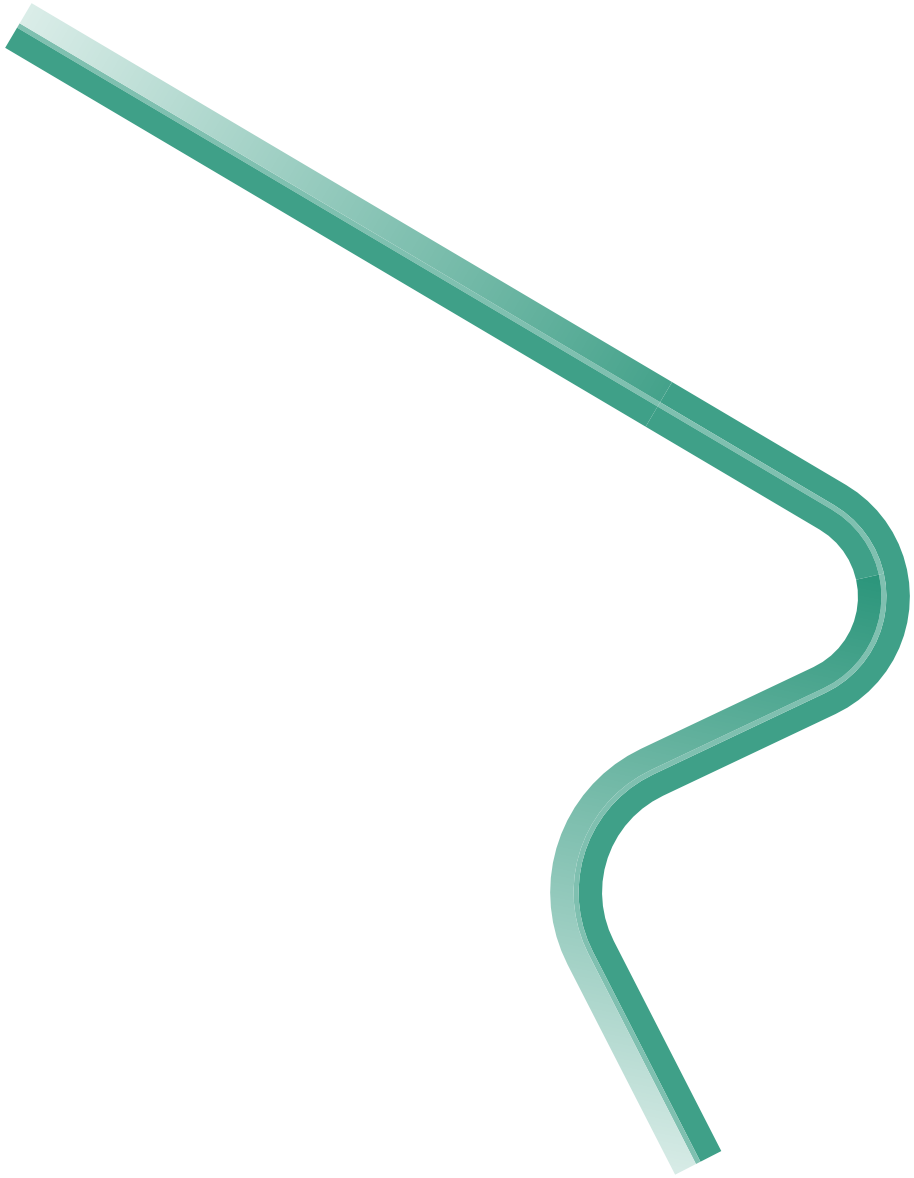


Expanding universes on shrinking footprints

Fascination Research Design

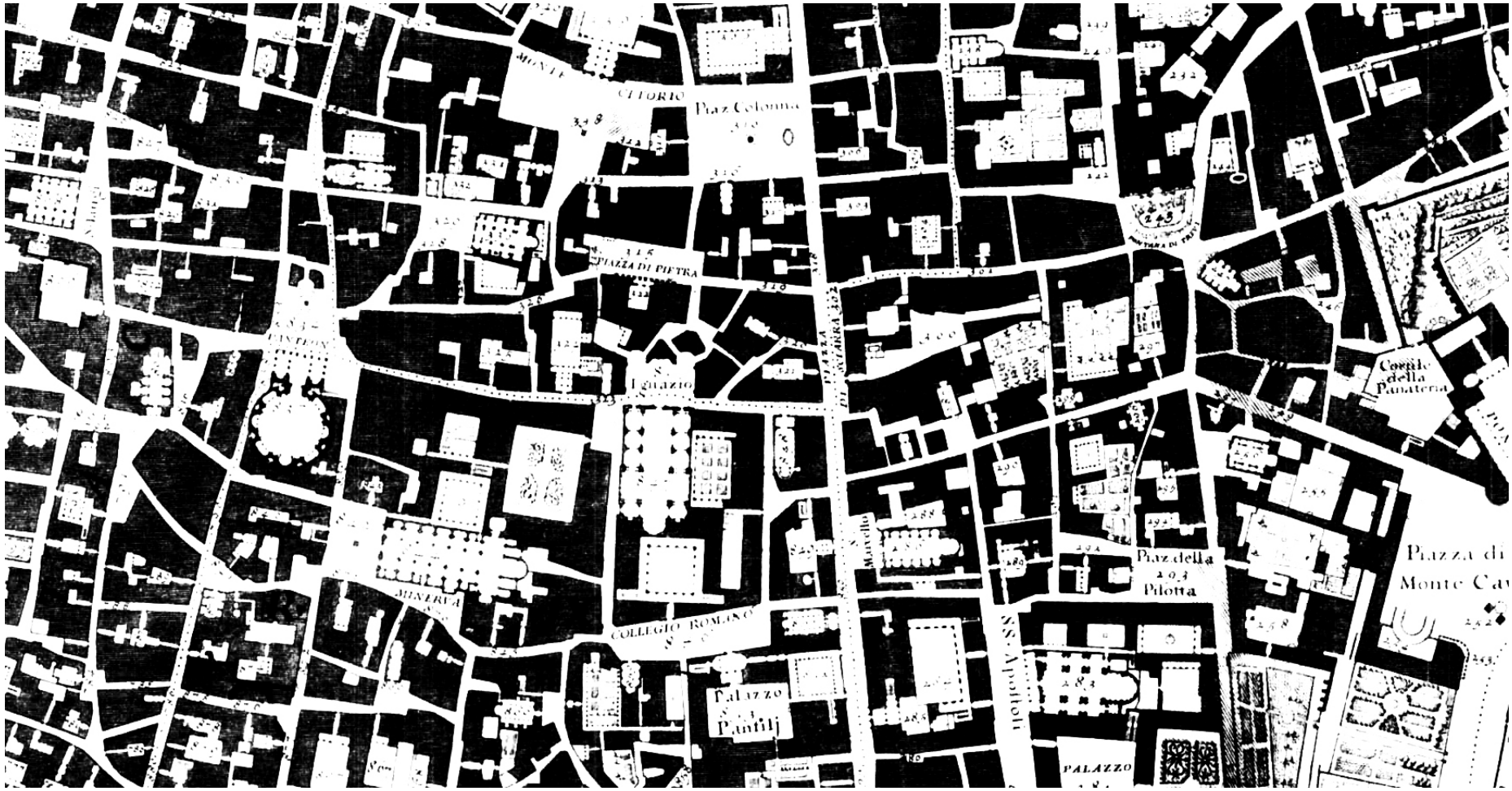
Fascination

ILLUSTRATION

PUBLIC/PRIVATE DENSIFYING CITIES

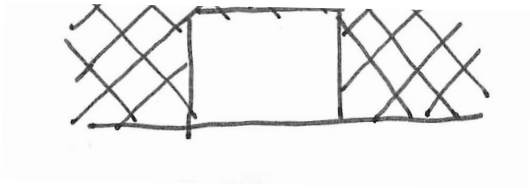
ILLUSTRATION

PUBLIC/PRIVATE (TWIN-PHENOMENA)

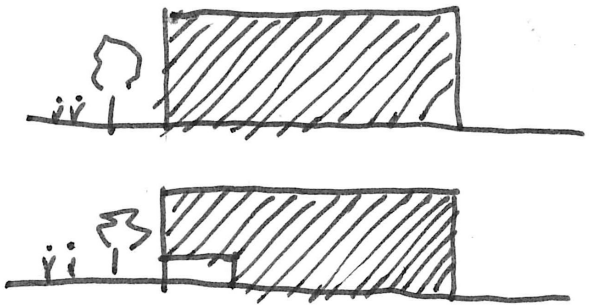


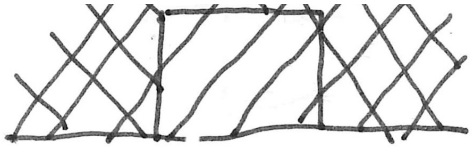
THEME

EXPANDING UNIVERSES ON SHRINKING FOOTPRINTS

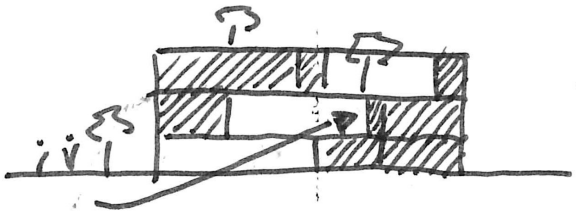


REGULAR PUBLIC SPACE





EXTENDED PUBLIC SPACE



abstract

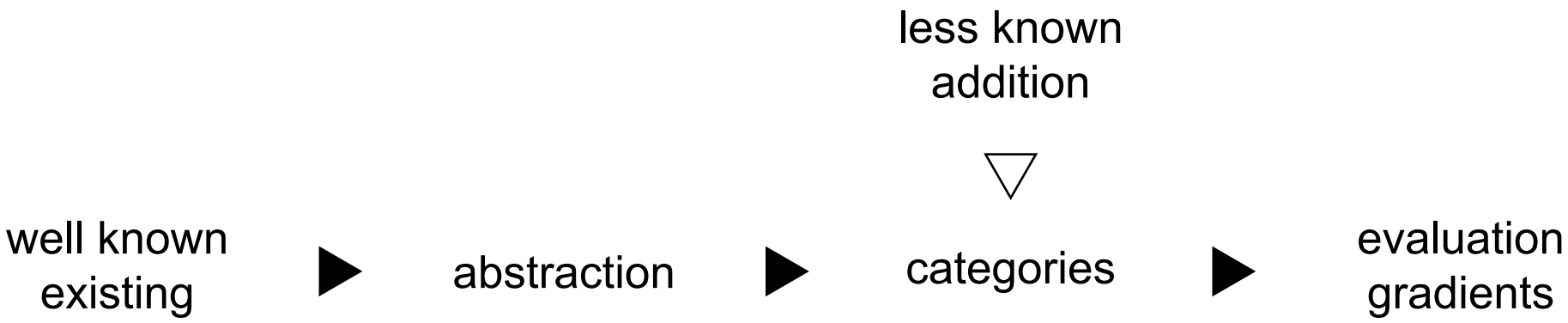
example

Research

What are architectural tools that create the transfer between public and private?

RESEARCH METHOD

OVERVIEW



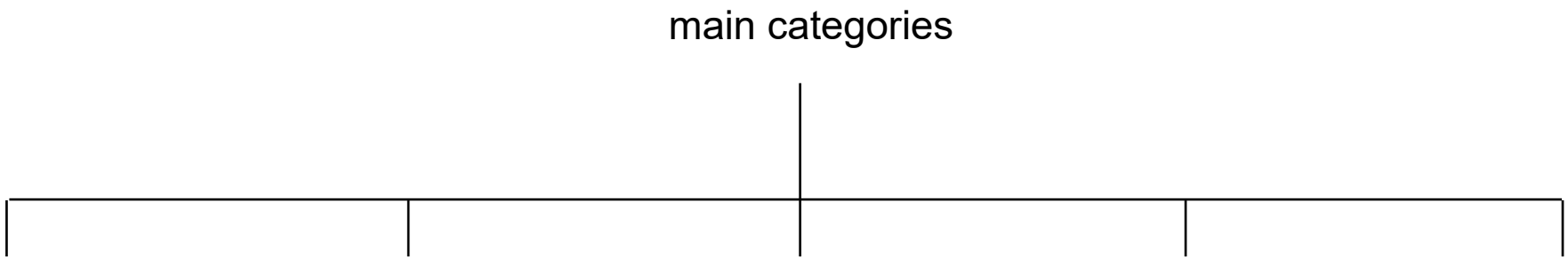
|| ACRREx

parallels with ACRREx ‘Teaching Creativity in Mechanical Design’ | Breedvel P. / Herder J.L. / Tomizama T.
Abstracting, Categorizing, Reflecting, Reformulating and Extending

RESEARCH METHOD

ABSTRACTING

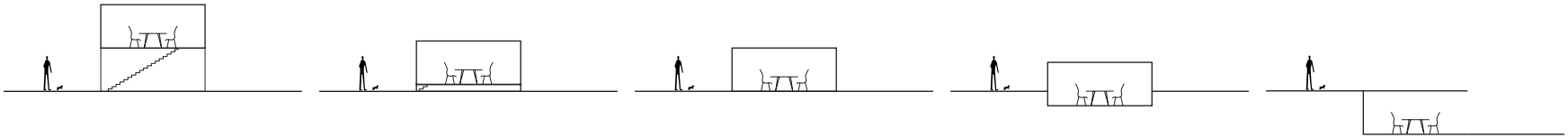
RESEARCH
MAIN CATEGORIES



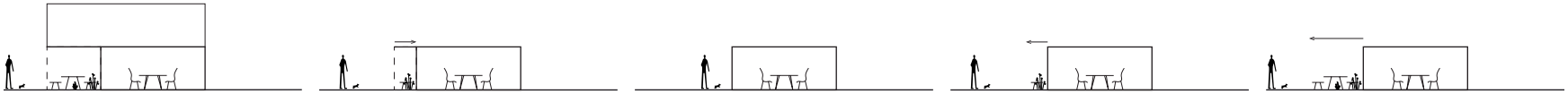
Distance	Dwelling Function	Dwelling Enclosure	Urban Layout	Facade Enclosure
How far am I from the window?	What space is behind the window?	Can I see through the dwelling?	Is the urban space public? (before the window)	How flowing is the transition?

TOOLBOX
ALL CATEGORIES

VERTICAL DISTANCE

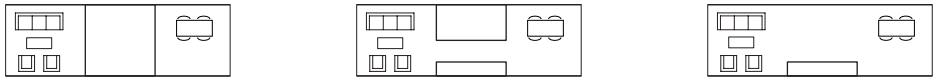


HORIZONTAL DISTANCE

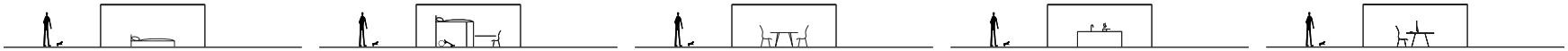


FACADE ENCLOSURE

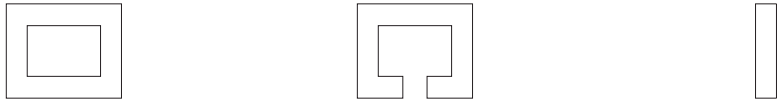
DWELLING ENCLOSURE



DWELLING FUNCTION

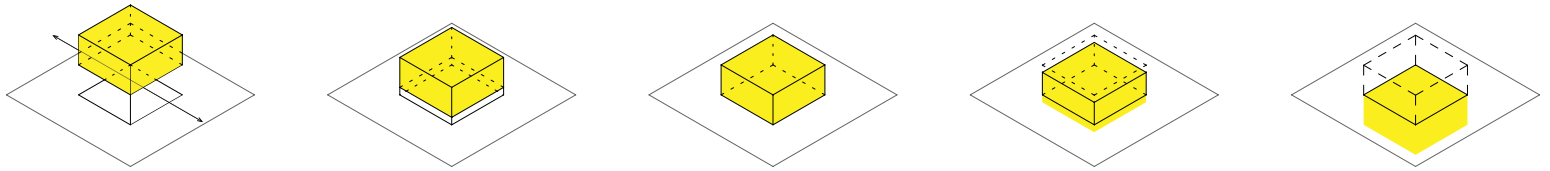


URBAN LAYOUT

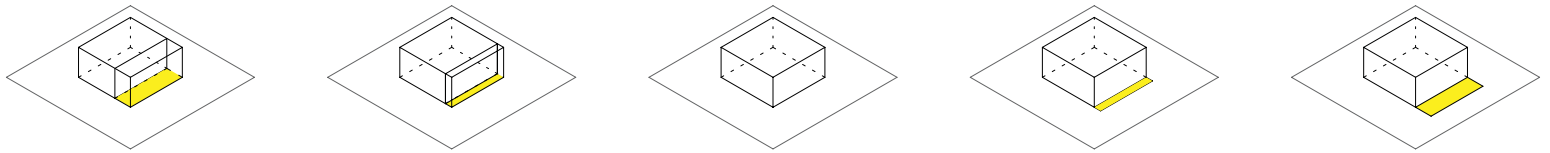


TOOLBOX
ALL CATEGORIES

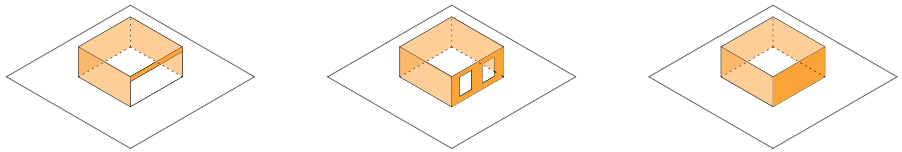
VERTICAL DISTANCE



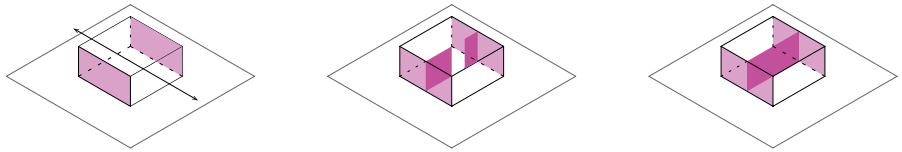
HORIZONTAL DISTANCE



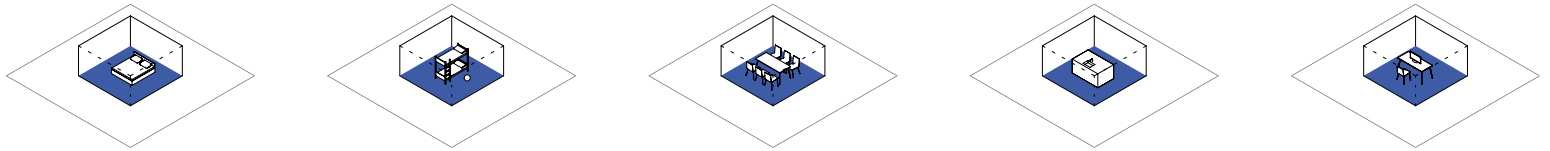
FACADE ENCLOSURE



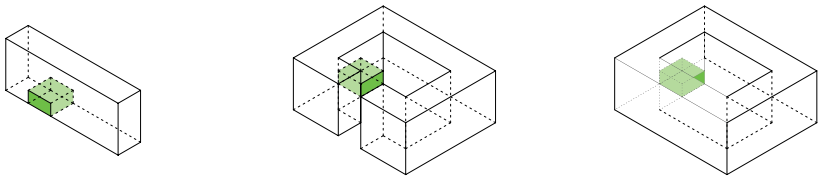
DWELLING ENCLOSURE



DWELLING FUNCTION



URBAN LAYOUT



Design

DESIGN GOALS
DESIRED QUALITIES

Urban strategy	**design site-specific & in harmony with Amsterdams' future plans**
Building	**expand universe / densify inner city on small footprint | implement my research | diversity in unity | attractuve build-ing-method | freedom of choice**
Dwelling	**transition between public and private adaptable for future lifesituation | freedom of choice**
Detail	**transition between public and private adaptable for future lifesituations**

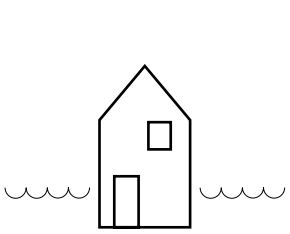
AMSTERDAM

OVERVIEW

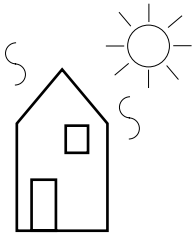
AMSTERDAM INNER CITY

CURRENT SITUATION VS FUTURE

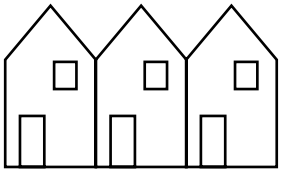
urban block

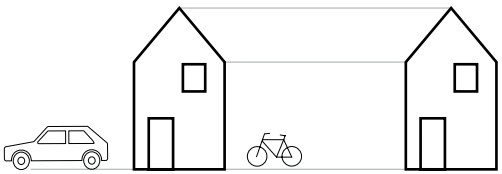


flood risk

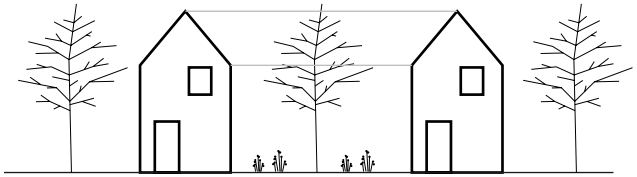


urban heat

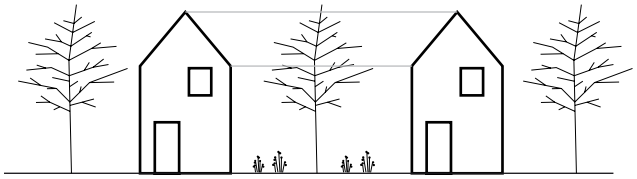




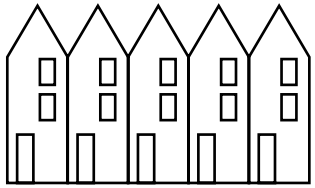
car-presence



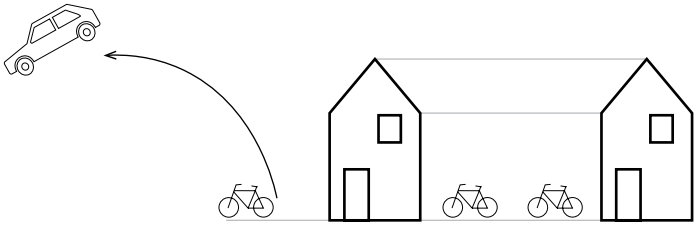
healthy urban block



rain & heat buffer



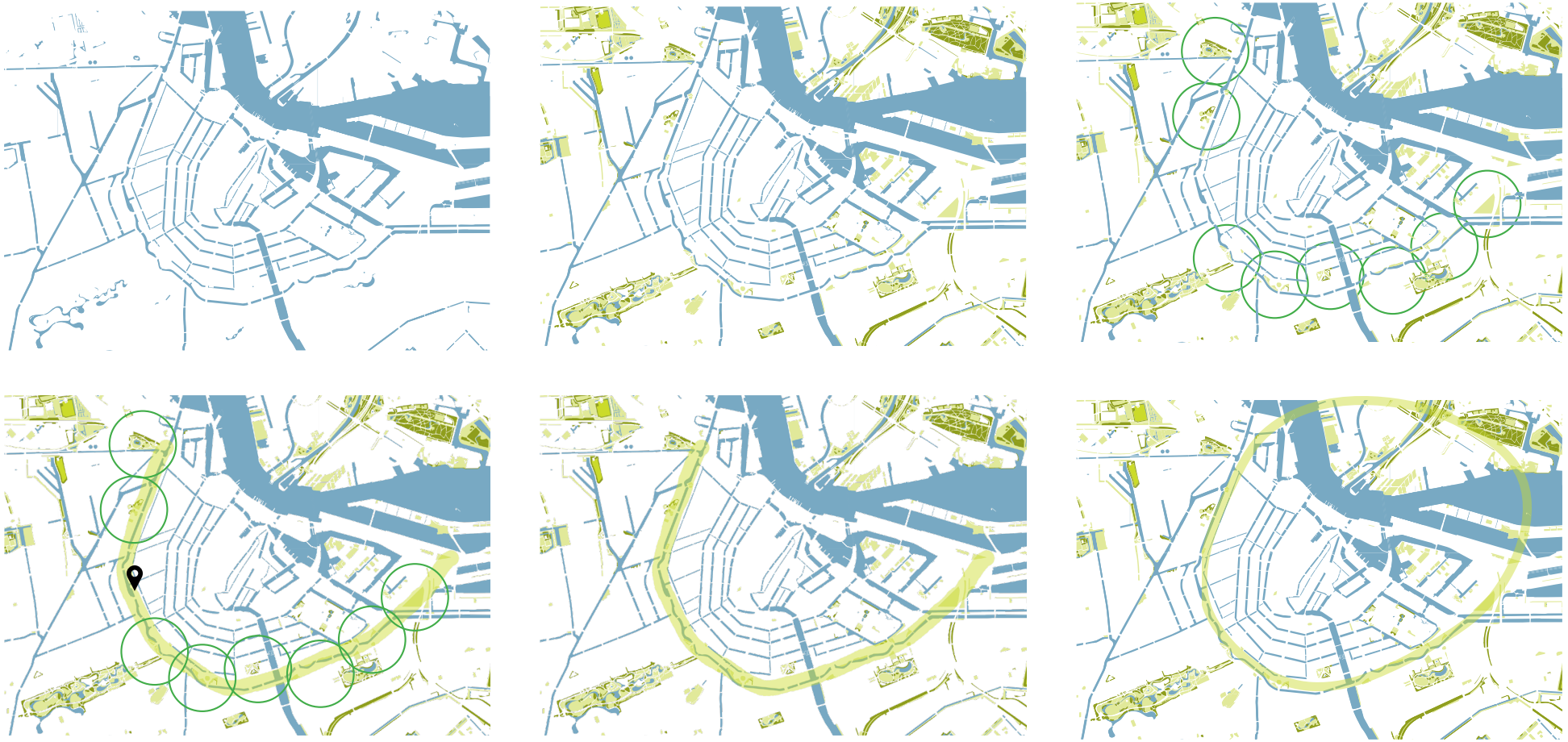
densification



push out car

Where would Amsterdam need a public space upgrade?

GREEN LOOP
URBAN STUDY



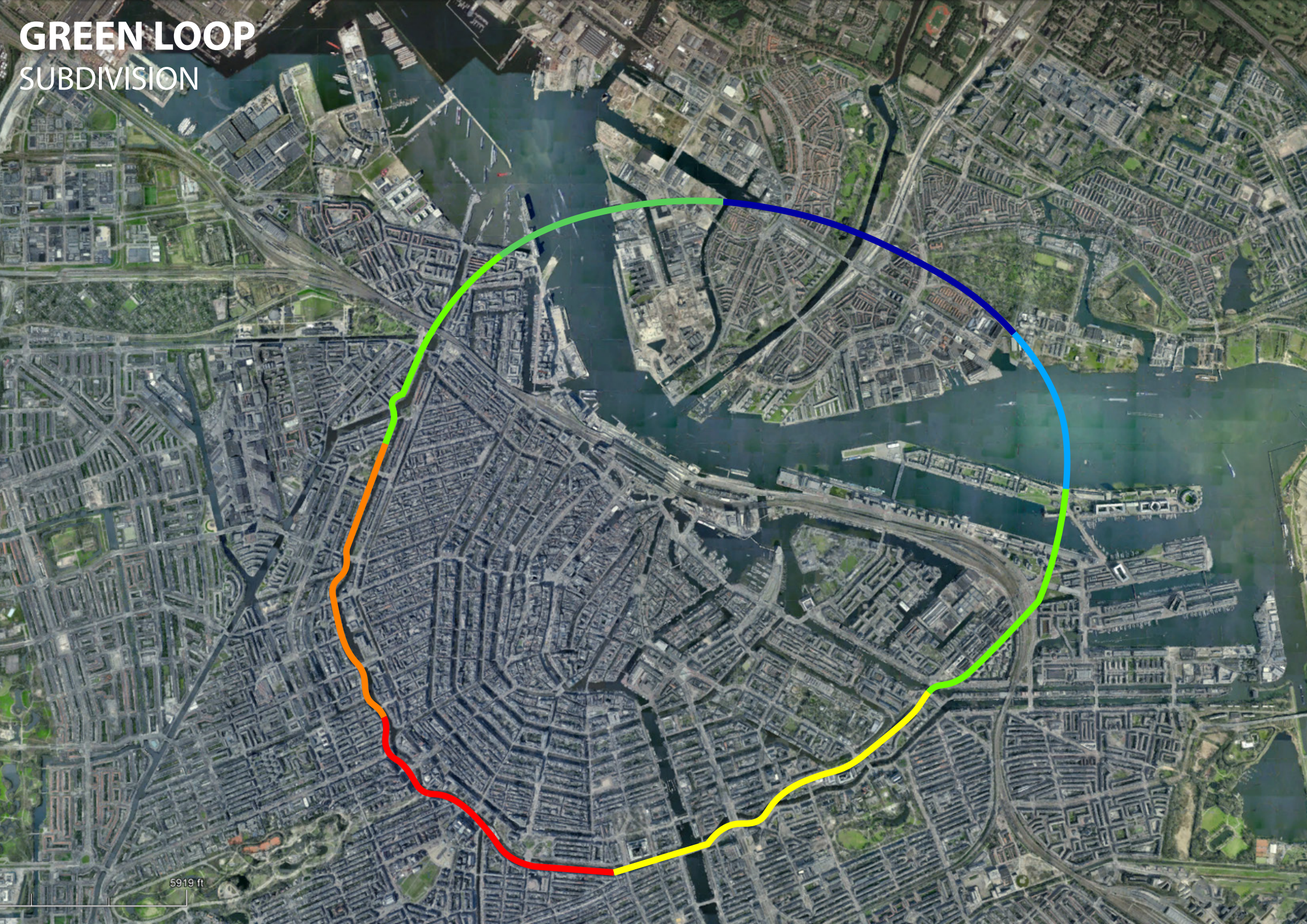
GREEN LOOP
AMSTERDAM

GREEN LOOP

BIKE

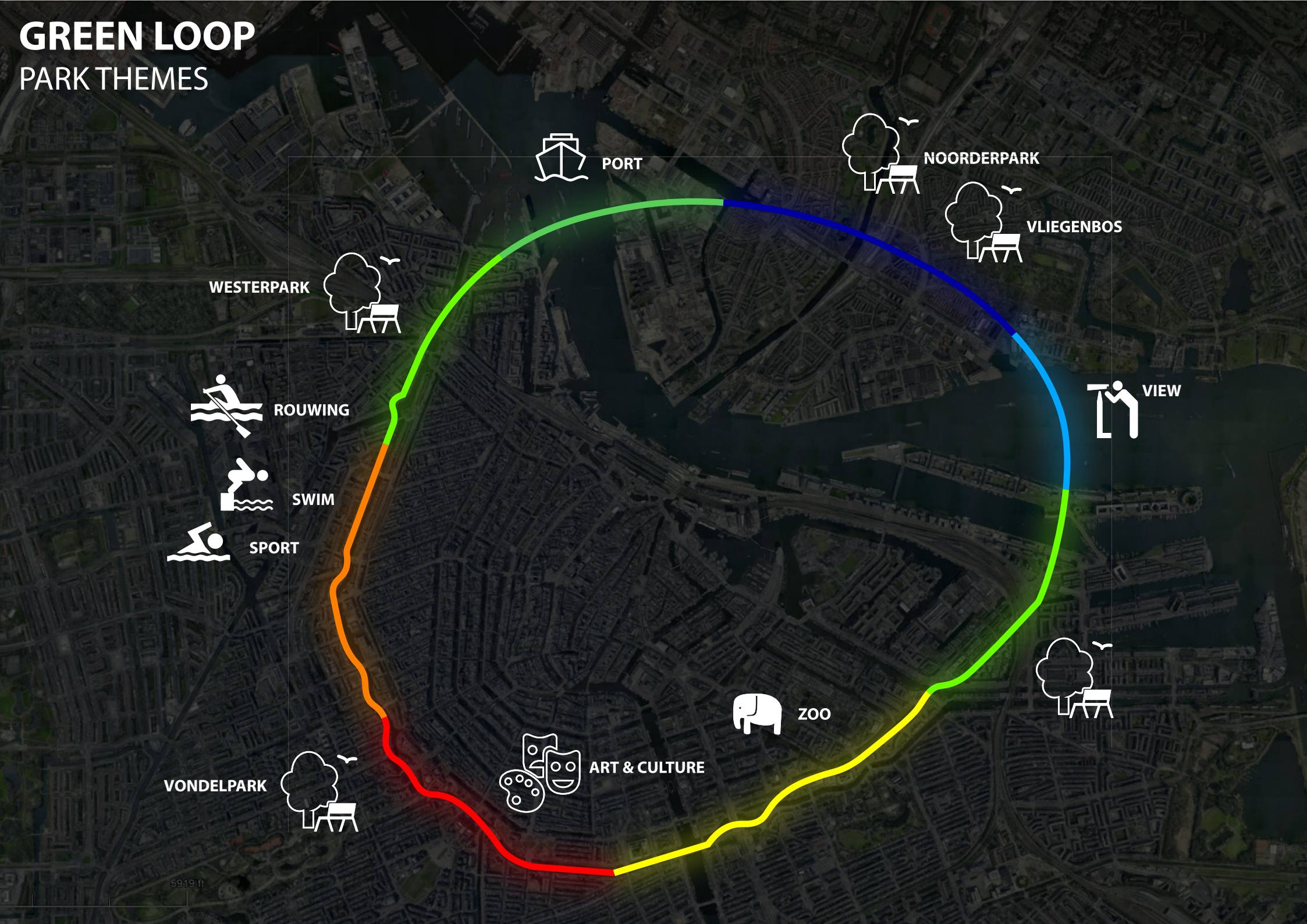

GREEN LOOP
ONE BIG PARK
ONE BIG PARK

GREEN LOOP
SUBDIVISION



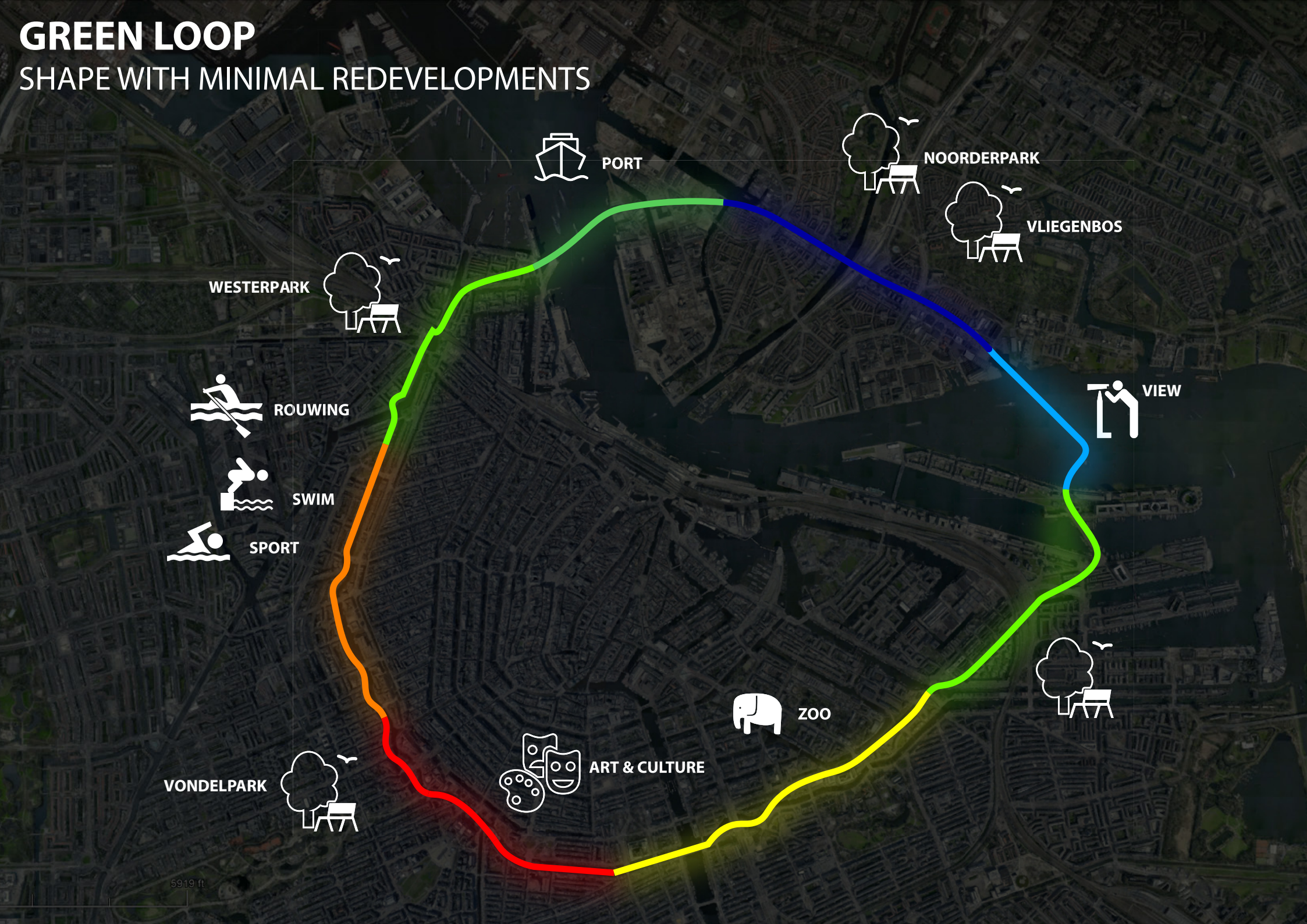
GREEN LOOP

PARK THEMES



GREEN LOOP

SHAPE WITH MINIMAL REDEVELOPMENTS



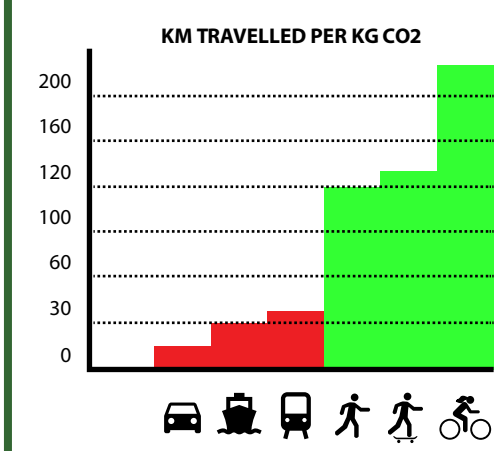
GREEN LOOP
BENEFITS

LEISURE

it is one of the key reasons for people to go to parks in a city. It is connected to socializing and relaxation and improves well-being. A good city has to provide leisure places spread around and in reachable distances for its citizens.

