



PROJECT OF THE DEVELOPMENT OF ZABŁOCIE BOULEVARDS WITH AN EXPERIMENTAL PROJECT OF SERVICE, OFFICE AND SPORTS COMPLEX

TOMASZ JAŁOCHA - MASTER THESIS 2020

KRAKOWSKA AKADEMIA IM. ANDRZEJA FRYCZA-MODRZEWSKIEGO

SUPERVISOR: PROF. KRZYSZTOF INGARDEN, PHD PIOTR URBANOWICZ

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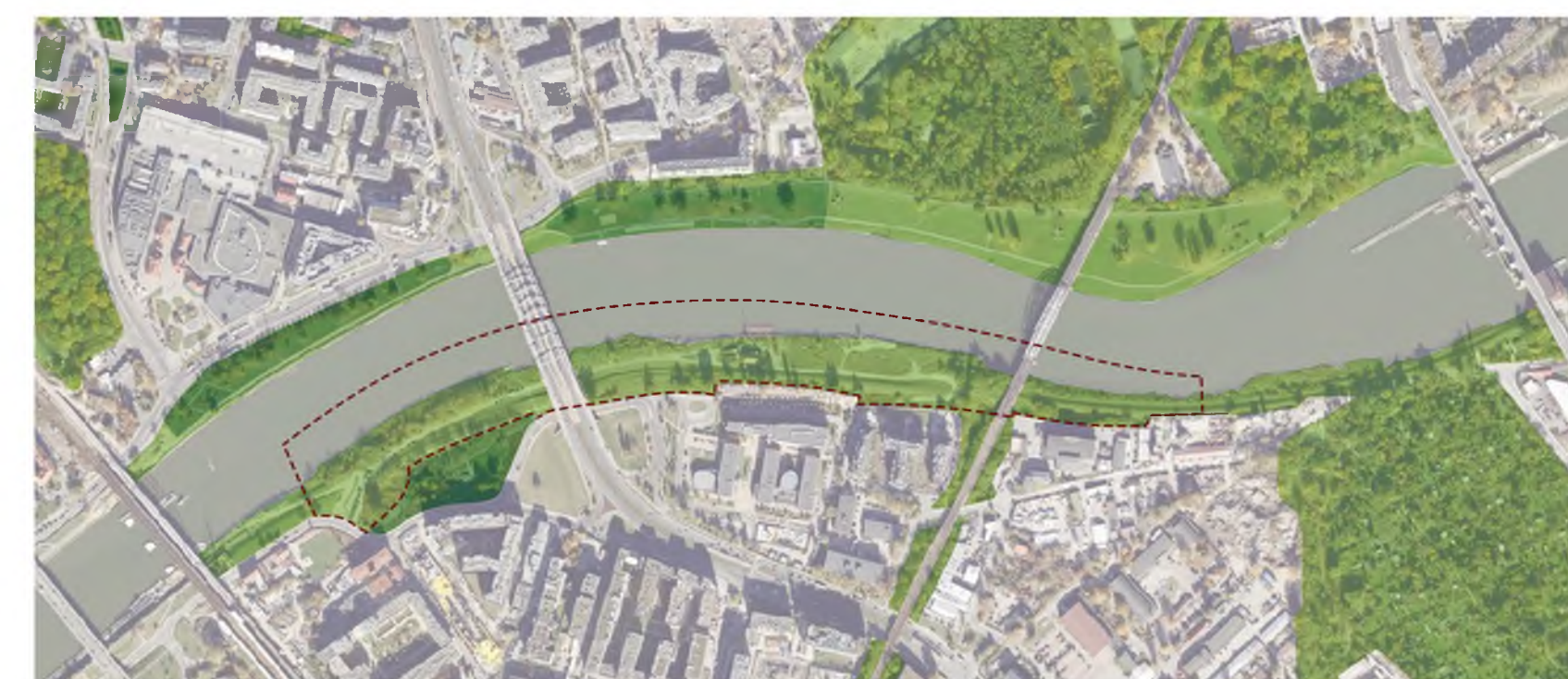
The Krakow Vistula boulevards are one of the most attractive and most visited public spaces in the city



