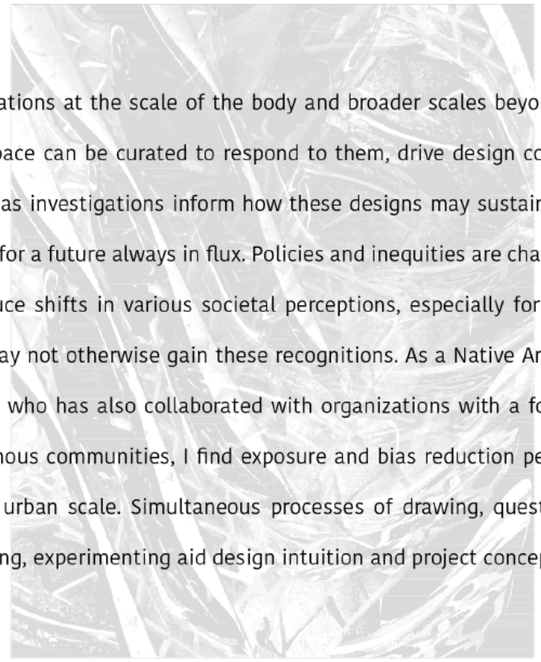
2020 - 2023 A Graduate Architecture Portfolio Columbia GSAPP M.Arch 23

VISUALS ■ WRITINGS ■ DISCUSSIONS ■ CURATIONS
■ AMBIGUITIES ■ EXPERIMENTS

EMMA SUMROW



Speculations at the scale of the body and broader scales beyond, and how space can be curated to respond to them, drive design considerations as investigations inform how these designs may sustain themselves for a future always in flux. Policies and inequities are challenged to induce shifts in various societal perceptions, especially for bodies that may not otherwise gain these recognitions. As a Native American female who has also collaborated with organizations with a focus on indigenous communities, I find exposure and bias reduction pertinent at the urban scale. Simultaneous processes of drawing, questioning, making, experimenting aid design intuition and project conception.

questions ◆ comparisons ◆ interrogations ◆ sovereignties ◆ policies ◆ identities ◆
representations ◆ interrogations ◆ encounters ◆ agencies ◆ bodies ◆ biases ◆ evolutions

Figure 1.0
Physical Model - Wood and Fabric
Scrim / Channel Glass System

SWEET SUFFOCATION

Adv 5 Studio Fall 2022 ■ Critic: Mario Gooden ■ Dwellings /Settlement /Academy

The sweet disguise of sugar - a toxic veil of Imperialism, Capitalism, Pollution - masks the afterlife and residue of the plantation economy facilitated through a foreign giant and the shadows it casts now and in the future. The investigation began with looking internally at the earth and body's relationship with Land Earth and Air. These informed further investigation into our body's specific relationship with the three and how we subconsciously interact with them. The COSUMAR Sugar refinery and neighboring workers quarters in Casablanca was built in the 1920s, situated in a zone legally unfit for the French to live due to factory proximity and pollution as French owned factory looms over its housing site as it is practically in the home's backyard, like an oil rig in a sea of houses. The quarters are still owned and managed by the company who wants to expand the factory into the housing region. While the residents are essentially on an island curated by the capitalist giant who swaddles them with a surrounding wall with only 2 points of entry/exit. In initializing its relocation of residents, COSUMAR has made living conditions intentionally uncomfortable to make people want to leave. With the present-day displacement of worker's quarters residents by the company, residents transition from a forced life in environmental degradation to a new life of coerced relocation.

A dwelling, a settlement, an academy all in one - spaces of living become a daily space of learning and knowledge sharing, across generations and genders, through events as simple as dropping dough off at the baker's, attending a house gathering, or getting a trim at the barber's. This notion layers a new veil over the site that transforms from toxic corporations, their pollutants, and suffocating exploitations to one of filtration and protection, ridding the residents of the looming cloud of capitalism. This new veil gives agency to the residents in their new settlement through the removal of the corporation's poisoned infiltration as knowledge spreads.

A new facade system comprised of local woods and nanoparticle spray treated textiles that neutralize airborne pollutants entangles itself around and through the spaces of living and learning to blur opacities and types of encounters. Creating a new form of living and learning in synergy with the ecologies already natural to the site, this dwelling-academy-settlement is a production of a new way of interrogating and unlearning the residues of the sweet masked toxic capitalist disguise.

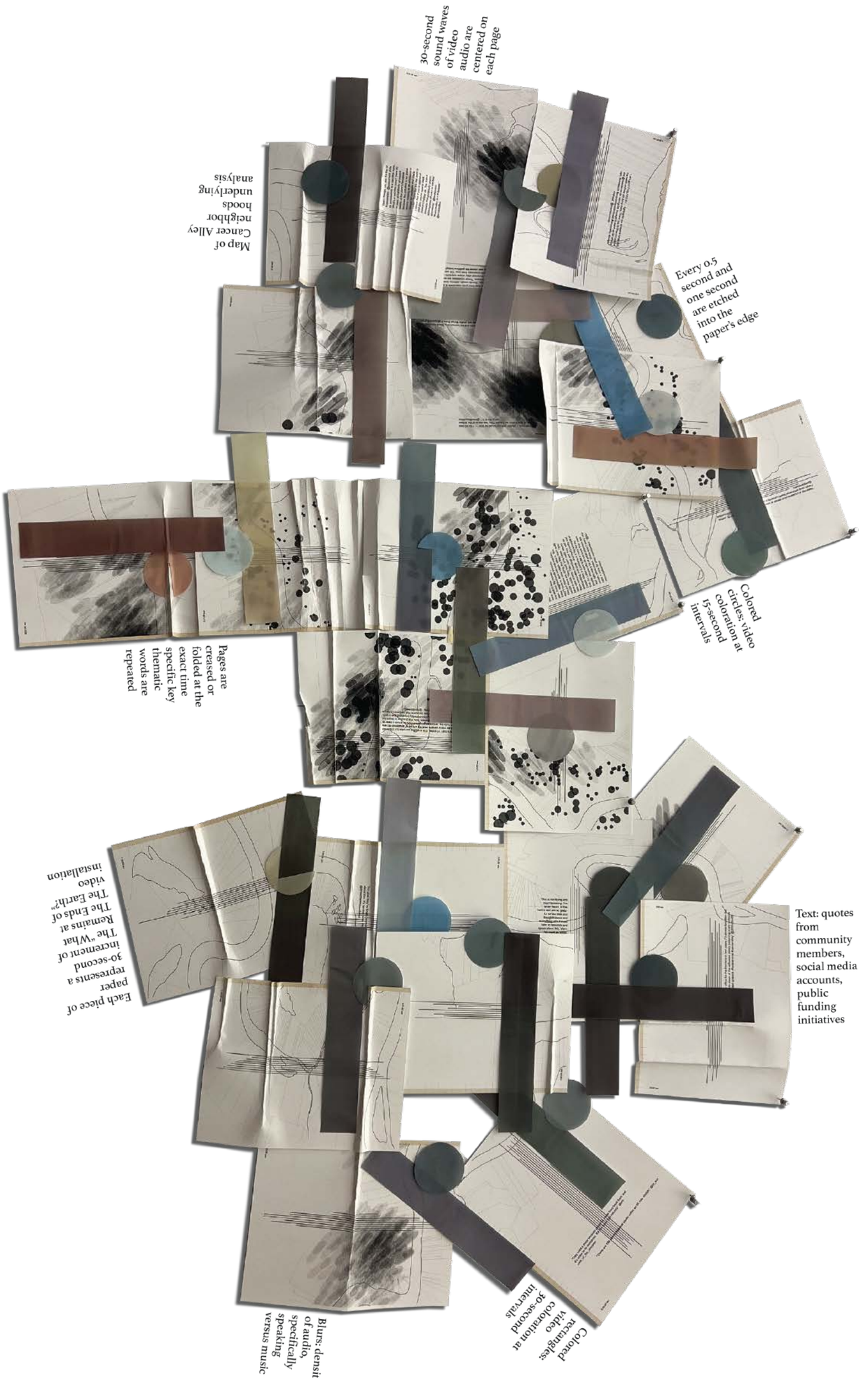
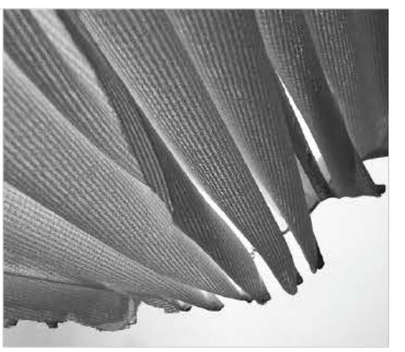


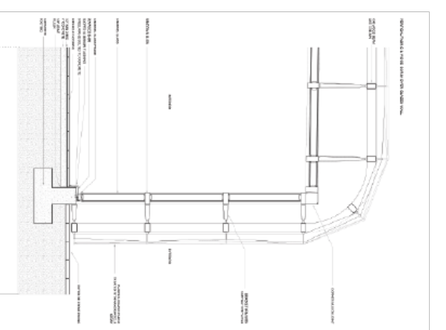
Figure 1.1
Forensic Analysis of Imani Jacqueline Brown's "What Remains at the Ends of the Earth?" Installation
Investigation Collaborator: Alex He

Figure 1.2
Casablanca Site Investigation. Pollutant, Economic, and Production Information

Clockwise from Top: Figure 1.3
Physical Model - Wood and Fabric Scrim / Channel Glass System (Exterior)

Figure 1.4
Perspective - Baker's Kitchen / Academy





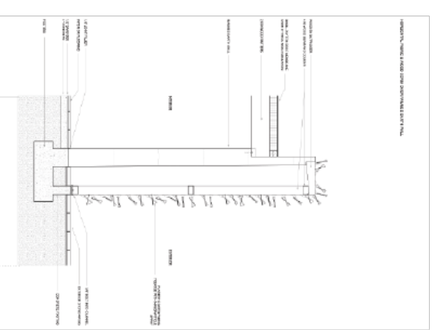


Figure 1.5
Detail Section - Vertical Fabric and Wood Scrim Over Glass Wall, Interior-Exterior

Figure 1.6
Detail Section - Horizontal Fabric and Wood Scrim Over Rammed Earth, Interior-Exterior

Figure 1.7
Perspective Sections Stitched - Baker's Home, Outdoor Space, Barber's Home

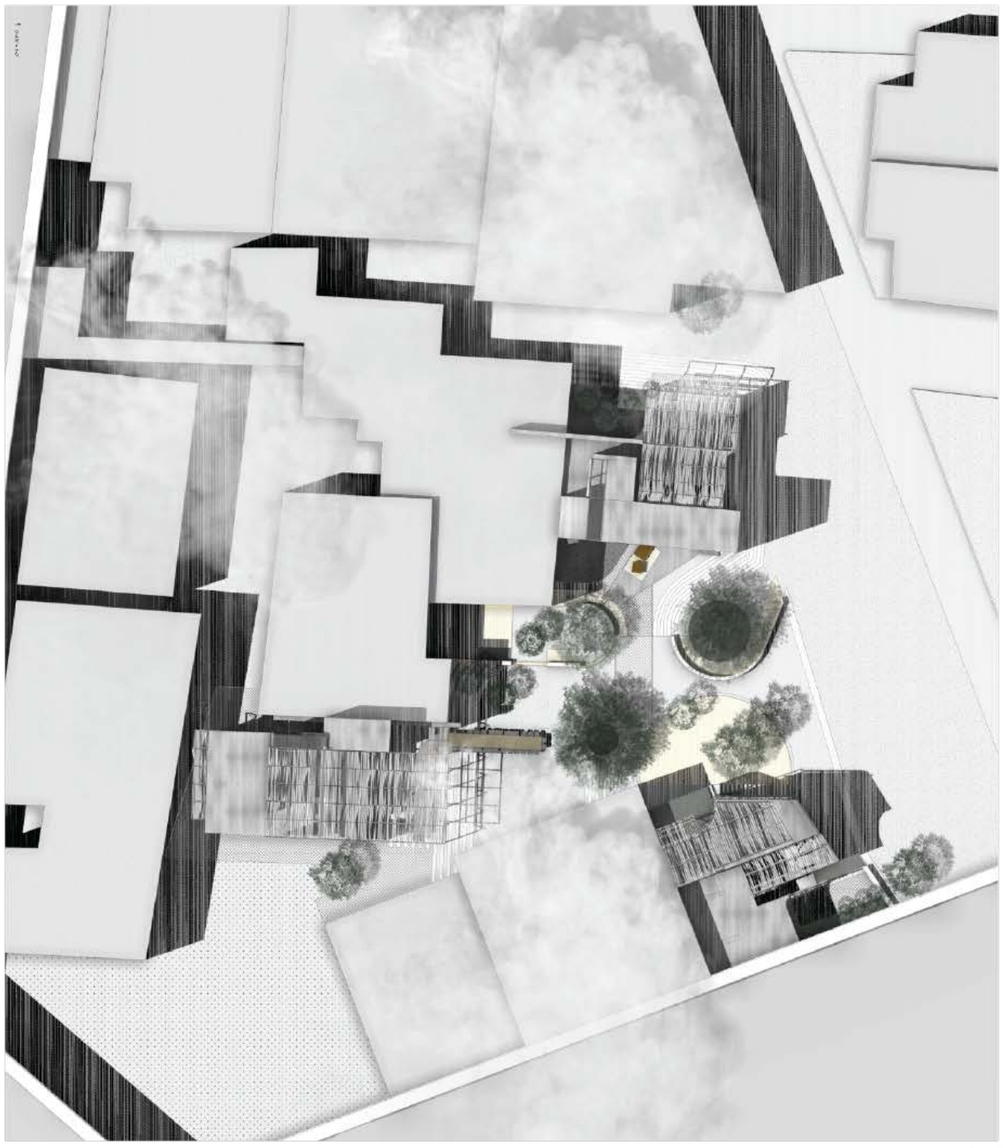
Figure 1.12
Perspective Sections Stitched - Barber's Home, Oudoor Space, Family's Home

Figure 1.11
Detail Section - Freestanding Fabric and Wood Scrim, Exterior-Exterior

Figure 1.10
Perspective - Family Space, Gathering / Academy

Clockwise from Top: Figure 1.8
Physical Model - Wood and Fabric Scrim / Channel Glass System (Interior)

Figure 1.9
Perspective - Barber Shop / Academy



Opposite: Figure 1.13
Site Plan - Existing Worker's Quarters, Factory, and New Settlement

Figure 1.14
Site Plan - New Settlement, Dwellings and Spaces of Knowledge Sharing

Opposite: Figure 1.15
Final Review Exhibition - West

Figure 1.16
Final Review Exhibition - East

Figure 2.0
Cut Axonometric of Unit Relationships

Re figure

Core 3 Studio Fall 2021 ■ Critic: Hilary Sample ■ Multigenerational Housing

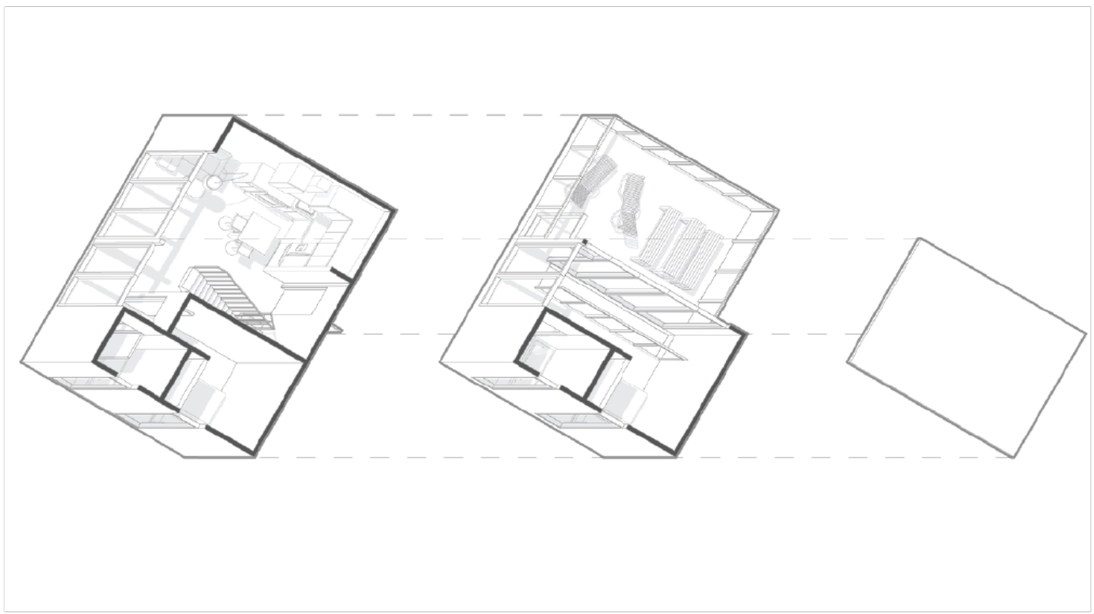
Collaborator : Alex He

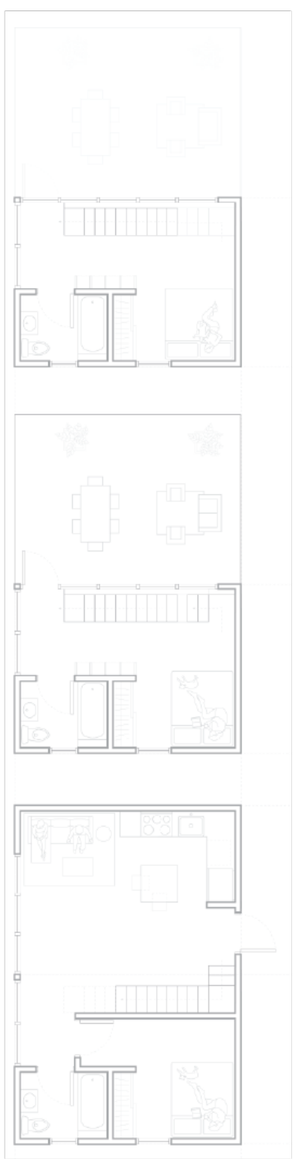
The installation of multi-generational housing creates a performance in the neighborhood which remains stable and lacks temporality. Actors inhabit and execute daily life which is ever-changing within this structured installation; the only constant is that the actors' lives and routines are perpetually in a state of flux. The levitating neighborhood hovers above the site, providing interconnected spaces that force exposure and interaction between the cast members, both below and within the complex.

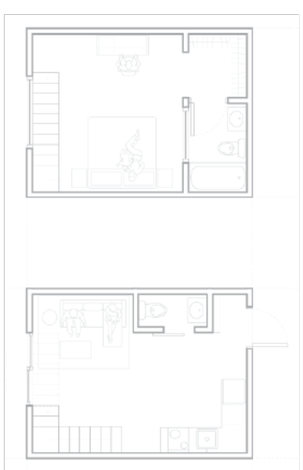
The units act as a kit of parts, on an elemental level, which plug into one another and rely on the multi-scale overlapping series of structural grids. Horizontal spanning trusses, in which units hang from and stack upon, connect vertical public cores such that life exists within the in-between, the bridge. Each part within this kit acts as a cast member in the overall performance that is the installation of the overall structural complex. Material hierarchy denotes the recreation performed within each component creating shifting degrees of transparency and opacity. This network refigures to combine into vertical elements, lifting and bridging units together.

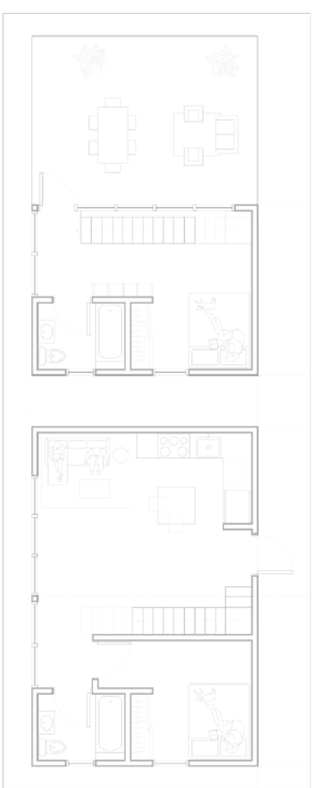
Seemingly random, the plan poises itself as a map of activities and possibilities for the pedestrian. Its only limits are the staggered and tectonic variations of physical textures reflected by the ground mirroring the overlapping structural grids of the housing complex hovering as a canopy above. Sheltered ground-level activities range throughout the seasons of the year, but remain accessible as the site opens itself to the sidewalk and street at multiple angles, blurring the boundary line.

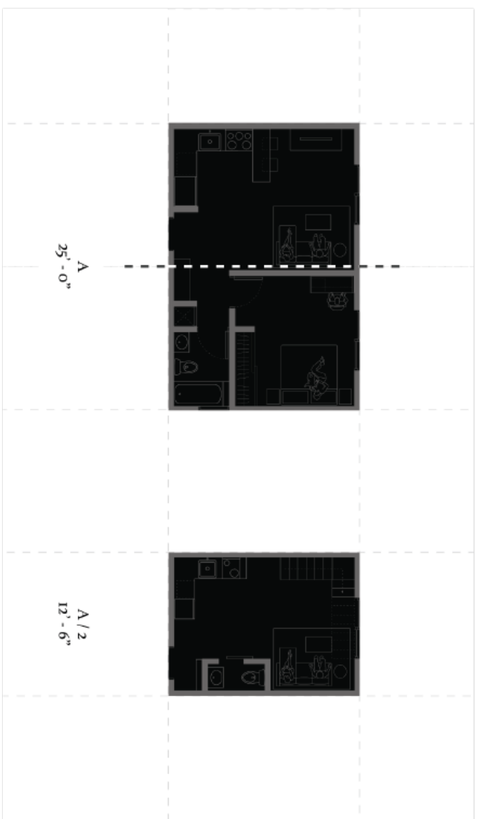
Indoor and outdoor activities invert displaying curated moments of activated space. Through the shifting of heights, vertical cores connect that of above with that of below, providing the only anchor points that touch down and meld the private domestic with the vibrant community. Multiple relationships are established and explored in the show: housing unit-to-unit, unit-to-ground, unit-to-exterior, unit-to-circulation, and unit-to-public.







