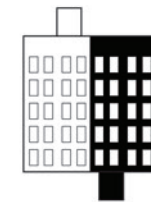




FIRST HOUSES

A Retrofit and Infill Model for Collective Living



2025 Fall GSD Option Studio

Professor: Daisy Ames

Site: First Houses, New York

Building Area: 185,000 ft²

Partner: Subin Moon

Role in Team: Research, Design, Digital Modeling, Physical Model, Illustration Drawings

First Houses has persisted on the Lower East Side for nearly a century. Completed in 1935 as one of New York's earliest publicly funded housing projects, it carries an early model of collective life into a city now shaped by rising rents, declining homeownership, and increasingly small households. Rather than treating the landmark as a fixed artifact, the project asks how its social and spatial logic might be extended—supporting long-term settlement while allowing residents and households to grow within the neighborhood.

The proposal combines the retrofit of First Houses with a new low-rise, high-density infill building. Its organization begins by reading the existing tenant fabric and mirroring it upward—not as literal duplication, but as translation. The same grammar produces a different sentence. Historic facade rhythms and figure-ground relationships become a framework for new forms of living, while the gaps between buildings are reorganized into intertwined Public and Domestic pathways. Plazas, shared programs, and income-generating spaces transform circulation into a thicker social ground between the home and the city.

Within the building, compact units are structured by inserted cores and T-shaped walls that negotiate the boundary between privacy and collective life. As households change, the dwelling is understood not as a finished container but as a framework capable of accommodating different configurations of living. Beyond the unit, generous communal spaces and a double-height public interior extend domestic life into the building and establish a shared social anchor.

The project does not equate affordability with the reduction of private space alone, nor preservation with freezing an existing form. Instead, it pairs compact dwelling with expanded commons, proposing a contemporary model of collective living grounded in what—and who—is already there.





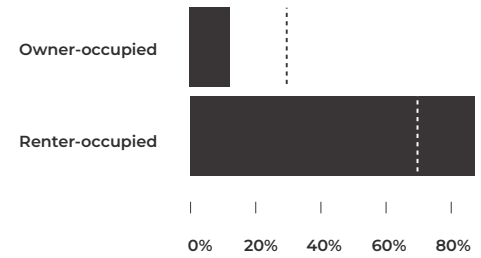
Average Population Age: 33.8

Total Occupied Housing Units: 23,409

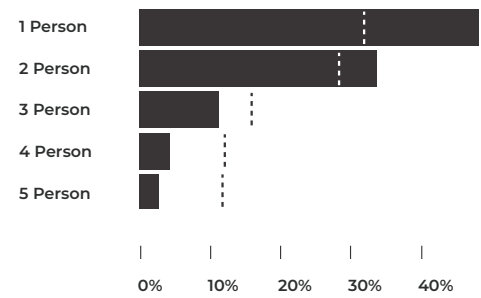
Population Distribution Between 20-34: 43%