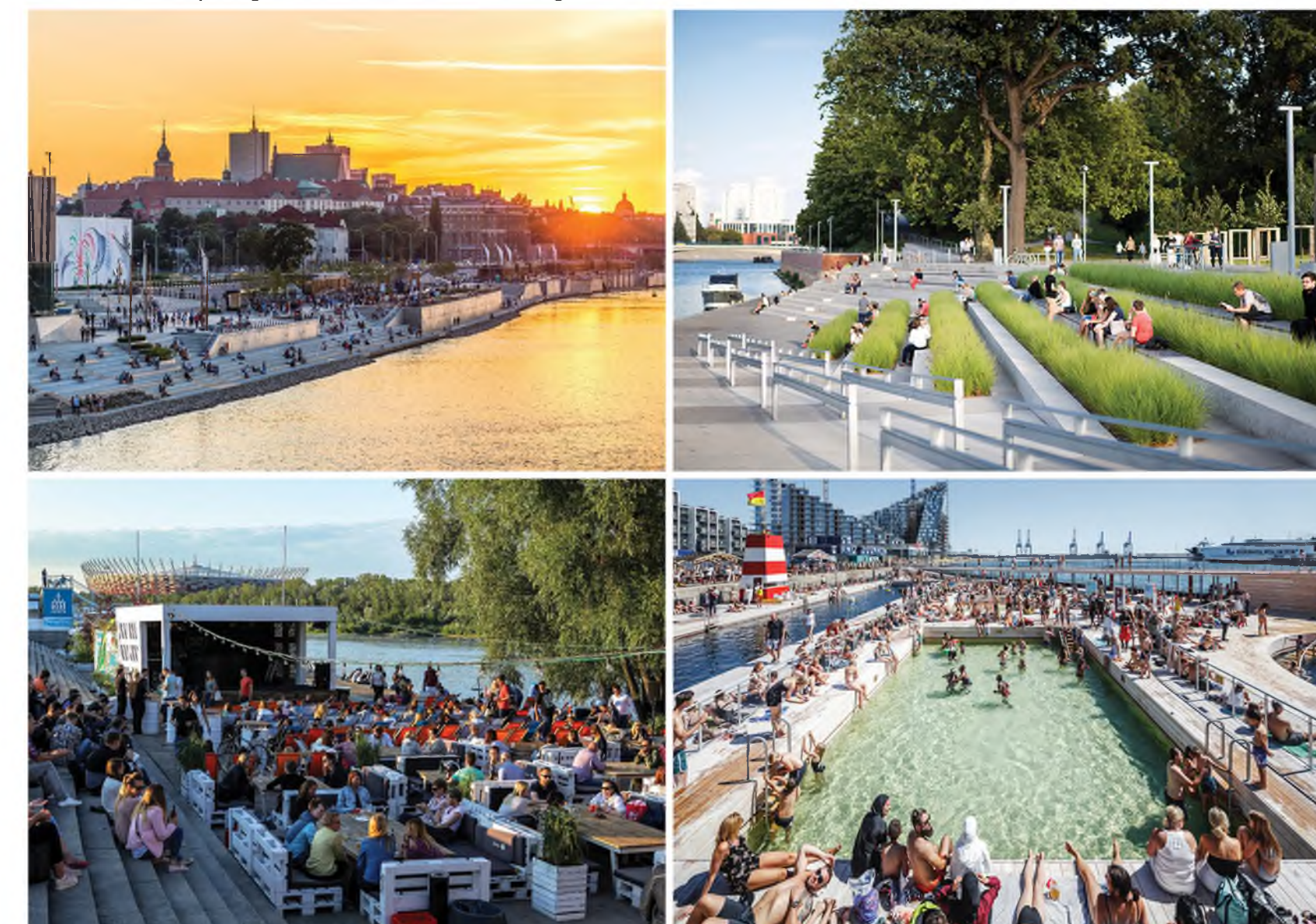
The Vistula, as the largest of Polish rivers, has been the main communication route for centuries. Numerous barges were an important element of the city's economy and landscape. In addition, during hot days, the banks of the Vistula were full of sunbathers who eagerly spent their free time by its waters.



