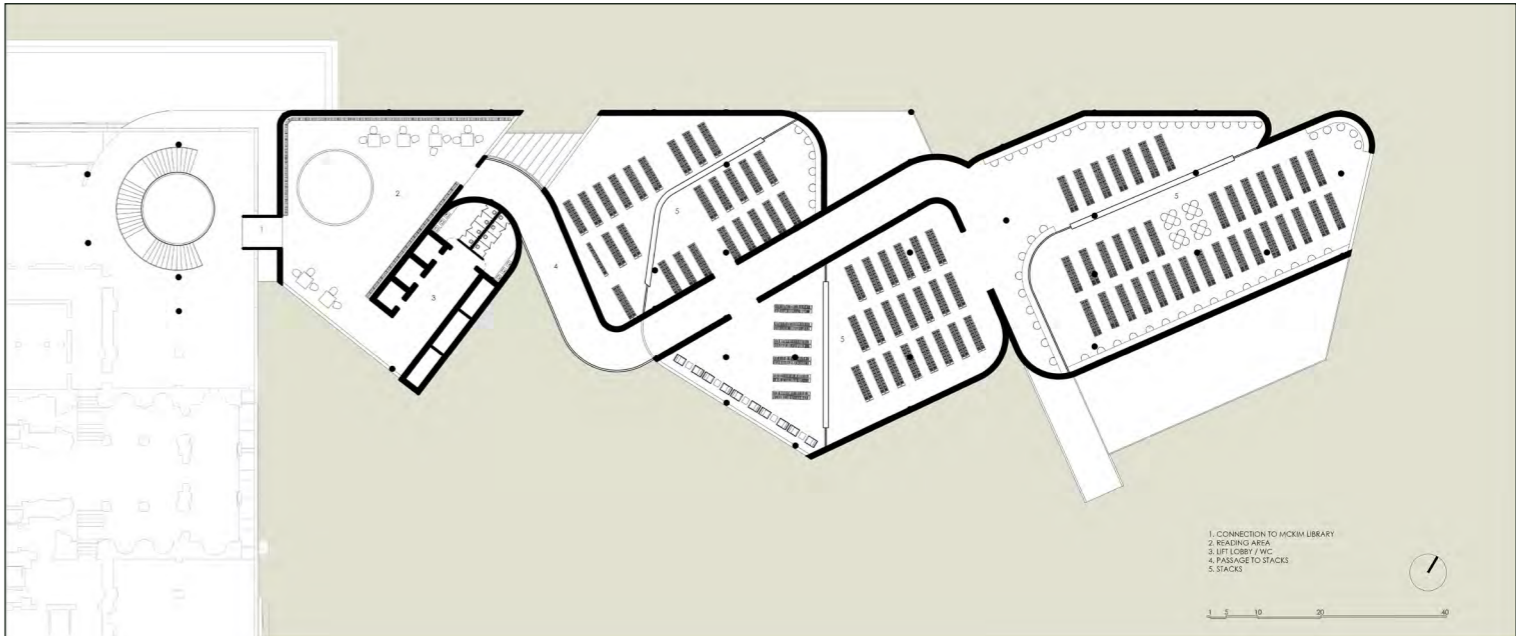
SOUTH ELEVATION VIEW



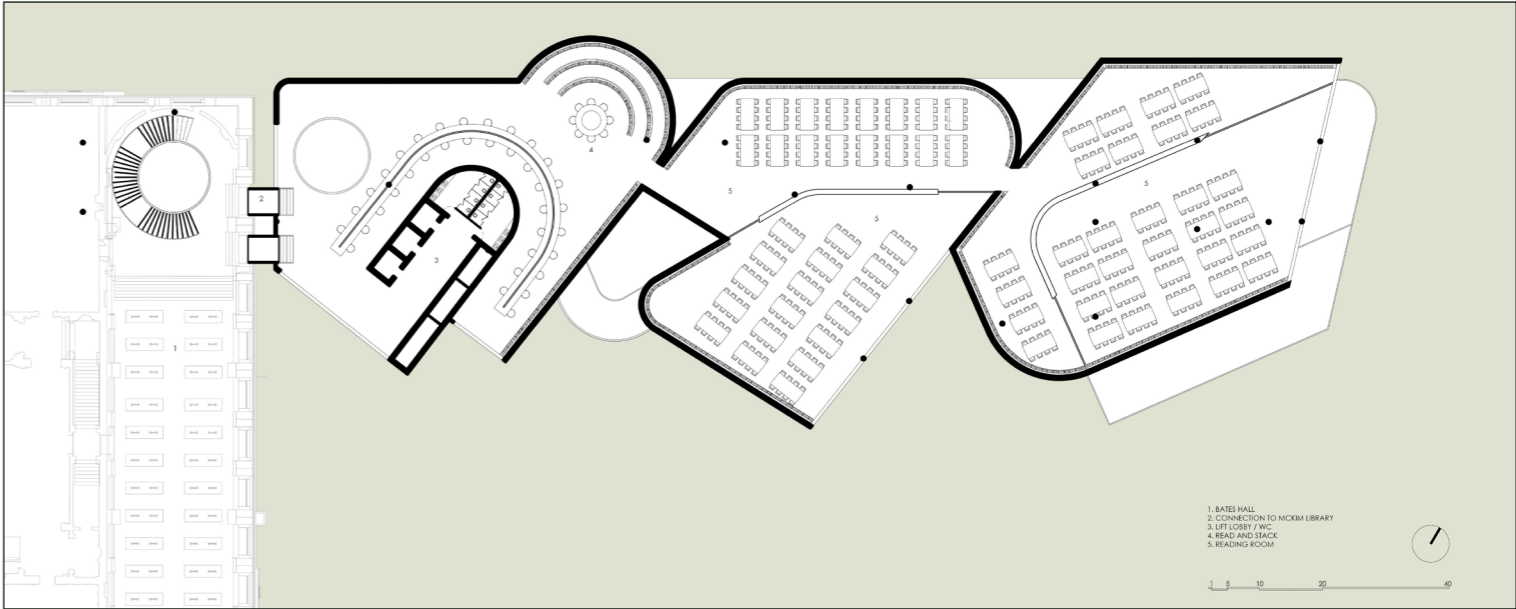
SITE PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN

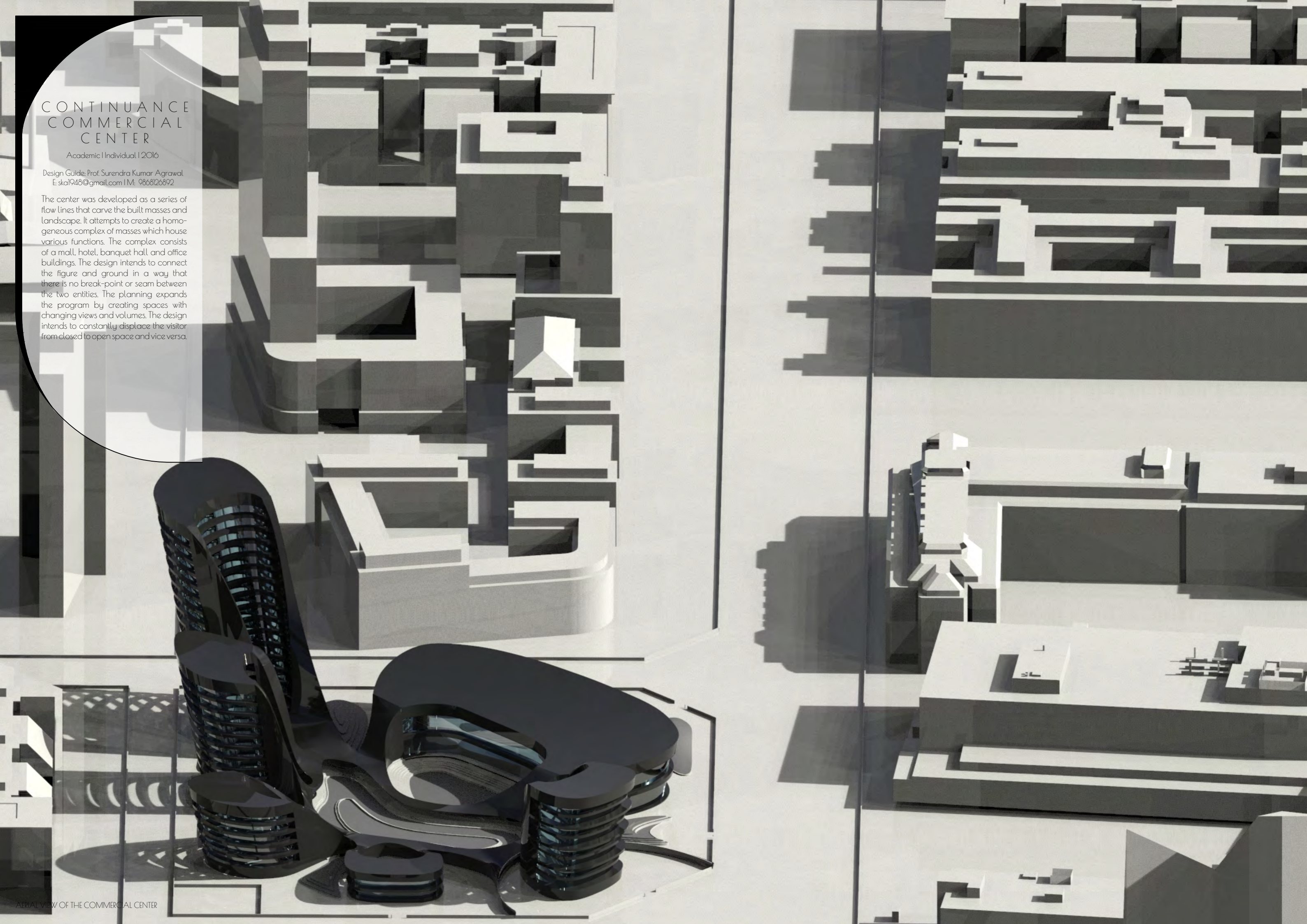


CONTINUANCE COMMERCIAL CENTER

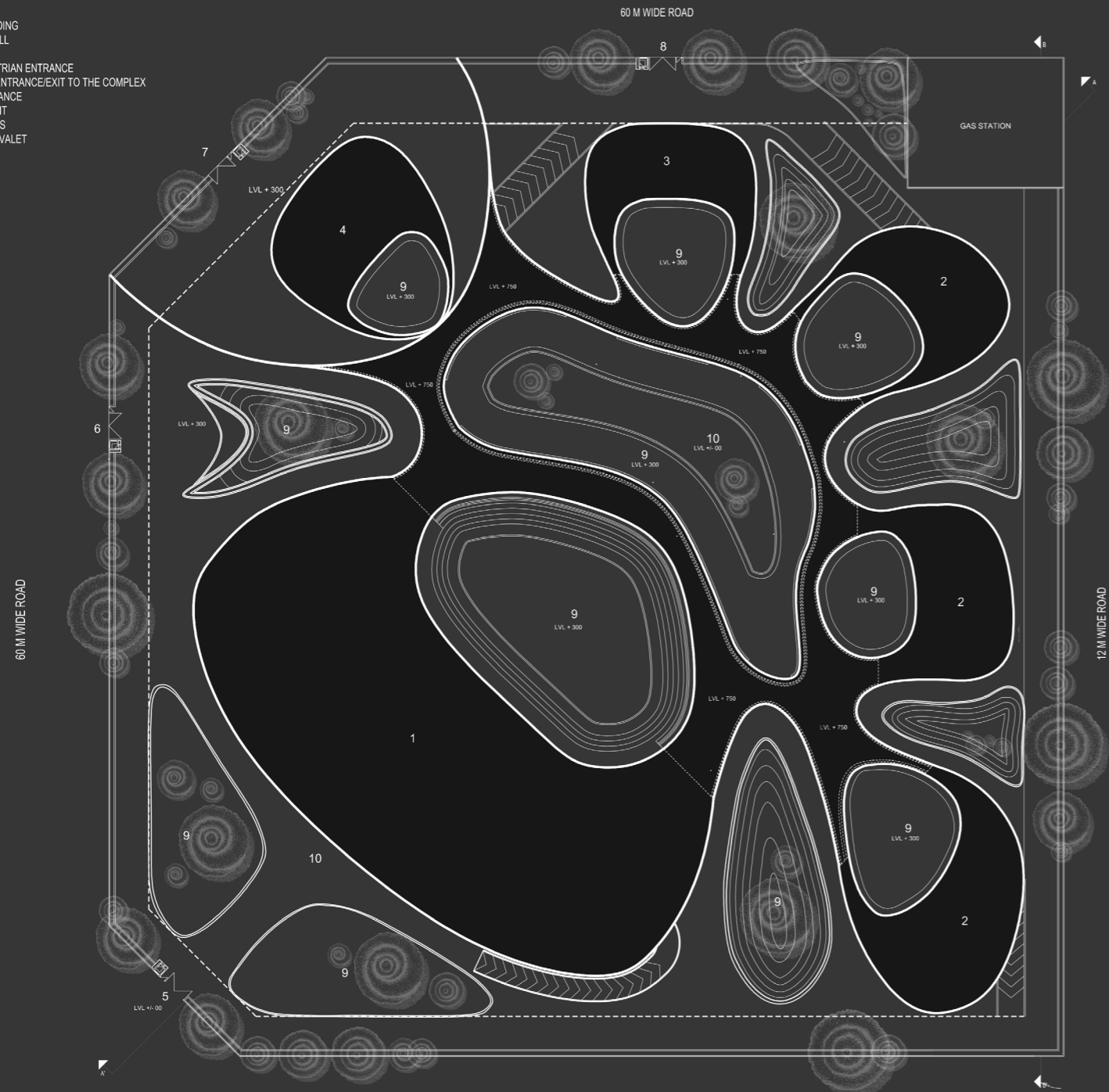
Academic | Individual | 2016

Design Guide: Prof. Surendra Kumar Agrawal
E: sk1948@gmail.com | M: 9868126892

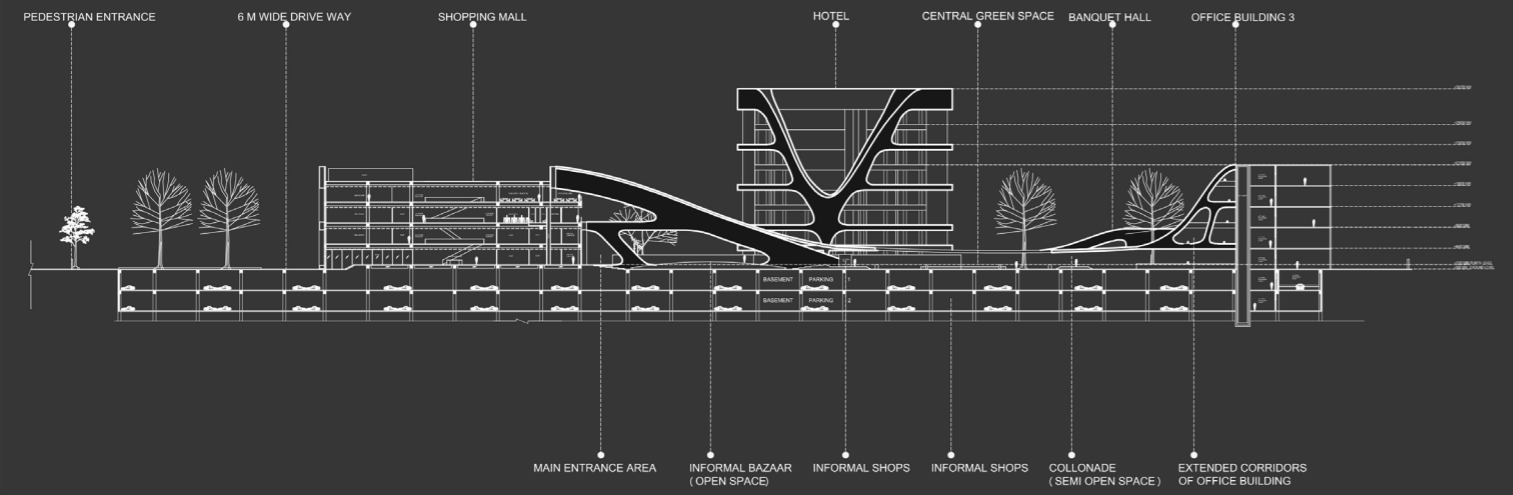
The center was developed as a series of flow lines that carve the built masses and landscape. It attempts to create a homogeneous complex of masses which house various functions. The complex consists of a mall, hotel, banquet hall and office buildings. The design intends to connect the figure and ground in a way that there is no break-point or seam between the two entities. The planning expands the program by creating spaces with changing views and volumes. The design intends to constantly displace the visitor from closed to open space and vice versa.



