INTERNSHIP RESEARCH PROGRAM

Repurposing

2023

MVE + RESEARCH

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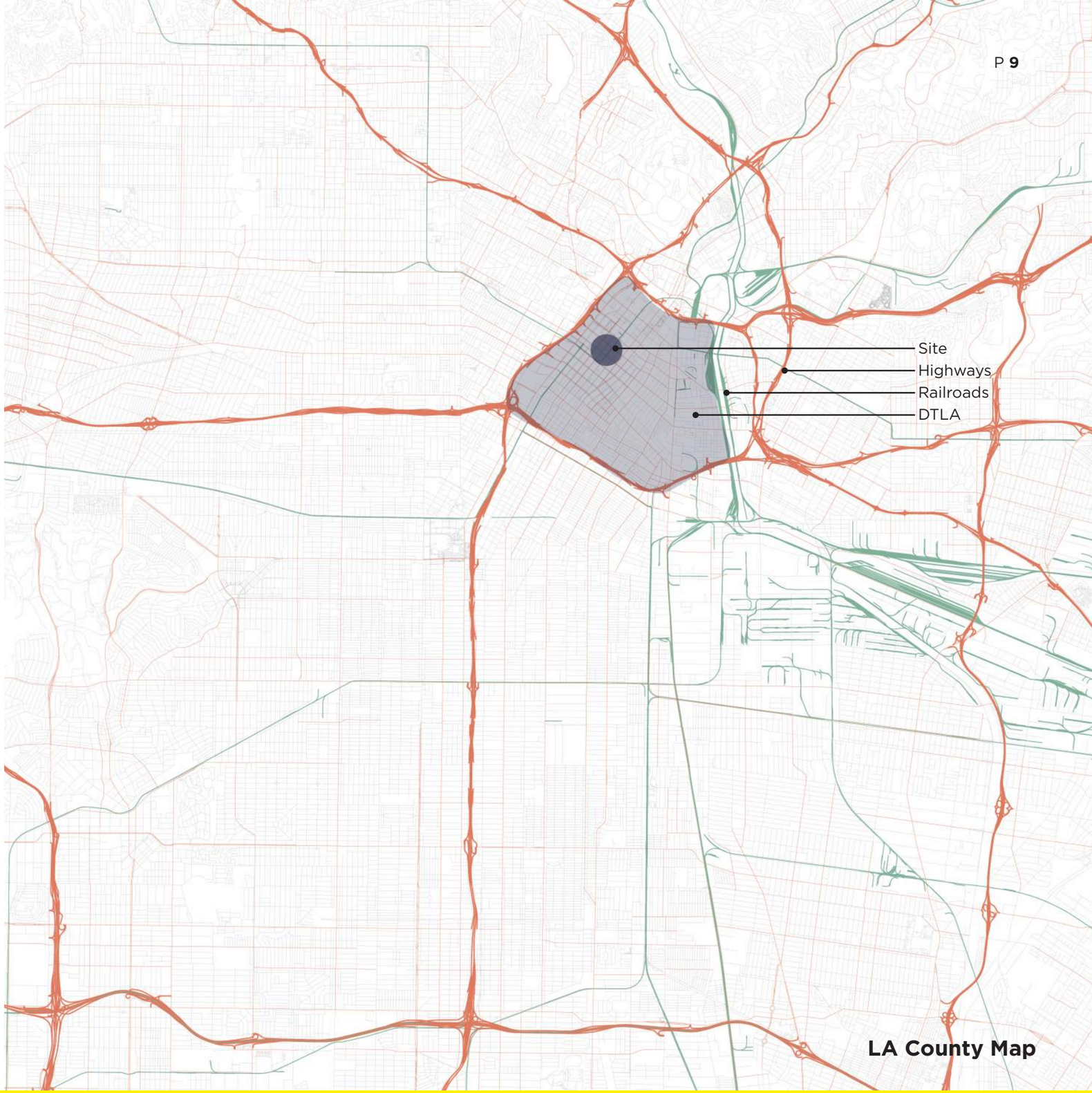
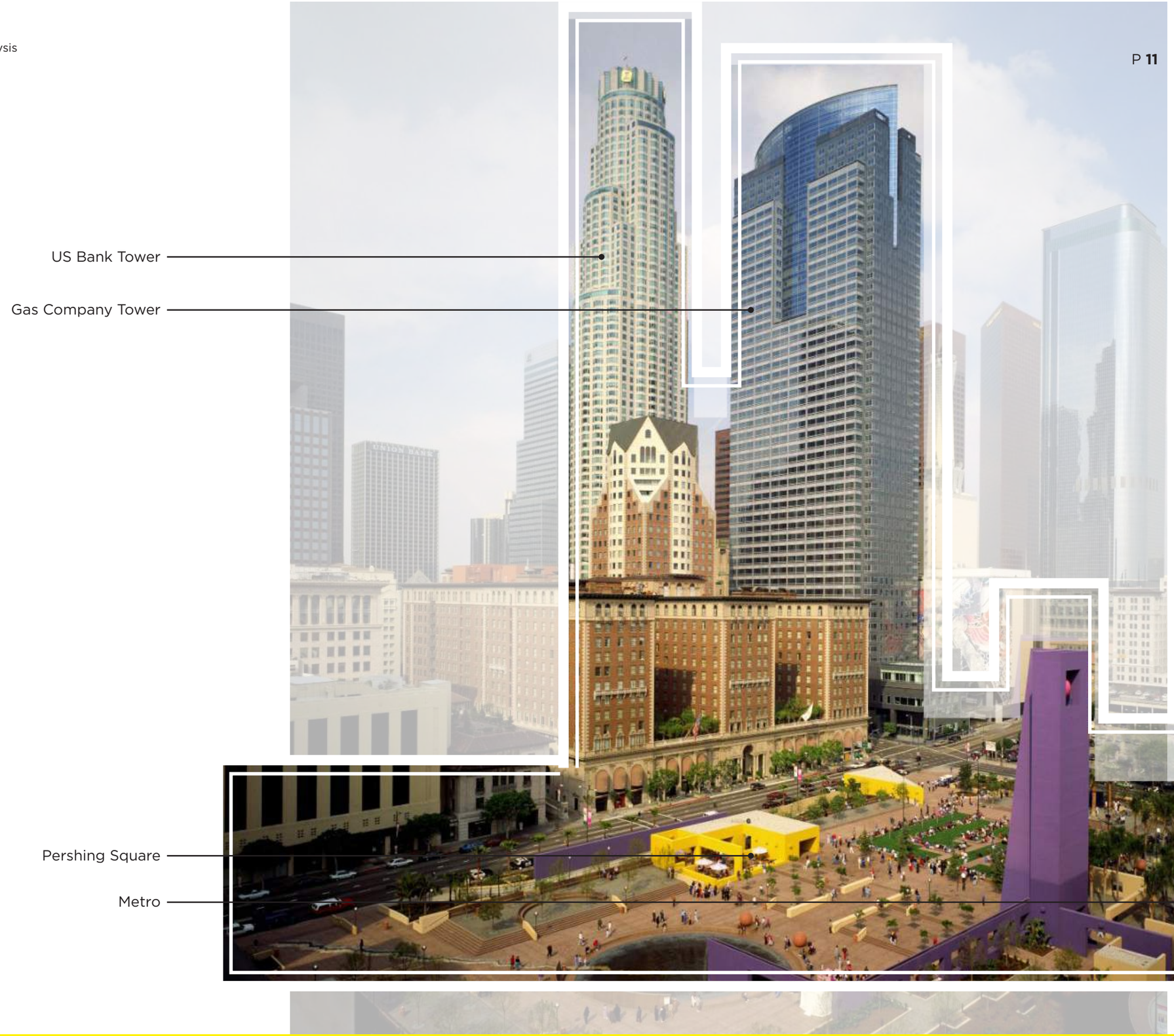
Quay Quarter Tower
63 Madison
Tai center for Heritage & Arts

03 Phase 3 Environmental Analysis



LA County Map

SITE VIEW



HEIGHT & SCALE

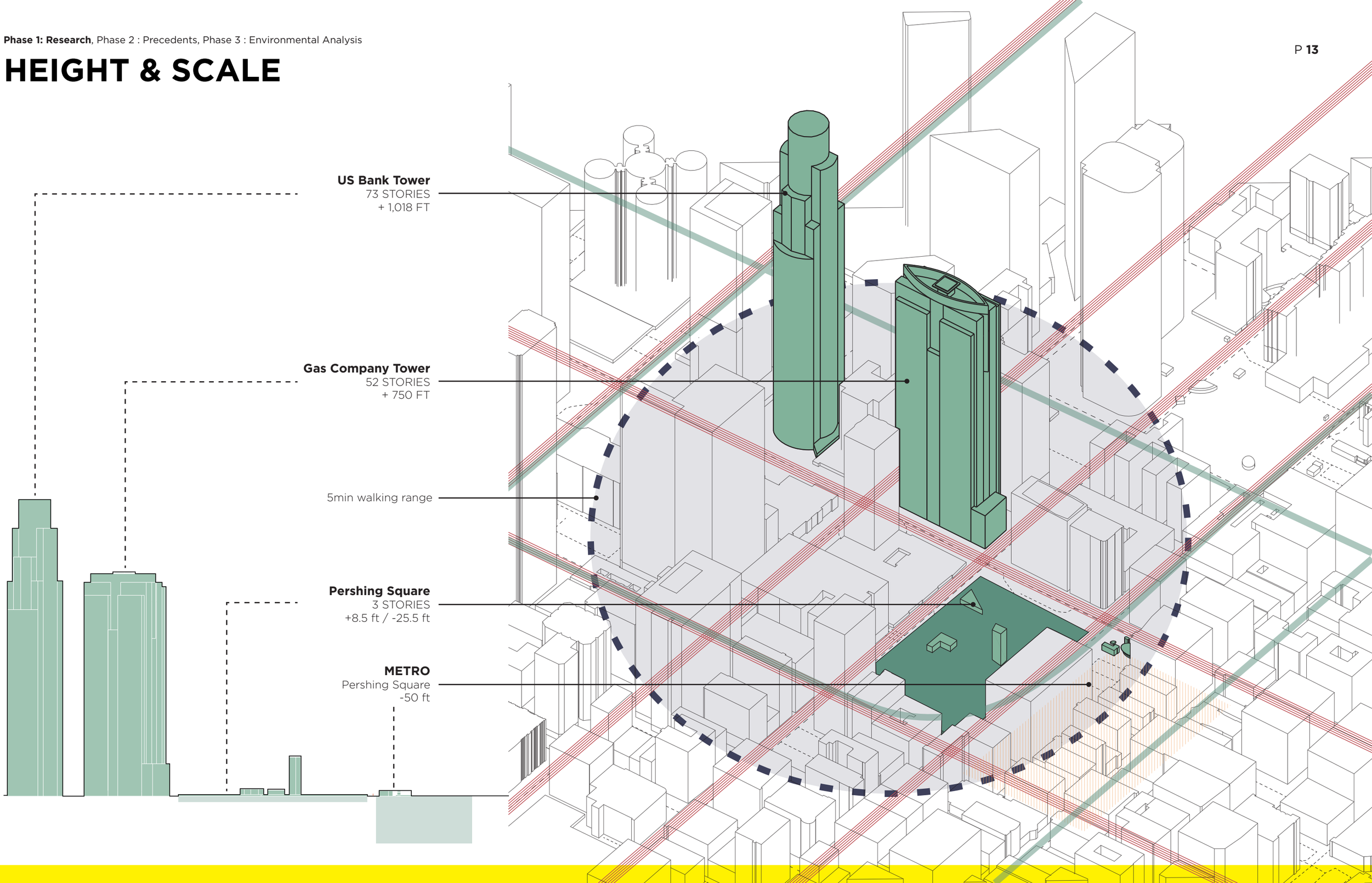
US Bank Tower
73 STORIES
+ 1,018 FT

Gas Company Tower
52 STORIES
+ 750 FT

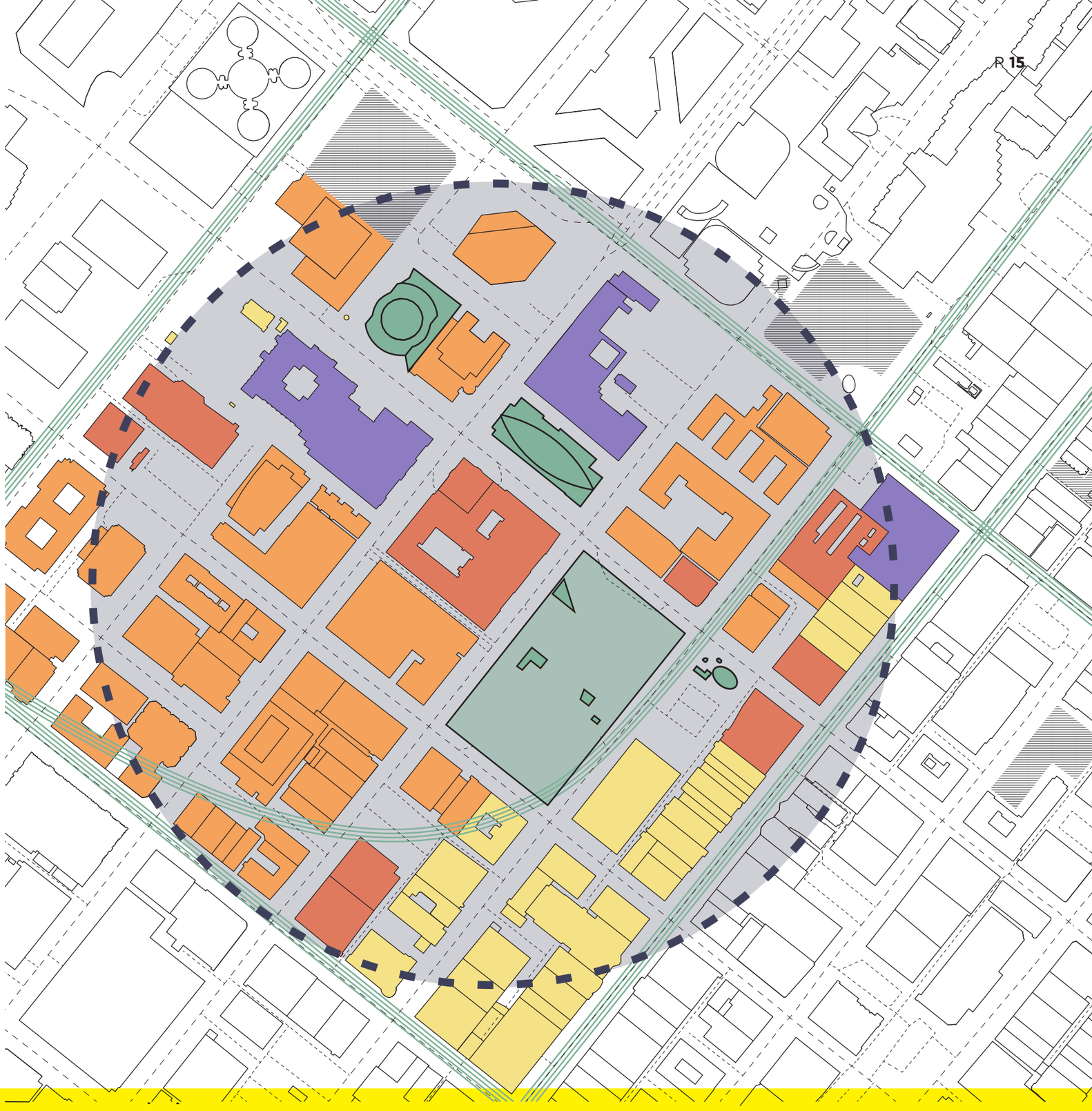
5min walking range

Pershing Square
3 STORIES
+8.5 ft / -25.5 ft

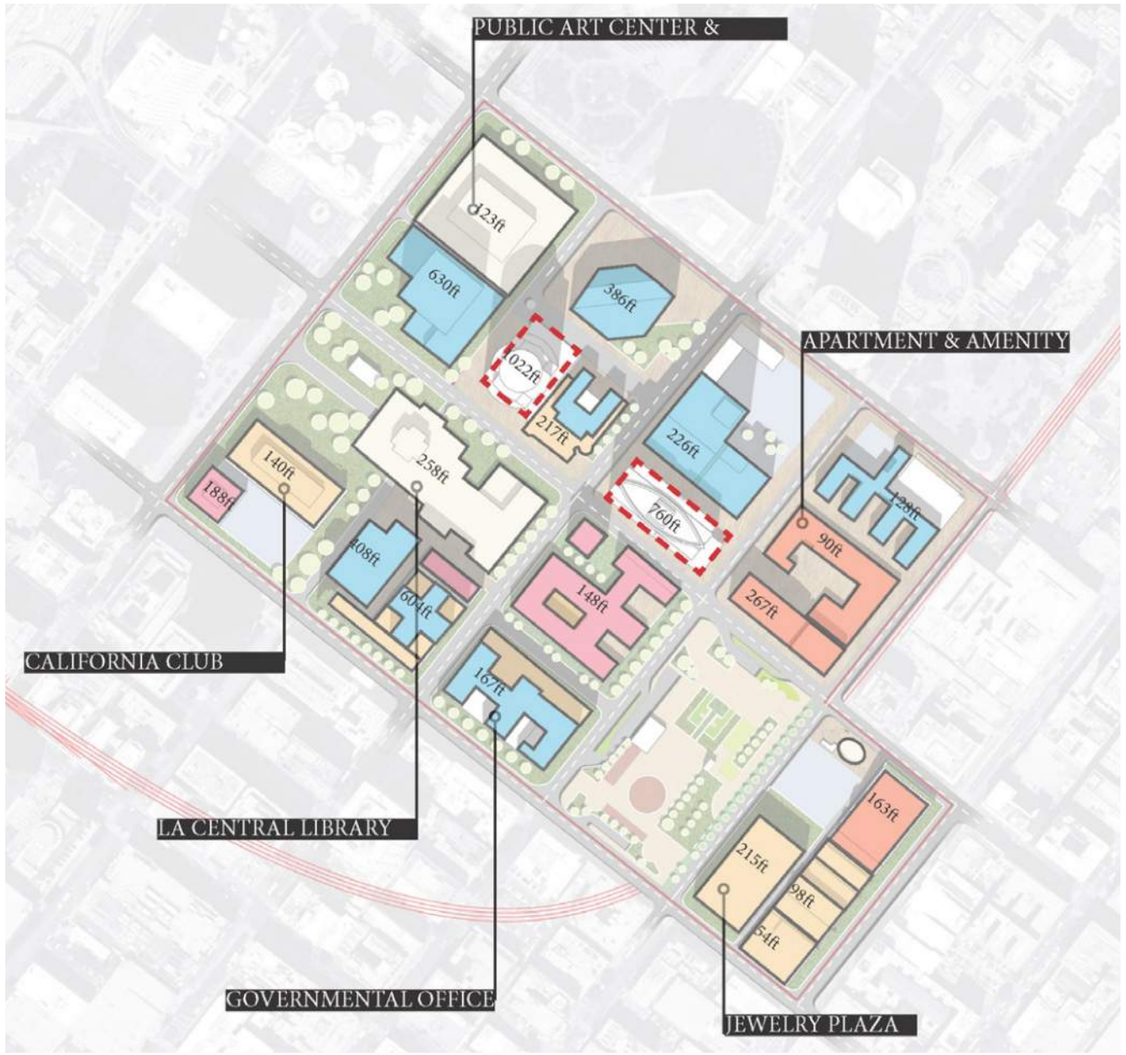
METRO
Pershing Square
-50 ft



PLAN & PROGRAM

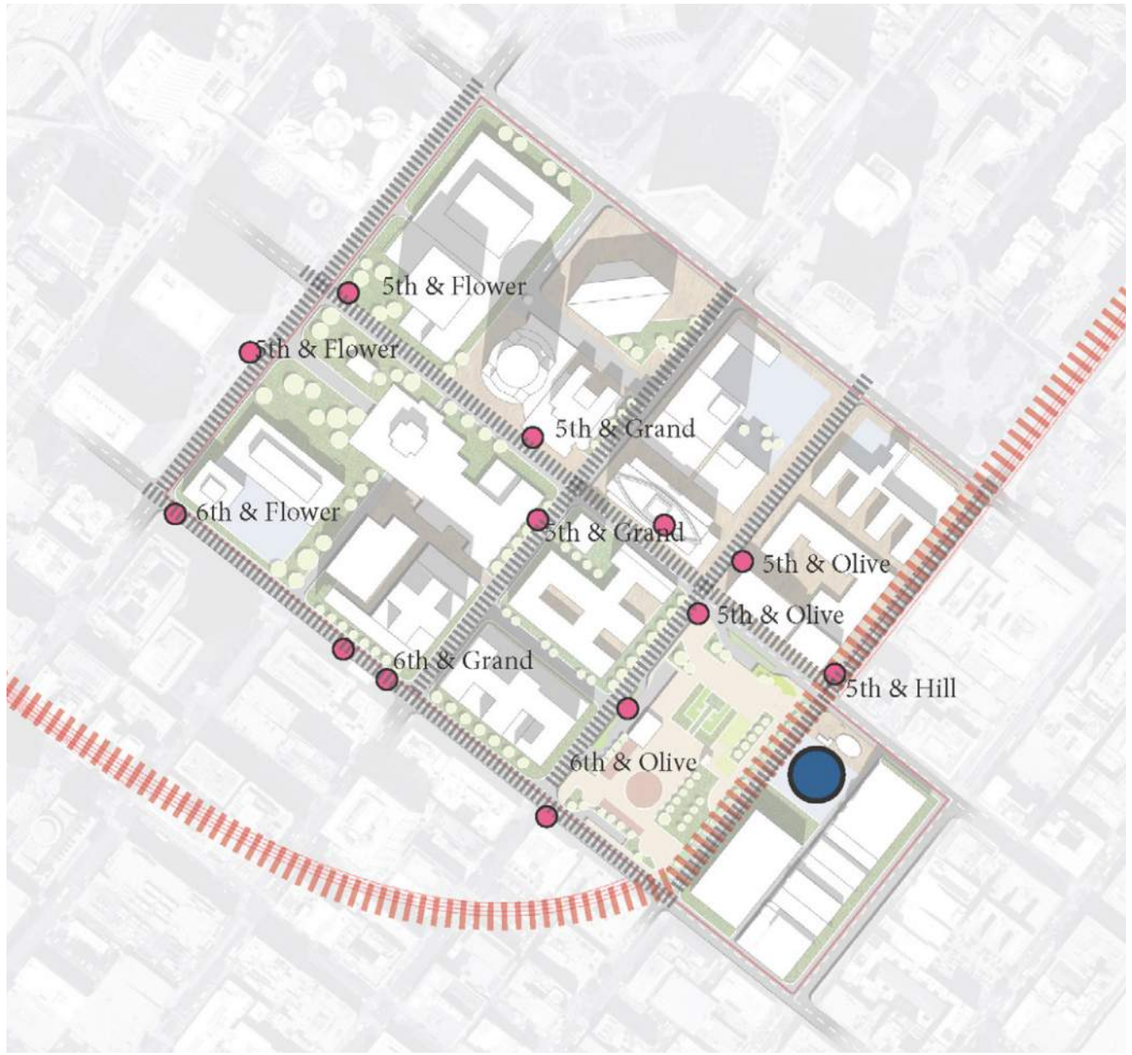


Site (53 Acres)
7 Helipads



- Hospitality
- Residential
- Commercial
- Cultural & Educational
- Office

Land Use
HIGHLIGHTS



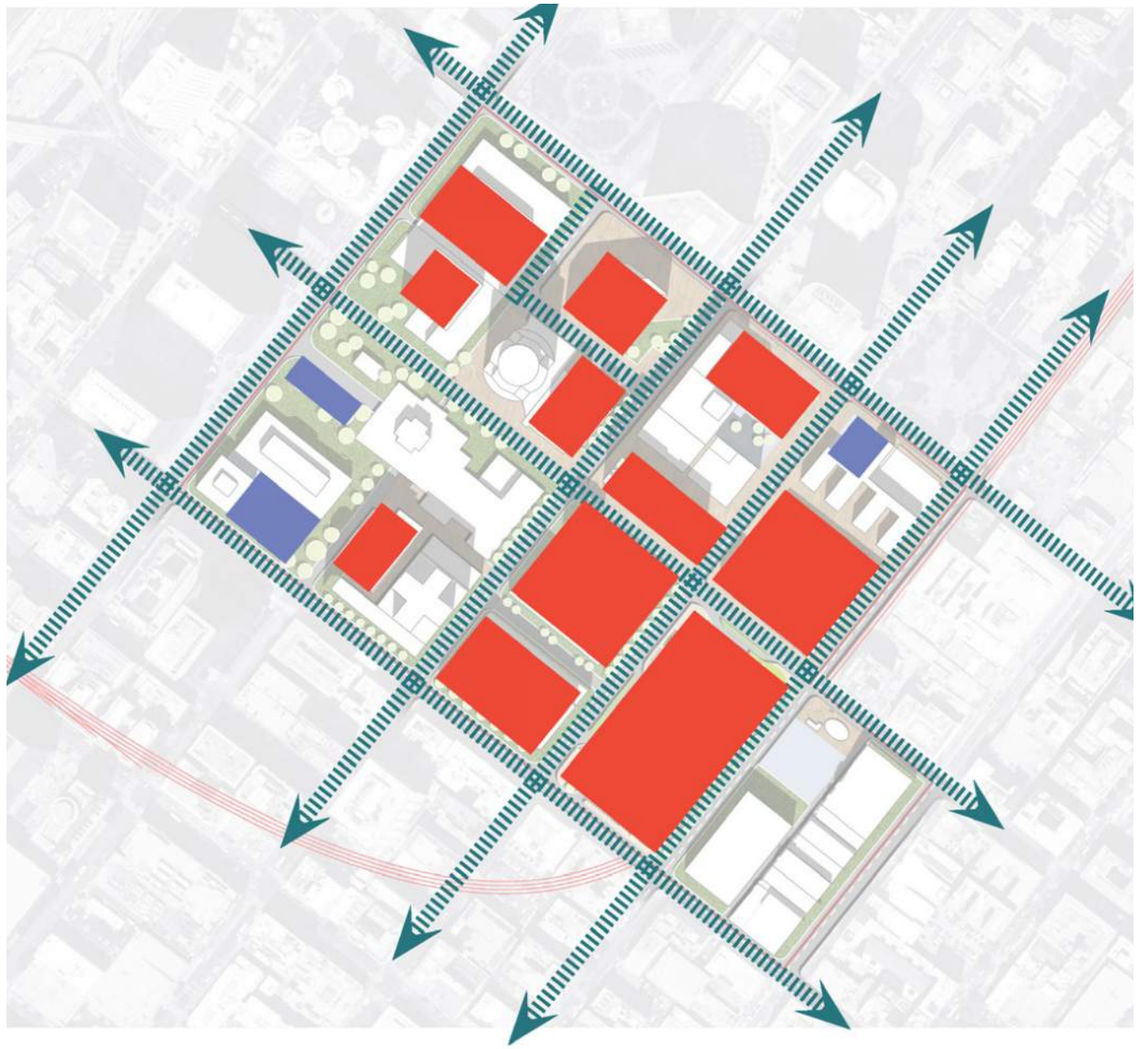
Metro Station

Bus Stop

Metro Line

Bus Route

Public Transportation
URBAN TRANSIT SYSTEM



Ground Parking Lot

Underground Parking Lot

Roadway

Parking
1800 UNDER PARK

Park

Green Buffer

Plaza

Open Space

GREEN COURTYARD, V-GARDEN, GREEN FACADE

GAS COMPANY TOWER

Skidmore Owens & Merrill, 1988

ADDRESS
555 W 5th St
Los Angeles, CA 90071

HEIGHT
750ft
52 stories tall

INFRASTRUCTURE
Central core = column free experience
Concrete Floors and exposed ceilings

FACTS
Class A Office Building
1.4 million sqft
300,000 sqft of parking garage
Experiential Lobby

LEED Gold Certified

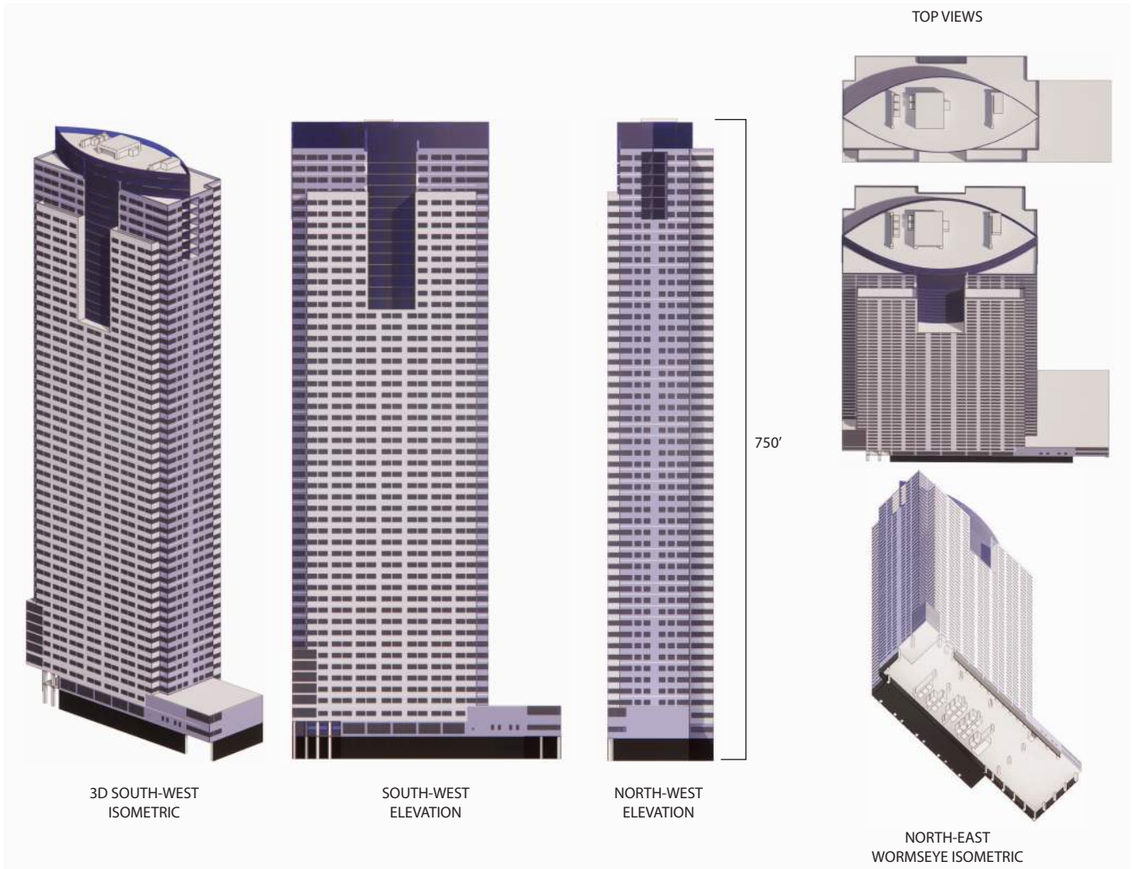
This fifty-two-story building was designed by Richard Keating of SOM.

