



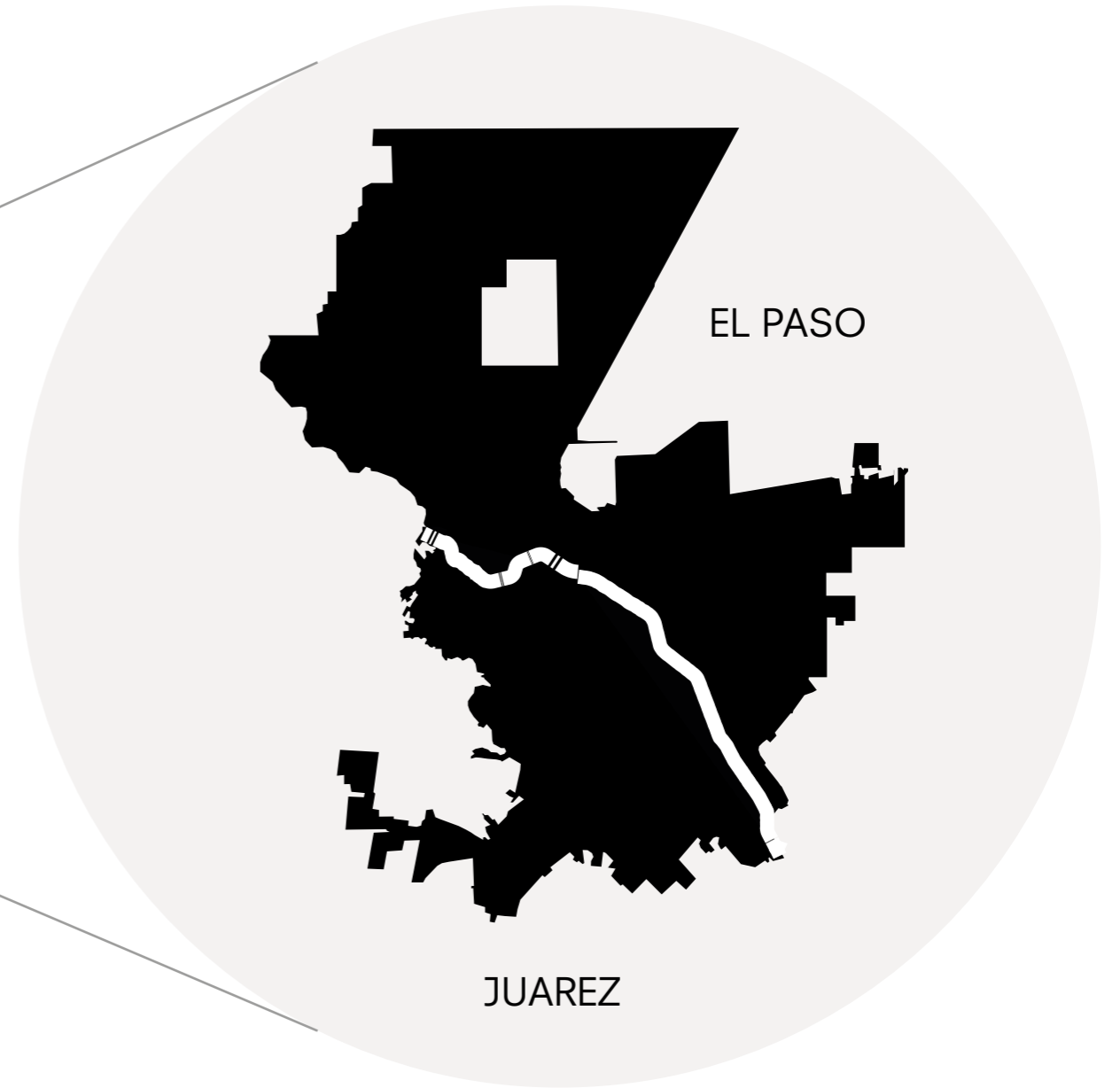
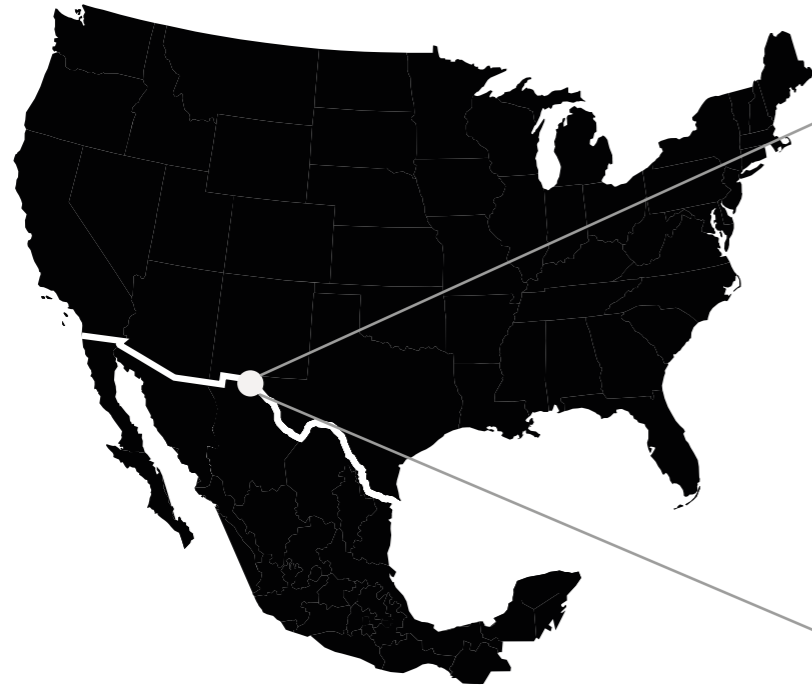
WASTE MANAGEMENT CENTER

SANDRA BUGAITE

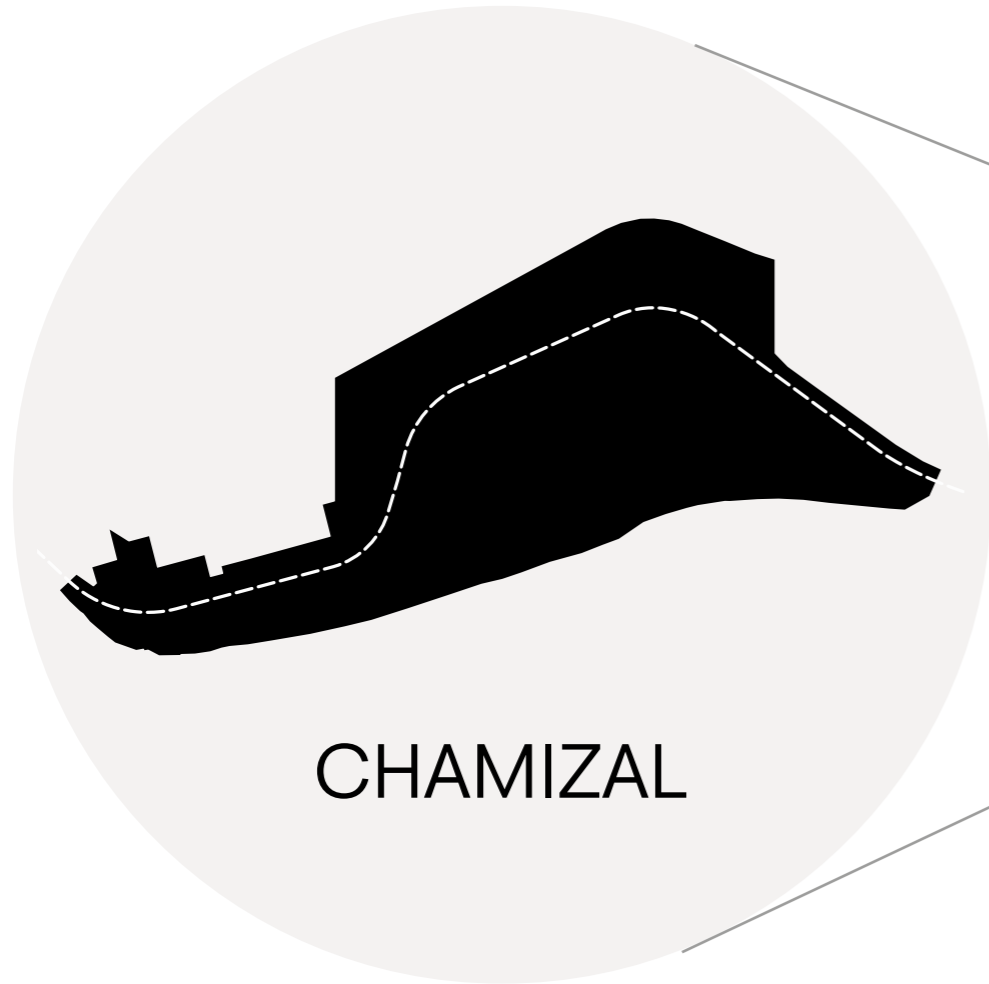
WAMC



WHERE?



WHERE?









...ORA DEL NORTE
...MEDICINAL ES Y ALFARERA. TEL. 2003



Handwritten graffiti on a yellow wall, possibly reading 'R10'.



SCAVENGERS - SOCOSEMA

JUNK IN CHAMIZAL





BACKYARD TRASH

B



FORMER LANDFILL

RESEARCH QUESTION



WASTE MANAGEMENT CENTER

per capita kg/day

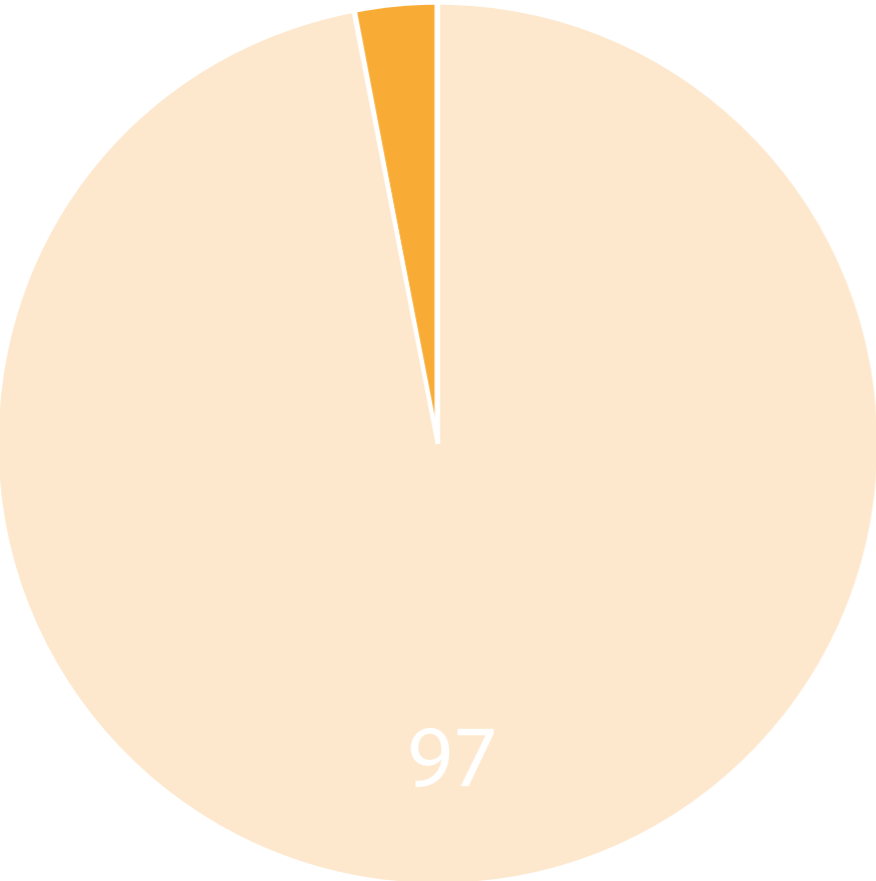
Sandra Bugaite

GENERATED WASTE

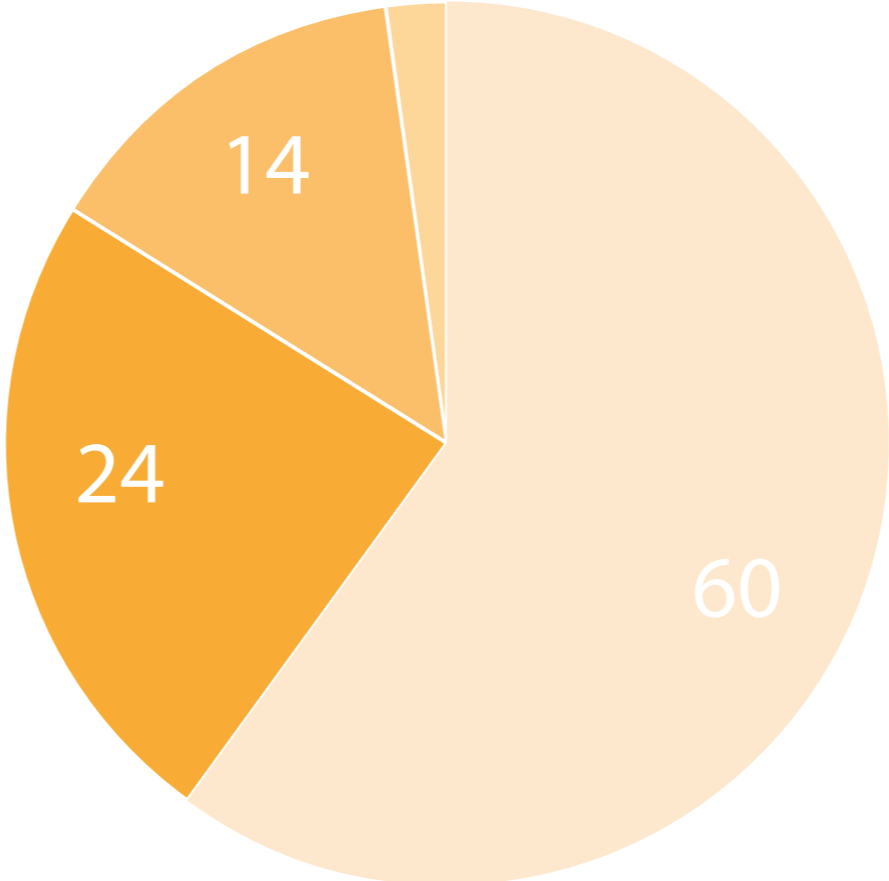
BORDER WASTE



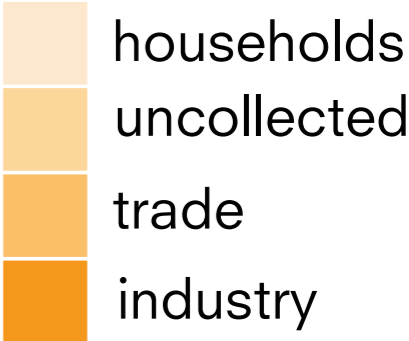
WASTE GENERATORS



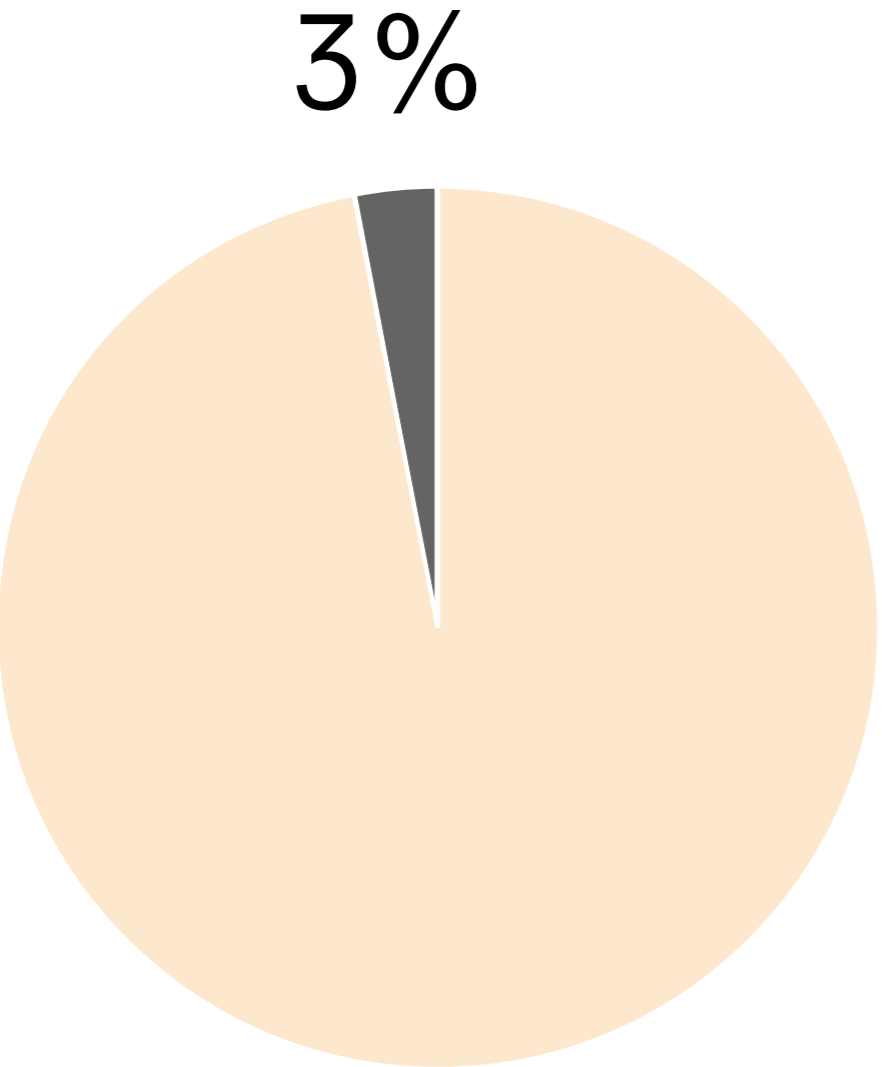
USA



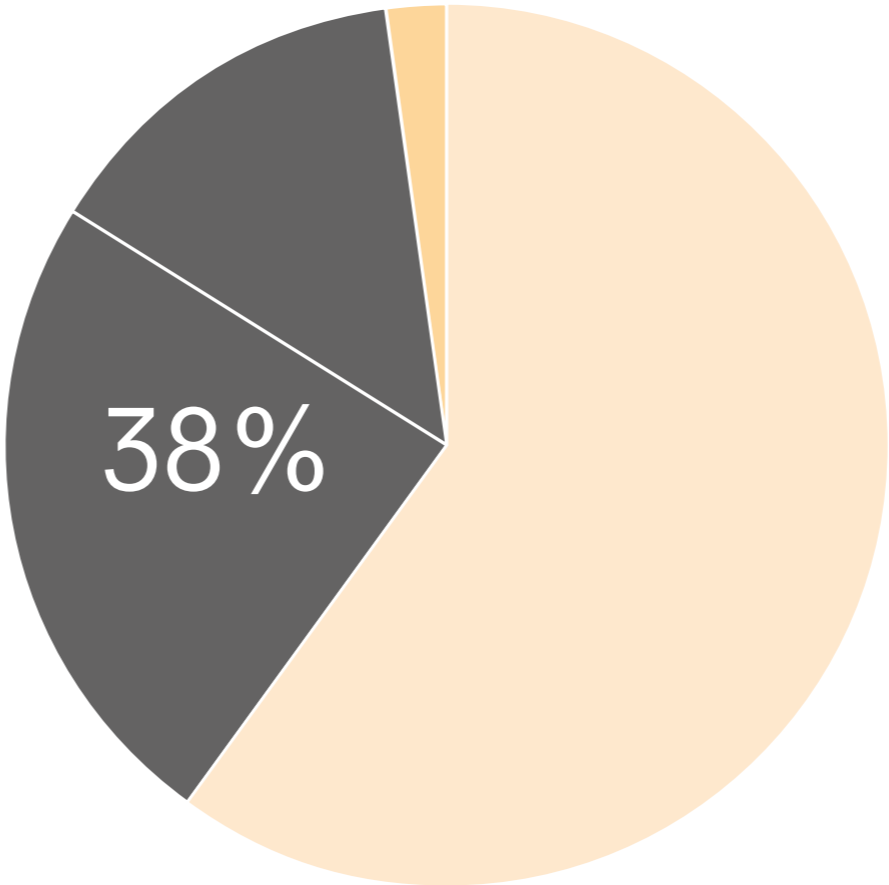
MEX



WASTE GENERATORS



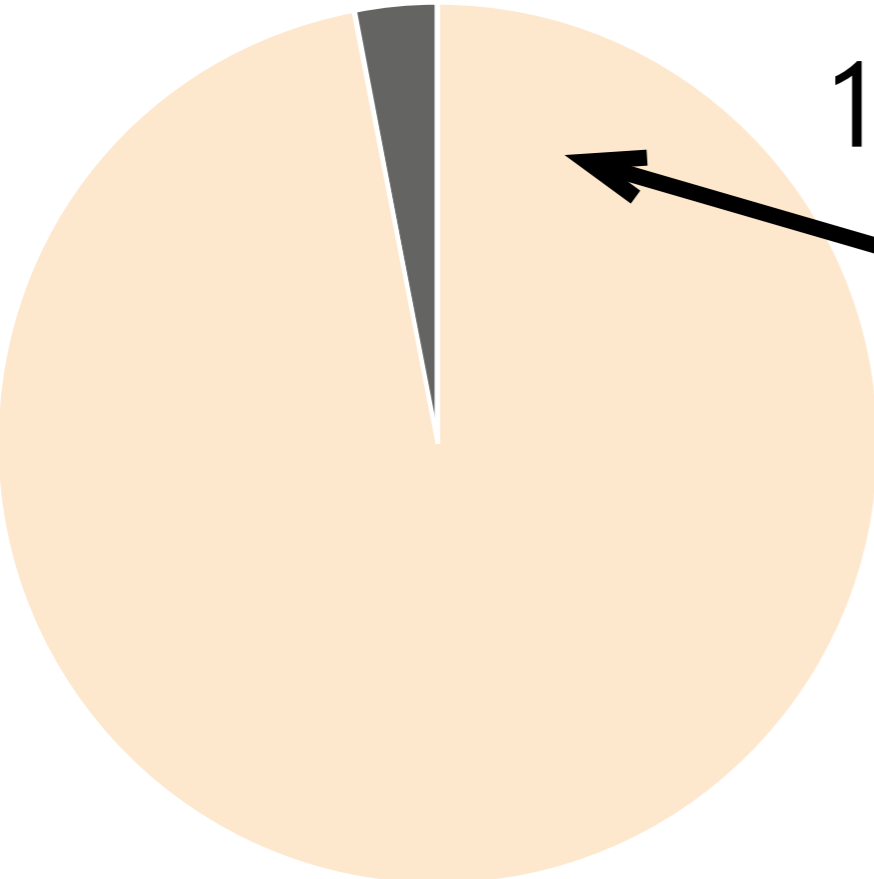
USA



MEX

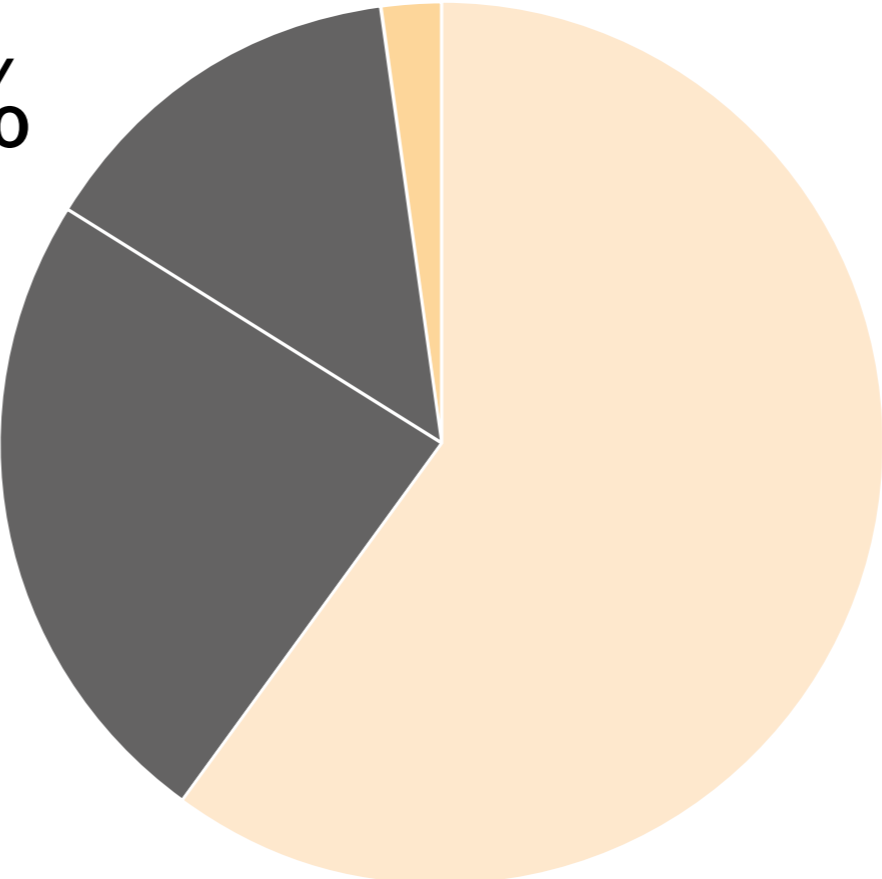
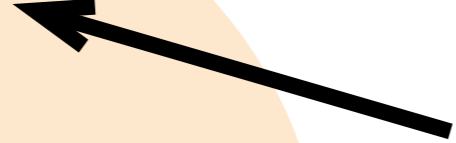
■ trade industry

WASTE GENERATORS



USA

10%



MEX

trade industry

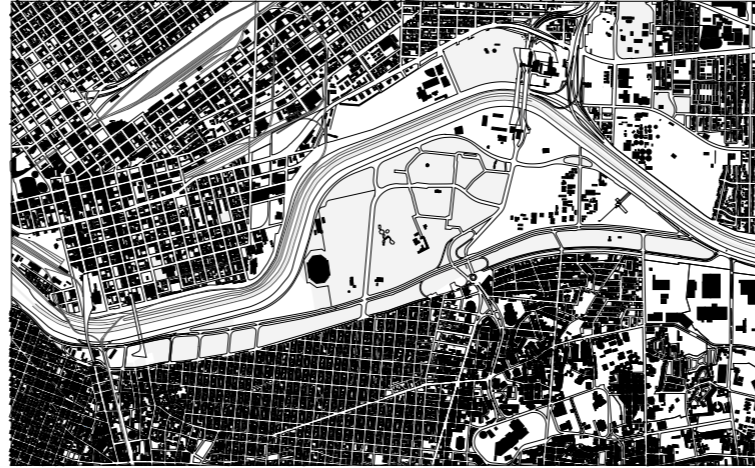
ILLEGAL TREATMENT



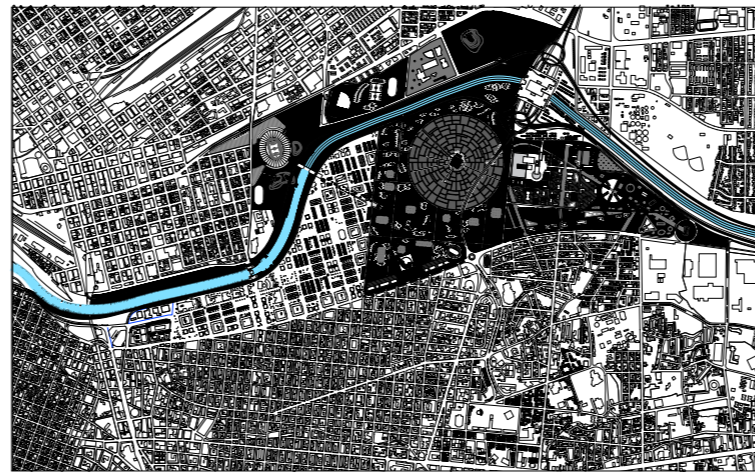
AMBITION

Introduce a **new united** position towards waste management in binational context; and design a waste management facility which would improve situation and increase awareness about waste issue.



