

SCHOOL NAME:

Columbia University GSAPP

DATE:

Fall 2020 - Spring 2023

PROGRAM:

MASTER OF ARCHITECTURE I

YIFEI YUAN

GSAPP
2023

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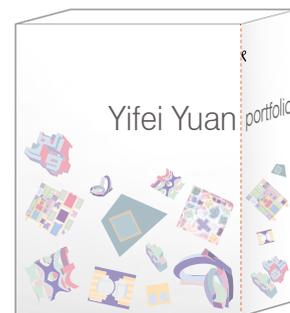
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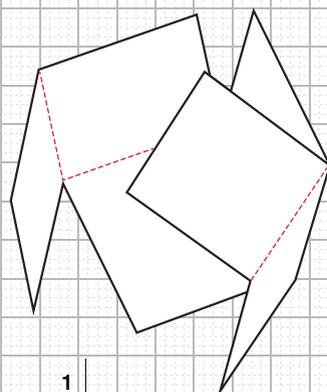
ADV V Advance Studio V

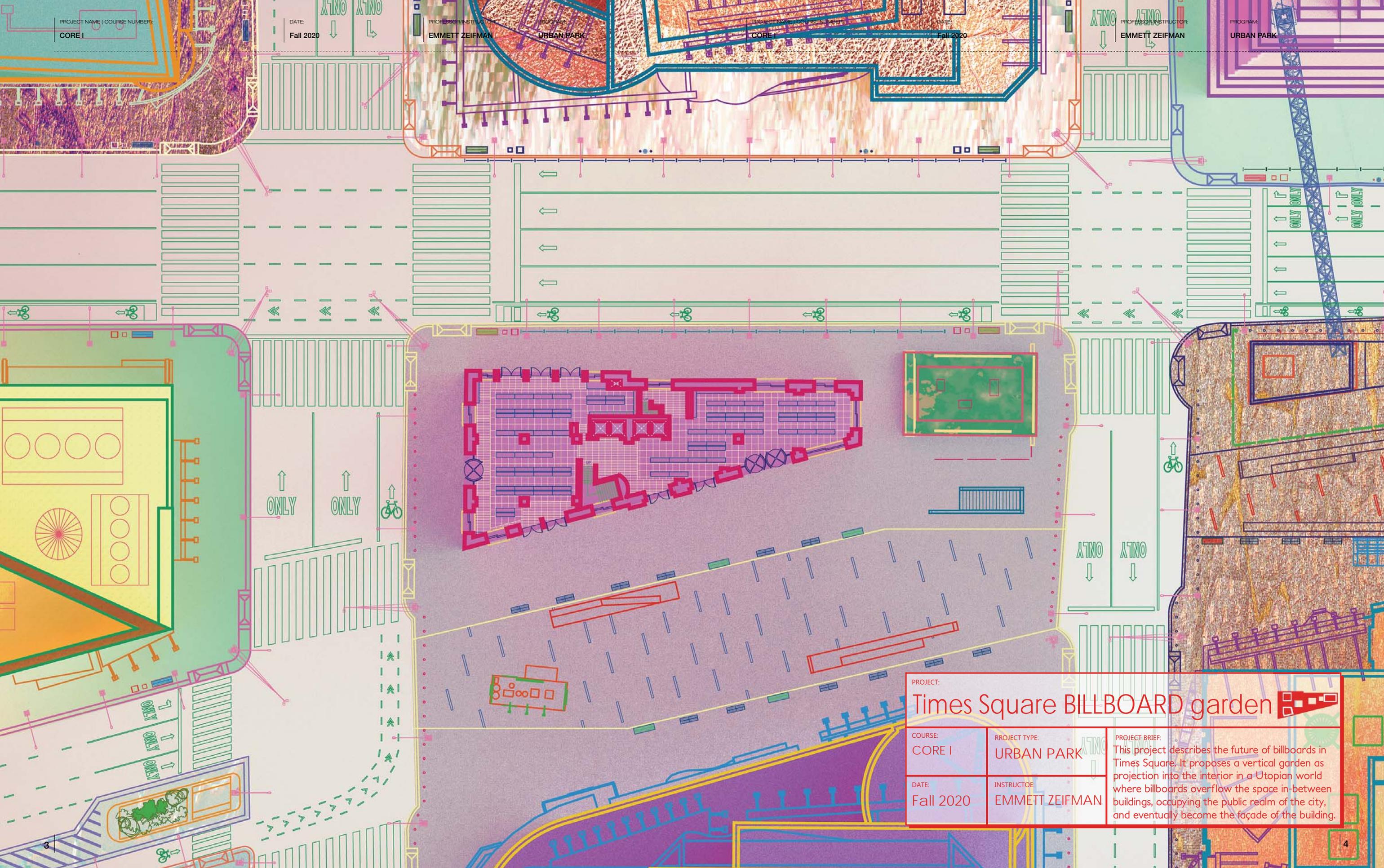
ADR II Drawing Representation

ADR I Drawing Representation

ATV Vertical Structure

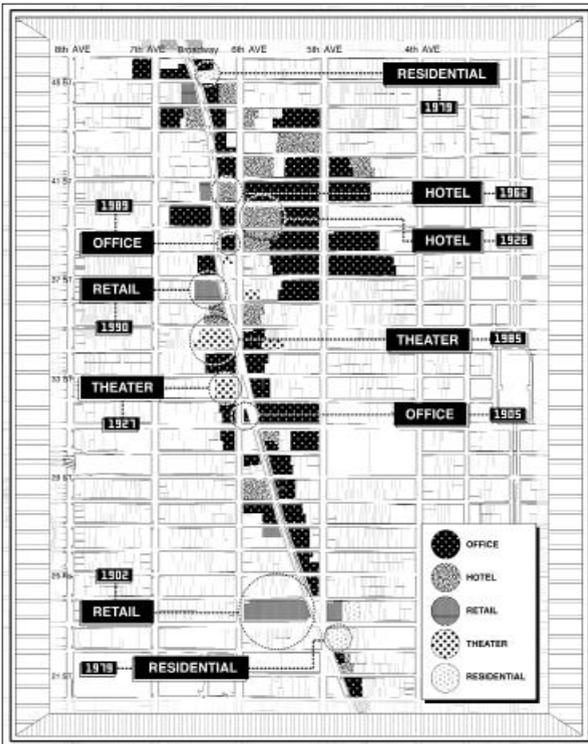
ULTRAREAL Rendering



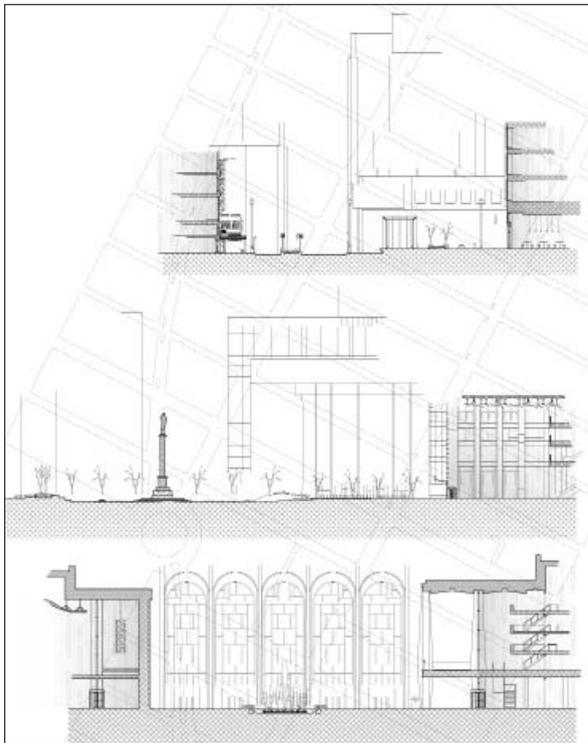


PROJECT:
Times Square BILLBOARD garden

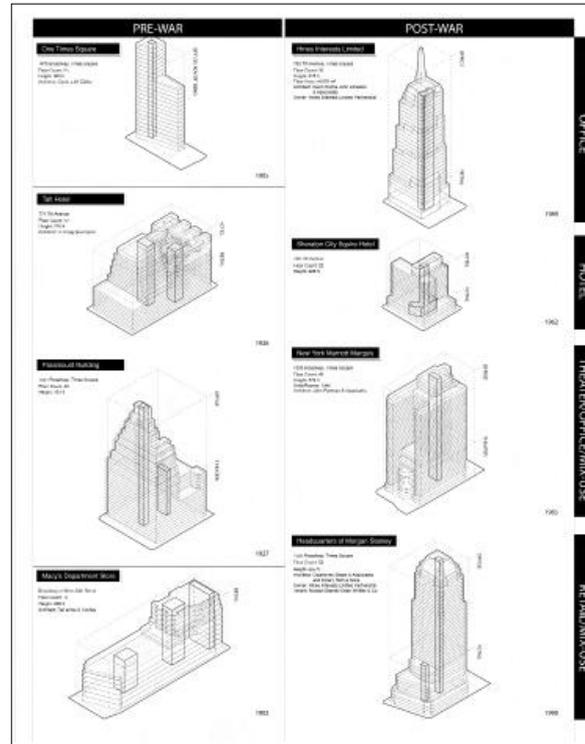
COURSE: CORE I	PROJECT TYPE: URBAN PARK	PROJECT BRIEF: This project describes the future of billboards in Times Square. It proposes a vertical garden as projection into the interior in a Utopian world where billboards overflow the space in-between buildings, occupying the public realm of the city, and eventually become the façade of the building.
DATE: Fall 2020	INSTRUCTOR: EMMETT ZEIFMAN	



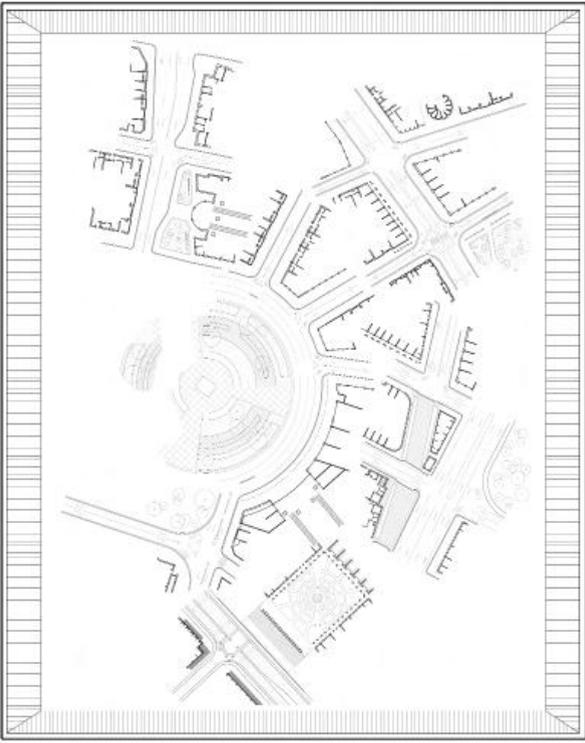
Highrise Typology Site Plan
Site Context Map // along Broadway Ave



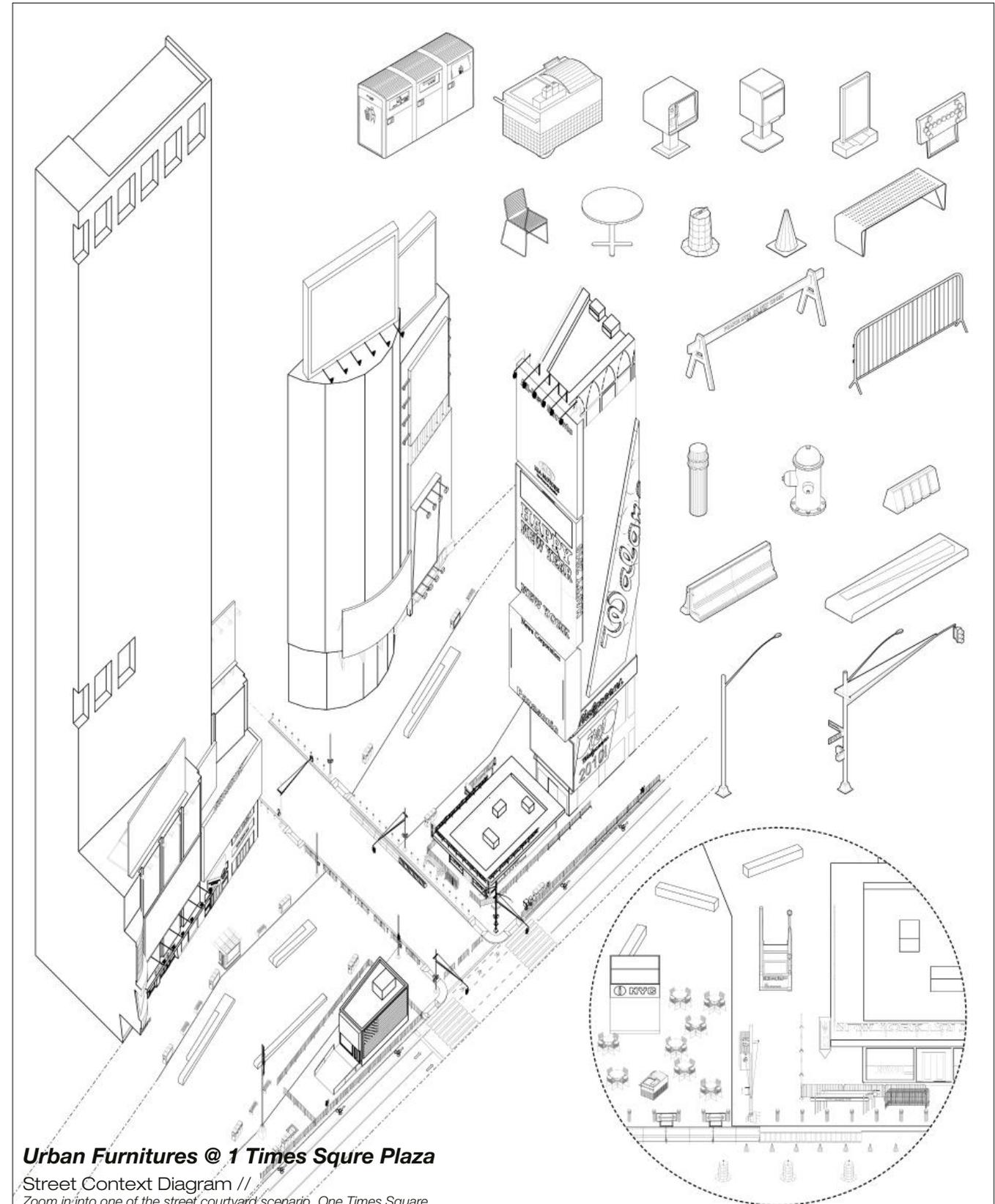
Urban Plaza Section
Site Context // Major Void Space
Sections cut through street plaza and courtyard reveal the compacted nature of public space along Broadway ave. Its impervious space serves primarily as extension of circulation, ignores the purpose for public wellness.



Highrise Category Pre/Post-War
Formal Evolution // morphosis along time



Urban Plaza & Intersection Plan
Site Context // Major Void Space
It tries to mix and match major street intersections to create a conjunction of urban fabric. Unconnected cross road are placed right next to each other, showed as Piranesi's Plan of Rome, to cultivate a image of public and private.



Urban Furnitures @ 1 Times Square Plaza
Street Context Diagram //
Zoom in into one of the street courtyard scenario, One Times Square Plaza, it is a public space sandwiched between highrise buildings, forming a street garden, with the installation of multiple street furnitures, creating unique spacial characters.

Billboard Content Analysis

Korean Town in Manhattan //
One Times Square //
Compeny, Revenue, Context,
Information Style and Duration //

Billboard showcases distinct contents in Korean town and Times Square, both visually and culturally. In Times Square, big name companies worldwide invest billion of dollars to flash seconds through the LED screens. But in the Korean town, small family restaurants and Asian small businesses pulled up their light boxes for decades.

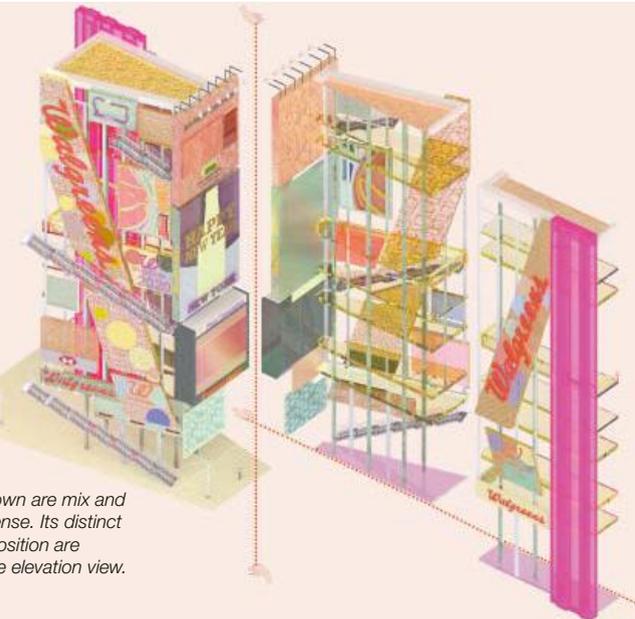


◀ Existing Building Analysis
Axonometric view

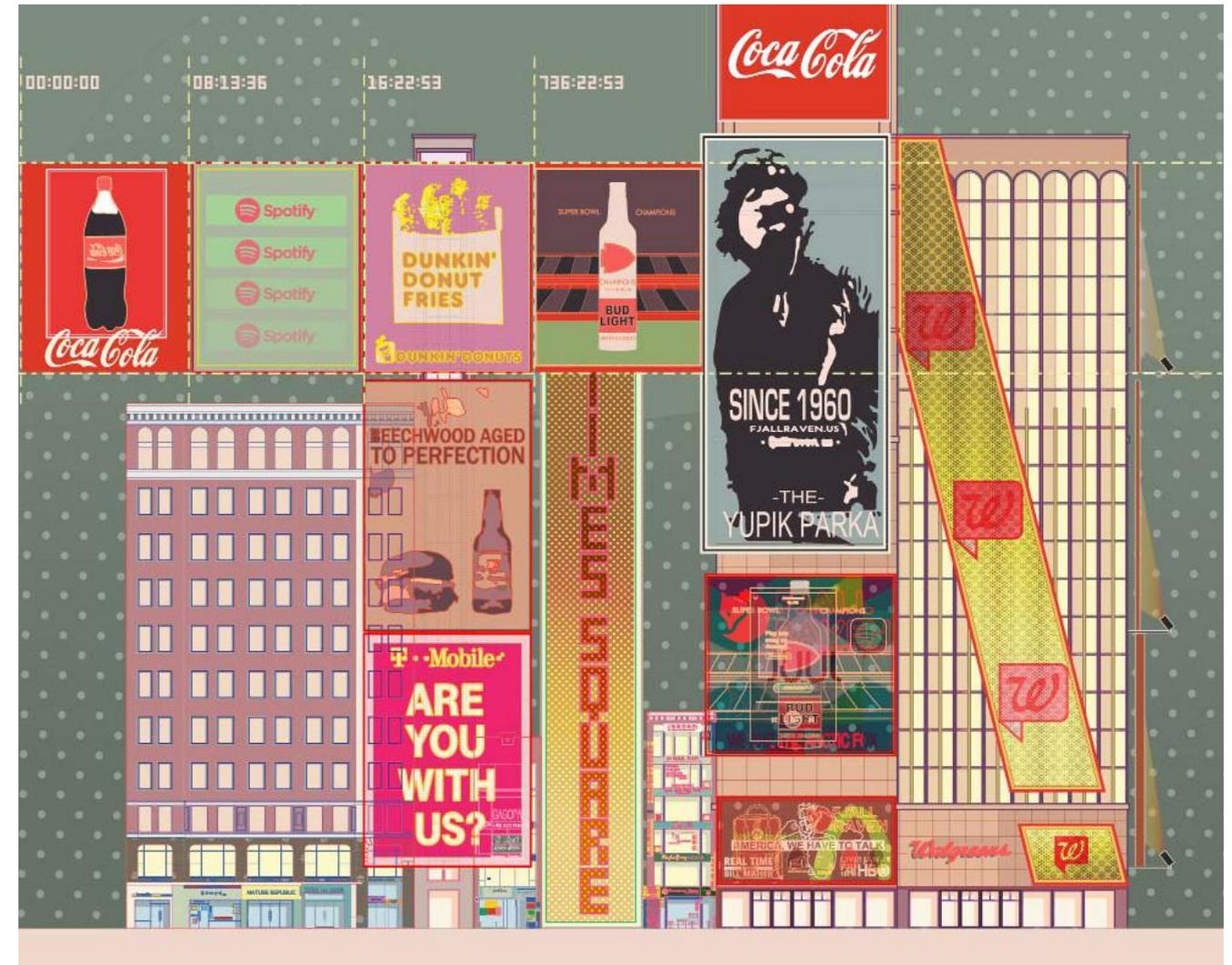
Decomposed Billboard

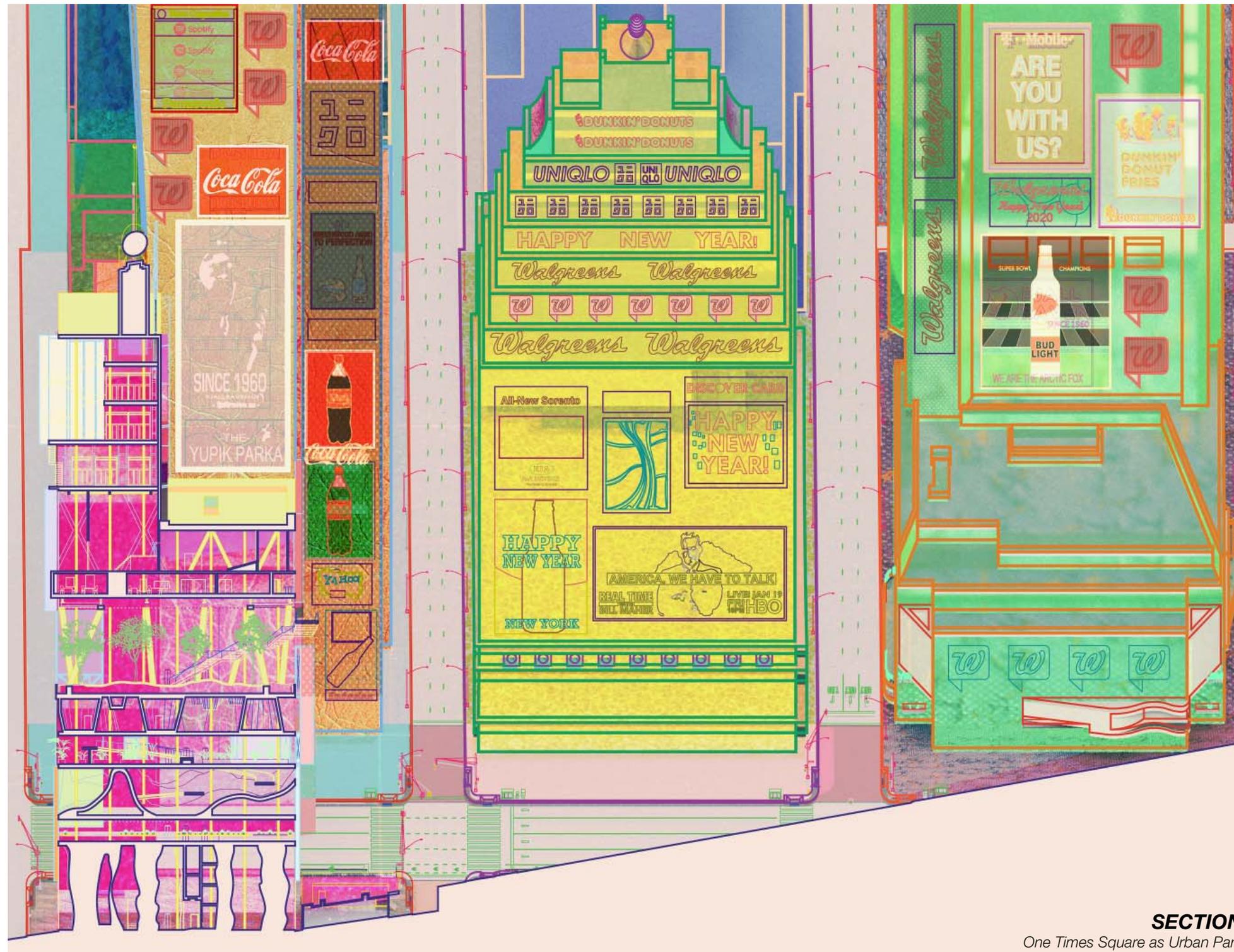
Korean Town in Manhattan //
One Times Square //

Billboards from Times Square and Korean Town are mix and match together to create a conjuncton presense. Its distinct qualities such as size, colour, content, and position are magnified through parellel comparision in one elevation view.



◀ New Facade Intervention
Axonometric view





SECTION
One Times Square as Urban Park



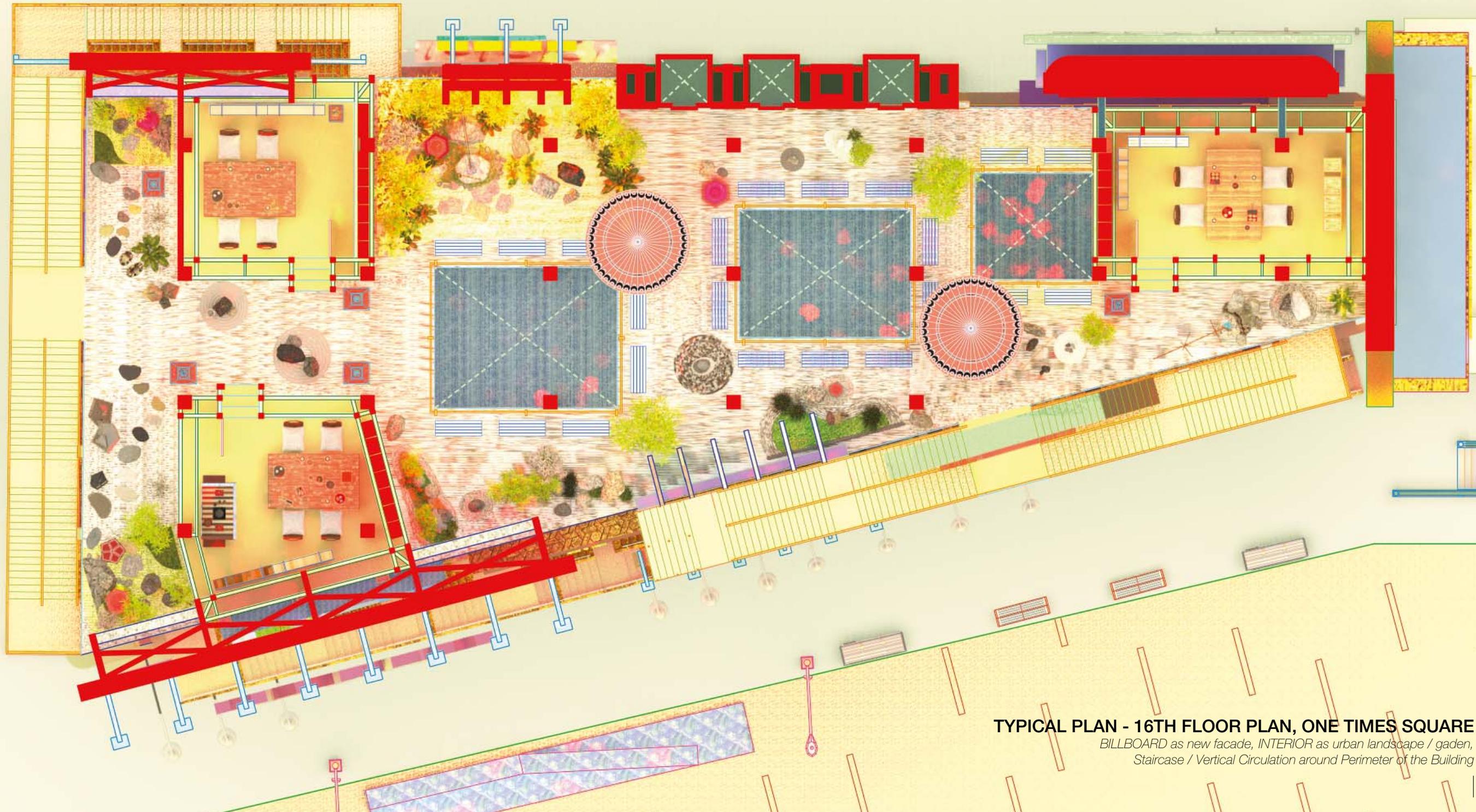
EXISTING BUILDING FACADE



EXISTING SITE

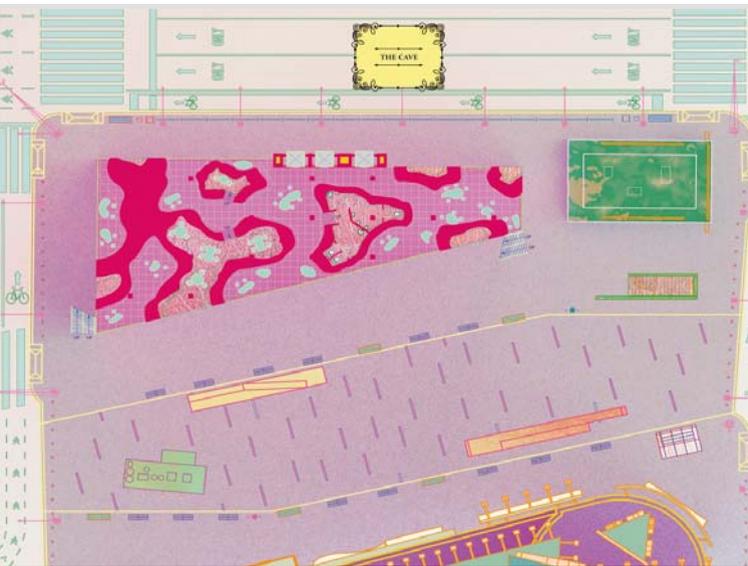


NEW BUILDING FACADE WITH BILLBOARD

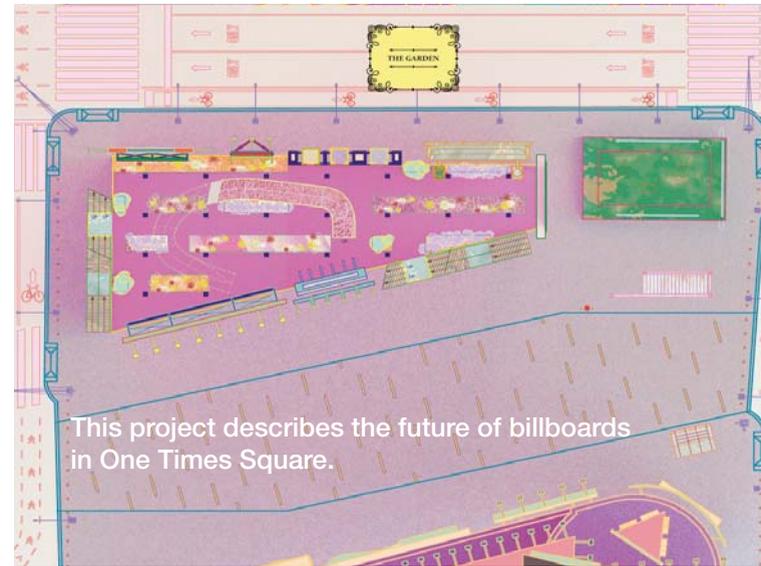


TYPICAL PLAN - 16TH FLOOR PLAN, ONE TIMES SQUARE

*BILLBOARD as new facade, INTERIOR as urban landscape / gaden,
Staircase / Vertical Circulation around Perimeter of the Building*



Ground Floor Plan



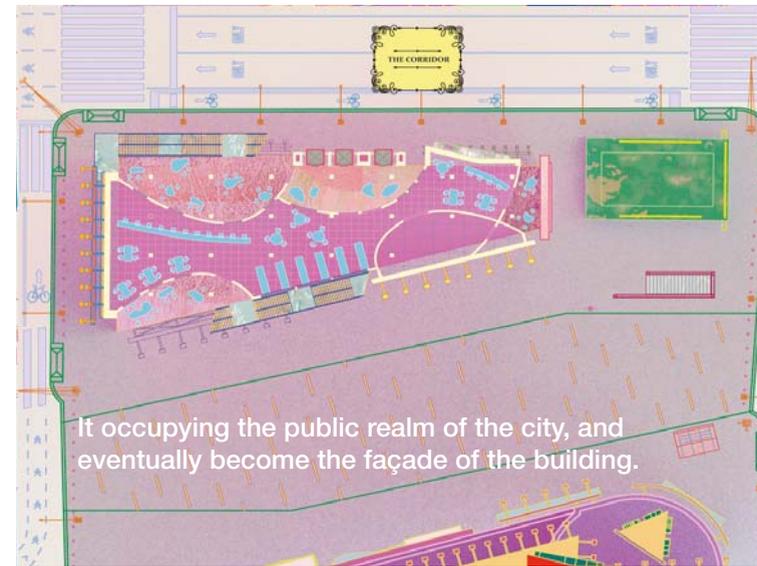
This project describes the future of billboards in One Times Square.

6th Floor Plan



It proposes a vertical garden as a projection and image into the interior in a Utopian world where billboards overflow the space in-between buildings.

12th Floor Plan

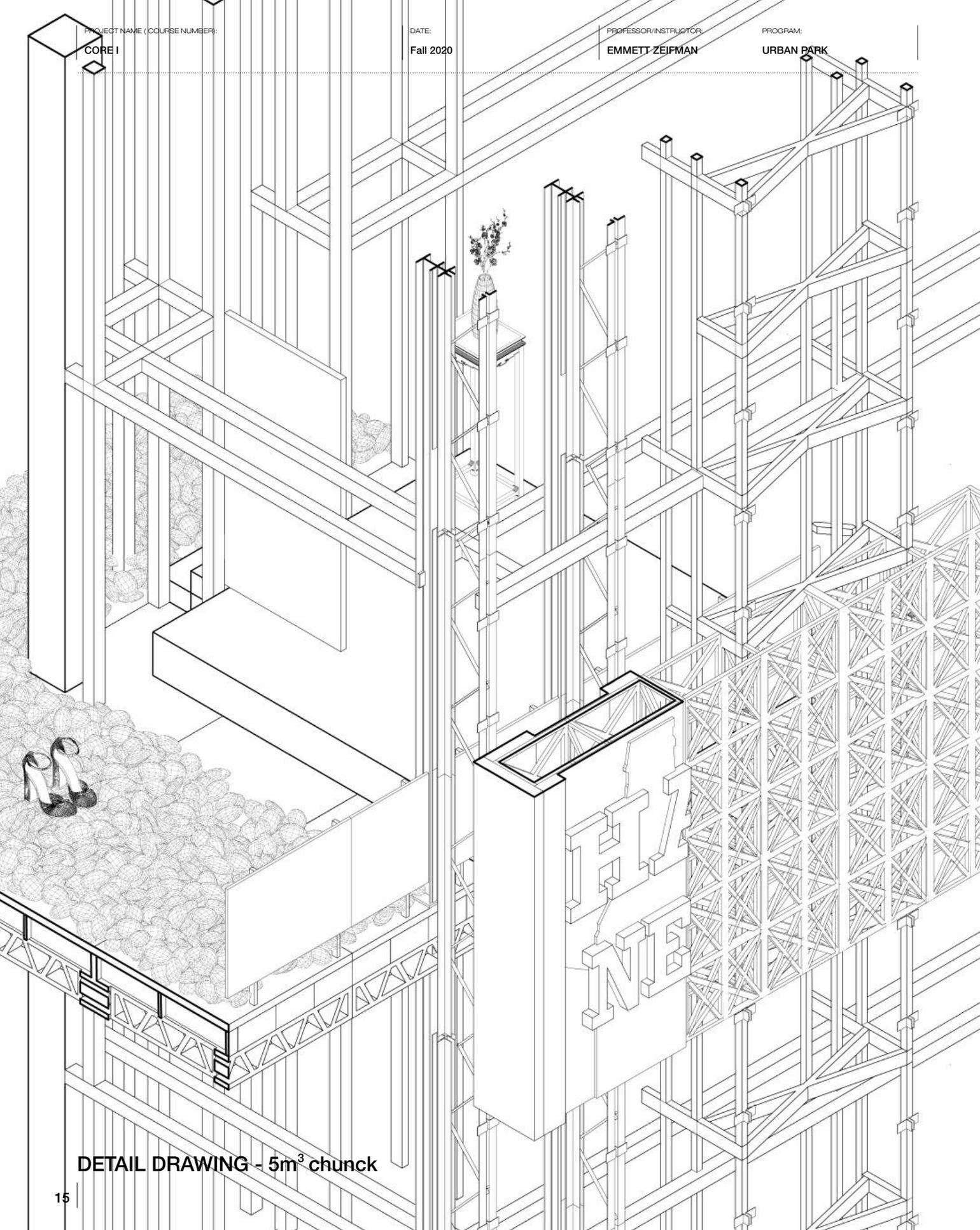


It occupying the public realm of the city, and eventually become the façade of the building.