- 1 MALL
- 2 OFFICE BUILDING
- 3 BANQUET HALL
- 4 HOTEL
- 5 MAIN PEDESTRIAN ENTRANCE
- 6 VEHICULAR ENTRANCE/EXIT TO THE COMPLEX
- 7 HOTEL ENTRANCE
- 8 COMPLEX EXIT
- 9 GREEN AREAS
- 10 DROP OFF / VALET

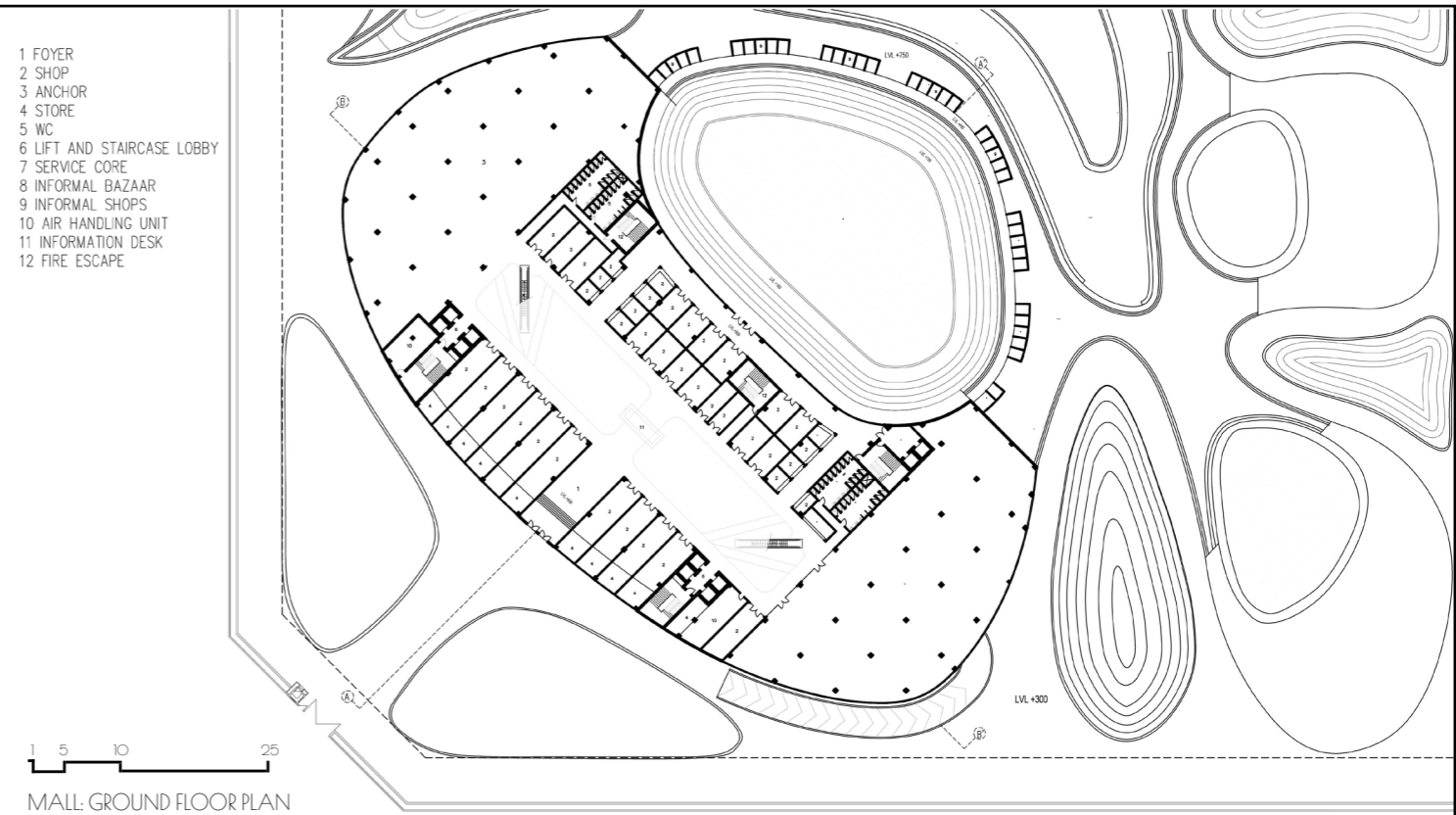


SITE PLAN



SITE SECTION

- 1 FOYER
- 2 SHOP
- 3 ANCHOR
- 4 STORE
- 5 WC
- 6 LIFT AND STAIRCASE LOBBY
- 7 SERVICE CORE
- 8 INFORMAL BAZAAR
- 9 INFORMAL SHOPS
- 10 AIR HANDLING UNIT
- 11 INFORMATION DESK
- 12 FIRE ESCAPE



MALL: GROUND FLOOR PLAN

- 1 MINI ANCHOR
- 2 SHOP
- 3 ANCHOR
- 4 STORE
- 5 WC
- 6 LIFT AND STAIRCASE LOBBY
- 7 SERVICE CORE
- 8 FIRE ESCAPE
- 9 CONNECTING BRIDGE +3000



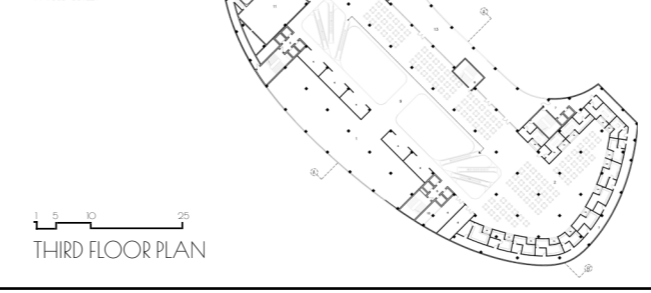
FIRST FLOOR PLAN

- 1 MINI ANCHOR
- 2 RESTAURANT
- 3 ANCHOR
- 4 SHOP
- 5 WC
- 6 LIFT AND STAIRCASE LOBBY
- 7 SERVICE CORE
- 8 FIRE ESCAPE
- 9 CONNECTING BRIDGE LVL +7200
- 10 STORE
- 11 MOVIE SCREEN
- 12 KIOSK
- 13 OPEN EATING AREA SPACE

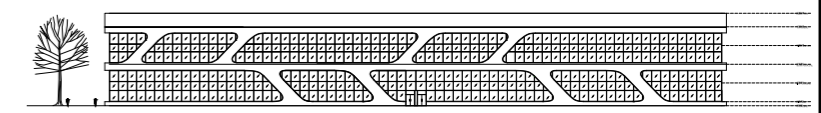


SECOND FLOOR PLAN

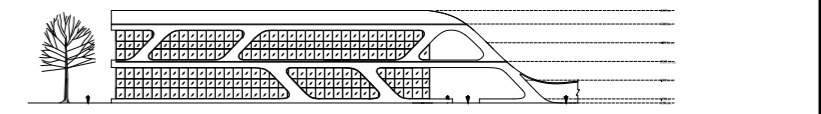
- 1 GAMING ZONE
- 2 FOOD-COURT
- 3 ANCHOR
- 4 SHOP
- 5 WC
- 6 LIFT AND STAIRCASE LOBBY
- 7 SERVICE CORE
- 8 FIRE ESCAPE
- 9 CONNECTING BRIDGE LVL +7200
- 10 STORE
- 11 MOVIE SCREEN
- 12 KIOSK
- 13 OPEN EATING AREA SPACE
- 14 FOOD OUTLET



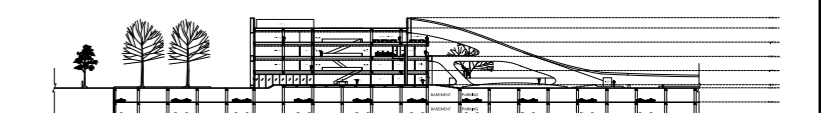
THIRD FLOOR PLAN



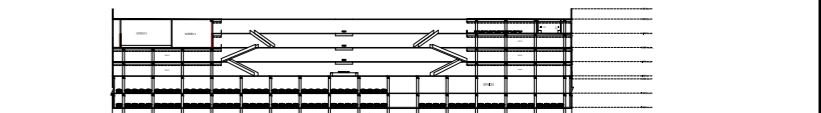
WEST ELEVATION



NORTH ELEVATION



SECTION - AA'



SECTION - BB'

METAMORPHOSIS GROUP HOUSING

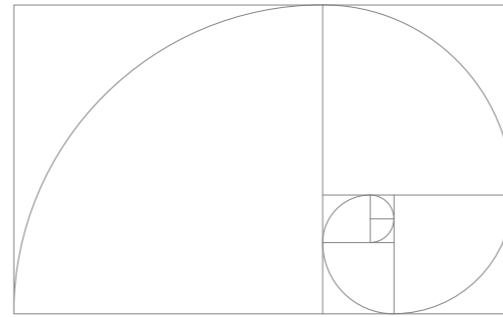
Academic Individual 12015

Design Guide: Prof. Surendra Kumar Agrawal
E: skai948@gmail.com | M: 9868126892

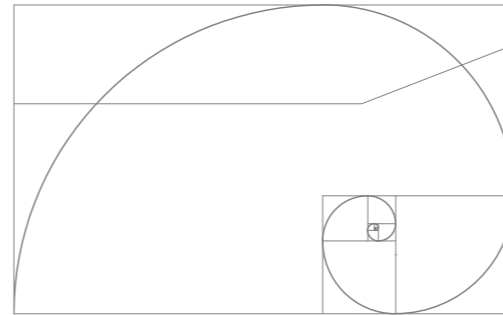
Narela is a sub-city located in north-west Delhi. It is situated just off the grand trunk road and its location made it an important market town. It was developed as the third mega-city project of DDA after Dwarka and Rohini. My third year's spring project was to design a high-end residential group housing project accommodating 500 dwelling units. The design intends to use the concept of a golden spiral for the formation of spaces on the site. The project has been designed according to the virtual divisions formed in the golden spiral with the change of each level, space morphs into another space. For instance, the landscape morphs into podium parking and the podium parking morphs into a tower as the level change.



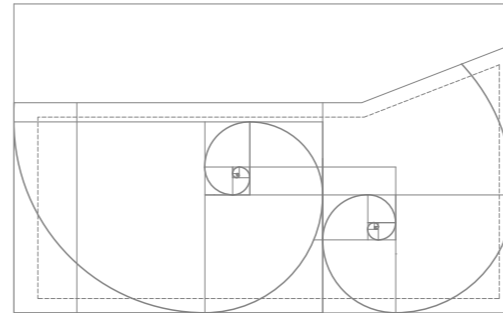
AERIAL VIEW OF METAMORPHOSIS GROUP HOUSING



