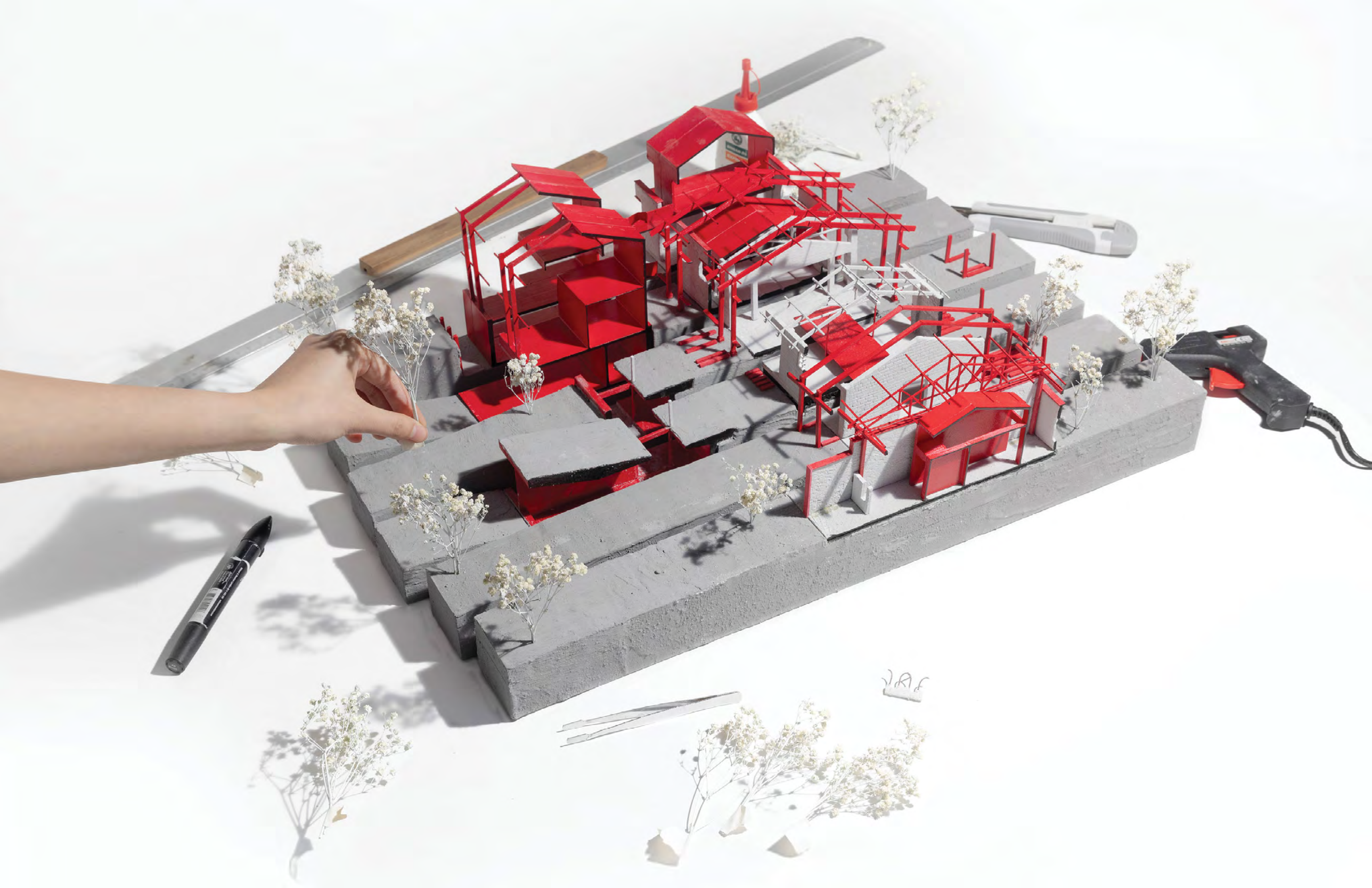
DESIGN PORTFOLIO

Max Walewski

Syracuse University
School of Architecture













CREATE + DISPLAY + LIVE

Adaptive Reuse

Semester: Fall 2024
Location: Centro Sassu II, Arborea, Sardegna
Collaborators: Vivian Sheng, Ayrton Laucks
Instructor: Daniele Profeta

Centro II Sassu is a center of Bonifica (water reclamation) in western Sardegna, built by the Italian government for agricultural and water control. Originally programmed for buffalo and cow cultivation, the site now sits derelict. Our studio sought to redevelop the site as a group, each taking responsibility for small areas of the site, collaging our architectural interventions into a patchwork that adaptively reuses the site.

Our site “area” is something beautiful and meaningful that we wish to work with, not against. Based on our experiences, we derived a set of two architectural strategies. From the industrial rhythm of aggregation and the silos, we came to the idea of **doubling**. From the complex grounds we walked on and walls we touched, filled with fragments of plants, CMU, concrete, and dirt, we came to the idea of **layering**. These layers come to represent the layered histories of the site - a physical rendering of a complex history.

With this understanding of the site and a set of architectural strategies, we looked to an interview our instructor conducted with a squatter on the site. Jean-Pierro is a metal-worker - an independent artisan detached from society yet attached to his craft. Considering the history of the site as a space for industrial production, we began to think about what a change from industrial to individual production would mean architecturally and programmatically. For local artisans producing separately but brought together by their trade, we organized a simple programmatic sequence concentrated on the South edge of the site:

Create + Display + Live

Looking back to our architectural strategies, we placed this new process of production as a new “layer” on the site, still connected to the past but distinctly separate and different. Offset walls, light structural connections, and a raised walkway emphasize this historical approach in architectural space.
This proposal is not meant to be the first, nor the last intervention on the site. It supports and is supported by the past, and offers a means of physically preserving the site’s layered history while changing to support new processes of production and artistic creation.

Resident Communal Usage

Unit

Unit

Unit

C

Live II Level 3

Live II Level 1

Live II Level 0

See other projects

See other projects

Building Not Surveyed

Building Not Surveyed

C

Sculptures

Sculptures

Display II Level 0

A

Individual Work Spaces

Knife Forge

Metalshop

Welding

Create I Level 0

Smaller Flat Works

Walkway

Smaller Flat Works

Smaller Wall Works

Smaller Wall Works

Smaller Wall Works

Sculpture

Sculpture

Smaller Wall Works

Smaller Wall Works

Smaller Wall Works

Display I Level 0

Shared Kitchen

Single Unit

Single Unit

Single Unit

Single Unit

Single Unit

Live I Level 0

A

Building Not Surveyed

B

Individual Work Spaces

Metal/Lumber Storage

Storage

Small Woodshop

Create II Level 0

Display II Level 0

B

Building Not Surveyed

Create I & II Level 1

MEP

Storage

Storage

Milling/Cutting

Storage

Storage

Storage

Archive

Archive

Archive

Archive

Archive

Archive

Create II & Display II Level -1

Live I Level 1

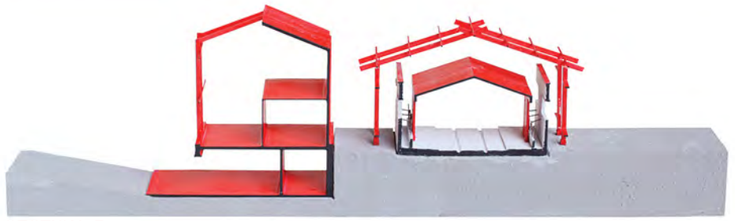
Site Plan
1:150

0 2 8
1 4 16

Key Plan
1:3000



SECTION A



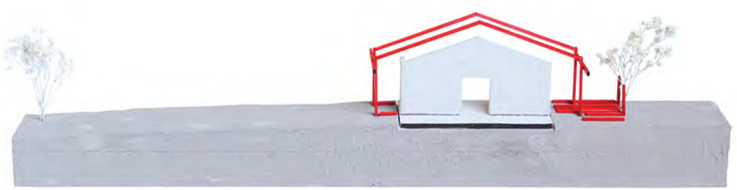
SECTION B



SECTION C



SECTION D

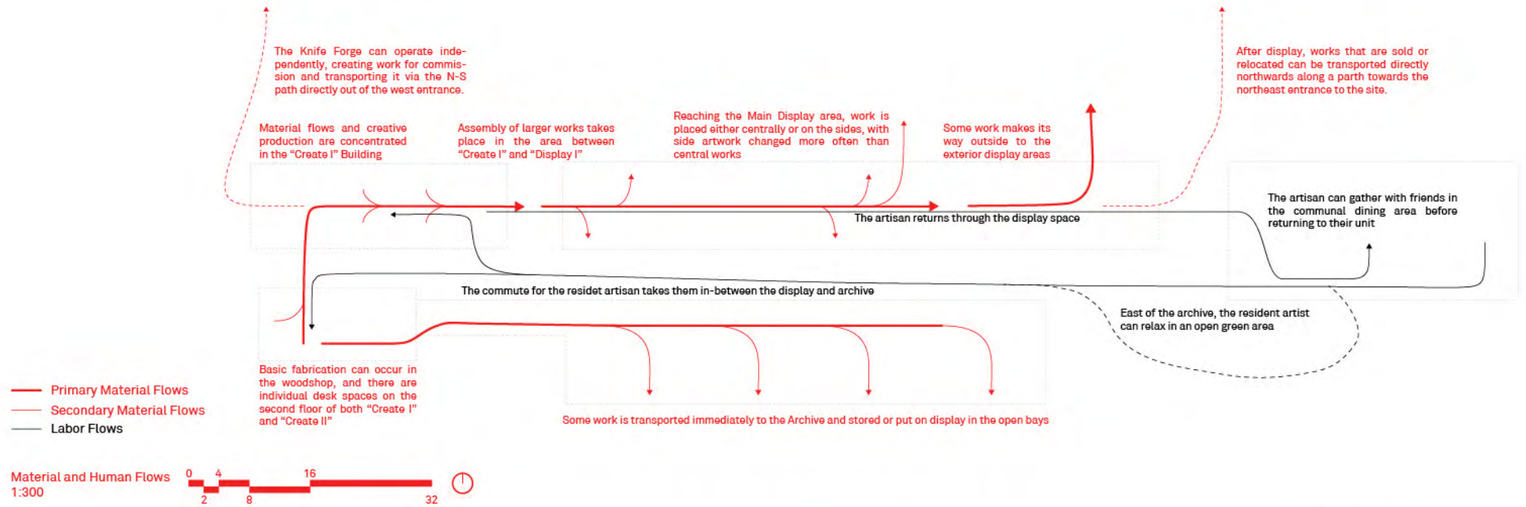


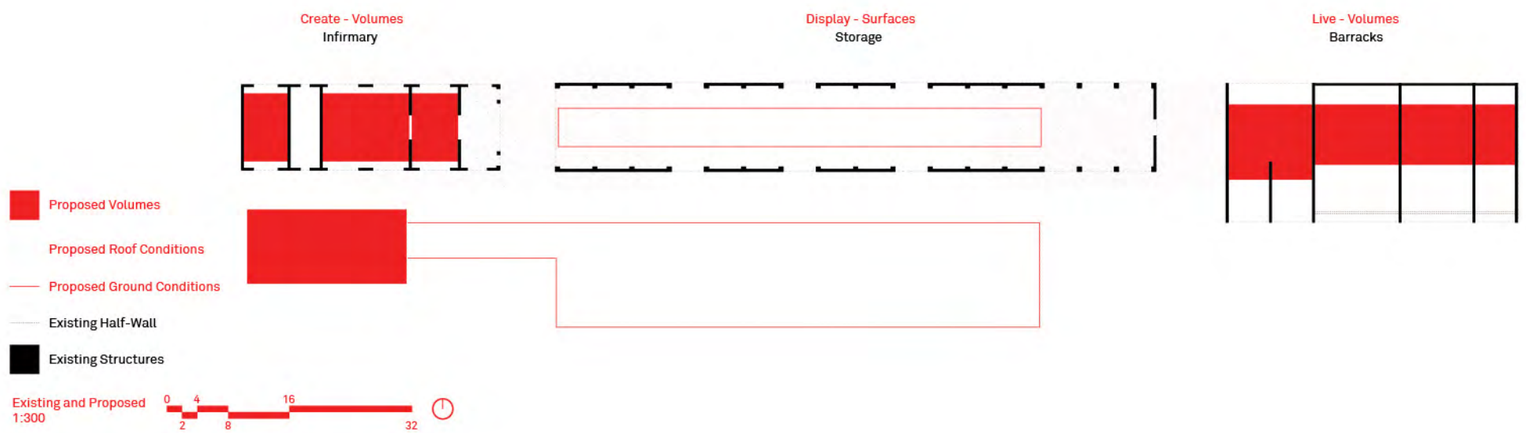
SECTION E



SECTION F







Detail Approaches
1:20

Layering to Continue a Fragmented Structural Reading a Number of Circulation

Encapsulating the Existing to Create New Enclosure
Retaining, Framing, Existing to Create New Works

Doubling Existing Walls
Supporting Existing Walls with Steel Inserts

Inserting Existing Objects in Different Locations
Creating New Void in the Post-War Structure

Emphasising Existing Rhythms
Dividing Structural Members to Suit New Purposes

Supporting Existing Structure from Alt Sides
Layering and Construction Fragments of Weathering/Lofting

Demolition Plan
1:300

Wall Demolition Type 1

Brace existing wall form with steel angles

Wall Demolition Type 2

Remove components which form gable, brace all sides with steel angle

Wall Demolition Type 3

Remove wall components that do not form a gable, brace with steel angle

Wall Demolition Type 4

Create opening within existing bays

Wall Demolition Type 5

Brace existing wall with steel angles, remove portions to form doorways and brace top with steel angles

Wall Demolition Type 6

Remove gable and wall components along with a door-sized opening in the southern, smaller portion of the existing wall. Brace all with steel angles

Wall Demolition Type 7

Cut wall at eye height, retain what remains of existing openings

Wall Demolition Type 8

Decrease wall height, cap with steel angle, windows to remain

Section C
1:150

Section B
1:150



CREATE | MATERIAL LAYERING RENDER



CREATE | ENCLOSURE LAYERING RENDER

+14.0m Silo Roof
+10.6m Silo Level 4
+8.0m Silo Level 3
+7.0m Create I Roof
+5.5m Silo Level 2
+3.1m Silo Plinth
+2.7m Create I Level II
+0.2m Create I Level 0