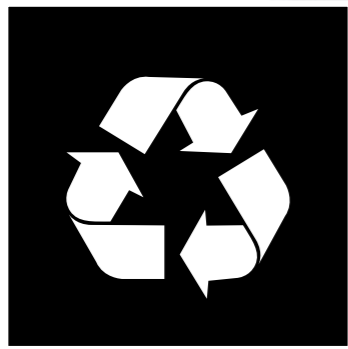


EXISTING SITUATION

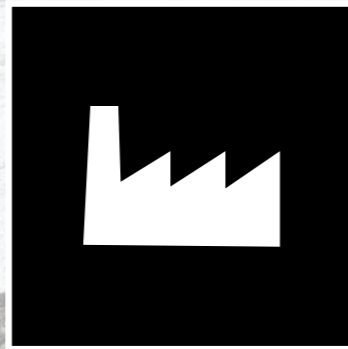


PROPOSED STRATEGY

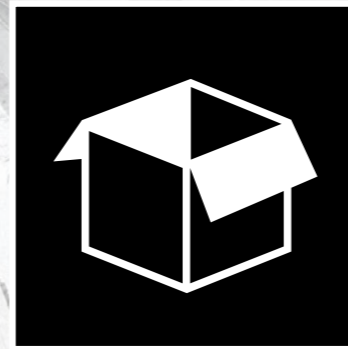
RECYCLING



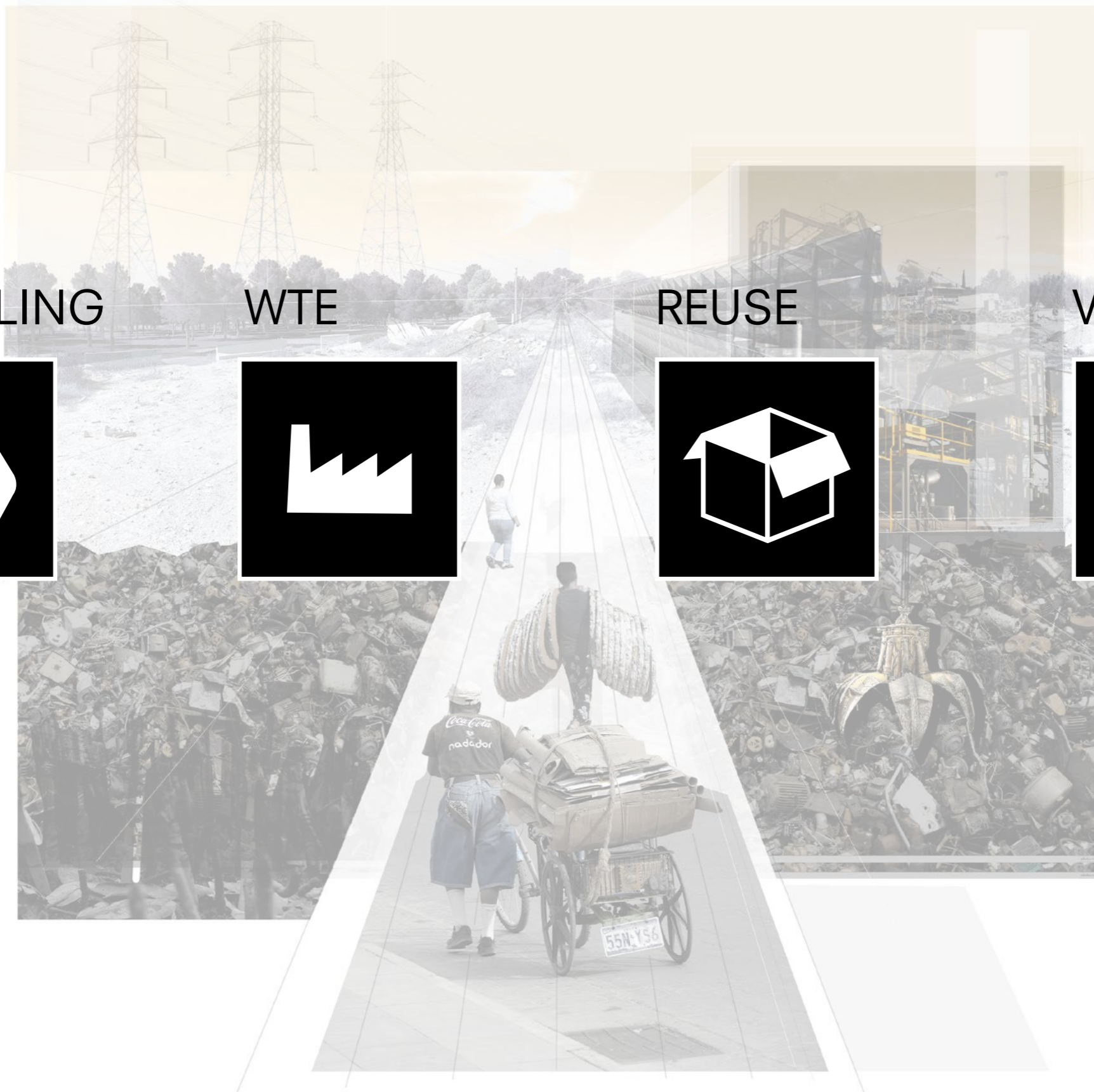
WTE



REUSE



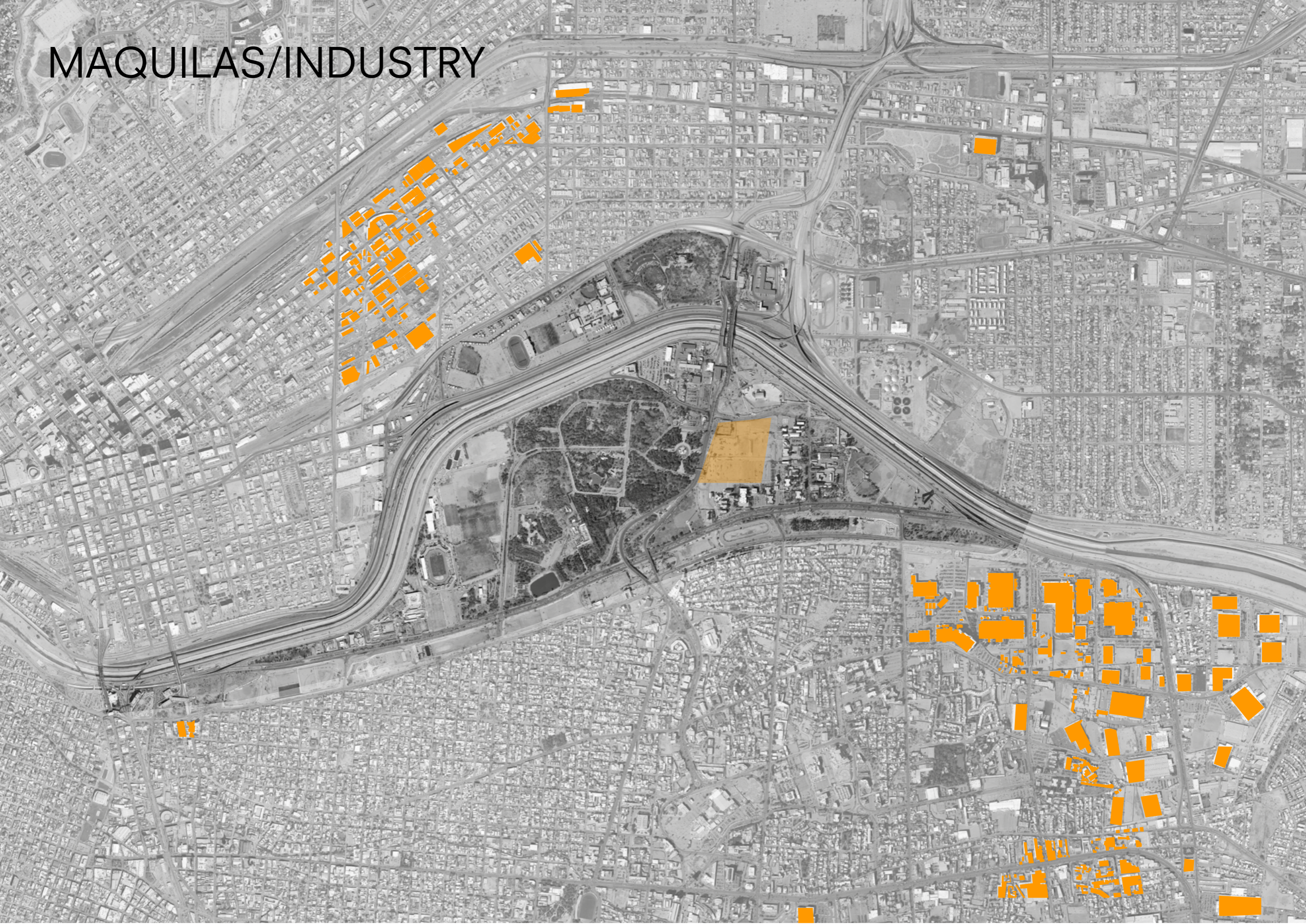
VISITORS



MAIN ROADS



MAQUILAS/INDUSTRY



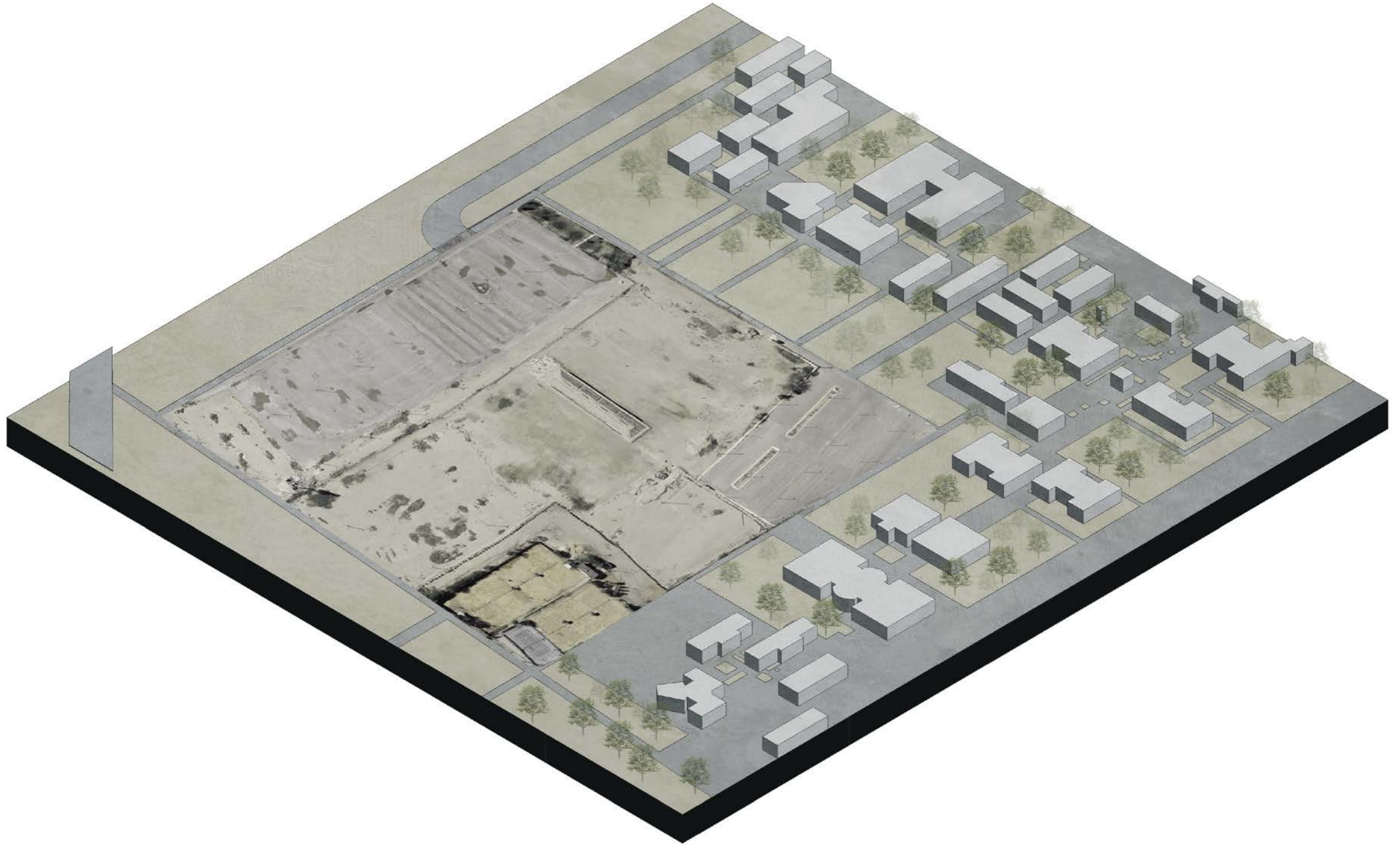
SITE SELECTION



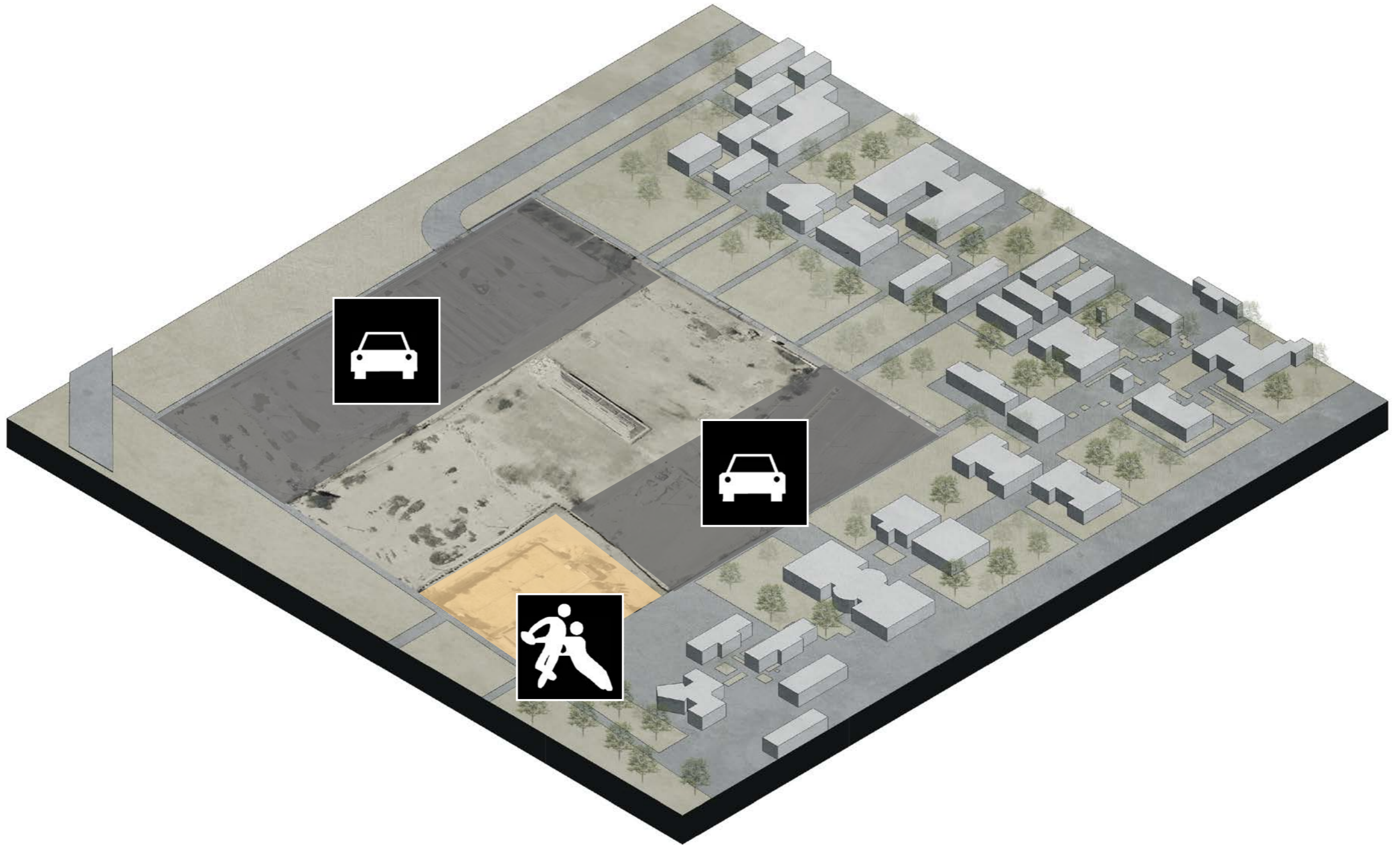
FORMER
LANDFILL



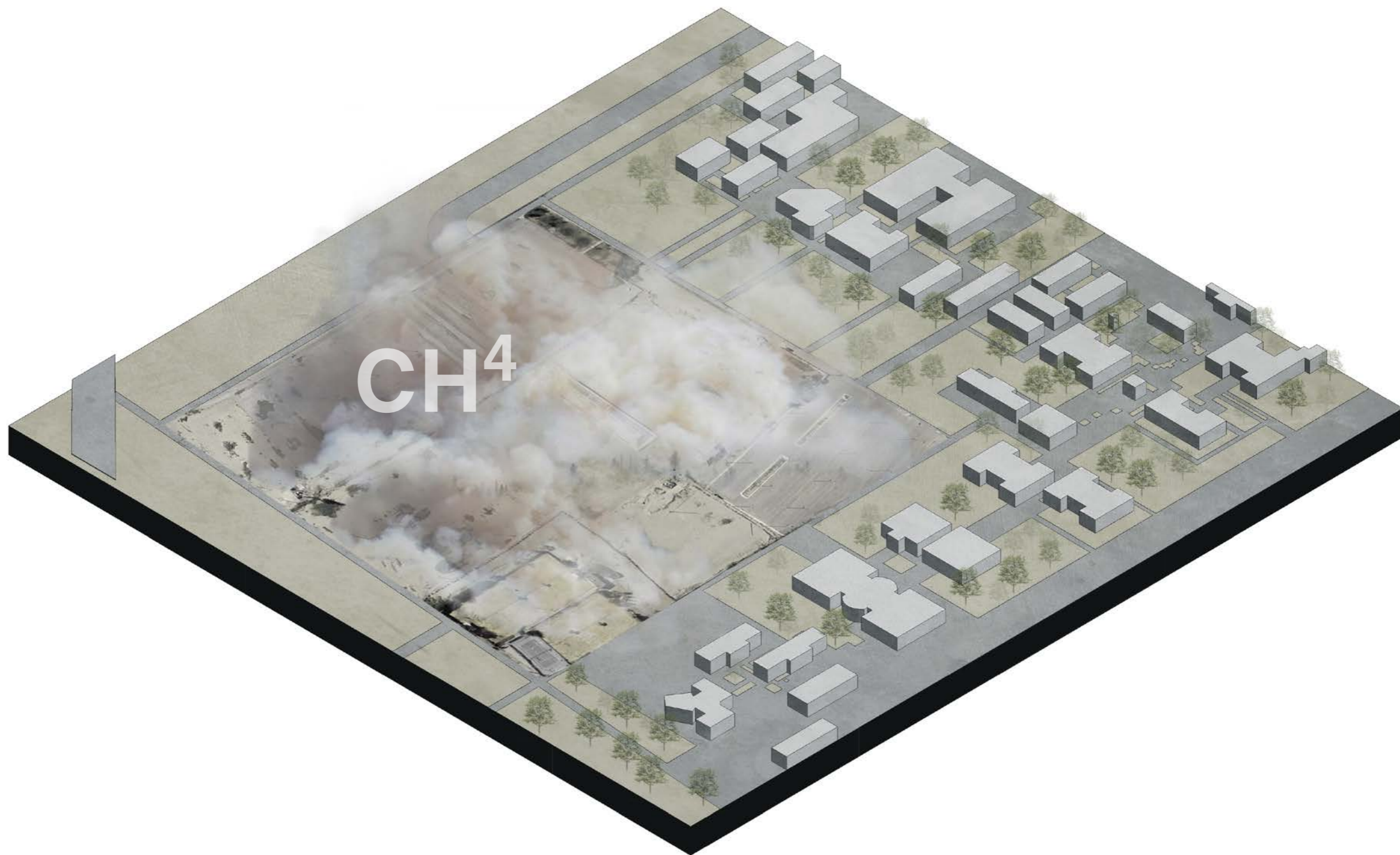
EXISTING SITUATION



USE OF THE AREA



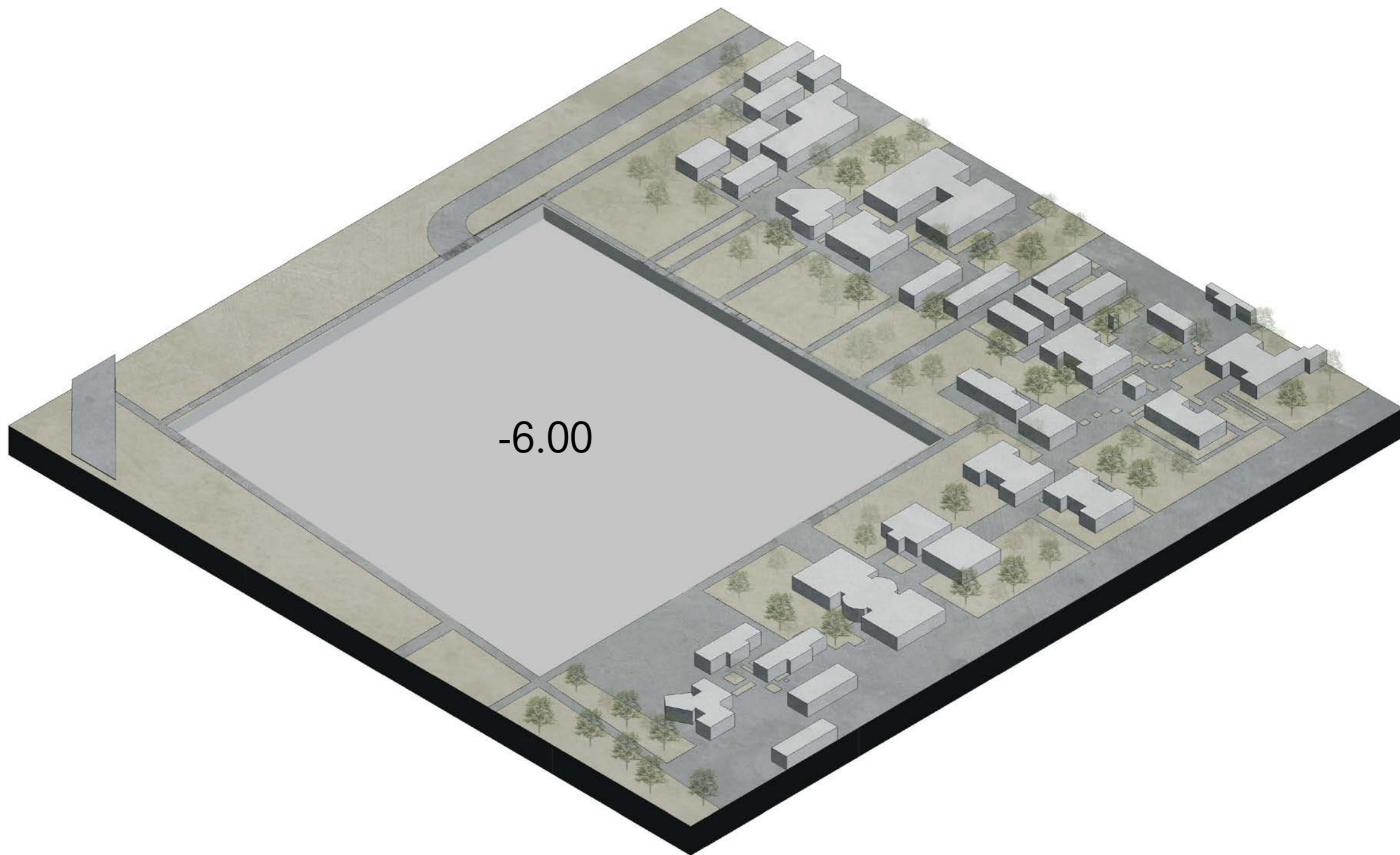
FORMER LANDFILL POLLUTION



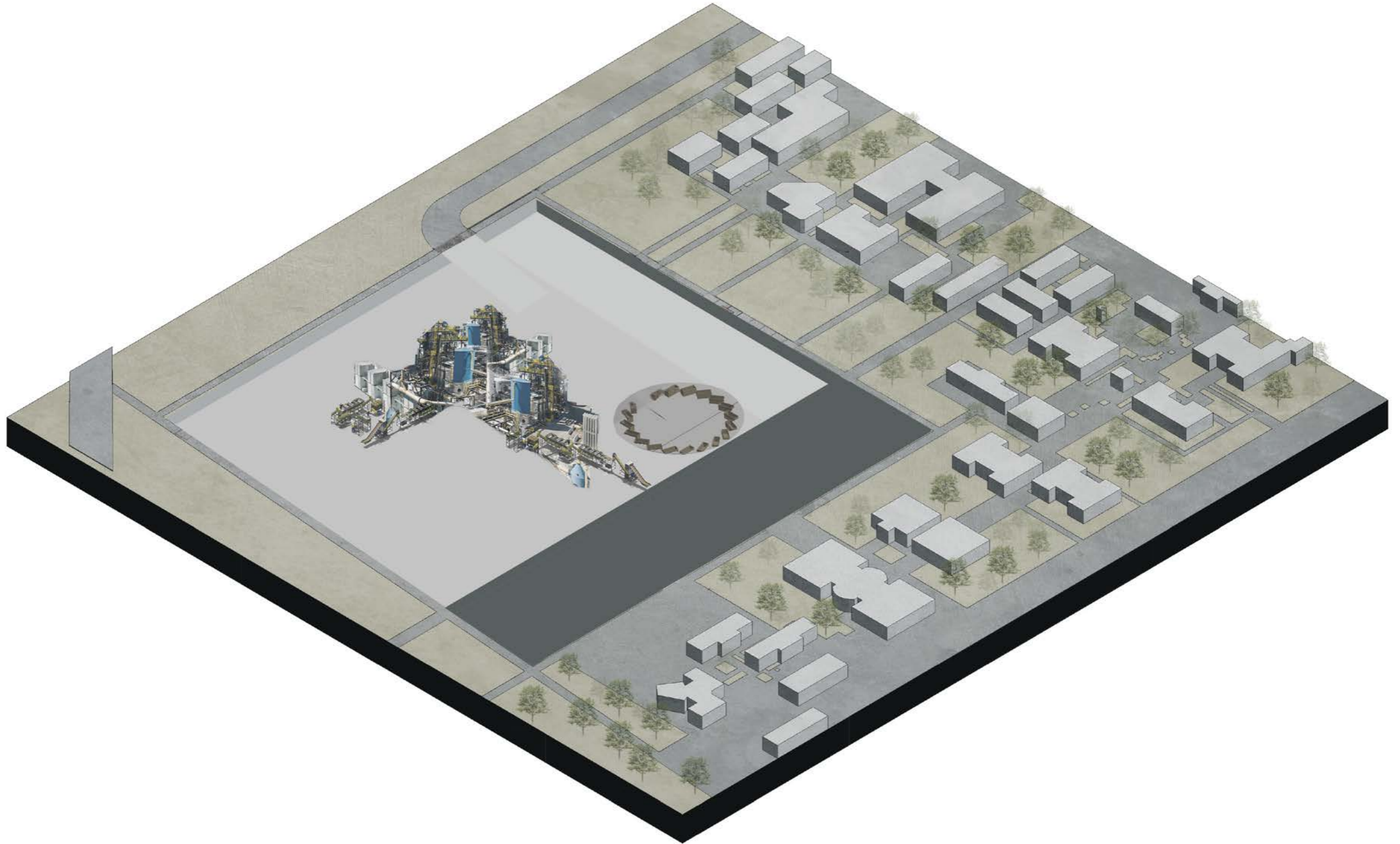
REMOVING WASTE



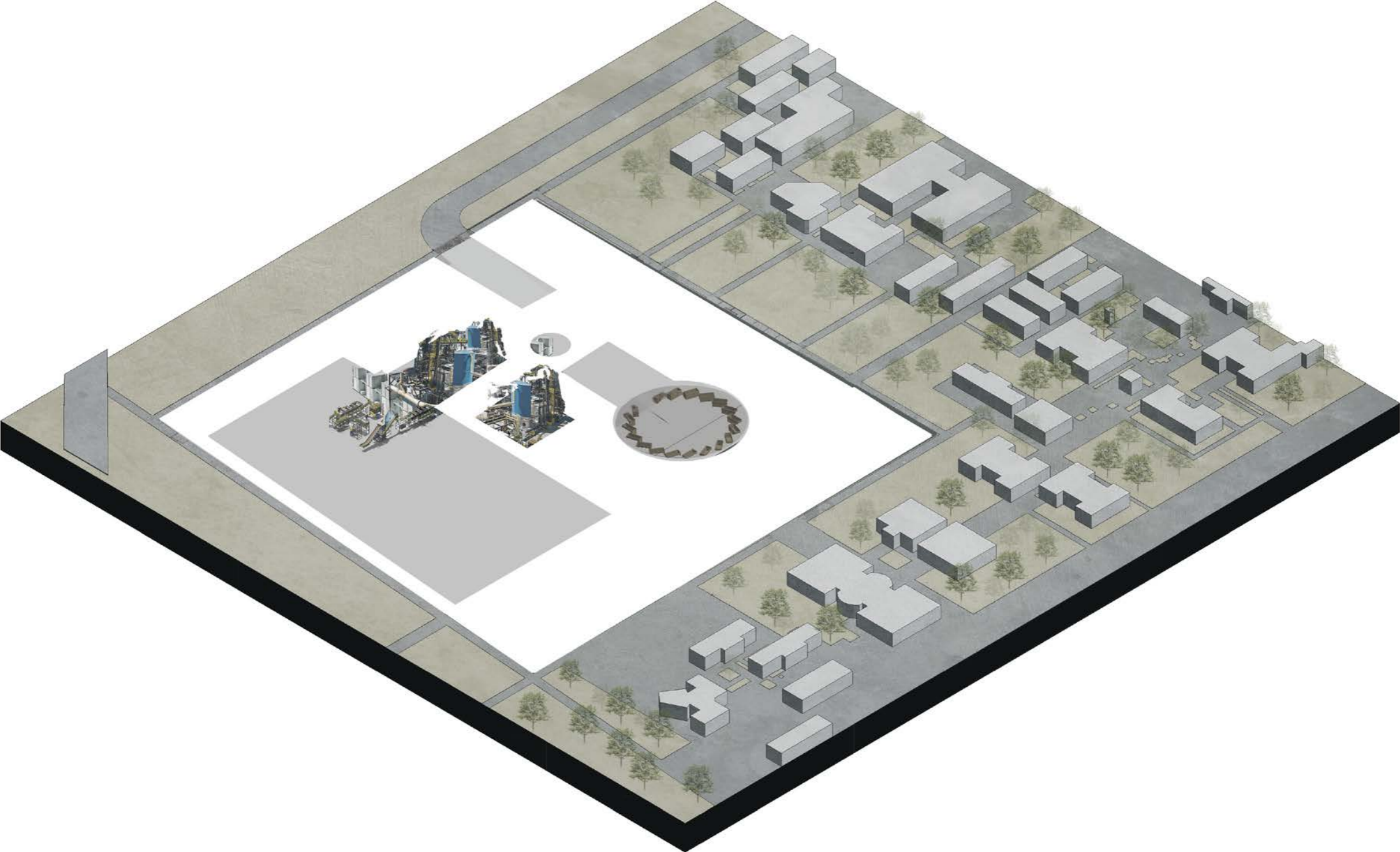
DITCH



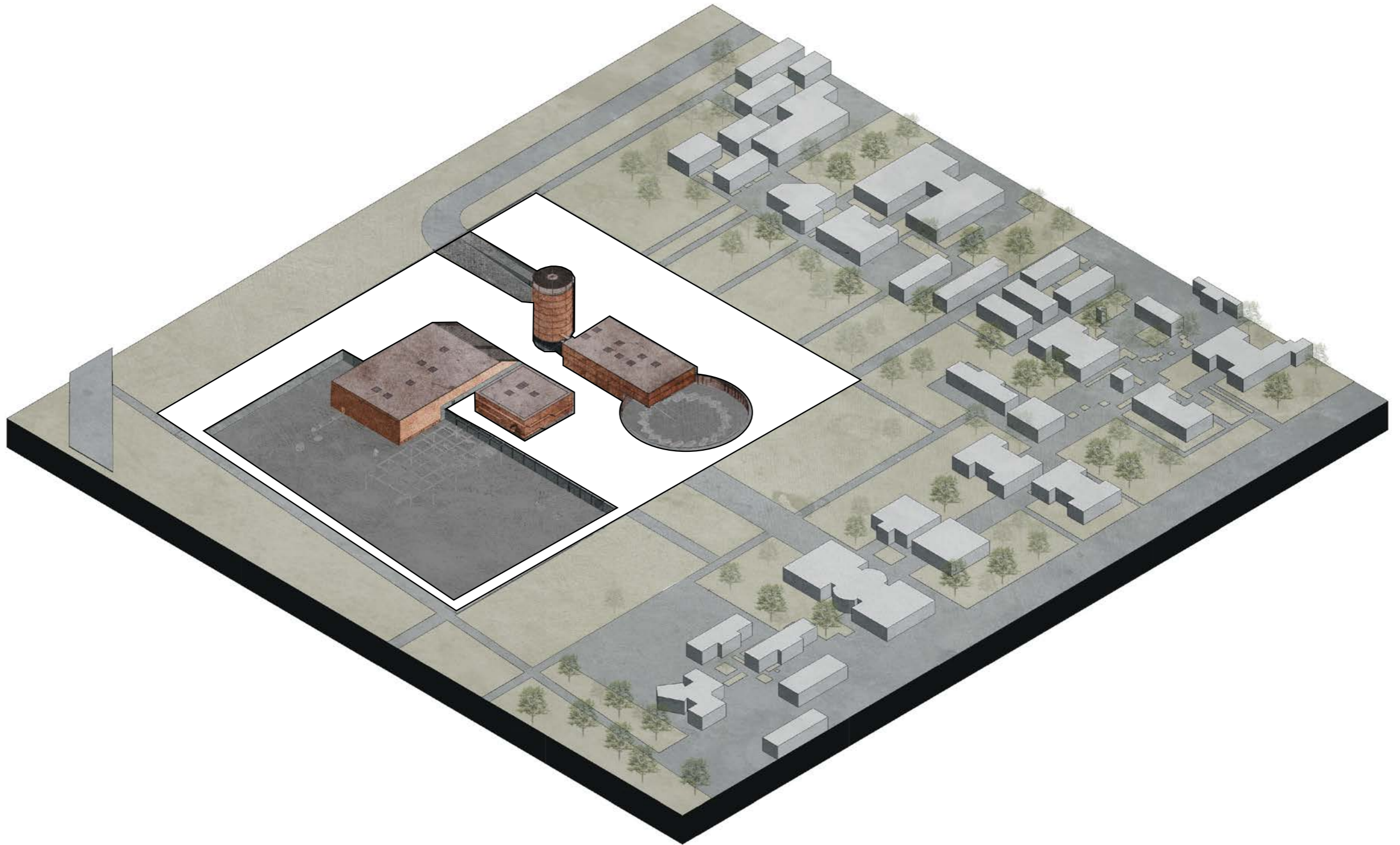
MACHINES - UNDERGROUND



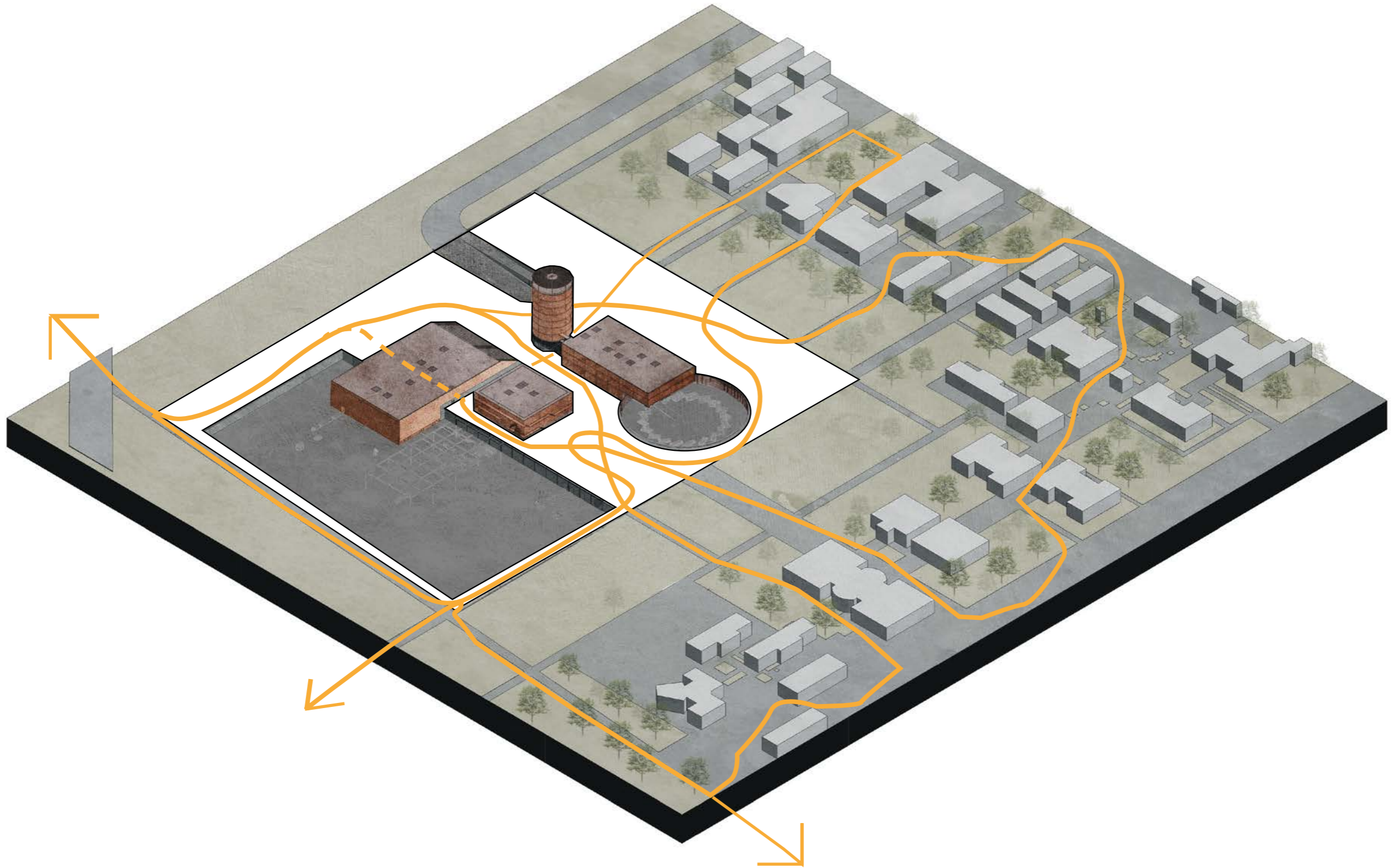
CONCRETE SLAB



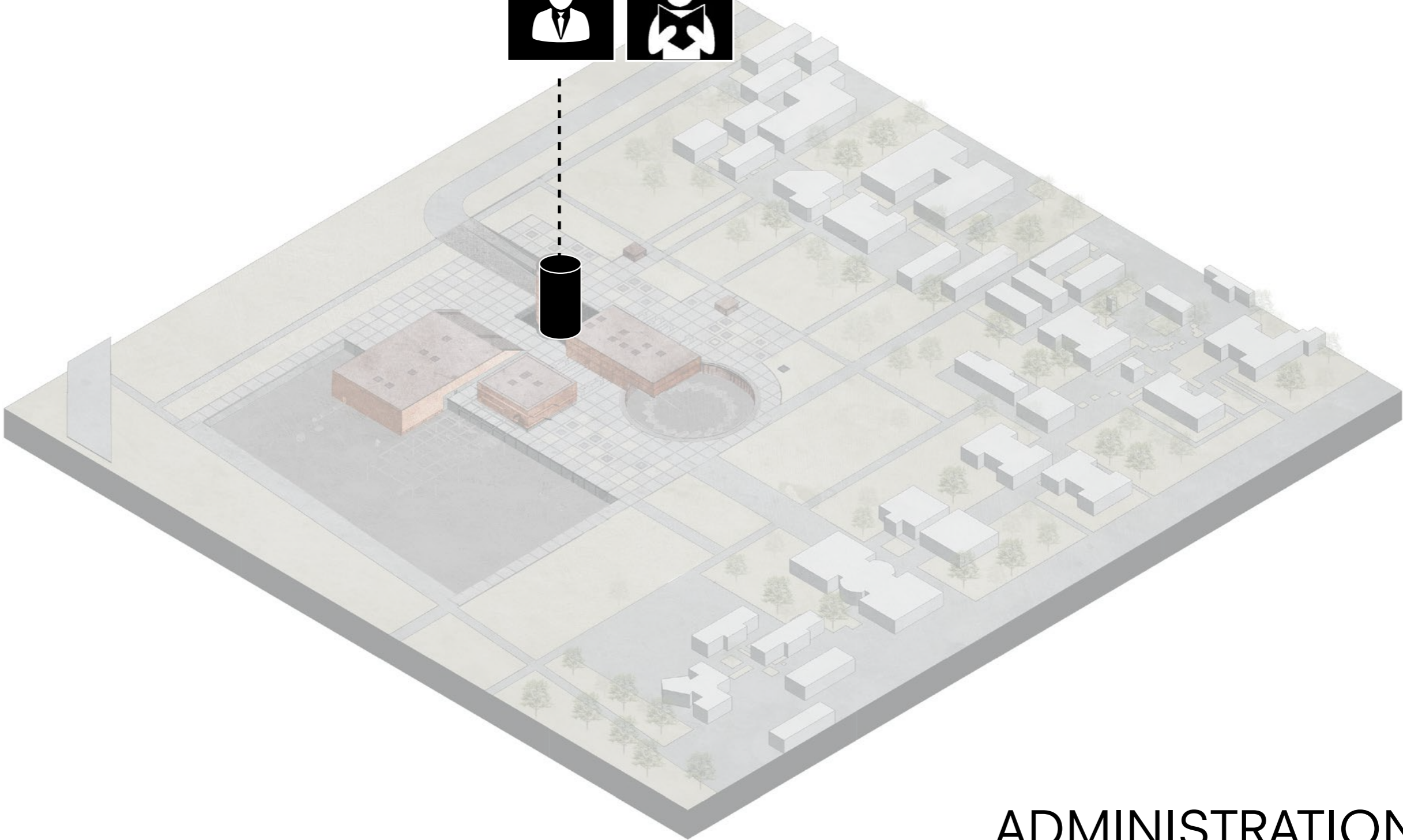
VOLUMES FRAME THE PROGRAM



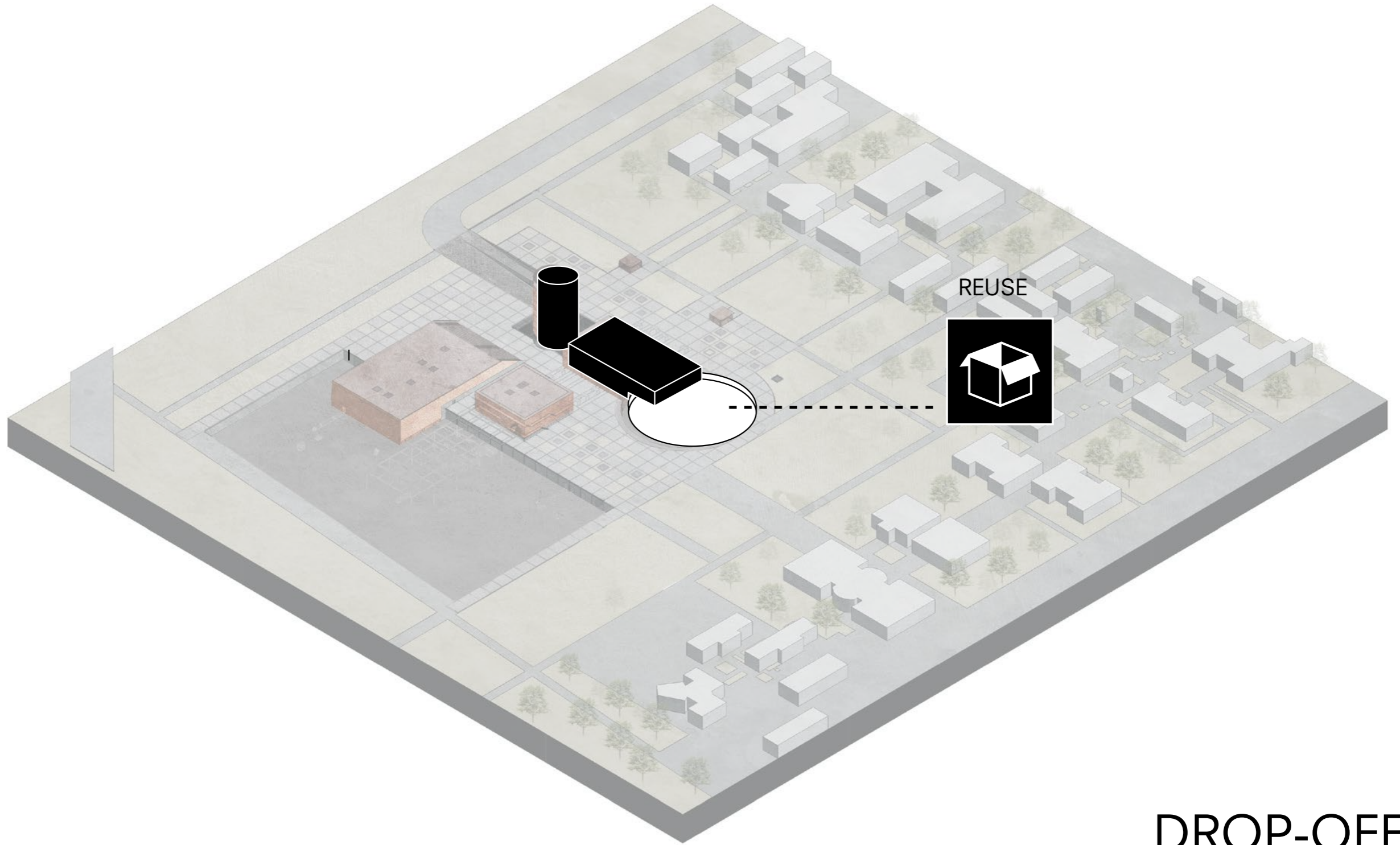
IN-BETWEEN SPACE



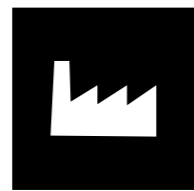
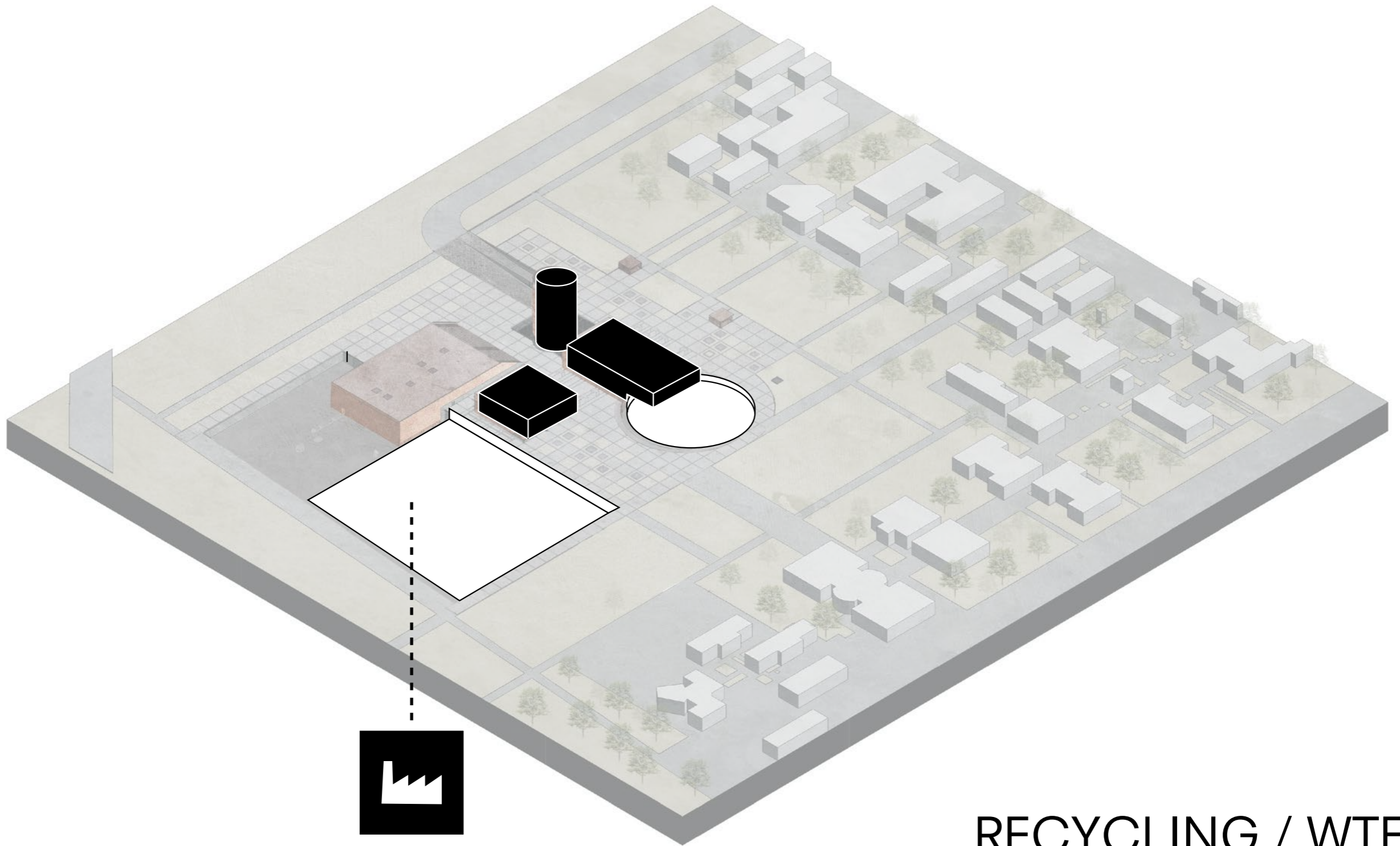
ADMIN. EDUCATION



