

PORT FO LIO

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COLUMBIA UNIVERSITY
GRADUATE SCHOOL OF ARCHITECTURE, PLANNING AND PRESERVATION

MASTER OF ARCHITECTURE, 2023

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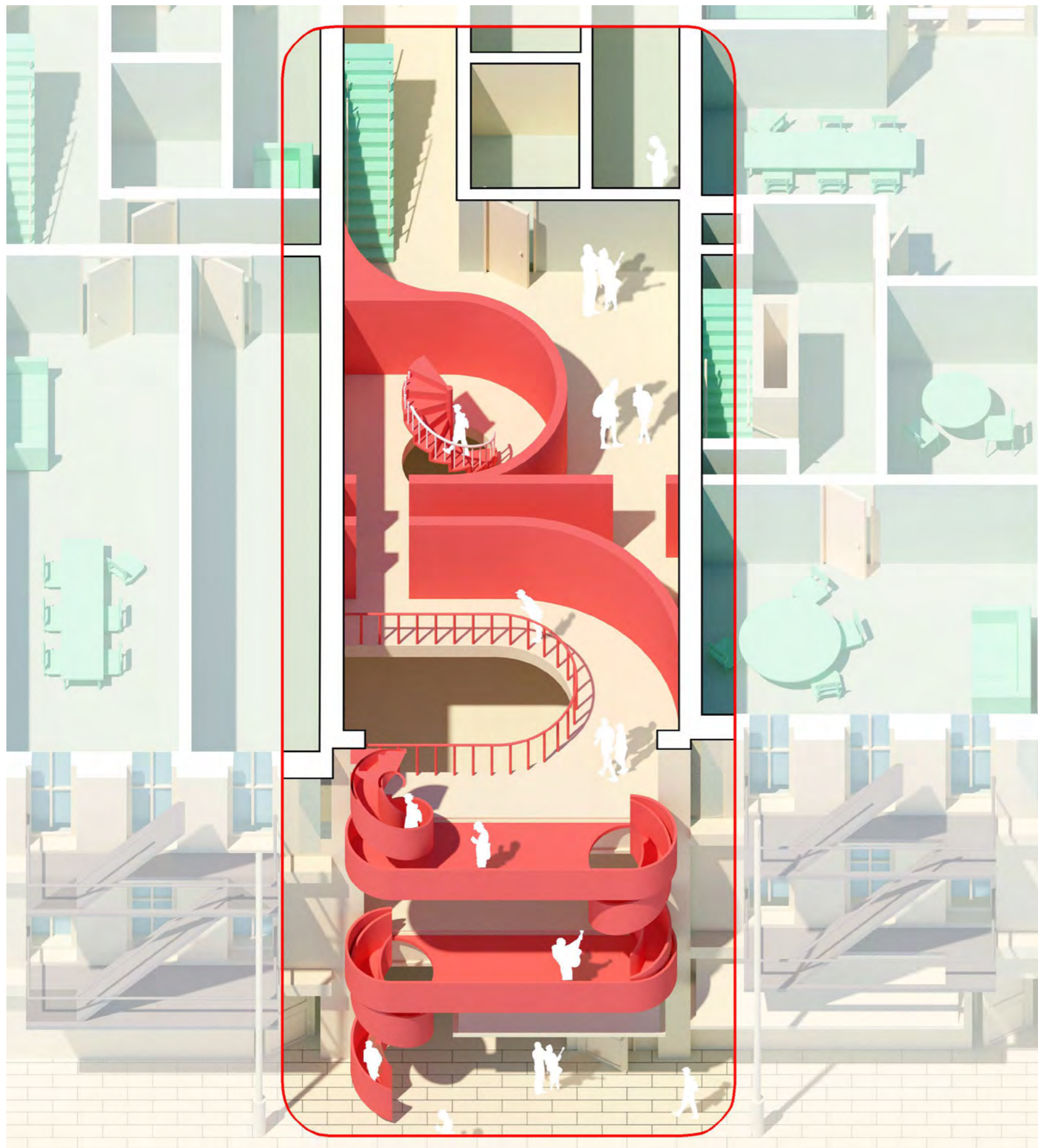
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BLURRING THE BINARY

Academic Work
Fall 2020
Instructor: Amina Blacksher
Individual Submission

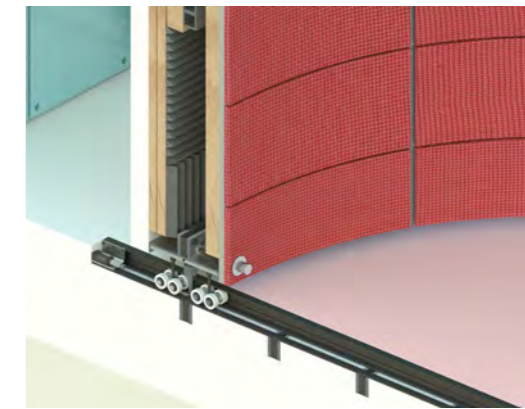
New York continues to undergo rapid gentrification and globalization. As a result, historical elements imbued with memory are beginning to become fragmented and vastly replaced by the homogeneity of neat glass skyscrapers. As an endeavor to regain the agency and locality of NoHo, the project seeks to analyze the dialectic relationship between the inhabitants and their given built environment. Much like Doreen Massey's global sense of place, how do we retain and reconcile the locality and agency of communities?



01 Unfolding of External Spaces

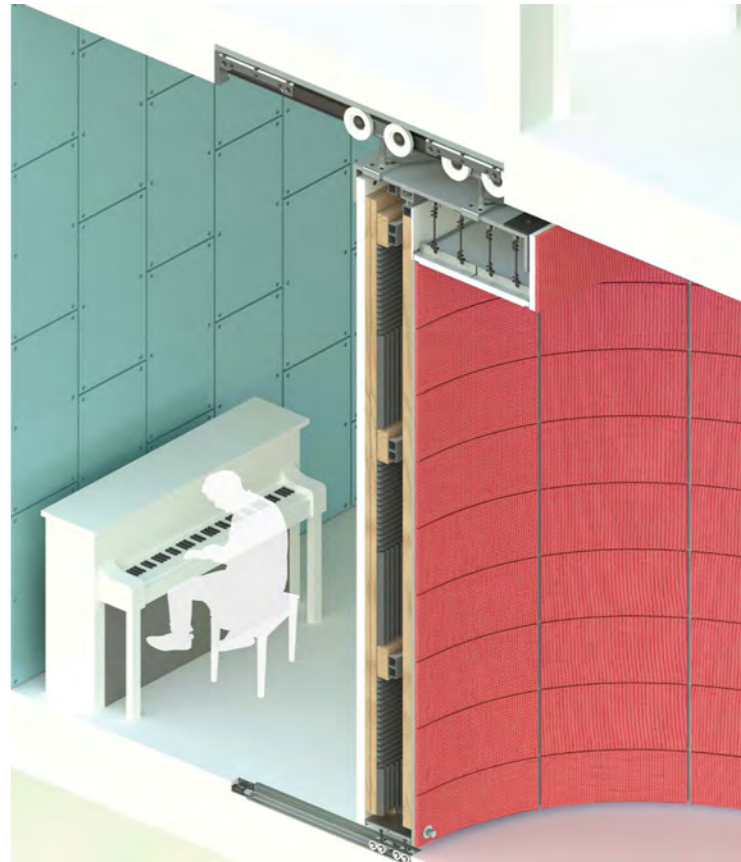
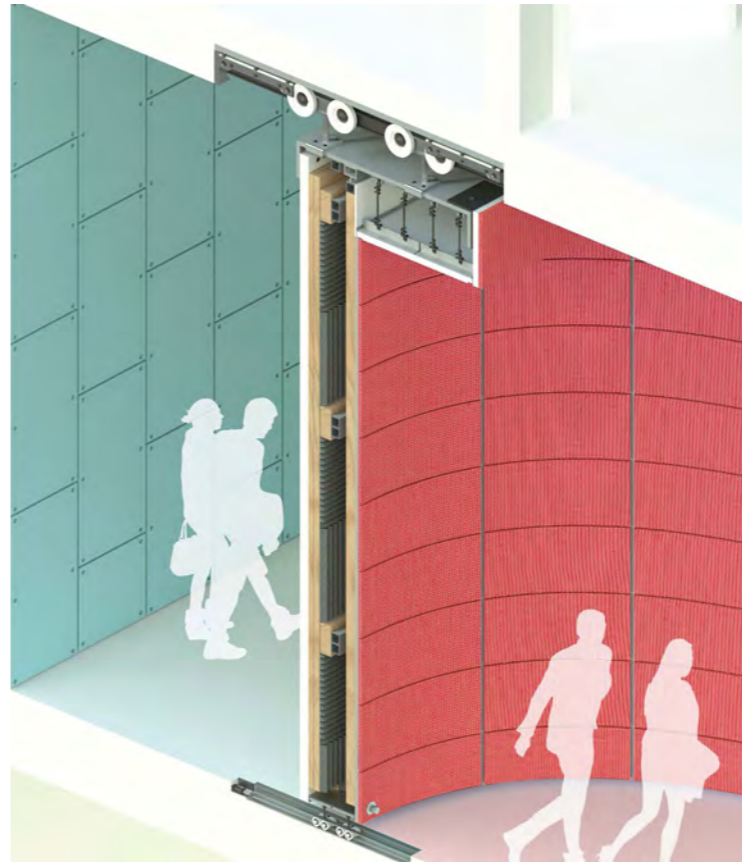
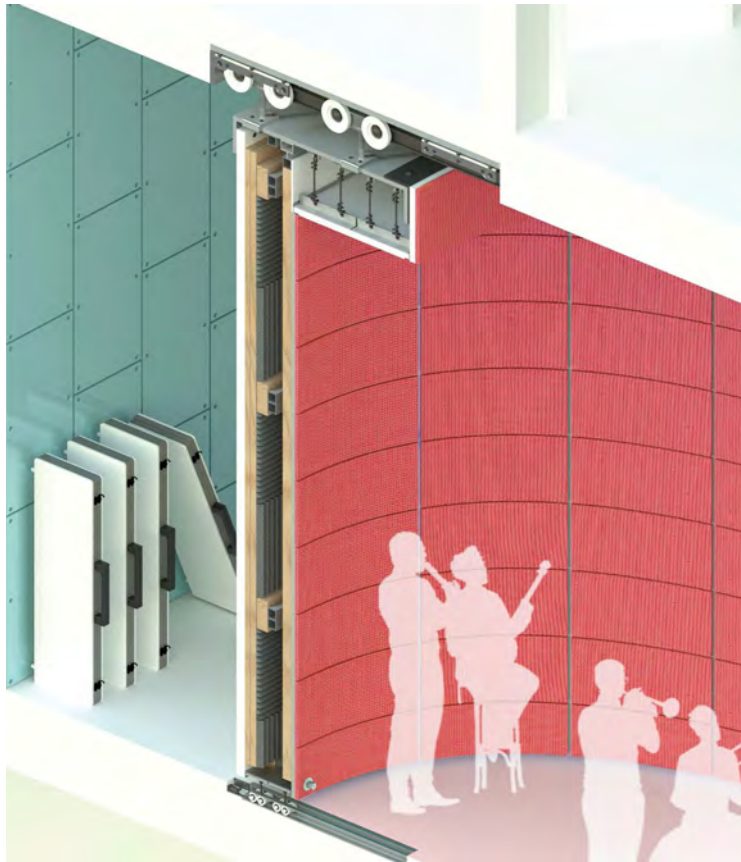


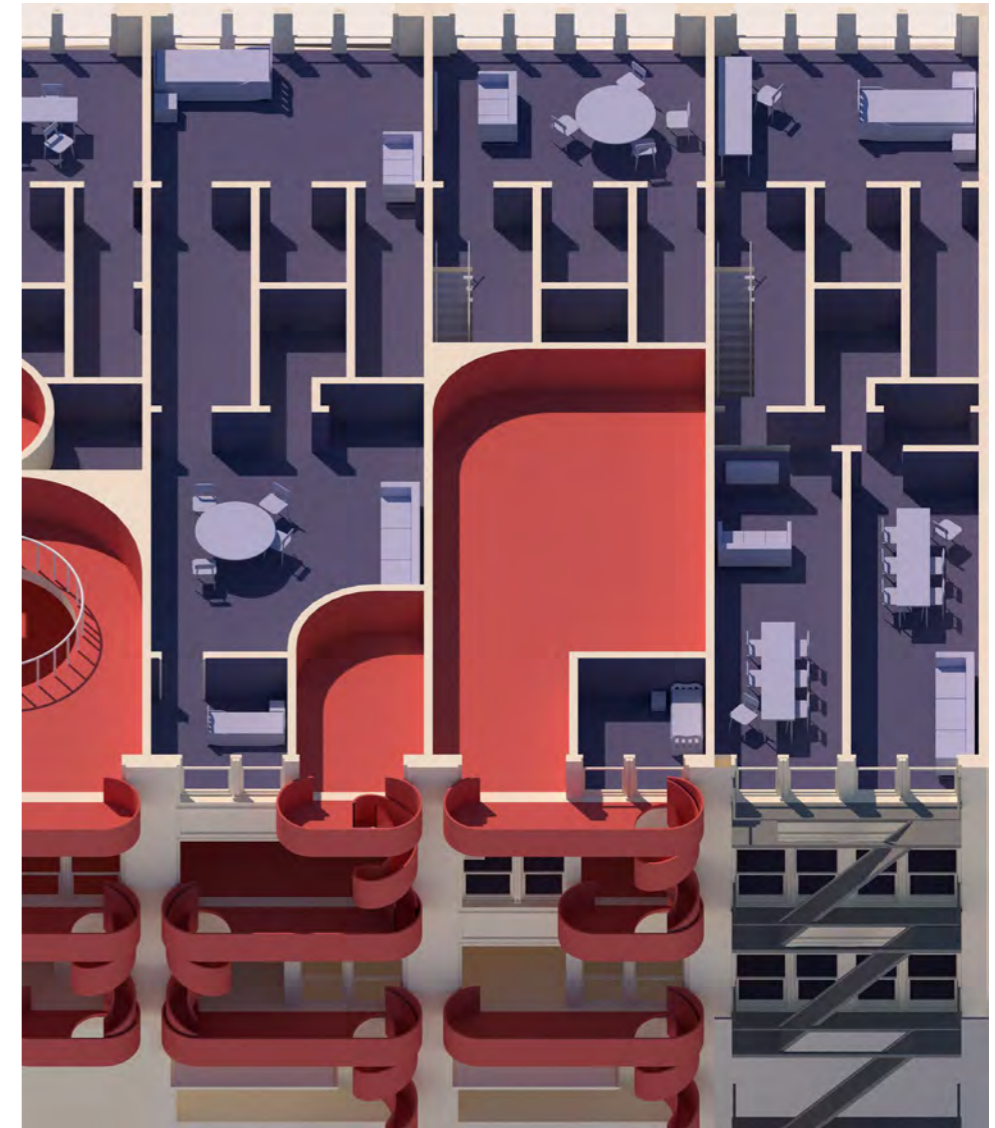
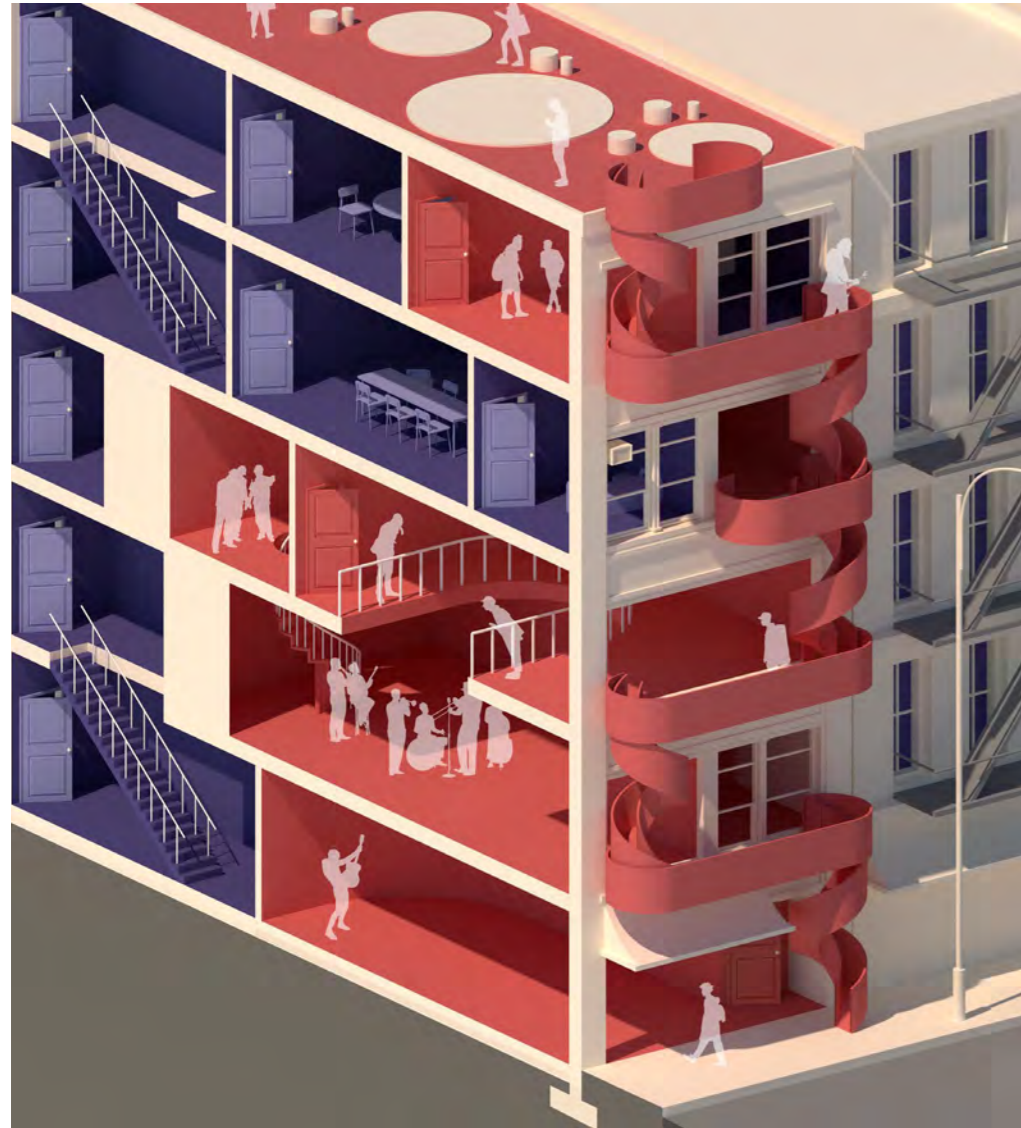
02 Sliding Acoustic Panels