SPORT & HEALTH

Sport and health are two closely related flieds. A city has to offer safe envirenment - indoors as well as outdoors - for its citizens to do sport and animate them to live a healthy lifestyle.



CO2 - INNER CITY TRANSPORT

The goal of progressive cities and citizens, is the reduction of CO2 emmissions. This promotes not only transport by public transport, but an active way of moving.
In this sence, the bicycle is once again the forerunner.

GREENERY

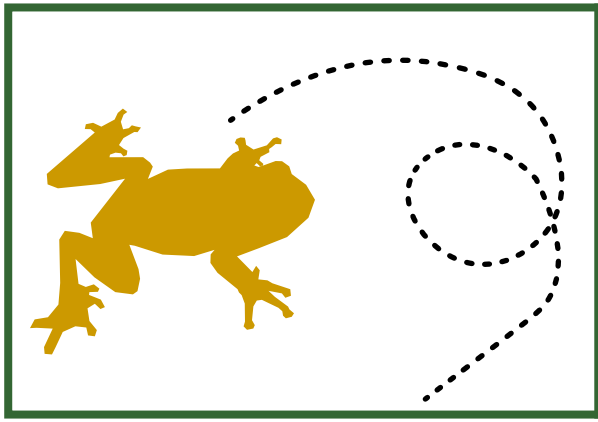
Nature is an important part of our life. Not only that plants produce the oxygen we breath, but also being visually connected to nature on a workplace increase vproductivity.

HEAT AND RAINBUFFER

Greenery also improves the climate within the city. If city greenry covers a sufficient amount of sqm it significantly reduces urban heat and acts as rainbuffer

LEISURE

it is one of the key reasons for people to go to parks in a city. It is connected to socializing and relaxation and improves well-being. A good city has to provide leisure places spread around and in reachable distances for its citizens.



MIGRATION

Animal migration in the built environment is only limited within parks andoptional biocorridors.
The danger of traffic does not allow certain species to migrate. This has a direct impact on biodiversity.

MOBILITY

The goal of progressive cities and citizens, is the reduction of CO2 emmissions. This promotes not only transport by public transport, but an active way of moving.
In this sence, the bicycle is once again the forerunner.

GREEN LOOP

TODAYS FACTS

NOS Nieuws Sport Uitzendingen AEX 15 km 9°

Amsterdam zet plannen voor fietsbrug over het IJ door

15-06-2017, 12:01 BINNENLAND

De kop van Java-eiland met rechts het Hamerstraatgebied in Amsterdam-Noord. Op de a
station te zien (archief) ANP

De minister is tegen, Rijkswaterstaat is kritisch en ook scheepvaartse
provincie zijn er niet blij mee, maar dat houdt de gemeente Amsterdam niet
tegen. Als het aan het college ligt, komt de fiets- en voetgangersbrug over het IJ
er gewoon.

In januari presenteerde de gemeente plannen om de verbindingen over het IJ te
verbeteren. Fietsers en voetgangers moeten nu met de veerpont oversteken,
maar daar wordt het steeds drukker.

Amsterdam bouwt parkeergarage onder de gracht

9 Mei, 2017

Gemeente Amsterdam bouwt een nieuwe parkeergarage onder de Boerenweteringsgracht in de Oude Pijp. Na de bouw van de garage worden maximaal 273 parkeerplaatsen op straat opgeheven. Meer ruimte dus voor groen, voetgangers en fietsers.

Zo wordt de parkeeroverlast in de Oude Pijp verminderd én krijgt de openbare ruimte in de Frans Halsbuurt de broodnodige kwaliteitsimpuls. De ondergrondse garage wordt naar verwachting begin 2018 in gebruik genomen.

Gemeente Amsterdam English

Onderwerpen Actueel Contact

Home › Bestuur & Organisatie › College van burgemeester en wethouders › Pieter Litjens › Persberichten Pieter Litjens

Sarphatistraat succesvol als fietsstraat

In het kort

Het aanpassen van de Sarphatistraat naar een straat die primair bedoeld is voor fietsers en waar auto's te gast zijn, is succesvol.

Het aanpassen van de Sarphatistraat naar een straat die prim
is voor fietsers en waar auto's te gast zijn, is succesvol. Dat b
resultaten van de pilot die de gemeente Amsterdam de afgelo
maanden heeft uitgevoerd. De doorstroming voor fietsers is fl
verbeterd, zonder dat het autoverkeer vastloopt.

De meerderheid van de bewoners, ondernemers en verkeersdeelnem
straat geeft aan (zeer) tevreden te zijn met de aanpassingen die op
wethouder Litjens (Verkeer en Vervoer) zijn ingevoerd. Voor de mees
ondervraagde voetgangers maakt de nieuwe inrichting echter geen v
om het veiligheidsgevoel gaat: 61% vindt dat. Daarnaast is bijna een
mening dat het veiliger is. Negenendertig procent van de bewoners e
ondernemers voelt zich veiliger hoewel een bijna even groot deel aan
nieuwe inrichting geen verschil maakt voor het veiligheidsgevoel. Een
de ondervraagden voelt zich onveiliger.

De Sarphatistraat is een van de bekendste straten van de hoofdstad
onderzoek blijkt dat er veel meer fietsers dan auto's gebruik van mak
gemiddelde werkdag maken zo'n 17.500 fietser gebruik van de Sarph
Door deze straat aan te passen aan hen, is er een veiligere doorgang
voor fietsers. Auto's kunnen nog steeds door de Sarphatistraat, maar
maximaal 30 km/u rijden en delen de weg met fietsers. De aanpassin
geen gevolgen voor het Openbaar Vervoer (OV) en taxi's: die kunnen
blijven maken van de trambaan.

Wethouder Litjens is tevreden over de resultaten van de pilot: "In dit
veel meer fietsers dan auto's gebruik van deze straat. Dan is het logi
weg aanpast op het gebruik. Dat komt de doorstroom ten goede en d
de maatregelen die we kunnen nemen om de flinke groei van het aan
Amsterdam op te vangen."

Meer fietsstraten

ArchDaily News UNStudio Envisions New Transportation Hub and Development in Amsterdam

UNStudio Envisions New Transportation Hub and Development in Amsterdam

14:10 - 10 November, 2016 | by Patrick Lynch

Save this article Like 249 Tweet Pin it

Ben van Berkel and UNStudio have collaborated with a multidisciplinary team including Goudappel Coffeng (mobility consultants), GeoPhy (data specialists) and 2getthere (automated transit systems) to produce a study examining the future of infrastructure and city development for the area around Amsterdam's A10 ring road and the Leylaan district.

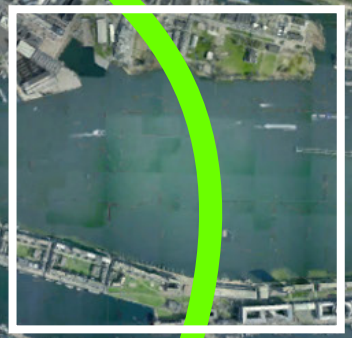
Proposals resulting from the study comprise a new multimodal transportation hub located at the intersection of Cornelis Lelyaan and the A10, and new urban districts flanking the highway that will link to adjacent neighborhoods while provided a much needed new address in Amsterdam.

What site could become a strong stand for “Expanding universes on shrinking footprints“?

GREEN LOOP
DESIGN SITE

CONNECTING NORTH & SOUTH AMSTERDAM

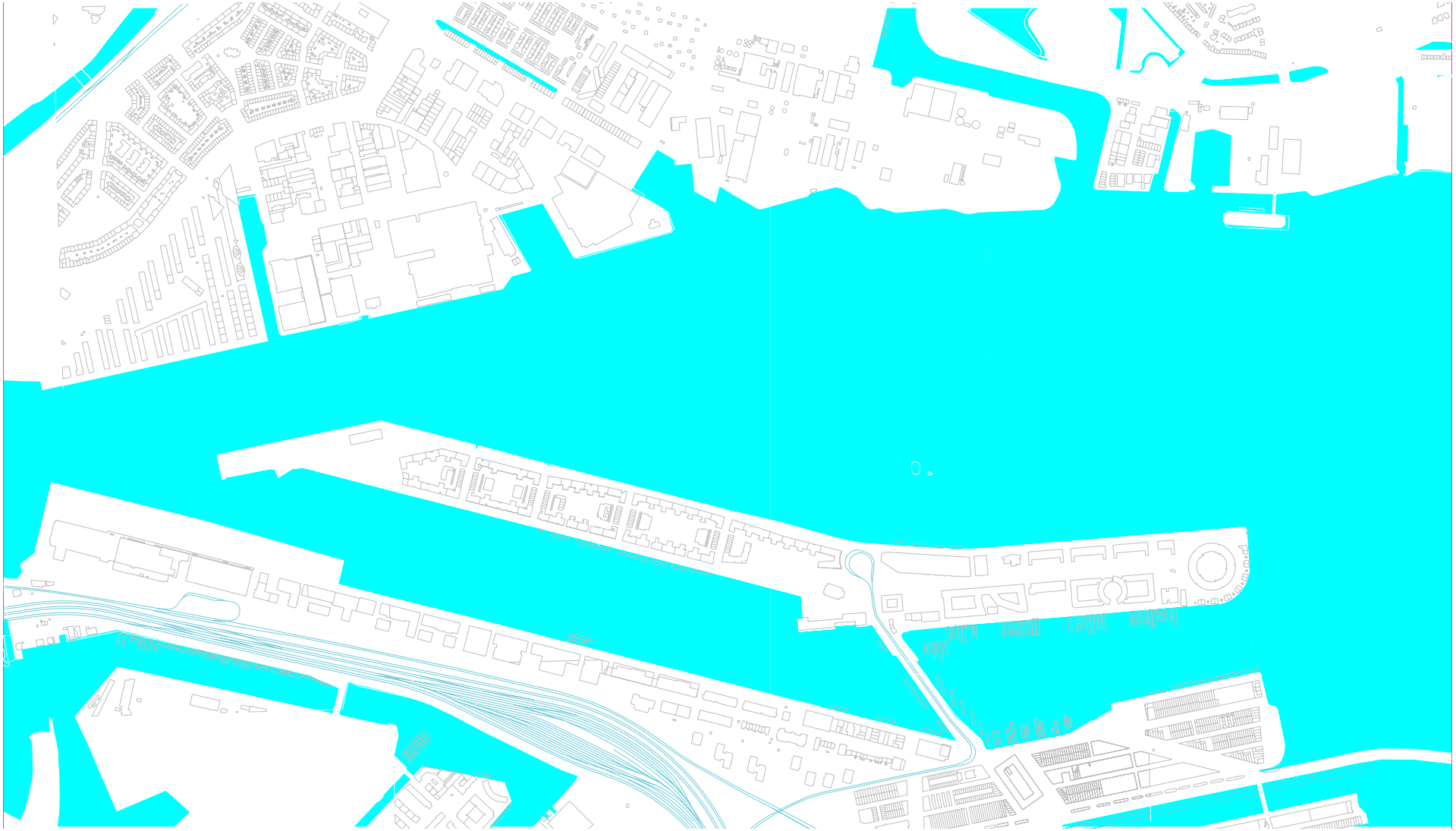
For its completion into a continuous circular route, the LOOP has to cross the IJ on two locations. The marked locations appears to be an interesting design site.



5919 ft

DESIGN SITE

IJ



DESIGN SITE
STUDY



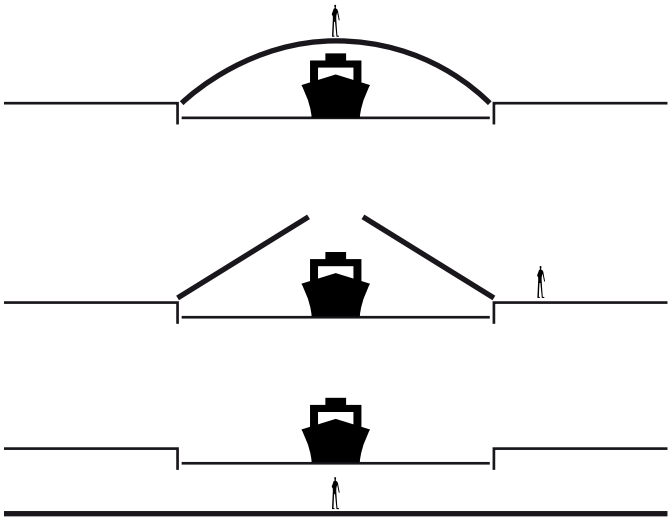






NORTH **RIVER - IJ** **SOUTH**

DESIGN CHOICE
semiCONCLUSION



Designing connection over IJ ...

