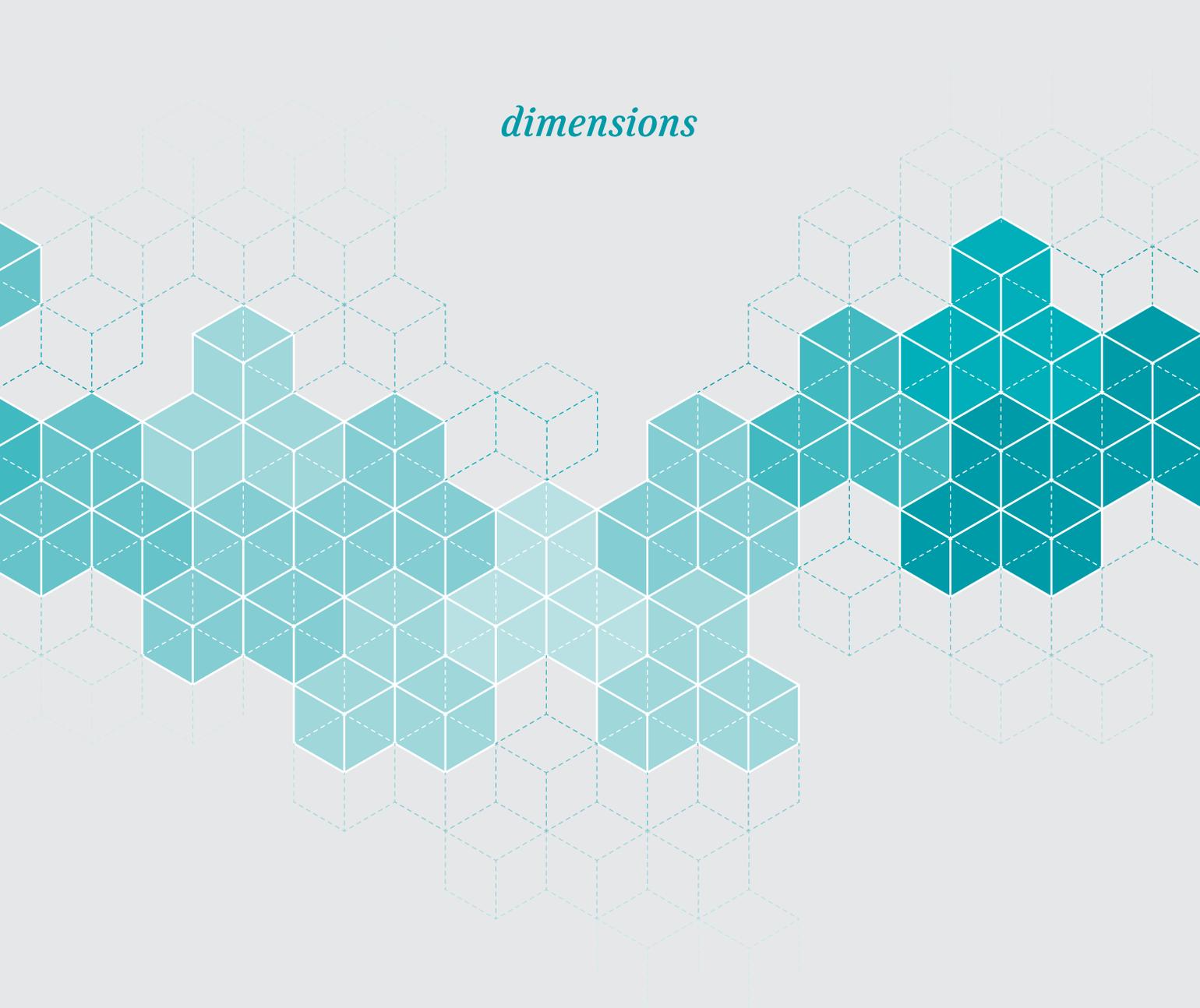
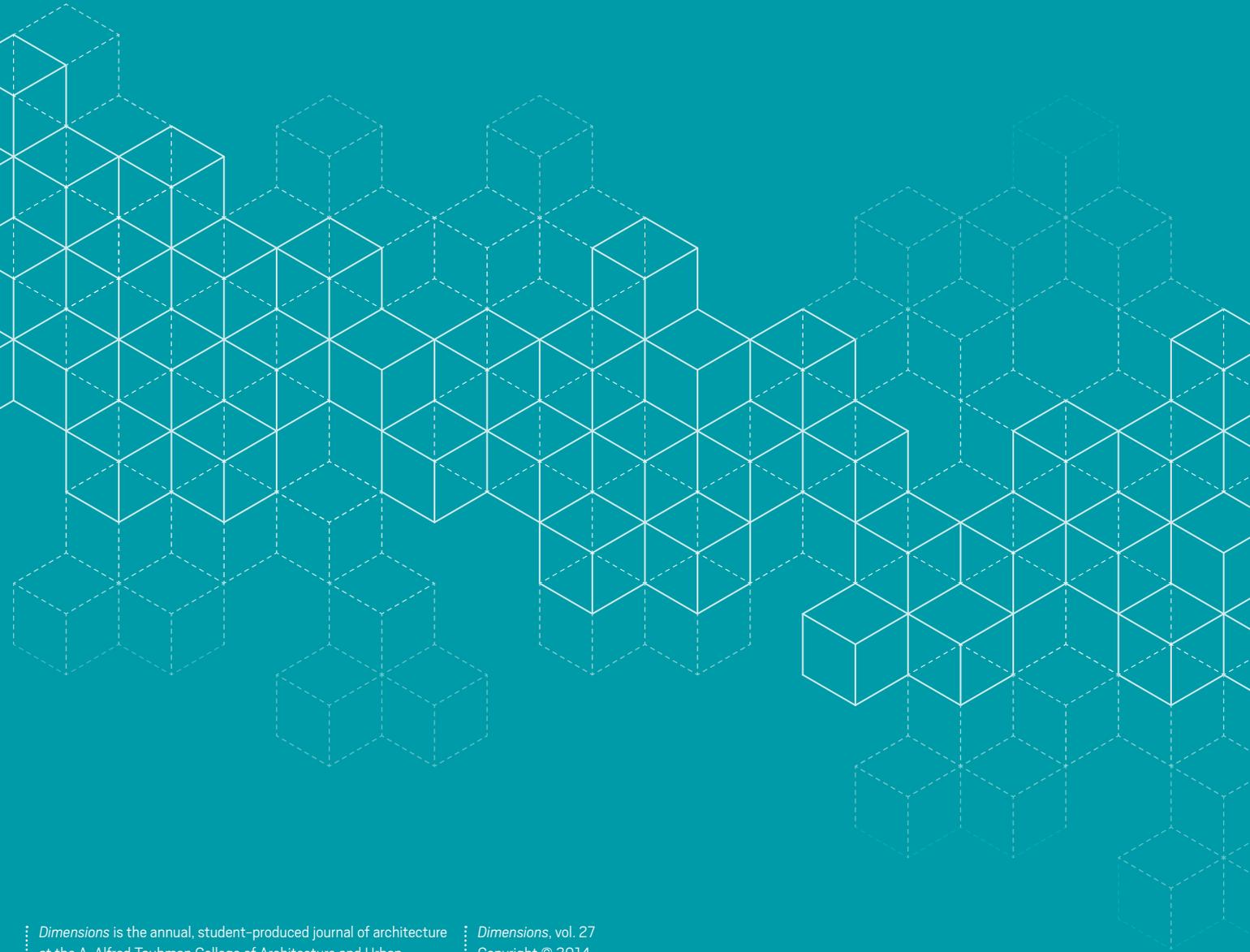


dimensions





Dimensions is the annual, student-produced journal of architecture at the A. Alfred Taubman College of Architecture and Urban Planning.

Dimensions seeks to contribute to the critical discourse of architectural education by documenting the most compelling work produced by its students, fellows, and visiting lecturers.

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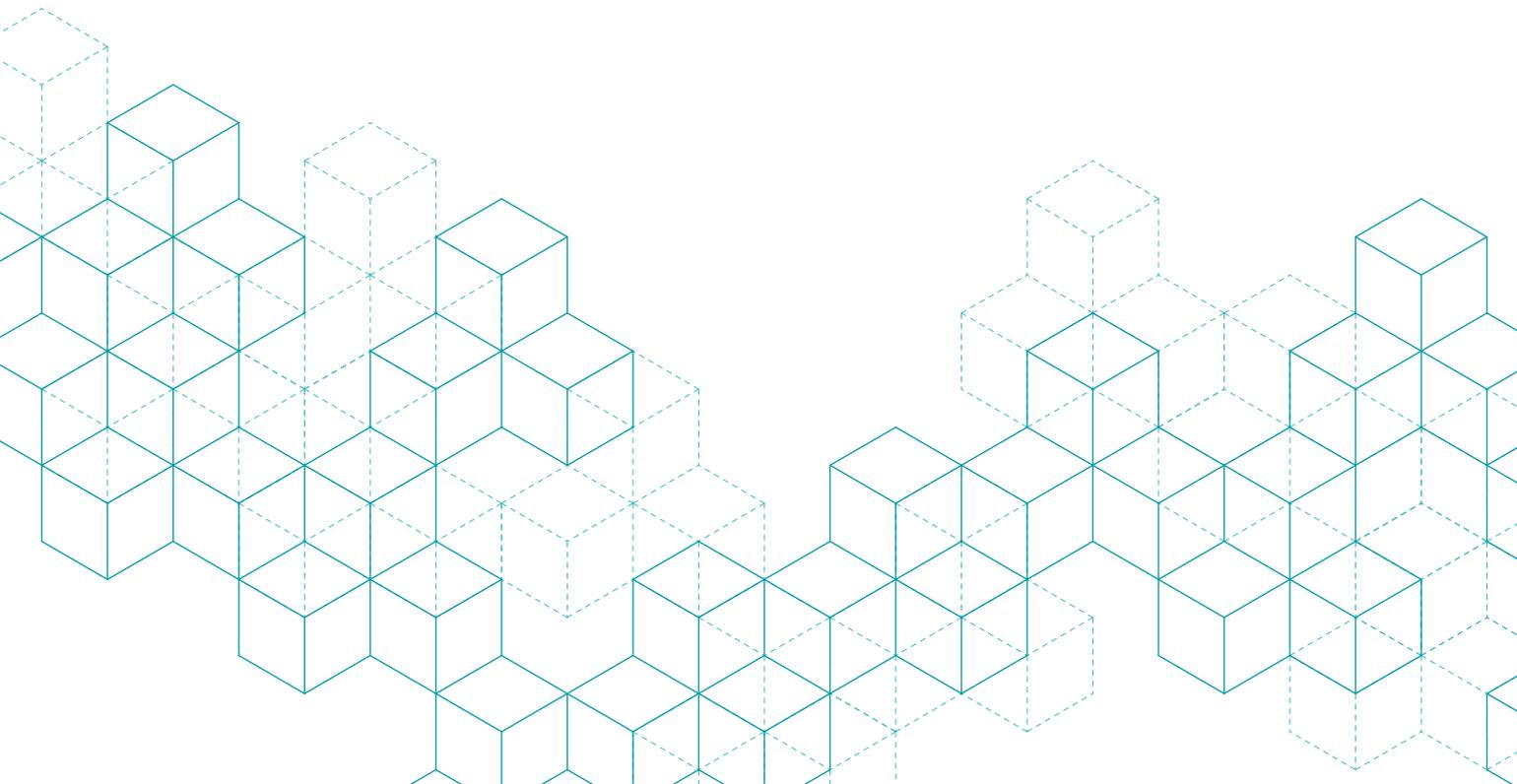
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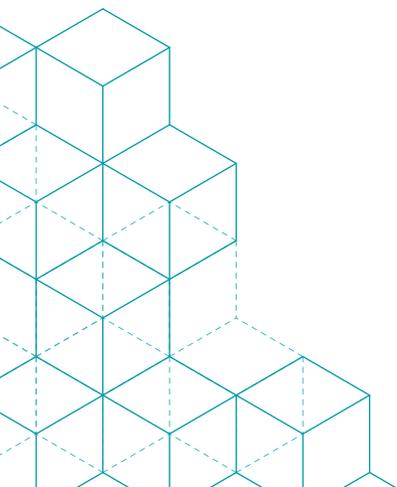
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dimensions



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Every iteration of *Dimensions* is as much a volume—a singular publication within a collective series—as it is a litmus test for the emergent discursive pursuits at Taubman College. It is an index, not a record; a mere dot in the ticker tape, one that only suggests the trajectory of future works, discussions, and publications. Only in aggregation do the volumes offer a lineage of the architectural practice and discourse here at the University of Michigan.

How then, do we view this twenty-seventh dot in the tape that is *Dimensions*? For the editors, a requisite for representing this index with fidelity is a delicate form of curating, parsing, and editing. As with most curatorial exercises, the challenge is in balancing diversity with coherence to create an outcome that most aptly captures the pluralistic attitude that surrounds the cohort.

While we may not be certain of the college's future trajectory, we can only attempt to contribute to and incite the conversations presently salient. These conversations are a collective effort—one not dissimilar to the task of a volume—which helps to unravel and demystify the course laid ahead. This index, *Dimensions 27*, endeavors to enrich this dialogue, one that we hope its readers will participate in.

Caitlin Cashner, Laura Kiyokane, Andrew Isaac Ng, Jason Park, Sally Tsang, Heidi Wong, John Yoon

March 30th, 2014
Ann Arbor

the architecture of the strange

Dean Monica Ponce de Leon

President Mary Sue Coleman recently addressed the college as part of our thank you celebration to Mr. Taubman for his \$12.5 million gift to the college. She spoke of how architecture shapes how we think, act and feel; how it generates ideas and stirs emotions. Most powerful in her speech was the example she used which I here take the liberty to quote:

"This month marks the 125th anniversary of a landmark architectural achievement: the opening of the Eiffel Tower.

At the time of its construction, the Eiffel Tower was intended to be a temporary structure.

From the moment it began to rise on the Paris skyline, it evoked passionate feelings.

When it opened in 1889, it was the tallest man-made structure in the world.

Some people loved it. Others found it hideous.

The writer Guy de Maupassant said he ate dinner every night at the tower's restaurant, because it was the only place in Paris where he could dine and not have to look at it.

It stands as testimony to knowledge, as Gustave Eiffel saw that the names of prominent French engineers, scientists and mathematicians be engraved in the wrought iron.

Its power is such that Hitler tried to demolish it during World War II.

It is the world's most popular monument. It has been featured in countless paintings, books and films.

It is a beacon for lovers, artists and tourists, and is the heart of Paris.

More than anything, it symbolizes the power of architecture to infuse our lives."

I find the example powerful because, despite its widespread popular appeal, the Eiffel Tower has always remained an outsider to architecture. The tower had no imitators, no movements that followed, no "isms"—too strange to be copied, too outside the mainstream of architecture to be followed. And yet, the tower's enduring quality was its willingness to be different, to break away from previous norms, to embrace new technology and propose new aesthetic paradigms—even if its aesthetic aspirations were at odds with the technology it sponsored. While the shape of the Eiffel Tower is the result of the new technology it was testing, its language, its details are all decorative dressing. The tower embodies the idea of difference in search for new definitions of beauty.

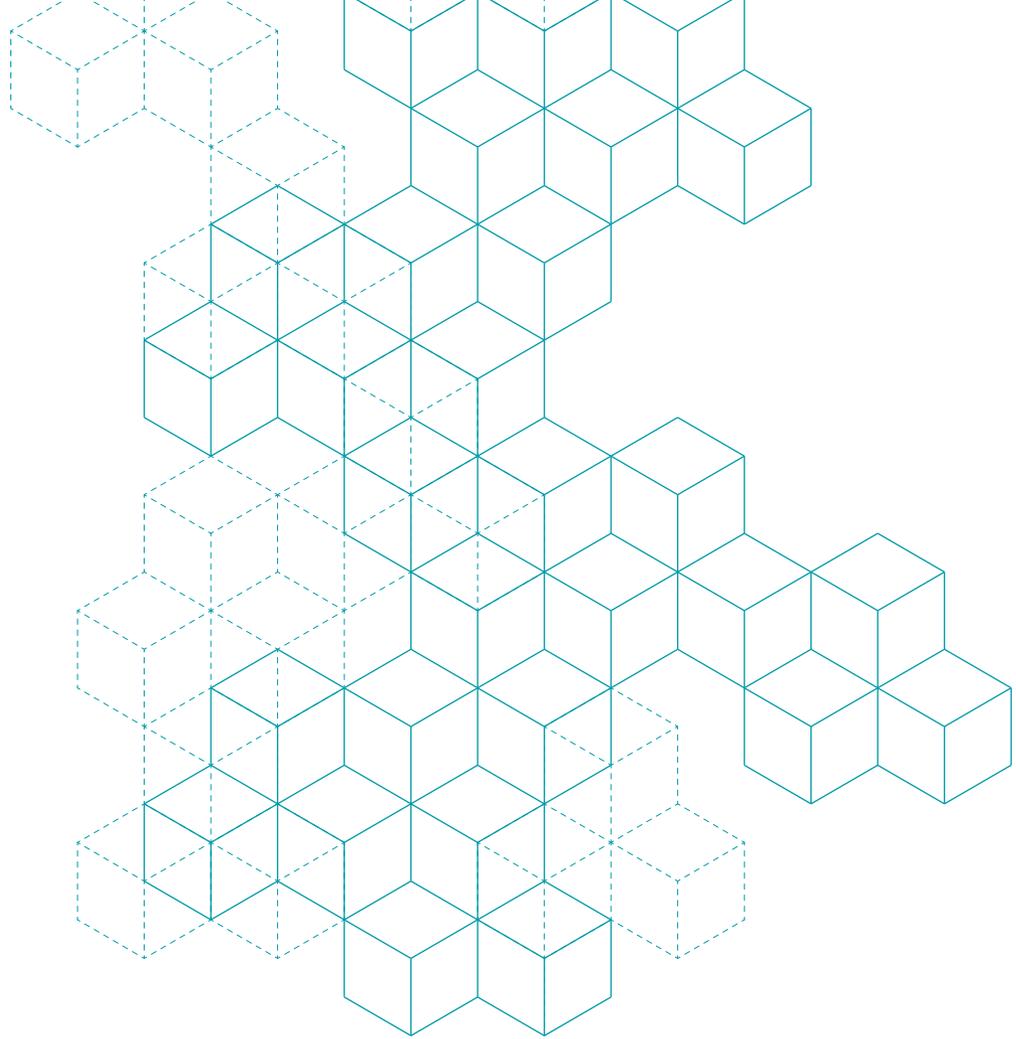
The time in which the tower was built is not much different from today: rapid technological changes, large cultural transformations and paradigm shifts—the rug has been pulled from under the feet of architecture and building will never be the same. This issue of *Dimensions* encompasses projects that, like the Eiffel Tower, are willing to remain outside of the mainstream and **be strange**. In their strangeness lies their new beauty and their power to speak to a larger audience and withstand the test of time by becoming indelible in our imagination.

—Monica Ponce de Leon

Dean and Eliel Saarinen Collegiate Professor of Architecture and Urban Planning

March 31st, 2014
Ann Arbor





2013 THESIS AWARDS

Megha Chandrasekhar, Chris Mascari, Brandon Vieth
carbonWound: Lightweight Composites

Pooja Dalal
Constructing the Other Space: Federal University of Manaus

Brittany Nicole Gacsy
Tapline: Environmental Control Systems for Artificial Extensions of Localized Micro-Climates

Emily Kutil
Flying the Coop: A Zoo for Belle Isle

Dan McTavish
Greetings from Nebraska: The Form of the Territory

Hans Papke
Bigger Boxes: Architecture in the Logistic Spatial Domain

Ariel Poliner
Figural Gambits

Nick Safley
Animal House

Anna Schaefferkoetter
A Typological Situation

thesis part one

· The product of a year-long investigation, thesis occurs in the final semester of the graduate sequence.
· A self-directed creative project, students engage in the process of research, critique, and synthesis to
· create works that engage with architectural discourse. Capping the studio is a review by outside critics
· and a weeklong public exhibition of the work.

· FEATURED PROJECTS: PART ONE

· Megha Chandrasekhar

· Chris Mascari

· Brandon Vieth

· *carbonWound: Lightweight Composites*

· Dorimar del Río Vélez

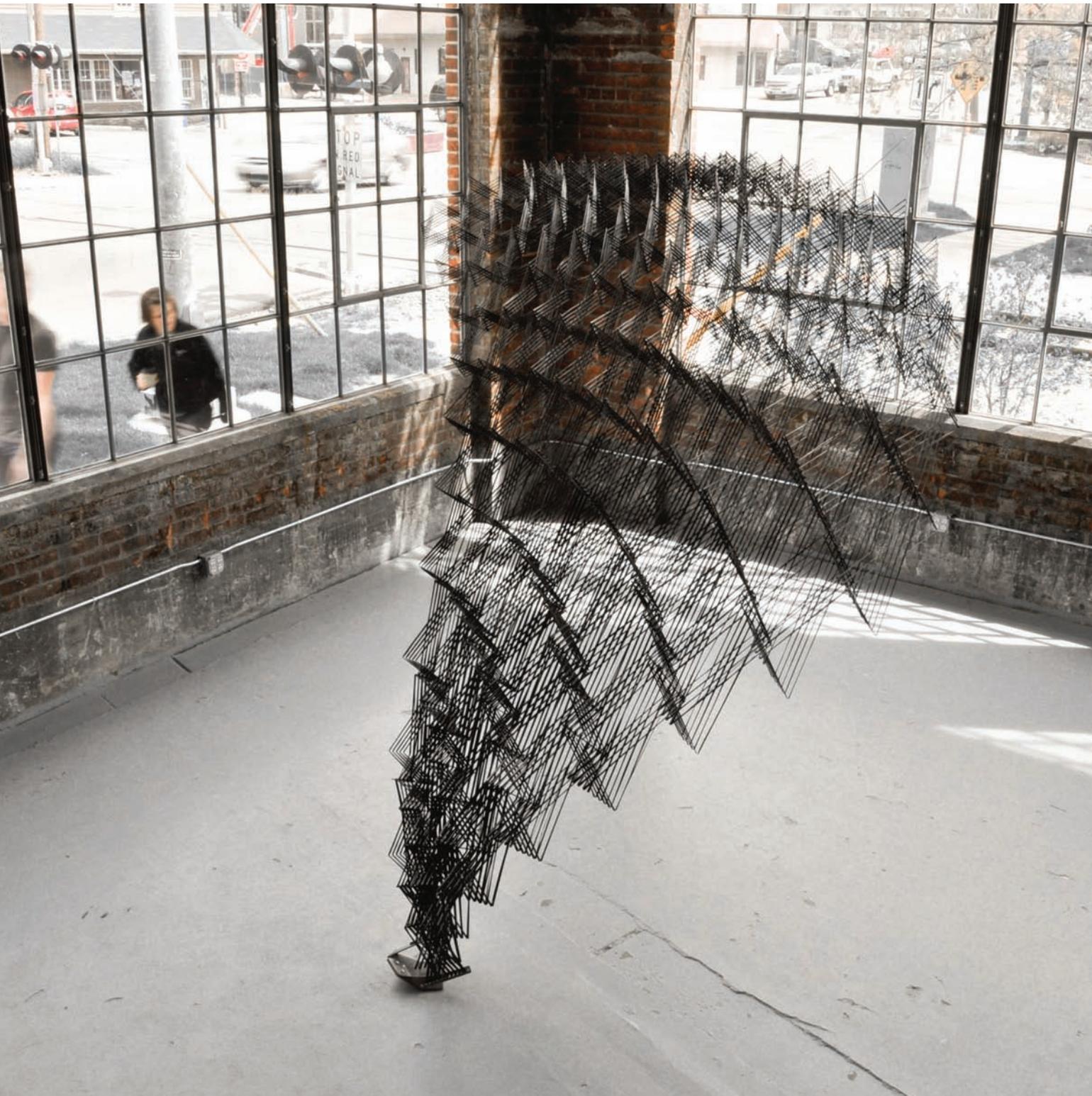
· *FLATend*

· Hans Papke

· *Bigger Boxes: Architecture in the Logistic Spatial Domain*

· Virginia A. Black

· *Nonumenta*



carbonwound: *lightweight composites*

carbonWound demonstrates a potential future for lightweight composites within a larger conversation of architectural building systems.

Lightness is a multi-disciplinary term that implies different narratives; lightness in architecture is associated with aesthetic quality and spatial presence, while physical characteristics—mass, maneuverability, and performance—typically parallel other material-sensitive disciplines.

carbonWound explores lightness as an element within architecture that utilizes the methodologies deployed in the design and manufacture of marine and aeronautic bodies. Within these disciplines, performance relies on the material capacity and flexibility of fibrous composites, such as carbon fiber, through its ability to accommodate dynamic, lightweight, yet structurally stable forms.

In architecture, the role of the composite remains attuned to the “mud-and-straw” mentality as a standard method of achieving the ultimate material performance. Materials such as concrete and steel, while strong, are visually opaque and heavy. On the other hand, fiber composites are both strong and light, and perform both physically and aesthetically. Advances in fiber strength, resin chemistry and fabrication processes have

dramatically changed the ways in which composites are designed to perform under extreme conditions. While these qualities are prevalent in other fields, their potential in architecture has yet to be fully realized.

The new paradigm surrounding fiber composites in architecture, particularly through the influence of Greg Lynn, focuses on the process of creating continuous free form objects, which entails complex CNC manufactured formwork. This approach significantly increases cost, material waste, and production time, often yielding only a singular customized part. A primary ambition of the project was to limit the amount of custom formwork, therefore reducing cost, while enabling a high level of geometric variability.

MEDIUM

The research began with a series of material investigations to develop an understanding of the phase-change process, fabrication limitations, and formal potential of four composite materials. Resin pre-impregnated carbon fiber, basalt, and fiber glass were tested along with fiber reinforced thermoplastics. Each material required a unique time and temperature sensitive curing process to solidify into the resultant geometry. After a series of tests, carbon fiber was chosen for its availability, strength, and aesthetic qualities.

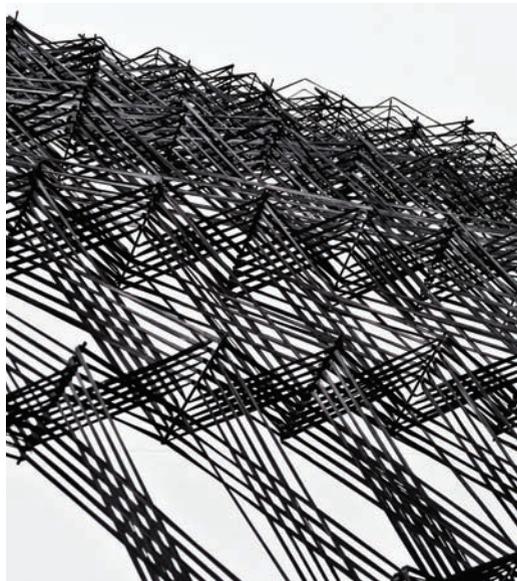
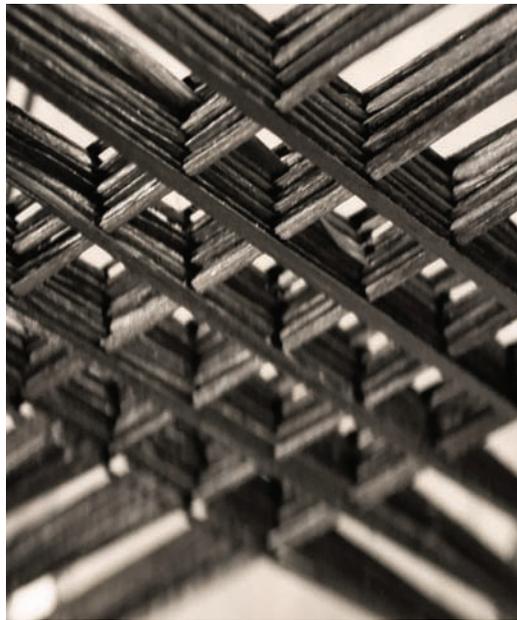
Material composition also played a pivotal role in the selection process. Rather than utilizing woven cloth as a base—which involves a laborious layup process—spooled carbon fiber filament provided increased flexibility by allowing for automated production and designed fiber orientation. The use of filament as a base material eliminated the dependency on standardized dimensional stock while creating opportunities for customization while wasting minimal amounts of material.



TOP: Medium — composite weave, a resultant of a multi-layered winding process

MIDDLE: Jig assembly before curing process — completed composite layup on formwork prior to the curing process

BOTTOM: Fabricated Prototype — fabricated prototype installed



APPARATUS

In many ways, *carbonWound* questions the role of the architect: rather than resorting to standardized manufacturing processes, both digital and physical tooling was designed and created in response to material and production demands. The leap from conceptual design to material form required the manifestation of three key elements: filament winding tool, programming and customizable jig.

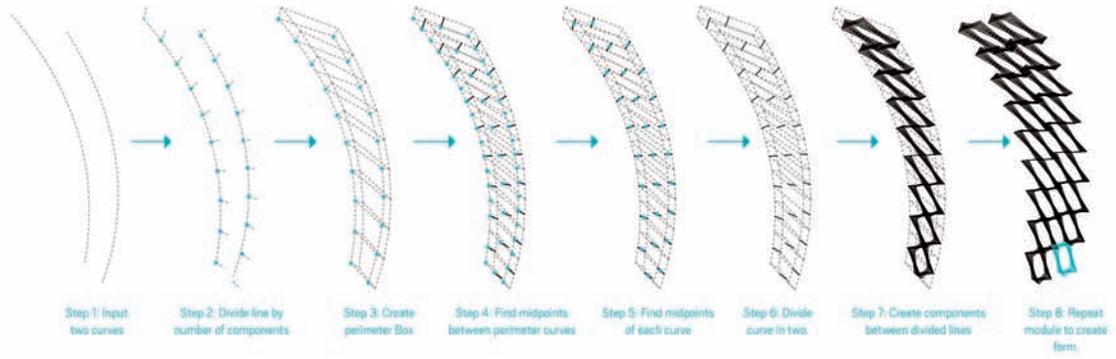
FILAMENT WINDING TOOL

A custom filament winding tool was developed first, which functioned as an extension to a standard industrial seven-axis robot. Robotic fabrication provides a high level of accuracy and timely production over the process of hand winding. The tool was responsible for accurately orienting and delivering carbon fiber onto a customizable jig, while having the ability to be adjusted to accommodate changing geometric and material conditions. These included directional changes, rewind force, and drag—a byproduct of resin moisture loss. To ensure a tight form and proper fusion during the curing cycle, constant tension was applied to the winding process through a local rewind mechanism.

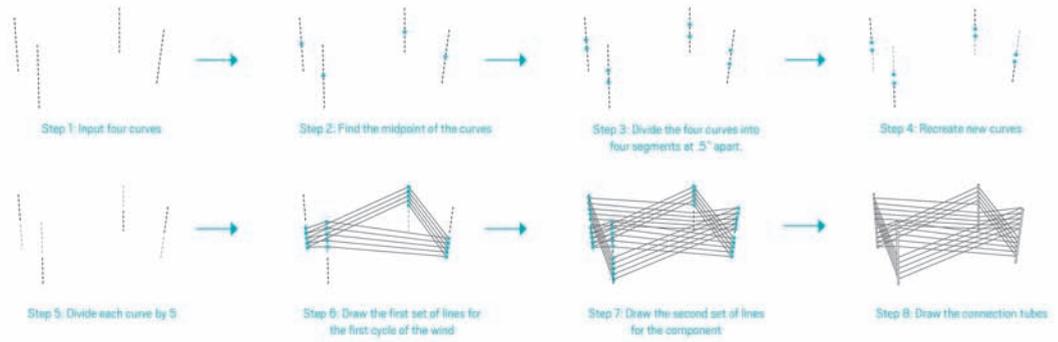
PROGRAMMING

In order to translate between design intent and physical form, a set of generative computational tools were developed as primary communication between the digital model and the physical output. The project utilizes code as a generative production tool contrary to formal exploration. A custom python script translated a generic digital model into detailed vector data that was programmed to account for connection tolerances, expected material behavior, and discrepancies between the robot, winding tool, and jig. This ensured that each component was constructed to a level of accuracy required to maintain integrity in the entire assembly. Additional variables were added to the system that allowed for programmed material placement and density.

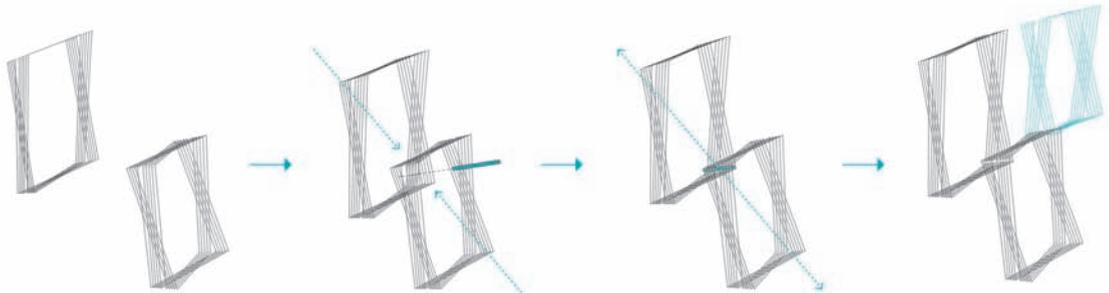
Module Generation



Component Generation

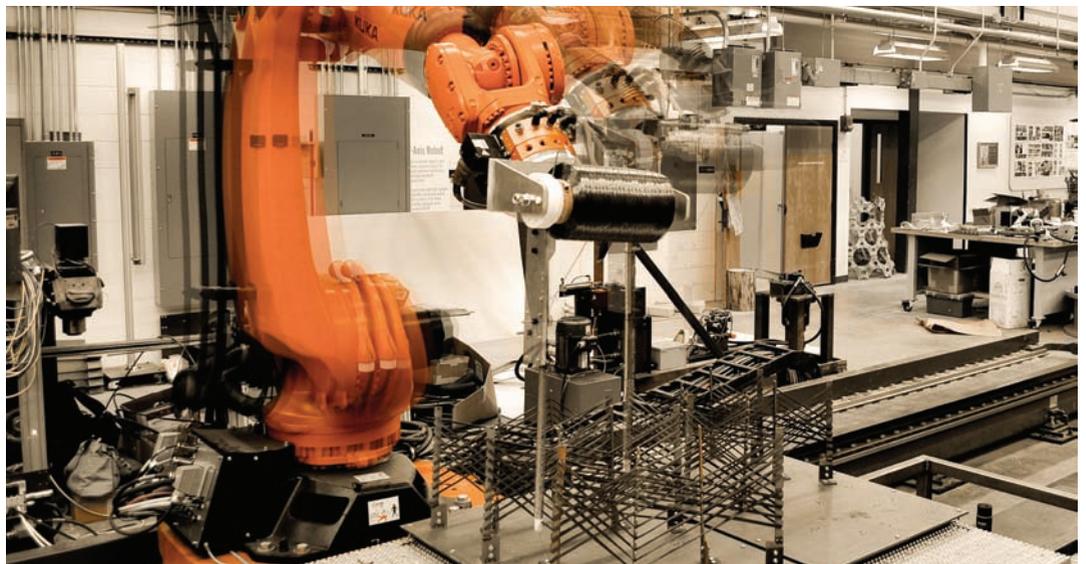


Component Assembly

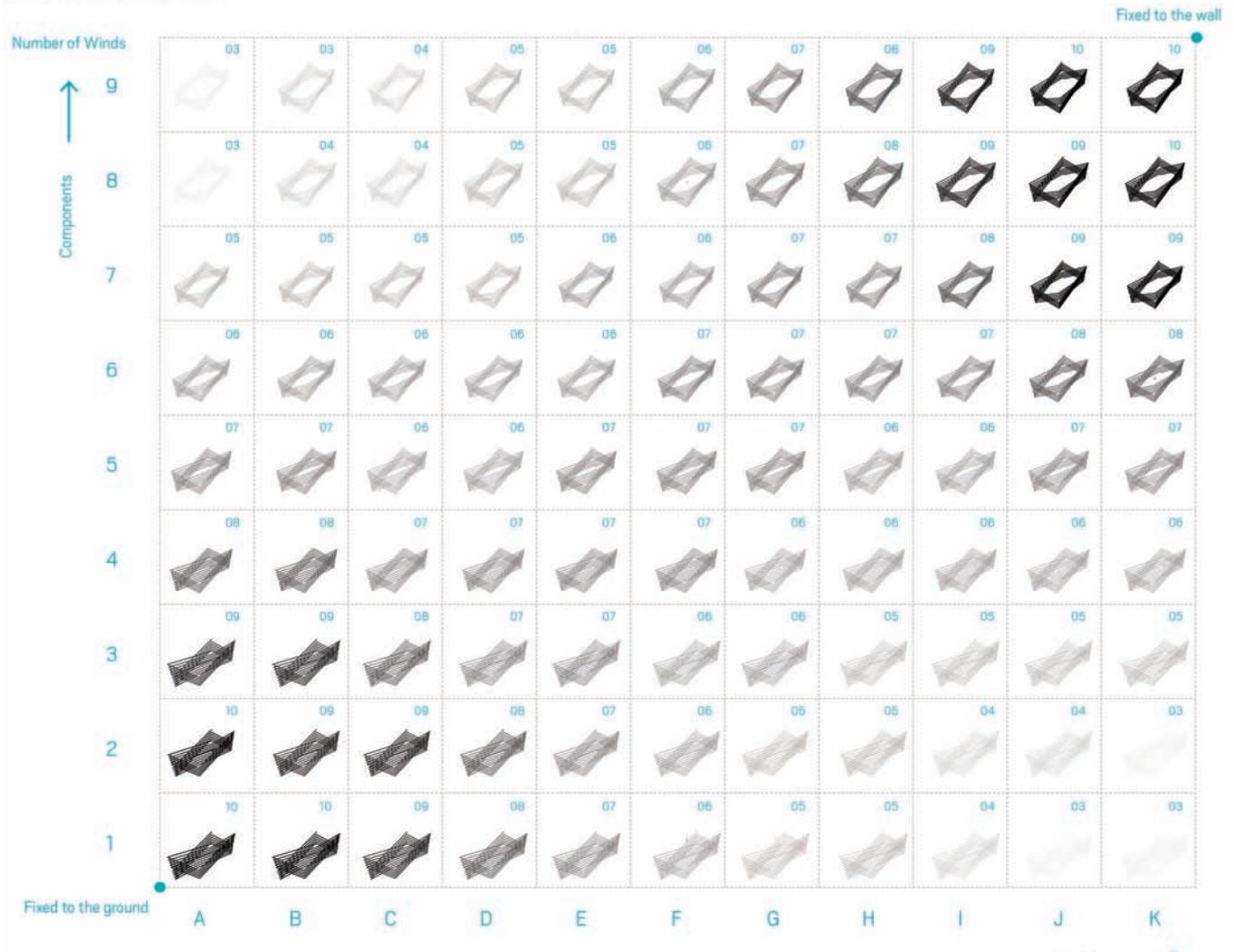


ABOVE: Pseudo-script — Diagrammatic representation of the scripted process used to generate a nine component module and a typical component weave pattern.

RIGHT: Automated filament winding process



Component Density Matrix



ABOVE: Diagrammatic representation of the variation in the densities of each component. Assembly "road map" containing the location and density of each unique component.

CUSTOMIZABLE JIG

The typical process for manufacturing a composite artifact requires a pre-manufactured mold, over which the composite is formed. Working with filament as the base material provided an opportunity to experiment with much simpler forming alternatives. Point coordinates were gathered from each module during the scripting process and fed into a secondary line of code that automatically generated a set of curve profiles that were manufactured and assembled on a base. This comb-shaped profile acted as a material spacer that later became the point of connection between modules. Once the robot finished winding each component, the entire jig assembly was placed in the oven, baked, cooled, and then reused.

The project culminated with the installation of a full scale prototype at the annual graduate thesis exhibition. A diligently designed global form significantly

decreased production time by limiting the amount of custom formwork. Variability was achieved by locally tailoring each component's density to meet its structural demand and location in space, thus allowing for certain components to geometrically repeat and formwork to be reused.

The finished prototype is composed of ninety-nine unique components formed around eleven custom molds. Components were later aggregated and epoxy welded on site to create the composite form. Strategic material placement allowed for the twenty five pound structure to withstand the forces of gravity—spanning twenty feet on two pinned connections. Pertinent to the ongoing discourse surrounding digital fabrication and material ecology in architecture, *carbonWound* demonstrates a potential future for lightweight composites within a larger conversation of architectural building systems. 

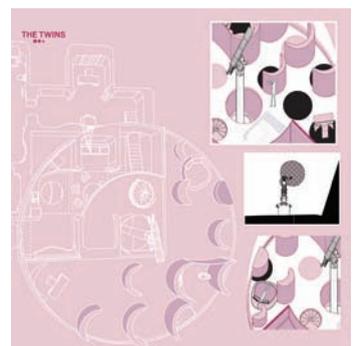
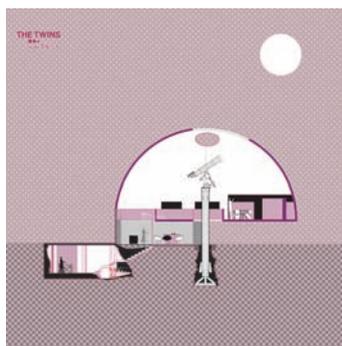
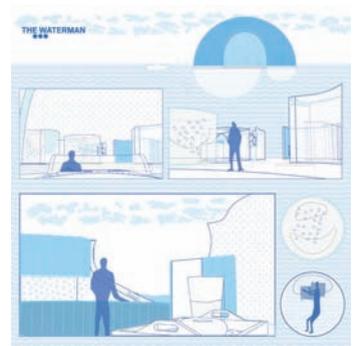
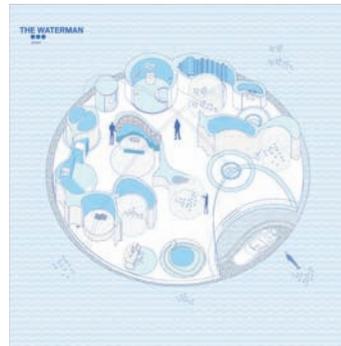
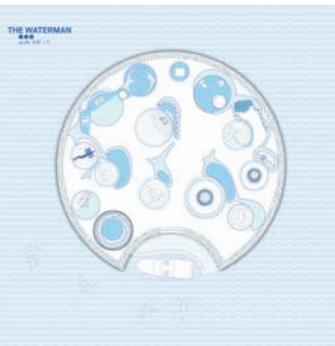
OPPOSITE: Fabricated prototype installed at the University of Michigan, Taubman College of Architecture & Urban Planning in the Liberty Annex

MIDDLE: Detail connection between the prototype and the wall

BOTTOM: Detail connection between the prototype and the ground







flatend

FLATend takes on ideas of both graphic legibility and illegibility as a way to pursue new formal, material, and superficial articulations.



FLATend challenges preconceptions of the architectural volume and its representation through the use of graphics applied and manipulated at different scales. Graphics—defined here as the flat composition of shapes and forms that construct figures and patterns—formally detached from architectural conventions but based upon cultural constructs of meaning and form through legibility. *FLATend* takes on ideas of both graphic legibility and illegibility as a way to pursue new formal, material, and superficial articulations.

This idea of a graphic architecture is explored through the lens of a group of four fictional clients: the Waterman, the Newlyweds, the Extrovert, and the Twins; and tested with one building type: a house. In order to achieve this, graphics are categorized and manipulated at the level of plan (figural and cartoon graphic), of enclosure (indexical patterning), and surface (supergraphics). Each graphic is extensively used in different scales as a reminder of the nature of the graphic and its ability to perform spatially. The houses become pure interiors, as they do not rely on exterior conditions but fully depend on how each client's requirements enable the graphic. Each graphic interior feeds off Aldo Van Eyck's formal characteristics, which

would act as the plan; off Frank Lloyd Wright's obsessive repetition, which act as enclosure; and off Stanley Tigerman's cartoonish representation, which is used as the main representation tool to highlight the graphical maneuvers in each house and bring a narrative quality to the project.

FLATend compresses the three dimensionality of space by layering it with the two dimensionality of a graphic. Although flat, its graphical and architectural articulations produce new interiorities that generate a peculiar kind of depth—as the result of two dimensions coming together. Therefore, space is flattened through the graphic and depth is created through the flatness of the graphics, as they are manipulated in space and in scale. Each one of the four houses is tested and tried with the same formula and same procedure, producing four different results. Difference depends on the client, whose requirements will determine what type of graphic will be used and for what purpose, so the possibilities are infinite. The project proposes four houses; it can produce infinite worlds, each world is *FLAT*. 

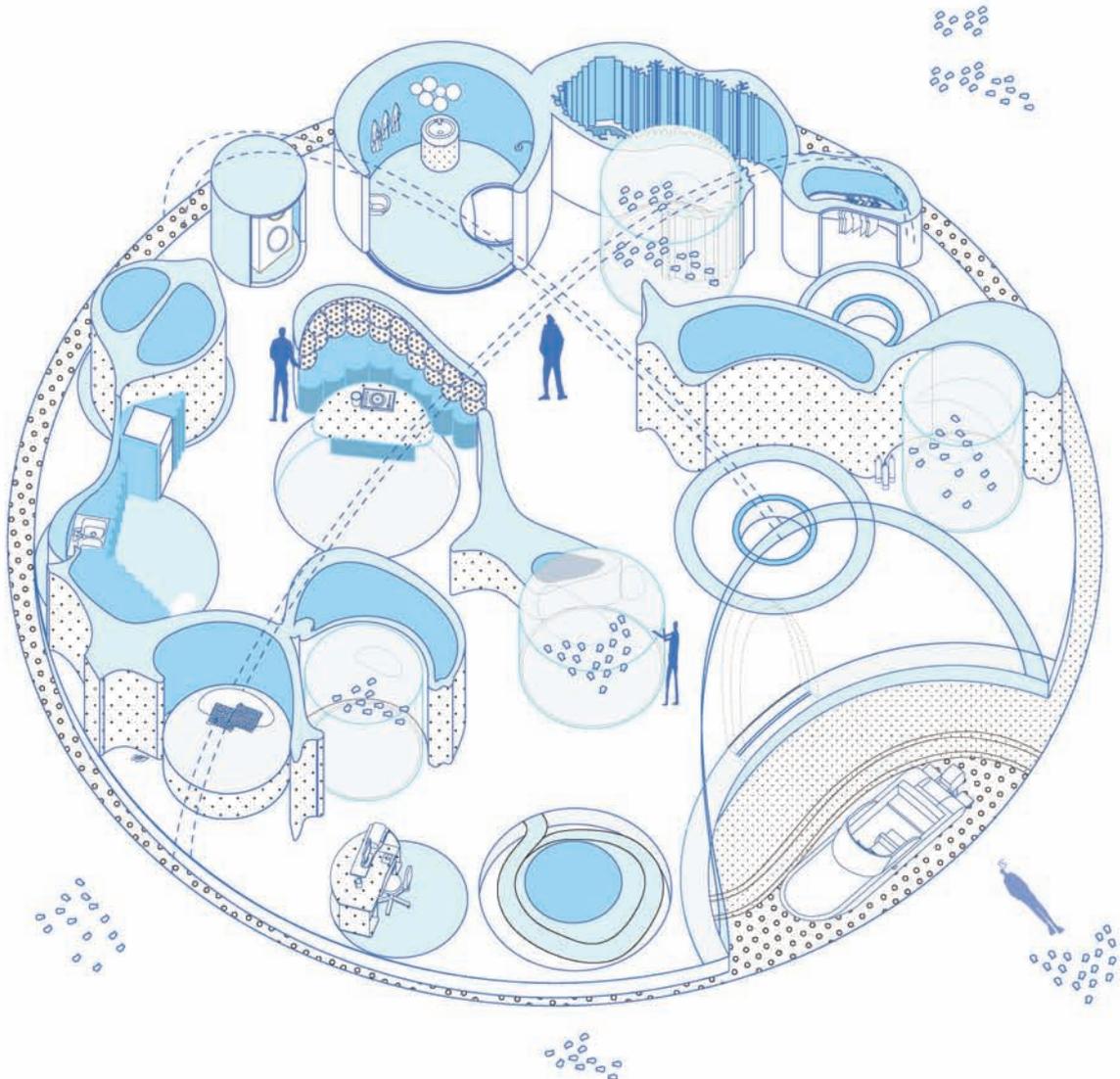
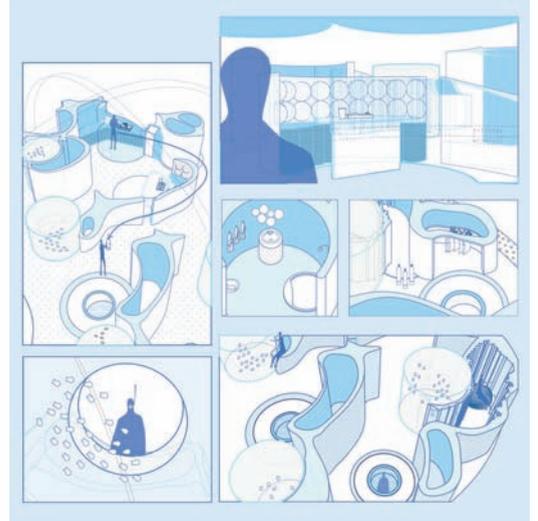
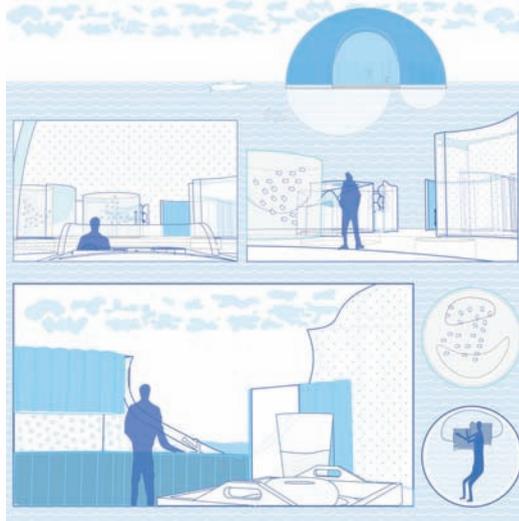
THE WATERMAN: Jacques Scuba, after retiring from his job as a respected history professor, he decided to pursue his lifelong dream to live out in the sea.

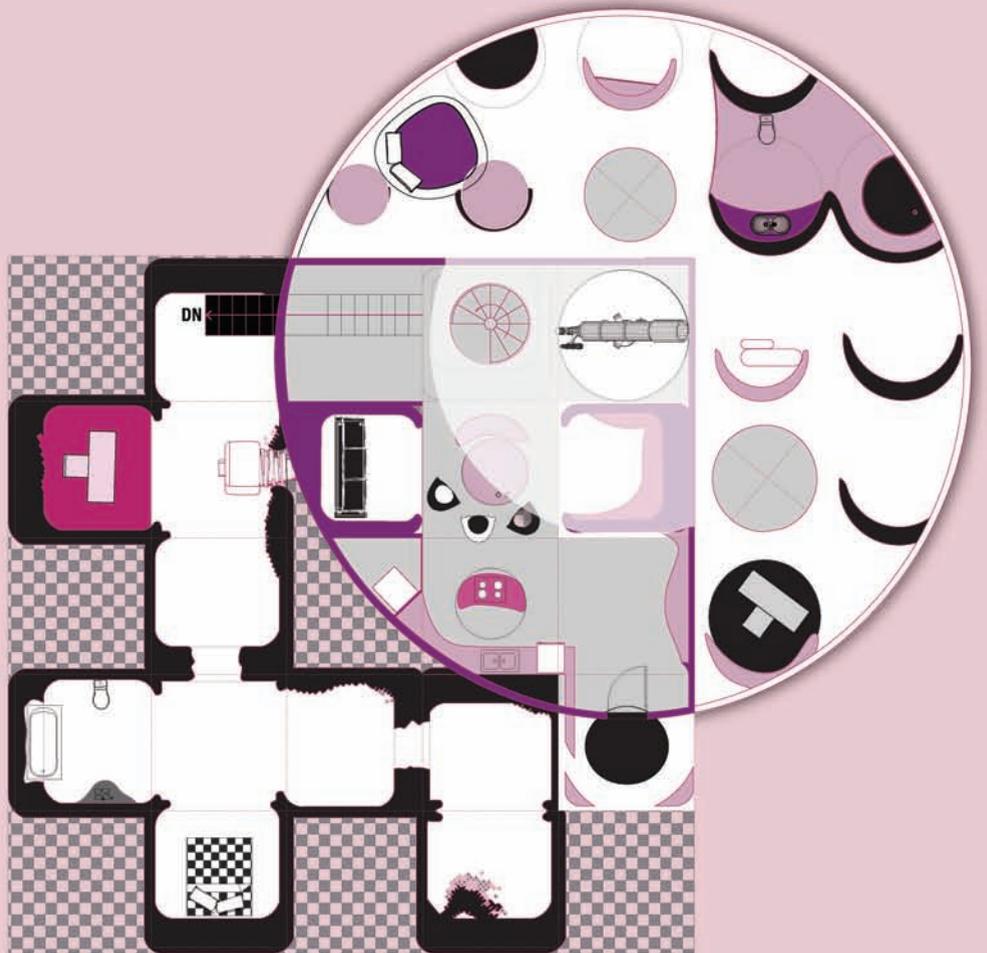
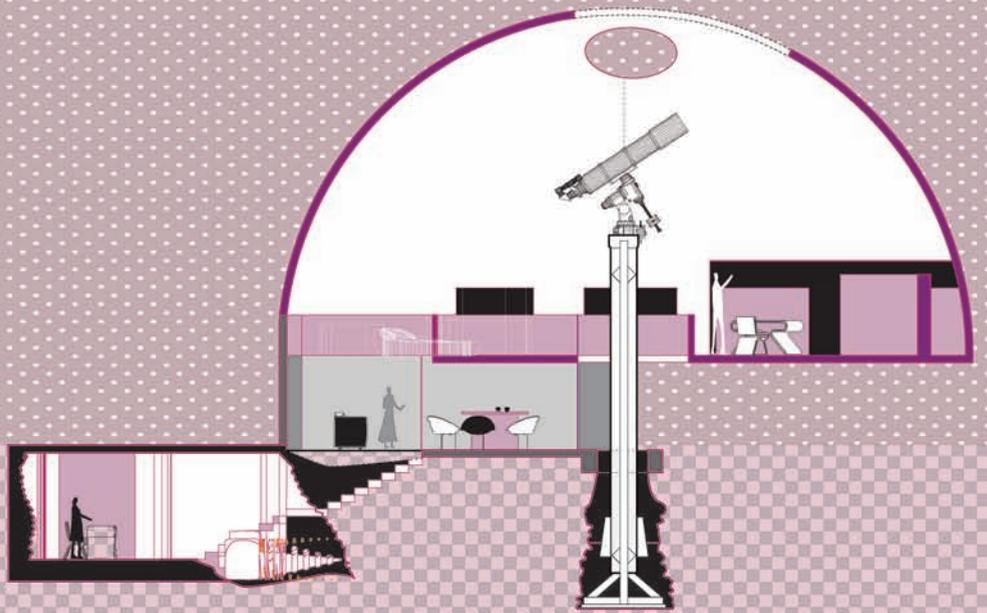
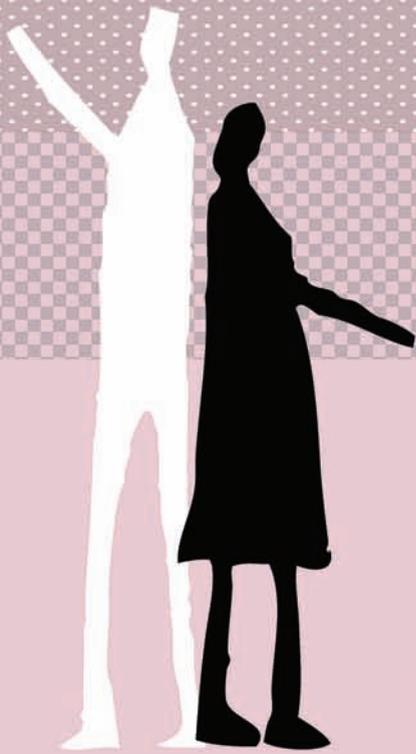
HOBBIES AND INTERESTS: Cooking, scuba diving, reading, and research

WANTS: A house

WHERE: Out in the sea

SPECIFICATIONS: The house must float, needs scuba diving holes, space for a boat, a small lab to study marine species, fish tanks, and storage. The house must be semi-spherical.

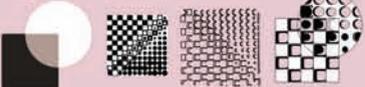




THE TWINS

■●★clients & graphics

figure pattern infill





THE NEWLYWEDS

♥♥♥ clients & graphics

figure



pattern



infill



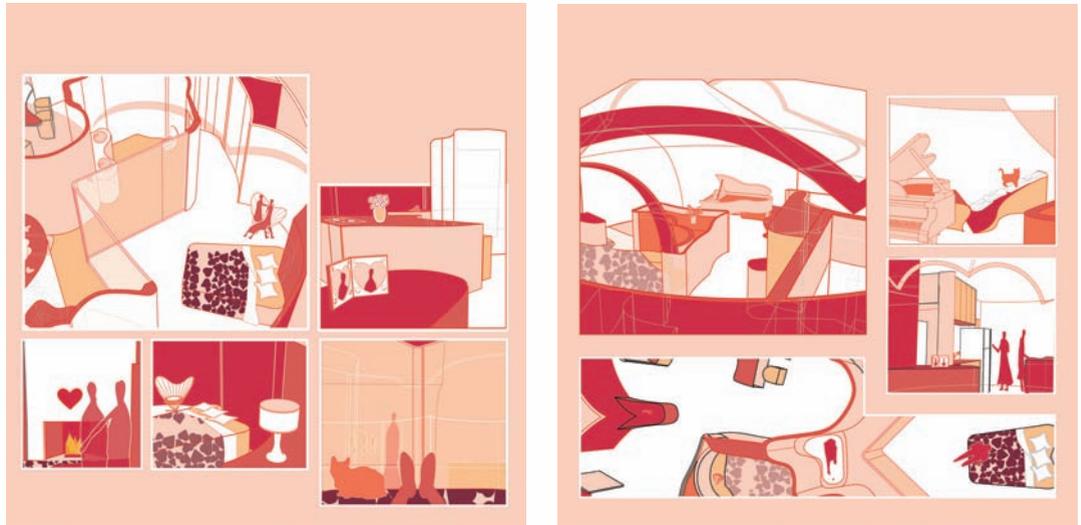
THE NEWLYWEDS: *Lucy & Ricky*, after going separate ways to study in different universities, the high school sweethearts met several years later during a family visit. The couple relived their love and two years later, they decided to spend the rest of their lives together.

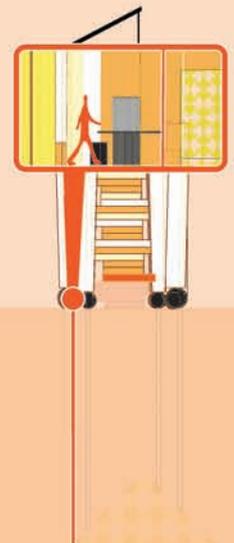
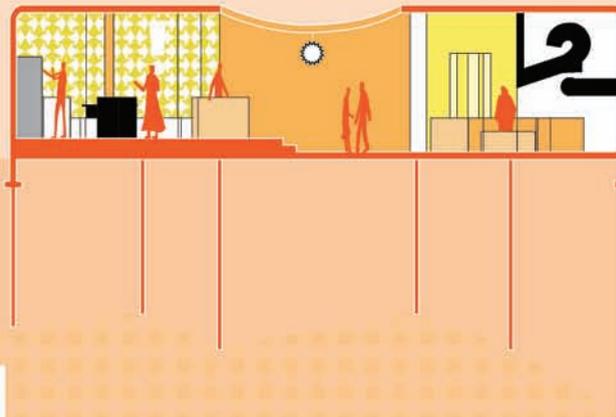
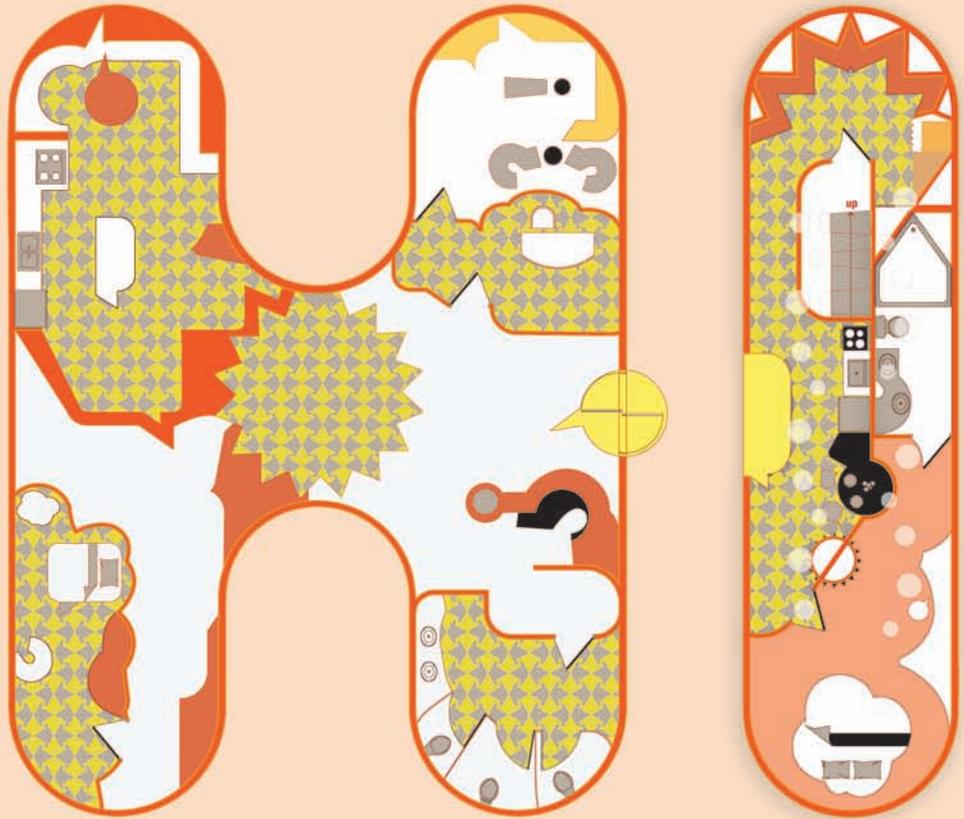
HOBBIES AND INTERESTS: Lucy loves to sing and Rick loves to play the piano. They enjoy cuddling in front of the fireplace. Lucy loves plants and has a cat whose name is Ricardo.

WANT: Their first place

WHERE: North

SPECIFICATIONS: Fireplace, one bedroom only, space for a piano, room for a cat, no television





THE EXTROVERT
 ●●● client & graphics

figure

pattern

infill

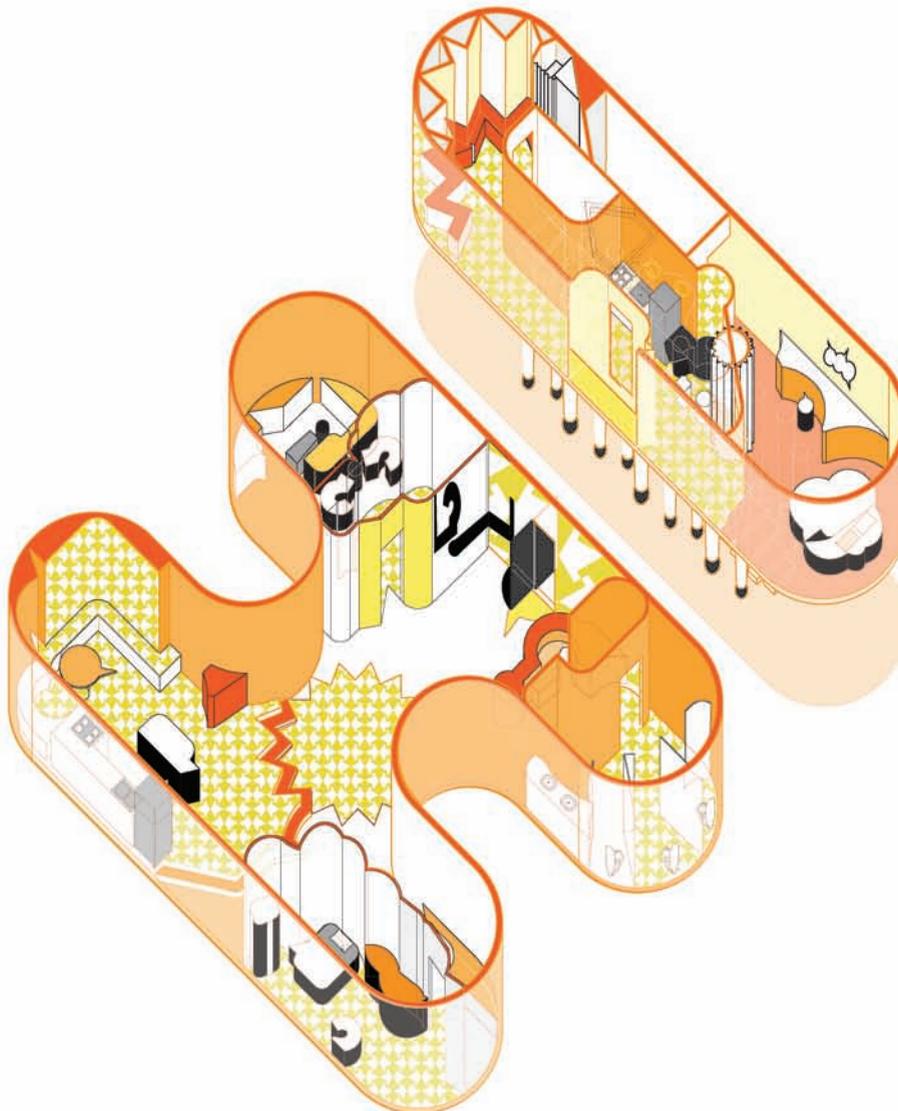
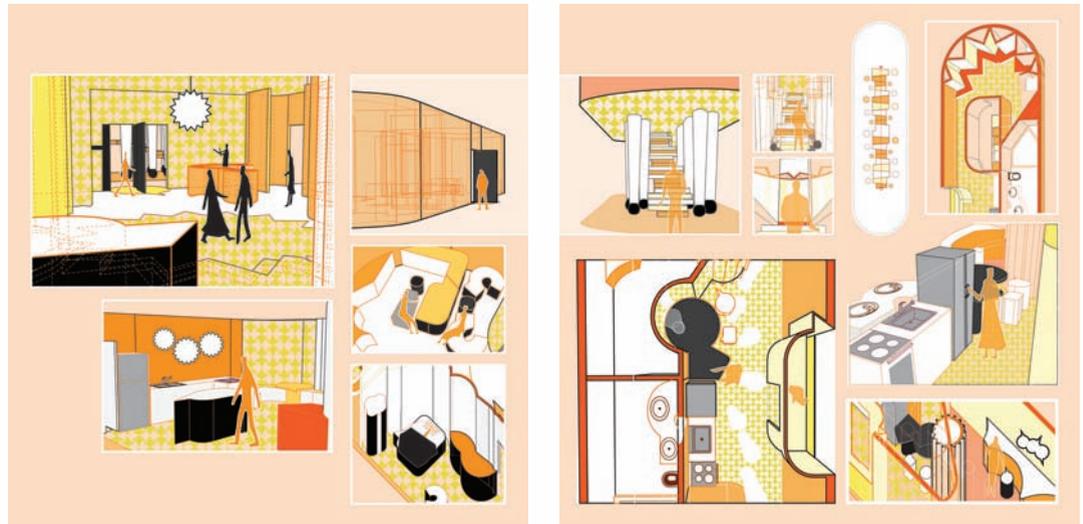


THE EXTROVERT: *Mike Speaks*, naturally social, Mike studied communications at his hometown and moved to the city to work as an event planner.

HOBBIES AND INTERESTS: Mike loves to plan parties and special events. He likes the company of his friends and is actively involved in all social media. Mike dreams of having his own TV show.

WANTS: Live/Work

SPECIFICATIONS: Room for entertaining, big kitchen and eating space, guest room, dance floor, office, and a small apartment with kitchenette





bigger boxes: *architecture in the logistic spatial domain*

To engage the national chain grocery store is to engage with the vast territories of non-city space that blanket most of the North American continent.

The spatial condition in which these grocery stores thrive is part of a spatial domain that has left architecture in a state of crisis. There was a time when all space was considered to be architectural space. Leon Battista Alberti famously once said, "The city is like a great house, and the house in its turn a small city."¹ However, as Europe moved out of the Renaissance, a new understanding of space began to emerge and there was a distinction drawn between the space of architecture and the space of the City²—and this notion of City Space dominated architectural discourse and thinking through the Enlightenment. With the dawn of the Industrial Revolution, however, conceptions of space were divided once again. A new division was created between the space of the city and the space of the region or nation. This new form of space was governed by the ideology of the engineer and eventually architectural space was entirely removed from the discussion.³ This new, architecture-phobic kind of space shall henceforth be called the Logistic Spatial Domain.

This project seeks to understand the differences between these seemingly conflicting conceptions of space in order to reposition the role of architecture within the Logistic Spatial Domain. In order to do this, it may be necessary to "let go of the city"⁴ in order to work on the question of how architecture can be instrumental in creating new forms of urbanization.

In order to become more familiar with the nature of the Logistic Spatial Domain, an investigation of the national grocery chain Kroger was conducted. Kroger is represented in all major markets in the US and can be seen as a prototypical big box grocery store. In one of its investor reports from 2011, Kroger spells out the desirable spatial conditions for their stores: the average Kroger pulls customers from a two-mile radius and tends to be sited adjacent to an interstate.⁵ Kroger stores are also often placed in the zone ten to thirty minutes outside of the nearest traditional city center. After making a map of the 83 Southeast Michigan Kroger locations,⁶ it became clear that these siting characteristics are at odds with traditional notions of both architectural space and city space.

In addition to grocery stores, there are a number of different types of programs which thrive in the Logistic Spatial Domain; some examples include single family houses, office parks, movie theaters, shopping malls, marshalling yards, and airports. However, there is perhaps nothing that exemplifies the spatial logic of Logistic Space better than a landfill. The landfill is the other side of the grocery store coin. Landfills share the grocery store's need to be directly connected to the interstate system as well as the store's requirements for vast tracts of open space and large buffers from nearby land uses. Finally, landfills and grocery stores both have a detrimental effect on adjacent land values while simultaneously contributing to the local tax base.

It was not until the mid-1960s that landfills became the standardized, regulated, and engineered complexes that they are today. At that point, they were carefully

1 Morris, Roderick Conway. "If a City Were Perfect, What Would It Look Like?" *The New York Times*. May 07, 2012. Accessed March 11, 2013. <http://www.nytimes.com>

2 Aureli, Pier Vittorio. *The Possibility of an Absolute Architecture*. Cambridge, MA: MIT, 2011. Print.

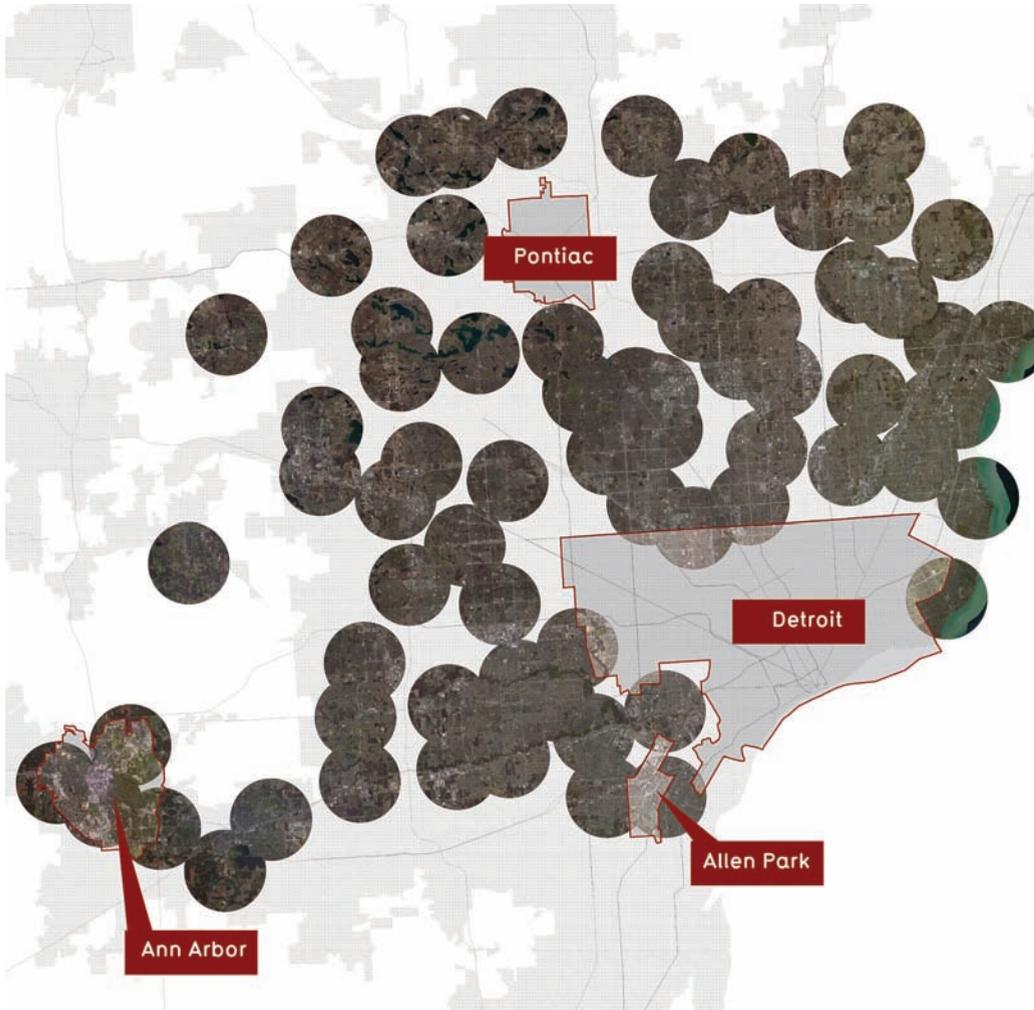
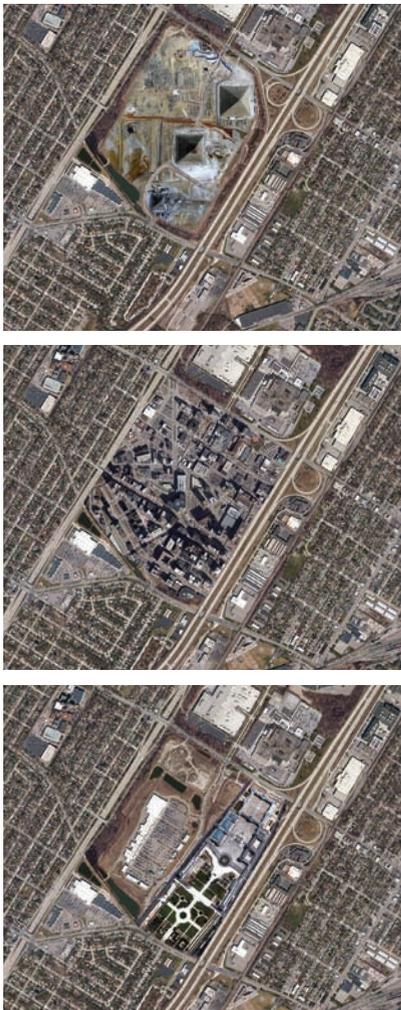
3 "Power: The Essential Works of Michel Foucault 1954-1984." By Michel Foucault.