The Gas Company Tower was the second building whose height is a result of Maguire Partners' Central Library air rights exchange (the other is U.S. Bank Tower).

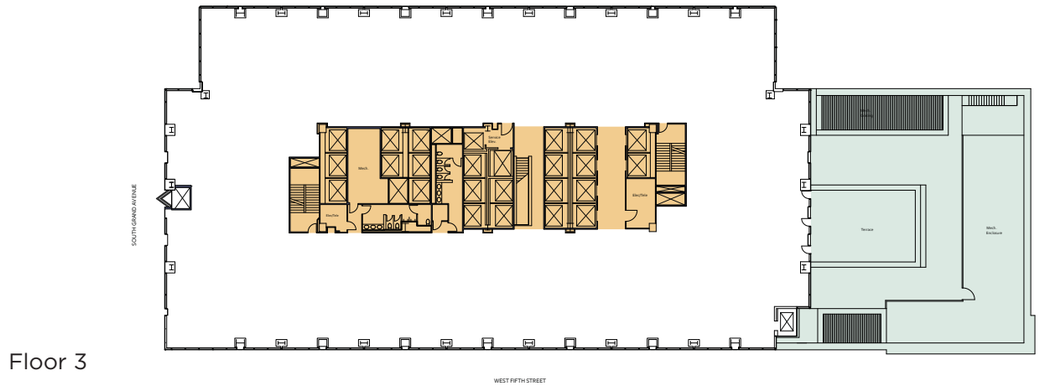
The building rises in a series of cliff-like setbacks and inverted corners, with an elliptical top of blue glass symbolizing the trademark blue gas flame of the building's primary tenant and joint venture partner, Southern California Gas Company.

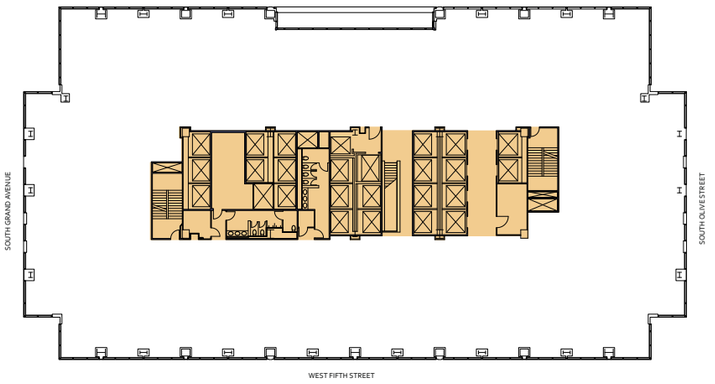
Inside is an unusual lobby, with a wall of windows looking out to an enormous mural by Frank Stella painted on the side of the adjacent building. The mural, titled "Dusk," is the public art component of the building.

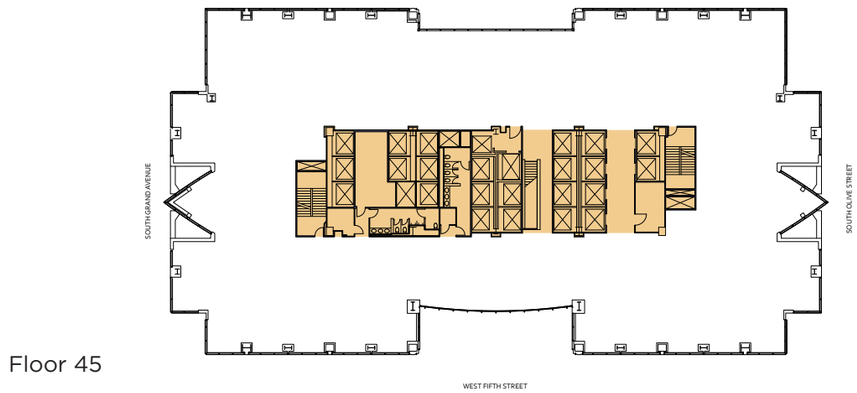
In the area between the mural and the lobby was a water installation which continued under the glass wall and inside the lobby under transparent strips of flooring. After renovations, this feature was dismantled, having the rembrandts of this idea visible in the new flooring.



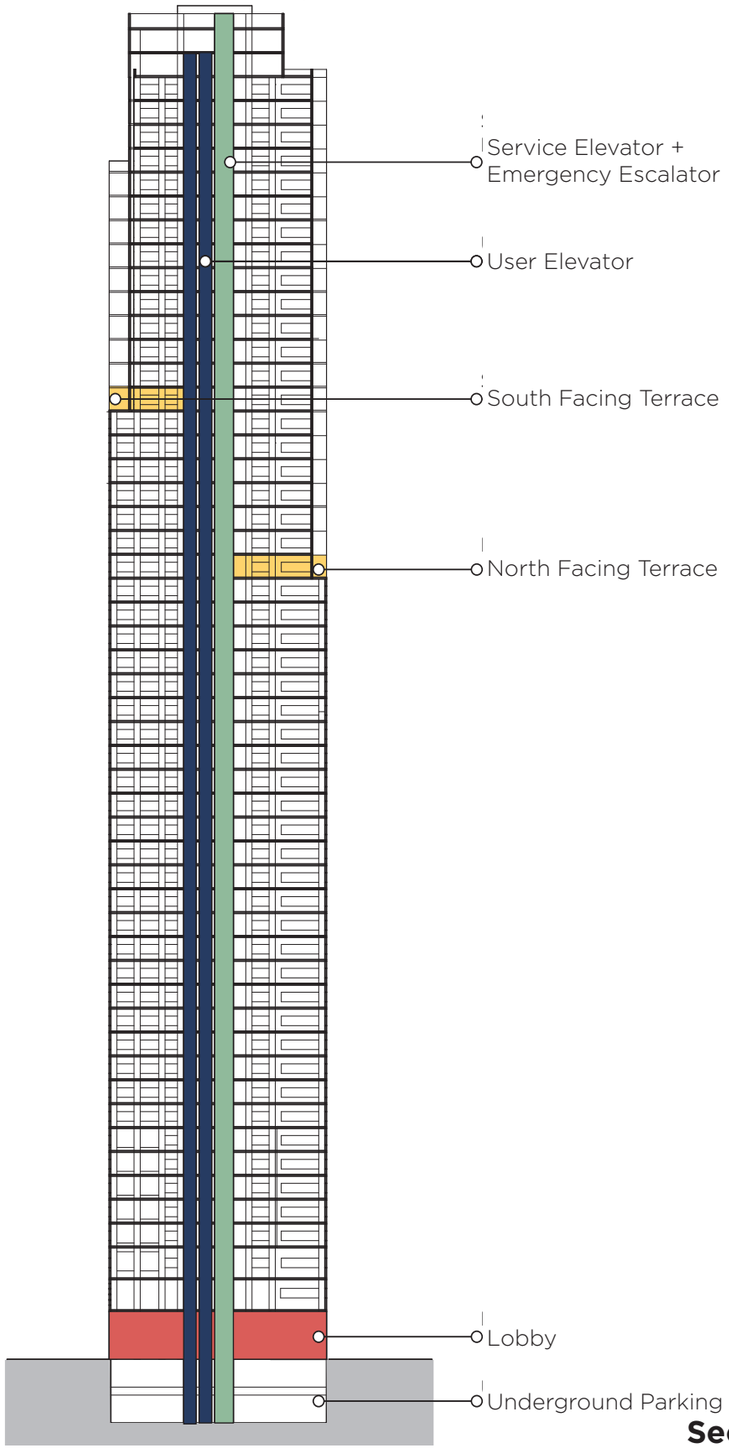
Elevations







Plans



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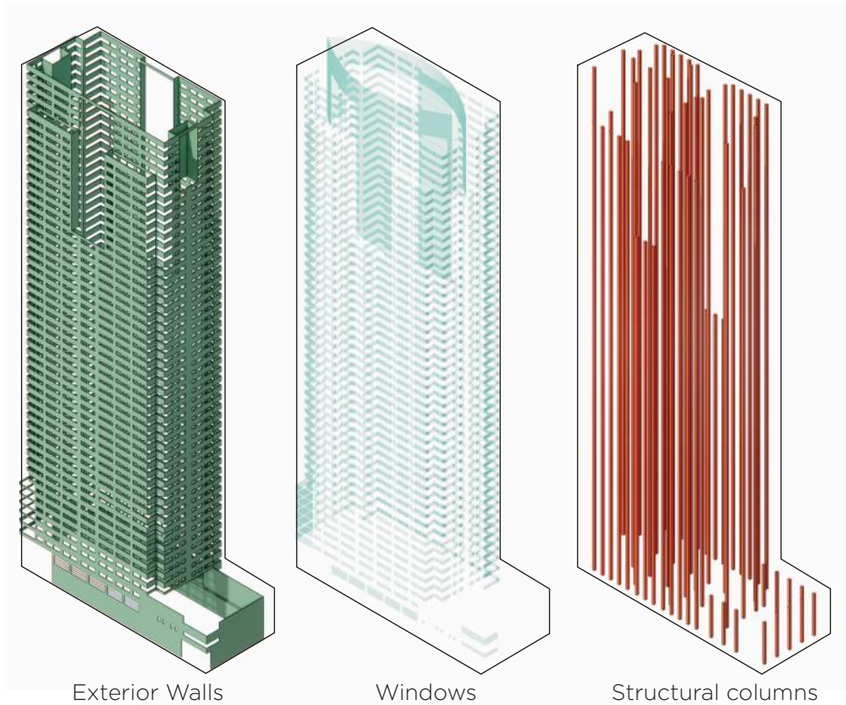
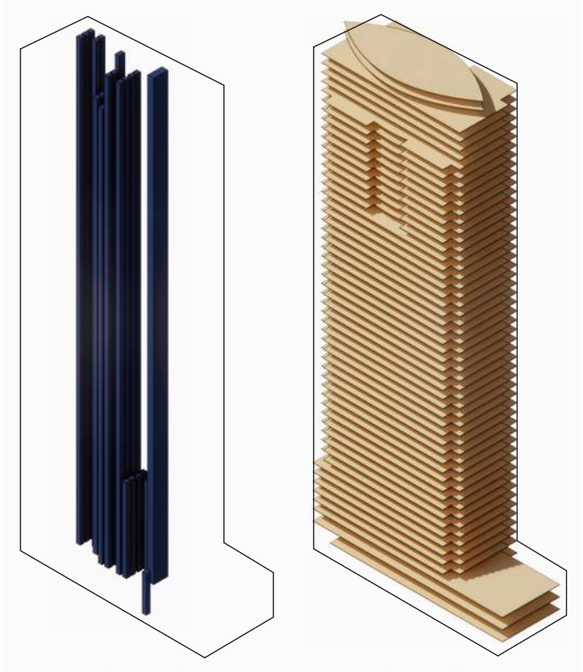




Structural Diagram

US BANK TOWER

Henry N. Cobb - Pei Cobb Freed & Partners, 1989

ADDRESS
633 West Fifth Street
Los Angeles, CA 90071

HEIGHT
1,018ft
72 stories tall

INFRASTRUCTURE
Central core = column free experience
HVAC: condenser water system with 24/7 capacity

FACTS
Class A Office Building
1,396 parking spaces

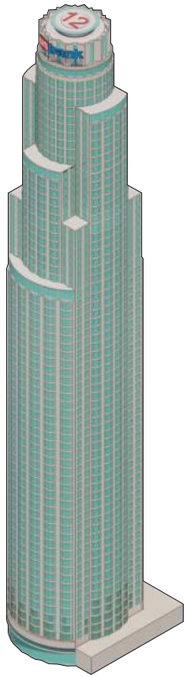
300,000 sqft of parking garage

Soaring 1,018 feet high, US Bank Tower is considered the defining anchor of the Downtown Los Angeles skyline. The 72-story building offers tenants a level of quality, luxury and prestige that has few rivals in the United States. The 1.4 million square foot Class A tower boasts full height windows with unrivaled floor-to-ceiling heights ranging from 13 to 18 feet.

Silverstein Properties has completed a $60M capital improvement program to modernize the building. The renovation breathes new life into over 35,000 SF of common area spaces throughout the building.

The renovation includes:

- A complete redesign of the lobby and entrances
- New day-to-night food and beverage options, from casual grab-and-go eateries to fine dining and catering
- A full elevator modernization
- Bolstered meeting and collaboration spaces
- The 54th floor has been reintroduced as The Vista, a hospitality-inspired destination exclusive to building tenants, featuring curated food and beverage options, event and conferencing spaces, flexible workspaces, and meeting and pitch rooms (15,000 SF of amenity space.)



3D SOUTH-WEST
ISOMETRIC

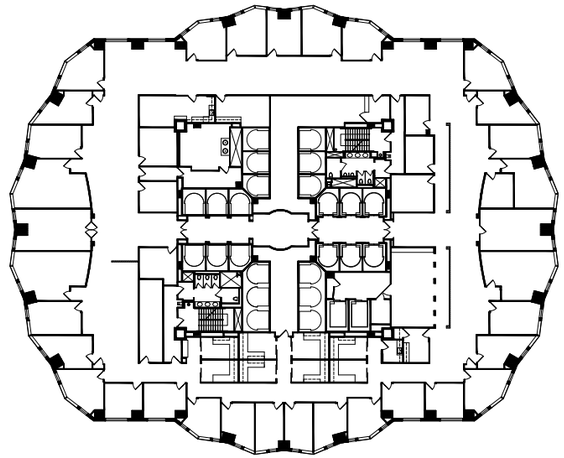
SOUTH-WEST
ELEVATION

NORTH-EAST
ELEVATION

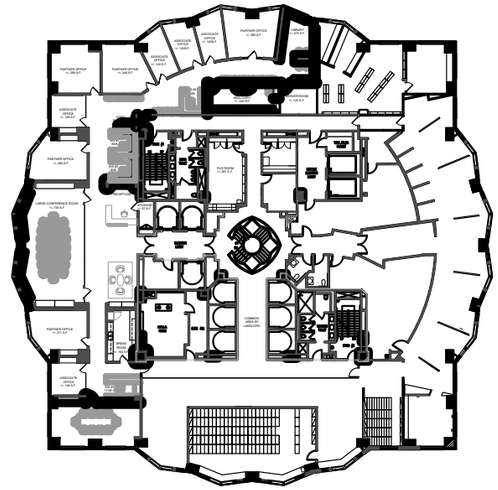
TOP VIEWS

Elevations

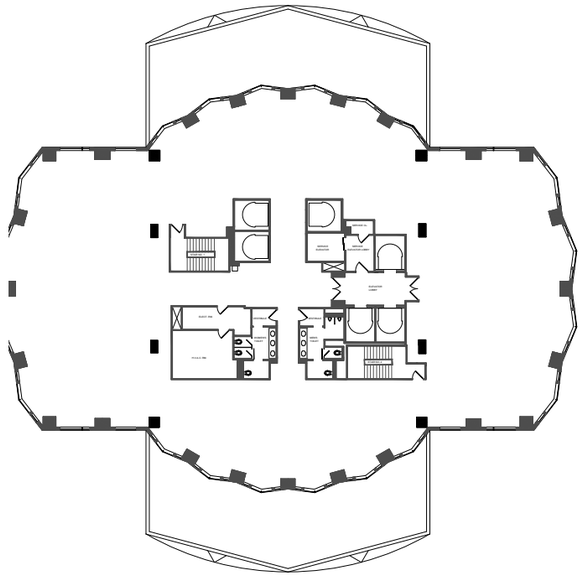
Floor 7



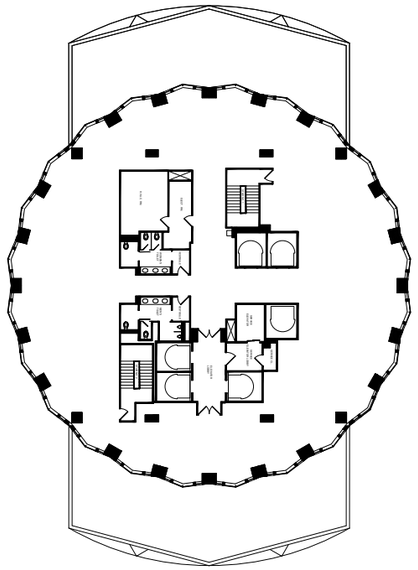
Floor 50



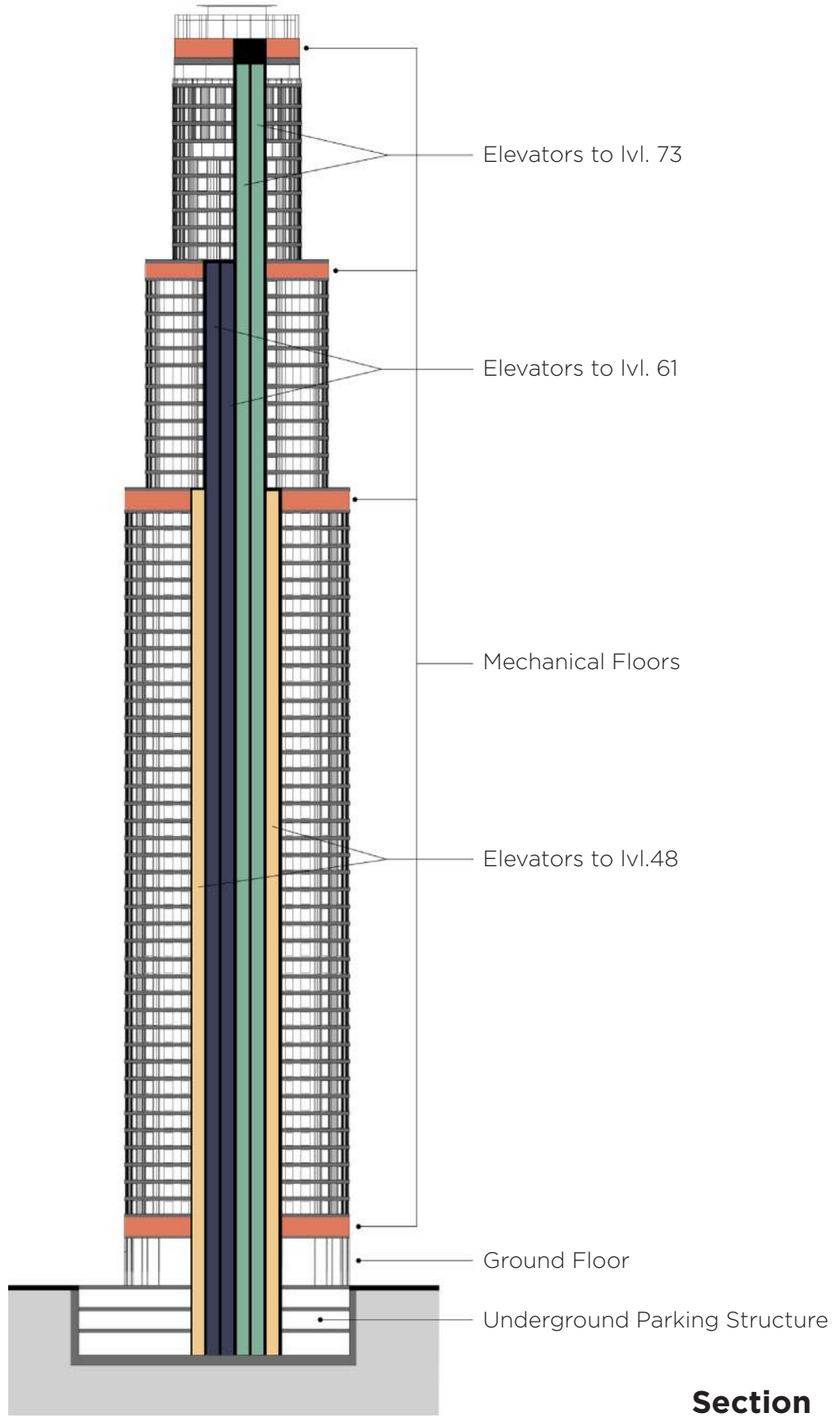
Floor 61



Floor 73



Plans



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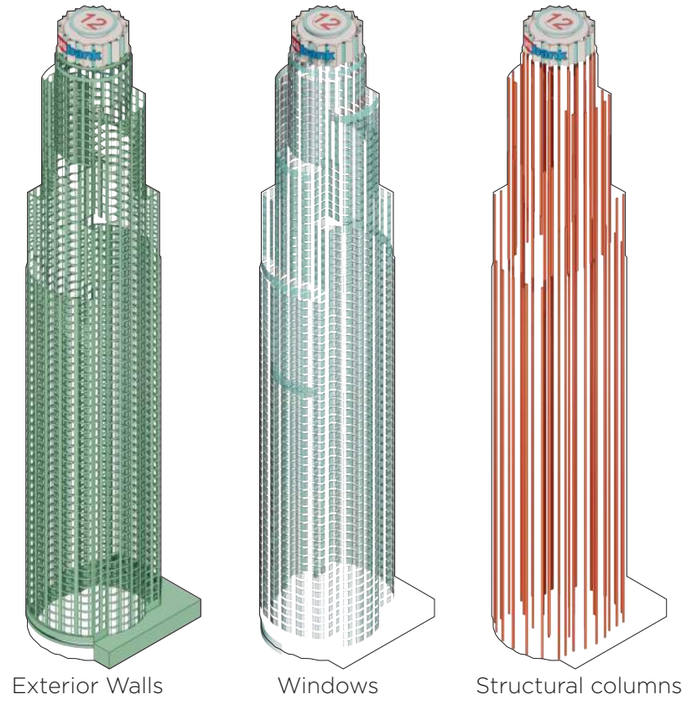
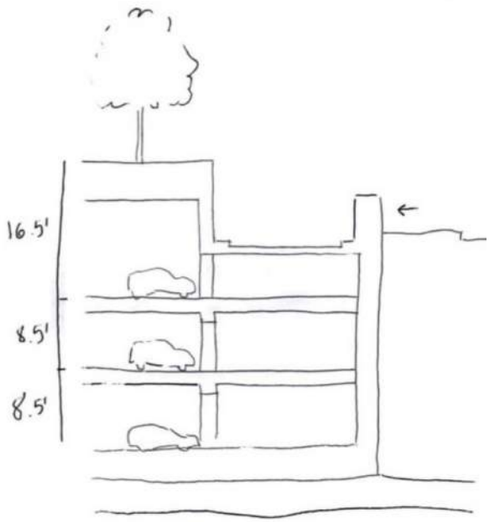
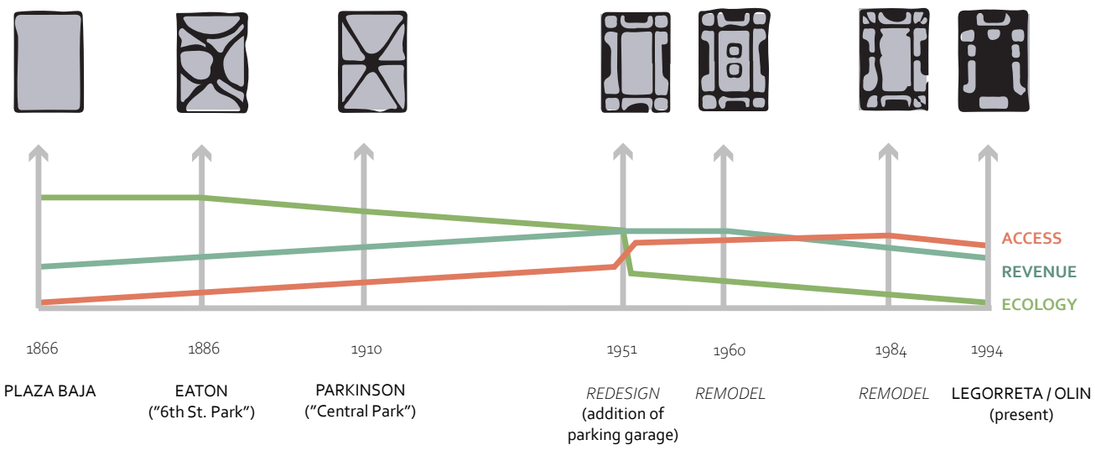


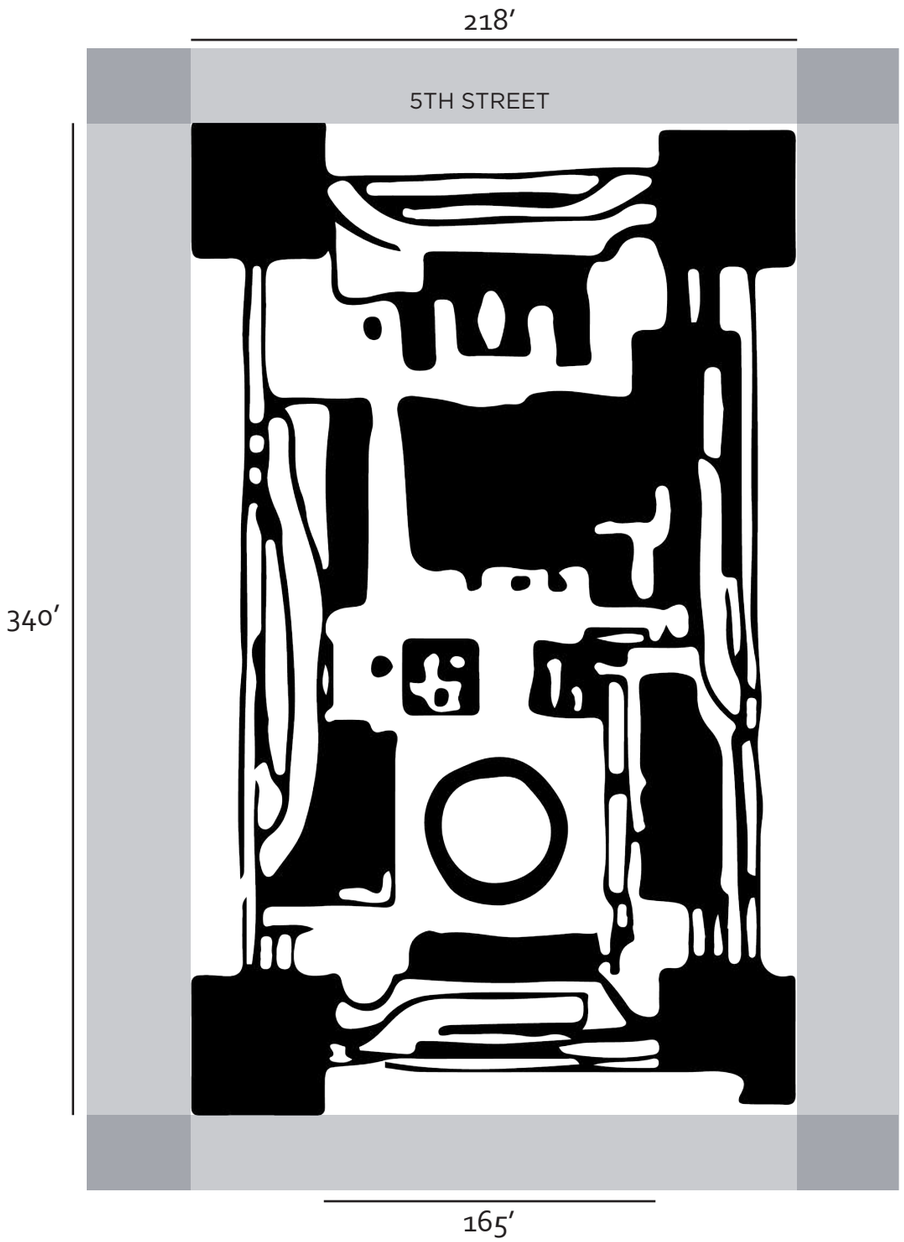
Structural Diagram

PERSHING SQUARE

Laurie Olin + LEGORRETA, 1993

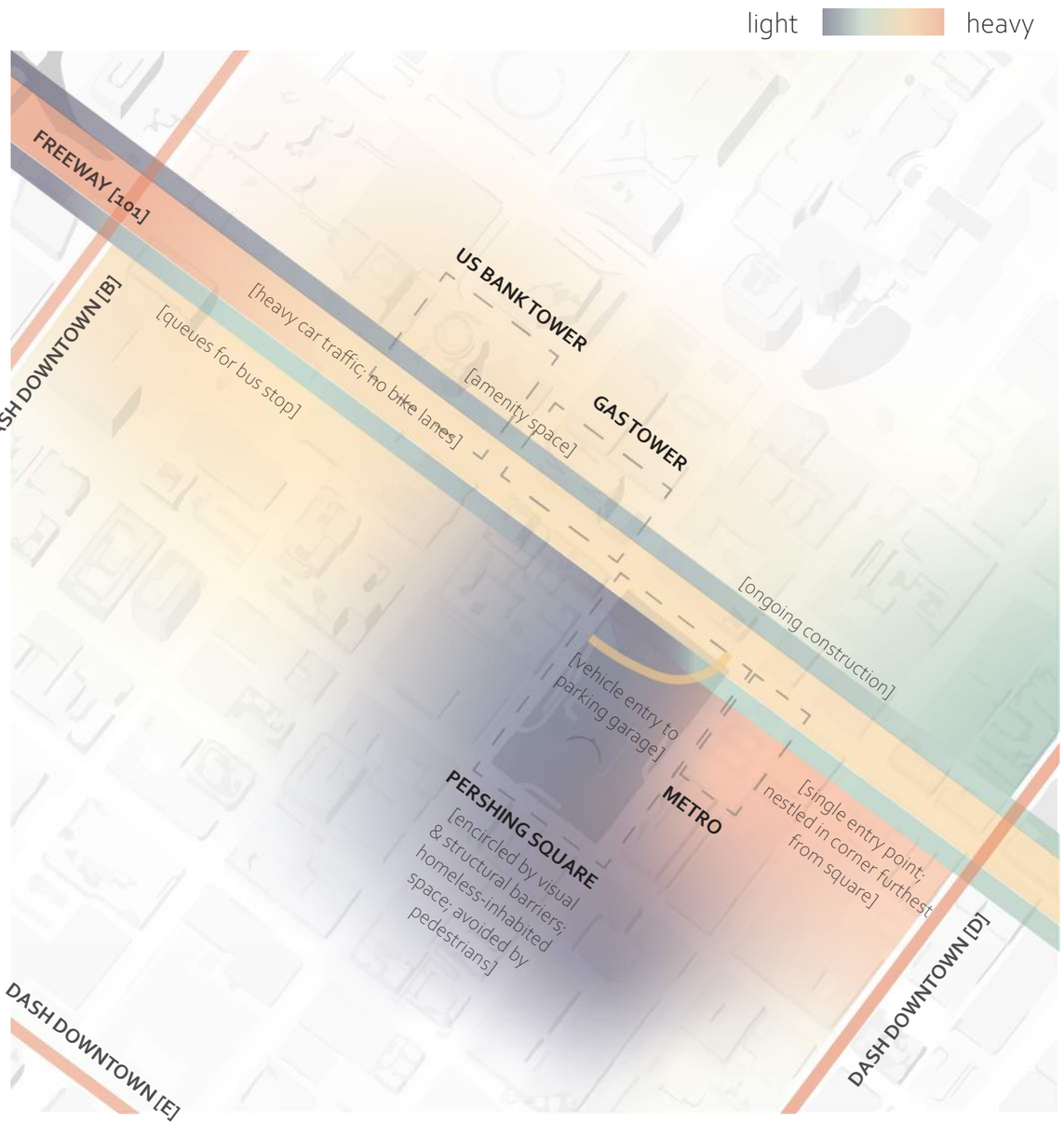





218′
5TH STREET
340′
165′

CIRCULATION

5th STREET



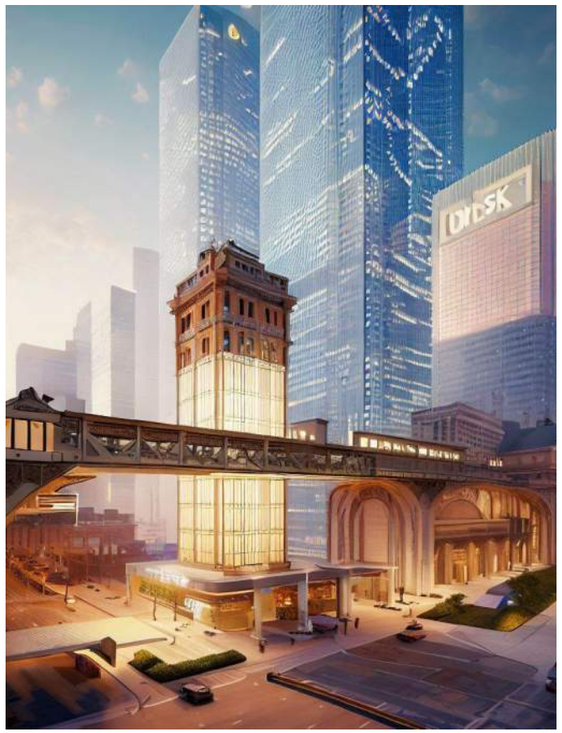
Connectivity
PERSHING SQUARE METRO

AI DEISGN EXPLORATION

Advanced applications of Artificial Intelligence have played a pivotal role in delving into conceptual design ideas at the inception of the research.