Individual Workspaces
MEP
Knife Forge
Metalshop
Metalshop
Welding
Assembly
Display
Found Silo
Display

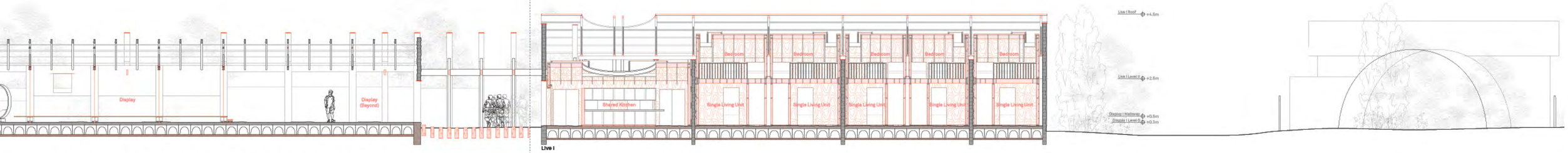
Create I
Display I

Section A
1:75
0 1 4
0.5 2 8

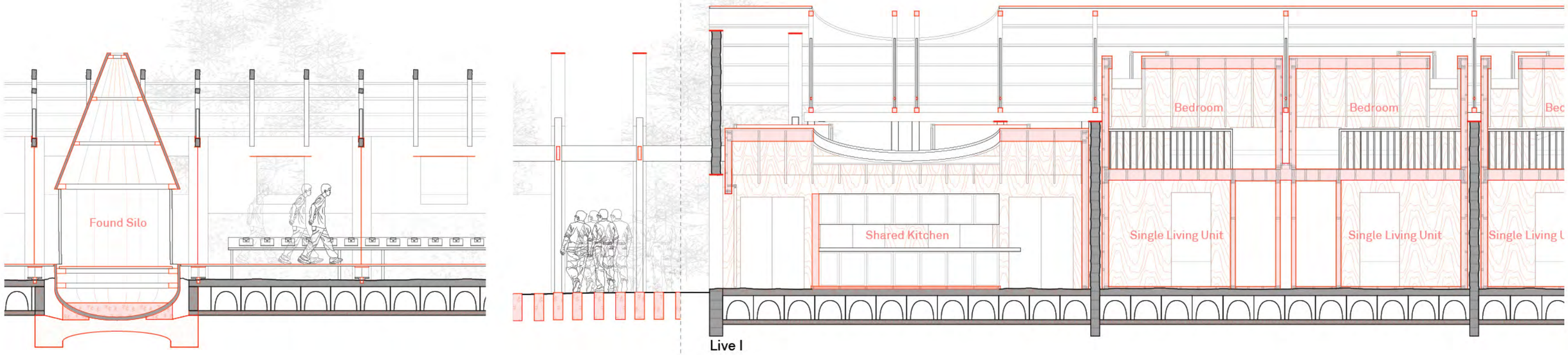
+8.0m Silo Level 3
+7.0m Create I Roof
+5.5m Silo Level 2
+3.1m Silo Plinth
+2.7m Create I Level II
+0.2m Create I Level 0

Individual Workspaces
Knife Forge
alshop
Metalshop
Welding

Create I
Display I


Display
Display (Beyond)
Shared Kitchen
Single Living Unit
Single Living Unit
Single Living Unit
Single Living Unit
Single Living Unit
Bedroom
Bedroom
Bedroom
Bedroom
Bedroom
Live I Roof +4.5m
Live I Level II +2.6m
Display I Walkway +0.5m
Display I Level 0 +0.3m

Live I


Found Silo
Shared Kitchen
Single Living Unit
Single Living Unit
Bedroom
Bedroom

Live I

Waste to Energy

Museum of Waste Art

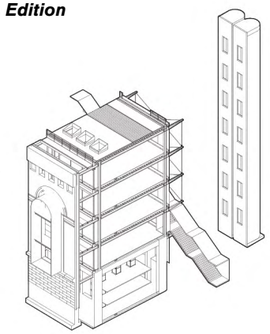
Asian Design Award (ADA) 23th Edition
Excellence Award

Semester:
Spring 2025

Site:
East 74th Street New York City

Instructior:
Fei Wang

Collaborators:
Changwan Lim



1. Existing facade
2. Existing structure
3. Retrofit window
4. Balcony
5. Glass window frame
6. Parapet

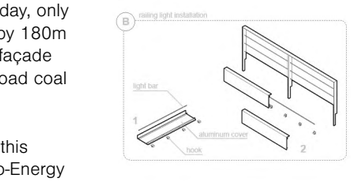
7. Semi-outdoor catwalk
8. Polycarboate plate

9. Metal deck
10. Concrete floor
11. Waterproof membrane
12. Insulation
13. Drainage layer
14. Root barrier
15. Soil
16. Skylight
17. Drainage + Roof deck

18. Parapet + Stair support
19. Glass enclosure
20. Stair
21. Elevator

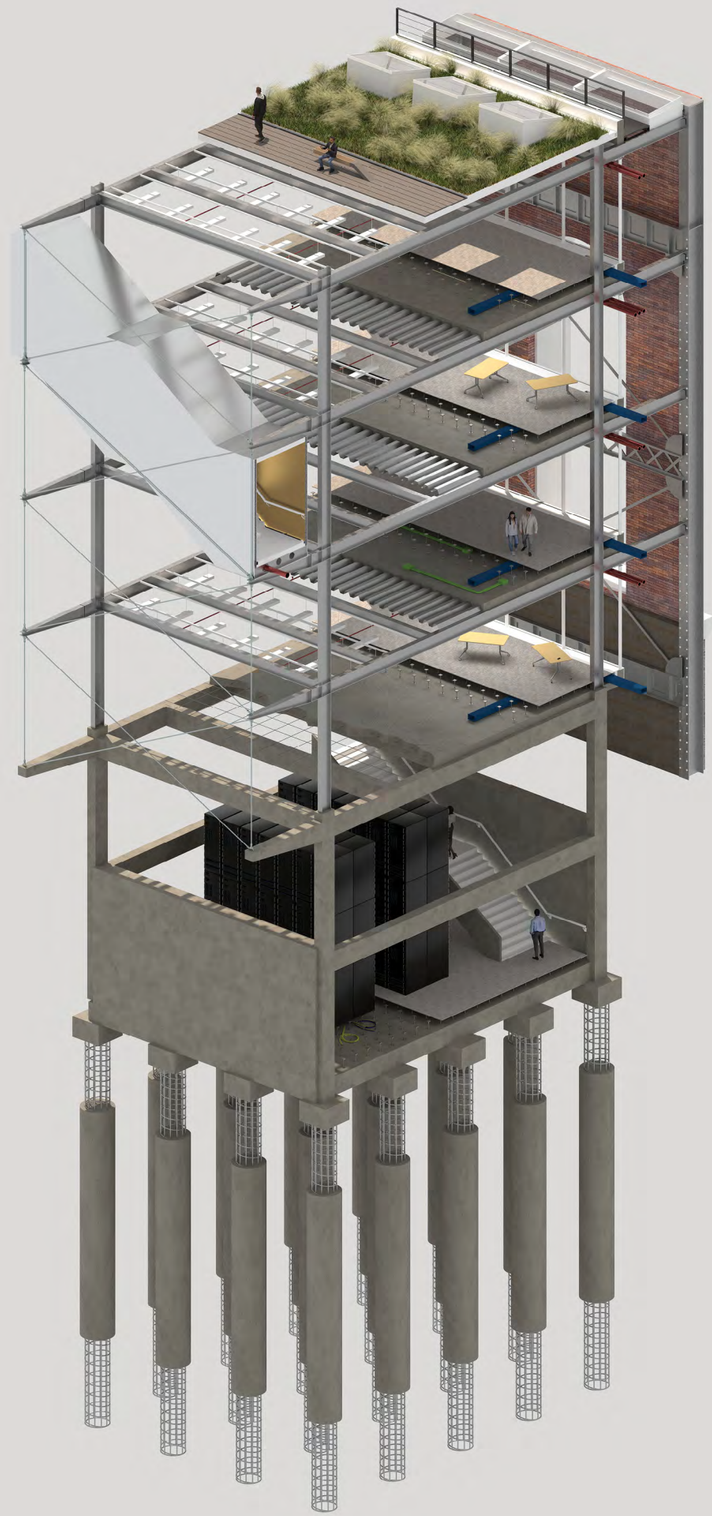
22. Raised floor plate
23. Raised floor pole + electrical system + HVAC

24. Data server machine
25. Lateral Bracing
26. Chilled Beam

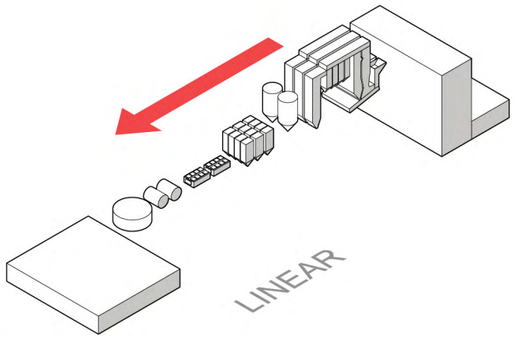


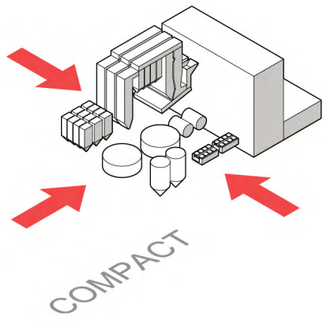
At the edge of Manhattan's East River, on 74th Street, stands the weathered shell of a 1900s power station—once a monumental engine of New York City's growth. Built of brick, stone, and steel, the structure received coal by boat, raised its chimney year after year to keep pace with the rising skyline, and carried the physical memory of industrial production in every soot-marked joint. Today, only fragments of that history remain: a 60m by 180m footprint, an 80-foot-tall envelope, and a façade punctured by openings once used to unload coal from the river.

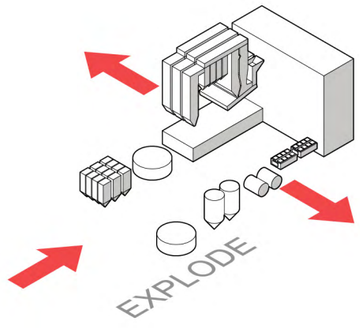
Our studio was tasked with transforming this long-abandoned structure into a Waste-to-Energy (WtE) plant. But the project was never conceived as a clean slate. Instead, it became an exercise in working with the relic, not against it, and asking how a piece of New York's infrastructural past might meaningfully support a new system of urban production

