



RECOVERY OF GOWANUS CANAL

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CONTENTS

 1. CONTEXT / SITE ANALYSIS

 2. LITERATURE REVIEW

 3. CASE STUDIES

 4. THE PROJECT



1. CONTEXT

GOWANUS CANAL

CONTEXT



The Gowanus Canal is a 100-foot wide, 1.8-mile long canal in the New York City (NYC) borough of Brooklyn, Kings County, New York. Gowanus Canal is limited by several communities such as Park Slope, Cobble Hill, Carroll Gardens and Red Hook. The Canal pours into New York Harbor. The adjacent waterfront is primarily commercial and industrial, currently consisting of concrete plants, warehouses and parking lots.

“almost solid” with sewage

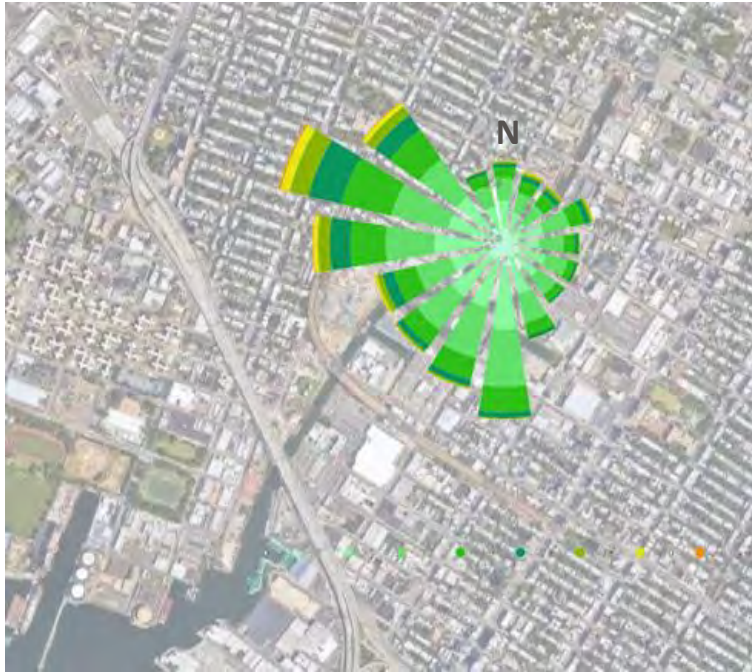
oily pollutants like coal tar

Long-Overdue Dredging Of Gowanus Canal Turns Up 'Black Mayonnaise,' Sunken Cars, Evil Stench

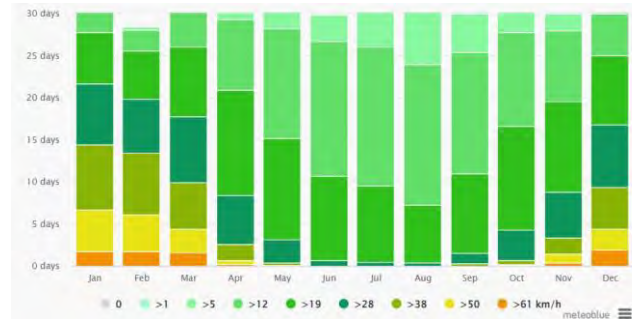
Once the Gowanus Canal Is Rid of 'Black Mayonnaise,' Who Will Benefit?

Canal, 19. it was formed in the middle of the XIX century due to tidal wetlands and freshwater currents. At the end of this century, heavy industrial use led to the fact that large quantities of factory pollutants flowed into the Gowanus Canal. Studies to eliminate or reduce pollution have not achieved the desired result. 20. although it began to be cleared of industrial structures towards the middle of the century, the pollution was never completely over. In 1990, Gowanus was recognized as one of the most polluted bodies of water in the United States. Due to the high rates of fecal coliform contamination, deadly pathogen rates and low oxygen concentration, it is often considered incompatible with marine life. Most of the sea creatures have disappeared and life around the channel is over. It also puts the lives of marine creatures on Coney Island, located a little further down, at risk if precautions are not taken. In general, we see a gray city.

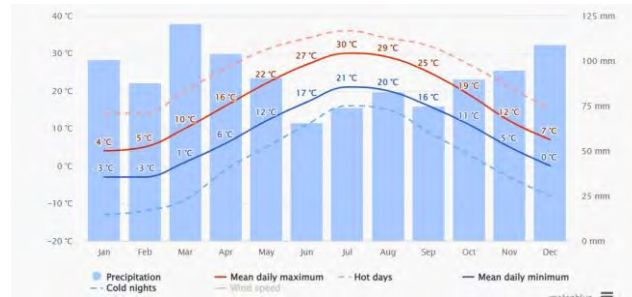




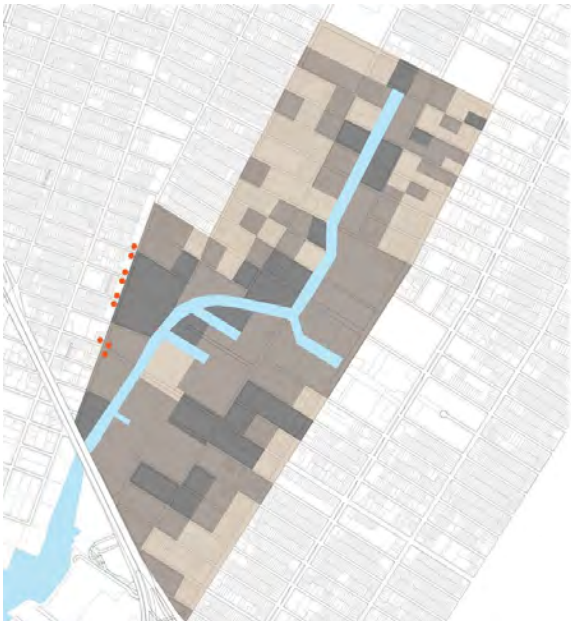
Wind Speed



Average Temperatures and Precipitations



*‘The **stench** emanating from the 1.8-mile-long slash of stagnant water was awful enough to penetrate people's dreams..’*



Levels of Street Litter

- high level of Street litter
- medium level of Street litter
- low level of Street litter
- public trash can



Separation of Smells

- negative manmade smells
- pleasing manmade smells
- organic smells





not green areas
, green POINTS,
there are almost
disappeared!

- Lack of greenery areas
- Poor flood protection due to lack of trees



Density of
Industrial
Area

'Opinion: Gowanus Needs Green Space. Let's Work Together'

Gowanus has even less public green space than the law New York City average, as well as in comparison with neighboring communities. Existing parks in the community are small, paved and often in disrepair. By the Parks Department's own assessment, Gowanus is underserved for open space.





An inspirational visual



when there were no industrial activities
in the past yet, Gowanus Canal



Recovery of Gowanus Canal Project,
2022, Gowanus Canal

MORE GREEN, MORE CLEAN, MORE REAL THAN EVER!





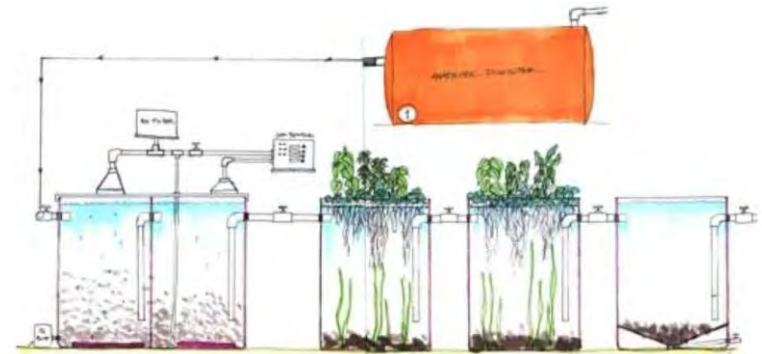
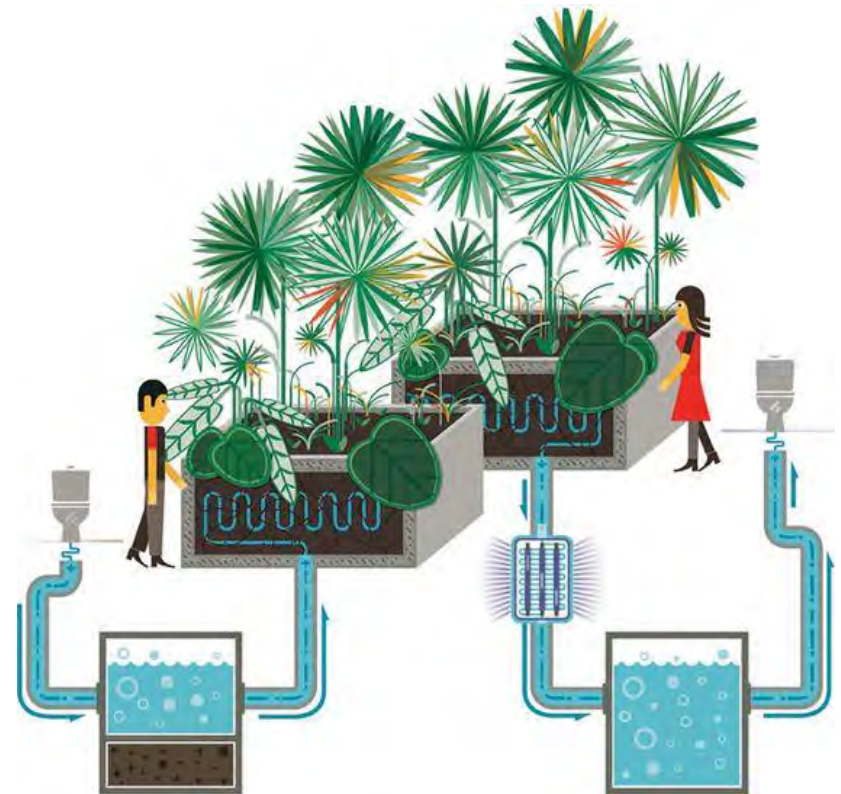
2. LITERATURE REVIEW