This cutting-edge approach leveraged sophisticated tools, including **Adobe Firefly**, the **Image Creator from Microsoft Bing**, Create an Image - **Playground AI**, and **Lexica Aperture**. These tools were used to genrate images from text.

These platforms collectively empowered us to conceptualize, refine, and iterate upon our creative visions, ushering in a new era of innovative ideation.



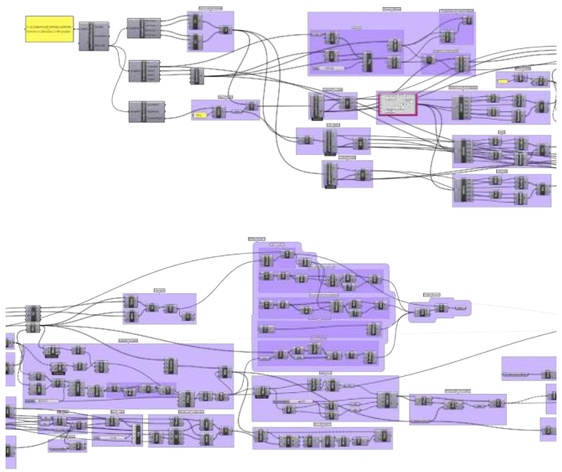
In addition to Text-to-Image generation, we employed other AI/Machine Learning plugin to swiftly generate preliminary plans in the initial phase of the research.

The Plugin used in the research was - Plan Finder

PlanFinder stands as a powerful software plugin compatible with established CAD and BIM platforms, designed to expedite the process of creating apartment plans. This versatile plugin boasts two key functionalities: ‘Fit’ and ‘Furnish.’

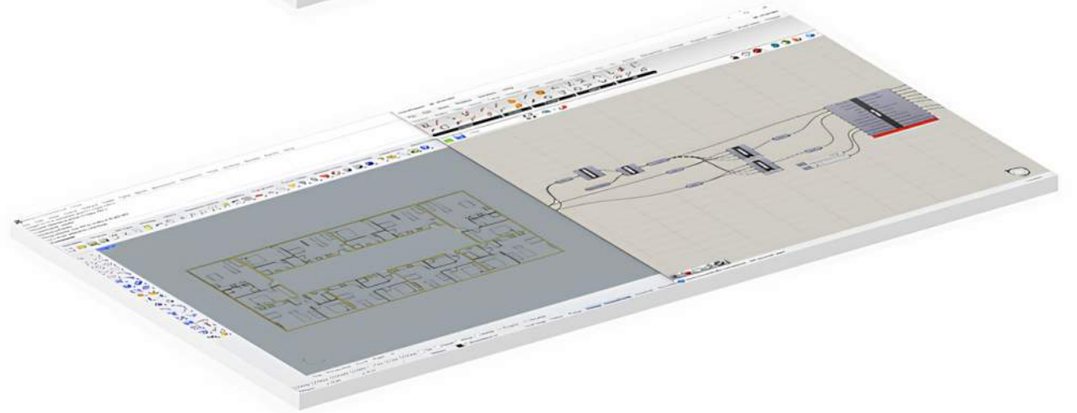
The ‘Fit’ feature allowed us to seamlessly adapt plans to your specifications while applying tailored filters to meet our preferences.

Meanwhile, the ‘Furnish’ capability empowered us to furnish a plan in seconds, streamlining the design process.

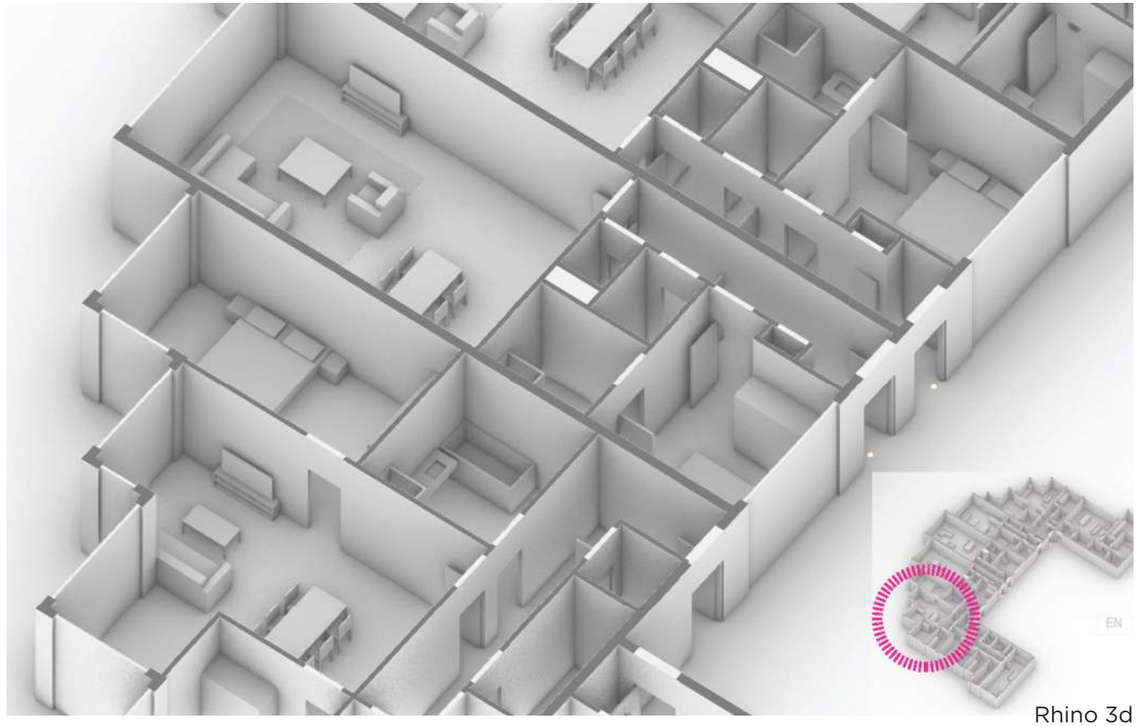


Grasshopper Script

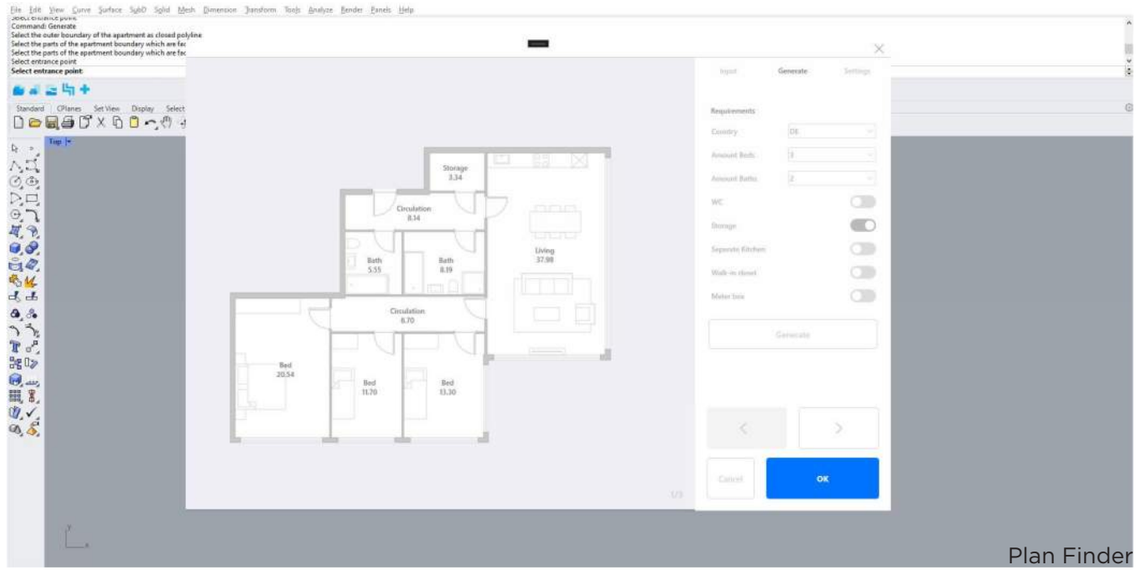
Rhino 3d



Grasshopper 3d



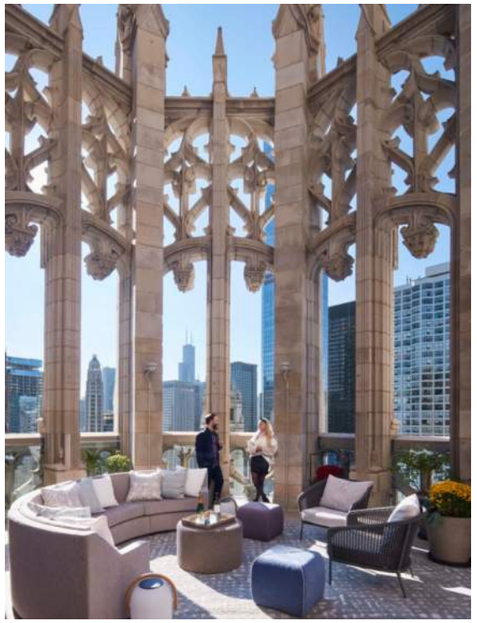
Rhino 3d



Plan Finder

TRIBUNE TOWER

Solomon Cordwell Buenz , Chicago, USA



OFFICE TO RESIDENTIAL

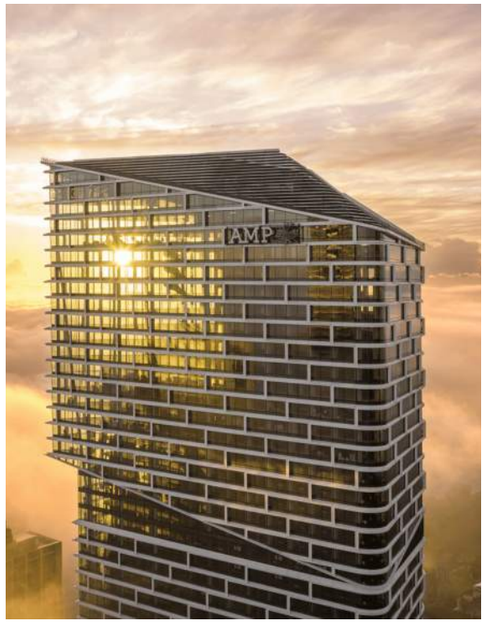
The landmark tower was constructed for the Chicago Tribune in 1925; its adaptive reuse designed by SCB and developed by Golub & Company and CIM Group was completed in 2021. The residences are now open to the public, featuring 34 stories of residences, plus 7 and 12-Story Condo Wings, totaling 950,000 SF.

The 1st floor hosts 55,000 SF of luxury retail, and luxury amenities are scattered through the building. The project also proposed a 1,422ft high rise tower with 700 residences and 200 hotel rooms, to be constructed beside the Tribune Tower Residence.

Some features of the tower include: 3 story below-grade parking, preserved original lobby entry, 360 wrap-around pool + outdoor terrace.

QUAY QUARTER TOWER

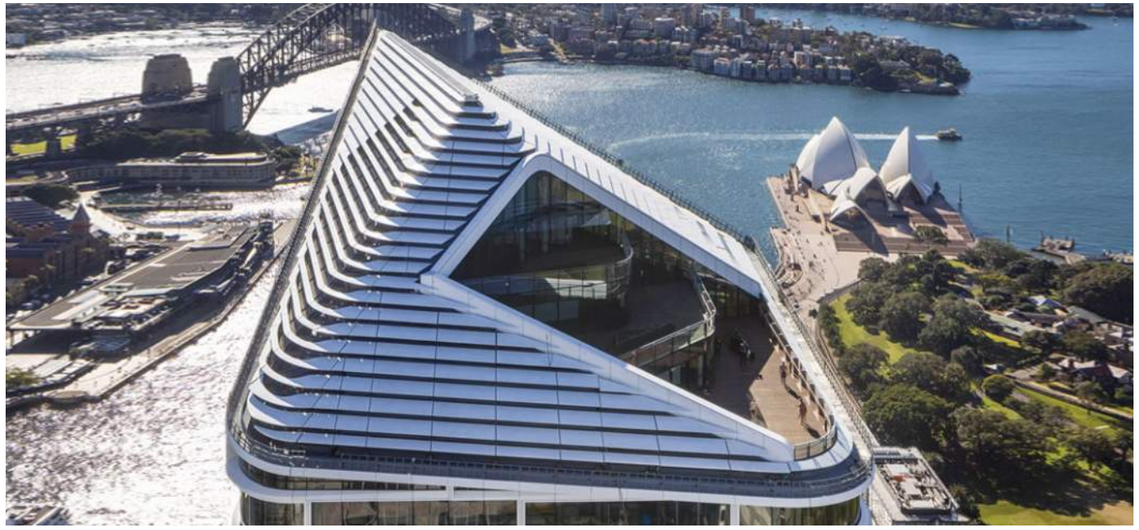
3XN, Sydney, Australia



STRUCTURE EXTENSION

Quay Quarter Tower is designed as a world-first vertical village that redefines the future of work. Offering some of Sydney's best views, this transformative statement on Sydney's skyline is profoundly focused on promoting human interactions and smart technologies to drive business success.

The building retains 65% of the original tower structure (beam-slab columns) and 95% of the original core, reducing carbon emissions by 12,000 tons, which is equivalent to the carbon emissions of 35,000 flights between Sydney and Melbourne.



63 MADISON

SOM, New York City, USA

TERRACING

The proposed design would follow the solution to retain, carve, plant, add and wrap.

First, the design retains the existing facade. This avoids generating the embodied carbon associated with new construction and recladding, and utilizes 93 percent of the existing structure.

Next, the design brings daylight into the deep floor plates by carving new openings in the facades, primarily on the south and west elevations. This dramatically increases the area of naturally-lit workspace for creative office tenants and creates unique interior-exterior terraces.

The removed floor area is then added to the roof of the building to create panoramic new premium office space. Finally, the entire existing building is wrapped in a lightweight “veil” to create a high-performance, double-skin facade. This avoids drastically increasing the building’s embodied carbon, reduces energy demands, and makes the project flexible and financially viable for potential tenants and owners.

TAI CENTER FOR HERITAGE & ARTS

Herzog & de Meuron, Hong Kong

FACADE

Originally an intimidating complex that housed a prison, police station, and magistracy, Tai Kwun is now an open and welcoming center for arts and culture.

The project incroporates a pre-cast alluminum porous facade. Together, the overall system acts as a heat sink and a sun-and-rain screen; obscures the mechanical equipment; and is porous enough to allow adequate air circulation and views to the outside when desired.

It is designed to be experienced from both the inside and outside. On the outside, the textured surface helps to reduce reflectivity and glare during the daytime. And at night, light emitted from the building will be partially screened, expressing the life of the activities within without creating heavy light pollution.

The raw material consists entirely of aluminum obtained from recycled car alloy wheels.

SUSTAINABILITY

Guiding Questions

- *How do we design a building that will last beyond the present?*
- *What does net zero mean, in practice?*
- *What processes and techniques would help us reach net zero?*
- *Could we aim to be net positive?*
- *How can we leverage the natural environment to minimize waste and energy?*
- *How do we fuse sensory pleasures with sustainable technologies?*
- *Can we design beyond the building to create a more sustainability-oriented culture in DTLA?*

Current & Future Trends

The carbon footprint of a building goes beyond its ground; it factors in construction, occupant transportation, behaviour, design, operations, and waste. In the design stages, EVs and public transit should be incentivized, providing onsite renewable energy and storage wherever possible. During build and construction, upfront embodied carbon should be minimized. Finally, circular economy principles should be a priority – rather than designing single-use buildings, we should be designing adaptive, modular spaces that evolve with changing times. Any residual emissions should be offset with comprehensive schemes like Gold Standard, WELL, or Living Building Challenge.

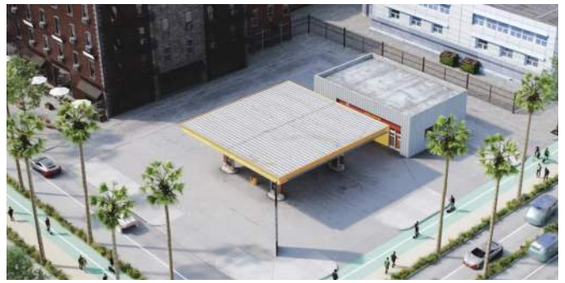
CURRENT & FUTURE TRENDS

As a dense and developed city, LA is expected to emulate the developmental patterns of London, Singapore, and Shanghai. Predicted trends from McKinsey include the rise of integrated mobility platforms & transit ‘hubs’, expansion and development of public transit (TOD), and catalytic urban planning (i.e. heavy parking restrictions in city centers), and the emergence of shared fleets of public AVs (Automated Vehicles) and EVs (Electric Vehicles).

MOBILITY

Guiding Questions

- *How do people enter and exit?*
- *What’s the most crowded entrance? Why?*
- *How do we control where people gravitate to? Should we?*
- *How do people tend to move through space?*
- *How do we want people to inhibit space?*
- *What do we want the most utilized areas within the building to be?*
- *What are the circulation patterns that this building imposes to people?*
- *What if the space itself could reconfigure itself based on its occupants’ behaviors?*



NTH Spaces

A satellite of networks of local destinations (e.g. gas stations) that refuel (people and vehicles) and host functional and social amenity spaces.

Blurred Boundaries

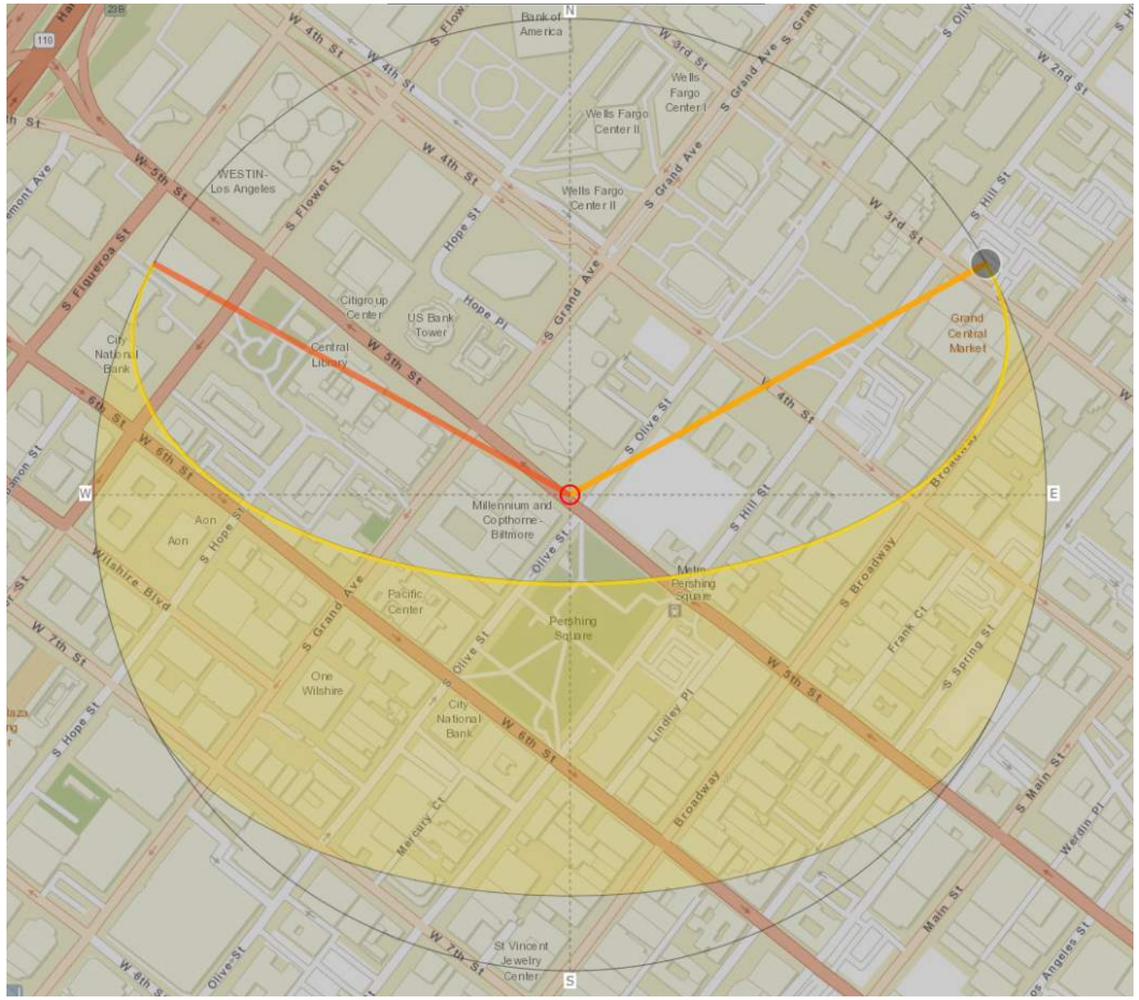
Semipermeable and mobile spaces of various sizes; transforming homes, adaptable ‘mobitecture’; shared spaces, and AVs-as-homes

Fluid Nodes

Cities that respond to residents with the real-time flexibility of a device (e.g. VR/AR planning proposals, popup events, mobile stores, interactive maintenance systems, dynamic crosswalks)