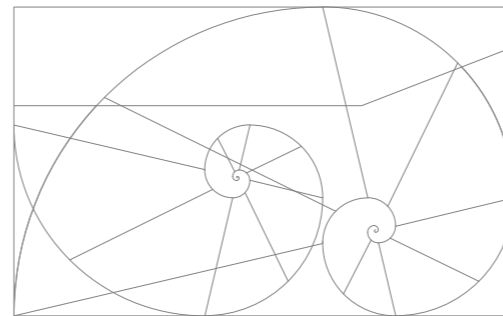
GOLDEN SPIRAL



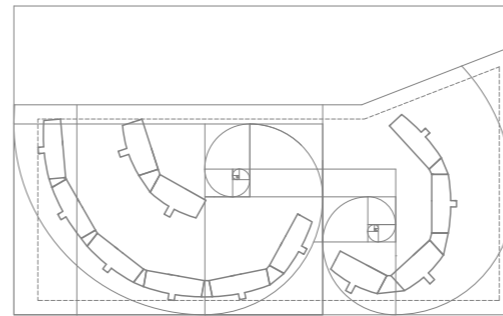
ESTABLISHING GOLDEN SPIRAL ON SITE



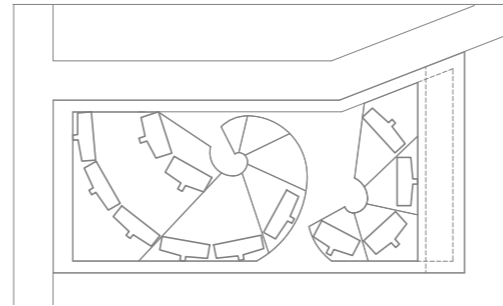
INTRODUCING SECOND GOLDEN SPIRAL



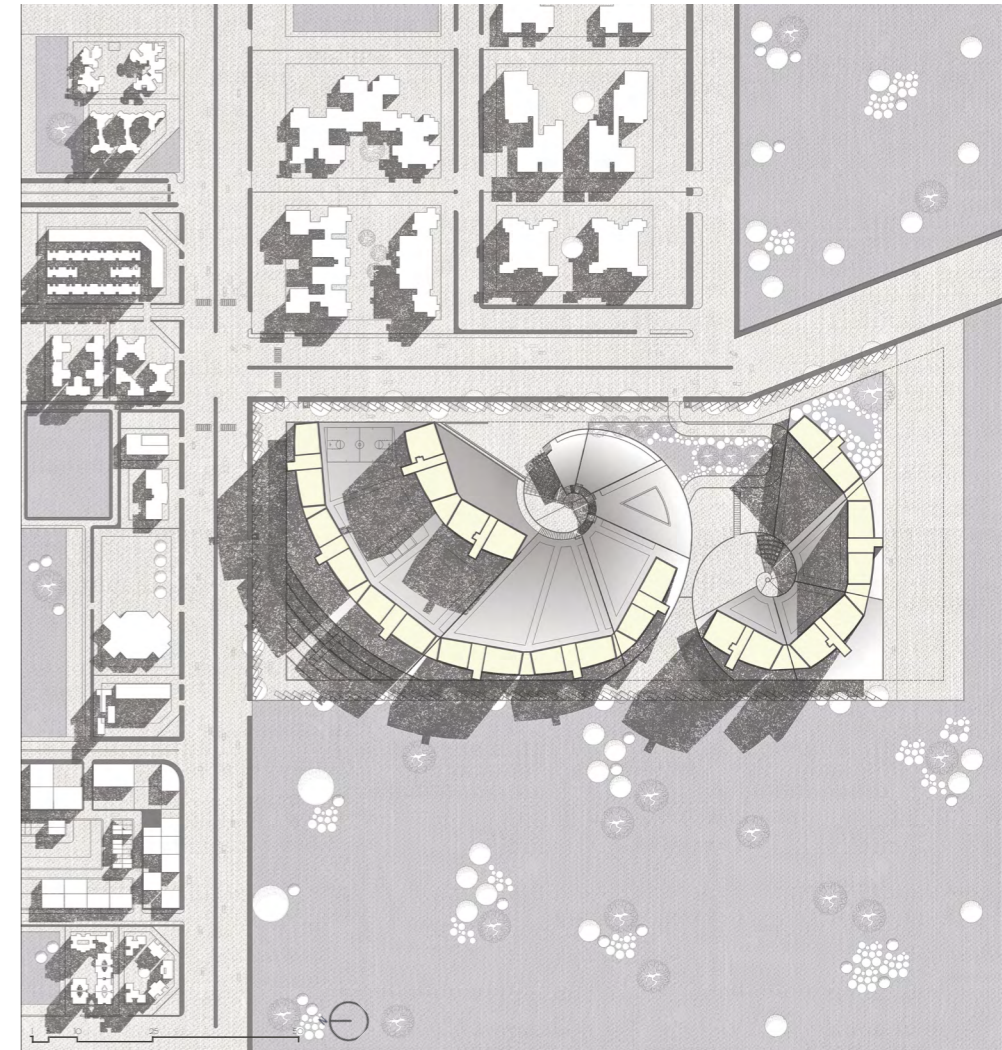
INTRODUCING DIVISIONS FOR PODIUM PARKING



RESIDENTIAL TOWER PLACEMENT



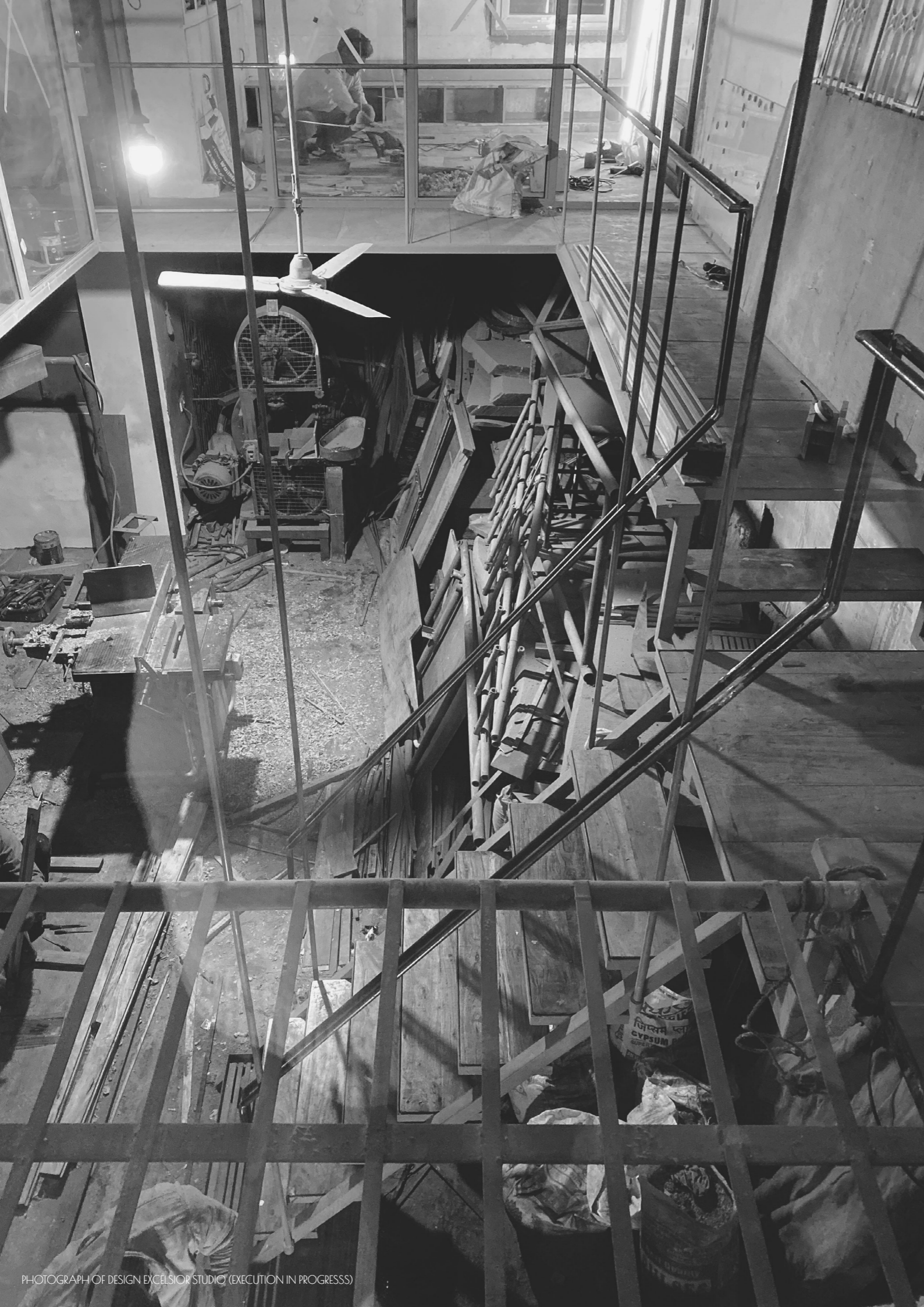
DESIGN SCHEME



SITE PLAN



SITE ELEVATION



PRO JECTS WORKS AREA

+ RU-URBAN BAORI, NUDES Office, 2018

+ SERENDIPITY PAVILION, NUDES Office, 2017

+ REGAL STORES, NUDES Office, 2017

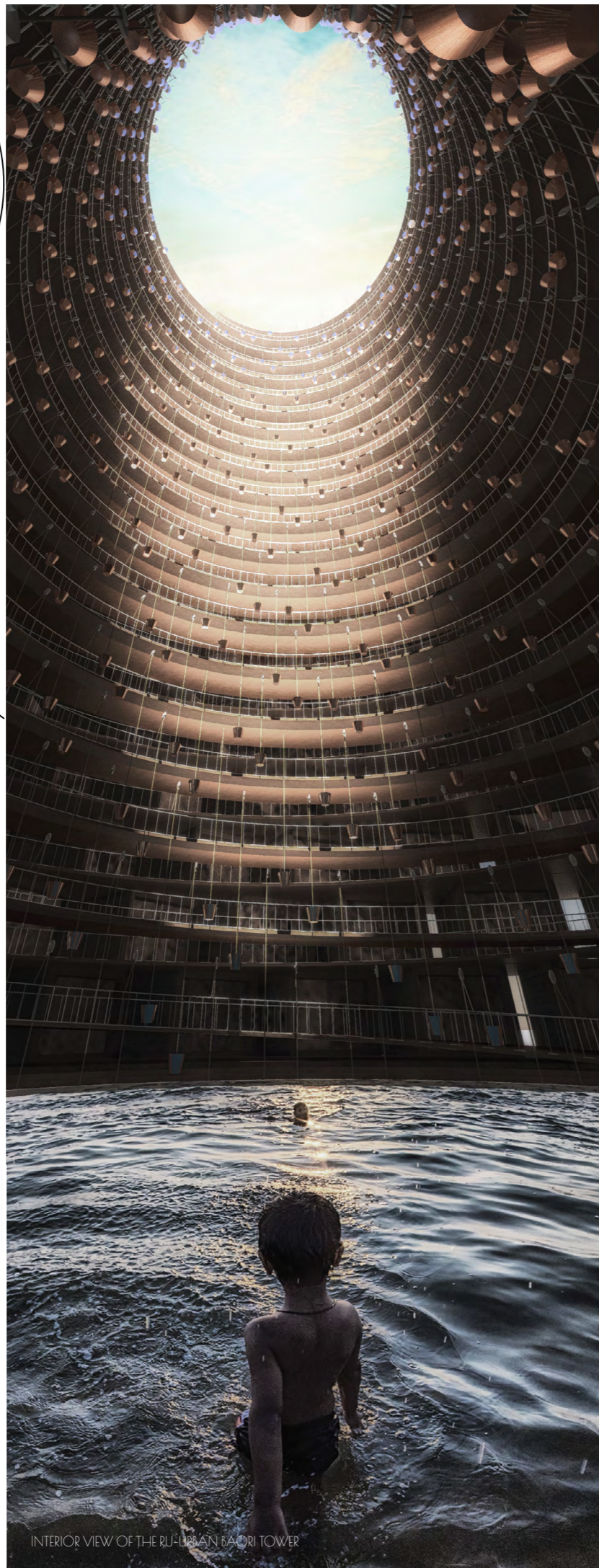
+ RESIDENCE WOODS, Design Excelsior, 2019

RU-URBAN BAORI

Professional I Team | 2018

The "baori" is a Ru-Urban housing concept that aims to build resilience towards drought-affected settlements. Baori's are one of the oldest forms of water management. They are excavated deep into the ground seeking water tables and in addition because of their depth, water evaporation is minimal. They also served as democratic institutions and spaces for communities to socially interact. The project explores this very principle of wastewater management and conservation. The hybrid program includes the flowing components; housing, markets, spaces for social interaction, hydrophobic farms, water conservation, livestock assets, skill creation, and clean technology development. Structurally the "baori" is realized through the creation of prefabricated RCC components with brick or local material infill to complete a single cell.

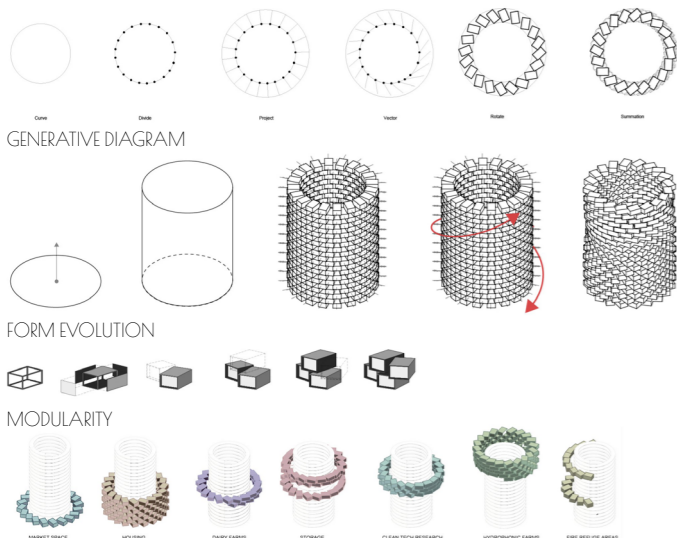
Responsibilities : Concept and design evolution, Orthographic drawings, axonometric drawings, documentation for publications

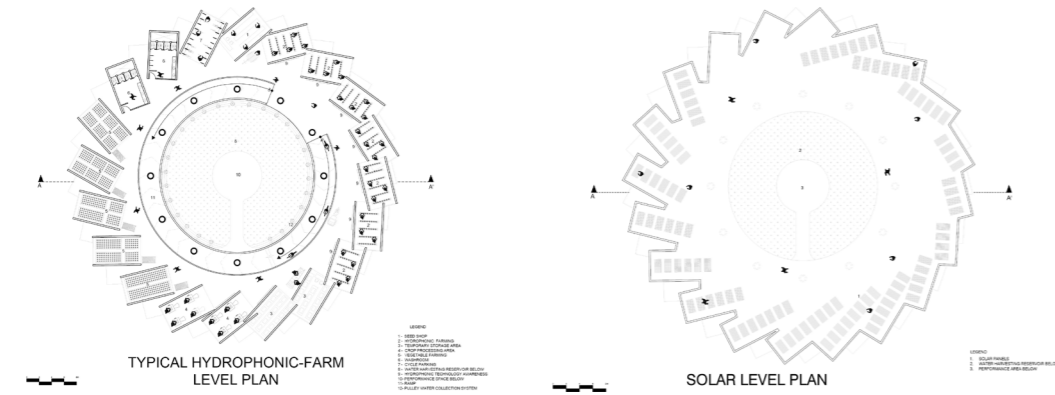
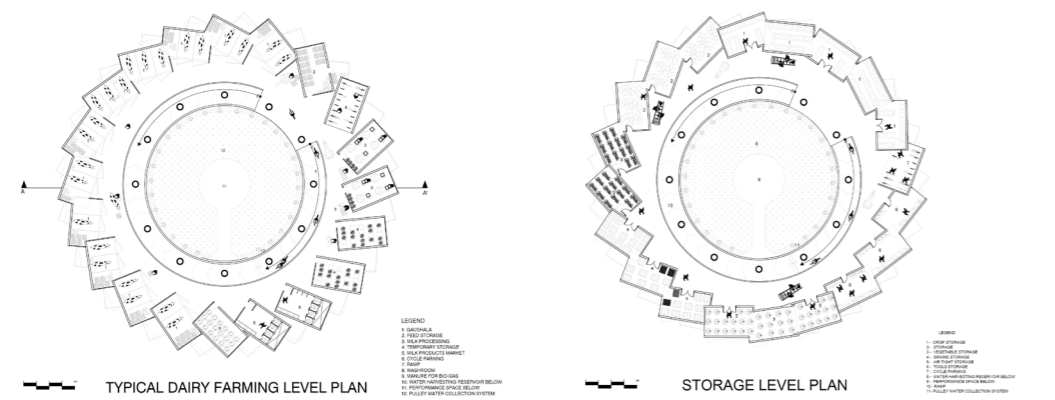
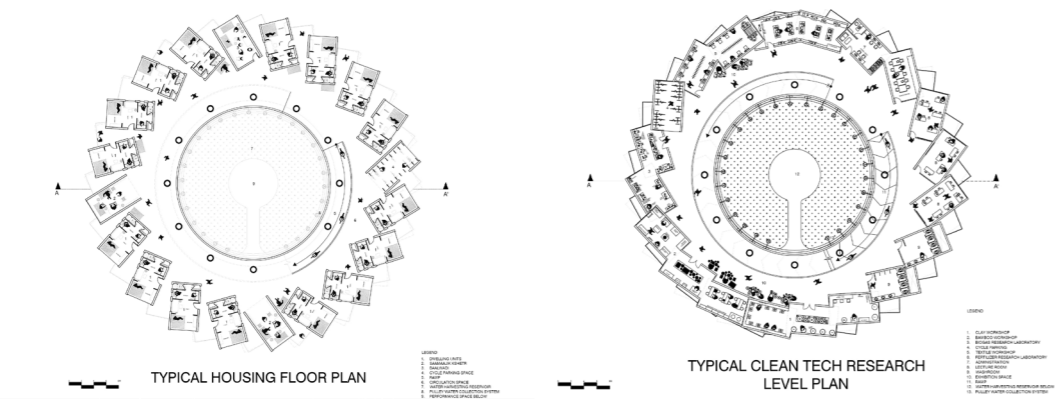
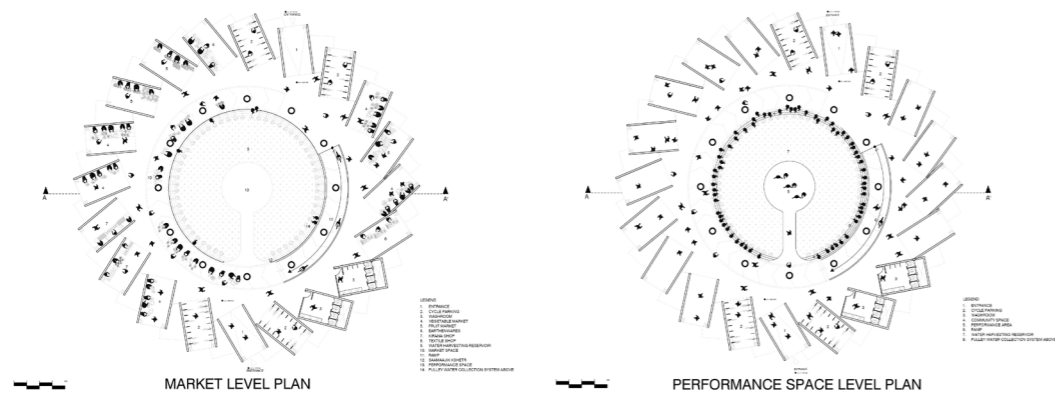