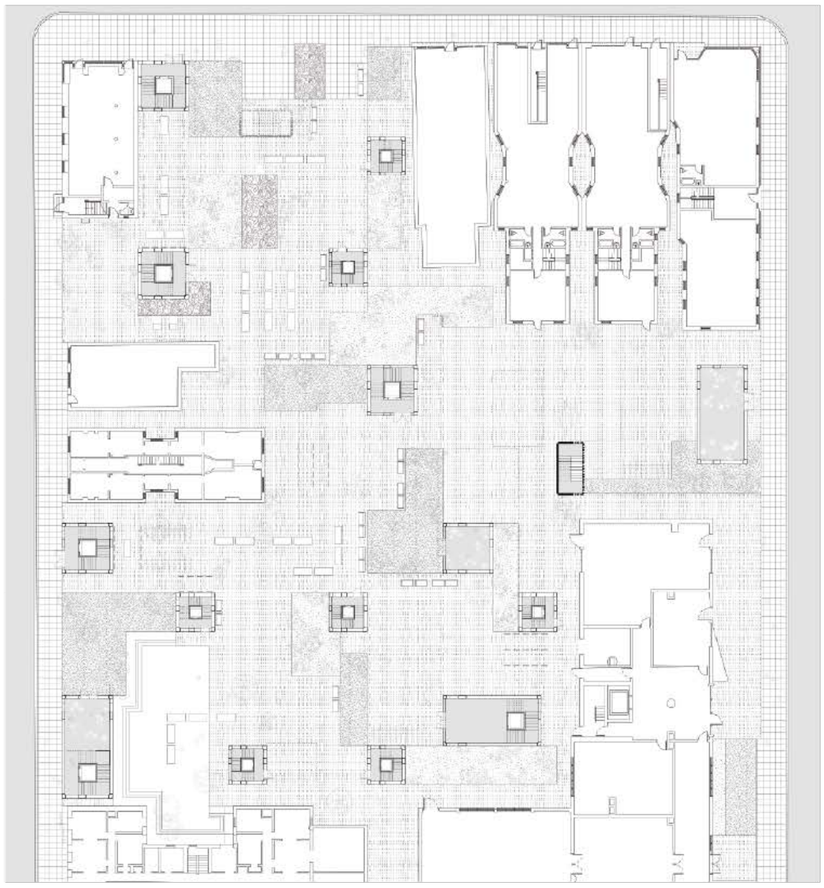


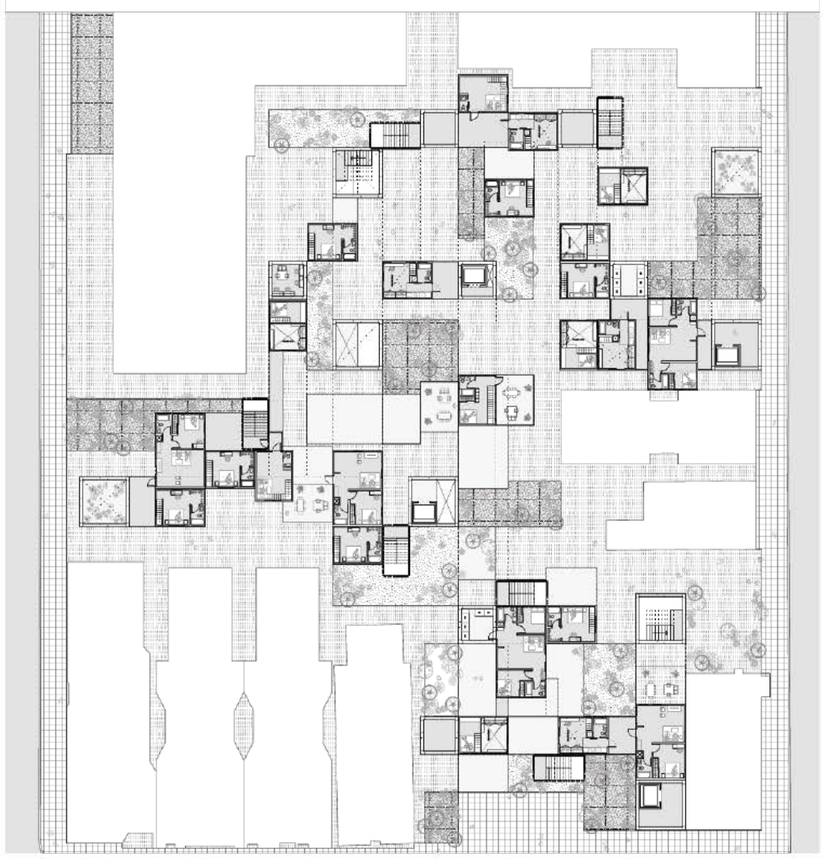


Opposite: Figure 2.1
Exploded Two Bedroom Stacked Unit

Top: Figure 2.2
Housing Unit Dimensions to Inform Building Grid

Descending: Figures 2.3 - 2.5
Plan - Two Room Stacked, One Room Stacked, Three Room Stacked

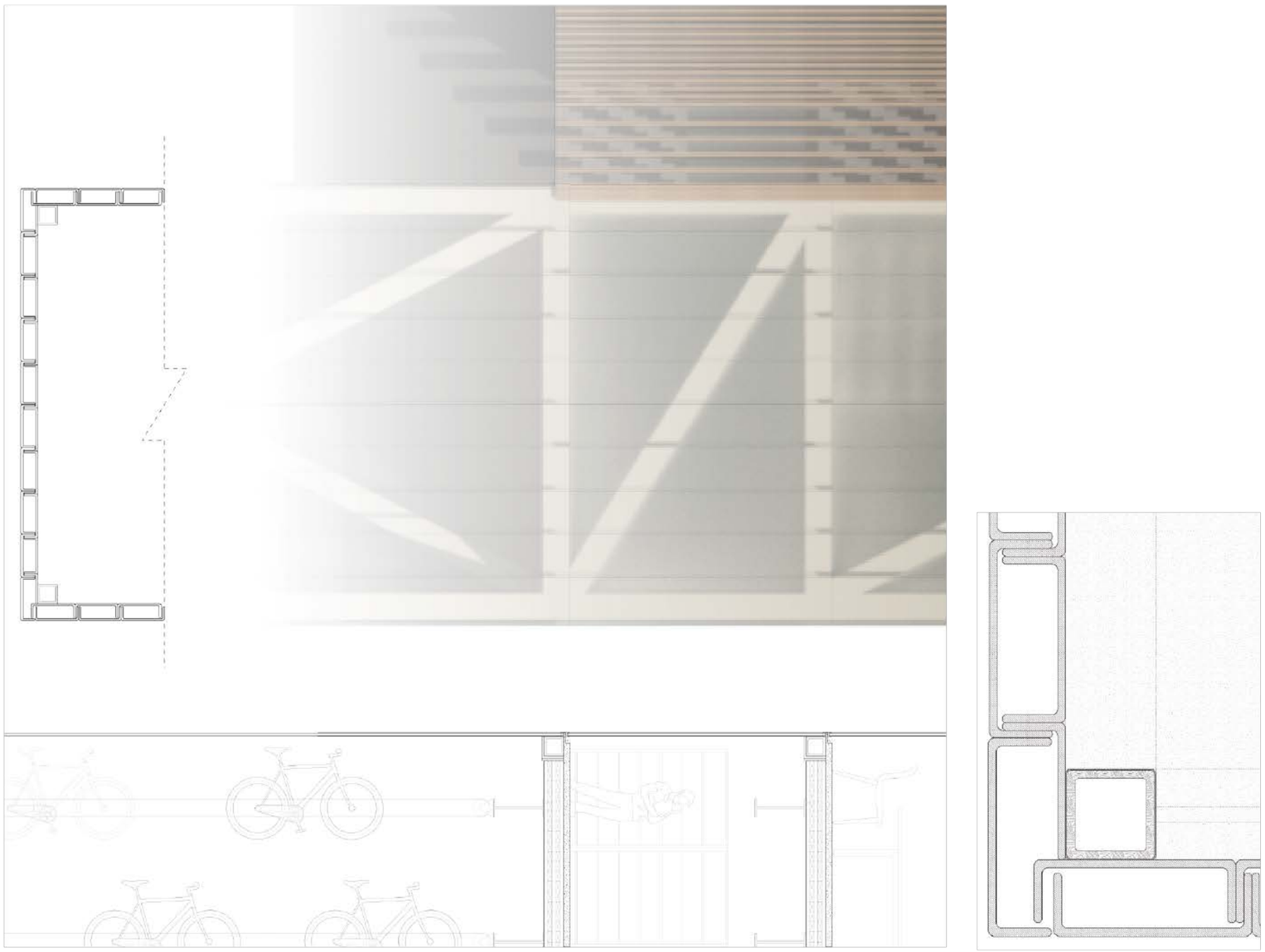


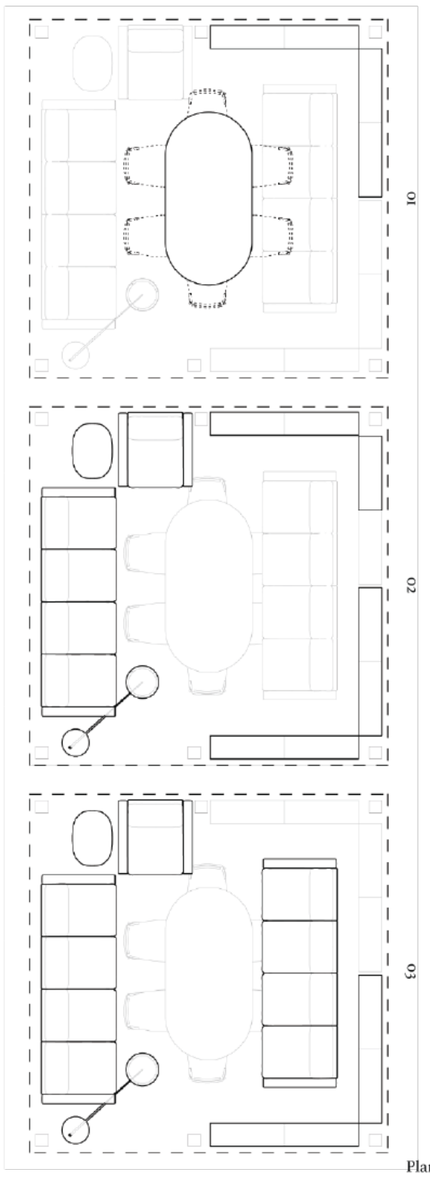


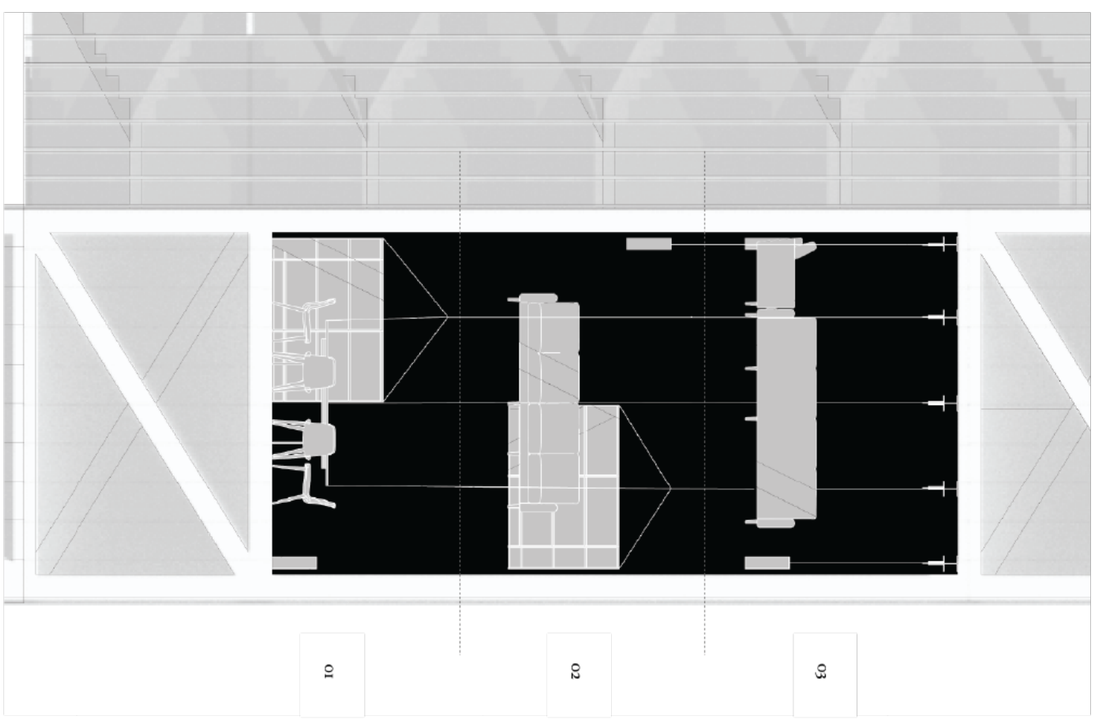
Opposite: Figure 2.6
Plan - Circulation Trusses and Groundscape Relationship

Figure 2.7
Plan - Housing Units and Circulation

Figure 2.8
Elevation - Housing in Site





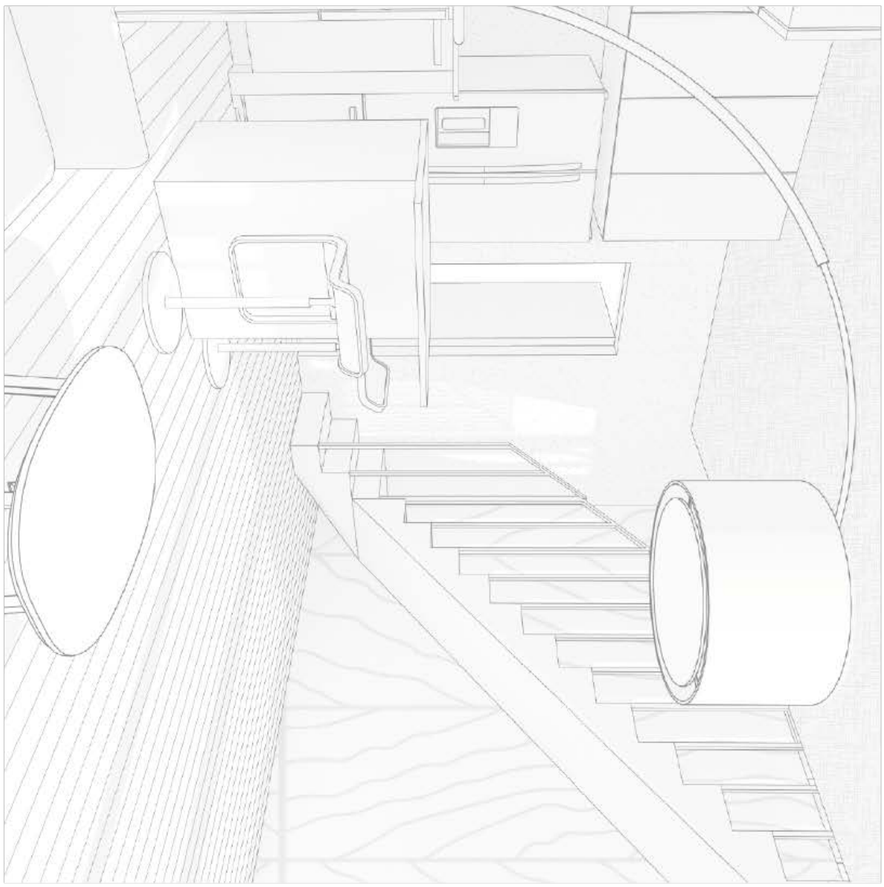


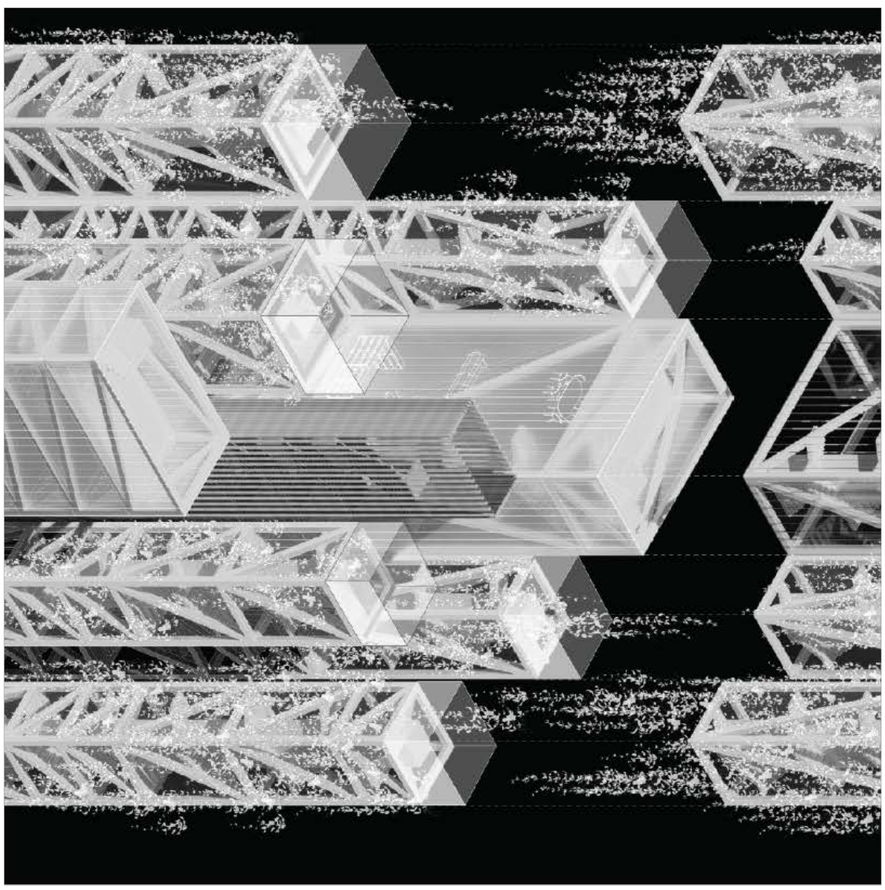
Opposite Top: Figure 2.9
Plan Detail - Structure and Materiality at Larger Scale

Opposite Bottom: Figure 2.10
Detail Section - Materiality and Pulley System

Top: Figure 2.11
Pulley System Arrangement Variations

Bottom: Figure 2.12
Plans - Pulley System Arrangement Variations





Opposite: Figure 2.13
Unit Interior Vignette

Figure 2.14
Vertical Core Typologies

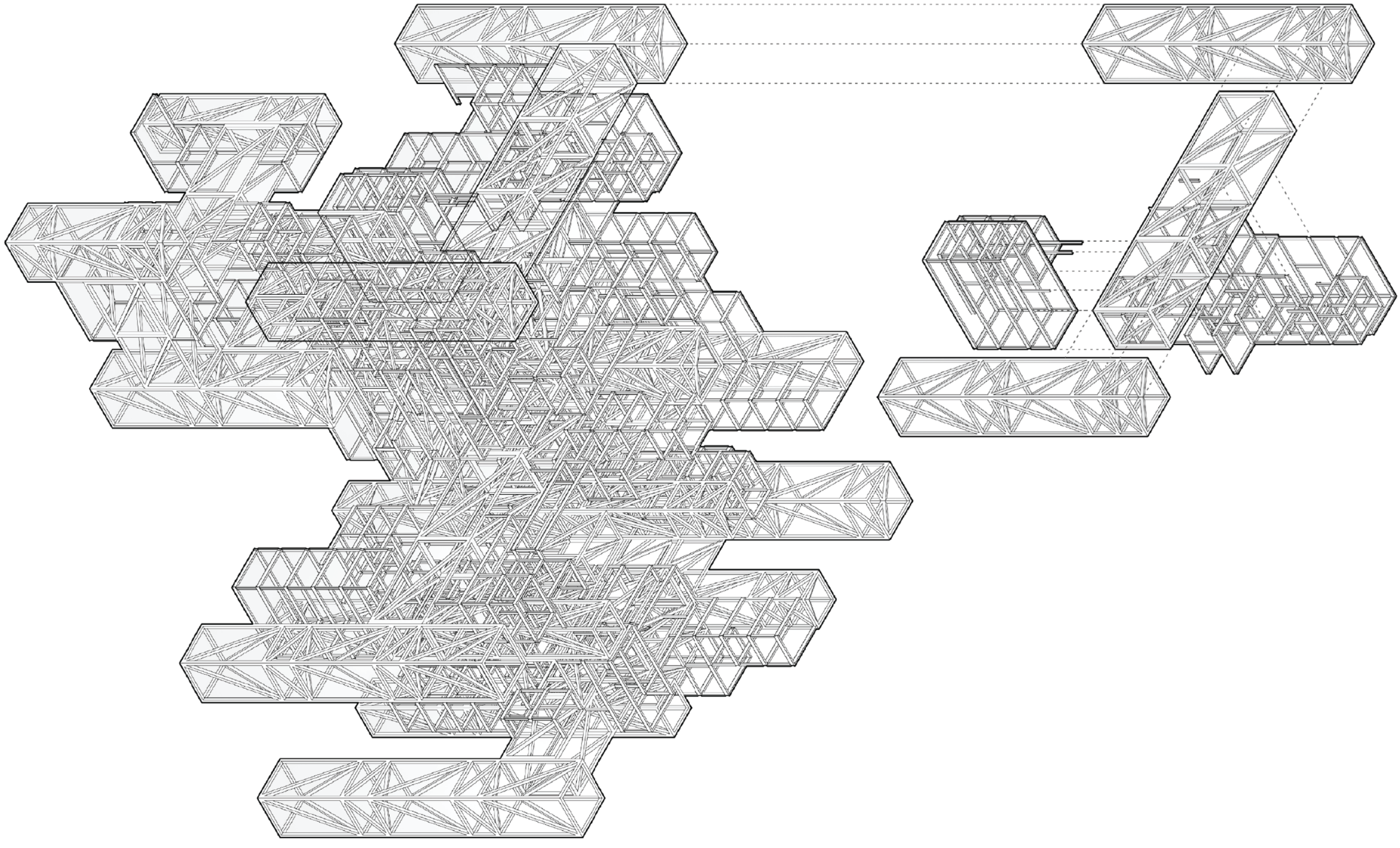
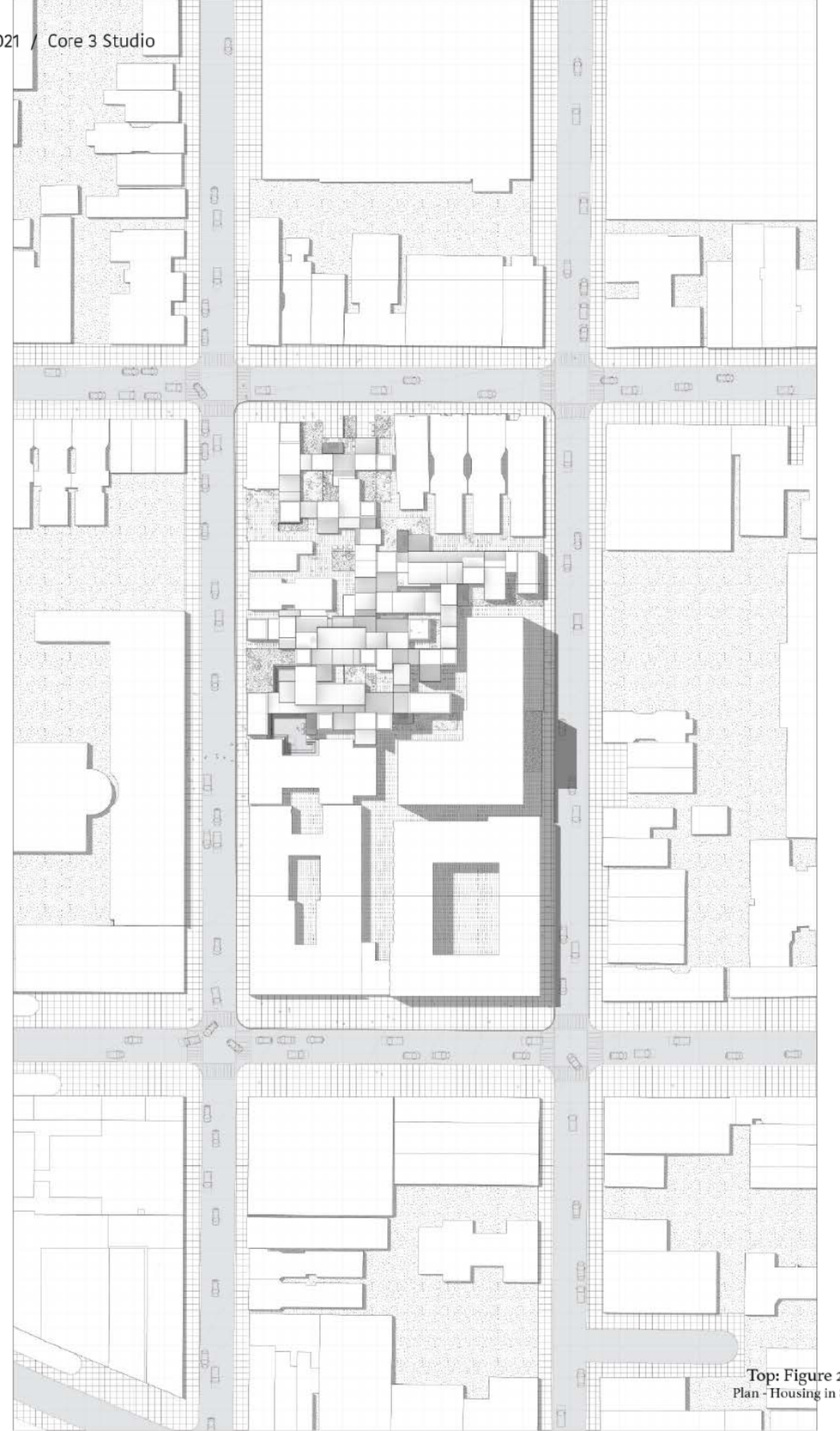


Figure 2.15
Structural Diagram Exploded



Top: Figure 2.16
Plan - Housing in Site

Bottom: Figure 2.17
Perspective - Ground Level
Outdoor Public Space

Figure 2.18
Perspective - Outdoor Public Space
Community Event Under Housing

MACHINE BEINGS An Examination of Prefabricated Housing and Its Inhabitants

History Theory Spring 2021 ■ Prof: Mark Wigley ■ Research Prospectus

Research Question

By analyzing the written and architectural works of Buckminster Fuller through a lens of machine-oriented ontology, the question arises of whether prefabricated housing, modular components, or the man using them are the machine or merely a biproduct of the machine. While discussing these ideas in pursuit of an answer, the man's role in the prefabricated home and the boundary of what qualifies as a machine will be explored through a linkage of historical ideas and emerging contemporary issues.

