Portfolio
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Masters of Architecture

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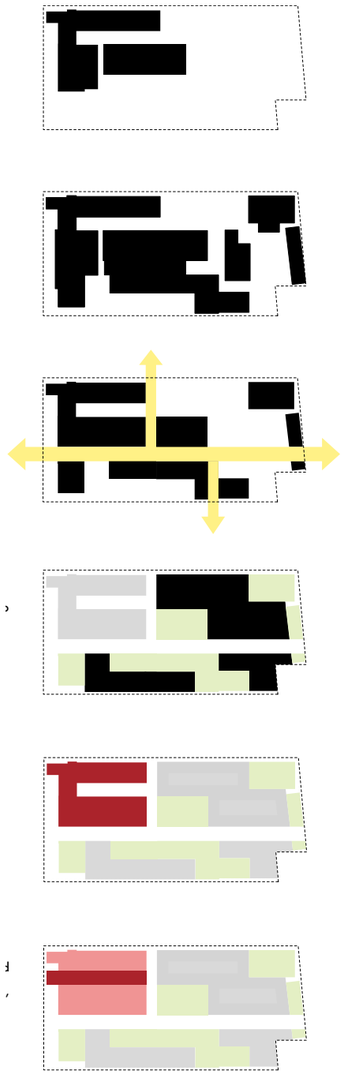
VI. Houston Bottling

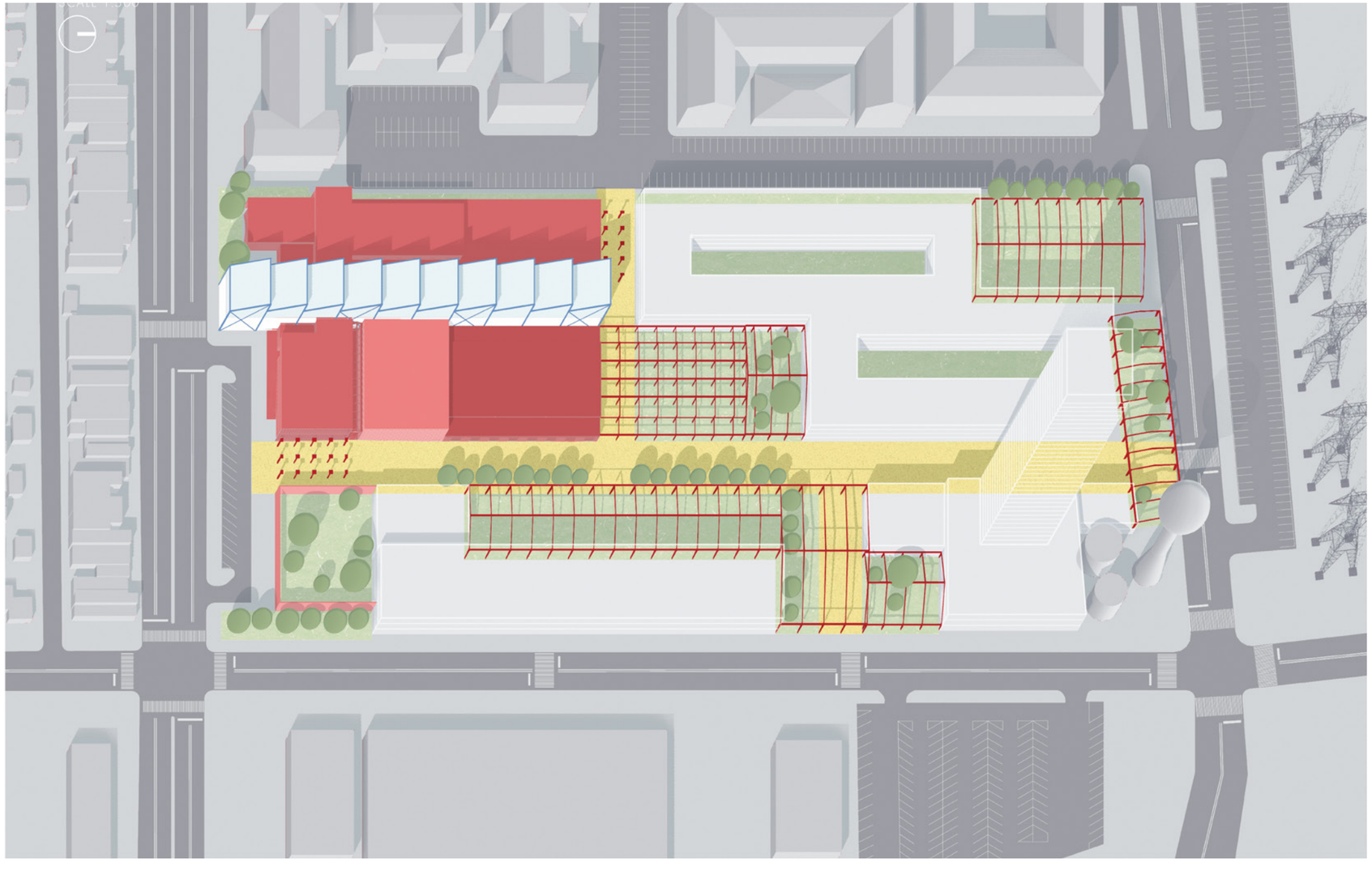
Wonne Ickx, critic.
In collaboration with Sarah Abouelkhair.

Houston Bottling in an arts and design incubator in the former Houston Coca-Cola Bottling Plant. Just like we selectively removed Coca-Cola from the name, throughout the project we made design moves with the same spirit: cutting out spaces while preserving their memory.

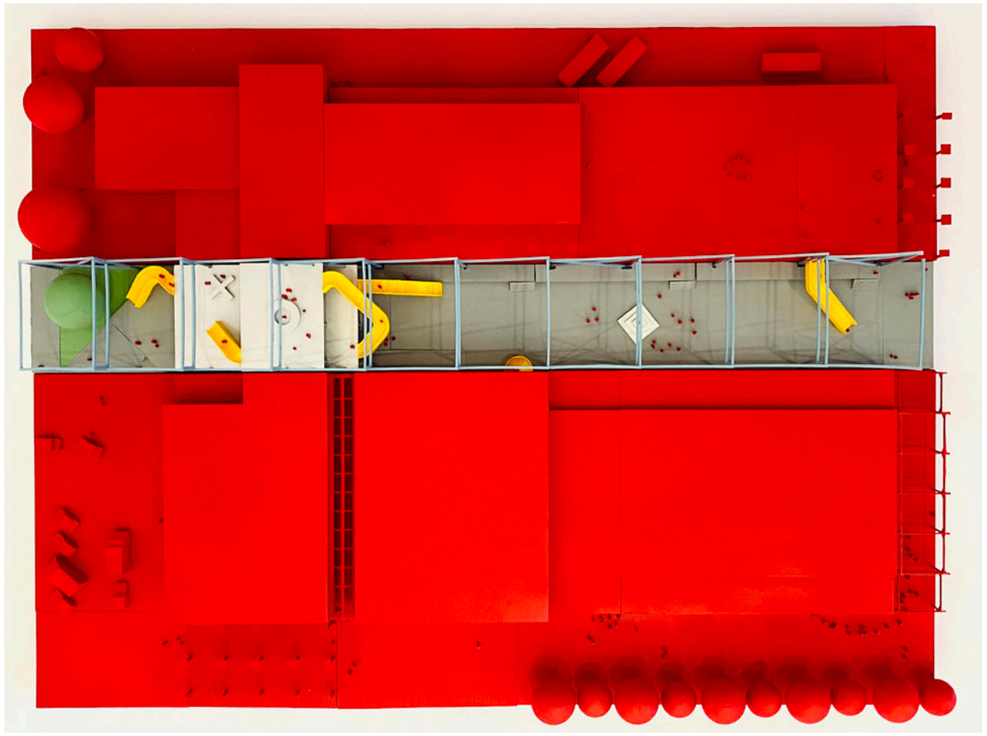
Our philosophy for the incubator is that mostly what emerging artists and designers need is space. And for the most part, the space that exists here already is perfectly suited to reuse, with minimal intervention. We slice axes through the site, invert the figure ground, and concentrate only on a corner. A oversized saw-tooth shed unites the mosaic of incubator buildings as a ‘difficult whole.’

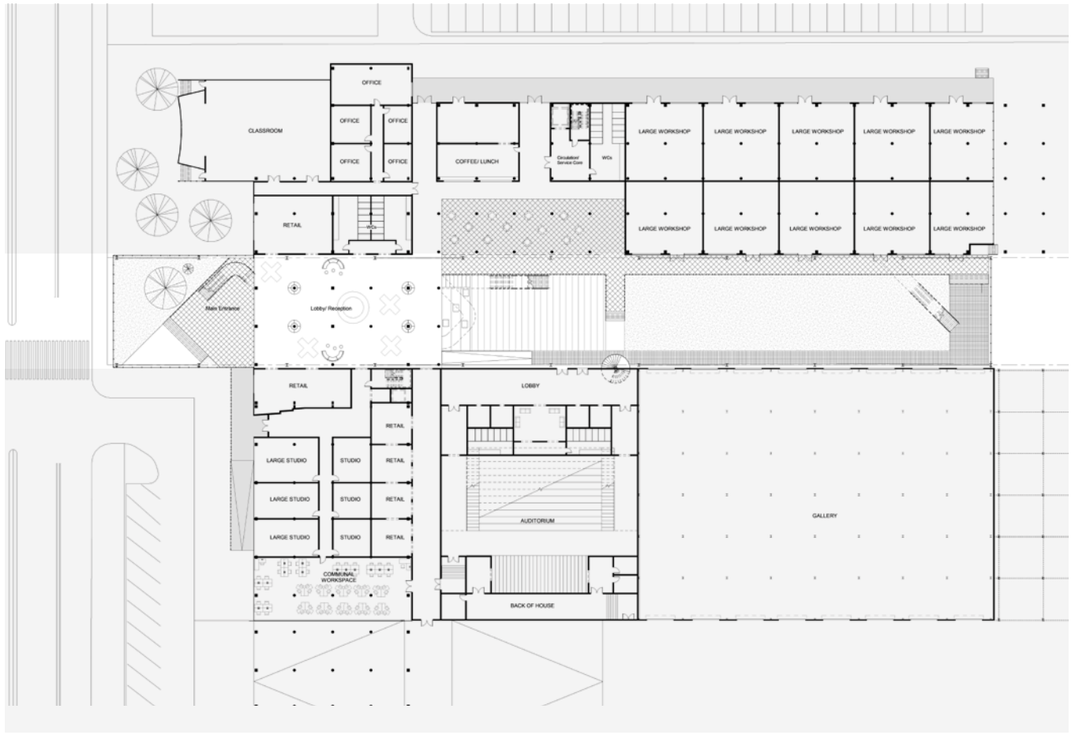
▲ 3/16” sectional model showing new sawtooth structure connecting the existing warehouse buildings.





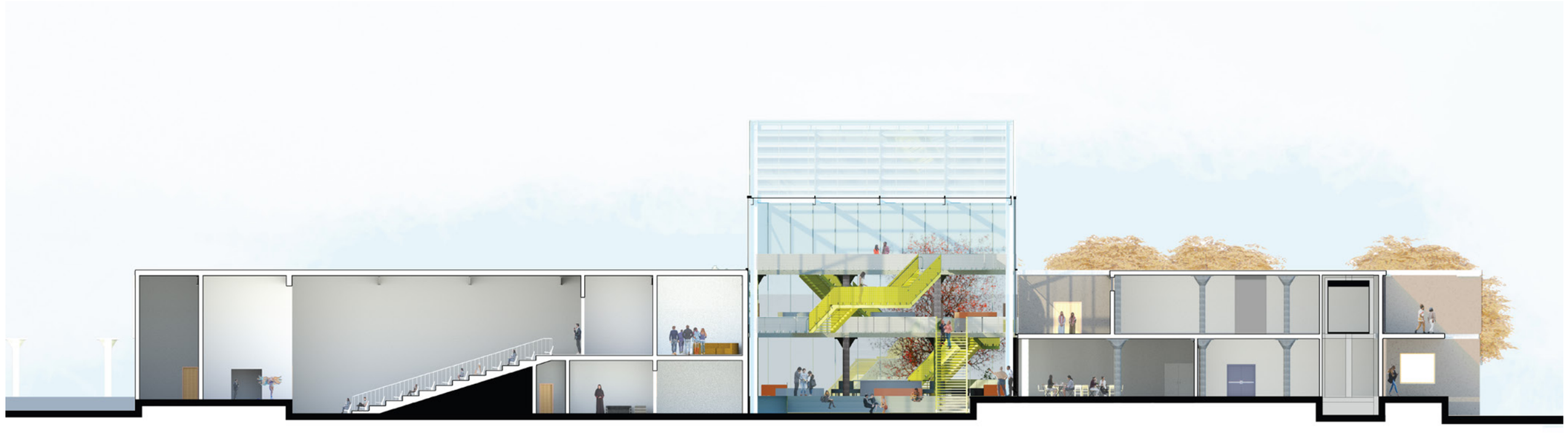
◂ Operation diagrams. ¶ ▲ Masterplan oblique. ¶ Pedestrian axes are sliced through the 13 acre site. The existing steel shed structures are uncovered, and remain as flexible armatures for programmable greenspace. The existing open area can be developed with new commercial spaces and housing, creating a dense walkable neighborhood.



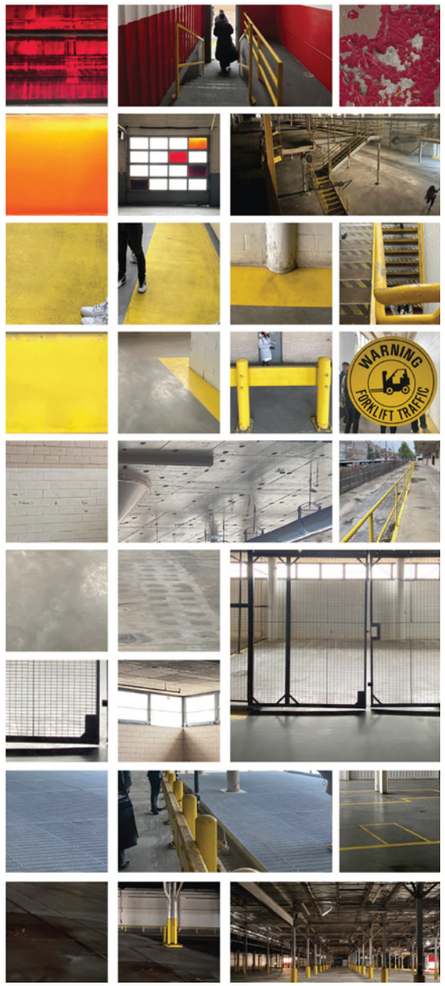


▲ 1:250 conceptual model, top view. ¶ ► Ground floor plan. ¶ The incubator program is concentrated in the SW corner of the site. Working with this remaining mosaic of bottling plant buildings, we introduce a new sawtooth shed to unite the incubator as a ‘difficult whole.’

▲ View North from Bissonnet St. ¶ Along the new pedestrian axes, the reinforced-concrete slabs of the existing building are sliced, revealing the internal aggregate and re-bar. The incisions are covered with a curtain of glass, framing both the cut edge and the activity within. The columns are left in situ – honoring the original extent of the plan.