INTERIOR VIEW OF THE RU-URBAN BAORI TOWER

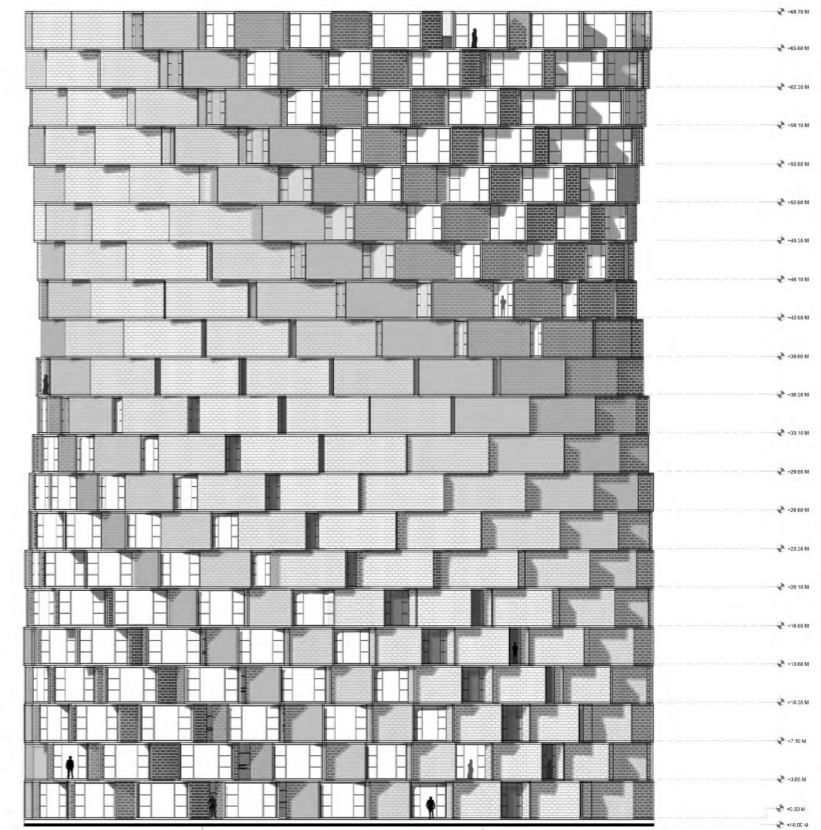


PERSPECTIVE VIEW OF THE RU-URBAN BAORI HOUSING TOWER

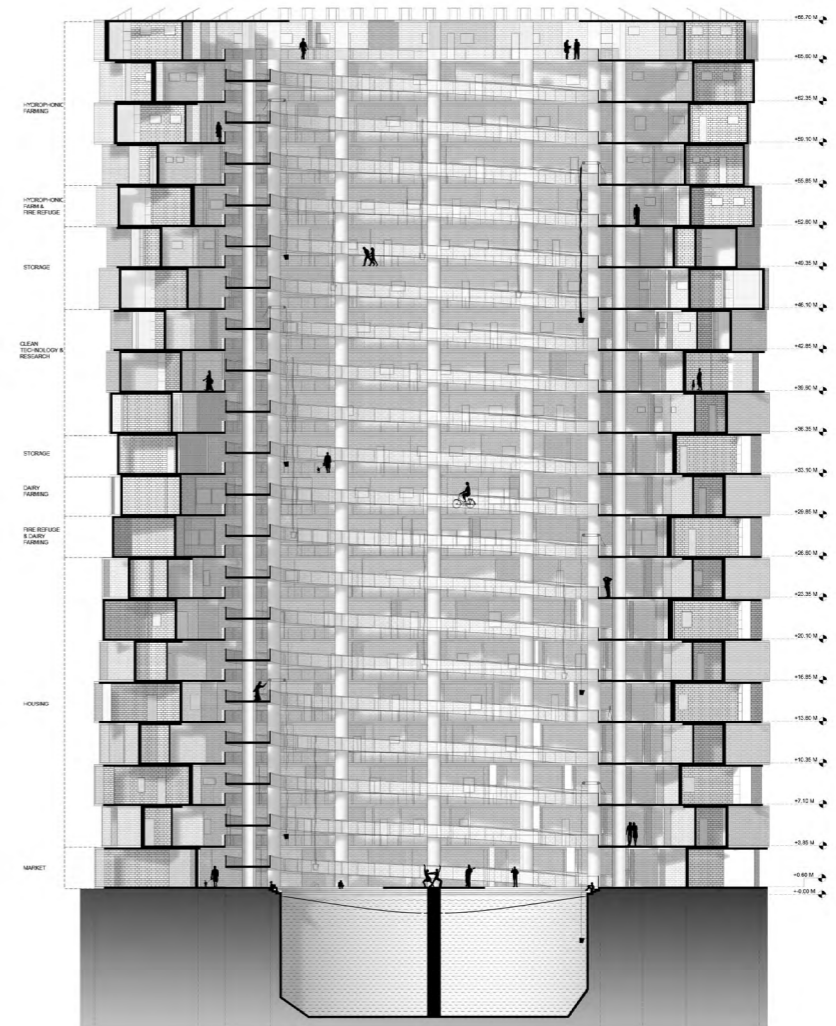




FLOOR PLANS



ELEVATION



SECTION

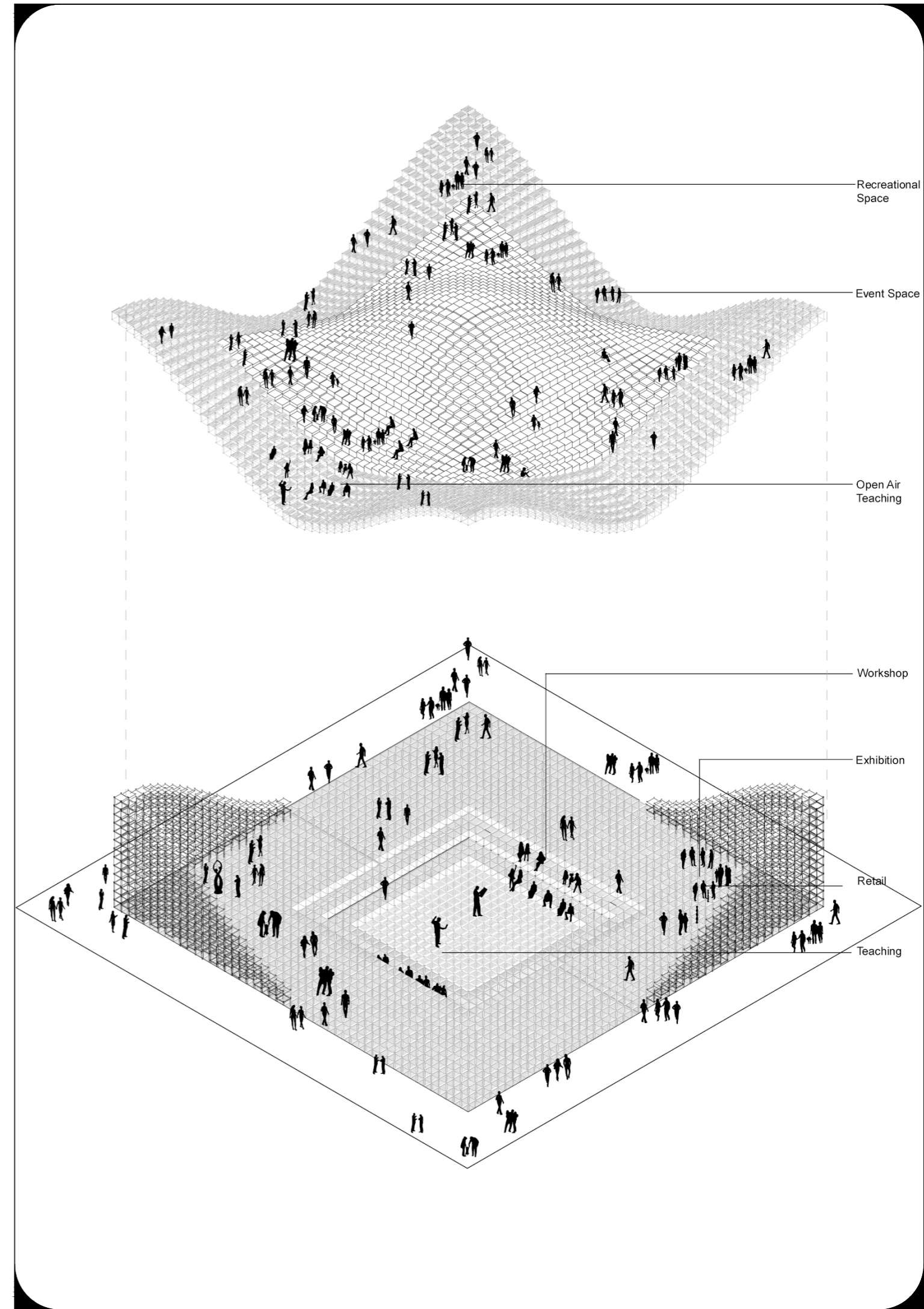
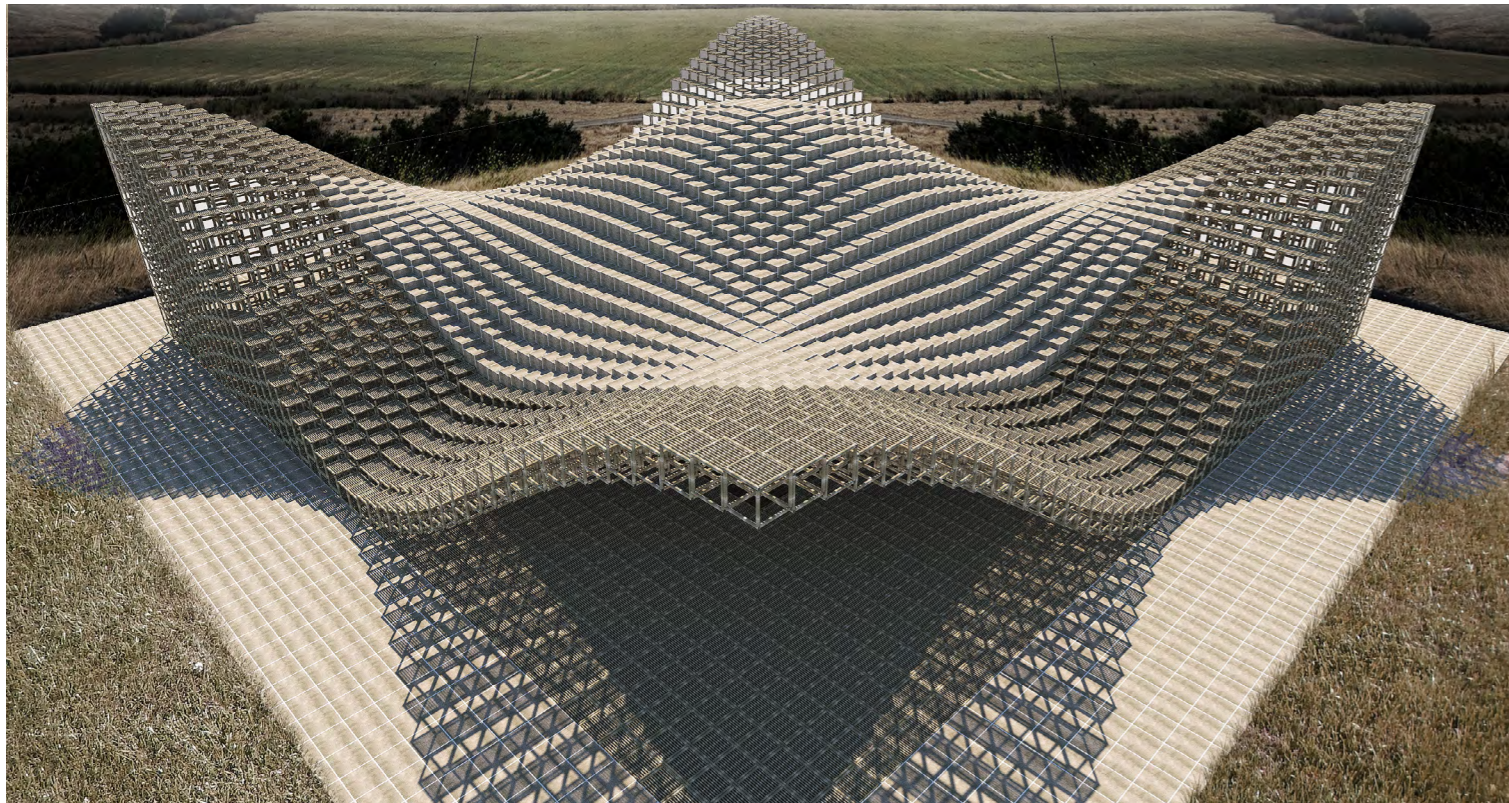
SERENDIPITY PAVILION

