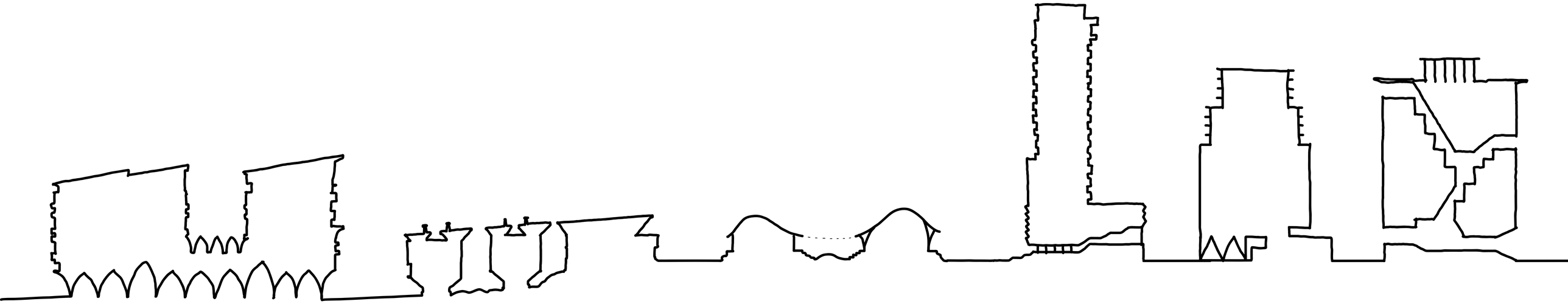
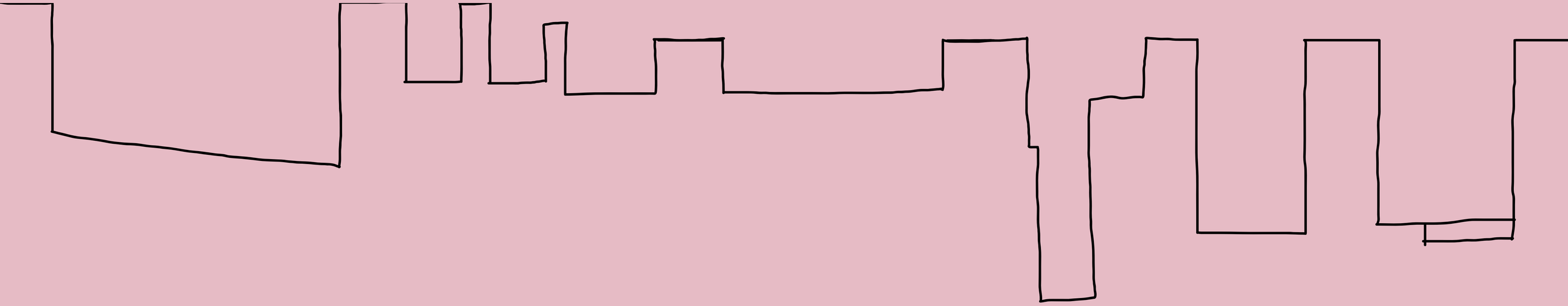


SEPARATE FUTURES



The GSAPP Journey of Steven Widyatmadja

Inspired by my fellow graduates...

Like the student body as a whole, although our individual perspectives may, and must, differ within our class, we understand productive dialogue through mutual respect to be a basic tenet of the academic freedom that supports us in applying a critical lens toward our explorations at GSAPP. Thus, in solidarity, we see the violence and the militarization of campus by the administration of Columbia University and the New York City Police Department as wrongfully threatening not only to fellow students exercising their right to protest, including some peers in our graduating class, but to the very foundations of the work we have produced and will produce.

For this unifying reason, in addition to those we may hold individually yet value collectively, we elect to be neither silent nor complicit in publishing work we produced over our past years at GSAPP. We include this note as either a preface for submissions required for our matriculation from the program, showcasing the quality of work at our institution. In continuity with the past letters our class has written, we appeal to our administration and all audiences to consider the concerns we currently voice with reciprocal urgency.

The actions of Columbia University set a precedent for other schools to condemn expression and criticism through protest. We hope the work we have chosen to include will alternatively serve as a testament to what is possible when ideas can be expressed freely, and what is at stake when that liberty is under threat.

A JOURNEY TO SEPARATE FUTURES

Here we stand, world aparts, the future’s broken in two - Steven (not Perry)

“Does the flap of a butterfly’s wings in Brazil set off a tornado in Texas?”

This is a story about the world in 2050, lived in two parallel universes with a mirror of distinct choice.

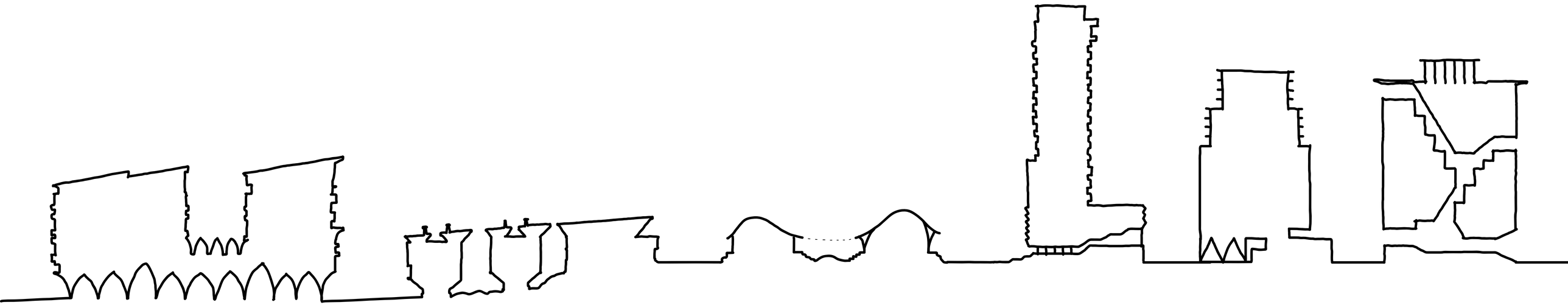
Observing the world from several part of the world through projects that started to develop in 2024,
Universe-1, The Upside Down, is a vision clouded by environmental neglect,
While, contrast to its counterpart,
Universe-2 is a beacon of sustainability and hope.

The choices made today echo into the future, shaping worlds of despair or hope.
In these intertwined narratives, the fate of one world serves as a cautionary tale to the other, urging humanity to tread thoughtfully on the path of progress.

In each world, the development stood as a symbol of the path taken:
a reminder of opportunities missed, or a testament to the power of change.

While Universe-2 will be a much better place for us to live,
Lots of work need to be done if we are to reverse the world and not going down the path of the Upside Down

Don’t stop believin’



01. THE FOUR ELEMENTS

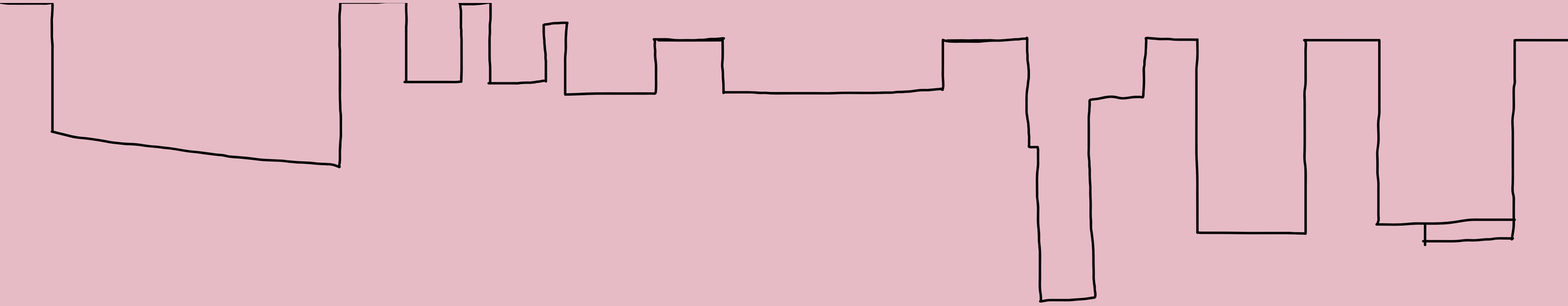
02. TANSFORMATION OF TRANSPARENCY

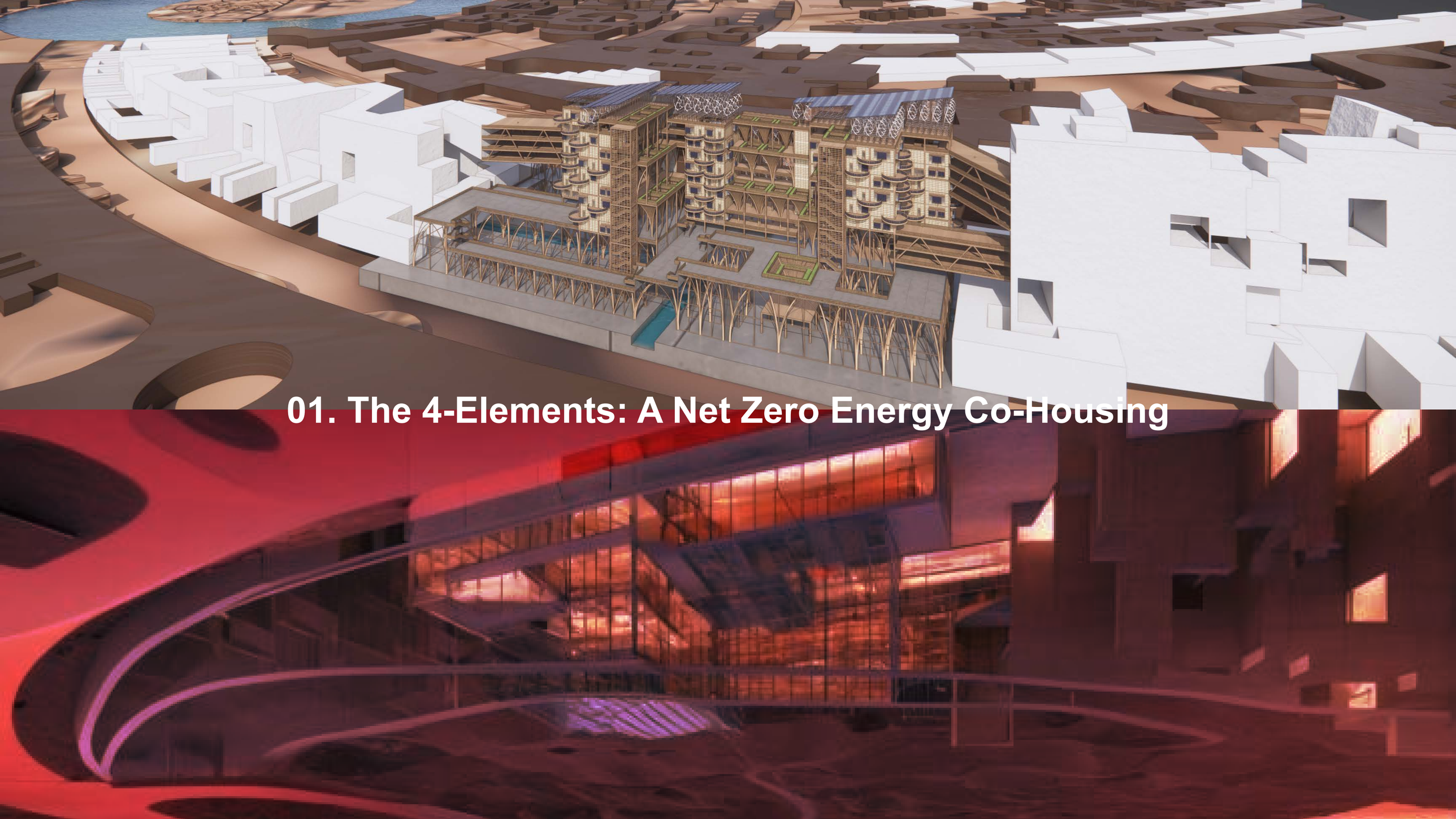
03. SENSORY TRANSIENCE

04. NORTH MADISON

05. SFCI

06. LAYERED DEGENTRIFICATION





01. The 4-Elements: A Net Zero Energy Co-Housing

The 4-Elements: A Net Zero Energy Co-Housing

Course	AAD Studio, Summer 2023
Instructor	Anupama Kundoo
Team	Hsin-Ying Huan
Location	Auroville, India

Auroville is a unique urban plan which fosters a shared community model with no land ownership, and no car traffic, and is an innovative laboratory-type city. Located in one of the harshest tropical climate environments in the world: hot, humid, and rainy, it allows experiments on novel urban design and architectural design strategies that would otherwise be impossible in other cities.

Hot and humid climates are among the hardest to deal with, especially for high-density housing, due to insufficient access to natural ventilation, inconsistent rainfall yet consistent high temperatures throughout the year. The building design resonates with and embraces four elements in nature: Air (Wind), Fire (Sun), Water (Rain), and Earth (Natural Materials).

Line of Goodwill #11, largest site for residential, as the site for the experiment

Gradual extrusion toward the south, based on Roger Anger's design guidelines

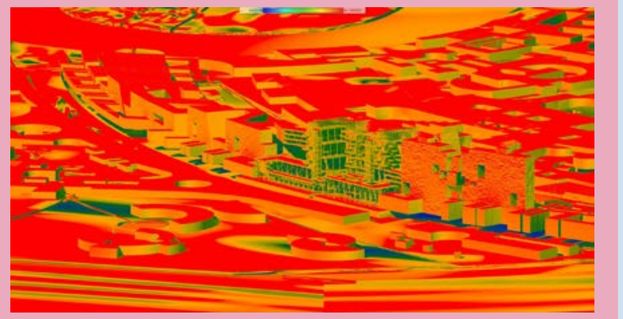
Valley toward the NE-SW axis to align with the radial city plan

Cut and interlock the mass, introduce openings toward NW-SE axis and in podiums

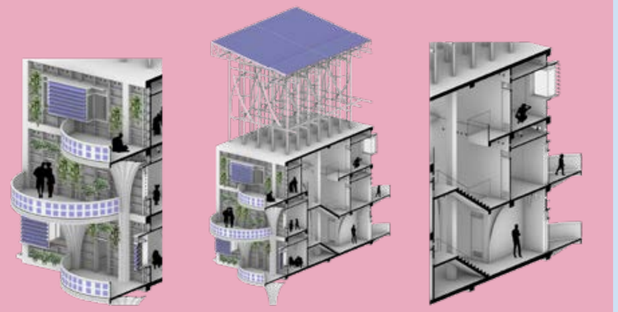
Provide solar PV and wind turbines at roof to generate renewable energy

Natural materials, PV glass and shades to define the co-housing high-rise building

FIRE - SUN



Simulation on the expected most severe day of Auroville in around mid May, with 38 °C and 66% humidity

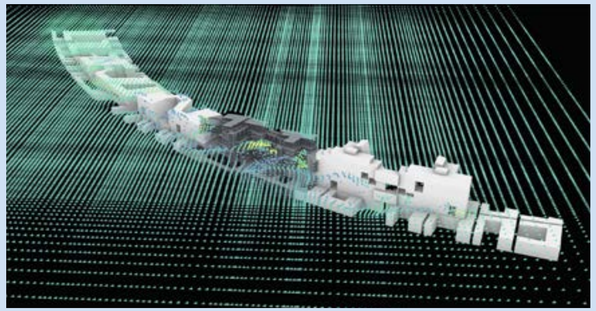


Utilize solar panels for louvers, shadings, balcony glass, and roofs to make sure most of the building envelope could be productive.

Ample openings are provided for natural light, and the operable photovoltaic shades help to filter the volume of light coming in.

The total photovoltaic production is 619,035 kWh per year, accounts for 130% of total energy consumption.

AIR - WIND



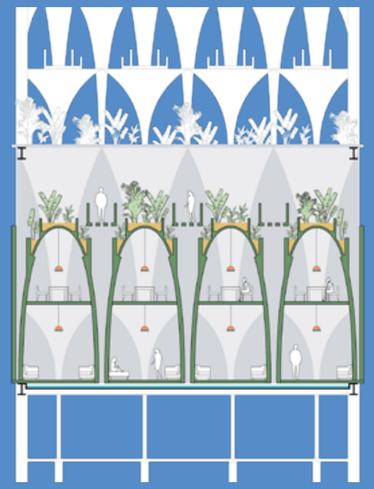
Wind simulation in May, expected hottest period of the year. Wind direction is from South South-East, with velocity of 4.2mps and temperature of 37°C .

The opening between the two buildings will accelerate the wind and generate adequate speed, ranging from 3-5 mps.

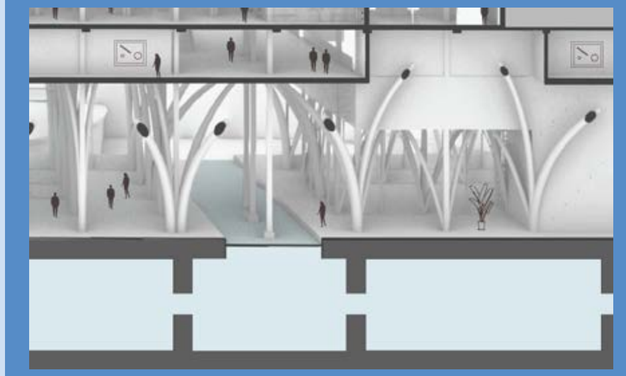
Vertical wind turbines are installed to efficiently generate electricity from the accelerated wind.

A total of 76 wind turbines could generate up to 133,152 kWh per year, about 7.3% of total energy consumption.

WATER - RAIN

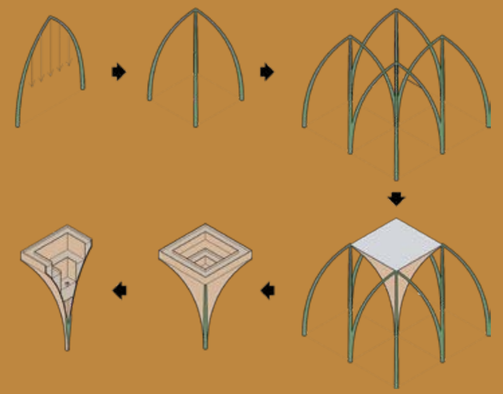


In the monsoon climate, short-term heavy rains in Auroville could cause flooding. Rain collector formed by bamboo structure aims to collect water. Inside the funnel, stepped potted plants and soil is intended to contain more water and prevent the rapid loss of rain.