03 Sliding Acoustic Panels

These spatial juxtapositions generate a multiplicity of thresholds within the existing built context, serving as spaces curated for the multi-faceted talents of artists and musicians. At varying scales, the spaces erected from the voided balconies can accommodate the seriality of all the conditions that could exist concurrently – The subjectivity of how these spaces flow is an attempt to imbue the multifaceted characteristics of local artists and musicians. Moreover, the superimposition of different functions and programs is intended to provoke a new form of social relationship within the built environment.



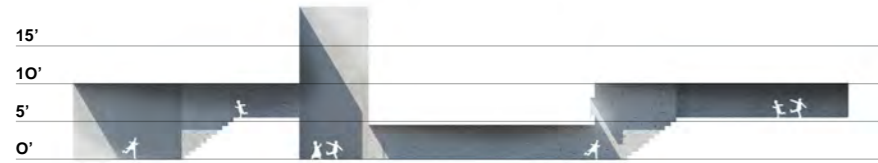




PS. 64 REVISITED

Academic Work
Spring 2021
Instructor: Erica Goetz
Individual Submission

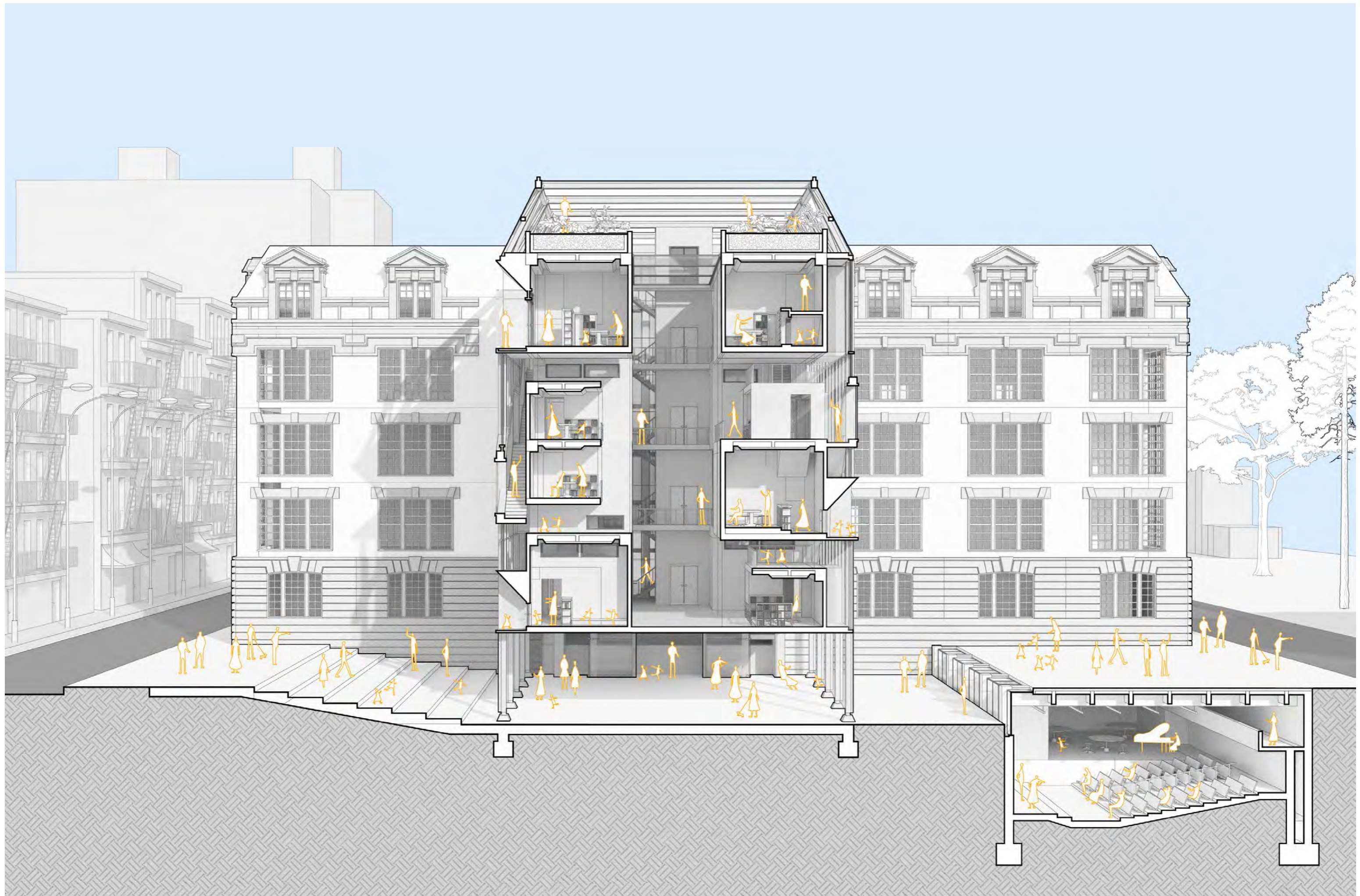
Spatial articulation, relationship to context, and curated programmatic arrangement were essential moves for this school. Drawing from Herman Hertzberger's influence, the proposal serves as a continuation of those principles brought forward by the traditional Montessori method of teaching. This project seeks to provide a self-guided curriculum that uses experiential learning in relationship-driven environments where program is explored through discovery and play.

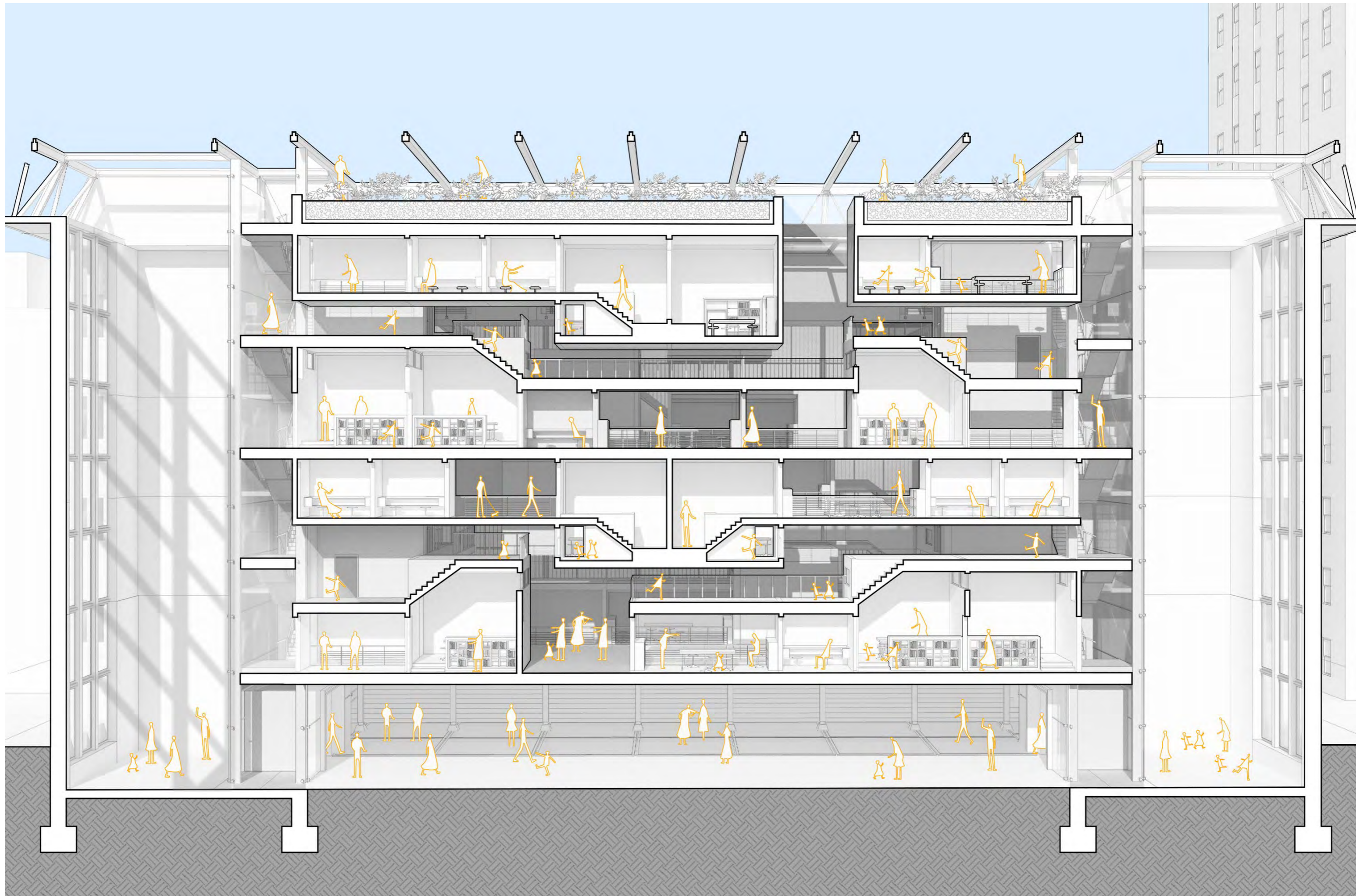


Rather than to accommodate the vast fifteen feet floor to height ceilings of the existing wing buildings, the central proposal offers to create differentiated heights and establish 5' & 10' floor to height ceilings that are only accessible by the children. By postulating the change in heights as a spatial divider, this intricate network of connectivity and circulation heavily encourages the students to think independently and interpret the spaces as they see fit. As an extension beyond the typical central loaded corridor, students can weave through the informal and staggered circulation and find new means of reaching their destination.

