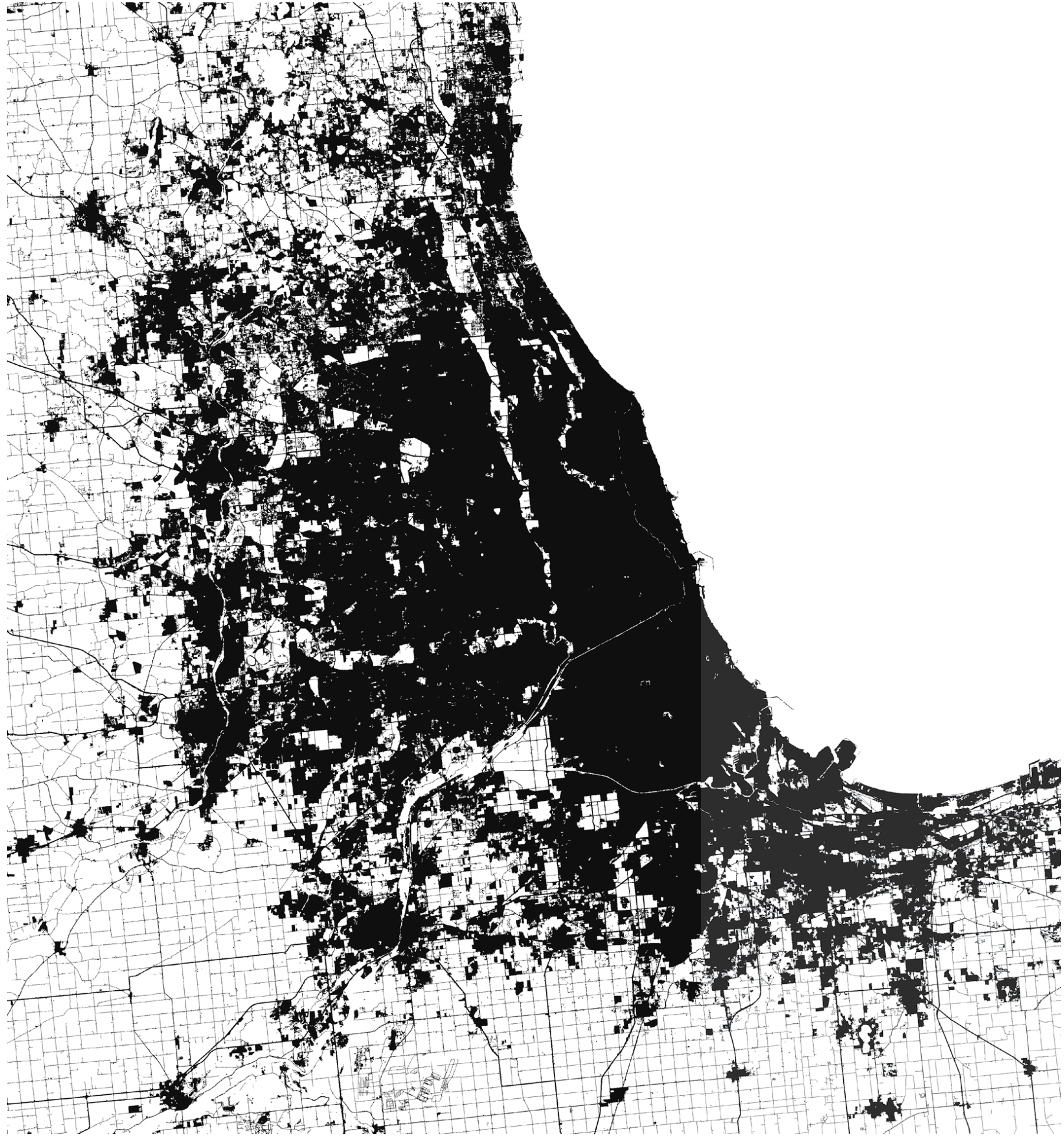


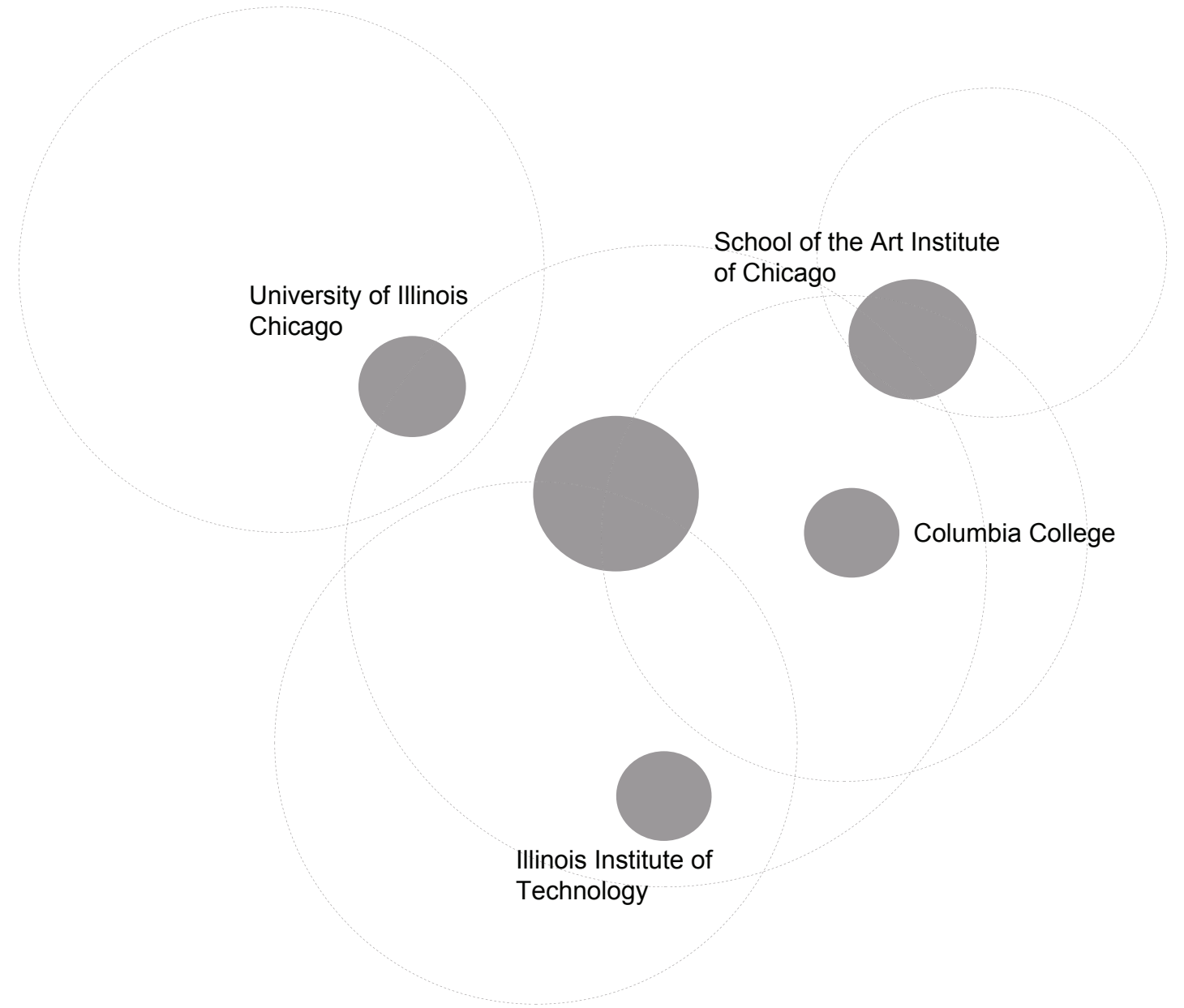
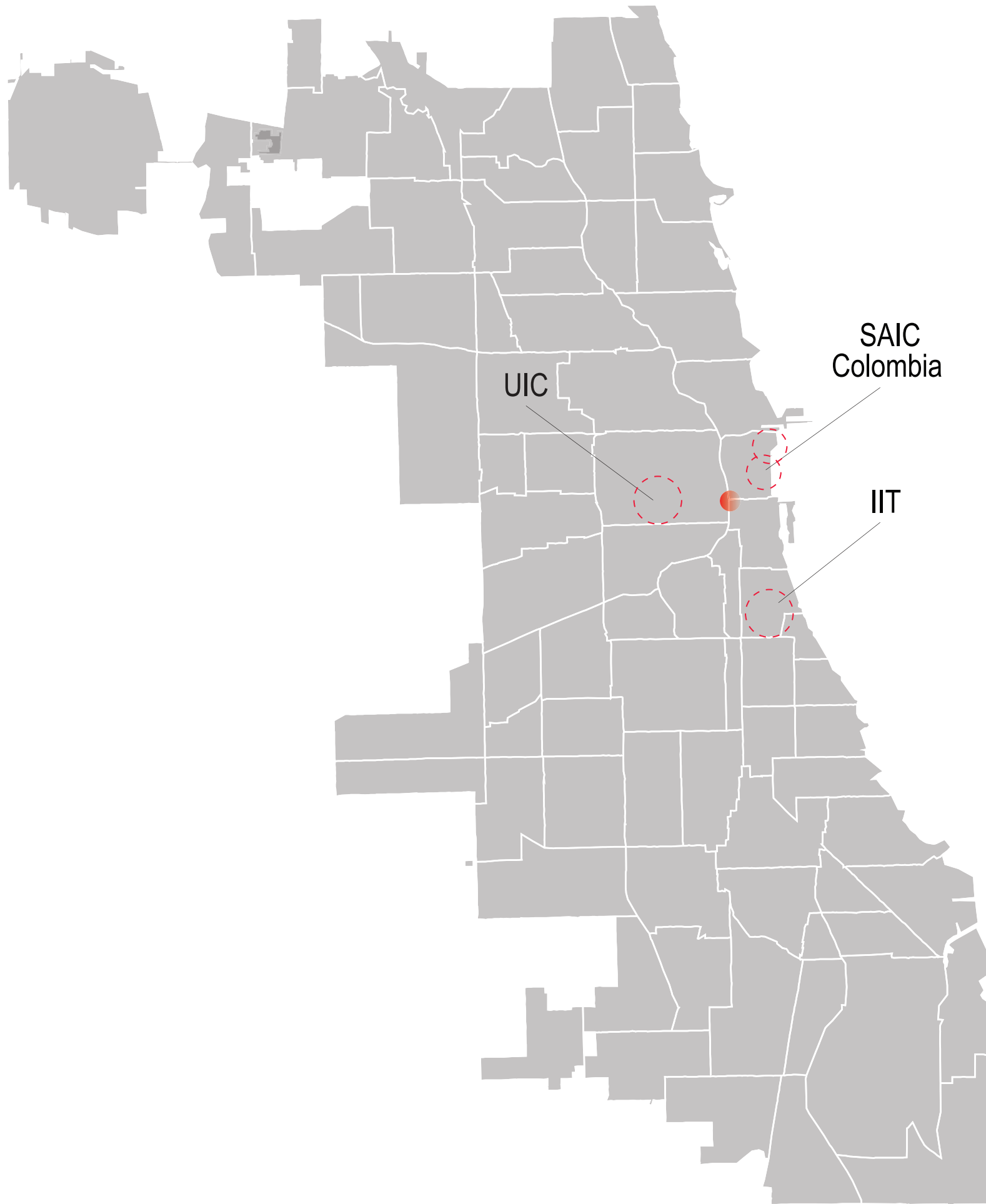
COLLAB

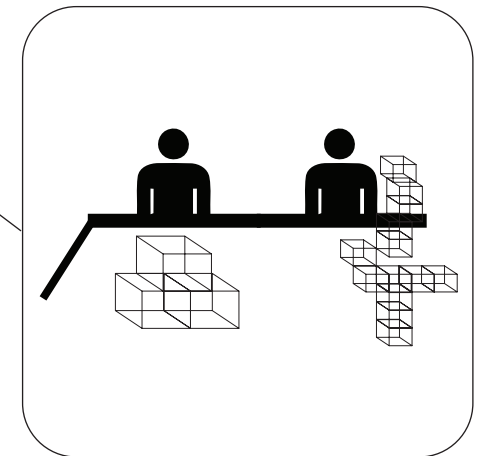
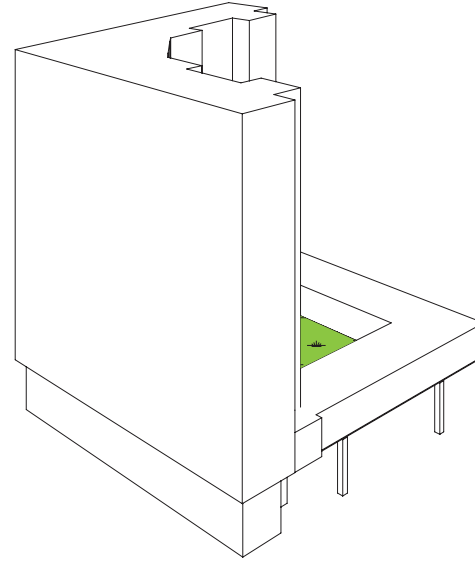
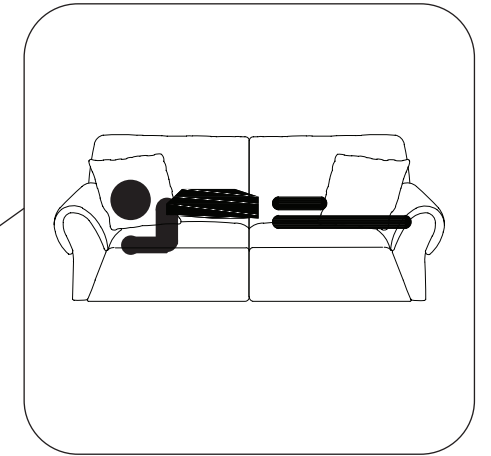
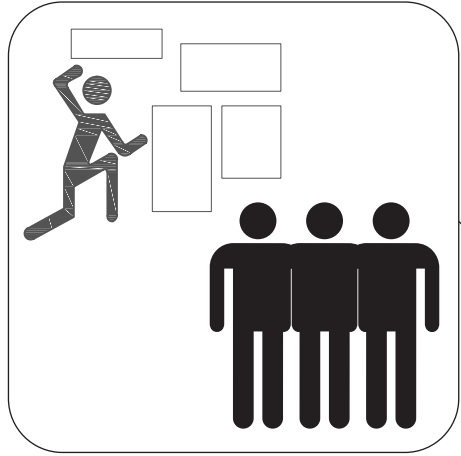
an exploration in networked, collaborative and interactive spaces



I am proposing to create a student housing hub for the various architectural colleges within the city of Chicago (IIT, UIC, SAIC & Columbia College). I am imagining not only making a physical connection but also creating a digital environment where students can collaborate, network and share ideas at their leisure. The phrase “living-learning environment”, comes to mind when thinking of my project, with so many advancements in technology, within architecture and within the public domain our learning has extended beyond the classroom. Although these schools were chosen primarily for their architectural distinction, the hub will welcome students across all disciplines.

Digital design has reduced the distinction between studio and classroom activities, so it is essential to create an environment where students can explore their ideas amongst themselves and on their own time. Most design education programs emphasize the importance of peer-to-peer learning which primarily occurs at informal learning spaces.





COLAB

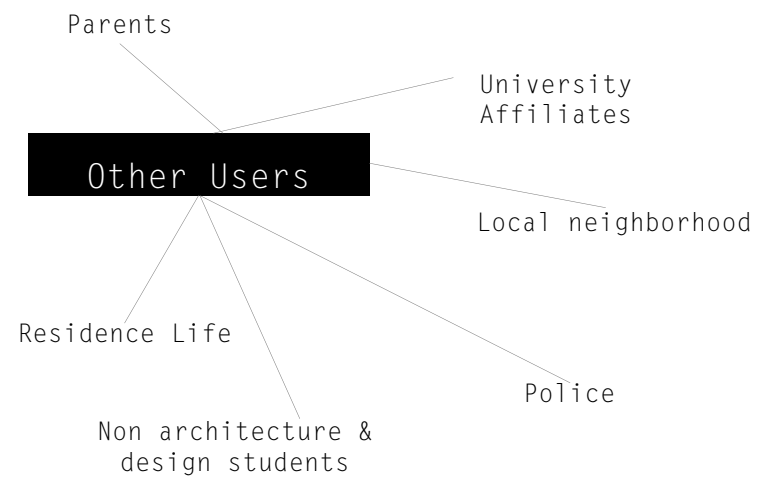
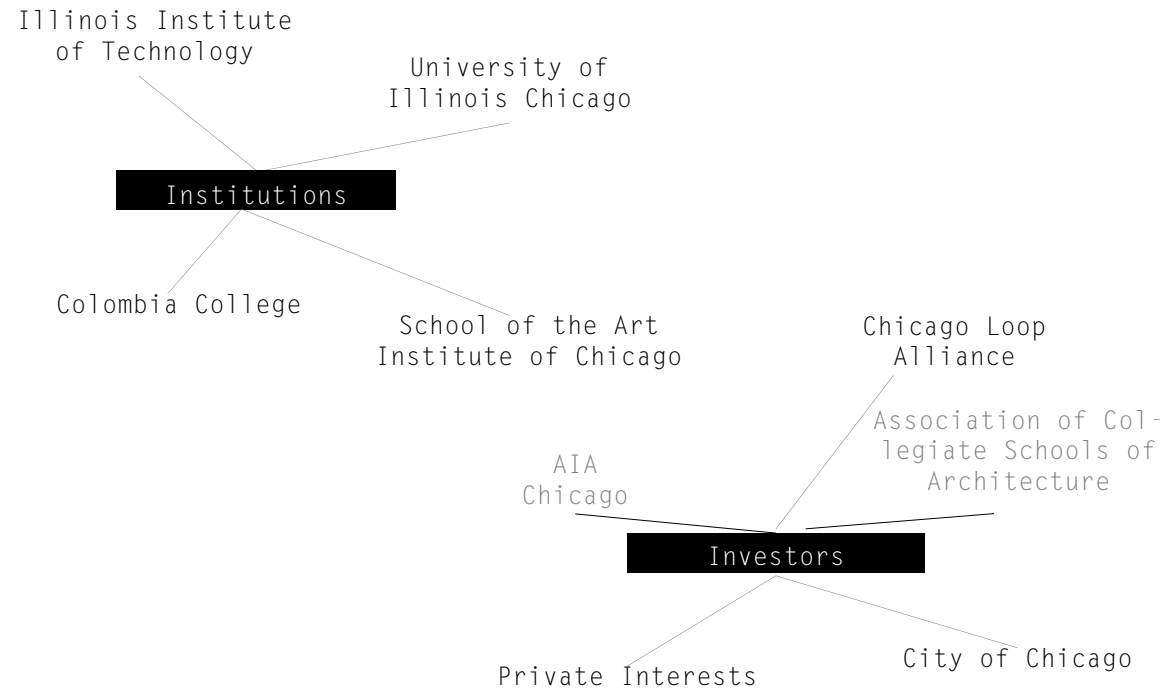
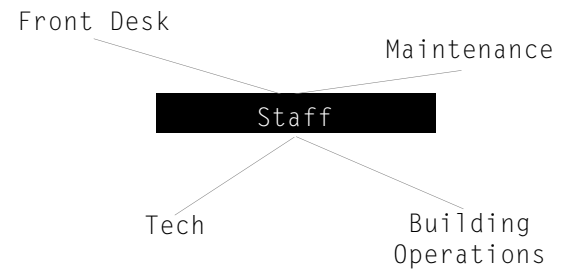
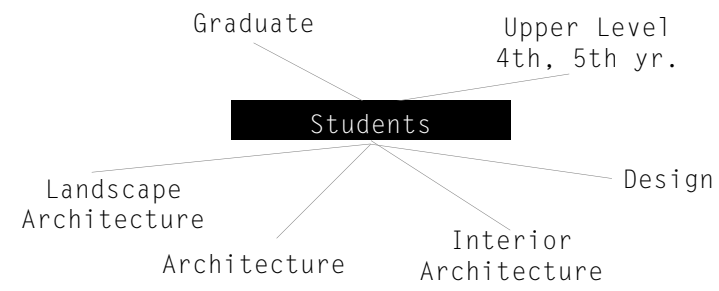
Goals
Guiding &
Principles

The student housing hub will create a series of physical, visual and intellectual connections:

Transit
Educational
Materiality
Collaboration
Ideas
Digital Network

Flexible and interactive spaces promote learning and keep the student/individual interested. Students are increasingly connected via social networking websites - twitter, facebook, tumblr, gmail - although many of them live in residence halls that predate the personal computer. Spaces will be planned so that they offer the opportunity for, but not dictate a specific type of learning activity. With the creation of this hub, new connections between the university and the larger architectural community will be established. The student housing hub will supply the need for an alternative housing environment where students can live, teach and learn comfortably.

Stake-
holders
Interest &



Quality
of
Environment

Today students expect hotel-like amenities, ample space for leisure activities and most importantly security within their environment. In order to create such an environment, the space should have the following characteristics:

Sufficient space for prototyping with room for fabrication

Flexibility

An absence of uniformity or predictability

A warm, secure, comforting environment

Easy access to needed materials and tools

An environment and a culture that encourage experimentation, reward success and are non-critical of failure

A sense of playfulness

Sufficient opportunity for both visual and tactile interaction

Ready access to information sources

A ready refuge from day to day activities that distract from the creative mind set

Appropriate for demonstrations and meetings



Traditionally the dimensions of a prison are 8 ft. by 6 ft. with a minimum ceiling height of 7 ft. for clearance, these cells have a single toilet and twin bed. This is the bare minimum space that prisoners are supplied with that is deemed occupyable. The International Building Code says that a room must be a minimum of 70 square feet in order for it to be habitable, again this is the bare minimum. Is it possible for a room or an apartment to be small in size while still supplying maximum comfort levels?

During a study abroad trip to Copenhagen, Denmark I was able to experience living in a Danish kollegium. "A kollegium is the Danish equivalent of an American residence hall or dormitory model - but there are some significant differences. As European universities usually do not have campuses, the rooms in the different kollegiums used are shared between many Danish universities and colleges, thus allowing you to meet a variety of students from many disciplines and backgrounds."

One interesting thing about the kollegiums was the maximization of space, the rooms weren't super large but they were comfortable and well designed. The lack of space in my personal room was accommodated by the communal areas such as the community kitchen and various lounge areas.

“The scale of the human body informs almost every aspect of architectural design.”

“It is established that one’s environment is a major determinant in one’s emotional and mental state”. Architectural education can often be draining, students are faced with stringent deadlines, exposure to demeaning critiques and often-times sleep deprivation. The formal teaching of architecture takes place within the studio and lecture hall but our learning does not stop when we leave the classroom nor does our creative impulse to design. In my experience, an architectural idea or design will come to me at the most inopportune time and or place such as during a dream or while standing on the elevated platform waiting for a train or even simple while having lunch with a friend. Architects and students of architecture will often carry a sketchbook with them specifically for these types of situations, but is that enough to express one’s design idea? For some the pen or pencil has its limits, which is one reason architecture has evolved as a profession, now we are equipped with a new set of tools, digital tools.



In today’s society it is necessary to create a living environment where students can fully express their design ambitions. “42 % of residence halls now include classroom space, it is particularly prevalent in the Midwest and Far West.”

“In addition to criticism of student work provided by instructors, most programs of design education emphasize the importance of peer-to-peer learning: the informal discussion of work in progress and sharing of knowledge among students.”

I am proposing to create an environment where students will experience absolute comfort physically and creatively.

"Digital design has reduced the distinction between studio and classroom activities". Today students can barely survive without some form of technology. Whether it is a cellphone, ipod, laptop or even a video gaming system, the necessity of digital technology has become almost second nature to human beings. With technology ever evolving, architecture continues to make major strides as a profession. As architecture continues to grow, architectural education must also evolve to prepare students for the workforce and also to test and develop new methods of design and production.

SAGE:
Scalable Adaptive Graphics Environment

SAGE is a graphics streaming architecture for supporting collaborative scientific visualization environments with potentially hundreds of mega pixels of contiguous display resolution. In collaborative scientific visualization, it is crucial to share high-resolution imagery as well as high-definition video among groups of collaborators at local or remote sites.

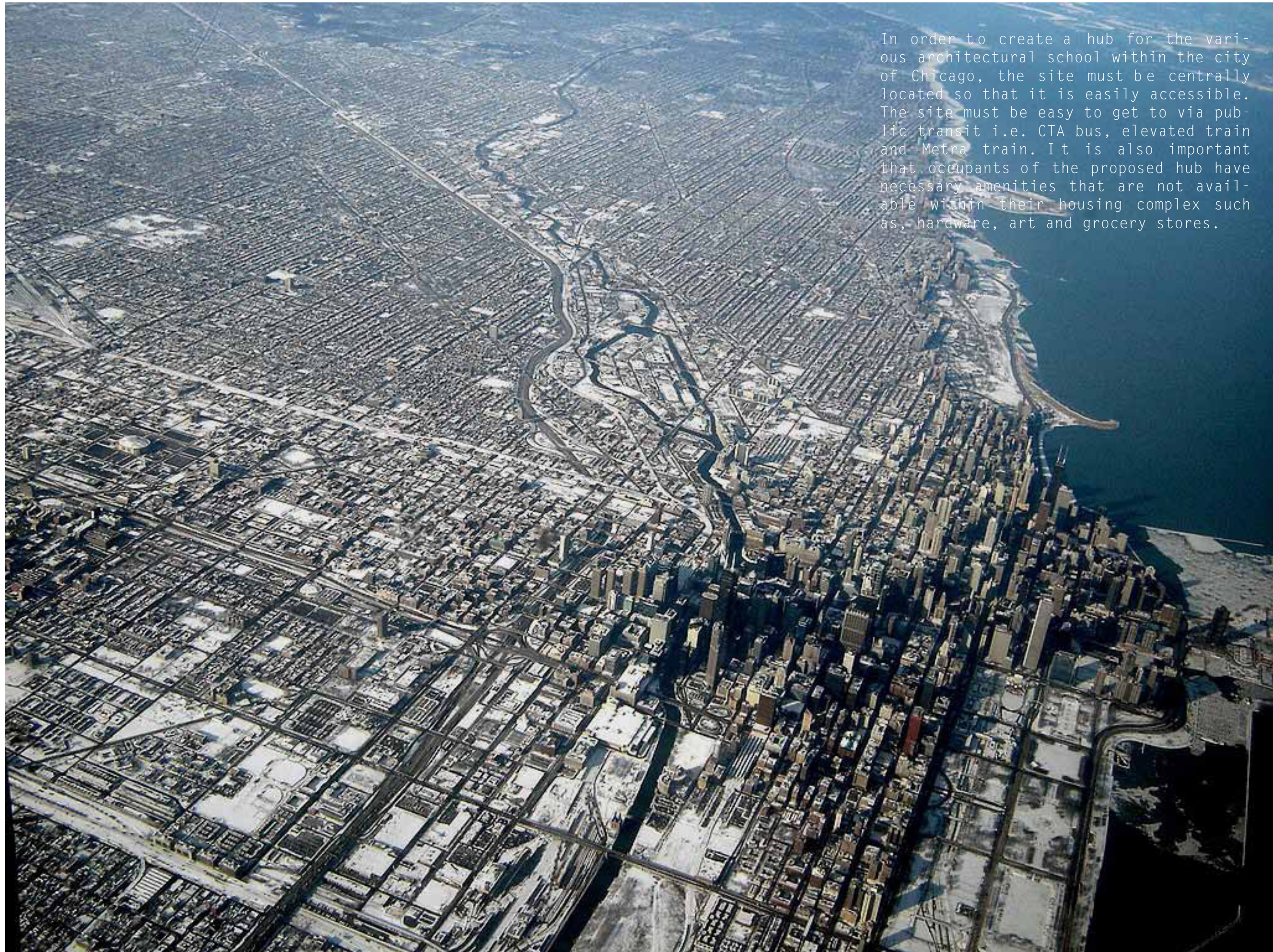
The network-centered architecture of SAGE allows collaborators to simultaneously run various applications (such as 3-D rendering, remote desktop, video streams and 2-D maps) on local or remote clusters, and share them by streaming the pixels of each application over ultra-high-speed networks to large tiled displays.

When I first came across this newly developed technology I immediately thought that this should be applied to architecture. This technology would fit well with the type of networking and collaborative environment I am trying to create in this project.

Another recently developed technology which is slowly making its way into the architectural community is the Kinect for Xbox 360. Kinect is a motion sensing input device by Microsoft for the Xbox 360 video game console. Based around a webcam-style add-on peripheral for the Xbox 360 console, it enables users to control and interact with the Xbox 360 without the need to touch a game controller, through a natural user interface using gestures and spoken commands. The project is aimed at broadening the Xbox 360's audience beyond its typical gamer base. Kinect competes with the Wii Remote Plus and Play Station Move with Play Station Eye motion controllers for the Wii and Play Station 3 home consoles, respectively.



Site Selection



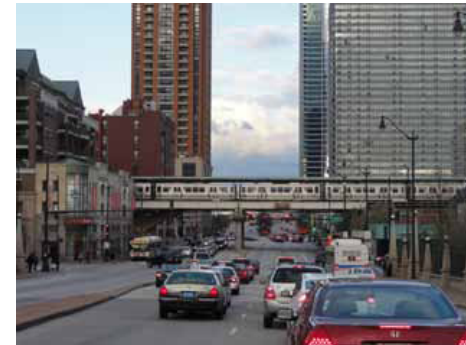
In order to create a hub for the various architectural school within the city of Chicago, the site must be centrally located so that it is easily accessible. The site must be easy to get to via public transit i.e. CTA bus, elevated train and Metra train. It is also important that occupants of the proposed hub have necessary amenities that are not available within their housing complex such as, hardware, art and grocery stores.

Location

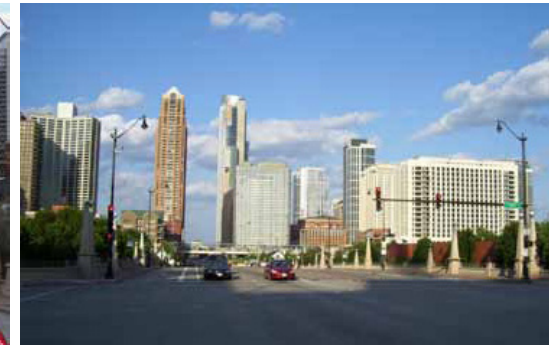


Location: Chicago, Illinois
South Loop Neighborhood
1000 S. Clark St.

The South Loop is one of the fastest growing neighborhoods in the Chicago area. In recent years many condominium and loft builders have bought much of the vacant land, which has resulted in an abundance of flourishing new construction. Aside from residential buildings the area offers a variety of shops and restaurants to suit everyone's needs. Tourists also flock to this area to experience such sites as Museum Campus, Soldier Field and Grant Park.



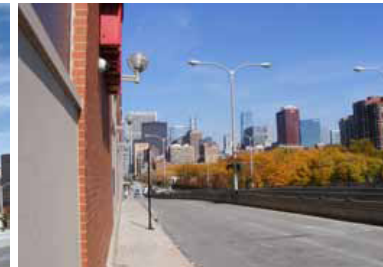
① View looking east along Roosevelt Road toward elevated train platform



② View at the intersection of Roosevelt Road and South Clark St. looking east



③ View outside of Target store, Willis Tower in the distance.



④ Looking north down S. Clark Street toward site.



⑤ 1000 S. Clark St., project site



⑥ Outside the Target parking complex.



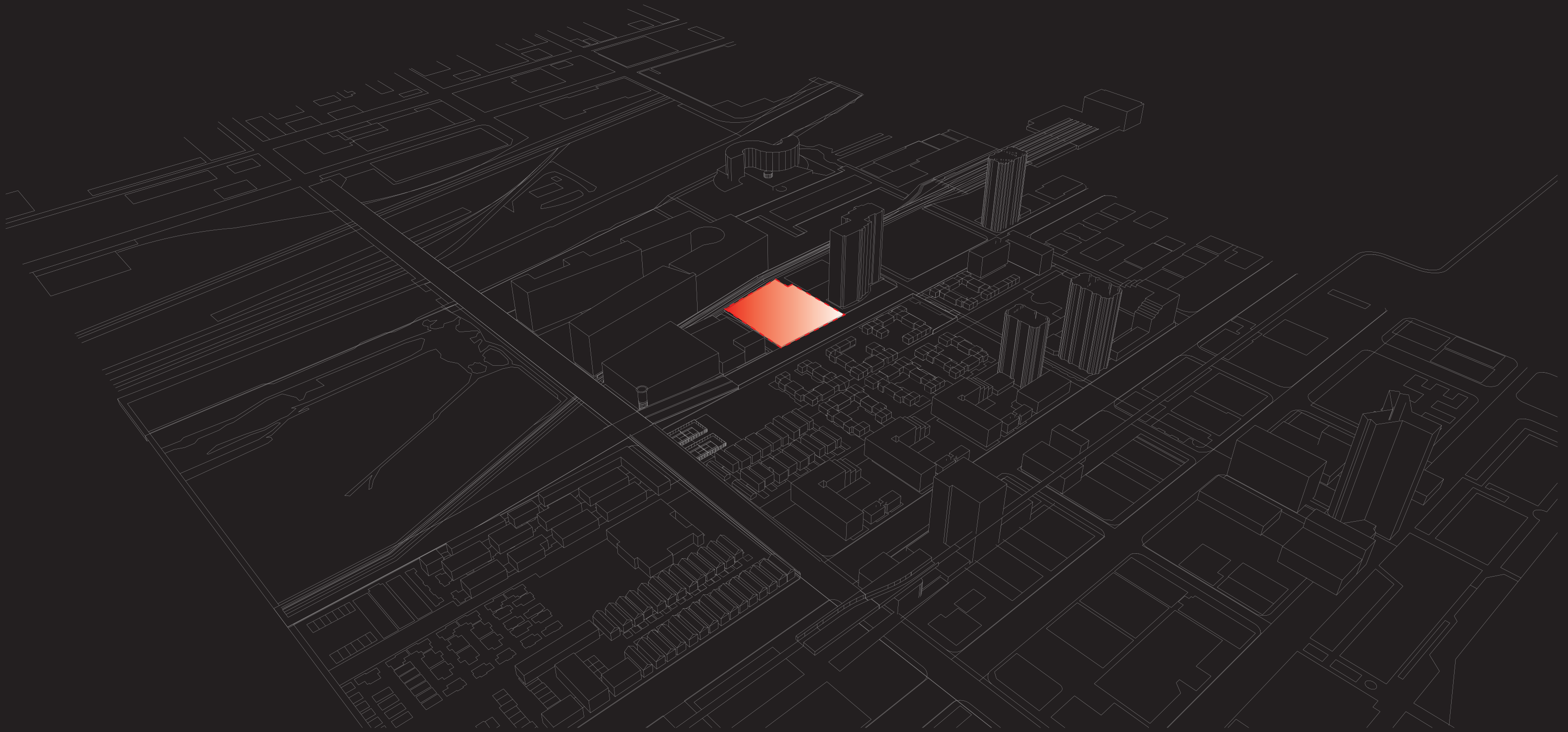
⑦ LaSalle Street Metra line.

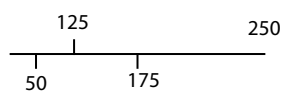
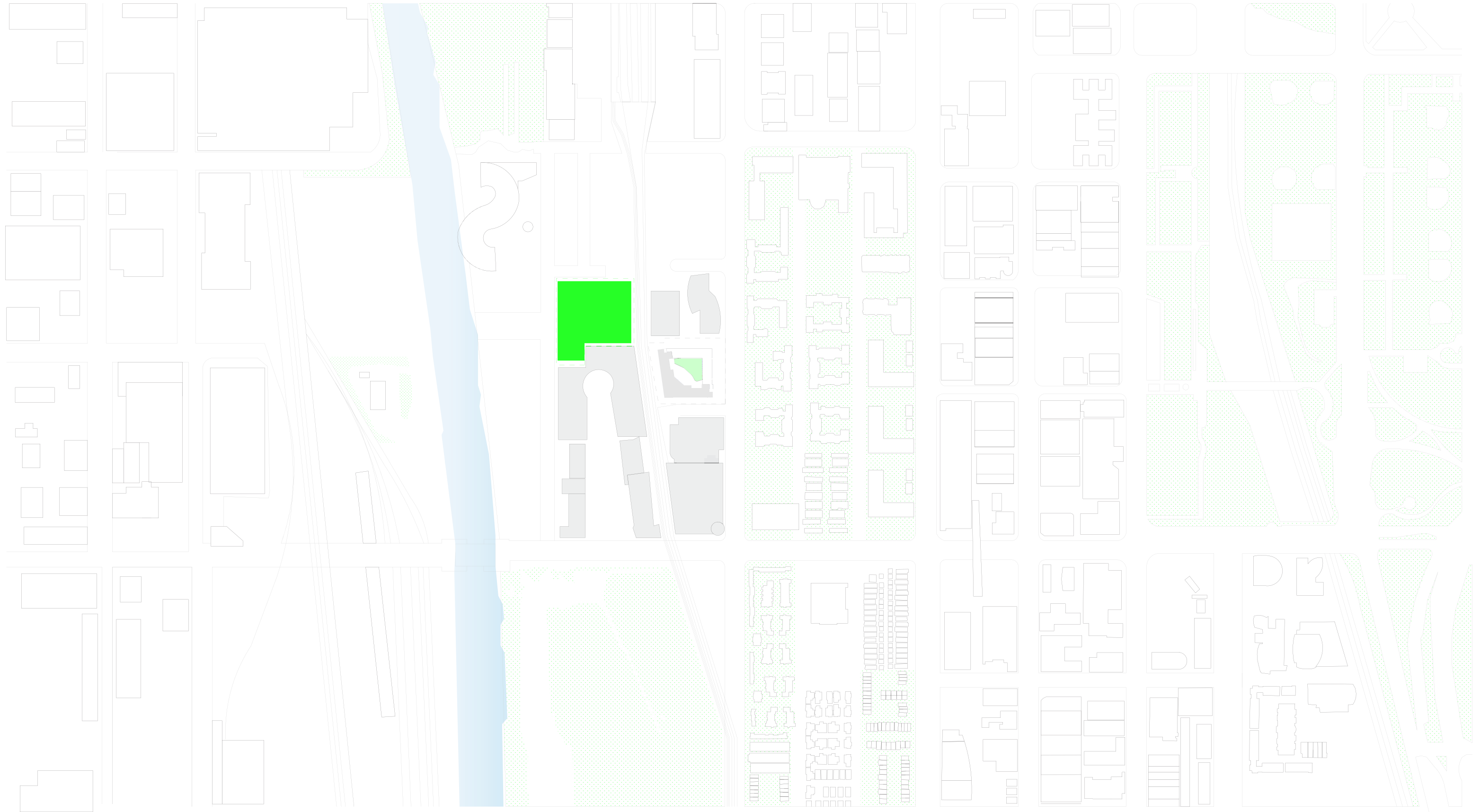


⑧ View from southeast corner of site plot looking toward Dearborn Park.