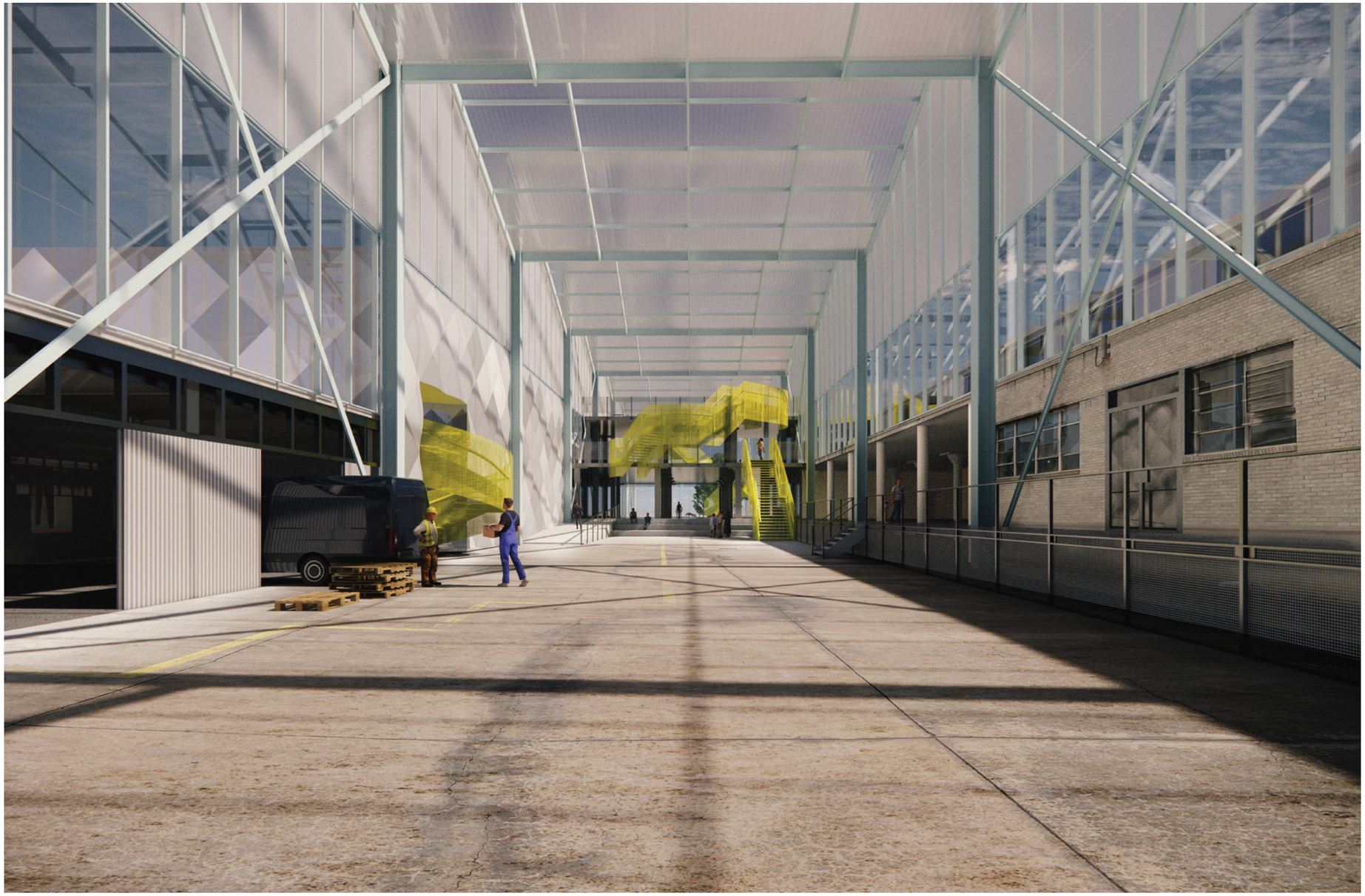


▲▲ E-W section. ¶ ▲ N-S section. ¶ The oversized sawtooth form is derived from the industrial language of the site, built in the same spirit of economical steel construction. Where the new spine intersects with the old building, the latter is eroded back to its basic structure. Gestural circulation sweeps you up and over this x-rayed zone.

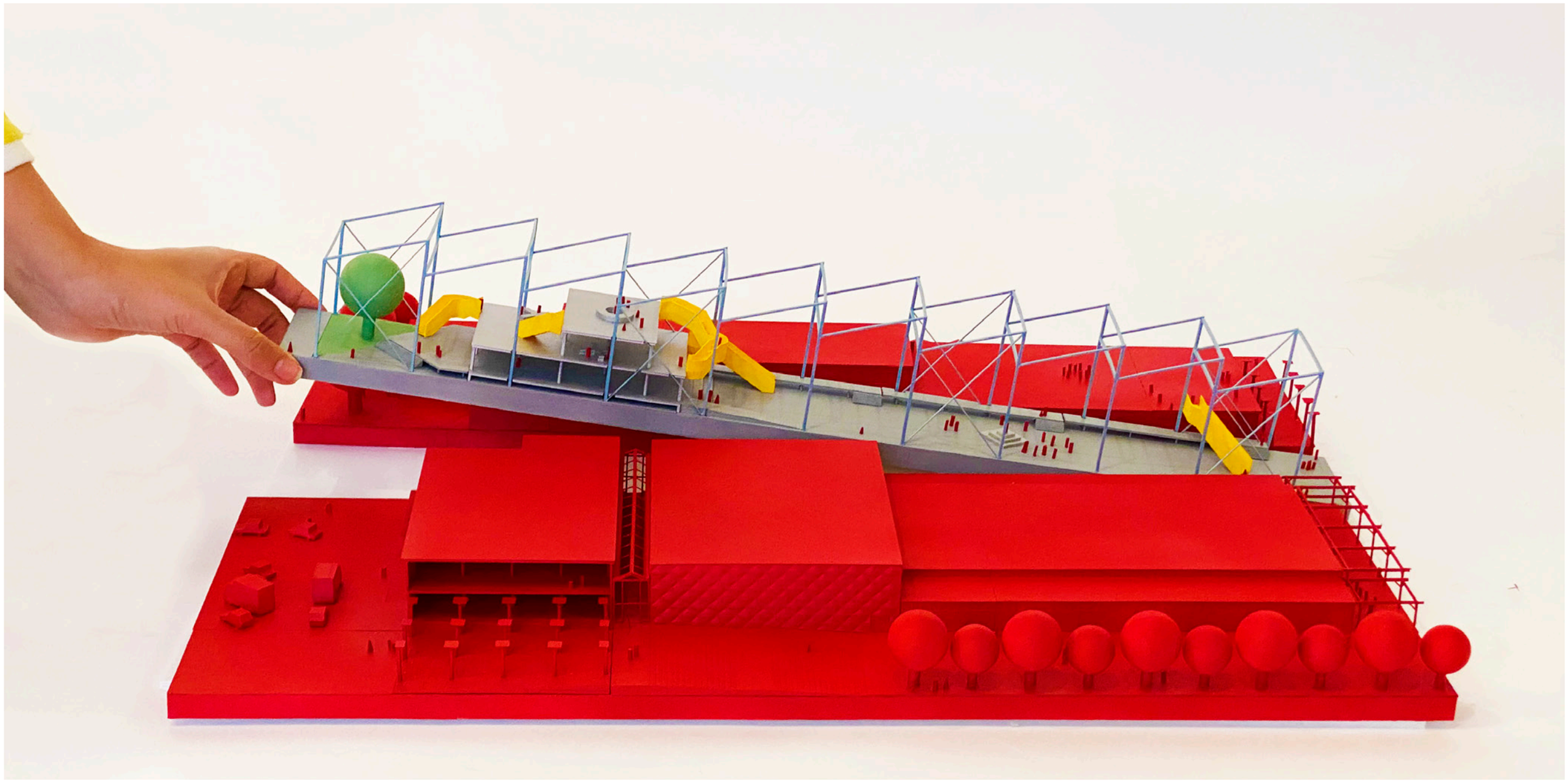


◂ Material and color study. ¶ ▲ Rendering of a large workshop space, with textures from the site collaged over. ¶ We took cues from the site to guide us in color and materiality. Yellow was predominantly used to signal movement, so we chose it for our main circulation to visually guide the flow throughout the central spine.

▲ 3/16” detail model. ¶ At the north of the spine, stairs lead up on top of the workshop building to an accessible roof for occupants to enjoy.



▲ Rendering of central spine with site photos collaged on top. ¶ The central gallery space can host large scale events and exhibitions unsuited for the column filled drive-thru building. The lobby, occupying the first floor of the x-rayed concrete structure, can be seen in the distance.



▲ 1:250 conceptual model with removable central spine.

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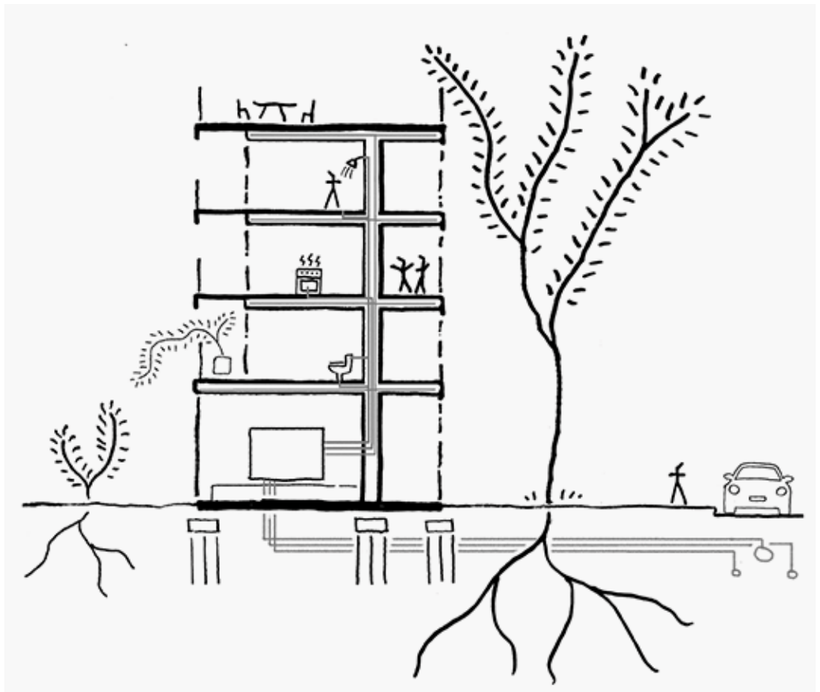
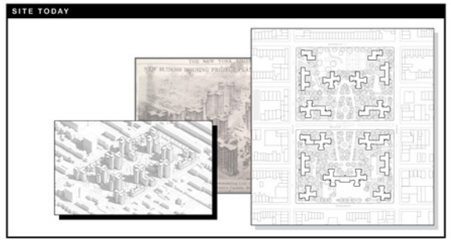
V. Housing Uncertainty
Stephen Burks, critic.

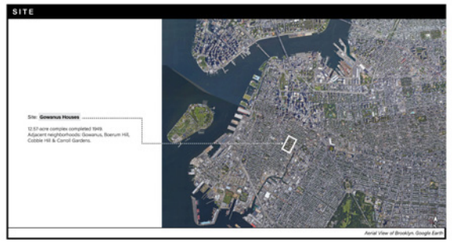
The history of public housing in the US is a history of exclusion, discrimination, patronizing moralism, and neglect. The future of public housing must be one built on inclusion, pluralism, agency, and respect. Housing must be understood as a verb, not as a static noun, and must embrace the uncertainty of society's myriad and ever-changing needs.

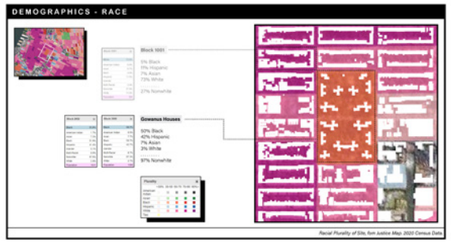
This project proposes a tartan grid of mass timber, able to adapt to various conditions on NYCHA's Gowanus Houses, home to over 2,000 residents. The light and flexible system can deploy along the street-wall of the superblocks, extending existing apartments and constructing new infill supportive housing, while preserving existing mature trees and creating positively defined interior yards. Residents are empowered to adapt the framework to their individual and social needs.

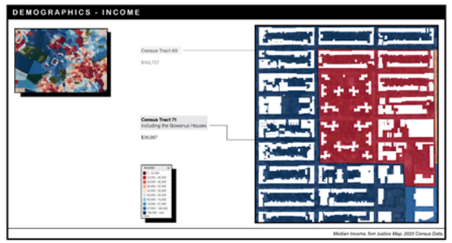


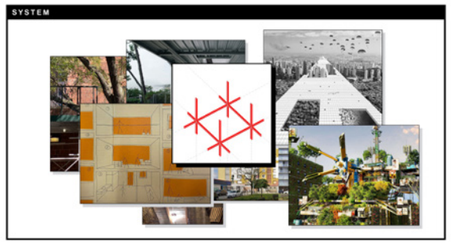
▲ Concept sketch for timber infill housing that wraps around existing trees onsite.

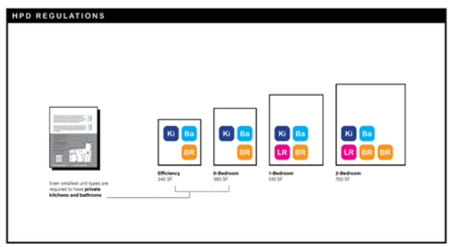


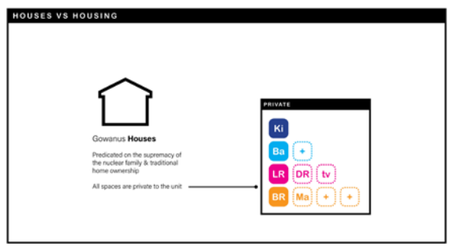


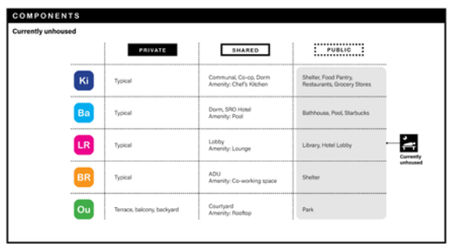


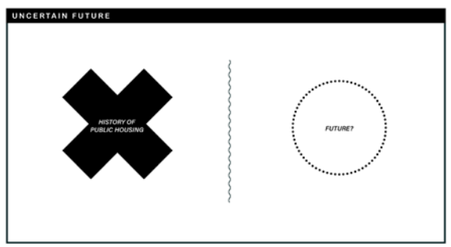












▲ Presentation slides. ¶ My project takes seriously the notion that housing is a basic human right, that vulnerable populations should receive housing first, that it is a fundamental role in society to provide places to live for all of its inhabitants, and that barriers to housing (both moralistic and economic) should be removed.

SITE STRATEGY

Take as fixed:

24 Public Housing Buildings

Nicholas Naquan Heyward Jr. Park

Large trees (40'+)

Reinforce streets

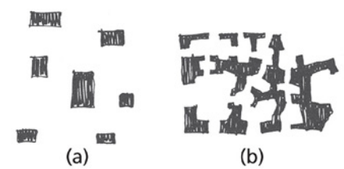
Identify existing streetwalls to be reinforced.

Create new streets

Use N-S axis of 1949 plan to create pedestrian street.

Create positive greenspace

See diagram from Christopher Alexader's *A Pattern Language*



(a) (b)

(a) Buildings that create negative, leftover space...
(b) Buildings that create positive, outdoor space...