The flood of 1903 resulted in the decision to regulate the riverbanks and to build flood defenses. Additionally, the boulevards designed by Roman Ingarden were to be part of the Danube - Odra - Vistula - Dniester canal. On both sides of the Vistula, boulevard walls were built, lower internal and higher external.



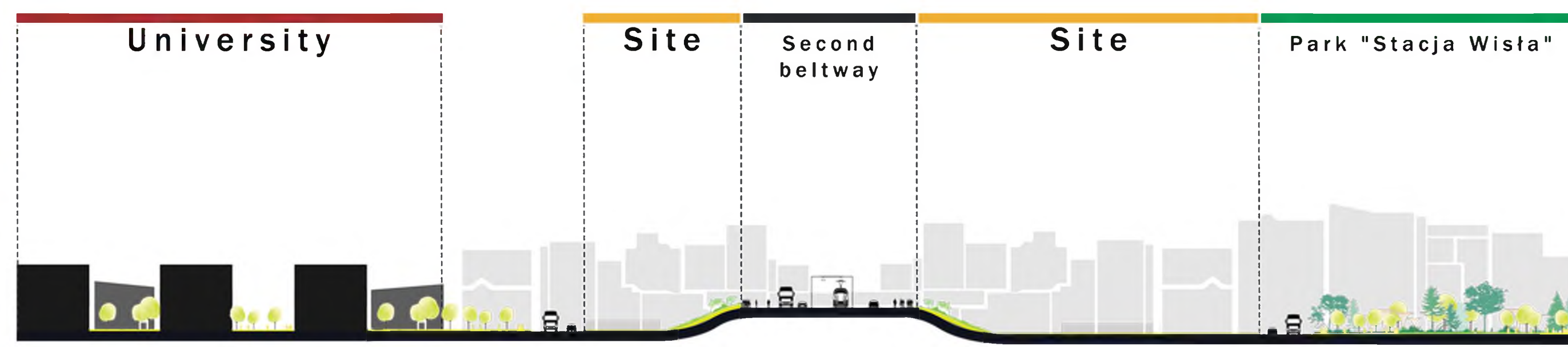
Over the years, the boulevards have become very attractive due to their landscape values, beautiful panoramas of Wawel, Skałka and the Mangha Japanese Cultural Center. Despite the advantages, further expansion of the boulevard is not continued and requires immediate intervention. The boulevards along the Zabłocie and Grzegorzki districts are not architecturally developed. Only small fragments function as a pocket park and a mini beach. Waterfront of the developing Zabłocie is a forgotten bush.