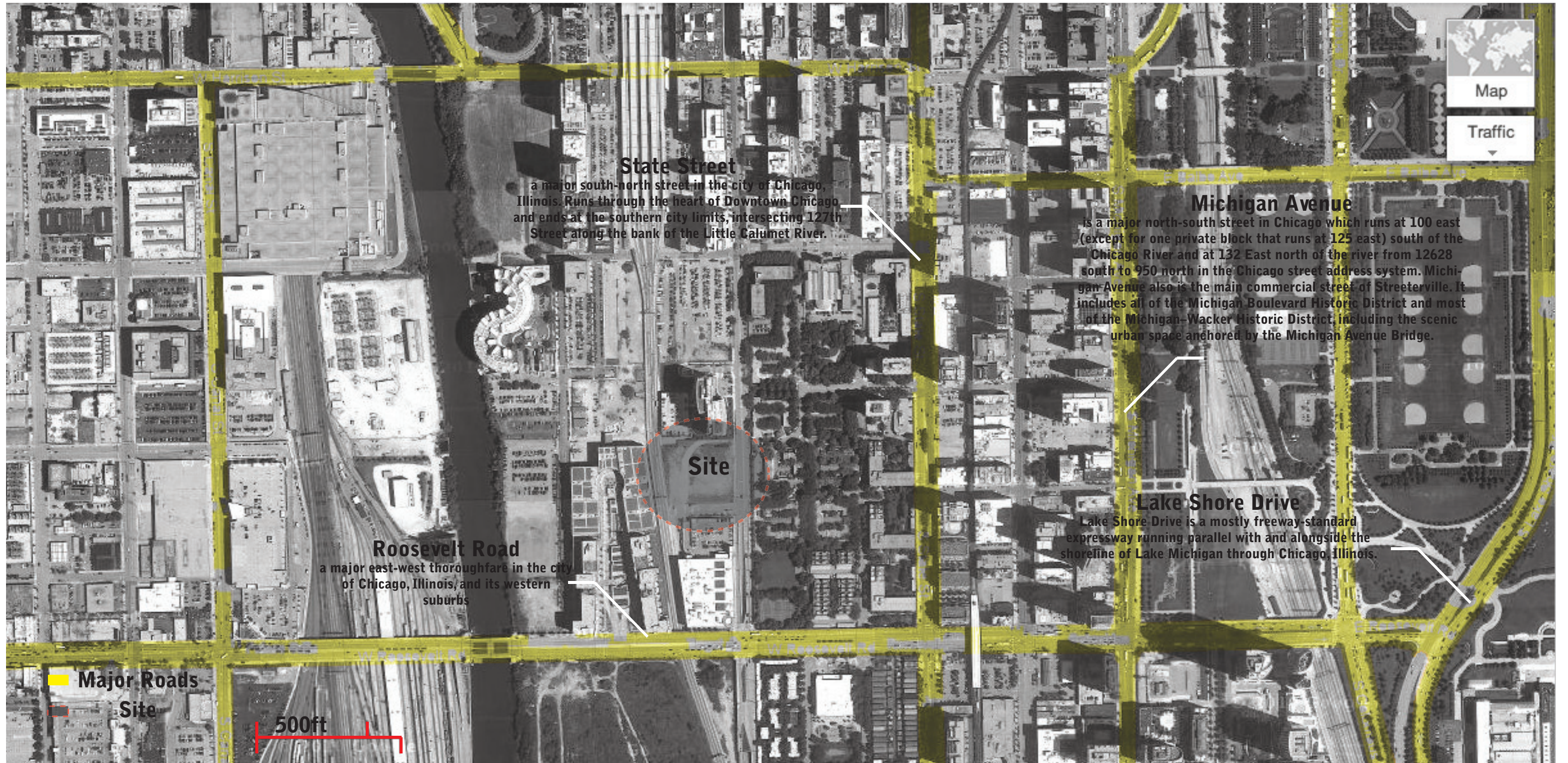


⑨ View along S. Clark St. beside Dearborn Park residences





Site Analysis



Map

Traffic

State Street

a major south-north street in the city of Chicago, Illinois. Runs through the heart of Downtown Chicago and ends at the southern city limits, intersecting 127th Street along the bank of the Little Calumet River.

Michigan Avenue

is a major north-south street in Chicago which runs at 100 east (except for one private block that runs at 125 east) south of the Chicago River and at 132 East north of the river from 12628 south to 950 north in the Chicago street address system. Michigan Avenue also is the main commercial street of Streeterville. It includes all of the Michigan Boulevard Historic District and most of the Michigan-Wacker Historic District, including the scenic urban space anchored by the Michigan Avenue Bridge.

Site

Roosevelt Road

a major east-west thoroughfare in the city of Chicago, Illinois, and its western suburbs

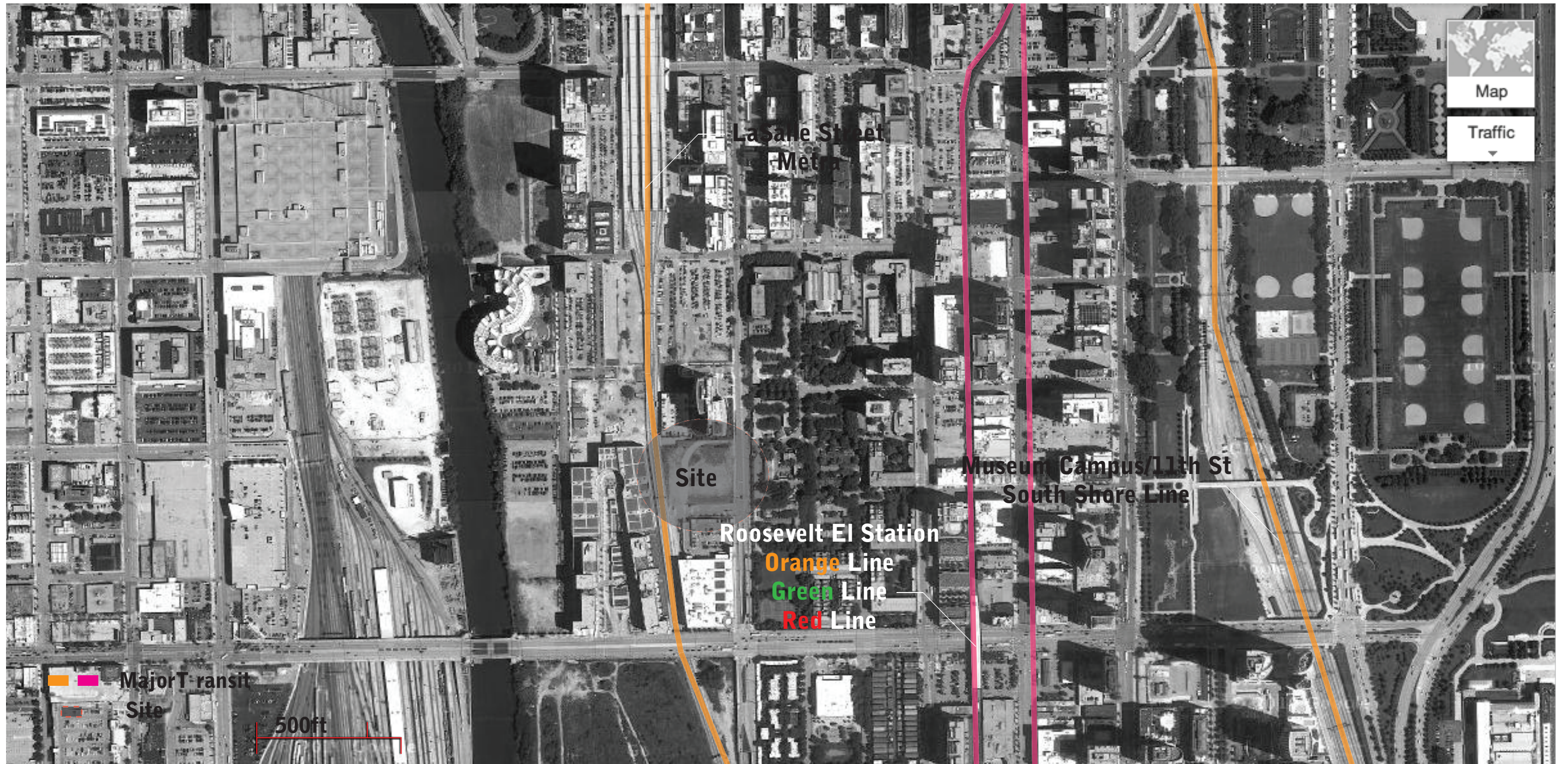
Lake Shore Drive

Lake Shore Drive is a mostly freeway-standard expressway running parallel with and alongside the shoreline of Lake Michigan through Chicago, Illinois.

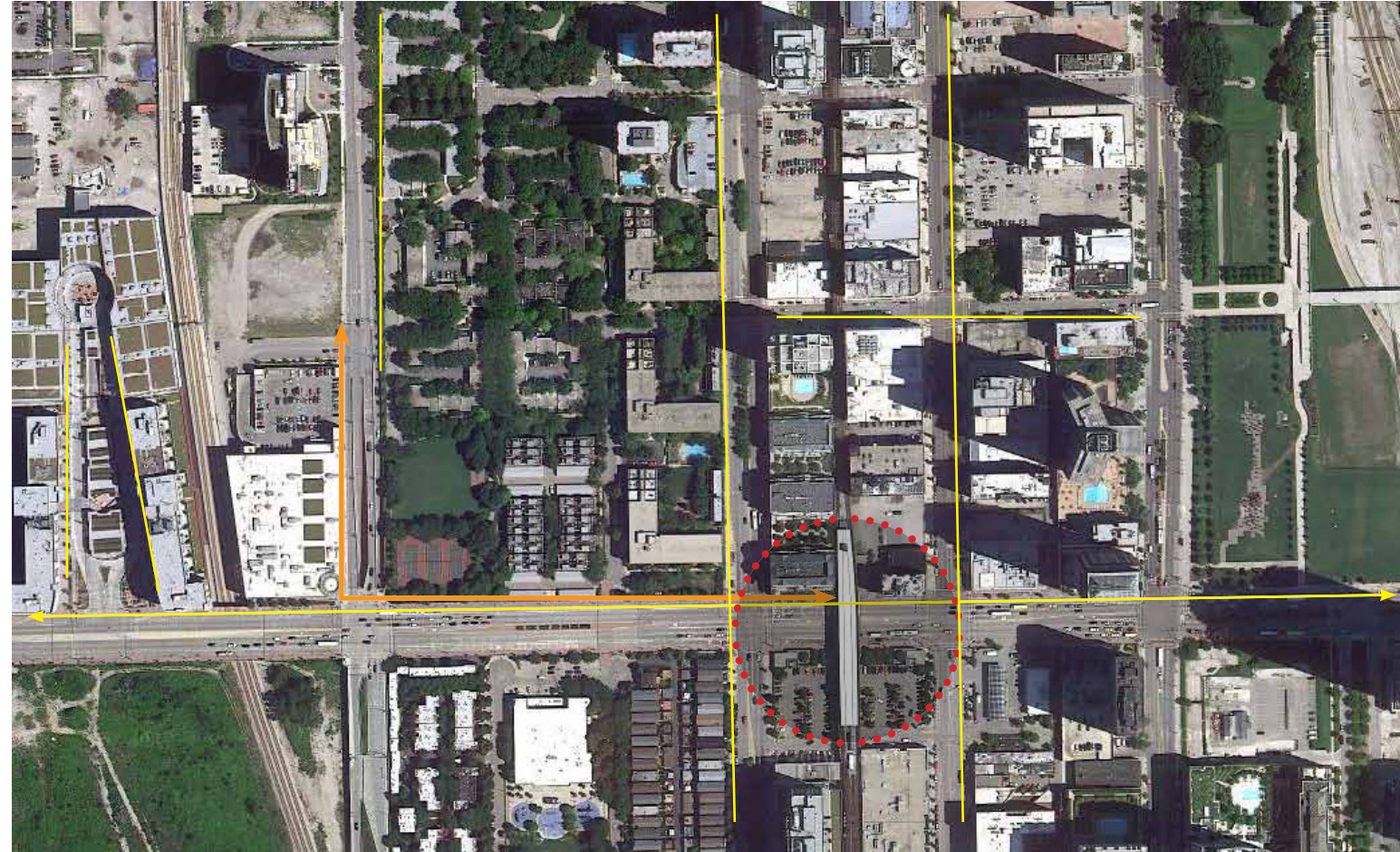
Major Roads

Site

500ft



Travel time from site:
 17 minutes to IIT via Green
 Line train
 17 minutes to UIC via Blue
 Line train
 12 - 15 minutes to SAIC and
 Columbia via Red Line or
 Green Line train

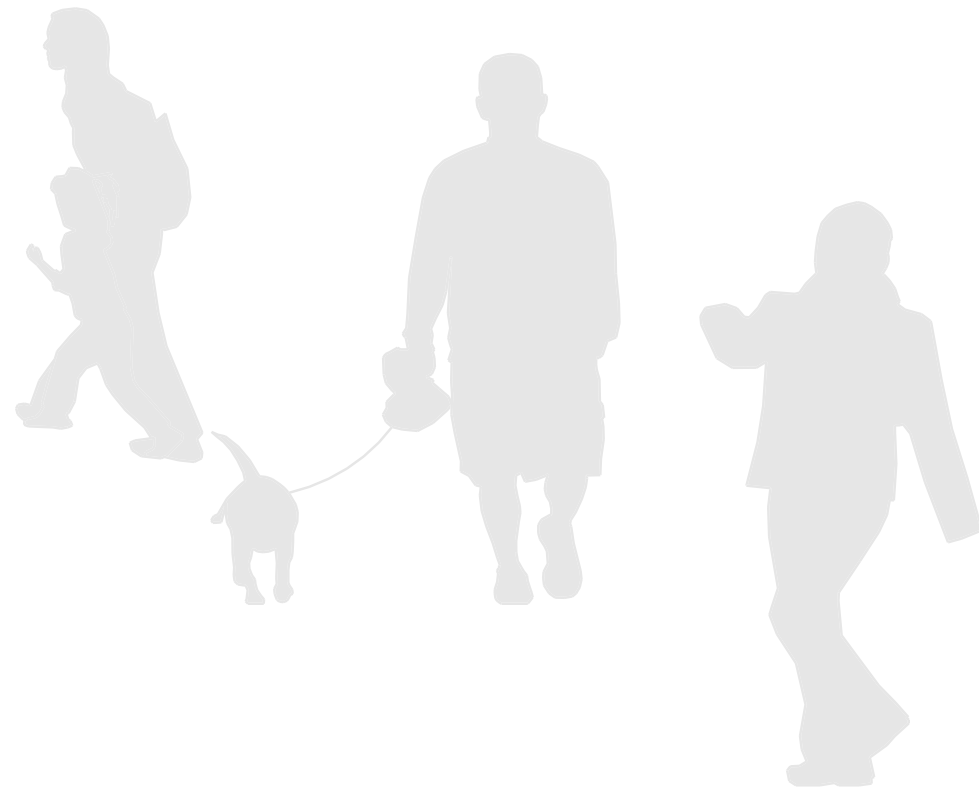


200ft

- CTA Buses
- #12 Roosevelt
- #18 16th/18th
- #29 State
- #62 Archer (Owl Service)
- #129 West Loop-South Loop
- #146 Inner Drive/Michigan E x-press
- #192 University of Chicago Hospitals Express
- CTA Orange, Green & Red Lines
- Roosevelt/Wabash
- Metra Electric and South Shore Lines
- Museum Campus/11th Street

TRANSIT HUB

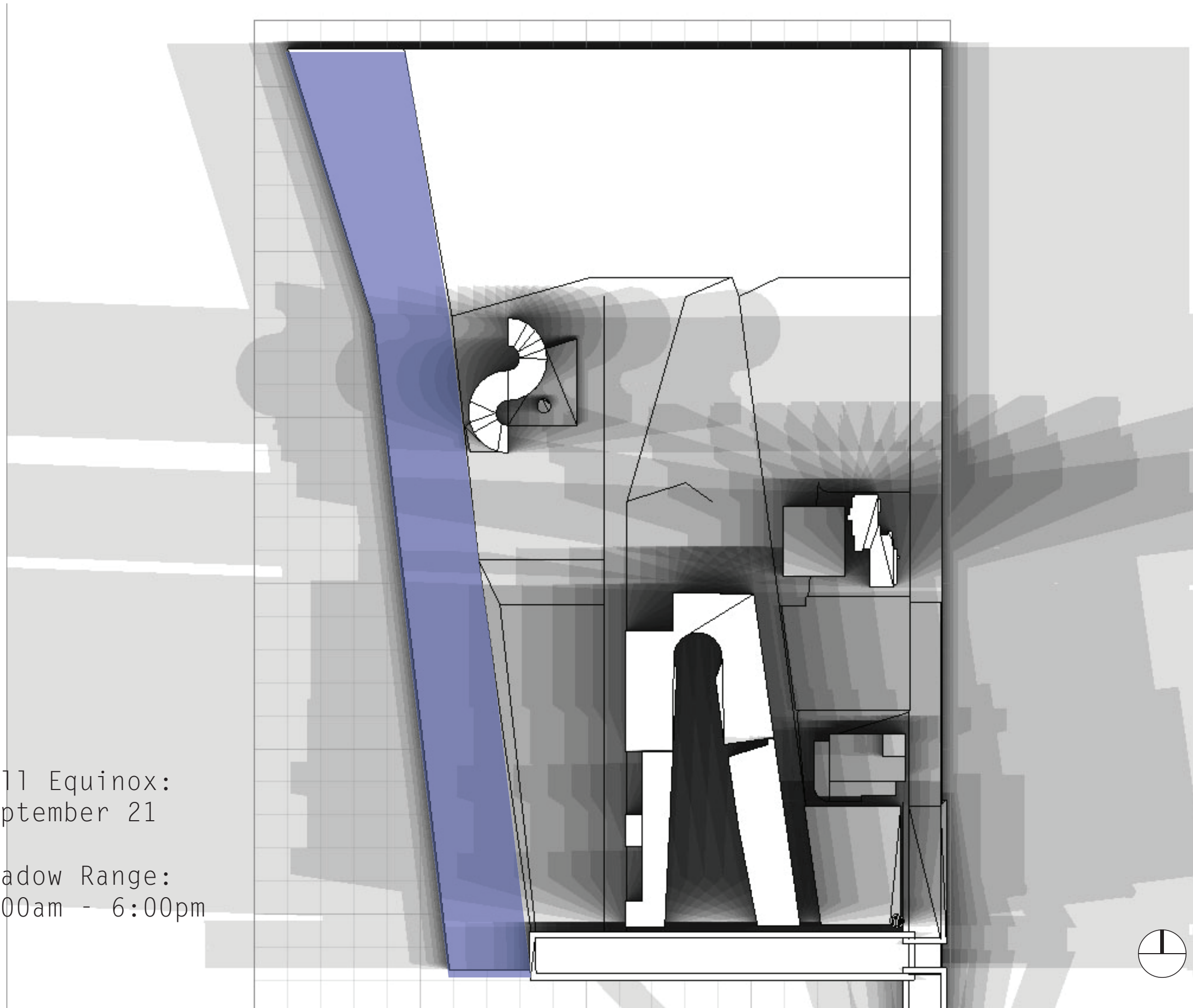
Roosevelt is an 'L' station on the CTA's Green and Orange Lines. It is an elevated station with a single island platform, located at 22 East Roosevelt Road in the South Loop community area of Chicago, just east of State Street. Free transfers to the Red Line subway station of Roosevelt are available at this station, and the Museum Campus/11th Street Metra station is about 1/3 miles to the east. The station is also the closest 'L' station to the Museum Campus of Chicago and Soldier Field, which are about 1/2 mile to the east.