Water storage in the basement could store rainwater worth of 30% of the building footprint with a capacity of 12,540 m3. This accounts for 70% of residents' water consumption.

EARTH - MATERIAL



Limit for bamboo structures is about 12 m (4'), while for timber structures is about 80 m (20') supported with a concrete core.

Bamboo is stronger when holding the weight horizontally. The bamboo is bent to form arches to support the floor slab up to three stories. Every three stories are then supported by timber structures.

The use of Cross-Laminated Timber for structural framing resulted in 30% reduction of embodied carbon, while substituting earth blocks for wall partitions resulted in 46% reduction.

Lower Residential

Upper Residential

02. TRANSFORMATION OF TRANSPARENCY

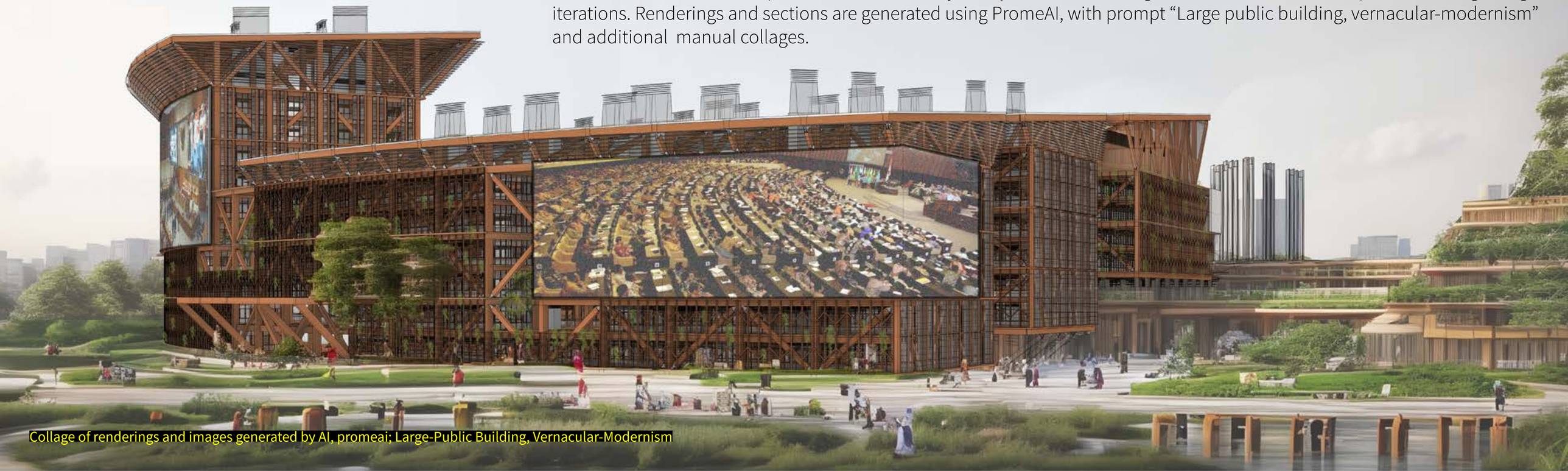
TRANSFORMATION OF TRANSPARENCY

Course Advanced V, Fall 2023
Instructor David Benjamin
Location Nusantara, Indonesia

Constructing a new city amid the global environmental crisis, could be seen as a reckless decision. Indonesia is now in the process of relocating its capital city, built from scratch on top of an industrial forest. Yet, there are opportunities to make amend of the development and transforming the way we build buildings by designing carbon-negative buildings.

Using locally sourced timber from the former forest and developing transparent wood to complement glass will significantly reduce the carbon footprint of the construction. Symbolized by the use of transparent woods that highlights potential of profound change within any entity, the transformation toward transparency is ideally extended to government practices, starting with the construction of legislative buildings in the new capital city.

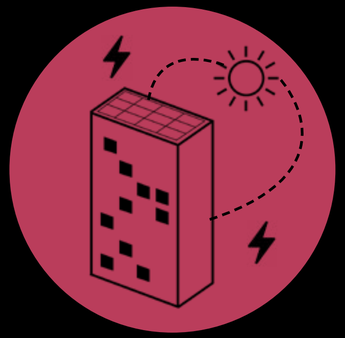
The studio utilize AI, with platforms such as Midjourney and DALL-E, to generate feedback and inspiration during design iterations. Renderings and sections are generated using PromeAI, with prompt “Large public building, vernacular-modernism” and additional manual collages.



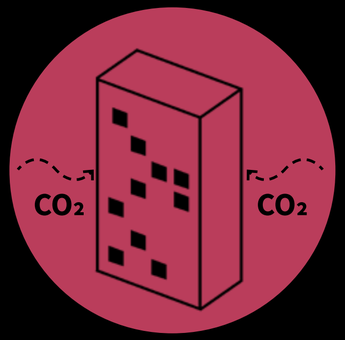
Collage of renderings and images generated by AI, promeai; Large-Public Building, Vernacular-Modernism

TRANSFORMATION + TRANSPARENCY

1. Zero Carbon Building



Zero operational carbon buildings



Zero embodied carbon buildings

2. Material Substitution

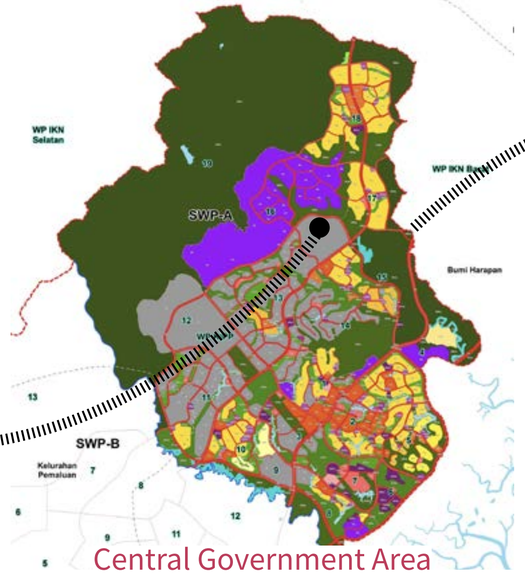
mass timber
https://www.siga.swiss

transparent wood
https://www.youtube.com/watch?v=uUU3jW7Y9Ak

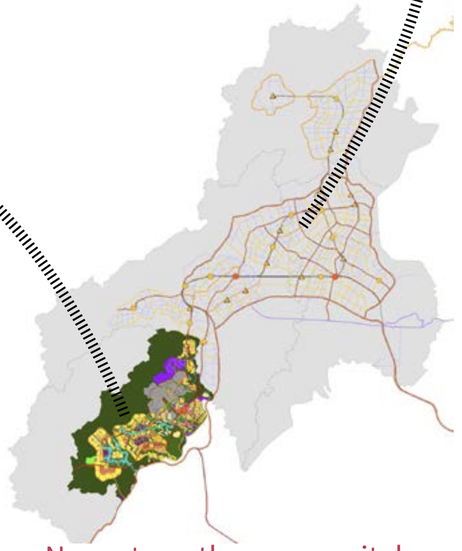
3. Transparency in Govt. Building

THE NEW CAPITAL

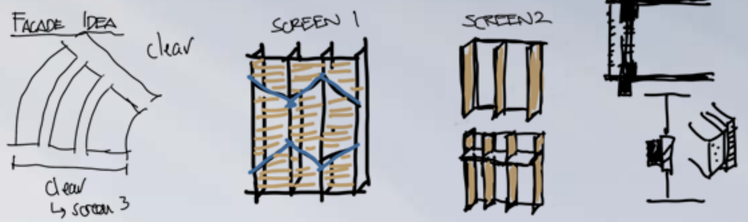
Legislative complex

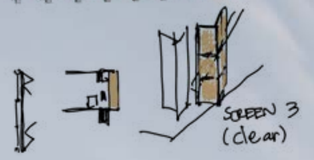


Central Government Area



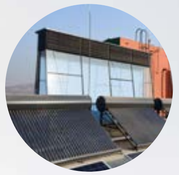
Nusantara, the new capital

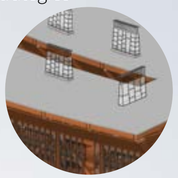


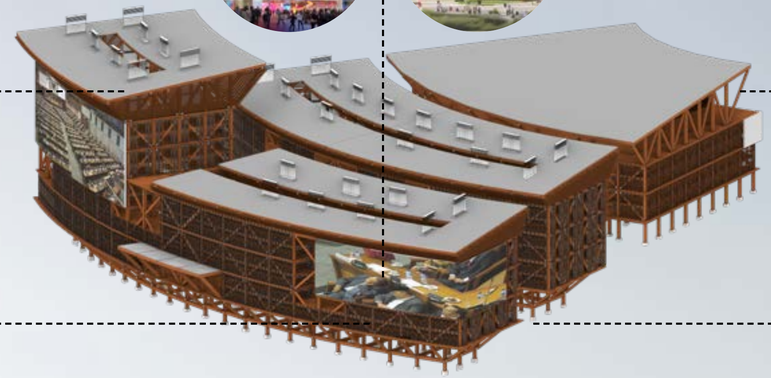


LED Screen

Passive Strategies







Mass-Timber Exoskeleton

Batik Screen Shadings

Stilt Building

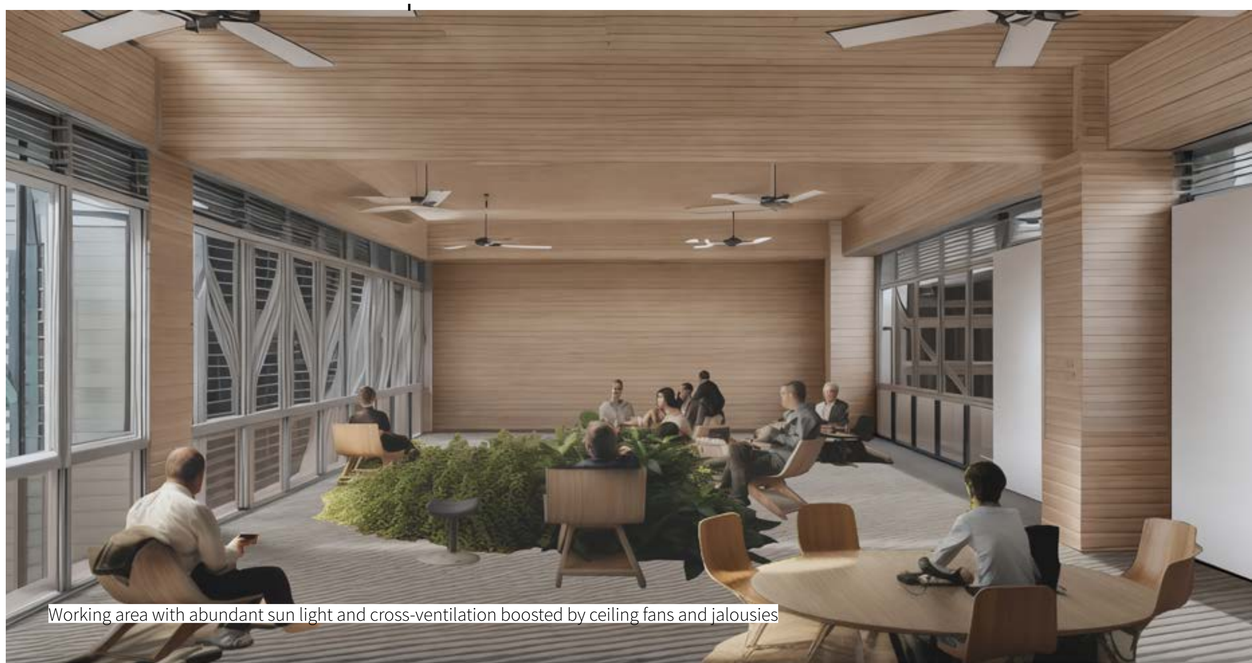
Collage of renderings and images generated by AI, promeai; Large-Public Building, Vernacular-Modernism

- Solid
- Translucent Wood
- Transparent Wood
- LED Screen
- Working Room
- Meeting Room
- Open Working Area
- Service

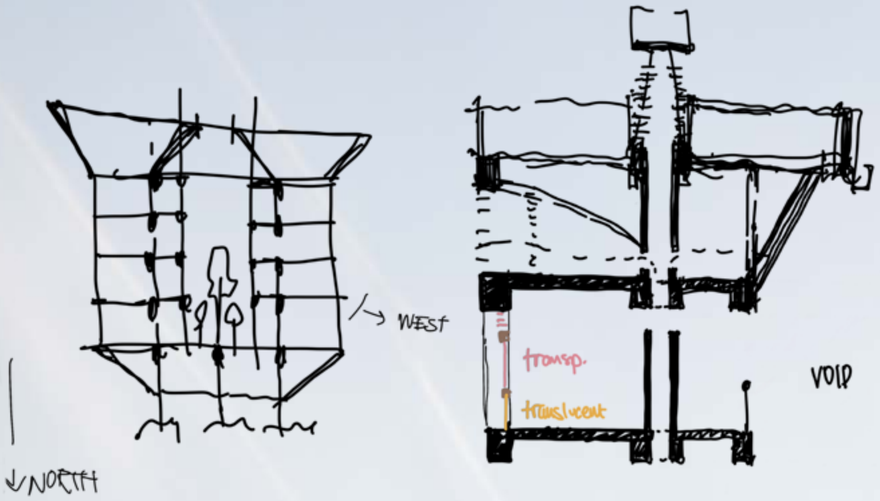
Ground Floor

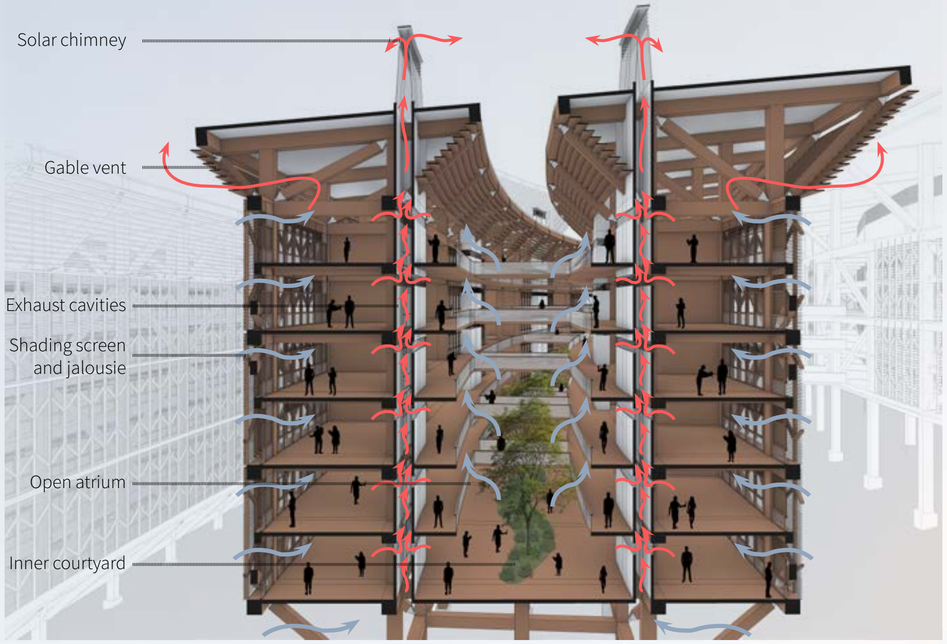
Upper Floor

Ground level atrium with biophilic environment and adequate natural ventilation



Working area with abundant sun light and cross-ventilation boosted by ceiling fans and jalousies





Passive strategies to provide wellness to the occupants while reducing the needs for energy consumption

Overall section of the Legislative Building Complex, showing atriums inside and gaps between buildings, and the stilt concept as a response to the hilly land site

translucent wood 6mm
15.91 kgCO_2e/m²

transparent wood 4mm
12.12 kgCO_2e/m²

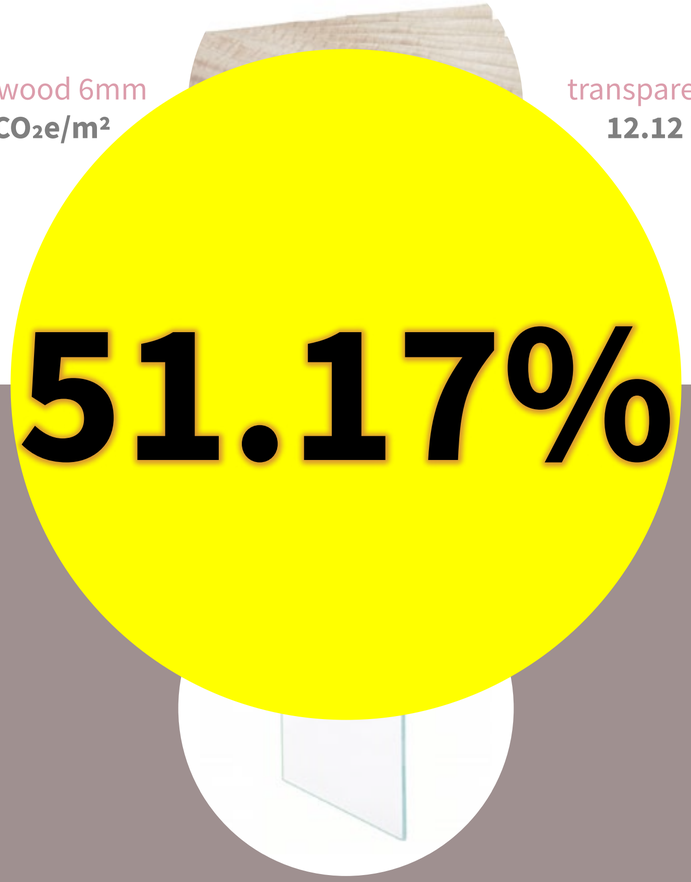
TRANSPARENT WOOD VS GLASS

glass 8mm
28.7 kgCO_2e/m²

Embodied carbon values are based on:
The Inventory of Carbon and Energy (ICE) version 3.0 by Circular Ecology