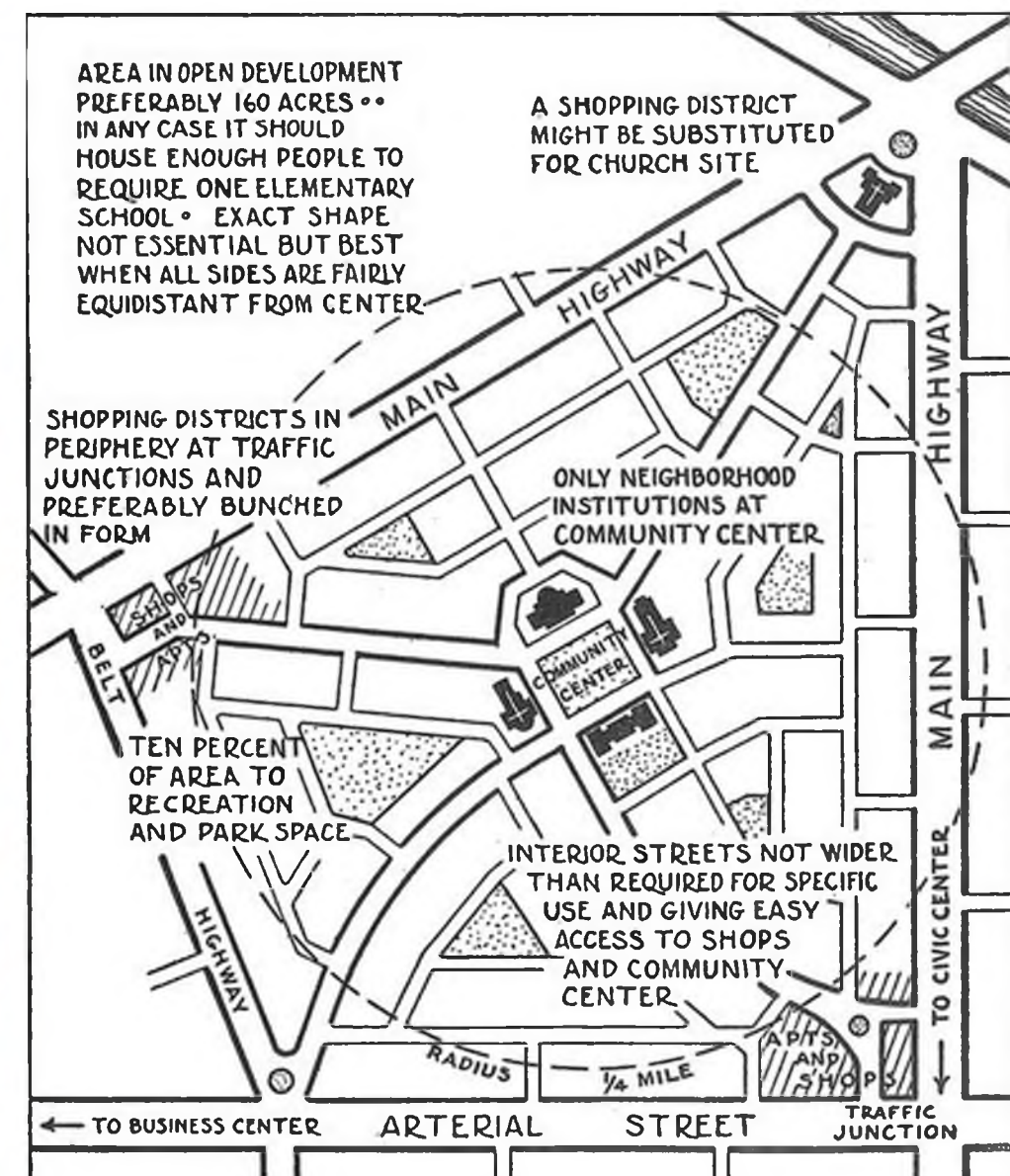
Examples from Warsaw, Wrocław or Copenhagen show that the boulevards can be a showcase of new, developing city districts, and the high quality of their architecture and a multifunctional program allow to create a new place for meetings, recreation or sports and cultural activity for residents.



By combining a typical post-industrial urban landscape with the values of the natural environment, we can obtain a balanced functional program public urban spaces, with maximum efficiency. This allows us to get the exciting result of a biodiverse city. In this way, we provide residents with a place to live, work as well as rest and recreation. Thanks to the proximity of individual functions, it is possible to move around the unit without using a car, making it even more ecological.