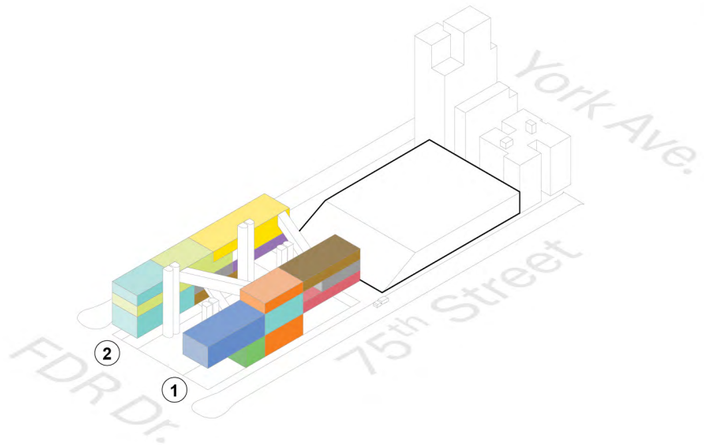


MACHINERY ARRANGEMENT









sq.m

3 700 WTE

1 560 office

1 040 cafe

923 gallery

806 emission control

806 research

806 archive

780 exhibition

780 mechanical

780 studio

130 gift shop

1



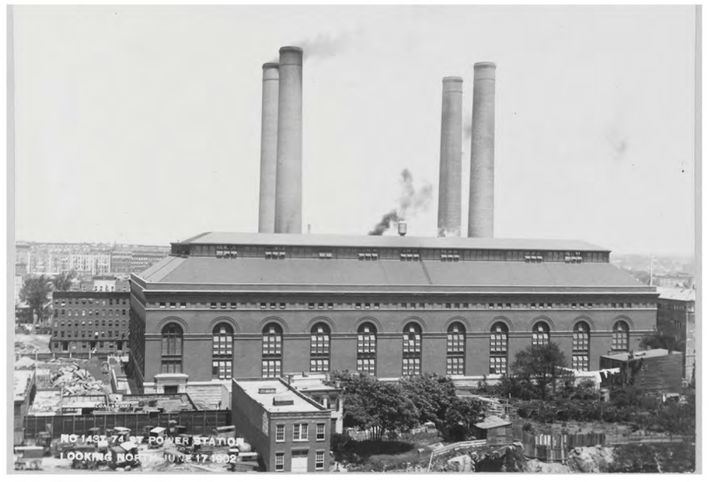


2











3844

15210

2000

A-502

Roof
EL. 25.3m

Fourth Floor
EL. 20.3m

Second Floor
EL. 10.3m

First Floor
EL. 5.3m

Ground
EL. 0.00

Basement
EL. - 5.0m

1% →

E 74 ST

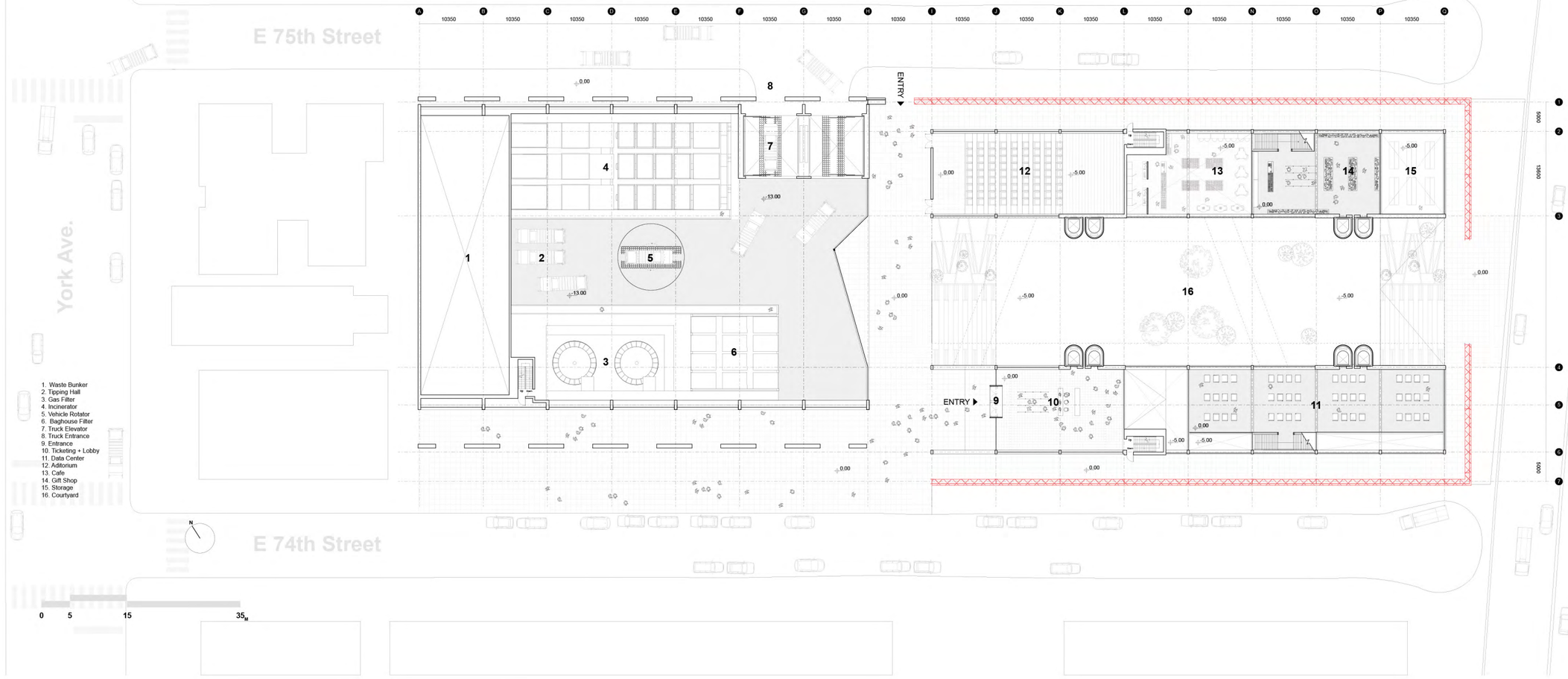
E 75 ST

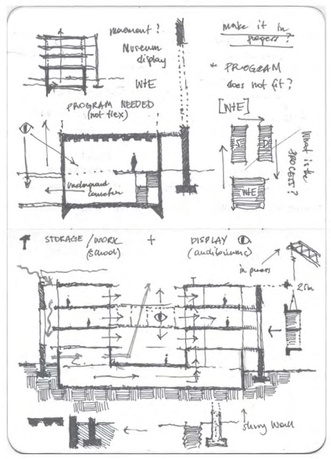
1. Cylindrical Elevator
2. Wooden Deck
3. Aluminum Sheet Layer
4. Skylight
5. Green Roof
6. Maintenance Walkway
7. Polycarbonate Skylight
8. Chilled Beam + Lighting
9. Floor Panel
10. Electrical System
11. Heat Vent
12. 100x124mm Aluminum Window Beam
13. W12x50 Steel Beam
14. Aluminum Cladding
15. Double Glazing Window
16. Metal Catwalk
17. Brick Tie
18. 20mm Rigid Insulation
19. Air Space
20. Cornice Band
21. Steel Window Retrofit
22. L Shaped Steel Bracket
23. W18x50 Steel Beam
24. Polycarbonate Ventilation Panel
25. Panel Joint
26. Steel Deck
27. Drain Pipe
28. Steel Plate Railing
29. Vapor Barrier
30. Data Center
31. Rigid Insulation
32. 180mm Concrete Slab (4h Fire Rating)
33. Stair Passage
34. Pfeifer Swagged Fitting
35. Gusset Plate
36. Steel Cable
37. Glass Curtain
38. Steel Handrail
39. Glass Clamp

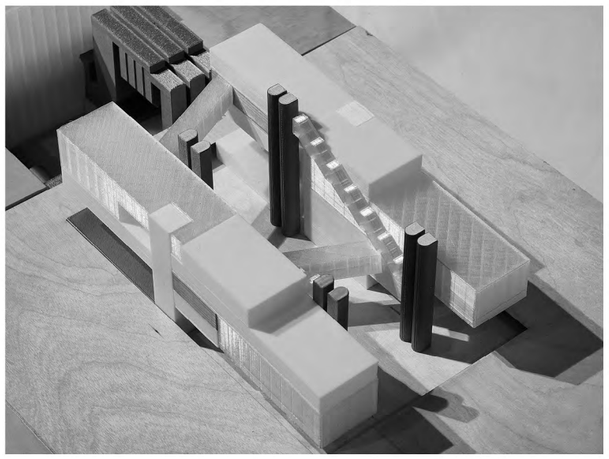
A-501

DETAIL SECTION (SHORT SIDE)

1:75


E 75th Street
E 74th Street
York Ave.
FDR Dr.
John Finley Walk
EAST RIVER
ENTRY
ENTRY
1. Waste Bunker
2. Tipping Hall
3. Gas Filter
4. Incinerator
5. Vehicle Rotator
6. Baghouse Filter
7. Truck Elevator
8. Truck Entrance
9. Entrance
10. Ticketing + Lobby
11. Data Center
12. Addtorium
13. Cafe
14. Gift Shop
15. Storage
16. Courtyard
0
5
15
35M


STORAGE / WORK
DISPLAY
Slurry Wall




MoWA



BOAT HOUSE

Resilient Housing

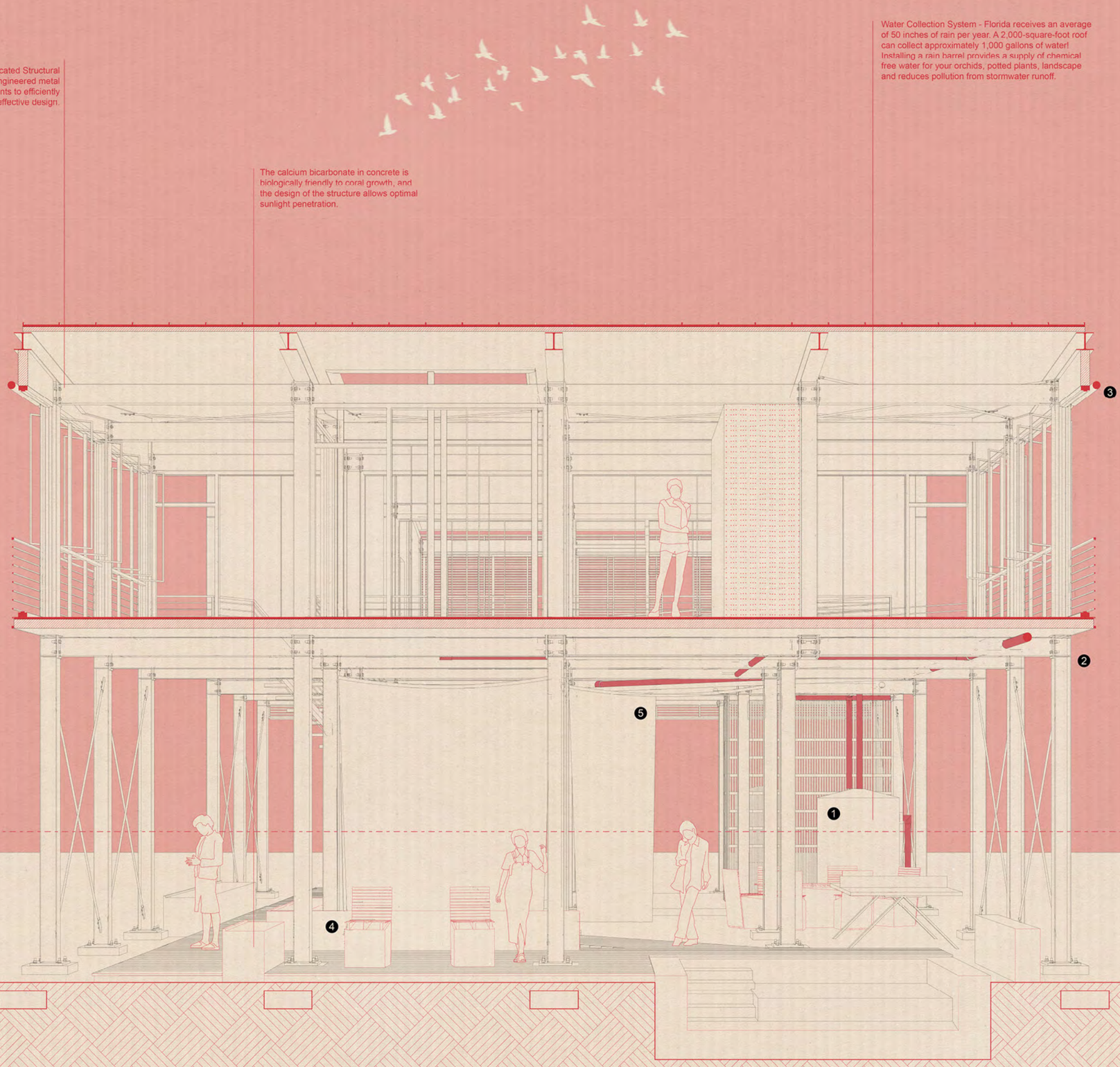
Semester: Spring 2024
Location: Miami FL, United States
Instructor: Laura Salazar + Pablo Sequero
Collaborators: Dhruv Jadhav

Surfside is a suburban town near South Beach Miami. Much of Florida is dealing with concerns of seal level changes as well as exponentially increasing storm surges. The standard home in surfside is a low single level designed with little environmental interest. Current new construction aims to maximize space within the zoning ordinances that limit height- creating tall, unenthusiastic homes. The goal of this project is to explore a third typology, one that might connect the suburban scape while responding to environmental issues.

This elevated platform is created with the idea of raising the level of the house as high as possible and creating a compact living space, as well as a flexible and spacious understory. In order to do so, we explored a strong steel structure that can keep the figure light but also strong. This structure is supplemented by a strong concrete slab, clt walls, and hurricane grade windows. Designing for strength also means designing for easy replacement. The steel structure is based on boat storage structures found in the area and hurricane grade windows are used in new constructions in the area. The more solid materials of the house will be unphased by various storm scenarios and the looser elements are designed with replacement in mind- keeping individual and insurance costs low.

Houses in Surfside value privacy- to do this we created this panel facade which blocks most of the view from the outside in, but creates a light and free-flowing understory. There is a heavy and protected front bedroom space and a light and open living space in the back. The living space consists of an open plan with a courtyard, kitchen, and bathroom in the middle; this creates soft spatial zones that work with the structural grid. The public entrance leads into the understory while the more hidden staircase takes you into the home. This allows for a composition which hides the public program behind the private program. The understory is a space for community activities such as workshops or exhibition space.

The long term ambition is for the building to be modified over time as storm damage occurs. Once the sea level rises to an uncomfortable level, the house can be stripped, and the structure can potentially revert to being a boat structure. As the sea level inevitably takes over the whole space and deems it uninhabitable for humans, it will become a part of the biome.

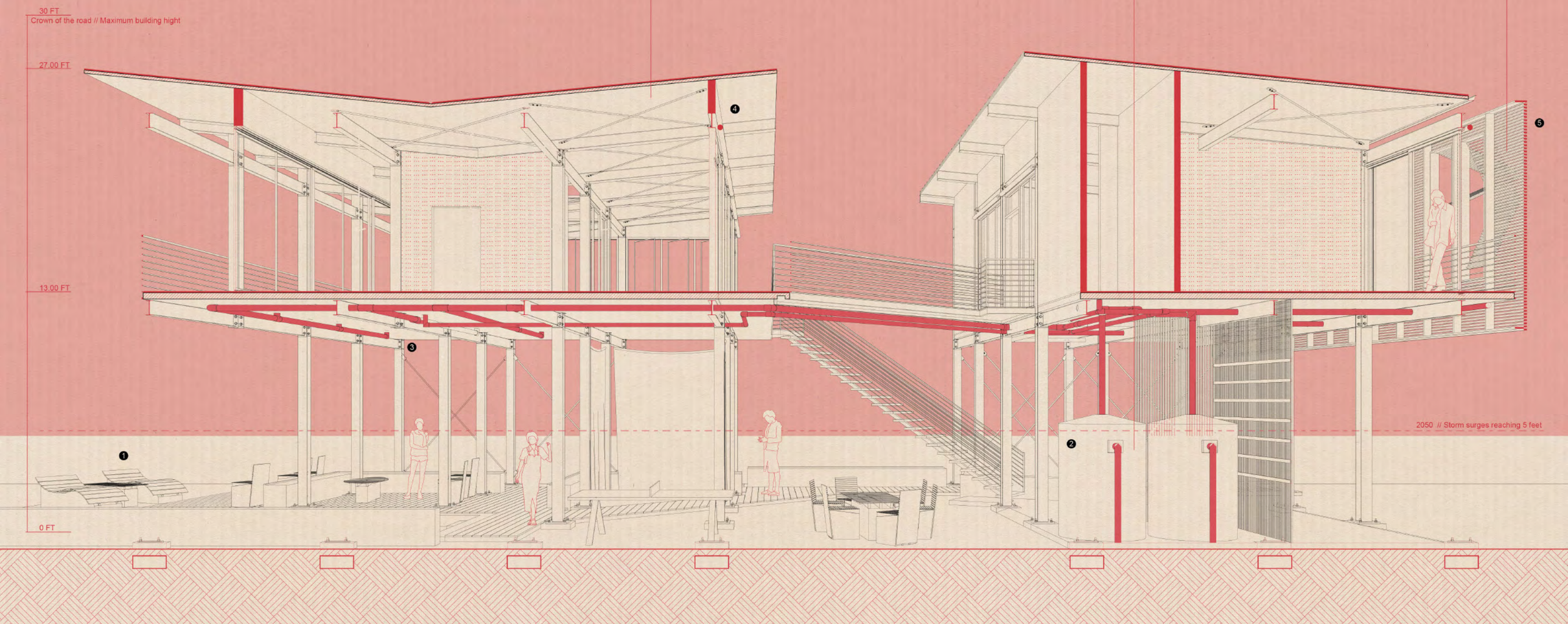


1. Concrete Substrate
2. Water Collection Tank
3. Prefabricated Structural
4. Storm Impact Blinds
5. Louver Facade
6. Canvas Divider