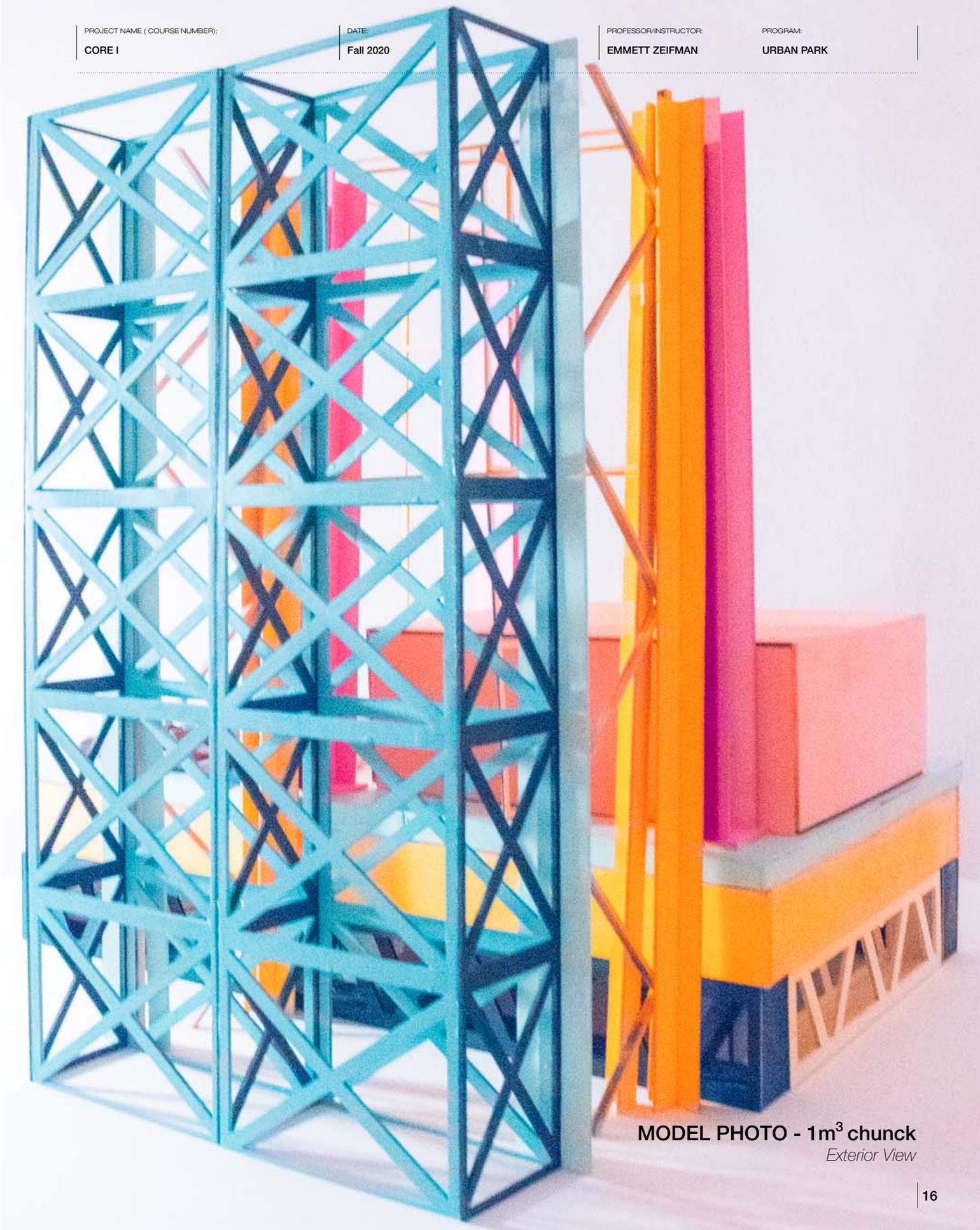
22th Floor Plan



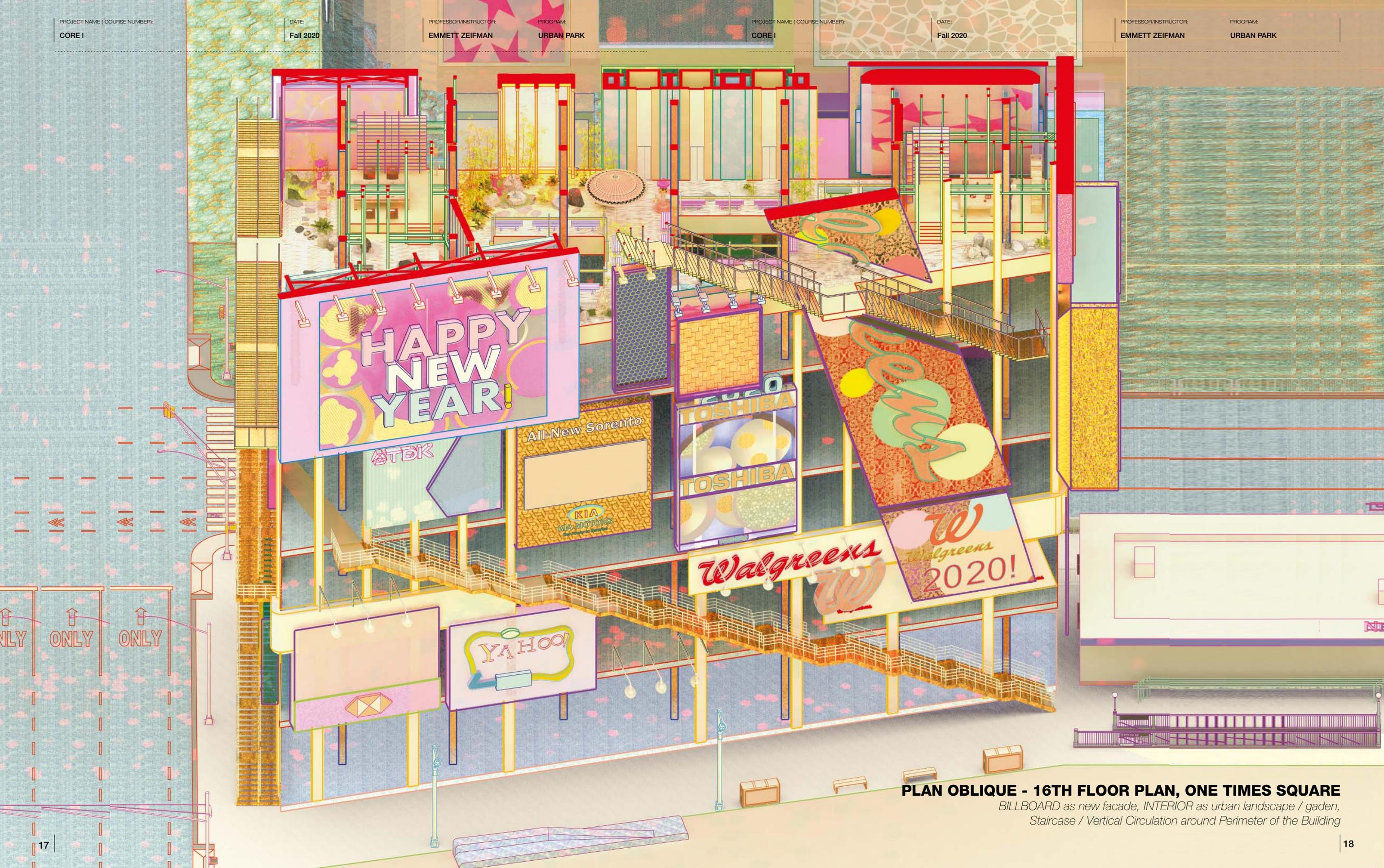
TYPICAL SECTION - 16TH FLOOR PLAN, ONE TIMES SQUARE
Opening for lights, Tea House, Zen Garden, Benches, and Plants



DETAIL DRAWING - 5m³ chunk

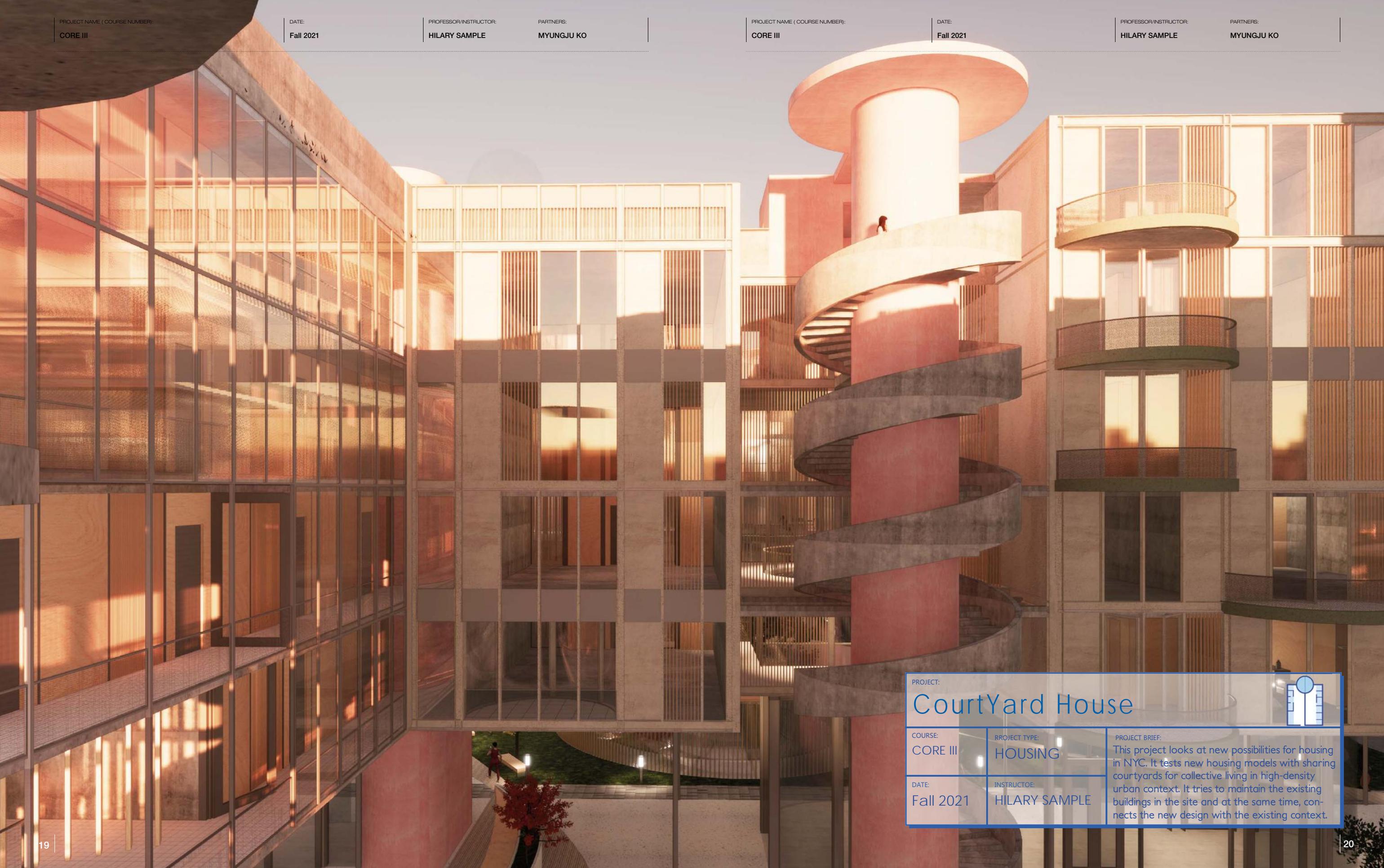


MODEL PHOTO - 1m³ chunk
Exterior View



PLAN OBLIQUE - 16TH FLOOR PLAN, ONE TIMES SQUARE

*BILLBOARD as new facade, INTERIOR as urban landscape / gaden,
Staircase / Vertical Circulation around Perimeter of the Building*



PROJECT: CourtYard House			
COURSE: CORE III	PROJECT TYPE: HOUSING	PROJECT BRIEF: This project looks at new possibilities for housing in NYC. It tests new housing models with sharing courtyards for collective living in high-density urban context. It tries to maintain the existing buildings in the site and at the same time, connects the new design with the existing context.	
DATE: Fall 2021	INSTRUCTOR: HILARY SAMPLE		



EXISTING SITE PLAN - BRONX DOCUMENTARY CENTER

*COURTYARD as activity field, UNOCCUPIED SPACE as urban landscape / garden,
Reimagine the left over space around perimeter of the building*



SECOND FLOOR PLAN

*Linear PROMENADE connects public resting area together to form a continuous semi-public zone
Spiral staircase runs the vertical circulation and shapes open to below area for sun light access*



GROUND FLOOR PLAN

*Several old buildings are removed to allow for new developemtn of a large shared courtyard
Very skinny bar shaped commercial area outlined the perimeter of the 1st floor*



4TH FLOOR PLAN

*Existing building and new apartments are connected by PROMENADE
Different unit types compose each floor giving various configuration of balcony and shared spaces*



Promenade View
Render

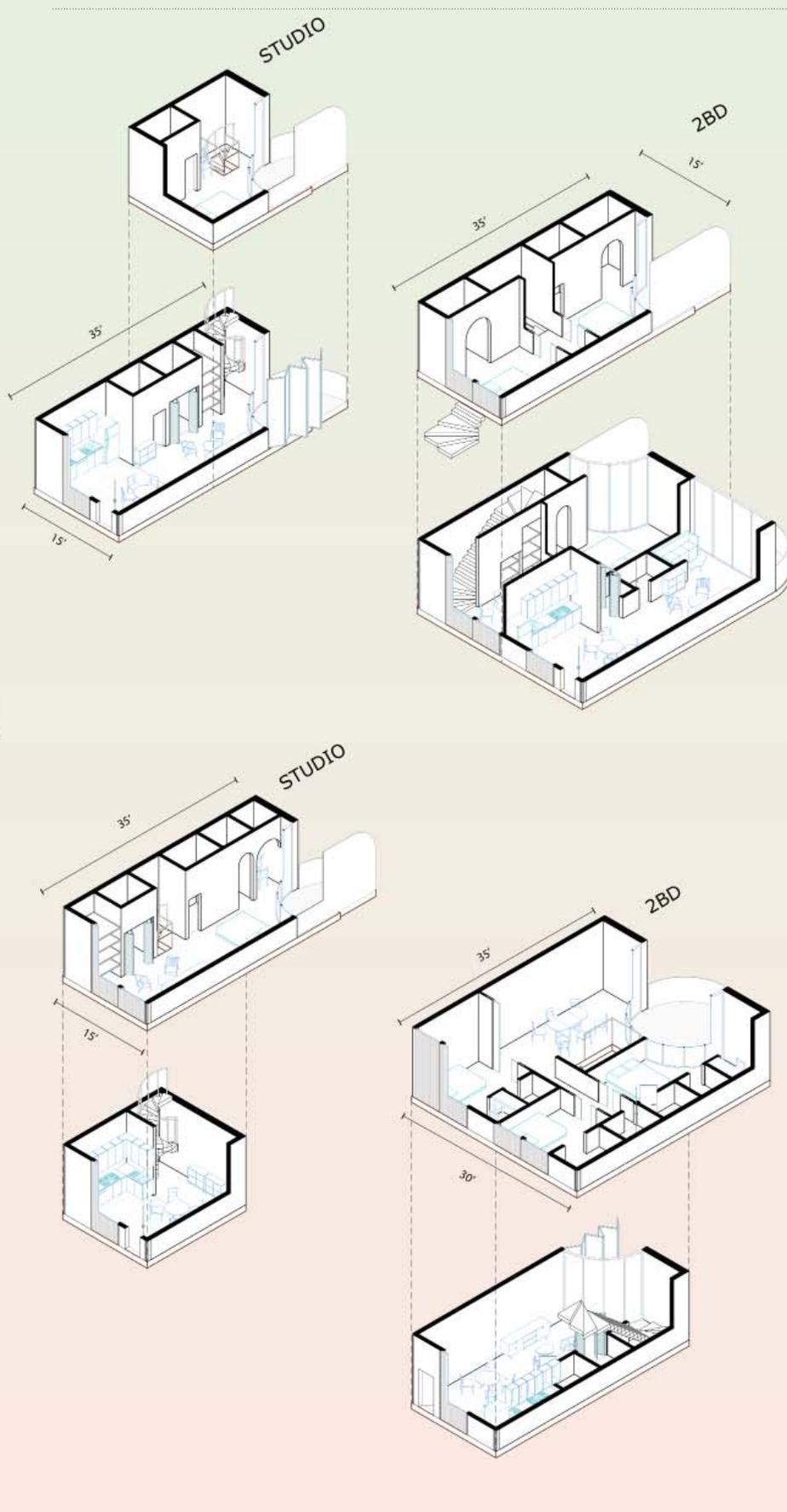
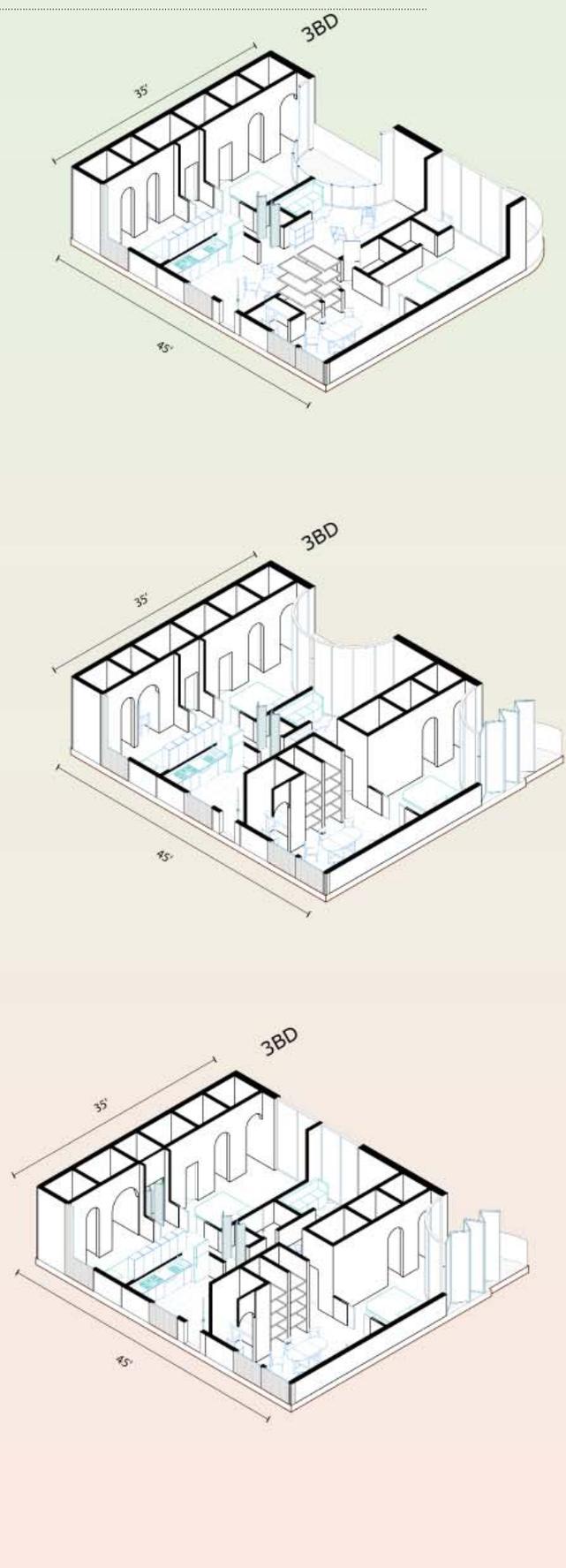
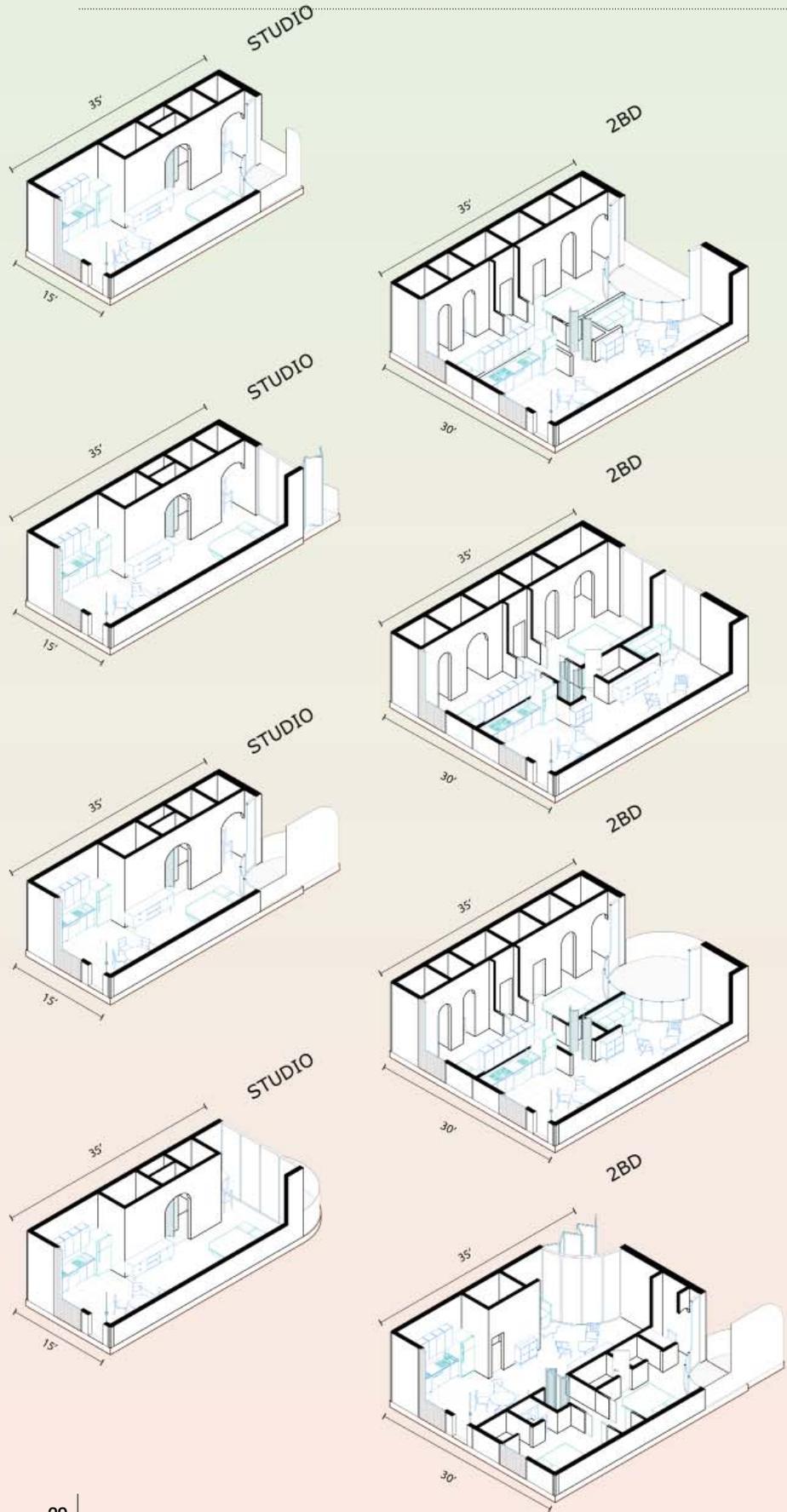


Courtyard
Sectional Perspective View



Units and Courtyard
Sectional Oblique View

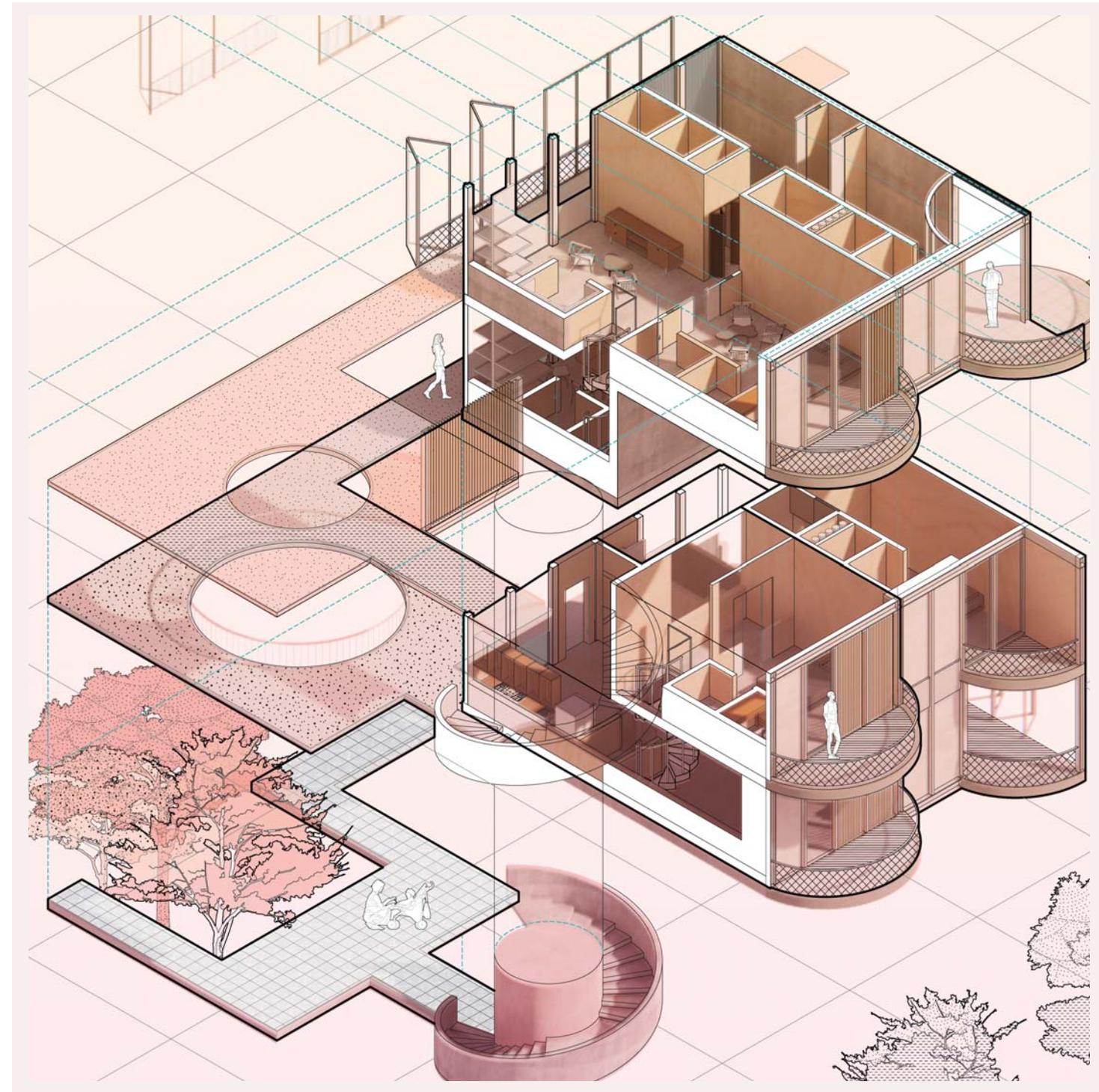
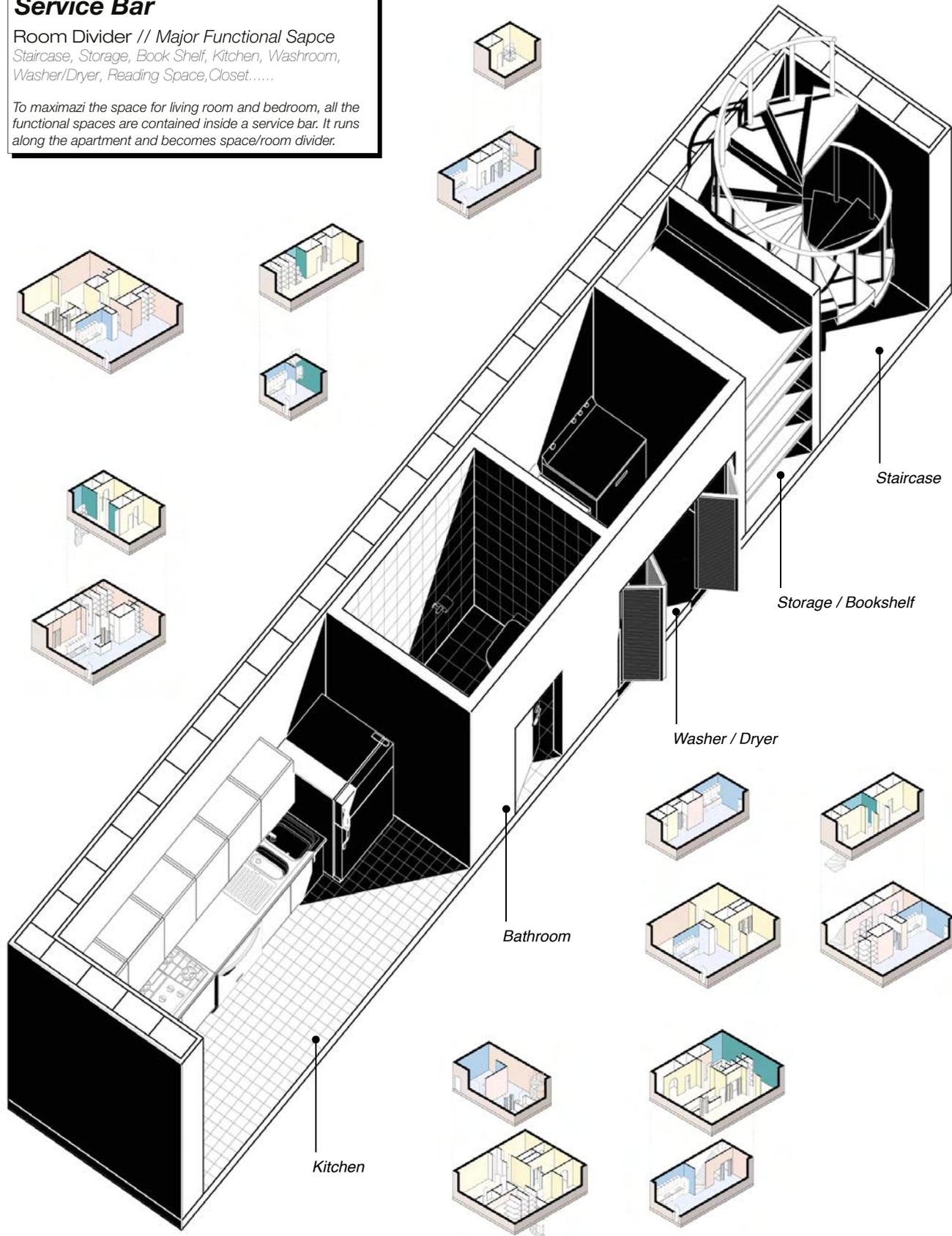




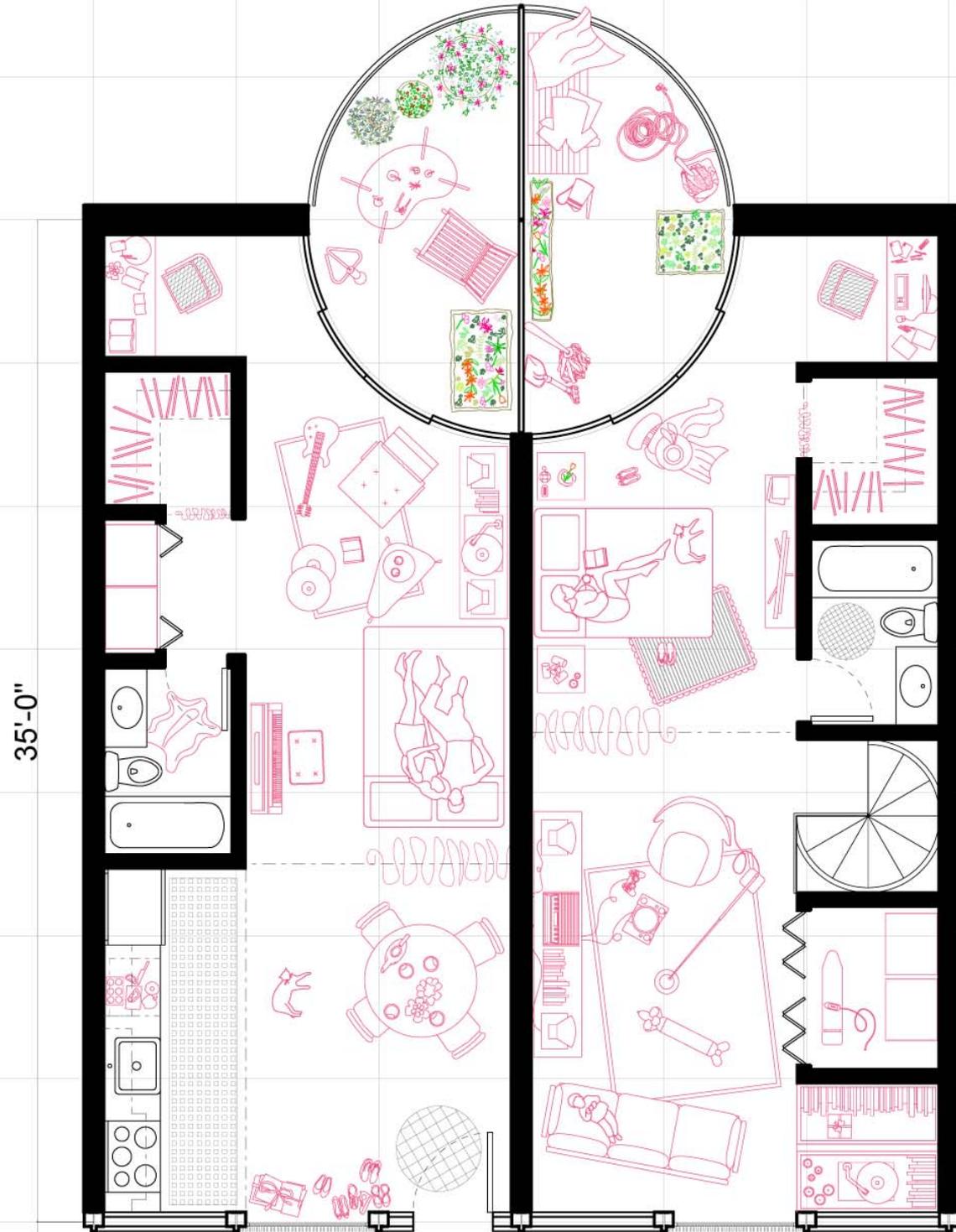
Service Bar

Room Divider // Major Functional Sapce
Staircase, Storage, Book Shelf, Kitchen, Washroom,
Washer/Dryer, Reading Space, Closet.....

To maximazi the space for living room and bedroom, all the functional spaces are contained inside a service bar. It runs along the apartment and becomes space/room divider.