Structural section of the existing program



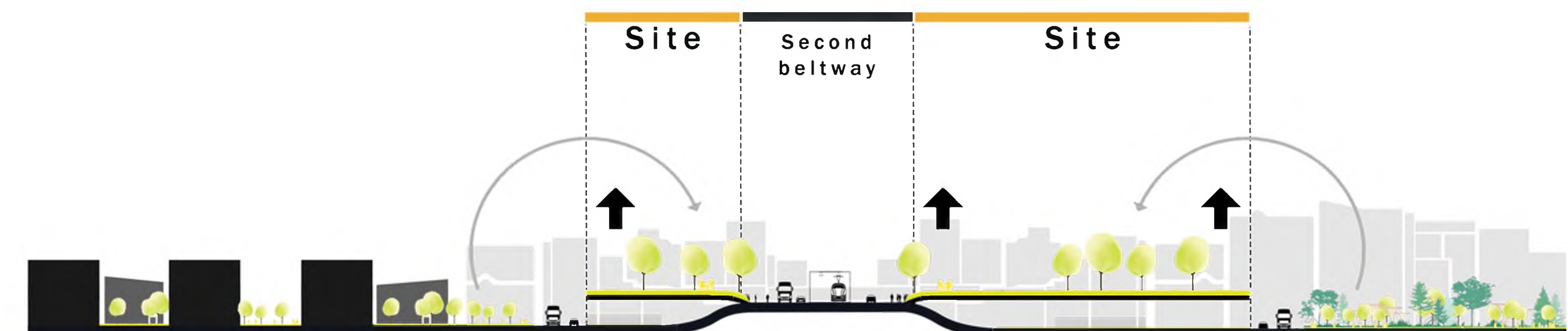
The inspiration for the creation of the functional program was the neighborhood unit developed in 1939 by Clarence Perry, established as a determinant for designers in creating functional, independent districts in cities.



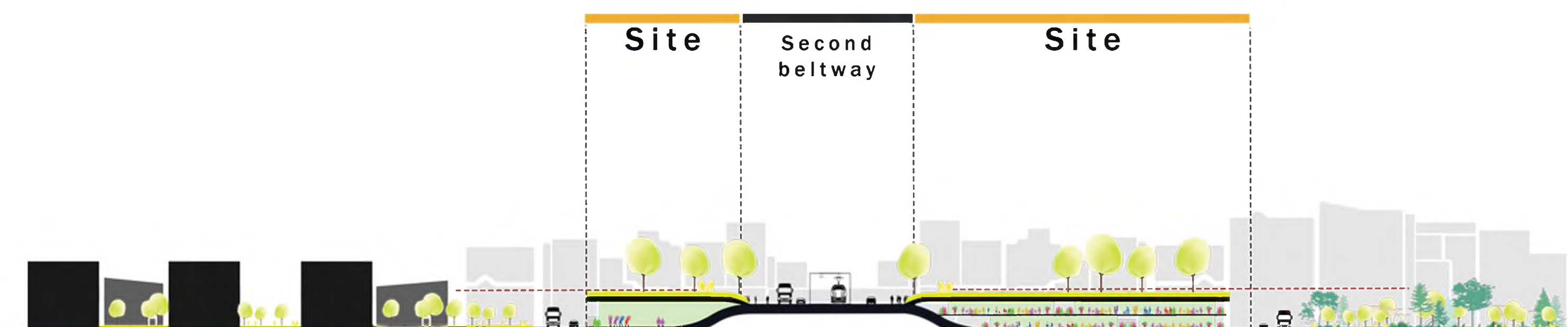
## Location

The plot is located in the central point of the district. Surrounded by functional areas that should complement.