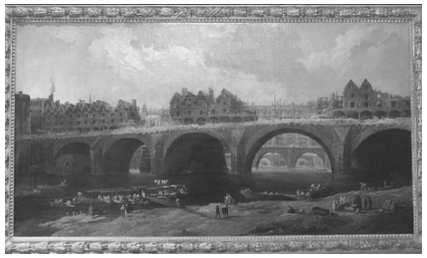
merged with (NOT ONLY) dwelling-program

STUDY
OCCUPIED BRIDGES

Krämerbrücke

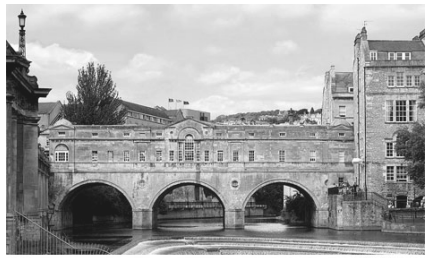
Ponte di Rialto

Pont Notre Dame



Ponte Vecchio

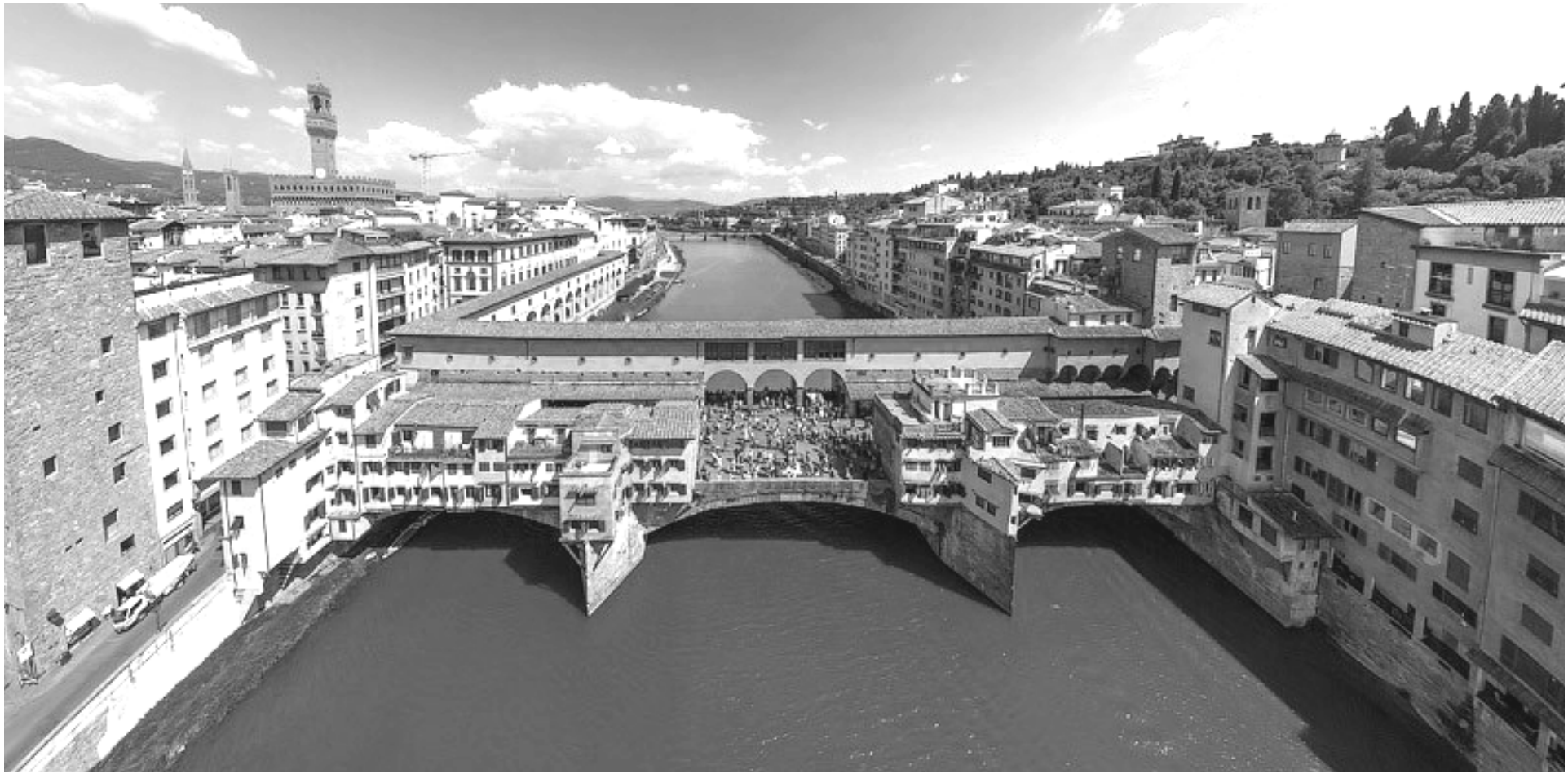
Old London Bridge



Pulteney Bridge

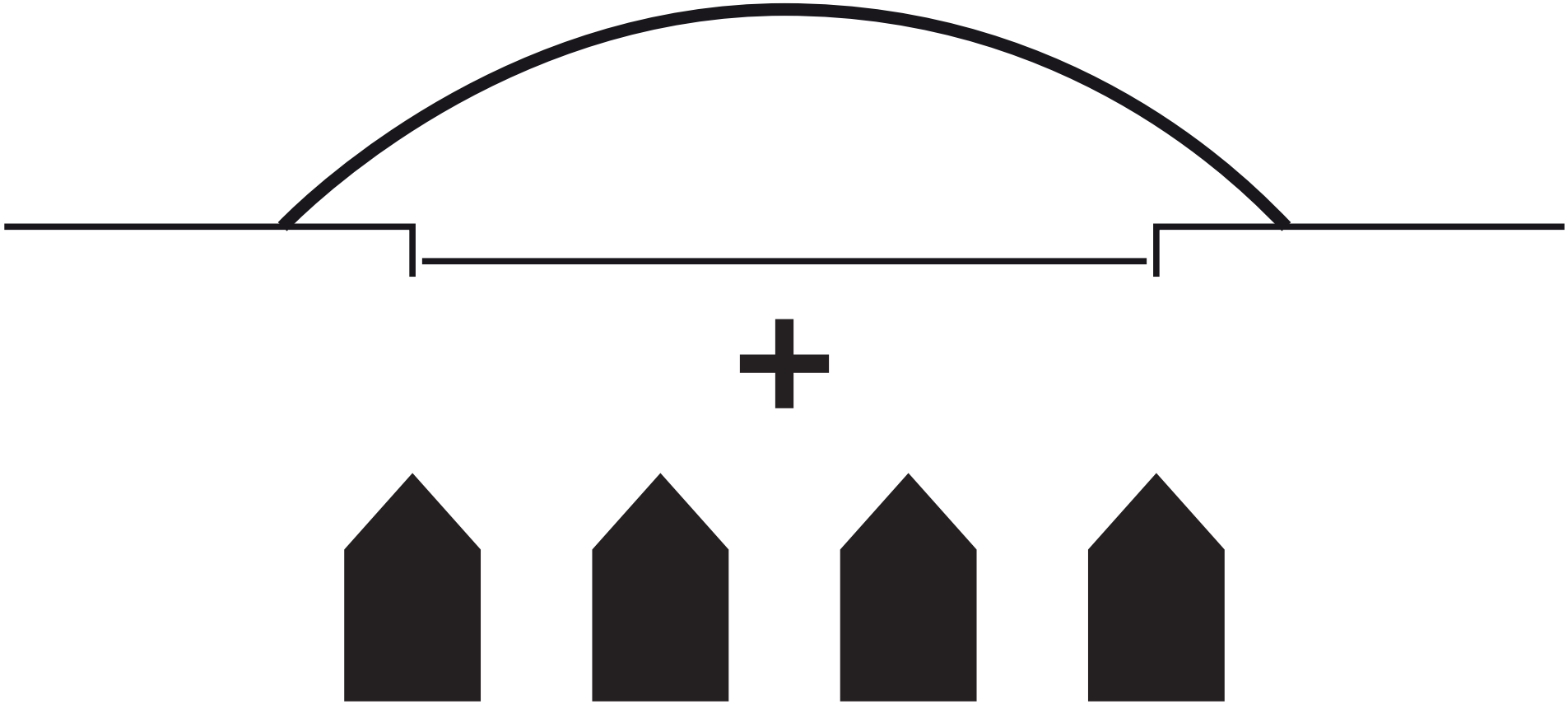
OCCUPIED BRIDGES

PONTE VECCHIO

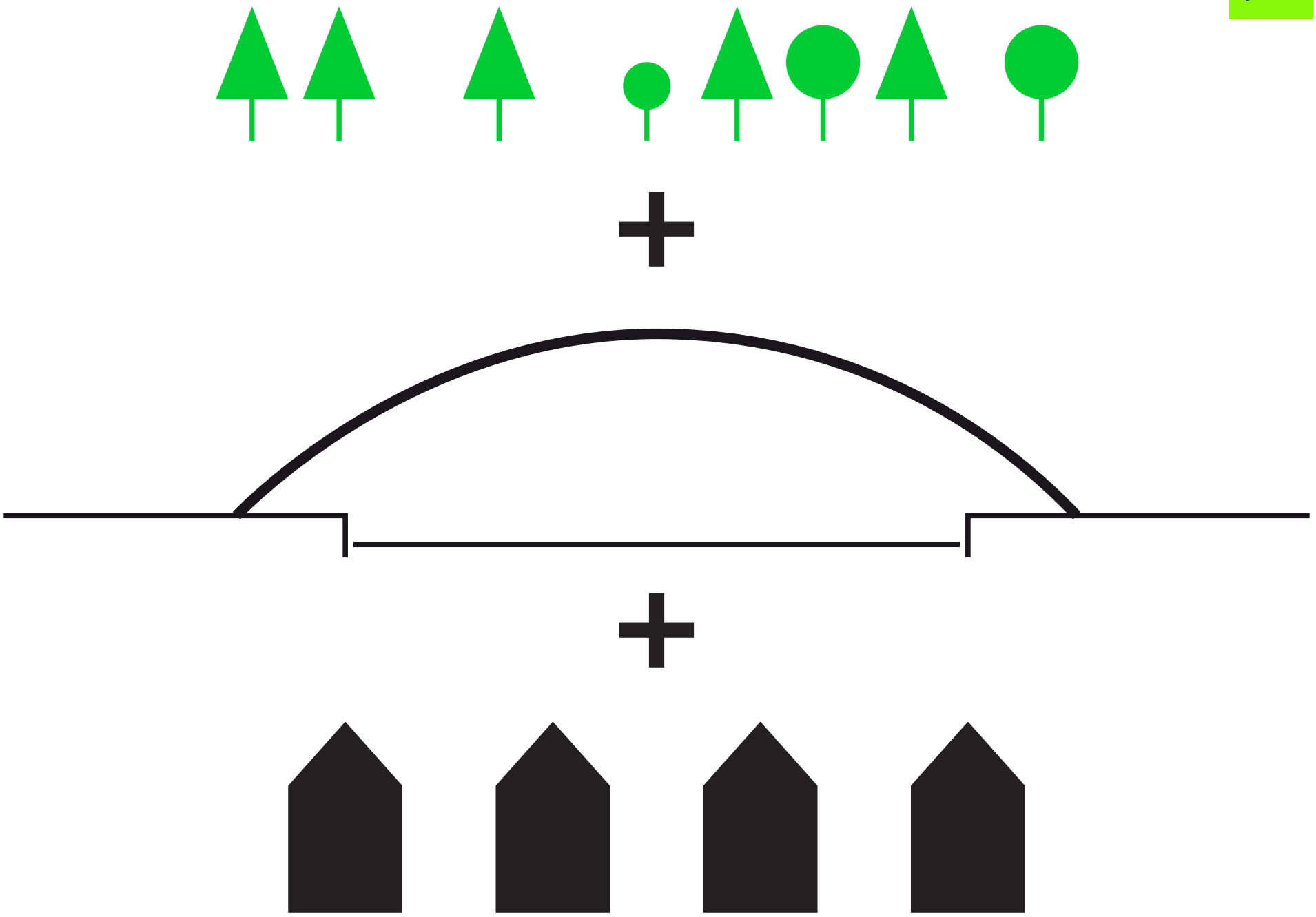


DESIGN
HOUSING

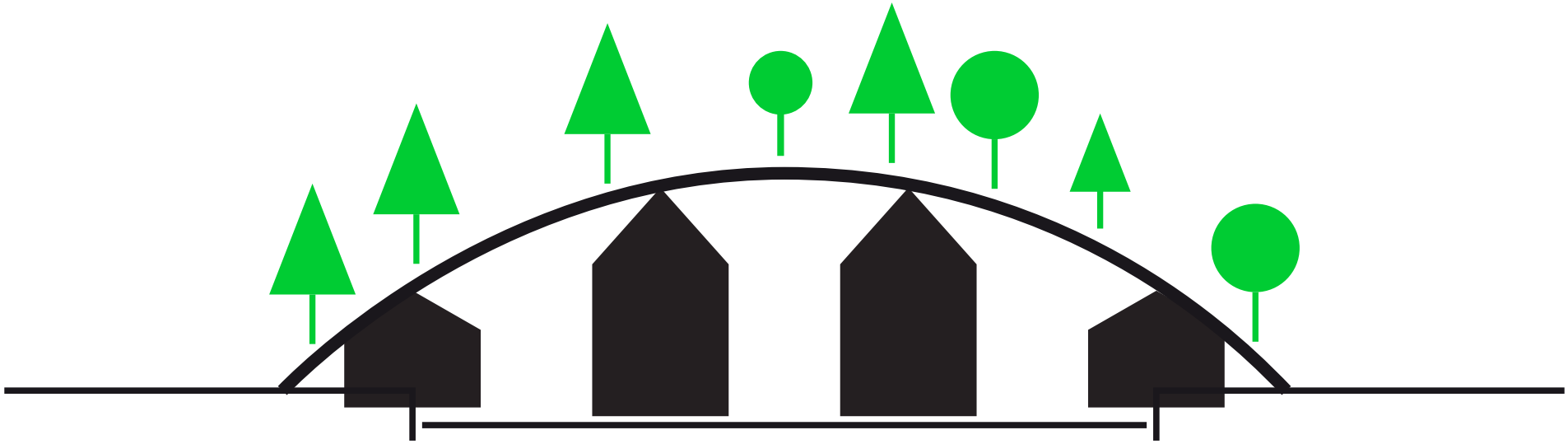
DESIGN
BRIDGE



DESIGN
PARK



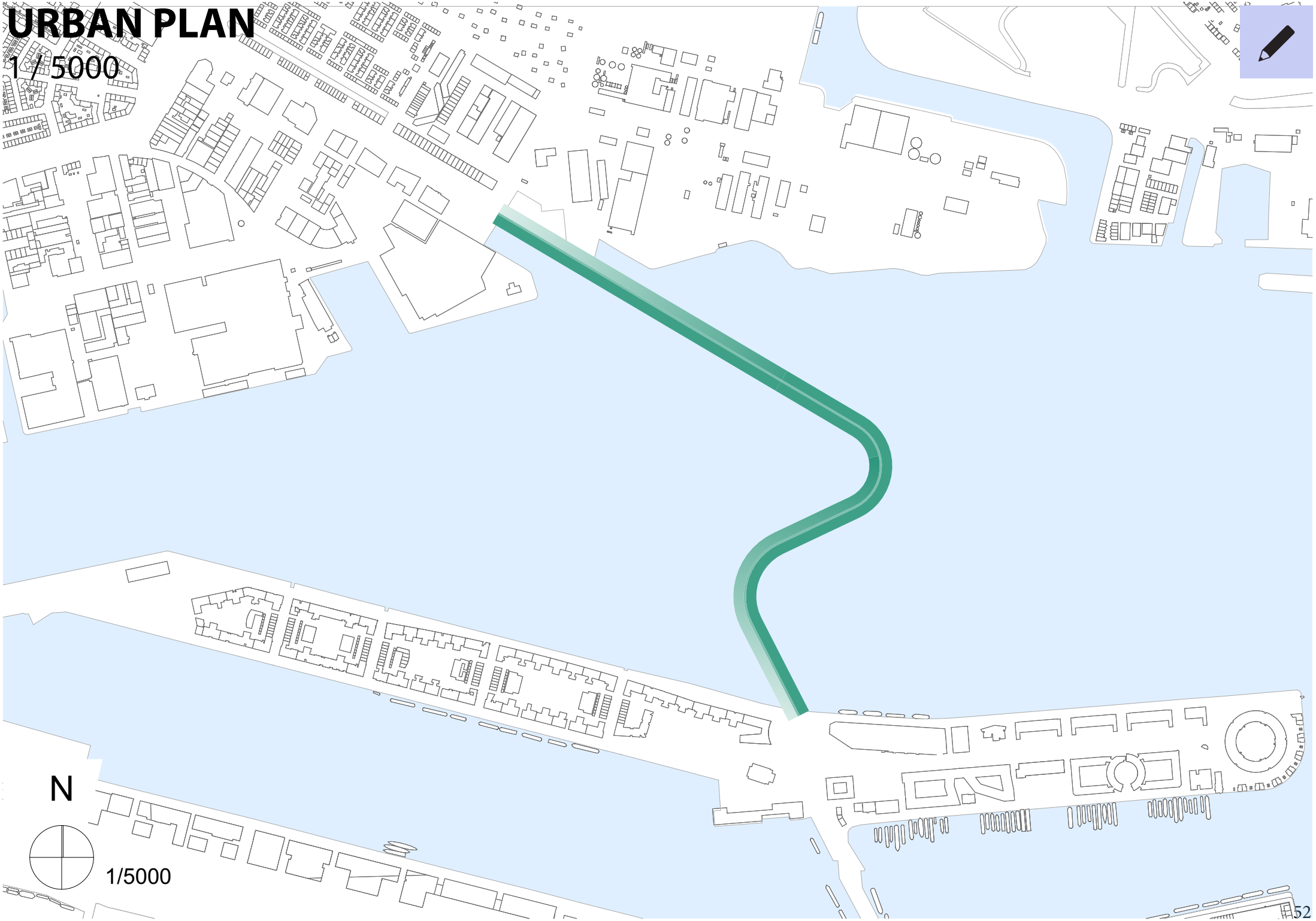
DESIGN
PROGRAM FUSION

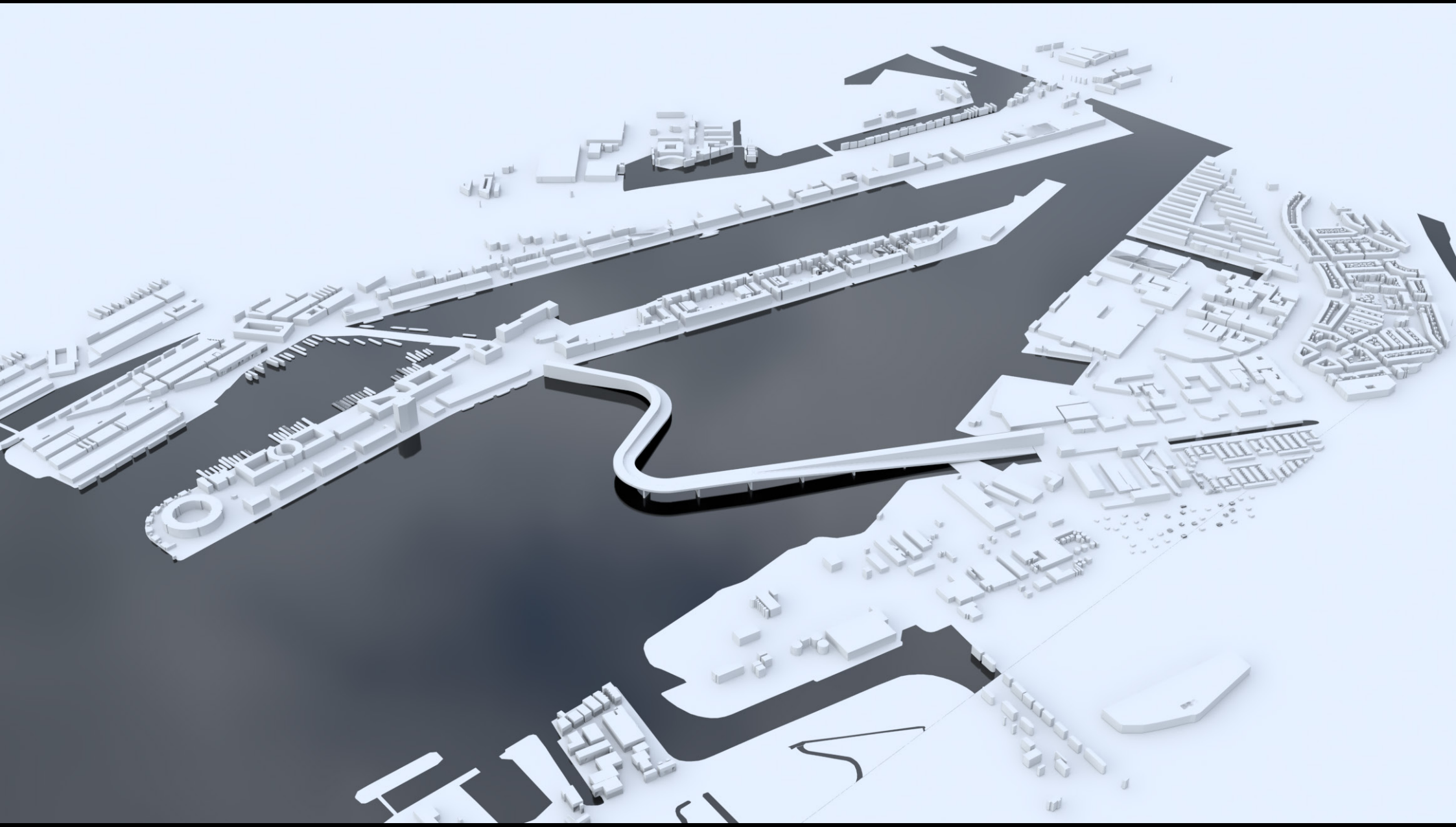


new park & living experience

URBAN PLAN

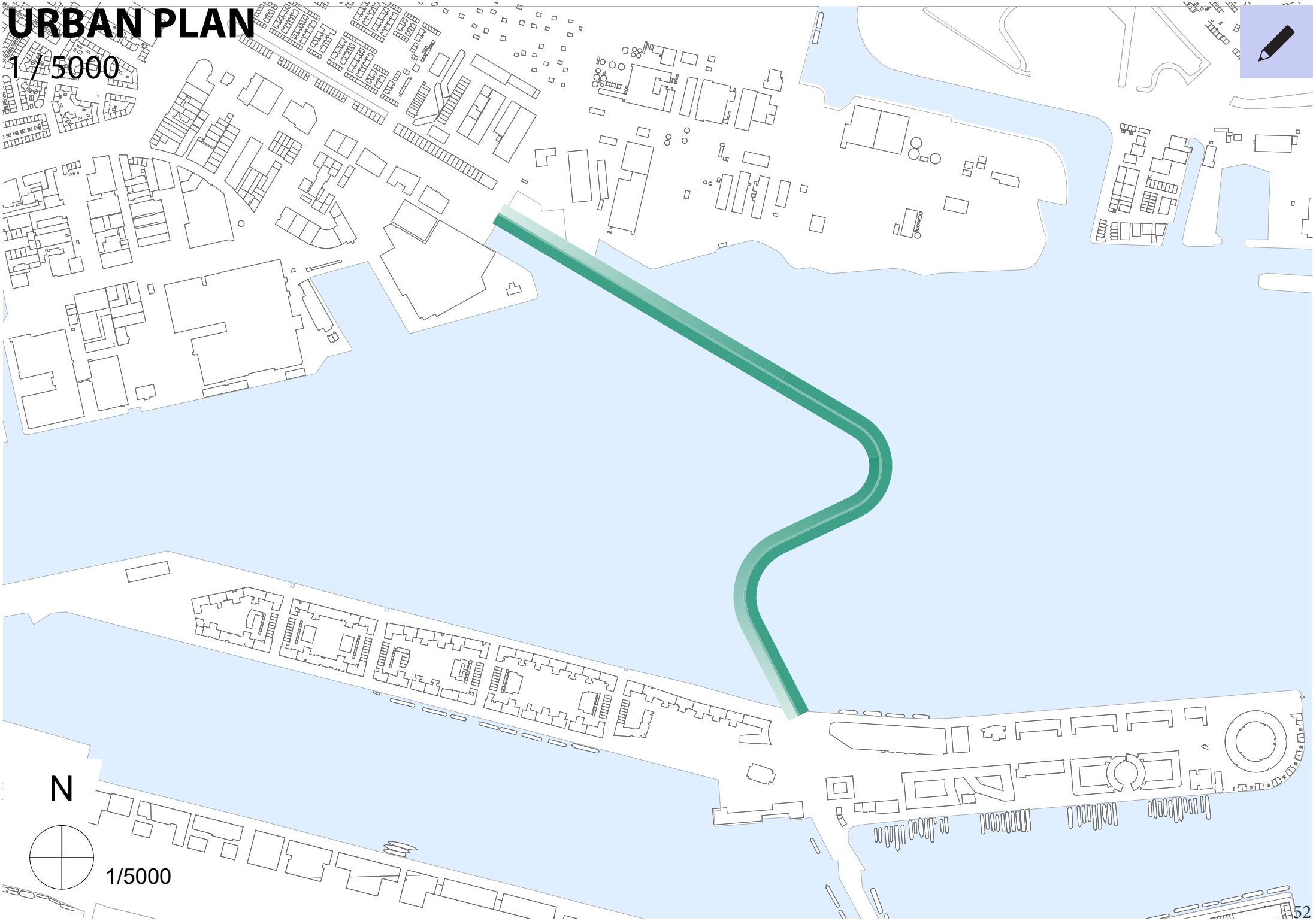
1 / 5000





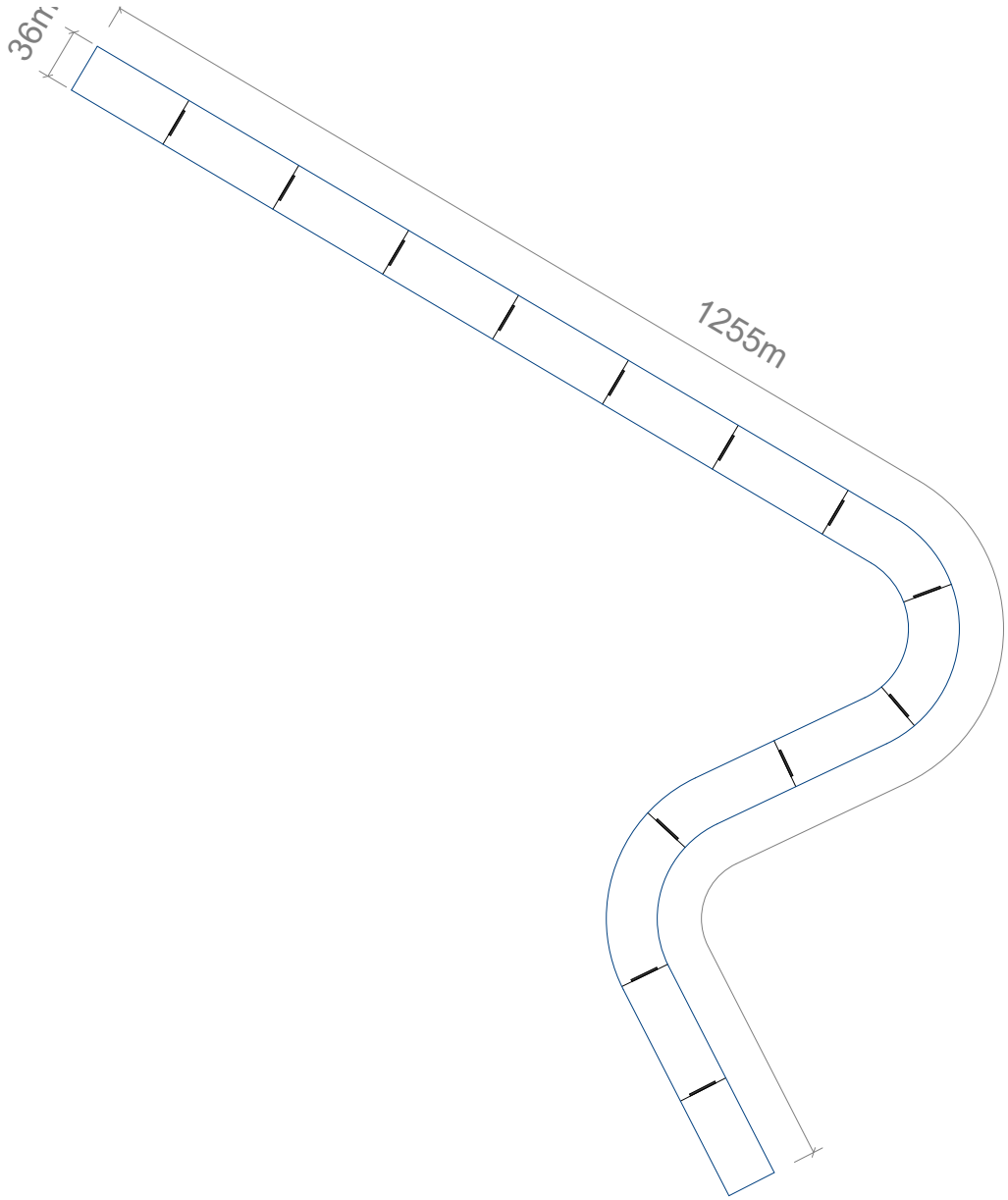
URBAN PLAN

1 / 5000



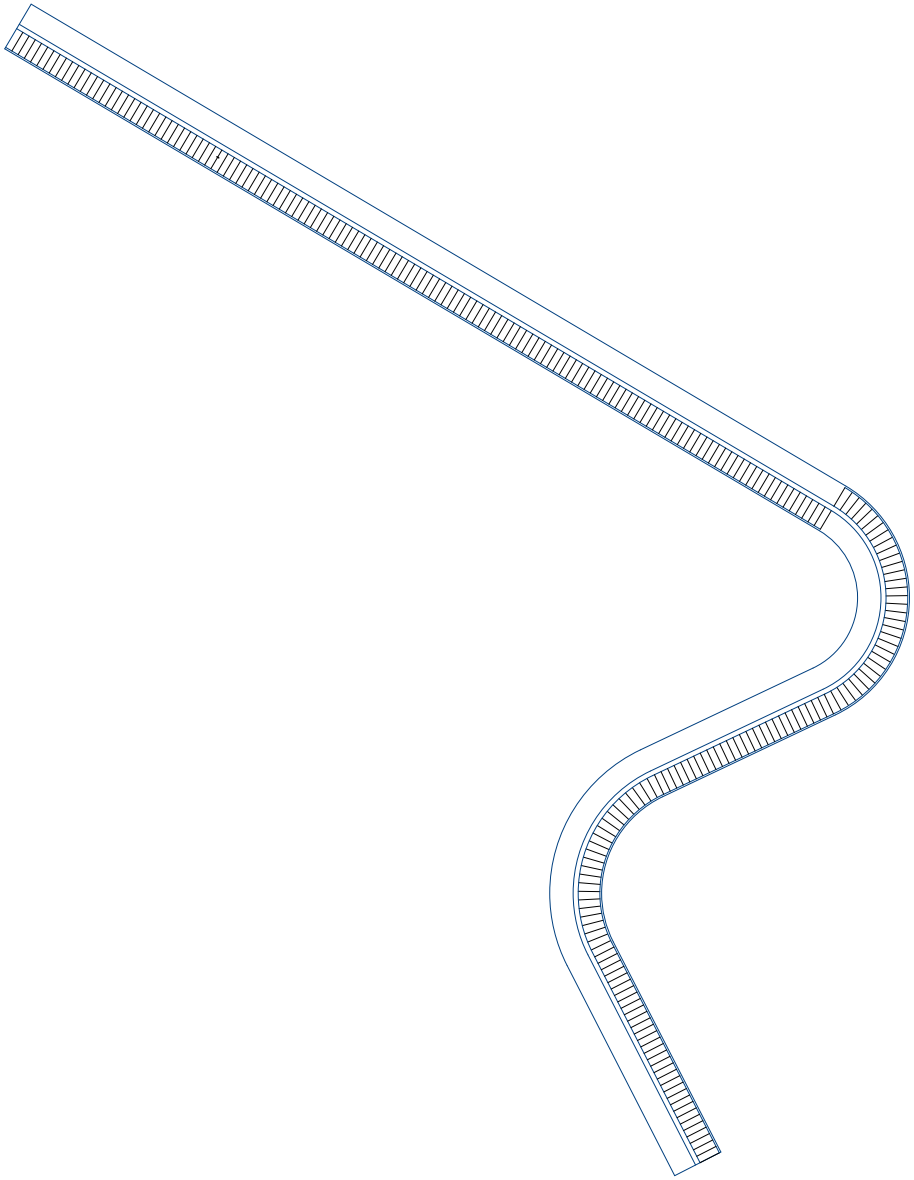
MAIN STRUCTURE

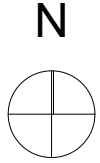
SUPPORTS



MODULAR GRID

1 / 5000





PLAN
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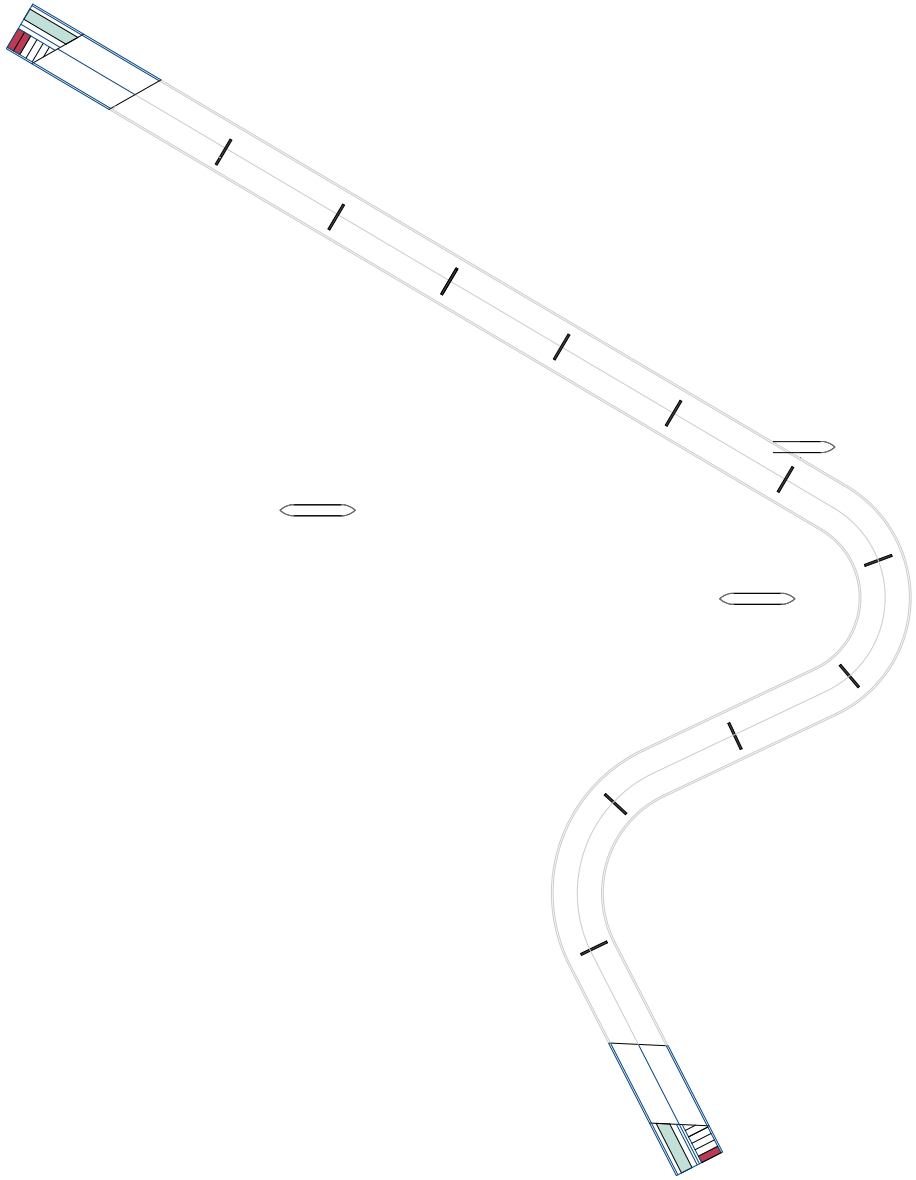

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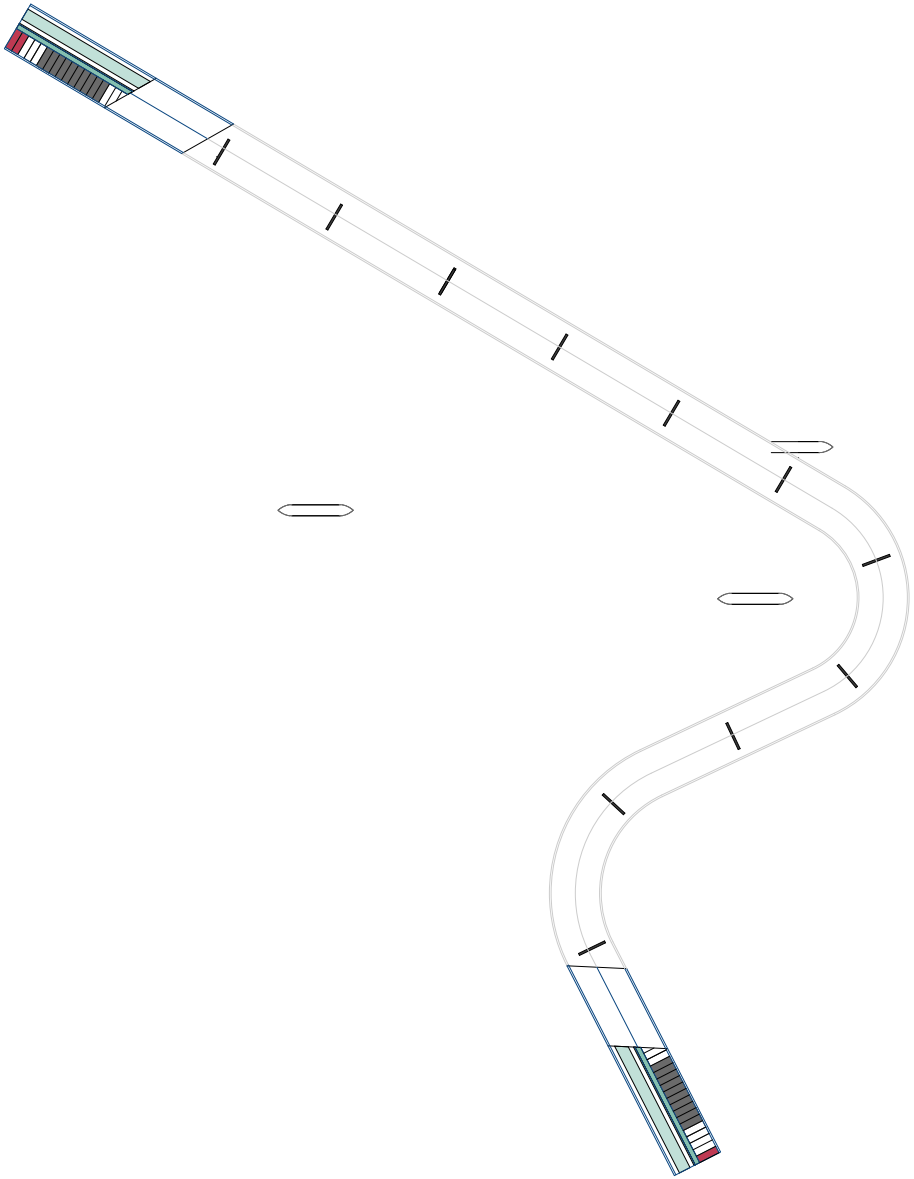

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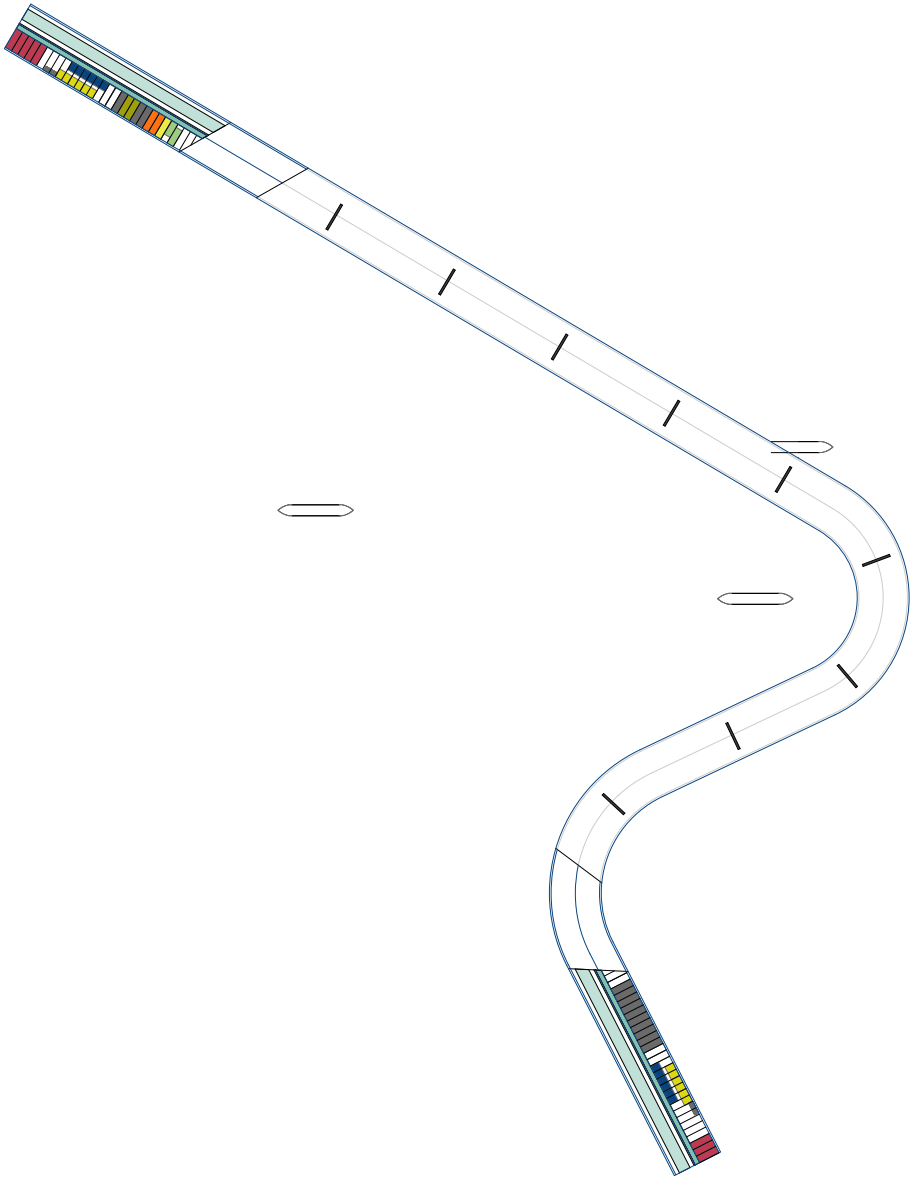

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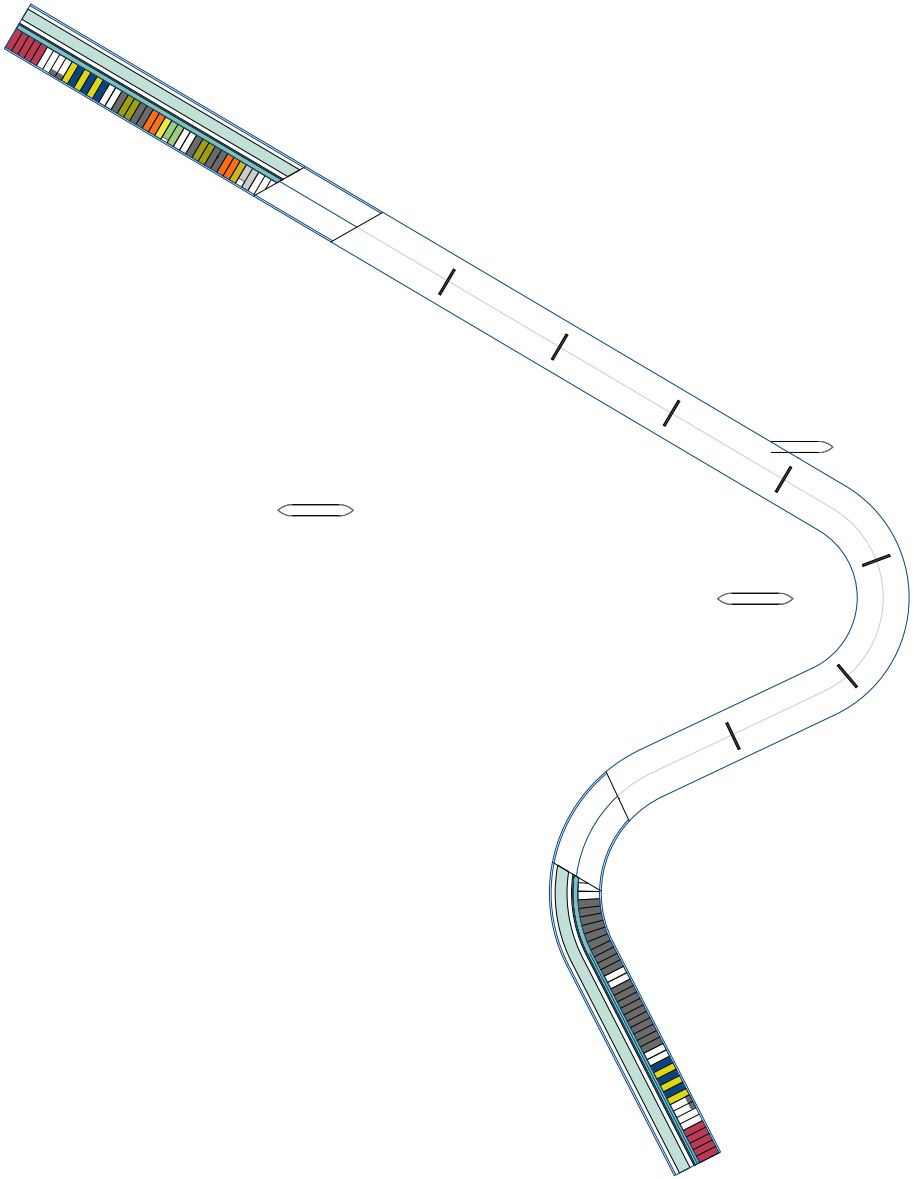

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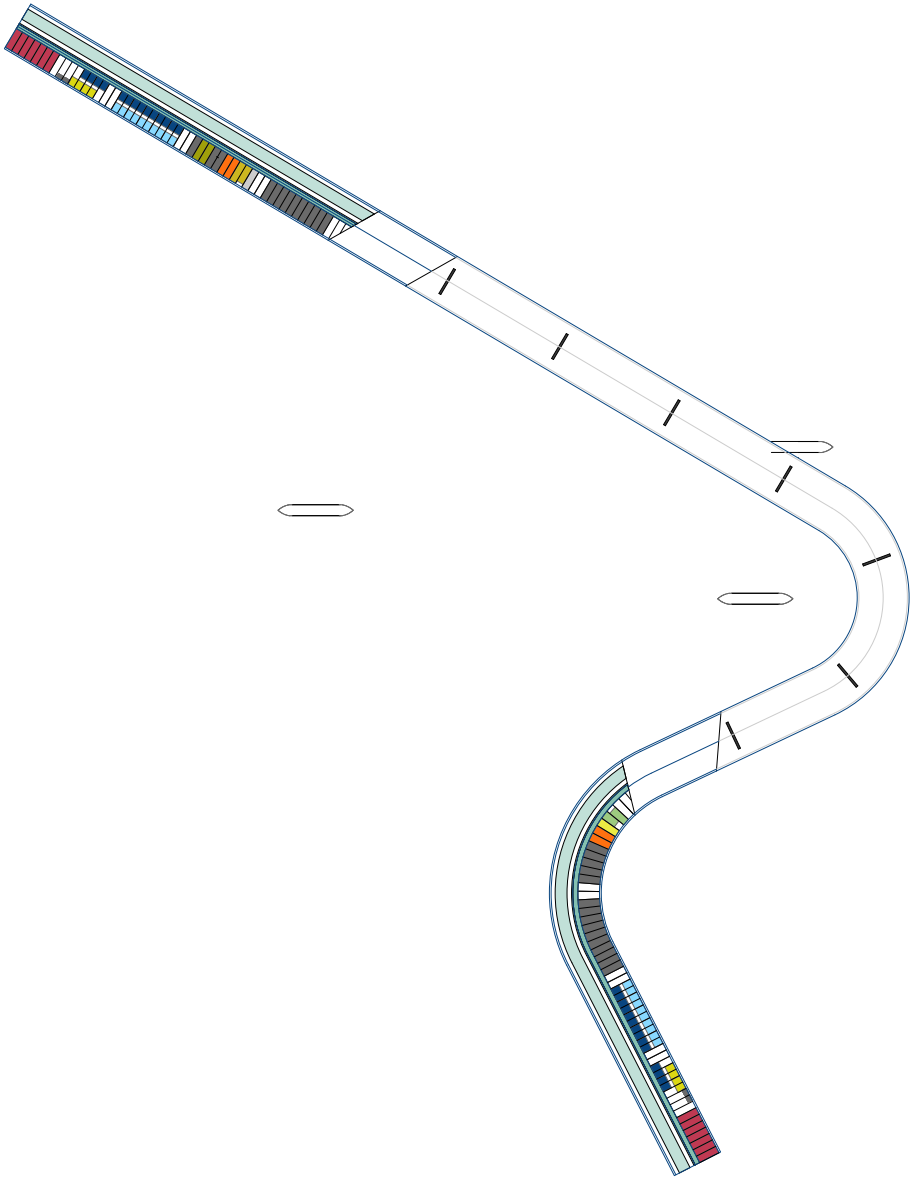

