

PORTFOLIO

Kay Vandenberg
2025 SUMMER - 2026 SPRING
M.S. ADVANCED ARCHITECTURAL DESIGN
COLUMBIA UNIVERSITY



I chose to establish the Noise Pavillion in San Pedro because it was once an important port and center of maritime activity, rich in oceanic culture and history. As Los Angeles' main port, San Pedro has witnessed extensive shipping and industrial activities, highlighting the close relationship between humans and the ocean. The cargo ship and industrial noises here have become representative of underwater noise pollution.

San Pedro was originally inhabited by the Gabrielin-Tongva Tribe and is located at the base of the Palos Verdes Peninsula near the entrance of the Los Angeles River. Its prime location attracted later European settlers. In 1784, Juan Jose Dominguez established Rancho San Pedro. After the American arrival, a harbor was built, and a railroad was completed in 1871. By 1897, San Pedro became the official port of Los Angeles, during which the main breakwater was constructed. Port MacArthur was established in 1914, bringing a military presence. As shipping and fishing industries grew, the area attracted large communities of Japanese, Croatian, Italian, and other international immigrants.

San Pedro
Berth 46 / Port of Los Angeles Cruise

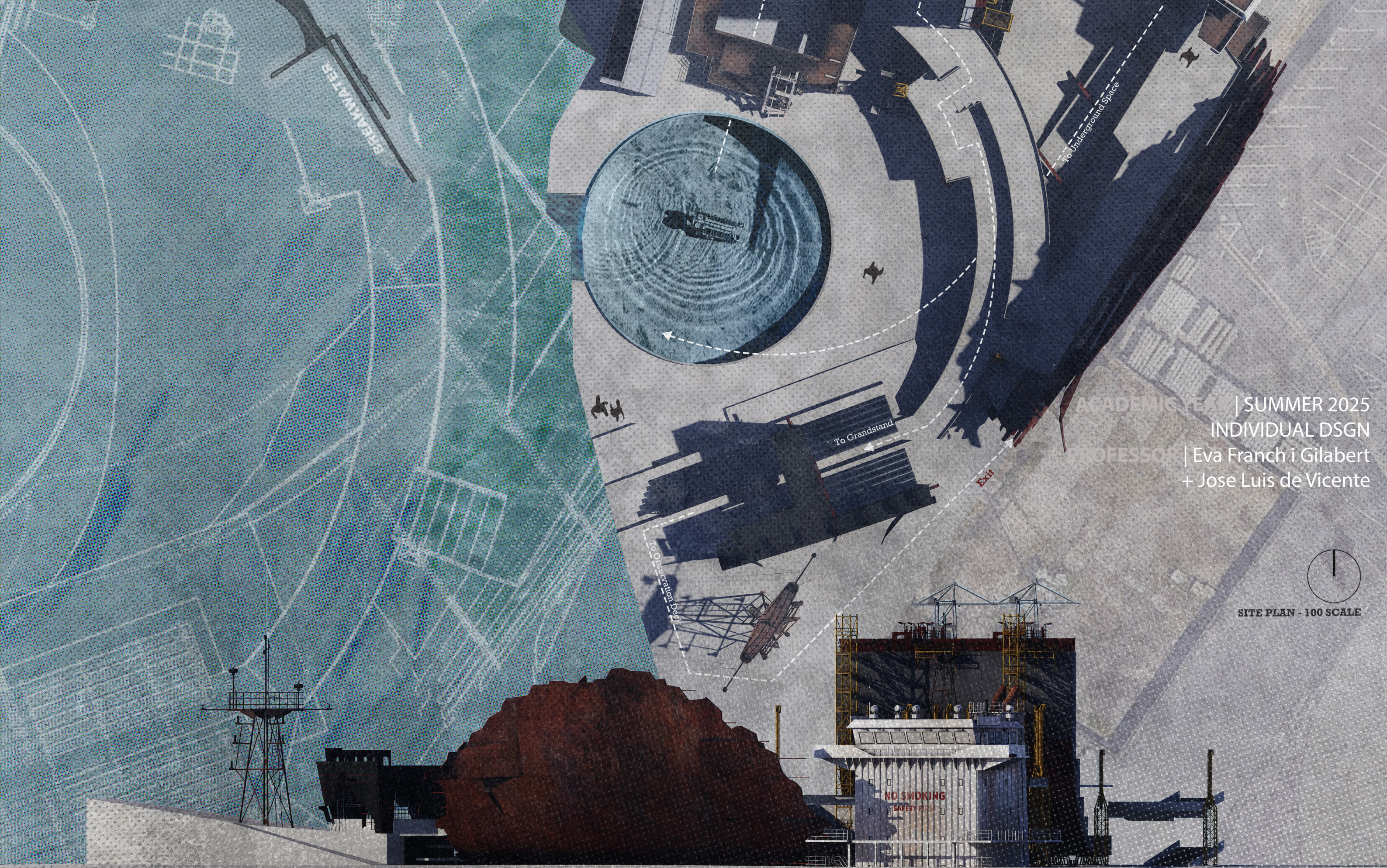


Main Entrance

To Parking Lot

To Pavillion 01 - Info

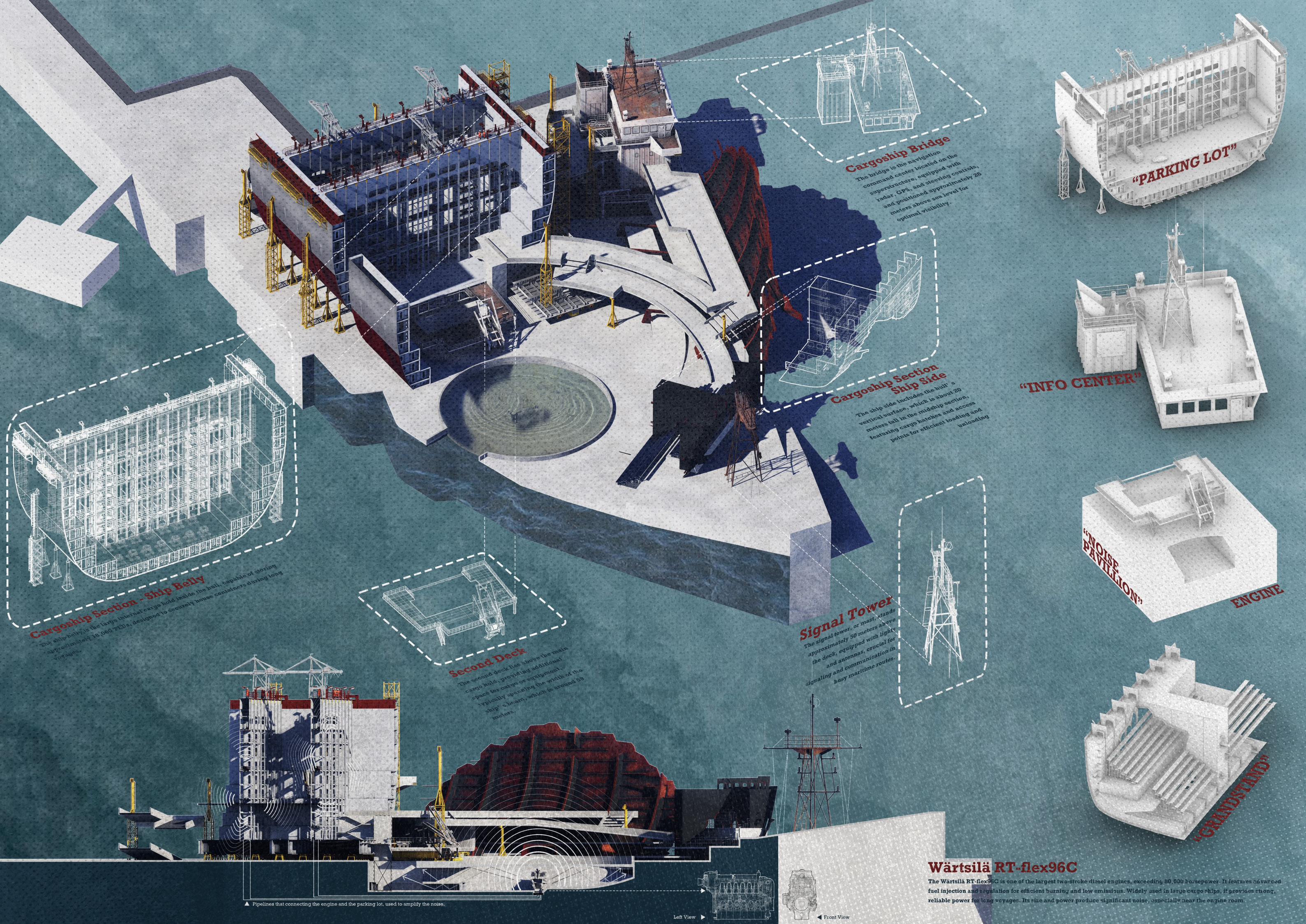
To Pavillion 02 - Noise



ACADEMIC YEAR | SUMMER 2025
INDIVIDUAL DSGN
PROFESSOR | Eva Franch i Gilabert
+ Jose Luis de Vicente

SITE PLAN - 100 SCALE

EAST ELEVATION
100 SCALE



Cargoship Bridge

The bridge is the navigation command center, located on the superstructure, equipped with radar, GPS, and steering controls, and positioned approximately 25 meters above sea level for optimal visibility.

Cargoship Section Ship Side

The ship side includes the hull's vertical surface, which is about 20 meters tall in the midship section, featuring cargo hatches and access points for efficient loading and unloading.

Signal Tower

The signal tower, or mast, stands approximately 50 meters above the deck, equipped with lights and antennas, crucial for signaling and communication in busy maritime routes.

Second Deck

The second deck lies above the main cargo hold, providing additional space for cargo or equipment, typically spanning the width of the ship's beam, which is around 50 meters.

Cargoship Section - Ship Belly

The ship belly is the large internal cargo hold inside the hull, capable of storing approximately 10,000 TEUs, designed to securely house containers during long voyages.

"PARKING LOT"

"INFO CENTER"

"NOISE PAVILLION"

ENGINE

"GRANDSTAND"

▲ Pipelines that connecting the engine and the parking lot, used to amplify the noise.

