

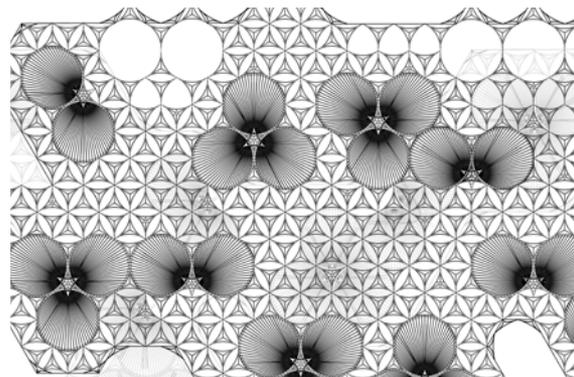
collective works

GSAPP 2019 - 2020

Summer 2019

Canopy After Life

Studio

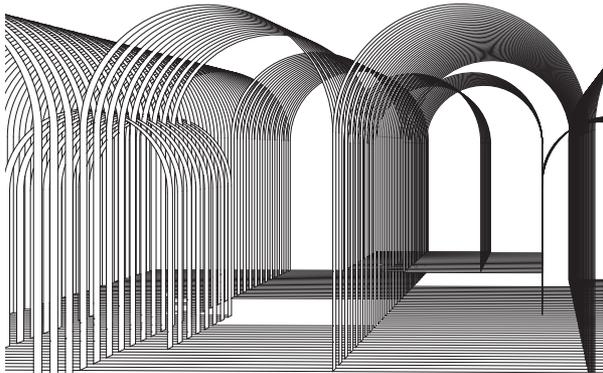


2

Fall 2019

Textile Daycare

Studio

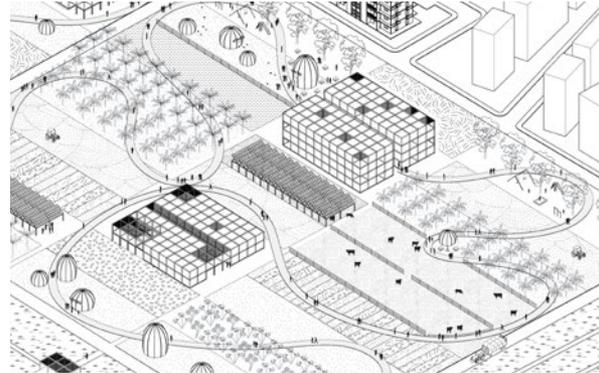


3

Spring 2020

United Farms of Los Pinos

Studio

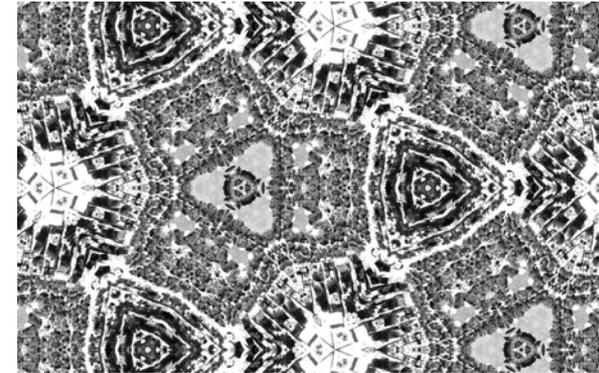


4

Fall 2019 - Spring 2020

Visual Studies

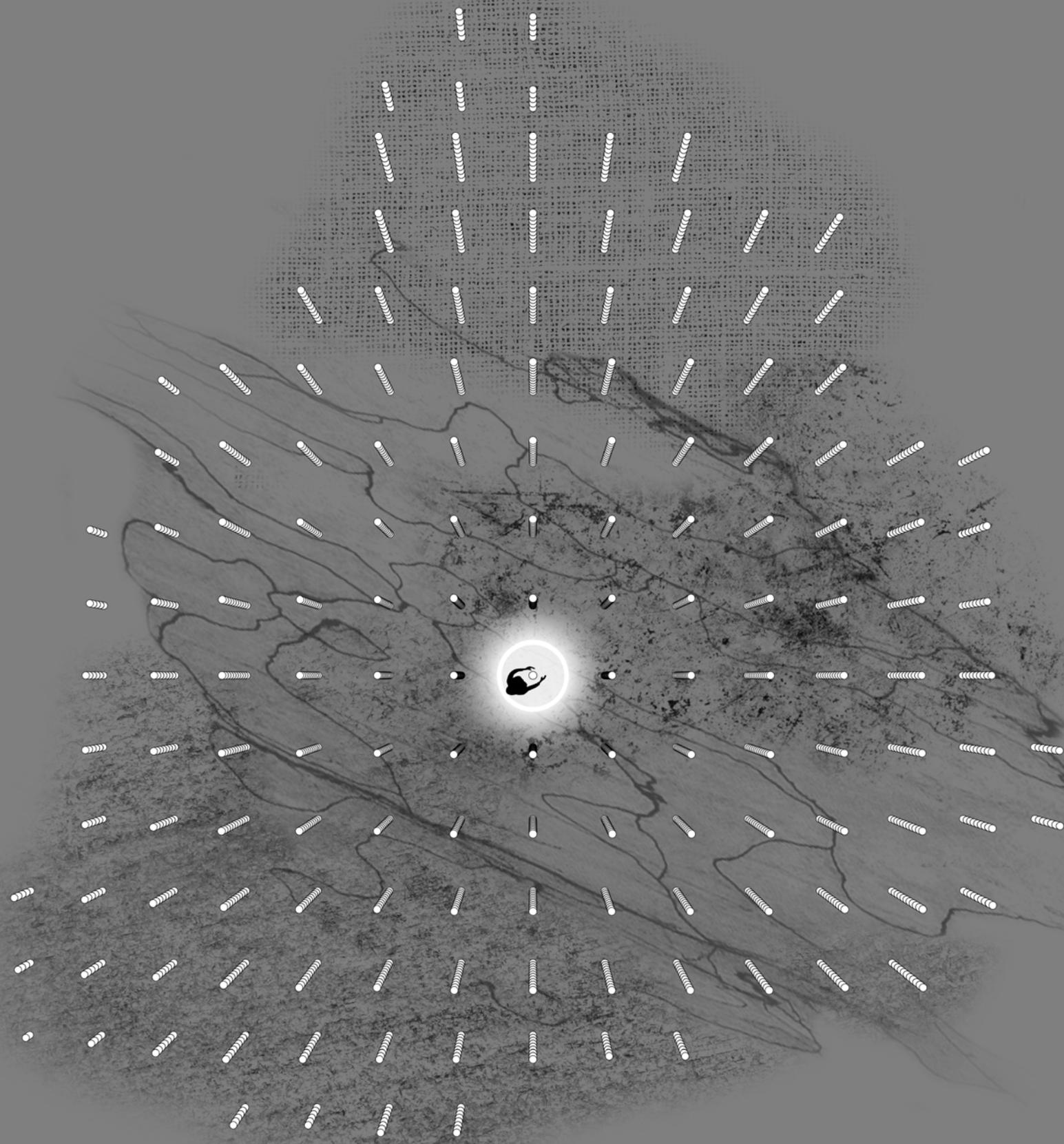
Visual Studies

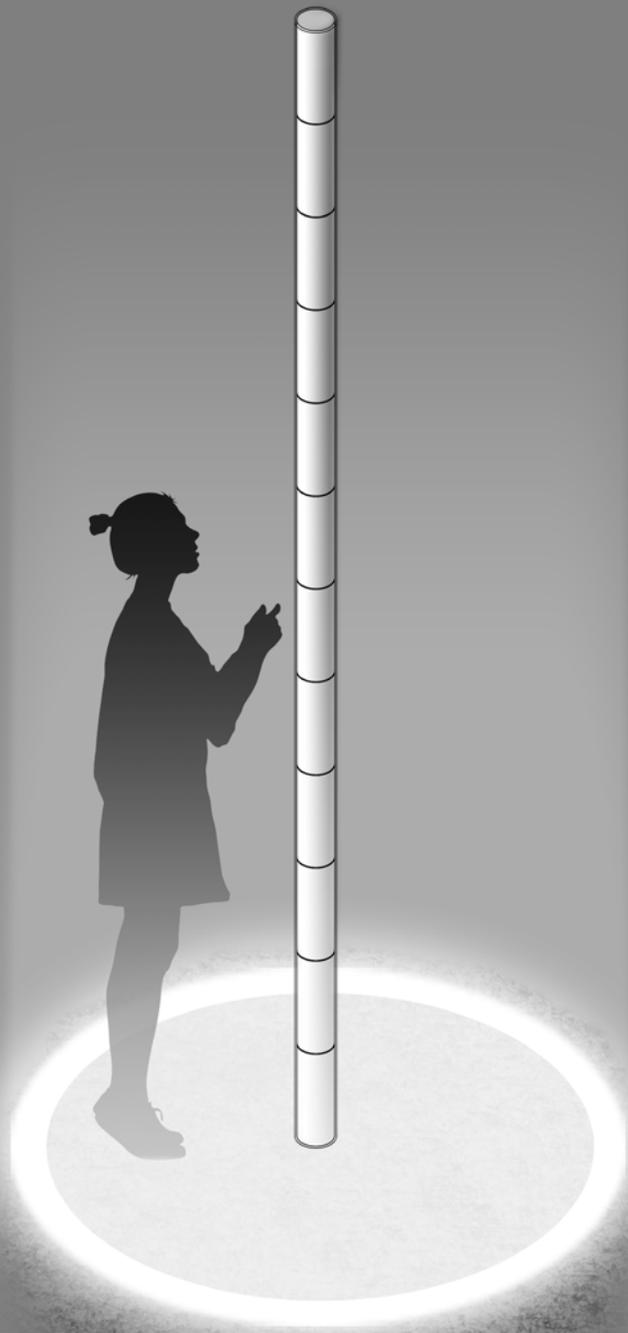


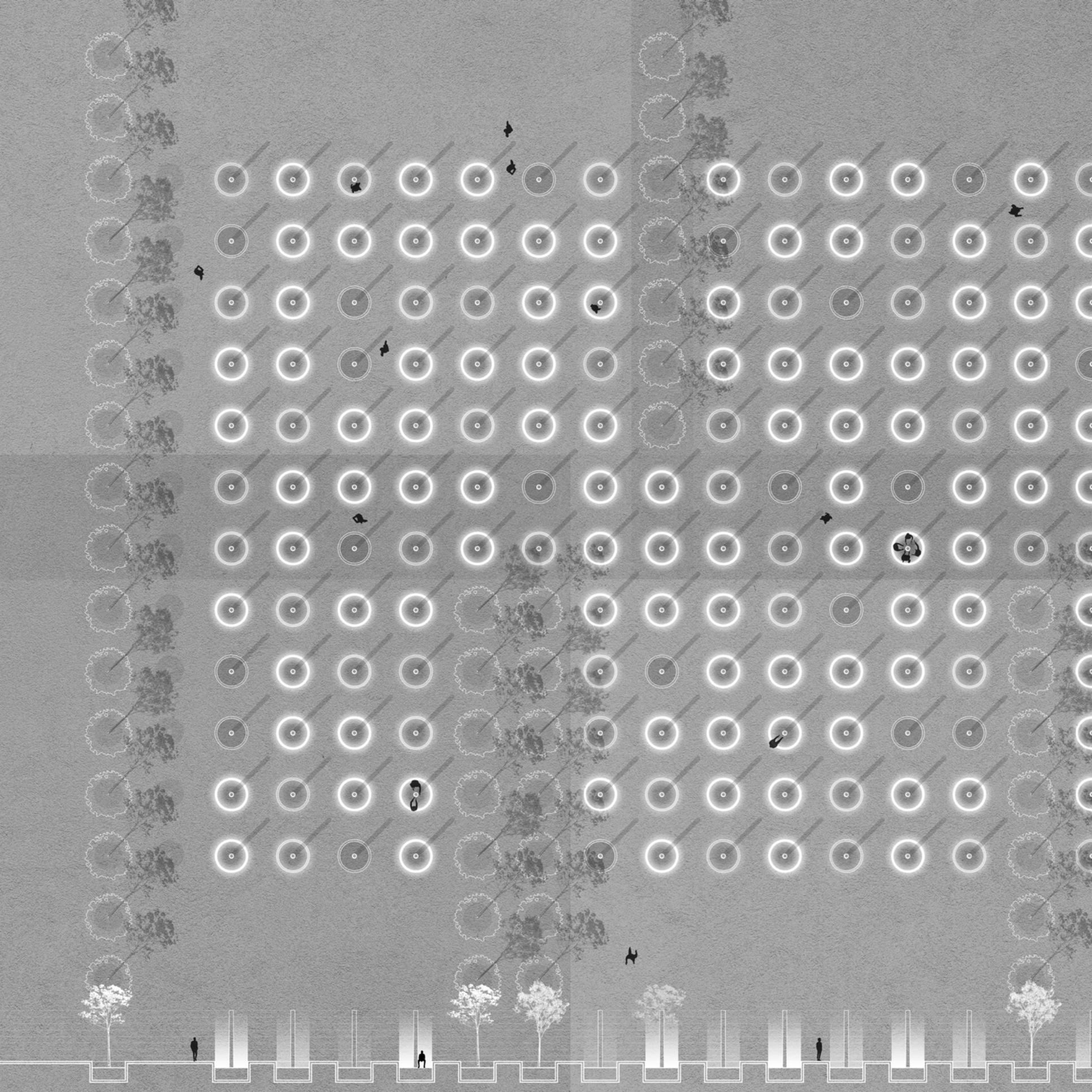
urban cemetery.

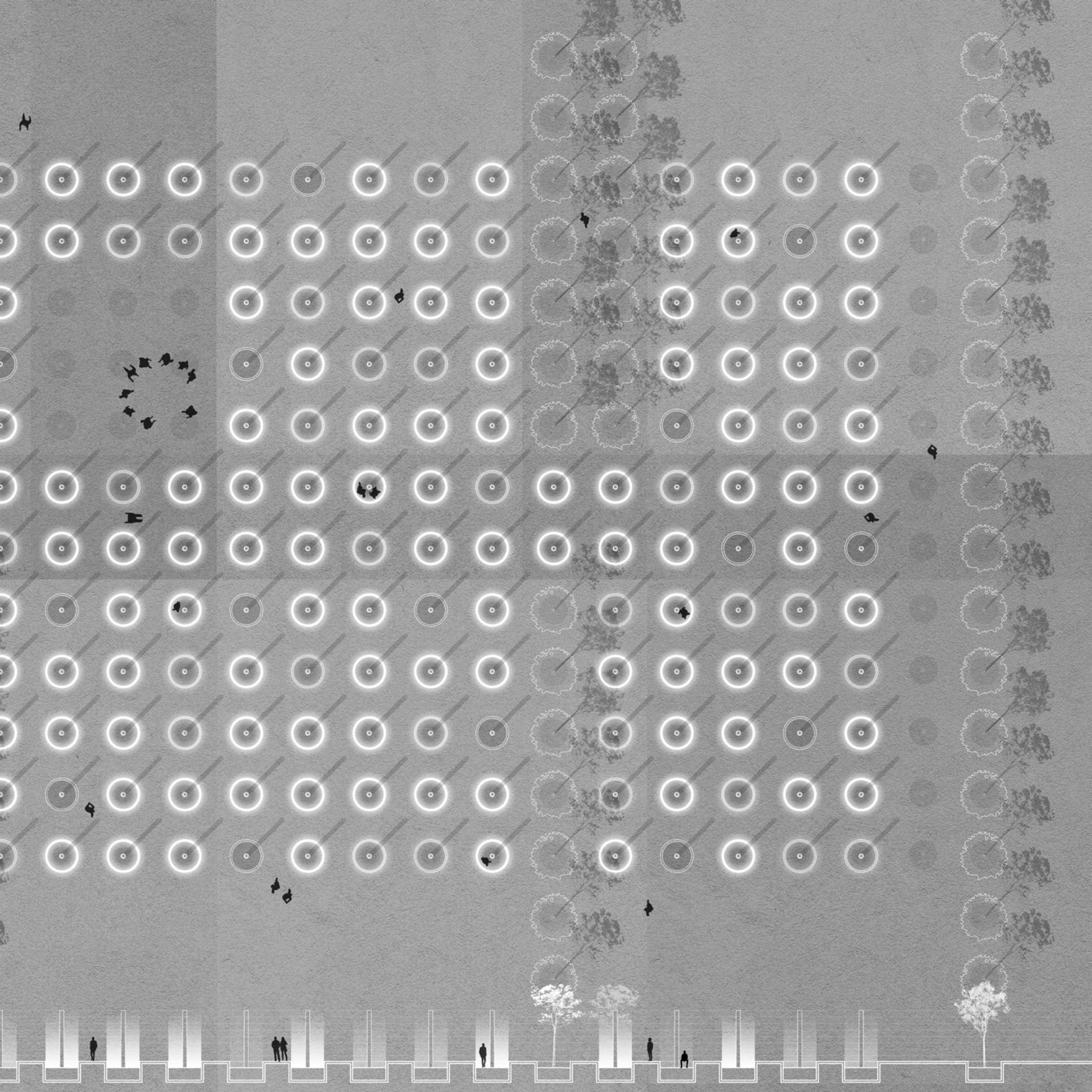
Cities are running out of public cemetery space due to overpopulation and overcrowding. This project offers a meeting ground where the living are invited to spiritually interact with the dead. A new form of 21st century cemetery co-exists with a layer of public park below. Through anaerobic bioconversion, the deceased mass is converted into energy, encircling one in a halo of light. The aggregated corona provides both intimate and collective settings for personal remembrance and communal engagement.