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PLAN

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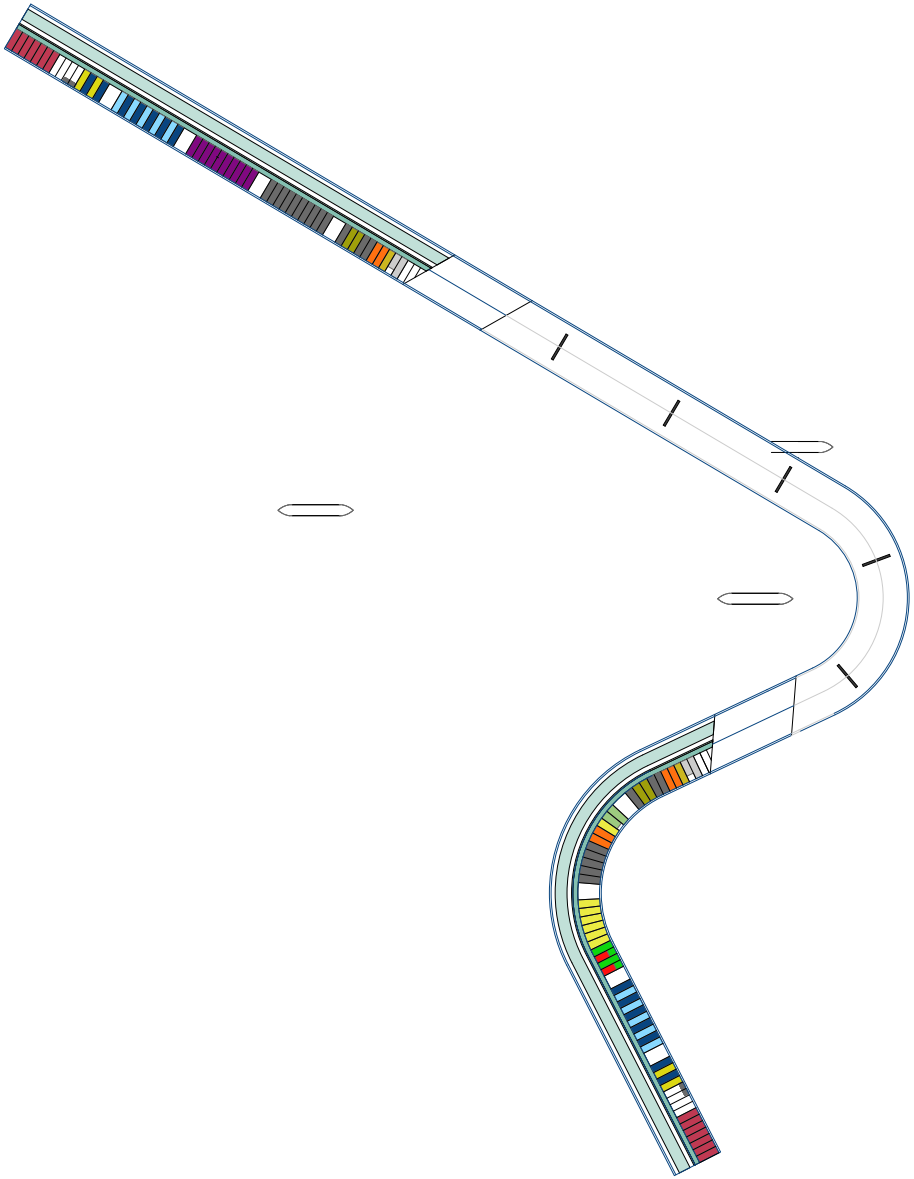

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PLAN

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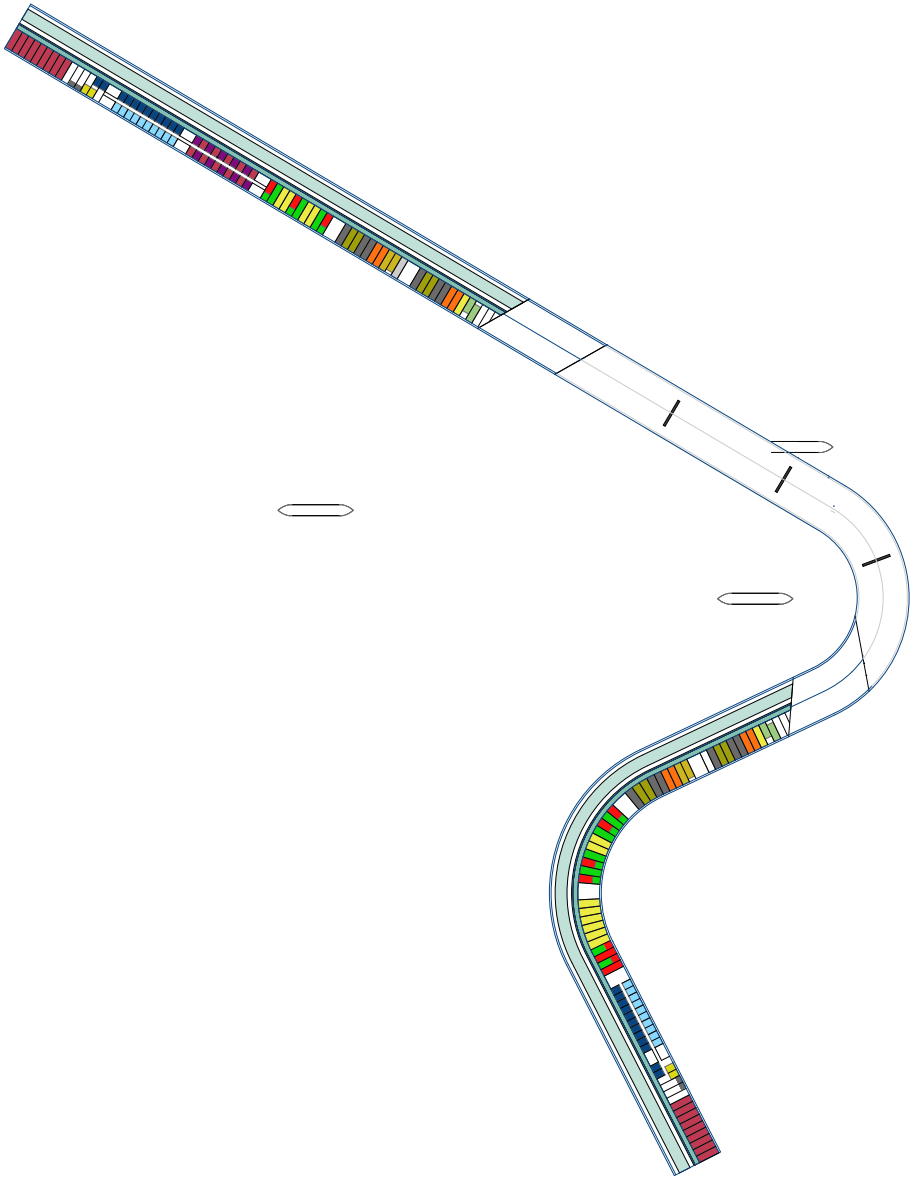

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PLAN

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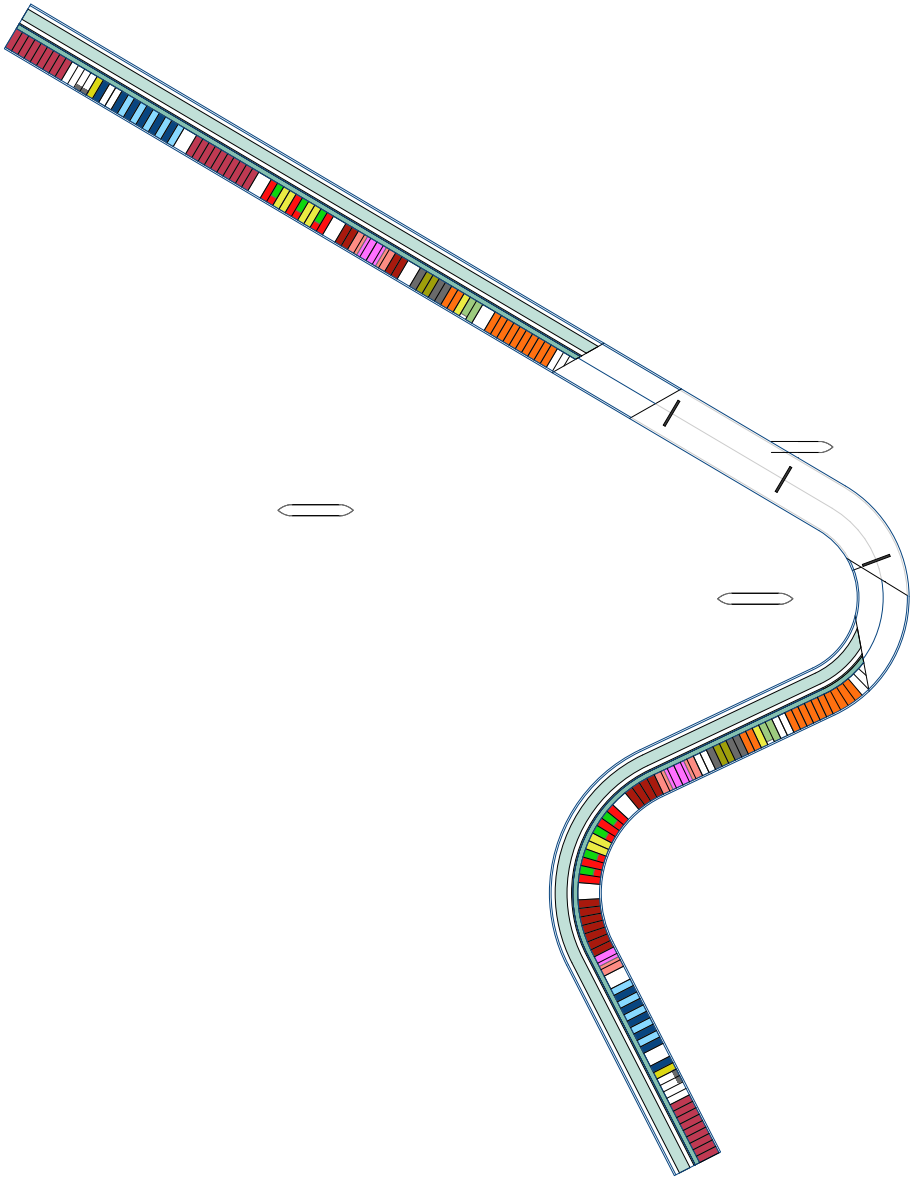
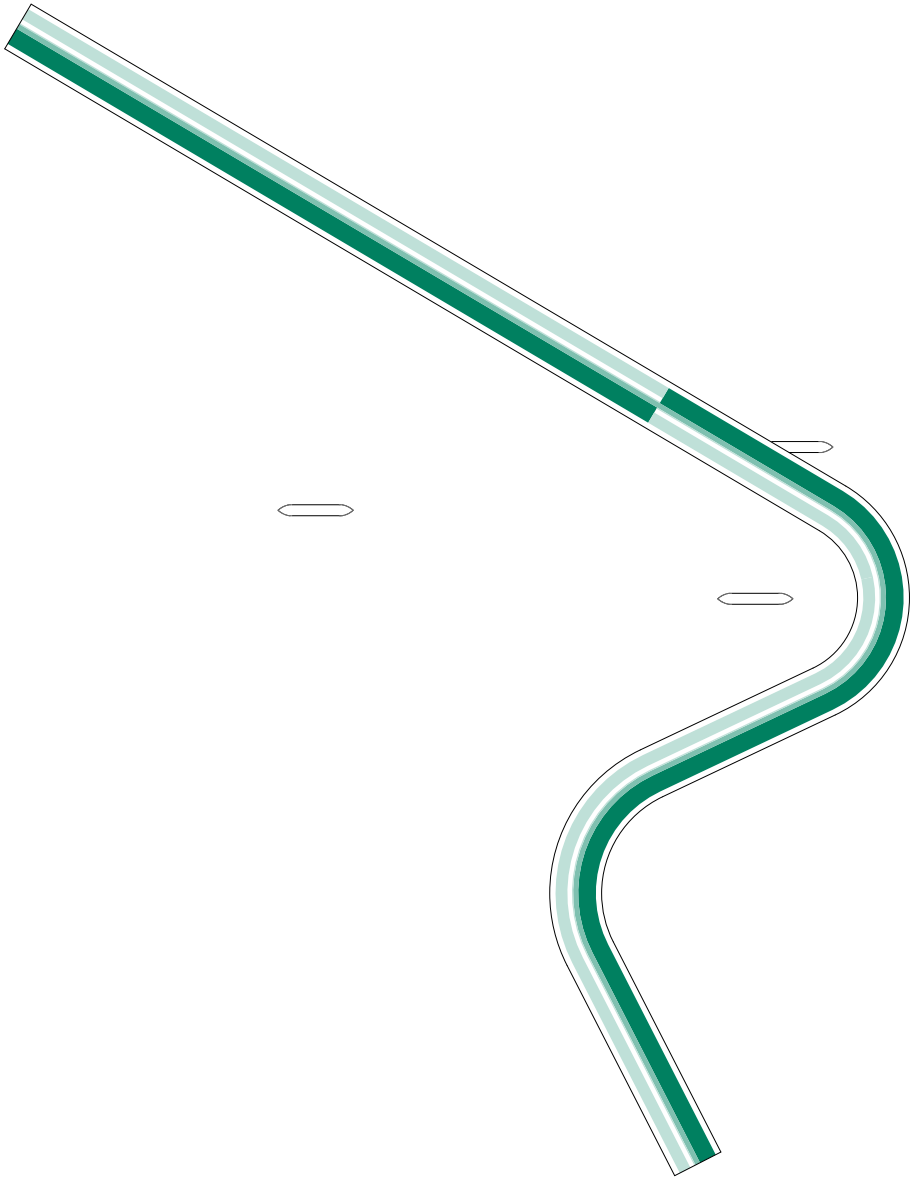
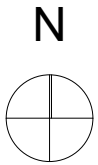
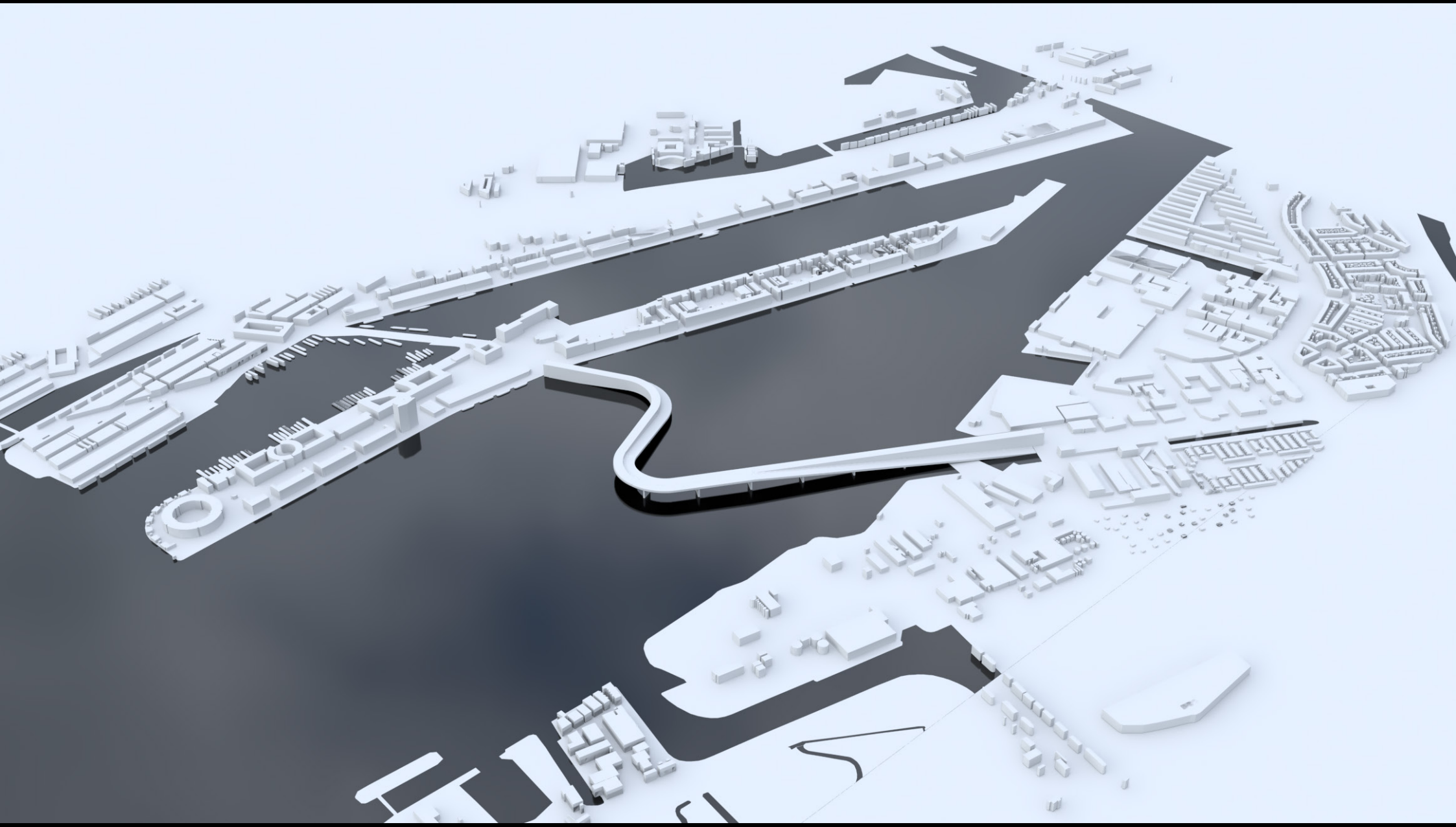


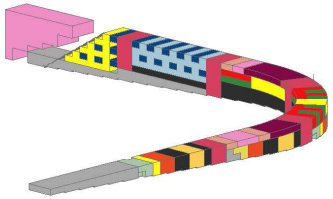
PLAN
ROOFS

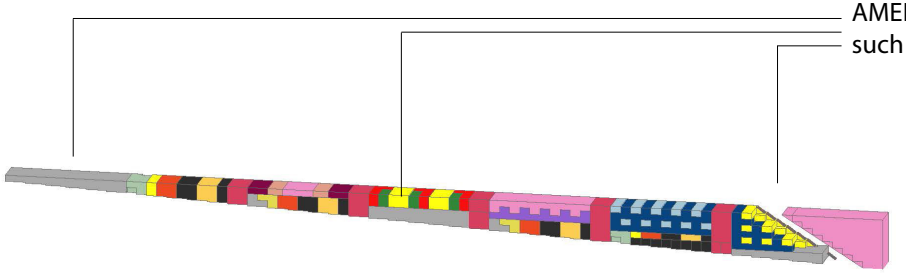




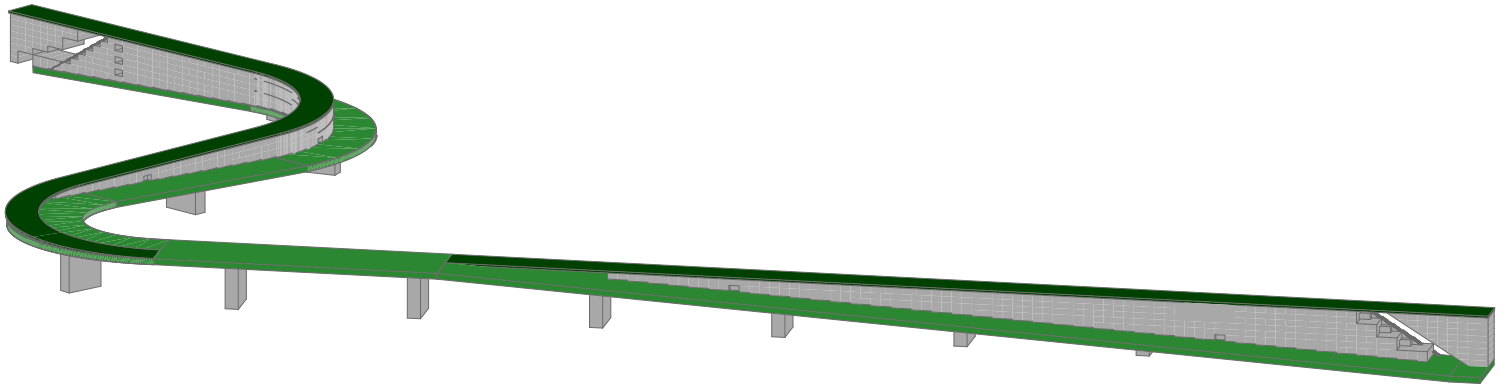


DIVERSITY WITHIN UNITY





DIVERSITY IN STREETS & DWELLINGS

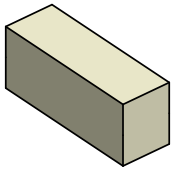


ONE ARCHITECTURAL LANGUAGE

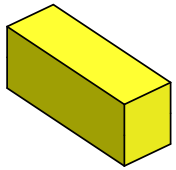
HOUSING CATALOGUE

BLOCK SYSTEM

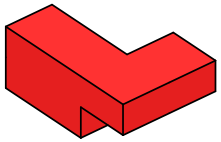
r1



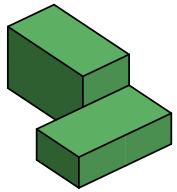
r2



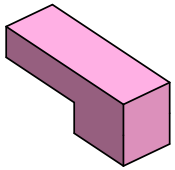
v5



v6



m1



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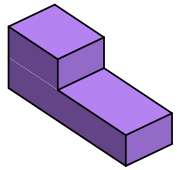

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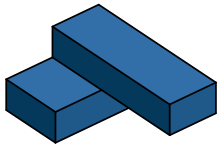

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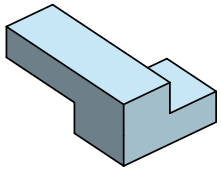

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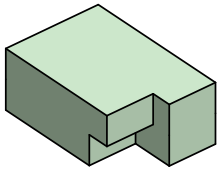

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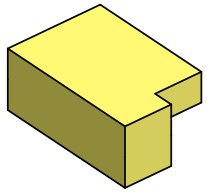

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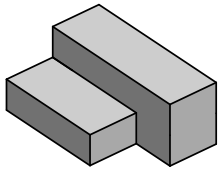

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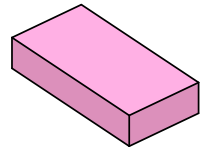

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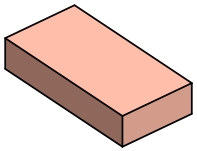

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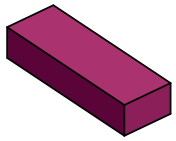

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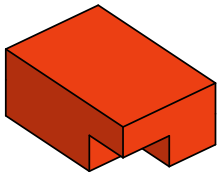

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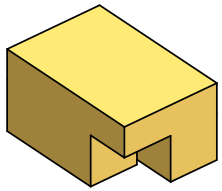

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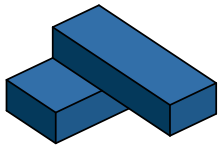

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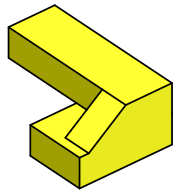

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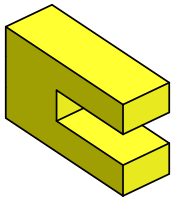

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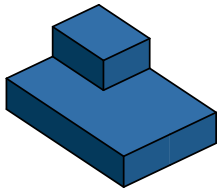

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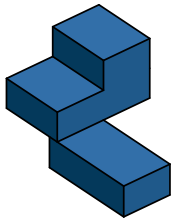

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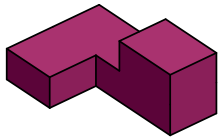

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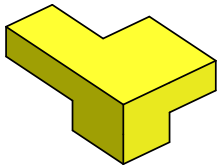
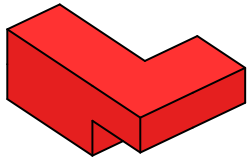
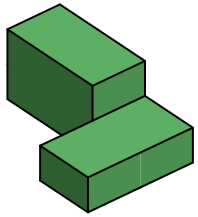


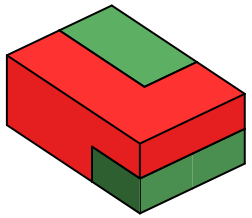
BLOCK SYSTEM
DWELLINGS

v5



v6





DWELLING
BLOCK SYSTEM

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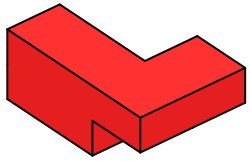

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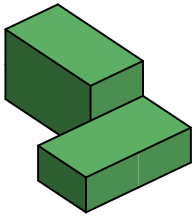

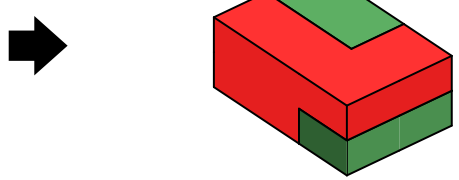

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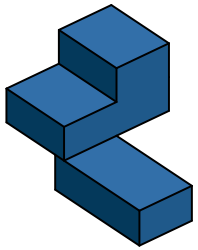

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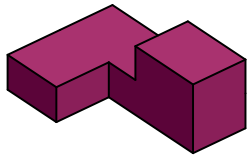

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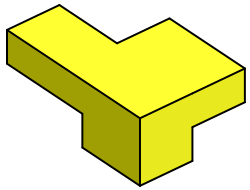
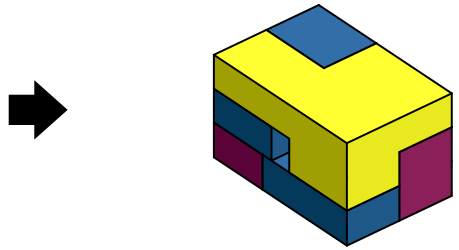
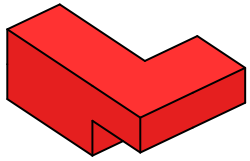




DWELLING
BLOCK SYSTEM

v5



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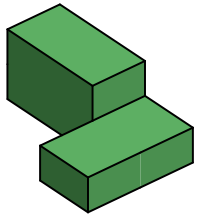

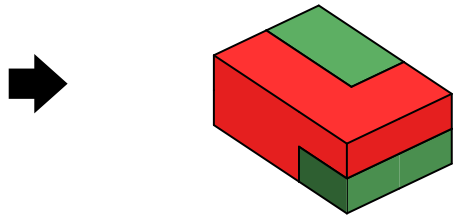

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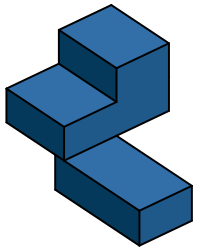

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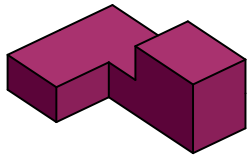

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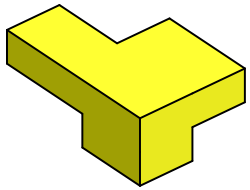
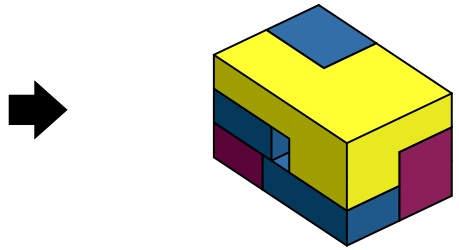
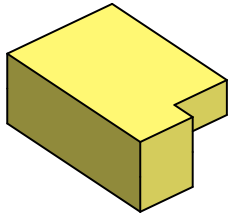
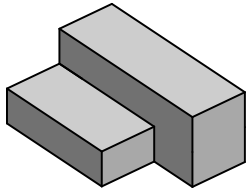