ADMINISTRATION

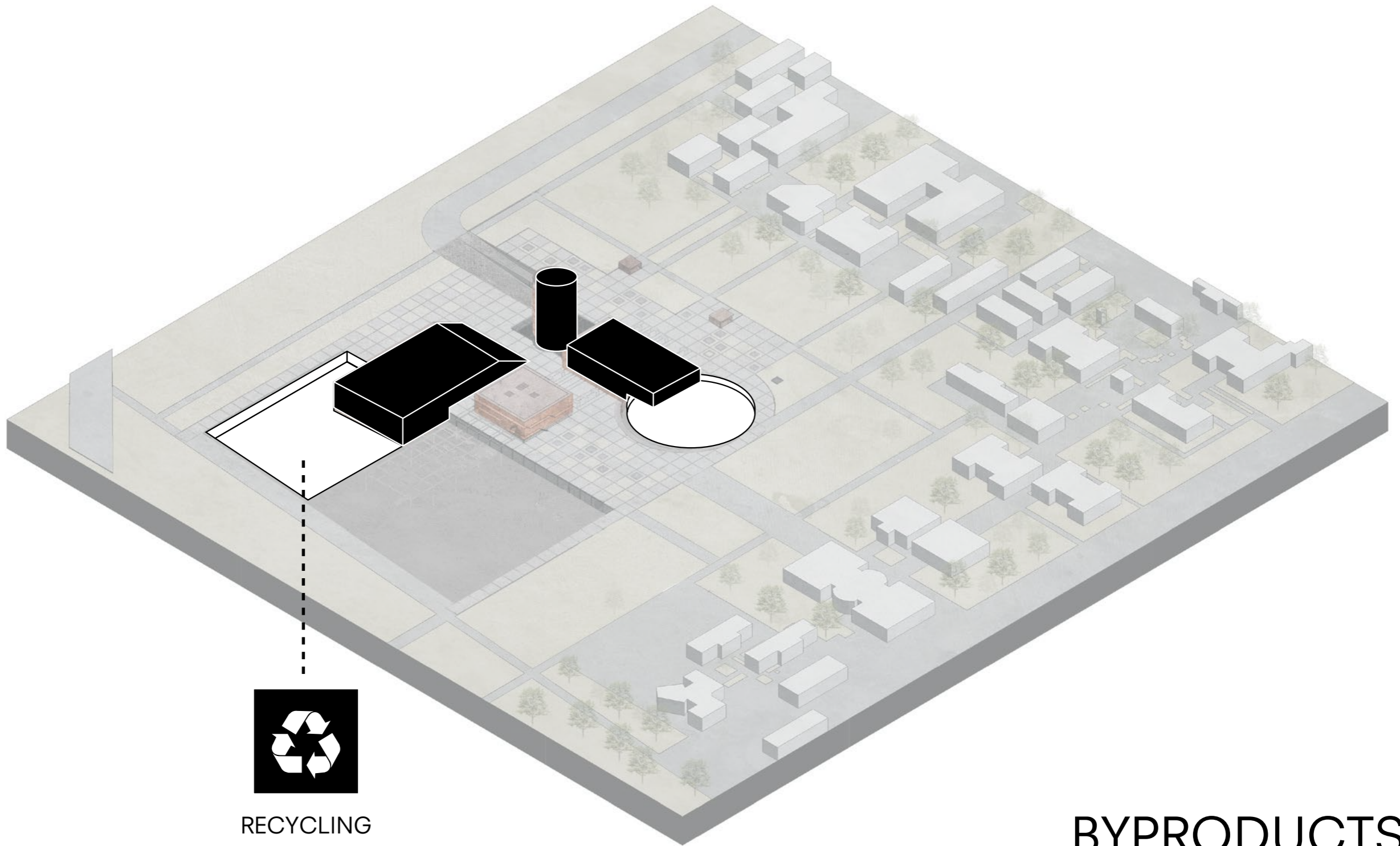


DROP-OFF



WTE

RECYCLING / WTE



RECYCLING

BYPRODUCTS



BORDER WASTE

REGION & TWIN-CITY

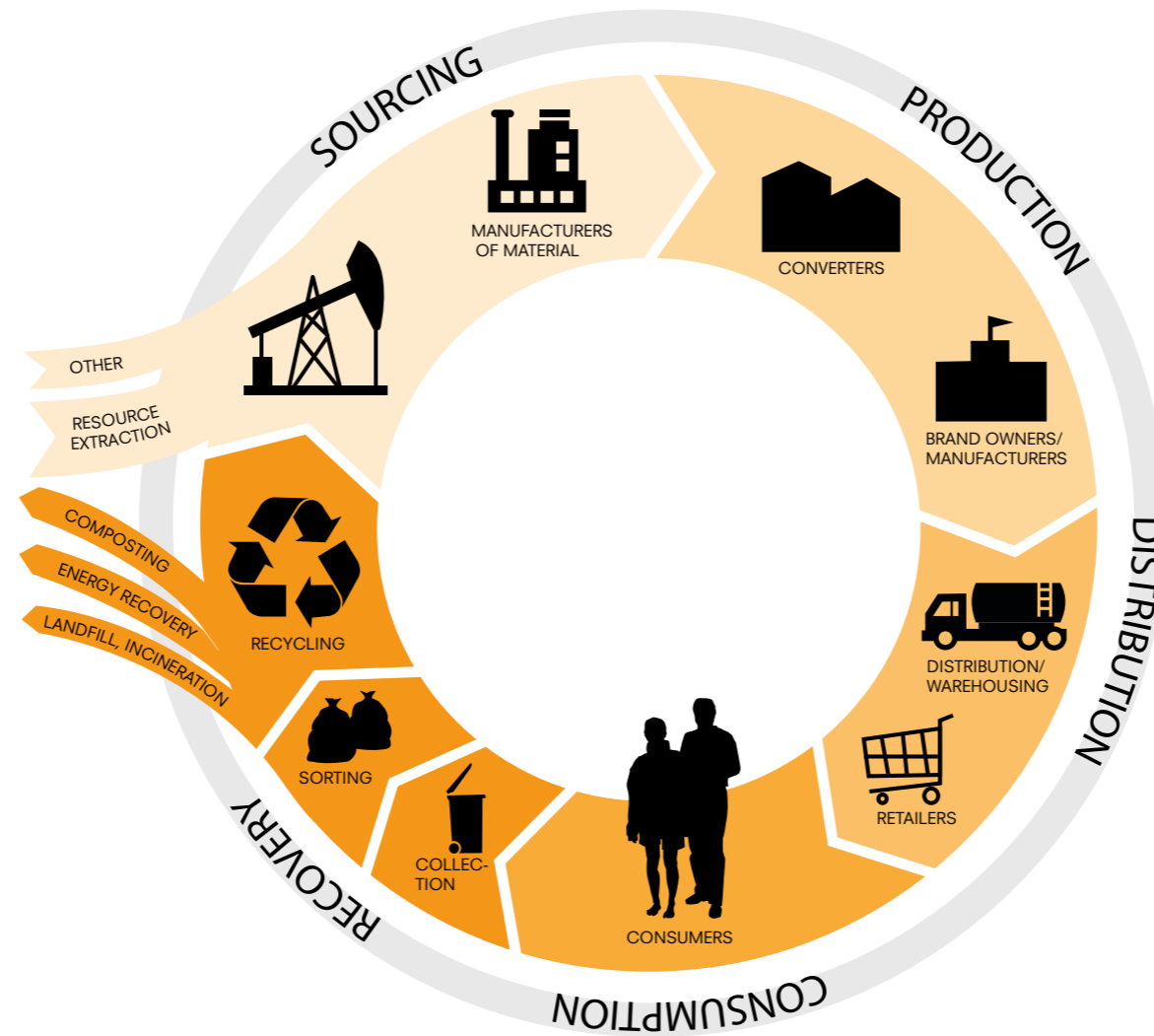


LINEAR ECONOMY





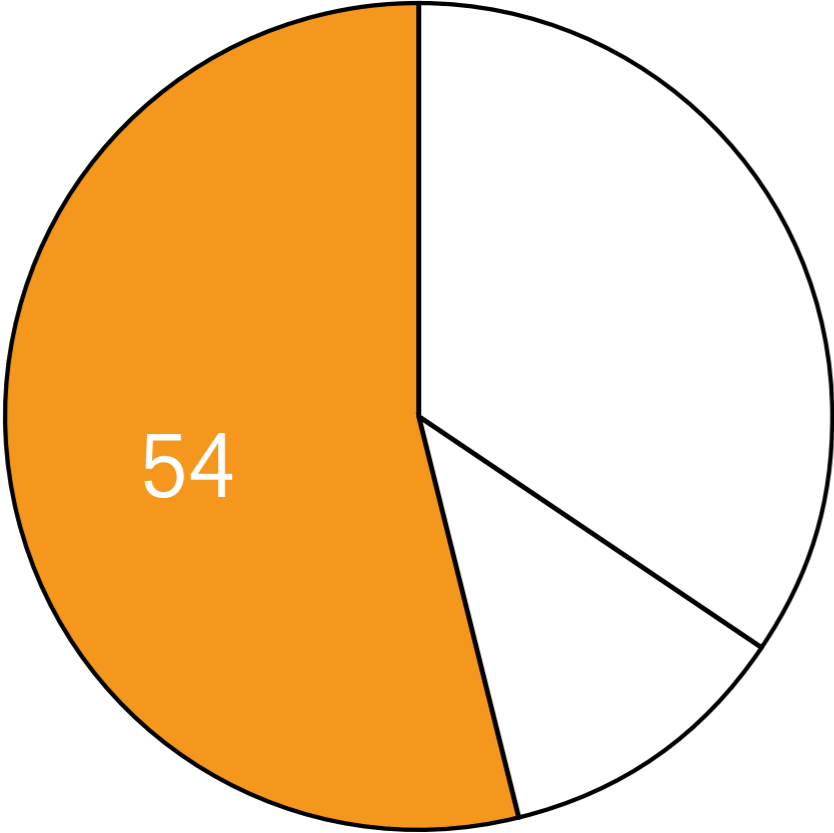
CIRCULAR ECONOMY



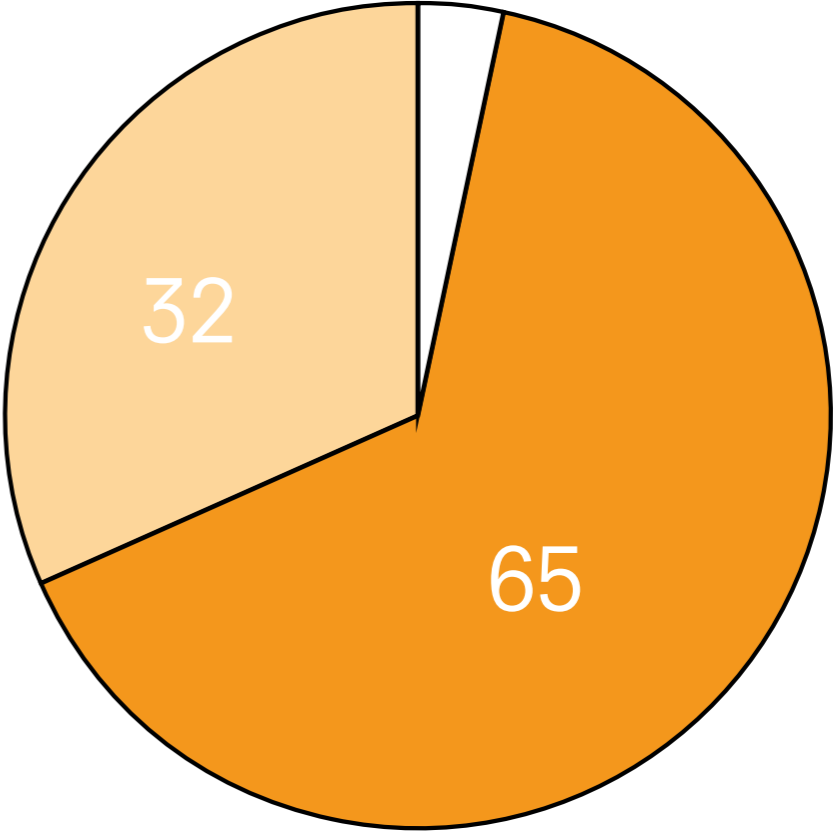
ZERO WASTE

WASTE MANAGEMENT

- sanitary landfilling
- illegal landfilling



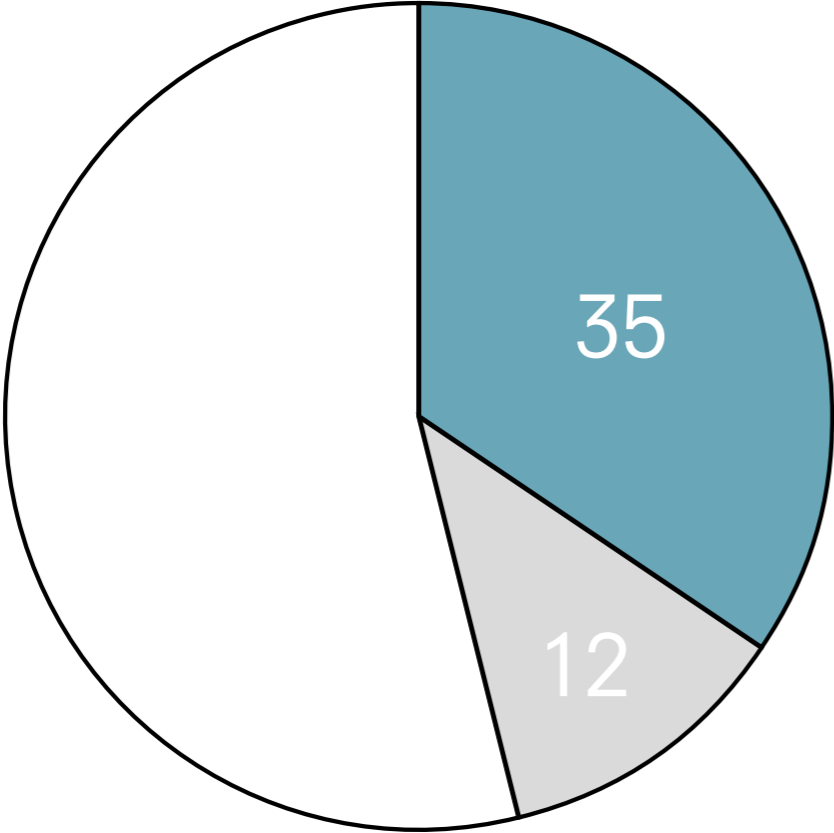
USA



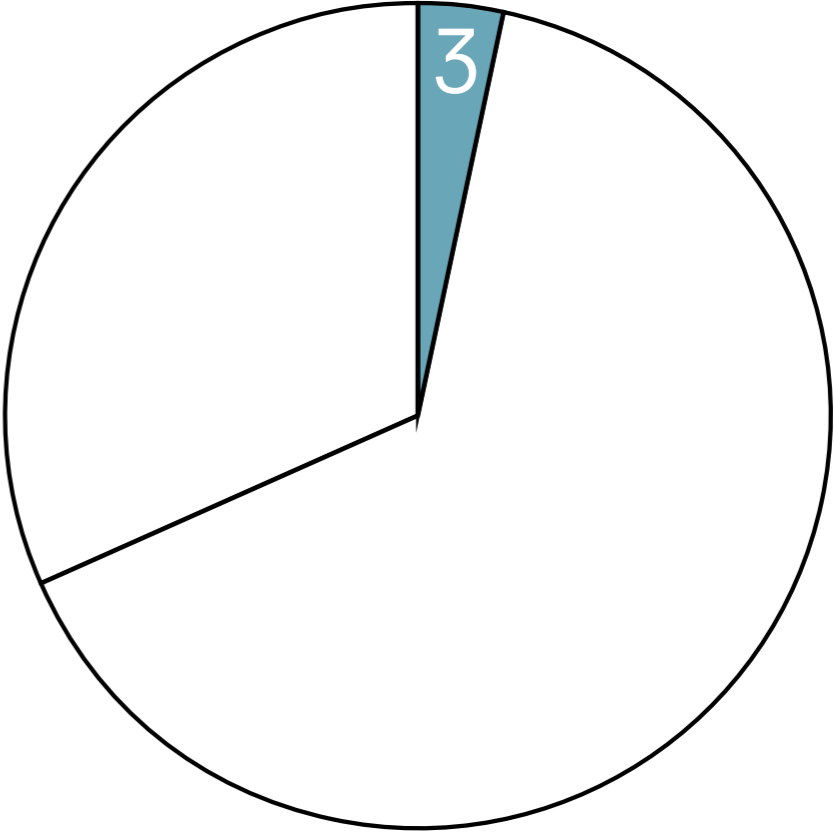
MEX

WASTE MANAGEMENT

- recycling
- waste-to-energy

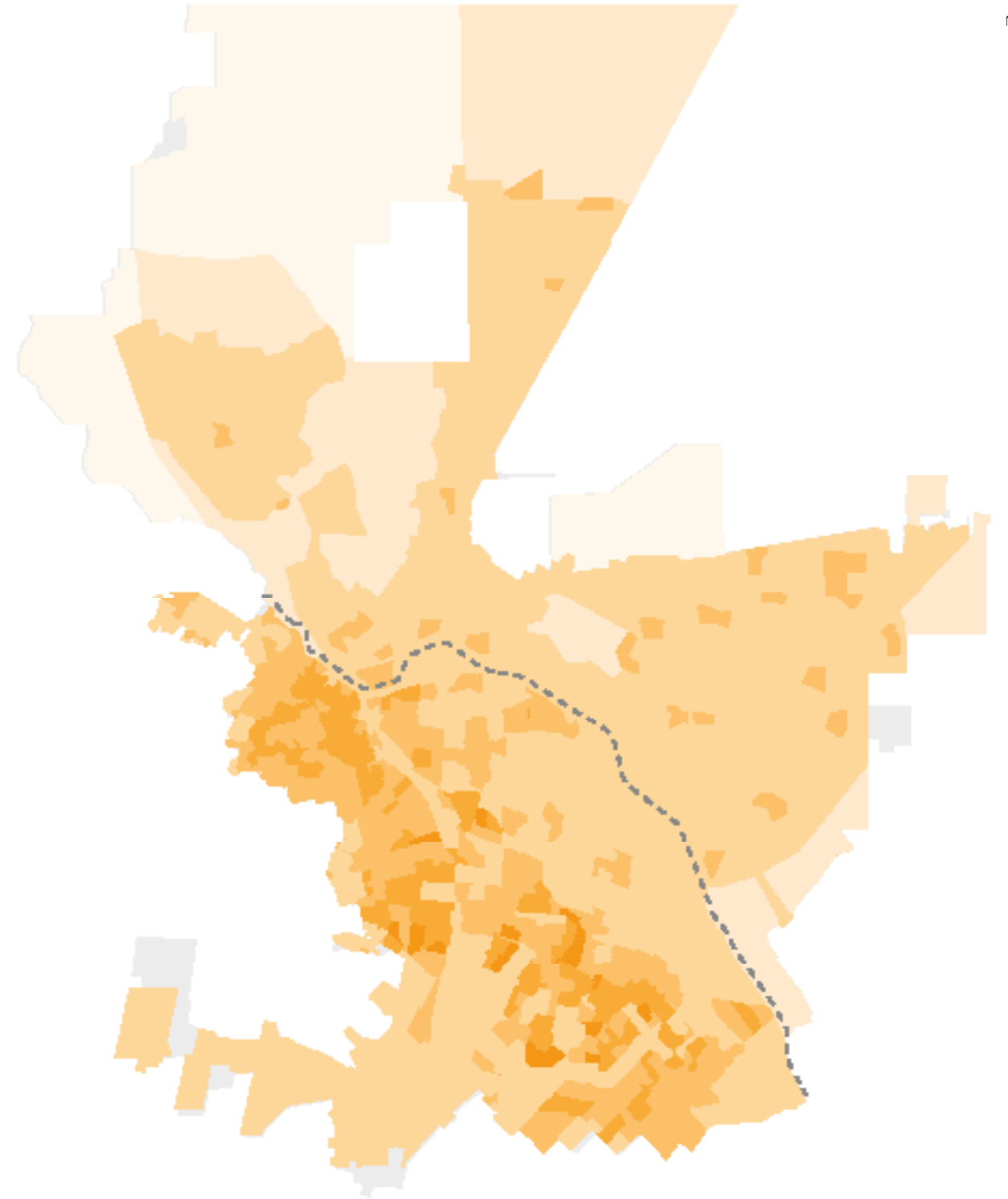


USA

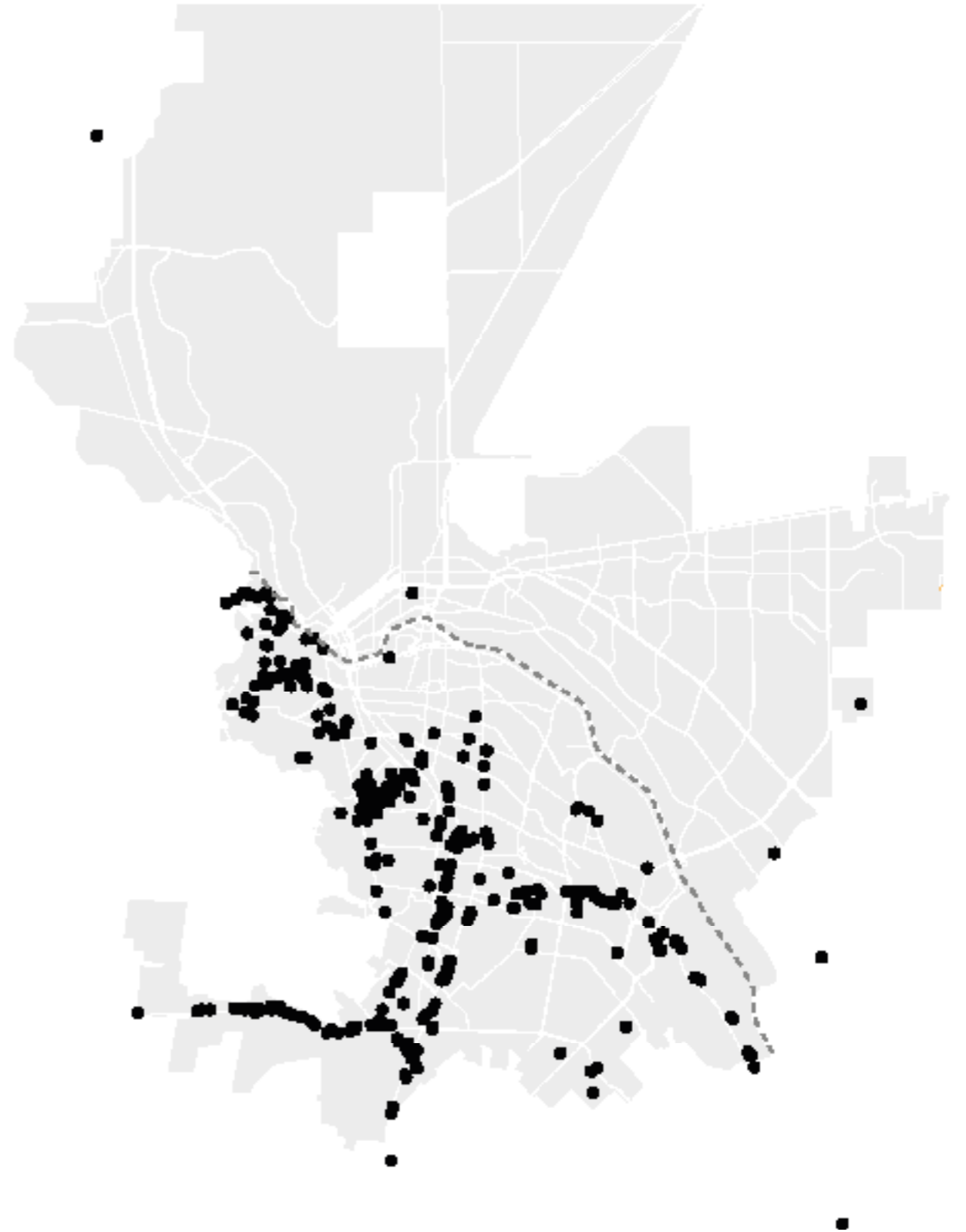


MEX

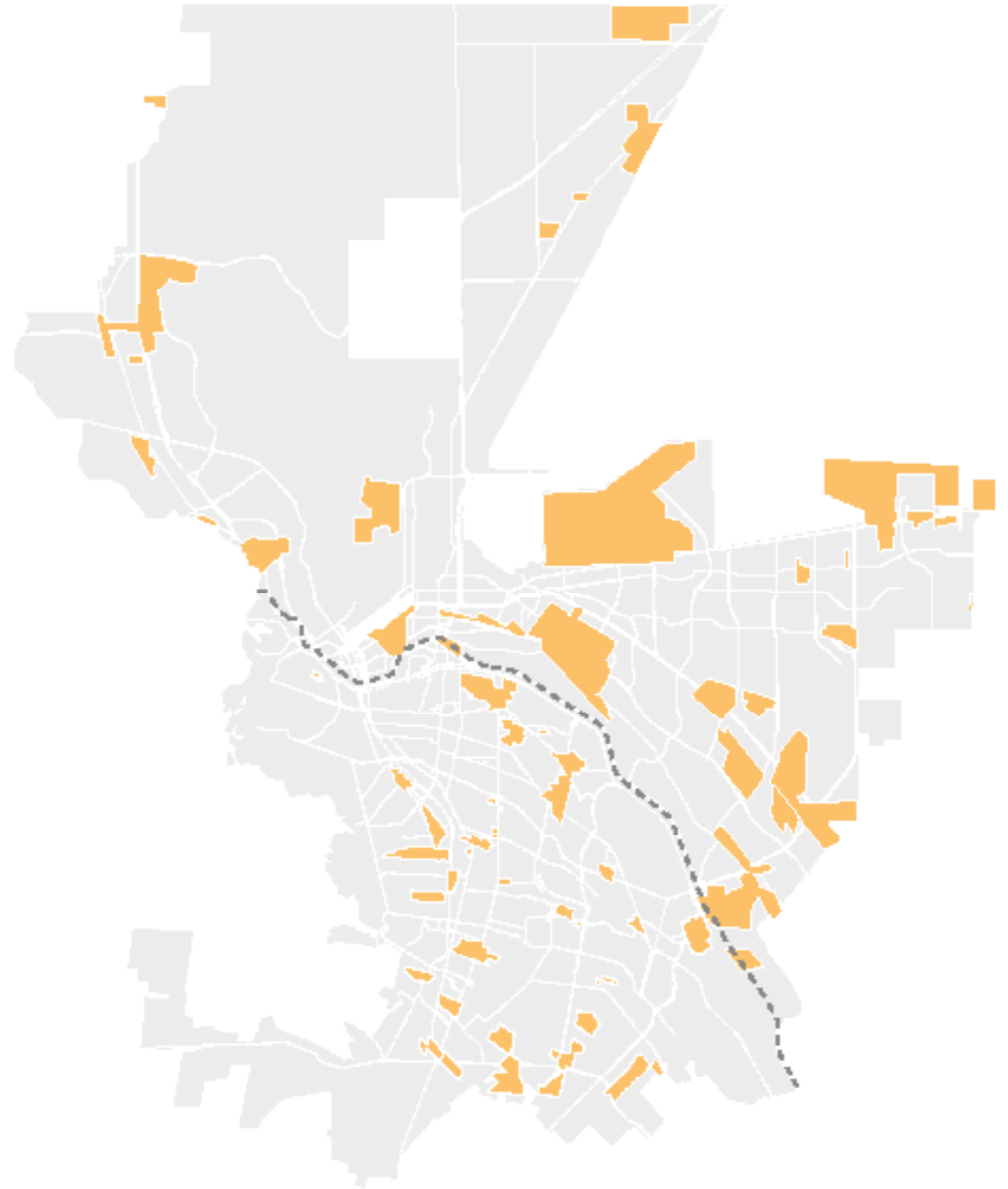
ISSUES: WASTE PRODUCTION



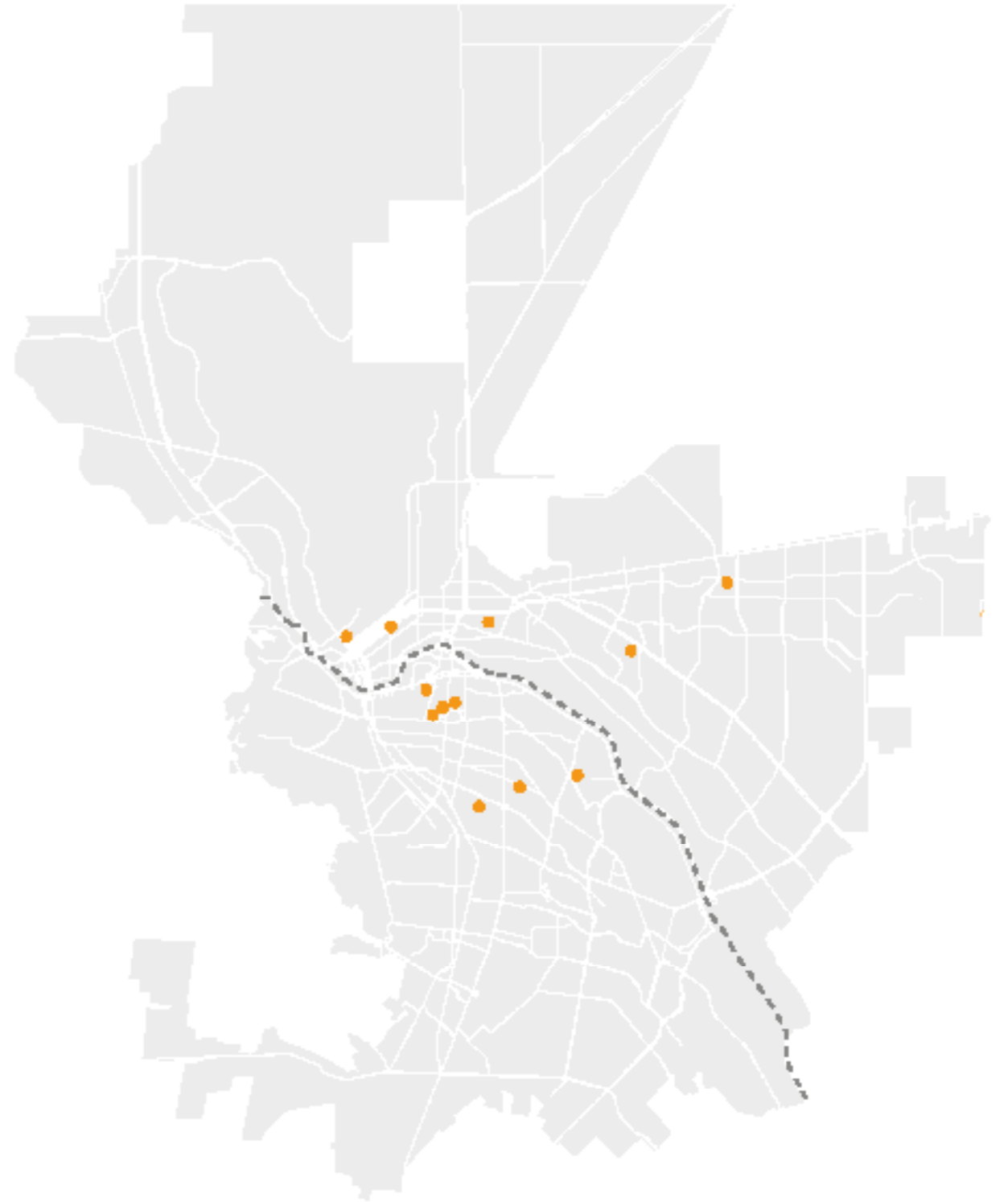
ISSUES: JUNKYARDS



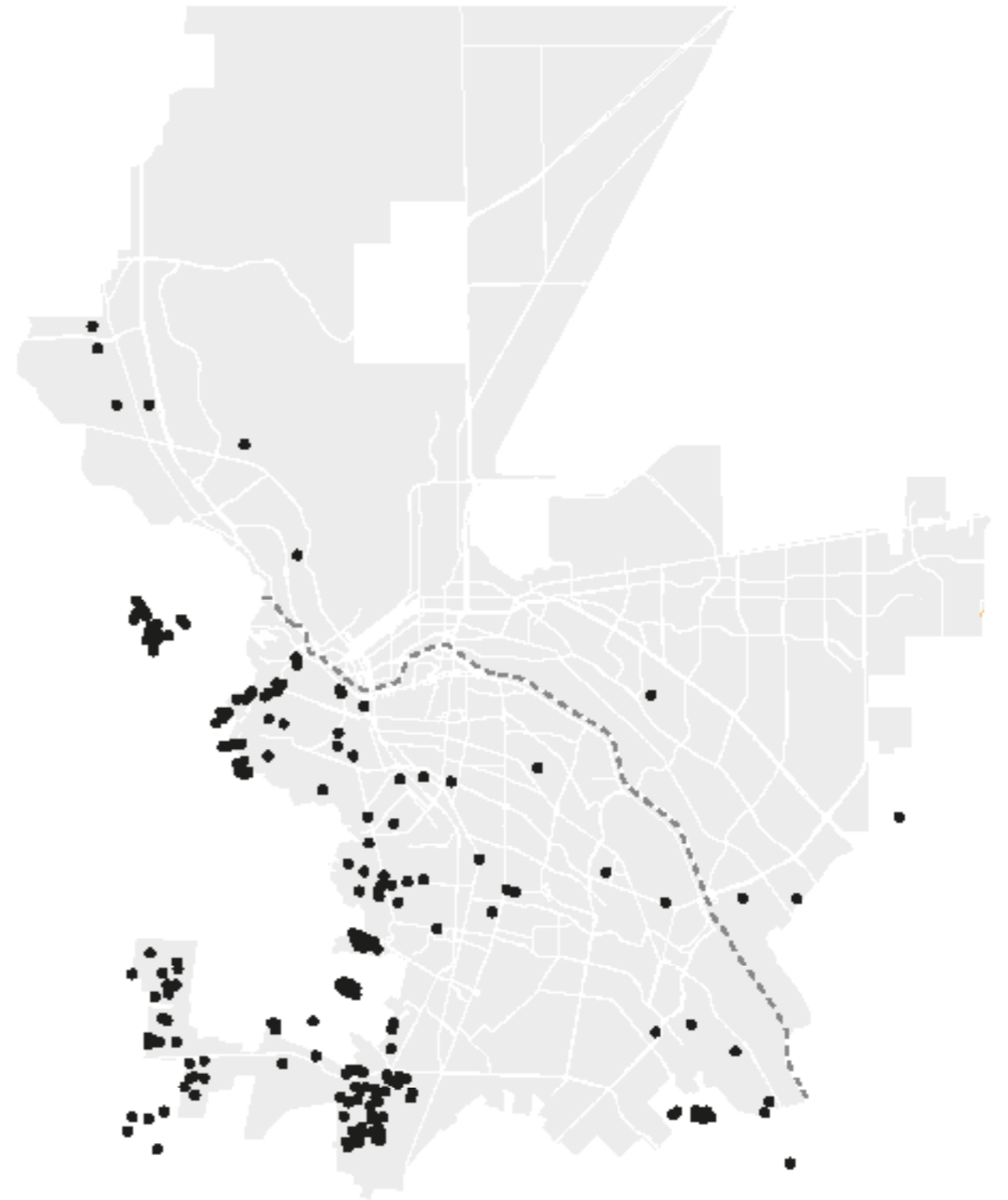
ISSUES: MAQUILAS, INDUSTRY



ISSUES: HOSPITALS



BRICK KILNS



MANAGEMENT: LANDFILLING

name
size
capacity
total

Camino Real
194 ha
653 266 t/y
3 963 000 t

1

name
size
capacity
total

McCombs
295 ha
133 055 t/y
4 137 100 t

2

name
size
capacity
total

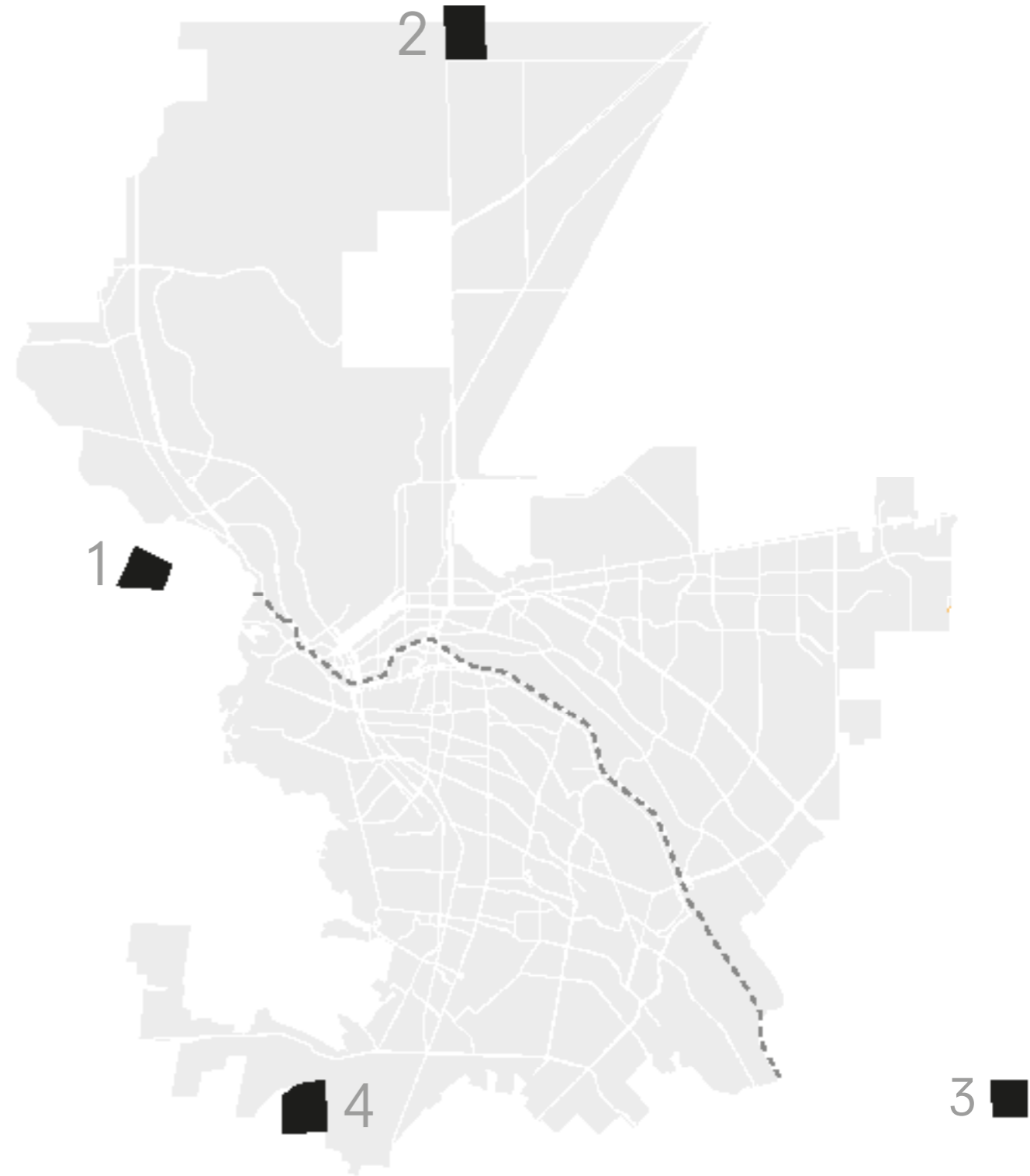
Clint
241.6 ha
475 500 t/y
4 904 400 t

3

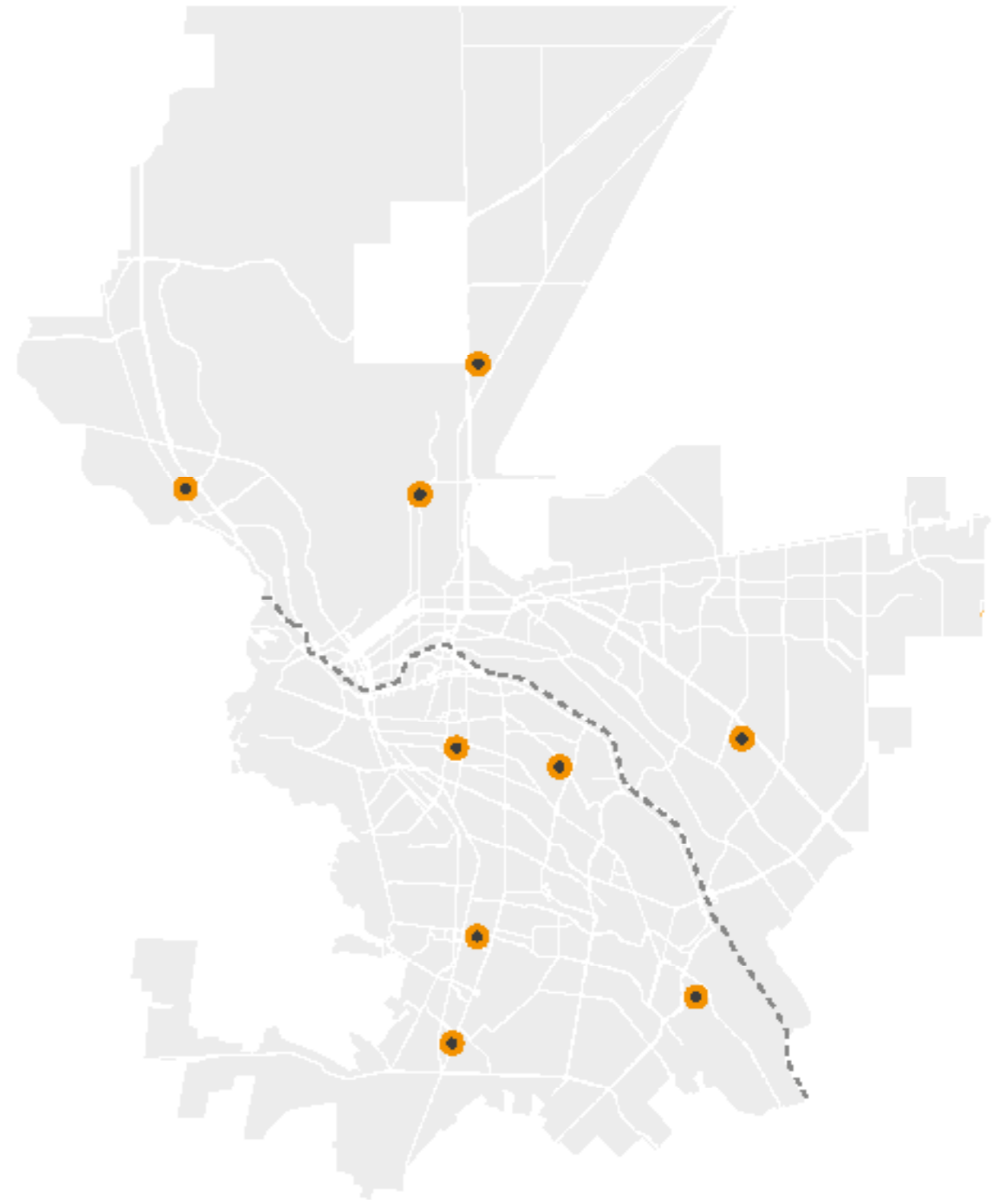
name
size
capacity
total

Juarez
310 ha
760 605 t/y
4 980 000 t

4



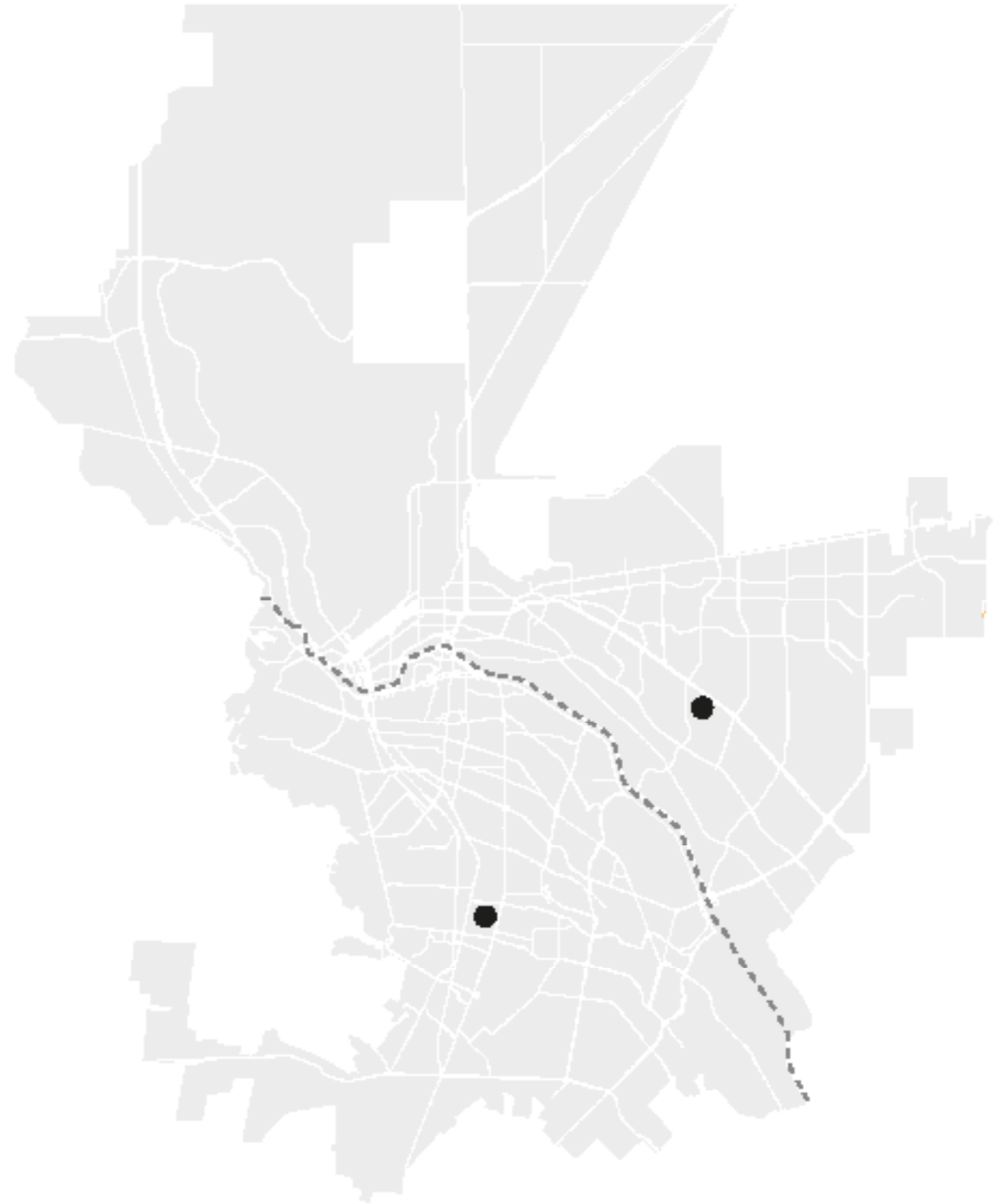
MANAGEMENT: DROP-OFF STATION



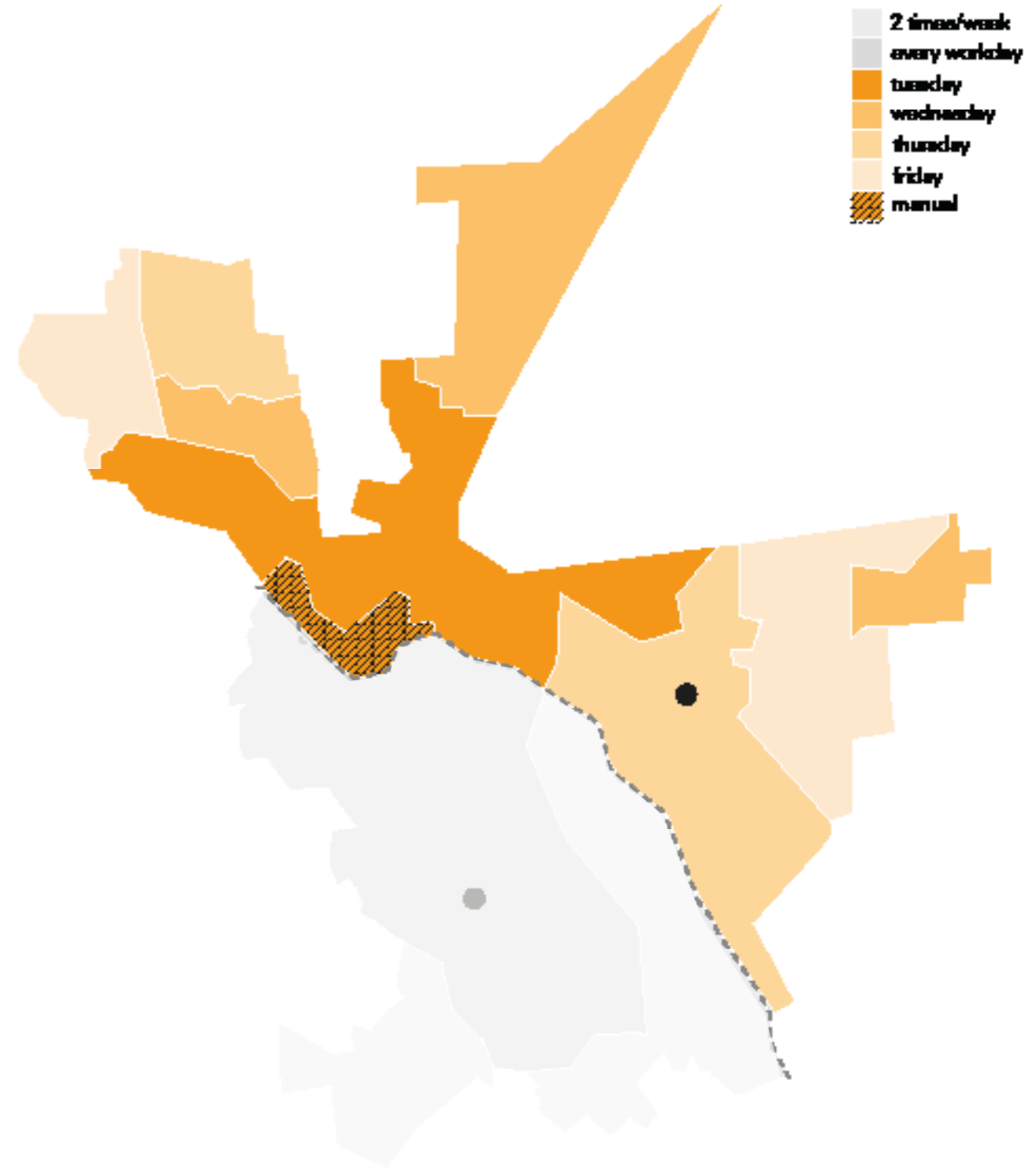
RECYCLING CENTERS



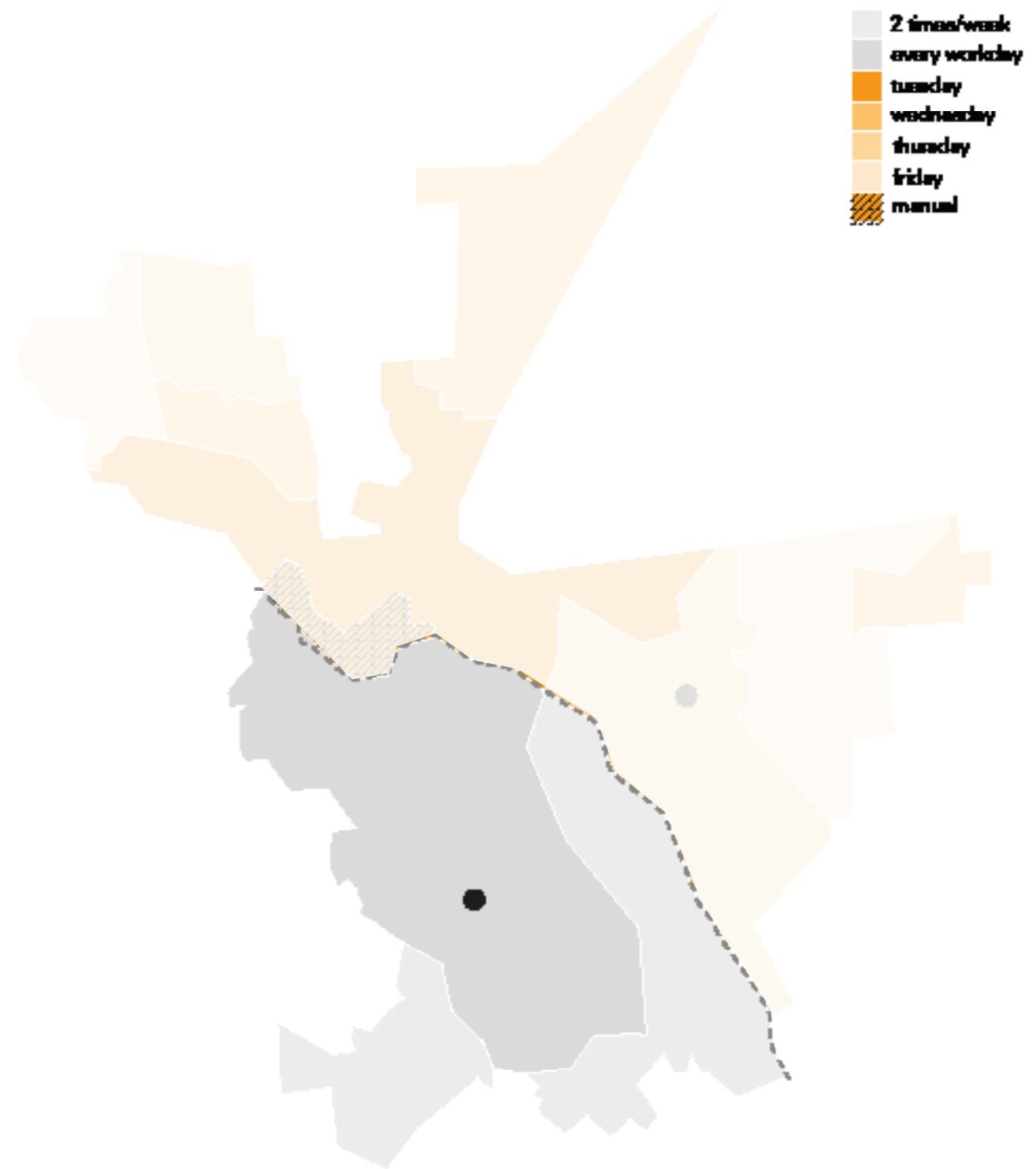
MANAGEMENT: WASTE COLLECTIC



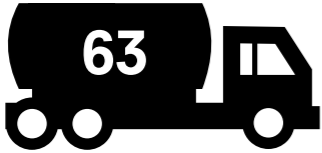
MANAGEMENT: WASTE COLLECTIC



MANAGEMENT: WASTE COLLECTION



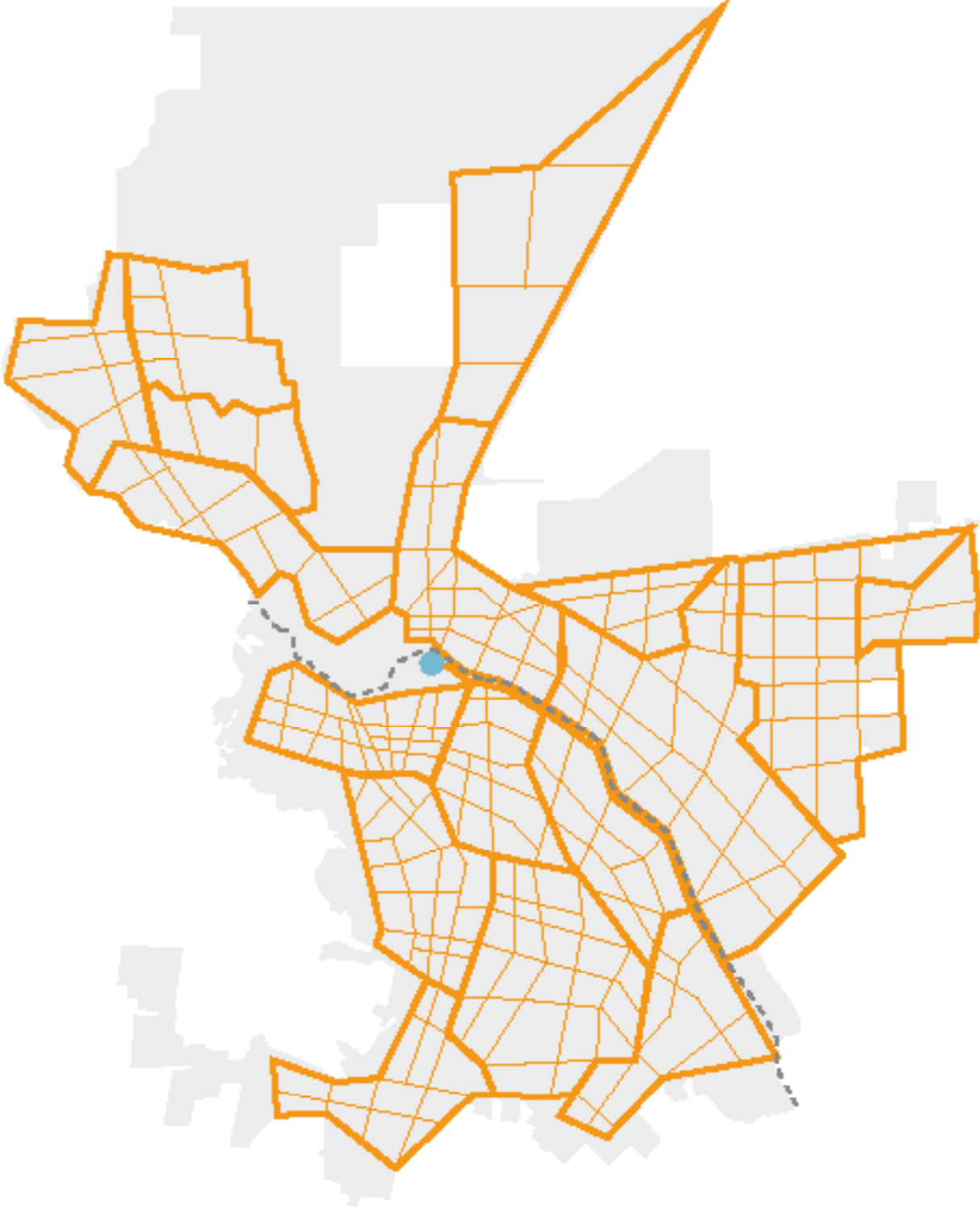
WASTE COLLECTION: URBAN WASTE



Juarez



El Paso



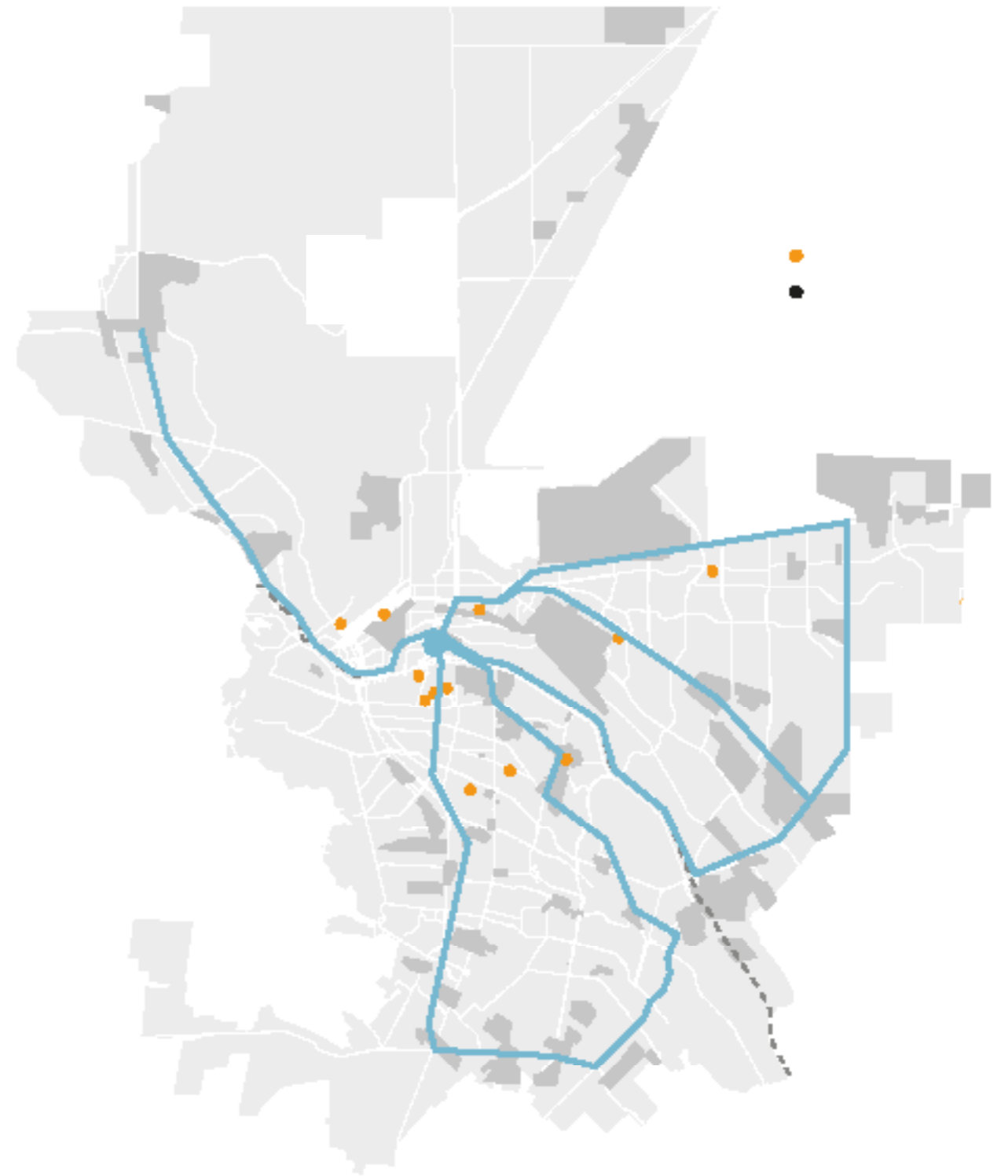
COLLECTION ROUTES: HAZARDOUS WASTE



Juarez



El Paso



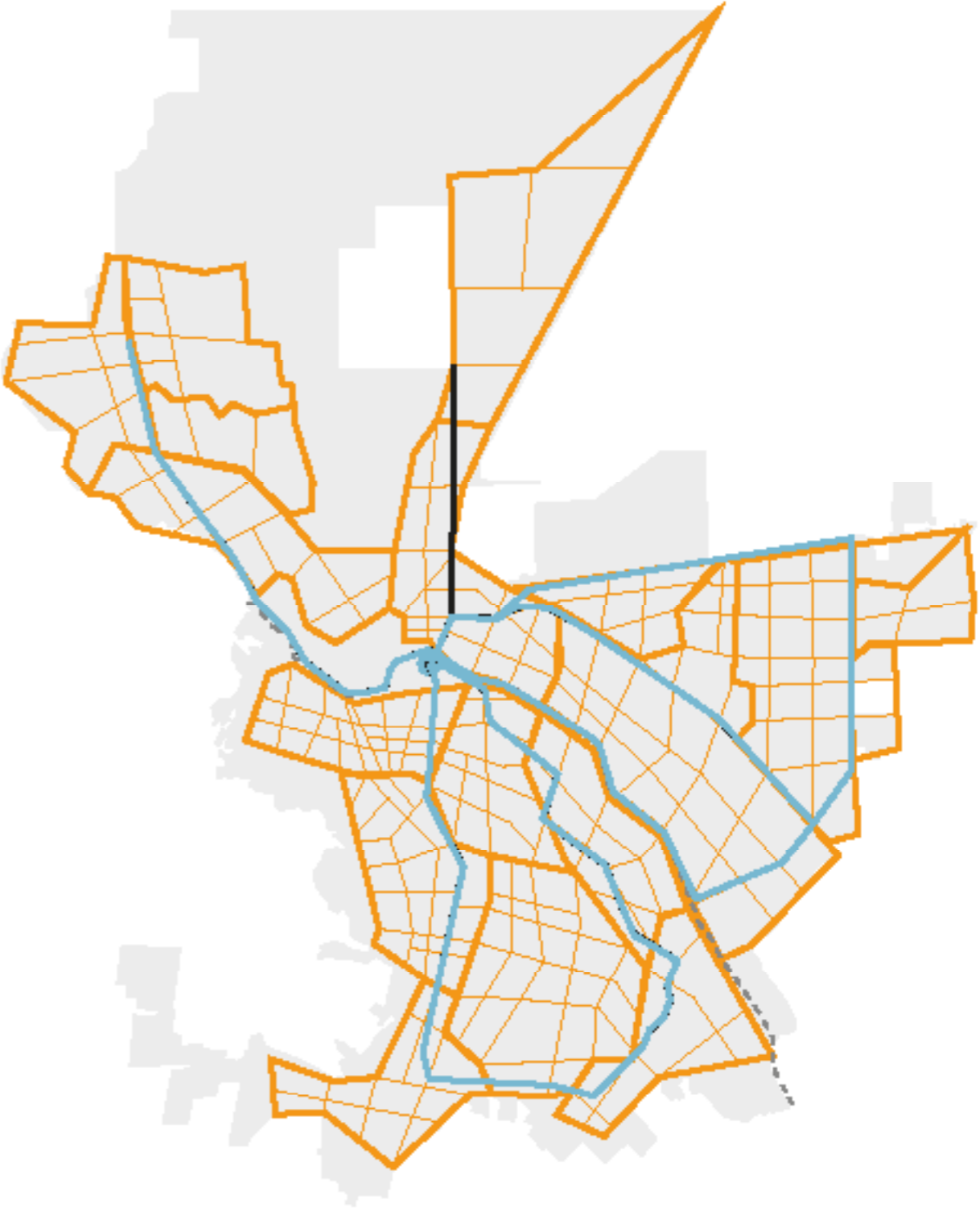
ALL ROUTES:
TOTAL



Juarez



El Paso



CASE STUDIES - CONCLUSIONS



SUNSET PARK MEMORIAL VISITOR CENTER
SELLDORF ARCHITECTS, BROOKLYN, NY



SUNSET PARK MEMORIAL VISITOR CENTER
SELLDORF ARCHITECTS, BROOKLYN, NY



INCINERATION PLANT 1, DENMARK
NOT GIVEN



PLASCO WASTE TO ENERGY PLANT
PLASCO ENERGY GROUP

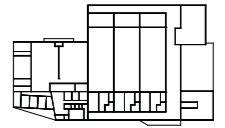
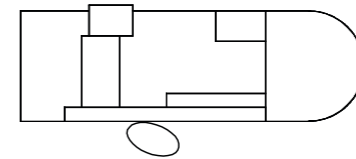
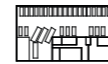
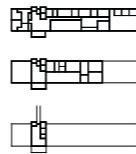
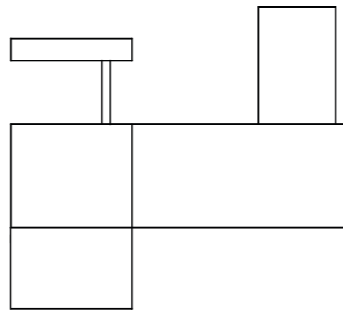
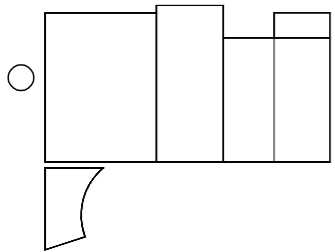
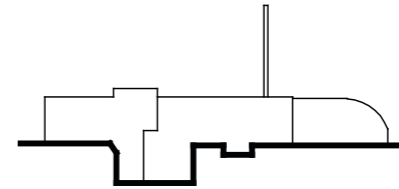
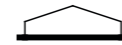
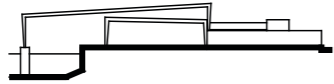
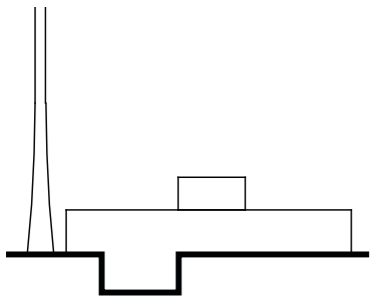


SMILIEUSTRAAAT DROP-OFF CENTER, DORDRECHT
GROSSMAN ARCHITECTS



HDE 17 FACTORY, FRANCE
POGGI ARCHITECTURE / MORE ARCHITECTURE

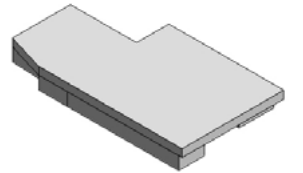
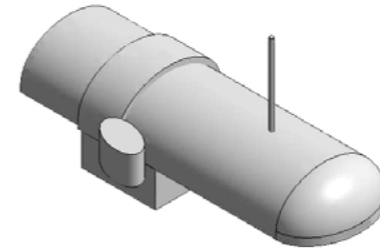
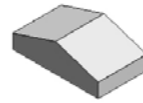
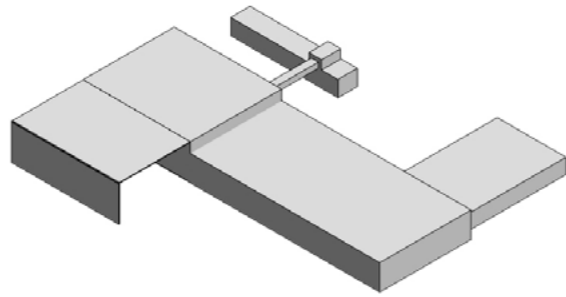
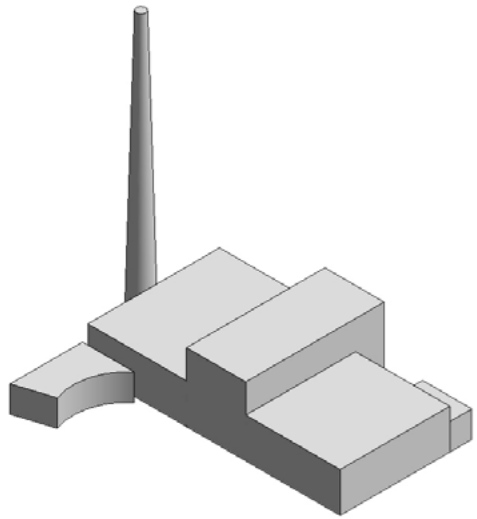
SIZE COMPARISON



SIZE COMPARISON



MASSING COMPARISON





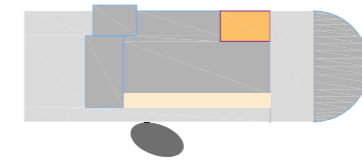
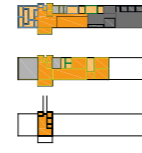
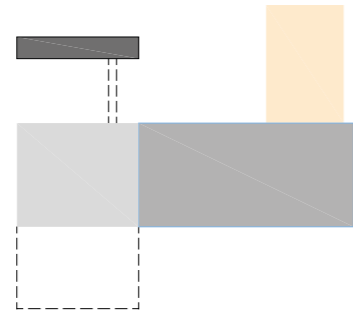
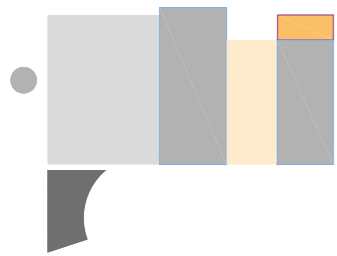
WASTE TO ENERGY FACILITY