Shadow Study

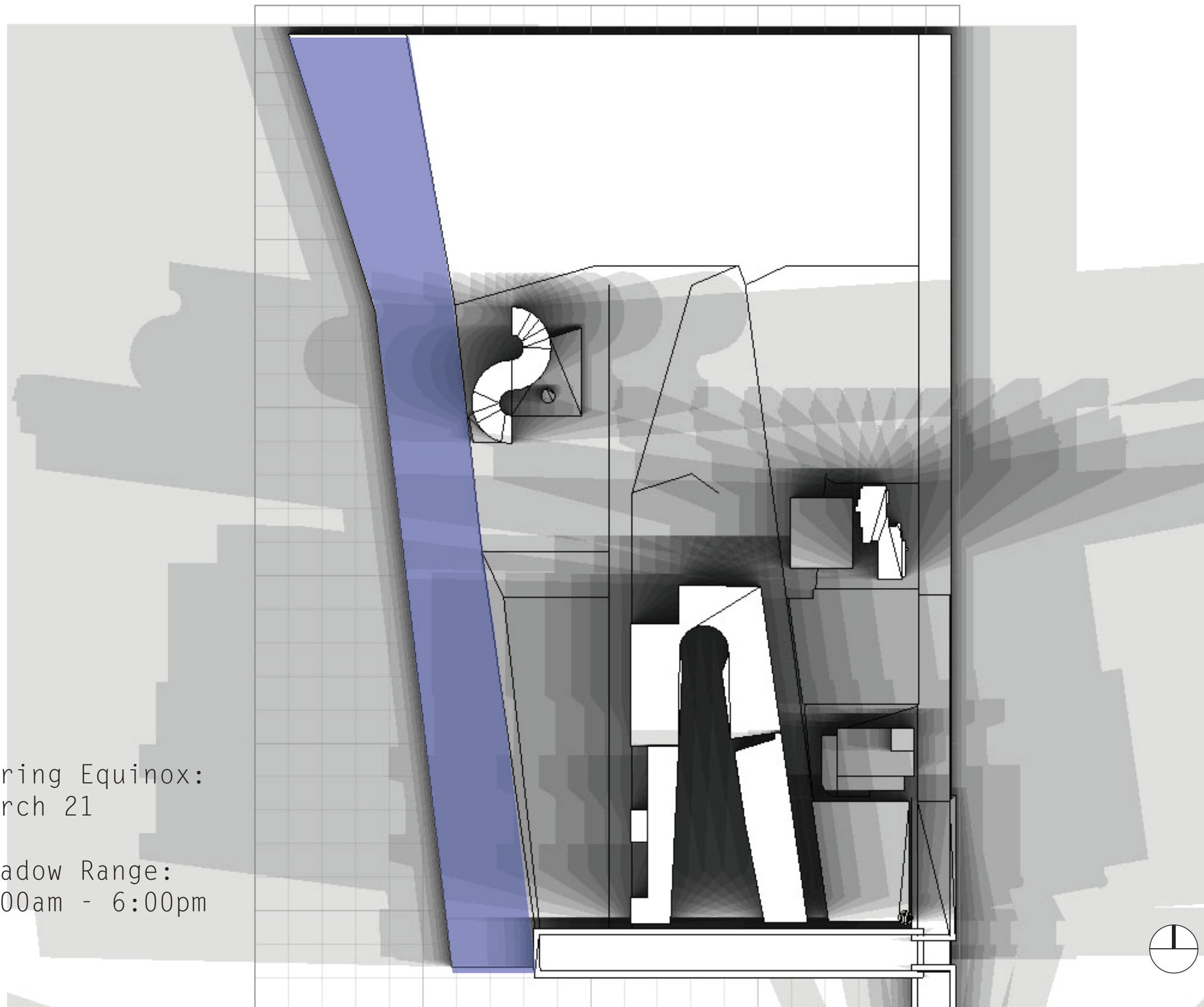
Fall Equinox:
September 21

Shadow Range:
6:00am - 6:00pm



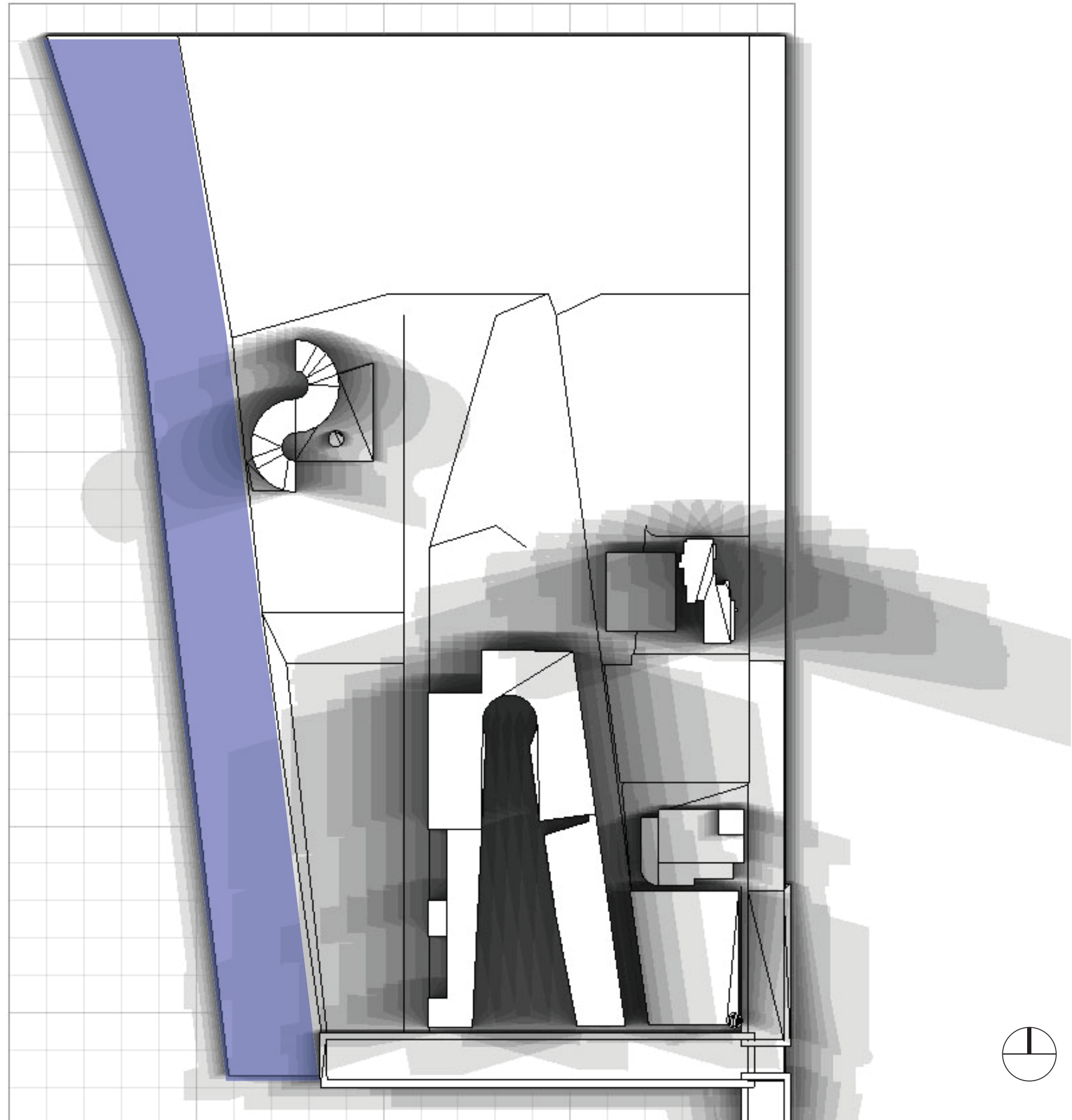
Spring Equinox:
March 21

Shadow Range:
6:00am - 6:00pm



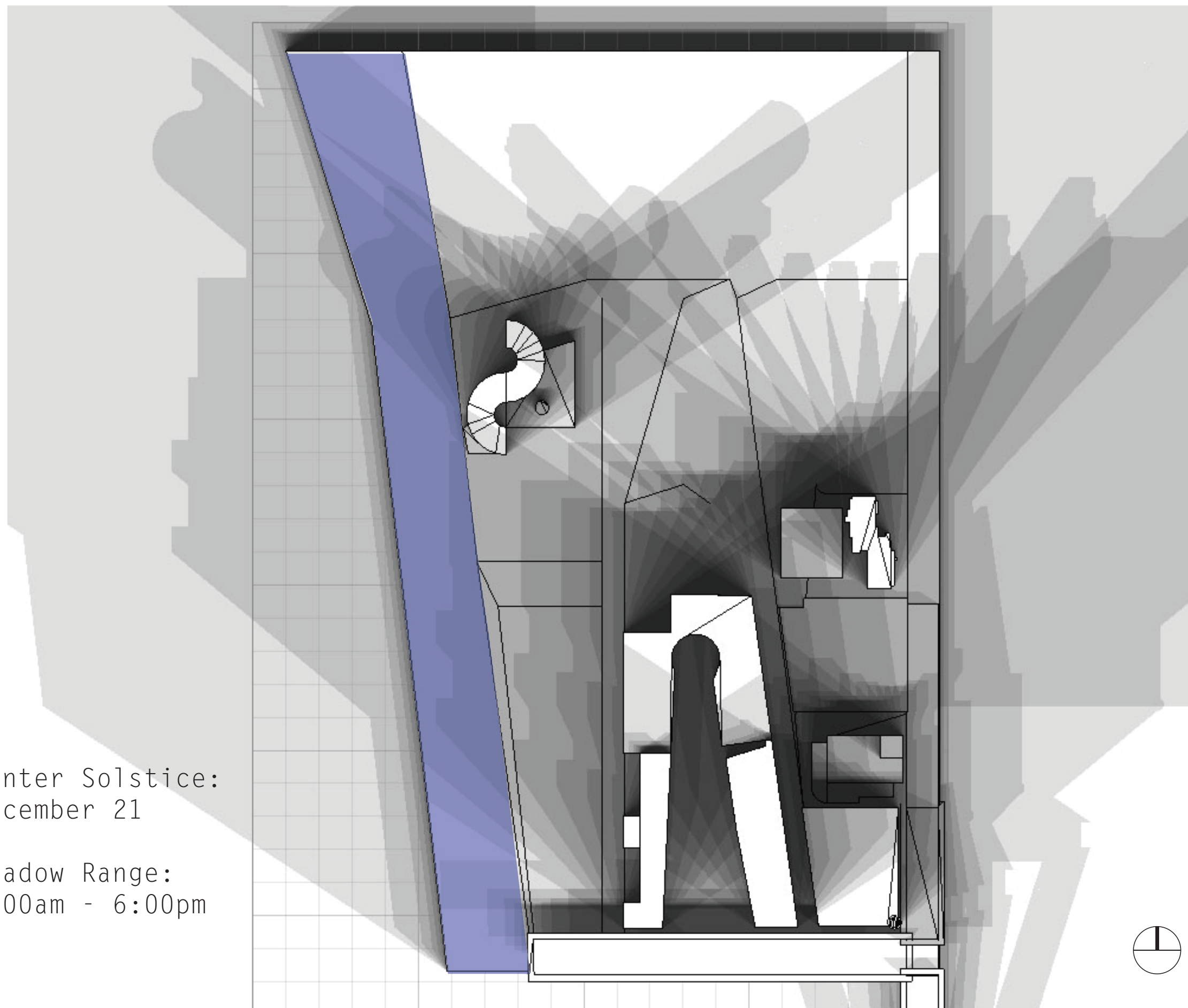
Summer Solstice:
June 21

Shadow Range:
6:00am - 6:00pm

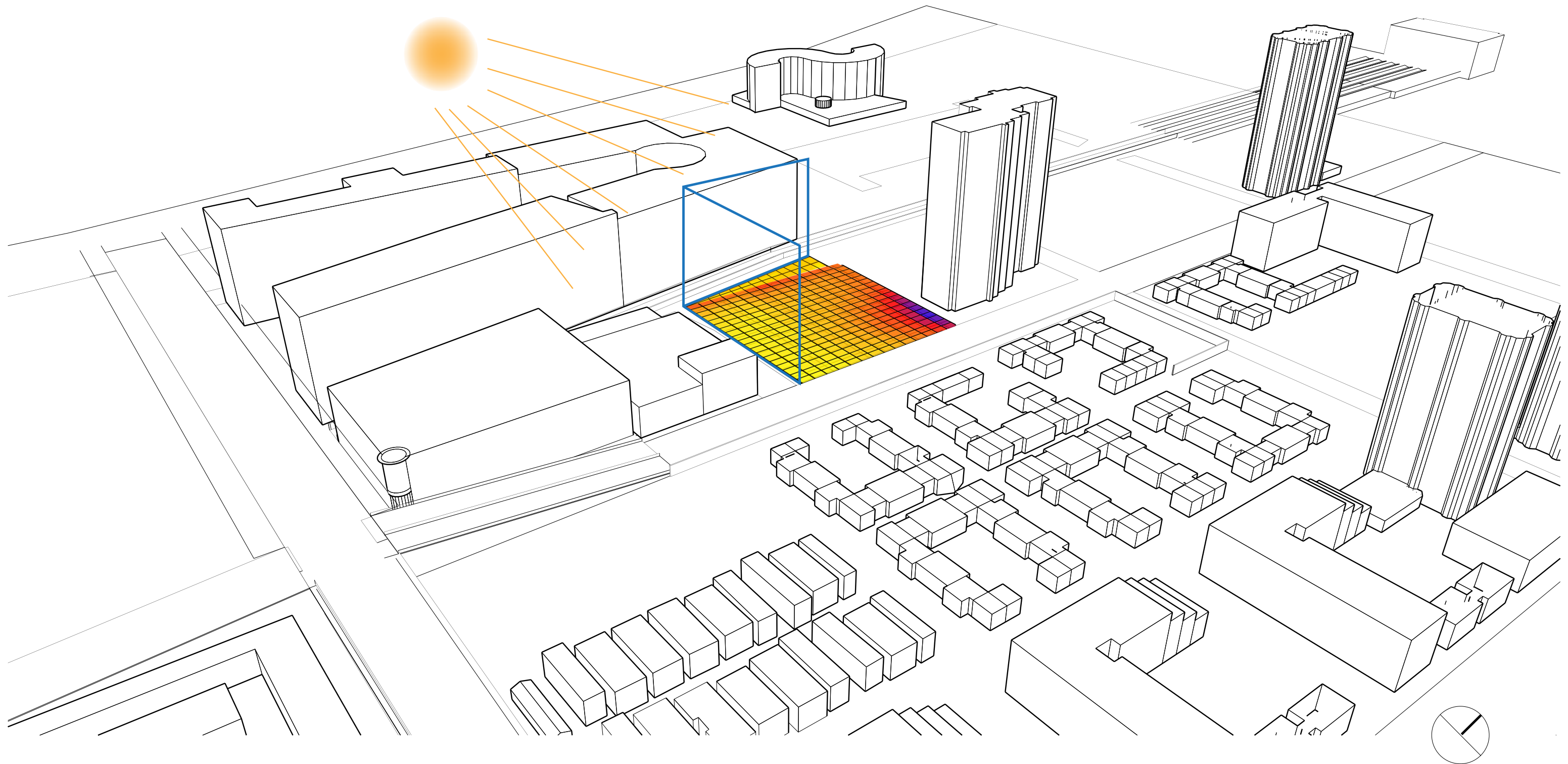


Winter Solstice:
December 21

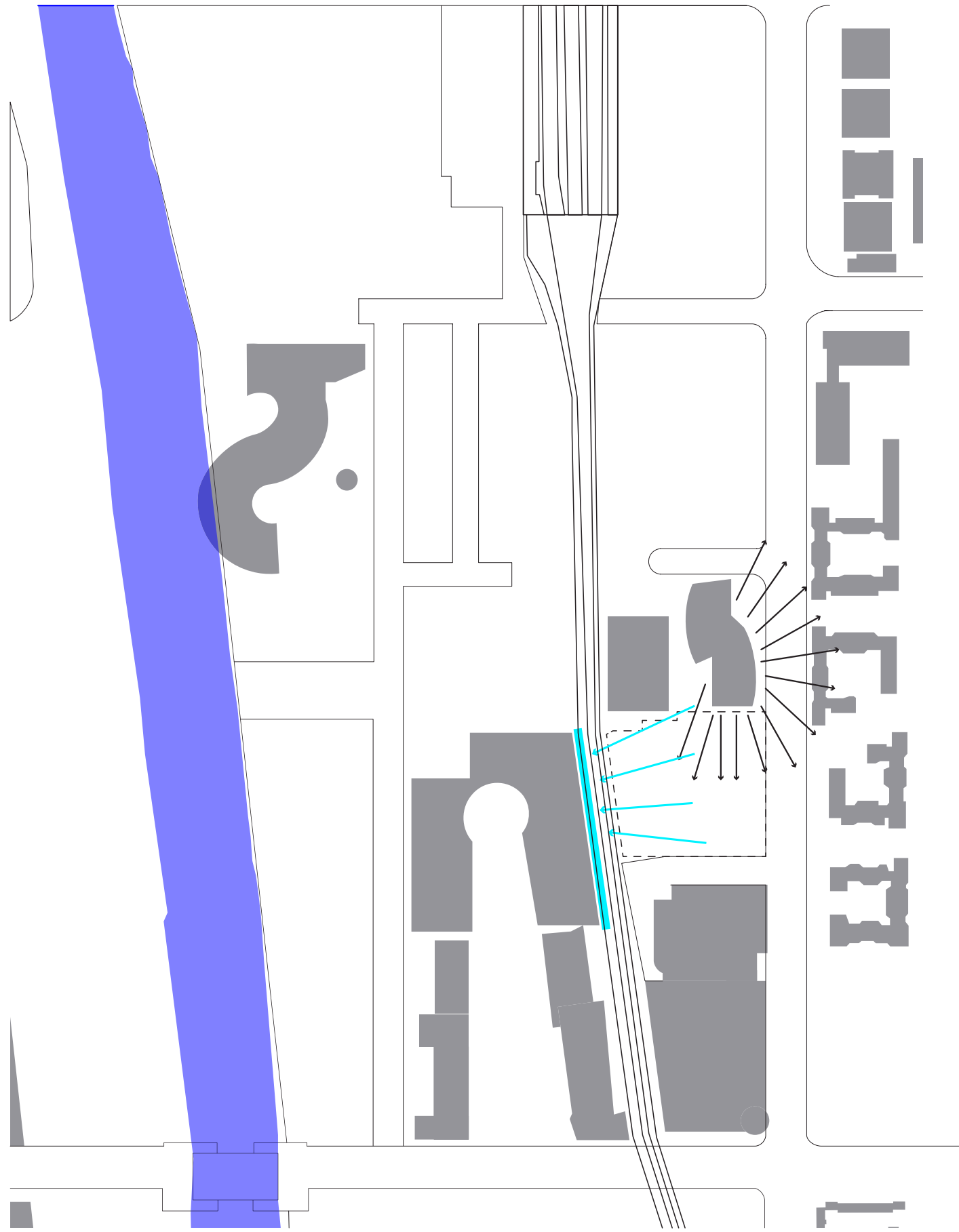
Shadow Range:
6:00am - 6:00pm



Solar Analysis

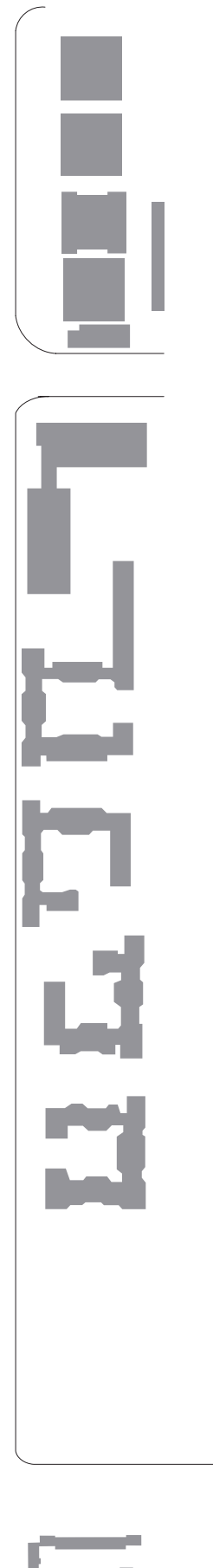


Site
Influence

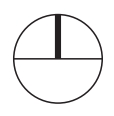


50
02 5 100



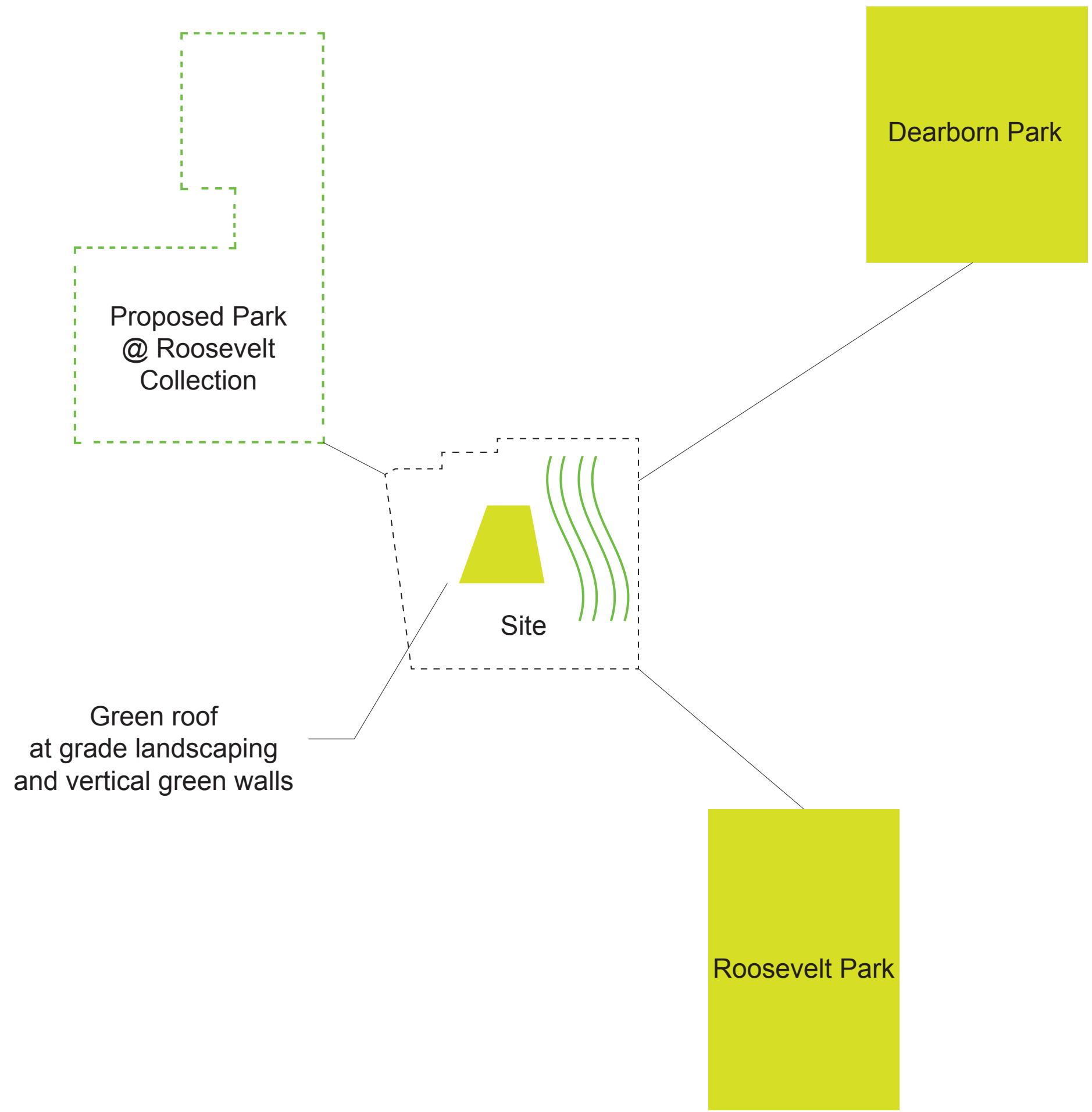


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Green Connection





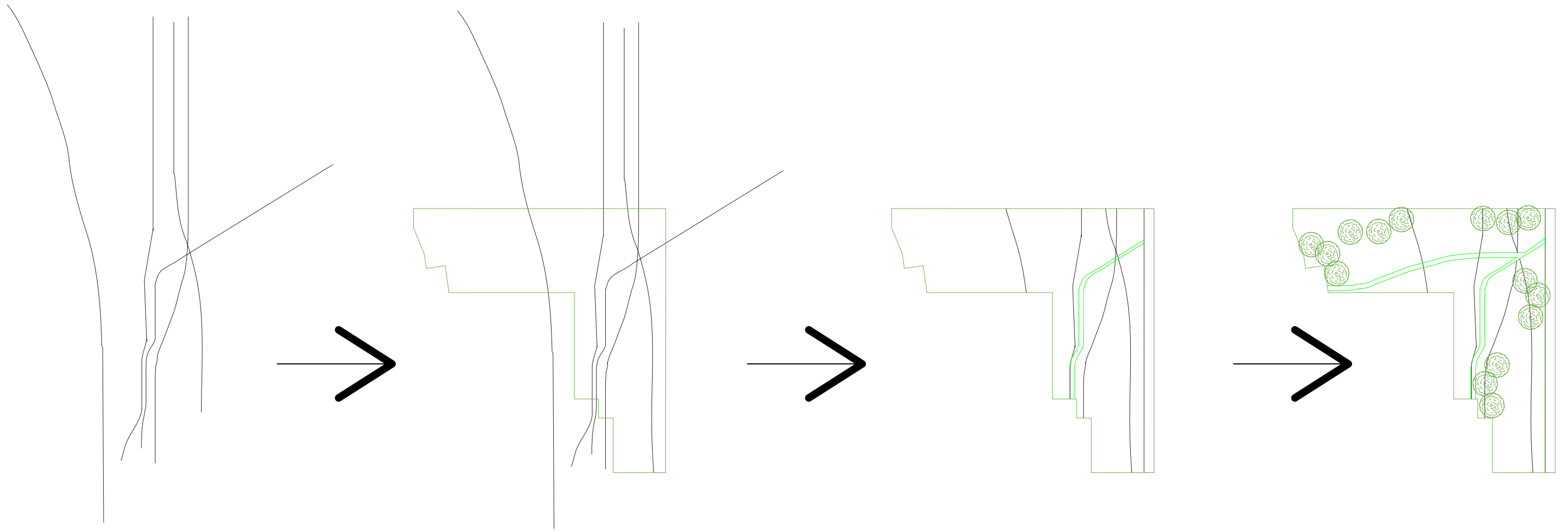
Proposed Park
@ Roosevelt
Collection

Dearborn Park

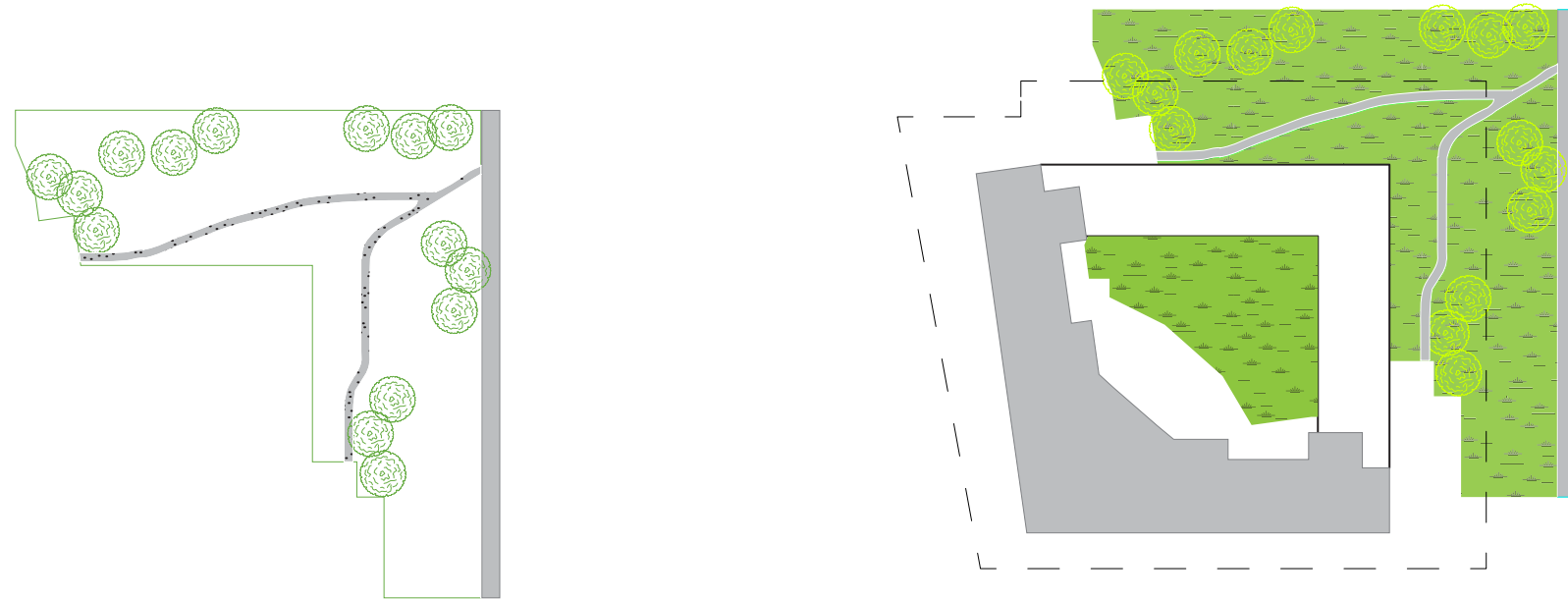
Site

Green roof
at grade landscaping
and vertical green walls

Roosevelt Park



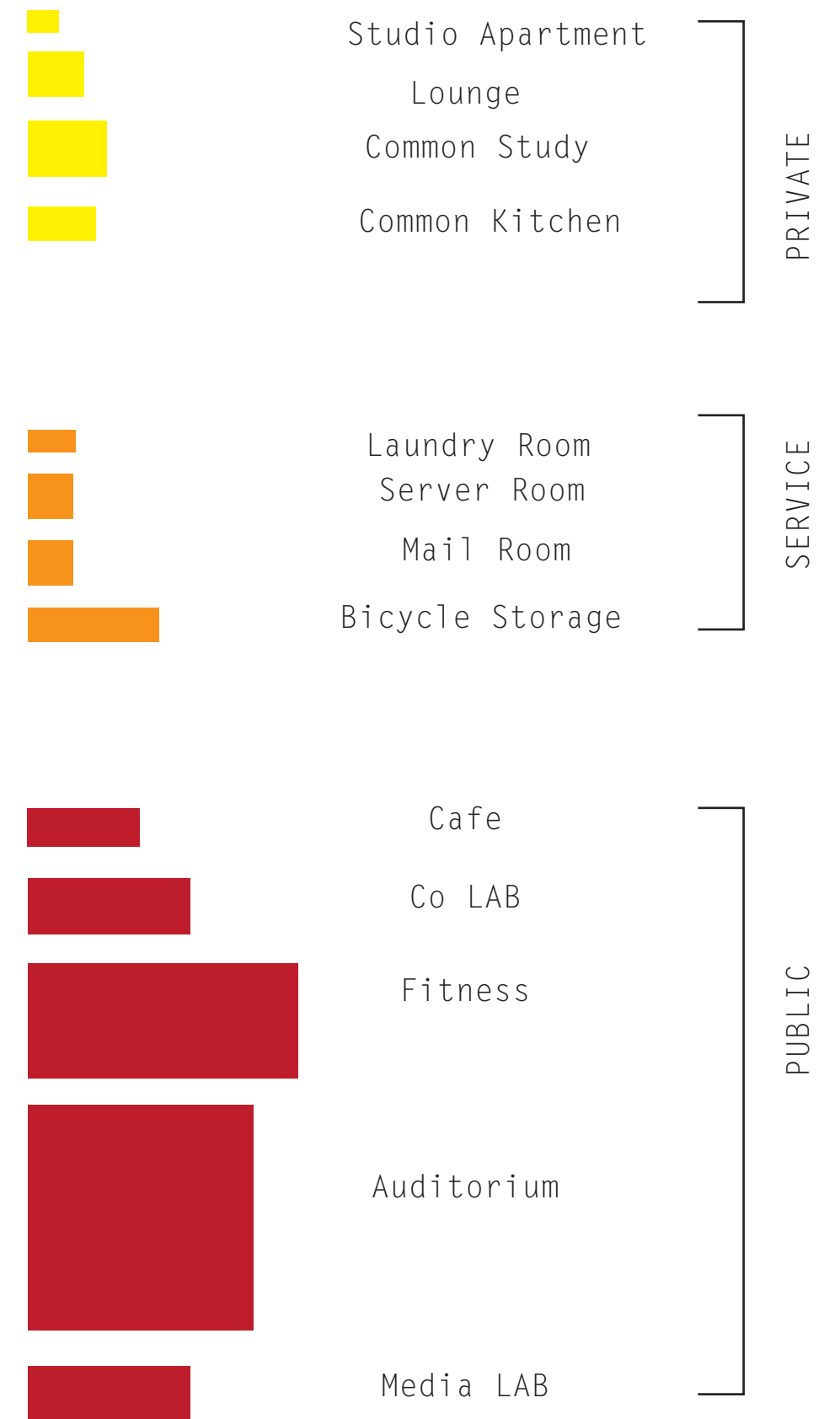
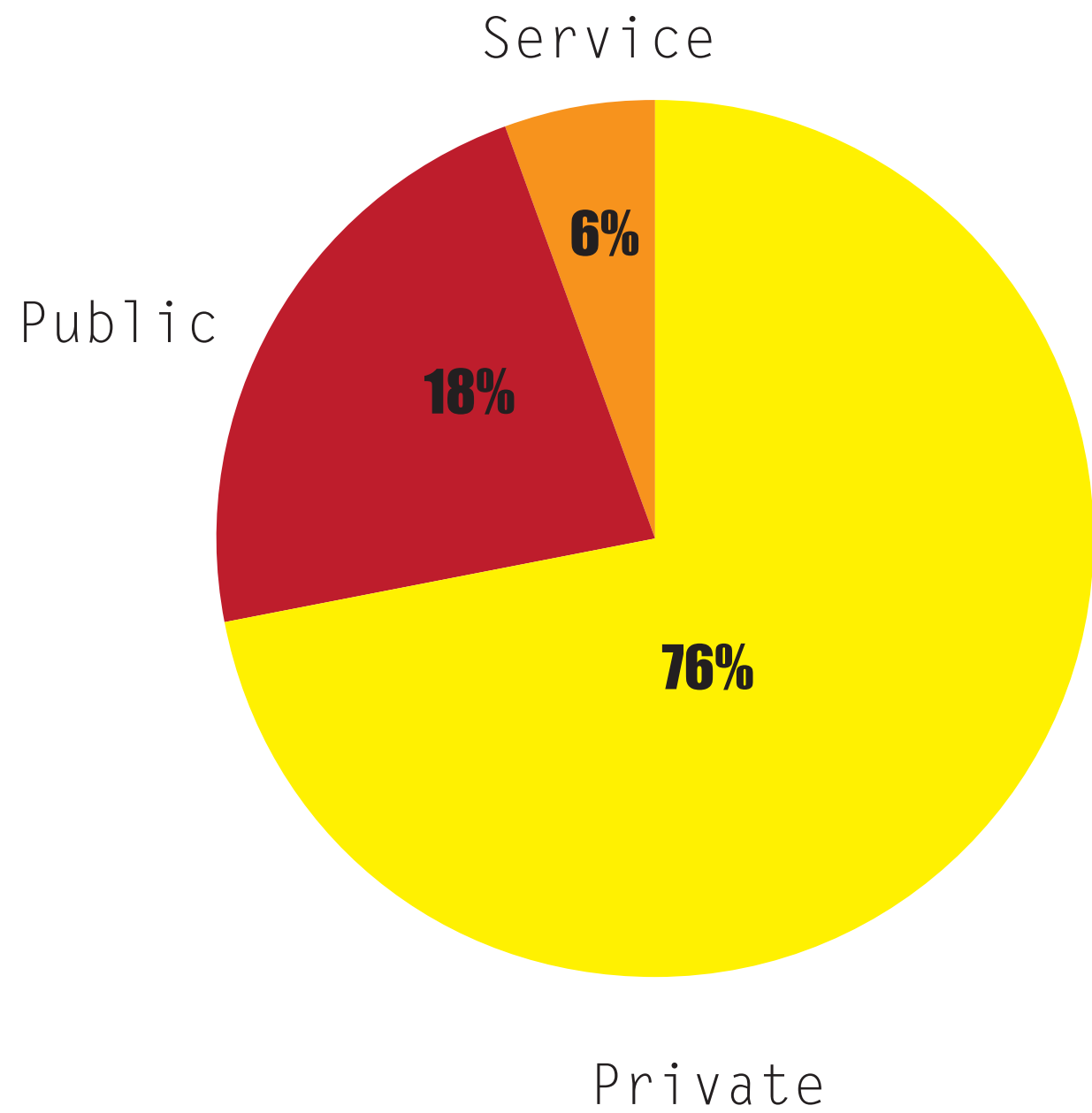
Transit lines of circulation



Program

14

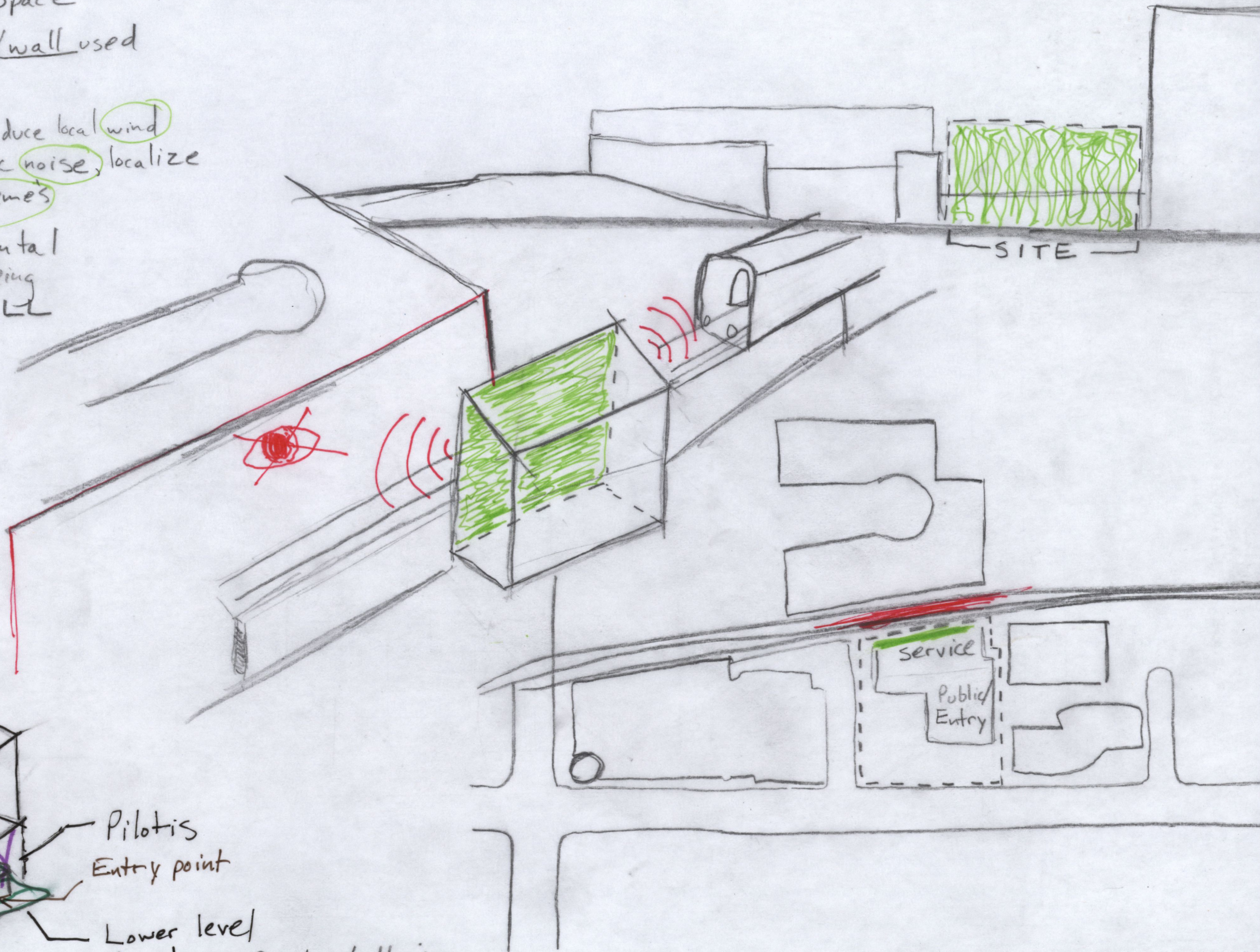




Sketches /
Design
Development

Inc of Green Space

- Green space/wall used as a buffer
 - living wall
 - benefit reduce local wind speed, traffic noise, localize temp extremes
- physical & mental health & wellbeing
- BLANK WALL
- air filtration



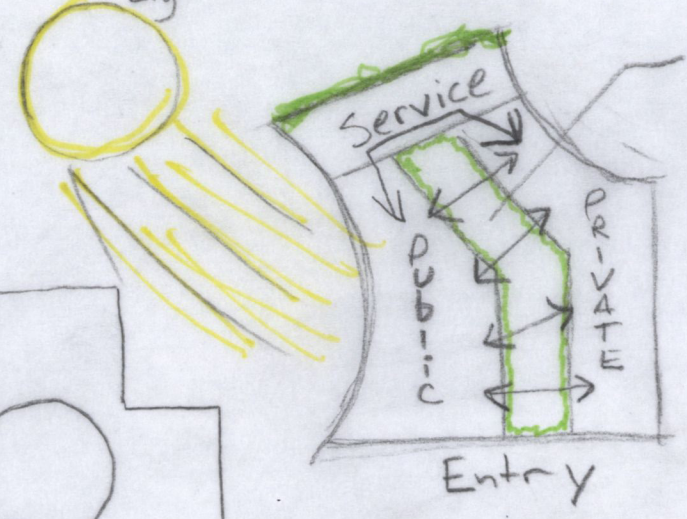
- Living Wall
- bike racks/storage
- Pilotis Entry point
- Lower level Landscape @ entry/gathering

Service
Public Entry

Inc of Green Space

- interior & semi exterior
- rear living wall to block Roosevelt collection + use a social ~~barrier~~ mediator/education tool
- interior circulation w/ green space

Natural Light



Circulation Space

Lounge

Circulation cores

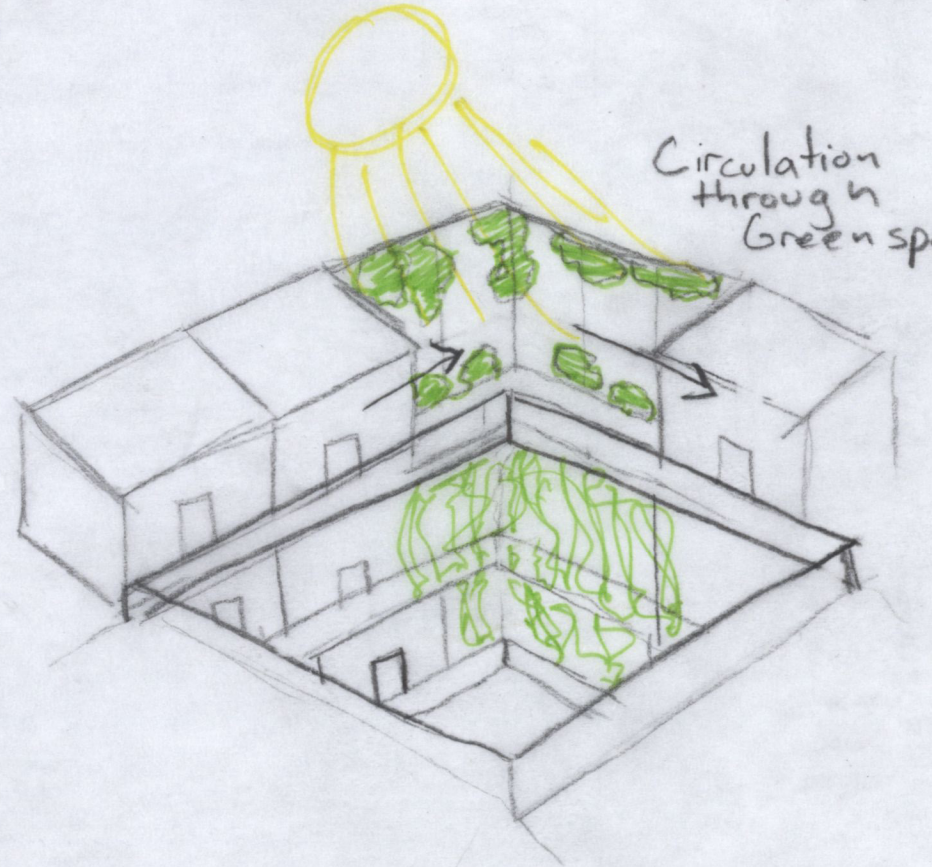
Service

Apts w/ Ext balconies

Kitchen

Study

Green Circulation Space



Circulation through Green space

Barrier

View

No corners

Service

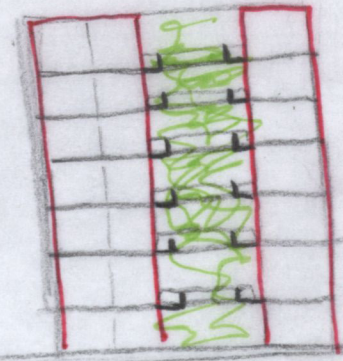
Sun

Private

Respect

Interior Circulation Network w/ hanging gardens

Public

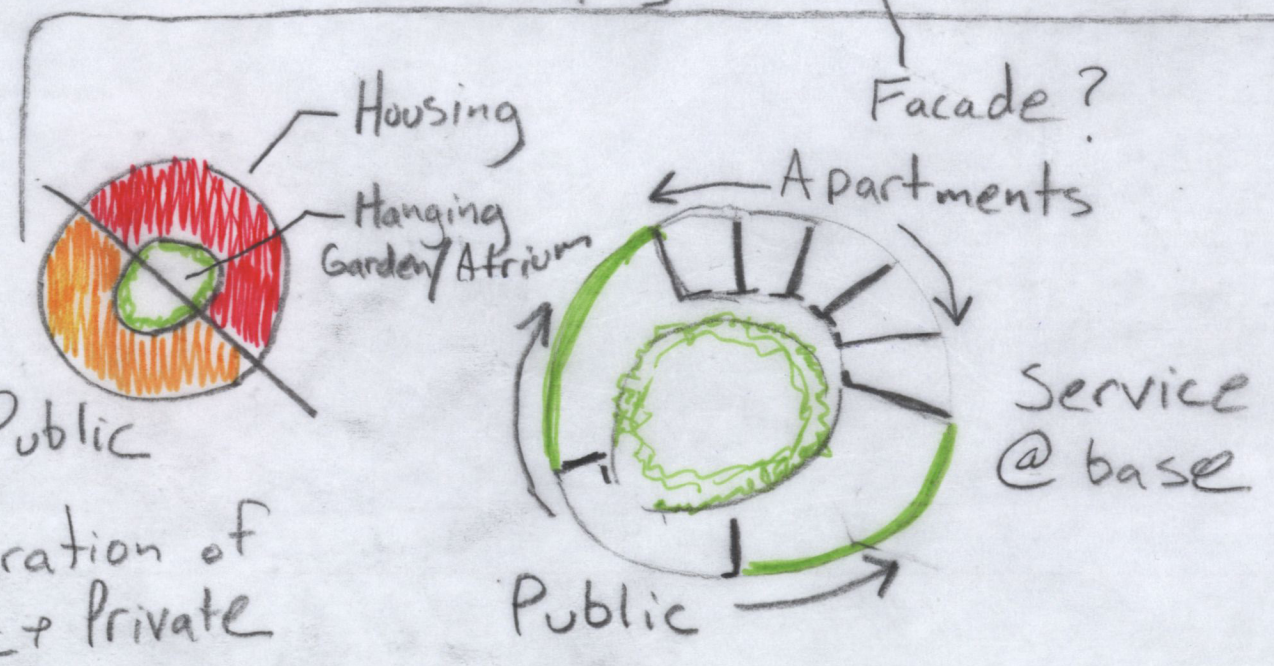
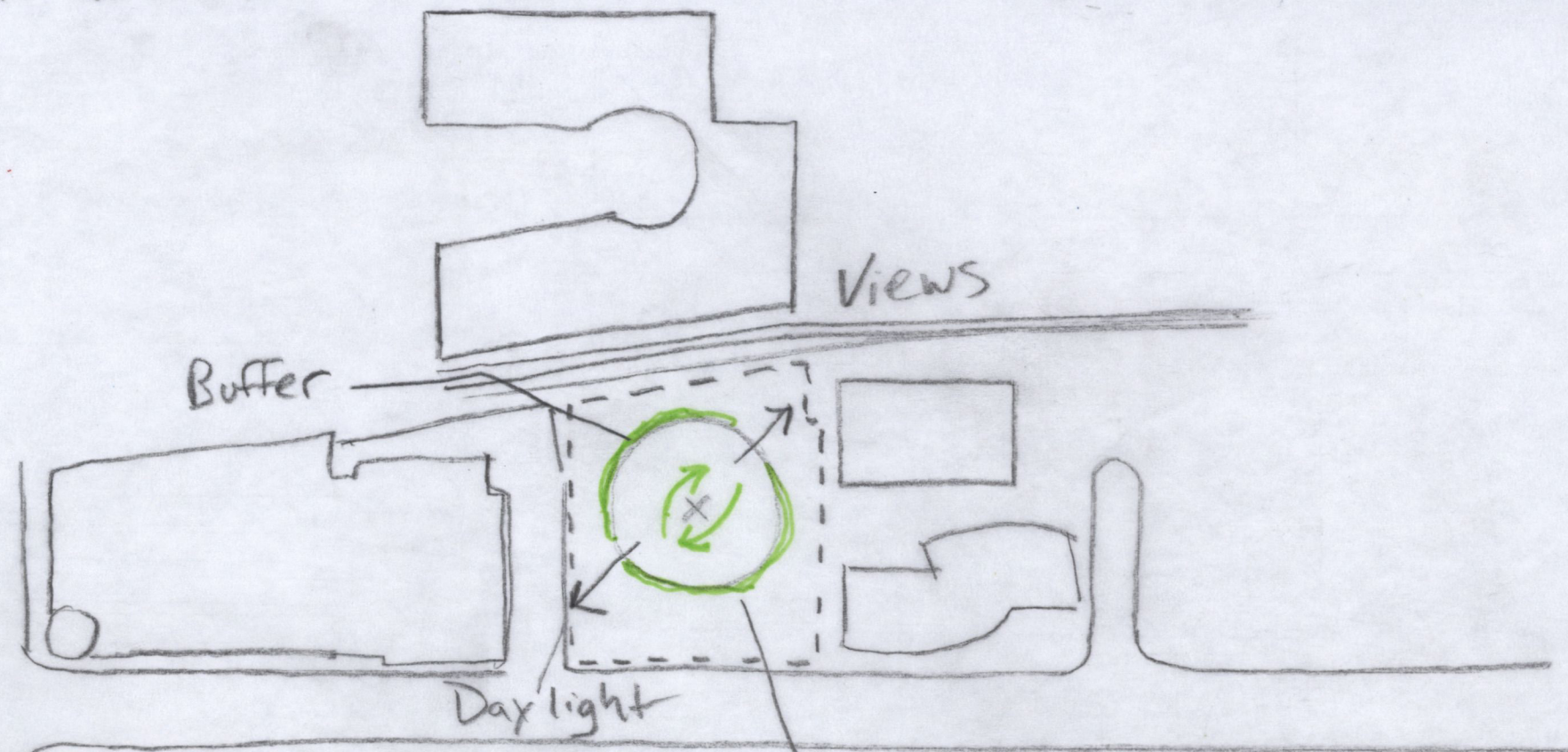


- Housing
- Circulation
- Green space

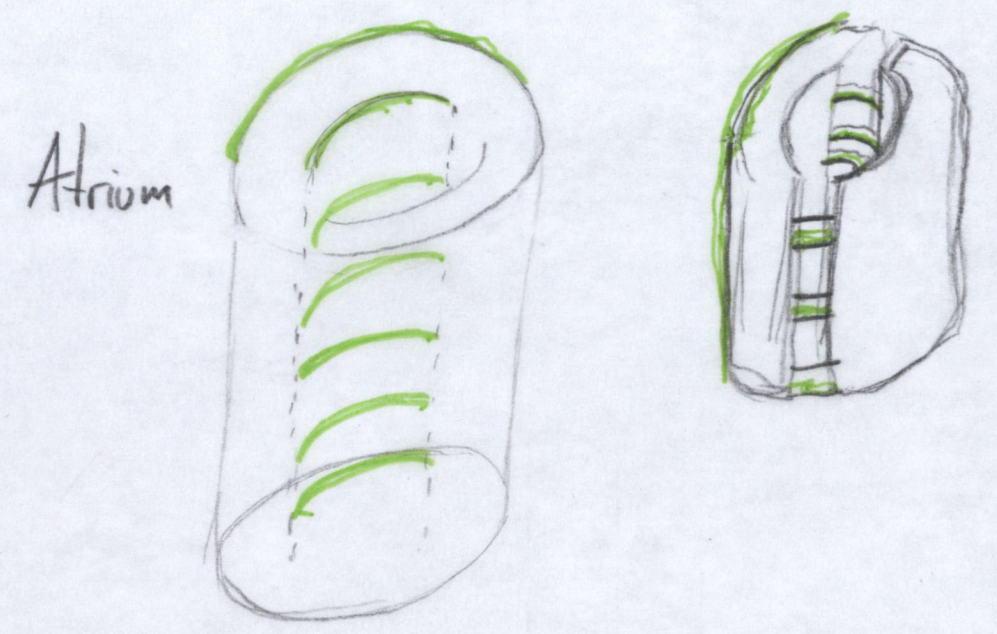
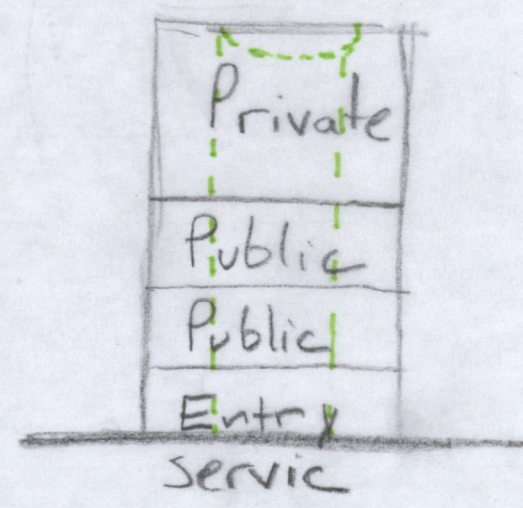
Inc of Green Space Connected to circulation

Exterior + Interior spaces
atrium, hanging gardens
terraces

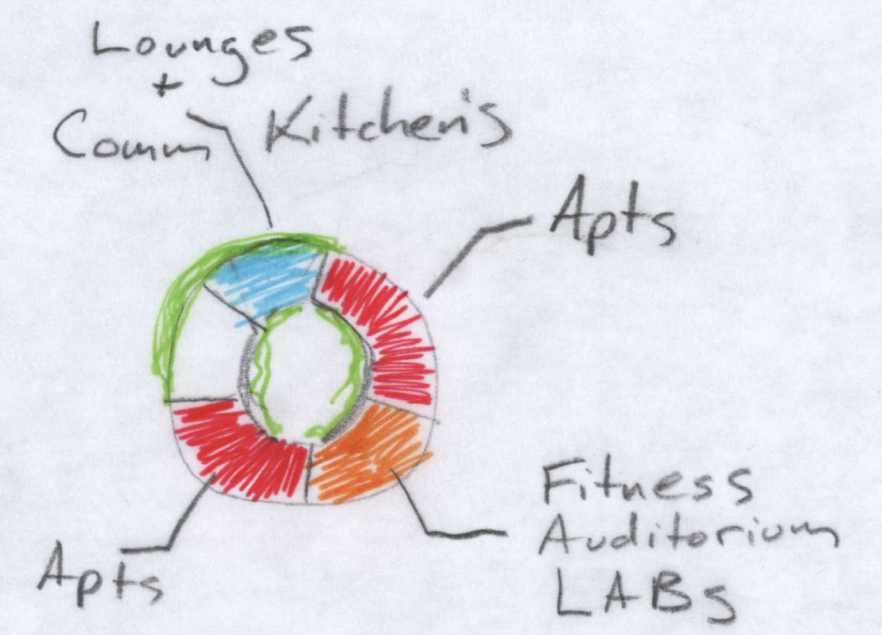
Green technology as an educational tool

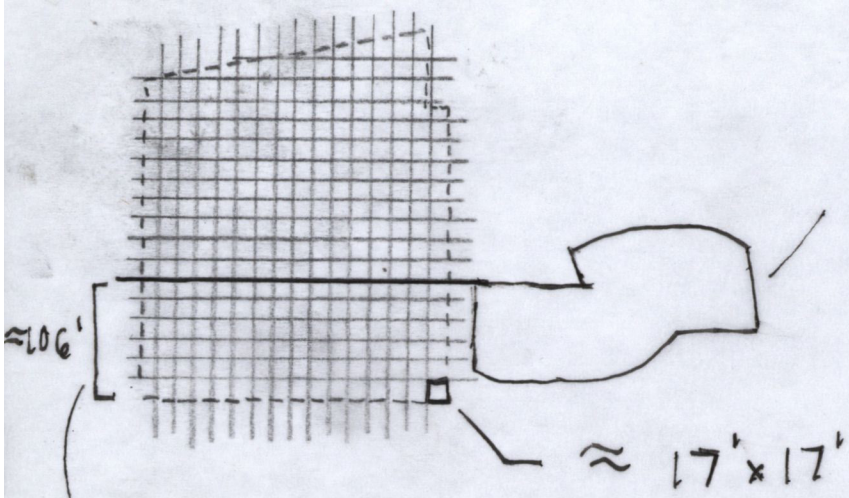


-Separation of Public + Private

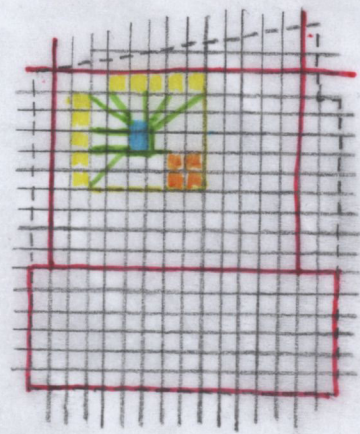
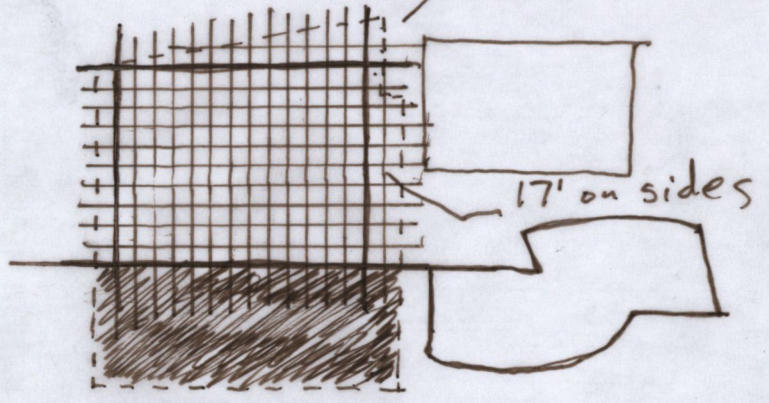