Left View ▶

◀ Front View

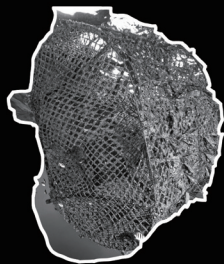
Wärtsilä RT-flex96C

The Wärtsilä RT-flex96C is one of the largest two-stroke diesel engines, exceeding 80,000 horsepower. It features advanced fuel injection and regulation for efficient burning and low emissions. Widely used in large cargo ships, it provides strong, reliable power for long voyages. Its size and power produce significant noise, especially near the engine room.

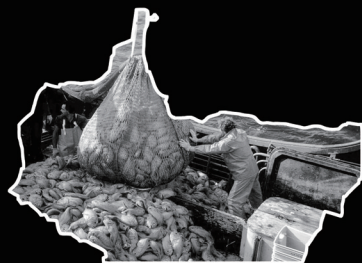
FISHERIES



BYCATCH

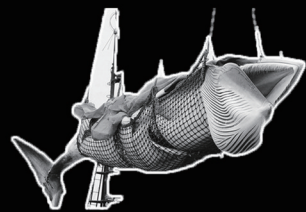


GHOST NETS



OVERFISHING

WHALING



COMMERCIAL WHALING

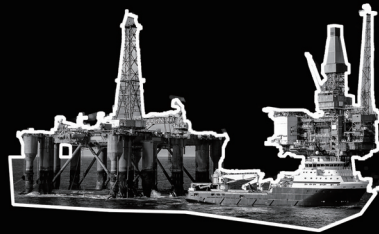


HUNTING FOR FISHERIES BAIT

CLIMATE CHANGE



OFFSHORE EXPLORATION



OIL AND GAS



CONSTRUCTION

SHIPPING AND VESSEL STRIKES



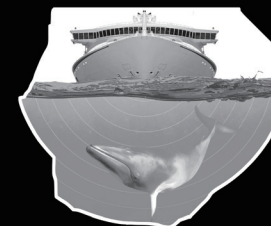
POLLUTION



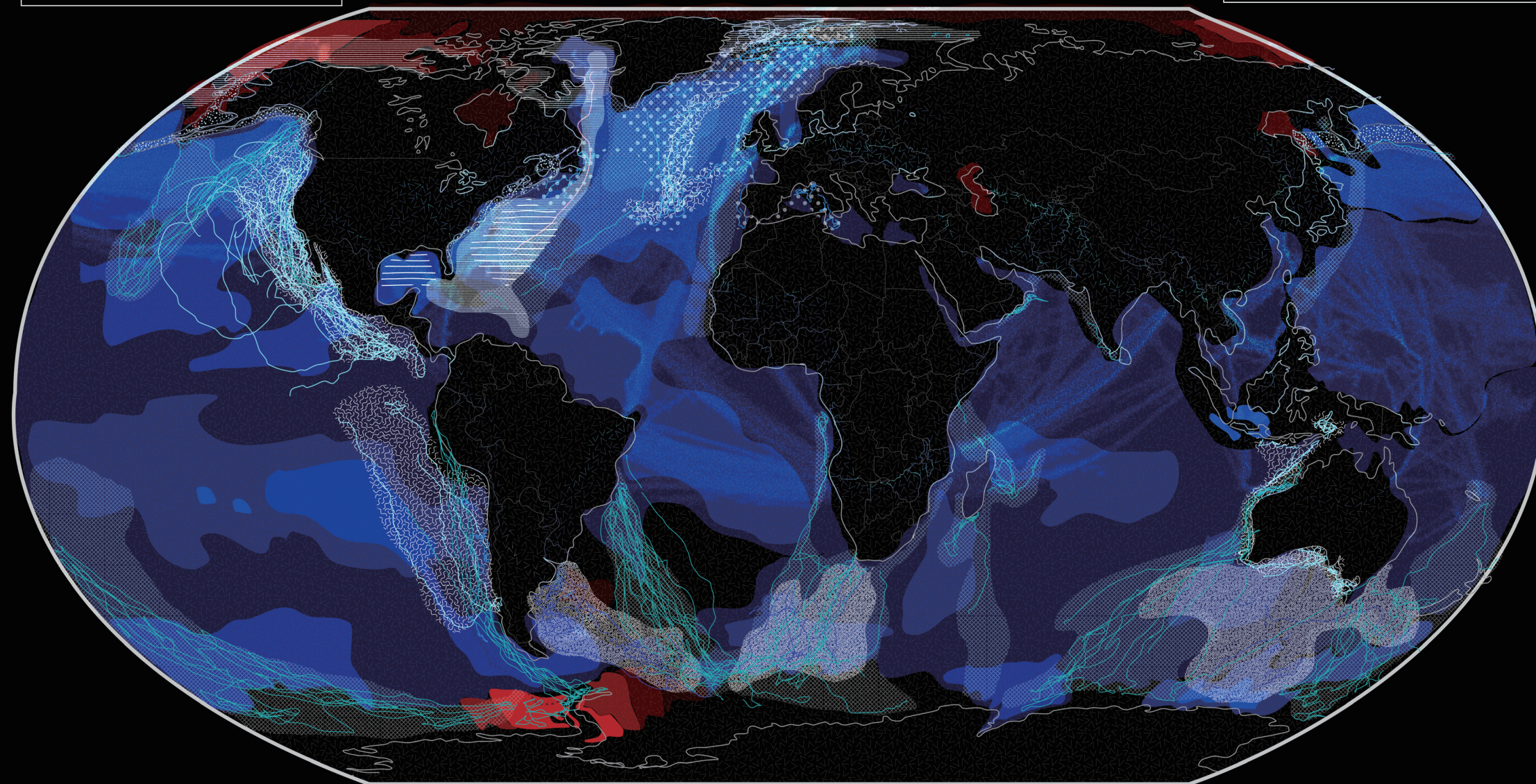