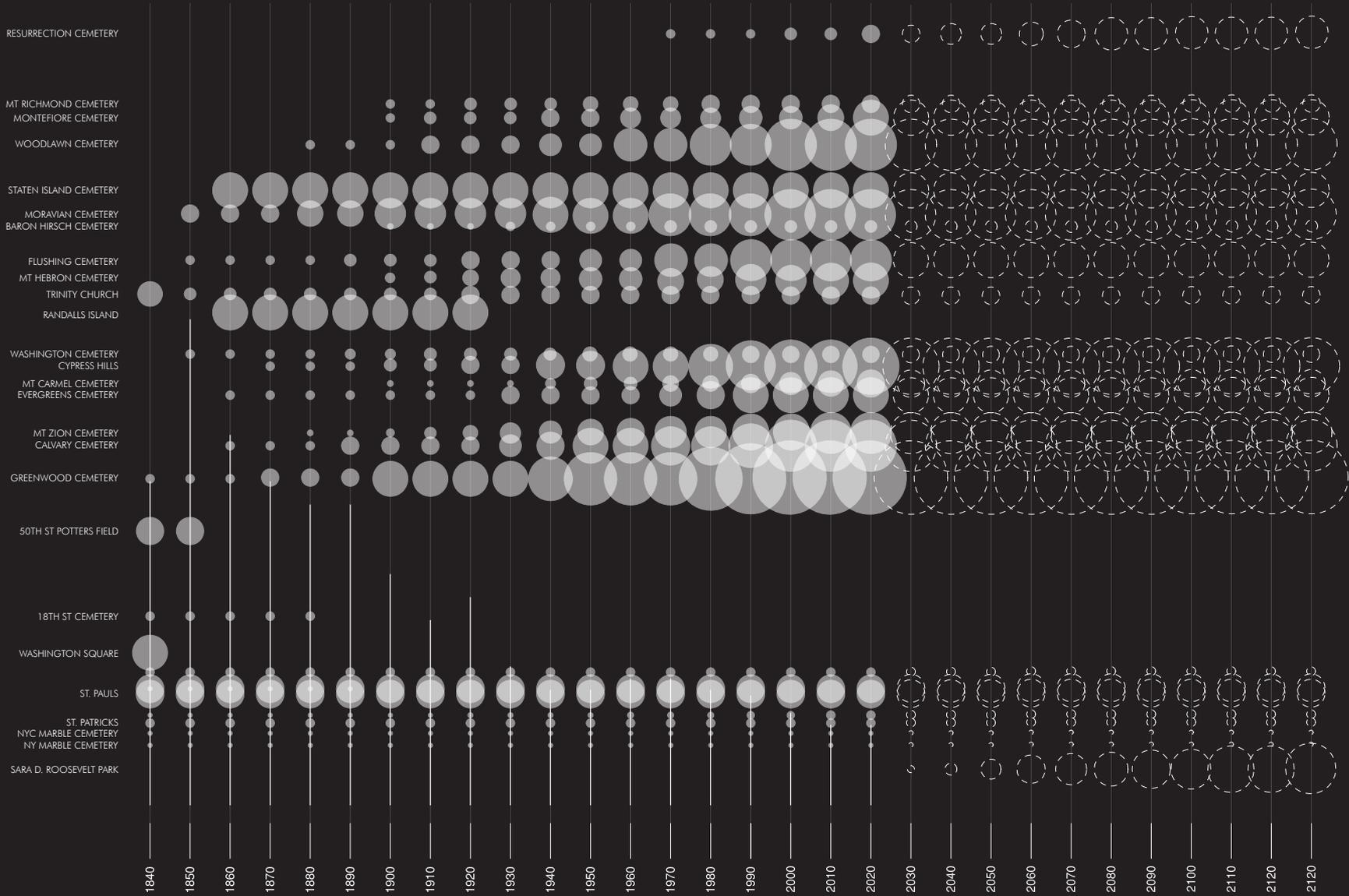


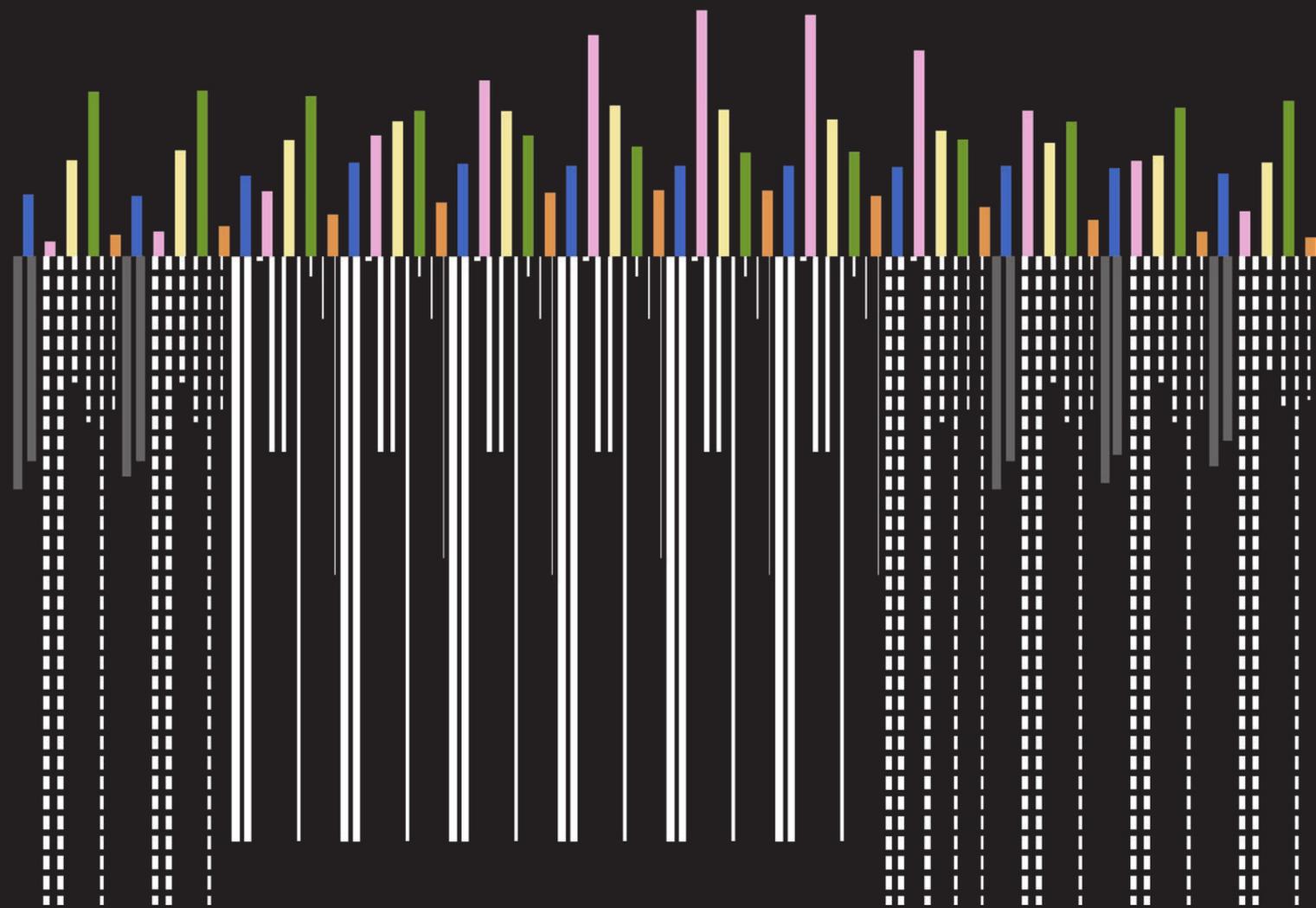


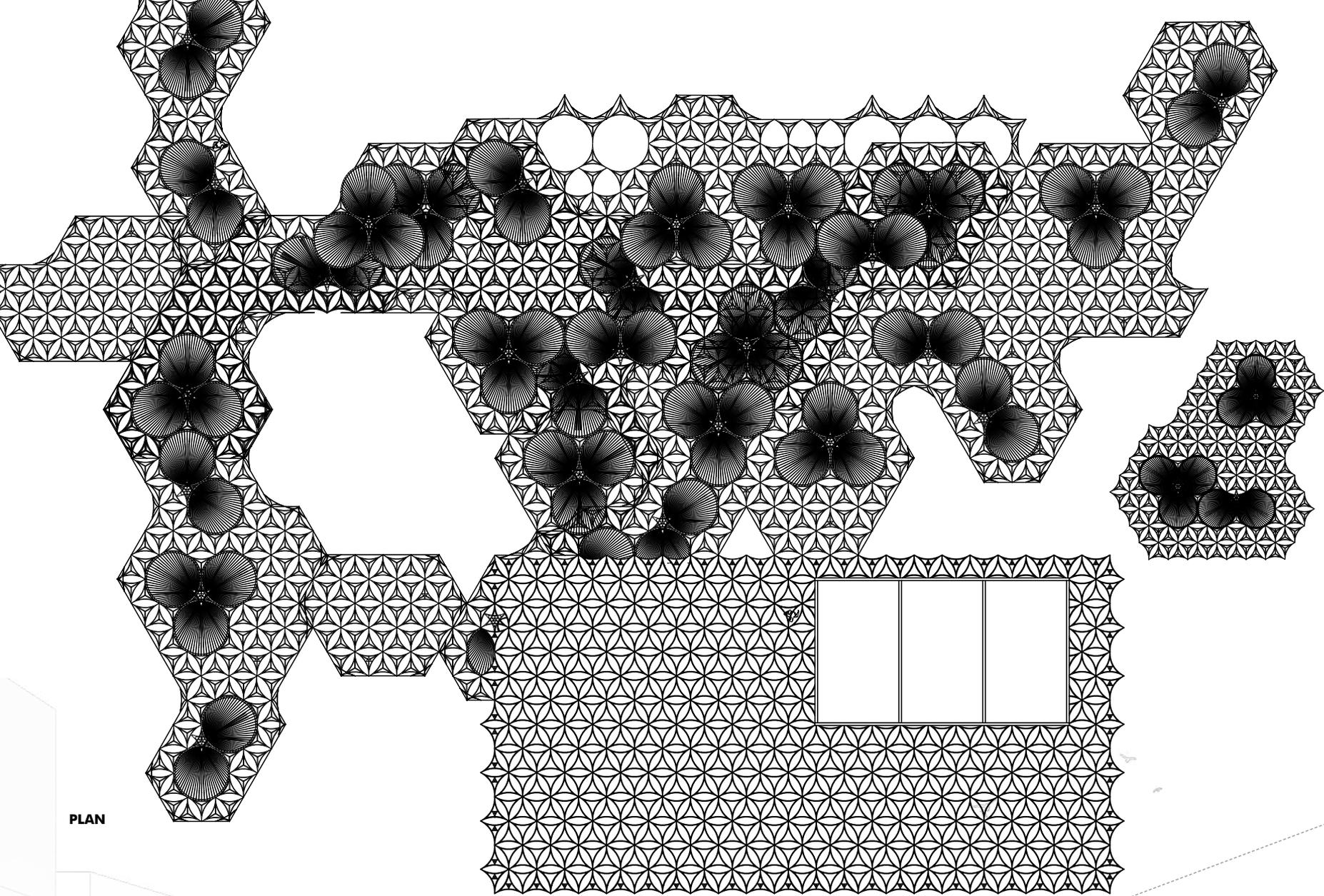




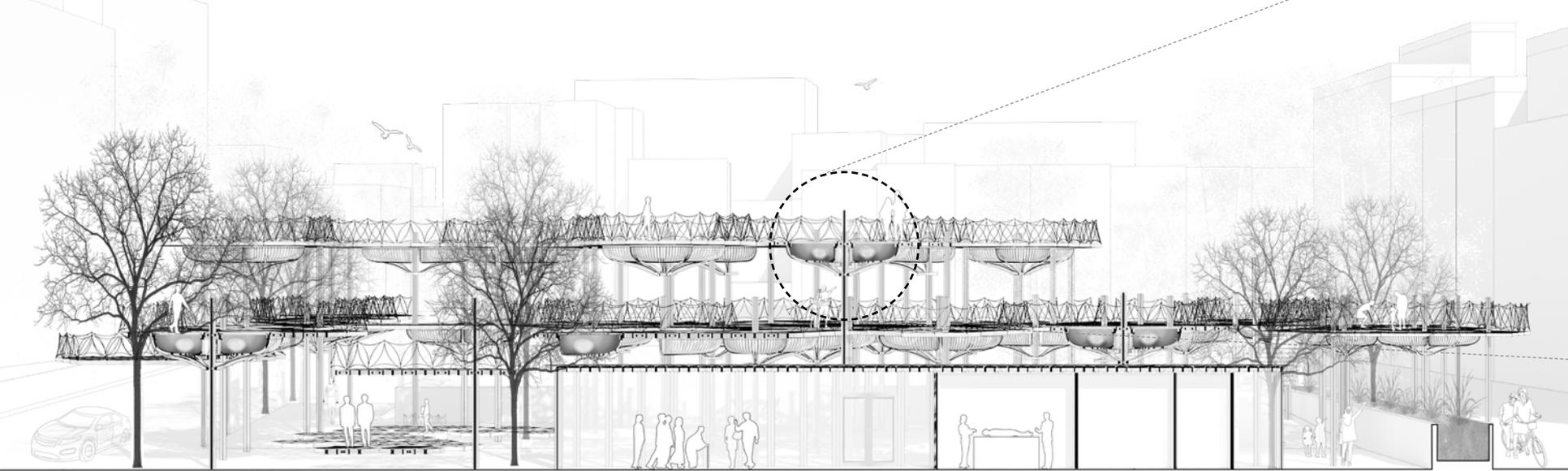




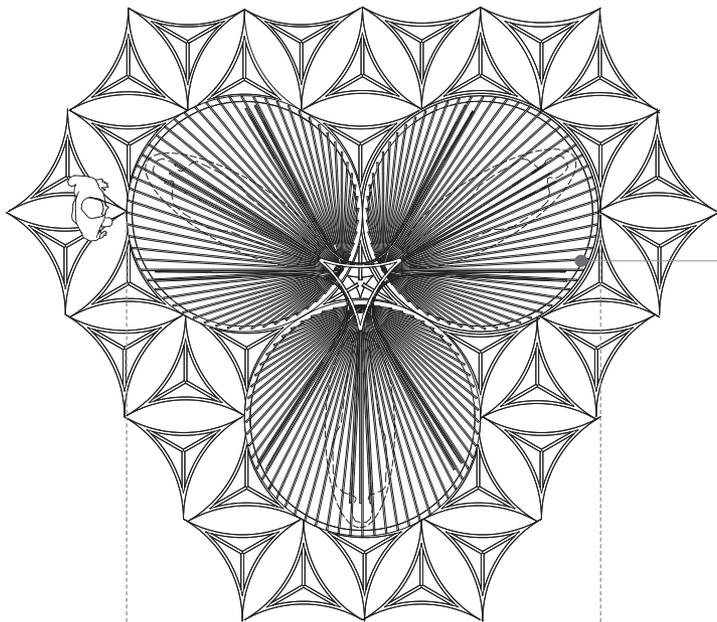




PLAN



SECTION

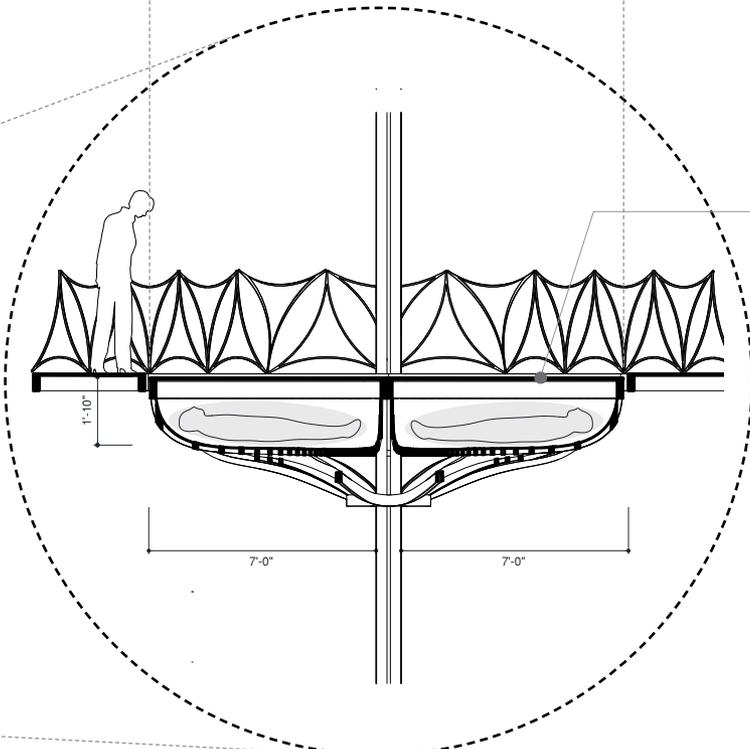
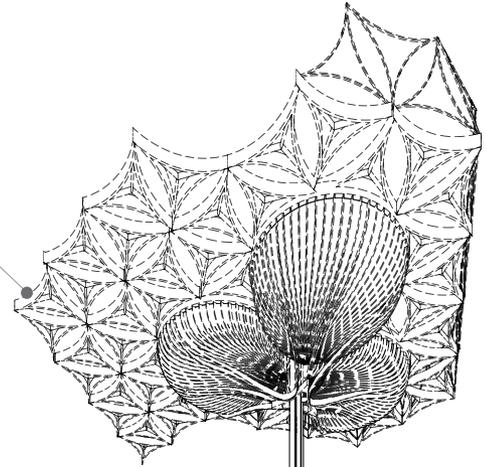


DETAIL PLAN

FUTURE EXTENSION

MICROBIAL FUEL CELL

Converts biomass from vessel into electrical energy in the form of light



DETAIL SECTION

COVER

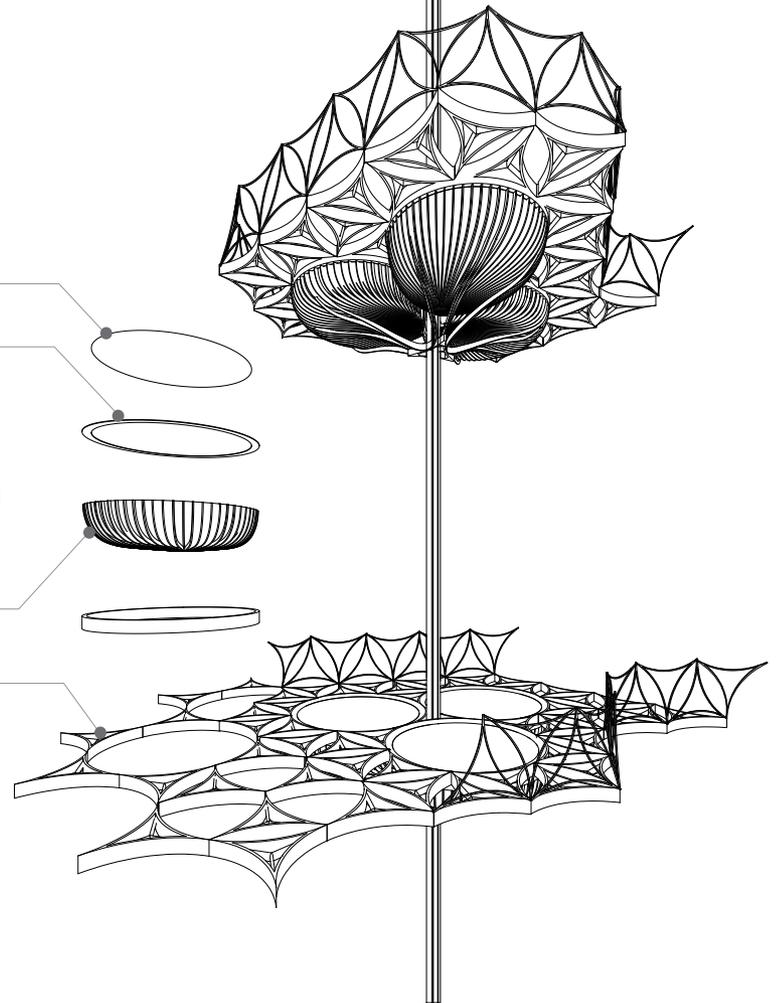
LIGHT HALO

VESSEL

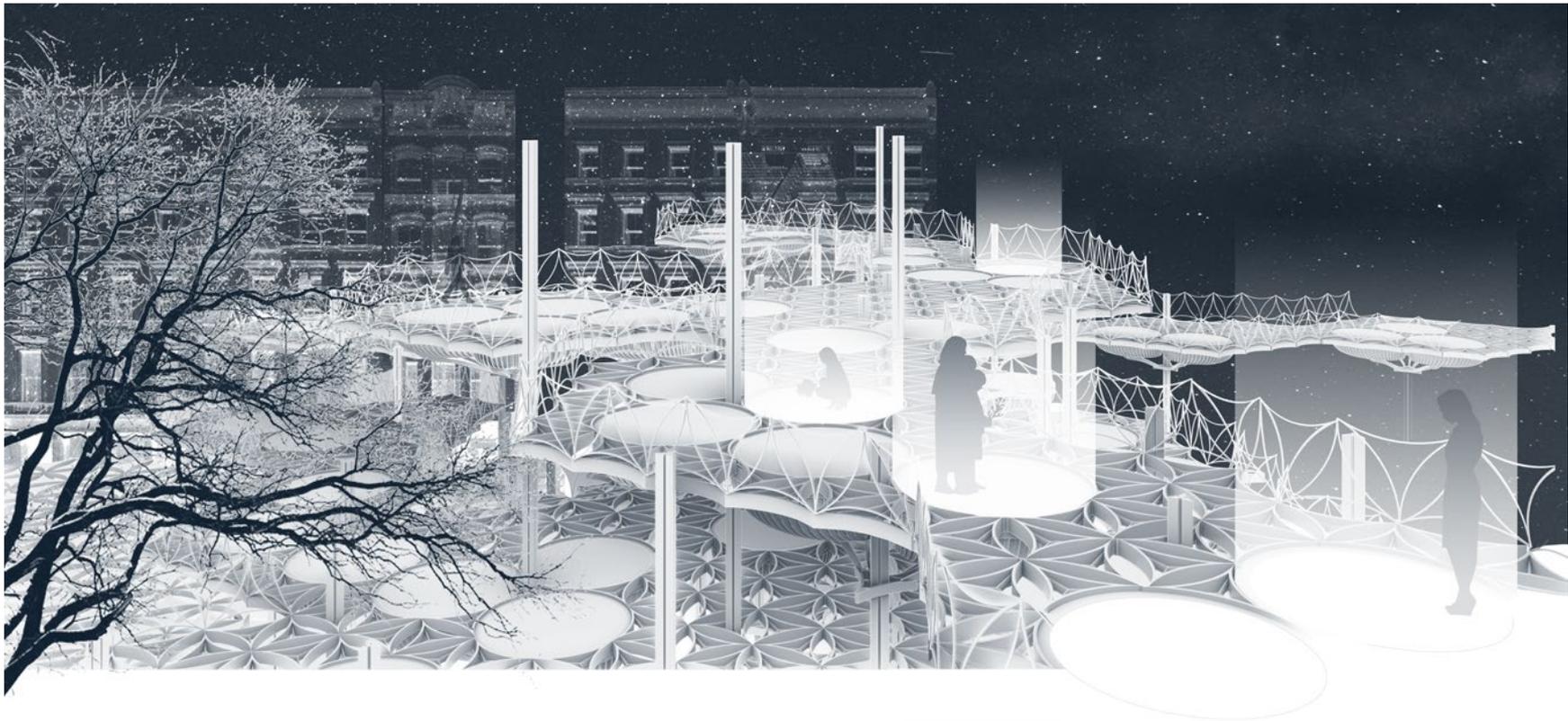
Corpse is wrapped in biodegradable fabric and placed inside the vessel. The vessel remains in the fuel cell for one year.

