

PORTFOLIO

Chiao Yang

This Portfolio Includes Tech Elevtives, Visual Elevtives and Studio Works

dy2422@columbia.edu
+1 551 225 6163

M. Arch

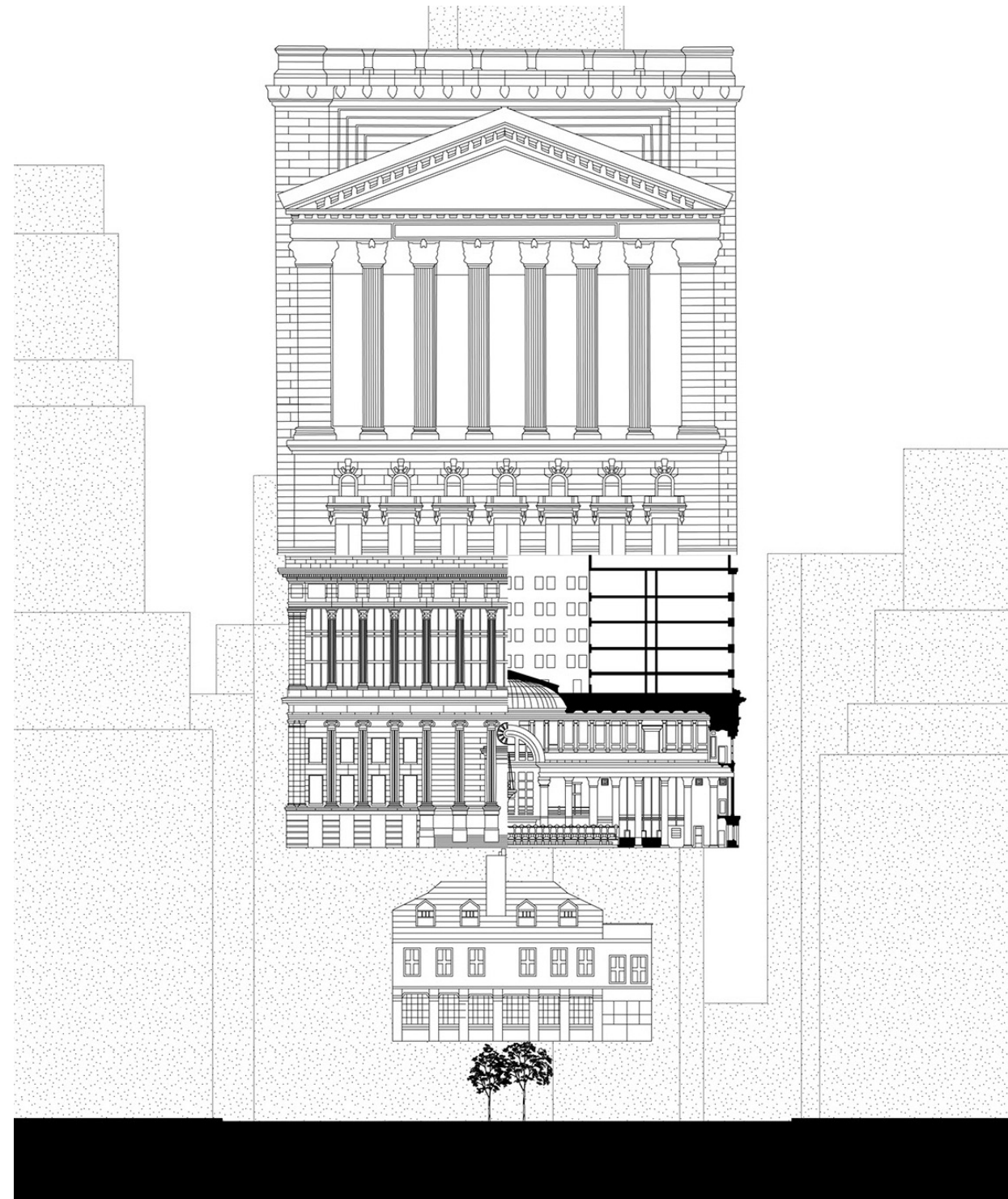
GSAPP, Columbia University, New York

Honored to be taught by
Lindsey Wikstrom / Benjamin Cadena / Nahyun Hwang / Marc Tsurumaki /Hillary Sample
/ David Benjamin / Lola Ben Alon /

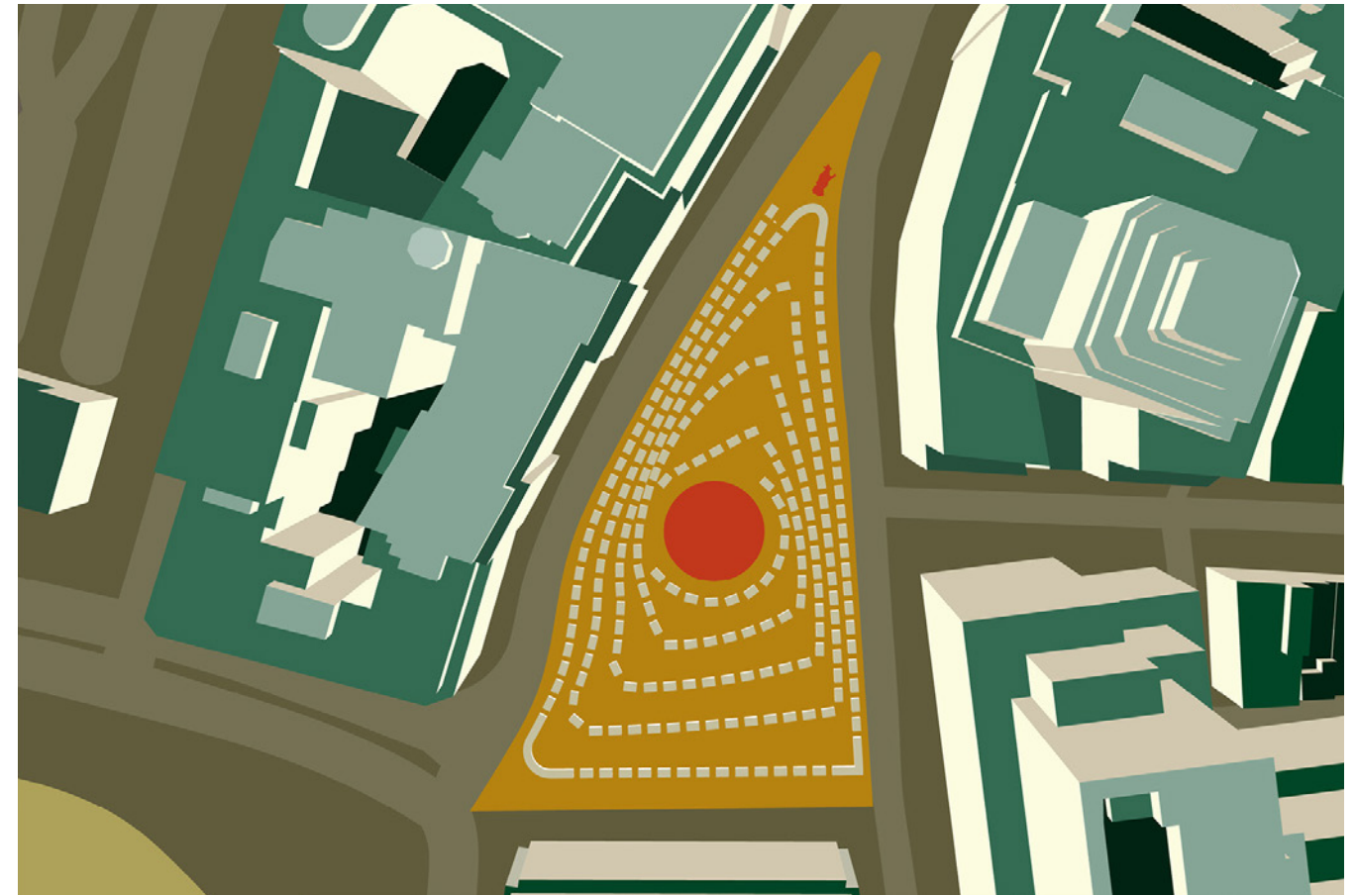
Happy to collaborate with
Hanyu Liu / Carley Pastoloton / Blake Kem / Phoenix Yang / Sophia Strabo

01. ALL THAT IS SOLID SELTS INTO AIR

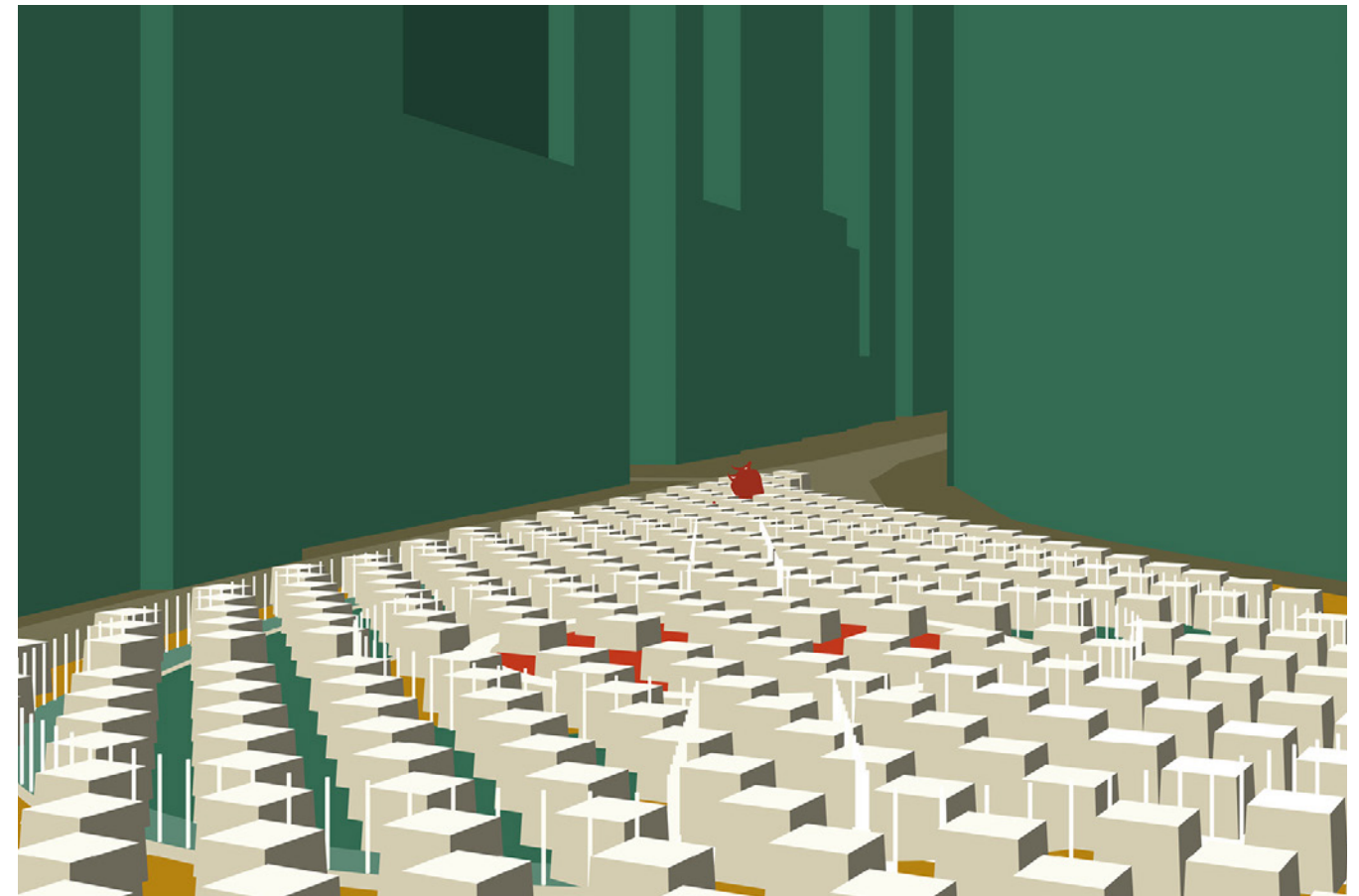
As one of the most significant cornerstones of world order in our time, NYSE's obsession with stone is evident at its expanding architectural footprint, all of them have used Quincy granite as the main building material. Polished granite was loved at that time due to its elegant appearance, durability and cultural monumentality, which suits the criteria of financial institutions well. But it's also the same quality that trapped the neighbourhood in a dilemma, having a difficult time being renovated in order to accommodate other programmes in the post-NYSE era. This project argues the functional, aesthetic and social obsolescence of granite at financial district, proposing to dismantle them and use it to create a new "Initial Public Offering".



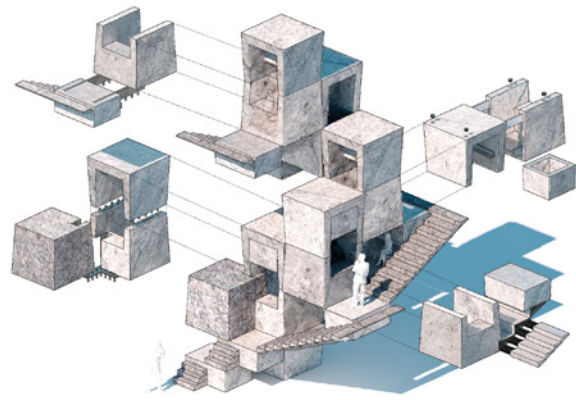
01



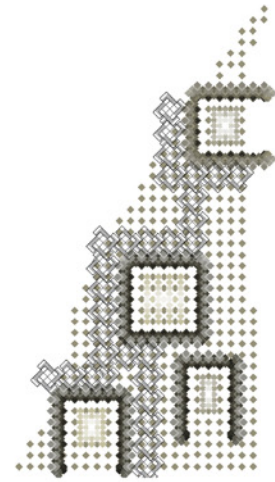
02



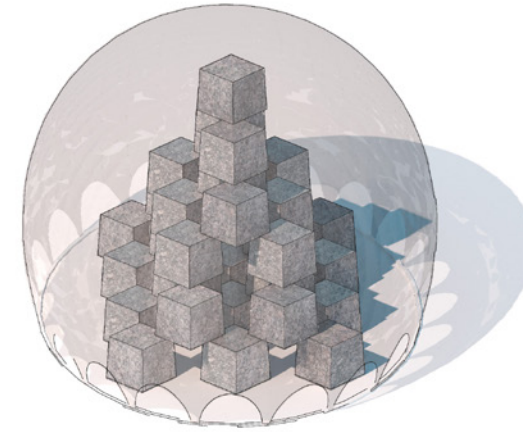
03



Public Offering III - The Local Market



Local Market Plan



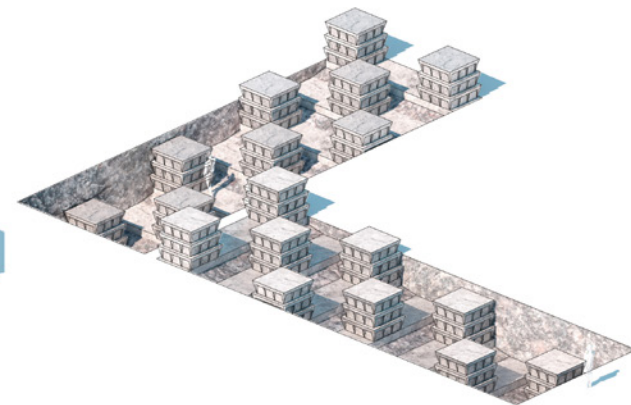
Public Offering I - The Stock Market



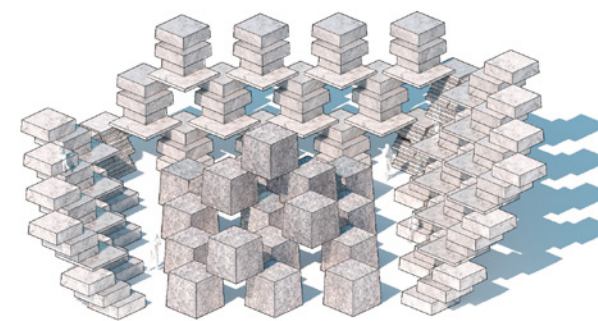
Stock Market Plan



Public Offering IV - The Garden



Public Offering V - The Graveyard



Public Offering II - The Amphitheater



Amphitheater Plan

04
Granite stone
stacking up
according to the
ticker price
movement

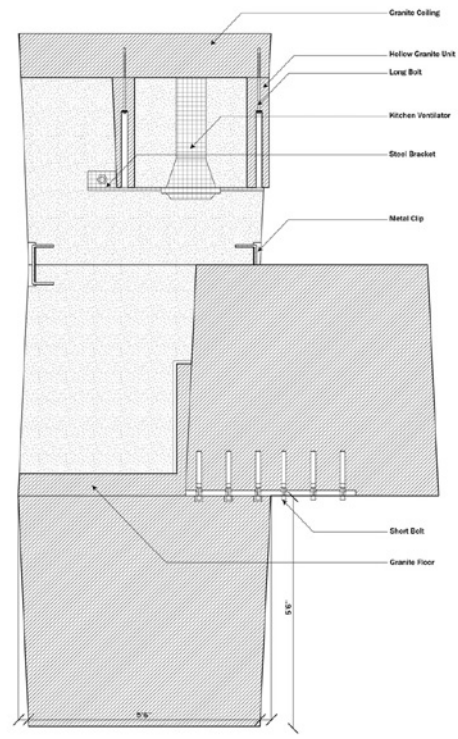
05
Registering
current prices of
companies