CHEMICAL

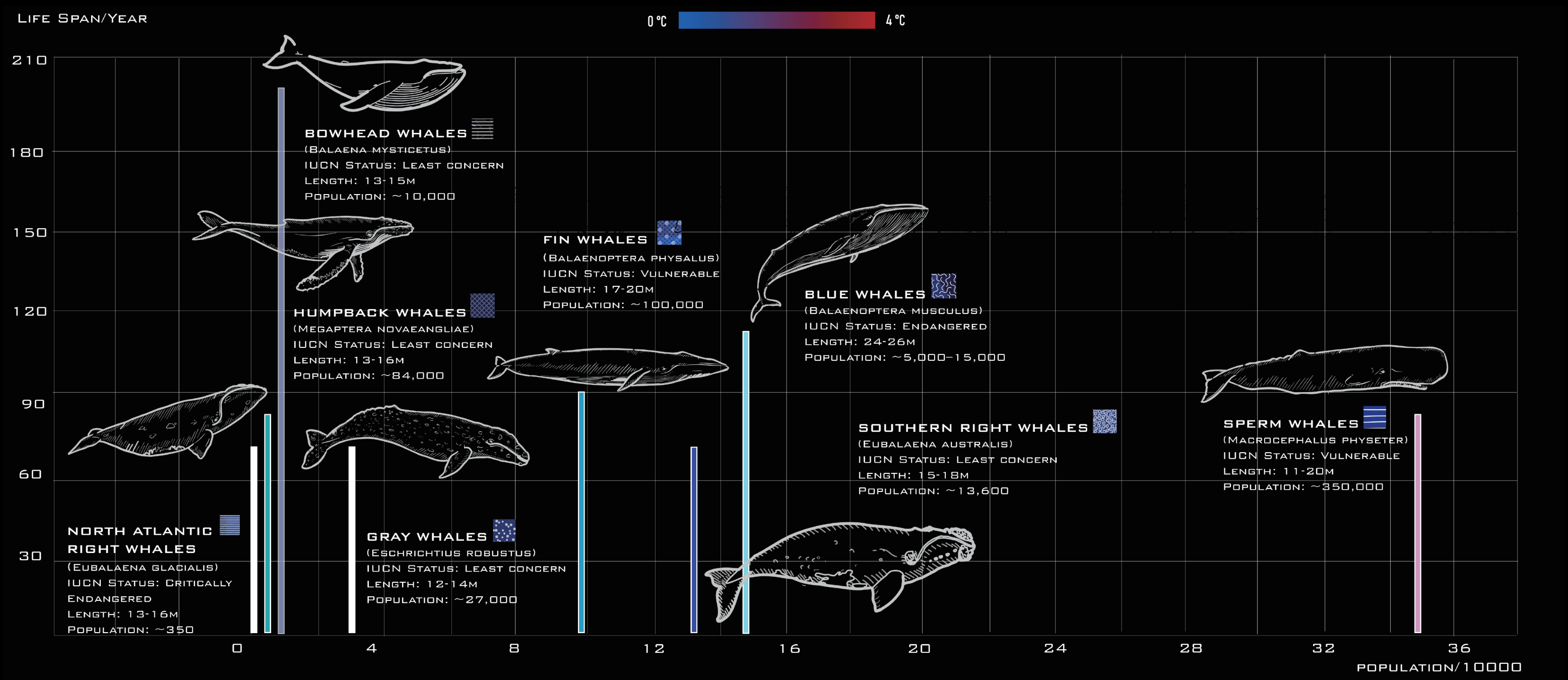


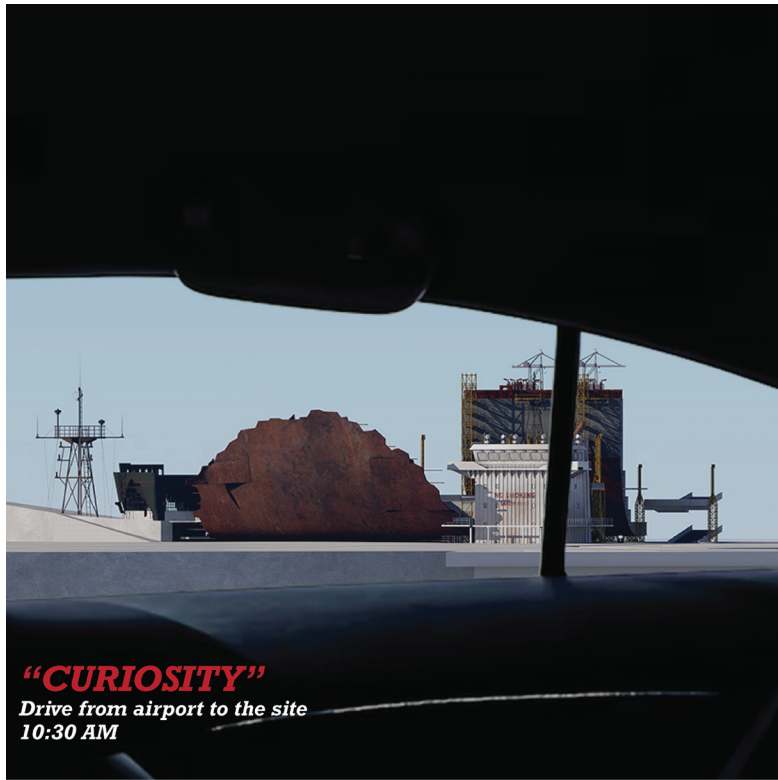
PLASTIC



UNDERWATER NOISE







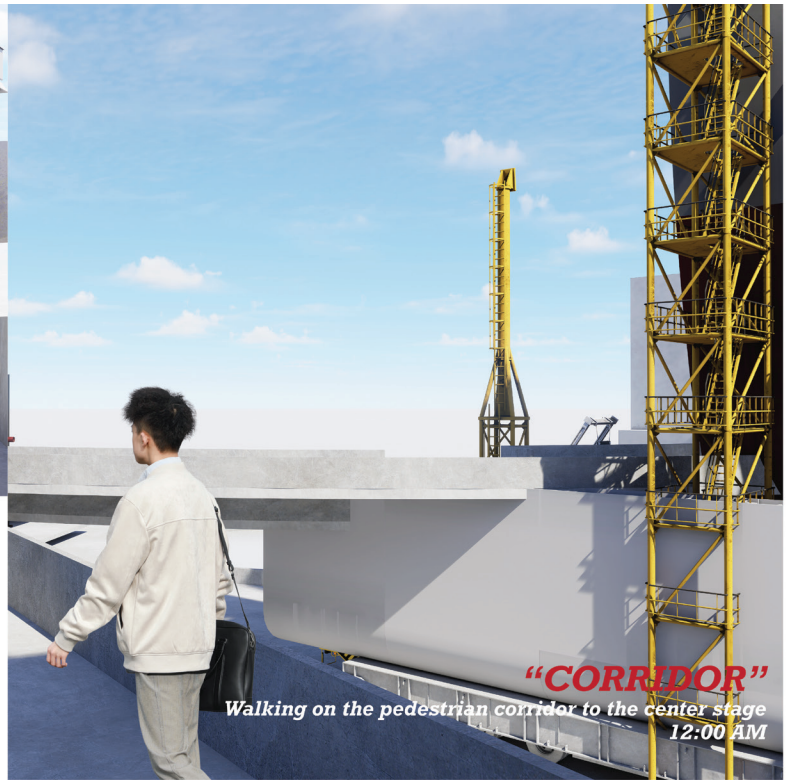
“CURIOSITY”
Drive from airport to the site
10:30 AM



“PARKING”
Arrive at ECHO CARGO sectional parking lot
11:00 AM



“INFO CENTER”
Heading to the info center after parking
11:20 AM



“CORRIDOR”
Walking on the pedestrian corridor to the center stage
12:00 AM



“ENGINE”
Feel the noise from engines and parking lots
in the underground space
12:40 AM



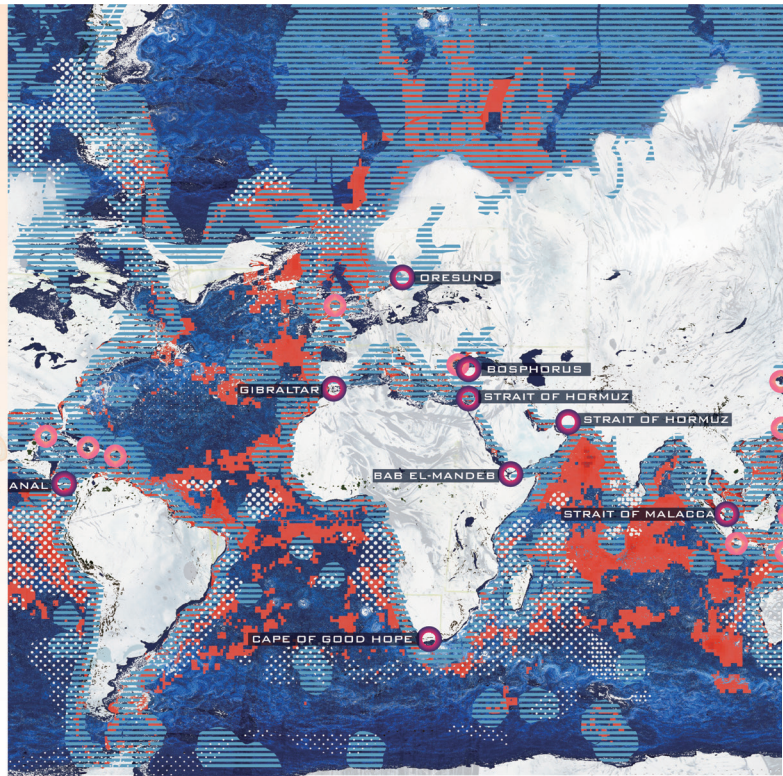
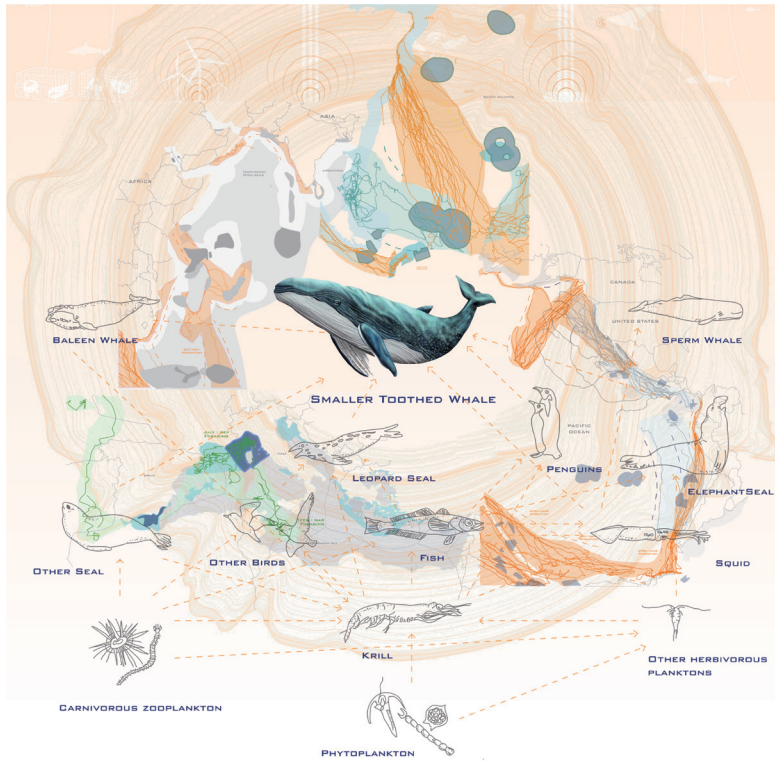
“Noise Pavillion”
Go to see the Noise Pavillion
13:20 PM



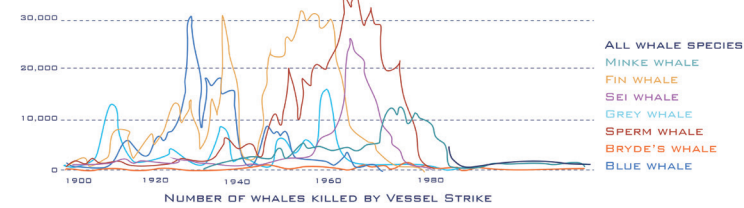
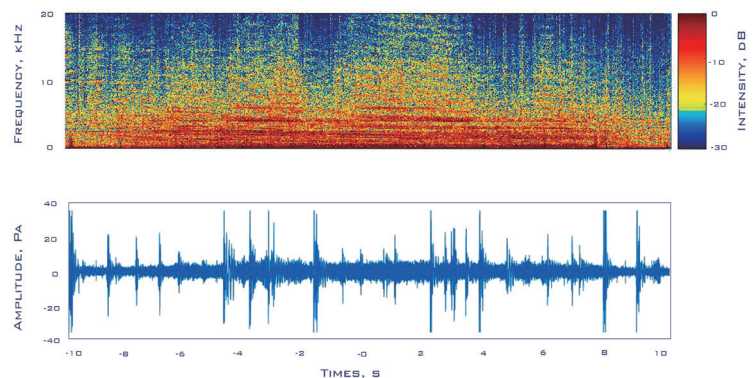
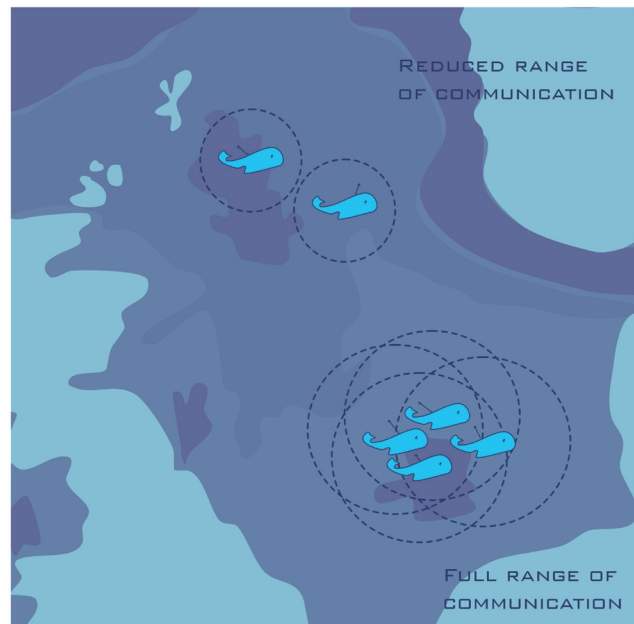
“NOISE & WATER”
Sitting on the grandstand and see the vibration of water
14:00 PM