01 Superimposition of Program

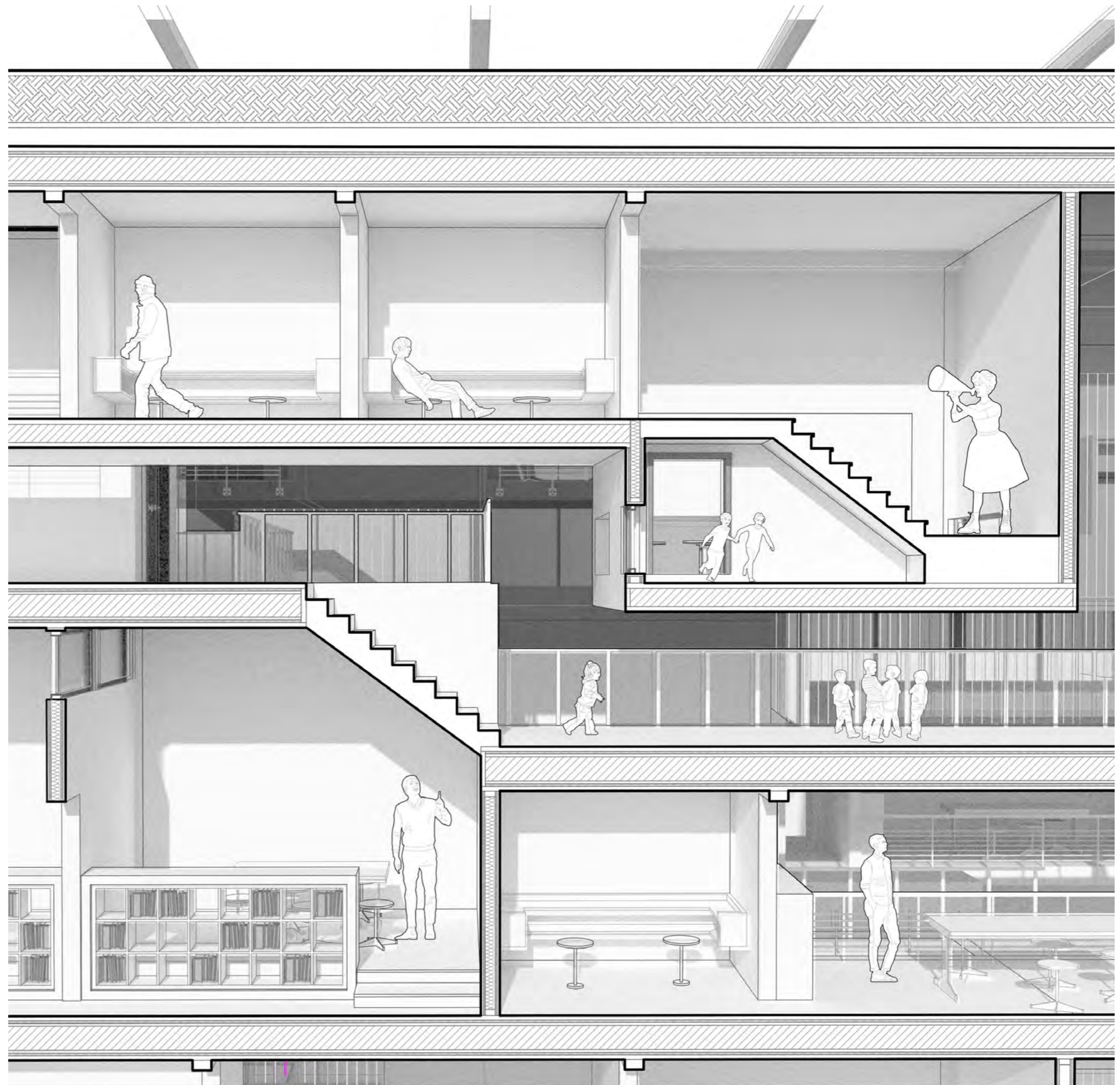






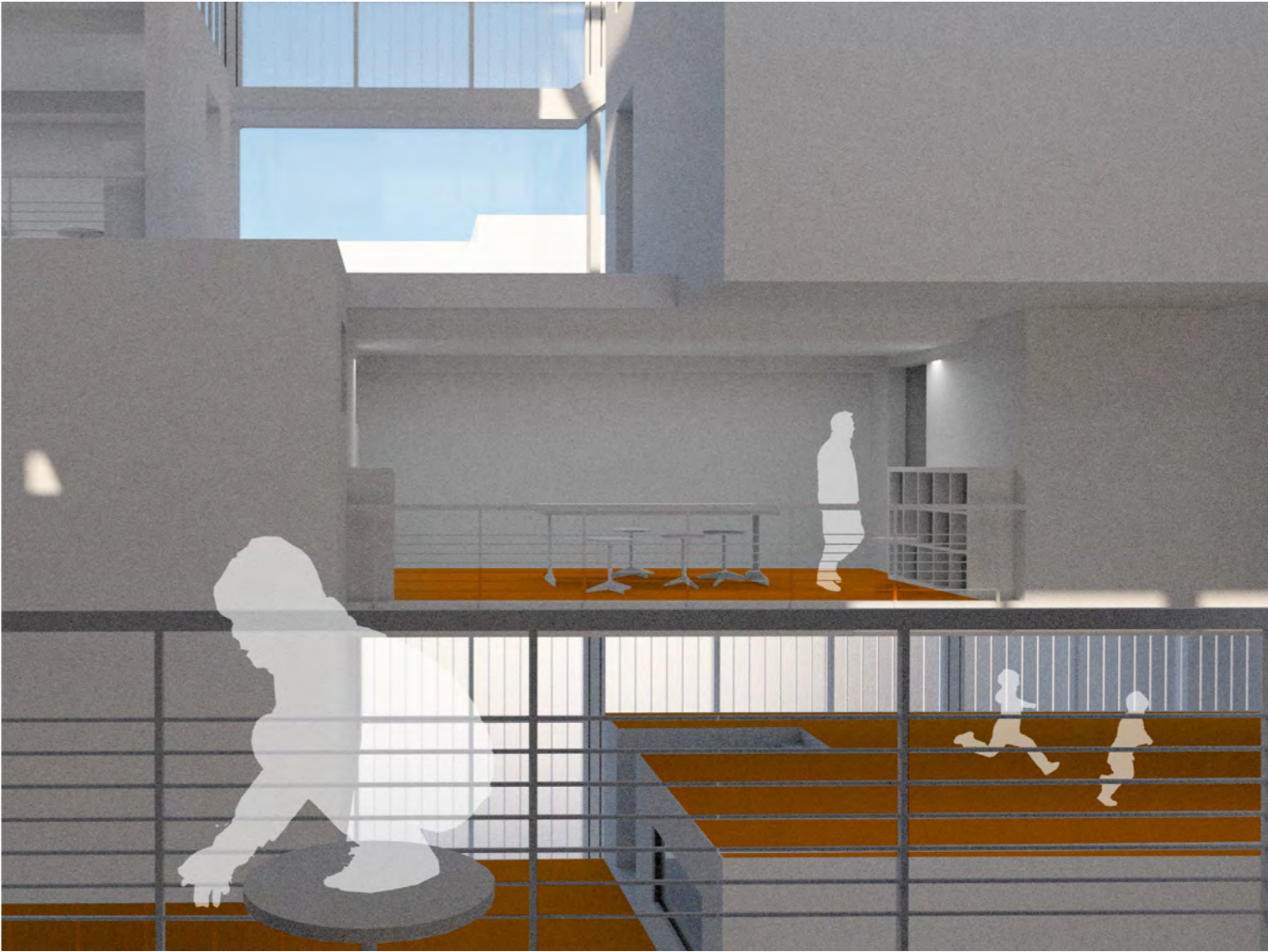
01 Intersectionality of circulation

These spatial juxtapositions generate a multiplicity of thresholds within the existing built context, serving as programmatic spaces curated for the activity of children. As an adoption of the Montessori school teaching practices, there are spaces that are heavily curated to specific program that allows for students to achieve greater privacy and isolation when needed. The conflation of the varying offsets in height demonstrates how architecture can serve as an intermediary between various types of learning.







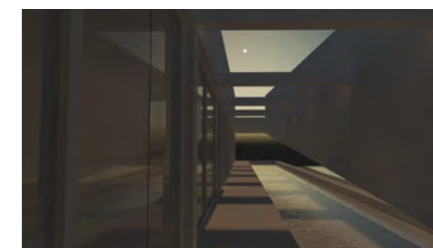
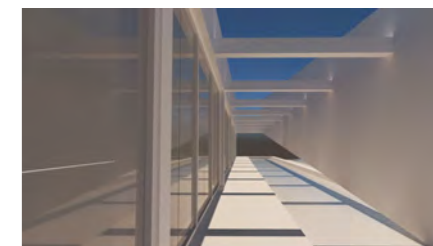
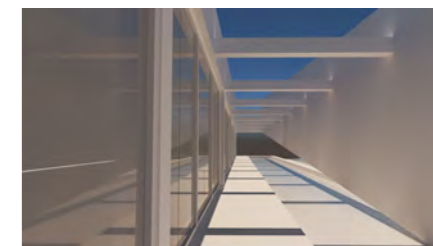
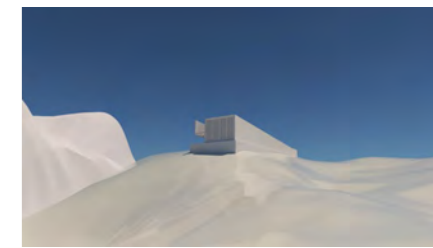




ULTRAREAL

Academic Group Work
Spring 2021
Instructor: Philip Crupi & Joseph Brennan
Group Submission

Through the use of V-Ray & 3D Studio Max, our group sought to work with various visualization methodologies as a means of exploring conditions of lighting and materiality within the constructed frame. Engaging closely with the built environment, we focused on exploiting the inherent complications in texture found throughout concrete and various other materials within construction.