06

07

04

05



Local Market Construction Detail



Local Market Unit

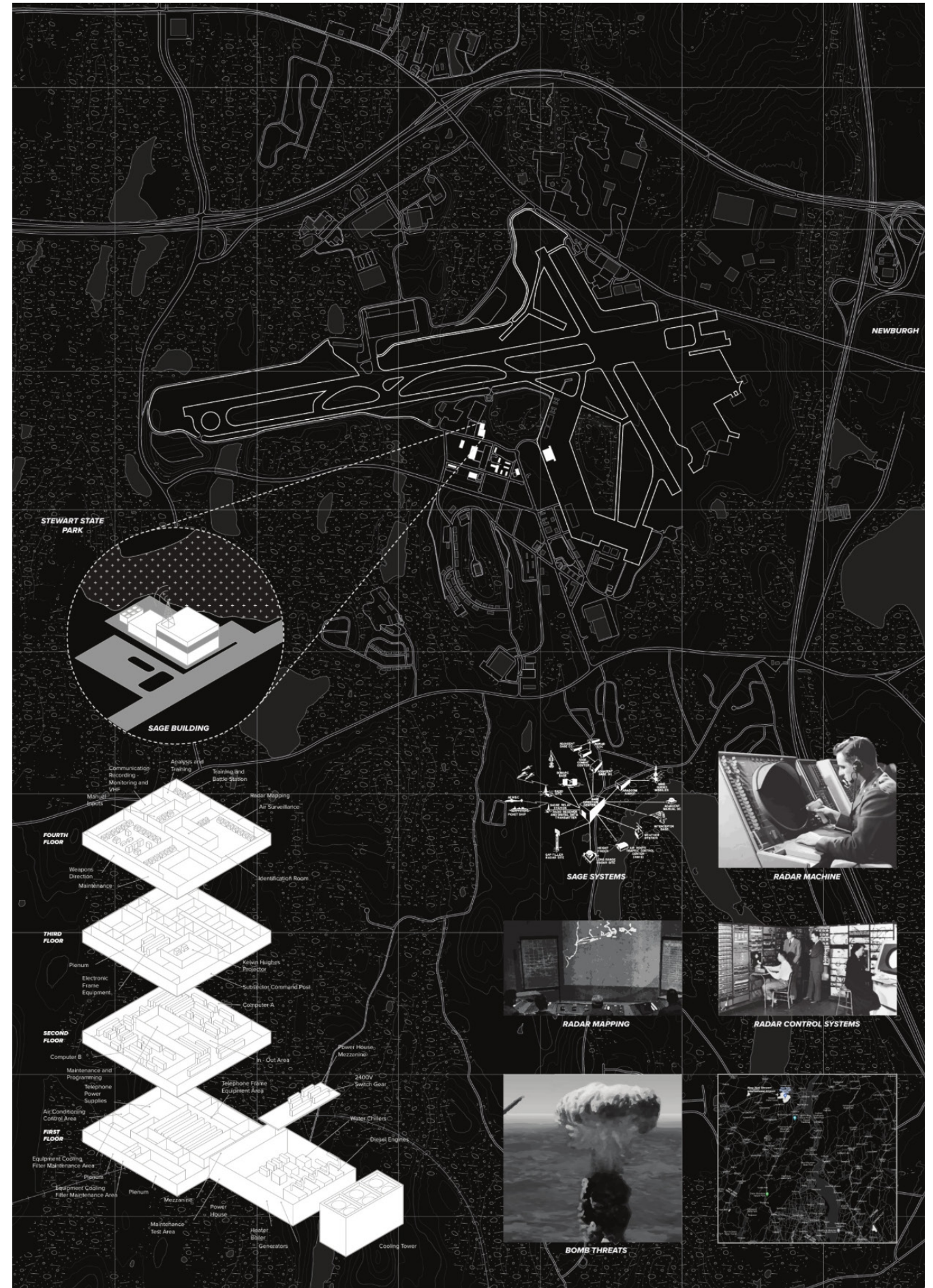


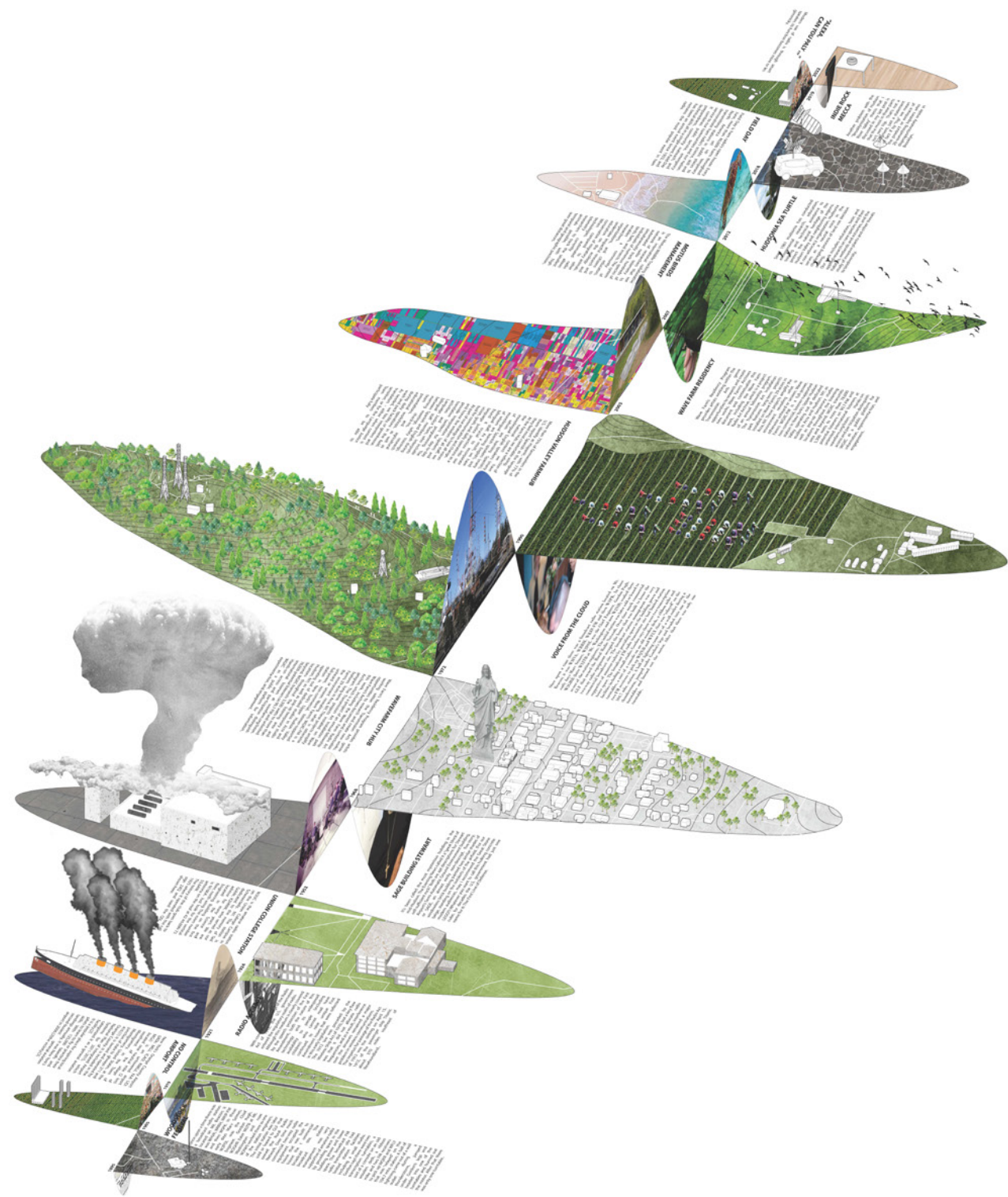
08 Granite stone stacking up according to the ticker price movement
09 Registering current prices of companies



02. FROM RADAR TO RADIO: SPATIAL BREAKDOWN OF SAGE

Airports started as military bases in Hudson Valley, due to its proximity to New York City and were seen as a prime location to implement this type of need from Cold war nuclear fear, the radius from Manhattan in case of bombing, and how Hudson Valley became a sanctuary during this time. Besides the airport and flights, in the air of Hudson valley hides another type of sanctuary space that's invisible/intangible - the radio waves. With the first ever ham radio broadcasting from Union College in Albany 100 years ago, those airwaves served as a sanctuary of the minority voice. The two parallel research on airwaves and airports lead us to our site at New York Stewart International Airport, which is located in the sanctuary city of Newburgh. It was called SAGE as an abbreviation of Semi-Automatic-Ground-Environment, or, the first and ultimate line of defense from a Soviet nuclear attack, a bulwark from an act of war that seemed inevitable in the 1950s. The SAGE directed and organized the North American Aerospace Defense Command's (NORAD) response to a potential Soviet air strike by coordinating radio waves collected from numerous radar sites into a single, comprehensible image. The SAGE Building will be reclaimed as a new form of media incubator that welcomes the agency and promotion of small businesses, local journalism, language justice, and grassroots organizations. In between, the terminal of the airport and the SAGE building is connected by a jet bridge.

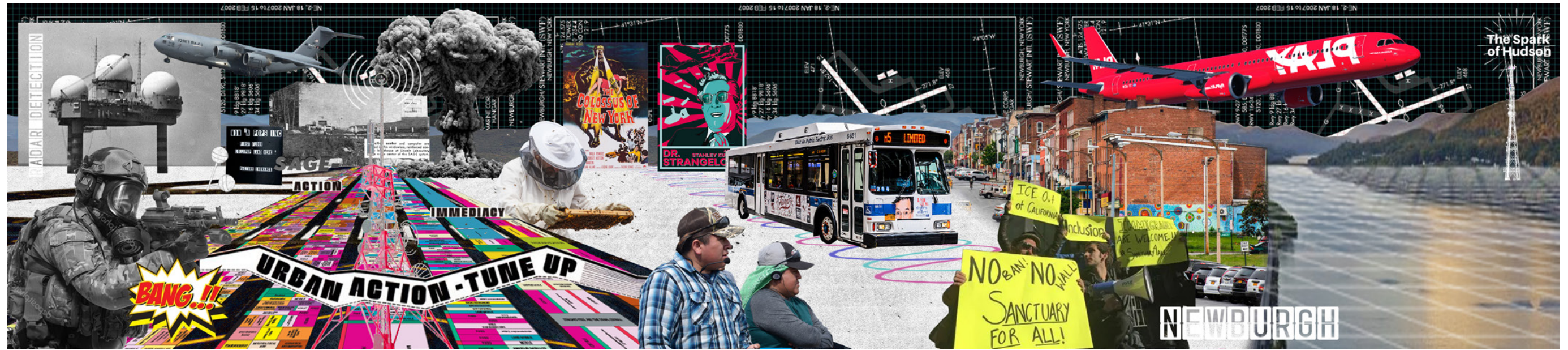








16
Collage showing
the invisible
radio grid that
coordinates
actions on the
field, juxtaposing
with John Cage



17 Hudson Valley immigrant hardship collage
18 Research focusing on the air space in Hudson Valley

17

Overlook Mountain Super Tower 1

During the summer hiking season, one of the most popular destinations in the Catskills is Overlook Mountain, where who reach the summit are rewarded with a view of nearby mountains and a glimpse of the Hudson River. A freshwater provides with elevation, and additional views. Hikers will also notice extensive, varying nature trails and ground communications functions. The hiking experience today would be much, much different had an ambitious and forward-thinking plan to establish an educational television station on the mountaintop come to fruition. Had it happened, those hiking it up the mountain knew they were allowed to would radio a certain amount of vehicle traffic, transcribing technicians, their staff, and education to the mountaintop.

<https://theterrainlab.com/overlookmountain/>

Chiao Yang

The Field Prophet 2

More than 75% of farmworkers in the U.S. identify as Hispanic, with 77% of them report Spanish as the language they feel most comfortable using. At the Hudson Valley Farm Hub, Language Justice is a program that fosters a multilingual work environment, and one that uses language as a platform to foster diversity and inclusion. The program includes a team of seven bilingual staff, most of whom work on the farm in production and maintenance, while also providing professional translation and interpretation at the Farm Hub. More recently, they have begun interpreting at food and farming events around the region. According to Andrea Pirozzi, Language Justice Program Manager, it is a "framework and a movement" that has yet to reach the coast.

<https://theterrainlab.com/languagejustice/>

Chiao Yang

Youth Media Sanctuary 4

Media Alliance, founded in 1977, moved its headquarters to North Troy in 2005. Youth Sanctuary develops youth programming in North Troy, NY, teaching multimedia skills to young people (ages 15-25). Youth Sanctuary centers its youth voices in the forms of radio stories, filmmaking, scientific research, advocacy, leadership, and a lot more. These programs develop urgently needed independent local voices in our economically-depressed neighborhood. Youth Media Sanctuary radio producers have been active through "Media Sanctuary Choir" at Troy High School in Fall 2019, youth develop with audio journalism through Hudson production. Youth take control over the site and the narrative of their community and their values.

<https://theterrainlab.com/youthsanctuary/>

Chiao Yang

No More Deadzone 3

Verizon has completed two cell phone towers in a dead zone in part of New York's Hudson Valley. The towers are fully active and expand 4G LTE coverage. New York state Senator James Blount says the towers fill reception in a dead zone along the Palisades Parkway between Orange and Rockland counties. The two towers are at the Overlook Lodge in Bear Mountain State Park and at the south end of the Anthony Wayne Recreation Area. Over the summer, Blount stood with local EMF personnel at the Recreation Area sitting on Verizon to prioritize construction of the two towers, giving safety issues for first responders and commuters. Then the state turned the Recreation Area into a COVID-19 site for testing sites, which emphasized the need for quality reception in the area.

<https://theterrainlab.com/verizon-towers/>

Chiao Yang

Youth Media Sanctuary 5

Ten Rue co-founded Free1020s, in 1987 as a micro-artist collective in Brooklyn, New York. Today, for seven, as the Artistic Director of Wave Farm (formerly known as Free1020s). Rue led Wave Farm's efforts to establish WQXC 90.7 FM, an FCC-licensed full-power non-commercial FM radio station, serving New York's Upper Hudson Valley since 2011, and currently manages the over 60 hours a week of Transmission Arts and Experimental Studio programming in the station. He has frequently featured about how he performs with Transmission and the history of radio performance and microcasting at venues such as Columbia University, Brown University, Brooklyn College, Flux Factory, The Robson, NYU's ITP Program.

<https://theterrainlab.com/wavefarm/>

Chiao Yang

Wavefarm 6

Wave Farm's Transmission Arts activities support artists' projects that engage the electromagnetic spectrum, transmitted on the airwaves and through public presentation. The Wave Farm Artist Residency Program supports visiting artists from around the globe. Property installations include Wave Farm's 20-acre, on-site and online, the Study Center Library features a specialized research collection, and the Transmission Arts Archive presents a living chronology of artist's experiments with broadcast media and the internet. Transmission encompasses works in which the act of transmitting or receiving is not only significant, but the focus for the artist's intention.

<https://theterrainlab.com/wavefarm-artist-residency/>

Chiao Yang

Stormville Flea Market 1

The Stormville Flea Market is located in the historic Hudson Valley, halfway between Manhattan and Albany. Also known as Stormville Airport Antique Show & Flea Market of Southern Dutchess, Flea Market, it hosts over 400 vendors from more than eight states dealing in antiques, arts & crafts, and new merchandise. Stormville Airport (SAA) (0) was a public airport located one mile (2 km) northeast of the central business district (CBD) of Stormville, a hamlet located within the Town of East Ferris in Dutchess County, New York, USA. This general aviation airport covered 150 acres (61 ha) and had one runway. It is no longer used as an airport, even though FAA sectional charts and NOTAMS do not indicate that it has closed.