Different Units
Axonometric View



BALCONY WITH FIXED PANEL

35'-0"

5'-0"

5'-0"

5'-0"

5'-0"

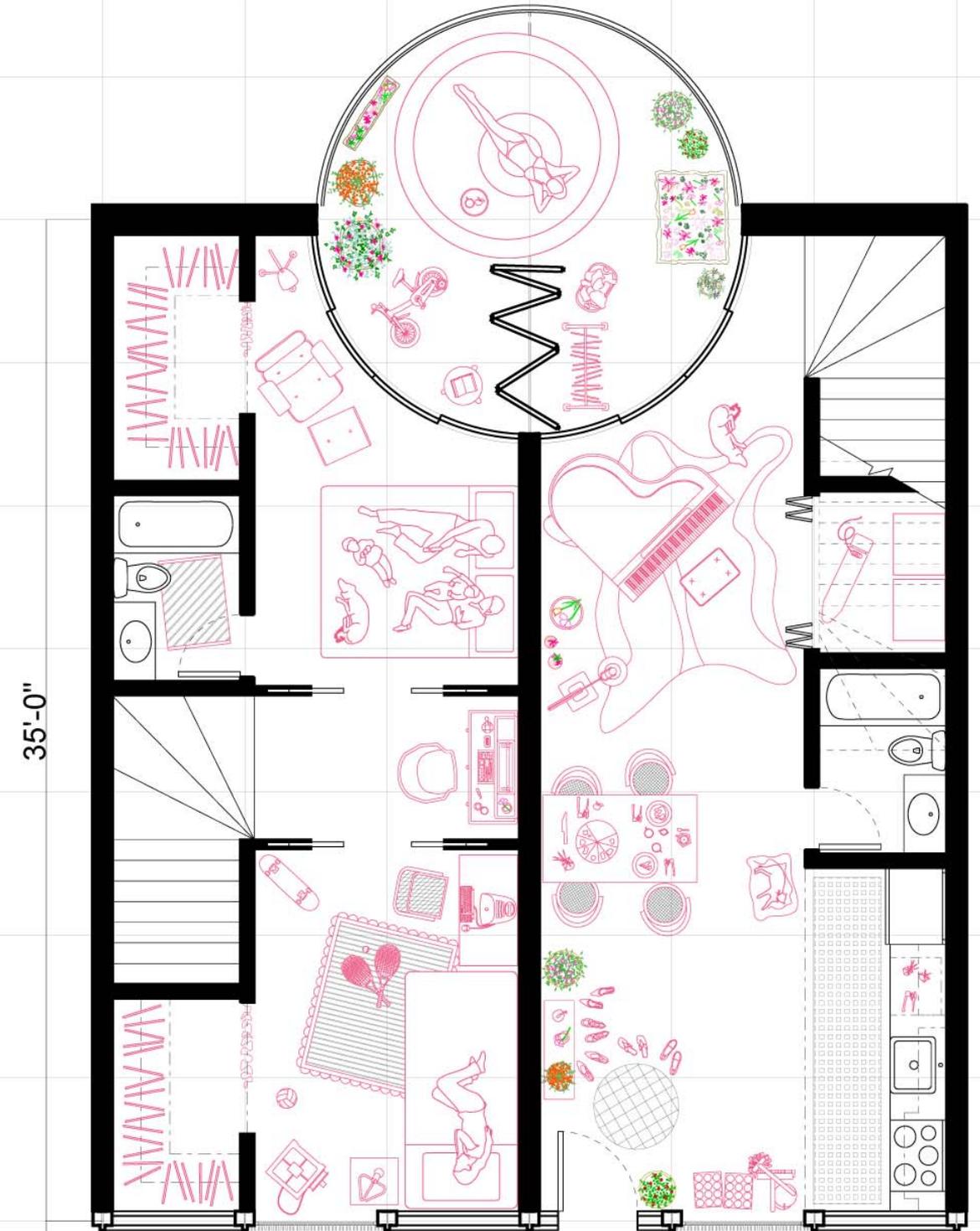
5'-0"

5'-0"

5'-0"

15'-0"

15'-0"



BALCONY WITH OPERABLE SCREEN DOOR

35'-0"

5'-0"

5'-0"

5'-0"

5'-0"

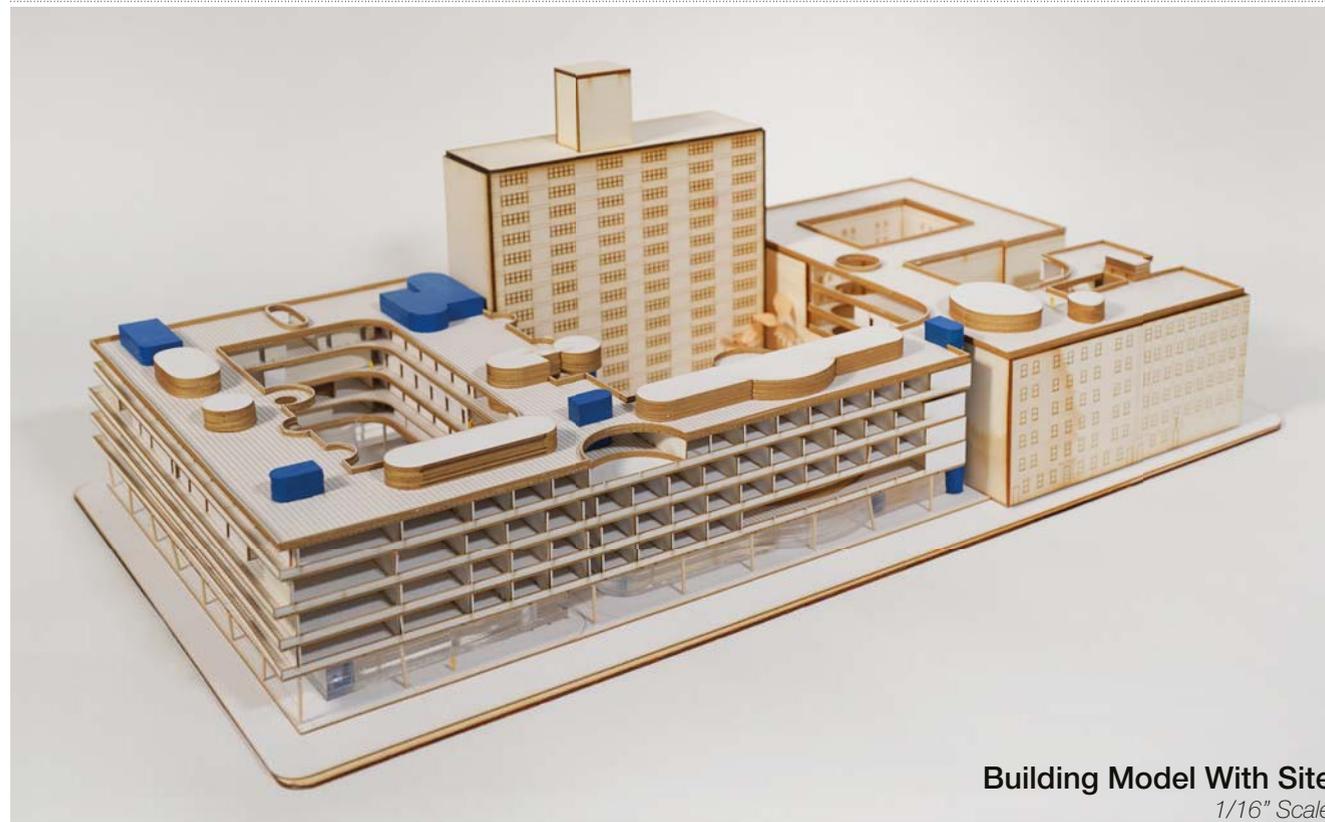
5'-0"

5'-0"

5'-0"

15'-0"

15'-0"



Building Model With Site
1/16" Scale

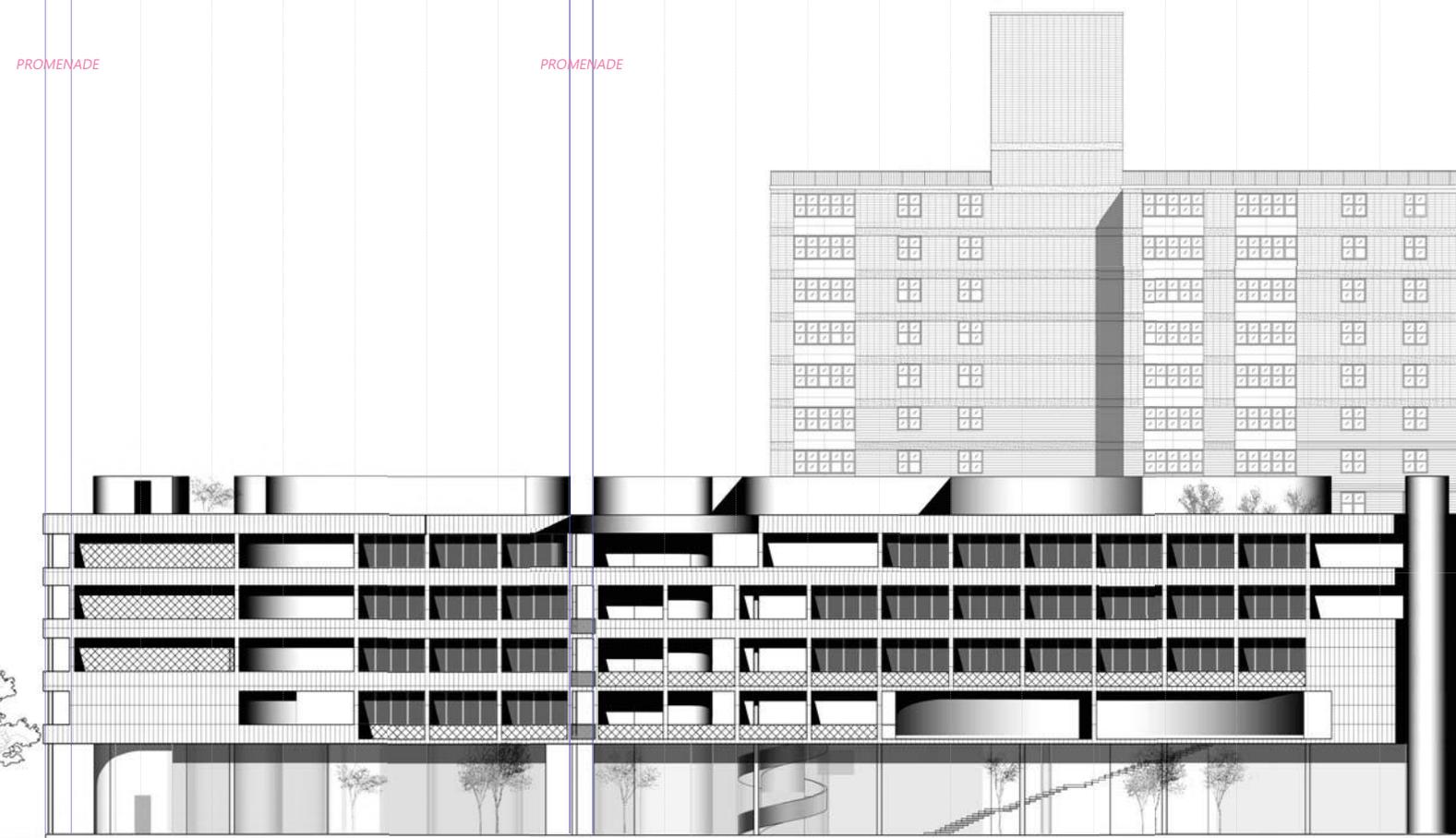
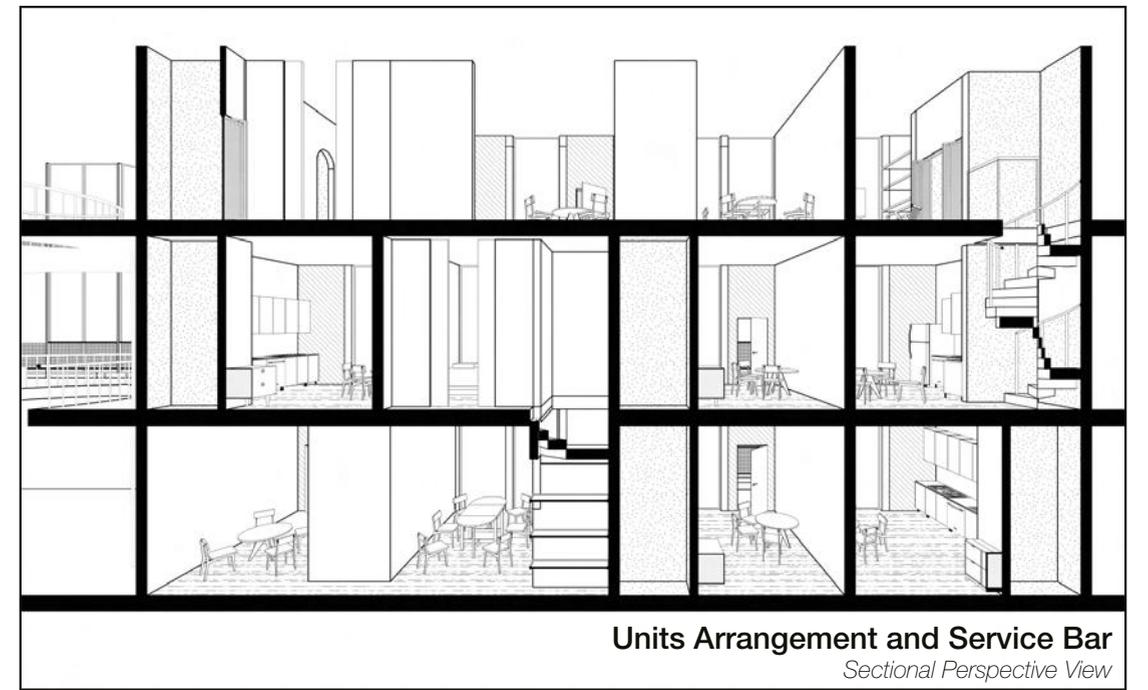
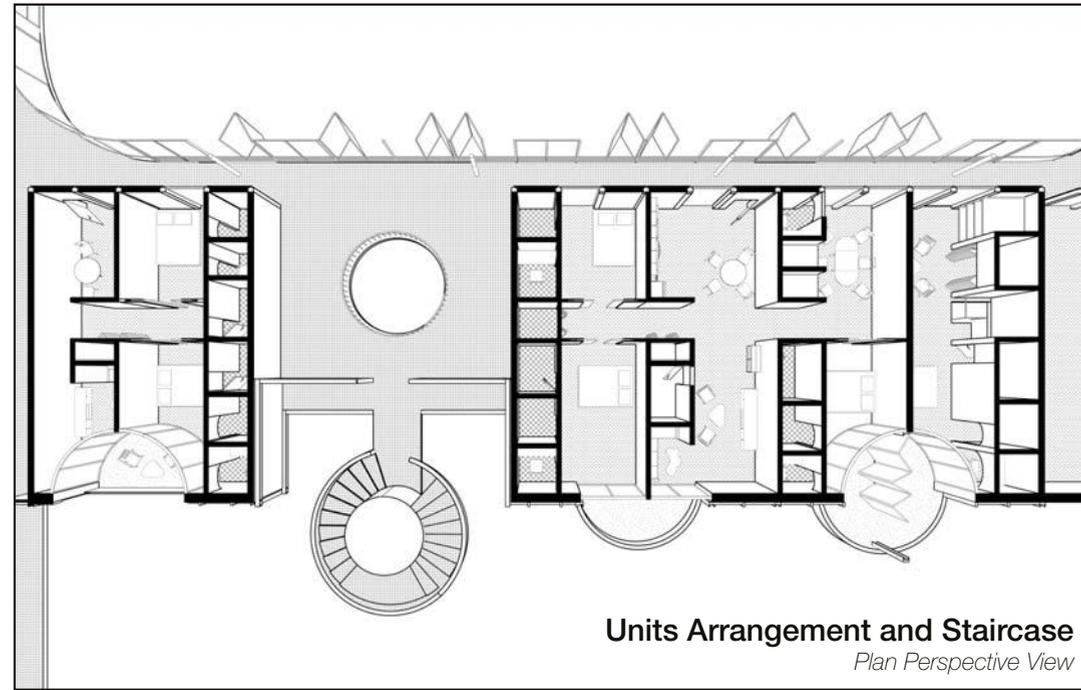


Unit Model With Furniture
1/2" Scale

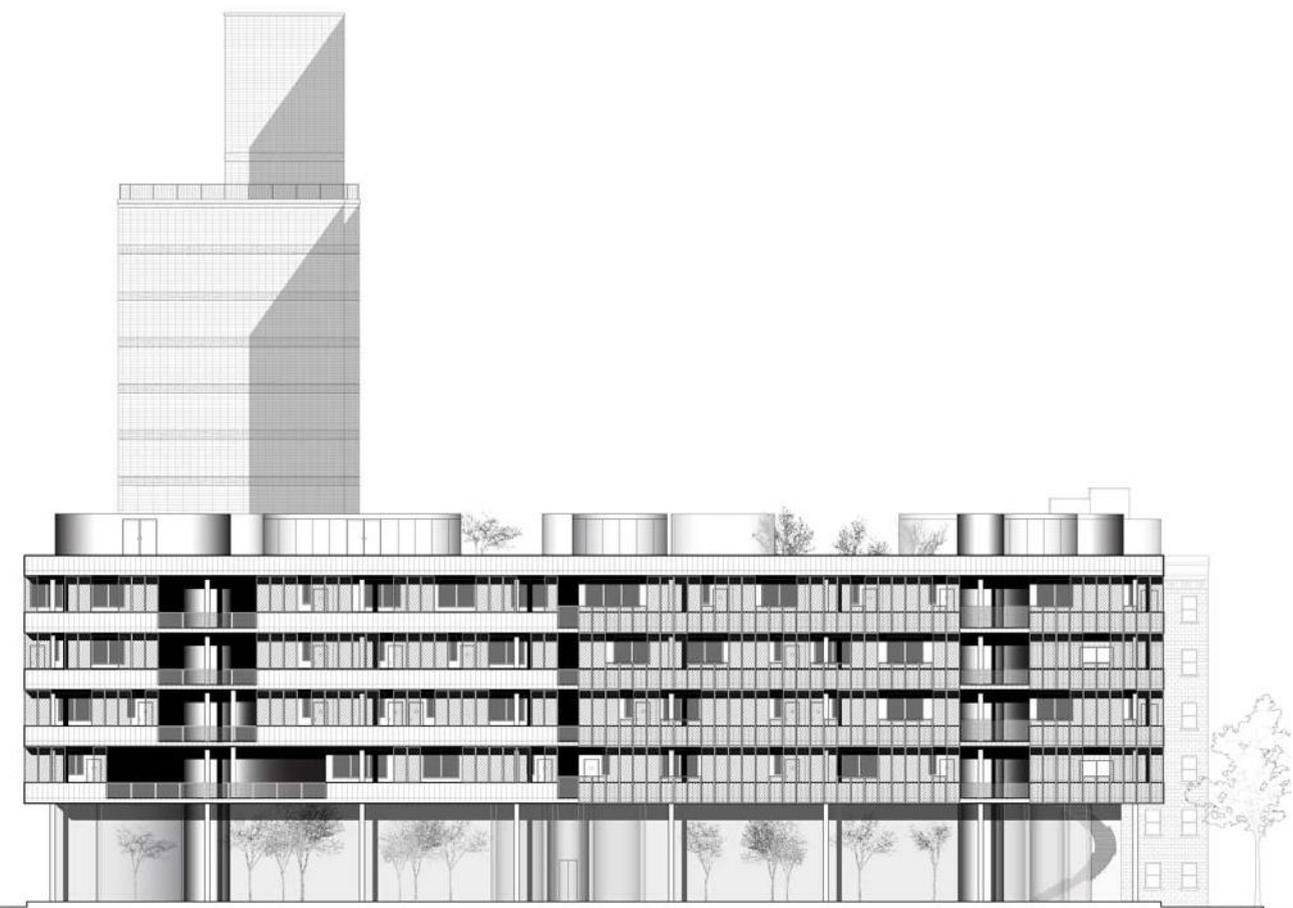




Courtyard Sunset View
Render



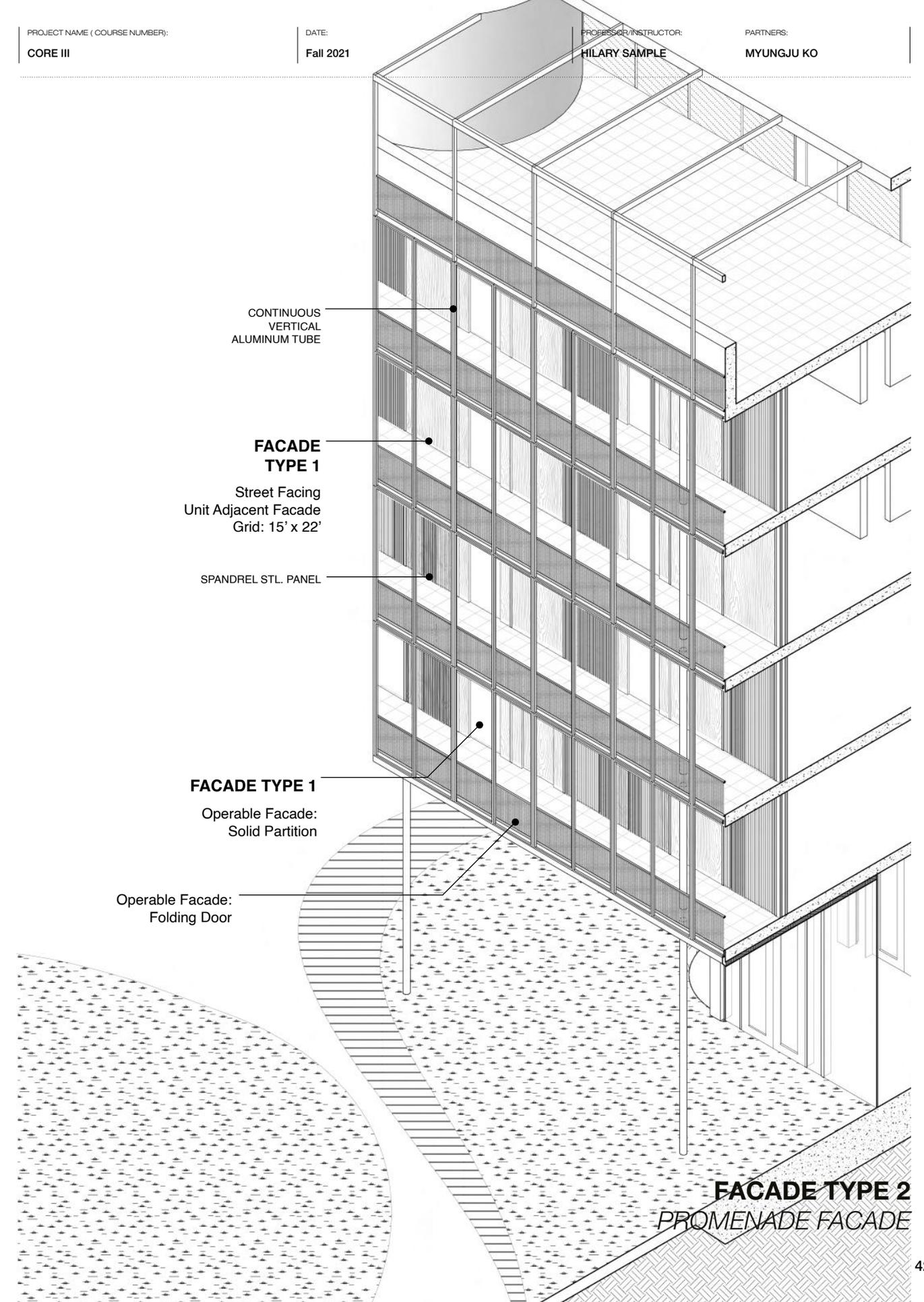
SOUTH ELEVATION
Facade Type 1 - Framed Operable Glass Panel



WEST ELEVATION
Facade Type 2 - Promenade Facade



South Elevation / Zoom In
Facade Type 1 - Framed Operable Glass Panel



CONTINUOUS
VERTICAL
ALUMINUM TUBE

**FACADE
TYPE 1**

Street Facing
Unit Adjacent Facade
Grid: 15' x 22'

SPANDREL STL. PANEL

FACADE TYPE 1

Operable Facade:
Solid Partition

Operable Facade:
Folding Door

FACADE TYPE 2
PROMENADE FACADE

WINTERC
CLOSED FACADE

SPRING / FALL
OPEN FACADE



WEST ELEVATION

Facade Type 2 - Promenade Facade



COURTYARD VIEW - WINTER
Render



COURTYARD VIEW - RAIN
Render



COURTYARD VIEW - SUMMER
Render



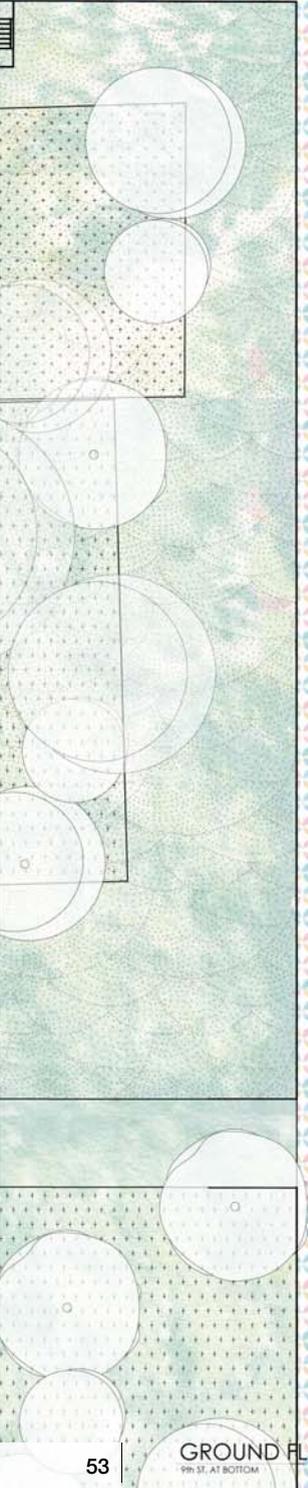
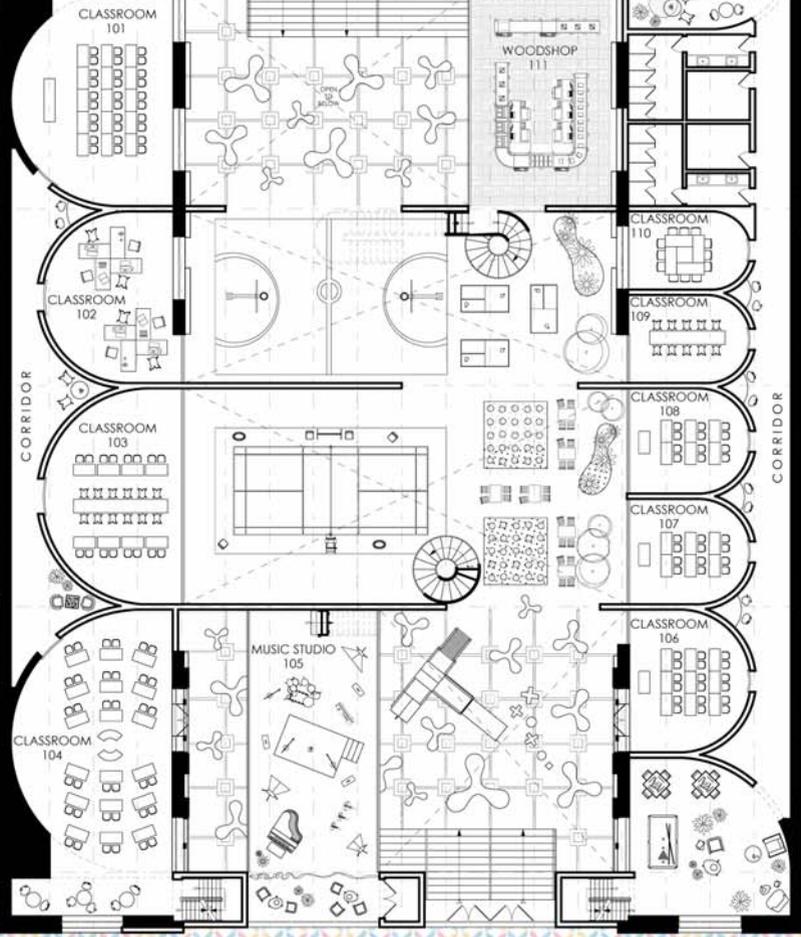
PROJECT:		
W*A*L*L: REinvent Highschool		
COURSE:	PROJECT TYPE:	PROJECT BRIEF: This proposal divides the courtyard around the two existing bars, similar to how a street grid defines the plan of a city. The Wall + The Staircase + The Window Opening = UNEXPECTED ENCOUNTERS.
CORE II	Education	
DATE:	INSTRUCTOR:	
Spring 2021	ERICA GOETZ	

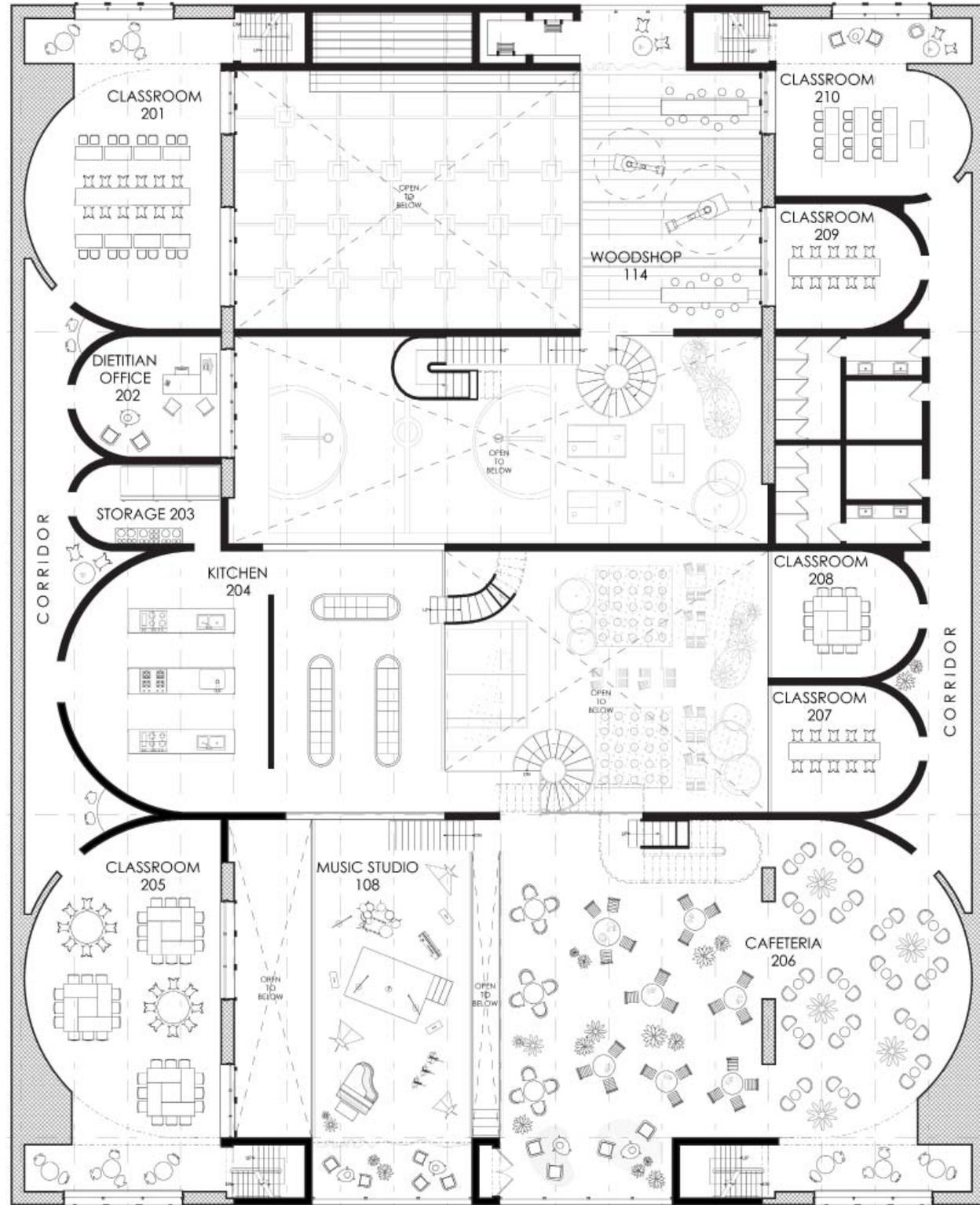
E. 10th STREET

E. 9th STREET

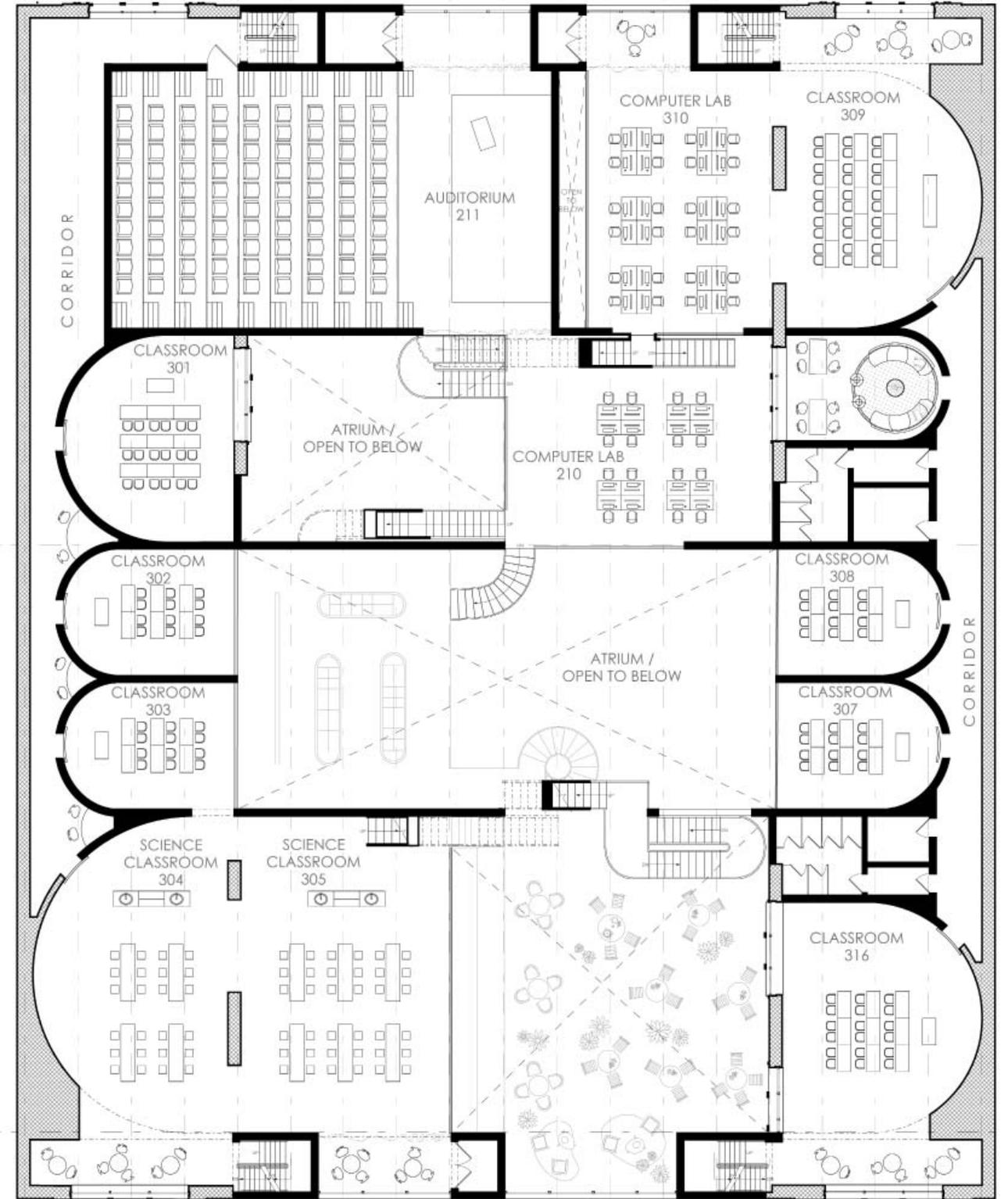
WALL: REVITALIZATION OF A HIGH SCHOOL

This proposal divides the courtyard around the two existing bars, similar to how a street grid defines the plan of a city. Major programs are scattered between walls and onto different plazas, the shapes of which are determined by the surrounding cityscape. Huge window cut-outs transform the wall into floors and platforms. Bridging between the walls, they house various public programs such as a studio, library, and cafeteria. The staircase— weaving in and out of the window cut-outs, platforms, and wall surfaces—emulates a path of discovery and wonder. The plan is organized toward the sheltered platforms and the atrium, where typical classrooms are located in the existing bar. The free plan typology translates the typical classroom into an open experience, on both horizontal and vertical planes.