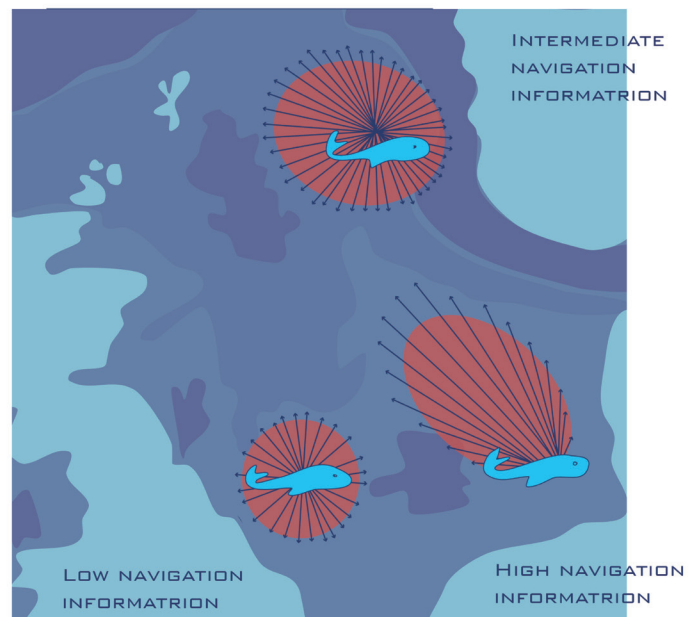
“SIGNAL TOWER”
Standing on landscape
and Enjoy the beautiful sea view
14:40 PM



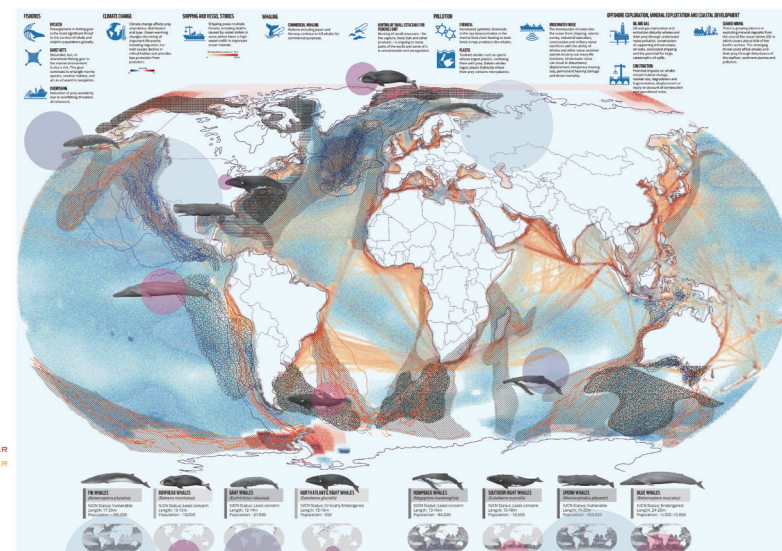
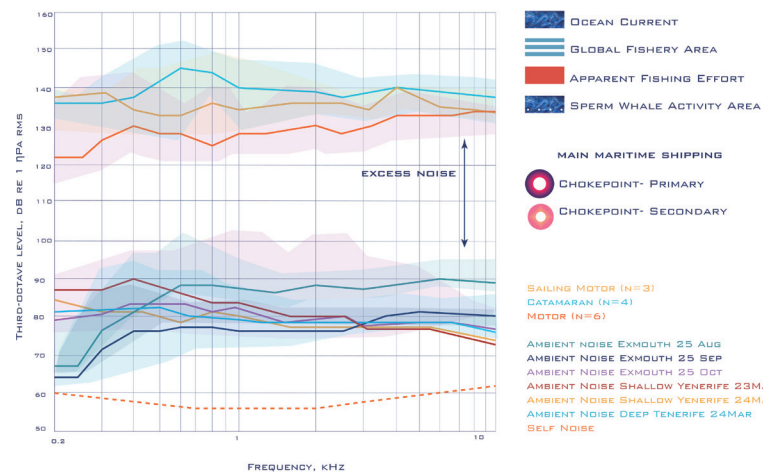
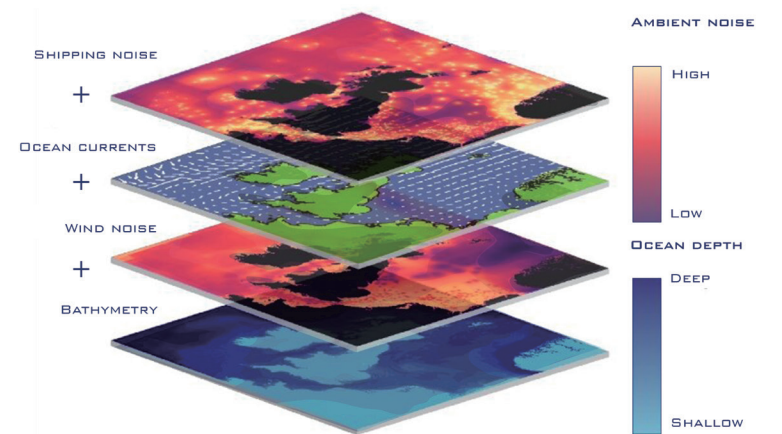
COLLECTIVE NAVIGATION