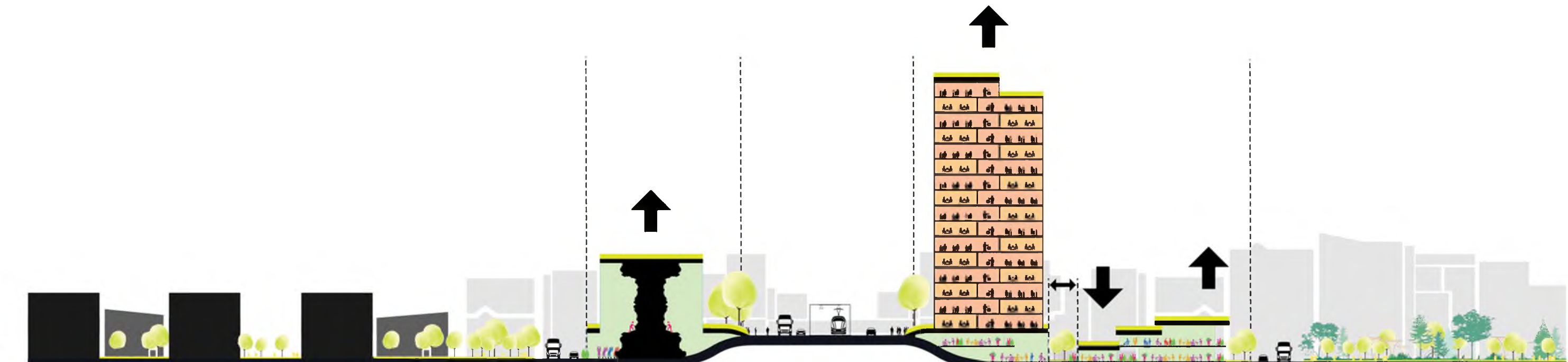
Directly adjacent to the boulevards and the new housing construction is an area of huge empty spaces on the inner sides of the car exits from the Kotlarski Bridge. These are spaces completely devoid of human scale and a communication system adapted to the needs of pedestrians. Moreover, these areas are located in the very center of the Zabłocie urban layout.