translucent wood 6mm
15.91 kgCO_2e/m^2

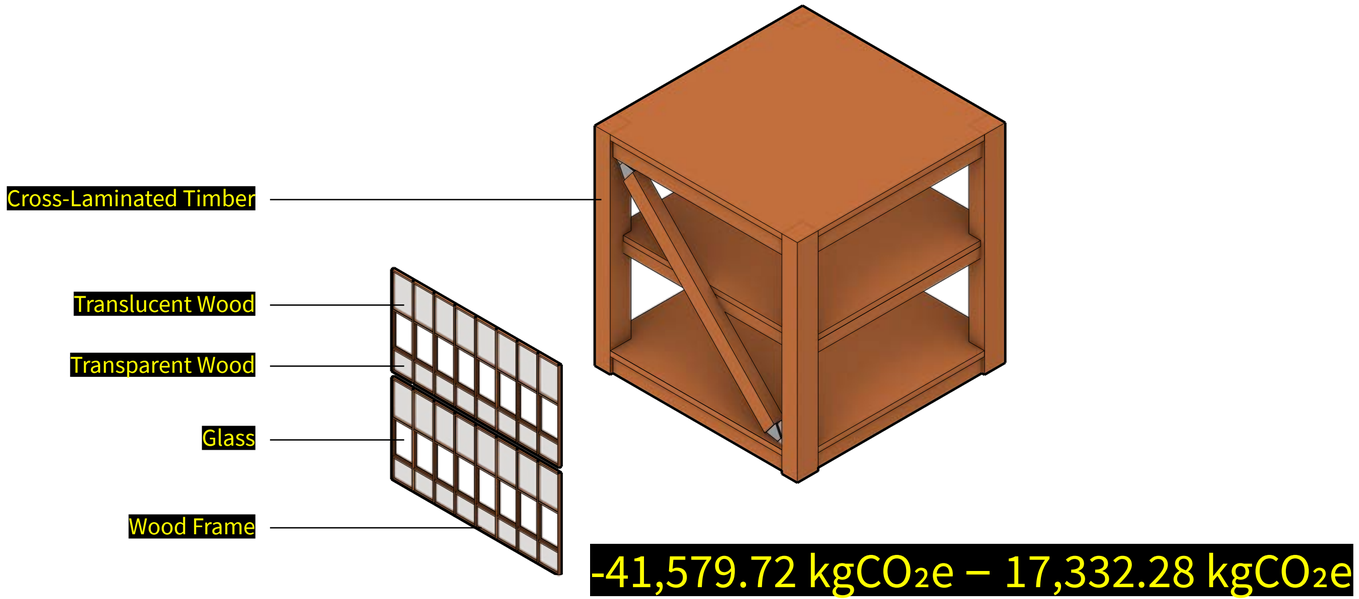
transparent wood 4mm
12.12 kgCO_2e/m^2



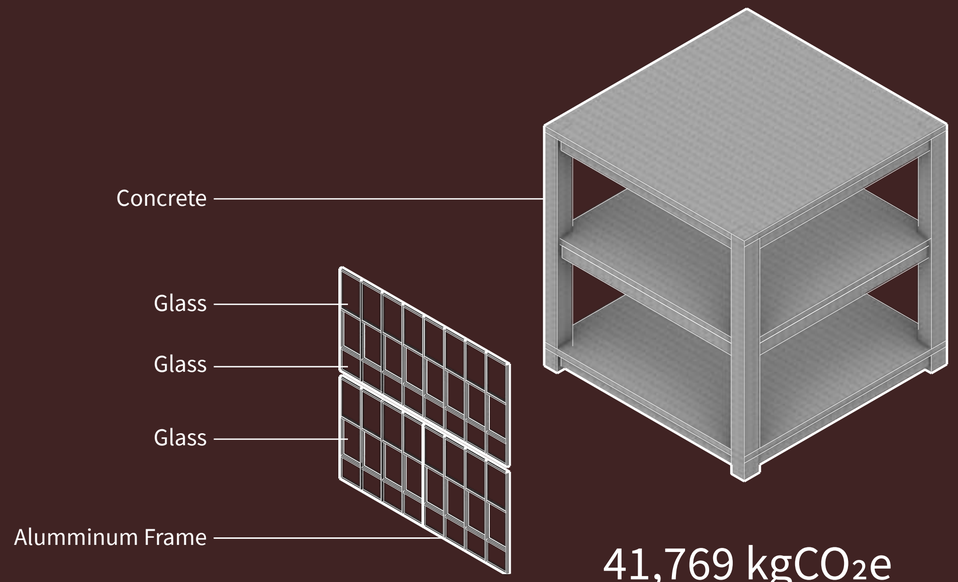
51.17%

glass 8mm
28.7 kgCO_2e/m^2

Embodied carbon values are based on:
The Inventory of Carbon and Energy (ICE) version 3.0 by Circular Ecology

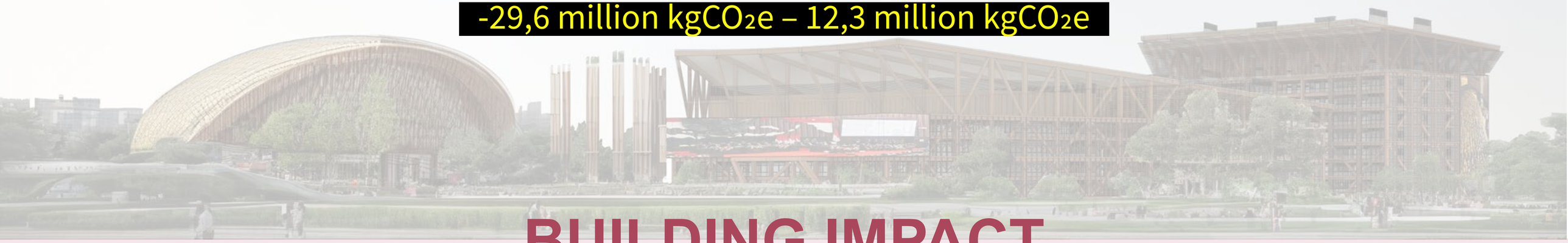


-41,579.72 kgCO_2e – 17,332.28 kgCO_2e



41,769 kgCO_2e

Embodied carbon values are based on:
Manual of Biogenic House Sections (2022) by Lewis, Paul, Marc Tsurumaki, David J. Lewis
The Inventory of Carbon and Energy (ICE) version 3.0 by Circular Ecology



-29,6 million $kgCO_2e$ – 12,3 million $kgCO_2e$

BUILDING IMPACT

Legislative Building = 712 modules (36,000 m^2)

29,7 million $kgCO_2e$

Embodied carbon values are based on:
Manual of Biogenic House Sections (2022) by Lewis, Paul, Marc Tsurumaki, David J. Lewis
The Inventory of Carbon and Energy (ICE) version 3.0 by Circular Ecology

-28 trillion – 12 trillion $kgCO_2e$

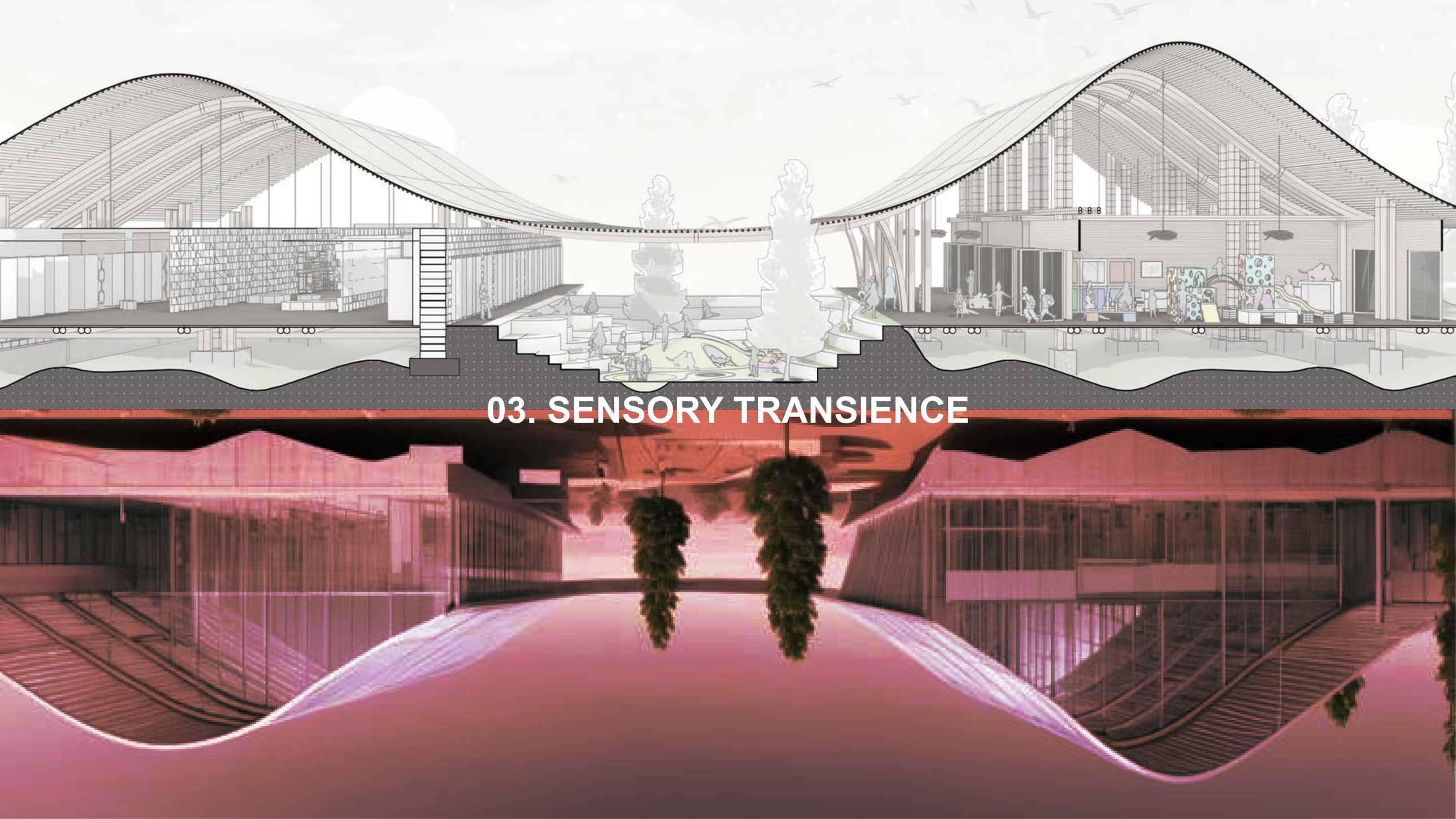
CITY IMPACT

35 billions m^2 gross building area

28 trillion $kgCO_2e$

Embodied carbon values are based on:
Manual of Biogenic House Sections (2022) by Lewis, Paul, Marc Tsurumaki, David J. Lewis
The Inventory of Carbon and Energy (ICE) version 3.0 by Circular Ecology


from
58.5%
until
-200%


03. SENSORY TRANSIENCE

SENSORY TRANSIENCE

Course Designing Spaces for Childred, Fall 2023
Instructor Anna Knoell
Team Farah Ahmed
Location Yunnan, China

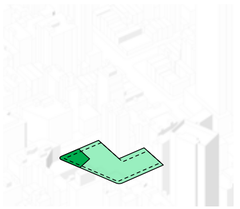
04. NORTH MADISON

NoMad Mixed-Use with the public plaza connection and prominent observation deck

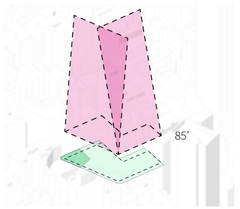
NORTH MADISON MIXED-USE

Course Re-Thinking BIM, Fall 2023
Instructor Joe Brennan
Team Mingjia Hu, Sonam Sherpa, Eskinder Fekade Law, Alison Lam
Location New York

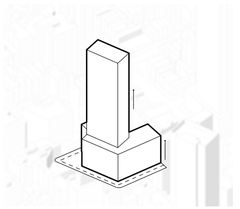
Proposing a new mixed-use development in the hustle and bustle of Midtown, Manhattan, is definitely a challenging situation for both designers and developers. How to survive? How to stand out? How to thrive? The NoMad Mixed-Use development offers a new dimension of retail integration with public realm: multi-level public balconies and alfresco dinings connection with ground level public plaza, roof top restaurant, and an observation deck on top of the hotel building.



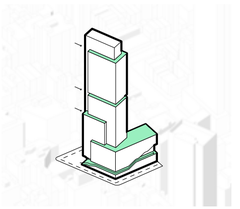
Setbacks of 10', 15' and 20', with 2,000 ft² of public plaza to gain FAR bonus



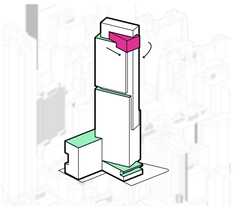
Podium height limit and sky exposure on both narrow and wide street as development boundaries



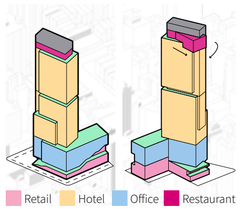
Mass extrusion to achieve max floor area, with tower located on the wide street



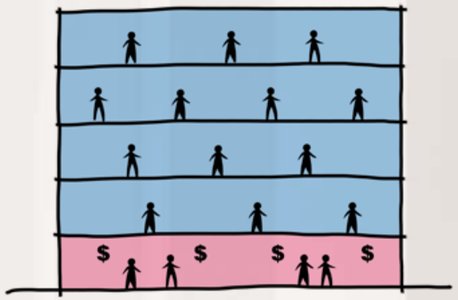
Carved the podium to provide public plaza connection and balconies on the tower



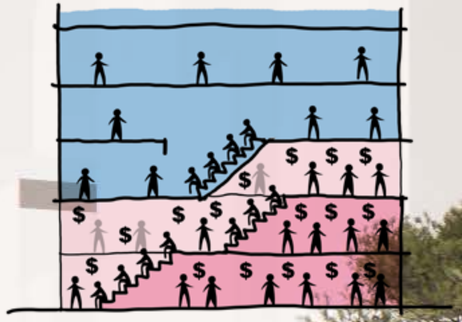
Tweak mass on the top toward the south-west for restaurant and viewing deck



Various programs in building that includes retail, hotel, office, restaurant, and open public space



Conventional retail development only at ground level



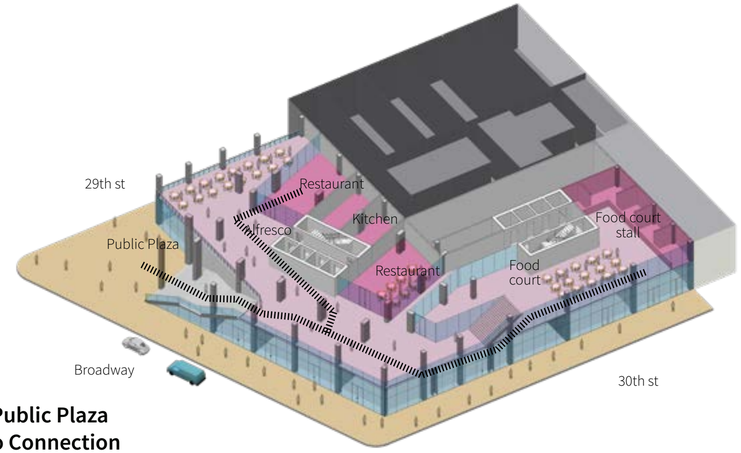
Multi-layered retail with open space to attract more crowd and provide circulation to upper floors

Interactive dining balconies at upper floors

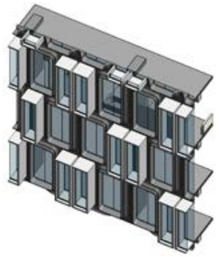
Active frontage as a response to the plaza

Seamless connection

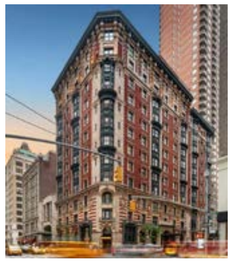
Seamless public realm connection from the ground level to the dining balconies at level 2



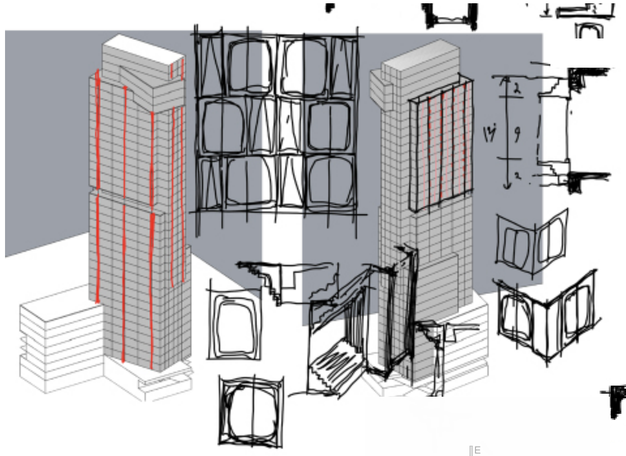
Ground Level Public Plaza and L2 Alfresco Connection

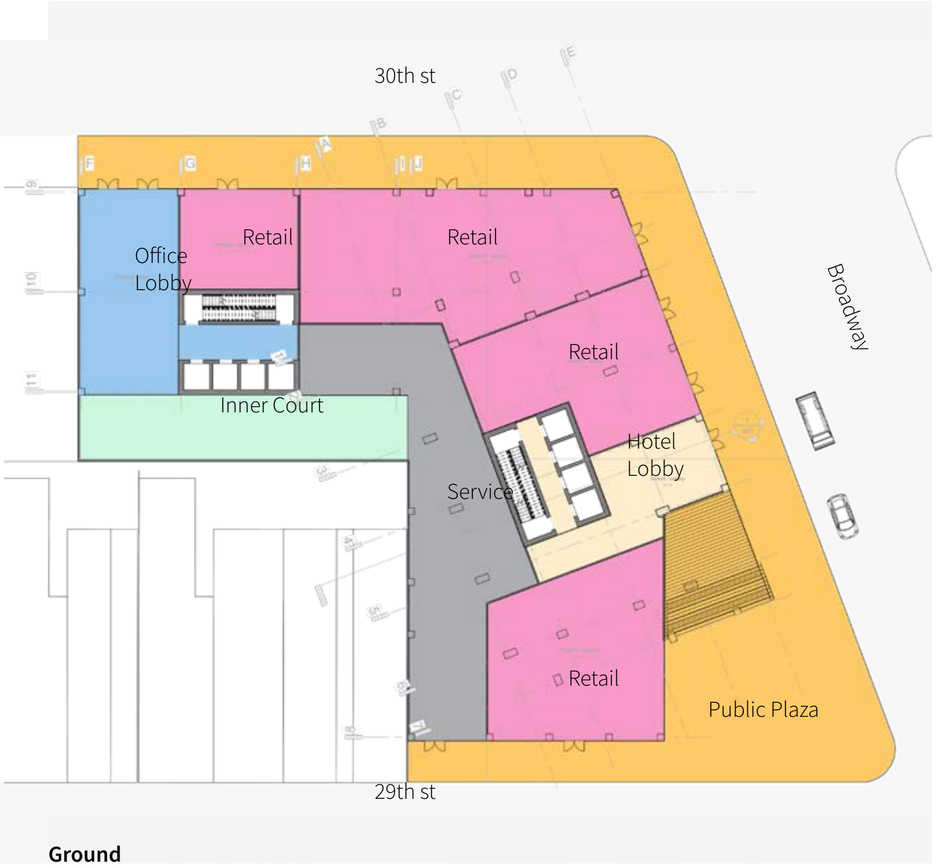


Contemporary interpretation of building facades around the site as a response for sun exposure at both the east and west side