Atrium

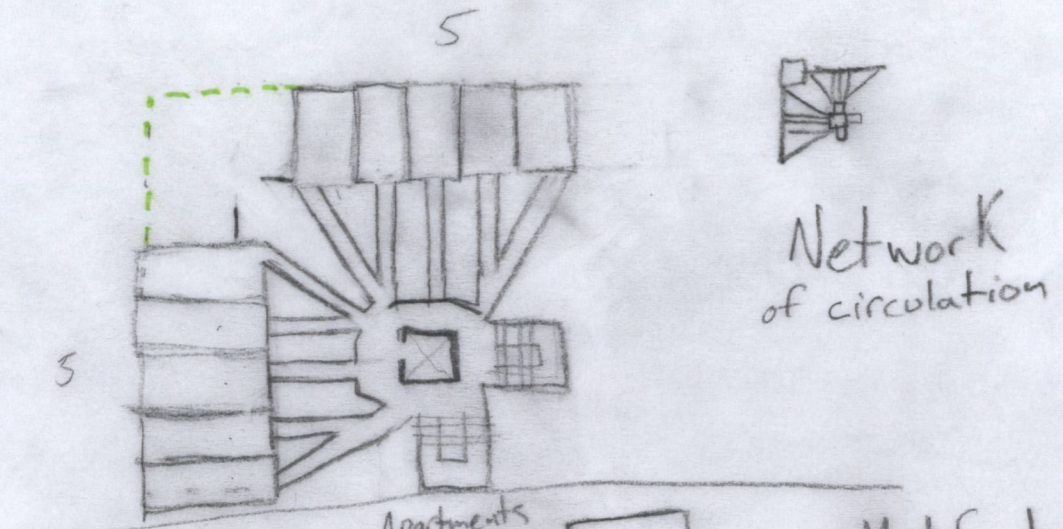




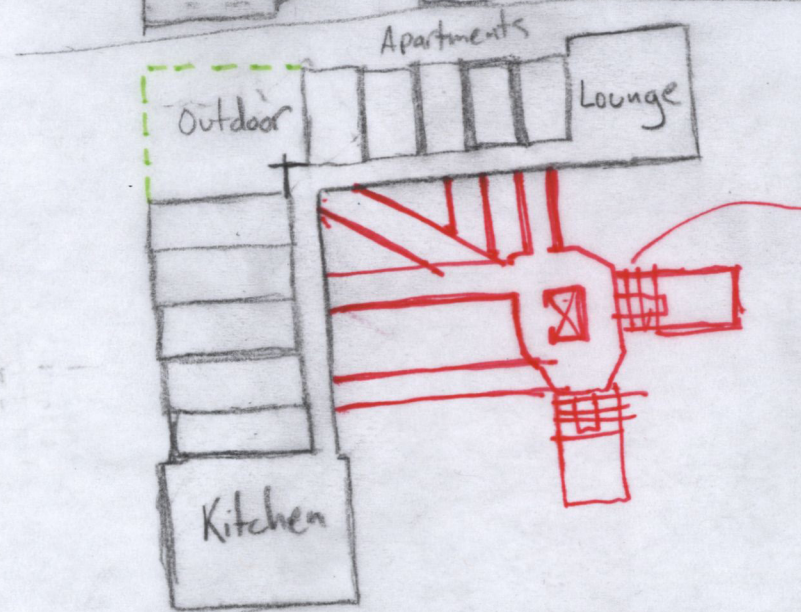
Building Approach + Setback



- Housing (Apts)
- Core
- Kitchen + Lounge
- ★ Circulation Network
- Boundaries

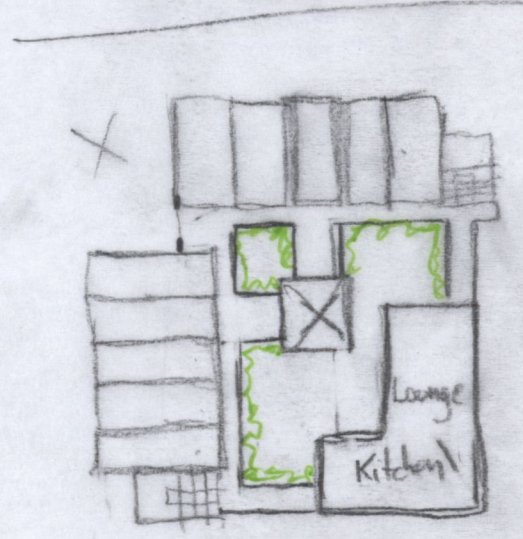
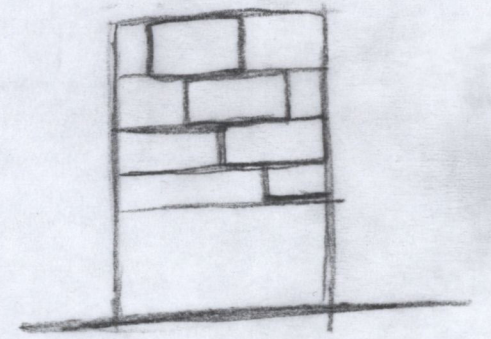
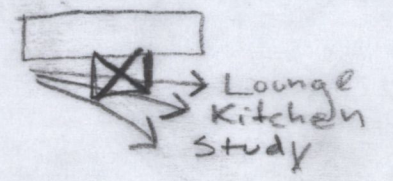
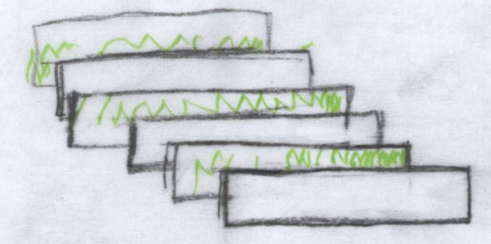
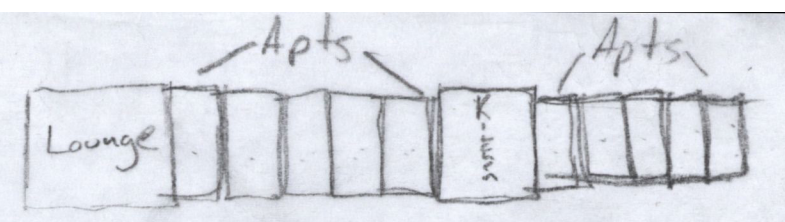


Network of circulation



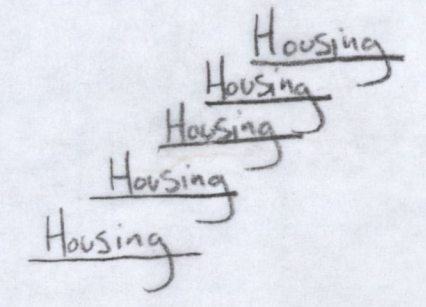
Modified Network

Core - elevator + 2 stair cases



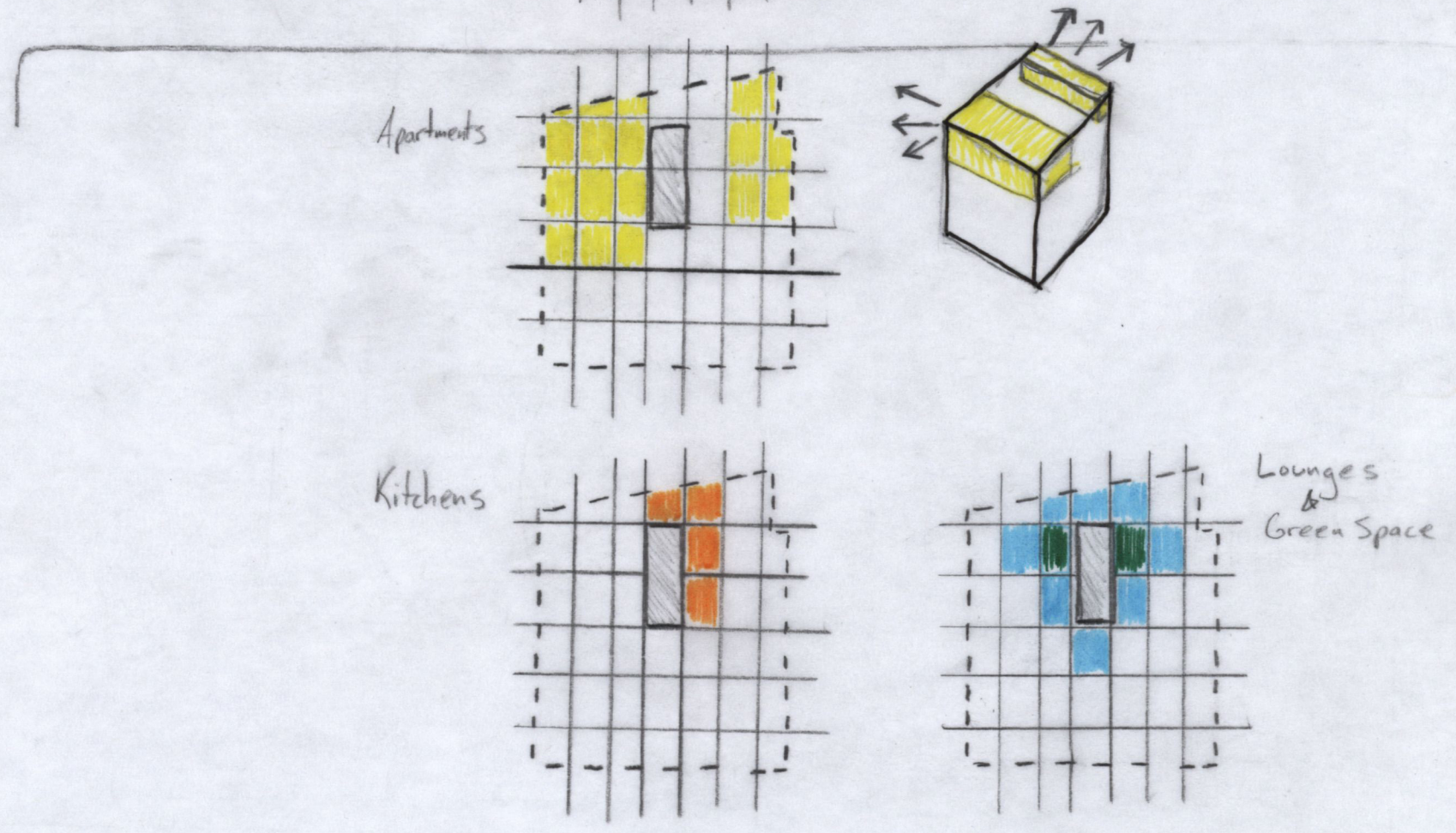
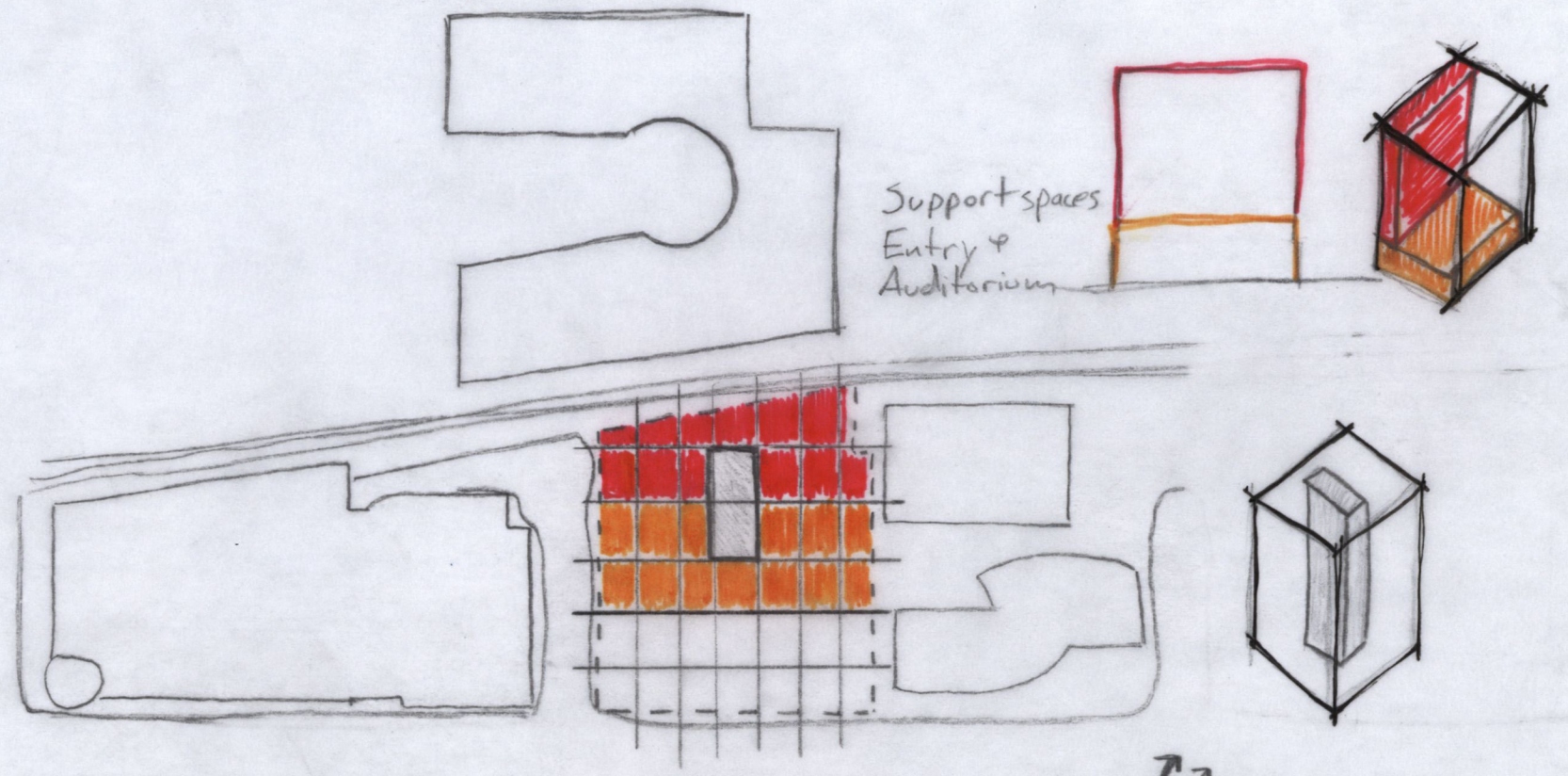
Further Modification

Kitchen/Lounge combo
Interior hanging gardens



Views, Orientation Circulation

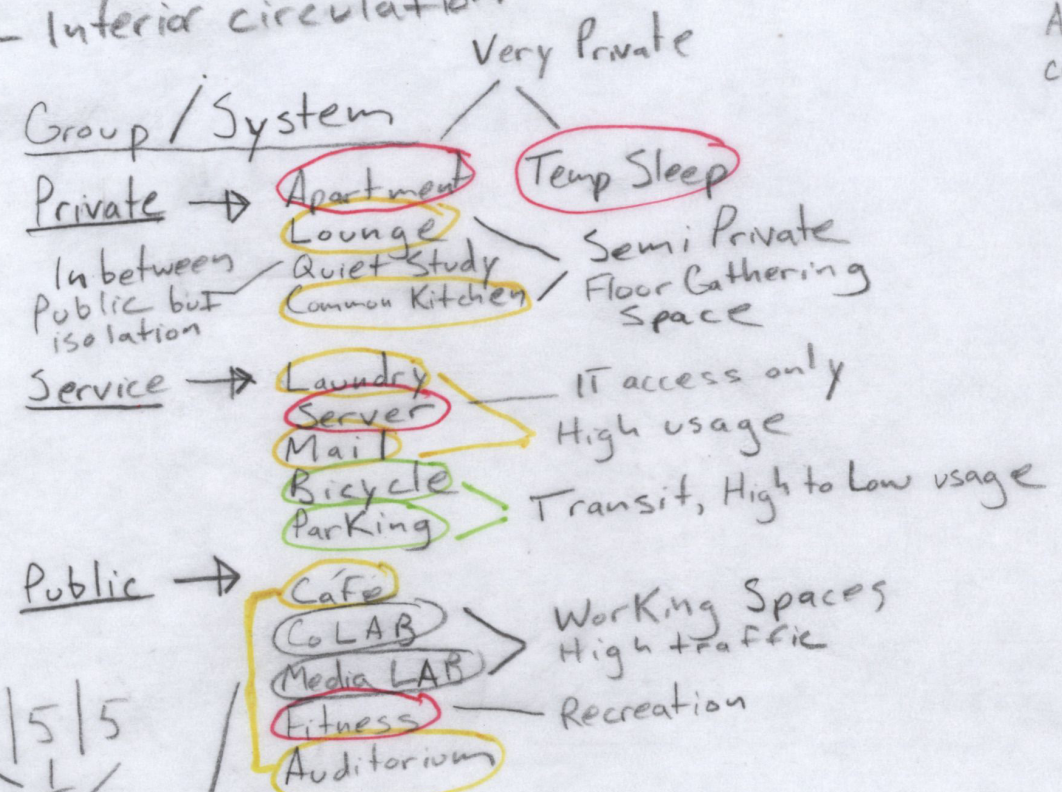
- Downtown vs. Southern Exp
- Problematic Concerns
 - Roosevelt Collection
 - AMLI 900 Highrise
- Interior views + Circulation
- Hanging program connected through circulation



Capturing Views + Giving Exposure

- Downtown
- Southern Exposure
- Blank rear wall
- Interior circulation

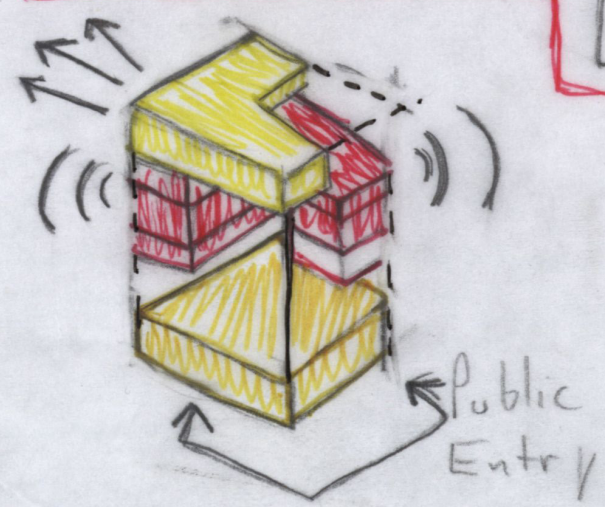
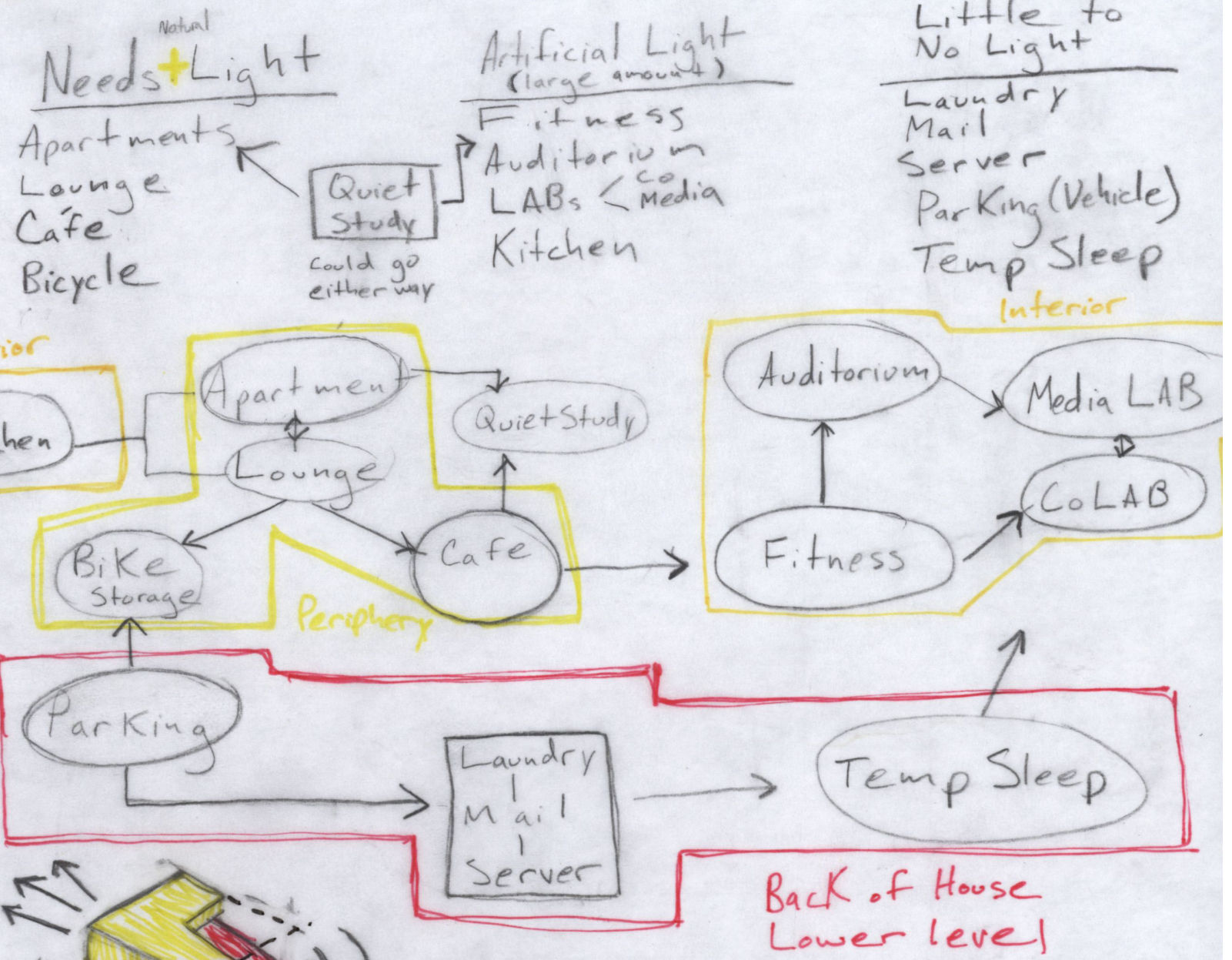
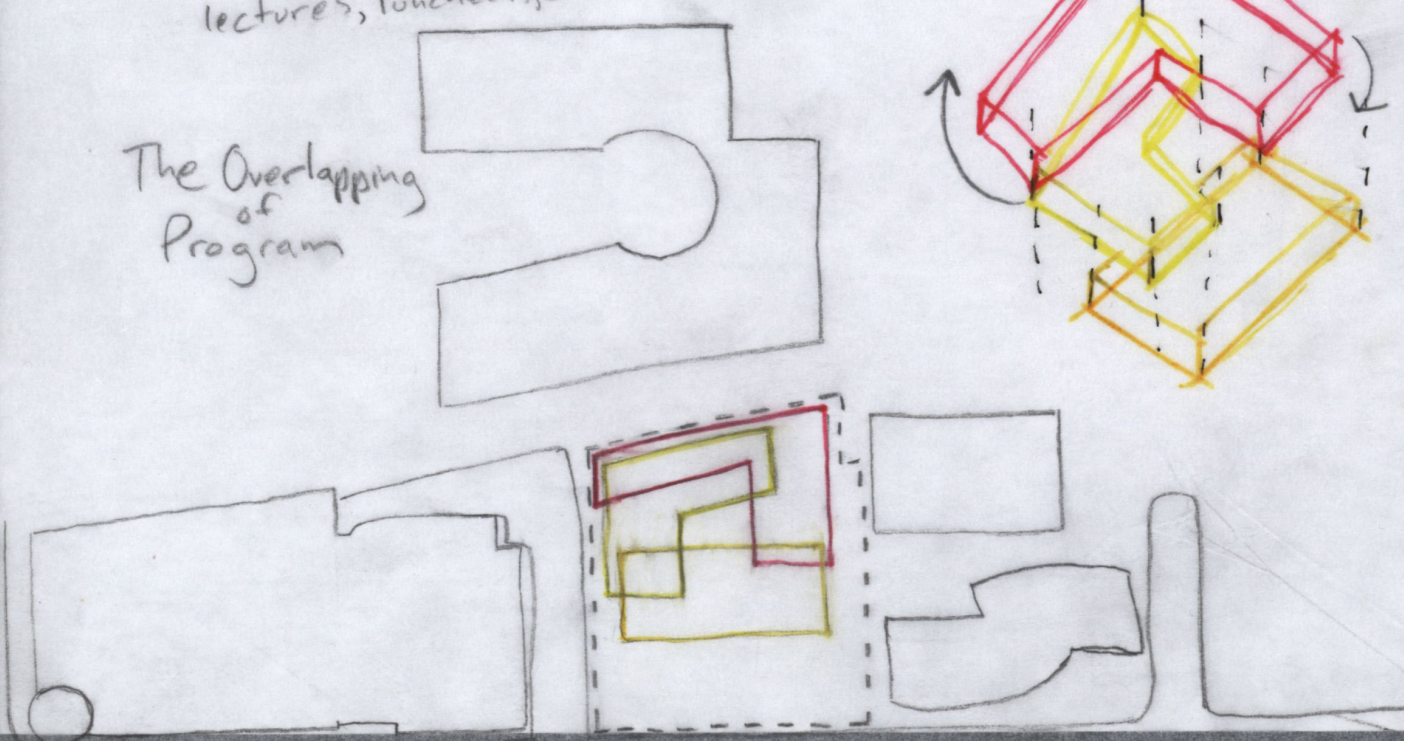
Network / network
 noun: An arrangement of intersecting horizontal and vertical lines
 A complex, interconnected group or system
 A system of lines or channels that cross or interconnect



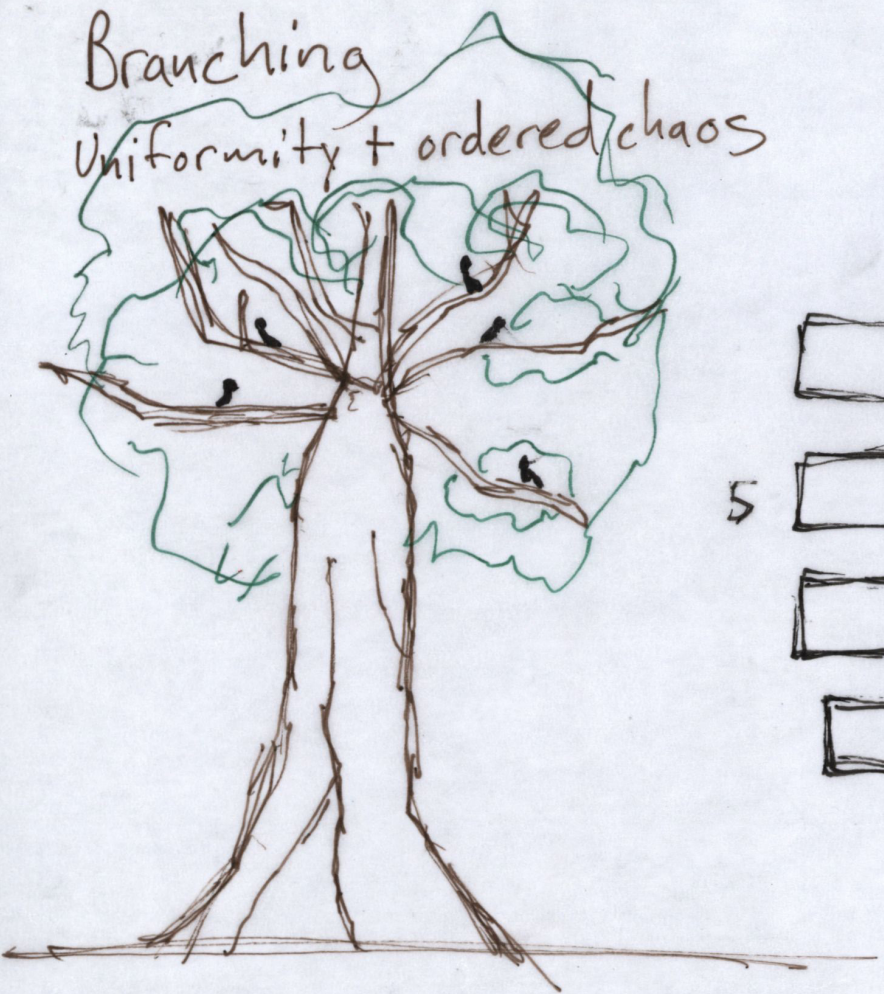
5/5/5
1/5

Public access for entertaining lectures, lunches, etc

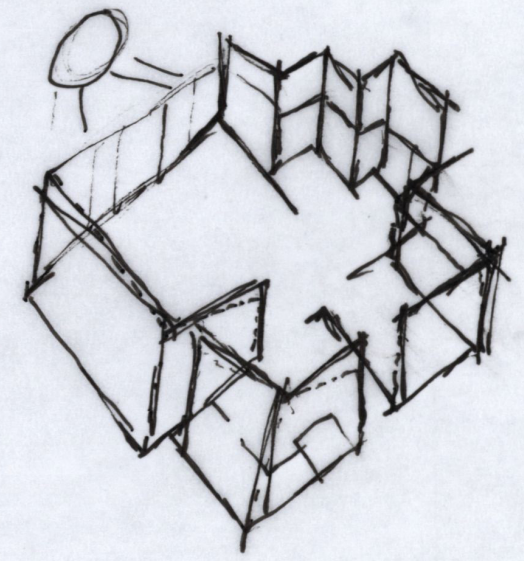
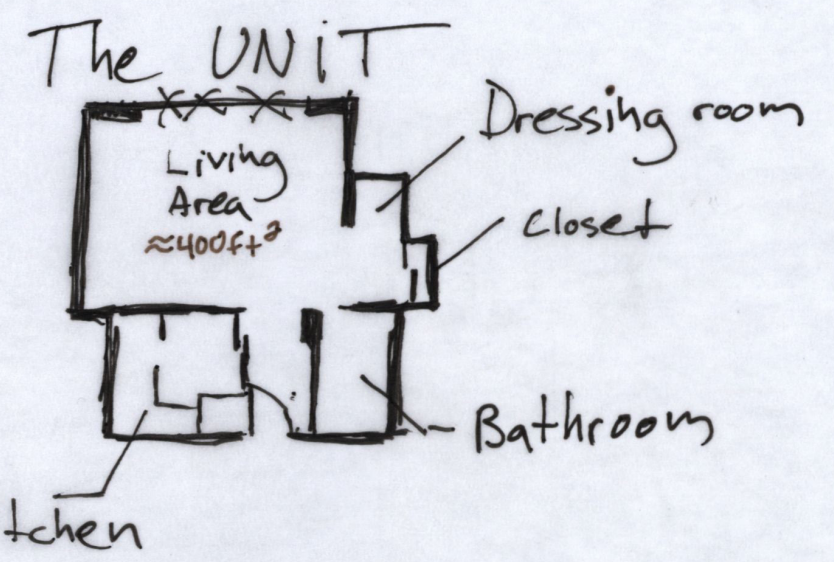
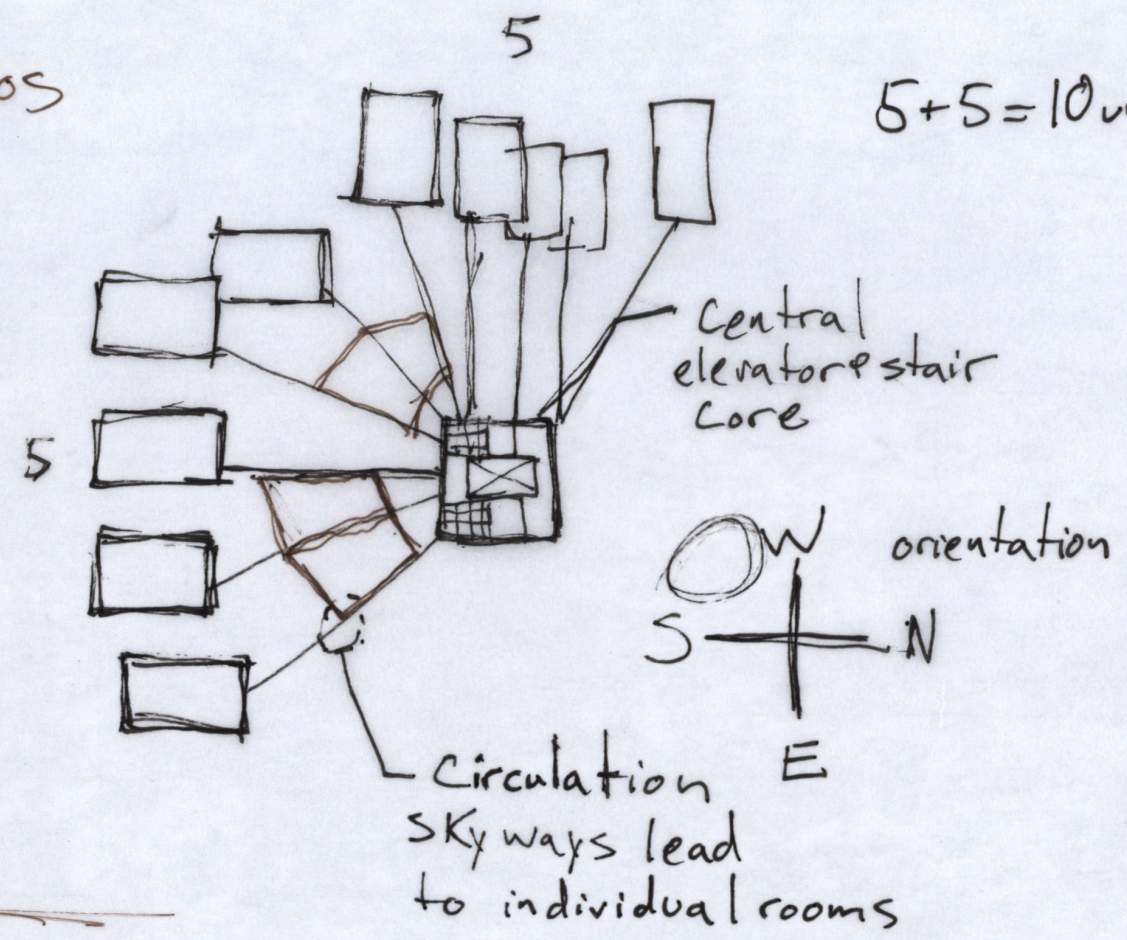
The Overlapping of Program



Branching
Uniformity + ordered chaos

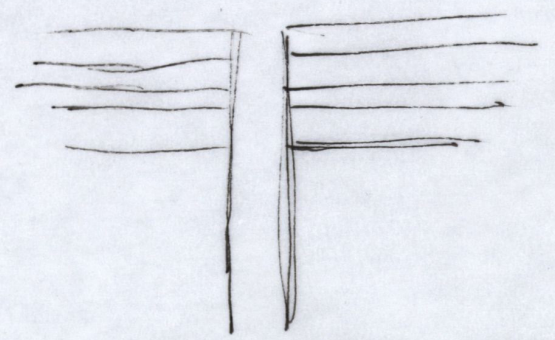
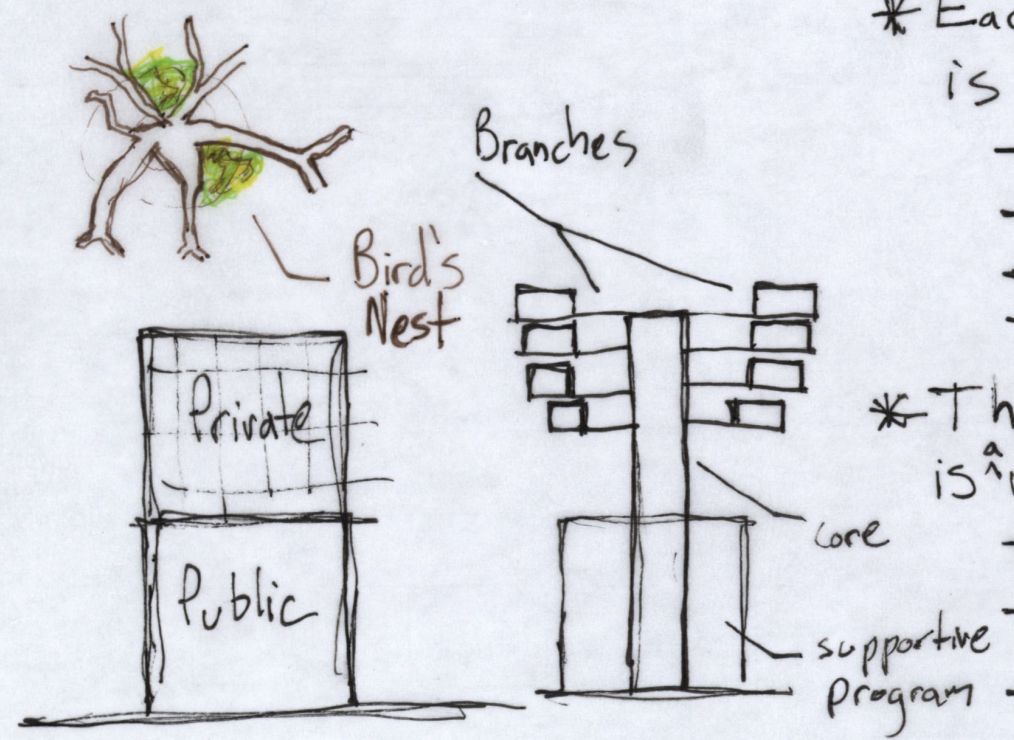


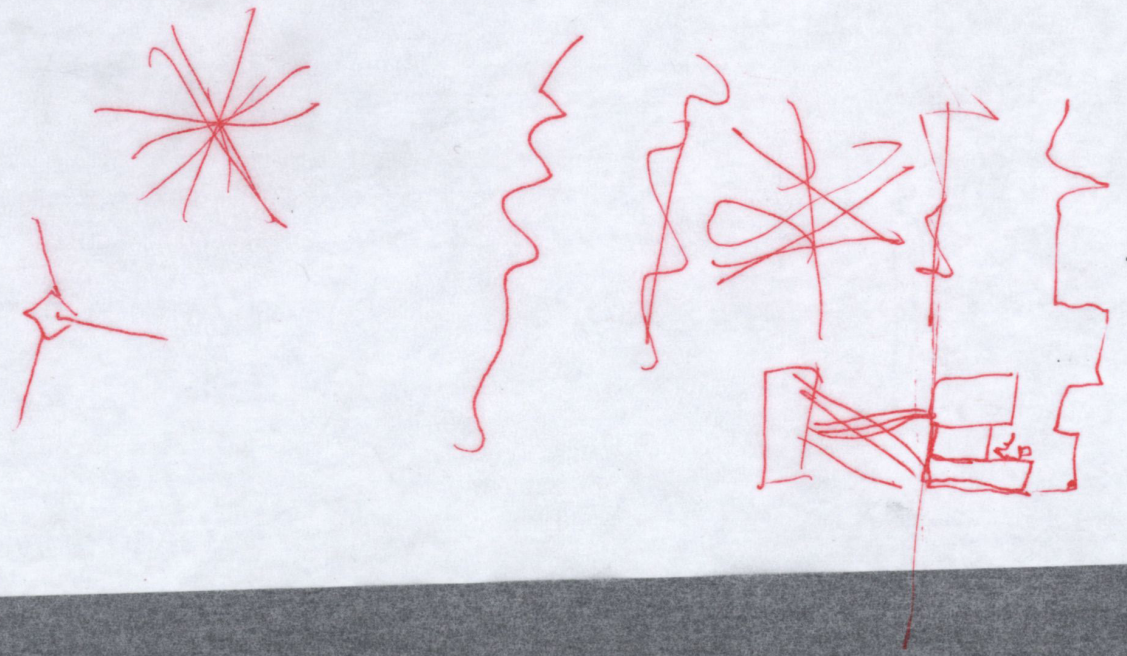
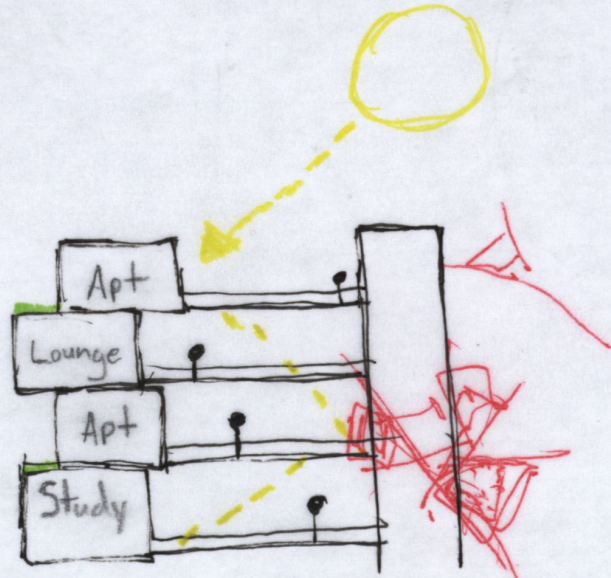
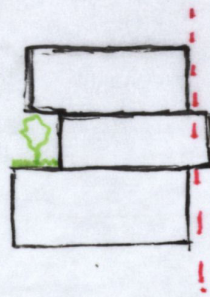
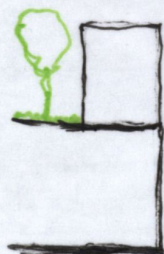
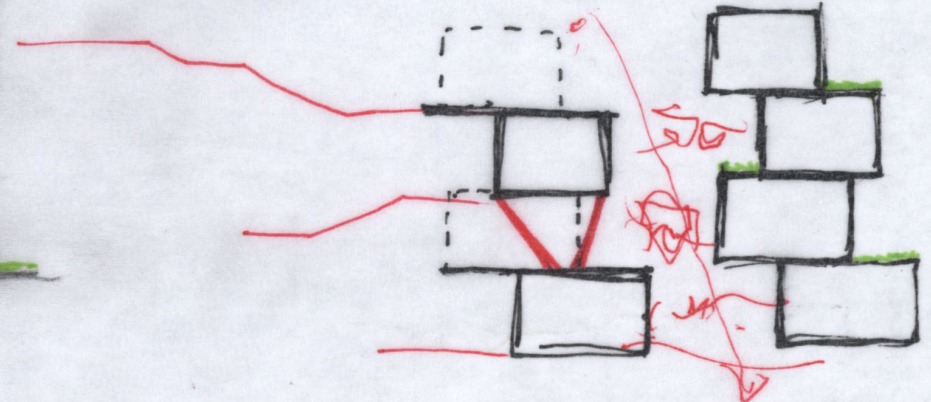
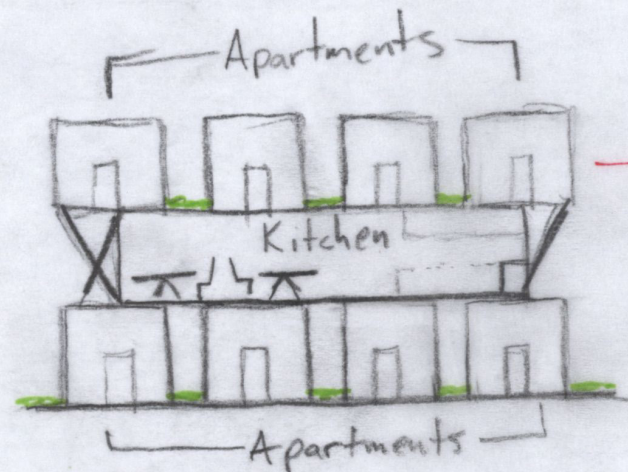
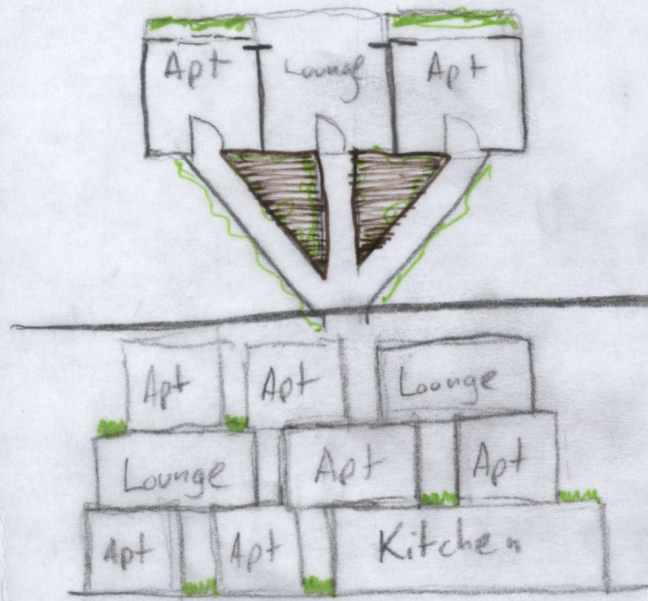
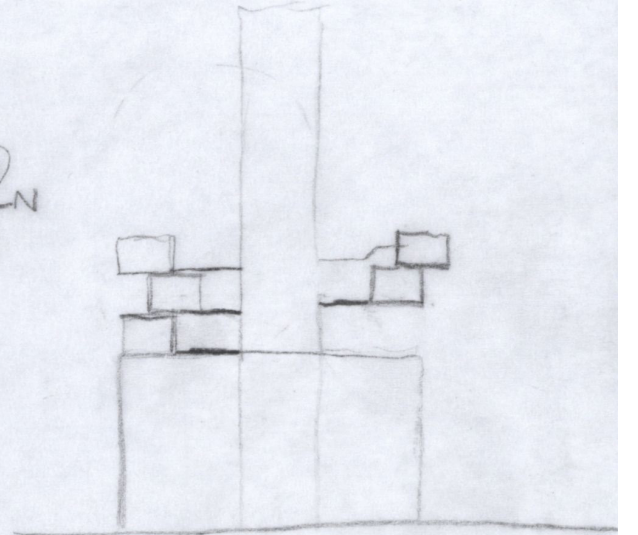
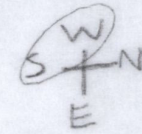
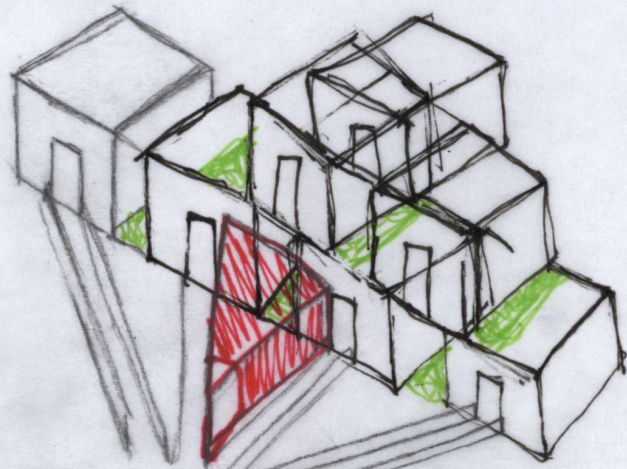
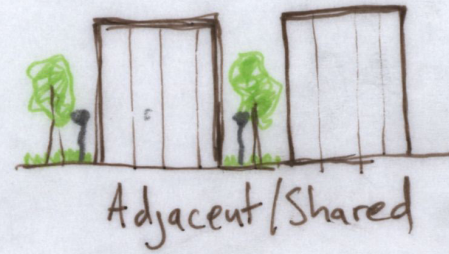
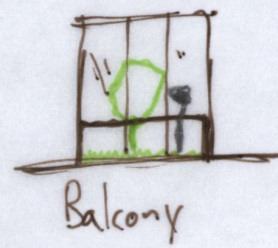
$5 + 5 = 10 \text{ units} \times 10 \text{ levels} = 100 \text{ units}$