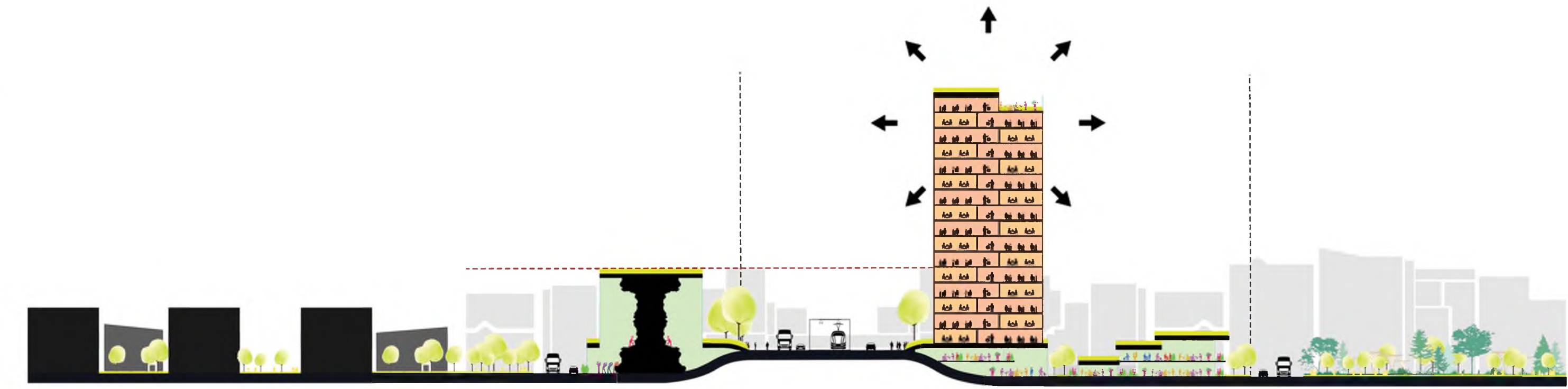
Building under the park



Public functional program in the podium of buildings



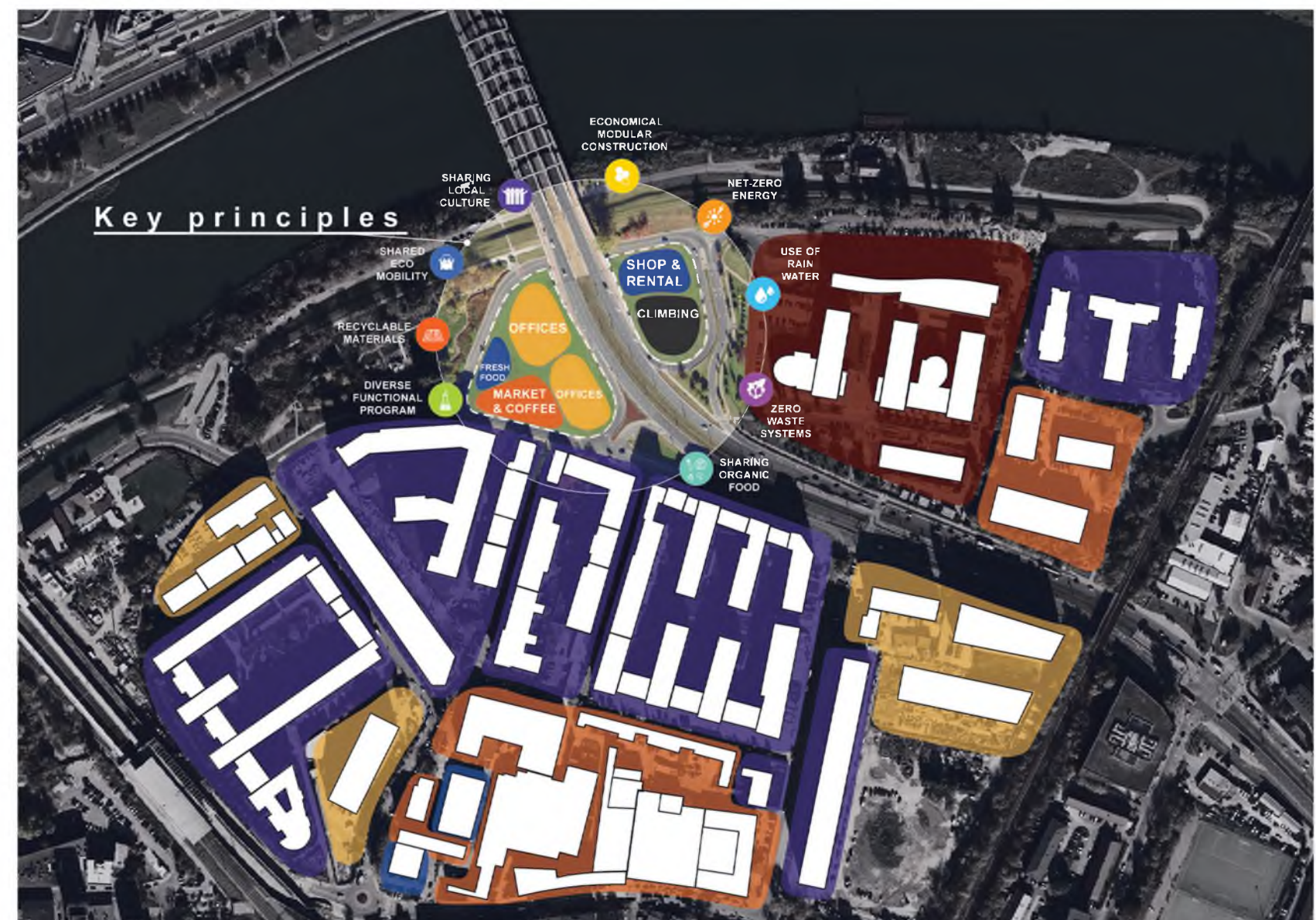
Minimum footprint and maximum function capacity



The building as a viewing and orientation point



The concept assumes that Zabłocie will be supplemented with a functional program that will ensure the district's self-sufficiency. The selection and arrangement of the proposed functions are aimed at reducing the need to travel by car inside the district.



## Key principles

Town-forming functions and creating new jobs are directly related to housing estates. The functions activating the student community correspond with the university. The whole concept is based on the biodiversity of space, materials and construction processes.

