

# **Lisa Ramsburg**

Architecture Portfolio

2019 - 2022

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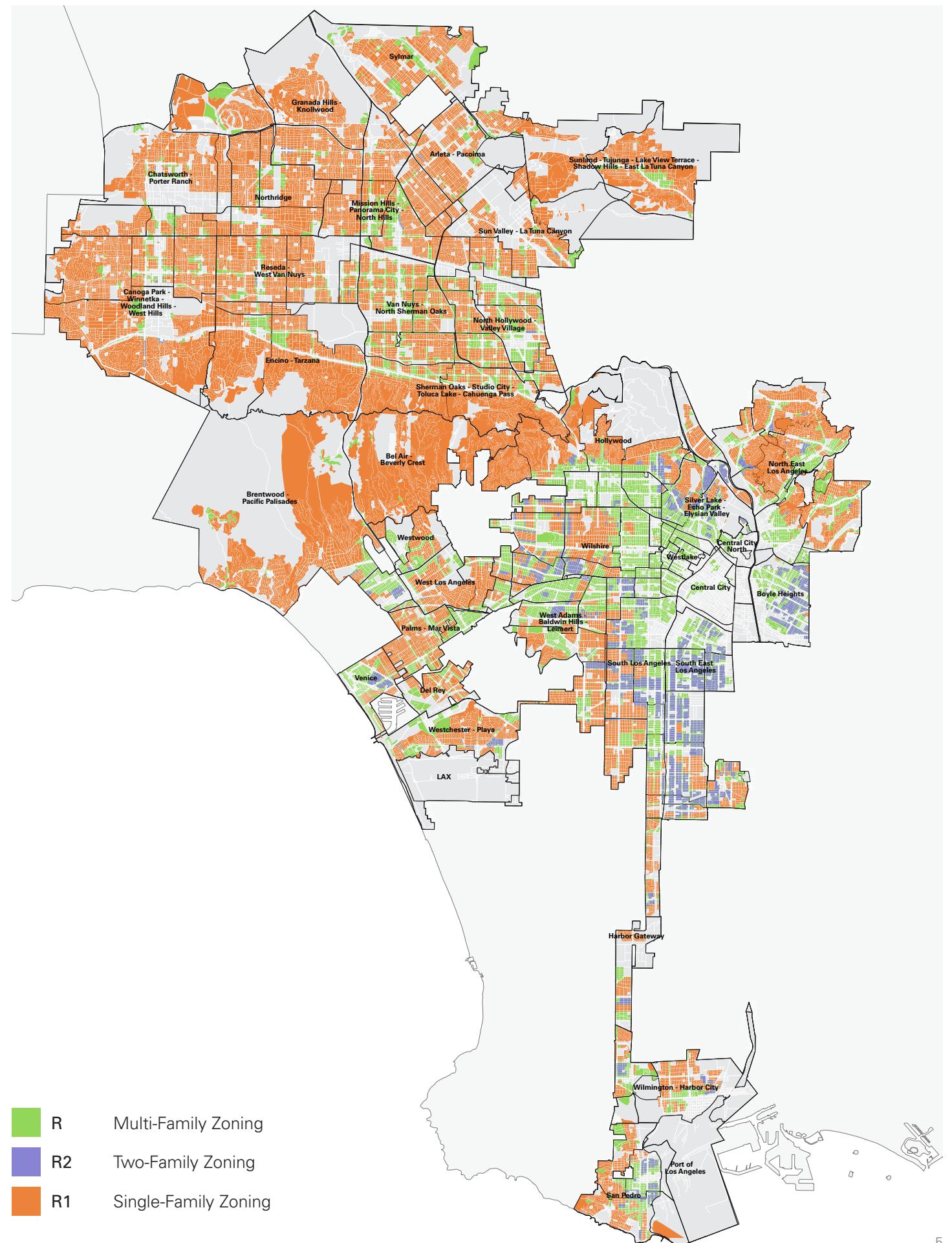
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# Duplexing Los Angeles

*Lisa Ramsburg and Anna Kerr  
Los Angeles, CA, 2022 Paul Katz Fellowship Research*

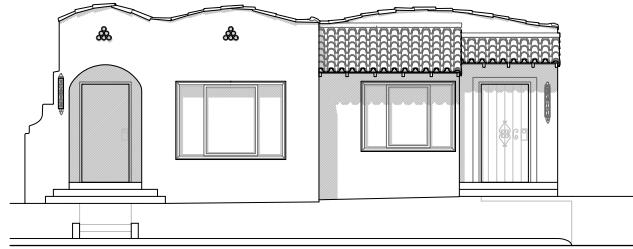
This research proposes duplexing as a formal and spatial method for designing equitable density and cohabitation in Los Angeles. *Duplexing* is a response to the recently passed bill SB 9 which allows duplexes in areas that previously only allowed single family homes—around 74% of Los Angeles County. *Duplexing* reappropriates the language of the duplex in order to adapt to new social contexts and subvert that which the duplex has been complicit in establishing in the US: property ownership as a means for wealth accumulation, nuclear family structures, and a culture of individualism. *Duplexing* does not respect the boundaries of party walls. Instead, it promotes collectivity, sharing, flexibility, and the proximity of difference.

The starting point for learning how we can *use* the duplex to *evolve* the duplex is a typological and study of duplexes in Los Angeles. While the image of Los Angeles is perhaps exemplified by the single-family house on a yard, LA is a complex metropolis where many types of housing have been tried and tested; it is a city that produced dingbats, -plexes of all numbers, bungalow courts, ADUs, and boulevards lined with apartment buildings. Even in areas where the single-family detached home appears to reign supreme, density has found ways to slip between the cracks. Thus, as a starting point for understanding how LA could be duplexed in response to SB 9, we canvassed the R2 zones to find existing duplexes in the city. Where are they? How do they fit into the landscape of LA housing? What are their distinguishing features? What works well and what doesn't? By drawing, photographing, and categorizing duplexes around the city, we compiled a duplexicon, a catalog of duplexes in LA that we can learn from to develop tools and strategies for implementing SB 9.

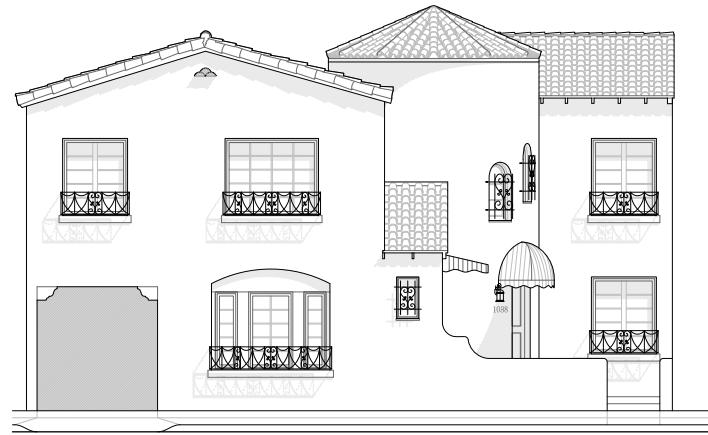


## Los Angeles Duplex Catalog

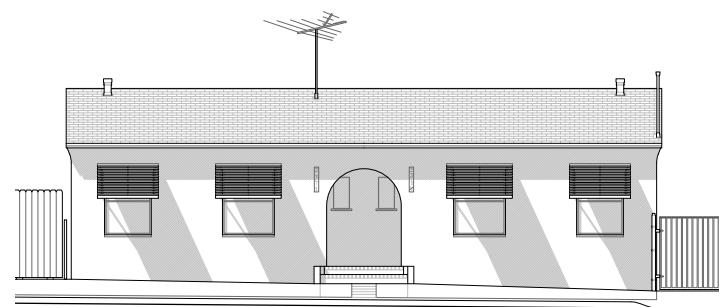
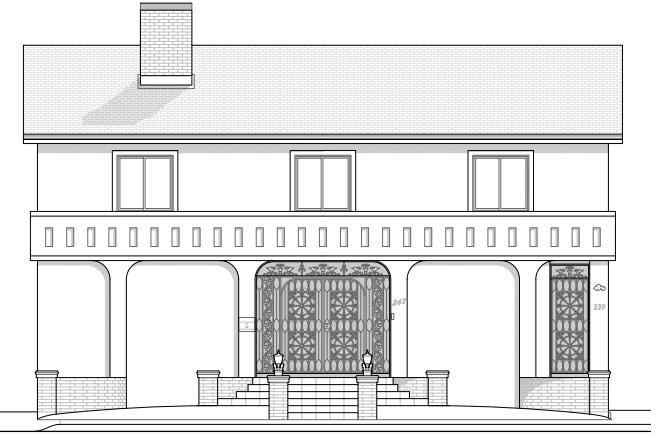
We identified four main types of duplexes that are found throughout Los Angeles. Borrowing language from Todd Gish's thesis, "Building Los Angeles," the first three types are the double bungalow (one story with side-by-side units), the double house (two stories with side-by-side units),



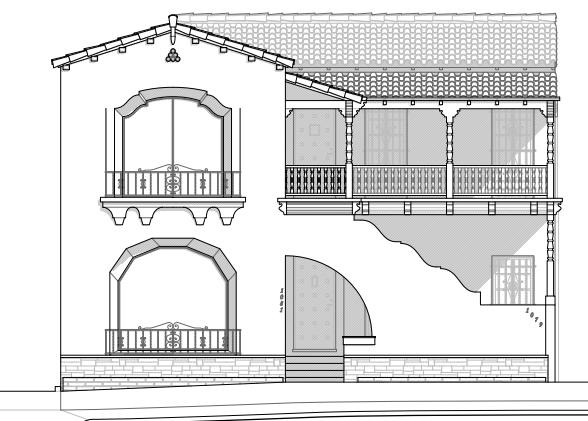
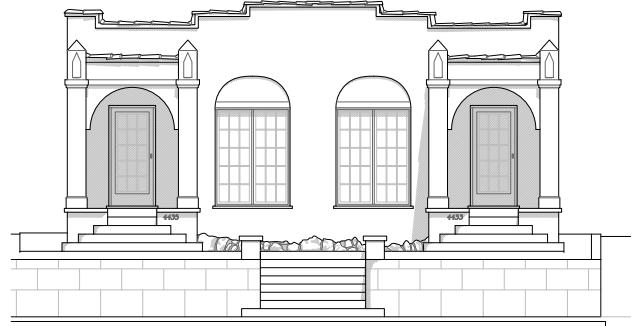
**Double Bungalow – Asymmetrical**