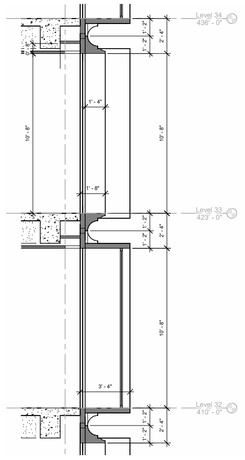


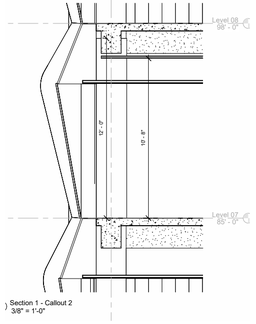
The James New York NoMad Hotel, one of the most well-known building in the area

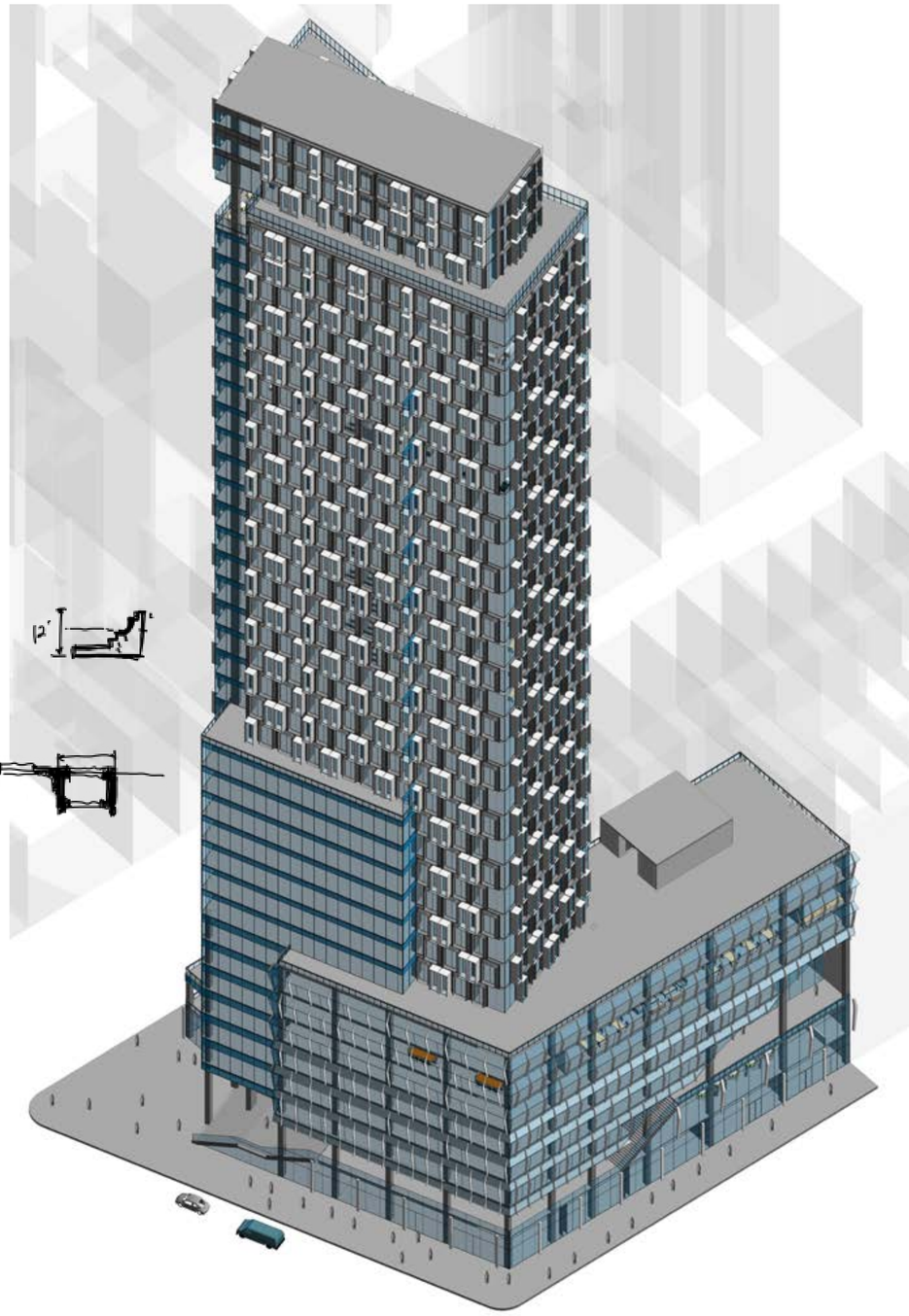




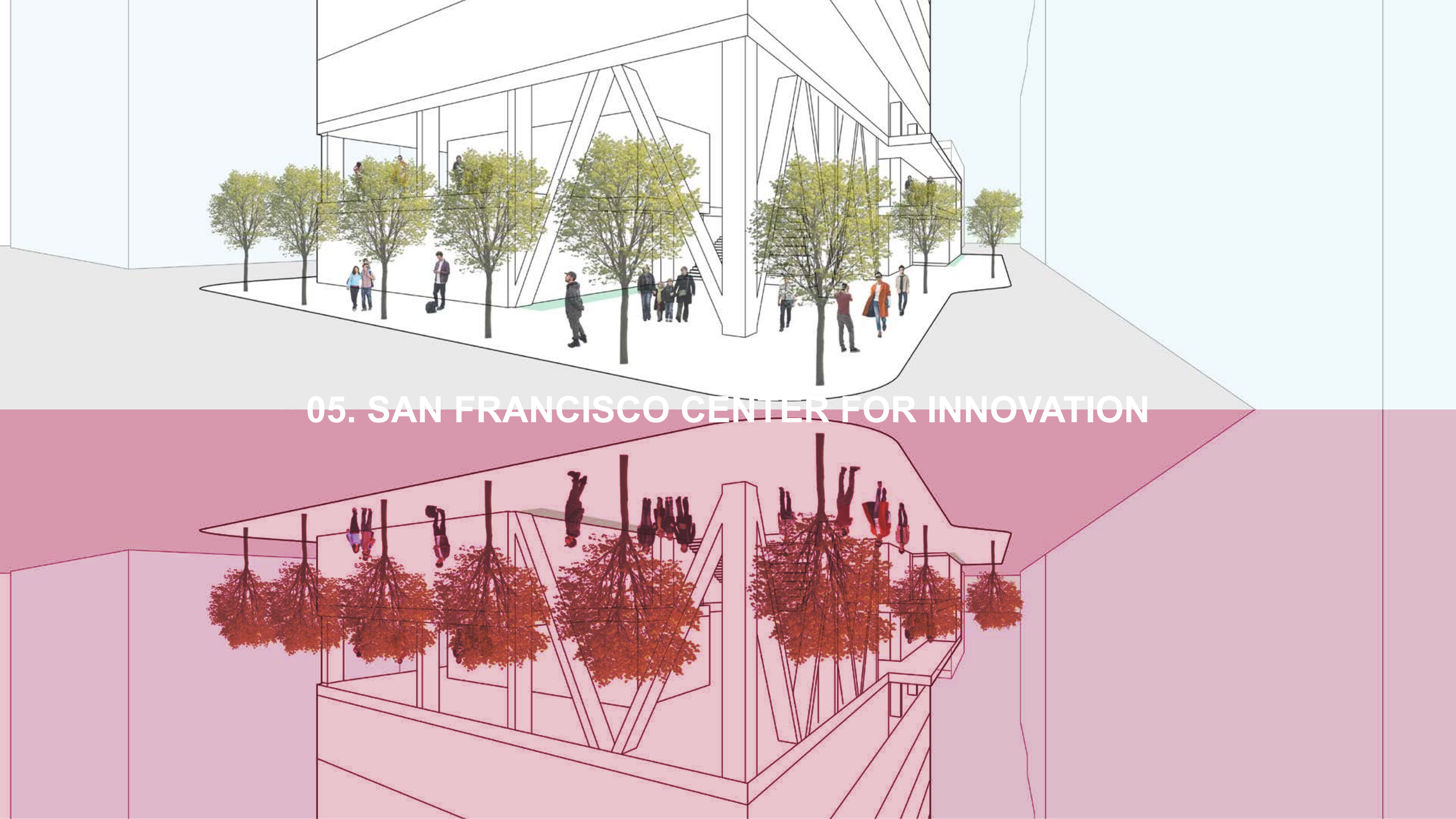
Ground

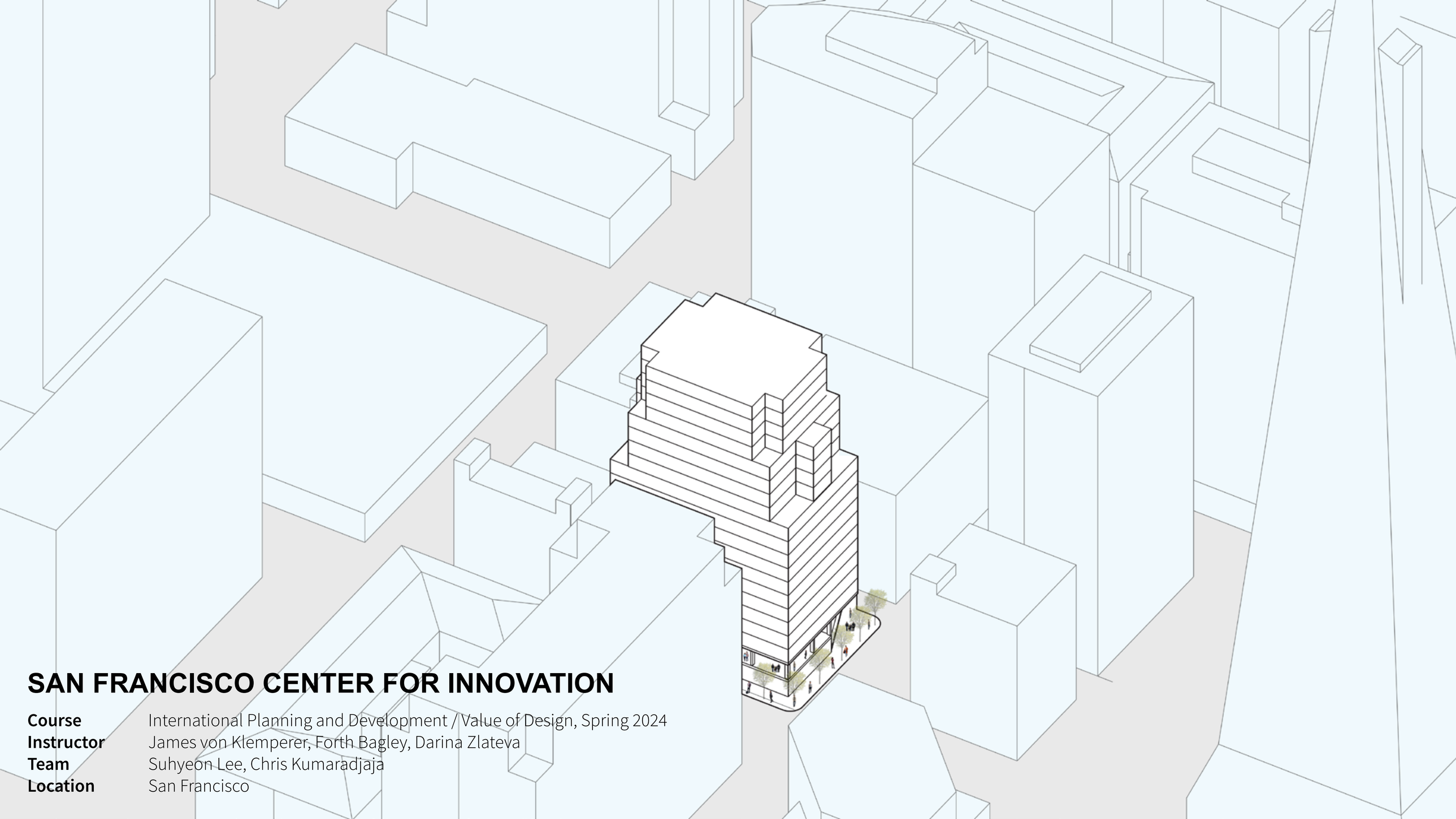






05. SAN FRANCISCO CENTER FOR INNOVATION



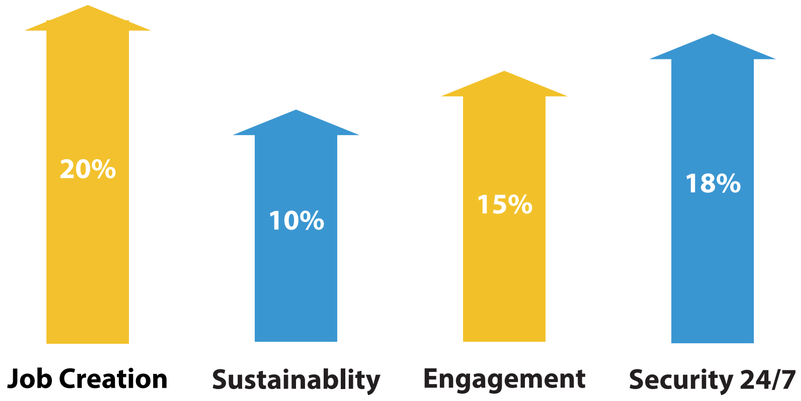


SAN FRANCISCO CENTER FOR INNOVATION

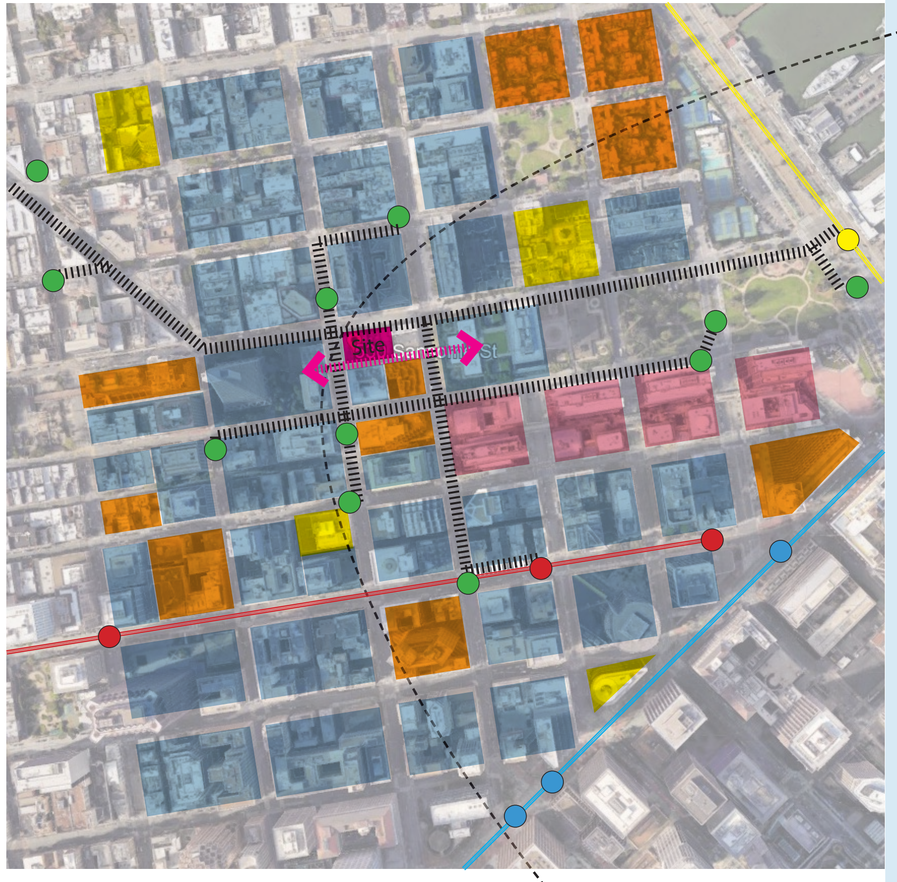
Course International Planning and Development / Value of Design, Spring 2024
Instructor James von Klemperer, Forth Bagley, Darina Zlateva
Team Suhyeon Lee, Chris Kumaradjaja
Location San Francisco

▲ *San Francisco Center for Innovation*

To rejuvenate San Francisco's core by creating a vibrant university campus in the financial district. This campus will attract a diverse and long-term population of students, faculty, and staff, contributing to economic growth through increased business activity and employment opportunities. We are committed to developing sustainable structures that seamlessly integrate with the surrounding environment, prioritizing the safety and well-being of our clients.



Site Analysis



- Tram Station
- Bus Stop
- Subway
- Pedestrian Accessibility
- Mark Twain Passage
- Office
- Apartment
- Hotel
- Retail
- Site

Proposal for TransAmerica rennovation: a rejuvenated public realm & retail activities on Mark Twain passage (credit: Foster and Partners)

The new Mark Twain passage in different activity hours, utilizing bi-fold gate to open or close the complex (credit: Foster and Partners)

The TransAmerica rennovation project as seen from the project site, showing opened and transparent storefront (credit: Foster and Partners)

Market Research

Understanding what serves both the city and developer best in the short and long term is crucial. While a major concern has been the overreliance on office space, filling the city with students has emerged as a popular solution, although it would also benefit the universities to be in the city.

"A number of universities—large and small—are looking at tapping into other geographic markets by establishing a physical presence in them," explains James Birkey, senior vice president for education at real estate services company JLL, which has studied the trend. "Not only does it provide an access point for academic exchange in the traditional sense, but it also increases institutional brand visibility and awareness in key markets."

A spokesperson for the UC Office of the President — which serves as the Oakland-based headquarters for the university system's 10 campuses, five medical centers and three affiliated national laboratories — said the system is "exploring opportunities to advance their research, public service, and education mission through an expanded presence in San Francisco."