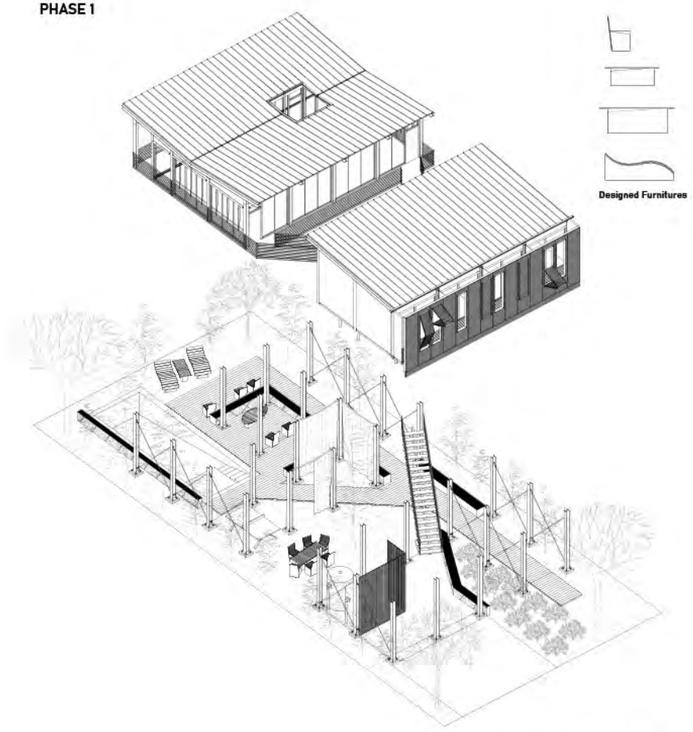
Conventional Prefabricated Structural steel with customengineered metal building components to efficiently achieve a cost-effective design.

Wood Frame Facade is designed to create a consistent yet mobile facade condition. The system consists of wood lining horizontally with rectangular vertical cut-outs within it. The cut outs are operable creating a variety of conditions suitable to ones needs. This system also provides adjustable shading from the intense summer sun in Florida.

Water Collection System - Florida receives an average of 50 inches of rain per year. A 2,000-square-foot roof can collect approximately 1,000 gallons of water! Installing a rain barrel provides a supply of chemical free water for your orchids, potted plants, landscape and reduces pollution from stormwater runoff.



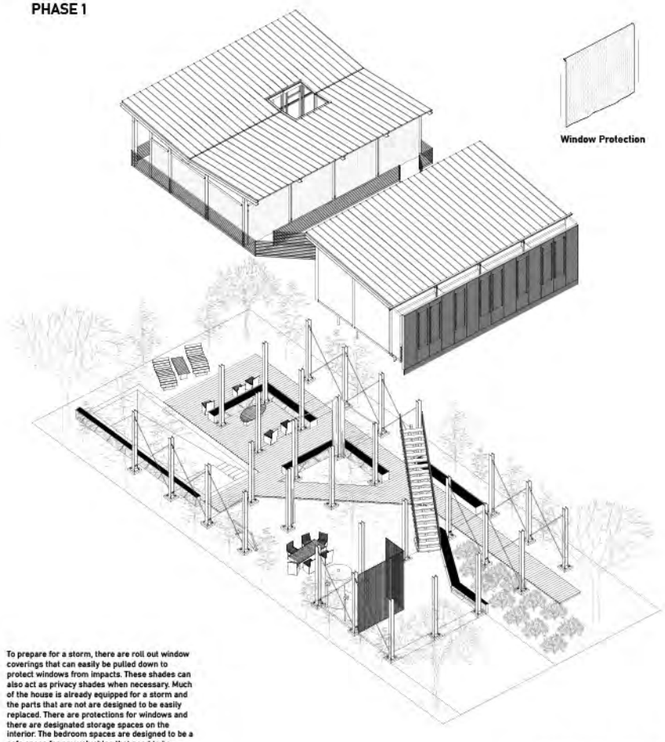
PHASE 1



Designed Furnitures

Initial Construction: 2025

PHASE 1

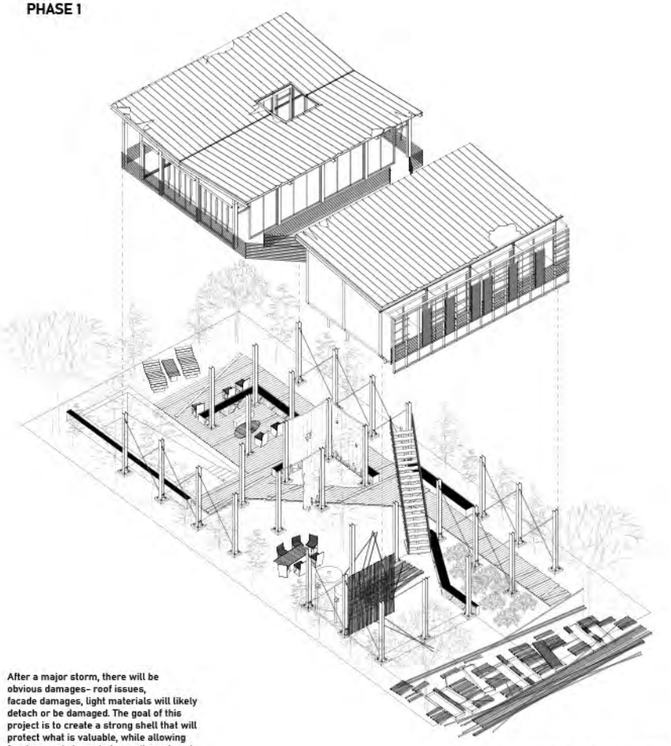


Window Protection

To prepare for a storm, there are roll out window coverings that can easily be pulled down to protect windows from impacts. These shades can also act as privacy shades when necessary. Much of the house is already equipped for a storm and the parts that are not are designed to be easily replaced. There are protections for windows and there are designated storage spaces on the interior. The bedroom spaces are designed to be a safe space for any valuables that need to be stored during a storm.

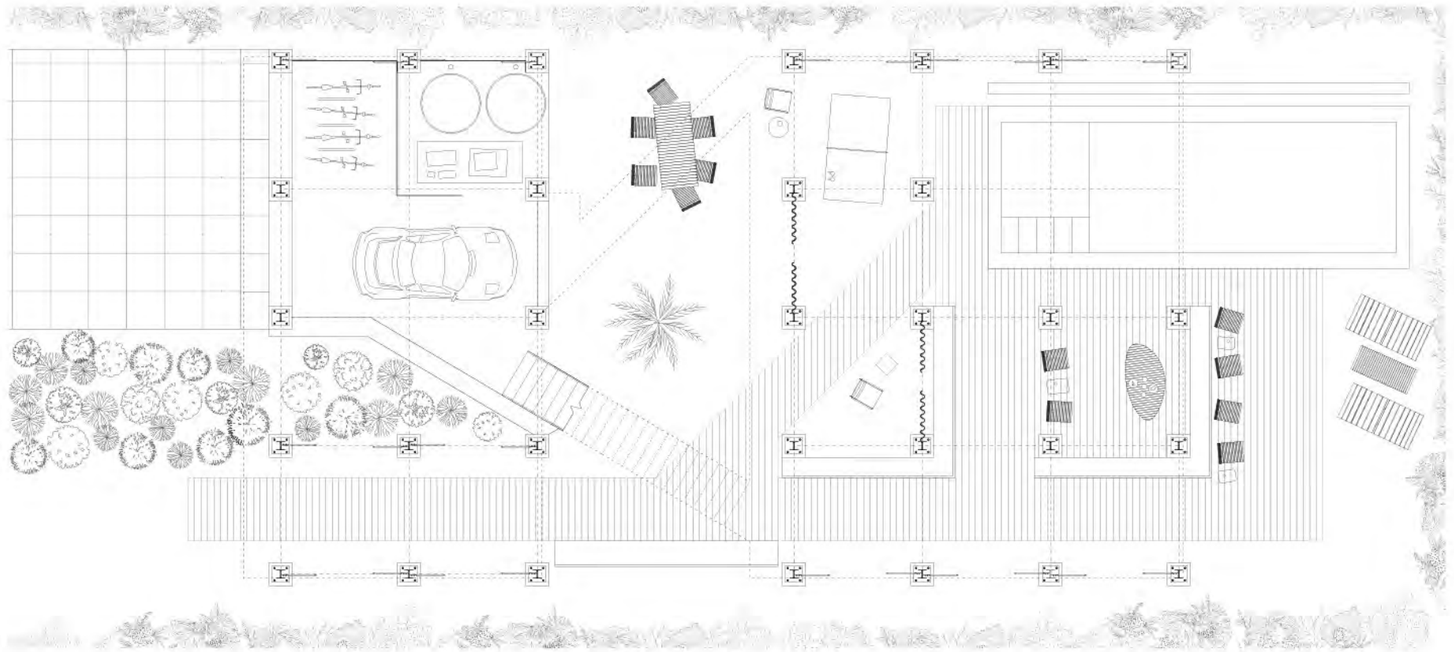
Pre-Storm Preparation: 2030

PHASE 1

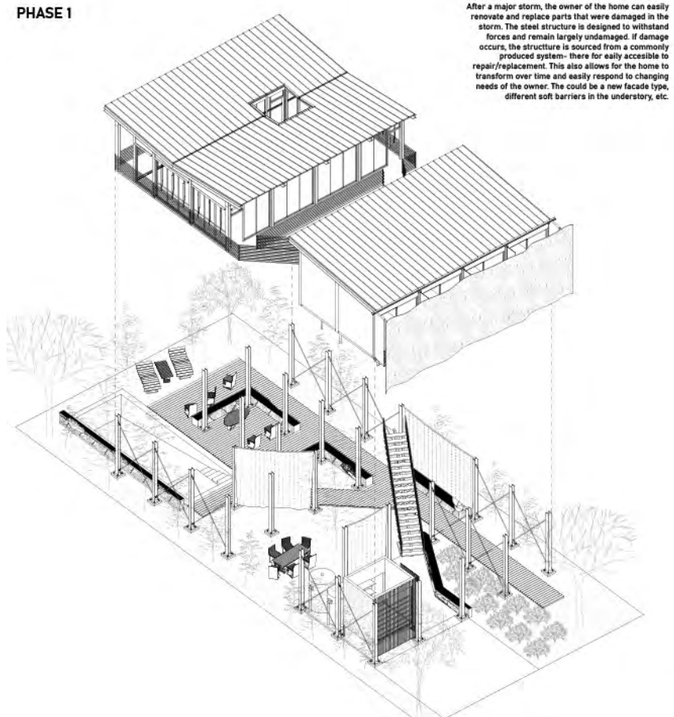


After a major storm, there will be obvious damages– roof issues, facade damages, light materials will likely detach or be damaged. The goal of this project is to create a strong shell that will protect what is valuable, while allowing for damaged pieces to be easily replaced.

Post Storm Damages: 2030



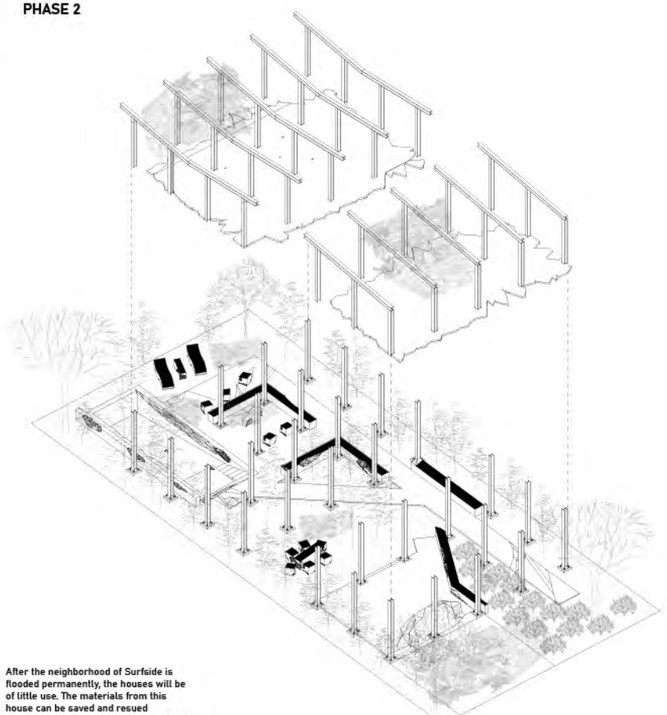
PHASE 1



After a major storm, the owner of the home can easily renovate and replace parts that were damaged in the storm. The steel structure is designed to withstand forces and remain largely undamaged. If damage occurs, the structure is sourced from a commonly produced system- there for eaily accesible to repair/replacement. This also allows for the home to transform over time and easily respond to changing needs of the owner. The could be a new facade type, different soft barriers in the understory, etc.

Rebuild/Renovate: 2040

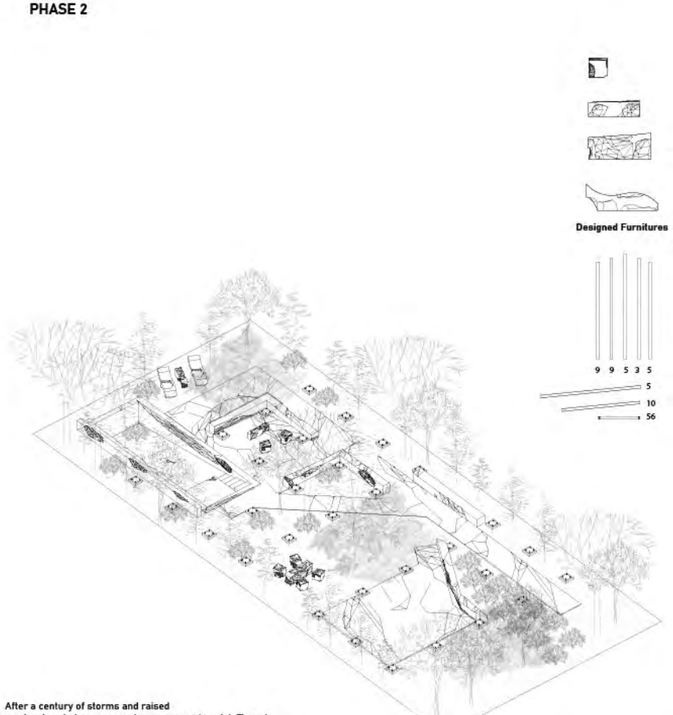
PHASE 2



After the neighborhood of Surfside is flooded permanently, the houses will be of little use. The materials from this house can be saved and resued elsewhere, while also leaving permanent elemnts to become a part of the new landscape.