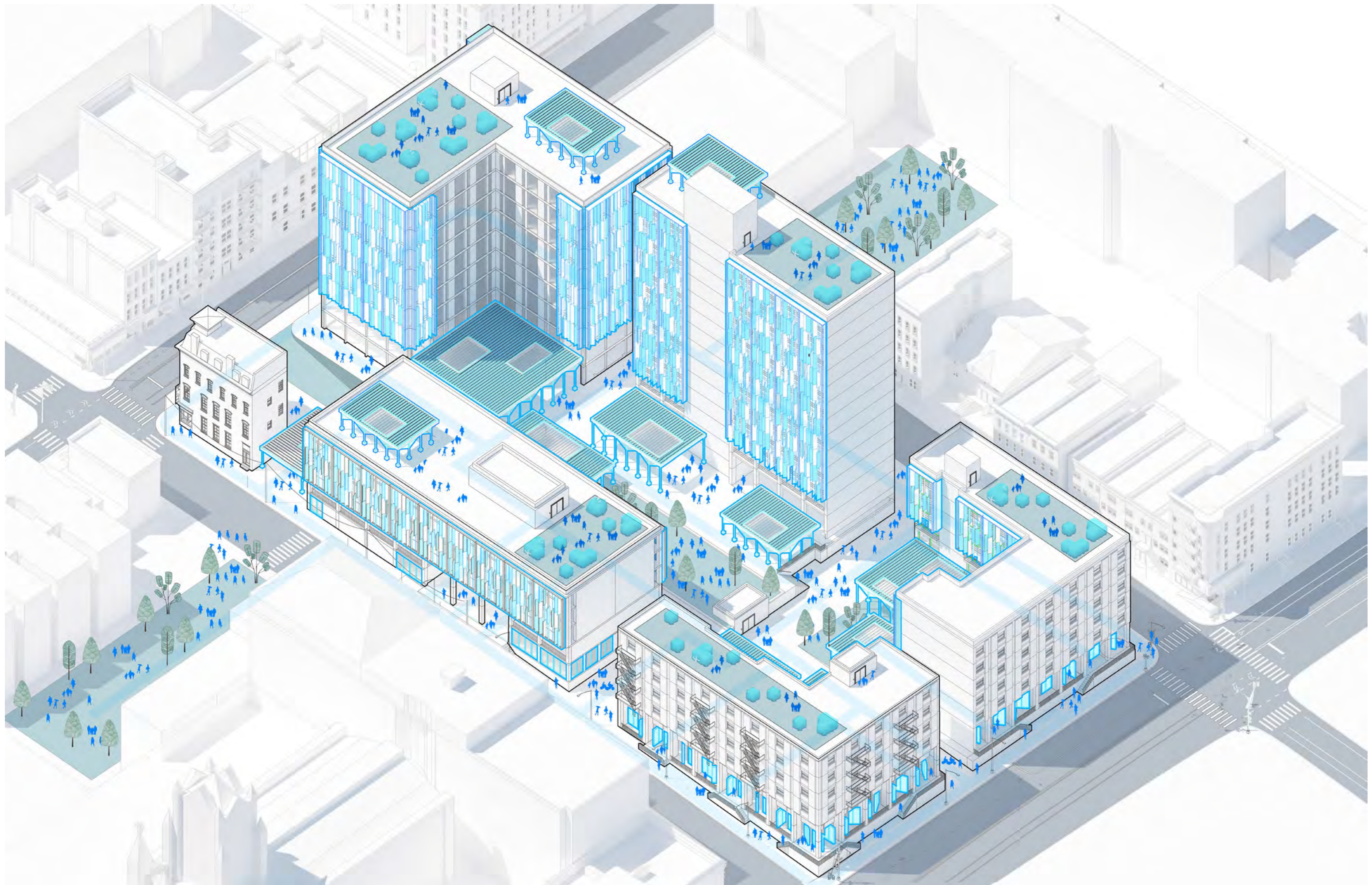
01 Series of Sun Studies

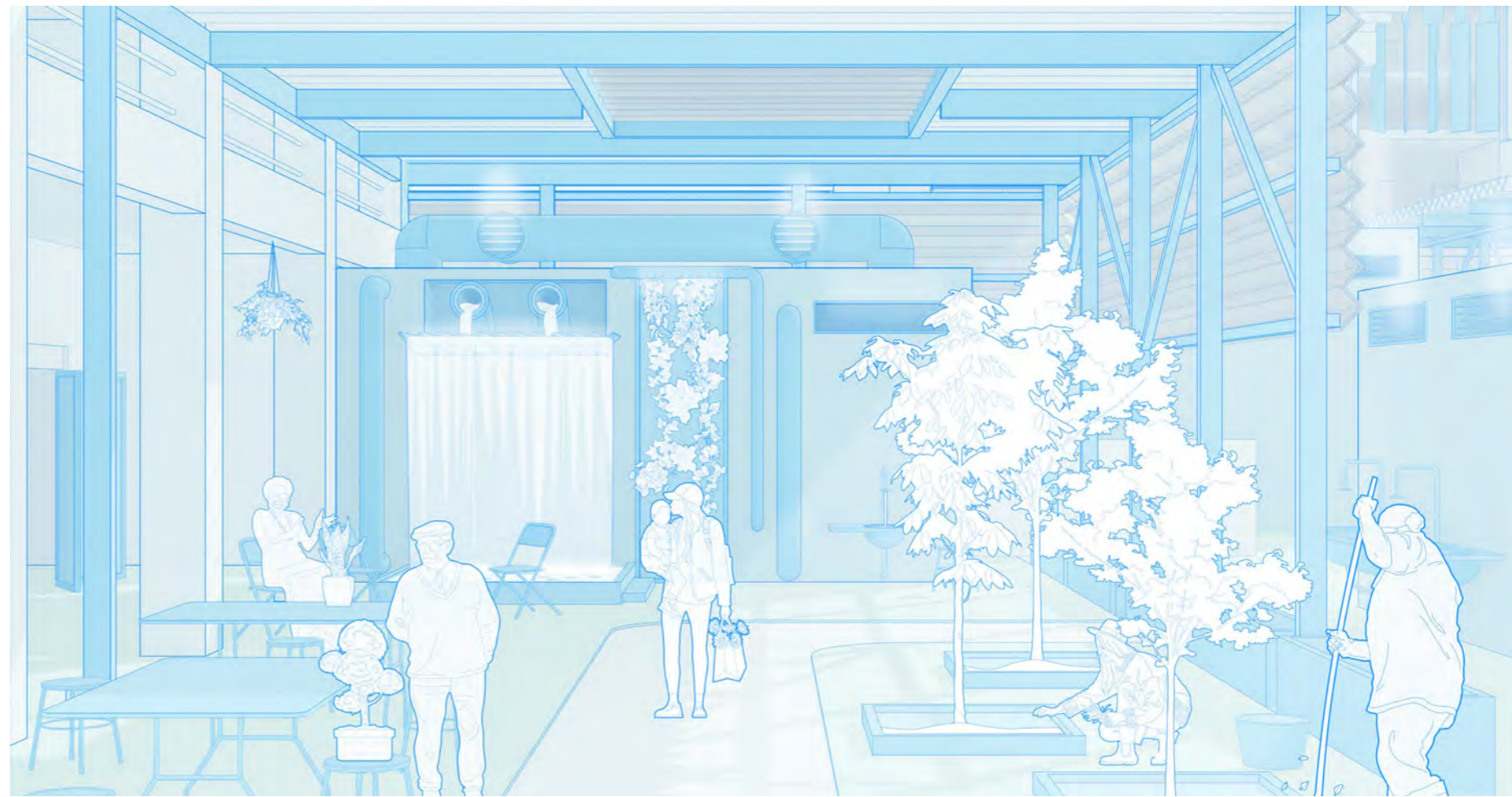


LIBERATING THE CORRIDOR

Academic Work
Fall 2021
Instructor: Esteban de Backer
Partner: Justin Hager

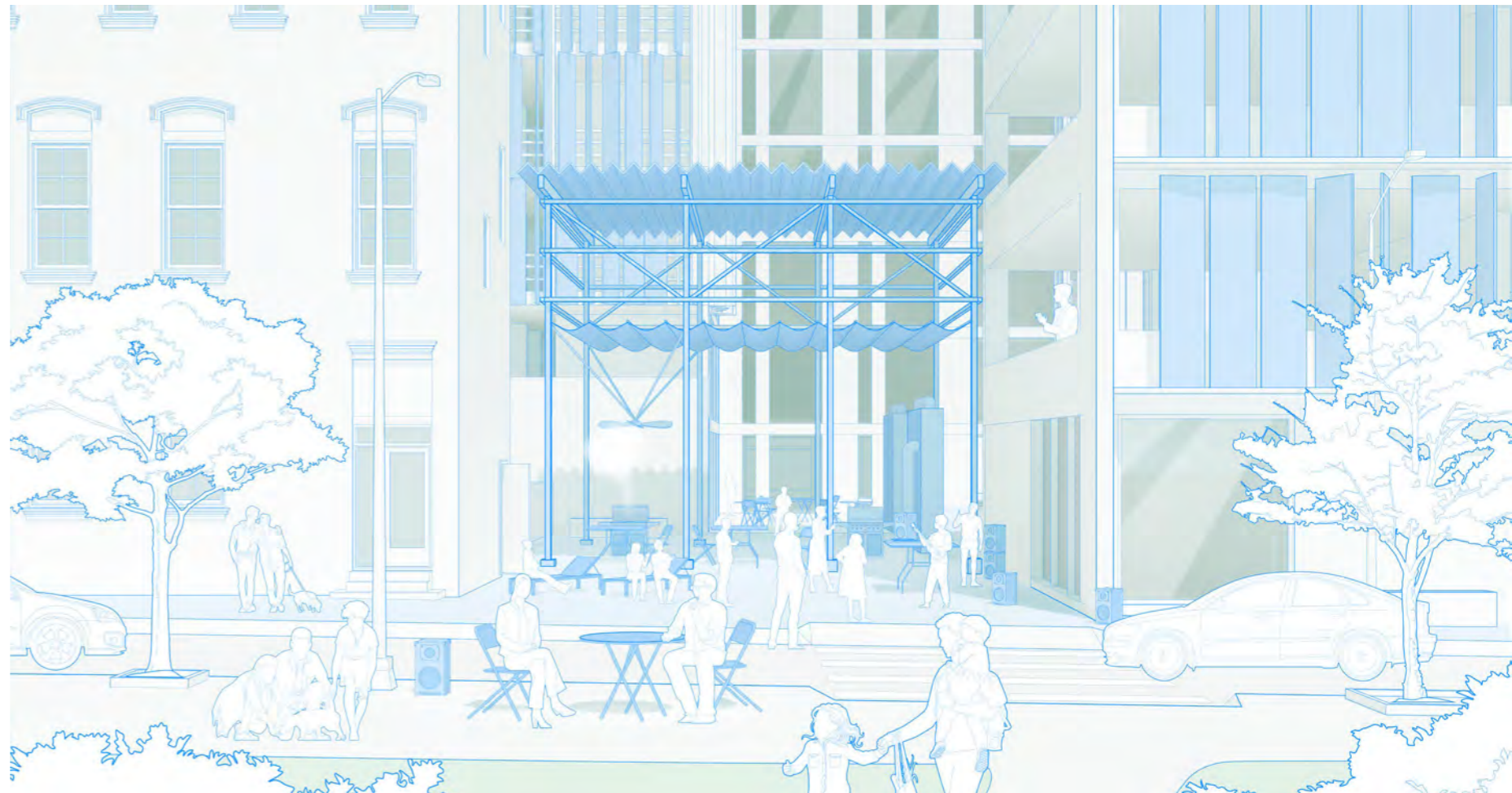
Following Lacaton & Vassal as precedent, the project provides alternate strategies in dedicating residential hubs into hybridized modes of housing and leisure. In addressing the possible outlooks of gentrification and globalization, the project focuses on reconciling the social and economic fluctuations in the Bronx that are most often overlooked. By offering the iterative process of micro housing directly to the inhabitants, the proposal seeks to integrate the needs of communities with those of the investors, addressing the fluidity of the neighborhood.

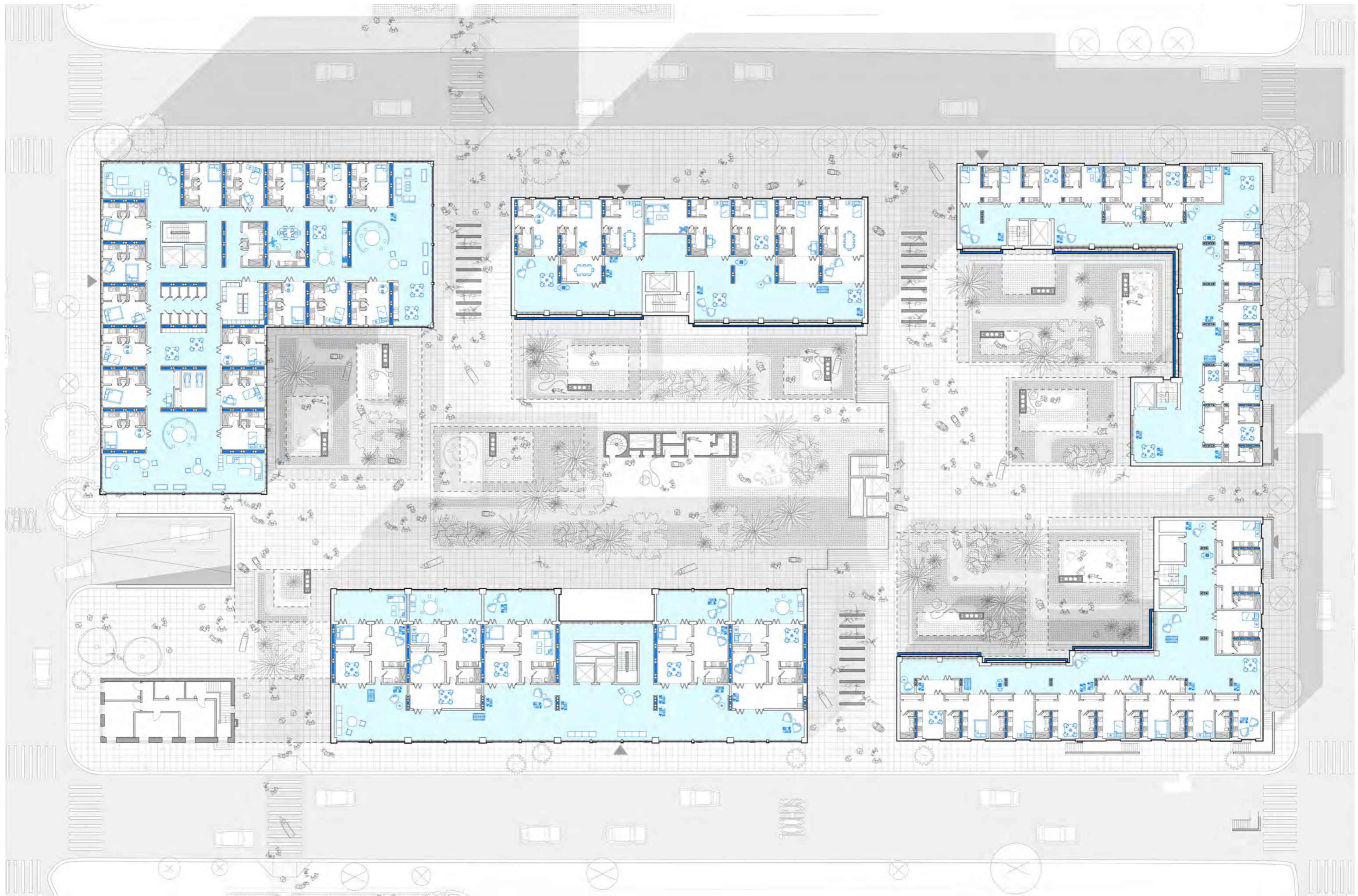


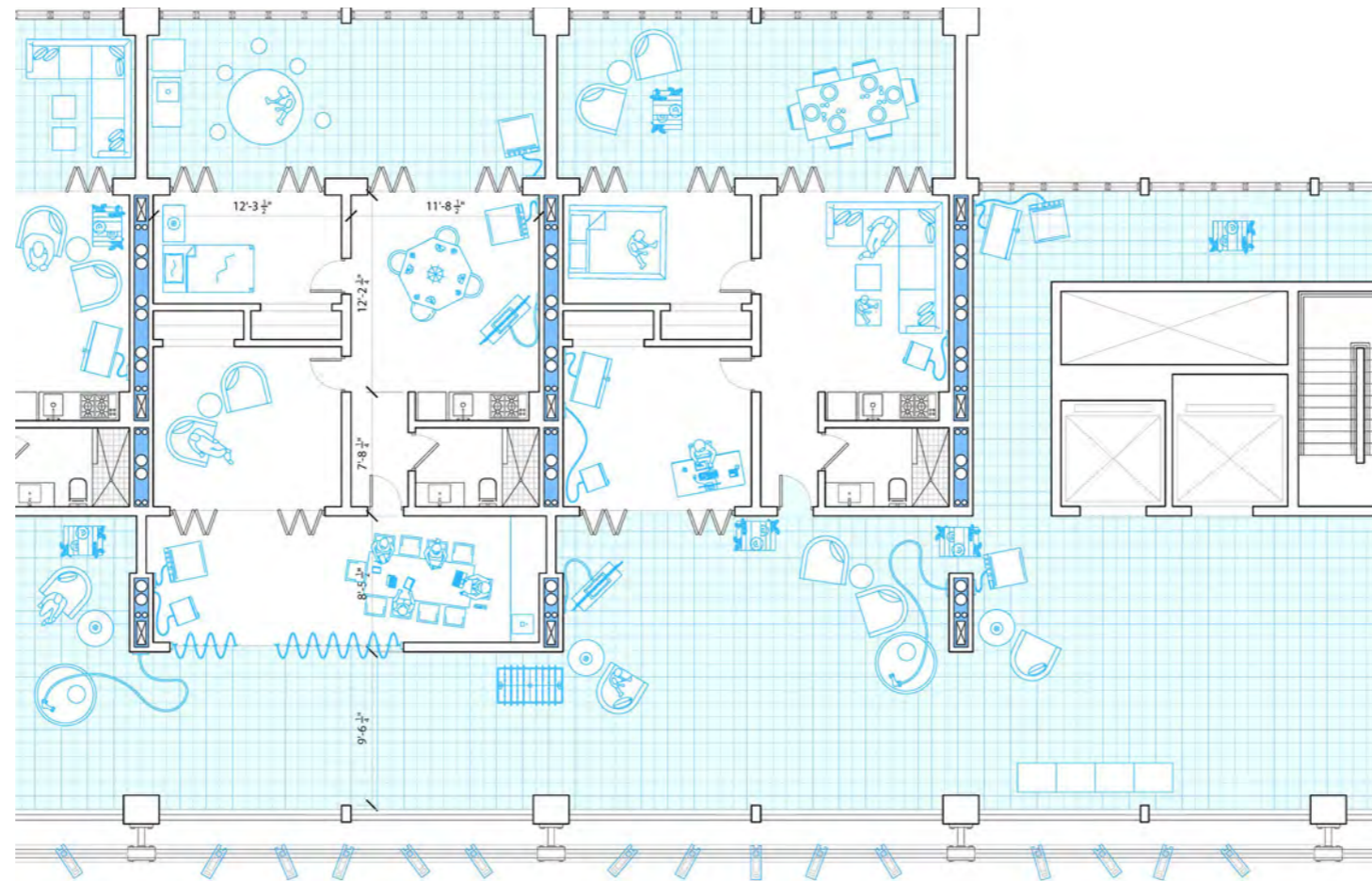
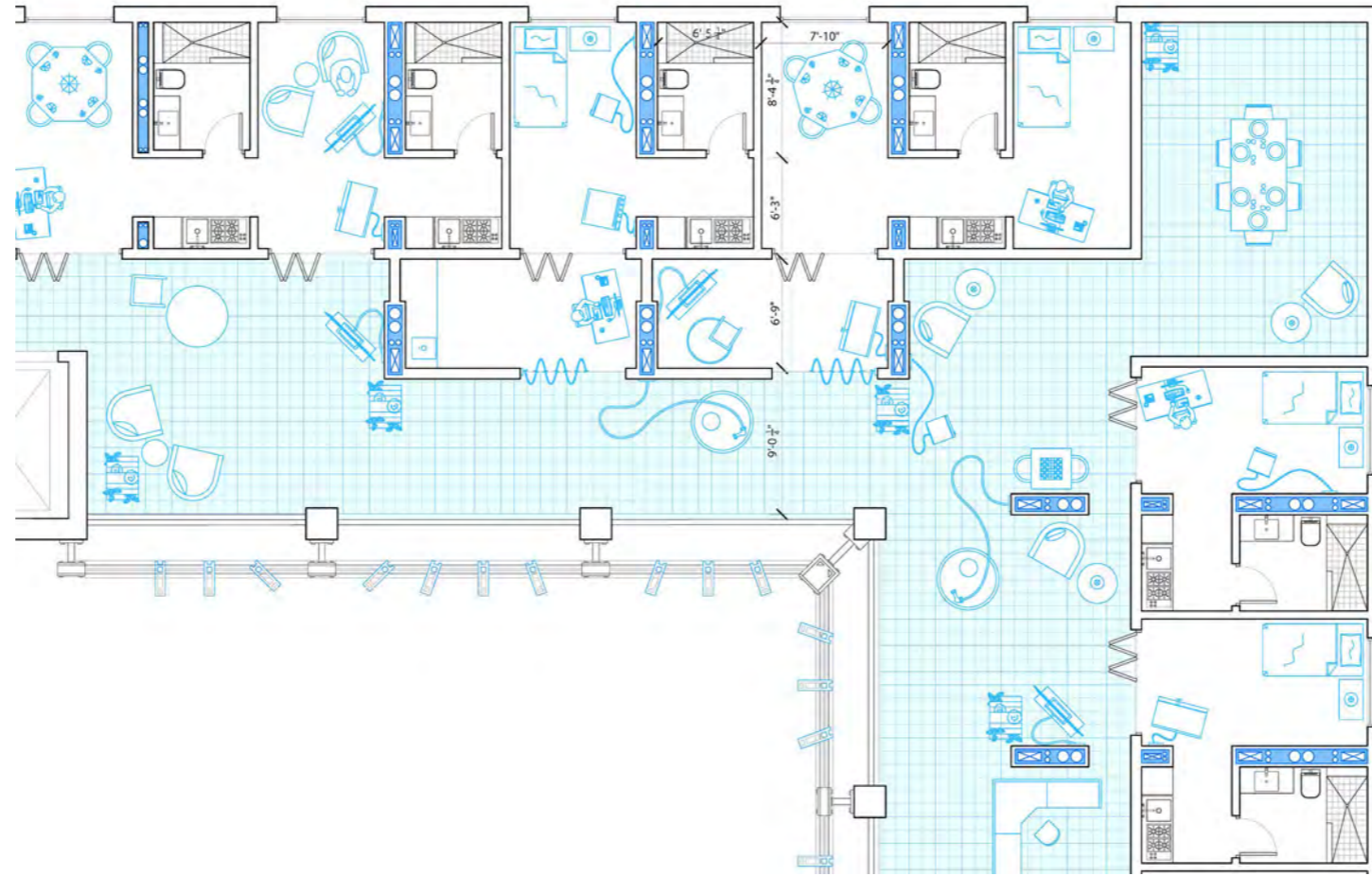