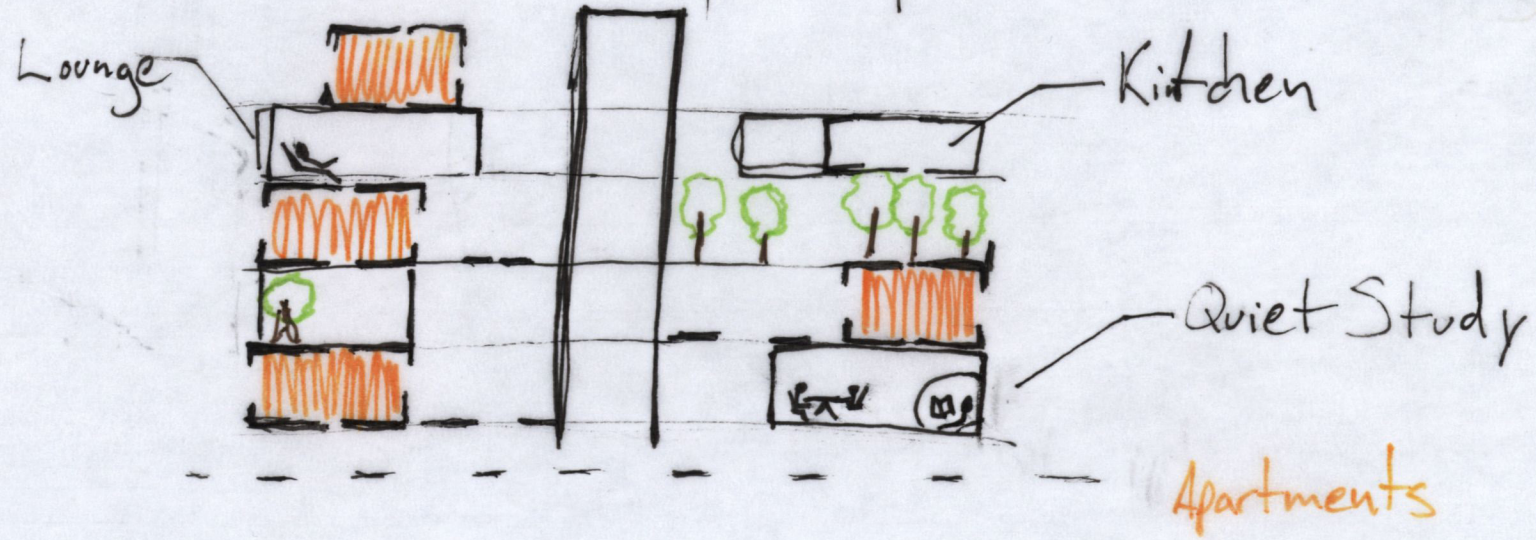
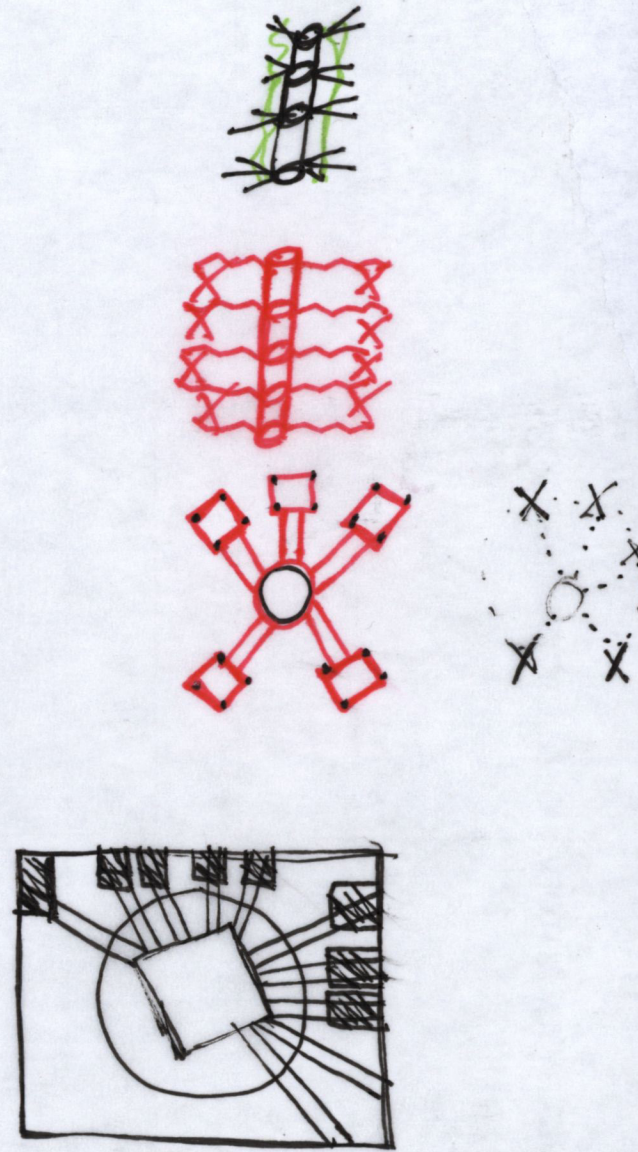
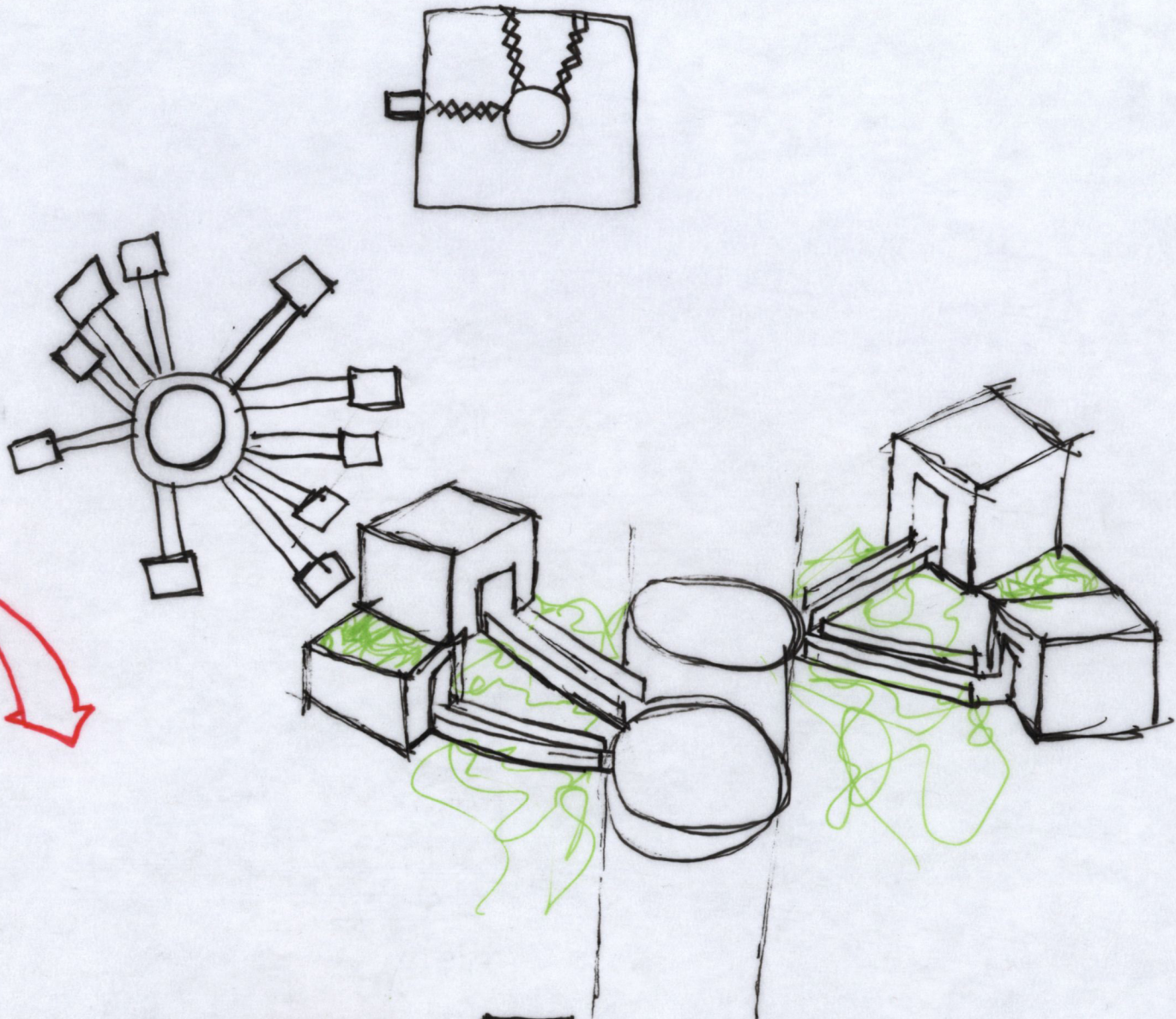
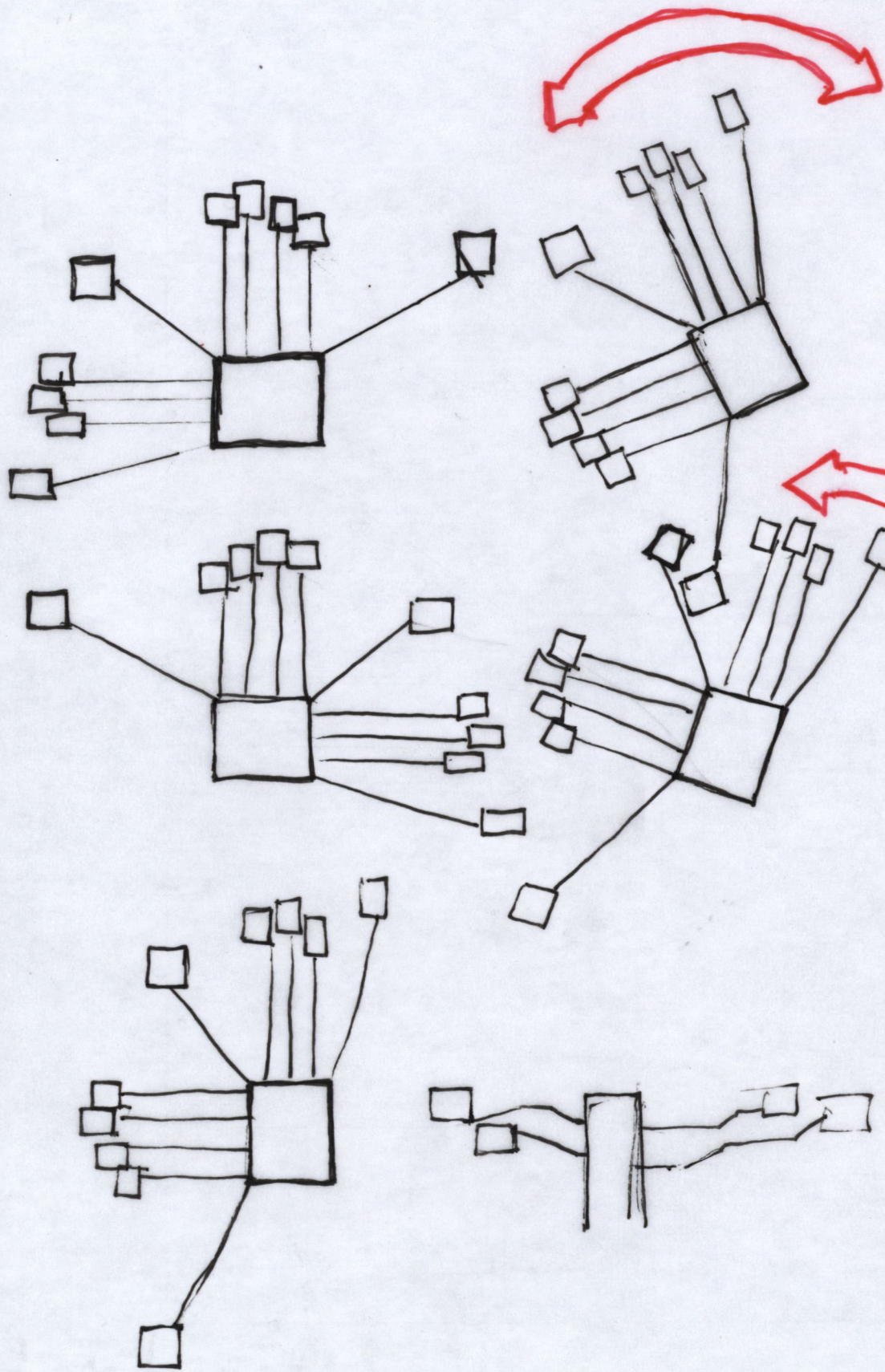
- * Each studio apartment is uniform
 - same shape
 - roughly 400ft²
 - studio/1 person
 - private

- * The journey (circulation to & from apartment) is a unique experience
 - Dynamic views
 - Dynamic lighting from various angles
 - Insertion of vegetation and/or green spaces





Branching



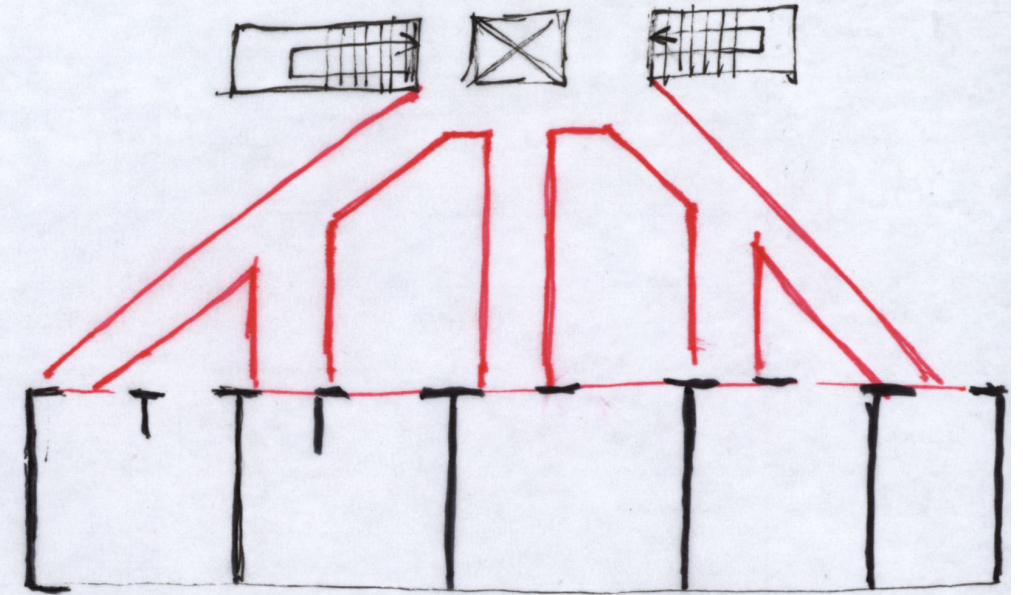
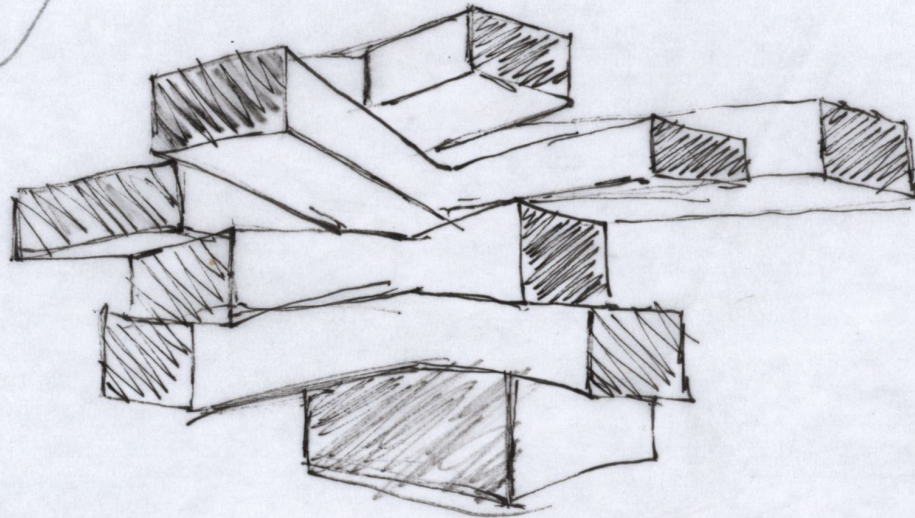
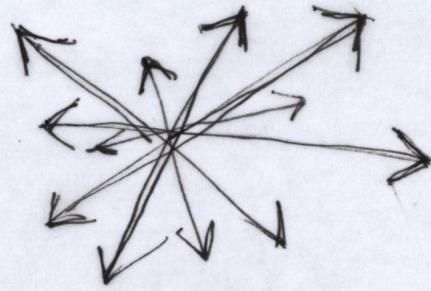
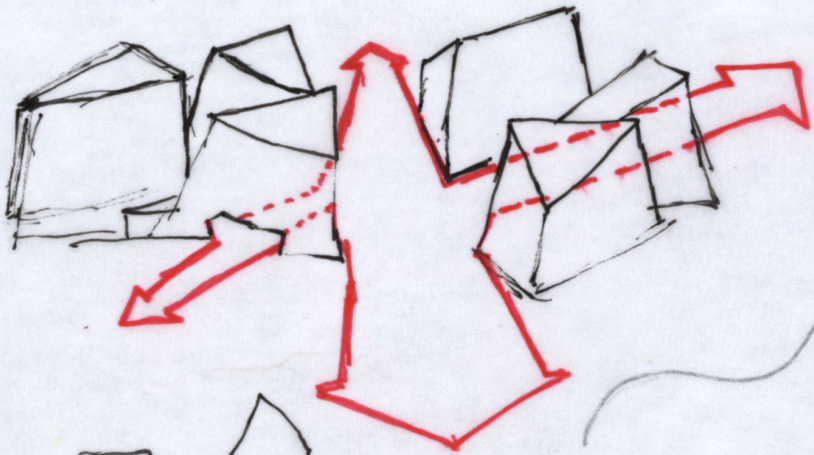
Porous

- Cutting through the mass gives visual connections

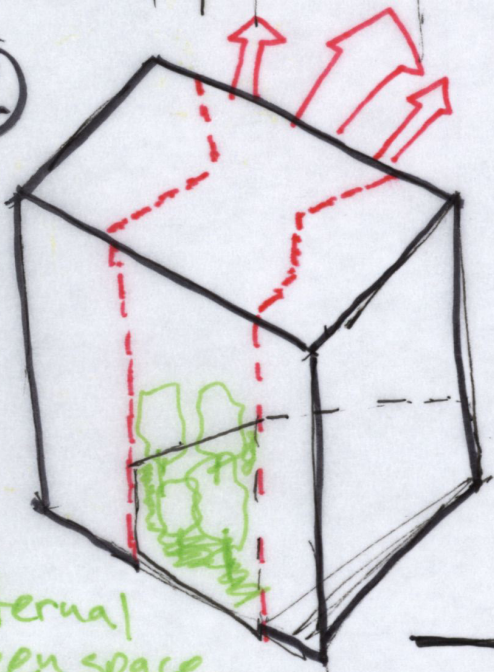
Networks
A Network of Views

5 Network of Circulation

1

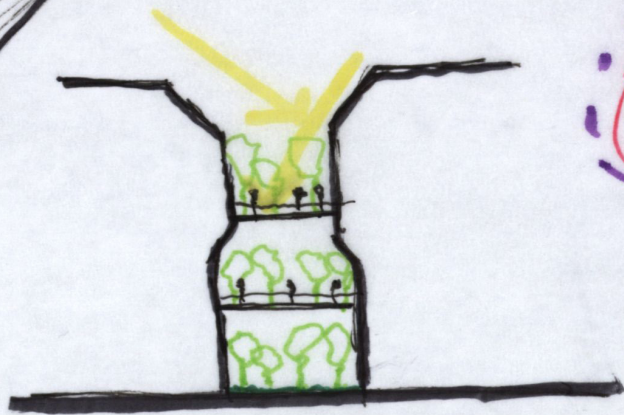


2



city views

internal green space

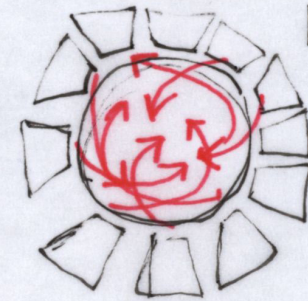


4 Internal Network of Program

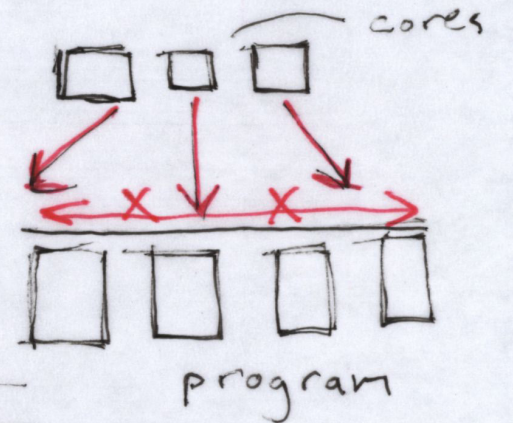
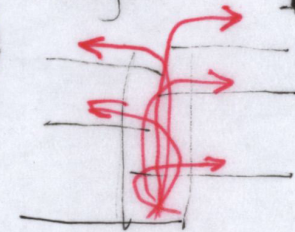


6

Internal Circulation

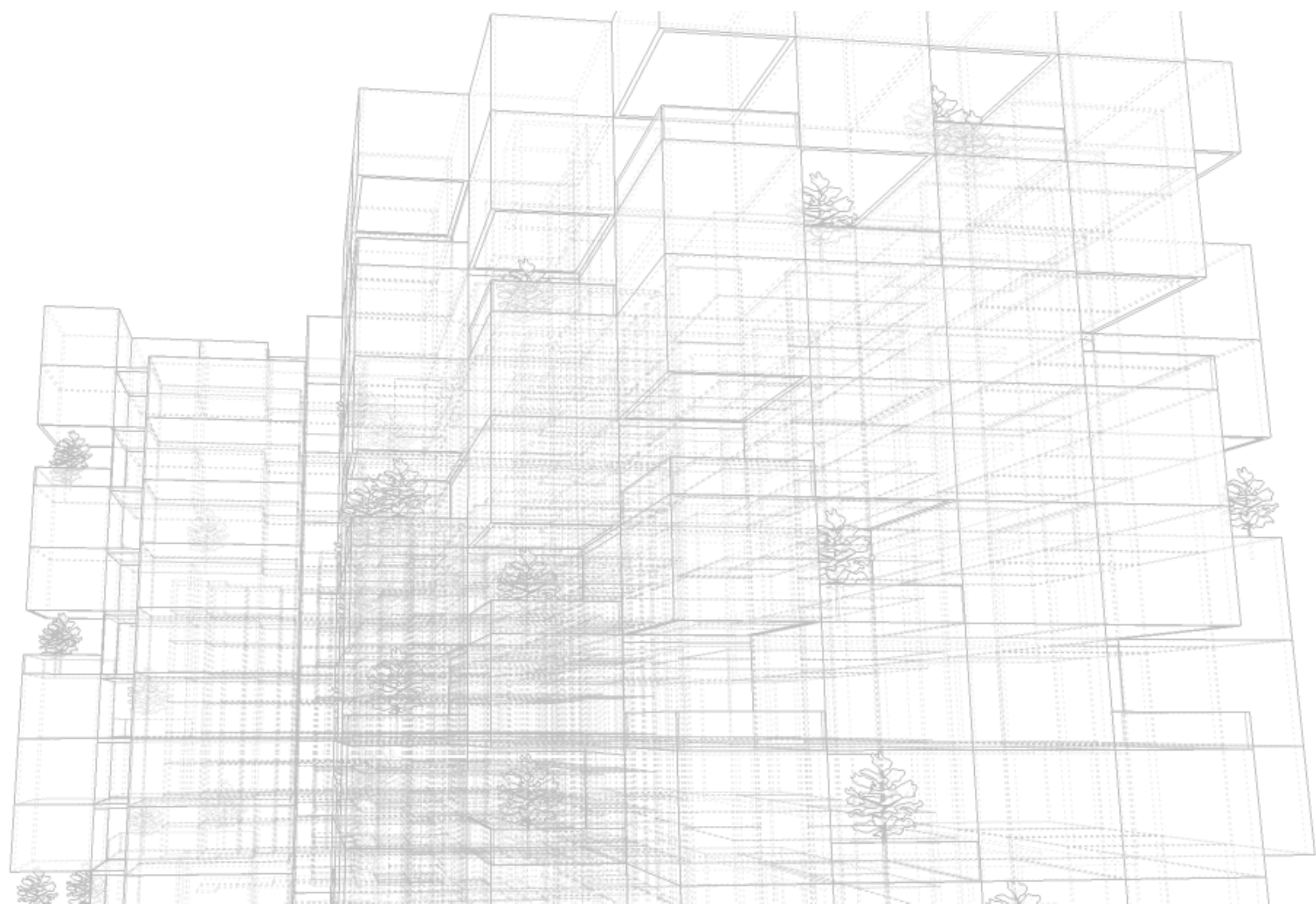


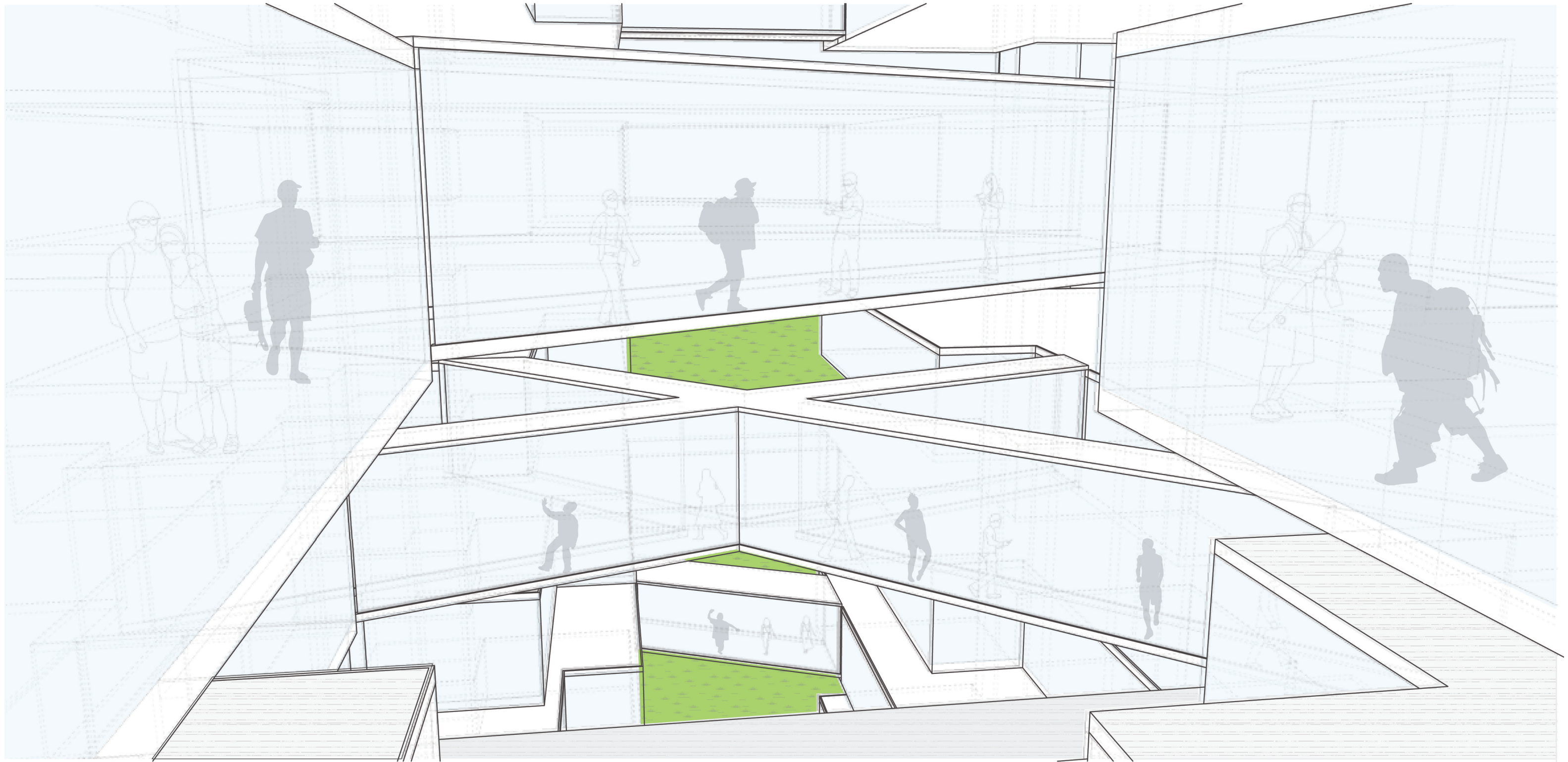
Exterior Program

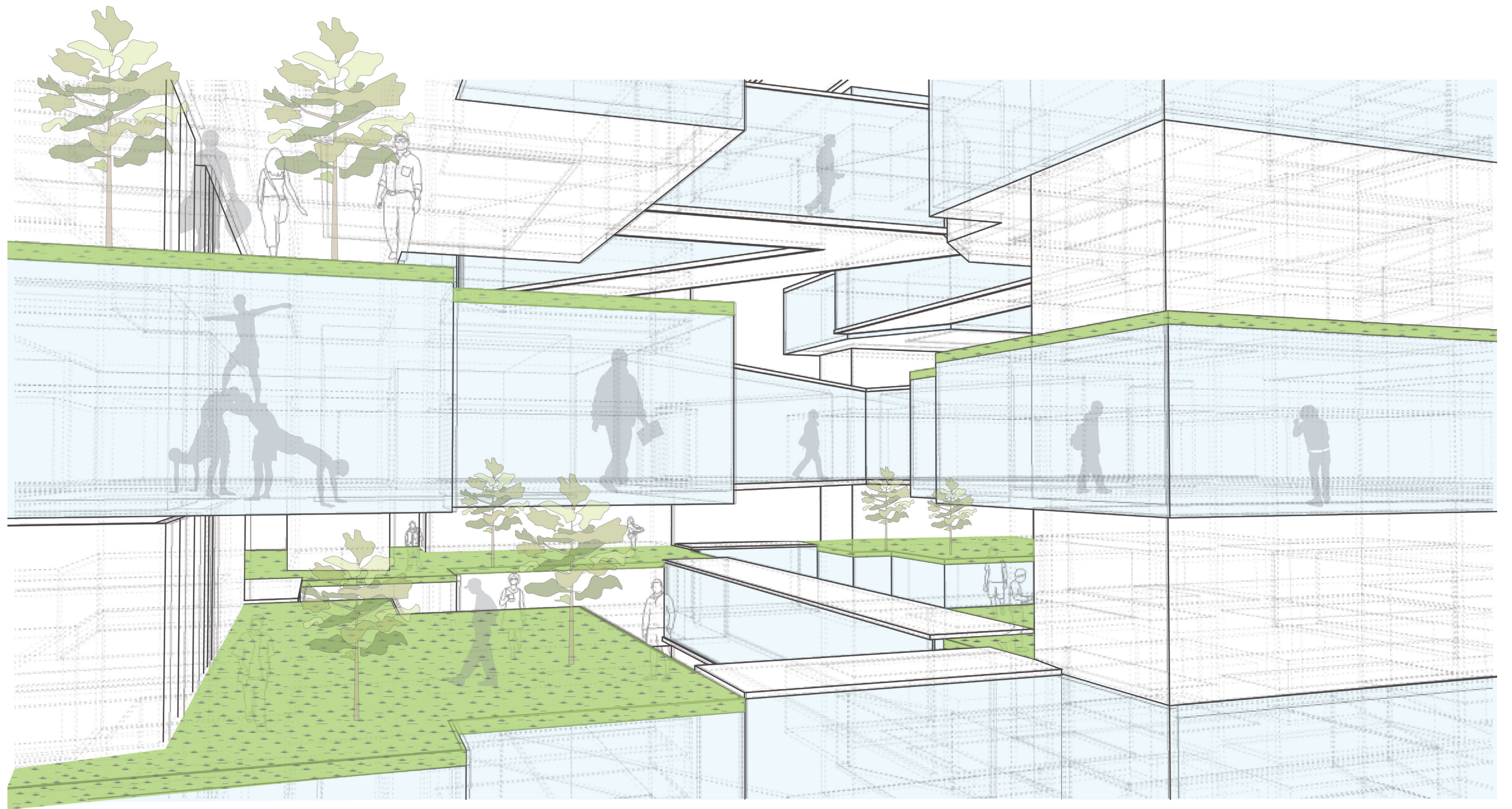


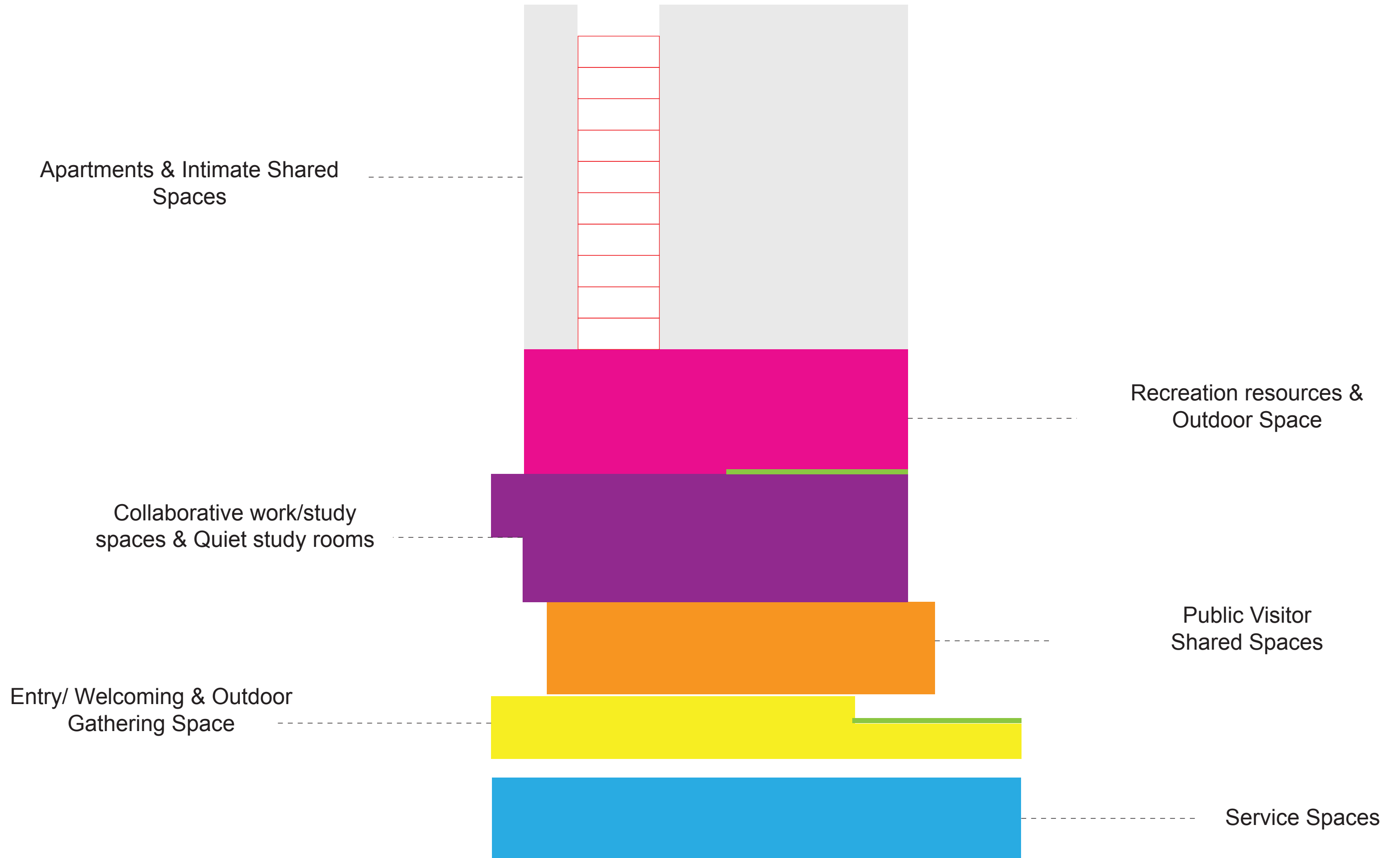
16 2

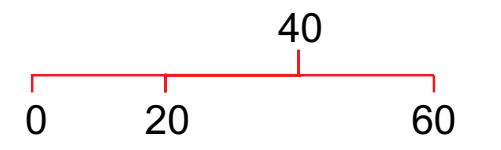
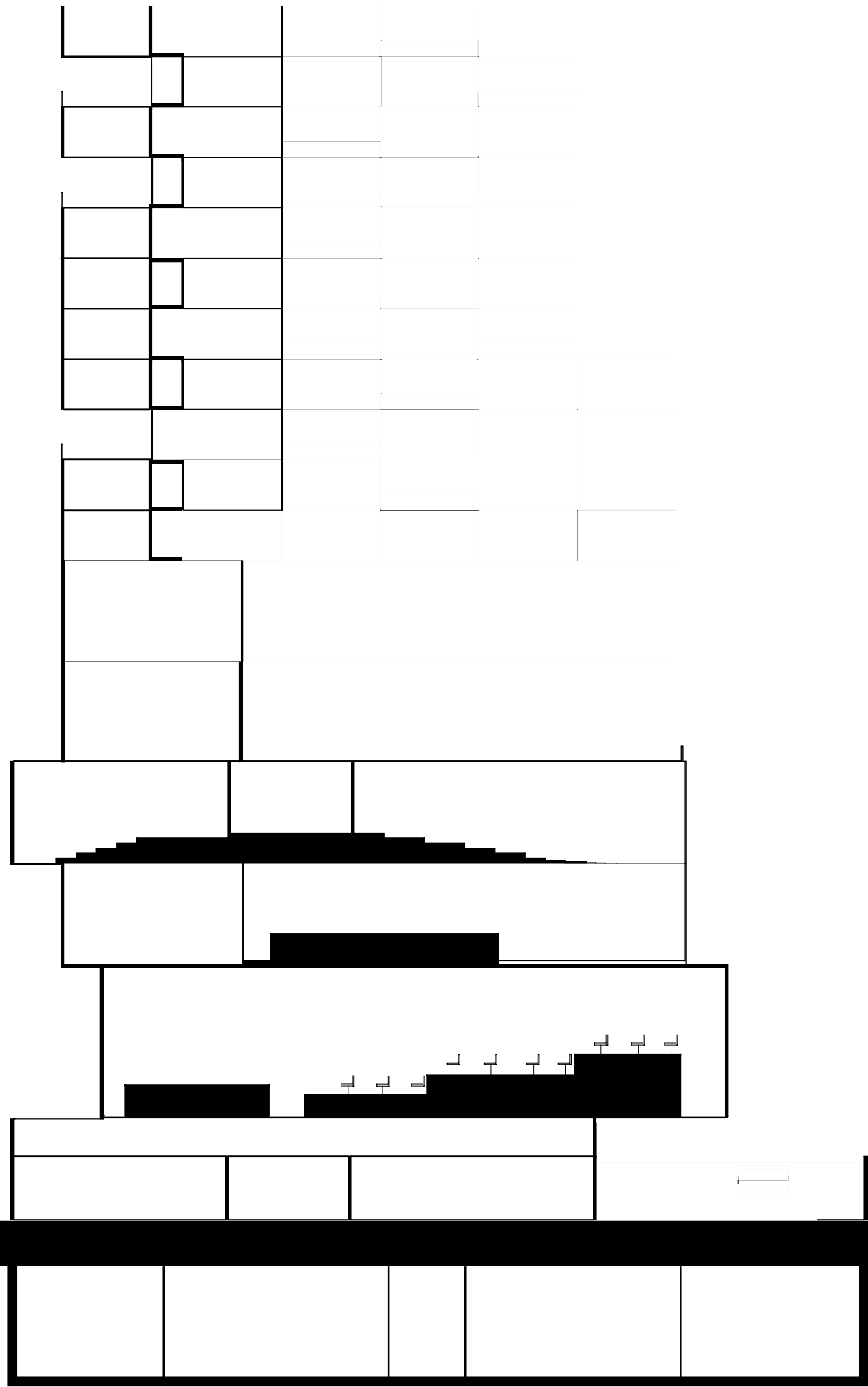
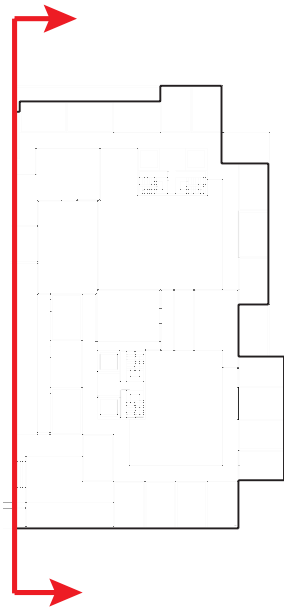
1 Phase
One