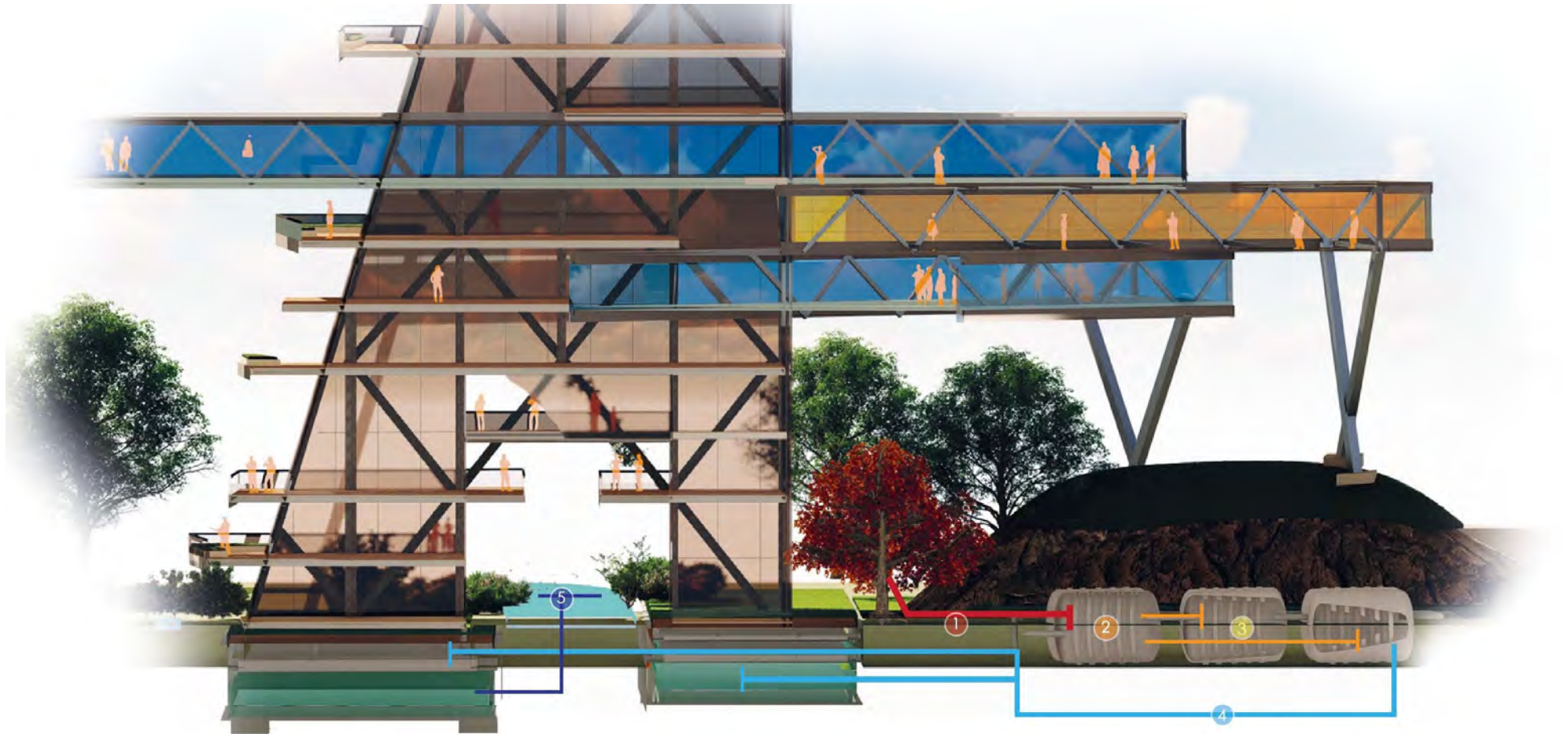
What is Living Machine?

'A Living Machine (capital letters, it's a patented invention) is a series of tanks teeming with live plants, trees, grasses and algae, koi and goldfish, tiny freshwater shrimp, snails, and a diversity of microorganisms and bacteria. Each tank is a different mini-ecosystem designed to eat or break down waste. The process takes about four days to turn mucky water crystal clear. It is chemical-free, odor-free (with the exception perhaps of the sweet fragrance of flowers), and, compared to conventional waste treatment, it costs less financially and ecologically.'

Wastewater Treatment Plan

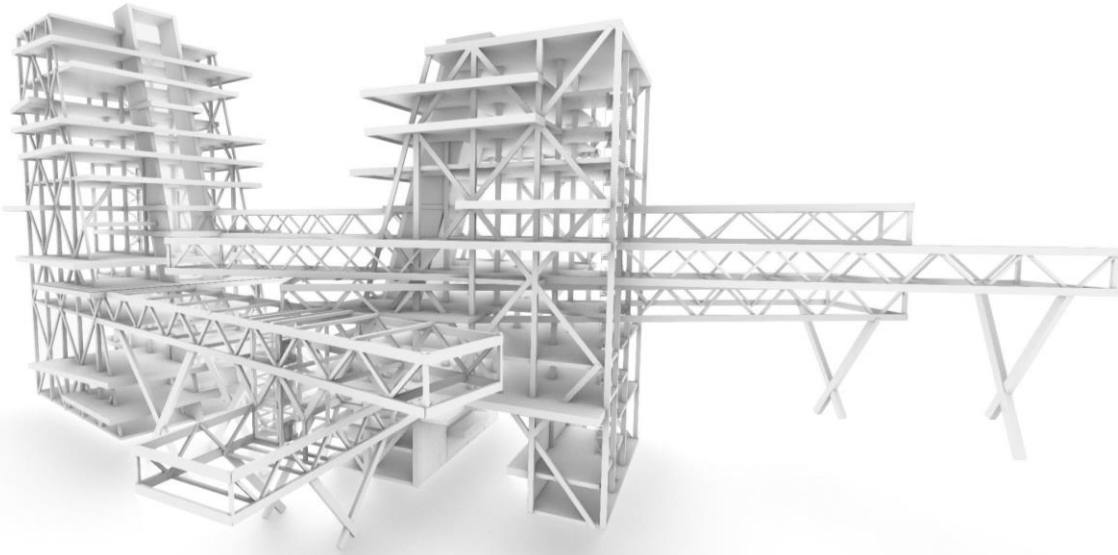
- ECOLOGICAL
- ECONOMICAL
- NOT REQUIRE CHEMICAL INPUTS





LIVING MACHINE PRINCIPLE FOR WATER REUSE





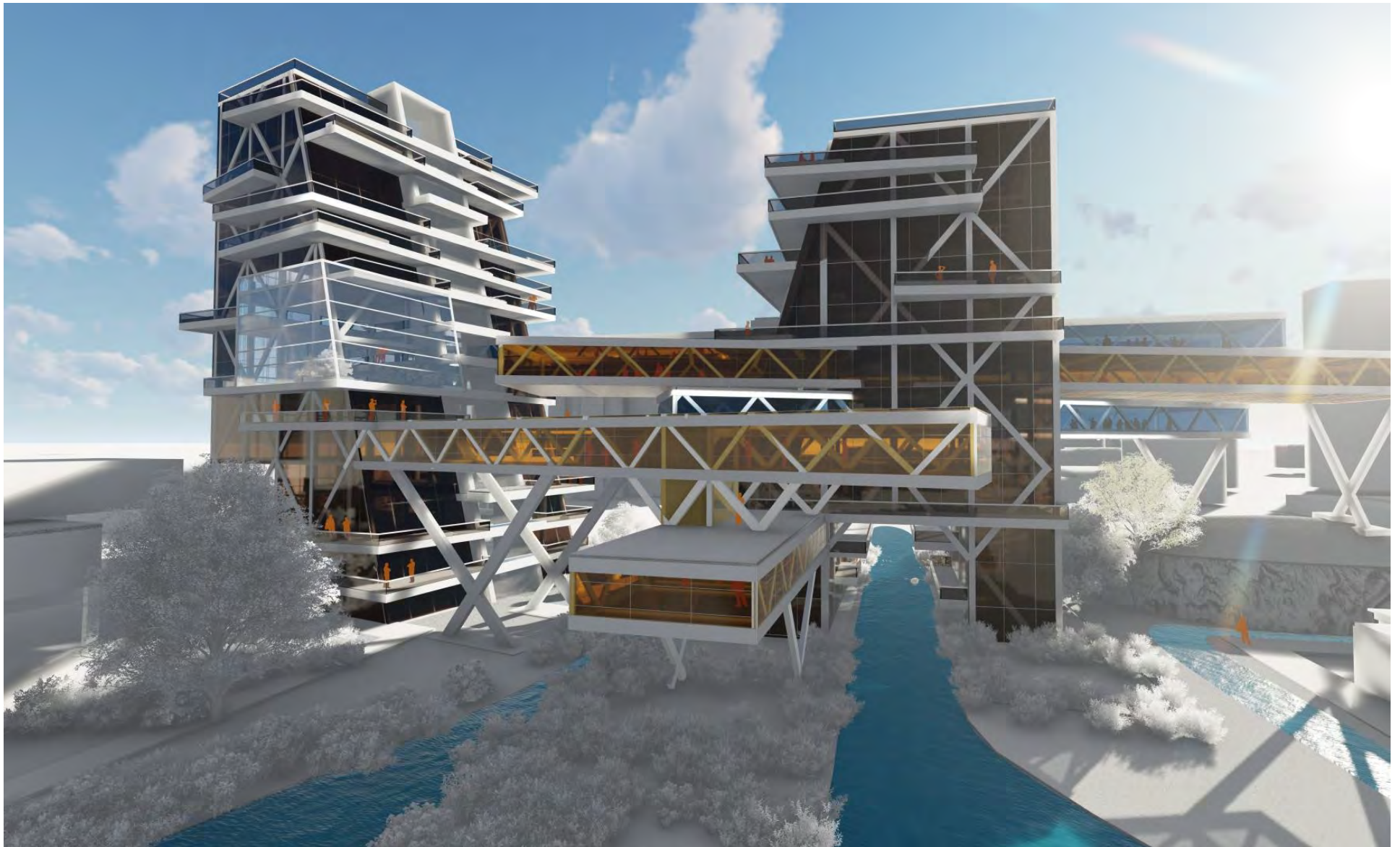
Why is Recycled Steel?

It reduces the consumption, expenses, energy, and time to mine other valuable resources.

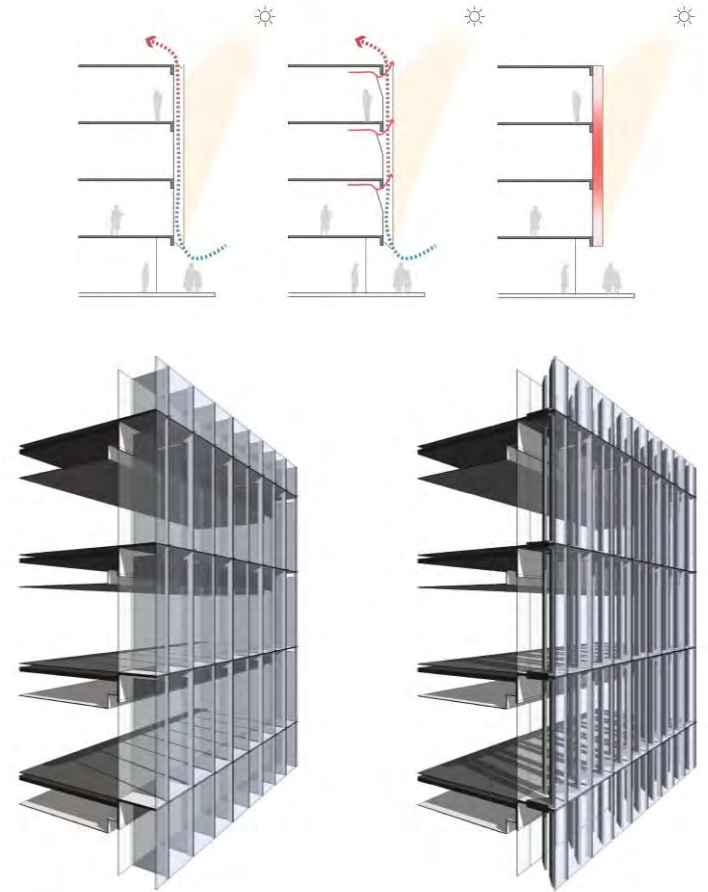
For every ton of recycled steel, it saves one and a half tons of iron ore, half a ton of coal, and 40 percent of the water normally used in the production process.