Set buildable zones

Keep 12' sidewalk

Offset 40'

Build economically

Create a framework that can both:

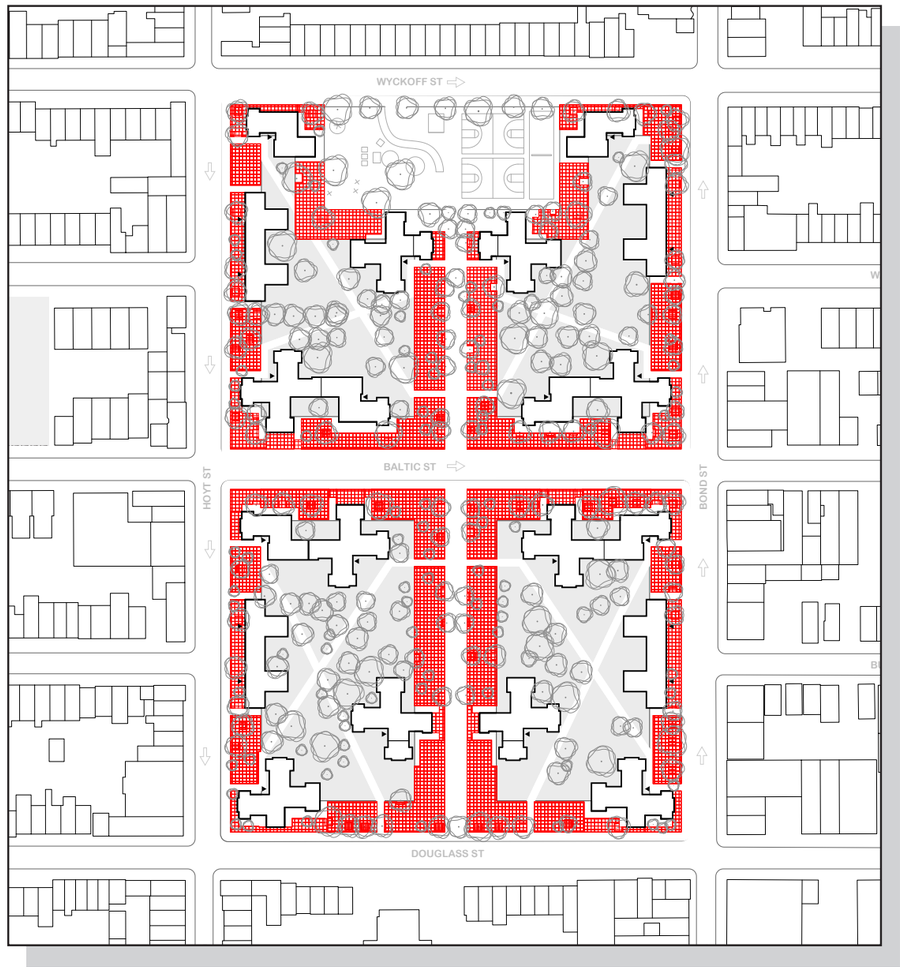
+ Expand and improve existing NYCHA buildings

+ Provide structure for new housing on site

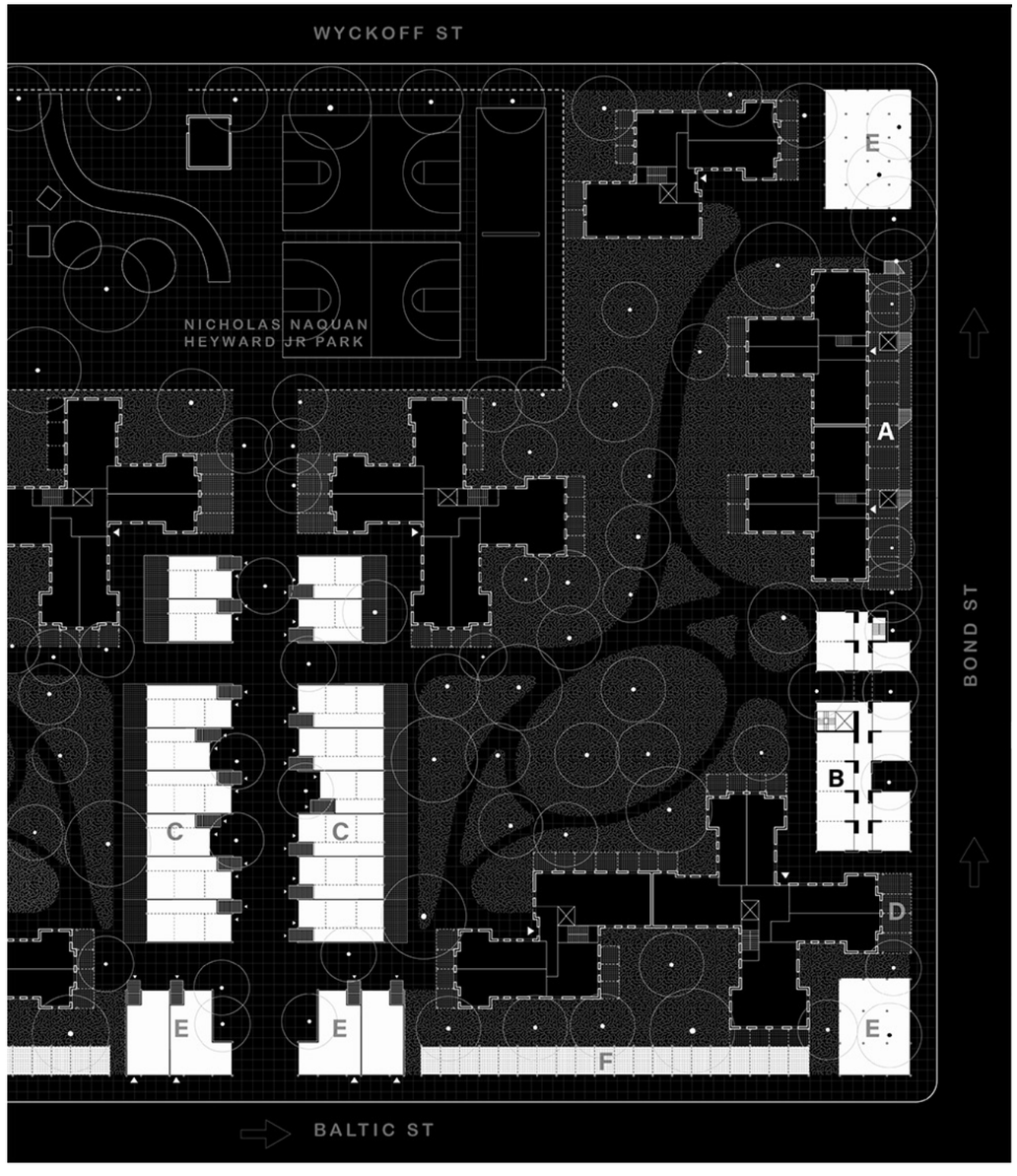
Build sensitively

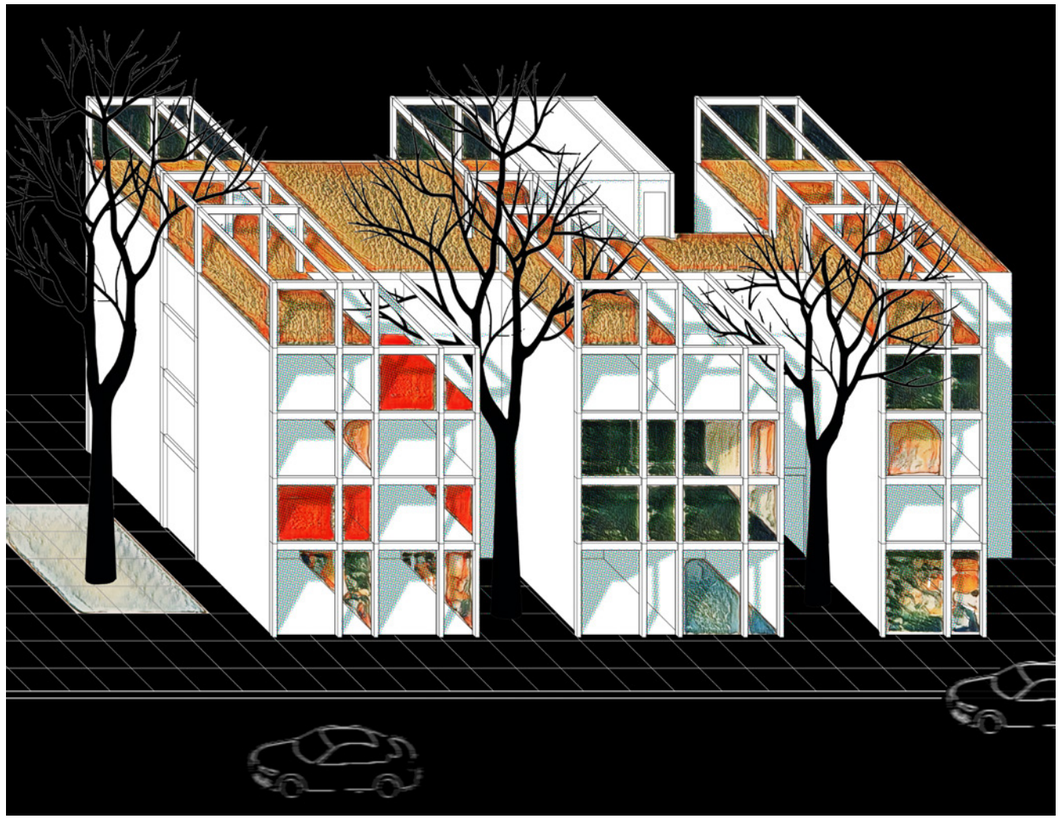
Create a framework that can integrate with existing structures and wrap around large trees.

Touch the ground lightly to prevent damage to root structures.

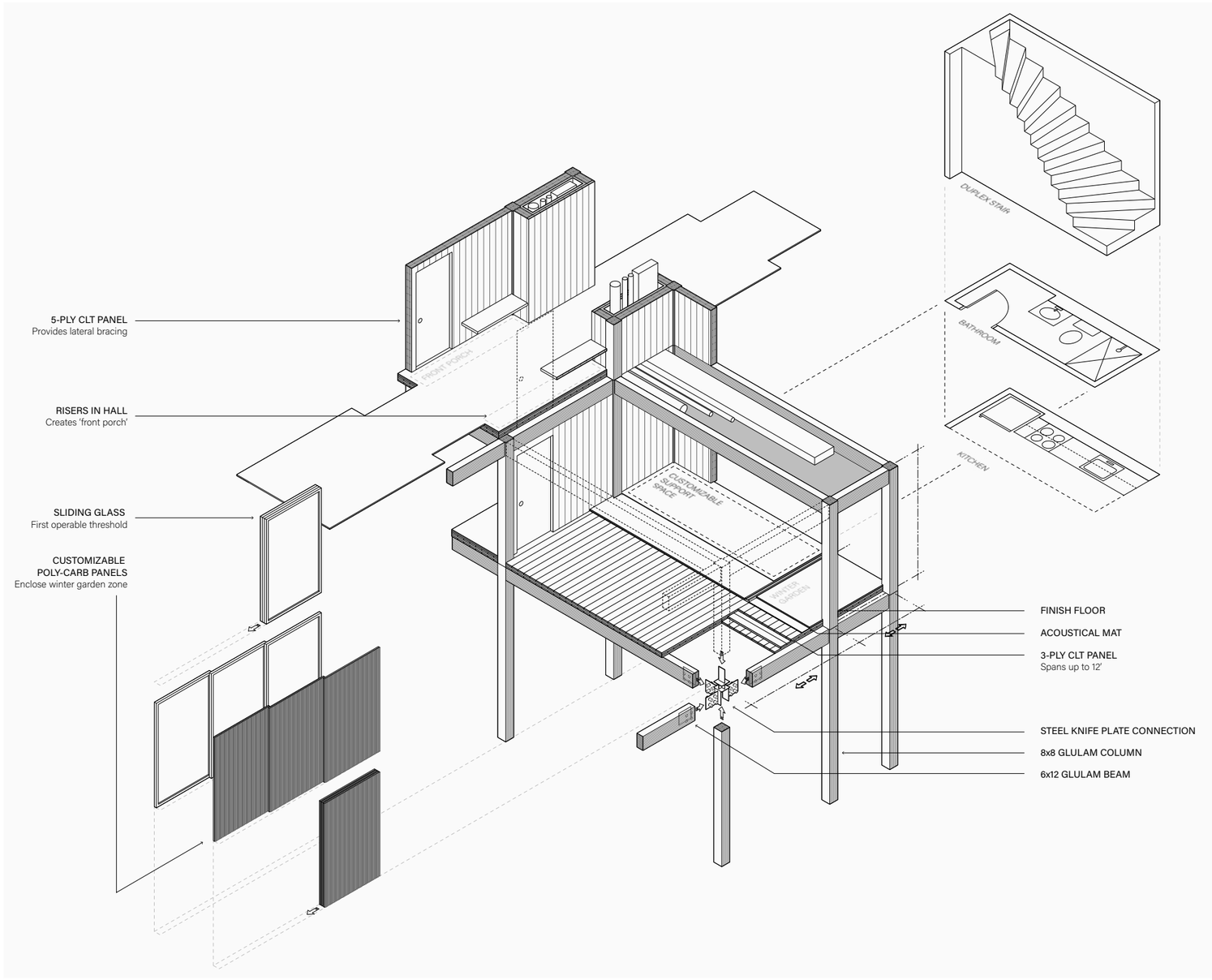


▲ Site Strategy.





◀ Site plan of Gowanus Houses with new infill housing in white. ¶ ▲ Concept oblique of street-wall infill (B). ¶ By concentrating new development along the street walls and the central axis, courtyards emerge in each quadrant. These are positively defined green-spaces that residents can feel ownership over.



▲ Systems diagram. ¶ The modular timber system is conceived of in tartan grids. In its smallest condition, a 6' support zone can hold a kitchen, bathroom, storage space, or a connecting stair. Risers are located in communal hallways to mediate monotony and free up more unit space.

▲ Looking South on Bond St; proposed extension on existing four-story NYCHA building. ¶ Elevators are added outside of existing circulation cores to increase accessibility. Exterior stairs connect intermittent unit extensions, creating secondary access and community stoops.

◀▲ Conceptual collages of unit extensions. ¶ A timber structure provides the framework for resident participation. A checkerboard pattern of platforms provides double-height spaces while preserving maximum daylight. Residents can enclose their extensions to create winter gardens, or leave them open as balconies.

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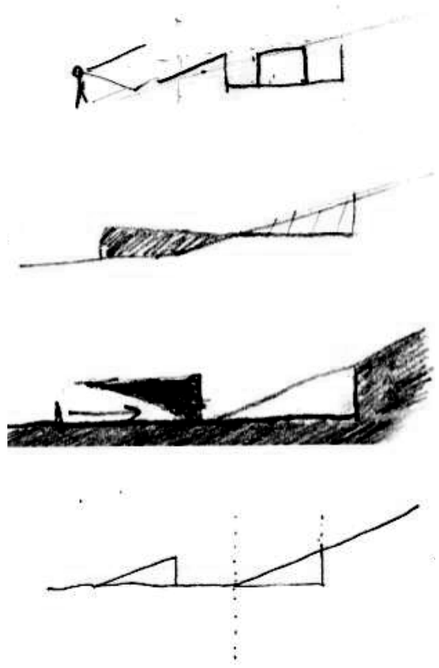
IV. Cut & Cairn

Bob Marino, critic.

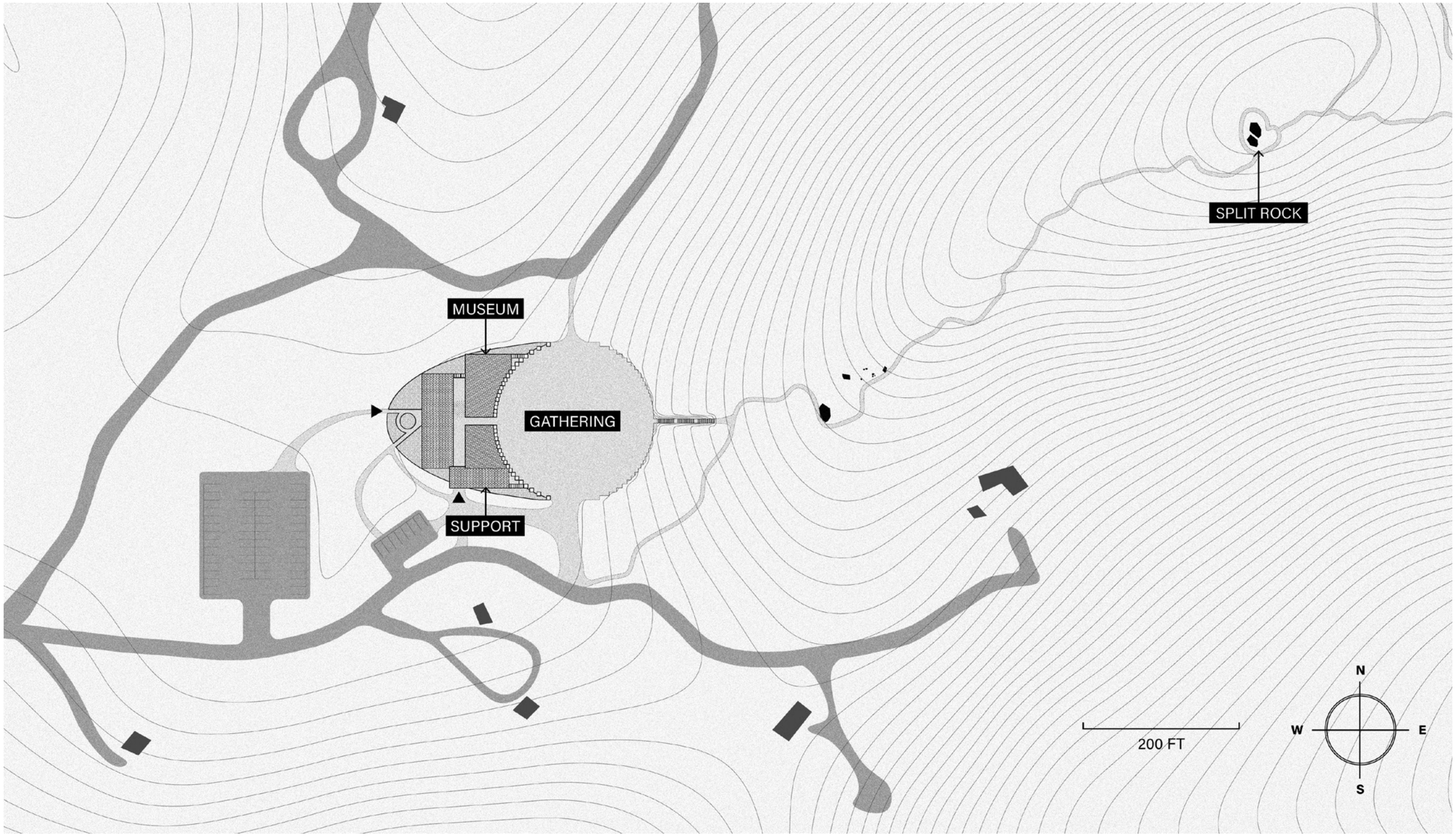
The Ramapough Lenape tribe have lived in the hills of Northern Jersey since before the last Ice Age, but like all Indigenous peoples in the U.S., their connection to the land is being aggressively eroded. A Museum of the Ramapough tribe should therefore stake a lasting claim on their ancestral land.