Average Housing Size: 1.82

Percent Distribution of Household Tenure

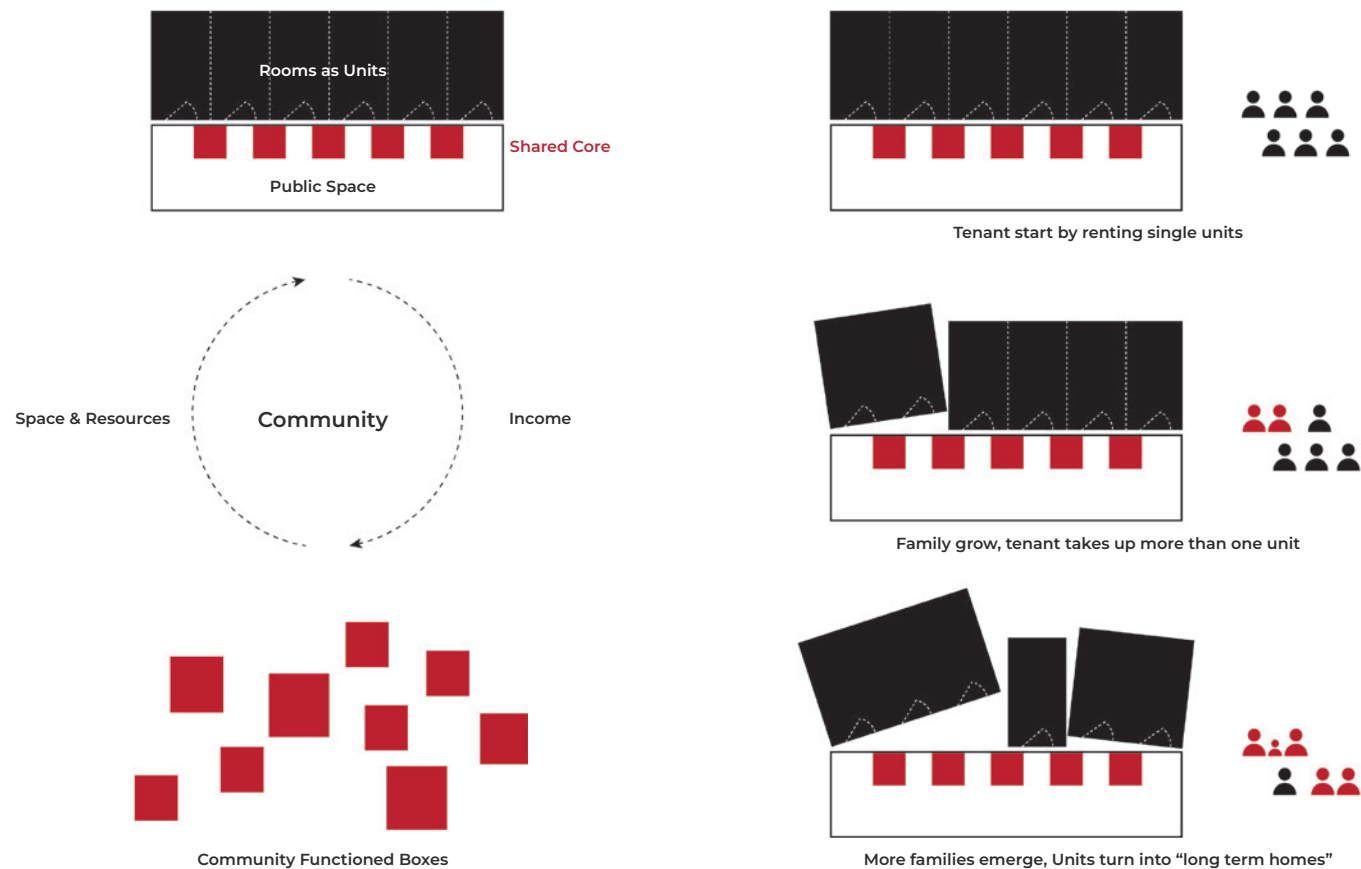


Percent Distribution of Household Size



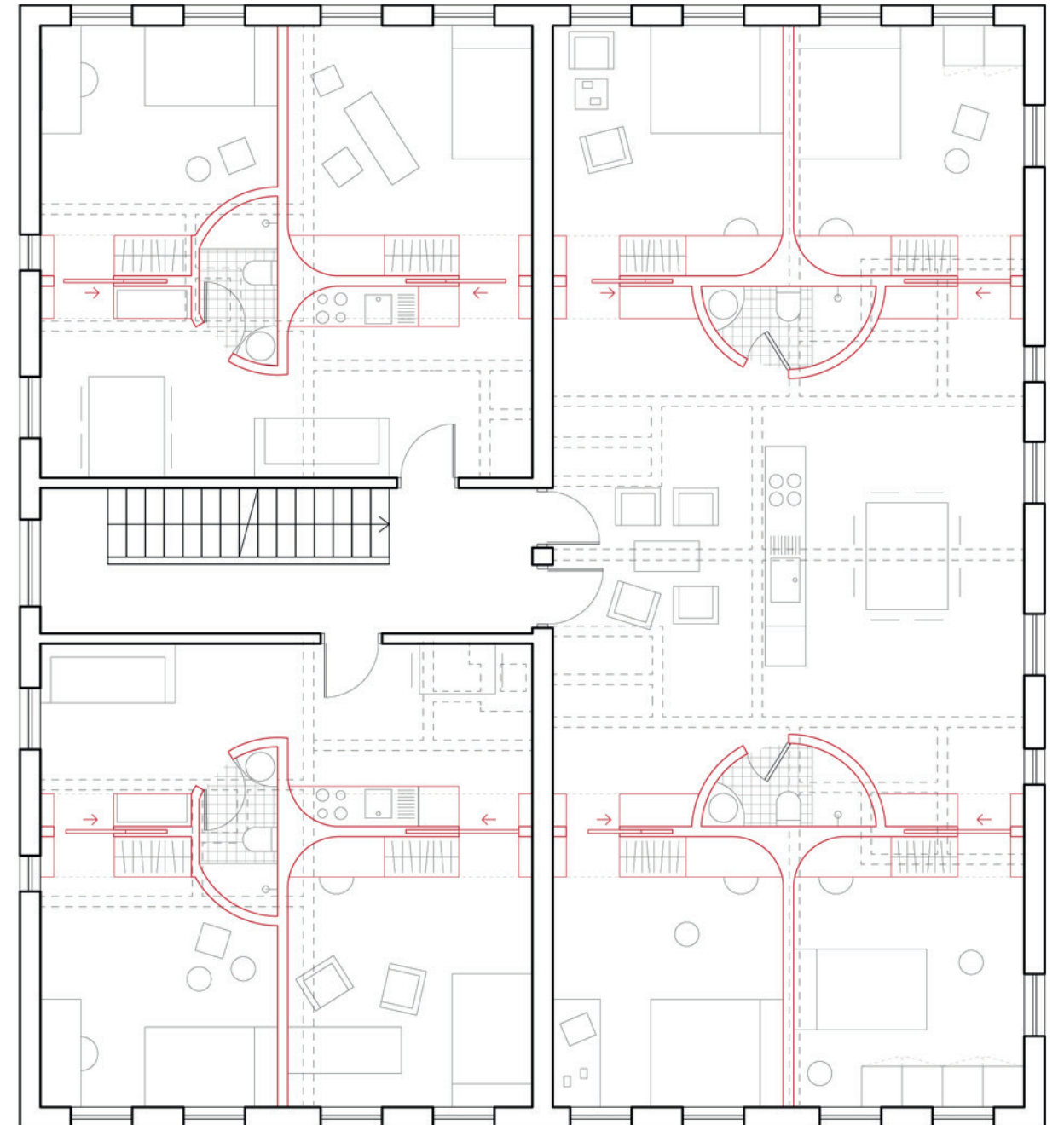
NEW YORK LOWER EAST SIDE: LIVING ALONE IN RENTAL HOMES

New York City's housing crisis is marked by declining homeownership and increasing rental dependence. This issue is more severe in the Lower East Side, where ownership rates are lower than the city average. Demographic data shows over 80% of households consist of one or two people, calling for housing models tailored to compact urban living.

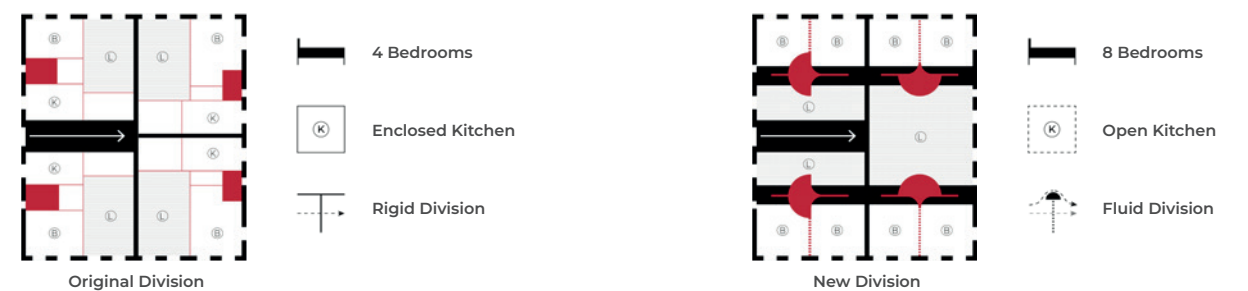


FROM RENTAL TO OWNERSHIP: A LONG-TERM HOUSING MODEL

Our project proposes long-term housing for one- and two-person households, supporting residents as they settle, grow, and eventually purchase their homes. Beginning as renters, tenants generate supplemental income through on-site office, workshops, and retail spaces, strengthening the community while creating a pathway from rental to ownership over time.