RECYCLED STEEL





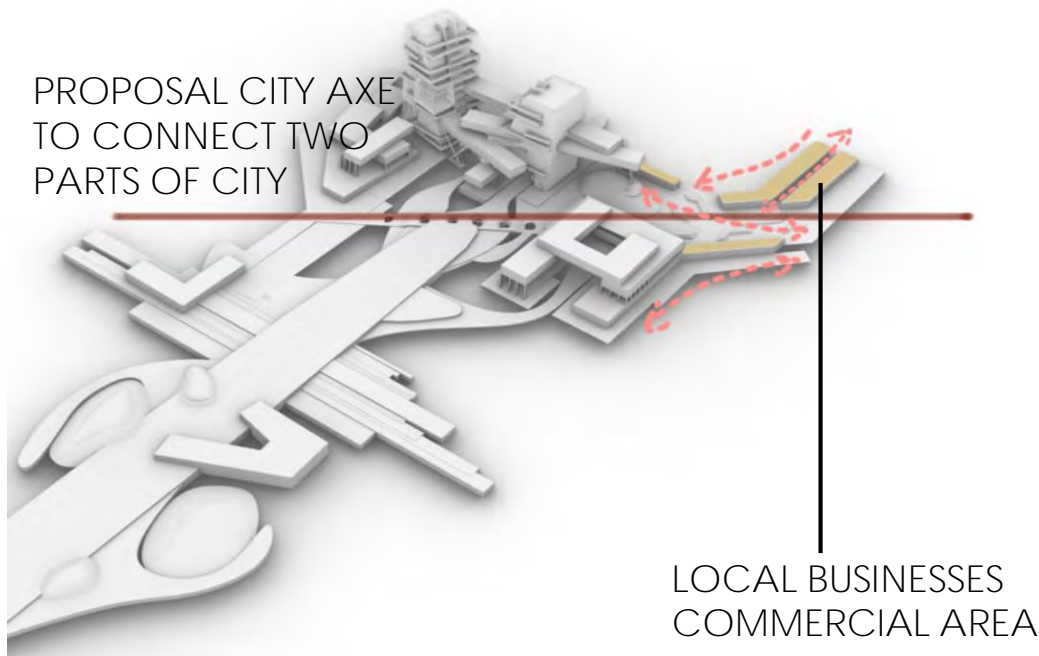
DOUBLE-GLAZED FACADE



NORTH-WEST FACADE

- Protection From Natural Elements
- Energy Efficiency
- More Fresh Air
- Better Insulation
- Noise Control





It is quite difficult to find a local business, especially in one of the most developed cities in the world, such as Brooklyn. Everyone prefers starbucks over Alice's place. An ongoing pattern has been formed with tall skyscrapers and identical shops. In this project, it is aimed to revive the local economy by supporting local businesses.

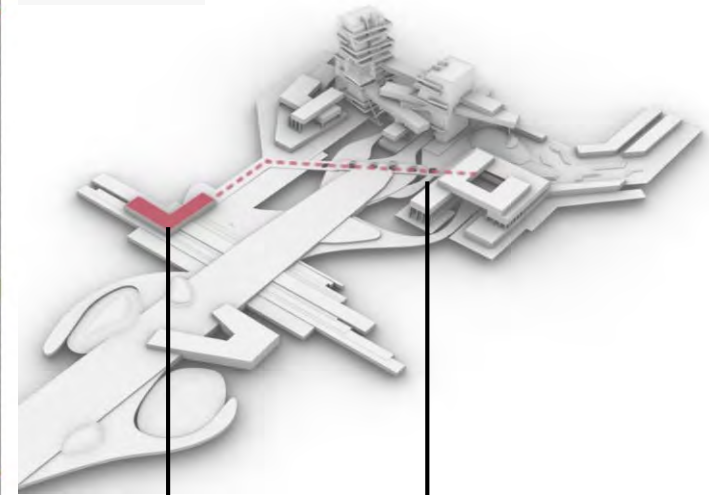




EXISTING PUBLIC TRANSPORTATION GRAPHIC

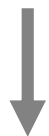


PROPOSAL PUBLIC TRANSPORTATION GRAPHIC



METRO STATION

PROPOSAL CITY AXE TO CONNECT TWO PARTS OF CITY



CARBON FOOTPRINT



ACCESIBILITY





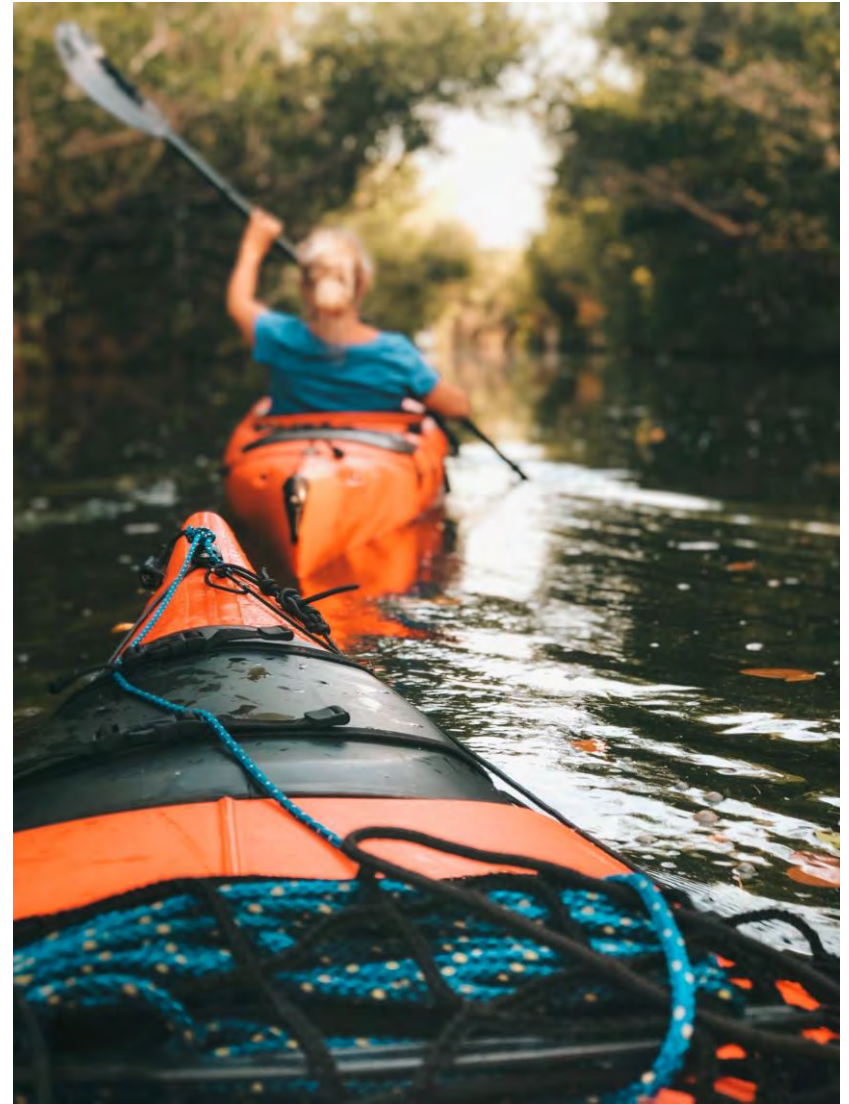
ATTRACT PEOPLE
ATTENTION
People will want to
come here!



EMPHASIZE THE
CLEAN WATER

BOATHOUSE

- Leaving no trace and educating our guests about wilderness best practices
- Giving back to our local communities and supporting local businesses
- Minimising energy usage and waste, and then reducing, reusing and recycling
- Tracking and offsetting carbon emissions
- Looking after our amazing staff





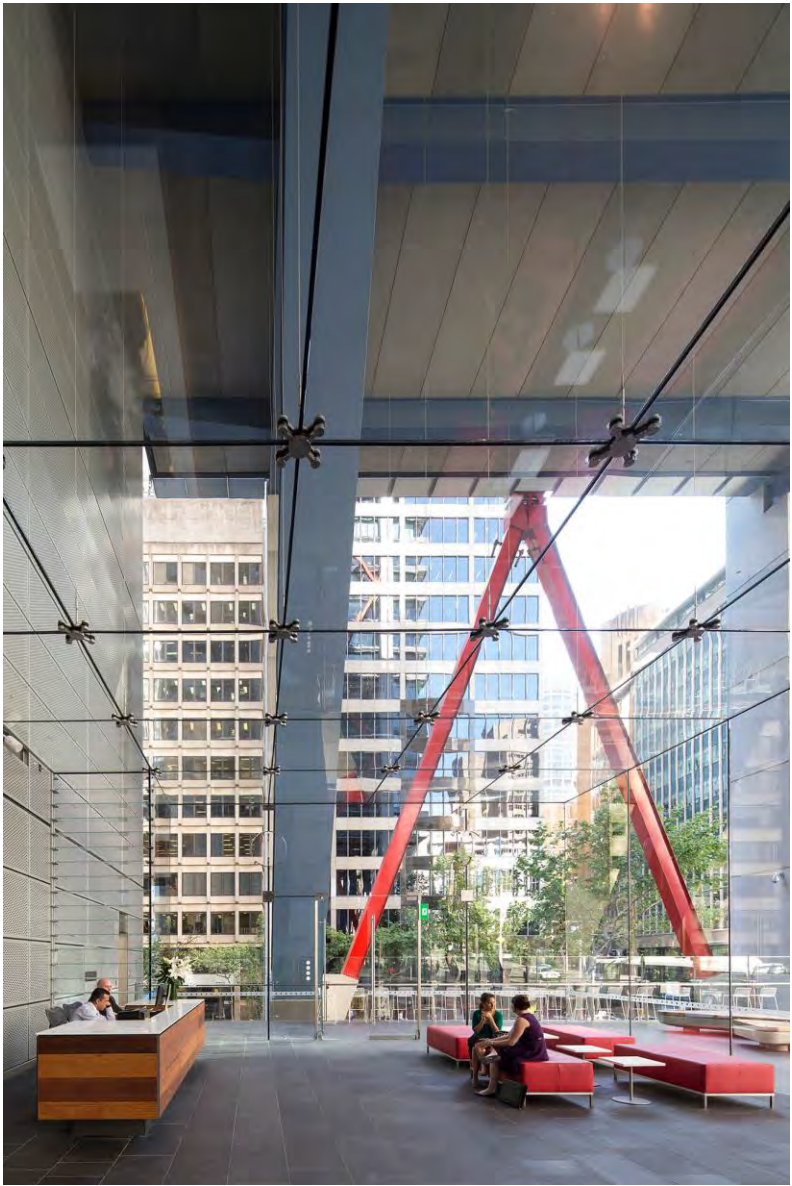
3. CASE STUDIES



The building is composed of large interlocking disks, spherical in section, and of different diameters and varying curvatures. Some disks are 'horizontal' and rest on other disks. The 'vertical' disks constitute the building's support and transfer the loads of the horizontal planes to the base.