A massive half-moon of granite bedrock is quarried from the side of the mountain, and moved across a circle to form the Western edge of a now bounded field. Cut & Fill becomes Cut & Cairn: the museum is built up out of stacked dimension stone, while the now-leveled ground becomes the site for dance, prayer, and Powwow.

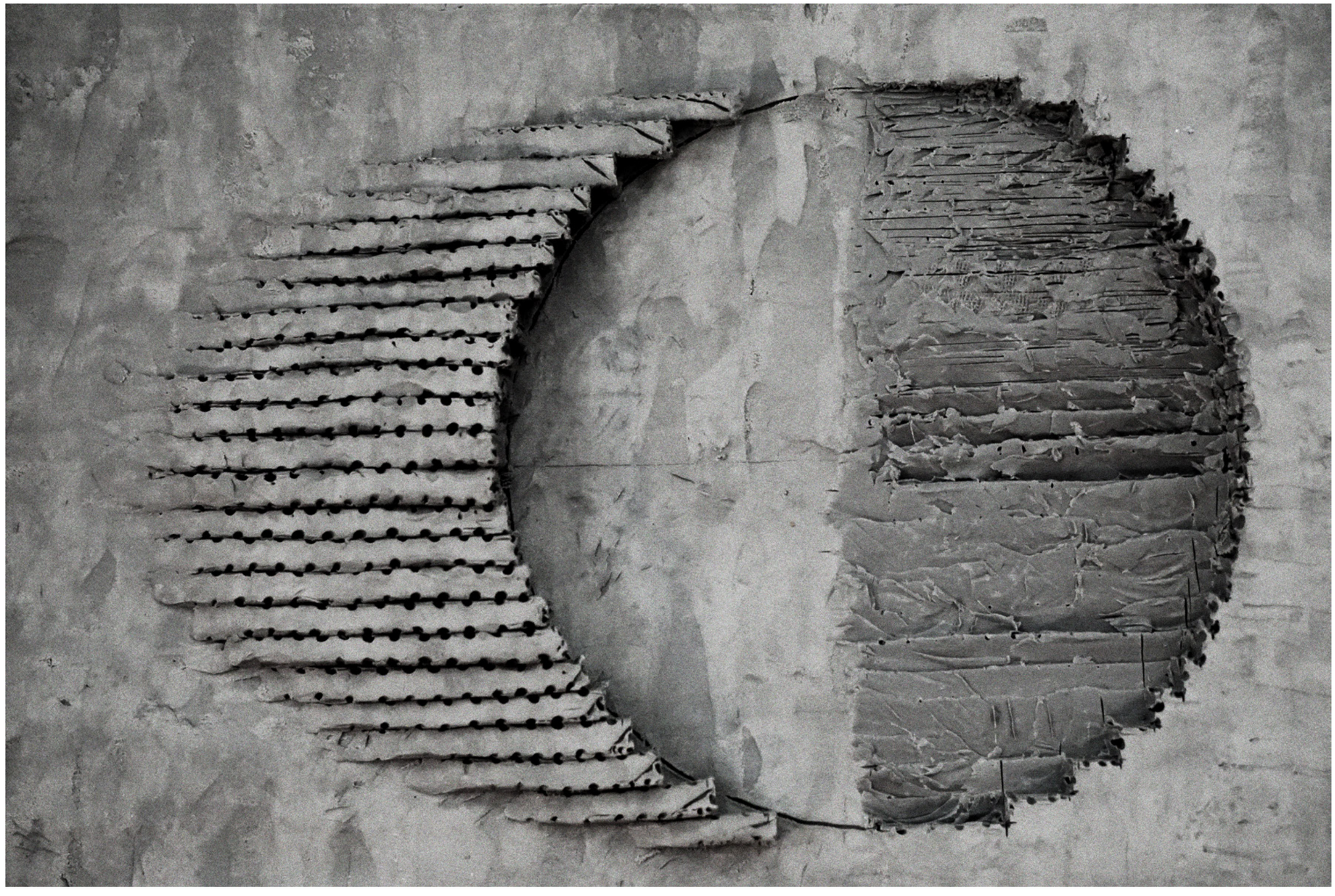
▲ Collage over clay study model demonstrating the scale of gatherings possible within the central ground.



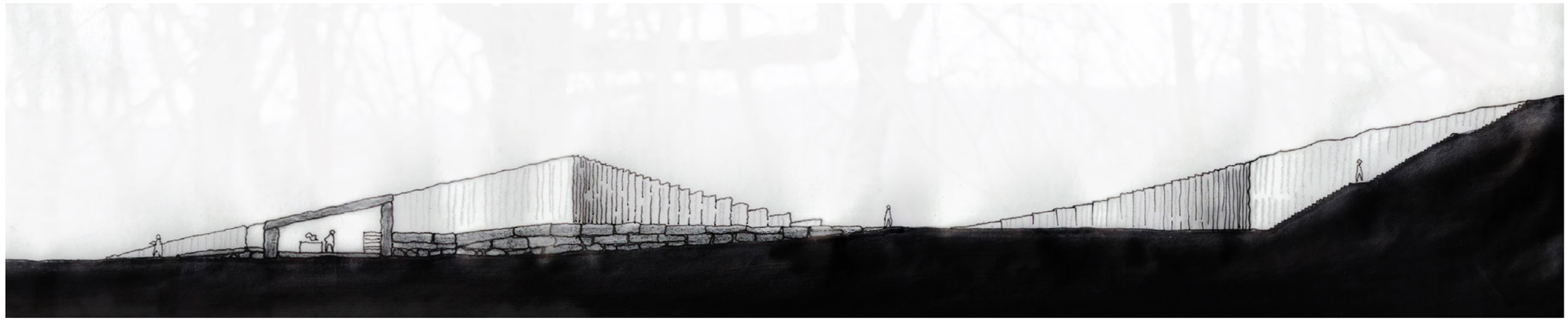
▲ Cut & Cairn (bottom): where a sloped and level surface intersect, a portion of the hillside can be carved out and reassembled into a new form. ¶ ▶ Collage of view out toward quarried face of gathering field. ¶ In contrast to the perceived impermanence of Indigenous structures, a massive earthwork stakes a lasting claim on the land.

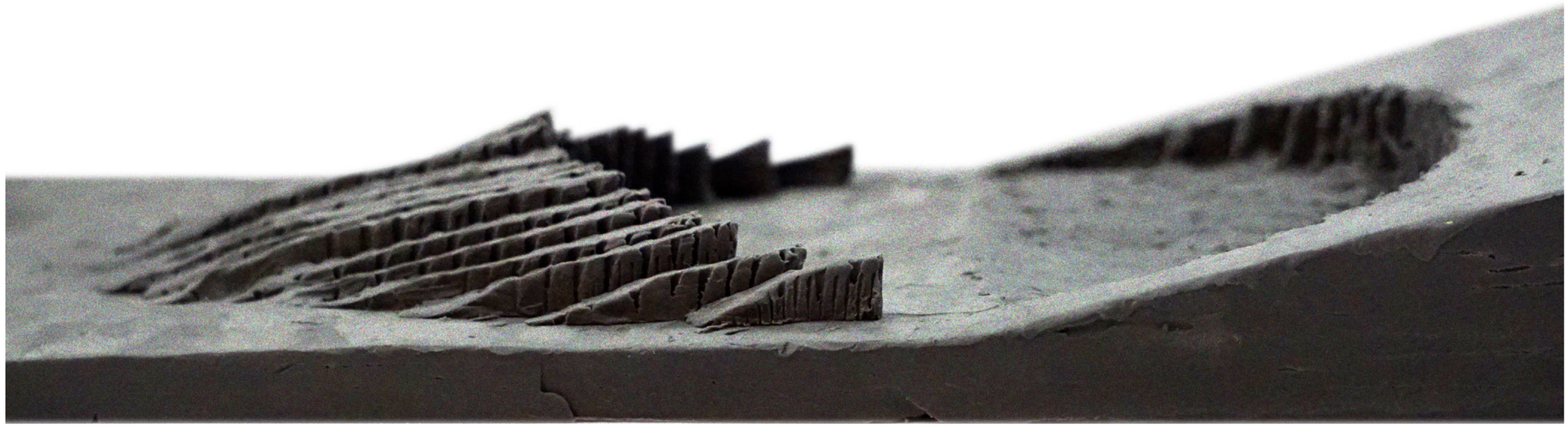


▲ Site plan. The public museum occupies the North half of the cairn. An equal amount of space to the South is used as support for the community and for programming the gathering ground. ¶ Public entry to the site is from the West, through the cairn and the museum, fostering education.



▲ Clay study model. ¶ As the quarry and the cairn grow in equal proportions, the gathering ground bears witness to their equal and opposite processes. ¶ The ground becomes the site of excavation, the site of aggregation, and critically, the site of transportation. This effort is shared and participatory, forming the foundation of community bonds.





▲▲ Section cut along central axis. ¶ ▲ Clay study model. ¶ Stone is split using a low-tech wedge and feather method. ¶ Every piece of granite quarried finds a home in the constructed cairn: dimension stones stack to form walls; cracked and irregular rocks pile at their angle of repose; and gravel fills in between the foundations.

▲ 3/16” model made from hundreds of individual wood pieces. ¶ ▶ Process shot. ¶ Stacked stone walls define voids within the cairn that become the interior spaces for the museum and support program. Timber cleared from the site is reused to form deep glulam beams. The beams span between stone walls in a rationalized 2-d ruled surface.

▲ Collage of 3/16” model photography. ¶ A semi-circle of massive granite monoliths defines the threshold between the museum and the gathering ground. As visitors arrive and pass through the cairn, individual outsiders learn the ways of the Ramapough as a collective.

III. Nature of Housing
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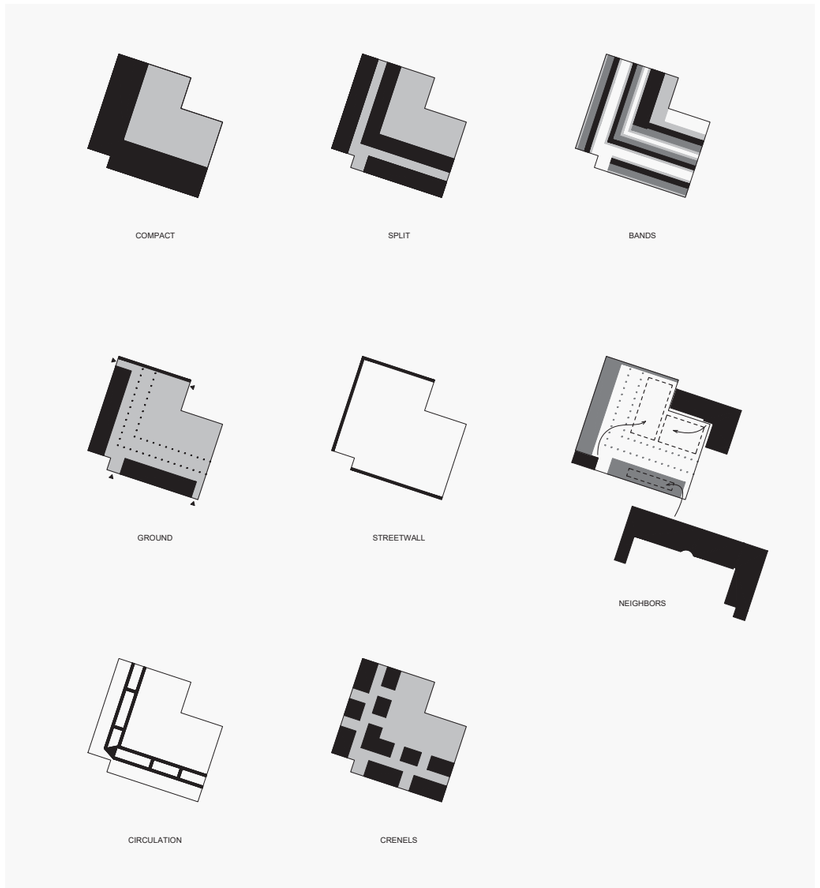
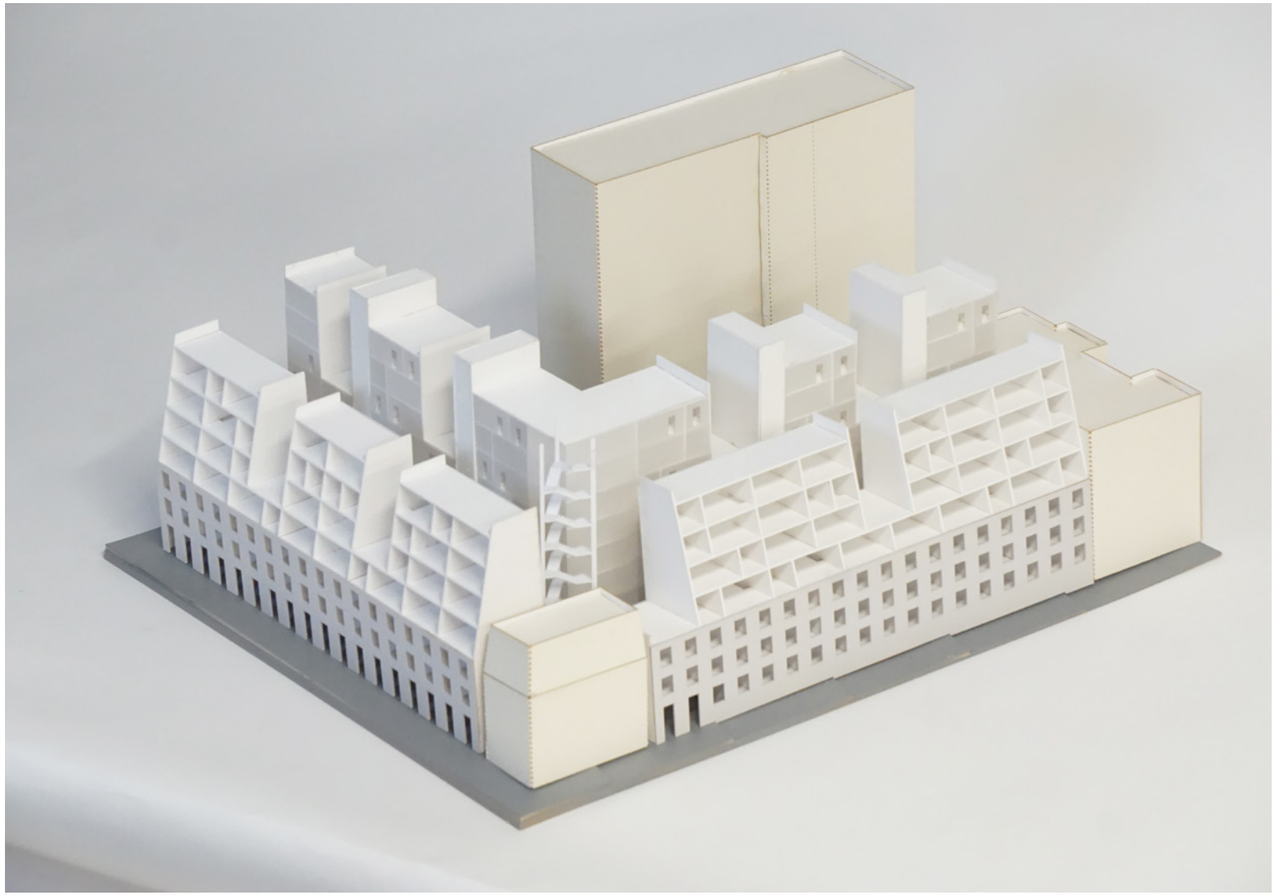
III. Nature of Housing
Mario Gooden, critic.
In collaboration with Florencia Yalale.

We seek shelter for privacy and protection from the elements. But can housing re-integrate those elements which we shut out?