0 4ft
■ Inserted Core ■ Preserved --- Old Layout (Subin Moon)

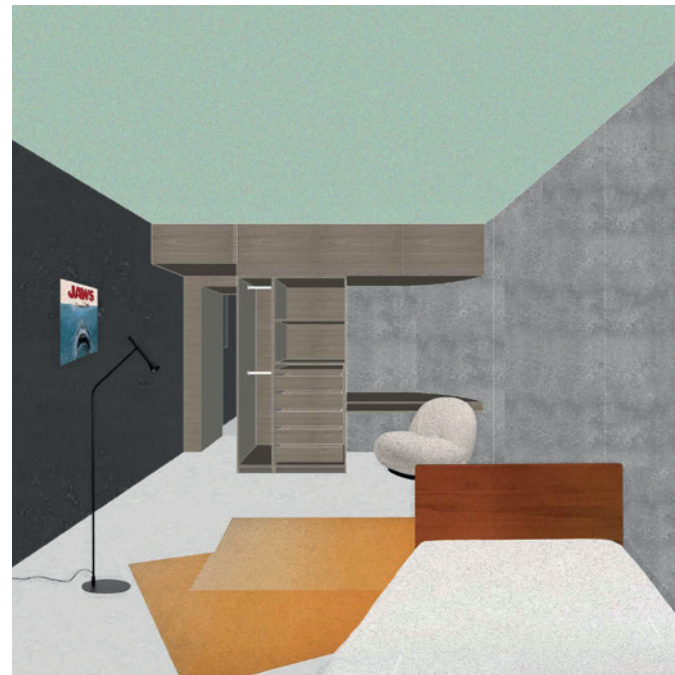


ORIENTATION & DIVISION: CORE AS ORGANIZER

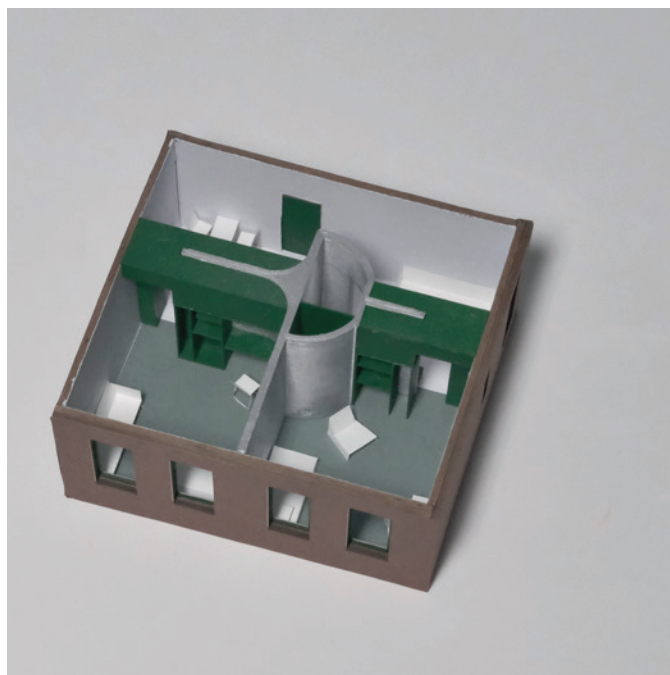
For the First Houses retrofit, existing structural bearing walls were preserved while a new spatial core was inserted. Comprising a closet, desk, kitchen, and semi-circular bathroom. The semi-circular shape organizes the interior and divides the unit into four zones. By exploring the direction of the semi-circle, the atmosphere of the units is defined.



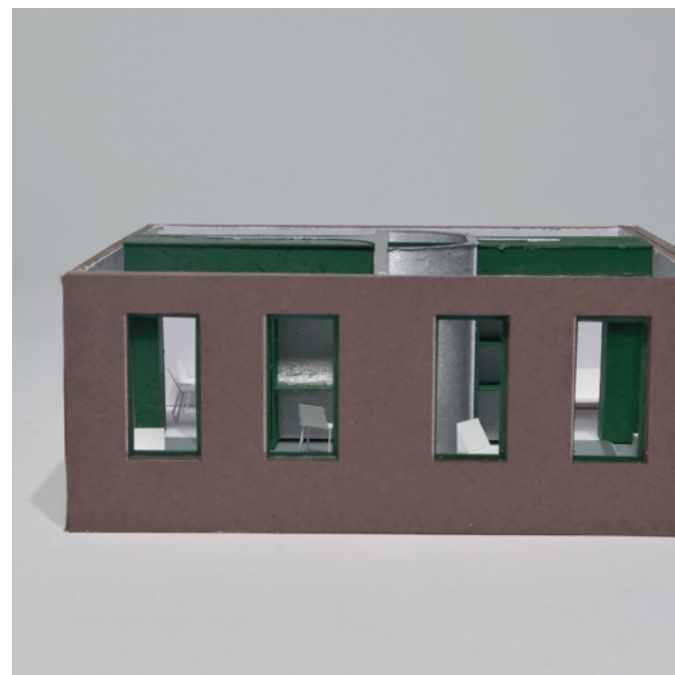
Public Area (Subin Moon)



Private Area (Subin Moon)