Abstract

The relationship between the human as an individual and the tool as a machine has long been analyzed as the human has arguably morphed to create a blurred distinction between the two actors. Is humanity a machine itself? Or does humanity still possess enough agency to be the god of the machine? This translates from the body of the individual to the body of the society at large as today's social infrastructures rely on modern technologies, systematic routines, and contemporary infrastructures to function. This has especially proven true with recent global pandemics and natural disasters which have severely handicapped all powers at large. Can a cognitive human even exist today in this system without the advent of tools? Tools have always defined what it means to be a human as the rise of nations and cultures were created around the machines at specific locations at specific points in time. These distinctions are what have produced modern mass-cultures as tools beget other tools. Layers of machines ripple out from the human at the center, who becomes one of the machines themselves. The question then transgresses past 'are we a machine?' to 'when did we become the machine?' It is not a new observation or question as to whether or not the individual body or the social body is a tool but is a question of how far back into history we should examine bodies on an ontological and epistemological level. This research aims to link historical and theoretical ideas with contemporary issues and tools that are emerging and relevant today. This link is specifically manufactured through an in-depth look into Buckminster Fuller's writings as they contradict and overlap with his prefabricated housing design. These issues and

contradictions are then analyzed through the lens of machine-oriented ontology (MOO) which declares the notion that everything, living and inanimate, are machines. It could be argued that through his claims about the purpose and components of the prefabricated dwelling and what we know to be true of MOO, Fuller himself is calling the house a machine. However, in reading his texts, he believes the man within the dwelling to be the machine. Are there layers of machines that can be divided by their tendencies? Does Fuller carry out his belief of man as the machine in his architecture? How far can the definition of machines be stretched when comparing these works, theories, and writings?

Review of Existing Literature

To analyze the relationship and contradictions between the prefabricated housing of Buckminster Fuller and the human, or the inhabitant, with an overarching debate of who or what acts as the machine in this relationship, historic texts on Fuller's ideas of man versus machine must be overlapped with commentary on his prefabricated housing designs in addition to contemporary theories on machine-oriented ontology. The paper will cross-reference key primary resources and opinions by experts on the topics at hand, pointing out contradictions to better determine informed answers to questions on the machine's reach and who or what qualifies as the machine themselves. In the chapter titled "The Phantom Captain" in Nine Chains to the Moon, Fuller makes the claim that the relationship between man and machine are closely intertwined. Man is not the god of the machine, but he is the machine and the machine is his 'captain'. Meanwhile, while Levi Bryant, a recent psychoanalyst and philosophy professor, does not disagree with Fuller's equation of man to machine, he argues "that every entity or substance is a machine." Bryant's conversations with Christos Stergiou begins to bridge the gap between Fuller's written arguments and his drawn architectural works. While the argument in "The Phantom Captain" revolves around the man's relationship to the machines he uses, his earlier design work of the prefabricated and modular Dymaxion House seemingly contradicts his argument as he produces a house itself which acts as a machine of living. William Jordy draws attention to this house and its mechanical core which serves as the hub of the self-sufficient home. In this analysis of Fuller's design for a prefabricated home, the user and inhabitant are never mentioned nor discussed. His argument and primary thesis that the man is a machine becomes an ironic element to his architectural venture as he designed a machine that negates the need for or thought of an inhabitant. The man, in this case, becomes a cog in the dwelling and not a machine himself. The research will move forward to discuss not only the man as the machine versus the dwelling as a machine, but will reignite the ideas of machine-oriented ontology in relation to the house and its prefabricated methodology. The very core of prefabricated buildings is that they lack a specific context throughout their design phase and construction. If Marshall McLuhan's assumptions in "The Invisible Environment: The Future of Erosion" are to be held into account in this debate of machine qualifications, the very notion that the house lacks a presumed environment upon conception poses an inherent dilemma. He argues that it is the environment, natural or programmed, which acts as a machine for education. In analyzing each

1. R. Buckminster Fuller, "The Phantom Captain," *Nine Chains to the Moon* (New York: Lippincott,1938).

2. Levi Bryant and Christos Stergiou, "An Interview with Levi Bryant." *Anarchist Developments in Cultural Studies: Ontological Anarché: Beyond Materialism and Idealism*, 277–83.

3. William H. Jordy, "The Symbolic Essence of Modern European Architecture of the Twenties and Its Continuing Influence," *Journal of the Society of Architectural Historians* 22, no. 3 (1963): 177-87. doi:10.2307/988229.

of these arguments, prefabricated housing in a more general scheme, beyond Fuller's Dymaxion House, will be looked to in order to understand the boundary of the digital or physical environment's role in the larger machine dynamic.

Method

This constructivist theme rejoins theoretical notions of Machine-Oriented Ontology (MOO) to prevalent historical texts and physical architectural projects. The modern architectural discourse aims to separate theoretical construct from built or designed works of the profession, deeming one more practical than the other. By looking more closely into the texts such as those by Buckminster Fuller, Levi Bryant, and Marshall McLuhan, it is easy to find relevant parallels in the discourse that have transgressed texts into contemporary physical and virtual platforms. Neglecting these assumptions and refusing to interrogate the works separates architecture into restricted and uninformed binaries and decontextualizes themes and significant constructs. Not only is this research assuming a new position by cross analyzing early twentieth century works with twenty-first century theories, it is also surpassing the normal approach by interrelating these theories with the contemporary housing and building method trends of prefabricated housing construction. By looking beyond the mere aesthetics and standard features typically worthy of analysis in Fuller's architectural works such as his Dymaxion House, discoveries can be made which impact all works of architecture, the building user, and how humanity experiences the world around them. Works that are seemingly trivial, as they did not meet their full planned potential, prove to have more weight in the debate of larger overarching themes of anthropology and philosophy. Continuing this research fills gaps in a multitude of discourses which fundamentally impact life, media, interactions, environments, physical and digital landscapes, labor, and more. Approaching these issues with a foundation of interdisciplinary works, texts, and projects broadens the field of possible discoveries that could be made as there is a lack of binaries and homogeneity in the process. Firsthand accounts of theorists and philosophers as well as interviews and commentary will be used in this research. Documents from both the time of project or theory fruition as well as later findings are both mandated to insure a more well-rounded understanding of the topics at hand.

4. Marshall McLuhan, "The Invisible Environment: The Future of an Erosion," *Perspecta 11* (1967), 164-165.

1. The pursuit of understanding and defining humanity has been on the forefront of writings, research, and philosophy since the dawn of time.
2. Anthropologically, the relationships of humans and the tools used continues to be researched as the two have begun to morph into one, disintegrating early noticeable distinctions.

1. Through the overlap of written and physical architectural works and research, the relationship between man and machine transgresses the limitations of the other, extending to both the environment and the dwelling. This cross-pollination of canonical writings and the prefabricated housing design of Buckminster Fuller with the contemporary philosophy of machine-oriented ontology situates both the human and the home as a machine, furthering this transgression to the environment and thus interrogating the fundamental site-less nature of a prefabricated dwelling.

What is a Machine Defined As?

A. According to Buckminster Fuller, the human is the machine and the machine is the human: the two in tandem have become one.
1. The machine has become an extension of the human to the extent that it is the driving factor of mankind.
a. "Inevitably, the captain's habitual association of his infinite self with his subconsciously subservient mechanisms has inclined him to a dual 'presumption': (1) that this mechanism is an ACTUAL (by extension) part of his phantom self, whereas it is purely an electro-chemical combination of inanimate energy molecules that are intrinsically the ship the phantom captain commands, and (2) an attitude of ownership: the mechanism of ordination for his will is 'his' permanent 'possession,' whereas in reality it is only temporarily in his custody."
2. Not only have man and machine become one, machine has control over the man as technology has evolved to the 'captain' of humans; without it humans are biological pools without agency yet humans biological remain as a machine.
a. "There are two main types of phantom-captained mechanisms, differing only in their machinery for the reproduction of miniature replicas of themselves (a manufacturing process)..."
i. The outward and the inward biological and chemical makeup of humanity are machines constantly in the mode of production, a continuous state of flux.

B. The philosophy of Machine-Oriented Ontology (MOO) deems that everything, no matter the scale, is a machine; these tendencies are not limited to humanity.
1. While everything, physical or digital, animate or inanimate, may be classified as a machine, these may be further classified into subcategorizations as they do not preform the same functions.
a. "I argue that every entity or substance is a machine. Machines are defined by their operations or powers (capacities)."
2. Machines are not limited to objects or tangible entities, they are also unseen actors and agents with a purpose, impact, or method.
a. "...as machines are processes, we can also call them events. They are events in the sense that they are happenings or occurrences that have a duration or that continue for a certain period of time."

Prefabricated Housing: The Dymaxion House as a Machine

A. Buckminster Fuller, who argues that the man solely is the machine, ironically produces a canonical prefabricated house that acts as a machine for living and abandons the articulation or role of the human.
1. The Dymaxion House was a prefabricated house with a well-rounded mechani cal core filled with every amenity to keep the home running on its own, without human intervention.
a. "In 1927 Fuller had already created a model of his mast-hung, stamped-aluminum Dymaxion House, with a mechanical core which provided cooking facilities, plumbing, heating, ventilation and even music."
2. The home functions as a machine mechanically, structurally, systematically, and even visually as its materiality and form surpasses futurism to a machine-age aesthetic. All of which negates the man's place as the machine, thus contradicting Fuller's written works by placing the home in the position of the machine.
a. "...thus making it briefly seem that these forms were significantly related to the machine."

B. The human acts as a cog in the machine in the dynamic that Fuller has produced through his housing design, as he does not place an emphasis on the man in this newly derived prefabricated symbiosis.
1. In addition to the man as the inhabitant, Fuller informs a new role for humans in the process of the prefabricated house.
a. "...dropped by helicopter into a foundation and then connected to water, electricity, and gas, posed a strong challenge to what he saw as the antiquated building trades with their hierarchies of carpenters, bricklayers, and masons."

The Stretch of the Machine: How Far is the Reach, Where does Prefabricated Housing Lie?

A. The fundamental characteristic of all prefabricated buildings and homes are that they are decontextualized to serve a greater purpose of mass production, one-size-fits-all.
1. The appeal of prefabricated housing is becoming a contemporary sustainable and affordable trend as they can be mass-produced and transported to multiple sites, negating hurdles of various geographies or contexts; the 'machine' engulfs the factory construction process, to the transportation, to the assembly.
a. "...an assembly line cut[s] down costs because factories buy supplies in bulk...you don't have to send carpenters, plumbers, and electricians to individual construction sites. And a faster build time..."
b. In accordance with previously interrogated theories on machine classifications, this method of production places the home as a machine before it becomes a machine for living.

5. Fuller, 21.
6. Ibid., 21.
7. Ibid., 24.
8. Bryant, 277.
9. Ibid., 278.
10. Jordy, 177.
11. Ibid., 178.
12. Margolin, Victor. "Design for a Sustainable World." *Design Issues* 14, no. 2 (1998): 83-92. doi:10.2307/1511853, 84.
13. Barber, Megan. "Want a Prefab House? Here's Everything You Need to Know." Curbed. Curbed, March 2, 2020. https://archive.curbed.com/2020/3/2/21142898/modular-prefab-homes-house-build-cost

B. Marshall McLuhan negates Buckminster Fuller by theorizing that man is not machine, but environment is machine: both physical and virtual.

1. The environment is a machine for learning, constantly being informed by other machines, technologies, and kinetic bodies.

a. "One way of putting this is to say that our children today live in a world in which the environment itself is a teaching machine made of electric information."

2. Tearing the prefabricated home out of a specific environment provides the structure with a multiplicity of environments which further promotes the fluctuating and autopoietic nature of the prefabricated home as the ultimate machine.

a. "Environments are not just containers, but are processes that change the content totally. New media are new environments...One related consideration is that anti-environments, or counter-environments created by the artist, are indispens able means of becoming aware of the environment, in which we live and of the environments we create for ourselves technically."

14. McLuhan, 164.

15. Ibid., 165.

A. The expansion of tools into the everyday lives of humanity has manufactured a blurry distinction between machines, people, and the buildings they reside in or create, so much so that some theorists now deem the multitude of objects as having one linking characteristic: the machine.

1. Can a cognitive human exist today in this system without the advent of technology? Are there layers of machines that can be divided by their tendencies?

B. Buckminster Fuller's theories and writings ironically contradict his prefabricated design of the Dymaxion House in accordance with the ideals of machine-oriented ontology and the fundamental characteristics of prefabricated constructions.

1. Machines are generating machines for domesticity which then manufactures layers of machines separated by tendencies.

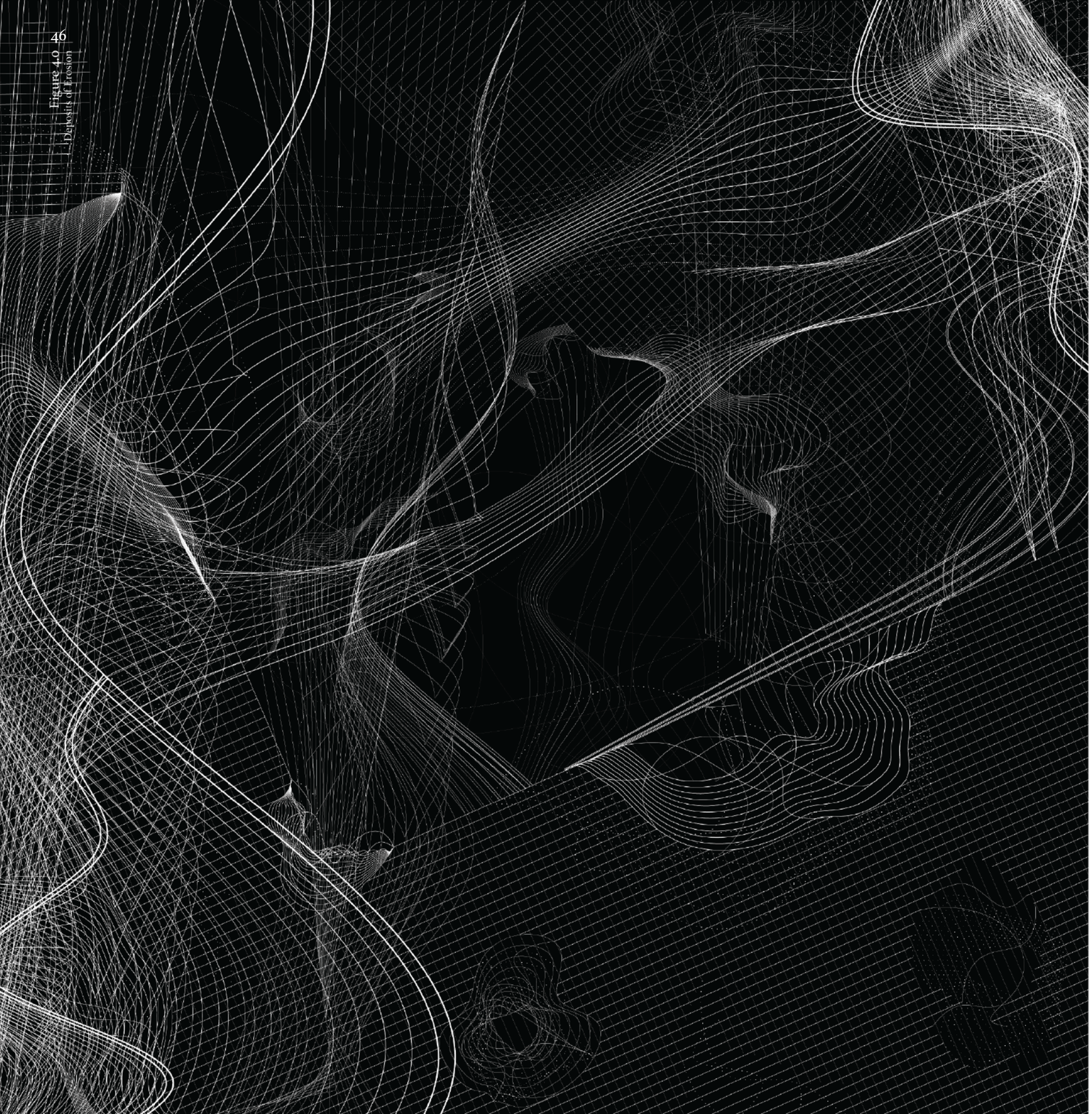


Figure 4.0
Deposits of Erosion

FILTERED CORROSION

Core 2 Studio Spring 2021 ■ Critic: Karla Rothstein ■ Education and Community Showcase Center

The school of the past is eroded with varying intensities as formal gestures infiltrate multiple space typologies to enhance discoveries through interconnected views. With this, there is a removal of the agents, which divide the disciplines, to yield a more intense level of curiosity and engagement. Transparent voids open the building, forming a fluid connection across pedagogical types. This increased level of formal engagement and reduction of barriers stimulates curiosities by creating a desire to learn in a provocative environment which negates uniformity and the connotations of a classroom as a cell.

Classrooms are comprised of moving pieces that can be engaged with as they increase the building's temporality. Daily deposits of student-produced works and small-scale performance pieces are aggregated into basins where building users can observe new additions in this ever changing gallery-like exhibition space.

In the summer, the facility can be used as a display for emerging forms of knowledge. Basins and movable classroom partitions become re purposed for local NYC innovators and creatives to exhibit their works and research in this multi-disciplinary workspace for the community to view and discover. Dynamic spaces produce a variety of uses as a result of the novel forms which act as the primary catalyst to facilitate interactions between the student body, social body, and opportunities for greater discoveries.

Curiosities of students, faculty, and locals are stimulated and answers to rising questions are pursued.