RECYCLING CENTER

RECYCLING/ COLLECTION CENTER

WASTE TO ENERGY FACILITY

FACTORY



- administration
- technical
- circulation
- storage
- services
- public

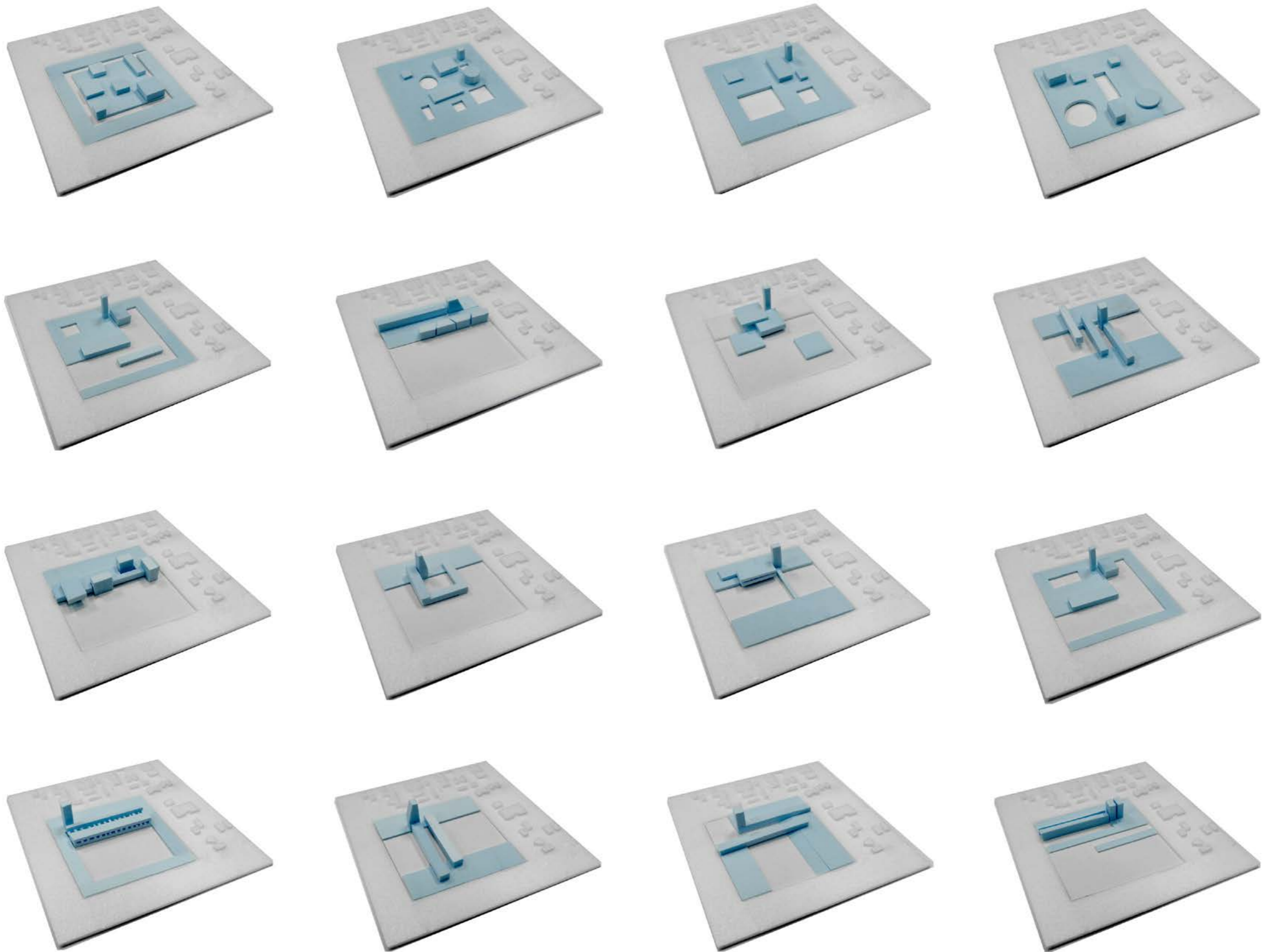
PROGRAM COMPARISON

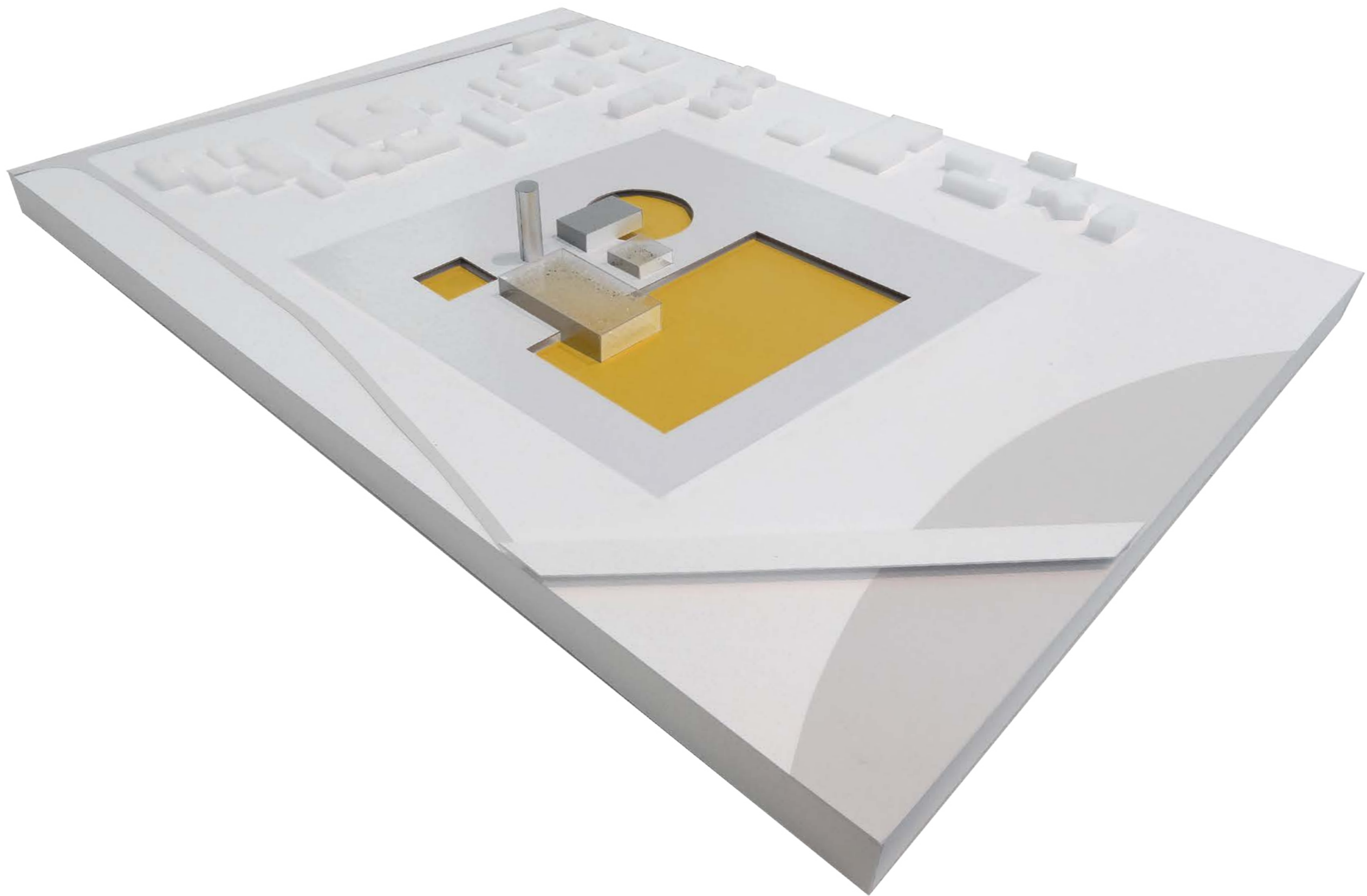
PROGRAM

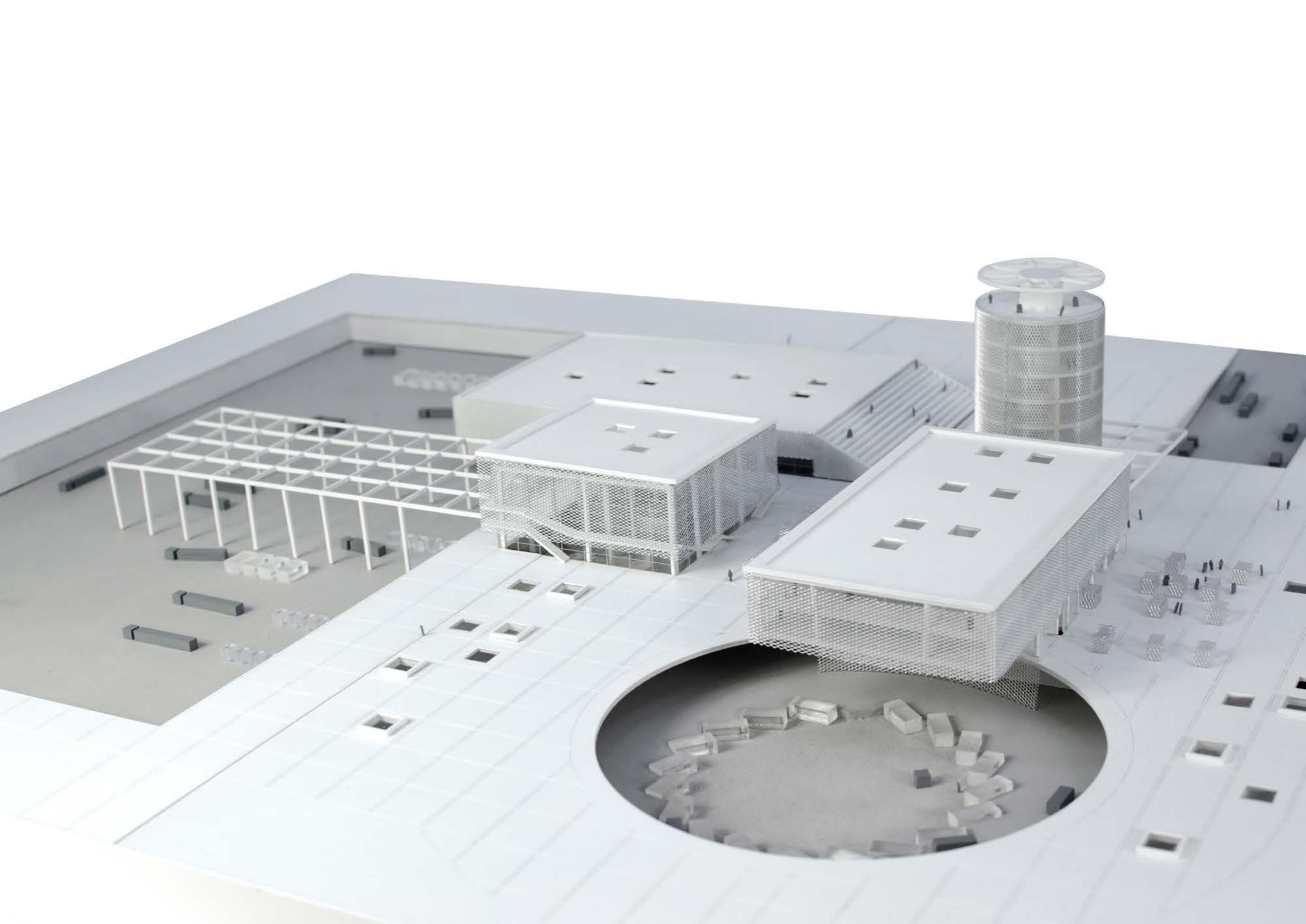
TOTAL
18 200 m²



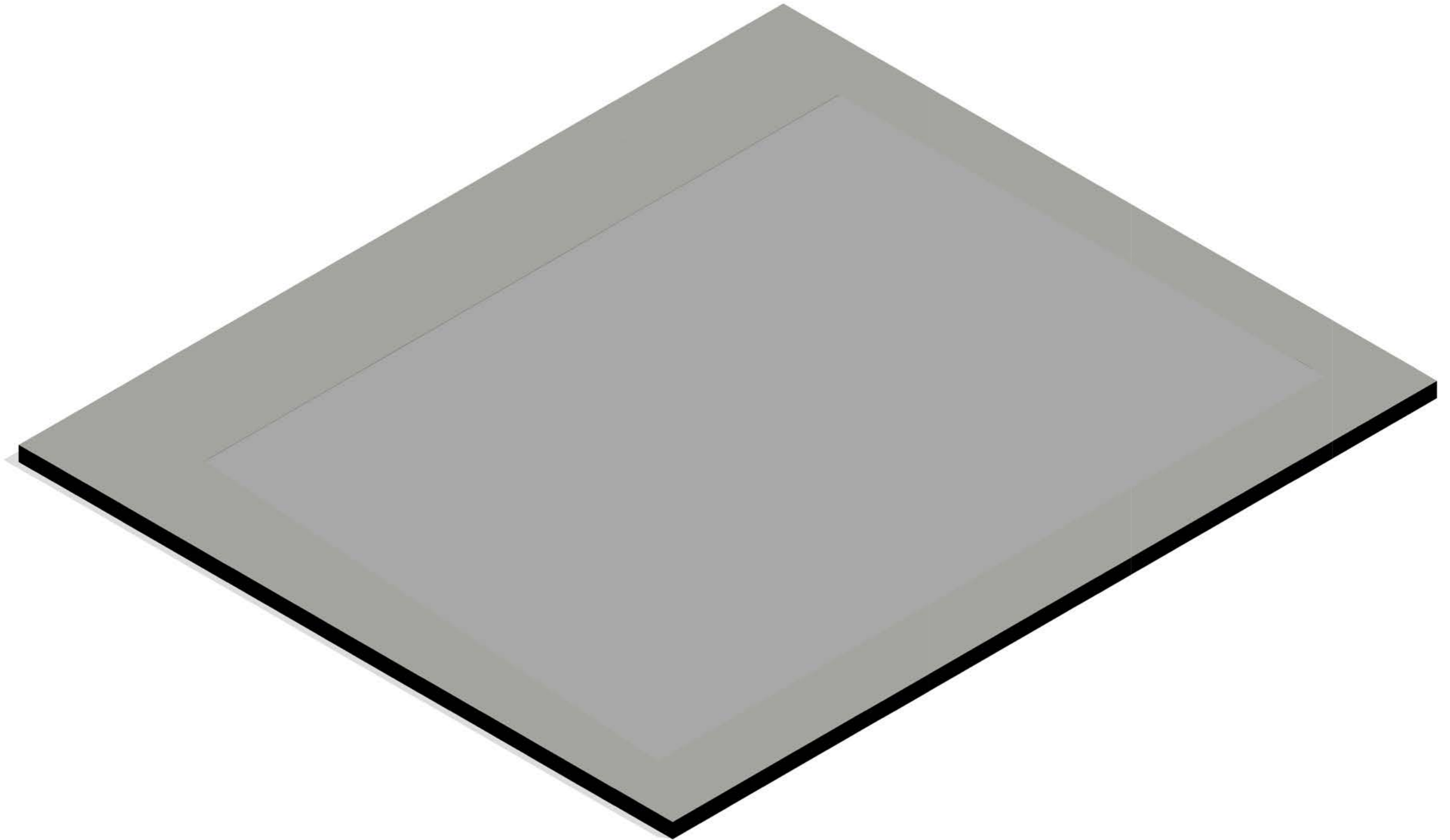
WASTE MANAGEMENT CENTER



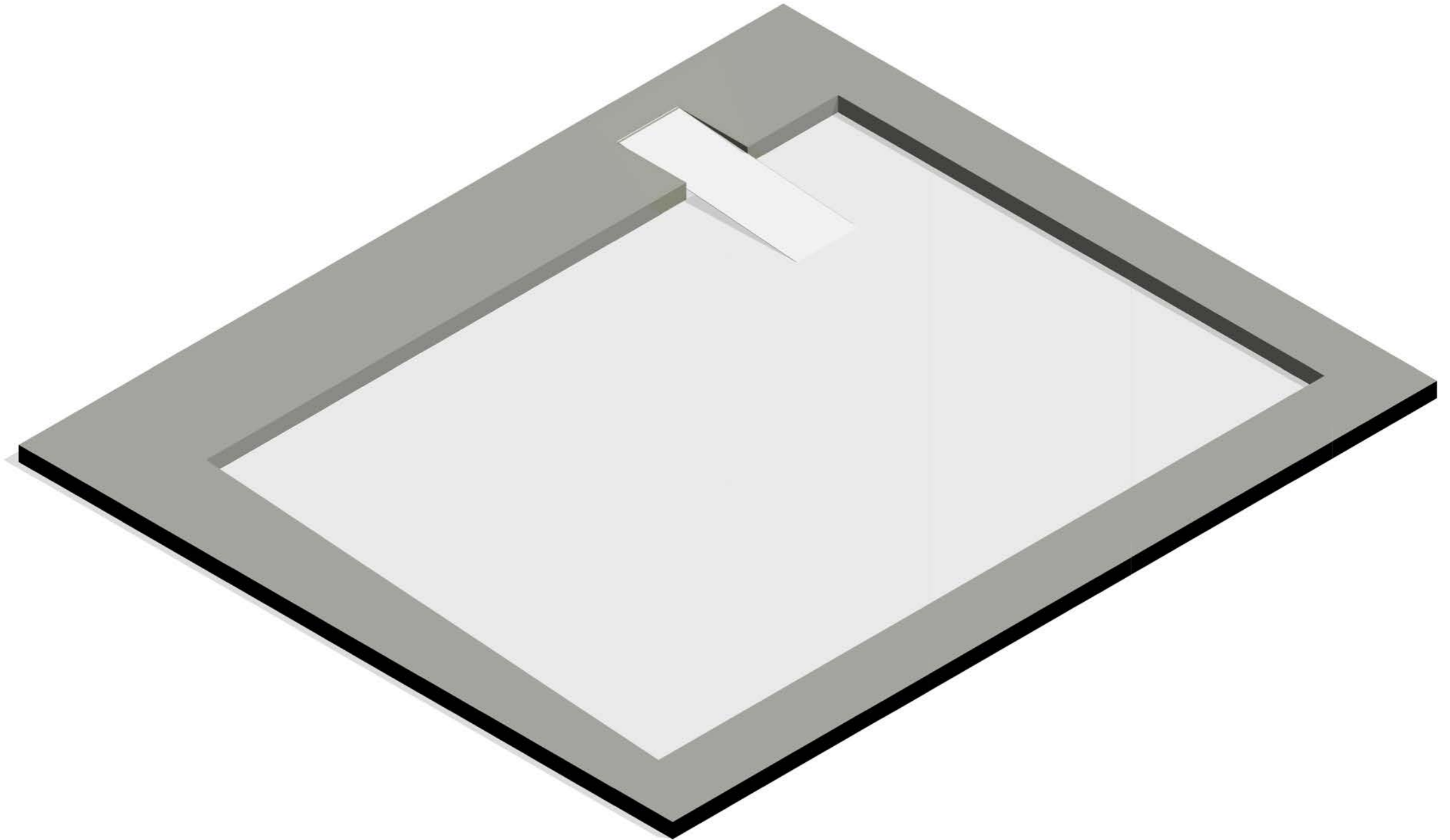




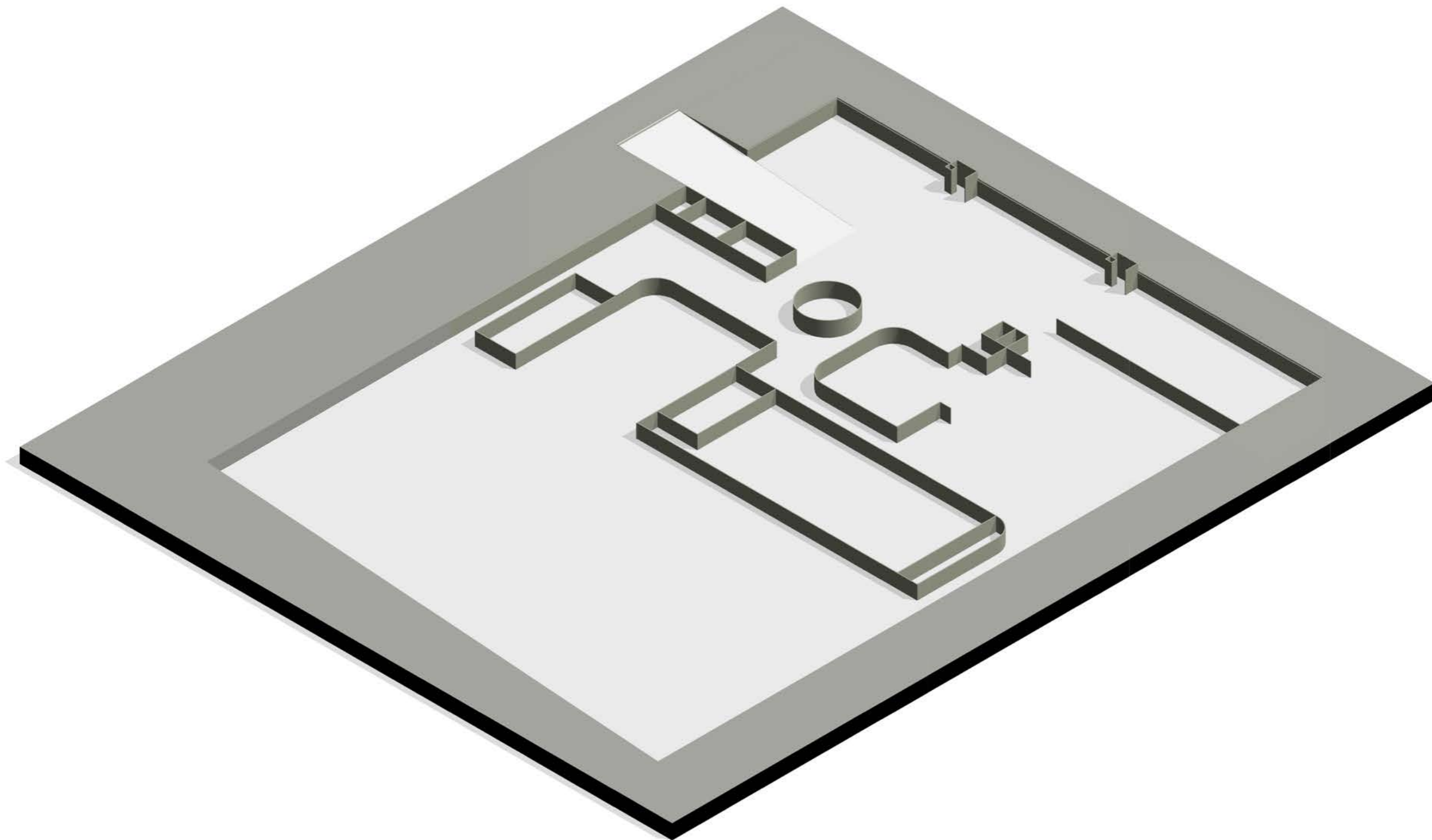
BUILDING SEQUENCE: EXCAVATING



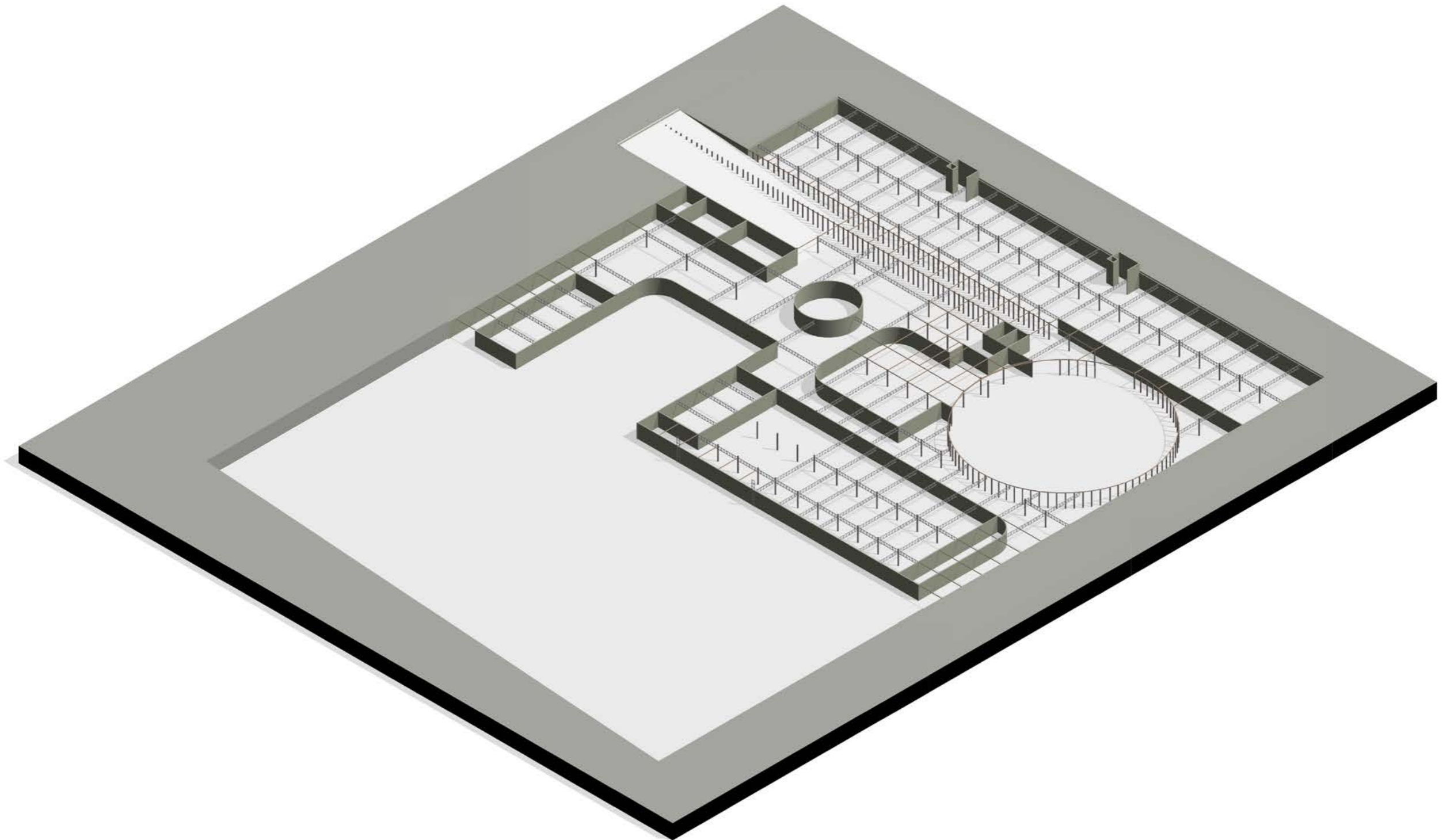
EDGES/RAMP



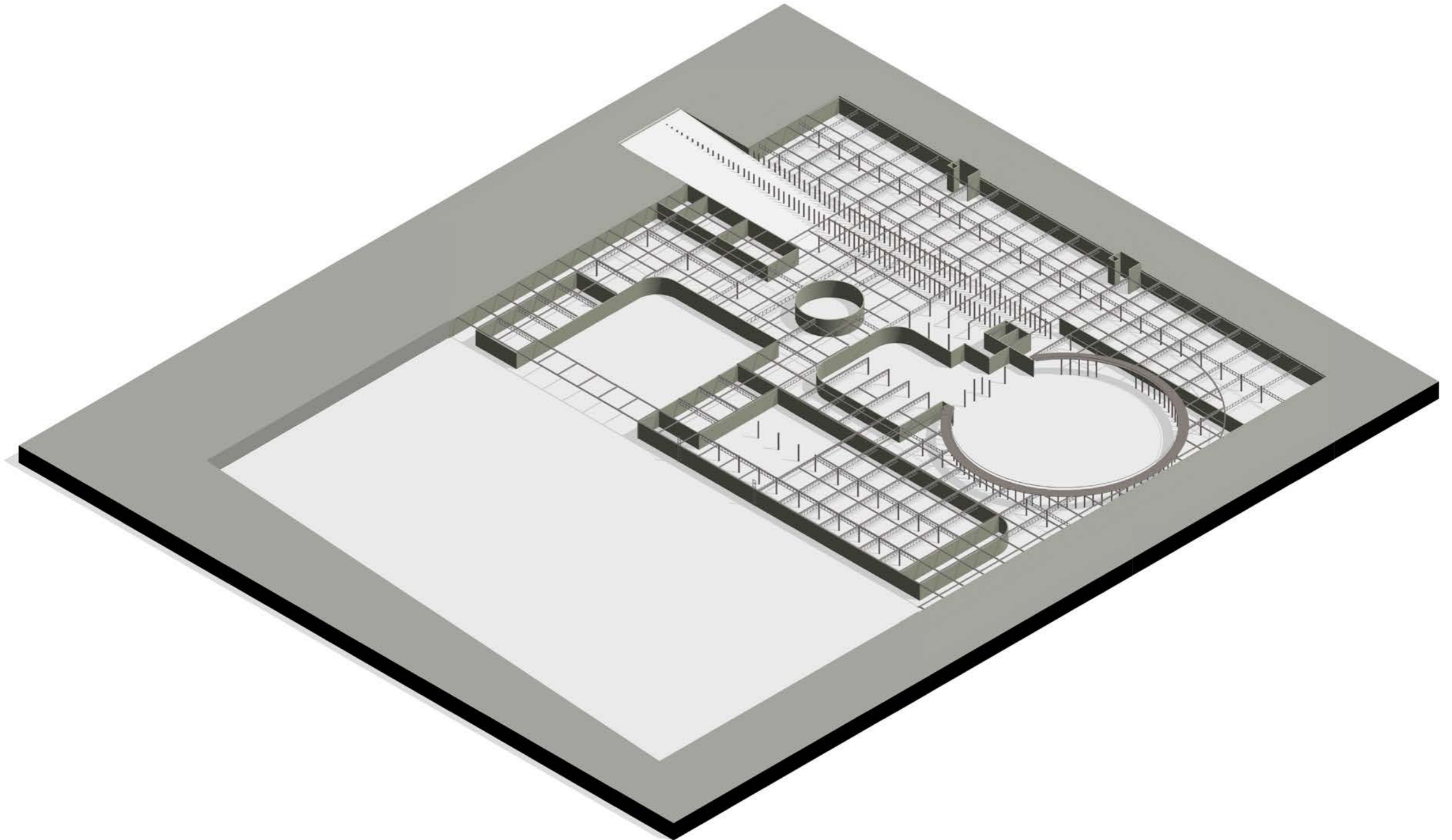
LOAD BEARING WALLS



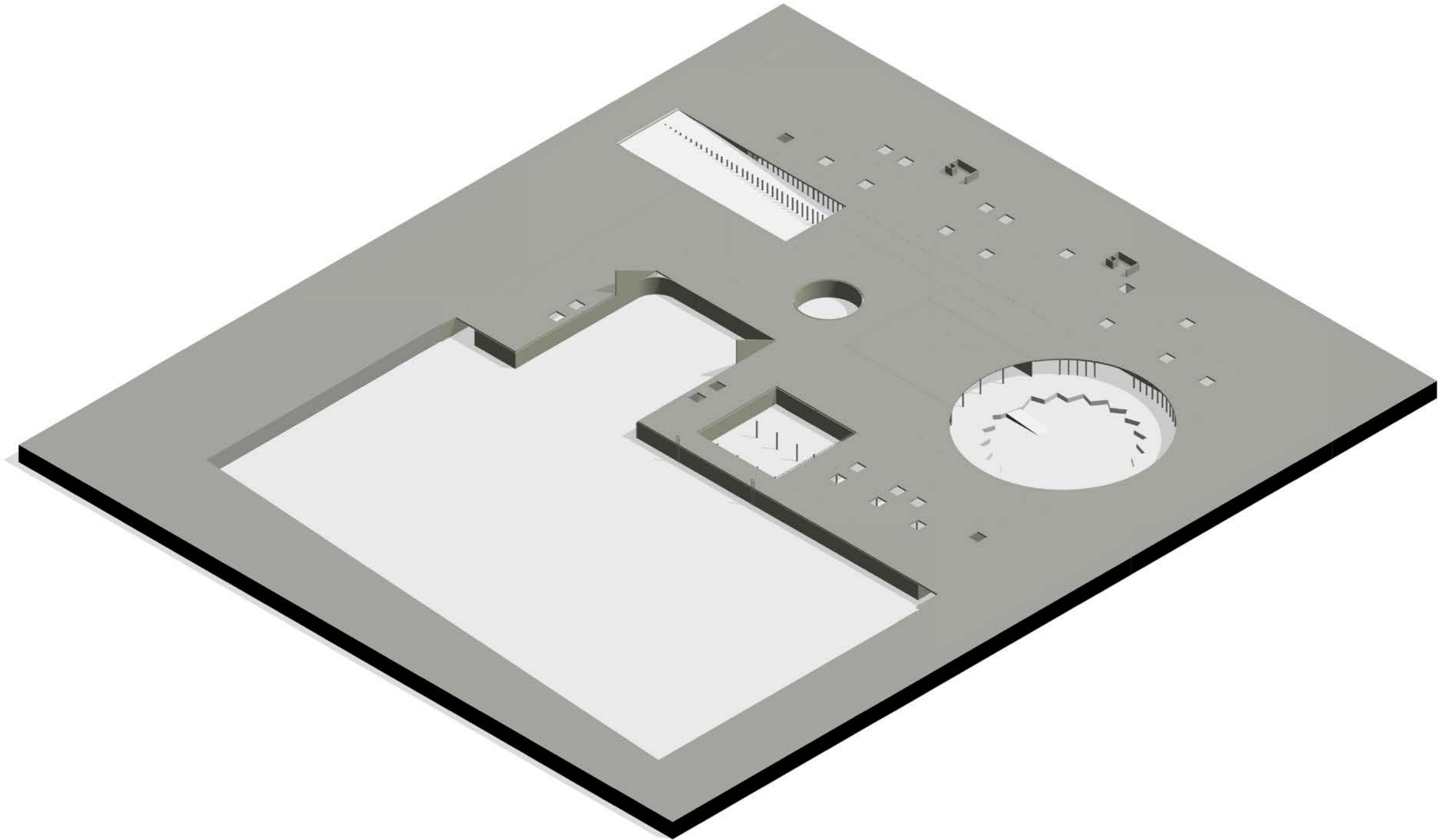
COLUMNS/TRUSSES



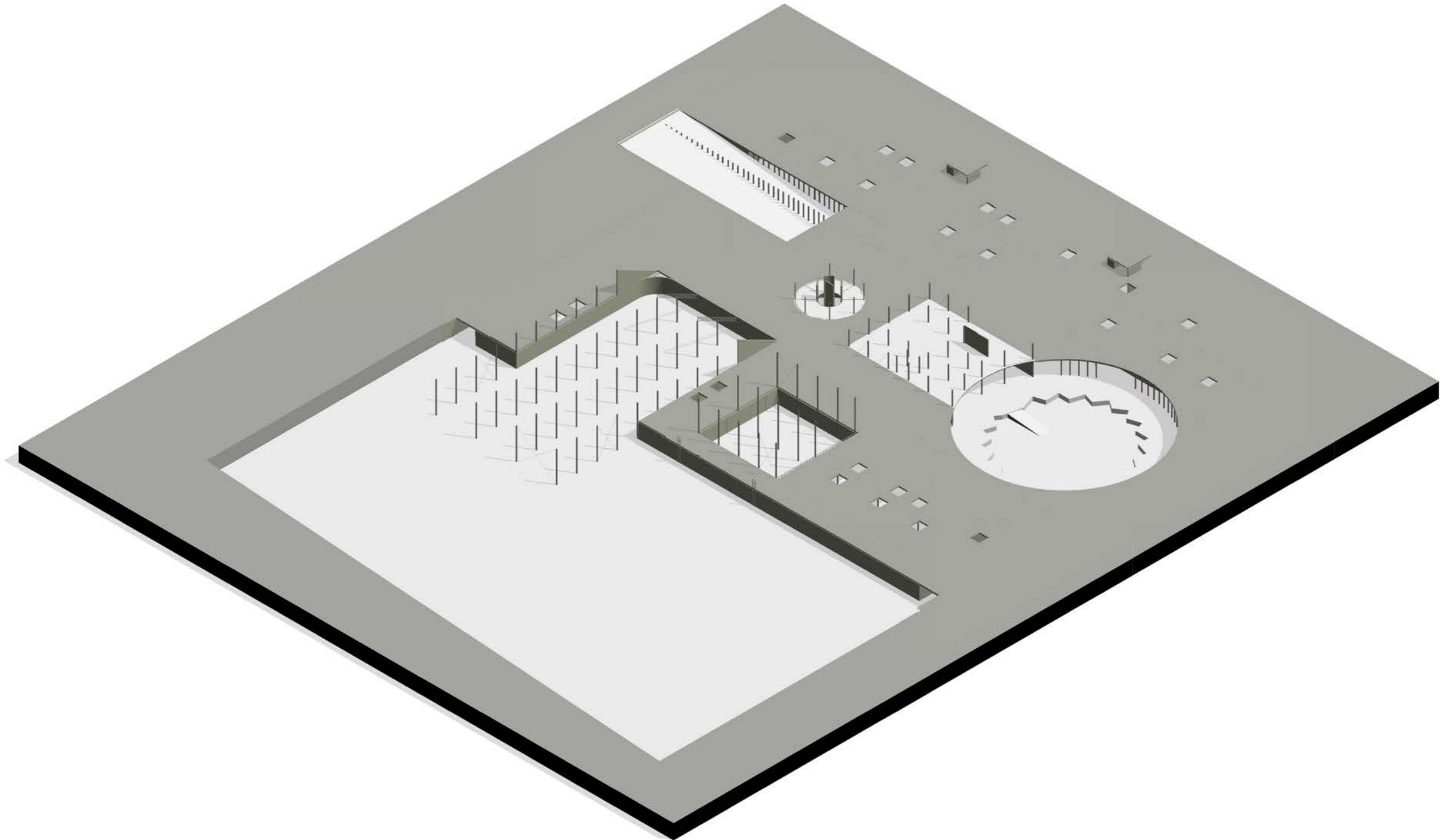
BEAMS



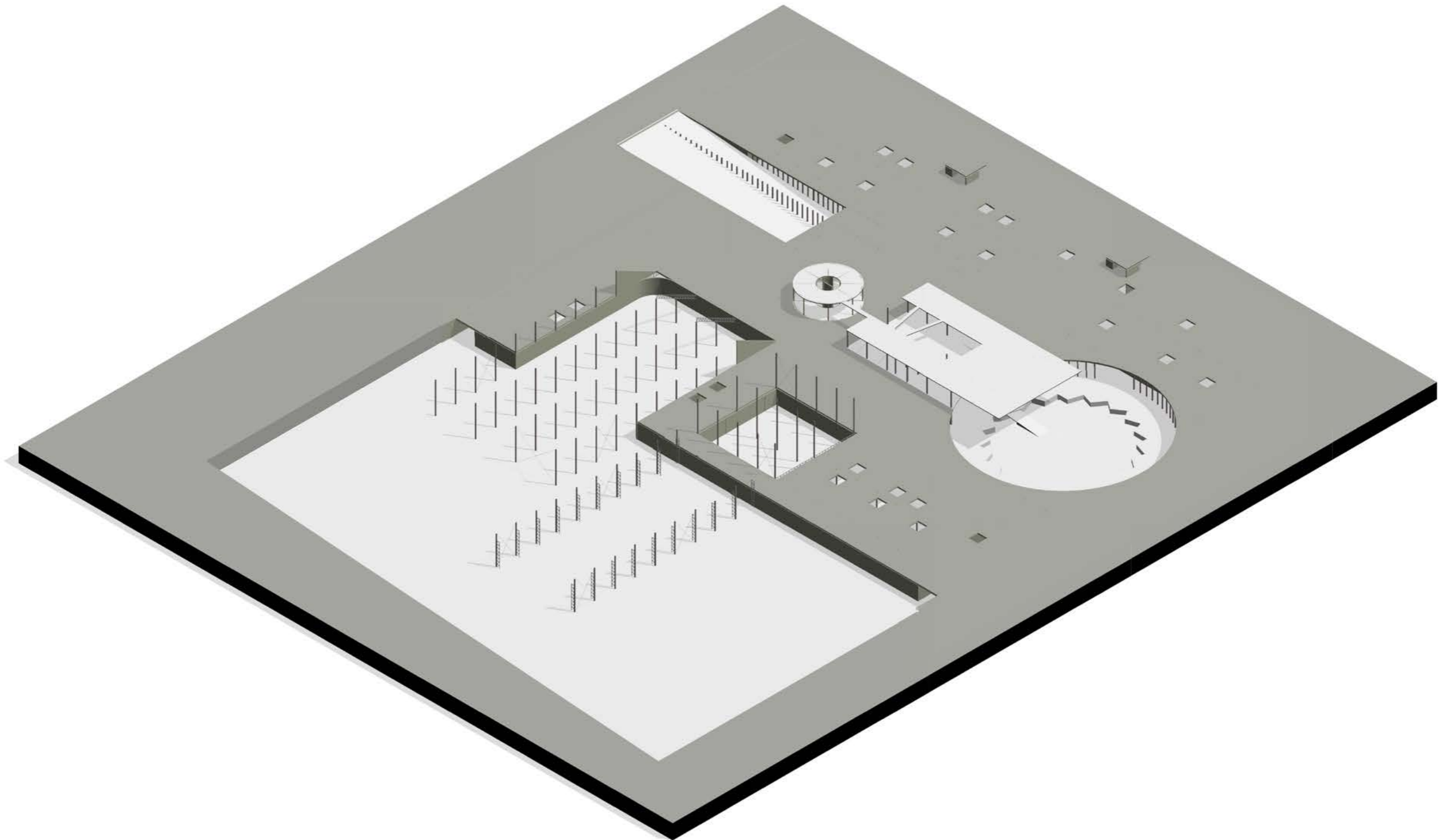
COVERING SLAB



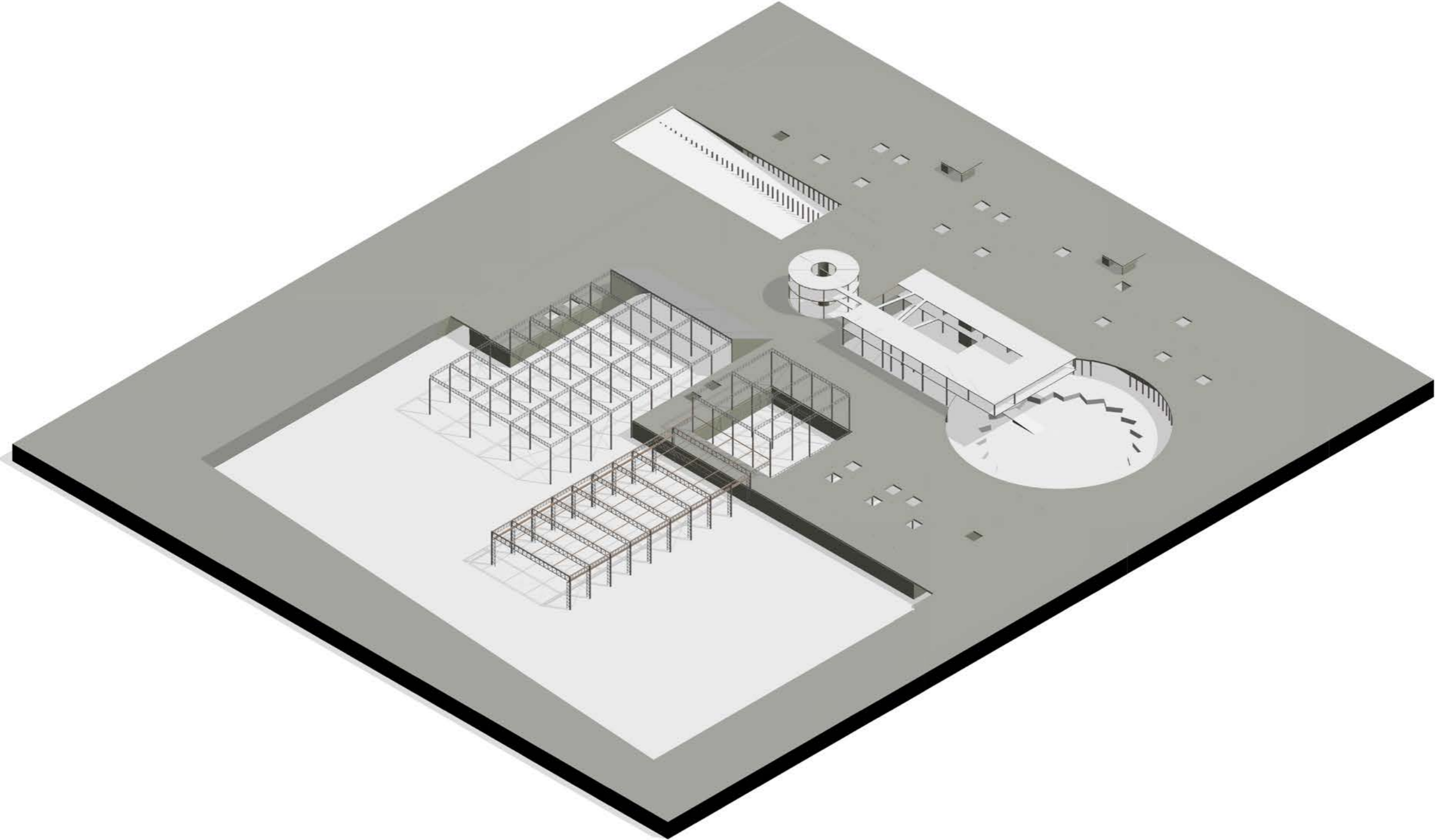
COLUMNS



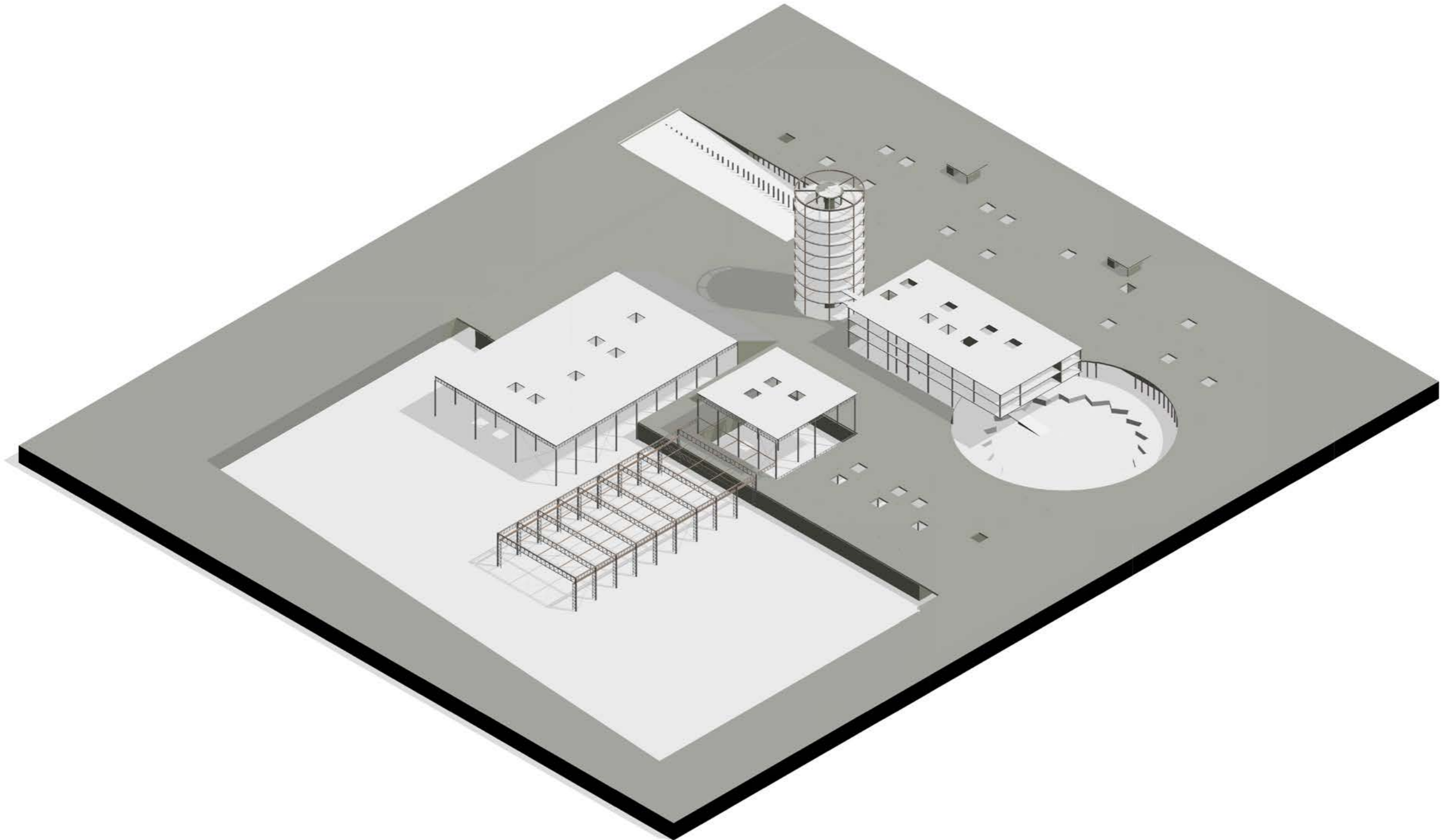
BEAMS/SLABS



BEAMS/TRUSSES

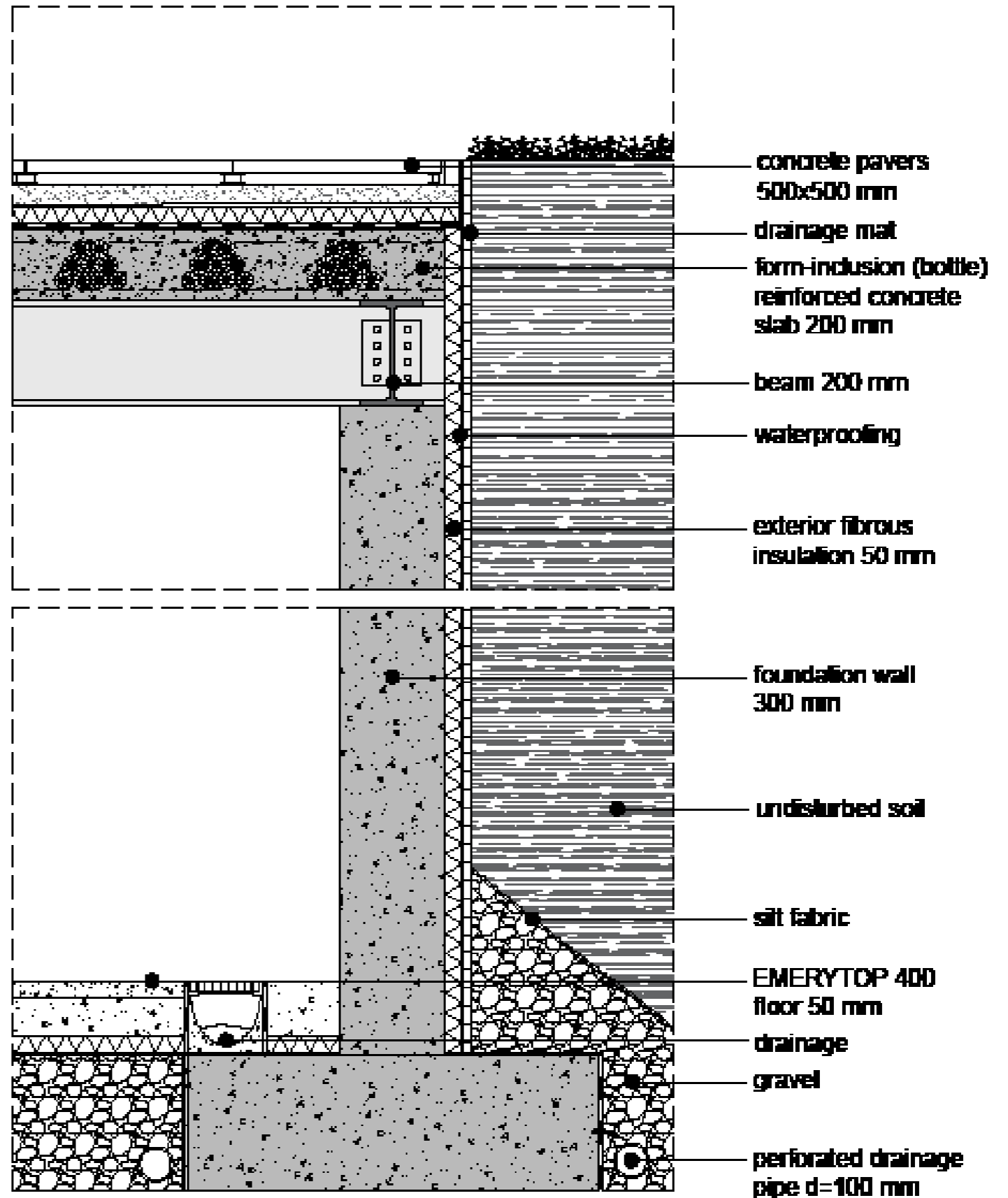


SLABS



DETAIL

ditch - undisturbed
soil joint

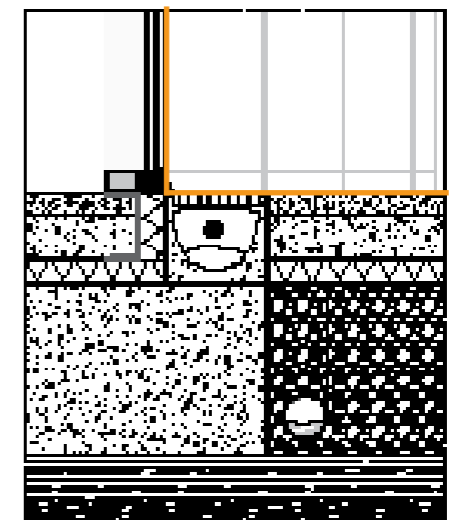
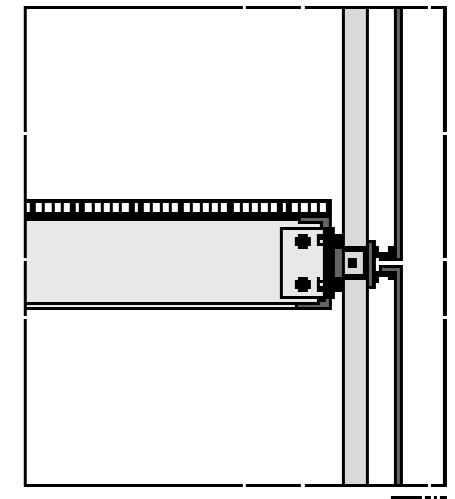
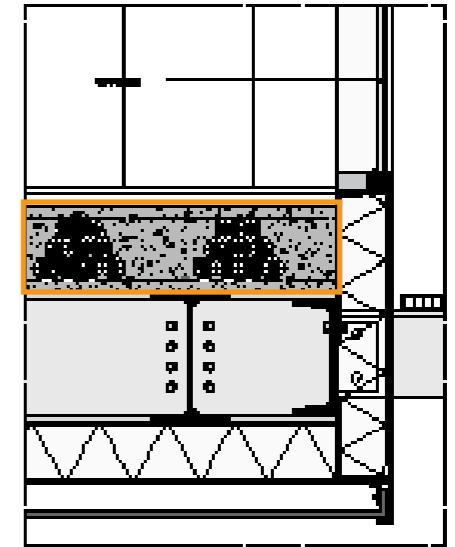
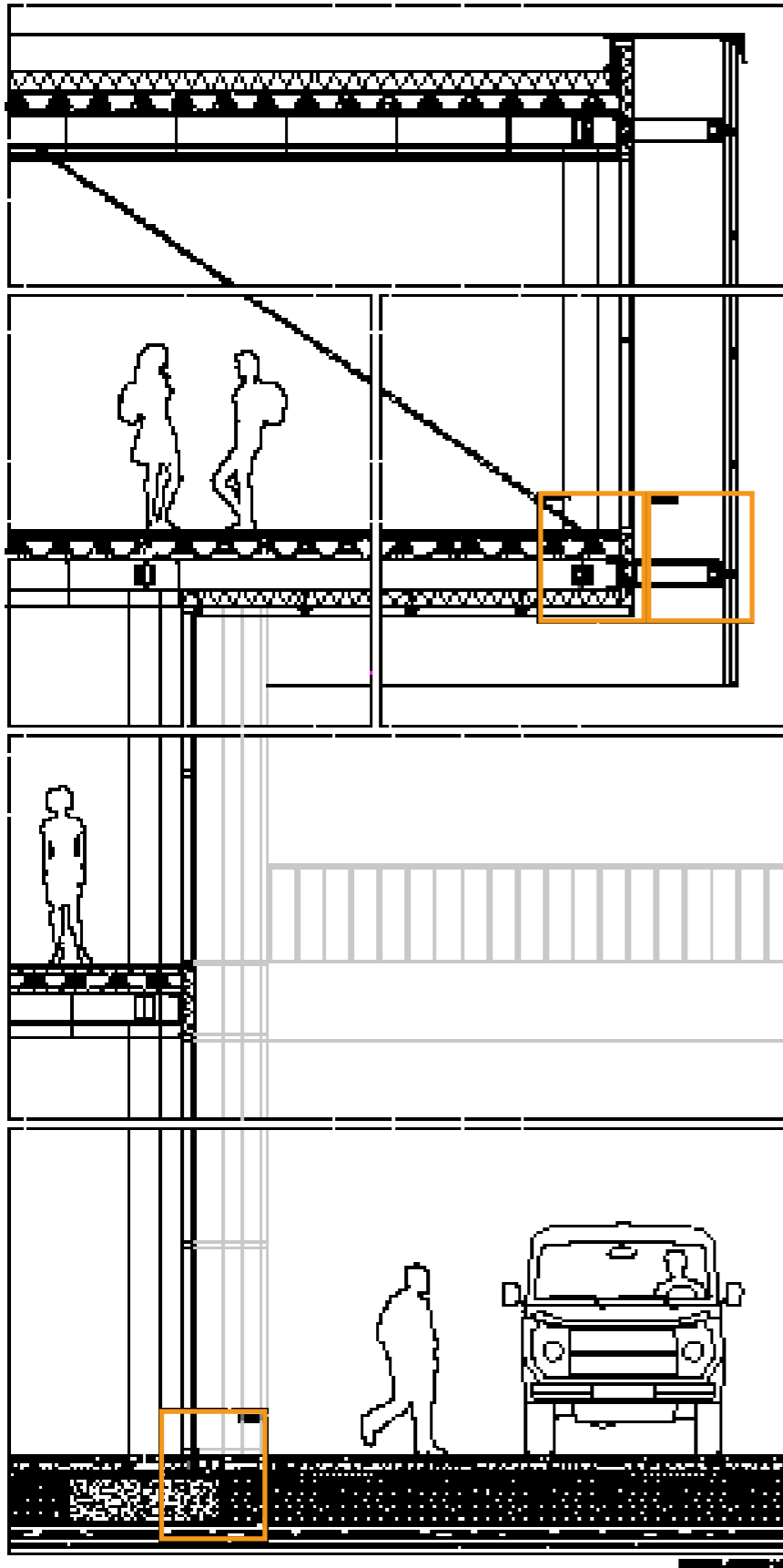


DETAILS

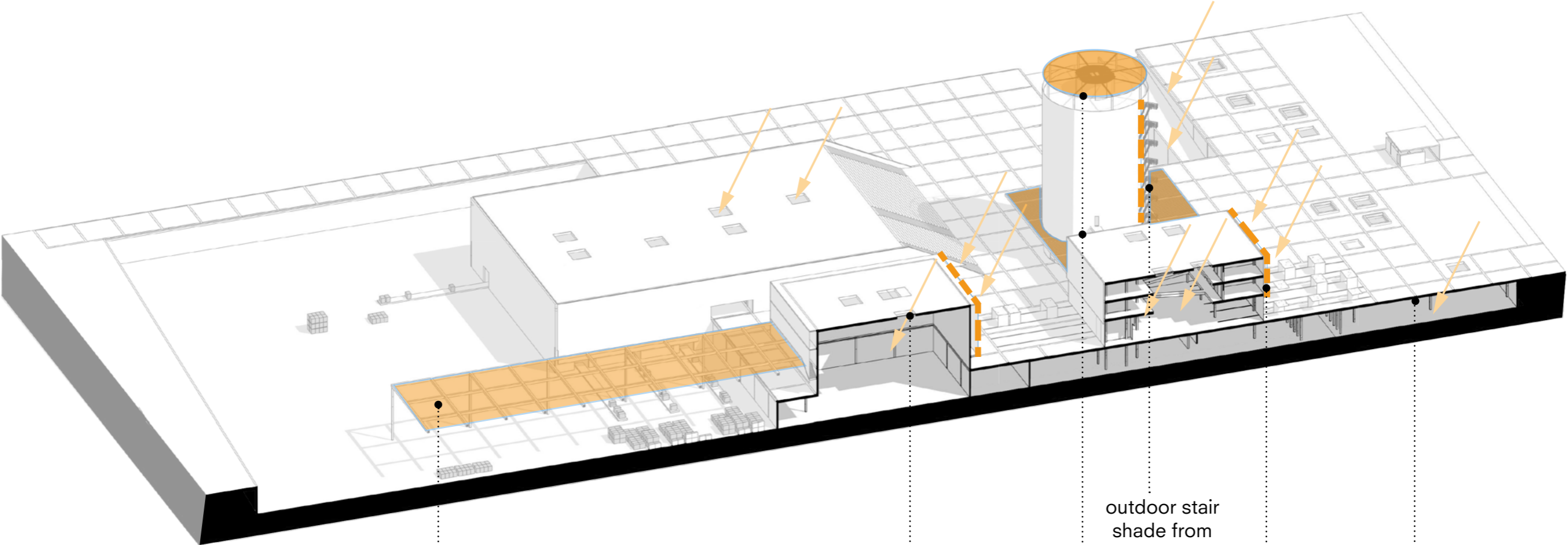
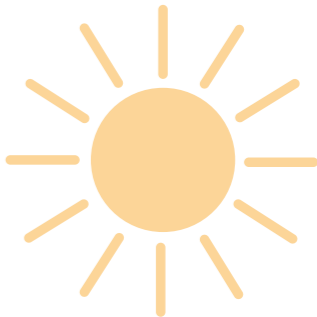
form-inclusion reinforced
concrete slabs

facade support detail

ditch floor -
facade joint



CLIMATE



canopy sunshade

roof windows for natural light

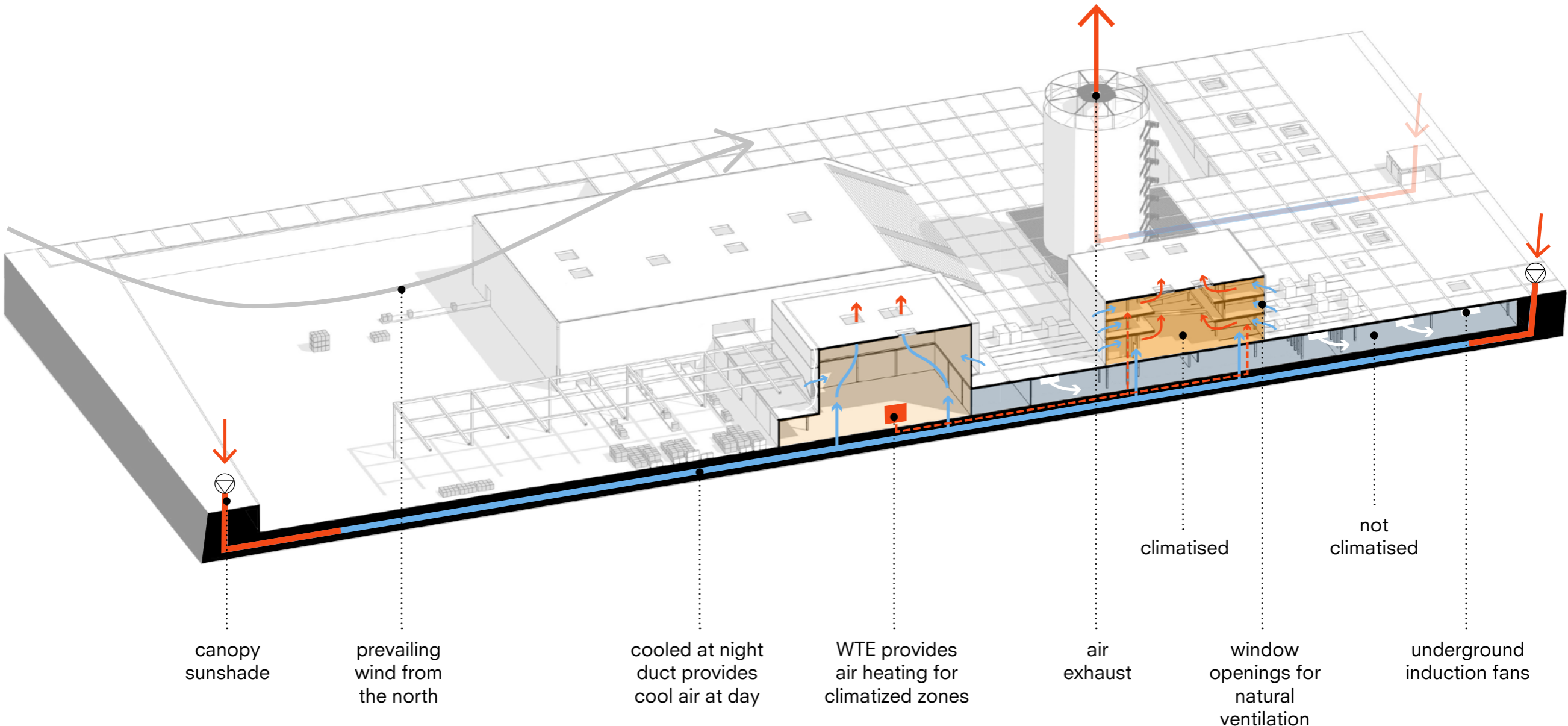
canopy sunshade

outdoor stair shade from south sun

perforated steel facade shading

thermal mass

CLIMATE



canopy sunshade

prevailing wind from the north

cooled at night duct provides cool air at day

WTE provides air heating for climatized zones

air exhaust

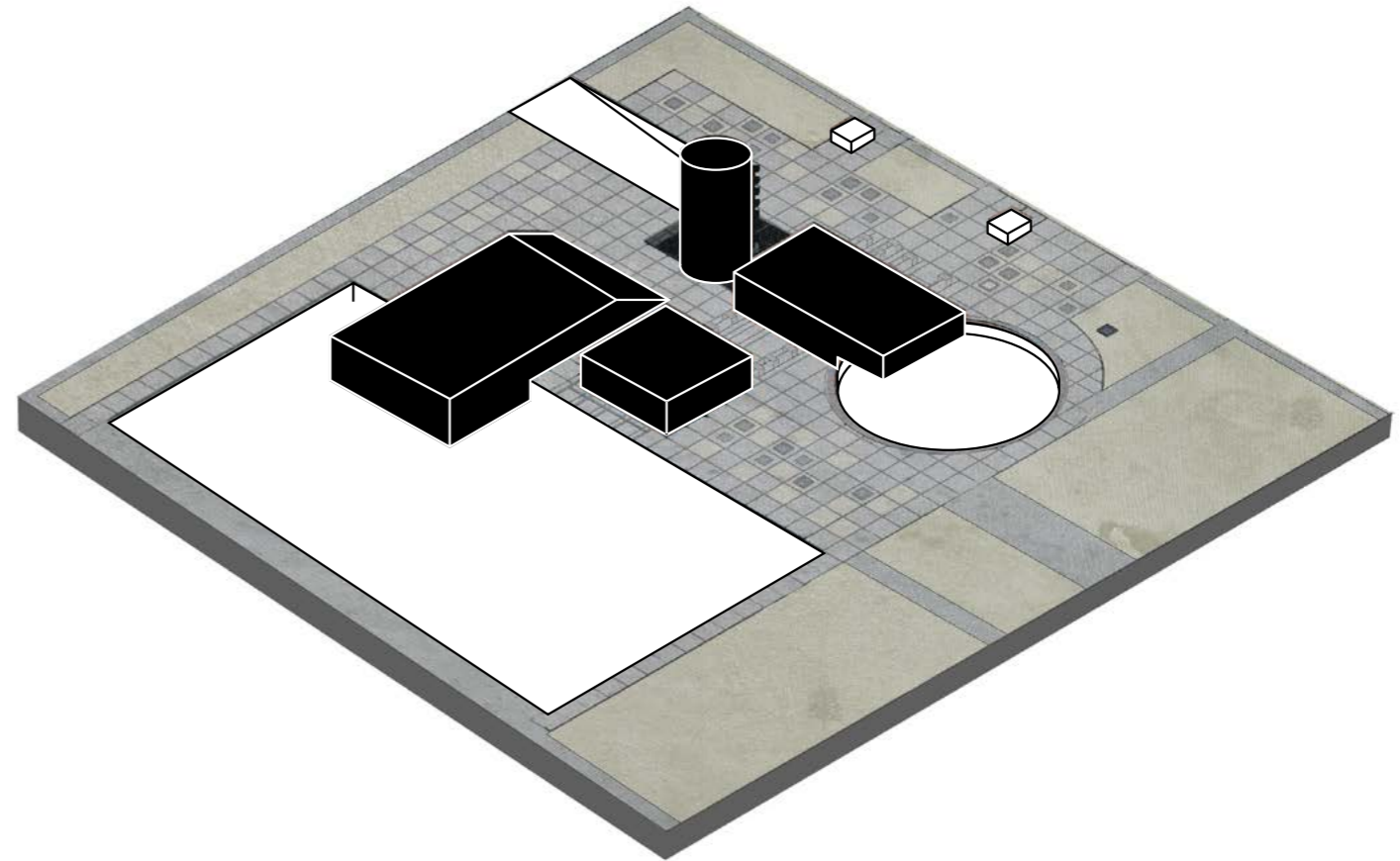
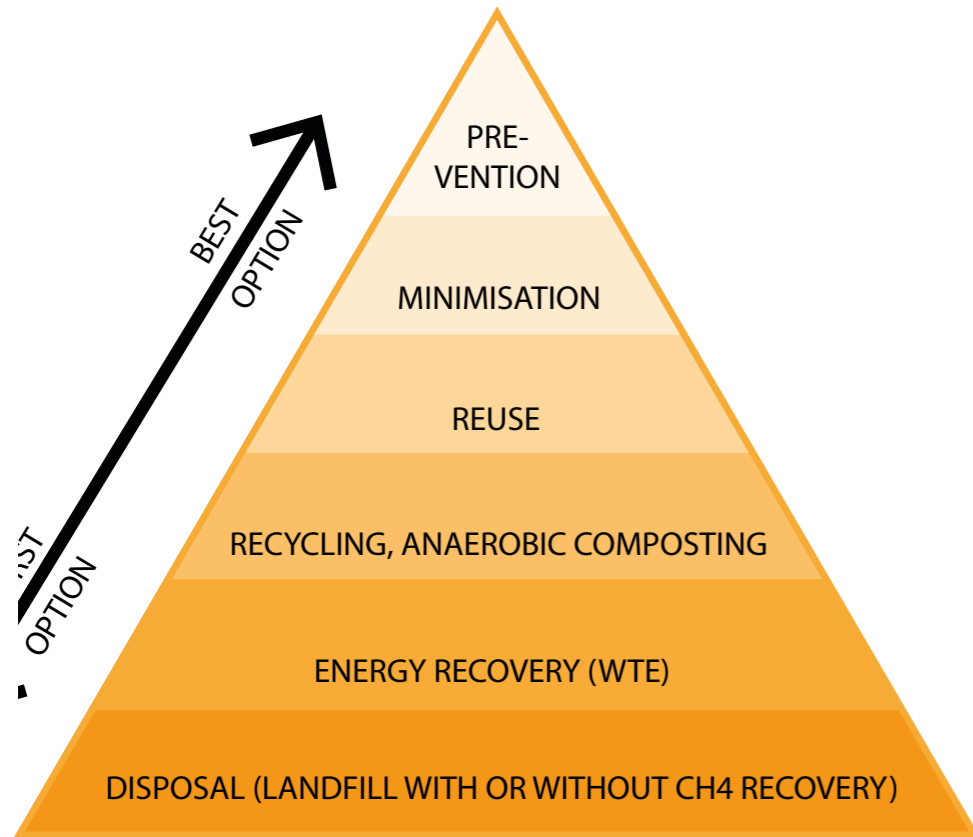
window openings for natural ventilation

underground induction fans

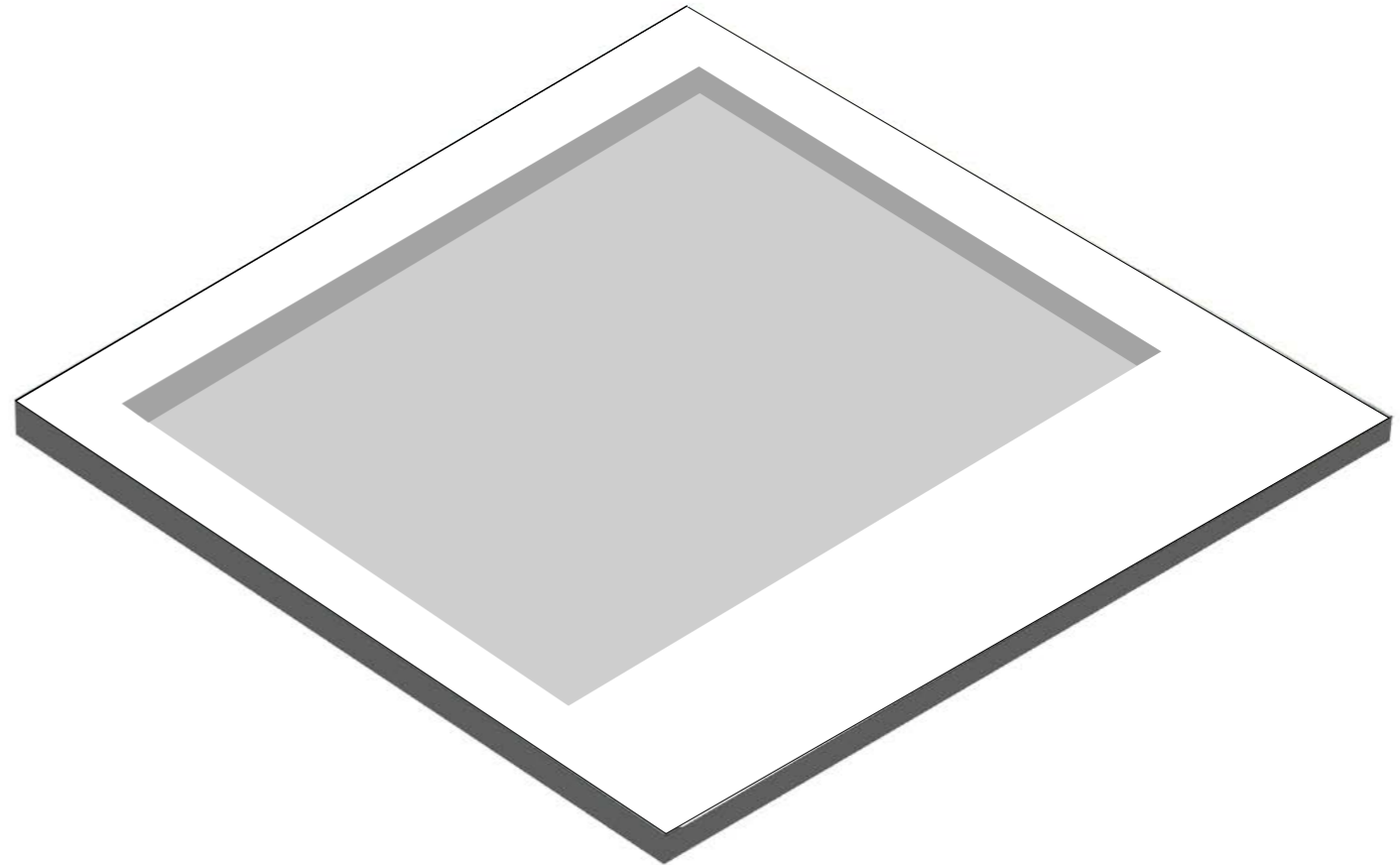
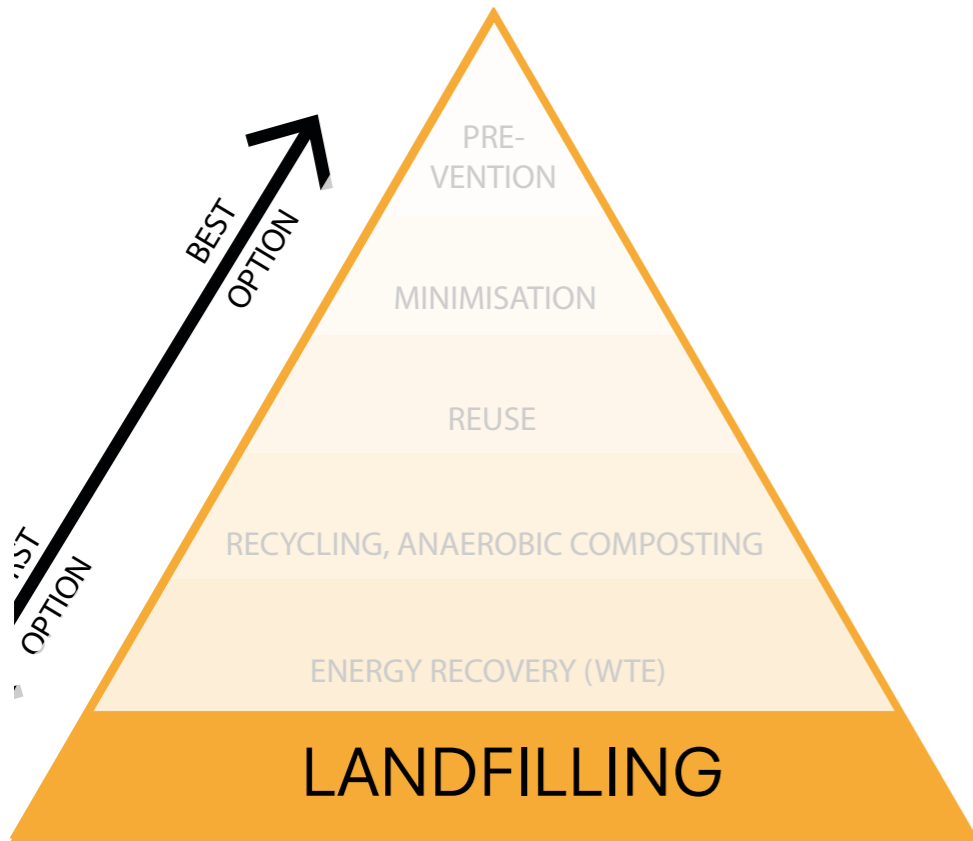
climatized