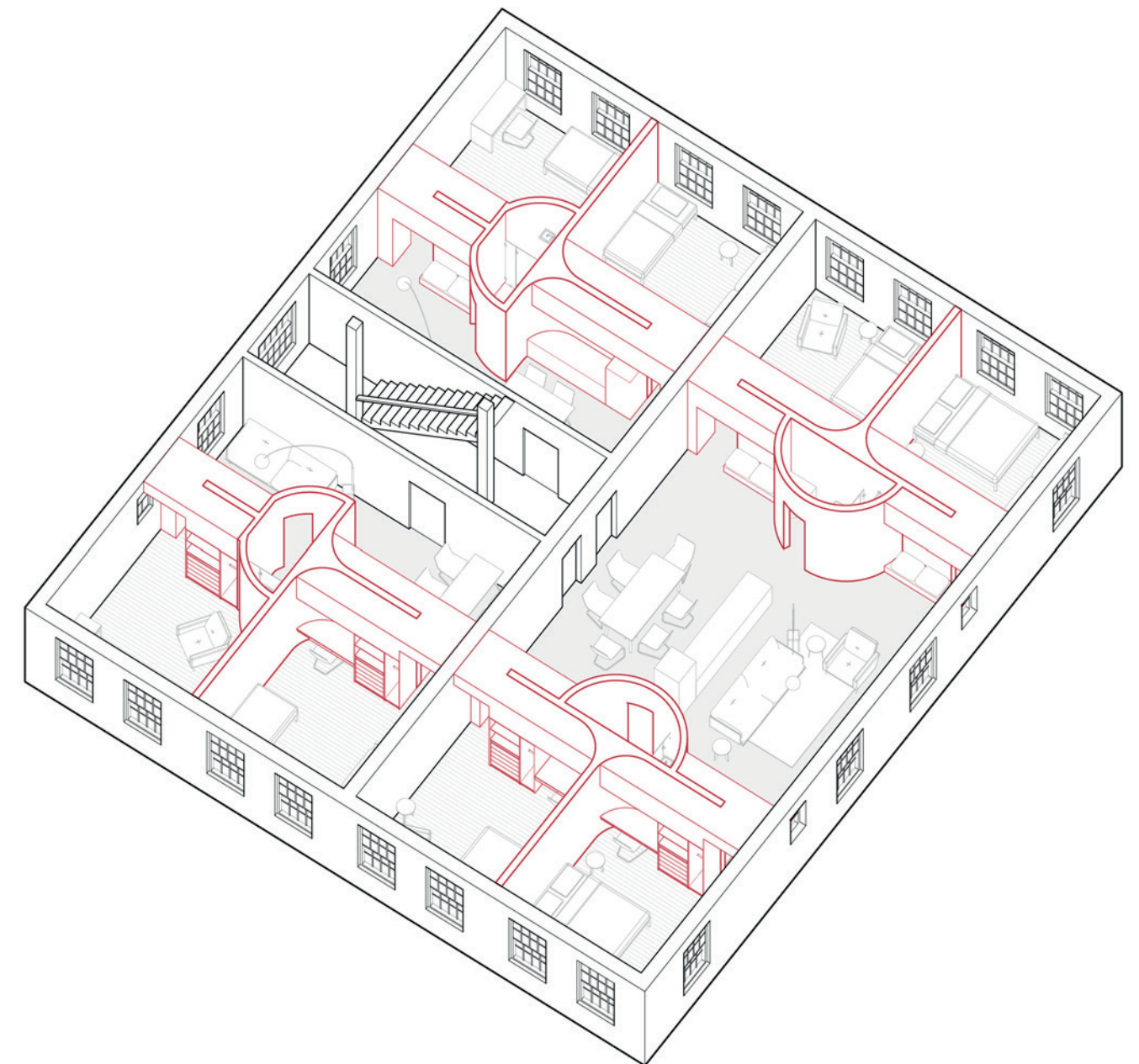
Unit Model Picture



Unit Model Picture

CURVATURE AS SOFT BOUNDARIES WITHIN A COMPACT UNIT

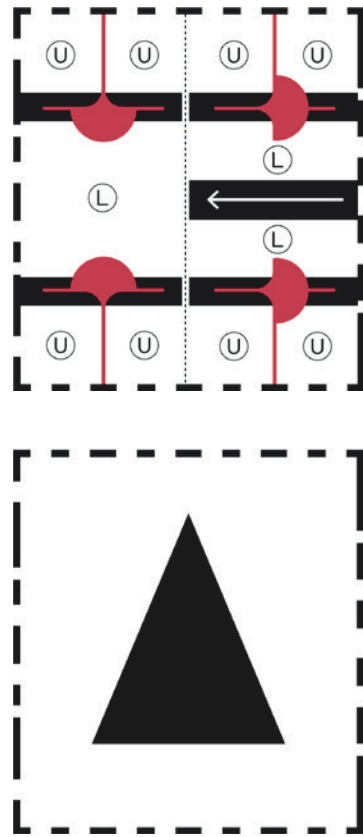
The semi-circle shape itself is a soft division of the public space. Filleted curves extend from the semi-circle bathroom to embrace the kitchen and the desk, guiding circulation while softening boundaries. This curved geometry further enhances spatial continuity and creates a sense of intimacy within the compact interior.



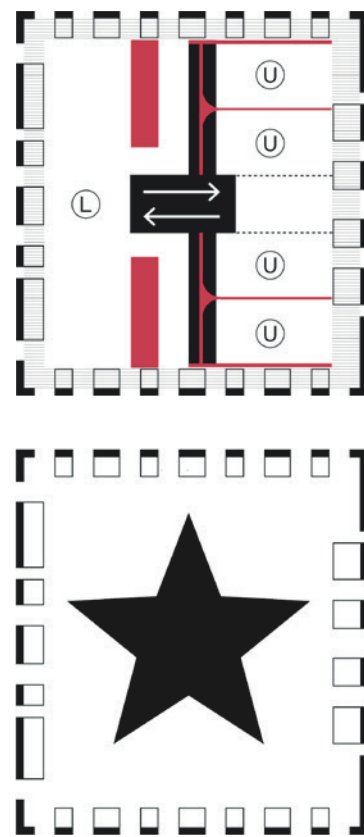
■ Preserved
■ Inserted Core

RECTANGULAR AS A THRESHOLD BETWEEN PUBLIC AND PRIVATE

The built-in closet system reinforces the boundary between public and private zones. Acting as a creative core, it organizes the closet, desk, kitchen, and seating while marking the threshold of intimacy and circulation, giving structure and purpose to the compact interior.