ENVIRONMENTAL ANALYSIS

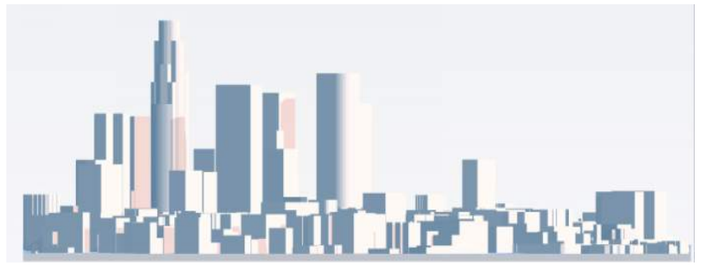
Solar Path
YEARLY ROTATION



Solar Path
DAILY ROTATION - SUMMER SOLSTICE

North

East



South

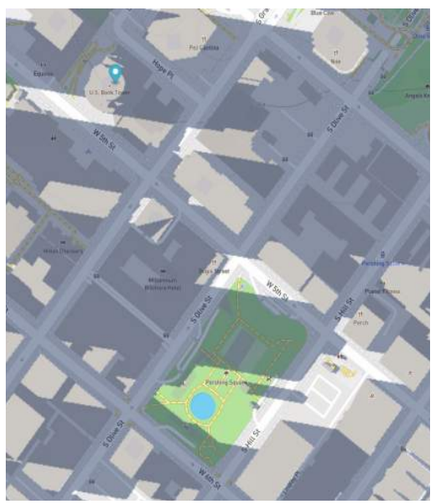
West

Light & Shadow

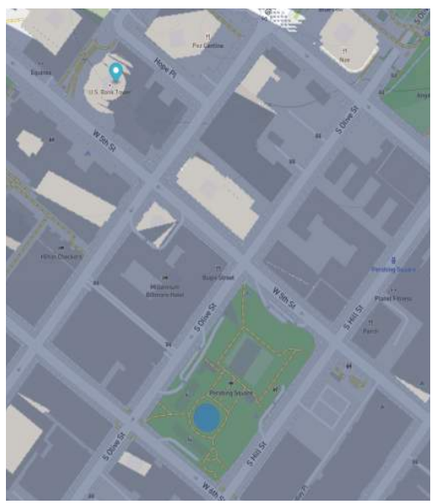
SUNSET

8:00 AM

12:30 PM



5:00 PM

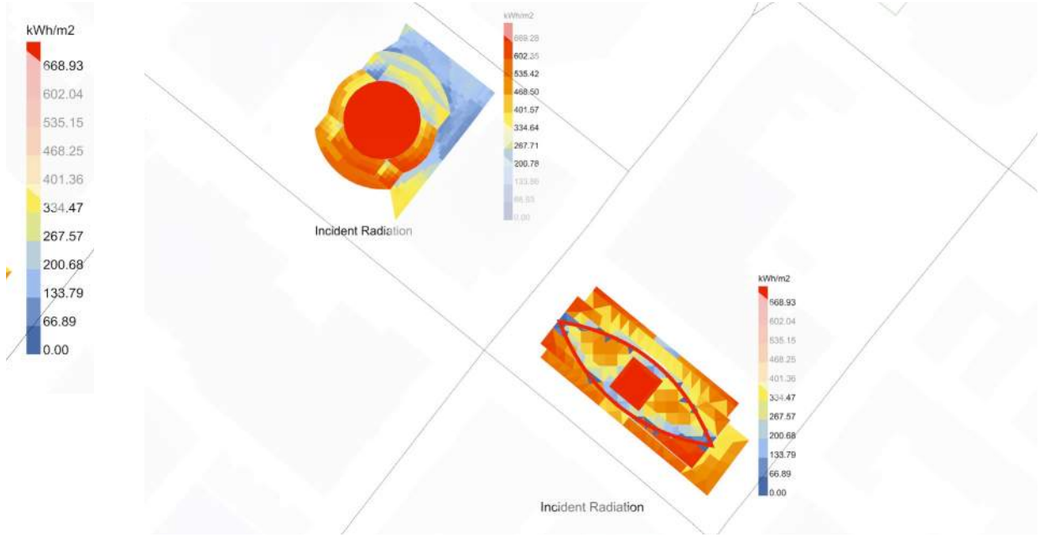


8:00 PM

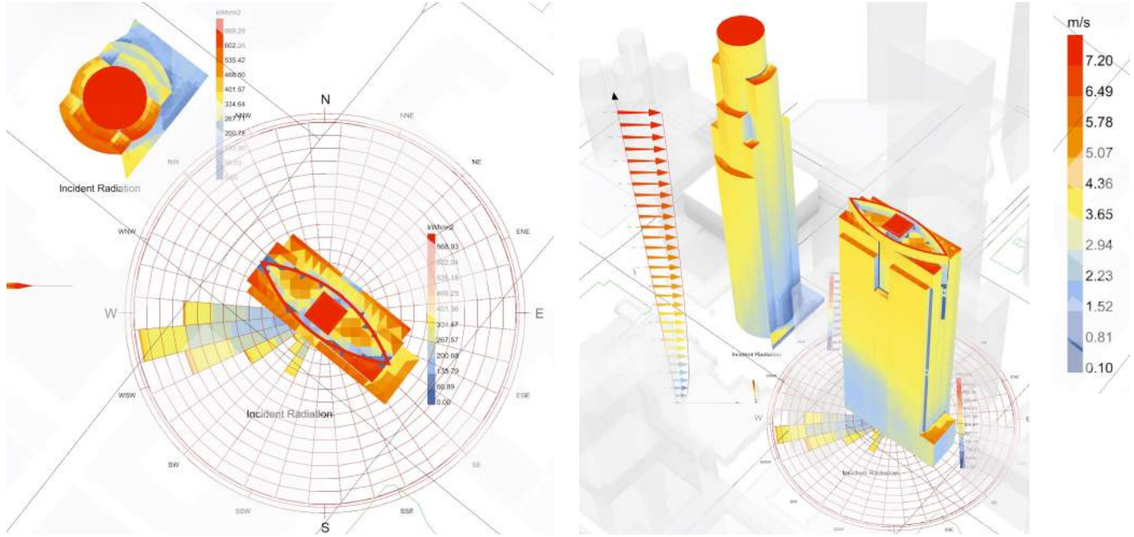
Light & Shadow

SHADE PATH - SUMMER SOLSTICE

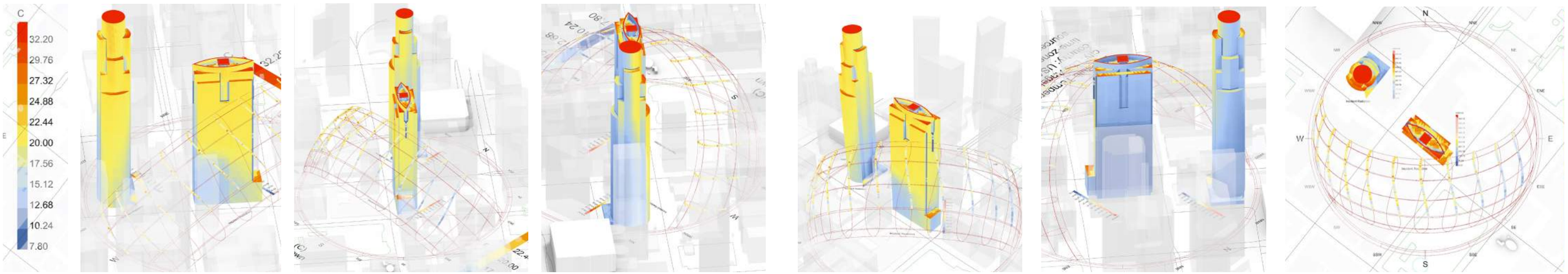
Incident Radiation

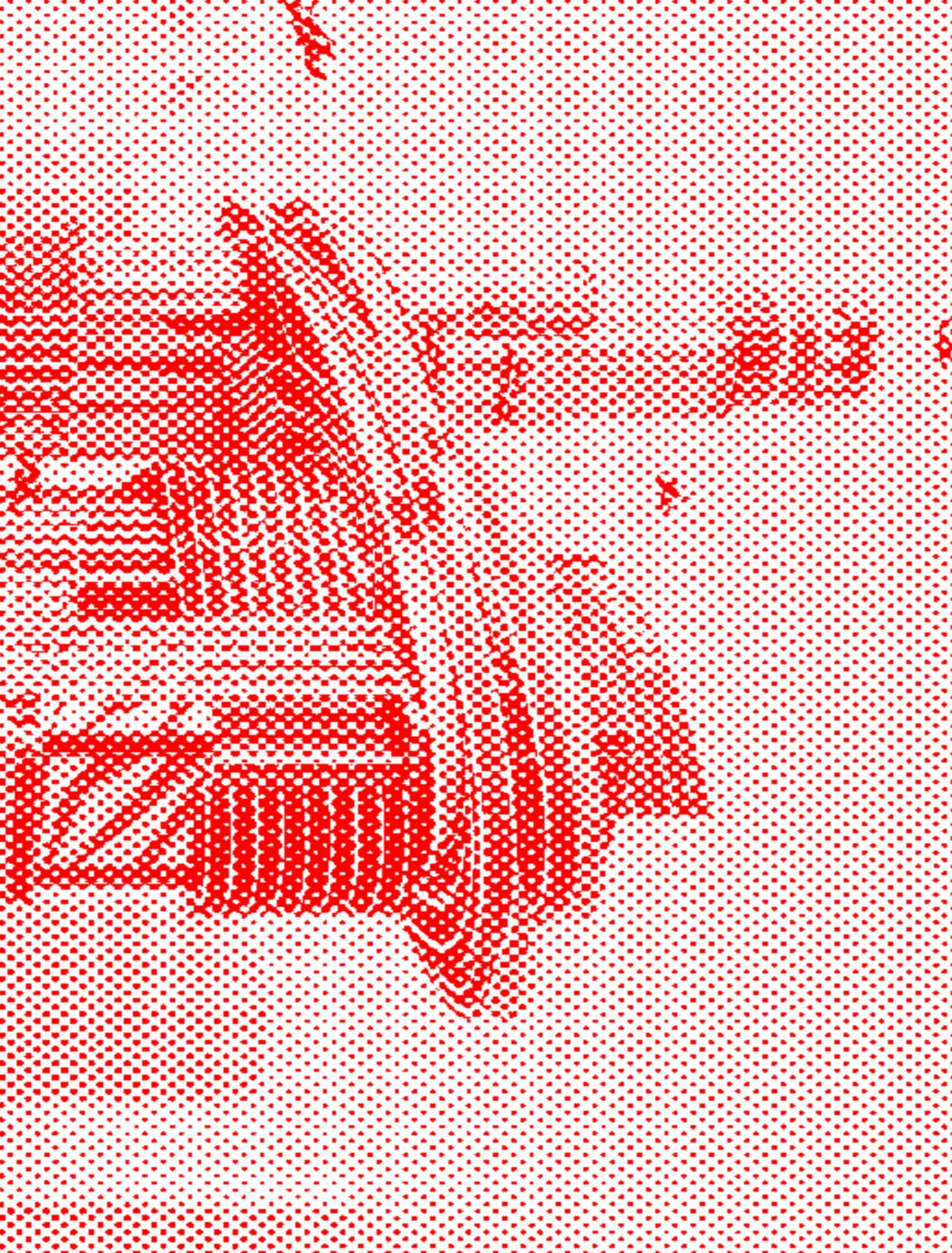


Wind Speed



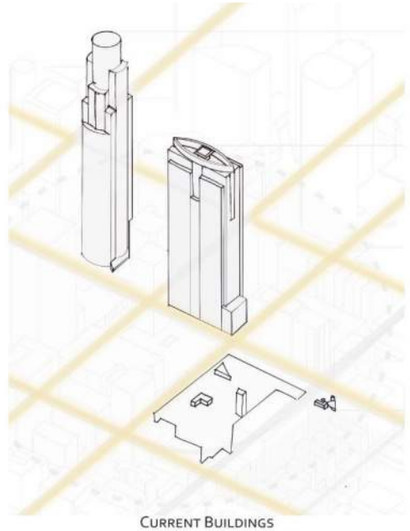
Dry Bulb Temperature



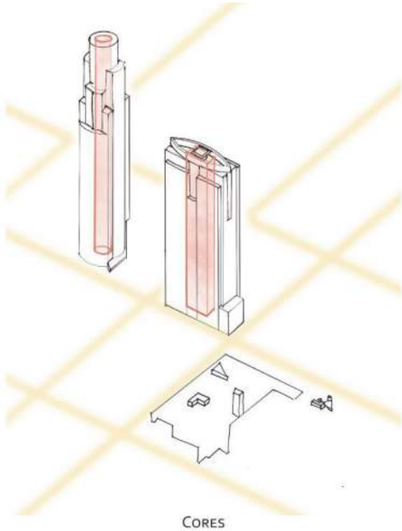


CHAPTER 2 OF 3

IDEATION

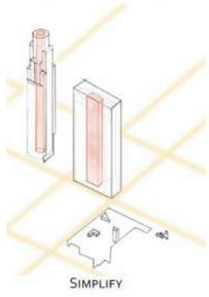


Current Buildings

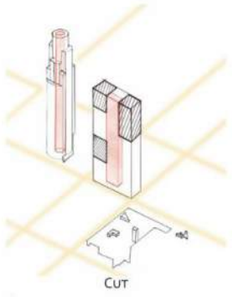


Cores

Gas Company Tower



Simplify



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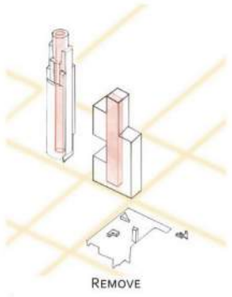

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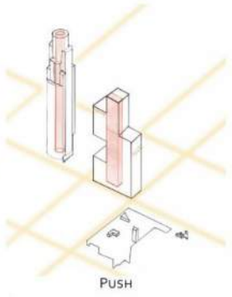

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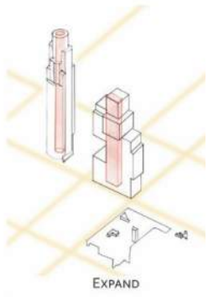
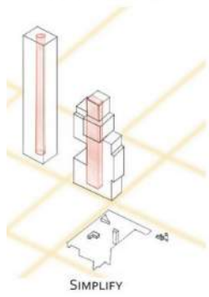
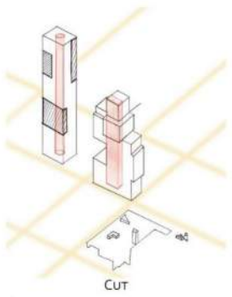


Expand

US Bank Tower



Simplify



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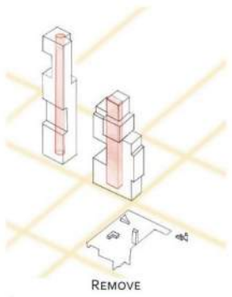

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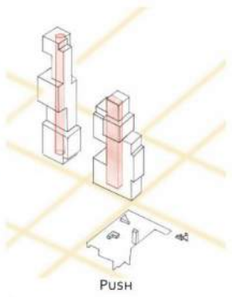

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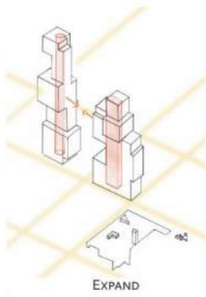

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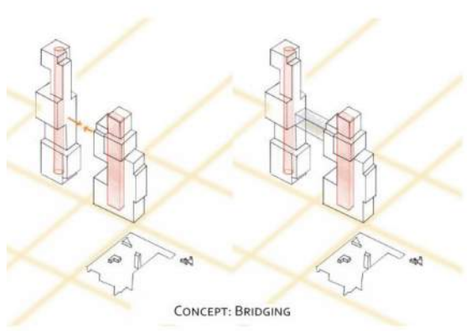
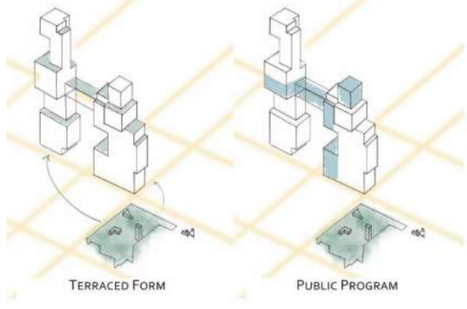


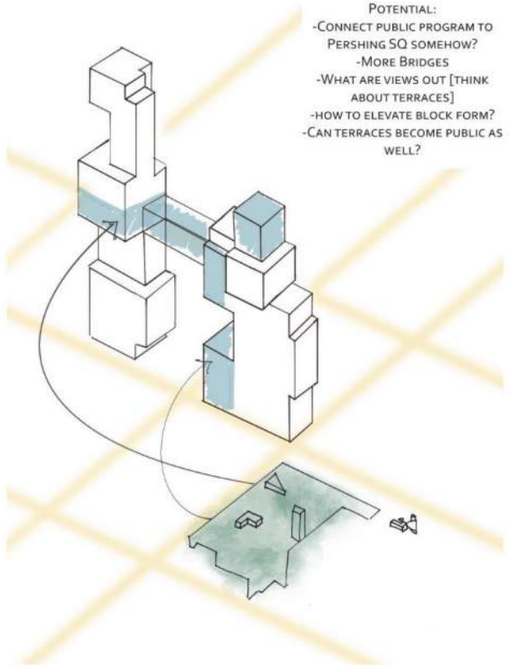
Concept: Bridging



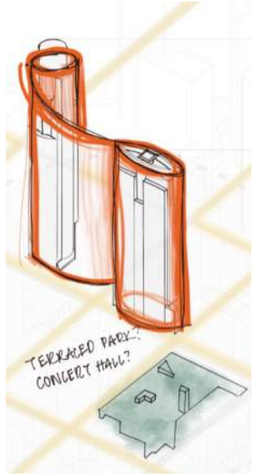
Terraced Form

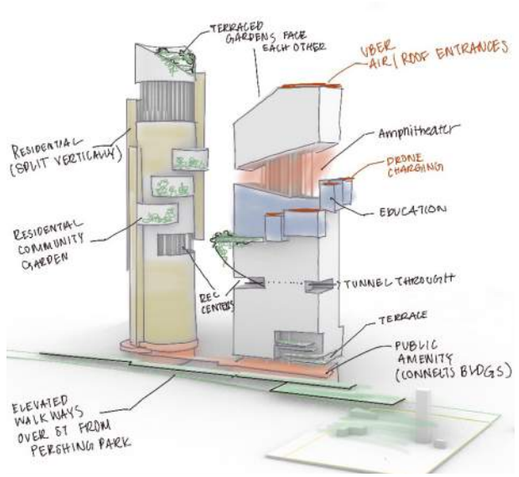
Public Program

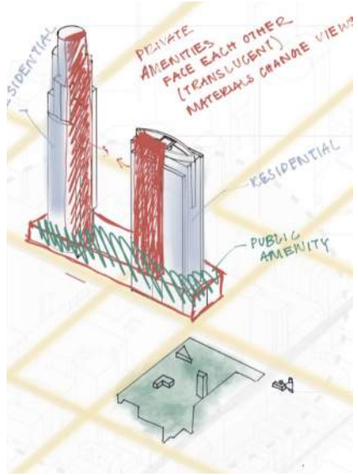
Potential:
-Connect public program to Pershing SQ somehow?
-More Bridges
-What are views out [think about terraces]
-How to elevate block form?
-Can terraces become public as well?

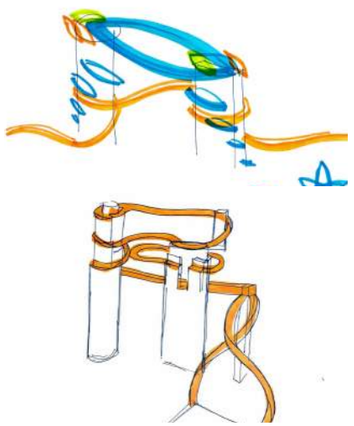


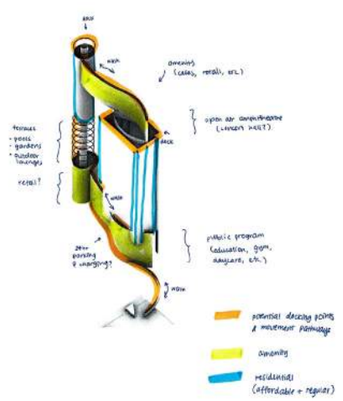
Initial Sketches

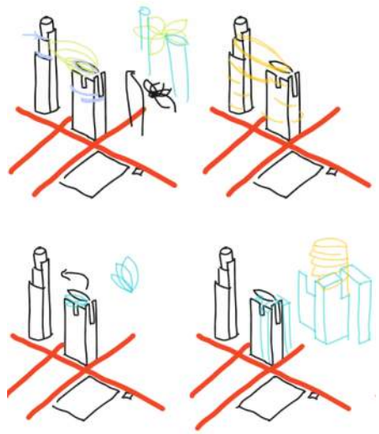




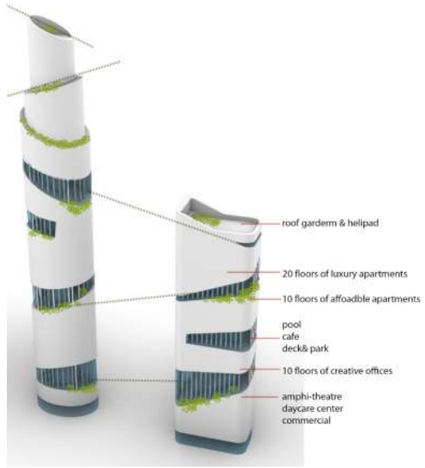


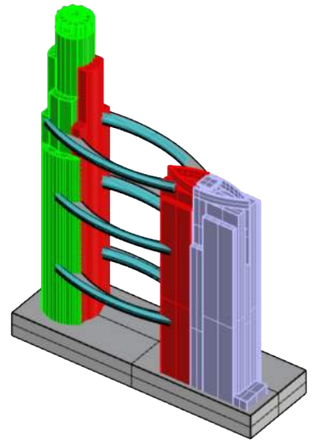


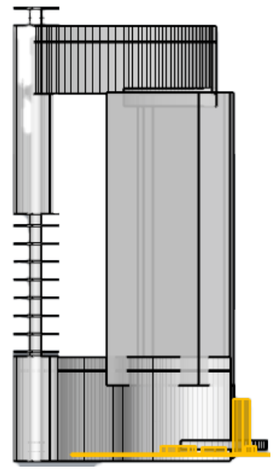


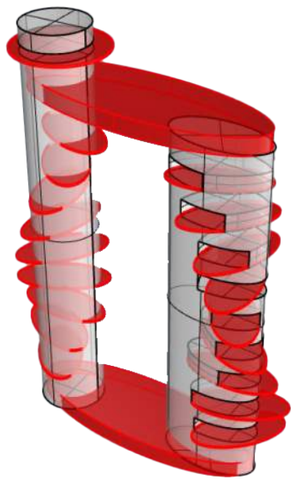


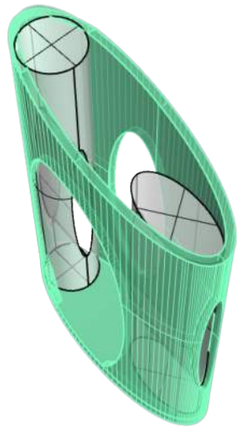
Massing Models

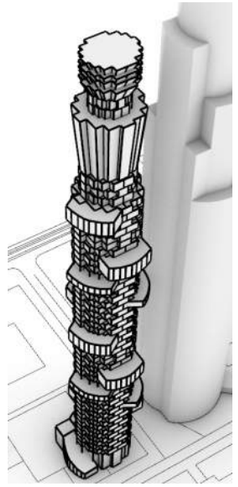


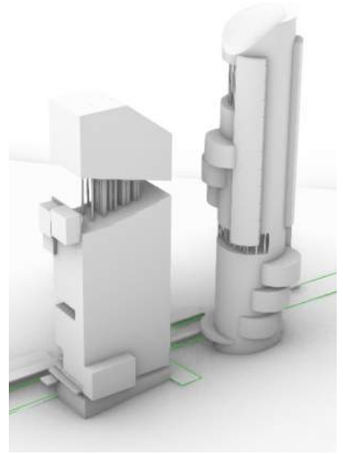


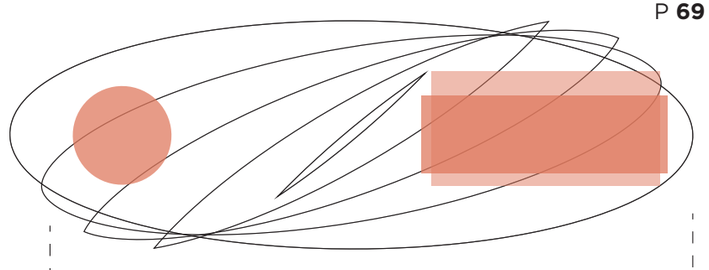












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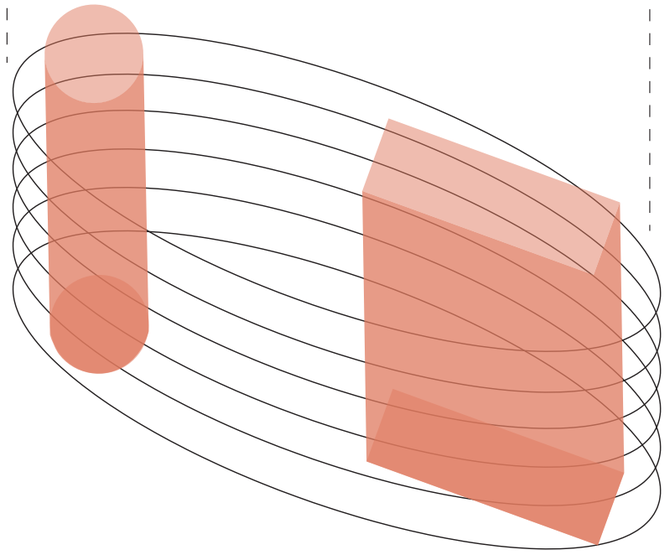
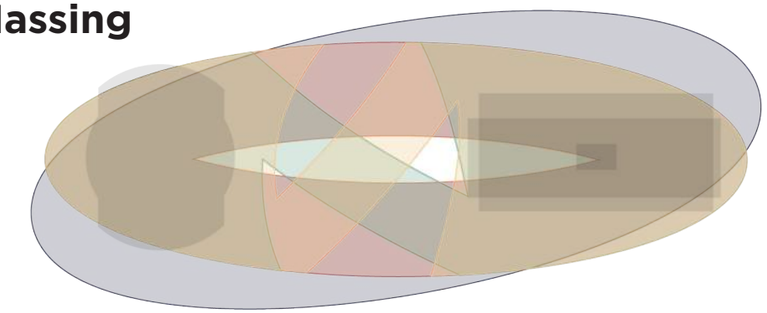
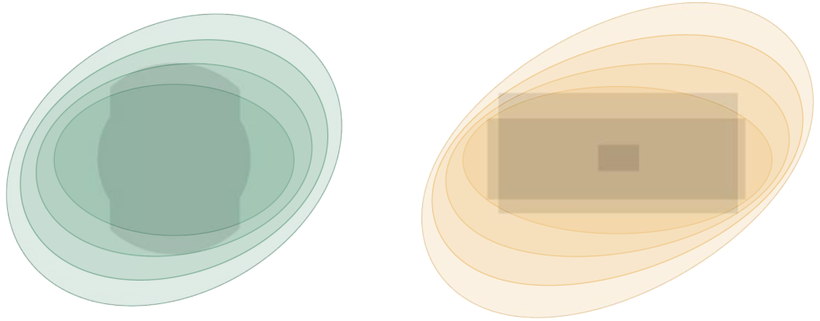