<https://www.stormvilleairport.com/>

Carley Pasquolito + Chiao Yang

Immigration into Hudson Valley 2

In August, former Westchester County Executive Rob Astorino, who's a Republican candidate for New York State Governor, claimed undocumented immigrants are being flown from the southern border to Westchester County airport. The New York Post reports migrants who allegedly crossed the border from Mexico are all being secretly flown into the Hudson Valley. The New York Post believes over 2,000 overnight migrants have secretly landed at the Westchester County Airport since early August.

<https://theterrainlab.com/immigration-into-hudson-valley/>

Carley Pasquolito + Chiao Yang

Airports for Sale 3

The public access airport set on over 100 acres is listed for \$3.5 million. The privately owned airport is an incredible turn-key opportunity in a vibrant aviation community featuring runway 3017', the main lighted runway 3023 x 50 feet paved with 2 approaches, an well paved taxiway, 3 secondary parking ramps to accommodate turboprop & jet aircraft, 24 hour self-servicing fueling station, hangars, community hangars, a hangar club, helicopter parking, tie-down, transient parking & a 4,000 SF terminal with a restaurant, storage & maintenance facility, pilot club & office space for 30+ staff members. Expansion potential with 80+ undeveloped acres, with the potential of additional acreage to be purchased. McGrath Realty listed in the listing.

<https://theterrainlab.com/airports-for-sale/>

Carley Pasquolito + Chiao Yang

Bees Take Flight 4

There is growing credibility in certain parts of the airline industry about how to reduce their carbon footprint and emissions problems. Supercritical bees are the stars of one highly creative and successful solution. Aquifers are just one of many ways international airports are looking at reducing their carbon footprint and emissions. Flying accounts for 40% of all global emissions, and since 1980, CO2 emissions from international air travel have increased 87%. This is disproportionate high, and there are more daily flights than ever before, thanks to cheap flights and new and more efficient middle classes in many developing countries. The industry is seeking solutions such as more efficient engines and new fuels. In 2012, for instance, San Diego's wastewater airport was the first in the USA to install LED runway lights.

<https://theterrainlab.com/bees-take-flight/>

Carley Pasquolito + Chiao Yang

Boneyards 5

An aircraft boneyard or aircraft graveyard is a storage area for aircraft that are retired from service. Most aircraft in boneyards are either kept for storage with some maintenance or have their parts removed for reuse or resale and are then scrapped. Boneyard facilities are generally located in deserts, as well as in the Southwestern United States, since dry conditions reduce corrosion and the hard ground does not need to be paved. Due to the impact of the Covid-19 pandemic, an aviation demand for aircraft storage increased dramatically in 2020. Furthermore, many aircraft that had already been planned for short-term storage were ultimately stored long-term or even scrapped altogether, requiring maintenance work to prepare the boneyards for the different planes.

<https://theterrainlab.com/boneyards/>

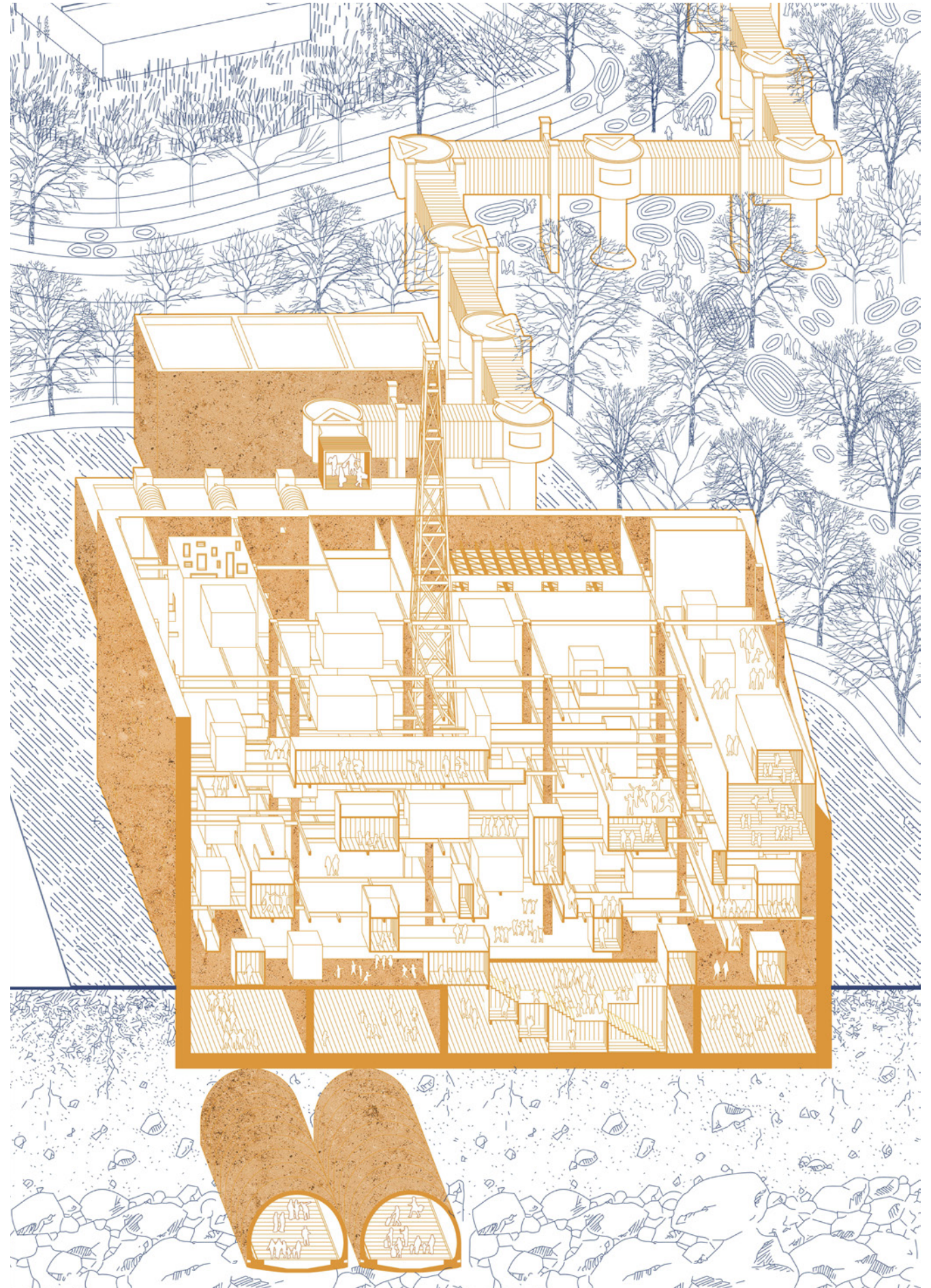
Carley Pasquolito + Chiao Yang

Airport City 6

Also known as Alfred, Mirvan Karim Hassan became the world's most famous airport dweller after living in Paris Charles de Gaulle airport from 20 August 1968 until July 2000. Originally from Iran, was given refuge status by Charles de Gaulle and claimed that his documents were stolen in Paris en route to the United Kingdom. He was refused entry and declined new papers due to changing his name and place of birth. In 2008, Karim Hassan was allowed to leave the airport to go to a hospital after contracting an unknown illness. After being looked after by the French Red Cross, Sir Alfred was transferred to a homeless reception centre in Paris, where he has lived since 2008.

<https://theterrainlab.com/airport-city/>

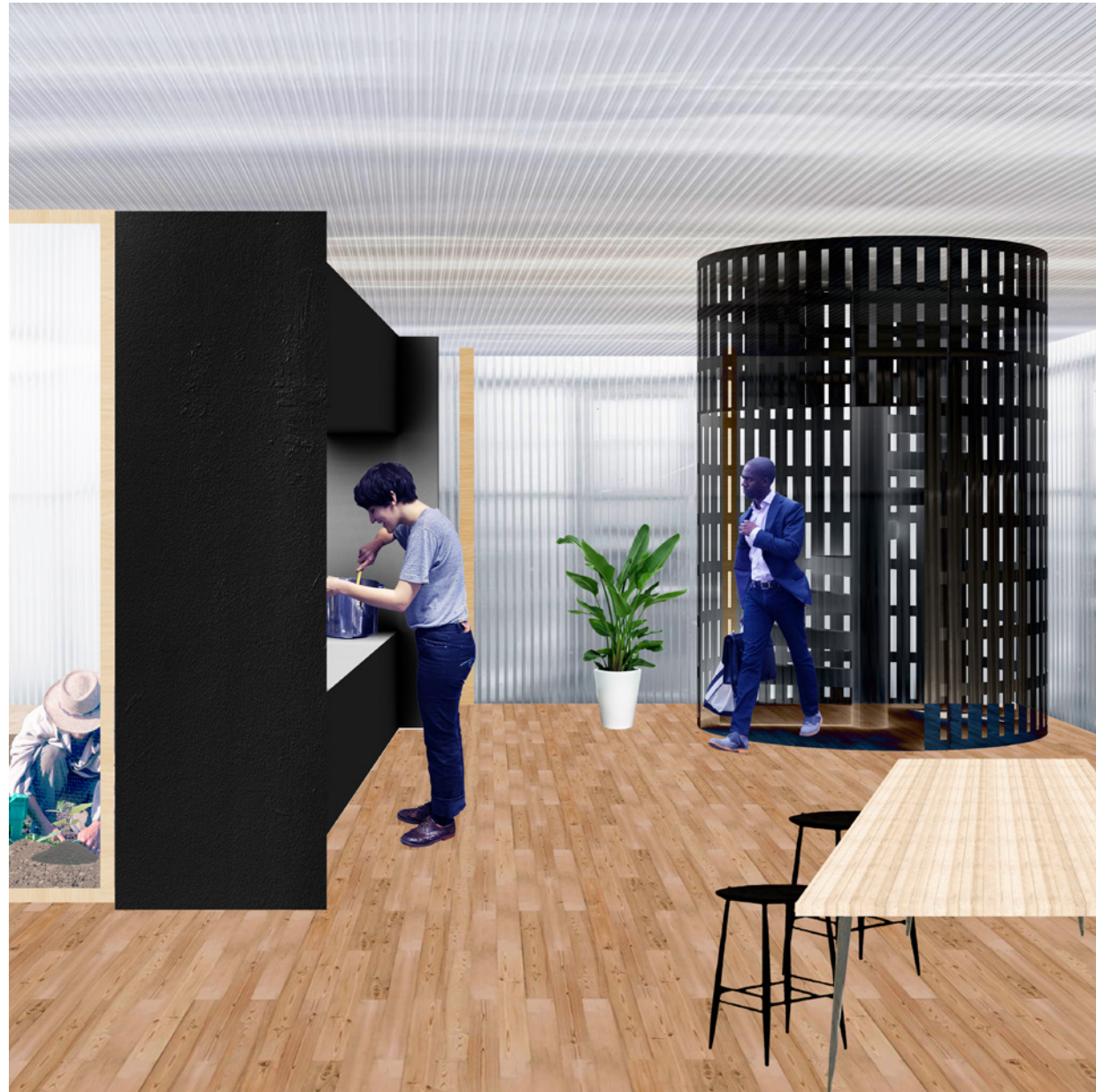
Carley Pasquolito + Chiao Yang



19
Pedestrian
Wkybridge
togetehr with the
transformation of
SAGE building to
form a continuous
flow of immigrant
workers

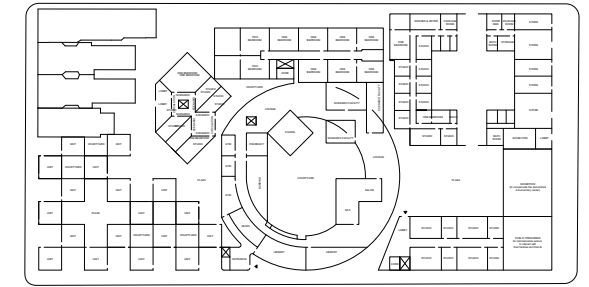
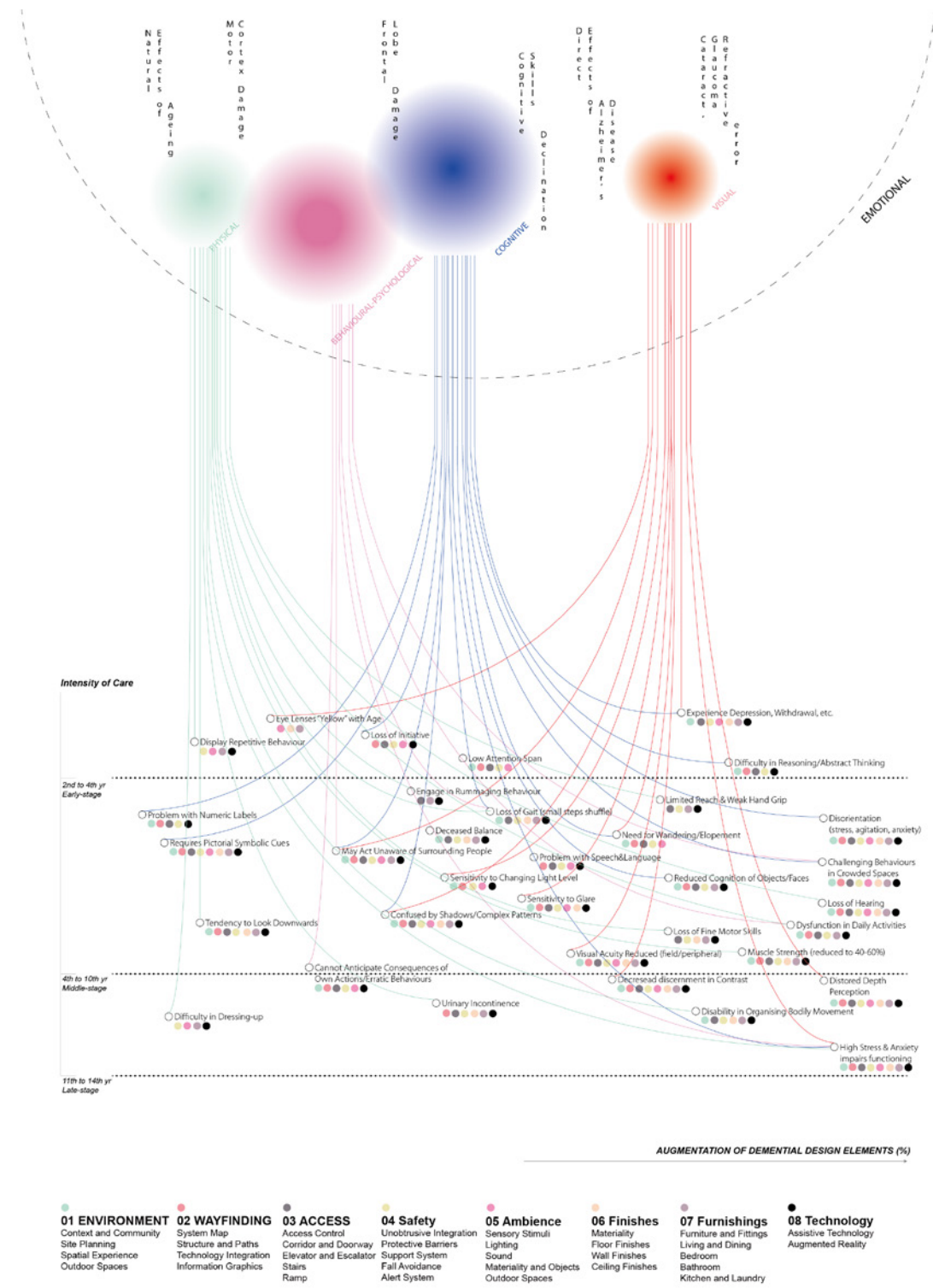
20
Interior breakdown
of the SAGE
building to
smaller podcast
room for grassroots
ham radio of the
community