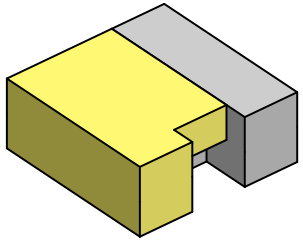


v2



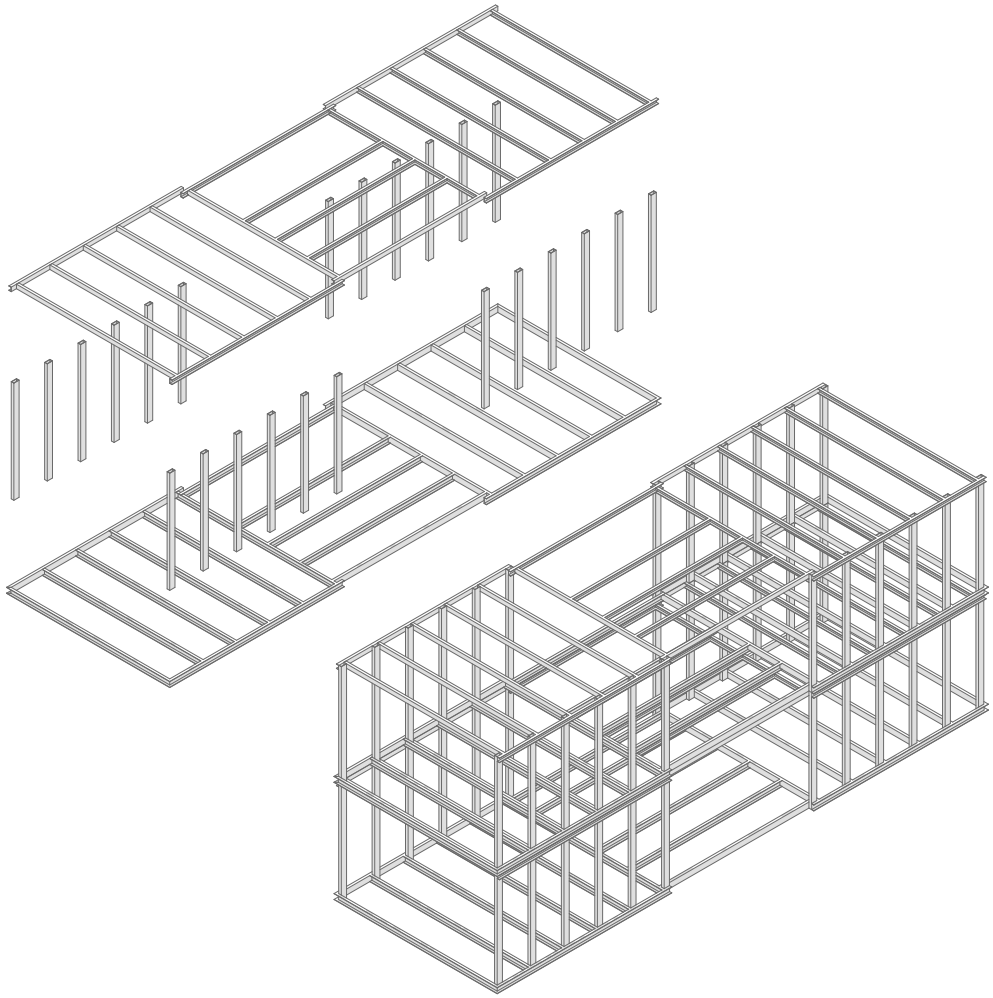
v3





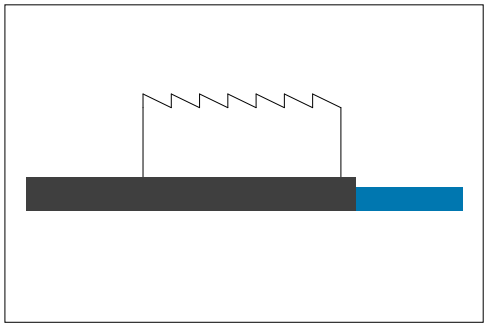
STRUCTURE OF ONE UNIT

EXAMPLE R1 / R2

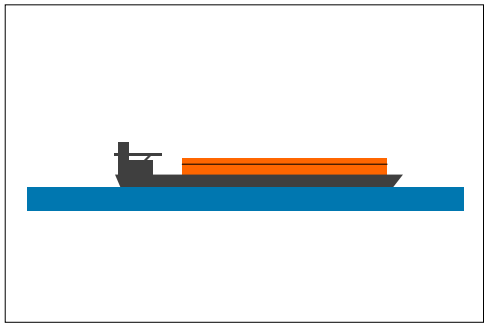


CONSTRUCTION PROCESS

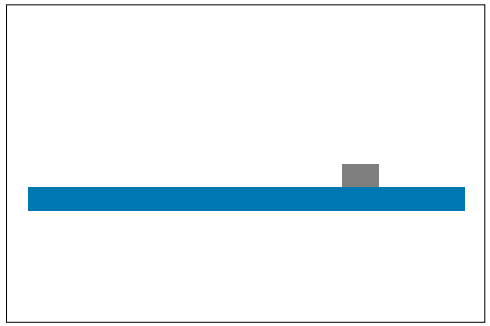
EXAMPLE R1 / R2



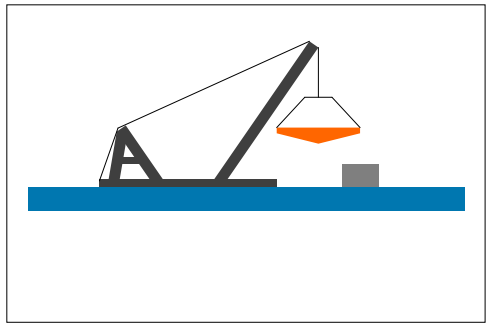
COMPONENTS PRODUCED IN CONTROLED ENVIRONMENT



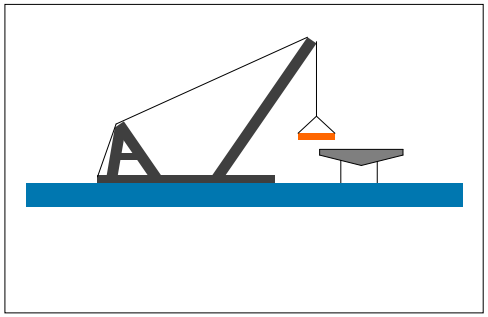
COMPONENTS SHIPPED ON SITE



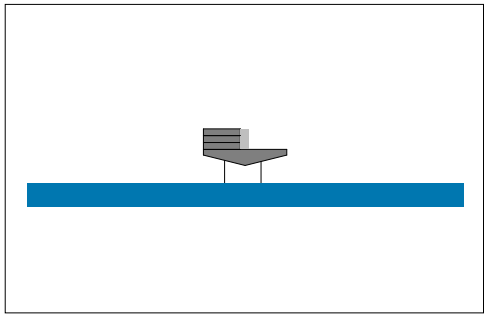
REINFORCED CONCRETE SUPPORTS



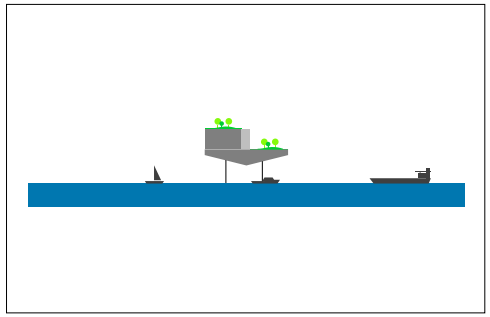
PLACING LONG SPAN COMPONENTS



PLACING LIGHT WEIGHT COMPONENTS



2 LEVELS OF PUBLIC SPACE



ADDING GREENERY OF PARKS

CONSTRUCTION PROCESS

COMPONENTS PRODUCED IN CONTROLED ENVIRONMENT

CONSTRUCTION PROCESS

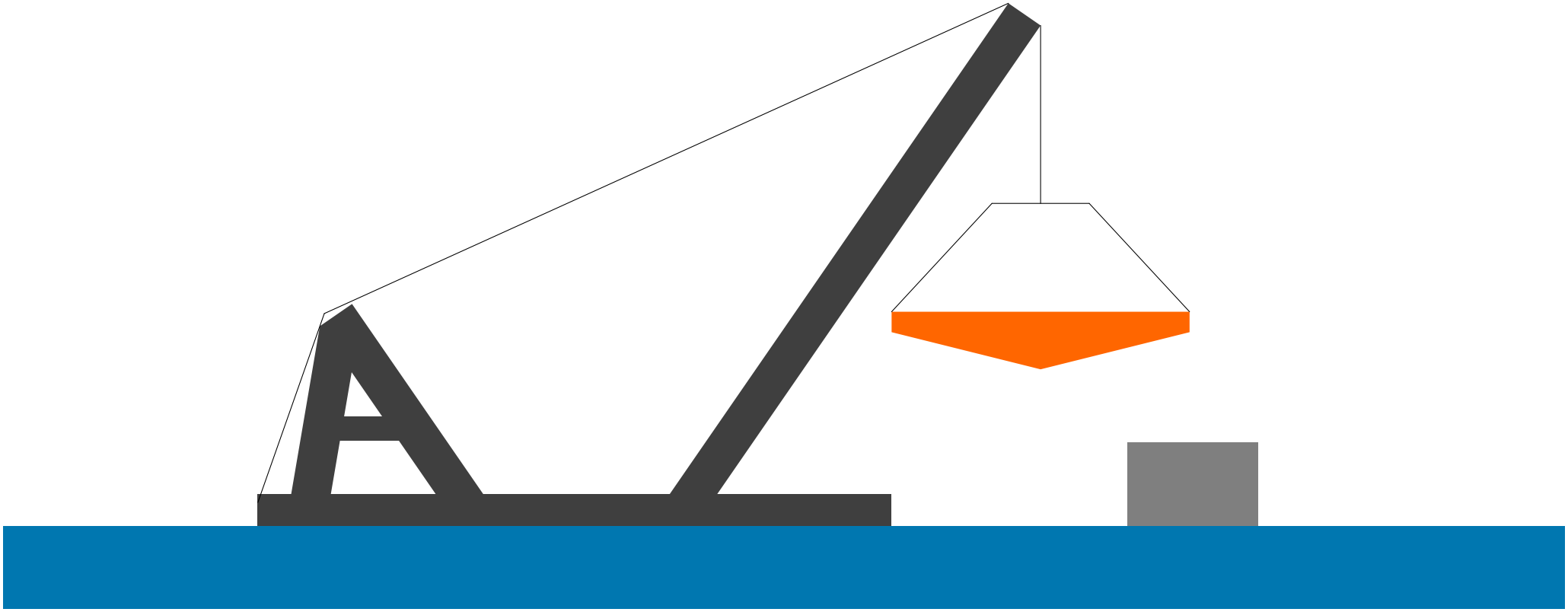
COMPONENTS SHIPPED ON SITE

CONSTRUCTION PROCESS

REINFORCED CONCRETE SUPPORTS

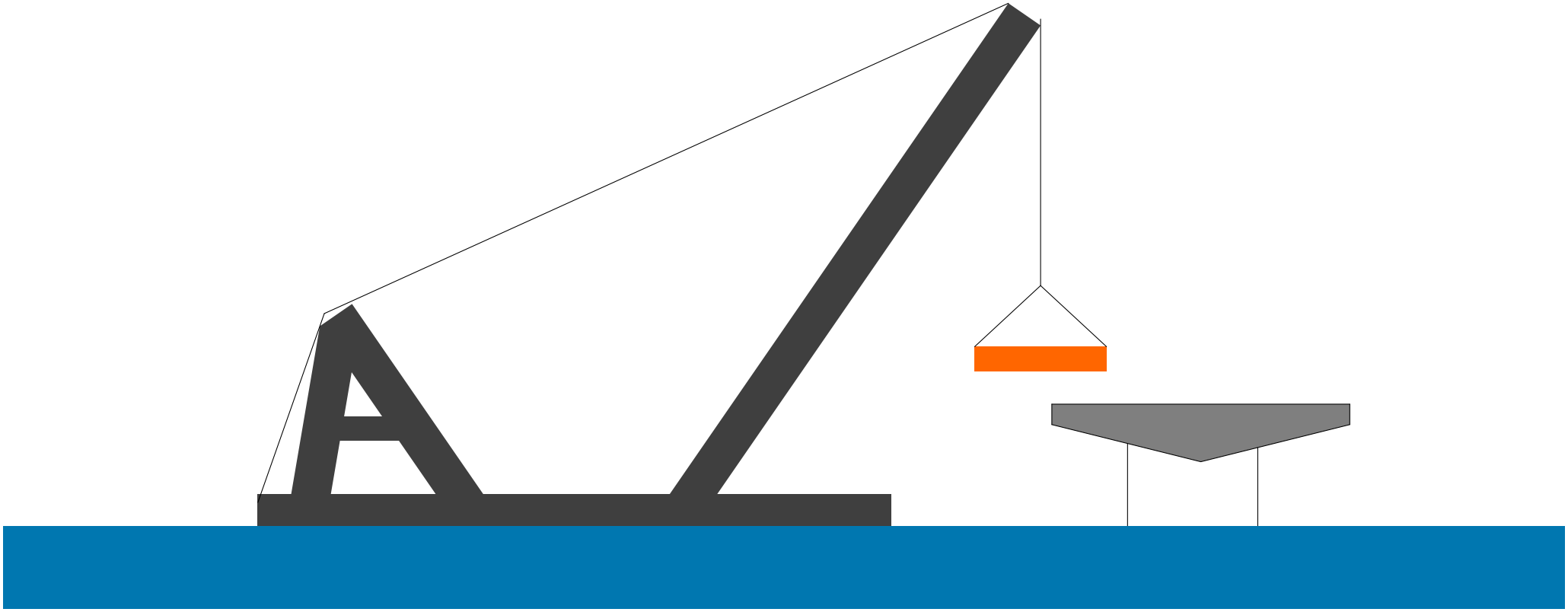
CONSTRUCTION PROCESS

PLACING LONG SPAN COMPONENTS



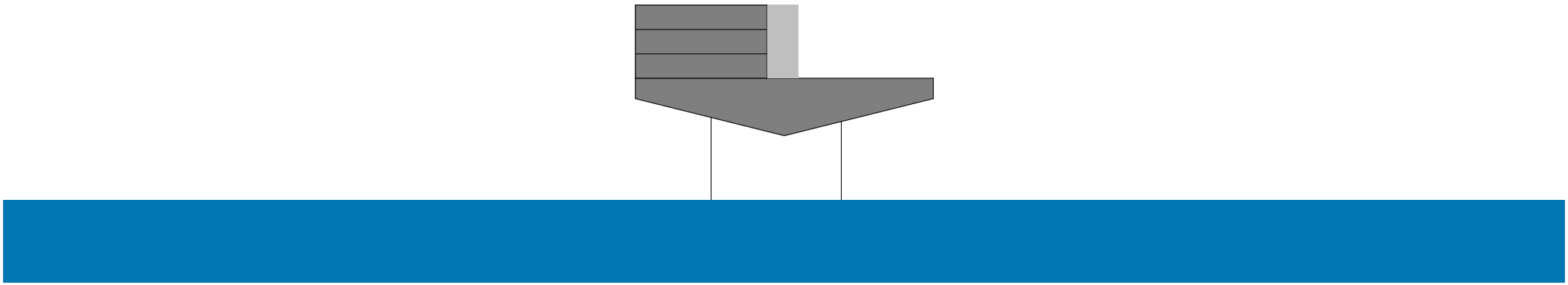
CONSTRUCTION PROCESS

PLACING LIGHT WEIGHT COMPONENTS



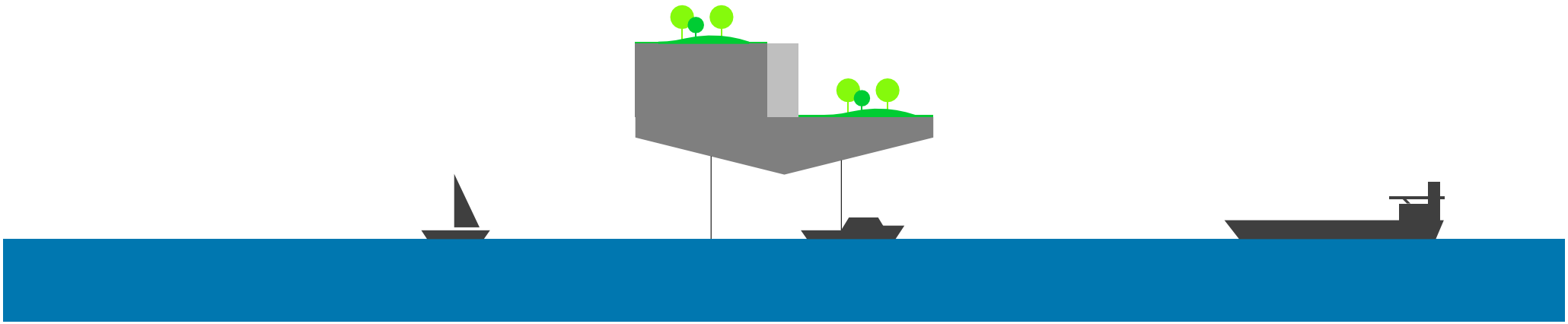
CONSTRUCTION PROCESS

2 LEVELS OF PUBLIC SPACE



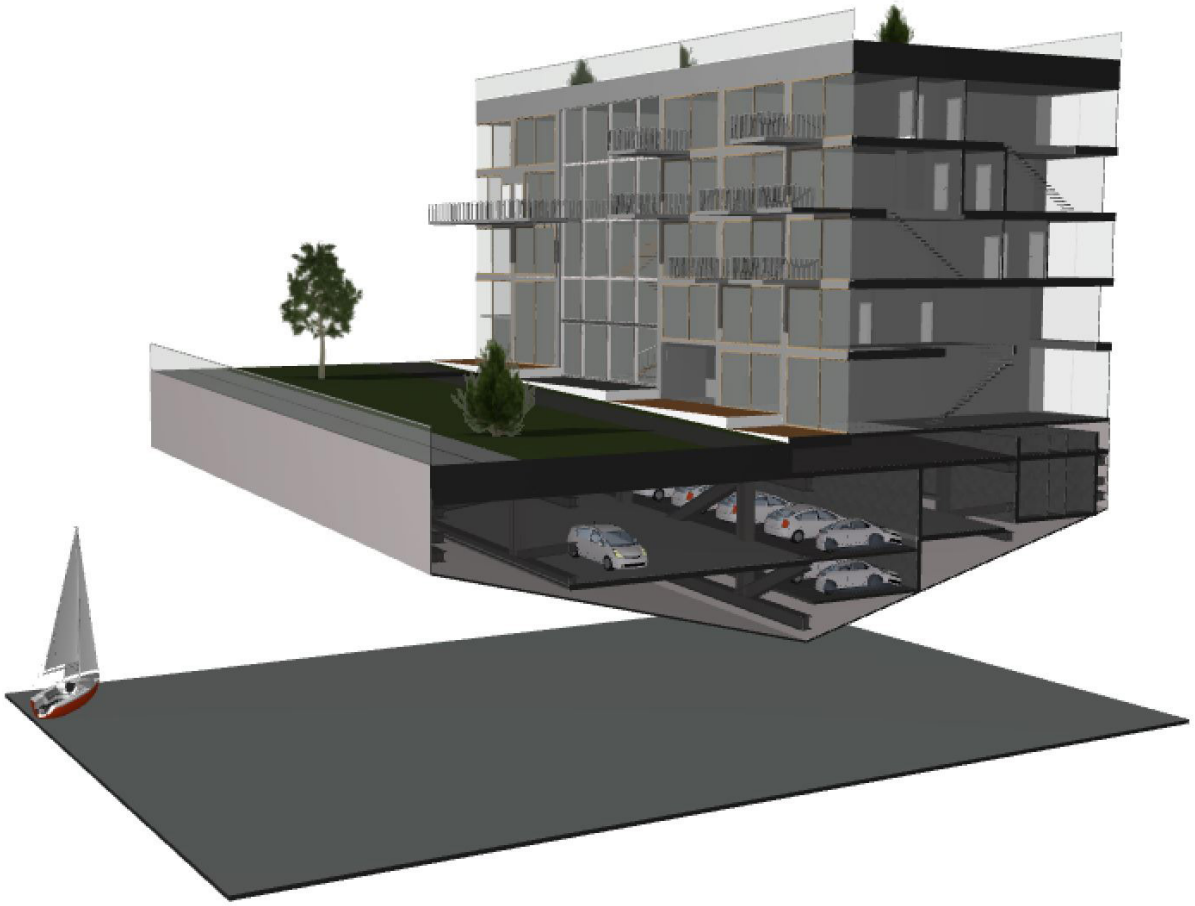
CONSTRUCTION PROCESS

ADDING GREENERY OF PARKS



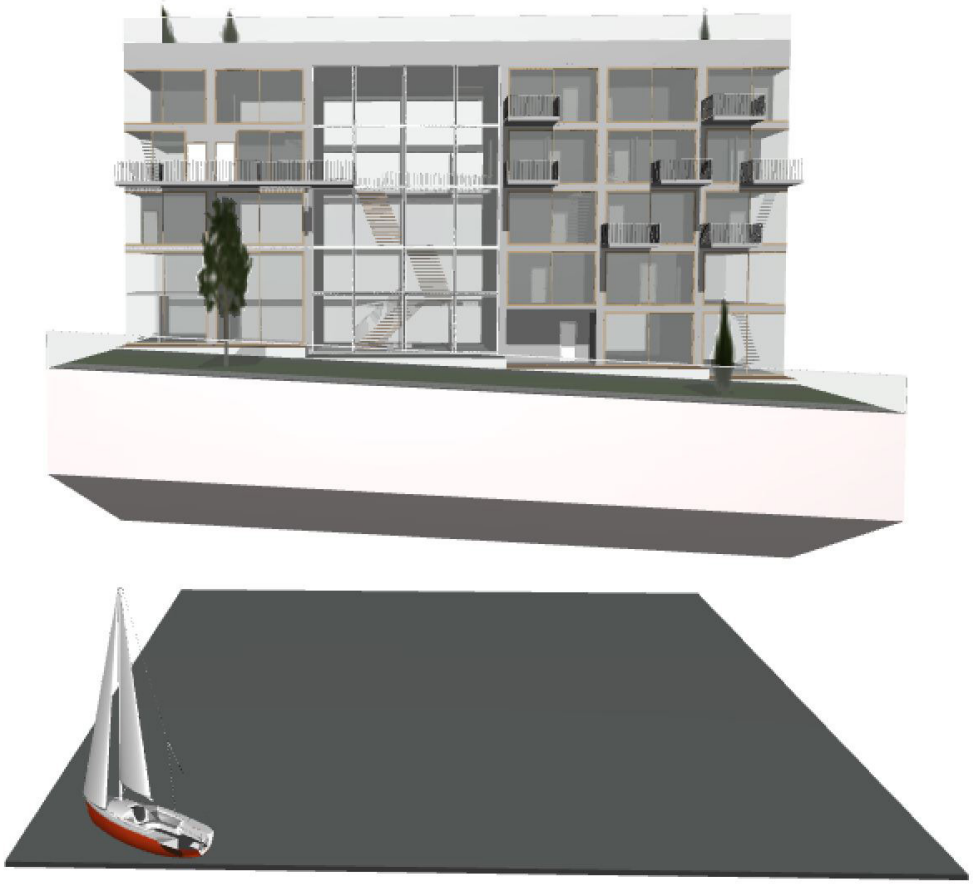
BIM MODEL

3D SECTION



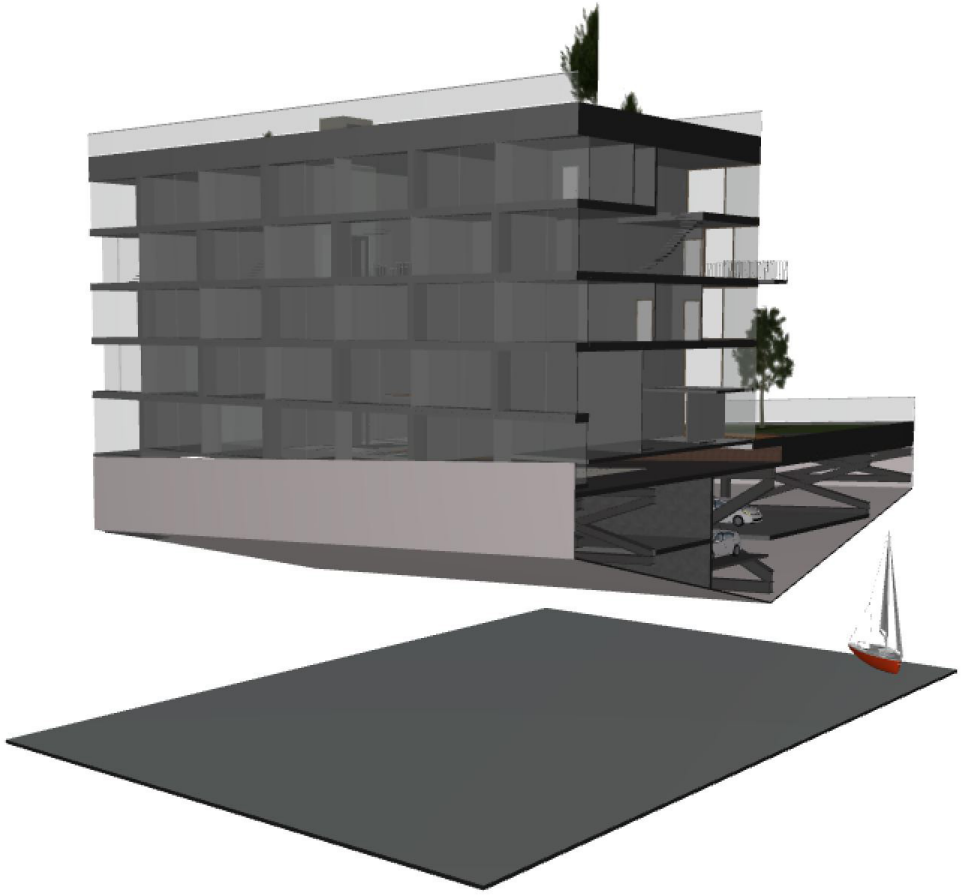
BIM MODEL

3D SECTION



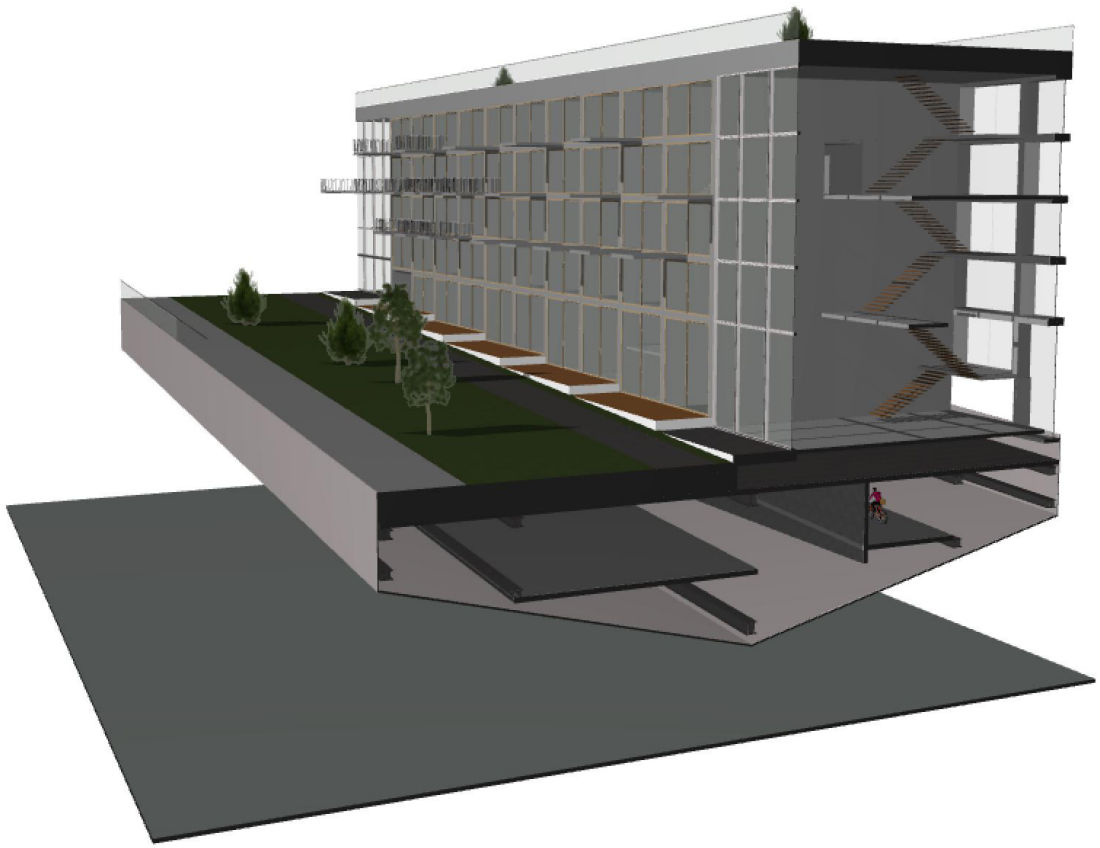
BIM MODEL

3D SECTION



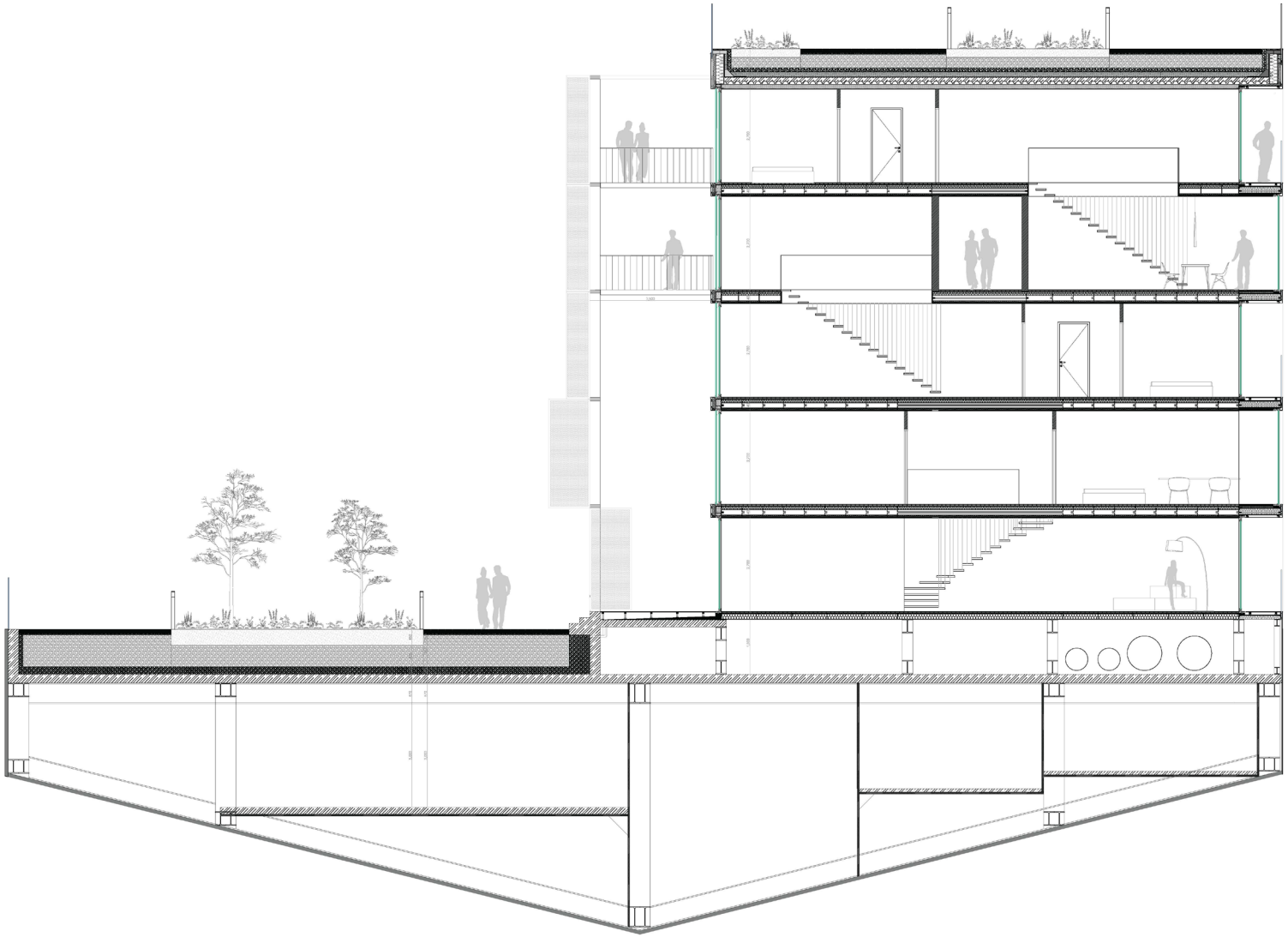
BIM MODEL

3D SECTION



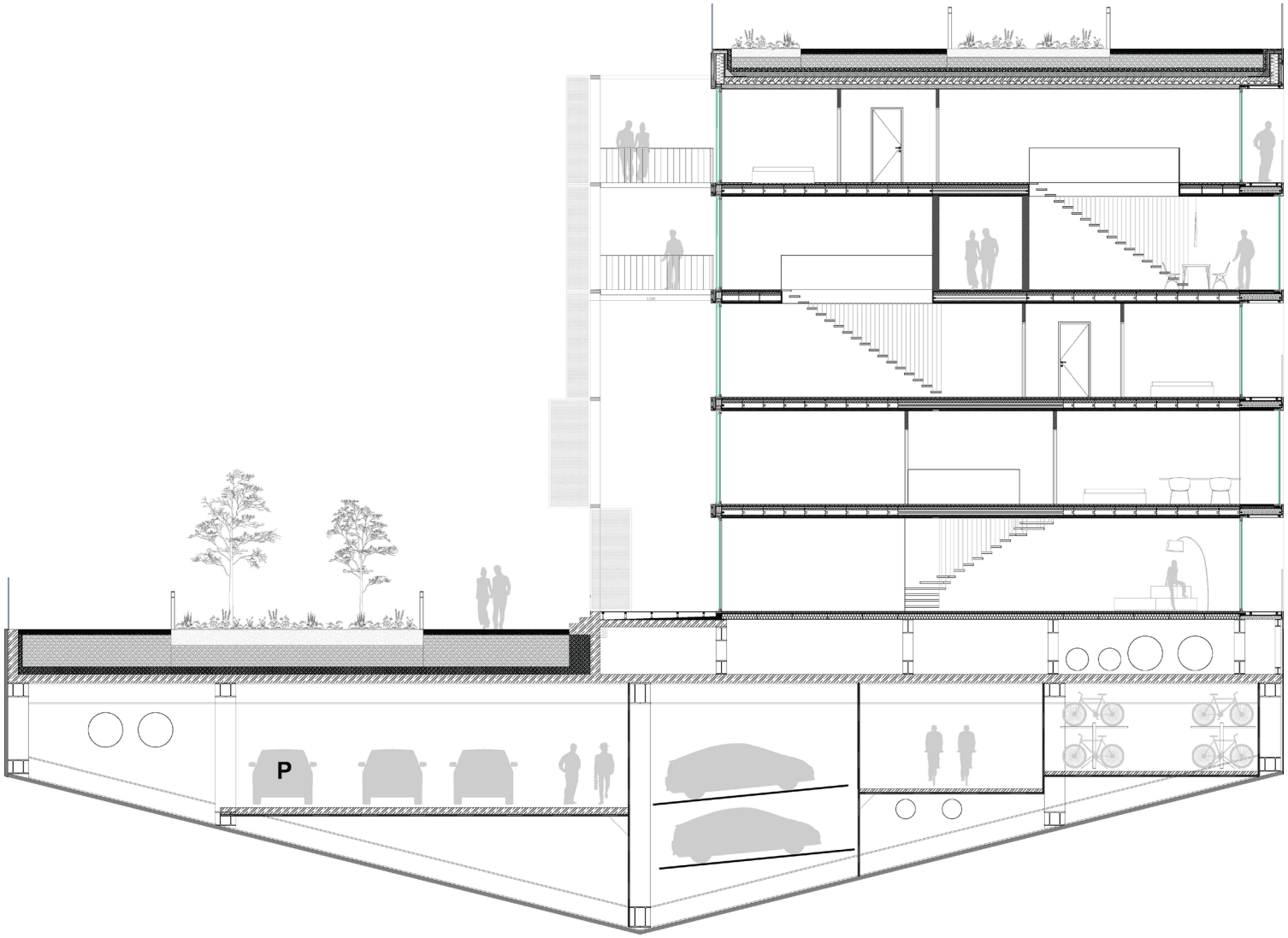
SECTION

1 / 20

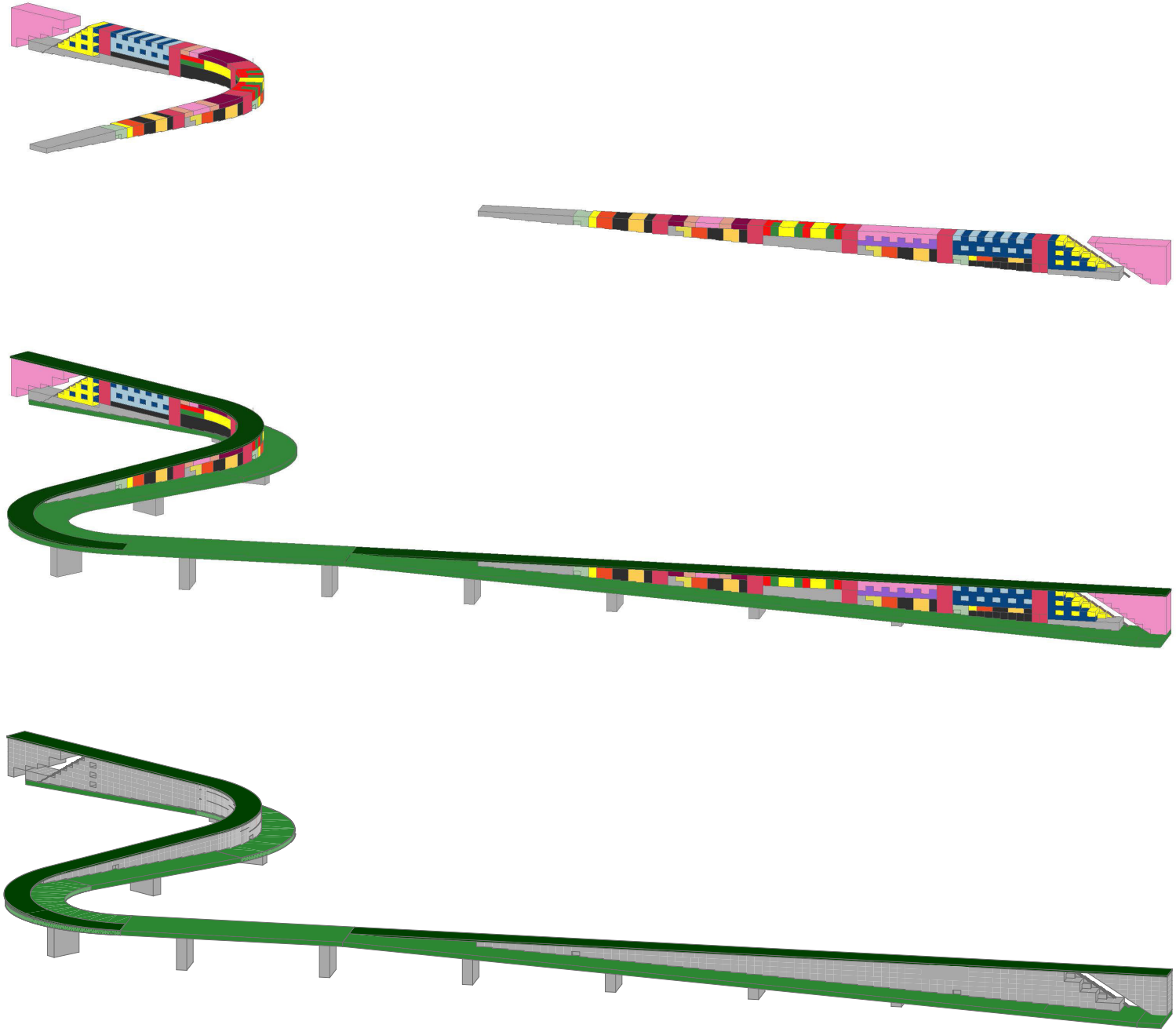


SECTION

1 / 20



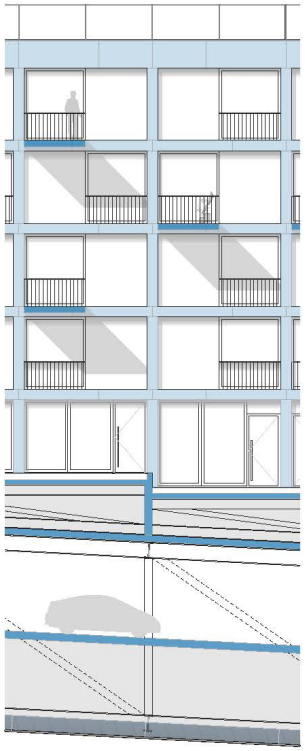
UNITY WITHIN DIVERSITY



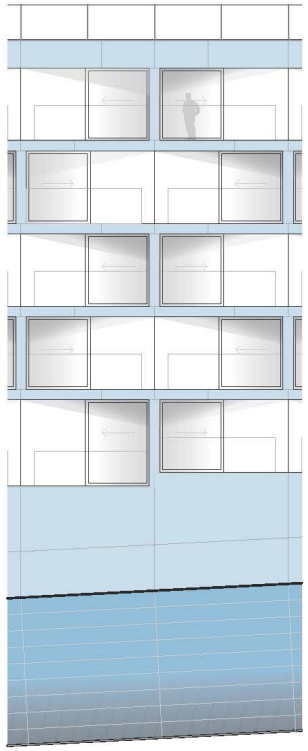
UNITY WITHIN DIVERSITY
FASADES

STAGE 1

STAGE 2



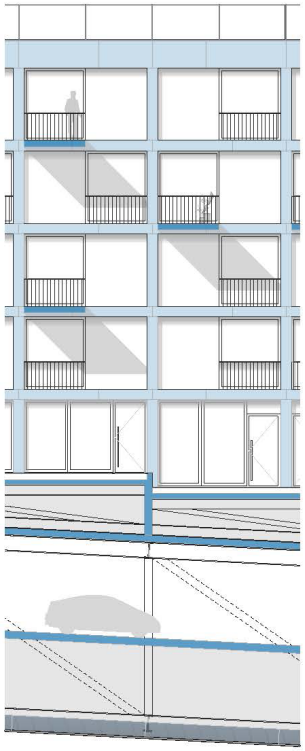
STAGE 3



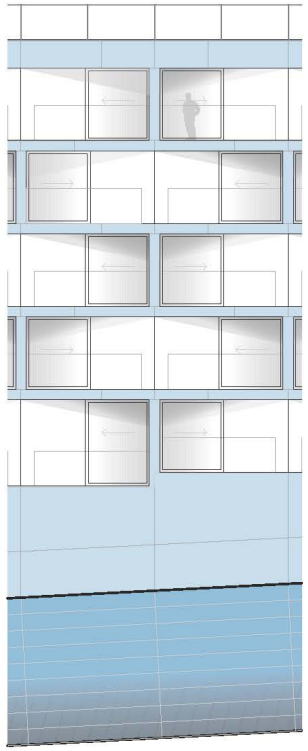
FASADES
3 STAGES

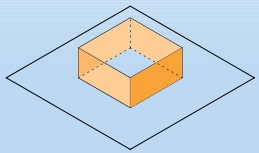
STAGE 1

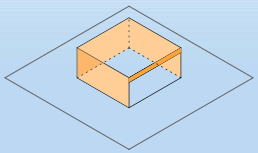
STAGE 2

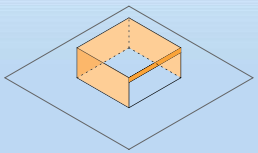


STAGE 3



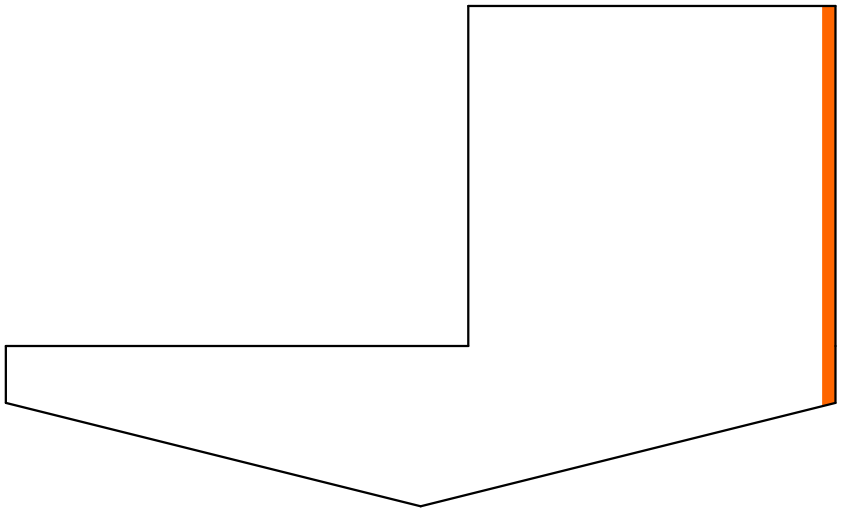






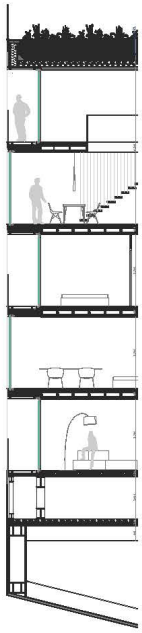