4 Young, Jason. "SUBLOG." *SUBLOG*. 28 Sept. 2011. Web. 28 July 2013

5 2011 Kroger Co. Fact Book

6 The 83 addresses were found using Google Maps, and the map was generated with ESRI ArcMap 10 GIS software.





LEFT: Scale studies — The Pyramids of Giza, Downtown Detroit, and the Louvre superimposed on the Fairlane Green shopping center

located far away from city centers, where no one would ever come into contact with them. However, by 2010, nearly all of the landfills in Southeast Michigan had been enveloped by the ever-expanding territory of the Logistic Spatial Domain.⁷

In 2002, an enterprising developer recognized some of the latent potential of one of Michigan’s landfills and set in motion what would become the largest landfill redevelopment program in the history of the state.⁸ The project resulted in the construction of a one million sq. ft. shopping center anchored by a 160,000 sq. ft. grocery Super-Center, on top of the former Allen Park Ford Motor Company Landfill. The development was called Fairlane Green.

This thesis sees Fairlane Green as an extremely exciting event: it is the moment where the chain grocery store and the landfill literally become one.

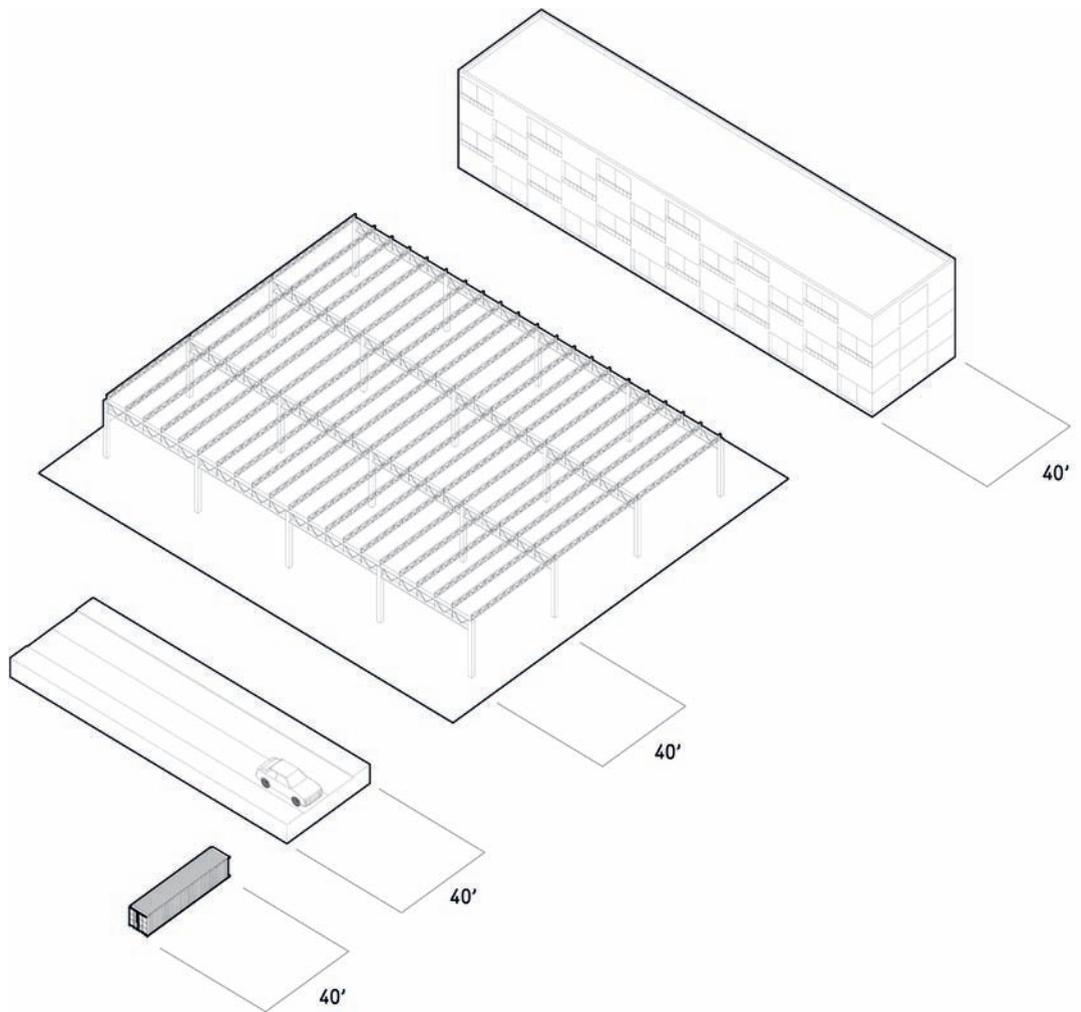
⁷ US Census 2010 Datasets <http://www.census.gov/cgi-bin/geo/shapefiles/2010/main>

⁸ Kozuh, John G. “June 2005.” *APWA Reporter*. American Public Works Association, June 2005. Web. 28 July 2013

This combination of landfill and shopping center presents an opportunity to use architecture to rethink the possible outcomes of combining these two key components of Logistic Space. The national chain grocery store and the related cast of regional-shopping-center characters will remain crucial programmatic elements as the landfill becomes a Trojan horse through which a new urban form can be introduced into the Logistic Spatial Domain.

In addition to their strategic locations within the Logistic Spatial Domain, landfills also present a pressing crisis. As of 2012, the state of Michigan has only 24 remaining years of airspace before all 71 of its active landfills are full.⁹ That means that within the next 30 years a territory nearly the size of an entire township (36 sq. mi.) will be simply covered with grass and left vacant. As demonstrated by the Fairlane Green development, many landfills offer prime real estate from which one can directly connect to the nation’s

⁹ MI DEQ 2011 Solid Waste Annual Report



MIDDLE: This map shows where Kroger locates its stores in relation to traditional city centers.

RIGHT: Diagram showing different examples of the 40' module in use

transportation network. Furthermore, landfills generate energy—they have meticulously controlled hydrologic systems and are large enough to accommodate city-sized projects. They also offer panoramic views from the top surface of the trash plateau: the maximum theoretic volume of the largest landfill in Michigan would produce a garbage pyramid ten times the size of the Great Pyramid of Giza.¹⁰

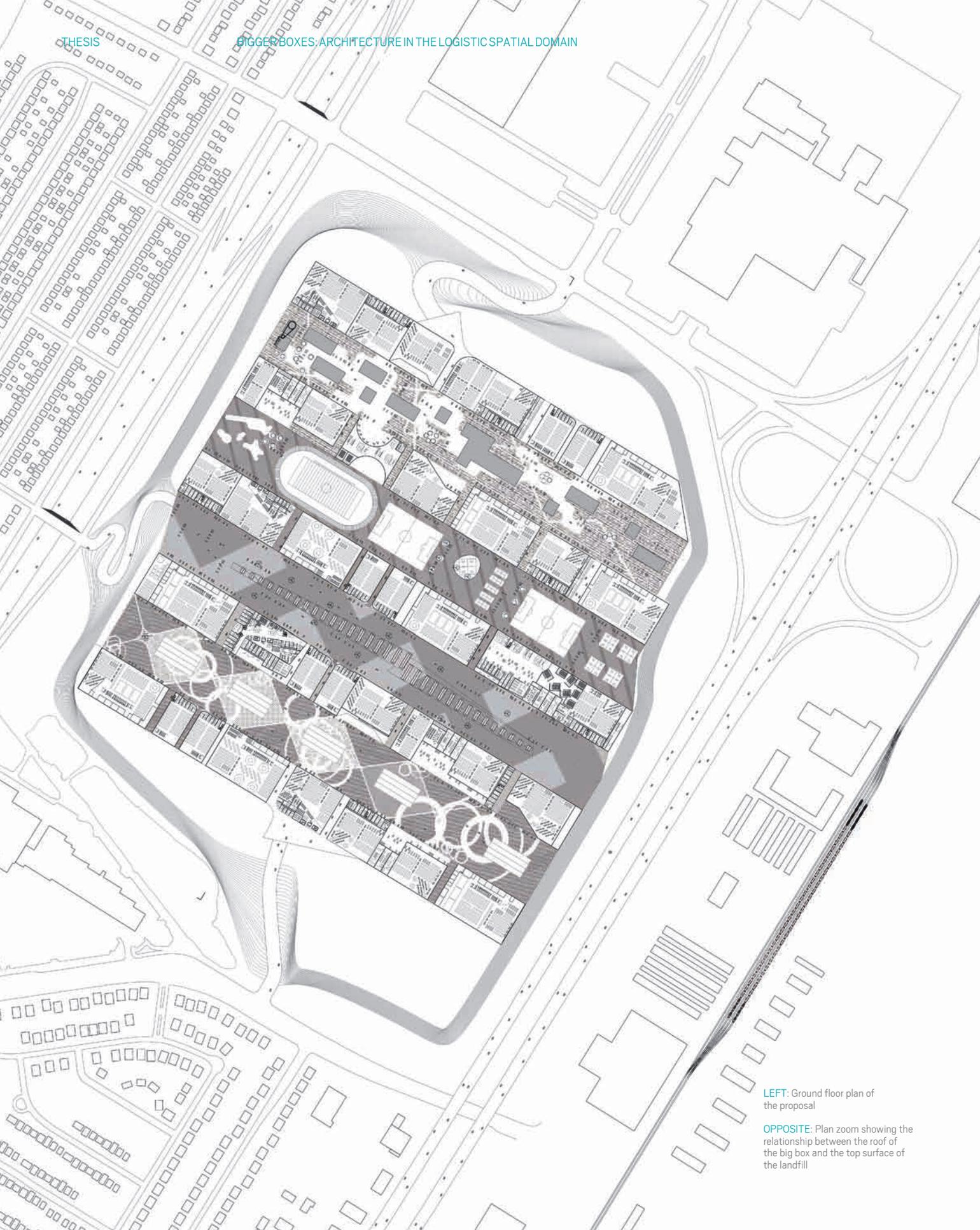
Landfills are simply begging to be pioneered. What would this re-territorialization landfills look like? What is an appropriate way to build on a mountain of trash? Could a network of hilltop towns emerge along the interstate system? How would these new settlements change the architectural parameters of the national chain grocery store?

The future of the city lies not in trying to resurrect the pedestrian-oriented forms of the past, but rather must begin with Logistic Space as the organizing principle.

¹⁰ "Airspace: The Geopolitics of Landfilling in Michigan" in *Trash*, edited by John Knechtel (Cambridge: IT Press, 2006): 132-135

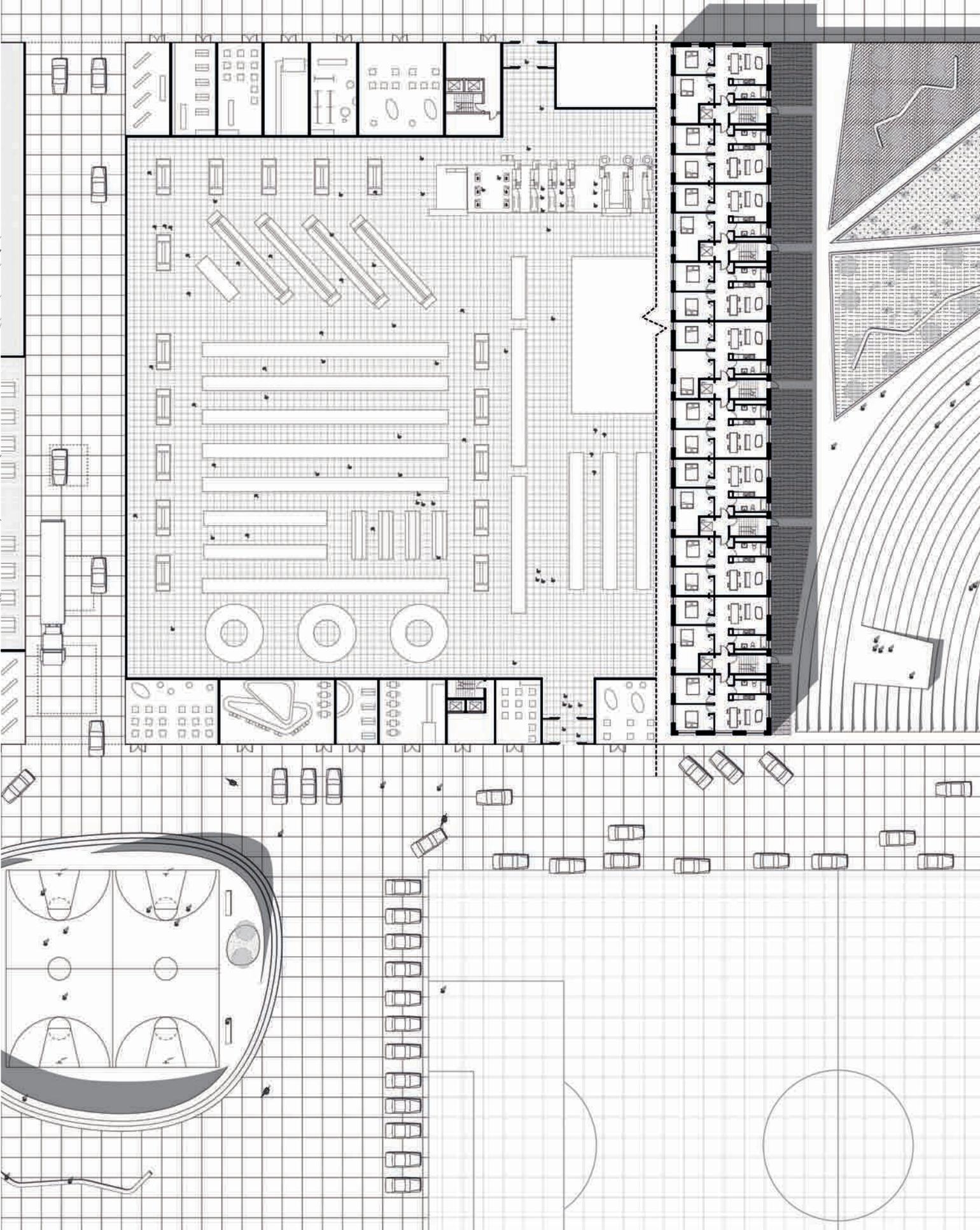
Luckily, Logistic Space has, at its core, a specific dimension that guides its spatial relationships. Forty feet is the long dimension of a shipping container, and that same dimension is the ideal spacing of a big box store's structural grid. Forty feet makes for a very usable housing or office floor plate depth and is also a common dimension for a two-lane roadbed. This 40-foot dimension provided the basic spatial framework for the design of a new kind of urban form. A 40-foot grid was imposed over the extents of the landfill. This grid was then used to lay out a row of big box stores along with the required space for parking.

This is where things become unfamiliar: instead of knitting everything together with the typical network of roads and parking lots, the top surface of the landfill becomes one giant parking lot. It is the diagram of the building surrounded by a sea of parking taken to its most extreme. Parking lots are quite interesting: as soon as a person or vehicle enters a parking lot the rigid behavioral patterns of the street network disappear.



LEFT: Ground floor plan of the proposal

OPPOSITE: Plan zoom showing the relationship between the roof of the big box and the top surface of the landfill



TOP: Image of the final model—Scale 1:200

BOTTOM LEFT: Image of the final model—Scale 1:200

OPPOSITE RIGHT: View from the water park

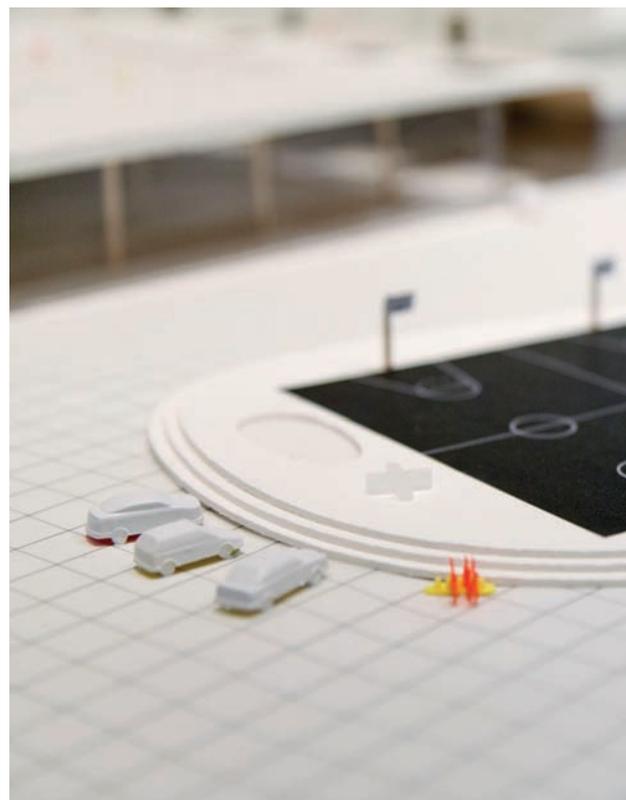
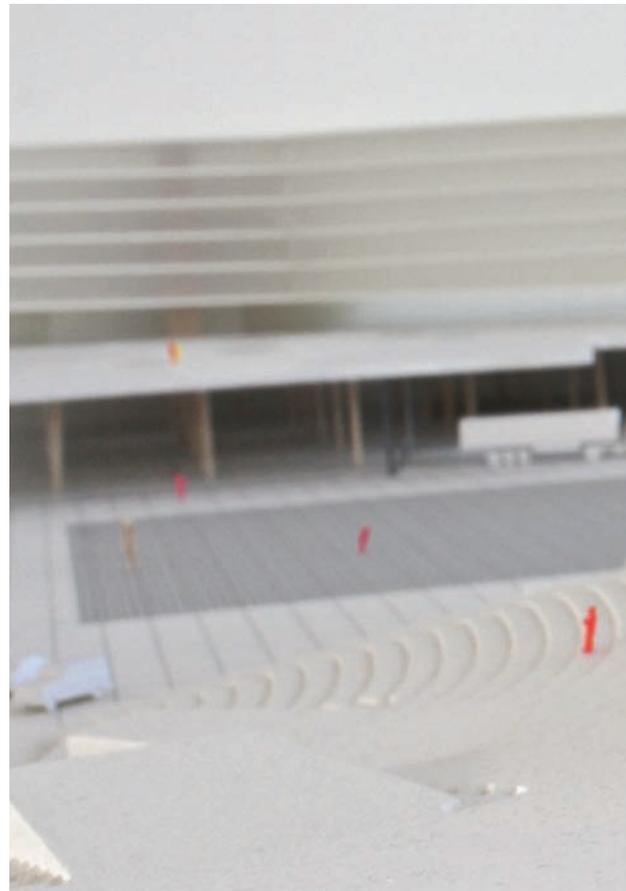
No longer are the markings and painted lines on the ground sacred. People, cars, trucks, and carts mix freely and negotiate the space amongst themselves unmediated by the rules of the road. This is very similar to the way in which Western European city squares function. The only real differences between parking lots and squares are the ways in which the surrounding programs frame and interact with the space. We are all familiar with the biggest problem of parking lot design—lots are sized according to the theoretical maximum volume they need to accommodate on the busiest day of the year—therefore they are almost always empty. This suggests that they could be cross-programmed without losing efficiency as a parking lot.

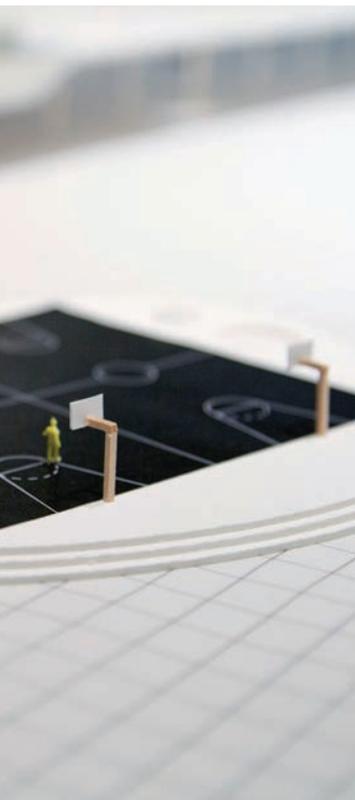
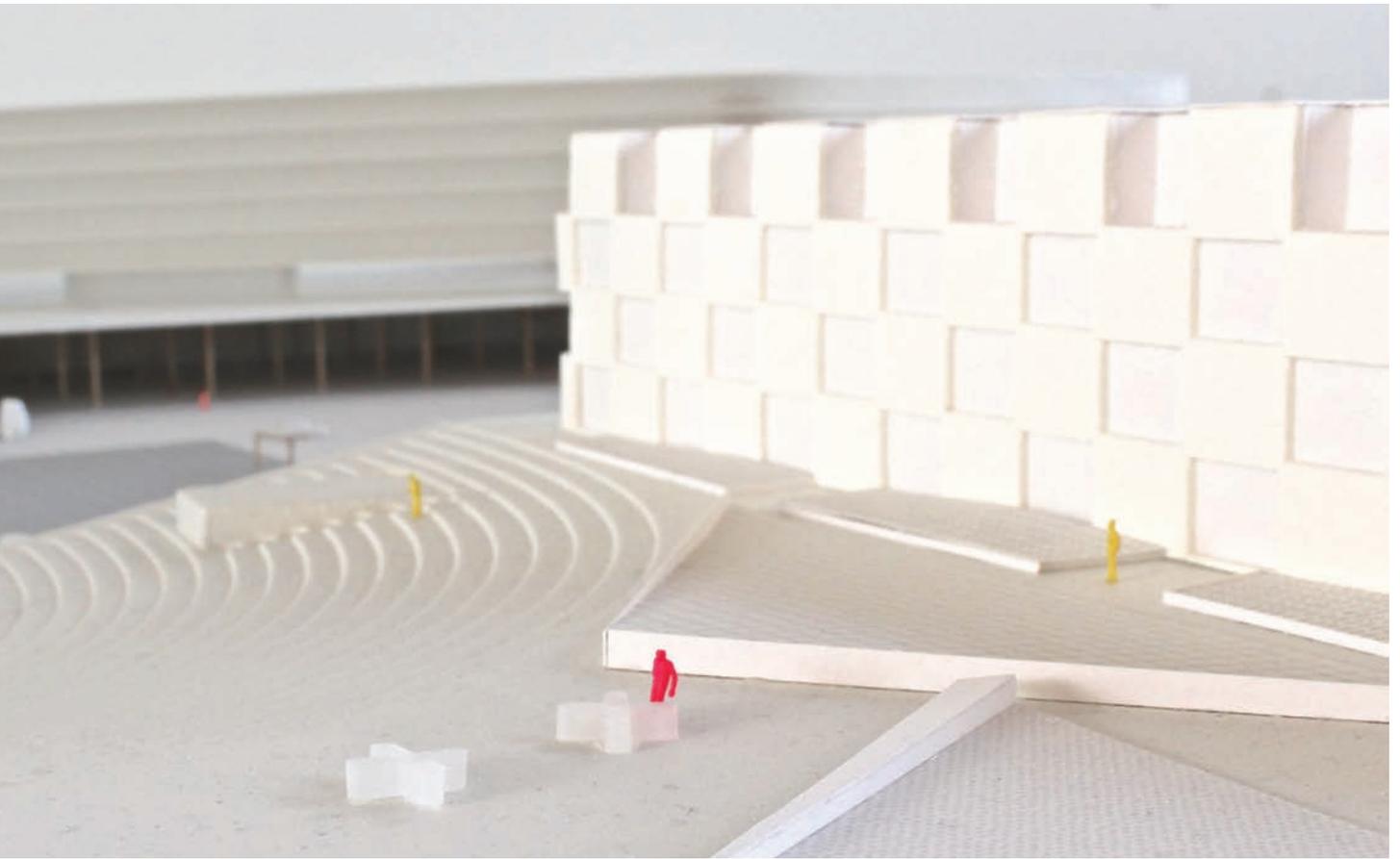
The design uses each of the strips of parking between the rows of big boxes to introduce an additional programmatic theme made possible in part by the energy produced locally by the landfill: a spa and water park, a sports complex, a market hall, and methane powered greenhouses. Finally, on top of the 40-foot column grid which organizes the big box stores, space can be created to accommodate a number of different kinds of programs: churches, schools, houses, doctors offices, hotels, and office space can all comfortably live on top of big retail stores below.

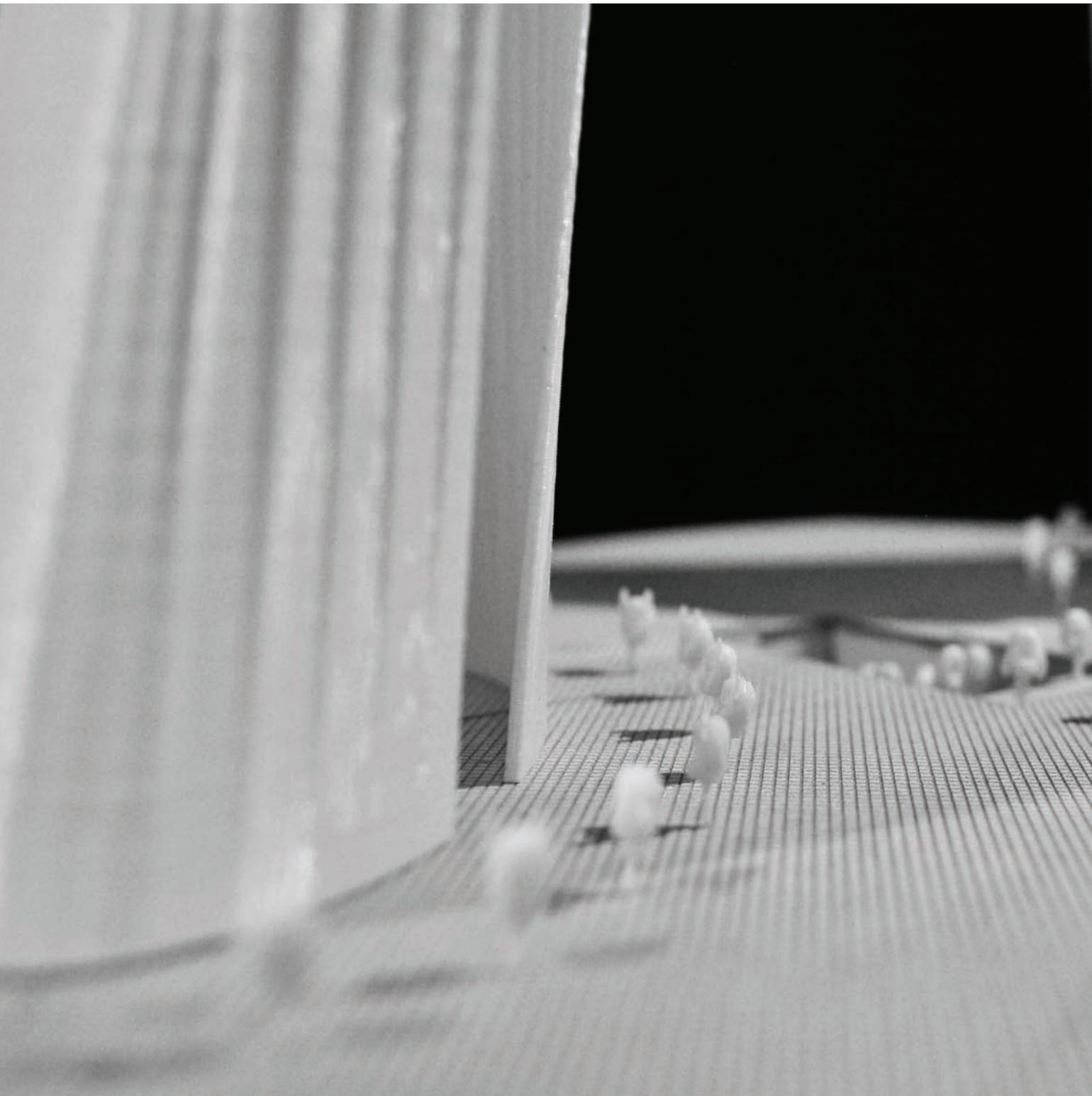
In this way, architecture becomes crucial to the success of the project; the extra programs introduced to the open spaces ensure that pedestrians are no longer discriminated against by the parking lot. Basic architectural elements like windows and stairs suddenly become necessary for the grocery store because the buildings have an incentive to respond to the cross-programming of the open space. Thus the fundamental concepts of architecture find a new life in the very place that was once thought to be the end architecture.

The landfill provides the ideal geographic location for this subversion and recombination of Logistic Space's building blocks. What emerges is a kind of urbanism that is not totally foreign, yet certainly not familiar. It is a space made of an architecture that encourages both old and new forms of civic life while simultaneously accommodating the spatial demands of contemporary logistics. It is a city in section, but a logistic diagram in plan. It has a clear defined form, but enough parts to be spatially nuanced and to encourage a vast range of interactions, uses, and events.

The Logistic Spatial Domain is not the end of architecture; it is the beginning of a new form of urbanity. 





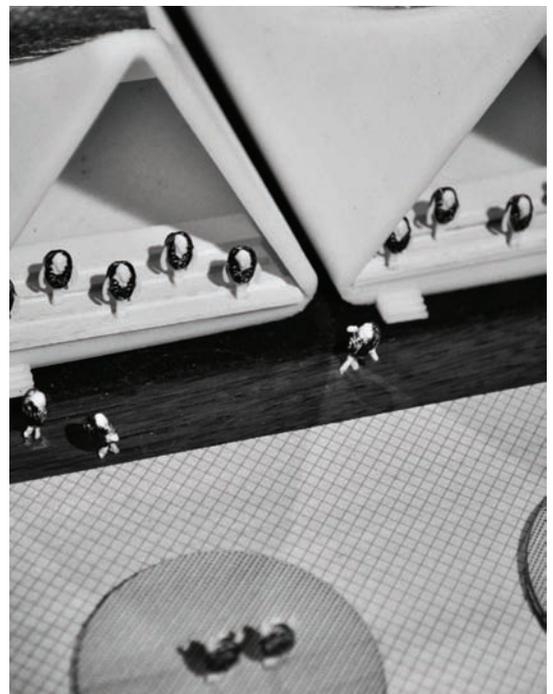


nonumenta

If the monument is the heroic, monolithic, top-down, object-oriented, political signifier of univalent ideology, the nonument reflects the post-modern reassessment of subject-object relationships and places emphasis on the complexity of subject representation and identity formation.

It questions the efficacy of resistance to the ubiquitous accepted system. The nonument explores the aesthetic as driver of cultural production and producer of collective identity, questioning how we represent ourselves through aesthetic choices and how these choices, in turn, condition us.

Nonumenta depicts an 'urbanscape' composed of competing building-objects that challenge binaries associated with monuments, including history/memory, mind/body, symbolism/phenomenology, heroic/personal, collective/individual, and urban/domestic. These "nonuments" act as false memes, pushing the limits of alterity through aesthetic distortions of familiar or hegemonic monument characteristics. The urbanscape is dotted with varying phenomena, including masked, uniformly attired, gender-ambiguous persons that assemble, disassemble and perform amongst the built fabric. Requisite cultural participatory practices are shown in process; energy is harvested, structures are built, meditation practices are undertaken, and all activities are represented in a manner that conflates work and play. Here the disambiguation of the body, the adornment of industrial architectures, and the seemingly bizarre joy with which characters engage in what could be deemed Fordist production lends itself to a blurred interpretation of hierarchies of social structure, class structure and happiness itself. The nonuments in this scene comprise a typological catalogue of history/memory devices and the responses of individuals and collectives constructing and interacting with them.



INTRODUCTION

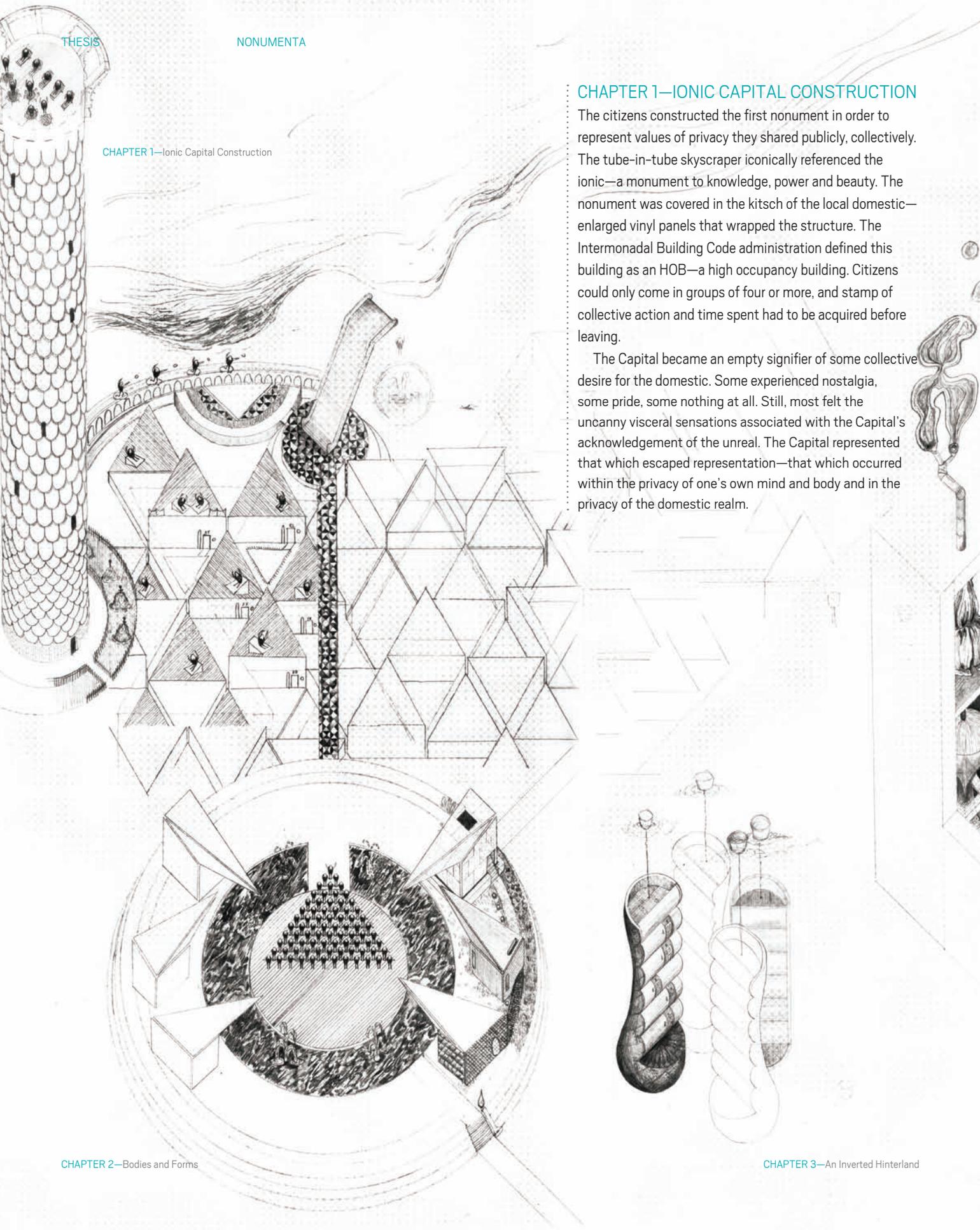
In the town of Nonumenta, the year was unknown. A traumatic event occurred and the citizens collectively made the decision to build the infrastructure which could withstand these now known, now feared external traumatic forces. In the Year One—the first year after the event—the citizens began constructing their domiciles. They wore neoprene suits corraling their supple bodies into singular form. The disambiguation of the body of the individual breathed a different kind of life into collective acts.

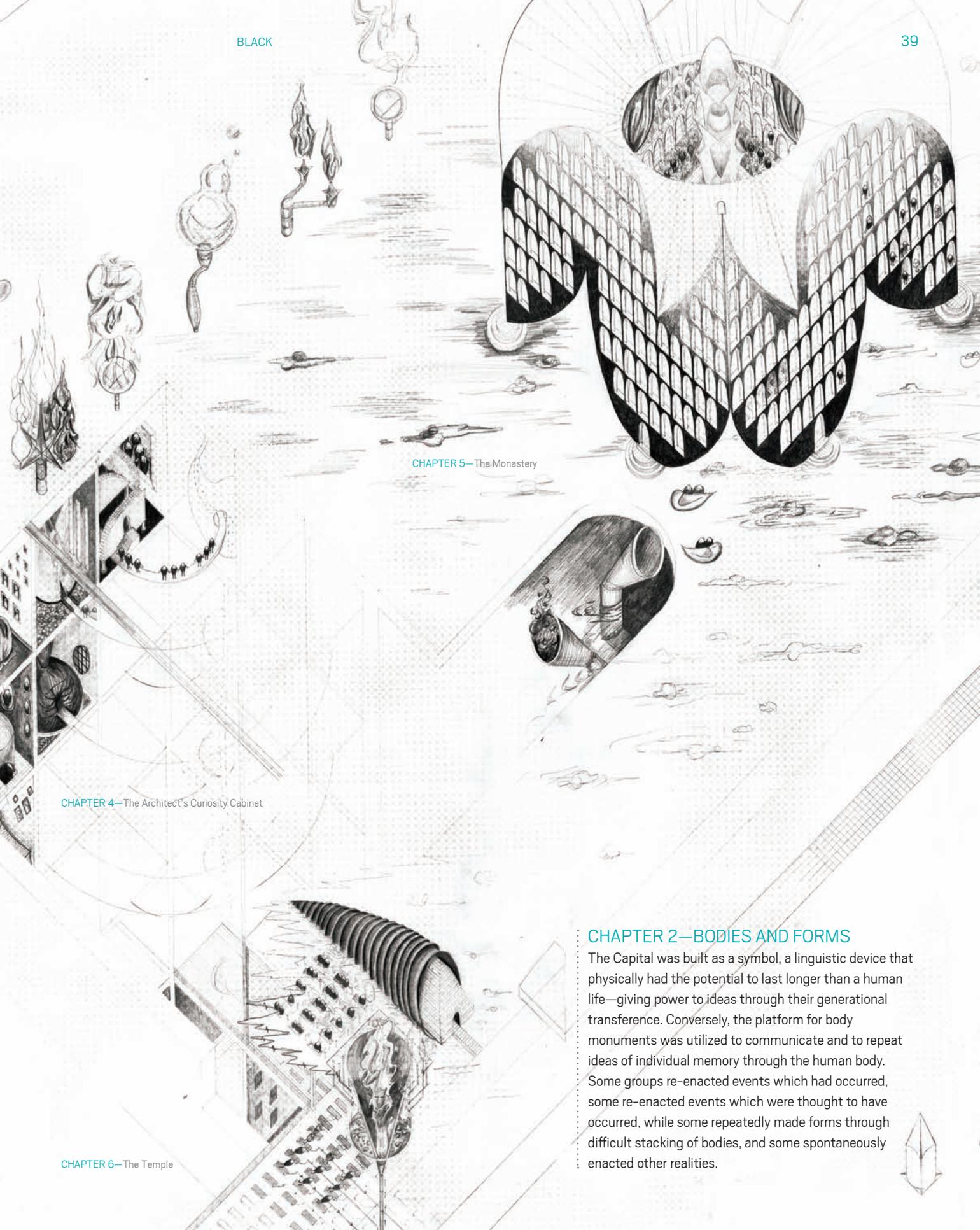
CHAPTER 1—Ionic Capital Construction

CHAPTER 1—IONIC CAPITAL CONSTRUCTION

The citizens constructed the first nonument in order to represent values of privacy they shared publicly, collectively. The tube-in-tube skyscraper iconically referenced the ionic—a monument to knowledge, power and beauty. The nonument was covered in the kitsch of the local domestic—enlarged vinyl panels that wrapped the structure. The Intermonadal Building Code administration defined this building as an HOB—a high occupancy building. Citizens could only come in groups of four or more, and stamp of collective action and time spent had to be acquired before leaving.

The Capital became an empty signifier of some collective desire for the domestic. Some experienced nostalgia, some pride, some nothing at all. Still, most felt the uncanny visceral sensations associated with the Capital's acknowledgement of the unreal. The Capital represented that which escaped representation—that which occurred within the privacy of one's own mind and body and in the privacy of the domestic realm.





CHAPTER 5—The Monastery

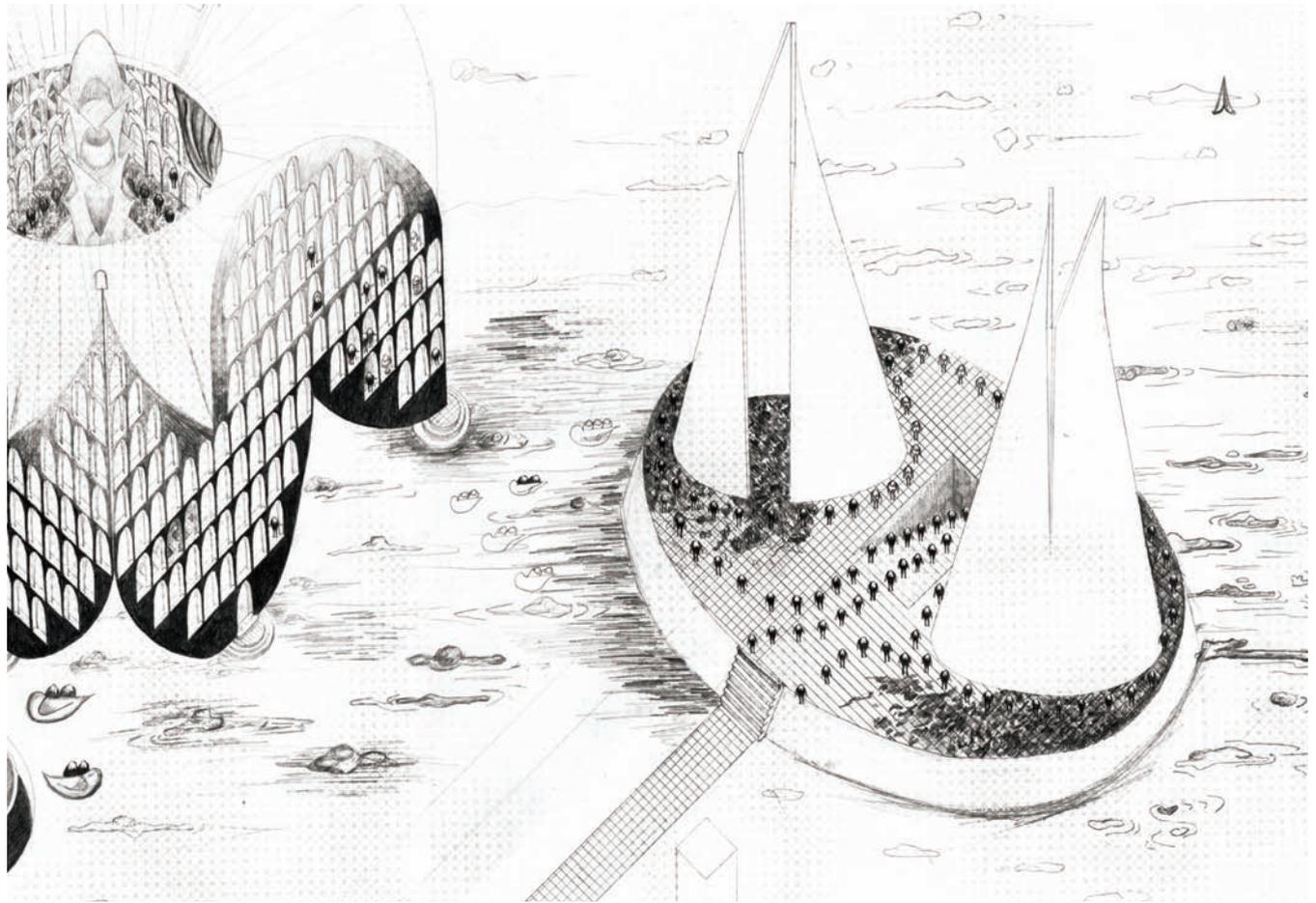
CHAPTER 4—The Architect's Curiosity Cabinet

CHAPTER 6—The Temple

CHAPTER 2—BODIES AND FORMS

The Capital was built as a symbol, a linguistic device that physically had the potential to last longer than a human life—giving power to ideas through their generational transference. Conversely, the platform for body monuments was utilized to communicate and to repeat ideas of individual memory through the human body. Some groups re-enacted events which had occurred, some re-enacted events which were thought to have occurred, while some repeatedly made forms through difficult stacking of bodies, and some spontaneously enacted other realities.





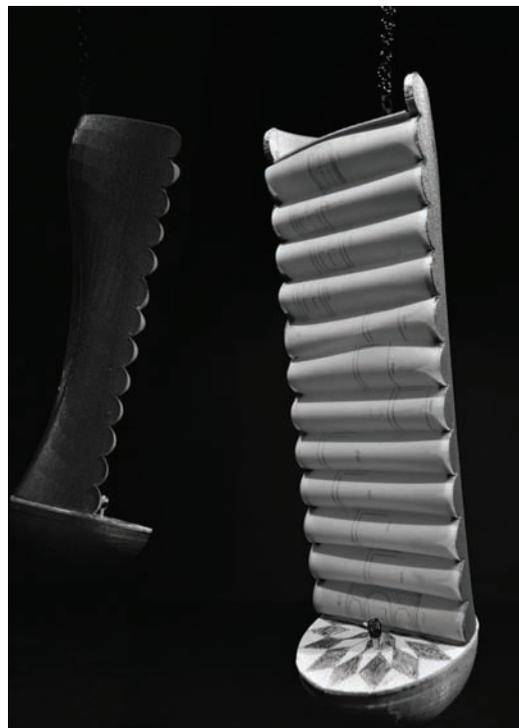
ABOVE: Close-up of the Monastery and the Picturesque

RIGHT: Model of an Inverted Hinterland

OPPOSITE TOP: Model of Ionic Capital Construction

OPPOSITE MIDDLE: Top view of the model of the Picturesque

OPPOSITE BOTTOM: Model of a Row of Amphitheaters



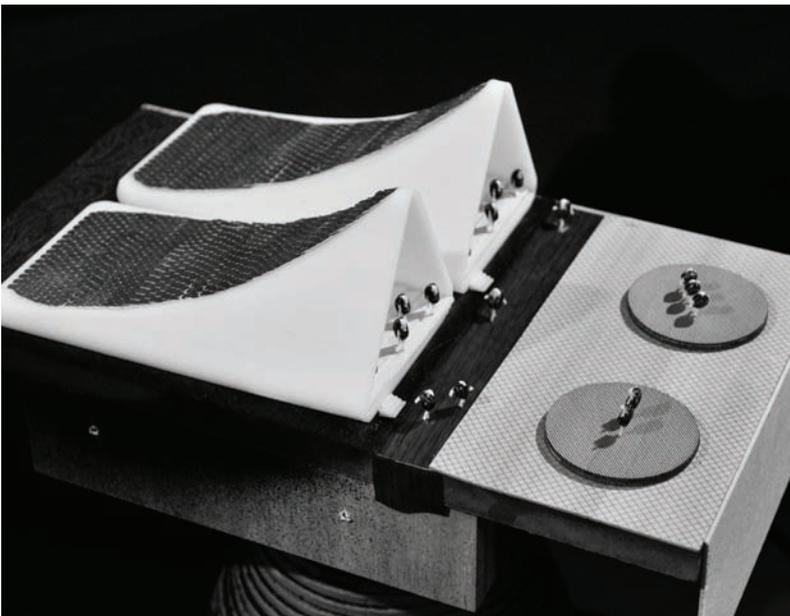
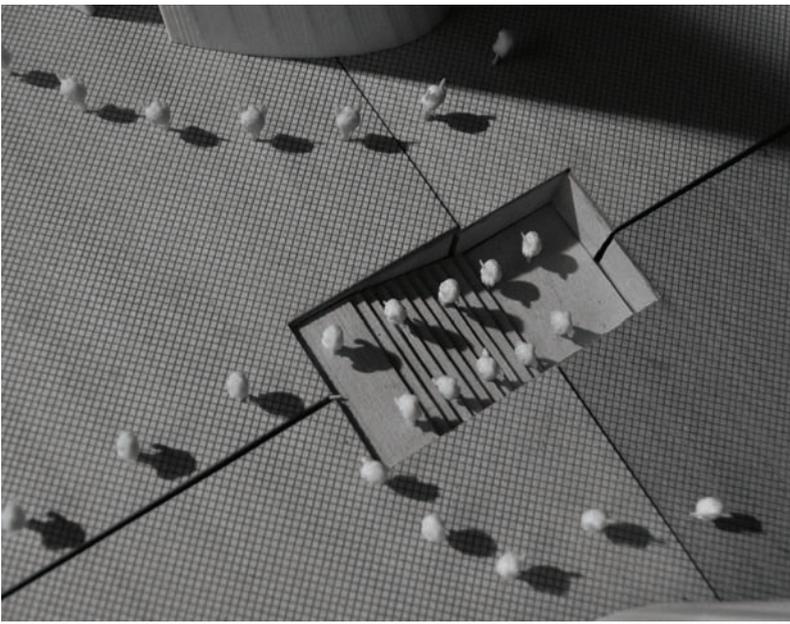
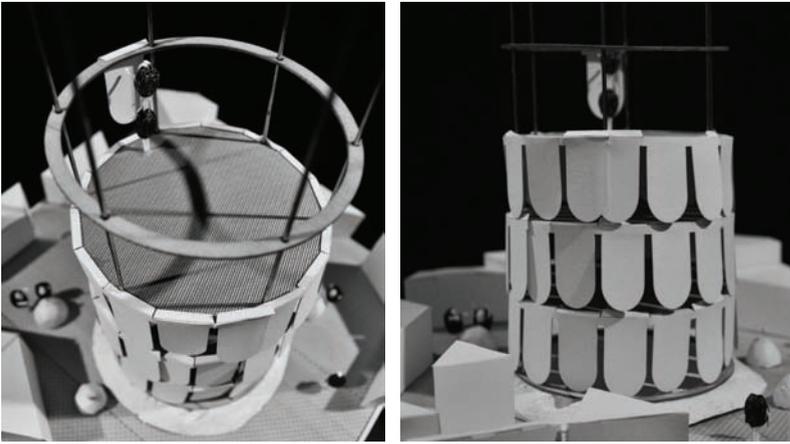
CHAPTER 3—AN INVERTED HINTERLAND

The underwater high rises were constructed for those requiring social mobility. They were built with the frenzied determination of Manhattan, and they were rearranged with the same zeal. There was no underlying grid to organize their seemingly instantaneous construction—only water pressure dictated material differentiation. The upward, vertigo-generating mobility, the acrophobia associated with high towers, was replaced with bathophobia—the fear of the unknown depth. In this case, the land masses surrounding the dense city became a kind of inverted hinterland.

They were monumental in nature—huge and sublime, yet their form and environment were unfamiliar and required new habits for inhabitation.

CHAPTER 4—THE ARCHITECT'S CURIOSITY CABINET

Power had to be generated somehow, but boredom was abhorred. Citizens skipped and danced their way through production mechanisms, their energy being harvested by complex technological devices disguised in the guise of



structures, individual enough for workers to feel ownership over. These workers forgot whether or not they were working; their dreams of otherness were dissipated by the dictation of highly various, engaging, and coordinated daily activities set in place by unseen but familiar political figures.

CHAPTER 5—THE MONASTERY

No one really knew what went on inside, but from time to time figures emerged, performing amidst the arches and passers-by stopped to contemplate a different and unknown life far removed from the familiar.

CHAPTER 6—THE TEMPLE

As gilled architecture surrounding the temple sucked power from running water, soothing echoes facilitated aneurysm from the members of the congregation. In an adjacent pond filled with hot tubs and ventilation tubes, collective dreaming was also made easy for those requiring chemical mediators. These tubes, spouting intoxicants, connected to a boiler below whose power was generated by cyclists, who were members of the curiosity cabinet.

CHAPTER 7—THE PICTURESQUE

The two large cones required a ten-minute approach from the temples, but people still went anyway. On crowded days or deserted days, there appeared to be only one way to walk around them. There was always something to buy in the platform underneath.

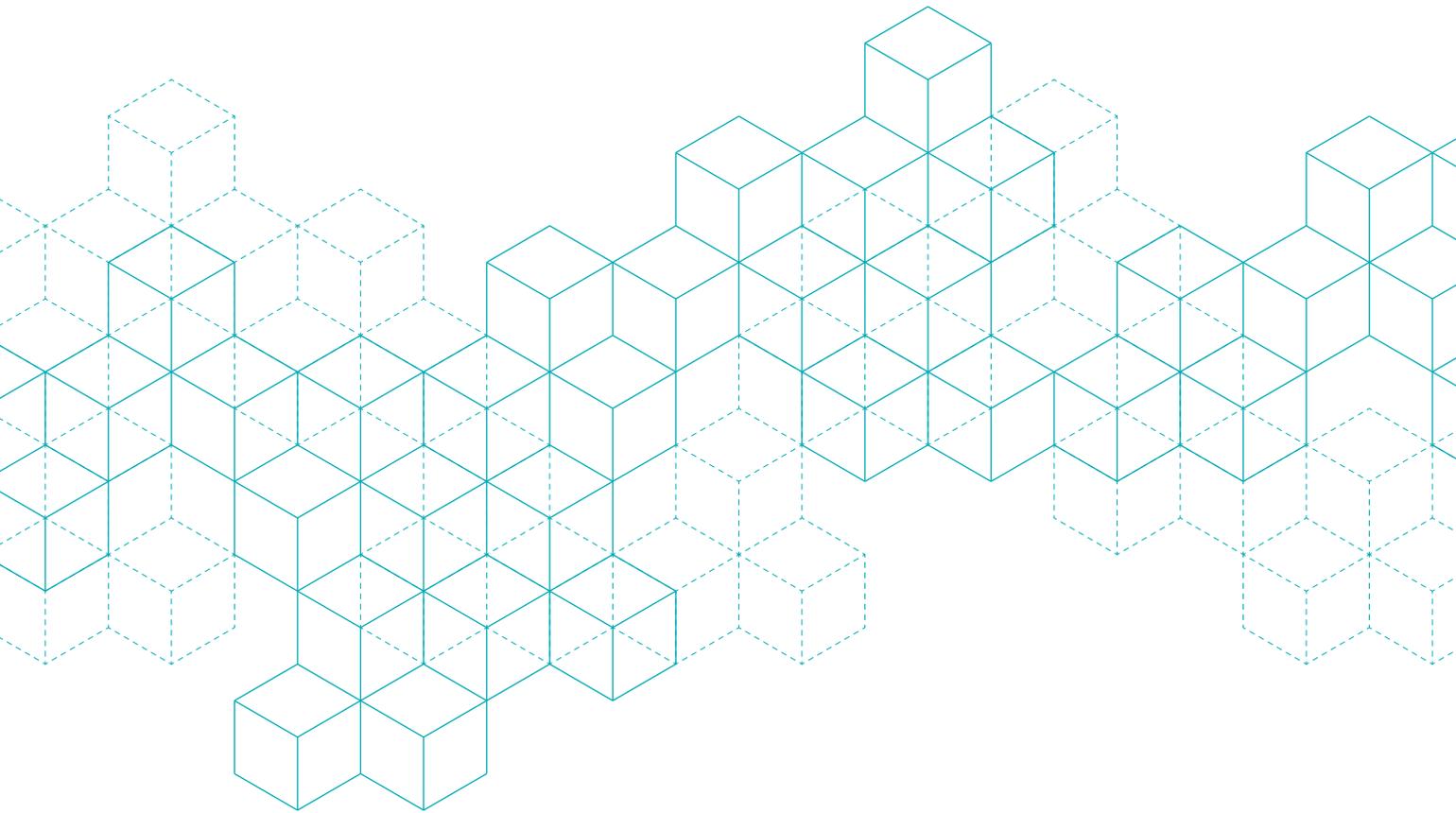
CHAPTER 8—A ROW OF AMPHITHEATERS

Always an audience, always a crowd, always the provision of space for communication. The repetition undermined the significance of the performances and encouraged the acceptance of public displays.

CHAPTER 9—FIGURING THE VOID

The void was made as an infrastructure for temporal memories. The walls of the void were made of perforated holes in which citizens could place balloons. The spontaneous and ever-changing filling of the void allowed for an ever-changing monument which lacked a fixed meaning. An adjacent observation tower provided a platform for viewers wishing to experience the monument in its totality.

Not coincidentally, the observation tower also overlooked a nearby floating island, whose forms predominantly consisted of rectangular agglomerations coated with indiscernible messages. 



2013 RAOUL WALLENBERG COMPETITION AWARDS

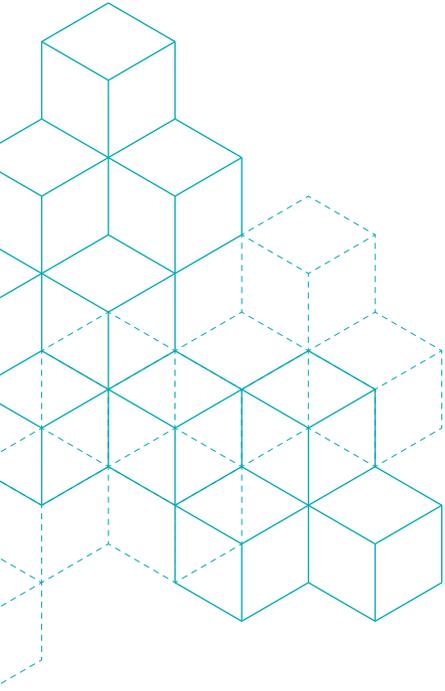
Raoul Wallenberg, a 1935 graduate of the University of Michigan College of Architecture and Design, has been called one of the 20th century's greatest heroes. At the college, Wallenberg's legacy lives through our aspirations for architecture as a humane and social art. All undergraduate seniors participate in the Wallenberg Studio, in which the students are challenged to develop proposals that address humanitarian, social and/or political issues in architecture.

HONOR AWARDS

Carly Gertler
Studio Critic: Christian Stayner
Robert Michel
Studio Critic: Neal Robinson

HONORABLE MENTION

Yojairo Lomeli
Studio Critic: Dawn Gilpin
Kevin Raley
Studio Critic: Keith Mitnick
Victoria Rice
Studio Critic: Adam Fure



wallenberg

Taubman College of Architecture and Urban Planning awards undergraduate scholarships every year in honor of alumnus Raoul Wallenberg (B.A. Architecture '35). Following his formative years at the University of Michigan, Wallenberg rescued over 100,000 Jews from Nazi persecution in Budapest, Hungary, during World War II. The Wallenberg Scholarships offered in his name fund exemplary undergraduate students wishing to pursue humanitarian work anywhere in the world. Established by the Bernard L. Maas Foundation in 1968, the award commemorates Wallenberg's lifelong concern for the human condition.

FEATURED PROJECTS

Drew Kaczmarek
Grounding Identity

Carly Gertler
Between the West and the Western

Daniel Marty
Closing the Loop

Robert Michel
Safe House



grounding identity

If life doesn't offer a game worth playing, then invent a new one.

—Anthony J. D'Angelo



Ground, as an element from which personal identity can be derived, contains both the material and the cultural. Material often has tangible economic value, while the cultural elements, including the fictional and the mythological, may hold value from only a single individual's perspective.

THE PROTAGONIST

Identity through ground

THE ANTAGONISTS

Impositions onto ground entity

THE GAME PLANS

Subverting impositions, making them a desired part of personal identity

THE SITE

A small farm, up to heaven and down to hell, shown on the left by the stratigrapher. The latter depicts possible cultural aspects of grounded identity, from Greek mythology, to Jules Verne's fiction, to very real technology and human accomplishments, as well as material composition of key strata.

THE PROTAGONIST

The protagonist is represented by beliefs, whether socialized notions or private convictions. These beliefs are the defining personal aspects, which bring the physical surroundings into play with individual identity.

CIVIL WAR PROMISE

Physical ground is an unalienable right, exemplified by the civil war legend that every freed slave would get his comeuppance of land, thereby initiating him into society.

YOUR PROPERTY

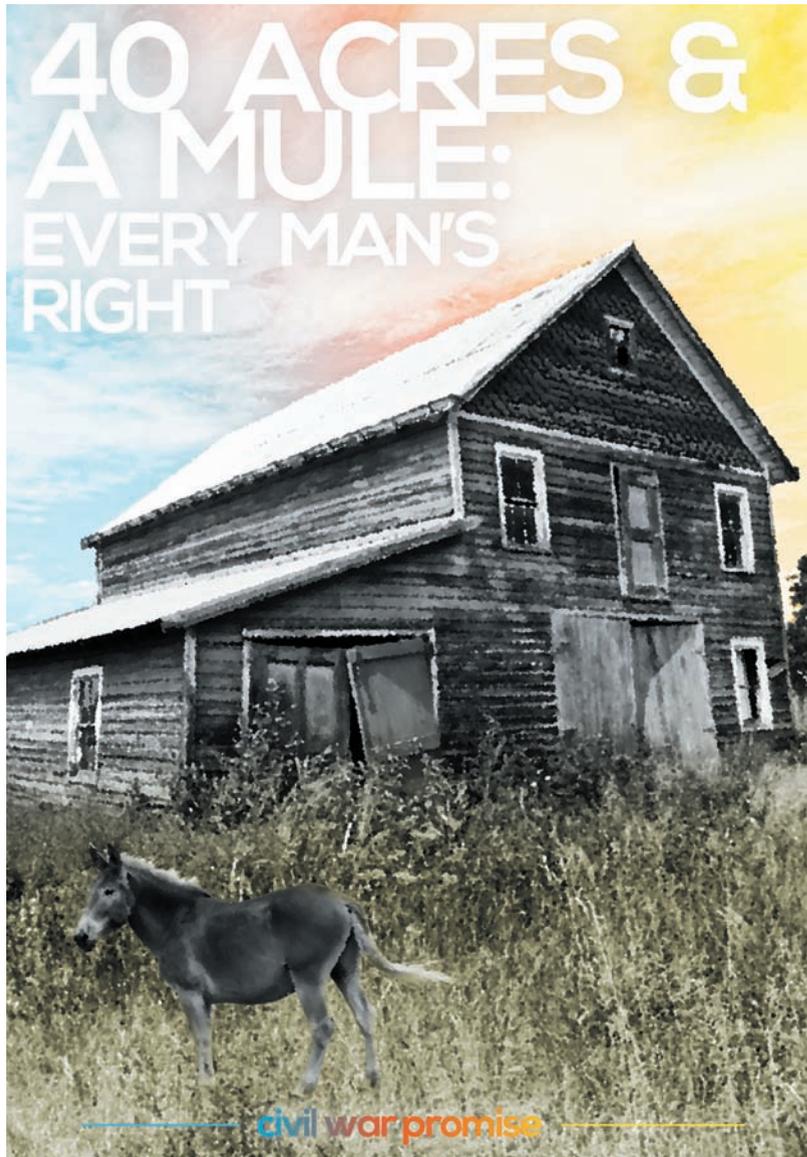
The 13th century Latin legal definition of property rights, which is still very much alive in informal understandings, by extension becoming essential to concepts of land ownership and identity.

CIVIL WAR PROMISE:
40 acres & a mule: every man's right

YOUR PROPERTY:
vertical ownership: up to heaven and down to hell

PRAGMATIC, NOT UGLY:
supporting America's economy

PRIVATE PROPERTY:
keep out

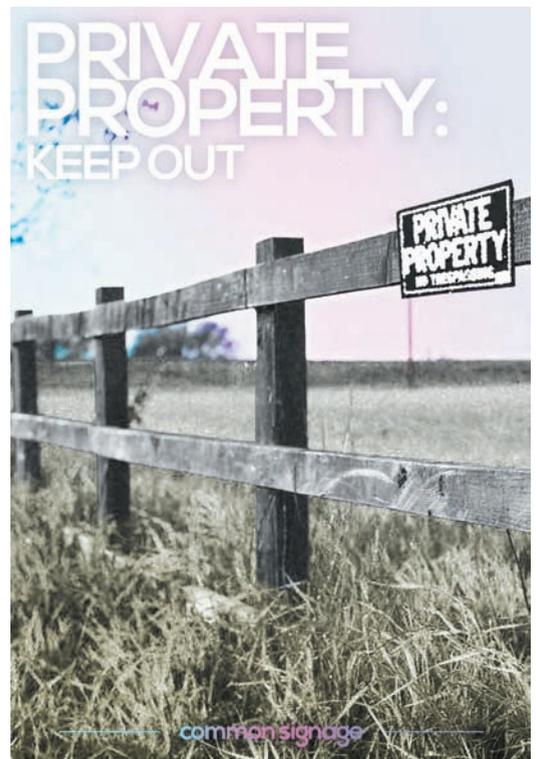
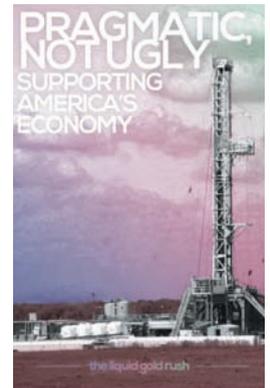
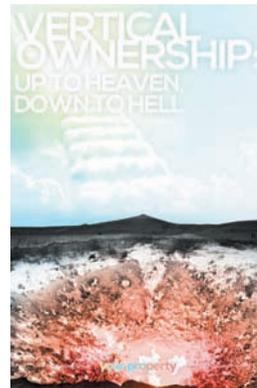


THE LIQUID GOLD RUSH

Commercializing ground includes iconic tools, which can represent industrial imperiousness and grime, or a very tangible manifestation of economic vitality.

COMMON SIGNAGE

Strength of belief is manifest in the strength of defense. Landowners protect that which is part and parcel to identity, privatizing this part of themselves as many keep private other convictions and aspects of identity.



THE ANTAGONISTS

The antagonists impose upon the protagonist's land or surroundings in ways not completely under the protagonist's control. These impositions operate in much the same way the site does; running the gambit from fictional, to real, to hybridized fictional reality. The antagonists also operate at every altitude of the site, up to heaven, and down to hell.

SPACE CANNON:
antagonist, up to heaven

NATURAL GAS EXTRACTOR:
antagonist, down to hell

EXCAVATION SITE:
antagonist, down to hell

WIND TURBINE:
antagonist, up to heaven

A PLAY BOOK:
by possible interactions between the protagonist and the antagonists

THE GAME PLANS

A play book by which the landowner can formally alter the ground to subvert the imposition into a redefined part of the landowner's identity. Several possible attitudes the protagonist may have towards the antagonist are provided for each imposition, not all of which are negative. Three game plans are explored in detail. The formal implications

give rise to the subtleties of the protagonist's identity and attitude towards the antagonist. The three selected here represent a range of these attitudes and pull from each of the possible antagonists.

On one level is the logic and practicality of each game plan. Hiding beneath is the protagonist's private reality that only the most perceptive and creative could ever hope to discern independently.

THE FANTASTIC AND THE PRACTICAL

Three of the game plans are explored in detail. Formal implications give rise to the subtleties of the Protagonist's identity and attitude towards the Antagonist. The three selected here represent a range of these attitudes and pull from each of the possible antagonists. 

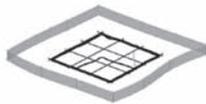
protagonist: landowner's home



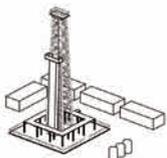
antagonist: space cannon



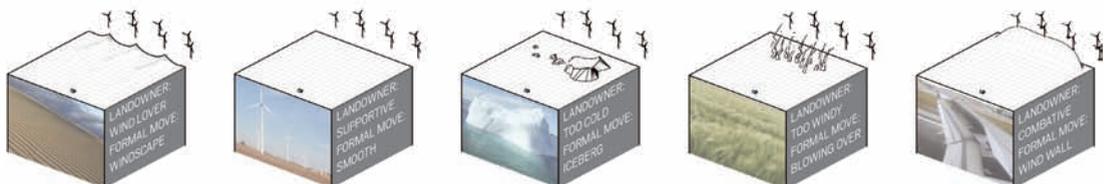
antagonist: excavation site



antagonist: natural gas rig



antagonist: wind farm



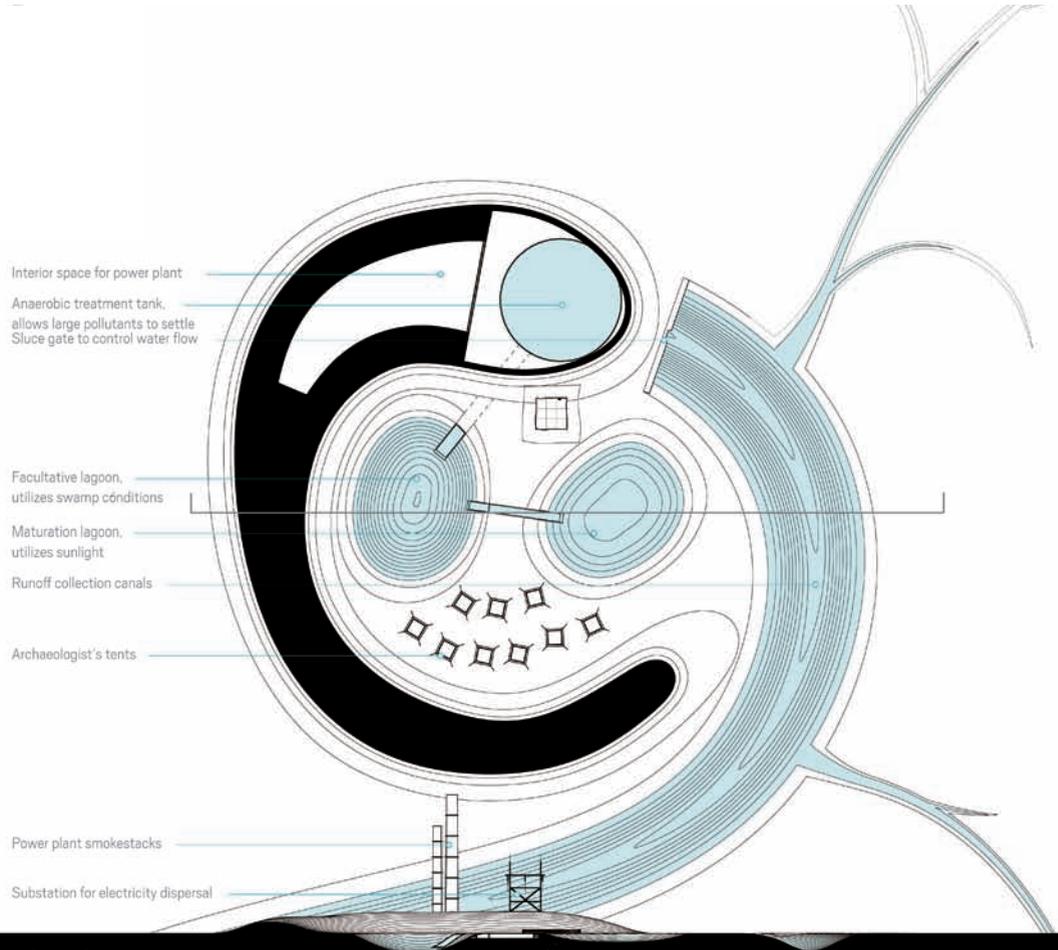
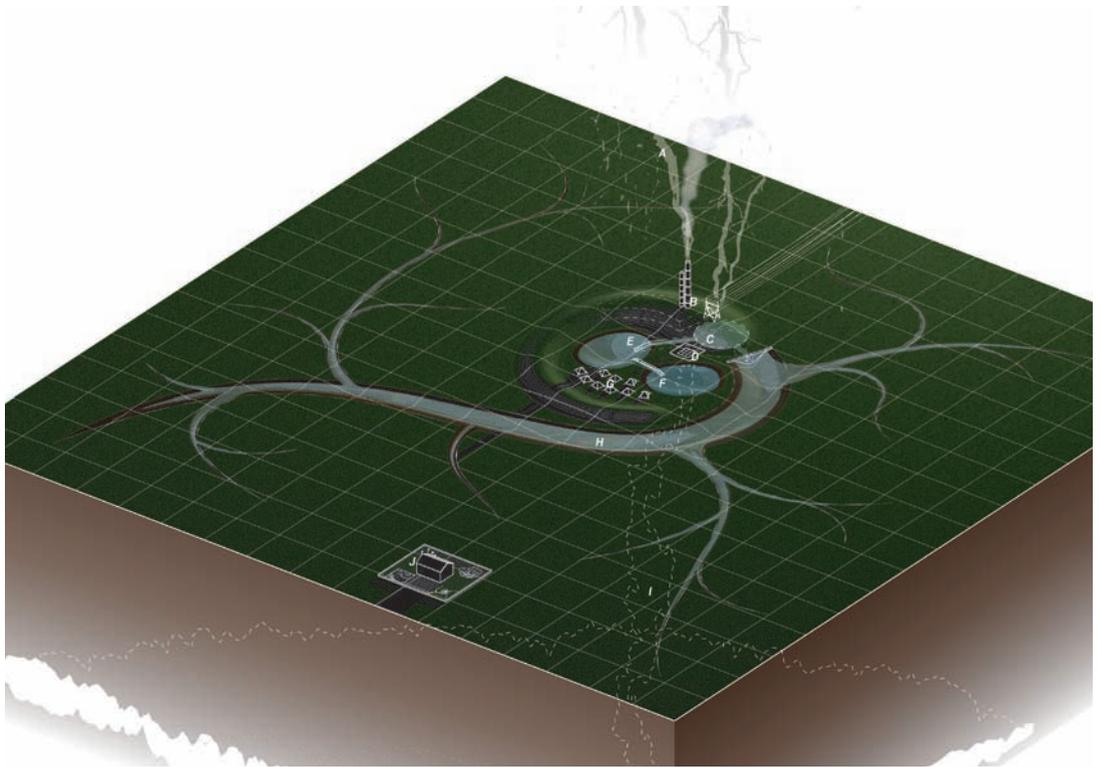
GAME PLAY: happens by possible interactions between the Protagonist and the Antagonists. On one level is the logic and practicality of each game plan—the pragmatic. Hiding beneath is the protagonist’s private reality that only the most perceptive and creative could ever hope to discern independently—the fantastic.