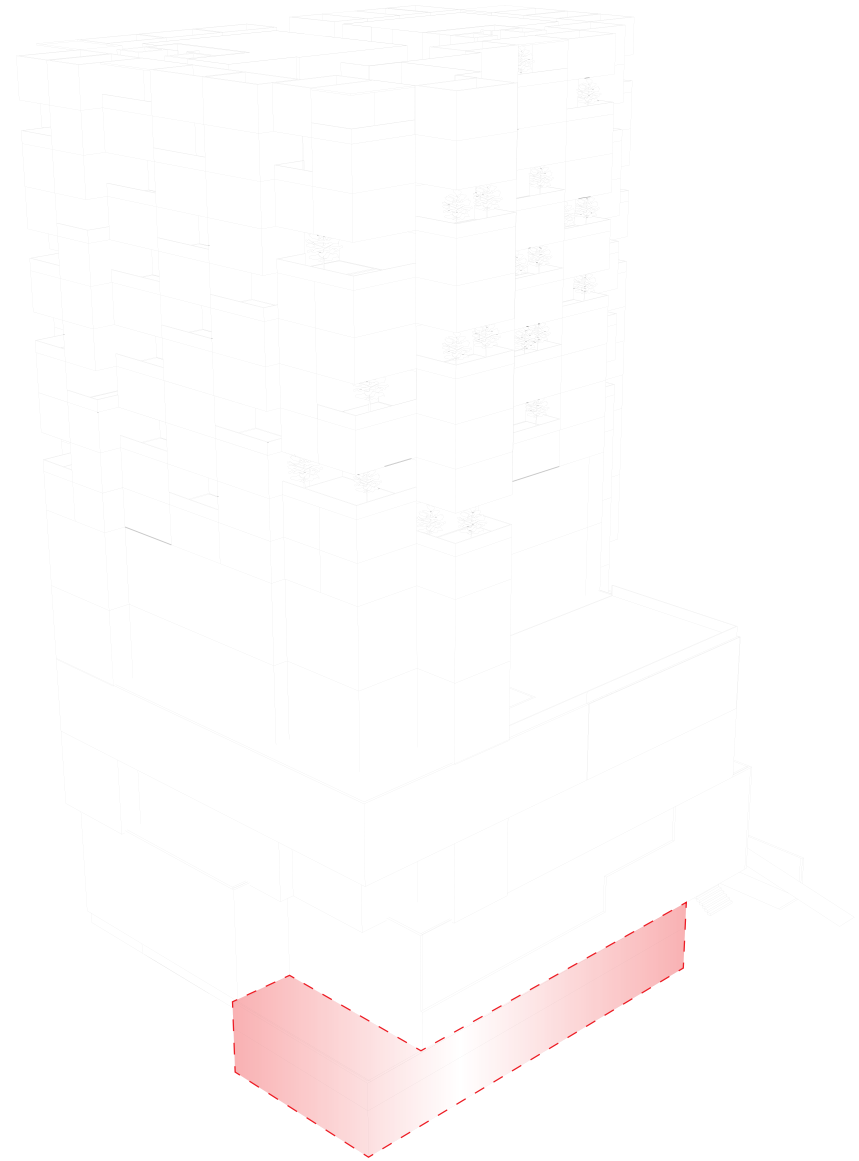




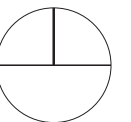
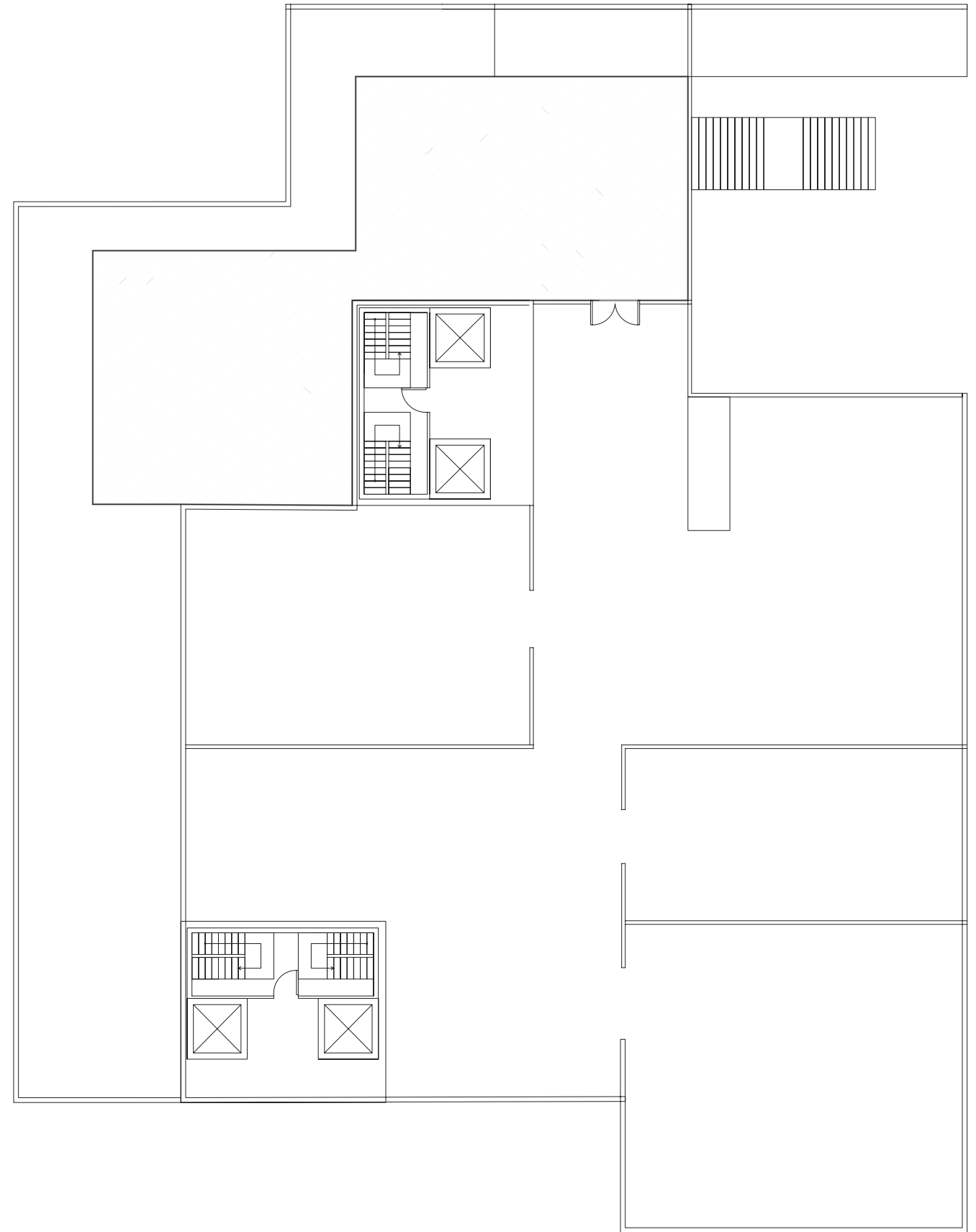


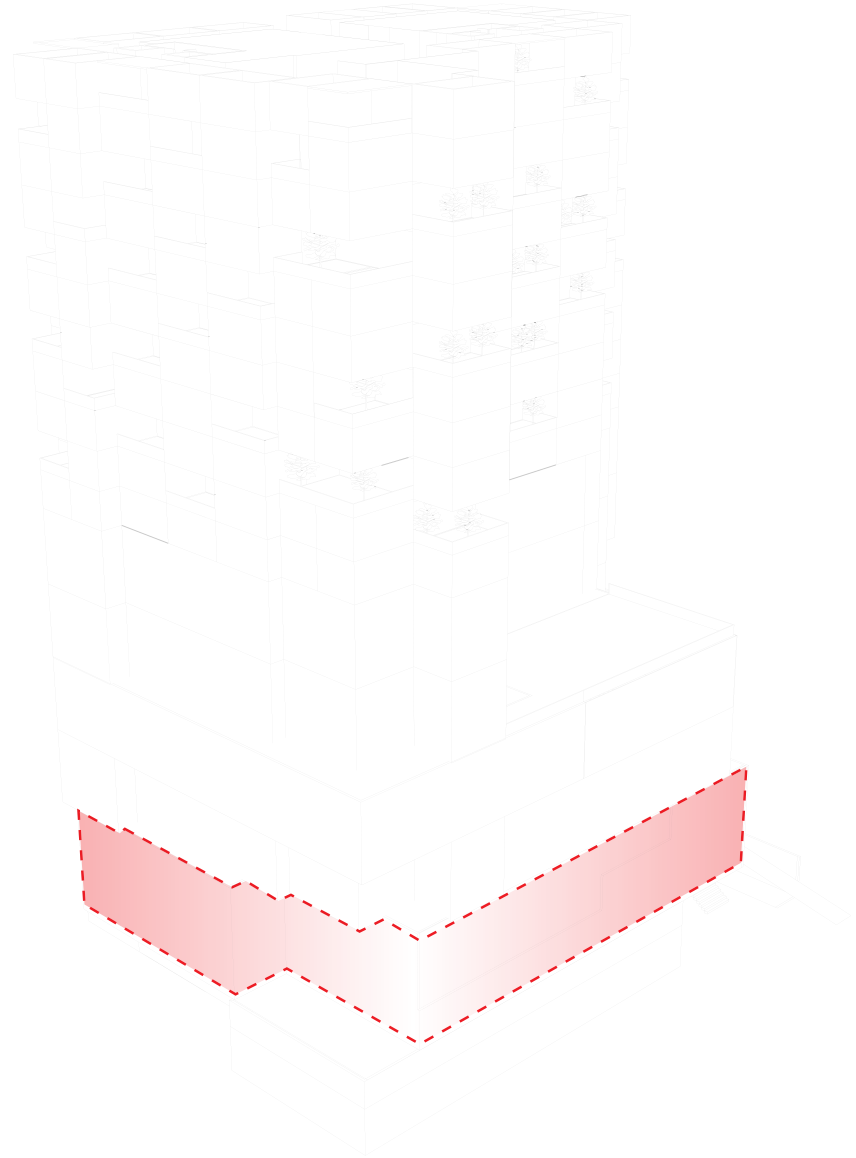




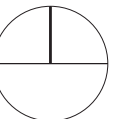
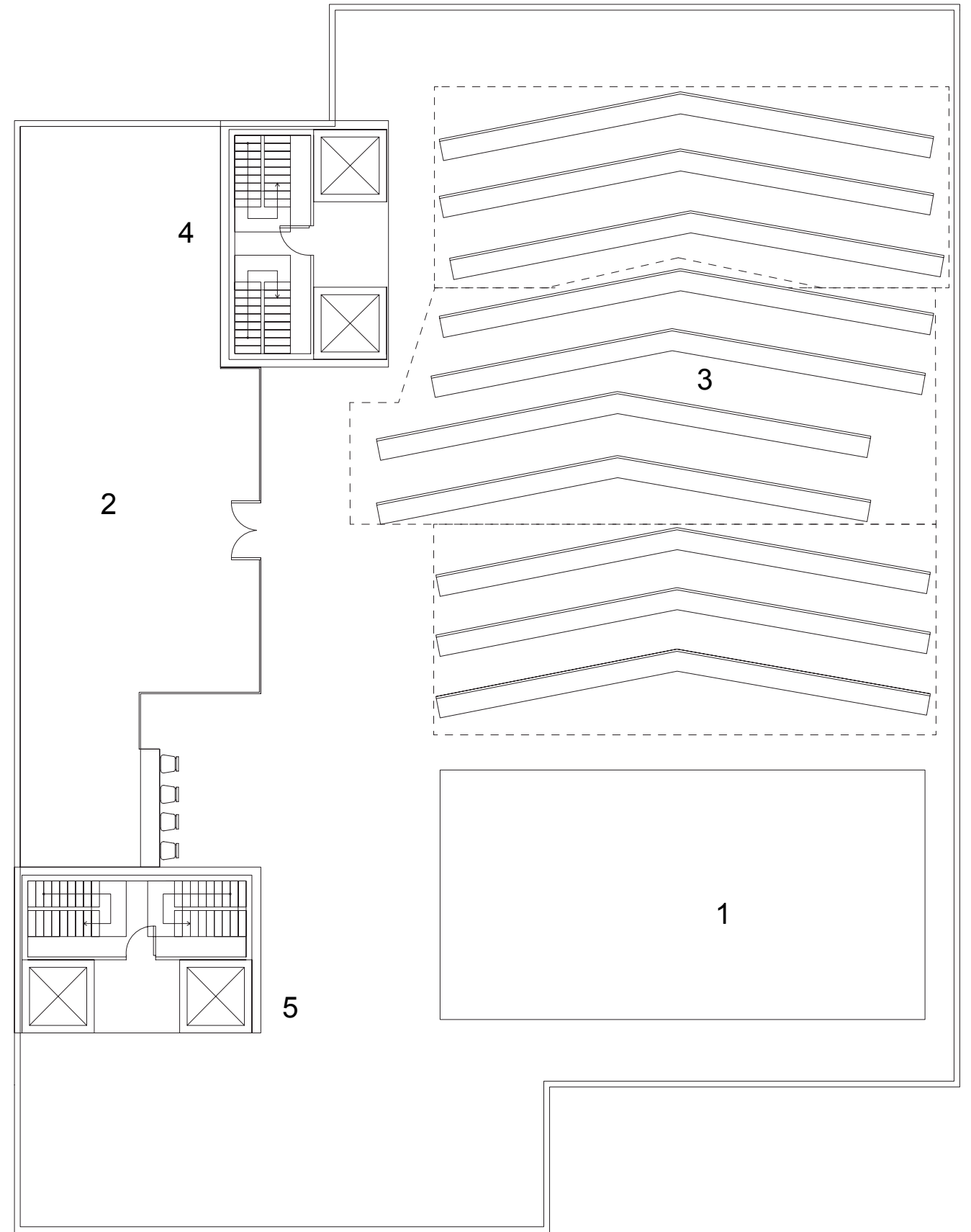


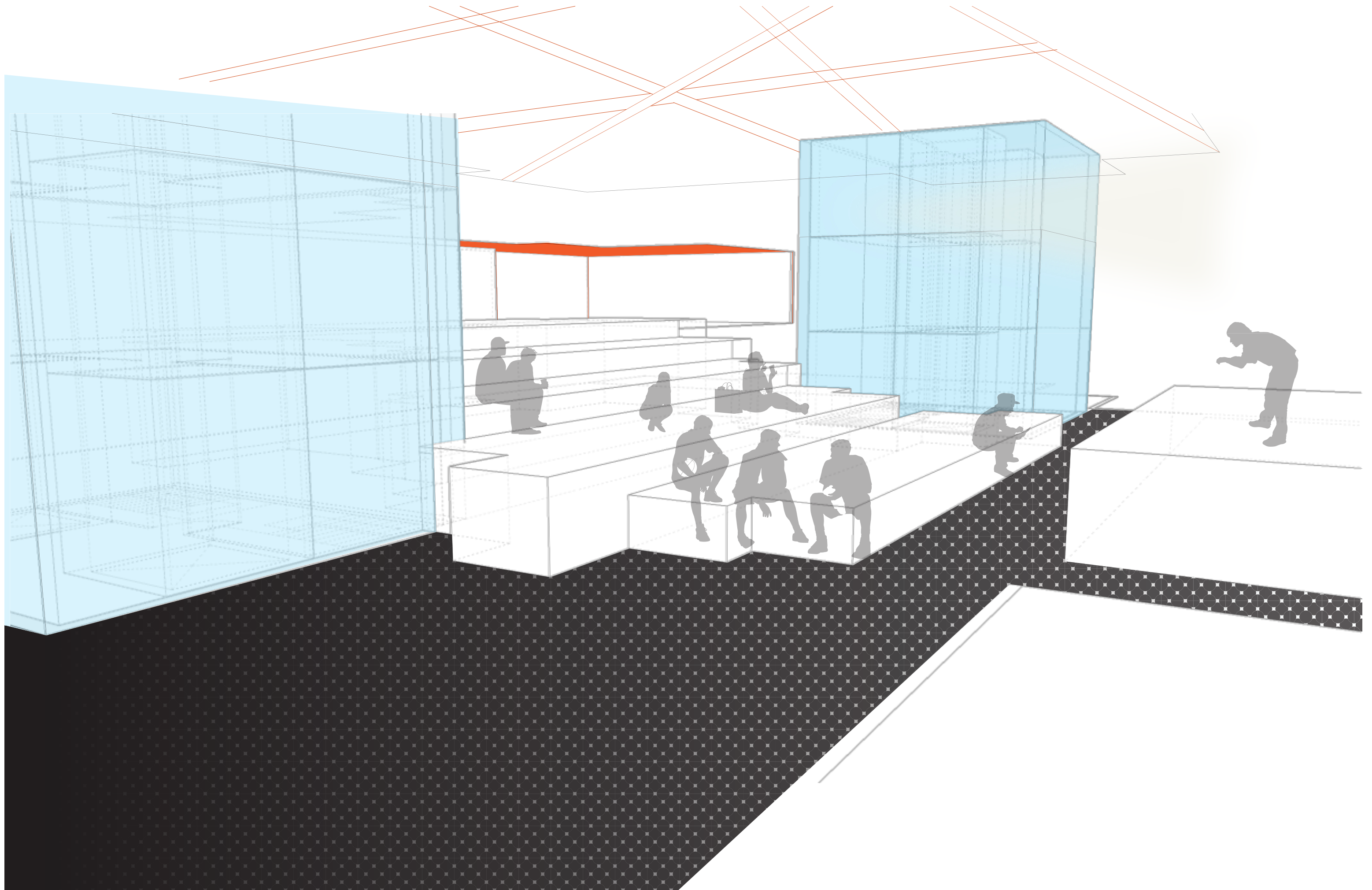
1. Mail Room
2. Server Room
3. Check In/ Security
4. Security Control
5. Outdoor Space

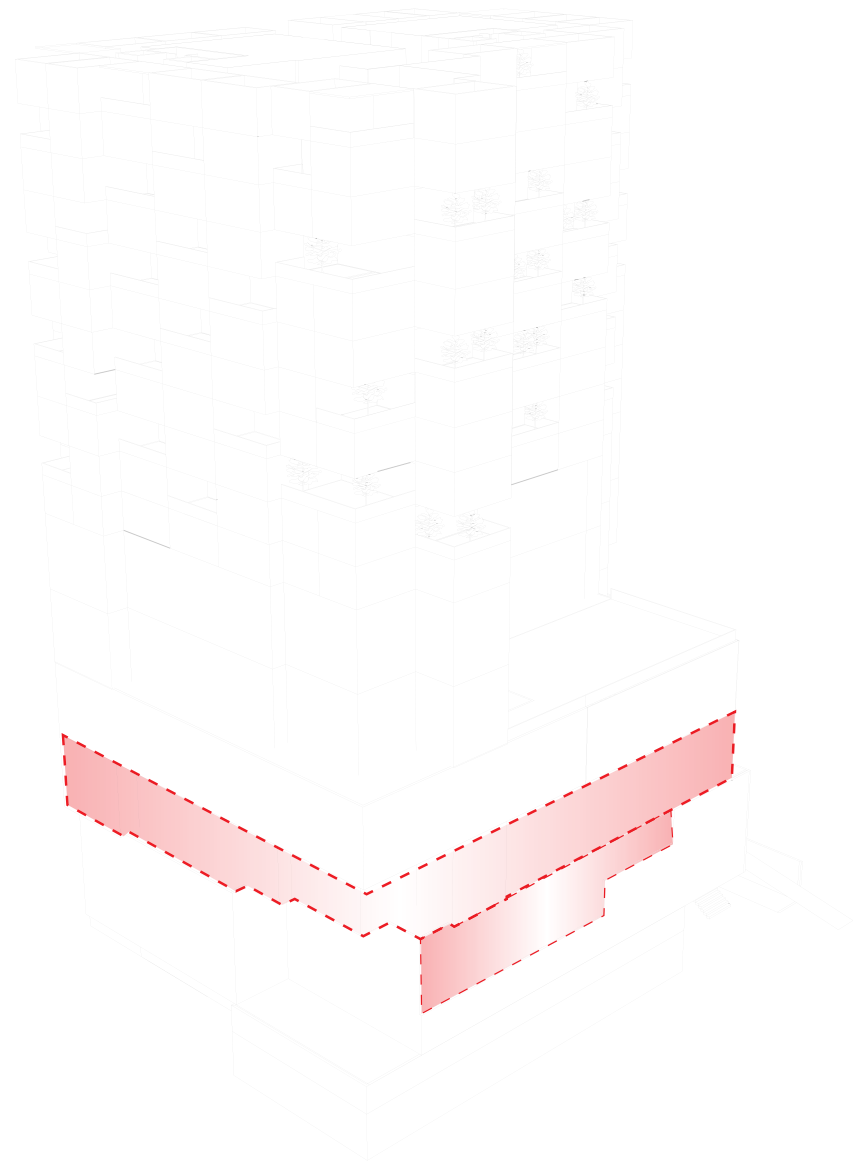




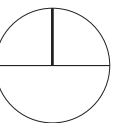
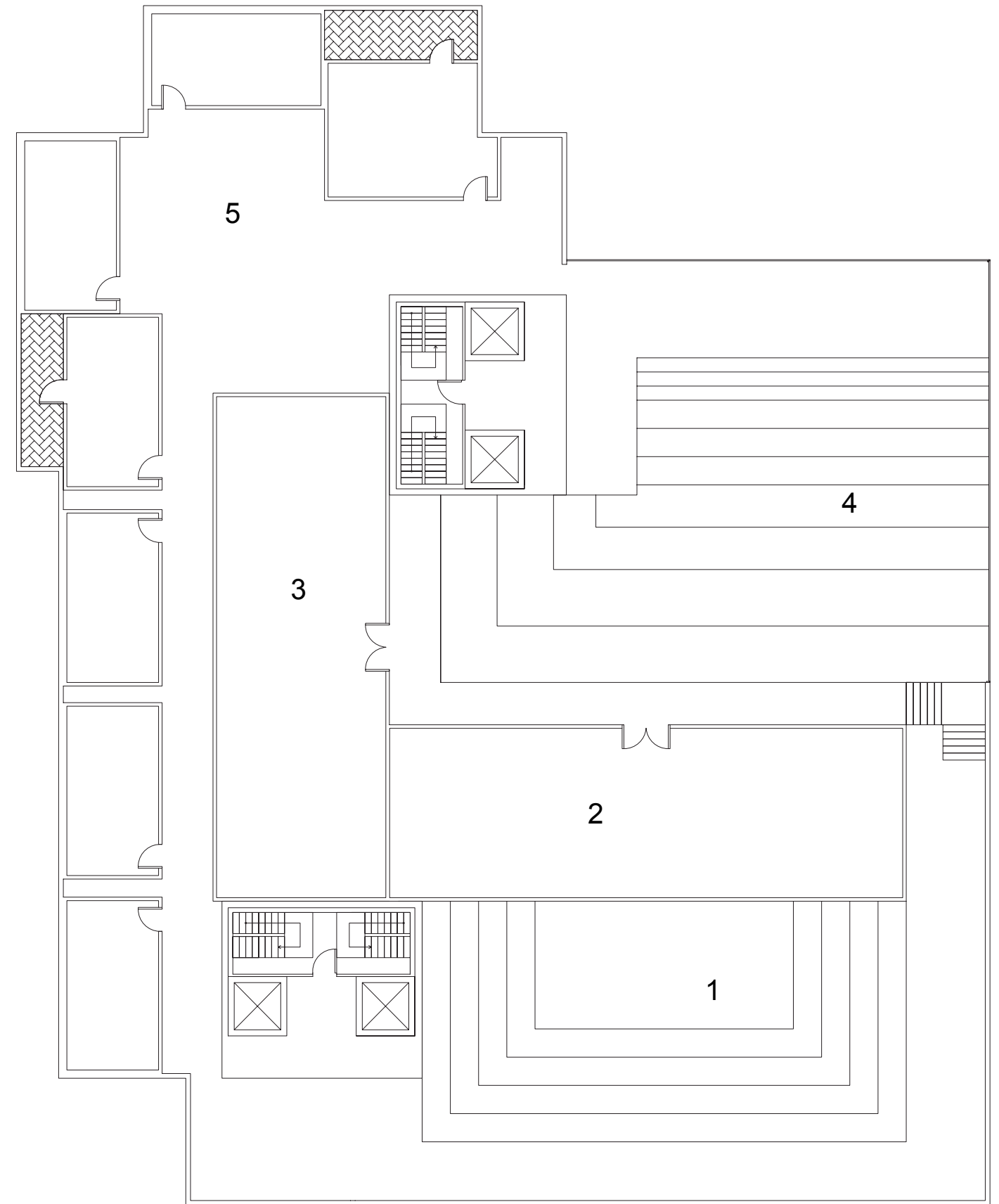
- 1. Stage
- 2. Cafe
- 3. Auditorium seating
- 4. Circulation core
- 5. Circulation core



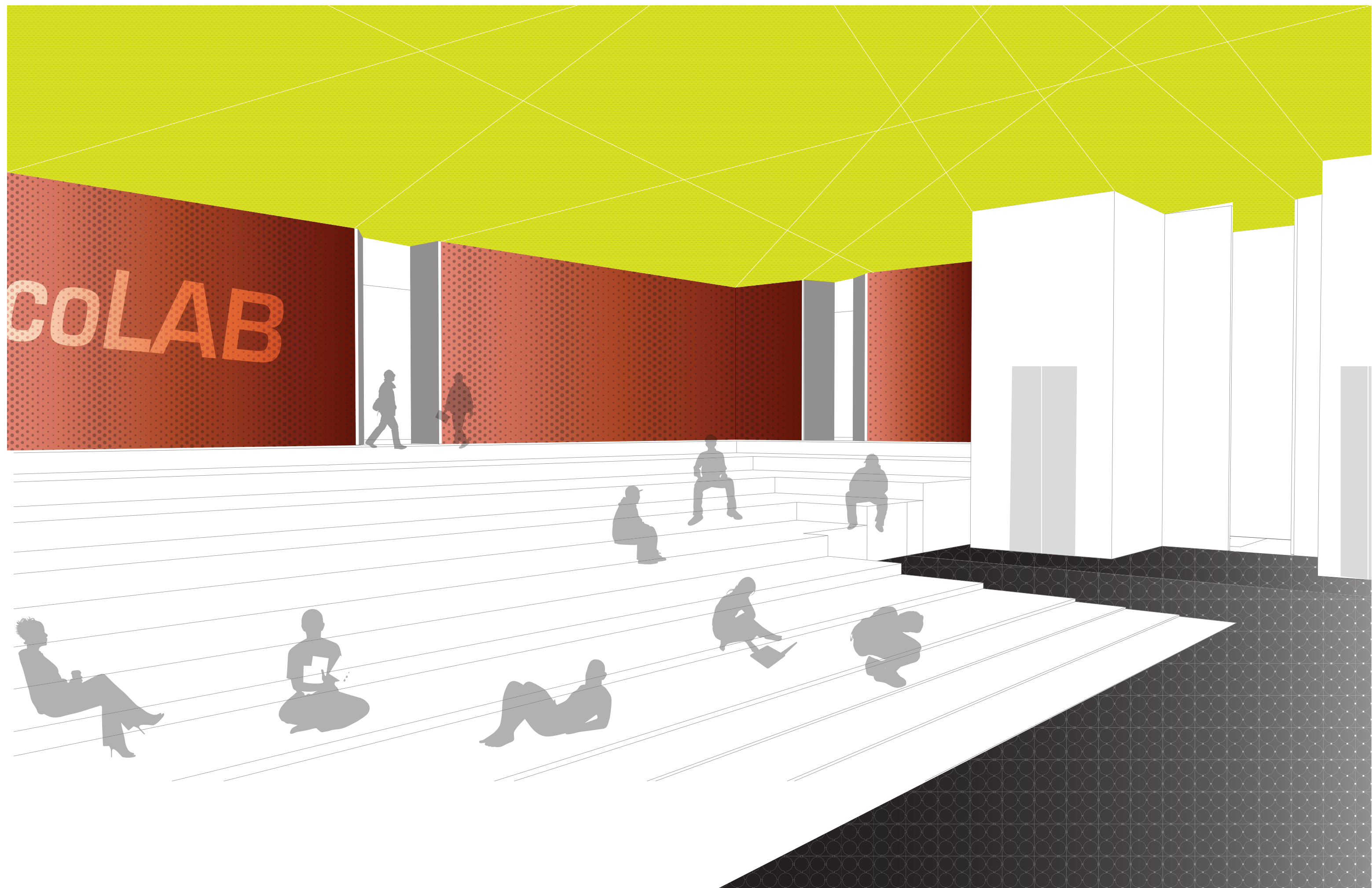




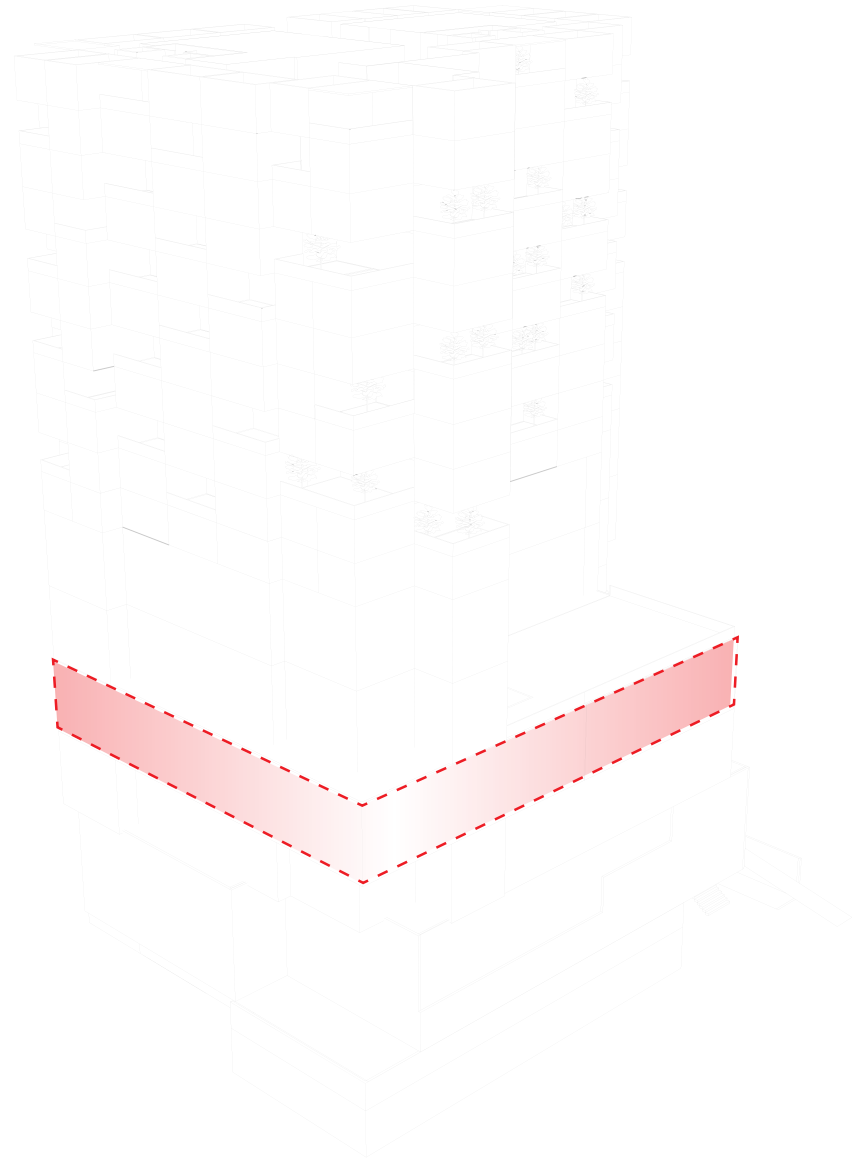
- 1. Social Study Area A
- 2. coLAB 1
- 3. coLAB 2
- 4. Social Study Area B
- 5. Quiet Study Rooms



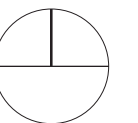
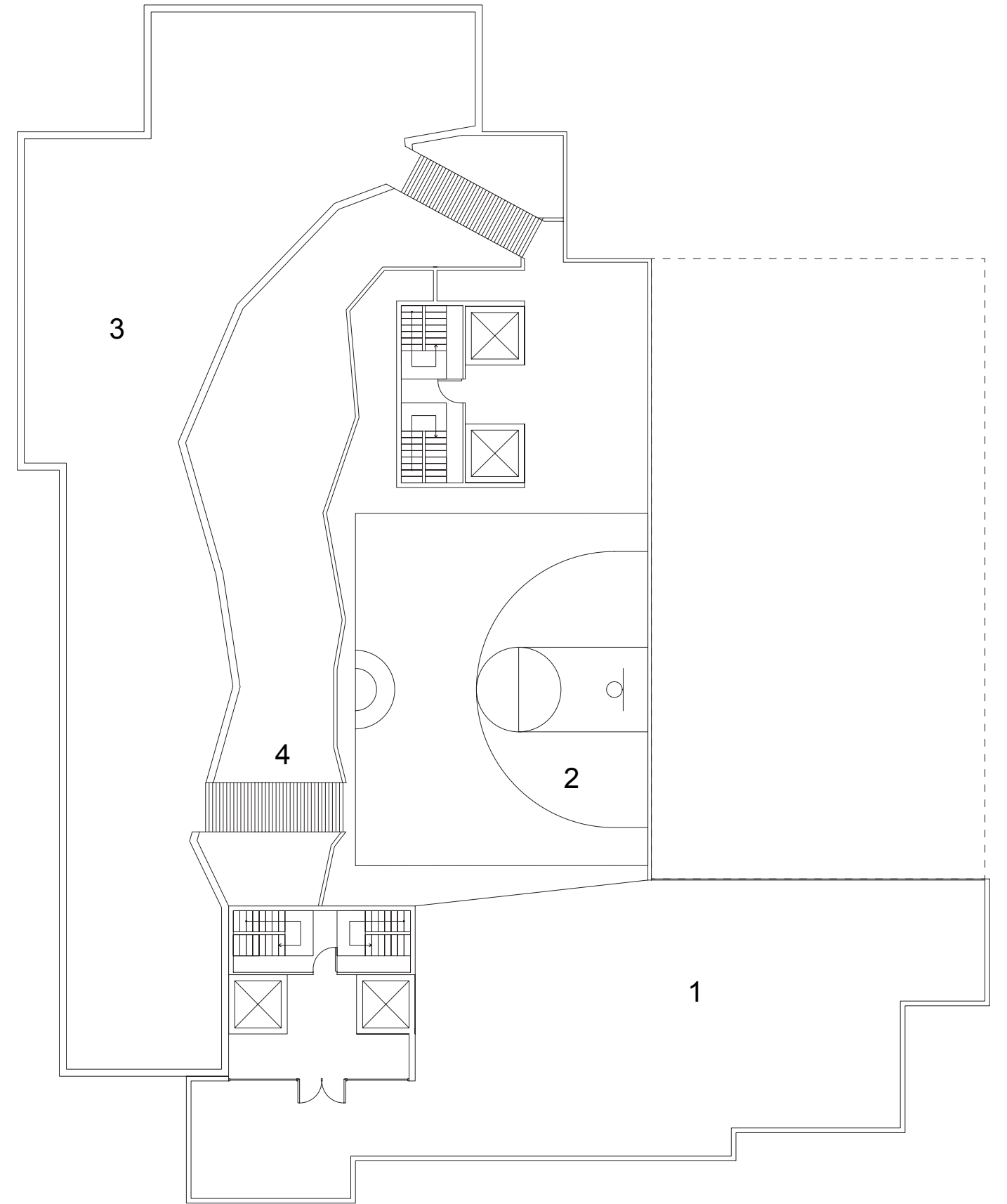