WATER FASADE

PUBLIC SPACE = IJ

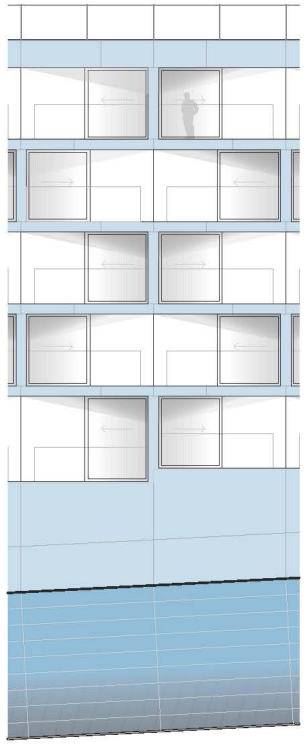


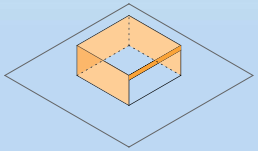
IMPRESSIONS
WATER FACADE

SECTION



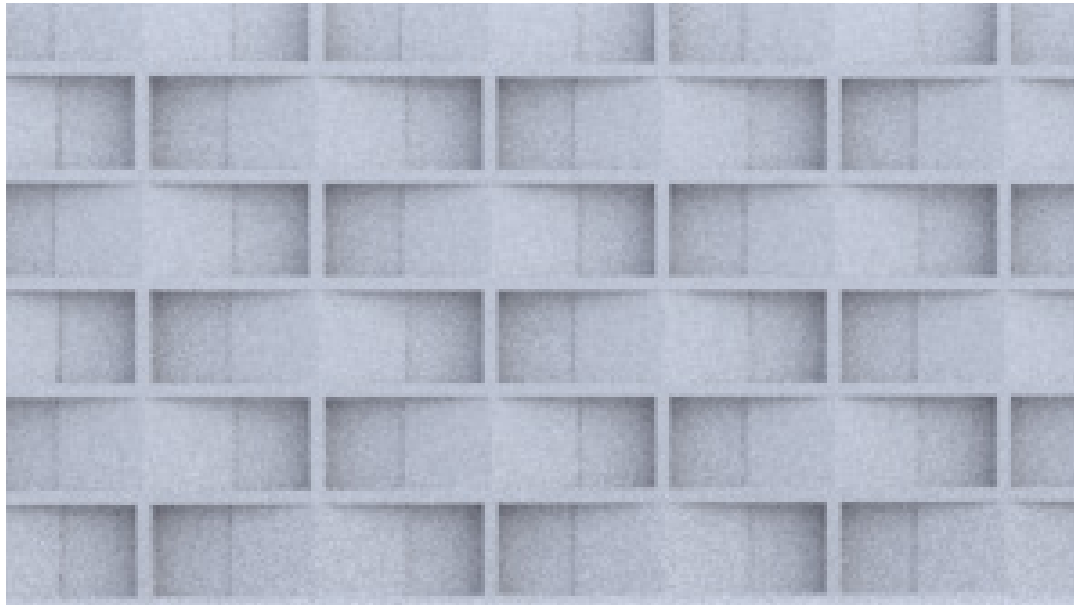
STAGE 3





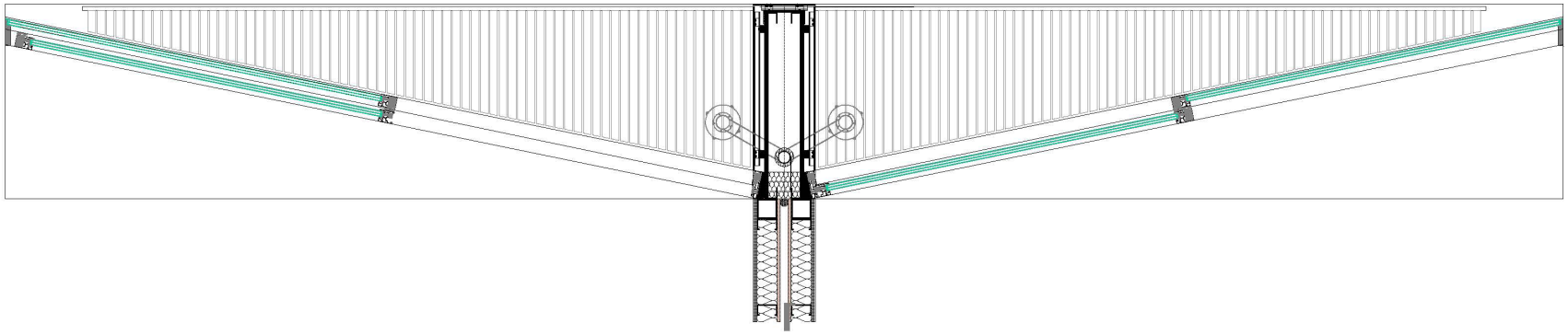
EMPHASIZING BUILDING LENGHT

WATER FACADE



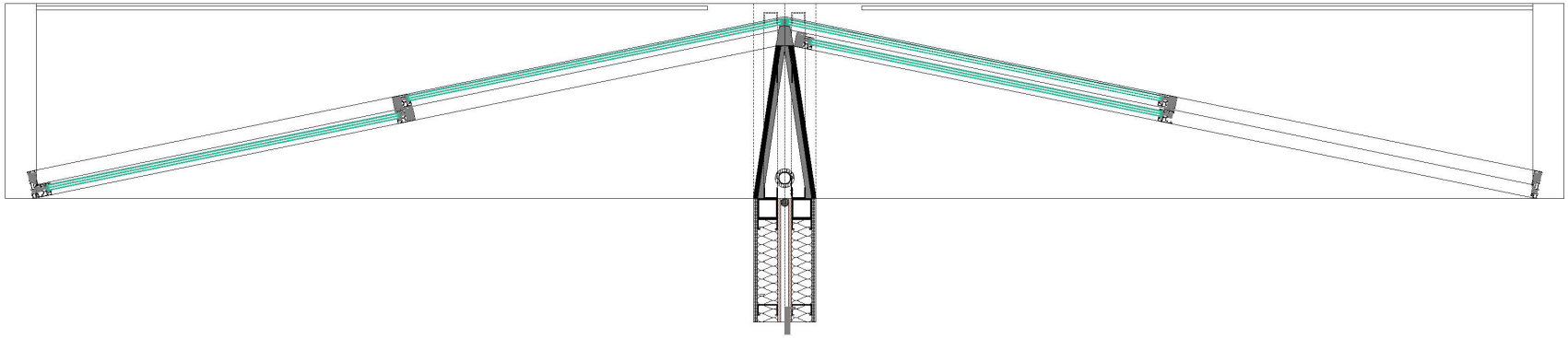
DETAIL
PUBLIC AND PRIVATE

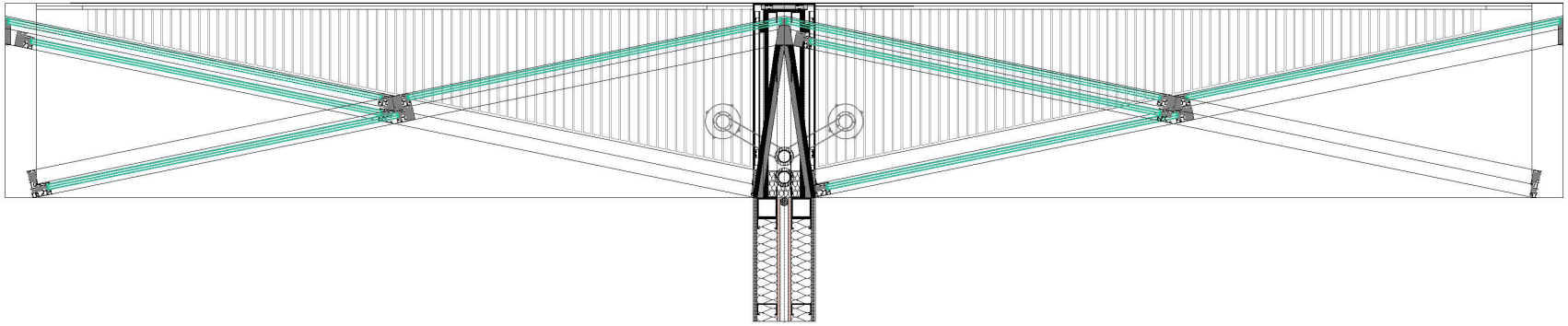
1. FLOOR



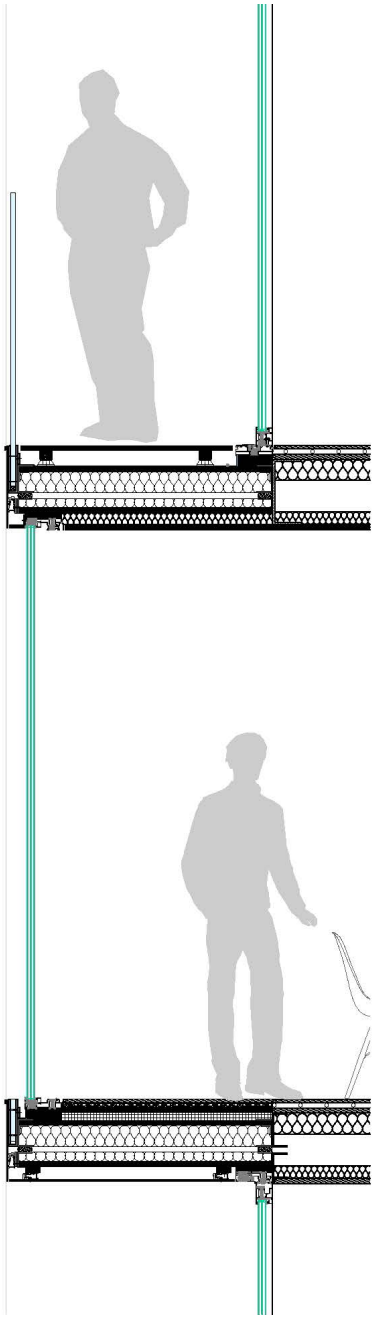
+

2. FLOOR

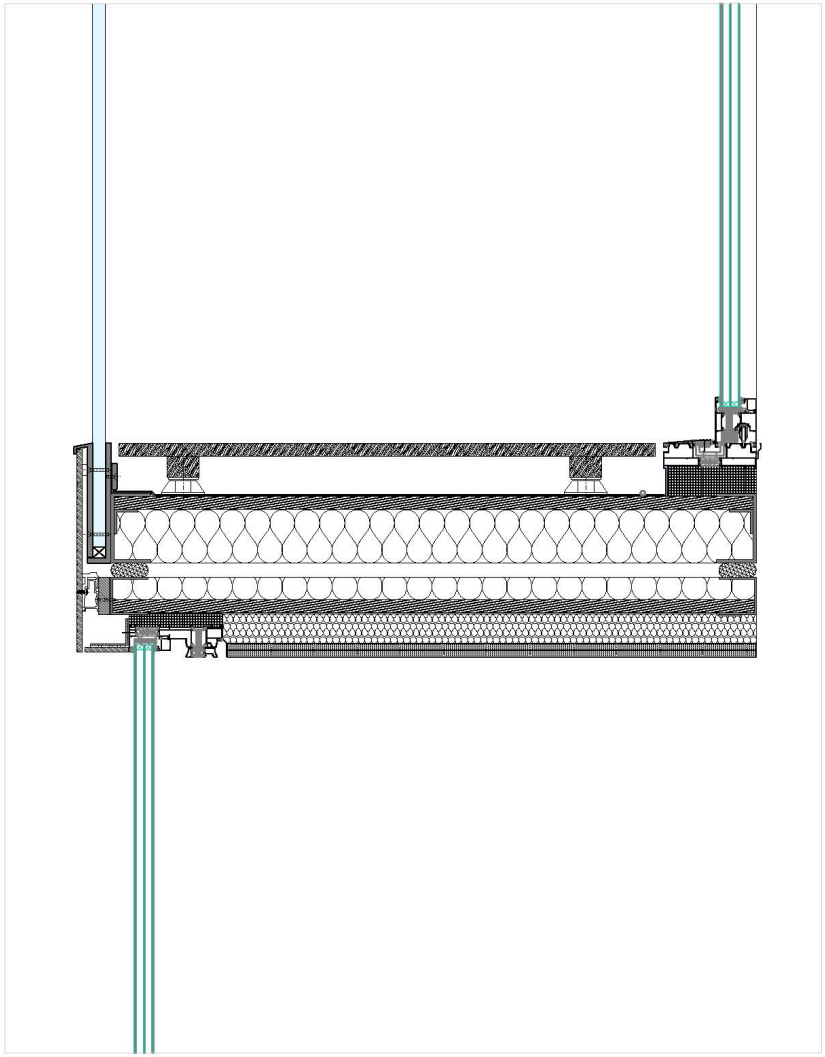


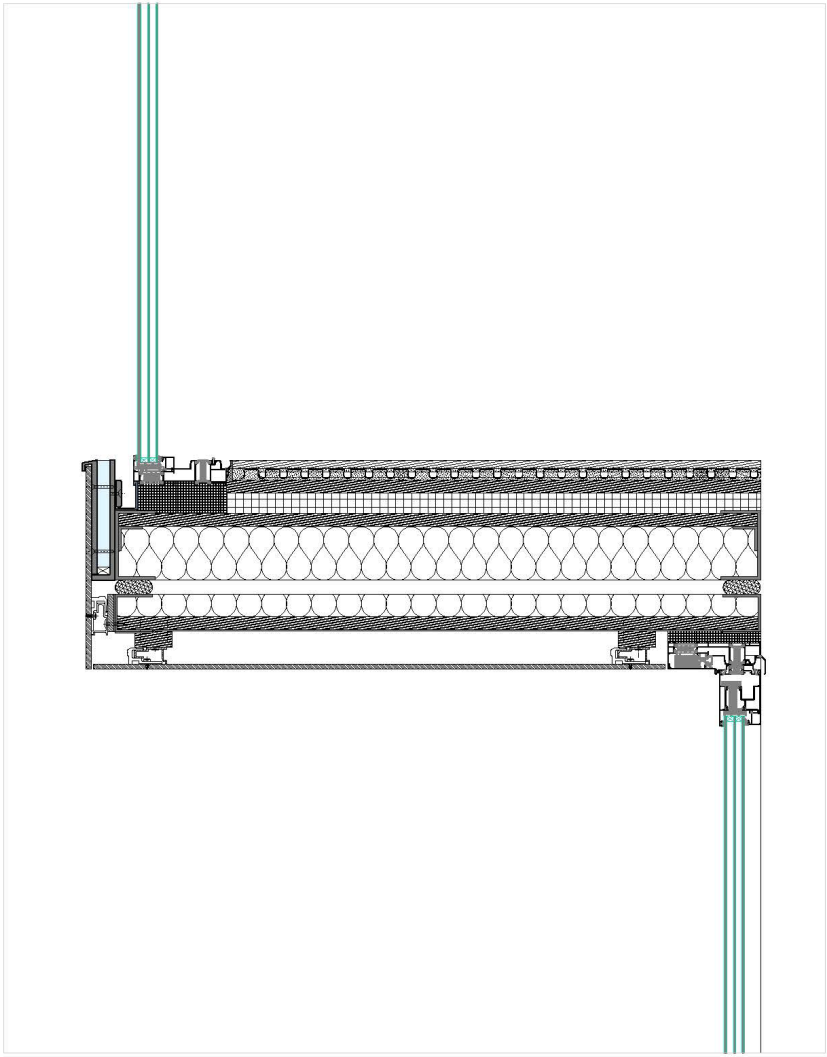


DETAIL
FORM - WATER FASADE

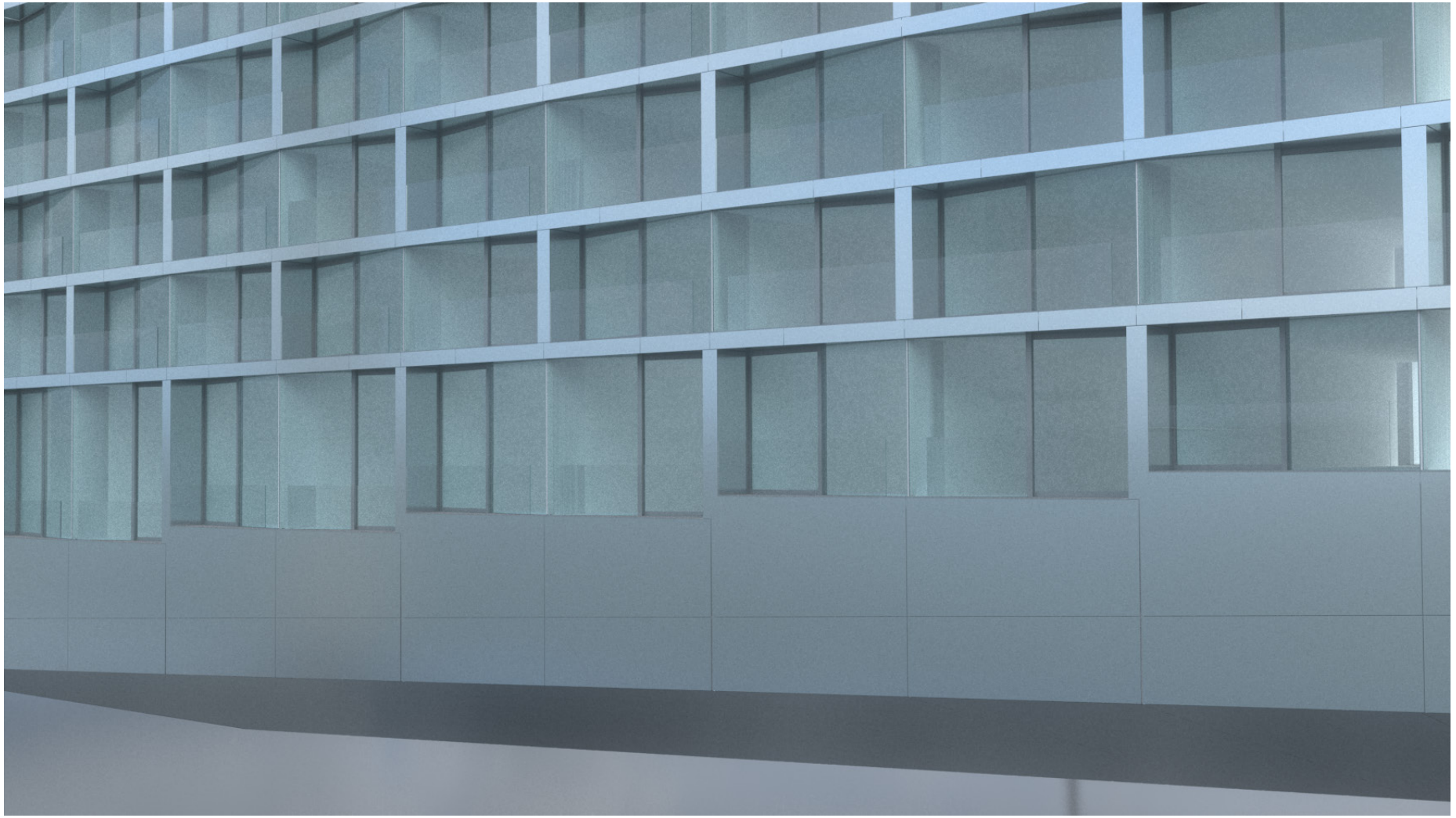


DETAIL
FORM - WATER FASADE



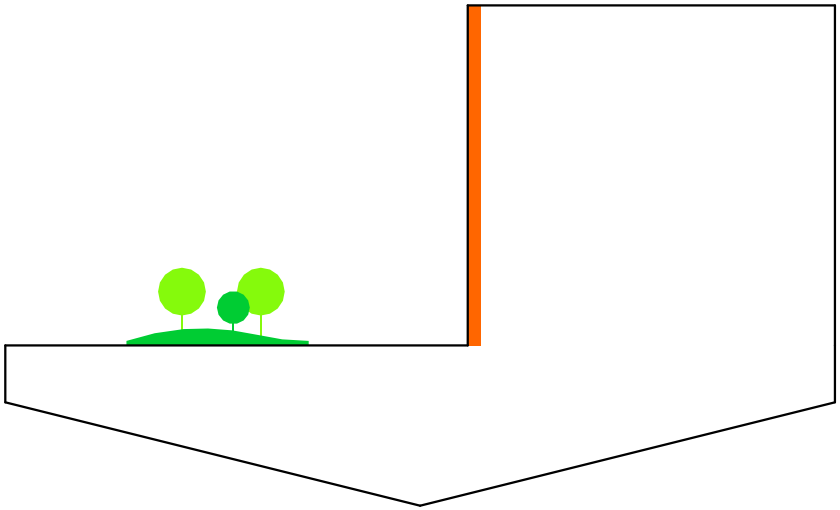


IMPRESSION
WATER FASADE



PARK FASADES

PUBLIC SPACE = PARK

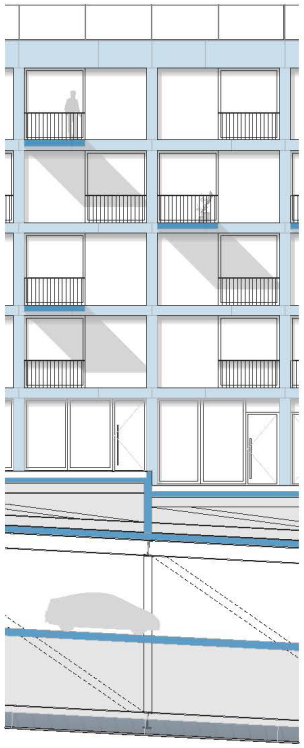


FASADES

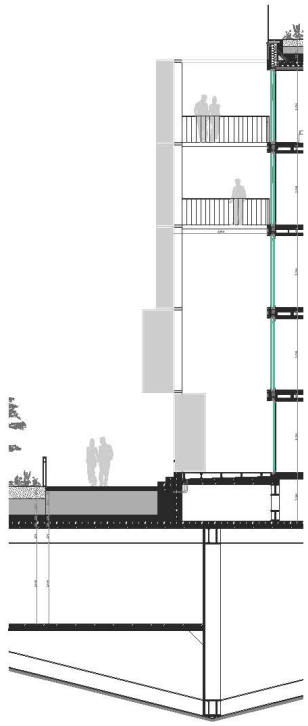
PARK FASADES

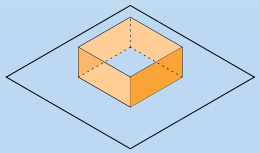
STAGE 1

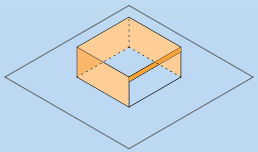
STAGE 2



SECTION



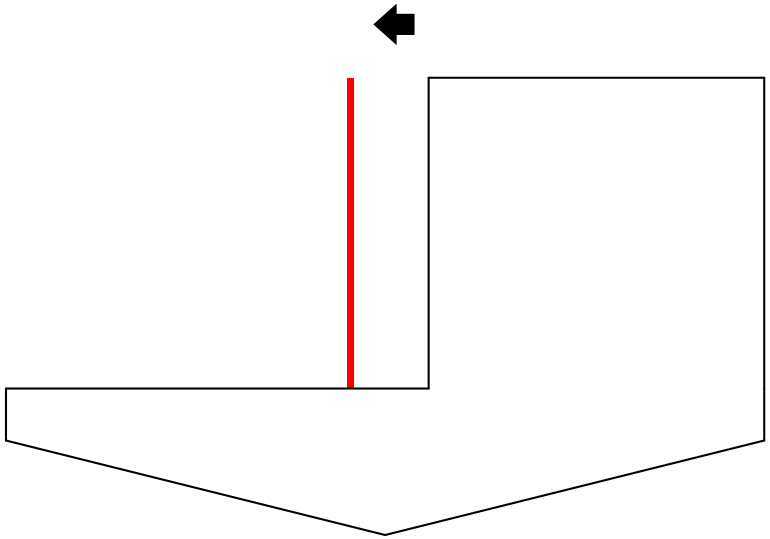




INBETWEEN SPACE

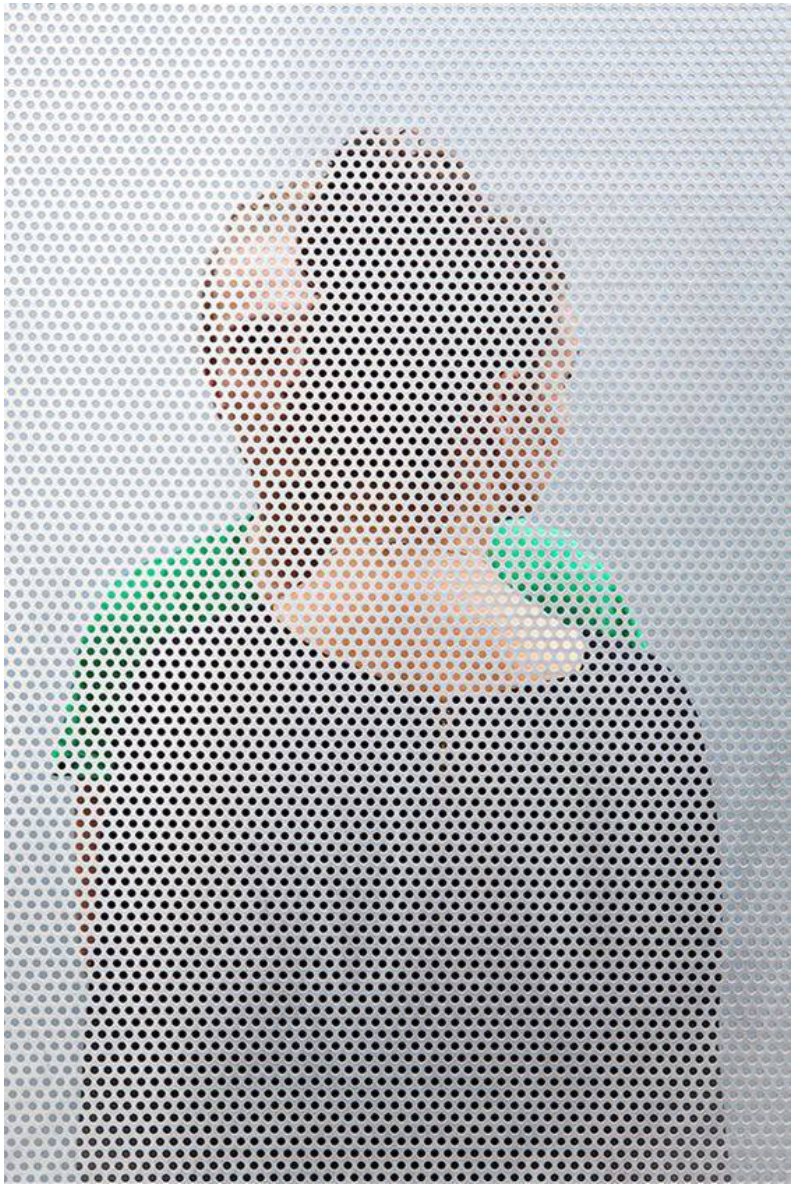
2 FASADES

VEIL



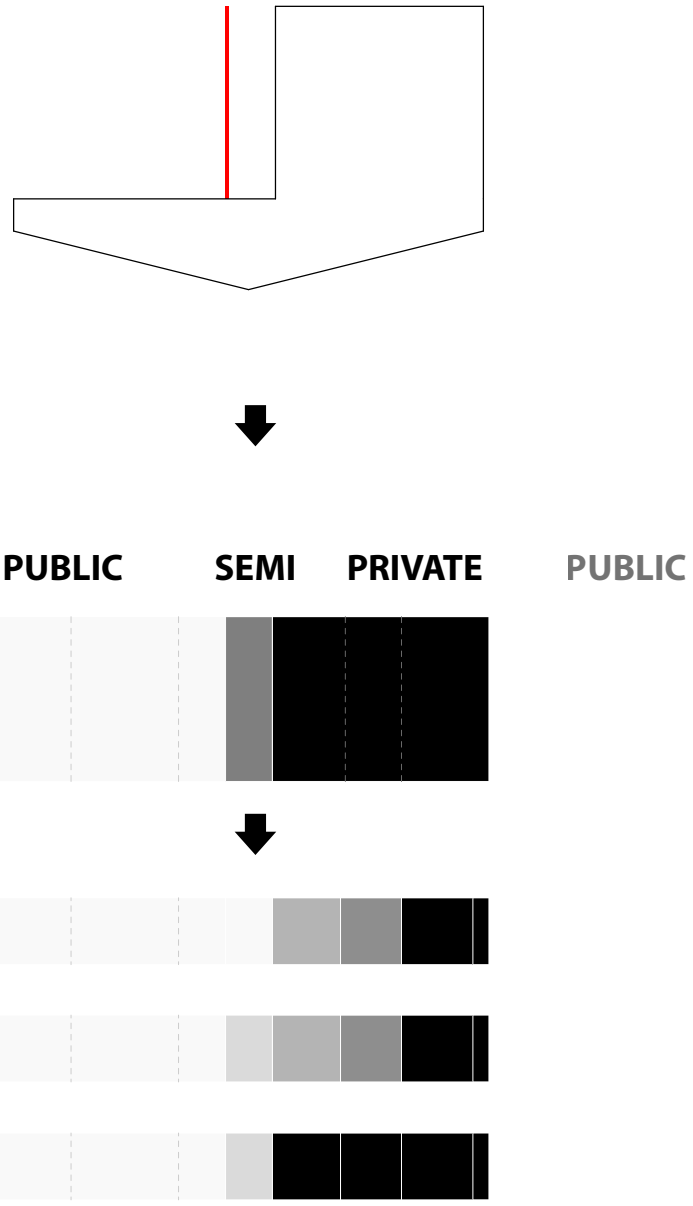
PERFORATION
STAINLESS STEEL

VEIL



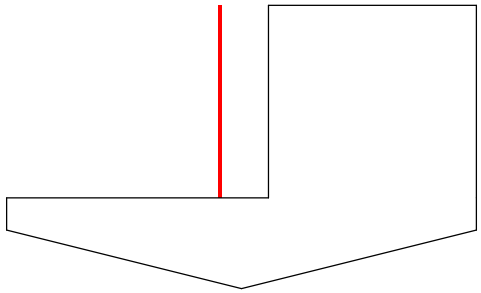
IN-BETWEEN SPACE

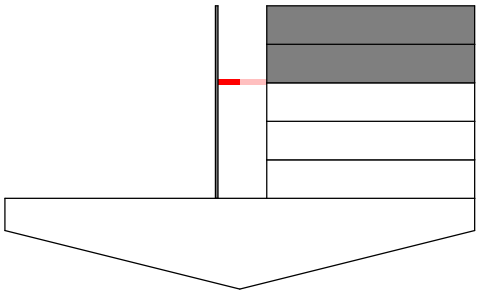
INCREASE IN PRIVACY



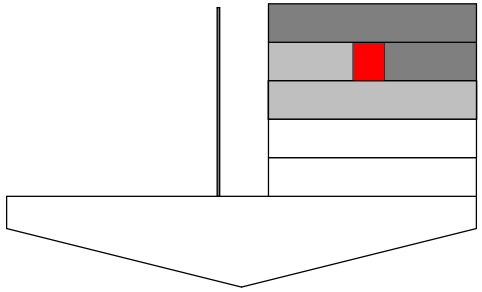
UNITYFING
VARIOUS ACCESSES AND SPACES

BIG VARIATY WITHIN UNITY

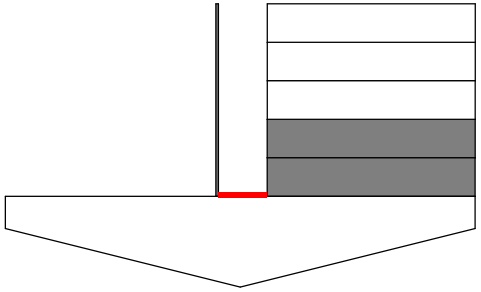




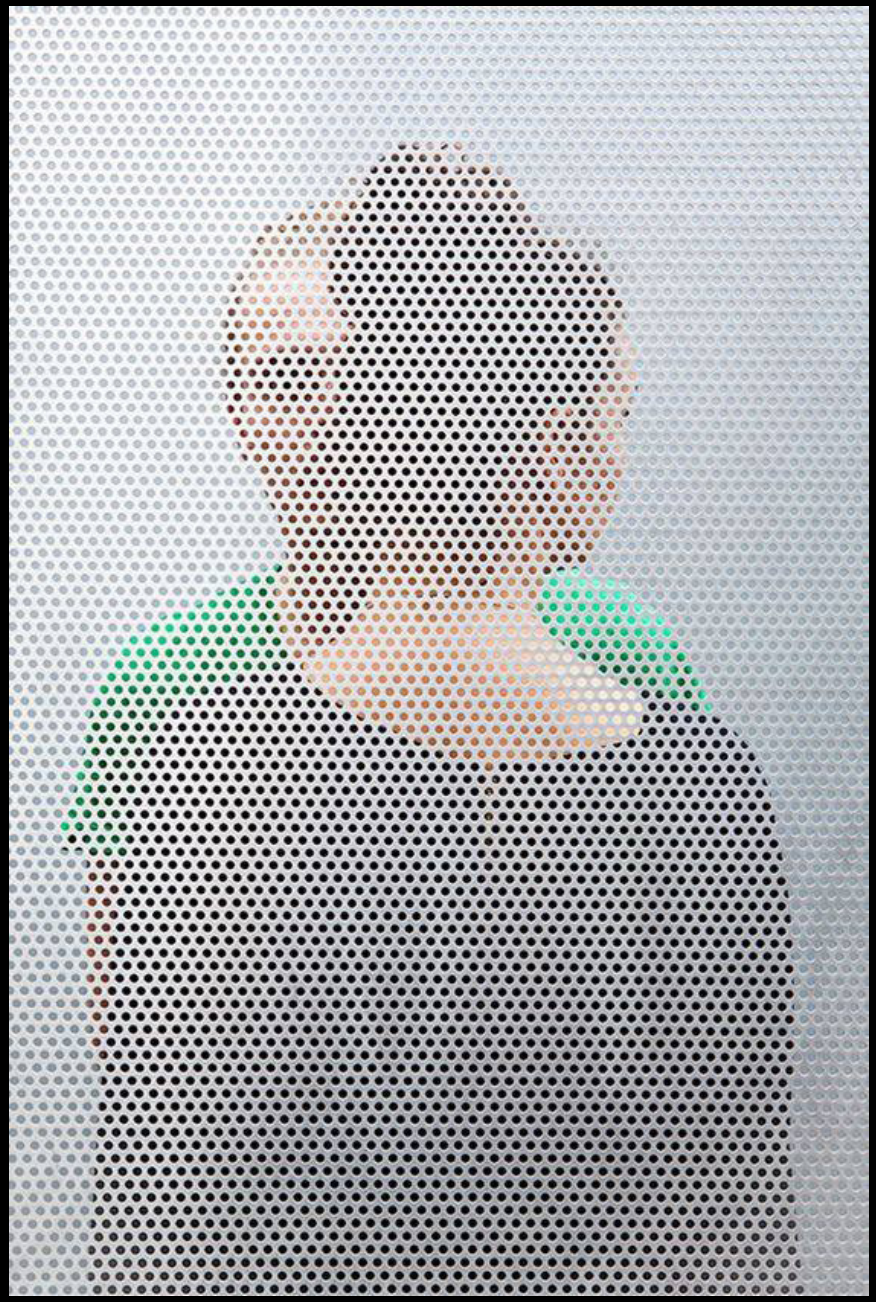
GALLERIES BALCONIES



CORRIDORS



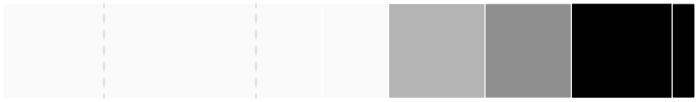
GROUNDFLOOR TERRASSES



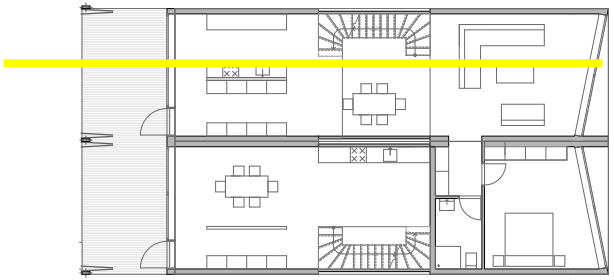
FREEDOM OF CHOICE

PUBLIC AND PRIVATE

PUBLIC **PRIVATE**



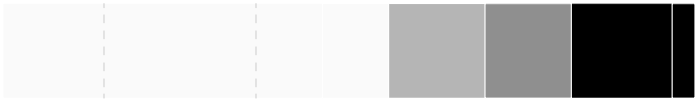
OPEN



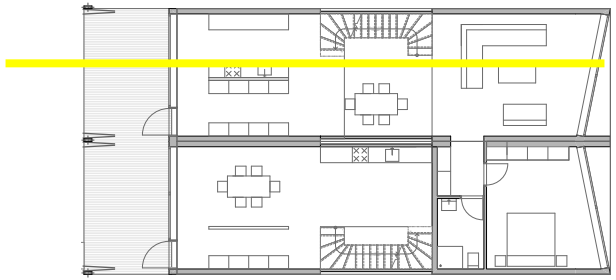
FREEDOM OF CHOICE

PUBLIC AND PRIVATE

PUBLIC **PRIVATE**

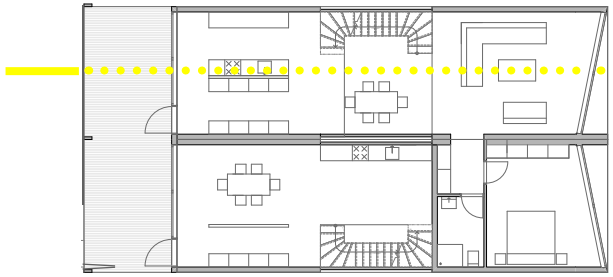


OPEN



PUBLIC **PRIVATE**

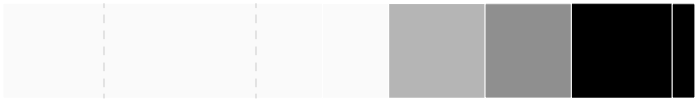
CLOSED



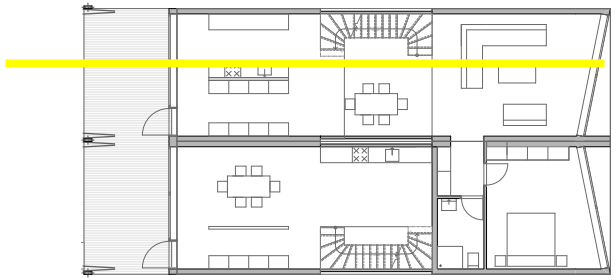
FREEDOM OF CHOICE

PUBLIC AND PRIVATE

PUBLIC **PRIVATE**

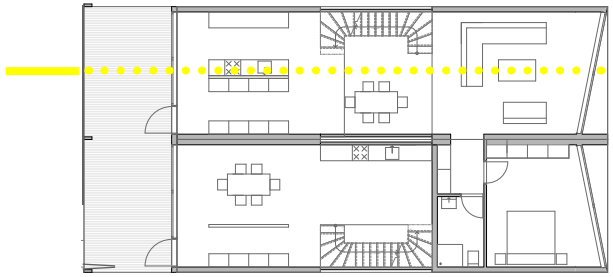


OPEN



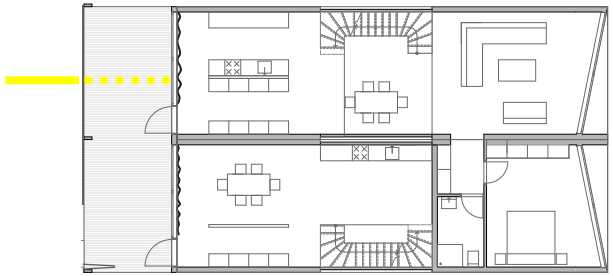