GEOFLUIDIC EXCAVATION: Agricultural runoff treatment (the pragmatic) — the river Styx (the fantastic)

- A: lightning, attracted by power plant — *ethereal signal*
- B: power plant — *signal corps*
- C: anaerobic treatment tank — *Hades overflow contingency tank one*
- D: archaeological dig site — *J.Verne departure point*
- E: facultative treatment lagoon, ten feet deep — *Hades overflow contingency tank two*
- F: maturation/polishing treatment lagoon, five feet deep — *Hades overflow contingency tank three*
- G: archaeologist’s camp — *peak camp, elevation: 3960 mi.*
- H: agricultural runoff collectors — *Styx River & tributaries*
- I: caverns — *passage to the center of the earth*
- J: farmer’s home — *gamer’s home*

AGRICULTURAL RUNOFF TREATMENT & POWER PLANT:

- 1: existing 40 acre farm above caverns to center of the earth
- 2: archaeologists arrive excavation decreases separation to caverns
- 3: treatment and power plant built, unfarmed areas consolidated
- 4: earthwork completed, drainage canals and hill to conceal plant and anaerobic tank built.
- 5: fully functional agricultural pollutants removed, electricity produced, peak camp grows



TERRITORIAL SYMBIOSIS: vertical growth and storage — *The Fall of Icarus*

- A: invasive wind turbines — temperate micro climate generators incidental targets
- B: possible explosive failure scenario — attack trajectory
- C: silo explosion mitigation cap — mounting armament
- D: dispersed sunflowers enhancing corn growth conditions — retaliatory territorializing
- E: interior grain storage — explosive static electricity amplifier
- F: oscillation extents masks turbine din — Icarus' wings
- G: exterior sunflower cultivation enabled by micro climate — agricultural camouflage
- H: wind stabilizers — subterranean electrostatic triggers
- I: farmer's home — gamer's home

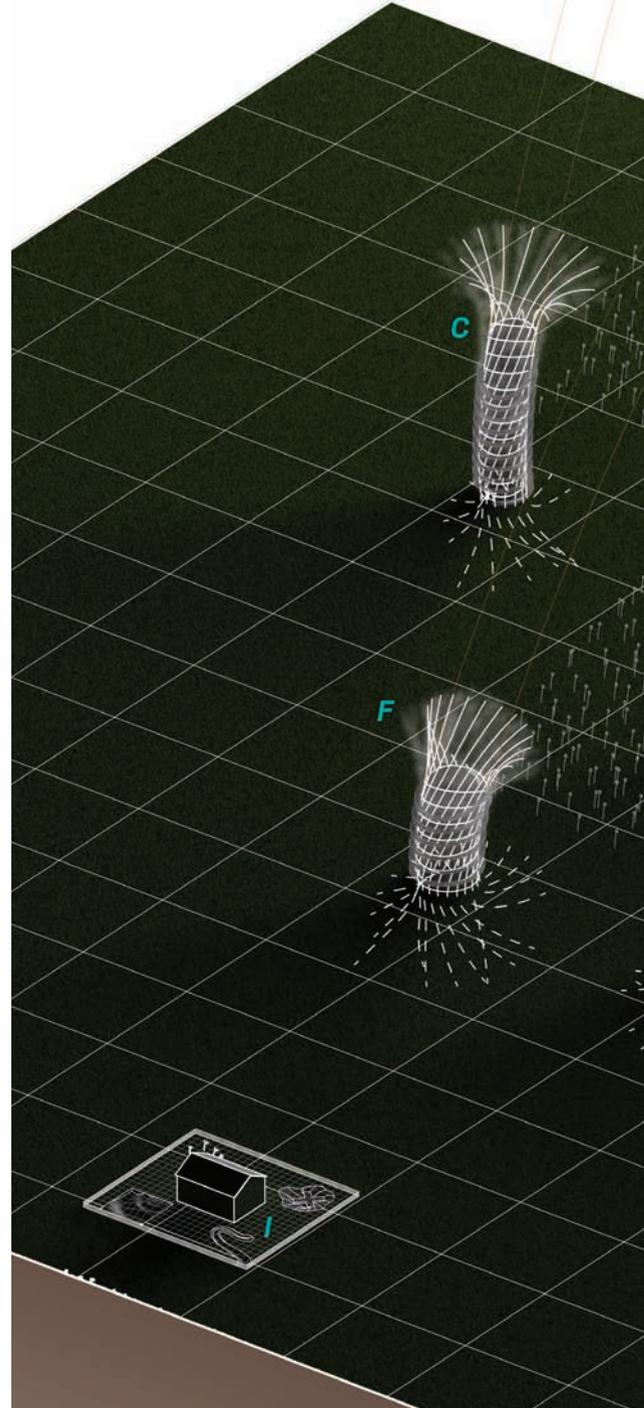
SUNFLOWER GROWER:
also grain silo

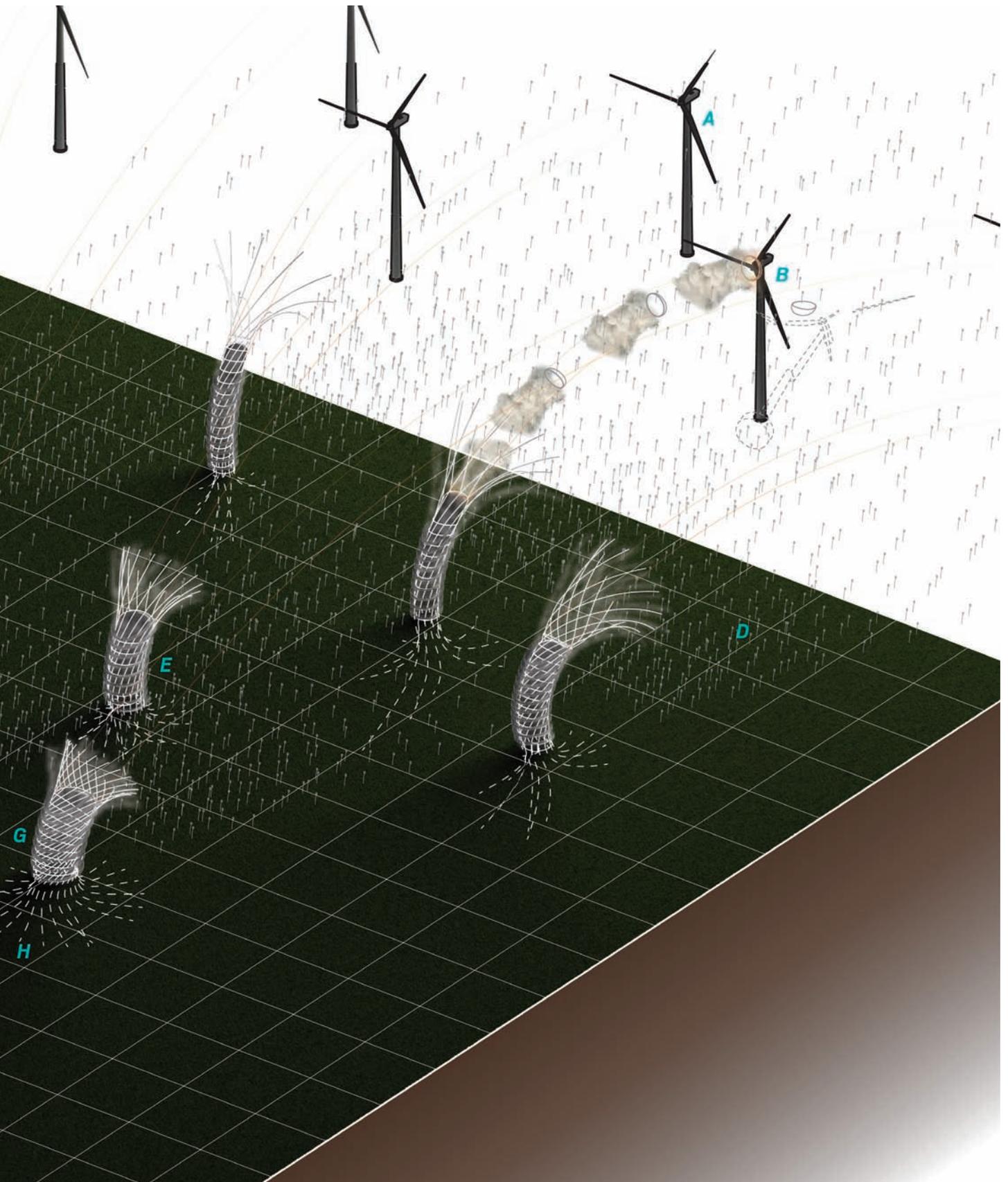
- 1: existing 40 acre farm CO: 6th in the US for wind power generation
- 2: wind farm built, views altered, micro climate created
- 3: response initiated, semi-rigid steel poles driven into ground
- 4: silos completed, steel members stabilized by exterior bands and interior walls; some flexibility remains
- 5: sunflowers spread, seeds pulled off silos by the turbines begin growing, soil is nourished.

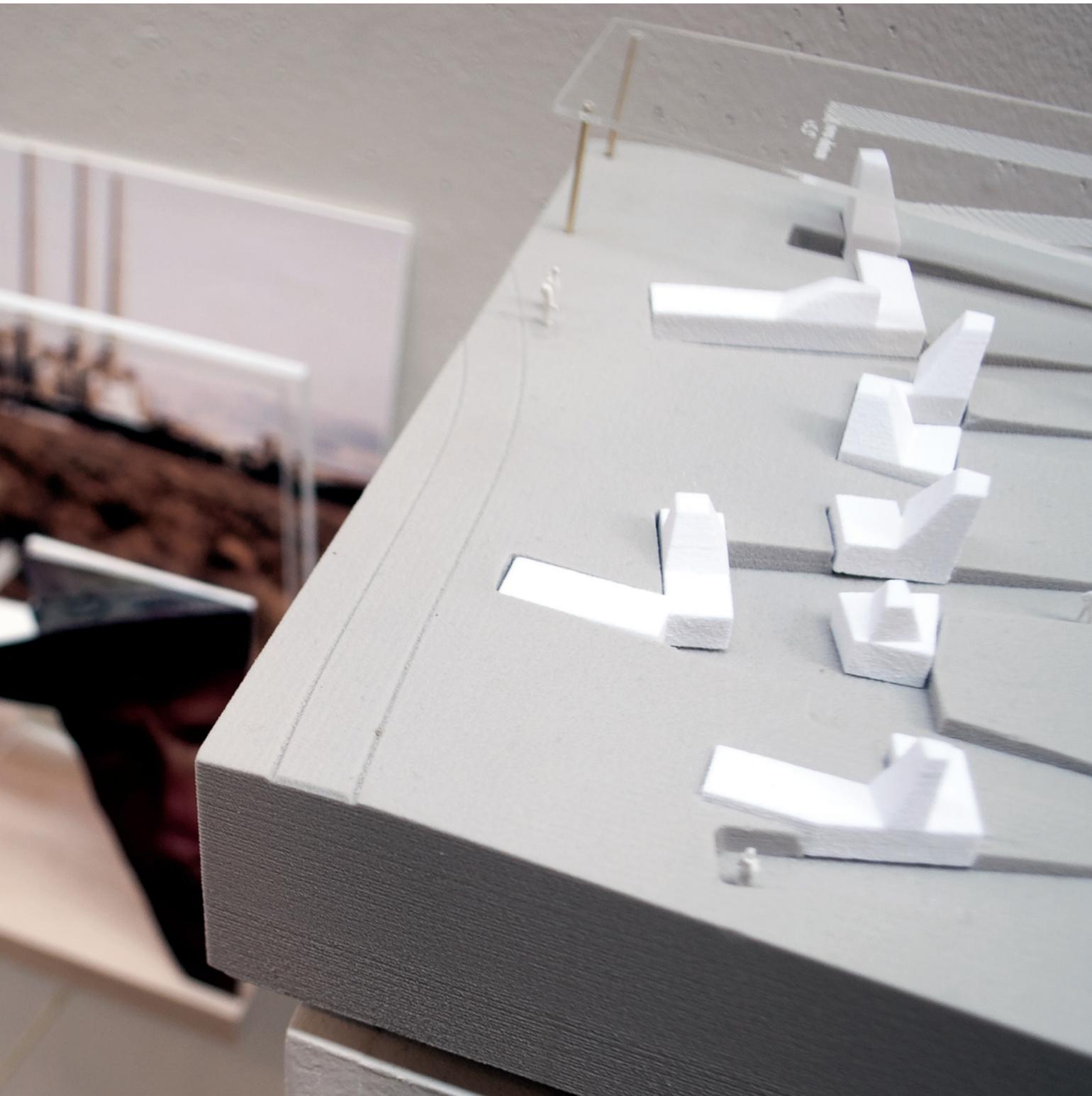
Sunflower seeds spread by wind into fields, grow alongside corn, assist in replenishing soil nutrients

- Flexible steel members
- Steel shedding + steel columns operate in tandem
- Seam to allow pressure release, if necessary
- Stairs for sunflower access
- Web-like structure of steel members and support rings allow sunflower growth along exterior
- Grain storage
- Door

Wide underground structural spread, for stability







between the west and the western

The film genre of the Western presents a “mythology of the West”¹ so influential that it has largely overshadowed the actual experience of the landscapes it cinematically represents.

The film genre of the Western presents a “mythology of the West”¹ so influential that it has largely overshadowed the actual experience of the landscapes it cinematically represents. Instead it has become an inhabitable mythology—a “promise land” in which American ideals of individuality are founded.

This project takes place in the Navajo Nation, possibly the most famous of these represented landscapes. Constructing vision through extreme foreground and background views, the Western misses or removes the contemporary situation of the West and its complex issues, leaving a “middle ground” open for architectural intervention.

The architecture of the middle ground seeks to make explicit paradoxes and occupy this spatial void by providing a new representation in which ideas of far, near, and middle are reframed through relationship to horizon, land, and program. In a single architectural investigation spread over three sites, this project seeks to mediate between the building scale and the landscape it is situated within—ultimately creating spaces of active engagement and dialogue in the new promise land of the Contemporary West.

A CONTEMPORARY WEST

As the frontier of the American political and theological imagination,² the West and its history remain largely misrepresented today through the timelessness of the Western film genre. Alongside this idealization of the West exists another West: that of the Native Americans as occupants rather than invaders, of an economy dependent on federal handouts rather than individualism,³ and of a natural environment overburdened with man’s misuse rather than a land ripe for occupation. This is the contemporary western situation, lost between the extreme foreground and background shots of the Western film genre. No more explicit is this situation than in the physical place of the Navajo Nation of northeastern Arizona. From the expansive CinemaScope views of Monument Valley to the tracking shots of Gregory Peck on horseback in Canyon de Chelly, the Navajo Nation is a place mainly experienced through its continuous representation by outside sources. What is lacking from this external representation is an experience of the physical place itself, the experience of a contemporary West. Constituting the project of the Contemporary Western, *Between the West and the Western* is composed of one architectural intervention separated over three sites in the Navajo Nation, proposing architecture’s ability to intervene within and around political, cultural, and ecological issues of the present west.

2 Turner, Frederick Jackson, 1861–1932. *Rise of the New West, 1819–1829*. Volume 14 Vol. New York: Harper & Brothers, 1906. Print.

3 Solnit, Rebecca. *Storming the Gates of Paradise : Landscapes for Politics*. Berkeley: University of California Press, 2007. Print. Referenced from the chapter *The Postmodern Old West, or the Precession of Cowboys and Indians*.

1 Solnit, Rebecca. *Storming the Gates of Paradise : Landscapes for Politics*. Berkeley: University of California Press, 2007. Print. Referenced from the chapter *The Postmodern Old West, or the Precession of Cowboys and Indians*.

LEFT: *The Old West*. Through extreme close-ups and panoramas, the West is constructed as an idea rather than a physical place. Within this construction, landscape becomes a character, playing the role of the American Frontier.

RIGHT(TOP TO BOTTOM):
Ephemeral Land — Kayenta Peabody Coal Mine

Land of Production — roadside view approaching the Navajo Generating Station

Symbolic Layering — collapse of cultural juxtapositions approaching Monument Valley

OPPOSITE TOP: Represented region — North West corner of Navajo and Hopi Nations, proximities of three sites

OPPOSITE MIDDLE: Actors — As the architectural and landscape elements of the vernacular, each element is analyzed on its programmatic usage, site temporality, and representation

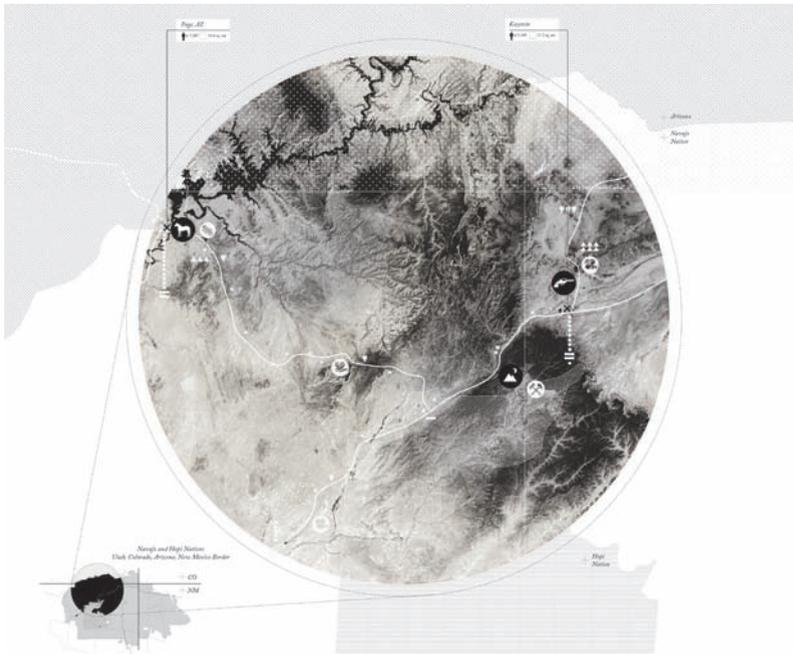
OPPOSITE BOTTOM: Varying scales of "middle ground" by which architecture can begin to engage on the site



SETTING THE STAGE—THREE SITES

Intensely controversial, the Peabody Energy-owned Kayenta Mine provides electrical power for much of the American southwest (Arizona, Nevada, and California), constitutes the main source of air and water pollution in the region, and is the primary site of employment and revenue for the Reservation economies. Its reclaimed land, once held culturally sacred to the Navajo, serves as the architectural ground of Scenic Transportation. The mine's coal is hauled 75 miles by railroad to the Navajo Generating Station, a power plant located near the border of the reservation and Page, Arizona. This border land, framed by the three 775 foot-tall gas stacks of the Navajo Generating Station, is the site of Consumer Motel. Fast Infrastructure, as the third architectural intervention, is sited north of the Kayenta Mine in Monument Valley, a region specifically imaged in John Ford's 1956 film, *The Searchers*, and layered with representational significance.



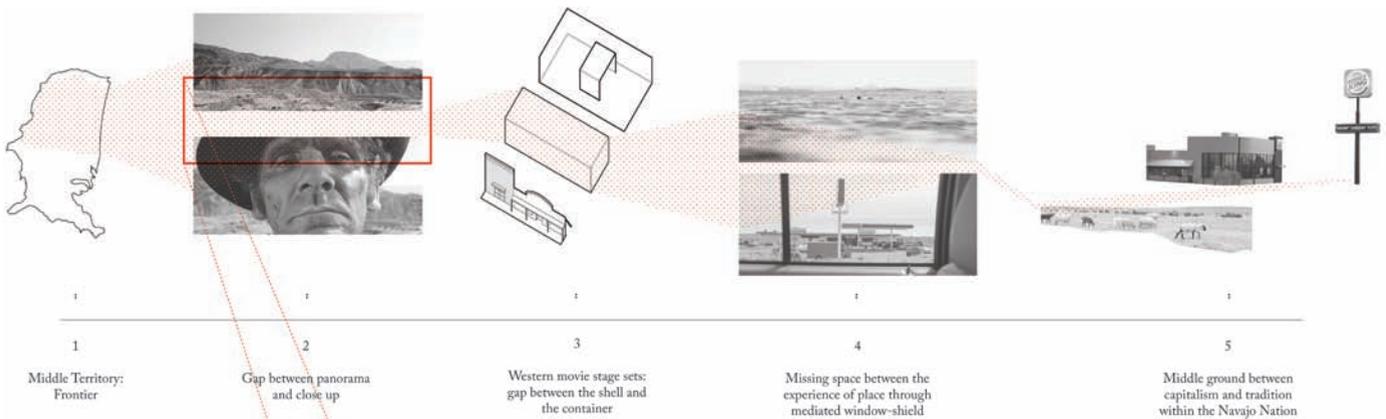
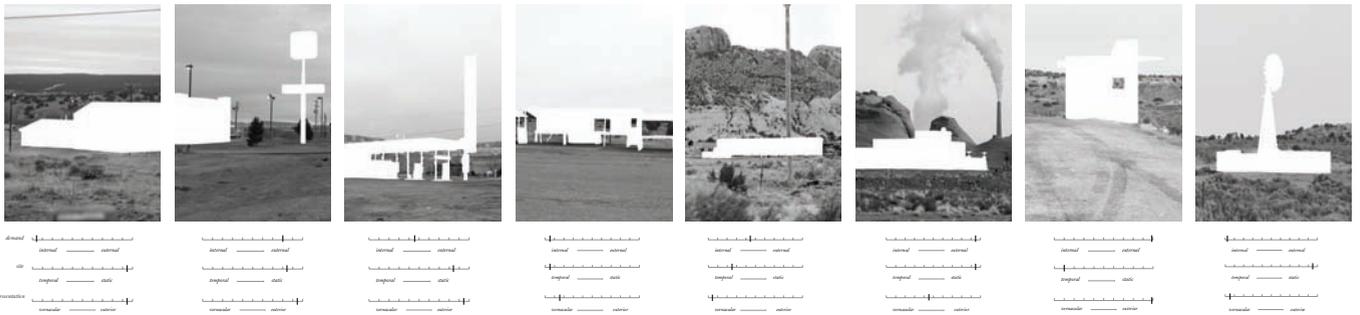


ACTORS—THE VERNACULAR

Within this construction of the Contemporary Western exists a catalogue of vernacular architectural and landscape elements that combine to act as middle-programs, creating a human scale in a place where no sense of something larger than self is evident. These found everyday elements, such as the scenic overlook or the gas station, constitute the body of the Contemporary Western experience.

PRODUCTION ANALYSIS—THE MIDDLE

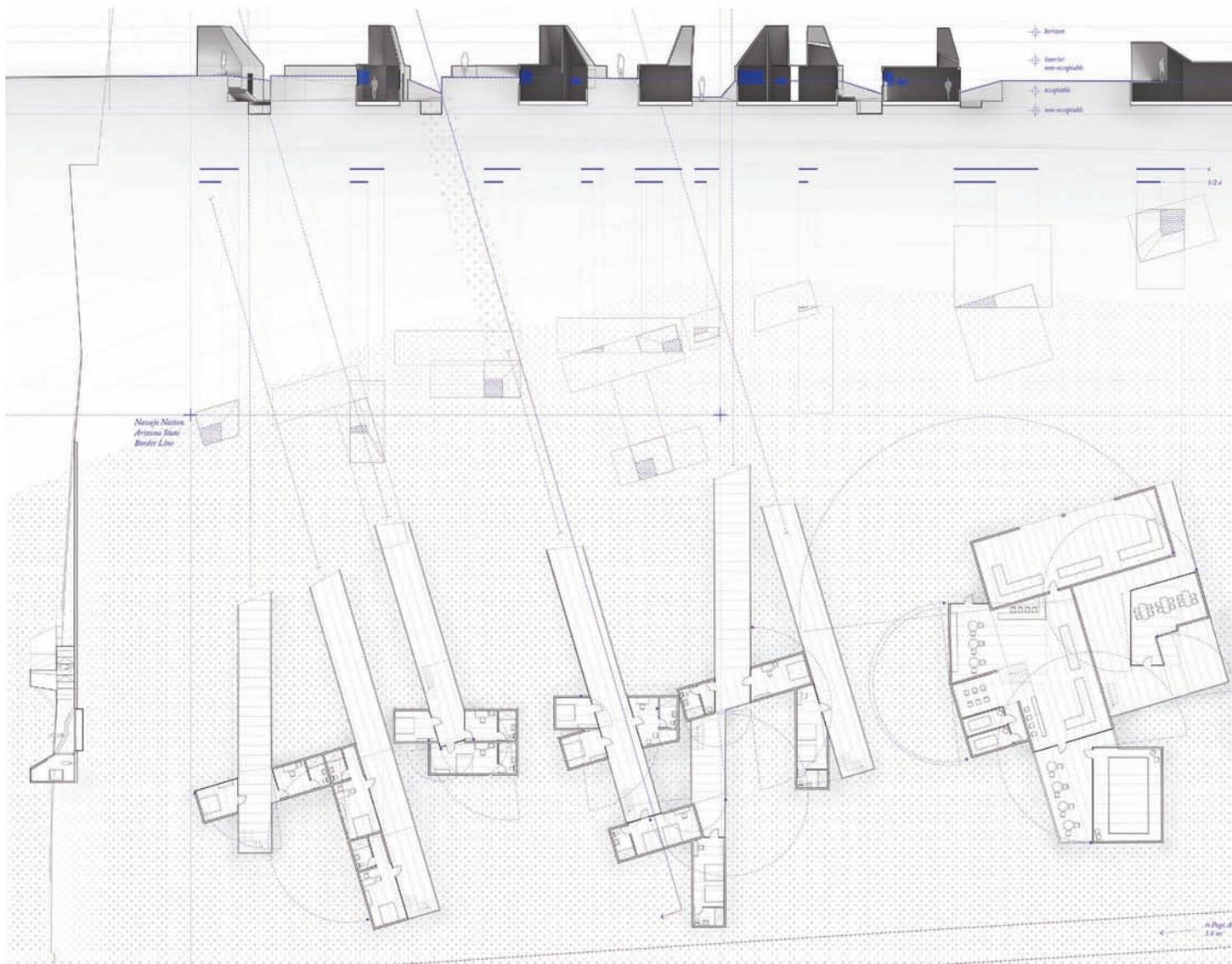
From the understanding of the frontier as the middle territory of America to the gap between the panorama and close up of the Western film genre, middle appears as a consistent measure and means by which to engage within the dialogue of the West. The production of the Contemporary Western focuses on an architectural grasping of this middle, varying between each of the three sites according to formal movements, views, and concepts of occupation.



THE HORSE: CONSUMER MOTEL

The horse constitutes the material basis and sphere of action for the Western film, engaged actively by the lead as a supporting actor by which to foreshadow against. As an architectural analogue of the horse, Consumer Motel responds to its highway adjacent site between Arizona and the Navajo Nation by embedding within the ground, aggregating, and rotating, thus constituting a new landscape of form by which to frame issues of consumerism, territory, and boundary. Consisting of a combination between motel, trading post, and street

market, Consumer Hotel brings together local Navajo traders, outside buyers, and temporal residents as a place of democratic congregation and meeting. An ambiguous middle space is created through a disruption of these usually linear programs, emphasized by an embedding within the earth to create a new relationship of the individual to land. Inhabitation of the interior occurs at mid-ground level as occupants experience a changed horizon line favoring a framing of land rather than landscape.

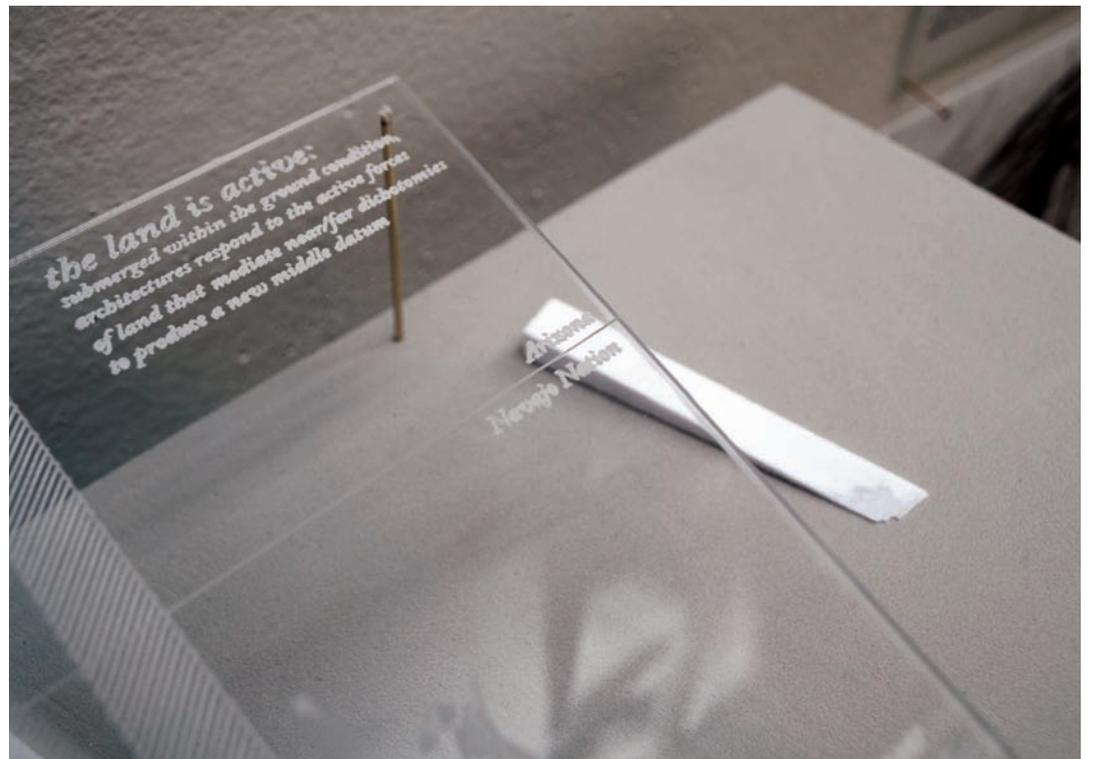
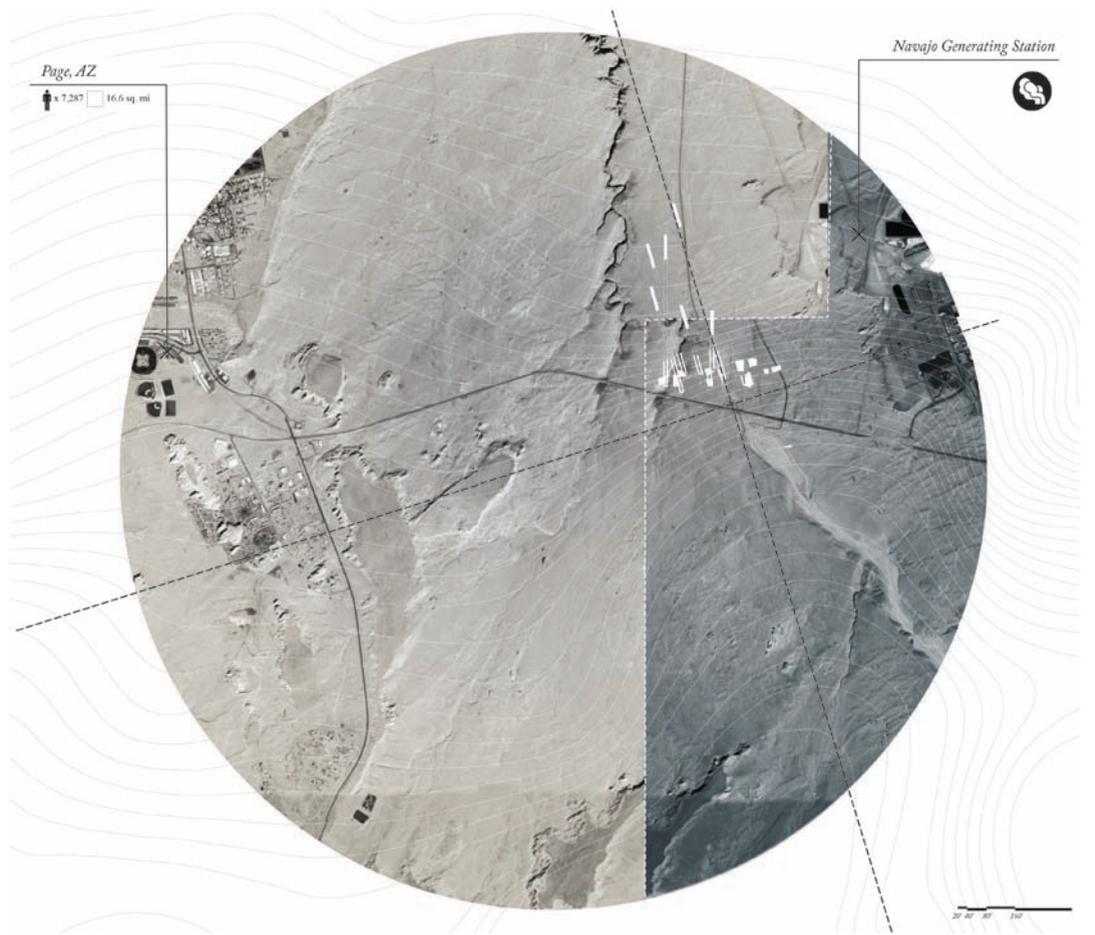


OPPOSITE: Ground floor plan, roof plan, and sections of the Consumer Motel describe a new middle datum of occupation in relationship to the horizon as well as the formal disruption of programmatic aggregation.

RIGHT: Border Condition Site — the land becomes active as it mediates between near/far dichotomies, creating an ambiguity of border and territory.

BOTTOM: The land is active — physical model of consumer motel

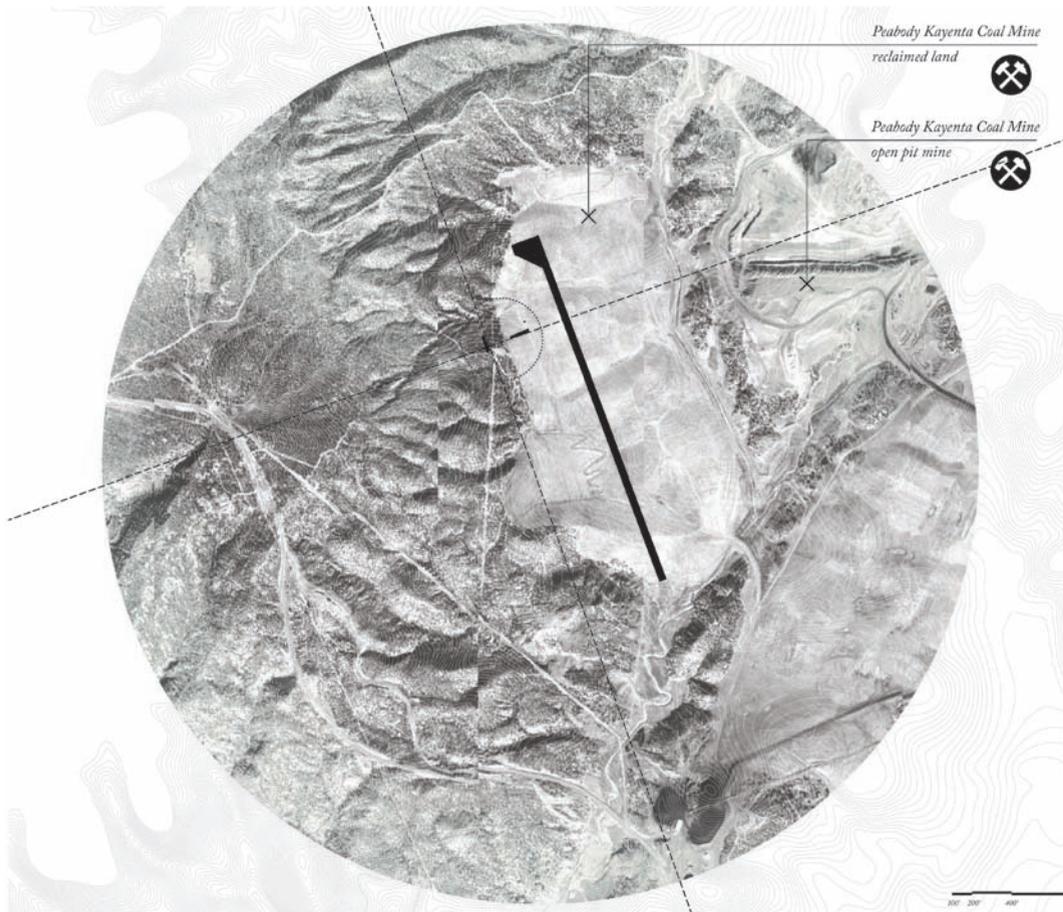
Land becomes both excavated and moved on the site, mediating between the boundaries of built earthwork and architecture, Arizona and the Navajo Nation.





THE LANDSCAPE: SCENIC TRANSPORTATION

The Landscape is omnipresent and passively engaged within Western cinema. It acts as a foil character, there to make explicit the situation at present. Scenic Transportation takes the landscape as a referent to compose a passive space engaged through sight and movement on the reclaimed land of Peabody Energy's Katenta open pit coal mine. Here, land is constantly in motion as the act of mining moves, removes, and replaces what was once held culturally sacred. Combining vernacular programs of the scenic overlook, gas station, and airport, Scenic Transportation facilitates a visual middle ground through taking the ground and roof as architectural primitives for generating a space of occupation. Visually creating juxtapositions and oppositions through varying rhythms of reflective surfaces and varying understandings of ground, the architectural form explicates the notion of excavation and the temporal value of land.



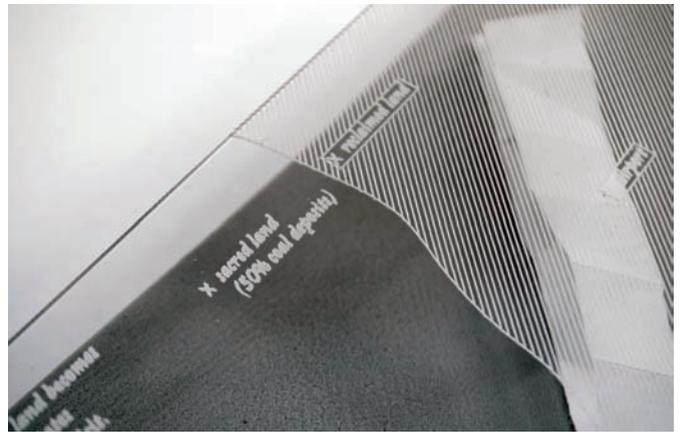
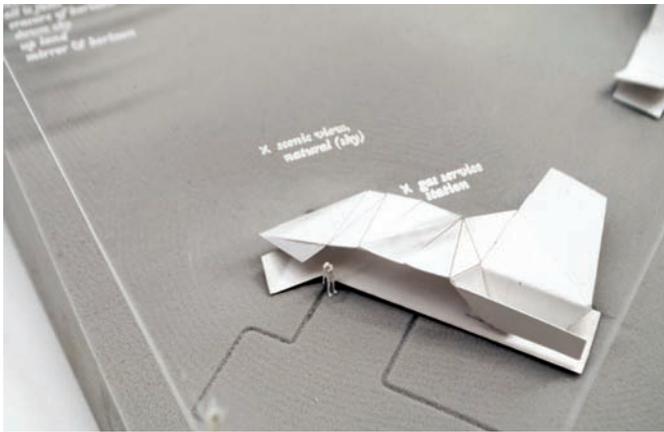
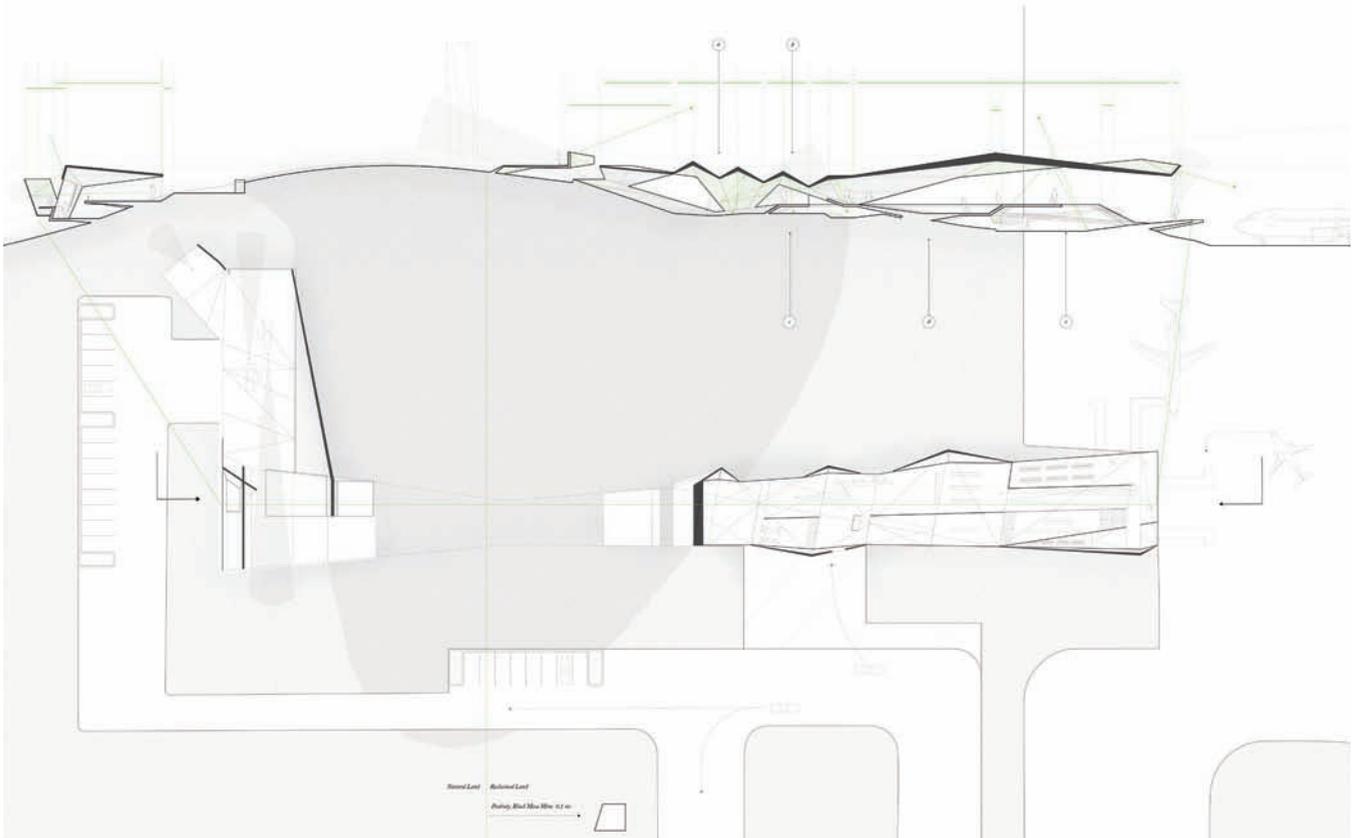
TOP: Moved, Removed, Replaced— physical model of scenic transportation

MIDDLE: Actively Constructed Vision — the Contemporary Western is constructed through active engagement of issues of site, culture, and ecology. Rather than the passive engagement of watching a Western film, each project is set up to engage the viewer through different means of abstract framing: the tripod, the mirror (French landscape), and the pinhole camera.

BOTTOM: Temporal Site Condition — Scenic Transportation is sited on the reclaimed land of the Peabody Energy Coal mine

OPPOSITE TOP: Scenic Transportation — plan and section diagram the rhythmic sequences of space and vision in relationship to the reclaimed mine land

OPPOSITE BELOW: Moved, Removed, Replaced — physical model of scenic transportation



moved, removed, replaced:
 Land in motion across natural horizons during extraction and sacred land becomes temporal as it is moved, removed, and replaced. This architecture facilitates juxtapositions of sky/ground conditions to render extraction processes explicit.

formal creation of middle ground
 visual no middle
 bouncing of light
 all is false
 nature of horizon
 from sky
 up land
 mirror of horizon

X sacred land (50% coal deposits)

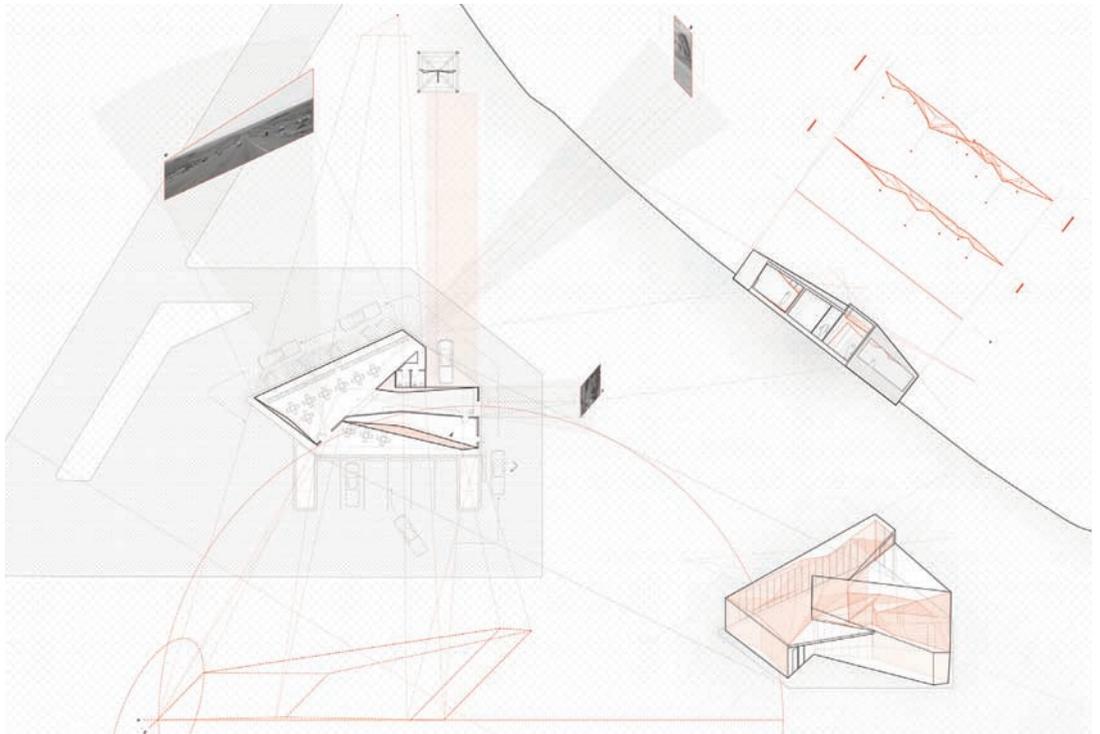
X scenic volume artificial (mine)

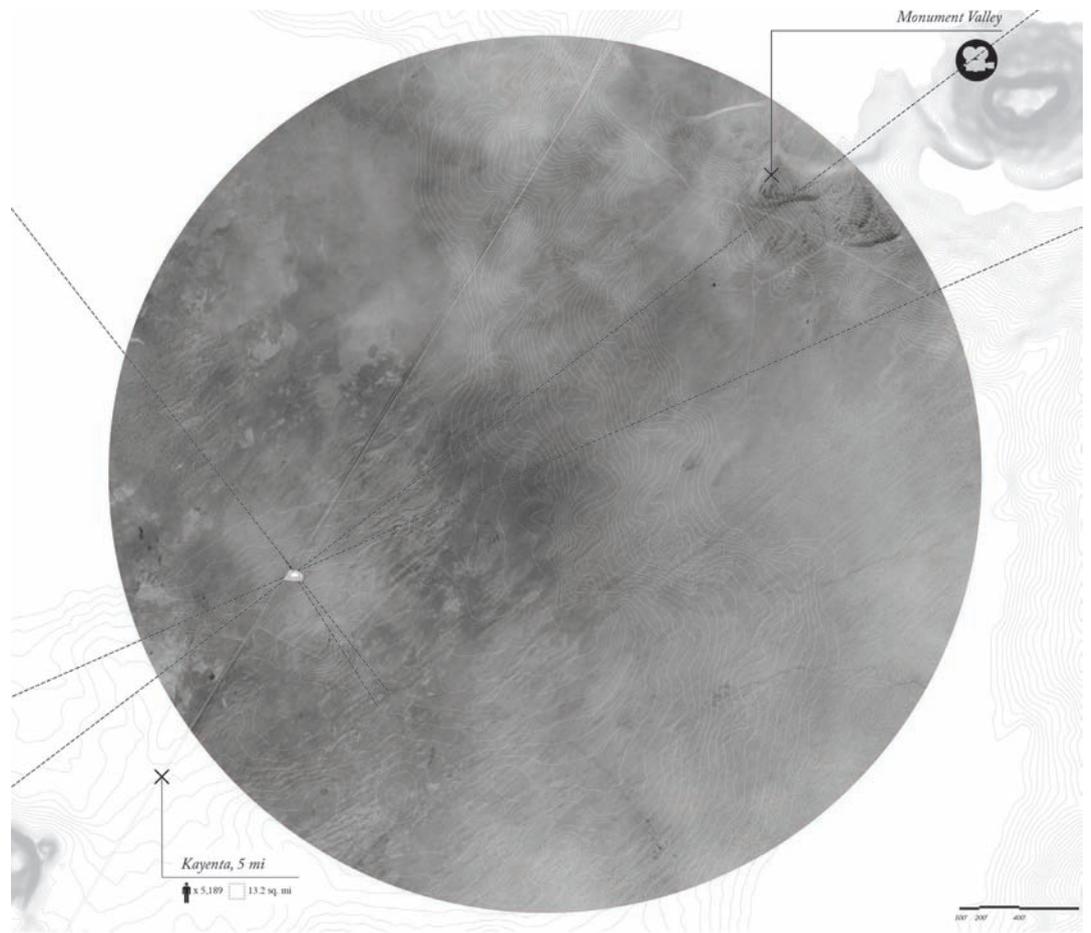
THE GUN: FAST INFRASTRUCTURE

The Pistol acts as a form of communication and active engagement within the Western film. As an architectural analogue of the pistol, Fast Infrastructure combines the typical water/wind infrastructure found within the frontier space of the Navajo Nation with a fast food restaurant typically found at most highway junctions, facilitating a dialogue of consumption and production. Sited on the entry to Monument Valley along US Highway 163, multiple exterior views are collapsed through cinematic analysis of aspect ratios shaping both form and aperture. Much like cinema, architecture here acknowledges its power to allow or deny views through the manipulation of building form in response to the highly represented landscape. Inside, the walls are clad in a water membrane,

constantly shifting as water is taken by local farmers, creating a vacillation of space and awareness of resource use while people order, diners sit, and toilets flush. Akin to Richard Slotkin's idea of the promise of "regeneration through violence", where we constantly remake ourselves, remake our myths, and re-assert our privileges through violence,⁴ the architecture of spontaneous infrastructure finds a more constructive and peaceable way of occupying land and realizing promise. 

⁴ Referencing - Slotkin, Richard, 1942- *Regeneration through Violence: the Mythology of the American Frontier, 1600-1860*. [1st] ed. Middletown, Conn. Wesleyan University Press, 1973. Print.





OPPOSITE TOP: Eat & Acknowledge — physical model of fast infrastructure

OPPOSITE BOTTOM: Fast Infrastructure's architectural form is determined by and in response to the cinematic notions of projection and view. Through plan, axon, and elevation, the interior space of the water membrane is made explicit in relationship to the views framed through aperture as one experiences the space.

TOP RIGHT: Site, framed viewscape, cinematically represented; landscape becomes split through varying interior building conditions responding to site.

RIGHT: Re-appropriating the Western characters into the representation of the Contemporary Western, extreme foreground and background are occupied by fictional characters while the architecture remains in the middle zone of focus.



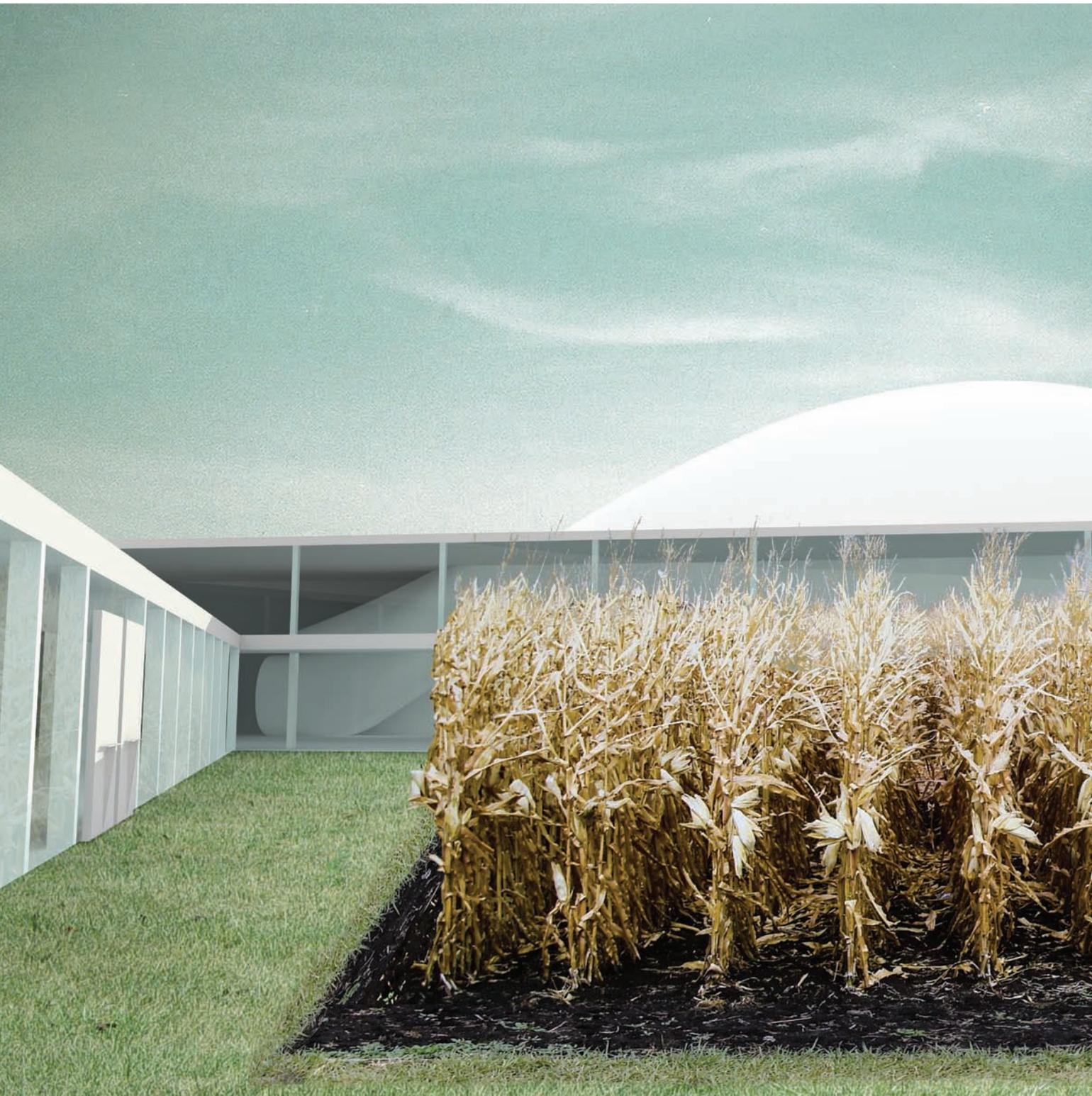
10:00

Once Upon a Time in the West, 1968



0:05

High Noon, 1952



closing the loop

Black Mesa, a region inhabited by the Navajo Nation, exists between two worlds: the consumerist machine, dominated by cheap, manufactured, and placeless food products, and the traditional Navajo culture, centered on a close relationship with the land.



Economic disparity within the Navajo Nation has allowed for an inundation of fast and cheap food, which has assimilated itself into the diet and culture of Black Mesa. Consequently, a disconnect exists between where food is harvested and where it is consumed. This warrants a new type of food infrastructure where consumption and production exist together in order to cultivate a symbiotic, not dissonant, relationship. I propose a new arrangement of space that seeks to reestablish a relationship between production and where our products come from.

For centuries farmers have used companion planting as a means to grow healthier crops. This farming mechanism uses certain properties of crops that mutually benefit other crops by planting them in close proximity to each other. Corn and beans are an example of this: cornstalk provides a natural framework for the beans to climb up, and the beans create extra amounts of nitrogen, which benefits the corn. In parallel, consider an architectural intervention based on this farming practice of “companion planting”, where differing programs of production and consumption are paired at a building and regional scale. At the regional scale, food production and consumption infrastructures are hybridized, calling into question their resulting relationship with the land. At the building scale, consumption and production are combined and mediated

through architectural forms, creating playful spatial situations between opposing programs.

TERROIR

The proposed infrastructure borrows qualities from the fast food network and the winery. The fast food infrastructure concentrates all energy on efficiency. Large mega-farms from halfway across the country harvest crop and animal meat, which is then shipped and distributed to the fast food chains located along major roadways and intersections. In this scenario, there is no connection with the land surrounding the fast food chains—it is a purely homogeneous product. Alternately, the winery’s central pivot is *terroir*: a French term which describes a theory among vintners, which the unique qualities of soil and climate can be detected in the wine produced there. Loosely translated, it means “a sense of place”. It is a fascination, almost a fetishizing, of the hyper-local. The proposed network crosses the concept of *terroir* and the efficient deployment of the fast food chain.

The infrastructure utilizes Food Hubs placed strategically along major roads and intersections. Like the winery, the Food Hub produces and sells a product on site. The location and program of each Food Hub is determined

through a regional site analysis of overlapping soil information, rain and aquifer information, and population information. A generated loop through the most water rich region of Black Mesa connects all the Food Hubs together along a route that celebrates the locality of the region while leveraging the distributional properties of the roadways.

BELOW: Type study of programs of consumption and production and the networks; diagram of matching the various programs of consumption and production together.

OPPOSITE: Infrastructure map

PROGRAM POLYCULTURE

In the same vein as the companion crop mechanism, Food Hubs pair programs of consumption and production

together while considering the consequences and possibilities of two programs inhabiting the same space. A modular system is deployed to generate the Food Hubs and splice together the opposing programs.

Three different programs of production: the barn, silo, and animal corral, and four different programs of consumption: the market, motel, restaurant, and school, are considered. These opposing programs are paired together to create five different companion program species: the Corral-Market, the Silo-Market, the Corral-Restaurant, the Barn-Motel, and the Barn-School.



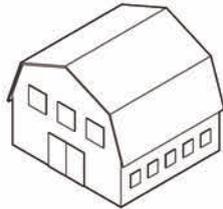
PRODUCTION



CONSUMPTION

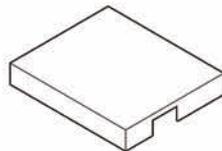


NETWORK



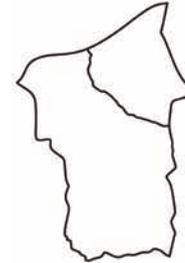
Prairie Barn

This barn is made out of timber and is used for equipment storage. It also has ample space to work inside, out of the weather.



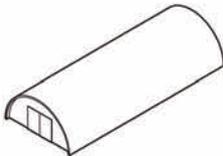
Grocery Store

A large store with shelves laid out in a grid. Products are arranged democratically along the selves.



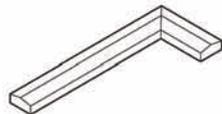
Black Mesa

The proposed network is a loop that circulates around the region of the Navajo Reservation that has the most amount of water. Farms are placed in specific sites in order to cultivate a more local economy.



Shed

This storage shed is made out of corrugated steel and is used for equipment storage. There is little to no work space available in the shade.



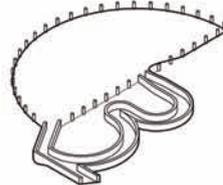
Motel

This long slender building is arranged in a line that kinks to accommodate more modular rooms around a parking lot.



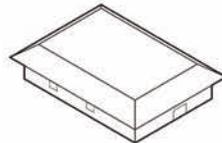
Camino de Santiago

This route is a pilgrimage that can be entered at any point. The very beginning starting in Paris, traveling all the way to western Spain.



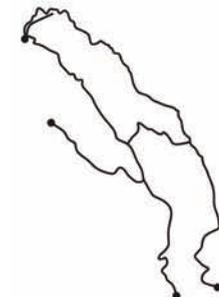
Corral

The Temple Gradin corral was designed to be more human to livestock entering the system.



Fast Food Restaurant

Small box restaurants that were made for the fast moving pace of society in cars.



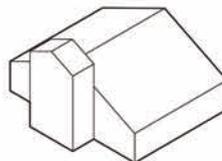
Napa Valley

The winery has a hyper-obsession with the idea of location and the originality of the land. The Napa Valley route circulates through the Napa region with specific armatures that reach out to other farther away wineries



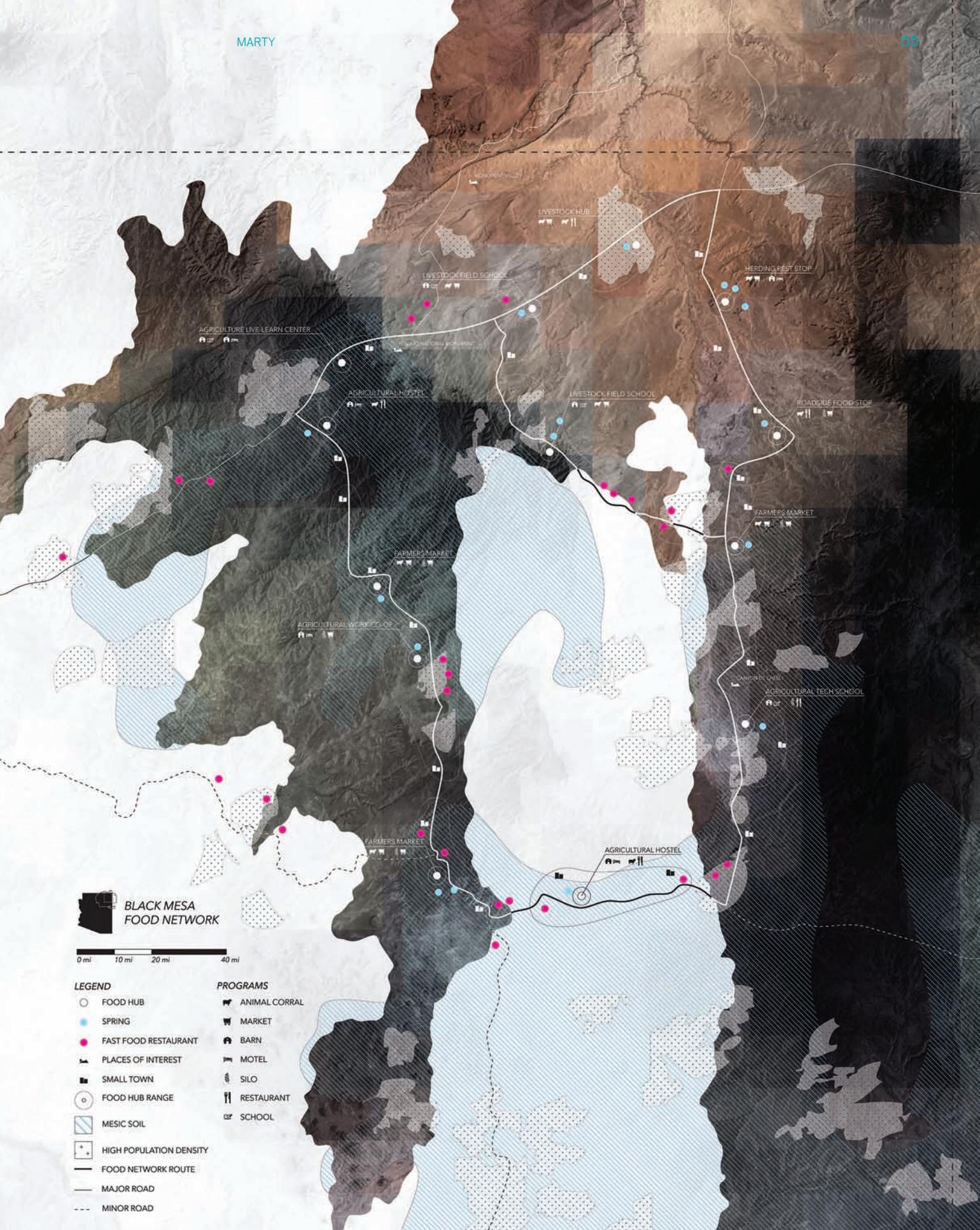
Grain Silo

Long cylindrical tube made out of steel. It is filled from the top, with the bottom most crop stored being the oldest.



Small School

This small school is typically found in rural areas with a very low population density. It has two class rooms and is often times becomes a cultural center.



Combining two of these modular units forms a Food Hub. Joining different combinations of the program species creates ten different permutations of the Food Hub.

Within the program species, architectural forms mediate the relationship between the two programs. The series of folding operations creates states of play between the two types of inhabitants through sensory overlap. In the Corral-Market, a fold moves farm animals upward while shoppers browse below listening to the sounds of the baa-ing and moo-ing. In the Barn-Motel, farm animals and tools are stored below while a series of motel pods house tourists above. In the Silo-Market, the harvest moves through a horizontal silo, and is dispensed at varying stages of the drying process through tentacles touching the ground. In the Corral-Restaurant, patrons and animals eat across from each other, separated by a wrinkle in the ground that serves as a bar and food trough. In the Barn-School, students take classes above with a direct view of farmers laboring below. In each case, the two different inhabitants occupy the same space through either sight, sound, or smell, allowing for a

spatial experience that makes acts of consumption and production explicit.

When two of these program species combine to form a Food Hub, they enclose a shared square, which formally and programmatically closes the loop between the two spaces. The square serves as an area of programmatic overspill, allowing for an amalgam of different activities to occur.

SHARED SENSE OF PLACE

Mirroring the companion program polyculture, the proposed farming mechanism asks if there is a mechanism of farming where property and farmland could be shared at various sites. Here, ideas of crop rotation and companion crops are combined. While farmers rotate crop to preserve soil integrity, neighboring plots are able to share property and land to their mutual benefit if they rotate companion crops into the shared space. This allows for a new element of Le Terroir, in which ones neighbor becomes a part of the sense of place, a shared sense of place. 

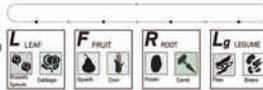
BELOW: Example of a food hub in site and the farming mechanism in use

RIGHT: Example food hub drawn in plan and section

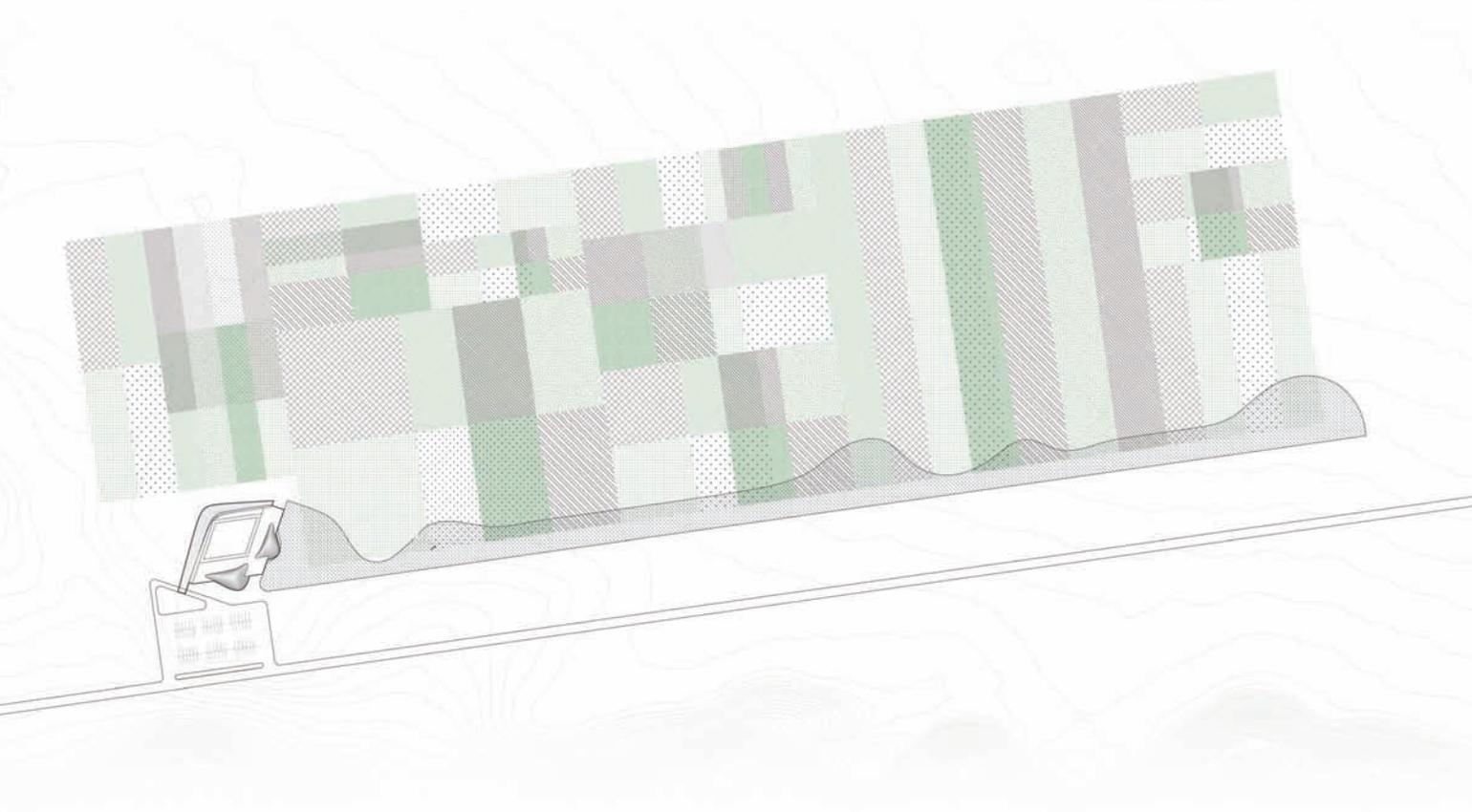
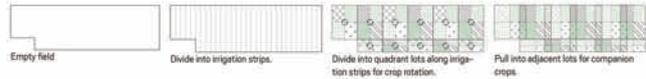
FOOD HUB: An aerial view of the Food Hub on the Landscape. Each hub is located along a major road intersection.

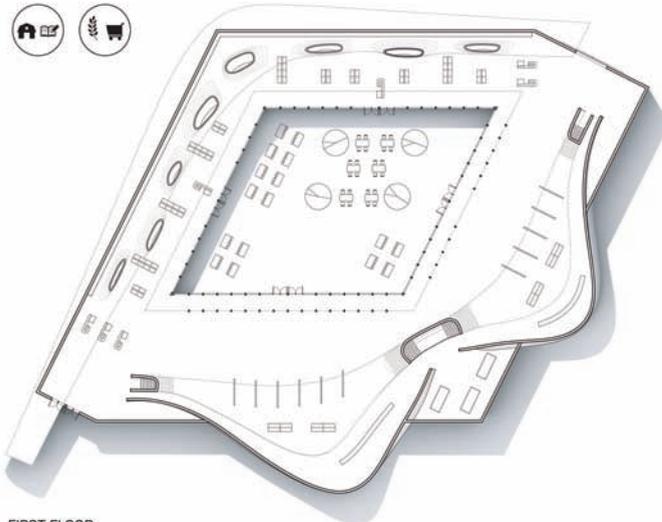
CROP ROTATION + COMPANION CROPS

Farmers must rotate the fields from the following sequence. Farmers may choose from the two crops per category, but if their field overlaps with another, then the corresponding companion crop must be its overlap.

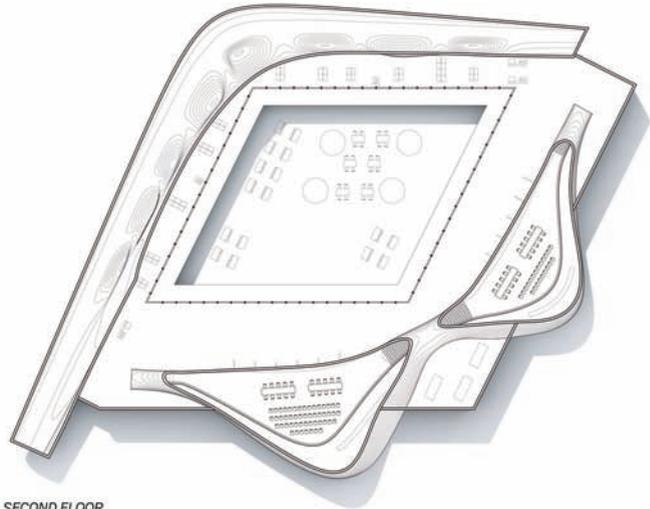


DIVIDING FIELDS AND OVERLAPPING CROPS





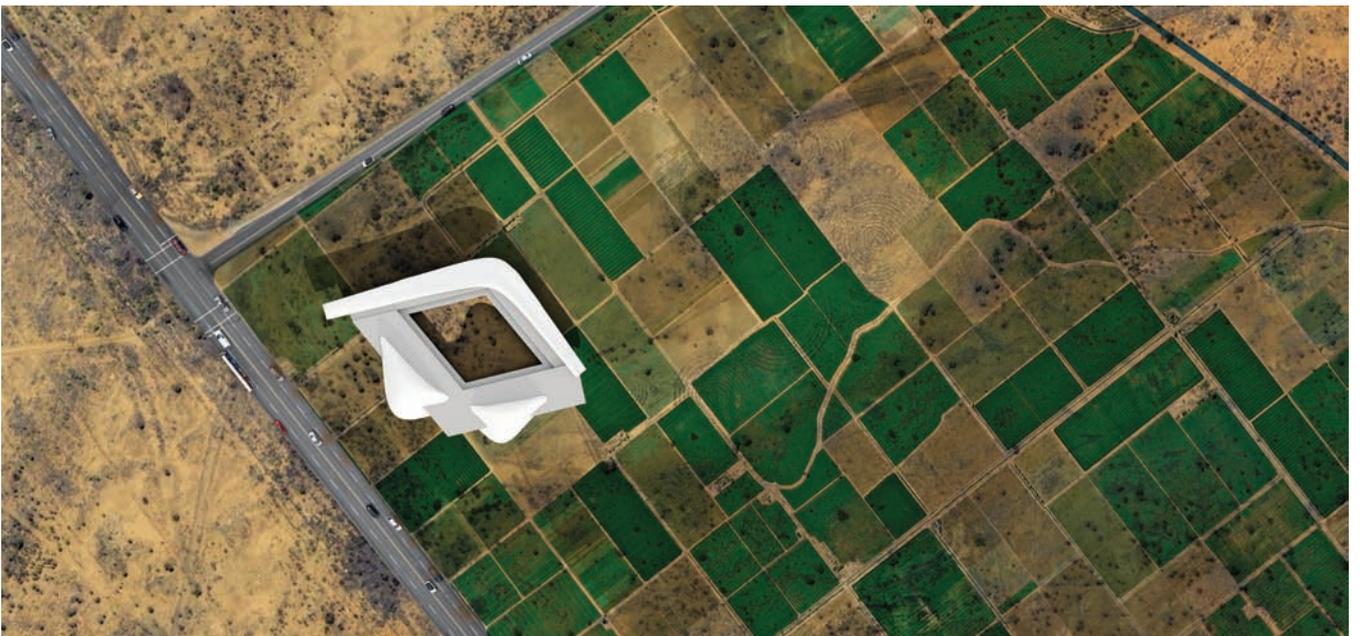
FIRST FLOOR
10 ft 20 ft 40 ft



SECOND FLOOR
10 ft 20 ft 40 ft



SECTION THROUGH COURTYARD
10 ft 20 ft 40 ft



CORRAL: As cattle are herded upward, people purchase and shop for food to the sound of mooing and movement above. The form lifts up so shoppers are able to shop below the form. The gap provides sensory access to the cattle above.