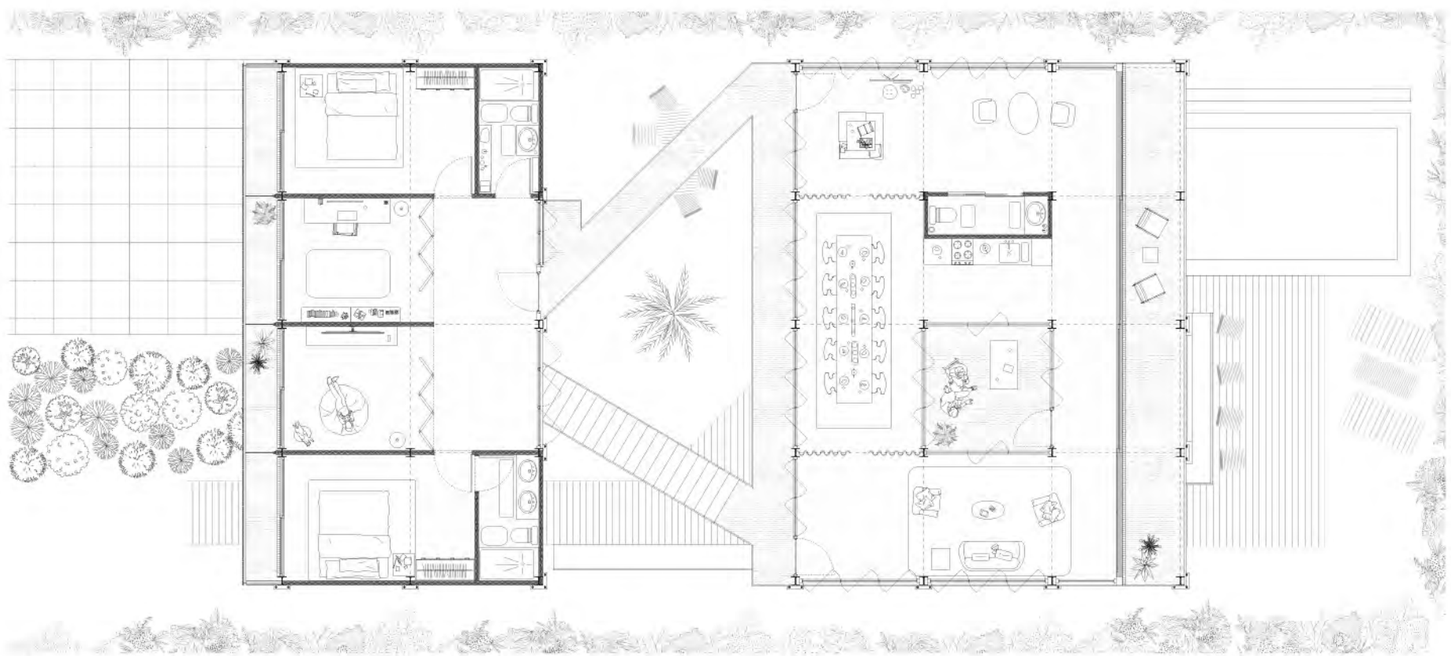
Post-Use: 2100

PHASE 2

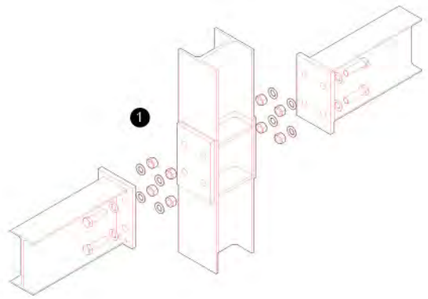


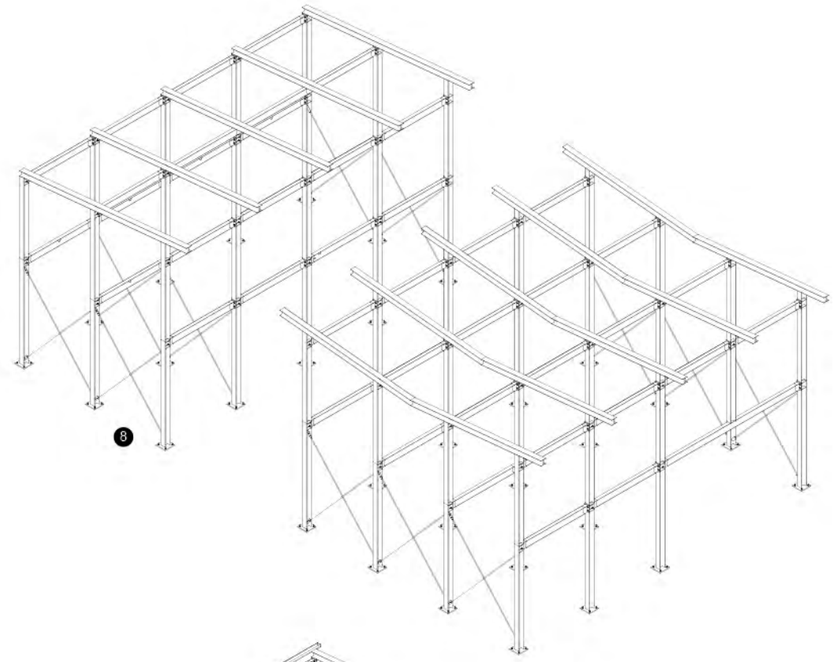
After a century of storms and raised sea levels, what once was a house ceases to exist. There is very little sign of what used to be. The concrete pieces are broken and worn down, and have, over time, been latched onto by various sealife and microorganizms.

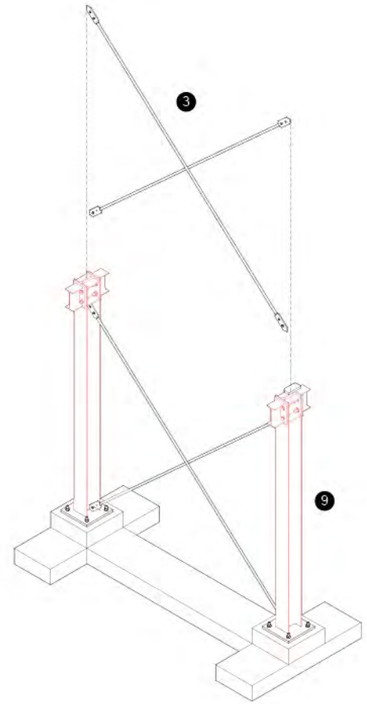
End of Life: 2200+

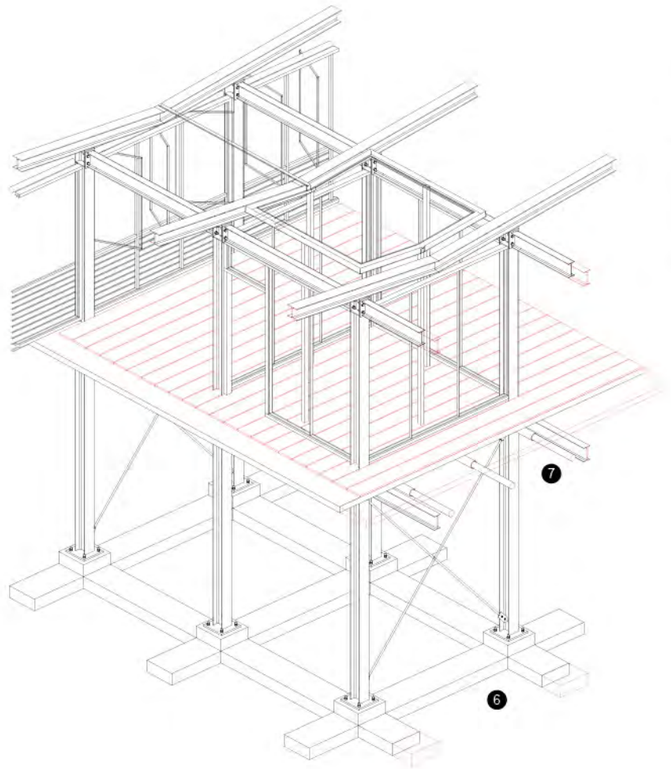


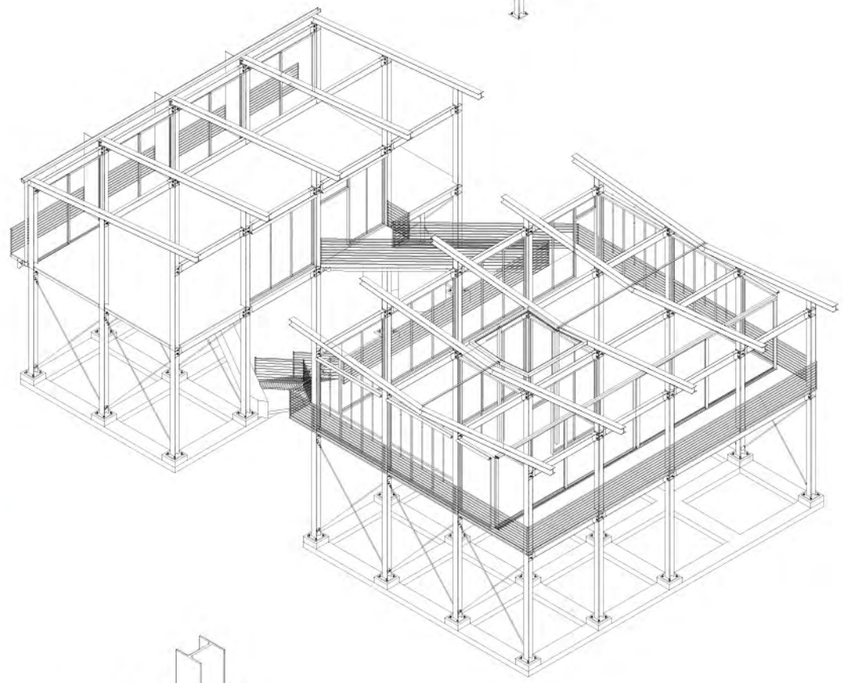
1. Beam-Column Connection
2. Multilevel Structural System
3. Steel Cross Bracing
4. Foundation Connection to Column
5. Hortzontal Steel Beams
6. Foundation
7. Water Collection System
8. Steel Structural System
9. Vertical Structure

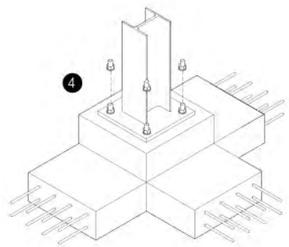


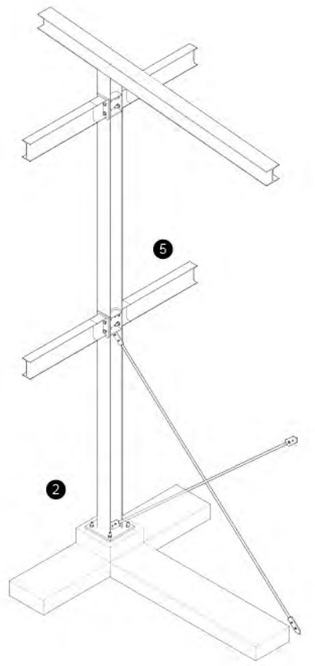














DAMS AND HYDROELECTRIC DREAMS

VIVIAN SHENG, MAX WALEWSKI, AJ LAUCK

@magazine.utopia

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DAMS AND HYDROELECTRIC DREAMS

Rendering

Semester: Fall 2024
Instructor: Daniele Profeta
Collaborators: Vivian Sheng, Ayrton Laucks

The conditions and effects of dams and hydroelectric power extend across scales from the world of microns to the world of kilometers. These effects and conditions form a network – an immaterial object which represents the hydroelectric dam and its repercussions. This network shifts between visible and invisible, never captured in its entirety. Our perception of the hydroelectric dam is shrouded by multiple perceptions in multiple scales. This project attempts to bridge the scalar gap, using topographies of scales from microns to kilometers in order to collage a new ground and new datum from which to approach the hydroelectric dam.

The ground is not only a collage which violently mixes scales and resolutions, it is also a datum on which the immaterial effects of the dam area realized. Each scale is gridded for cross reference, and these grids are occupied with words and images, further expounding on the ideas of the dam while embedding its immaterial structure on its material structure – the land.