WORLD TRADE CENTER – RICHARD ROGERS



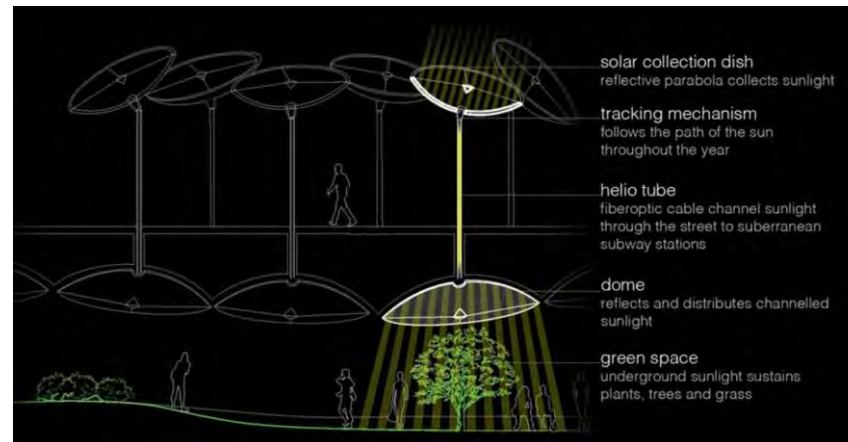


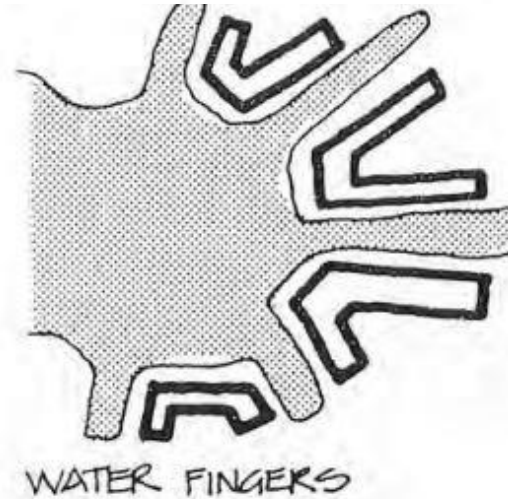
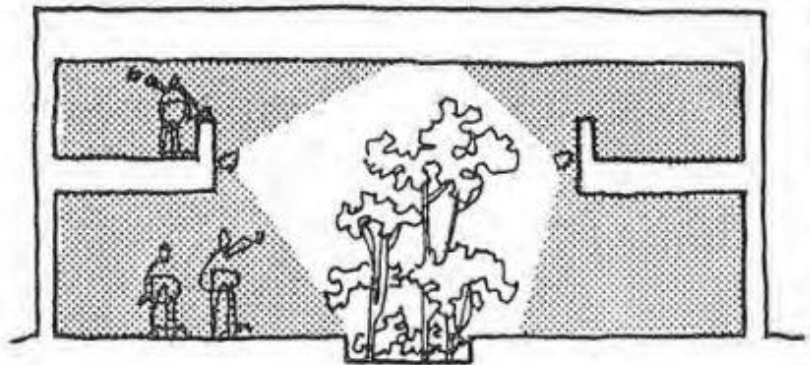
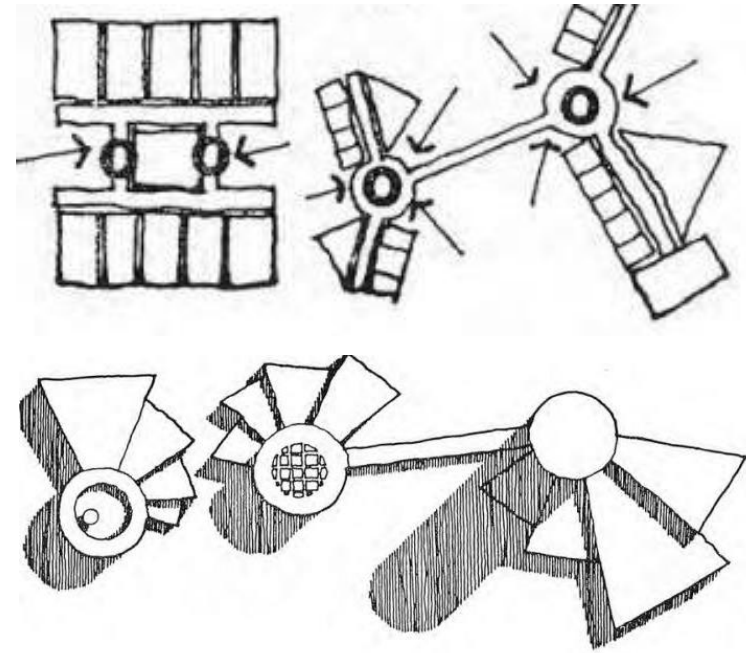
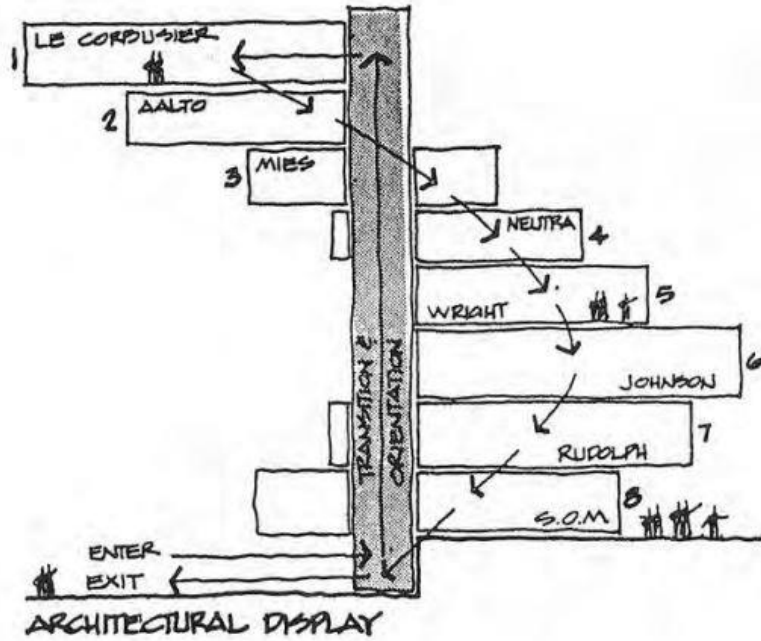
Infinity is a mixed-use residential building, located at the corner of Bourke Street and Botany Road in Green Square, Sydney. The 20-story building includes 325 apartments, 75 boutique hotel rooms, a 450-seat conference centre, and more than 30 retail, food & beverage spaces. It has a direct connection to the Green Square train station and is adjacent to a Public Plaza and Green Square Library.





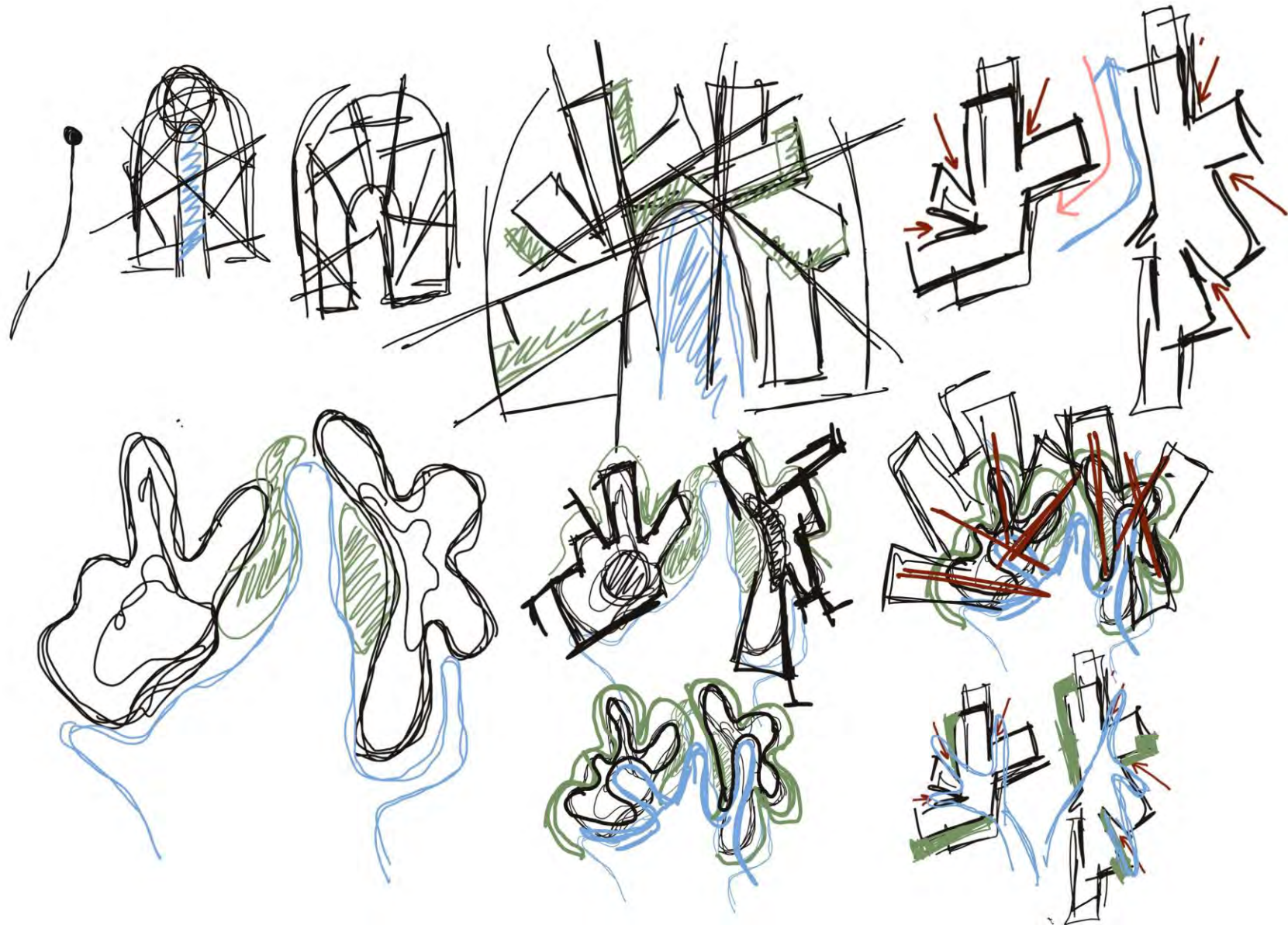
The Lowline aims to build a new kind of public space one that highlights the historic elements of a former trolley terminal while introducing cutting-edge solar technology and design, enabling plants and trees to grow underground. The study concluded that the Lowline was not merely technically feasible, but would also vastly improve the local economy and the adjacent transit hub.