BARN/MOTEL: The Navajo Churro sheep sleep in enclosed pens between luxury hotel rooms containing Issey Miyake-clad tourists. Motel rooms drop down into the barn area and are separated from the Barn area sectionally, however patrons still must walk through the space of the Barn.

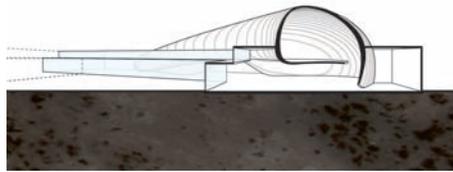
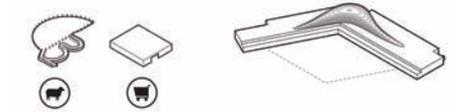
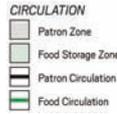
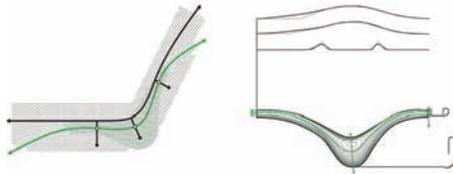
SILO/MARKET: In the market, shoppers wander and graze through aisles and the silo's fingers as the silo dispenses crop to them. The harvest moves through the silo, being dispensed at varying stages of the drying process.

CORRAL/RESTAURANT: As farmers labor below, students watch and listen from above as they are taught various technical agricultural skills. Two classrooms are lofted above the barn space. The form dips down to connect to the barn for circulation purposes and for a greater connection to the labor below.

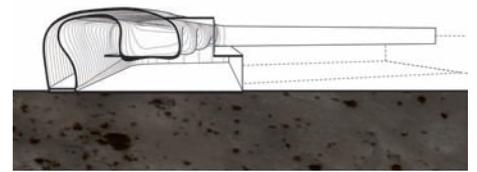
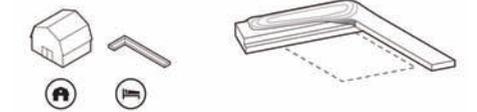
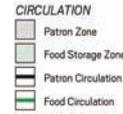
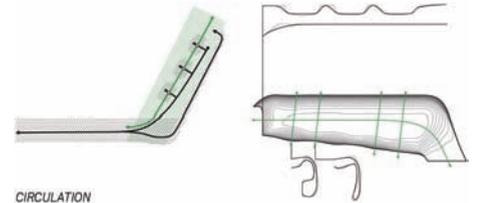
BARN/SCHOOL: In the restaurant, diners face their meal in the very beginning stage of its assembly: feeding. Animals and humans eat on the same surface, staring across one another. But they are still separated by a curved glass surface for health reasons.

BELOW: All of the different combinations of the program polycultures. Each combination was given an identity that corresponds to the programs they hold.

Corral/Market



Barn/Motel



Livestock Field School



Livestock Maintenance School



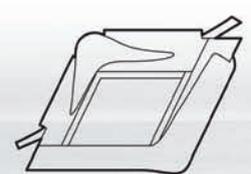
Agriculture Live-Learn Center



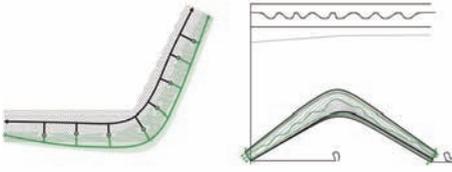
Agriculture Tech School



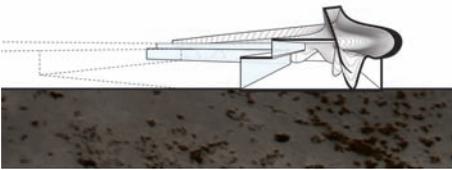
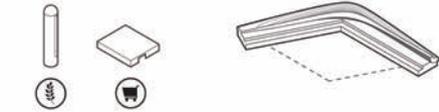
Herding Rest Stop



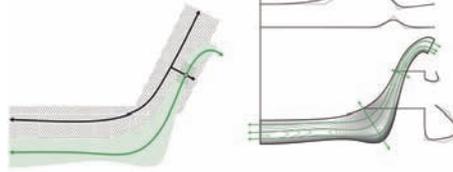
Silo/Market



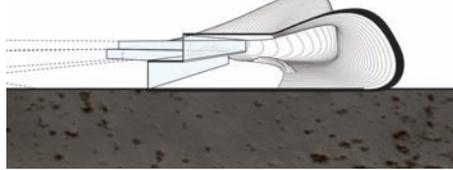
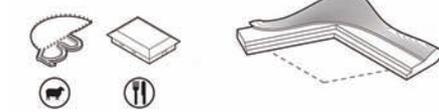
- CIRCULATION**
- Patron Zone
 - Food Storage Zone
 - Patron Circulation
 - Food Circulation



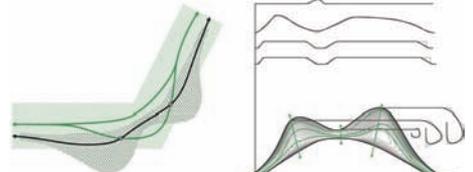
Corral/Restaurant



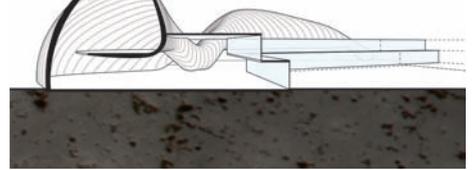
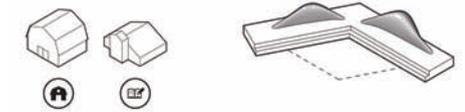
- CIRCULATION**
- Patron Zone
 - Livestock and Laborer Zone
 - Patron Circulation
 - Livestock and Laborer Circulation



Barn/School



- CIRCULATION**
- Patron Zone
 - Laborer Zone
 - Patron Circulation
 - Laborer Circulation



Livestock Hub



Farmers Market



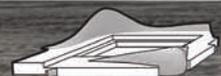
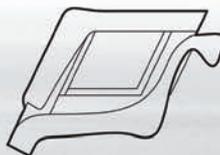
Agricultural Hostel



Agriculture Work Cooperative



Roadside Food Stop





EXISTING SITE: General image of field/forest, predator/prey conditions

In a time where urban lifestyles are increasingly stimulating, one must seek alternative grounding when needed. This project takes place during the individual's escape within a geographical oscillation between urbanity and the rural ecotone of field and forest. It is here that space is constructed in stages reflected by the visions of the ambiguous and memories of the past. Pace, technology, familiarity, environment, and the wild game of predator/prey all become actors within one's physical and psychological well-being. It is explored through the inherent space produced over time and its inevitable connection to the past.

There is a particular heightened sensory experience of entering somewhere novel, and to many this is a desired adventure. Once this process becomes habitual, the repetition begins to conjure mental relationships between time and space. As one moves further from their roots, space begins to transition into loosely defined boundaries. Creeks, rivers, fields, and forests replace the street and fence. The landmark begins to act, giving context to the occupied present. *Safe House* aligns these landmarks and produces an environment of therapy through their contrasting recurrence. Over time the structure comprised of foreign compositions grows with the forest until it

safe house

There is a new promise land on the edge of the imagined unknown. Safe House traces the transition and ultimate escape of an individual seeking refuge from a blasé metropolis while constructing a heightened environment on the forest's edge.



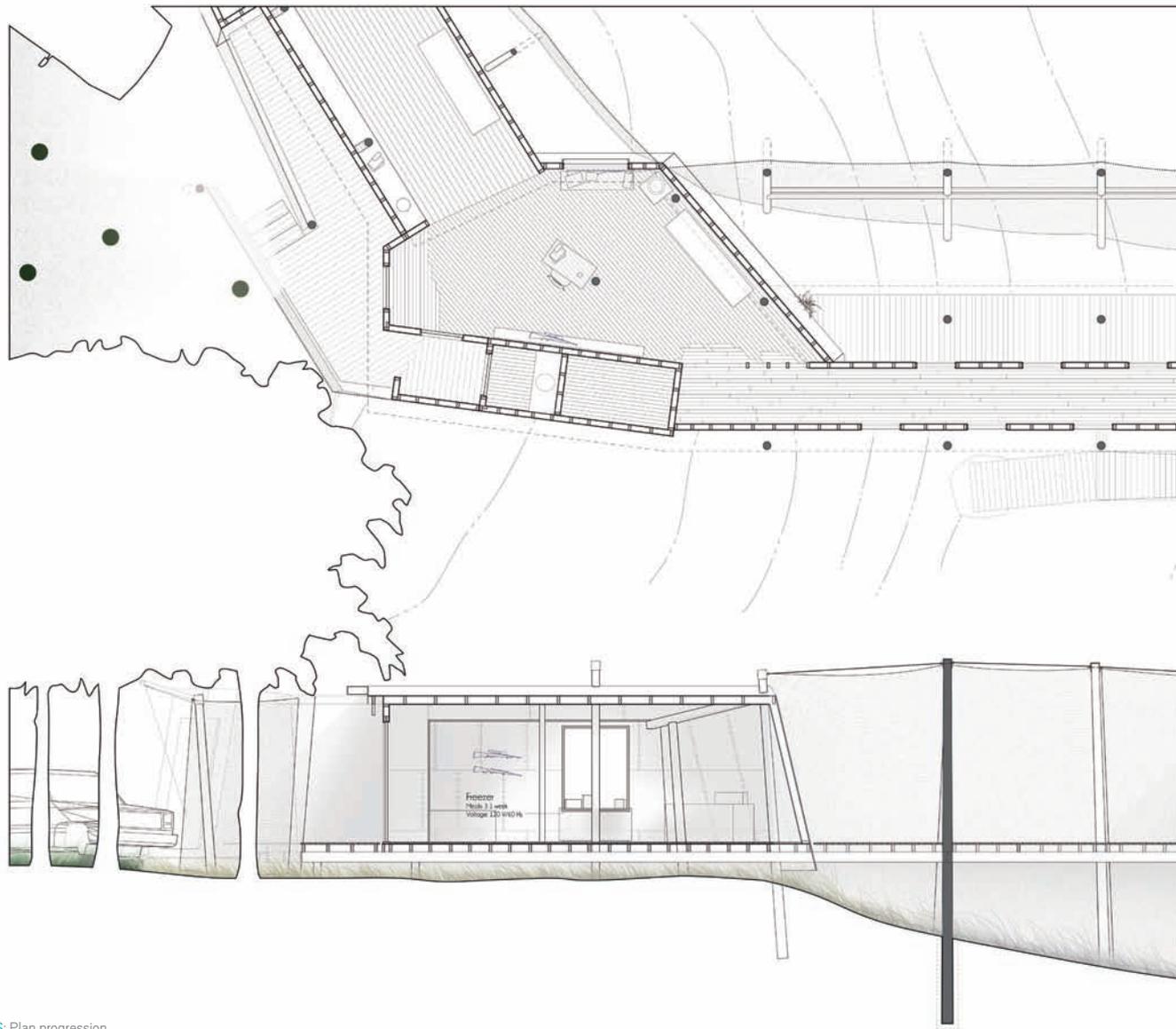
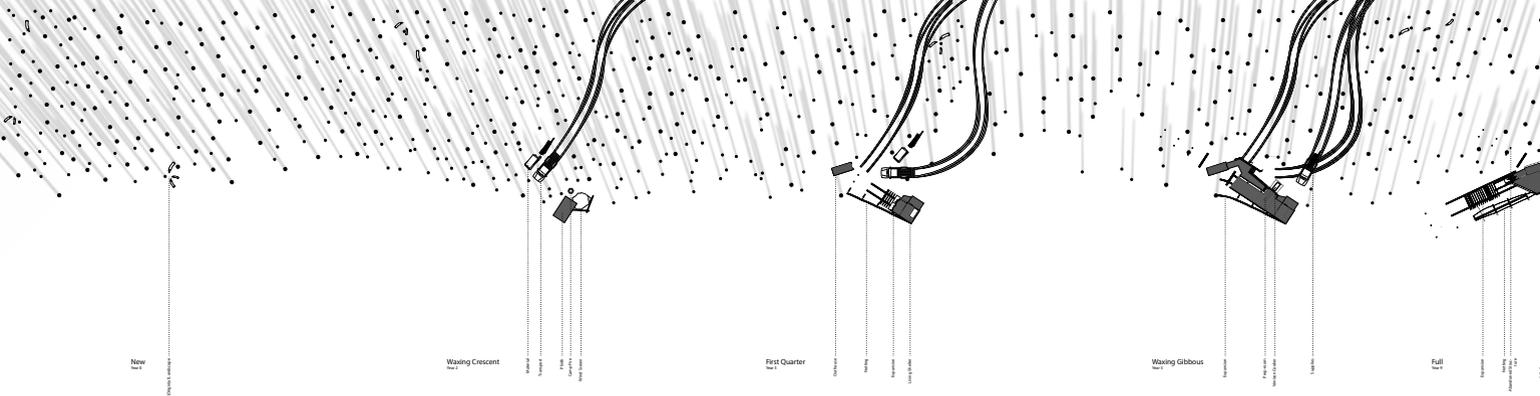
too is in decomposition. This project illuminates the relationships of life and death within architecture. As a natural cycle often unrecognized, we have witnessed new eras bloom from the ashes of another.

This becomes apparent during the birth of Modernism explained in a 1978 writing by Kenneth Frampton in which he states:

“Johnson’s metaphor of the incinerated house, to which he referred in 1950 when he wrote: ‘The cylinder made of the same brick as the platform from which it springs, forming the main motif of the house, was not derived

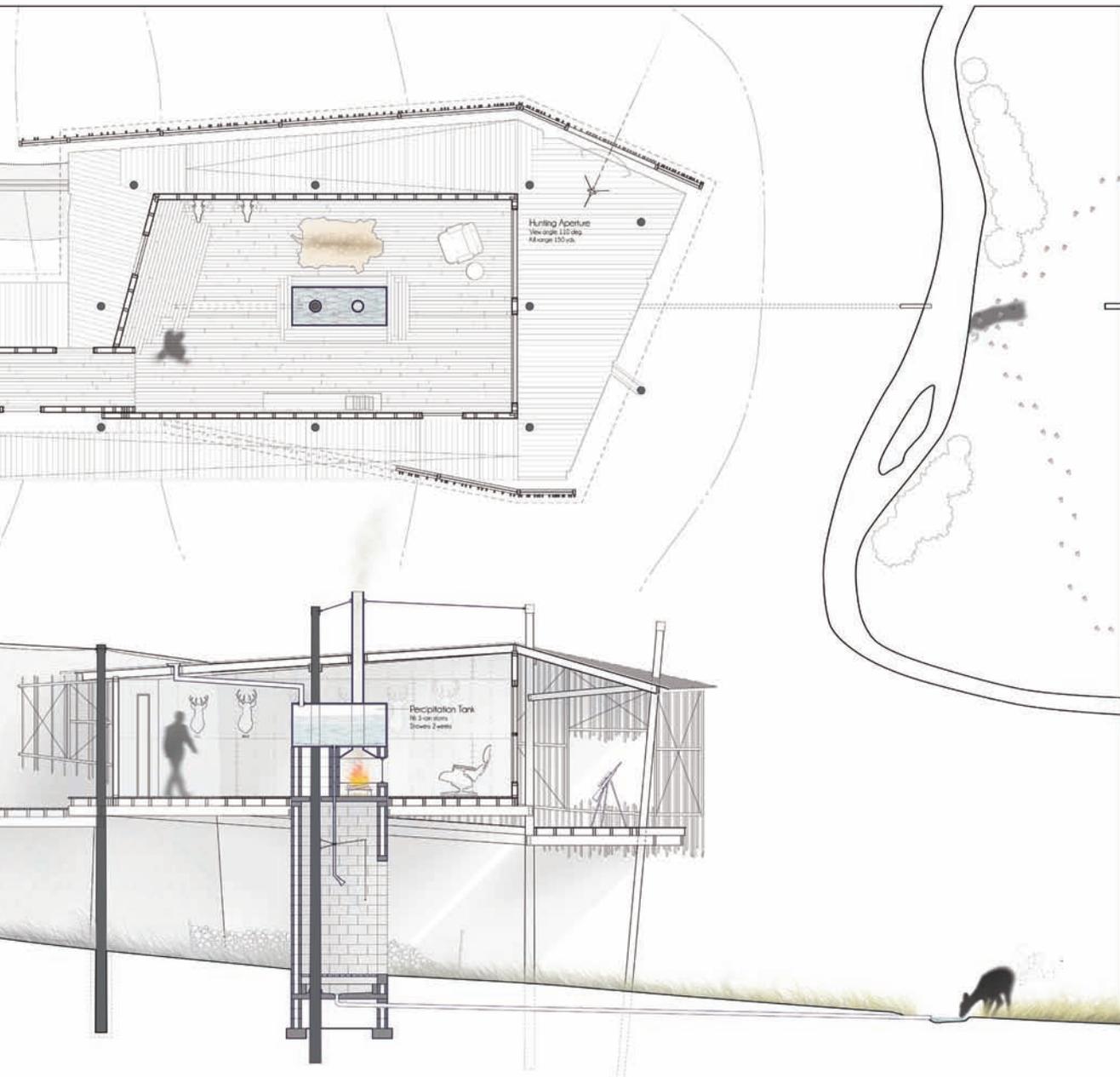
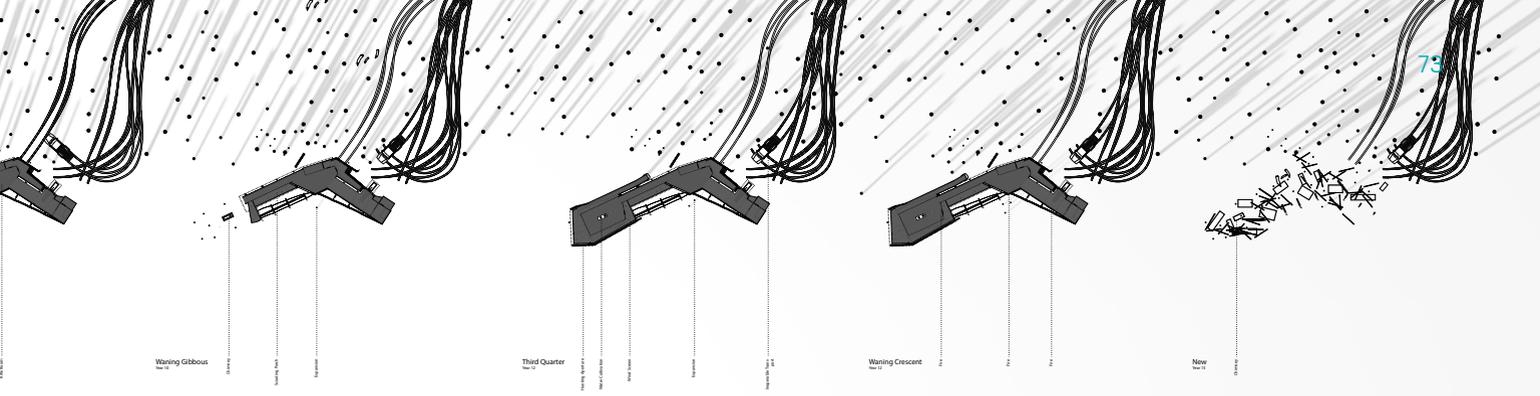
from Mies, but rather from a burnt-out wooden village I saw once where nothing was left but the foundations and chimneys of brick. Over the chimney I slipped a steel cage with a glass skin. The chimney forms the anchor.’ These laconic words not only suggest that the Glass House was based on the vision of a ruin, but that the ruin in question was almost certainly the blitz-krieged remains of a village.”¹

¹ Kenneth Frampton, “The Glass House Revisited”. Catalogue 9 Sep/Oct 1978. Republished in Phillip Johnson “The Glass House” by David Whitney and Jeffery Kipnis



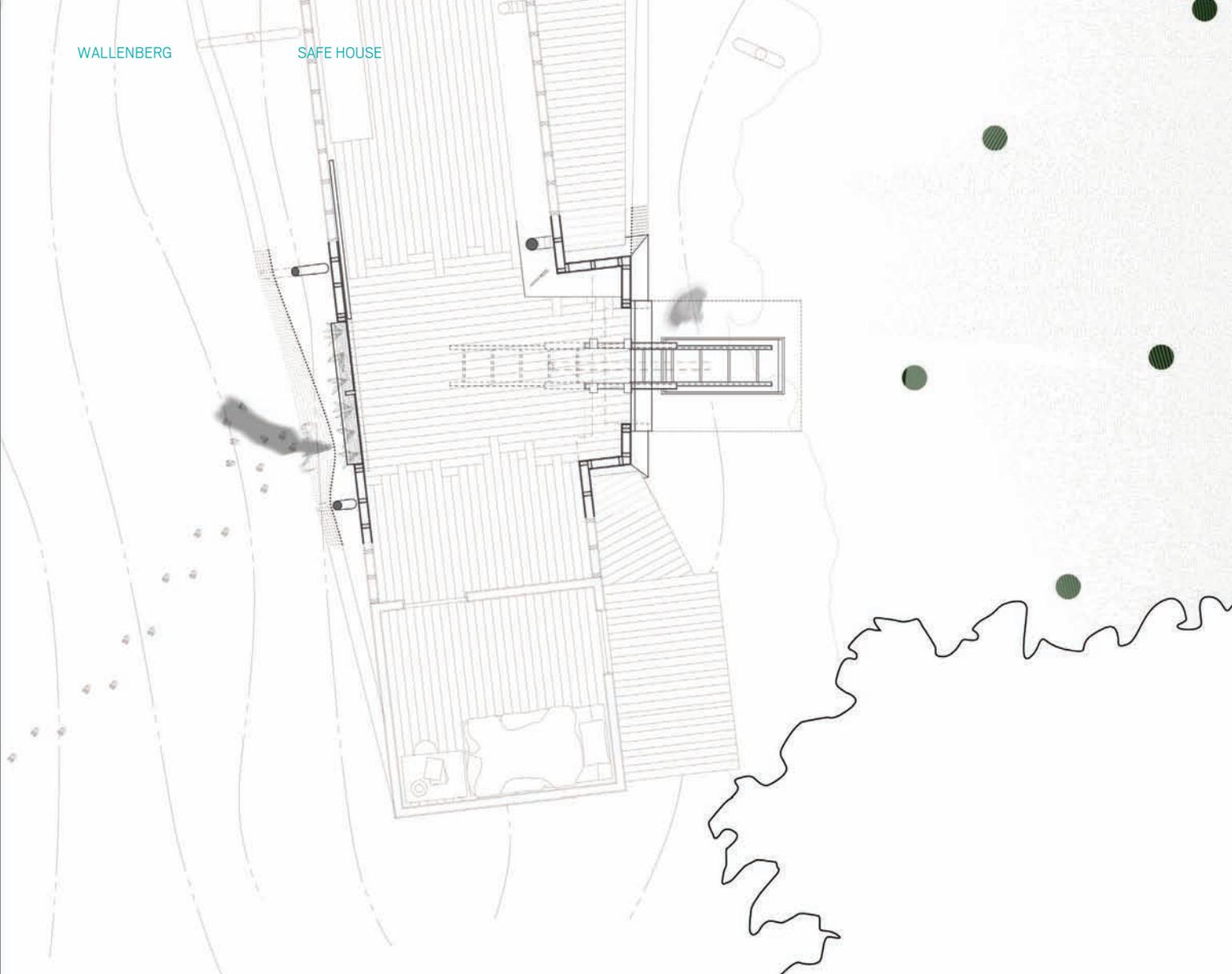
PROCESS PLANS: Plan progression of cabin over the duration of multiple years. Moon phases hint that there is a cycle in place.

SECTION: Final production of the cabin and implementation of "known" systems. Provides connection through participating resources.

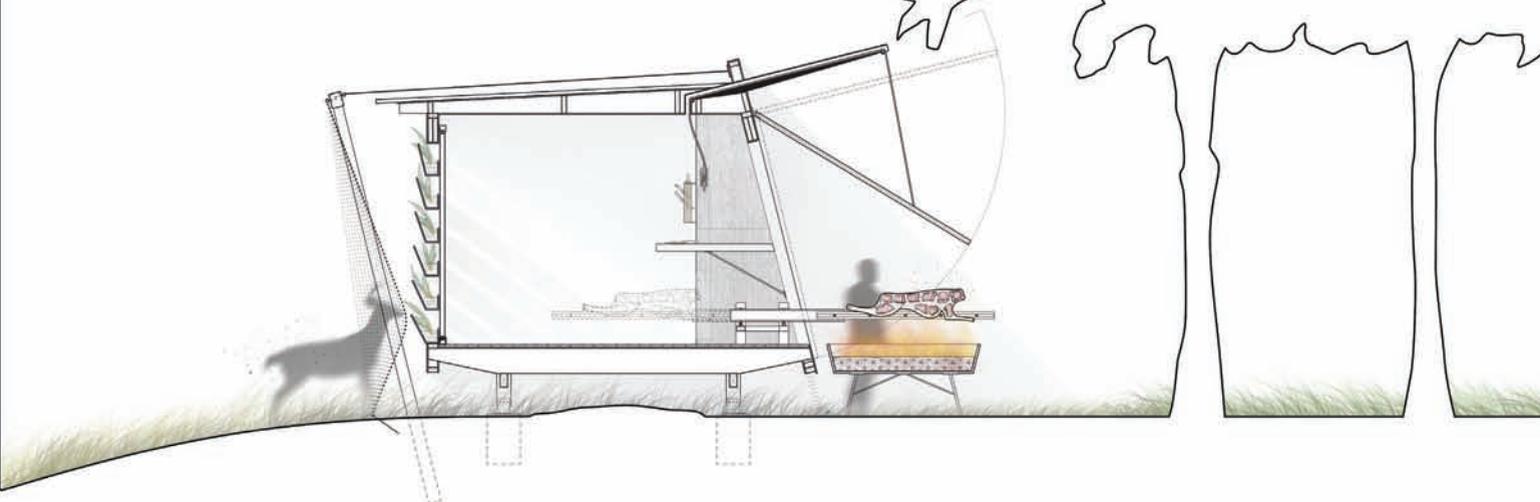


WALLENBERG

SAFE HOUSE

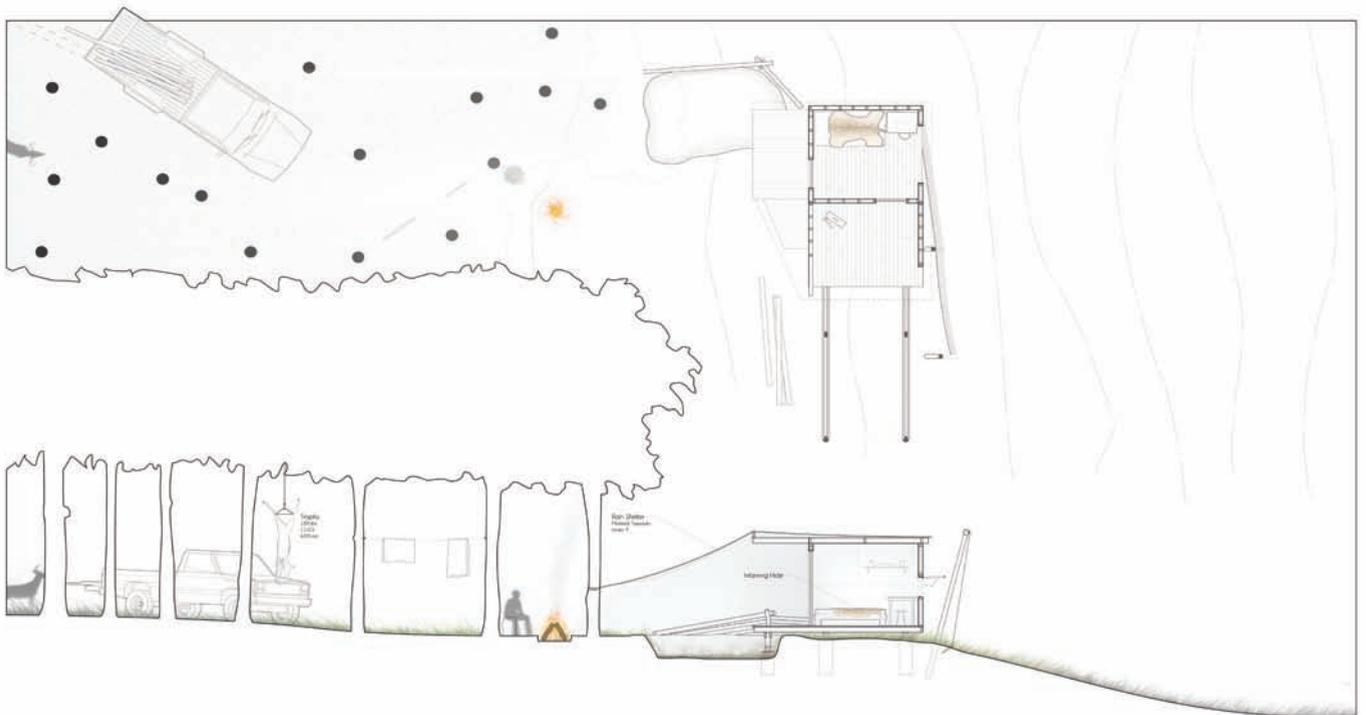
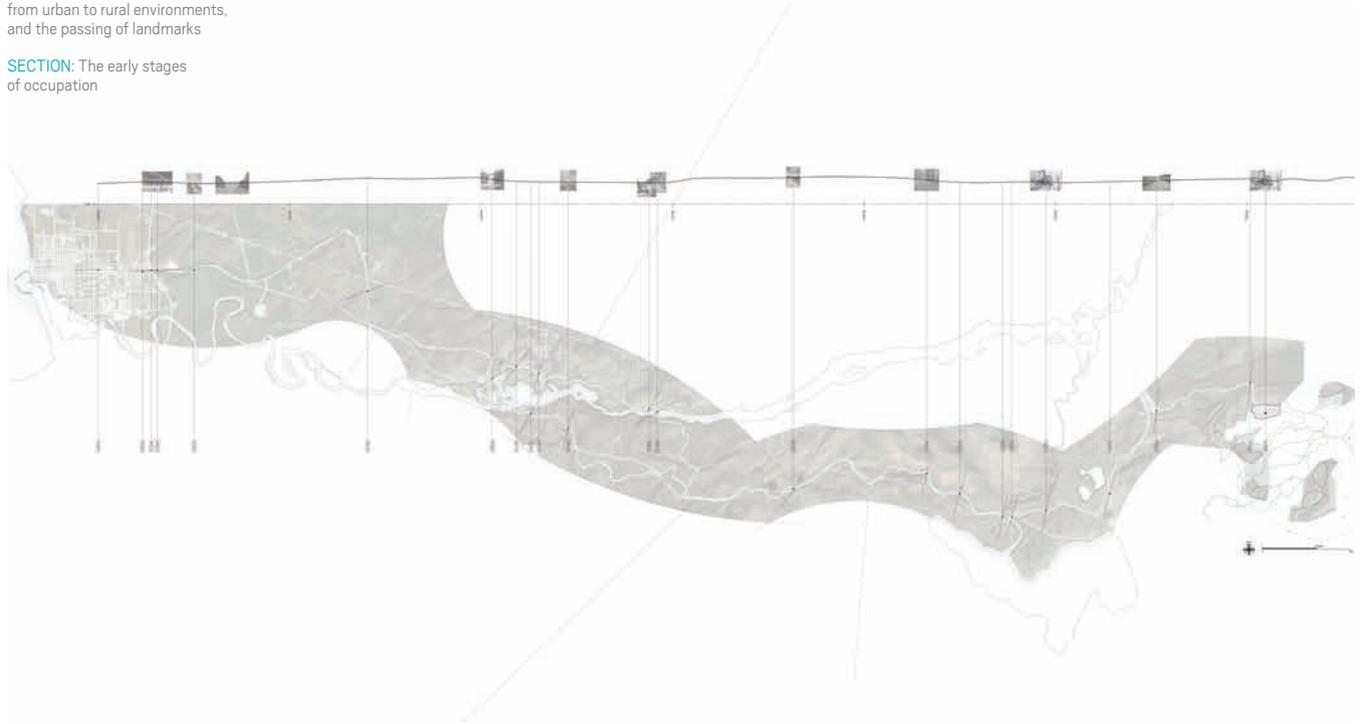


SECTION: Shows the inherent relationship of predator/prey through production, consumption, and at times cycling of resources.



URBAN ESCAPE: Mapping of the transition of territories, movement from urban to rural environments, and the passing of landmarks

SECTION: The early stages of occupation

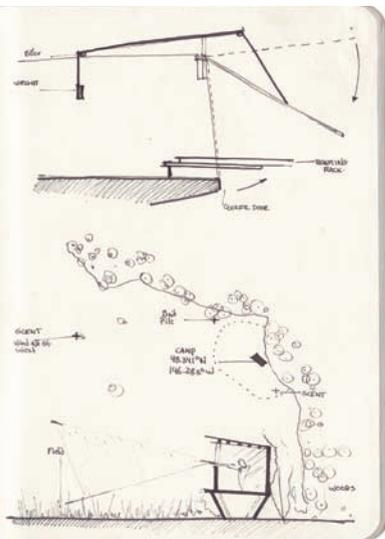




DAY 50
 TODAY WAS ANOTHER TERRIBLE DAY AT THE OFFICE. MY ENTHUSIASM FOR THAT JOB DIMINISHED WITH EVERY THROUGH-DAY. EVEN MY OWN DESIRE SEEMS TO BE A CHARACTER ACTIVELY PLAYING ITS PART IN THE DAILY PERFORMANCE OF MORTALITY.
 MORE AND MORE MY MIND WANDERS TO MY SOFT SPOTS IN THE FOREST. IT'S ALL I CAN DO TO KEEP MY SANITY IN THIS DEWENTRATED WORLD. FIRE IS COMING, THE BRUSH MARKS AND LINES ARE A MESS. EVERY DAY I'D LIKE TO GET UP THE ROAD AS SOON AS POSSIBLE, THE OTHER ARE LESS SCARED THE LONGER IT GOES ON.
 HOPEFULLY THIS YEAR'S SEASON IS PRODUCTIVE, I CAN'T WAIT UNTIL THE COOLER IS READY, I'VE MADE A FEW CHANGES TO THE VERSION Recipe FROM DAD'S OLD HUNTING JOURNAL.

VERSION ROAST
 1/4 BROWN SUGAR
 1/4 CHIPPED SALT
 2 Tbsp. CAYENNE POWDER
 2 Tbsp. ROSEMARY SALT
 1 Tsp. BLACK PEPPER
 1 Tsp. CAYENNE PEPPER

- COOK BIRD WITH HOT ROAST 200-300°F
 - CARBOCAL & WOOD CHIPS ONLY!
 - COOK ROAST FOR 1.5-2 HOURS



5:00 am: I wake up exhausted but relieved that daylight has returned to restore reason. My relief would be short-lived however. When I examined the nights sketched productions, they were seemingly full of confrontational marks of erasures. They revealed a topographic imagination, one that is unresolved, fragmentary, and a bit feral.

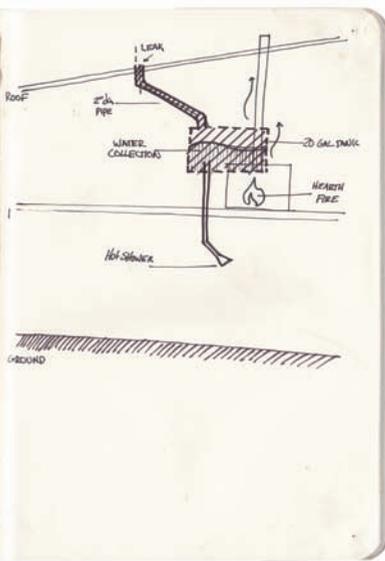
For years, numbers were supposed to stabilize the day's production. 2" x 4" x 16" o.c. promised as much. I believed it. But now, after repeated weekend labors, I have come to realize that I've constructed a conventional wisdom—a shifted structural paradigm that choreographs the movement of my body from an urban flat to the edge of space and range.

This promise, this dream of logic, made familiar through the habitual slogging of calculus into re-seasoned landscape, is exhausting. However and perhaps perversely, I have decided to take confidence in the utility of my own nighttime markings and before beginning again, **rise to stoke the fire.**

YEAR 4, DAY 18
 IT RAINED A LOT THIS LAST WEEK, HAD TO SPEND HALF OF MY TIME HERE AT THE CABIN FIXING THE LEAKS IN THE ROOF. I'VE GOT AHEAD SOME VARIOUS TIME TO MAKE THE NECESSARY IMPROVEMENTS TO THE PLACE NEXT MONTH, I THINK I HAVE AN IDEA ON HOW I CAN MAKE USE OF THAT HOLE. IF I COULD JUST FIND A WAY TO MAKE THE PLACE MORE ACCOMMODATING, I COULD ENJOY LONGER DAYS. OH, BEFORE I FORGET, I WAS ABLE TO GET OUT HUNTING FOR THE FIRST TIME THIS YEAR AFTER THE ROOF WAS PATCHED. I WAS WORKING THIS SEASON WOULD PASS ME BY, BUT I SHOT ONE OF THE BIGGEST DEER THE CAMP HAS SEEN, I'LL HAVE TO GET IT MOUNTED, MAYBE NEXT TO THAT TRAP FROM TWO YEARS AGO.

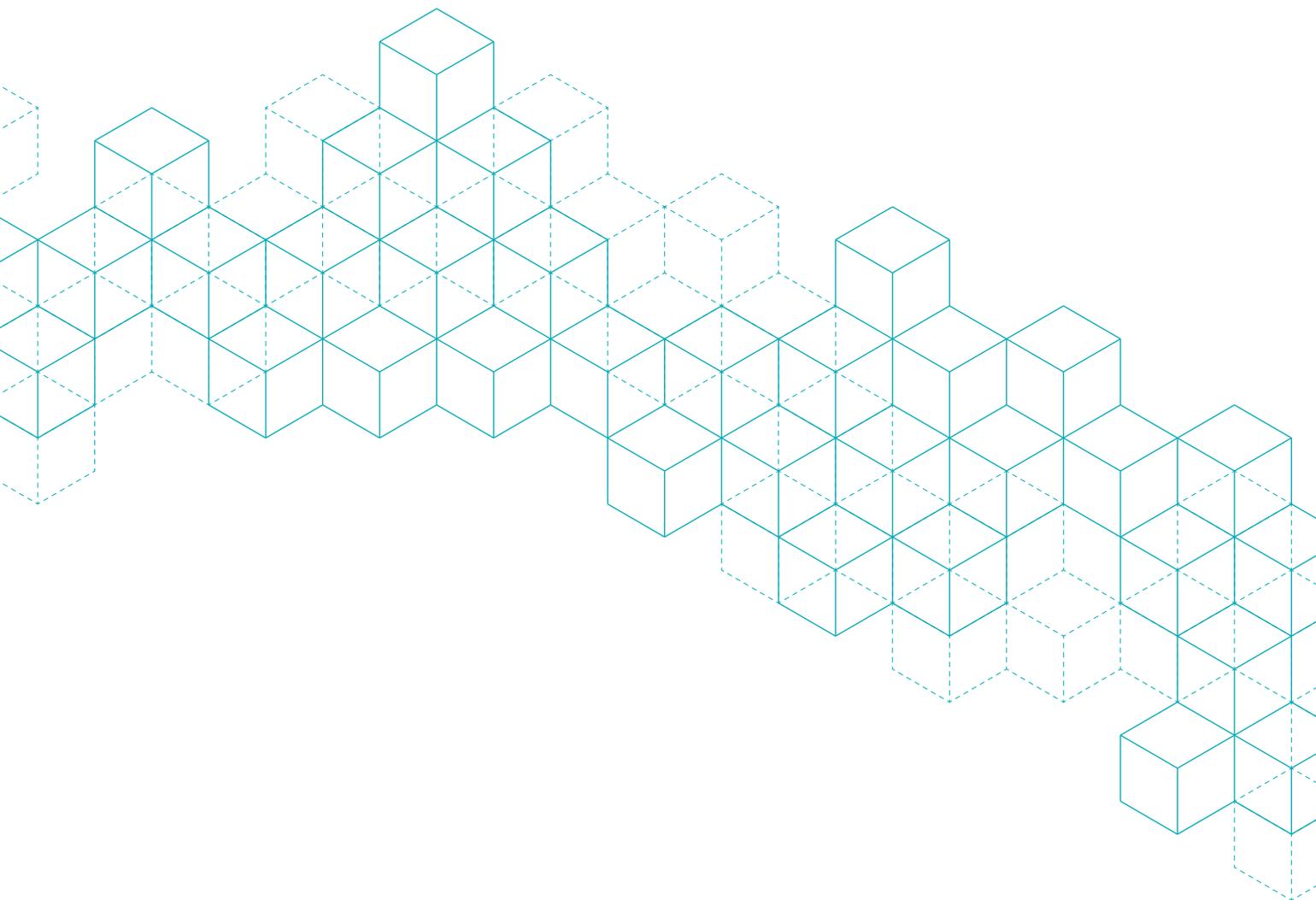
DEER: 7HL 11
 • NOVEMBER 15
 120 YDS
 220 LBS!
 13 ft, 22" SPREAD

• NOVEMBER 26
 90 YDS
 218 LBS
 8 ft 24" SPREAD



YEAR 9, DAY 230
 THE CABIN IS STARTING TO GET A BIT MESSY, ITS ARRANGEMENT HAS BECOME AS ORDERED AS THE PLACE I LEFT. I WAS IN SUCH A HURRY THIS WEEKEND AND DIDN'T GET HALF OF WHAT I WANTED DONE. NEXT WEEK I CAN MAKE IT BACK OUT TO FINISH MY TO-DO LIST, WEATHER PERMITTING. THE BRUSH HAS GROWN UP AROUND THE PLACE AND NEEDS TO BE TRIMMED BACK, BUT THAT IS A WHOLE DAY OF WORK...
 DOC TOLD ME TO TAKE IT EASY ON THE LOGS, BUT IT HAS BEEN WORKING O.K. I'VE BEEN SEEING A LOT OF DEER ON THE PROPERTY LATELY. THE SEASON SKIPPED ON BY BEFORE I COULD GET OUT TO HUNT. OH WELL, NEXT YEAR...





fellows

Taubman College of Architecture and Urban Planning offers three fellowships in the areas of architectural research and instruction. Fellows spend a year at Taubman College, teaching three classes as they pursue their fellowship interests.

RESEARCH / SANDERS FELLOWSHIP

The Sanders Fellowship supports individuals with significant, compelling and timely research dealing with architectural issues. Research could dwell within architectural, urban, landscape, or cultural history or theory; architectural or environmental technology; or design studies. These agendas could emerge from recently-completed doctoral dissertations or other intense and rigorous research format. The fellowship will support both research and the development of research-related curriculum.

PROJECT / OBERDICK FELLOWSHIP

The Oberdick Project Fellowship facilitates the development and realization of a significant exploration into some aspect of architectural speculation and production. Fellows are provided with resources for the execution of a project that may take the form of an exhibit, publication, installation, or any other material construction. Projects may range from the exploration of emergent building, fabrication, and environmental technologies to the realization of architectural works and endeavors typically unsupported within conventional models of practice.

DESIGN / MUSCHENHEIM FELLOWSHIP

The Muschenheim Fellowship offers design instructors early in their career the opportunity to develop a body of work in the context of teaching. Muschenheim fellows play a significant role in the definition of studio culture while pursuing their own creative endeavors. Proposals for the Muschenheim Fellowship focus upon the development of a specific project individually or with students, outside of teaching or center upon a particular set of pedagogical themes to be engaged in the studio context.

Alex Maymind — *100 Drawings*

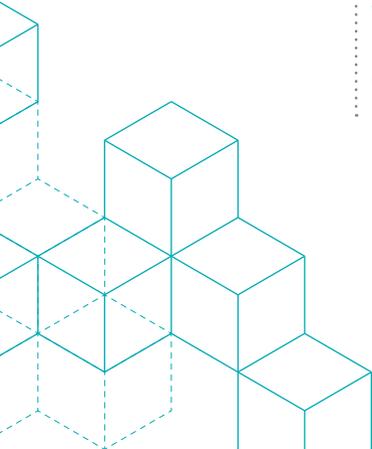
2012–2013 Walter B. Sanders Fellow in Architecture

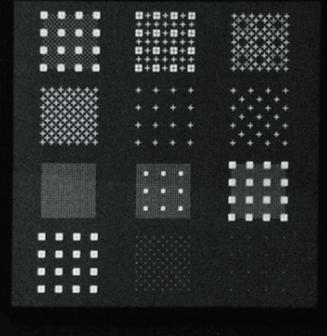
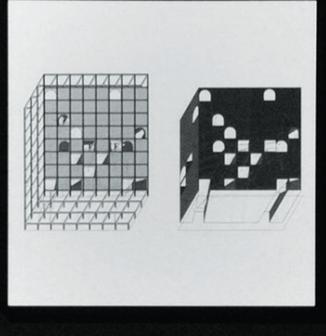
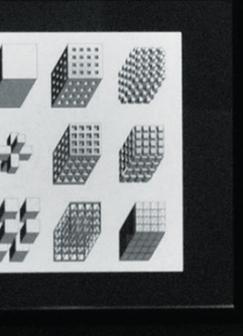
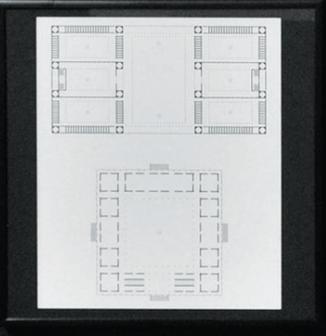
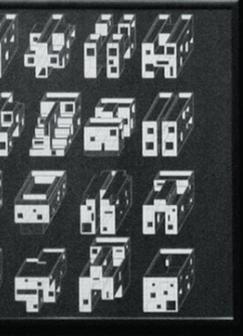
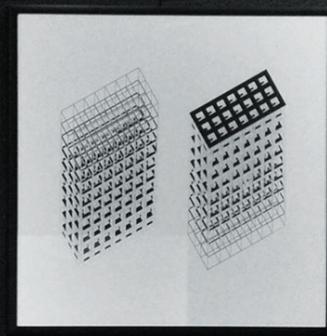
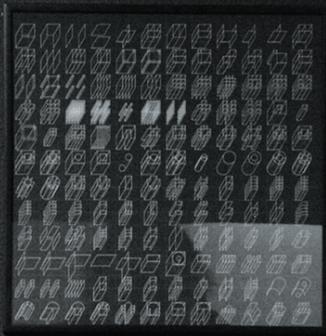
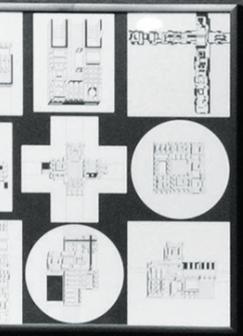
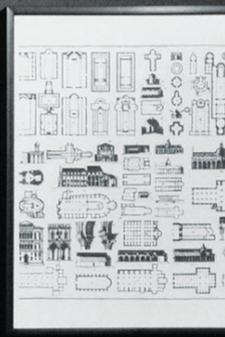
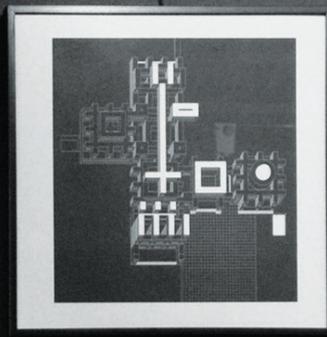
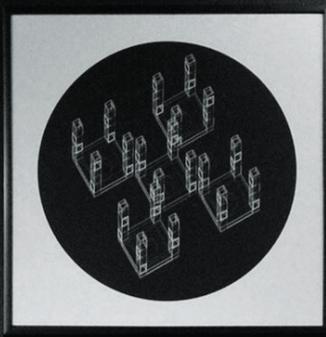
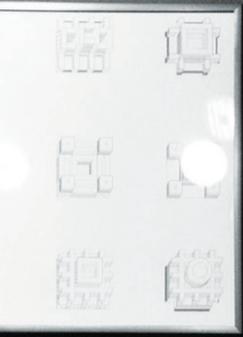
Andrew Holder — *48 Characters*

2012–2013 Willard A. Oberdick Fellow in Architecture

Christian Stayner — *Land Form*

2012–2013 William Muschenheim Fellow in Architecture





100 drawings

100 Drawings is a messy mash-up of historical research, obsessive drawings, and genealogy-making; a project of equal parts documentation, appropriation, and reproduction.¹

MASH-UP

100 Drawings is a messy mash-up of historical research, obsessive drawings, and genealogy-making; a project of equal parts documentation, appropriation, and reproduction.¹ As an entropic collection of architectural ephemera from the last 300 years of disciplinary history, the drawings interrogate the multiple ways in which architecture has attempted to map, organize, classify, index, compare, and invoke the sheer vastness of the world itself.² This ambition has occurred through various forms of architectural knowledge accumulated in a quasi-scientific manner.³ This body of material acted as the basis for *100 Drawings*.⁴

GENEALOGY

A broad historical genealogy of the architectural knowledge genre is based on a shared compulsion to understand and define rigorous design methods and grammars of composition—the rules and internal processes of architecture.⁵ Certain themes temporarily unify this genealogy, such as a propensity towards rigor, objectivity, an unusual degree of self-consciousness towards architecture's past and the internal narratives and processes of architecture itself, and an unrelenting search for architectural principles via typology and morphology. More importantly, these themes each point to the fact that the very difficulty of architecture was embraced and even exacerbated. In the search for rules and systems which might have clarified architecture, it only became more complex, more entwined.

¹ The project avoids neatly fitting into any single category of work and instead lingers restlessly on the cloudy boundaries between design and history.

² Invented, distorted, rationalized, and personal.

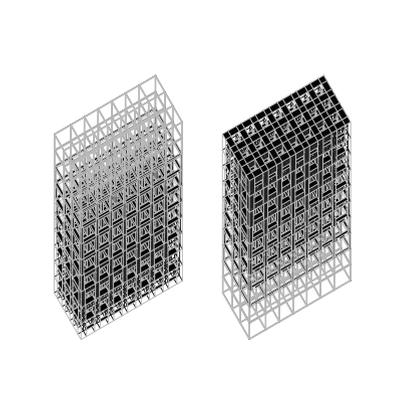
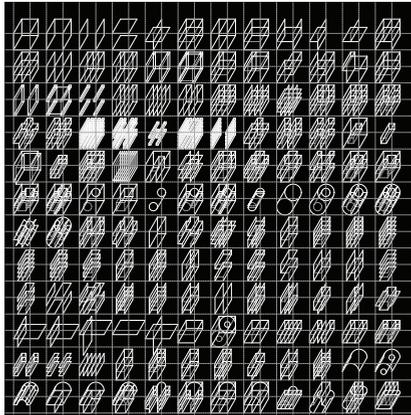
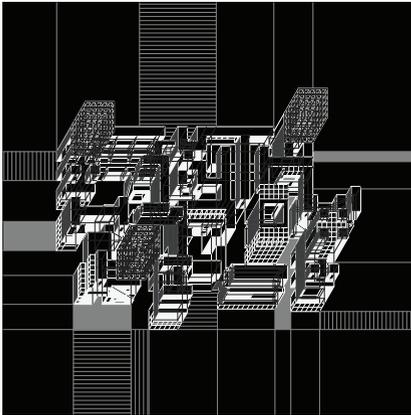
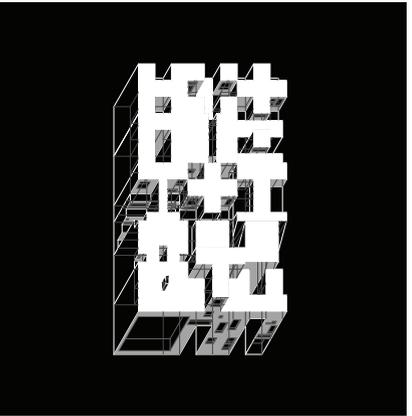
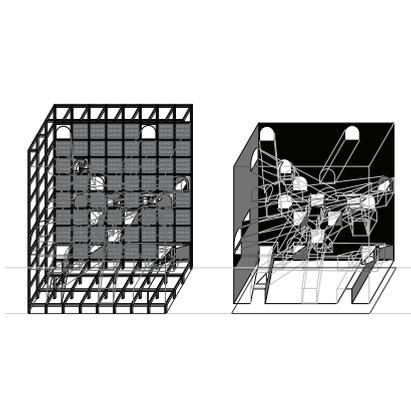
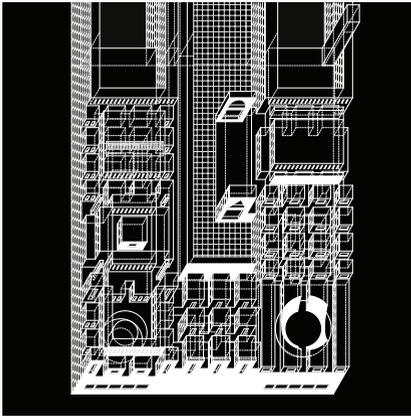
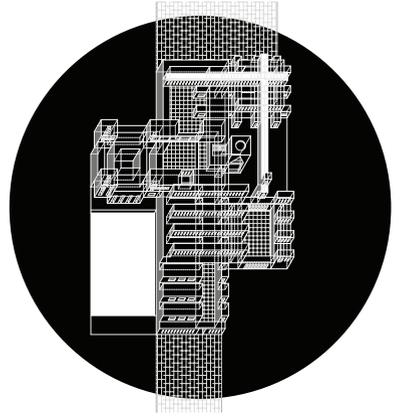
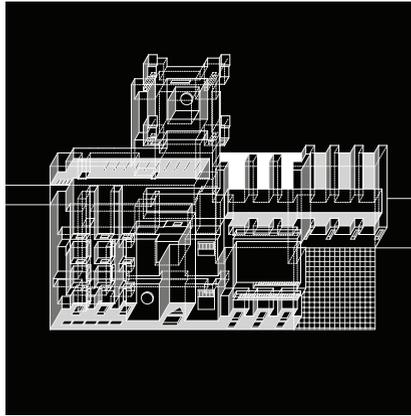
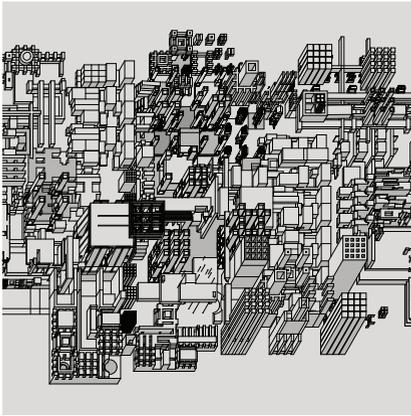
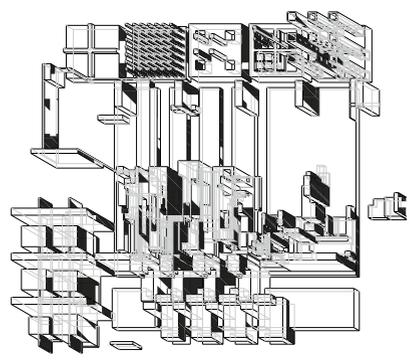
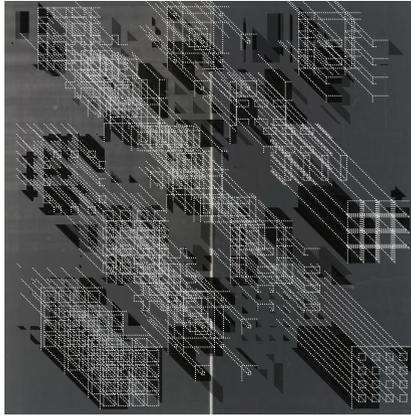
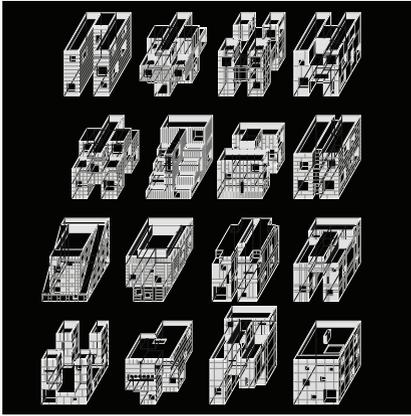
³ Systematization, taxonomies, and other genres of classification.

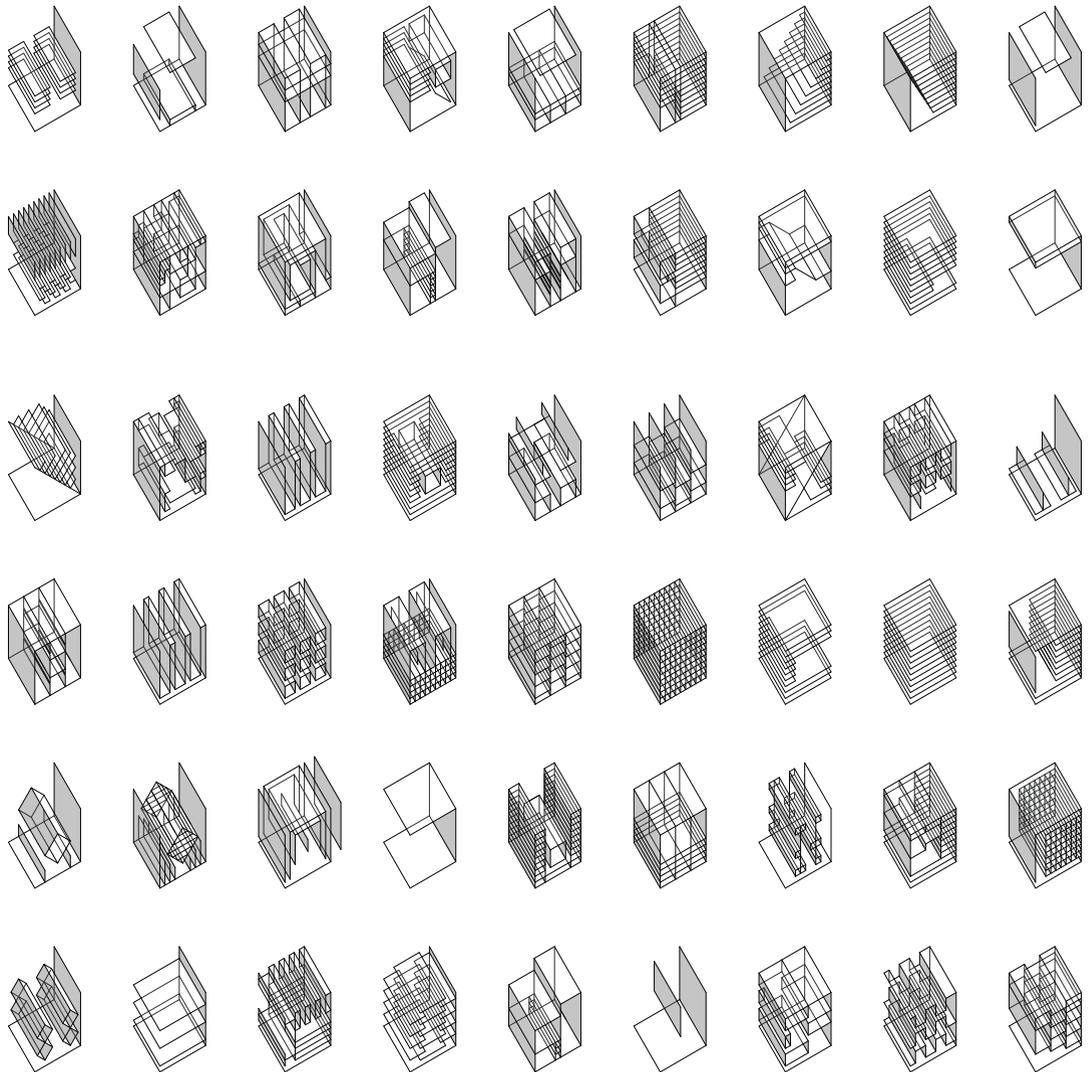
⁴ Each drawing was limited by a number of basic constraints: a 13-inch x 13-inch square format, a black and white color palette, and an array of non-perspectival architectural projection techniques. Within this range the drawings pursue a wide variety of formal and conceptual issues, achieving coherence as a set of documents and at the same, stand alone as discreet items.

⁵ Including but not limited to Palladio, Durand, Kahn, Krier, Ungers, Eisenman, and Purini.

• Alex Maymind
• is a designer, critic, and educator. He has taught architecture in various roles at UCLA, University of Michigan, Cornell, and Yale.







COLLECTIVE COMPULSION

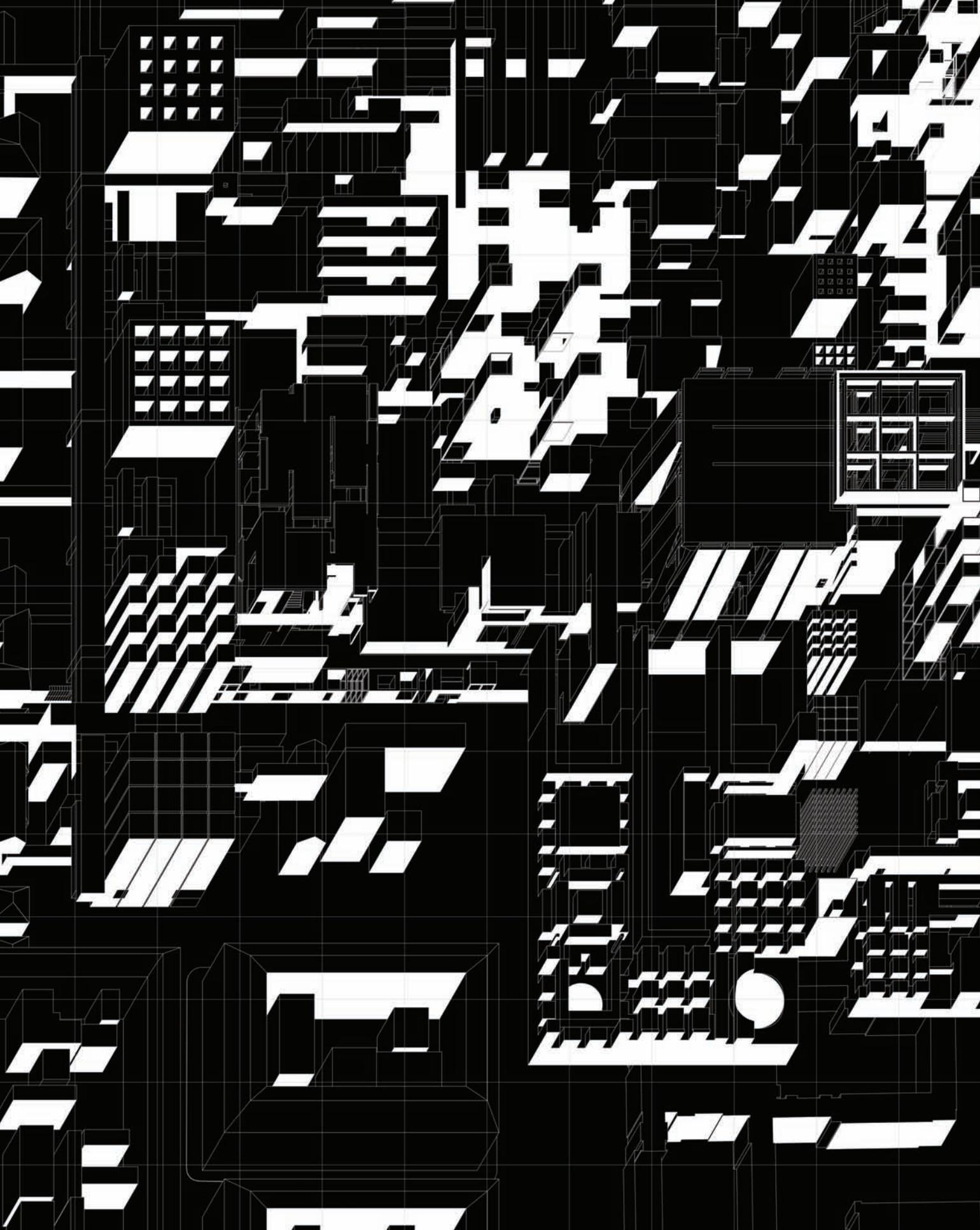
100 Drawings attempts to recuperate this body of material as productive fodder. This terrain was examined through various methods of misreading and re-enacting certain ideas through drawing.⁶ This can be understood as a parallel notion to the encyclopedic discourse of the Enlightenment, wherein architectural history—and in certain cases, the work of specific architects themselves—began to be conceived systematically rather than historically.⁷ This collective compulsion to organize the world—“to put things in proper order”—often took the form of pedagogical or documentation machines which

attempted to codify and therefore regulate compositional and serial systems by which architecture could then be abstractly rationalized.⁸ When viewed in dialogue with our own contemporary open-source culture of endlessly proliferating images and associated digital ephemera, the project of systematization appears to be an impossible project by its very nature in the sense that it aims to never be complete by constantly enlarging its scope and recursivity. This impossibility is both a Herculean task and an excessive ambition.

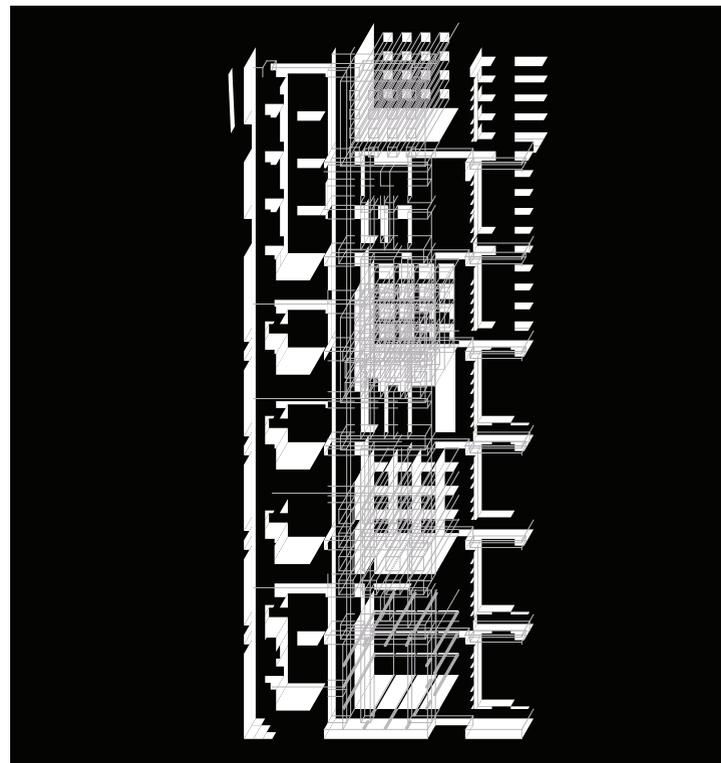
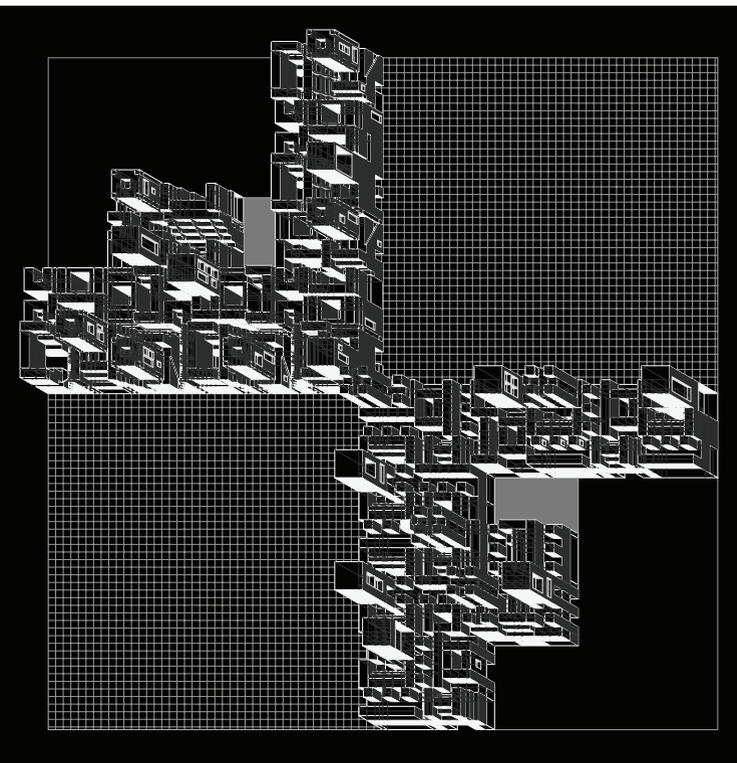
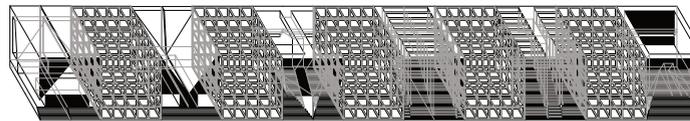
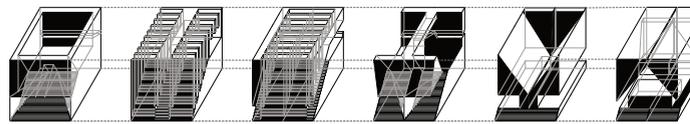
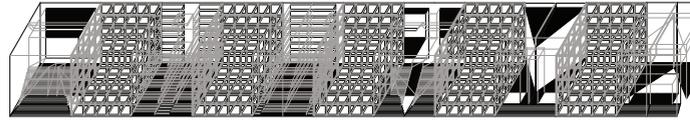
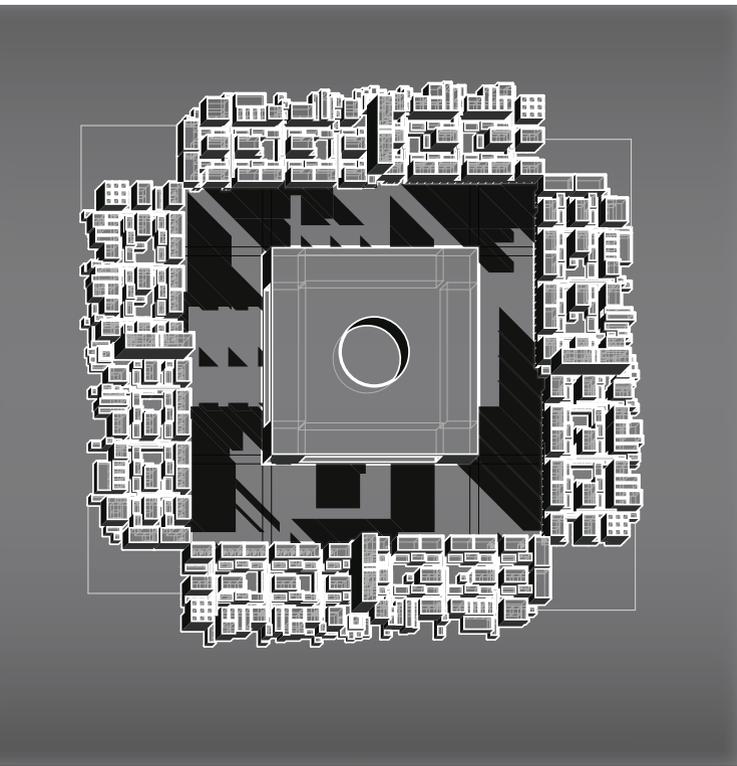
⁶ By transforming originals through distorting, regrouping, or reassembling the constituent pieces or organizations, new latent possibilities were produced.

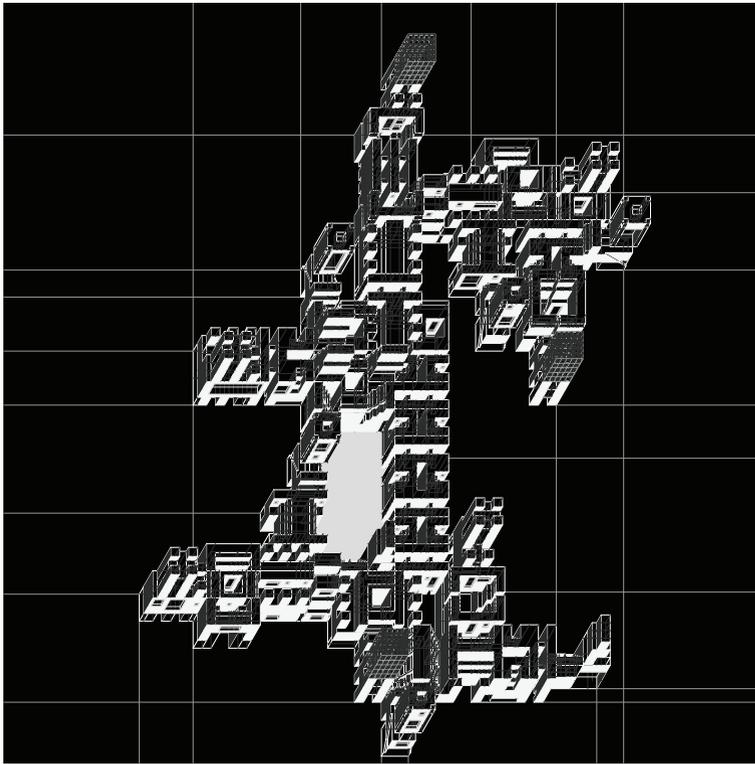
⁷ As described by historian Anthony Vidler, “this tendency stressed classification and comparison; their implied method was that of the natural scientist, not the antiquarian. Boullée stressed the need for comparison; Ledoux spoke of ‘abbreviating the annals of time’; Durand insisted on ‘classifying the buildings and monuments according to type’ and drawing them to the same scale.” – Vidler. *The Writing of the Walls: Architectural Theory in the Late Enlightenment* (Princeton: Princeton Architectural Press, 1987), 166.

⁸ In addition, many of the architects in this genre attempted to recuperate anachronistic and academic formal devices and certain classicizing tendencies as a way to invoke architecture’s deep history. This tendency aspired to not only codify but to provide discursive and conceptual stability to an otherwise disparate and radically heterogeneous body of material.