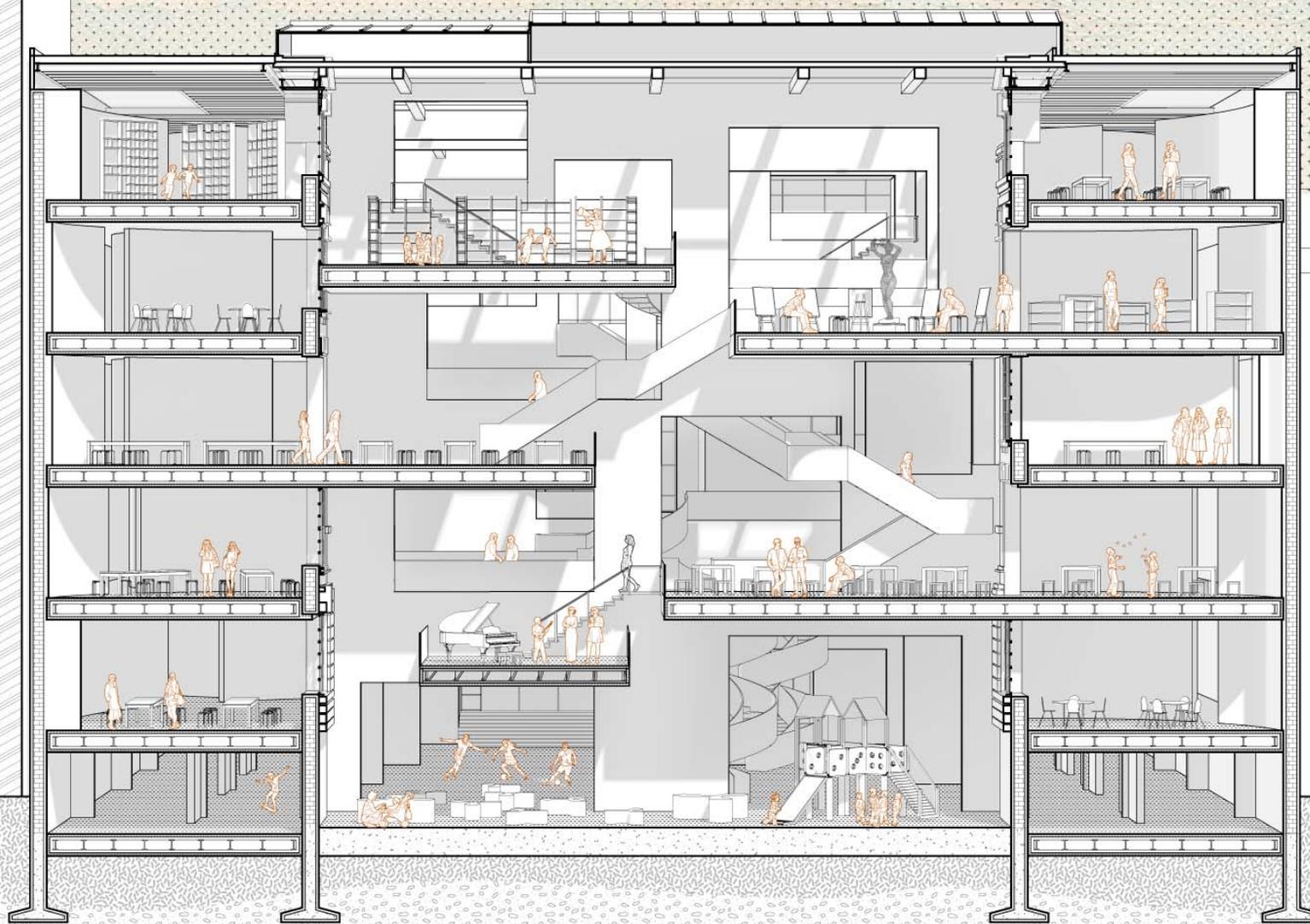




SECOND FLOOR PLAN
9th ST. AT BOTTOM



THIRD FLOOR PLAN
9th ST. AT BOTTOM



CROSS SECTION



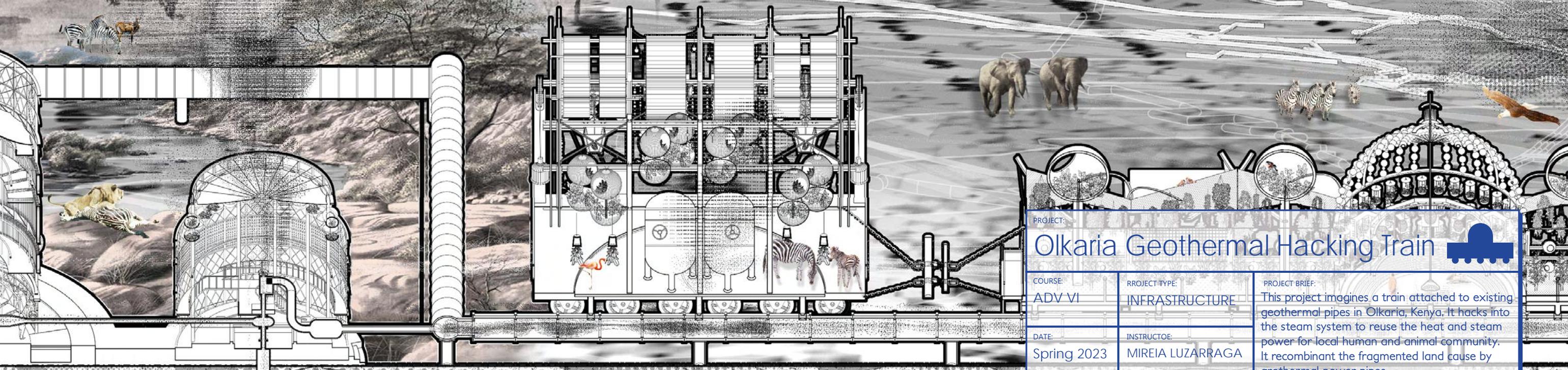
LONGITUDINAL SECTION

+ *Mount Longonot*

+ *Lake Naivasha*

+ *Olkaria Rose Farm*

+ *Geothermal*



PROJECT:

Olkaria Geothermal Hacking Train



COURSE:

ADV VI

PROJECT TYPE:

INFRASTRUCTURE

DATE:

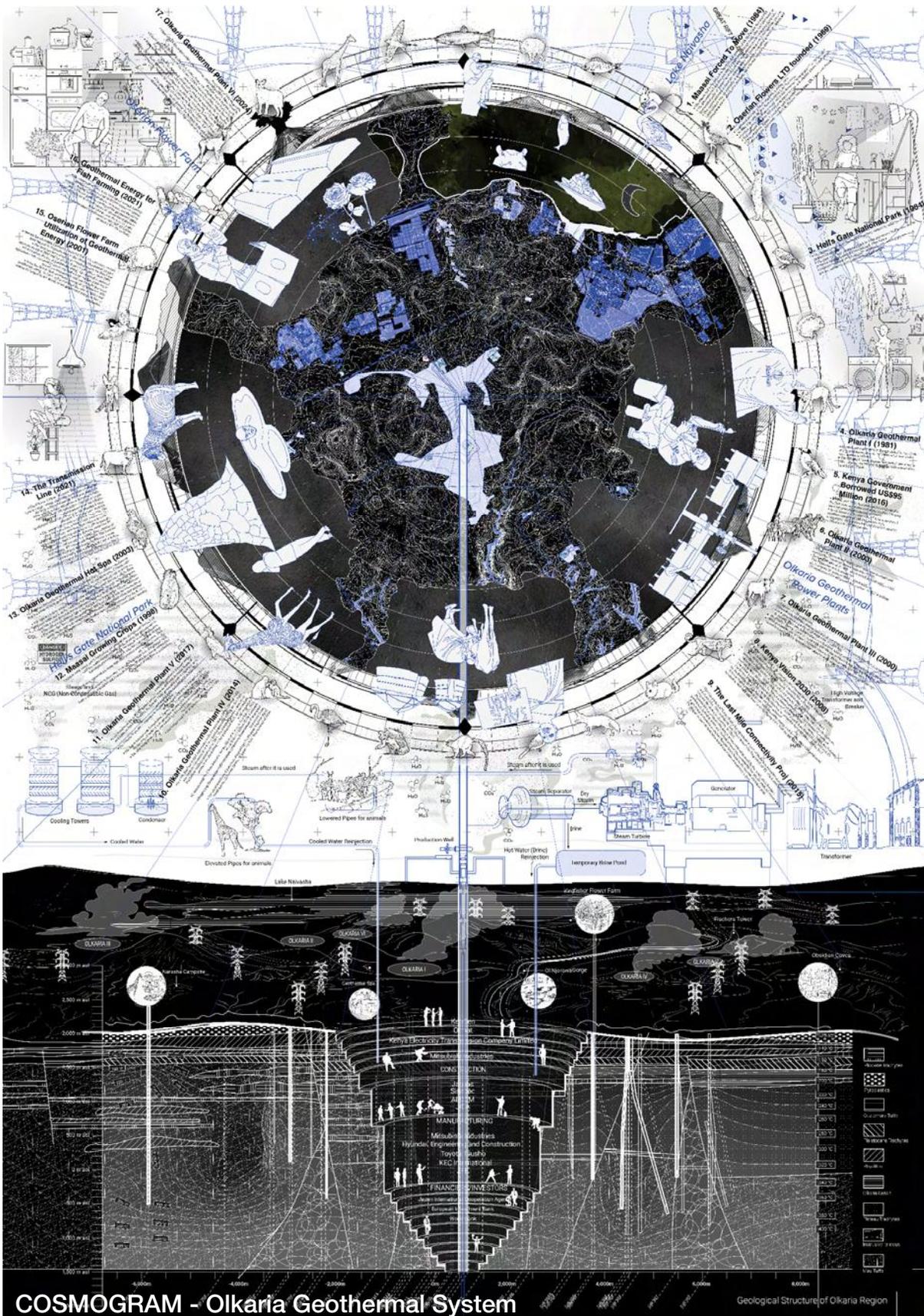
Spring 2023

INSTRUCTOR:

MIREIA LUZARRAGA

PROJECT BRIEF:

This project imagines a train attached to existing geothermal pipes in Olkaria, Kenya. It hacks into the steam system to reuse the heat and steam power for local human and animal community. It recombinant the fragmented land cause by grothermal power pipes.



COSMOGRAM - Olkaria Geothermal System

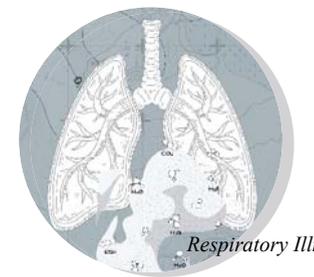
Geological Structure of Olkaria Region



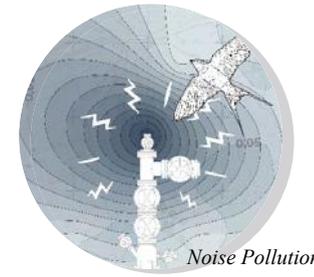
Time Location Diagram



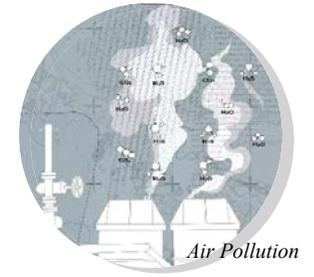
Intermediate Diagram



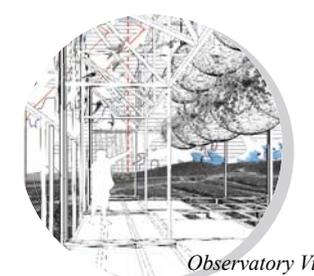
Respiratory Illness



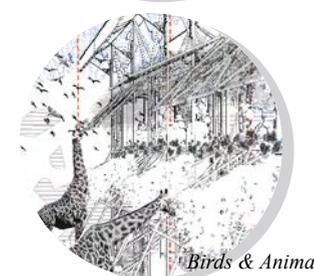
Noise Pollution



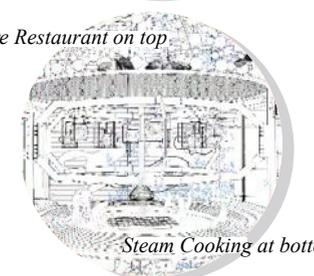
Air Pollution



Observatory View



Birds + Animal Feeder



Vulture Restaurant on top

Steam Cooking at bottom

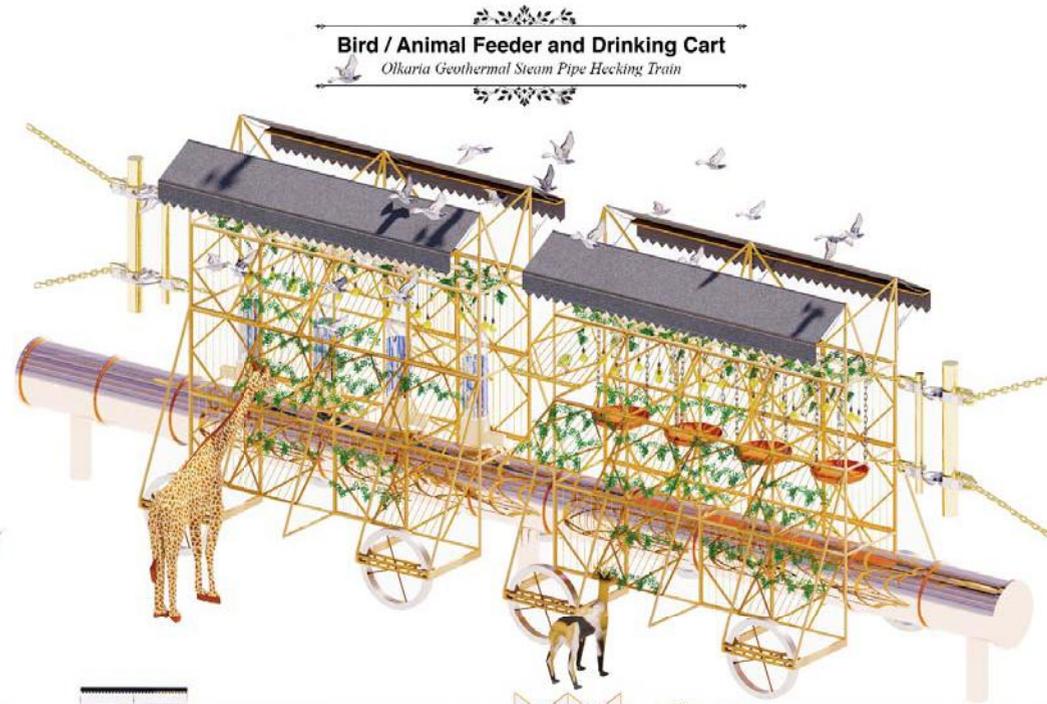


ELEVATION VIEW

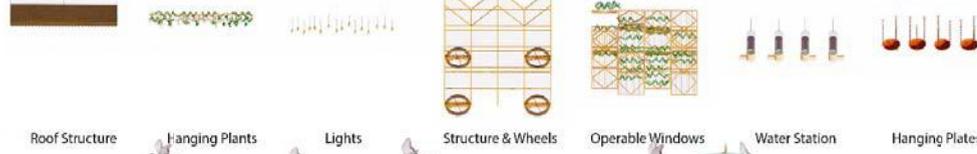
The wellness cart acts as a sanctuary space for animals and birds to nourish themselves via folding windows and hanging plates. The facade and roof both consist of plants for fauna to gather and eat. Steam water is filled in the hanging water fountains for birds and hanging lights on the roof act as a mechanism to attract birds and animals in the night time.



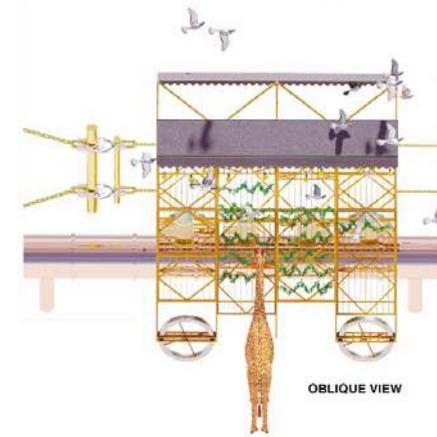
ELEVATION VIEW



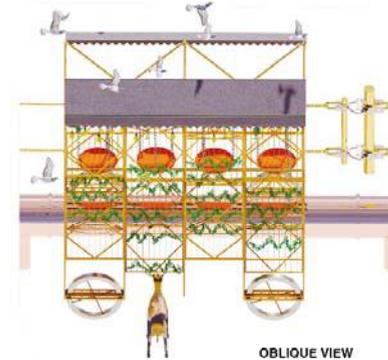
Bird / Animal Feeder and Drinking Cart
Olkaria Geothermal Steam Pipe Hecking Train



Roof Structure Hanging Plants Lights Structure & Wheels Operable Windows Water Station Hanging Plates



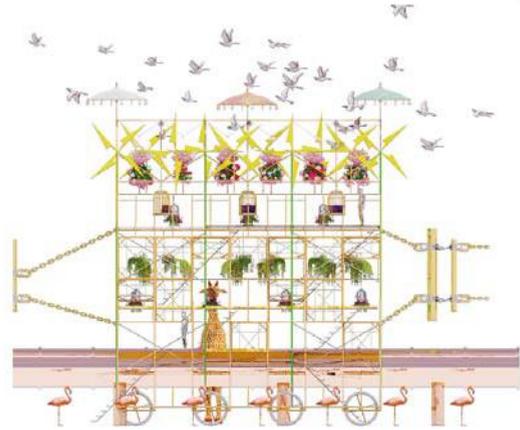
OBLIQUE VIEW



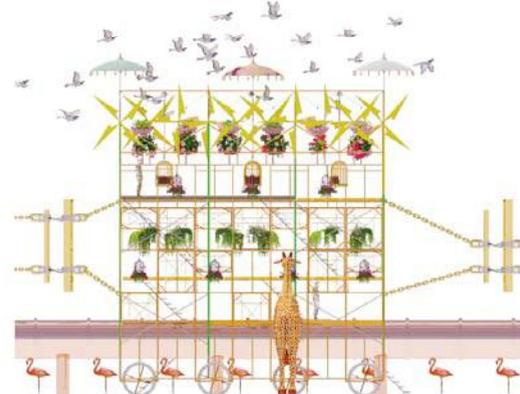
OBLIQUE VIEW



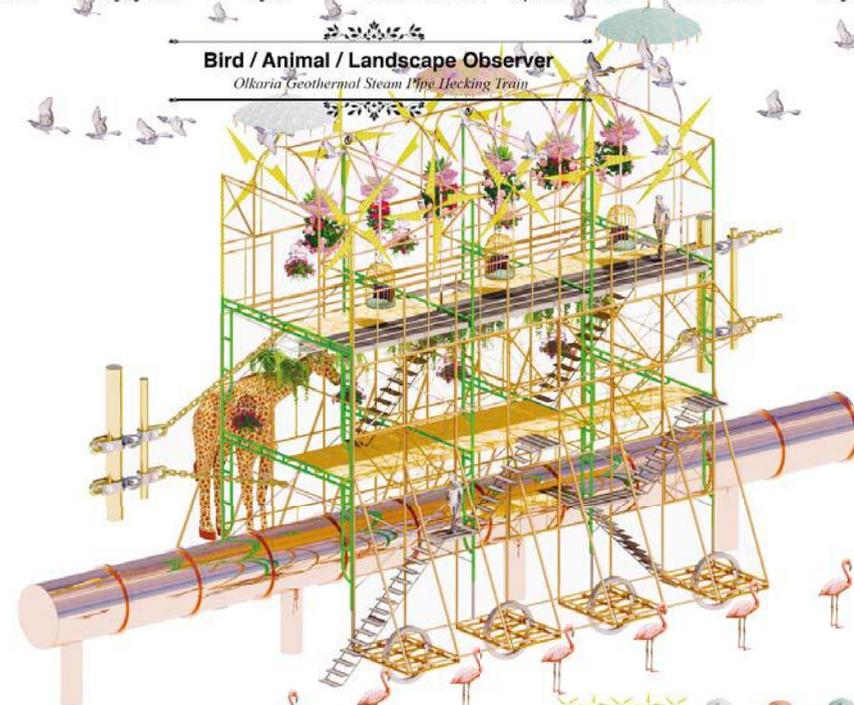
Perspective View - Feeder & Drinking Cart



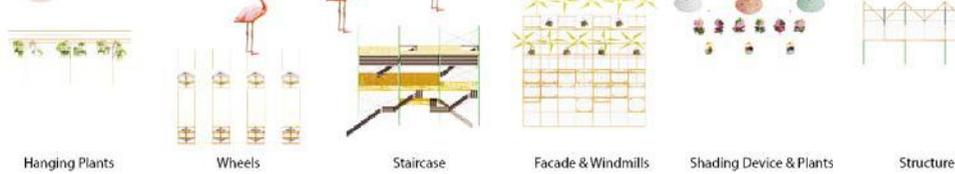
ELEVATION VIEW



ELEVATION VIEW



Bird / Animal / Landscape Observer
Olkaria Geothermal Steam Pipe Hecking Train

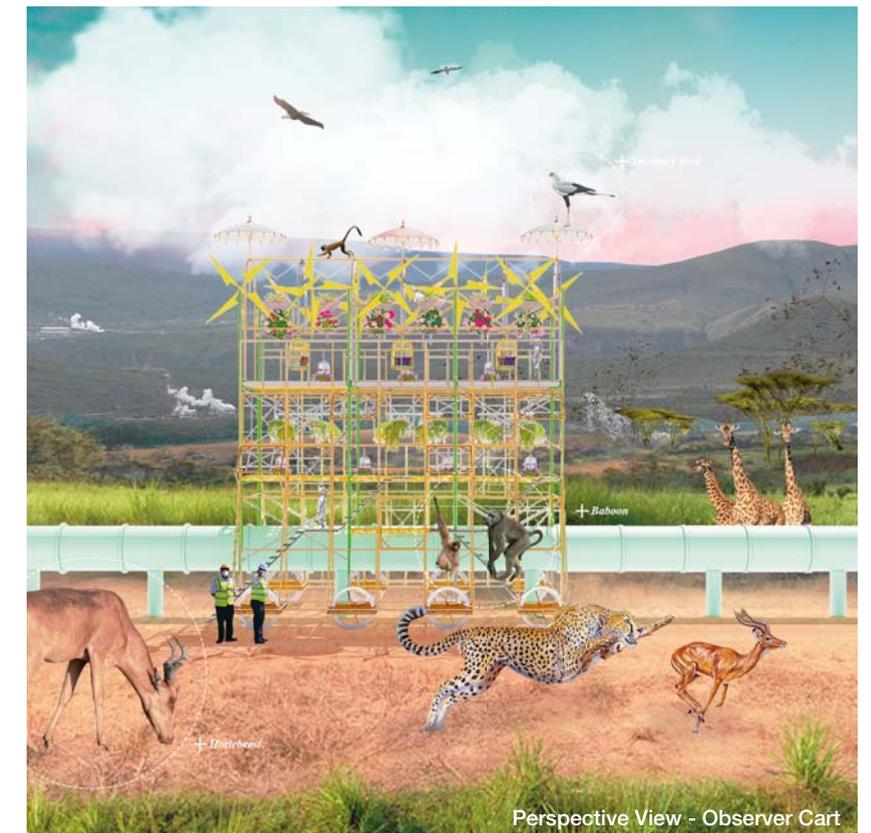
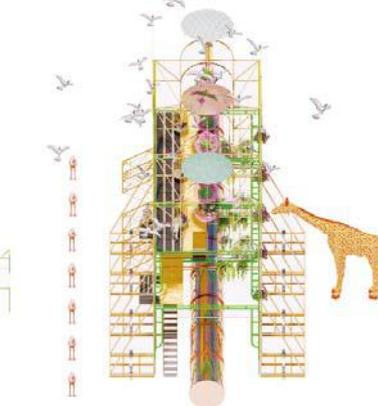


Hanging Plants Wheels Staircase Facade & Windmills Shading Device & Plants Structure

The observation train allows humans to observe the vast land and species of Olkaria by having a high vantage point. Made from existing scaffolding structures recycled from the geothermal power plants, the structure supports hanging plants growing in the cart for local animals and people to eat. The facade and roof acts as a vertical garden, allowing local flora to grow by hatching the geothermal steam. Windmills on the top of the structure help to filter air pollution and check temperature conditions in Olkaria.



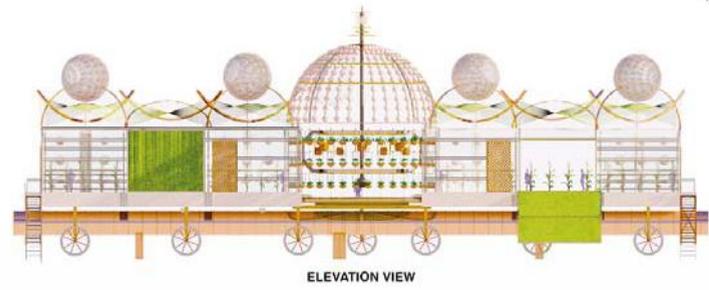
OBLIQUE VIEW



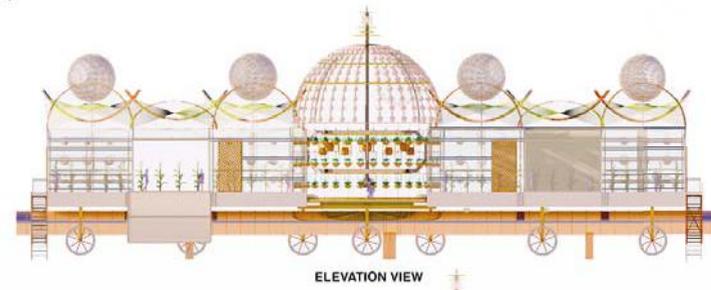
Perspective View - Observer Cart

Greenhouse / Kitchen / Bird Sanctuary Cart

Olkaria Geothermal Steam Pipe Hecking Train

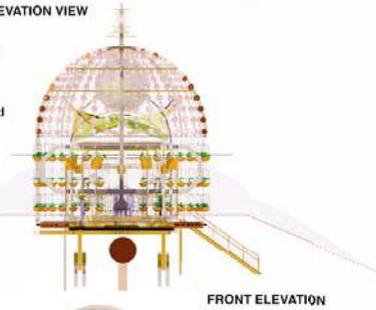


ELEVATION VIEW

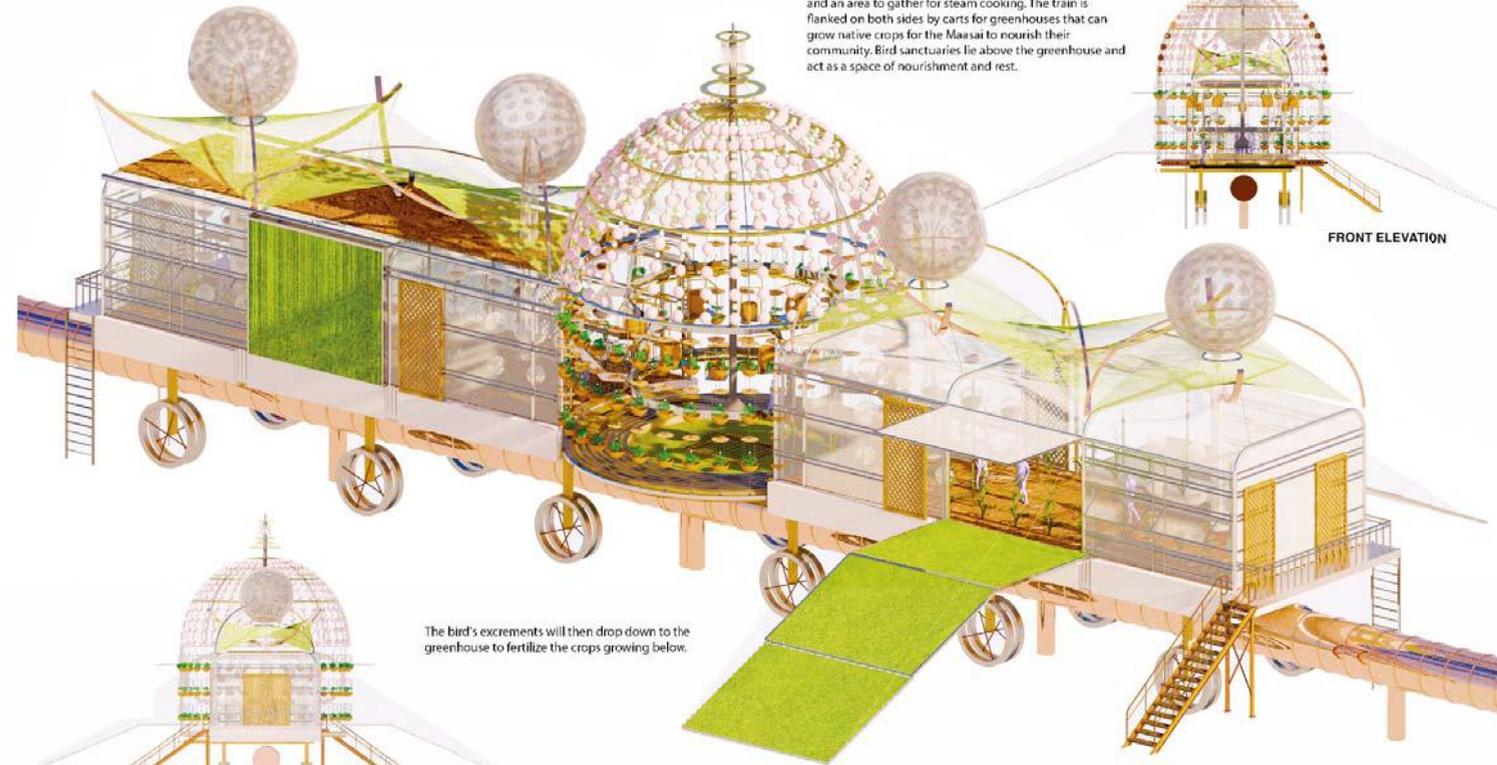


ELEVATION VIEW

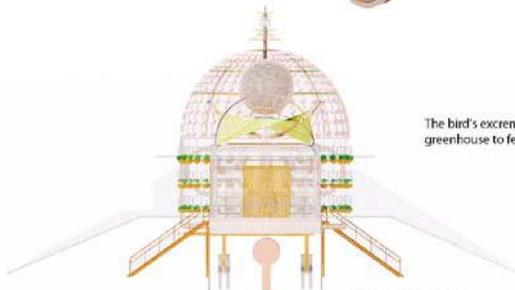
The central train consists of a greenhouse, bird sanctuary, and an area to gather for steam cooking. The train is flanked on both sides by carts for greenhouses that can grow native crops for the Maasai to nourish their community. Bird sanctuaries lie above the greenhouse and act as a space of nourishment and rest.



FRONT ELEVATION

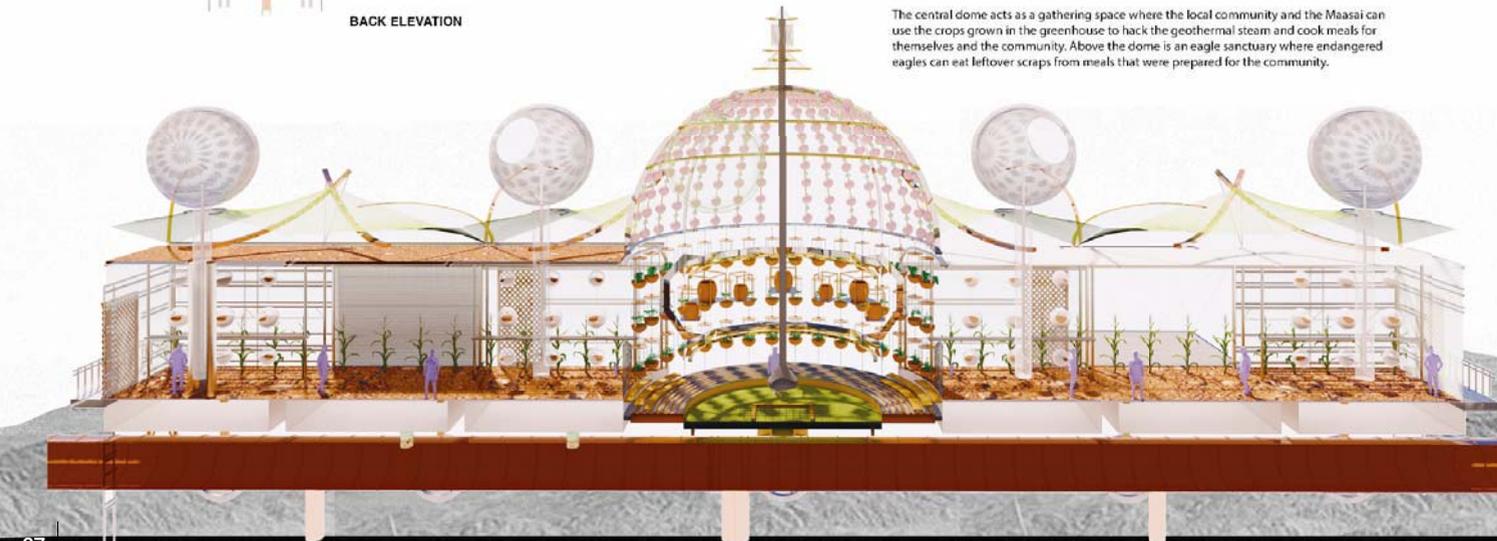


The bird's excrements will then drop down to the greenhouse to fertilize the crops growing below.



BACK ELEVATION

The central dome acts as a gathering space where the local community and the Maasai can use the crops grown in the greenhouse to hack the geothermal steam and cook meals for themselves and the community. Above the dome is an eagle sanctuary where endangered eagles can eat leftover scraps from meals that were prepared for the community.