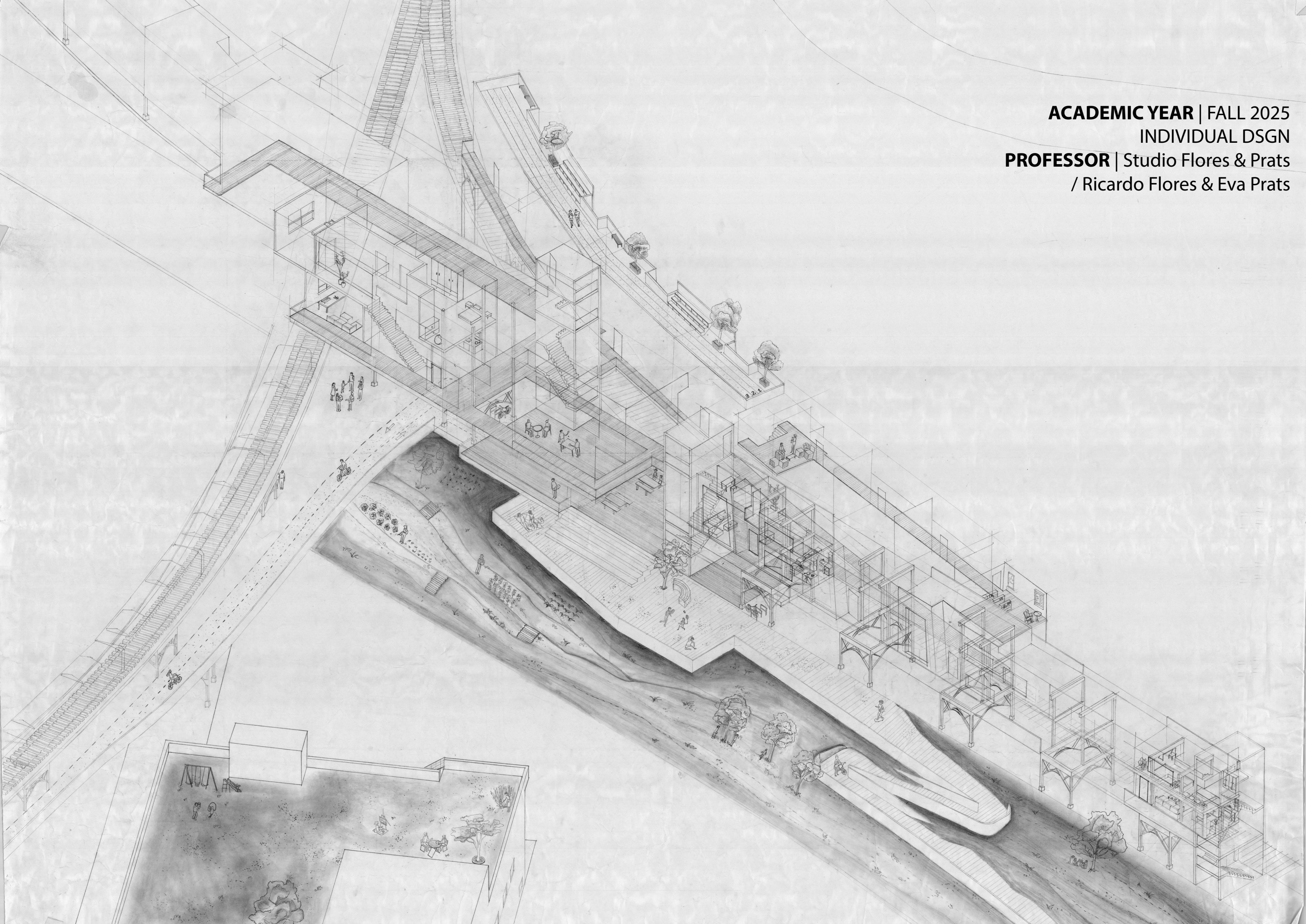
INDIVIDUAL NAVIGATION

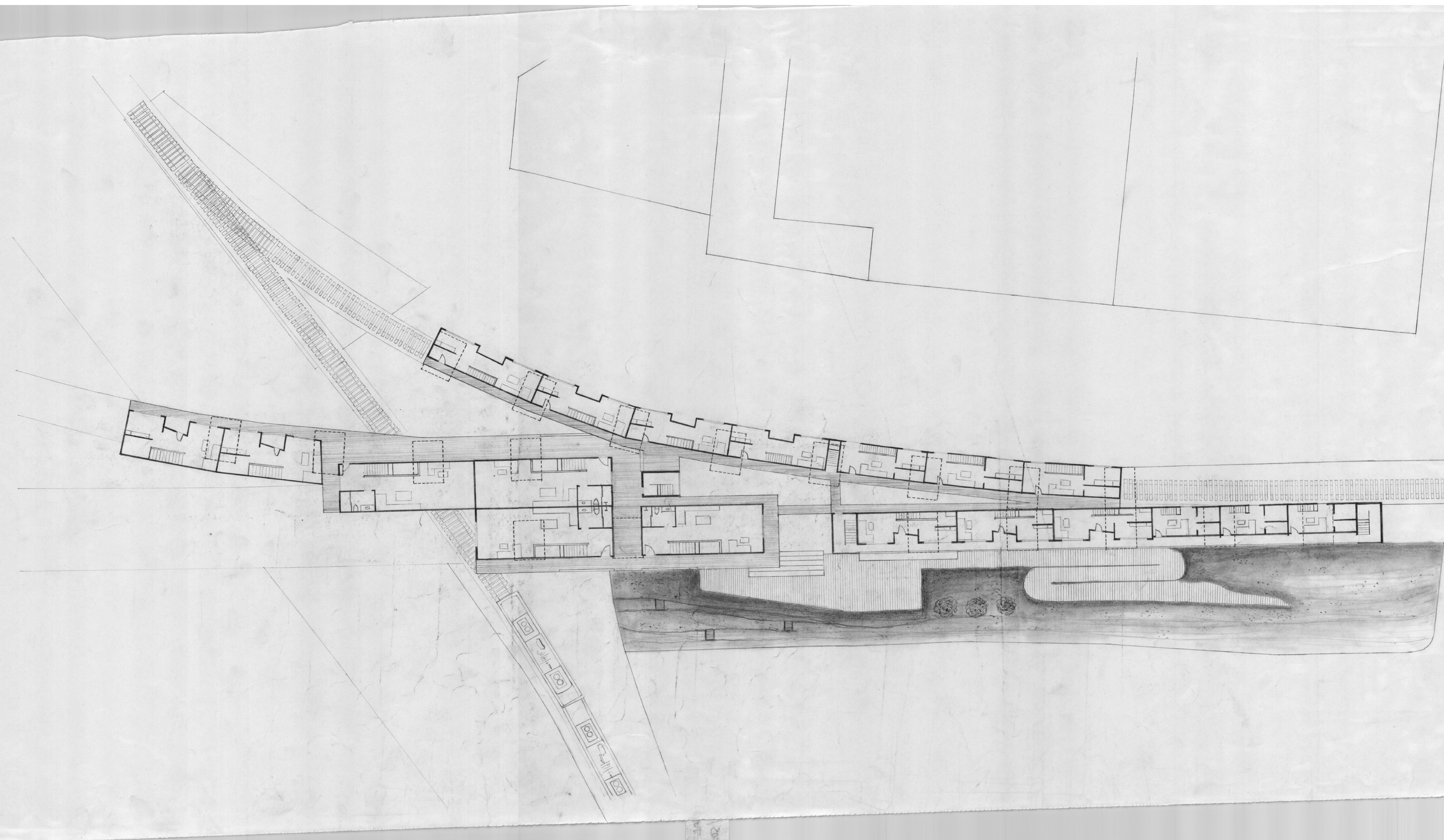


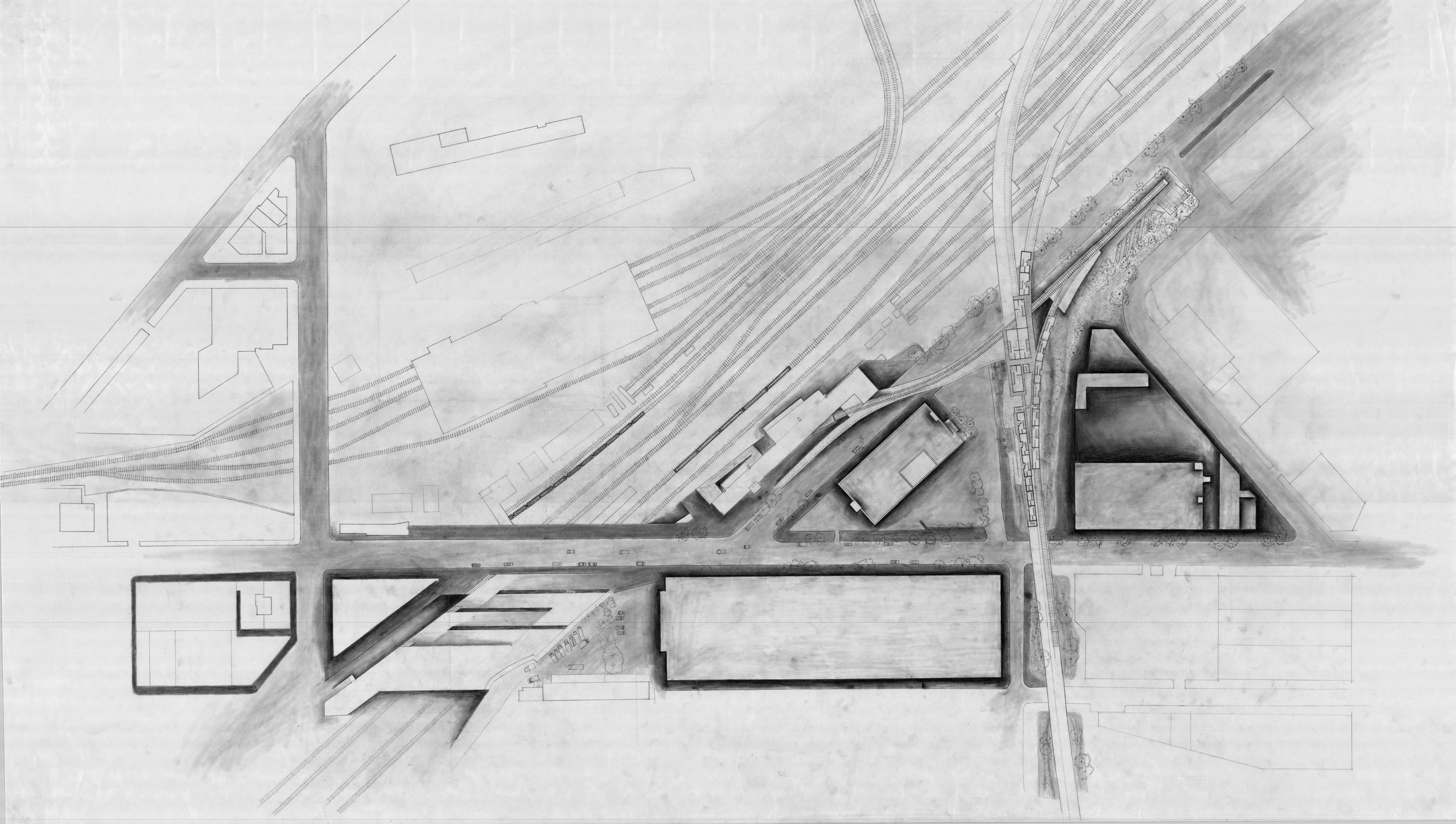
DATA AGGREGATION

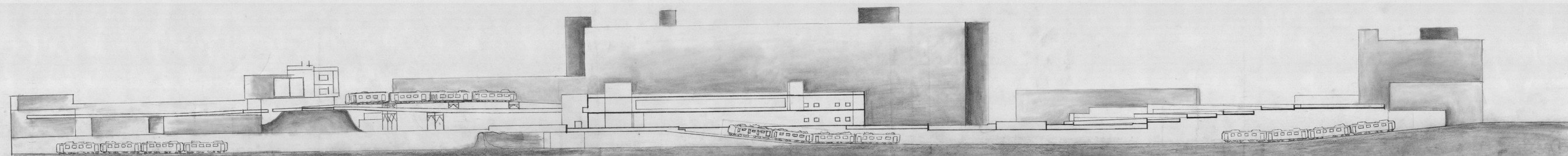
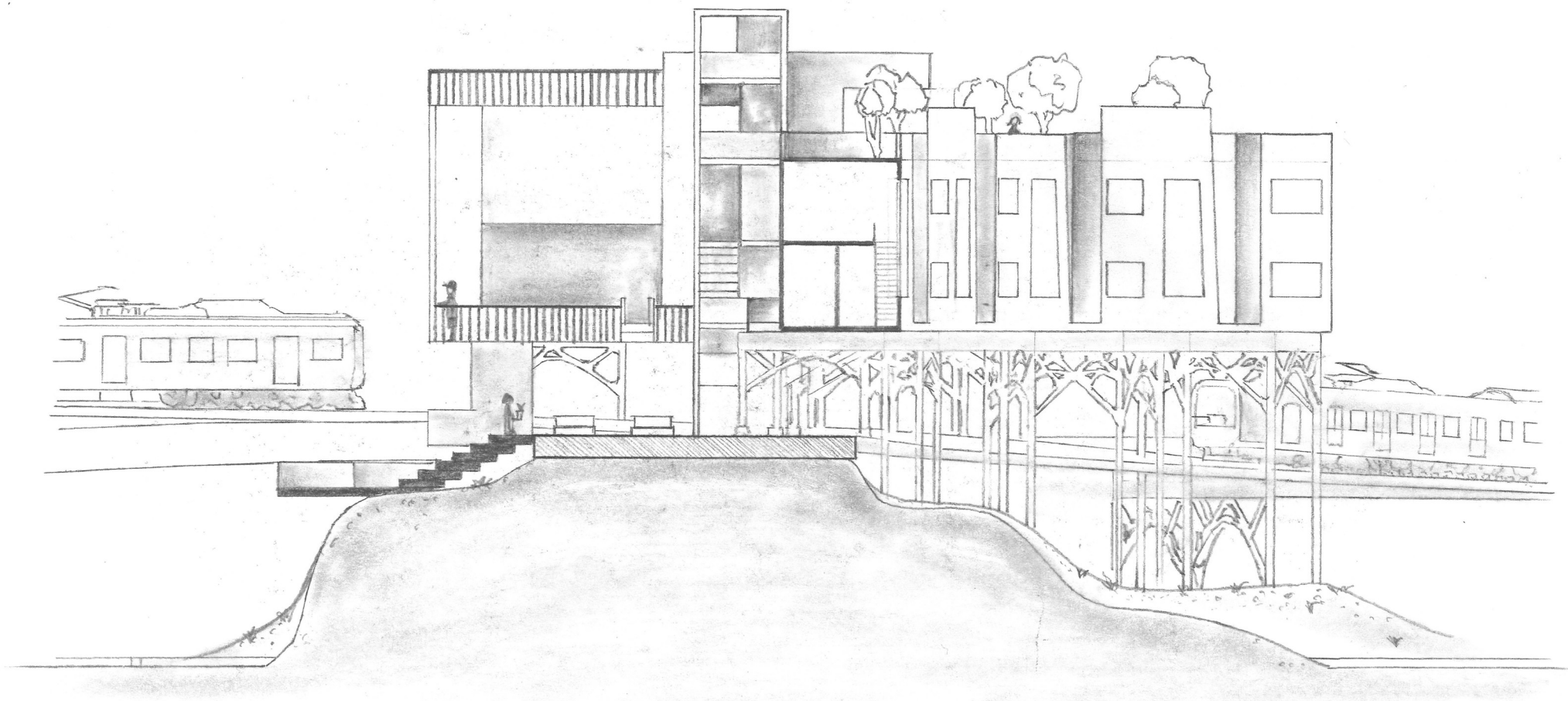