San Francisco Chronicle e-Edition

BAY AREA // REAL ESTATE

University of California considers S.F. for expansion in wake of Mayor Breed's plea

By Laura Waxmann

Jan 13, 2024

Gift Article

The Washington Post — Subscribe

HIGHER EDUCATION

More colleges are opening branch campuses in fast-growing cities

As demographics shift, higher education institutions are going where the students are

By Jon Marcus

December 22, 2023 at 6:00 a.m. EST

The New York Times

Colleges Snap Up Unused Office Space in a Slumping Market

As companies with hybrid work forces reduce square footage, universities see an opportunity to buy buildings at bargain prices.

Potential Partnership with SFCI

University of California

"UC Berkeley and the University of California state school system have been quietly meeting this summer to explore options for creating satellite housing and classrooms for graduate students in Downtown, The Standard has learned." (*Source: The San Francisco Standard, San Francisco, UC Berkeley officials discuss housing and climate, AI classes in downtown, OCT 2023)*

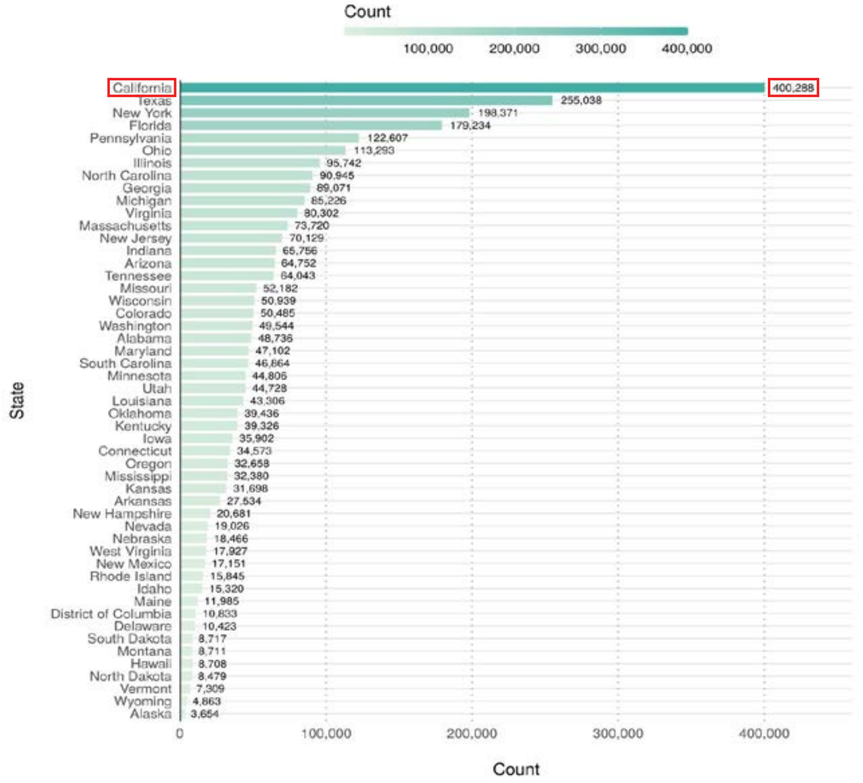
Historically Black Colleges and Universities

"San Francisco is partnering with historically Black colleges and universities to bring educational programs to the city this summer as local leaders seek to attract a permanent satellite campus to help revitalize downtown." (*Source: San Francisco Chronicle, San Francisco wants a college campus downtown? Here's why it should be an HBCU, AUG 2019)*

University Campus Development

A major new university campus in downtown San Francisco proposes a transformative opportunity to revitalize the urban core and diversify its economic base. Establishing a vibrant academic hub would diversify the population beyond office workers and lessen the city's reliance on the tech sector. With California boasting the greatest enrollment of students in the United States, and given the San Francisco Bay Area's strengths in crucial, future-oriented fields like artificial intelligence, life sciences, and climate change adaptation, the city could be highly attractive to domestic or international universities seeking to expand their programs through a satellite campus.

Mayor Breed firmly believes that "bringing students into the heart of San Francisco affords a set of remarkable opportunities." One possibility for streamlining campus development lies in San Francisco's discretionary zoning rule. The San Francisco Chronicle reports that "as a state entity, the university could conduct and approve its own environmental reviews, rather than being subject to challenges by the Board of Supervisors through San Francisco's review process."

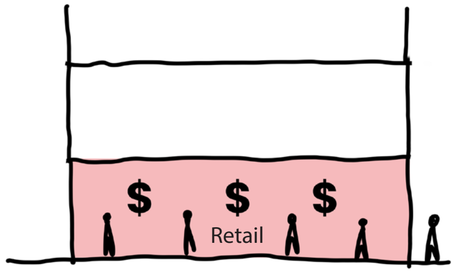


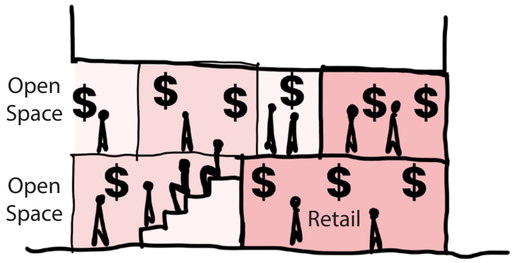
SOURCE: U.S. Department of Education, National Center for Education Statistics, IP-EDS, Spring 2019, Fall Enrollment component (provisional data).

Advantages on Campus Development

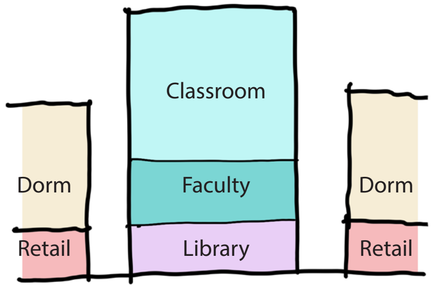
- **Stable Occupancy and Long- Term Lease**
- **Low Risk in Default of the Tenant**
- **Reduced marketing costs**
- **Reduced wear and tear**
- **Positive impact on community image**

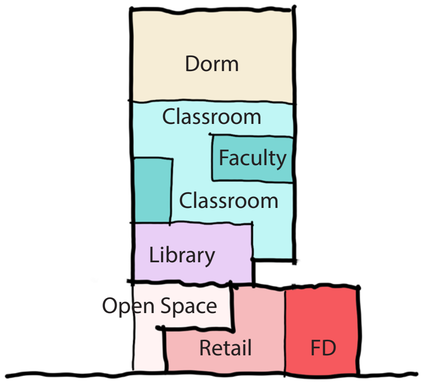
Multi Level Retail
+ Open Space



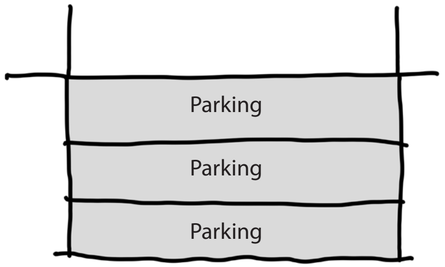


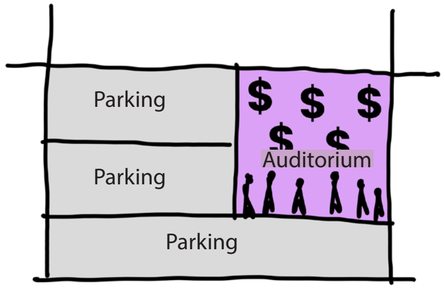
Integrated and Seamless
University Environment



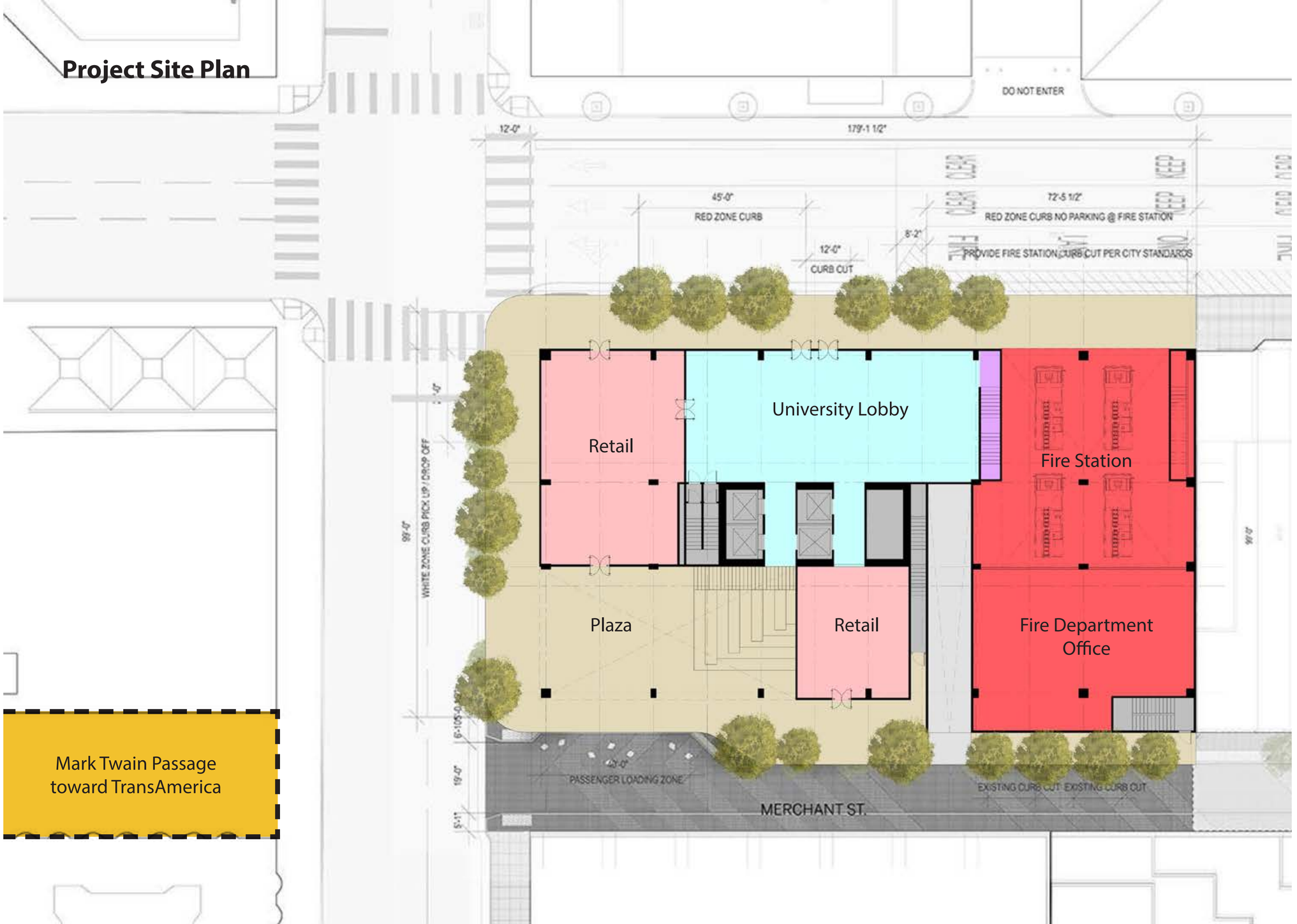


Auditorium for Rent
at Basement





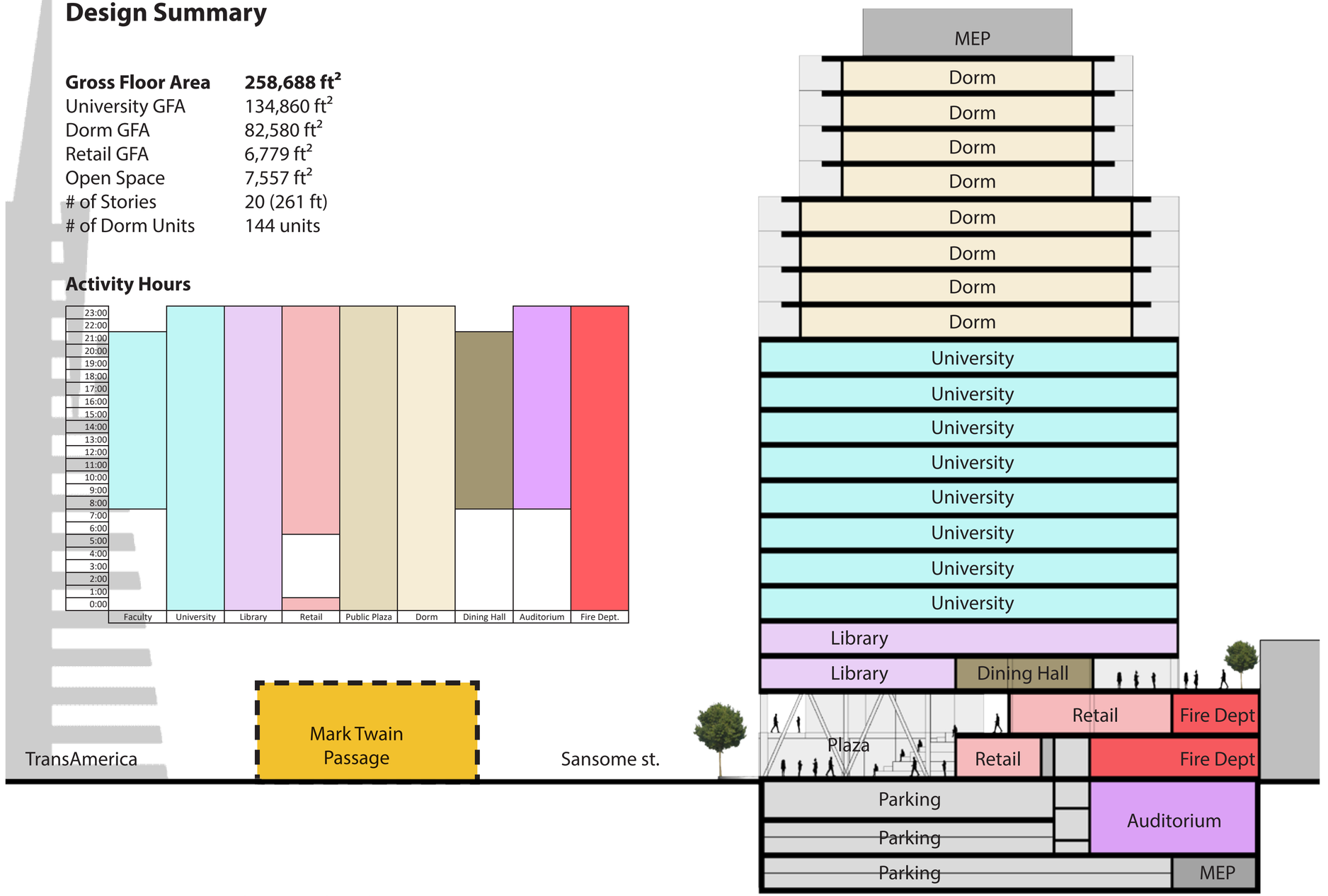
Project Site Plan



Design Summary

Gross Floor Area	**258,688 ft²**
University GFA	134,860 ft²
Dorm GFA	82,580 ft²
Retail GFA	6,779 ft²
Open Space	7,557 ft²
# of Stories	20 (261 ft)
# of Dorm Units	144 units

Activity Hours

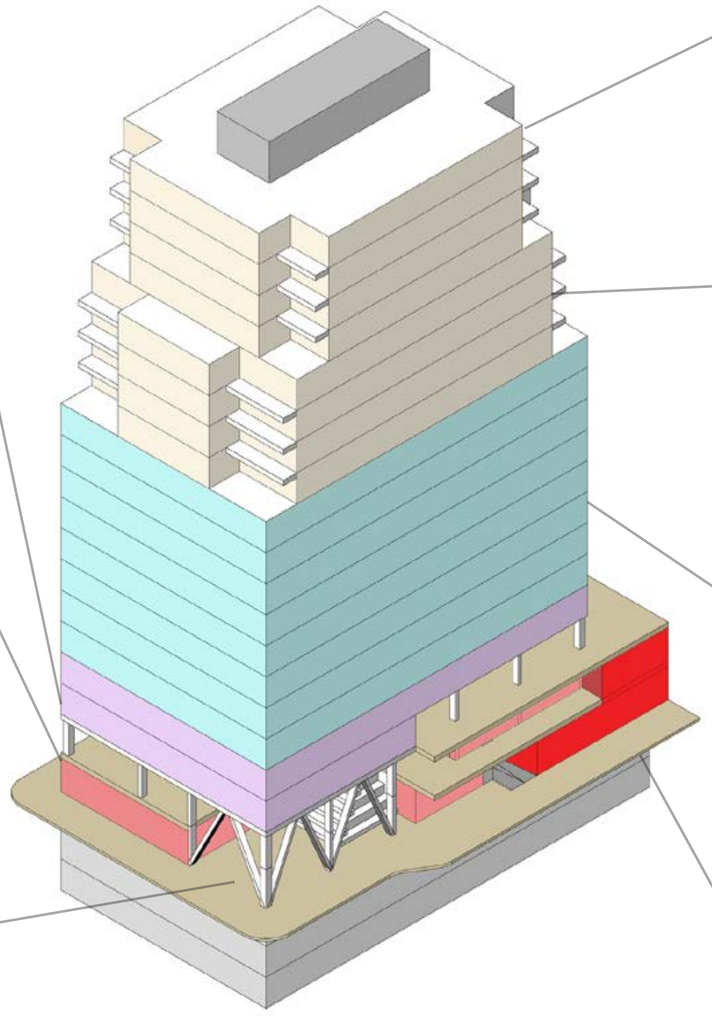


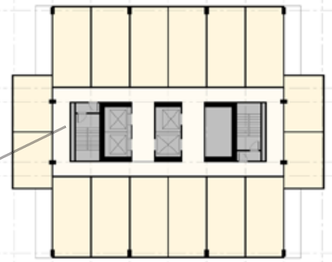
Design Summary

Level-3 - Library & Dining

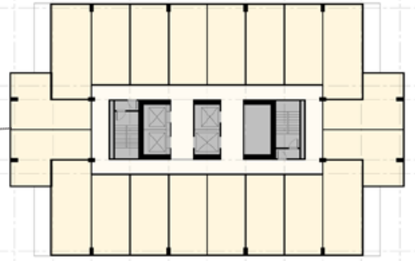
Level-2 - Retail

Level-1 - Lobby, Retail & Fire Dept.