First Houses



New Design

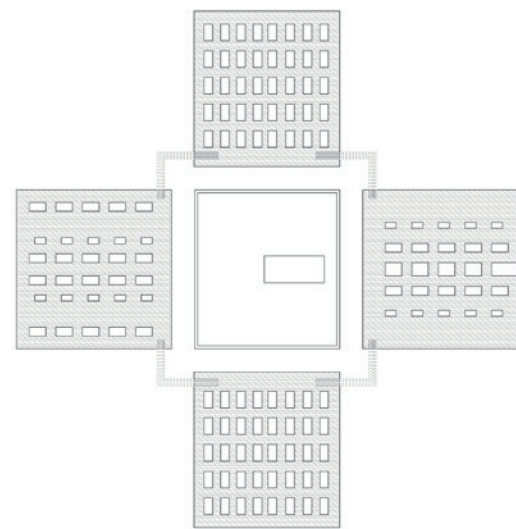
(Subin Moon)

MAINTAINING EXTERIOR IDENTITY WHILE REDEFINING INTERIOR EXPERIENCE

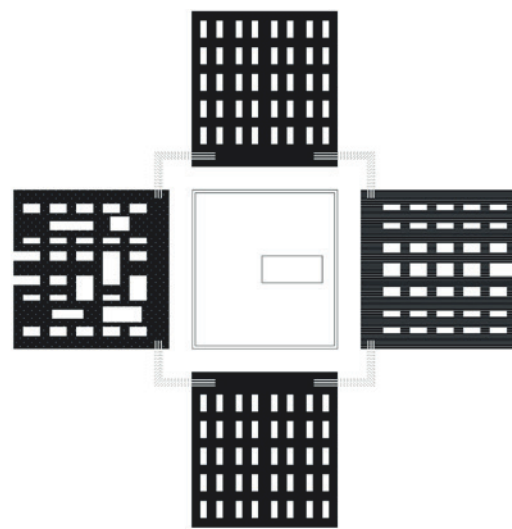
The new design maintains a dialogue with First Houses by preserving the original facade rhythm. Inside, the program is entirely reimagined. A new pathway bridges old and new, guiding circulation and creating a transitional spatial experience. The width of the pathway also follows different interior identities, such as public seating and semi-private walkways.



Double-height Public Lounge (Subin Moon)



First Houses



New Design

Red Brick
 Concrete
 Grey Wood
 Light Grey Metal

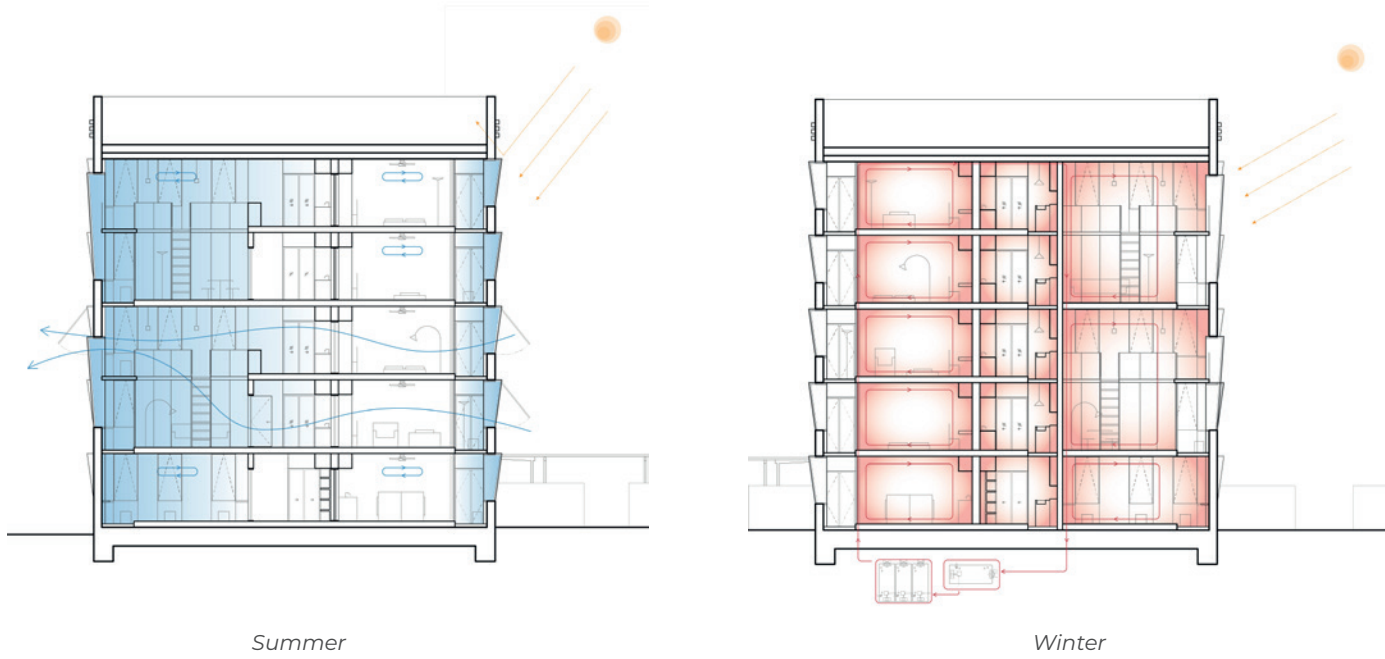
(Subin Moon)

MATERIAL EXPRESSION: DIFFERENTIATING INTERIOR EXPERIENCE

The new design mirrors First Houses' elevation, except for one facade side indicating a double-height public space and different interior layout. Material choices further express spatial character: concrete contrasts with red brick to signify newness, metal marks public areas with a sleek tone, and wood conveys warmth and domesticity in private units.