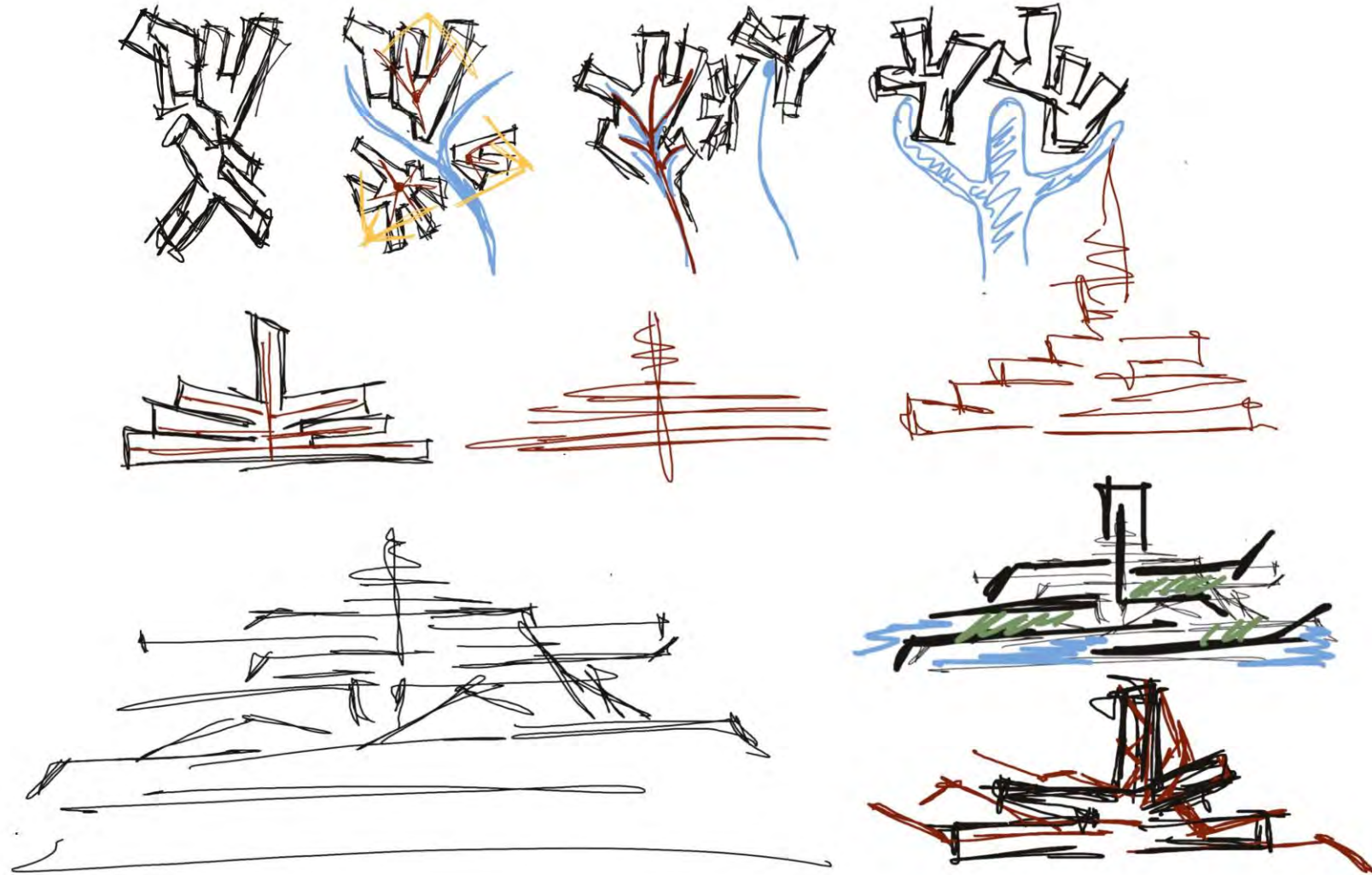


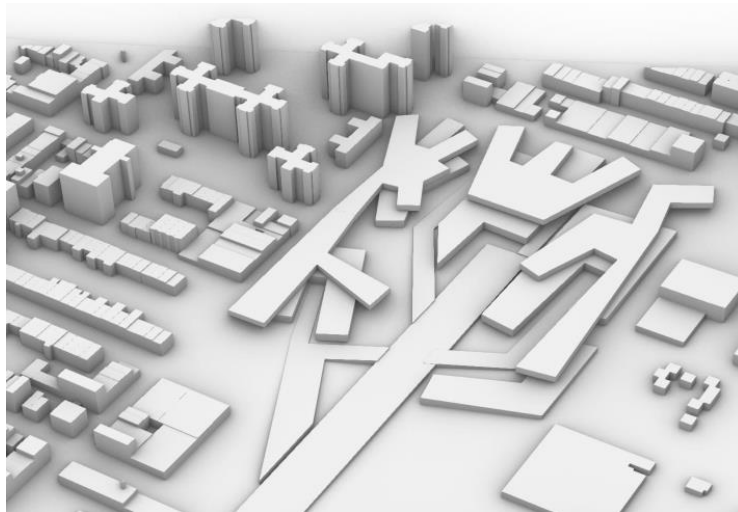
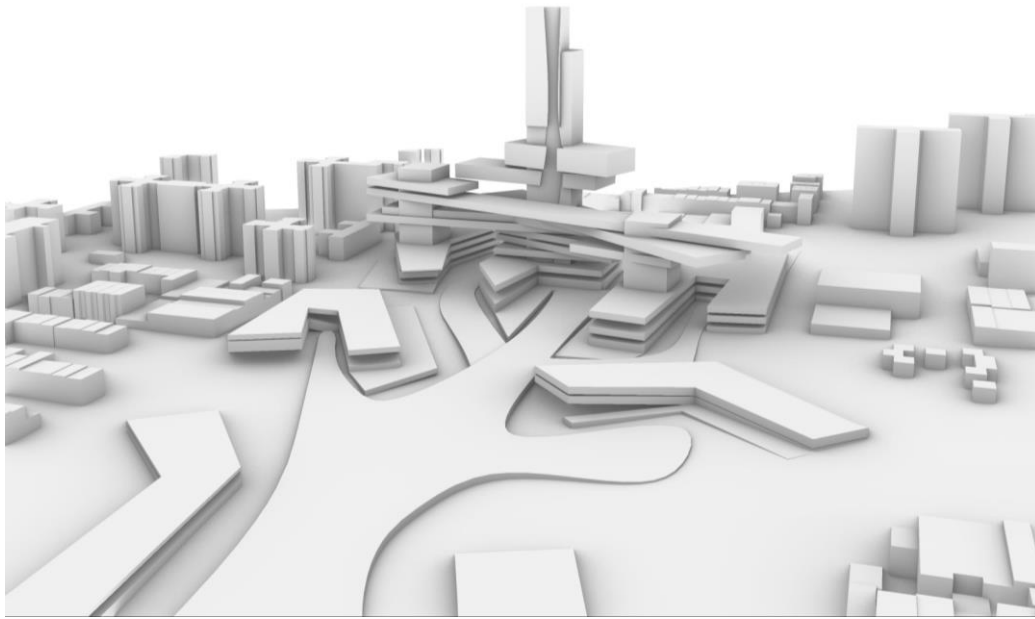