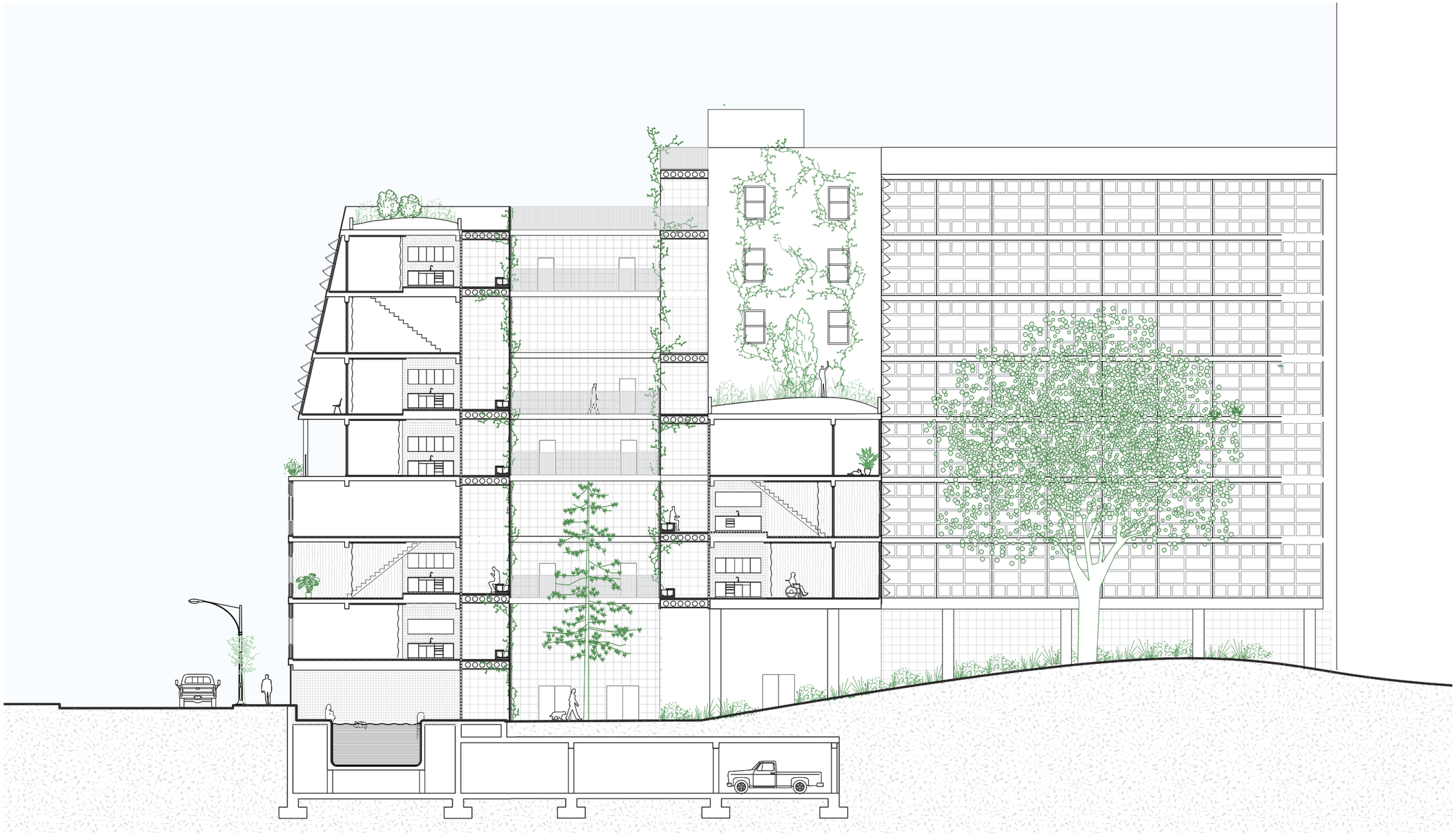
This project aims to embed ‘nature’ into housing at the neighborhood, massing, and unit scale. This ‘nature’ is alternately wild and tame, unmediated and constructed, framed and blurred. By defining a series of thresholds, residents are allowed to alternately dissolve or intensify boundaries between themselves and others, between the inside and the outside, between the wet and the dry.

▲ 3/16” chunk model.

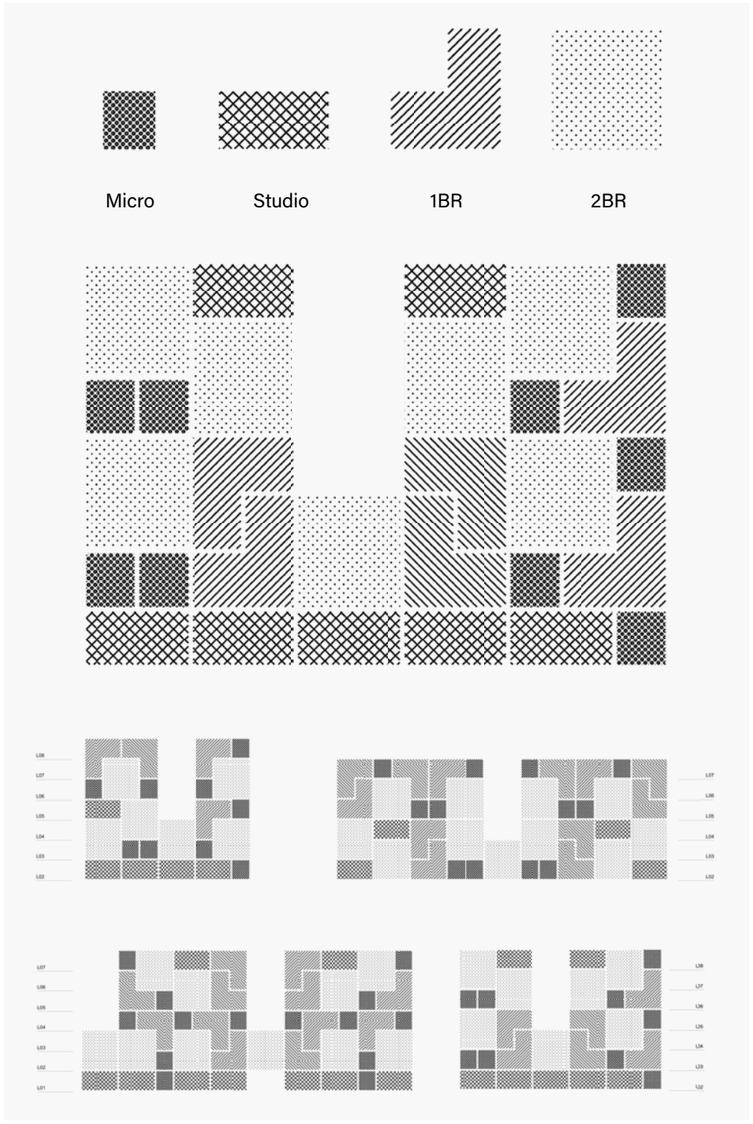




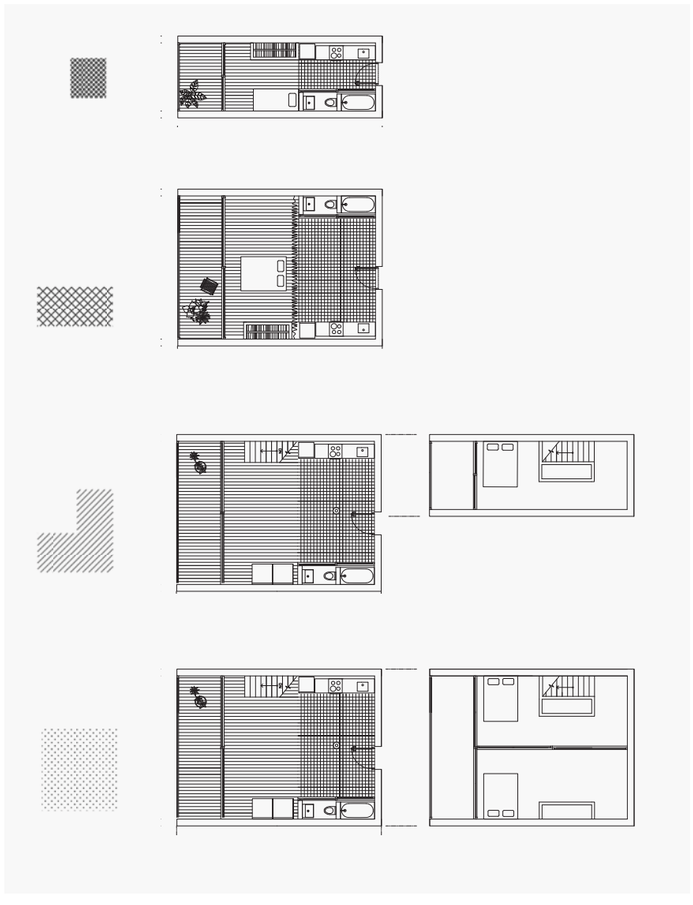
▲ Site strategy plan diagrams. ¶ ▶ 1/16” model. ¶ At the largest scale, the massing itself becomes the threshold between the city and garden, protecting, defining, and expanding an overgrown vacant lot, a pocket of untended nature within the city grid.



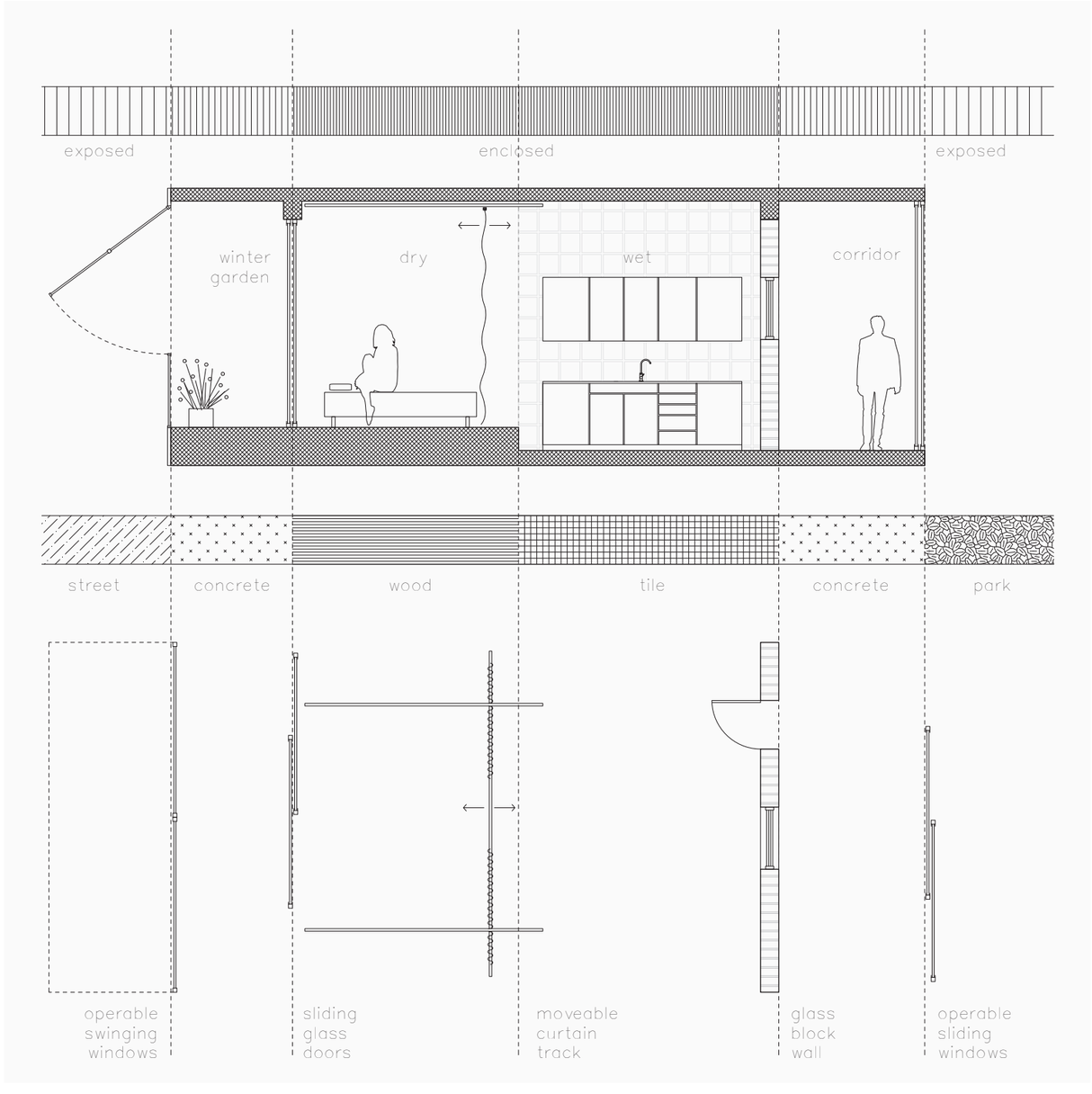
▲ Section. ¶ The threshold of the massing is further striated, split down the middle to create another zone, where nature as climate is on display. Here is a zone just for residents, an interior street, a corridor (split, mirrored, and widened). This zone is semi-exposed, inviting atmospheric elements into the project by degrees.



◄ Unit mix diagrams. Units are distributed to create a mix of incomes on every floor. Duplex 1BR & 2BR units are nested to relieve the need for a corridor on every third level, letting more light and air into the building. ¶ ▲ 1/16” study model, exterior circulation removed. The exposed pattern of entry doors hints at the duplex dependent unit mix.



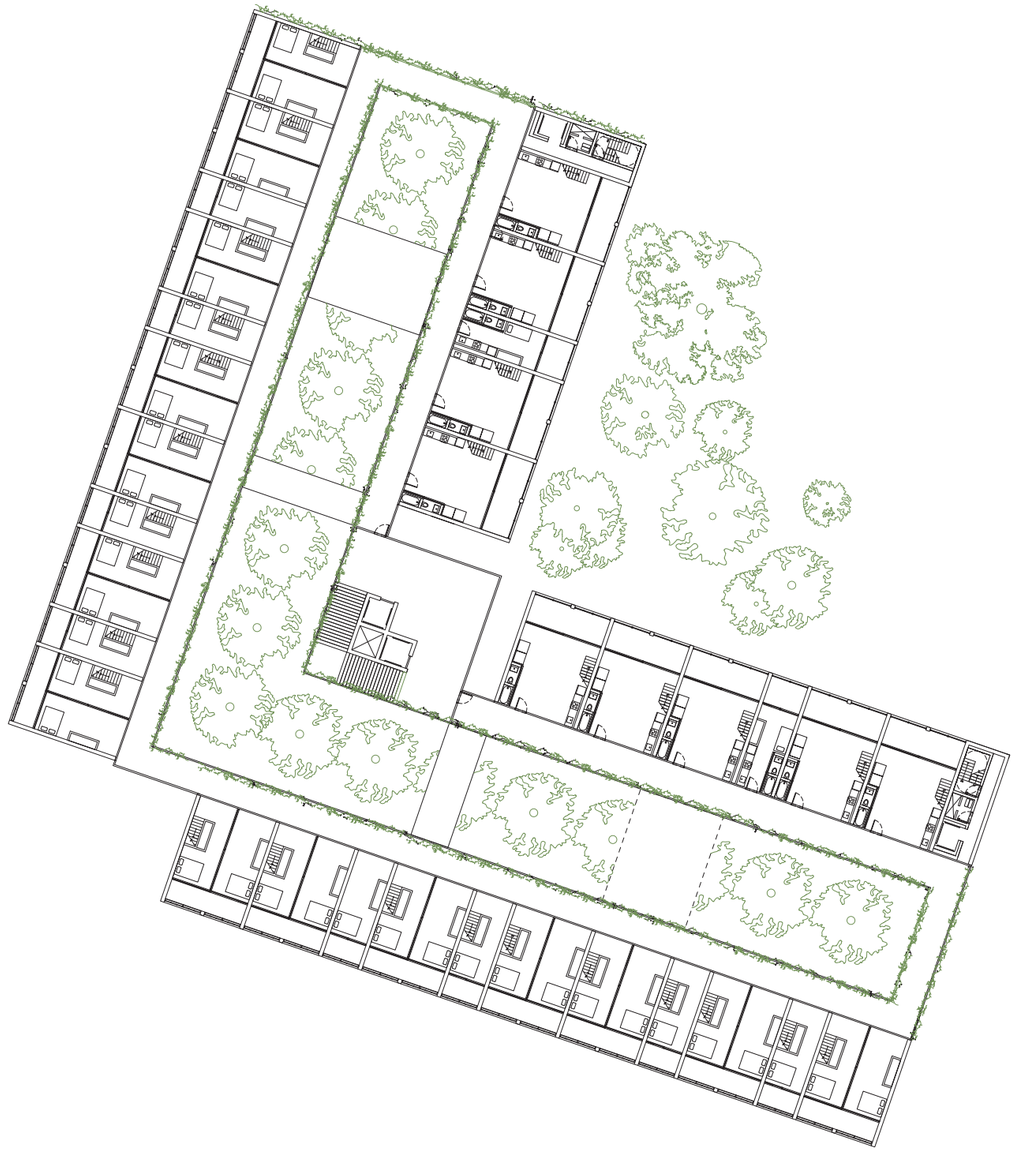
▲ 1/4” model of duplex unit. Entry is through a raised wet zone, housing the kitchen and bathing programs. A sunken living space contains a generous winter garden and stairs to above. ¶ ▶ Unit plans. All units, regardless of size, follow the same logic of wet and dry spaces. All have winter gardens: buffers between the inside and the outside.