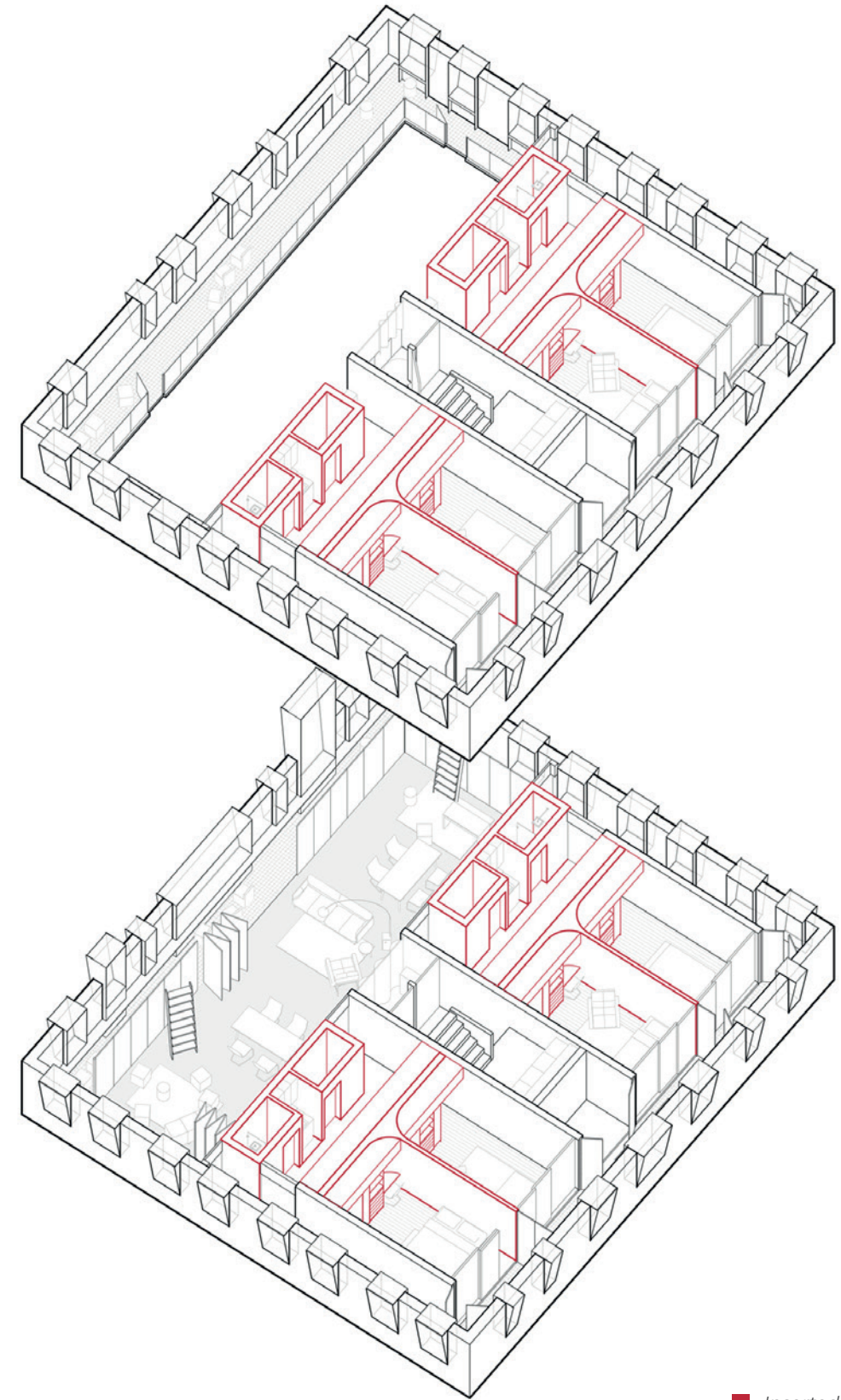
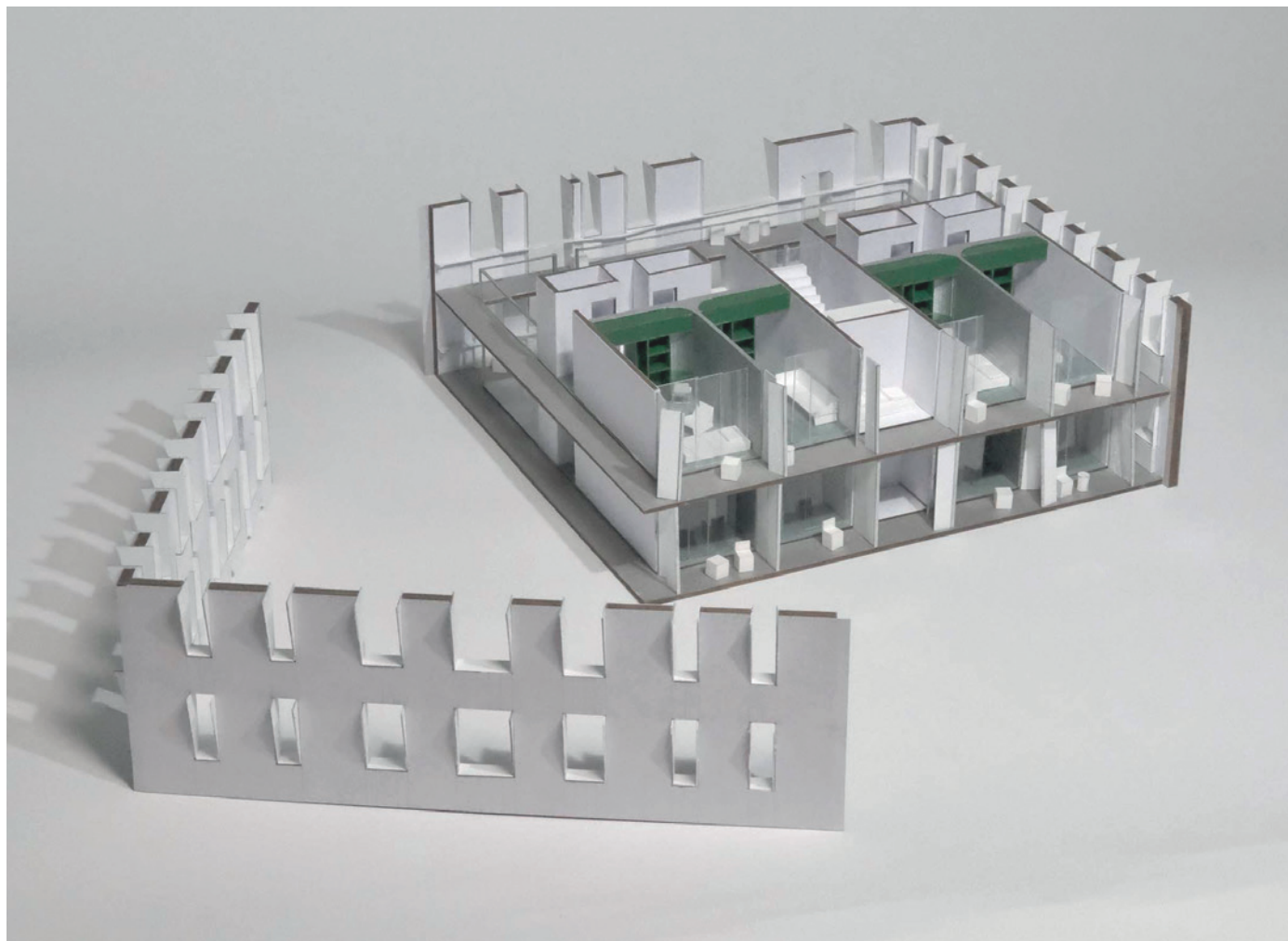