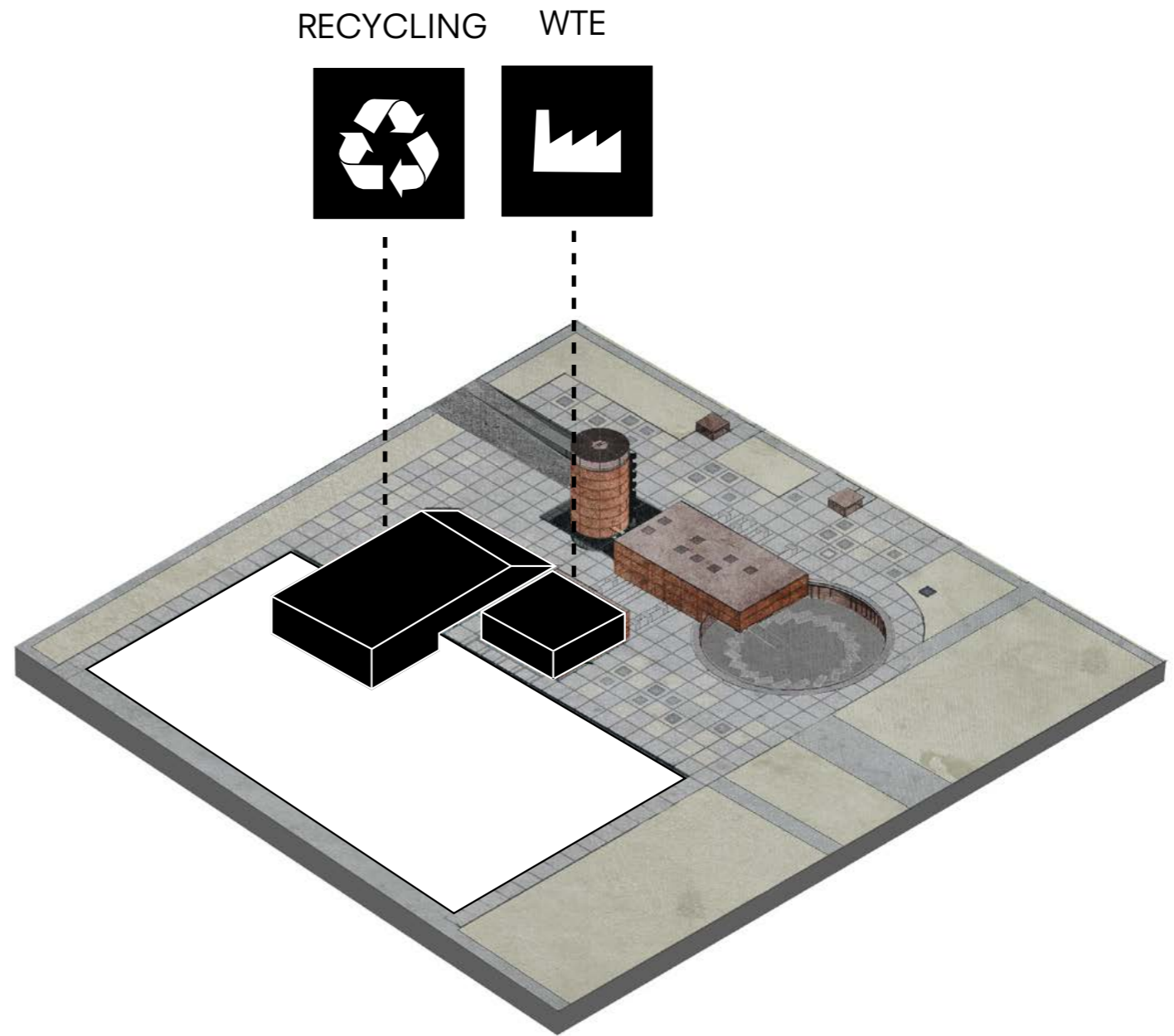
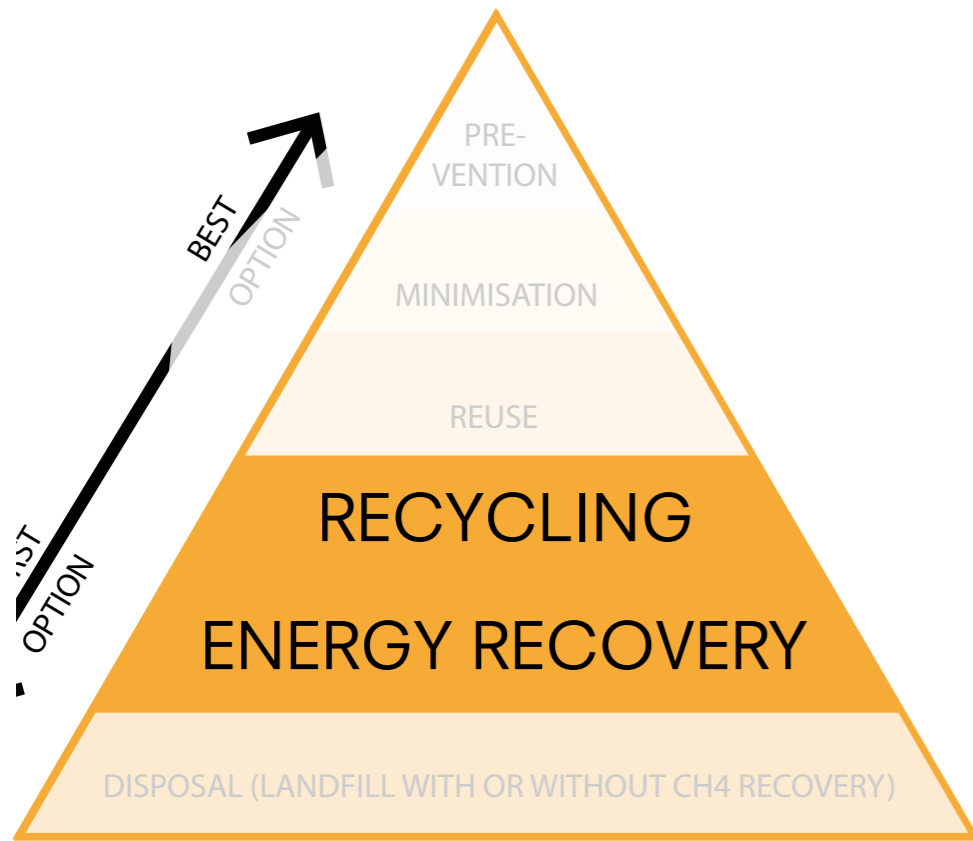
not climatized

BUILDING CONCEPT



LANDFILL MINING

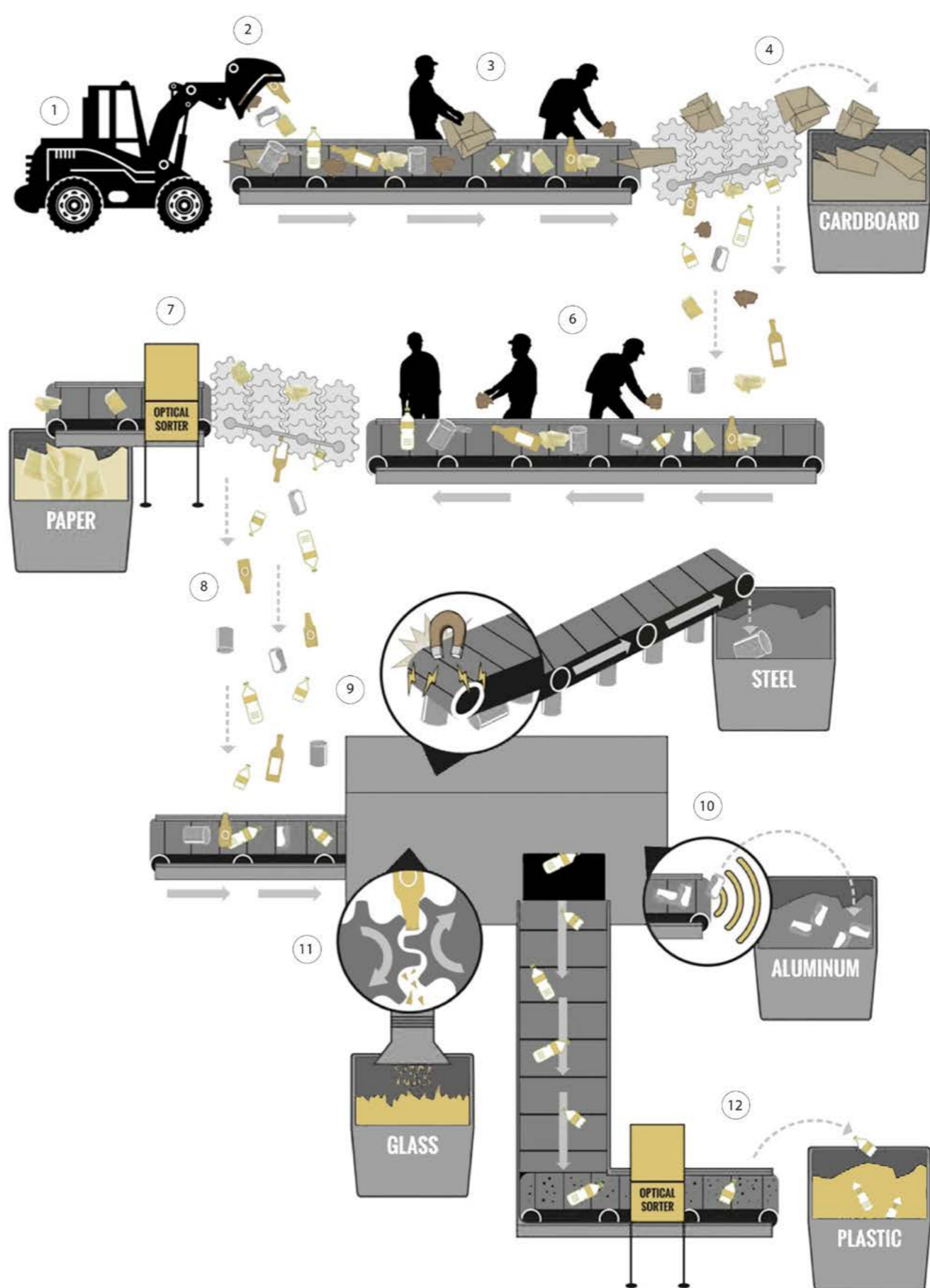




WASTE SORTING FACILITY (MRF)



WASTE SORTING PROCESS



WASTE-TO-ENERGY (WTE)

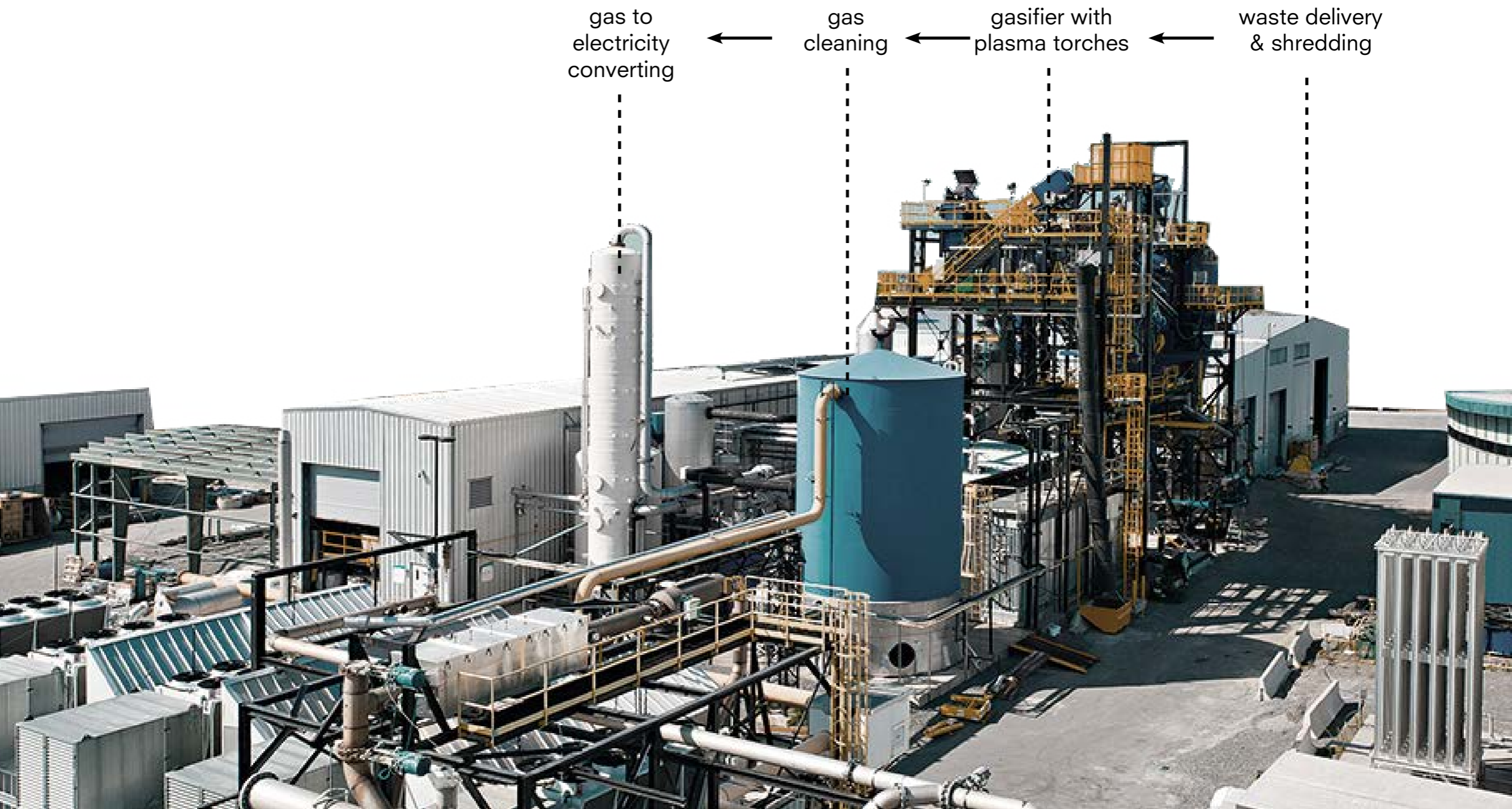
WASTE AS RENEWABLE RESOURCE

“WTE facilities generate ... **clean** electricity. It is the only **renewable** resource that is **constant** and **reliable** as its load power operates **24 hours/day, 365 days/year.** ”

> Energy Recovery Council



PLASMA GASIFICATION

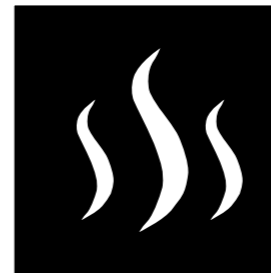


PLASMA GASIFICATION

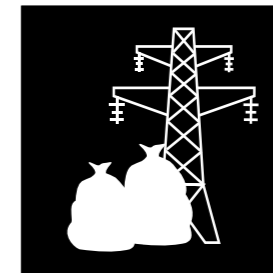
MISCONCEPTIONS



POLLUTION



ODORS



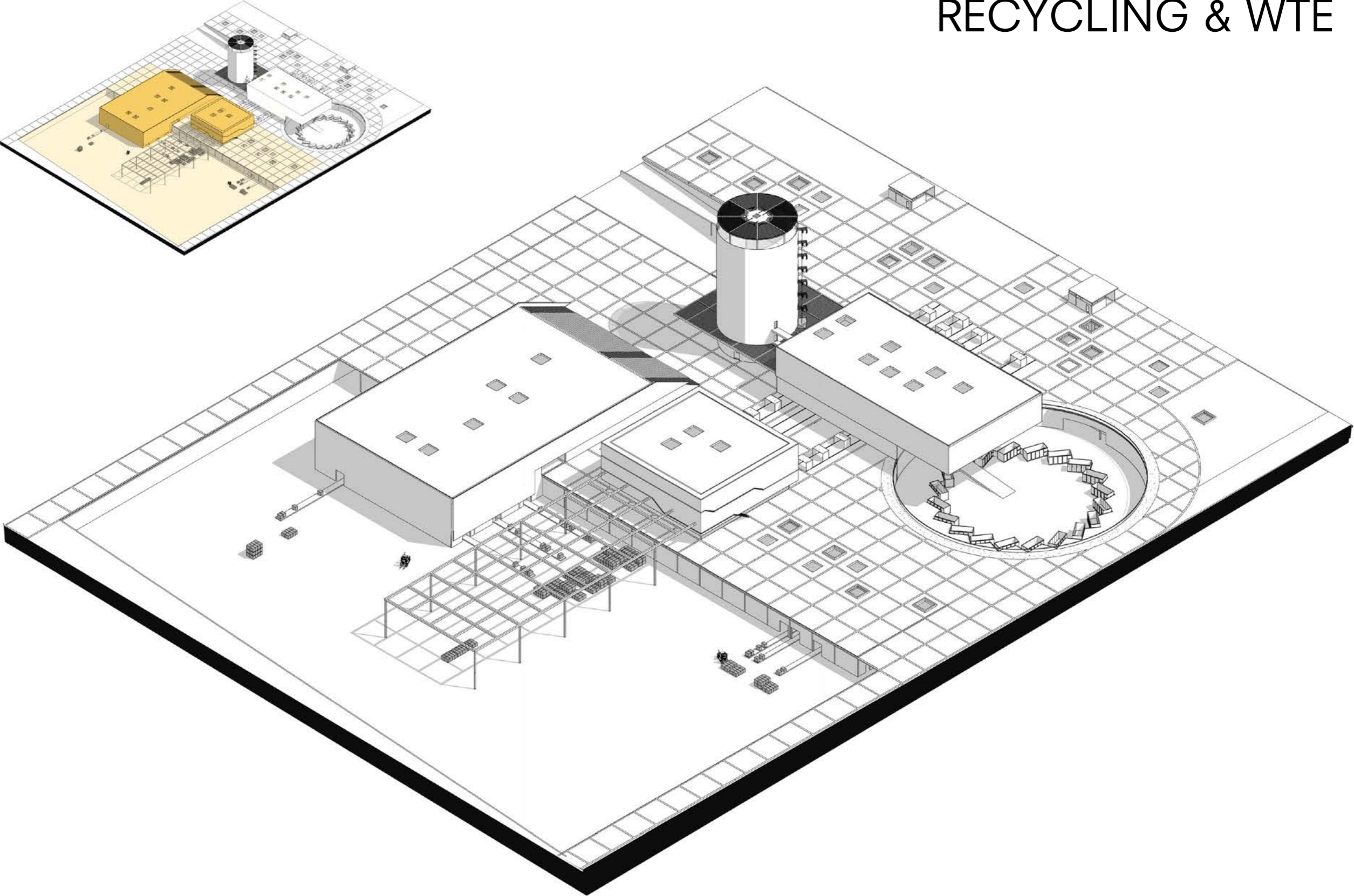
'DIRTY ENERGY'



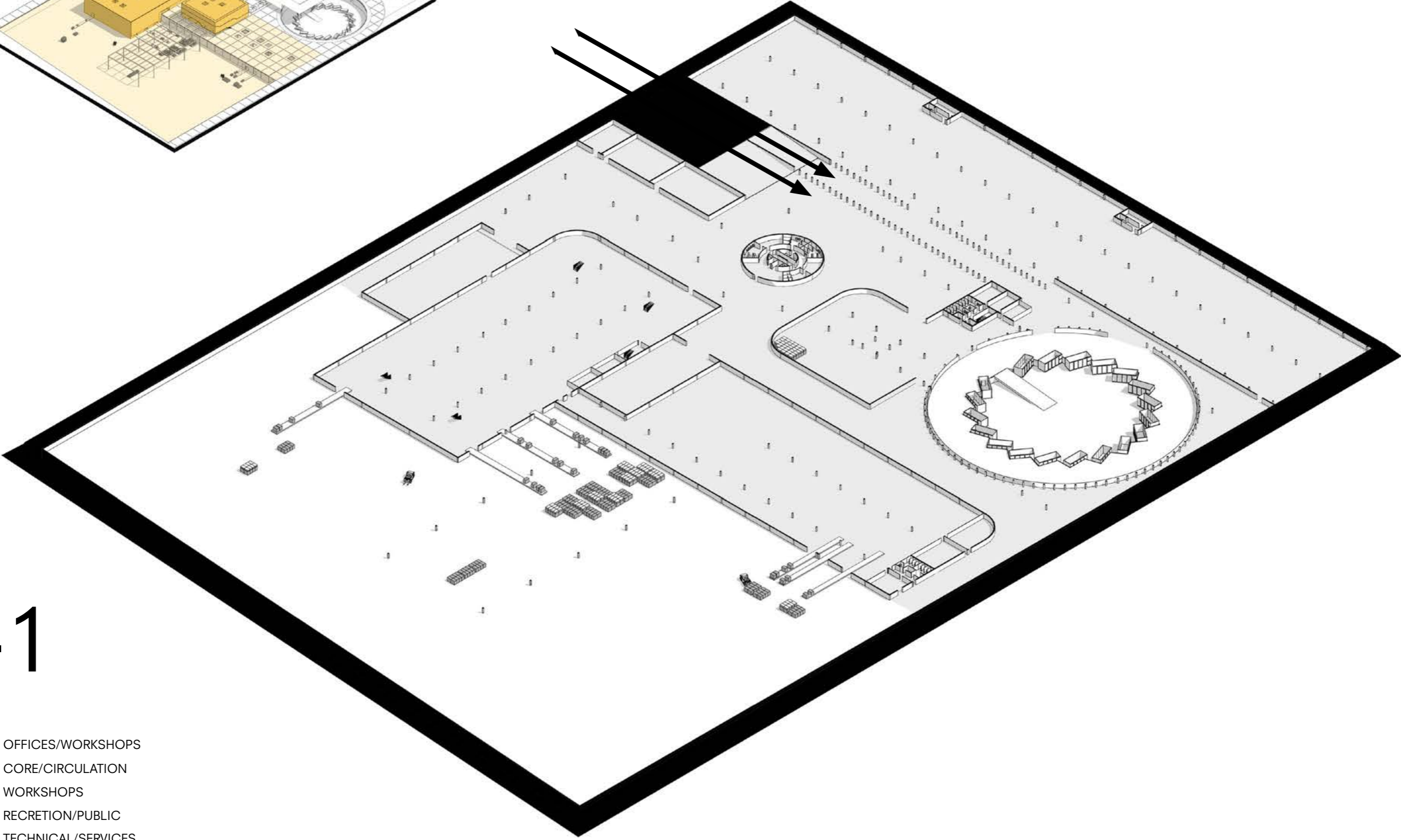
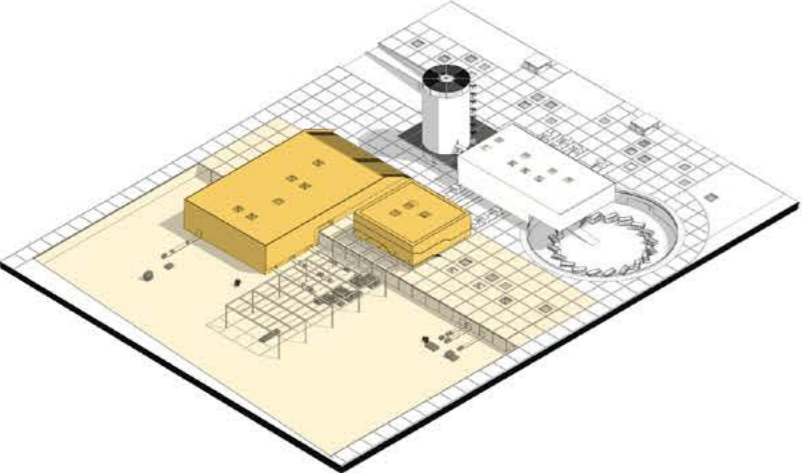
HEALTH RISK



RECYCLING & WTE



RECYCLING & WTE OPENINGS

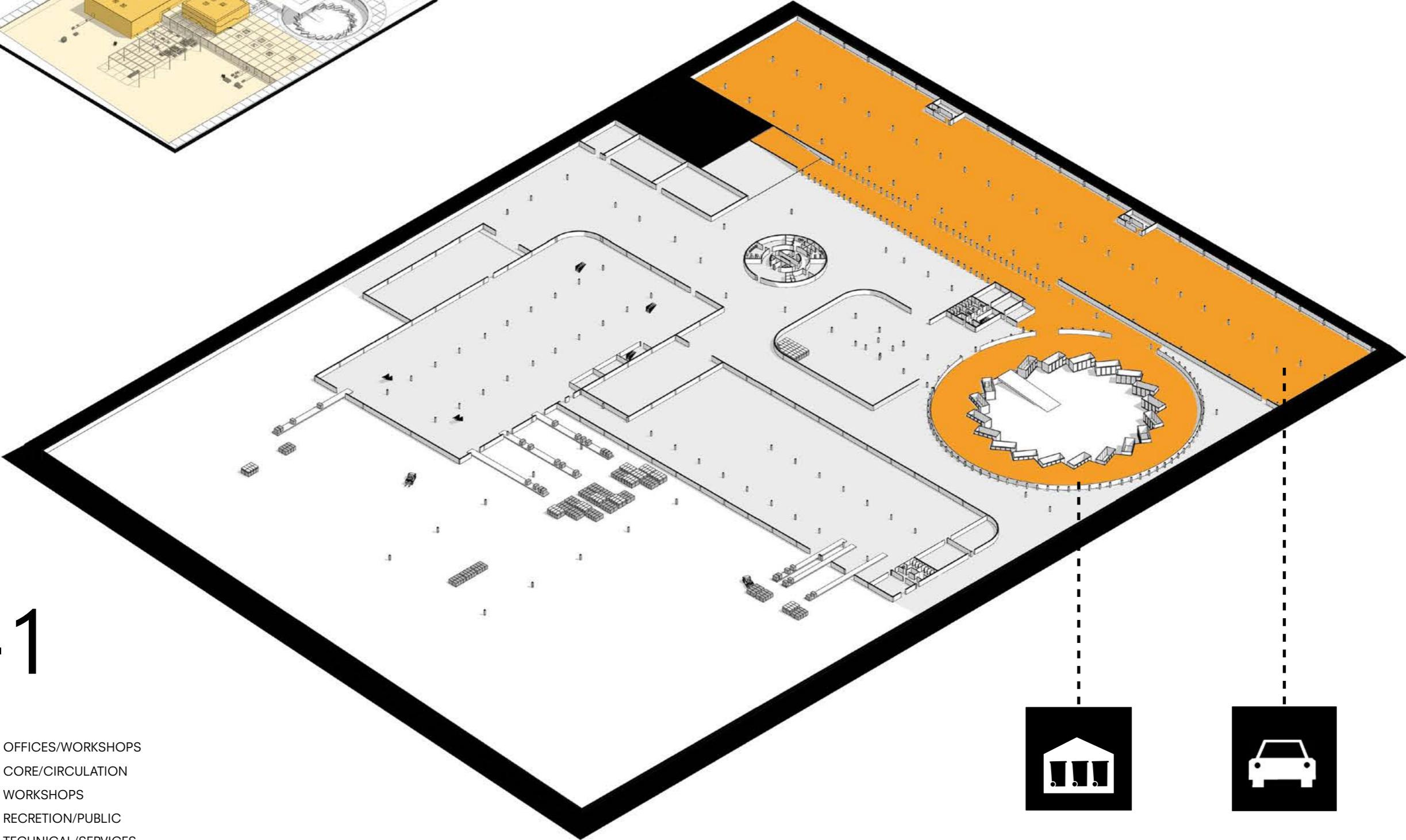
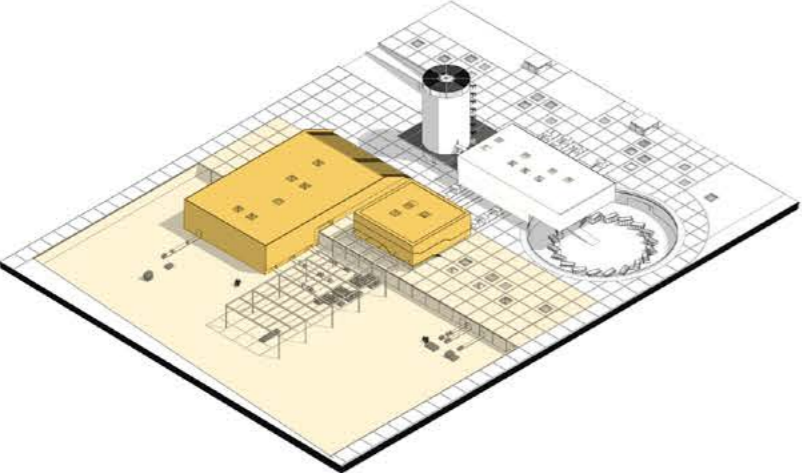


-1

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

RECYCLING & WTE

ACCESSIBLE FOR PUBLIC



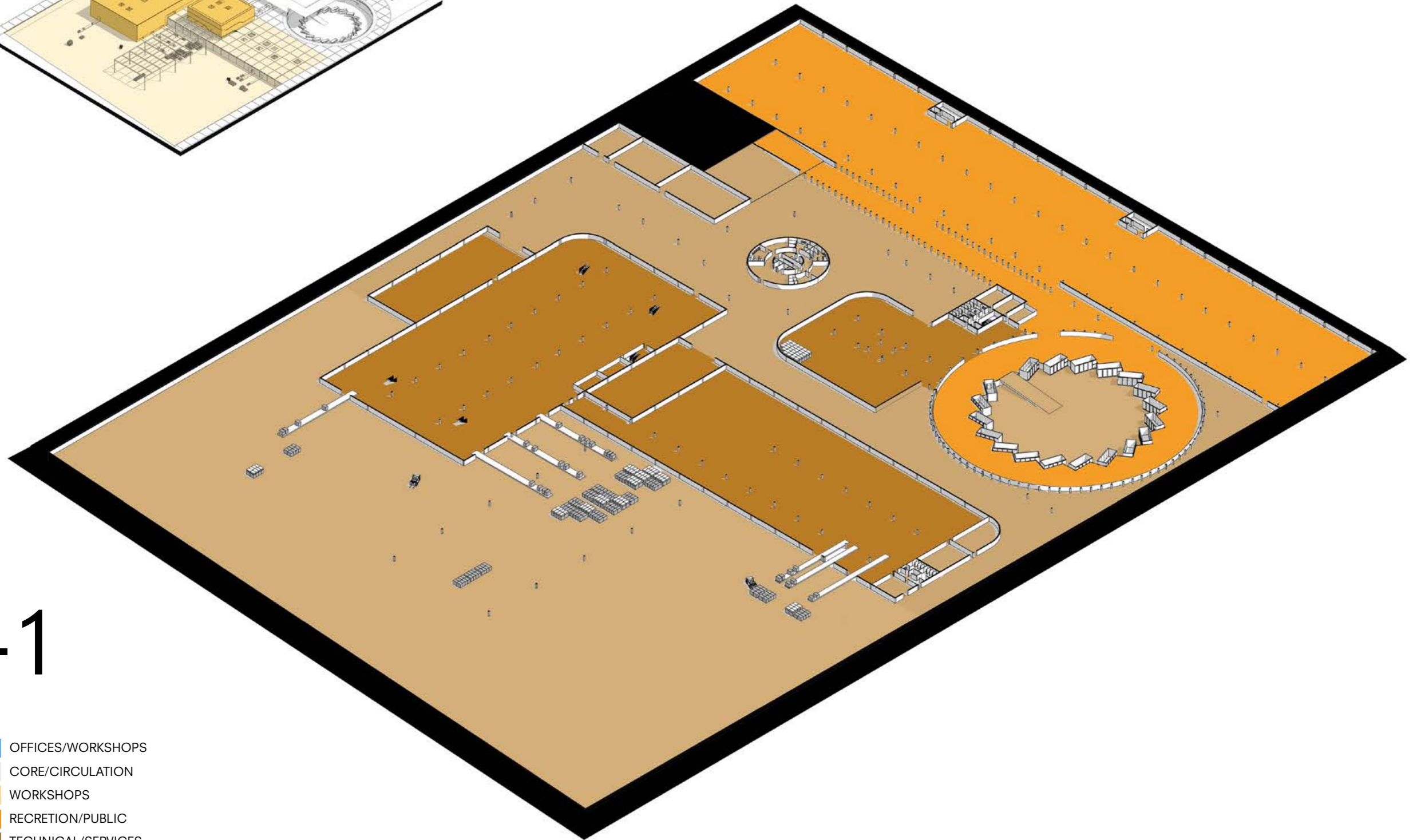
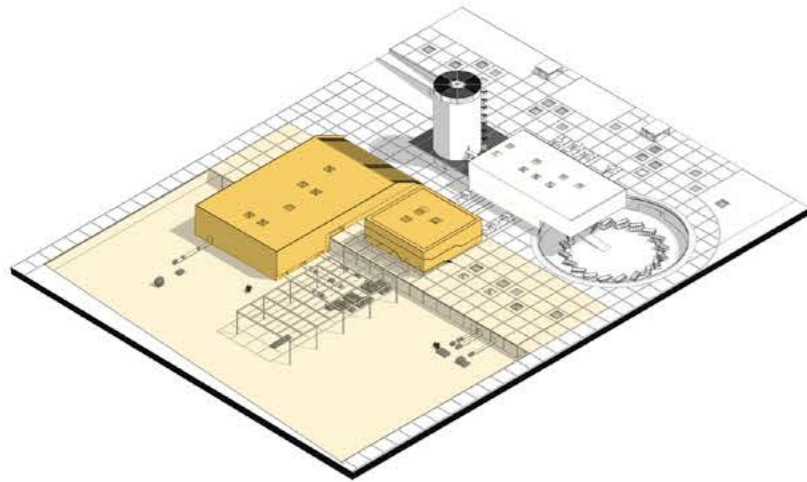
-1

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES



RECYCLING & WTE

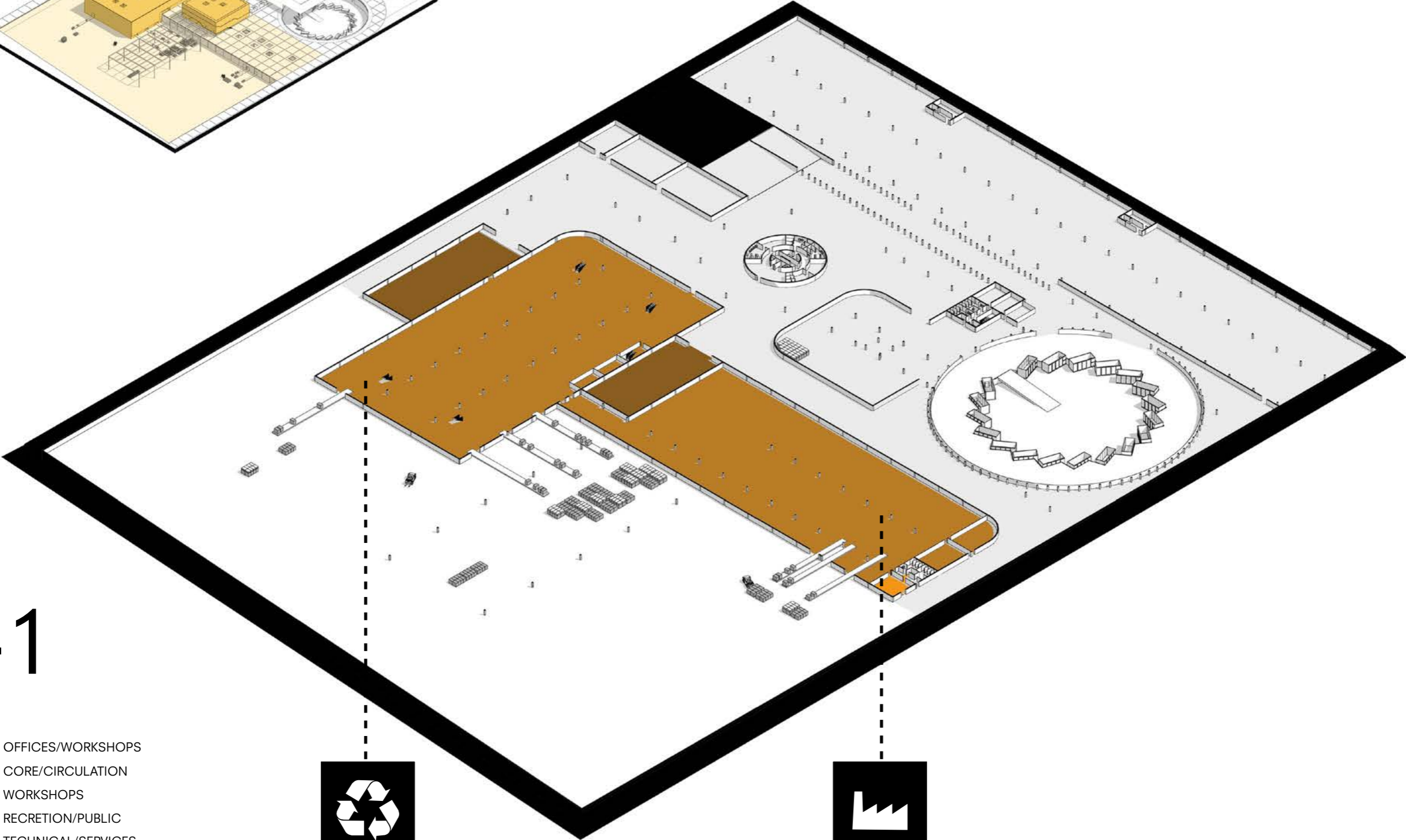
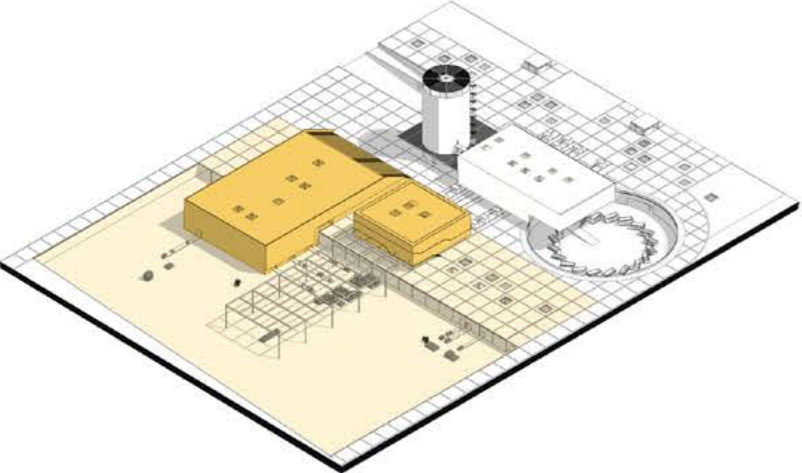
ACCESSIBLE - NOT ACCESSIBLE



-1

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

RECYCLING & WTE

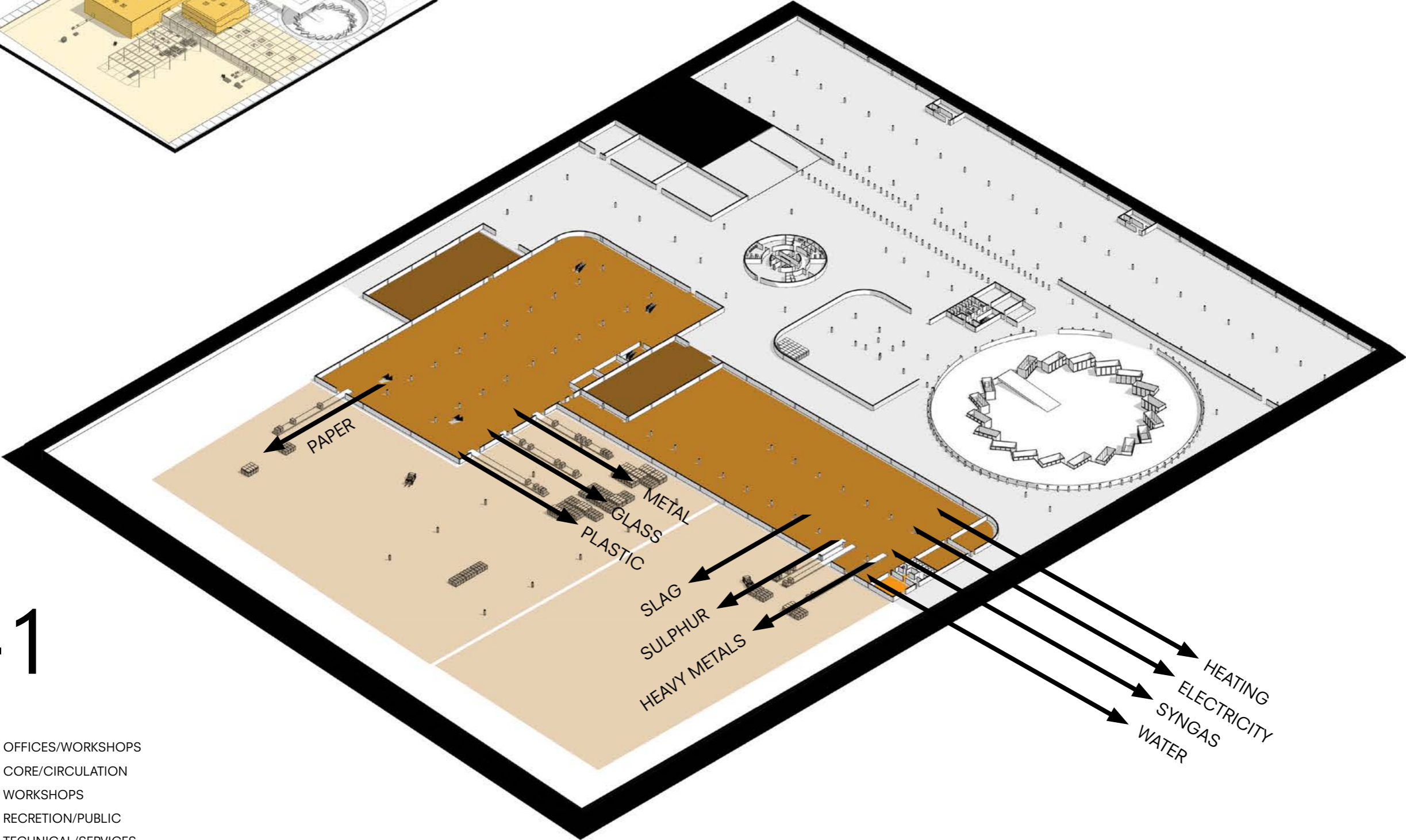
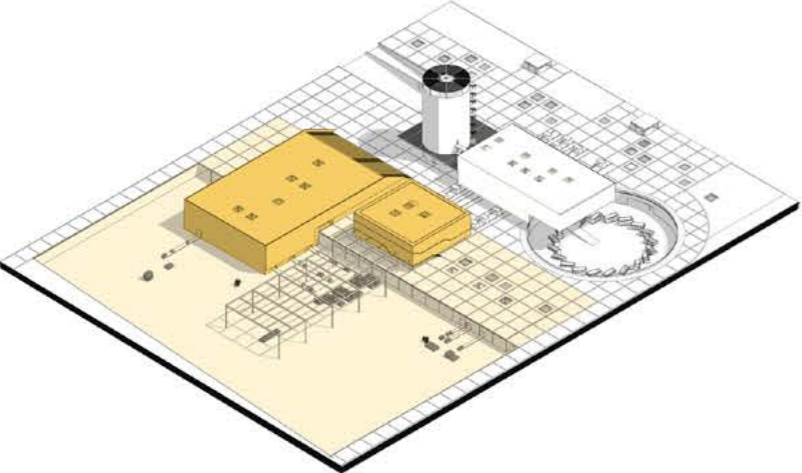


-1

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES



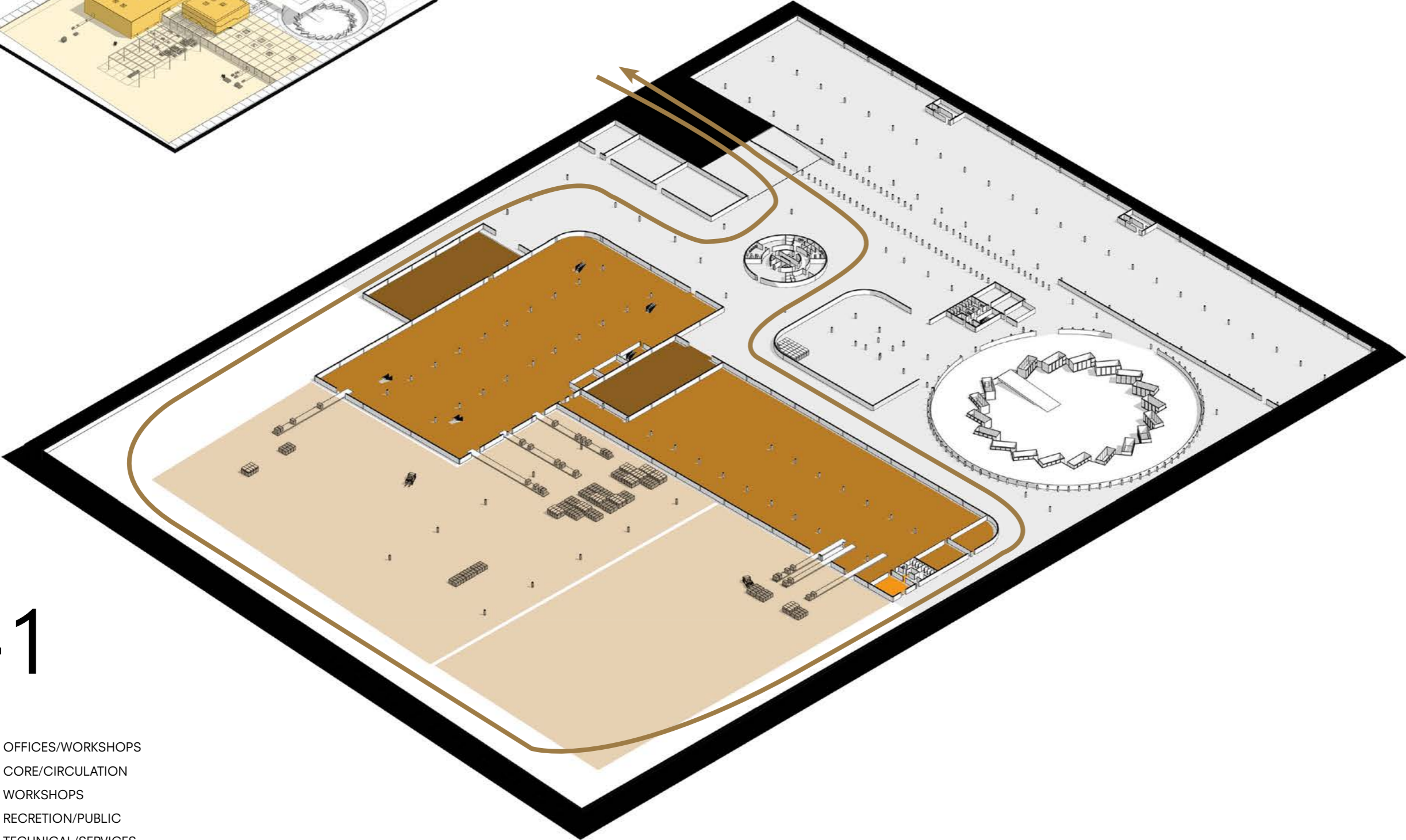
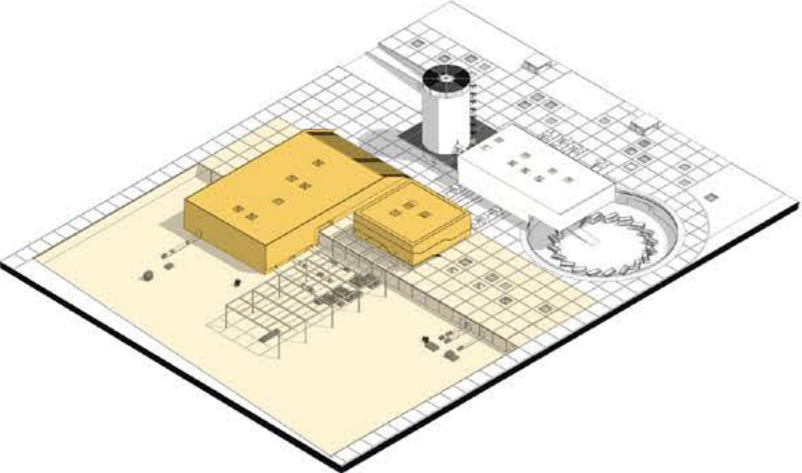
RECYCLING & WTE



-1

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

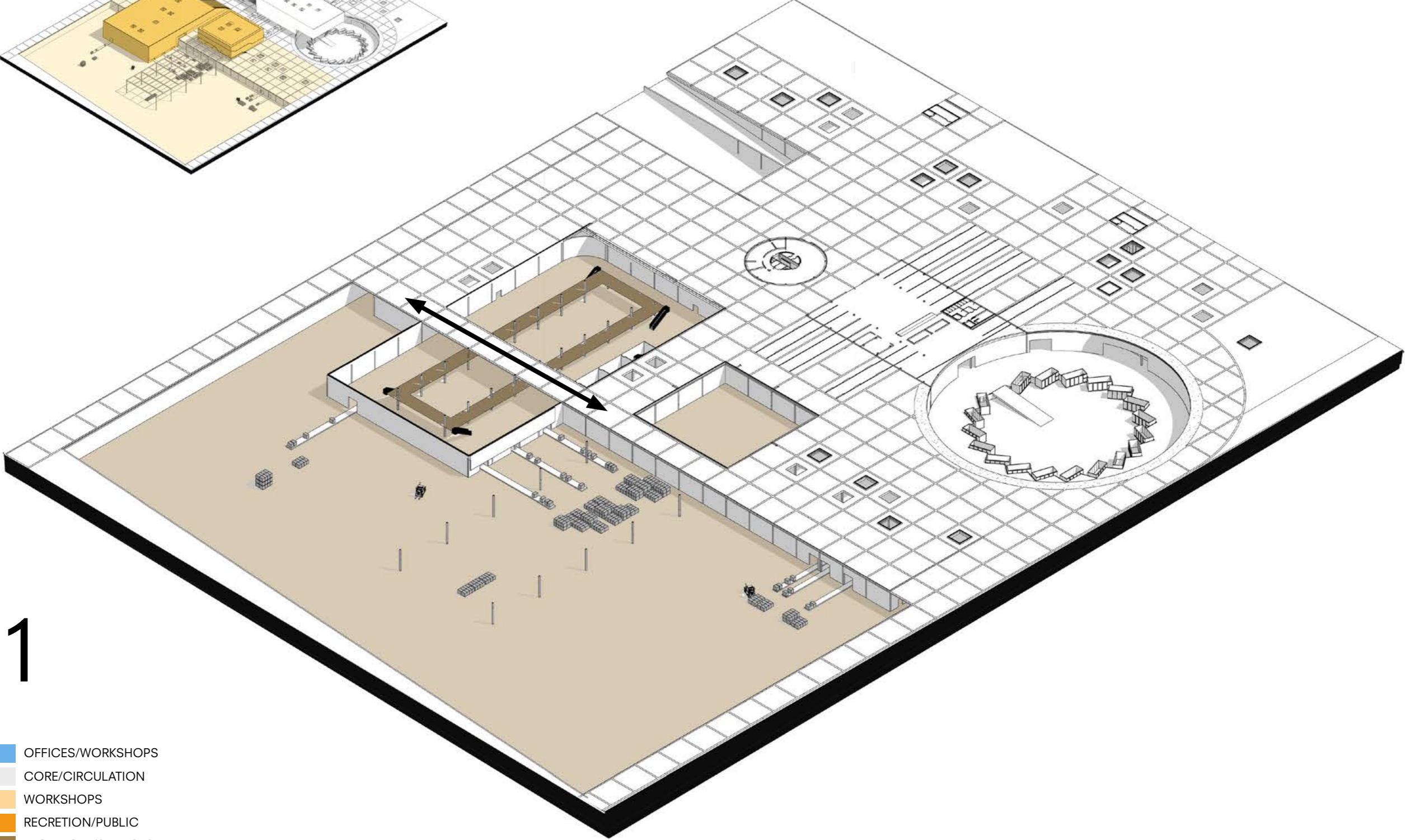
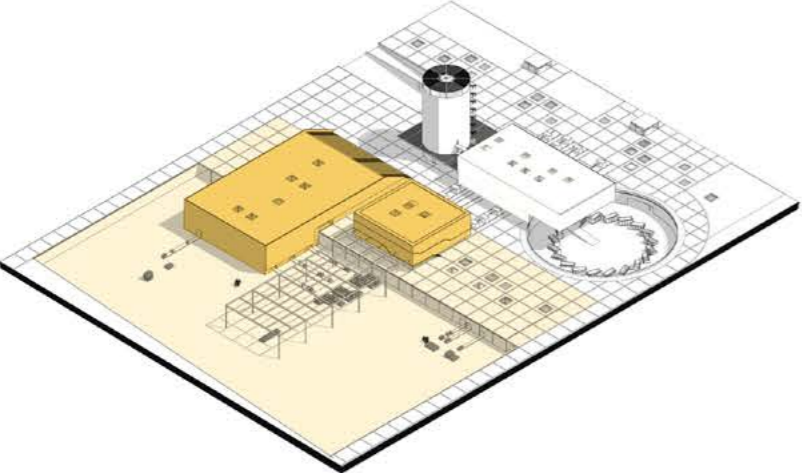
RECYCLING & WTE