PUBLIC **PRIVATE**

CLOSED

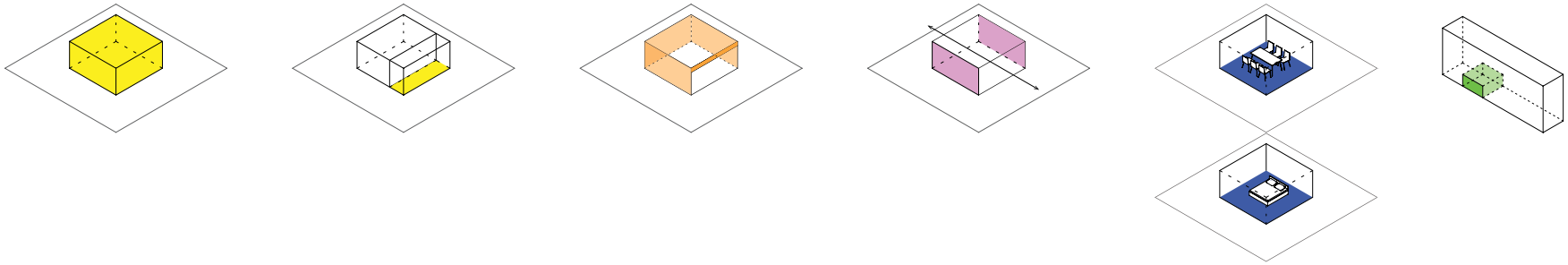


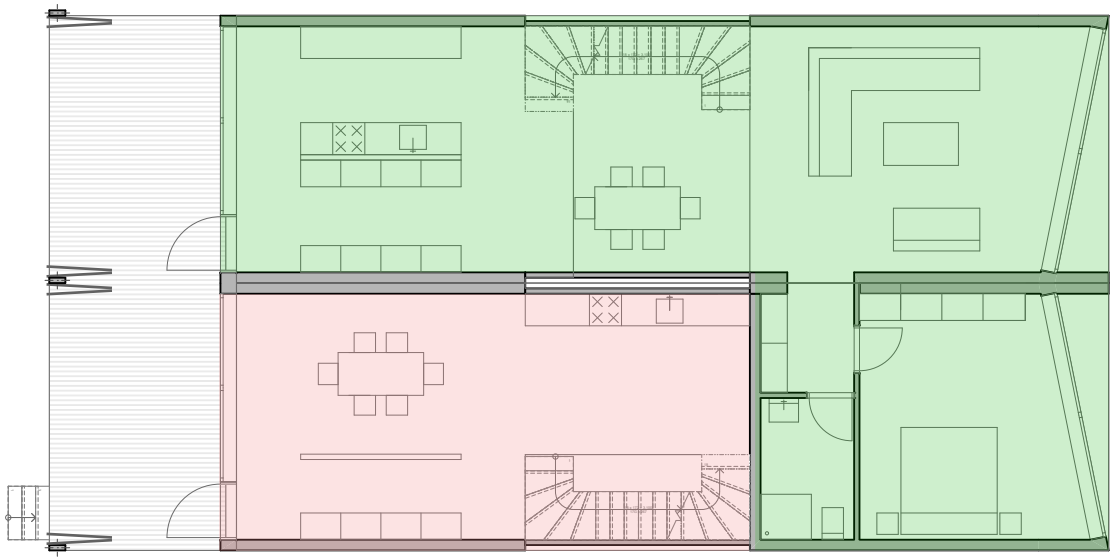
PUBLIC **PRIVATE**

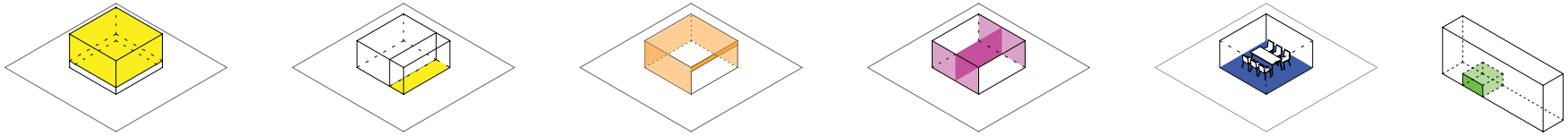
CLOSED CURTAINS



LAYOUT V5 & V6
PUBLIC AND PRIVATE

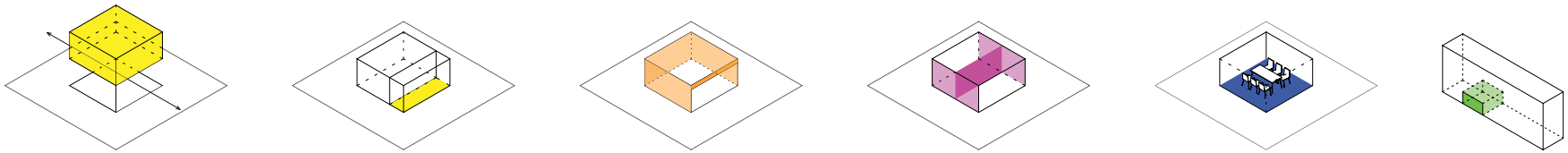


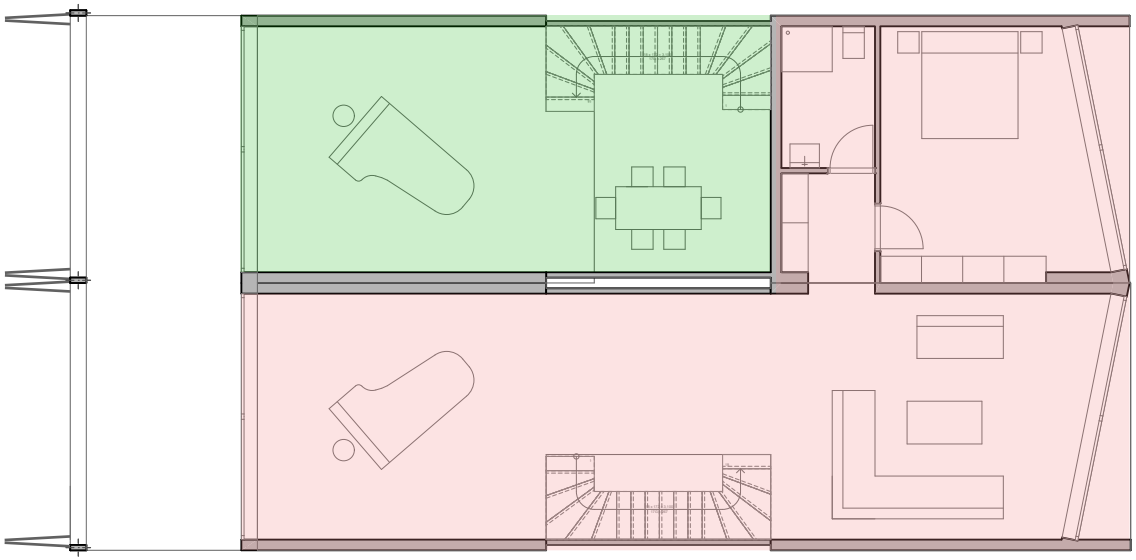


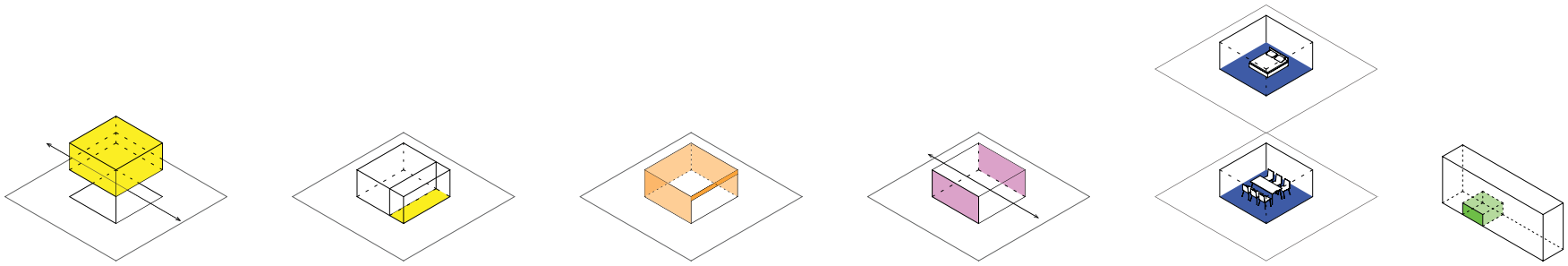


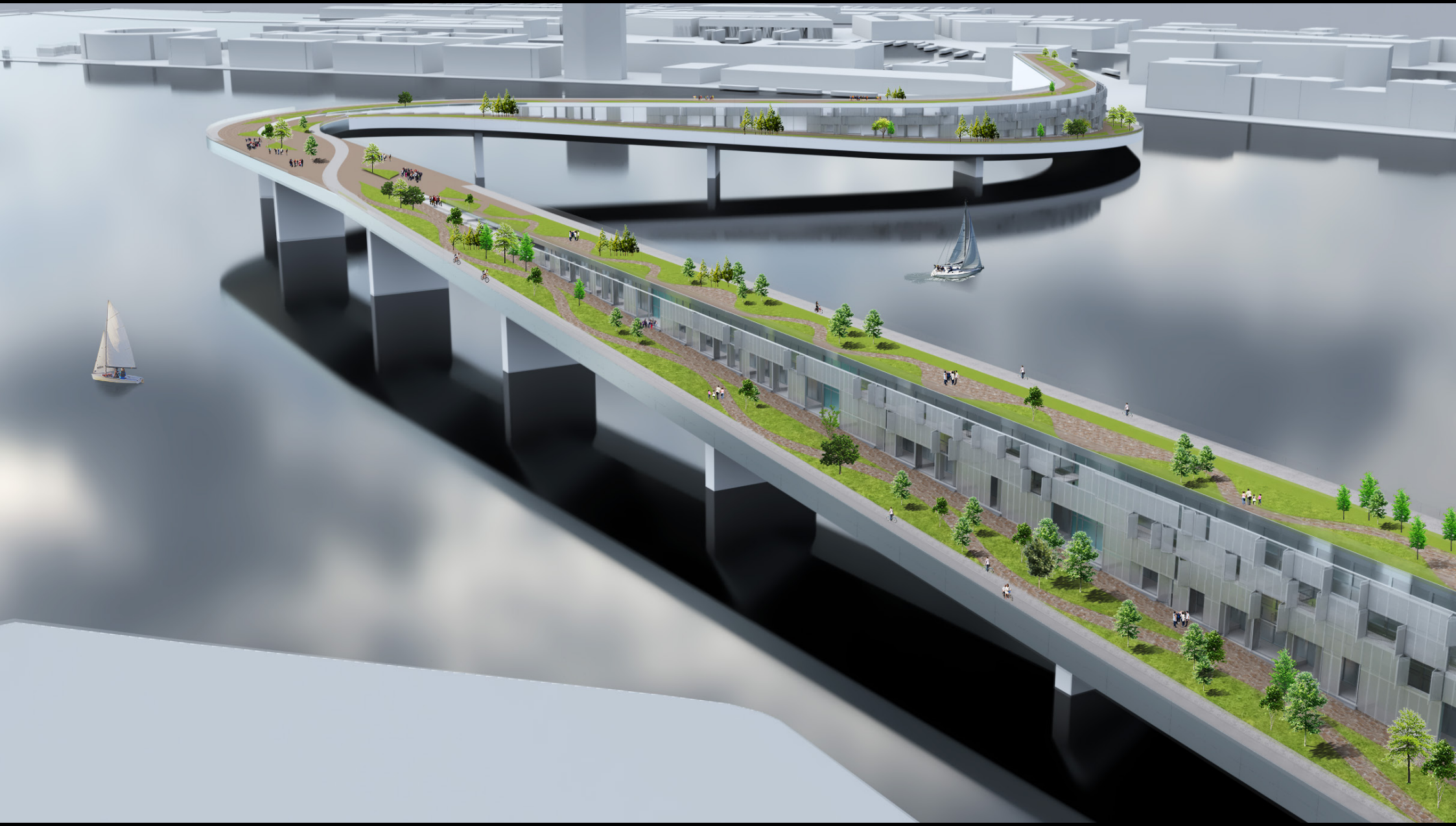
LAYOUT V5 & V6

PUBLIC AND PRIVATE

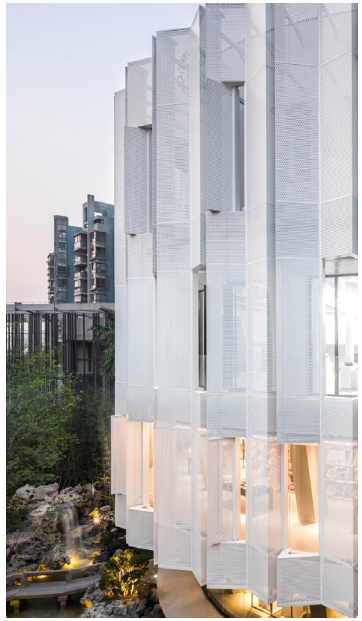
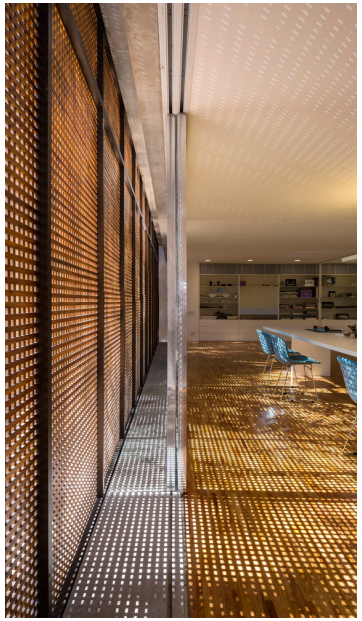


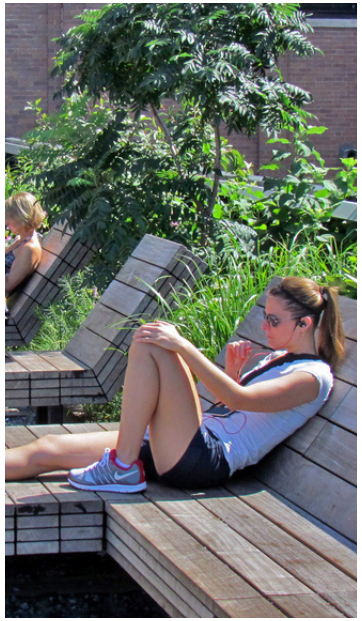




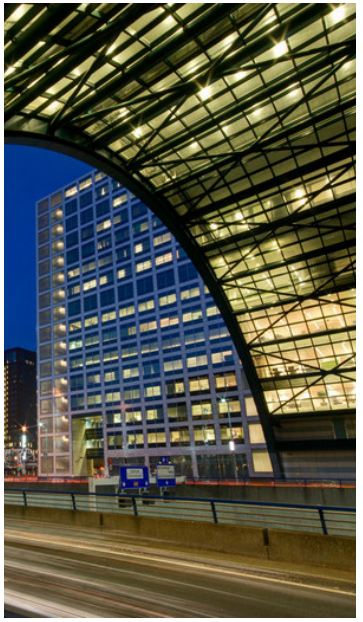


MATERIALS
IMPRESSION

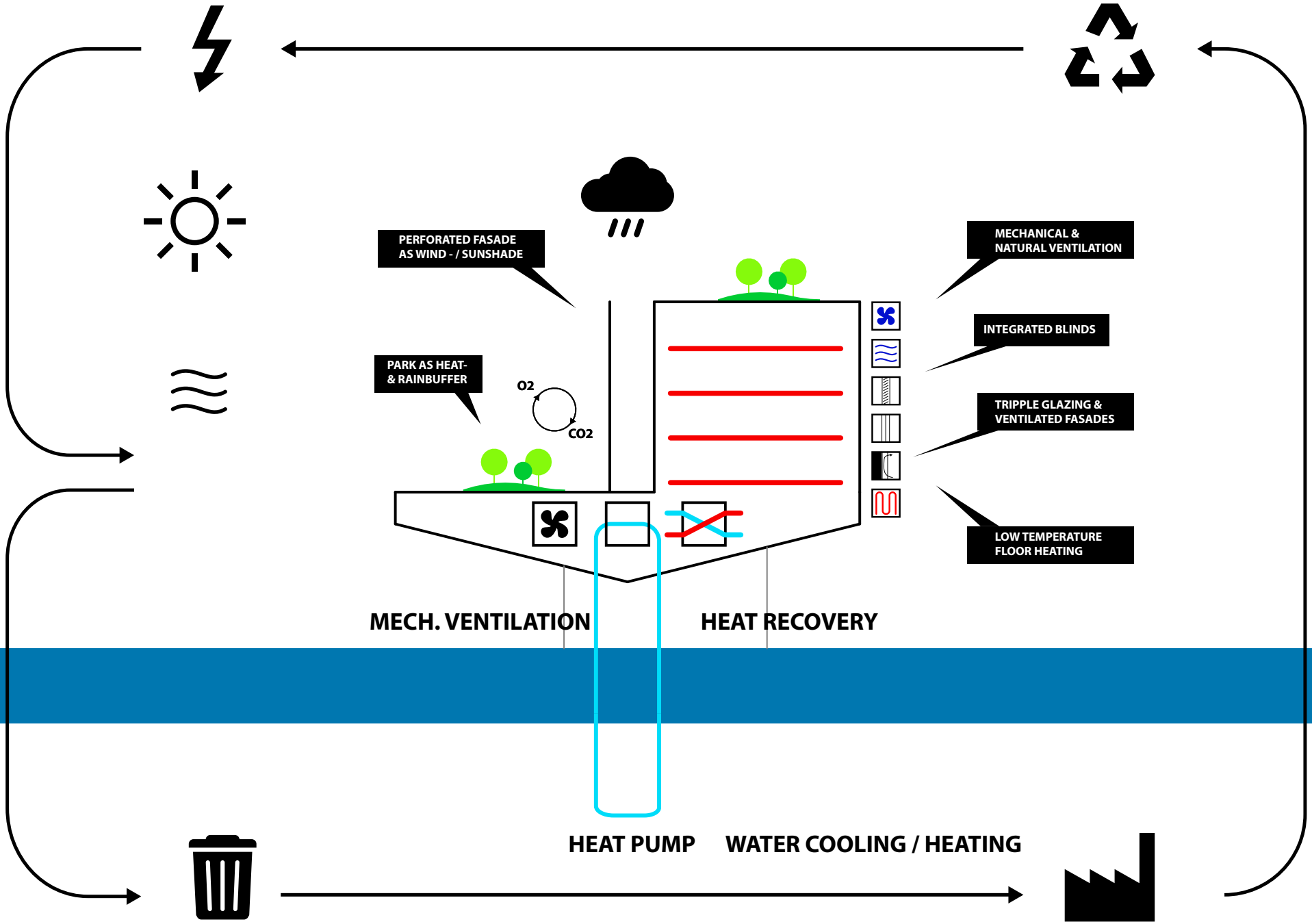








CLIMATE SCHEME

SUSTAINABILITY



CLIMATE - GREEN LOOP

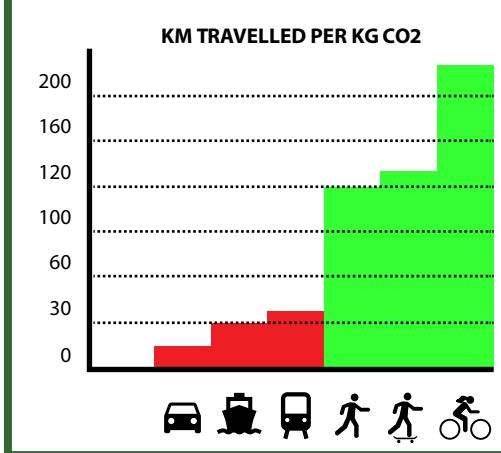
BENEFITS

LEISURE

it is one of the key reasons for people to go to parks in a city. It is connected to socializing and relaxation and improves well-being. A good city has to provide leisure places spread around and in reachable distances for its citizens.

SPORT & HEALTH

Sport and health are two closely related flieds. A city has to offer safe envirenment - indoors as well as outdoors - for its citizens to do sport and animate them to live a healthy lifestyle.



CO2 - INNER CITY TRANSPORT

The goal of progressive cities and citizens, is the reduction of CO2 emmissions. This promotes not only transport by public transport, but an active way of moving.
In this sence, the bicycle is once again the forerunner.

GREENERY

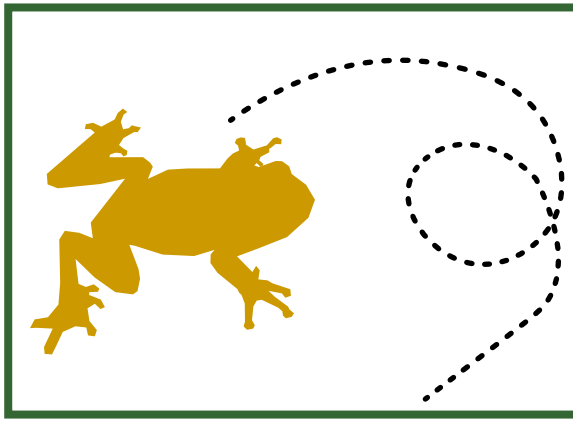
Nature is an important part of our life. Not only that plants produce the oxygen we breath, but also being visually connected to nature on a workplace increase vproductivity.

HEAT AND RAINBUFFER

Greenery also improves the climate within the city. If city greenry covers a sufficient amount of sqm it significantly reduces urban heat and acts as rainbuffer

LEISURE

it is one of the key reasons for people to go to parks in a city. It is connected to socializing and relaxation and improves well-being. A good city has to provide leisure places spread around and in reachable distances for its citizens.