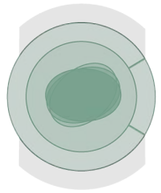
Form & Massing



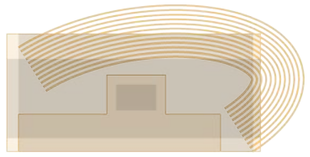
BRIDGE



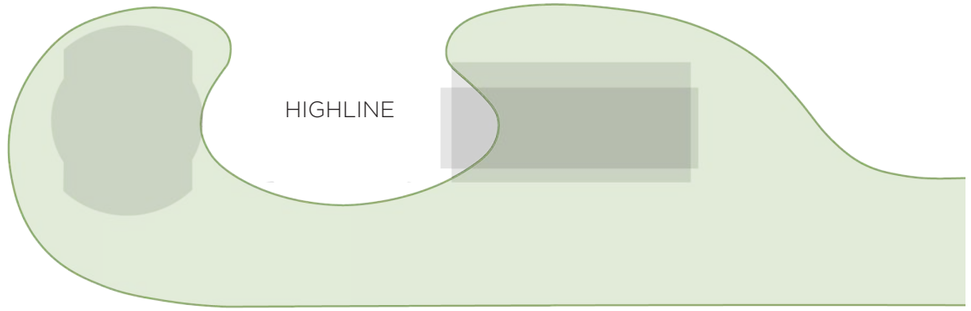
RETAIL



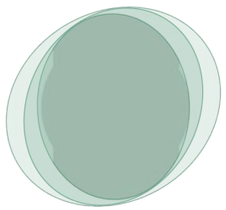
FOREST



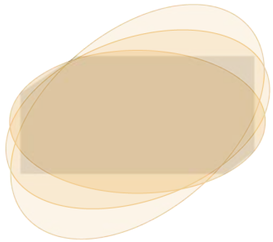
AMPHITHEATER



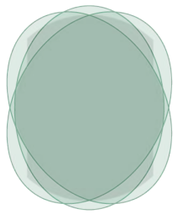
HIGHLINE

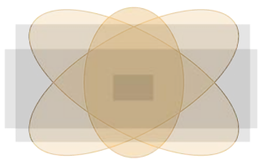


HEALTHCARE

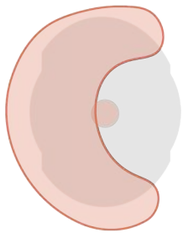


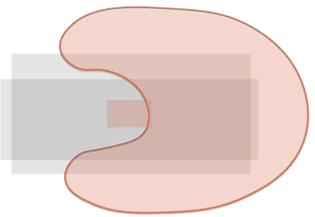
OFFICE



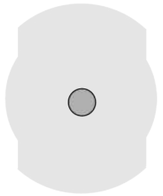


RESIDENTIAL/HOTEL





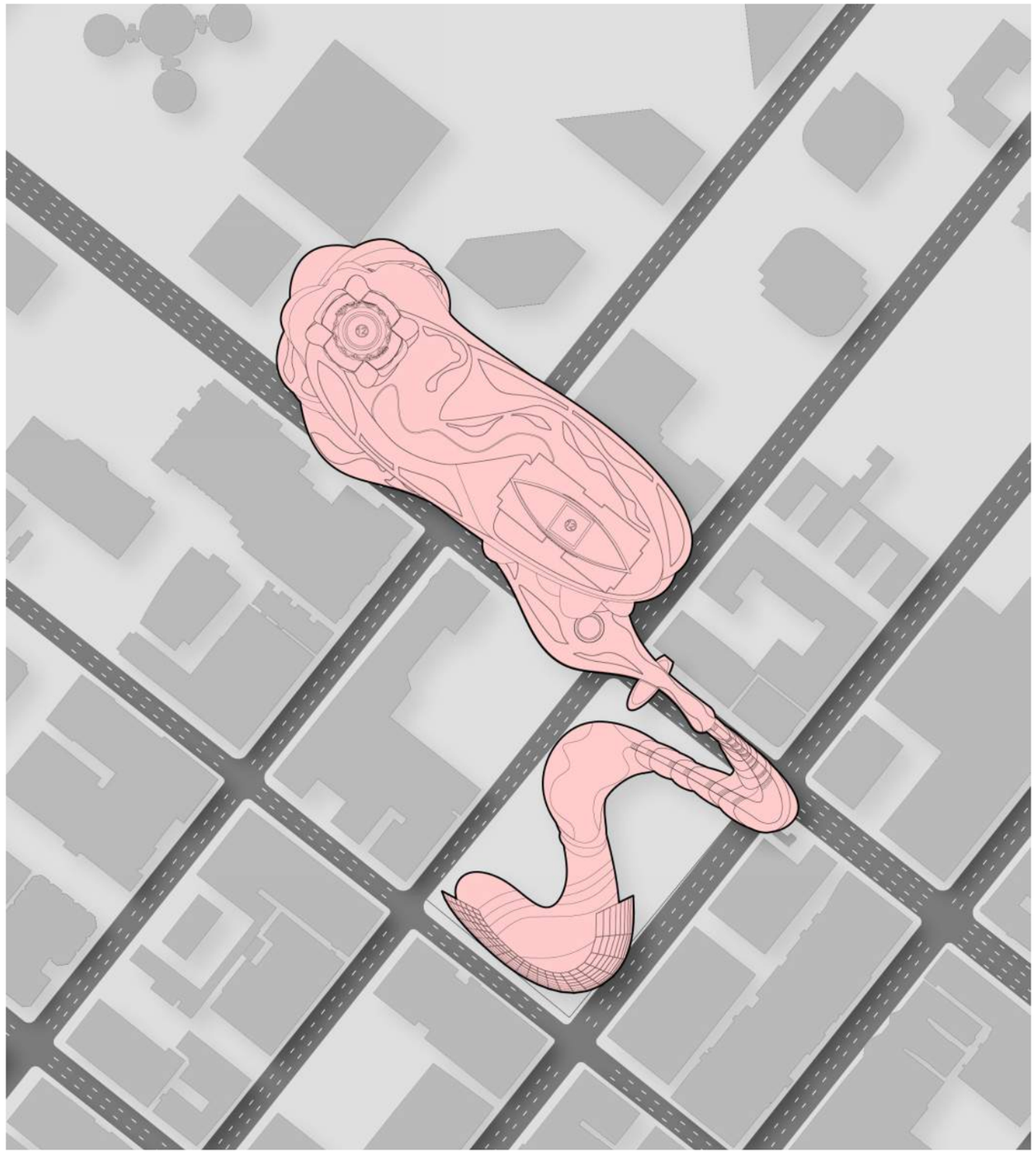
MEZZANINE



GROUND

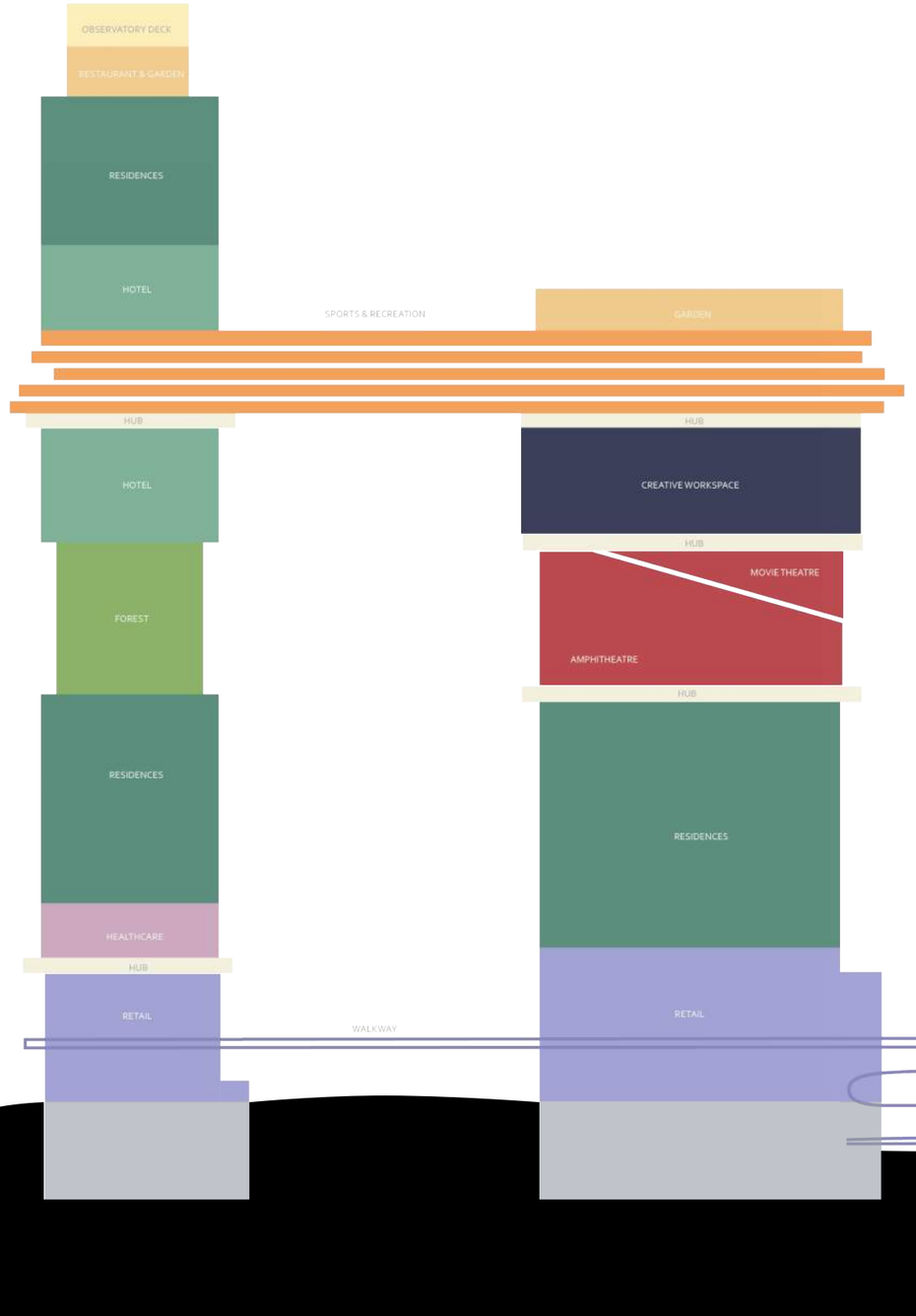
Site Plan

Existing



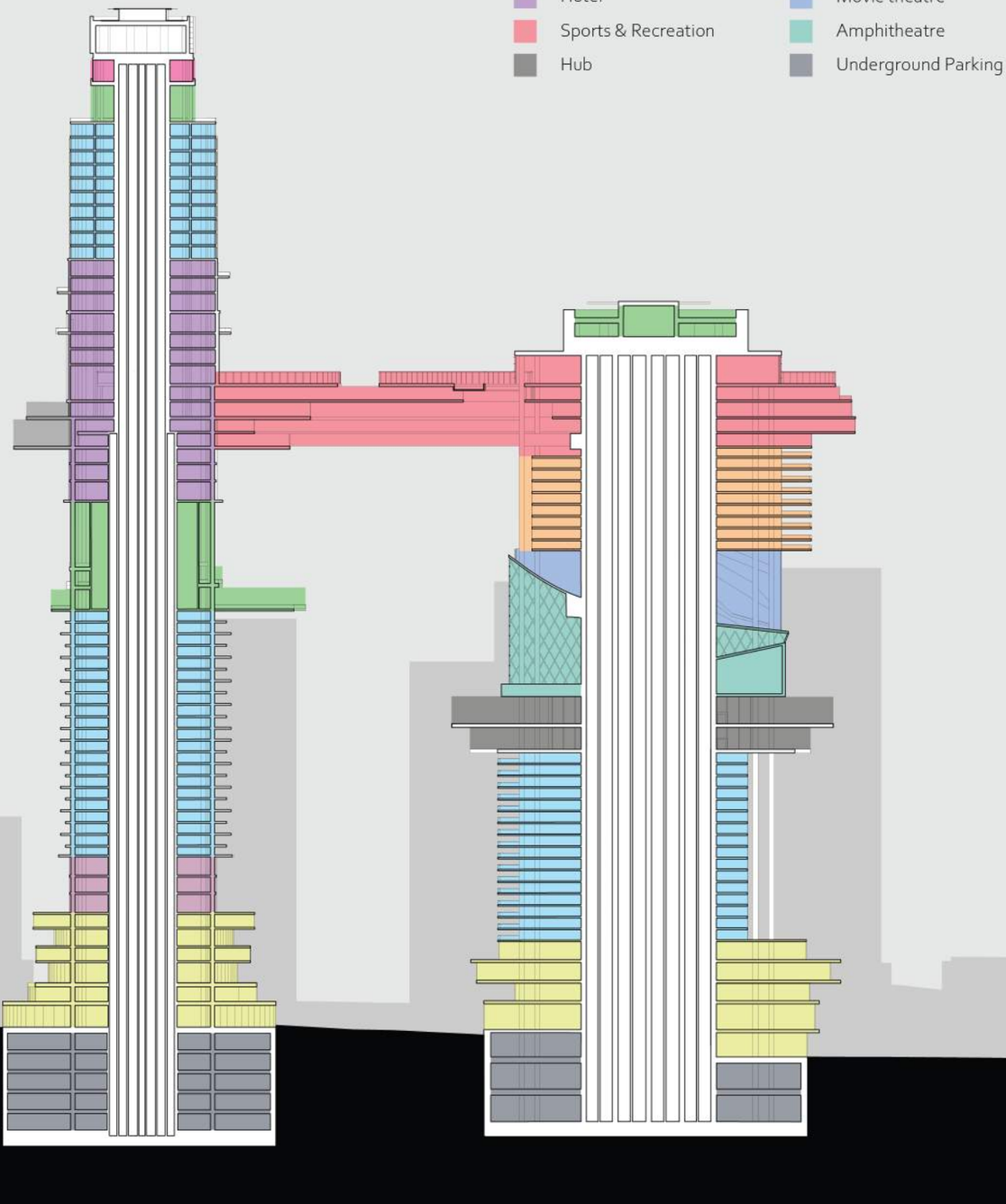
Purposed

Program

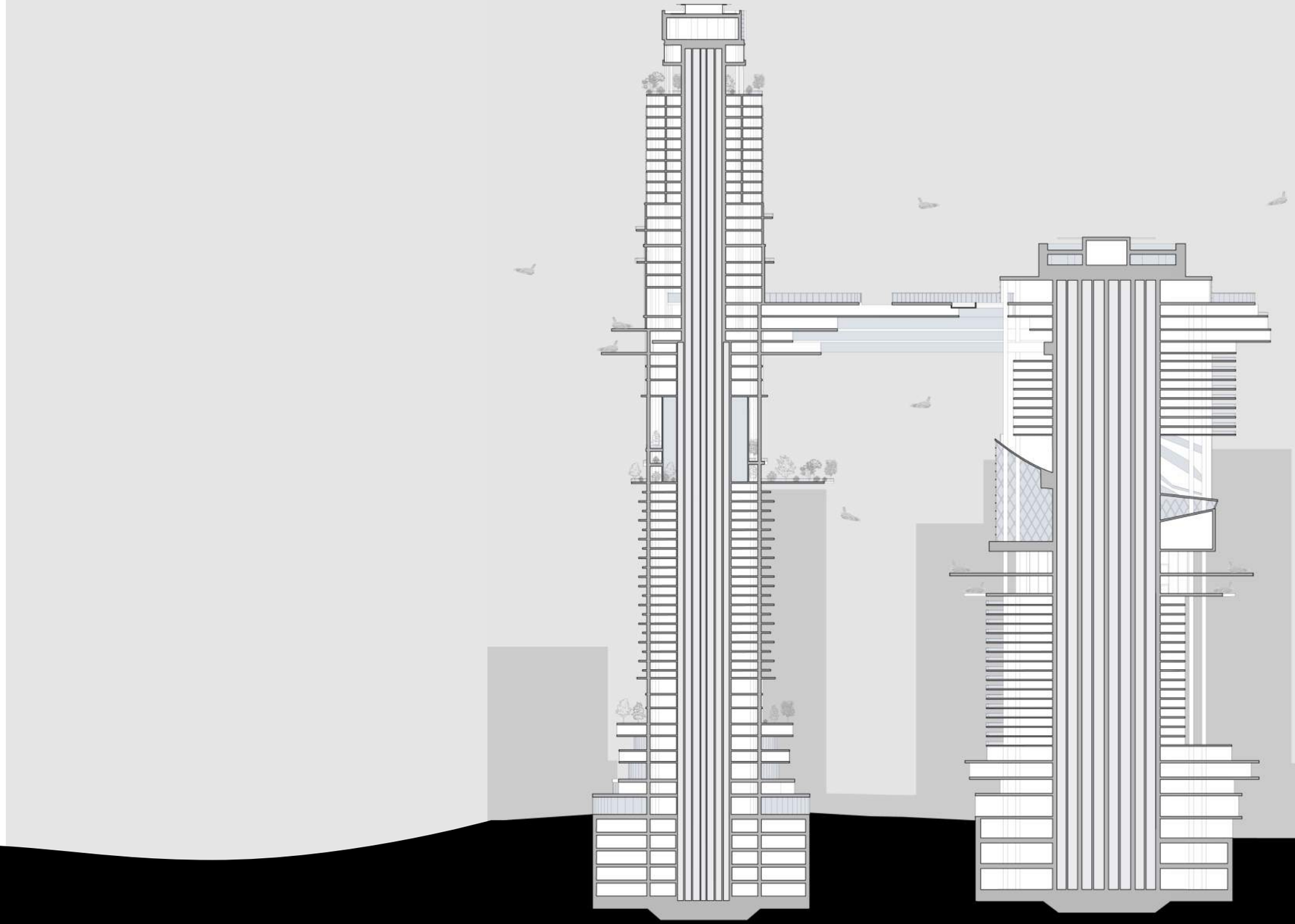


Legend:

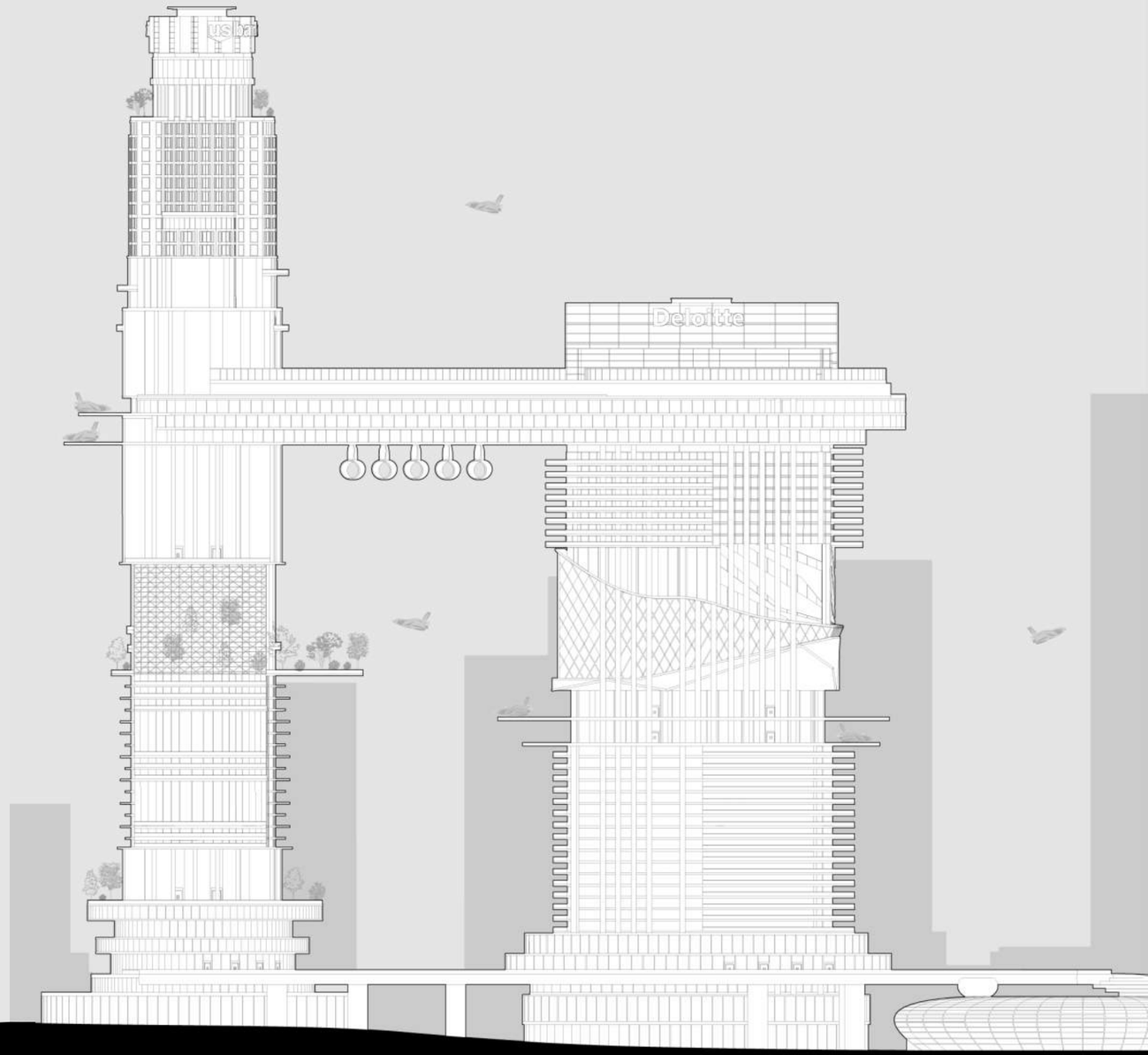
- Restaurant
- Garden
- Residences
- Hotel
- Sports & Recreation
- Hub
- Healthcare
- Retail
- Creative Workspace
- Movie theatre
- Amphitheatre
- Underground Parking



Section



Elevation

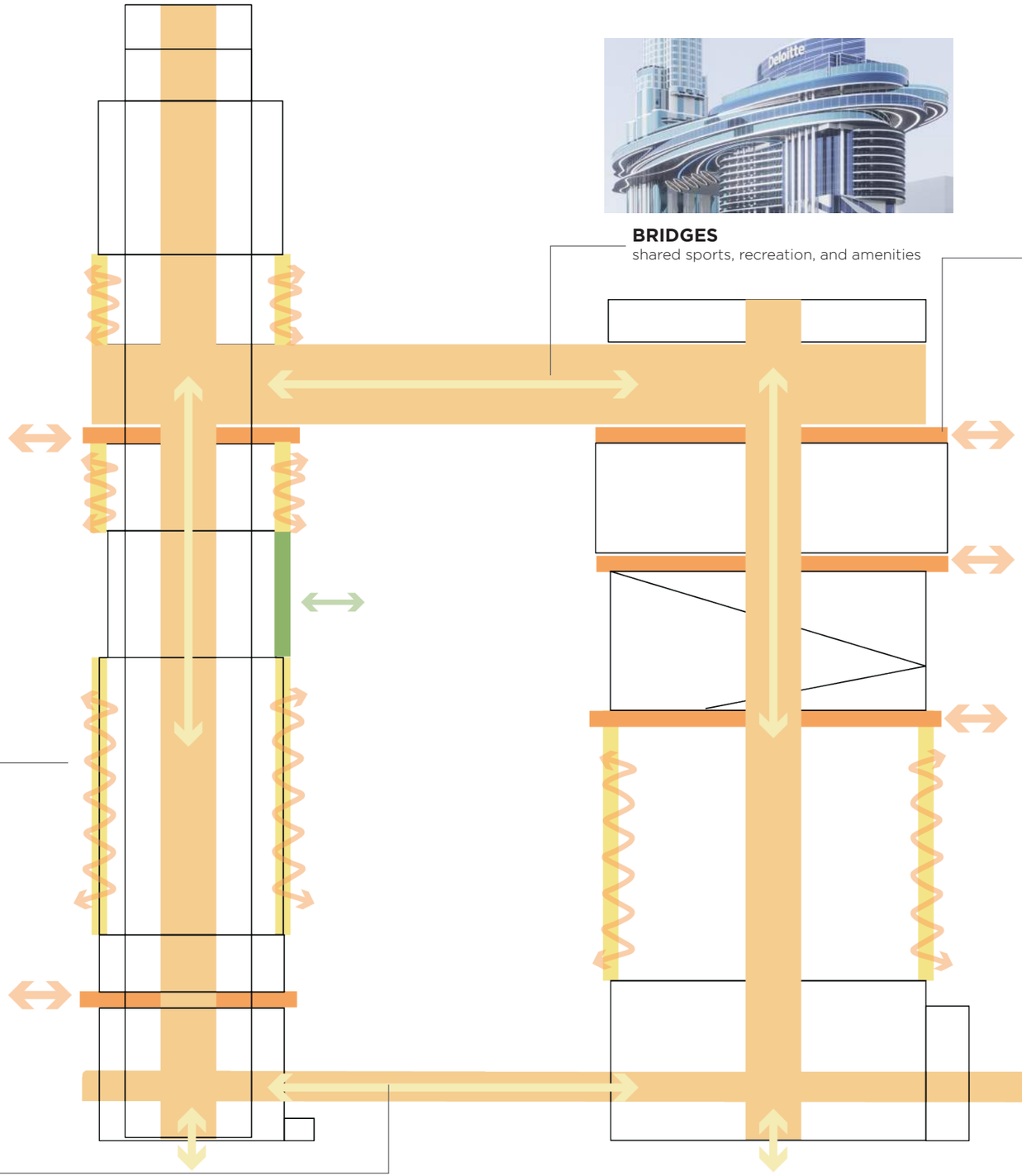


Mobility

DOCKS
access points for residents on each floor.
offers 24h solar charging and parking.

BRIDGES
shared sports, recreation, and amenities

HUBS
rest, recharging, and replenishing for humans and drones. offers 24h solar charging and parking.

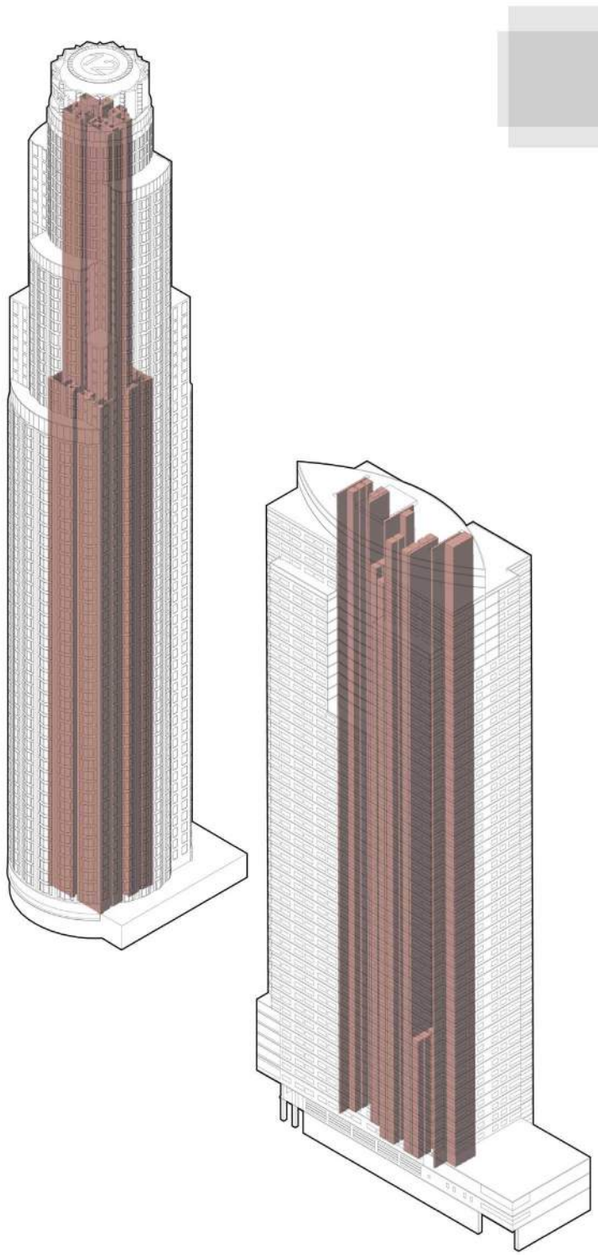


Legend :

- Pedestrian
- Private Drone
- Uber Air
- Public Transit
- Birds

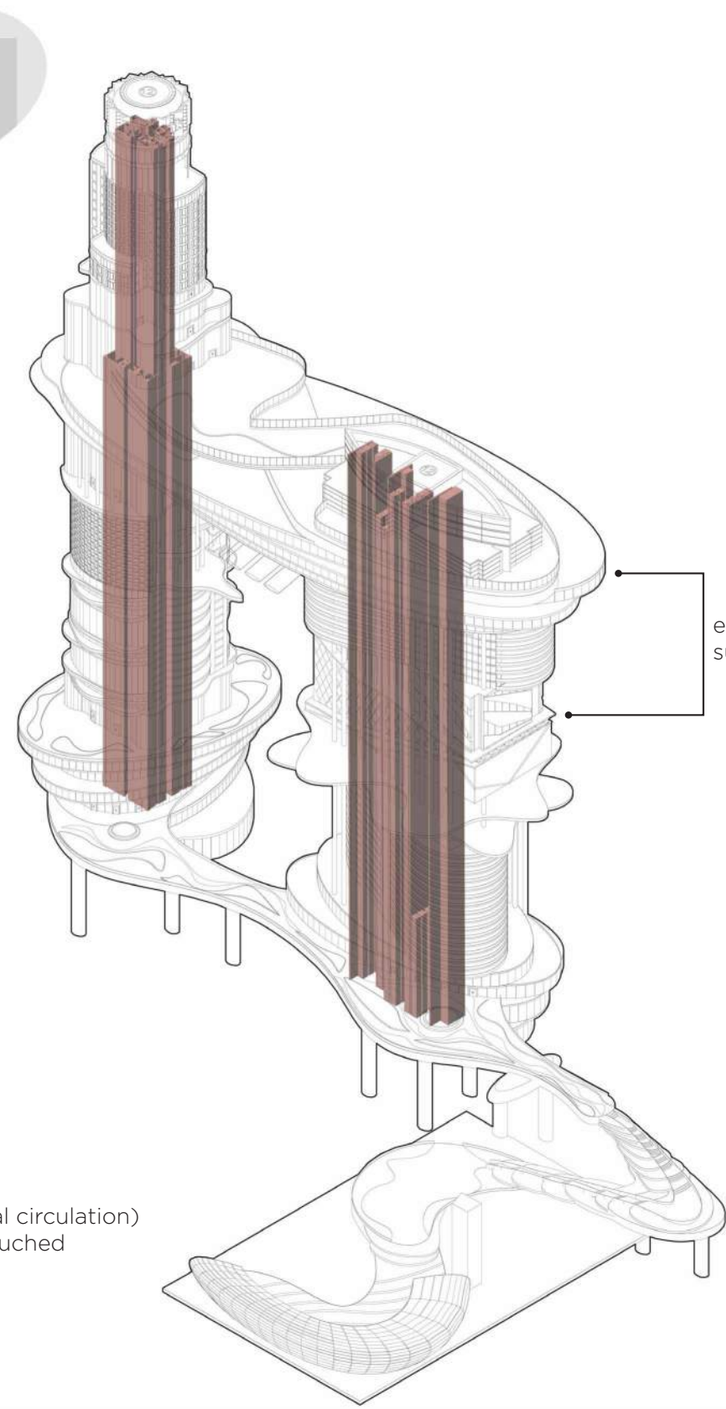
HIGHLINE
connecting the towers to Pershing Square and DTLA.

Sustainability



EMBODIED CARBON

save over 50% of the CO2
used to demolish and rebuild
through adaptive reuse.

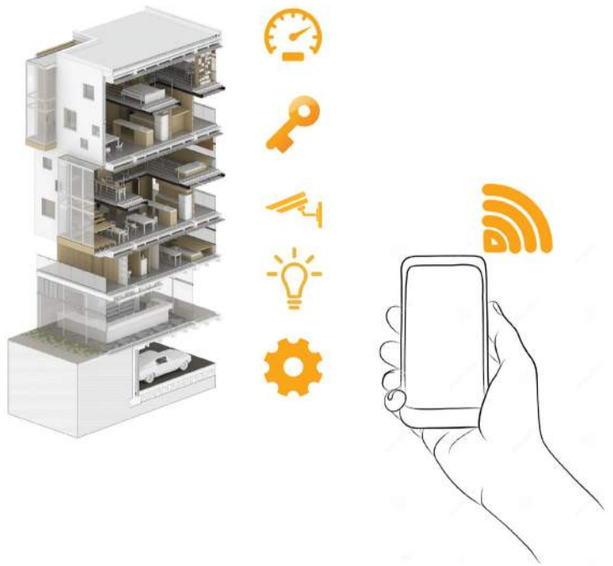


structural core (vertical circulation)
of both buildings untouched

Active Sustainability

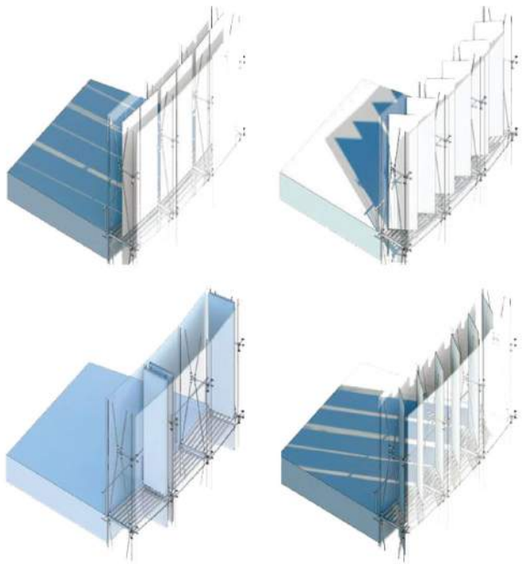
SMART MEP SYSTEMS

upgraded, energy-efficient MEP & HVAC systems throughout the buildings (LEDs, low flush, DCV ventilation, fuel cells, etc.).
Controlled by an adaptive BMS system.