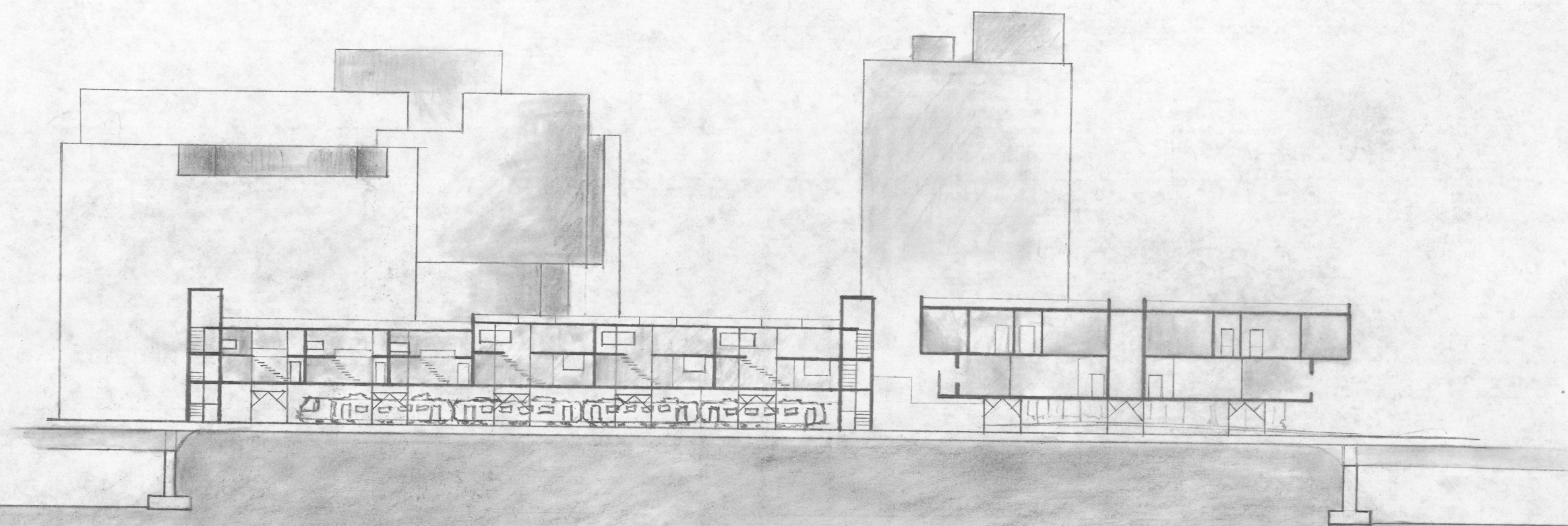
ACADEMIC YEAR | FALL 2025
INDIVIDUAL DSGN
PROFESSOR | Studio Flores & Prats
/ Ricardo Flores & Eva Prats

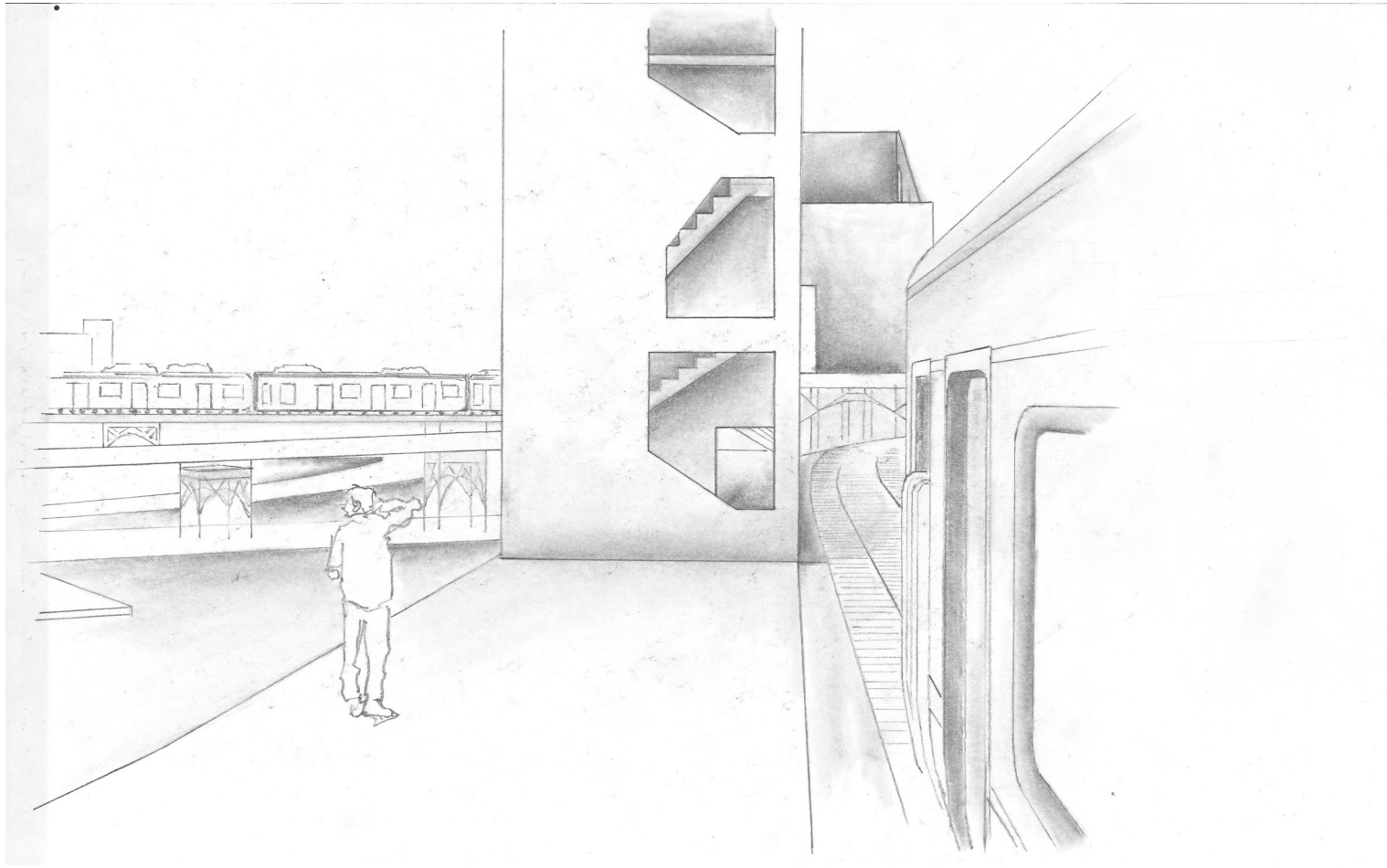
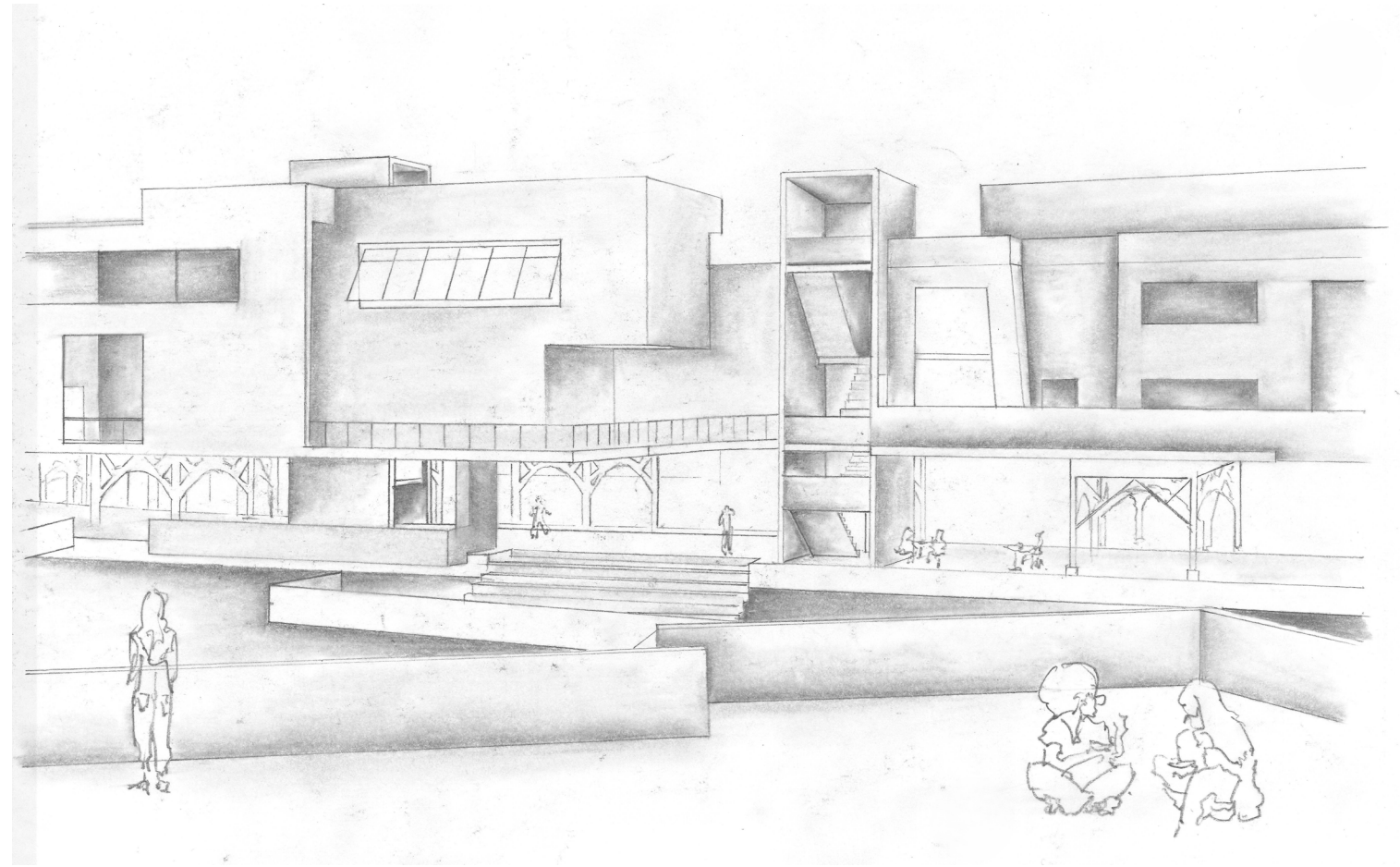