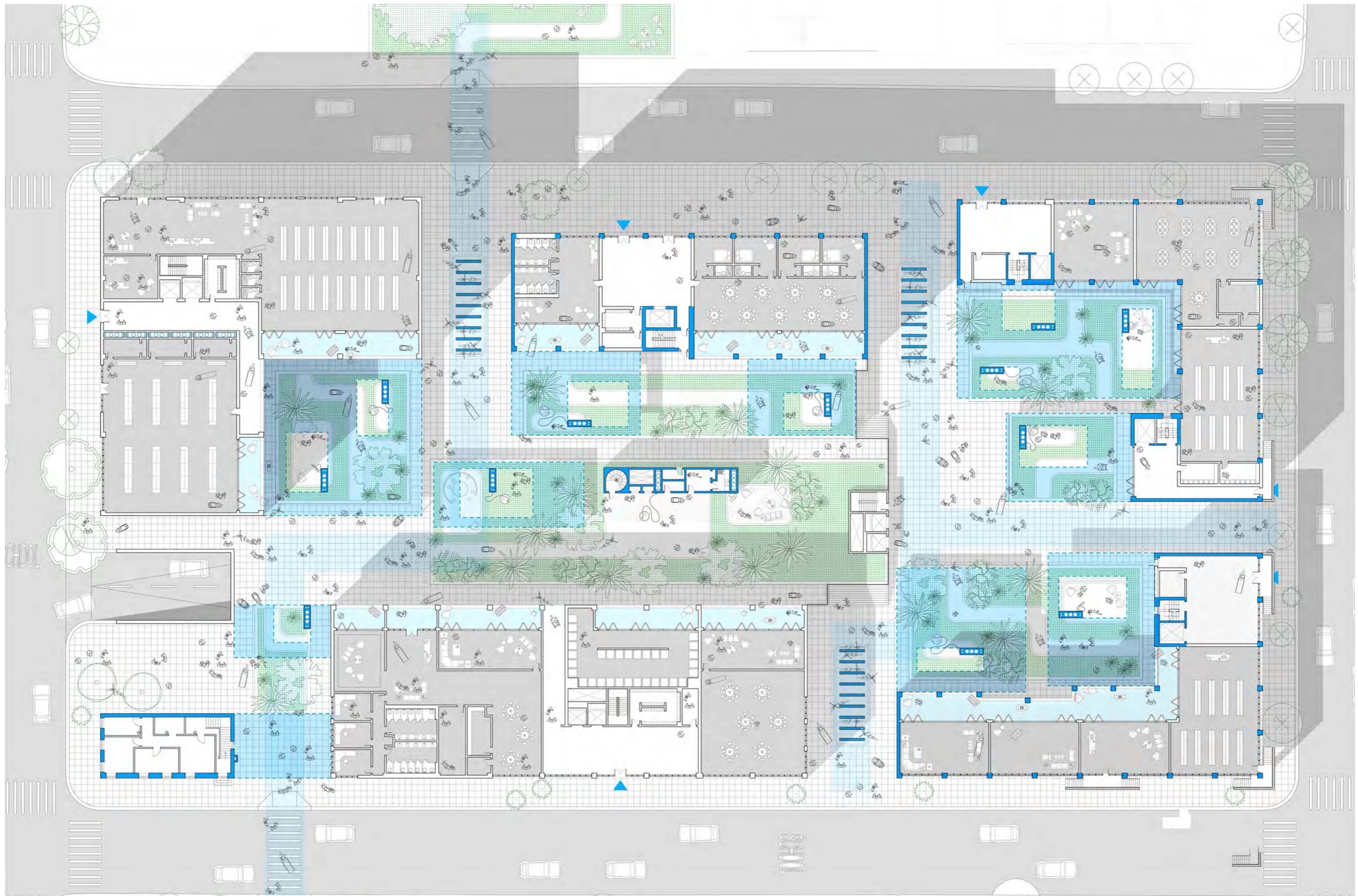
01 Urban Adaptability

The project embodies Lacaton Vassal's conception of space, where new thresholds are created between circulation and habitable spaces. In reference to the extensive interactions between inhabitants, the project seeks to provide various forms of adaptivity in the hopes of developing an urban structure that is resilient to the fluidity of economic and social changes.

















DELAMINATED ASSEMBLIES

Academic Work
Spring 2022
Instructor: Lindsey Wikstrom
Personal Submission

Following Lacaton & Vassal as precedent, the project provides alternate strategies in dedicating residential hubs into hybridized modes of housing and leisure. In addressing the possible outlooks of gentrification and globalization, the project focuses on reconciling the social and economic fluctuations in the Bronx that are most often overlooked. By offering the iterative process of micro housing directly to the inhabitants, the proposal seeks to integrate the needs of communities with those of the investors, addressing the fluidity of the neighborhood.

01 Understanding the Fabrication Process

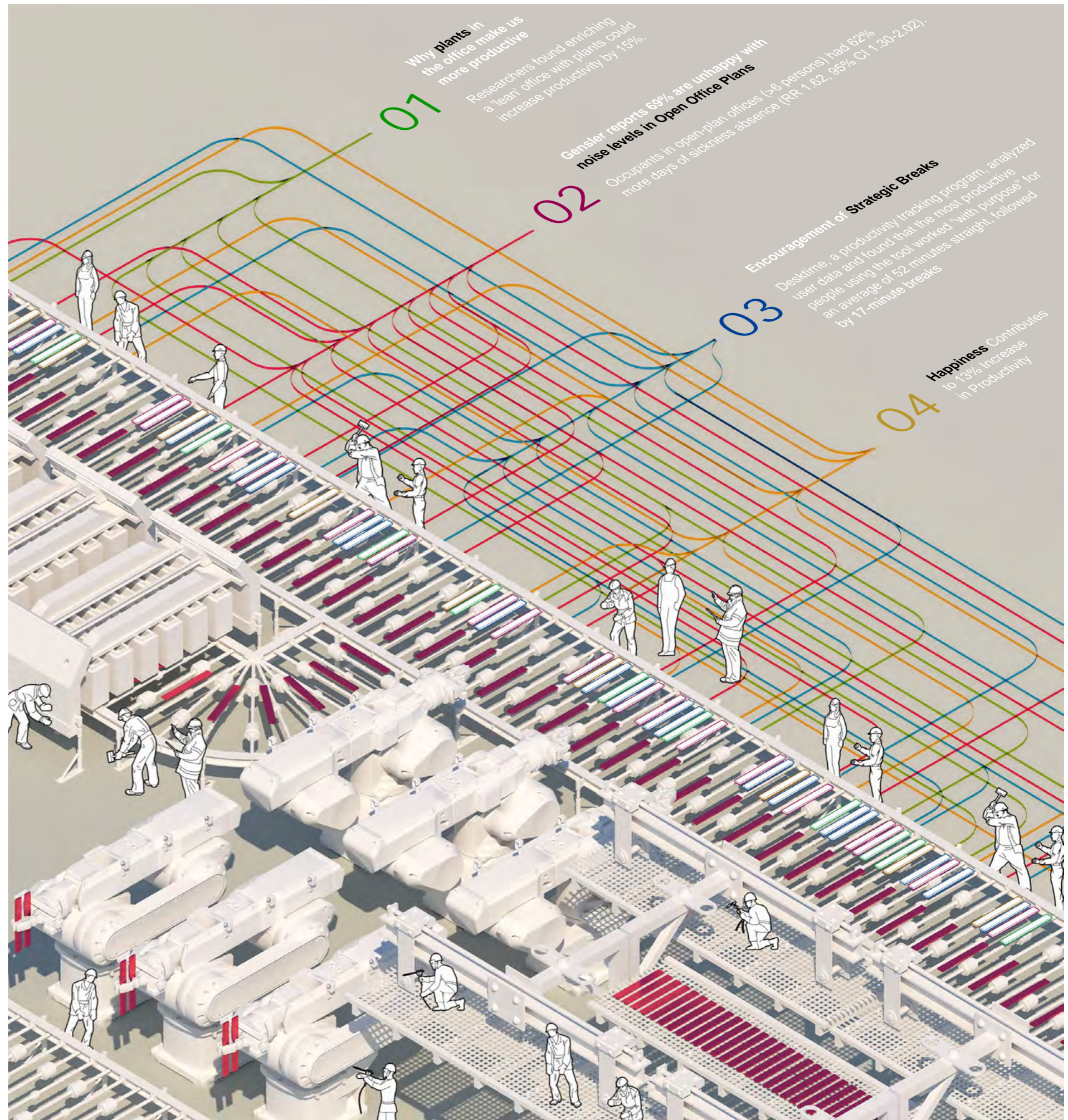
Recognizing the qualitative measures and embracing sustainable health practices amongst employees were crucial in understanding the essential drivers in the development of a CLT manufacturing site. The proposal aims to concretise a highly systematic work environment by developing strategies that enhance the psychosocial experiences for workers.

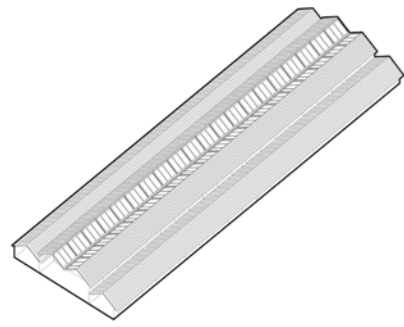
02 Why plants in the office make us more productive Researchers found enriching a 'lean' office with plants could increase productivity by 15%.

03 Gensler reports 69% are unhappy with noise levels in Open Office Plans Occupants in open-plan offices (>6 persons) had 62% more days of sickness absence (RR 1.62, 95% CI 1.30-2.02)

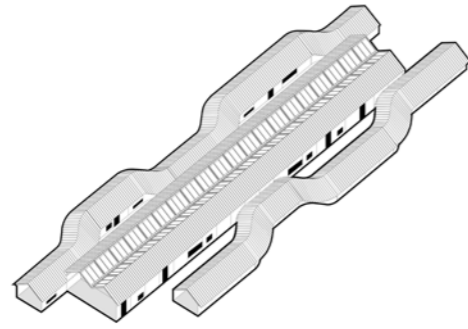
04 Encouragement of Strategic Breaks. Desktime, a productivity tracking program, analyzed user data and found that the most productive people using the tool worked "with purpose" for an average of 52 minutes straight, followed by 17-minute breaks