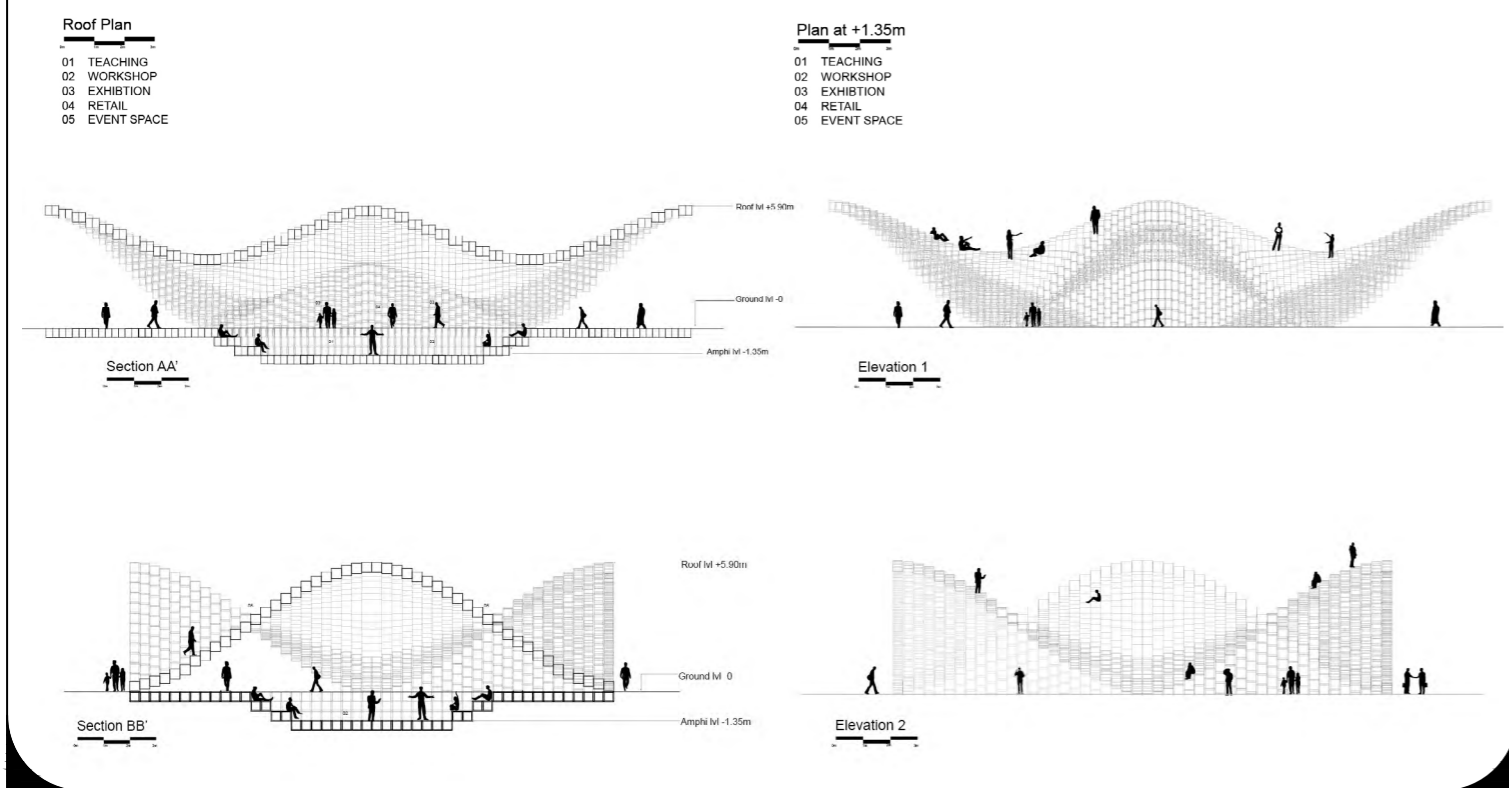
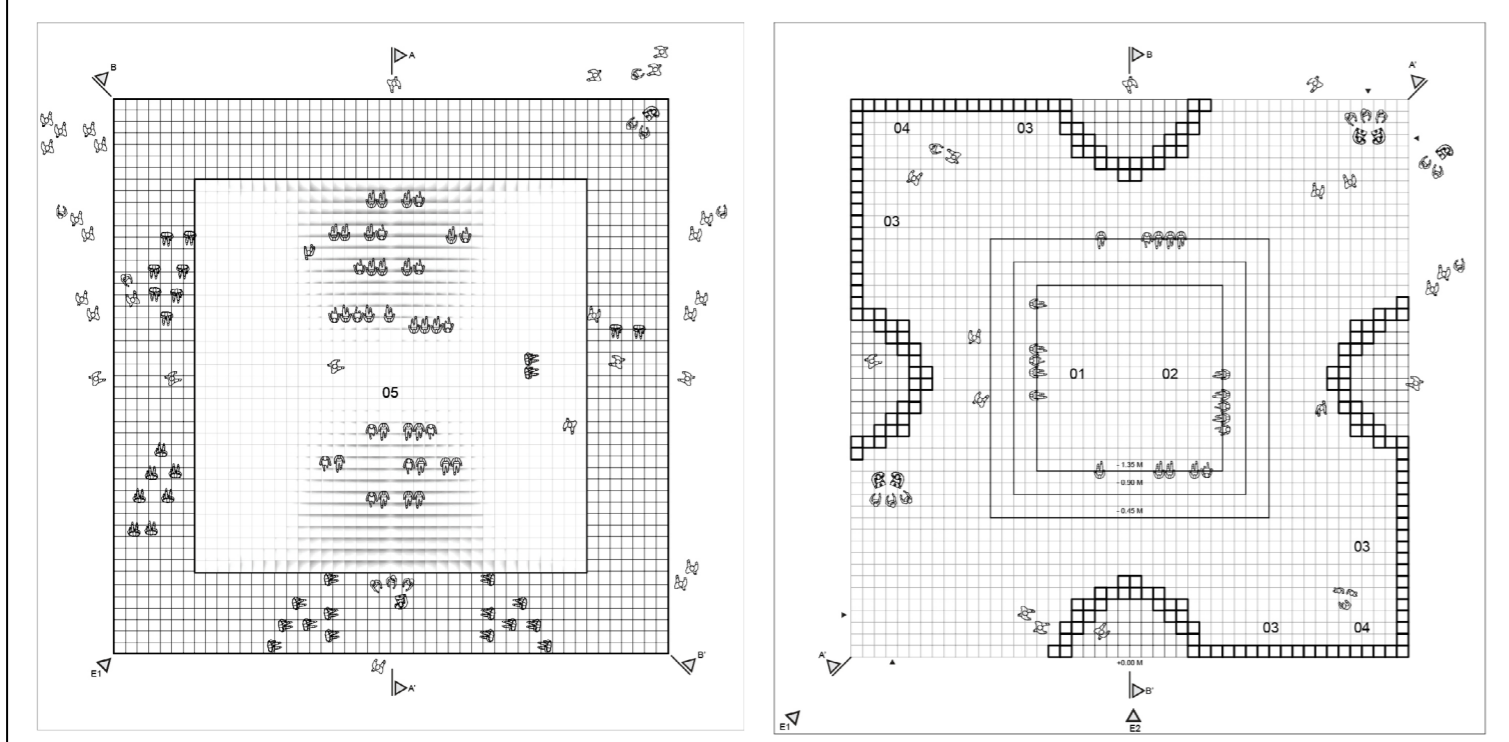
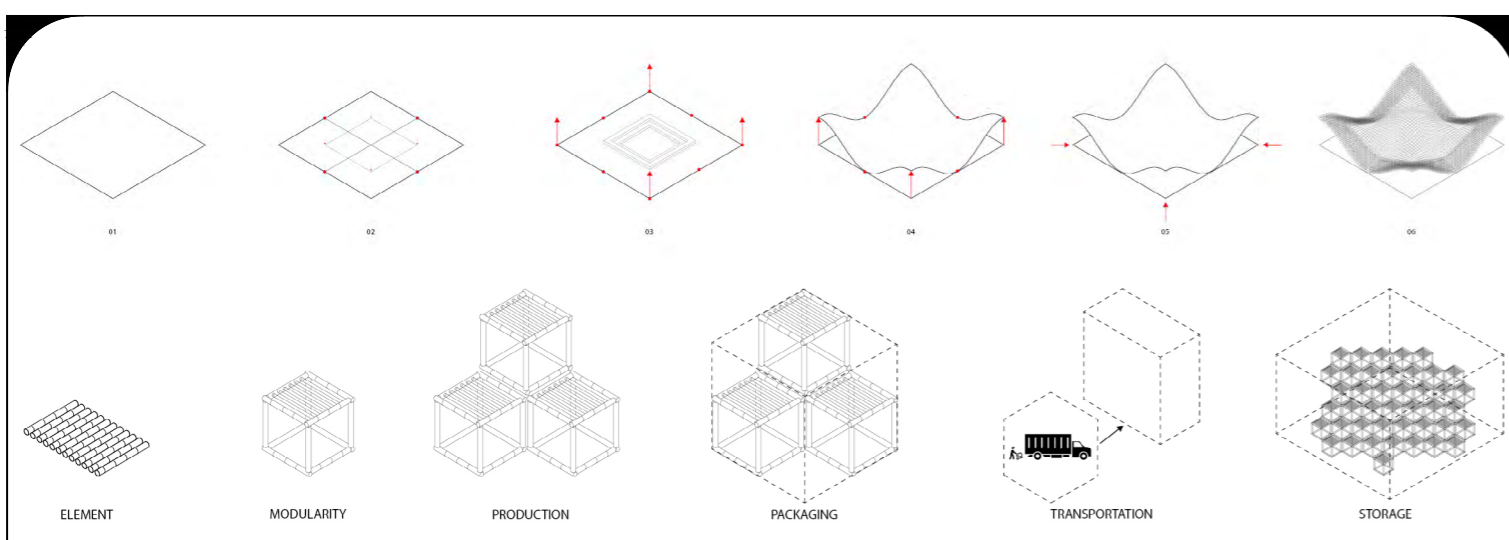
Professional I Team 12017

Responsibilities : Concept and design evolution, Orthographic drawings, axonometric drawings, documentation for publications

The proposal for the new Barefoot School of Arts & Craft Pavilion is a celebration of Goa as a cultural capital and a reflection of the state's unique picturesque topography and location on the west coast flanking the Arabian Sea. The proposal humbly explores design at the intersection of art and architecture honoring a multi-disciplinary approach and thereby reinterpreting the program and iconography within a contemporary context. The outcome is a sculptural intervention, which serves as a flexible workshop space, performance space, a cultural hub and a new icon for the state. The Pavilion consists of indoor, outdoor and transitional public spaces, embedded into the landscape. The genesis of the pavilion design is based on "z axis" vectors operating on the corner and mid-point vertices of a square grid acting in equilibrium to create a pavilion design that celebrates both indoor and outdoor experiences for learning, information dissemination and exhibition / event spaces. The deployable pavilion is a hybrid construct encouraging "out of the box" learning environments. The common denominator of the pavilion is a cube which also references traditional architectural forms of the region by using sustainable material technologies and literally building the pavilion "brick by brick" or rather "box by box". This construction philosophy allows for a very simple understanding of a modular system that could be easily decoded and put into practice. Cubes are proliferated across the dynamic surface typology to create an unconstrained volume within the pavilion allowing maximum flexibility for teaching, workshops, exhibition and event spaces.

The pavilion has an indoor space with a sunk amphitheatre for both teaching and workshop activities. The periphery including the skin could be used for exhibition, retail events and display of products. The stepped amphitheater is also reflected in a dynamic open to sky environment which could be used during fair weather. This indoor outdoor experience enables the creation of a 24x7 cultural space which fosters the ideology of the Serendipity Arts Festival through a multi-disciplinary cultural experience. The structure is light-footed concept with construction possible on site and offshore. The unitized system allows for ease of production, packaging, storage, transportation and installation. The boxes consists of cells that protect the users from rain and also celebrate the outdoors during fair weather. The construction system deploys locally sourced materials such as fired earthen tiles, recyclable metal/wood and bamboo. The pavilion skin consists of sustainable, reusable hollow boxes 2304 in number which acts also as an insulation device thereby withstanding harsh environmental conditions. This enables minimal reliance on mechanical modes of cooling and ventilation. The entire pavilion due to its "unitized" modular system is dismantle-able and capable of mobility to a new site, leaving no permanent impact on the previous site.