**Two-Flat – Interior Stair**



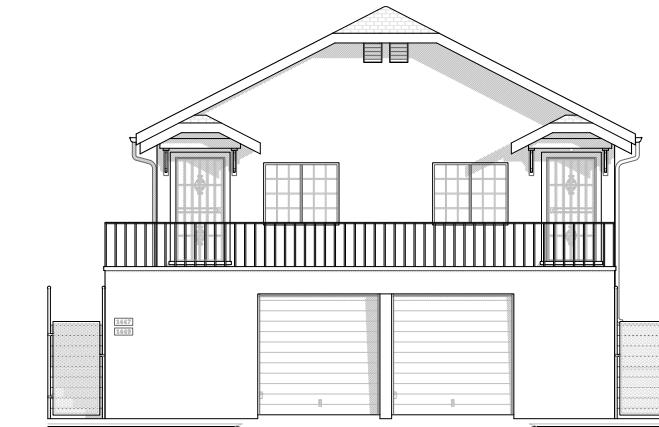
**Double Bungalow – Symmetrical**



**Two-Flat – Exterior Stair**



**Double House**



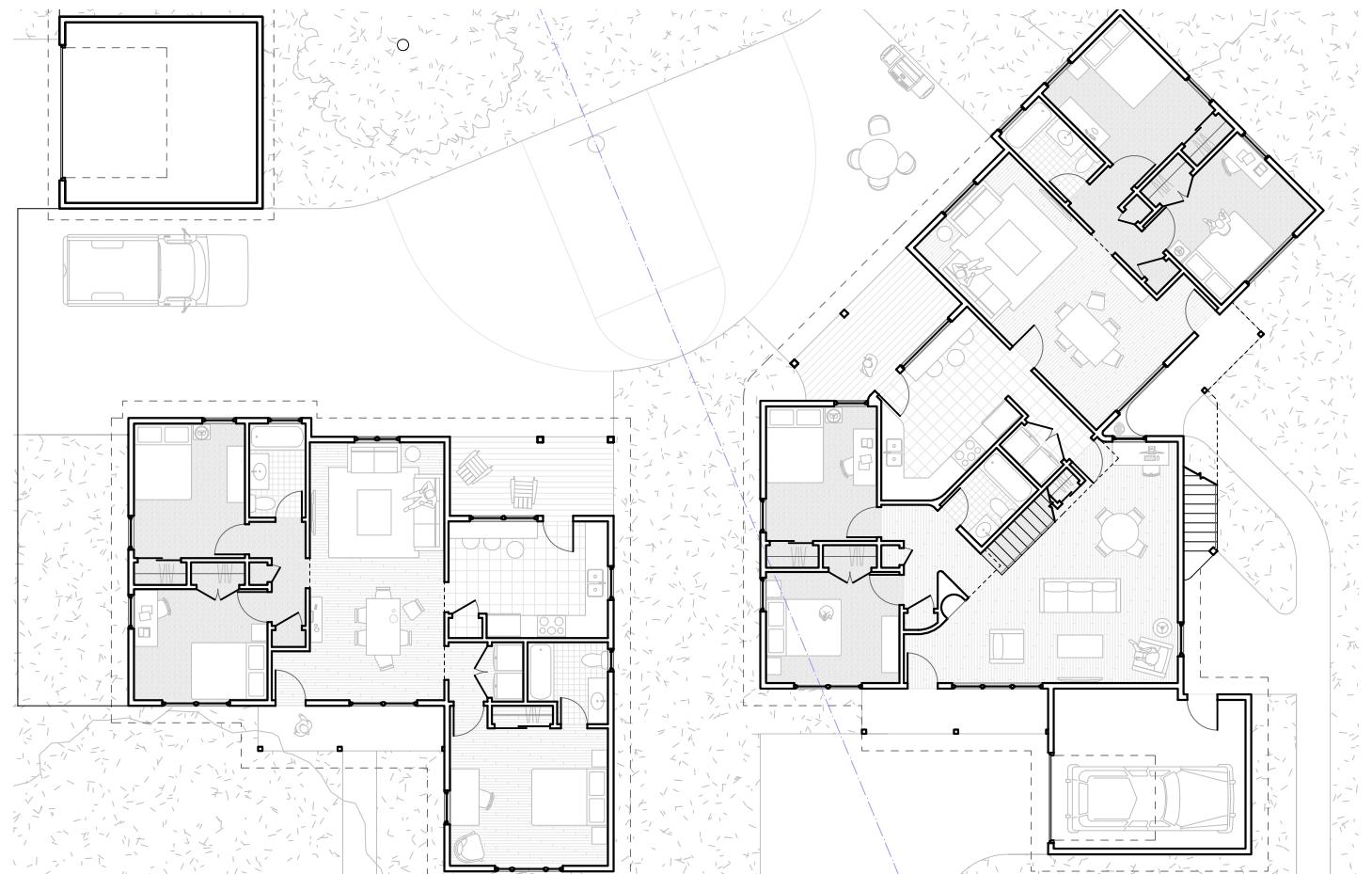
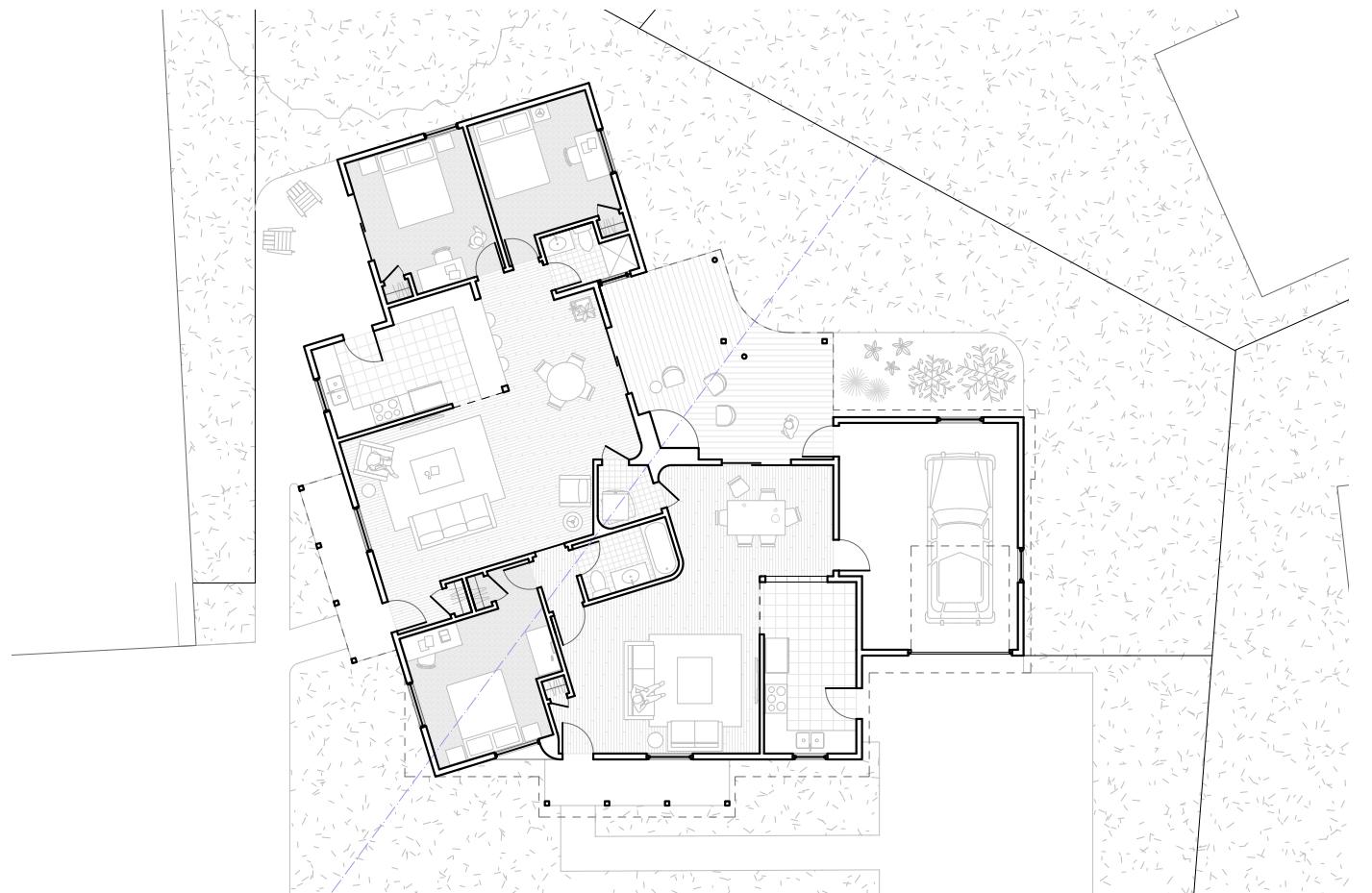
**Hillside**



## Actionable Site Plan – Mirrored

In order to show how the study of Los Angeles duplexes could be used to create a method—*duplexing*—we chose a two block portion of the San Fernando Valley to show how it could be transformed over time. Our method mirrors the existing houses at angles to create new duplexes





**Above:**  
One of the first strategies for Duplexing an existing single family house is called the Self Duplex. Working within the setbacks of the lot, the existing house is mirrored at an angle which results in an overlap of interior spaces that can be resolved into flexible and shared spaces.