Private Indoor Balcony (Subin Moon)



INTEGRATING CLIMATE RESPONSIVENESS INTO SPATIAL DESIGN

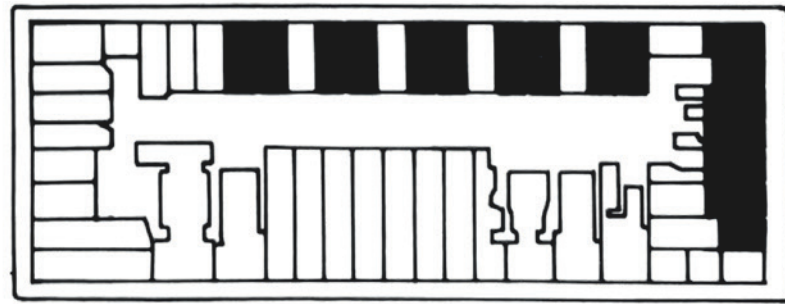
The double-height public space functions as a summer windpipe, promoting natural ventilation. Thick exterior walls and the interior pathway help retain heat during colder months, reducing energy demand for heating and cooling. This climate strategy balances comfort and sustainability while integrating seamlessly with the building's spatial design.



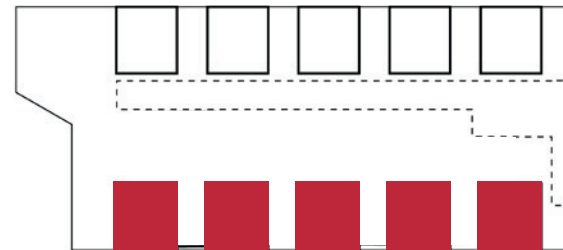
■ *Inserted Core*

PATHWAYS AND THRESHOLDS: SHAPING PRIVATE AND SHARED LIFE

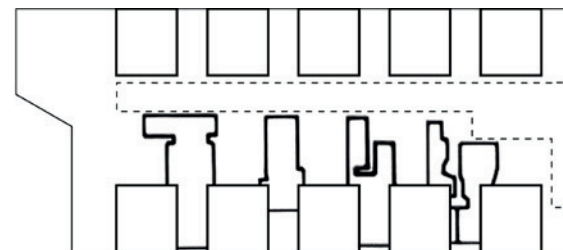
The interior mirrors First Houses' logic, with a T-shaped wall dividing private and public zones. A double-height common space fosters community gatherings and events. Along the pathway, private and public areas widen to four feet to accommodate furniture, while multiple thresholds adapt to diverse uses, balancing compact units with open communal space.



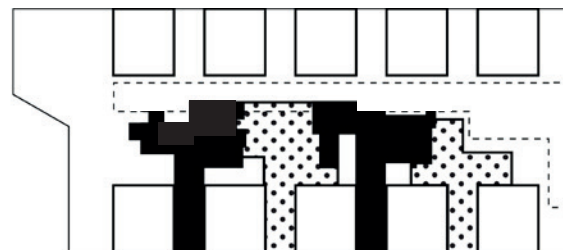
Original Block with Historical Tenement Fabric



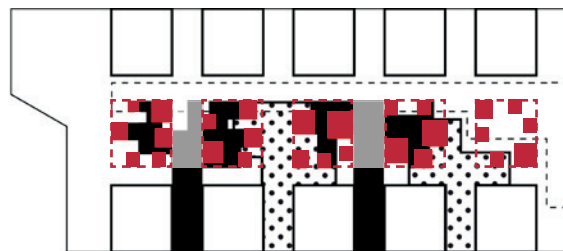
Mirror First Houses on Top



Bring Back Developable Historical Fabric



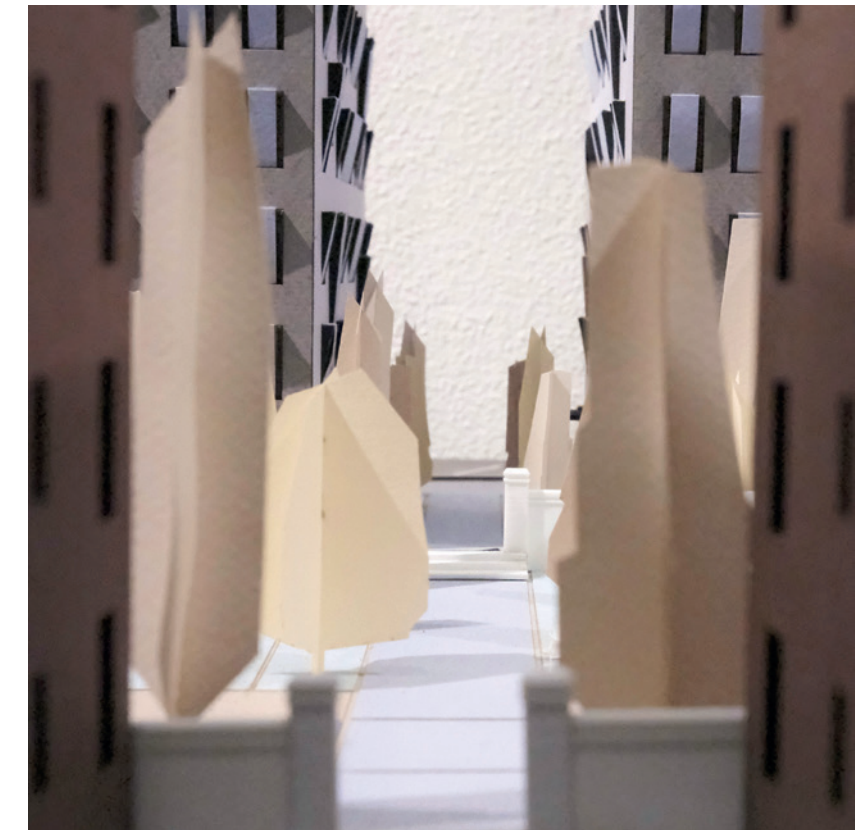
Regenerate and Regroup



Insert Community Functioned Boxes

POROUS COMMUNITY SHAPED BY HISTORIC FIGURE-GROUND LOGIC

The original First Houses garden is preserved and expanded into a porous community space between building masses. Aligned with the historic block orientation, interstitial gaps echo traditional figure-ground patterns. This is further expressed with different pavements. Community functioned boxes and pergolas activate the plaza, supporting social and income-generating uses.