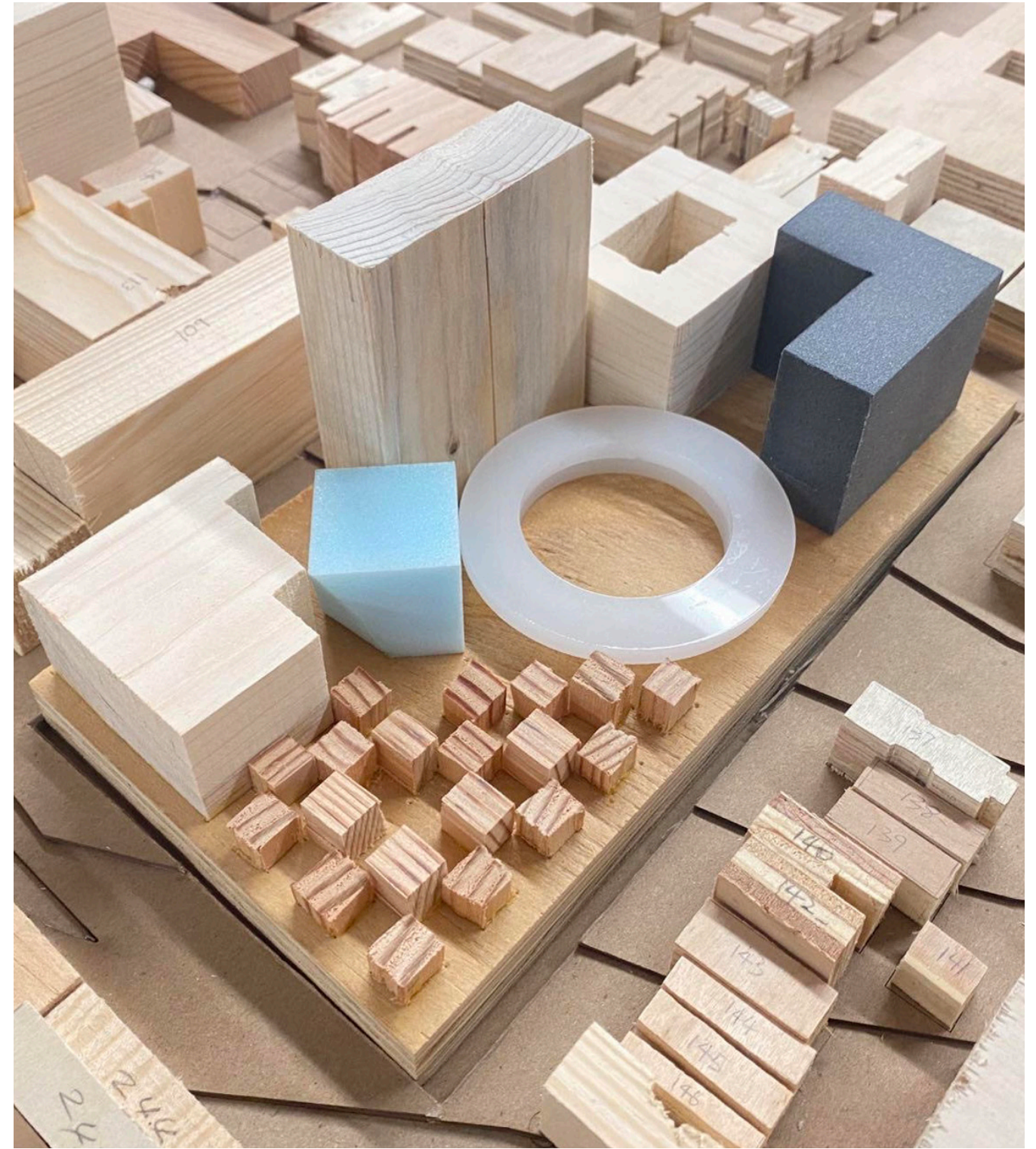


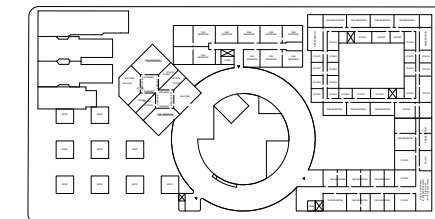
03. HOUSING OF DEMENTIA

The theme of the project is dementia housing: a community housing that accommodates the elderly with amnesia, the cognitively impaired, or those who feel insecure around new space. The site is in Bronx, New York, a district that has sixty percent of New York's nursing homes. In this context, we design 4 distinctive housing typology and a straightforward way-finding system. It is a safe place to live. Despite physical or psychological weakness, residents could still find their way home, and have the freedom to enjoy the environment and welfare with the community. The blunting of cognition, the decline of memory, the depletion of the body, and natural aging are not reasons to narrow our range of activities and lower our standard of living. The proposal design an environment that no one gets lost in.

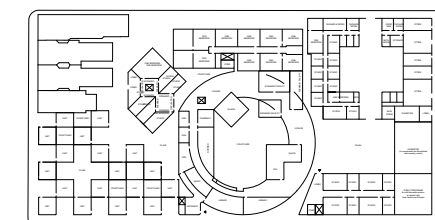
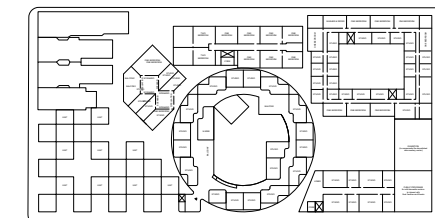


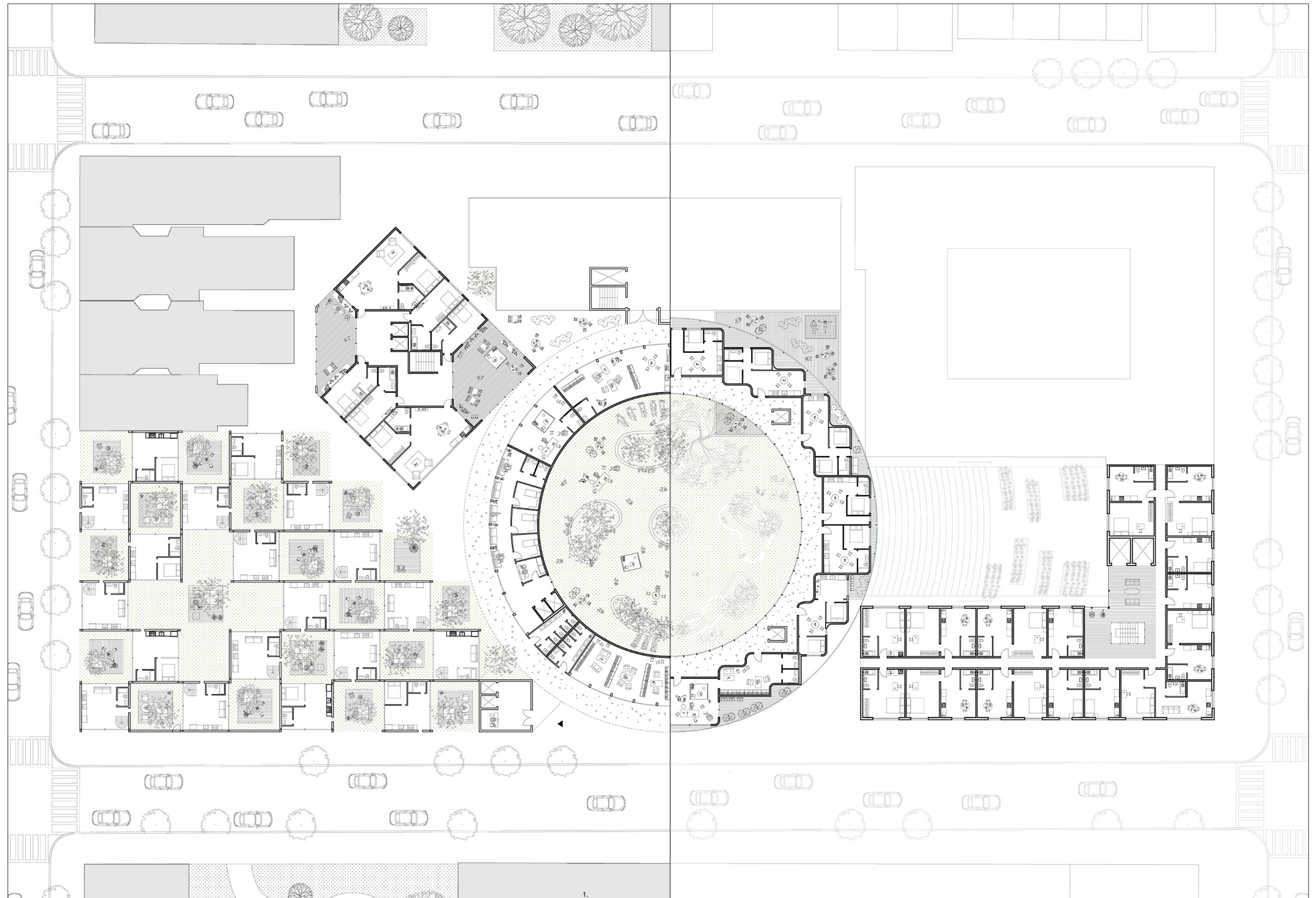
25 Dementia process and the existing architectural response
 26 Campus strategy with four recognizable distinct volume
 27 Stage1 - Black, Stage2 - Courtyard, Stage3 - Blue, Stage4 - Circle



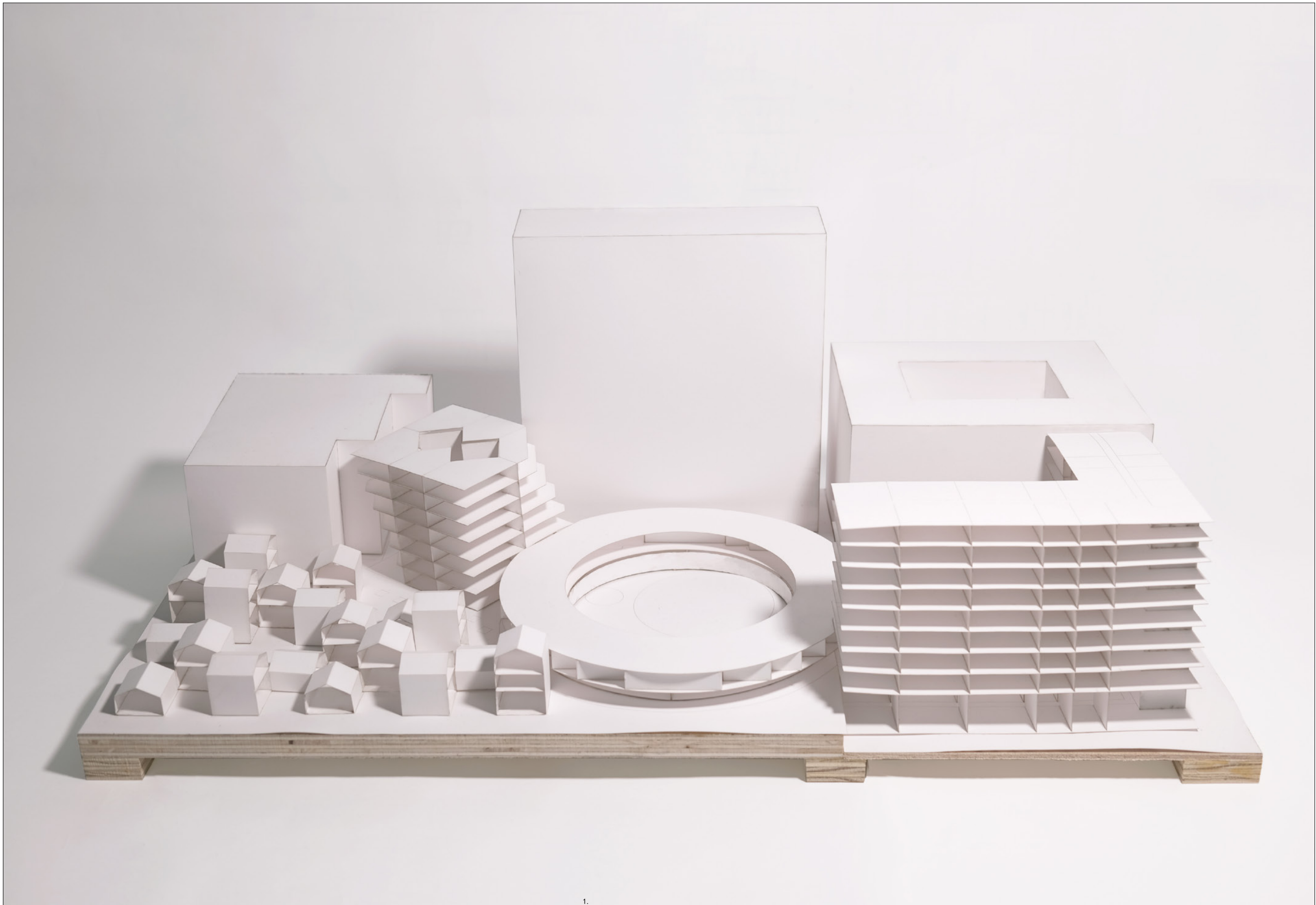


28
Stage1 - Black
Stage2 - Courtyard
Stage3 - Blue
Stage4 - Circle





29
Multi-level plan
with the left half
showing Ground
Floor and right
half showing 2nd
Floor



1.



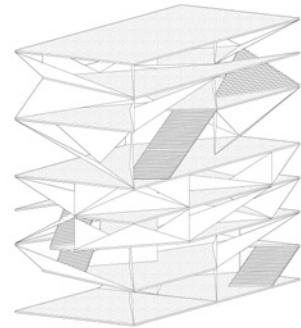


04. RESCUE P. S. 64 – THE PLAN OF ATTACK

P.S.64 is ultimately political. Stuck in multiple interweaved layers of interest/power network, it is the rotting meat hanging on spider webs. Despite its deliciousness, for almost over 30 years it is still hanging there, not because there are no predators, but because there are too many of them threatening each other. As enemies of each other, what is common between Gregg and Lopez is that for decades, they are both and still waiting. In a way both of them are victims of time, there is no winner, everyone loses. Lopez still lives in the building opposite to the school, staring at the unfinished work everyday from her window. To rescue P.S.64 from its current situation. I argue that an architectural disruptor should be introduced to the site immediately, tomorrow, in order to break the dilemma of infinite waiting.