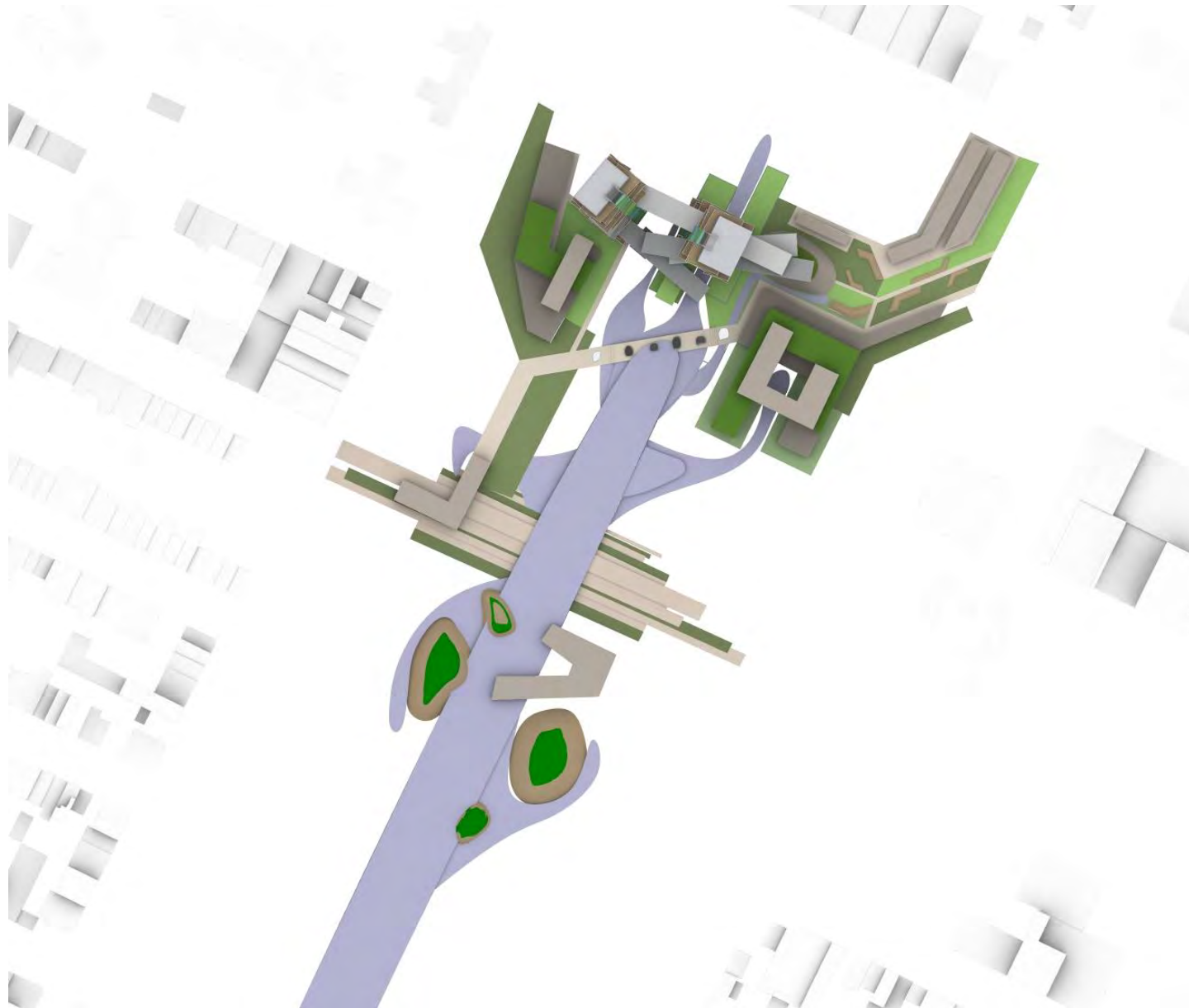


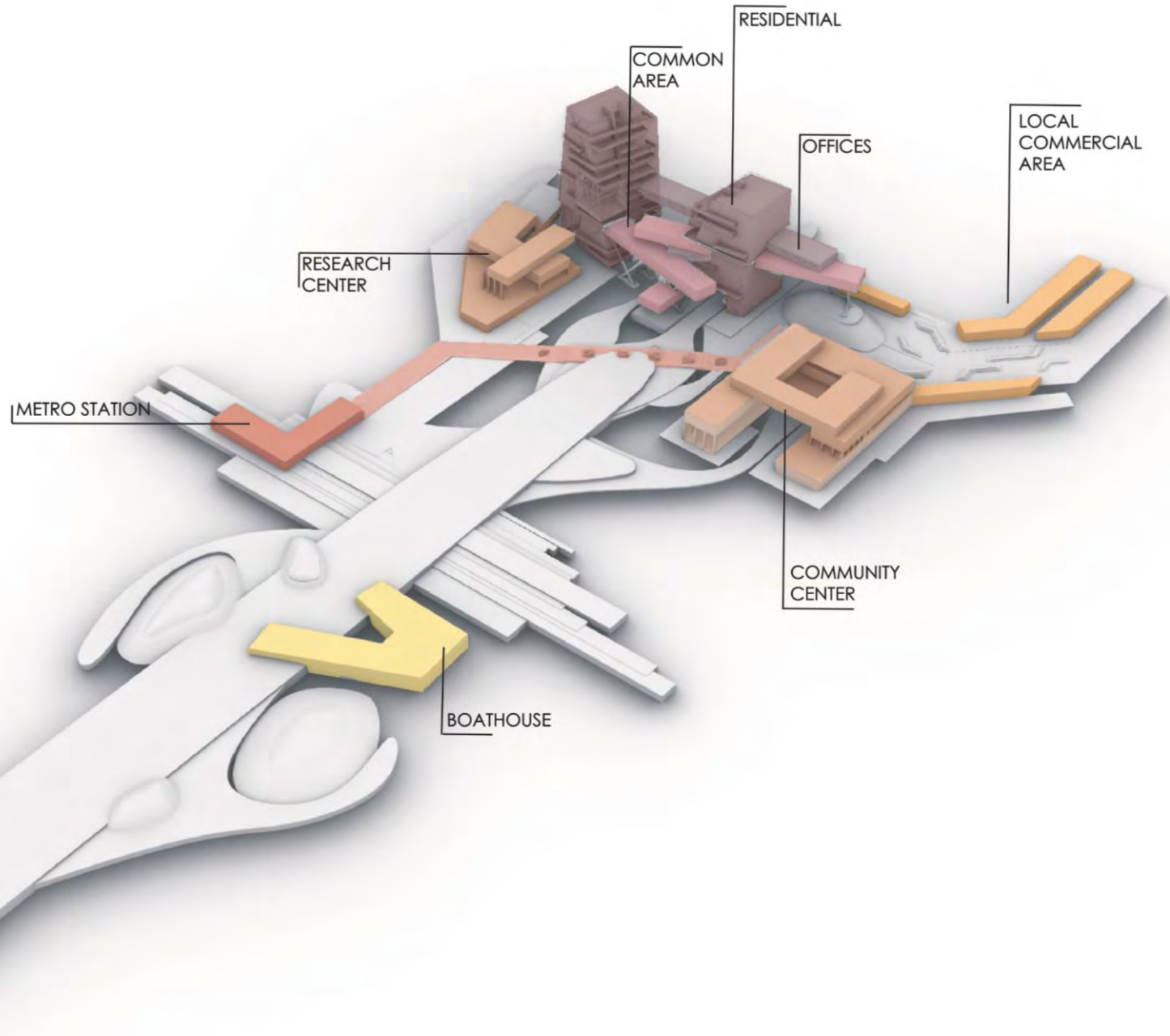
4. THE PROJECT

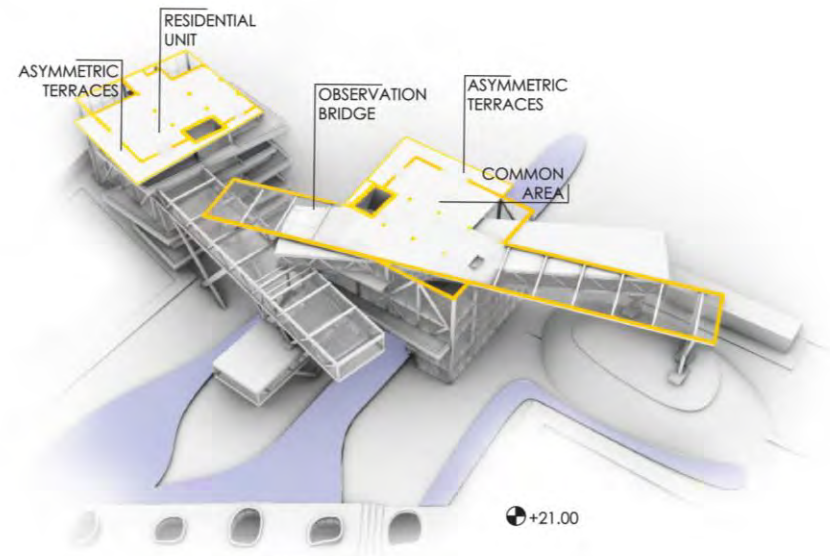
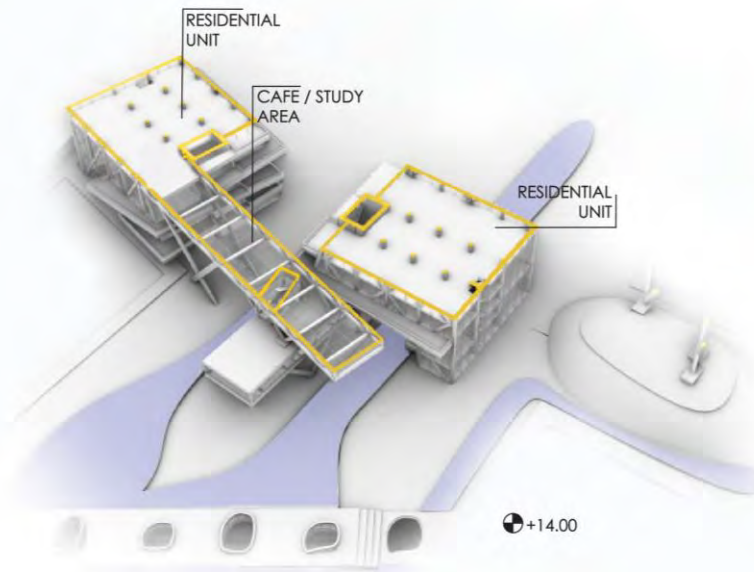
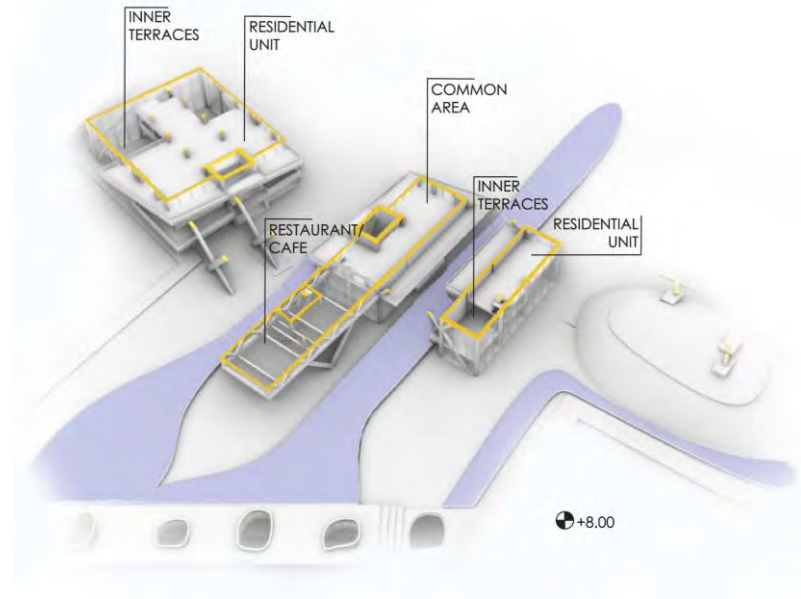
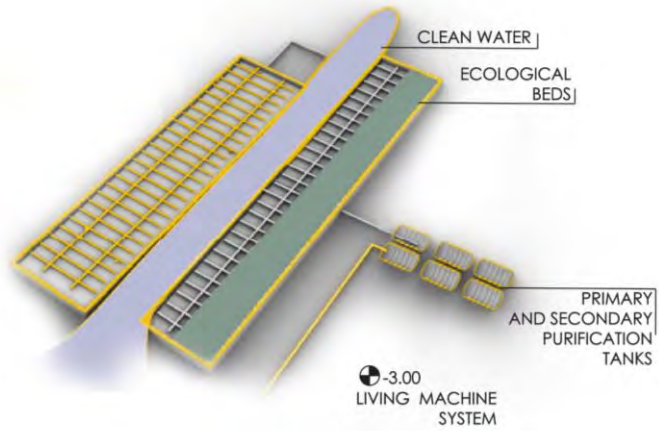