**Below:**  
Mirroring results in a symmetrical relationship to the open space between units, encouraging a mindset where the units have an equal ownership of the yard. This strategy is therefore in contrast to ADUs which are often designed to hide or be camouflaged in the back yard.



**Below:**  
Duplexing can result in either a one-story or two-story modification/addition. The two-story options offer additional square footage for bedrooms, offices, commercial spaces, or ADUS. Here we show a two-story intervention that is set back from the street to fit in well with the existing scale of the block.

**Above:**  
Another strategy is the Neighbor Duplex. Rather than mirroring the existing house onto itself, the neighboring house is mirrored across the property line onto the existing house. While the development can still be completely contained to one lot, it can be used to create a relationship between two neighboring lots.

# Duplexing Philadelphia

*Lisa Ramsburg and Anna Kerr  
Princeton University, Masters Thesis, 2022  
Advisors: Monica Ponce de Leon and Cameron Wu*

Our thesis proposes duplexing as a formal and spatial method for designing equitable density and cohabitation in Philadelphia. Duplexing as a method learns from the successes, contradictions, and obsolescences of duplexes. Endlessly interesting and uncanny, versions of duplexes can be found all across the country. While some duplexes are stacked by floor, we are particularly interested in the duplexes that are mirrored across a party wall in which symmetry simultaneously emphasizes the whole and the parts.

Used to disguise density within the coded facade of the single-family detached home, duplexes offer a strategy for affordability and efficiency of design and construction while upholding hegemonic ideals of property ownership, individualism, and nuclear kinship structures. Despite the fact that the shared party wall connects the sides, in reality it acts as a device of separation, enabling the sides to operate as separate whole halves to the extent where one side can be completely demolished.

Duplexing, on the other hand, will not respect the party wall. Rather than mirroring along the party wall, what if one side was mirrored at an angle, replacing the partition with overlapping zones that can be resolved into flexible or shared spaces, accommodating a variety of kinship structures, ways of living, and a diversity of programs unsupported by typical domestic configurations. The angled mirror plane is the primary strategy for duplexing. Though duplexing is derived from duplexes, as a method it can be applied to sites that are not duplexes as a way to infill or modify existing conditions that are not built to best serve the folks using them.



*Philadelphia Duplexes clock-wise  
from top left:*

*Late 20th Century / Post-war  
suburban duplex  
Early 20th Century railroad suburb  
duplex  
Mid 19th century urban duplex  
Mid-late 19th century streetcar  
suburb duplex*

## Site 1 – Existing



Our first site for Duplexing is a block of Philadelphia rowhouses, the housing type that Philadelphia is known for. Emblematic of much of North Philly in particular, following a sharp decline in population in the 1970s and 1980s, rowhouses were vacated and selectively demolished, leaving gaps in the urban fabric. Philadelphia's population is once again growing, and there is immense pressure in the city for housing that is affordable. However, a solution that builds back what once was there ignores that previous spatial configurations no longer suit contemporary modes of living and the potential for future states of growth and decline.

## Site 1 – Duplexed

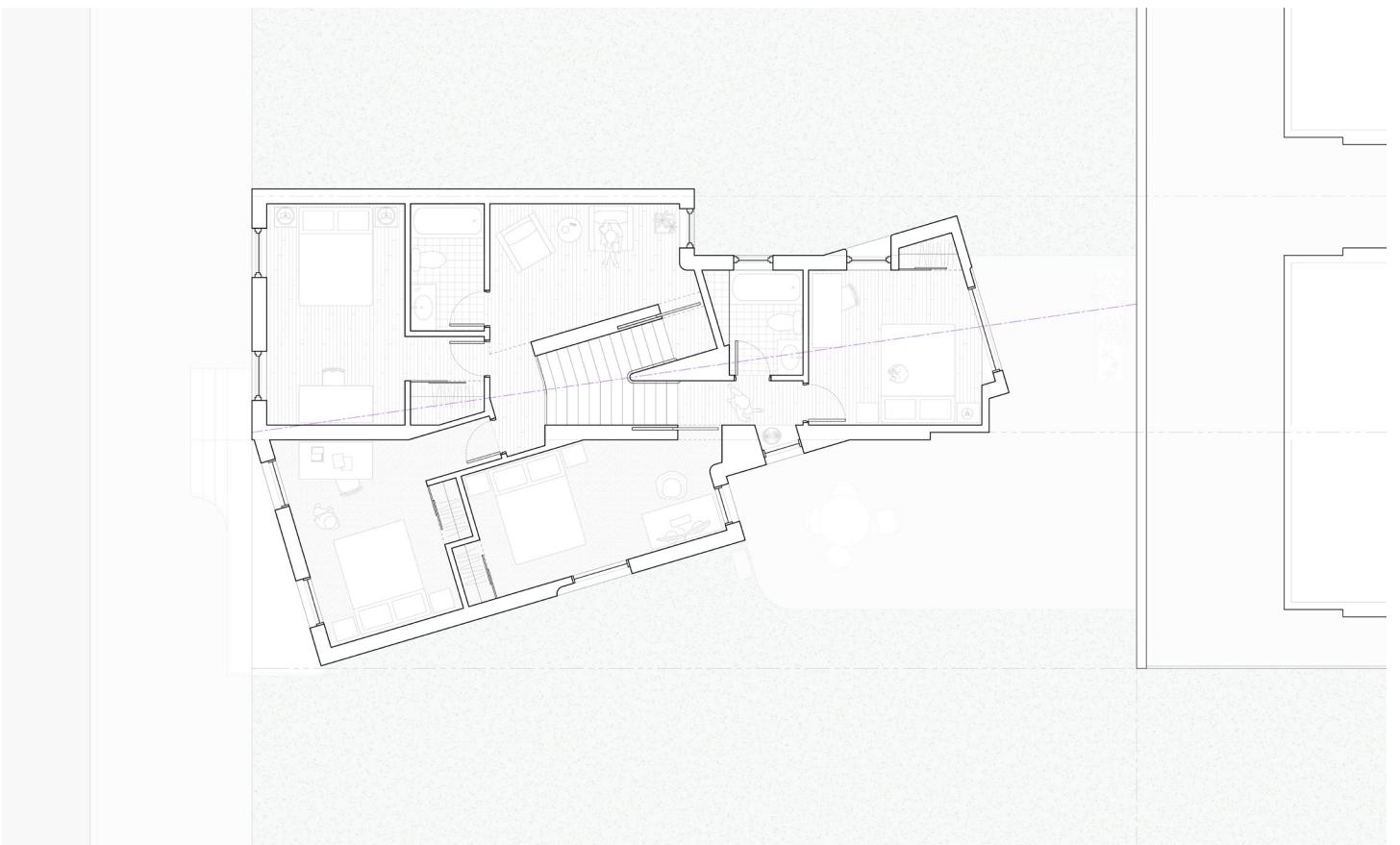


Duplexing would unfold over time, each successive mirror plane reacting to the previous ones, building upon ways residents already use vacant land, modifying dwellings, and pulling back from the street to frame shared spaces on the interior of the block. Fundamentally changing the structure of the block in this way disrupts existing property lines and zoning requirements. Instead, residents can opt into a community land trust that would oversee and agree upon the development of the block, ensuring affordability over generations. Alternatively, residents can maintain their property but allow duplexing to happen within their lot through easements. At its core, Duplexing is a process that requires communication and compromise.