VESSEL

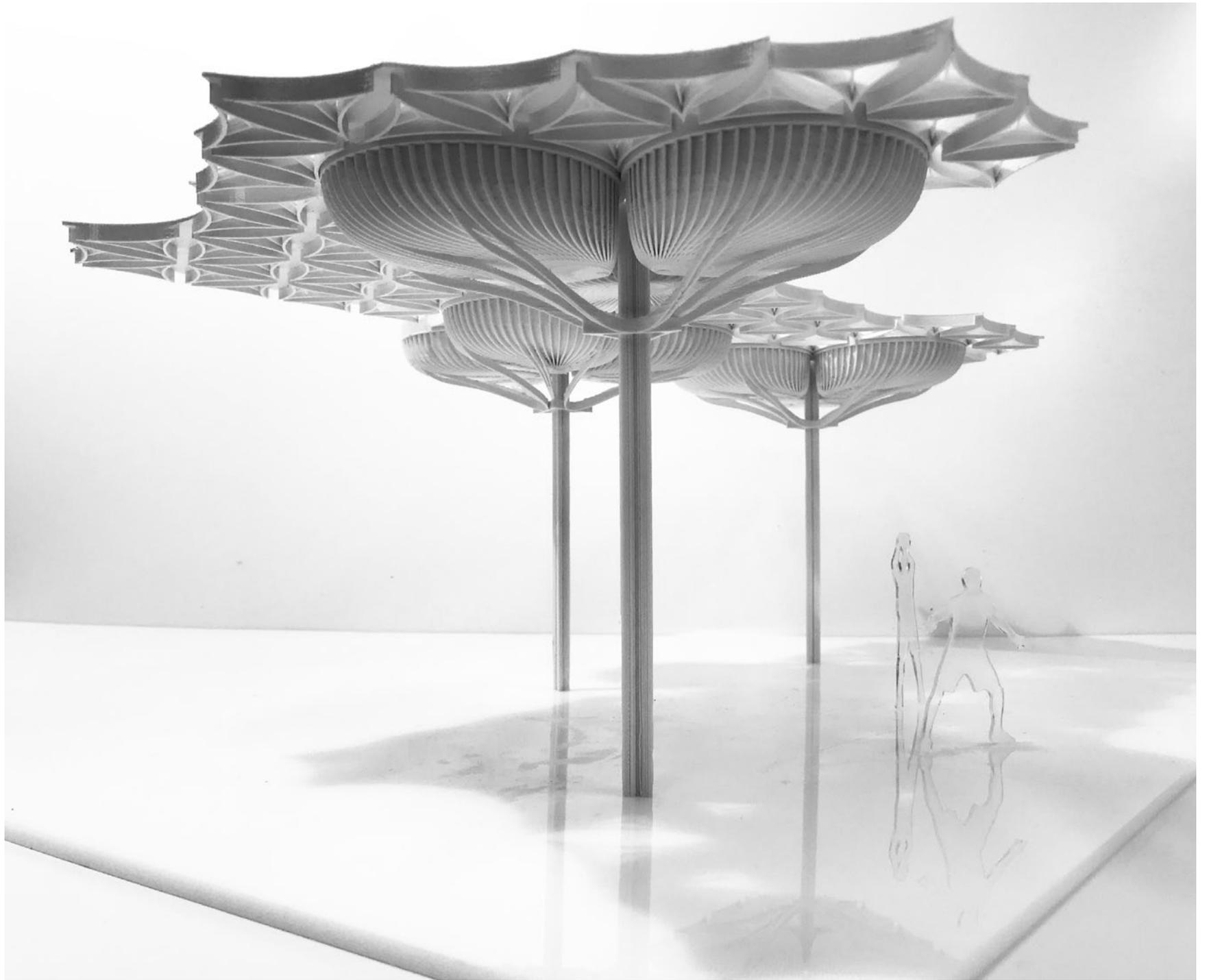
FUTURE VESSEL STRUCTURE



STRUCTURAL DIAGRAM

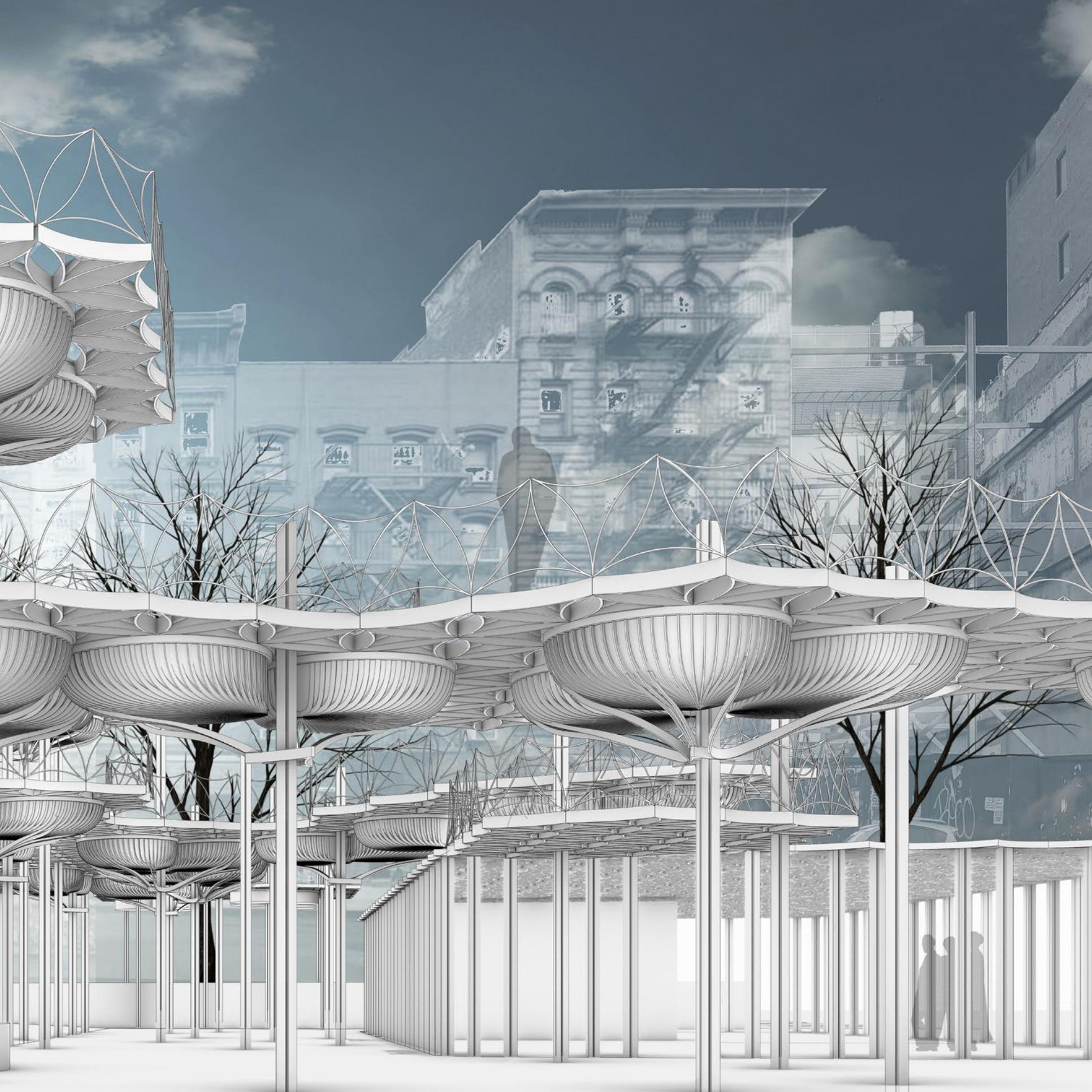






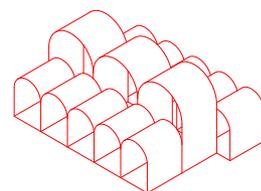
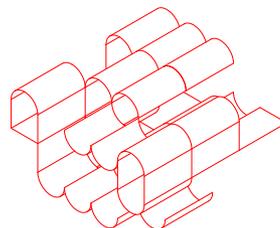
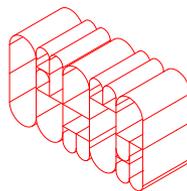
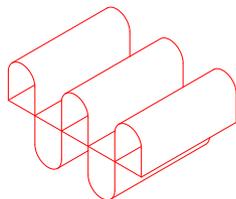
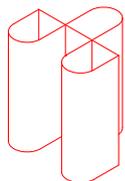
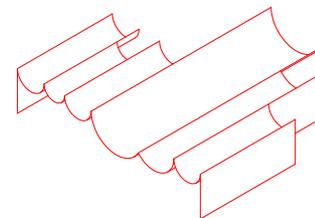
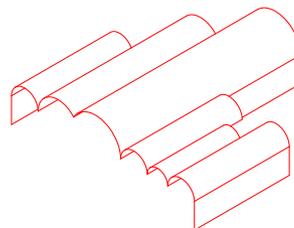
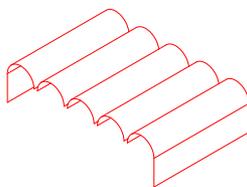
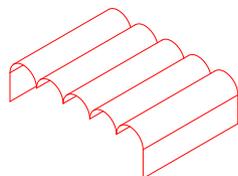
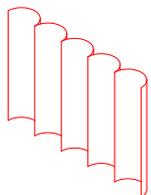
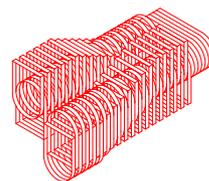
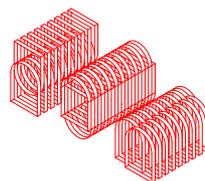
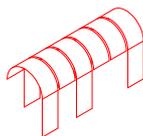
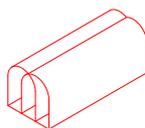
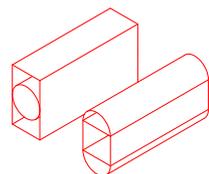
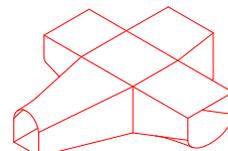
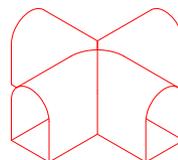
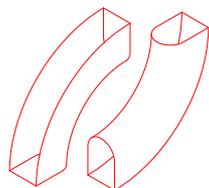
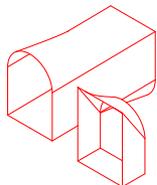
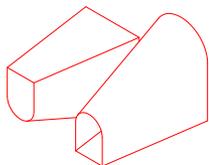
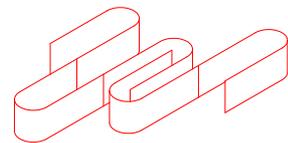
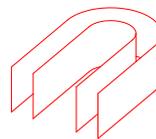
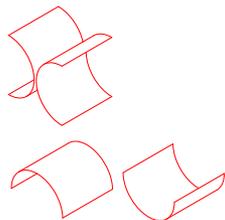
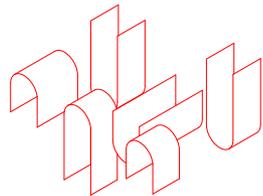
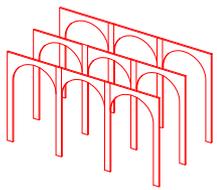




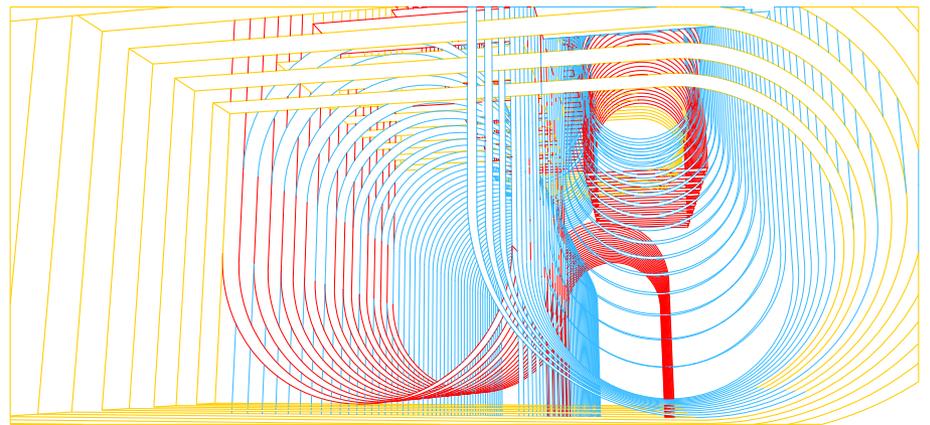
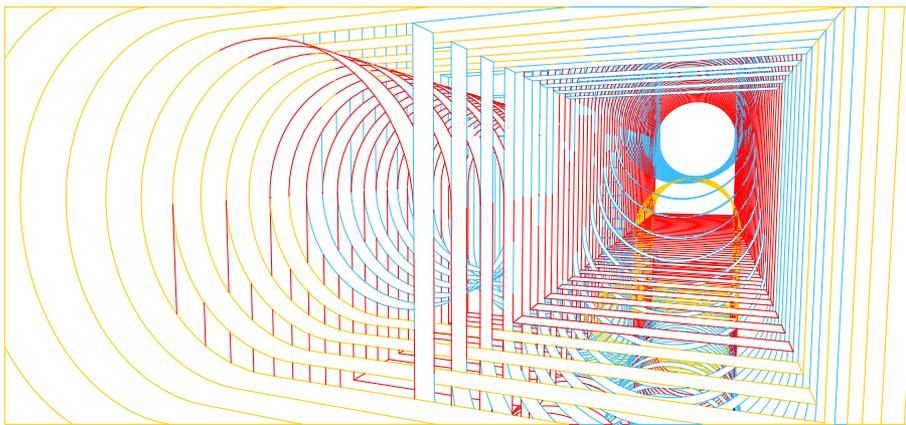
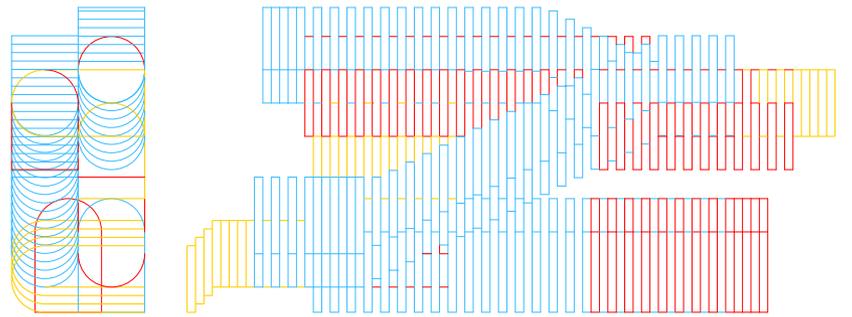
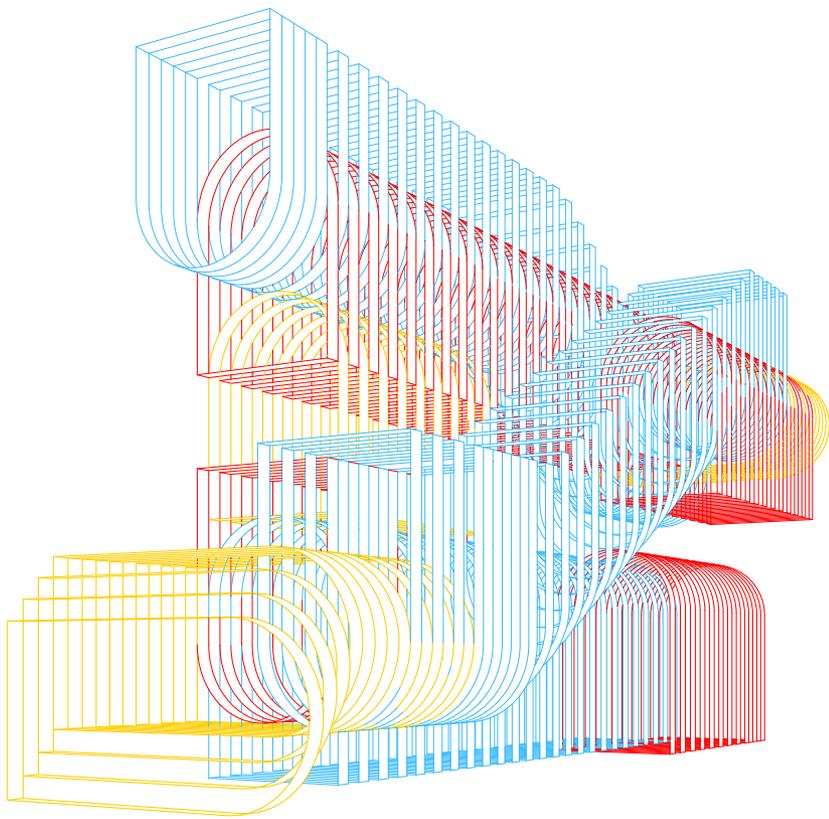


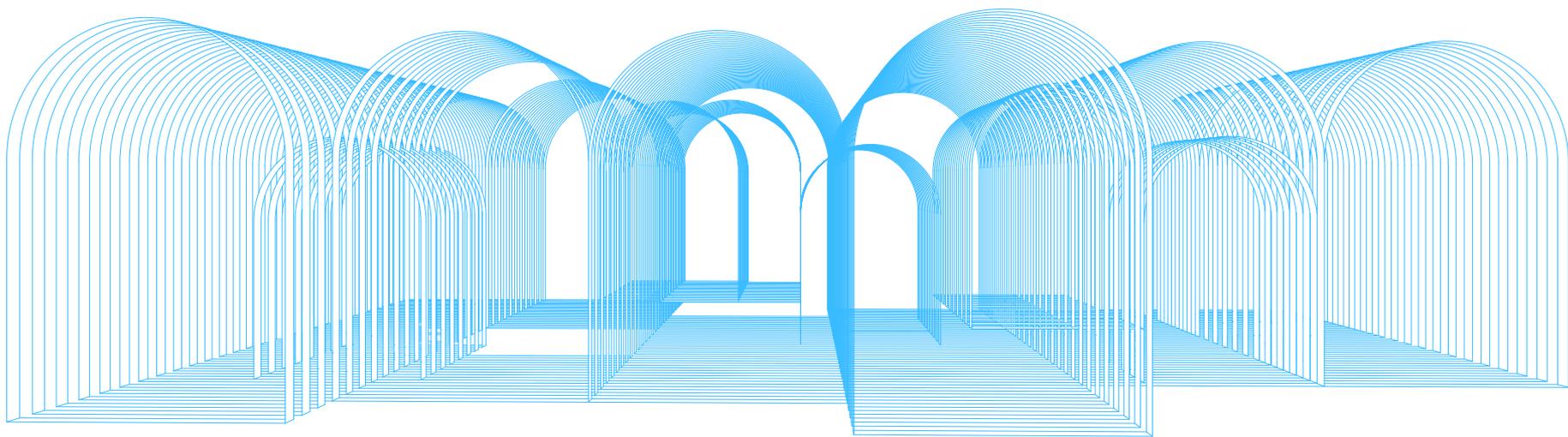
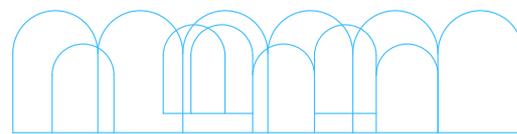
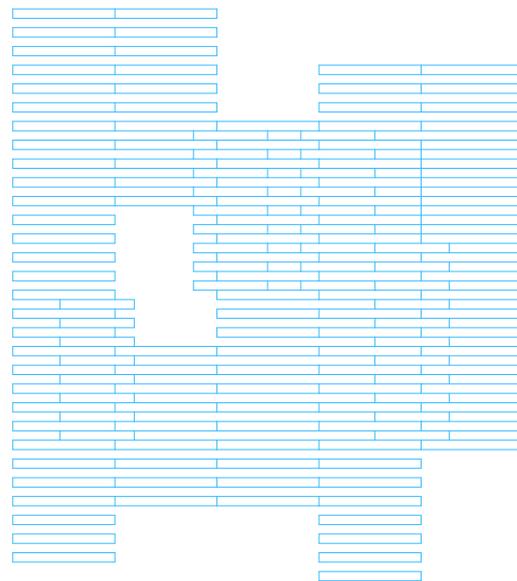
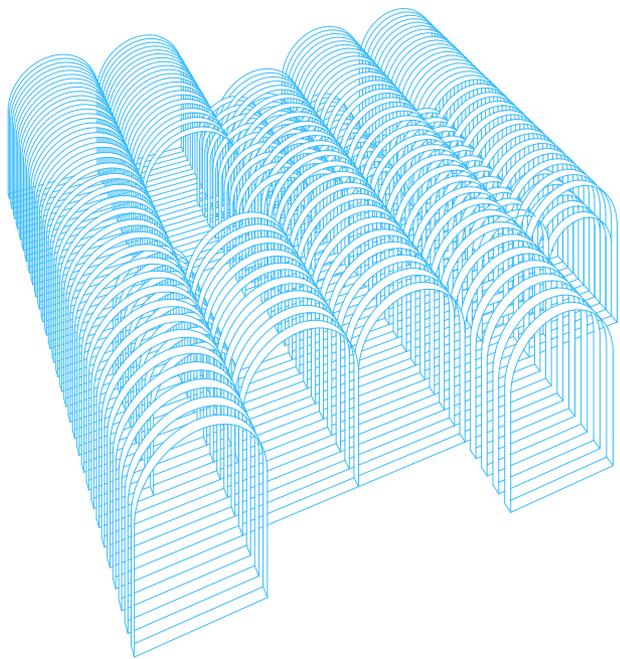
tactile learning.