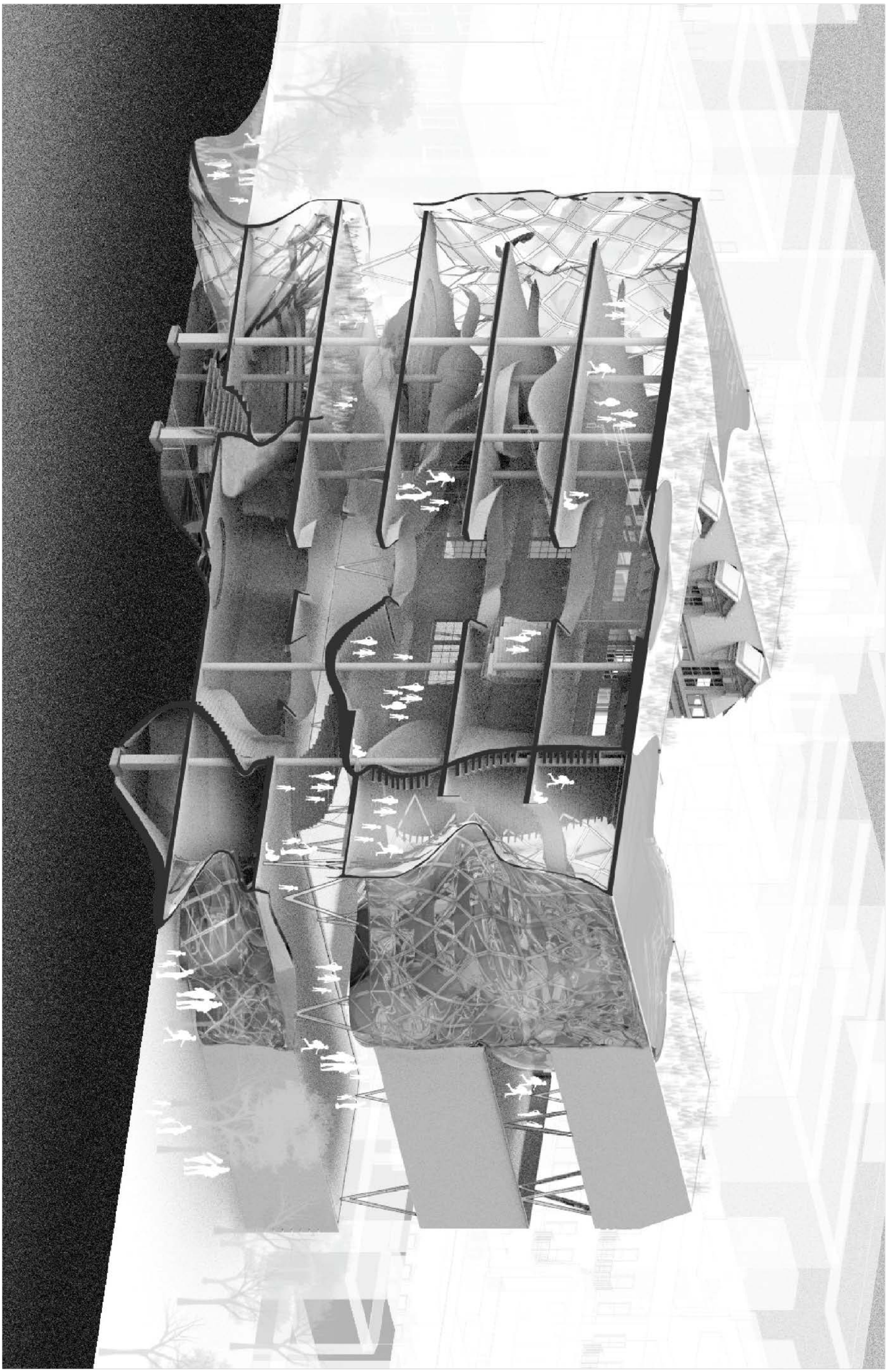
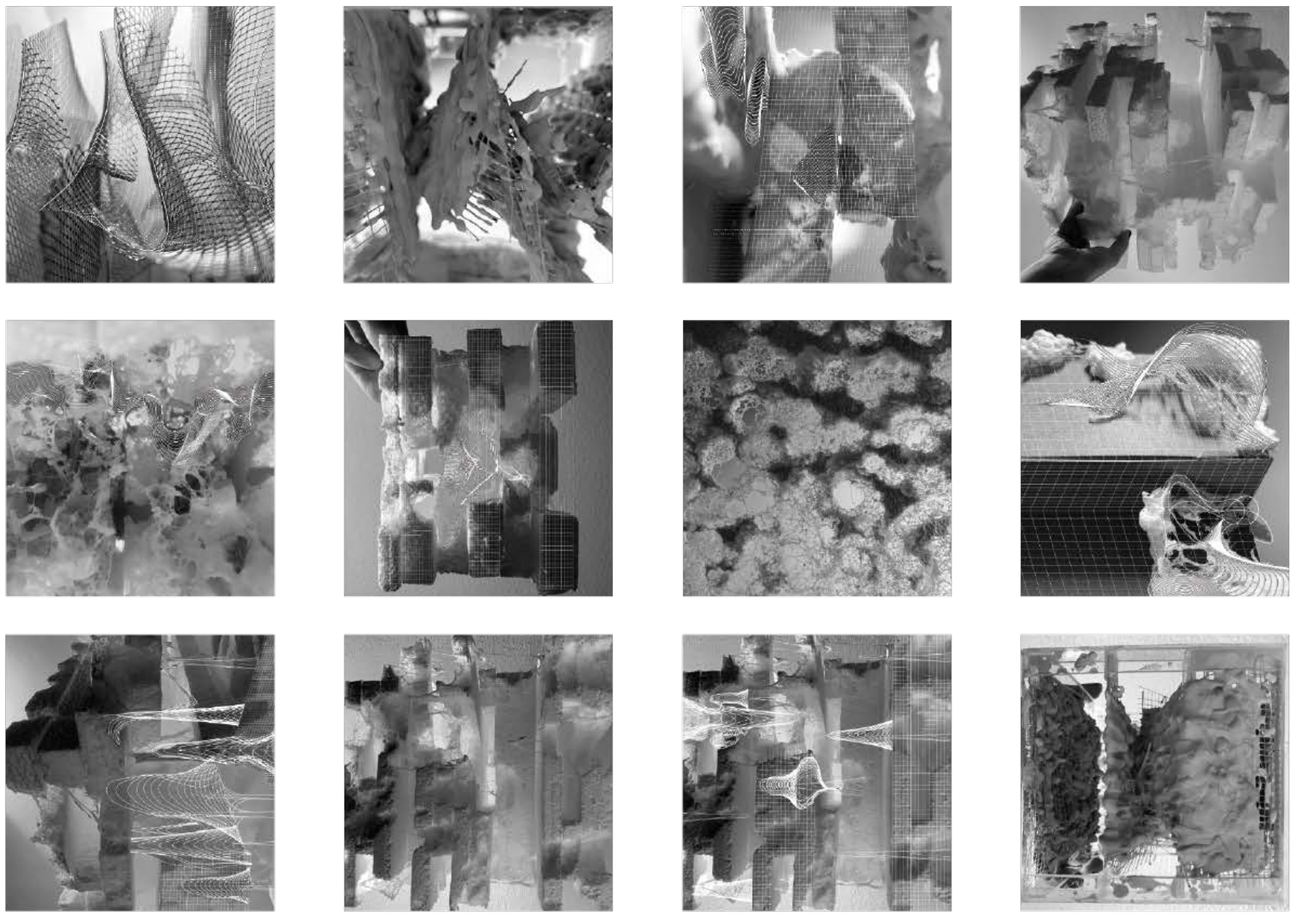
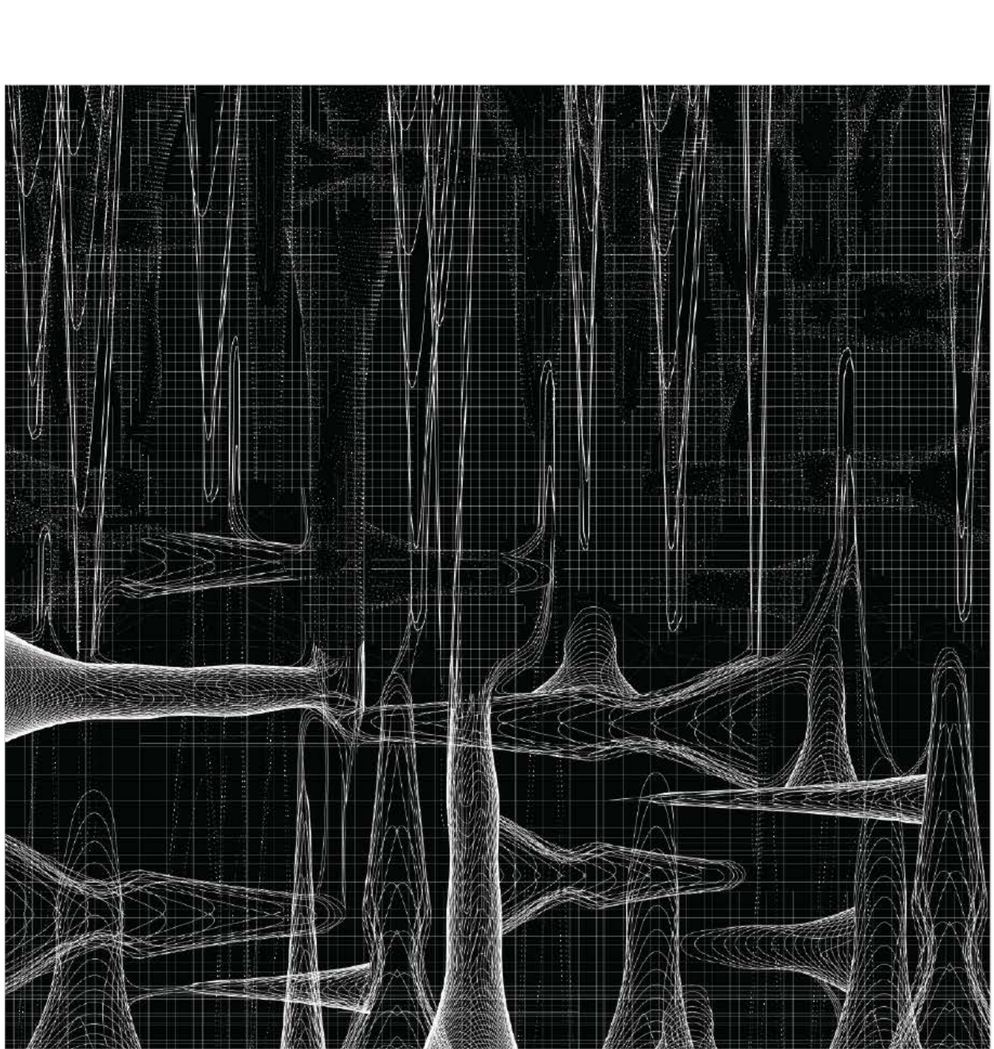


Figure 4.1
Isometric Section, North Half Uncut





Opposite: Figures 4.2-4.13
Material Experiments Models
Deposits and Erosions

Figure 4.14
Experiment Variables

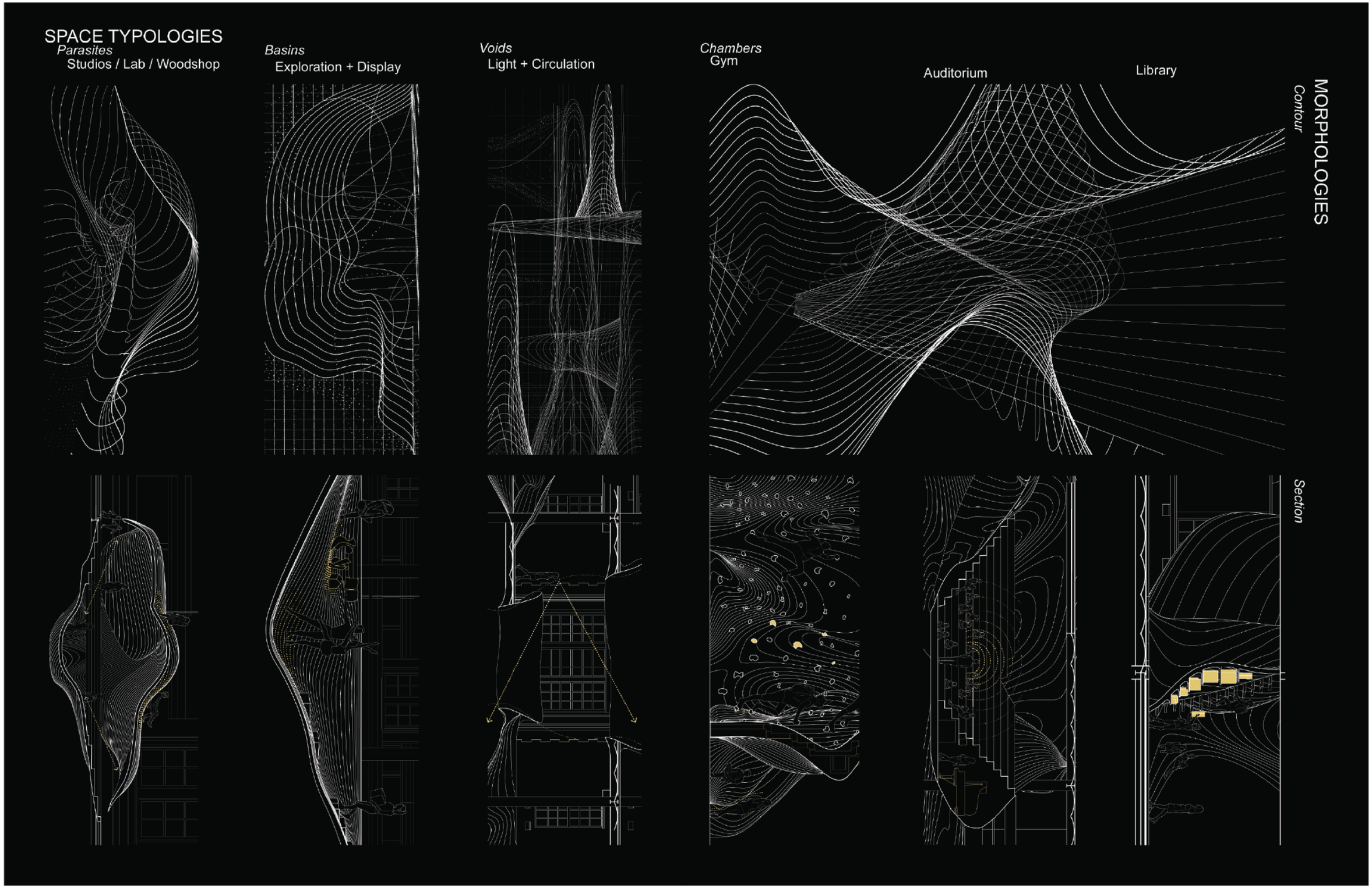
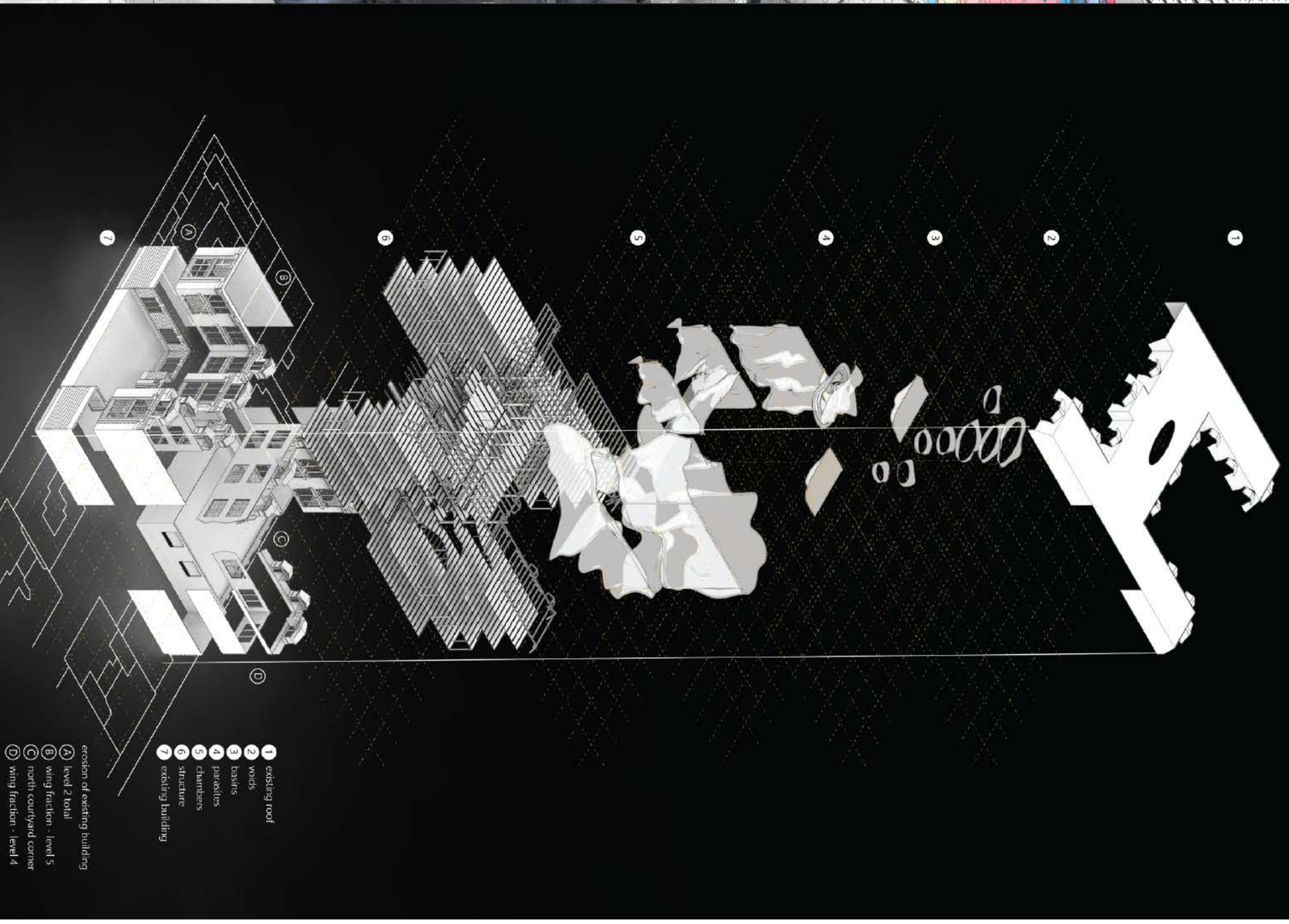


Figure 4.15
Morphology and Spatial Outcomes Matrix



Opposite: Figure 4.16
Two-Cut Isometric - Stages of Use Overlapped

Figure 4.17
Exploded Isometric - Points of Erosion and New Element Placement

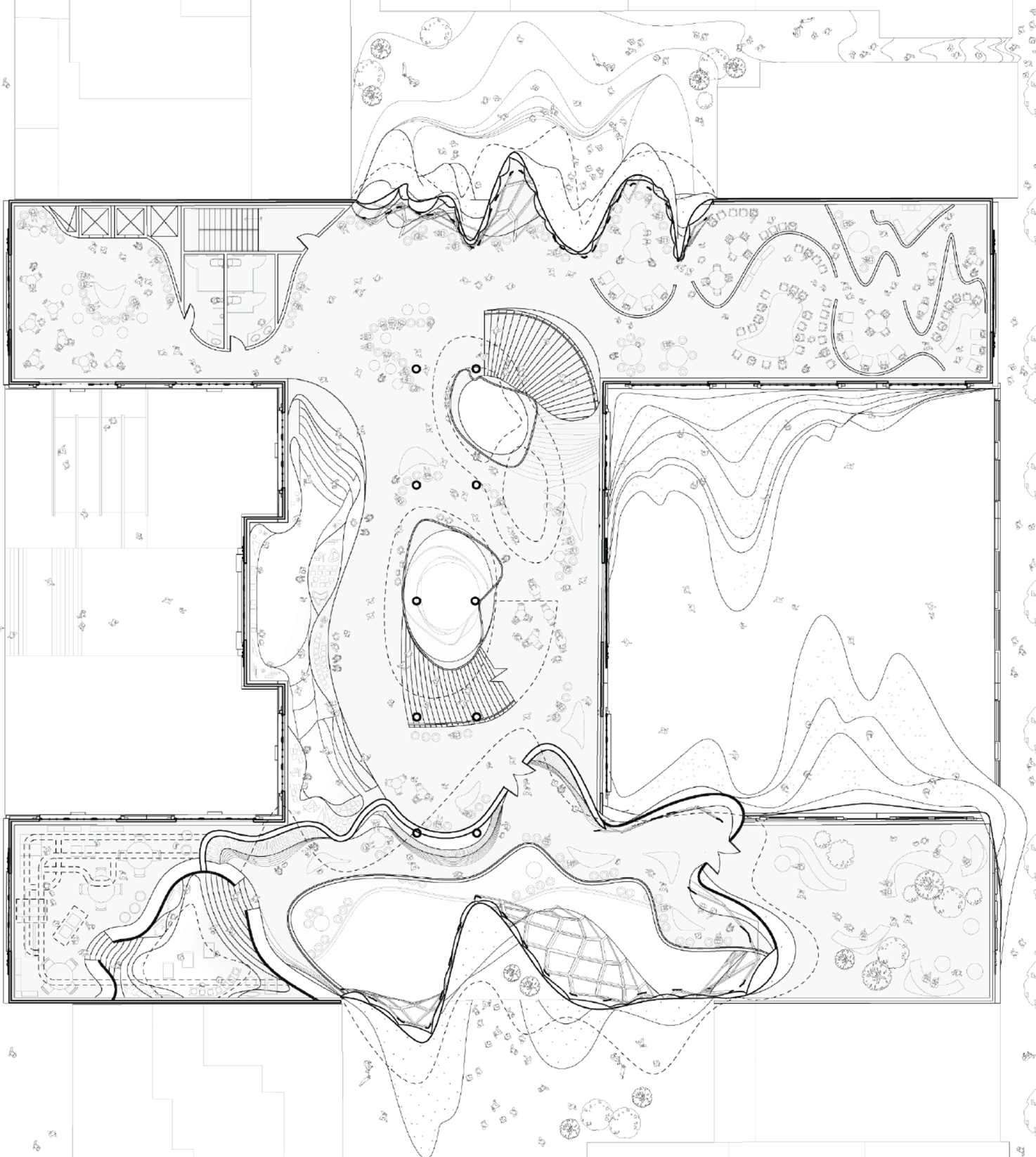
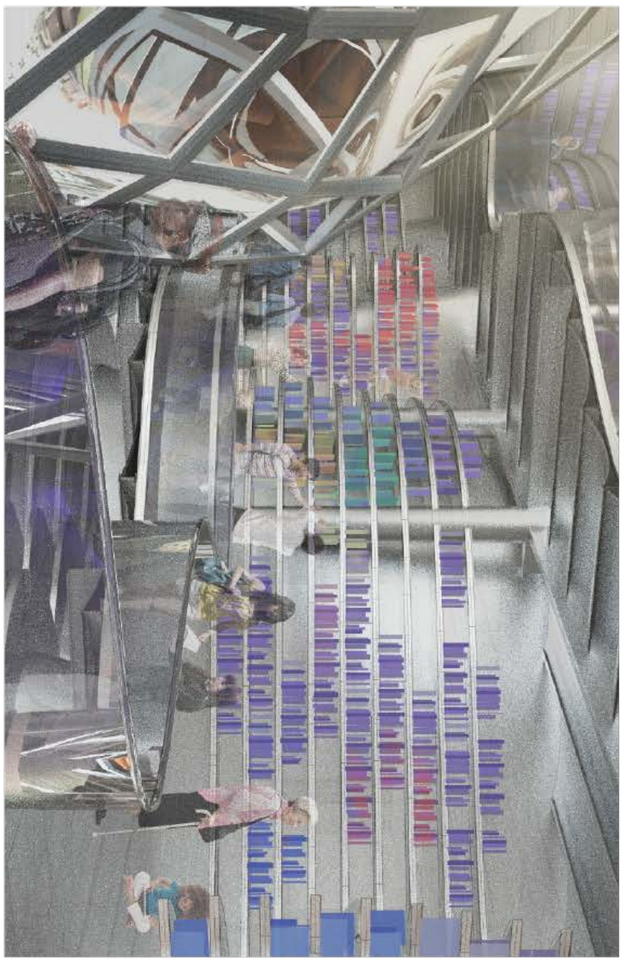
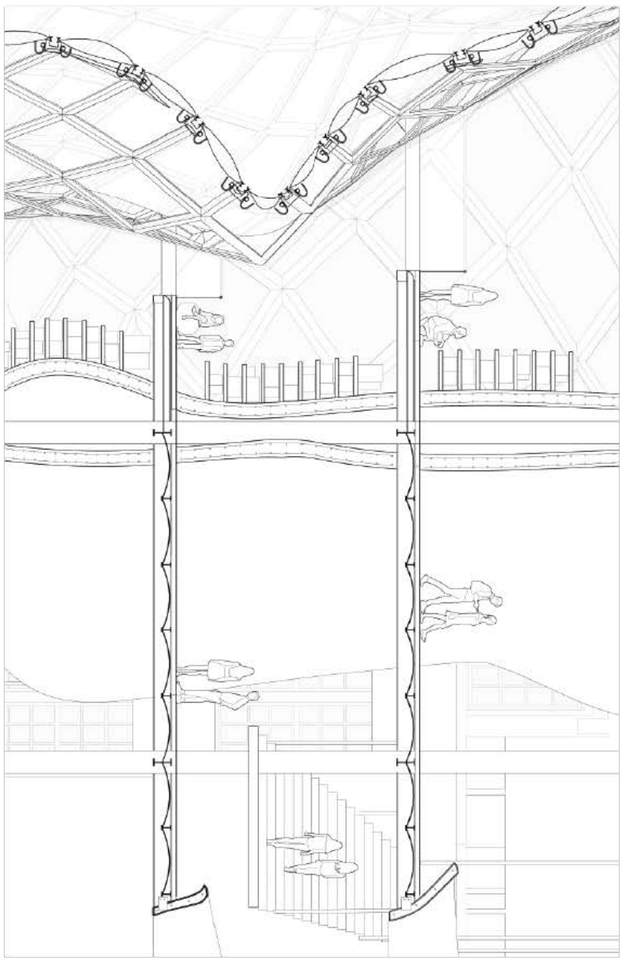
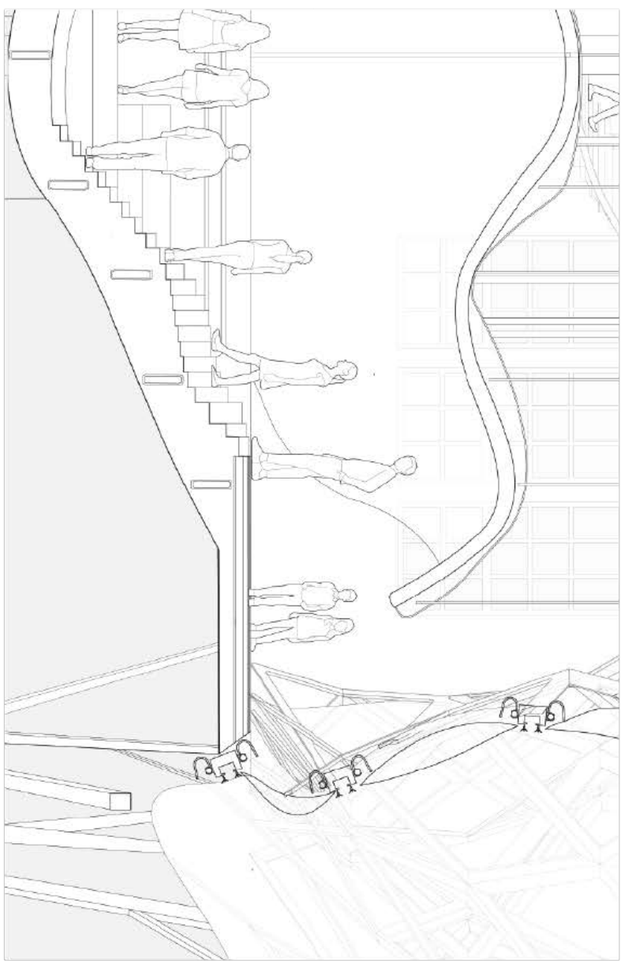