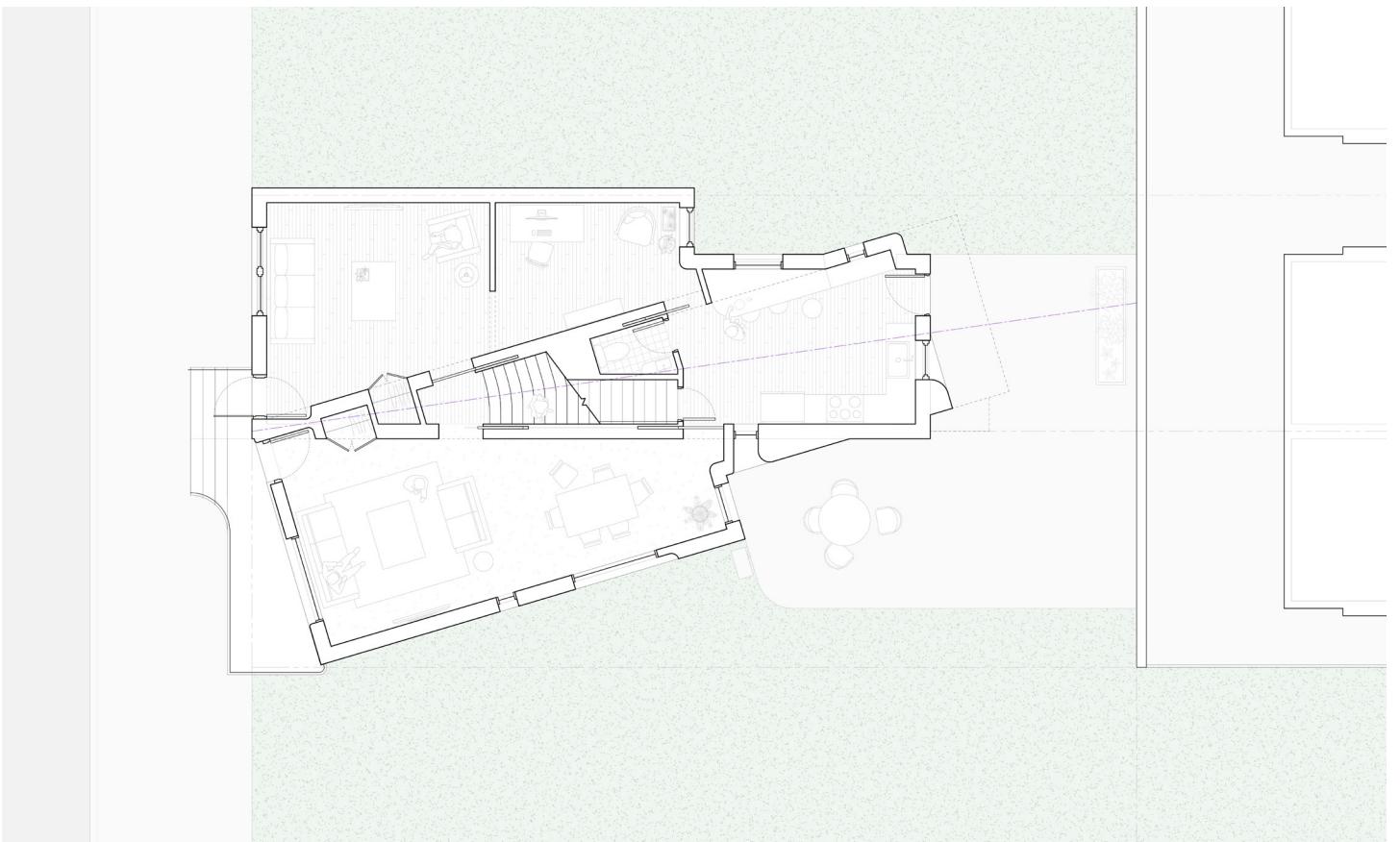


*Above:*  
View from the street showing how duplexing fundamentally alters the structure of the block. Mirroring at an angle pulls the new facades away from the street, drawing visitors into the center of the block towards a theater / community space.

*Below:*  
View from inside the block showing the way that open space can be consolidated for shared use. Also showing an interior block path that leads to additional program. By removing fences and consolidating yards, the interior of the block is activated.



Second Floor Plan



First Floor Plan

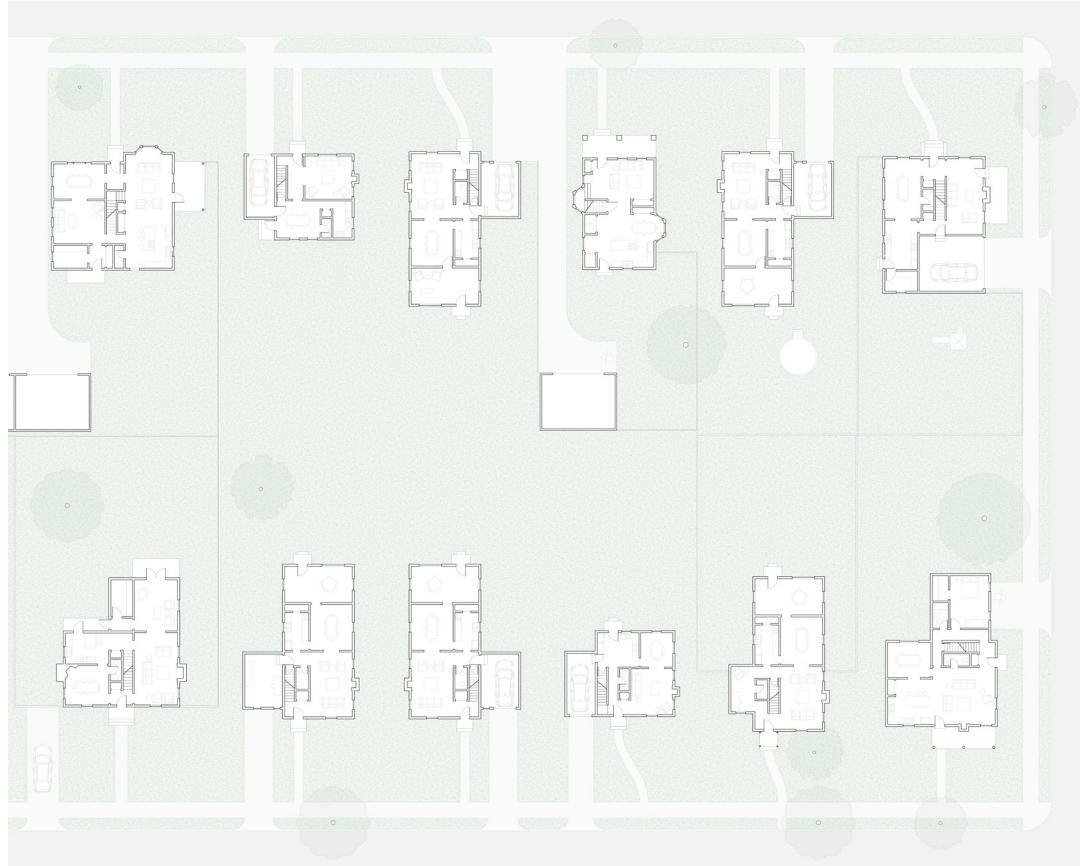


Above:  
View from the second floor showing the way that the stair stairs together and splits at the top, separating the units while maintaining visual connectivity and the potential for flexibility.



Below:  
Model photographs showing the material reality of the existing and new construction. The seams and overlaps between the two indicate our approach to seek abstraction while maintaining the image of mirroring and communication with the existing.

## Site 2 – Existing



Oxford circle is a first ring suburb in Northeast Philadelphia. Developed beginning in the 1940s, it is a neighborhood with a wide variety of housing types from rowhomes, to duplexes, to single family homes. Served by a SEPTA regional rail line, it has the potential to serve a higher density of people without overburdening car infrastructure. Like most of Philadelphia, it is zoned to allow attached housing, and thus is an ideal location to prototype duplexing as an example that other cities can follow. Exclusionary R1 zones that only allow detached single-family houses have dominated American cities and suburbs, exacerbating ongoing housing crises and wealth inequality across the country. As attitudes around these zones are finally shifting, duplexing imagines what could take place when we challenge the prevalence of R1 zones.

## Site 2 – Duplexed



Over time, houses could be altered to accommodate aging family members, intergenerational families, groups of roommates, throuples, work-from-homers, entrepreneurs, and more. In addition to changing the nature of the domestic interior, the method also subverts the standard of house on privately owned and occupied yard. Instead of each house having a small yard and a basketball hoop on their driveway, outdoor space can be consolidated into park facilities managed by the community land trust. Duplexing creates a new image of the block. The result of the angled mirror plane is not like the image of the duplex where the party wall division is clearly legible on the facade. Instead, materials, windows, and other elements end up on both sides of the mirror plane, obfuscating divisions of ownership and emphasizing the flexible nature of the resulting plan.



*Above:*  
View from the inside of the new block showing the way that yard space can be consolidated into a community garden and shared outdoor space. Also in view are two different types of duplexes, one that is attached to an existing building and one in which both units are new.

*Below:*  
Rather than having a basketball hoop in each driveway, the community could have an entire half court in the center of the block. Mirroring frames entrances and access to the new public space, ensuring that it seems welcoming to all.



Second Floor Plan



First Floor Plan



*Above:*  
View of the dining room that can also be used as a office conference room during the day. The shape of the room is the result of mirroring the existing exterior bay window. Shared space like this dining room make it easy to adjust which rooms are used by occupants, ensuring flexibility as needs change over time.

*Below:*  
Model photographs showing the material reality of the existing and new construction. The seams and overlaps between the two indicate our approach to seek abstraction while maintaining the image of mirroring and communication with the existing.



## Up in the Air

Lisa Ramsburg and Taka Tachibe  
Princeton University, Fall 2021, Faculty: Paul Lewis and Guy Nordenson

Up in the Air addresses two concurrent and pressing crises in the Pacific Northwest: a lack of affordable housing and a high risk for a major tsunami resulting from an earthquake off the coast. Though mitigations for these crises are remarkably different in terms of scale, integrating them can be productive and mutually beneficial. The site for the project is Neskowin, Oregon, a small beach town on the coasts that hosts many tourists in the summer season. Because of the location of the fault line, there would not be enough time to evacuate the town in the event of a tsunami. Therefore, this project proposes a tsunami tower, a vertical structure that offers refuge while waiting out the storm.

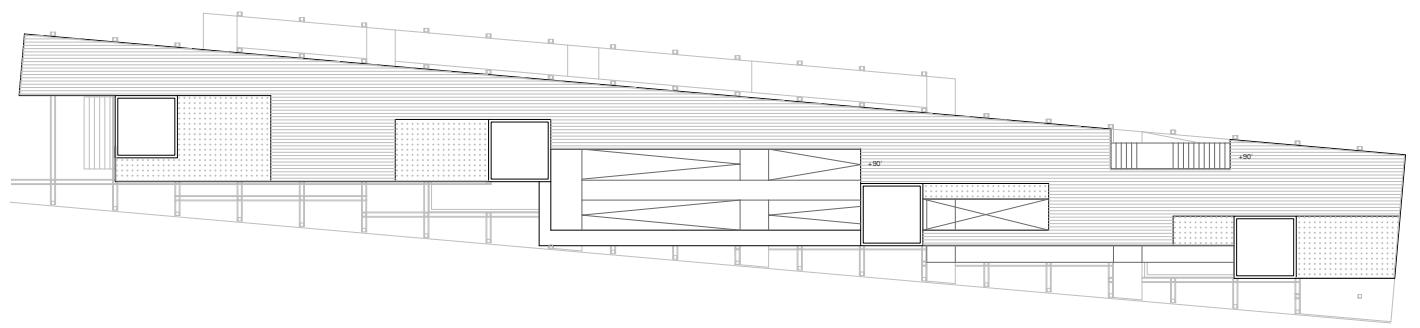
The project consists of three systems—steel structure, emergency circulation, and housing—that are calibrated for different uses but overlap to form one coherent volume: a long bar oriented parallel to the Neskowin streets. The steel structure supports a 90' tall, 5000 SF refuge platform that is accessible from a continuous run of stairs and an ADA accessible system of ramps. The ramps also weave through and provide access to the housing. A wood lattice fills out the volume, camouflaging the steel structure and supporting a lenticular scrim that directs views and acts as a shading system for the housing.