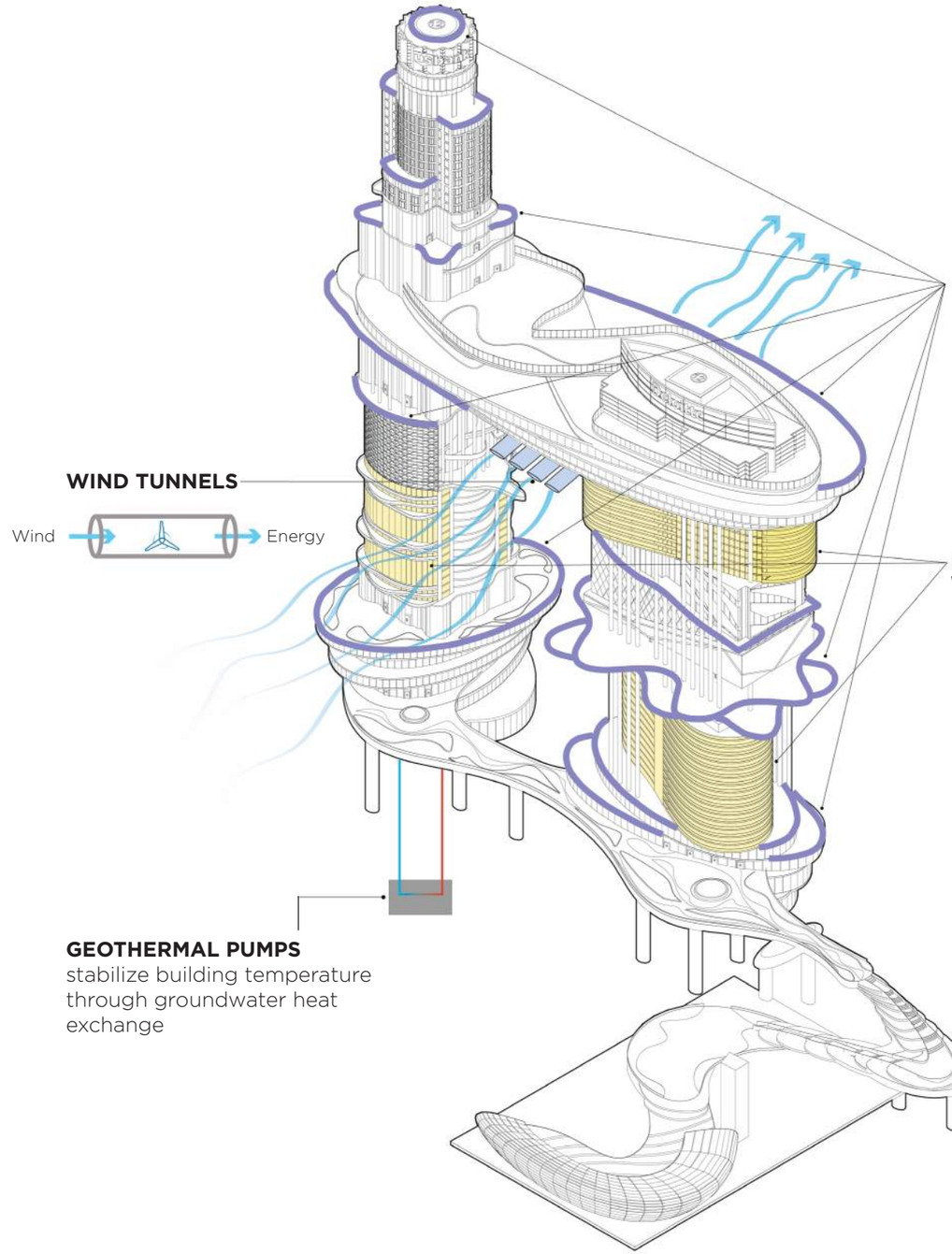


BMS-CONTROLLED WINDOWS

automatically tint facade when temperature comfort limits are reached



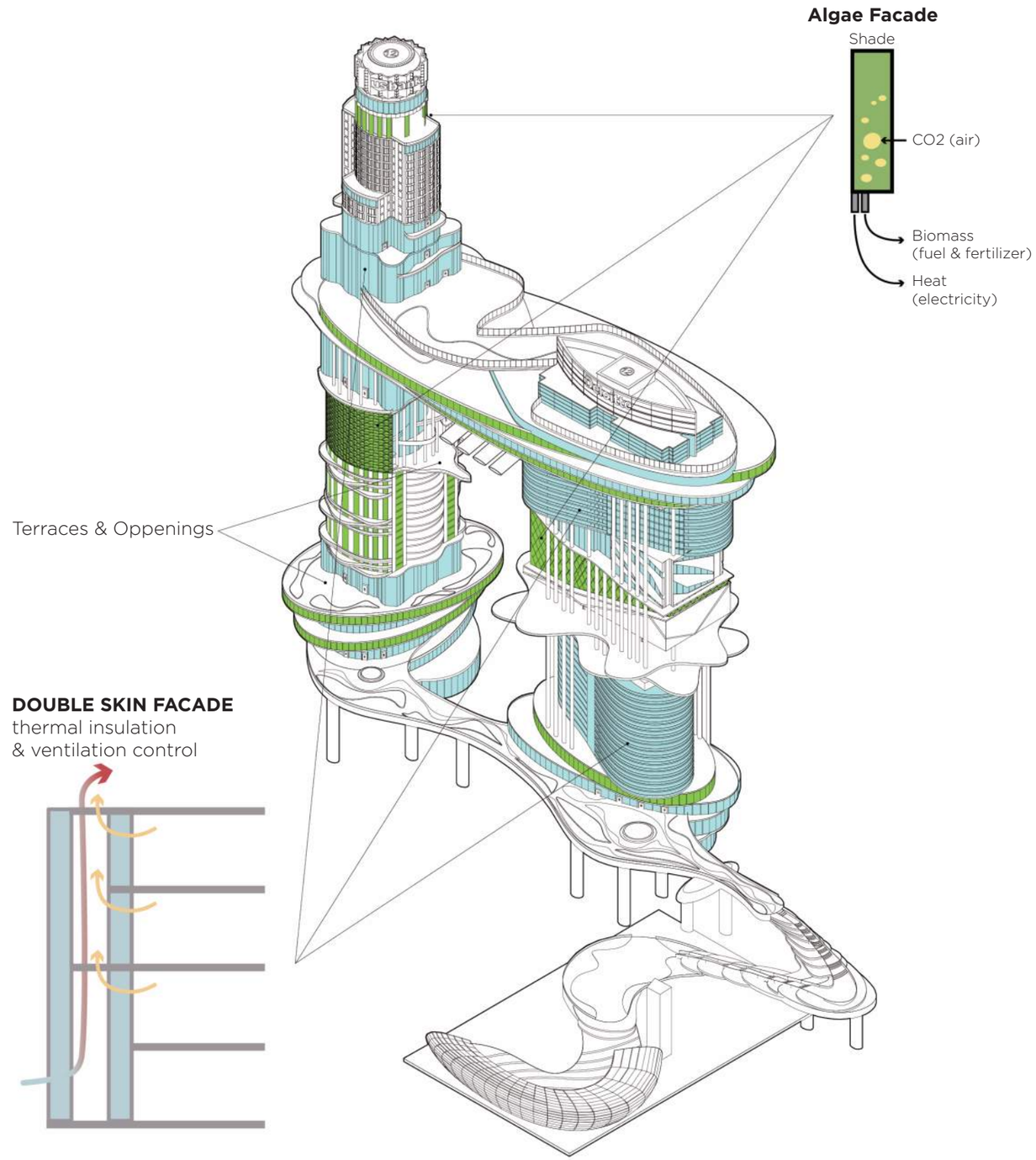
Power over 100%. of building operations, and donate extra energy to DTLA grid.



SOLAR
powers all operations through microg-rid, and offers 24h EV-drone charging stations for residents and visitors.

GEOTHERMAL PUMPS
stabilize building temperature through groundwater heat exchange

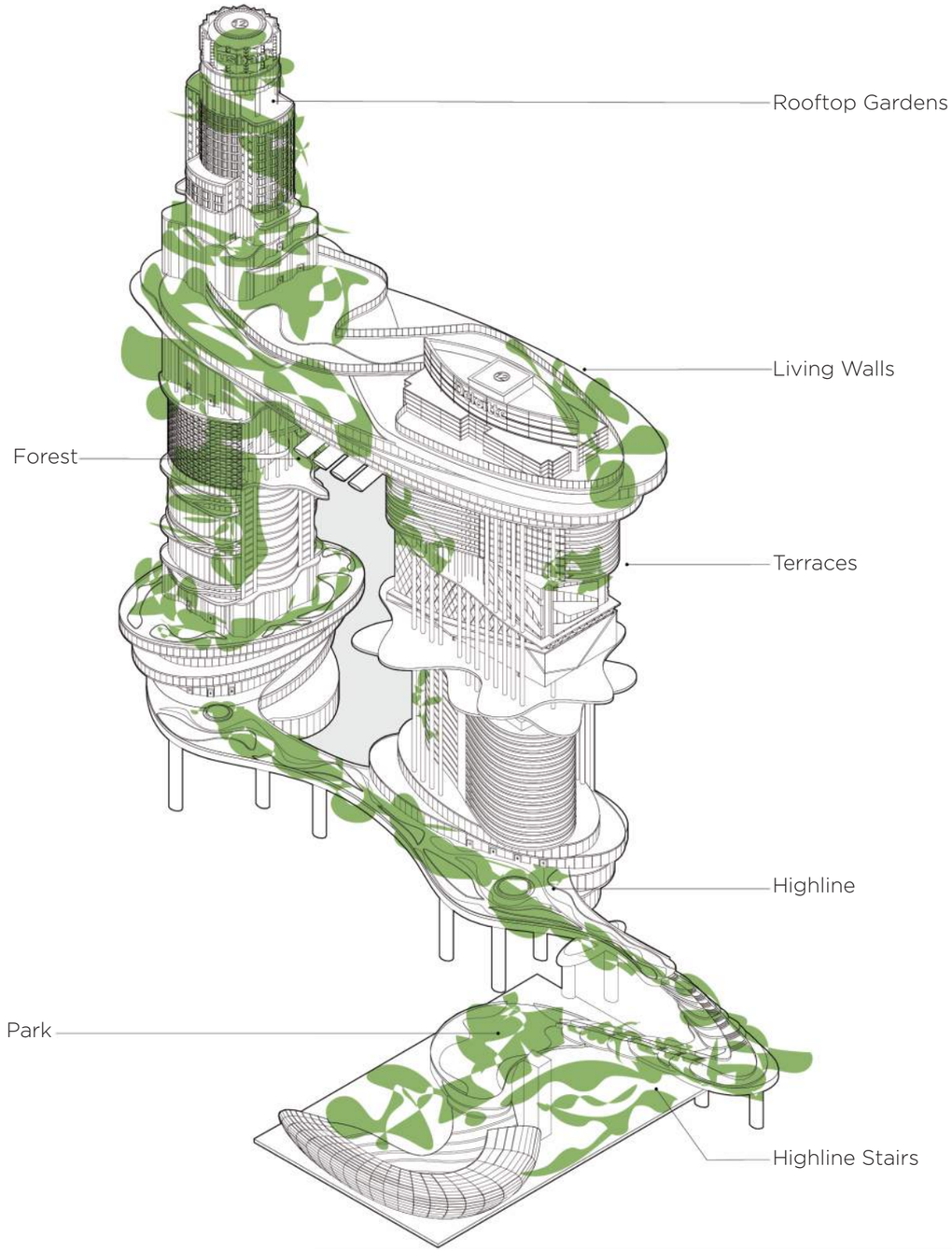
Passive Sustainability



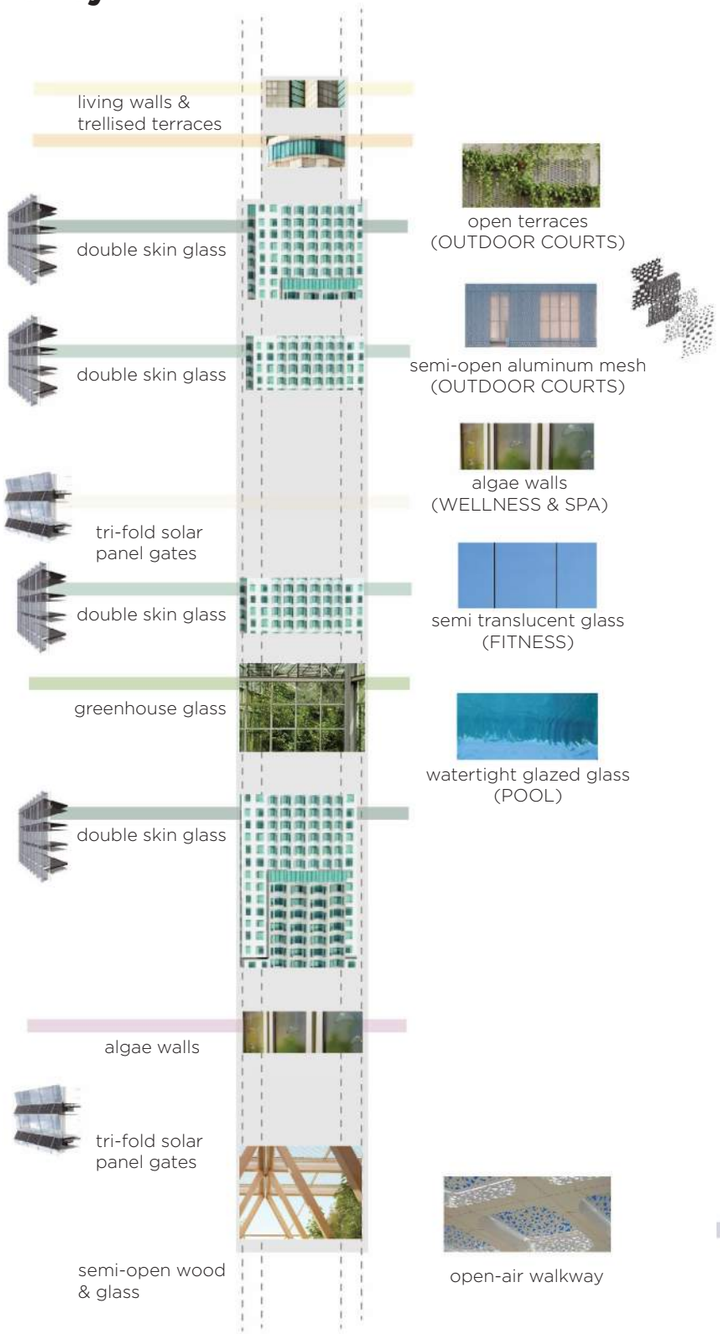
Save over 20% of the average building's operational CO2 emissions with efficient design.

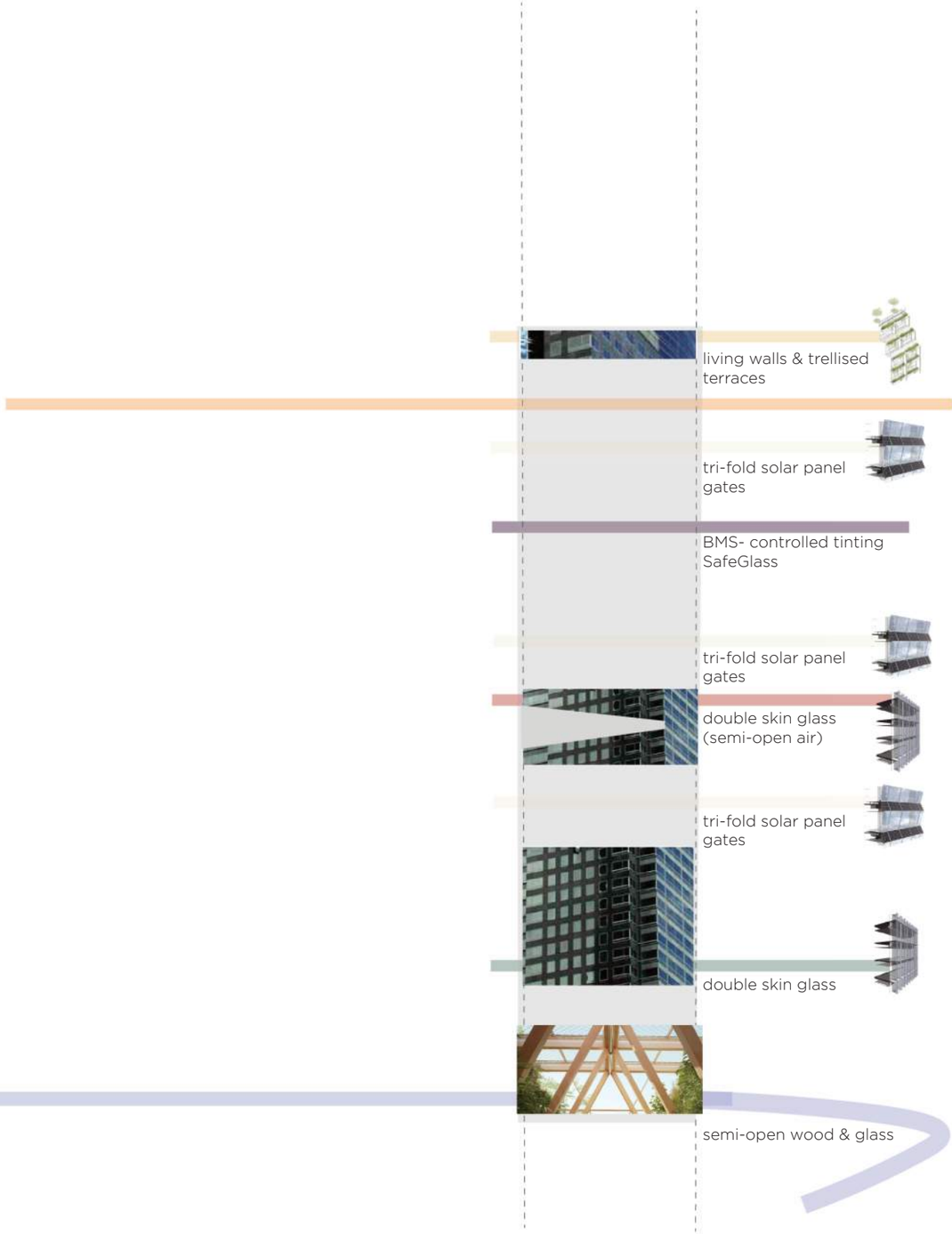
Biophilia

Save 50-80% of the average building‘s energy costs through natural processes, for a greener building and a greener city.

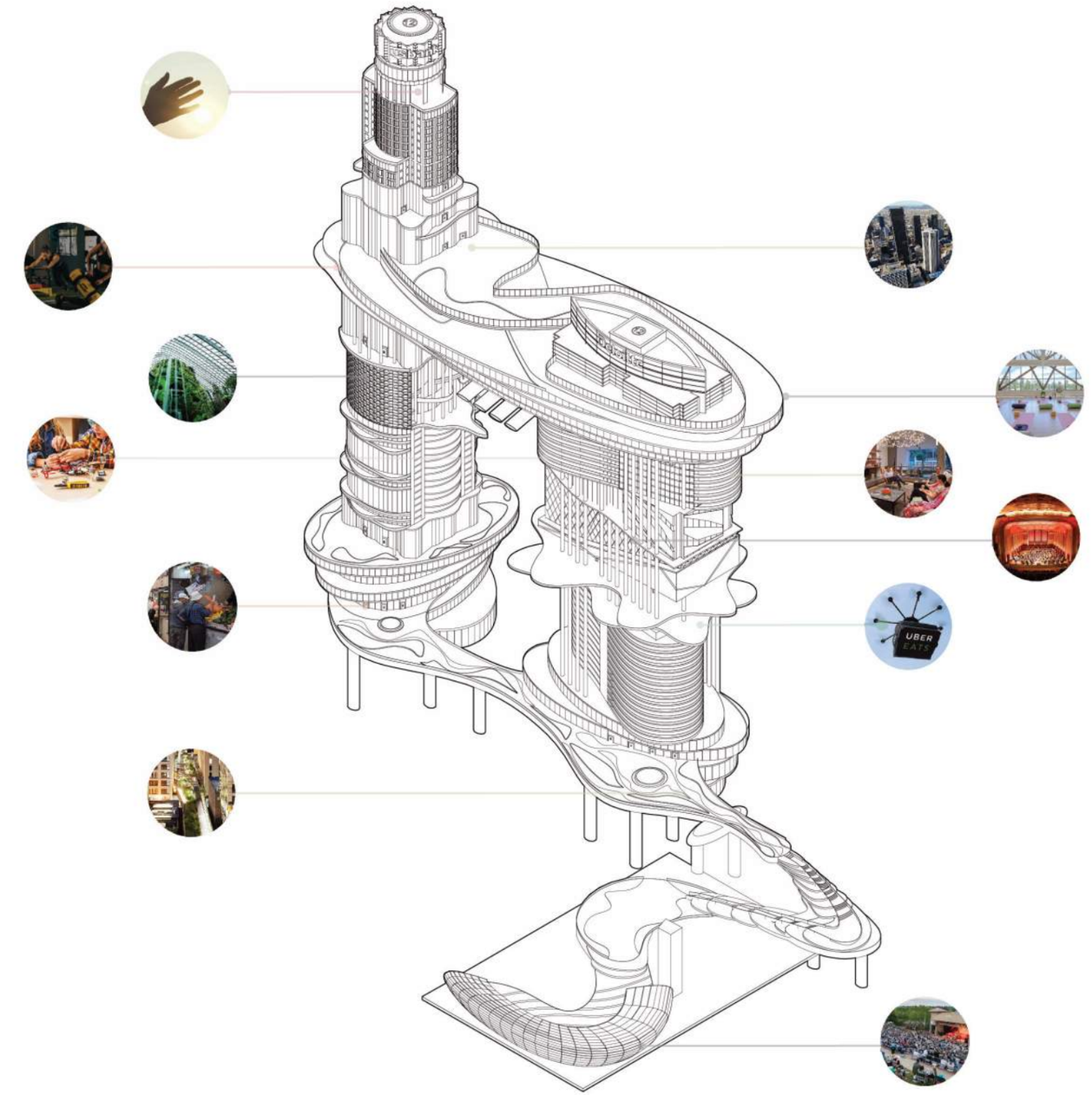


Facade & Materiality



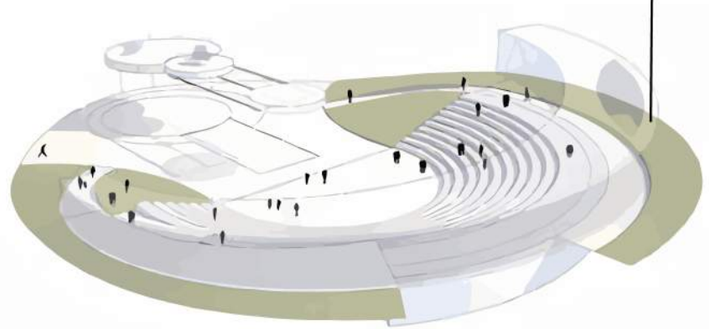


Sensory Experience

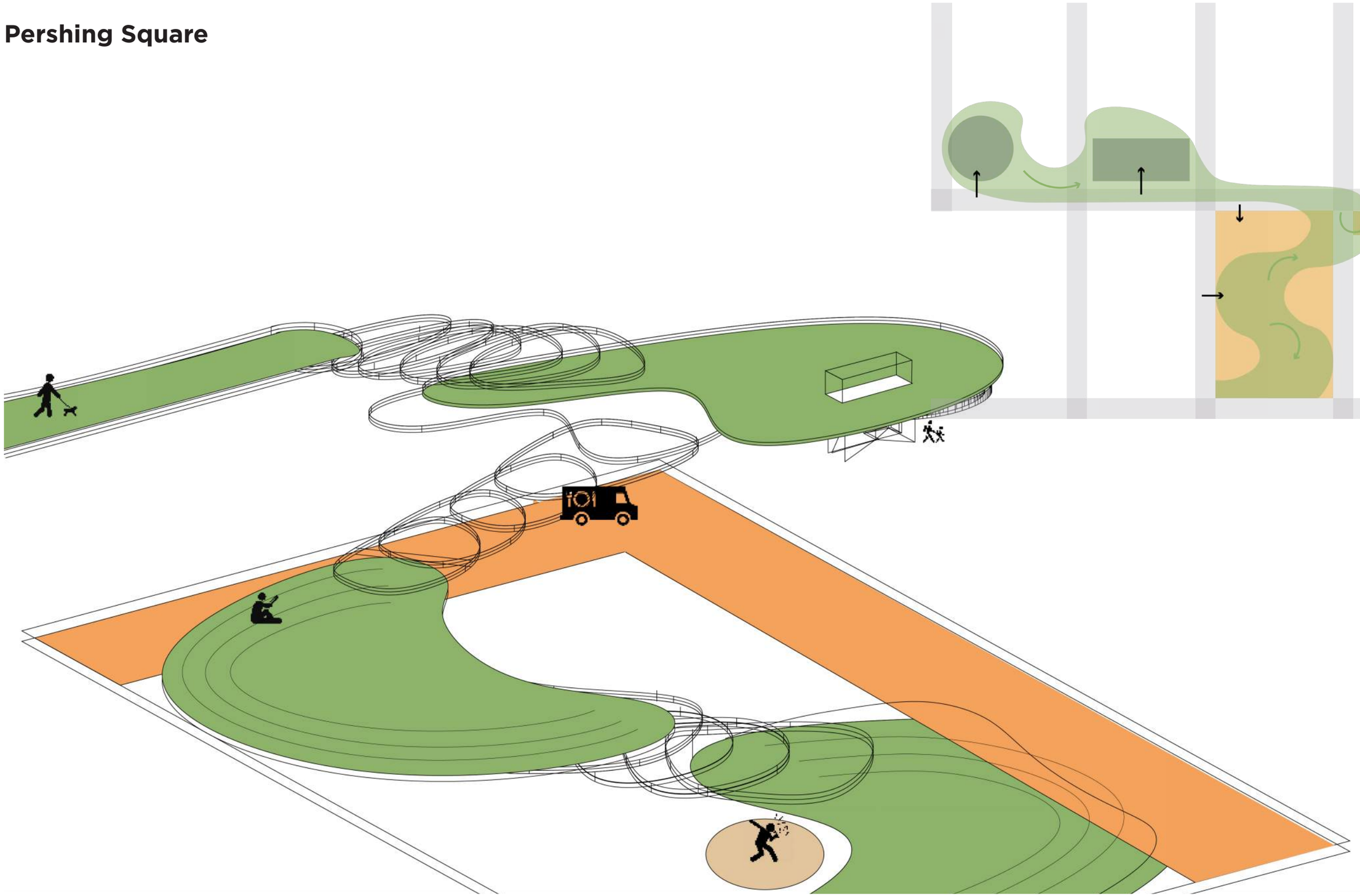


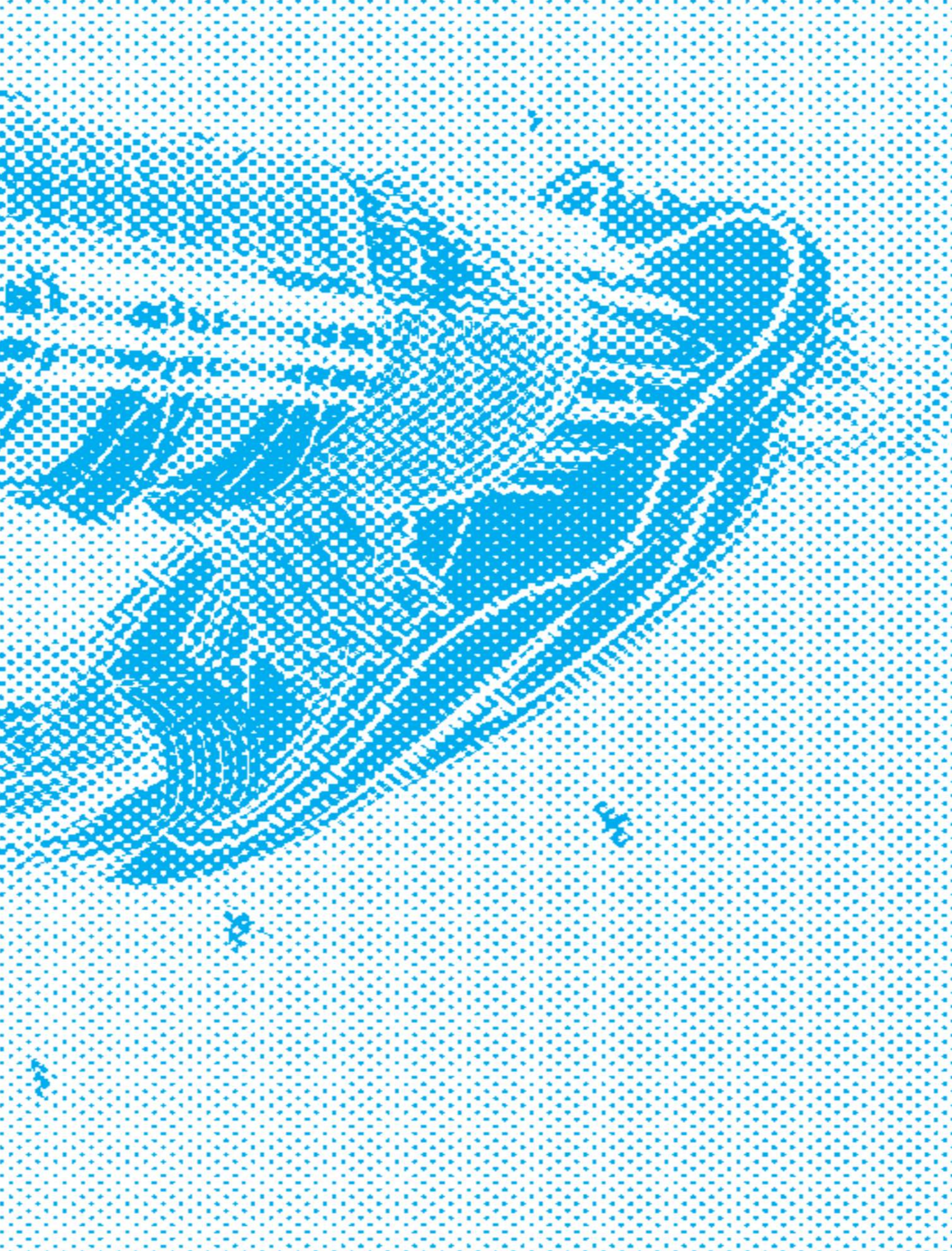
HEAR FEEL SMELL TASTE SEE

Highline & Pershing Square



Pershing Square



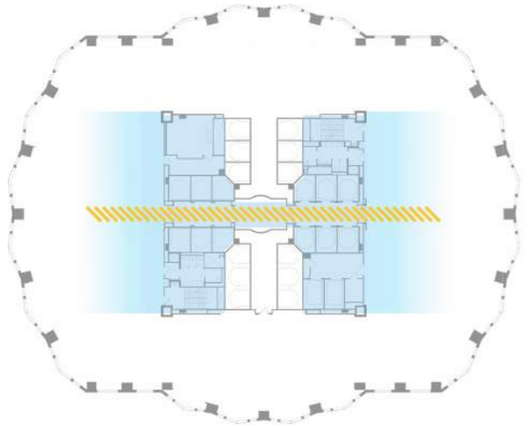


CHAPTER 3 OF 3

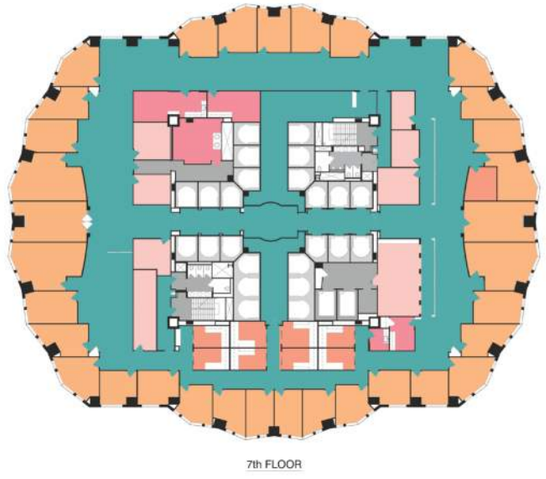
DESIGN


usbank
Deloitte

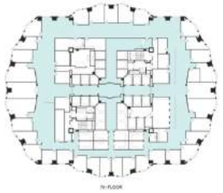
Plan Re-Design

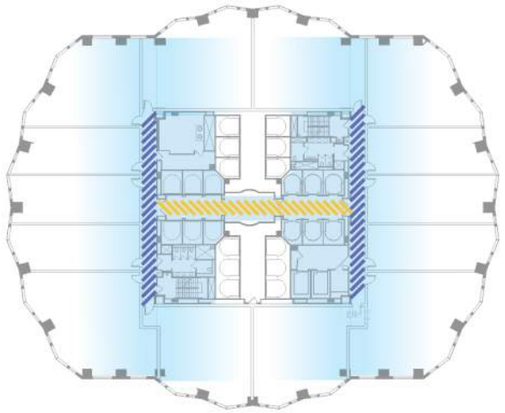


One Path East-West
remove the other side

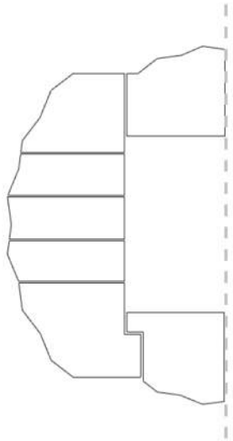


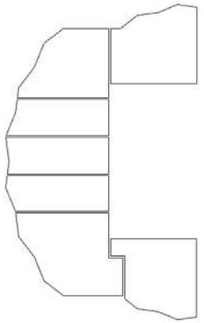
Original Office Corridor
need 6'