▲ Concept collage showing the materiality of wet and dry zones. ¶ ◄ All units follow a similar logic of micro-climates and zones that are suggested through materiality and adjacency to water, light, and air. The membranes of these zones are all flexible or porous, allowing the residents to expand or strengthen the zones as they desire.

▲ Collage over 3/16” model showing generous winter gardens featured in every unit.

▲ 1/16” model facade detail. The regularity of the facade is animated by the participation of the residents. Shutters, windows, and curtains become performative apertures. ¶ ► Upper level plan.



II. Library of Access
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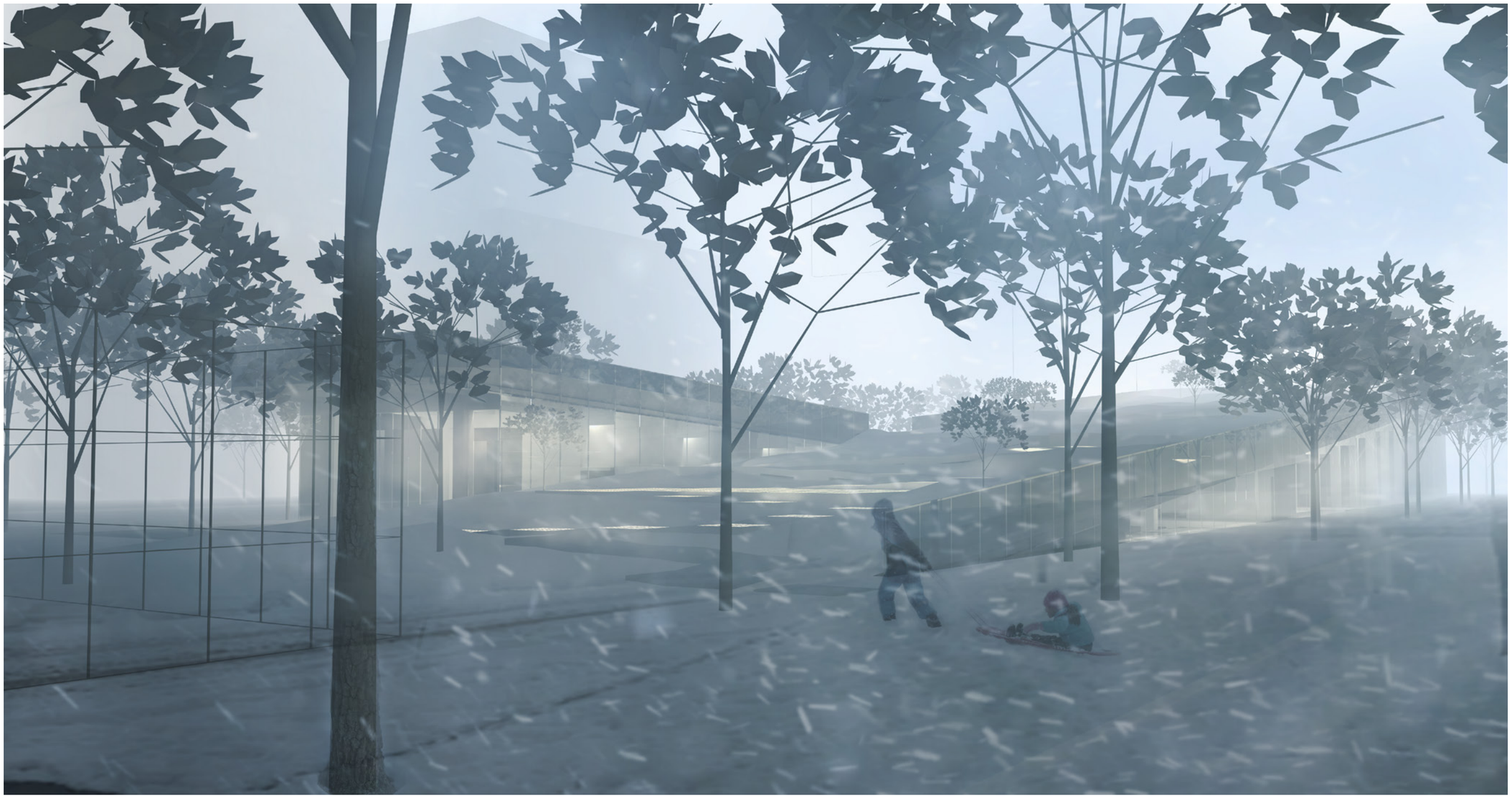
II. Library of Access
Toshihiro Oki, critic.

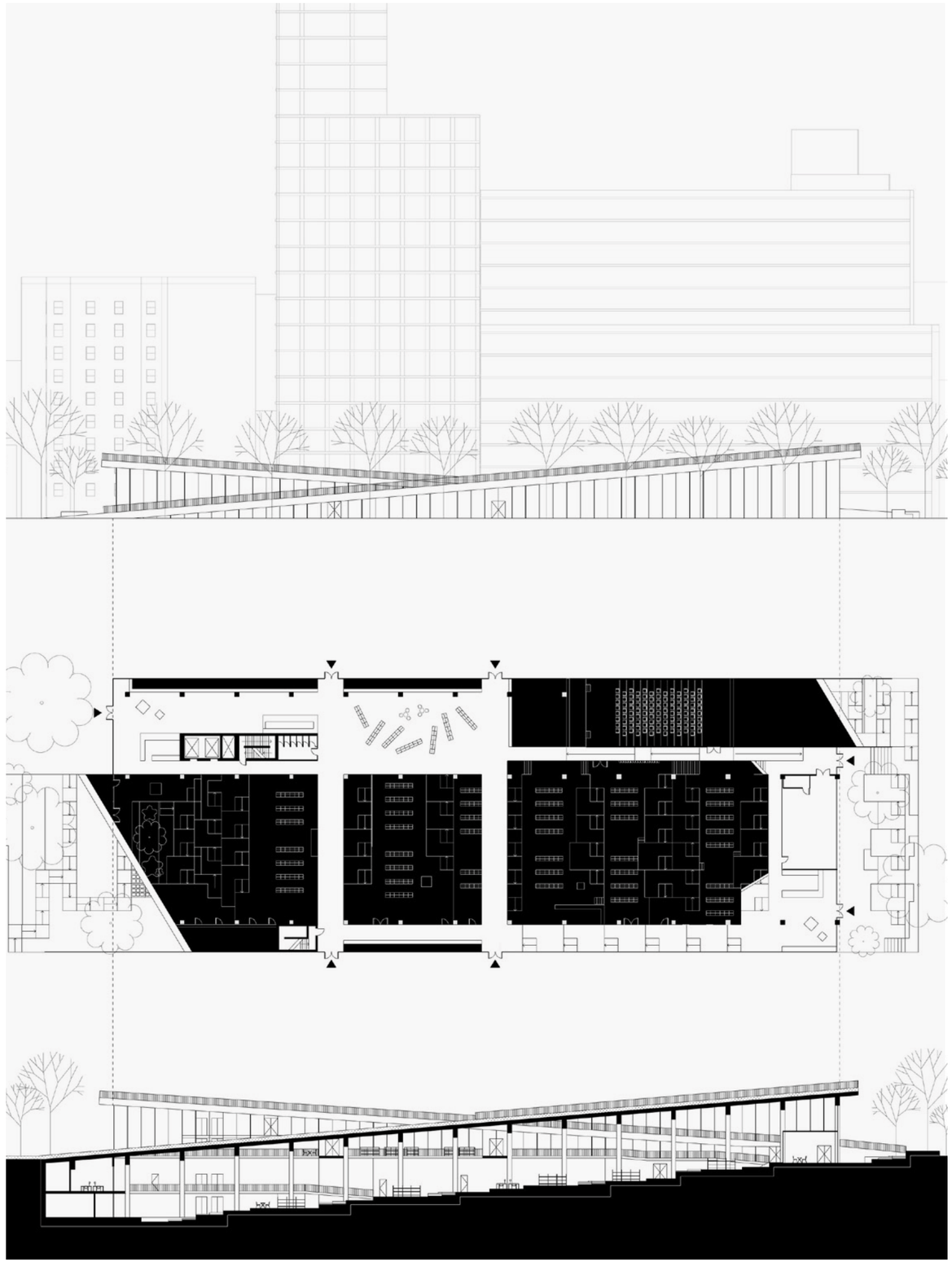
Given the status of the public library as one of the last remaining civic institutions that serves the most disenfranchised, and the site's location next to NYC's historic skid row — the Bowery — I chose to design a library specifically for the un-housed population in the area.

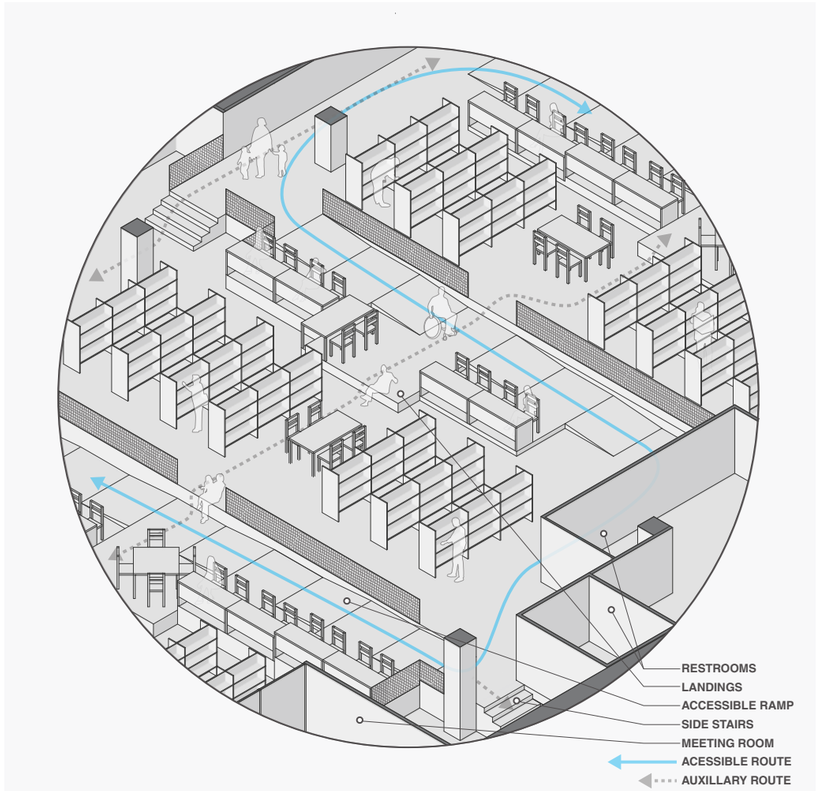
The program is catered to their needs (computer stations, clothing library, private showers, emergency shelter) and the space is designed to be as comfortable as possible for those without stable housing: clear sight-lines, free circulation, and open interior spaces. The library is organized around a terraced cascade of stacks connected by accessible ramps. The gently sloping occupiable roof preserves and enhances the existing hard-scape of Sara D. Roosevelt Park.

▲ 3/16" model showing ground floor cafe entry.

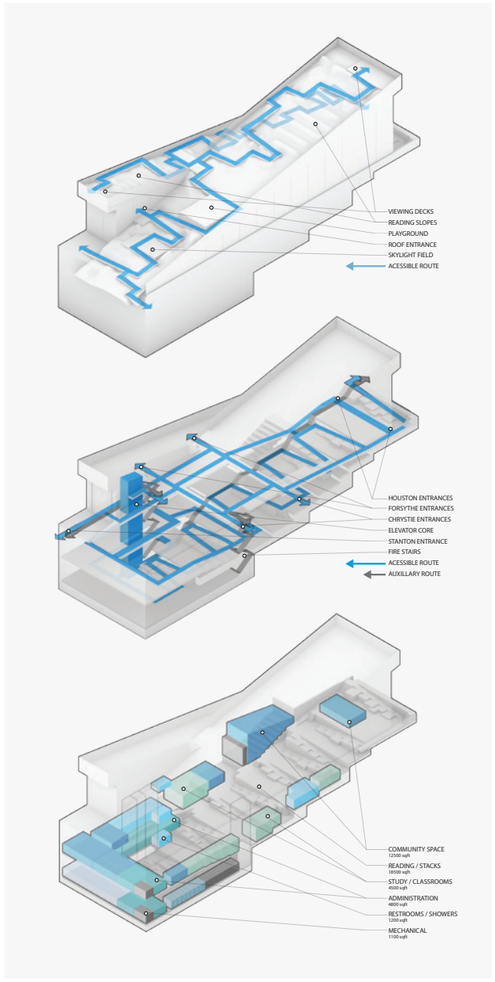


▲ The library as a sledding hill. ¶ The gently-sloped occupiable roof preserves and elevates the existing hardscape of Sara. D. Roosevelt park.





▲ Axonometric diagram highlighting the central accessible circulation. ¶ ◄ Elevation, plan, & section. ¶ The library dips underground in two intersecting volumes. The new roof is punctuated by pavement lights, daylighting the stacks below while preserving the recreation spaces above.



▲ 3/16” sectional model cut through central circulation ramp. ¶ ◄ Circulation & program diagrams. Ramped circulation is prioritized throughout, sidelining stairs. Private programs populate the perimeter of the plan, creating a grand reading room.

▲ 3/16” sectional model cut along side axis. ¶ Ground floor entry and cafe shown above underground counseling rooms and offices. Terraced stacks terminate two levels below ground in a reading area, lit from above by pavement lights in the occupiable roof.

I. Privy Park
I. Privy Park
I. Privy Park
I. Privy Park
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I. Privy Park

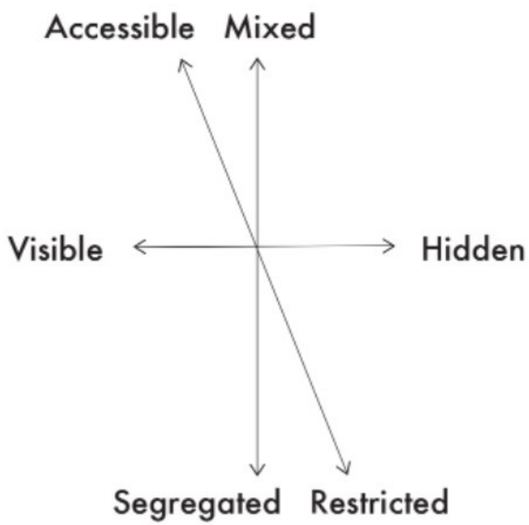
I. Privy Park

Benjamin Cadena, critic.