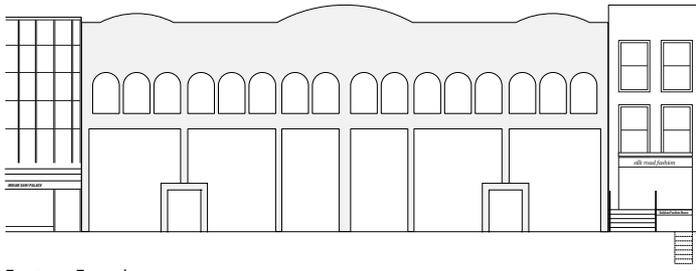
Jackson Heights is a neighborhood distinguished by diverse cultures. The site is located on a street called “Little India,” known for the abundance of sari and jewelry shops. Although central Jackson Heights is well-preserved as a Historic District, adjacent areas of the neighborhood is undergoing rapid gentrification. High-rise hotels, mixed-use developments and large-scale retail stores (e.g. Target) are threatening local businesses and driving up rent prices. Although outside the bounds of the Historic District, this project is an adaptive reuse proposal that preserves and celebrates existing architectural elements of the original facade, such as its arched windows. To support existing local textile shops and reintroduce the handweaving culture to future generations, this project merges the program of a daycare with a textile center.







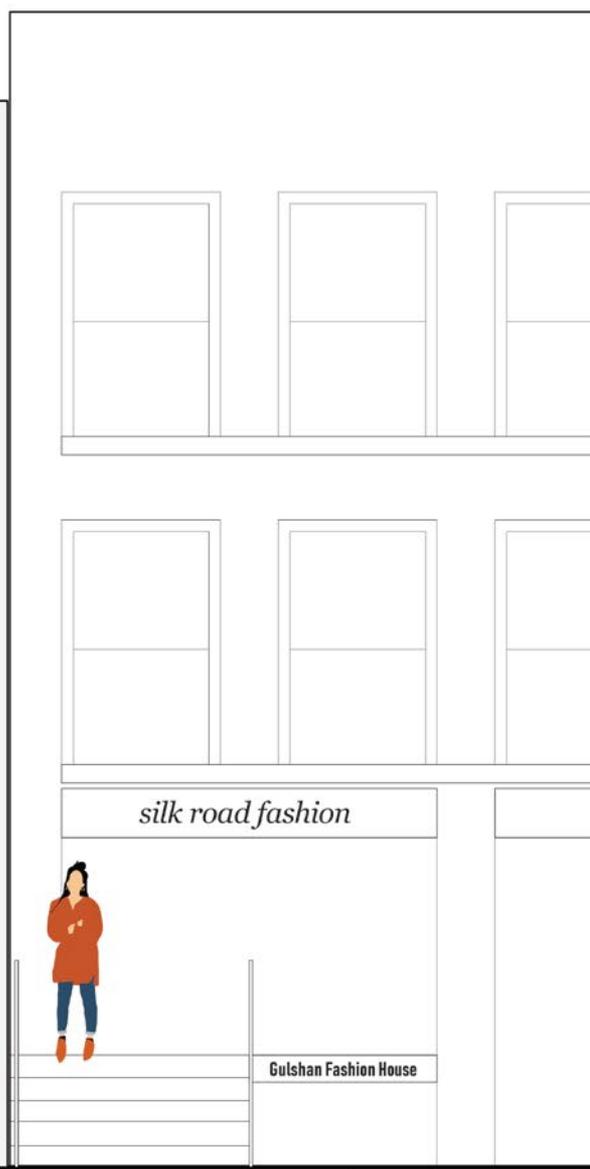
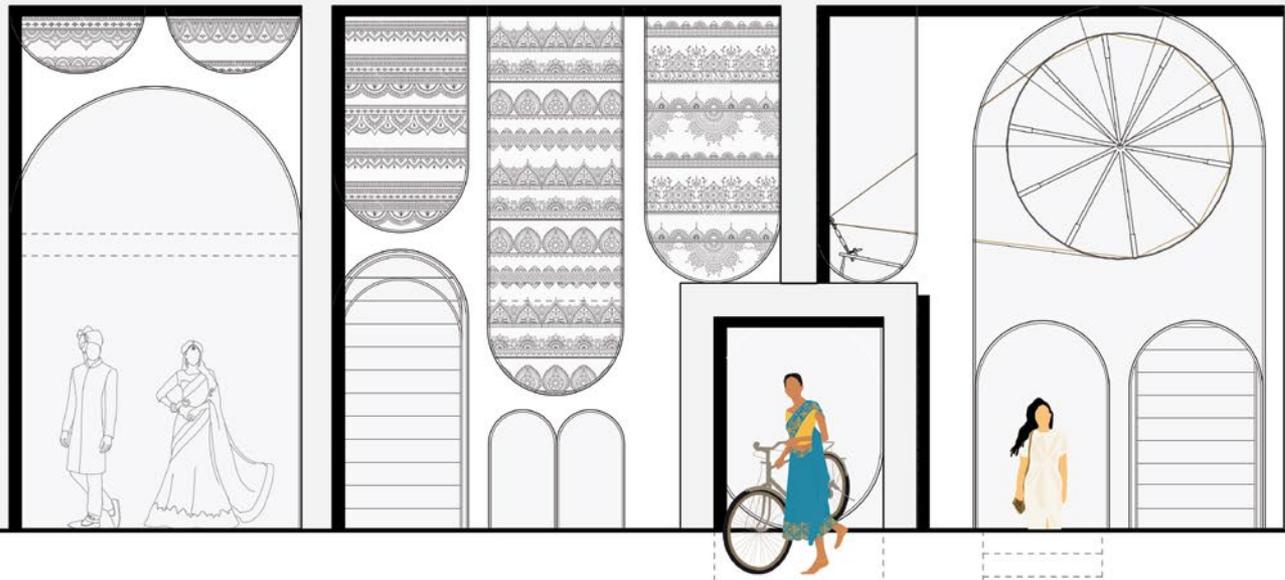
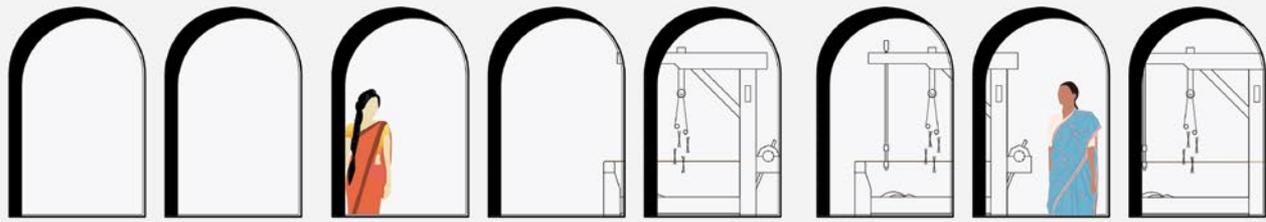


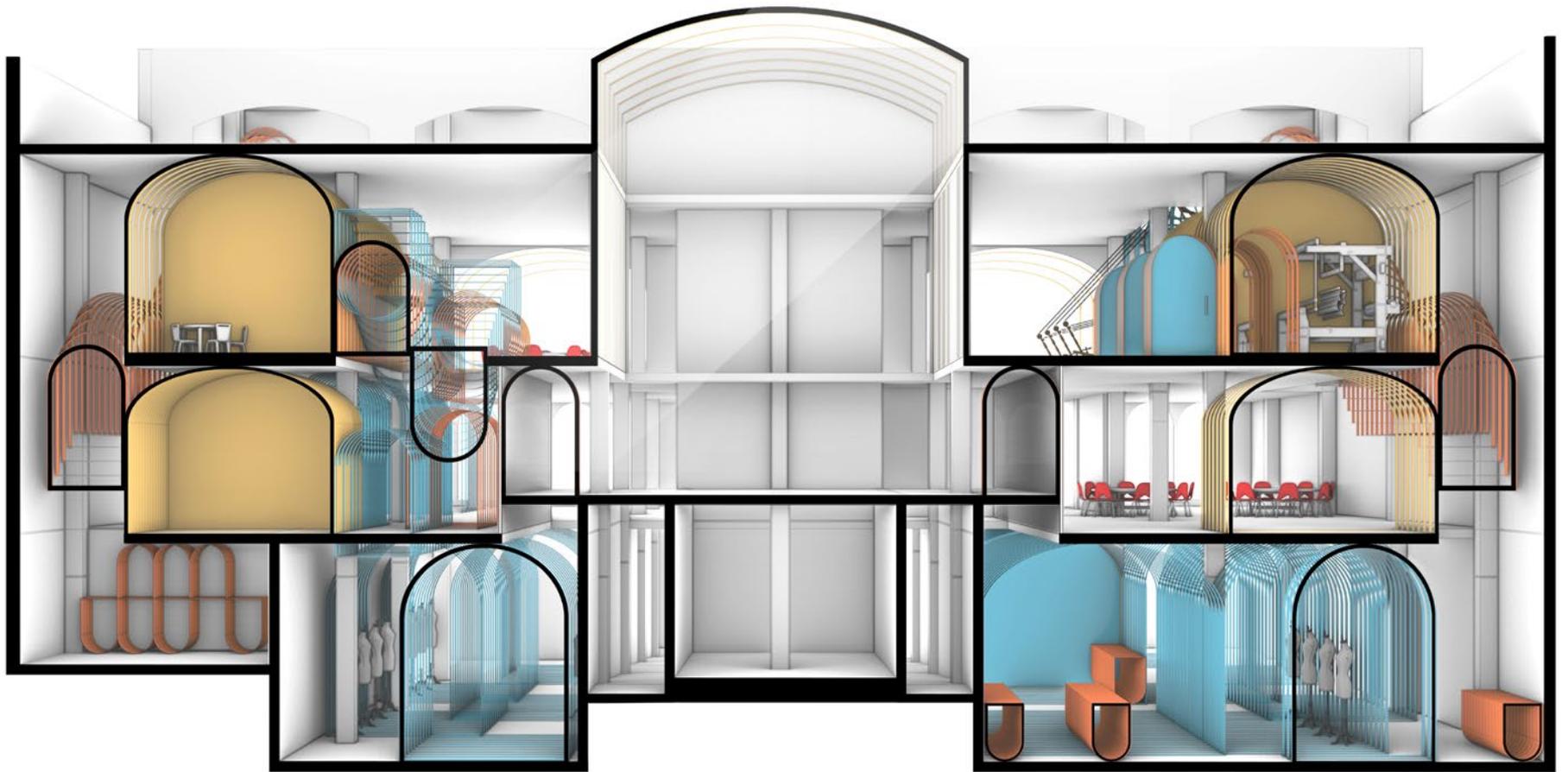


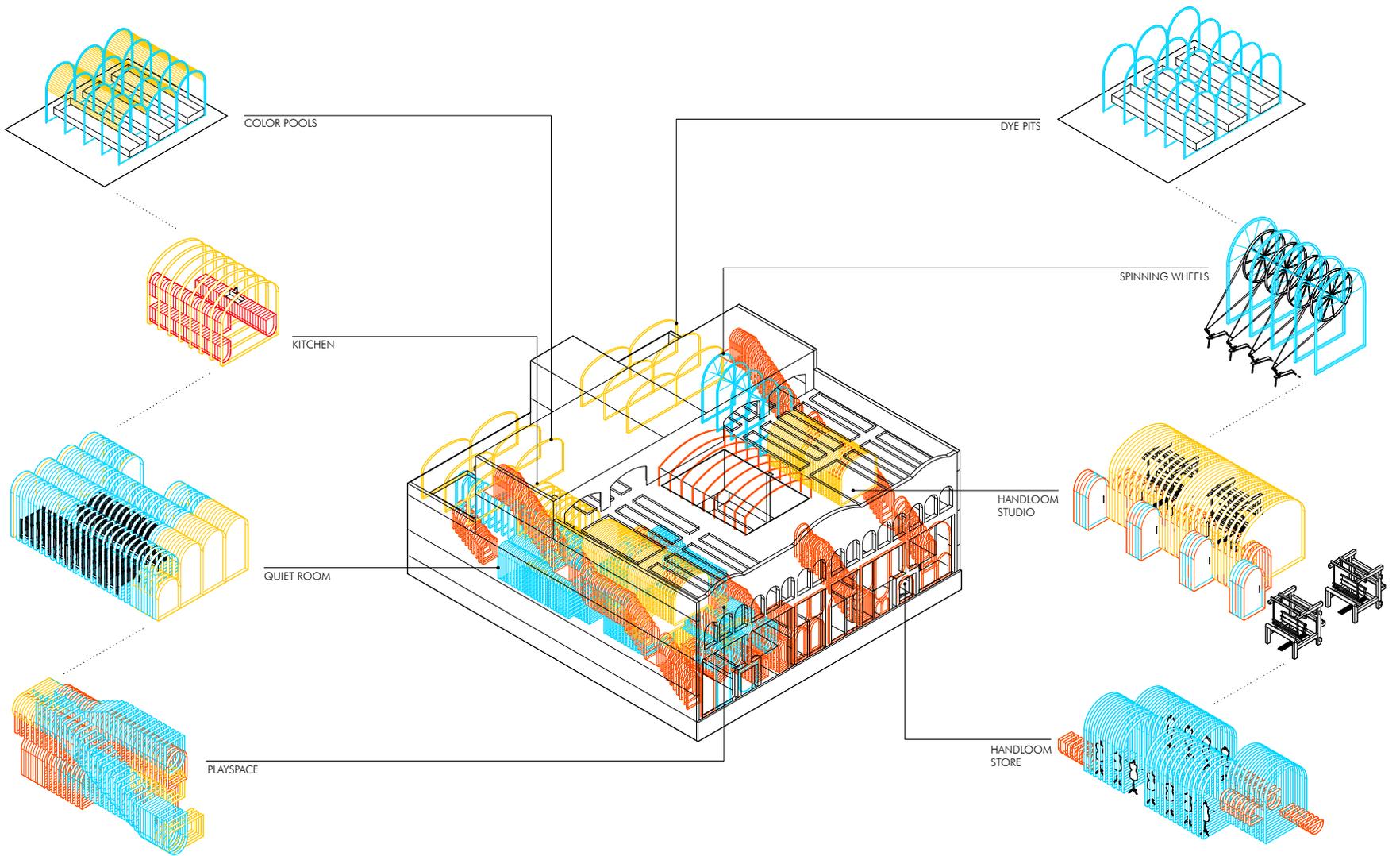
Existing Facade

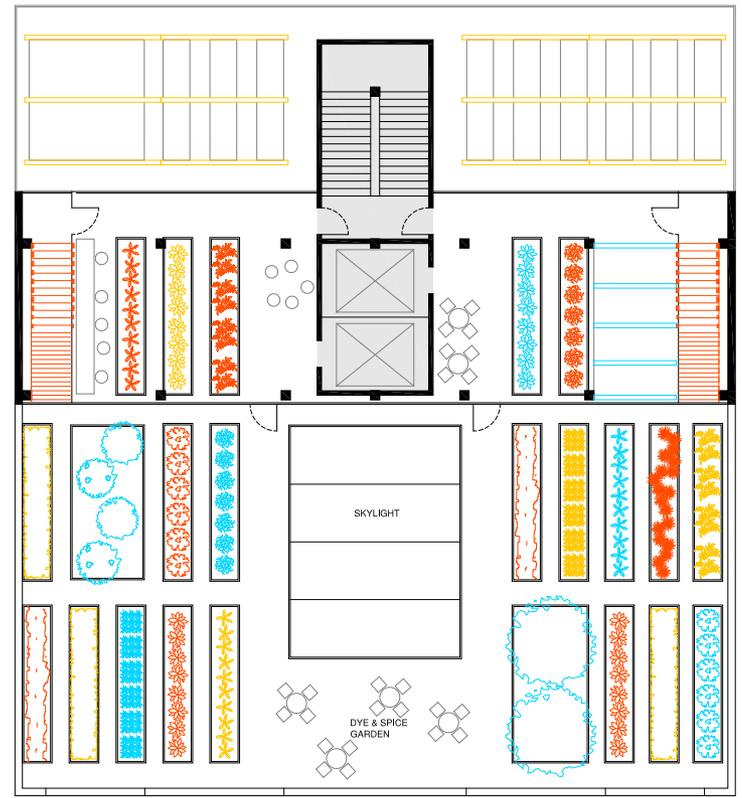
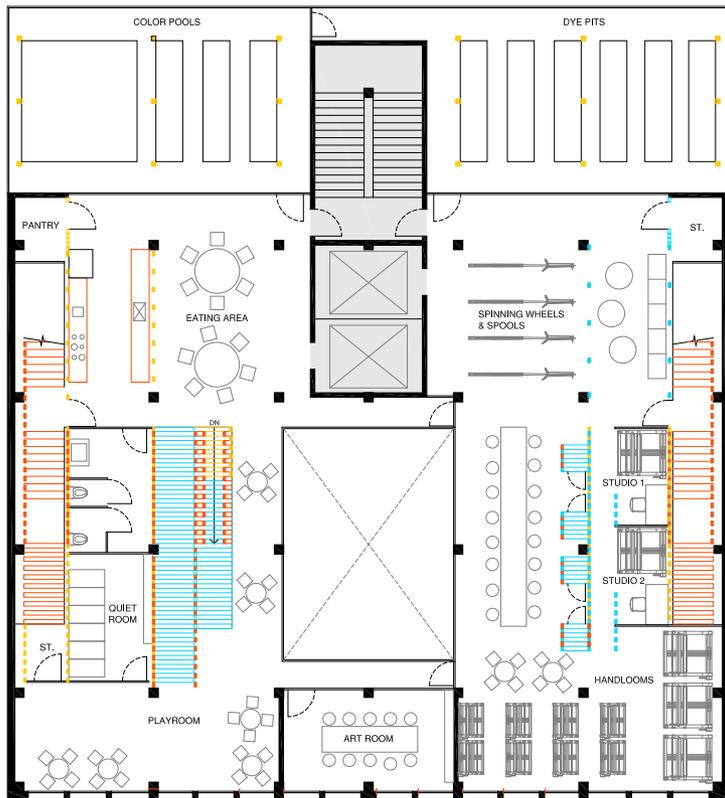
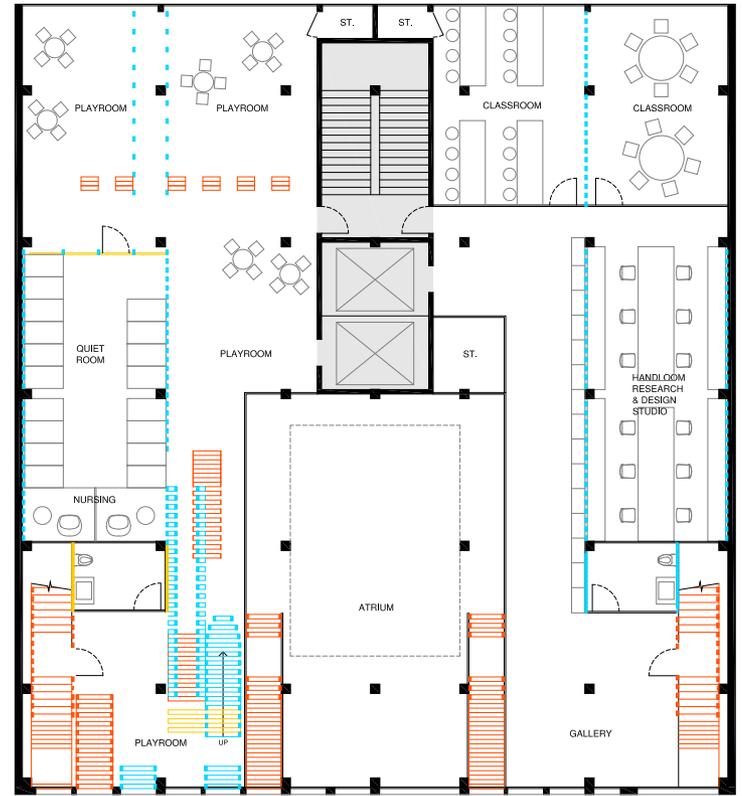
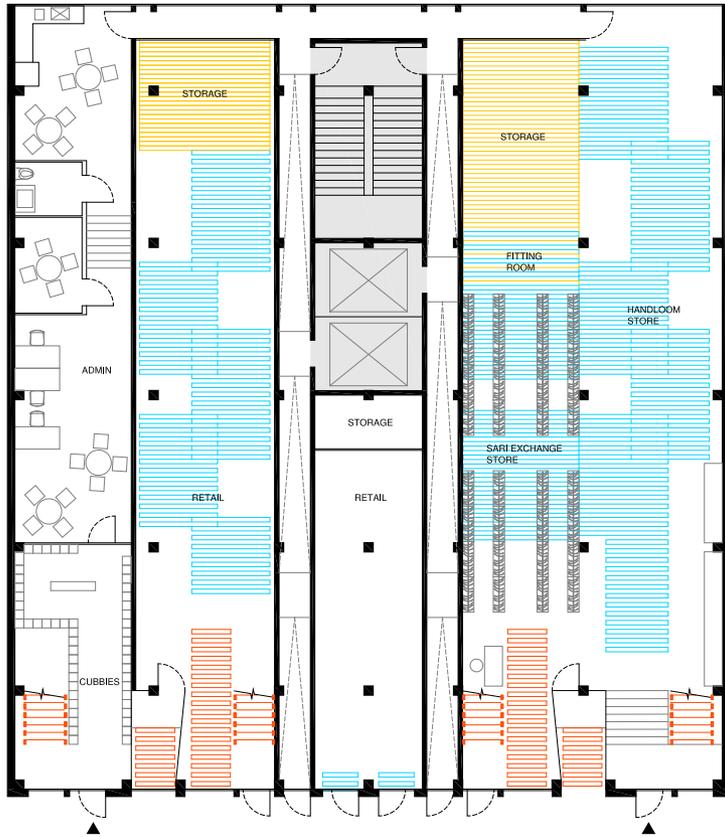