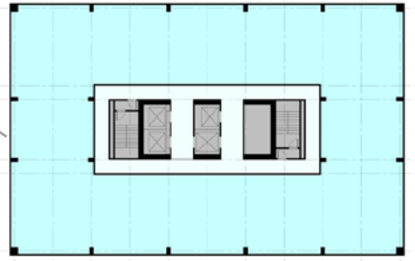




Typical Dorm 2 - 16 Rooms

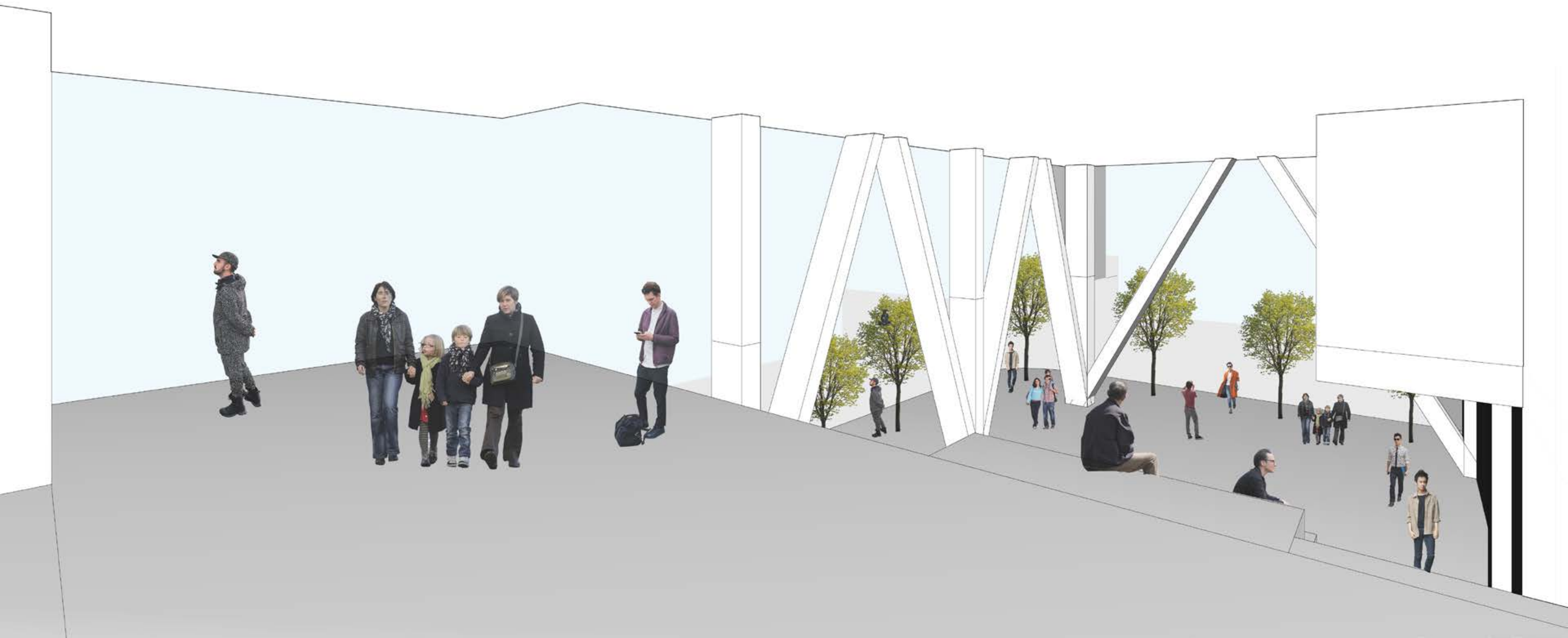


Typical Dorm 1- 20 Rooms



Typical University

Basement-2 - Auditorium & Parking



06. LAYERED DEGENTRIFICATION

NOVO EDIFICIO A NOITE: LAYERED DEGENTRIFICATION

Course Advanced Studio VI, Spring 2024
Instructor Galia Solomonoff
Location Rio de Janeiro

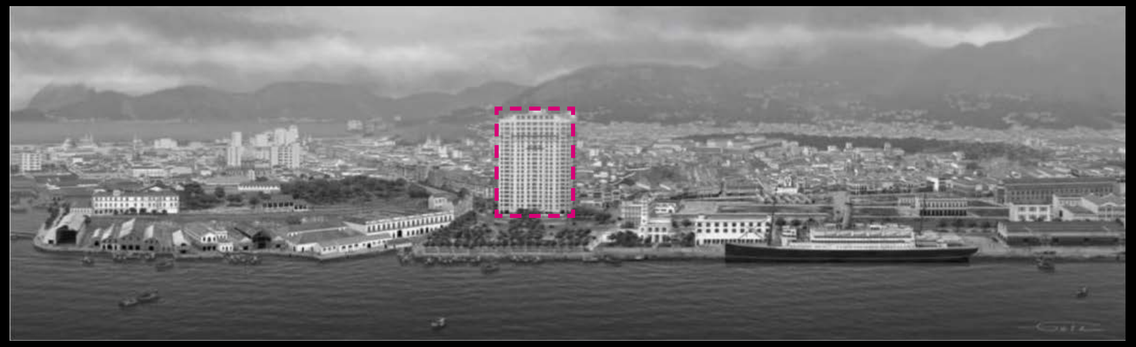
Edificio A Noite, a 95 years old office building, stood tall by the Porto Maravilha. Once the tallest building and the first reinforced concrete skyscraper in the South America, it is now abandoned and empty for almost a decade. Located in a busy tourism area famous for years of gentrification and multi-layers of urban problem, with eviction and displacement being one of the most recent issue, Edificio A Noite has a big opportunity to contribute to the city.

With about 40 abandoned buildings nearby, Edificio A Noite could become a pilot project for the surrounding abandoned building: restore the evicted community, reconnect the vista, and rehabilitate the urban fabric. Novo Edificio A Noite will again be the first building in the city to, layer by layer, integrate the people with tourism activities around the port, and ultimately, degentrify Rio de Janeiro.

EARLY SETTLEMENT, 1500s

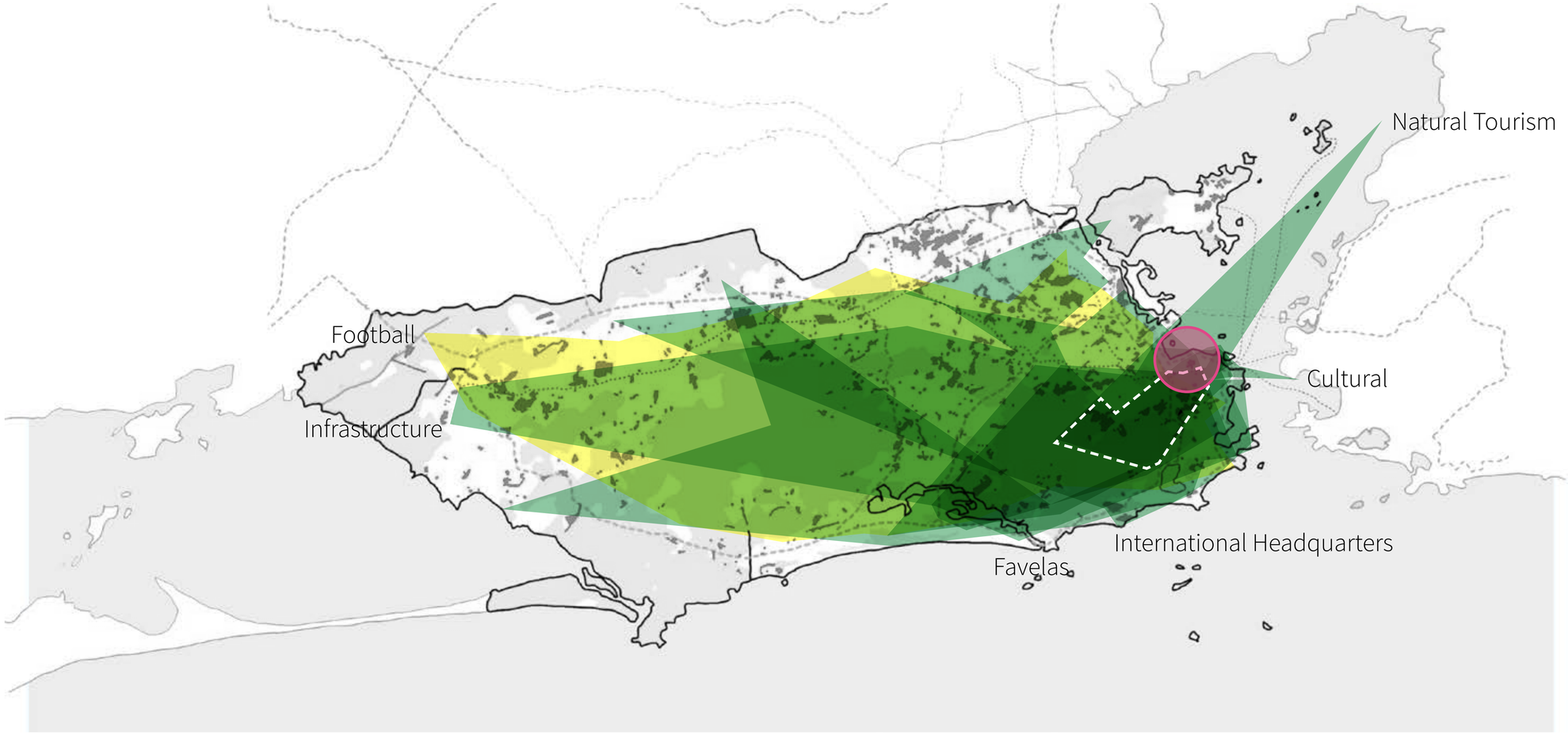
PORT CITY, 1800s

EDIFICIO A NOITE, 1929



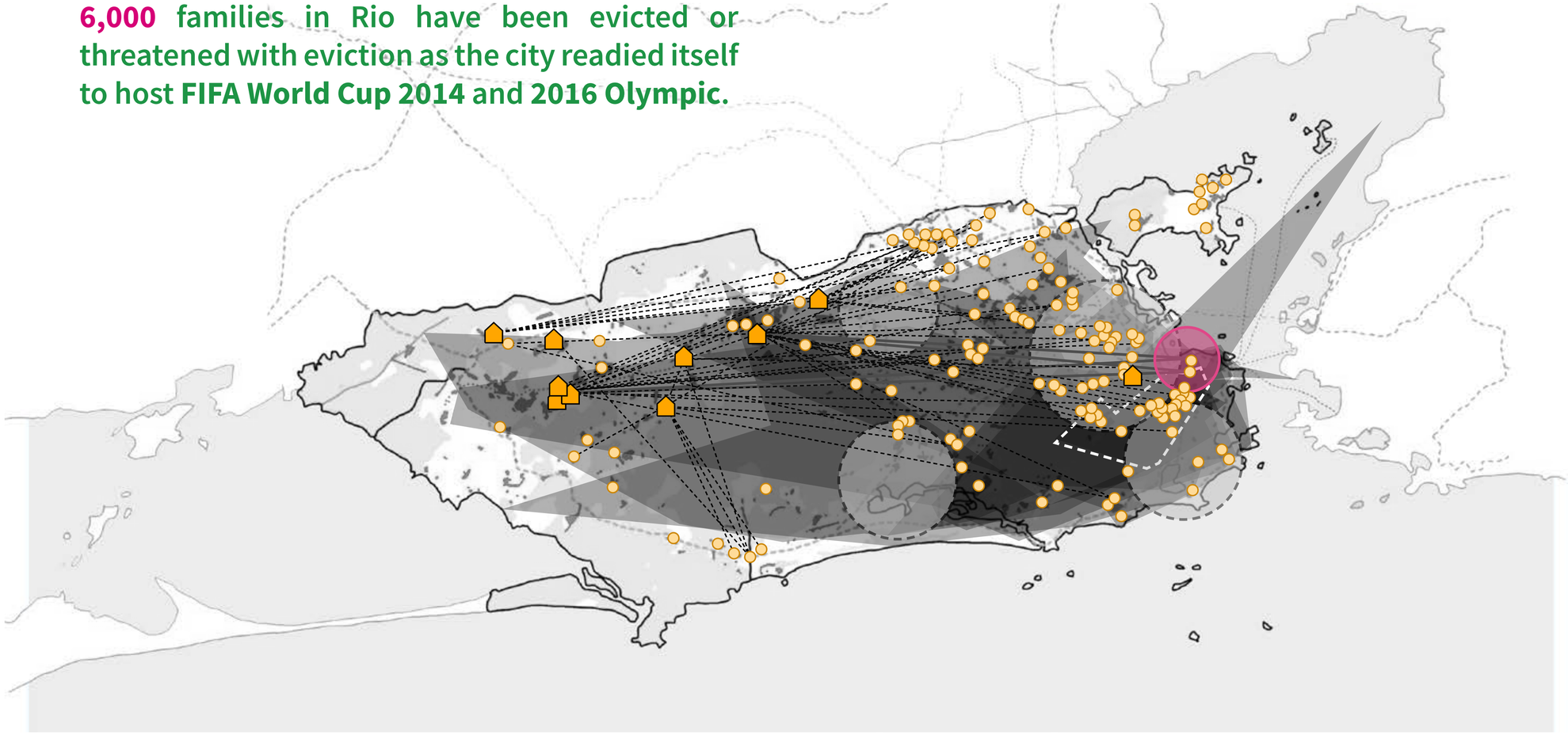
PORTO MARAVILHA, 2009

ACTIVITIES OVERLAY



ACTIVITIES OVERLAY + EVICTION & DISPLACEMENT

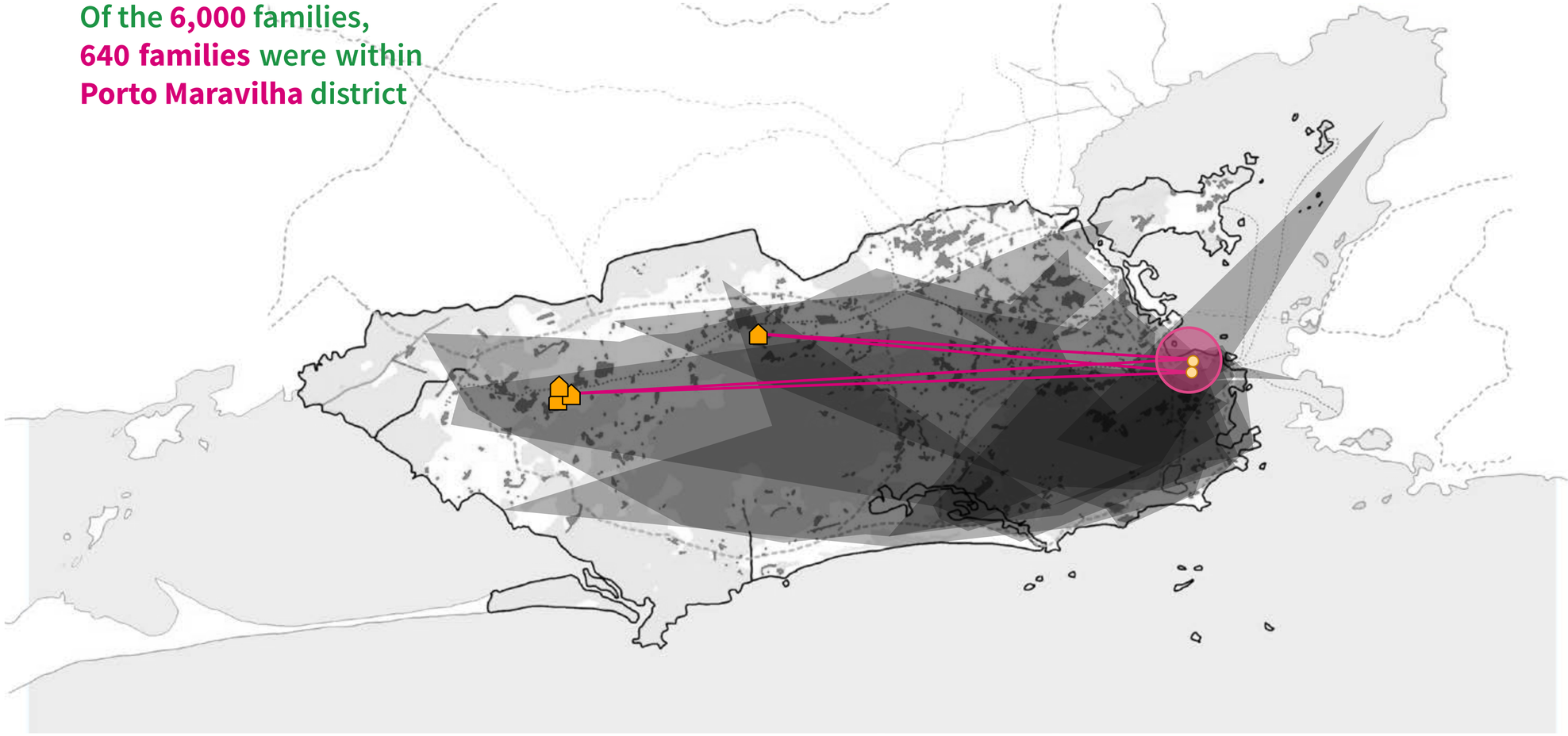
6,000 families in Rio have been evicted or threatened with eviction as the city readied itself to host **FIFA World Cup 2014** and **2016 Olympic.**



- Displaced Favelas
- Minha Casa Minha Vida Housing Project
- Porto Maravilha
- Olympic Clusters
  - 1 Deodoro
  - 2 Barra
  - 3 Copacabana
  - 4 Maracana

EVICTION & DISPLACEMENT

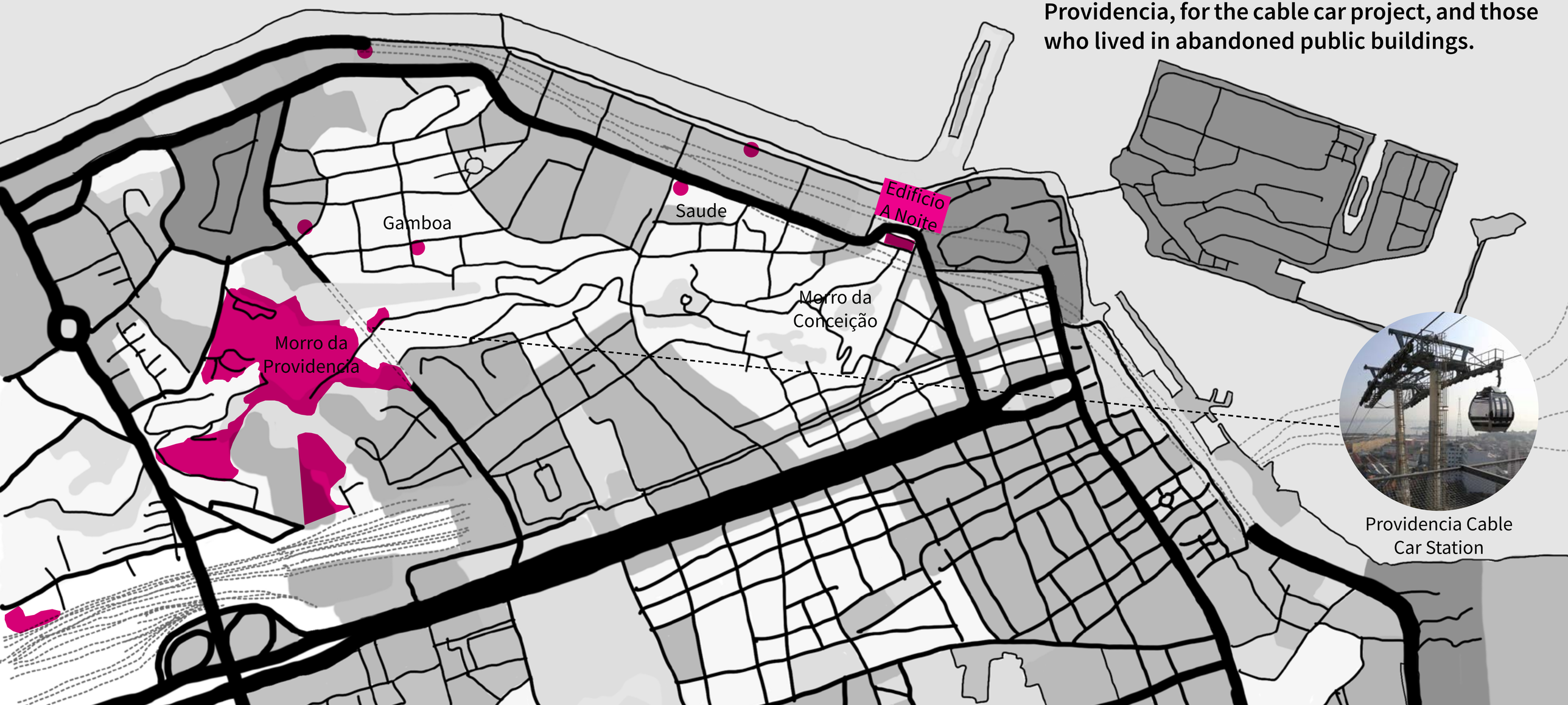
Of the **6,000** families,
640 families were within
Porto Maravilha district



Displaced Favelas
Minha Casa Minha Vida Housing Project
Porto Maravilha

PORTO MARAVILHA EVICTION

The evicted 640 families within Porto Maravilha district included neighborhood in Morro da Providencia, for the cable car project, and those who lived in abandoned public buildings.