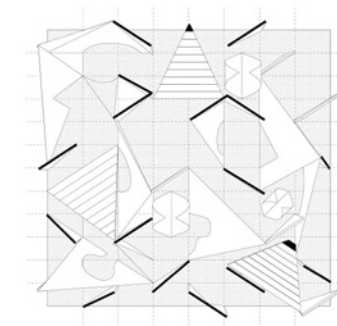
Spatial Prototype



Spatial Translation - Axo



Spatial Prototype



Spatial Translation - Plan



Prototype Model for Translation



Possible Translation as placeholder



35
Intervention study
and its spatial
translation

36
Pepper as a spirit
to radically spice
the situation up

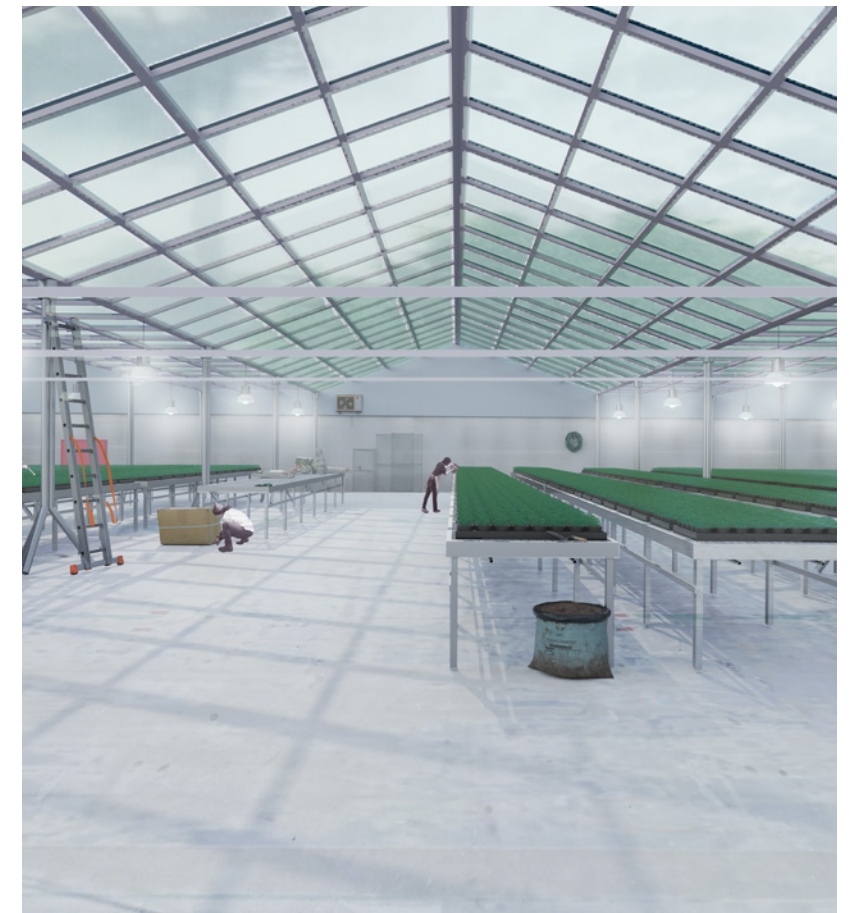
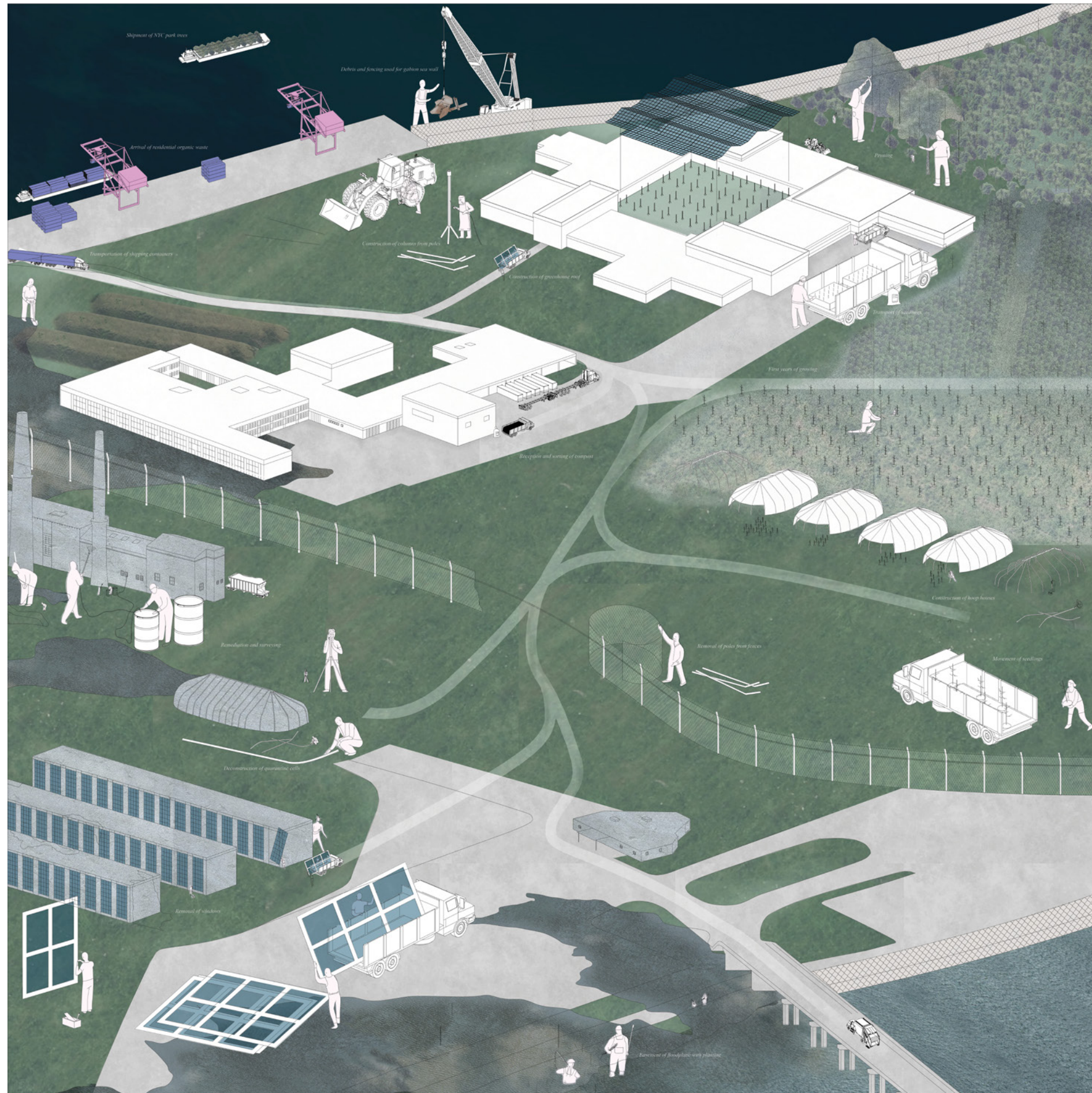


37
Front entrance,
the circular cut
and a golden
nugget coffee
at the project
beginning





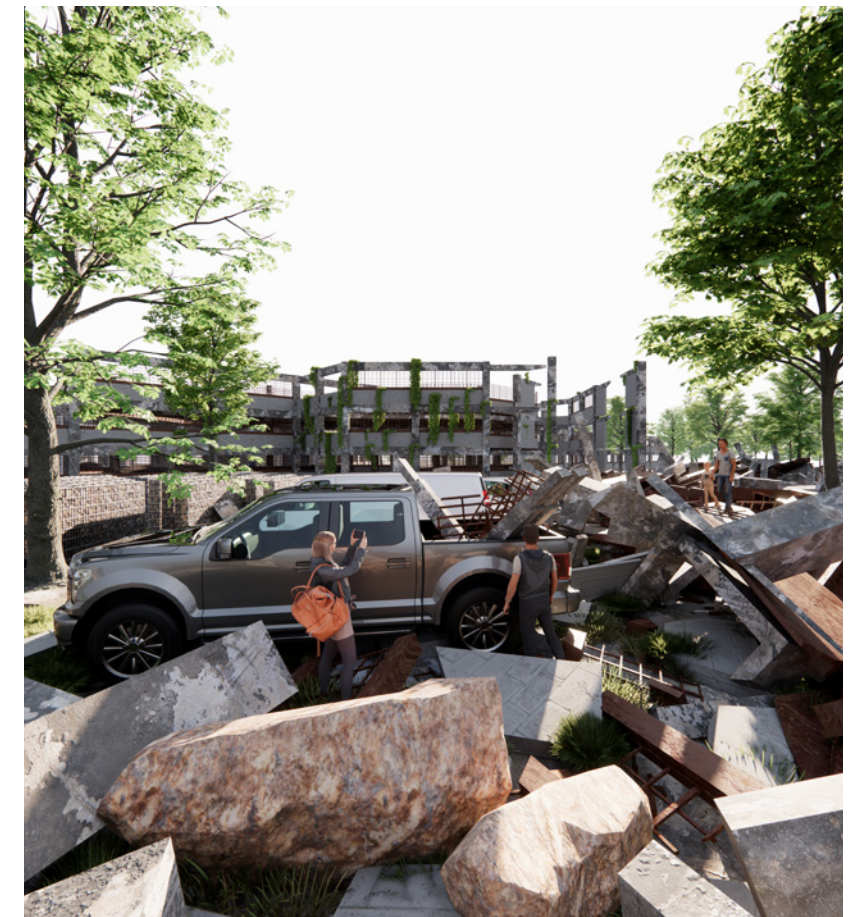
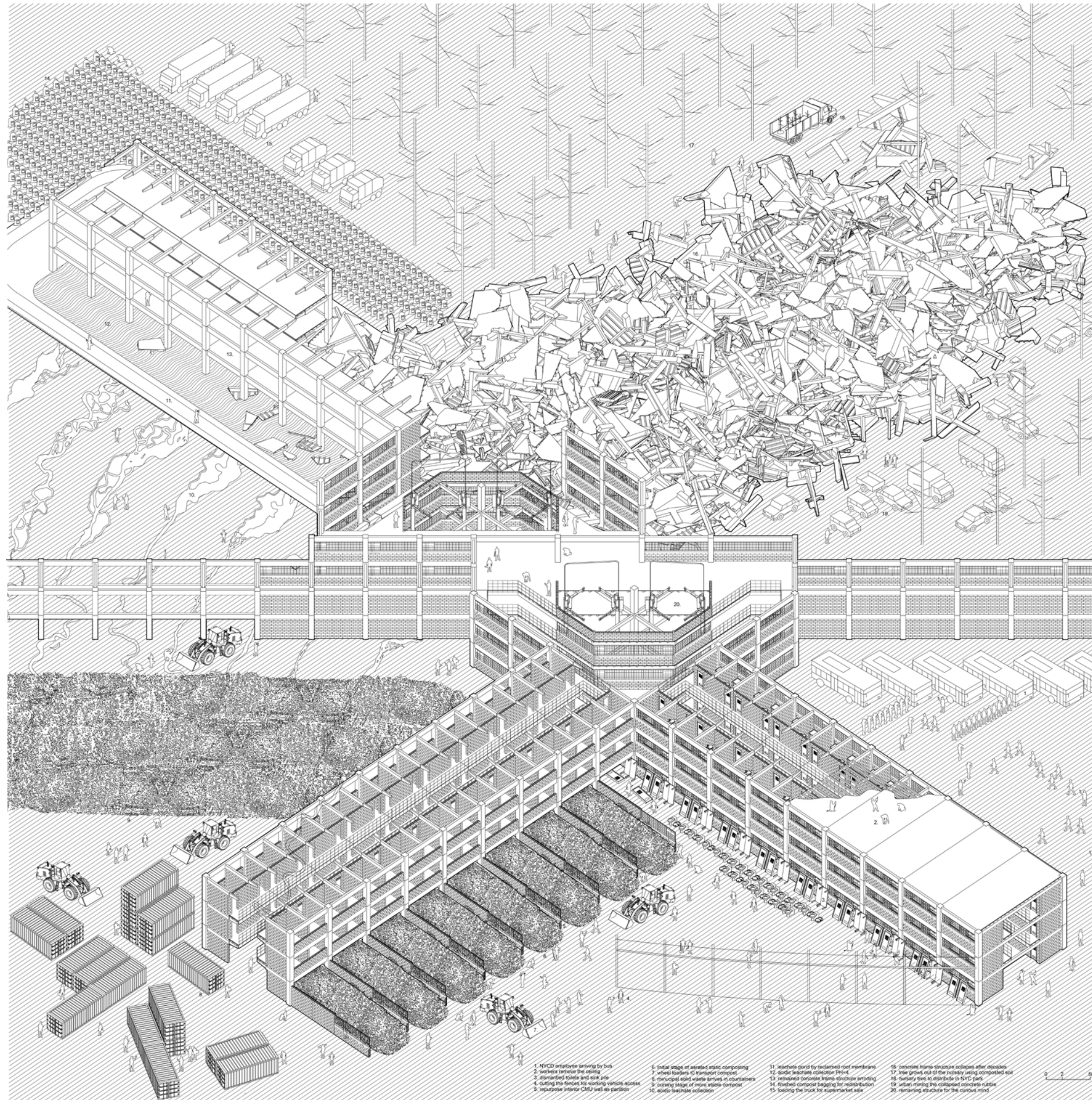




46
Reuse the prison
building as the
tree apiary

47
Interior of the
tree nursery



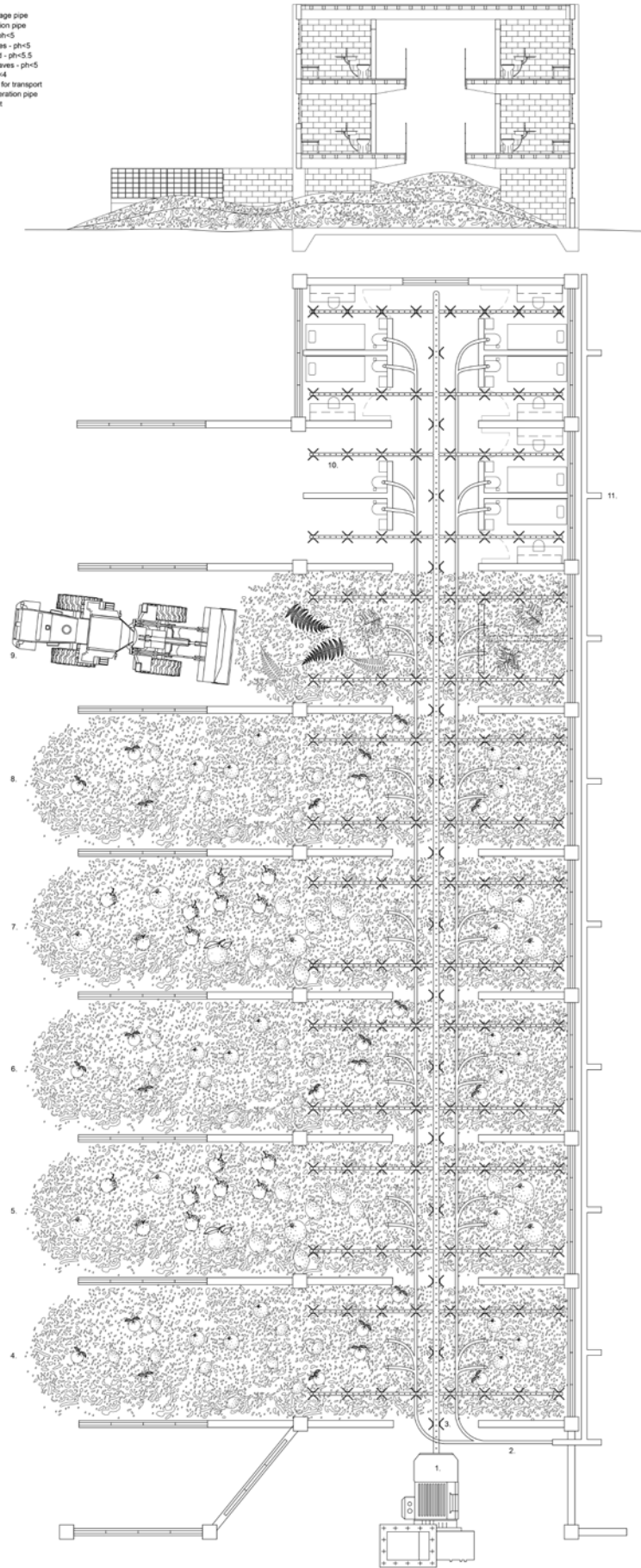


48
 Slowly cracking
 down of the prison
 building using the
 compost in process
 to degrade the
 building

49
 Urbna mining of the
 collapsed prison
 architecture



- 1. air blower
- 2. primary drainage pipe
- 3. primary aeration pipe
- 4. citrus Fruit - pH=5
- 5. conifer needles - pH=5
- 6. coffee ground - pH=5.5
- 7. deciduous leaves - pH=5
- 8. bracken - pH=4
- 9. wheel loader for transport
- 10. secondary aeration pipe
- 11. leachate outlet