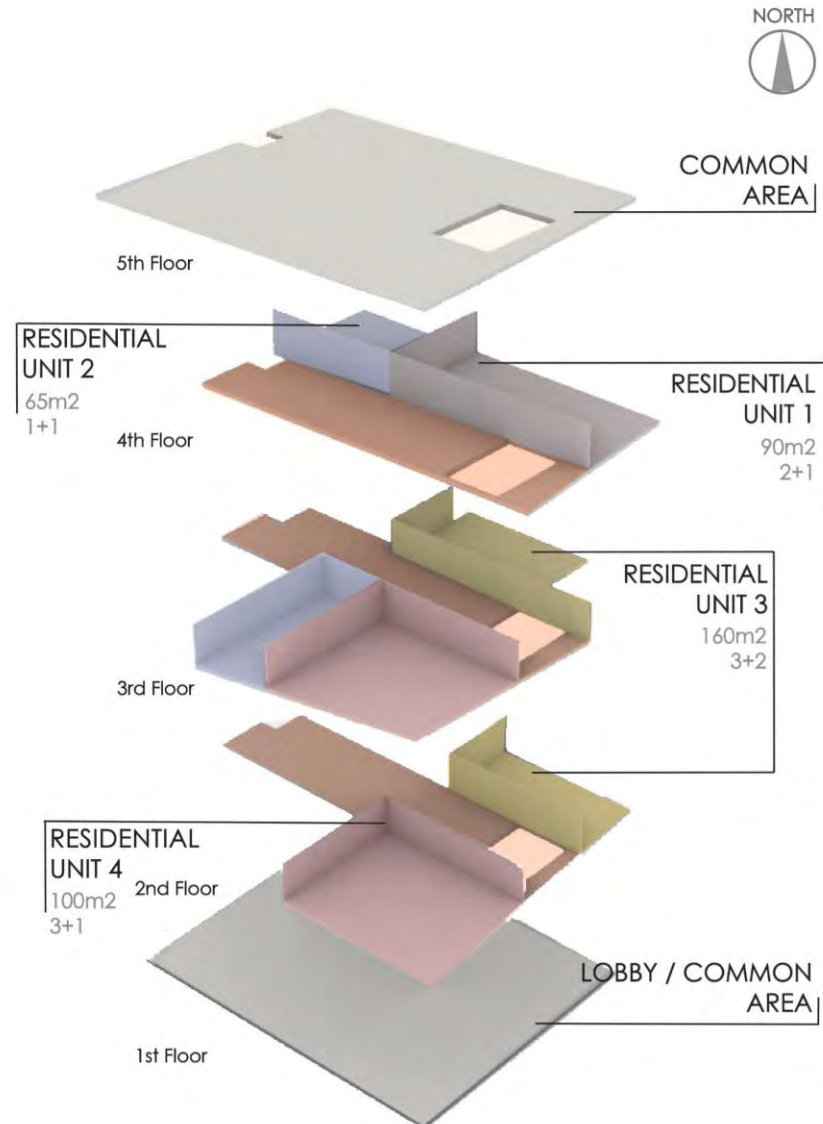
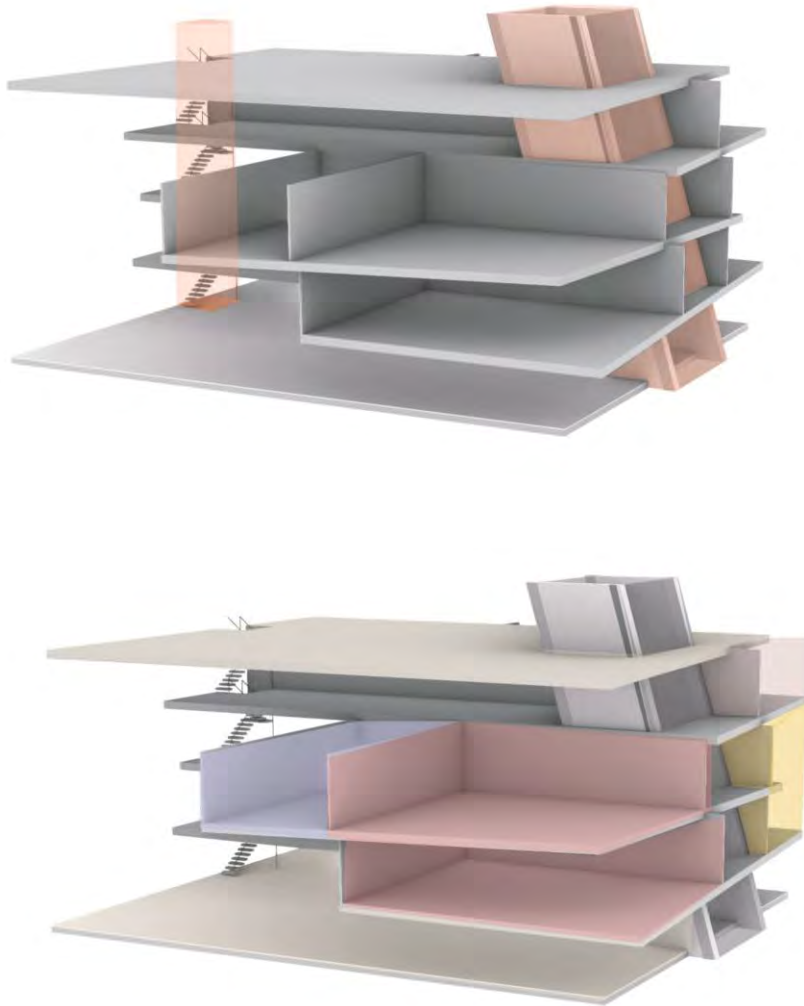