Figure 4.18
Plan - Classrooms, Exhibitions, Outdoors







Opposite Top: Figure 4.19
Detail Section - ETFE Exterior and Library Interior

Opposite Bottom: Figure 4.20
Perspective - Second Level of Library

Top: Figure 4.21
Detail Section - ETFE Exterior, Concrete Basin, Demolished Level

Bottom: Figure 4.22
Perspective - Underneath Basin on Demolished Middle Level

Filtered Corrosion

2021 / Core 2 Studio

Critic: Karla Rothstein

Figure 4.23
Section Diagram / Components, Uses, Sun Study, Time, Aggregations

Figure 5.0
Isometric - Pop-up Installation
on Block of Broadway

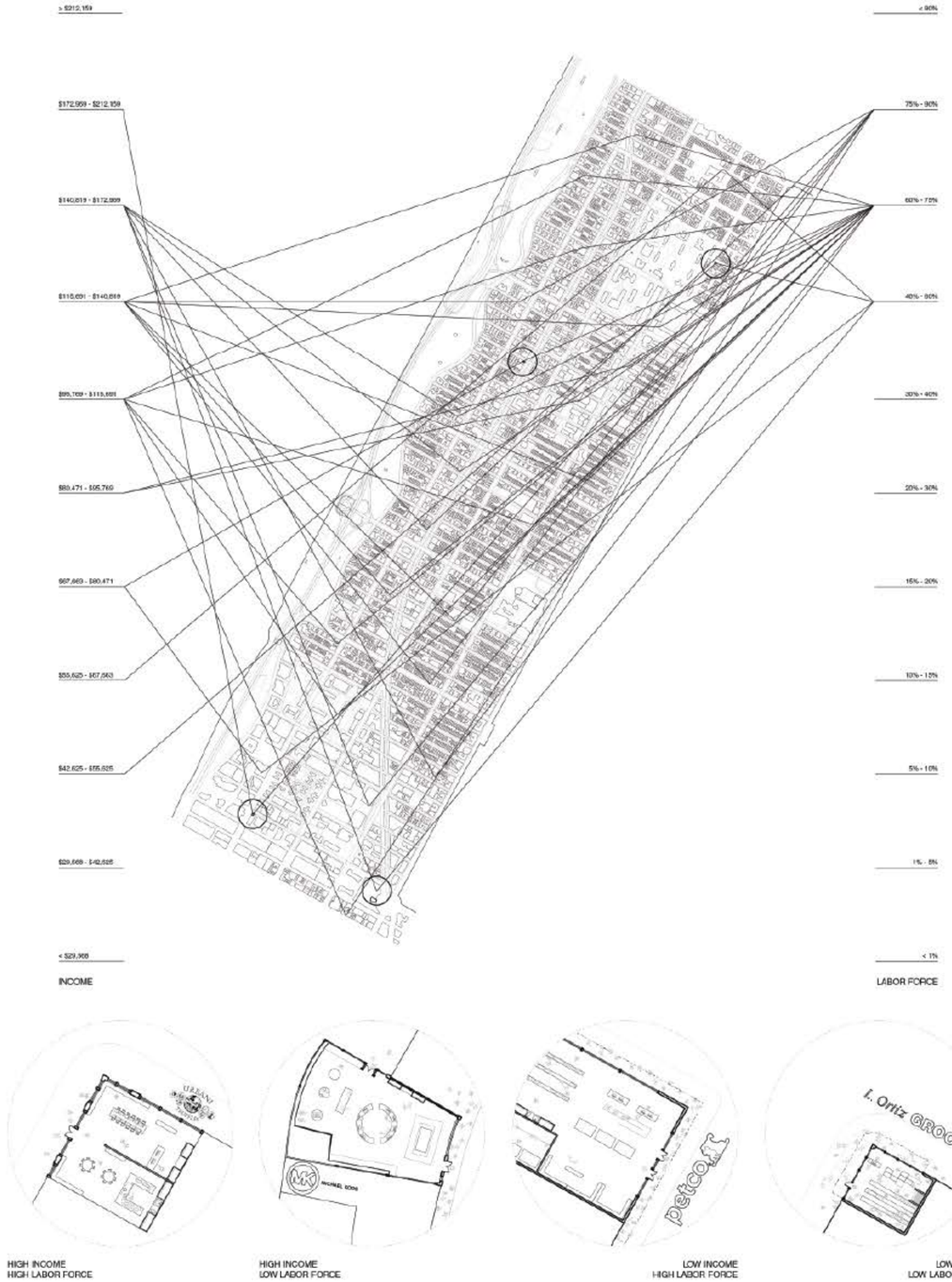
NYC MEDIA COLLABORATIVE

Core 1 Studio Fall 2020 ■ Critic: Anna Puigjaner ■ Pop-up Media Production and Display Event

Data on the economics, race, and consumer culture of the Upper West Side each display the social boundaries and a resulting amount of bias that exists. In addition to being felt, this sensation can be seen through business typologies and their locations - from high-end consumption to necessity-based retail. Additionally, in a sequence of specific advertisements found in two major areas of the site, there is a dramatic difference in the types that are being displayed and the social targeting that influences human bias.

In order to combat this saturation of advertisements and their impacts, this design utilizes reused scaffolding materials and decreases the potential for the population to be manipulated through advertisements. This proposal would be mobile by existing at different locations weekly. These are public and on a common ground with various racial and economic groups of the UWS in order to address the existence of bias, and the consumers' social identity.

The NYC Media Collaborative Pop-Up provides activities and resources as a place where people can participate and exert their own agency in what is interacted with by residents at large as the community will re-negotiate what the site's ads broadcast. Media exerts power, agency, and voice and this will encourage bias reduction, where there will be a greater subconscious openness to belonging. Residents who may not normally feel a sense of place in certain retail zones will begin to feel like they could belong, blurring out the current media's social targeting that designates who can exist where on the site. With this also there would be a breakdown of the built-up bias for or against users or companies.