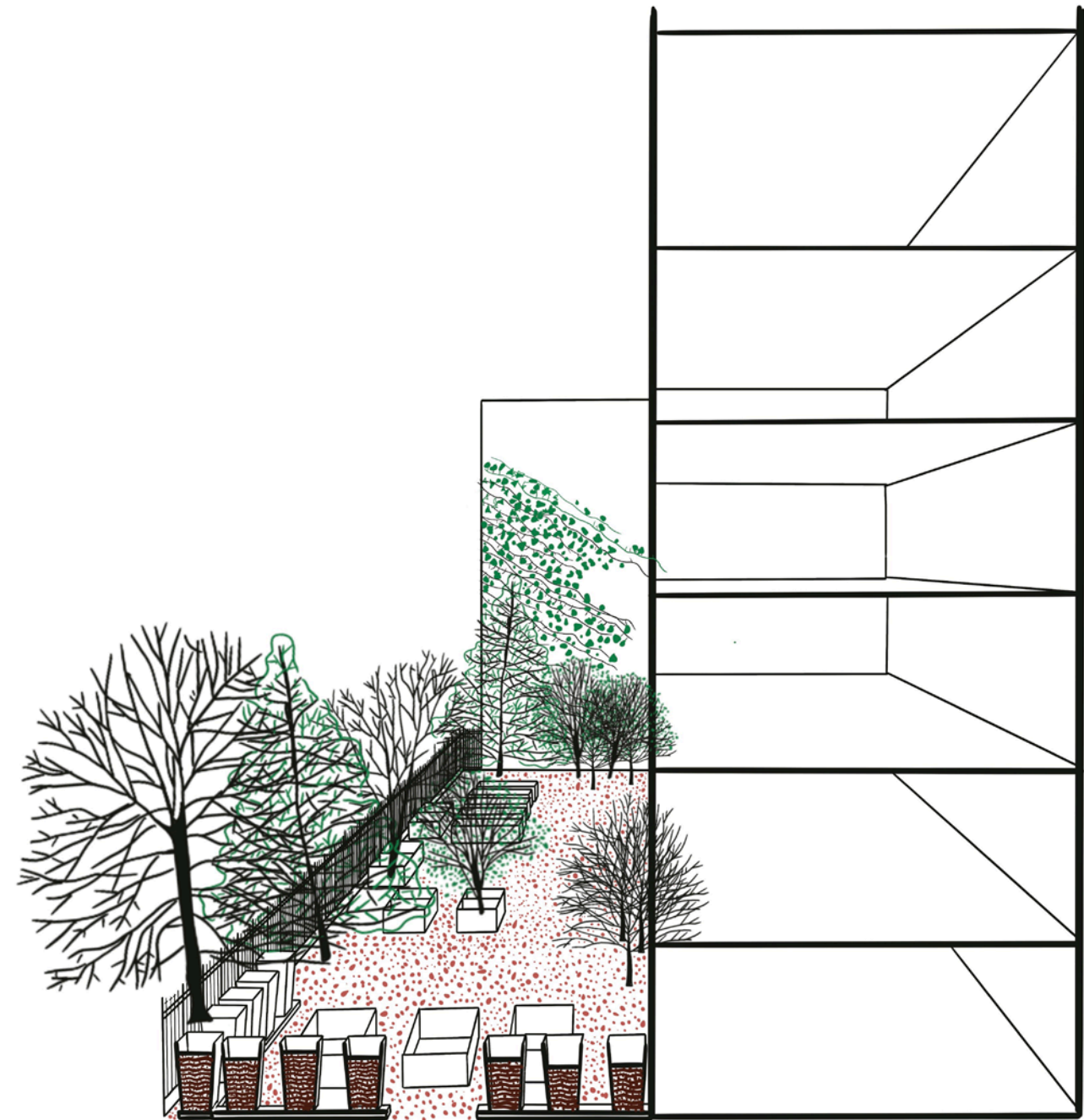
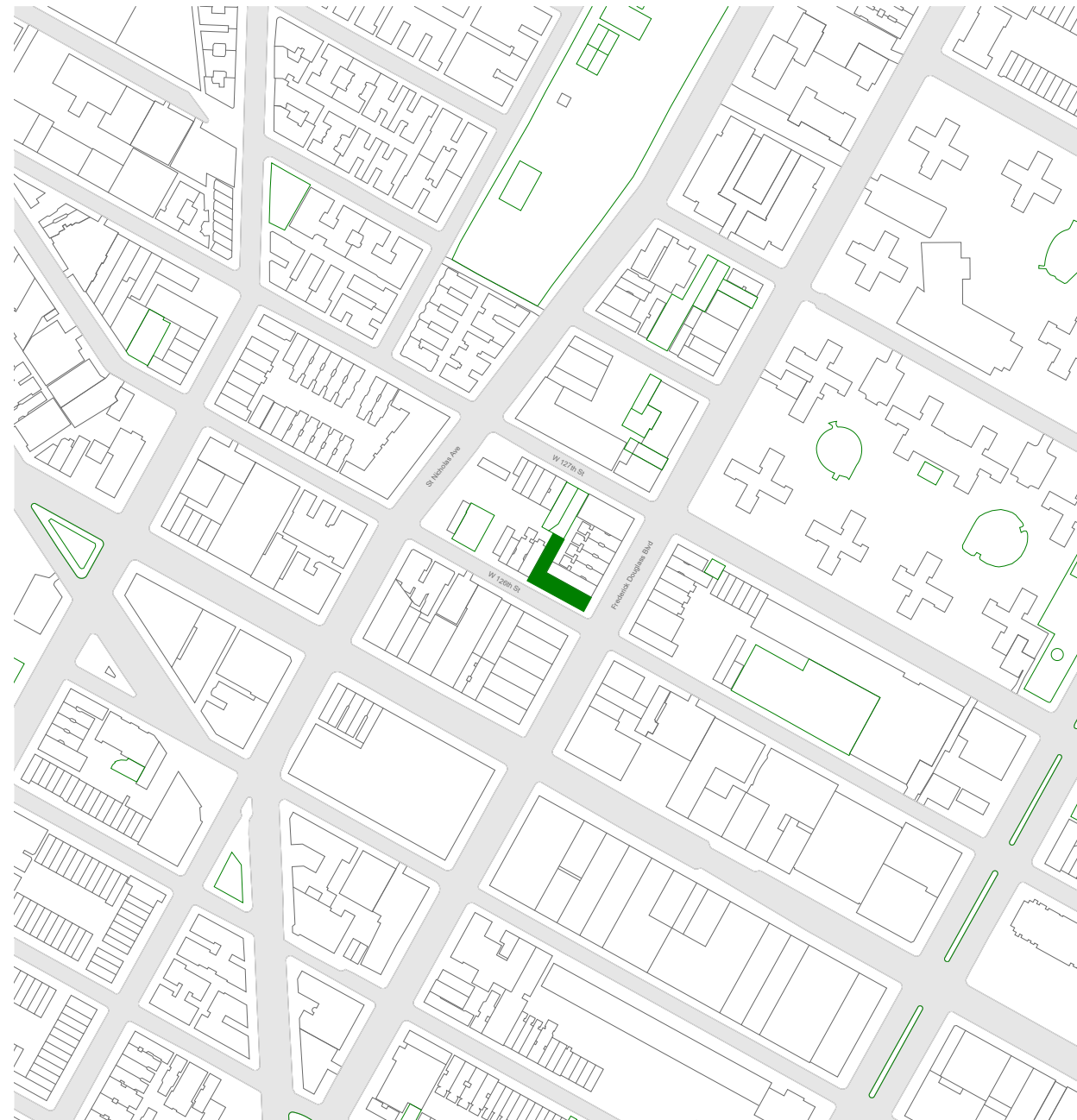
50 Using prison wing as the composting wing as the process requires similar space

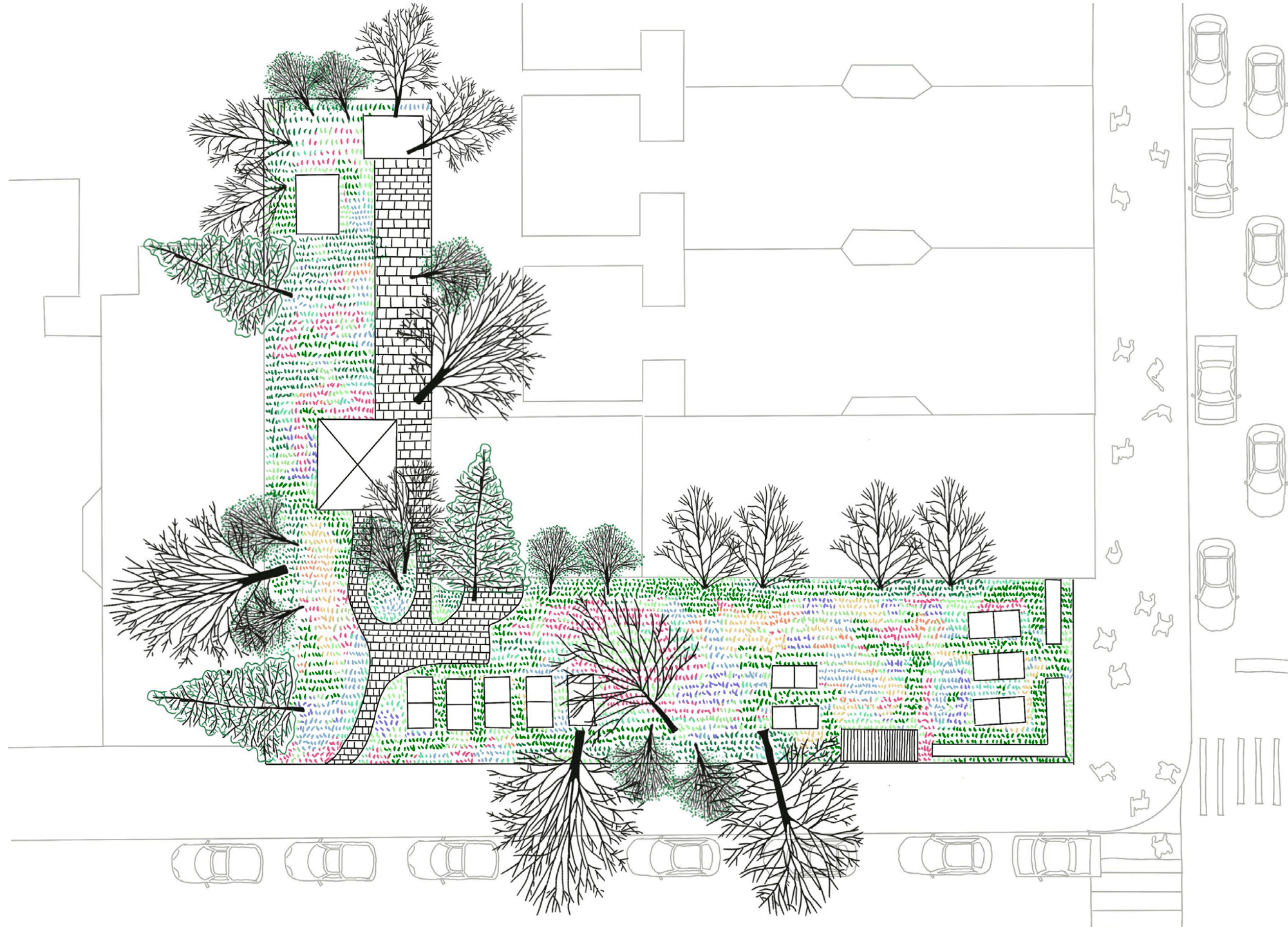
51 Interior condition

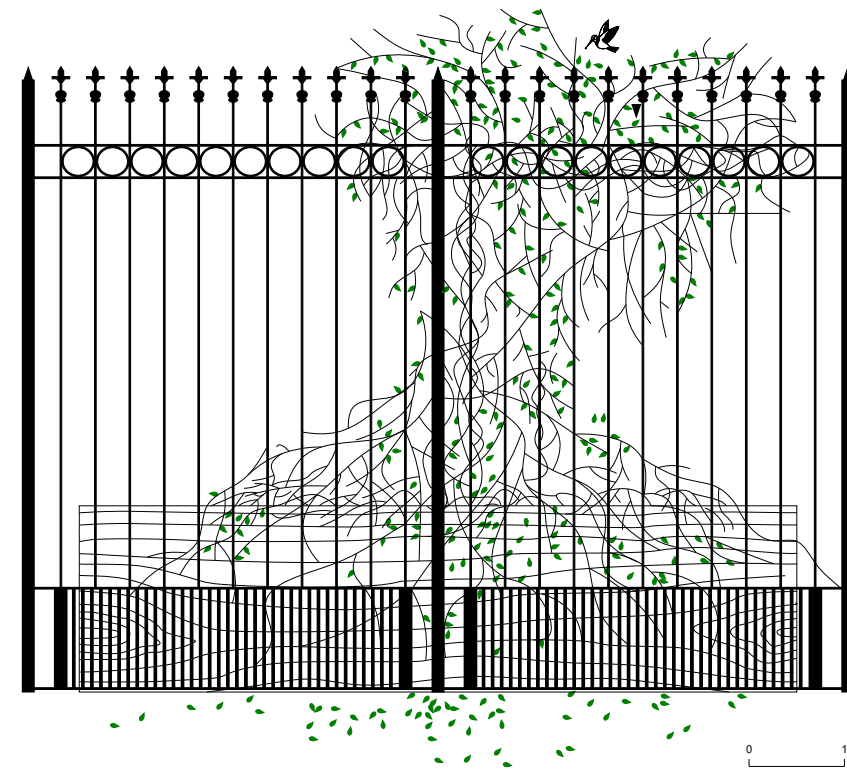
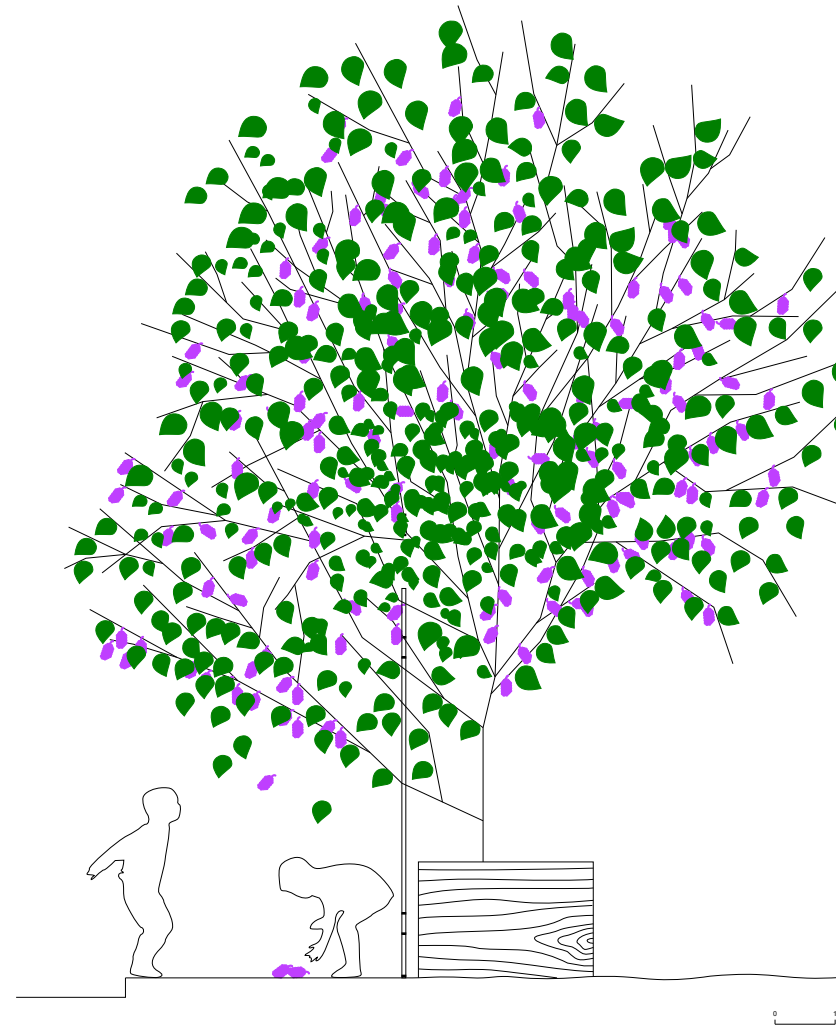
05. VACANT SPACE, NY, A Community Shed