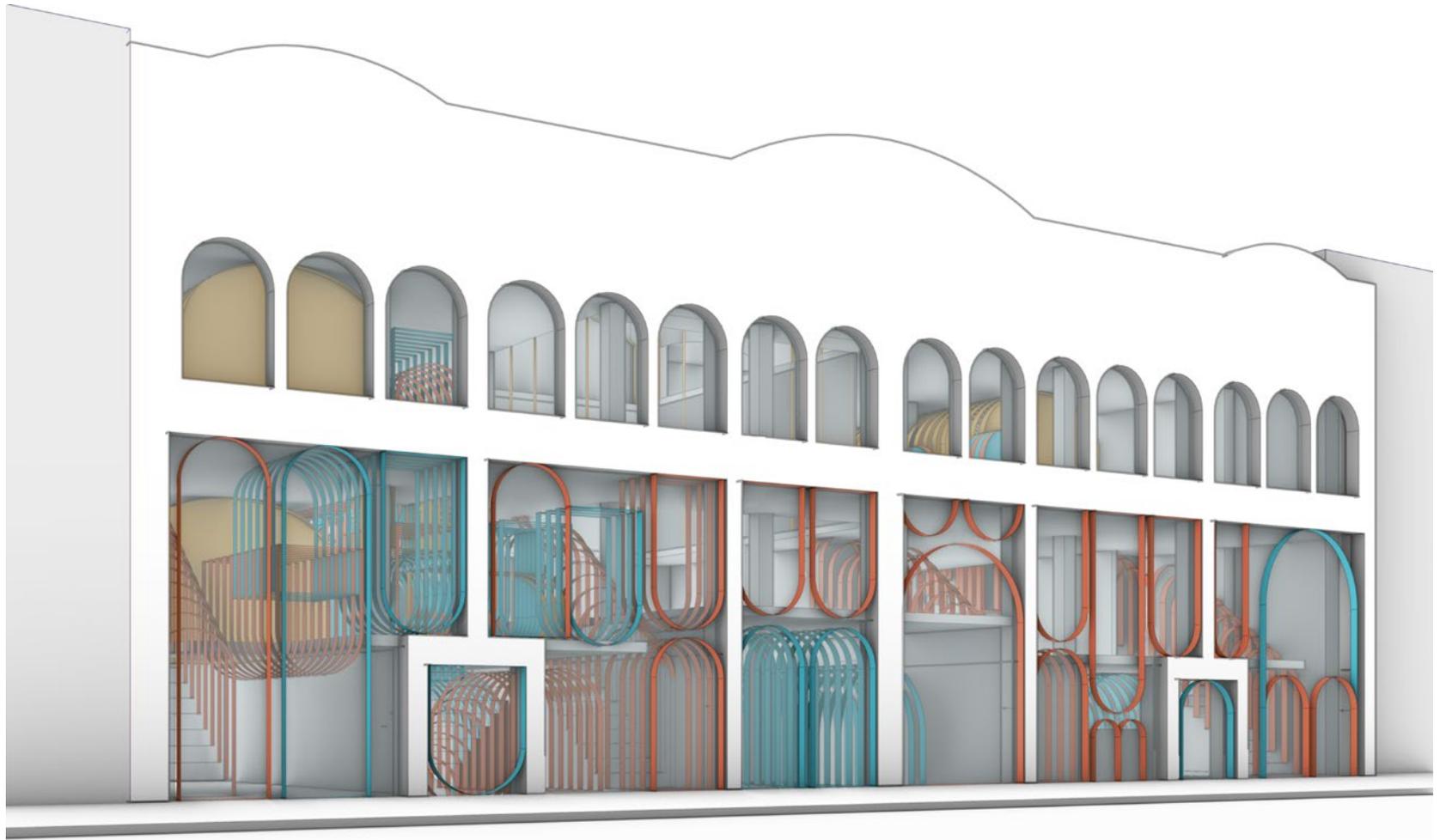
Proposed Facade

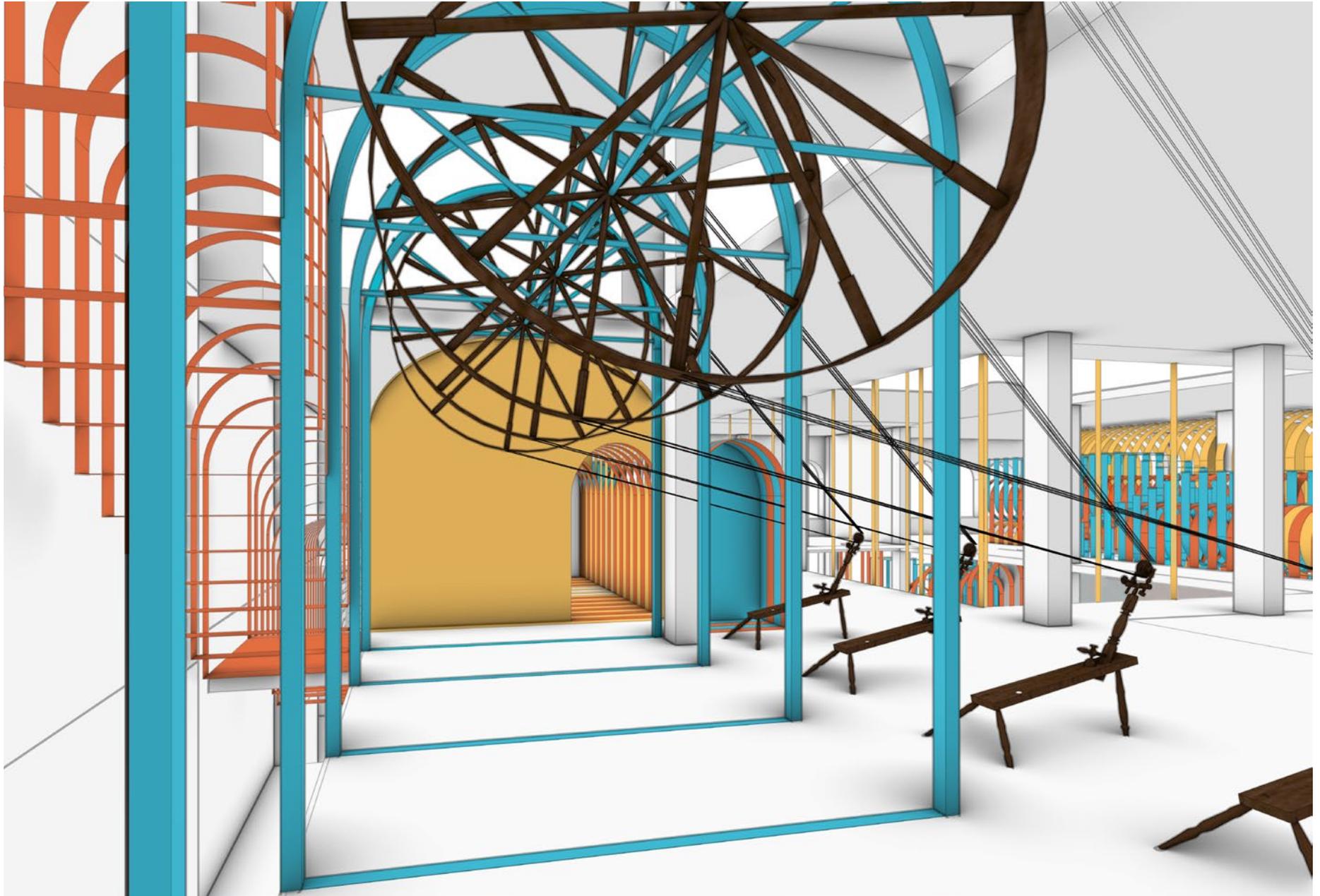


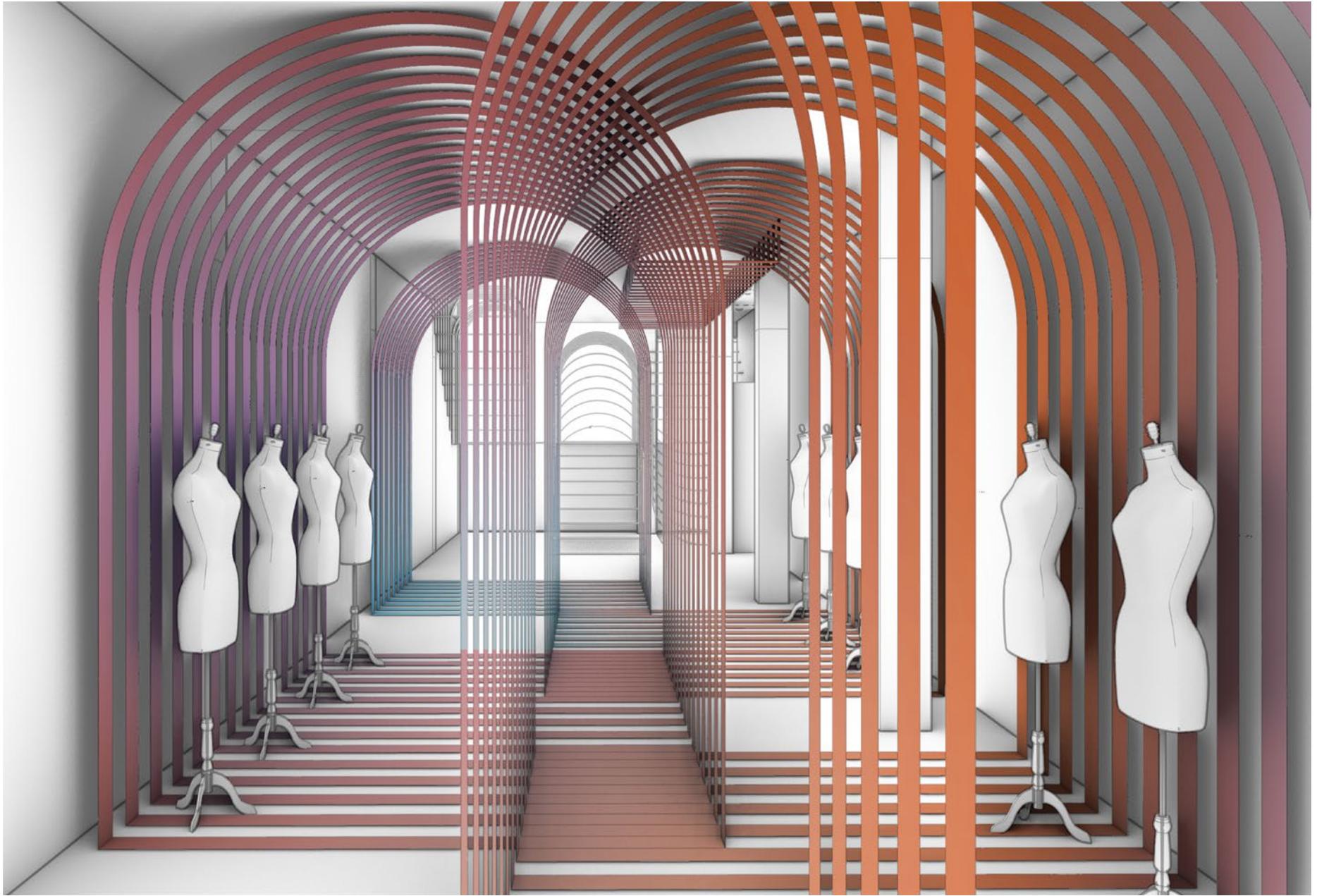












agroCity.

This project is a proposal for an urban hybrid that questions the environmental, technological, economic and cultural ideologies of the Los Pinos district in Havana, Cuba.

Organiponicos, which refer to organic urban agriculture, arose in Cuba after the crash of the Soviet Union in 1991, as a response to a lack of food security. One of the largest and most successful examples of organoponicos is Vivero Alamar, which operates as a cooperative of 150 members and 17 employees. The sense of belonging is central to Vivero Alamar, and the community is less vulnerable economically because they can adapt locally to the economic conditions. This also leads to improved social conditions for members

and their families. Vivero Alamar produces 300 tons of food / yr, which is sold to local restaurants or the local community.

Despite the proliferation of organoponicos, there are still some threats to Cuba's urban farming scene. Economists in Cuba argue that urban farms are "going back in time", and there is a stigma that agriculture is an industry of the elder generation. So there is a lack of young farmers to carry on the knowledge. Also, vast lands in Cuba with the ability to support sustainable farming are underutilized. 69% of rationed basic staples, such as rice and bread are still imported, and Cubans must await in long lines - sometimes for over an hour - to receive their food.



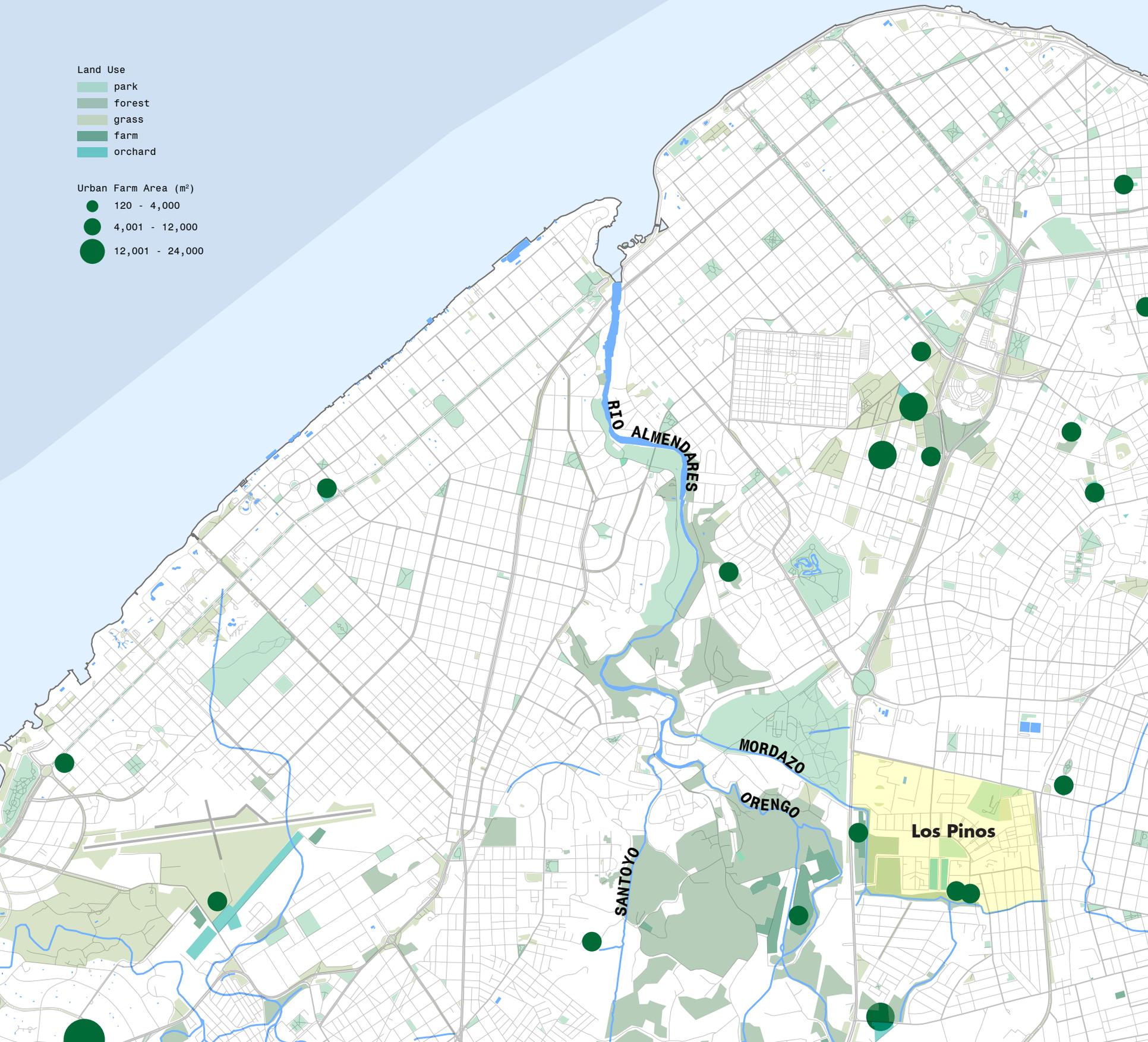
Los Pinos is situated adjacent to a tributary of the Almedares River, characterized by a string of organoponicos.