HIGH INCOME
HIGH LABOR FORCE

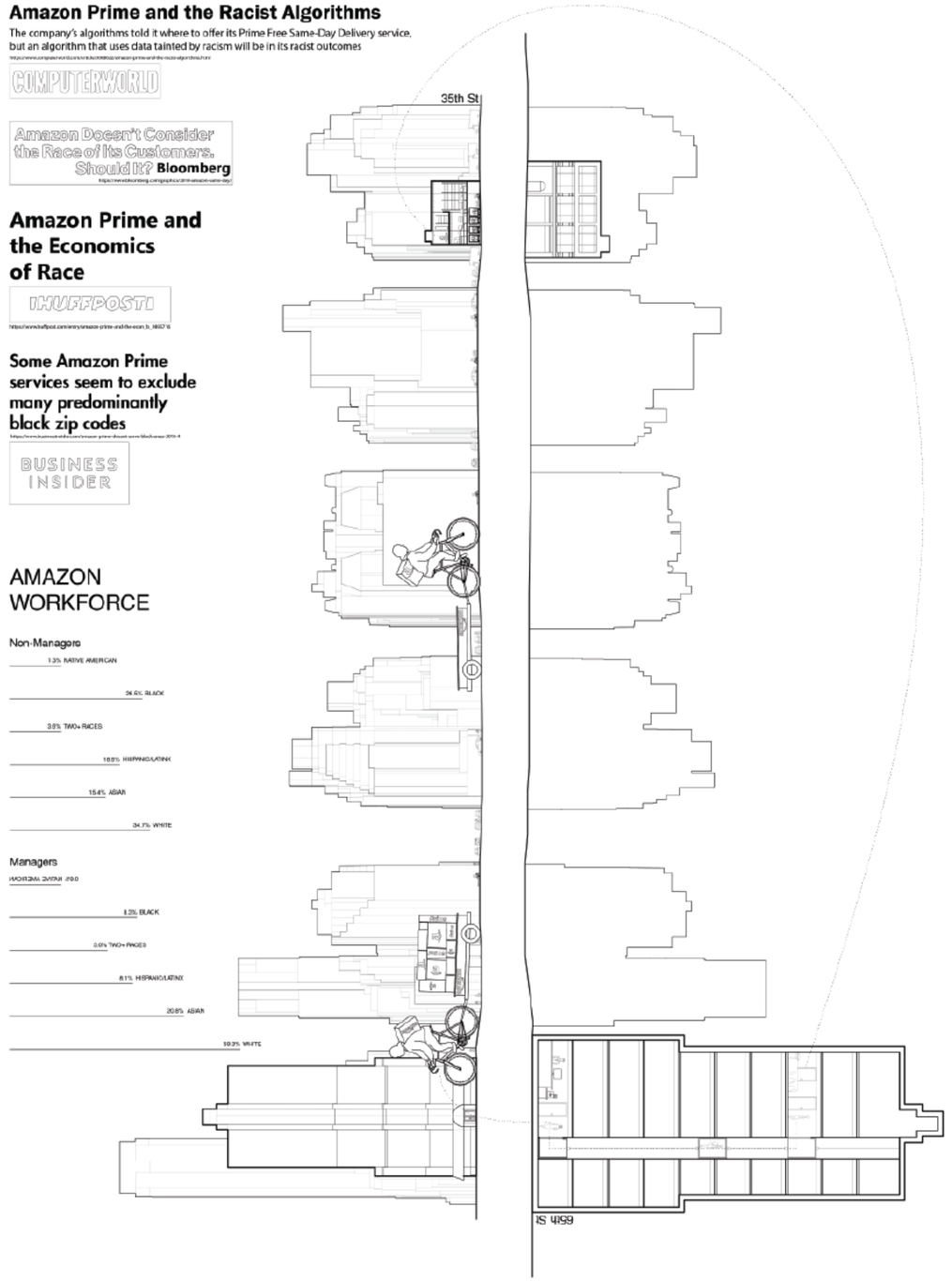
HIGH INCOME
LOW LABOR FORCE

LOW INCOME
HIGH LABOR FORCE

LOW INCOME
LOW LABOR FORCE

Figure 5.2
Diagram - Amazon Delivery
Algorithm by Zip Code

Opposite: Figure 5.1
Diagram - Income and Labor Force
Percentages of Manhattan



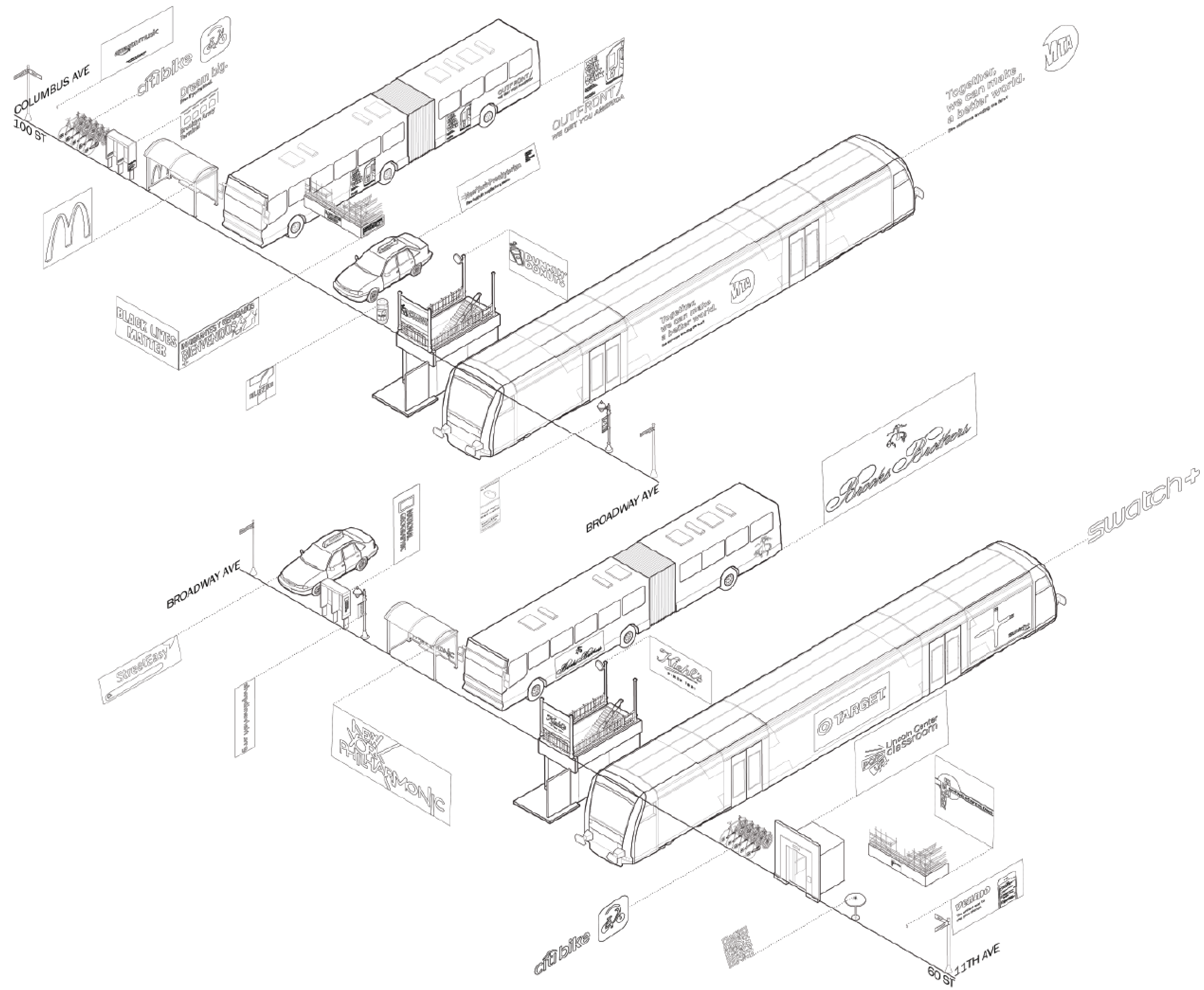


Figure 5.3
Analysis - Comparison of
Advertisements by walking Path

Figure 5.7
Scenographic Model of Installation

Clockwise from Top: Figures 5.4-5.6
Physical Detail Model - Reused Scaffolding

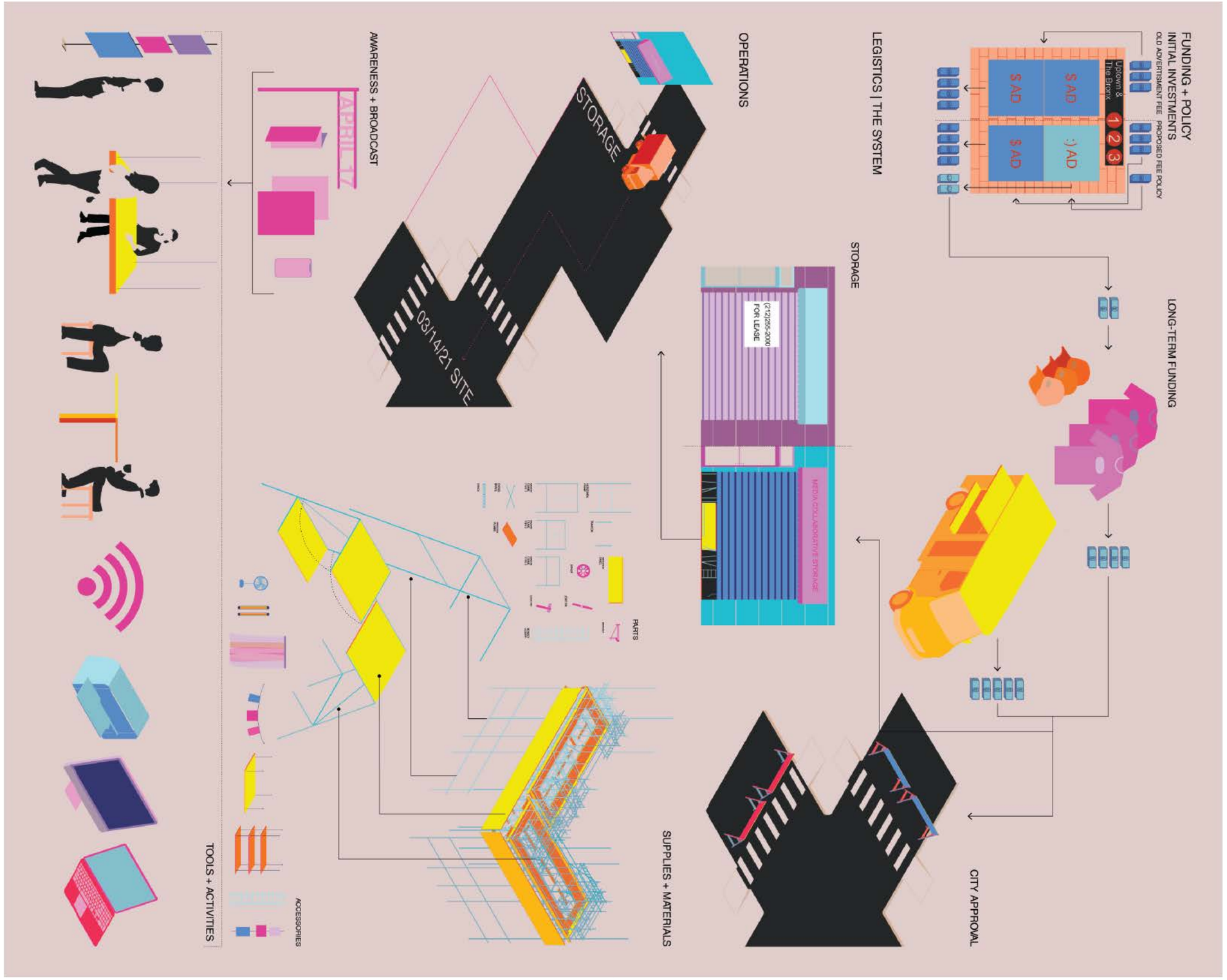
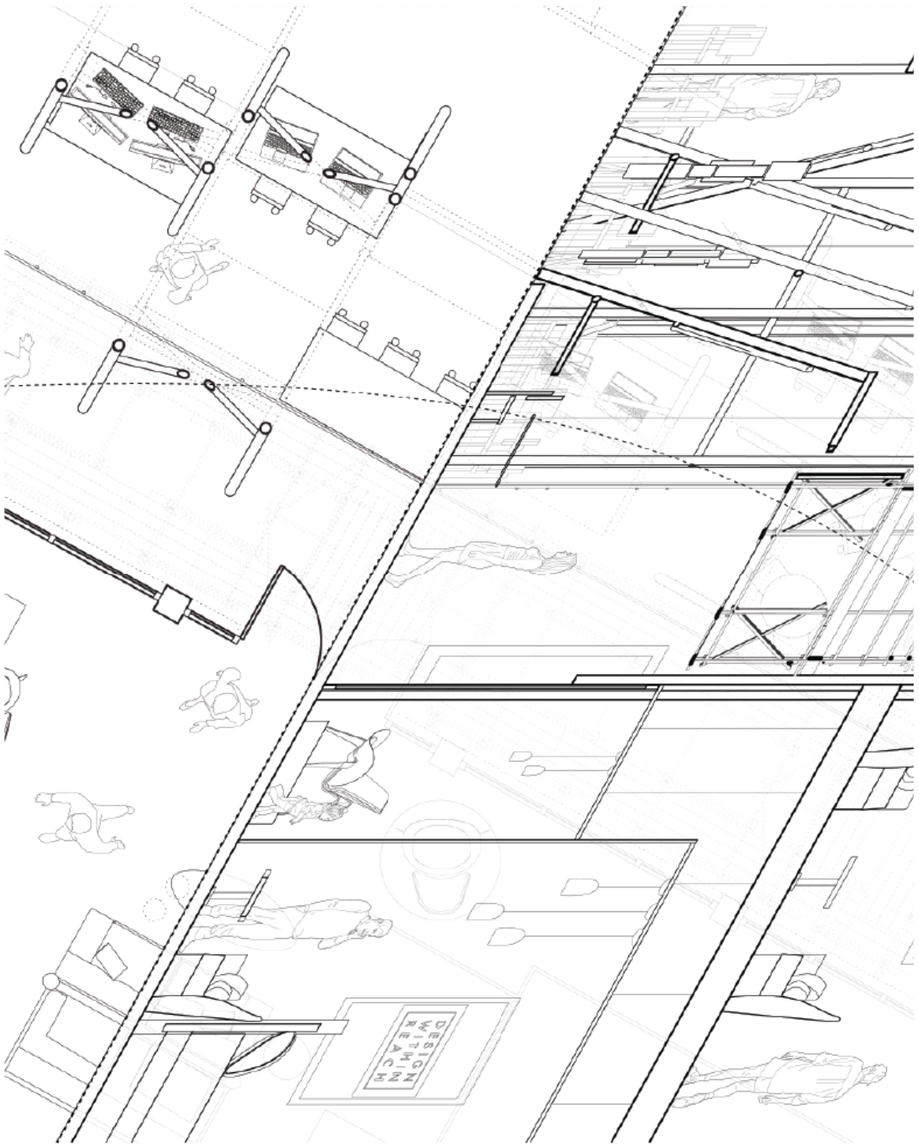
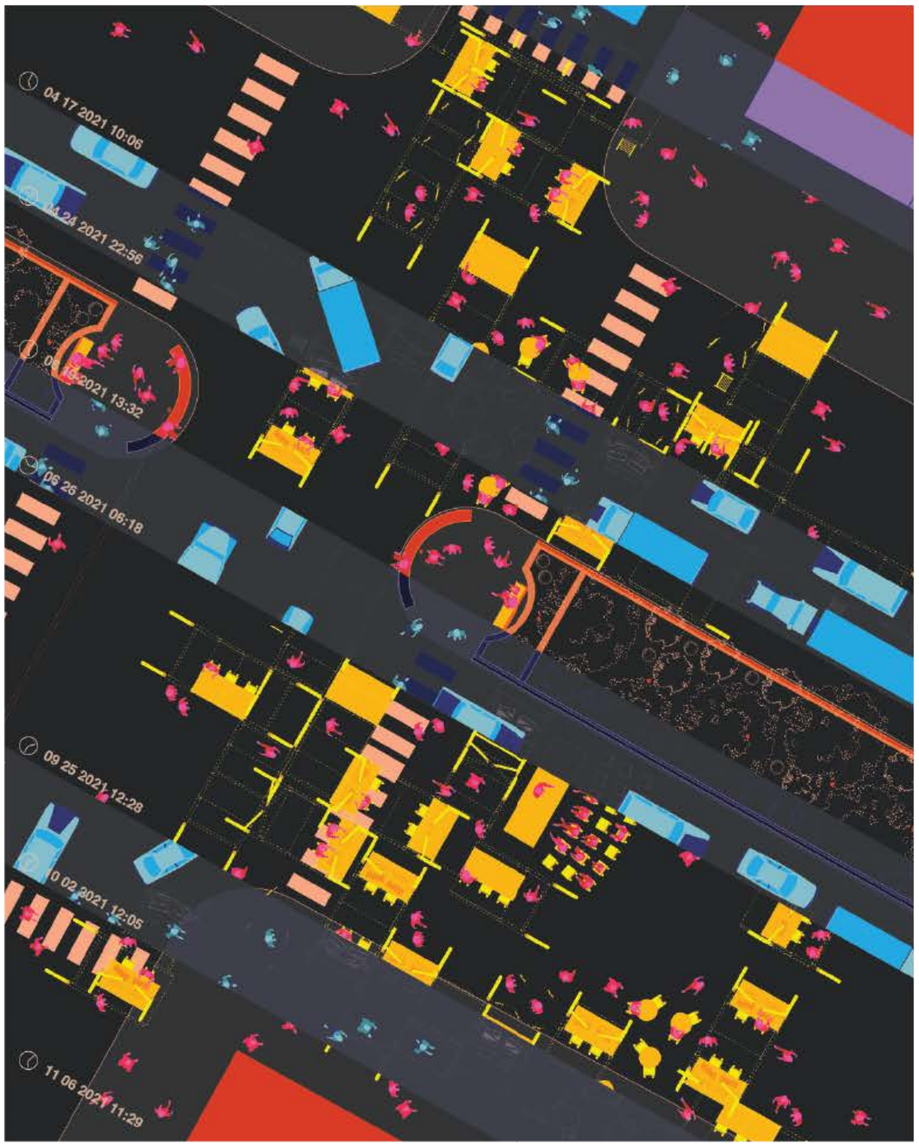


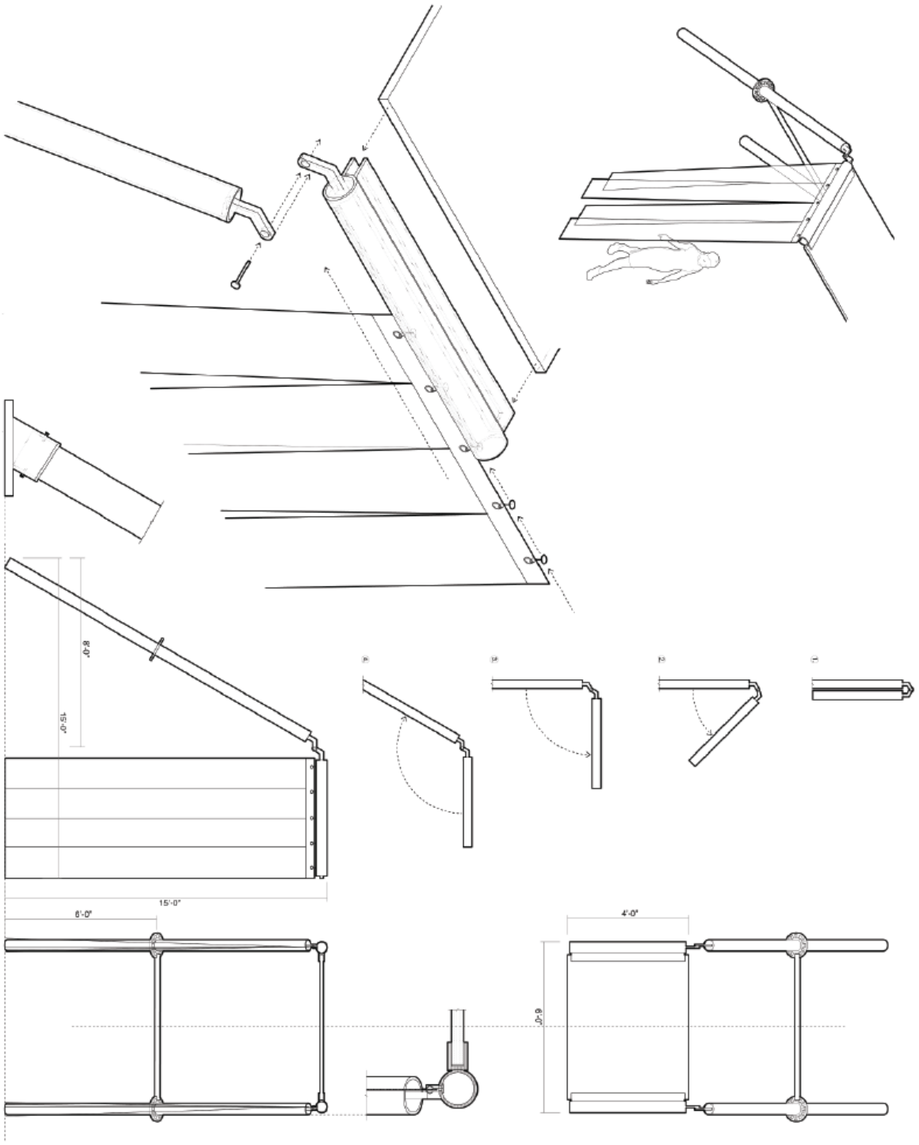
Figure 5.8
Diagram - Steps of Installation and Use





Opposite: Figure 5.9
Plan and Section - Connection to Permanent Storefronts

Figure 5.10
Plan - Broadway Block on Different Dates



Opposite: Figure 5.11
Assembly Detail - Construction of Pop-Up

Figure 5.12
Perspective - Event in Two Seasons

FOR - AGAINST

The Contemporary Spring 2022 ■ Prof: Bernard Tschumi ■ Selected Excerpts From Weekly Readings and Responses

Session 02

For:

Typologies and specifications remain constant as architects and non-architects aim to identify and classify elements and buildings like specimen in a taxonomy. Breedings of program, function, aesthetic, economics, and energy ratings are outlined for categorizations, tax purposes, building codes, publics/non-publics, and more. Many cross-pollinate yet remain subject to a label.

Against:

Vidler's argument of the three typologies has become outdated; we have transgressed the third typology and are now on our fourth or fifth. The third discusses nature as element but negates the current issues we're experiencing with nature and resources. The scale, beyond the city, now addresses global concerns.

Session 03

For:

The notion of viewing and objectification of an inanimate or even human figures, discussed by Colquhoun, in architecture remain a consideration today as thoughts and opinions on design and who or what we are designing for persists. Hays's commentary on the viewing subjects, planes of perception, the moment of encounter, and how each of these projects an outward or inward force onto the subject remains a valuable debate today. Who or what is the subject, and how do we articulate these moments to accommodate an unidentified subject? Hays quotes Hejduk and states "you are not just looking at it: 'you are in it... you become an element of an internal system of organisms'" (Encounter, 97). Colquhoun furthers this thought as he questions the imagination and technology's role in this overall relationship of an object's ontology: "technology has created a separation between means and ends" (Essays in Architectural Criticism, 167). This creates an environment in a state of becoming as objects, humans, and architectural elements each transgress the other and undergo role swapping constantly. Every object has an impact on one another. The human impacts the element, the element the earth, the earth the human, and so on. Each exuberates and penetrates the other with an unseen force that is constantly causing a reaction.

1. Rossi, Aldo. Introduction and Chapter 1 of *The Architecture of the City* (Cambridge, Mass: MIT Press, 1982).

2. Vidler, Anthony. "The Third Typology" (1978). (reprinted in *Architecture Theory* since 1968).

3. Colquhoun, Alan. "Typology and Design Method," in *Essays in Architectural Criticism: Modern Architecture and Historical Change* (Cambridge, MA: MIT Press, 1981): 43-50. (first published in Arena vol. 83, June 1967).

4. Moneo, Rafael. "On Typology," *Oppositions* 13 (Summer 1978): 23-45.

5. Rowe, Colin and Fred Koetter. *Collage City* (1973) (excerpts in Architecture Theory since 1968).

1. Rowe, Colin. Introduction to *Five Architects*. (reprinted in *Architecture Theory* since 1968).

2. Hays, K. Michael. "Encounter," in *Architecture's Desire: Reading the Late Avant-Garde*. Cambridge, MA: MIT Press, 2010.

3. Colquhoun, Alan. "From Bricolage to Myth, or How to Put Humpty-Dumpty Together Again," in *Essays in Architectural Criticism: Modern Architecture and Historical Change* (Cambridge, MA: MIT Press, 1981).

Against:
The notion that architecture is restricted to the binaries of sign versus signified or duck versus shed is outdated. We have limited ourselves to many binaries in design and aim to label every element in which we interact. Architecture is more than "the sign which is the building and the sign which fronts the building" (On Ducks and Decoration, 447). Technology, art, music, and more have all entered the realm of the built environment and led to a production of sampling that transgresses the 'duck and the shed' narratives. A shopping center needs neither a sign nor a formal gesture hinting to the stores in which it possesses for one to know that the building is a commercial shopping center. There has become a sense of rhythm, repetition, and recognition that the consumer is inherently aware of without the architectural binary that Scott Brown and Venturi have detailed. Housing typologies, restaurants, institutions, and more could all be argued to surpass the duck and shed, yet still be recognized for what they are, even when designed in a different style and generation.

Session 05

For:
I agree with Gehry's discussions on the design process, relationships of art composition and building compositions, and materiality. Through his commentaries, he is able to relate the more conceptual notions of movement, art, or objects to the more practice-related notions of construction methods and materials. This ability to interrelate such seemingly juxtaposing concepts is an ability many designers and architects attempt regularly. Gehry makes the comments that "from the very beginning [he's] been worried about the translation of ideas through the many people involved in the process of making a building. They frequently drain the strength and power out of an idea" (Gehry Talks, 46). This remains to be a very commonly discussed predicament that architects face during the fruition of their designs. Gehry goes on to say "you [have] to think of the finished building" in order to have "a building that [has] feeling, genuine passion" (Gehry Talks, 46). Although many do not see the need for a space to evoke feeling, I agree with the high regard in which Gehry places this relationship of many components. It is important for these relationships to persist as their impacts heavily expand beyond the boundary of the building.

Against:
While Derrida is not inherently wrong in his claims, he seems to be limiting architecture by reducing it to the building itself. This reduction negates nature, economics, a building's inhabitant, and more that others seem to acknowledge through their texts. Derrida claims "we must recognize in it [architecture] an artifact, a construction, a monument...it is not natural" (AA Files, 573). Derrida's claim is not inherently false, but it is outdated and restrictive to not then claim the natural as an architecture as well. He aims his focus to the building and the warped and biased history of the building. Yes, a building is manmade and not entirely natural, but nature itself is also its own architecture. This cannot be ignored as we gain a lot of our understanding of architecture from nature.

1. Wigley, Mark. "Deconstructivist Architecture," in *Deconstructivist Architecture* (New York: MoMA, 1988), 10–20.

2. Derrida, Jacques. "Point de Folie: Maintenant l'Architecture: Bernard Tschumi: La Casa Vide," *AA Files* (Summer 1986).

3. Tschumi, Bernard. "Disjunctions." In *Architecture and Disjunction* (New York: MIT Press, 1994).

4. Gehry, Frank. Excerpt from *Gehry Talks* (New York: Rizzoli, 1999).

5. Evans, Robin. 'Persistent Breakage,' Chapter 2 in *The Projective Cast: Architecture and Its Three Geometries.* Cambridge, MA: MIT Press, 1995.

Session 07

For:
In Philip Ursprung's text on minimalism and minimal art, his comments on Donald Judd's ideas about the scale and complexity of art as it relates to minimalism maintains relevant as we continue to debate claims like "less is more," "the whole is greater than the sum of its parts," and "ornament is crime." The new art he describes acknowledges more than medium and technique as it invites the surroundings to become a part of the overall performance. As "a sculpture is made up of individual elements the impression should not be given that some are subordinate to or serve others" yet they work in balance with one another to produce a sense of a whole (Ursprung 8). Instead of looking at minimalism as a reduction of elements, this concept produces something minimal by adding features and broadening the scope. Sometimes stripping an item down to its raw component only increases complexity and reduces its minimalistic value. The atmosphere, feeling, visuals, and composition designers create speak more to the binary of ornament versus minimalism than just an image or piece at face value. A grand seemingly simple gesture is no longer minimal when increased to a certain scale or positioned at a specific intimidating angle as it evokes certain senses that something more seemingly complex at a different scale or angle does not.

Against:
Ilka and Andreas Ruby go on further to discuss Donald Judd and his ideas behind minimalism as it relates to the dialect between art and architecture. However, their discussion maintains a separation between the two elements of art and space and how each distinctively have an impact on the other. They should be viewing and contemplating these two as parts of a greater whole, two becoming one. It is naive to think the two parts should be maintained as separate entities. The author continues to reduce elements into binaries through the discussion of inside versus outside and how each relate to the atmospheric interpretation of minimalism. They yet again separate art and architecture by stating that "in contrast to artworks, [buildings] do have an interior space that in the utilitarian sense, also represents their raison d'etre, the primary social experience of architecture includes both the surrounding space (=outside) and their internal space" (Ruby 25). Art and architecture are one and furthermore become one when they are physically introduced to each other. Setting them apart from one another and writing about them, and inside versus outside, negates minimalism and only increases complexity.

Session 08

For:
The Politics of the Envelope discusses topics that still maintain their relevancy as the conversations on envelopes and their compositions persist. The text provides ample examples that prove that a building's envelope surpasses a practical feature of shelter, but becomes something of symbolism, sustainability, psychology, semiotics, and more. The envelope impacts those within and those outside of the building whether it be through the sheer materiality or the form. A feeling or sensation is evoked for both humans and those that are more than human. The "materiality and tessellation of the surface become critical

1. Ursprung, Philip. "Minimalism and Minimal Art." In *Minimal Architecture* (Munich: Prestel, 2003).

2. Ruby, Ilka and Andreas. "Essential, Meta-, Trans-. The Chimeras of Minimalist Architecture." In *Minimal Architecture* (Munich: Prestel, 2003).

3. Zumthor, Peter. *Atmospheres: Architectural Environments- Surrounding Objects.* Basel: Birkhäuser, 2006.

design mechanisms mediating between simultaneous demands for iconicity and immunization" that absorb or defy the idea of signification, architectural expression, or context. Every detail cannot be thought of in isolation as each has an impact on the other, as well as in a much broader scheme. This text raises many issues that are not commonly thought of when the design is coming to fruition. The minimalism or added adornment of ornamentation is a choice that will inevitably have an impact on many scales. Are we viewing envelopes or cladding as merely a piece of the design that needs to meet a specific aesthetic? Or are we viewing it as its own project with its own identity in itself?

Against:

In the writing The Art-Architecture Complex, Hal Foster describes the façade of City Hall in London that is advertised as ecological and accountable. The system is said to be technologically advanced and beneficial for public relations. The transparency of the 'ecological' façade "might be associated with the political or administrative workings of the client," which are typically the opposite of transparent. Ecological facades or building features transgress merely the materiality or the construction to a point of the impact it has on the environment or people who encounter it. When the transparency becomes a selling point for the ability of the public to watch or observe the policy makers within in order to hold the politicians accountable, it becomes a much less 'green' or 'ecological' feature as it produces the same problematic psychological phenomena as the Panopticon. These features should be considered in more depth than simply deemed as green just because they have less of a carbon footprint during construction or because they provide natural light into the building. If the user is uncomfortable mentally or physically or if the birds fly into the façade because it reflects the sky, it is no longer green and clean. Envelopes, like many other building features, should be considered more wholistically from the point of fruition to the point of the building's future life, renovation, or demise.

1. Baudrillard, Jean. "The Beaubourg-Effect: Implosion and Deterrence," trans. R. Krauss, A. Michelson. *October* 20 (Spring 1982): 3–13. (reprinted in *Rethinking Architecture*, ed Neil Leach [London: Routledge, 1997])

2. Zaero-Polo, Alejandro. "The Politics of the Envelope," *Log #13/14* (Fall 2008): 97-132.

3. Foster, Hal. "Crystal Palace" and "Light Modernity," in *The Art-Architecture Complex*. London: Verso, 2011.

KILLING TO LIVE(ING)