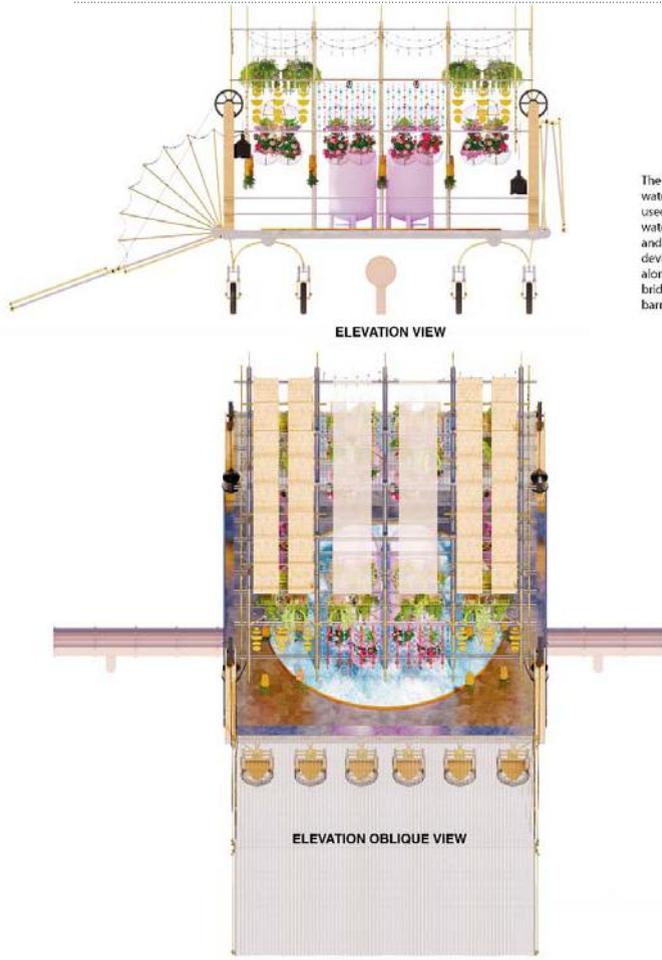
+ Ruppell's Vulture

Ruppell's Vulture +

+ Klipspringer

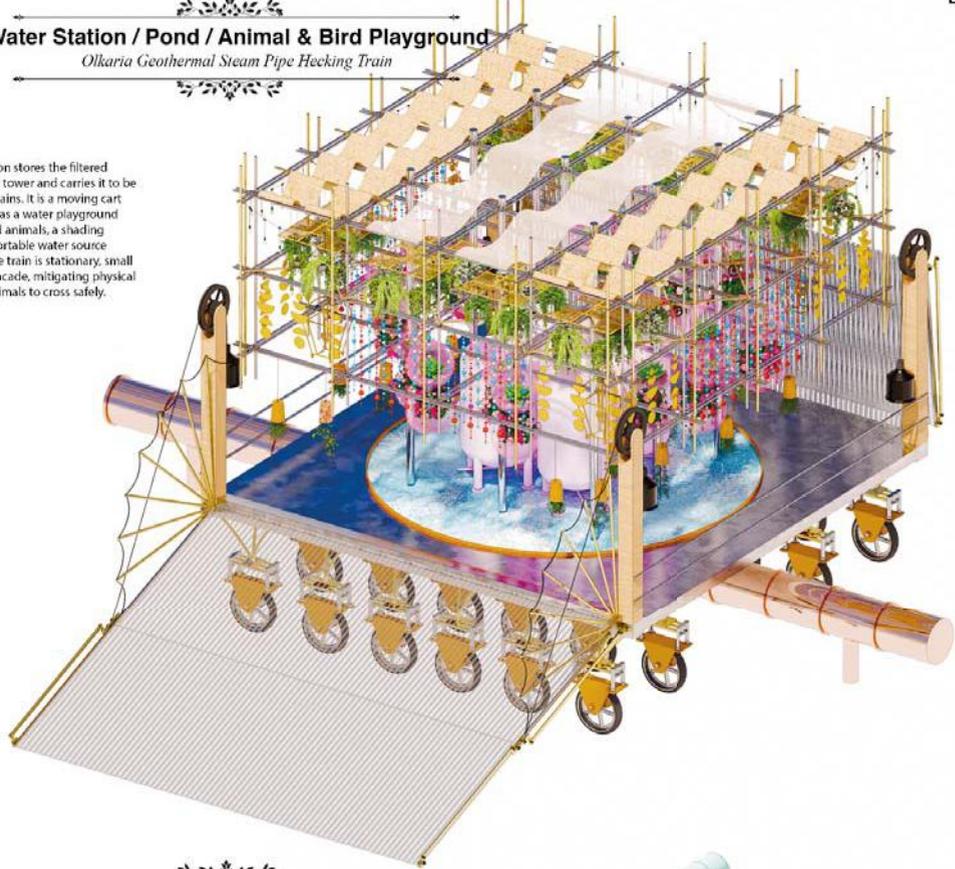
Zebra +

Perspective View - Greenhouse & Steam Kitchen Cart



Water Station / Pond / Animal & Bird Playground
Olkaria Geothermal Steam Pipe Hecking Train

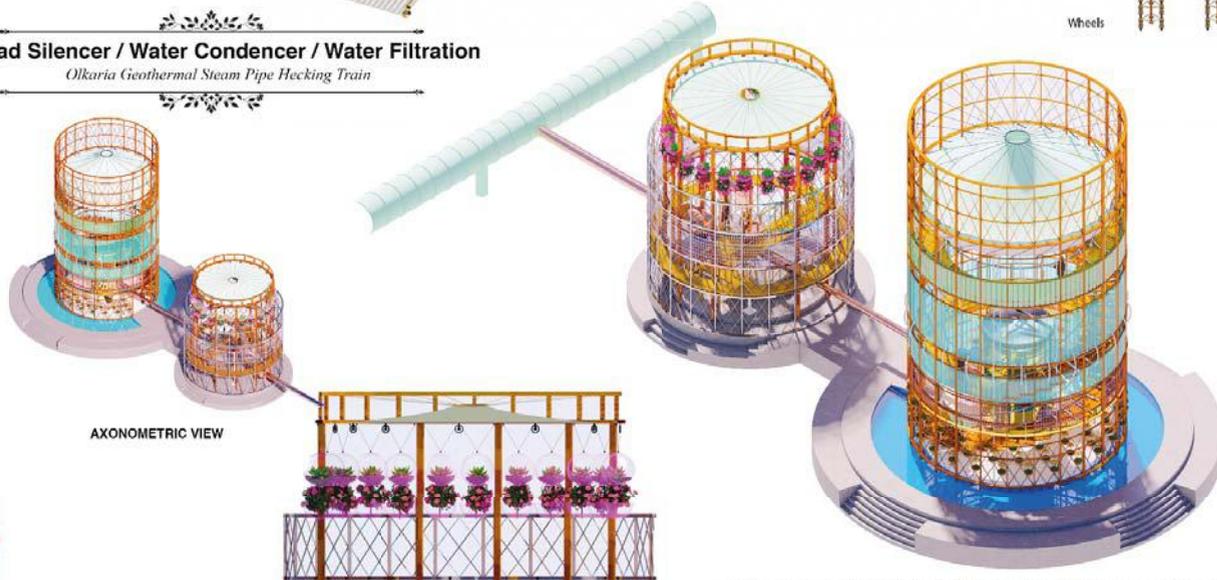
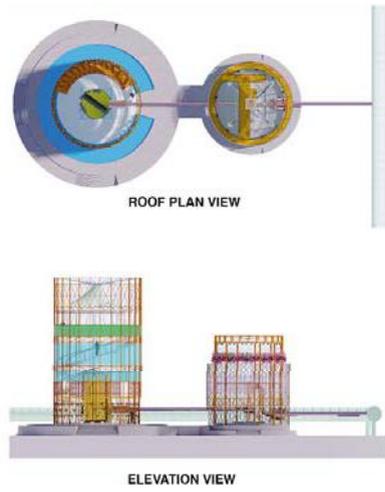
The portable water station stores the filtered water from the wellhead tower and carries it to be used among the other trains. It is a moving cart water oasis, functioning as a water playground and nesting area for land animals, a shading device for birds, and a portable water source along the pipe. When the train is stationary, small bridges open from the facade, mitigating physical barriers and allowing animals to cross safely.



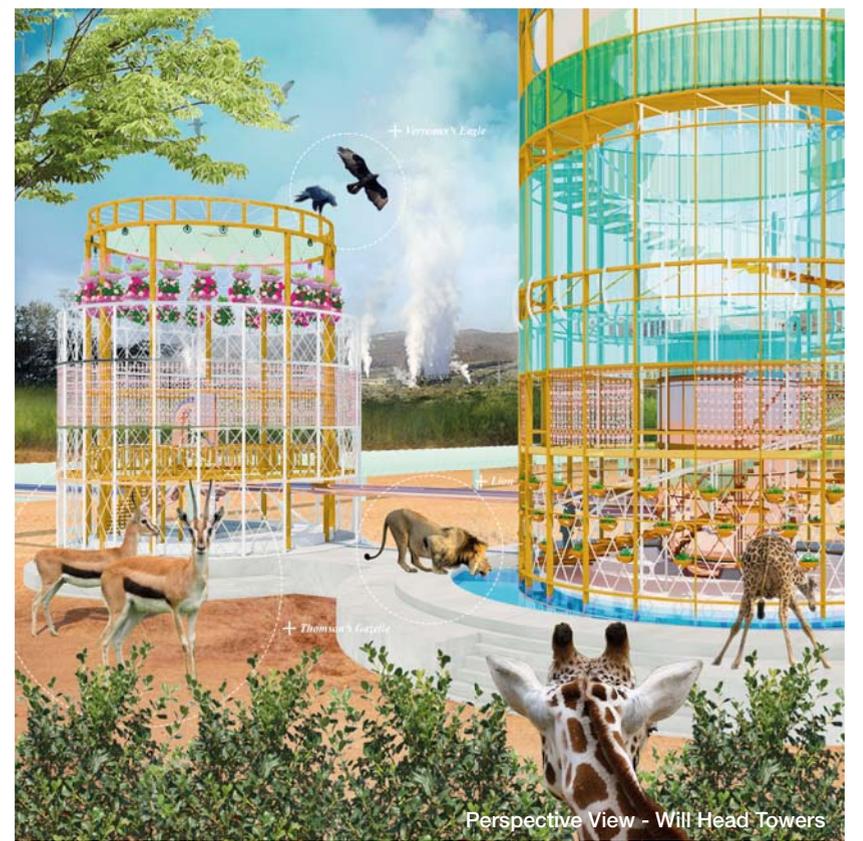
- Tensile Structure
- Plants
- Structure
- Ornamentation
- Drinking Pond & Storage
- Plants
- Ramp
- Wheels

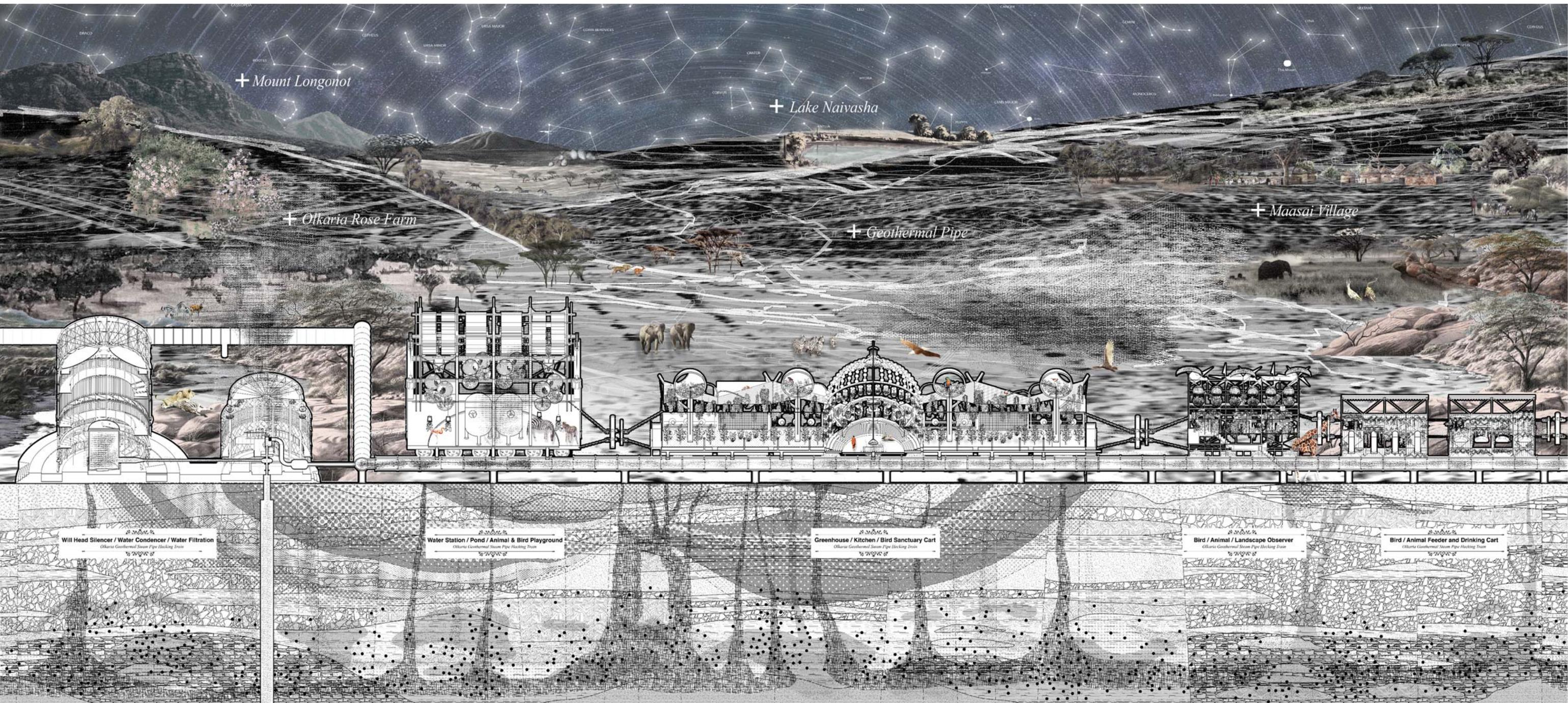


Will Head Silencer / Water Condenser / Water Filtration
Olkaria Geothermal Steam Pipe Hecking Train

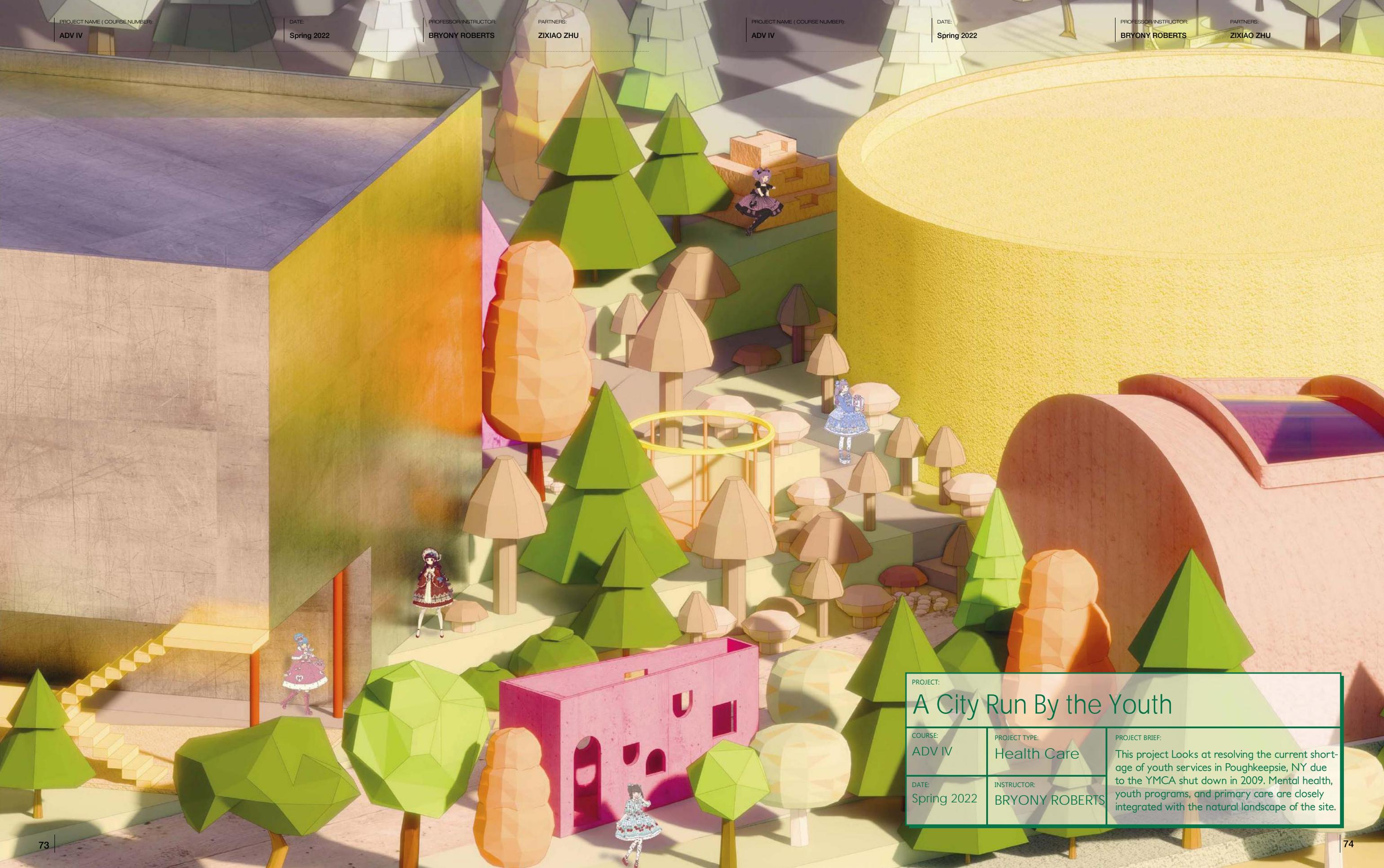


Covering the wells, the wellhead towers act as a noise silencer and steam filtration system. The steam from the well rises up the tower and gets collected at the top of the structure. The steam runs through the sodium hydroxide to divide into sodium hydrogen and water. The gravity then allows the water to be filtered through seaweed-filled transparent inflatable bubbles. As the filtration process finalizes, the water runs through potted plants and is collected and stored in a central pond for local animals, where the salt will be discarded leaving fresh drinking water for local animals.



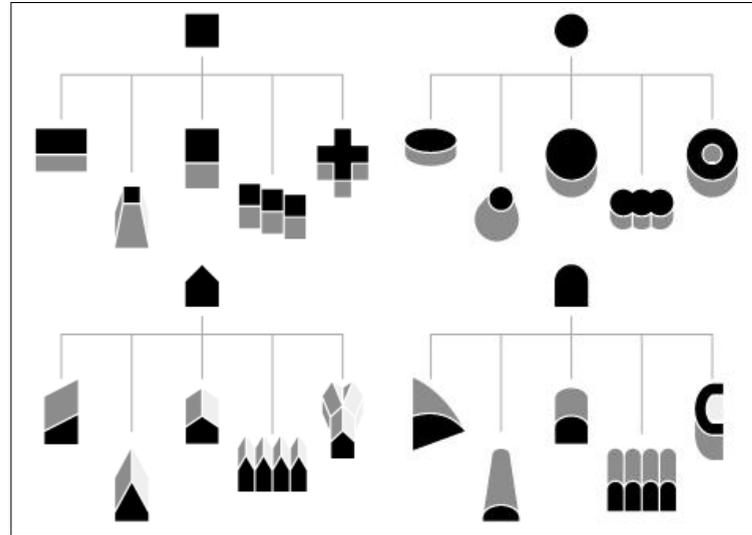


SECTION OBLIQUE - Olkaria Geothermal Hacking Train & Will Head Towers



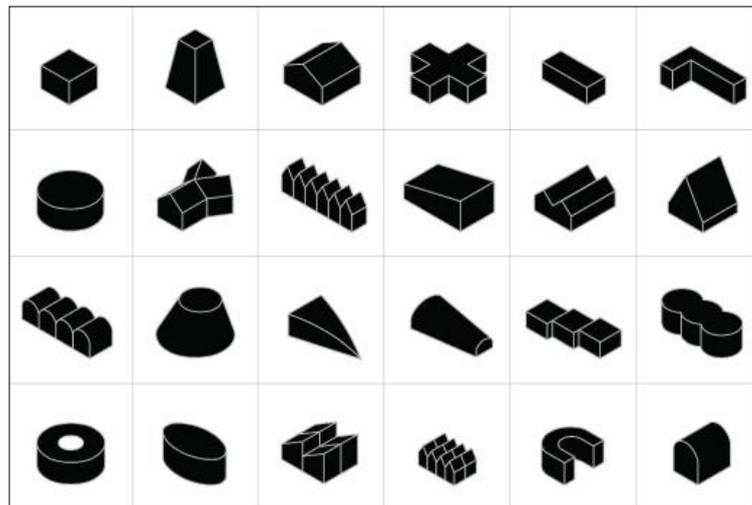
PROJECT: A City Run By the Youth		
COURSE: ADV IV	PROJECT TYPE: Health Care	PROJECT BRIEF: This project Looks at resolving the current shortage of youth services in Poughkeepsie, NY due to the YMCA shut down in 2009. Mental health, youth programs, and primary care are closely integrated with the natural landscape of the site.
DATE: Spring 2022	INSTRUCTOR: BRYONY ROBERTS	

- Shape Classification -



◀// Topography of FUN SPACE//
// An Index of Shapes In the City //

This design focuses on the relationships of architecture and the city with a close look of the dynamic and interdependent forces of mental health, education, community services, and landscape. It is a design for a mental clinic with a focus on youth activities such as YMCA and in-patient health care. It starts with generating a tri-leg structure of healthcare structure development with three major components: Mental Healthcare, Recreational Activities, and Primary Healthcare. It looks at the existing buildings in the site context and tries to summarize them into fundamental shapes. Four different types of forms are identified: Circle, Square, Pitched roof, and Arch roof. Then, these 4 major forms are sub-divided into more complicated geometry by methods such as extrusion, addition, and division.

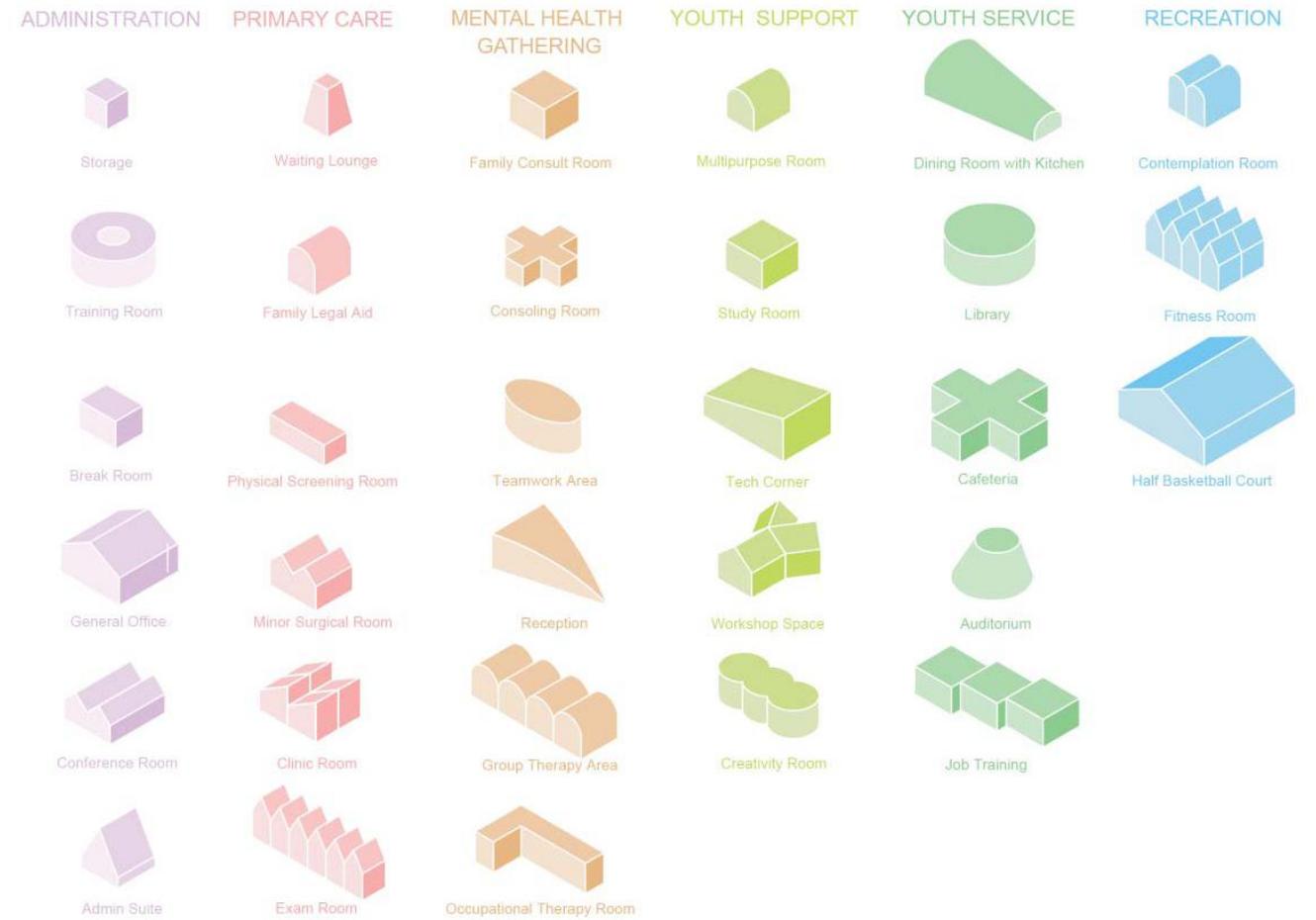


// Spectrum of PROGRAM & FORM// ▶

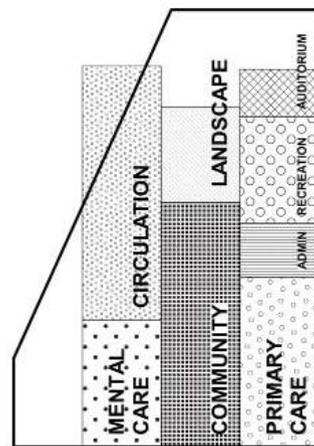
All the forms are further classified according to how they can relate to a certain type of activities and programs. There are six program categories, ranging from more adult related to youth centered. It also suggests a range of noise level from quite / private to loud / public. Different shapes could manifest different program usage and spatial arrangements.

ADULT

YOUTH

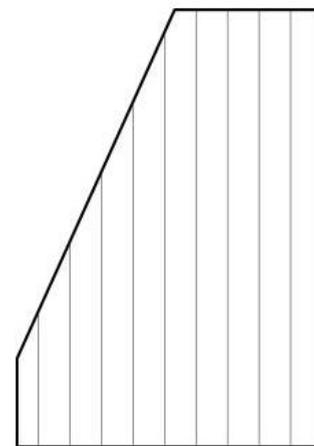


- SITE STRATEGY -



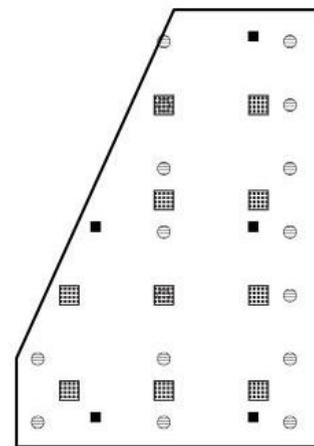
THE SITE

The Site is too small.
The program area is too large.



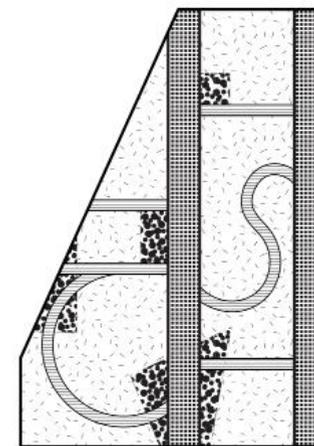
THE STRIP

The site is divided into strips of equal size
to give a sense of order and system.



THE OBJECT

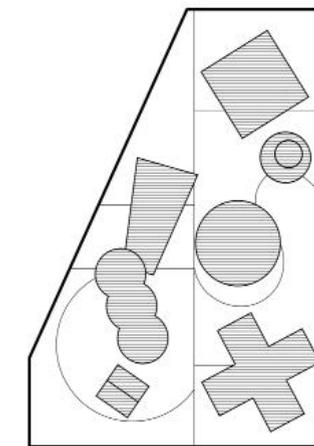
Some small and barzzer objects occur
across the site with a certain frequency -
happened on the grid intersection.



CIRCULATION

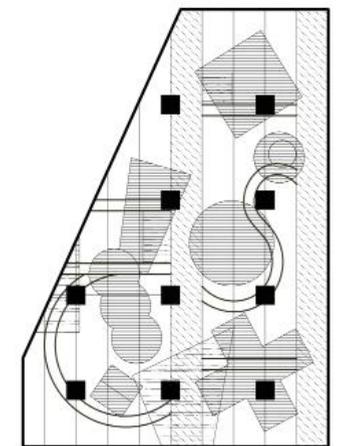
(1) The BOULEVARD
(2) The PROMENADE

- SITE STRATEGY -



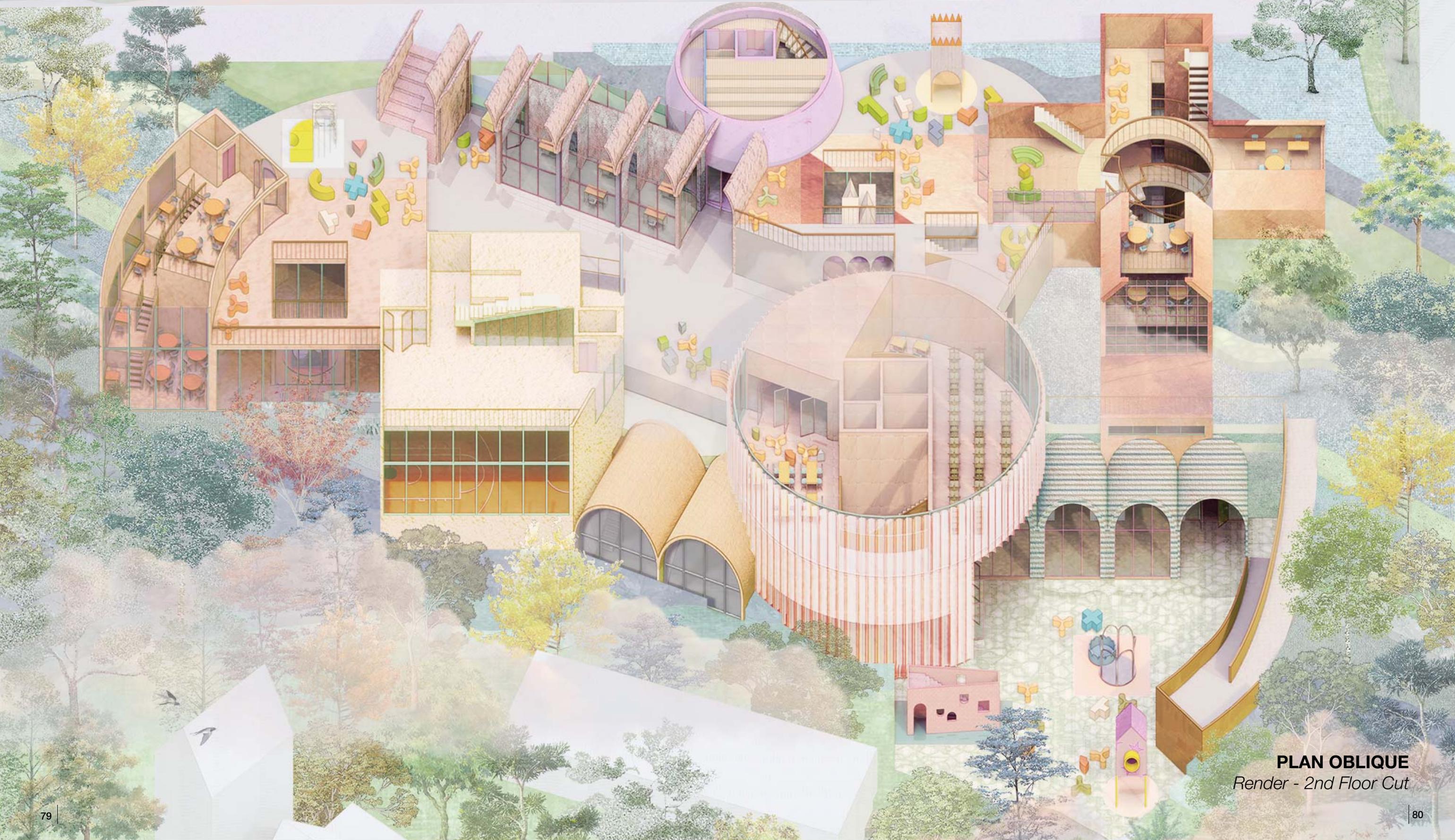
BIG FORM

The final layer is a composition of major
architectural elements. It is a loose fit of
big forms.

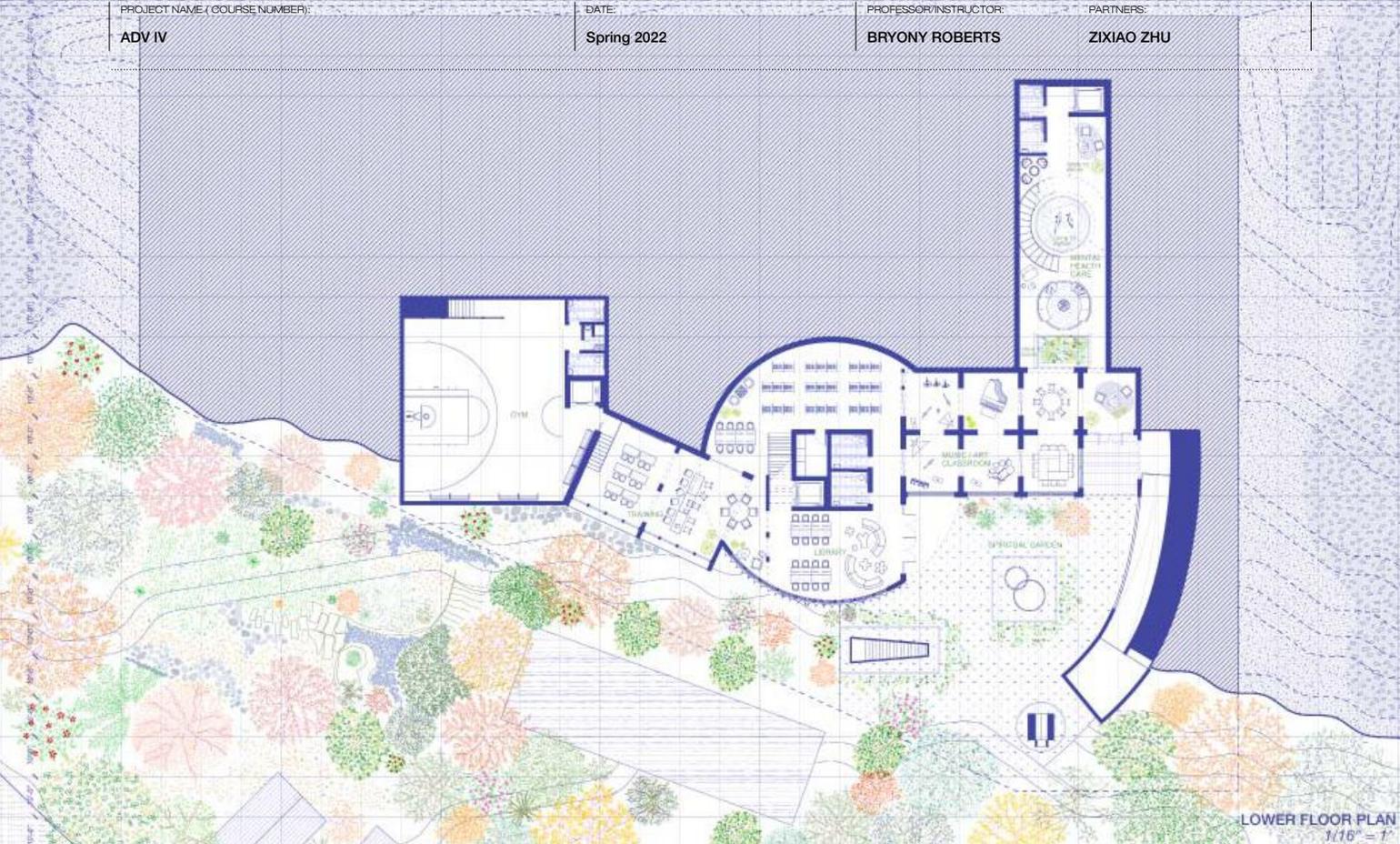


SUPER IMPOSED

All the layers of strategies and systems
are collapsed into a super imposed
mashup.