05 Happiness Contributes to 13% Increase in Productivity

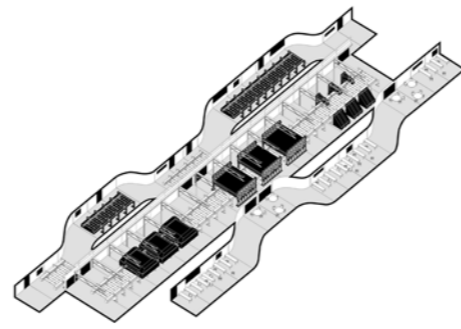




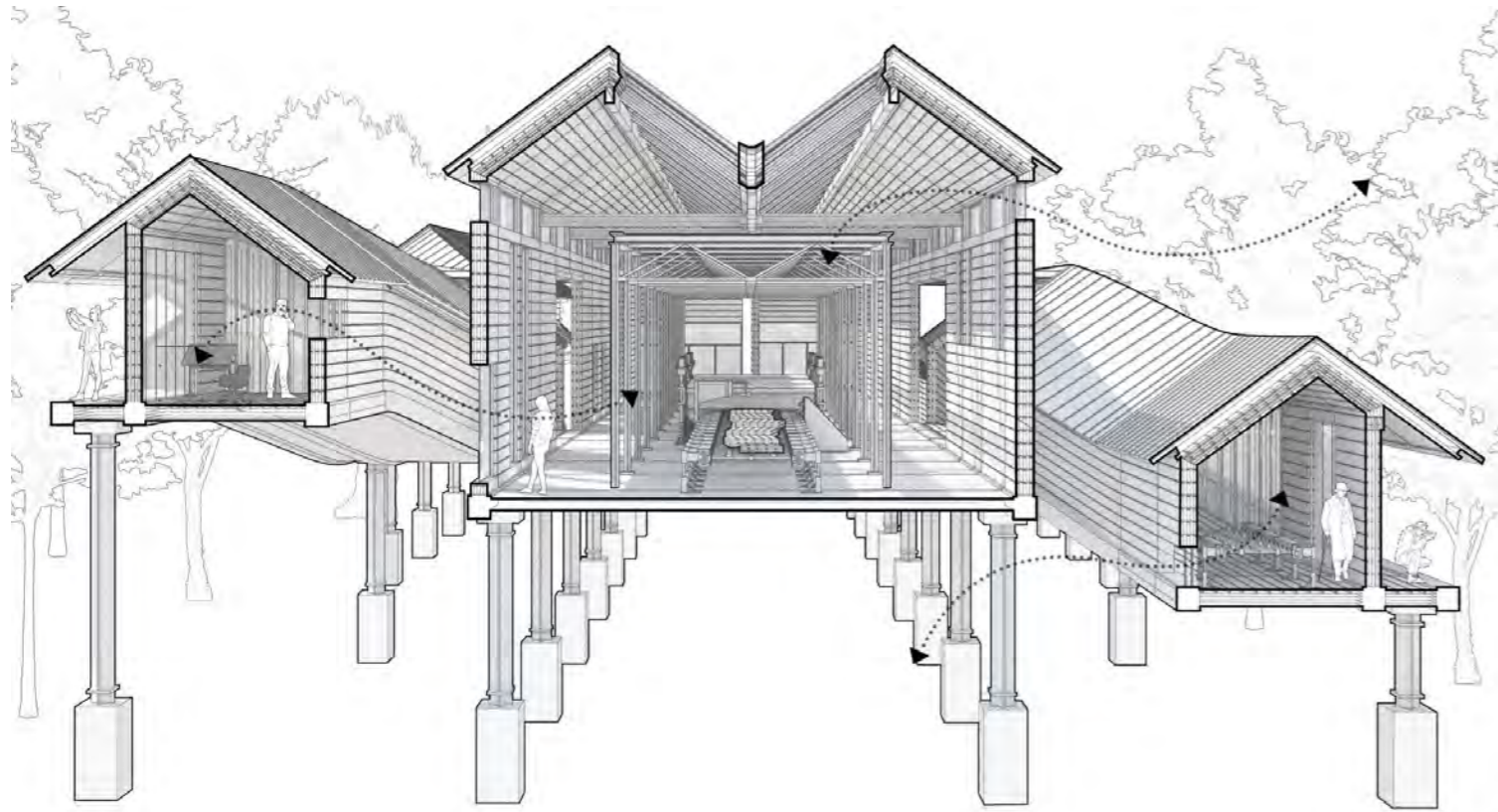
01 CONVENTIONAL | Type A



02 DELAMINATION | Type B



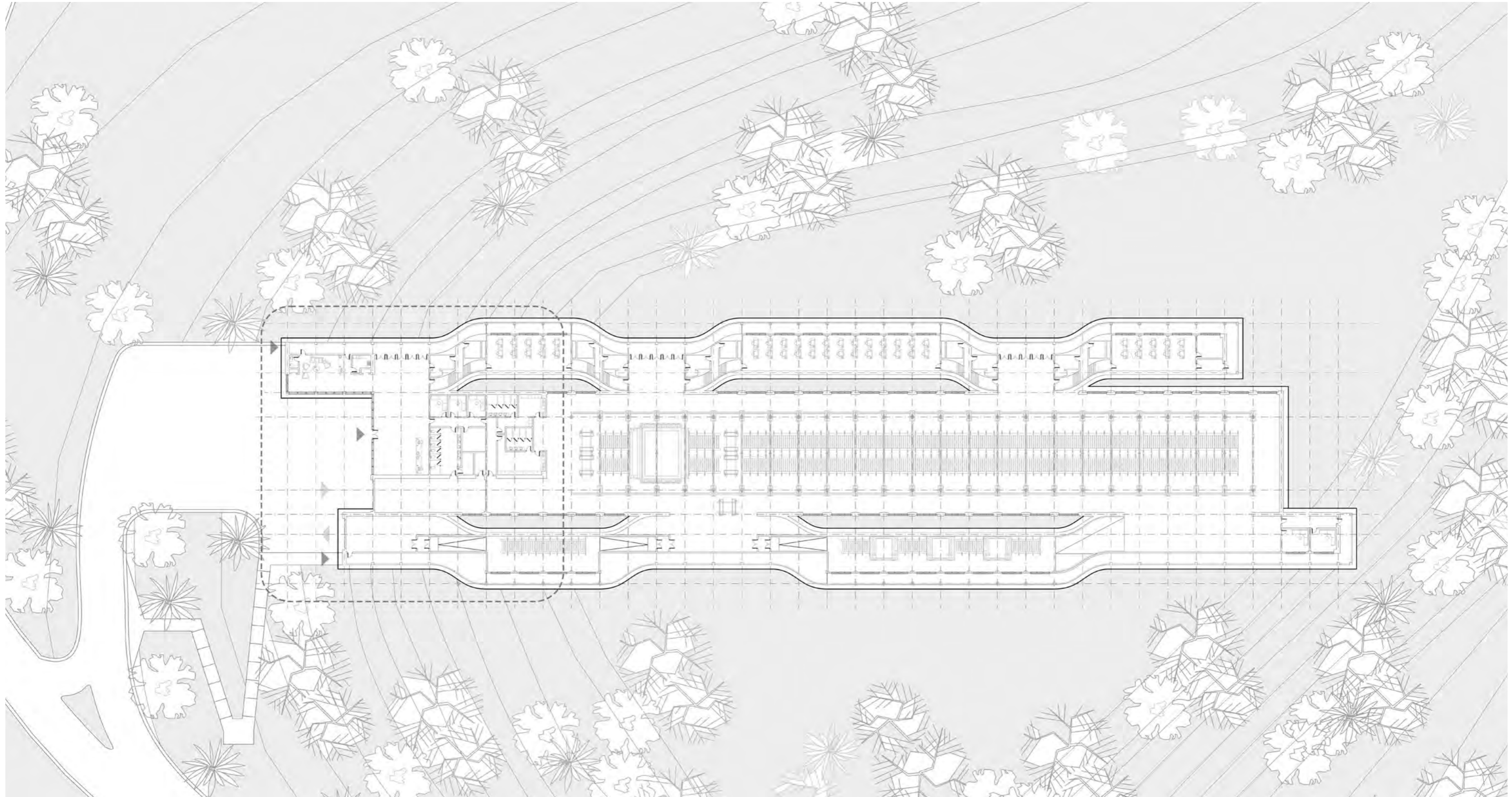
03 CLT PROCESSES | Type C



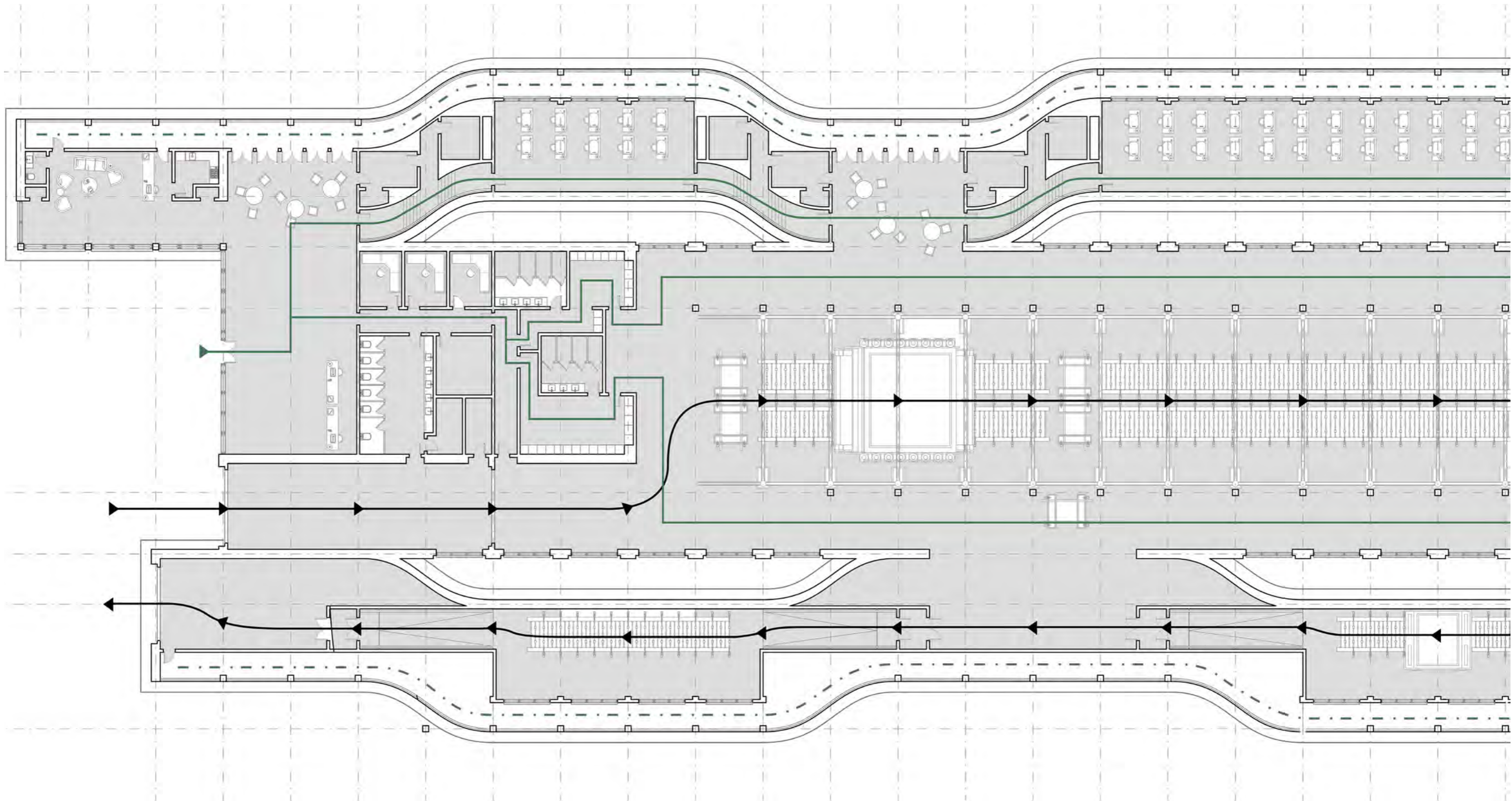
The structure provides a horizontal composition in which the aggregation of all housing units contribute in creating its own urban conditions. As such, the superblocks occupy the under-utilized spaces left within standardized London terraced housing blocks, allowing for affordability and minimal footprints. The above-ground infrastructure addresses the inherent connectivity and integration with existing row-houses and other kinds of social interactions.



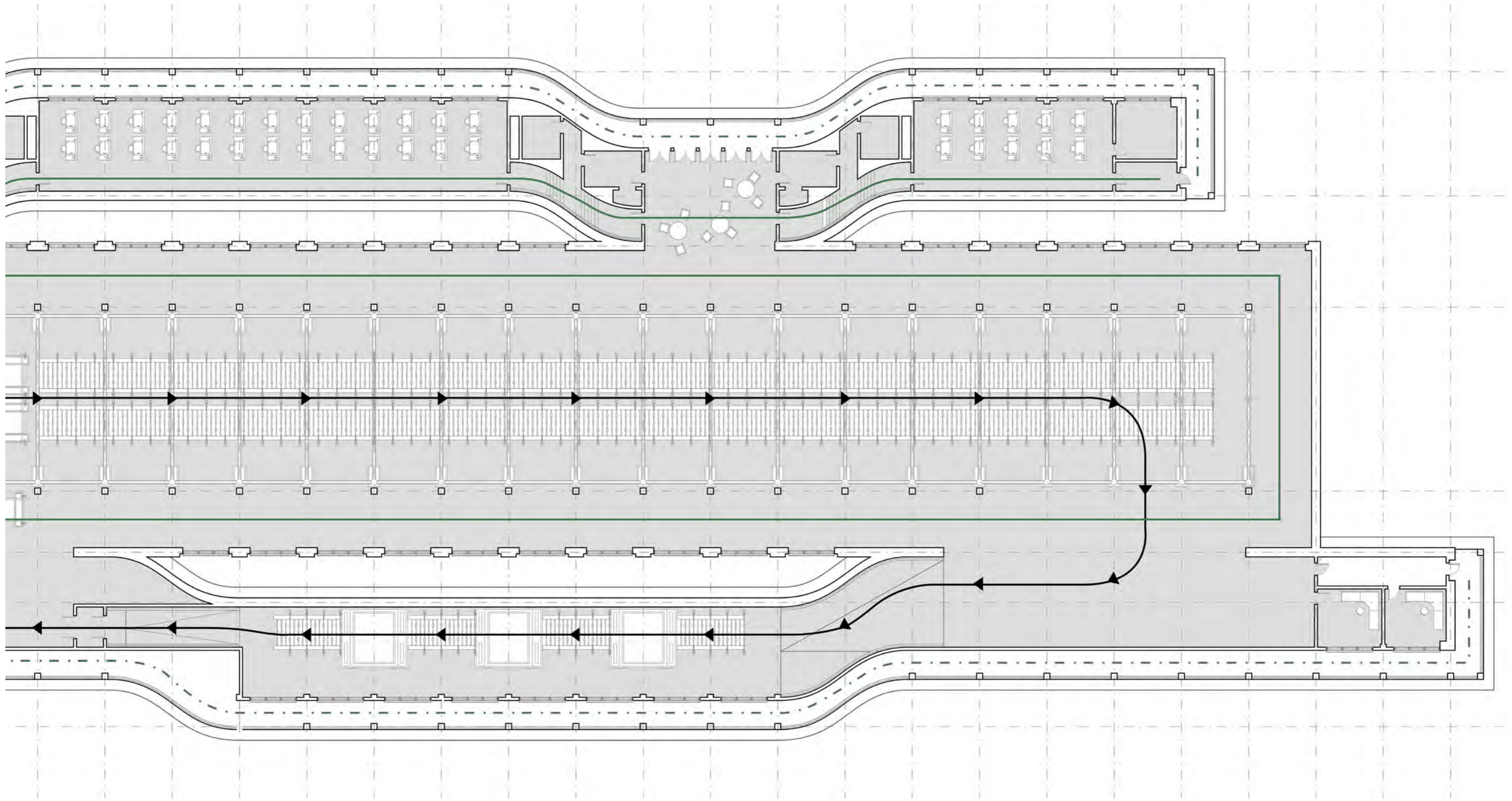
INFRASTRUCTURE: The augmentation crafted from the delaminations elevates various visual connections that challenge the formalistic rigidity of traditional manufacturing sites