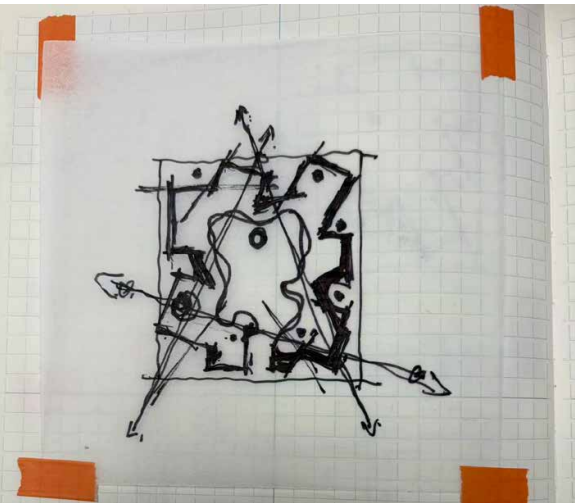
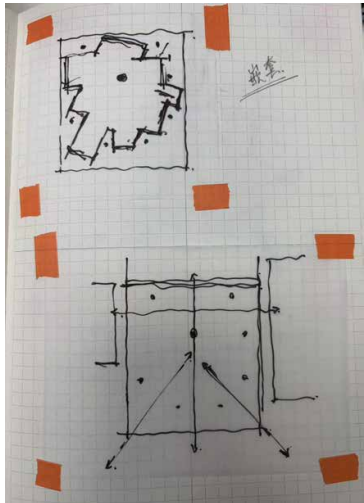
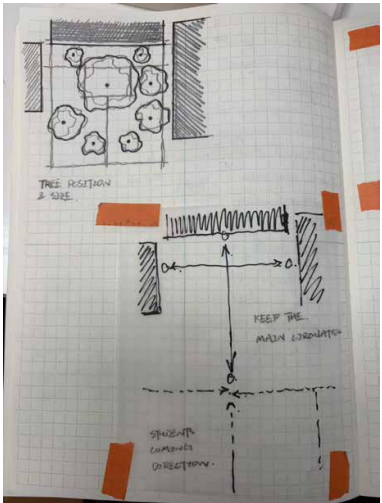
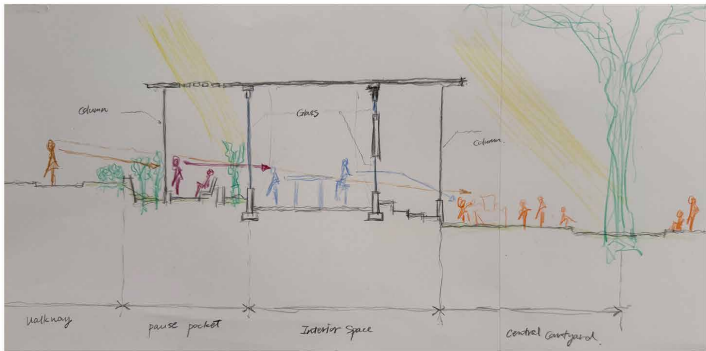
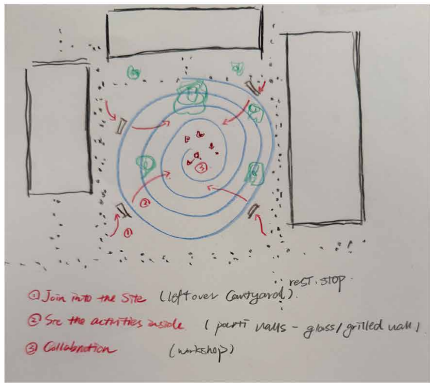
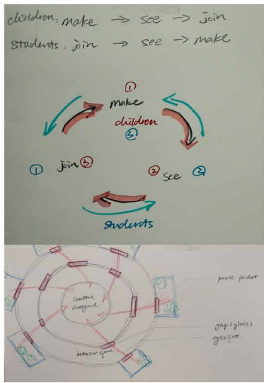
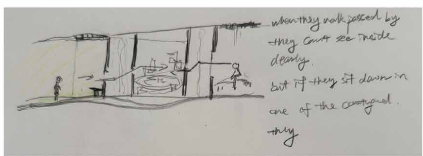
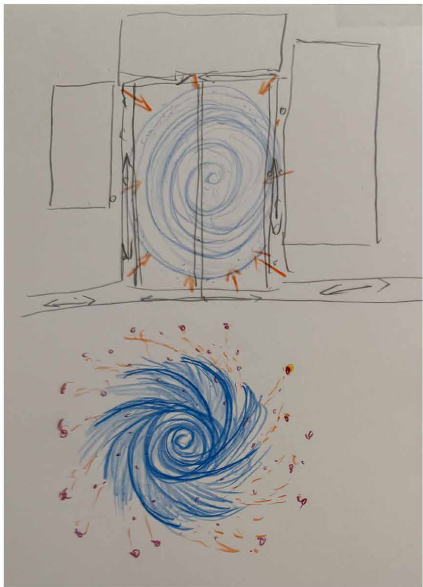