Providencia Cable Car Station

PORTO MARAVILHA NEIGHBORHOOD

Morro da Conceição

Nossa Senhora da Conceição

Pedra do Sal

Largo de São Francisco da Prainha

Gamboa Warehouses

Museu de Arte do Rio

Museum of Tomorrow

Olympic Boulevard

Comando do 1º Distrito Naval

Providencia Cable Car Station

Avenida Rio Branco

Morro da Providencia

Igreja de Nossa Senhora da Candelária

Central do Brasil

Praça da República

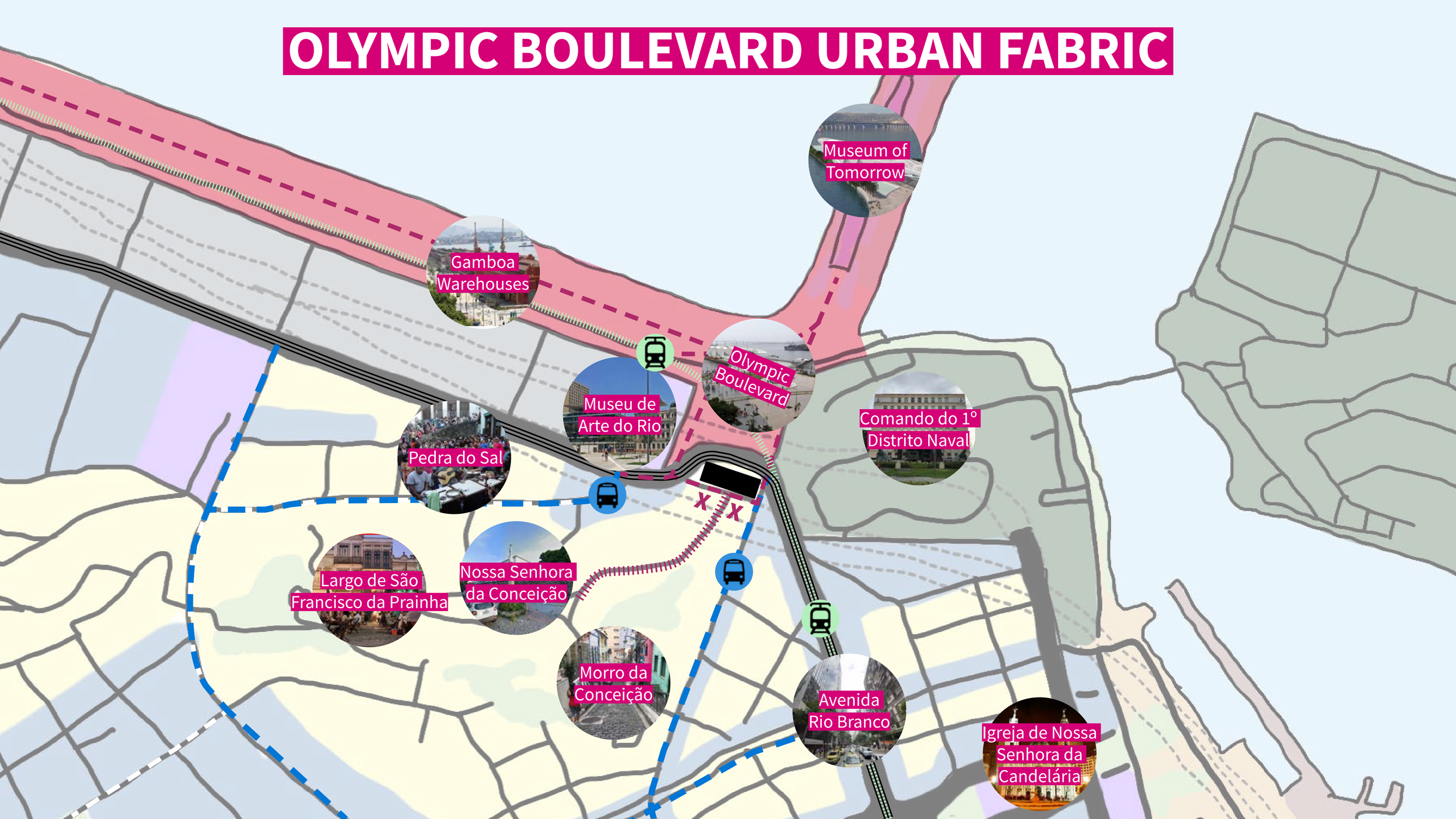
Avenida Presidente Vargas

Business District

CCR Barcas Praça XV

PS: no football field in this area!

OLYMPIC BOULEVARD URBAN FABRIC

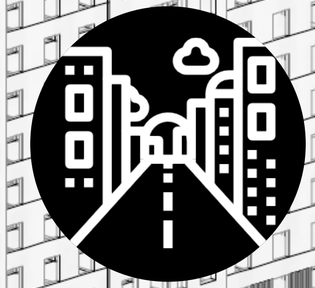


NOVO EDIFICIO A NOITE

FORM FOLLOWS FICTION

A better world is started with a dream, a vision, a fiction.
Edificio A Noite was once the tallest building and the first skyscraper in reinforced concrete in Latin America.
Edificio A Noite will again be the first building in the city to, layer by layer, return the people to the city and integrate them with tourism, the port, and ultimately, degentrify Rio de Janeiro.

COMMUNITY



VISTA

URBAN FABRIC

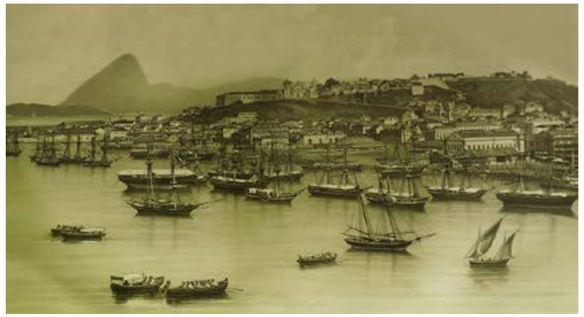
COMMUNITY

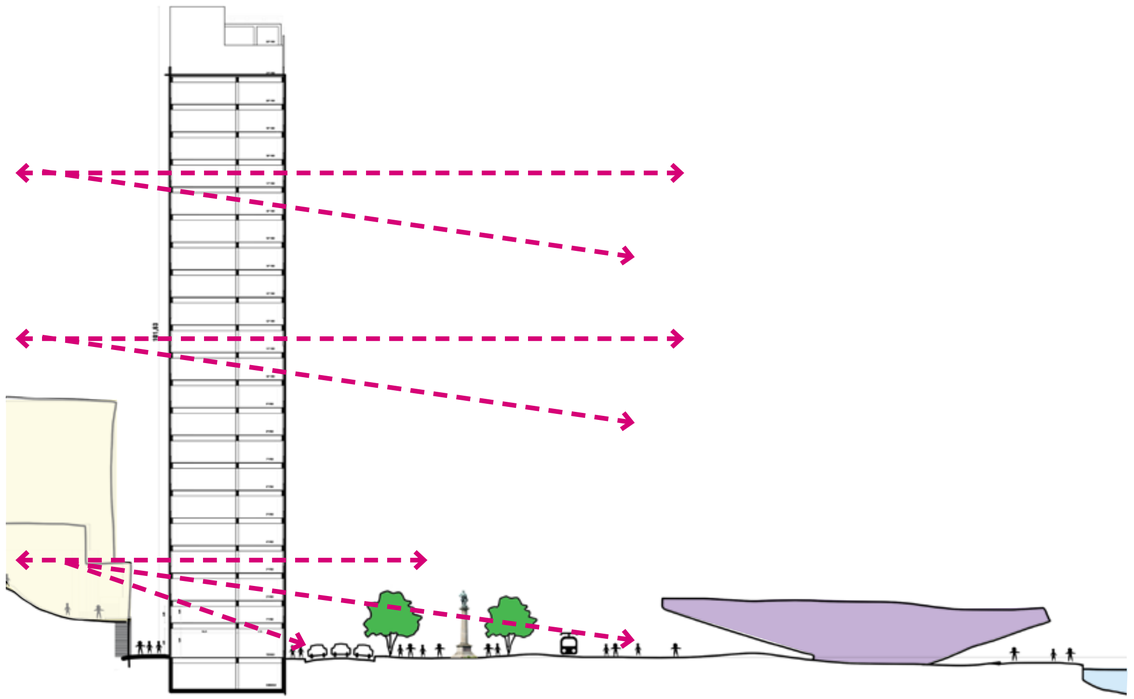
Returning and restoring the evicted **640 families** from **Porto Maravilha** to their old neighborhood as the priority to occupy the proposed social housing program in the A Noite building.

In Rio downtown area, there are at least 41 buildings listed as abandoned and empty. Utilize and improve these buildings to be residential buildings for the evicted will help to restore the community, enhance the living of the people and regentrify the downtown area of Rio de Janeiro.

VISTA

Recover the vista and visual connection from Morro da Conceição toward Praca Maua and the bay with open spaces throughout the building





Morro da Conceição

Edificio A Noite

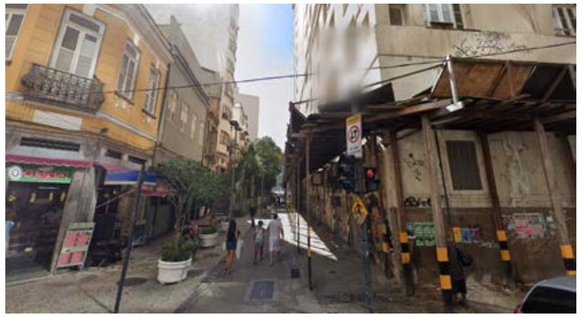
Praça Mauá, Olympic Boulevard

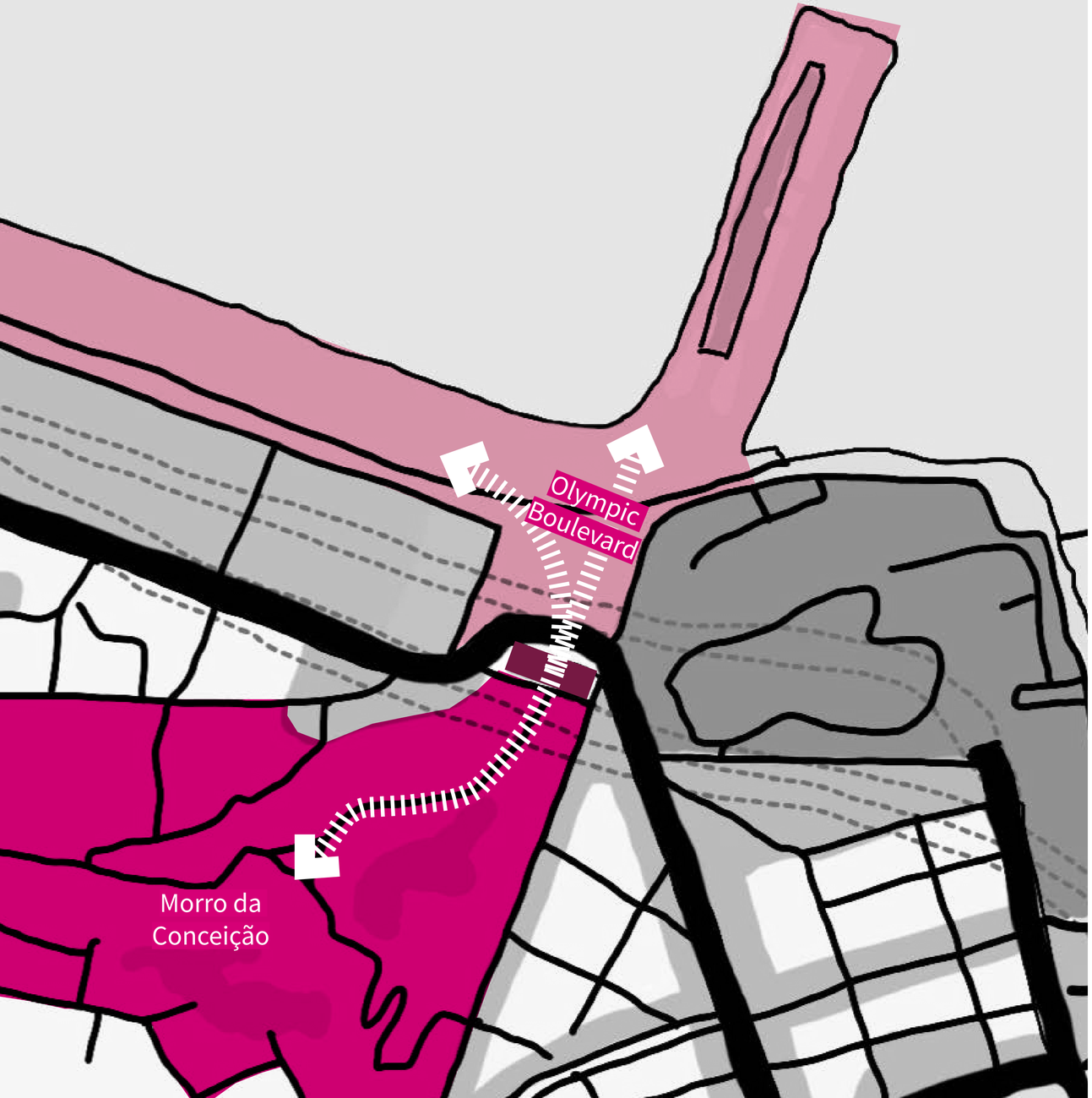
Museum of Tomorrow

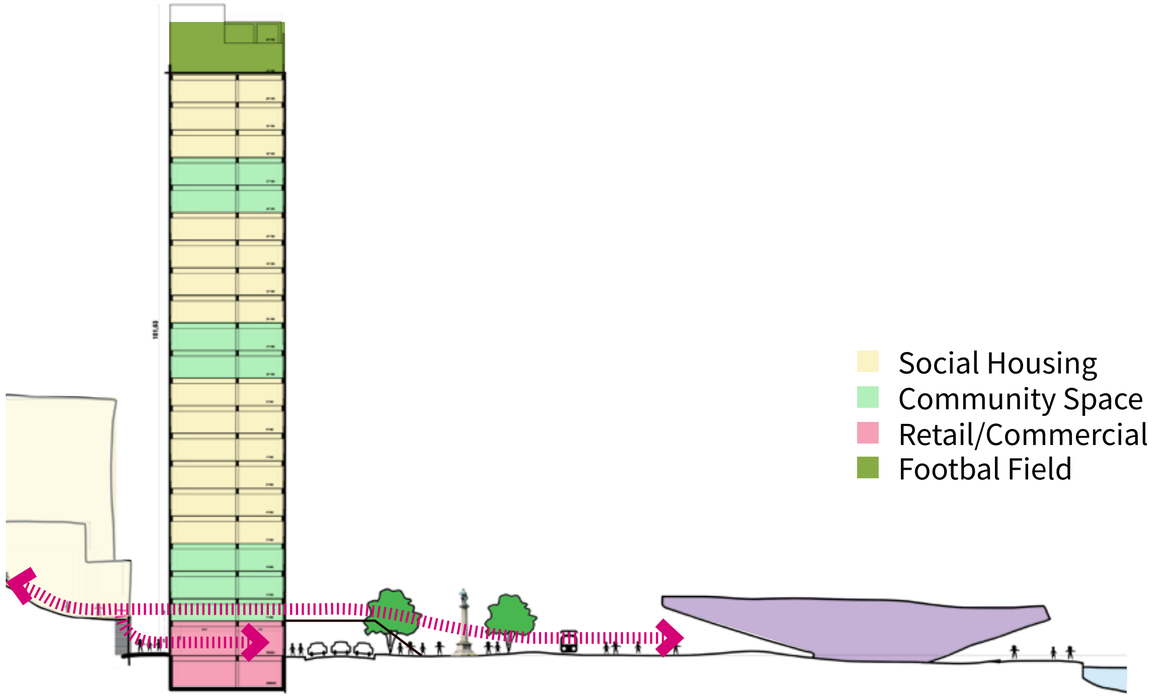
Guanabara Bay

URBAN FABRIC

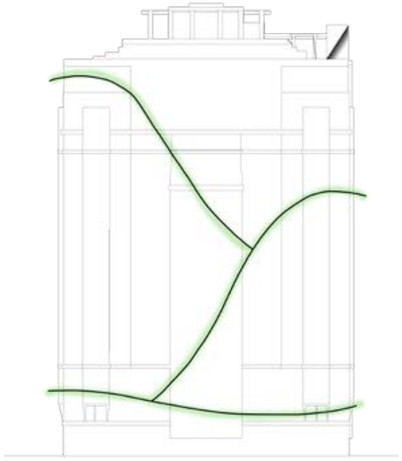
Reconect the dettached urban fabric disjunct by the building: from the residential area to the Olympic Boulevard