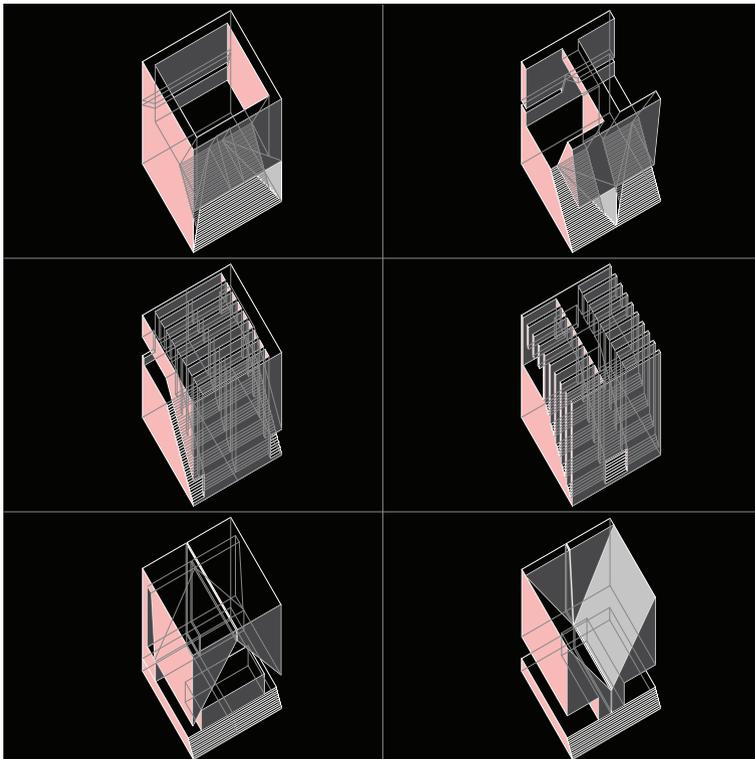






COLLECTION & CLASSIFICATION

Collection and classification entail not only organization, but a renewed engagement with the medium of drawing and re-drawing. Throughout the project, inevitable alterations, corrections, and inventions have been made, as is true for other archive-centric architects from the past. While the distribution and organization of the collection itself tends towards entropy, the project is loosely held together by specific architectural iconoclasts from the past, which anchor the set of drawings. As with previous obsessive-compulsive archivist-architects—most notably, Piranesi's *Campo Marzio*, Durand's *Precis* or Letarouilly's *Edifices de Rome Moderne*—the drawings oscillate between the scale of the city and the individual building, between autonomous figures and blatant agglomerations, and between legible archipelagos and an interconnected wholes, allowing divergent contiguities and spatial relationships to emerge from within the set. 





48 characters

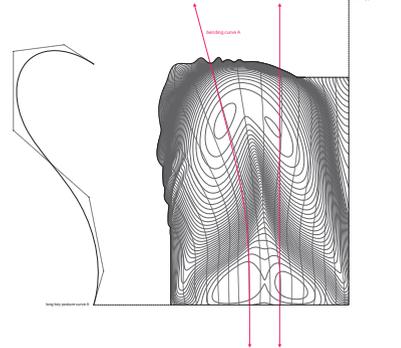
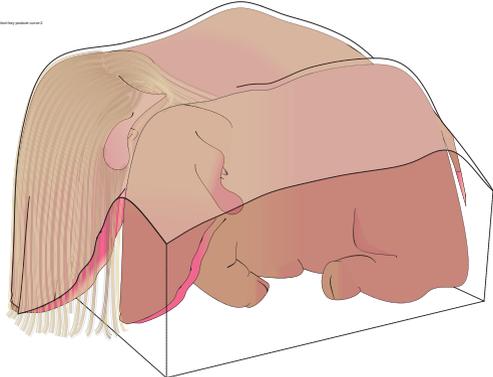
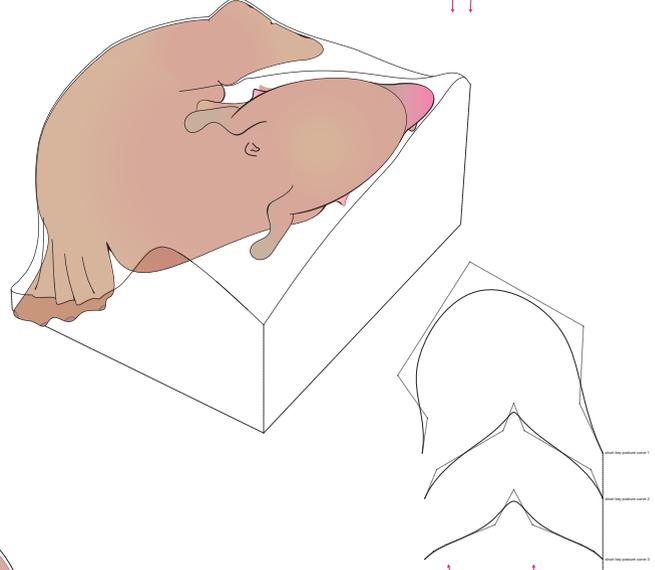
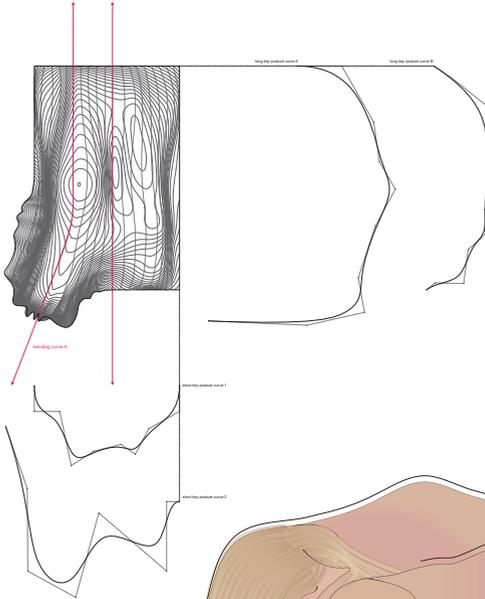
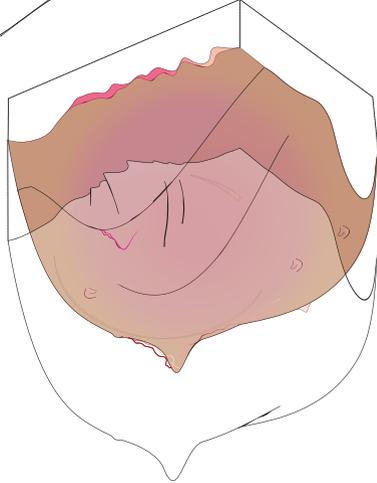
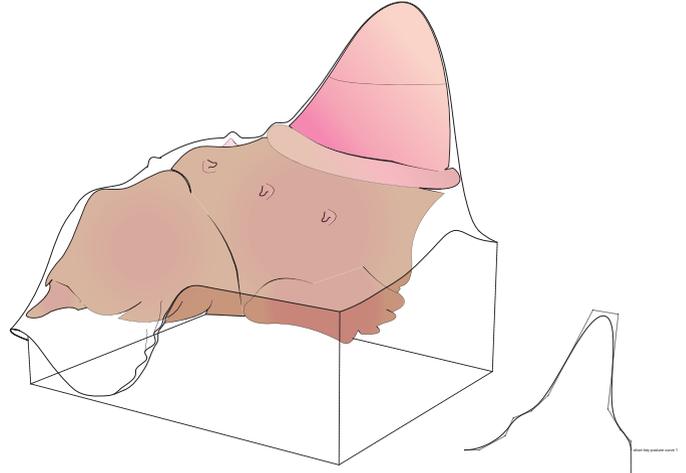
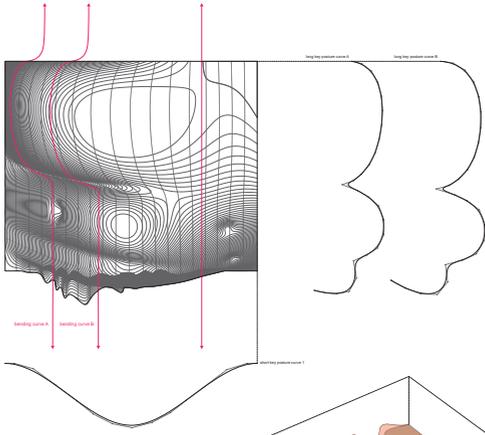
Consider, as a special case of form and repetition, a litter of piglets suckling at the teats of a plump sow. Both at the level of the entire piglet-sow agglomeration, and at the level of the individual pig body, geometric analysis is not readily equipped to describe this situation.



Andrew Holder

is a designer, critic, and occasional author. He is the co-Principal of the LADG, where his design interests include re-purposing common or outmoded drawing techniques, inventing architectural characters, and inducing states of play in an audience. Andrew has held teaching appointments at UCLA, SCI-Arc, and Otis College of Art and design, and is a frequent guest critic at institutions across the country. Prior to his career in architecture, Andrew's professional lives include work in real estate finance and tax credit syndication with National Equity Fund, and a stint as director of business development for a technology start-up using statistical analysis of language for novel information storage and retrieval systems.

Consider, as a special case of form and repetition, a litter of piglets suckling at the teats of a plump sow. Both at the level of the entire piglet-sow agglomeration, and at the level of the individual pig body, geometric analysis is not readily equipped to describe this situation. The disposition of one pig against another does not appear to be regulated by clear systems of repetition and adjacency. While the pressing of one pig tummy against another can be partially described as the pressing of one topological surface against another, but this same system cannot be used to rationalize the fit of mouth to teat. Each fit between adjacent bodies is unique not only as a variation on a single type, but also as a variation in kind. The pig bodies themselves resist decomposition as assemblages of skin and structure; they are too fat—nearly all fat, in fact. The excess of this obesity—the sheer quantity of material in any one body—make it impossible to assign any particular region to the task of fit and adjacency. A patch of one piglet's distended stomach fits against the neighboring piglet, but not all of that stomach participates in the plane of fit between bodies, and not the same region of the stomach participates each time it presses. Nor can we definitively assign the stomach the role of “fitting part” or “the thing that does the work of joining one pig to another.” Snout, hoof, tongue: each of these may or may not participate in the fit of adjacent bodies.



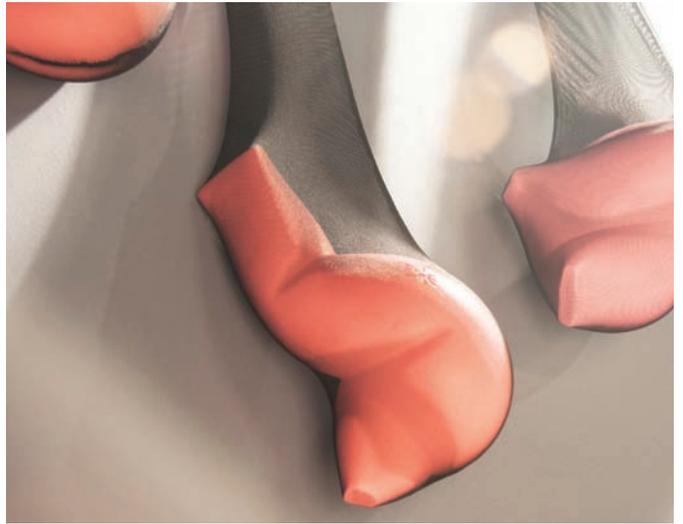


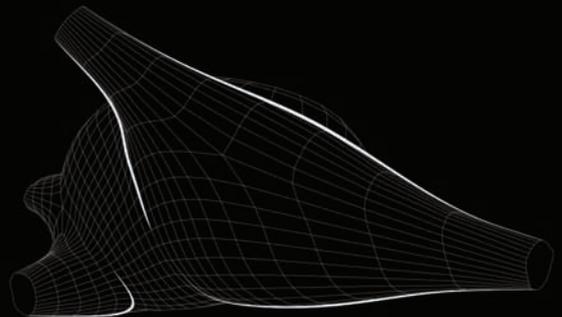
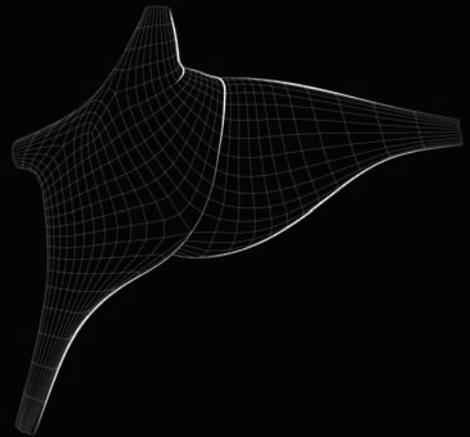
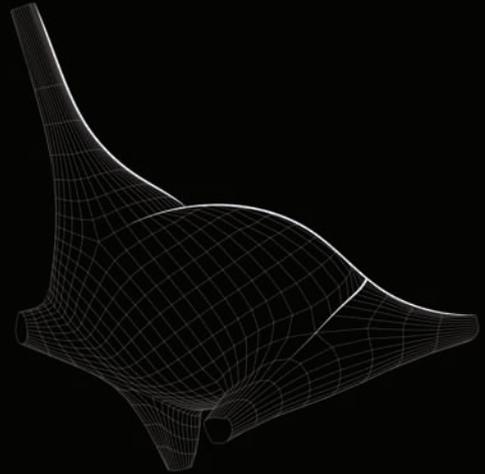
Geometric analysis cannot supply a total rationale for these extremes of variation and excess. Geometry plays a role but, ad-hoc in its application, always shifting in its physical location, there is a lurking suspicion that all of this geometry is incidental to something else entirely. It is the detritus of some other animating principle. What we struggle to rationalize in the language of geometric analysis, the languages of character and posture easily accommodate: the piglets nestle and suckle; the sow sprawls; obese bodies squeeze and abut one another. The work of repetition and aggregation is offloaded to character. Or more precisely, the work of repetition and aggregation is offloaded to characters.

48 Characters reproduces the geometric and material properties of pig bodies using plaster cast inside latex balloons. The balloon casts produce species of obese

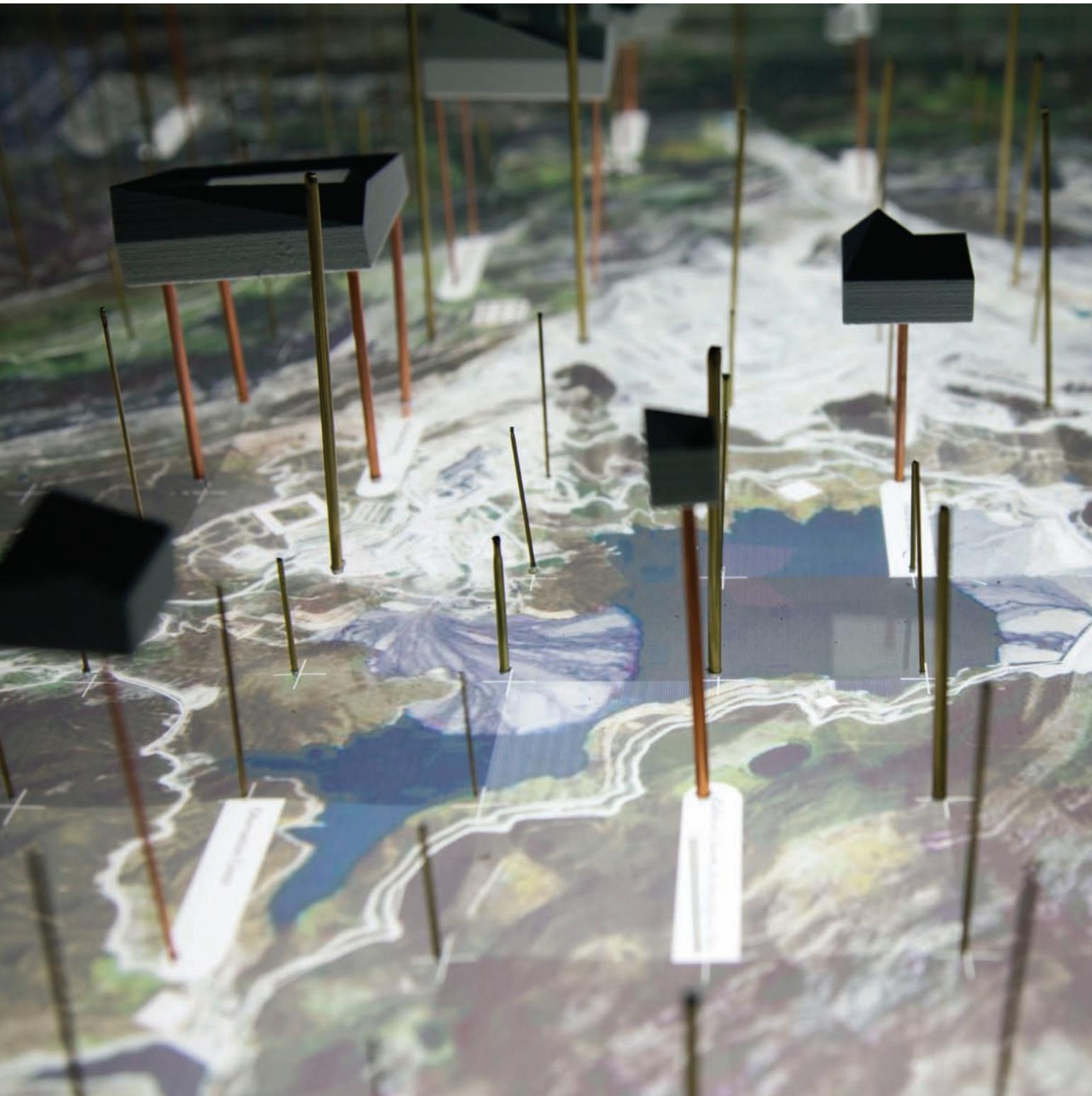
bricks with an excess of mass and feature that sags and flops beyond the limits of what is strictly required to make a brick; they are materially homogenous, defying decomposition into anatomical pieces and they are arrayed in ever-changing distributions that resist systematization as variations on any one geometric theme. "Brick-characters" snuggle, hug, sprawl, wrestle, and copulate their way toward the production of space. 🧱











land form

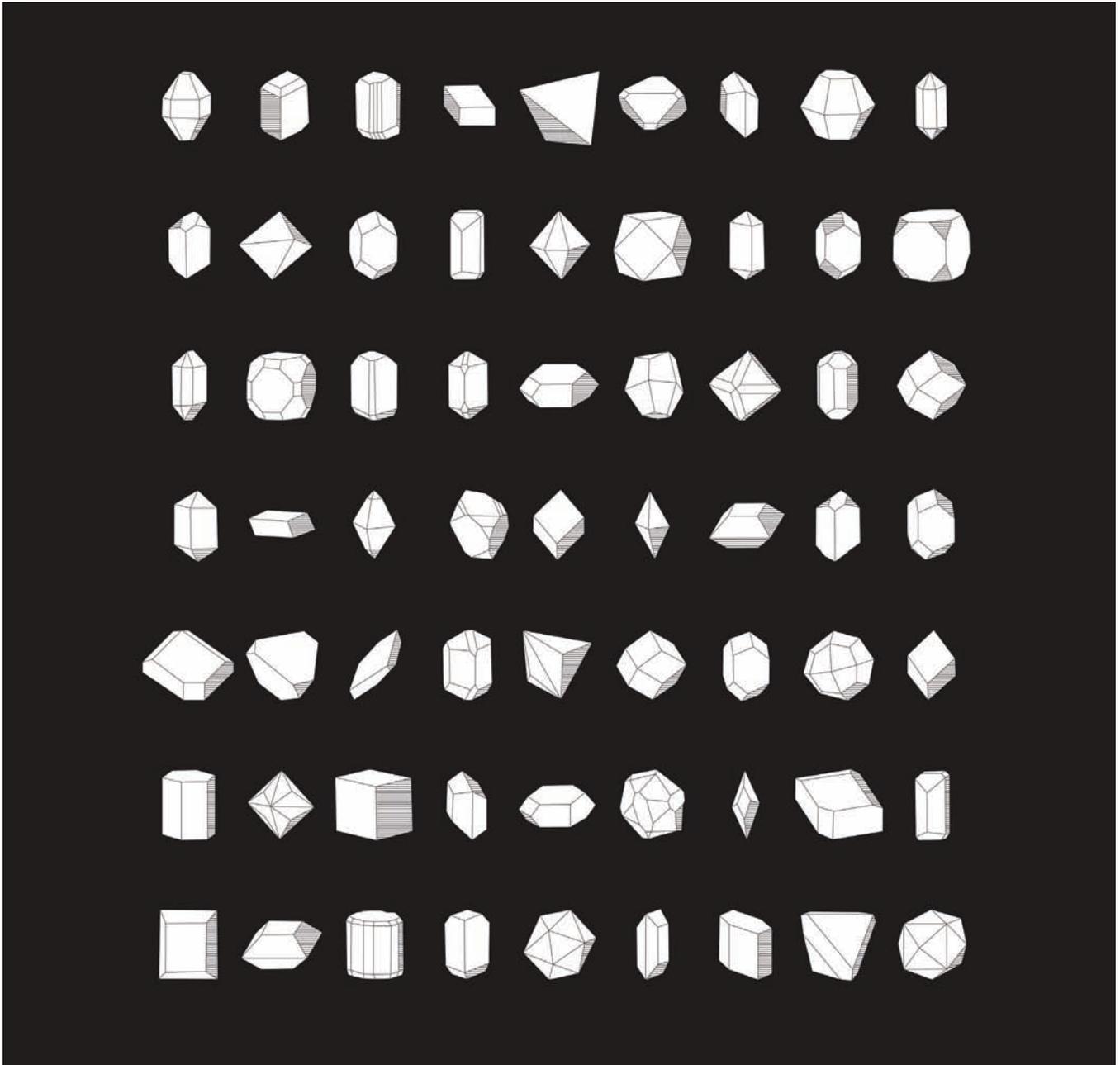
This exhibition presents selections from Land Form, an ongoing research project that examines the politics, economics, histories, ecologies, and social conditions surrounding sites of contemporary resource extraction.

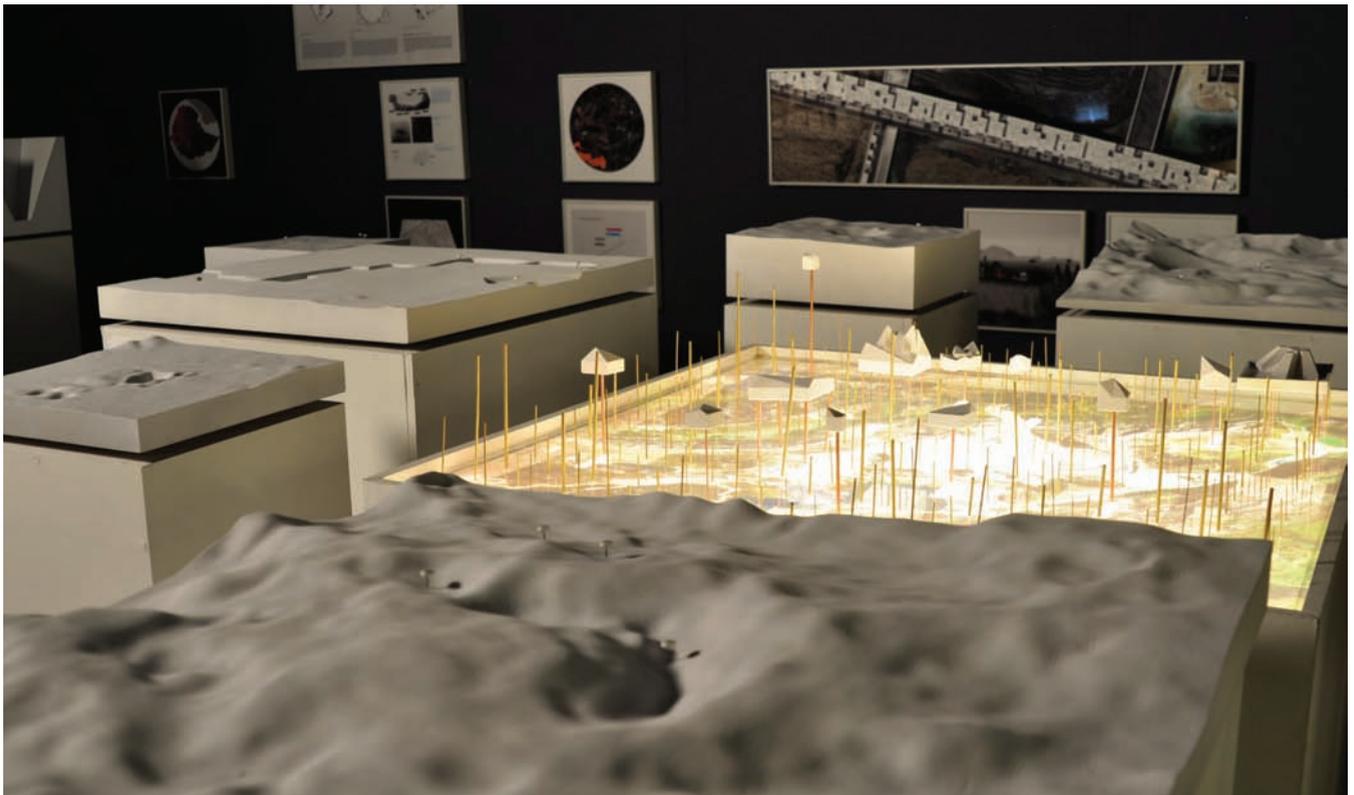


: [Christian Stayner](#)
: is an Assistant Professor (2014–) at the Taubman College of
: Architecture and Urban Planning at the University of Michigan in
: Ann Arbor. Christian is also founding partner of Stayner Architects,
: a Los Angeles-based design practice that provides comprehensive
: architectural services across a broad range of scales and programs.
: His current academic research focuses on the non-visual in
: architecture: the possibilities of formalism and informality in
: excavation, soils and land use; East African urbanism and territorial
: organizations; the possibilities of alimentation and olfaction in
: architecture; and practice in the public domain.

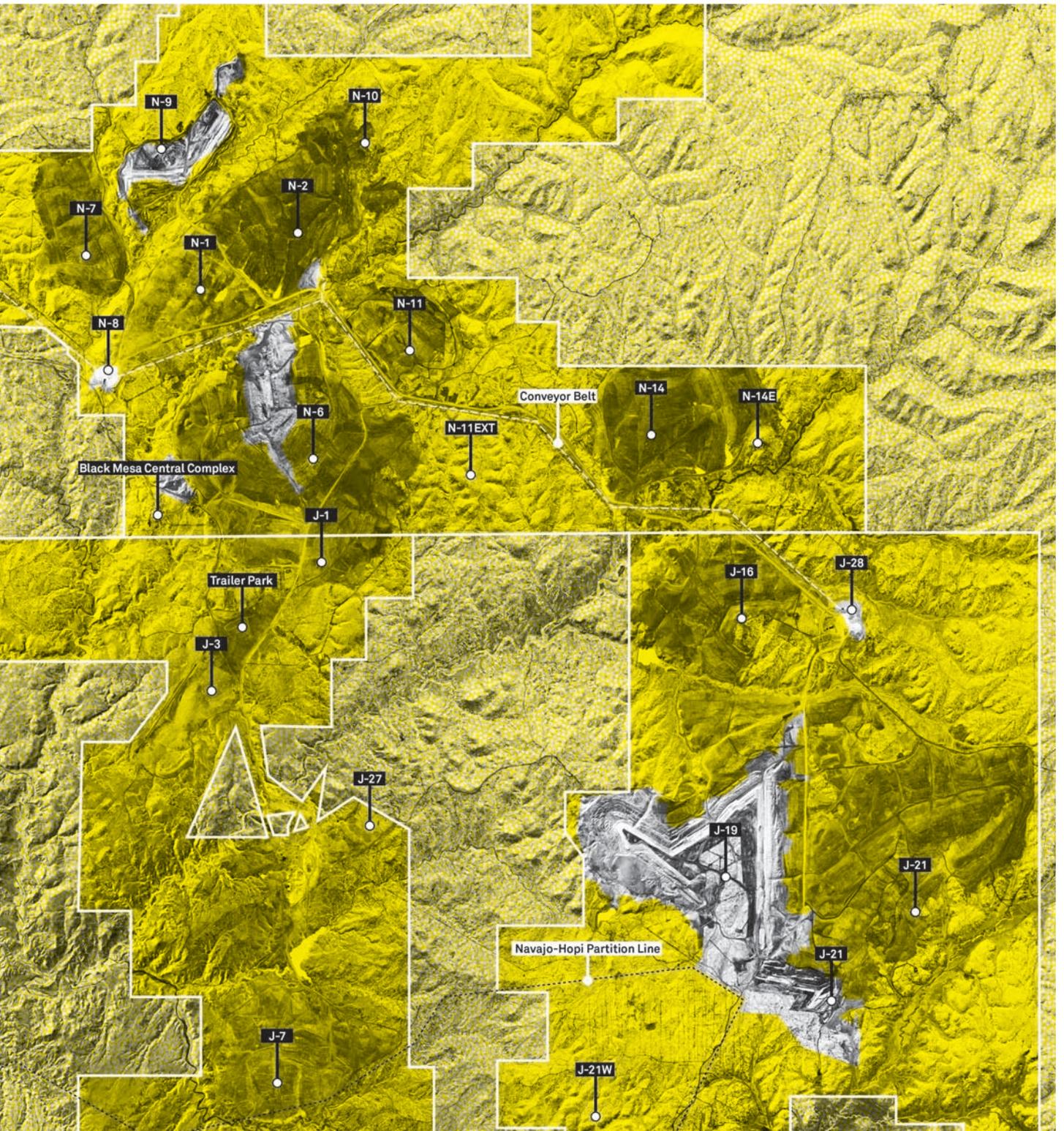
TOWARD AN ARCHITECTURE OF EXTRACTION

The project looks to mines, aqueducts, and other extractive systems as potential spaces for a new engagement of architectural form. Indeed, the extractive processes explored here transform the earth at a scale that compels architecture to think beyond individual buildings—demanding a reconsideration of the ground, a central trope in the development of the discipline. From land to datum to city to field, architecture has sought to reconstruct the ground according to changing political and social conditions.





Today, this necessitates engaging with the shifting political economy of resource scarcity and the large-scale manipulation of the Earth's surface. Rather than seeking to ameliorate the seemingly intractable situation of scarcity—in which architecture and construction are complicit—*Land Form* instead mobilizes sites of resource extraction to think about a new scale of architecture. The first three design projects shown here use the figure of the square to intervene upon existing sites of resource extraction. This framing device allows us to reconceive the industrial landforms and evolving ecological conditions of each site. In addition to the square, future projects will deploy other architectural primitives to reconsider a total of twelve sites.







Land Form Twelve Sites of Extraction

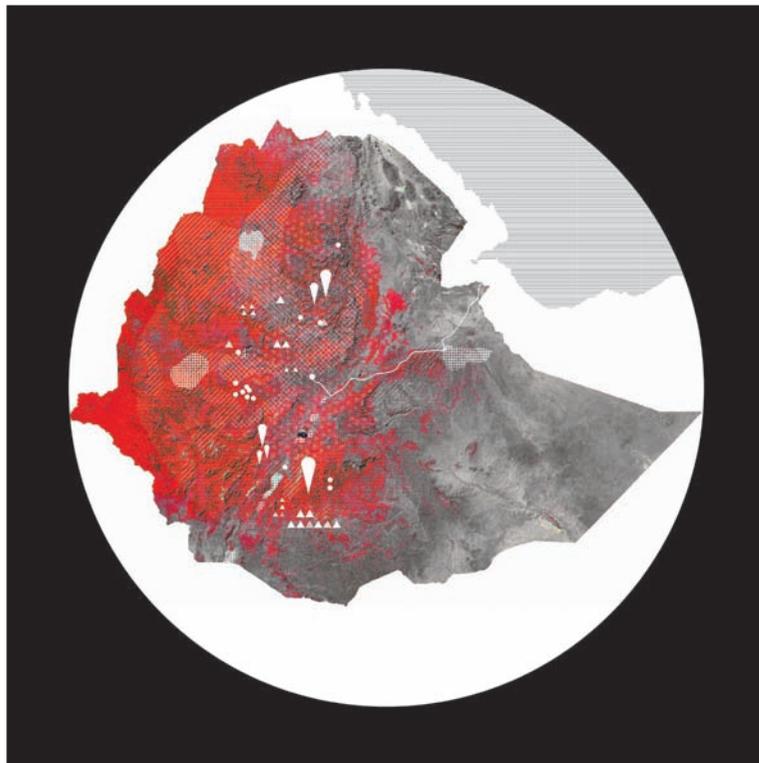
TWELVE SITES OF RESOURCE EXTRACTION

Phase I (proposals in the exhibition): 1. *Technology*: Sierra Copper, Tucson, Arizona; 2. *Historic Preservation*: Hashima, Nauru, Mannar, Homonhon, Pacific Islands; 3. *Ecological Conservation*: Antamina Mine, Ancash, Peru.

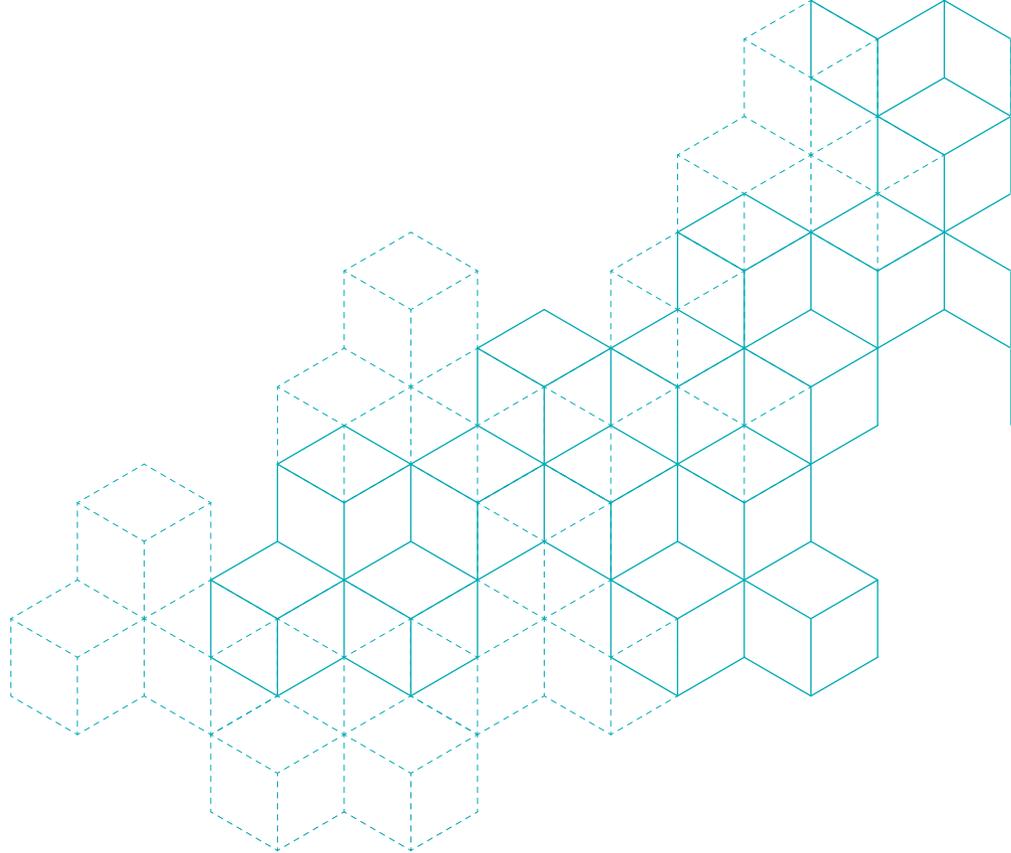
Phase II (presented in): 4. *Legal Scenarios*: Black Mesa Coal Mine, Navajo Nation; 3. *Local Politics*: Tilden and Empire Iron, Upper Peninsula, Michigan; 6. *Labor Rights*: Okote Mine, North Okote, Ethiopia.

Phase III: 7. *Geo-remediation*: Black Thunder, Wyoming; 8. *Water Resources*: Los Angeles Aqueduct, California; 9. *Globalization*: Oyu Tolgoi Mine, Mongolia.

Phase IV: 10. *Post-industrial Urban Design*: Ferropolis, Grafenrainichen, Germany; 11. *Nuclear Heritage*: Plowshares Project, North America; 12. *Historical Sites*: Marble Quarries, Carrara, Italy. 🏠



United States Federal Geographic Data Committee Cartographic Standards Selection (highlighting items for Map-work Landform)





interviews/lecturers

FALL 2013 POLITICS LECTURE SERIES

Michele Oka Doner
Karen Fairbanks
Mohamed El-Sioui
Marshall Brown
Regina Myer
Sarah Dunn
Julie Snow
Georgeen Theodore
Michael Dear
Lydia Kallipoliti
Shohei Shigematsu
Ann Markusen

Shohei Shigematsu
Diversified: Recent Works from OMA, New York

Georgeen Theodore
The Arsenal of Inclusion

Sharon Haar
Chair of Architecture Interview

WINTER 2014 ECONOMICS LECTURE SERIES

Eric Owen Moss
Jimenez Lai
Michael Graves
John MacArthur
Candy Chang
Bjørn Sletto
John Forester
David Belt
Timur Galen
Winy Maas
David Leopold
Fernando Romero
Rachel Armstrong
Panos Leventis
David & Im Schafer



Interview with:

Shohei Shigematsu

D27: *As the director of the OMA*AMO New York office, what would you say are some of your biggest challenges?*

SS: The challenge is to succeed a culture of OMA's history and give a new dimension to it for our generation. There are a lot of ex-OMA offices, young firms that are doing very well and with which we are often compared. We are often considered the older office that spawned this new generation, but now that I am also of this new generation similar to their age, I am trying to rejuvenate the OMA brand. Because we are a global organization, we are dealing with many different cultures, different climates, different programs, and just to keep up with it for me is a big challenge. So what we do constantly is observe and take certain initiatives in the interests that we develop ourselves and cultivate them beyond the field of architecture. And that's why we have this entity called AMO that enables us to break outside of the architectural framework and initiate and create a form of communication that enables us as architects to talk to a wider audience or to a different field.

D27: *Tell us more about how OMA and AMO work together.*

SS: It was at the end of the '90s when we discovered that there were more opportunities within the architectural field than just designing, delivering, and finishing. A lot of clients consider architecture a part of their communication, part of their brand, part of their identity. We started working on a project that was about creating more of a framework of defining architecture, rather than designing. And in that sense, we had to go beyond the typical notion of architecture and create a flexible entity that could deal with the speed of

fashion or the speed of a media company or the speed of the changing global condition in general. And it's more like a dialectics within a firm where you have a very strong architectural dimension, but also a very loose one. By loose I mean that it's not so physical and there are non-architectural commissions where we deal with an architectural thinking. An architectural mind can generate a lot of platforms for discourses or research or knowledge beyond commissions. Architecture is inherently problematic because you basically only start working when you get the commission. But in this way, we can initiate and cultivate our interests without being bound by that system.

Many of the AMO staff have an architectural education, but they are more interested in the potential of architectural thinking or communication and research. It's a very flexible organization. The projects are diverse: from research to branding to fashion show design, submission design to bookmaking. I think what AMO does successfully is create a platform that is more interdisciplinary than architecture because it instigates collaboration with writers or scientists or economists; architectural projects in AMO enjoy quite a dynamic and collaborative environment. I think that's very valuable. We are interested in enlarging or reinserting ourselves into society in a slightly different manner, but also a meaningful way.

We often say we don't have any style, but we have a style in thinking. This is why OMA has spawned a lot of young successful architects. We share a methodology but not necessarily the formal outcome. And I think this methodology is quite down-to-earth and very straightforward, pragmatic, contextual, and not too philosophical. Of course the philosophy exists within the thinking, but it's not like the '90s when you could delude and try to mystify architecture. It's completely the opposite. Of

Shohei Shigematsu

became Director of OMA*AMO New York in 2006, and a Partner in 2008. During his time at OMA, Shohei led the team that won the CCTV (China Central Television) Headquarters design competition in 2002, as well as the winning competition entry for the Shenzhen Stock Exchange (SSE) Headquarters.

Shohei graduated in 1995 from the Department of Architecture at Kyushu University, Fukuoka. After studying at the Berlage Institute Amsterdam (Postgraduate Laboratory), he joined the Office for Metropolitan Architecture in 1998. He is currently a design critic at Harvard University's Graduate School of Design.

Shohei was invited to Taubman College to give a lecture titled "Diversified: Recent Works from OMA, New York" in November 2013.

course one thing that is often misunderstood about OMA is that we don't care about form. We just don't speak like that in public. If you came to our office and observed our process, you would see that we do many different formal possibilities. If we don't think the form is beautiful, we often go back to the premise and re-examine the narrative so that form will be better. We actually do care quite a lot.

D27: *OMA is notorious for its use of diagrams that illustrate a clear and deliberate decision-making process. What role does diagramming, and more generally, your representational technique, play in your work?*

preservation. You said that preservation has lost its original meaning, and the world needs a new system mediating between preservation and environment. Can you speak a little bit more about this?

SS: Yes, I think the preservation was often regarded or it has been regarded as something that is the opposite of development. You preserve something and then you keep it as it was when it was in an original state. It was about authenticity and it was also an expression of social interest to preserve a certain structure. But now because of many economical interests, for example like

“Architecture is a very long process and if you don't have a clear understanding of the performance or the context of the building, the clarity gets lost, the design process suffers, and then the building process suffers. I think the narrative is the tool to actually create a coherence within the team and also communicate with the world.”

SS: I think that “diagram” is a word that became a little too famous. We are interested in creating a narrative. A narrative means out of a context we create a story that can be told and that can also govern the architectural process. Architecture is a very long process and if you don't have a clear understanding of the performance or the context of the building, the clarity gets lost, the design process suffers, and then the building process suffers. I think the narrative is the tool to actually create a coherence within the team and also communicate with the world. Both internally and externally, the diagram plays a very important role because it shows very clearly the thought process and the narrative. But the diagram unfortunately become a form of hype. As long as you can tell a clear narrative, it doesn't matter if it's a diagram or a sketch. I'm trying to open up again the kind of representational issue too, because at some point the representation invited others to say, “Oh, this looks very OMA.” And I really don't want that. So we are trying to get rid of even that kind of style. But the premise is that we embrace anything that creates a very clear narrative.

D27: *You held an exhibition at the Venice Biennale in 2010 called Cronocaos, where you argued about the attitude towards*

the world UNESCO heritage sites that they designate, as soon as they designate a site, the whole development starts around it. So actually the preservation is no longer a means to actually purely preserve, but it's also a means to develop. So what used to be some kind of an opposite notion is now a kind of a parallel notion. And that's why we think it's very important to re-examine the political, economical, social dimension of preservation. And we are not saying the typical notion of preserving something is bad; we're just saying as an architect, it's very important to know also the development, but also now preservation because preservation and development is back-to-back, hand-in-hand.

Also preservation is kind of escalating. There is talk about preserving part of the moon and create big chunk of the ocean, specifically Great Barrier Reef like in Australia. And the notion of preservation extends to intangible heritage like dance or ceremonies. Those are also now being preserved. So it's very difficult to know now to what degree you want to—what's the authenticity of preservation and also how much we preserve because it might be quite counter-productive in some cases if the preservation becomes a regime to control certain image or a certain development. For example, we did CCTV in Beijing, but we were also working with the City

“And that’s why we think it’s very important to re-examine the political, economical, social dimension of preservation. And we are not saying the typical notion of preserving something is bad; we’re just saying as an architect, it’s very important to know also the development, but also now preservation because preservation and development is back-to-back, hand-in-hand.”

of Beijing on a plan for the preservation of hutongs, the typical Chinese houses. But when you say “preserve the hutongs,” there are also many layers in the history. So when it was built, of course it was in the dynasty but now it went through Communism and there are many remaining of Communist layers such as many things like typically not so beautiful. But now when you talk about preserving, to what degree do you preserve? Is the ultimate intention to something back to its original state or do you really want to preserve the atmosphere that went through several layers of regimes?

So it’s a very difficult question now. And I’m for preserving the layers and not going back to the original romantic idea of preservation. But if then what does it mean then “to preserve”? Because it’s almost like an original—the current state is good enough, but the preservation wants to always make it more authentic in the most pronounced way.

D27: *Do you have any advice for students?*

SS: Well, obviously a lot of observation is needed. Instead of creating premature visions, I think students need to observe what’s happening in the world as much as possible. I think we are very privileged to have access to so many regions and cultures. So travel more and meet more people. It may be very benign advice, but rather than just sitting in the studio too much, I think that it’s very important to travel and to understand and see things. I’ve taught studios at Columbia and Cornell, and I’m currently teaching at GSD. I make sure that our students travel a minimum of one week with me because it has such a strong impact on the dynamic of the studio and the final design proposals. 

NOVEMBER 15, 2013

Interview with:
georgeen theodore

D27: *The name “Interboro” was carefully chosen for your practice because it was a ubiquitous name in New York. Can you speak a little bit more about your decision to do so and how it fits within the design philosophy of your practice?*

GT: When you hear the word “interboro,” it’s sort of very every day. It’s a name that attaches itself to all different types of things so it does a lot of different stuff. So there’s the Interboro Cement Factory and there’s the Interboro Funeral Home. It’s a very every day name and in the spirit of our office because we’re really interested in the everyday landscape. I think what was also very interesting for us was that, as a word, it was appropriated by lots of different groups and organizations and actors. So for example, there’s an Interboro Trade School. And like I said before, there’s an Interboro Cement Factory. We are very interested in how one’s architecture that gets out in the world is used by other people sometimes in ways that we never anticipated. The fact that Interboro is a word that is used by a lot of different people is in the spirit of our practice.

D27: *In the introduction to your workshop, you had framed a certain approach to asking questions about the city. You said, it’s important to “focus on the different people who make up the city and understand how they use and transform space through judgment-free observation and conversation so that we can be better informed and hopefully become more effective designers.” I appreciate the level of empathy and attention to the individual that is exemplified in your design approach. Can you speak about what drives your practice’s design approach?*

GT: The world is endlessly interesting and the more you go out into a place and talk to people and learn about it, the crazier and wilder and more different it will be than you realized. For example, with the workshop, everybody probably had a preconceived notion of what Eastern Market was. But once they started to talk to people, they realized that there are all these other things that are happening, like the whole illicit underground trade with tokens or the different types of businesses that are popping up. I think it’s our belief that that kind of condition and that material is something that is endlessly fascinating. Why would we not use that in the design process? It’s not that we don’t bring something; we’re all designers. We don’t think that architectural design needs to be in isolation and that you could actually use that as part of the material of design. But I think also inherent in that is the belief that architecture need not be this isolated practice where you just do your thing. In the end, we believe that architecture can be more interconnected to the things that are happening out there and have the chance to engage with it and perhaps improve it. But also these forces can influence architecture. That kind of connection and that dialogue will make the architectural project better because you are not only influencing the architect but also hopefully creating some kind of connection and some kind of value for the other people who use architecture as well. Part of this came out of a time where in some areas of the discipline, architecture had become just so autonomous and very disconnected from everyday people.

And we thought that that was a pity. When we first started working, it was really a critique of what was out there. I don’t think that that’s the heart of our practice to be critical of other modes of practice. But we think that there are other ways that architecture can perform. That’s why we’re doing

Georgeen Theodore

is an architect, urban designer, and Associate Professor at New Jersey Institute of Technology’s College of Architecture and Design, where she is the Director of the Infrastructure Planning program. She received a Bachelor of Architecture from Rice University and a Master of Architecture in Urban Design from Harvard University’s Graduate School of Design, where she graduated with distinction.

Georgeen is founding partner and principal of Interboro, a New York City-based architecture and planning research office. Since its founding in 2002.

Georgeen was invited to Taubman College to give a lecture titled “The Arsenal of Inclusion” and conduct a workshop in October 2013.

what we're doing—because we think that there's room for alternative practices. Also to perhaps have more of an impact in areas where we think that we want to have an impact.

D27: *We appreciate that about your practice. For a field that is so interdisciplinary, architecture can feel overwhelmingly insular. Are we designing for other architects? We often overlook the fact that we are designing for other people.*

GT: Right, yeah. And this is something I really tried to highlight in the workshop. I don't think that the workshop itself should be judged by the work products, but by the process. Because of course, being able to make a plan or to develop a sequence of spaces in one of the studios, that's what we do as architects or the development of a district or whatever scale we're working at. But what I wanted to do in the studio was to somehow focus our lens or shine the light on some other ways of working that can be integrated into the design process that allows us to bring more of these other perspectives into designing. That's why in the workshop, the product in the end was not a building or even a space. It was about how to think when you begin to work in a place, and how you can look at these other things and think about the techniques that you can use to incorporate them into the design process. That's what my hope was for the studio. It was really about ways of seeing and ways of engaging and then ultimately ways of integrating that into your work.

D27: *Do you feel that this is a shared approach amongst practicing architects today or that a complex understanding of the micro-level of the user often gets oversimplified?*

GT: I think more and more practitioners out there are practicing architecture in a way that is more holistic and engaging of these other forces. I don't think we're the only ones and there's all different strands of that. The three of us met in graduate school and we worked together in school. Then we all moved to New York and were working for other people. While working for different urban practices in New York at that time we noticed that there were no small boutique urban design planning firms. There were just these huge corporate offices that got all the projects. They [the corporate offices] were using a lot of techniques and methodologies that had been around for quite some time and perhaps not

as innovative as they could be. And so we saw that there was an opportunity to fill a niche in New York City that hadn't been filled at that time. Part of it was really doing something that we believed in, but also I think we saw that there was an opportunity to create something that wasn't out there. And this is something that we've also talked a lot about in the workshop, which is about how to be opportunistic about what is out there and to create opportunities for you to work as a designer that maybe are beyond the traditional understandings of what the architect does. And so I mean of course you could say the making of the office is a project. But I think we were being expansive and opportunistic in thinking about what our firm could be.

D27: *In your lecture, you started off by talking about the MoMA PS 1 Holding Pattern design and Commonplace, both examples of a temporary architecture, and then presented more permanent ones such as the Rebuild By Design project. How has your design approach shifted? Are you able to apply those same strategies of re-appropriation, reuse, and flexibility, into these larger scale designs or is this something the practice is currently discovering or figuring out at the moment?*

GT: I think that all of the things that we have been working on are at the root of that project and so I don't see it as being a departure at all. Even the way that we discovered the design opportunities were really by going to these places and talking to people and understanding what their needs and their hopes and their fears are about the future. I think that level and that kind of engagement that happens with all different types of people—not only residents, but also experts in insurance or people who are running governments and mayors and other governmental officials—those projects emerged from that kind of dialogue with those actors combined with the kind of expertise that our team has.

But no, I think it was rooted in that and that's why we called the project *Grassroots Regionalism*. It's thinking about what is already happening out there and these kinds of municipal interdependencies that already exist between everyday people and you can actually grow them. So I don't see it as a departure at all, but I do see it as a next step because it is a different scale and it is a much wider net of actors that we have to work with that's much more complicated. In that project, I had talked a lot about the different strategies that we're employing.

And you can also see a lot of the themes that we've explored or the things that have been important to us in the other projects, namely I think you can see in all of our projects there is this deep commitment to social justice. And so, even with PS 1, it was about making the space of this rarefied museum more open to a broader number of people and making those things and the small investments of that project not only be valuable to us but also be valuable to other people. The money that we spent on designing and building those things were basically transferred to other people. I would say similarly that if you look at *Rebuild by Design*, our team focused on extremely vulnerable communities that are low-income or medium-income and that are low-density and medium-density. We are not spending our design energy protecting Wall Street or lower Manhattan, which we as a society have to do, but our focus has really been on those communities and trying to develop a design that makes our society more equitable. That sounds so bombastic, but I think that it really is what we're trying to do.

I would also say that one of the things that's really at the core of the project is that we're trying to make the investments that our country decides to make in, say, risk mitigation, that they have a value for the everyday. And that was one of the things I said at the very beginning and so we used the term "the emergency" and "the everyday."

methodology. And I think that the methodologies are actually very, very consistent. So it's the same thing with *Rebuild By Design*. How can you take a project like this which has certain investments and say, "how can you make it work for what the client wants, to mitigate risk, and create a system of coastal protection, but at the same time how can it bring value on another level?" So I think explained that way, you can see that they're not different at all.

D27: *The role of representation within architecture is something that we are constantly questioning as students. Interboro's mode of representation is instantly recognizable and we appreciate the level of clarity, complexity and whimsy embodied in your drawings. Can you speak a little more about the role your representational technique plays in your work? Does it play more of a generative or communicative role?*

GT: Well, I think you hit the nail on the head; it's both of those things. It's a generative tool and it's a mode of representation. We believe that drawing is a generative practice and that through drawing things, we discover new possibilities. So it's drawing and representing ideas as a mode of exploration and also a mode of inquiry, but it's also a generative mode where we see the world in a new way and identify new design opportunities. But on the flip side, I

"Even the way that we discovered the design opportunities were really by going to these places and talking to people and understanding what their needs and their hopes and their fears are about the future."

I think that with the temporary projects, they're trying to create more value out of what the project is. So it's asking in that particular condition, "How can you make more of what you're doing?" So in that case we try to make it more for more people. With *Holding Pattern*, it wasn't just for the museum-goers, but it was for a broader number of people. But also, it's asking "how can you take a small budget and almost double your money?" You spend the money on your project but then you're also disseminating that value out to the people who get the products afterwards. So I think we all—Tobias, Dan and I—we really don't want to even categorize those projects as temporary projects because it's not the temporariness that's interesting; it's the

think we're also very interested in communicating ideas to a broad audience and so—because just as we talked about before how architecture can be more inclusive and more expansive—I think we're really interested in how you might convey complex ideas or even design ideas to a non-professional audience.

We have always had a lot of fun coming up with new techniques to explain our ideas to others, experts and everyday people alike. One thing that we really have explored a lot is narrative and how you might use storytelling as a way to convey design ideas and convey a process. I think you can see with a lot of our drawings that we have often tried to synthesize our research and observations into new spaces.

Part of it is really about speculation, too. It's not just about representing what's there. But in a lot of our projects, we have looked at who might be the users of tomorrow just to see and test the potential performance of a design idea.

D27: *So with the expertise workshop fresh in our minds, we are curious about the role that the charette process plays in your practice's design process. Do you often set up short rapid fire exercises in the beginning of a project as a means to generate maximum creative ground? If this exercise were in the beginning of the investigative phase of one of your projects, what would be your next steps? For us, we're wondering now that we're almost complete with this workshop what our next steps would be if we were to take this further.*

and another person does the other. We really feed off of each other and use that collaborative design session as a way to identify opportunities that we might develop.

What I was intending with the workshop was that we first thought expansively about the actors and I didn't want to put any limits on that. The next part was going on-site and doing detective work, investigating and trying to get information about practices of these actors on site, and learning more. And then the next step, which I think was really the most critical step, was coming up with a technique to represent these relations between the different actors on-site. And that has been very challenging for people because I think they think they have to show everything. But they don't. It's really just about seeing one or two things well about what's interesting in the site. My expectation is that by

“At Interboro, we're all interested in how you can build on the things that are there. So my hope with the workshop was that you would be able to see what was important to you there on-site and then use that understanding as a way to enrich the design process.”

GT: We don't call it “charette” but we will all sit down and just talk about what the possibilities are if we're starting a project, and then different people will draw or develop different pieces of it and then we come back together again and we explain what we think might be working and we talk about it again. It's very similar to the process which I had hoped for the workshop, which is that you think about a condition, everybody comes up with ideas, you test some of them, you look at them together and you say, “Okay, this works and this doesn't work,” and go back to the drawing board. So this is a kind of feedback loop, but a collaborative feedback loop where you all come together and evaluate ideas. We do that whenever we're working on a design project and I think it's harder for us these days because we have more projects, but we don't have a practice where one person does one project

the end of the workshop, people will say, “Wow, there's an opportunity to make something that we discovered stronger” or, “This totally doesn't work and that would be a place where we would try to rethink things.” So it was really the culmination of the workshop that would be the identification of opportunities of places and things that we would want to strengthen or things that we would want to change. And then that would be the starting point for developing the project. That was my intention. At Interboro, we're all interested in how you can build on the things that are there. So my hope with the workshop was that you would be able to see what was important to you there on-site and then use that understanding as a way to enrich the design process. 

NOVEMBER 4, 2013

Interview with:
sharon haar

D27: *What interested you most about Taubman College of Architecture and Urban Planning and what are you excited about working on here?*

SH: I really like the diversity of interests in both the faculty and the student body. I find that there are some areas of concentrated interest, but not only one; it's a big program. And I like the idea of a big program that has a lot of different things going on. I am really interested in how to solidify the nature of those interests without sequestering them. The institution has the resources to make those things happen so that they're not necessarily just pie in the sky ideas, but that there is a real spirit of experimentation at the school and testing things out. It's not a place where everything goes because I don't think "everything goes" is really experimentation, but it is a place where things can be tested in an iterative format to see what actually works.

D27: *Could you expand on the current state of the school and ideas for moving forward?*

SH: Of course you all know I have been here about five weeks, so it has been a short amount of time. I have been really using this semester, to be as present as I can in the architecture program, but at the same time not be too present. In other words, I am doing a lot of observing and I am trying to spend as much time with different people as possible: understanding what's going on and not make any sudden moves let's say. I feel very much a part of the school, but I also feel like I am an outsider. There is only a short window of opportunity to be looking from the outside in and that will probably be over by the time we've worked through reviews at the end of the semester. I am trying to keep that mental distance, even as I get to know people. The question though

was not that; the question was more specifically how I see—

D27: *—the school's strengths, weaknesses, and major goals for moving forward.*

SH: I think the strengths of the school are the things that I think are allied to my interests, as it turns out. One of the real strengths of the school—and something that we're really going to be focusing on—is how to grow the travel programs of the school, so that we're not only just traveling but we're actually building alliances around the travel. One of the things I talked about in my interviews in the spring was how globalization impacts architecture and I don't think globalization, like with experimentation, means "everything goes."

The other thing is, as we're building allegiances globally, I think we need to build allegiances internally. For instance—this is a faculty level, but I think it also affects students as well—the school has, in my mind, two broad strengths that come out of its history. One is it is an institution that has a history of making. It has faculty who make things and a history of turning out designers who design and who build practices and are very interested in material, form, and affect. It also is part of a very large research university, and increasingly is working towards understanding what research means in the context of architecture, urban design, and urban planning. This is manifested at least for the faculty through the two big grant programs of the college, research through making and research on the city. I'm really interested in how those two things come together and how the research productivity of one set of faculty and students and their interest in this area can be brought to in closer allegiance with the history or with the tradition of making that's a part of what has made the program historically strong.

Sharon Haar

is the current Chair of Architecture at the University of Michigan's Taubman College of Architecture and Urban Planning.

Her recent publications include: editing *Schools for Cities: Urban Strategies* (NEA/ Princeton Architectural Press, 2002), "At Home in Public" in *Embodied Utopias* (Routledge, 2002), "Location, Location, Location: Gender and the Archaeology of Urban Settlement" in the February 2002 issue of the *JAE*, and "Chicago's Search for an Architecture for Education" in *Architecture for Education: New School Designs from the Chicago Competition*. She is working on a book titled *City As Campus: Sites of Urban Education*. She is currently the Book Review Editor for the *Journal of Architectural Education*.

Sharon began her current tenure as Chair of the Architecture program in January of 2014. This interview was conducted in collaboration with Architectural Representative's Committee (ARC) in February of 2014.

D27: *Now that you've given us an introduction to how you see the school let's backtrack a bit. Could you maybe talk a little bit about your background both academically and professionally and how it's led to today. How you became interested in academic administration?*

SH: Unlike a lot of you, but like some of you, I did not pursue a higher education goal in architecture originally. My major in college was Science in Society. At some point I realized that what interested me in sciences were actually the things that interest me in architecture: how things go together. So I liked my biology textbooks, but I didn't in the end like the active running of the experiments. And as it turns out, I'm kind of that way a little bit with architecture as well. I do not enjoy professional practice because I like to think of things in a broader view and understand how they're going together.

To answer the question more directly, I think this is not a case where I suddenly realized I was

D27: *What you said about going to school not knowing if you wanted to be a practicing architect could resonate with many students here. Do you have any advice for students pursuing the profession, academia, or something else entirely?*

SH: I think one of the important things is to—even if you're not sure—make a serious attempt to become licensed. And I don't mean this because I think everyone should become professional and very much because I don't believe that the ultimate and only goal of a school of architecture is to produce practicing architects. I don't think that's the nature of school. However, it's really important for anyone graduating today to have a kind of flexibility and an ability to be hybrid, as well as to know what it is you want. You need to know what your own position is and not necessarily be inflexible with it, but know where you stand: not necessarily to start your own firm, but because the profession itself and what we do is so incredibly fluid today. Unlike

“However, it's really importantly for anyone graduating today to have a kind of flexibility and an ability to be hybrid, as well as to actually know what it is you want; to know what your own position is and not necessarily to be inflexible with it, but to know where you stand.”

interested in academic administration after having done something else for a long time. Even at the moment I was applying to architecture school I was interested in the institutional and disciplinary base of architecture. In a box somewhere in my garage, I have a copy of the essay I wrote when I applied to architecture schools. And at that time, I said I was not sure that my ultimate goal in going to architecture school was to become a practicing architect but, “please admit me anyway.” Further down I said was that I really was interested in the built environment and in constructing the way *(laughs)* in which the construction environment is made. So that seems a little bit weird. For an independent study project, I designed the curriculum for a school of architecture, landscape architecture, and planning. And I designed that building for my thesis. So I didn't become an administrator; I was already researching and thinking about formulating architecture programs while I was in one.

when I was graduating from school—and it's not just because of the economy—it is much more likely that you will move around from office to office or opportunity to opportunity very quickly because that's simply the way the world works today. So school is a really good time to really think, “Okay, what are my core values in architecture?” “What are the opportunities that are out there that get me this knowledge base?” I think it's being flexible, open, and not too rigid.

D27: *We've discussed a bit about your introduction to the school as well as your background in both teaching and administration. We have some questions specific to students. The first is: How do you view the role of the chair? What do you think people want or expect?*

SH: I don't believe I represent one group to another and I am not solely a problem solver. I don't

represent students to faculty; I don't represent the faculty to the dean; I don't represent the dean to the faculty, and vice versa. I don't like that kind of hierarchical way of looking at things.

I think that the role of the dean is really a very big picture. The dean is the person who represents the school outwardly, who negotiates for us, and who articulates the vision and mission. I think the role of the chair is less sort of big picture, but more bottom-up, more of the day-to-day, which is about: How do you accomplish these things? Again, I don't see myself as, "This is what people want to accomplish and it's my job to get that done." I don't think it's really that. I think, "What is the nature of our mission that comes more from the ground and from the day-to-day of how things work?" This is one of the things that interests me in institutions, the way in which a big picture mission gets enacted is in the day-to-day.

So you need to have a big picture and I do have big picture ideas, but you often end up often carrying that picture out in how you go about accomplishing little tasks, attending to issues. Part of it of course is working on developing the curriculum, but in order to develop the curriculum, you have to be very in tune with the pedagogy and the way in which people teach, their strengths. A lot of it is in how you admit the class. I always say to undergraduates applying to graduate schools, "It's not about the name of the school. It's about the match." You need to go to the school that's right for you and for the school, you're the right thing for them. And I think about that in how I work as well. Even in the day-to-day like, "There's a problem up in the studio. How do we solve it?" is trying to keep the bigger picture in mind. So the solution is not always perfect, but it always is towards a larger goal.

D27: *How do you see your interaction happening with students?*

SH: There are a couple of things. One is I am trying to spend as much of my Friday afternoons up in the studios as possible, either sitting in on reviews for an hour or so, which means the whole studio doesn't see me, but I'm in at least one place, in undergraduate studios, in graduate studios, a workshop, and so forth, changing every week. I do walk through studio, anyone should feel free to grab me if they see me up there just to talk. Studio is a much better environment to talk than in my office. For Ph.D. and M.S. students I think we need to find other formats: a lunch or something else where

we can get together, but I want it to happen in space in real time.

I do want to teach eventually but I don't think that happening probably until the spring of next year. I imagine that being a seminar of some kind, at least at first, perhaps eventually to a studio, I think I'd like to get my feet wet here in more of a seminar environment. I do hope to teach every year moving forward.

D27: *We have time for one more question before we open up to questions from the audience. How do you see architecture both as a profession and a discipline today? It's a very large question, I know. So if there's smaller items you want to parse out of that, a general trajectory, similarities or differences between academia and the profession, overlaps occurring, things that trouble or excite you?*

SH: Right. So (*pauses*) I don't think I find things troubling. I think there are a number of challenges out there that are going to shape both the academy and the profession in important ways. And I think a lot of this is already happening here. The challenges that the profession is facing are manifested in the academic environment. In some respects, I see the two moving closer together, although not I think in the way that most people have traditionally thought about it. The academy and the profession should not move together by the academy becoming more like a professional environment and becoming more of a training ground for the profession. I think it's the other way around. I think that the profession understands that a lot of what happens within the schools is really important to the future of the profession. And by that, I mean, again going back to the first thing I said about research and making, that we are in a knowledge economy and in a globalizing and urbanizing environment and the way in which I think the profession has the potential to grow is by recognizing the importance of research in the making.

So one of the things about architecture today is that I believe it's less and less simply about making buildings. It's more about capitalizing on collaboration—and we were talking about this earlier today—collaboration and interaction and the way in which technologies are transforming how we interact with one another in physical space and in virtual space. And I think that one of the things that's really great about the architecture program here is that this is one of the things that it's really

working on. So that the marketplace for what we do isn't the one that has the kind of traditional idea of what schools produce, which is people who go out and build buildings and hopefully those buildings manifest themselves as works of architecture.

I think it's all part of the same piece, knowing where you're situated, yet being open to opportunities is actually the way architecture firms are operating today, too. It's not just like, "Oh, we're here—in my case Chicago. We need to grow the firm. Where are buildings being built? Oh, they're being built in China. Let's go to China so we can get more commissions." I think that's a very short-sighted view of architecture. I think a more long-term view is: What is it we're producing and where is that useful? Or more specifically: Where are there problems or questions out there that actually need to be explored that architecture can contribute to in some way or another? And what new questions can architecture pose?

D27: *We'd like to now open it up to questions from the audience.*

Darby Morris: *You said you are spending time now observing how things are running and I am curious what you have been observing and what conclusions you've drawn from what you've seen?*

SH: So what's really interesting is that when you look at a school from the outside, you're looking a lot at the materials it delivers publicly. So it's website, its marketing literature, its reputation out there. And so initially, I assumed the program was more siloed than it actually is. There's actually a lot of collaboration already going on. I find out about a faculty member working with an engineering faculty member and employing his GSIs or GSRA's, engineers, architects, and so forth. I think that I see more of that actually going on than I really thought there was. And in fact, more students are being gainfully employed in the process and they're doing studios around those collaborations. I've turned up

little corners of that every week that I'm here. Like literally one a week practically. I think: How do we grow those opportunities even more? is what I am interested in.

Luis Orzoco: *As a student here also just having arrived, it's quick to see that sometimes the faculty can be easily identified in large camps. I have seen it's very easy for a student to get trapped within one of these bubbles. And I think that one of the greatest assets of an architectural education is that we are very specific generalists. How would you say that Michigan places itself compared to other architecture schools you know in regards to letting students be precise, selective, broad, prepared, or with a trajectory towards a very specific focus on architecture?*

SH: Well, I believe that students have to be better themselves at making sure that they get a broad perspective, and every so often saying, "You know, I'm not sure I'm good with this" or, "I don't know that I'm all that interested in the topic, but I have heard that this person teaches a great class" and actually just going outside of your comfort zone. That's one of the things about a larger school. I was educated in one of the smallest ones in the country, so there weren't a lot of options. There was certain things that school was really good at. And I'm a product of that education. Fortunately, it was a good fit for me.

There's a lot more or different opportunities here, and I think that is a strength of a large program. But, it behooves a student to act upon that size. I'm also okay with opening it up. One of the things though that I think we're going to be really careful about moving forward is to make it more possible for students to be able to take other kinds of classes. Now everything is an elective, but the schedule is really tight. And the building is even tighter. So how can we manipulate the physical spaces and the students' already tight schedule to make it possible for you to move around more and actually act on

"So that the marketplace for what we do isn't the one that has the kind of traditional idea of what schools produce, which is people who go out and build buildings and hopefully those buildings manifest themselves as works of architecture."

that opportunity? Michigan has one of the broadest range of possibilities.

And just finally, with the faculty: in my experience with the faculty, which is of course going to be different from a student's experience is, yeah, there are different cliques of faculty. But it's interesting that they do know one another broadly and when you see them outside of the teaching environment, there is a lot more interaction going on, at least in my experience. I hope to enlarge that.

Will Martin: *Early on in talking, you talked about reaching out internationally and I was wondering if you had any specific ideas about how the school might continue to or increasingly reach out regionally?*

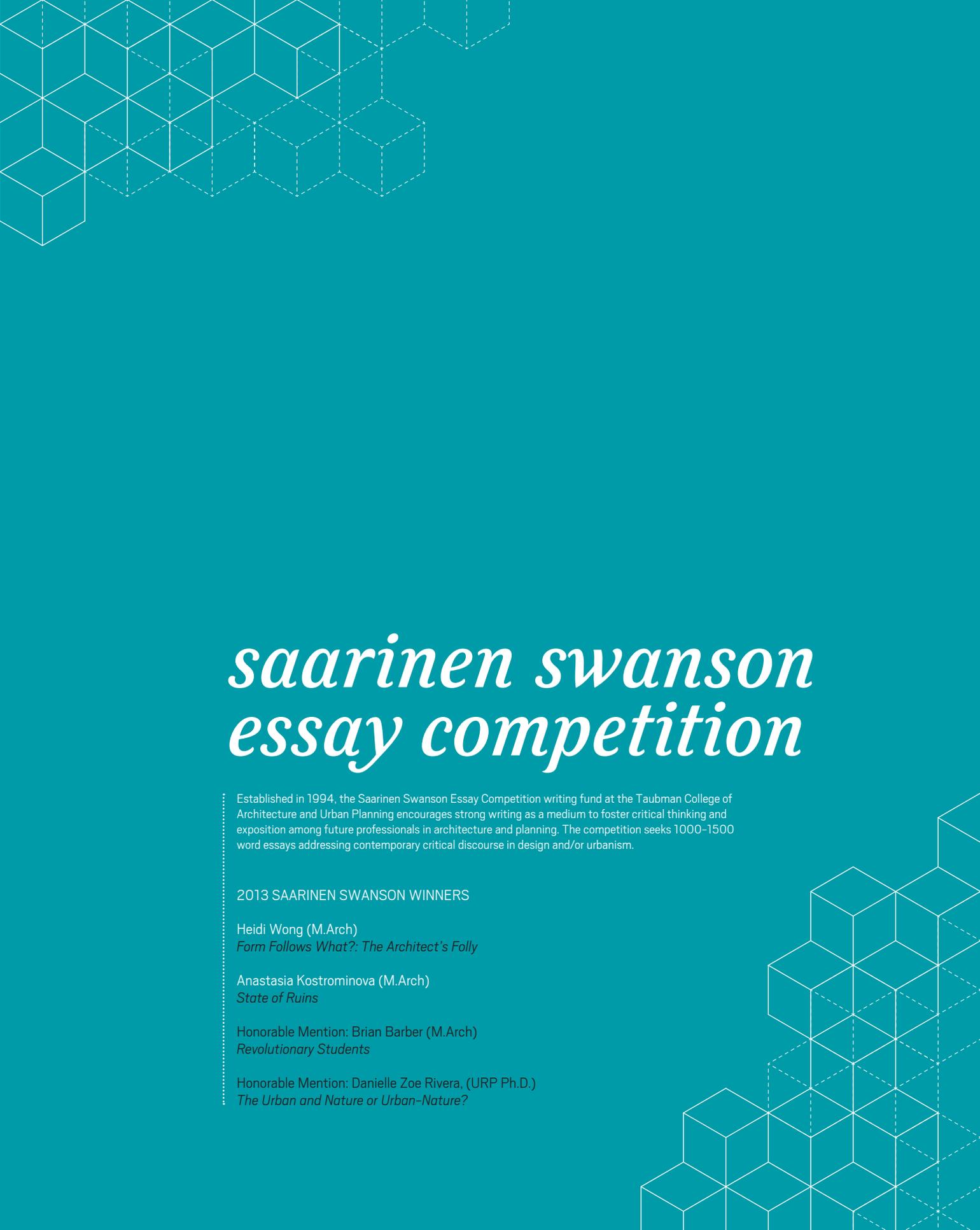
a little difficult to negotiate sometimes, but they can sometimes be worked out and hopefully they can. I think that in terms of Detroit or other areas around Ann Arbor—it doesn't only have to be Detroit—the notion that we should have outreach isn't a very productive thing. Like, "Wouldn't it be good if we reached out and put ourselves out there and did these things?" If it's not mission driven and directed by particular institutional relationships, then it's not productive for anyone and the communities it's least productive for are the communities that aren't Taubman College. What I want to avoid is, "Oh, I have an idea for what we should do in this place. Let's go find some people that we do it 'for'—oh no, I mean 'with'." I don't think that's a productive thing. It might be productive for us, but it's not

"If it's not mission driven and directed by particular institutional relationships, then it's not productive for anyone and the communities it's least productive for are the communities that aren't Taubman College."

SH: So there are a lot of different levels on which the school can reach out regionally from literally a regional scale, which in some respects falls under the purview of landscape and urban planning. But one thing is: Where can we interact more with those disciplines and bring architecture to those disciplinary discourses? So one thing would be the possibility of more collaborative studios. Those are

productive for communities. So it's really important that in opening up our very internal focus, and reaching beyond the space of our studios as some faculty are already doing, we do this with a mind towards building relationships over time. 

FEBRUARY 14, 2014



saarinen swanson essay competition

Established in 1994, the Saarinen Swanson Essay Competition writing fund at the Taubman College of Architecture and Urban Planning encourages strong writing as a medium to foster critical thinking and exposition among future professionals in architecture and planning. The competition seeks 1000-1500 word essays addressing contemporary critical discourse in design and/or urbanism.