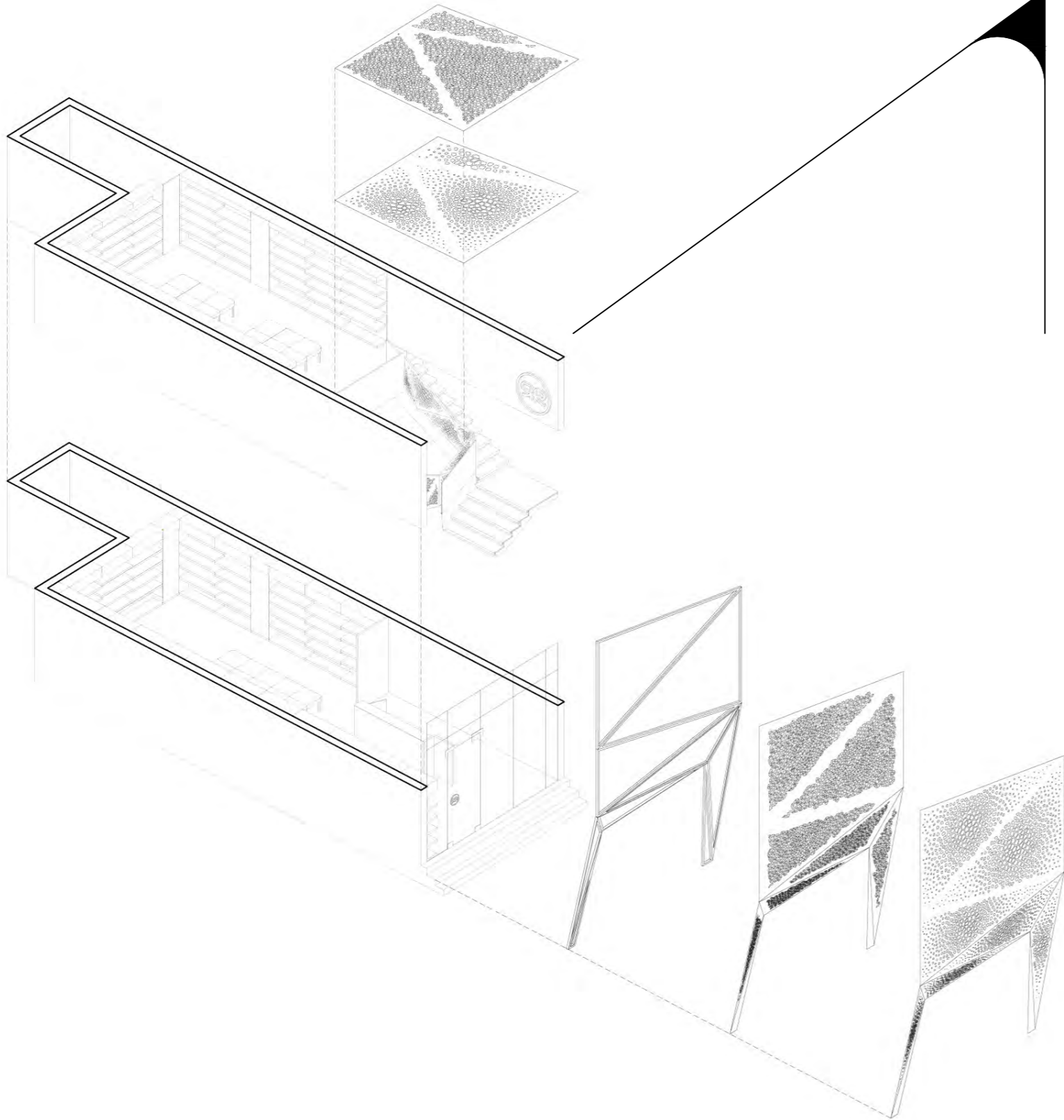


REGAL STORES

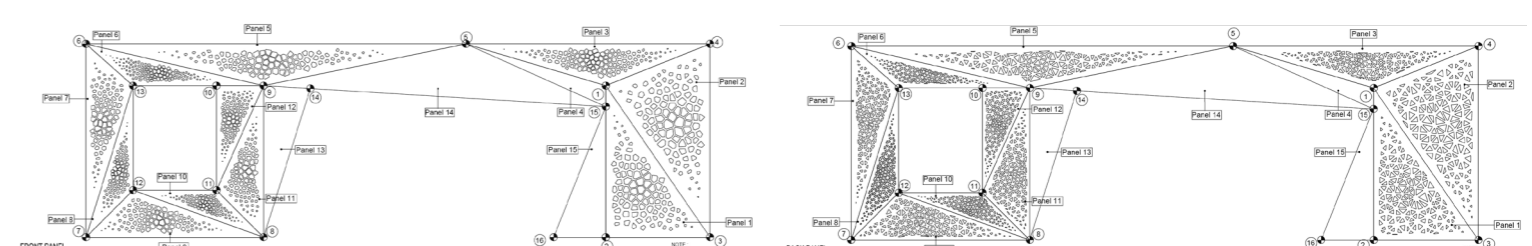
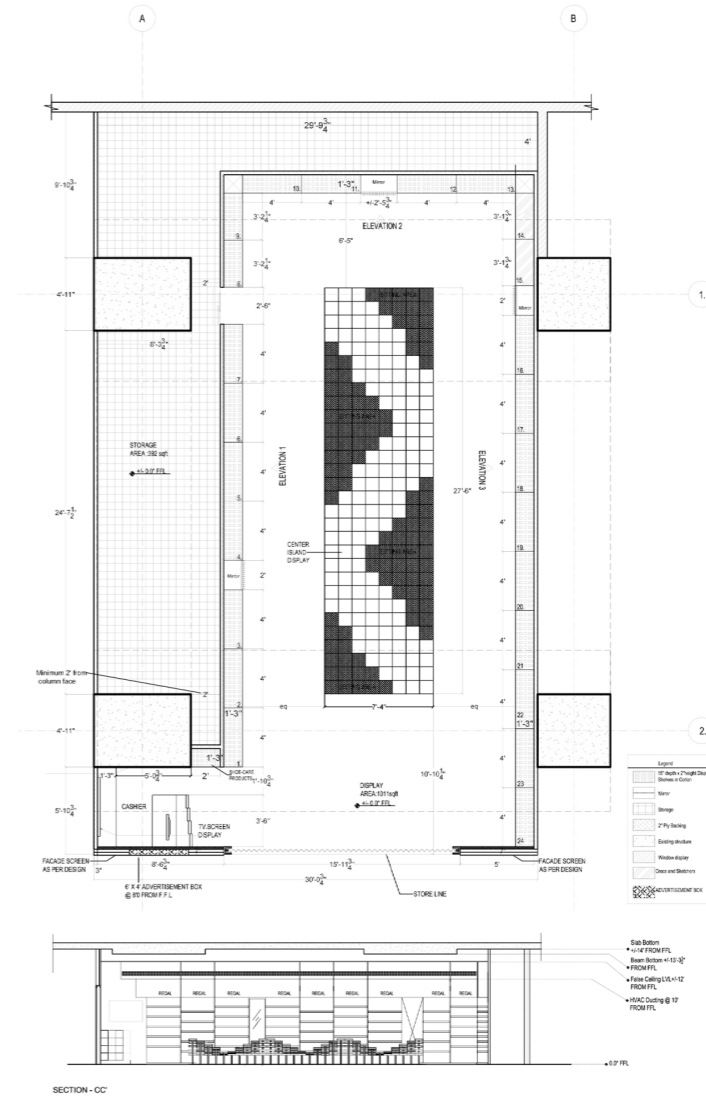
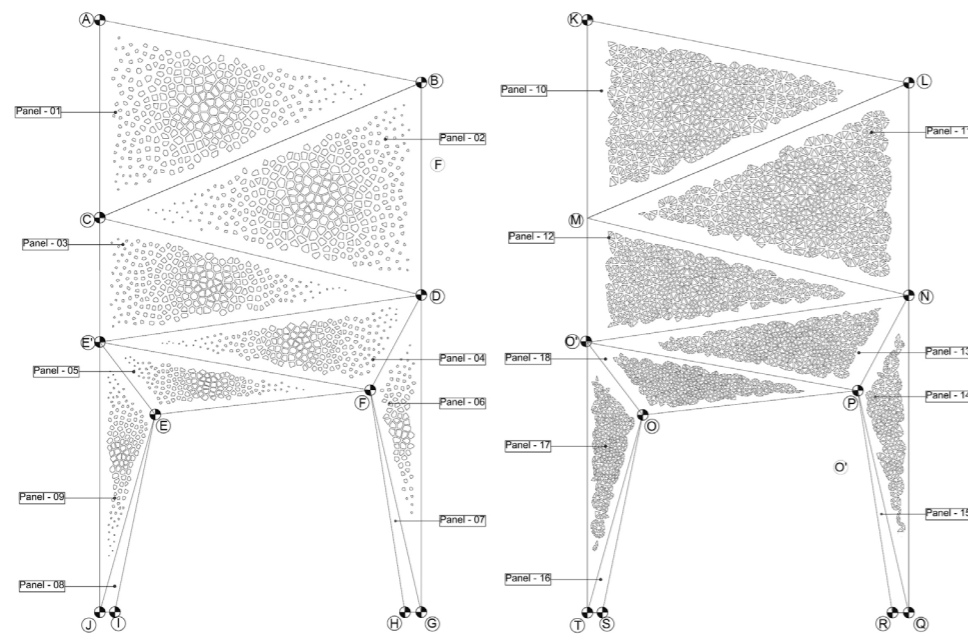
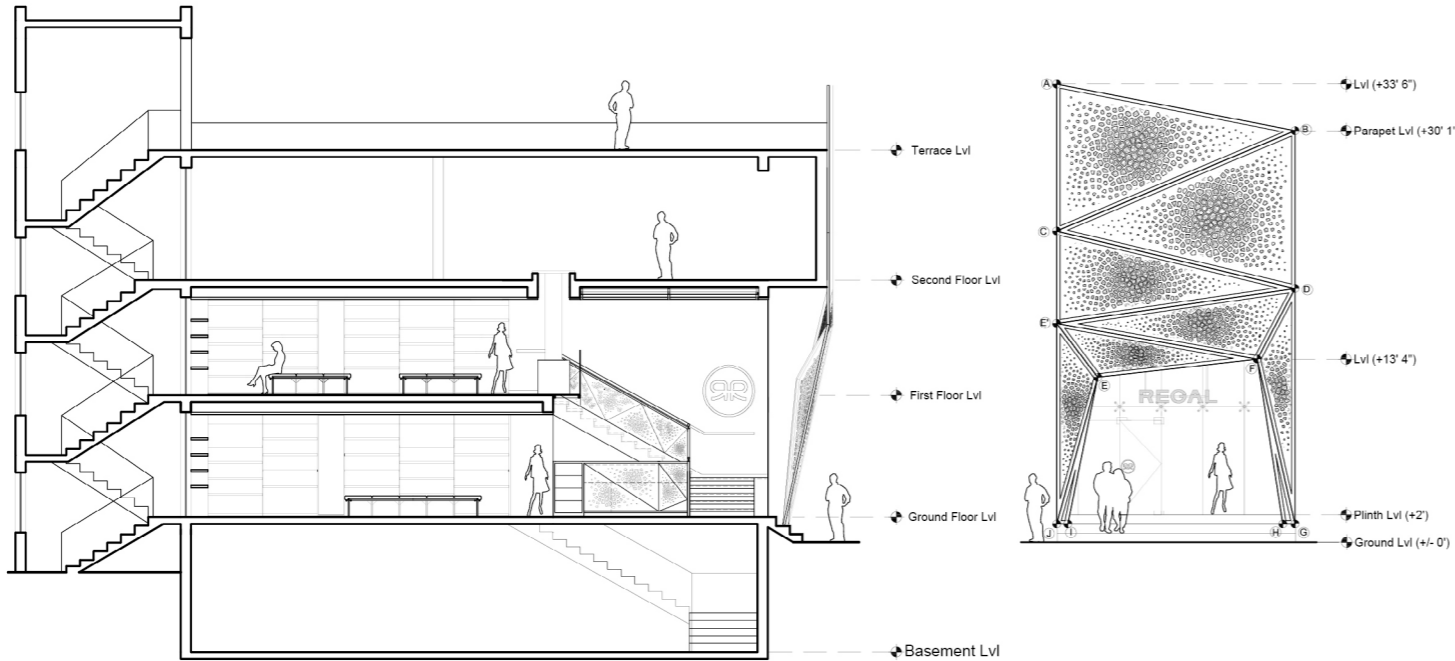
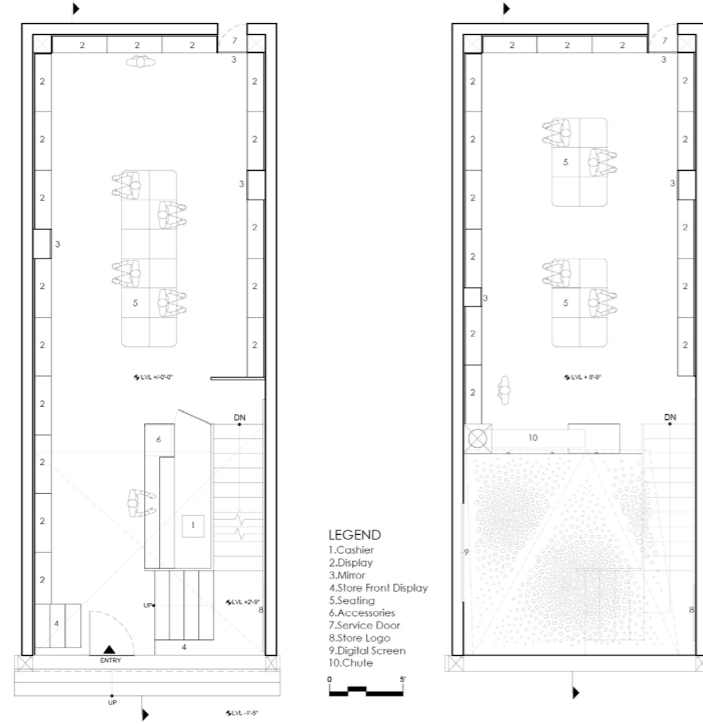
Professional I Commercial Building I 2017

Responsibilities : Orthographic drawings, axonometric drawings, documentation for publications

This project was an experimentation of the parametric skin on a larger scale. The store is 3 stories tall building and the facade has been designed as a skin using 2D Voronoi. We took the design forward by using 2D Voronoi of the storefront. The storefront consists of two aluminum panels stacked together enhancing the depth. The front panels consist of 2D Voronoi cells and the back panel consists of triangular cells. This is done to add layers to the skins of the storefront.



PHOTOGRAPH OF THE REGAL STORE IN PUNE



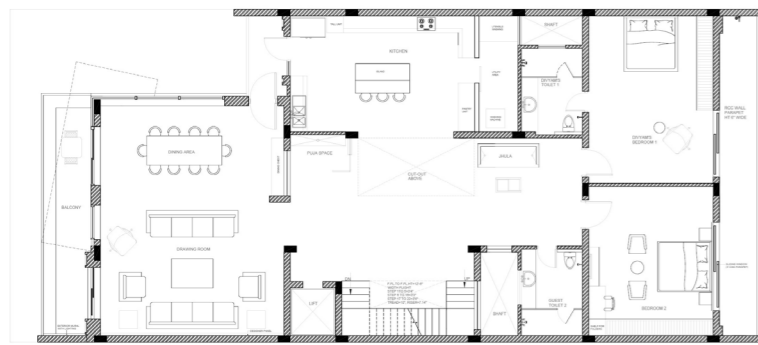
Residence Woods

Professional I Residential Building I 2017

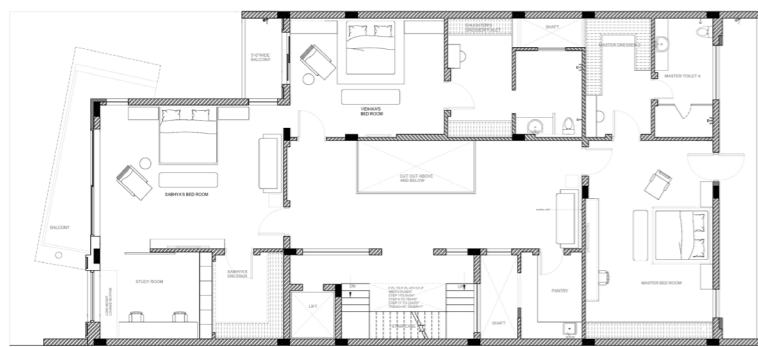
Responsibilities : Orthographic drawings, axonometric drawings, construction drawings, renderings

Residence Wood is Design Excelsior's very first architectural project. The client's brief required us to achieve maximum F.A.R. through planning and aesthetically a minimal yet bold elevation was desired. For designing Residence woods we used three to four design elements like Thermo treated wooden cladding, Anodized Steel bars accompanied with Matte Grey paint. The project has strong linear character, that is minimal yet elegant.

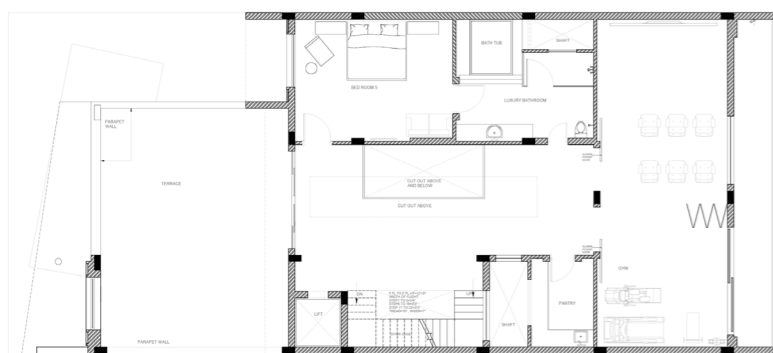




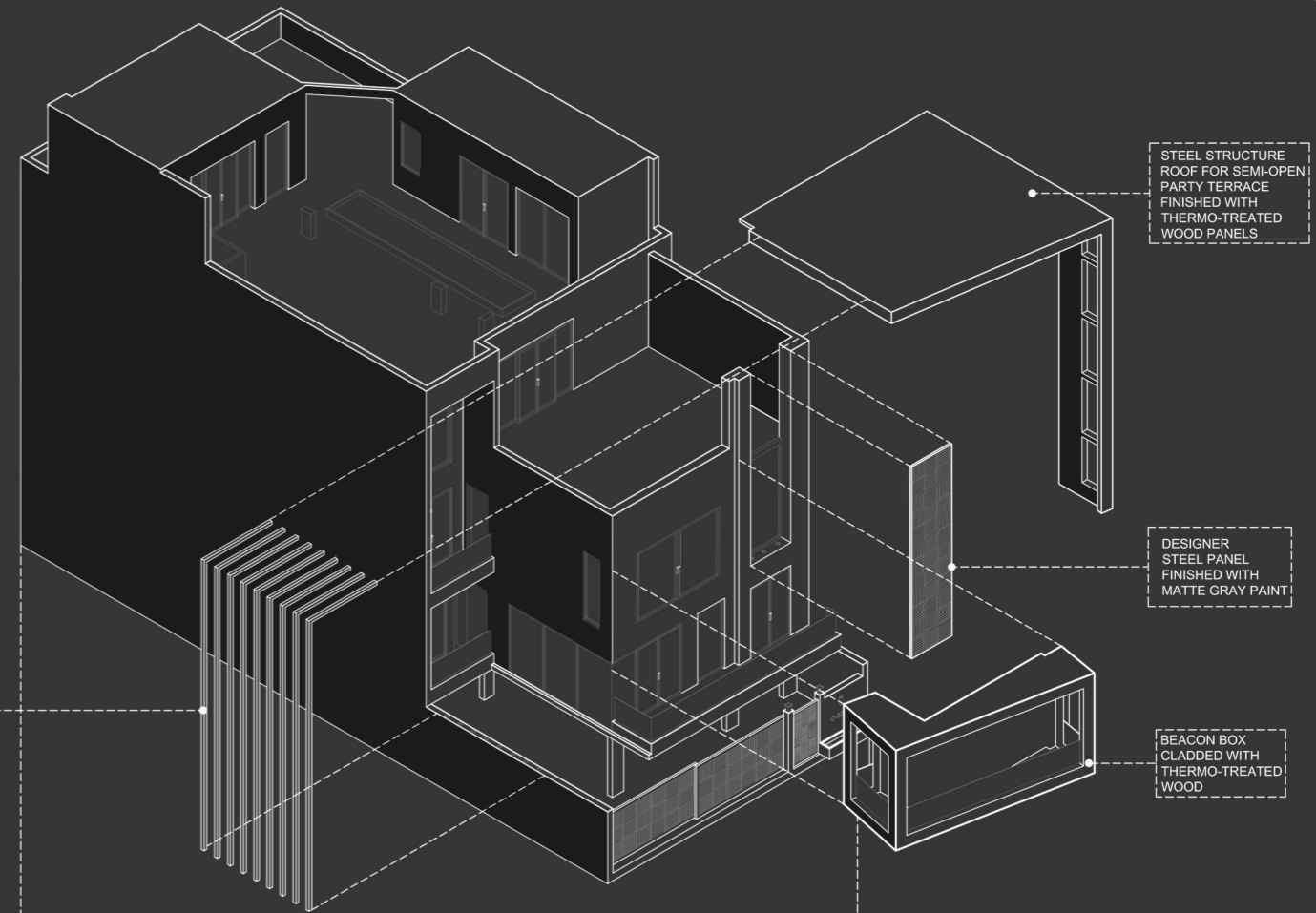
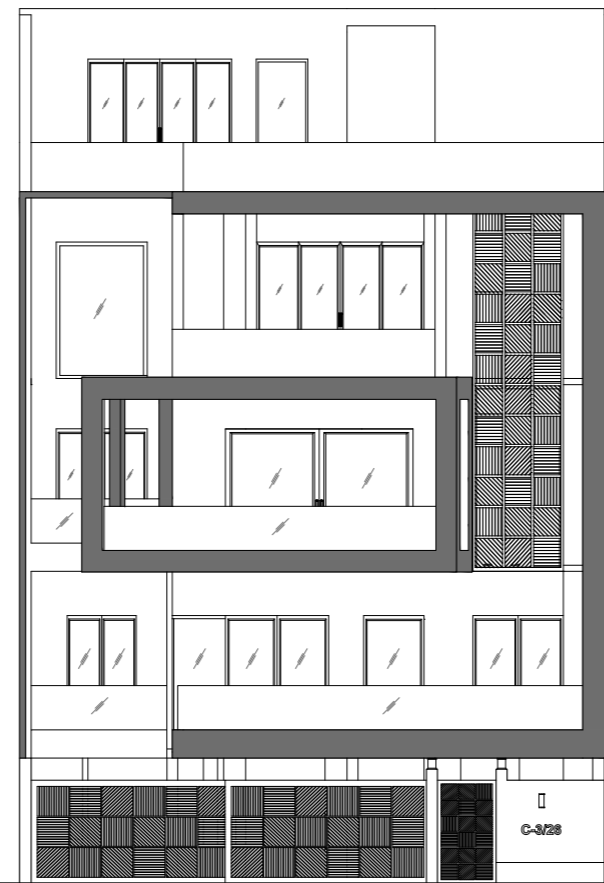
UPPER GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN



ISOMETRIC DIAGRAM OF RESIDENCE

MISCELLANEOUS

BIOLOGICAL MORPHOLOGIES - ARCHITECTURAL ASSOCIATION VISITING SCHOOL (AAVS), MUMBAI



SCALE MODEL OF POROSITY URBAN BENCH



The Biological Morphologies workshop organized by Architectural Association Visiting School focused on two themes: biomimetic methods and fabrication through parametric design. Bio-mimetics examines how the systems, processes, and elements of nature can be abstracted to provide innovative design solutions. Advances in technologies have facilitated responsive experimental building techniques that can be positioned in specific local contexts. Dynamic spatial structures can be researched using sophisticated computational tools and delivered with low tech assembly methods. The program explored how a bio-inspired logic can be translated into design and the design was further formed and assembled by using materials with consistent feedback to computational platforms.

The workshop covered the following areas of biomimetics:

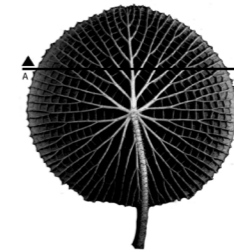
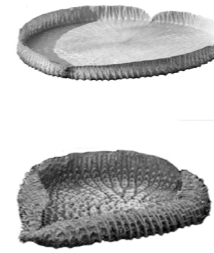
1. Theory of bio-mimetics and organic evolution abstracted into innovative design / material solutions.
2. Material explorations using new low tech methodologies to produce dynamic forms.
3. Tectonics and fabrication methods related to the specific material.
4. Introduction to computational tools used to deliver dynamic digital forms into physical geometry

Our group of six students was assigned giant water lily as the biological organism. We were asked to study the organism in detail and then use its characteristics (material, structural system, etc.) for designing a water deck or pavilion.

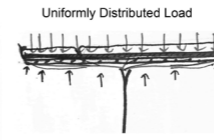
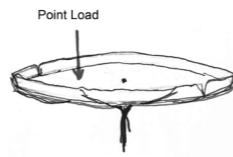
Giant Amazon Water Lily

The Giant Amazon water lily (*Victoria amazonica*) is found mainly on the mainstream flood plains of the Amazon River. It has 3 main components: Leaf, flower, stem. The leaves grow up to 8m in diameter. They are anchored by long stalk arising from an underground stem, which is buried in the mud of the river bottom.

Towards the end of the leaf, where the cross section of the ribs is minimum, it turns up and develops notches to drain out water from the upper surface at the same time the sharp spines prevent birds to make nests and insects to enter the upper surface.

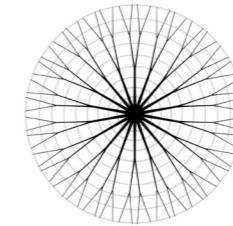


The network of ribs on the underside of the leaf form the main support system of the leaf. These ribs are clad with sharp spines that act as a defense system against herbivorous fishes. The ribs branch out radially in a hierarchical pattern, as primary, secondary and tertiary structural members (as explained by the Murray's law). The strength of the structure is further enhanced by the concentric pattern.



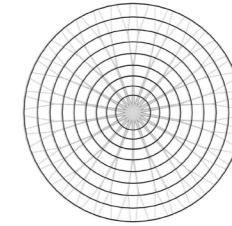
Load Distribution

The upper surface of the leaf has a quilted appearance and is waxy in texture, repelling water. It is so thin that if a Point Load is applied, the leaf would be punctured. But if it experiences a Uniformly Distributed Load, then it can bear weight up to 35-45 kilograms. For instance if we place a wooden plank on the surface of the leaf and place a load on top of it, the leaf won't take any damage as its a Uniformly Distributed Load.



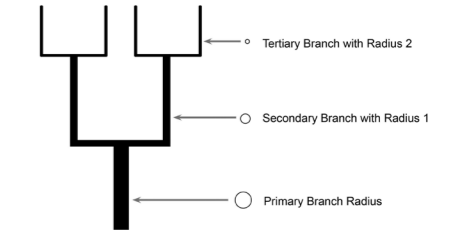
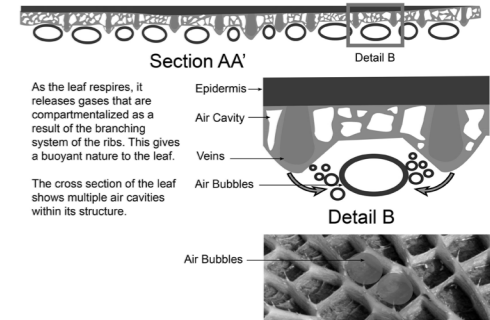
Radial Branching of Veins

The structural branching system of the veins forms a strong structural network by distributing weight of load outwards when a downward force is applied.



Concentric Pattern

The concentric pattern reinforces the branching system by distributing weight of load sideways when a downward force is applied.



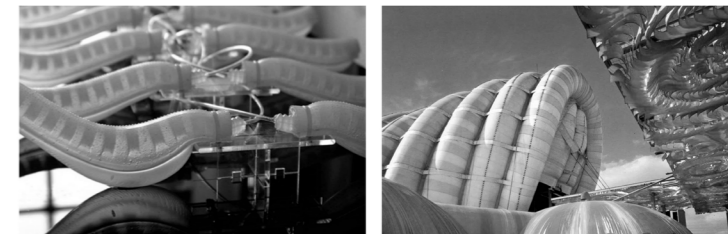
Murray's Law

"The cube of the diameter of the parent vessel equals the sum of the cubes of the diameters of the daughter vessels."

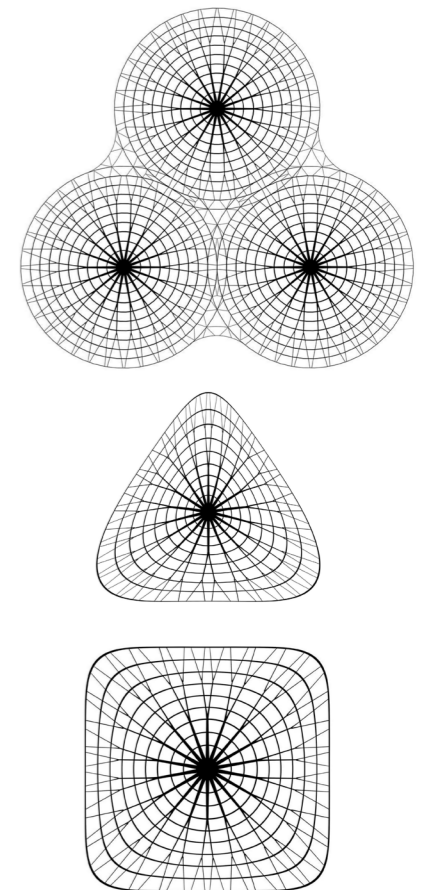
Experimentation	Material	Test	Result
1. Brick (Tied) Plywood	Type of Material: Plywood, Latex Balloon Length (mm): 150 x 300 x 30, 30 Dia. No.: 1, 25 Volume (cu. mm): 1350	Test 1 - Half a brick was attached to the plywood nad balloon	Test 1 - Floats but flips over
2. Square Wooden Sticks, Circular Wooden Sticks, Plastic Sheet, Latex Balloons	Type of Material: Circular Wooden Sticks (2mm Dia.), Square Wooden Sticks (5mm X 5mm) Length (mm): 155, 95, 65, 210 No.: 8, 8, 8, 8 Volume (cu. mm): 3895, 2390, 1630, 42000	Test 1 - Half a brick Test 2 - Two half bricks Test 3 - Three half bricks Test 4 - Four half bricks Test 5 - Concrete Block	Test 1 - Floats Test 2 - Floats Test 3 - Floats Test 4 - Sinks a little, but not entirely Test 5 - Sinks a little, but not entirely
3. Square Wooden Sticks, Circular Wooden Sticks, Plastic Sheet, Latex Balloons	Type of Material: Circular Wooden Sticks (2mm Dia.), Square Wooden Sticks (5mm X 5mm) Length (mm): 85, 115 No.: 16, 8 Volume (cu. mm): 2135, 22400	Test 1 - Half a brick Test 2 - Two half bricks Test 3 - Three half bricks Test 4 - Four half bricks Test 5 - Concrete Block	Test 1 - Floats Test 2 - Floats Test 3 - Ribs broke at the connection Test 4 - Null Test 5 - Null
4. Square Wooden Sticks, Circular Wooden Sticks, Felt Fabric, Latex Balloons	Type of Material: Circular Wooden Sticks (2mm Dia.), Square Wooden Sticks (5mm X 5mm) Length (mm): 85, 115 No.: 16, 8 Volume (cu. mm): 2135, 22400	Test 1 - Half a brick Test 2 - Two half bricks Test 3 - Three half bricks Test 4 - Four half bricks Test 5 - Concrete Block	Test 1 - Floats Test 2 - Floats Test 3 - Floats Test 4 - Floats Test 5 - Floats

Architectural application

- The prototype proposes a structural grid system that suggests the span of area an elastomer can span across, and a surface that contains inflatable pockets that are occupied within the interlocking grid spaces
- The surface will be adapted with the integration of pneumatic sensory-behaviour computing system that functions as a load sensor, distributing and regulating air volume within the inflatable pneumatic pockets necessary for the maintenance of an even flooring surface for human activities.
- These elastomers when controlled digitally, can fluctuate between a range of parameters and constraints designed based on the environmental changes and load capacities.
- Future potentials include an inflatable floating platform or bridge, functioned solely by pneumatic responsive technologies in the absence of heavy structures.
- Additionally an inflatable foldable system can be developed that functions efficiently, conveniently and sustainably.
- While the proposal infuses positivity with its possibility, the experimentation with parametric modelling to predict the pneumatic elastomer and air pockets in creating such a complex system needs further exploration.



Digital experiments



AA Visiting School Mumbai 2015

Biological Morphologies / <http://mumbai.aaschool.ac.uk>

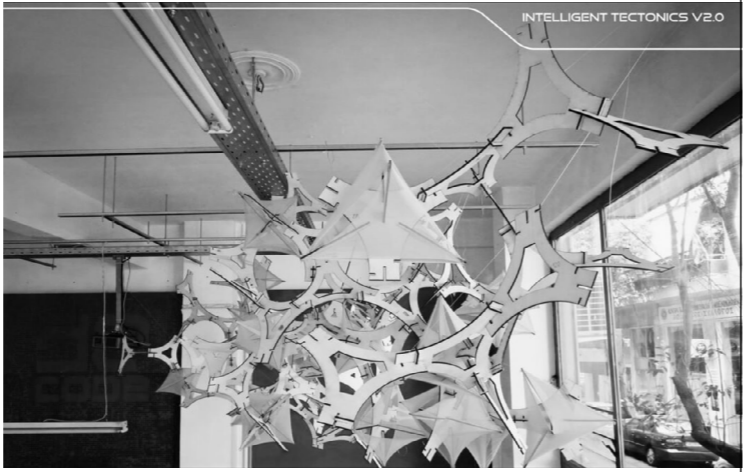
Directors: Tejas Sidnal / Marco Corazza / Nicolas Cabargas
Tutors: Marco Corazza, Nicolas Cabargas and Samidha Kowli
Students: Dipesh Kotwani | Jamie Lee | Nishant Pandav | Nandini Jain | Sovona Ganguly | Mehak Gupta



INTELLIGENT TECTONICS - DESIGN MORPHINE.
ATHENS. GREECE



CLOSE-UP OF THE PARAMETRIC CEILING INSTALLATION

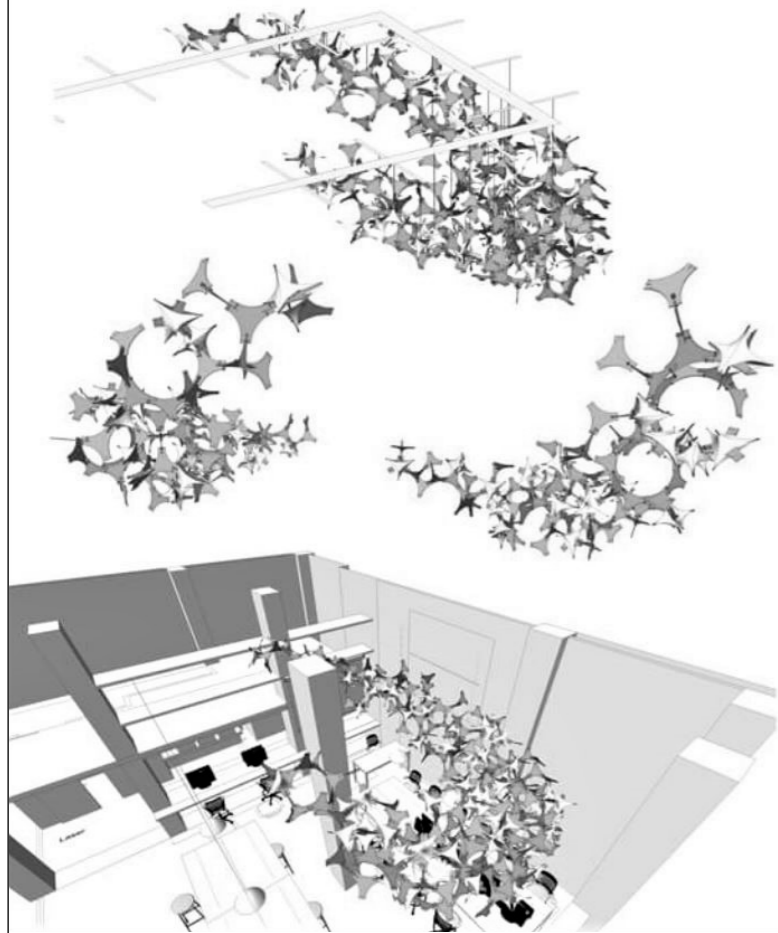


PHOTOGRAPH OF THE PARAMETRIC CEILING INSTALLATION

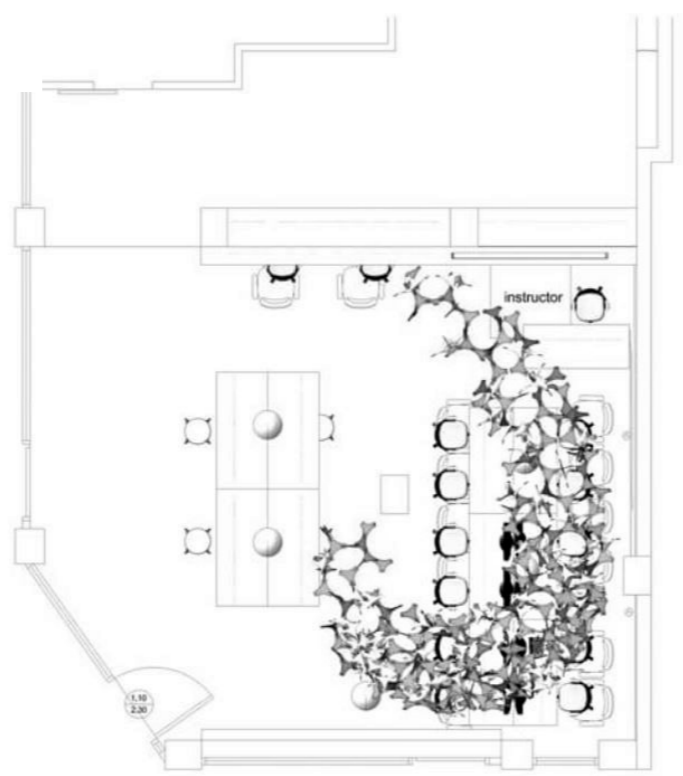
The main focus of the workshop was on the application of computational design in form-finding design strategies and fabrication methodologies for membrane typologies, stretched across spatial rod-string structures. Processes like physics simulations, panelization techniques and optimization tools to design advanced computational forms, as well as achieving their material representations through digital fabrication methodologies were used. As a participant of the workshop, we were required to develop minimal surface and tensegrity structures to generate digital study models that inform a proposal for a permanent ceiling installation at the Decode FabLab in Athens. The outcome was a single built-in, 1:1 scale, ceiling-mounted structure that was fabricated and assembled by all participants collectively.