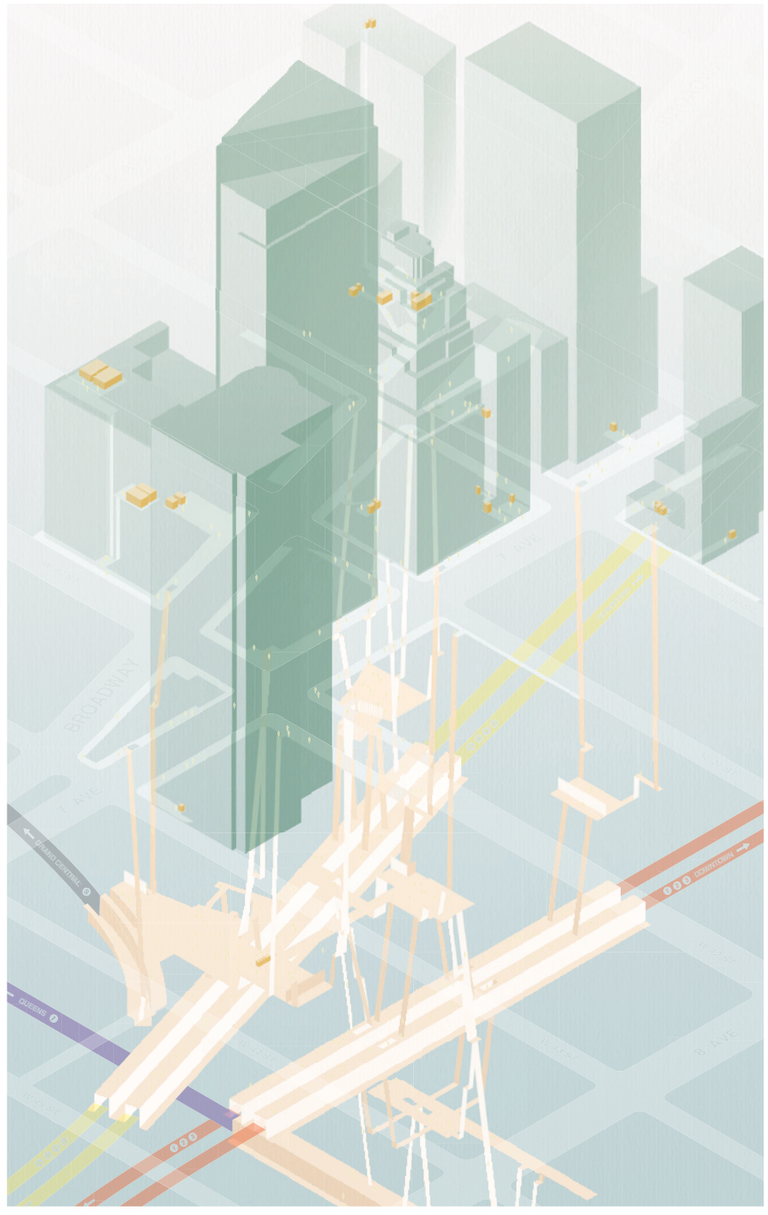
This project looks at public bathrooms around the Times Sq-42 St Station, both as an existing network of fragmented public space and as a potential: valued public parks which provide a fundamental convenience.

Bathrooms have taken many forms throughout time, and their designs reflect the culture that produced them, and its notions of privacy, race, class, religion, and gender. These bathrooms take the form of pocket parks, with mirrored privies and communal water walls for washing. By separating the washing and the eliminating programs of the bathroom, the spaces themselves become much more inclusive, promoting a conception of accessibility that is rooted in mixing and visibility.

▲ Final booklet, printed on toilet paper via acetone transfer. ¶ Times Sq-42 St Subway model from Candy Chan, projectsubwaynyc.com



◂ Graphic plotting of historical and contemporary bathrooms. ¶ Images from Stalled!, an open-source web platform dedicated to truly accessible restroom design: www.stalled.online


BROADWAY
7 AVE
8 AVE
42 ST
43 ST
44 ST
45 ST
46 ST
47 ST
48 ST
49 ST
50 ST
51 ST
52 ST
53 ST
54 ST
55 ST
56 ST
57 ST
58 ST
59 ST
60 ST
61 ST

◄ ▲1:1 mock-up of privy demonstrating its mirror and beacon effect. Lumber, mylar, LEDs. ¶ Two way mirrors allow the privies to function as beacons when not in use... and mirrors for passersby while occupied.

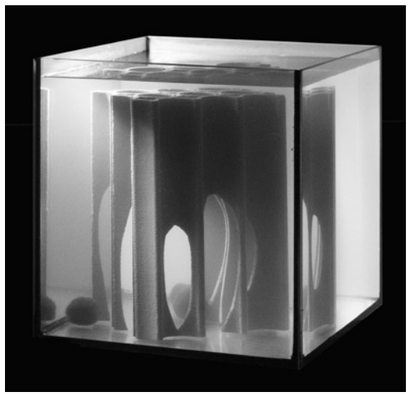
▲ Study model constructed for stop motion animation. Daytime. ¶ Mirrored privies are arranged in a pocket parks. Washing occurs along wet walls that define the outdoor space, ala Paley Park.

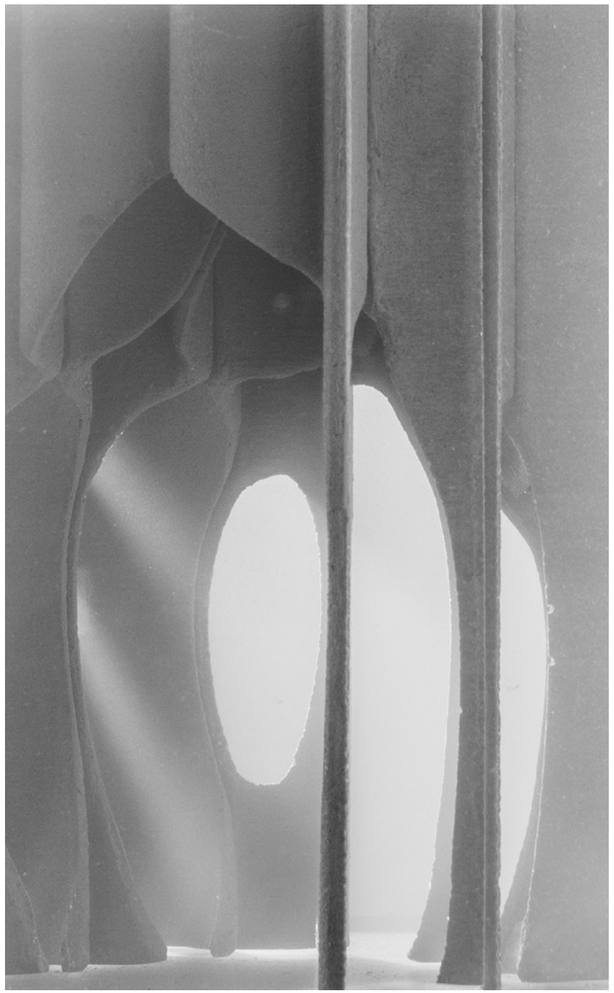
▲ Study model constructed for stop motion animation. Night. ¶ By separating the washing and the eliminating programs of the bathroom, the spaces become much more inclusive, promoting a conception of accessibility that is rooted in mixing and visibility.

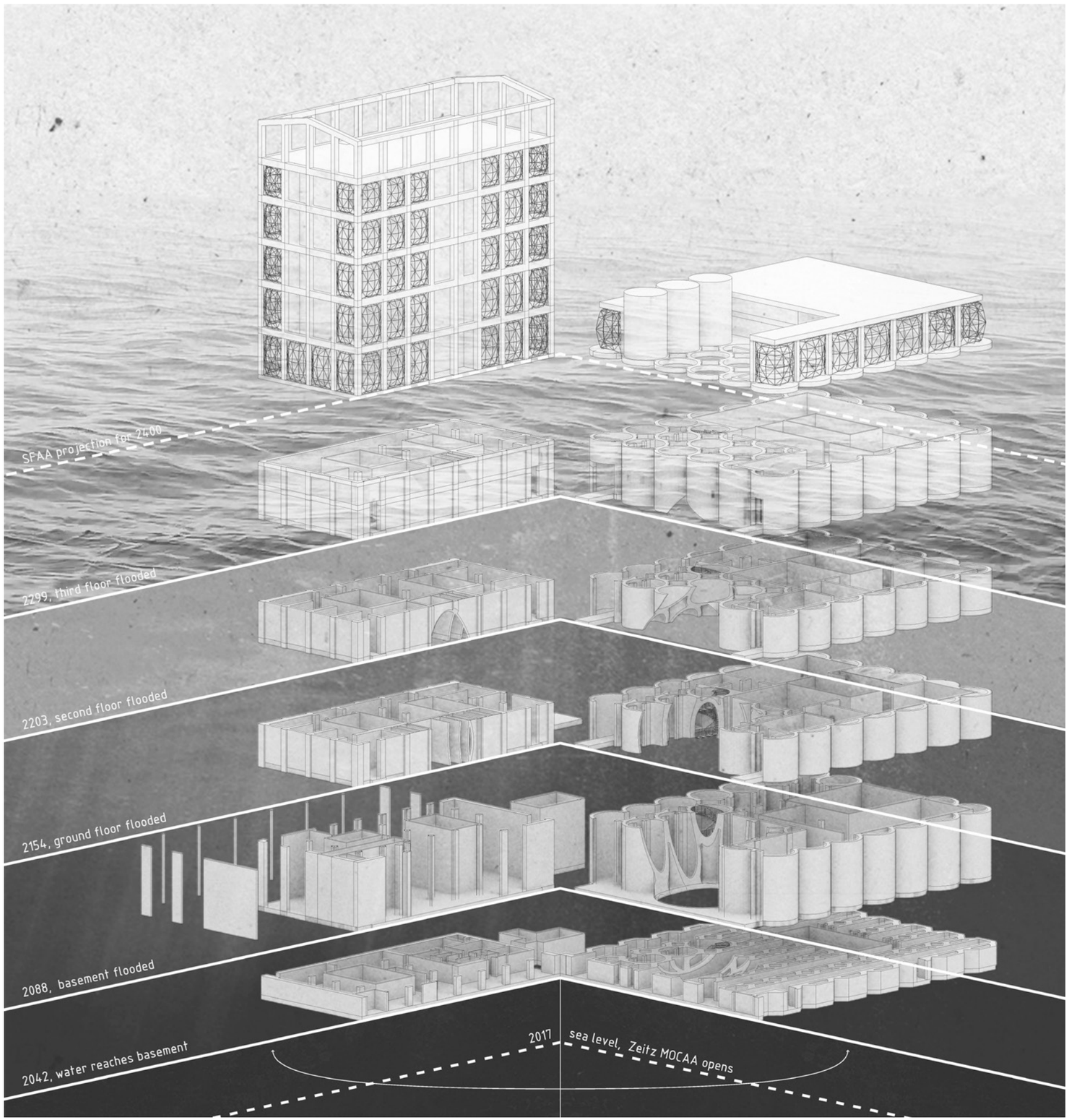
Architectural Drawing & Representation I
Josh Uhl, professor.

Rising Tides

This project analyzes the Zeitz MOCAA by Heatherwick Studios, imagining the grain-silo-cum-art-museum as a casualty of catastrophic global sea-level rise. ¶ The drawing documents the slow but steady inundation. ¶ The model explores the potential after-life of the sculptural concrete atrium as an aquatic ruin. The model was constructed by casting rockite into CNC-milled foam molds. The rockite shells were epoxied together and submerged in a ready-made aquarium. §



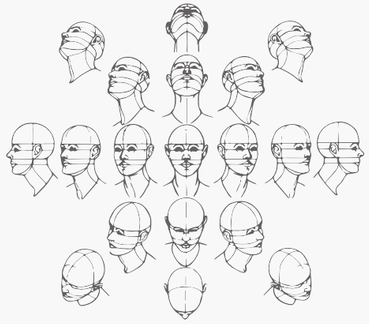


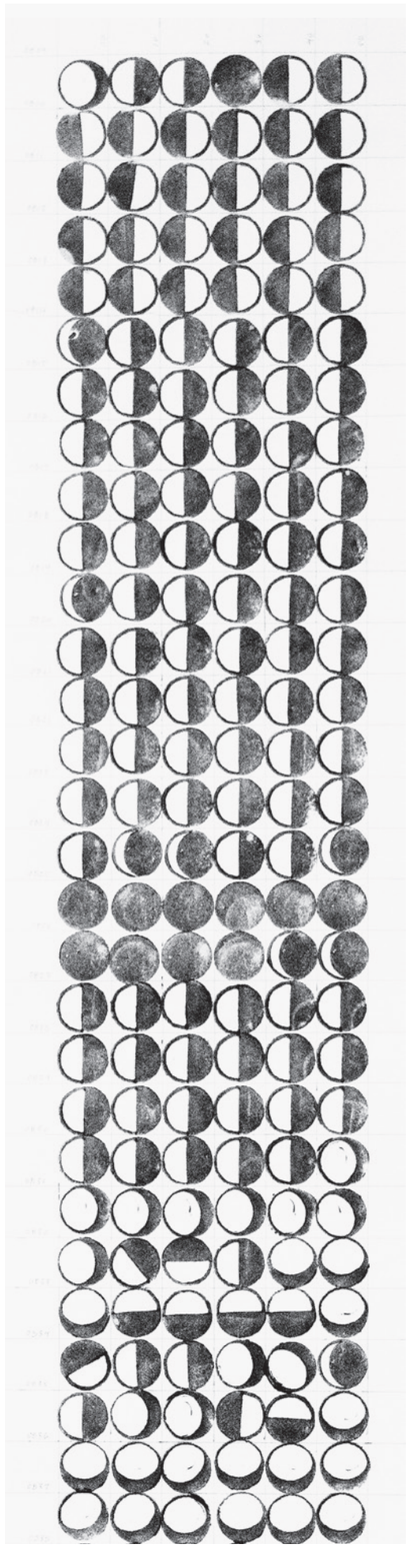


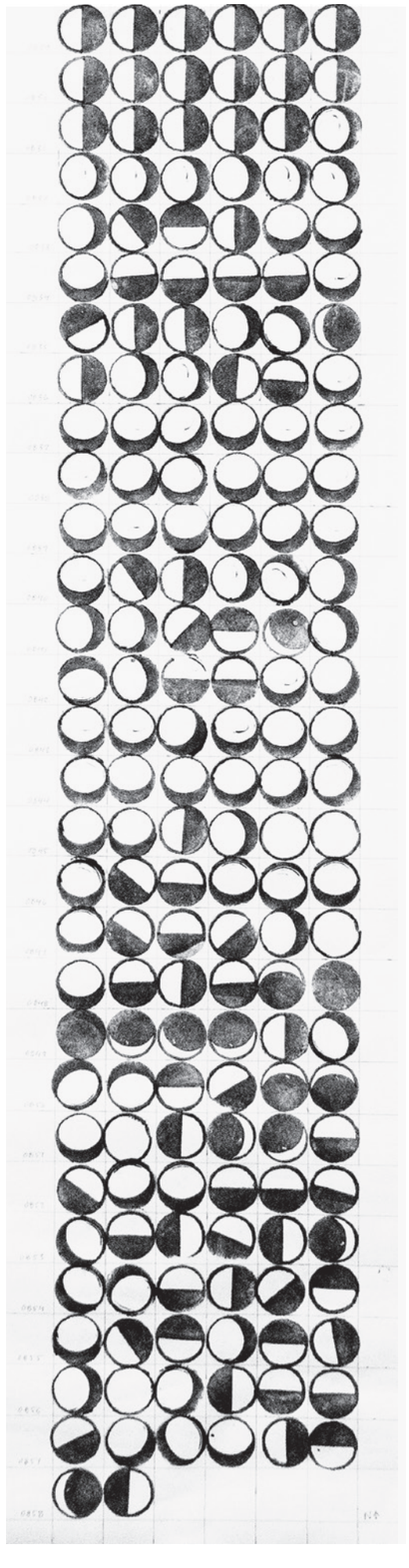
Architectural Drawing & Representation II
Dan Taeyoung, professor.

Morning Moon

My morning routine as told by planometric orientation of my head. Each circle represents approximately 10 seconds. ¶ Patterns emerge that only I can interpret: the minutes of snooze; the way I turn my head as I brush my teeth; long stretches of looking at my phone. §







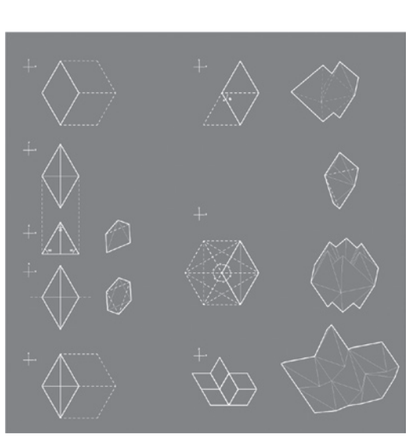
Building Flash

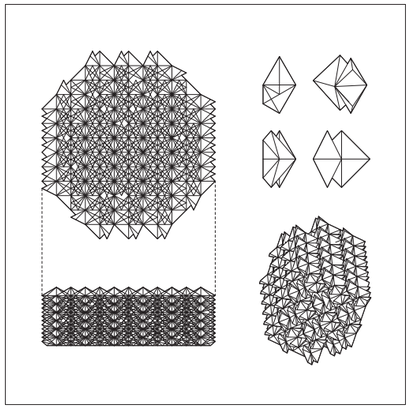
Plots get thrown away, digital files lost or accidentally deleted. What better way to subvert architectural representation than by challenging its impermanence? Tattoos, after all, last forever. ¶ For my ADR II final, I reduced my studio project Library of Access to a flash sheet. My final drawings were produced dot by dot (stick-n-poke style) during the review. ¶ Many many thanks to Greta, Jake, Henri, and Ian for letting me tattoo some version of this flash on their flesh. Ian: I'm sorry I put the ramp arrow upside-down. §

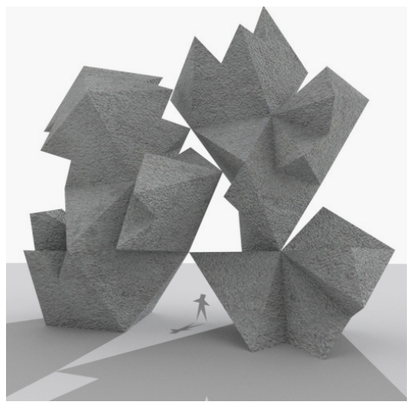
Transitional Geometries
Josh Jordan, professor.