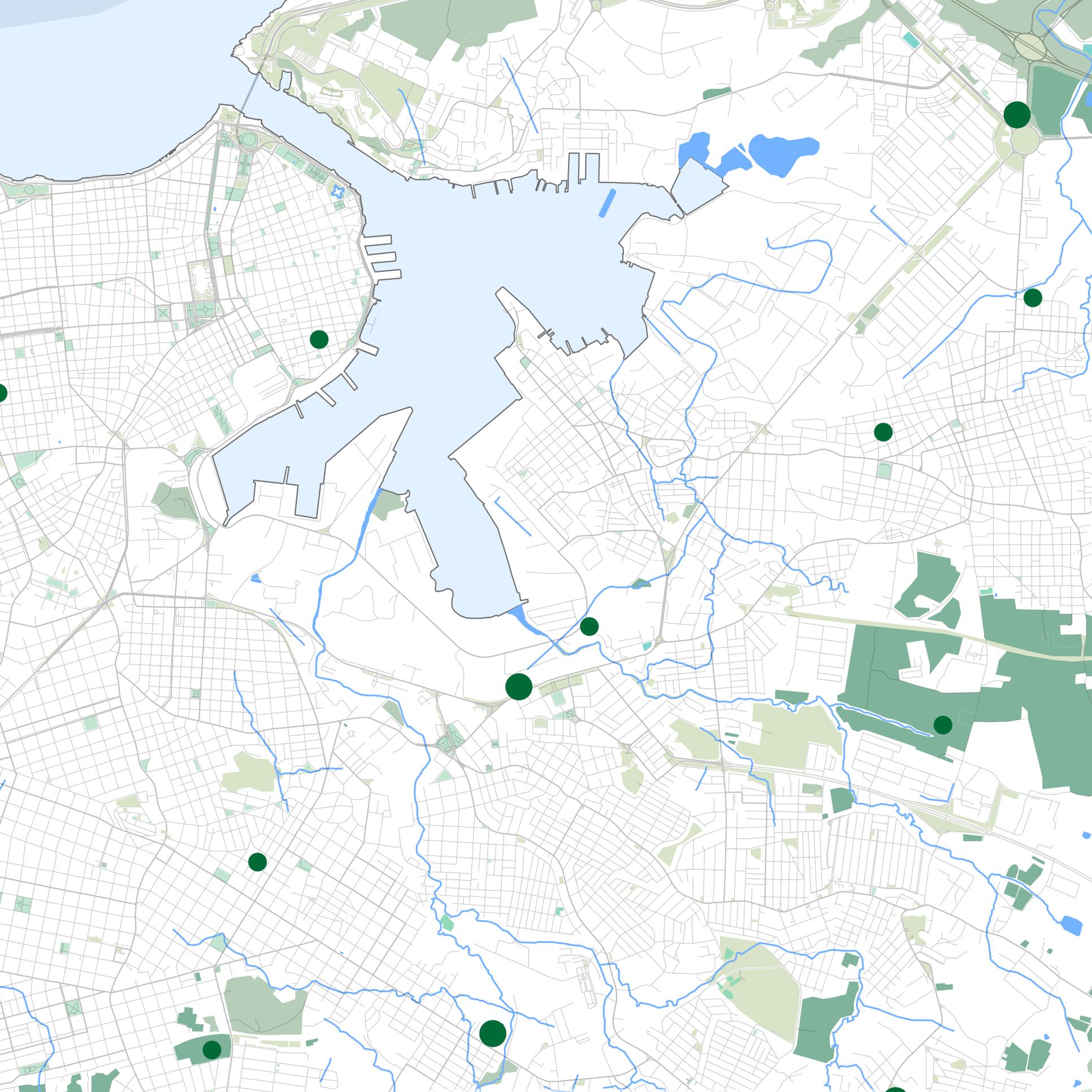
Land Use

- park
- forest
- grass
- farm
- orchard

Urban Farm Area (m²)

- 120 - 4,000
- 4,001 - 12,000
- 12,001 - 24,000





GEOPONIC

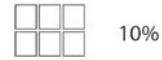
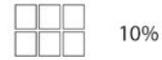
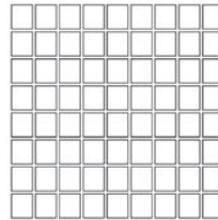
HYDROPONIC

AEROPONIC

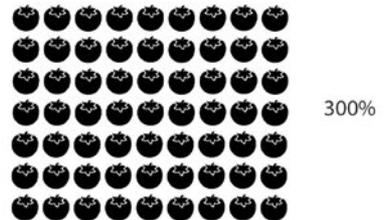
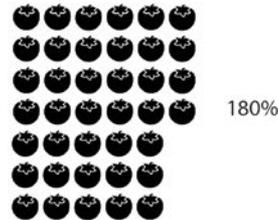
WATER USE
PER TOMATO PLANT



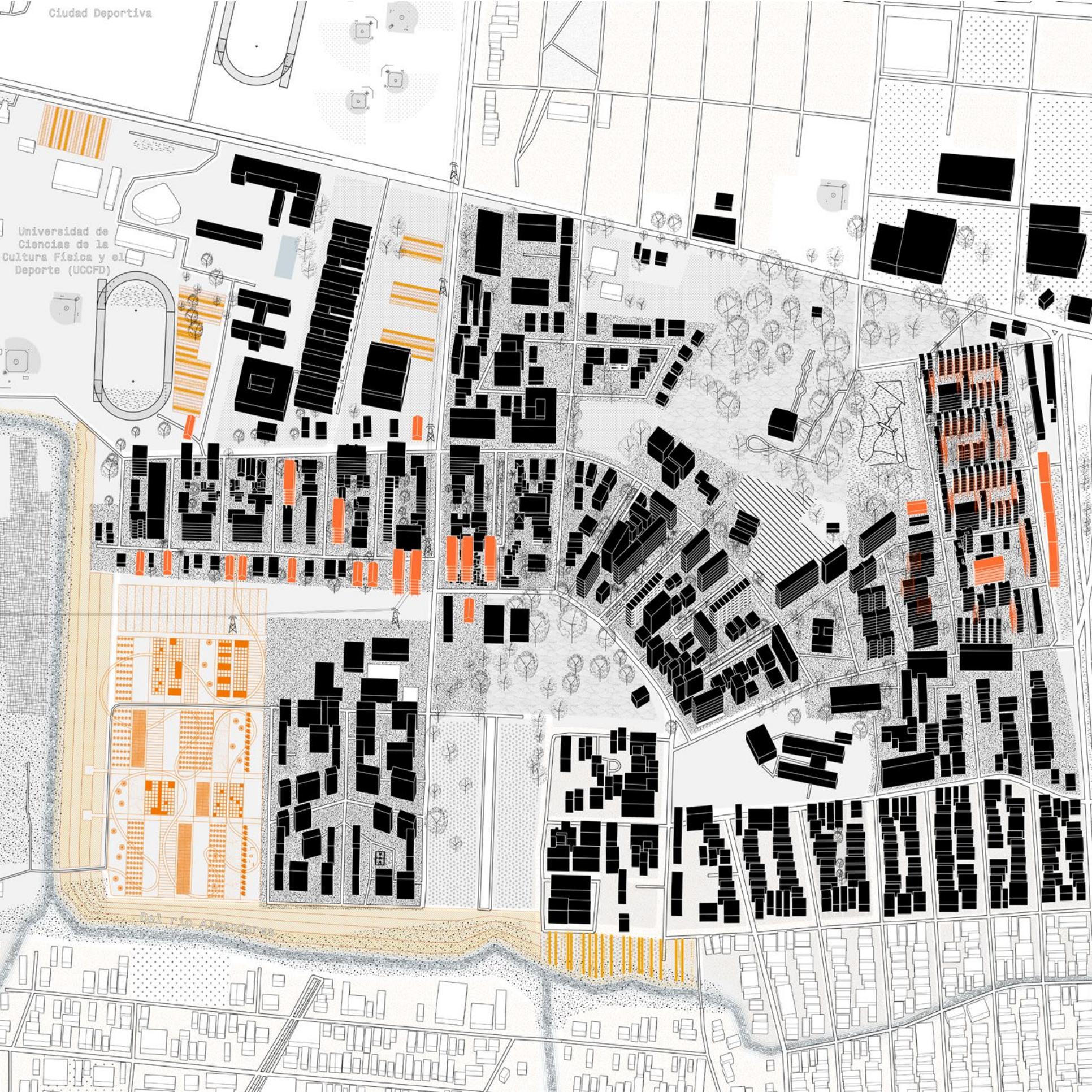
LAND USE
PER TOMATO PLANT

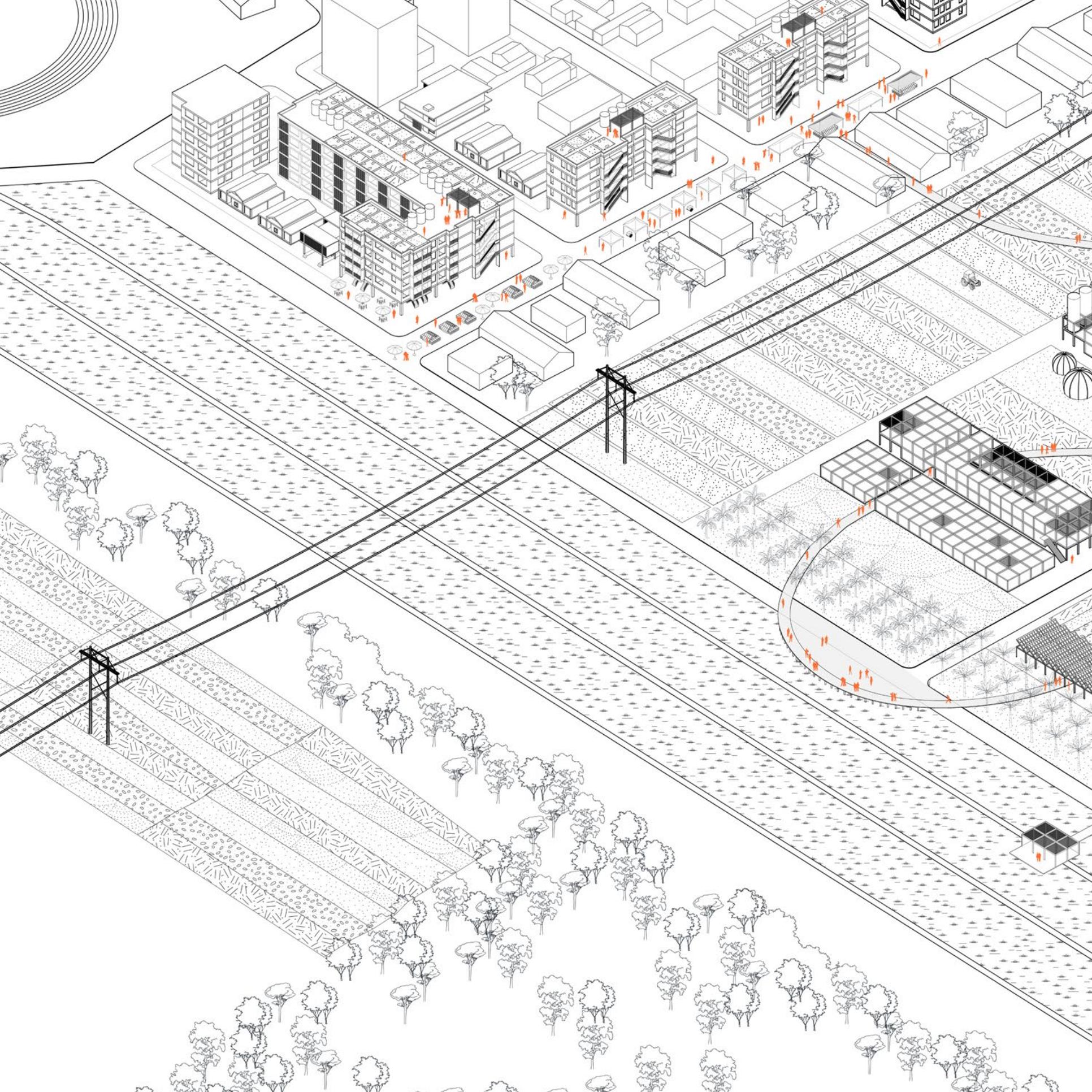


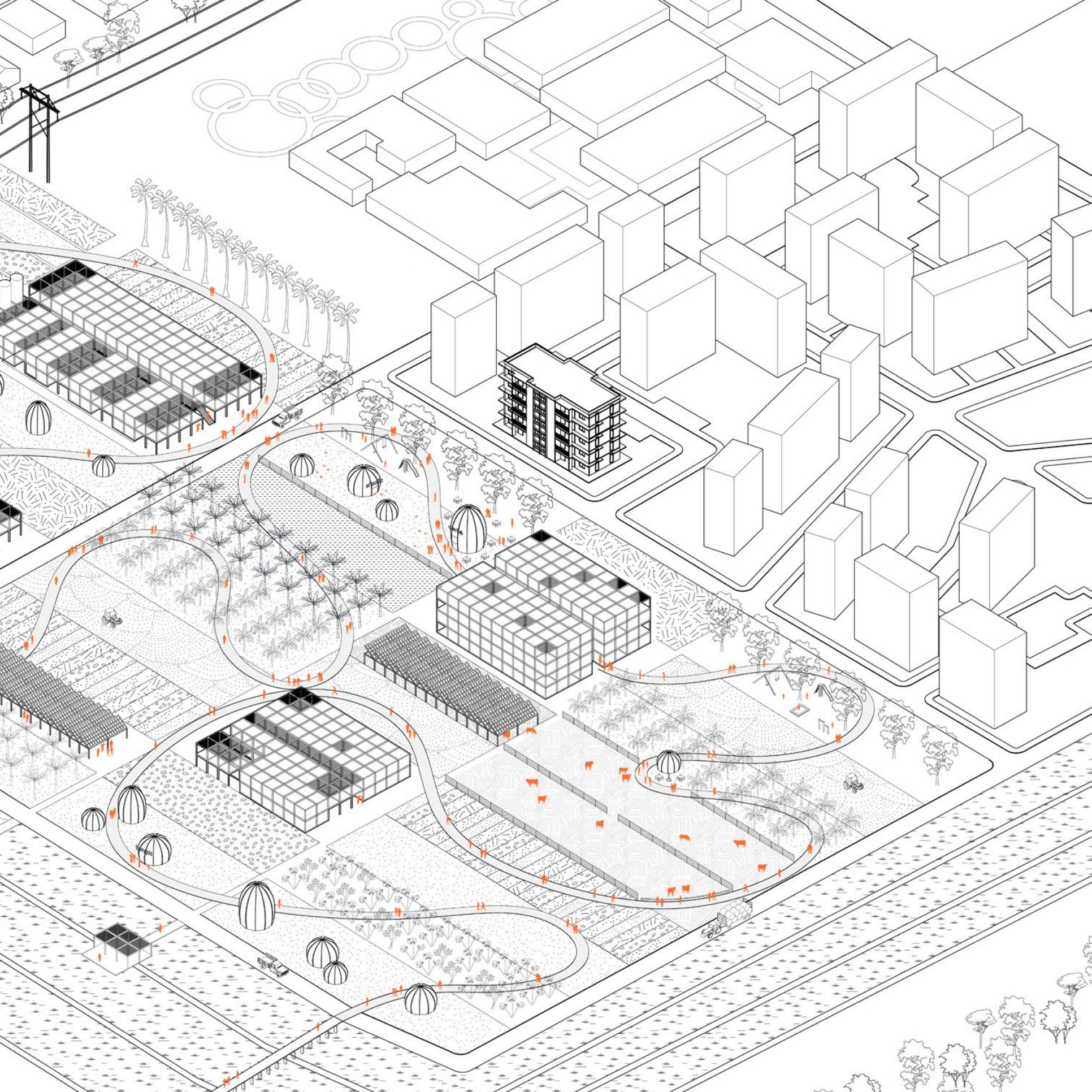
CROP YIELD
LB / SQ FT / YEAR

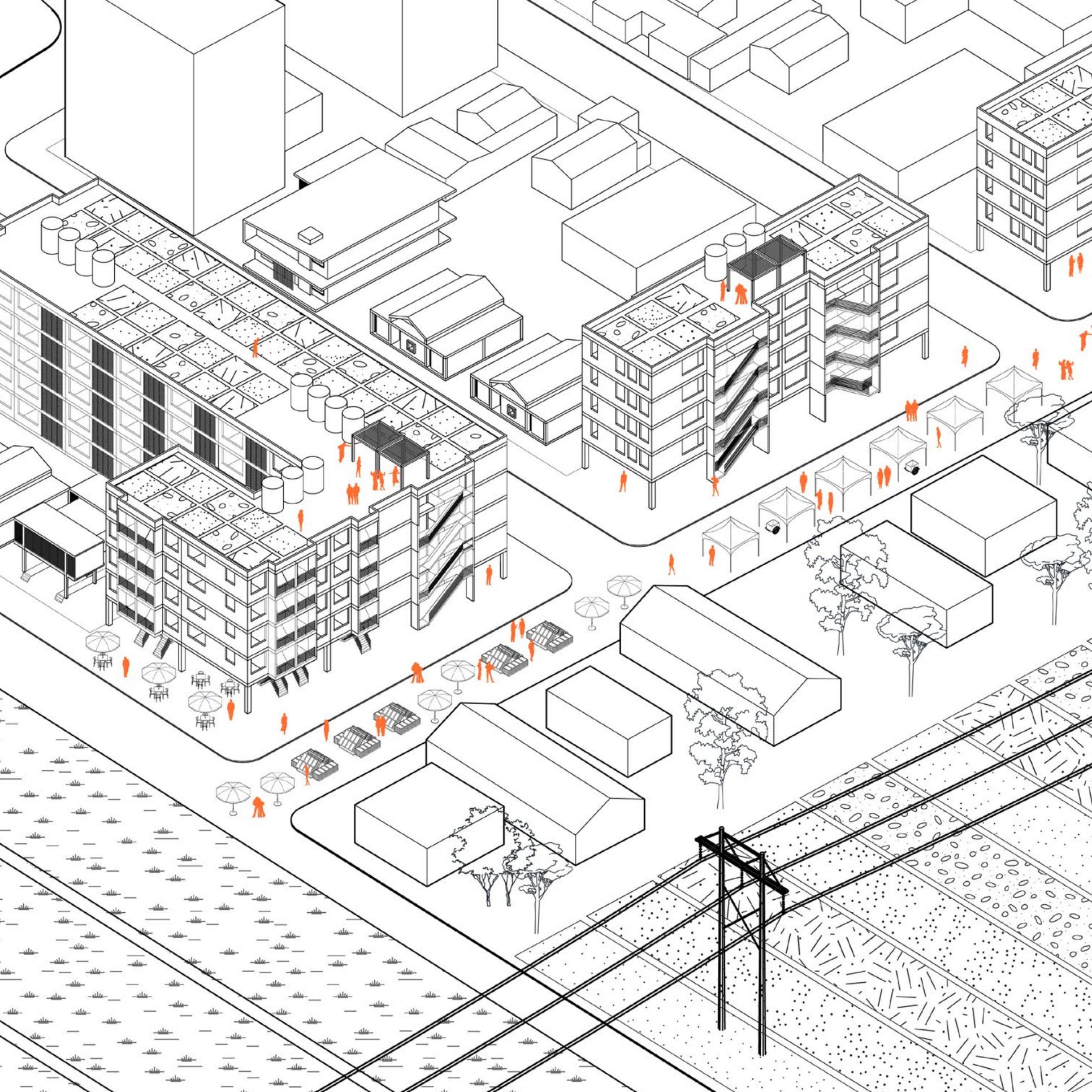


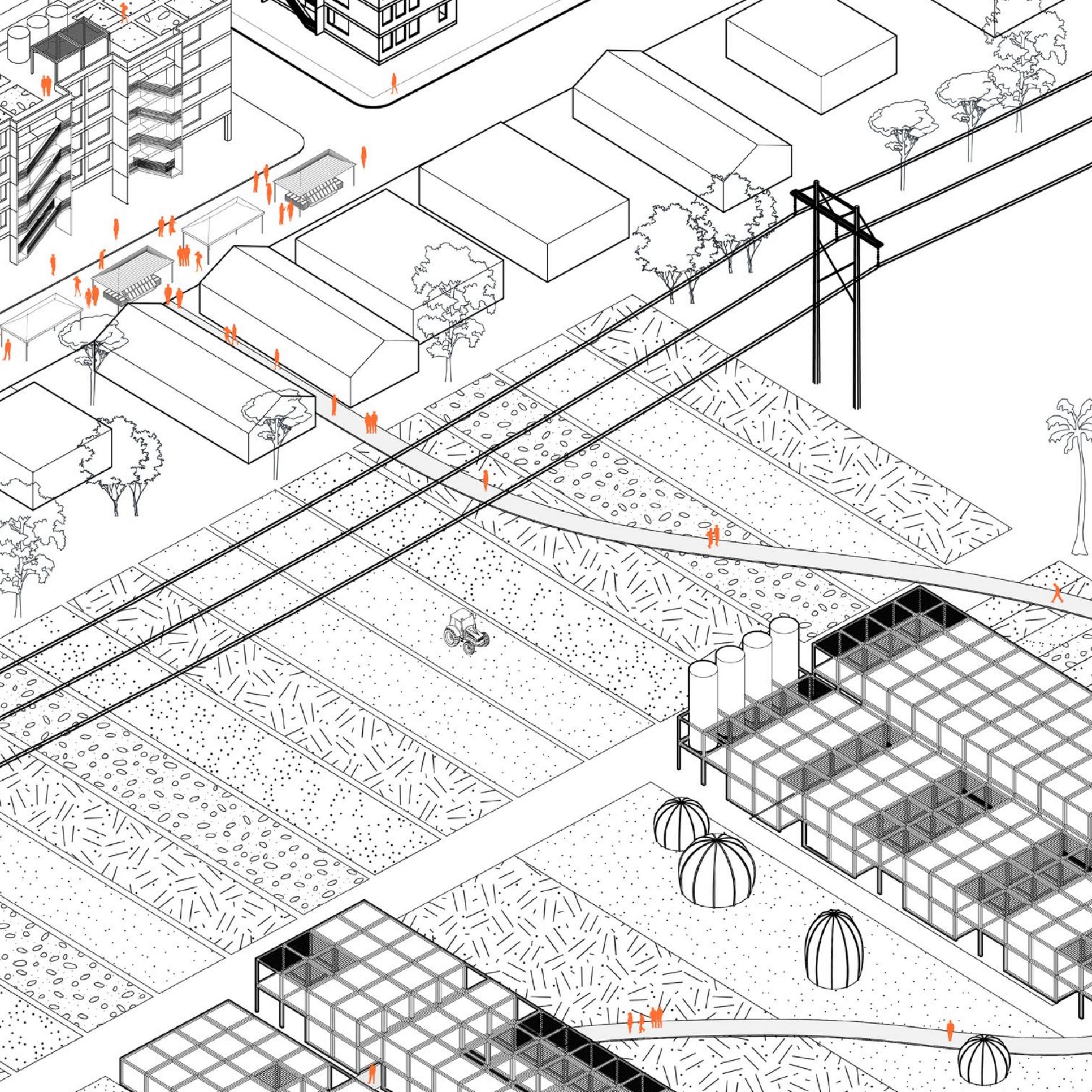
Universidad de Ciencias de la Cultura Física y el Deporte (UCCFD)