PLAN OBLIQUE
Render - 2nd Floor Cut

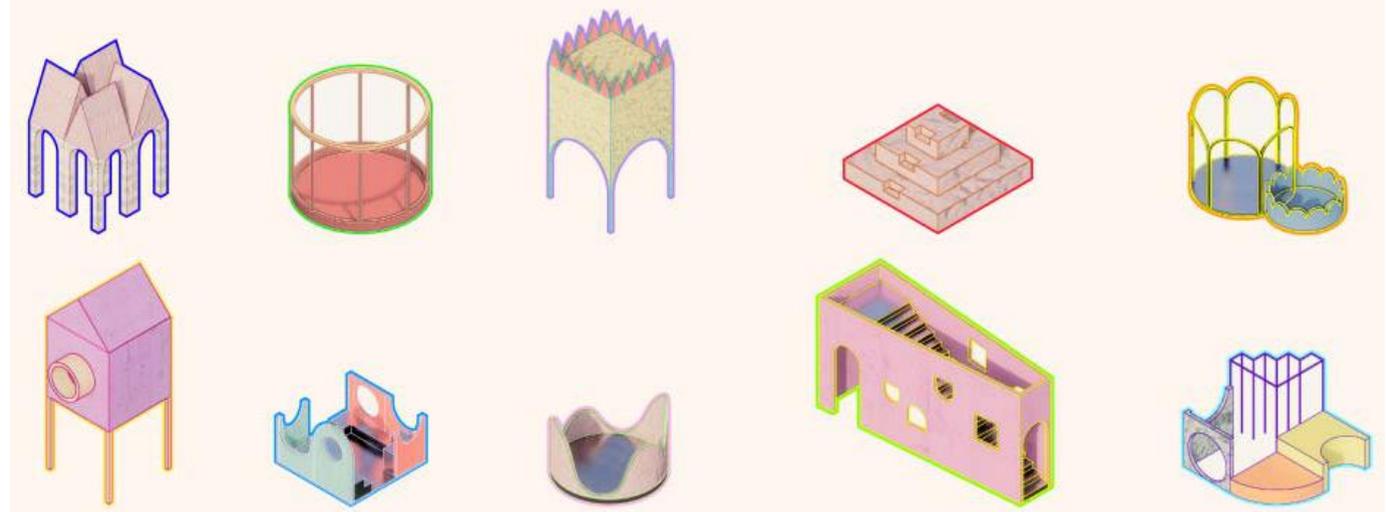


LOWER FLOOR PLAN
1/16" = 1'



UPPER FLOOR PLAN
1/16" = 1'

- The Objects // Sensory Spots -



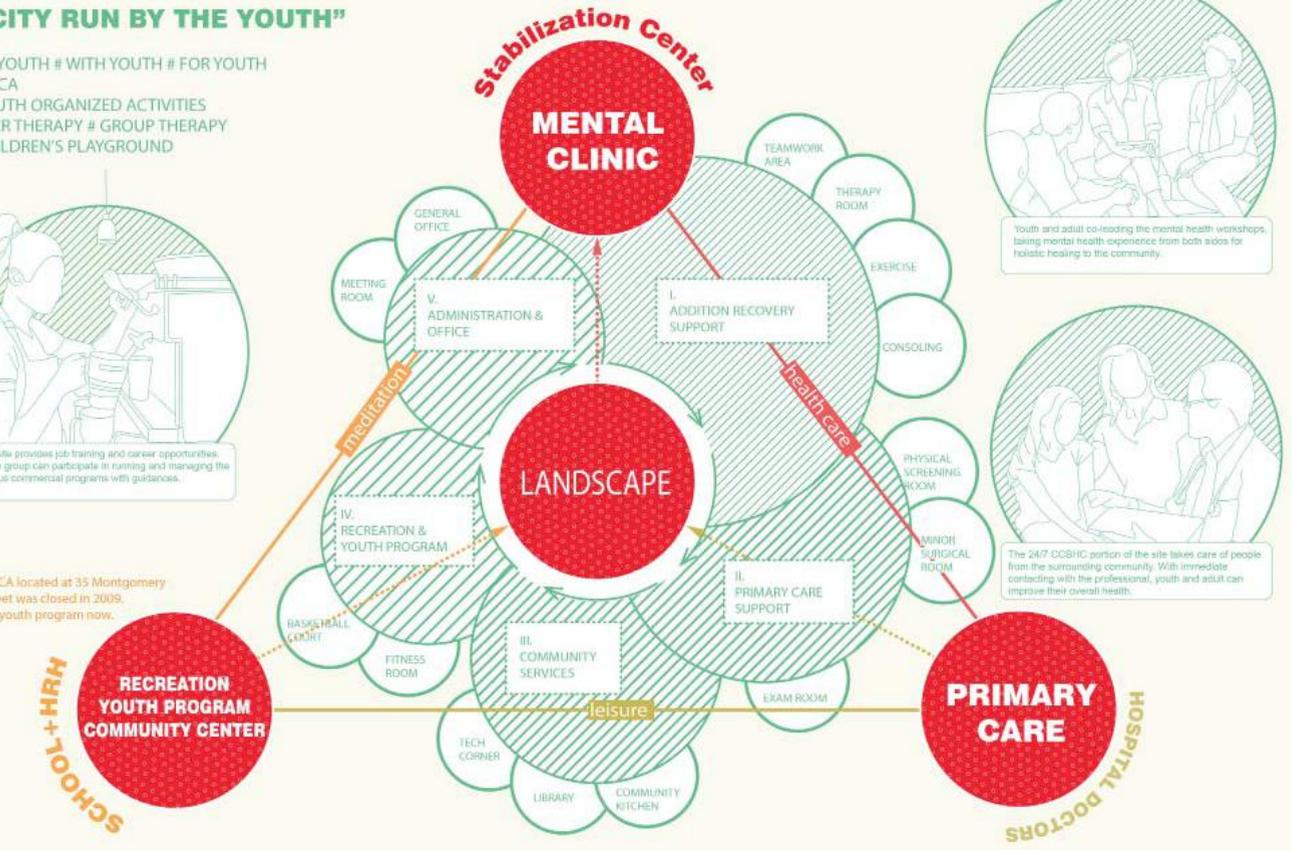
- Health Care Method // Program Design -

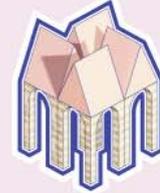
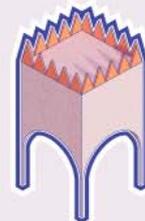
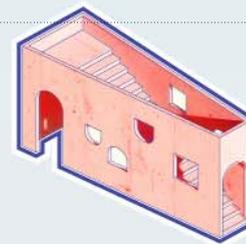
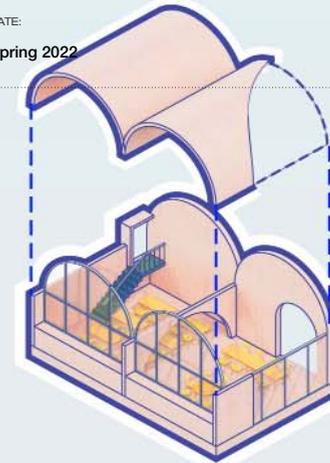
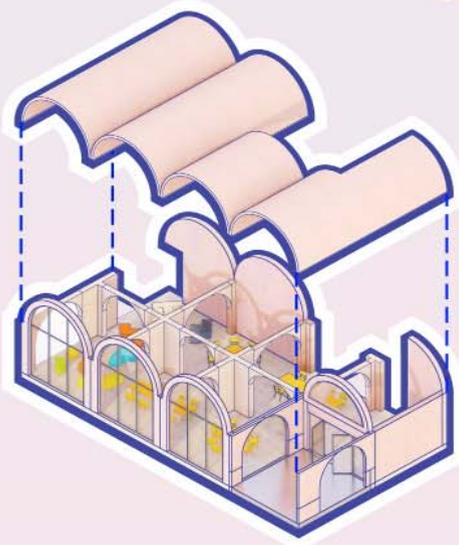
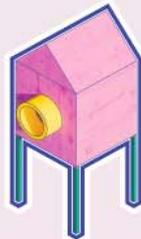
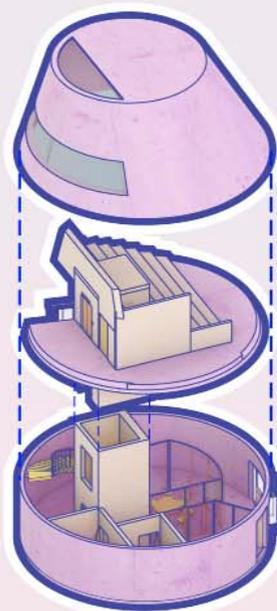
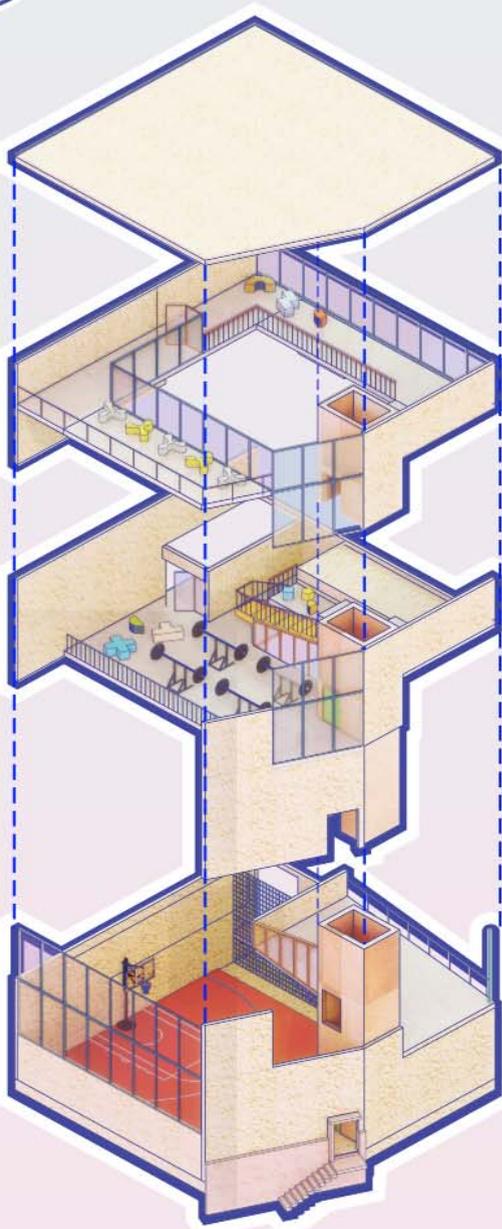
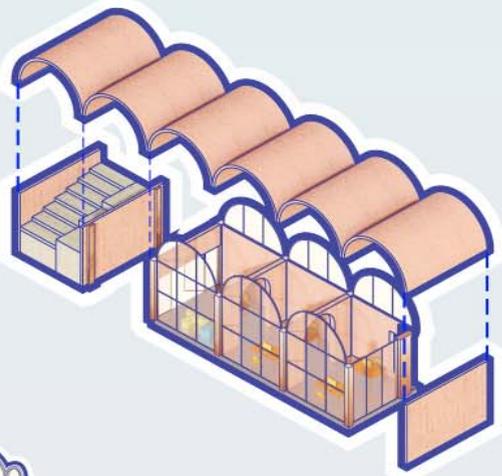
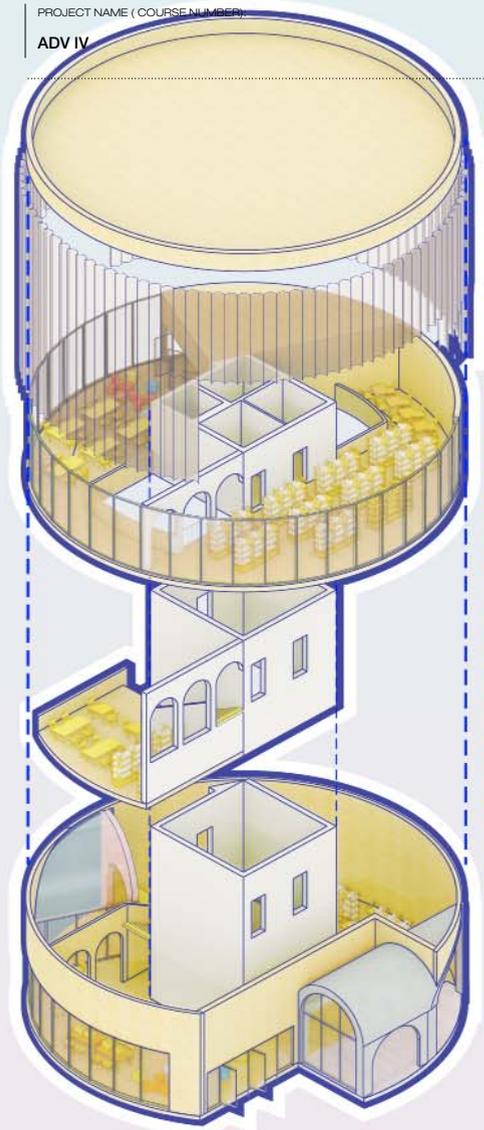
"A CITY RUN BY THE YOUTH"

- # BY YOUTH # WITH YOUTH # FOR YOUTH
- # YMCA
- # YOUTH ORGANIZED ACTIVITIES
- # PEER THERAPY # GROUP THERAPY
- # CHILDREN'S PLAYGROUND



YMCA located at 35 Montgomery Street was closed in 2009. No youth program now.



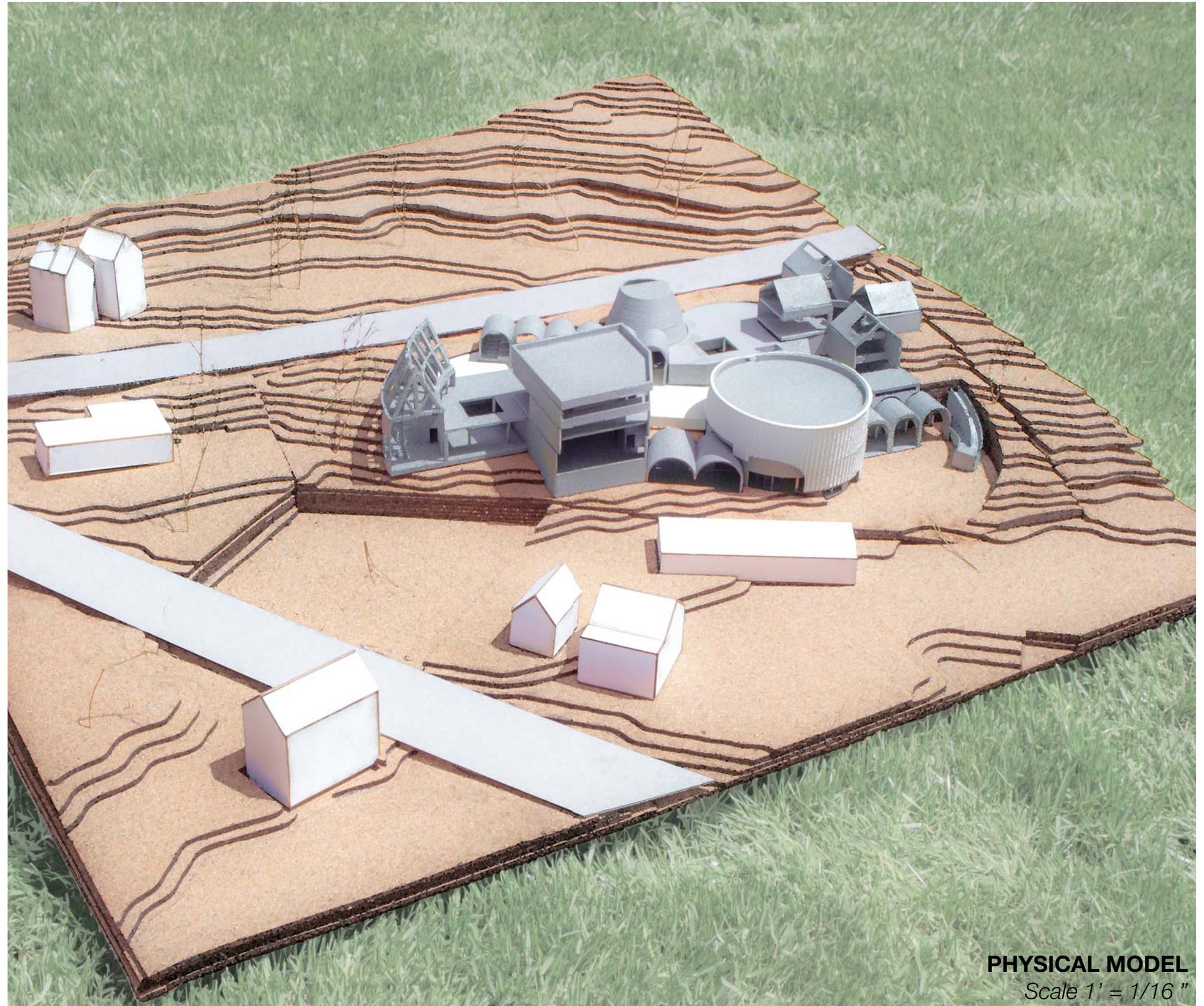


PROGRAM DIAGRAM
Exploded Axon

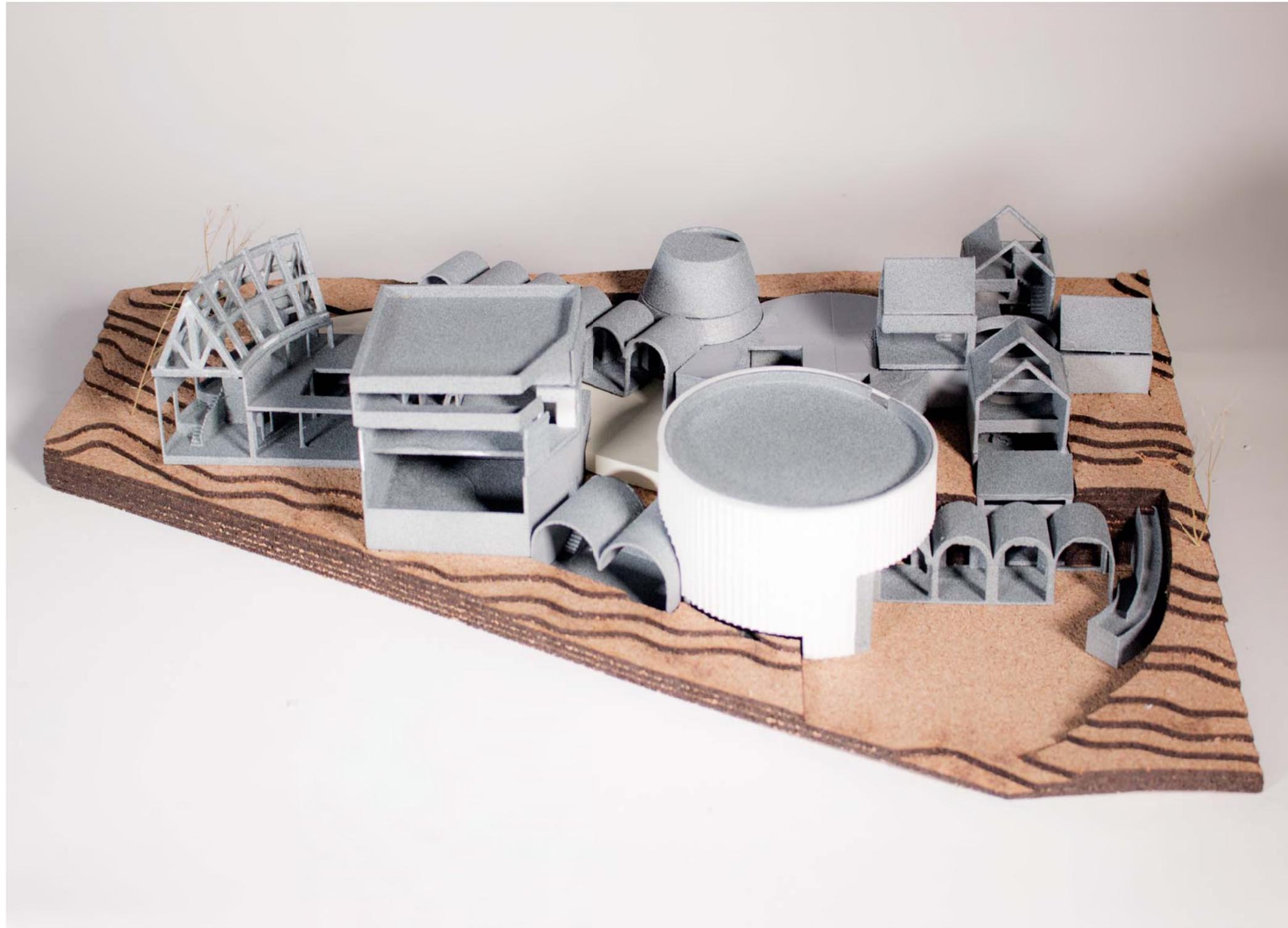
INTERIER VIEW - HEALTH CARE
Render



EXTERIOR VIEW - CENTRAL PLAZA
Render



PHYSICAL MODEL
Scale 1' = 1/16"



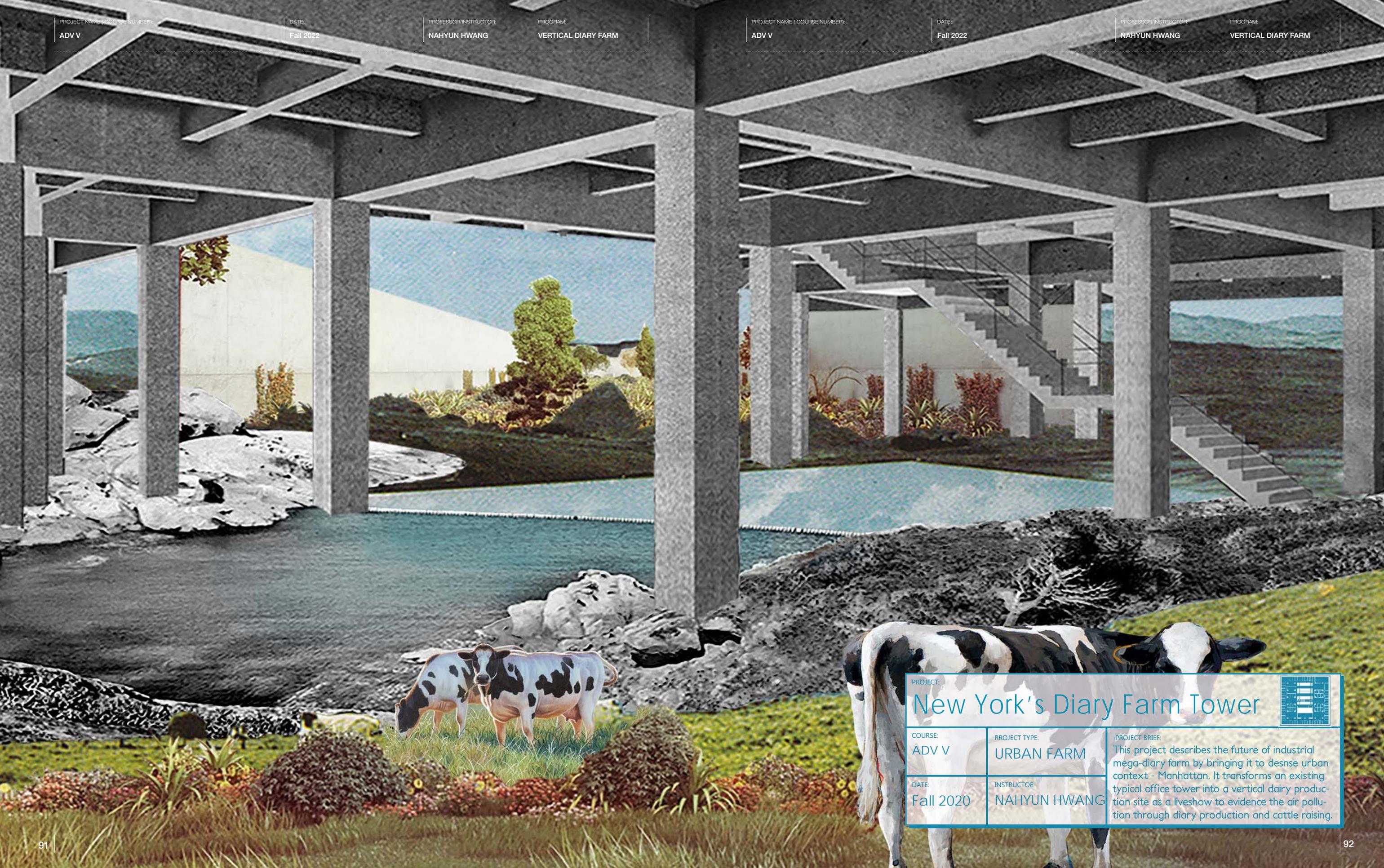
PHYSICAL MODEL
Scale 1' = 1/16 "



PHYSICAL MODEL
Scale 1' = 1/2 "



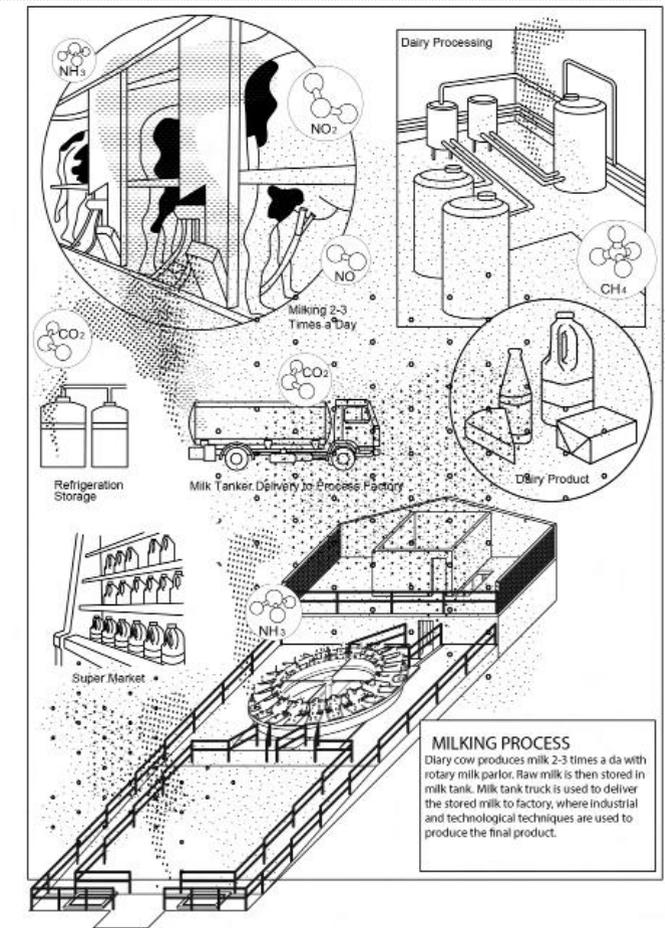
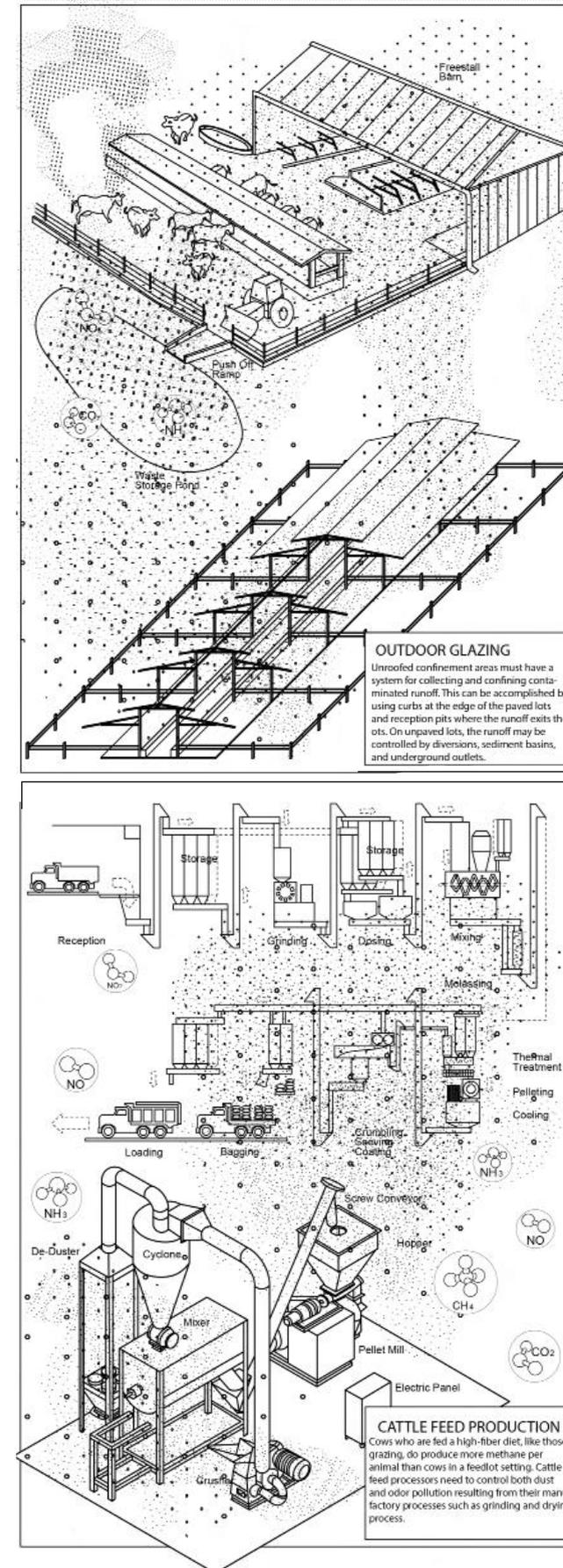
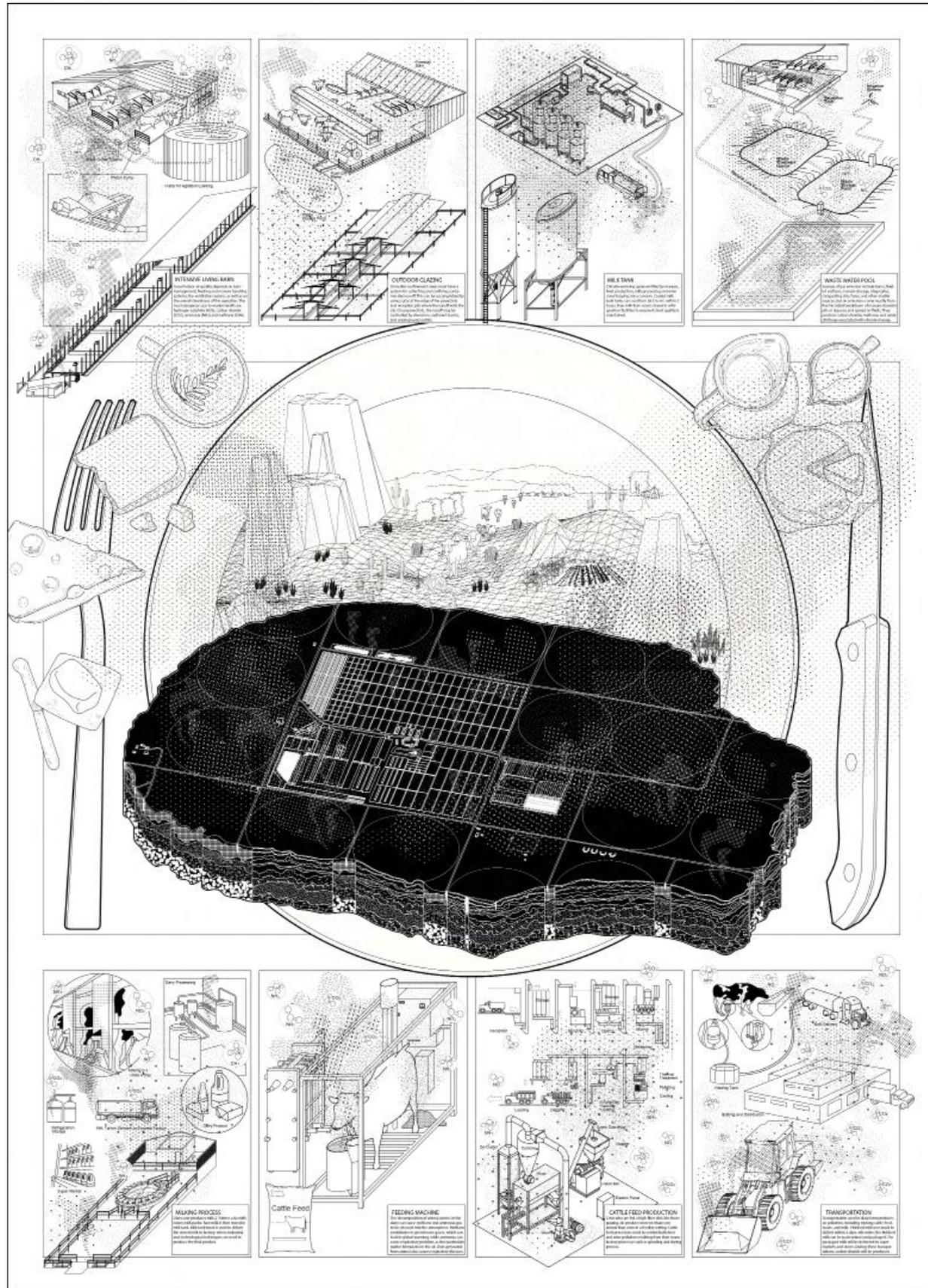
SPIRITUAL GARDEN
Render



PROJECT:
New York's Dairy Farm Tower

COURSE: ADV V	PROJECT TYPE: URBAN FARM	PROJECT BRIEF: This project describes the future of industrial mega-dairy farm by bringing it to dense urban context - Manhattan. It transforms an existing typical office tower into a vertical dairy production site as a liveshow to evidence the air pollution through dairy production and cattle raising.
DATE: Fall 2020	INSTRUCTOR: NAHYUN HWANG	