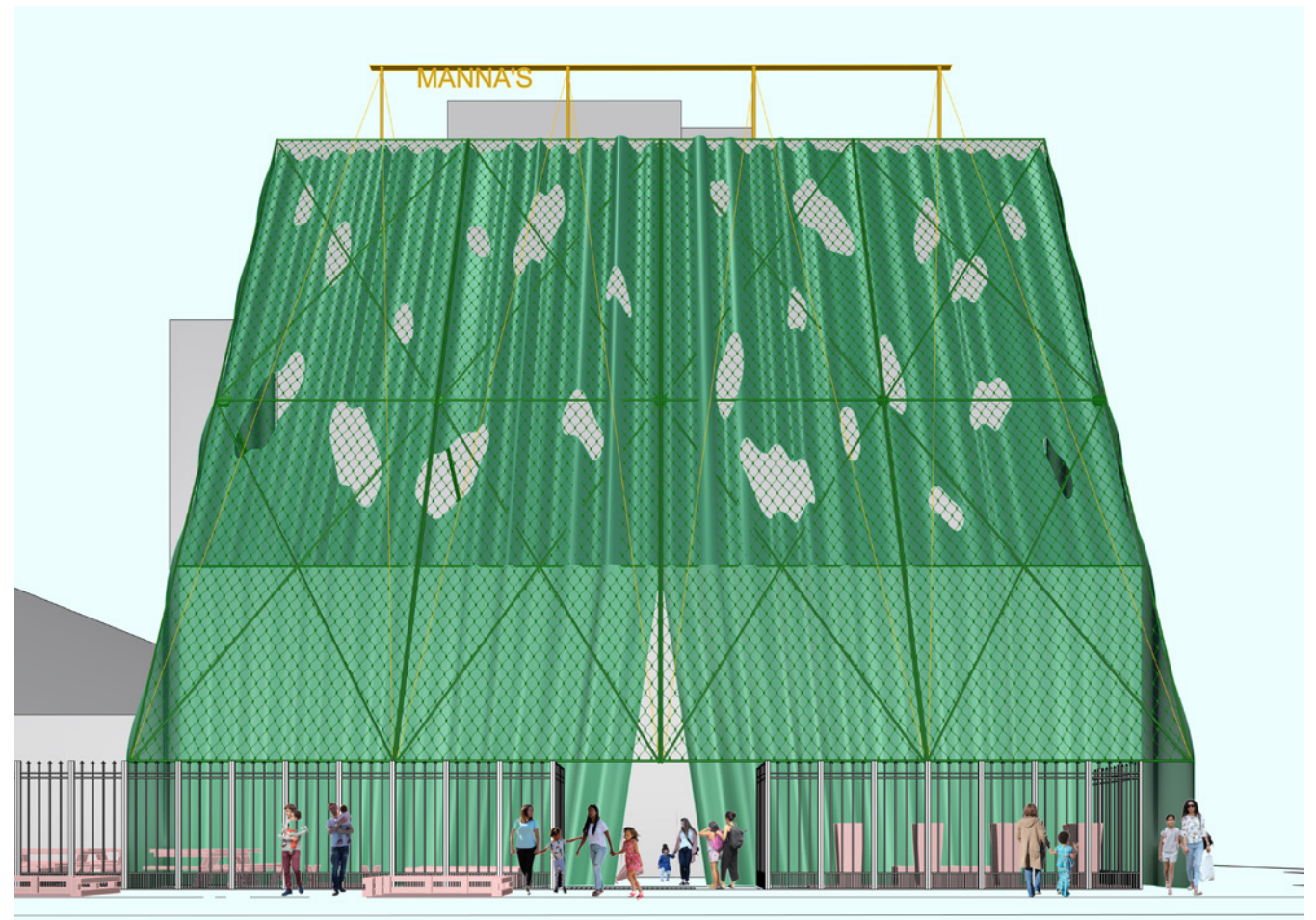
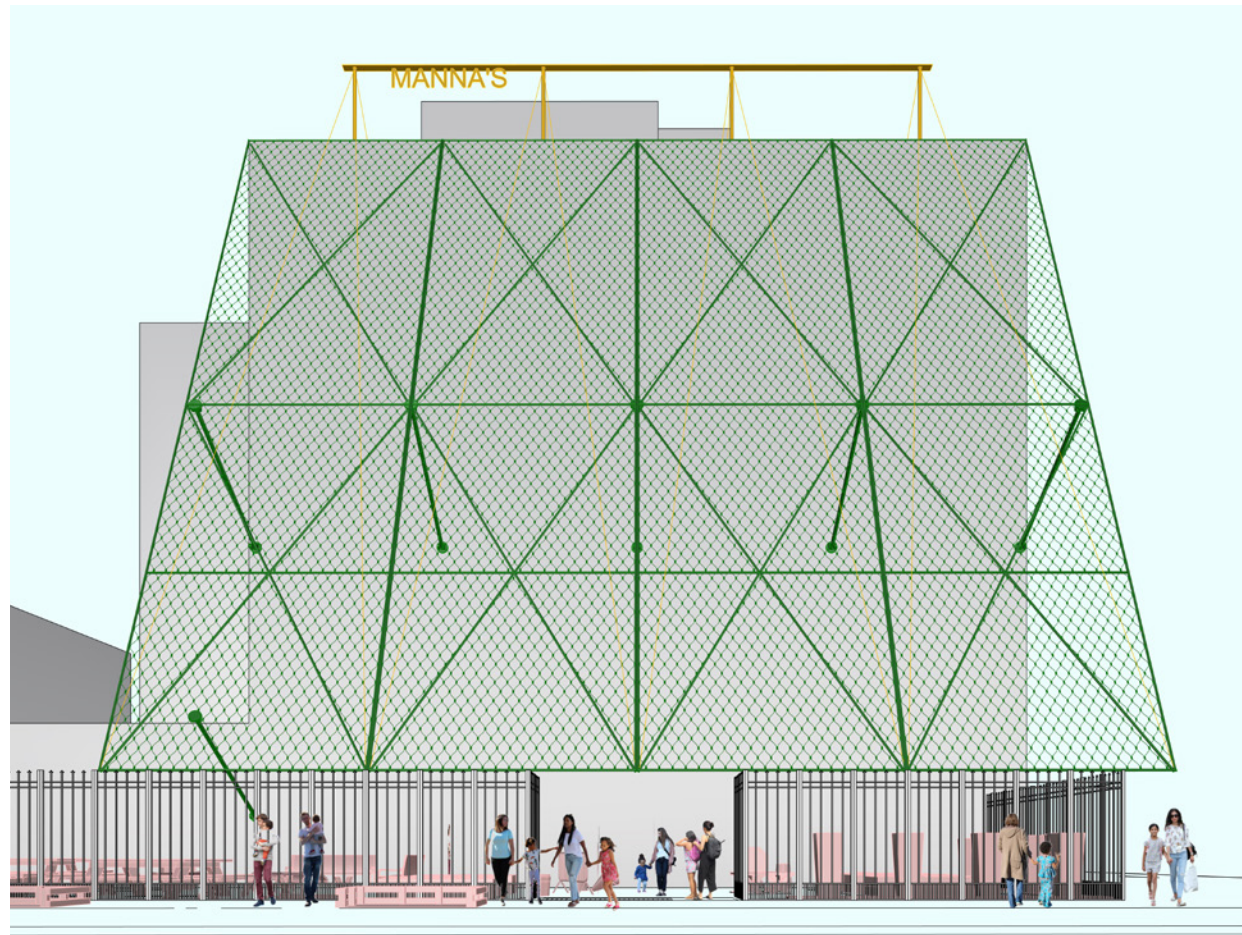
Ira Gershenhorn, a level 8 Google Local Guide and dedicated naturalist, gave Clayton William Community Garden a 2-star rating, noting it as "closed." Located in central Harlem between St. Nicholas Street and Frederick Douglass Boulevard, this community garden has been consistently inaccessible to the public. Despite efforts to reach out to the Manhattan/Bronx Land Trust, the land owner, there was no response to inquiries made via email and phone calls. The issue highlighted by Ira's review reflects a common problem among many New York community gardens. Although these gardens occupy valuable land intended for affordable housing and feature lush vegetation, they often appear closed off to the public. Enclosed by 10-foot black metal fences with locked gates, they typically restrict access from late October to mid-April, excluding the broader community.

The proposal envisions a dynamic transformation of the Clayton Williams Community Garden, igniting its vibrant community spirit! Picture this: a modest three-story timber shed poised along the bustling street, injecting life into every corner of the garden, round the clock, across all four seasons. The ground level, once secluded, bursts open, welcoming everyone into its embrace, with two elegant curtains cascading down to unveil a captivating community theater. Ascend the charming wooden staircases to the elevated second floor, a verdant sanctuary where members can nurture, cultivate, and harvest to their heart's content. Along Frederick Douglas street, an enclosed oasis awaits, poised to blossom into a lush greenhouse, illuminated by enchanting purple UV lights that dance through the night. This innovative structure acts as a guardian, offering cool respite on scorching summer days and cocooning warmth during chilly winters, fostering a paradise for plant growth both indoors and out, atop platforms and amidst the new architecture.

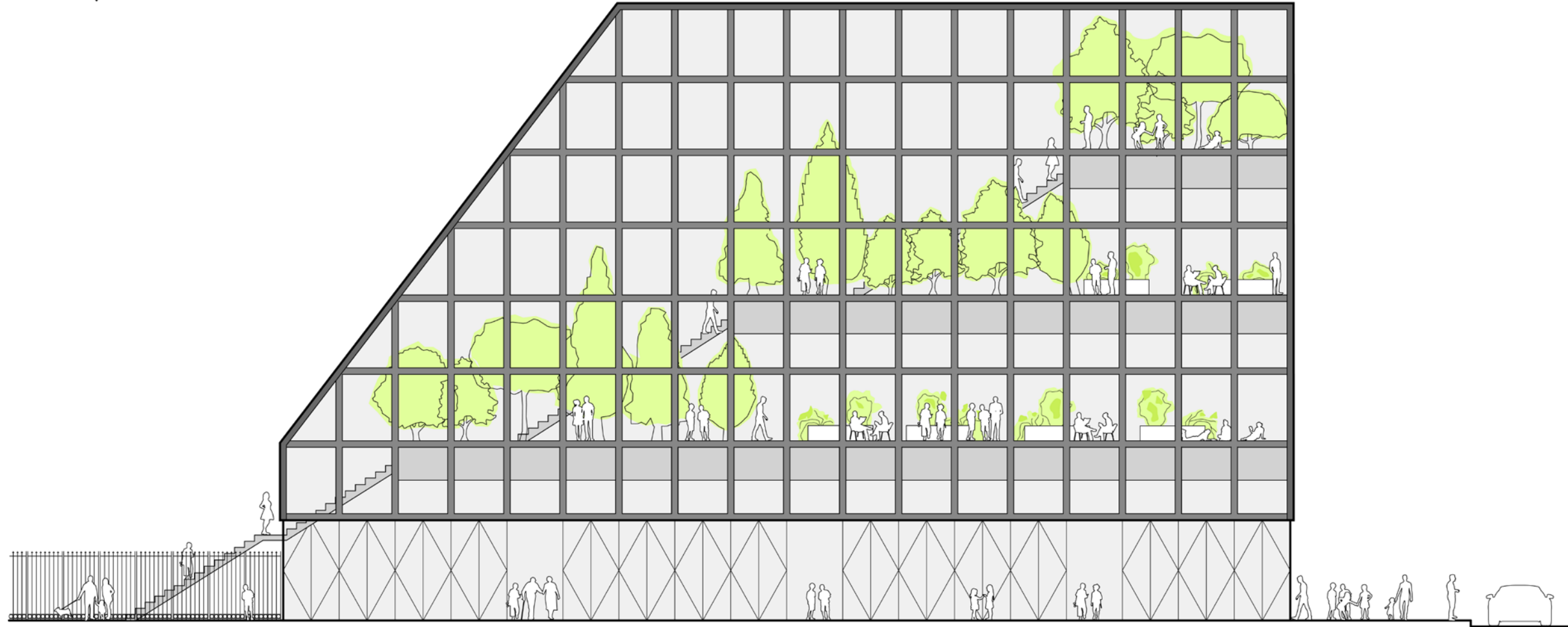






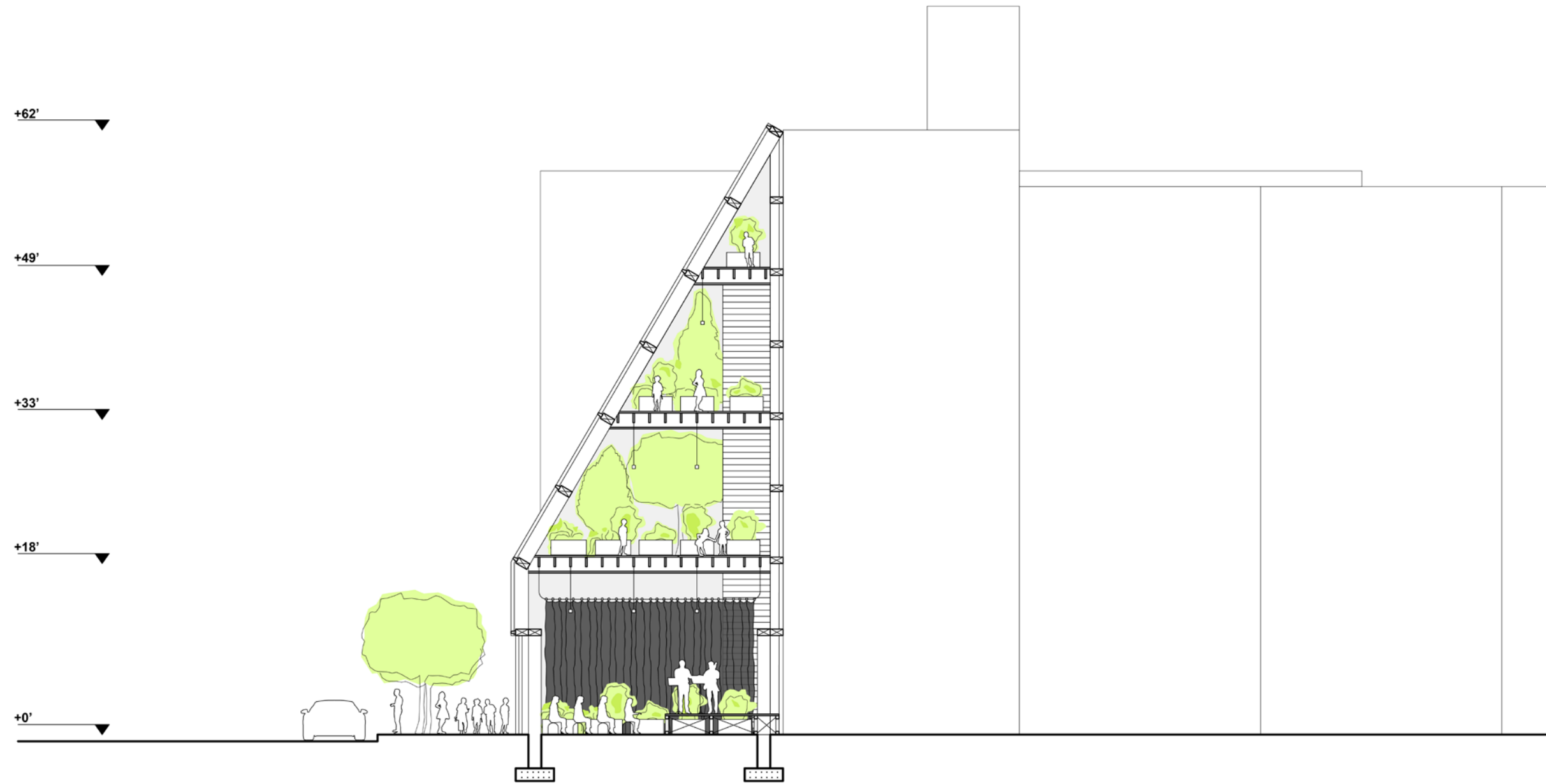


+62'



SOUTH ELEVATION

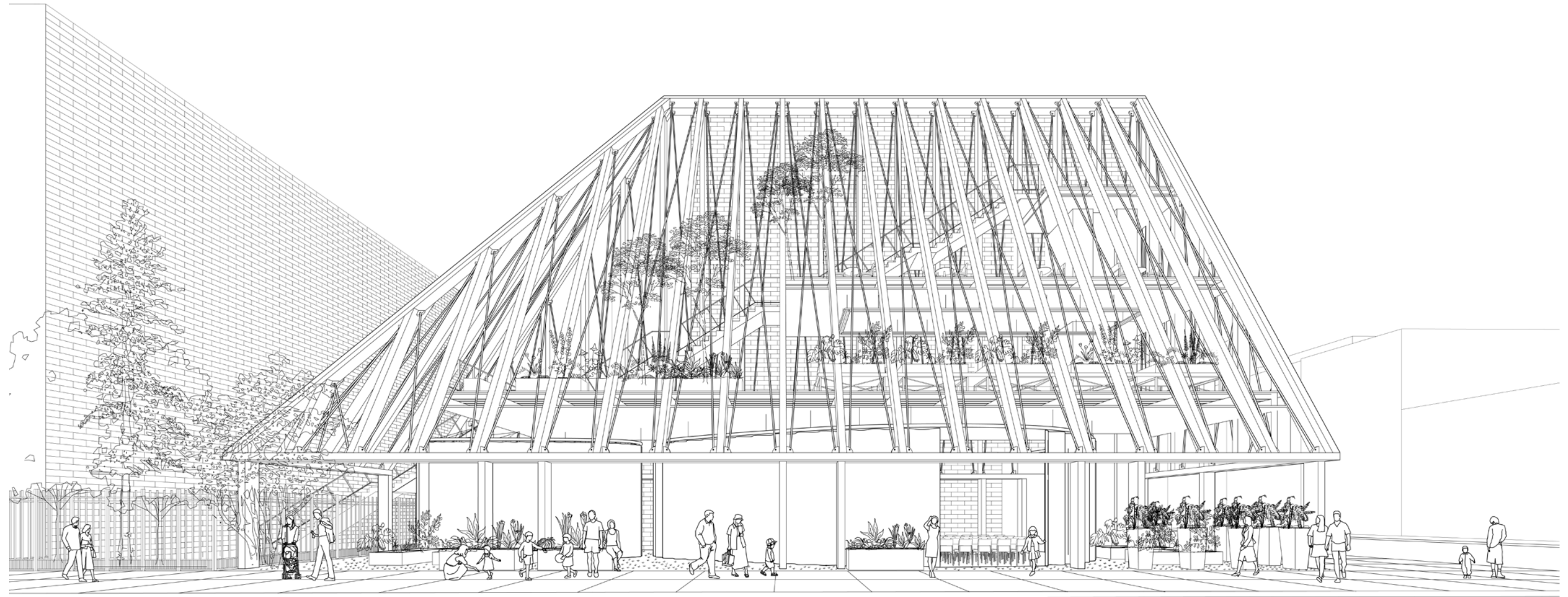
3/16" = 1'