2013 SAARINEN SWANSON WINNERS

Heidi Wong (M.Arch)
Form Follows What?: The Architect's Folly

Anastasia Kostrominova (M.Arch)
State of Ruins

Honorable Mention: Brian Barber (M.Arch)
Revolutionary Students

Honorable Mention: Danielle Zoe Rivera, (URP Ph.D.)
The Urban and Nature or Urban-Nature?

form follows what?: the architect's folly

HEIDI WONG

Form follows function was the mantra of early modernists. In their righteous dismissal of ornament as crime, they rejected traditional aesthetics in favor of a functional architecture. They advocated for an architecture detached from symbolic content and derived empirically and rationally, shaped by universal standards of beauty and the technological context of the time. Despite their lofty claims, “the actual commitment to the concept [was] not always an actual concern of the period . . . and while it is virtually axiomatic that program/function influences the organization of building, the attempts to render that relation explicit have for the most part been mixed.”¹ Several critics have pointed out that modernism was only functionalist in name, and that in reality, “the architect was (as he always is) far more intimately concerned with the physical embodiment of even more exacting fantasies.”² Throughout modernism and postmodernism, stylistic and formal concerns were prioritized over programmatic ones.³ The formal design for the Seattle Public Library by OMA was derived from analytical diagrams of its intended programs. Before there was form, there was intense scrutiny of the building’s intended functions. The Seattle Public Library can be understood as the exemplary architectural project of the last fifty years because of its successful adherence to the doctrine “form follows function,” but in such a way that addresses the nuances of program rather than generalizes it as a universal functional requirement

Although a critical component of architecture, the notion of program was hardly a part of the discourse

throughout modernism and post-modernism. Bernard Tschumi wrote:

What struck me early on was that most architects are unbelievably passive towards programs. They accept them in a completely uncritical way, dress them up with forms, and thereby miss major opportunities. I admit to having been very irritated vis-à-vis the prevalent ideologies of the seventies, whether the modernist “form follows form” dictum or the subsequent “form follows historical allusion” of architectural postmodernism.⁴

In the Seattle Public Library, OMA successfully produced a reciprocal relationship between form and program, in which the program helped to drive the form, and the form consequently drove the program. By abstracting the project through diagrams to produce the design, “this graphical substantiation render[ed] program malleable, susceptible to architectural forms of manipulation, such that the overlap, the fold, and compression become programmatic fold, programmatic overlap, and programmatic compression.”⁵ Focus was directed to the relationships and interactions of the parts, and form emerged as a consequence of this.

OMA’s exploration of program in his famous Downtown Athletic Club provides an interesting contrast to the Seattle Public Library. In *Life in the Metropolis*, Rem Koolhaas discussed how the program in the athletic club generated a very unique condition in the way that new relationships and situations were created through the peculiar

1 McMorrough, John. “Notes on the Adaptive Re-Use of Program.” *Praxis: Journal of Writing and Building*, Issue 8: Reprogramming (2006): 103-110.

2 Rowe, Colin. “Introduction.” In *Five Architects: Eisenman, Graves, Gwathmey, Hejduk, Meier*. New York: Oxford University Press, 1975. 3-7.

3 Tschumi, Bernard. “Spaces and Events.” In *Architecture and Disjunction*. Cambridge, Mass.: MIT Press, 1994. 139-152.

4 Tschumi, Bernard, and Rem Koolhaas. “2 Architects, 10 Questions on Program.” *Praxis: Journal of Writing and Building*, Issue 8: Reprogramming (2006): 6-15. 9.

5 McMorrough. “Notes on the Adaptive Re-Use of Program.” 108.

mix of programs. This is especially evident on the ninth floor, where the placement of the locker room, a boxing ring, and an oyster bar, left one “eating oysters with boxing gloves, naked on the ninth floor—such is the plot of this floor—the twentieth century in action.”⁶ A similar condition is set up in the Seattle Public Library, where various programs overlap and generate new conditions. After defining the specific programs and designing individual platforms to house these activities, spaces for generic program, such as open reading areas, were then placed in between via a ramp. This design compartmentalized the space into specific spaces, but also created flexibility and set up conditions for cross-pollination of activity in the spaces between.⁷ This exploration of program with surreal connections can be traced back to Koolhaas’ embrace of ordered chaos in *Life in the Metropolis*, in which he saw in New York a resultant congestion from which unimagined situations emerged. Both the Downtown Athletic Club and the Seattle Public Library embody Koolhaas’ desire to represent a metropolitan condition within architecture, where unconventional proximities and relationships set up conditions for interesting program.

he was out to cure the disease of modern cities.”⁹ Decorum, then, was not important to such modern architects as Mies van der Rohe, who perceived the function of a building as ephemeral.¹⁰ In contrast, OMA prioritized its focus on the various programs it sought to accommodate from the start of the conceptualization of the project. Before any design was done, OMA committed a substantial amount of time to research the role of the library in the modern day and position the Seattle Public Library within this discourse. By revisiting and ultimately rejecting the traditional flat organization of libraries because of its failure to efficiently accommodate growing and shrinking collections overtime, OMA sought to better address the evolved needs of the modern library by arranging the collection in a continuous ribbon running in a multi-story spiral.¹¹ OMA also recognized the new social role of the modern library and sought to address these new responsibilities. In contrast to the generalization of function in modernism and the insensitive packaging of different programs into univalent forms, the Seattle Public Library was highly sensitive to the functional roles of the building from the start. More than that, it questioned the broader role of the library

“In contrast to the generalization of function in modernism and the insensitive packaging of different programs into univalent forms, the Seattle Public Library was highly sensitive to the functional roles of the building from the start. More than that, it questioned the broader role of the library . . .”

The derivation of the form through diagrams of the building’s programmatic aspirations represents a true departure from the univalent forms of early modernism. In *The Death of Modern Architecture*, Charles Jencks partially attributed the failure of modern architecture to its reverence of univalent form, which had “become fetishized to the point where it overwhelms all other concerns.”⁸ Jencks criticized the undiscerning use of reductive boxy forms that were born out of the notion that such a reduced style was both rational and universal. He remarked, “that no one asked to live in a factory did not occur to the doctor-modern-architect, because

at a larger scale and its relationship to evolving technology. John McMorrough wrote, “when the needs of the user can no longer be accommodated over time, the building is rendered obsolete.”¹² OMA avoided this path towards programmatic failure by designing the library so that it anticipated evolving needs.

The significance of the Seattle Public Library can be understood in the terms that Colin Rowe uses in his “Introduction” to *Five Architects*, in which he questioned the original ambitions of modern architecture. Rowe argued that modern architecture’s new embrace of empirical facts and supposed

6 Rem Koolhaas, “Life in the Metropolis’ or ‘The Culture of Congestion” *Architectural Design* 47, 5 (August 1977), 319–325.

7 OMA/LMN, “Seattle Public Library Proposal.” The Seattle Public Library. <http://www.slp.org> (accessed March 29, 2013).

8 Jencks, Charles. “The Death of Modern Architecture.” In *The Language of Post-modern Architecture*. New York: Rizzoli, 1977. 15.

9 *Ibid.*, 31.

10 *Ibid.*, 15.

11 Levene, Richard C., Fernando Cecilia, and Rem Koolhaas. *OMA/Rem Koolhaas: 1996/2007*. Madrid: El Croquis, 2007.

12 McMorrough, “Notes on the Adaptive Re-Use of Program.” 107.

detachment from symbolic content served as a mere disguise for architects to explore forms, what Rowe termed the “physique-flesh,” without critically engaging meaning, which he termed “morale-word.” Rowe believed that the morale and physique

and was thus vindicated from responsibility. Though Rowe may be accurate in that regard, this raises larger questions about whether architecture needs to be (or even *can* be) fully justified by reasons detached from one’s authorship.

“The Seattle Public Library serves as a prime example of Rowe’s speculation that modern architectural theory has less to do with the making of buildings as it does with relieving the architect of feelings of guilt and responsibility for his decisions.”

of modern architecture has never, and will never, occur together. I believe that the Seattle Public Library comes pretty close. Although Koolhaas admitted that the sequence of diagramming was necessitated by a need for a linear, logical process to present to a Board of Trustees, and certain diagrams were actually drawings that came after the fact,¹² the level of analysis spent parsing out the morale before making decisions about the physique merits recognition.

Despite its logical progression, it would be hard to argue that the physique was derived purely from the morale. The Seattle Public Library serves as a prime example of Rowe’s speculation that modern architectural theory has less to do with the making of buildings as it does with relieving the architect of feelings of guilt and responsibility for his decisions. By excessively diagramming all of the considerations in the project, Koolhaas was able to claim that the ultimate design was the pure product of its needs. When the design was unveiled, critics of the building saw it as a product of OMA’s whim and ego, rather than an engagement of the site. By tracing design decisions to programmatic needs, however, it was easy to defend the building’s integrity and make the claim that the entire design was created from addressing the needs of the librarians and the public.¹³ Like modernist architects who claimed that their work were a pure product of external events of an age, and disguising what is likely a symbolic work colored with the architect’s individuality, Koolhaas justified the physique of the library through heavy diagramming of its morale

Similar to the presentation of the library in the form of programmatic diagrams, FOA, the architects of the Yokohama Port Terminal, famously communicated their design to the client with an image of the Hokusai Wave. Questions were raised about the merits of this rationalization, and whether it was too reductive or an effective means of communication. Despite Koolhaas’ decision to rationalize every formal move, perhaps out of necessity to win the commission, the design embodies what Rowe proposed to be the most realistic solution, by adhering to the physique and relegating the morale to “little more than a constellation of escapist myths.”¹⁴

In sum, the process through which the design of the Seattle Public Library came to fruition and its ultimate delivery embodies the successes and ideals that modernist architecture celebrated but failed to achieve. McMorrough wrote, “Architecture might have promised too much . . . With the twin impulses of technical inevitability and social contract, architectural Modernism had come to represent a tangled web of motivations that were held simultaneously as style, politics, and zeitgeist.”¹⁵ In designing the Seattle Public Library, OMA untangles this complicated web by revisiting one of the basic motivations of modernism—function—and prioritizing its nuanced needs to drive all subsequent decisions. 

¹² Tschumi. “Spaces and Events.” 139–152.

¹³ Prince-Ramus, Joshua. “Joshua Prince-Ramus: Behind the design of Seattle’s library.” Ted.com. http://www.ted.com/talks/joshua_prince_ramus_on_seattle_s_library (accessed March 29, 2013).

¹⁴ Rowe. “Introduction.” 6.

¹⁵ McMorrough, John. “Ru(m)inations: The Haunts of Contemporary Architecture.” *Perspecta: The Yale Architectural Journal*. 40: Monster (2008): 164–169.

State of ruins

ANASTASIA KOSTROMINOVA

The struggle is an accepted trope within the discipline of architecture. Exemplified by Ayn Rand's character of Howard Roark, the righteous architect who virtuously fights for design integrity in the face of materialistic developers, the ideal architect is the humane and social artist who takes upon himself the heavy responsibility of pursuing art in the face of commerce. While a noble pursuit, architects are currently losing this battle; refusing to forsake idealist notions, architects have acquiesced to being undermined. The Museum of Modern Art's recent announcement that it will demolish the adjacent Folk Art Museum, a cherished and innovative work of architecture by Tod Williams Billie Tsien

halted, leaving behind a sprawling landscape of vacancy and ruin. Facing the challenges of a struggling auto industry, a population exodus to the suburbs, and a lack of effective government leadership, today Detroit has few financial resources available to dedicate to the preservation of its wealth of historic architecture. The historic architecture roster includes over one hundred historic districts and 15,000 historic buildings,² with more being added on a regular basis. From of this context of limited resources, aggressive demolition has emerged as the dominant method of solving the problem of historic buildings that have degraded to the point of being uninhabitable, in other words, ruins.

"The time has come to stop being undermined and become assertive about our profession's role in the built environment by extending our authority to the building once it has left the drawing board and been realized within the context of the city.

Architects, demonstrates the frailty of architecture in the face of the capitalist market. Instead of incorporating the unique vertical exhibit spaces of the Folk Art Museum—which is only 12 years old—as an extension of their own galleries, MoMA has chosen to raze the structure in order to make way for a lucrative new development. A joint venture with the international developer Hines, the new 82-story tower will take full advantage of the soaring real estate prices in Manhattan.¹

Detroit serves as a more venerable example of the dangers of our current capitalist driven building industry. Most of Detroit's historic architecture was constructed when the economy was booming in the late 1800s and early 1900s. Real estate was an expression of wealth, and construction soared without limit or consideration for the future. When the economy burst in the mid 1900s, development

In our current developer-driven building industry,³ do architects have a responsibility for the preservation of the built environment? This question is not only pertinent to the field of preservation, but to the future of architecture. Examining how yesterday's ruins are perceived today reveals society's perceptions about the value that architecture holds after it has ceased to fulfill its functional role as shelter. These attitudes about the value of historical architecture also reveal the way contemporary buildings will be addressed in the future. If we do not create architecture that has value beyond function, or envision viable ways to preserve architecture once it ceases to be inhabitable; then, architecture is in great danger of losing permanence, one of its most influential qualities.

In the dominant teaching model found in

¹ Pogrebin, Robin. "12 Year Old Building at MoMa is Doomed." *The New York Times*, April 10, 2013, sec. Art & Design. <http://www.nytimes.com> (accessed April 28, 1013).

² Jennifer Ross (Detroit Historic District Commission Employee) in discussion with the author, February 2013.

³ In this essay, the "Building Industry" encompasses all of the trades involved in the financing, design, and construction of buildings such as Real Estate Development, Architecture, Engineering, Construction, etc.

American architecture schools, designs are created, critiqued, reworked, presented, and consumed entirely by the academic community. Yet the reality is that architecture leaves the hands of the designer as soon as the building construction is complete. After the closeout materials are submitted to the owner, the building's fate rests with other disciplines: developers, government officials, preservationists, and occupants, likely disconnected and unfamiliar with the discipline of architecture.

How then, do we reclaim our stake in the architecture after construction? Can we control how the building will be perceived through the design? Can we inspire the public, through design, to develop a personal connection to our work, thus creating a league of citizens who will be dedicated to championing the preservation of the building should it encounter hard times? Can we gain this control through actual interaction with the community during the design process and if so, should we be teaching students how to navigate the community based design process instead of encouraging them to spend the entirety of their professional education developing abstract ideas unhindered by the realities of the building industry.

I propose two approaches that architects can take to reclaim our stake in the fate of the building:

- 1: Advance—reassert that architecture has value beyond function through the imposition of symbolic meaning.
- 2: Retreat—develop preservation techniques that capture the memory of a building while removing it from the threatening political environment of the city.

The imposition of a symbolic meaning to an object is a broad discussion that extends beyond the realm of architecture. Looking at this larger discussion can help the architect understand how the building can take on a symbolic role after it is realized and become a visual representation of issues of economy, race, equality, and politics among many others.

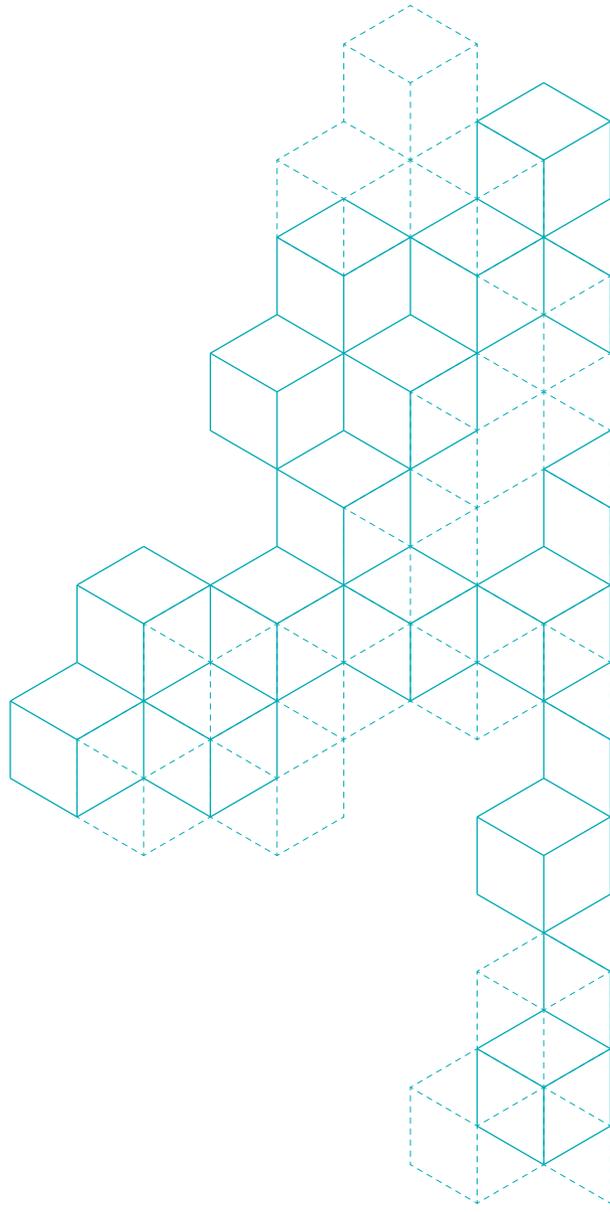
The 2005 exhibition *Making Things Public*, curated by Bruno Latour and Peter Weibel investigates the ontological shift in contemporary culture where objects are no longer understood as an objective fact or perceived independently of the context in which they were produced and in which they exist. As Latour famously states, “matters of fact have become matters of concern.”⁴ the object has transformed into a thing whose meaning is greater

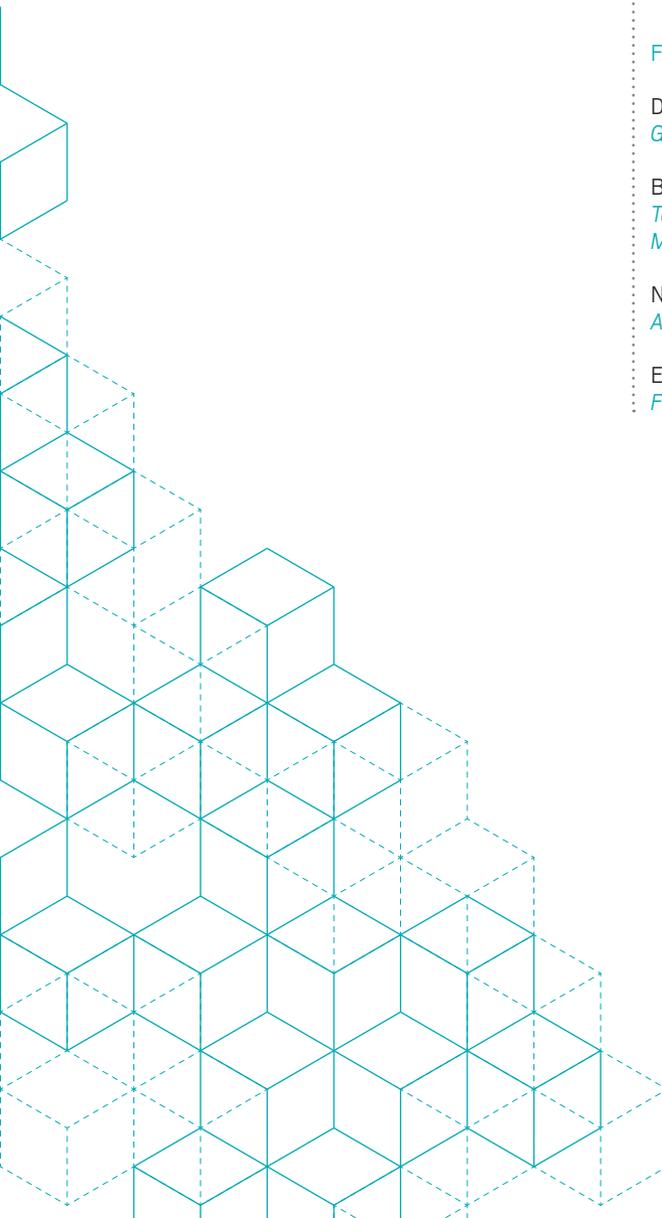
than merely the sum of its parts. The thing; the architectural ruin; the contemporary building; the Folk Art Museum, does not stand independently in the political sphere—its greatest value lies not in the quality of its construction, nor the novelty of its design, nor the beautiful patina that the brick has acquired over the course of one hundred years, but rather in its capacity to be a visual representation of the conflicting values in the debate about preservation. Once the building possesses this value of symbolic representation, demolishing it becomes much more contested and architecture acquires the power of resistance.

The alternative approach to advancing: the retreat, acknowledges that traditional preservation is no longer a viable approach in many of today's built environments, for example Detroit, where ruins symbolize abandonment and are seen as a threat to public safety. The retreat seeks alternative methods of preserving the memory of architecture by removing it from the threatening context of the built environment. Archivist approaches such as making latex casts of buildings document the building's existence and allow for future reconstruction of the building. Although the building is still demolished in this approach, its disappearance does not have to be permanent. Should it be decided later that the building holds cultural value, the archive provides a template for its reconstruction.

What is the role that architects have in the built environment? Are architects the service professionals on the periphery of the building industry? Are architects struggling artists that seek creative ways to sneak good design into the relentlessly cost-based model for development? As buildings, which are both the product of architect's labors and the vehicle of architect's legacy, face demolition, are there approaches that architects can take to ensure that buildings do not become forever lost? Whether it is nobler for the profession to take arms against a sea of troubles: fiscal bankruptcy, vandalism, abandonment and the relentless natural destruction that brick and mortar are heir to, or to relinquish authority over this built environment, taking souvenirs of architecture out of the politicized environment of the city and putting them to rest within the protective halls of the museum? The time has come to stop being undermined and become assertive about the profession's role in the built environment by extending architect's authority to the building once it has left the drawing board and been realized within the context of the city. 

⁴ Bruno Latour, “From Realpolitik to Dingpolitik,” in *Making Things Public*, (Cambridge, MA: The MIT Press, 2005), 31.





thesis part two

The product of a year-long investigation, thesis occurs in the final semester of the graduate sequence. A self-directed creative project, students engage in the process of research, critique, and synthesis to create works that engage with architectural discourse. Capping the studio is a review by outside critics and a weeklong public exhibition of the work.

FEATURED PROJECTS: PART TWO

Dan McTavish

Greetings from Nebraska: The Form of the Territory

Brittany Nicole Gacsy

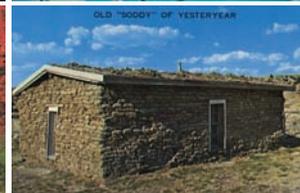
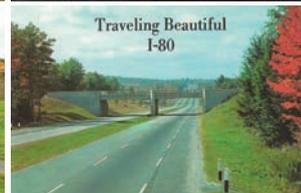
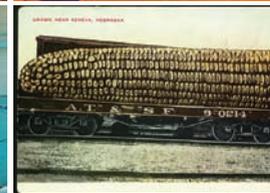
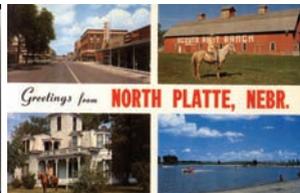
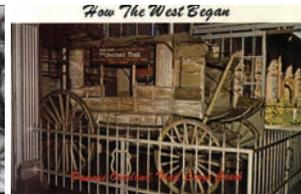
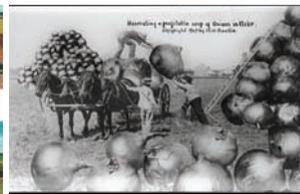
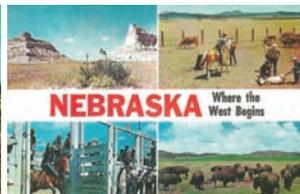
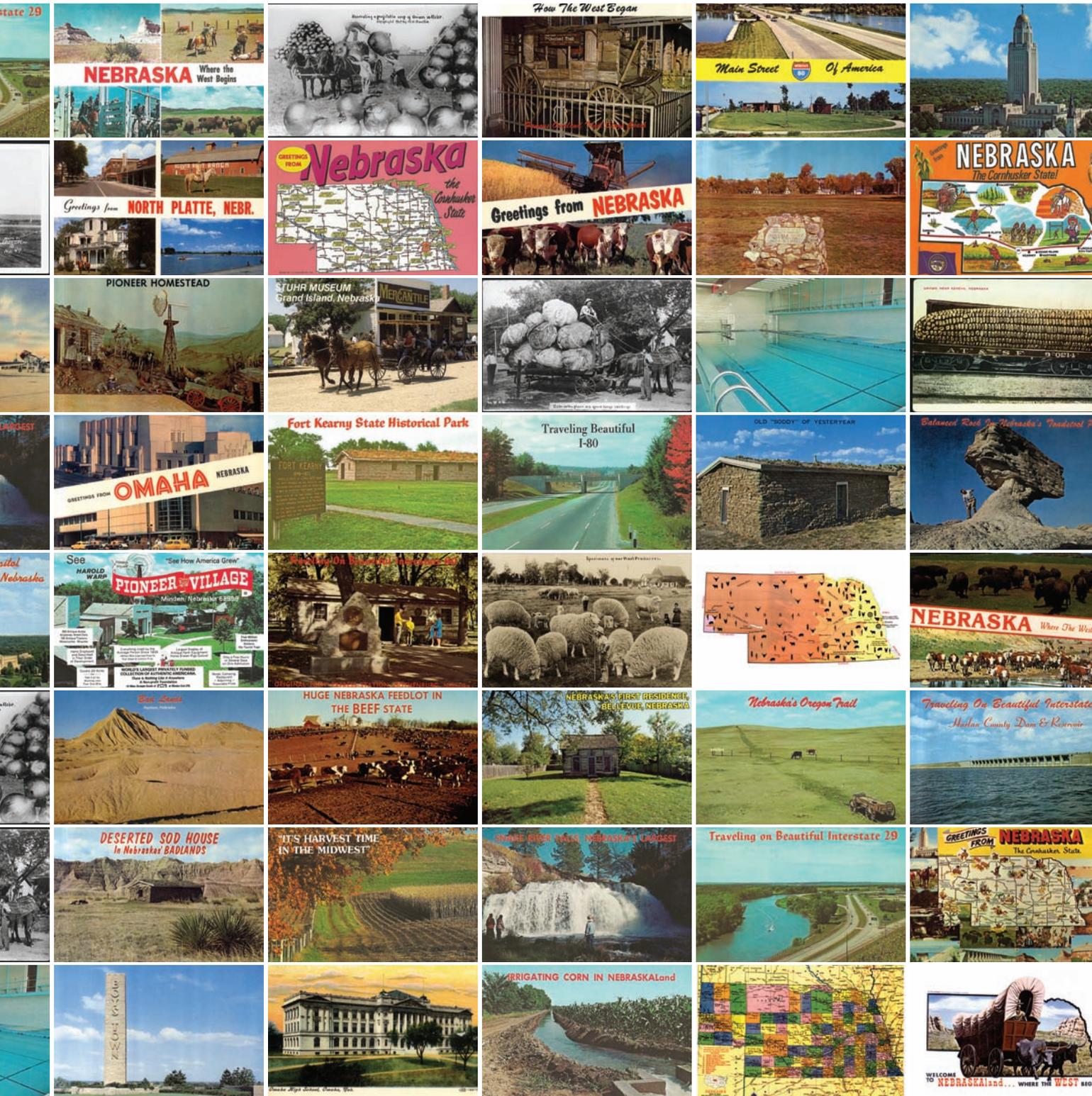
Tapline: Environmental Control Systems for Artificial Extensions of Localized Micro-Climates

Nick Safley

Animal House

Emily Kutil

Flying the Coop: A Zoo for Belle Isle



greetings from nebraska: *the form of the territory*

Greetings from Nebraska explores the contradictions between the abstract space of Nebraska and the differential, historical, and everyday spaces within the state.

The United States Land Ordinance of 1785 organized the land into a system of square townships and one hundred sixty acre tracts of privately owned and cultivated land with the intention of organizing social and political utility. The figure of the yeoman farmer embodied the values of agrarian Jeffersonianism; combining the right to property, individualism, and republican values. Today, high-yield mechanized agriculture is synonymous with farm consolidation, depopulating towns, and the reframing of subjectivities from farmers to operators and urban dwellers. In 1971, Secretary of Agriculture Earl Butz infamously urged farmers to plant commodity crops “from fencerow to fencerow.”¹ The “Get Big or Get Out” mentality of land consolidation further equates the space of mid-America, in particular the Great Plains, with a productive landscape. Fixed in our spatial imaginaries, this is a homogenizing space that is simultaneously totalizing and fragmented; a space that one flies over or travels through.

Against hegemonic views of the territory as abstract—empty, quantitative, innocent, or in some way fixed—*Greetings from Nebraska* hypothesizes that the image of the United States territory is in constant reformation, whether consciously or not, or whether in the public’s best interest or not. Through the project, it is asserted, that architecture, as a both a material and representational practice, has a role in projecting “desirable conditions and

opportunities hitherto thought impossible.”² The thesis proposes differential forms of settling and imagining the territory through the case of Nebraska—the state most heavily settled by the 1862 Homestead Act.

The contradictions between the abstract space of Nebraska and the differential, historical, and everyday spaces in the state are articulated through the acts of *Situate*, *Wander*, *Collect*, *Intervene*, and *Arrange*. New multivalent readings of the territory emerge through the juxtaposition of specific past, present, and future spatial conditions within the territory made manifest through historical postcards, quantitative cartography, travel documentation, and discrete architectural projects.

SITUATE

*An act of siting, or locating. The establishment of context, and to bring into relation.*³

When flying over the Great Plains, one of its most distinct and recognizable features is the relentless continental grid. The establishment of this grid was envisioned by Thomas Jefferson and implemented through the Land Ordinance Act of 1785, with the idea of establishing “an agrarian equalitarian society, reflecting the Jeffersonian social ideal of a democracy of small independent landowners.”⁴ The yeoman farmer, for Jefferson, embodied the values of his agrarianism defined through private land ownership, individualism, and republicanism. It was the yeoman farmer who would come to occupy this newly surveyed land.⁵

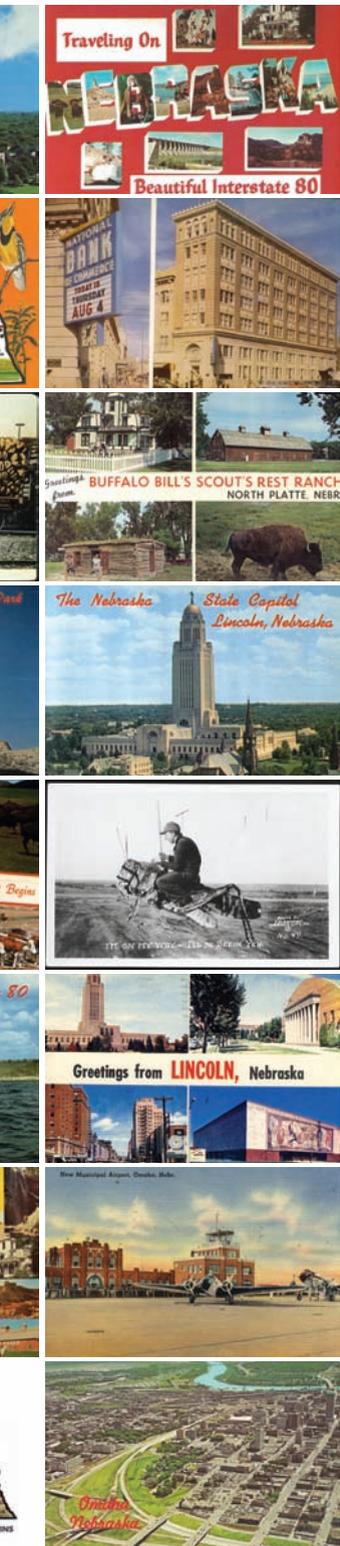
2 Cedric Price, “Potteries Thinkbelt,” *New Society*, 2 June 1966, reprinted in Samantha Hardingham and Kester Rattenbury, *Supercrit #1: Cedric Price Potteries Thinkbelt*, (Oxon: Routledge, 2007) pp. 14–17.

3 “situate, v.,” OED Online, March 2013, Oxford University Press.

4 Dolores Hayden, *Seven American Utopias: The Architecture of Communitarian Socialism, 1790–1975* (Cambridge: The MIT Press, 1981) pp. 118.

5 Yeoman is a man holding a small landed estate; a freeholder under the rank of a gentleman, hence vaguely, a commoner or countryman of respectable standing, esp. one who cultivates his own land. “yeoman, n.,” OED Online, September 2013, Oxford University.

1 Earl Lauer Butz, the 18th United States Secretary of Agriculture January 21, 1971–October 4, 1976.





ABOVE: aerial view of Nebraska north of Devere

ABOVE RIGHT: "The John Curry house, near West Union, Custer County, Nebraska, 1886" also known as *Nebraska Gothic*, Solomon D. Butcher

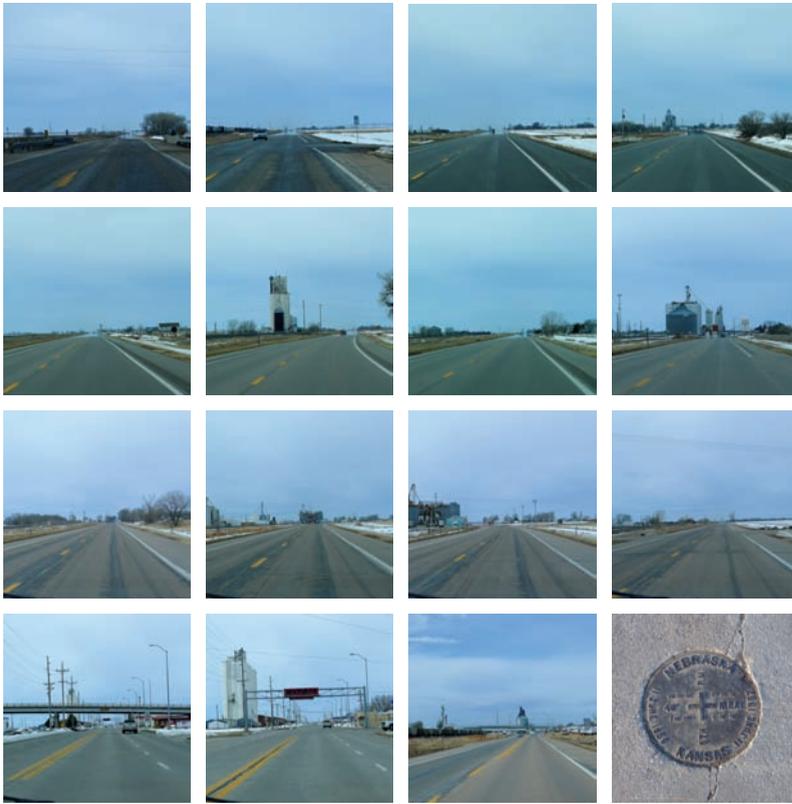
RIGHT: Grant Wood, American, 1891–1942, *American Gothic*, 1930, Oil on Beaver Board, 78 x 65.3 cm

OPPOSITE TOP: *Wander*

OPPOSITE BOTTOM: Gunter's Chain and the Rectangular Survey

The Land Ordinance Act divided the land into six by six mile townships, with each township being made up of thirty-six one square mile sections. The measurement of the land corresponded to the tool use for surveying the land prior to settlement. Gunter's Chain, a system made up of chains and links, allowed for the systematization of the land, subdividing it into purchasable plots, which in turn could be broken down further into two and a half acre plots, the average area that one person could harvest in one day unaided. Seventy-seven years after the beginning of the systematization of the land through the rectangular grid of the Land Ordinance Act, the 1862 Homestead Act made available a free quarter section of the grid—one hundred sixty acres—to anyone willing to cultivate and make improvements to the land for five years. The Homestead Act was directly influenced by the Jeffersonian idea of a society made up of yeoman farmers.

Over forty-five percent of Nebraska's land was given to would-be farmers through the Homestead Act, the largest proportion of any state. Nebraska was also the location of the first Homestead application by Daniel Freeman on January 1st, 1863. Subsequent settlement of Nebraska primarily followed the Platte River valley, tracing the path of the Oregon and Mormon Trails and later, the Union Pacific Railroad. The photographs of Solomon D. Butcher depict these new settlers establishing themselves on the land. Butcher's photograph "The John Curry house, near West Union, Custer County, Nebraska, 1886," also known as *Nebraska Gothic*, shows the new ideal Jeffersonian yeoman farmers establishing their homestead. *Nebraska Gothic*, not surprisingly, was the inspiration for Grant Wood's iconic painting *American Gothic*, solidifying the quintessential image of the territory and its inhabitants; one of the struggling yeoman farmer and the ideals which that image embodies.



WANDER

An act of establishing a lived experience of a space which begins to break down the space as purely abstract and empty.⁶

When working on the territory from afar, there is a constant search for a knowable and relatable dimension. It is only through inserting oneself in Nebraska that the vastness, scale, and flatness of the state are really experienced. Moving west, these initial experiences are contrasted by the extreme rolling topography as one progresses towards the Rocky Mountains. More than travel, which implies directionality—to travel to a point or to travel through a space—the act of *Wander* implicates simply being within a space; it is inherently non-directional.

While in Nebraska, there was no itinerary; at times the trip strayed into Kansas and Iowa. The only destination was one stop at the origin point of the Sixth Principle Survey. Under a manhole cover in the middle of a dirt road at the border between Nebraska and Kansas lays the stone that marks the point from which the grid covering Nebraska and Kansas is established. The nine hundred images, taken over nine hundred miles, over a seven day period, document *Wander*, and become content and material for future intervention.

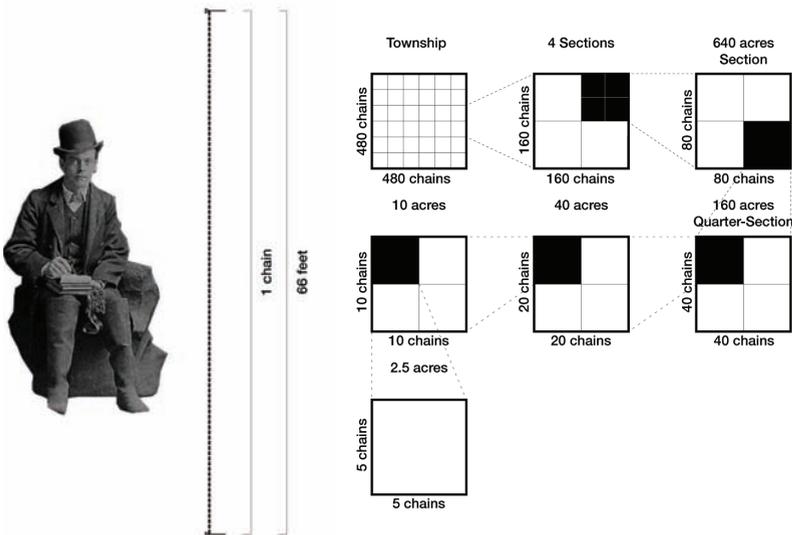
COLLECT

An act of assembling together from which one can infer or deduce.⁷

Collect assembles over one hundred postcards of Nebraska, establishing the representational dimension of the territory. The postcard presents another form of production in the territory outside of the dominance of corn. They capture the production of an image or imaginary of Nebraska. This imaginary represents the multiplicities of “Nebraska” outside of the purely quantitative realm of corn production, and through these images, new ways of reading the territory emerge. Themes of settling, the Pioneer, the frontier, pride in crop production, and methods of production which were pioneered in the state due to its unique climatic, geographic, and geologic conditions become clear. The major organizational spines of Interstate 80 as well as the Lincoln Highway, today US-30, are also constantly present. The material from *Collect* becomes source material for the production of new images of the territory.

6 “wander, v.,” OED Online. March 2013.

7 “To collect” means primarily “to assemble, to gather together,” but its second meaning, and one employed by the epistemologist John Locke, is to infer or deduce.” By putting single or unique entities -objects, memories, anecdotes, stories -into a single collection, the collector makes a way of understanding. Assembly thus meaning makes.” Barbara M. Benedict, ‘Collecting,’ *Curiosity and Method: Ten Years of Cabinet Magazine* (Brooklyn, Cabinet Books, 2012) pp. 485.



MIDDLE: Overall Intervention Map, Nebraska

BOTTOM: Nebraska Grain Elevators and Corn Production

INTERVENE

To come in as something extraneous, in the course of some action, state of things, etc.

*Of a thing: To come in or between so as to affect, modify, or prevent a result, action, etc. To be placed or situated locally between other things; to come or lie between.*⁸

The act of *Intervene* includes three spatial projects which are situated within and respond to the situation of Nebraska, while simultaneously challenging those situations and contexts to project potential future conditions. The interventions are characterized by three specific actions: *Frame, Form, and Figure*.

These projects are characterized by three discrete spatial strategies—*Figure, Frame, and Form*—which reference existing conditions within the state while challenging the status quo and projecting new desires.

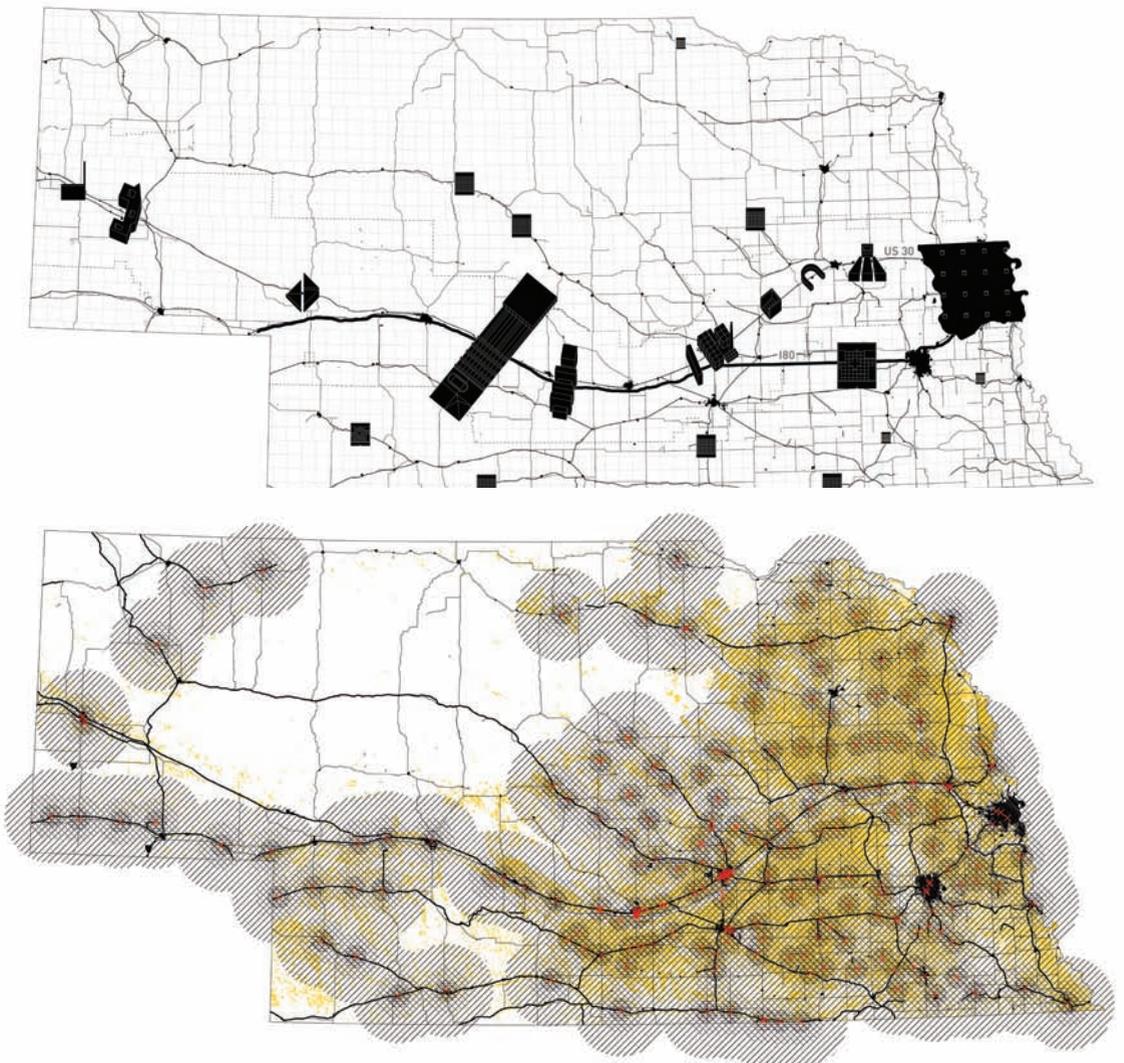
8 "intervene, v.". OED Online. March 2013. Oxford University Press.

FRAME / A WALL

*An act of giving specific shape or expression to something. The act through which a space is claimed and set apart from another space.*⁹

The intervention is situated in and frames, both conceptually and literally, the consolidating space of corn production in Nebraska. This consolidation of farms is not a phenomenon unique to Nebraska. Over time agricultural practice has experienced a scaling up of production. The size of corn yields and the price received for those yields have increased to meet the expanding demand of domestic and foreign markets. These new demands have prompted an increase in mechanization and new technologies of management, all of which increase the cost of. The paradox of this is obvious: farmers implement new technologies and techniques to chase the fleeting profits promised by new demands, while in fact reducing

9 "frame, v.". OED Online. March 2013. Oxford University Press.



TOP LEFT: Saline County, Nebraska:
 1. Dwellings + Parking
 2. Combine Mfg + Storage
 3. Race Track
 4. Grain Marketing
 5. Test Track
 6. Church
 7. Community Center
 8. Irrigation Mfg
 9. School
 10. Big Box
 11. Logistics Center
 12. Rail

TOP RIGHT:
 FRAME View From Dwelling
 Towards Consolidated Cropscape

BOTTOM LEFT:
 FRAME The Wall
 Saline County, Nebraska

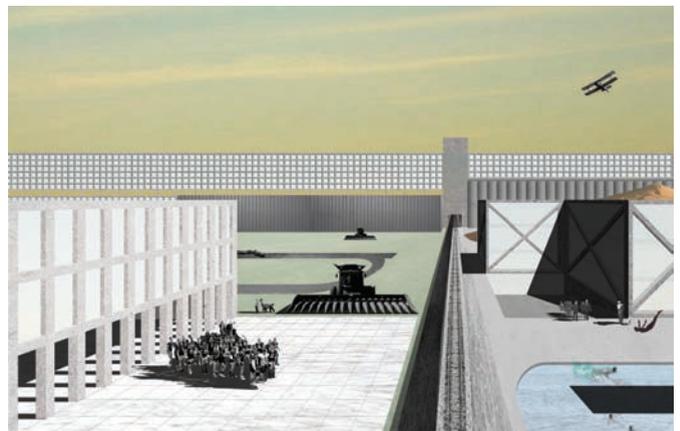
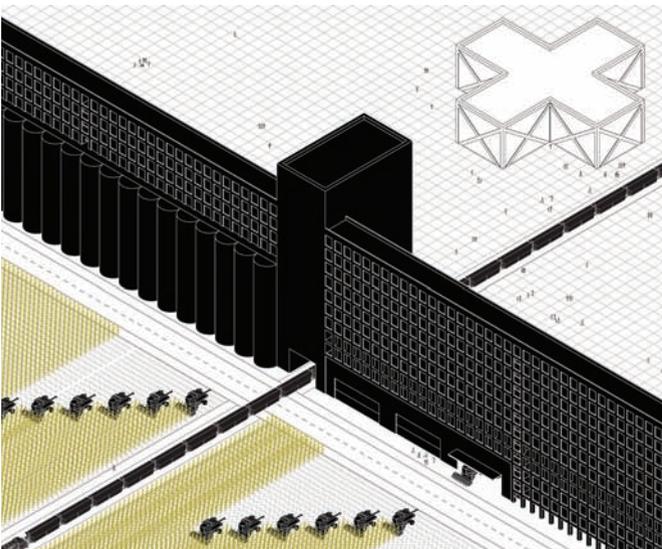
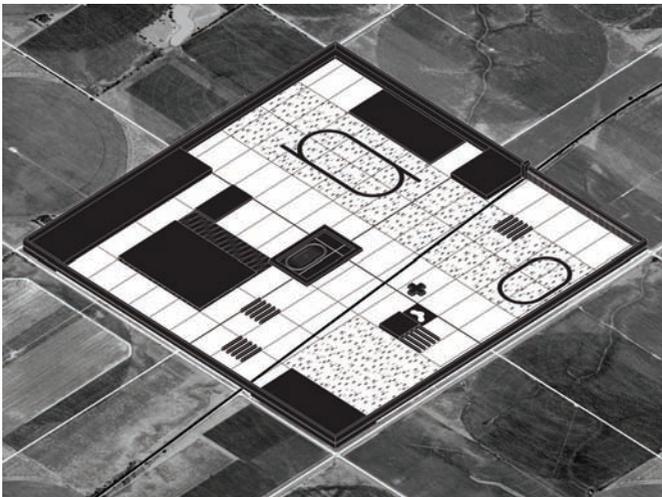
BOTTOM RIGHT:
 FRAME Courtyard View
 Saline County, Nebraska

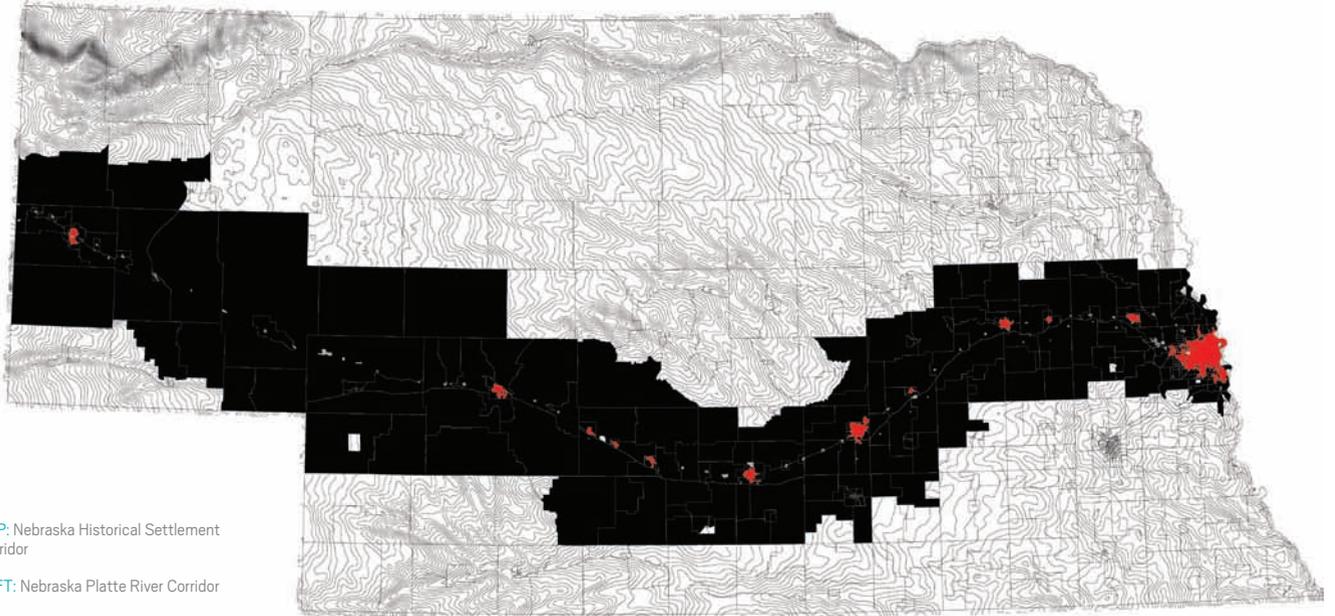
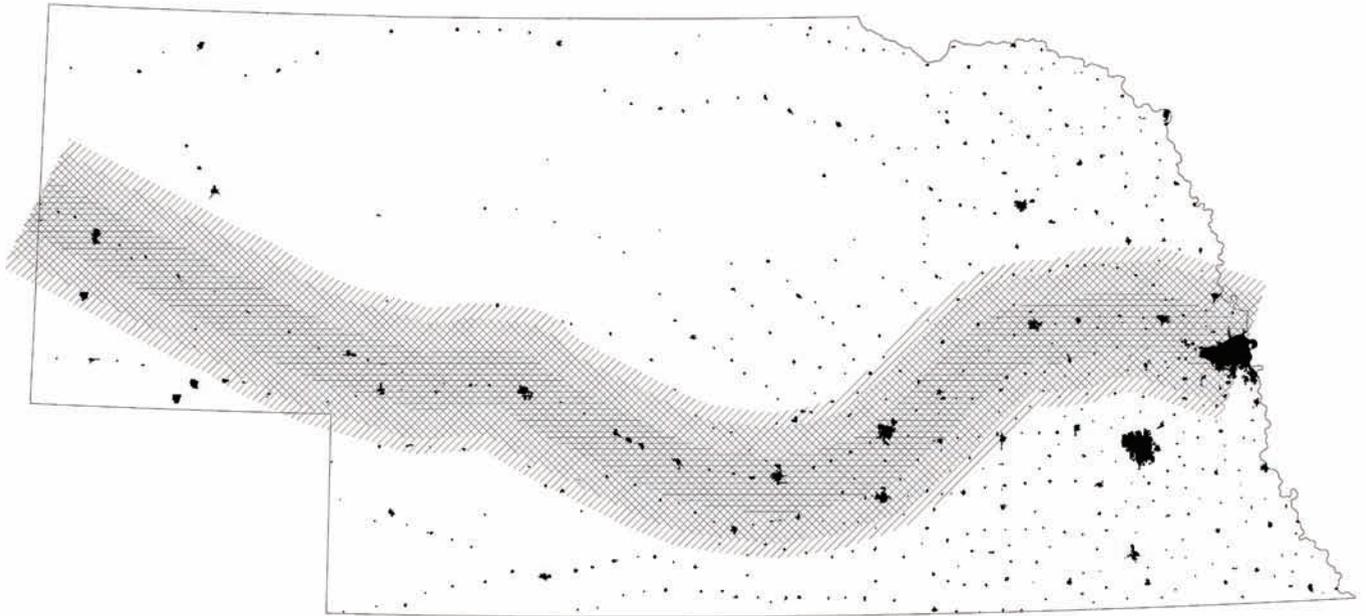
profits and increasing overall risk. These conditions facilitate the "Get Big or Get Out" mentality promoted by then Agricultural Secretary Earl Butz in the 1970s. Only through the increasing of ones operations through land consolidation is it possible to compete. Farms are consolidated into larger and larger family farms, from the one hundred sixty acre farm of early settlement to the nine hundred eighty acre farm, the average size of family farm in Nebraska today. While the amount of agricultural land has remained relatively constant, it is being held by fewer and fewer hands, forcing a considerable number of farmers off the land. With the increases in technology and management to run these new larger farms, those that remain are fundamentally transformed from farmers to operators.

A wall delimits one square mile, within which all the mechanisms of production are housed; labor, storage, transportation, irrigation manufacturing, combine manufacturing and storage, seed distribution. From this

point, managers, operators, agronomists, technicians, soil specialists, combines, irrigators, and semi-trucks are deployed into the vast consolidated agricultural landscape. The single-family house no longer exists here; laborers are housed in the most basic units for eating and sleeping when not working the land. The units provide breathtaking vistas out over the landscapes of corn, soy, and winter wheat.

The wall frames one square mile creating a space that exists simultaneously outside of and as a fundamental part of the consolidated space. Within this space there is a school for education and Friday night football, a church to care for the spiritual needs of the residents, a recreation center for fitness, a big box grocery store to fulfill the desires of the residents for products made from the material of their toil, and a race track. The process of consolidation allows for the creation of an intense density in an otherwise highly diffuse landscape, where the population density rarely crests ten people per square mile.





TOP: Nebraska Historical Settlement Corridor

LEFT: Nebraska Platte River Corridor

OPPOSITE TOP: FORM
Dawson County, Nebraska
1. Market
2. Dwelling
3. Agriculture
4. Culture and Recreation

OPPOSITE MIDDLE: FORM
The Market, Logistics Hall
Dawson County, Nebraska

OPPOSITE RIGHT: FORM
Dwelling Common Space
Dawson County, Nebraska

FORM / A TOWN

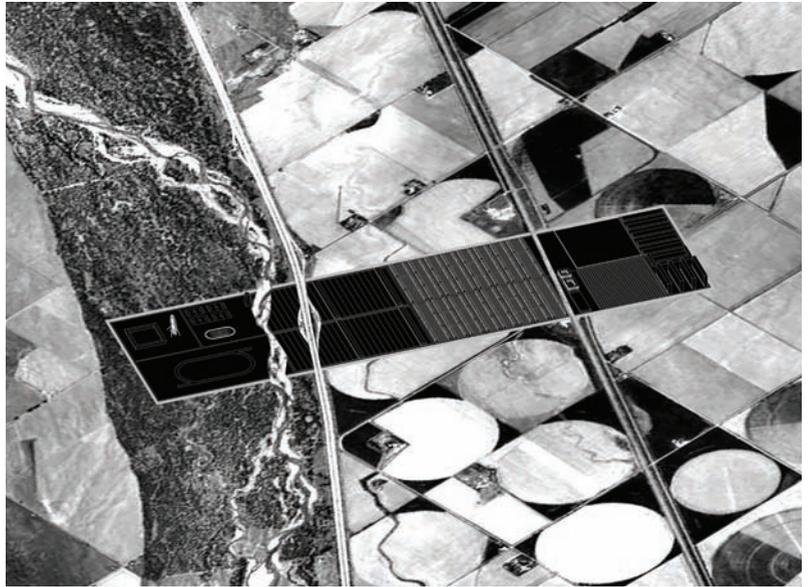
*An act of giving shape to. To arrange and place into an order. An act through which space is acted upon and produced through the recognition of existing orders and the projection of external desires.*¹⁰

*"...the small town is hardly adequate socially or culturally. It offers little beyond an occasional respite from physical isolation and a rare hint of the rich cultural life that exists beyond its banal expectations."*¹¹

Form acts as a series of projects situated along the Platte River, between existing towns, spanning rail and both the US-30 and Interstate 80. Specifically, this intervention is located between Cozad and Gothenburg, at the hundredth meridian, where it is said the West begins.

The settlement of Nebraska has historically followed the Platte River Valley, following the Oregon and Mormon Trails. This pattern was furthered by the Pacific Railway Act of 1862 which granted 6,400 acres of land to the Union Pacific Railway for every mile of track laid along the flattest and most fertile land of Nebraska, to be sold at their discretion. The development of the railway also established a series of towns, roughly every ten miles, a development still clearly legible today. Interstate 80, except for a detour to connect to Lincoln, follows this same route creating a concentration of population; 83 percent of the population of Nebraska is located within fifteen miles of the Platte River.

The intervention is a new form of town that acts not only as a reprise, but has inherent value as a space of exchange and offers alternative modes of occupying the land both individually and collectively. The project contains a market and food distribution center, communal low rise housing and plots, produce fields, and a recreation ground, organized into a one by four mile band. This band spans the Union Pacific Railway, US-30, Interstate 80, and the Platte River. The market acts as a space of exchange, where vendors, wholesalers, local residents, and commuters can come into friction with one another. The logistics hall hosts the sorting and distribution of produce from the county, the state, and the nation. Produce is transferred into a public restaurant, opening up the space of logistics to the public view. Adjacent to the market is a series of low rise housing buildings organized into rows. Alternating between the rows of housing are communal plots and circulation space. These offer not only an alternative way of occupying the land—in contrast to the dominance of the individual home—but an alternative way of cultivating the land against the dominance of the mono-crop culture.



¹⁰ "form, v.1". OED Online. March 2013. Oxford University Press.

¹¹ Diane Dufva Quantic, *The Nature of the Place: A Study of Great Plains Fiction*, (Lincoln: The University of Nebraska Press, 1995) pp. 19.

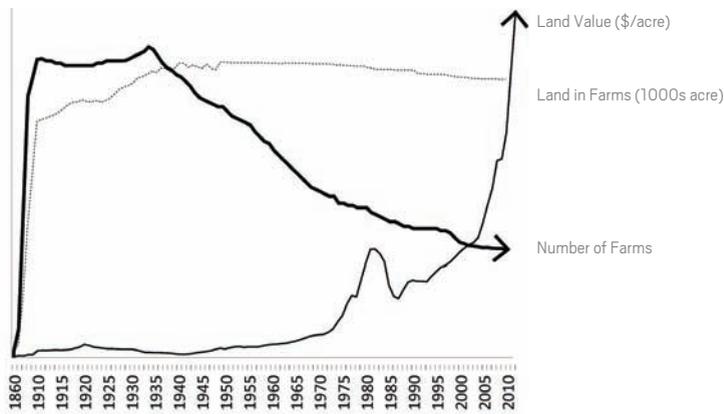


FIGURE / A VOID

An act of tracing or marking the land. Establishing a system through which desires can play out and emerge.¹²

“Farmland is quickly emerging as one of the year’s hottest investments on Wall Street. ‘We’ve been doing this for a number of years, long before anyone thought this was sexy,’ says Jeff Conrad, who heads Hancock Agricultural Investment Group. ‘Now we are getting a lot of calls, and we are noticing more competition. There’s a lot of interest in New York.’”¹³

—Stephen Gandel, “Want to Make More than a Banker? Become a Farmer!” *Time Magazine*

The intervention is situated within both Douglas County, the county that is home to Omaha and Sarpy County, which hosts the overflowing sprawl of Omaha. It intervenes in a condition in which the value of agricultural land

ABOVE: Farm Consolidation

BELOW: FIGURE
Omaha, Douglas and Sarpy County, Nebraska

BELOW RIGHT: FIGURE
Clearing Space
Omaha, Douglas and Sarpy County, Nebraska

OPPOSITE TOP: Omaha Growth

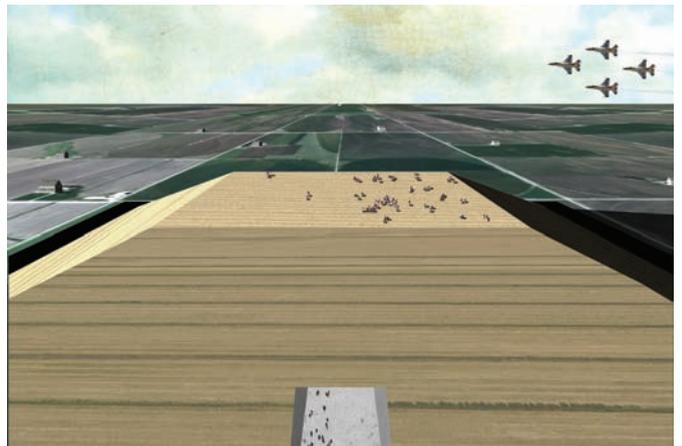
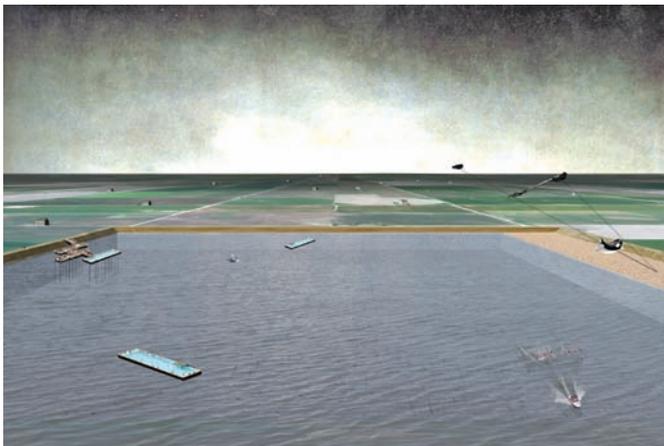
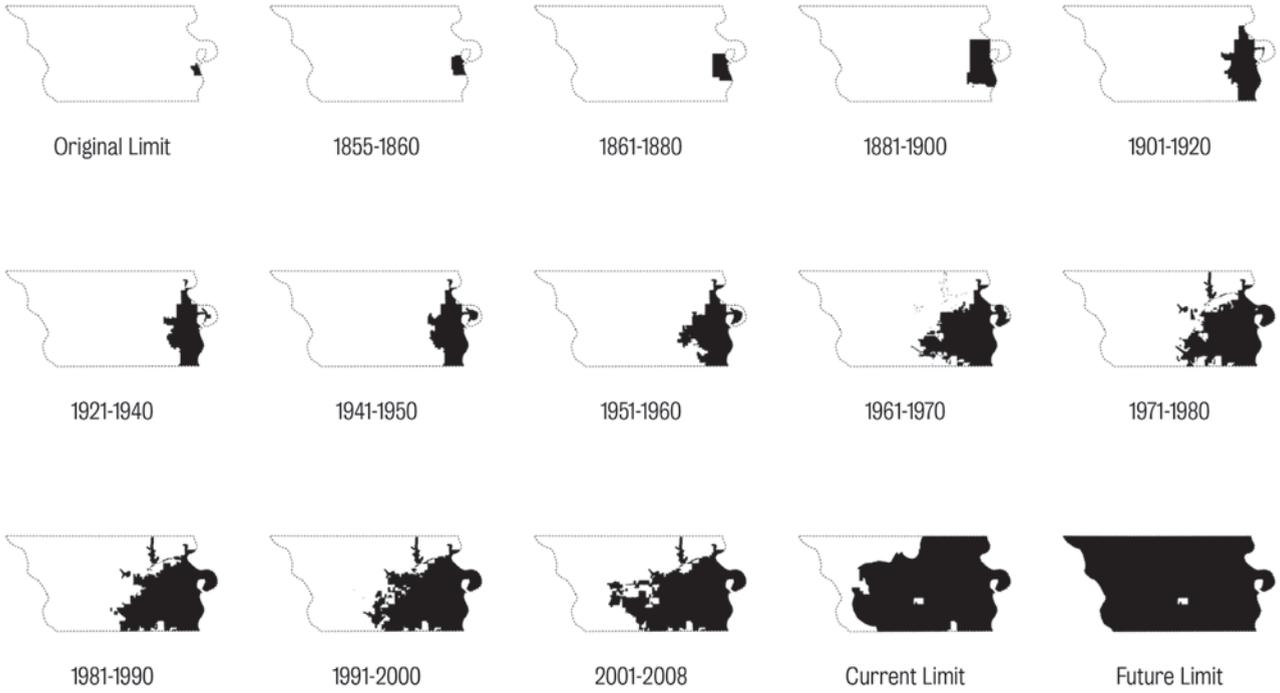
OPPOSITE: FIGURE
(Clockwise) Plaza, Buffalo Commons, Mound, Lake and Beach
Omaha, Douglas and Sarpy County, Nebraska

is increasing to the point where the agricultural land itself is becoming a commodity, being speculated on for future crop growing. The same forces of speculation simultaneously produce its inverse; the removal of agricultural land for the development of low-rise housing. These two forms of land speculations, where value appears to come both from its fullness of crop or its fullness of houses, confront one another at the edge of a westerly sprawling Omaha. The project clears and claims a space that is neither part of the logics of agricultural planting nor of real estate speculation and development. Section sixteen, the section historically set aside for the development of schools by the Land Ordinance Act of Jefferson, becomes the space of action. These spaces are not meant to reinforce qualities that already exist but rather establish new qualities. Land dynamics are allowed to play out around the spaces, ultimately causing a recalibration of the space within the section as well as without. The project claims a space for creative practice outside of the logics that currently construct the territory, and through the introduction of radically different elements, new ways of understanding the territory emerge. 🌐

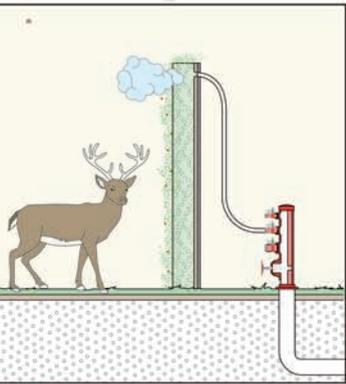
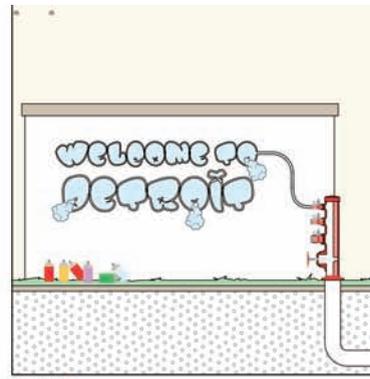
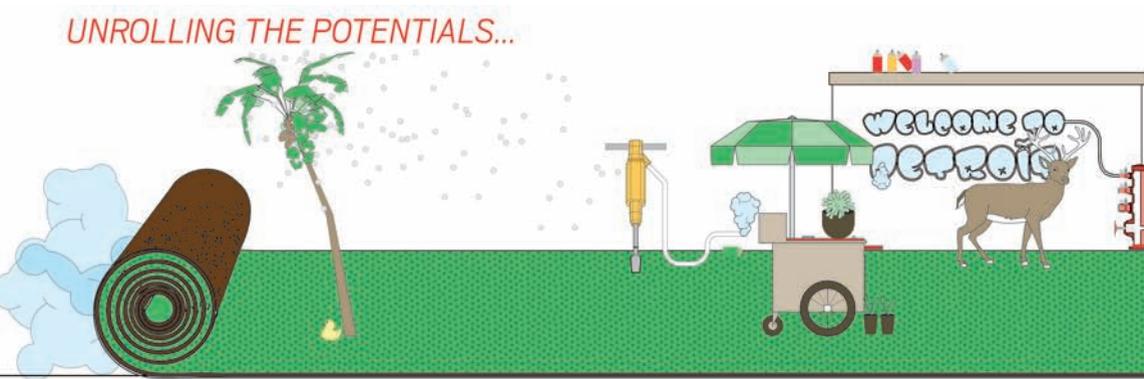
¹² “figure, v.”, OED Online. March 2013. Oxford University Press.

¹³ Stephen Gandel, “Want to Make More than a Banker? Become a Farmer!” *Time Magazine*, July 10, 2011
<http://content.time.com/time/magazine/article/0,9171,2080767,00.html>

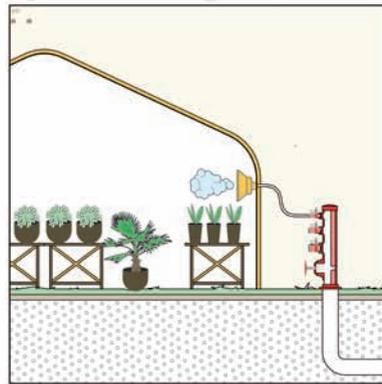




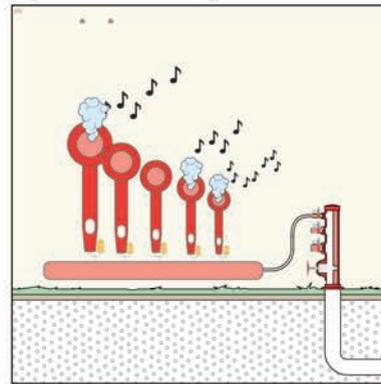
UNROLLING THE POTENTIALS...



steam irrigation



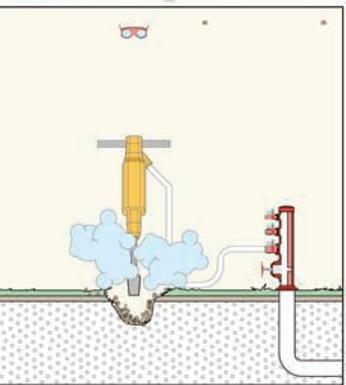
steam irrigation



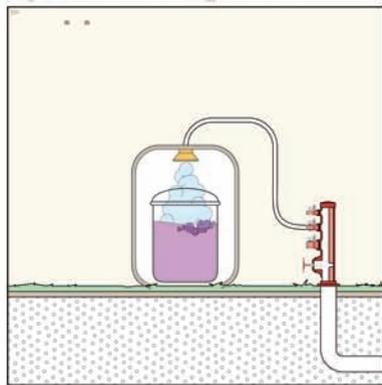
steam-organ



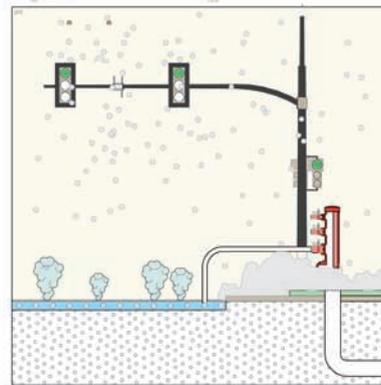
steam heat



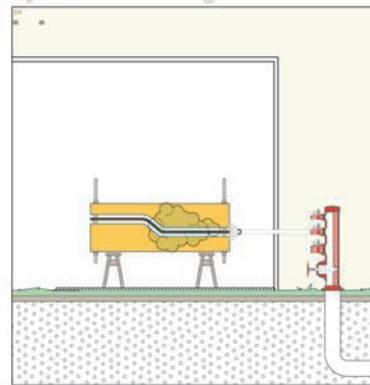
steam drill



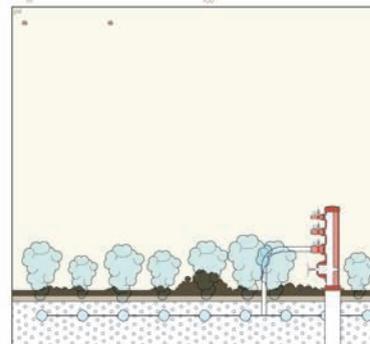
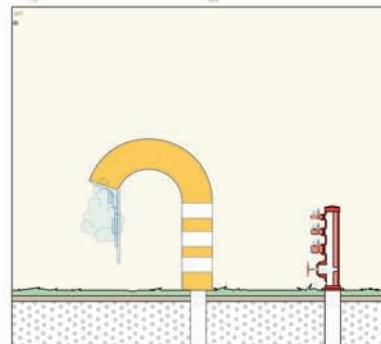
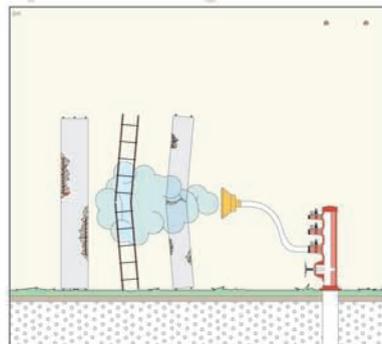
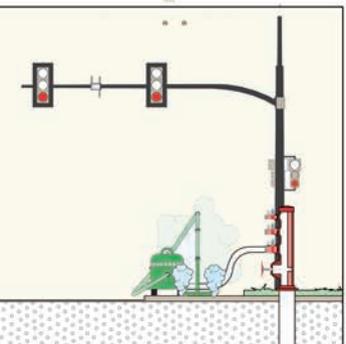
steam-colour



steam heating



steam-box; steam-bent



tapline: *environmental control systems for artificial extensions of localized micro-climates*

By opportunistically looking at the potentials of building with the atmospherics of steam, this proposal looks to expose the latent potential of the infrastructural network of Detroit's steam infrastructure within a developing sector of the city of Detroit.