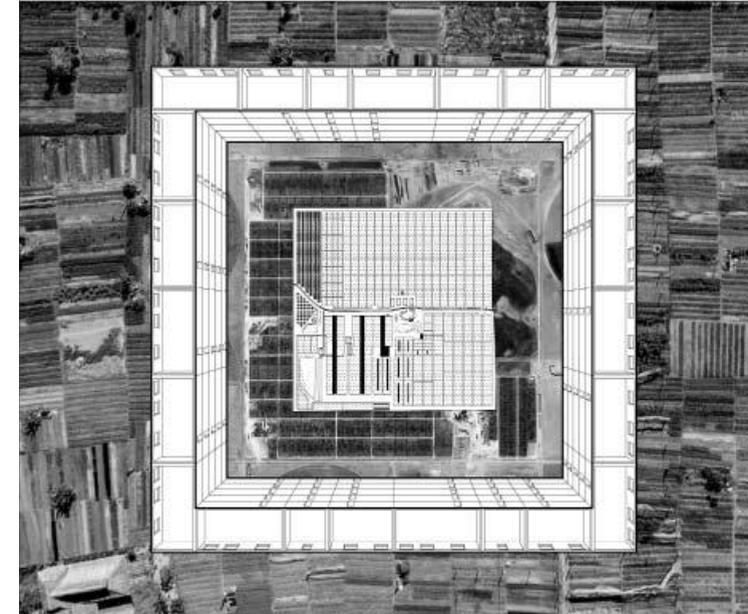
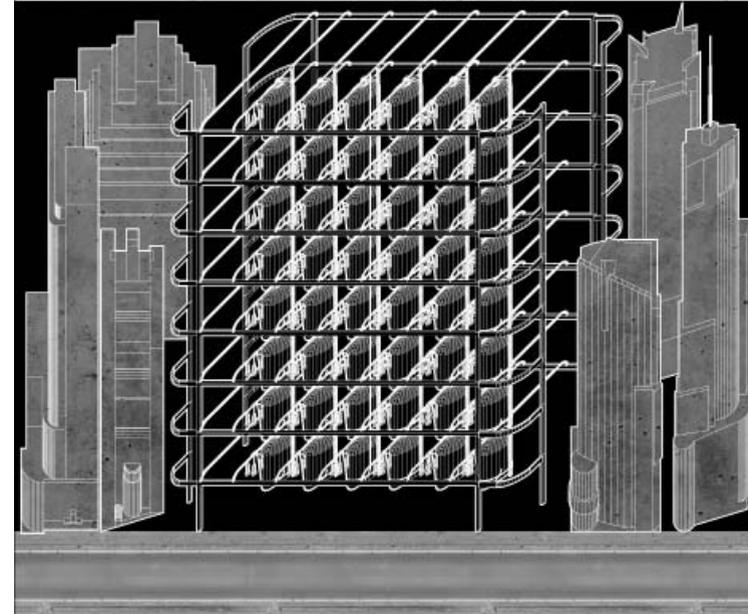
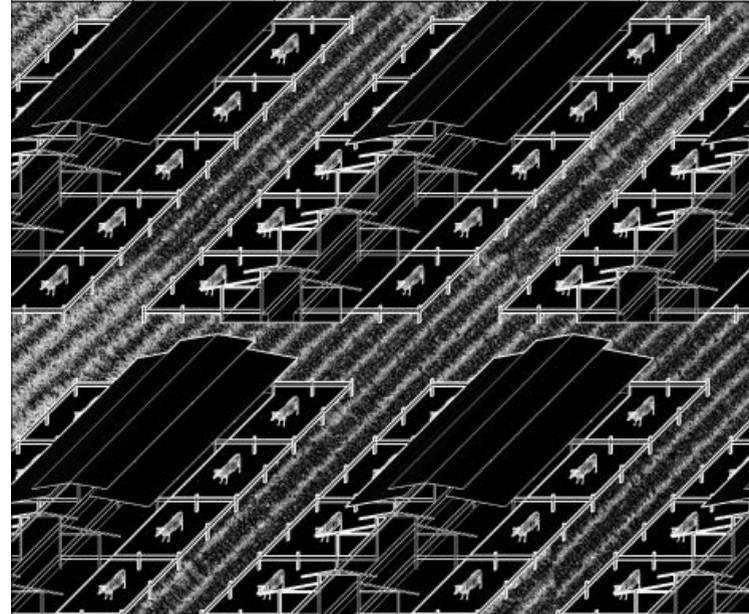
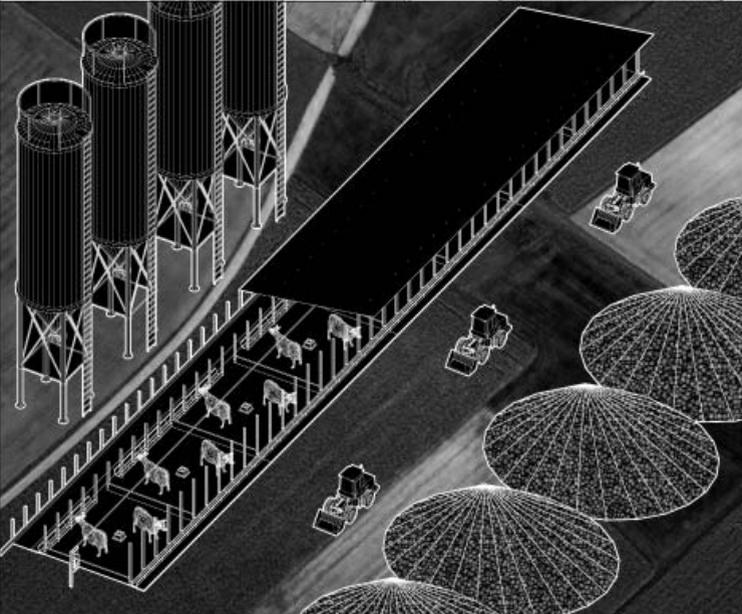
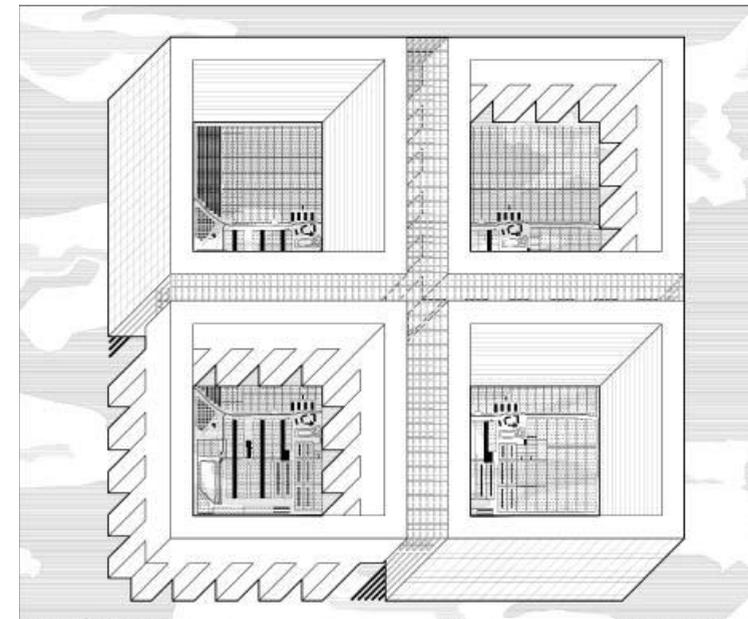
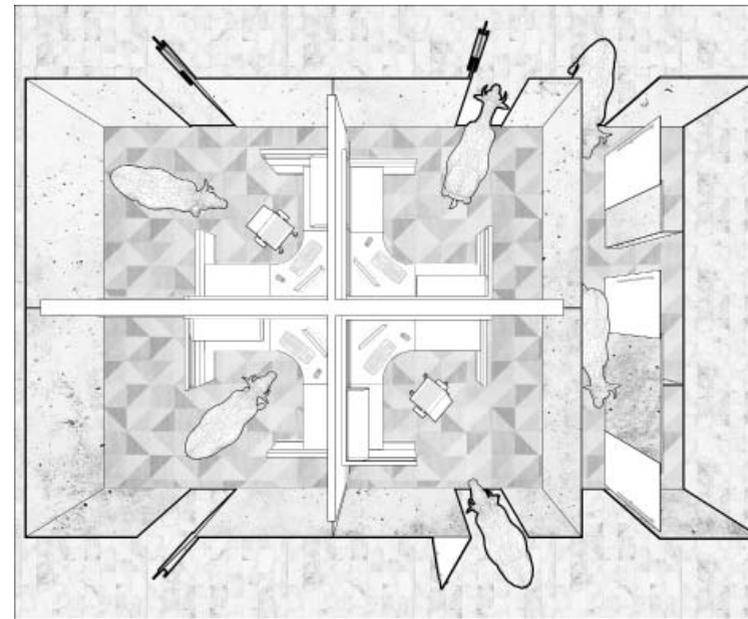
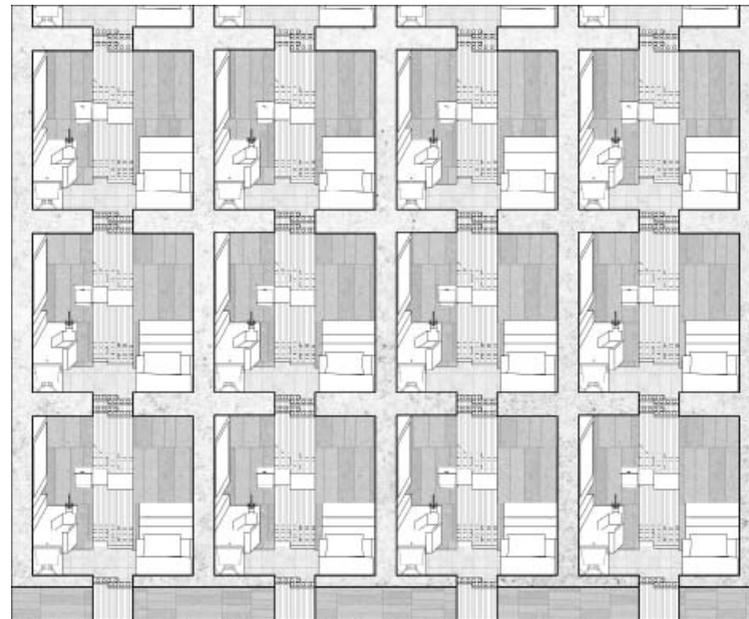
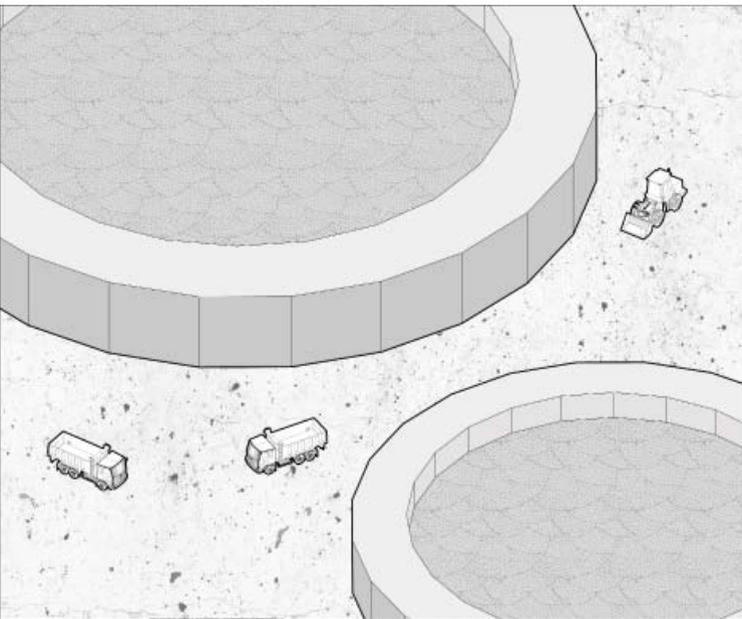
Diary Architecture Industrial Dairy Process & Air Pollution

Site Context // Major Facility Space
Collective Cattle Housing, Rotary Parlor, Milk Tank, Cow Fence, Open Air Grazing Yard, Transportation

This drawing shows an example of a mega size dairy farm located in Arizona close to Phoenix. It houses 80,000 cows. It illustrates the major fertility in industrialized dairy farms and how air pollution is generated when cows interact with the machines and architecture. The 8 boxes on the edge shows the most air polluted fertility such as the waste pool, the barn where cartels eats, and the milking refrigerating fertility. The process of producing cow feed is also producing air pollution, actually 96% of the corn production is going into the dairy industry.

In the middle, it is the site of a mega-size industrial dairy farm located close to Phoenix, Arizona. It not only produces air pollution gas such as CO₂, methane, and amonia, but also creates ground water shortage and lowering the bed rock for other crop use. It also illustrates major dairy products such as milk, cheese, and butter. The production and transfortation of dairy products creates even more air pollution than the raising of dairy cows.

Essentially, dairy farms and dairy product factories are located far away from city - where the consumer and business takes place. The process of milking producing is separated from human daily life and therefore the air pollution through these processes is not evidenced and unseen in people's daily life.



Waste Water, Cattle Feed, Transportation & Air Pollution

Diary farm consists of separate facilities and machines which form a close loop system: a production line. The system can be categorized in four major steps: Cattle Living, Milking Production, Waste Control, and Transportation. Air pollution in diary farm is mostly connected with cattle waste such as waste water lagoon, on-site transportation, and milking process.

Collective Cattle Barn & Jail Cells

This drawing shows the metaphor of diary fertility with architecture for humans, such as the barn where cows live is similar to the cells in the jails.

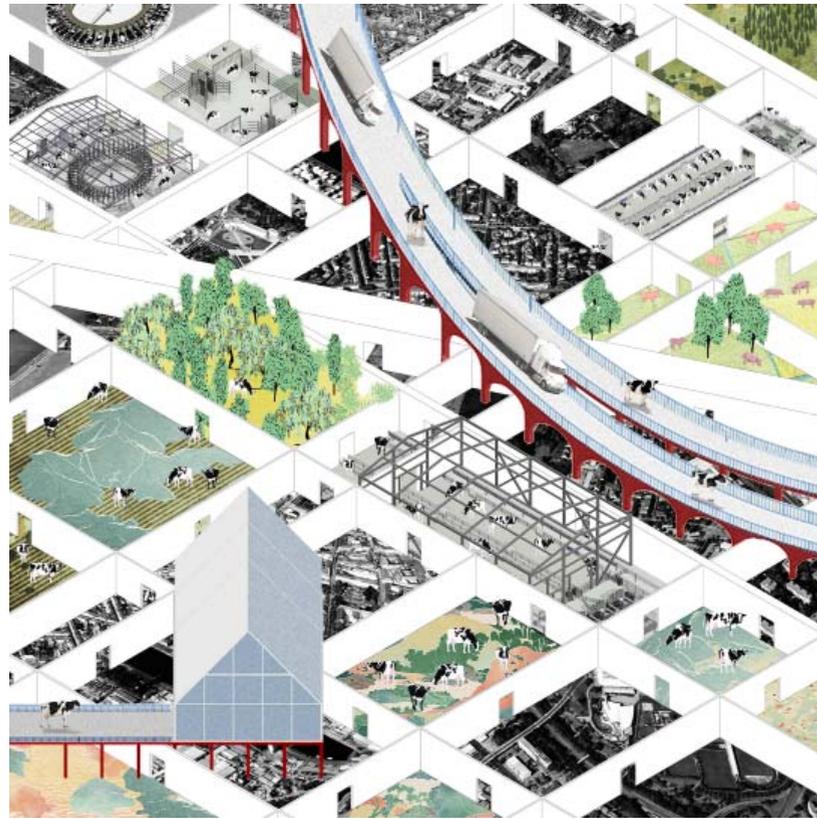
There is a Architectural parallel between the living condition of cow to the fenced space of jail cell. The fence becomes the wall and the barn to a grid square castle.

Cow Invading Office Plan & Tower of Milking Parlor

This drawing tries to imagine a world where cows take over a human living space most common to Manhattan - the office grid plan. It then enlarges the scene from one divided office grid to a highrise tower made of milking parlor. It is trying to bring forward the daily dairy product consumption hidden behind people's daily life.

Cow Outdoor Grazing as Courtyard & Builing Block Fence the Diary Farm

This drawing shows the metaphor of diary fertility co-exists with architecture for humans, such as the apartment blocks circumstances the diary farm and the entral courtyard where people enjoys the sun becomes the outdoor grazing field for cows. It tries to bring urban blocks into the sub-urban field and also emerges the human living condition with the diary cow.



Diary Farm & Urban Blocks Juxtaposition

Site Context Collage // situate into Urban Fabrics

The process of milking producing is separated from human daily life and therefore the air pollution through these processes is not evidenced and unseen in people's daily life. This drawing shows the attempt to bring the dairy farm and cow into dense urban context and image each city block as a walled room. Each walled room presents a type of dairy facility. The barn block is next to a urban block, which is adjacent to a outdoor grazing room. It sees the urban context as an exhibition space for dairy programs to re-distribute and co-exist with the city structures and urban fabrics.



Urban Farms and Vertical Diary Structure

Vertical Urban Farm Collage // From Horizontal To Vertical Massing

Zoom in into one of the diary farm scenario, Cow Waste Fertilized Plant Growing Center, it is a plant growing space layered and stacked as highrise typology, forming a floor of plat plot and grazing space for cows and other domestic animals such as pigs and chickens. This drawing tries to show a design attempt to verticalize the dairy facility into a tower and re-distribute dairy programs into each floor, creating unique spacial characters. It images to decrease air pollution produced by cow waste by recycle and reuse of the cow waste as fertilizer for urban farm and vegetable growing.



MODEL PHOTO - Stacking Tower
Scale 1' = 1/2 "



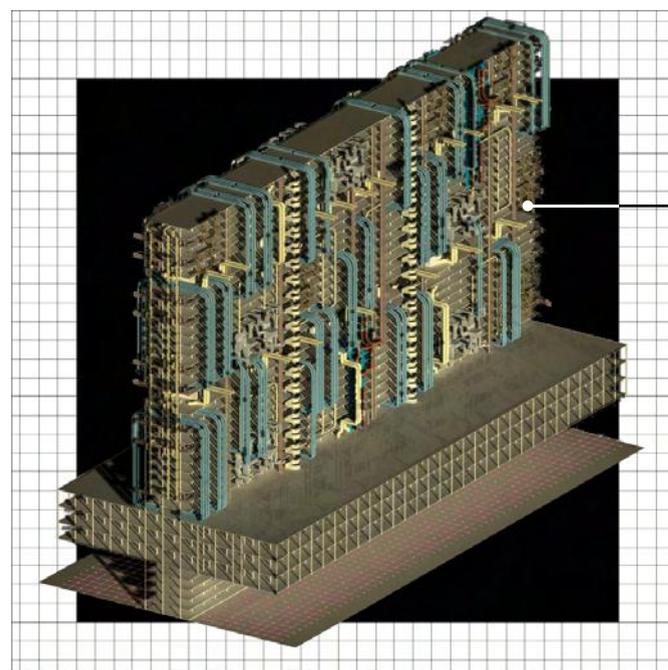
MODEL PHOTO - Domino Configuration
Scale 1' = 1/2 "



MANHATTAN AS A CONTEXT FOR 34 VERTICAL DIARY FARM TOWER - DIARY FLAGSHIP / BOUTIQUE

The project tries to bring the existence of cow and cow's air into the city and be evident through the daily life of ordinary people in Manhattan. To make the diary farm and urban context co-exist, it is necessary to stack/layer the existing diary facility and programs into a vertical structure. The attempt is to occupy 34 different locations and sites in New York/Manhattan to fit all the dairy farms required to sustain New Yorkers appetizers for dairy products. These 34 diary site will serve as boutique or flagship store to form a complex system of cow raising, waste recycling, milking production, and air pollution reduction treatment. On the same time, it can be seen as education center for air pollution in diary industry and tourist attraction. Such locations could be civil such as library at Bryant Park, or Commercial such as typical Manhattan office tower.

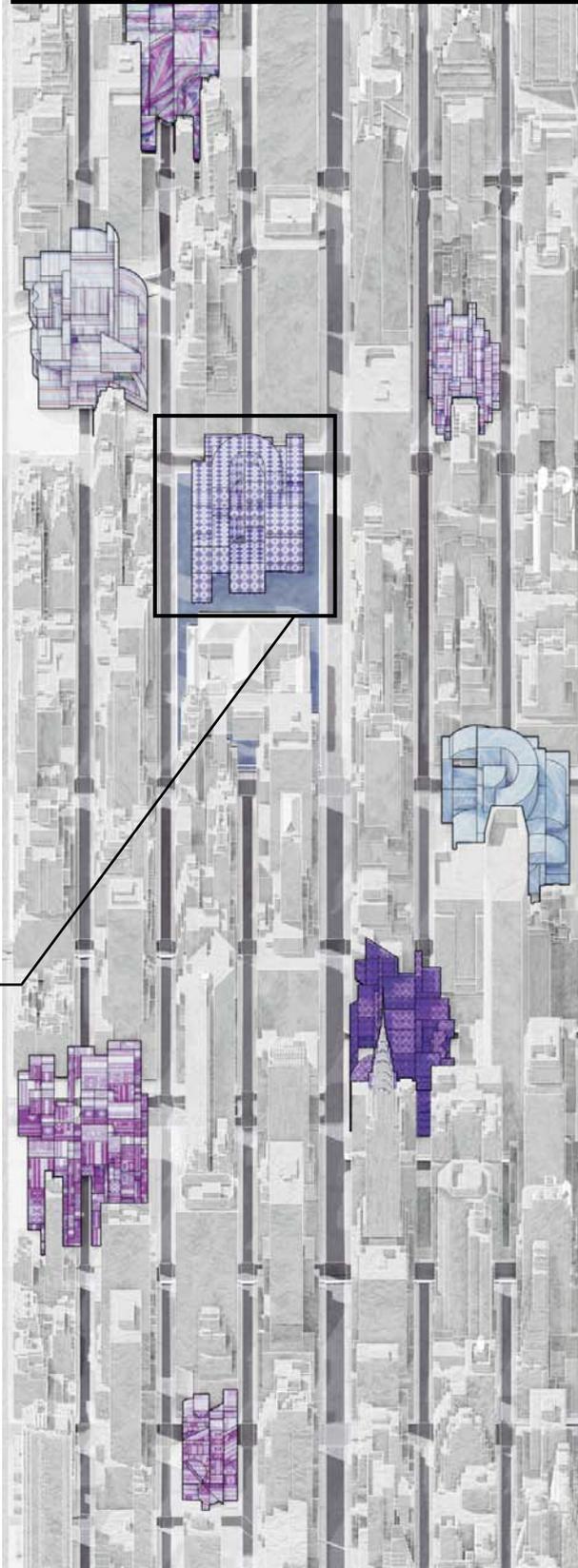
These drawings are different massing possible to occupy 34 unique sites in Manhattan. It can be civic form besides a library, a typical office tower, or framed Domino structure linking Hudson river to the apartments at inner city.



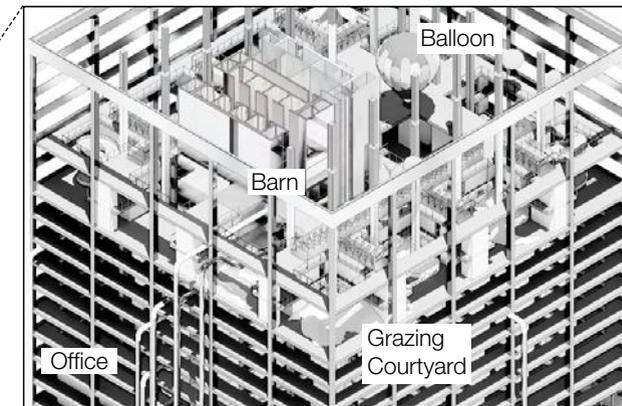
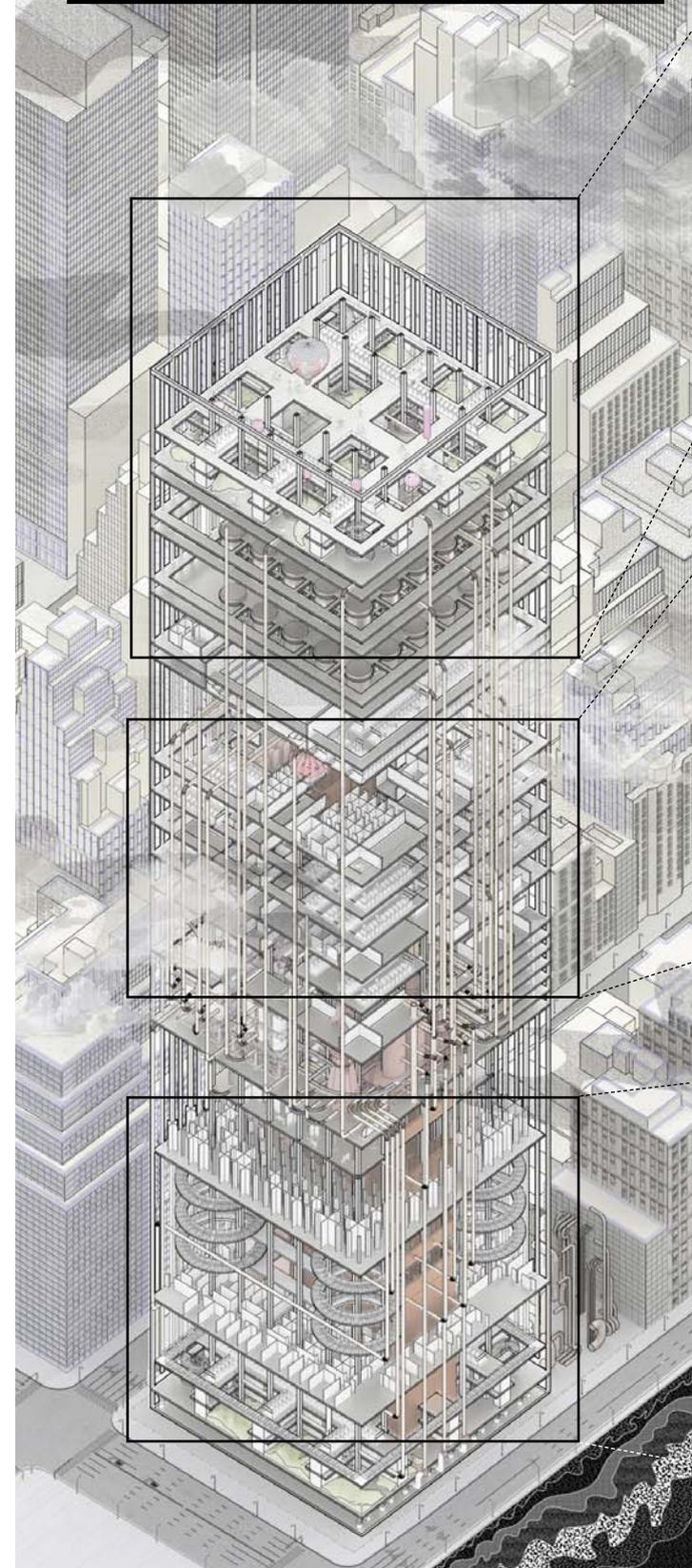
- MASSING STUDY // Dairy Farm As Highrise -

This massing proposes a highrise typology with a linear plan. It can be situated in Manhattan where a linear tower existed such as the UN headquarter. Its mechanical structure is exposed to the exterior to emphasize the air pollution and ventilation.

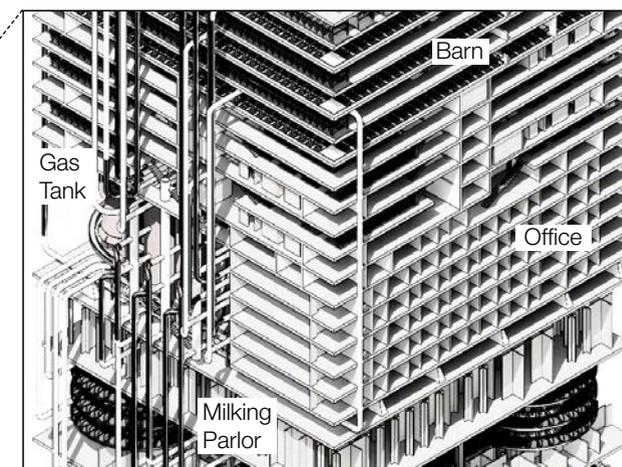
- 34 Dairy Farms Distributed In Manhattan -



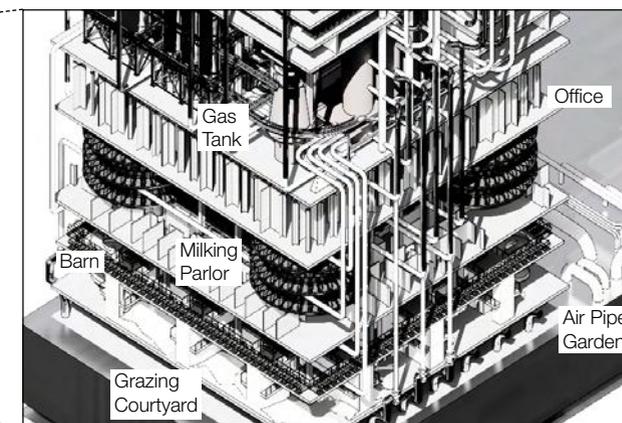
- New York's Dairy Tower // Exploded AXON -



Barn+ Office + Grazing Courtyard + Balloon + Air Pipe
Level 25-44 // North & West Facing Facade



Barn+ Office + Gas Tank + Milking Parlor + Air Pipe
Level 13-37 // South & East Facing Facade



Barn+ Grazing Courtyard + Office + Milking Parlor + Gas Tank + Pipe+ Recycled Pipe in Private-Owned-Public-Park
Level 1-16 // South & West Facing Facade

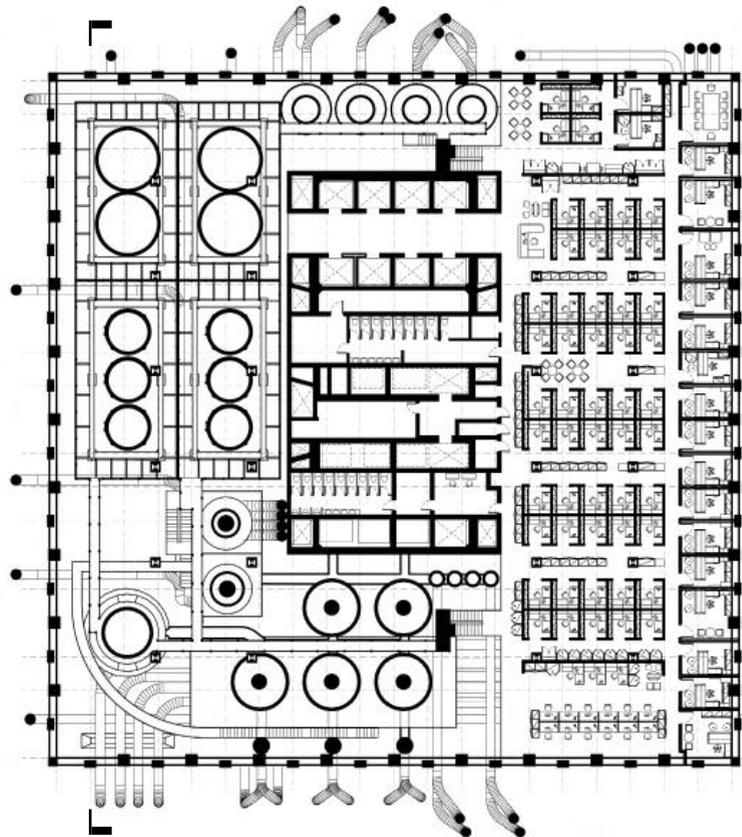
Transform Typical Office Tower Into Vertical Dairy Farm

Square Plan // Tension Between Human Living Environment and Dairy Cow's Field
1166 avenue of America, Manhattan, New York

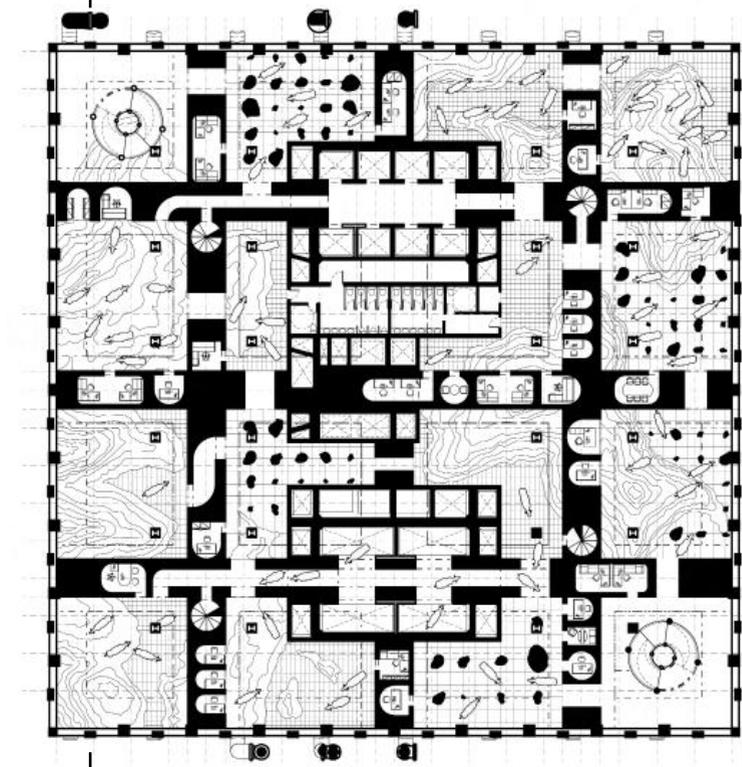
High rise and offices in Manhattan can be seen as a site, to emphasize the consumption by humans and the source of dairy products. The site is 1166 avenue of America, a typical office tower with square plan beside Bryant park. Dairy production and the air cow produced through industrialized dairy farms becomes a stage for human activities. There is tension between these two different and inter-dependent living environments. People need fresh air to maintain daily activities, but dairy cows produce tons of ammonia, methane, and carbon dioxide which invade into clean and fresh air area. To further emphasize and brings the critical air pollution problem, air pipes, ventilation duct, and mechanical tubes will be installed and exposed outside of the building facade to allow people walking on the street to see the process.

Floor 13-18 is air collecting and treatment center where level 13 is the existing mechanical plan. It will be transformed into the central air treatment center which collect all air produced by cow's by air pipe. Half of the floor plate above it (FL 14-18) will be removed to allow installation of huge gas tank and air filtration machines. The waste and polluted air can be seen as they move through the pipe into the central air treatment center.

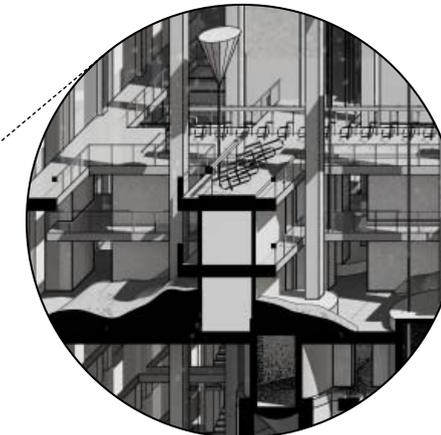
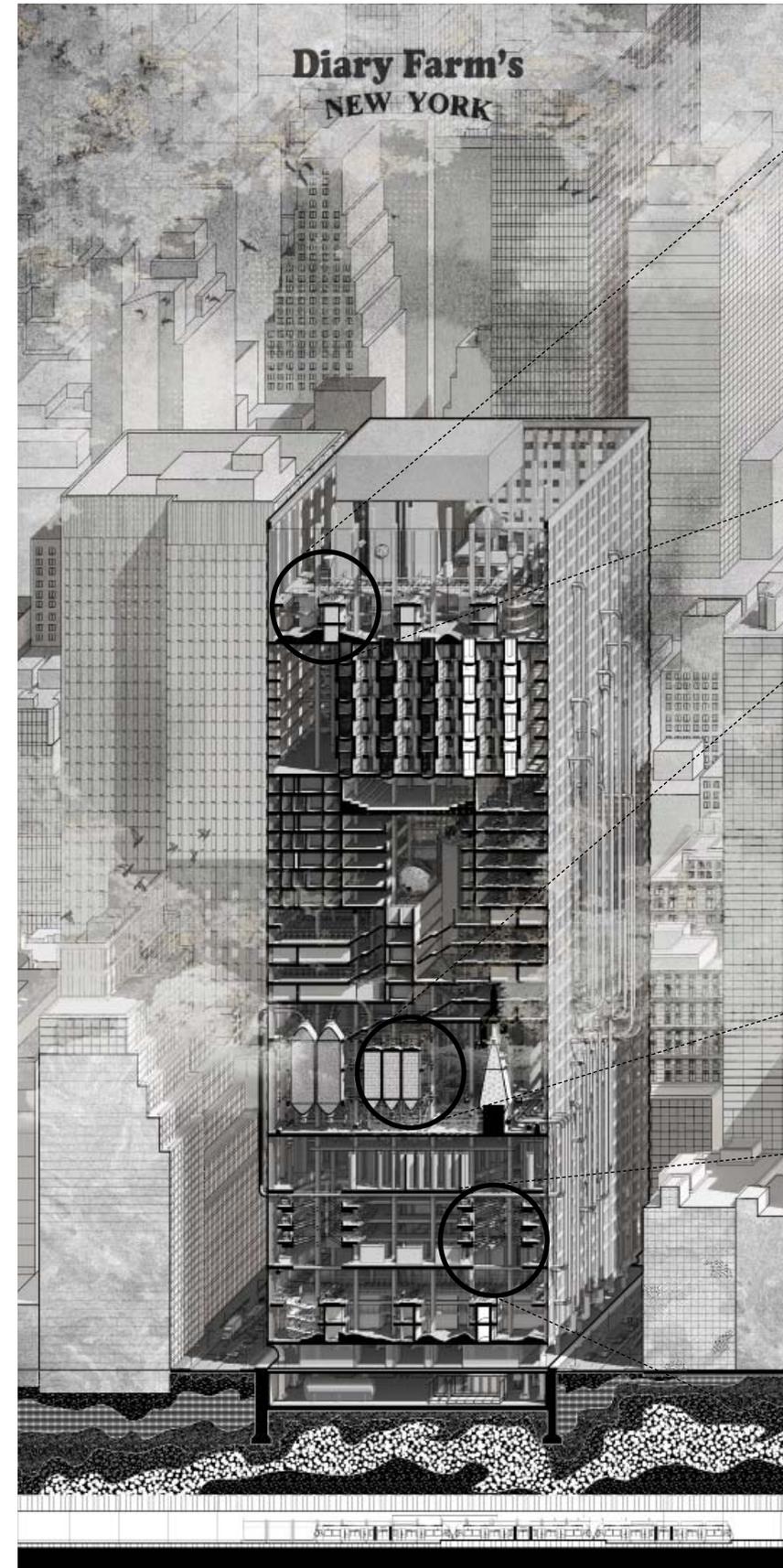
Floor 2-4 / 39-41 is a 4 level stack of cow's grazing field at bottom, office in poche area ay middle, and double story height barn with open to be low holes at the top. The plan in lower left shows the plan of the grazing field. Thick walled poche will divide the square plan into 16 courtyards. It will be filled with grass hills, stone field, and huge spiral ramp for cow to move up to barn level. Small pockets will be cut into the poche wall for meeting rooms and offices. Poche walls are also cut open to allow cows to move between grazing courtyards.