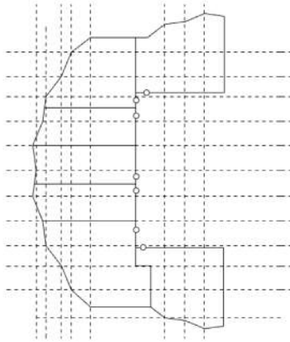


Shrink down side corridors
6' Egress Stair opening

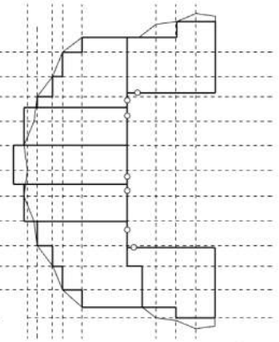




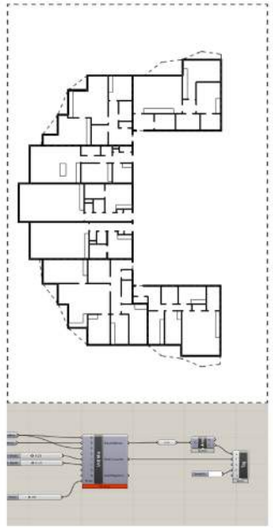
Unit Division
Merge-Outline



Door Spots

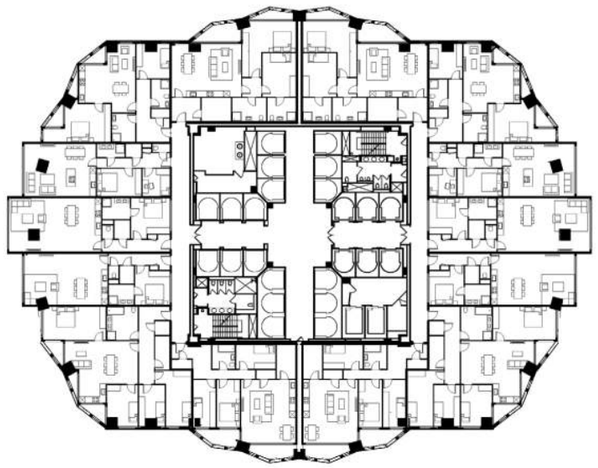


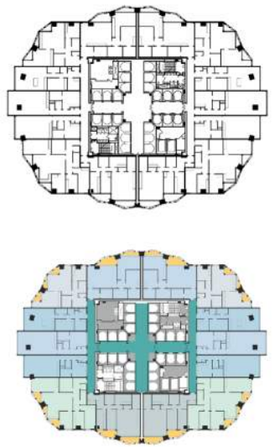
Exterior Wall Lines

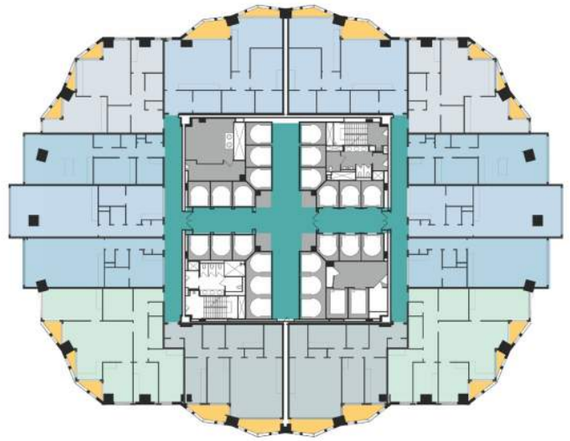


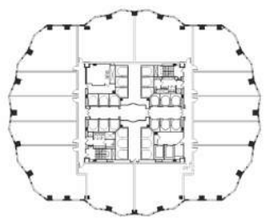
Plan Finder

Plan Re-Design

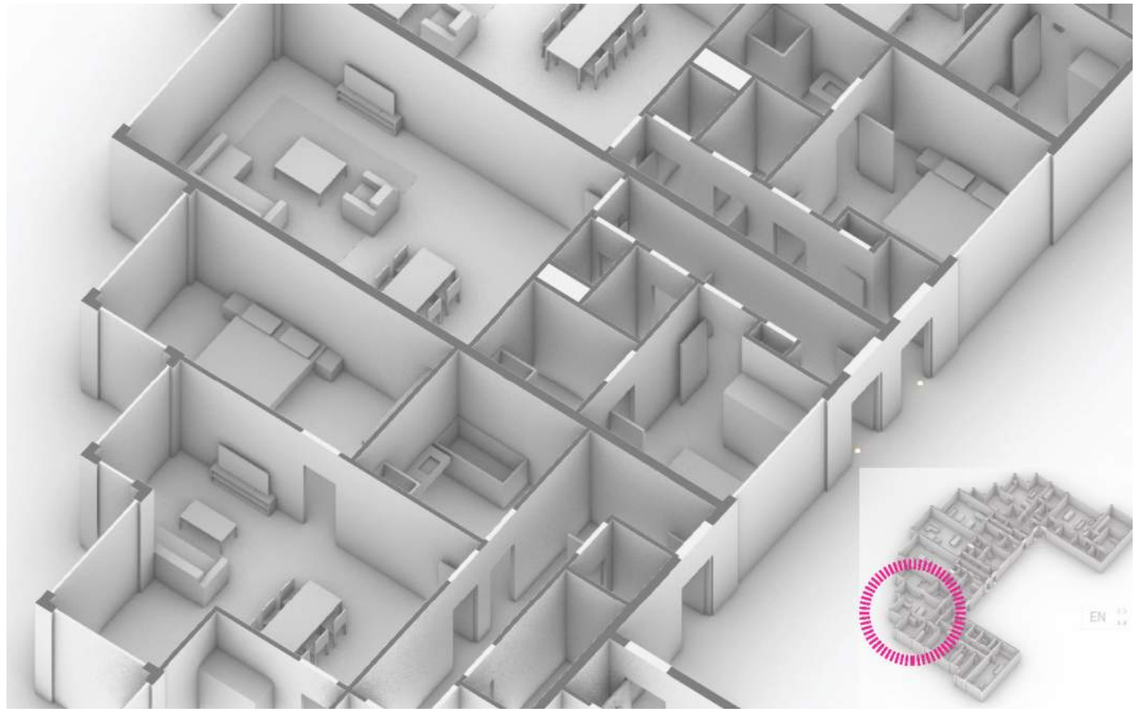






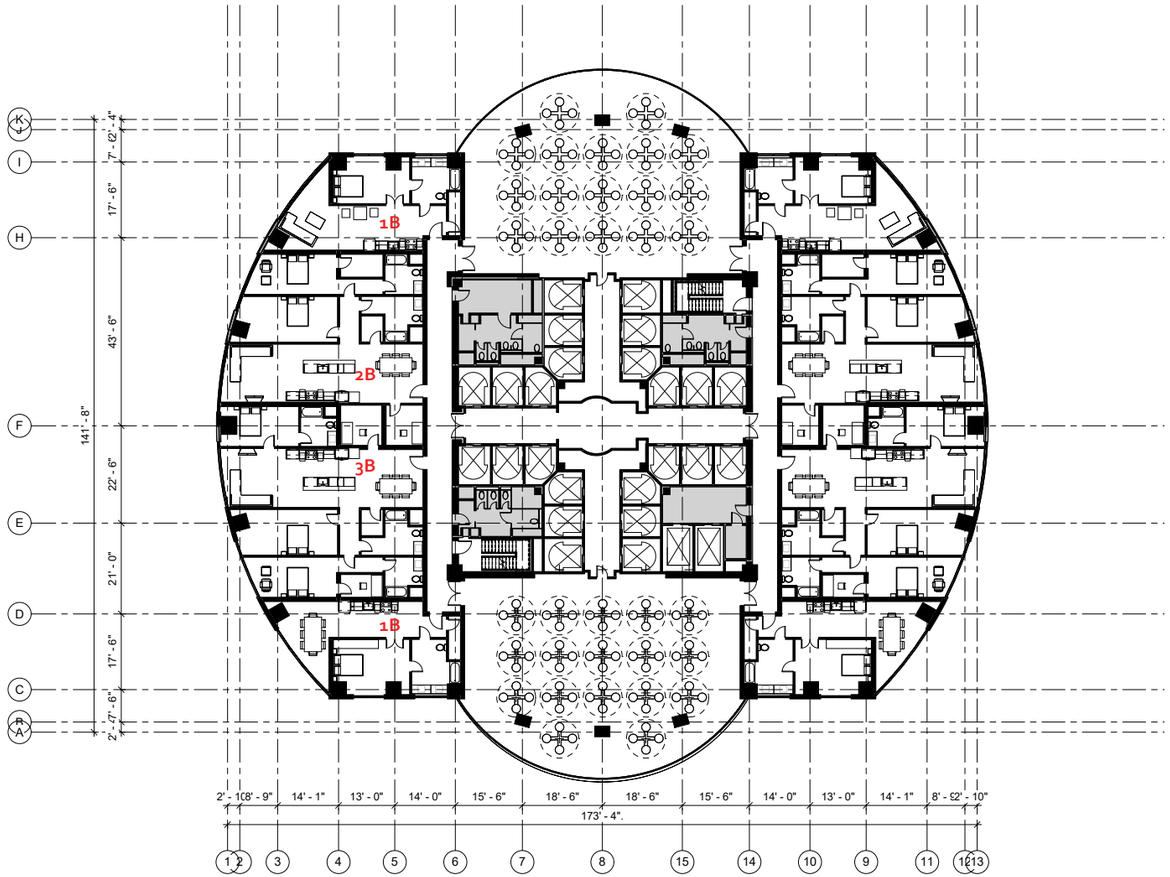


5 units (1b-5b)



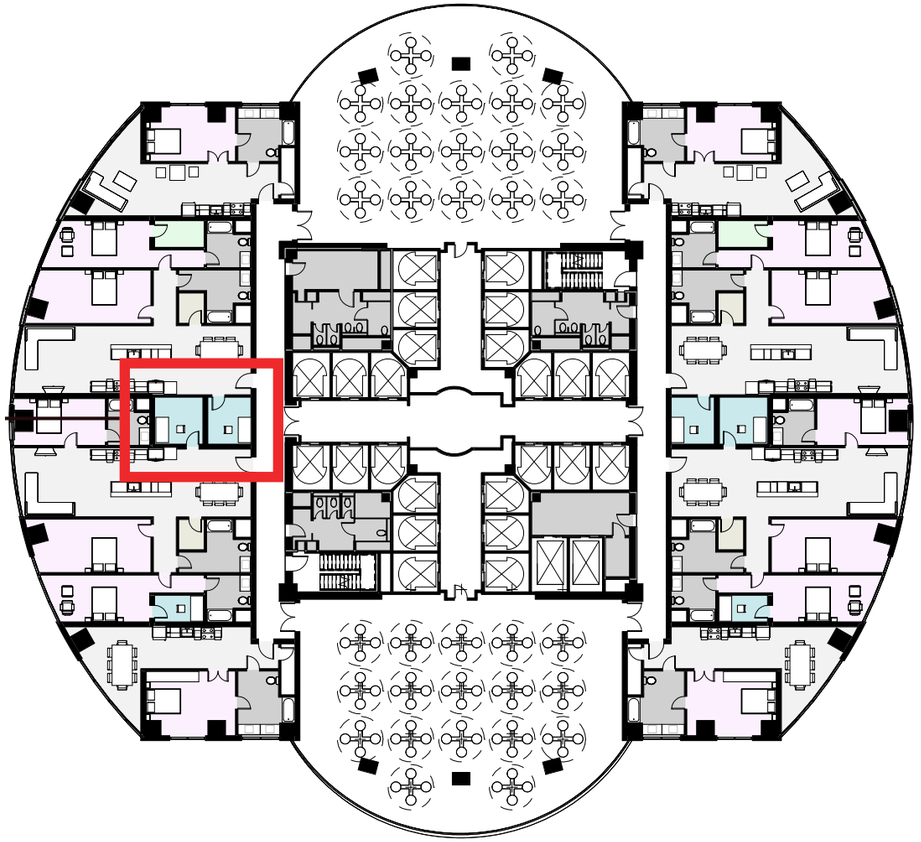
RESIDENTIAL - US BANK PLAN

FLOOR 17 TO 21, 10 FT HIGH
3-S, 3-1B, 1-3B



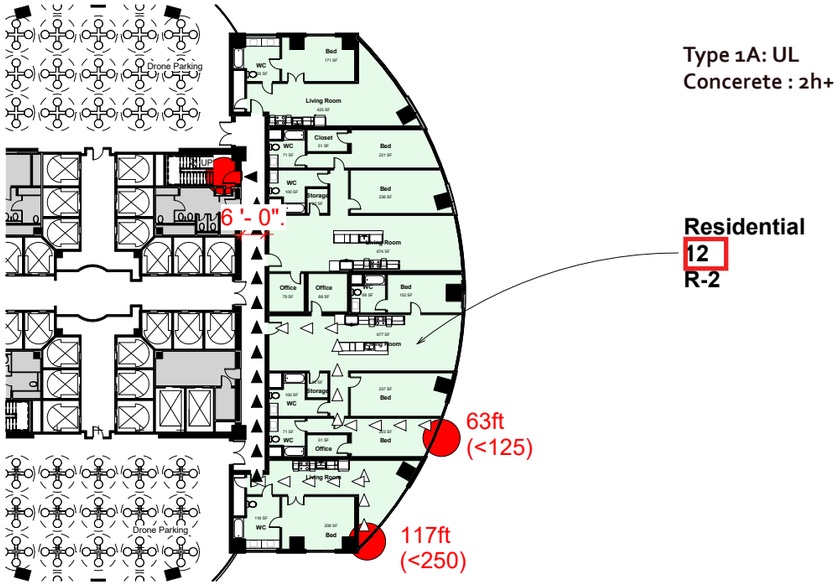
Plan Isometric view

ZONING PLAN
FLOOR 17 TO 21, 10 FT HIGH



- Bed
- Closet
- Hallway
- Living Room
- Office
- Storage
- WC

EGRESS PLAN
FLOOR 17 TO 21, 10 FT HIGH



Type 1A: UL
Concerete : 2h+

Residential
12
R-2

All: 12 ppl <20 ppl

1. CBC: Chapter 10- Table: Maximum Common Path of egress travel distance with sprinkler : - Residential areas: 125 ft

2. CBC: Chapter 10- Table: Exit Access travel distance with sprinkler : - Residential areas: 250 ft

3. The width of Common Path is caculated by multiplying the OL by egress capacity factor of 0.2 inch per occupant.
   But minimum door width is 36"=3ft

   12ppl x 0.2 in/ppl=6 inch < 3 ft (clear door width in current plan)

4. The width of Corridor/ Stairway is caculated by multiplying the OL by egress capacity factor of 0.3 inch per occupant.
   But minimum stair width is 44"=3ft 8in

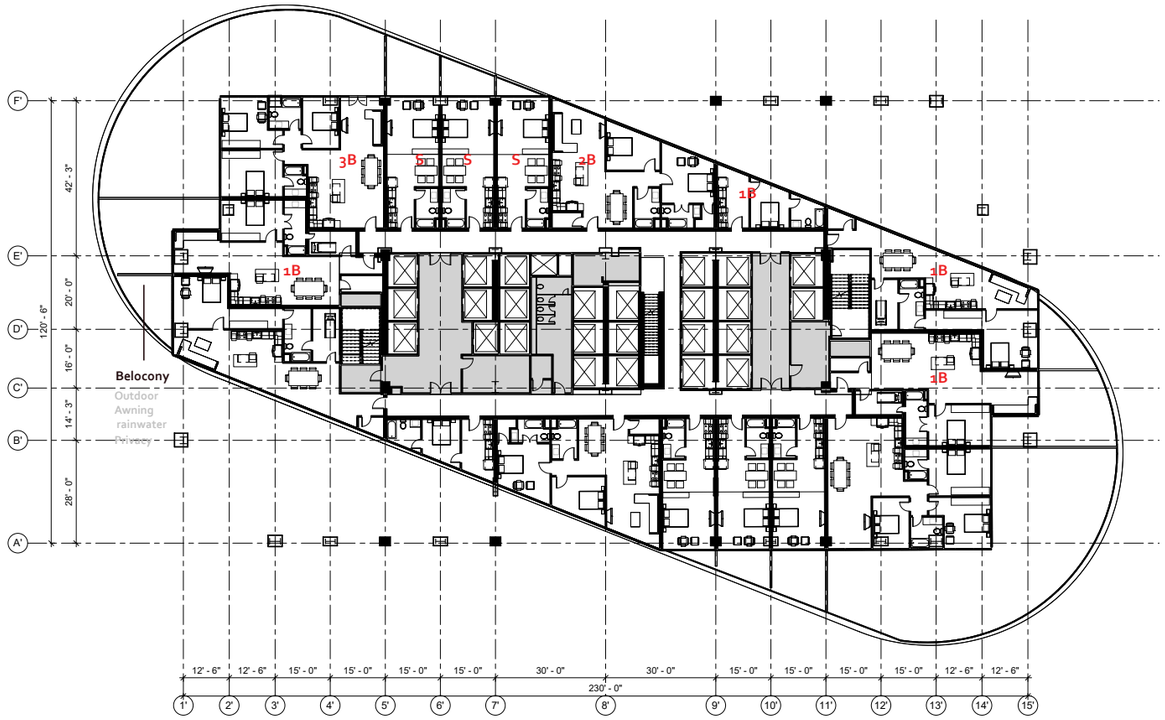
   12ppl x 0.3in/ppl=3.6 inch < 6 ft (clear corridor width in current plan)

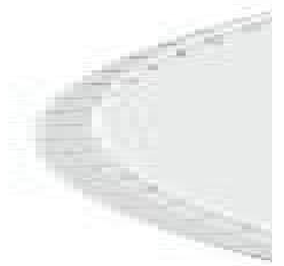
5. Corridor length:
   CBC: Chapter 10 - Dead End Corridor do not exceed 50 feet for occupany in group R-2.

Both longest CP and EA satify the codes in terms of egress exit for fire safety

RESIDENTIAL - GAS TOWER PLAN

FLOOR 11 TO 34, 10 FT HIGH
3-S, 3-1B, 1-3B



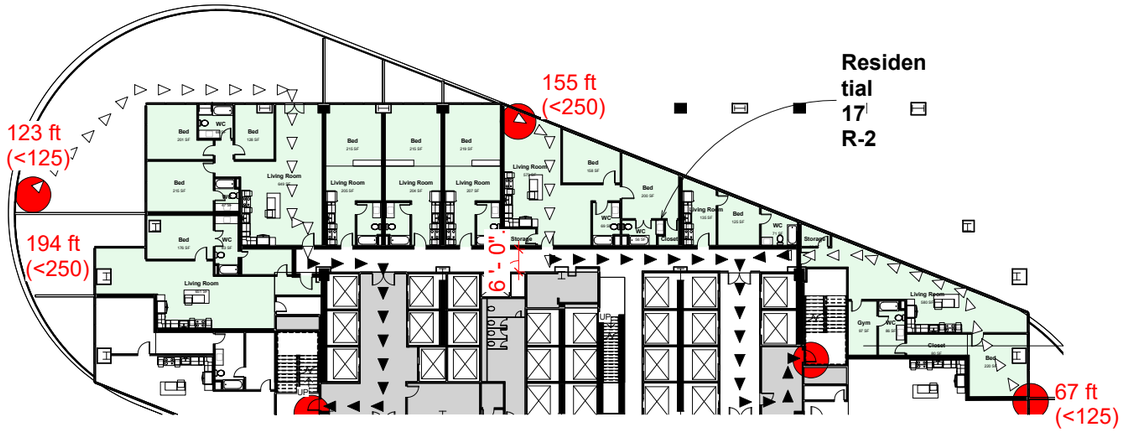


Plan Isometric view

ZONING PLAN
FLOOR 11 TO 34, 10 FT HIGH

- Bed
- Closet
- Gym
- Hallway
- Living Room
- Storage
- WC

EGRESS PLAN
FLOOR 11 TO 34, 10 FT HIGH



All: 17 ppl <20 ppl

1. CBC: Chapter 10- Table: Maximum Common Path of egress travel distance with sprinkler : - Residential areas: 125 ft

2. CBC: Chapter 10- Table: Exit Access travel distance with sprinkler : - Residential areas: 250 ft

3. The width of Common Path is caculated by multiplying the OL by egress capacity factor of 0.2 inch per occupant.
   But minimum door width is 36"=3ft

   17ppl x 0.2 in/ppl=3.4 inch < 3 ft (clear door width in current plan)

4. The width of Corridor/ Stairway is caculated by multiplying the OL by egress capacity factor of 0.3 inch per occupant.
   But minimum stair width is 44"=3ft 8in

   17ppl x 0.3in/ppl=5.1 inch < 6 ft (clear stair width in current plan)

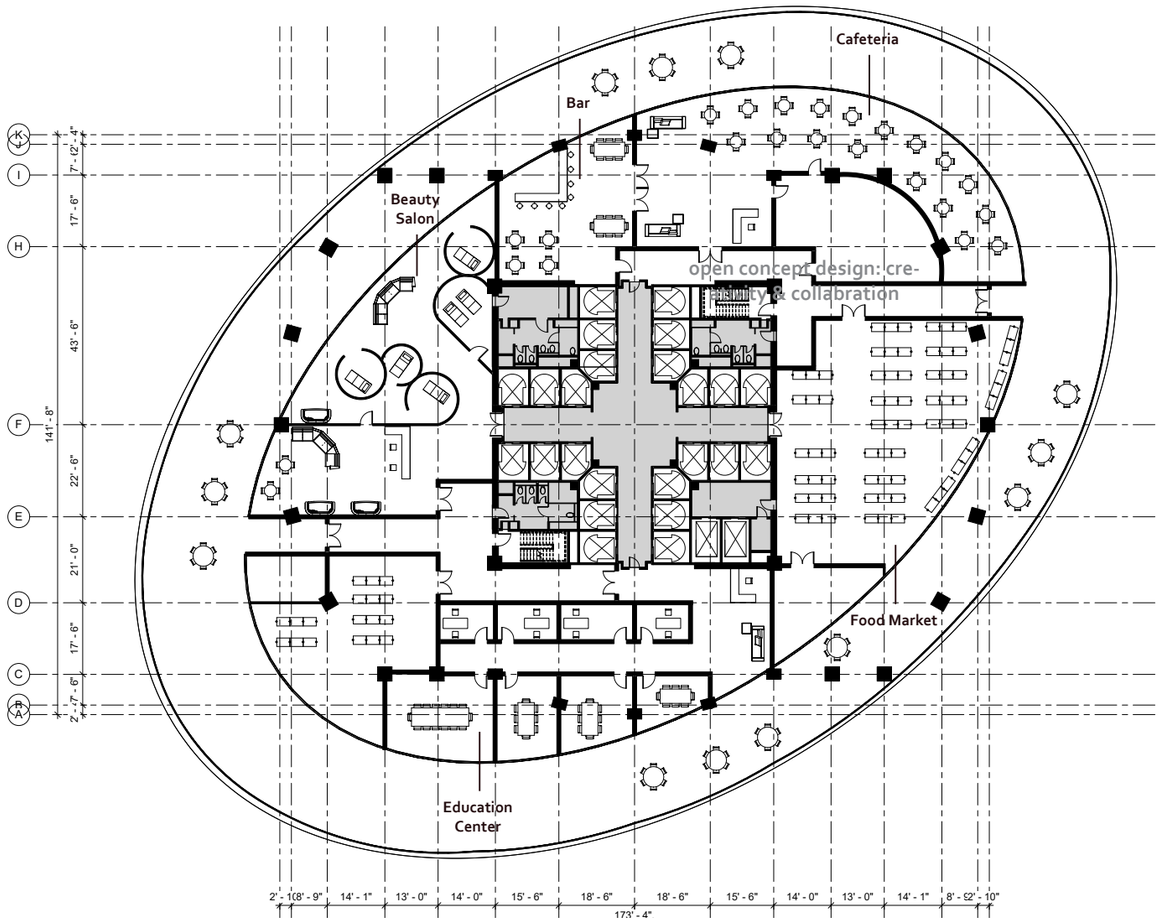
5. Corridor length:
   CBC: Chapter 10 - Dead End Corridor do not exceed 50 feet for occupany in group R-2.