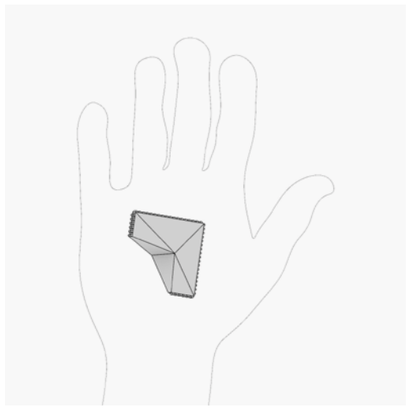
Roxy Heart

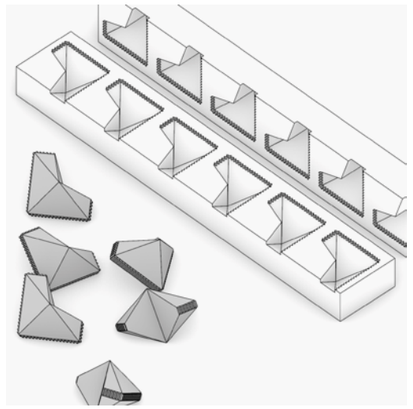
A space-filling truncuted rhomboid, with hexagonal tiling in two planes and square tiling in the third. ¶ Obsessive Rhino rotations gave way to obsessive casting: more! more! more! ¶ Gravity stymied some aggregations, but revealed others. §

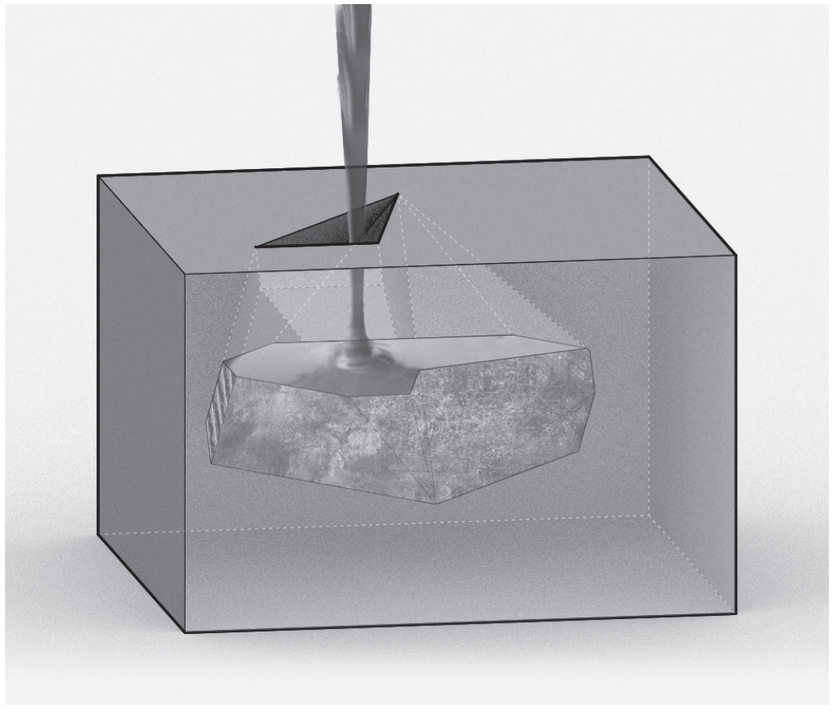


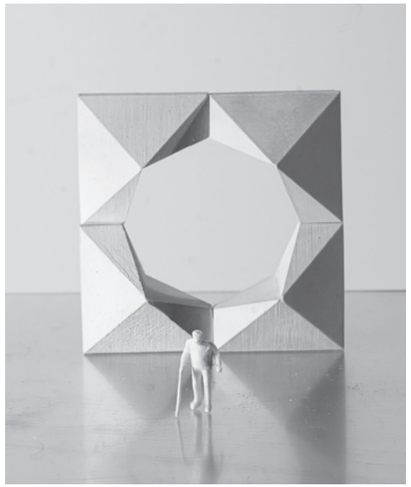


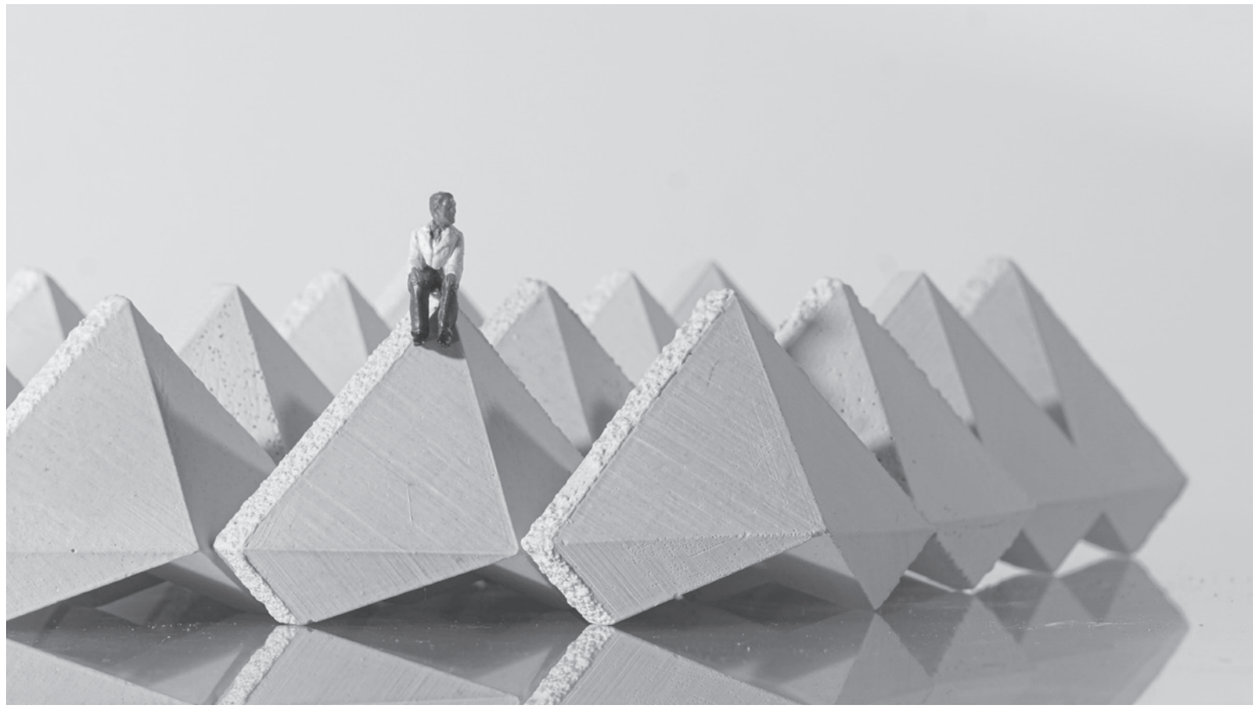








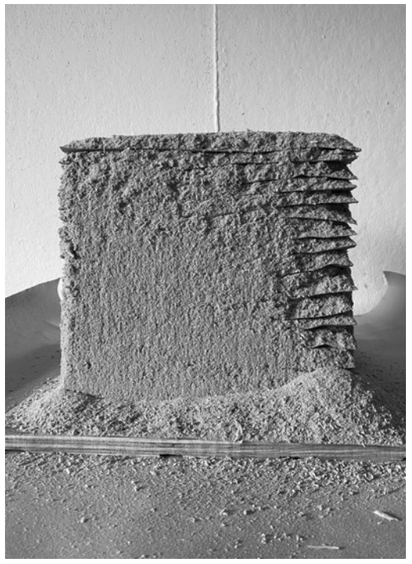


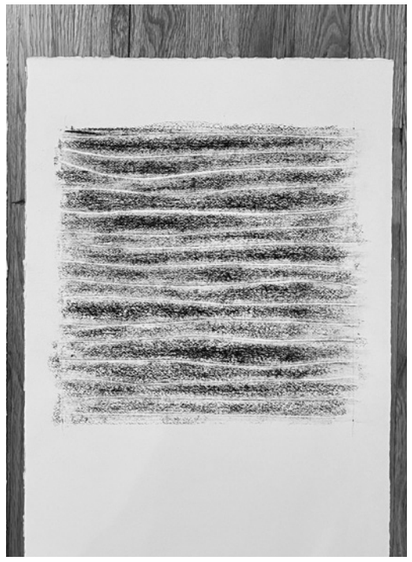


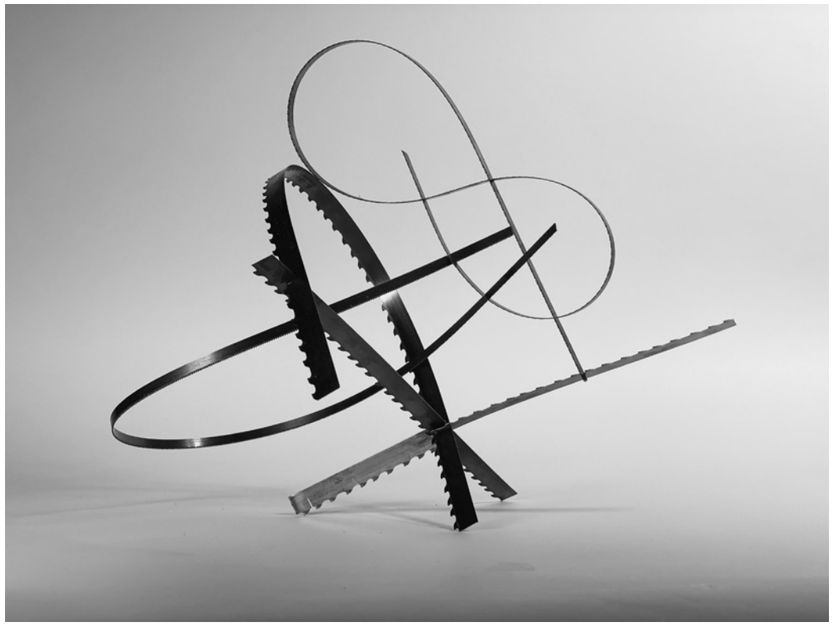
MAKE
Ada Tolla & Giuseppe Lignano, professors.

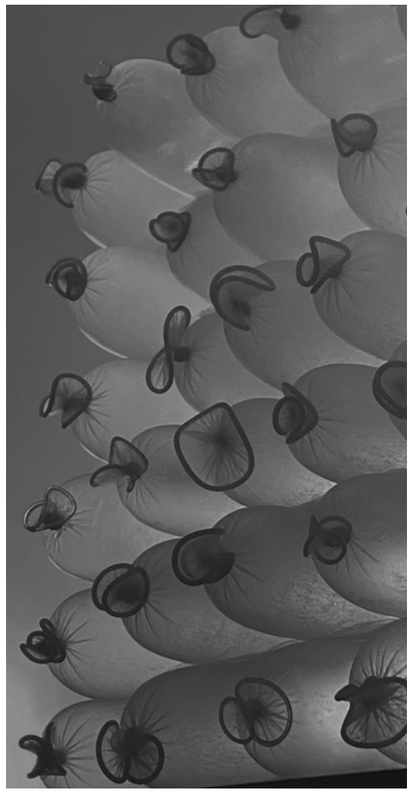
MADE

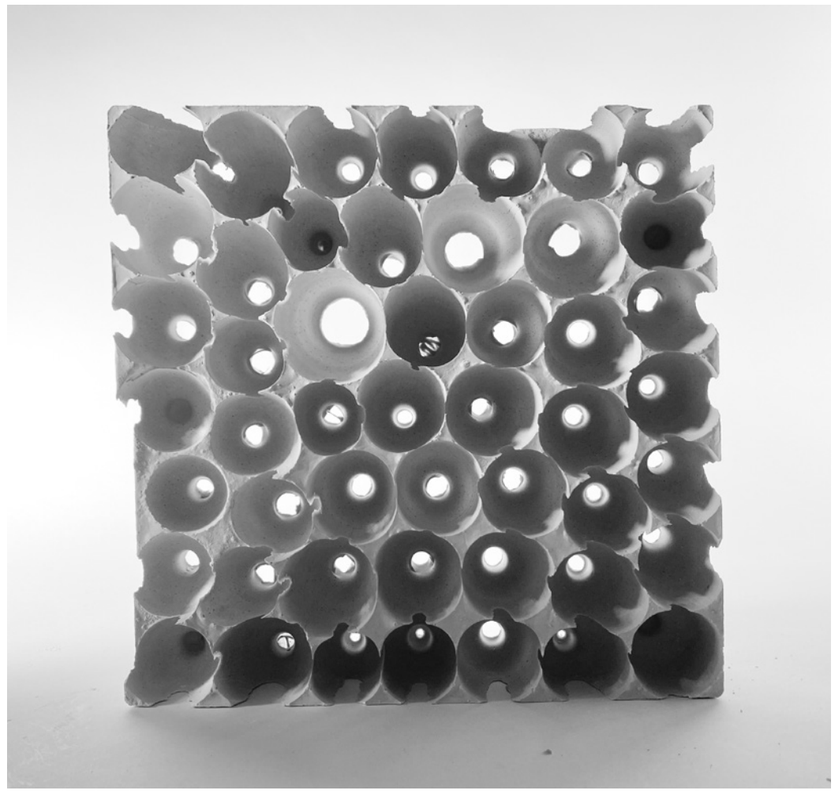
Plastic. Metal. Concrete. Wood. ¶ Condoms. Saw blades. Cast-condoms. Sawdust. ¶ A diary log from week 1: ¶ My objective was to use a most abject of objects: the condom. ¶ I used condoms I had accumulated over the years, all freely acquired from student health centers and pride-fair giveaways. Most of them turned out to be expired. For each condom, I opened the wrapper, unrolled the condom, inflated (but not over-inflated), and tied off the end. I played around with many different ways to aggregate (tied together like balloon animals, strung up in a garland, rubber-banded in bundles), but in the end I wanted to preserve the recognizable form and achieve a systematic volumetric accumulation. I used cling wrap to make 1' wide bandoliers of six condoms each. Stacking six bandoliers in alternating x & y alignments, achieves as 1' tall volume, with open corners. §

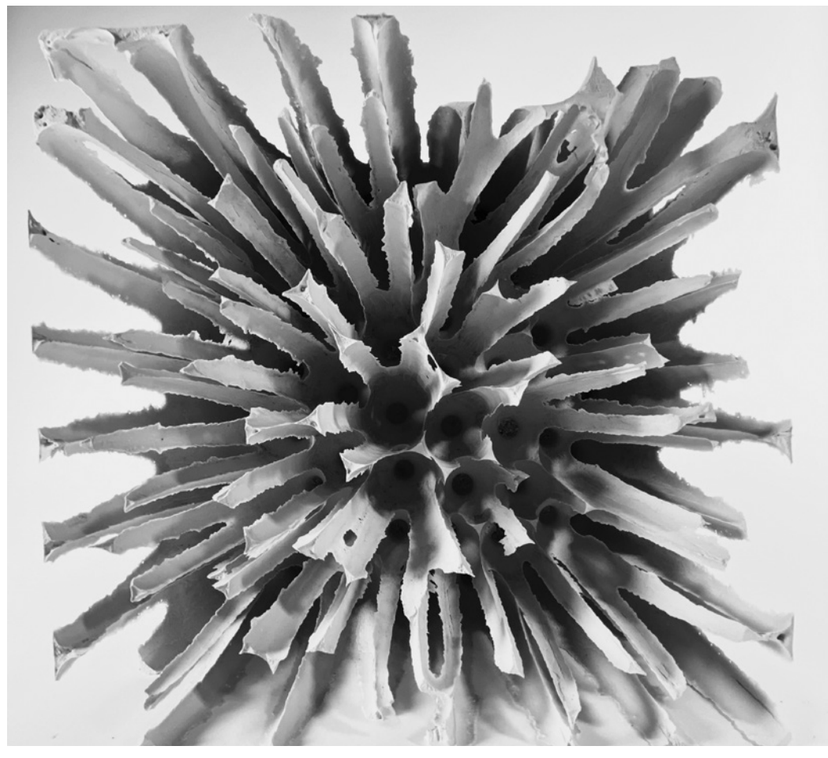












Thanks!