Appearing sometimes like a billboard and sometimes like a cloud, the project blends into the surroundings while also providing a clear signal of disaster preparedness and safety. While the project is intended for use during a disaster scenario, it would be an asset to the community at all times, offering a place for exploration, play, bird watching, and gathering.

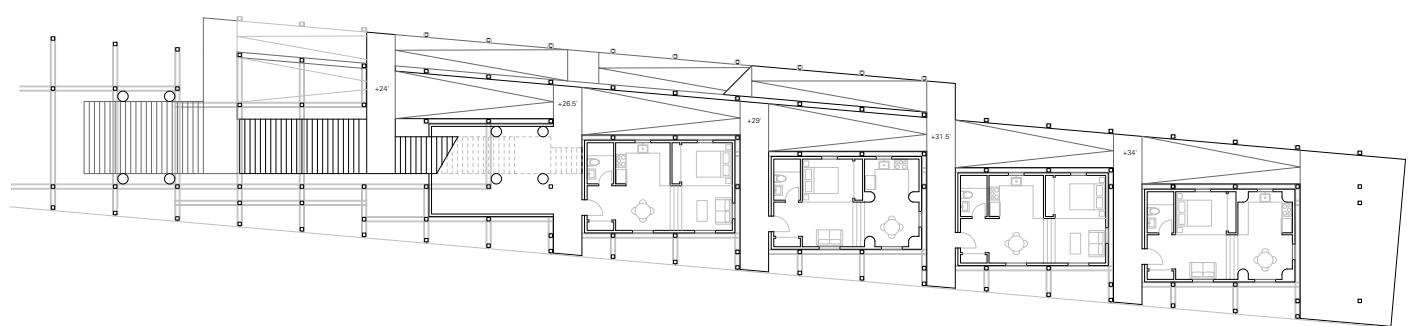


Above:  
A view from the 5000 SF refuge platform where the community would gather during a tsunami. The enclosures hold supplies that would be needed while waiting out the storm. On normal days, the platform is a promenade that stretches out towards the ocean, offering panoramic views and places to rest.

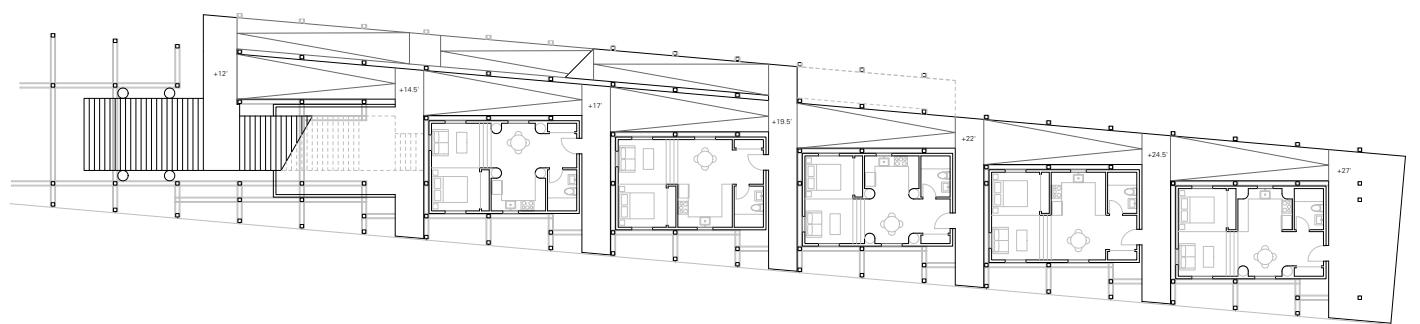
Left:  
View from the highway. The long linear form of the tsunami tower with the lenticular screen makes the project immediately visible from the surrounding area, acting as a beacon of safety. At the same time, the perforations of the screen and wooden lattice beneath blur the edges of the project, softening it so that it blends into the surroundings. The housing units are staggered and stack up beneath the stairs, creating more density on the east side of the project.



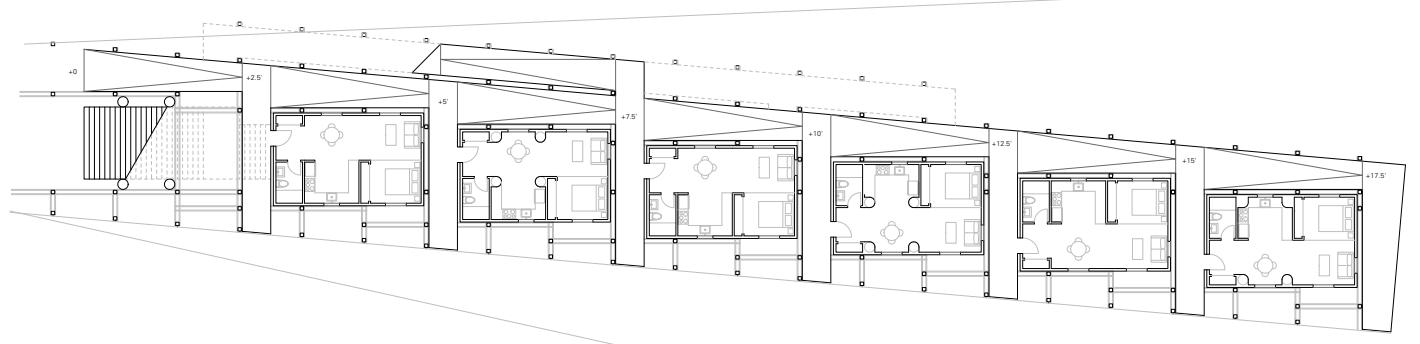
Refuge Level



Third Floor



Second Floor



First Floor



Left:

A continuous run of stairs connects from the ground level up to the 90' tall platform. The stair is wider at the bottom and narrows at the top, providing space for gathering and events. Each landing of the stair connects with the ADA accessible ramp that leads to the housing and connects to the platform at the top.

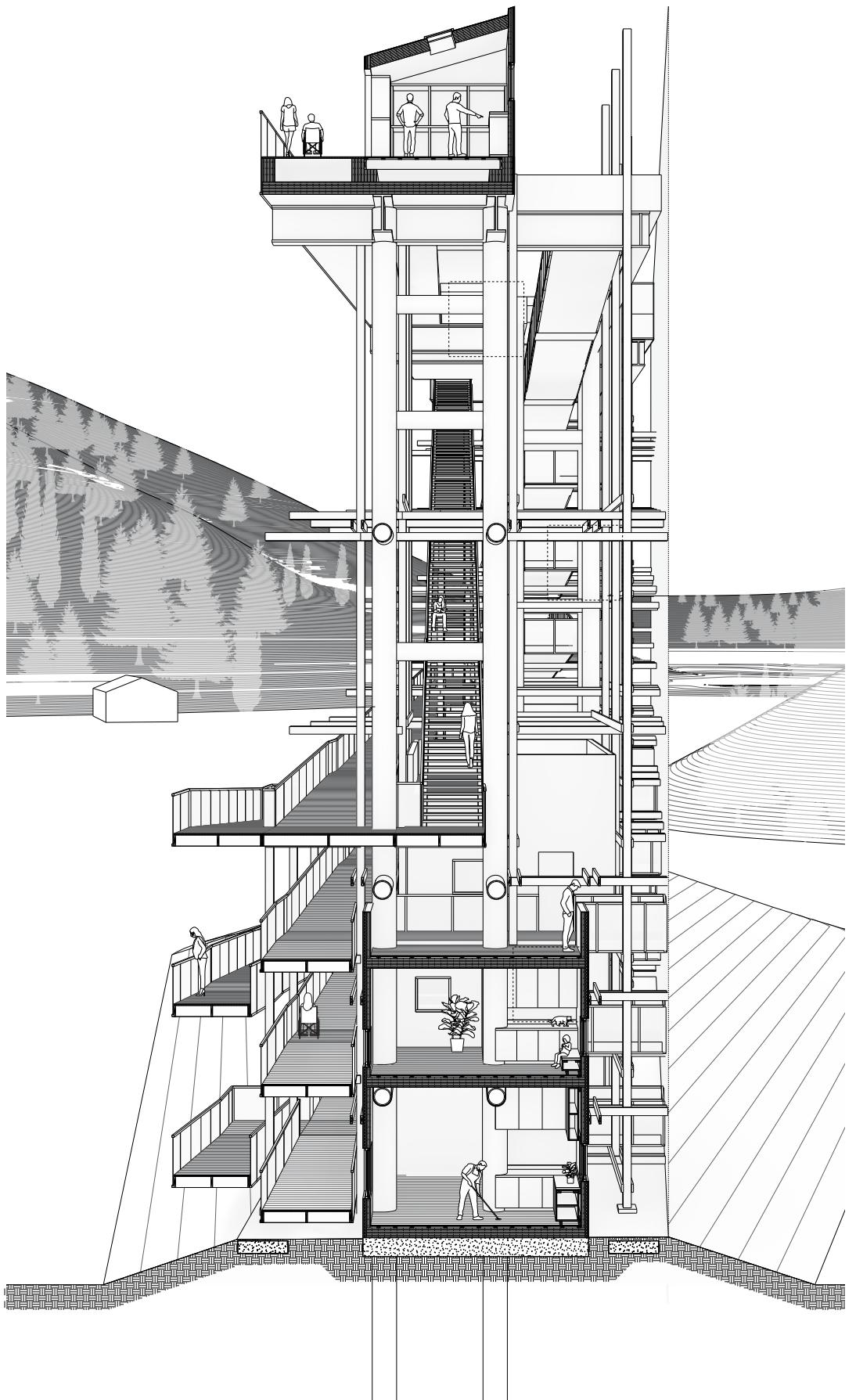


*Above:*  
A sectional model showing the way that the steel structure penetrates the CLT housing units. In a disaster event, the CLT is expected to be sacrificial, leaving the steel structure to support the refuge platform.