OFFICE SPACE

LIBRARY

RESTROOM

ROOF OUTLINE

CENTRAL PLAYGROUND

MAIN ENTRANCE

KITCHEN

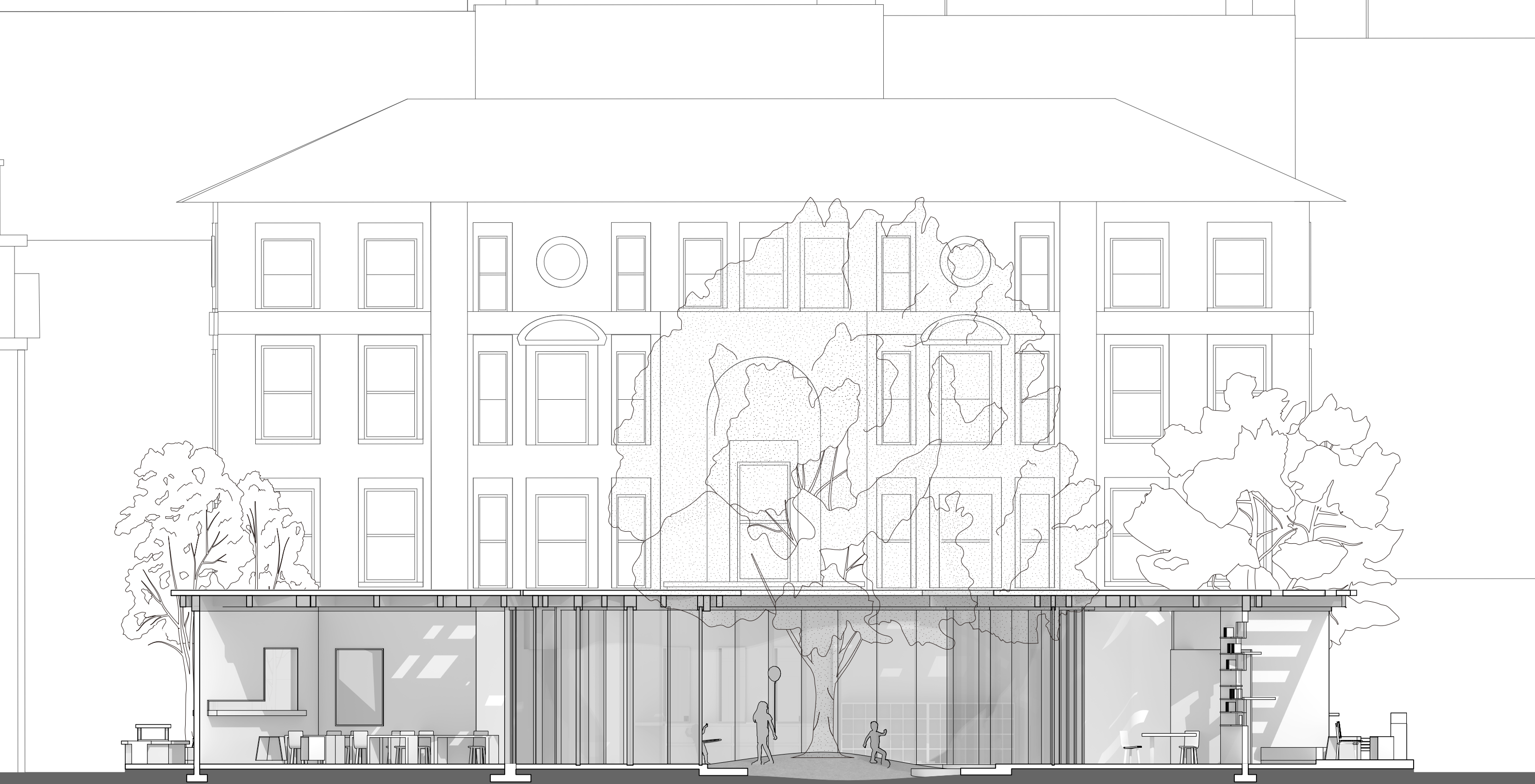
RECEPTION

WORKSHOP 02

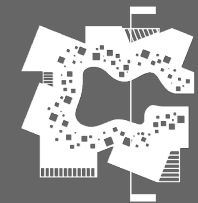
WORKSHOP 01

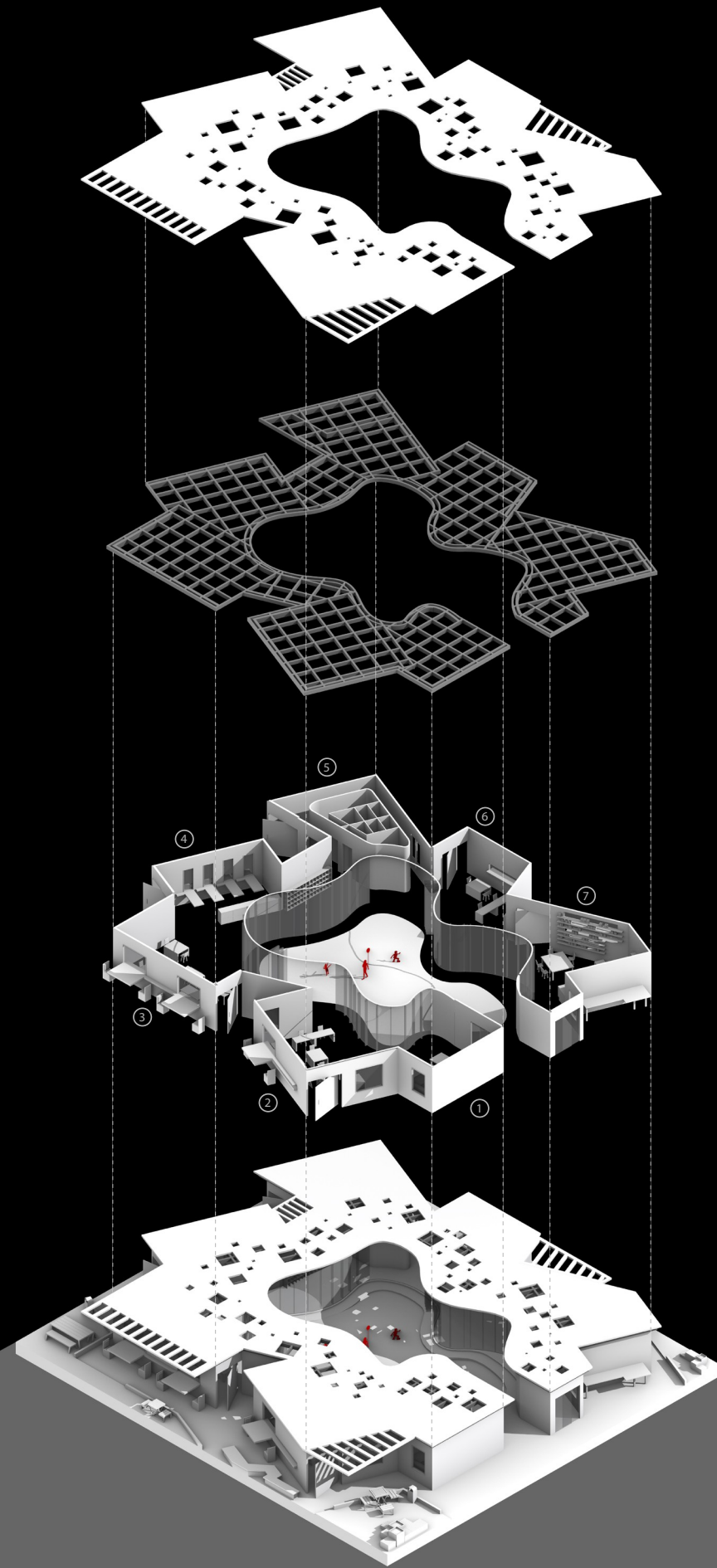
ROOF OUTLINE

0 2 4 6m

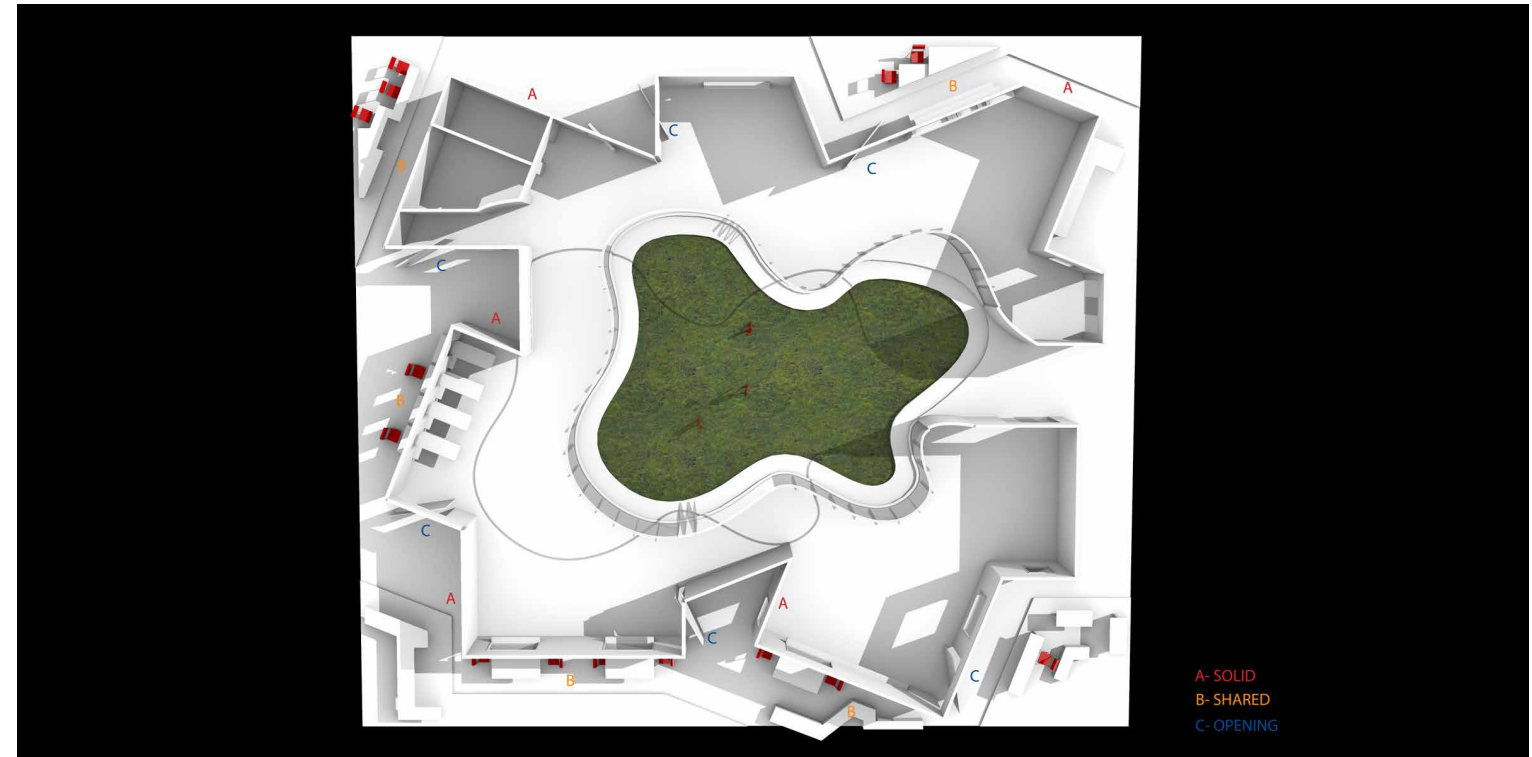
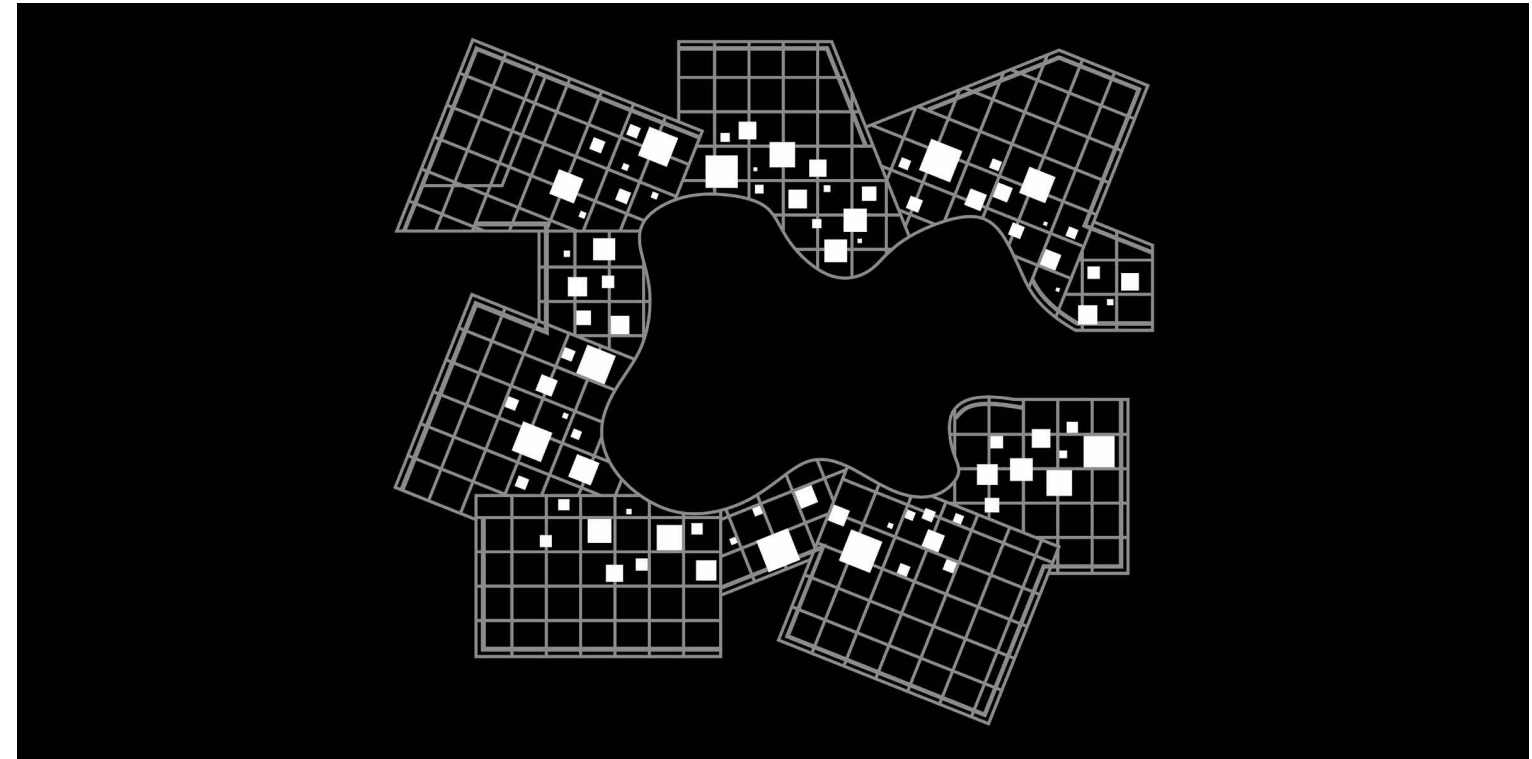


0 2 4 6m





- ⑦ Library
- ⑥ Office Area
- ⑤ Restroom
- ④ Kitchen
- ③ Workshop 01
- ② Workshop 02
- ① Reception



- A- SOLID
- B- SHARED
- C- OPENING