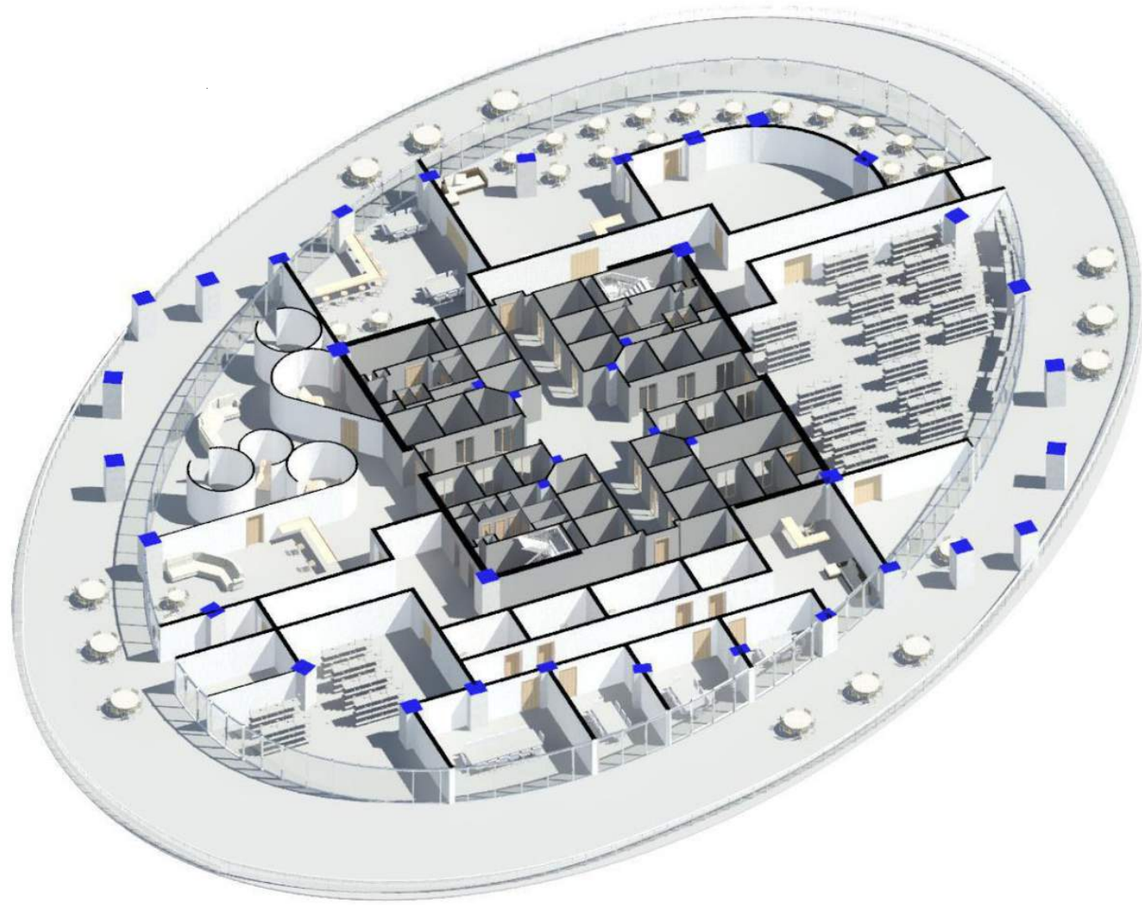
Both longest CP and EA satify the codes in terms of egress exit for fire safety

COMMERCIAL - US BANK PLAN

FLOOR 1 TO 10, 12 FT HIGH

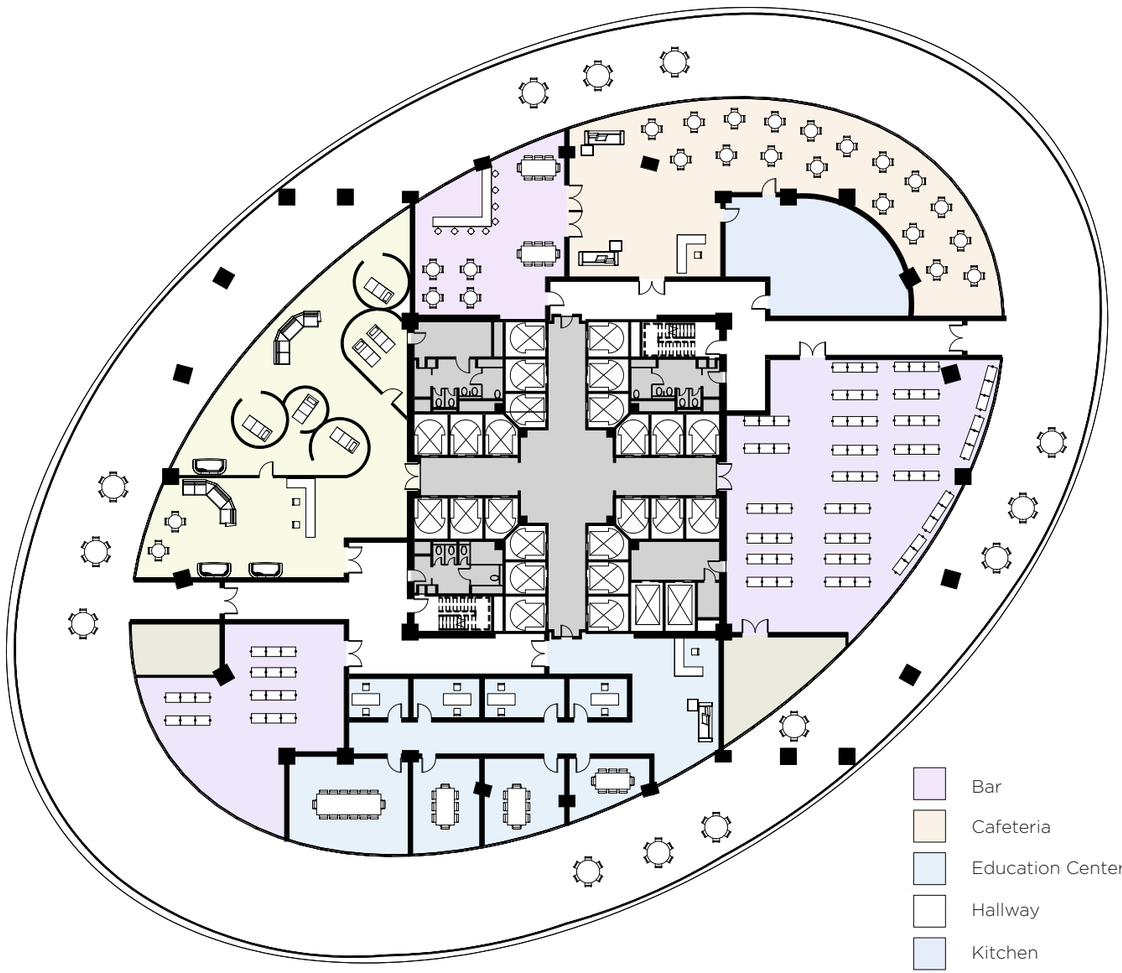
Mixed use concept design: dynamity & a wide variety use





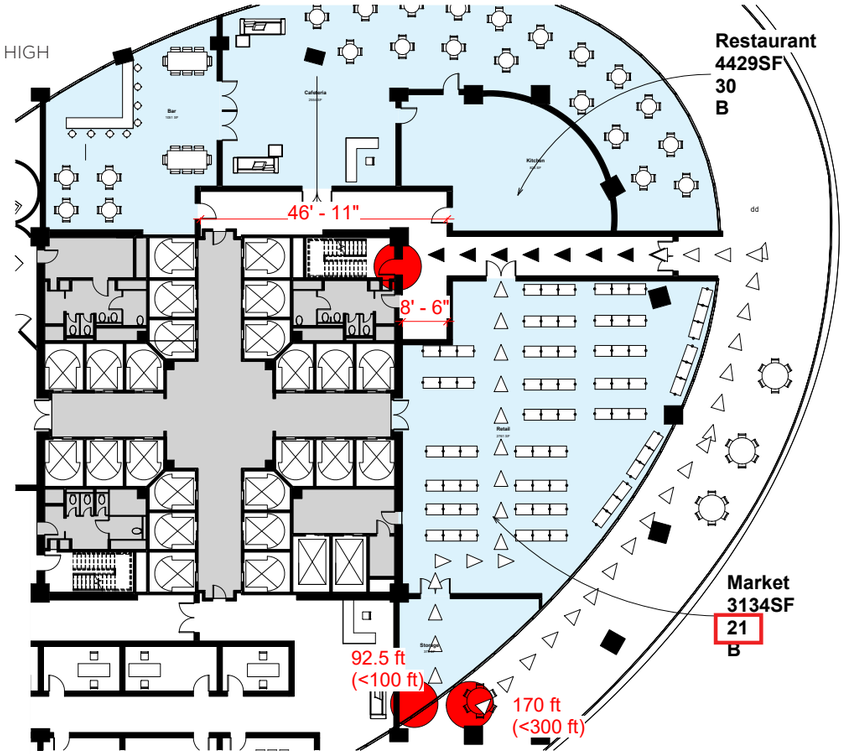
Plan Isometric view

ZONING PLAN
FLOOR 1 TO 10, 12 FT HIGH



- Bar
- Cafeteria
- Education Center
- Hallway
- Kitchen
- Outdoor Terrace
- Retail
- Spa
- Storage

EGRESS PLAN
FLOOR 1 TO 10, 12 FT HIGH



CBC: Chapter 10: Maximum Floor Area Allowance Per Occupant-
Bussiness : 150 gross
Resturant: (1051+2554+824)/150=30 ppl <49ppl
Retail: (373+2761)/150=21 ppl <49ppl

All: 30+21 = 51ppl, so 2 exits needed

1. CBC: Chapter 10- Table: Maximum Common Path of egress travel distance with sprinkler : - Bussiness areas: 100 ft

2. CBC: Chapter 10- Table: Exit Access travel distance with sprinkler : - Bussiness areas: 300 ft

3. The width of Common Path is caculated by multiplying the OL by egress capacity factor of 0.2 inch per occupant.
   But minimum door width is 36"=3ft

   49ppl x 0.2 in/ppl=9.8 inch < 5ft 8in (clear door width in current plan)

4. The width of Corridor/ Stairway is caculated by multiplying the OL by egress capacity factor of 0.3 inch per occupant.
   But minimum stair width is 44"=3ft 8in

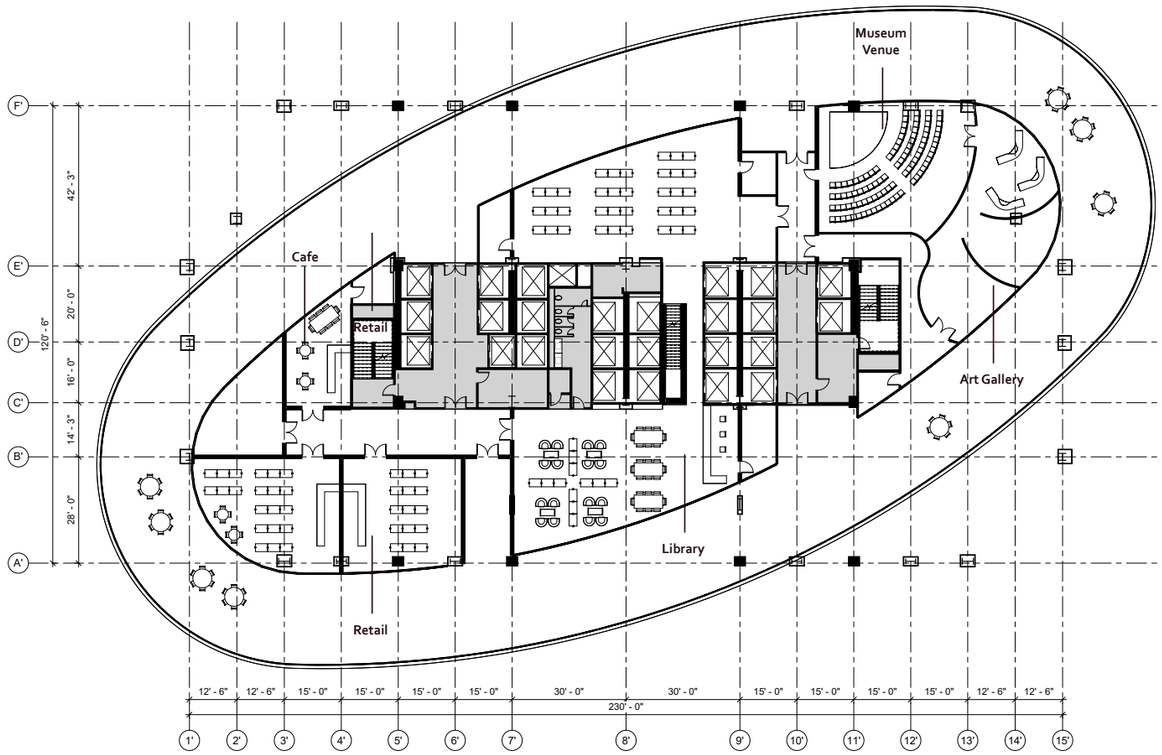
   51ppl x 0.3in/ppl=15.3 inch < 8.5 ft (clear stair width in current plan)

5. Corridor length:
   CBC: Chapter 10 - Dead End Corridor do not exceed 50 feet for occupany in group B. In our case, this is going to be a sprinklered building so the dead end corridor is 50 ft - this information is usually found in the IBC

Both longest CP and EA satify the codes in terms of egress exit for fire safety

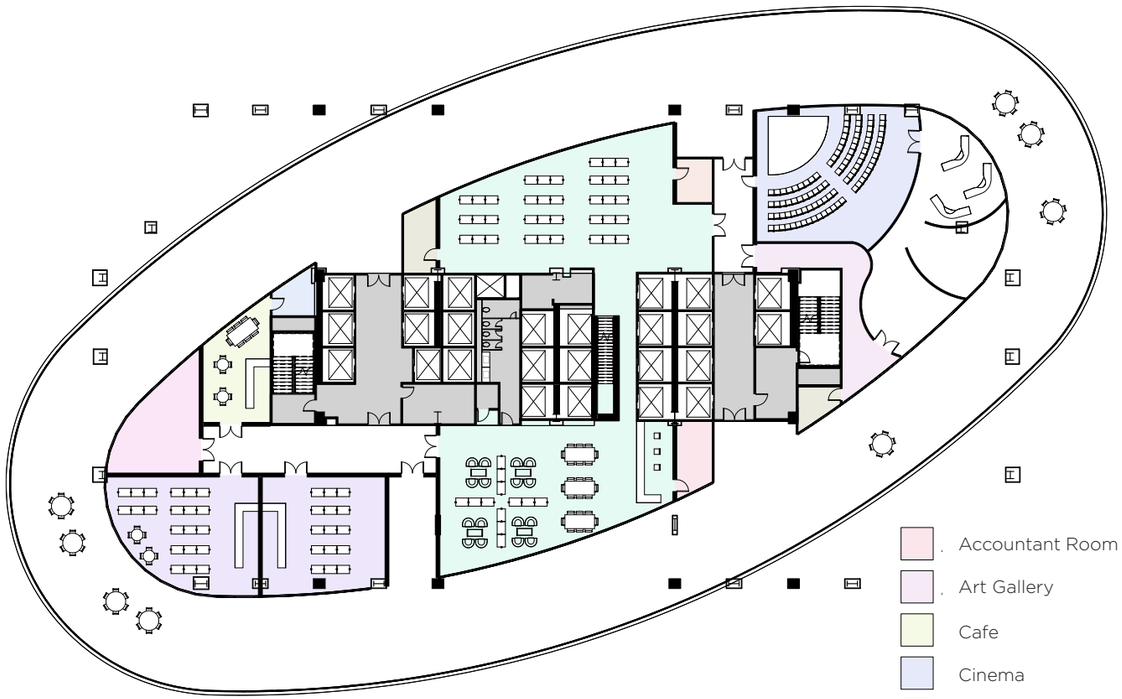
COMMERCIAL - GAS TOWER PLAN

FLOOR 1 TO 10, 12 FT HIGH



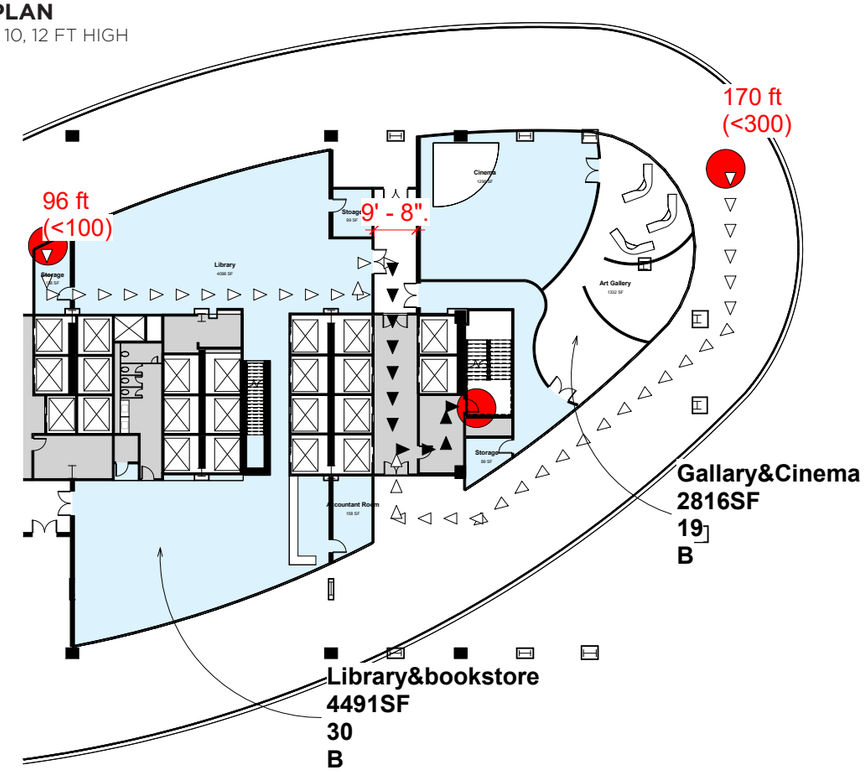
Plan Isometric view

ZONING PLAN
FLOOR 1 TO 10, 12 FT HIGH



- Accountant Room
- Art Gallery
- Cafe
- Cinema
- Hallway
- Kitchen
- Library
- Nail Beauty
- Outdoor Terrace
- Retail
- Storage
- Storage

EGRESS PLAN
FLOOR 1 TO 10, 12 FT HIGH



CBC: Chapter 10- Table: Maximum Floor Area Allowance Per Occupant-
Bussiness areas: 150 gross
Bookstore: (4096+138+158+99)/150=30 ppl <49ppl
Cinema: (1296+1332+89)/150=19 ppl <49ppl

All: 30+19 = 49ppl

1. CBC: Chapter 10- Table: Maximum Common Path of egress travel distance with sprinkler : - Bussiness areas: 100 ft

2. CBC: Chapter 10- Table: Exit Access travel distance with sprinkler : - Bussiness areas: 300 ft

3. The width of Common Path is caculated by multiplying the OL by egress capacity factor of 0.2 inch per occupant.
   But minimum door width is 36"=3ft

   49ppl x 0.2 in/ppl=9.8 inch < 5ft 8in (clear door width in current plan)

4. The width of Corridor/ Stairway is caculated by multiplying the OL by egress capacity factor of 0.3 inch per occupant.
   But minimum stair width is 44"=3ft 8in

   49ppl x 0.3in/ppl=14.7 inch < 9ft 8in (clear corridor width in current plan)

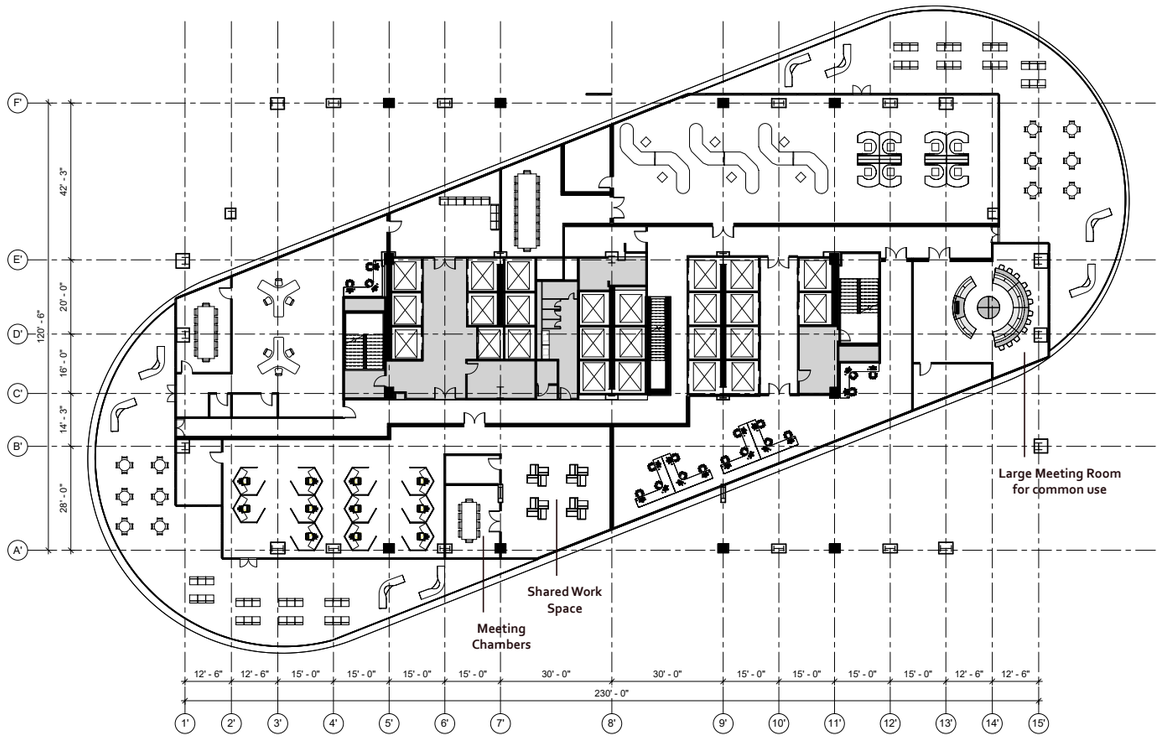
5. Corridor length:
   CBC: Chapter 10 - Dead End Corridor do not exceed 50 feet for occupany in group B.

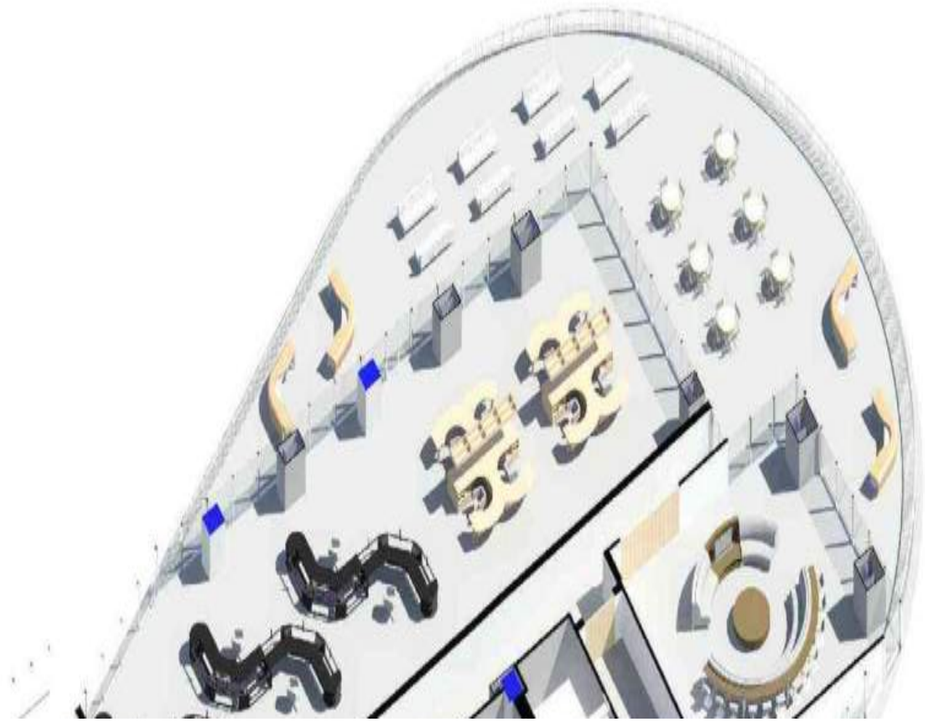
Both longest CP and EA satify the codes in terms of egress exit for fire safety

OFFICE - GAS TOWER PLAN

FLOOR 37 TO 46, 10 FT HIGH

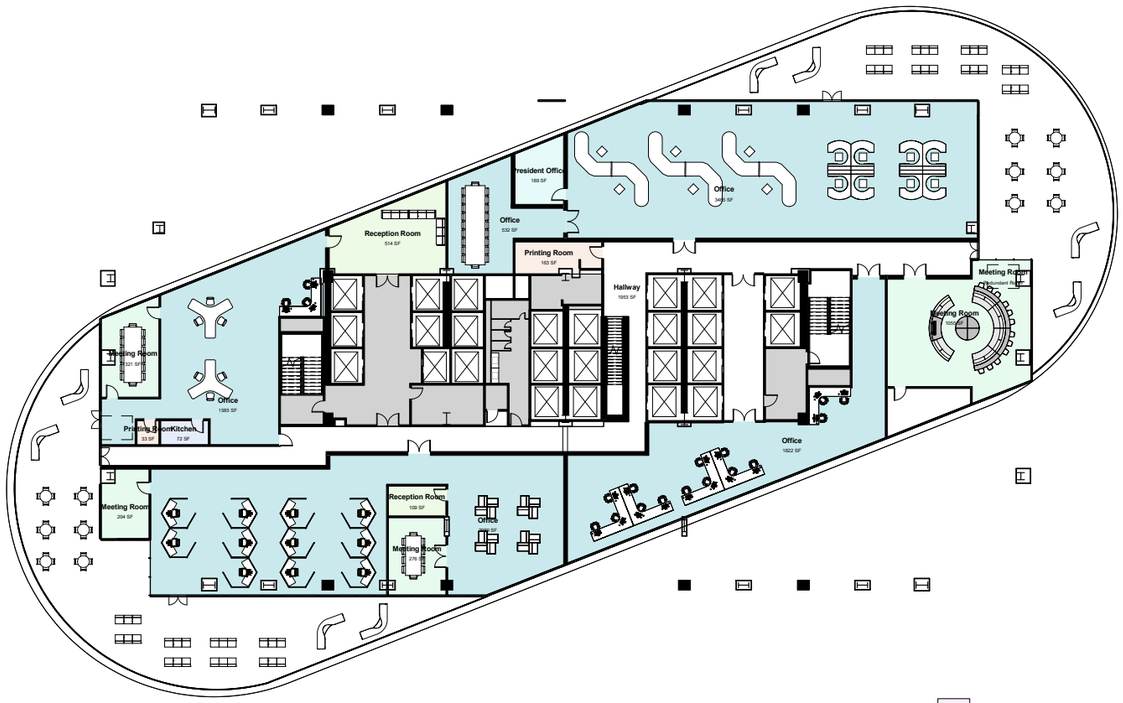
Open concept design: creativity & collabration





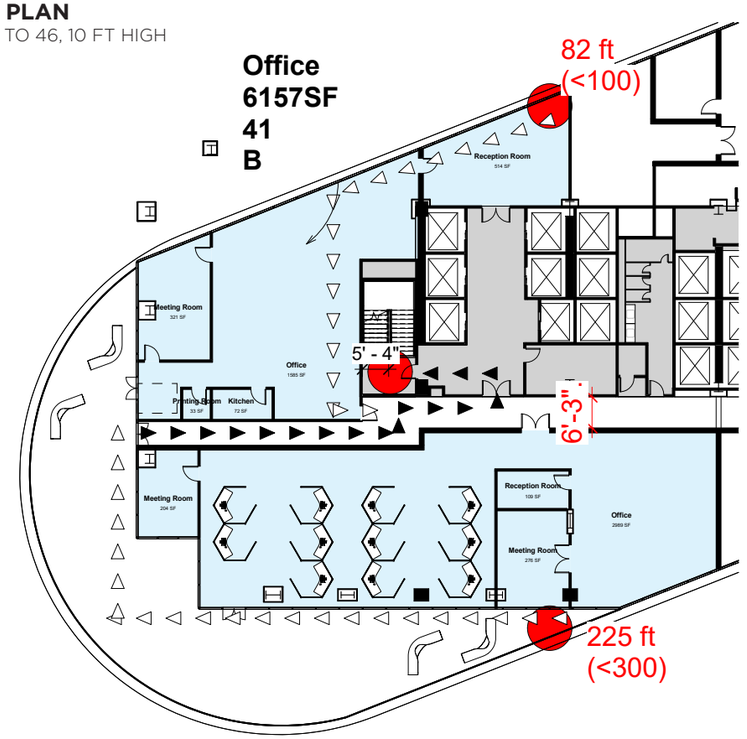
Plan Isometric view

ZONING PLAN
FLOOR 37 TO 46, 10 FT HIGH



- Hallway
- Kitchen
- Meeting Room
- Office
- President Office
- Printing Room
- Reception Room

EGRESS PLAN
FLOOR 37 TO 46, 10 FT HIGH



CBC: Chapter 10- Table: Maximum Floor Area Allowance
Per Occupant- Bussiness areas: 150 gross
Office 1 : (514+321+1585+33+72)/150=17 ppl <49ppl
Office 2: (204+109+279+2989)/150=24 ppl <49ppl

All: 17+24 = 41ppl

1. CBC: Chapter 10- Table: Maximum Common Path of egress travel distance with sprinkler : - Bussiness areas: 100 ft

2. CBC: Chapter 10- Table: Exit Access travel distance with sprinkler : - Bussiness areas: 300 ft

3. The width of Common Path is caculated by multiplying the OL by egress capacity factor of 0.2 inch per occupant.
   But minimum door width is 36"=3ft

   41ppl x 0.2 in/ppl=8.2 inch < 5ft 8in (clear door width in current plan)

4. The width of Corridor/ Stairway is caculated by multiplying the OL by egress capacity factor of 0.3 inch per occupant.
   But minimum stair width is 44"=3ft 8in

   41ppl x 0.3in/ppl=12.3 inch < 6ft 3in (clear corridor width in current plan)

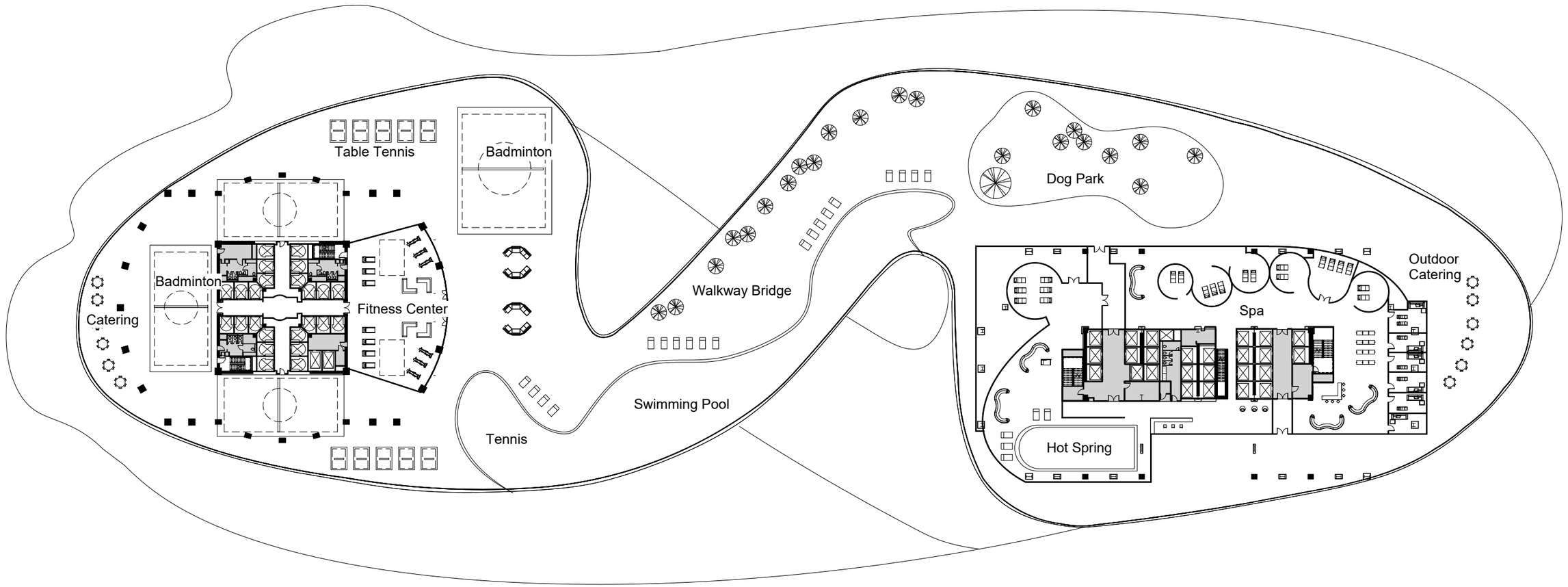
5. Corridor length:
   CBC: Chapter 10 - Dead End Corridor do not exceed 50 feet for occupany in group B.

Both longest CP and EA satify the codes in terms of egress exit for fire safety

LIFESTYLE BRIDGE PLAN

F 55

Amenity level Bridging: Fitness center, SPA, sky GRADERN,
PET PARK, POOL +outdoor recreational

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INTERNSHIP RESEARCH PROGRAM

Repurposing

2023

Leadership
Matthew Mclarand, AIA
Kap Malik, FAIA
Mark Kim, AIA

Mentors
Kap Malik, FAIA
Joe McClyde
Asmaa Abu Assaf
Nikhil Bang
Andrea Vilcarima

Interns
Cayetana Moncayo
Chloe Mascolo
Ira Puri
Jean Wang
Youssef Hachchane

TEAM

MVE
+RESEARCH