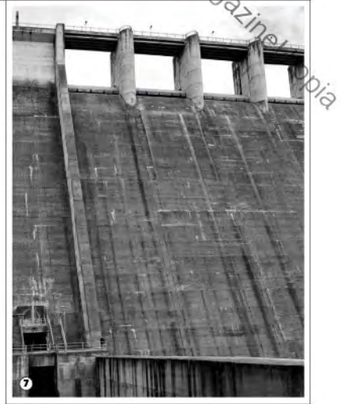
4 La Tribuna illustrata
Archivio Storico Intesa Sanpaolo, sezione fotografica, patrimonio archivistico dell'Istituto Mobiliare Italiano – IMI. Notiziario SES numero speciale 1961 "Mezzo secolo della SES"



5 Angelo Omodeo
Archivio Storico Intesa Sanpaolo, sezione fotografica, patrimonio archivistico dell'Istituto Mobiliare Italiano – IMI IMI - Notiziario SES numero speciale 1961 "Mezzo secolo della SES"



6 Giulio Dolcetta
Archivio Storico Intesa Sanpaolo, sezione fotografica, patrimonio archivistico dell'Istituto Mobiliare Italiano - IMI - Notiziario SES numero speciale 1961 "Mezzo secolo della SES"



7 La diga
Settembre 2024, Busachi. Un operaio al lavoro all'esterno della Diga Eleonora d'Arborea, lo sbarramento che dà vita al più grande bacino artificiale italiano, il lago Omodeo



8 Il progetto
"Dams and Hydroelectric Dreams" progetto di Vivian Sheng, Max Walewski, AJ Laucks della Syracuse University di Firenze

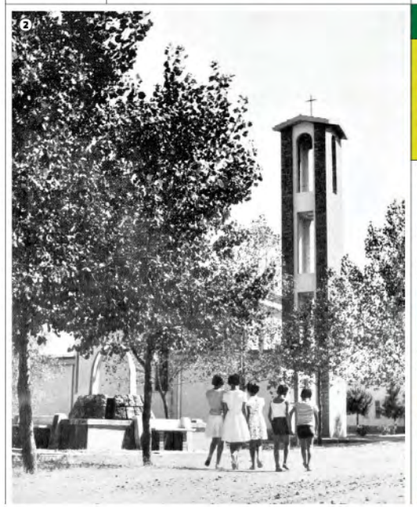


9 Santa Chiara
Settembre 2024, una veduta della diga di Santa Chiara a Ula Tirso



10 Gli impianti
In alto foto storica della diga. Archivio Storico Intesa Sanpaolo, sezione fotografica.
In basso, la sala conferenze

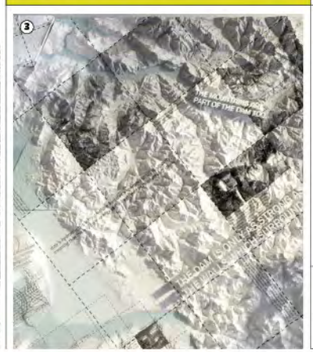
1 La chiesetta nel cantiere di Tirso
Settembre 2024, Busachi. Gli impianti interni della Diga Eleonora d'Arborea



2 La chiesetta nel cantiere di Tirso
Archivio Storico Intesa Sanpaolo, sezione fotografica, patrimonio archivistico dell'Istituto Mobiliare Italiano

L'ISOLA DEI LAGHI (SARDEGNA)
foto di **VALERIA CHERCHI**

L'ingegnere Angelo Omodeo, ebbe un ruolo cruciale nella rinascita economica della Sardegna. Con il progetto "L'isola dei laghi" Omodeo intuì come sbarramenti multifunzionali potessero trasformare l'isola, migliorandone l'economia. Negli anni anni '20 del '900 il sodalizio tra pubblico e privato portò alla creazione di infrastrutture trasformando la Sardegna in un polo agricolo-industriale



Trova tutti i quotidiani e riviste su https://eurekaddl.lat

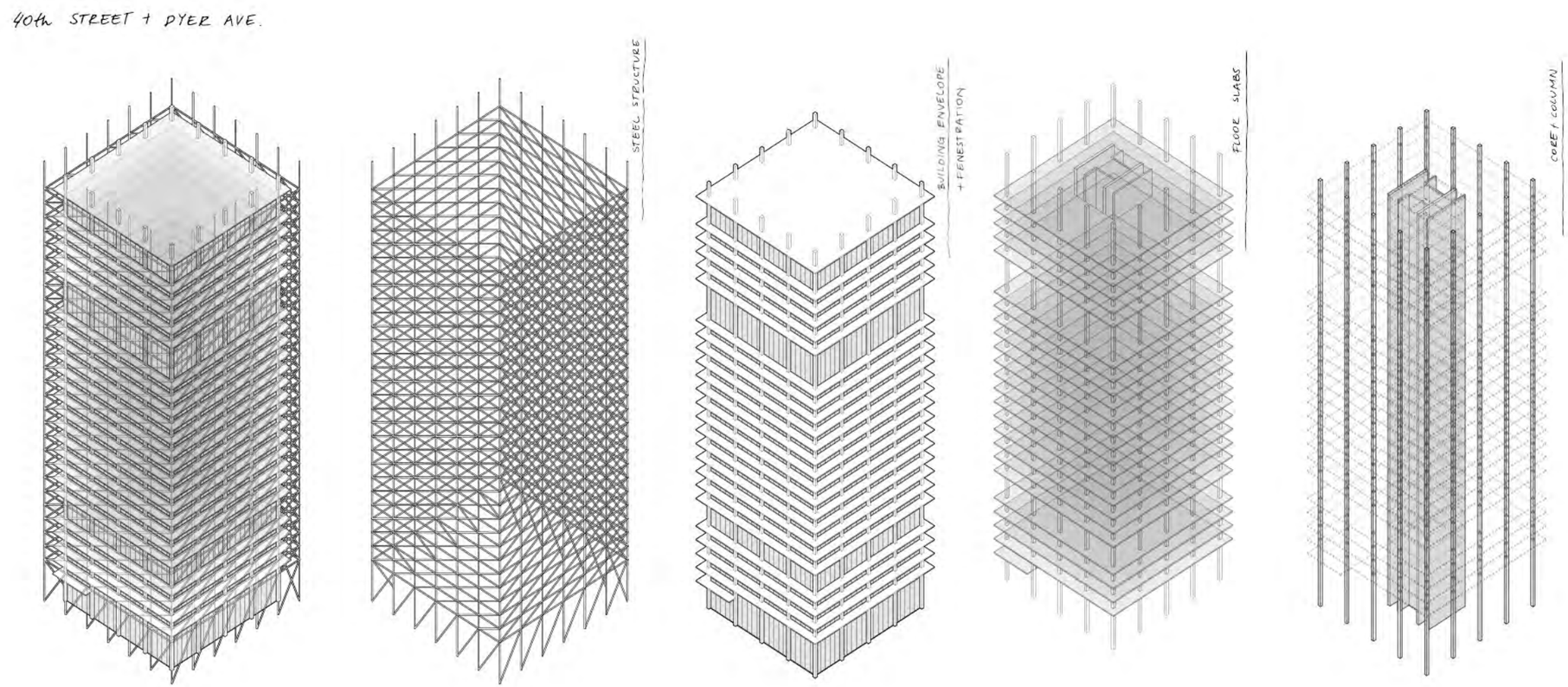
FILLING THE GAPS

Vacant Spaces

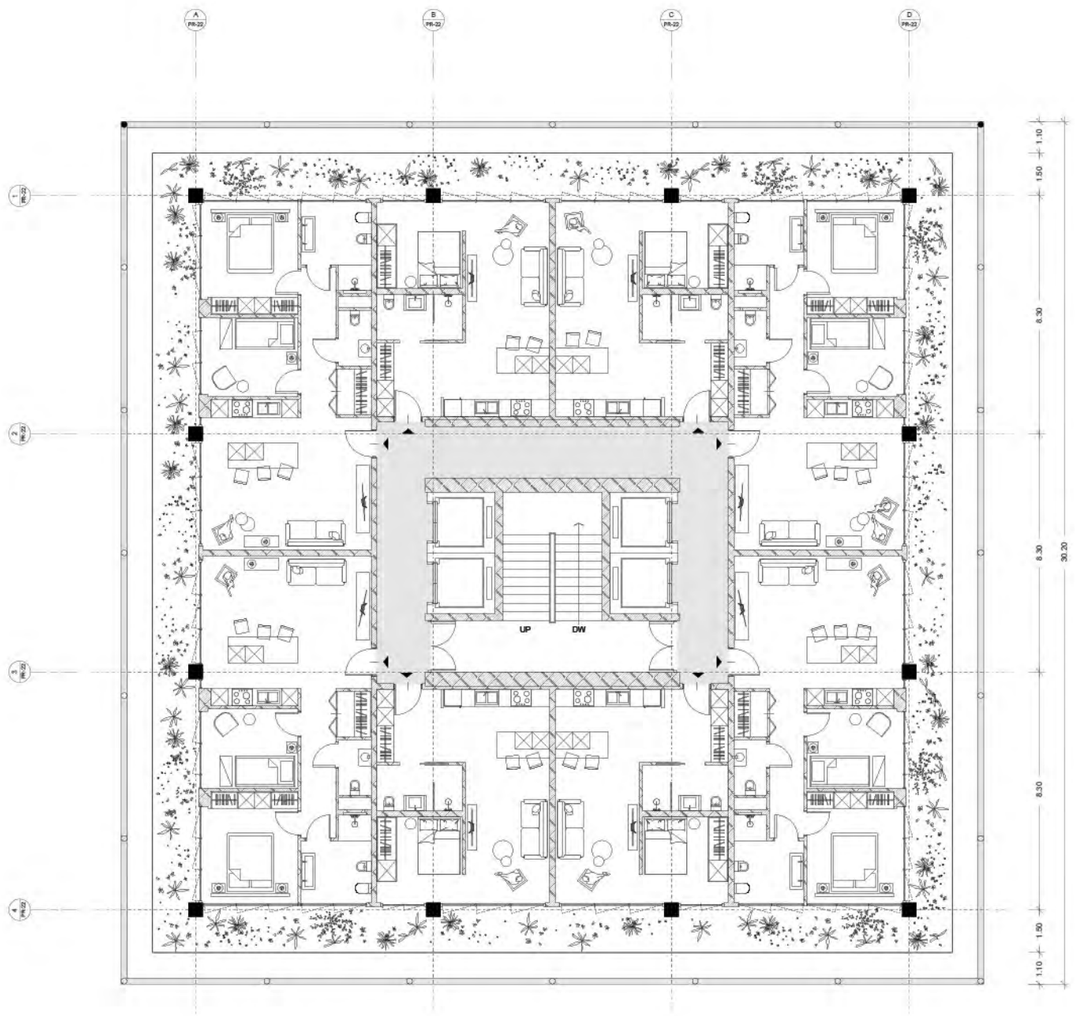
Manhattan, NYC
Professor: Rocio Crosetto Brizzio
Fall 2023

In the late 70's, Rem Koolhaas speculated on an interesting definition of Manhattanism; insisting on the idea that Manhattan was a sort of built celebration of the Culture of Congestion.

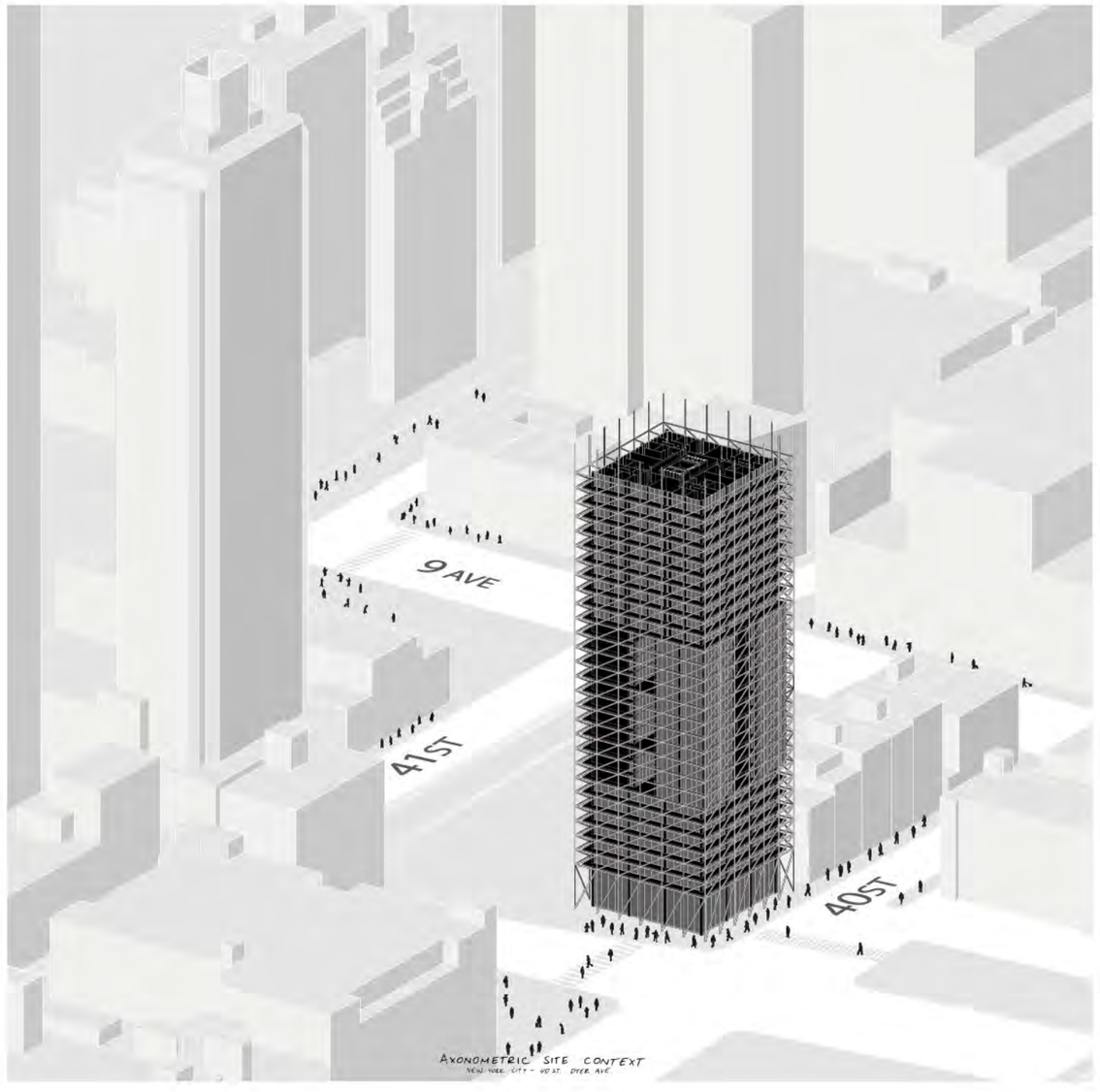
In consonance with Koolhaas' words, the mere idea of vacant space in Manhattan seems like a treason to its most primitive identity. The desire to fill the gaps to consolidate the magnetic grid feels inevitable. Despite its surreal attraction; the so-called "pockets" provide a pragmatic and measurable opportunity for local residents to imagine other ways of housing in which they could take place as stakeholders and decition makers. Manhattanites are facing an unprecedented housing crisis today. The exorbitant rise of rent costs, together with a shortage in the construction of new units and the control of the industry on few hands is shifting the rules on the island, inevitably expelling out thousands of Manhattanites from the place they have long called home.