-1

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

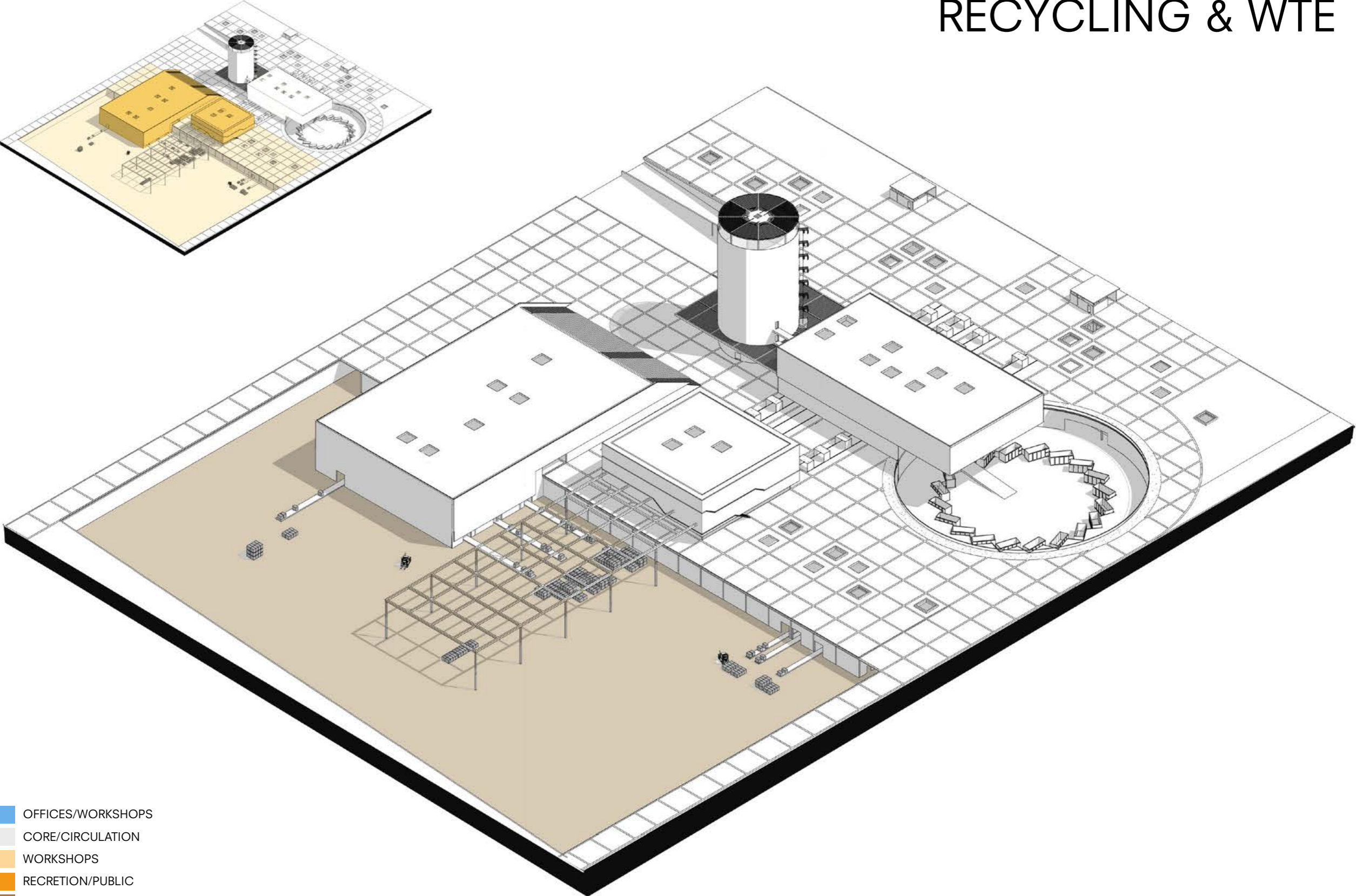
RECYCLING & WTE



1

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

RECYCLING & WTE

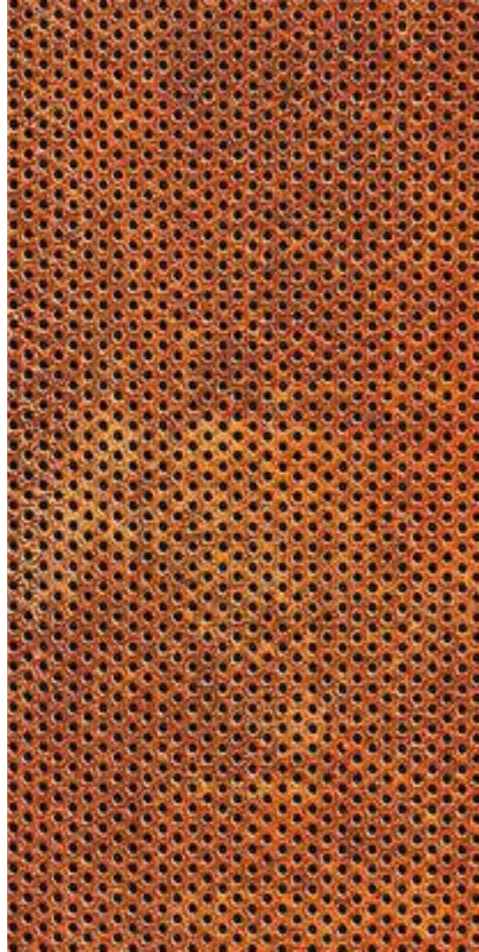


- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

UNDERGROUND MATERIALIZATION



PERFORATED CORTEN
STEEL PANELS



PERFORATED CORTEN
STEEL PANELS



WHITE CONCRETE WITH
STONE, METAL AND
GLASS FRAGMENTS

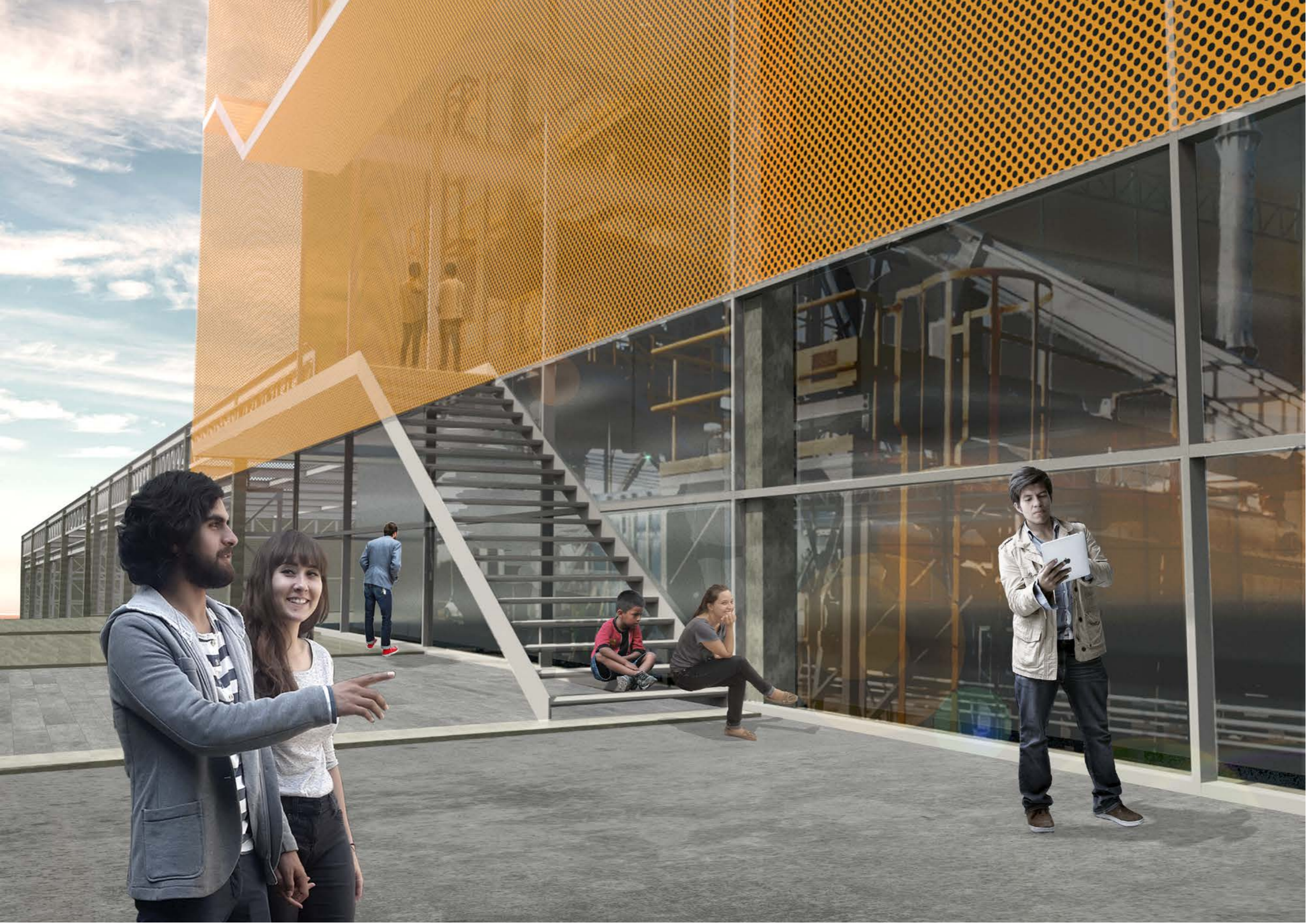


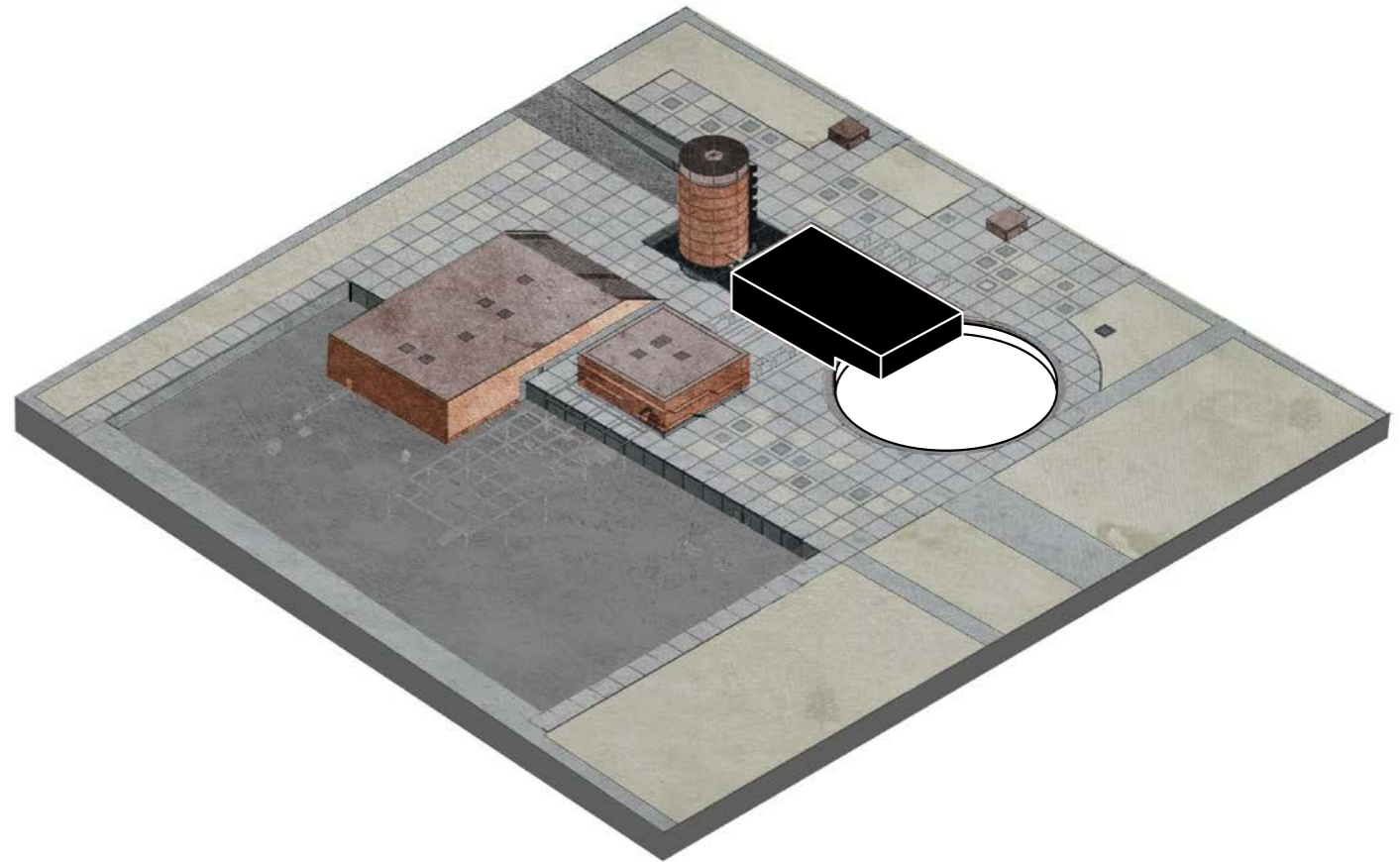
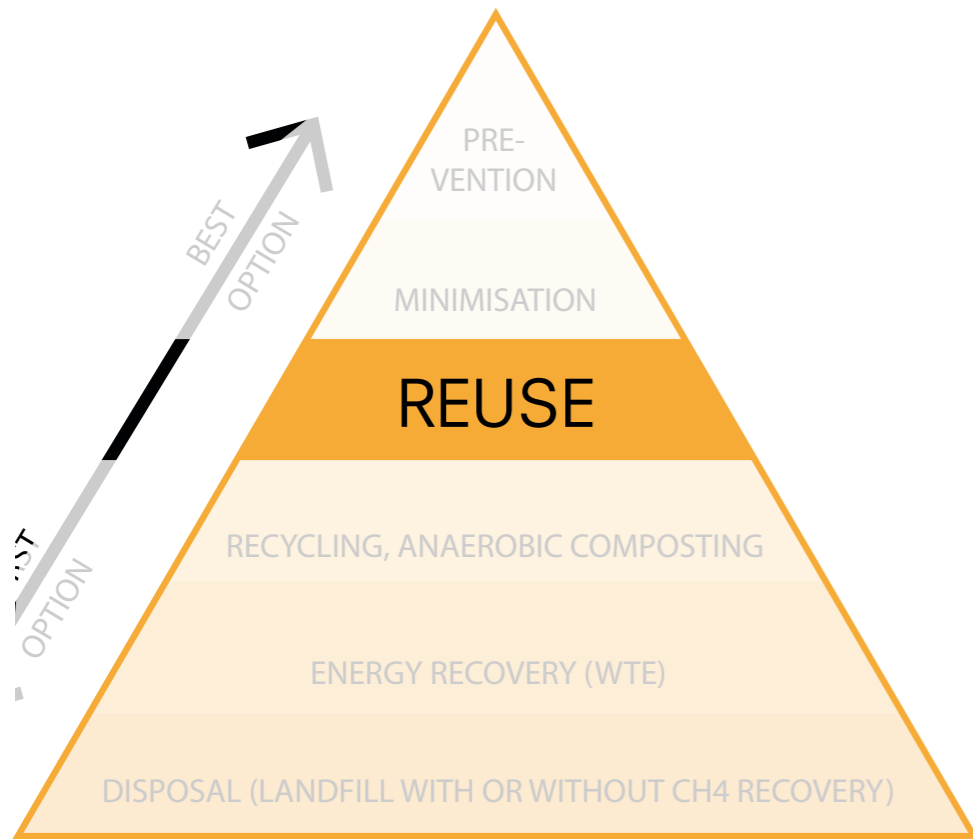
CONCRETE FLOOR WITH
EPOXY FINISH



AMERYTOP 400 FLOOR





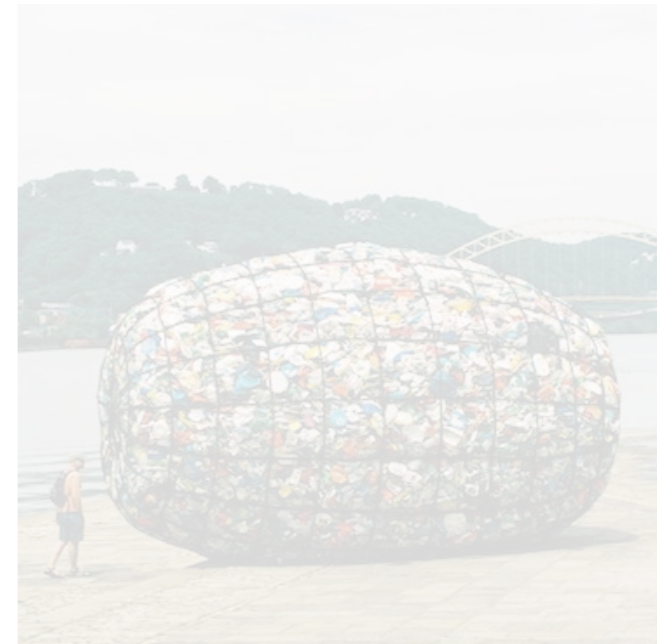
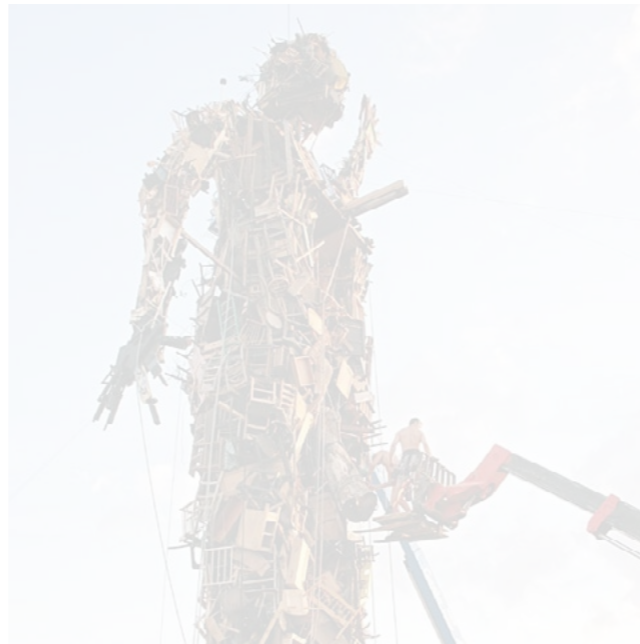




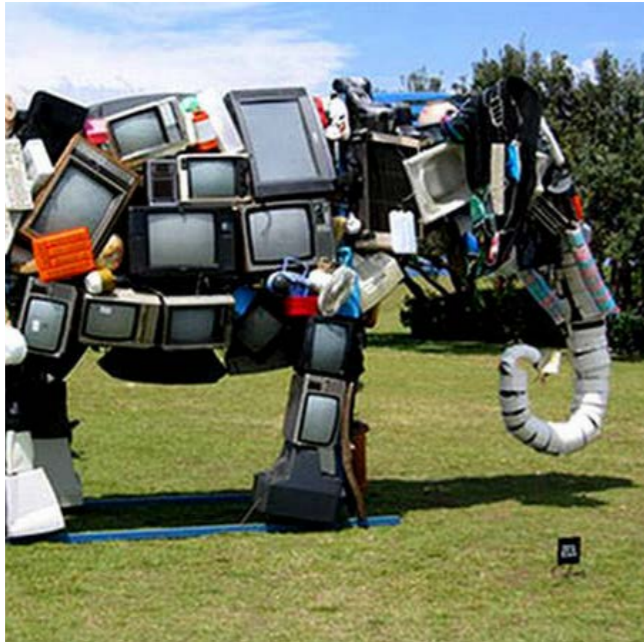
“One man’s trash is another man’s treasure”

› popular proverbial saying in America since the late 20th century.

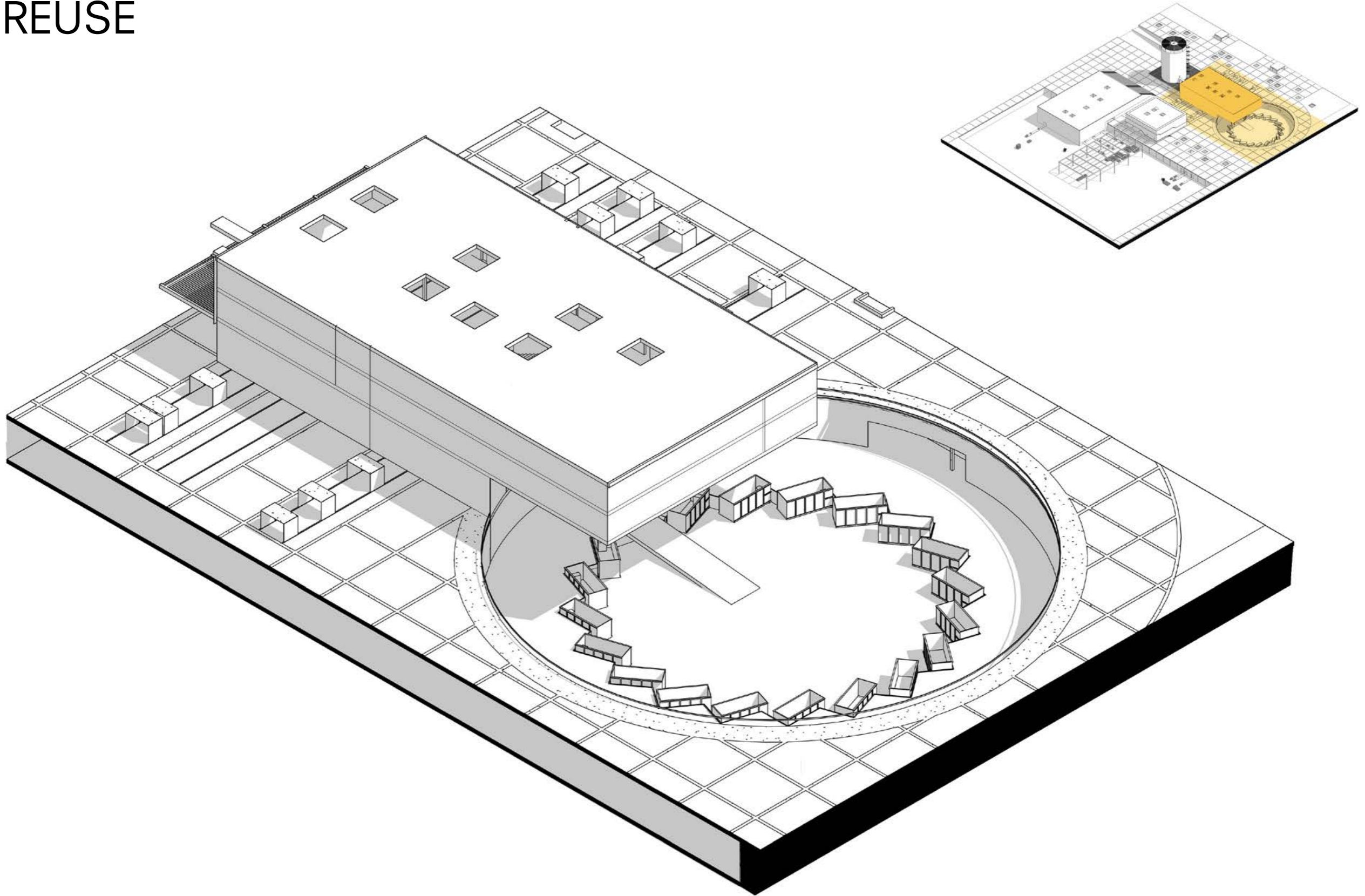
REUSE CENTER



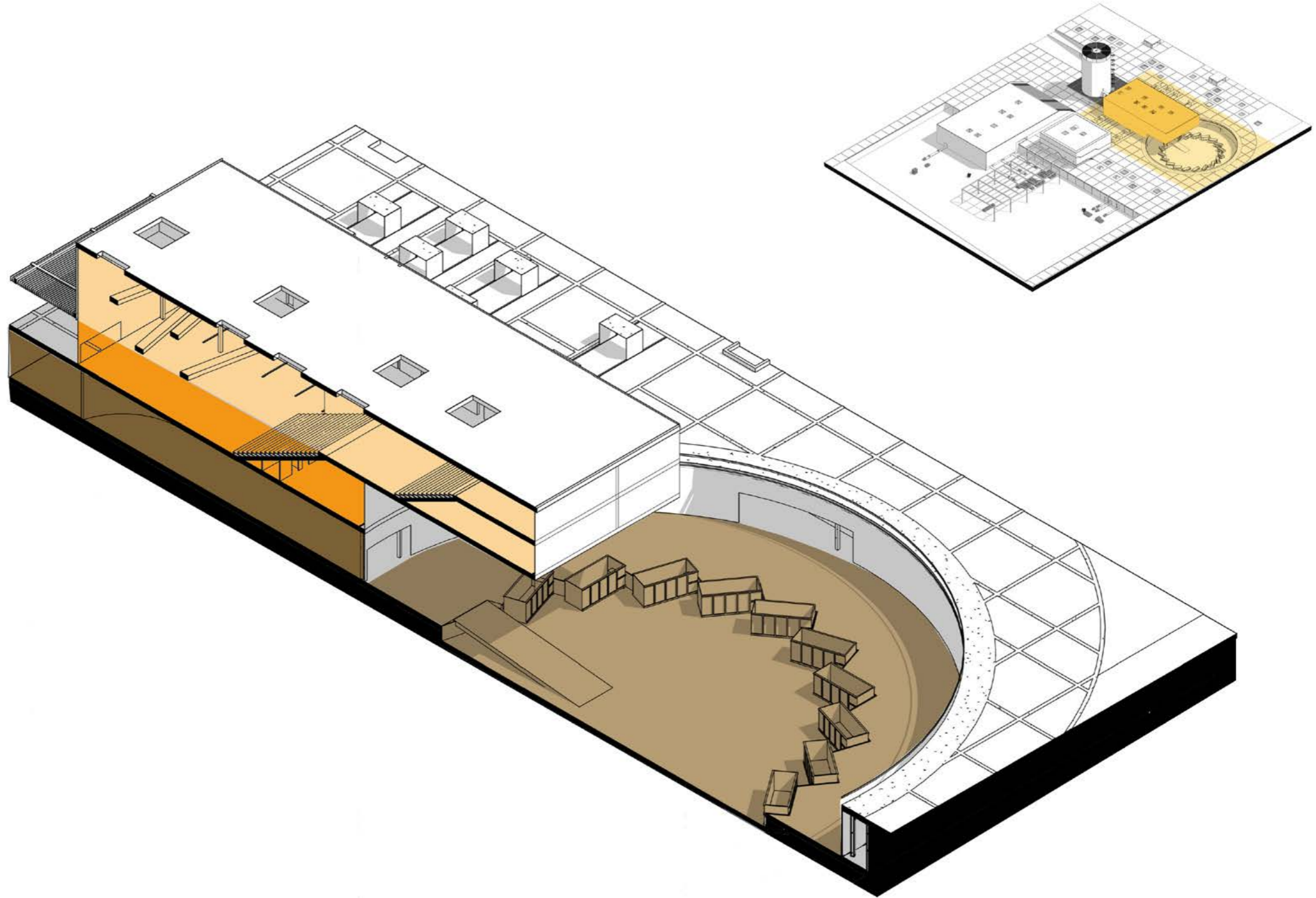
REUSE CENTER



REUSE

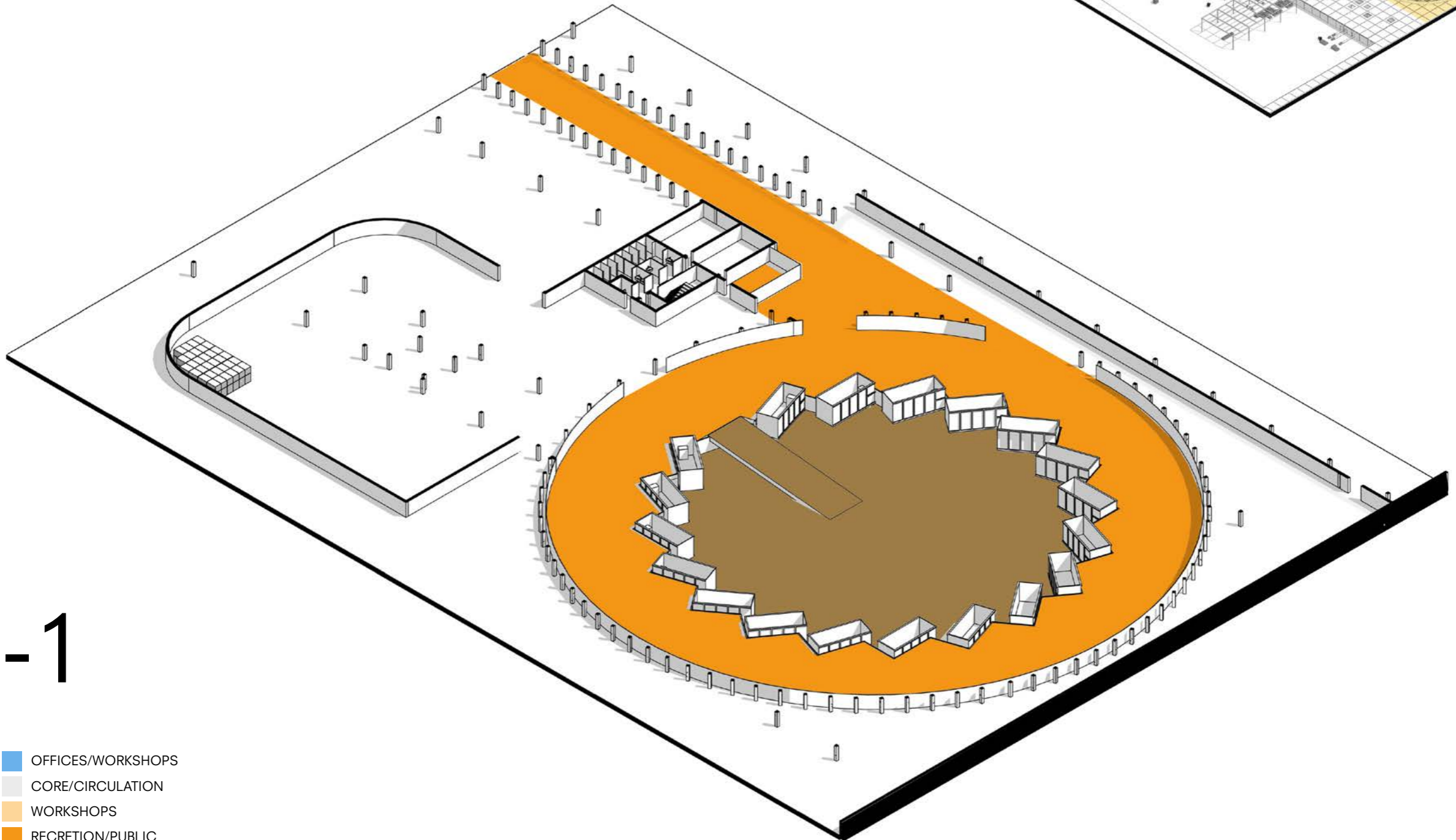
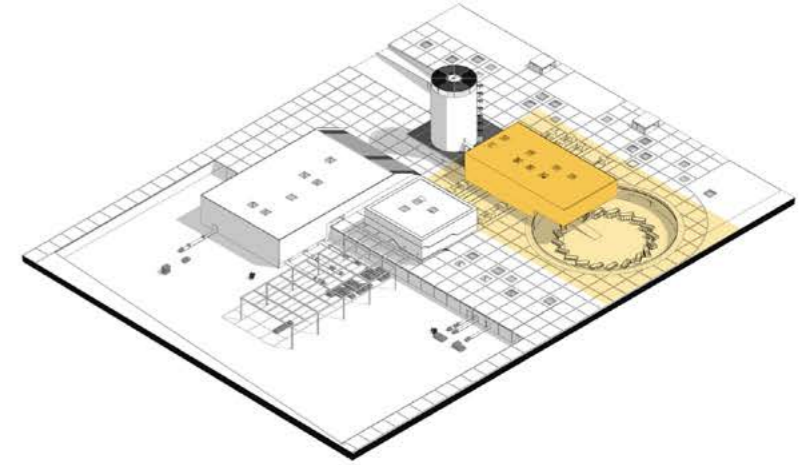


REUSE



- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

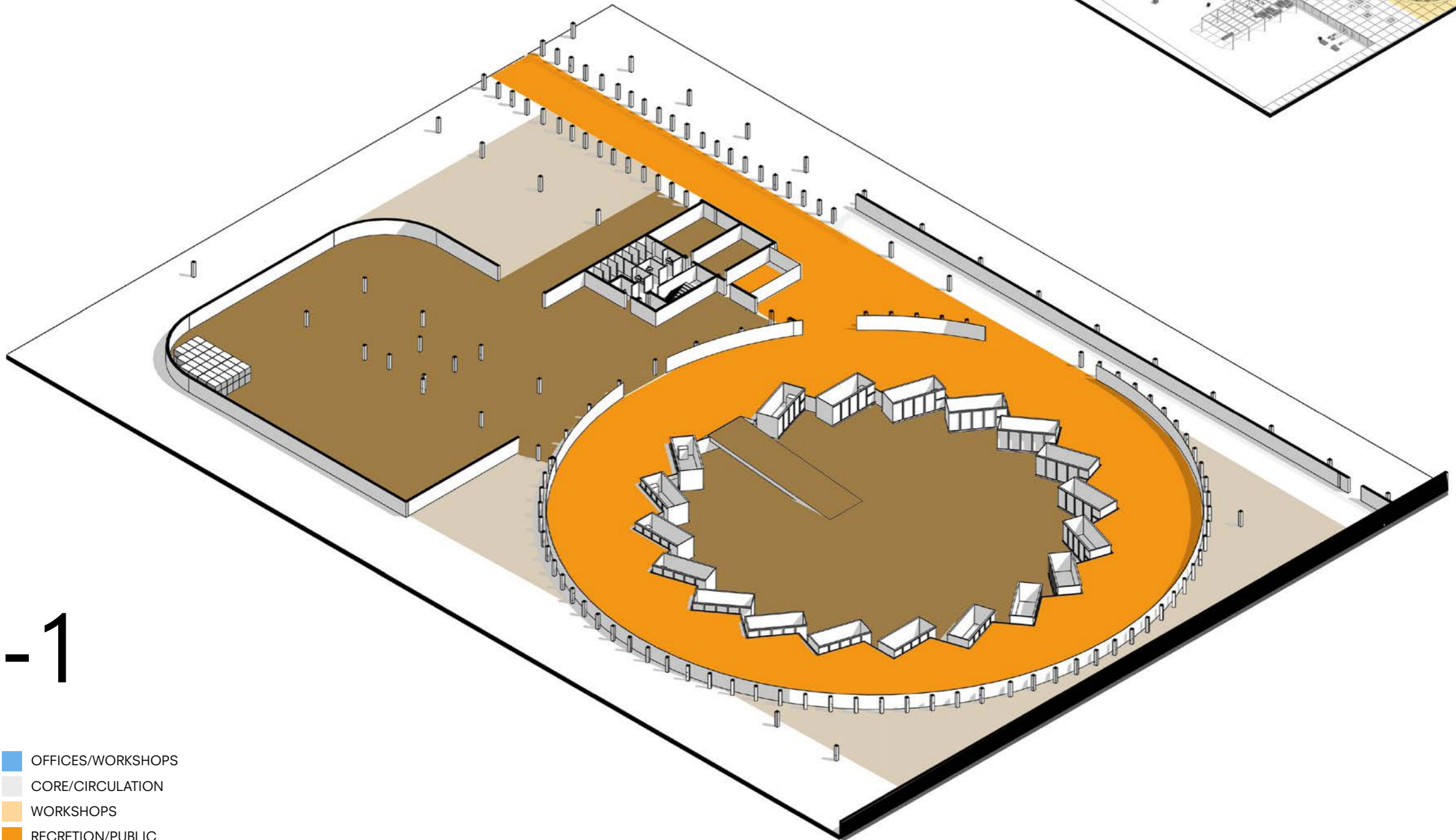
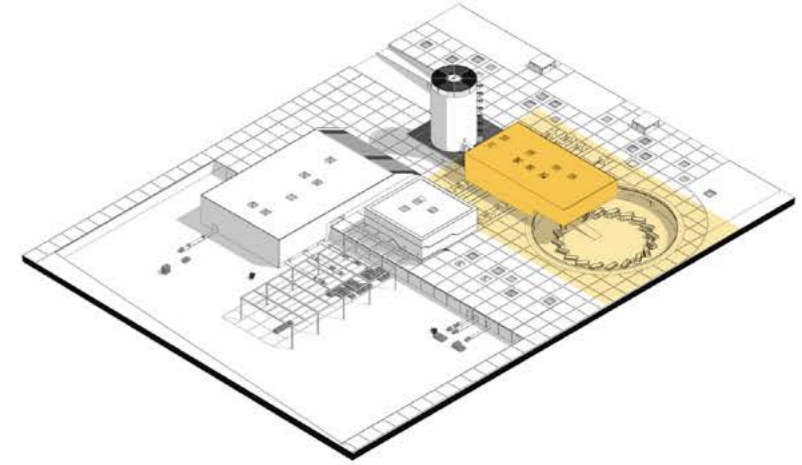
REUSE