Adv 4 Studio Spring 2022 ■ Critic: Nahyun Hwang ■ More Than Human Sanctuary

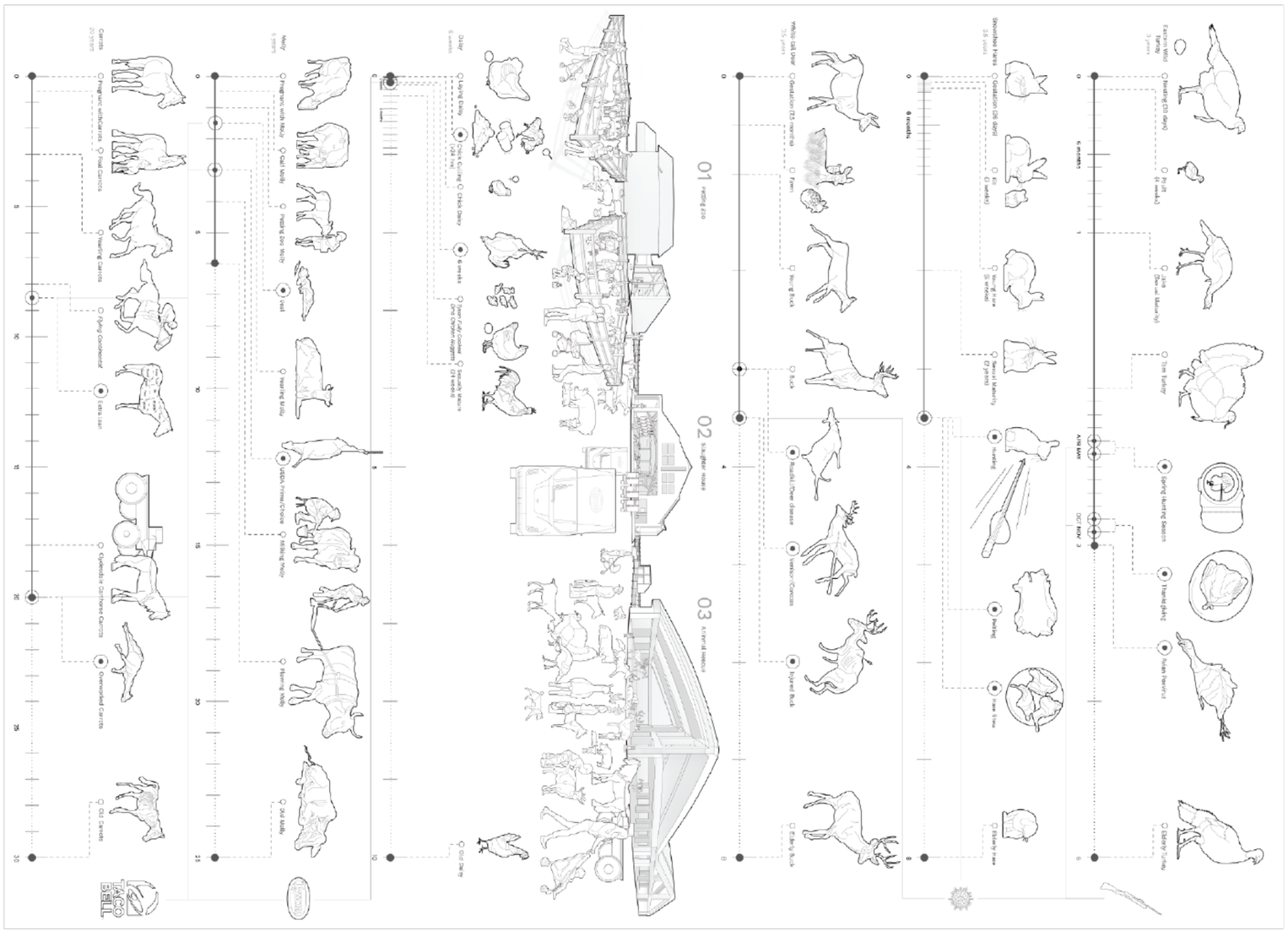
Collaborator : Alex He

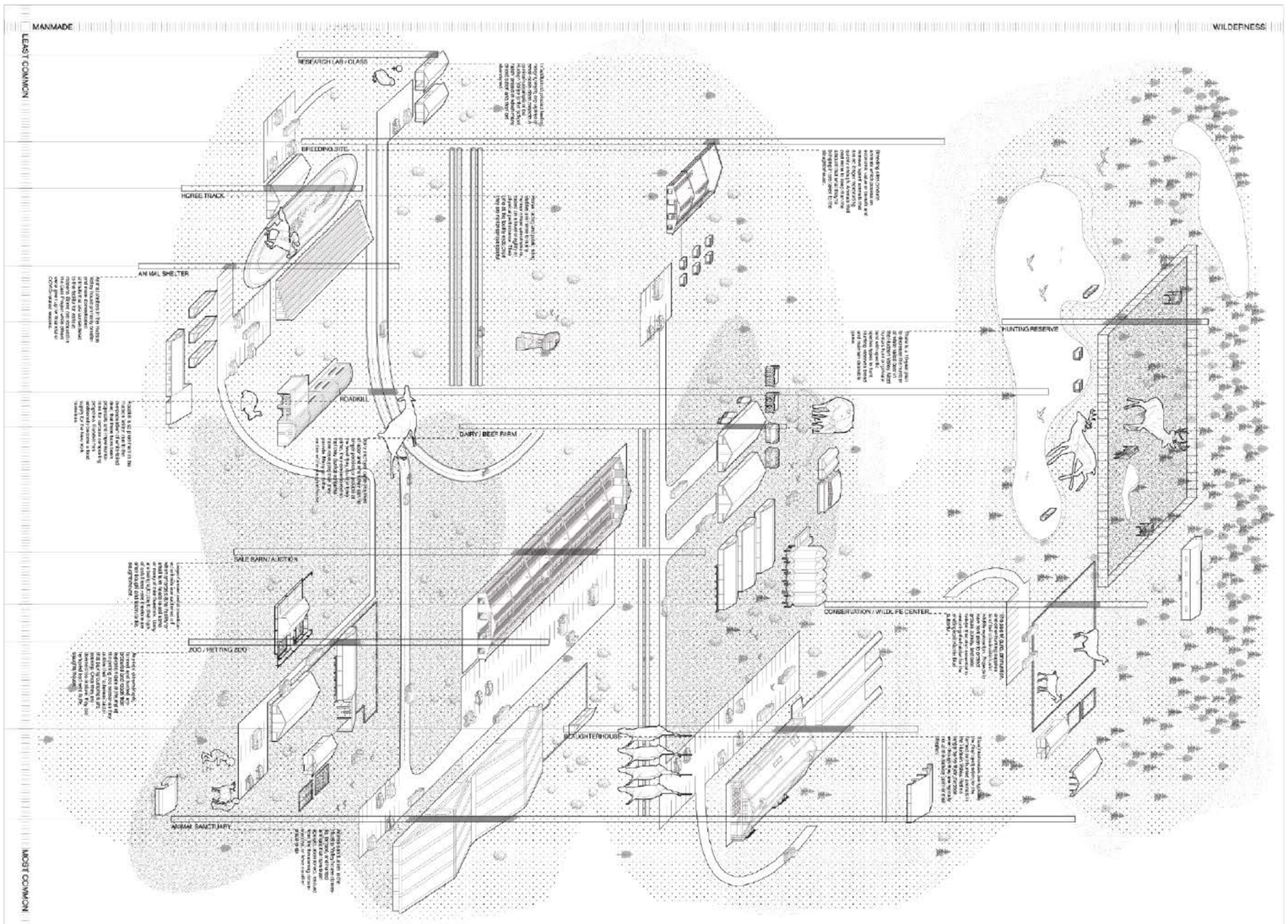
The Hudson Valley is often a place of escape and rest for the select few, however, it became apparent that this place of refuge is resting on the support of the many - specifically animals or those that are more than human. By following the life trajectories of various species, we discovered how animal labor and commerce are the driving forces behind the site typologies and facilities which they reside within or pass through - and ultimately determine when they meet their date of expiration.

We narrowed our focus on hunting preserves and specifically chose the TMT Hunting Preserve in Staatsburg, Dutchess County, NY as our site. The research and design proposals plan to respond to the site evolutions and ecological conditions utilizing current existing structures from the site.

Through a series of interventions that range in typologies for the benefit and wellbeing of animals on a large domestic-to-wild spectrum, the existing human-centric voyeurism disintegrates and animals become autonomous and personified. The proposals address just a few animals that will be residing on the site: deer, birds, and cattle and made a series of interventions across the site (Figure 7.12) to address the needs and wellbeing of these selected characters.

Over time, the presence of the human will become less apparent and the animal's self-sustainment and interactions will increase. Each animal, from the domesticated to the farmed to the wild, re-connects with its own ontology and gains agency, which the project begins to navigate through by creating a platform to amplify these origins and overlaps.





Opposite: Figure 7.1
Animal Life Sequence Interruptions and Trajectory Shifts

Figure 7.2
Spectrum of Wild to Domesticated Animals, Sites of Existence, Frequency

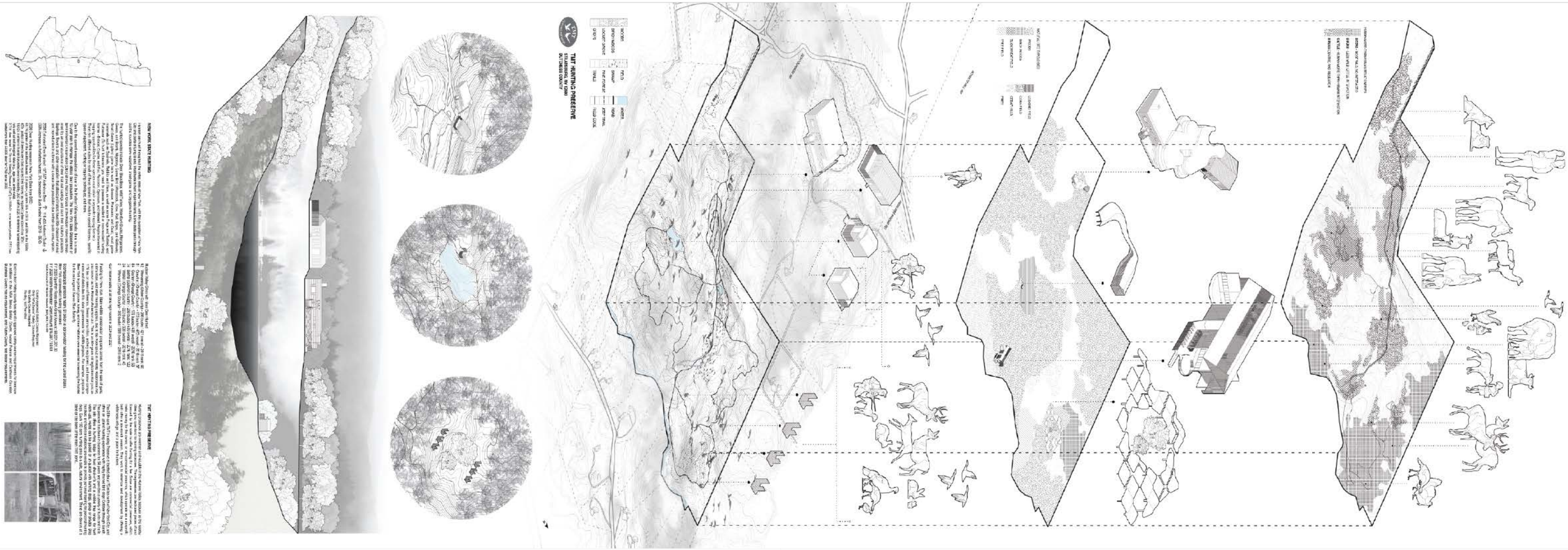


Figure 7.3
Hunting Reserve Site Research, Hunting Policies, and Intervention

Opposite: Figure 7.4
Perspective from Deer Eye - Deer Feeding Structure

Figure 7.5
Perspective from Cow Eye - Cattle Barn and Rehabilitation Center

Figure 7.6
Perspective from Duck Eye - Duck Landing and Shelter

Figure 7.7 - 7.11
Models of Land from Site and Soil Type
Layers for Landscape Intervention

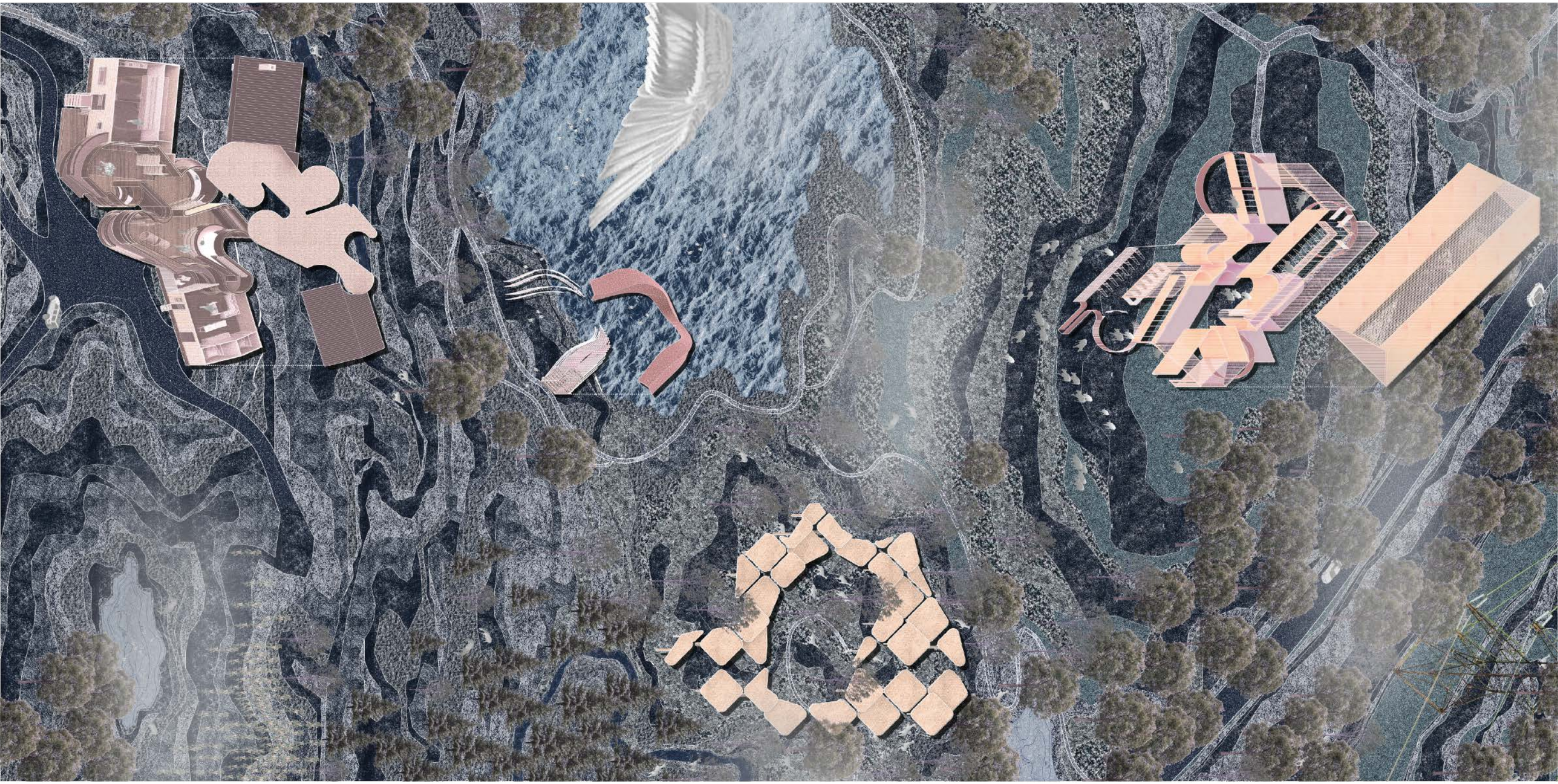


Figure 7.12
Axonometric Design Interventions Across Site

Interventions from Top to Bottom: Cattle Barn, Deer Feeding Shelter, Duck Landing, Clinic and Office

Figure 8.0
Perspective - Exterior of Sweat Lodge, Remote Site Location

SACRED SCARCITIES

Adv 6 Studio Spring 2023 ■ Critic: David Benjamin ■ A.I. Sweat Lodge

This project is a new type of sweat lodge that encapsulates issues of climate change, spirituality, and indigenous sovereignty for the people of Navajo Nation.

Drawing upon traditional sweat lodge architecture, a hybrid of past techniques and future technologies manifest to form a new space of biomaterials, projections, and steam. There is a constant oscillation of one's connection and focus on Water, Earth, and Air - holy elements of the ritual. AI is an agent just as much as the heat. Traditional stories from the elders and daily secular water consumption data will train the system to produce engulfing visuals sparking hypnosis and hallucinations with an inherent message of the climate future. Digital projections, medicinal herbs, drumming, high temperatures, and technological wall additions that preserve and channel water data all play into the user's practice and an immersive digital experience is manufactured that engages all five senses.

Water agreements between Native reservations and their non-reservation surroundings incite political unrest as water infrastructure is monopolized so the vulnerable are left with no choice other than to migrate. Spiritual practice binds to secular necessities as the rate of drought and evaporation are decreased, reducing territorial monopolies and the resulting migration of the To'Hajiilee tribal community, a subgroup of Navajo Nation, who are amongst the most vulnerable to climate change. The Sweat Lodge tradition, under threat, is preserved for future generations and empowered to become more accessible with customized introspective experiences that respond to water status and data-trained feedback loops - increasing the ritual's recognition by providing new technologies to conserve water and the practice.

Each participant undergoes a unique experience based on their own introspections and reactions to the senses that are being stimulated. To dissolve the boundary between non-reservation and reservation and the discrepancies in water qualities, governmental funding shifts to these infrastructures from grants that are working to give equal access to clean water. This movement will shift the reliance and use of water to a minimal amount, increase preservations, and ultimately protect this cultural practice, all with the goal to reduce CO_2 emissions as a result of mitigating migrations from a tribe by simulating and empowering a ritual at a larger generational scale, and everything there is to learn.

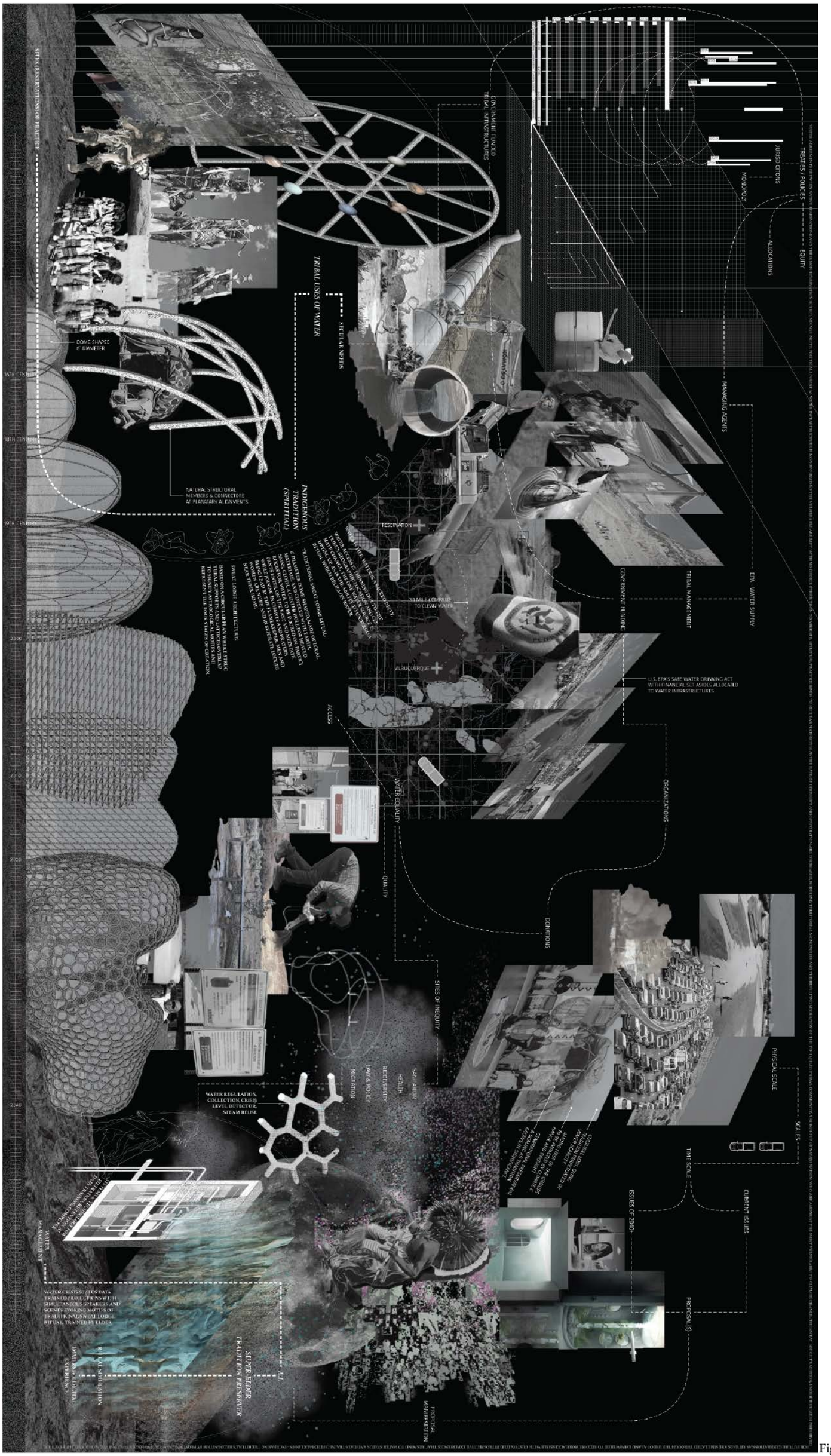


Figure 8.1
Investigation Map - Policies, A.I., Traditions, Data, Climate Change

Figure 8.2
Map Layers of New Mexico

Figure 8.3
Render Section - Ritual
Experience, Connection to Site

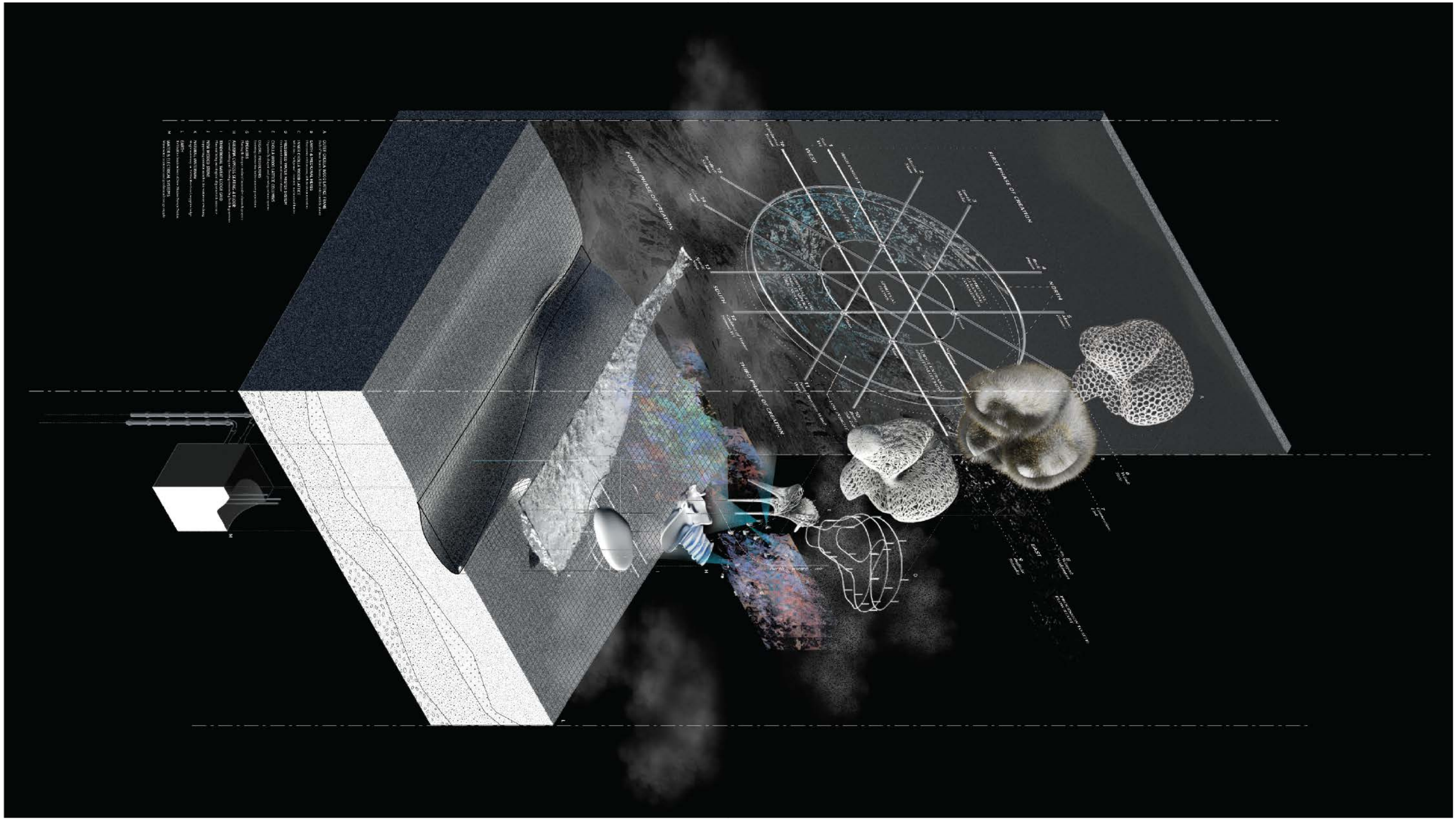


Figure 8.4
Exploded Isometric - Layers of Physical and Virtual Materials, Lodge Spiritual Tradition Diagram