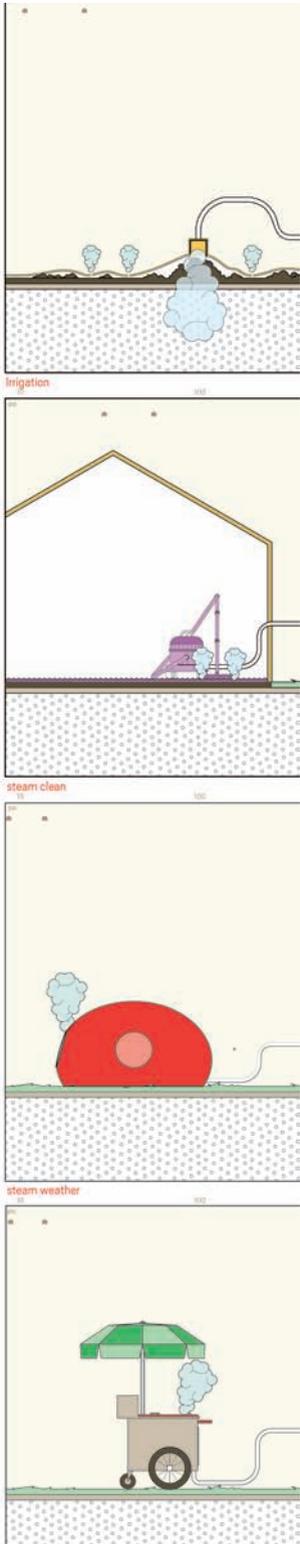
By opportunistically looking at the potentials of building with the atmospherics of steam, this proposal looks to expose the latent potential of the infrastructural network of Detroit's steam infrastructure within a developing sector of the city of Detroit.

Traditionally, architecture looks to the operations of materials as the basis of design and speculation. Broadening the usual boundaries, this proposal looks to speculate previously unimagined occupations and territories by looking to environmental conditions, specifically steam, as the inciting force for architectural design. A largely untapped resource by architects and planners, the historical architectural capacity of steam has been limited to one of pure necessity. By prioritizing the capacities of the atmosphere—or in this case steam, the palette of building materials expands, opening architecture up to more dynamic, unpredictable spaces that evolve with their environments, rather than in spite of them.¹

¹ Unrolling the Potentials: Steam has the potential to all at once operate as a solid liquid and gas based on its velocity and trajectory. Looking to tap into steam allows one to image all the working potentials of this resource to be a source of energy, production, inhabitation, and eccentricity.

Arguably housing the largest and oldest district energy system in the country, Detroit Thermal provides heat and electricity for almost 500,000 inhabitants in the Greater Detroit Area. With the capacity to service over two million city residents, the energy conglomerate has expanded its services to not only produce steam for heat and electricity, but also as a resource for cooling the downtown area. Moving steam at over 500,000 pounds-per-hour, the 30-inch high pressure line distributes a continuous flow 225 psi of steam under the streets of Detroit. With the longest continuous run spanning three miles from Detroit Renewable Power to Detroit Thermal down Dequindre Street, the main feeder line requires an extraordinary amount of relief to remove the pressure in that span. Traditionally, pressure reducing valves serve as relief, which usually culminates in a large orange reflective flume at surface level. This landscape of orange daftness inadvertently functions not only as a means to redistribute opaque street clouds, but also set unintended spatial implications with environmental and occupational effects. Using this pre-existing condition, what are the possibilities of designing with environmental factors as a first principle?

Capitalizing on the physical intersection of this urban excess and the newly developing green-way, the Dequindre Cut, the project storyboards the opportunistic potential of tapping into this hidden resource. Deploying artificial environmental factors such as steam opens up opportunities for spatialization at the urban scale, creating territories for types of movement and interactions rather than the hard lines of structures that are primarily interior. Shifting away from the known chemical process and outcomes of steam energy, the project broadens the agency of atmosphere in the realm of architecture and urban planning. It sets a precedent in



which we can look at artificial environments as more than purely for their technical value and open up the possibility to imagine terrains of spatial occupation that were otherwise previously uninhabitable by architecture.

HOW IT WORKS

Detroit Thermal is the oldest and largest renewable energy network in the country producing heat and energy through the process of incinerating the city's solid waste. Detroit Thermal consumes approximately 90% of the Greater Detroit Area's waste leaving only 10% for Detroit landfills. The heat or fuel boils water that produces steam. That steam is carried through an underground network of pipes which provide energy services to 50% of the downtown market share to the city of Detroit.

SITE AXON: Physical intersection of this urban excess and the newly developing green-way, the Dequindre Cut.

DEQUINDRE CUT: Dequindre Cut Near Alfred and Orleans St.

STEAM TRAP CORNER OF GRATIOT AND ST. AUBIN: Detroit Renewable Power sends more than 350,000 PSI per hour down its main high pressure line on St. Aubin street, just 60 cm below the surface.

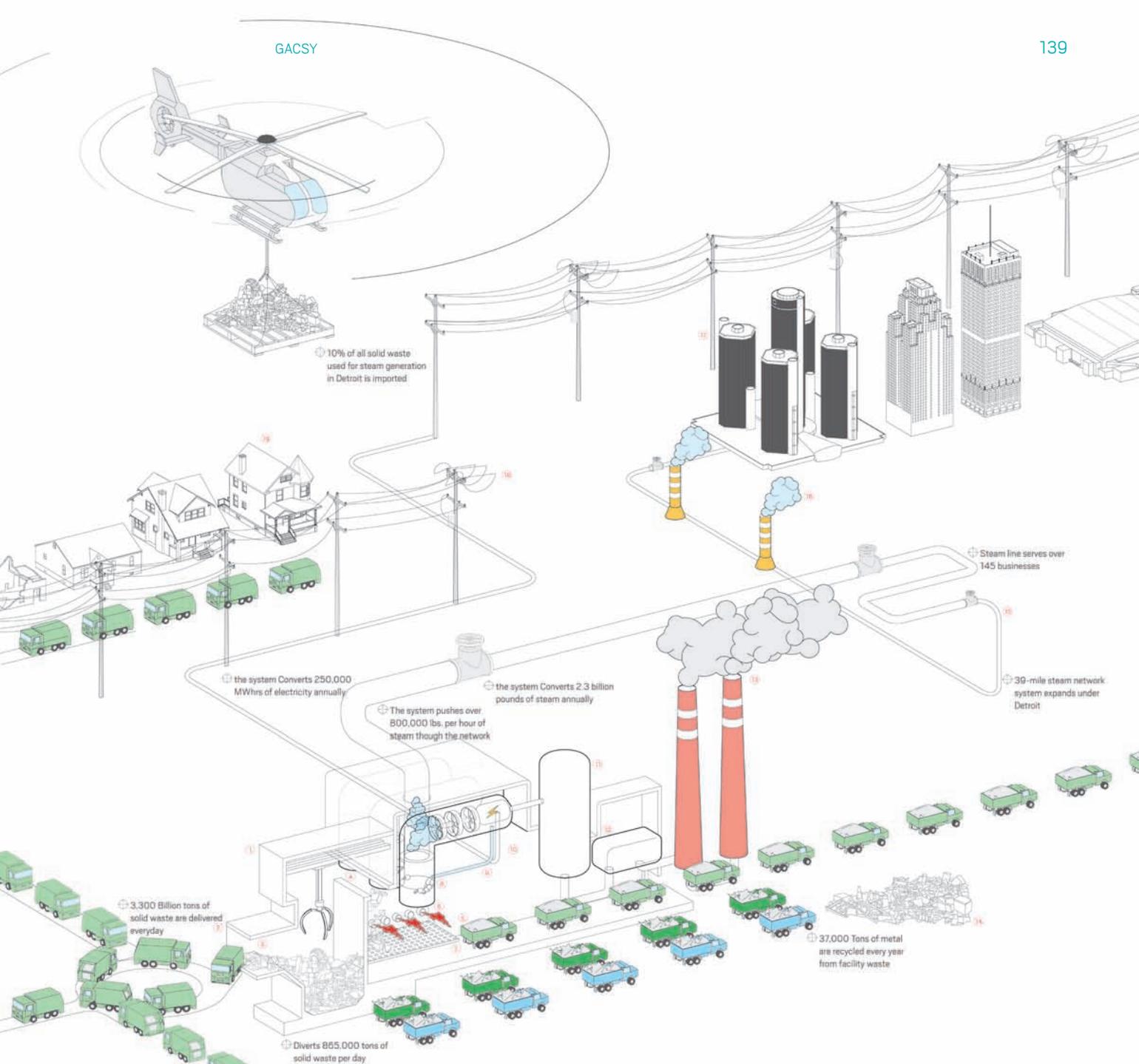
STEAM NETWORK: 39 miles of underground pipe network



The steam network, operated and run by Detroit Thermal, extends for over 39 miles underground approximately ten to thirty inches below the surface. The pipe network drops to a depth of 80 feet below surface connecting underground Detroit with 4 miles of tunnel, making it possible to walk from the Detroit Athletic Club to the Cadillac Tower without seeing the light of day.²

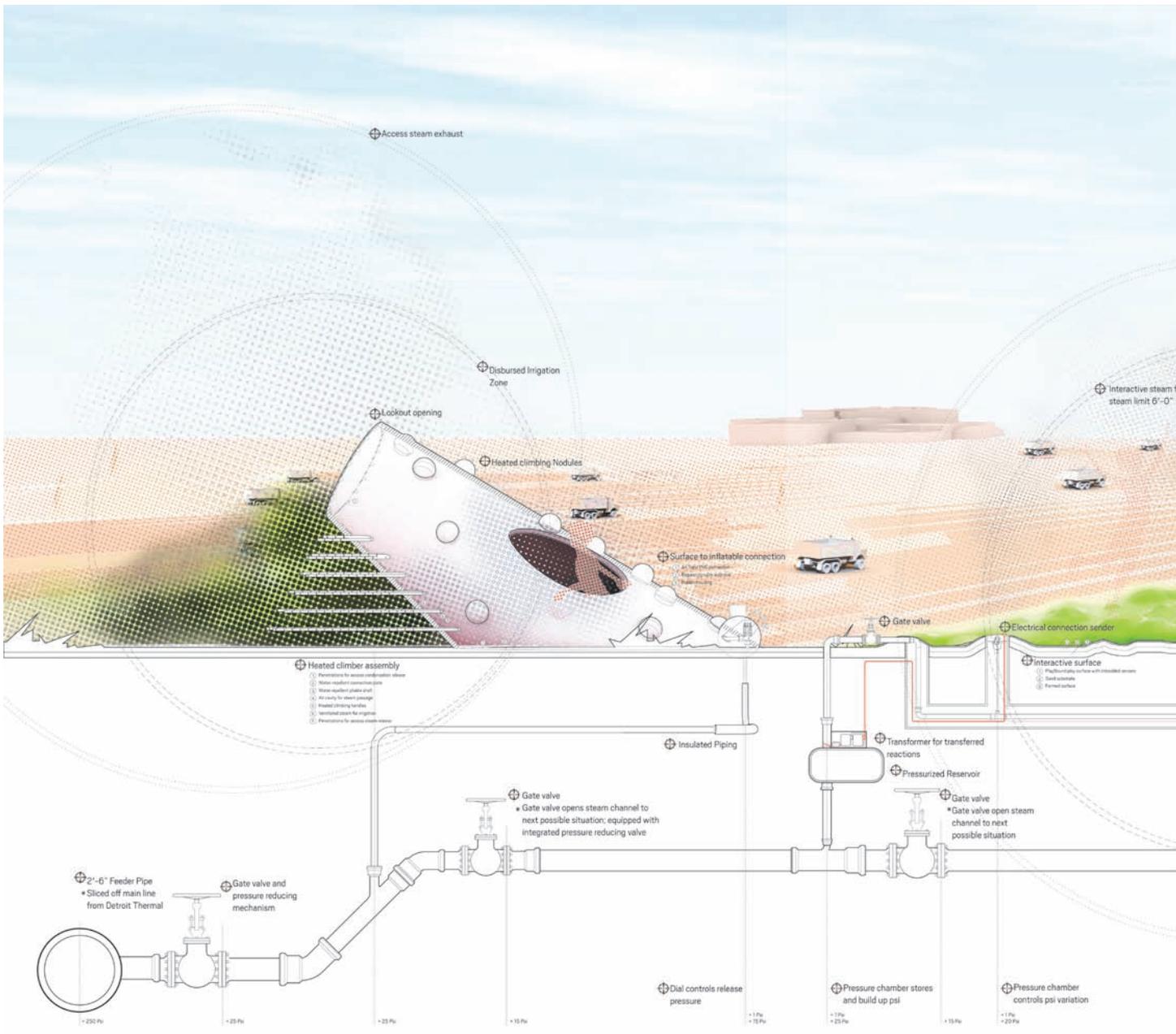
2 Providing surface or public access to the buried steam network opens up a form of development that builds with environmental factors as its primary form. By allowing the public to directly access the network new ways of working or economies have the potential to develop along this river of resource. Through the hydrant system one can regulate the flow of pressure to have a development of food trucks that run on steam and pressure cookers, develop a series of pools for a thermal bath or maybe even look to the potentials of a wood bending industry.





STEAM NETWORK KEY:

- 1: mass inspection and sorting
- 2: tipping floor
- 3: pit
- 4: waste sizing and shredding
- 5: bottom ash
- 6: combustion chamber
- 7: ash conveyor
- 8: boilers
- 9: condensate return
- 10: steam turbine generator
- 11: flue gas scrubbers
- 12: filters
- 13: emission stacks
- 14: metal collection
- 15: steam line
- 16: steam trap
- 17: downtown Detroit
- 18: electrical power to market
- 19: metro Detroit area



PLAY: Leveraging steam as a solid, liquid, and gas, allows the limitations of exterior play to cease. Playgrounds and parks have the potential to be heated, cooled, and irrigated through interactive environmental control systems. Climbers and play-sets can be designed to run off of the steam system heating the play equipment in the winter and cooling in the summer. The exhausted condensate has the potential to produce lush green landscapes or icy sculptures.

INTERACTIVE IRRIGATION: Process from vacant land to micro-climate creation

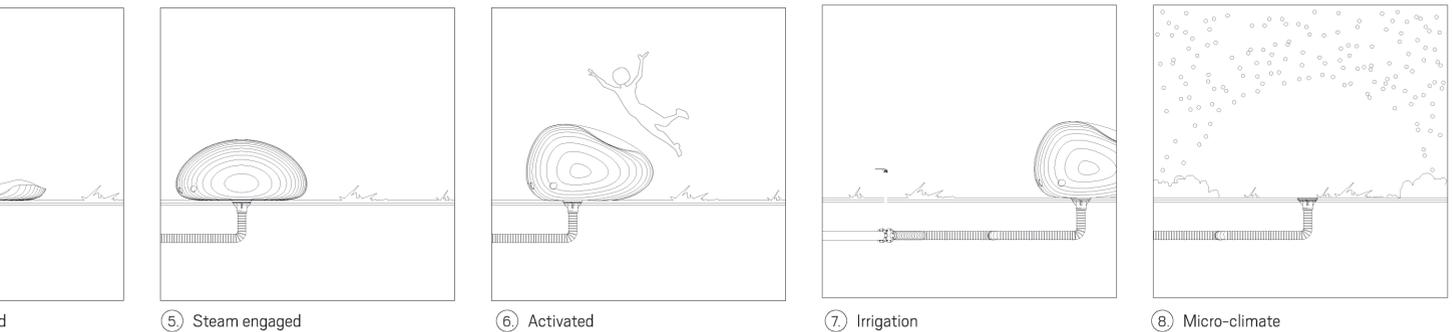
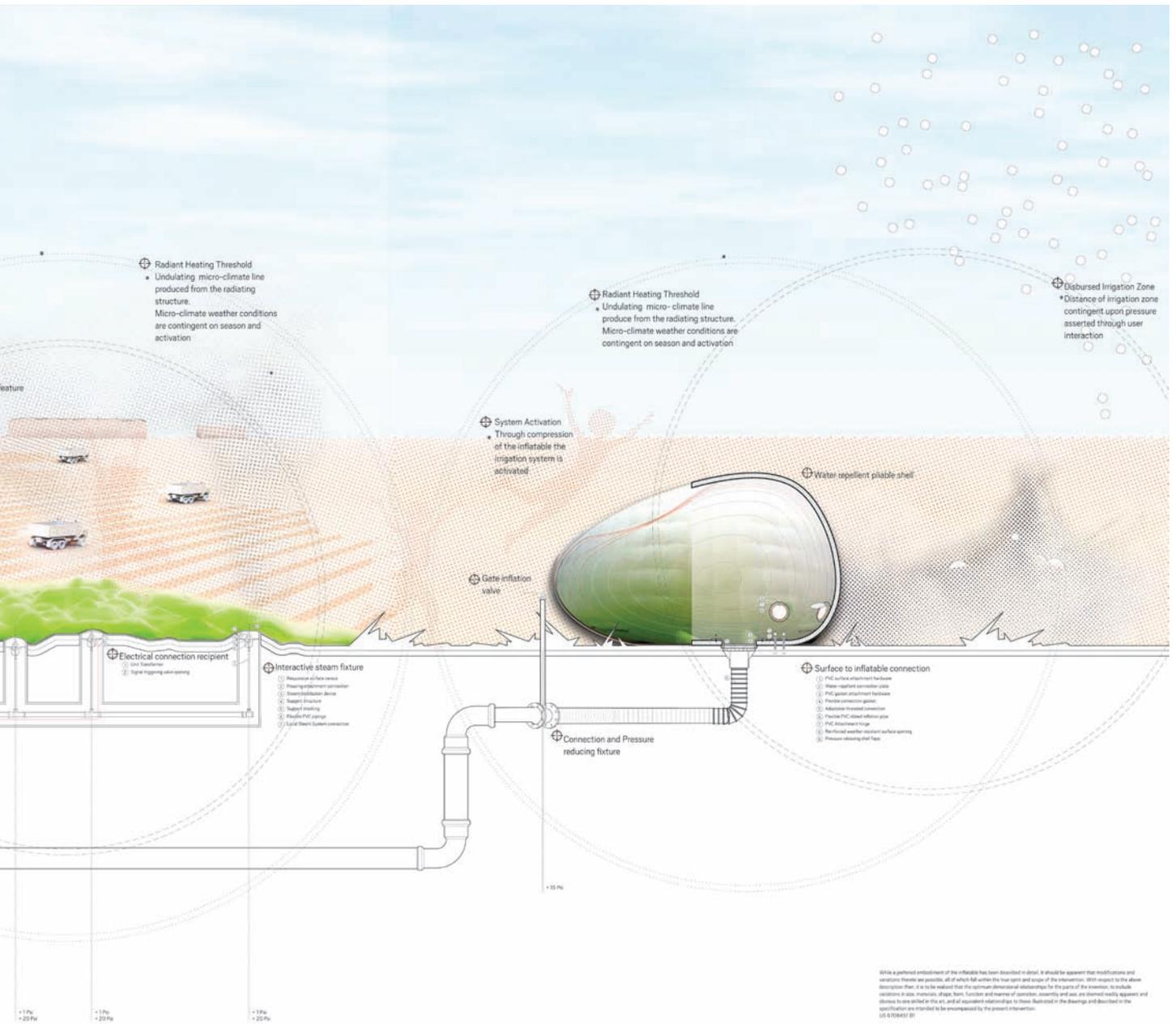


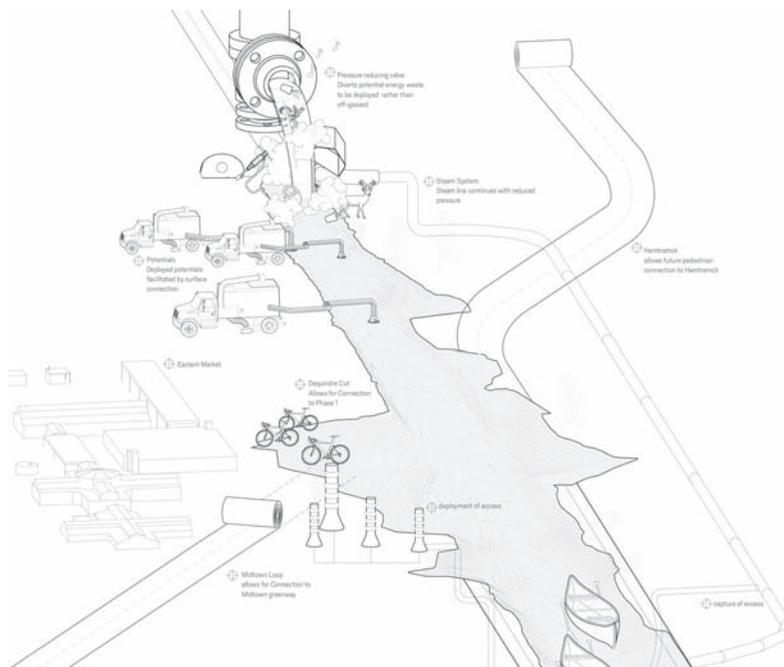
① Vacant Land

② Steam connection provided

③ Access valve added

④ Inflatable connector

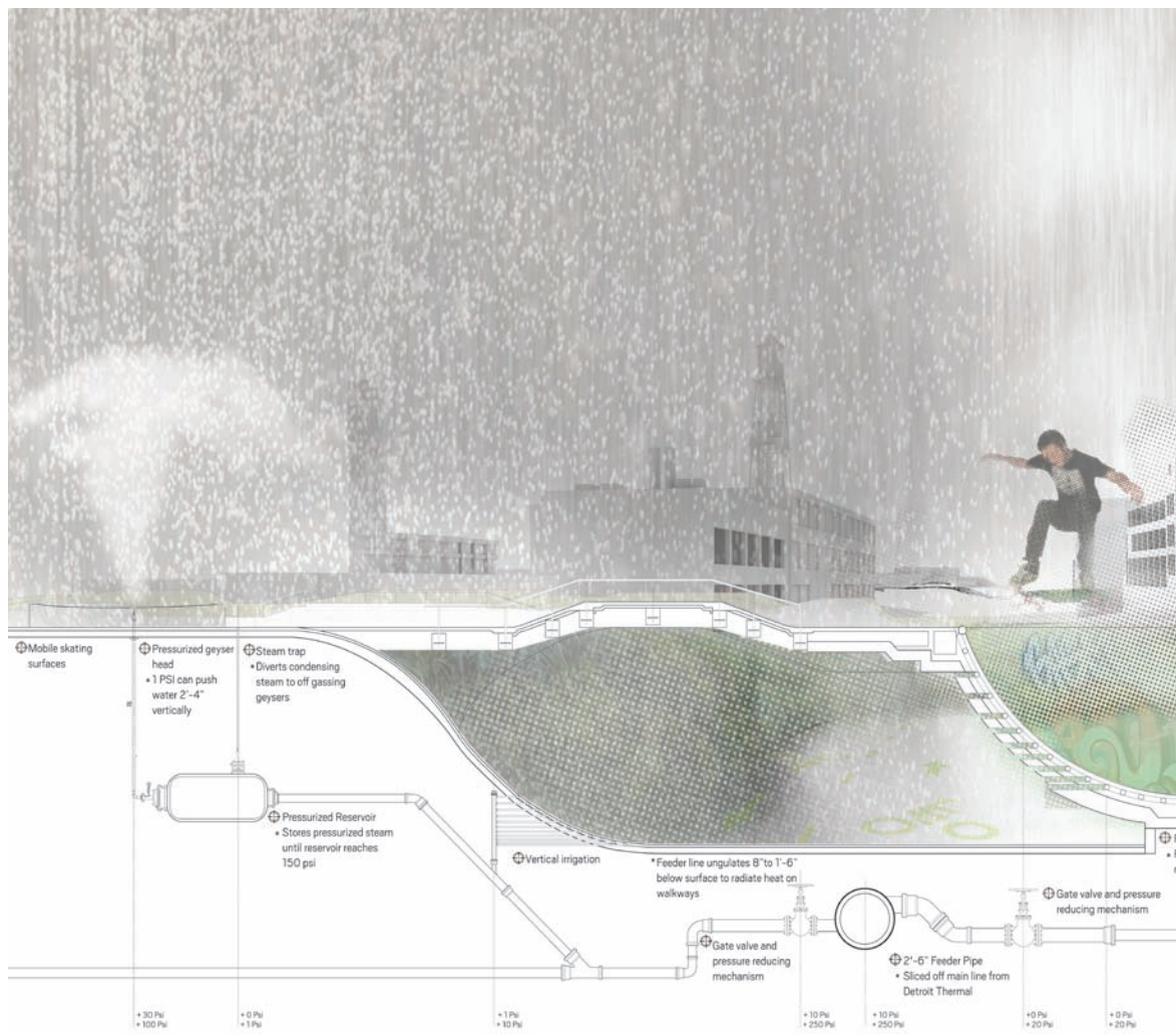




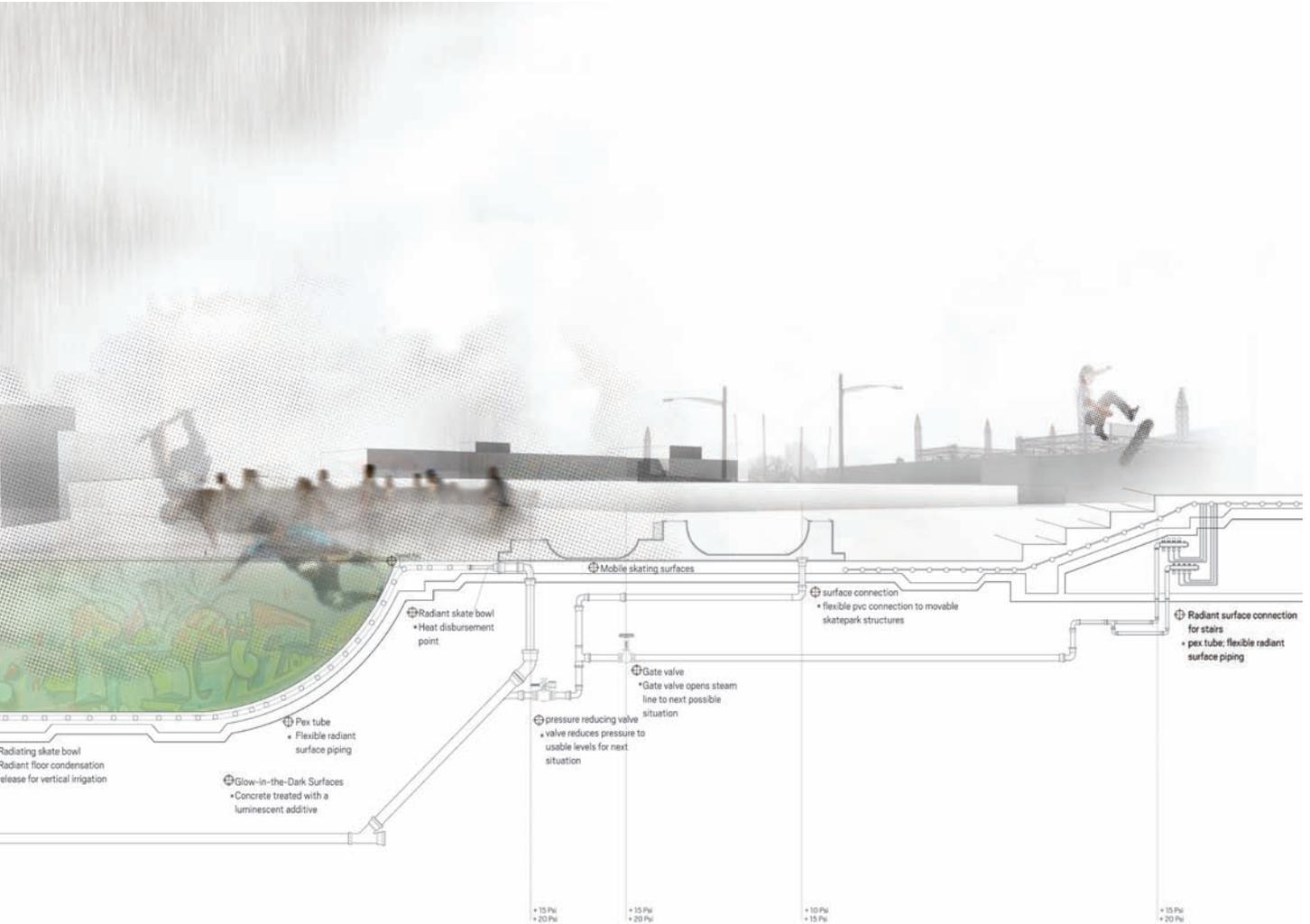
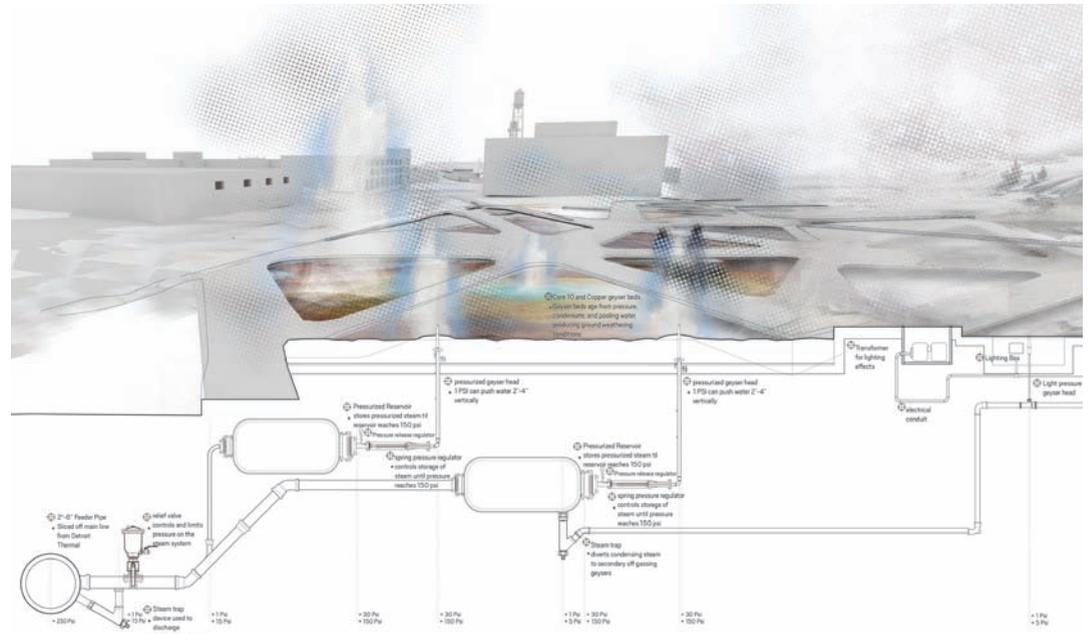
CUTS AND INTERSECTIONS:

The intersection between the steam network and the Dequindre Cut operates as a hub for creative energy use and deployment. It allows for the newly steam heated path to operate as a connector from Downtown to Eastern Market.

24/7/365: Leveraging the energy source of steam allows seasonal and nocturnal limitations of occupation to cease. Heating the surfaces we occupy removes the traditional notion of controlled environments from the interior of a recreation center to the entire exterior environment. Providing a connection to allow for heat to pass through our surfaces opens up opportunities to have 7/24/365 skate parks that use heat to allow winter occupation. Through other additives the surfaces can also leverage the embedded energy to provide illumination through the use of photo-luminescent paint chips that are powered by the released energy.



SHOOT IT OUT! Re-pressurizing the urban access opens the potentials of eccentricity and spectacle. By collecting and compressing the off gassing from the network a steam Geyser Park has the potential to operate as an attractor along the steam line providing artificial phenomena that is traditionally foreign to a city.





animal house

Animal House proposes a series of extremely durable free standing rooms figured as affective architectural characters within the suburban home.

Animal House proposes to remake architecture from the inside through the revival of the notion of “character”. Character has historically been defined as a quality that a building possesses—or lacks—and is referred to as an expression of an inner subject within the material and form of the architectural object. *Animal House* proposes a series of tornado shelters placed within suburban homes and figured as architectural characters, possessing extreme material durability to resist the entropy of the exterior world. Taking the suburban single-family house as siting, these hyper-durable characters disrupt, reorganize, and enrich the interior with implied subjectivity and vitality. Through their various postures and materiality, they re-orient the existing framework of their containers while also containing a protected interior of their own, only large enough to protect that which is most precious during a storm. The durable core characters affect the existing framework of the architecture without destroying it entirely from within.

ANIMAL HOUSE

Our lives in architecture are influenced by things rendered invisible by cultural values, norms, and common practices. This is the case for the tornado shelter, which exists today hidden within the hollow interior walls of suburban homes untapped for its architectural content. Tornado shelters operate under far different material logics and notions of durability than the houses which envelop them. By reorganizing and reconceptualizing the tornado shelter’s position within the architectural interior, a new architectural device can emerge. Neither a building in scale, nor quite a large piece of furniture, the ambiguity

of the tornado shelter as an object in the residential interior is its architectural potential. Once freed and given presence through figuration and precise articulation of details this new architectural object can take on character independent of the walls that once encased it. Through the organization and framing of elements, textures, materials, colors, etcetera, the tornado shelter can be used to establish the atmospheric character and mood of an environment. *Animal House* proposes to operate upon the tornado shelter through its details in order to develop new architectural characters capable of affecting interior atmosphere. This hidden element in the suburban home, the tornado shelter, will be the focus of a series of designs to precisely elaborate the affective character of an architecture that negotiates interiority with extreme, natural, exterior phenomena.

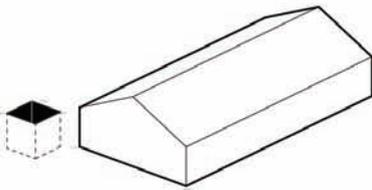
WHAT IS A TORNADO SHELTER?

Tornado shelters are a relatively new object—or type—within the interior and are indigenous to the North American continent, which has more tornadic activity than any other place on Earth. A tornado shelter’s function is to be durable enough to resist forces that would destroy buildings constructed in normative, affordable construction methods. It is prohibitively expensive and structurally complex to construct entire buildings in such a durable way, limiting these structures to the size of a pantry or small storage room. Beginning as subterranean root cellars in the high plains of America in the late 19th century, the tornado shelter has always been paired with some other program, most often the storage of food or other valuable goods. As root cellars were replaced by

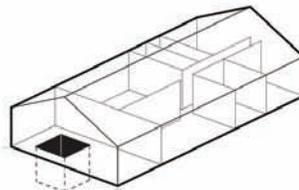
ice boxes and eventually mechanical refrigeration, a new source of shelter from extreme wind was found in bunker technology. These prefabricated and modified concrete "pill boxes," often more affectionately known as "fraidy holes," were buried underground in close proximity to suburban and rural homes to allow the houses residents to flee in an attempt to weather a storm in safety. In the last fifteen years as the frequency of tornadoes has increased, the tornado shelter has moved into the house to be more easily accessible and comfortable. This shelter has evolved from a hole in the ground to a box of steel reinforced concrete, or plate steel, hidden within the ubiquitous hollow walls in residential construction.

As the tornado shelter has been domesticated, its role as a curatorial space has changed from the embedded and intertwined functions of the root cellar to the flexible and yet-to-be defined space within the domestic interior of suburban America. This new situation creates a nesting of interiority based upon the mediation of natural forces through material and perceptual durability. What

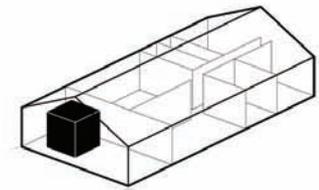
BELOW: Axonometric drawings of the evolution of the tornado shelter



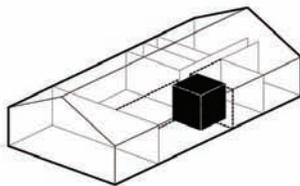
Traditional tornado shelter positioned outside home as "root cellar"



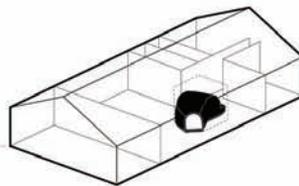
Underground shelter migrates into the interior liminal space of the garage after the invention of food refrigeration and to keep out vermin



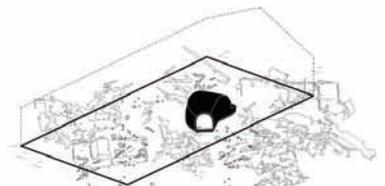
Above ground steel and concrete box shelters emerge from the ground for easy access and to rid them of darkness



Above ground shelter as most often hidden in wall cavities as they move into the domestic realm. In *Animal House* they are freed from the wall and demolish a clearing to live within.



The shelter is figured as an ambiguous object with animal qualities and vitality. The thing bends and reacts to reorganize the house spatially, infusing a generic field with life.



In the change of destructive weather the durable character is not destroyed and becomes the exterior of the home.



is included or excluded from the interior of the shelter is of equal importance as the formal character of the shelter's exterior. According to Sylvia Lavin in her article "Architecture in Extremis", the curation of our possessions is not just for personalization, but is what gives rise to architecture in the first place.¹ This tendency finds an extreme case when deciding what items one would desire to keep from being blown away into the entropy of the wind. Curation is an ever present activity within the everyday inhabitation of the interior. The durable nature of the tornado shelter in relationship to the relative temporality of wood framed construction creates a tiered system for the evaluation of value, whether aesthetic, practical, monetary, or otherwise. This definition of value is the fundamental act of architecture.

In a landscape of such extreme and fickle forces that destroys material property and take human life, the

¹ Sylvia Lavin. "Architecture In Extremis." Log. n.22 (Spring/Summer, 2011), 58-2 Gernot Bohme. "Atmosphere as a fundamental Concept of a New Aesthetics," Thesis Eleven (no. 36, 1993), 113-114.

psychological power of the tornado shelter is no less important than its instrumental function. Operating upon the emancipated object is thus a question of figuration in relation to these physiological, psychological, and cultural effects. Its figuration could be as diverse as the affective interaction of individuals with the natural environment or the positions surrounding them. Comfort, protection, fear, excitement, loss, apathy, and melancholy are all moods relating to the exterior environment that the tornado shelter, properly detailed and figured, could induce, reflect, and embody.

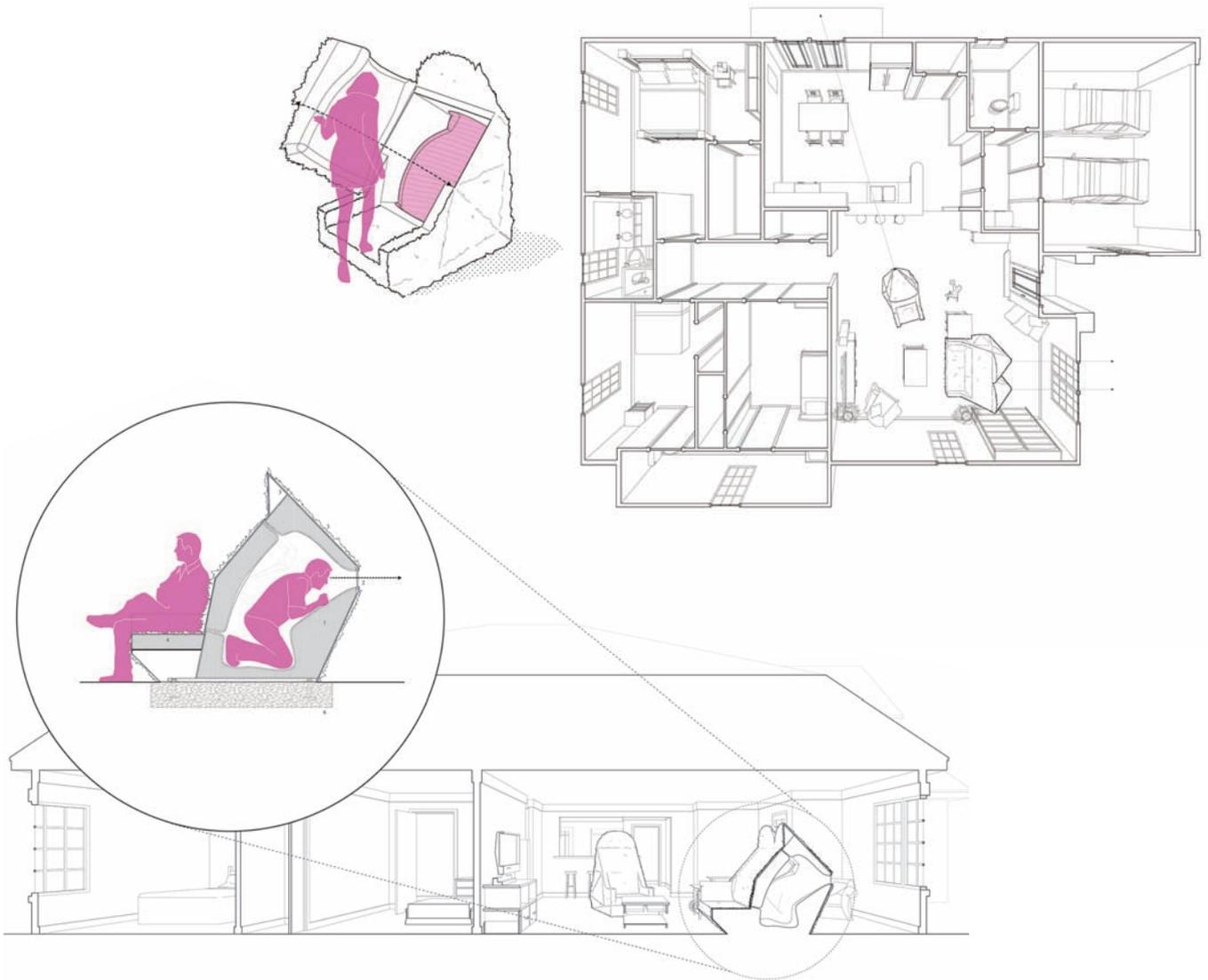
DETAILS

The conceptual base for this project draws from the work "Strange Details" by Michael Cadwell. In his book, Cadwell utilizes an experiential method of analysis to develop a narrative about the affective qualities of four famous works of modern architecture. Not quite a critical writing, but analytical none-the-less, his work transforms details that defy coherent logic and theoretical

frameworks by examining the immersive experience of the works and their relation as framing devices to the chaotic forces of nature. Cadwell's examples exist as outliers to more normative architecture and are examples of works that don't neatly fit within their given architect's oeuvre, as they each frame differing cosmologies regarding the "natural" world or the entropic world outside of the control of man. Using construction details to serve as the framework for expressing atmosphere stands as a model for linking affects to materials, organization, forms, textures, colors, and the situations in which they are related. Tornado shelters are an architectural device that have overt relations to the uncontrolled forces of the natural environment and exist ubiquitously hidden within the interior of single family residences throughout much of the central portion of the United States. Their presence is understood primarily intellectually, as there is little formal articulation for the people sharing space with these devices to interact with. By exposing and formally articulating the character that these elements effect, new

BELOW: Models of Rigit Rigit, Scradilla, and Hufloer





ABOVE: Plan perspectives and sections of Rigit Rigit and Scradilla in their houses

interior atmospheres embracing the tenuous condition of the natural environment emerge.

Cadwell's method embraces the concepts of affect and atmosphere as terms that encapsulate experience and interaction with specific material articulations or conditions. While these terms are inherently loose, arguably productively so, they require some definition.

Gernot Bohme, German Philosopher and author of *Atmosphere as a Fundamental Concept of a New Aesthetic*, describes atmosphere as such:

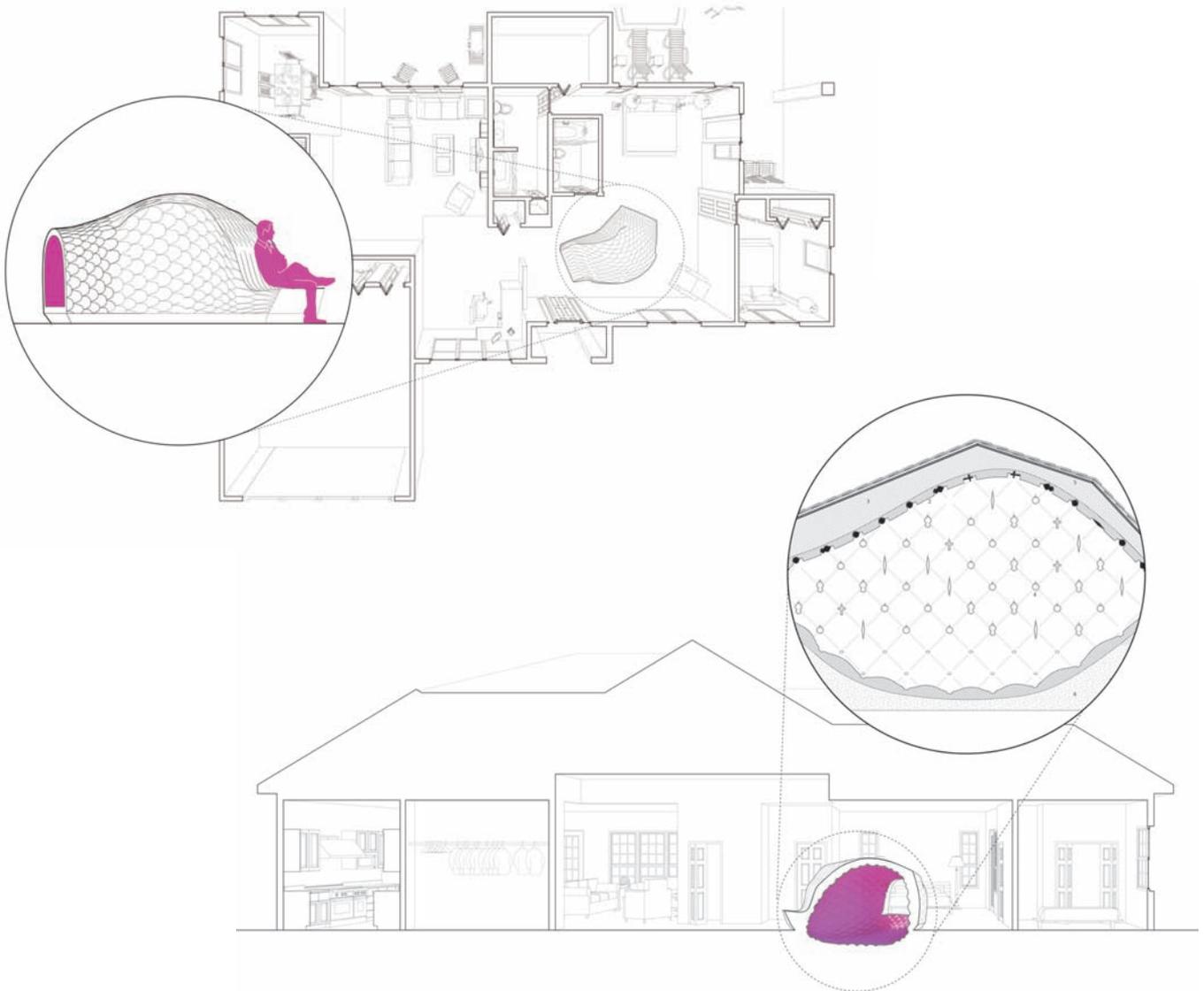
Here the expression "atmosphere" is applied to persons, spaces, and nature. Thus, one speaks of the serene atmosphere of a spring morning or the homely atmosphere of a garden. Upon entering a room, one can feel enveloped by a friendly atmosphere or caught

*up in a tense atmosphere. Of a person, one might suggest that they radiate an atmosphere which implies respect, or that an erotic atmosphere surrounds them. Here, atmosphere indicates something that is in a certain sense indeterminate—diffuse but precisely not indeterminate in relation to its character.*²

This term is highly inclusive in scope and has application to describe a wide variety of sensations that unite subject and object in a vibrational tone.³ Atmosphere, as a unification of object and subject, allows us to escape dualistic thinking as well as the both/and relationships of postmodernism by promoting a new

² Gernot Bohme. "Atmosphere as a fundamental Concept of a New Aesthetics," *Thesis Eleven* (no. 36, 1993), 113-114.

³ Gernot Bohme. "Atmosphere as a fundamental Concept of a New Aesthetics," *Thesis Eleven* (no. 36, 1993), 121-122



synthetic whole of sensation. Following the writings of Elizabeth Grosz and Brian Massumi, atmosphere is nearly synonymous with affect, and is here approached from the perspective of Baruch Spinoza and his elaborator Gilles Deleuze, which means accepting the linkage between the body and forces outside the body. What critically differentiates these terms from their forerunner phenomenology is this shared sphere of intensity. Phenomenology focuses upon the subjective experience of the world and not the interactions between bodies. Elizabeth Grosz describes affect in this way:

Sensations, affects, and intensities, while not readily identifiable, are clearly closely connected with forces, and particularly bodily forces, and their qualitative transformations. What differentiates them from

*experience, or from any phenomenological framework, is the fact that they link the lived or phenomenological body with cosmological forces—forces of the outside—that the body can never experience directly. Affects and intensities attest to the body's immersion and participation in nature, chaos, and materiality.*⁴

Describing painting or architectural details through these concepts focuses not so much upon what each represents, although representation is still possible, but upon the actual materiality of the thing as a collection of intensities. Radically different than aesthetic judgment, it is the mood and character of the atmosphere and affect that plays out upon our very physiology

⁴ Elizabeth Grosz, "Chaos, Cosmos, Territory, Architecture," *Chaos, Territory, Art* (New York: Columbia University Press, 2008), 2.



ABOVE: Hufior and Scradilla interact with the domestic interior.

through the distillation and intensification of naturally occurring sensations.

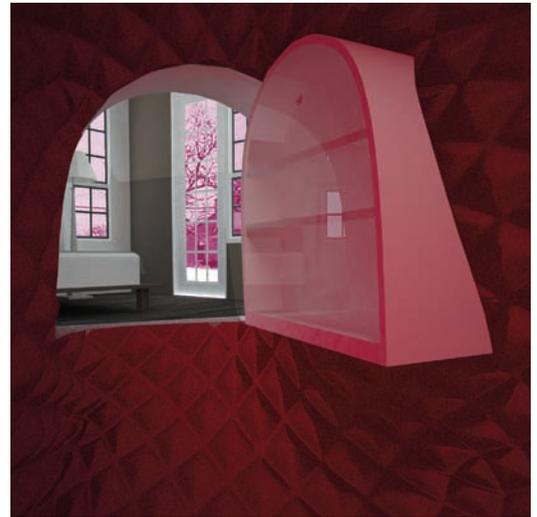
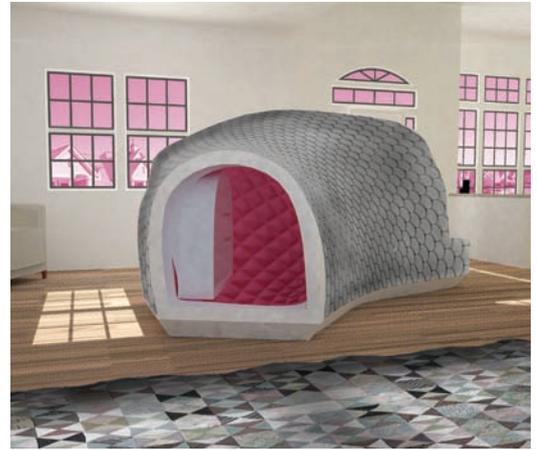
CHARACTER

The representation of affect is of great importance to current architectural culture and operates at the intersection of perception and materiality. Yet affect itself is extremely difficult to operate upon because of this inexact reception in the body of different individuals under different situations. Therefore, a material medium must be operated upon as a frame in the hope of affecting.

The historical concept of character can serve as a potent material mechanism for examining affect. Colin Rowe discusses architectural character, in his 1974 article *Character and Composition; or Some Vicissitudes of Architectural Vocabulary in the Nineteenth Century* as a historical discussion of material composition and what was then described as emotional or non-rational content. Rowe describes character in this way, “Character is seldom, if ever, defined, but it is generally implied that it may be at once the impression of artistic individuality

and the expression, either symbolic or functional, of the purpose for which the building was constructed.” While character during the 19th century, as well as for Rowe, relied on symbolism and cultural legibility, today character can be re-imagined through non-linguistic means and the transmission of affect.

Animal House develops a series of characters, defined by their details, which interact in different ways with the domestic interior to generate a variety of atmospheres that relate to an understanding of the external environment. In this way, the tornado shelter, as structure that already has a great deal of affective power—due to its intense durability and required material characteristics—is used as a means to explicate the relationship between the objective reality of the detail and the subjective aspect of bodily sensations. The concept of character as understood through posture, shape, and materiality is best understood through the details that either hide or foreground the intentionality of those characteristics. The characters are drawn in detail as representation sections and modeled with implied texture and



materiality. Additionally, methods of non-representational presentation, or methods of presentation that are architectural in and of themselves, were used to explore methods of what Sylvia Lavin refers to as "Architecture beside itself."⁵ Most notable to this means of presentation was the pursuit of narrative as an architectural tool.

NARRATIVE

All architecture is encompassed by narrative, yet its legibility is more often felt than understood. Like a music album that binds a particular group of people, it is mood that conveys the clearest narrative capacity. Narrative is the means used to discuss the affect, atmosphere, or mood of a space and to make explicit our relationship to the status quo within the world and the discipline of architecture. This narrative is the means for constructing the character and choosing from the myriad of possible shapes and materials. A narrative of

⁵ Sylvia Lavin. "Architecture Beside Itself." *Everything All at Once: The Film and Software Projects of MOS*. (New York: Princeton Architectural Press, 2012), 86-107.

comfort, of sympathy, of isolation, of protection, etcetera gives the basis of what the shelter can be and thus how to go about determining its construction. By positioning this project as an investigation of one such hidden condition, it is paramount to direct and bind the possible narratives of the project though the precise articulation of the materiality. This sort of narrative is similar to that employed by architect John Hejduk in his influential masques. The exorbitance of the masques is perceived in part as ambiance, mood, and affect as narrative systems of time and space that produce a phenomenal "feel" of places we may actually have visited but remain intractably alien.⁶ Narrative is not the communication of a legible meaning, but the bounding of emotive content through the precision of construction particular to a time and place.

Character is the articulation of a material artifact through narrative to produce a desired effect or atmosphere. When discussing character, it is possible

⁶ K. Michael Hays. "Architecture's Desire: Reading the Late Avant-garde". (Cambridge, MA: MIT, 2010), 111.



ABOVE: Rigit Rigit and the domestic interior.

to discuss both details and sensations at the same time. Giving the tornado shelter individual form requires defining its character, and understanding its identity in relationship to that of our own. K. Michael Hays in his analysis of Hejduk makes this observation of character:

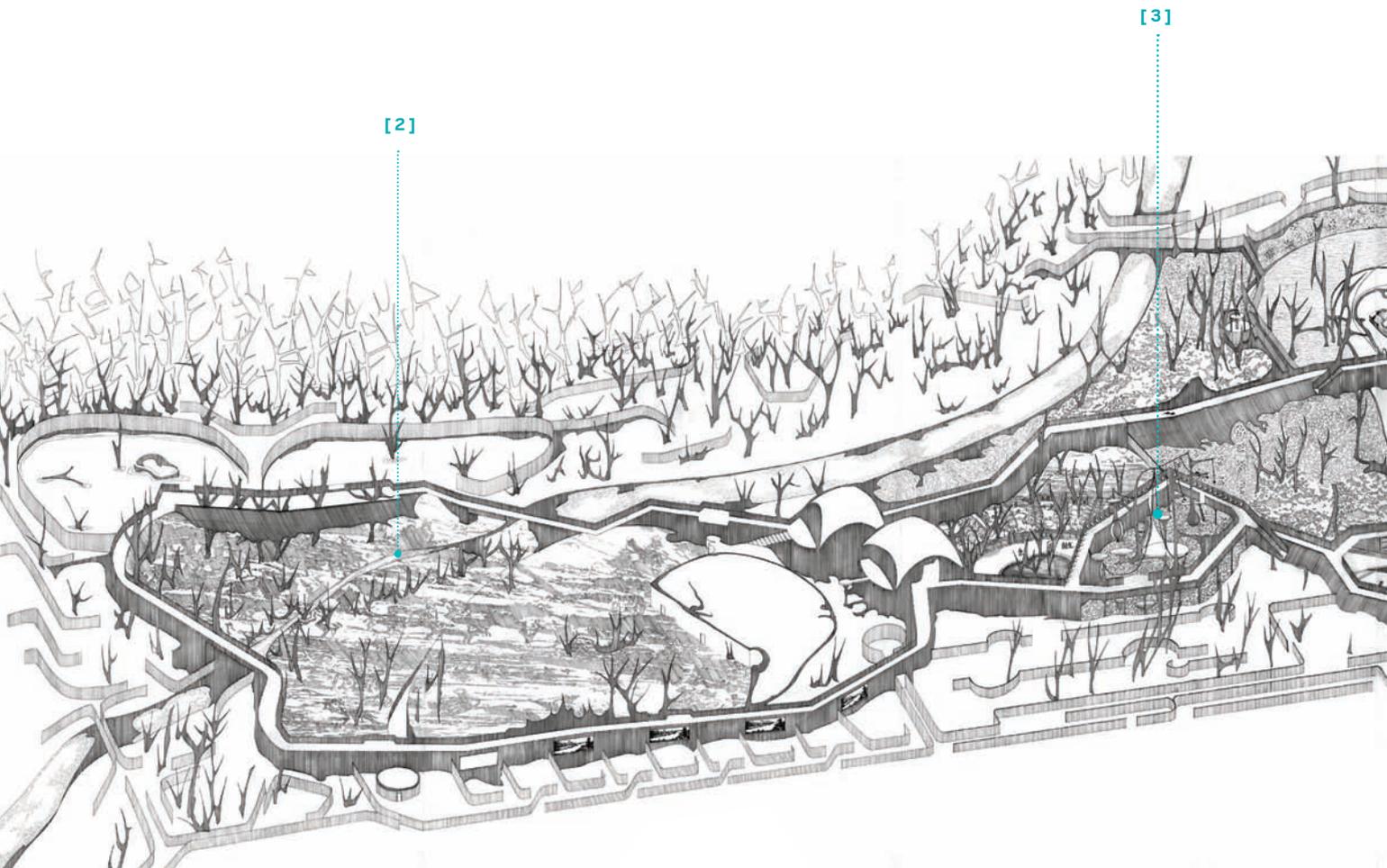
Opposing perceptions share an existential uncertainty generated by the affective precision of the architecture itself: the recognition of the fact that our cultural identities, our very foundations are outside ourselves, in the clusters of images and code through which we are culturally apprehended.⁷

Identity, or character, is applicable to the individuals, environments, and objects we surround ourselves with. Vastly different characters can emerge from what has

until now been a mute thing, each with traits that take positions in relationship to nature, chaos, tragedy, and most importantly inhabitation. Through this inhabitation, the characterized object influences directly the atmospheric qualities of the residential interior similar to a pet, relative, or friend. Not an artifact of inhabitation but a subject that inhabits a position of strangely familiar "other" with innate behaviors and personality. Architectural characters, refuse to separate abstraction and representation, the functional and the fantastic, or building from environment. The tornado shelter, as a character, has the untapped potential to affect the architectural interior in an area spanning much of the central United States. An exacting analysis and execution of details and narrative allow us to develop characters that negotiate the relationship of the domestic interior to the extreme phenomena of the natural environment. 

⁷ K. Michael Hays. "Architecture's Desire: Reading the Late Avant-garde". (Cambridge, MA: MIT, 2010), 119.





ABOVE: In *Flying the Coop*, drawing and model-making are opportunities to think about architectural methodological structures that, like zoo enclosures, actively shape our relationship to that which we design. Also like zoo enclosures, these structures can be toyed with, undermined, and made to conflict and perplex in ways that open them up to imaginative participation.

- KEY
- 1 ISLANDING: How to Get Away
 - 2 COLLAPSING: How to Flatten
 - 3 STAGING: How to Play
 - 4 HIDING: How to Disappear
 - 5 ORGANIZING: How to Line Up
 - 6 BUBBLING: How to Share

Remember there is nothing noble about us or those apes.

We both have our hallways, our specific captivities

—Pam Ore, from *Grammar of the Cage*¹

The constrictions of culture may be repositioned as a primal (natural) landscape.

—Jill Stoner, from *Toward a Minor Architecture*²

1 Pam Ore, "Standard Practices for Chimpanzee Management," in *Grammar of the Cage* (Los Angeles: Les Figue Press, 2005) 10.
 2 Jill Stoner, *Toward a Minor Architecture* (Cambridge: MIT Press, 2012) 11.

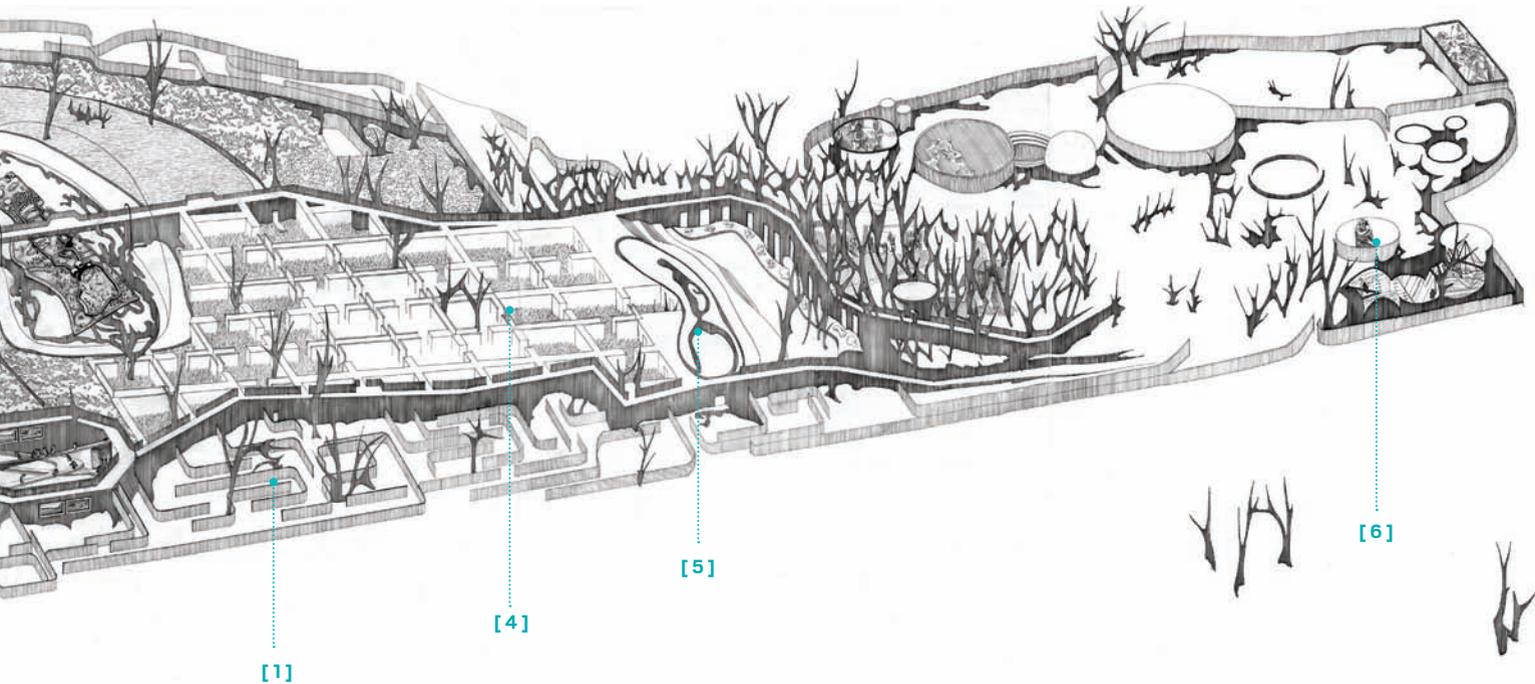
In 2002, the zoo on Belle Isle, Detroit's park island, was abandoned.

Or rather, the idea of keeping captive animals was abandoned; the zoo itself was never really empty. Its exotic menagerie was sent away but its enclosures and passageways remained full of the life of the island.³

As the zoo unraveled, so did its boundaries: dandelions pushed through splits in the rubber lining of the fake pond, birds picked their way through netting to nest in

3 "The life of the island" has included flora and fauna native to Belle Isle, curious human passersby, graffiti artists, the descendants of a herd of white fallow deer given to the City of Detroit by the King of France in 1895, and a cast of actors and battling animatronic robots from the movie *Real Steel*, shot in the zoo by Disney in 2011.

flying the coop: a zoo for belle isle



A zoo is a manifesto. It tells a story about the relationship between its human visitors and nonhuman captives, and it makes that relationship real.

the eaves of the viewing shelters, and leaves choked over the panoramic views from the boardwalk into the animal enclosures. Gradually, the zoo lost control of the human-nonhuman interactions it was designed to maintain.

A zoo is a manifesto. It tells a story about the relationship between its human visitors and nonhuman captives, and it makes that relationship real. It is a place for indulging collective fantasies, for the thrill of contact with something other-than-human. Architecture plays a key role in determining the nature of those relationships, positioning the visitors as particular kinds of subjects and the captives as particular kinds of objects. In Carl

Hagenbeck's 1898 zoological panoramas, visitors were cast as world-conquerors, able to take in an entire geographic region represented by seamlessly aligned enclosures collapsed within a single, perspectival view. Berthold Lubetkin's 1934 design for the penguin pool at the London Zoo cast its visitors as spectators and the penguins as performers, sliding on playful white slides into a perfectly circular pool. Cedric Price's 1964 Snowdon Aviary, also in London, strove towards the weightlessness of the birds, lifting its visitors up into an airy tensegrity structure and into the space of the animals themselves. The Woodland Park Zoo, designed by Jones and Jones in Seattle in 1980, expertly created the illusion that humans

were absent from the animals' environment, casting its visitors as invisible observers of a pristine natural setting. We build these intricate structures to enact our zoological fantasies, and they last. Though fantasies, they are also solid environments that persist in time—even when those fantasies change, lose their meaning, or become irrelevant.

Left unconsidered, the zoo's relationships can become static and stagnant—we can become trapped as certain kinds of subjects, captive to the roles we are asked to play. The fantasy environments can overpower our imagination and make any other kind of contact seem impossible. But within the uncertainty and unease produced by the Belle Isle Zoo's open cages and collapsed fences, there is breathing room—room that leaves us free to imagine other ways of relating.

Flying the Coop proposes a series of renovations to the zoo, transforming it from a collection of captive animals into a collection of structures that produce conflicting subject-object relationships. The structures respond to a series of impulses or desires common to the history of zoo design: Islanding—removal from the surrounding context in order to create a self-contained, fictional world; Collapsing—visually flattening contents into two-dimensional images; Hiding—erasure of the presence of human subjects and simulation of an “untouched” natural environment; Staging—performer-spectator situations; Organizing—production of meaning through ordered accumulation; and Bubbling—attempting to provide access to another living thing's “perceptual bubble”. By never allowing the subject to settle too comfortably within one way of seeing, the renovations attempt open up the zoo to more active imagination and play.

For *Flying the Coop*, architecture is not the heroic rescuer of a city in distress but rather its playful co-conspirator. It delights in the idea that there are many

ways to live in a zoo—and many ways to live in a city. It considers the Belle Isle Zoo's abandonment a wonderful reconfiguration of previously stagnant relationships. Architecture is asked to participate in this reconfiguration by setting up unexpected encounters, strange resonances, and opportunities for imaginative flights that allow visitors to actively participate in the invention of their environment.

Italo Calvino writes of flight: “Whenever humanity seems condemned to heaviness, I think I should fly... into a different space. I don't mean escaping into dreams or into the irrational. I mean that I have to change my approach, look at the world from a different perspective, with a different logic and fresh methods of cognition and verification. The images of lightness that I seek should not fade away like dreams dissolved by the realities of the present and future . . .”⁴ Flight, for Calvino, is not about escapism but about agility—developing an imagination agile enough to re-conceive real boundaries. It is possible that in order to truly change the structure of our environment, we must not flee but rather stay—investing deeply in the barriers we have created for ourselves, understanding their logics, and playfully reinventing their meanings.

ISLANDING—HOW TO GET AWAY

In order to create a self-contained, fictional world, zoos remove themselves from their surrounding contexts. The zoo's interior is often sealed from the exterior with fences, freeways, and large stretches of impassable land.

Without the idea of captivity, the border of this zoo can become loose and porous—the zoo removes itself not by sealing its interior from the exterior, but by playing with the passage from one side to the other.

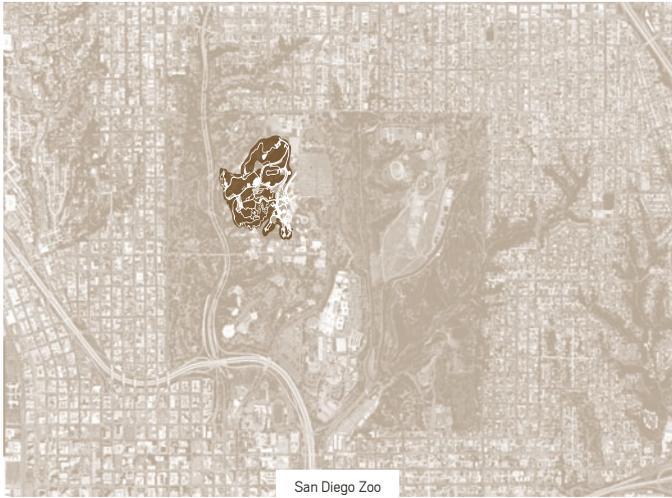
⁴ Italo Calvino, *Six Memos for the Next Millenium* (New York: Vintage Books, 1993) 7.



LEFT: Belle Isle Zoo, 1989

RIGHT: Belle Isle Zoo, 2012

OPPOSITE: Islanding—How to Get Away zoo maps



San Diego Zoo



Bronx Zoo



Cincinnati Zoo



Detroit Zoo



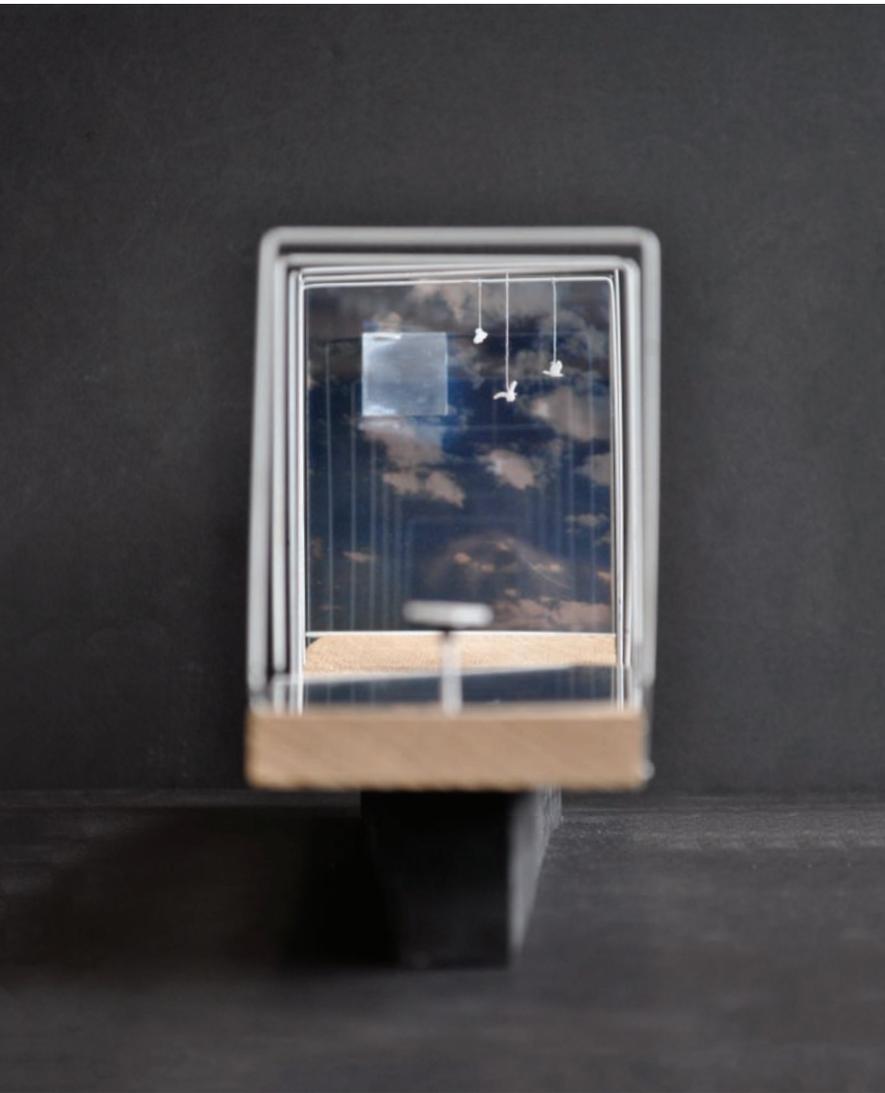
Los Angeles Zoo



Belle Isle Zoo



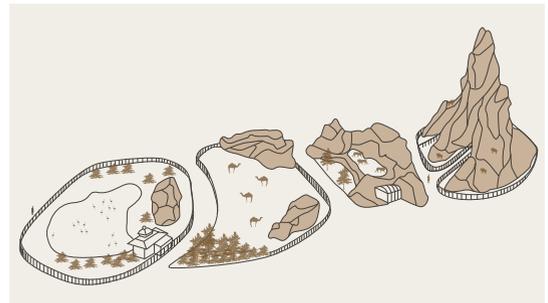
St. Louis Zoo



COLLAPSING—HOW TO FLATTEN

Collapsing plays on the long history of designing zoo exhibits to visually flatten their contents into two dimensional images. In Carl Hagenbeck’s 1898 zoological panoramas, visitors were cast as world-conquerors, able to take in an entire geographic region represented by seamlessly aligned enclosures collapsed within a single, perspectival view.

In this exhibit, visitors can gaze at and photograph a landscape that looks smooth and continuous—but they discover, once they enter it, that the landscape is crossed by hidden spaces.