-1

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

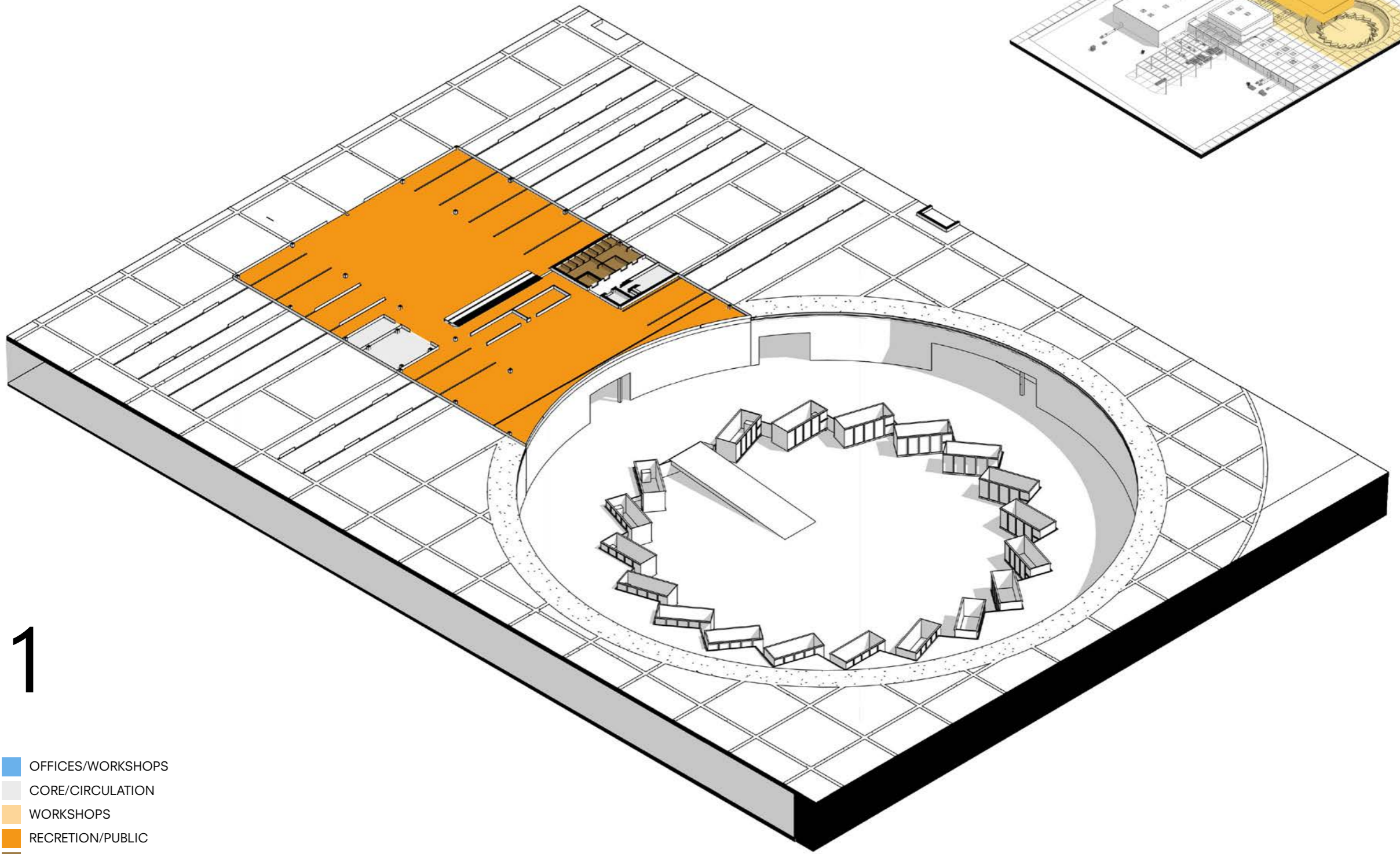
REUSE



-1

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

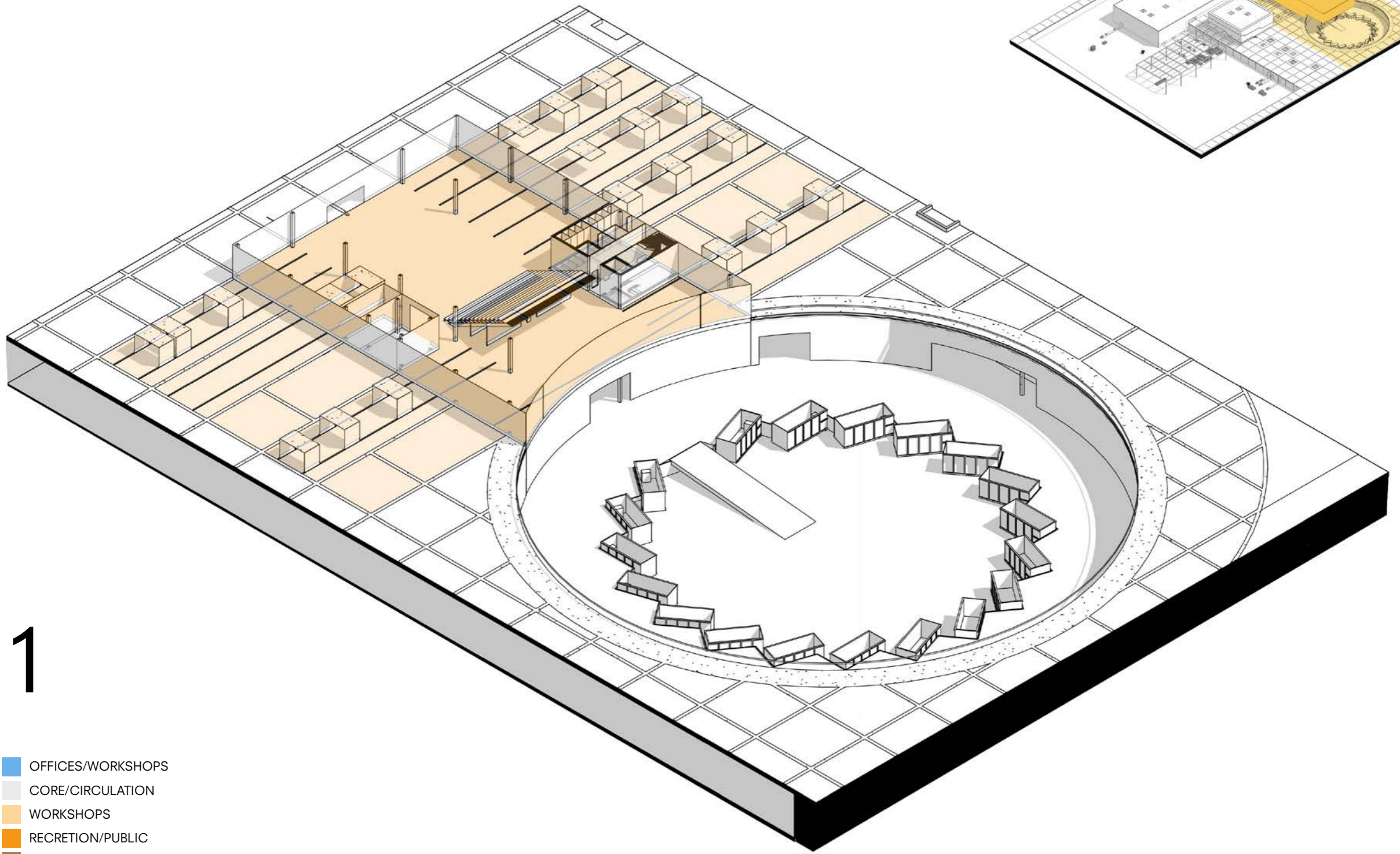
REUSE



1

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

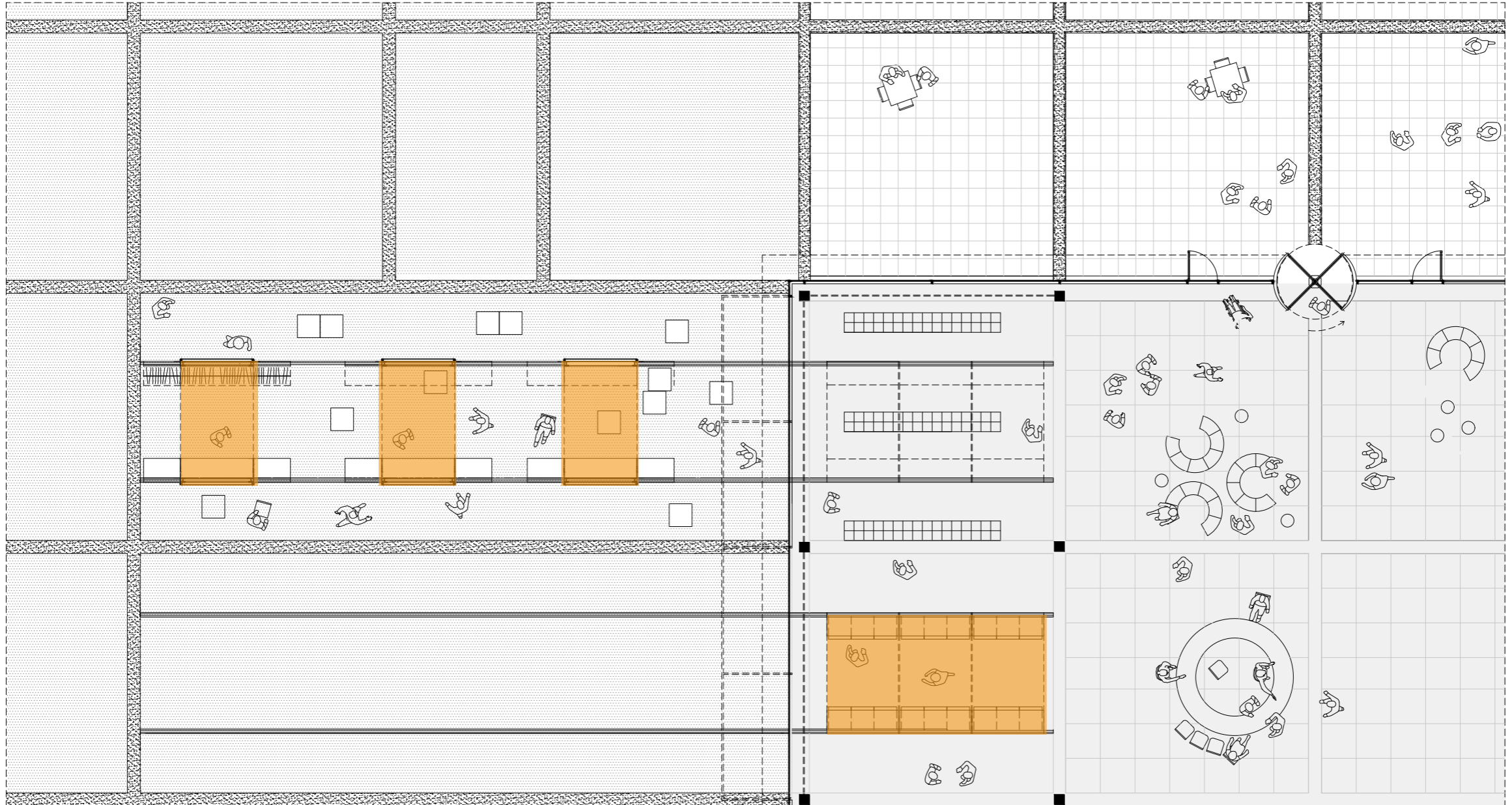
REUSE



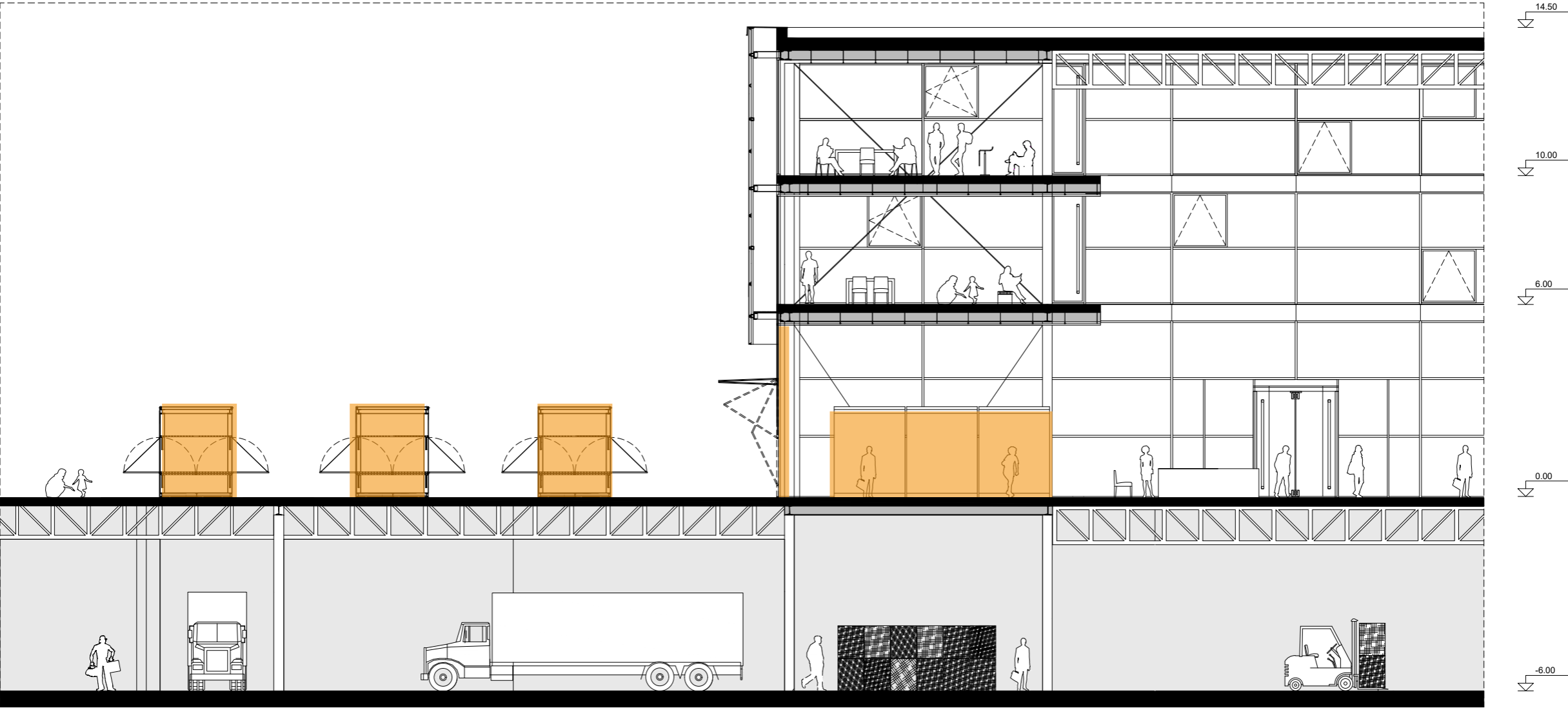
1

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

SHOP EXTENTION



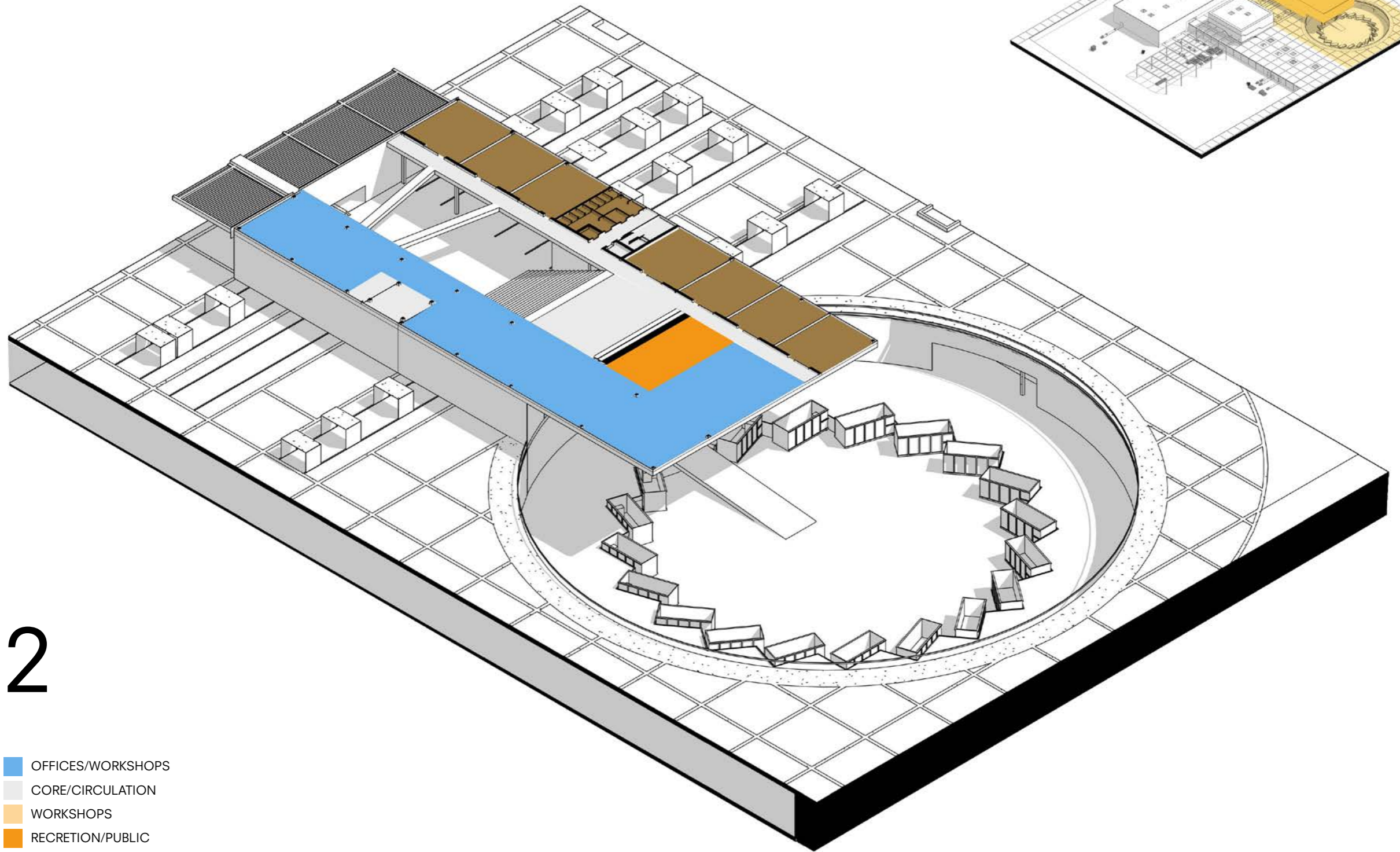
SHOP EXTENTION





5 SACOS
ALVEJADO
POR 1000

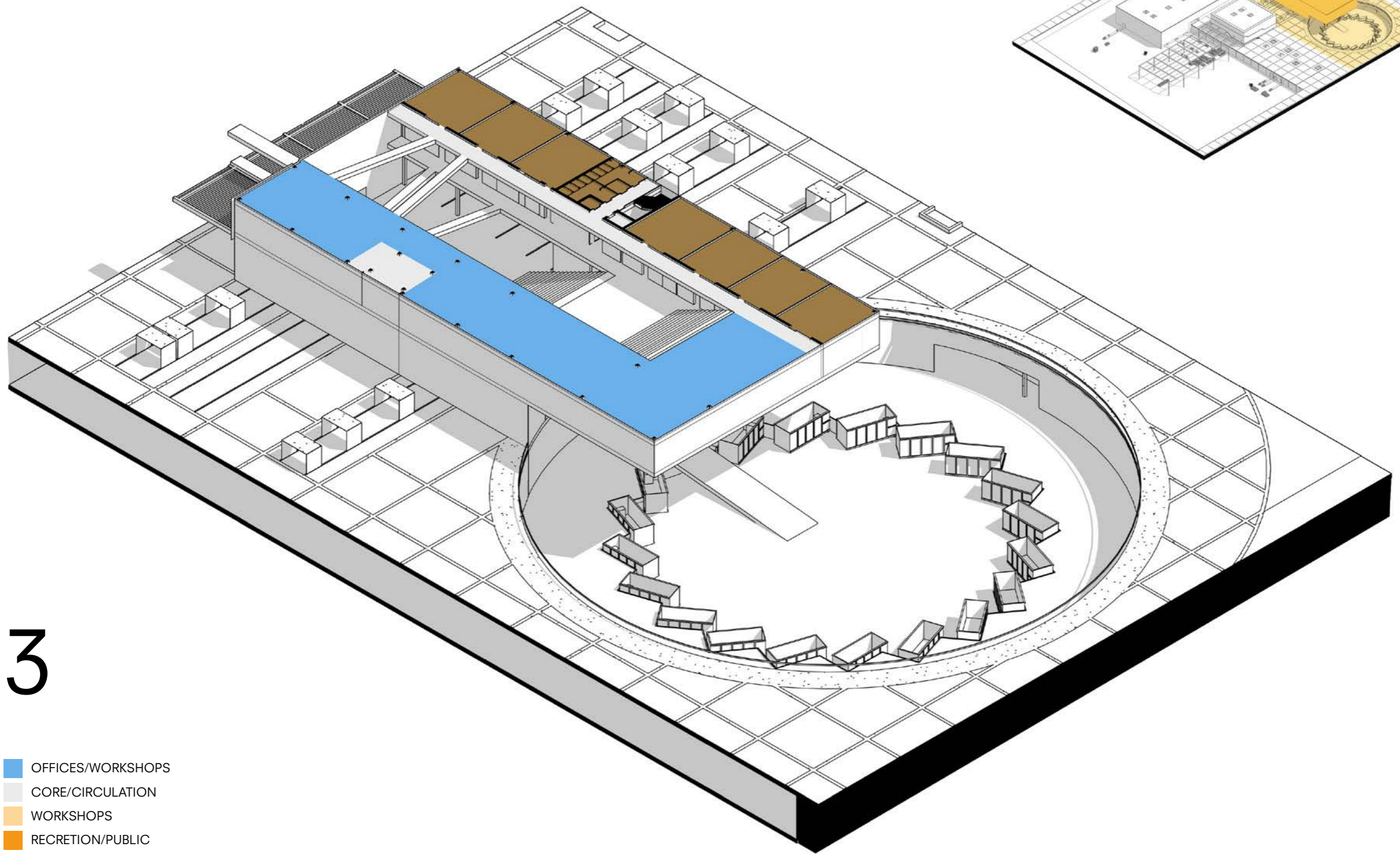
REUSE



2

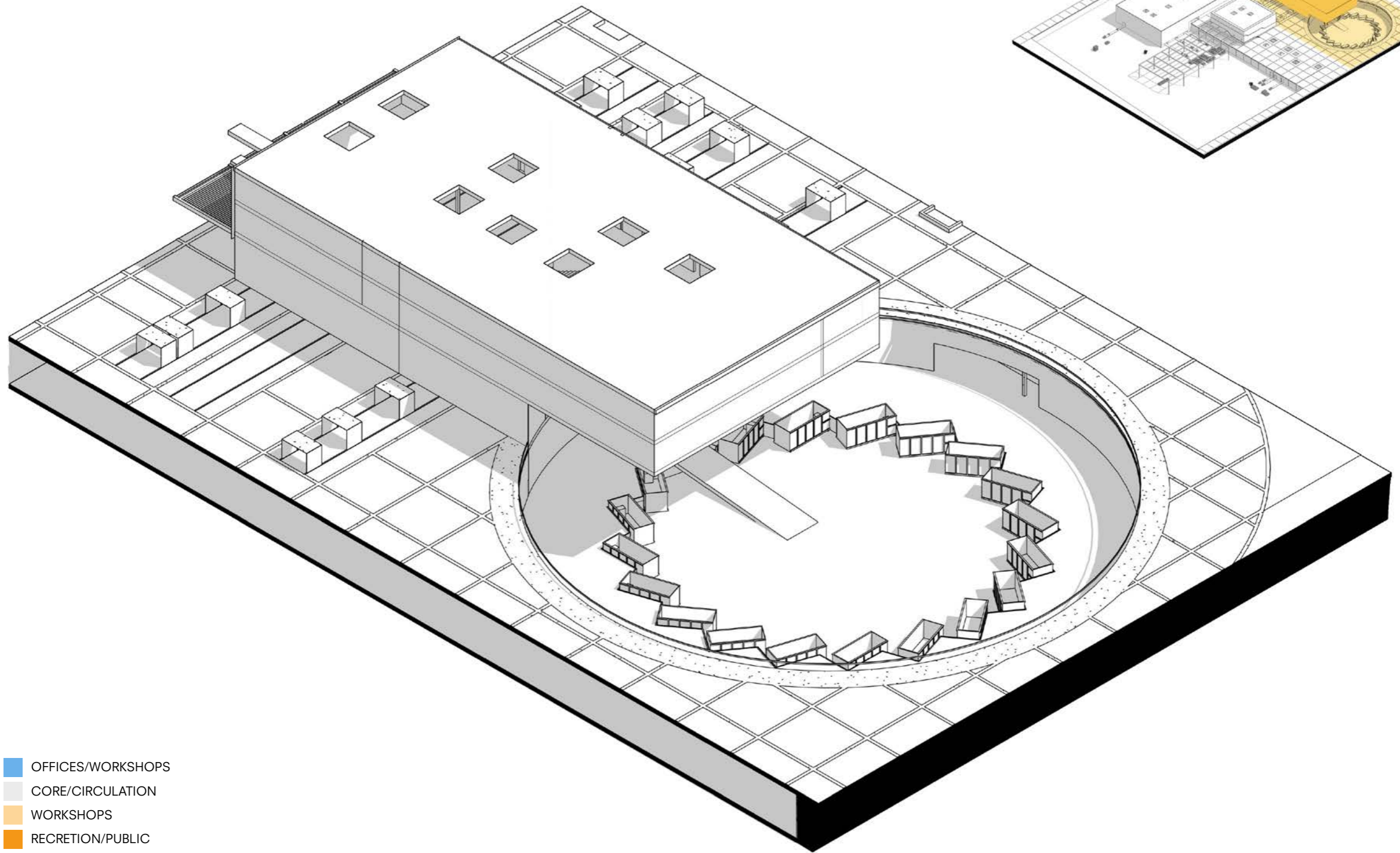
- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECREATION/PUBLIC
- TECHNICAL/SERVICES

REUSE



- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECREATION/PUBLIC
- TECHNICAL/SERVICES

REUSE



- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECREATION/PUBLIC
- TECHNICAL/SERVICES

INTERIOR MATERIALIZATION



PERFORATED CORTEN
STEEL PANELS



PERFORATED CORTEN STEEL PANELS



AMERYTOP 400 FLOOR



WHITE BRUSHED CONCRE
WALL FINISH



MAQUINAS PUBLICOS

SALA DEPO

TOOLS

LEATHER

PAINT

GLUE

CARDBOARD

MAGAZIN

COTTON

LIGHTS

SPORTS GEAR

TOYS

BOTTLES

CONTAINERS

LEGO

DOLLS

TEXTILE TOYS

MILK CARTONS

BOXES

PLASTIC TOYS

EGG CUPS

LIDS

JARS

PLASTIC CUPS

METAL

WOOD

LEATHER

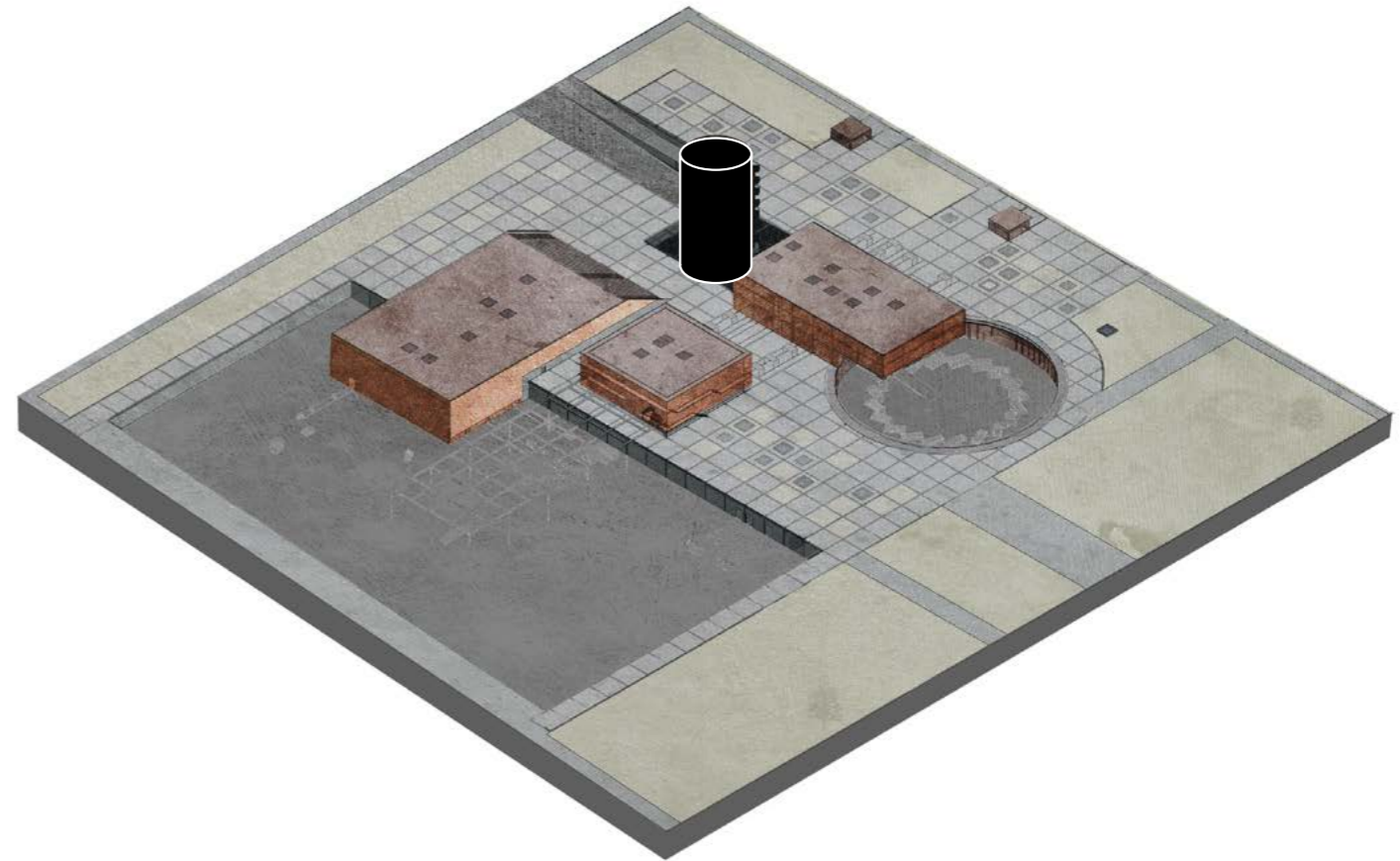
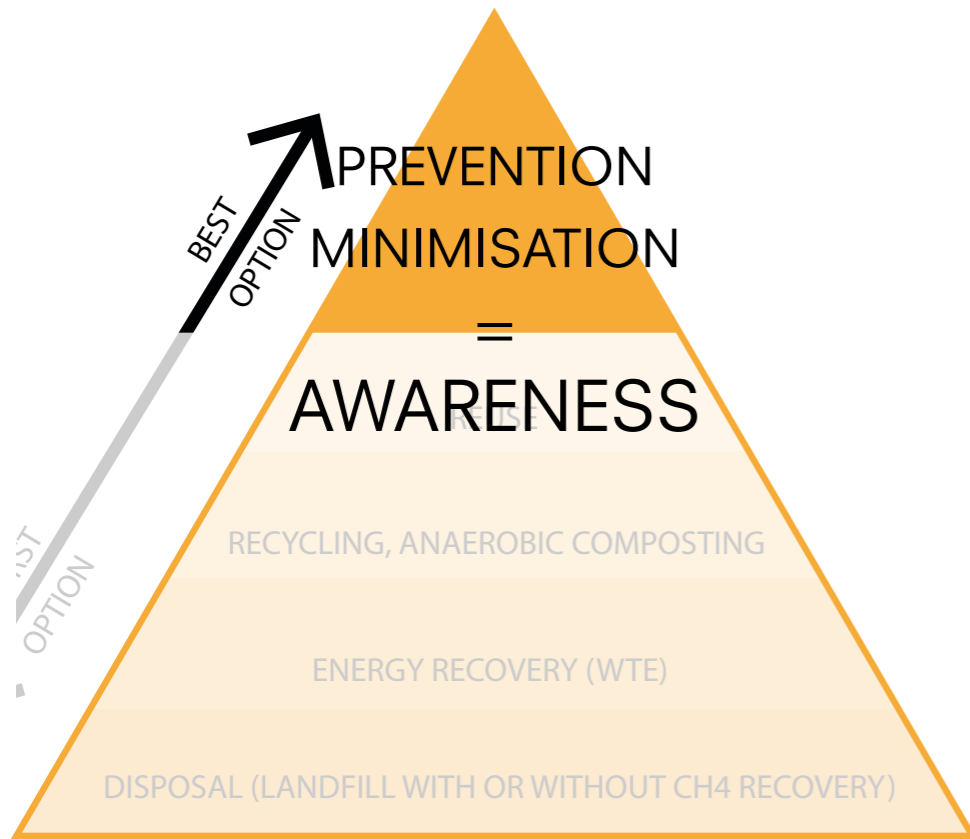
COTTON

GLUE

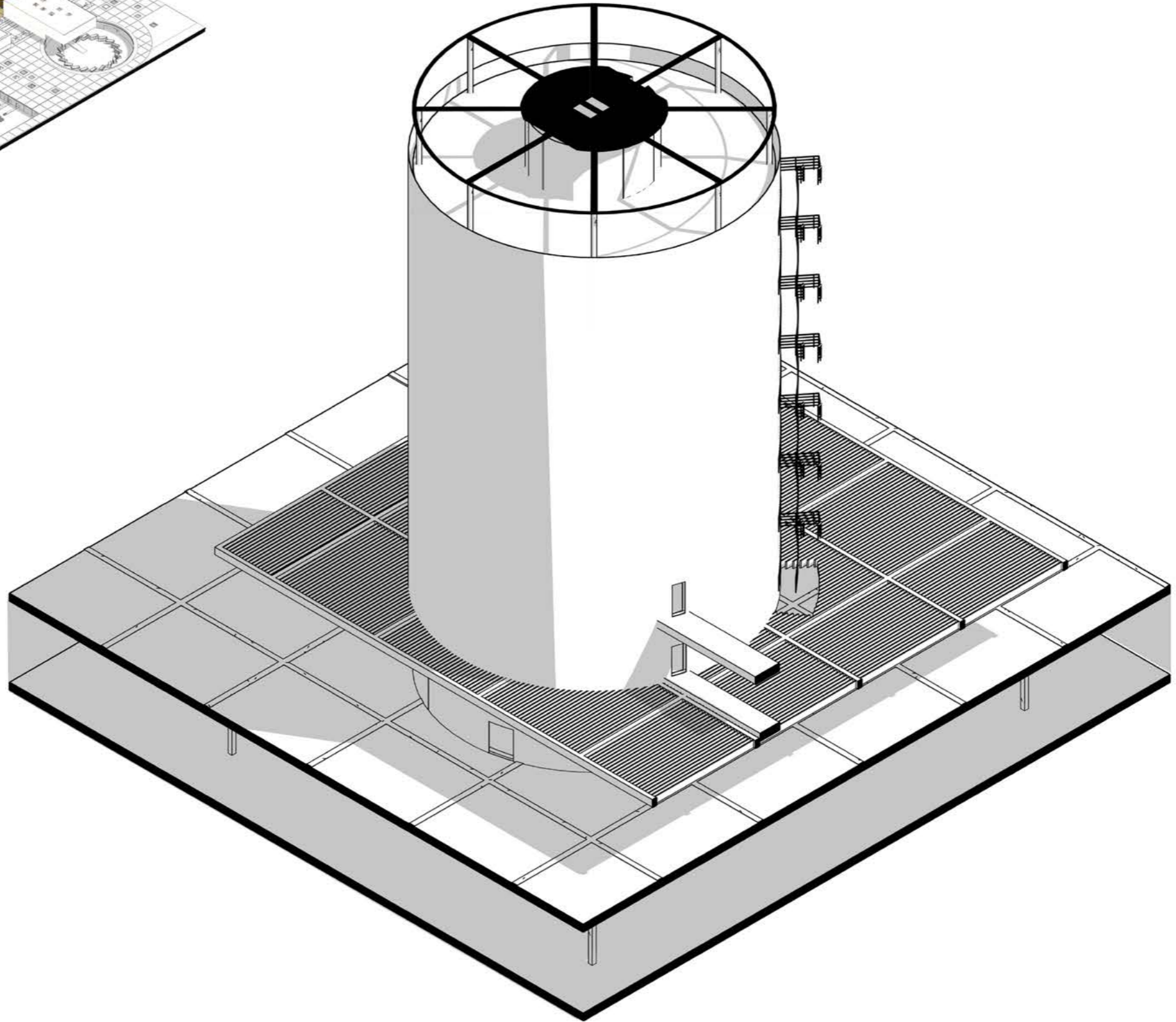
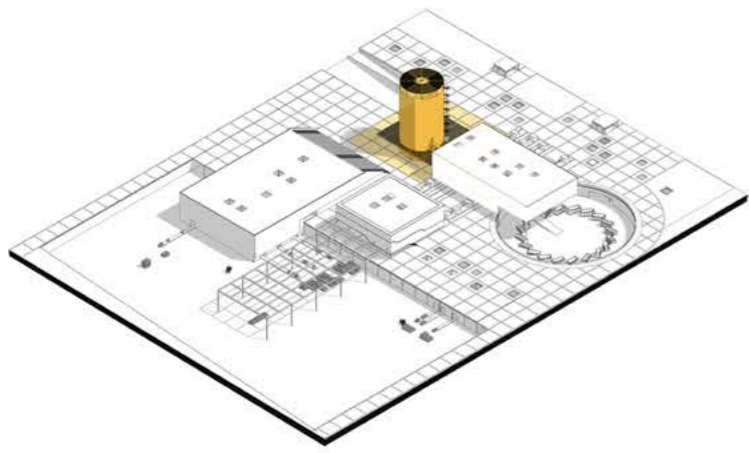
MAGAZIN

TOYS

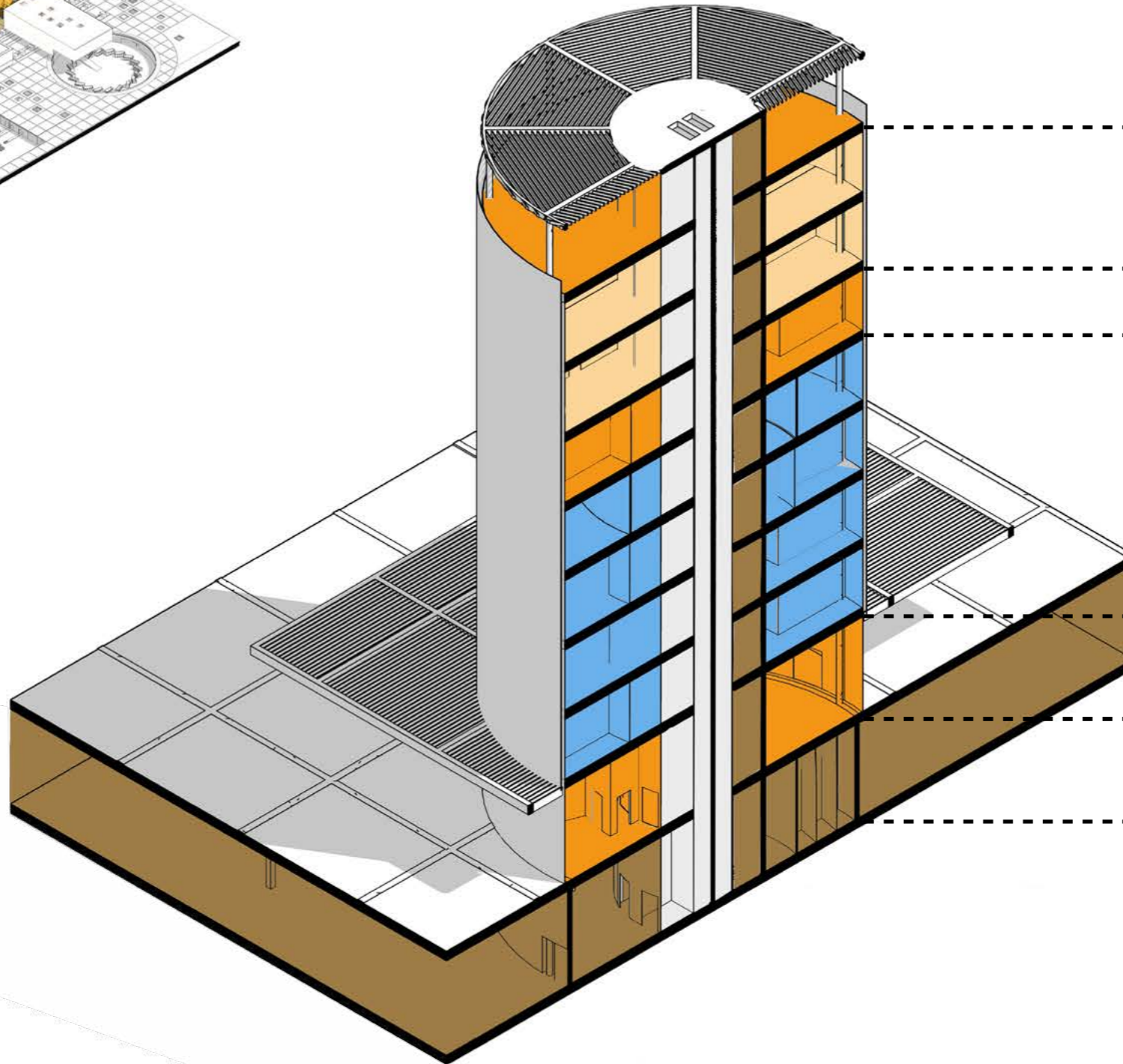
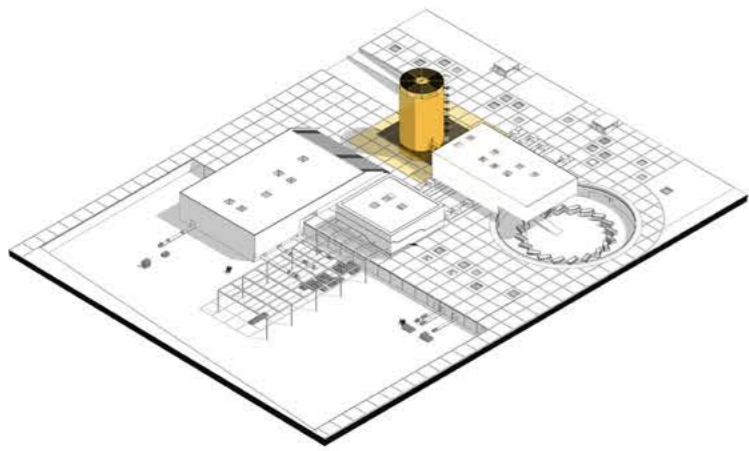
BOTTLES



TOWER



TOWER



observation terrace

education

library

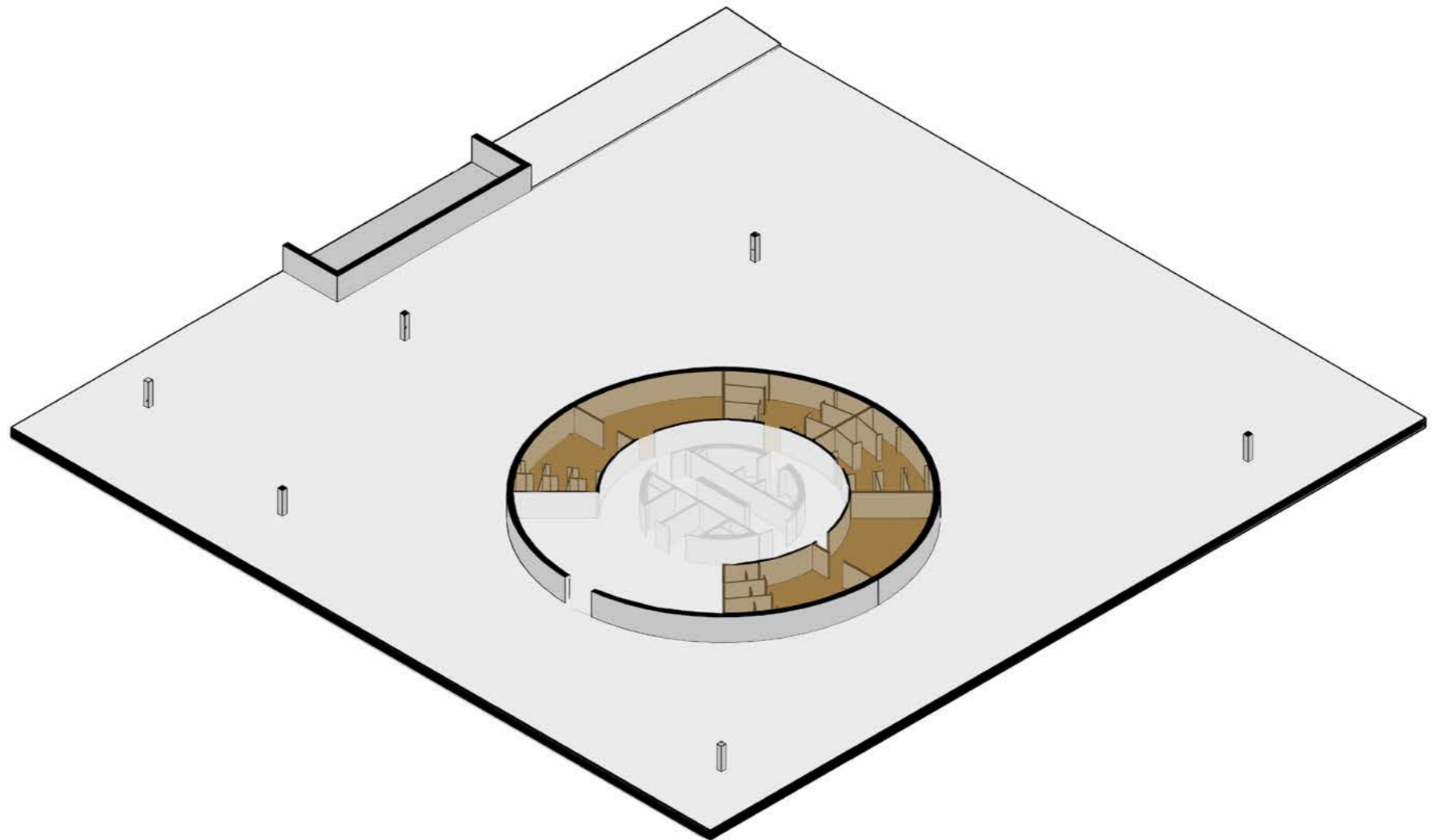
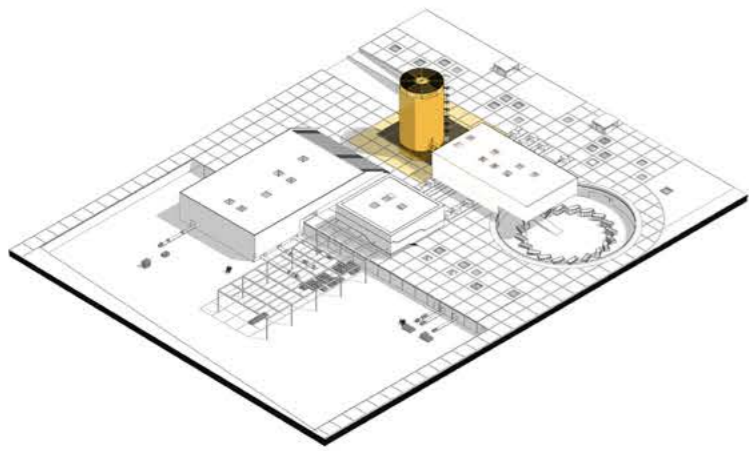
administration

cafe

technical

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

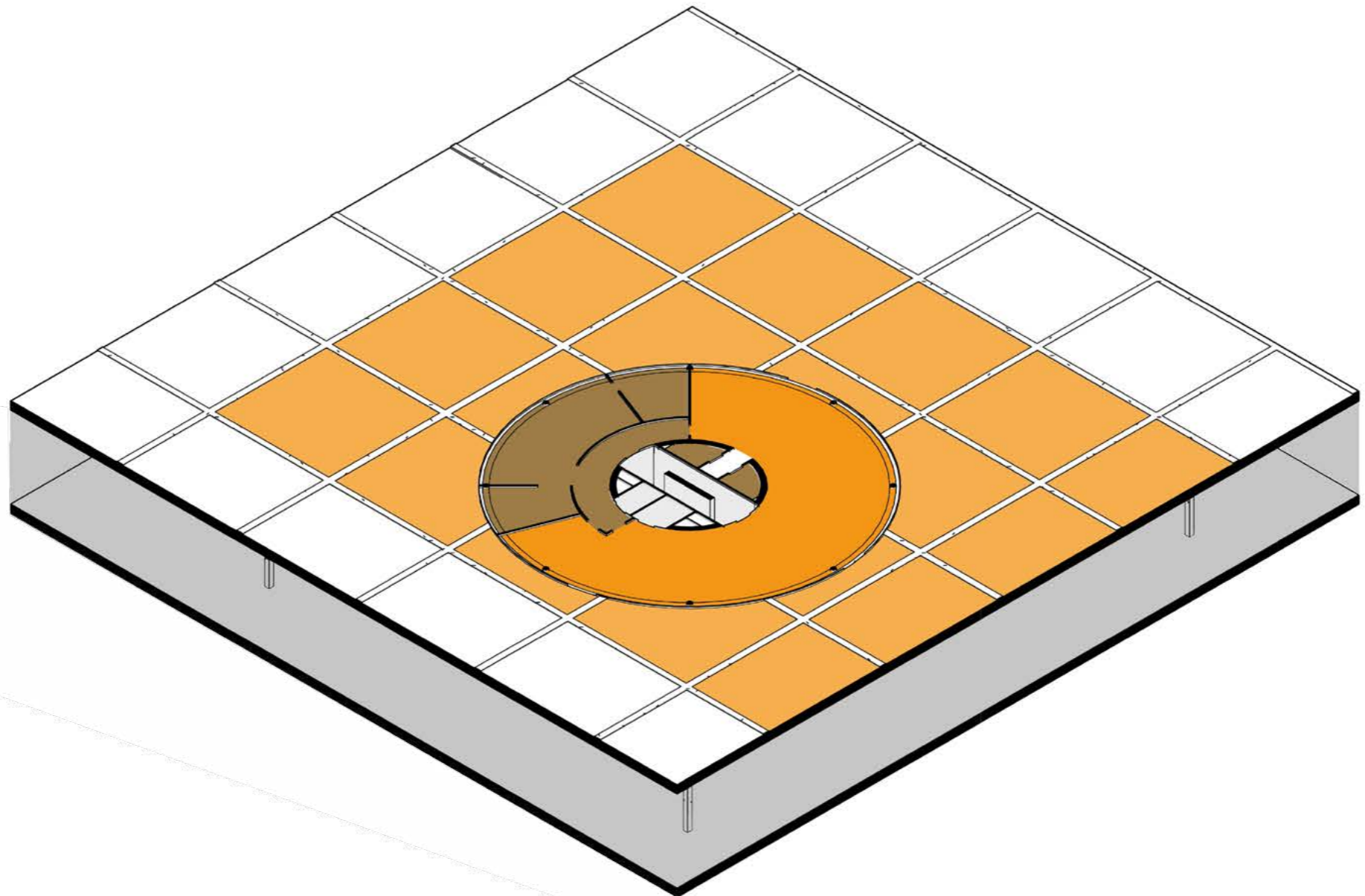
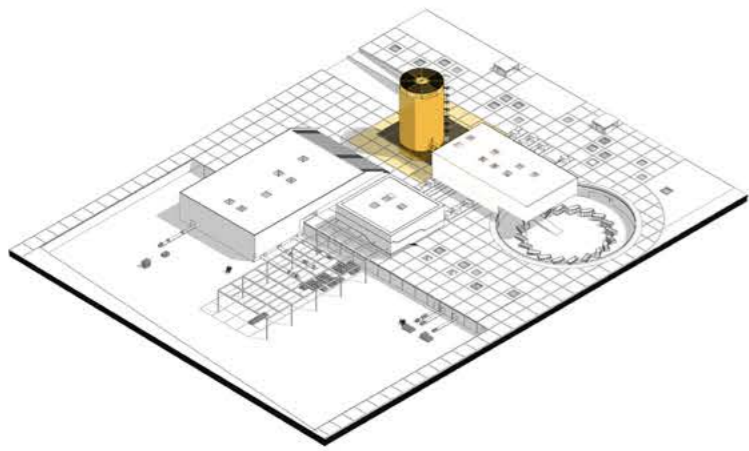
TOWER



-1

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

TOWER

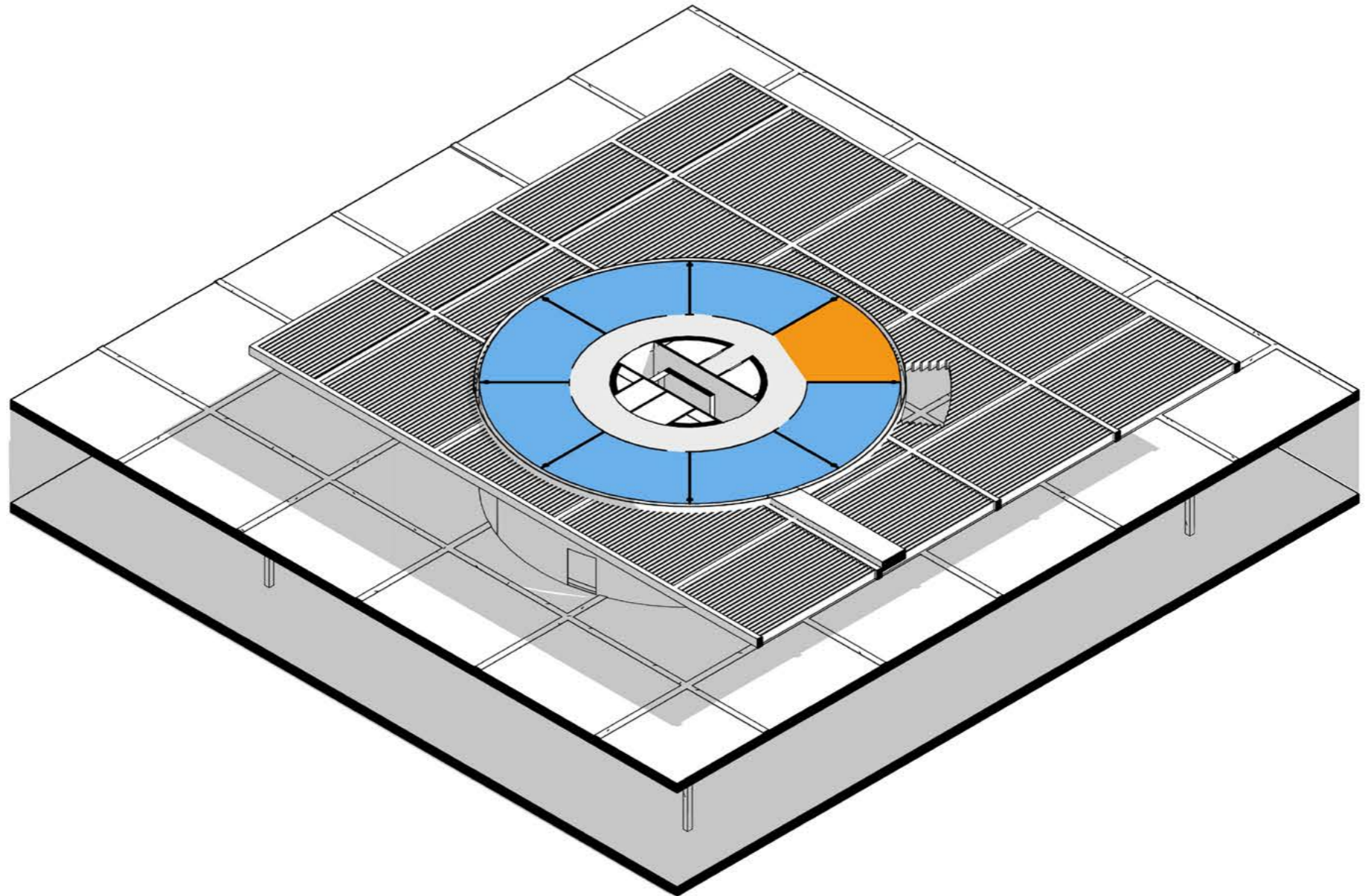
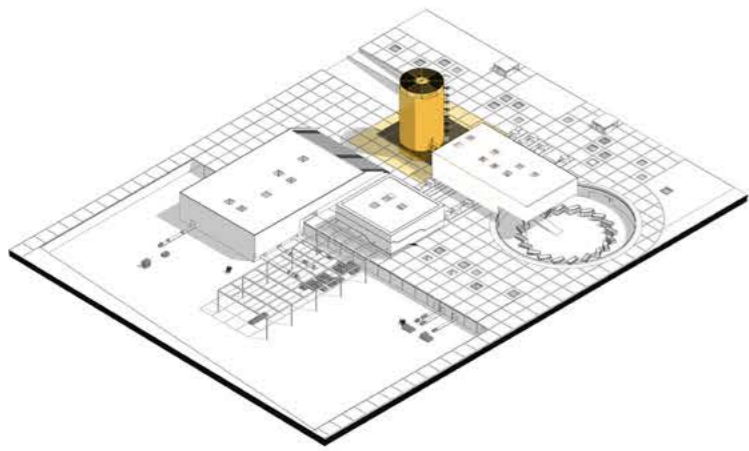


1

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES



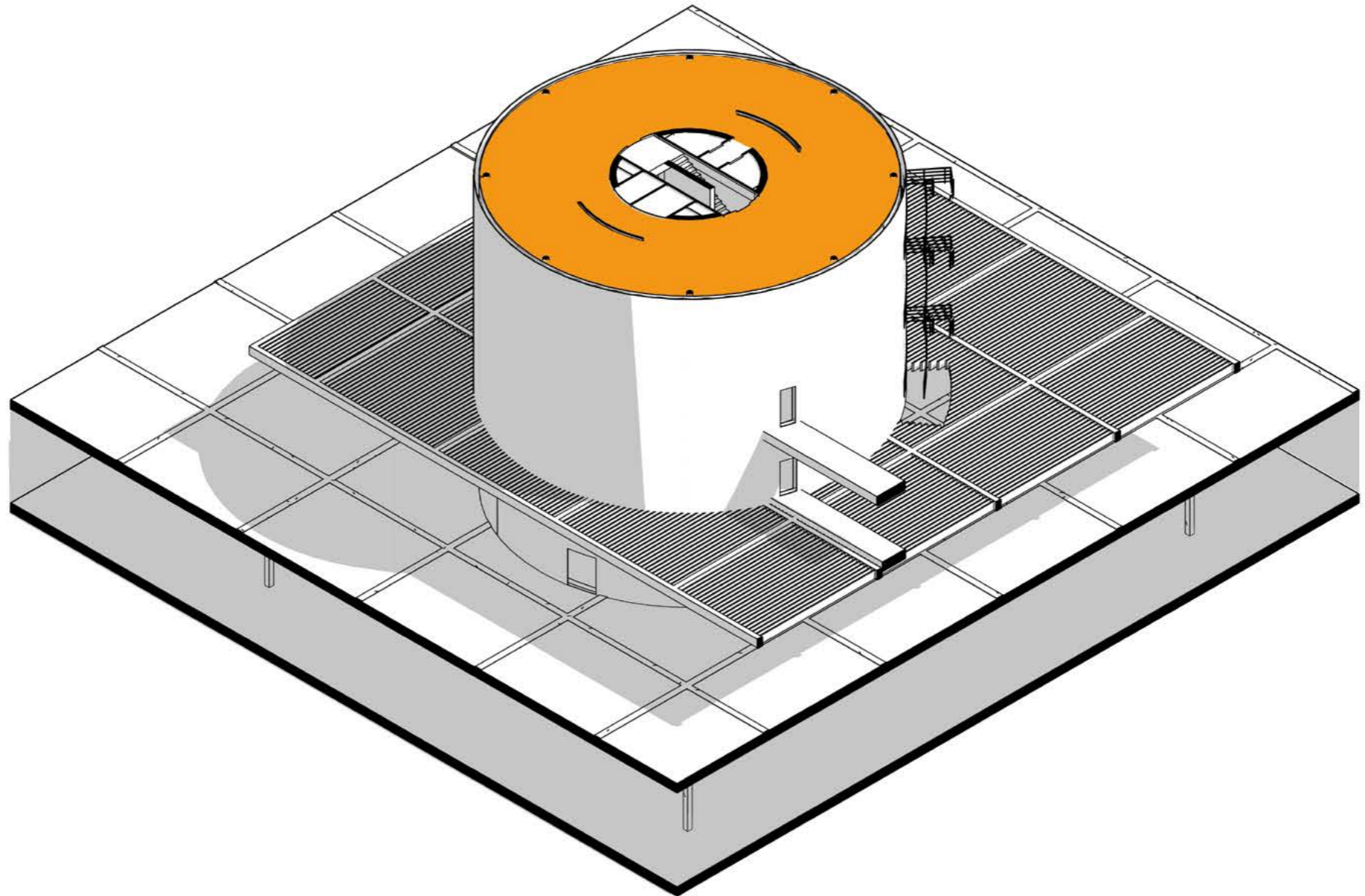
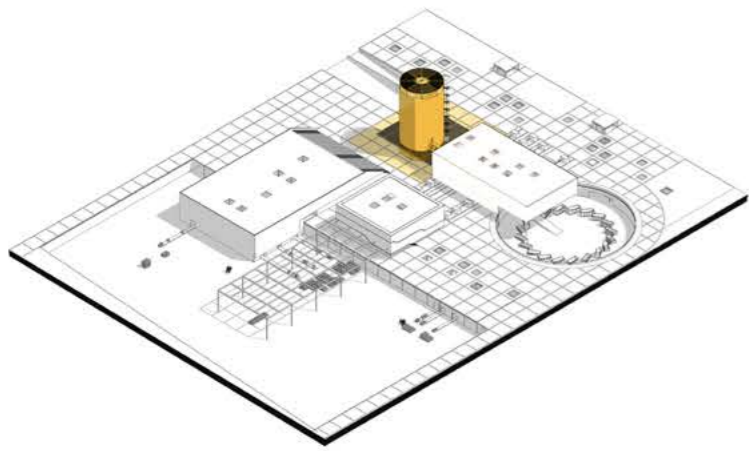
TOWER



2

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

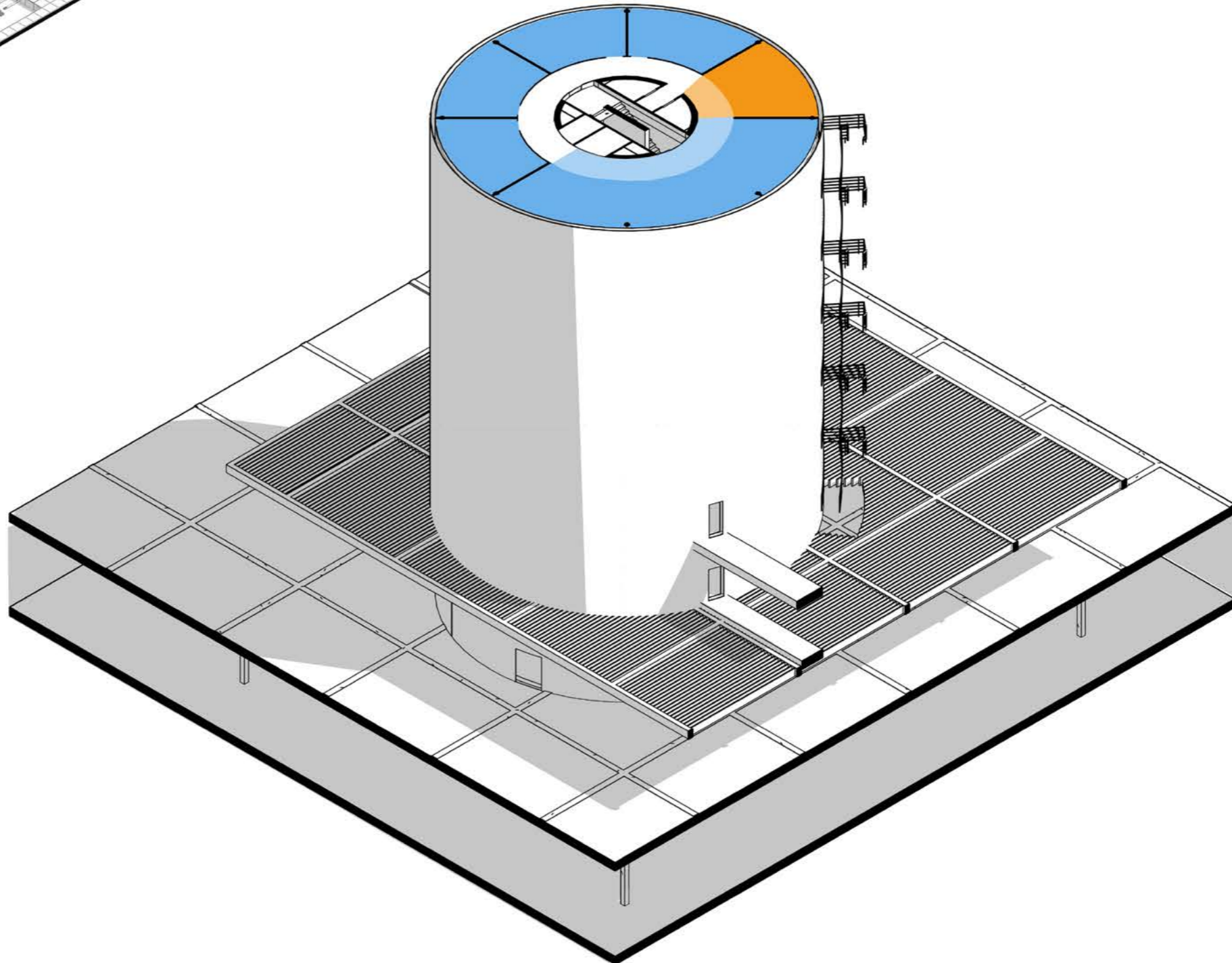
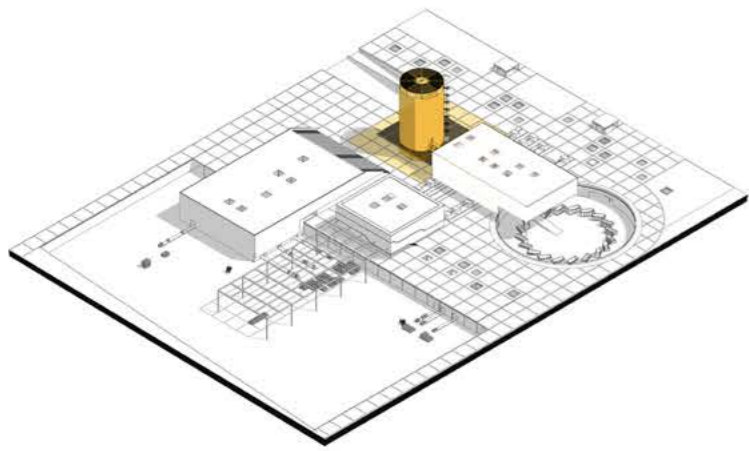
TOWER



5

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

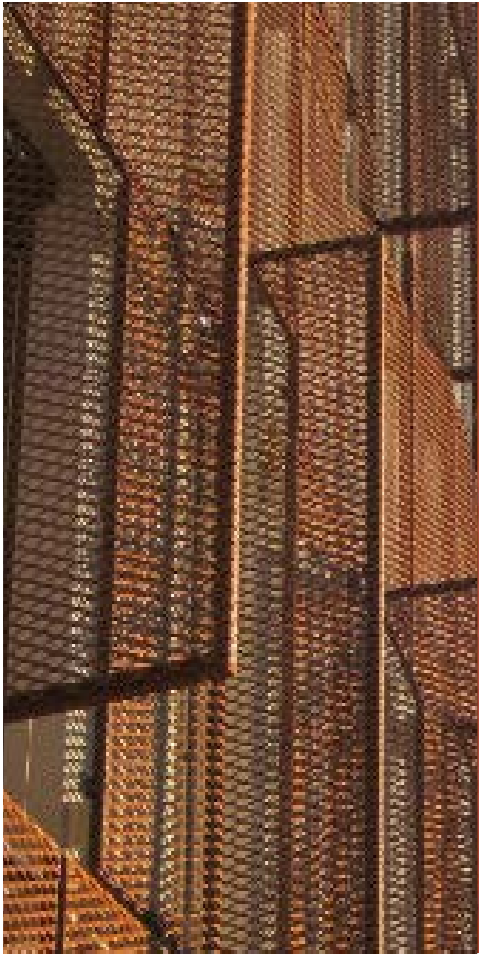
TOWER



7

- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

INTERIOR MATERIALIZATION



PERFORATED CORTEN
STEEL PANELS



RECLAIMED WOOD FLOOR



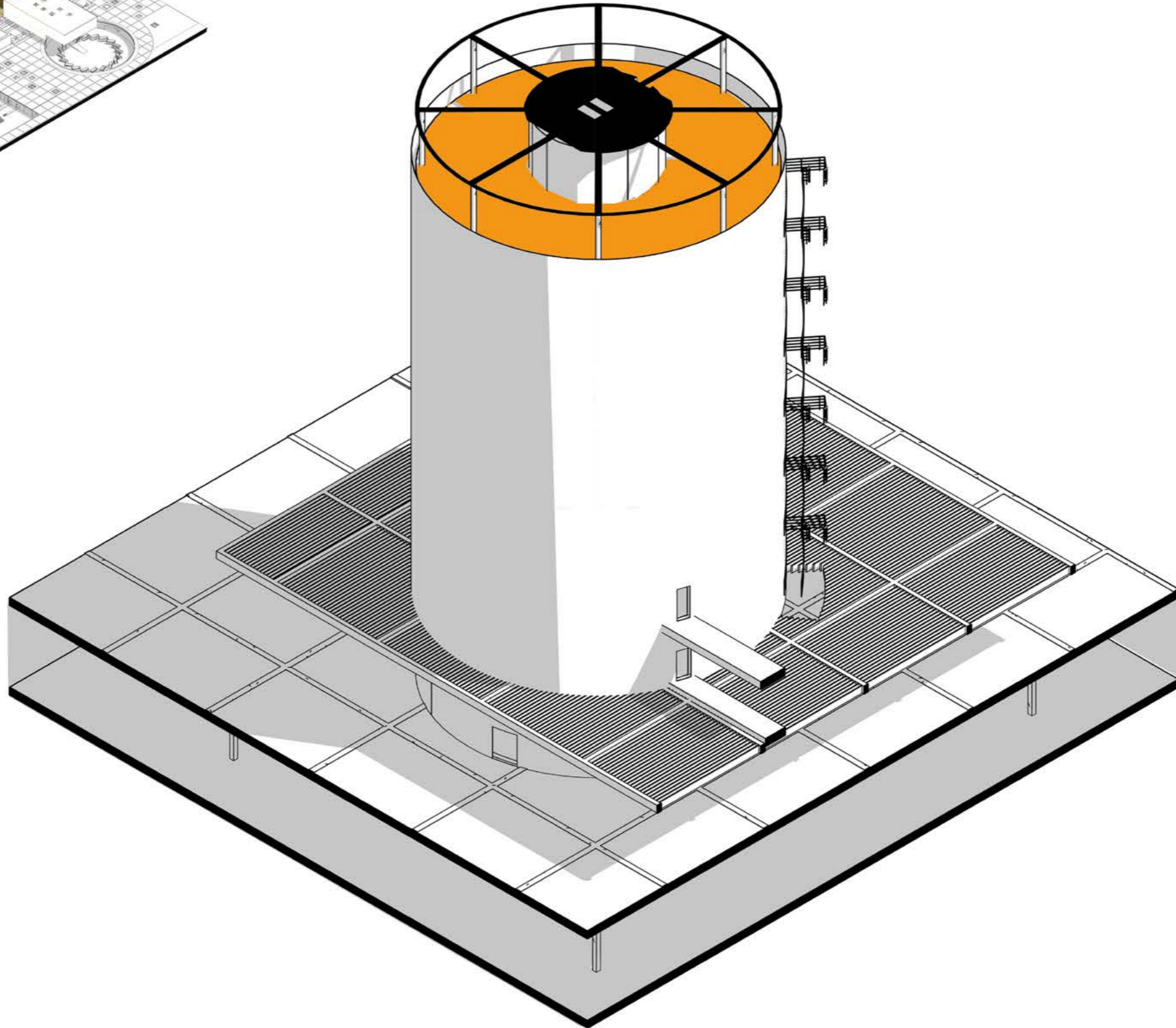
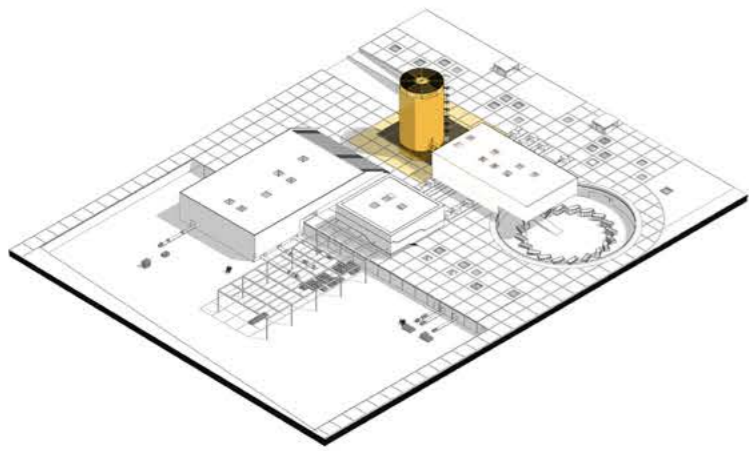
WHITE BRUSHED CONCRETE
WALL FINISH