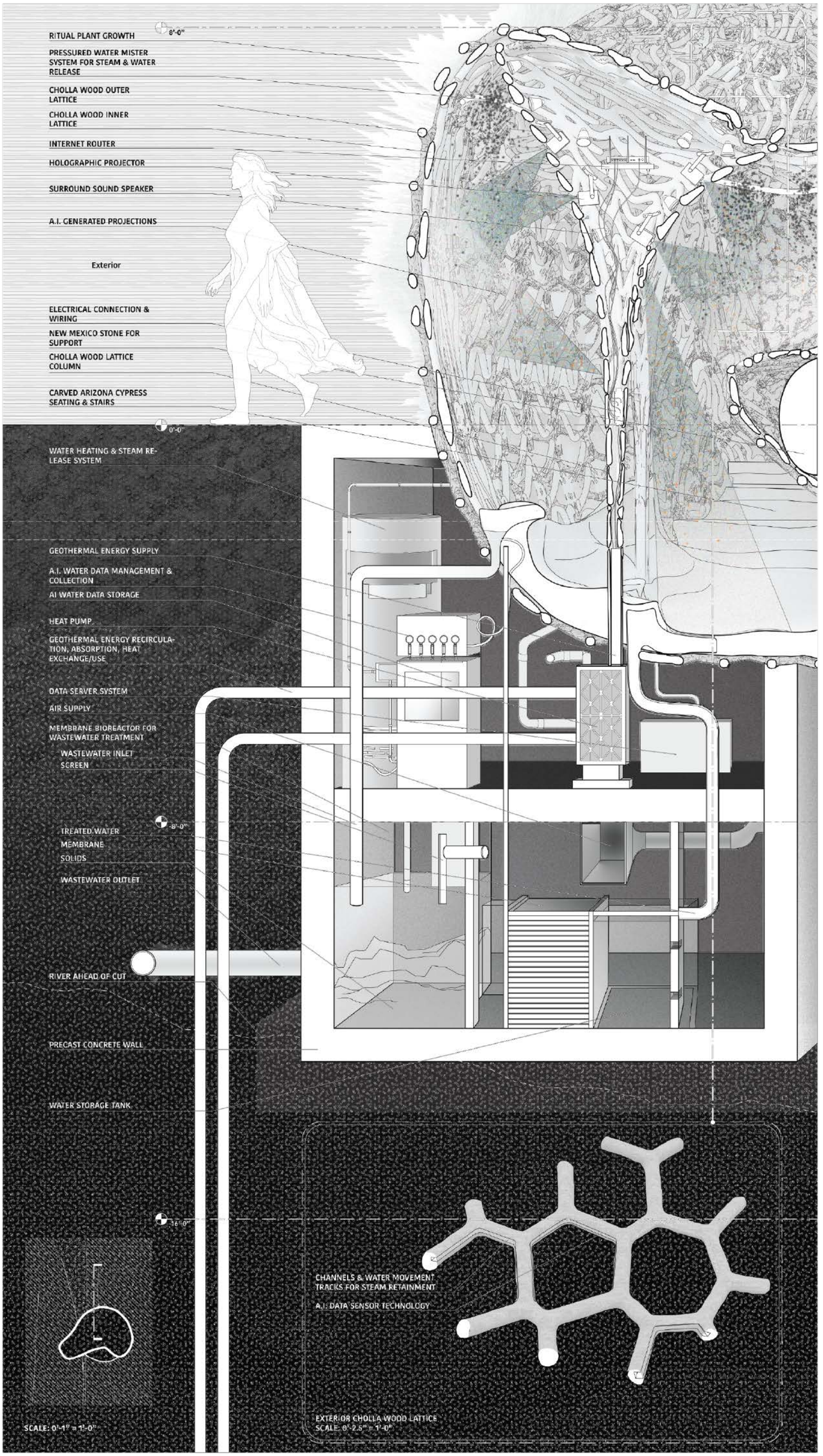


Figure 8.5
Detail Section - Technical Elements, Biomaterial Connections, A.I. Systems

SECOND STEP OF RITUAL

MEMBERS TURN ON THE WATER HEATING SYSTEMS, STEAM RELEASE SENSORS, DIGITAL PROJECTORS, SPEAKERS, AND FILTRATION SYSTEMS

FIFTH STEP OF RITUAL

UPON ENTERING, MEMBERS TRAVEL IN A CLOCKWISE MOTION AND SIT SEPARATELY IN CREVICES OF CARVED CYPRUS GROUND COVERING AND SEATING

FOURTH STEP OF RITUAL

MEMBERS ENTER THE SWEAT LODGE STRUCTURE ON THE EAST SIDE

SEVENTH STEP OF RITUAL

AFTER ONE IS CLEANSED OR HEALED THROUGH ELICITED VISIONS, THE PARTICIPANT EXITS THE DARK SPACE AND FULLY SUBMERGES THEMSELVES IN THE NATURAL WATER BEFORE DEPARTING FROM THE SITE

SYNCHRONOUS RELATIONSHIP WITH FACILITIES & SKY

EAST (ENTRANCE)

THIRD STEP OF RITUAL

MEMBERS STRIP EXCESS CLOTHING TO BE BETTER SUITED FOR EXTREME INTERNAL TEMPERATURES OF THE SWEAT LODGE

SIXTH STEP OF RITUAL

ELDER TRAINED ELECTRONIC SPEAKERS AND PROJECTORS ENTRANCE EACH INDIVIDUAL ON THEIR OWN MEDITATIONS AS SACRED PRAYERS, CHANTS, AND DRUMMING ARE PLAYED WHILE SIMULATIONS OF THE WATER MANAGEMENT SYSTEM'S DATA COLLECTION IS PORTRAYED ON A DAILY CHANGING BASIS

FIRST STEP OF RITUAL

PROCESSION OF 5-10 TOHA-JIILEE TRIBAL MEMBERS TRAVEL TO REMOTE SITE OF THE ONLY NATURAL WATER WAY ON THIS SUBSET OF NAVAJO NATION RESERVATION IN NEW MEXICO

TRAVEL TIME BY CAR: APPROXIMATELY 20 MINUTES FROM NEAREST BUILDING (TO'HAJIILEE WELCOME CENTER)

Figure 8.6
Plan - Diagram of Ritual Process

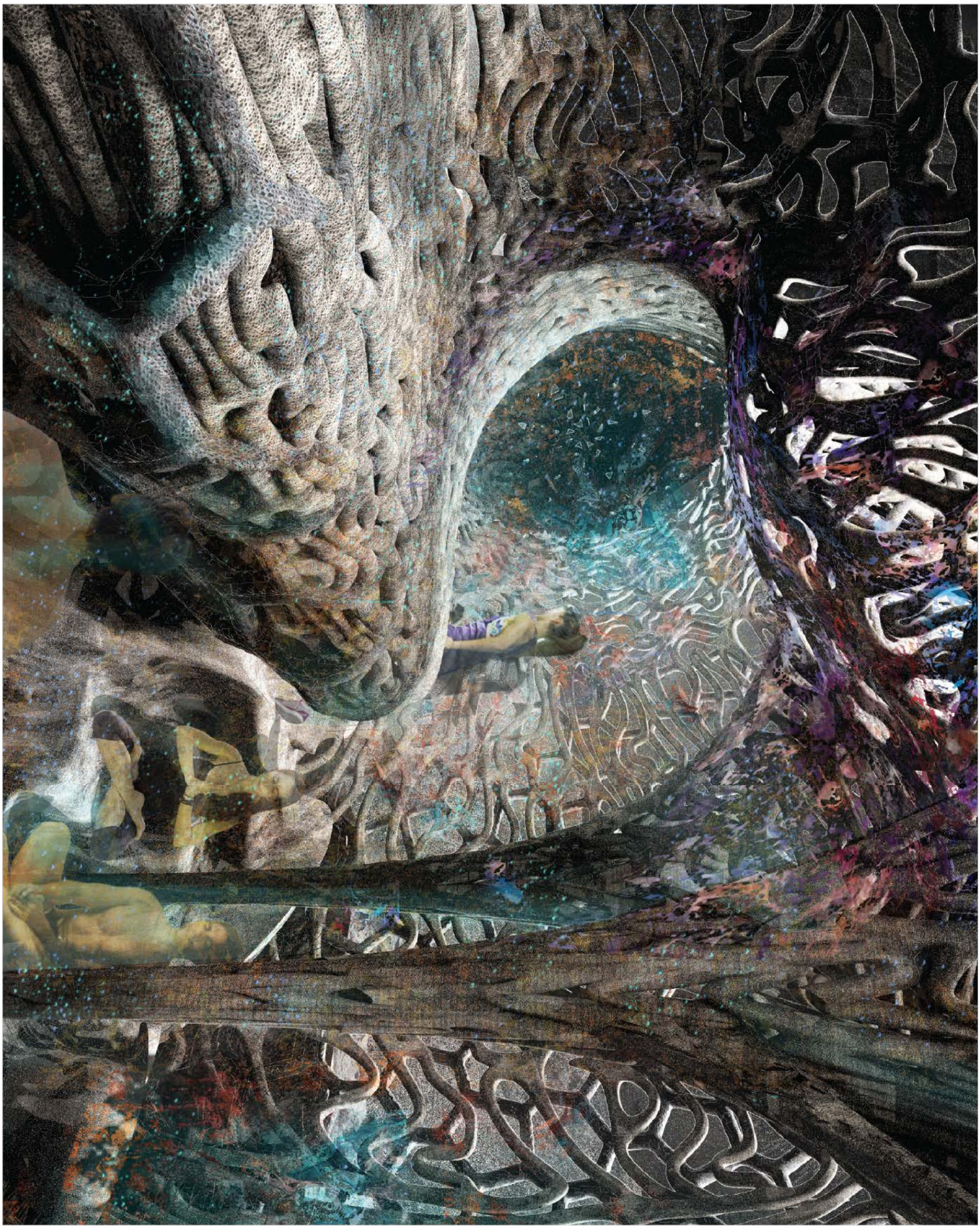


Figure 8.7
Perspective - Interior of Sweat Lodge During Ritual

Figure 9.0
3D Taxonomy Breeding
LC2PC1LC3PC2LA12PB1LB4PA3

A POPOVA TAXONOMY

Architecture Apropos Art Spring 2021 ■ Profs: Steven Holl + Dimitra Tsachrelia ■

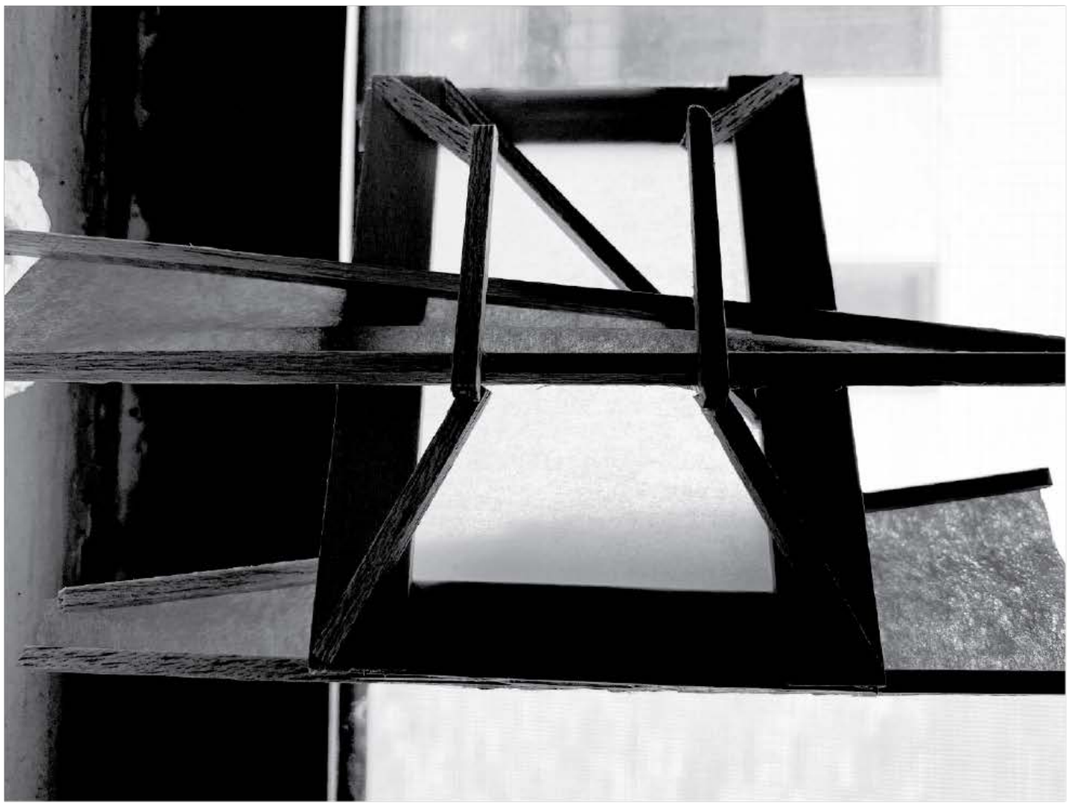
The design seminar focuses on Art's relation to Architecture through the lens of 21st century works. This analysis specifically investigates Lyubov Popova's early 1900s art through the lens of Colin Rowe and Robert Slutzky's "Literal and Phenomenal Transparency" of the 1960s. Works that can be classified as 'literal,' are each manufactured in different styles but translate an obvious level of transparency as they allow the audience to see directly into what lies beyond without independent assumptions.

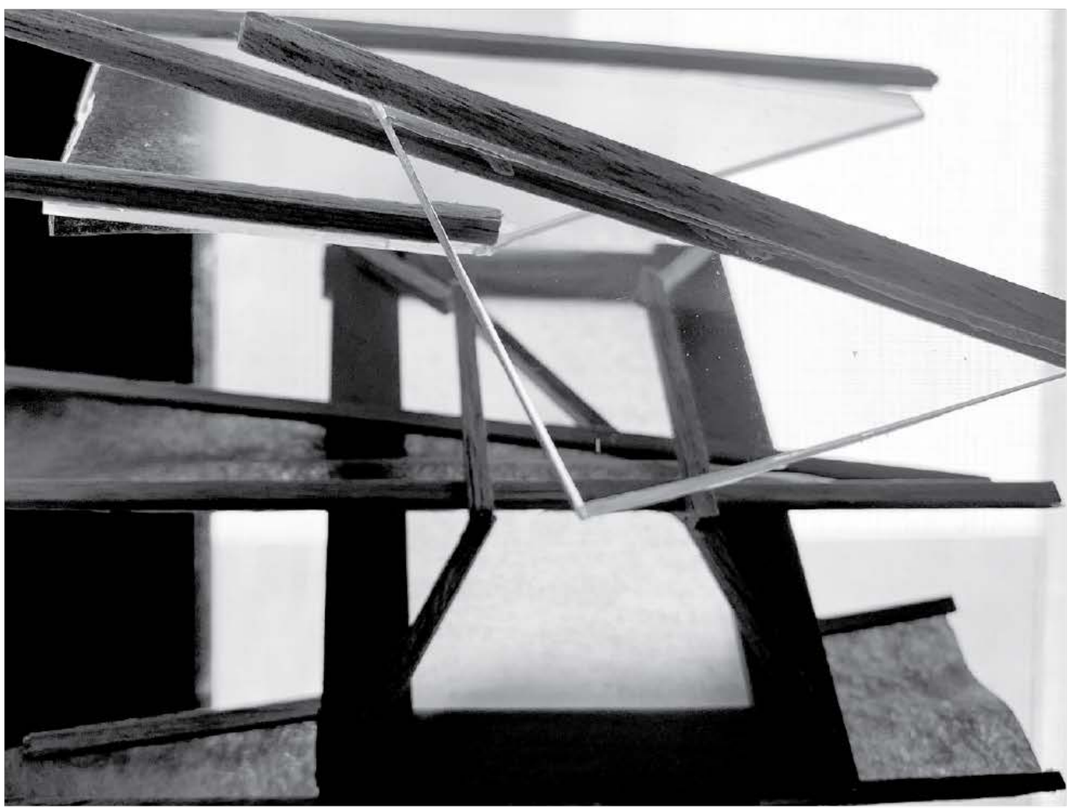
Moments of this phenomena are highlighted and cut out to better understand the superimposition of the planes preceding the body lying beyond, with little left to the imagination of the viewer. Meanwhile, some of Popova's mid-to-late-paintings embody phenomenal transparency, which exists through abstraction and relies on a higher level of inferencing by the observer. It is seen when she articulates the planes with an abstracted notion of space. The cutouts isolated lose their inherent essence and create new understandings of what could lie beyond the rectangular planes. Missing information is less resolved in the mind of the observer.

By reorienting the fragments into a more uniform tapestry and stripping them from their origins, they can be re-understood as a kit of parts that may evoke specific phenomena, understandings, or misunderstandings in the minds of the observer. Breaking these members forces the unknown to become more knowable. From this tapestry of transparent members, new typologies can be manifested by breeding the elements and cross-pollination of Popova's works. A series of breedings marry one literal transparent element to one phenomenological transparent element to suggest a new idea where the phenomenal can be re-understood as literal and vice versa. New moments exist where non-existent forms can be implied and understood to lie beyond the layers and continuing lines transgress from one work of art to another.

A final breeding produces a new organism which embodies both the literal and phenomenal form of transparency with assumptions made by the viewer. Angles and geometries from one painting appear to be in continuation with fragments from another as the eye moves to understand what does or does not or could or could not lie beyond.

Figure 9.1
Taxonomy and Breedings of
Painting Components





Opposite: Figure 9.2
3D Taxonomy Breeding
LA12PB1

Figure 9.3
3D Taxonomy Breeding
LC2PC1LA12PB1

Figure 10.0
Tile A Repeated

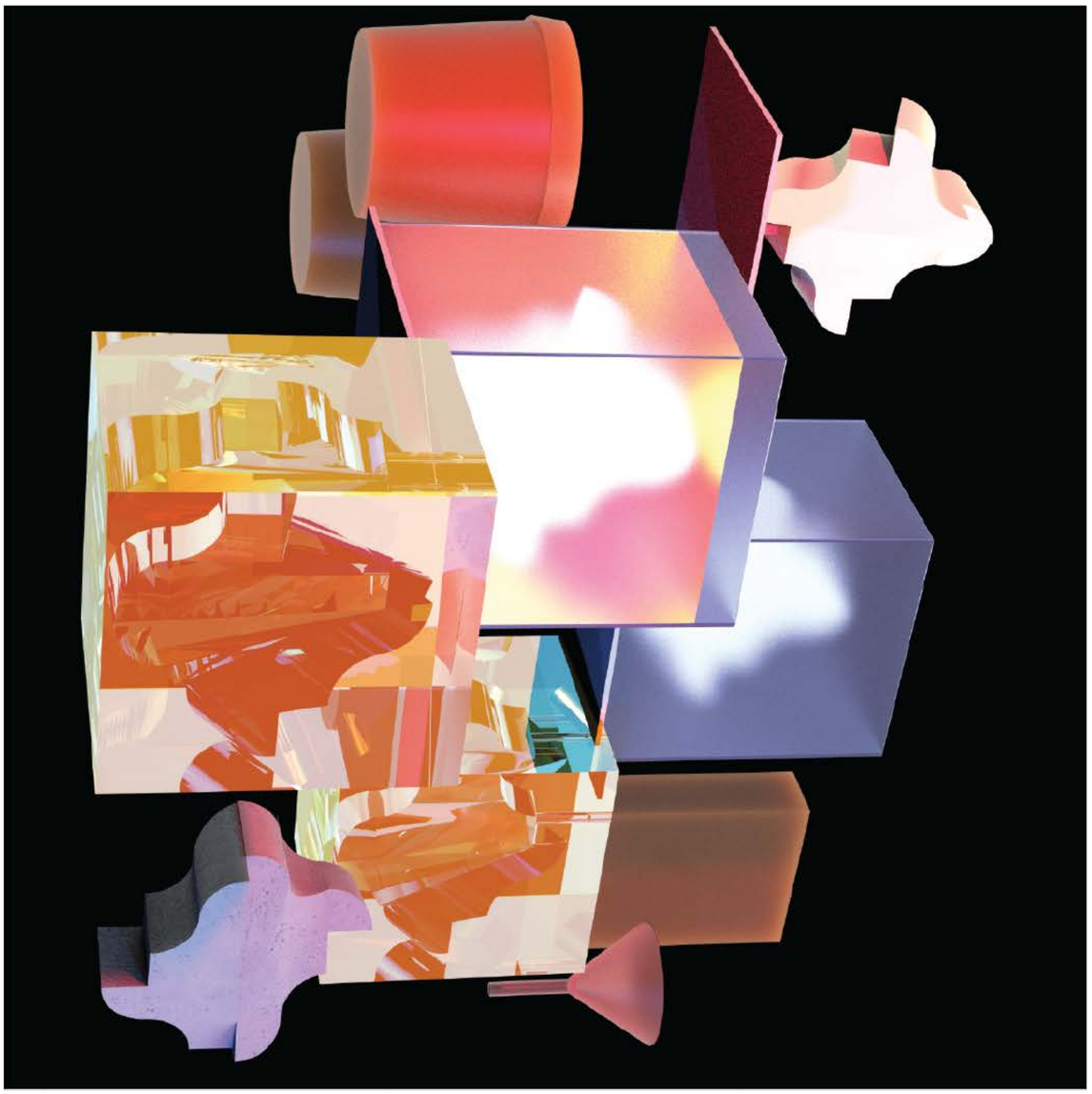
ASSEMBLED FIGURES

Transitional Geometries Fall 2022 ■ Prof: Joshua Jordan ■ Interlocking Stackable Cast Tiles

The works illustrate the designing and fabricating of physical tiles through iterations of two-dimensional diagramming and patterning and three-dimensional moments of connectivity or simultaneous tensions. Juxtapositions of form and contour are encouraged to explore sub-patterns and pattern terminations. Two resulting tile groups explore tessellated curved boundaries with a simultaneous and intentional asymmetrical extruding to inform a rotation when joined in a repeated pattern.

There are opportunities for z-axis rotations when stacked that produce an entirely unique system (Figure 10.2) independent of the tile's inherent desire to be repeated and stacked without adjustment (Figure 10.0). Digitally modeled iterations were 3D printed and coated in clay on curved edges to further separate the textured curved edge from the smoothly printed flat faces. These were cast to produce silicone molds. From a new grid to digitally modeled and elevated corners, Rockite masses were cast repeatedly, in the custom silicone molds, for two design iterations (Figure 10.1 and 10.3).

Variables of Rockite: Water ratios, pour levels, and cure times all impacted the resulting tile's color, texture, and height – thus offering a multitude of tiling pattern options.



Opposite: Figure 10.1
Diagram - Mold and Casting Process

Figure 10.2
Tile A Rotated and Stacked

Figure 10.3
Tile A and B Interlocking

thank you to ◆ gsapp ◆ critics ◆ colleagues ◆ friends ◆
family ◆ guest reviewers ◆ collaborators