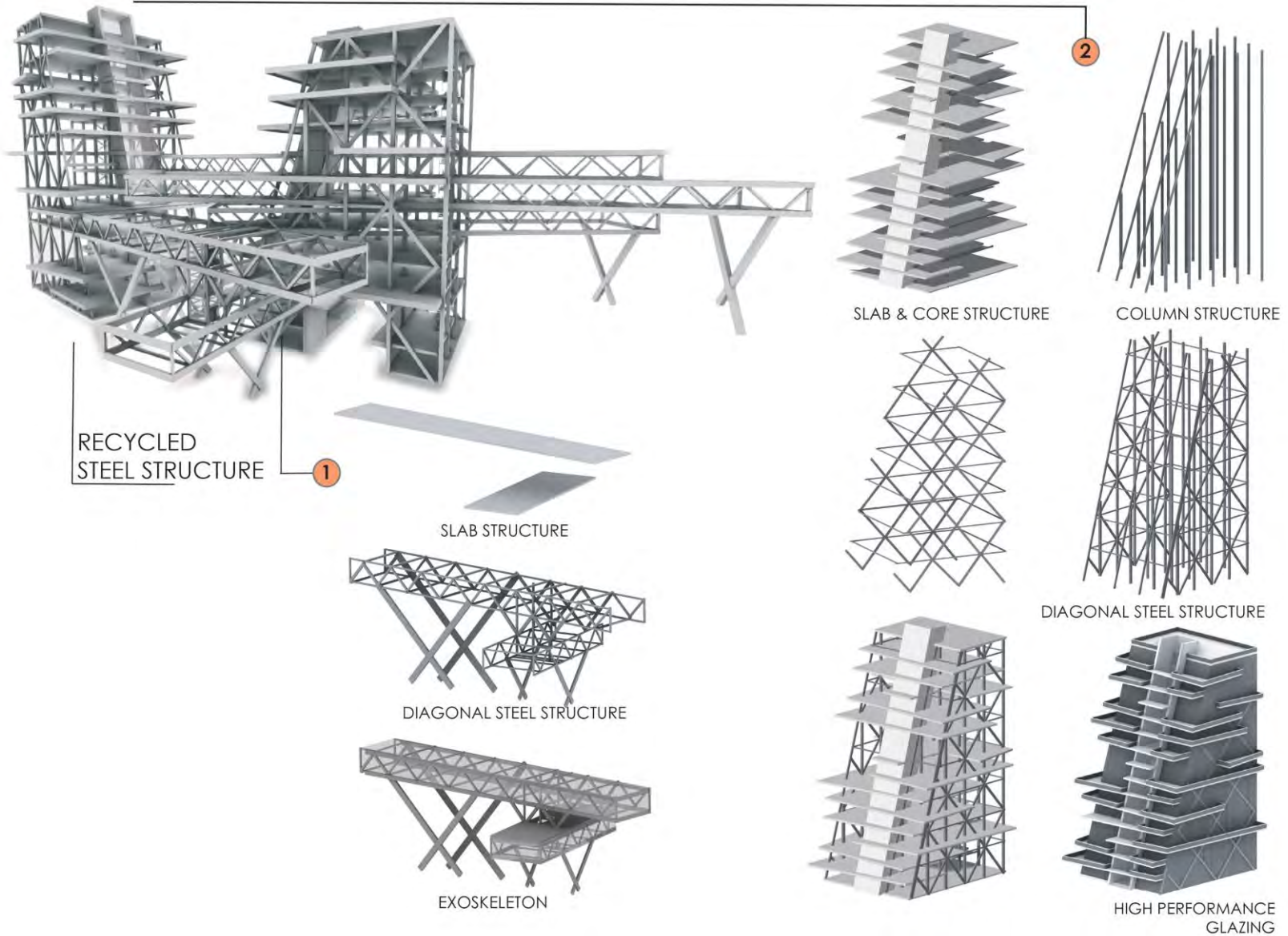






FIVE FLOOR UNIT





SECTIONS





OFFICES

COMMON AREA
OBSERVATION HOUSE

OFFICES

COMMON AREA
BRIDGE - GREEN HOUSE

COMMON
AREA
CAFE/RESTAURANT

LIVING MACHINE SYSTEM
ECOLOGICAL WASTEWATER TREATMENT

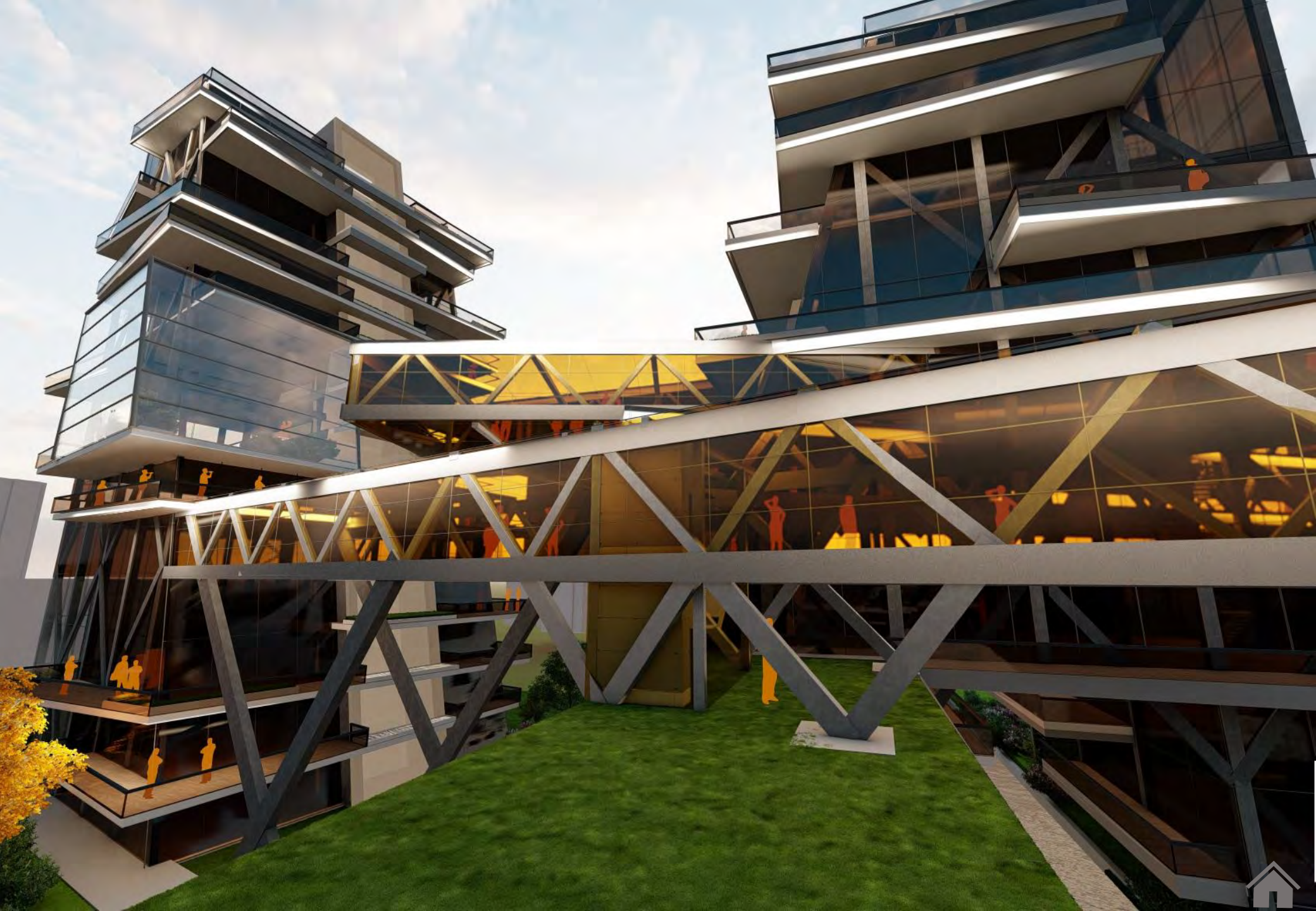
WAY OF METRO STATION/
TRANSPORTATION HUB

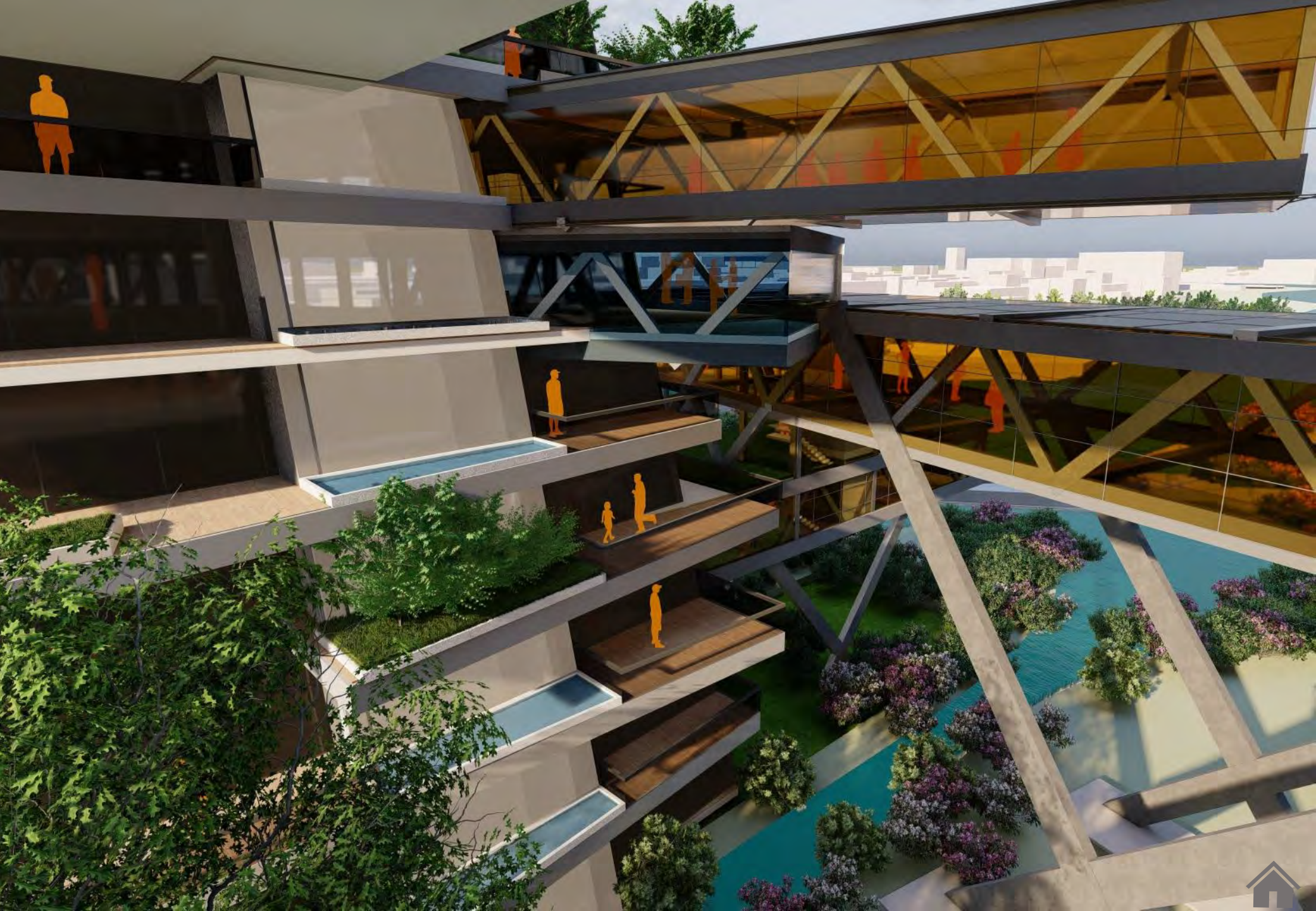


RECOVERY IS BEGINNING

THE PROJECT





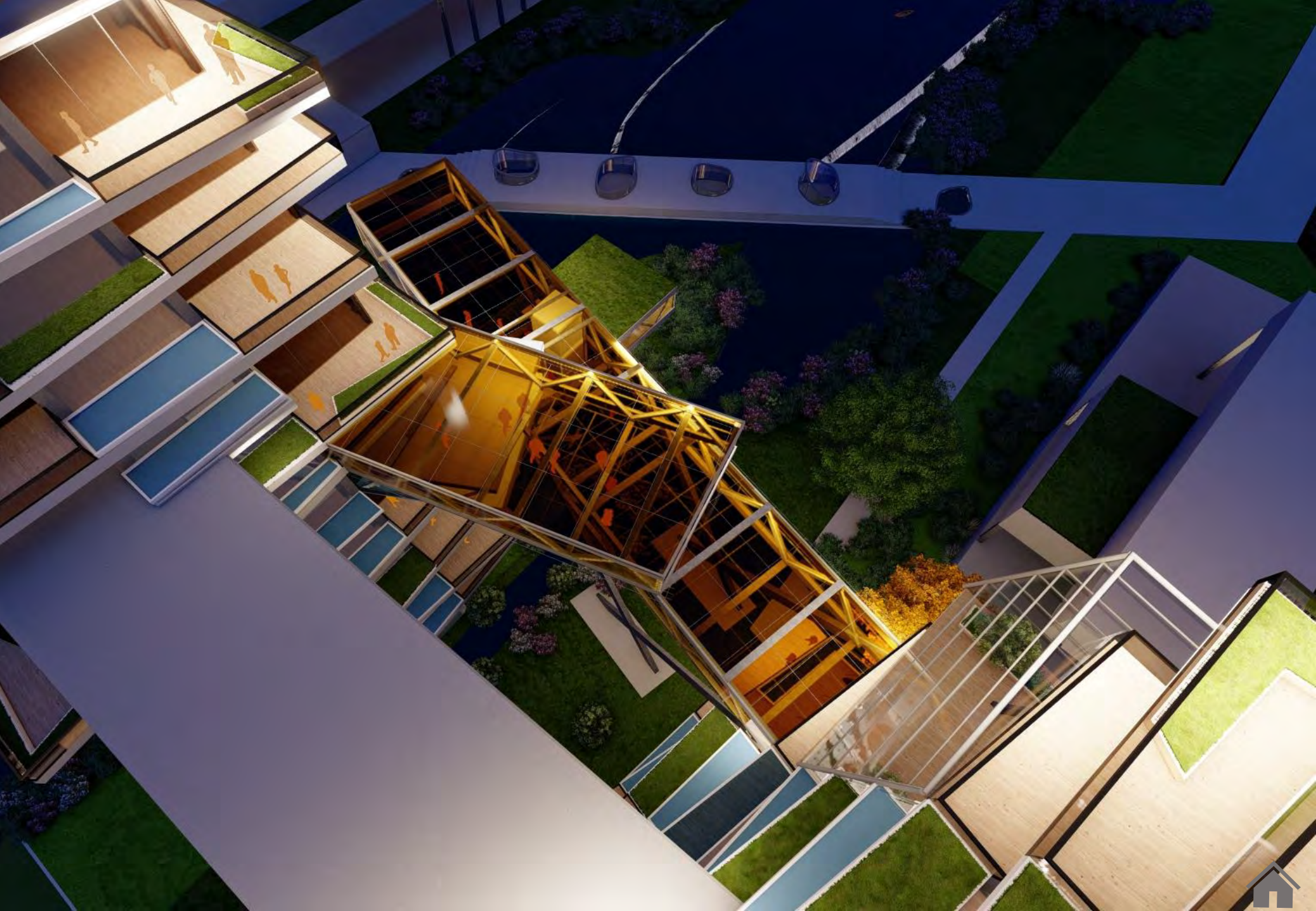
















FLYTHROUGH



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