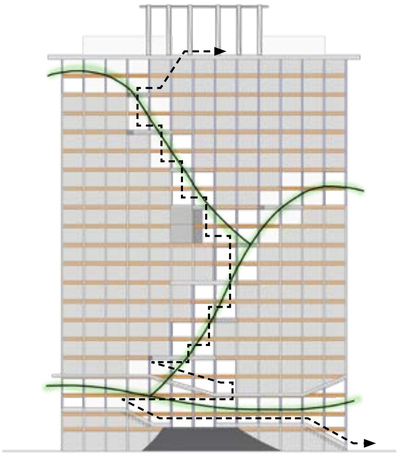


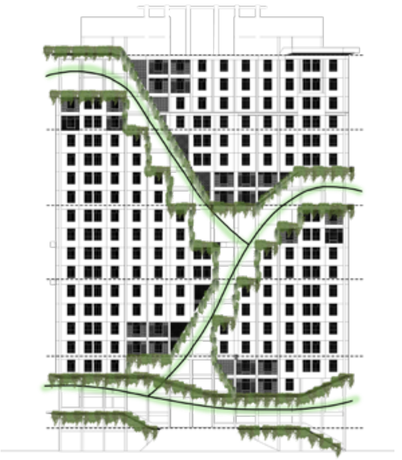


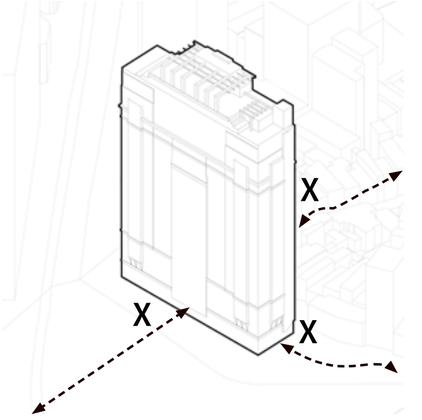


SILHOUETTE OF THE HILLS AND FAVELAS

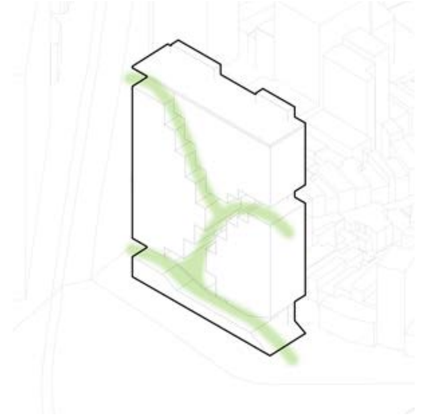




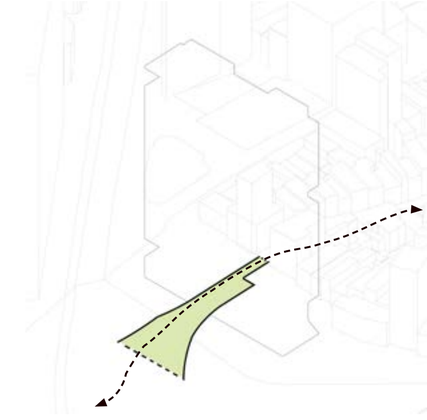




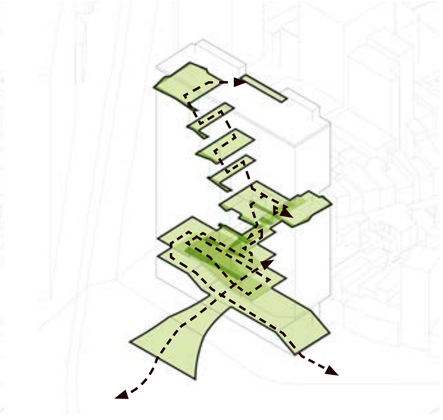
Existing building blocks the visual connection and disjunct the urban fabric



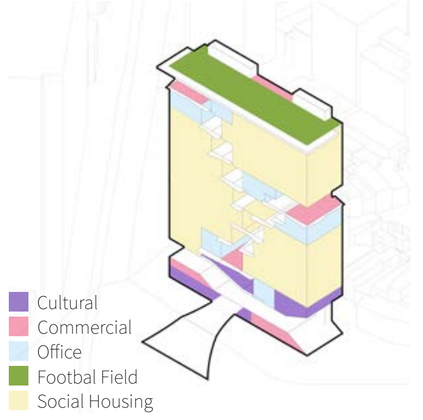
Extraction of the building resembling silhouette of Rio's natural hilly landscape to restore the vista



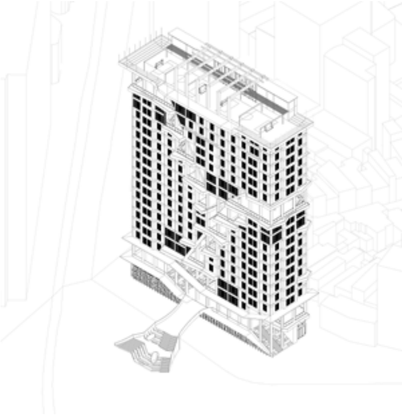
Rehabilitate the disjuncted horizontal urban fabric with open pilotis plaza at level 2 and bridge connection between the hill to the plaza



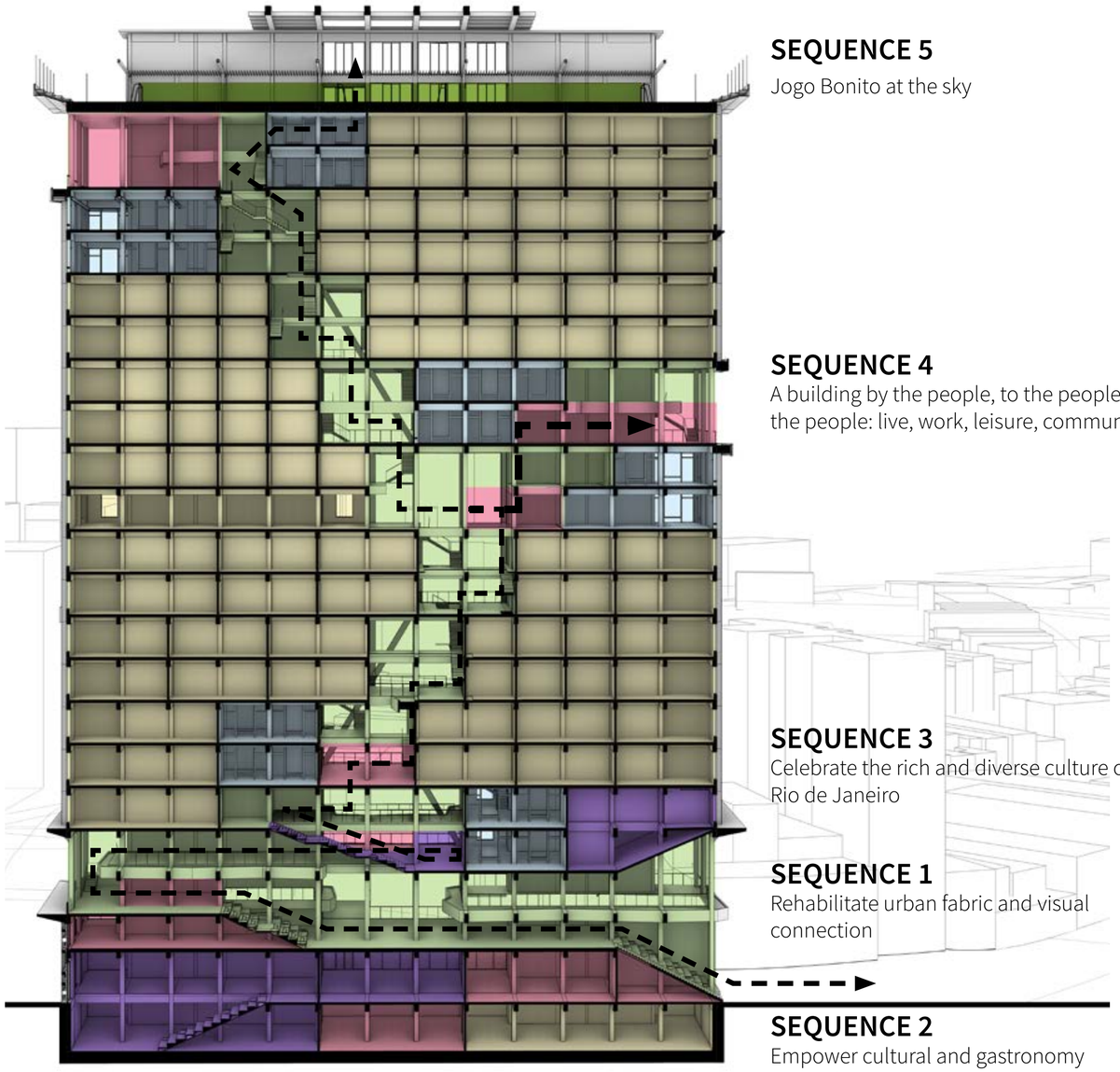
Introduce vertical urban fabric with continous stairs accessible for the public, from Praca Maua to the roof



Provide social housing as the main program, along with commercials and offices prioritized for the residents, cultural, and football rooftop



Utilize vernacular Brazilian building features such as cobogos and jalousies to fill the existing art deco style building



SEQUENCE 5
Jogo Bonito at the sky

SEQUENCE 4
A building by the people, to the people, for the people: live, work, leisure, community

SEQUENCE 3
Celebrate the rich and diverse culture of Rio de Janeiro

SEQUENCE 1
Rehabilitate urban fabric and visual connection

SEQUENCE 2
Empower cultural and gastronomy network

SEQUENCE 1
REHABILITATE THE URBAN FABRIC AND VISTA

SEQUENCE 2

EMPOWER THE MUSEUM AND GASTRONOMY NETWORK

Enhance the gastronomy network at the ground floor to the upper plaza

SEQUENCE 3
CELEBRATE THE RICH AND DIVERSE CULTURE OF RIO

Celebrate the rich and diverse culture of Rio at the sky amphiteatre

SEQUENCE 4

A BUILDING BY THE PEOPLE, TO THE PEOPLE, FOR THE PEOPLE: LIVE, WORK, LEISURE, COMMUNITY

The building from the residents, for the residents, and to the residents, where the construction workers are the residents, live, work, and leisure at the construction workers hub

SEQUENCE 5
JOGO BONITO AT THE SKY

Residents and tourists celebrate their time together in Rio by practicing one of the most sacred activities in Brazil: playing football

NoWhere Architects

WHAT ARE WE PURSUING?

Explorations of new materials through temporary and light pavillions and interventions, with a close relationship to academia and architectural schools.
ALL (ZONE) - Rachaporn Choochuey
THAILAND

A practice extended to the field of teaching and research commited with low cost and simple innovative solutions for building scale with a wide and groing scope in the field.
ADAMO-FAIDEN
ARGENTINA

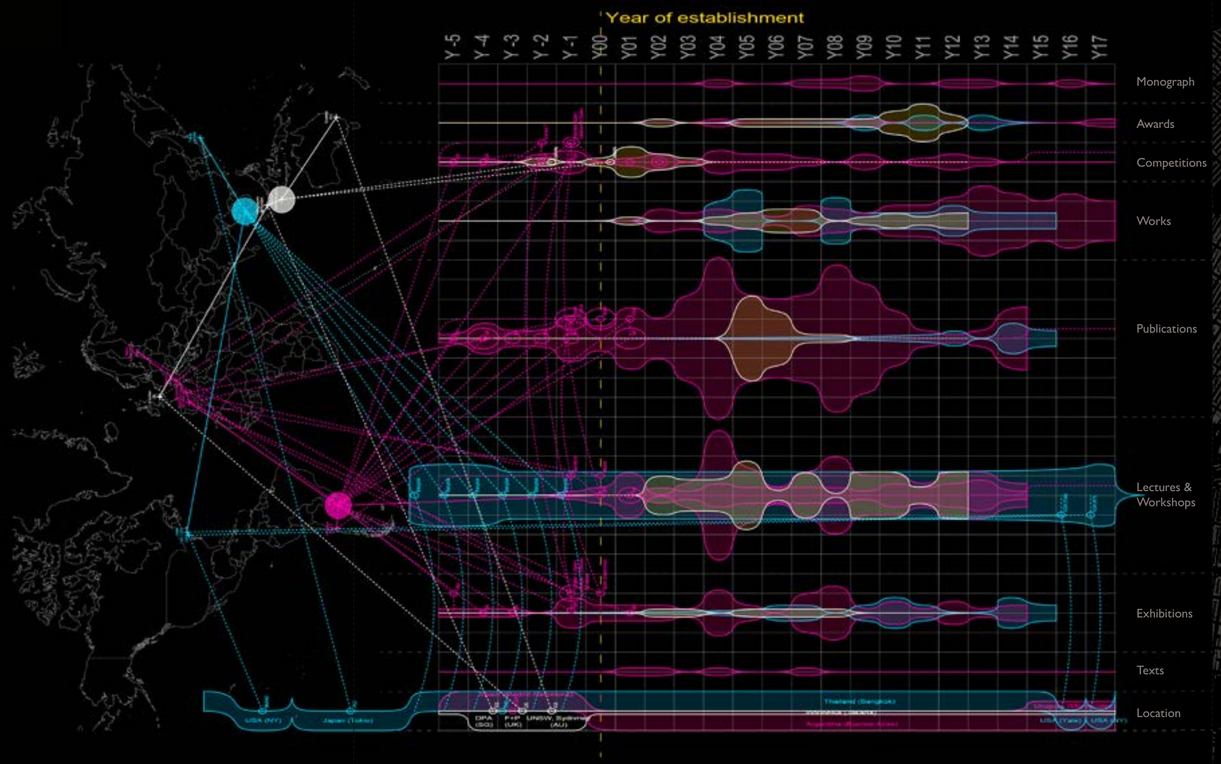
The creation of a public library and catalog of architectural solutions and construction innovation at the ground level of their office to be shared and offered to other firms and consultants
RAW - Real Arch. Workshop
INDONESIA

WHAT WE FOUND AND GOING TO PUSH FORWARD

We have observed a tendency to maintain a close relationship with the academic world in the first years of professional practice.

Faster, dynamic and broader sharing and communication of the work through studies and living abroad creating far-reaching relationships.

Team members of Nowhere are from three different countries (Chile-Indonesia-USA) sharing GSAPP as a common ground. Thus, extended and broad relationships are given, using the city of New York to keep a close relationship with the architecture school and, in turn, start testing and innovating in permanent movement as temporary resident architects of our workspace, engaging with local resources and global insight.



Recycling natural & building materials, not only conserves natural resources, but also significantly reduces construction waste.

40% of total landfill volume in the US is from construction waste
90M tons of waste are diverted from landfills annually with recycle

100M tons of CO_2 emissions saved by waste recycle in the US annually
21M cars taken off the road for a year as the equivalent of emissons saved

50% of all timber harvested are absorbed by the construction industry
25% of virgin stone extraction are consumed by the building sector

Yet, the built environment is expected to double in the next 30 years. To cut significant amount of carbon emission, we have to make a drastic transformation on the way we are practicing built environment. Rather than build everything new, it makes much more sense to work in recycling, using natural materials

Reconstruction of materials, environment, and practice will make a significant contribution toward the reduction of carbon emission and reversing the environmental crisis.

Recycling the practice means we can prepare a more sustainable and just built environment practice for the practicioner and incoming workforce, enhancing the process of producing more sustainable built environment.

134B USD to the economy from recycling construction materials
2.3M new jobs from green building construction and renovation projects

75% energy saved by recycling a building compared to new construction
20% faster construction time by recycling an existing building

Recycling buildings, will reduce carbon emission produced from new constructions

Course Unorthodox Practice in Architecture, Spring 2024
Instructor Juan Herreros
Team Pedro Pablo Gonzalez, Raymond Yu
Location NoWhere in New York

CATALOG
FOR CONSULTANTS

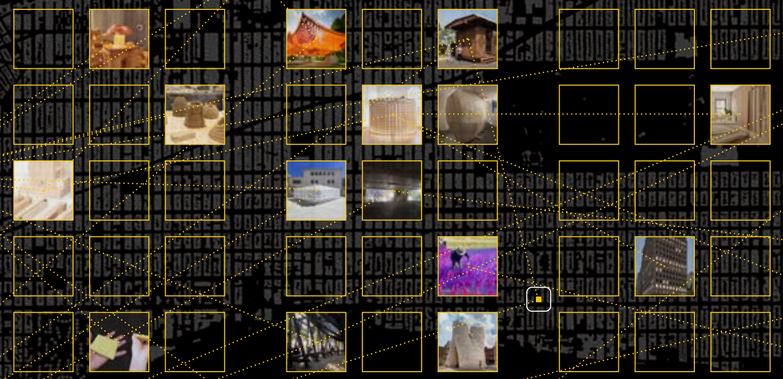
NEW MATERIALS AND CONSTRUCTION SOLUTIONS

WORKSPACE
OFFICE

SMALL SCALE PAVILIONS AND INTERVENTIONS

PROJECTS
OF ARCHITECTURE

FULL SCALE BUILDINGS CONSTRUCTIONS AND RENOVATIONS



"WE WORK WHERE WE BUILD"

Nowhere is an nomad architectural design practice in permanent motion extended to teaching and research fields. Committed to recycling new materials and innovative construction solutions for consultants, Nowhere aims to generate new ways for construction and adaptation of the built environment by embodying and inhabiting –as the main workspace– small pavilions and interventions in different locations to test and exhibit the ongoing innovations for architects and construction field.

"WE BUILD WHERE WE WORK"

AIA
(Exhibitions)

SITU
(Fabrication)

GSAPP

Natural Material Lab
Carleton Laboratory

Nowhere
Architects

Pedro Pablo González
Steven Widyatmadja
Raymond Yu

ENGAGED WITH RECYCLING AND NATURAL MATERIALS BY MAKING OUR OWN WORK SPACE