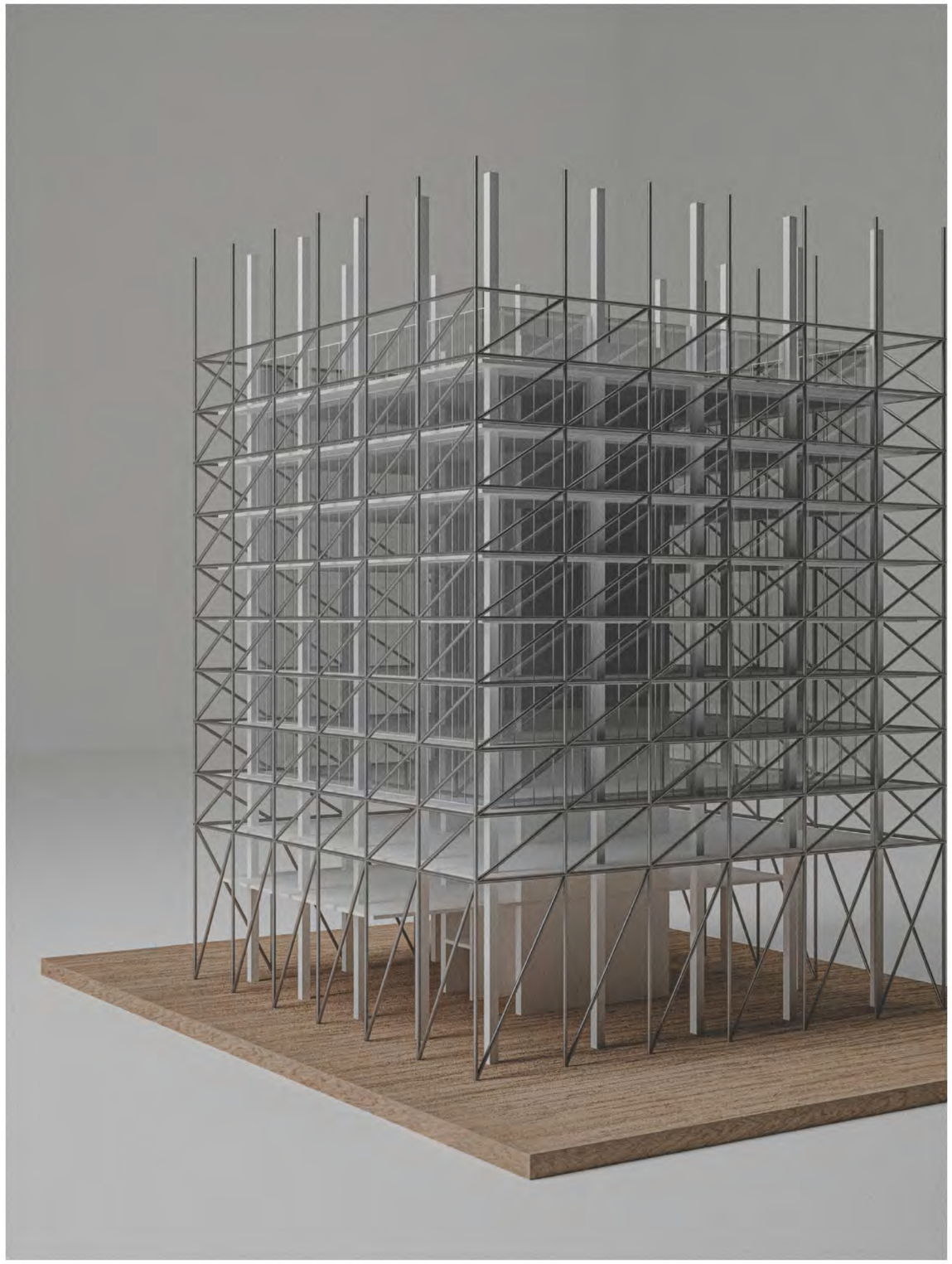
AXONOMETRIC STRUCTURE DIAGRAM
CLADDING + FENESTRATION + SLABS + CORE

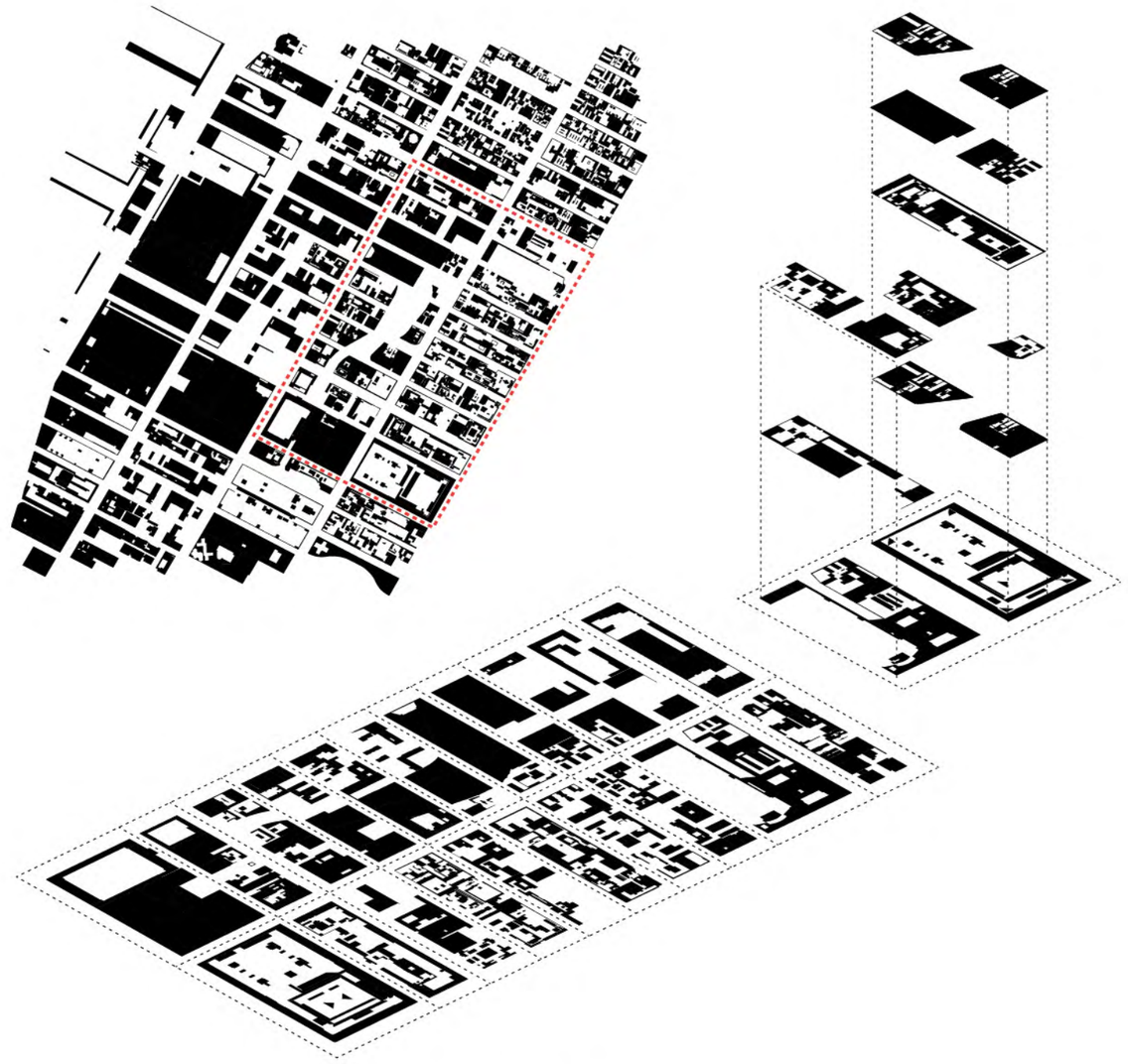


TYPICAL FLOOR PLAN
PERMANENT UNIT L + M



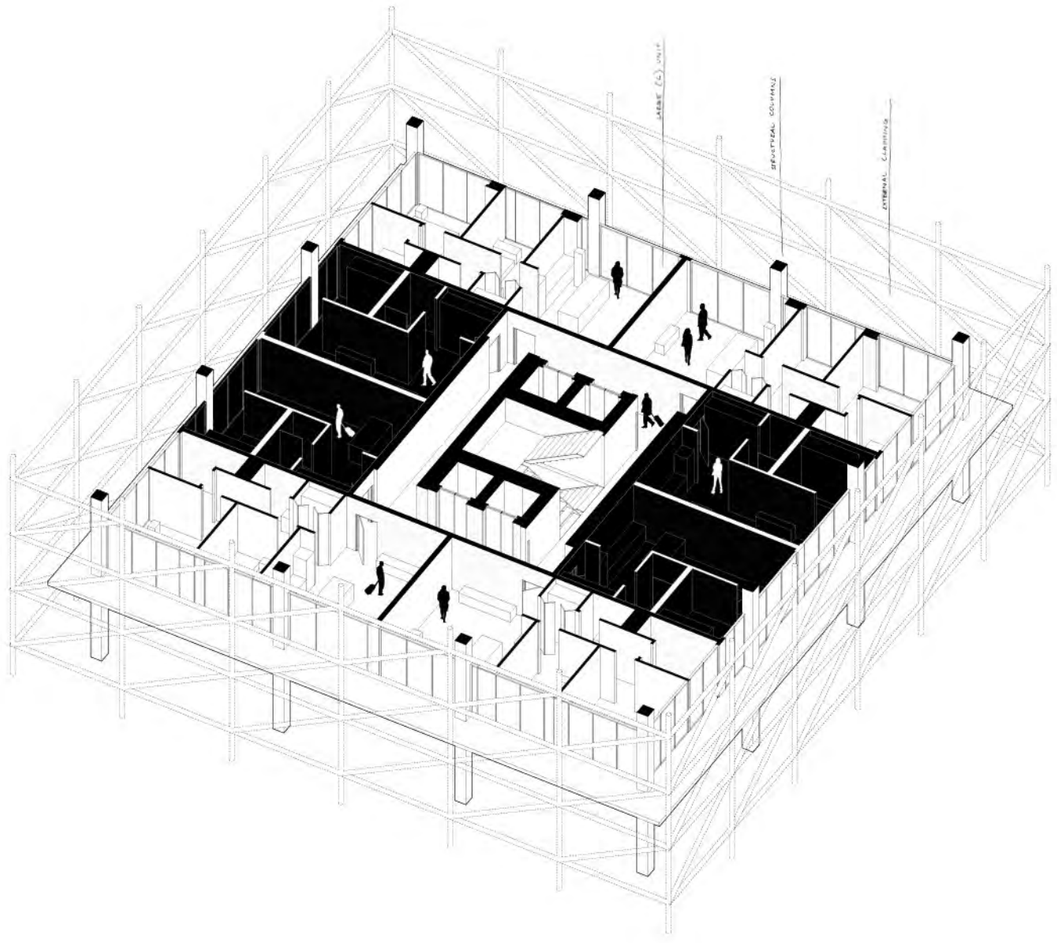
AXONOMETRIC SITE CONTEXT
NEW YORK CITY - VOST. DYER AVE





CONTEXT PLAN

NEW YORK CITY - 40 ST. DYER AVE.



AXONOMETRIC UNIT VIEW

PERMANENT UNIT L + M

L

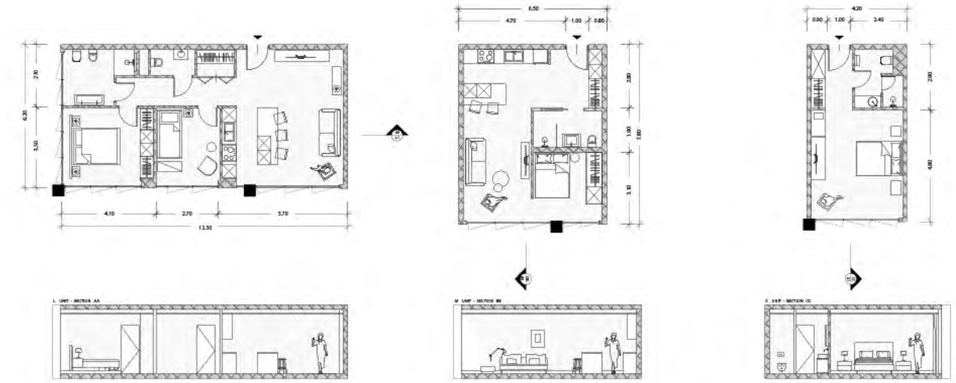
73.95m²

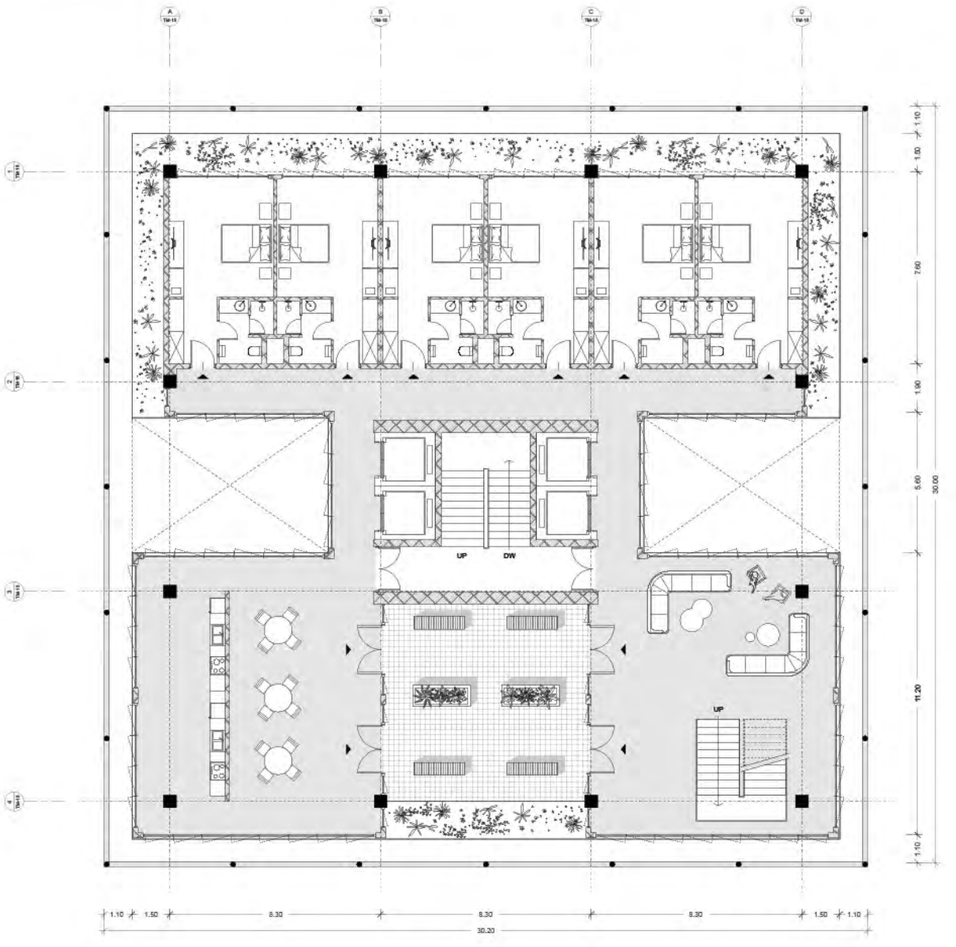
M

45.22m²

S

29.43m²





Wentworth Institute of Technology

Internship Project

Boston, MA

Overseen by: Matthew Pierce

Summer 2025

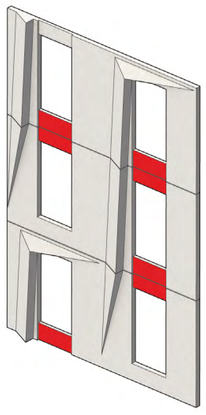
The new residential hall at Wentworth Institute of Technology explores the intersection of academic life, community, and urban density, reinforcing the campus fabric while responding to Boston's regulatory and environmental context.