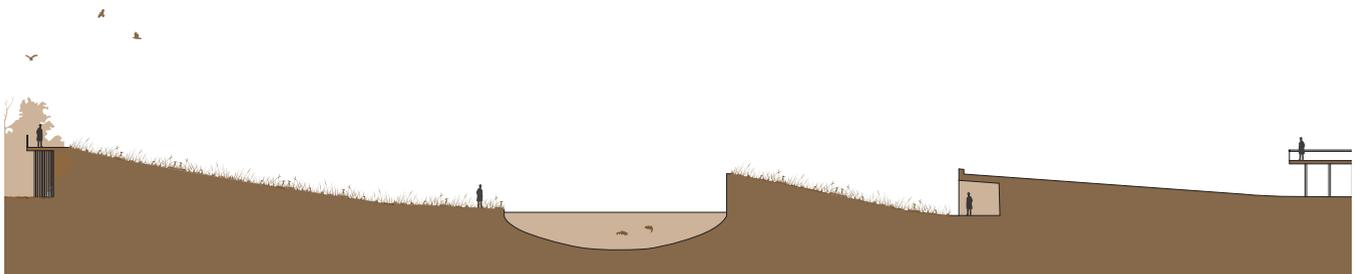


MODEL PHOTO:
Collapsing—How to Flatten

“MURALS MAKE BEAVERS FEEL AT HOME”: Popular Science article about the new Belle Isle beaver exhibit, 1936

AFRICAN PANORAMA: Carl Hagenbeck, *Zoological Paradise, The Zoological Garden Of The Future*, 1898

ZOO SECTION:
Collapsing—How to Flatten

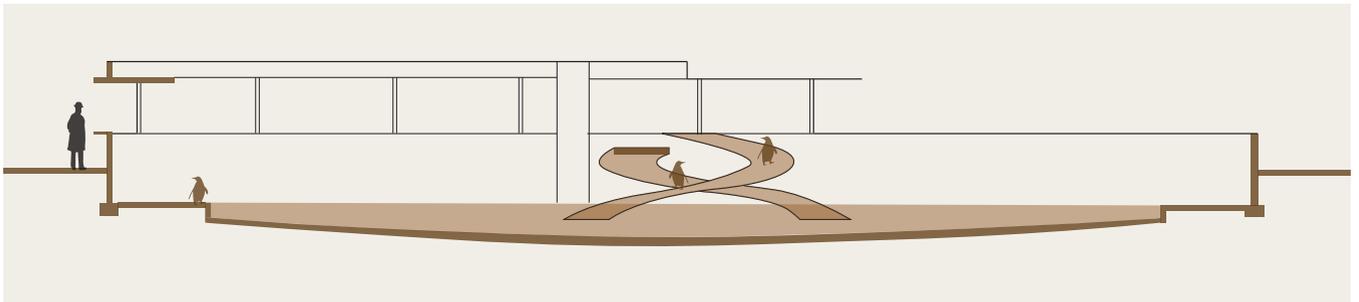




STAGING—HOW TO PLAY

Staging is the design of zoo enclosures for particular kinds of play. Berthold Lubetkin's 1934 design for the penguin pool at the London Zoo cast its visitors as spectators and the penguins as performers, sliding on playful white slides into a perfectly circular pool.

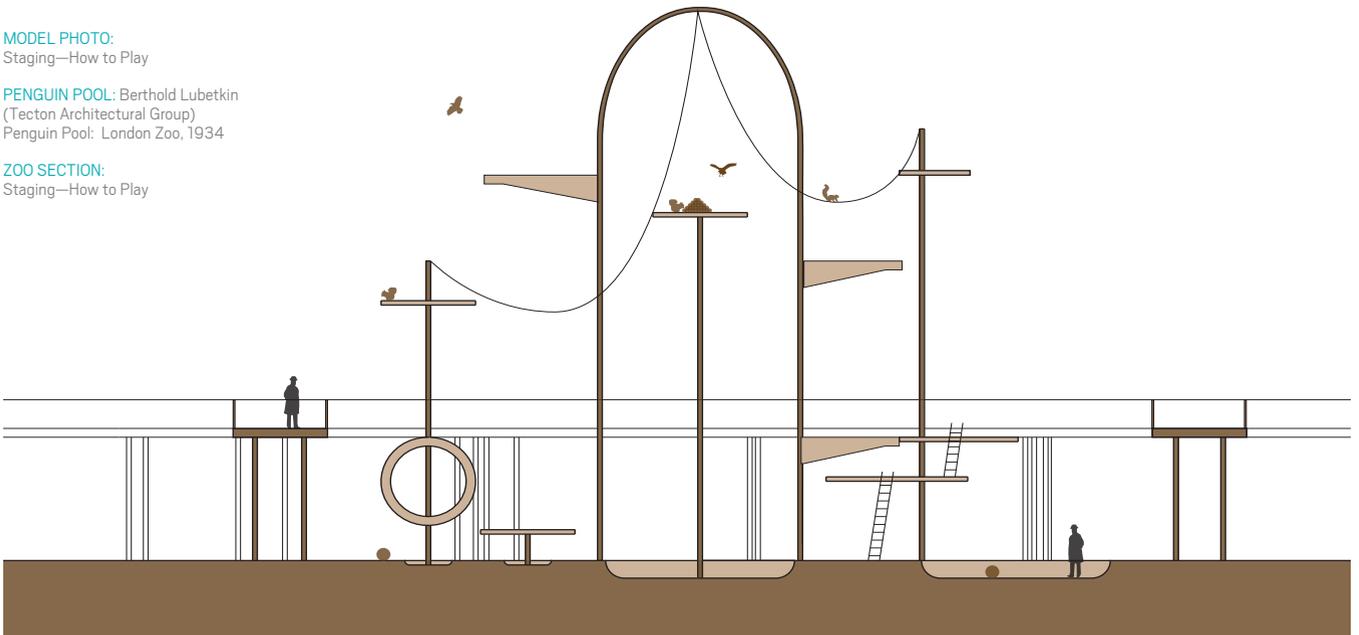
This zoo has a playground for humans and animals, and a place to watch them both.



MODEL PHOTO:
Staging—How to Play

PENGUIN POOL: Berthold Lubetkin
(Tecton Architectural Group)
Penguin Pool: London Zoo, 1934

ZOO SECTION:
Staging—How to Play



THESIS

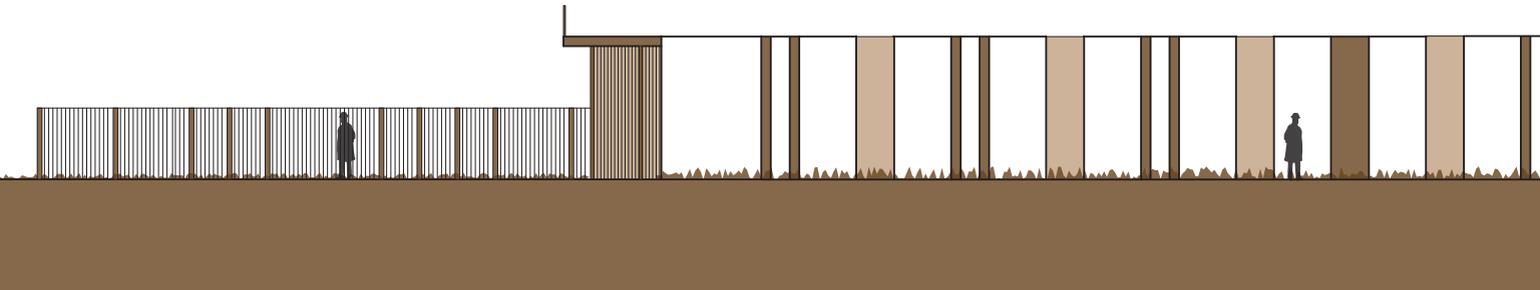
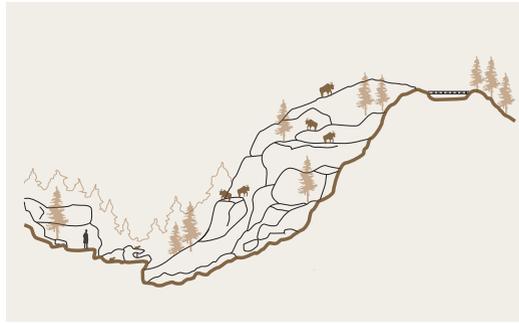
FLYING THE COOP: A ZOO FOR BELLE ISLE

MODEL PHOTO:
Hiding—How to Disappear

WOODLAND PARK ZOO: Jones and Jones, Seattle, 1980's

BIRDWATCHING: Sheriff Truman and Pete Martell birdwatching, *Twin Peaks*, Season 2, Episode 8, 1990

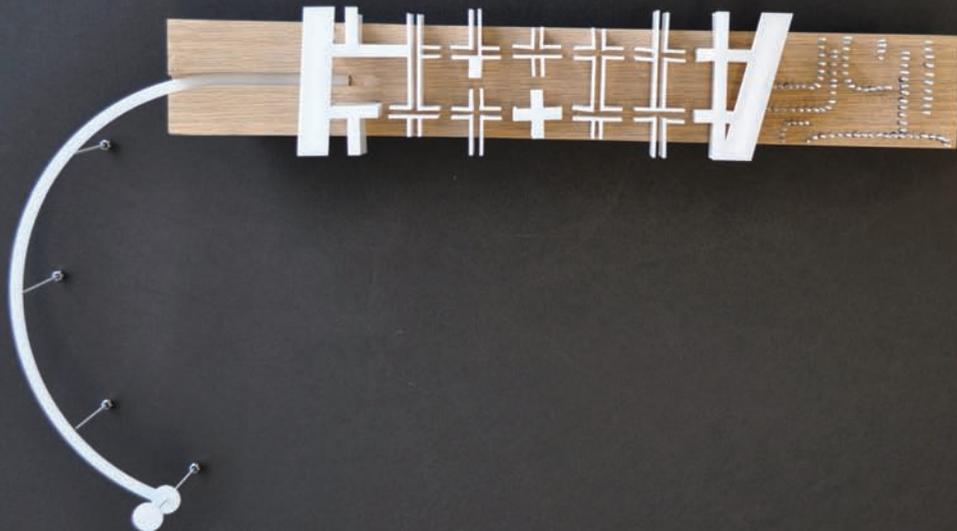
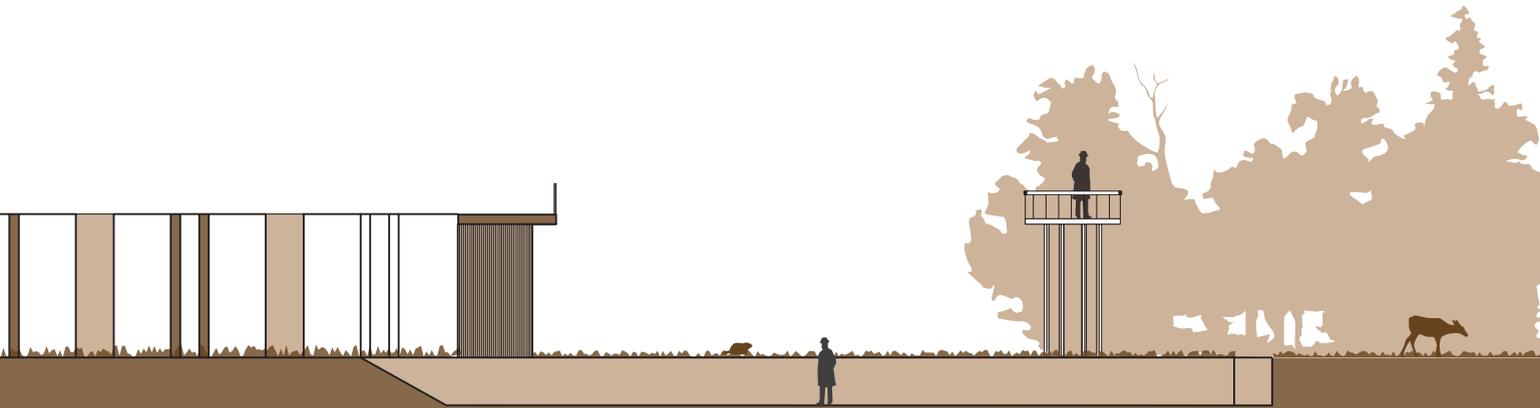
ZOO SECTION:
Hiding—How to Disappear



HIDING—HOW TO DISAPPEAR

Hiding is the desire for a zoo exhibit to erase completely the presence of a human subject. The Woodland Park Zoo, designed by Jones and Jones in Seattle in 1980, expertly created the illusion that humans were absent from the animals' environment, casting its visitors as invisible observers of a pristine natural setting.

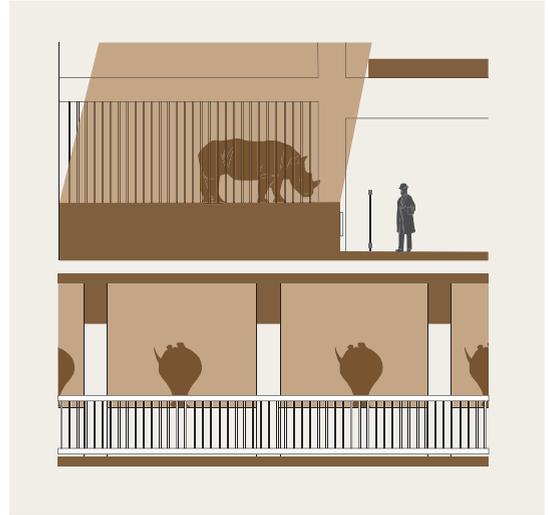
This zoo plays with several kinds of erasure: getting lost by winding, disorientation through monotonous repetition, and perching in a secret spot.



ORGANIZING—HOW TO LINE UP

Zoos point out connections between things by organizing, or producing meaning through ordered accumulation. Early zoos, like the London Zoo in the early 1800s, collected many examples of the same species and lined them up for morphological comparison.

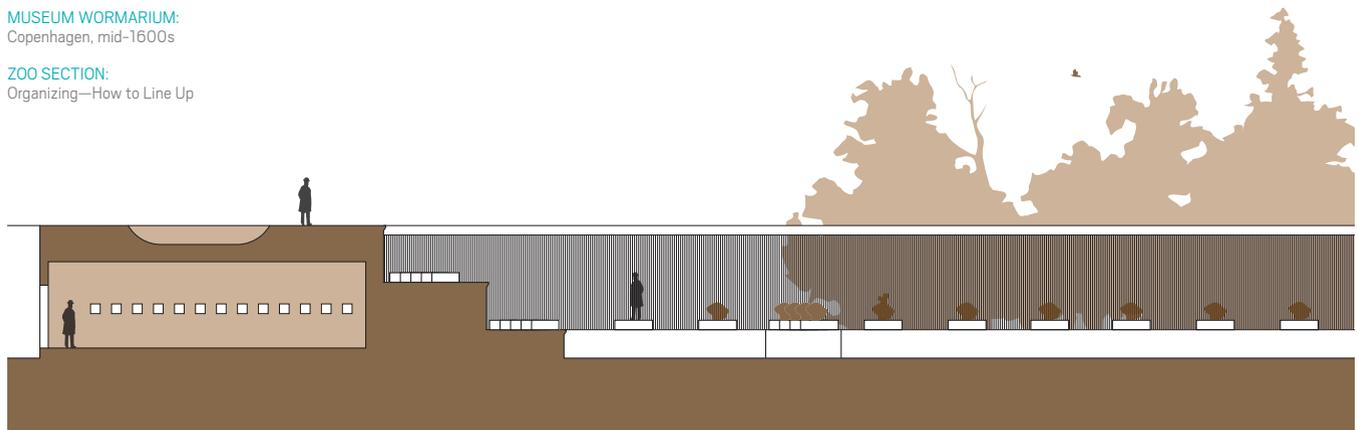
This zoo has a place for lining up both people and things.



MODEL PHOTO:
Organizing—How to Line Up

MUSEUM WORMARIUM:
Copenhagen, mid-1600s

ZOO SECTION:
Organizing—How to Line Up

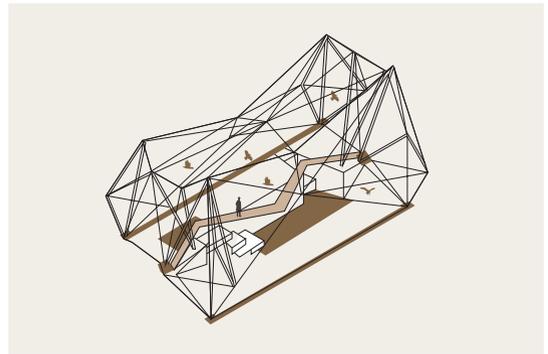




BUBBLING—HOW TO SHARE AND BORROW

Bubbling is the desire for a zoo exhibit to help its visitors enter into another living thing's "perceptual bubble." Cedric Price's 1964 Snowdon Aviary at the London Zoo strove towards the weightlessness of the birds, lifting its visitors up into an airy tensegrity structure and into the space of the animals themselves.

In this zoo, bubbling is attempted in a collection of self-contained spaces that use different types of media to immerse visitors in animal contact at a variety of scales. 



MODEL PHOTO:

Bubbling—How to Share and Borrow

JONES SNOWDON AVIARY:

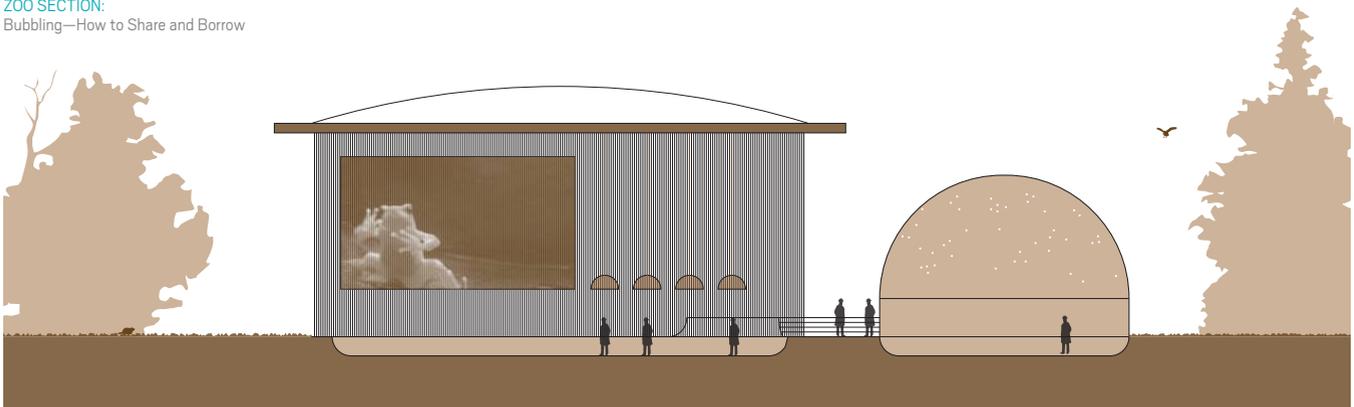
Cedric Price, Frank Newby and Antony Armstrong, London Zoo, 1964

SURROUNDINGS AND ENVIRONMENT:

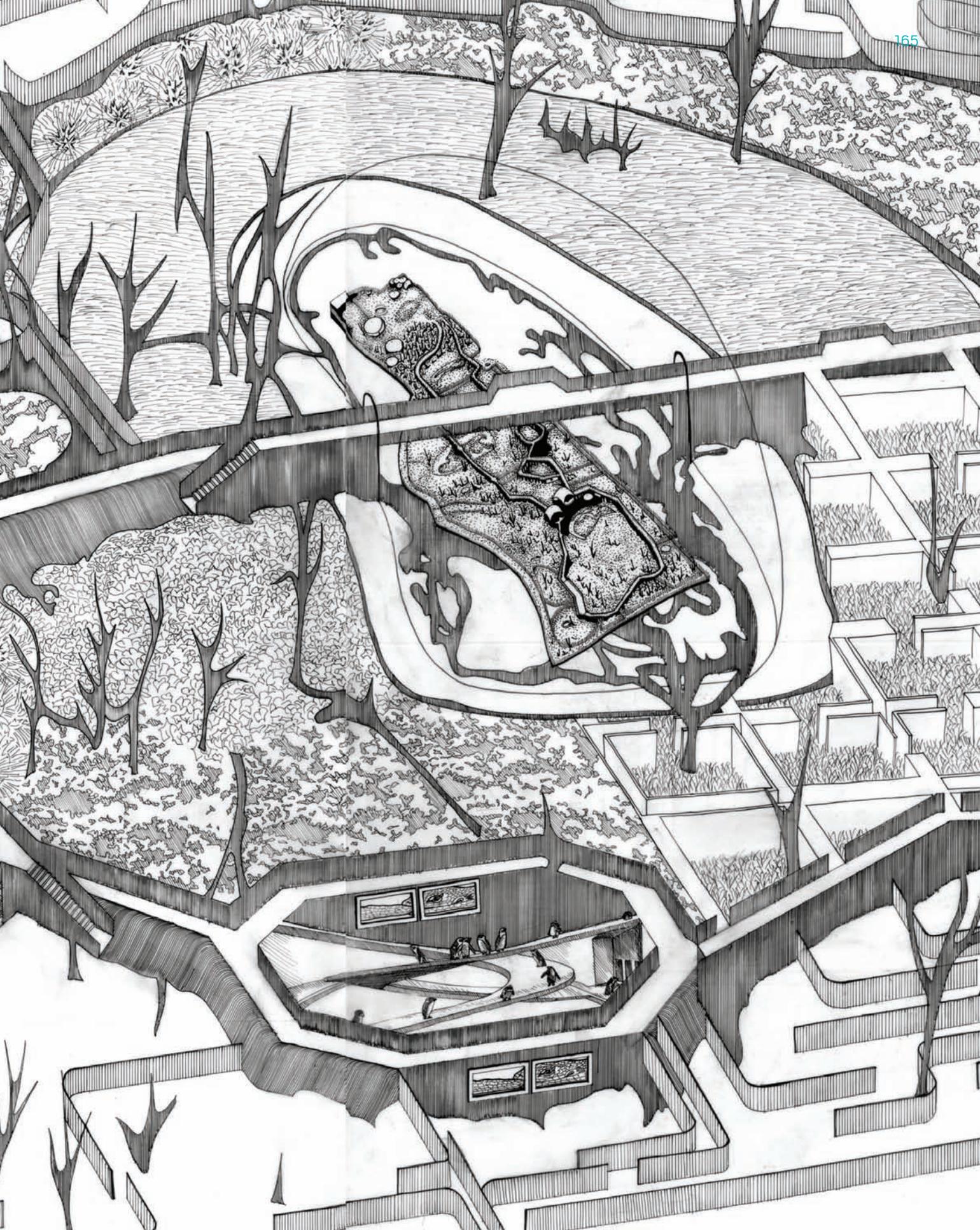
Jacob von Uexkull, *A Foray into the Worlds of Animals and Humans*, 1934

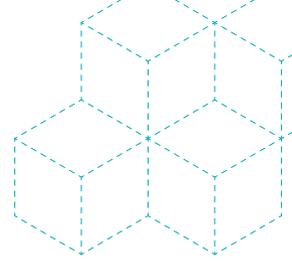
ZOO SECTION:

Bubbling—How to Share and Borrow









research through making

Historically, research and creative practice have been constructed as “opposites.” This is not an unusual struggle in architecture schools, particularly in the context of a research university. This perceived tension between design and research is indicative of age-old anxieties within the architecture field to understand its nature as an “applied art.” Design can be a purely creative activity not unlike creative practices in music and art. In other cases, design can be a purely problem solving activity, not unlike research in engineering and industrial production. The University of Michigan Taubman College’s Research Through Making (RTM) Program provides seed funding for faculty research, worked on by faculty, students and interdisciplinary experts. The exhibition presents tangible results of their collaborative work.

2013 RESEARCH THROUGH MAKING INSTALLATIONS

Jean-Louis Farges & Anya Sirota
Electroform(alism): Masters, substrates and the rules of attraction

McLain Clutter & Kyle Reynolds
Making Nothing

Meredith Miller
(DE)COMPOSING TERRITORY: Enclosure as a negotiation between bioplastics + environments

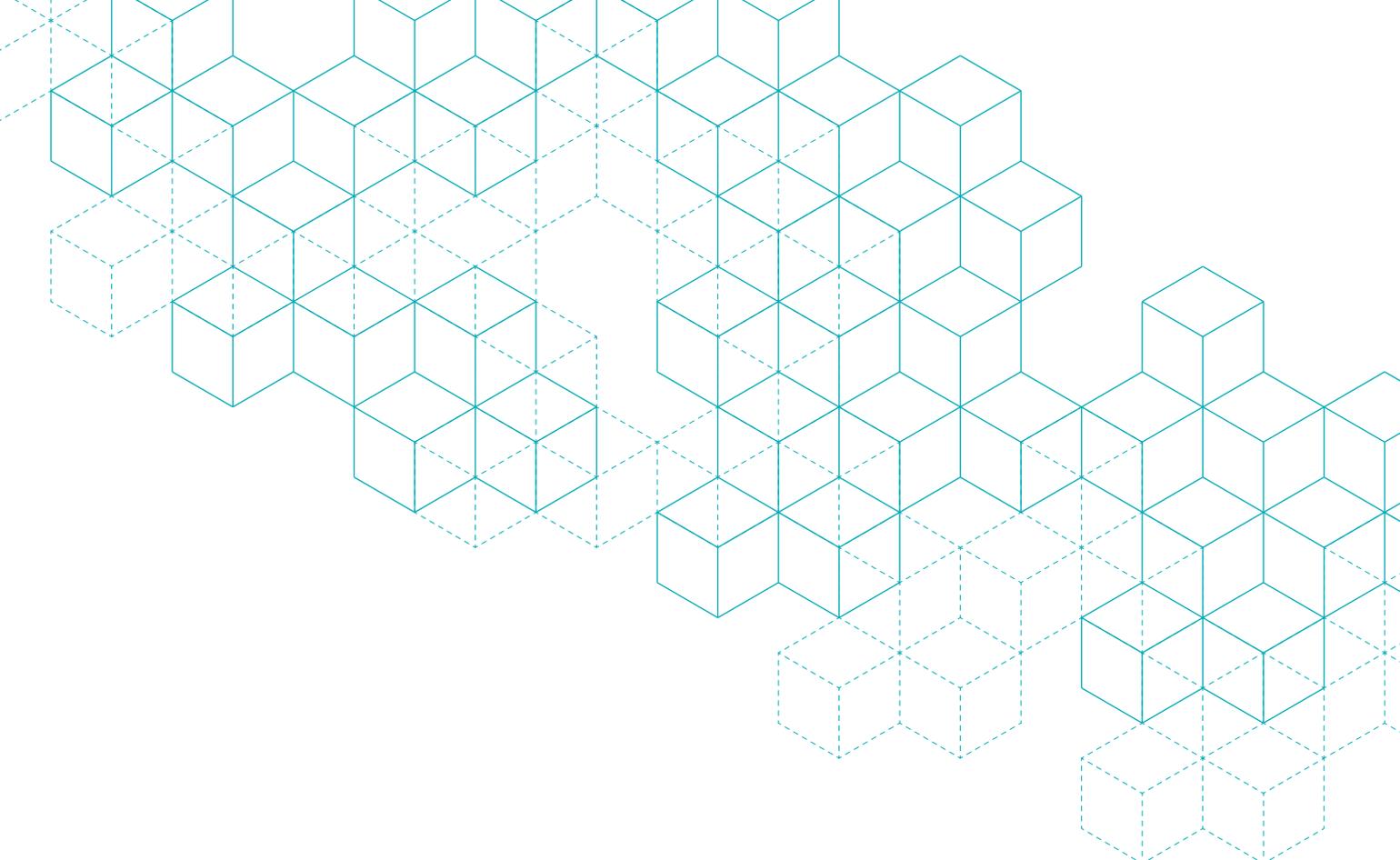
Maciej P. Kaczynski
Crease, Fold, Pour: Advancing Flexible Formwork with Digital Fabrication and Origami Folding

John McMorrough & Julia McMorrough
Platform for Architecture & Makin’ It, A Situation Comedy

FEATURED PROJECT

Maciej P. Kaczynski
Crease, Fold, Pour: Advancing Flexible Formwork with Digital Fabrication and Origami Folding





studio expertise workshop

⋮ The Expertise Workshop is a program that allows for the integration of high-level expertise into selected architectural design studios with the aim of expanding the interdisciplinary perspective of the students and faculty as they work on projects of contemporary relevance. Visiting experts come from a variety of fields, including urbanism, economics, politics, infrastructure, engineering, and building sciences, and are intended to provide an expanded perspective to students through a collective workshop with a specific pedagogical focus.

⋮ **Follow the Actors!**
⋮ Georgeen Theodore & Kathy Velikov
⋮ 2013 Networks Studio, November 1st–4th



crease, fold, pour

Crease, Fold, Pour is a line of research that proposes a new method of casting free-form reinforced concrete geometries with the use of folded thin-gauge plastics as semi-rigid formwork.

Research Director: Maciej P. Kaczynski

Research Assistants: Eric Pasche, Brandon Vieth, Lauren Bebry, Eric Meyer, Jason Prasad

Photography: Adam Smith and Lauren Bebry

Funding: University of Michigan, Taubman College of Architecture and Urban Planning, University of Michigan, Office of the Vice President for Research

Fabrication: University of Michigan Taubman College of Architecture and Urban Planning

Consultants: Peter Von Buelow (UofM), Harry Giles (UofM), Claude Bergeron (Lafarge Cement Company)

Crease, Fold, Pour is a line of research that proposes a new method of casting free-form reinforced concrete geometries with the use of folded thin-gauge plastics as semi-rigid formwork. Conducted at the University of Michigan's Taubman College of Architecture and Urban Planning, the research seeks to expand the architectural discipline's ongoing exploration of flexible formwork processes beyond the predominant membrane tectonic (non-rigid textiles) by incorporating methods of folding. The act of folding, often relegated to ornamental paper and origami, remains an under-utilized tectonic operation in architectural lexicon.

The importance of concrete construction is without debate; it is one of the most prevalent tectonic tools of architectural construction and practice. Despite the increasing ease and ability to digitally describe complex geometries, the casting of reinforced concrete has remained largely restrained to rectilinear geometries. Contemporary examples of free-form concrete have predominantly relied upon rigid molds subtractively machined from larger stock—a process which remains time intensive, materially inefficient, and expensive.

Textiles used for tension-resisting formwork offer the advantage of being hundreds of times lighter than conventional rigid formwork. While acknowledging the formal beauty and efficiency produced from fabric formwork, *Crease, Fold, Pour* seeks to grant the designer new avenues of formal authorship without compromising its elegant efficiency. The project seeks to hybridize techniques of fabric formwork and conventional rigid formwork construction as a means to diversify and expand

CONCRETE POURING PROCESS:

Concrete was poured into the formwork using fabric grouting bags through periodic openings (grouting bag visible in upper left). Pneumatic vibration was used during pouring to improve the surface quality and concrete flow.



CUTAWAY OF NODAL COMPONENT: One-eighth inch steel rod was held in place using custom-cut plastic offsets.

FOLDED FORMWORK UNDER CONSTRUCTION: At twelve-feet tall, the totem required ladders and scaffolding to be delicately placed to safely complete assembly.

CREASE, FOLD, POUR: On display at Taubman College Research Through Making Exhibition, March 2013

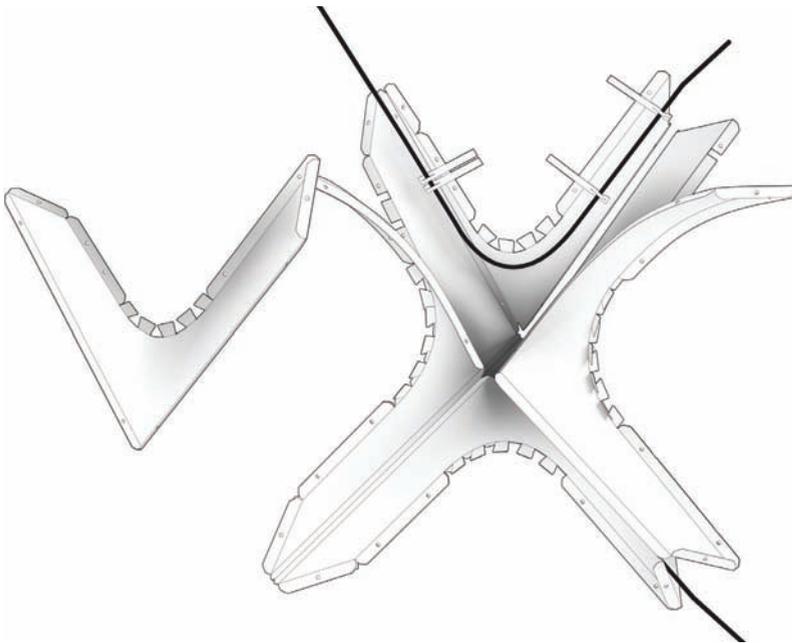
SUPER STAPLER: Modified industrial staplers allowed staples to be inserted as close as possible to folded seams in the plastic formwork.

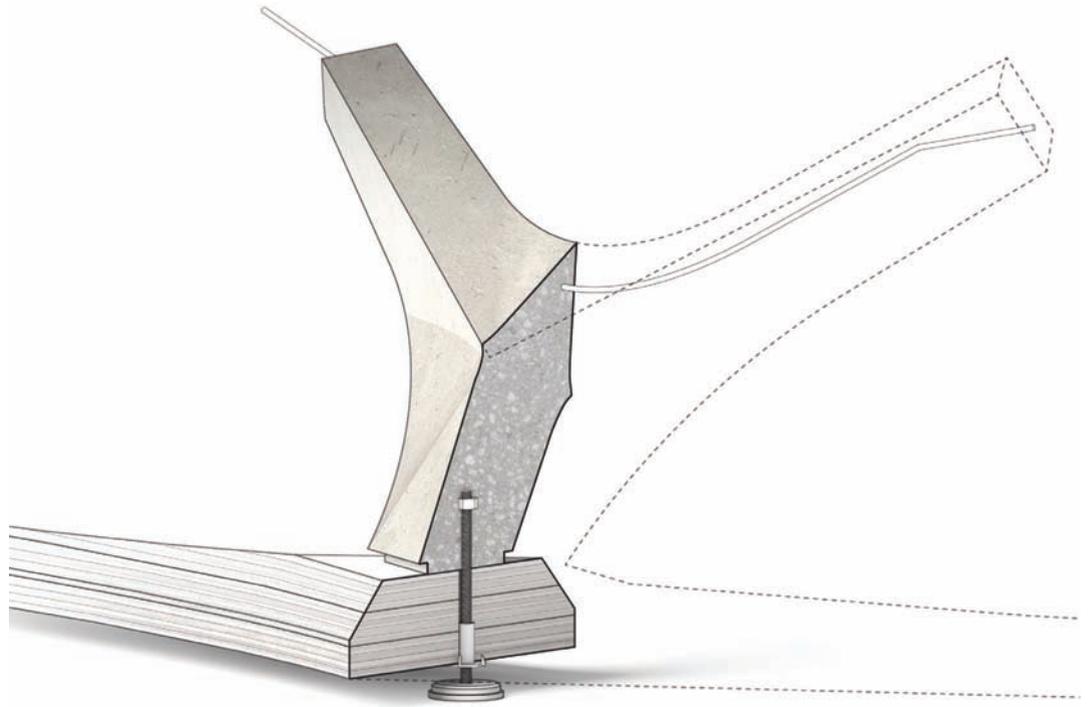
the methods of casting free-form concrete geometry. The unlikely catalyst of this hybridized approach is origami. Folding techniques offer greater control, precision, attenuation, and articulation of concrete forms than the fabric formwork equivalent.

Aided by the increasing prevalence and accessibility of software modeling tools, the practice of origami folding has attained previously unrealizable geometric precision and complexity as well as astounding rigidity by simply creating a single intact sheet of flat stock material. This research posits that such techniques of folding, combined with customized tabbing techniques, can create viable, efficient, and formally innovative concrete formwork. The first phase of research concluded with the construction of a full-scale, site-cast, reinforced concrete totem.

This totem was built from folded-plastic formwork and cast using a customized concrete recipe.

Although able to retain greater geometric definition and determinacy, one of the least-forgiving constraints of folded-plastic formwork is its inability to accommodate the outward hydrostatic pressure of freshly poured concrete. Like fabric formwork, folded-plastic formwork is vulnerable to distortion and material failure, requiring that large monolithic concrete forms be poured in shallow, sequential layers. Upon achieving final-set and sufficient compressive capacity, each layer of concrete can support the next without compromising the structure. This stratified pouring technique can thus avoid excessive accumulation of hydrostatic pressure, but raises new concerns such as insufficient bonding



**BASE CONNECTION DETAIL:**

A steel shear bolt was used to transfer lateral loads in the concrete totem to the plywood tension ring.

AW, SHUCKS: 48 hours after pouring finished, the one-time-use formwork was 'shucked' like corn.



LAYERED POURING SCHEDULE:

To ensure a strong bond between concrete layers, steel reinforcement was extended across "cold seams."

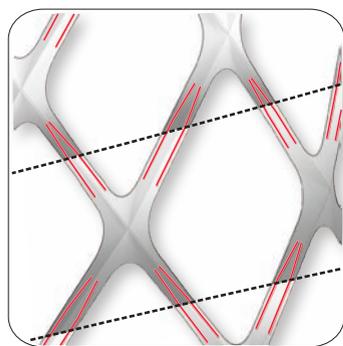
AGGREGATED NODAL COMPONENTS:

Steel reinforcement, connective staples, and push-riquets visible

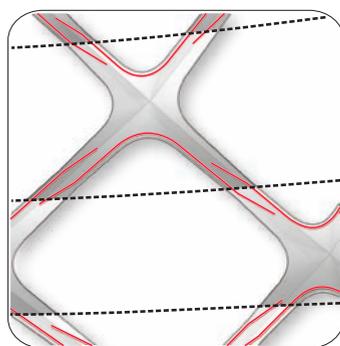
between strata, total length of set-time, surface bubble accumulation, and the necessity of incremental pour access points.

Despite these challenges, the totem was erected in three consecutive days of continuous pouring using a custom-designed, fast-set, self-consolidating concrete recipe. The completed prototype acts as a proof-of-concept to evaluate and demonstrate the tectonic integrity of folded formwork construction. 

REBAR PLACEMENT

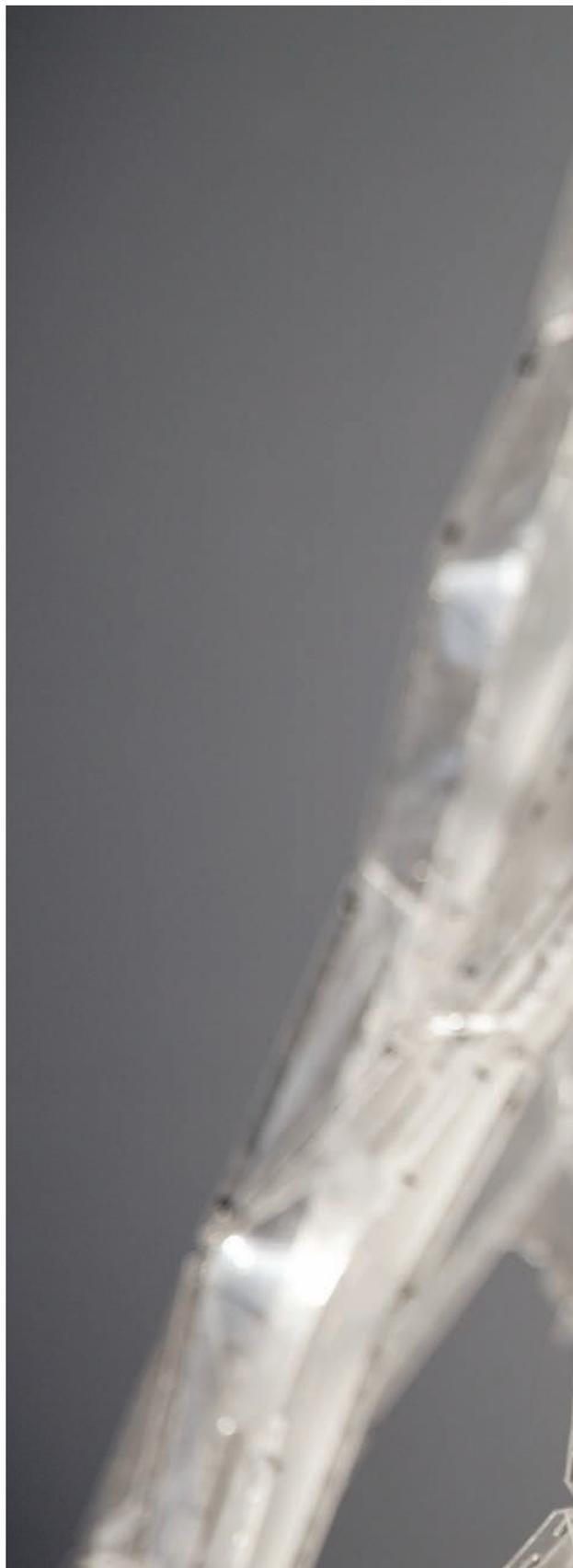
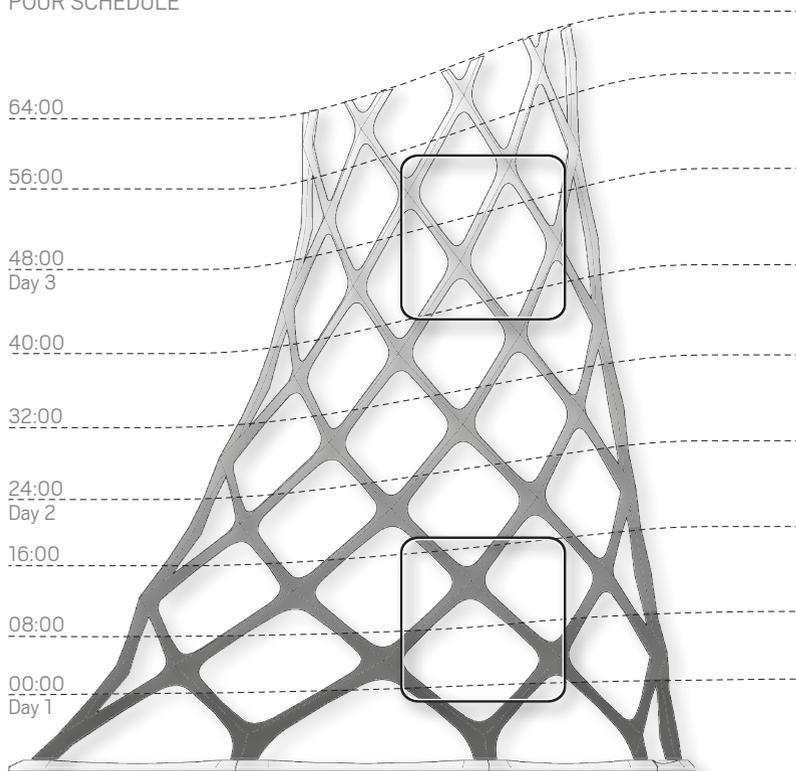


Upper Nodes



Lower Nodes

POUR SCHEDULE







follow the actors!

Architecture is increasingly enmeshed in an expanding network of actors such as real-estate speculators, politicians, activists, but also the unsuspecting individuals who make use of architecture everyday and thereby constantly transform it.



In a five day “Expertise Workshop” conducted at the college in Fall of 2013, led by “visiting expert” Georgeen Theodore and studio coordinator Kathy Velikov, 146 second year M.Arch students worked to uncover and visualize the ways different individuals, organizations, material things, and forces act upon architecture and urban space. At the beginning of the workshop, students were asked to identify actors who have a stake in Detroit’s Eastern Market, and over the five days of working on-site and off, they visualized and projected the relationships, interests, and practices of their selected actors.

Through this process, participants were challenged to reveal forms of spatial intelligence that typically cannot be captured or understood through traditional methods of architectural analysis. At the workshop’s conclusion, each of the twenty teams developed a synthetic illustration (either a single combinatory drawing or an assemblage consisting of multiple media) for discussion.

Within the context of the graduate Networks studio, the Expertise Workshop is an opportunity to engage the entire studio class with a specific approach or

methodology regarding working on the city, led by a visiting “expert” in the field. The goal of these workshops is more than skill acquisition or a quick-fire charrette—it is an experimental endeavor, intended as much to expand students’ engagement with new ideas and approaches as it is about leaving behind the safety of one’s expertise, and testing it within the context of the academy. Here, expertise is exposed to risk, to challenges, to silly questions, to variable experiments, to misunderstandings. It is about the kinds of exchanges and questions that we need be asking in design school, and putting to the test through public forum, discourse and debate.

We want to thank Dean Monica Ponce de Leon and Chair Robert Fishman for supporting the Expertise Workshop, the Networks Faculty—Heidi Beebe, Leigha Dennis, Rania Ghosn, Christina Hansen, Andrew Holder, El Hadi Jazairy, Doug Kelbaugh, Perry Kulper, Steven Mankouche, Neal Robinson, Geoffrey Thün, Jason Young—for participating in the extended discussions and reviews, and all the students for embracing the exercise with energy and openness.

WHY EASTERN MARKET?

Detroit's Eastern Market was chosen as the site for the workshop. ^{F1} Eastern Market is one of the most active areas of the city of Detroit, and is well-known for its produce and meat wholesaling. International, regional and local products are brought to the market, stored, sold, and then distributed throughout the metropolitan region.

This six-block area of warehouses, sheds, and parking lots represents a critical node in a complex, multi-scalar food distribution network serving one of the nation's mega-regions. Recently, new users and publics are utilizing the market site, and in turn, are introducing new practices and programs to the area. On weekends, in addition to the locals who have historically bought food at the market, today throngs of suburbanites come to the market to shop for food, with new specialty shops and eateries emerging in the area to serve this growing customer group.

Designers and craftspeople, appreciating the site's unique urbanity, have rented out some of the formerly industrial buildings, and now benefit from an informal network of artisans in the district. In many ways, Eastern

Market is a new kind of public space in Detroit, defined not so much by the architecture or infrastructure, but by the overlap of very different user groups in time.

PORTRAIT OF AN URBAN ACTOR

The workshop began by asking each student to first identify two actors (individuals or organizations) that have an interest or stake in Eastern Market and then to develop quick portraits of each. We distributed what we called "actor cards" ^{F3} and used these cards to catalogue all of the actors identified by the students. ⁷ Students were encouraged to think of actors big and small, well-known and "under-the-radar," on-site and off. We also asked students to become knowledgeable of each actor's specific interest in Eastern Market; such as what spaces each actor uses, controls, or cares about. Students were encouraged to use a range of resources to develop their portraits, including news articles, personal experience, and first-person interviews that were conducted in

¹ Interboro (Tobias Armbrorst, Daniel D'Oca, Georgeen Theodore) first developed the technique of using "Actor Cards" in the Critical Practice Studio at Lawrence Technical University in summer 2013."

FIGURE 1: As many as 45,000 people visit the Eastern Market on summer Saturdays. Photo: Heidi Wong

FIGURE 2: Urban Actor Cards being laid down by the class. Photo: Leigha Dennis

FIGURE 3: Urban Actor Portrait Card





Portrait Here

Name

Objective

Spaces of Interest

Resources

Strengths

Weaknesses

the following days. As opposed to developing generic profiles, we required the portraits to be specific, reflecting characteristics that were based on actual people.

At the end of the first day, all students were asked to introduce their actors to the larger group by succinctly describing their actors and identifying their zones of physical interest or influence by placing their cards upon a large, room-sized map of Eastern Market. *F2*

'FAMILY TREES'

Using the portraits they developed and working in twenty groups of seven to eight, student teams furthered their investigations by visiting the site and conducting interviews. The teams then began to analyze their selected actors as a group and speculated about the real or projected relationships among them.

Each team developed a representational technique to expose the relationships among their investigated actors and their attitudes regarding Eastern Market (whether shared or in conflict). Like a family tree shows a variety of different conditions—marriage, divorce, offspring, death, nuclear units, generational relationships, important

milestones and events, locations, etc.—students were challenged to develop a technique that resulted in a multi-layered illustrative diagram depicting the identities, characteristics (strengths and faults), relationships, and geographies among the selected actors. *F4 & F5*

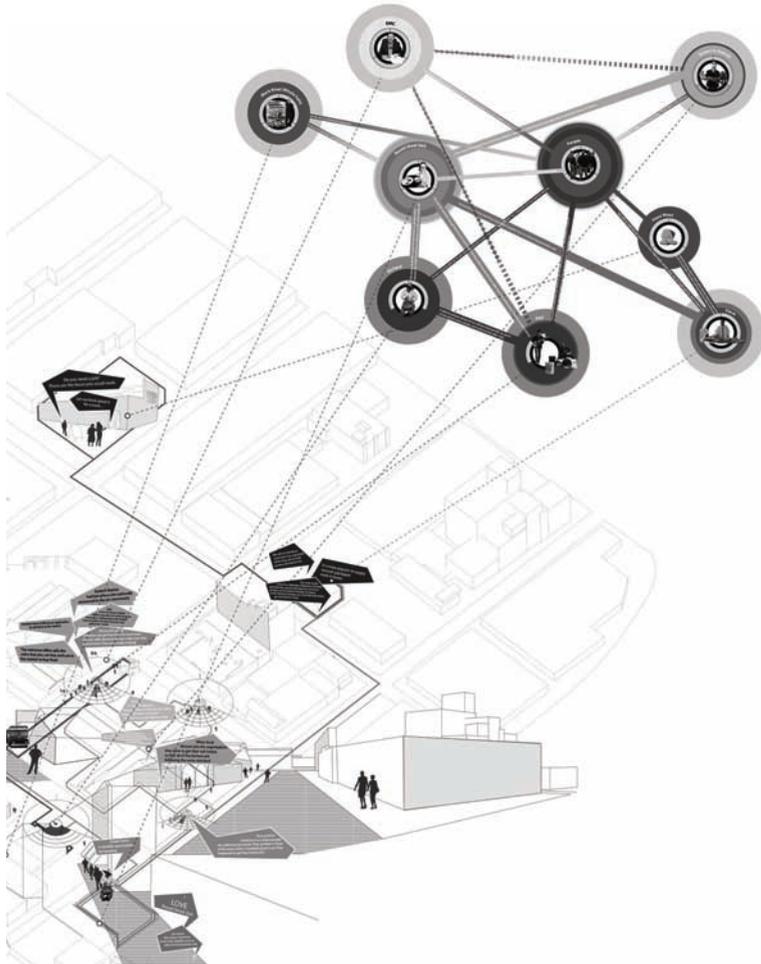
SPATIAL INTERESTS AND AGENCIES

Concurrent with visualizing the relationships among their actors, students were asked to develop a series of synthetic illustrations that represented the spatial interests and agency of each actor in the Eastern Market area. These were to be explored at multiple scales—at the scale of a building, the city and the region or world. These drawings were then combined to illustrate how these actors interact in space over time. The synthetic and combinatory drawings were intended to reveal the heterogeneous connections and activity that continually produce the urban. The premise of the workshop was that this empirical method of analysis and drawing could also expose spaces and scenarios where there would be a potential for design intervention—an amplification of what's already there, an introduction of something

FIGURE 4: Relational network of Eastern Market actors (students—Chen, Cook, Huang, McBride, Nakai, Wang)

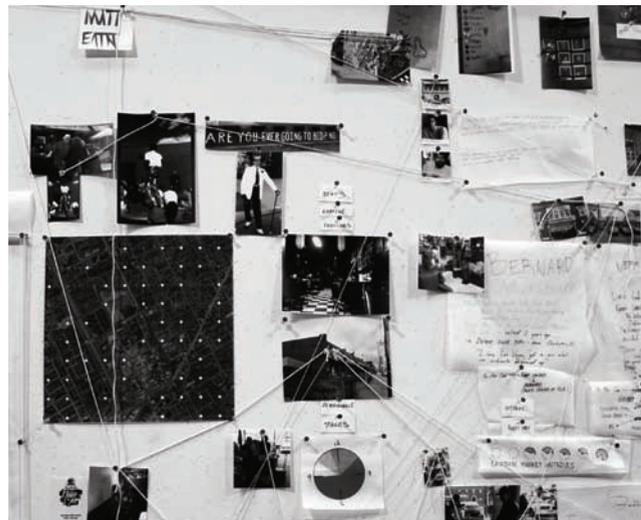
FIGURE 5: Entrepreneurial typologies of actors and their zones of influence (students—Fairbanks, Glen, Latona, Lewis, McGovern, Miglionico, Zhang)

FIGURE 6: Organizing evidence gathered on site in order to construct relations
Photo: Kathy Velikov



GROUP 17 Entrepreneurial Typologies of Eastern Market
Seven Typical and Atypical "Actors" Exerting Influence

<p>Cadance</p>  <p>Den Carmody</p>  <p>Hector Rossi</p>  <p>Mary Jones</p> 
   



totally new (an artifact, a program, a new user group), a hybridization of existing and new—that would allow architecture and design to be explicitly understood as an agent in socially embedded networks.

NARRATIVES

The work that emerged during the workshop can best be described through various species of narratives. Operating akin to detectives, investigative reporters and ethnographers, the student groups worked to compile, organize and reorganize the evidence they had gathered from the site in order to tell a story.^{F6} Given the nature of the challenge however, each story was inevitably comprised of the multiplicity of viewpoints and interests of the diverse actors that were assembled by each group.

The parallel narrative was a dominant species that emerged for many of the groups. These groups tended to focus on “minor actors”—everyday users of the market such as vendors, buskers, artists, squatters, shoppers and tourists—who shared the spaces of the market, and whose relationships and encounters were either transactionary^{F7 & F14} or entirely aleatory.^{F13} More than one group used representational techniques of gameplay, which exposed how the elements of chance, contingency and time could impact the spatial relations of their

actors.^{F11} Other groups were able to uncover causal relationships and strong ties between their actors, such as the exposure of the practices of food stamp fraud, developing a more linear narrative structure.^{F9}

Scenarios was another way in which some of the groups were able to use nonlinear narrative techniques speculate on how actors that typically had no relation could be mobilized into new relational structures. These scenarios ranged from accidental encounters^{F10} to more catastrophic or disruptive events such as food contamination or flooding.^{F8}

Groups also focused on what may be referred to the “power brokers” of the Eastern Market—developers, politicians and CEOs.^{F12} These representations exposed how some of Detroit’s most politically and economically powerful actors operate on the market, using the site to advance their large-scale, city-wide interests.

Whereas the focus of the workshop was the human actors, some groups productively took the point of view of nonhuman actors—such as a tomato^{F15} or a pig.^{F18} By tracing the physical itineraries of each, and visualizing the material and economic transactions that occur as they move through their respective networks, these groups created rich portraits of the architecture and infrastructure of Eastern Market.

FIGURE 7: Isometric drawing exposes parallel narratives of exchange among typical characters. (students—Doneko, Flynn, Lung, Nguyen, Orzco, Smith, Yao)

FIGURE 8: This group engaged in a scenario planning exercise where disruptive and catastrophic events transform yield unexpected futures for the collection of actors. (students—Davis, Menair, Migoski, Ping, Potts, Wolochow, Wu)

FIGURE 9: The actors, spaces and exchanges involving the practice of food stamp fraud in the Eastern Market are exposed by this group. (students—Barber, Hernandez, Kim, Larmor, Pierce, Sarver, Sylvain) Photo: Leigha Dennis

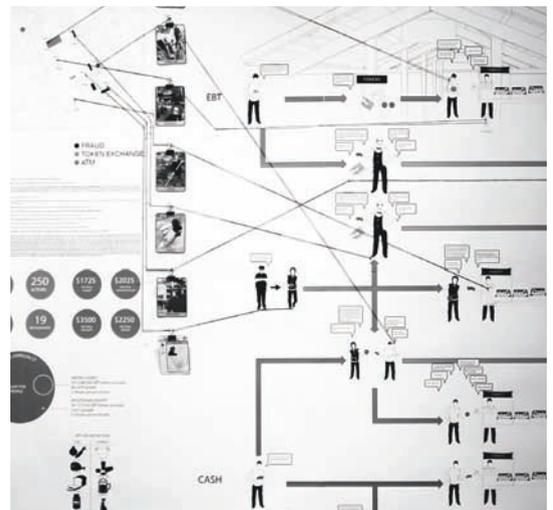
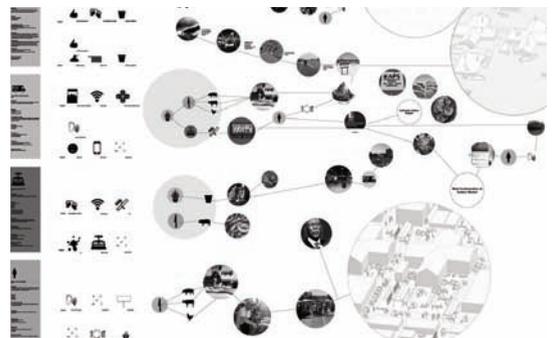
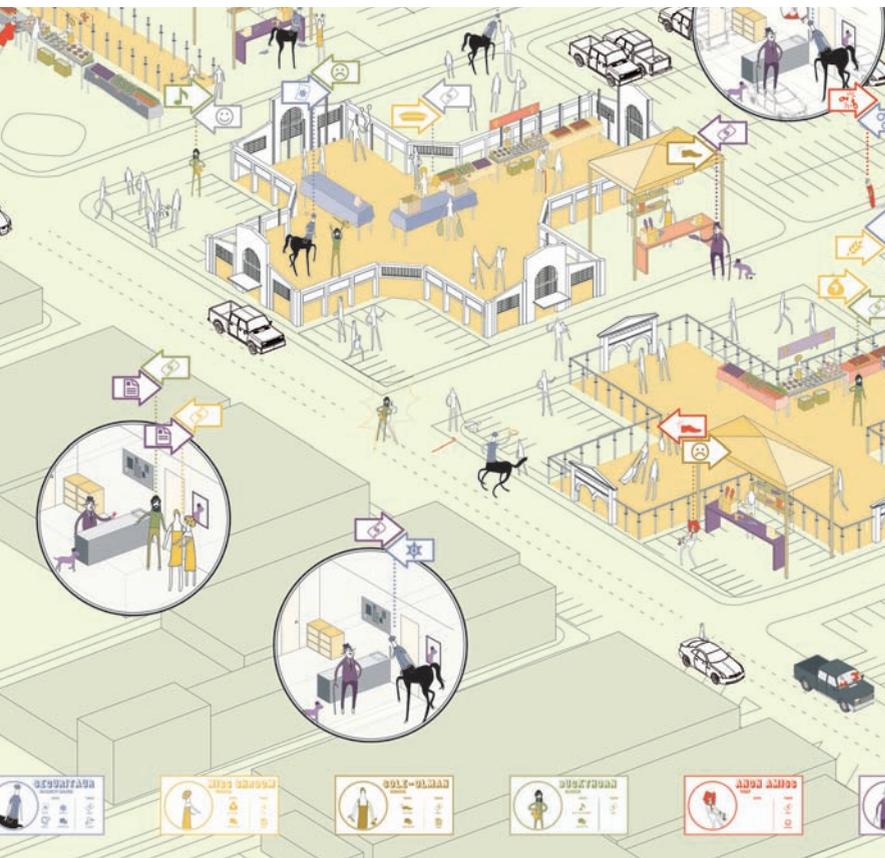


FIGURE 10: Multiple narratives that precipitate from chance encounters and events are explored in this composite drawing. (students— Brugmann, Clayborne, Granville, Liu, Lopez Medina, Wilson, Wong)
Photo: Leigha Dennis



FIGURE 11: This group chose to develop a game as a way to understand how contingent and chance activities of various actors could create different outcomes in the space of the market. (students— Cornejo, He, Joniec, Lee, Marcyan, Tish, Varma)

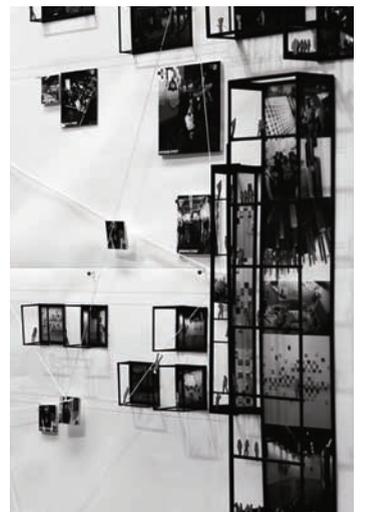
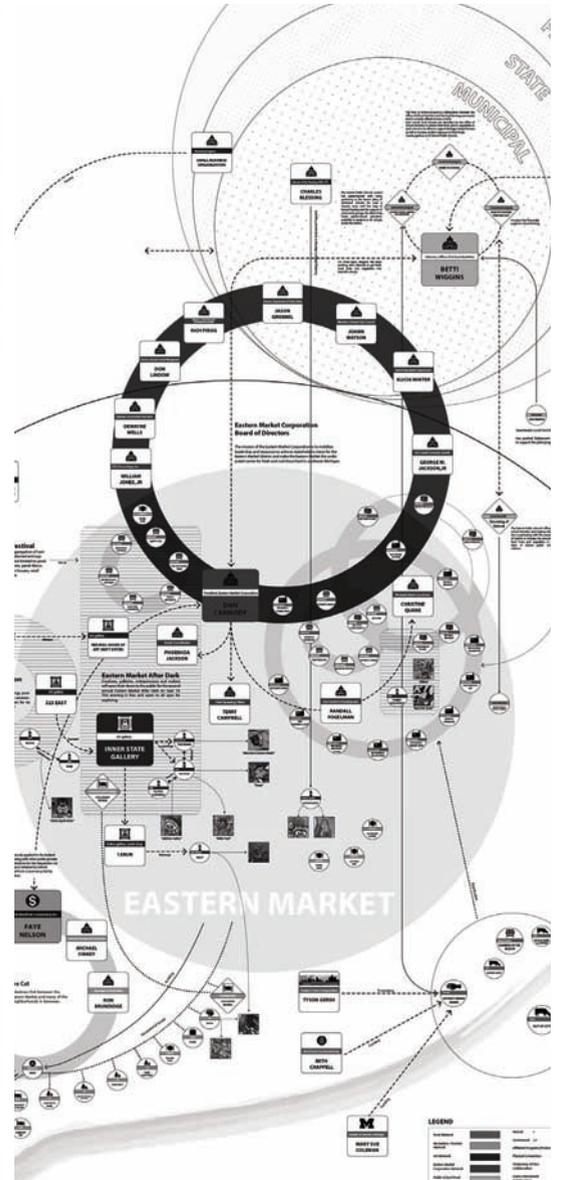


FIGURE 12: The Eastern Market is described here through its intersecting networks—of food, tourism, arts, public schools and development corporations—at the municipal, state and federal levels. (students—Dirienzo, Dome, Heck, Ipsilanti, Lomeli, Tsai, Zhang)

FIGURE 13: The multiplicity of minor actors within the space of the market is depicted in this group's illustration. (students—Feng, Heath, Jiang, Kiyokane, Lin, Oh, Wang)



FIGURE 14: A hybrid drawing maps actors and spaces associated with the market's artist and DIY community. (students—Gong, Gu, Langrehr, Lutren, Niu, Sutherland, Tucker)
Photo: Paul McBride



ANOTHER 38 CENTS DOWN THE DRAIN

AT 2:13 AM JERRY KOWALSKI ARRIVES AT EASTERN MARKET

HAVE THE USUAL.

I'LL THROW IN A COUPLE EXTRA IF YOU'LL BRING ME A PIE LATER.

AT 6AM DAVE MANCINI RETURNS TO SUPINO PIZZARIA TO PREPARE HIS FRESH PIZZA SAUCE.

ONLY THE FRESHEST SAUCE FOR ME PIES.

HOW MUCH FOR A SLICE?

\$2.50

JUST BEFORE NOON.....EDDIE CHARGE STOPS BY SUPINOS TO GRAB A SLICE OF DETROITS BEST PIZZA.

EDDIE CHARGE CASUALLY STROLLS THROUGH SHED 2, EATING HIS PIZZA, ON HIS WAY TO CHRISTINE QUANE'S OFFICE.

DO YOU HAVE YOUR BUSKER APPLICATION?

NO. BUT I BOUGHT YOU A TOMATO.

.....OOPS

A FEW MOMENTS LATER IN THE CHRISTINE'S OFFICE...

LATER ON DIVISION STREET...

GOT THE PERMIT GUYS. LETS GET ROCKING!

TOMATOES AND PEPPERS 7 FOR 3 DOLLARS!

AFTER HIS JAM SESSION EDDIE WANDERS THROUGH THE MARKET IN SEARCH OF FRESH TOMATOES.

FIGURE 15: This group used the format of the graphic novel to tell the story of a crop of tomatoes as it travels from the farm to the Eastern Market and to a family home in Detroit.
(students—Biglin, Chao, Giglio, Papendick, Secco, Tellez, Wang)

FIGURE 16: Students gather for the final presentations and discussion
Photo: Paul McBride

FIGURE 17: Scrutinizing the work of peers
Photo: Leigha Dennis

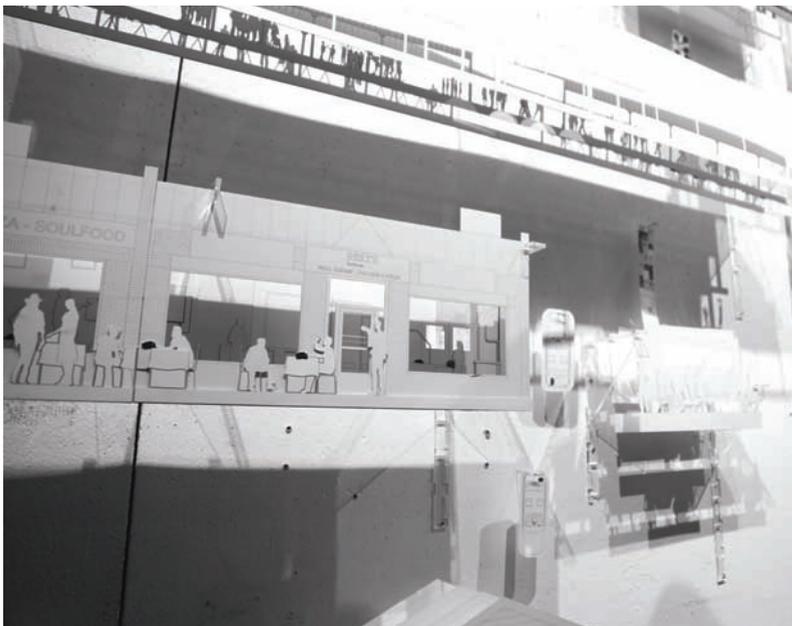
FIGURE 18: A layered anatomy of the spaces, itinerary, and transformations of a pig as it moves through the Eastern Market (students—Cavezzali, Davis, Doidge, Ko, Zhang, Ziemba)
Photo: Paul McBride

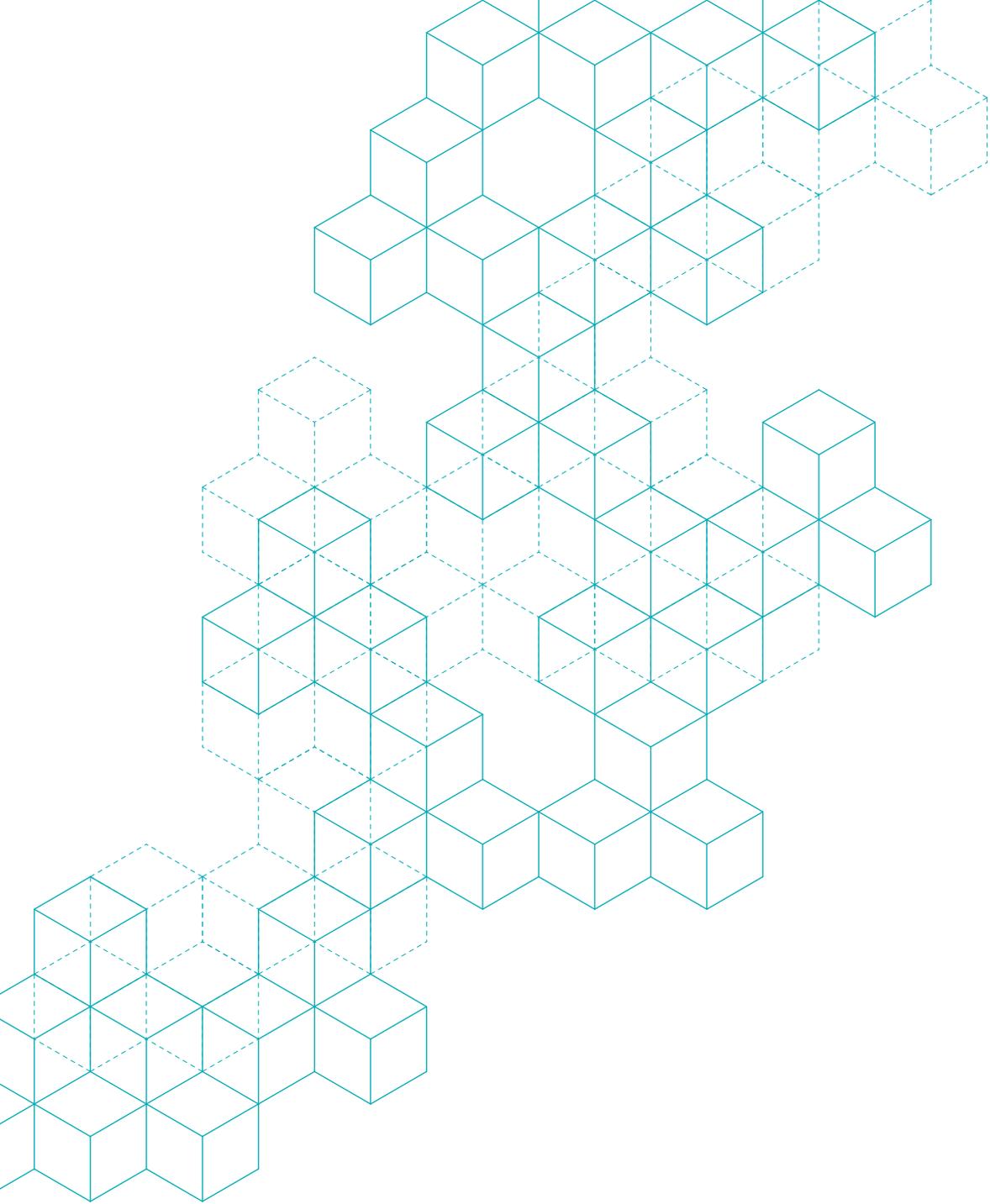
FIGURE 19: Workshop leader Georjeen Theodore discusses the outcomes of the workshop
Photo: Paul McBride

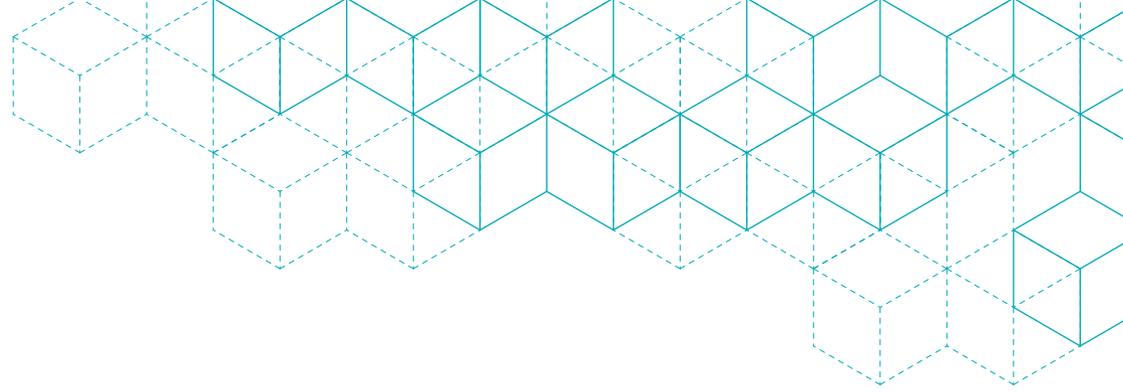
OUTCOMES

As the workshop demonstrated, Eastern Market is one of the most lively places in the City of Detroit. It's an urban infrastructure that is used, appropriated, and monetized by a wildly heterogeneous collection of actors, ranging from buskers, homeless people, tourists, farmers, food snobs, tailgaters, barbecue enthusiasts, entrepreneurs, larcenists, artists, and members of an expanding "growth machine." Detroit may be the most segregated city in America, and yet despite this, Eastern Market represents a lived architecture that fosters times and spaces where casual, urban interactions occur among diverse publics. Why? The answer doesn't lie in the material conditions of the market buildings or the plan of the overall site (although surely these contribute to the character and use of the place). The analyses and visualizations of how the actions of individual actors have shaped this

place—and reciprocally, understanding which elements of the physical environment have either encouraged or discouraged the use of urban space—can give us clues of how to make it better. While the workshop exposed a great deal about how Eastern Market is shaped by the agency of individuals, the intention is that both the analytical and representational techniques would be transferable to other situations. For many students, this type of immediate, on-the-ground investigative process was an entirely new approach, availing them to other ways of seeing, understanding and engaging with the city, and opening up a space for alternative discussions to take place. We hope this kind of design expertise, one that is rooted in an understanding of the ways individuals and organizations make use of space everyday, is key to making a more robust architecture tomorrow. 







supply and demand

Christian Unverzagt is the faculty advisor for *Dimensions* and an Assistant Professor of Practice in Architecture at the University of Michigan, Taubman College of Architecture and Urban Planning, where his teaching focuses on visual communication and interdisciplinary design methodologies. He is the design director of M1/DTW, a multidisciplinary studio operating at the intersection of design and cultural production.

Christian received a Bachelor of Science in Architecture from the University of Michigan and a Master of Architecture with distinction from the Southern California Institute of Architecture.

Christian lives and works in Detroit.

After many months of work assembling this journal—months editing, designing, revising and refining; months meeting with printers to devise specifications and their alternates, it was finally time for the staff to award the job of printing the book. With costs compared and debated, a decision was made and the final collaborator for the project set.

Then an unexpected message was relayed: there was not enough paper to print the entire job. Something which had not previously been an issue or even a concern was commanding all the attention. Despite working with a paper mill only a few hundred miles west of Ann Arbor, there was simply not enough supply to meet our demand.

Alternatives were considered and raised more questions in the process: Should it be printed on a replacement paper? Or perhaps a second paper to take up the slack? If so, would those copies constitute the 'real' thing, be a second-rate substitute, or simply an alternate version? How might this complicate the printing and bindery process and how would anyone determine who got which version?

While these conversations were taking place, a parallel message came through from the college's own front office: What could be done to limit distribution given the increased cost of mailing or shipping the book? While a smaller print run would not reduce printing costs much, however it would help in reducing what had become a significant burden to distribute them.

Dimensions has always been an instrument to frame, focus, reflect, and project the on-going work of the school. It has also been a project that revels in its own rendition. Various treatments studied as much for their cost as for their communicative value, and like many years, this team pursued several options they eventually passed up in order to focus the budget on a material now in limited supply.

In turn, they chose to embrace these convergent restrictions and work them to their advantage, producing the volume as intended, yet as a printed artifact, in limited quantities.

Dimensions inevitably goes out of print within a year or two of its printing, and will almost certainly go out of print even sooner now. Just like every volume ever produced, it's available free on-line, and not surprisingly, the number of downloads for recent titles surpasses the number of copies printed. However, if you're fortunate enough to be holding a book in your hands, and have made it this far, hopefully you now know what the fuss was all about. And if not, and you're reading this through some other technological artifact, you might just want to track one down and demand your own.

—Christian Unverzagt
Dimensions Faculty Advisor

April 14th 2014
Detroit

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We thank the Victor Gondos, Jr. Archives Fund for their support. This fund was established as a memorial to Dr. Gondos ('25) by his widow, Dorothy Gondos Beers. Dr. Gondos was a distinguished archivist and historian who served twenty-three years with the National Archives in Washington, D.C. Mrs. Gondos Beers' intention was that the fund be used to assist architecture students in exercising and improving their writing skills. Since its inception, the fund has supported the publication of this journal for many years. Upon her passing, Mrs. Gondos Beers left a substantial bequest for the Victor Gondos, Jr. Archives Fund, which generously funds writing projects like *Dimensions*.

Dimensions 27 would also like to thank the following people for their efforts to this year's publication:

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