MIGRATION

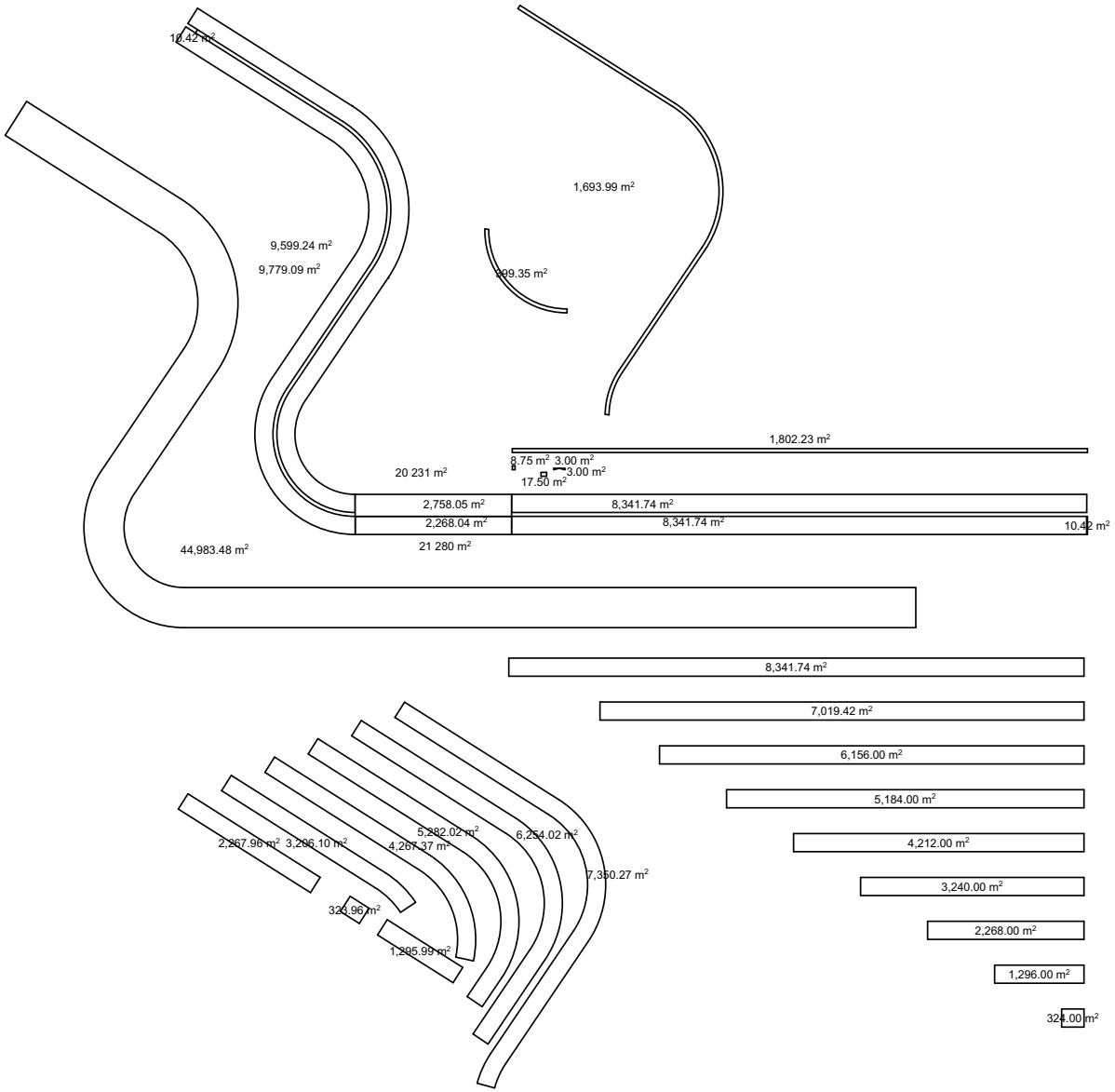
Animal migration in the built environment is only limited within parks andoptional biocorridors.
The danger of traffic does not allow certain species to migrate. This has a direct impact on biodiversity.

MOBILITY

The goal of progressive cities and citizens, is the reduction of CO2 emmissions. This promotes not only transport by public transport, but an active way of moving.
In this sence, the bicycle is once again the forerunner.

REFLECTION sqm

EXPANDING UNIVERSES ON SHRINKING FOOTPRINTS



IJ area = **44 984 m2**

2*4 230 m2
\+ 11*60 m2
footprint = **9 120 m2**

44 984 m2
\- 9 120 m2
perserved public space = **35 864 m2**

21 280 m2
\+ 20 231 m2
new public space = **41 511 m2**

3 896 m2
\+ 16 625 m2
\+ 570 m2
private outdoor spaces = **21 097 m2**

indoor space = **91 680 m2**

new public space	41 511 m2
private outdoor spaces	+ 21 097 m2
indoor space	+ 91 680 m2
building	= **154 288 m2**

perserved public space + 35 864 m2
dealt with an area of **= 190 152 m2**

DESIGN GOALS

EXPANDING UNIVERSES ON SHRINKING FOOTPRINTS

Urban strategy	**design site-specific & in harmony with Amsterdams' future plans**
Building	**expand universe / densify inner city on small footprint | implement my research | diversity in unity | attractuve building-method | freedom of choice**
Dwelling	**transition between public and private adaptable for future lifesituation | freedom of choice**
Detail	**transition between public and private adaptable for future lifesituations**

ACHIEVED QUALITIES

EXPANDING UNIVERSES ON SHRINKING FOOTPRINTS

SITE SPECIFIC DESIGN

AMSTERDAM FUTURE PLANS

PROMOTING HEALTHY LIFESTYLE AND BIKE

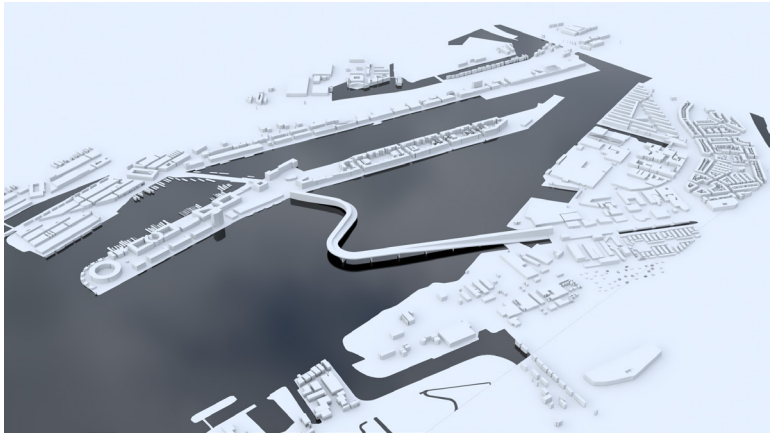
VARIOUS ROUTES FOR BIKING & WALKING & SHIPS

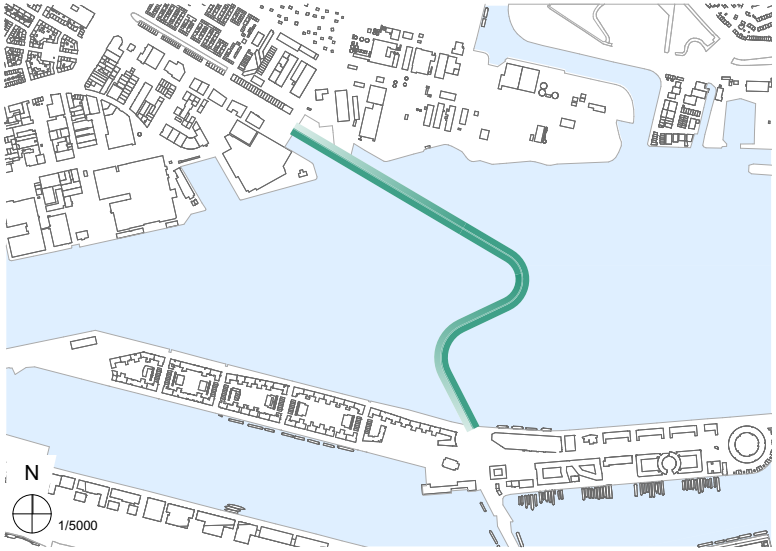
CAMPTURING BIG PANORAMA AND VIEW ON SURROUNDINGS

EXPANDED PUBLIC SPACE + DENSIFIED THE INNER CITY ON VERY SMALL FOOTPRINT OVER THE IJ

BUILDING PREFABRICATION IN CONTROLED ENVIRONMENT

ADAPTABILITY FOR FUTURE LIFESITUATIONS





ACHIEVED QUALITIES 2

EXPANDING UNIVERSES ON SHRINKING FOOTPRINTS

DIVERSITY IN UNITY

FREEDOM OF CHOICE (LIVING & CROSSING)

UNITY IN DIVERSITY

FASADE ARE FAMILY (SAME DNA)

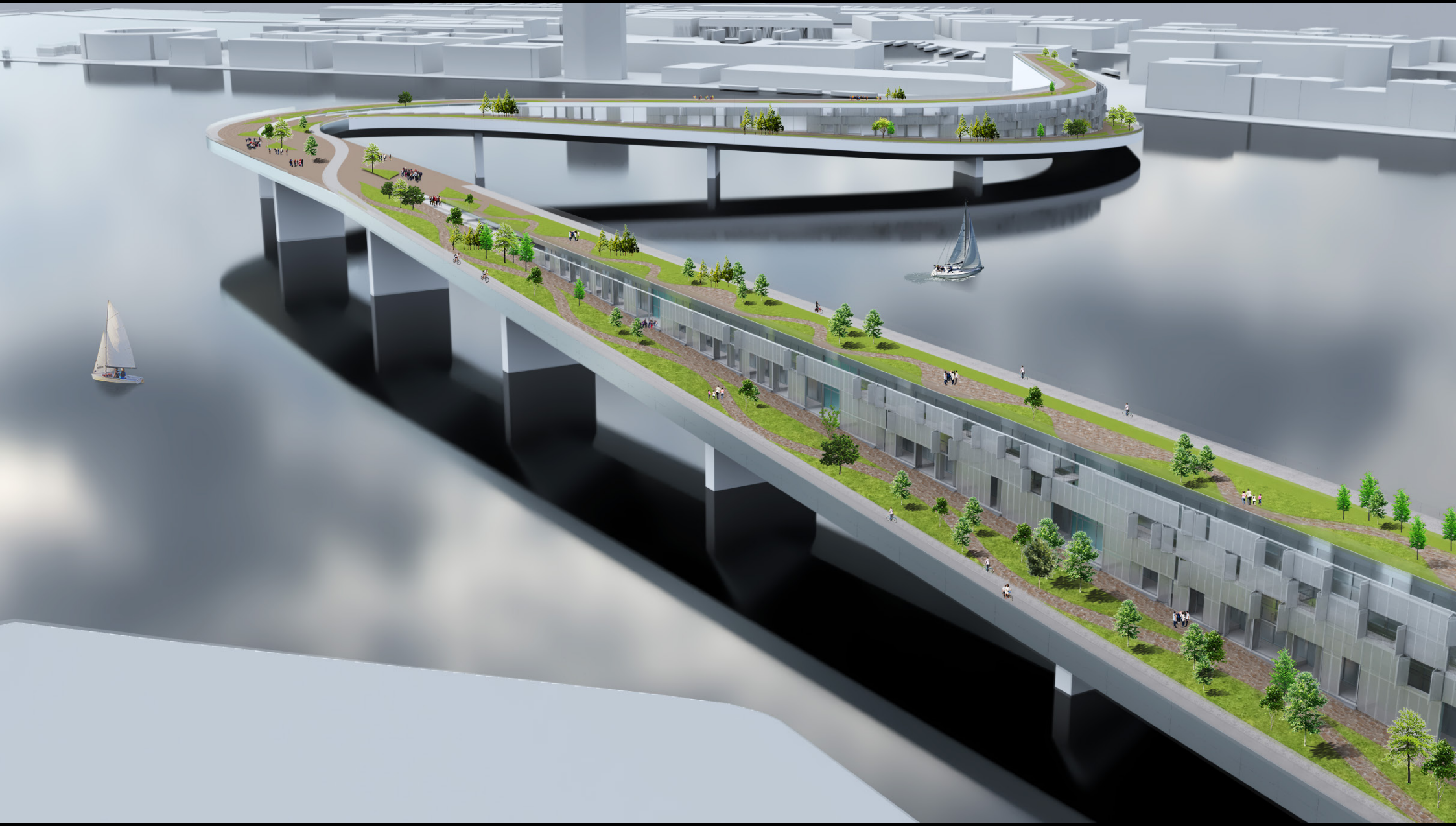
DWELLINGS ARE FAMILY (SAME DNA)

LABORATORY FOR RESEARCH RESULTS

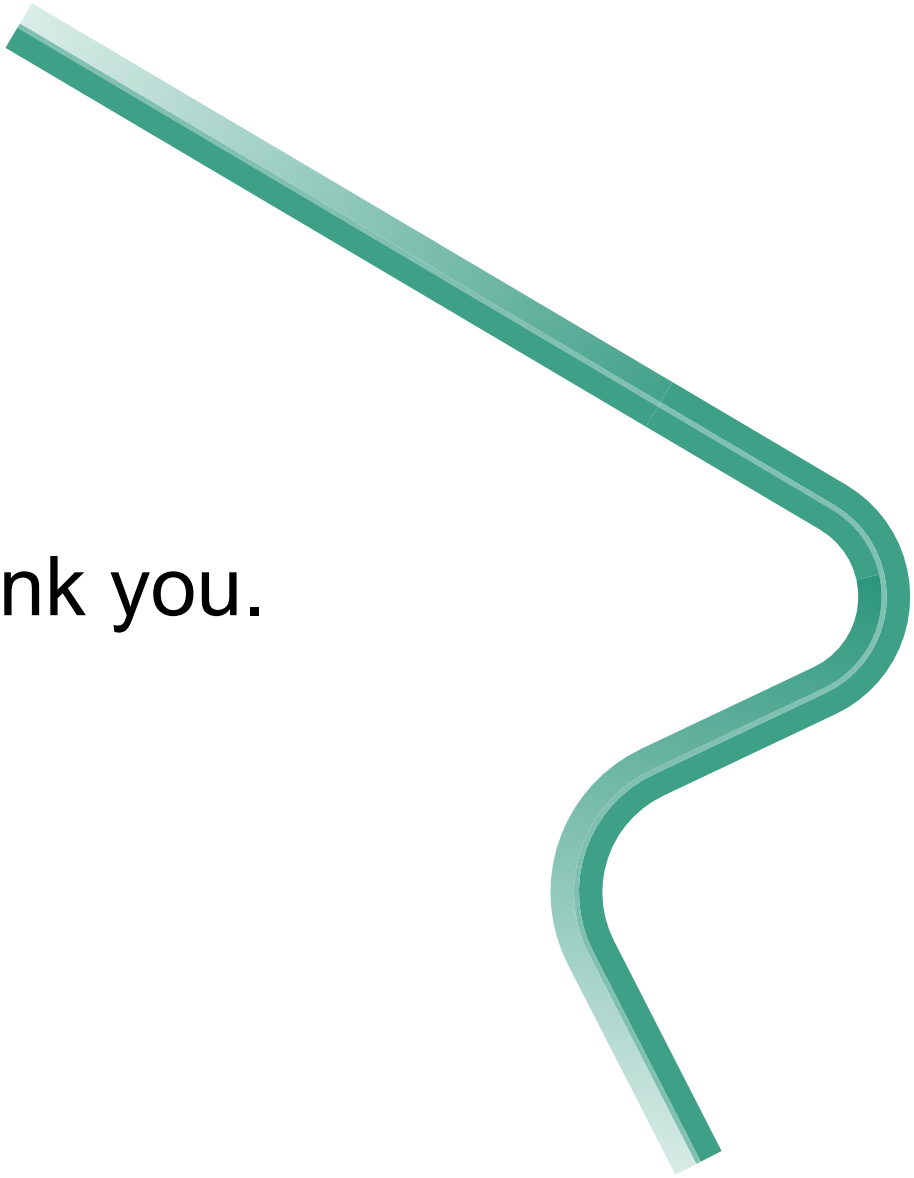
VIA BUILDING FORM / PLANS / ACCESSES / FASADES / ETC

MAXIMIZED VIEW WHILE MAINTAINING PRIVACY

UNIQUE LIVING AND PARK EXPERIENCE

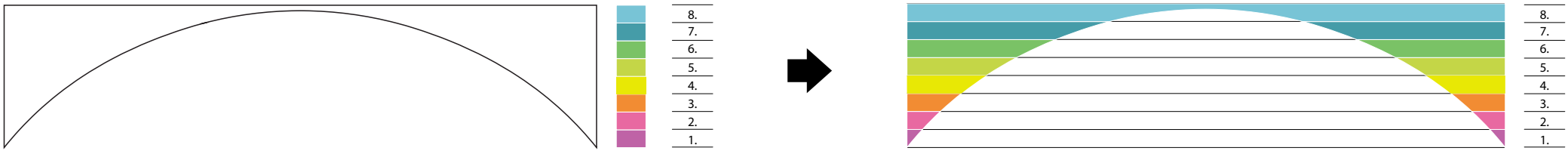


Thank you.

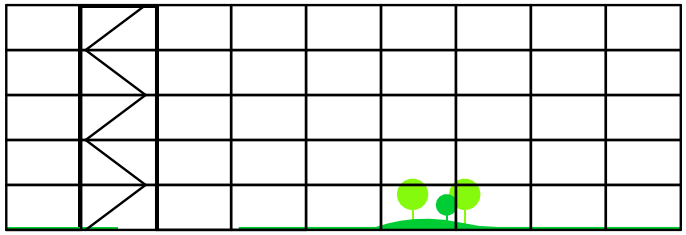


CORRIDORS & PUBLIC CEILINGS

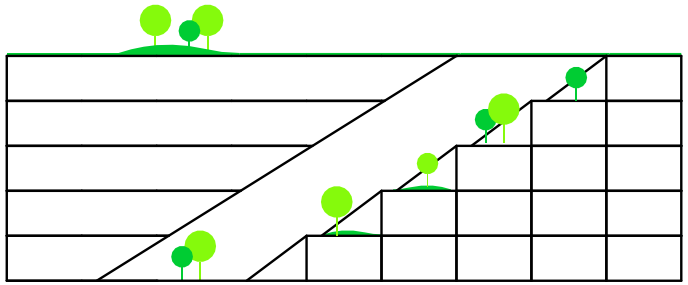
USE OF COLOR

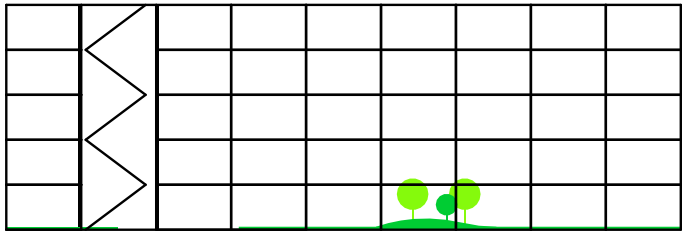


CEILINGS OF PUBLIC AREAS AND CORRIORS ARE COLORED
FOR IDENTITY AND PERSONALIZATION PURPOSES



UNINVITING



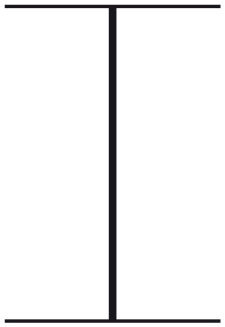


INVITING

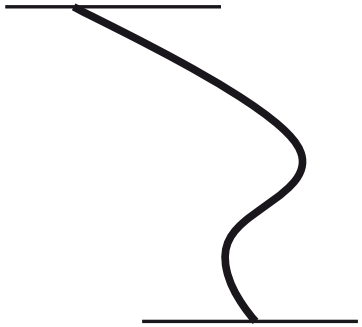
DESIGN CHALLENGES
EXPLANATION DIAGRAMS

FRAMEWORK FOR SYSTEMATIC DESIGNING

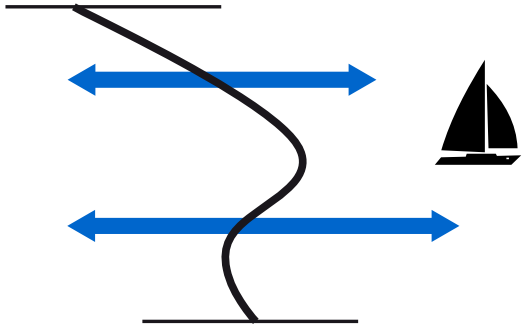
Application of systematic framework, which i developed during my research process.



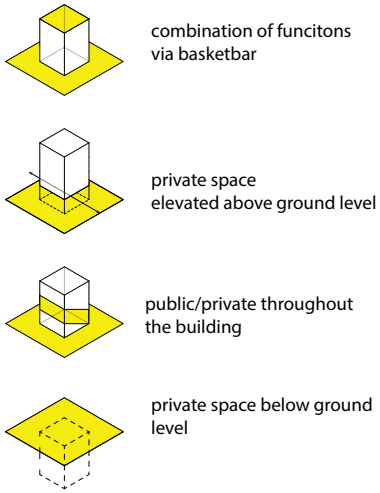
CONNECTION



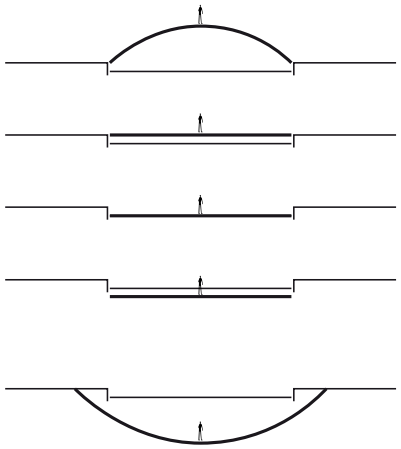
BIKE FRIENDLY



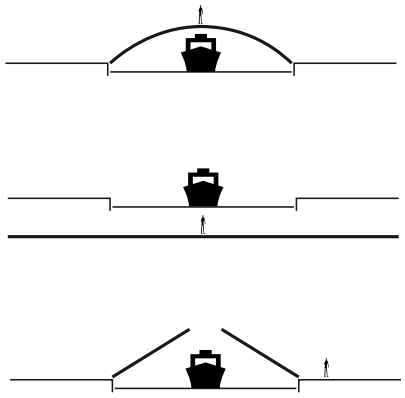
SHIP TRANSPORT



public/private

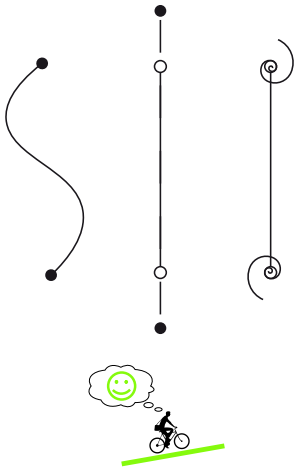


built connection

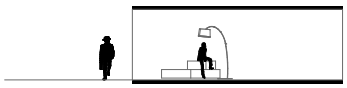


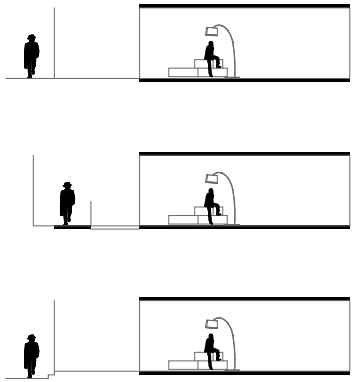
enable shiptransport

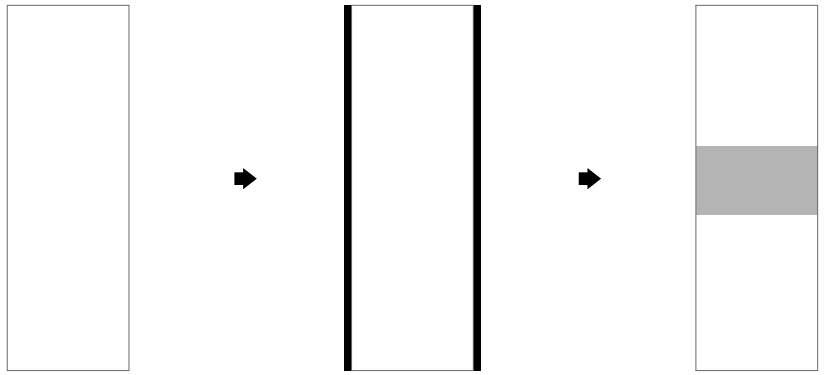
700m (>6%)



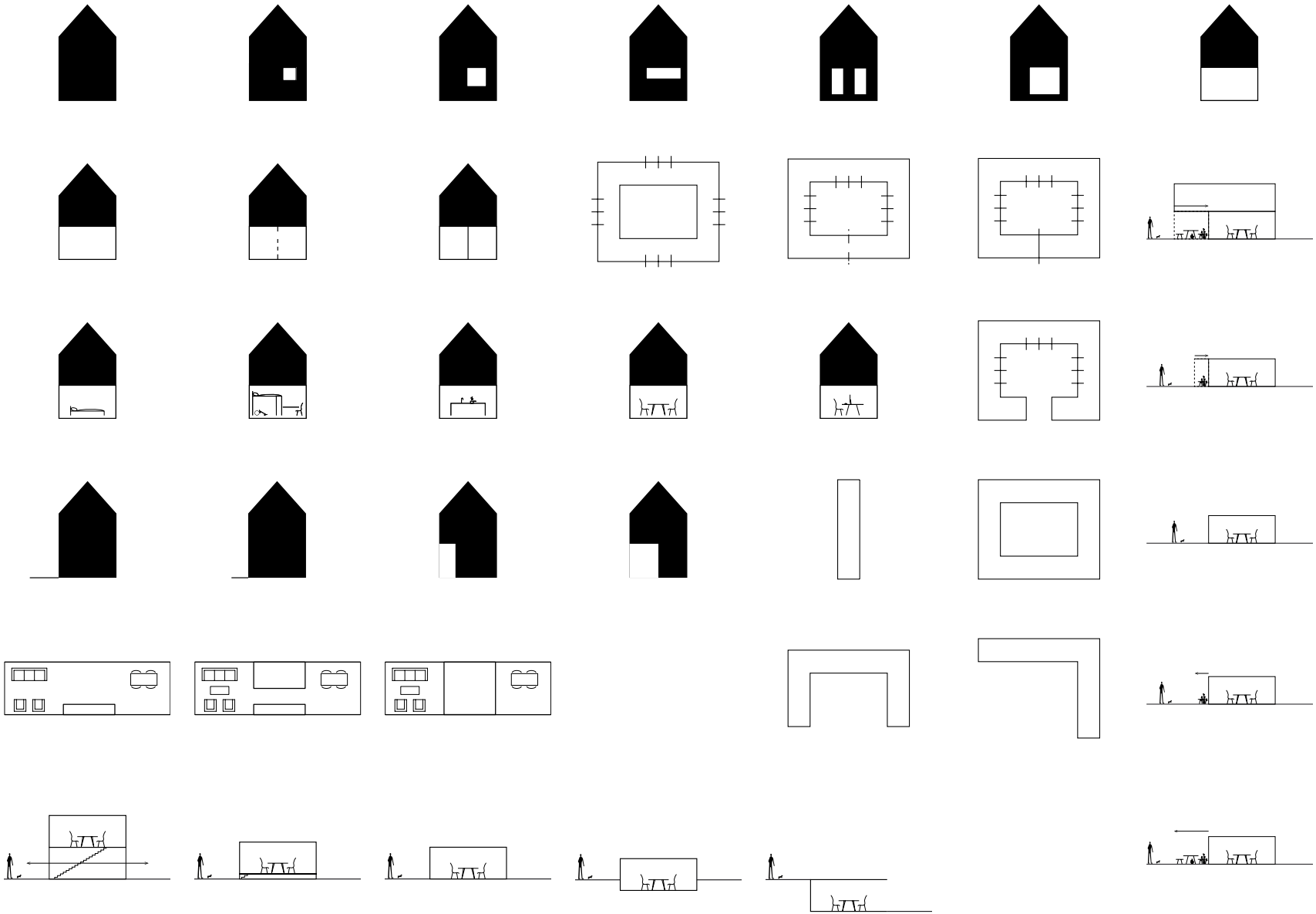
1200m (<6%)



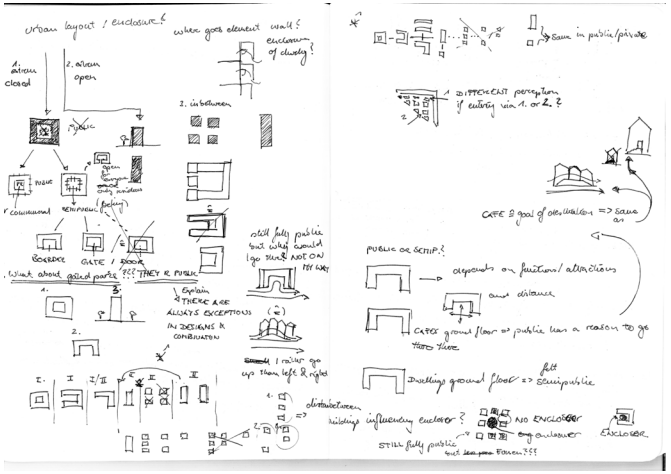


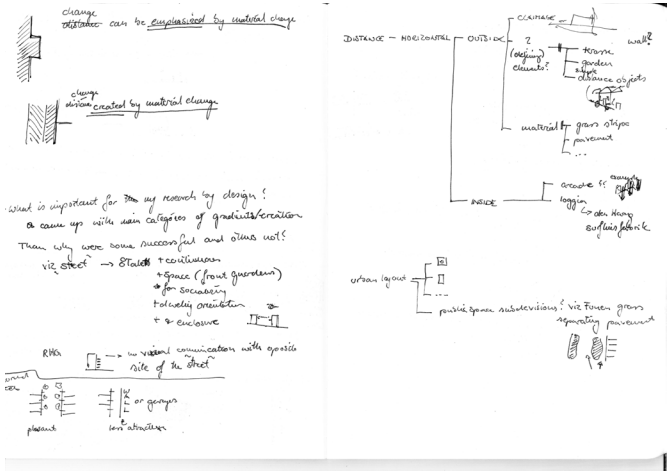

BASIC MODUL
KEEP FASADE
MAX OPEN
SECONDARY
SPACES

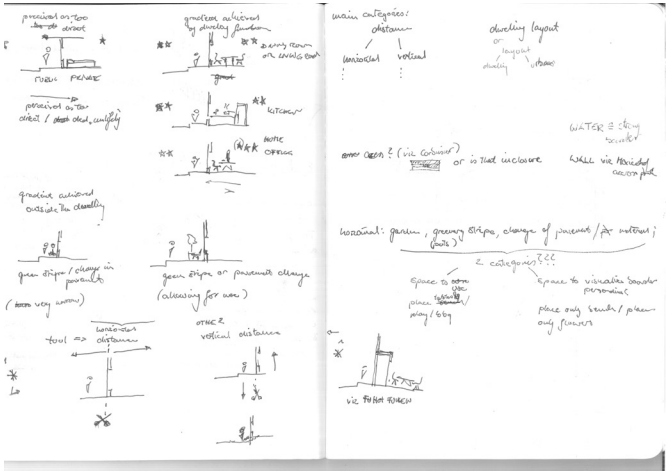
RESEARCH
OBSERVATION ILLUSTRATION

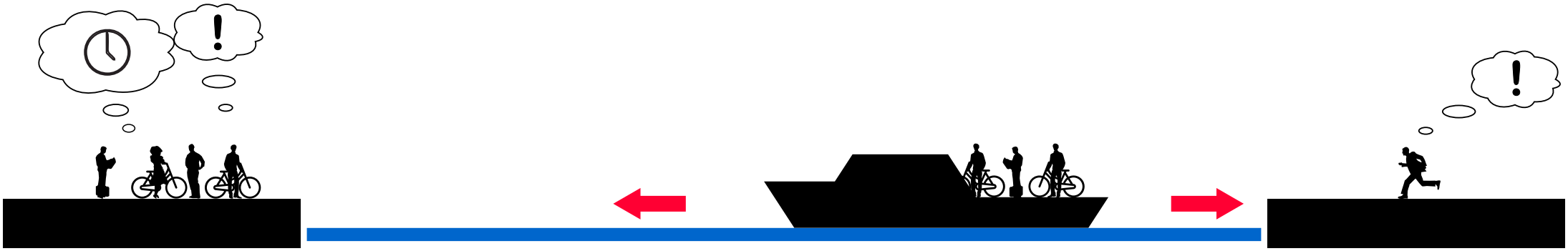


RESEARCH METHOD
ACTUAL PROCESS



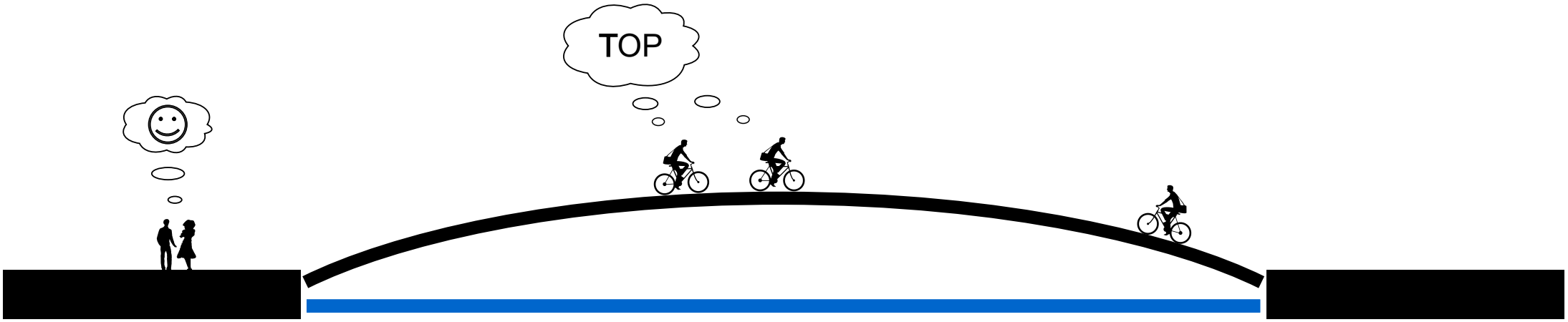






BUILT CONNECTION

BENEFIT



SHAPE SCHEMES

HEIGHT SECTIONS