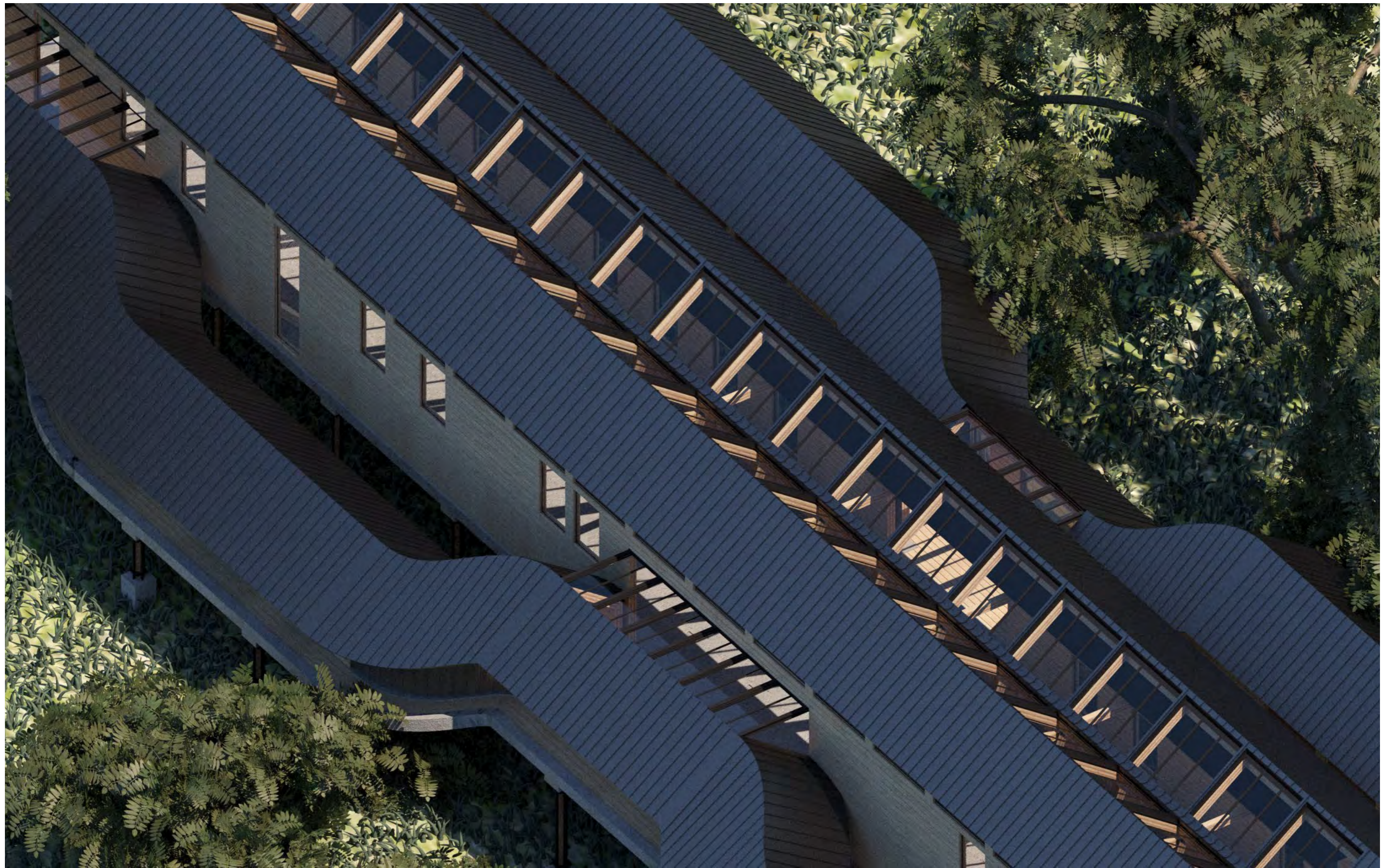
01 Site Plan

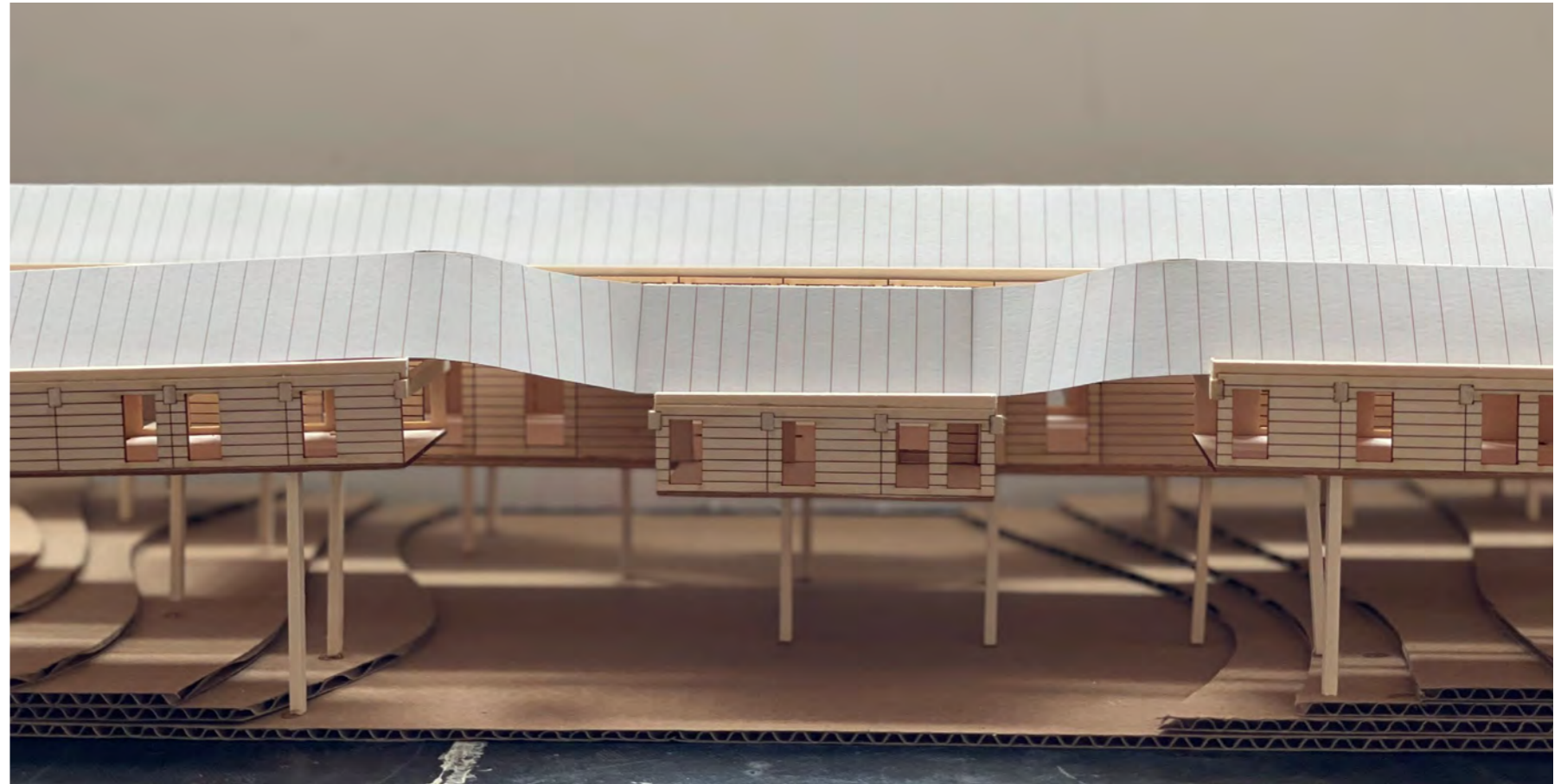


01 Detail Plan A



01 Detail Plan B







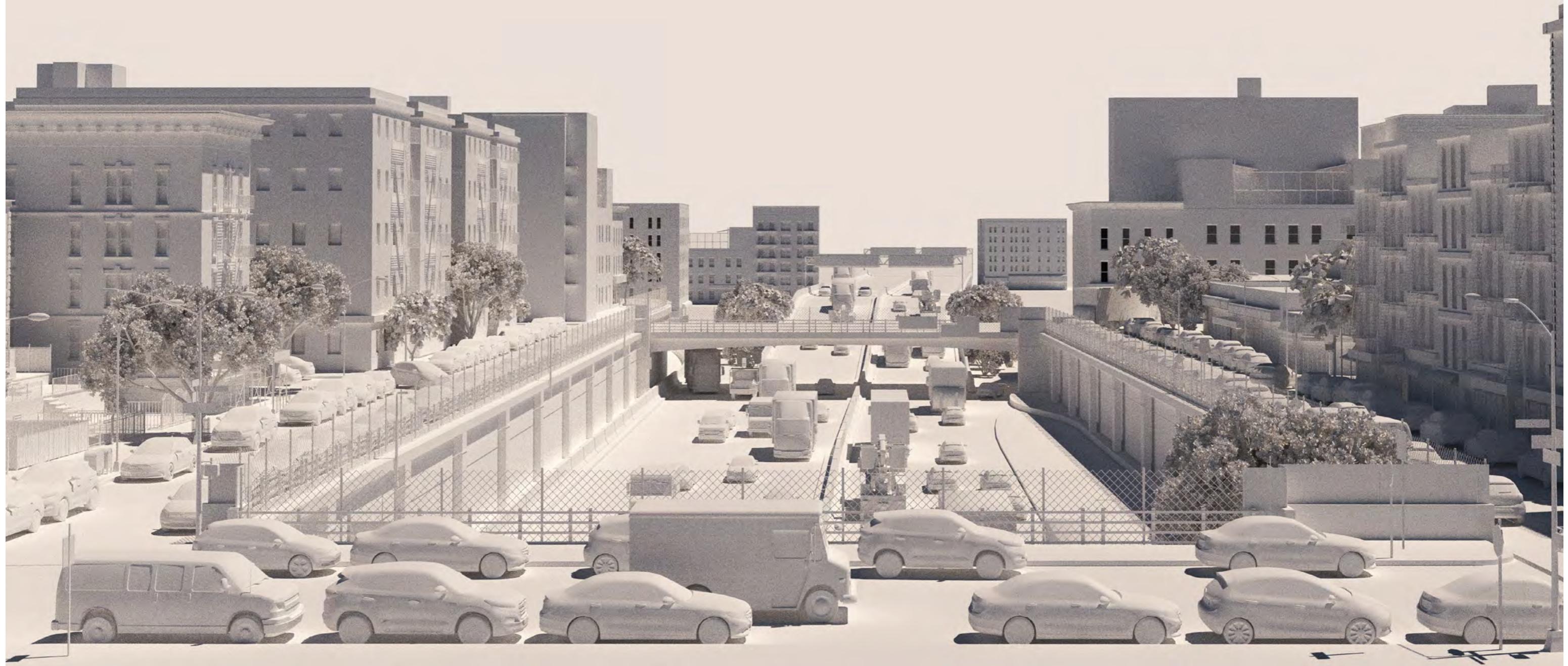


MEDIATED OBSCURITY

Academic Work
Fall 2022
Instructor: Michael Bell
Partner: Jacob Kackley

Utopias are sites with no real place. There are also, probably in every culture, in every civilization, real places—places that do exist and that are formed in the very founding of society— which are something like counter-sites, a kind of effectively enacted utopia in which the real sites, all the other real sites that can be found within the culture, are simultaneously represented, contested, and inverted.
- Michel Foucault (1967)

The Problem Physically large design interventions, particularly infrastructure, do not have the capability to simulate economic development whilst simultaneously minimizing its detrimental effects on existing communities and neighbourhoods



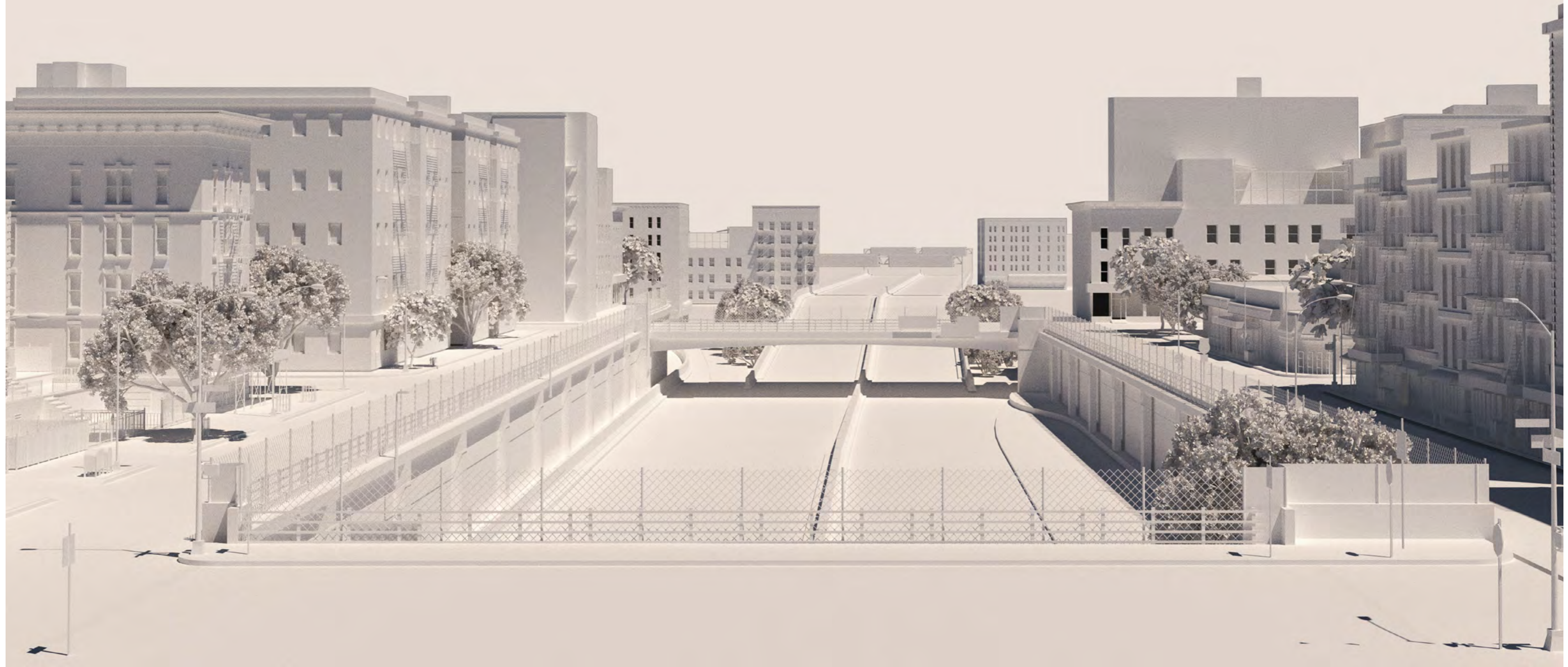
The Proposal

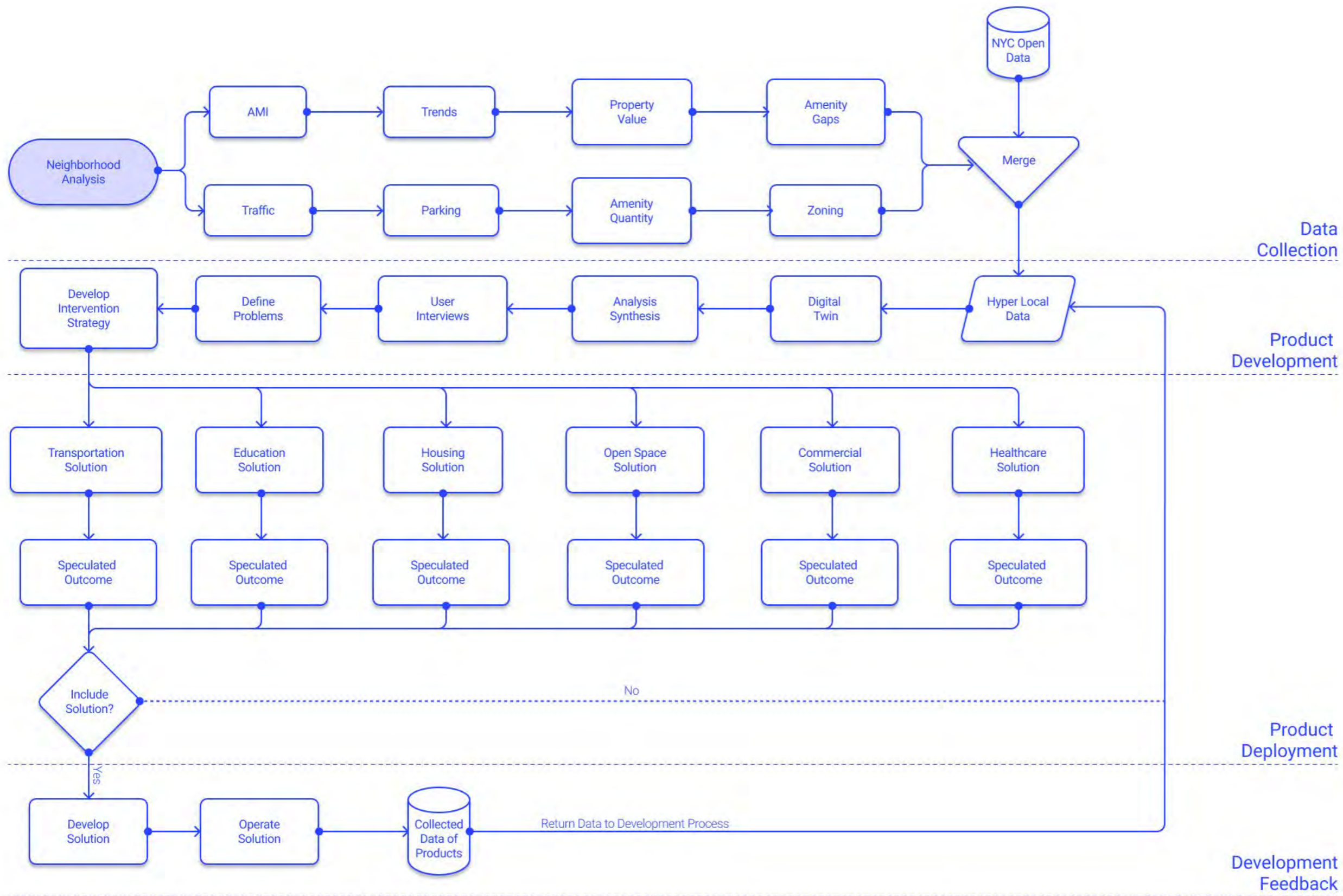
In order to mitigate risk of public and private equity, we propose studying infrastructure interventions using a digital twin to simulate changes and uncover complex issues of transportation, property assessment, and human capital through varying vantage points.