EAST SECTION

3/16" = 1'





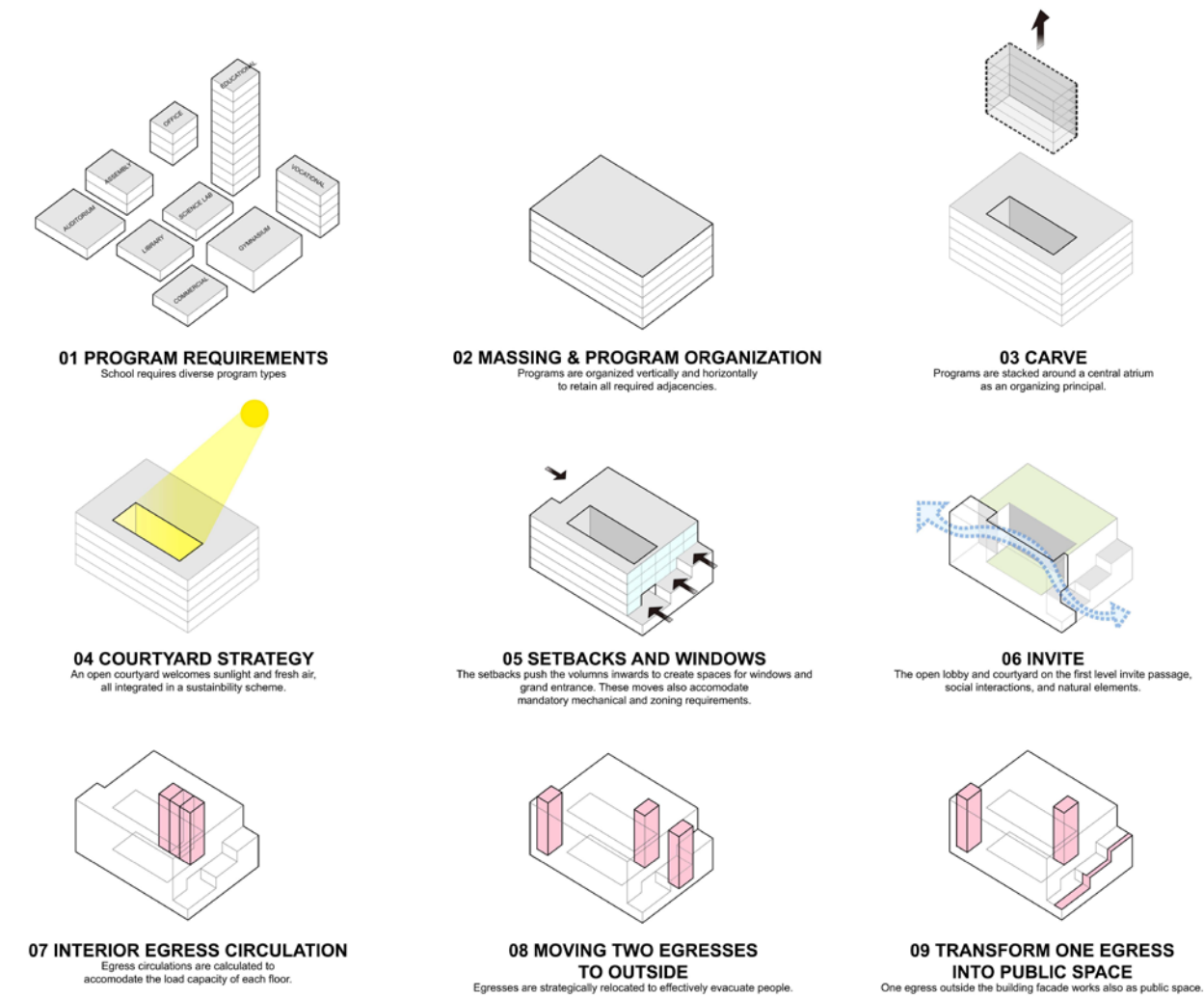


06. SOHO K12 SCHOOL – SD/DD PACKAGE STUDY

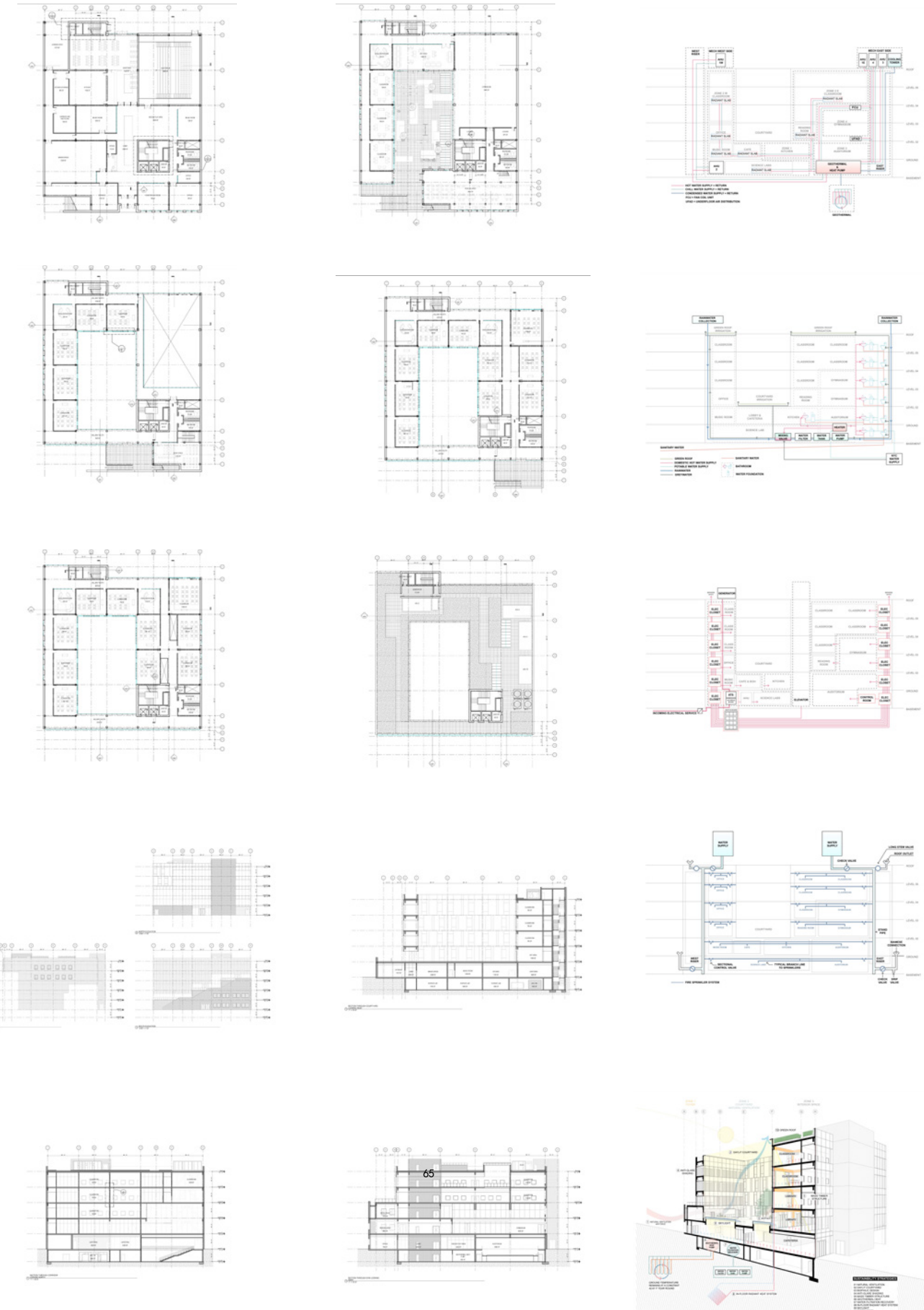
SOHO k12 School is a technical study that dive deep into designing one school to a potential SD/DD package level. The study explores CLT structure on top of concrete framing structure; long span; natural ventilation; different facade types; lighting design; Egress itenitary etc.The project is completely built in revit.



64



65

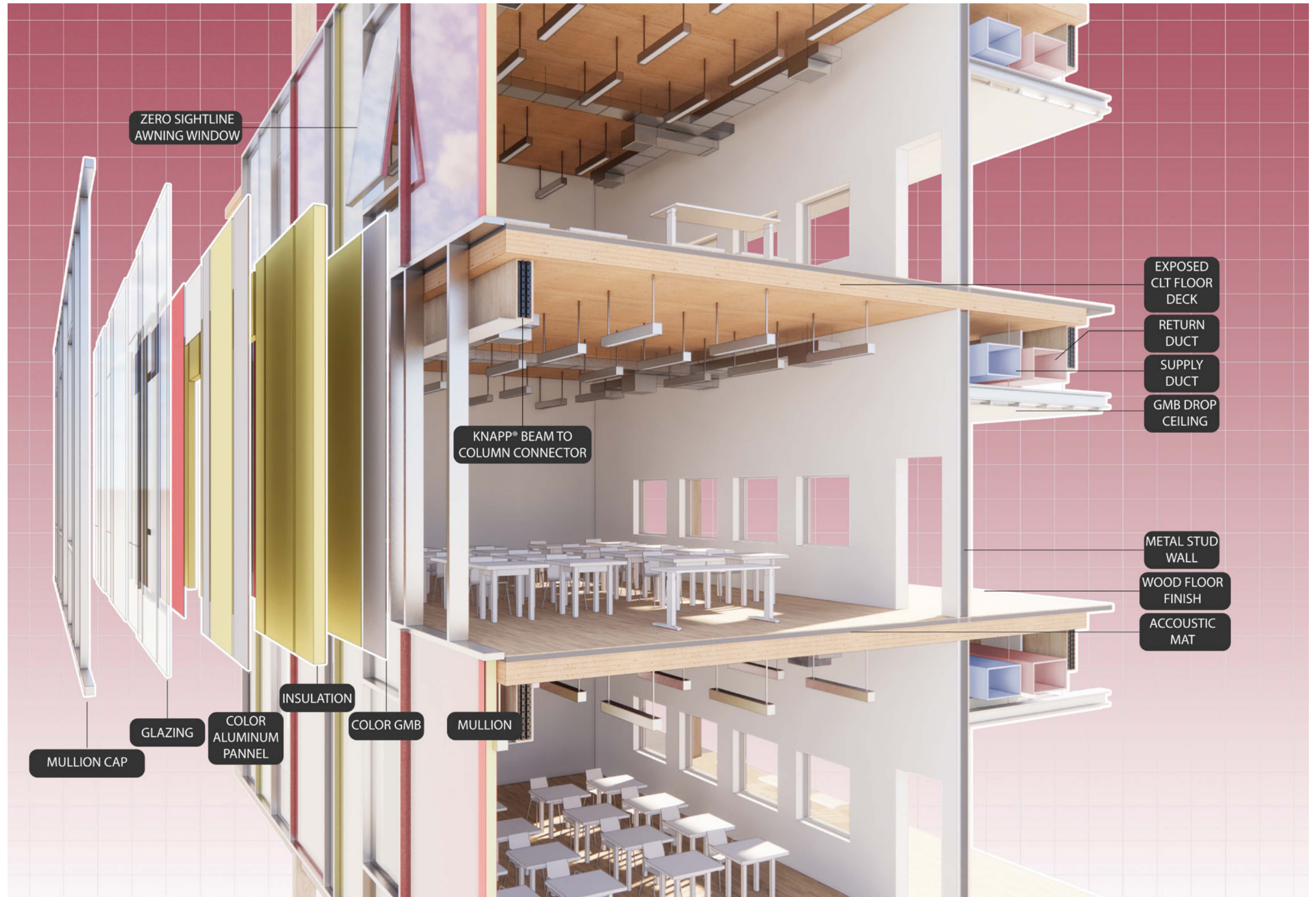


64
Site Plan

65
Massing Strategy

66
Plan

66



ZERO SIGHTLINE
AWNING WINDOW

KNAPP® BEAM TO
COLUMN CONNECTOR

EXPOSED
CLT FLOOR
DECK

RETURN
DUCT

SUPPLY
DUCT

GMB DROP
CEILING

METAL STUD
WALL

WOOD FLOOR
FINISH

ACCOUSTIC
MAT

INSULATION

MULLION

MULLION CAP

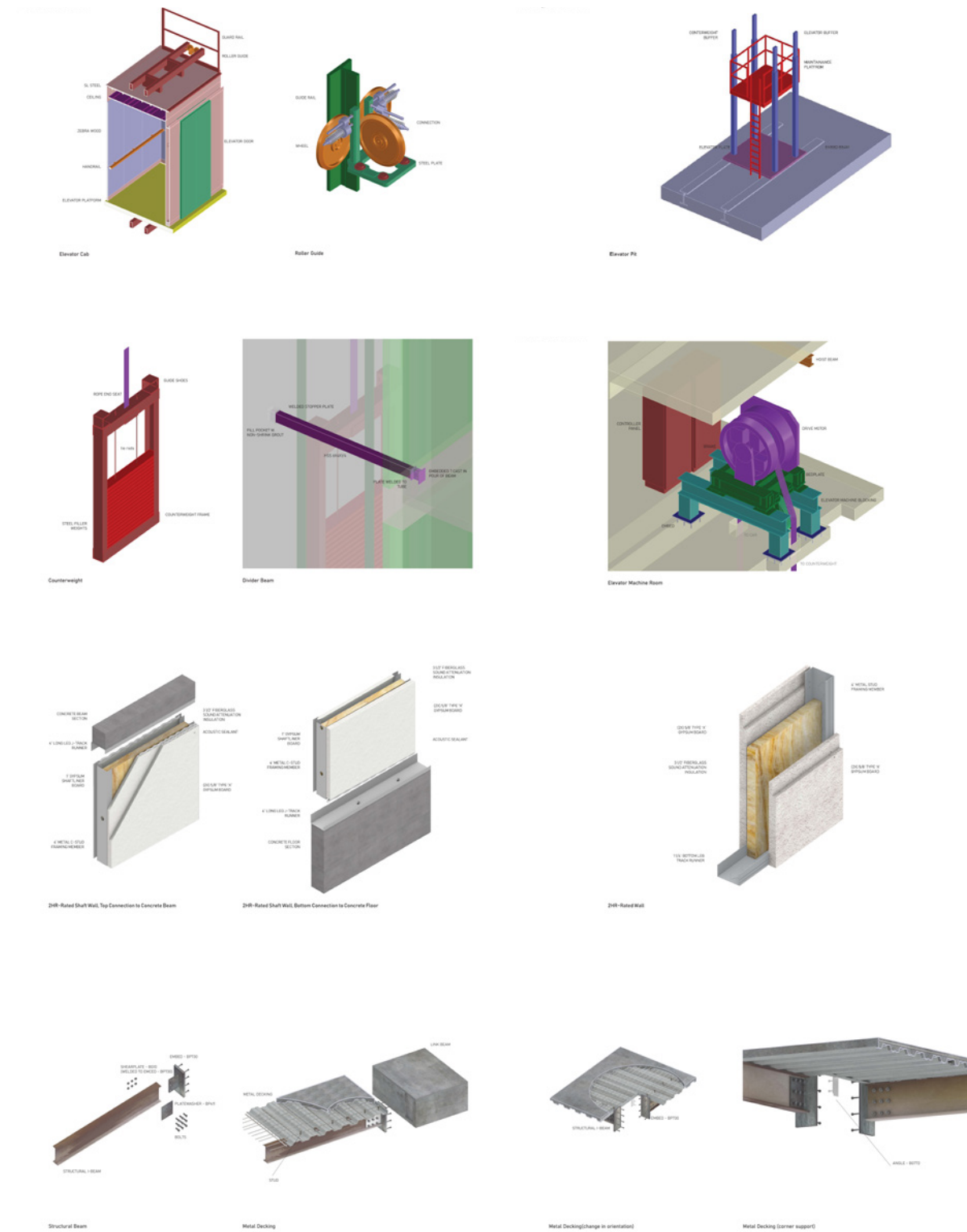
GLAZING

COLOR
ALUMINUM
PANNEL

COLOR GMB

07. VERTICAL TRANSPORTATION – ELEVATOR SYSTEM STUDY

The vertical transportation study looks in detail the elevator system and tried to understand every bits and pieces of its complicated mechanical equipment. It studies the elevator pit, the elevator cap, the guide rail and the 3 way roller, the counterweight and the machine room, the carpentry wall, the concrete core and the metal decking. The project also produces a movable model that mimic the operation of elevators.



70
Concrete core and
metal decking

71
Elevator machine
room, elevator cab
and counterweight