POLISHED CONCRETE
FLOOR TILES

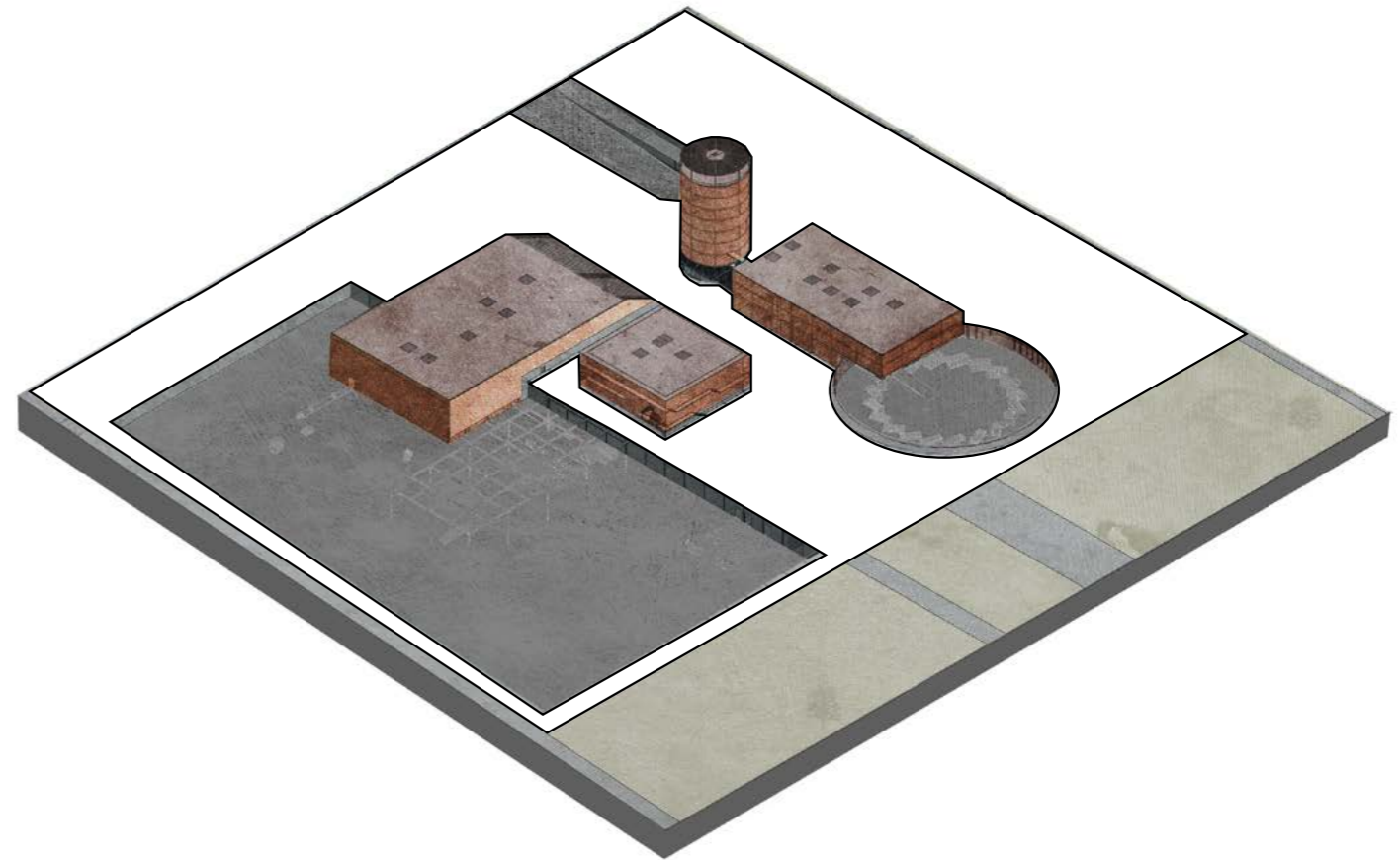
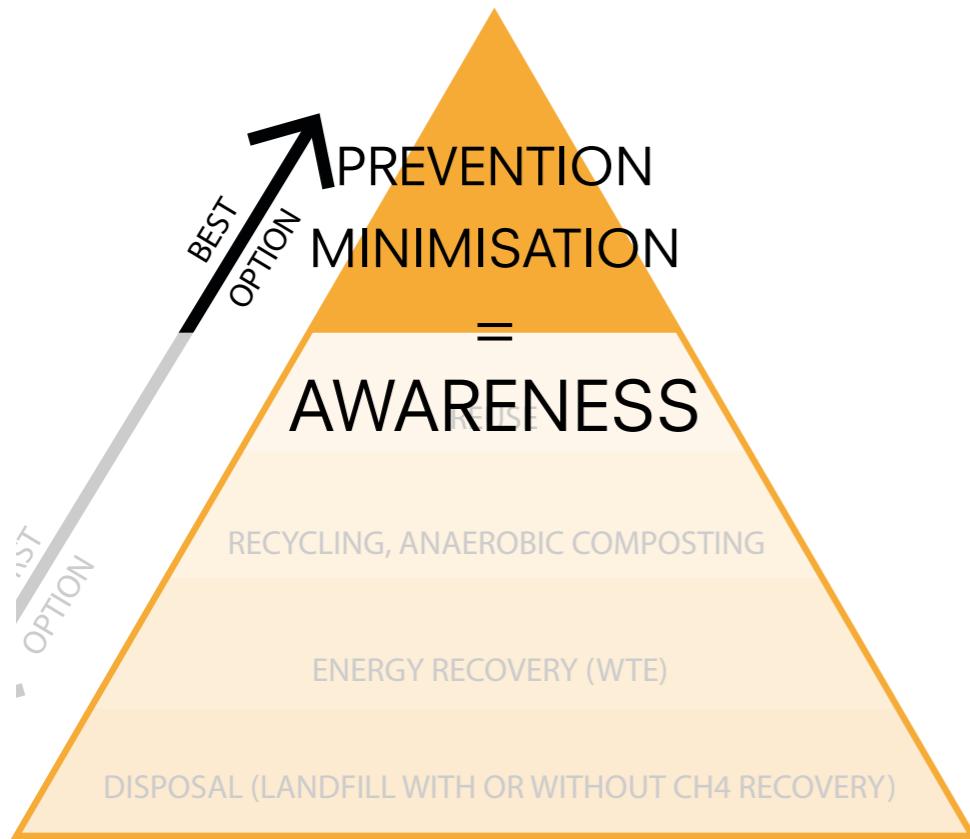


TOWER

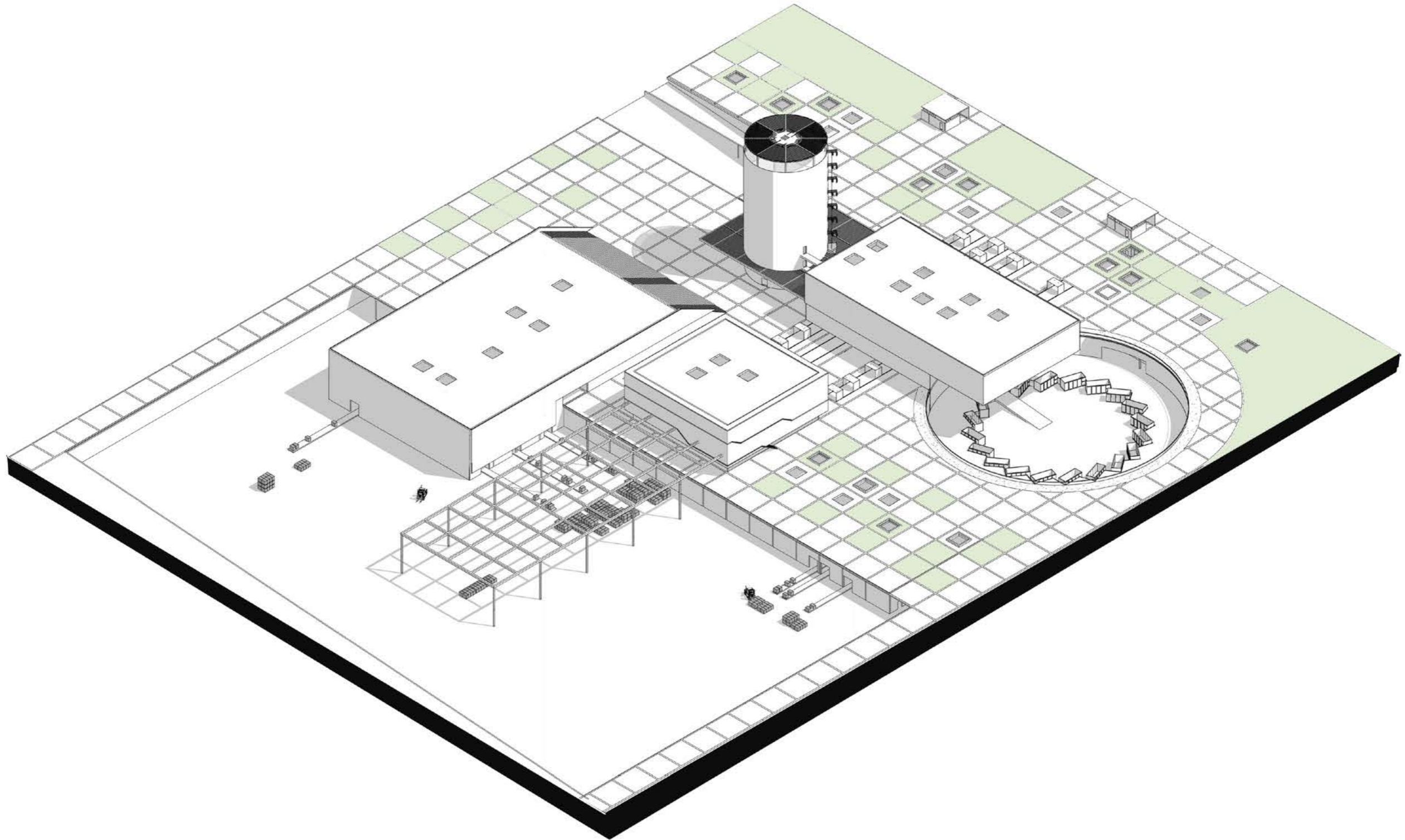


9

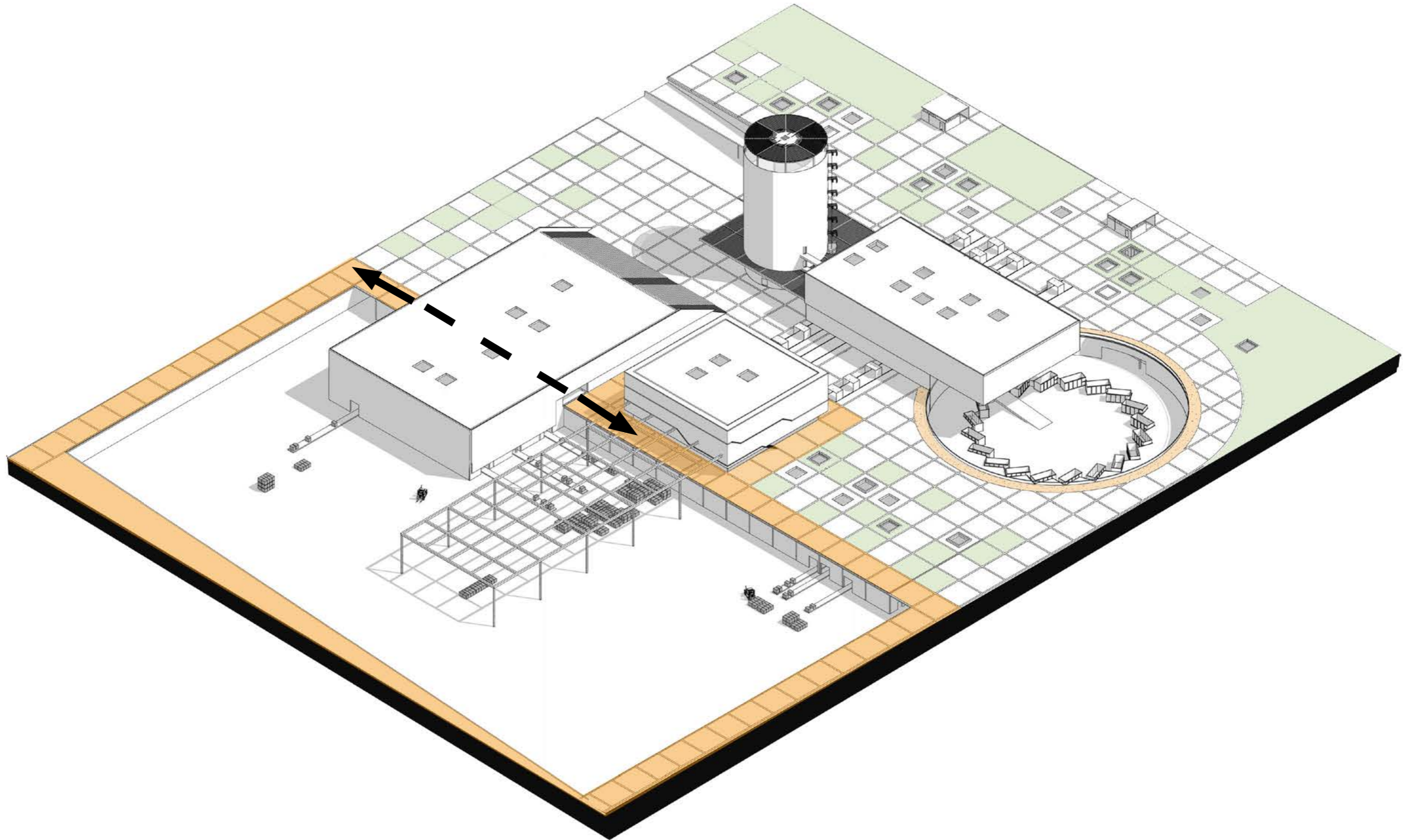
- OFFICES/WORKSHOPS
- CORE/CIRCULATION
- WORKSHOPS
- RECRETION/PUBLIC
- TECHNICAL/SERVICES

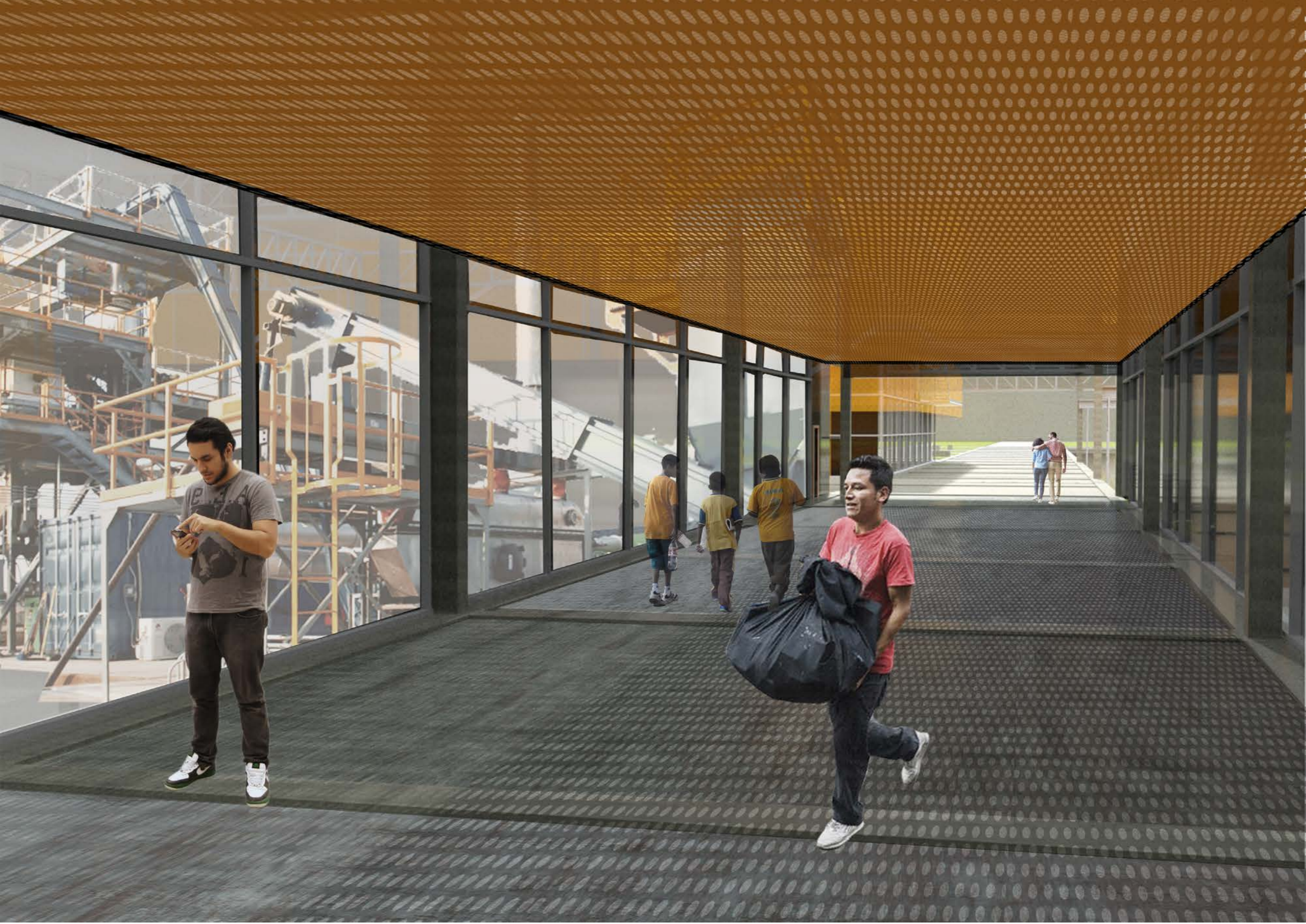


IN-BETWEEN SPACE

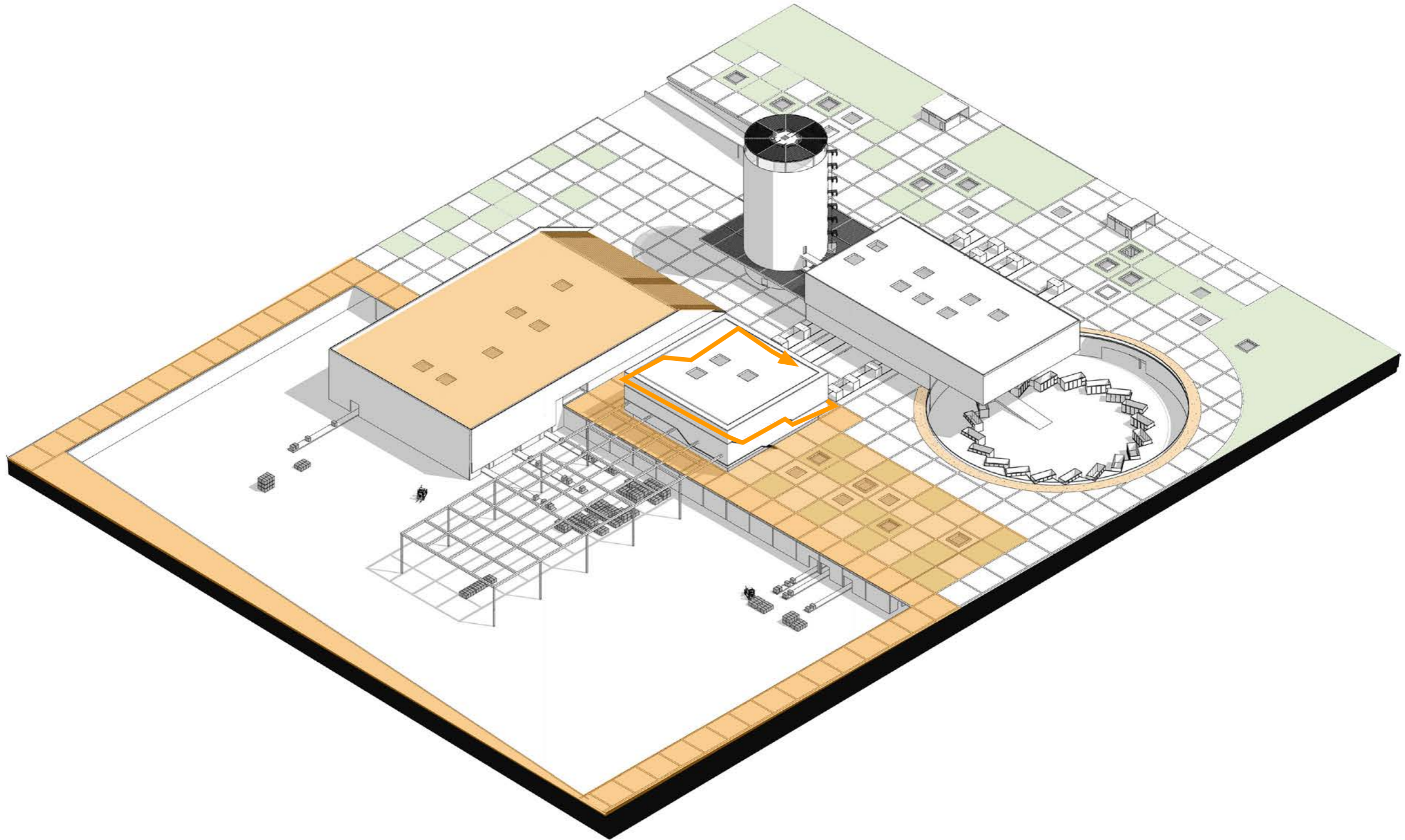


IN-BETWEEN SPACE



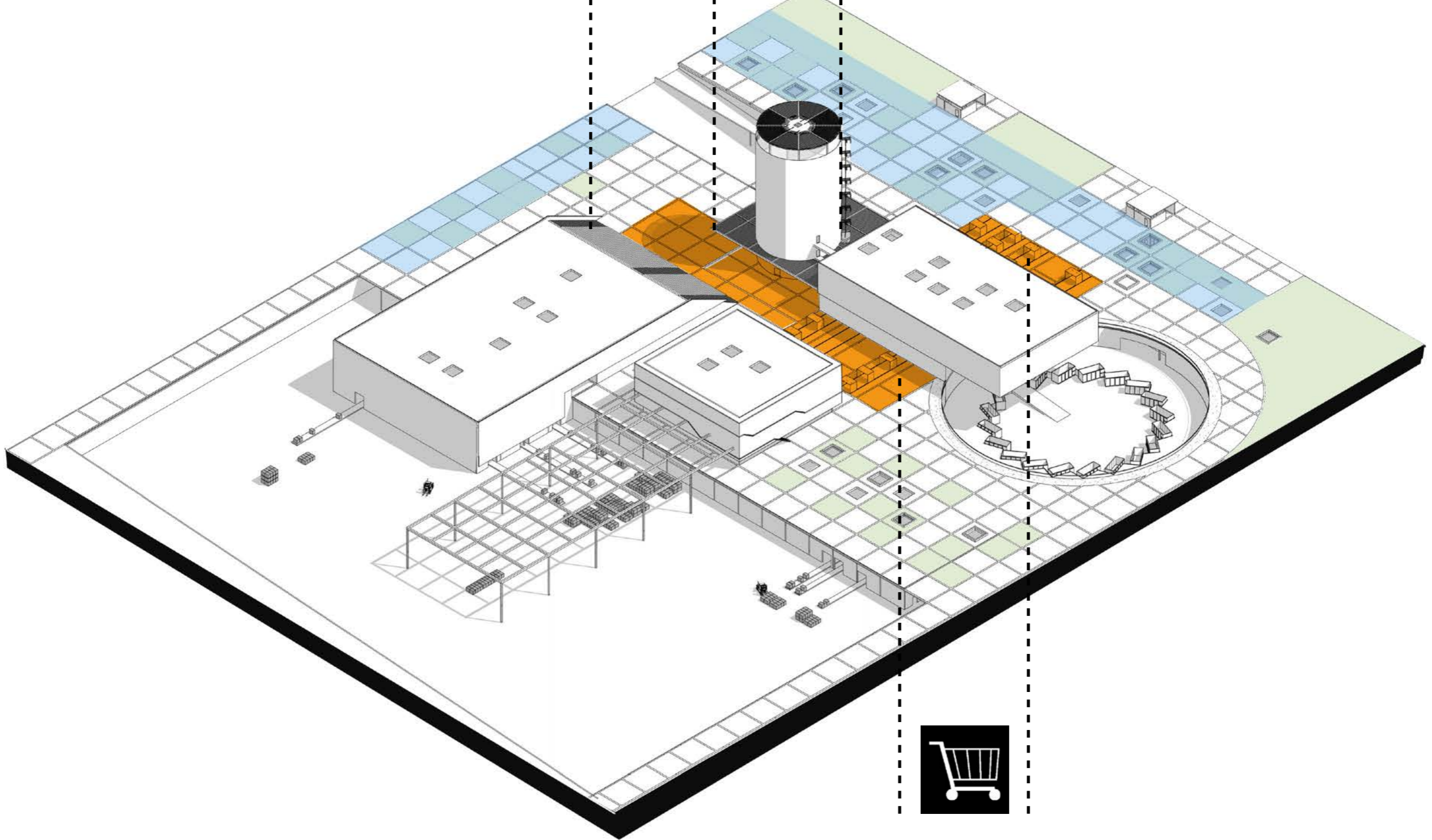


IN-BETWEEN SPACE





IN-BETWEEN SPACE



OUTSIDE MATERIALIZATION



PERFORATED CORTEN
STEEL PANELS



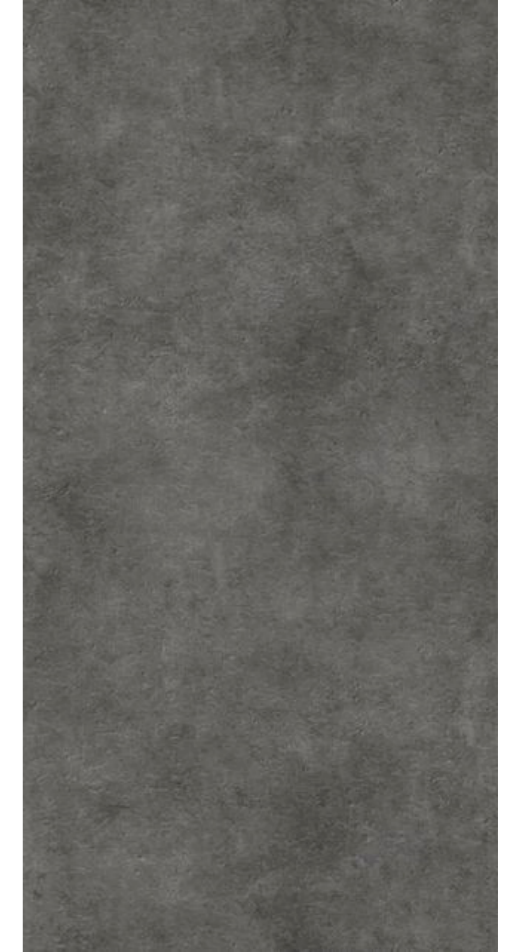
PERFORATED CORTEN
STEEL PANELS



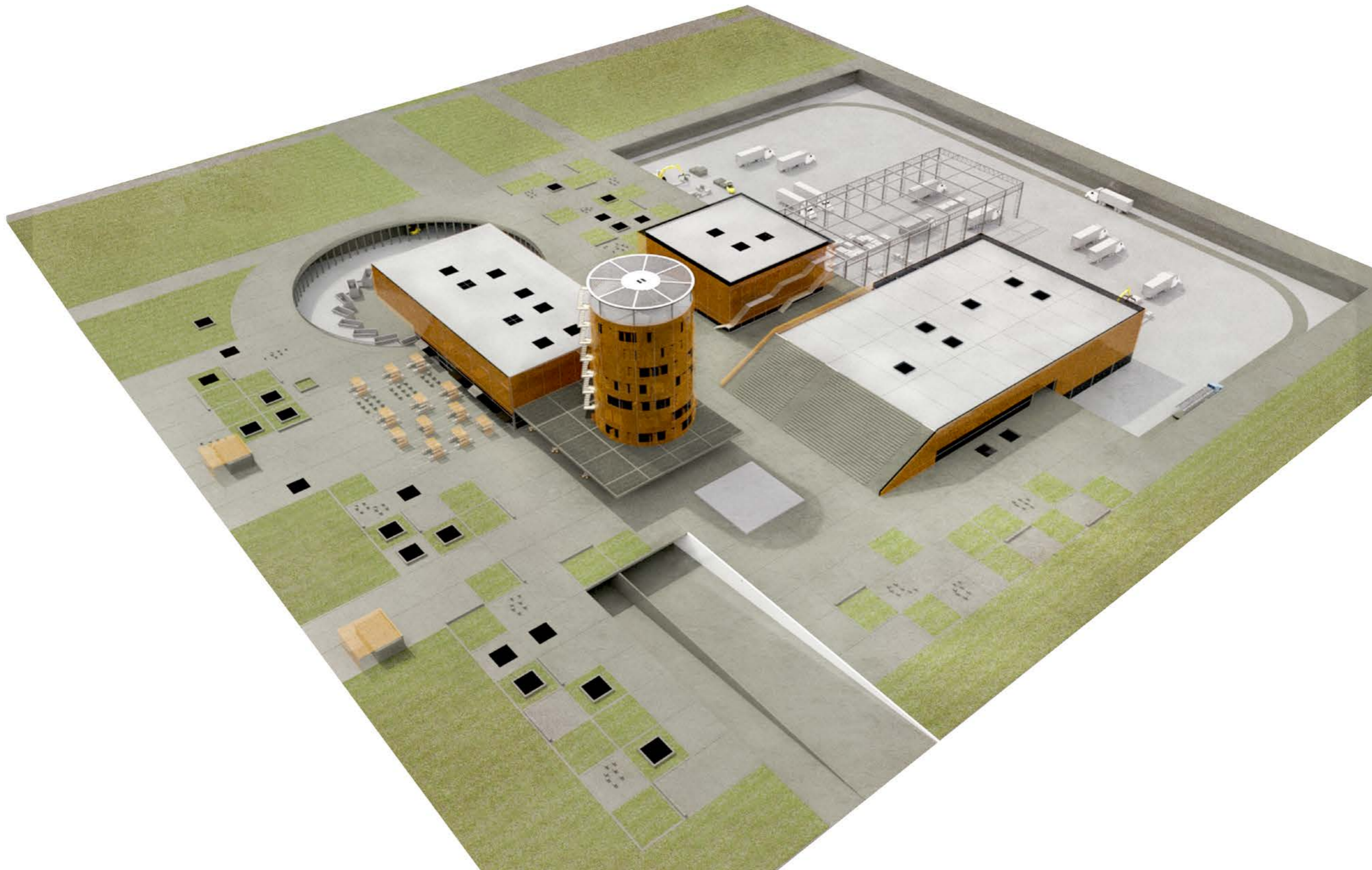
PERFORATED CORTEN
STEEL PANELS



CONCRETE MONOLITE
AND TILES

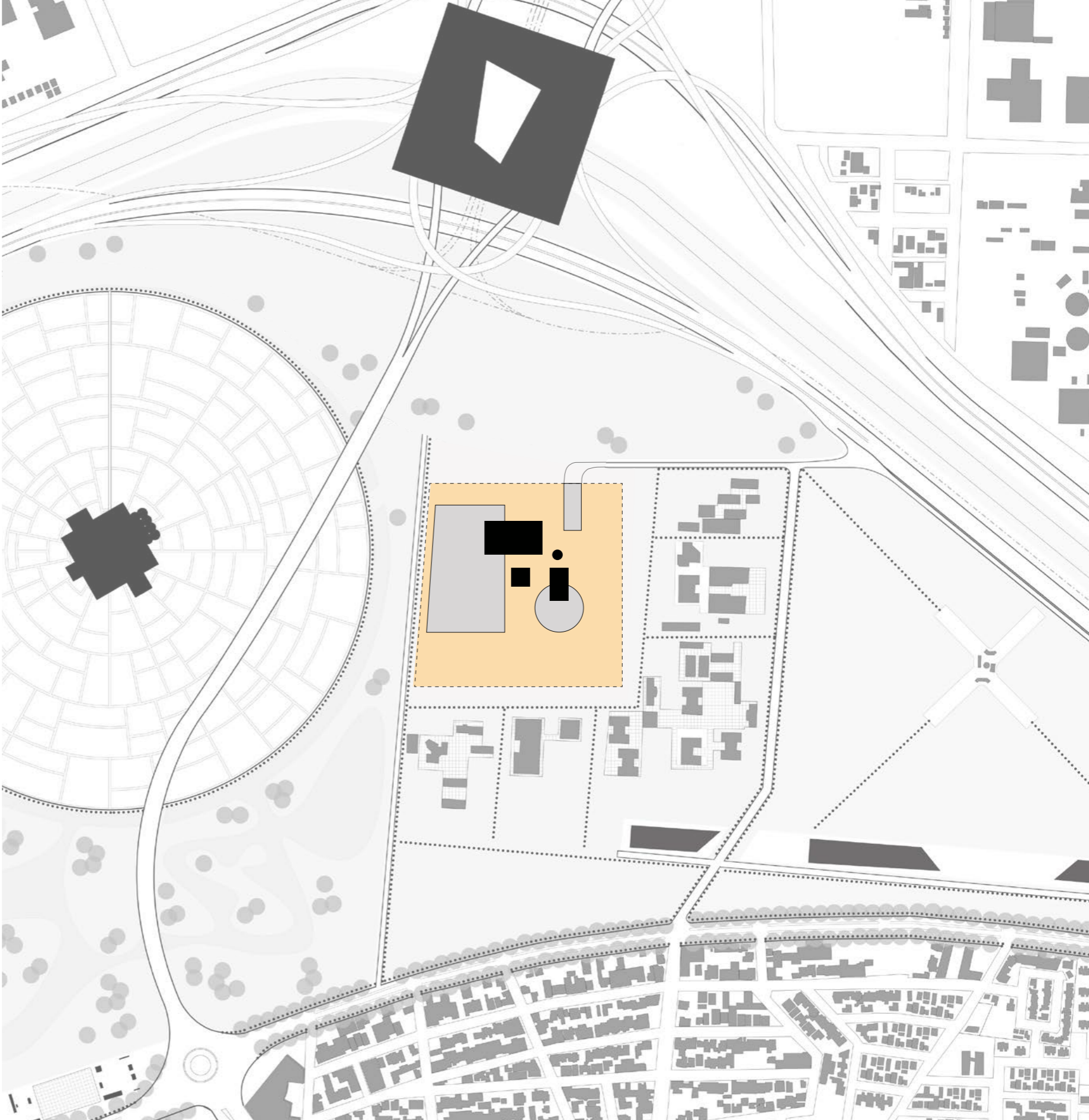


AMERYTOP 400 FLOOR





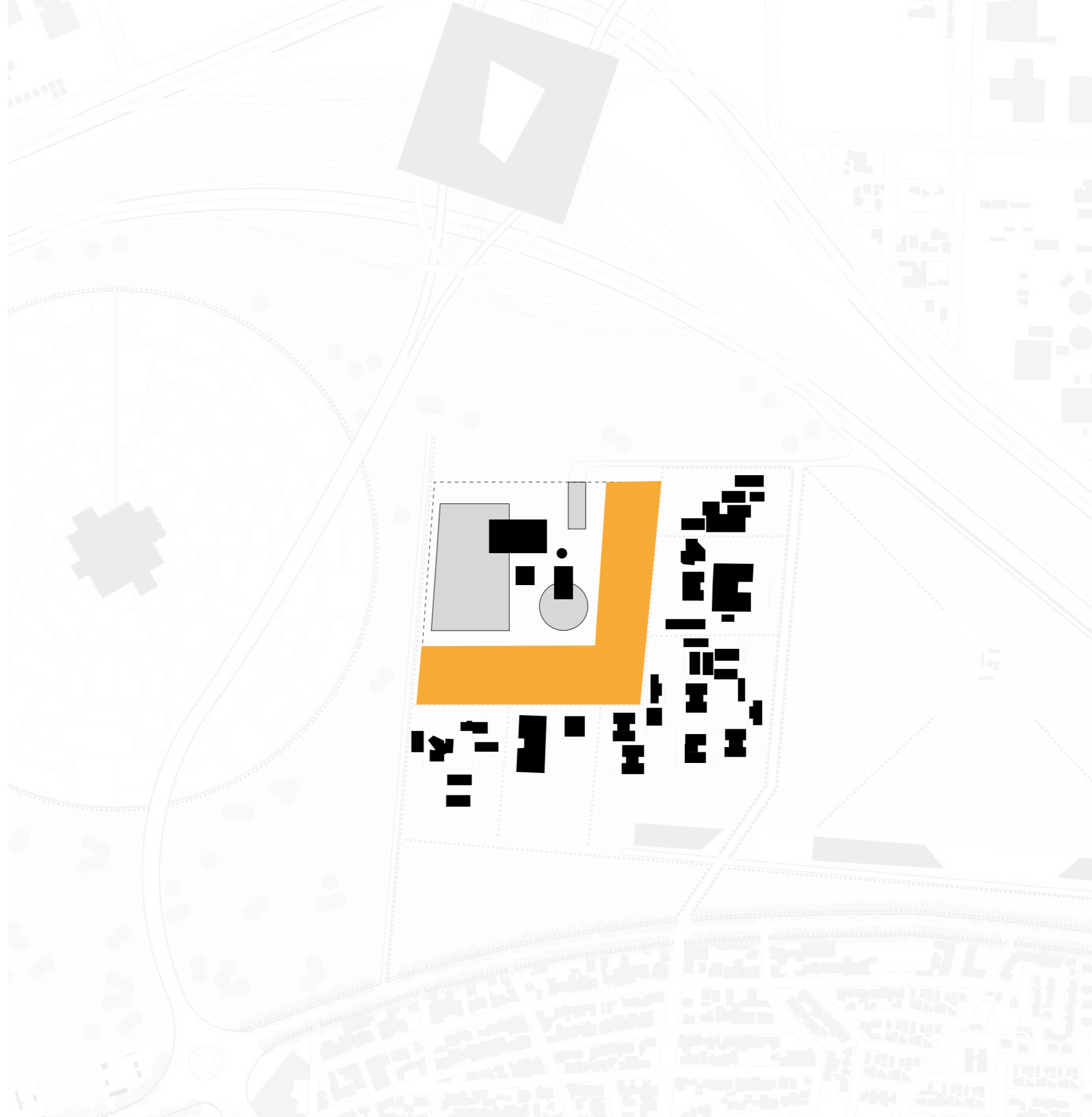
ZOOM OUT



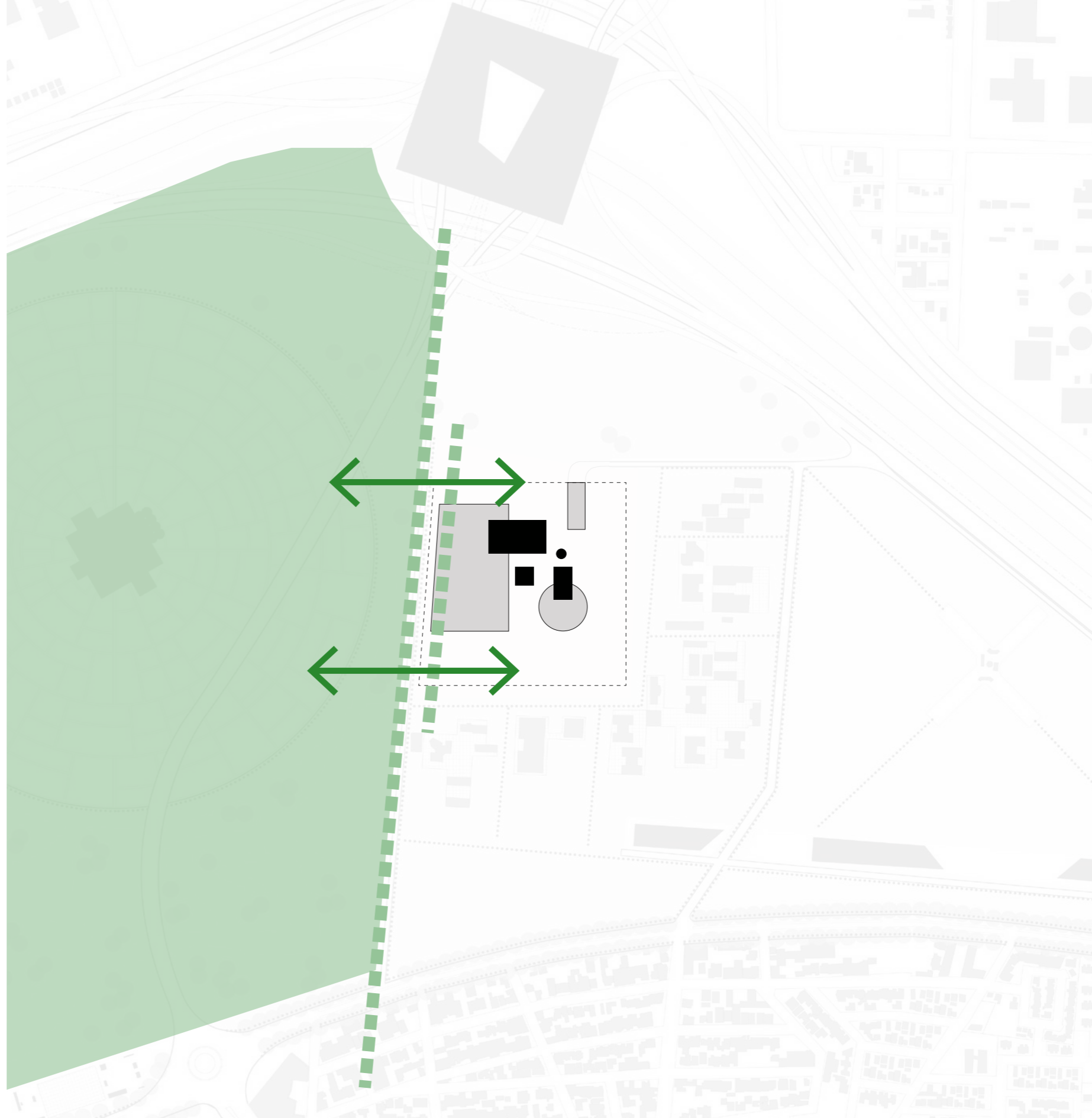
RELATION TO
SCHOOL &
UNIVERSITY



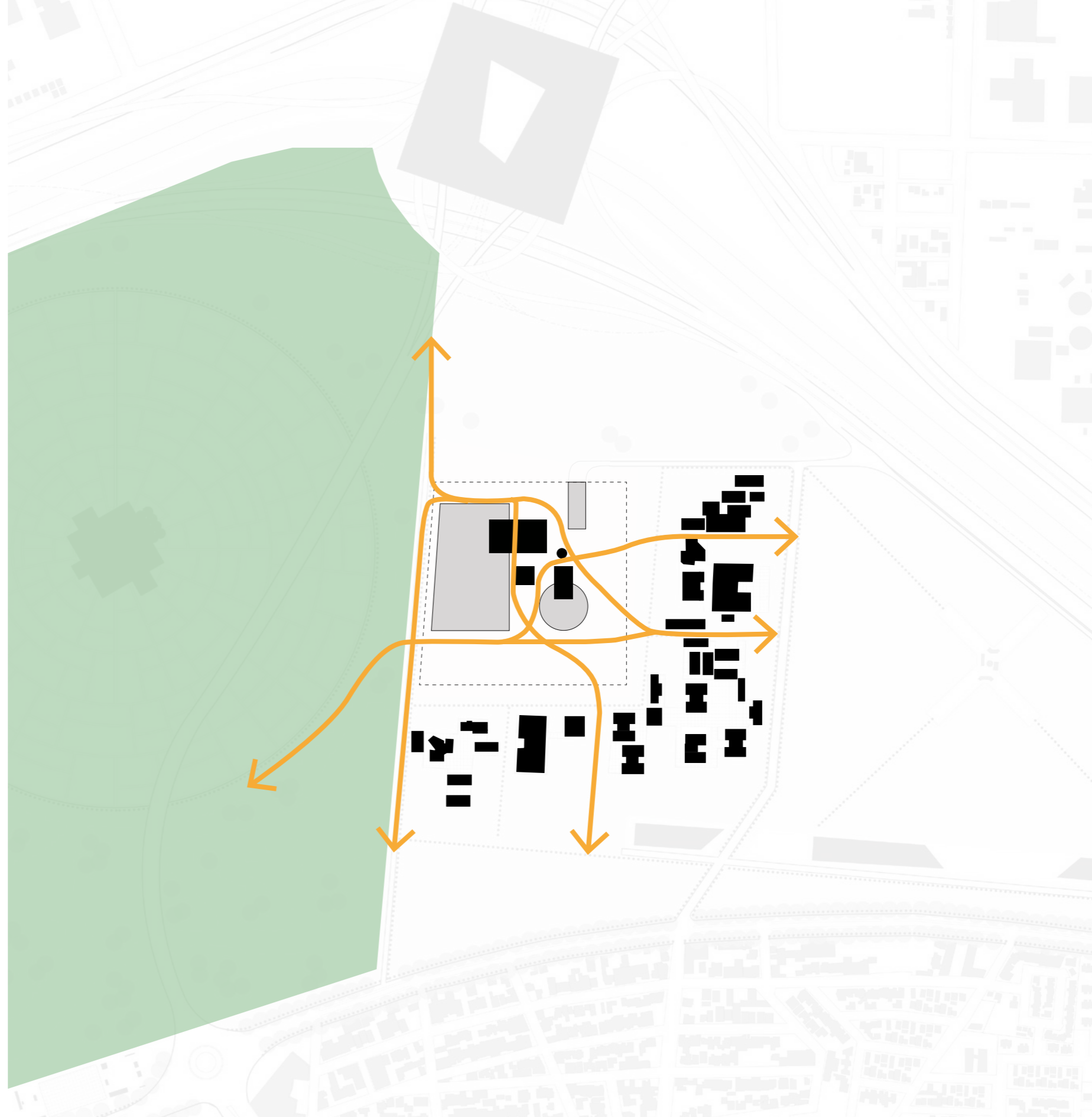
RECREATION AND PLAYGROUNDS

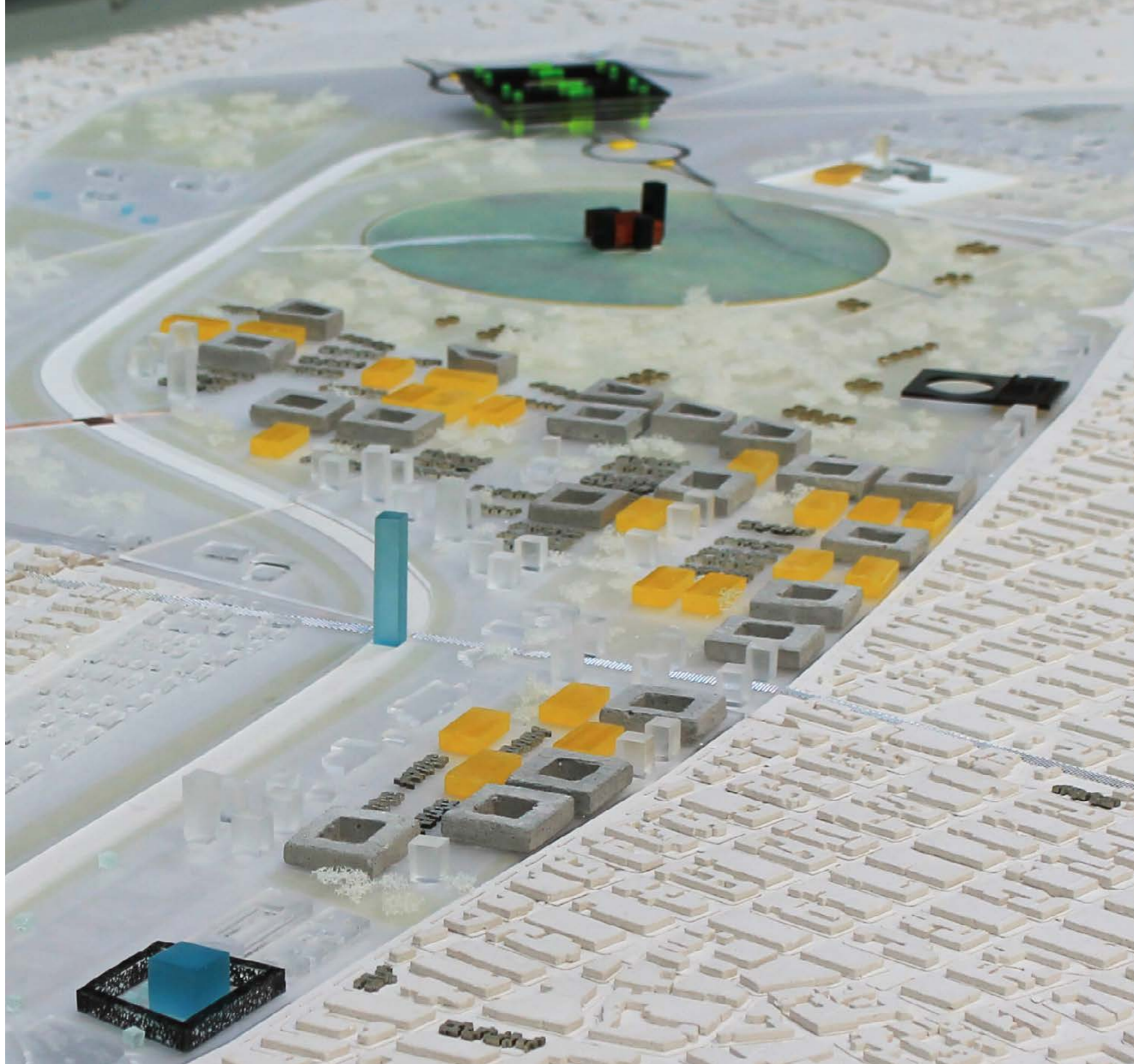


RELATION TO PARK



RELATION TO SURROUNDINGS





CHAMIZAL STRATEGY



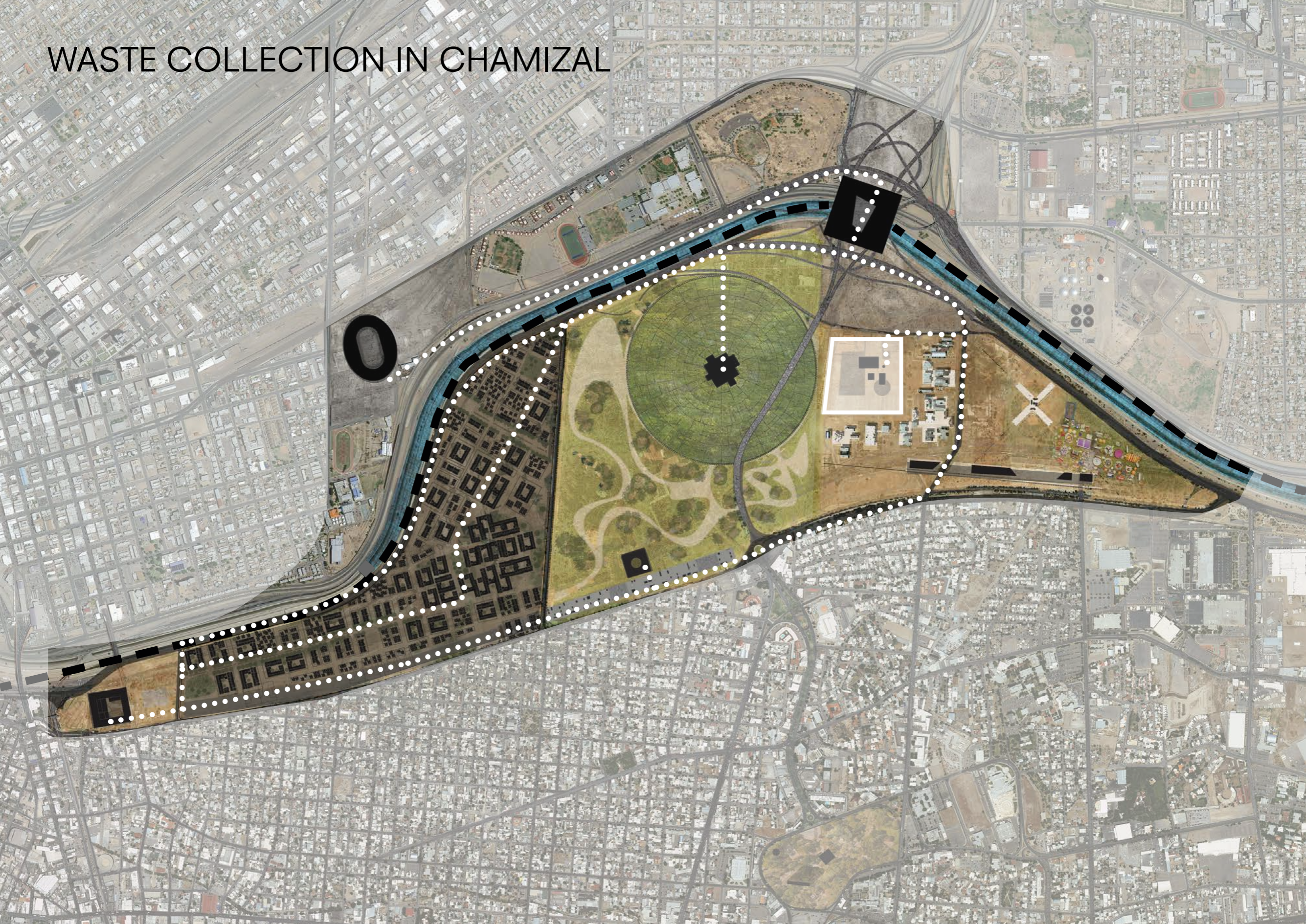
CHAMIZAL STRATEGY



CHAMIZAL STRATEGY



WASTE COLLECTION IN CHAMIZAL



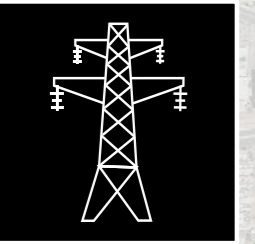


HEATING:
12 000 HOUSEHOLDS

4%

ELECTRICITY:
148 000 HOUSEHOLDS

27%



WATER:
12 000 HOUSEHOLDS

4%