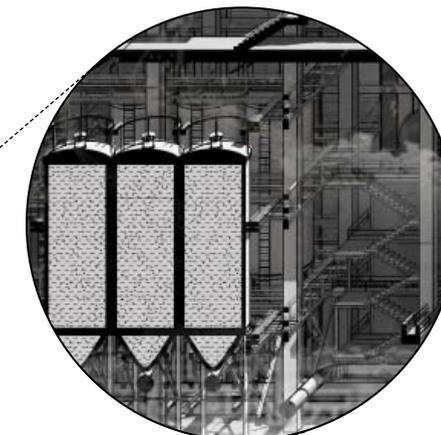
FL 13-18: MECHANICAL + GAS TANK + AIR CENTER



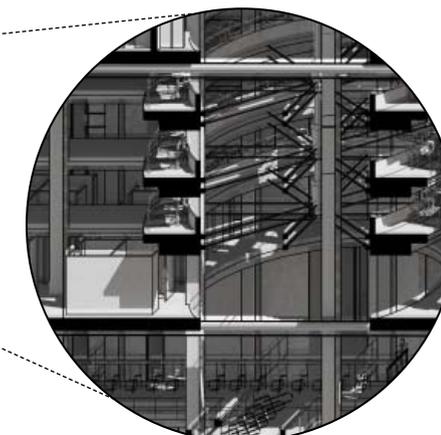
FL 2-4 / 39-41: BARN + COURTYARD FIELD + OFFICE



FL 39-41 // BARN + COURTYARD + OFFICE



FL 13-18 // GAS TANK + MECHANICAL + PIPE CENTER



FL 6-9 // ROTARY MILK PARLOR + OFFICE





FL 2-4 / 39-41: BARN + COURTYARD FIELD + OFFICE

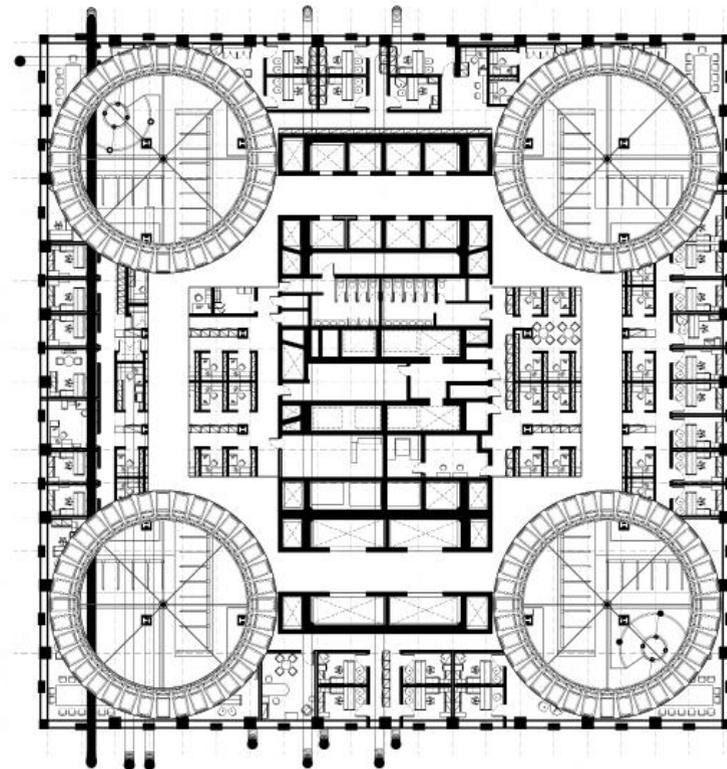
Transform Typical Office Tower Into Vertical Dairy Farm

Square Plan // Rotary Milking Parlor and Office
1166 avenue of America, Manhattan, New York

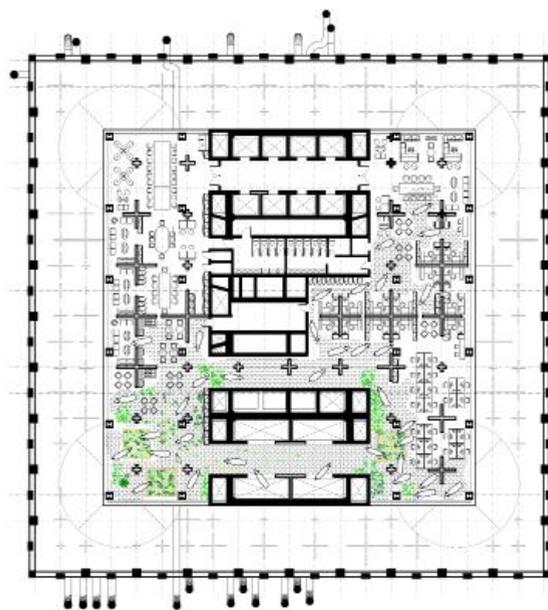
The plan on top shows the vertical stack of rotary milking parlors from level 6 to 9. The plans on the bottom shows 3 level of cow's grazing field invades into the office grid. The vertical circulation of the existing building is split between the human use and the dairy farm, and a 3rd vertical circulation is added for education tours and access of the milk bar. Existing floors plates are cut open to allow dairy farm to merge into the building.

Floor 6 is the existing typical office plan and floor 7-9 are stacking rotary milking parlor levels. Cow's waste and milk will drop down to the office below, making the environment dirty and smell. Catwalks connects 4 parlor together with the elevation for cow and dairy worker.

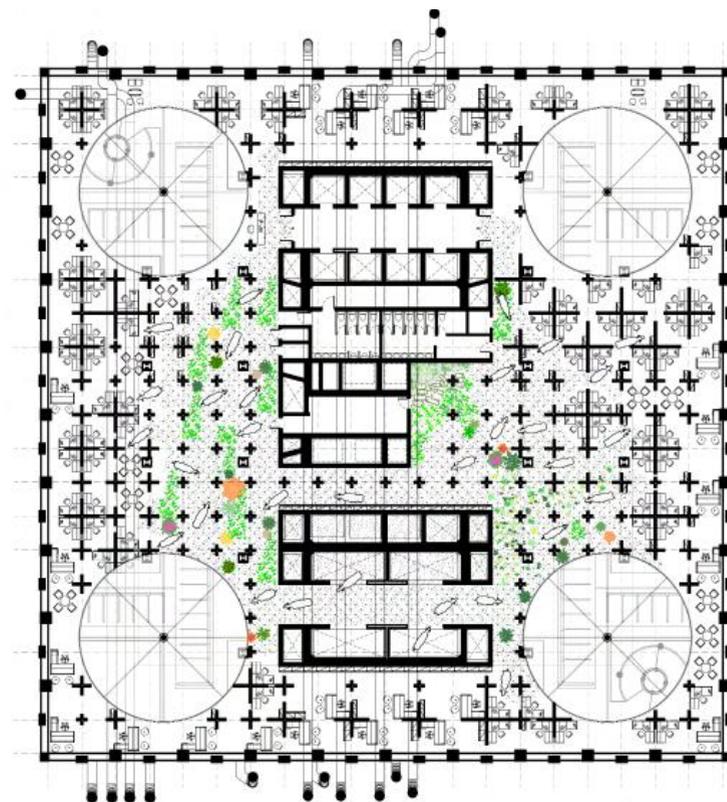
Floor 10-12 are 3 level stack of half office and half cow's grazing field. Level 10 is a double story labyrinth of walls for office. It has huge open to below cuts to allow people to see the milking process. Short walls allow cow to pass by, while longer walls only allow people to walk through. Level 12 is a smaller plan for people to observe below by looking down to the perimeter. Cow will invade into the space for people and grass slowing occupy office area.



FL 7: ROTARY MILKING PARLOR + OFFICE



FL 12: COW FIELD + MEETING ROOM



FL 10: COW FIELD + OFFICE GRID



Vertical Dairy Structure and Typical Office Plan

Floor 6-9 Rotary Milking Parlor and Office// Co-exist of Dairy Cow and People
Floors above a regular office plan is removed to allow installation of rotary milking parlors. Each Milking floor consists of 4 Milking parlor connected by catwalk to the elevator. Three floors of each assembly stack above the office. Cows walks around the milking parlor in catwalk and produces cow poops along the path. Polluted air will merge into office and ventilation will work to cycle fresh air back. Dairy workers constantly moves around the catwalk to participate in the milking process.



FL 10-12: COW GRAZING FIELDS + OFFICE GRID + MEETING ROOM

Transform Typical Office Tower Into Vertical Dairy Farm

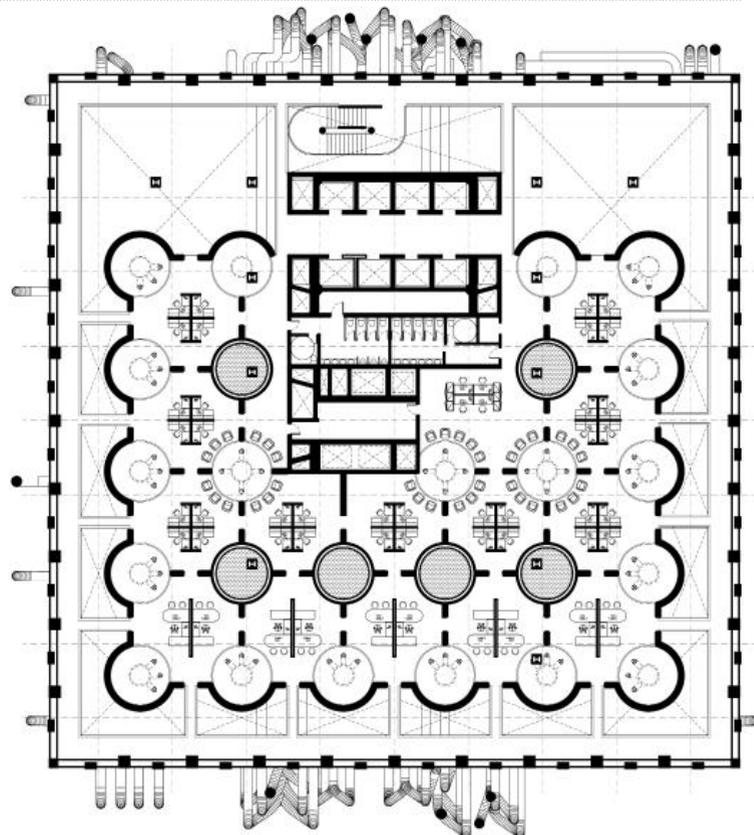
Square Plan // Milk Tank Tower

1166 avenue of America, Manhattan, New York

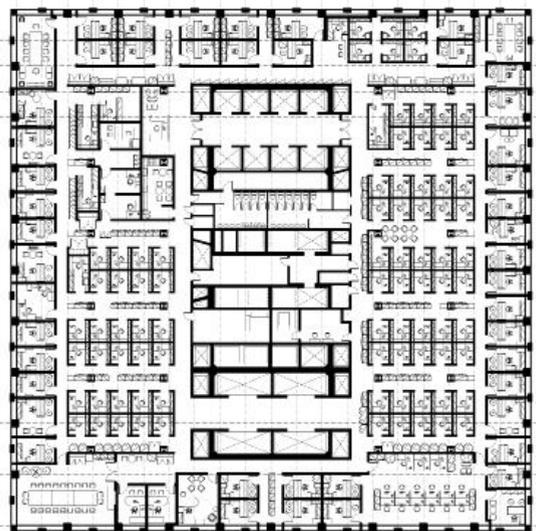
These 2 plans shows the vertical stack of milk tank from level 33 to 38. Milk tanks are insrted into the floor with a height of 1.2m above floor to be used as a table for restaurant and milk bar seating. It is enclosed by milk tanks and linked to the circulation path at the perimeter of the plan by catwalks. One staircase is added to allow vertical circulation for education tours and overvation of the milk tanks. Huge open to below space allow people to see the entire assenbly of milk tank stacking.

Floor 34, 36, 38 are milk tank with office. Small dividing walls seperates the space into cubics for smaller officie space. Milk tanks stands besides office table and offers milk tasting through tank head cap.

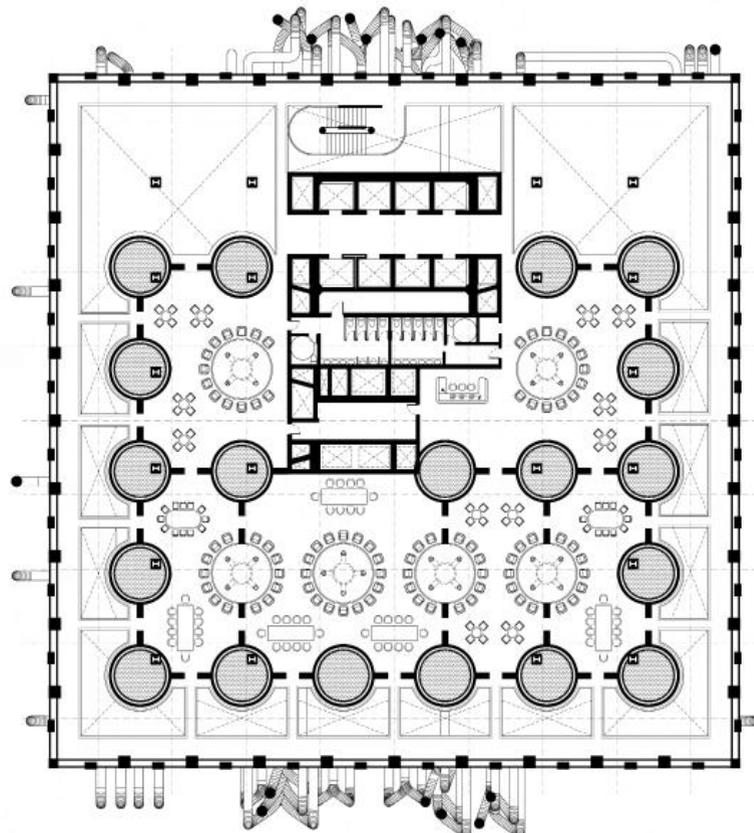
Floor 33, 35, 37 are milk tank with restaurant. The milk tanks used as table are alternating each floor. In the drawing, circles with black highlight are milk tanks installed through the floor height. Some milk tank's plat surface is used as restaurant tables and the milk tank above can provide fresh milk to the table.



FL 34, 36, 38: MILK TANK + MILK BAR + OFFICE



TYPICAL PLAN OF EXISTING BUILDING



FL 33, 35, 37: MILK TANK + MILK BAR + RESTAURANT



Merging of Cow Barn and Typical Office Plan

Floor 6-9 Rotary Milking Parlor and Office// Co-exist of Dairy Cow and People
Floors above a regular office plan is removed to allow installation of rotary milking parlors. Each Milking floor consists of 4 Milking parlor connected by catwalk to the elevator. Three floors of each assembly stack above the office. Cows walks around the milking parlor in catwalk and produces cow poops along the path. Polluted air will merge into office and ventilation will work to cycle fresh air back. Dairy workers constantly moves around the catwalk to participate in the milking process.



FL 19-32: CENTRAL ATRIM + COW BARN + OFFICE

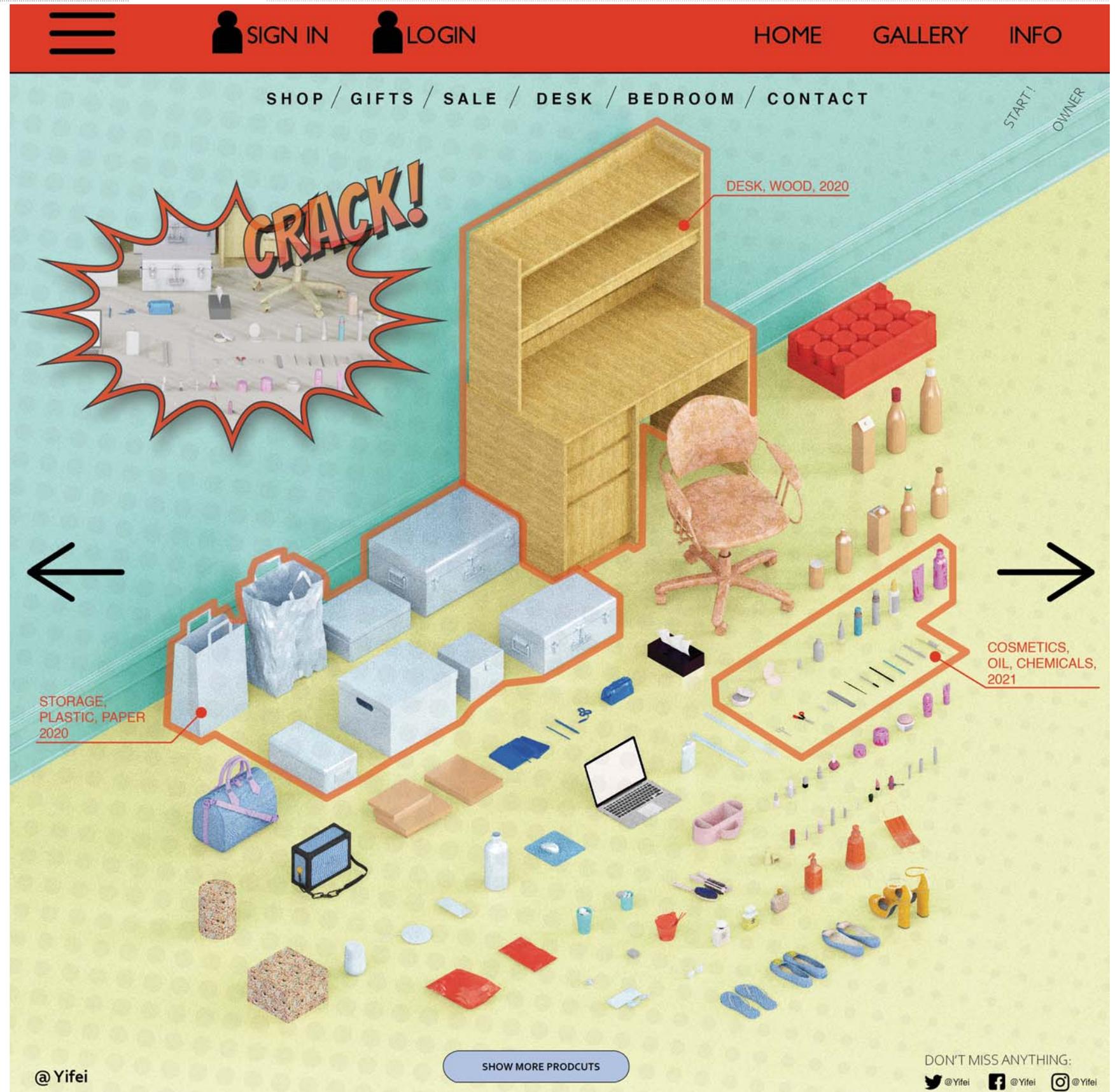


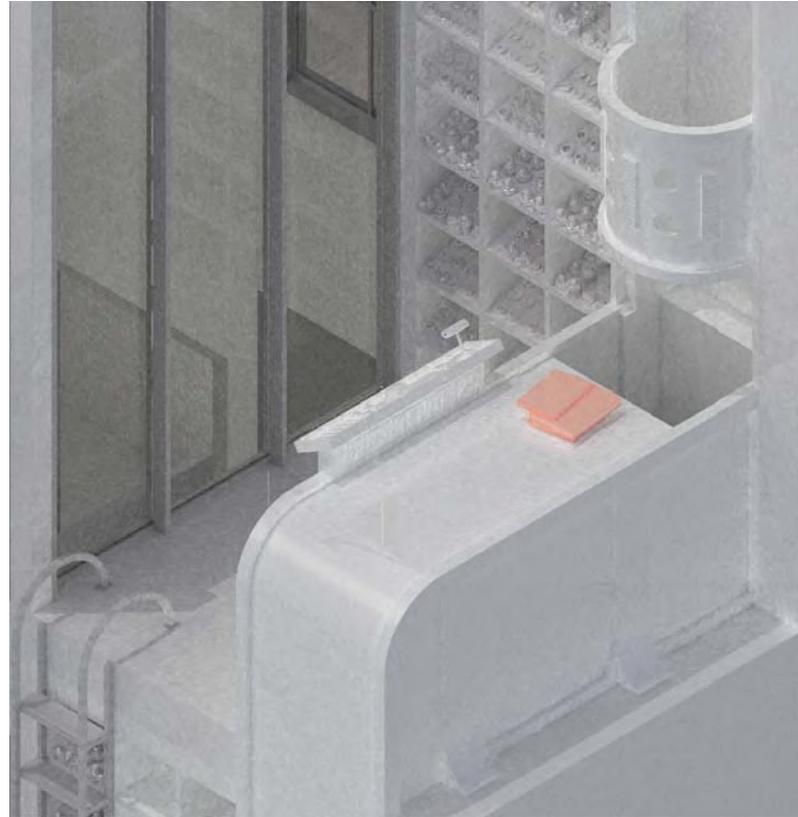
THE ROOM AS VIRTUAL SPACE

Documenting my room//
Recreate physical space into fictional//

*I think the room can be a online website.
It categorize my daily life objects.
It sells second hand / used things, and updates new inventory.
The website has different tabs for people to view my room as a
mini online store.*

PROJECT: ARCHITECTURAL DRAWING & REPRESENTATION		
COURSE: ADR II	PROJECT TYPE: Visual Study	PROJECT BRIEF: Using architectural representation as understanding of space, it is a process of mapping and analyzing the desk and room as a system of actions and status. I think the desk and room as a system of web pages, categorizing the daily products as merchandise to be sold.
DATE: Spring 2021	INSTRUCTOR: Lexi Tsien	

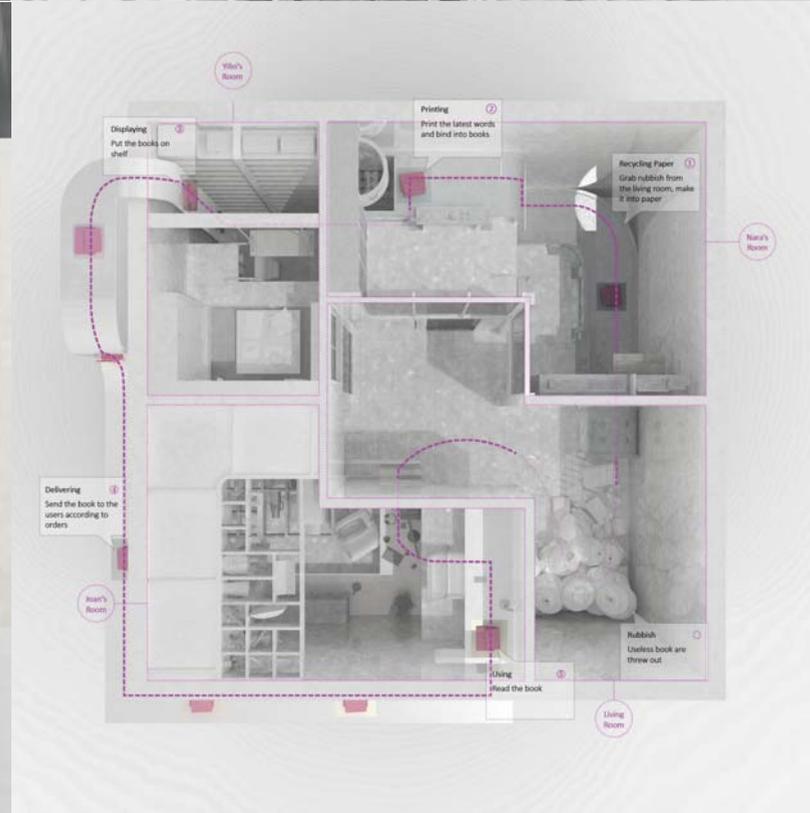




THE ROOM AS COMMON SPACE

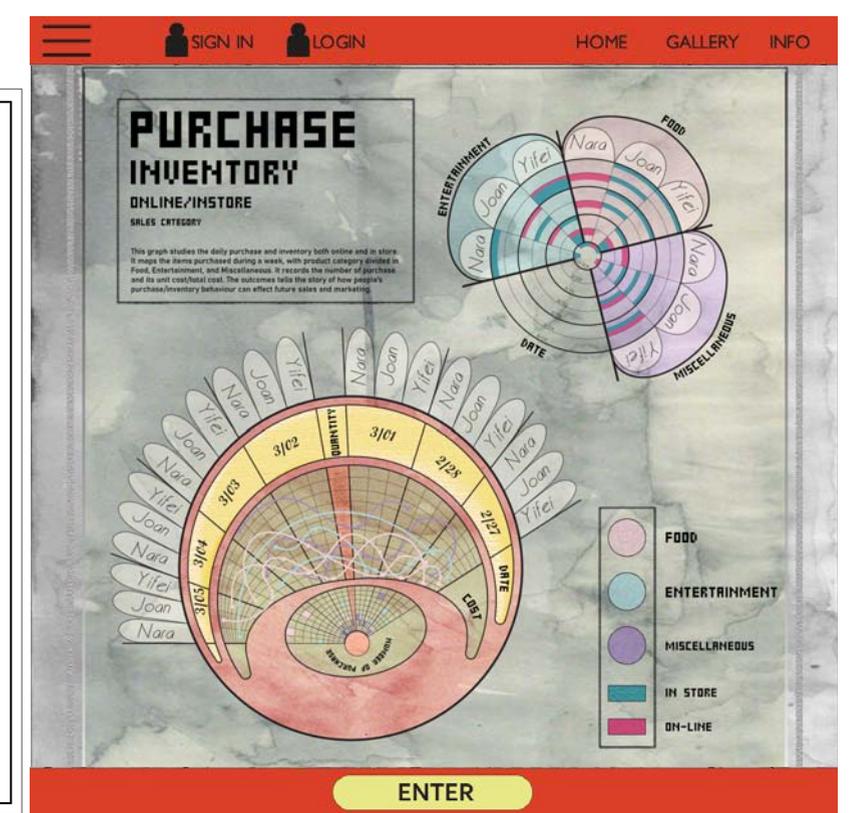
Four individual rooms together with a shared garbage room, the community is a close loop system: a production line. It forms a little world to self-consume and produce an object: a book. The rooms are arranged as the four major steps in this system: production, inventory/market-ing, customer/consumer, and recycle.

By co-creating this 20'x20'x20' shared workspace, a feedback loop of how a minimized super factory is functioned and connected to the larger commercial world.



ENLARGE THE SCALE OF SYSTEM

Scaling up from the domestic space into the world around us, we look at book production in the real commercial market. The larger cycle and system is documented as another page in the website, as an information for multiple scales of book selling space, both physically such as stores, and virtually as social media platforms. As part of investigation, personal data is documented and graphed as pie chart to showcase each person's life traces and involvement with purchase and consumer.



A #01 B #01

// The system of **RECYCLE, PRODUCTION, and CONSUMER** //
// How is a book made // How does it getting sold //

An investigate to the process of making a book, it looks at three major steps of the life cycle of a book. The recycle part reuses the material of the book and manufactured it into new material. The production part takes raw material and printed new book. The consumer part distributed all the book into the market, both physically into book sotres, and online such as Amazon.

Educational Community

Mode: Customer I
Function: Books distributed into schools, households, and public libraries

Commercial Community

Mode: Customer I
Function: Books distributed into commercial areas, companies, and small businesses

Binding Machine

Mode: Production II
Function: Combine single page Print/ Book Making

Printing Machine

Mode: Production I
Function: Intake Paper/ Printing

Social Media

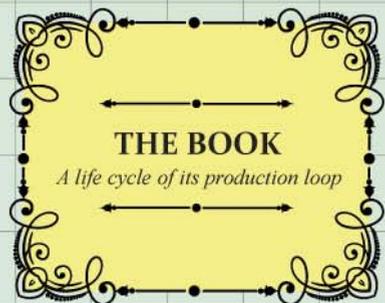
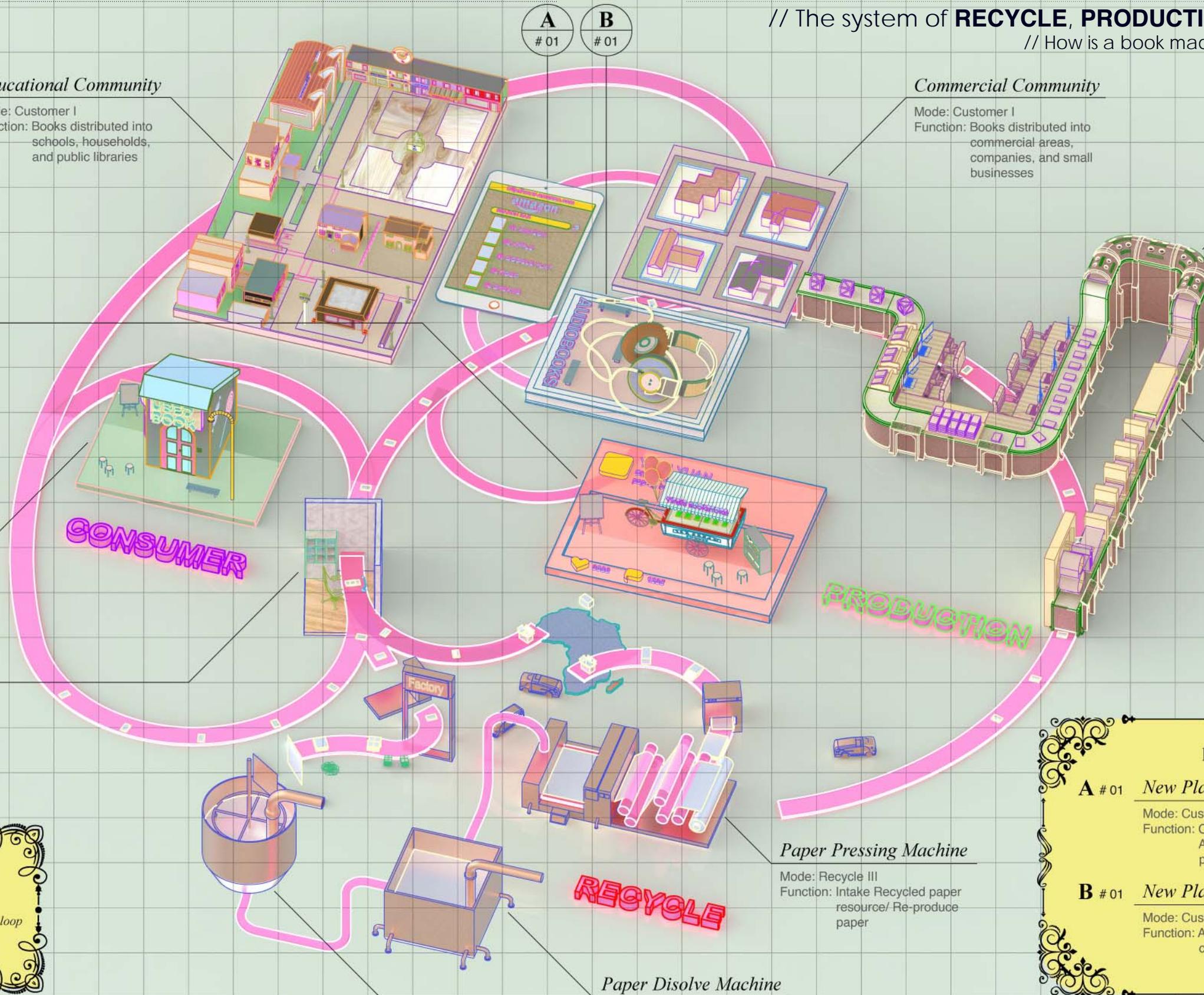
Mode: Customer III
Function: Instagram works as a marketing platform/ Social Media as book production and selling mechanism

Used Book Stores

Mode: Customer II
Function: Intake old/used books/ Selling second hand books

My Room

Mode: Recycle I
Function: I recycled my used books!



LEGEND

A # 01 *New Platform- Online*
Mode: Customer II
Function: Online book such as Amazon and Apple become the largest marketing platforms

B # 01 *New Platform- Audio Book*
Mode: Customer II
Function: Audio book as one of the new customer mechanism



REPEATED, FRAMED & SURREPTITIOUS

The Great Mosque of Córdoba //
Spain // Completed in the 16th century //

By emphasizing the Mosque's architectural elements and their repetition, juxtaposition, and proportion, the drawing representation tries to showcase the mosque's inner beauty.

PROJECT:

ARCHITECTURAL DRAWING & REPRESENTATION

COURSE:
ADR I

PROJECT TYPE:
VISUAL STUDY

PROJECT BRIEF:
This is my interpretation and re-imagination of an old Mosque depicting its structural and cultural significants. It is a representation of its essential elements such as columne, arch, corridors, and courtyards in a way that captures their orchestrated architectural movements.

DATE:
Fall 2020

INSTRUCTOE:
LEXI TSIIEN

Vertical Transportation & Structure

PROJECT:
VERTICAL Transportation & Structure

COURSE:
ATV

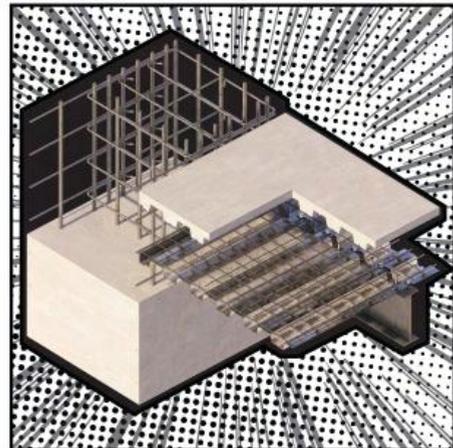
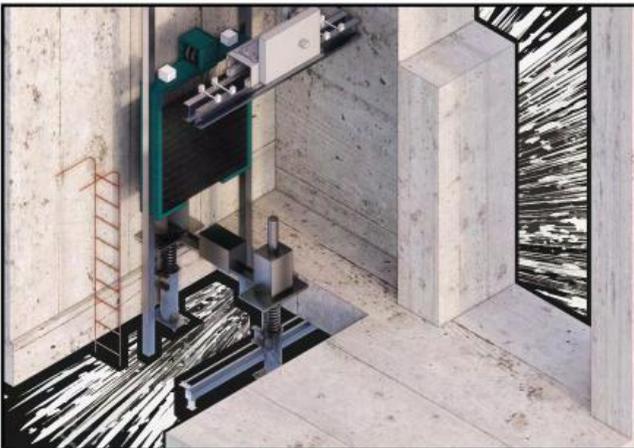
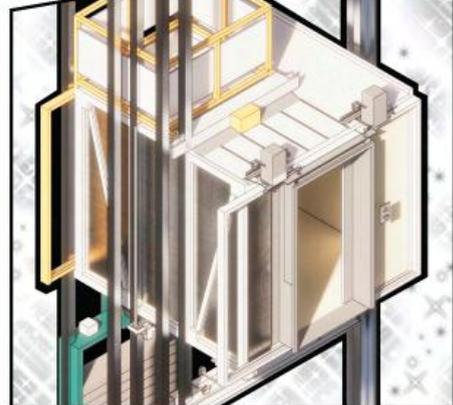
PROJECT TYPE:
Elevator Detail

PROJECT BRIEF:
An in depth investigation of the vertical transportation structure - the elevator. Using drawing and physical chunk model to study the mechanism and detail of the elevator system.

DATE:
SP 2022

INSTRUCTOR:
NICOLE DOSSO

Shining Hong Seung Ho Shin Yifei Yuan Kerol Kaskaviqi



PHYSICAL MODEL



PROJECT: DESERT OASIS		
COURSE: ULTRAREAL	PROJECT TYPE: Visual Study	PROJECT BRIEF: Using architectural representation as understanding of space, it is a process of mapping and analyzing the desk and room as a system of actions and status. I think the desk and room as a system of web pages, categorizing the daily products as merchandise to be sold.
DATE: Spring 2021	INSTRUCTOR: Joseph Brennan Phillip Crupi	



BASEMENT OASIS (NIGHT VIEW) MODEL/RENDER BY YIFEI YUAN