*Left:*  
Two models of subsequent portions of the tower, showing the development in the design of the project. The model on the left is an earlier iteration, without the scrim, mound supporting the housing, or steel columns that support the platform.

*Right:*  
Section Perspective showing the housing units that are stacked beneath the stair, accessible from the ramps on the north side of the structure. Four steel columns support the platform and a wooden lattice surrounds the steel, camouflaging the structure and supporting a metal screen on the south facade.



## Witherspoon-Jackson Story House

Lisa Ramsburg, Anna Kerr, and Victor Rivas  
Princeton, NJ Fall 2020, Faculty: Mira Henry and Matthew Au

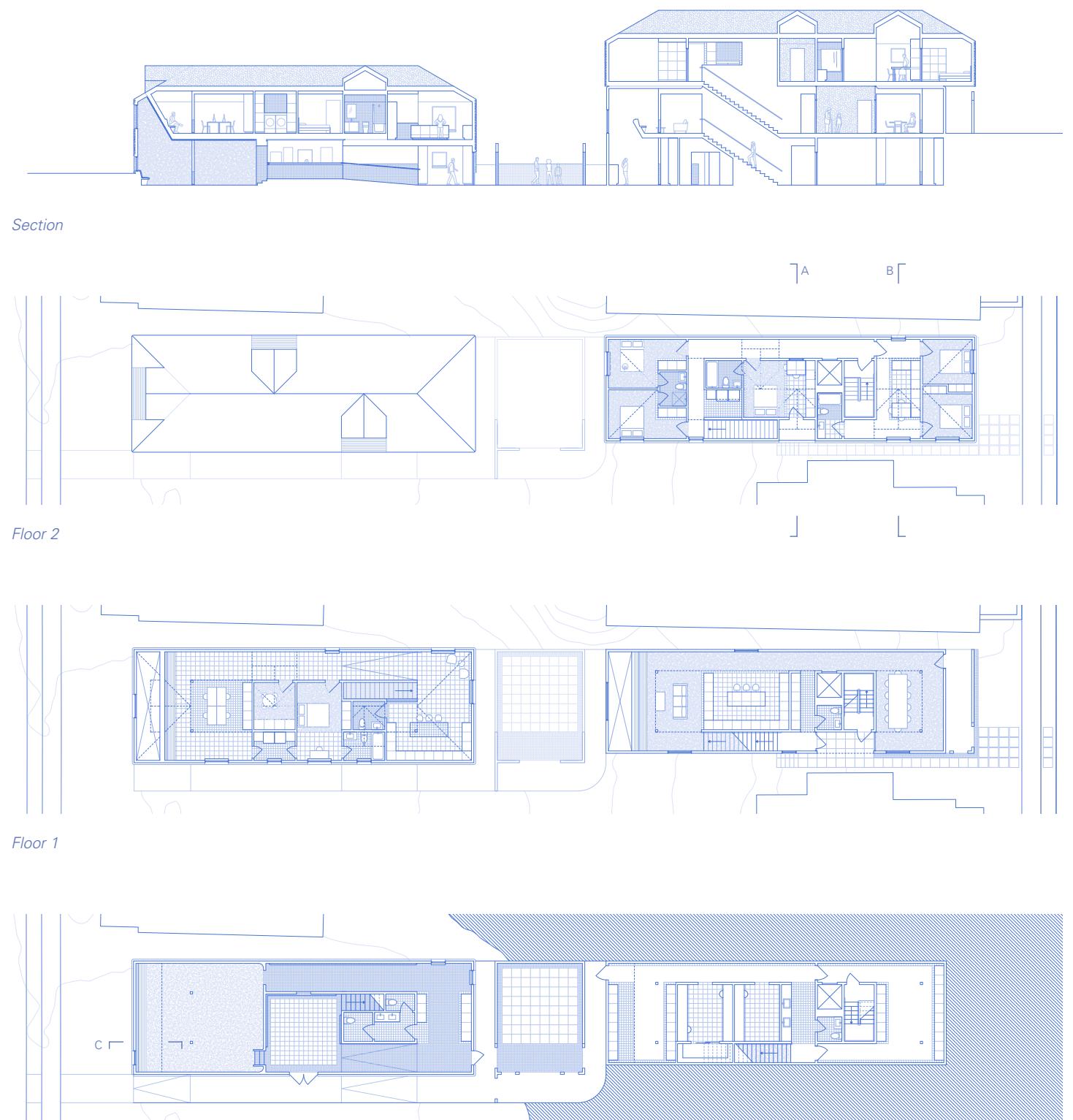
The Witherspoon-Jackson Story House is designed to collect and share Witherspoon-Jackson's storied past and present, celebrating those who have called this neighborhood home for generations and welcoming those giving it new life today.

The project consists of two buildings on narrow back-to-back lots connected by a central courtyard. Plans mimic the structure of neighborhood blocks, prioritizing interior spaces and unfolding details only to those most familiar with the building. On Birch Street, the smaller building houses a gallery, performance space, office, and artist residence. The courtyard is designed with low walls and blue tile that make it feel like another interior room. It becomes the new, hidden front of the buildings and a place for the community to gather. The second building on Leigh Avenue has artist studios, community multi-purpose rooms, and co-living affordable apartments. By including the housing, the community is directly involved in ownership of the project and can continue to give it life beyond its interaction with the Princeton Art Museum.

The material palette is affordable and residential—mostly carpet and tile—but elevated in application, designing architecture at the scale of the fingernail. The story room, the heart of the organization, is fully carpeted and plush. On the exterior, retired telephone poles are sawn into quarter-round siding and sprayed with a weather-resistant rubber coating, muffling geometric specificity while highlighting small-scale differences in texture. The building is quiet enough to blend in, but through various queues, like atypical window placements, it subtly announces that it contains something different than the surrounding houses.



*Aerial view. The project consists of two buildings on parcels that span between Birch Street (left/North) and Leigh Avenue (right/South). The blue tiled courtyard connects the buildings and becomes a gathering space for the community.*



Floor 0

Section

Floor 2

Floor 1



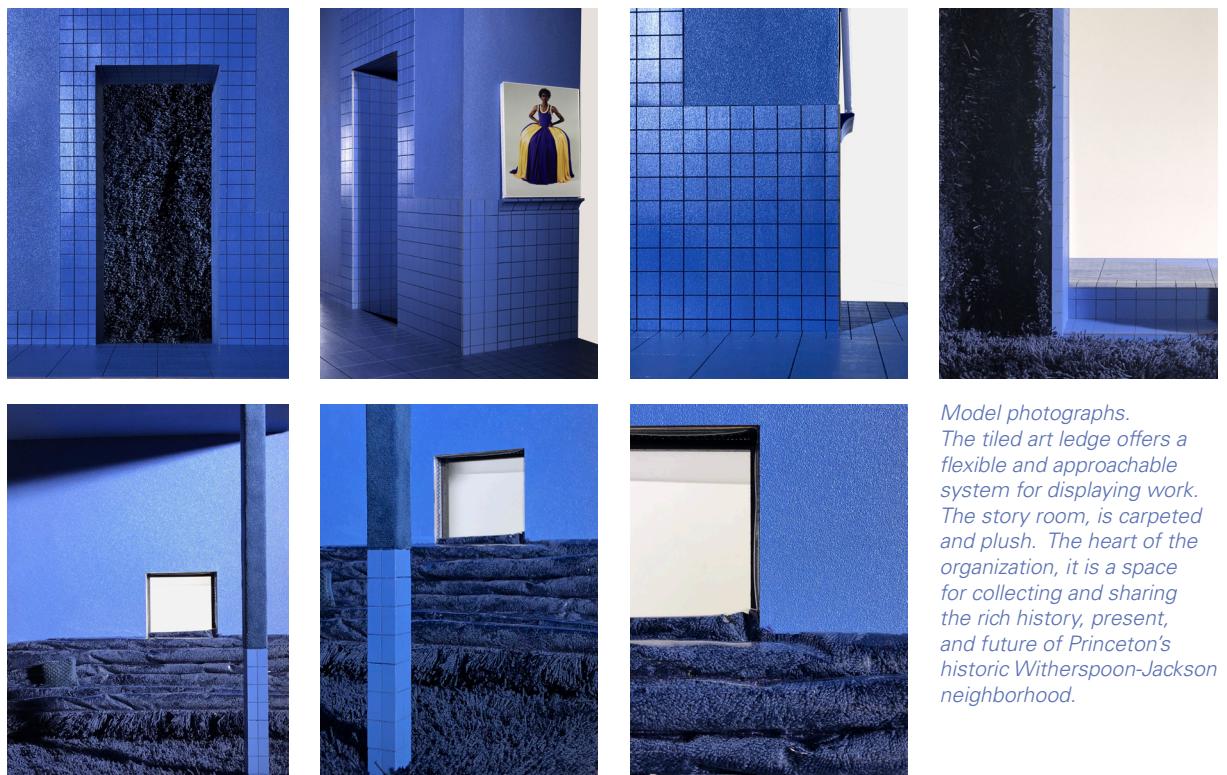
*View looking into the sunken hardscape courtyard between the two buildings. Taking advantage of the site topography, the courtyard connects to both buildings on the lower level. Half-height walls and tile give the impression of an interior room outside.*