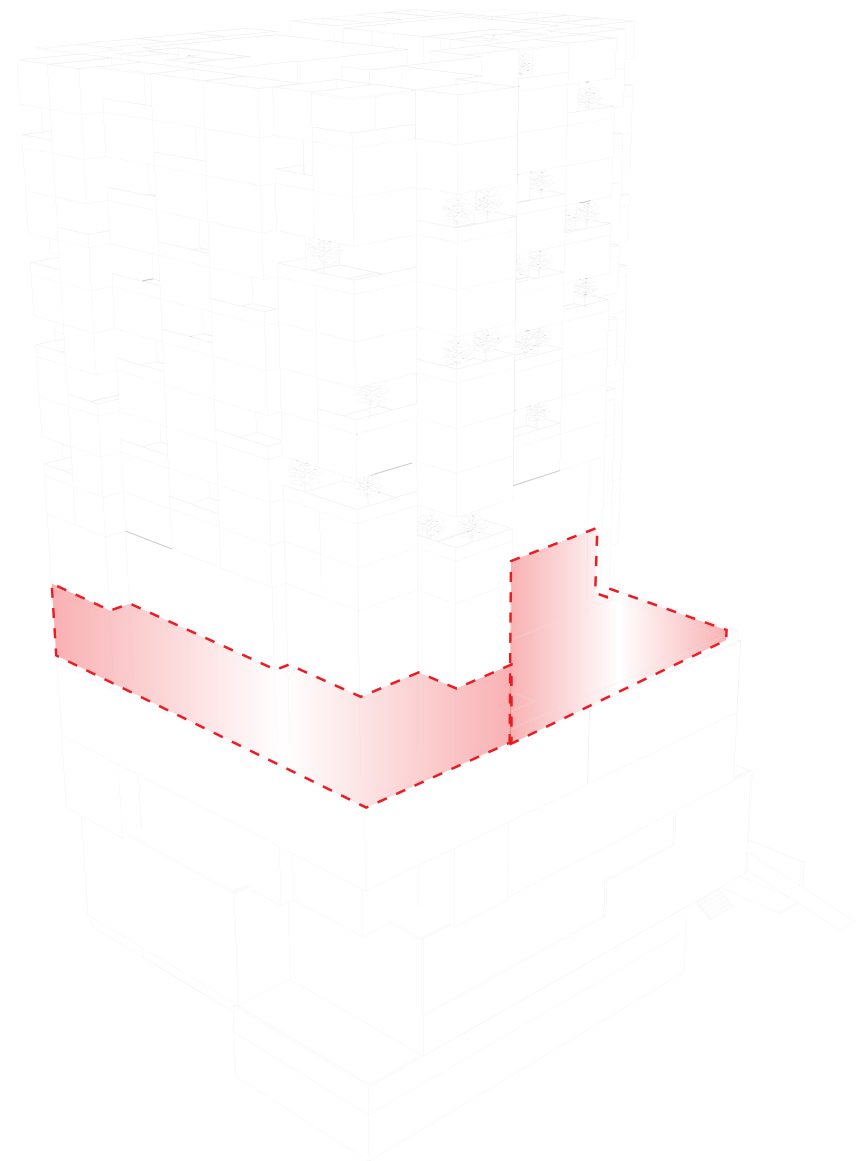


COLLAB

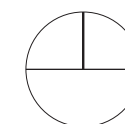


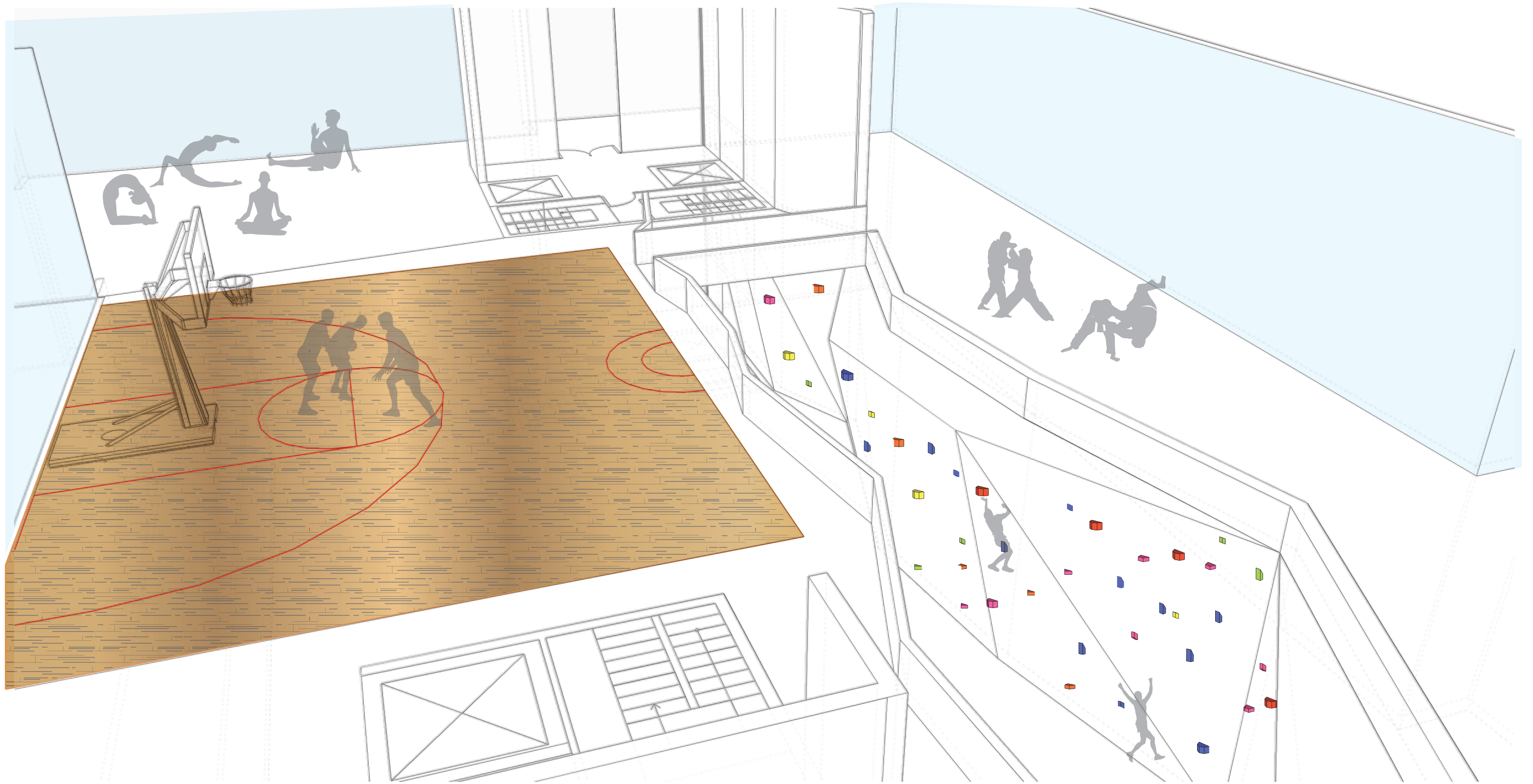
- 1. Yoga and Pilates Area
- 2. Half Basketball court
- 3. Multi-sport Area
- 4. Bridge overpass

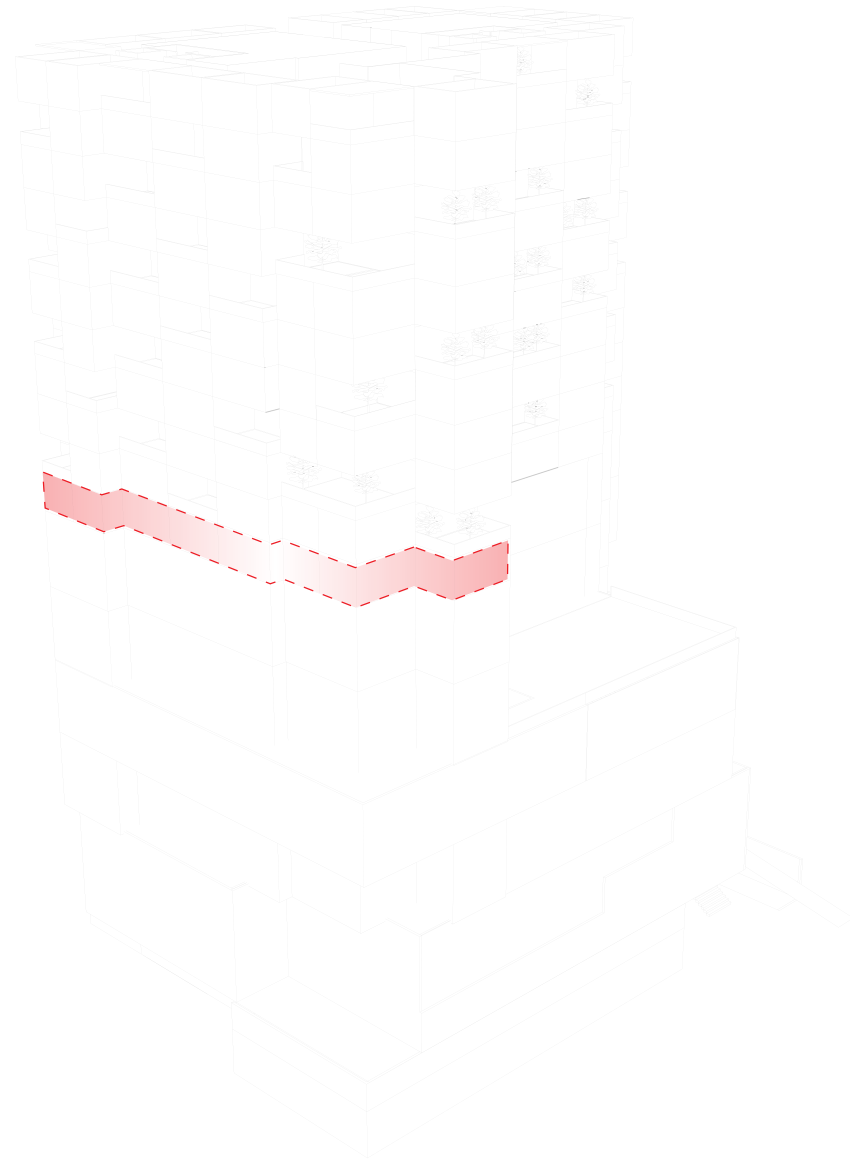




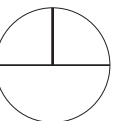
- 1. Men's Locker room
- 2. Women's Locker room
- 3. Stretching/ Warm Up Area
- 4. Climbing Wall

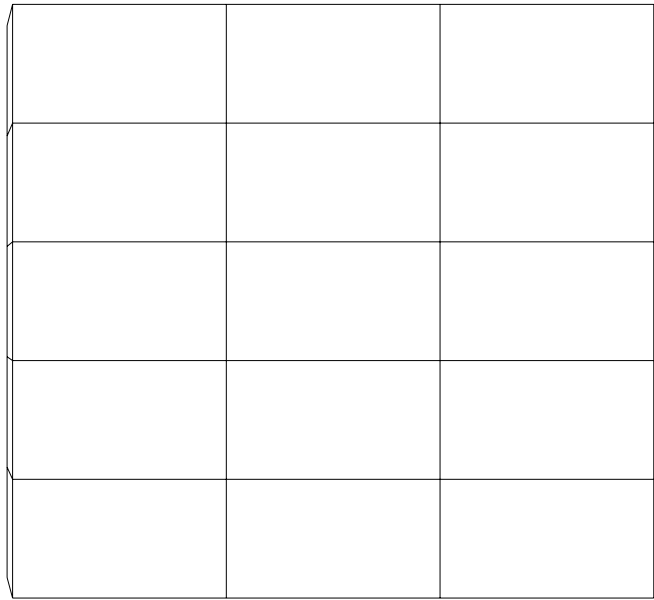




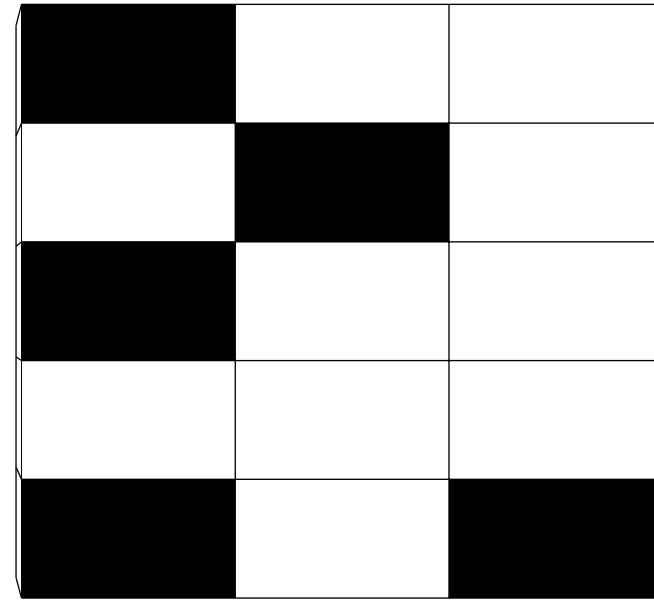


- 1. Connected lounges
- 2. Common Kitchen
- 3. Lounge
- 4. Common Kitchen
- 5. Lounge

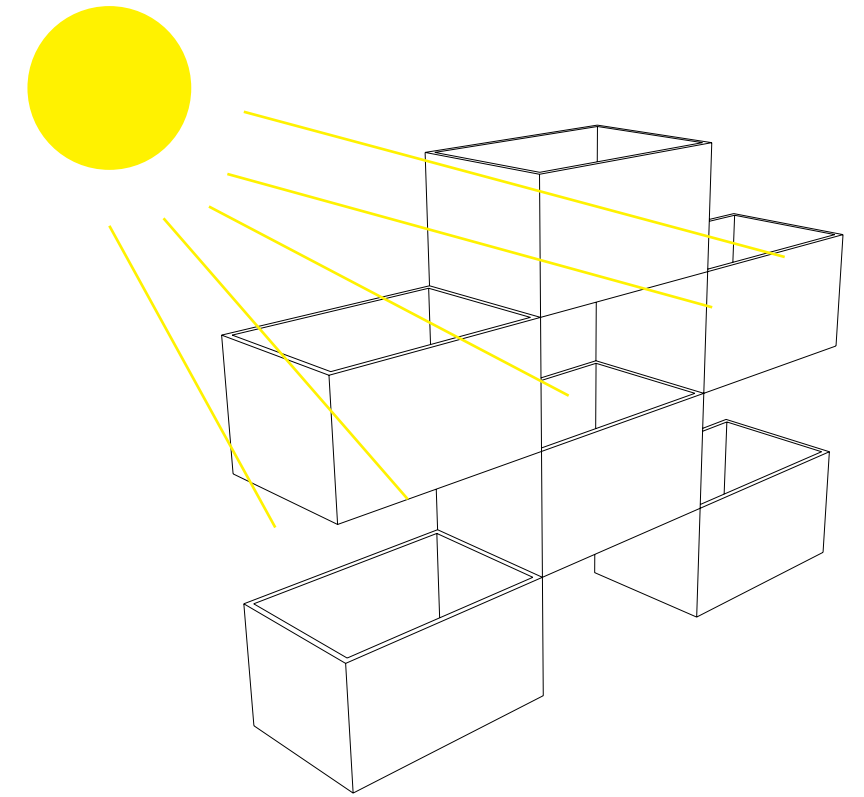




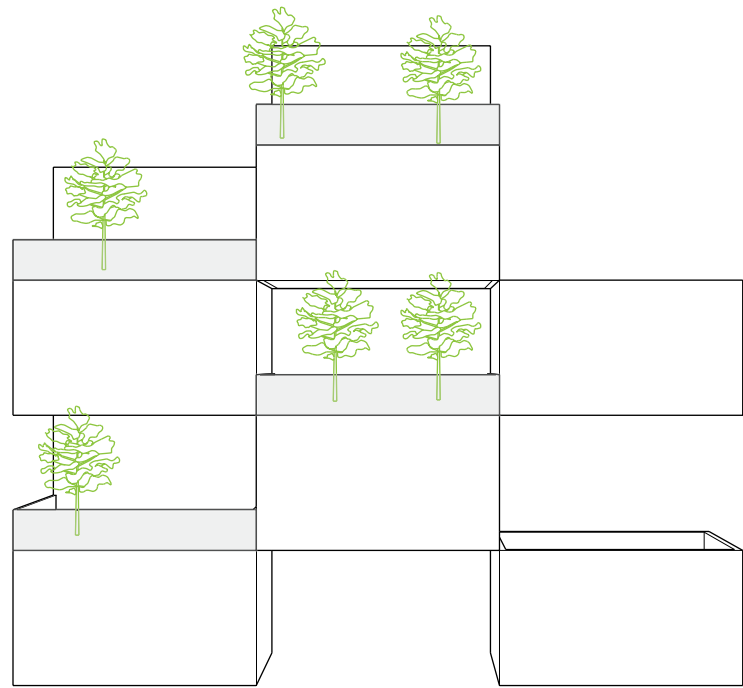
Although stacked units are feasible, a poor and uninspiring aesthetic is created.



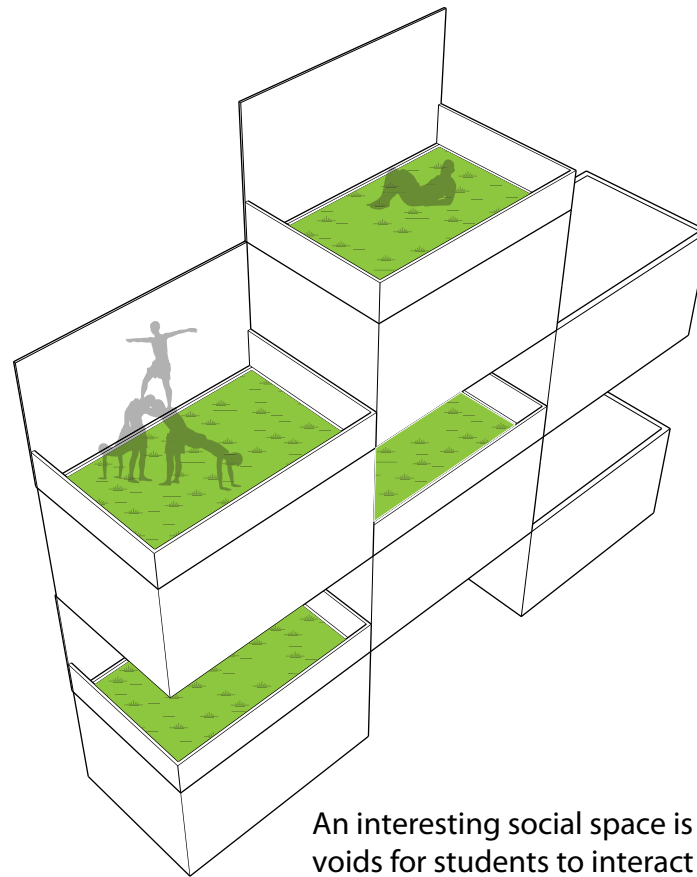
Pull apart the volume to create a porous wall.



Void spaces allow for natural light to enter the internal space.

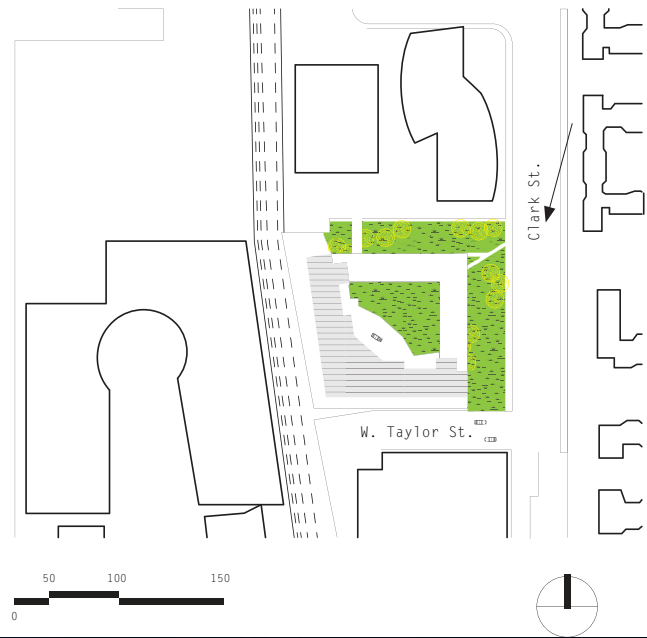


Introduction of green space into the newly formed voids.



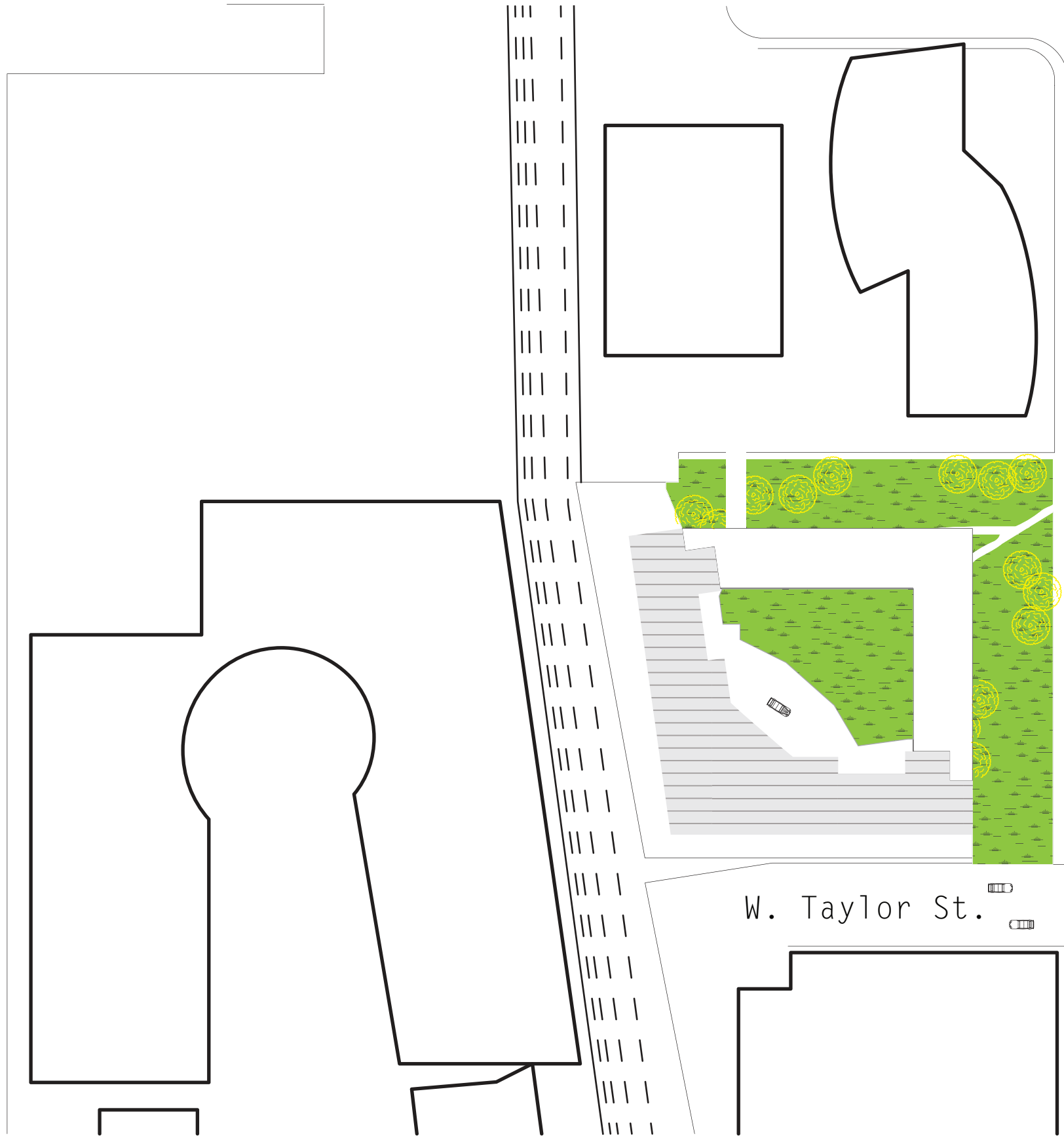
An interesting social space is created within the voids for students to interact while walking through the hallways.

2 Phase
Two



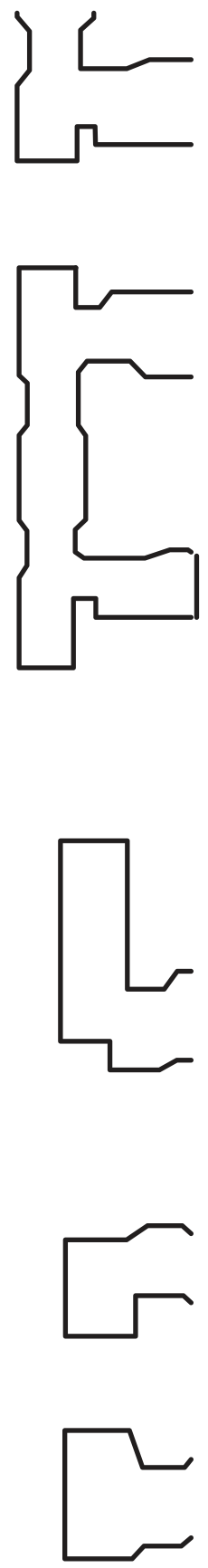
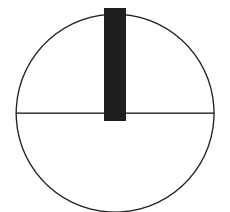
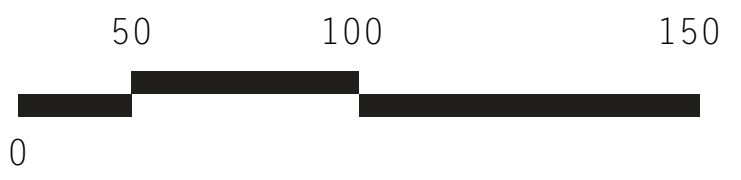
Exterior Perspective: Looking South

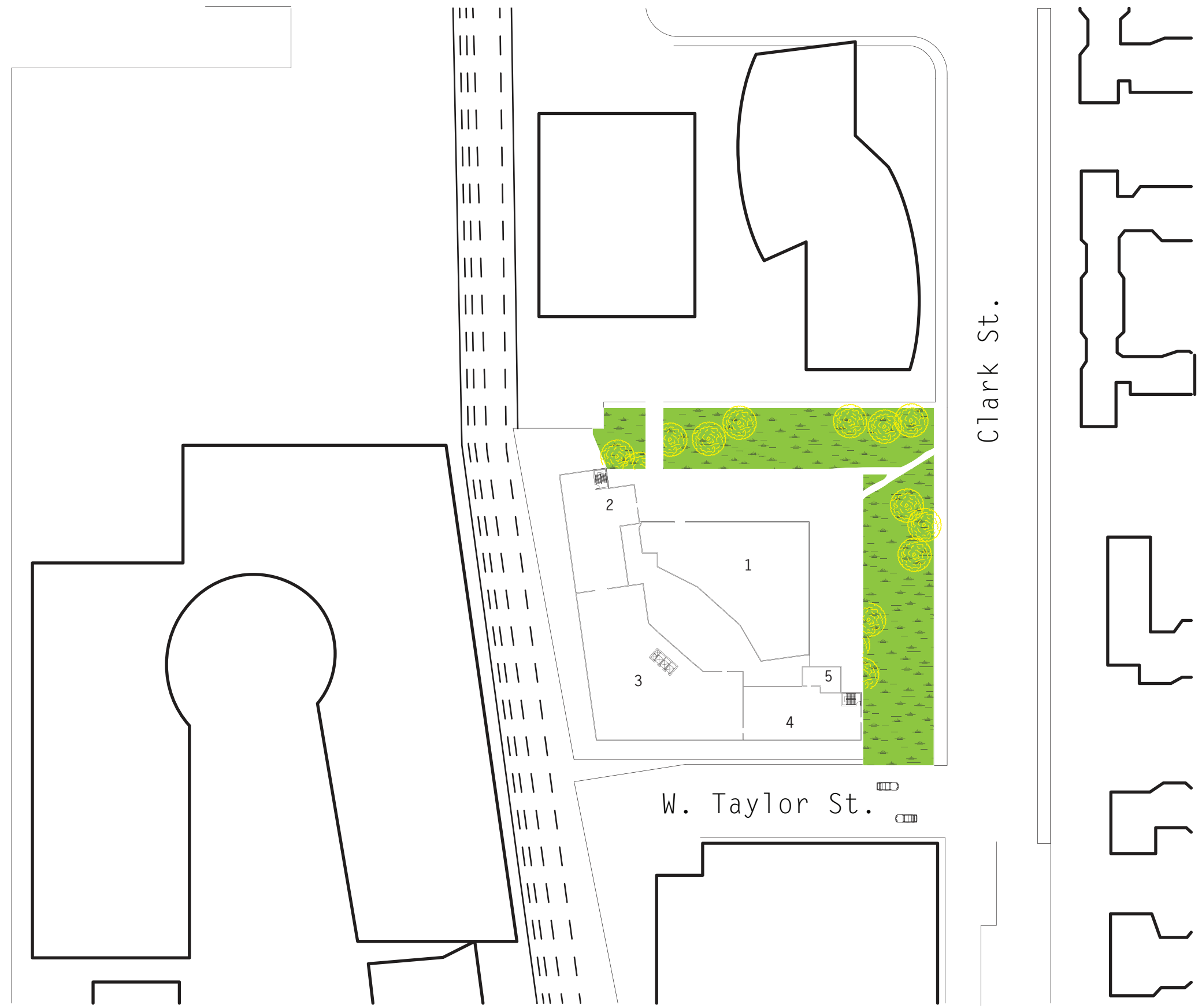




Clark St.

W. Taylor St.



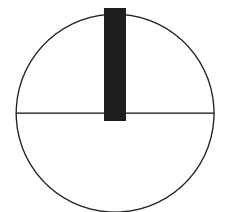
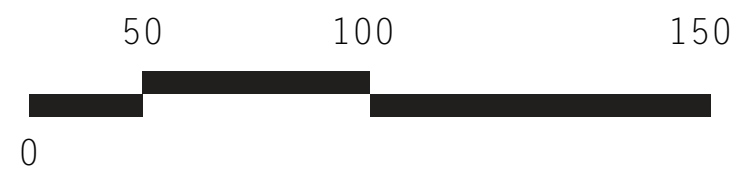


Clark St.

W. Taylor St.

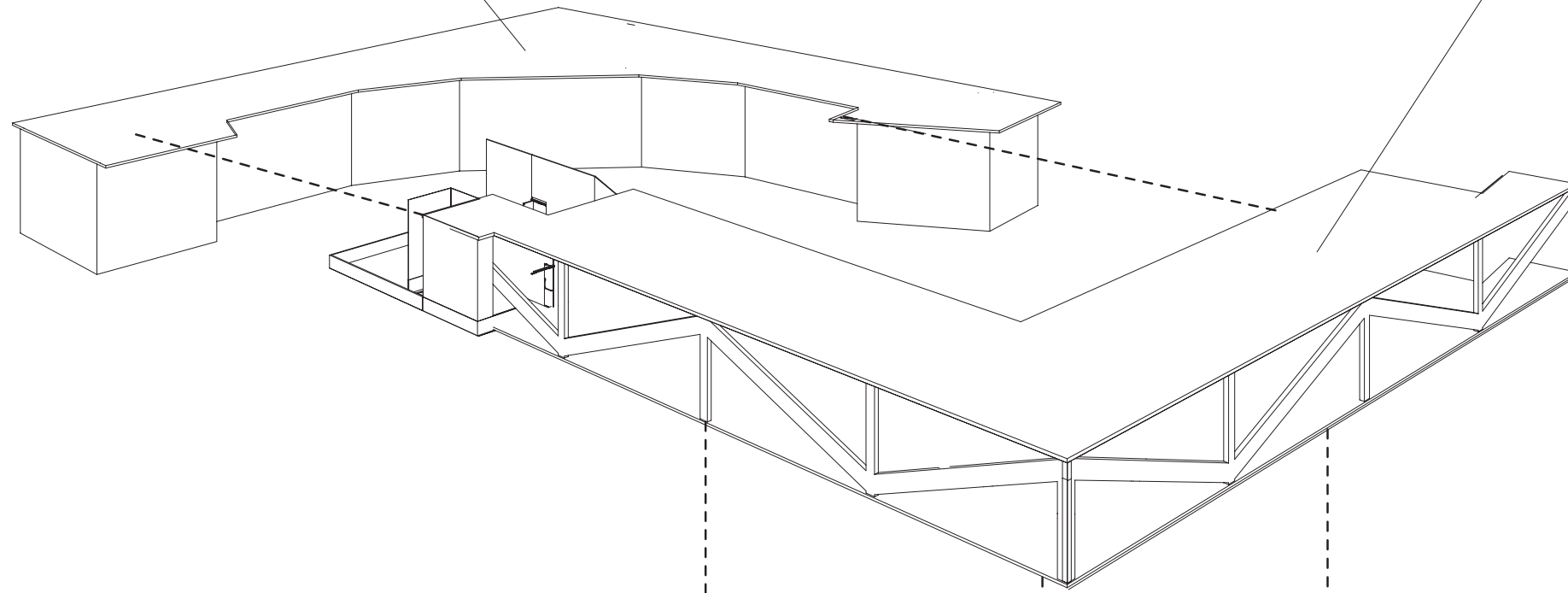
Ground Floor

- 1. Cafe
- 2. Entrance/Lobby
- 3. Auditorium
- 4. Bike Storage/
Student Lounge
- 5. Server Room



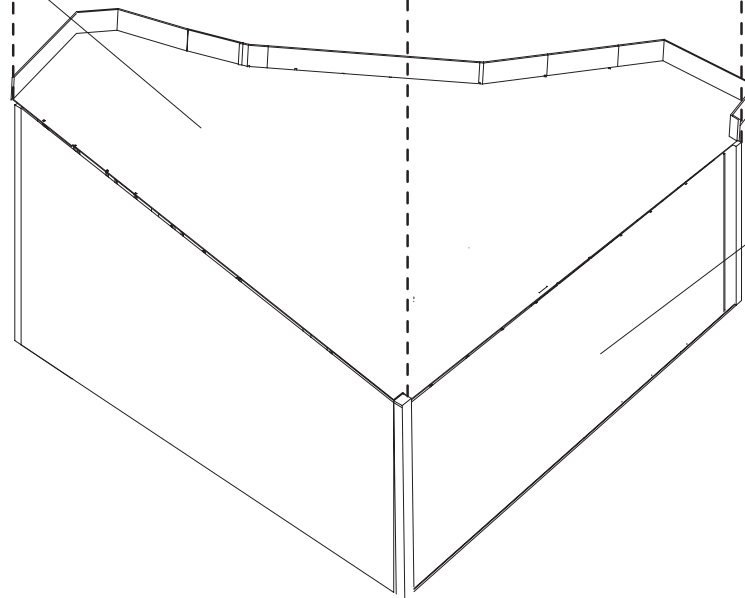
supportive
collaborative
space

collaborative
space

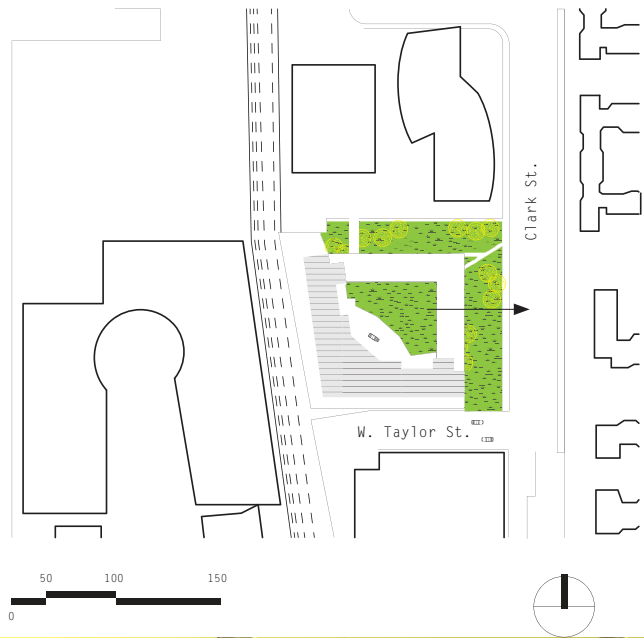


habitable green
roof

cafe

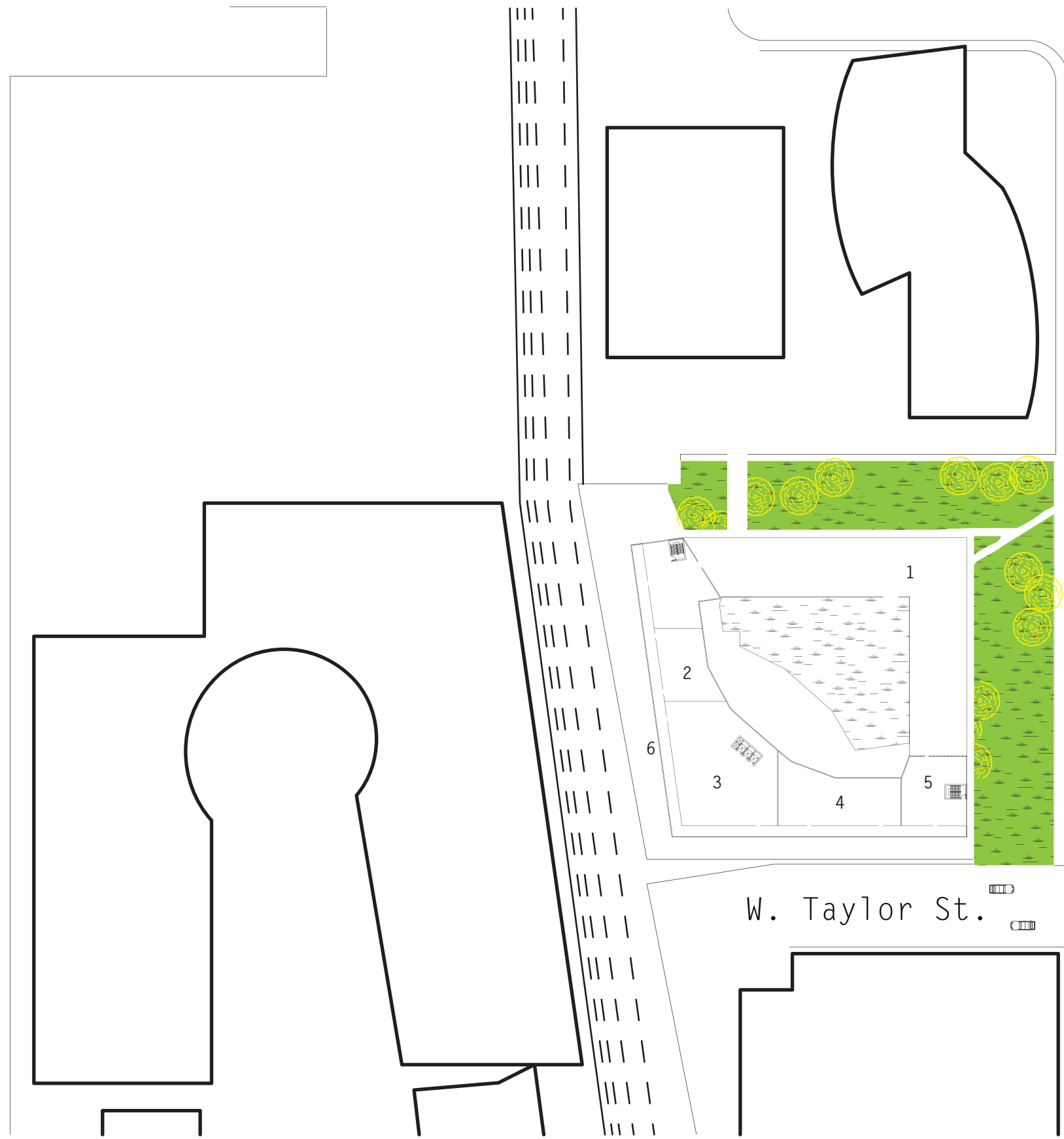


Spatial Concept

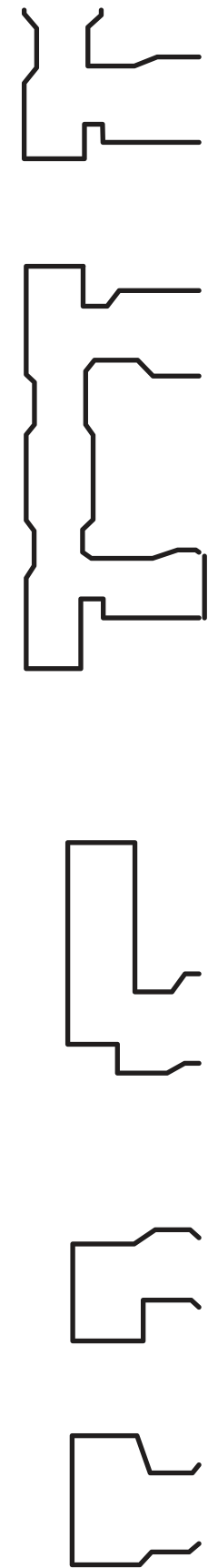


Interior Perspective: Looking East from
cafe



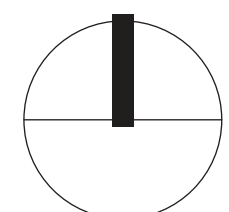
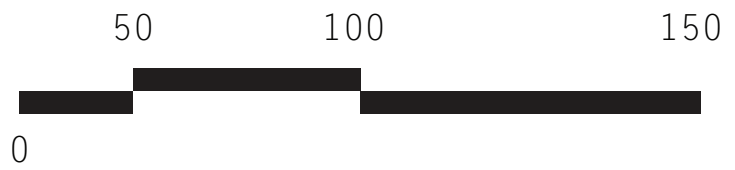


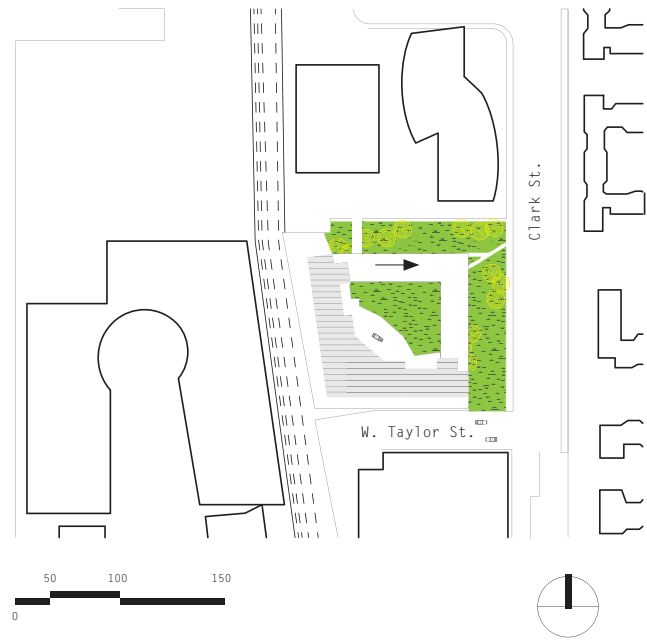
Clark St.