Working as part of Perkins&Will's Higher Education team, I contributed through 100% of the Schematic Design and Design Development phases. My work focused on the development and iteration of cast-in-place concrete façade panel systems using Rhino/Grasshopper and Revit, aligning design intent with fabrication and constructibility. I also prepared Project Notification Form (PNF) graphics and presentation materials for city review and community engagement, and participated in value engineering discussions evaluating window-to-wall ratios and energy code compliance to balance performance, cost, and design quality.

Perkins&Will







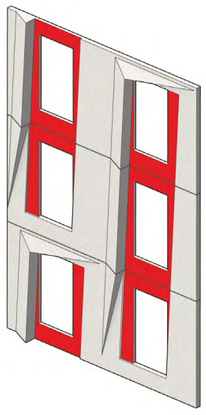
PANEL 1A

Total Volume: 307.282 ft³

Top: 107.470 ft³

Middle: 98.962 ft³

Bottom: 100.849 ft³



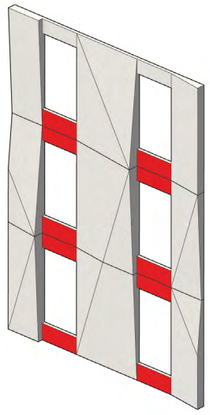
PANEL 1B

Total Volume: 293.149 ft³

Top: 102.595 ft³

Middle: 94.168 ft³

Bottom: 96.386 ft³



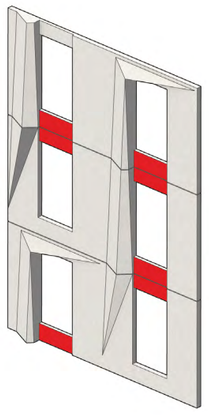
PANEL 1C

Total Volume: 330.945 ft³

Top: 104.023 ft³

Middle: 118.126 ft³

Bottom: 108.795 ft³



PANEL 1D

Total Volume: 307.282 ft³

Top: 107.470 ft³

Middle: 98.962 ft³

Bottom: 100.849 ft³

isgenuity

Harvard School of Public Health

Internship Project

Boston, MA

Overseen by: Al Kurokawa Xin Ge

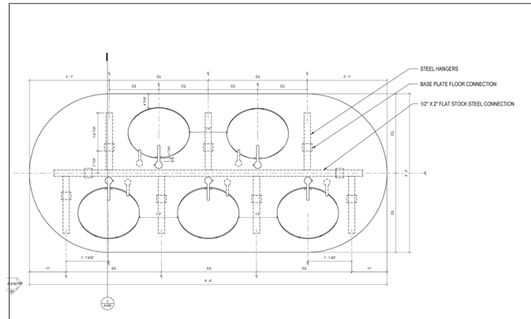
Summer 2024

The Gender Inclusive Restroom at FXB challenges the status quo of traditional public toilet rooms by eliminating the prescribed gender binary; advancing Harvard T.H. Chan School of Public Health's mission to serve as a radical stimulus for inclusivity, health, and dignity.

The composition of the space is alluring, glowing with subtle reflectivity, and embraces the dualities of visibility and privacy. Private compartments balanced by open loop circulation foster a personal sense of security and serve as a catalyst for non-conforming bodies to have positive social interactions and opportunities for community building.



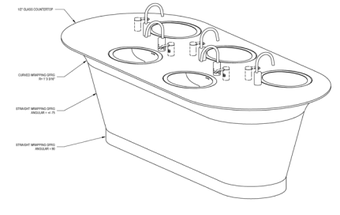




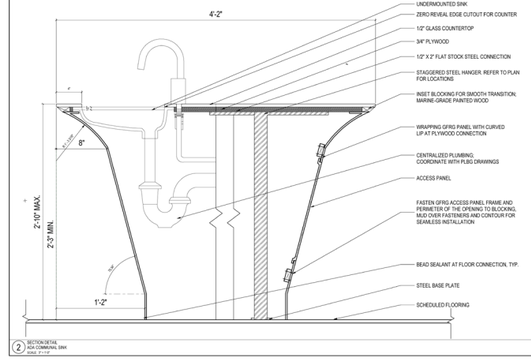
4 PLAN DETAIL
ADA COMMUNAL SINK
SCALE: 1 1/2" = 1'-0"

ADA COMMUNAL SINK NOTE

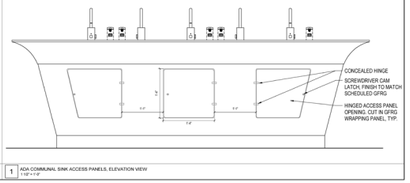
1. REFER TO SPECIFICATION SECTIONS FOR DESCRIPTION OF THE ADA COMMUNAL SINK
2. ADA COMMUNAL SINK SHALL BE INSTALLED BY GENERAL CONTRACTOR. REFER TO SHEET G-002 FOR COORDINATION BETWEEN SUB-CONTRACTORS. GO TO AT ADA CONTRACTS



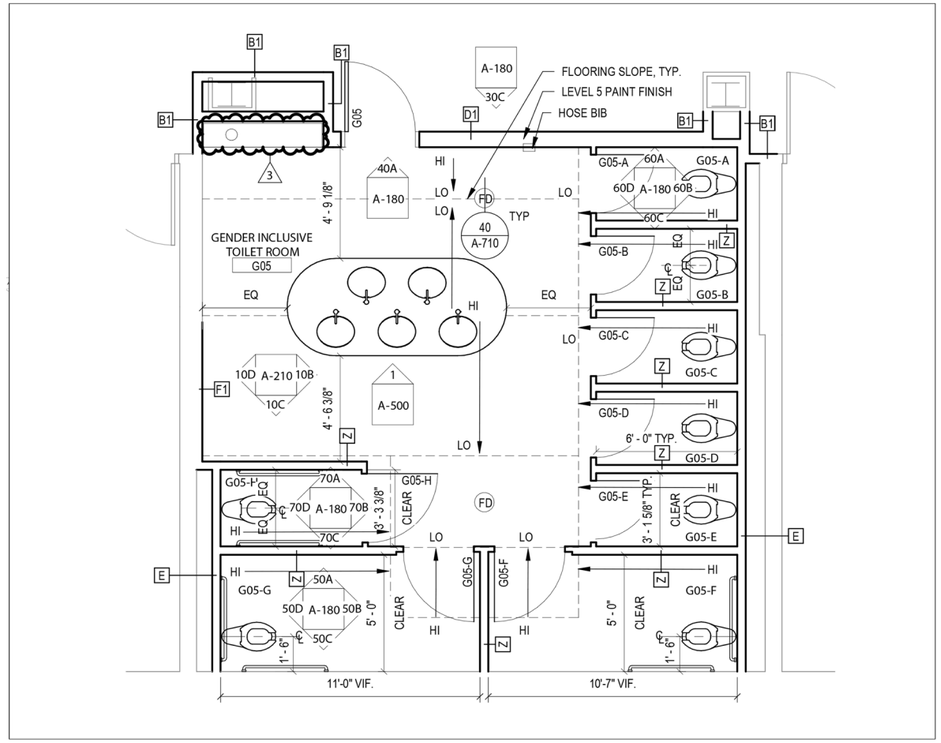
3 ADA COMMUNAL SINK - 3D VIEW



2 SECTION DETAIL
ADA COMMUNAL SINK
SCALE: 3/4" = 1'-0"



1 ADA COMMUNAL SINK ACCESS PANELS, ELEVATION VIEW
1 1/2" = 1'-0"



MARTHOMA CHURCH

Internship Project

Dix Hills, NY
Overseen by: Ryan McGrath
Summer 2023

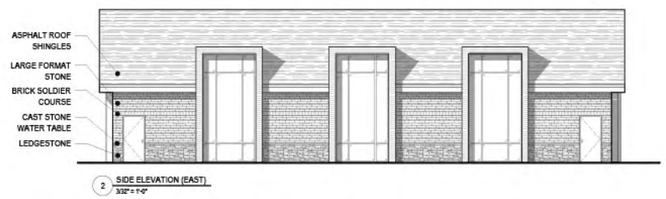
The Mar Thoma Church expansion project aims to integrate a new dimension into the existing architecture, while preserving the distinctive qualities of the original structure on the left. Focused on introducing an environment with natural light, the design proposal strategically incorporates large funnel shaped windows. The firm tasked me with creating renderings that would aid the client in visualizing the new proposal for the expansion. Throughout the summer I spend over 200 hours on design and representation working with construction documents and learning to design at the level of detail.

NELSON + POPE
engineers • architects • surveyors

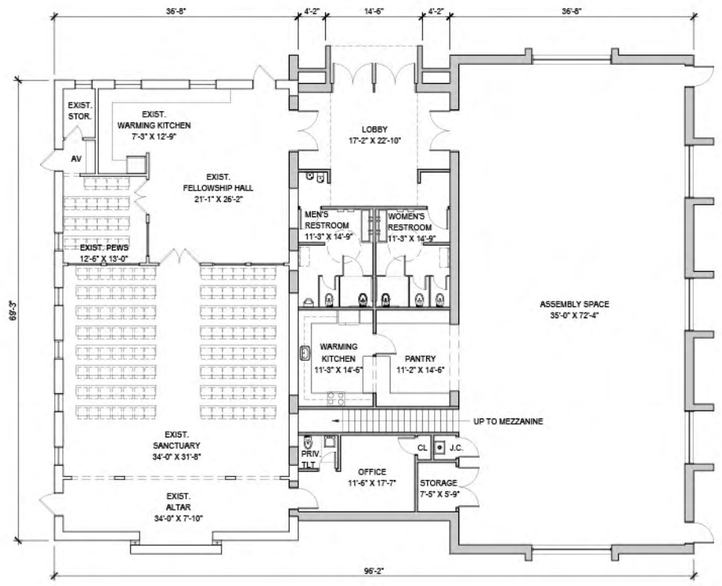










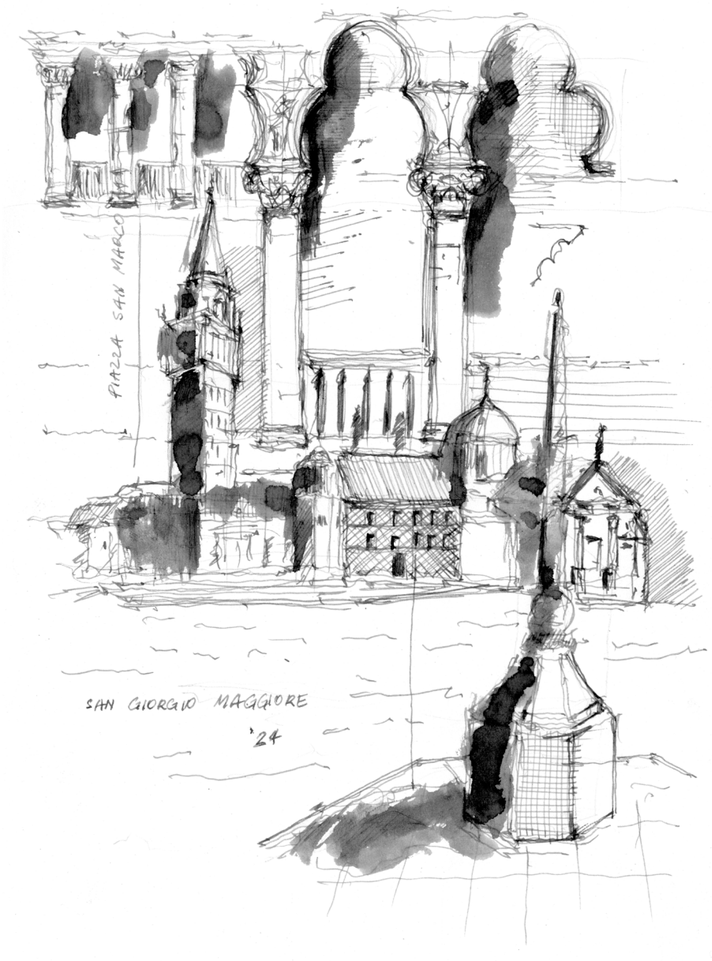


PROPOSED FIRST FLOOR PLAN

DATE: 01/27/23
SCALE: 3/32" = 1'-0"

SALEM MARTHOMA CHURCH
45 N. SERVICE ROAD, DIX HILLS 11746

NELSON+POPE
engineers • architects • surveyors
70 Maxess Road, Melville, NY 11747 • 631.427.5665 • nelsonpope.com



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