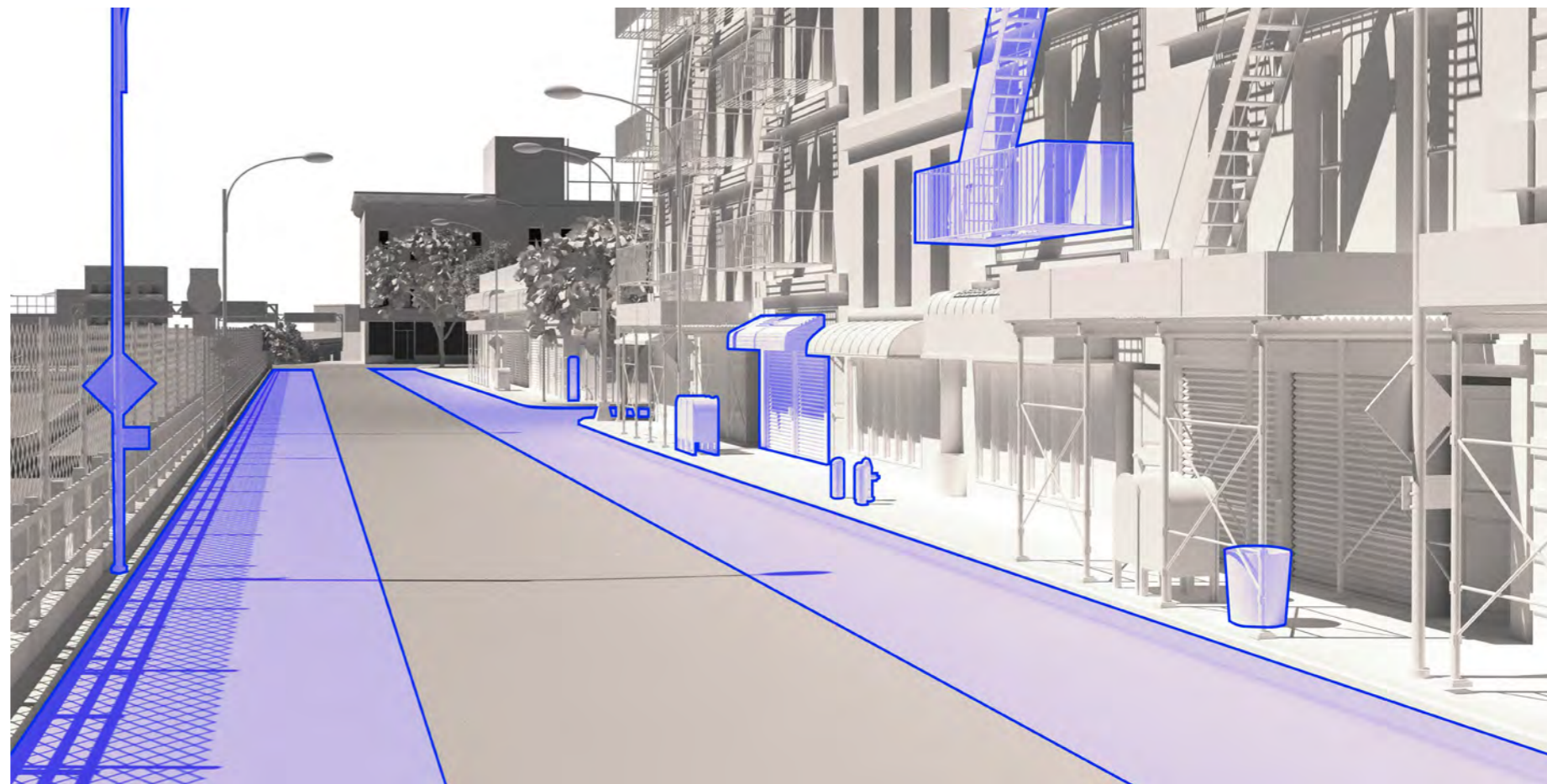
Value Proposition

A digital twin of the Cross Bronx Expressway will assist risk management through prototyping/ simulating capital asset interventions and Promote agency to stimulate healthy development in the Bronx





01 Digital Twin Taxonomy



01 Value Proposition and Value-Add

Our design interventions are founded on static and abstract data, capturing a still image of time and place. We can use emergent technologies to change spatial strategies towards living systems and develop methods of introducing seamless and concurrent processes within existing neighborhoods and communities.





[SUB] URBAN RESILIENCY

Academic Work
Spring 2023
Instructor: Michael Bell
Partner: Jacob Kackley

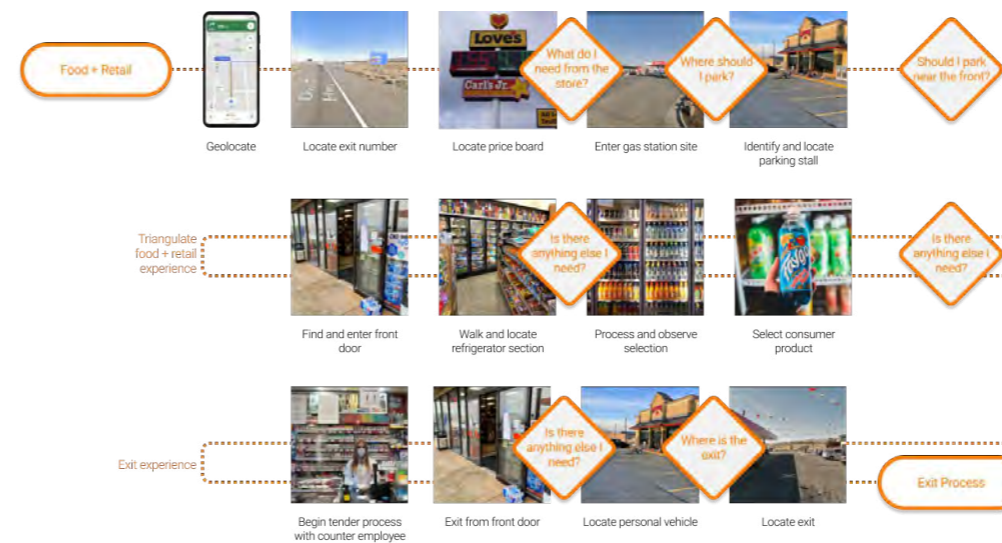
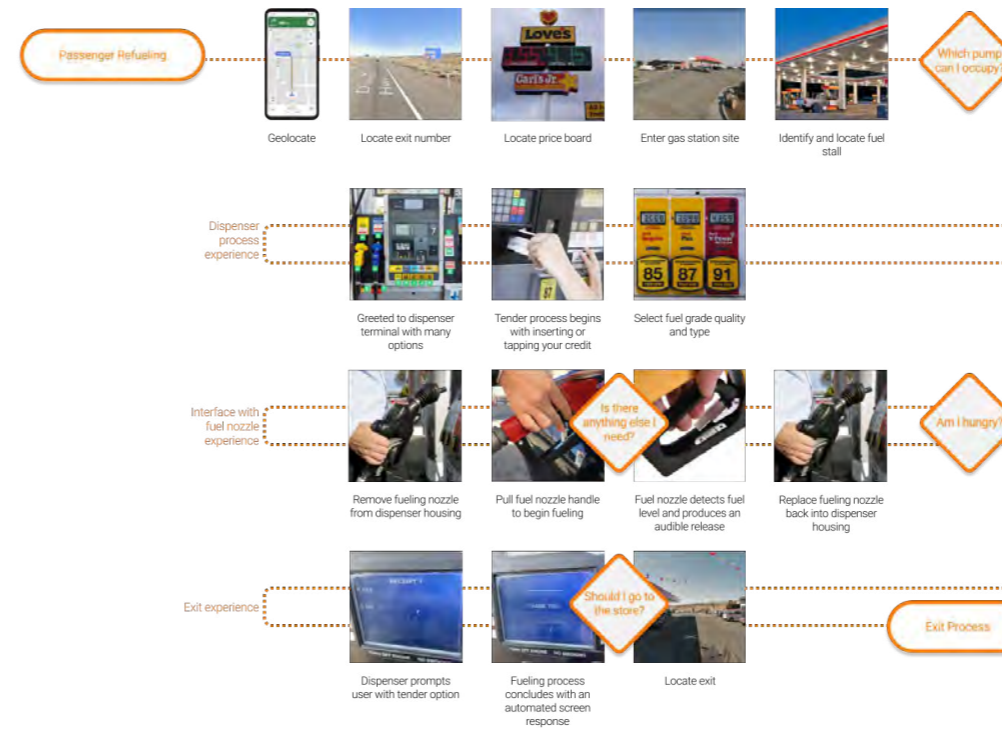
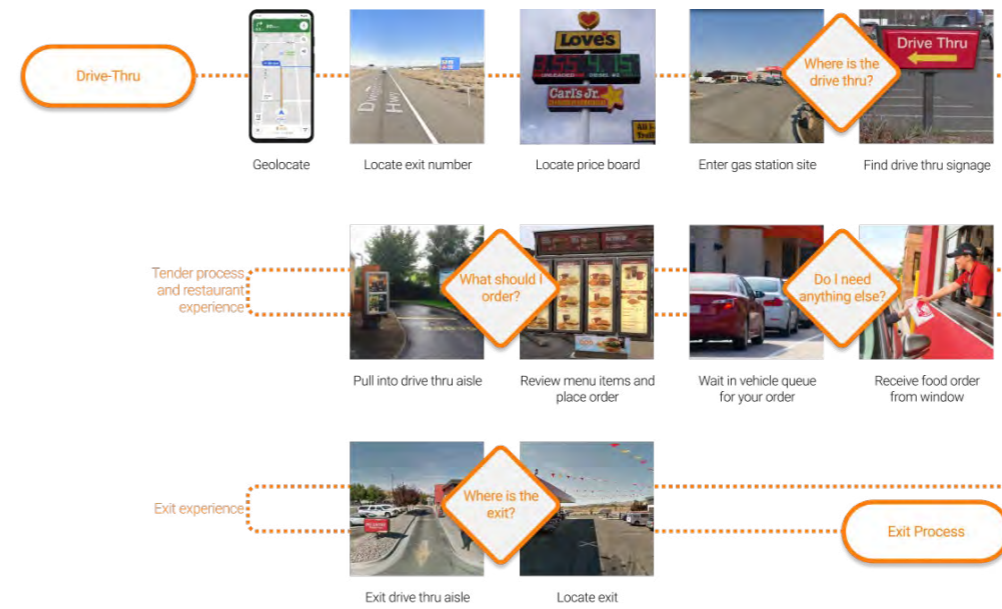
"I think if we can speak of reality, if reality and representation can be spoken of in the same sentence, if reality even exists any more, digital is simply another way of encoding that reality."

- Lewis Baltz (1998)











Remove fueling nozzle from dispenser housing



Pull fuel nozzle handle to begin fueling



Fuel nozzle detects fuel level and produces an audible release



Replace fueling nozzle back into dispenser housing

I need to pick up my drink!



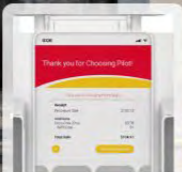
Greeted to dispenser to select from preselected menu of options



Tender process is streamlined by tapping your credit card



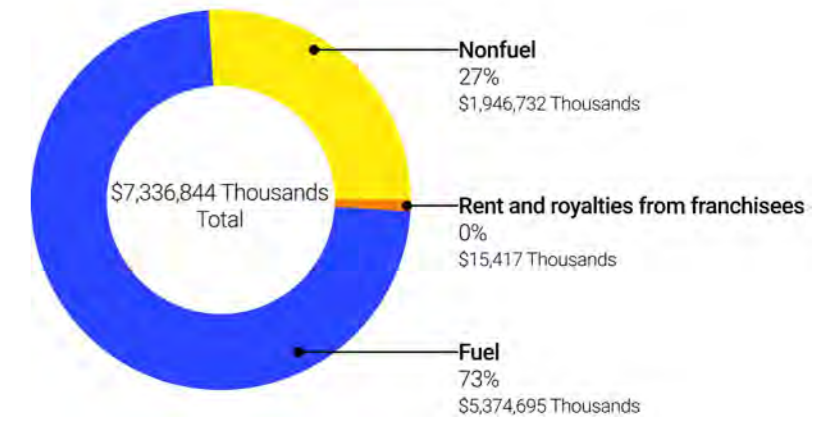
While fueling, additions and advertising are easily added



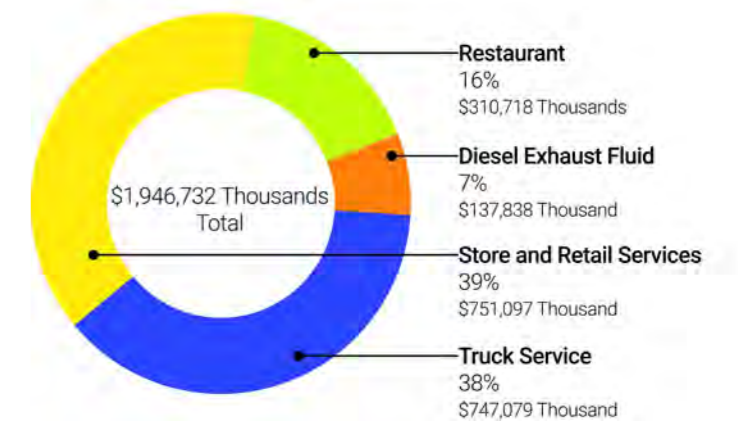
Fueling process concludes with an automated screen response

I need to pick up my drink!

Revenue



Nonfuel Revenue



Material Takeoff