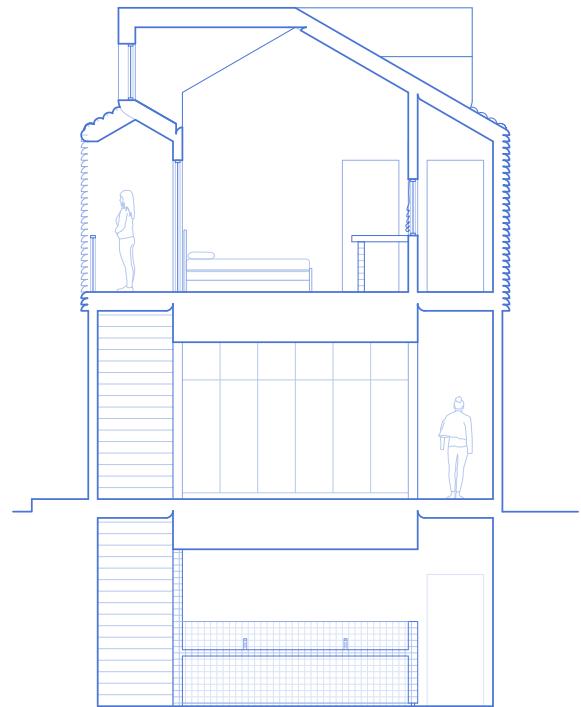
Inside the gallery looking towards the story room



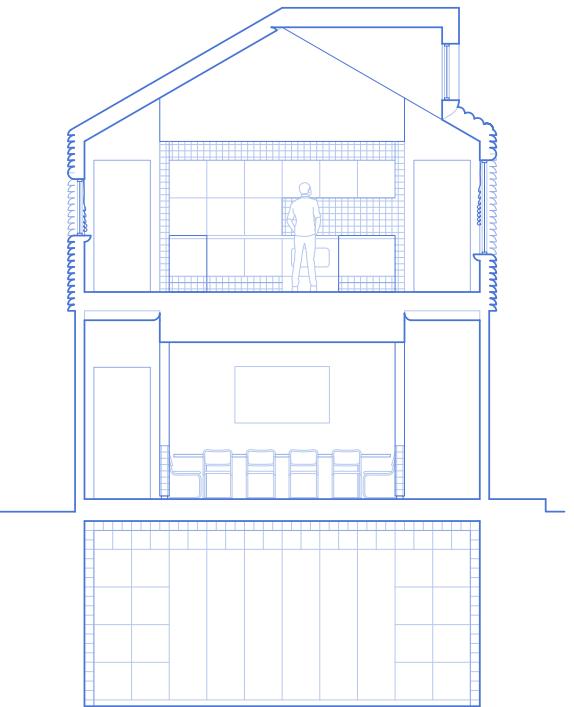
Inside of the Studio Apartment



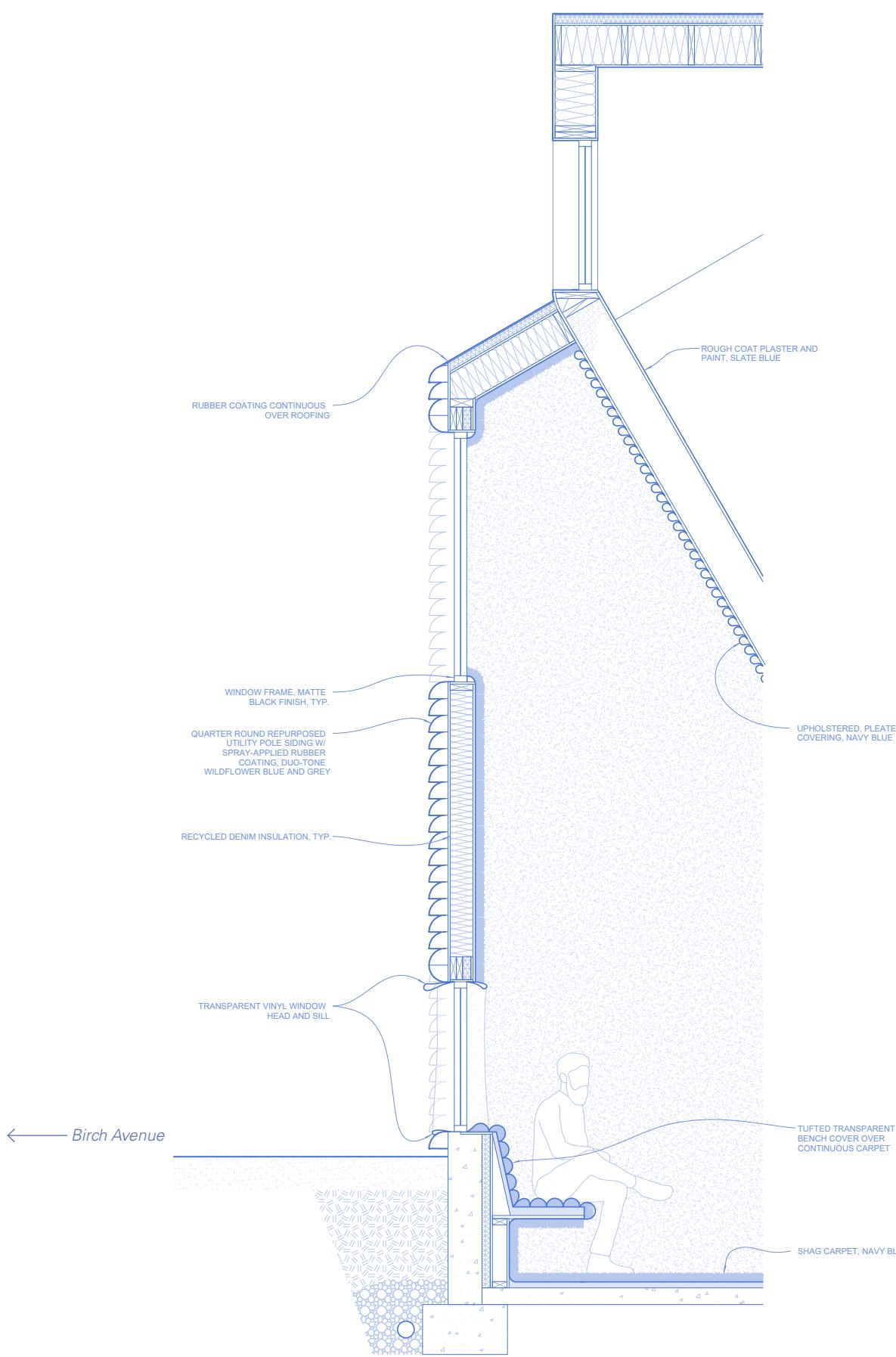
Model photographs.  
The tiled art ledge offers a flexible and approachable system for displaying work. The story room, is carpeted and plush. The heart of the organization, it is a space for collecting and sharing the rich history, present, and future of Princeton's historic Witherspoon-Jackson neighborhood.



Section A



Section B



*The building is quiet enough to blend in. Through various queues, like atypical window placements, it invites curiosity and subtly announces that it contains something different than the surrounding houses.*

*The Story Room is at the "front" of the building facing Birch Avenue, but it feels like the deepest most private part of the plan because you enter along the side of the building and follow a circuitous circulation path through the building.*

## Magnetic Z

Architect: Cameron Wu. Design/Build Team: Lisa Ramsburg, Anna Kerr, Cole Cataneo, Grey Wartinger  
Art OMI, Summer 2020

Magnetic Z is an installation at Art OMI by Cameron Wu that uses geometry as a generator of architectural form. A ramp leads up to an observation platform and then tucks under itself as a stair. The promenade is defined by geodesic lines on two cones, one pyramidal and the other curvilinear. The juxtaposition of discrete and continuous geometries creates a wide space at the apex of the path for viewing the spectacular landscape.