Floor 2

- 1. Collaborative Space
- 2. Media Lab
- 3. Student Auditorium
- 4. Temp Sleep
- 5. Winter Garden
- 6. Corridor

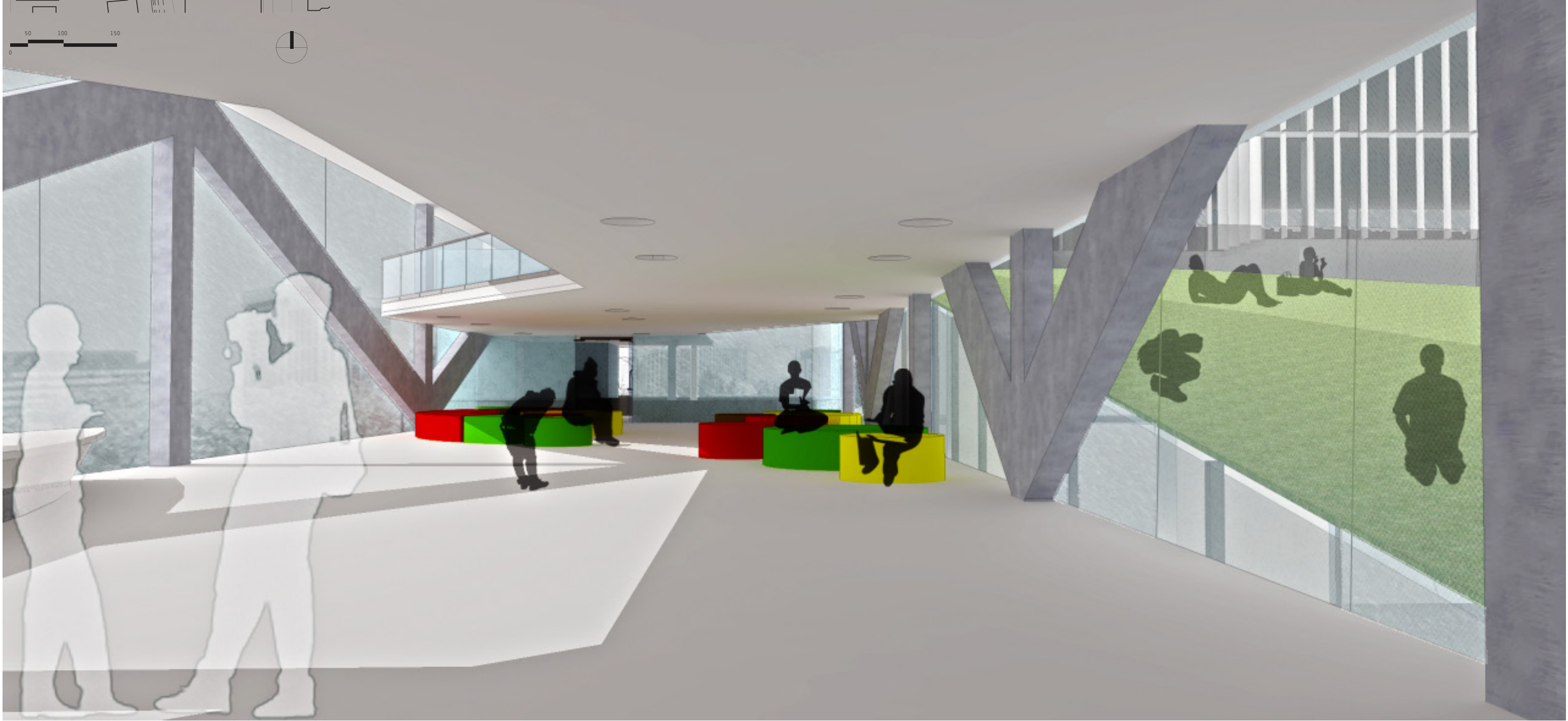
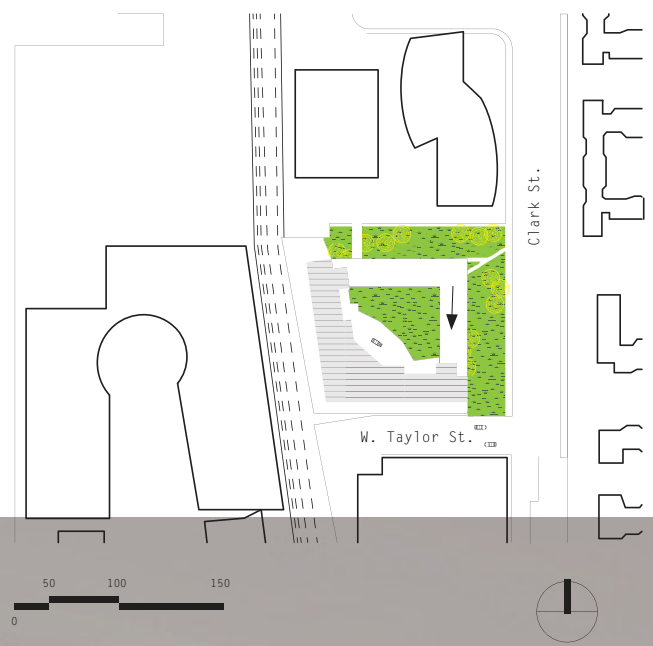


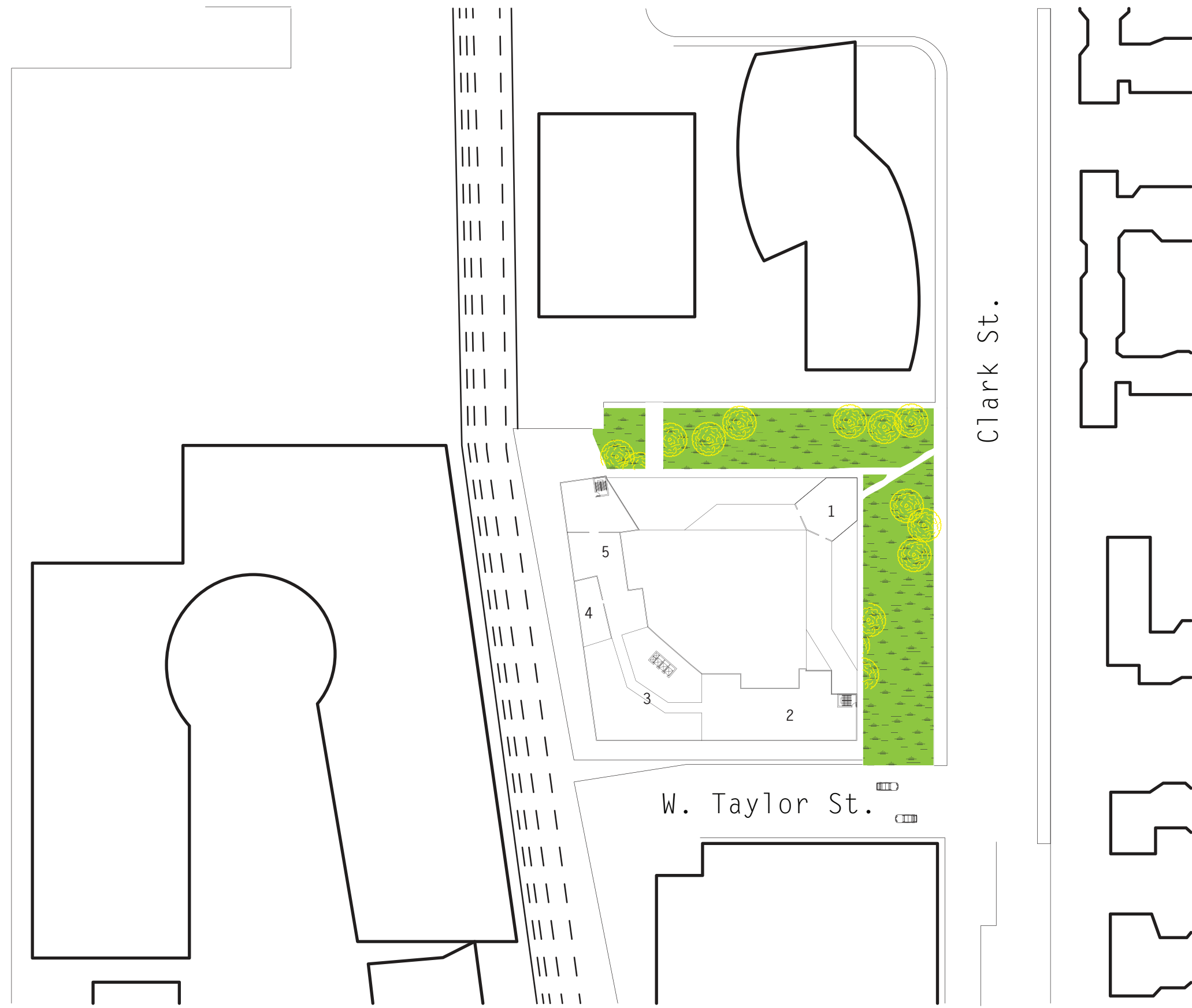


Interior Perspective: open collaborative space



Interior Perspective: open collaborative space

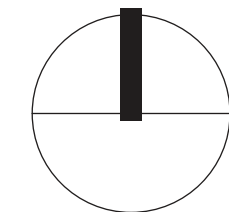
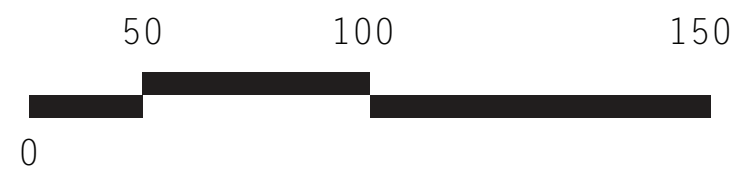


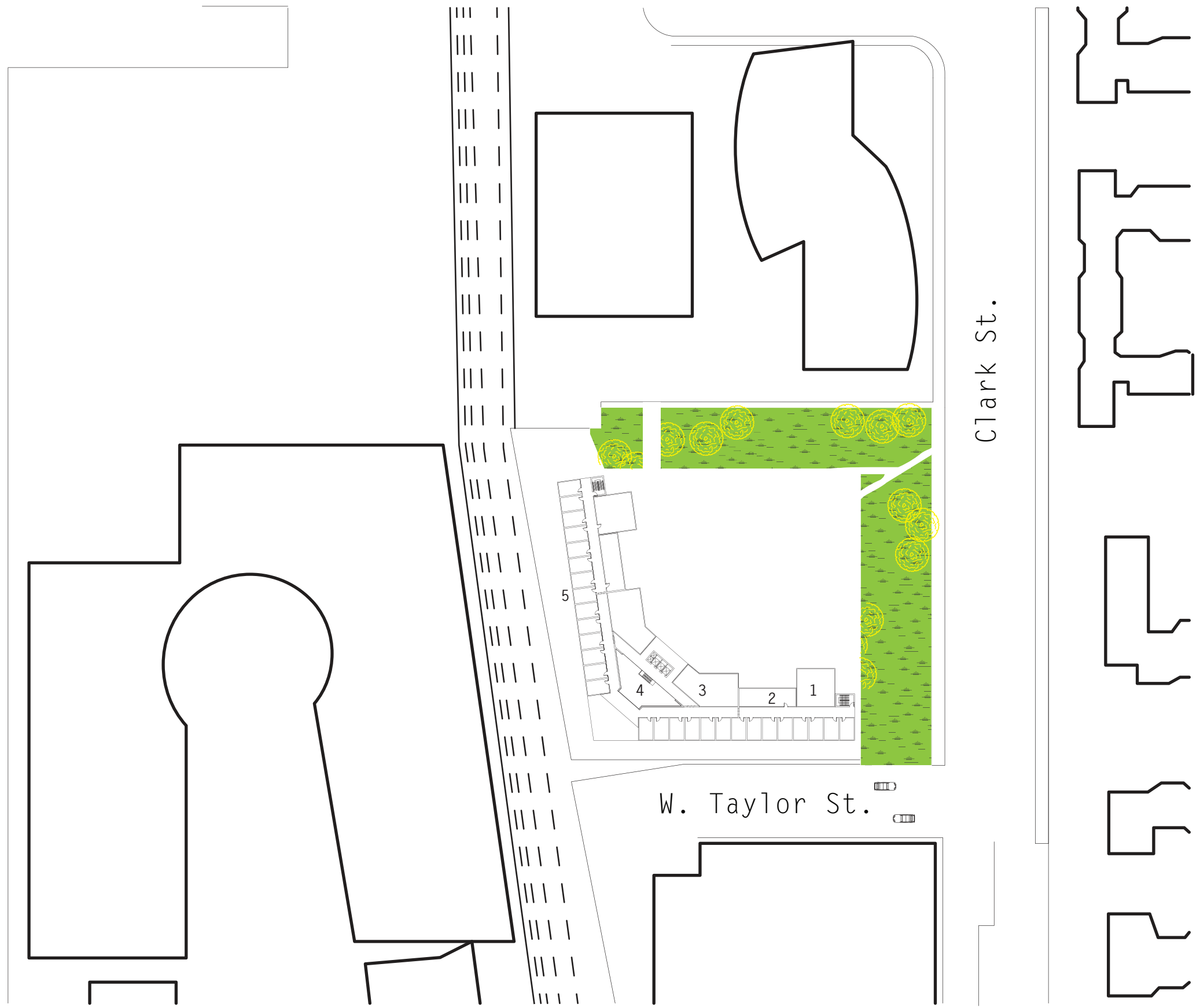


Clark St.

W. Taylor St.

- Floor 3
- 1. Private meeting room
 - 2. Fitness Area
 - 3. Connection bridge
 - 4. Laundry Room
 - 5. Open lounge space

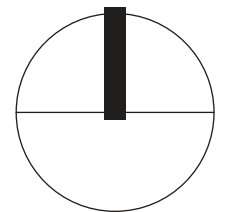
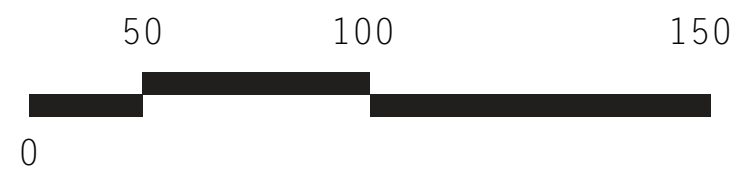




Clark St.

W. Taylor St.

- Typical Residential Floor
1. Lounge
 2. Common Kitchen
 3. small collaborative space
 4. Void space
 5. Studio Apartments



Spatial Concept

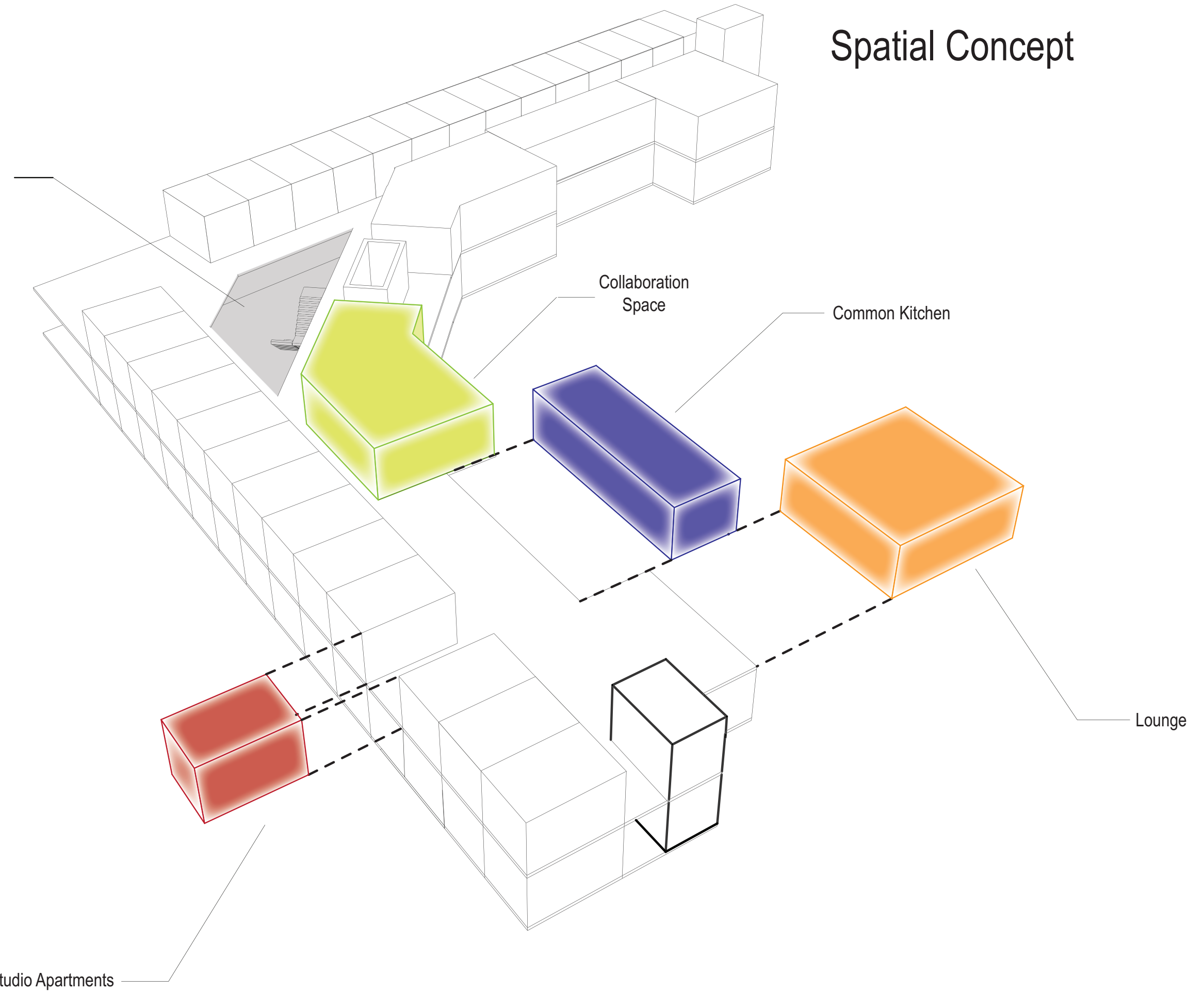
Void Space/
Connection between
Collaborative Spaces

Collaboration
Space

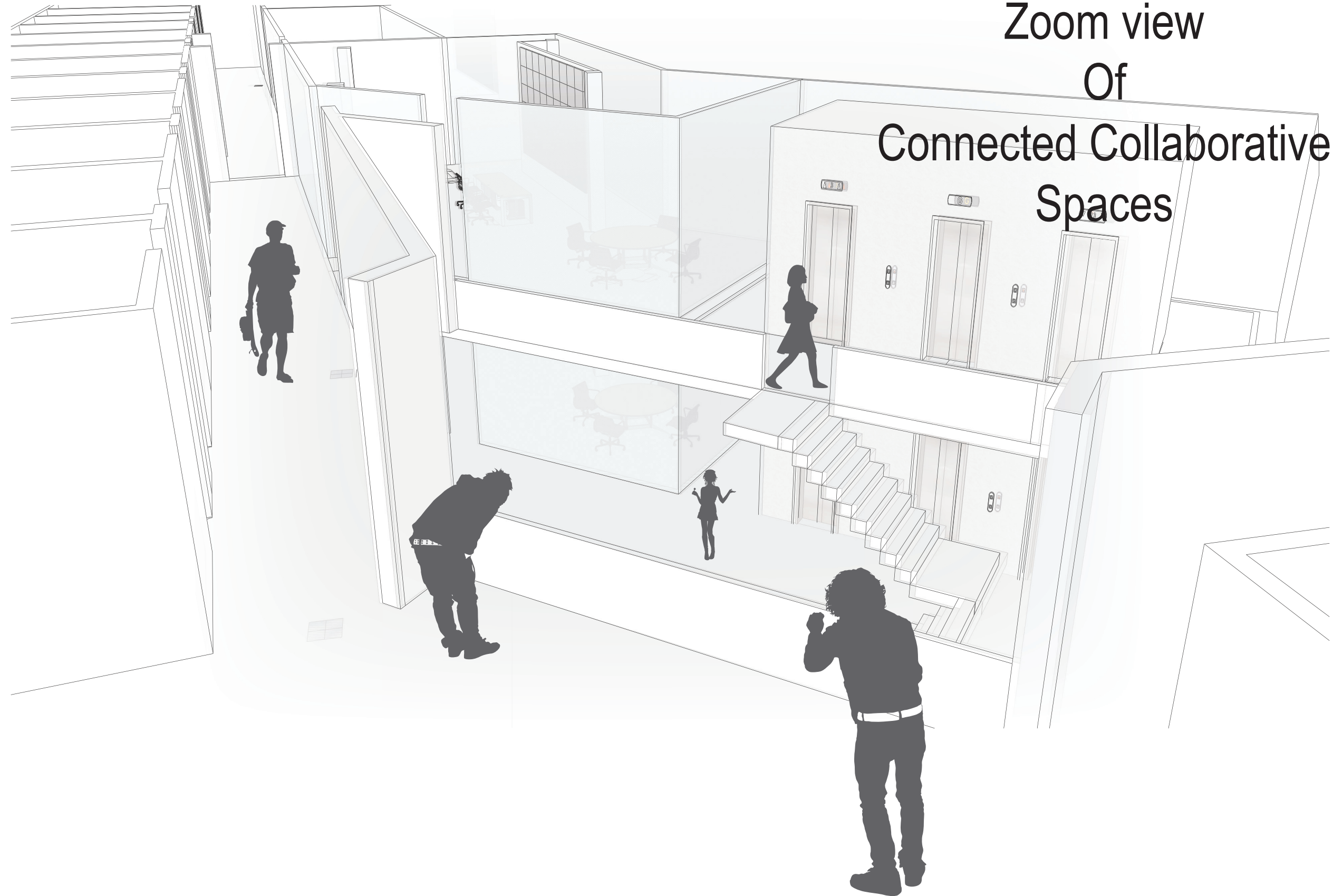
Common Kitchen

Lounge

Studio Apartments



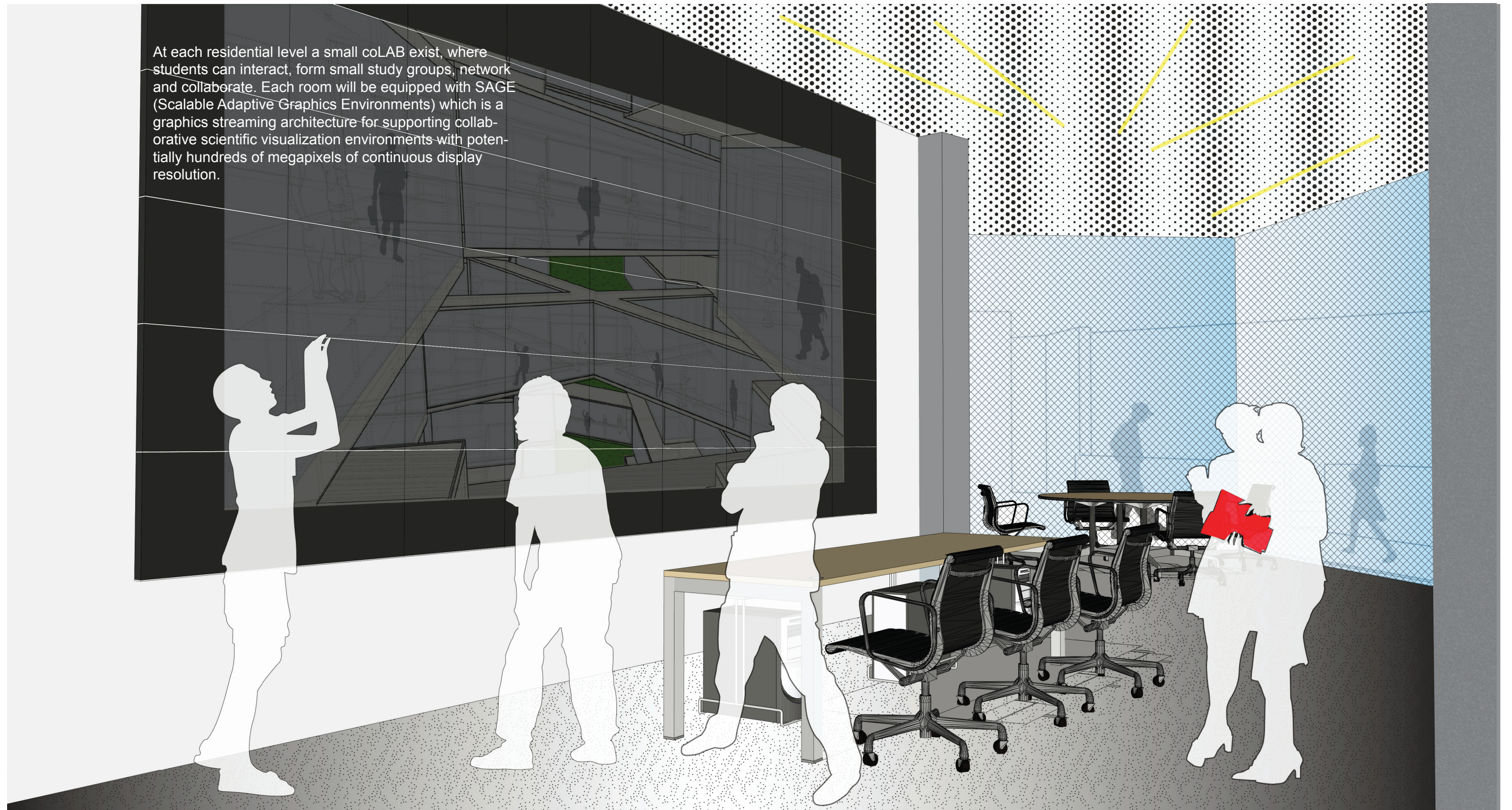
Zoom view
Of
Connected Collaborative
Spaces

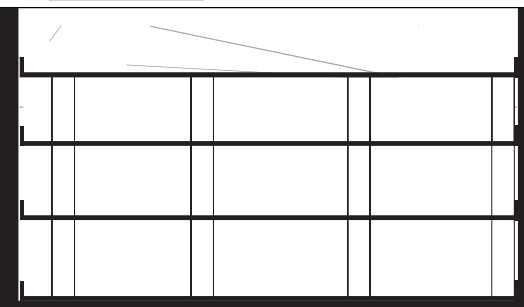
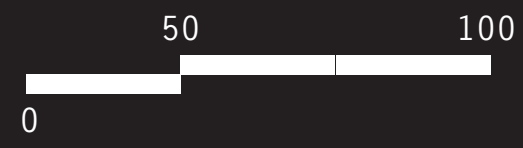
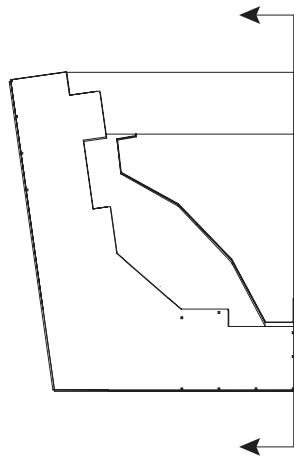


In the common kitchen areas located at each end of the residential level, students may gather to enjoy a group dinner or individual students may invite their guest to enjoy a meal in a larger setting. The common kitchen is another area where students will meet and interact, forming new relationships and friendships.



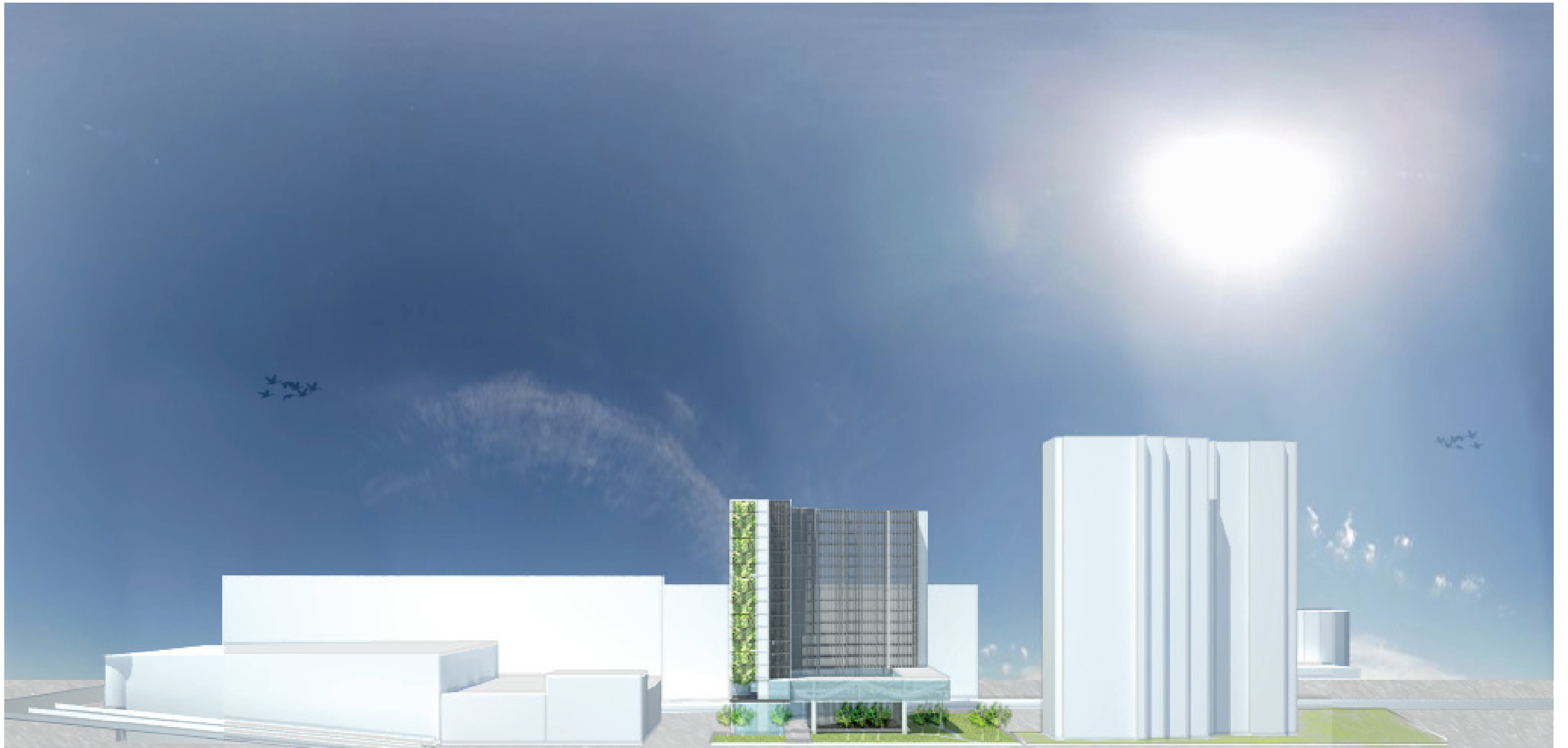
At each residential level a small coLAB exist, where students can interact, form small study groups, network and collaborate. Each room will be equipped with SAGE (Scalable Adaptive Graphics Environments) which is a graphics streaming architecture for supporting collaborative scientific visualization environments with potentially hundreds of megapixels of continuous display resolution.





Transverse Section





Elevation: looking West

05 0 100 150



Housing Study

A spectacular building with a sense of community, round buildings are uncommon in the city grid, and its distinctive shape is what gives this student-housing facility its identity, while also reinforcing a sense of community among residents. The architects wanted to create space for both the community and each resident by placing equal emphasis on the individual apartments and common facilities such as kitchens and lounges.

Architects
Lundgaard & Tranberg Arkitektfirma A/S

Apartments
360 studio apartments, 26-33 sq. m.



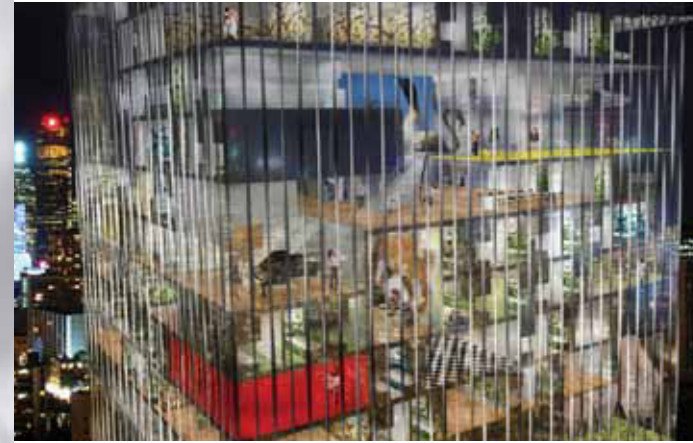
Tietgenkollegiet

Copenhagen, Denmark



we have chosen to create a single space flowing from floor to floor throughout the student housing part, the “vertical living room”. This creates a diversity in the spaces provided and emphasizes the connections between floors. The private sleeping units are minimized in order to give space to the large vertical living room. The public ground floors holds computers, rooms for group activities, gym, and a swimming pool. These are public spaces free for everyone to use and will serve as an important part of the neighborhoods street life.

Have a Nice Day Toronto, Canada



1



3



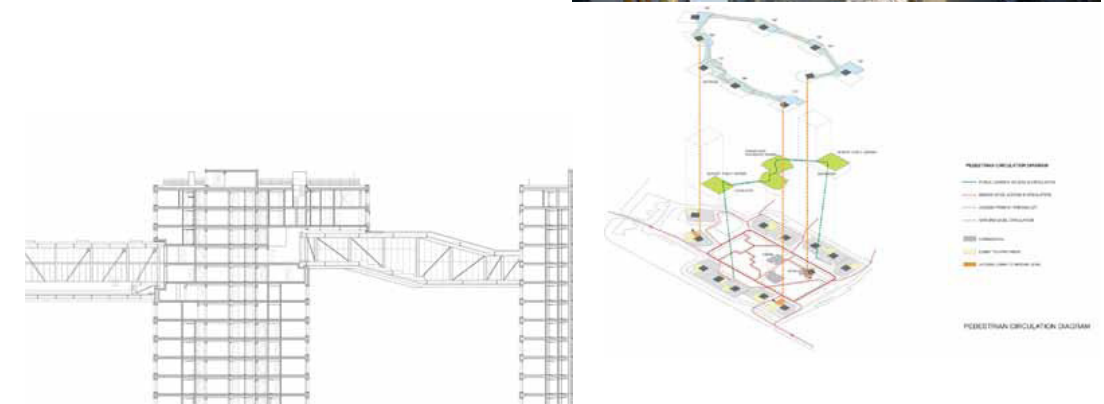
2



Architect: Steven Holl Architects
 Location: Beijing, China
 Program: 750 apartments, public green space, commercial zones, hotel, cinemateque, kindergarten, Montessori school, underground parking
 Client: Modern Green Development Co., Ltd. Beijing
 Project Area: 220,000
 Project year: 2003-2009



Steven Holl began studying horizontal skyscrapers many years before his now famous projects - Horizontal Skyscrapers and Linked Hybrid arose. Holl's most likely first attempt at creating a horizontal skyscraper was the Gymnasium Bridge across the Harlem River in 1979. This project was a building bridge-like structure only in its spanning across the river. It was significant for the cultural connections which it would make between the South Bronx and Manhattan through the many activities and events it would house.

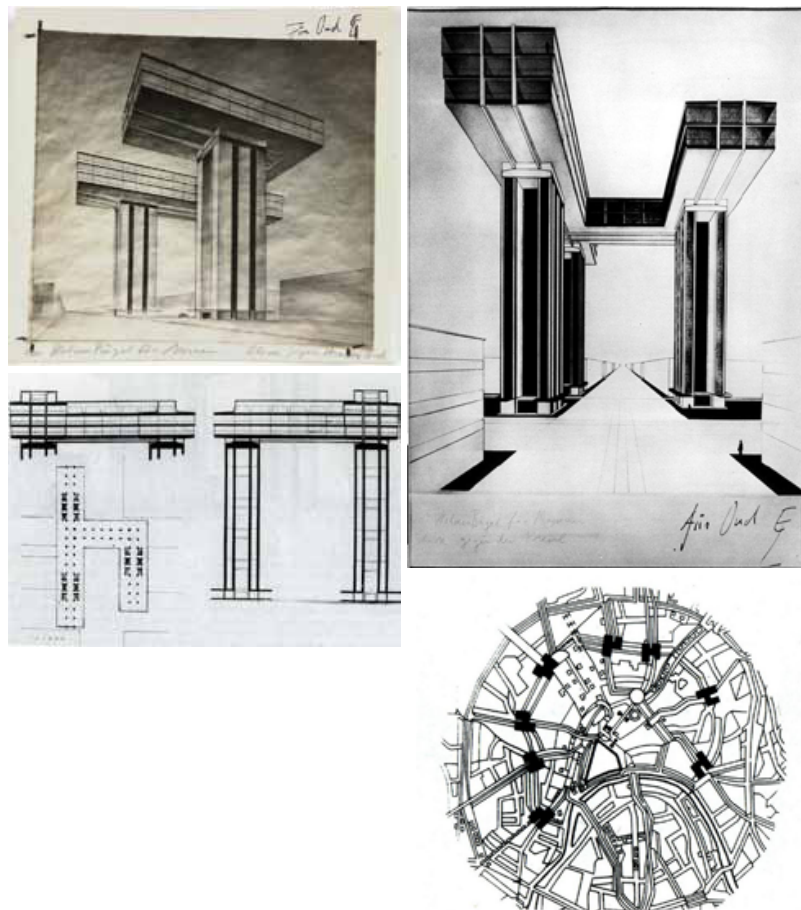


El Lissitzky

argued that as long as humans cannot fly, moving horizontally is natural and moving vertical is not. Thus where there is not sufficient land for construction, a new plane created in the air at a medium altitude should be preferred to an American-style tower. These buildings, according to Lissitzky also provided superior insulation and ventilation for their inhabitants.

spatial balance is in the contrast of vertical and horizontal tensions.

- El Lissitzky



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