Our proposal included:

1. Optimisation of :
 - tile aggregation parameters for smallest number of tiles
 - tile aggregation parameters for closest fit to enclosing volume
2. Refinement of :
 - component parameters for closer approximation of desert rose geometry
 - component parameters for more legible variations in gradation component
3. Incorporation of :
 - spiral mesh deformation/data management of particle-spring system



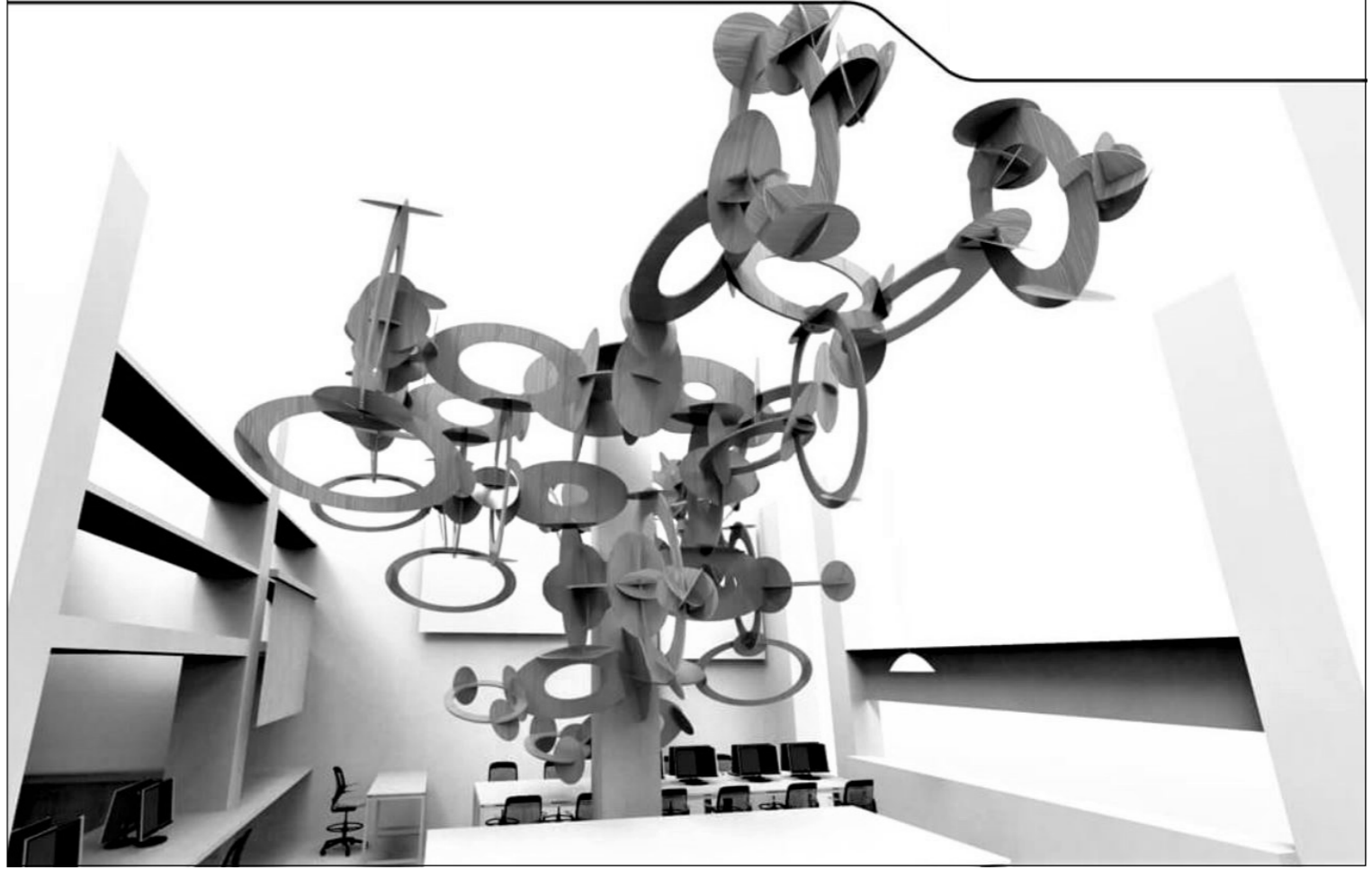
3D VIEW OF THE PARAMETRIC CEILING INSTALLATION



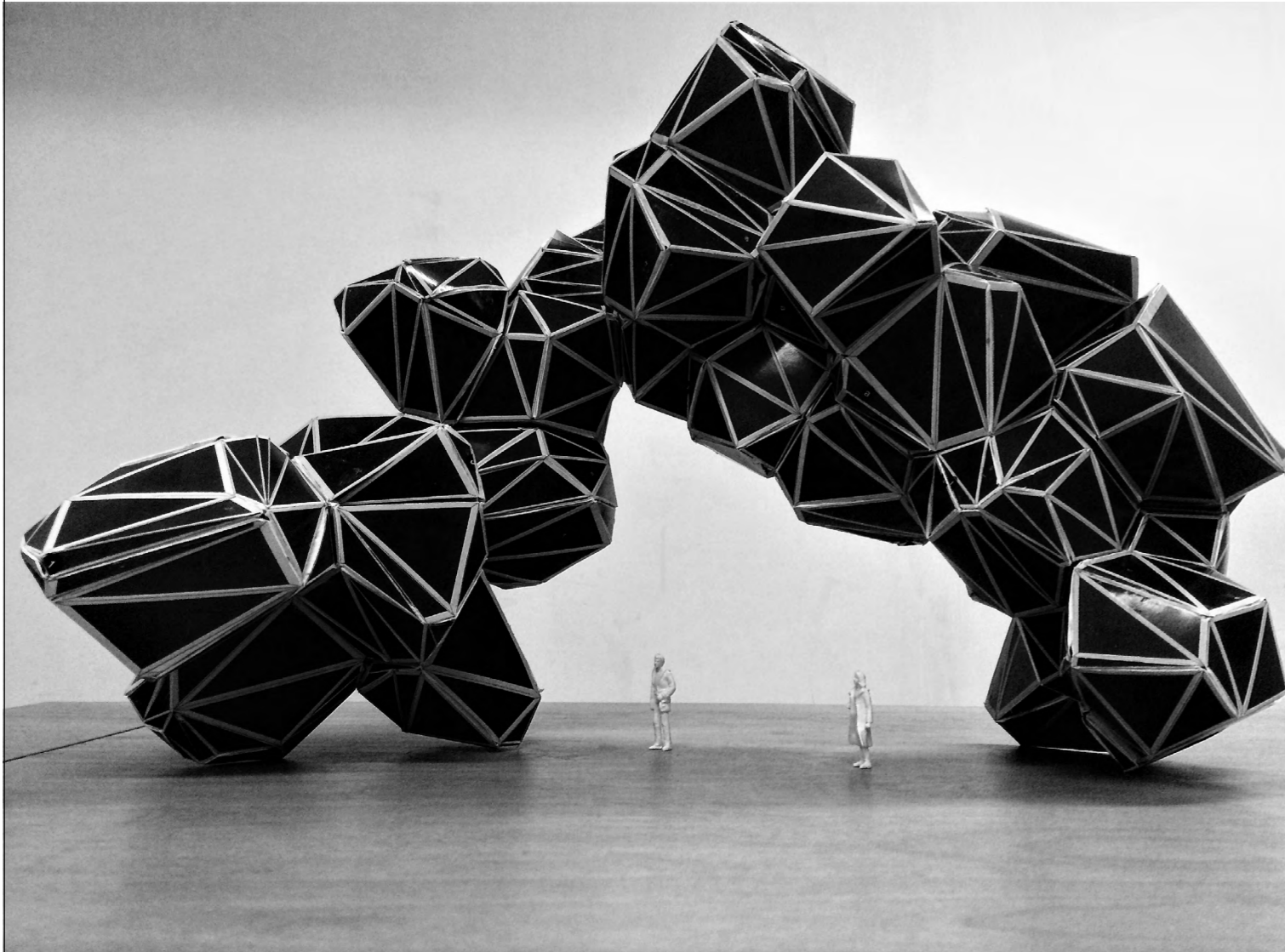
PLAN



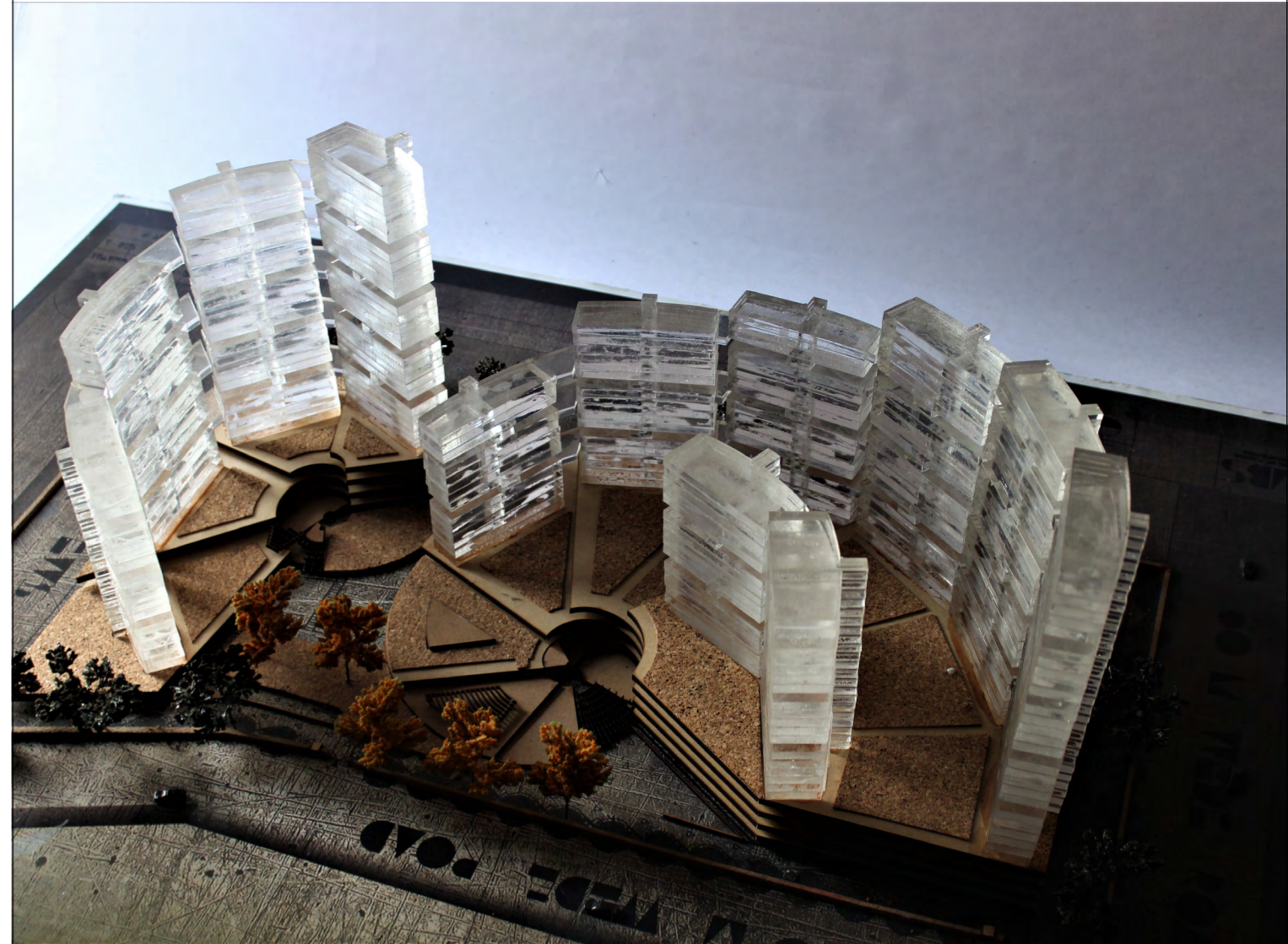
OUR PROPOSAL



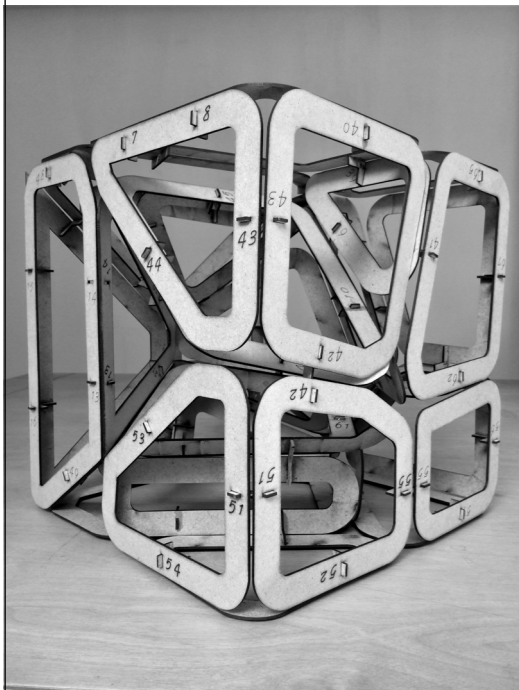
PHYSICAL SCALE MODELS



CONCEPT MODEL FOR A PAVILION
Team : Kasthuri N, Savona G. | NUDES Office | 2017



PHYSICAL SCALE MODEL FOR METAMORPHOSIS GROUP HOUSING MODEL
Individual | Academic | 2015



VORONOI EXPLORATION MODEL
Team : Alisha A, Saleem Z, Savona G. | NUDES Office | 2018



PHYSICAL SCALE MODEL FOR ARTISTS' STUDIO
Individual | Academic | 2014



PHYSICAL SCALE MODEL FOR CONTINUANCE COMMERCIAL CENTER
Individual | Academic | 2016



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