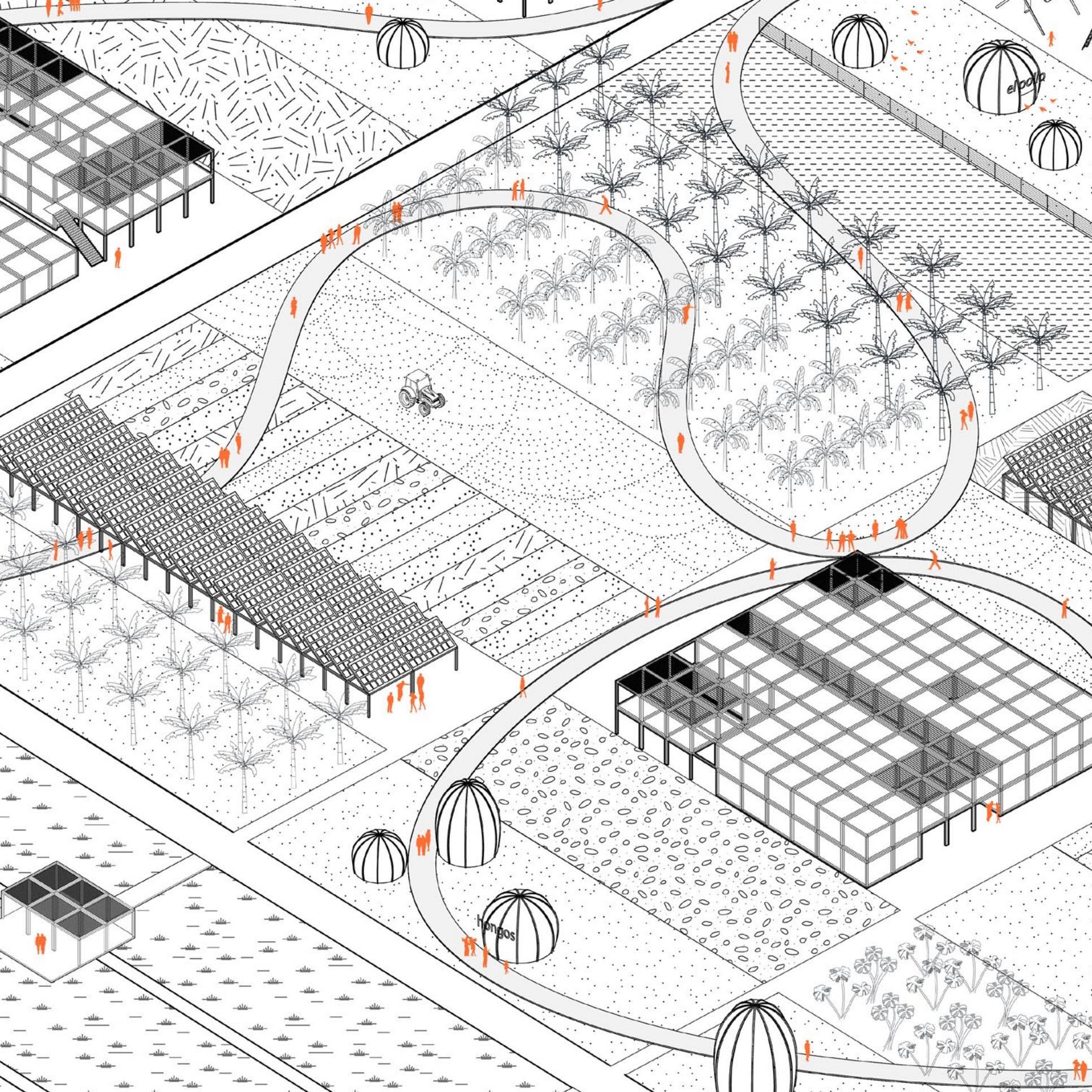


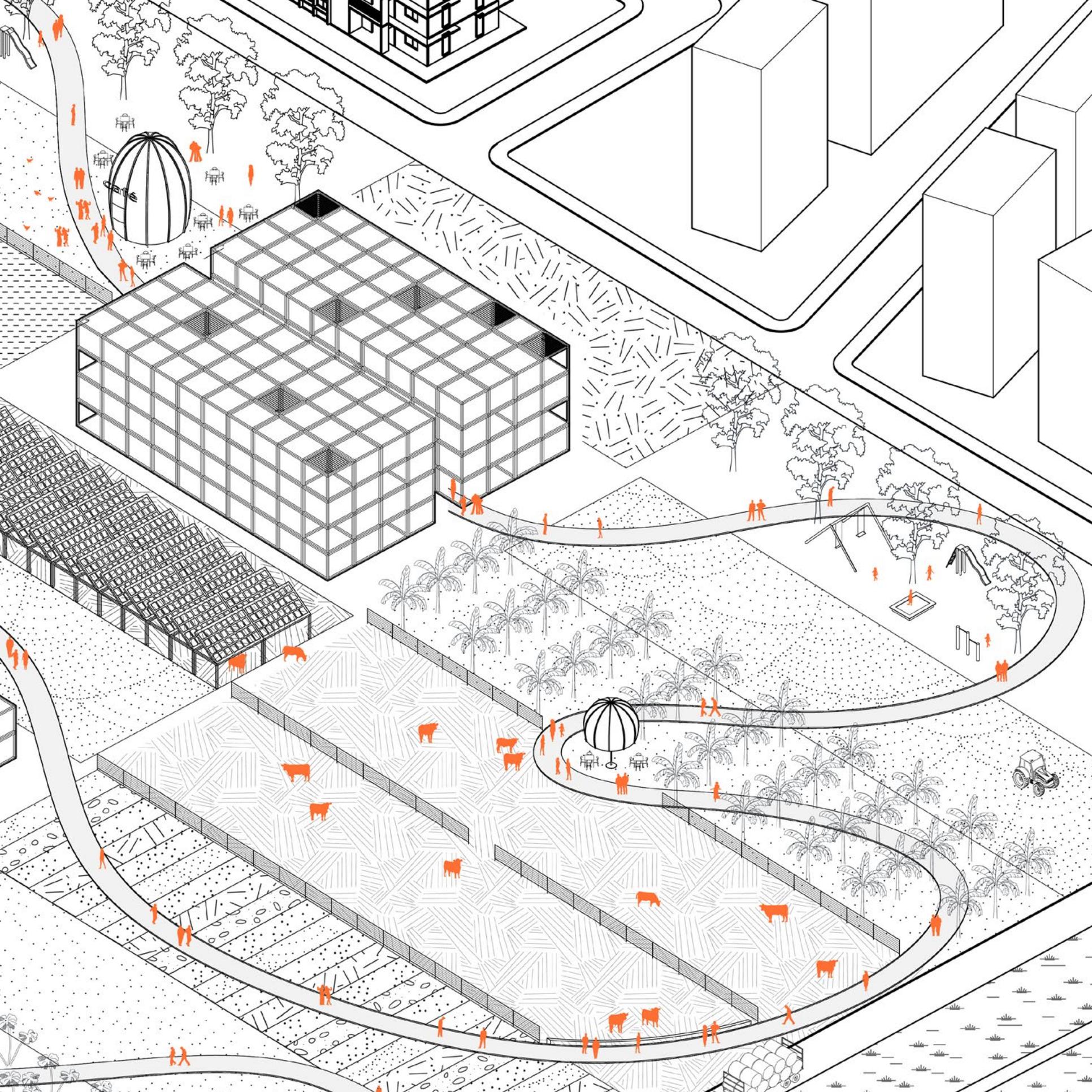






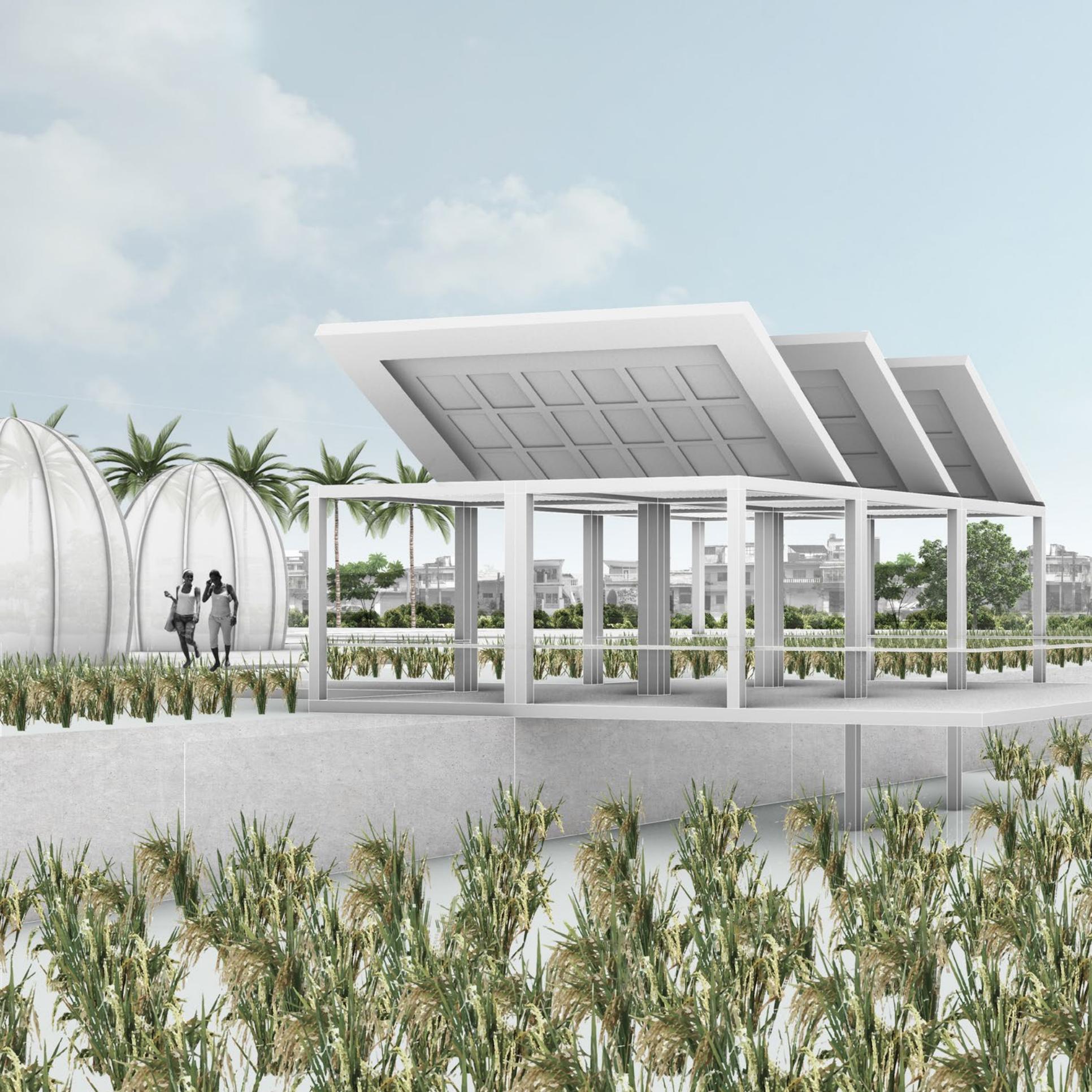














home cooked recipes.

As a decade comes to a close, we are battling two very important problems. First, a staggering accumulation of landfill that cannot be recycled, composted or destroyed through energy recovery. Second, the overwhelming percentage of the global population lacking basic human needs: namely, houses to call homes (nearly half a million people in the U.S.). Could we harness the better parts of one crisis to alleviate the other? Our proposal is to create a recipe generator that will present a new way of recycling landfill materials. We identified different categories of waste material: bottles,

corrugated boxes, grass clippings, food, furniture, tires, appliances and electronics. We also determined the amount of each material needed to generate an architectural component: roof, wall, floor, door or window. After this research, the parameters were inputted into Unity to generate a simulation (right). The goal for the simulation was to destigmatize waste, question the society's needs for vast amounts of domestic space, and give regular civilians agency through the ability to "DIY" their own homes.

You need to collect more materials!



I'm interested in reusing found materials to construct a microhome!
 I have 1 of Tires to construct a **roof**, 150 of Plastic Bottles
 to construct my **walls**, and 30 of Cardboard to use as a **door**.



Instructions +

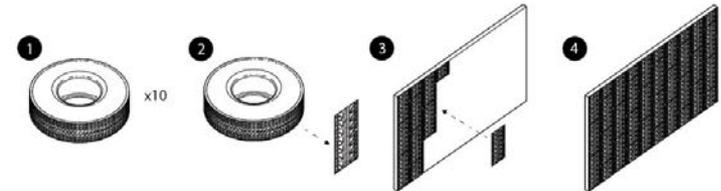


+

Assembly Method

Recycled Tires

The amount of scrap tires left on sides of roads increases every year in the US. With different methods and ways to recycle scrap tires being invented each year, recycling into construction material is becoming more promising. Rubber is an ideal material in construction because it is durable, provides good insulation, and acts as good shock absorbers upon impact.

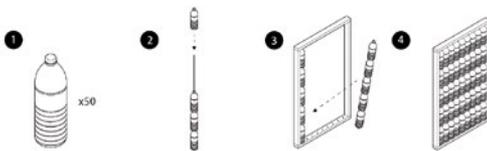


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Assembly Method

Plastic Bottles

Empty plastic bottles are found everywhere, filling up bags, cars and landfills. With their excellent insulation capability, non-brittle properties, availability and low cost, they make great building materials.

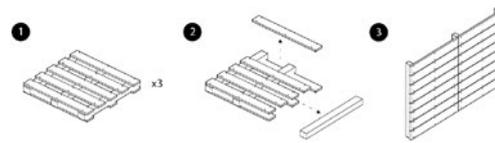


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Assembly Method

Wood Pallets

Although 75% of pallets are returned to service as pallets, the remaining 25% of pallets are discarded or recycled into other products. Pallet recyclers do a tremendous service to pallet users by removing empty pallets from accumulation spots like manufacturing facilities and distribution centers. The warm tone and texture of wood pallets provide a lively and beautiful aesthetic to homes.



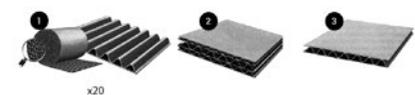
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Assembly Method

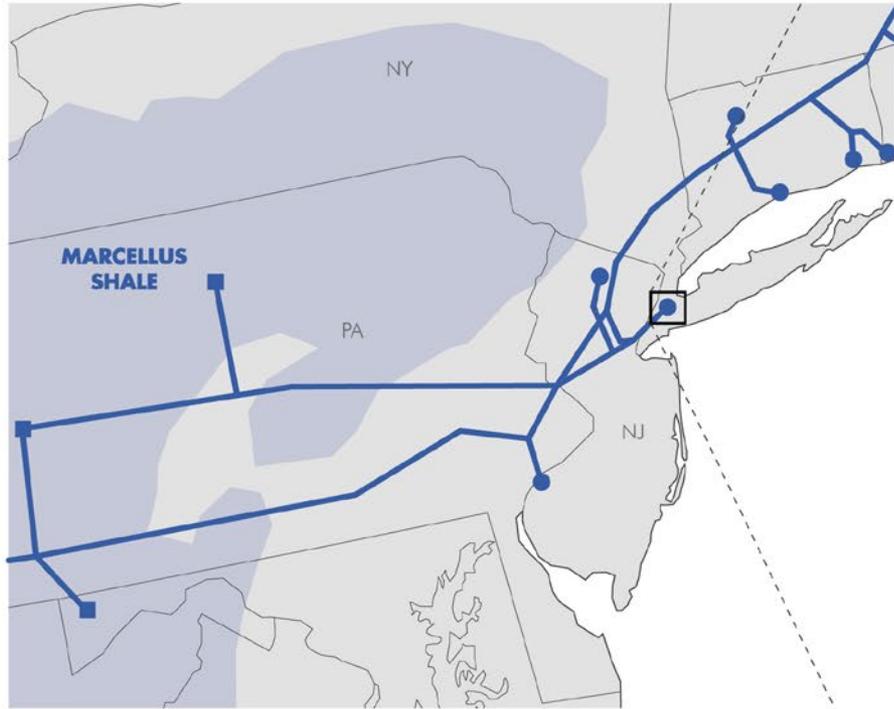
Cardboard Boxes (Corrugated)

Corrugated paperboard that contains rows of air columns. The columns make the paper stronger than average cardboard with the air acting as a cushion for any items inside of them. The ridges inside offer strength and flexibility, as usually intended in packaging.

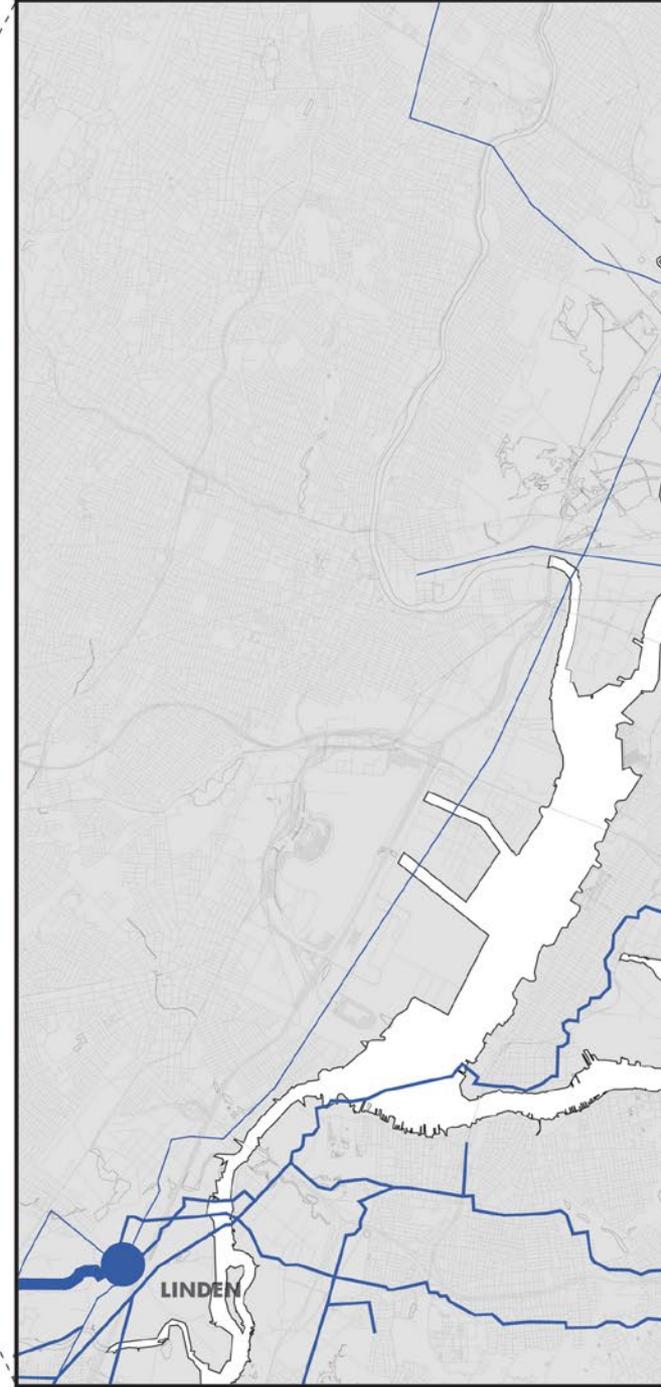
These boxes are known to be eco-friendly because they are biodegradable and made of recycled boxes.