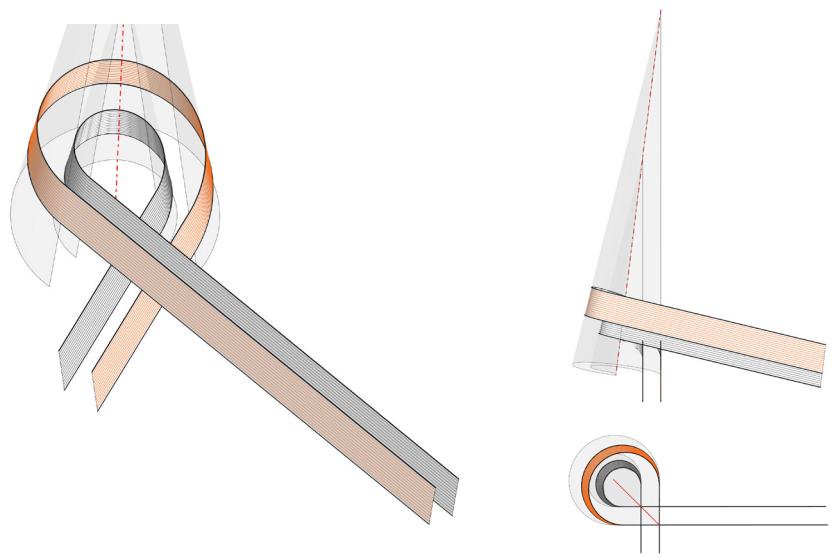
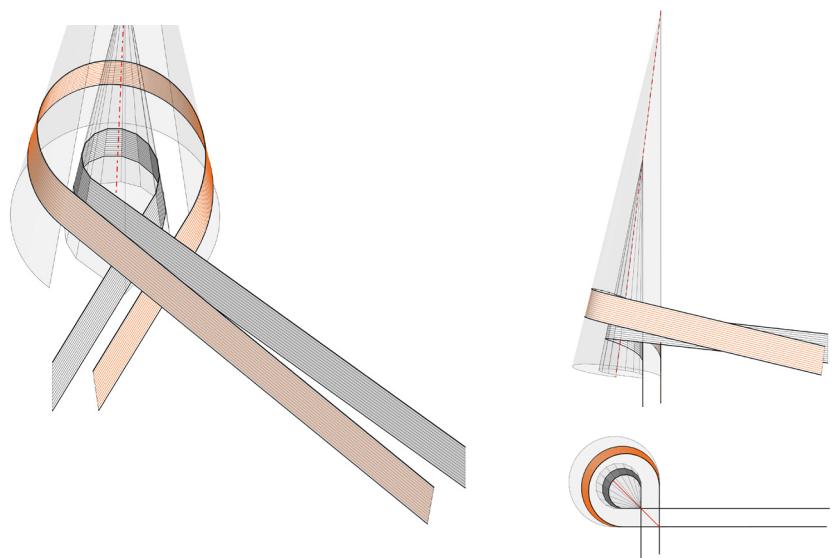
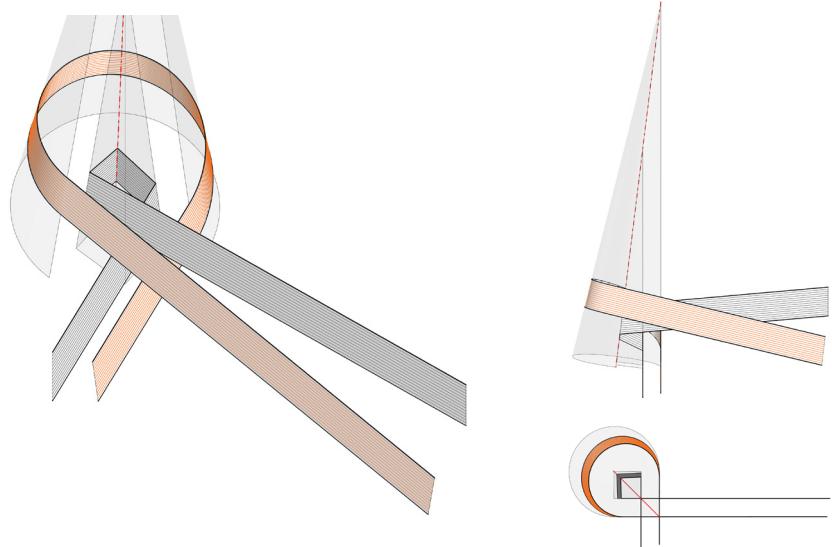
The installation was built on-site by a team of five individuals over the course of a summer. Made entirely of wood, the design uses a system of structural framing members and shiplap cladding. On the outer cone, the shiplap siding was steamed in a DIY double-barrel steamer to make it flexible and able to meet the curvature of the substructure.

The geometry of the design is calibrated to the site using a parametric grasshopper model that can be adjusted to meet the existing topography. The outer and inner surfaces start parallel to one another at the stair, but diverge due to the planarity of the inner cone.

*Above: Early morning view towards the ramp that is defined by the high resolution conic surface on one side and the low resolution planar surface on the other.*

*Below: Construction photo. The shiplap siding was steamed in a DIY double-barrel steamer, allowed to dry on curved formwork, and then attached to the structure.*





*Grasshopper development of the geometry. The two surfaces start parallel at the stair but the resolution and size of the planar cone affects the resulting angle of the gray surface that bounds the ramp.*



# Lisa Ramsburg

lkramsburg@gmail.com  
240 446 9644

## References

Powell Draper  
powell.draper@entuitive.com  
917 683 1535

Edward M. Segal  
Edward.M.Segal@hofstra.edu  
610 428 0793

Cameron Wu  
cvu@princeton.edu  
917 604 8964

## Education

Princeton University  
M. Arch I, 2022  
Thesis: *Duplexing Philadelphia*

University of Maryland  
B.S. Architecture, 2015  
summa cum laude  
Minor: Sustainability Studies

## Abroad

United Kingdom, Spring 2015  
Scandinavia, Summer 2014  
Rome, Italy, Spring 2013  
Turkey, Summer 2012

## Accolades

Suzanne Kolarik Underwood Prize  
AIA Medal for Academic Excellence  
Banneker/Key scholarship  
University Honors  
MD Distinguished Scholar  
National Corp. Scholarship

## Tools

Woodshop  
Lasercutter  
Zund  
CNC Mill  
3D Printers  
UR3 Robot Arms  
ABB Robot Arms

## Softwares

Revit  
Rhino  
Grasshopper  
Kangaroo  
VRay  
Adobe Suite  
AutoCAD  
SketchUp

## Professional and Academic Endeavors

### KPF Paul Katz Fellowship

*Los Angeles, Fall 2022, collaboration with Anna Kerr*

Two-month long research fellowship focused on housing in Los Angeles in response to California's recently passed duplex bill. Developed a catalog of LA duplexes and a feasibility study of *Duplexing* single family districts.

### Research Scholar

*Princeton University, Summer 2021*

Worked with Sophie Hochhäuser on publication titled *Living Room: Gender, Difference and Dissent*. Secured copyright for images, communicated with authors, edited chapter drafts.

### Federal Work Study Program

*Faculty Supervisor: Cameron Wu*

*Princeton University, Summer 2020*

Design-build of an installation at Art OMI that balances the geometric properties of cones with architectural requirements. Research about geodesic lines and tensegrity structures.

### Womxn in Design and Architecture Annual Conference

*Organization committee member*

*Princeton University, 2019–Present*

Researcher and co-coordinator for an annual conference focused on celebrating the under-explored work and history of womxn in the field of design and architecture.

### Schlaich Bergermann Partner

*Designer, project manager*

*New York, NY, 2016–2019*

Assisted with design, analysis, documentation, and project management, for over 20 projects in various phases including stadiums, bridges, buildings, facades, and sculptures.

### Future of Design NYC Conference

*Organization committee member*

*New York, NY, 2017–2019*

Co-development of the program, graphics, and logistics for an annual conference focused on the intersections of engineering, architecture, and art.

## Teaching Experience

### Introduction to Formal Analysis

*Assistant-in-Instruction (AI) for Assistant Professor Cameron Wu*  
*Princeton University, Fall 2020*

### Computational Fabrication in Architecture

*Assistant-in-Instruction (AI) for Assistant Professor Stefana Parascho*  
*Princeton University, Spring 2020*

### Interdisciplinary Design Studio

*Assistant-in-Instruction (AI) for Professor Mario Gandalsonas*  
*Princeton University, Spring 2020*

### Princeton ArcPrep

*Mentor*  
*Trenton High School, Spring 2020–Fall 2021*

Assist a group of Trenton High School students to develop a design project and a portfolio as part of Princeton University's initiative to improve access to the field of architecture.

## Podcast Episodes

### Alt House Radio

*with Jacqueline Mix and Anna Kerr*

<https://psoaradio.wixsite.com/althouse>

Episode 1 - Community Land Trusts - In this episode we explore CLTs: both their beginnings with the story of New Communities Inc. outside of Albany, Georgia and their current incarnations as a model of providing permanently affordable housing.

### The Race & Podcast: American Architecture as a Settler Colonial Project

*written and produced with Chris Loofs under the guidance of Charles Davis*

Octavia Butler's Afrofuturism

Through an analysis of the *Xenogenesis* Trilogy, this conversation delves into: how settler-colonialism has historically approached indigeneity; feminist models of resistance; race and representation; and the language settler colonialist architecture.

### Andrew Jackson Downing's *Cottage Residences*

Using the subtitle of the book as an outline, we discuss: the function of pattern books in mid 19th century America; the framing of the "cottage"; landscape's role in property-ownership; and the Anglo-Saxon identity as a legitimizing narrative for American architecture.

## Design Competitions

### 2019 Form and Force Conference - Finalist

*Team leader with Albert Chao, Powell Draper, and Edward M. Segal*

Two Blue Shells was constructed for the 2019 IASS conference in Barcelona. A new fabrication method was developed to reuse existing scrap acrylic by transforming into spatial structures using heat-induced form-finding.

### 2017 City of Dreams Pavilion Design Competition - Winner

*Team leader with Josh Draper, Edward M. Segal, Scot Thompson, Bruce Lindsay, Alex Cheng, Powell Draper, and Max Dowd*

Cast & Place was a pavilion that re-imagined how aluminum and clay could be diverted from the waste stream and transformed using an experimental fabrication method. Trays of local clay dried into a network of cracks that were used as molds for casting aluminum.

### Folly/Function 2018: Seats - Honorable Mention

*with Albert Chao*

Assigned Seating proposed the reuse of 100 school chairs. Modular connections couple, gang, and assemble the chairs into configurations that playfully promote conversations about past experiences, the structure of learning, and the nature of waste.

## Publications

Design of Discretized Acrylic Shells with Heat-Induced Form-Finding. *Proceedings of IASS Annual Symposia, IASS 2019 Barcelona Symposium: Form and Force Expo Pavilions*, pp. 1-8(8).

Clay Cracking: A Natural Process Guiding a Design-to-Fabrication Method for Cast Aluminum Panels. *Technology|Architecture + Design*, 4:1, 106-114, DOI: 10.1080/24751448.2020.1705722

Structural Design of Cast & Place, a Cast Aluminum Pavilion. *Proceedings of IASS Annual Symposia, IASS 2018 Boston Symposium: Reimagining material and design*, pp. 1-8(8). July 16, 2018.

## Invited Juries

University of Southern California, Taka Tachibe, Architectural Design 1  
December 2022

Hofstra University, Edward M. Segal, Civil Engineering Design  
December 2016, 2018, and 2020

Pratt University, Justin Snider, Representation 2  
May 2019