Public Pathway



Domestic Pathway

PASSING THROUGH VS. GATHERING

The interstitial gaps between buildings are organized into Public and Domestic pathways. The Public path prioritizes through-movement, supporting circulation across the site, while the Domestic path emphasizes to-movement and dwelling. Two pergola-covered plazas along the Domestic path provide gathering spaces that strengthen community life.



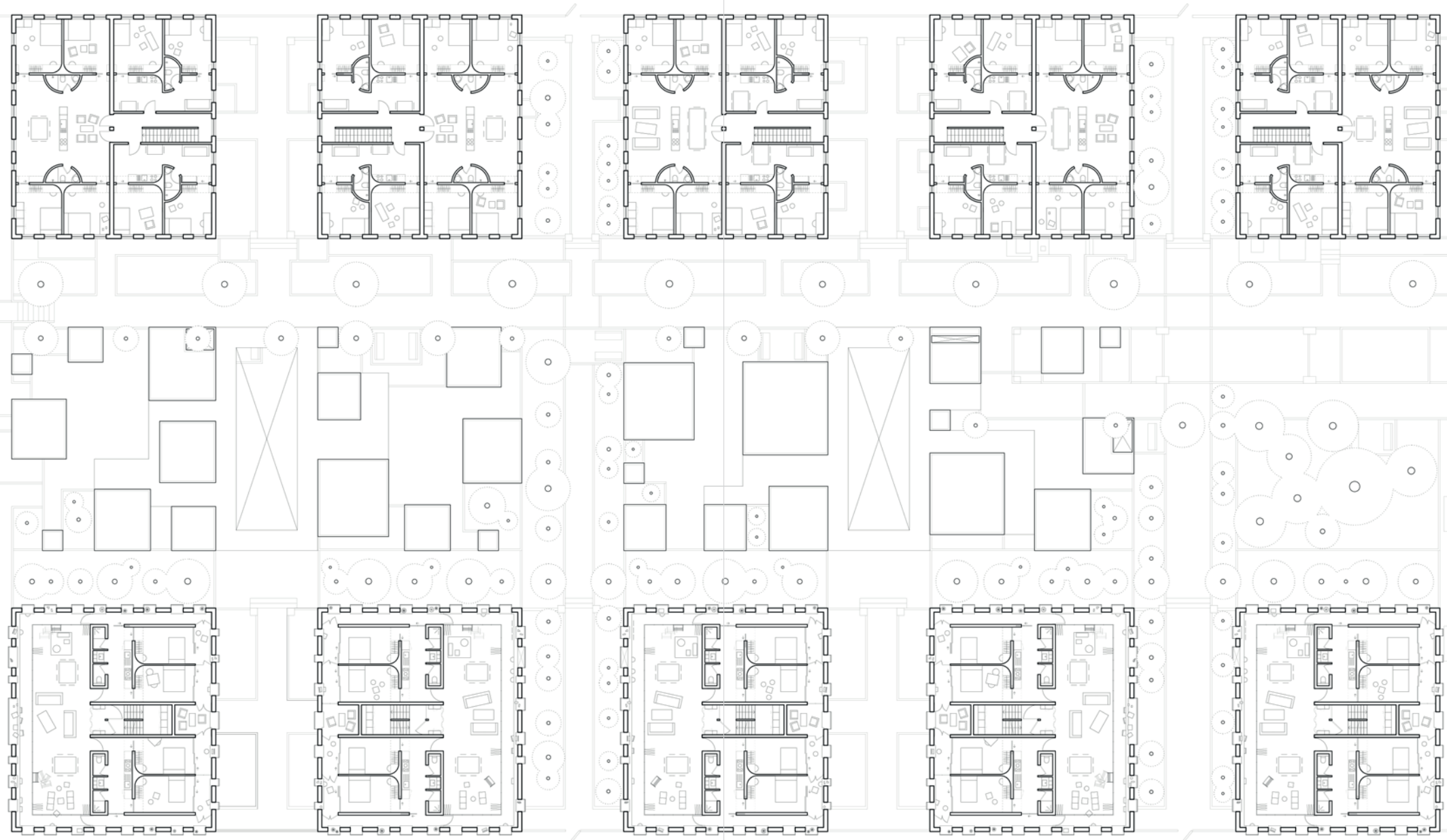
- 1. Laundry
- 2. Community Common Room
- 3. Conference/Projection Room
- 4. Workshop + Retail
- 5. Restaurant
- 6. Children's Room
- 7. Gym
- 8. Community Library/Book Store

0 16ft (Subin Moon)

DAILY LIFE MEETS COMMUNITY EXCHANGE

First Floor Plan

Within a diameter aligned to the First Houses, community boxes of varying sizes are arranged beneath extended pergolas. Commercial programs activate the Public pathway, while community rooms and project spaces line the Domestic route. Ground-floor spaces of the new design support cafés and retail, complemented by laundry, gym, and reading rooms near residential entrances.



MODERN CO-LIVING: COMPACT UNITS, EXPANSIVE COMMUNITY

Typical Floor Plan (Second Floor)

This project proposes a contemporary model of co-living within a historic context. Residential units are reduced to an extreme compactness, while shared spaces are expanded to encourage gathering and exchange. The spatial contrast between intimacy and openness is reinforced throughout the building and extends into a central garden that supports fluid community and block-level interaction.