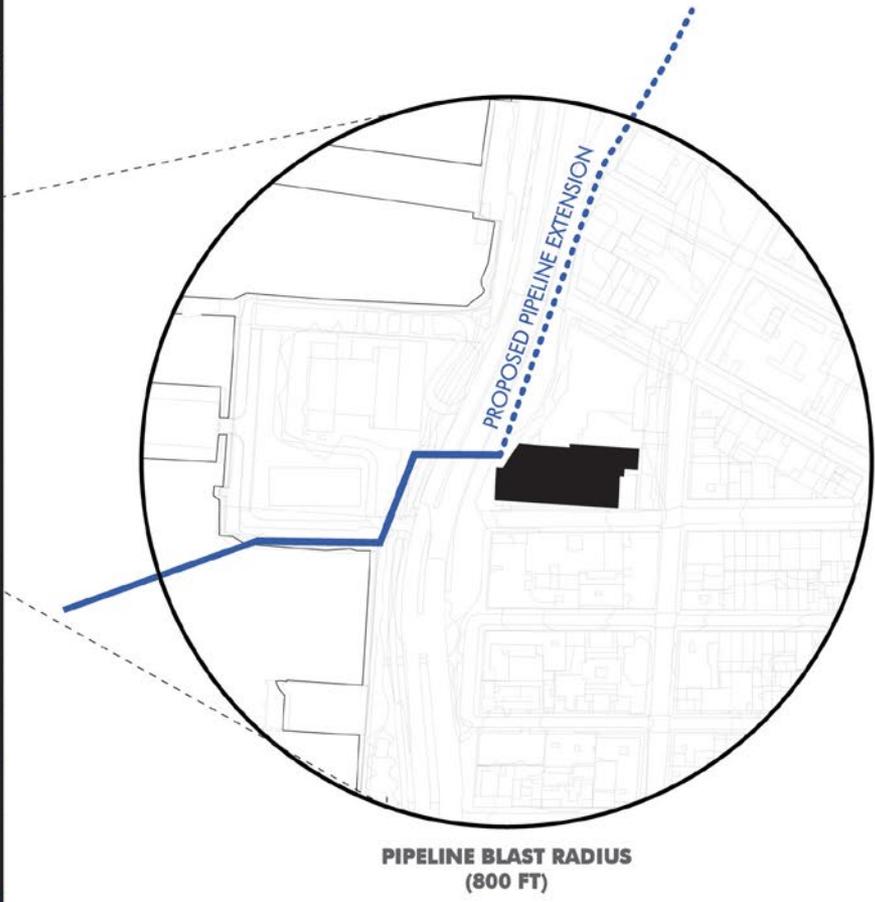
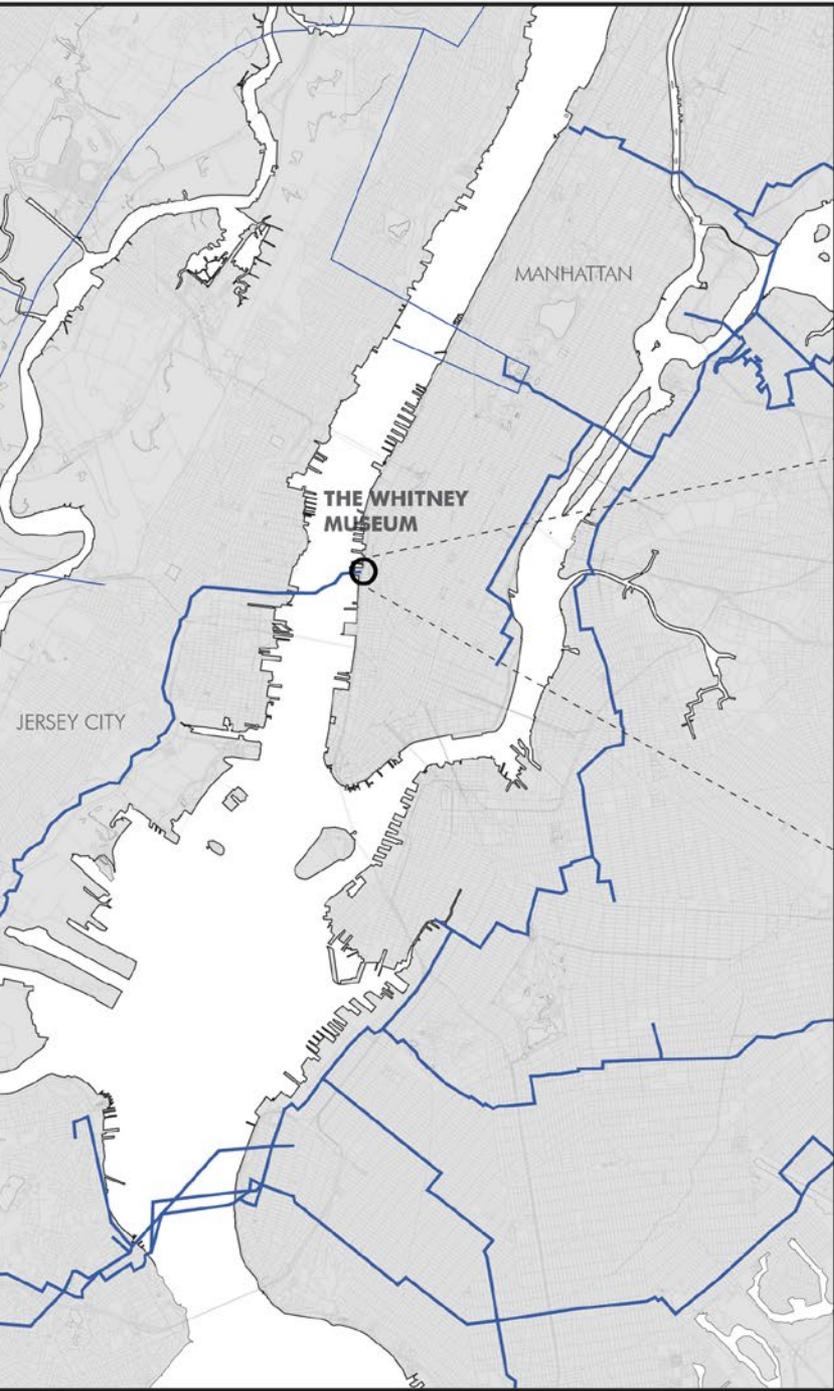
TRANS-SCALAR IMPACTS OF FRACKING



- SOURCE
- TERMINUS

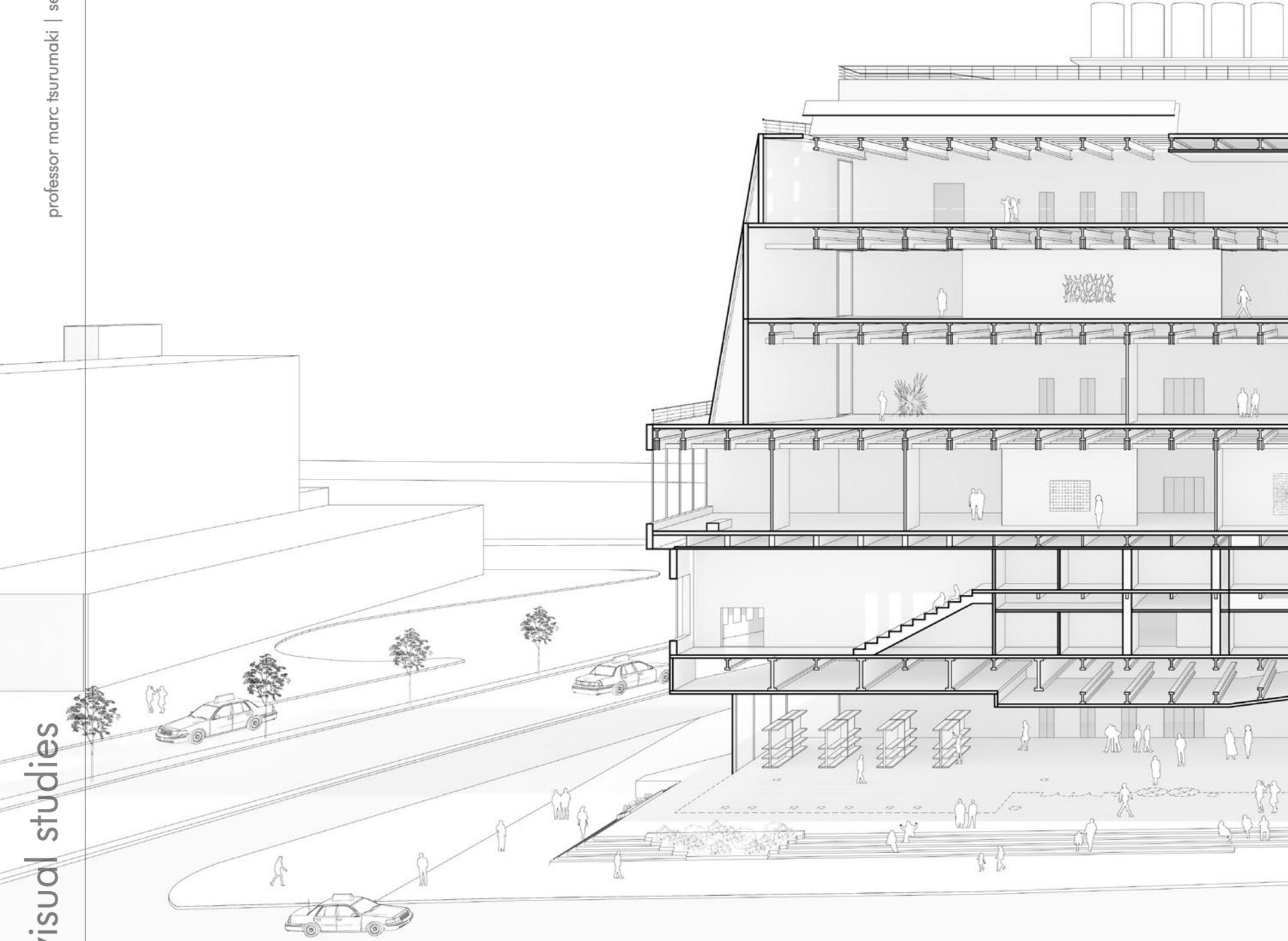


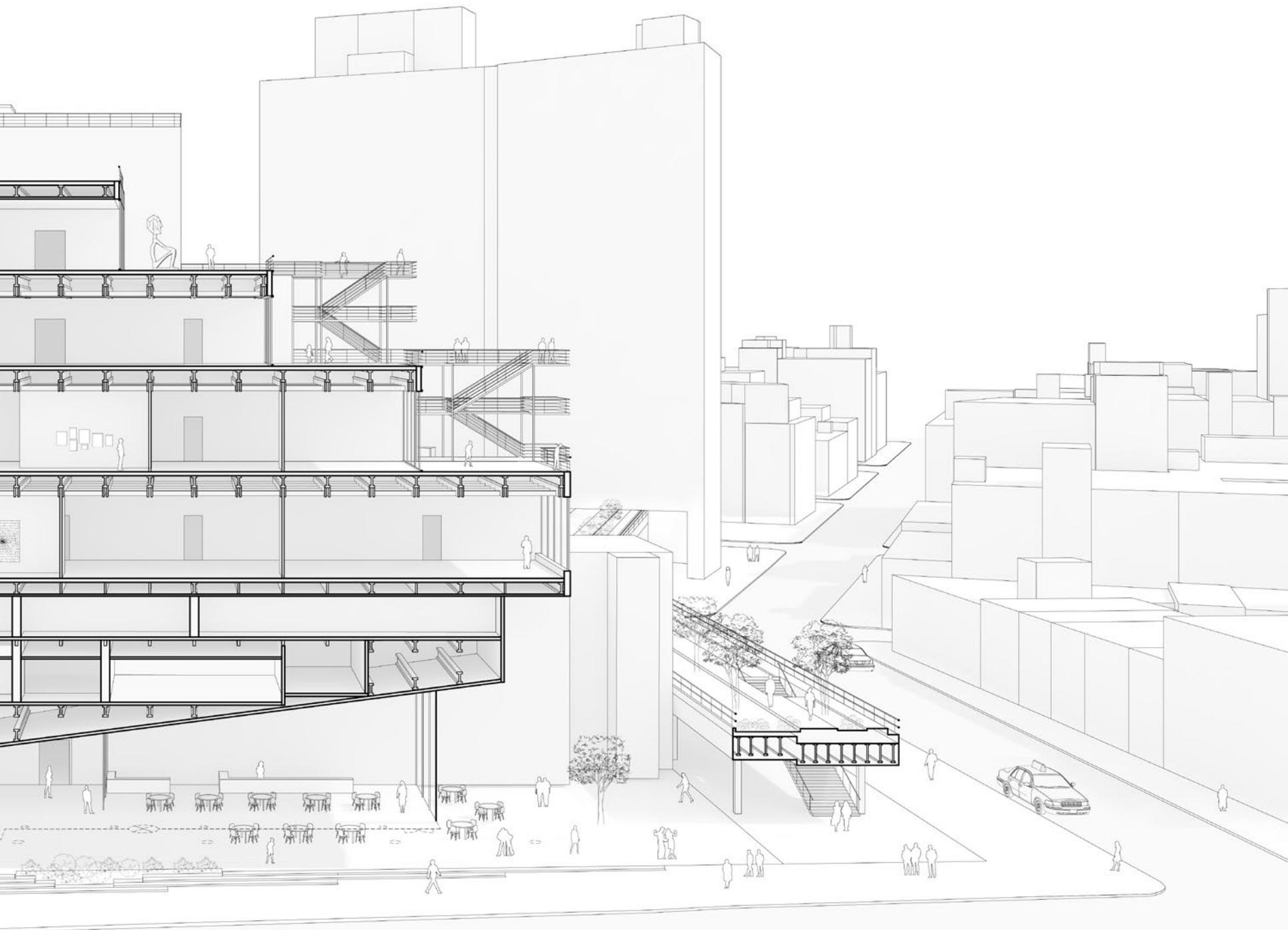
SOURCE



REGIONAL

TERMINUS





fractal city.

Fractals can be found throughout nature; they are a complex network of patterns and relationships that portray the incremental growth of life. Found in snowflakes, trees, oceans and clouds, it can be used to understand rules and formulas that govern the environment at various scales.

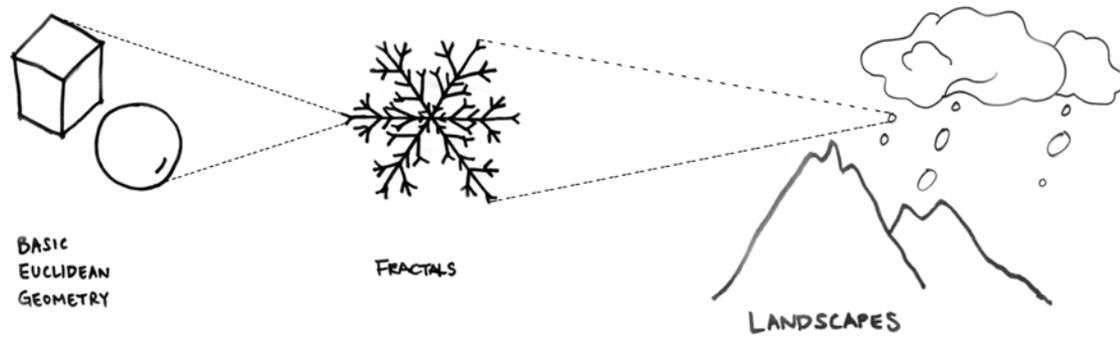
Active fractals can be used as a model for the endlessly morphing network of modern behaviors in cities over time, from local to global scales. By defining the parameters and limits of fractal infrastructures, we can start to change spatial systems while still accommodating for individual variety and temporal growth.

Two methods were used to begin visualizing this simple but complex spatial network. First, basic geometric shapes (sphere and cube) were used to represent the base module. Then, parameters and relationships between the geometry were defined. Additionally, randomness and time factors were applied to simulate the organic nature of fractals.

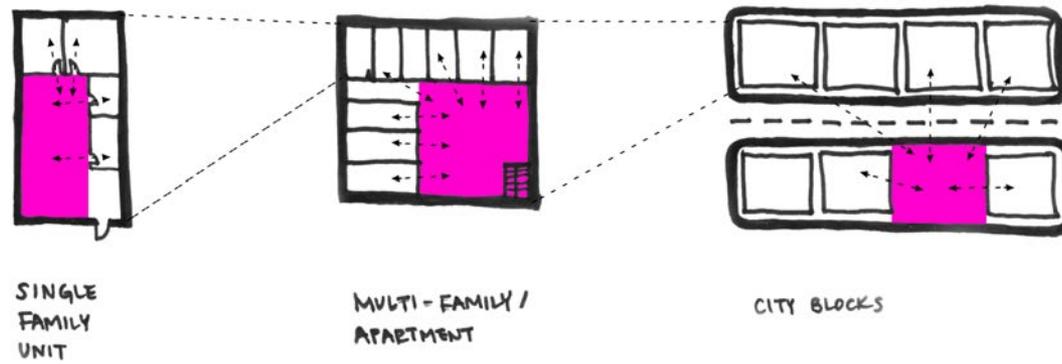
Many Utopian cities in the past have been conceived using Euclidean geometry. A common typology of cities is the radial layout, organized around a central place with encircling satellite districts at successive hierarchies. Although beautifully laid out, this perfect circular geometry becomes vulnerable when its occupants are imperfect species who place social value in individualism, autonomy and choice. There is a need for an active geometry that embraces the notion of the organic, irregular, complex and various at local scales— linking form to function, form to process, static to dynamic.

Can these top-down theories of the past be used to organize cities at the local level? If we utilize the same theory for a bottom-up approach, what will the overall form of the city be?

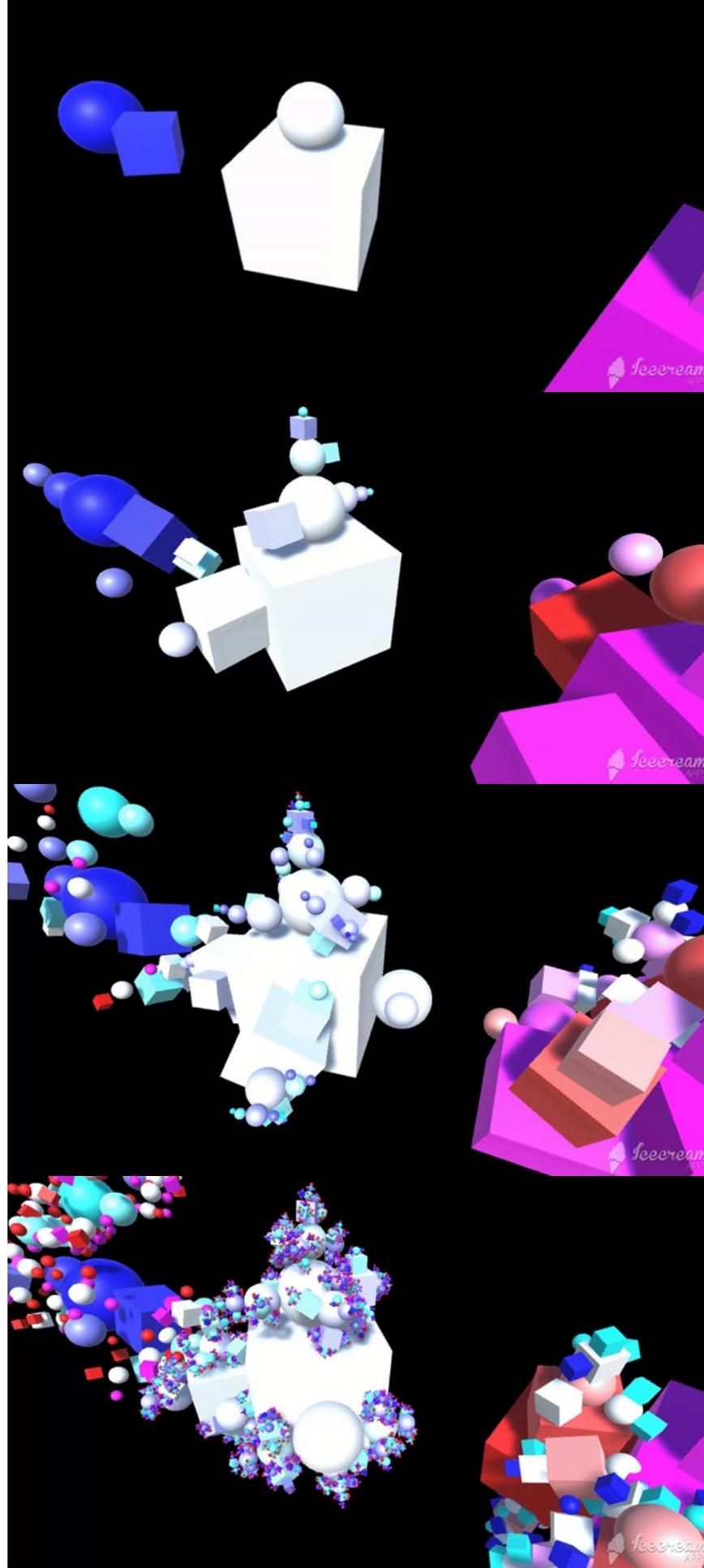
The second visualization method uses a kaleidoscopic method to organize the neighborhood using principals of radial, lattice and tree structures.



Fractals in Nature - Shared Geometry



Fractals in Cities - Shared Spaces



Frames from First Simulation



Frame from Second Simulation