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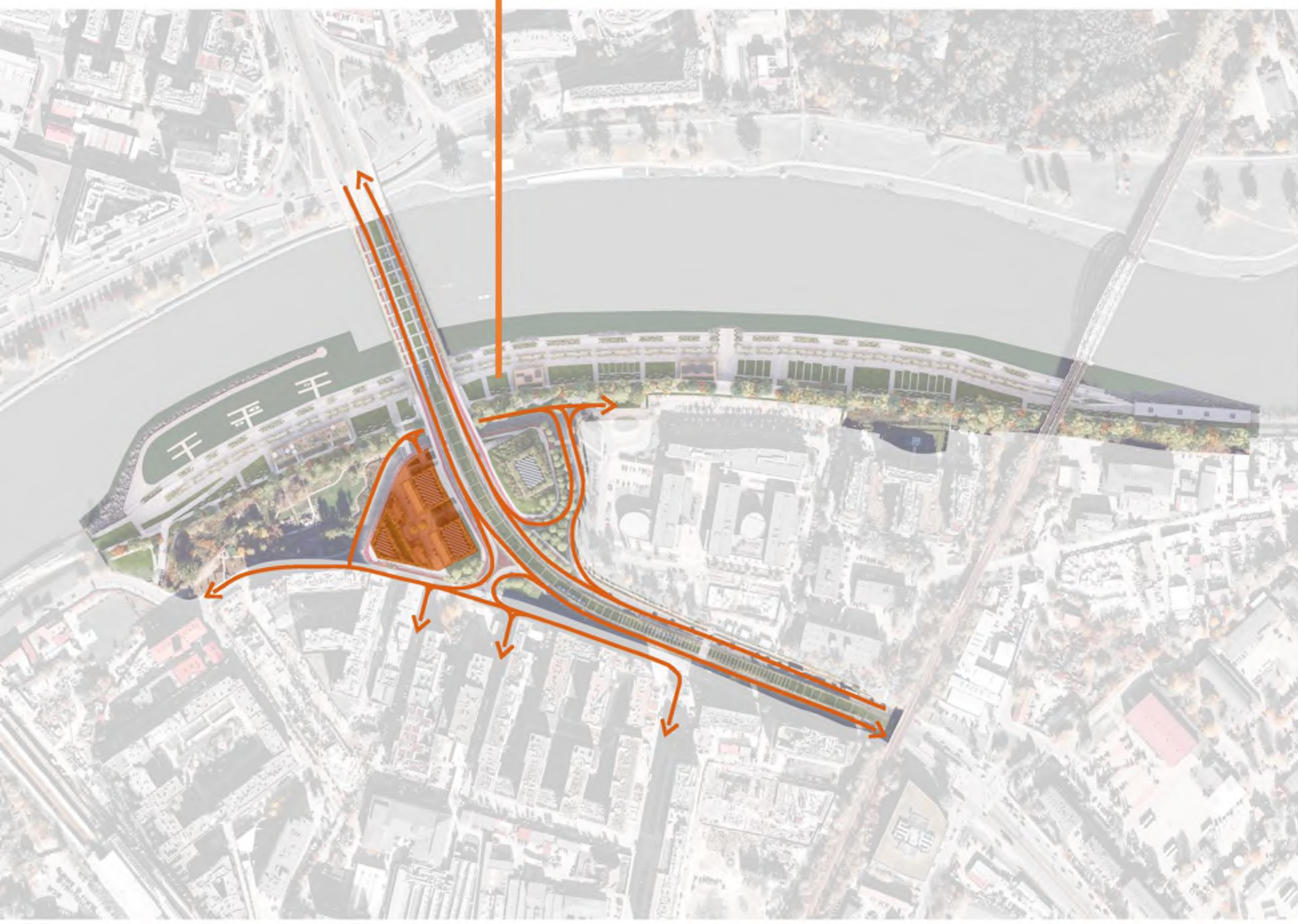
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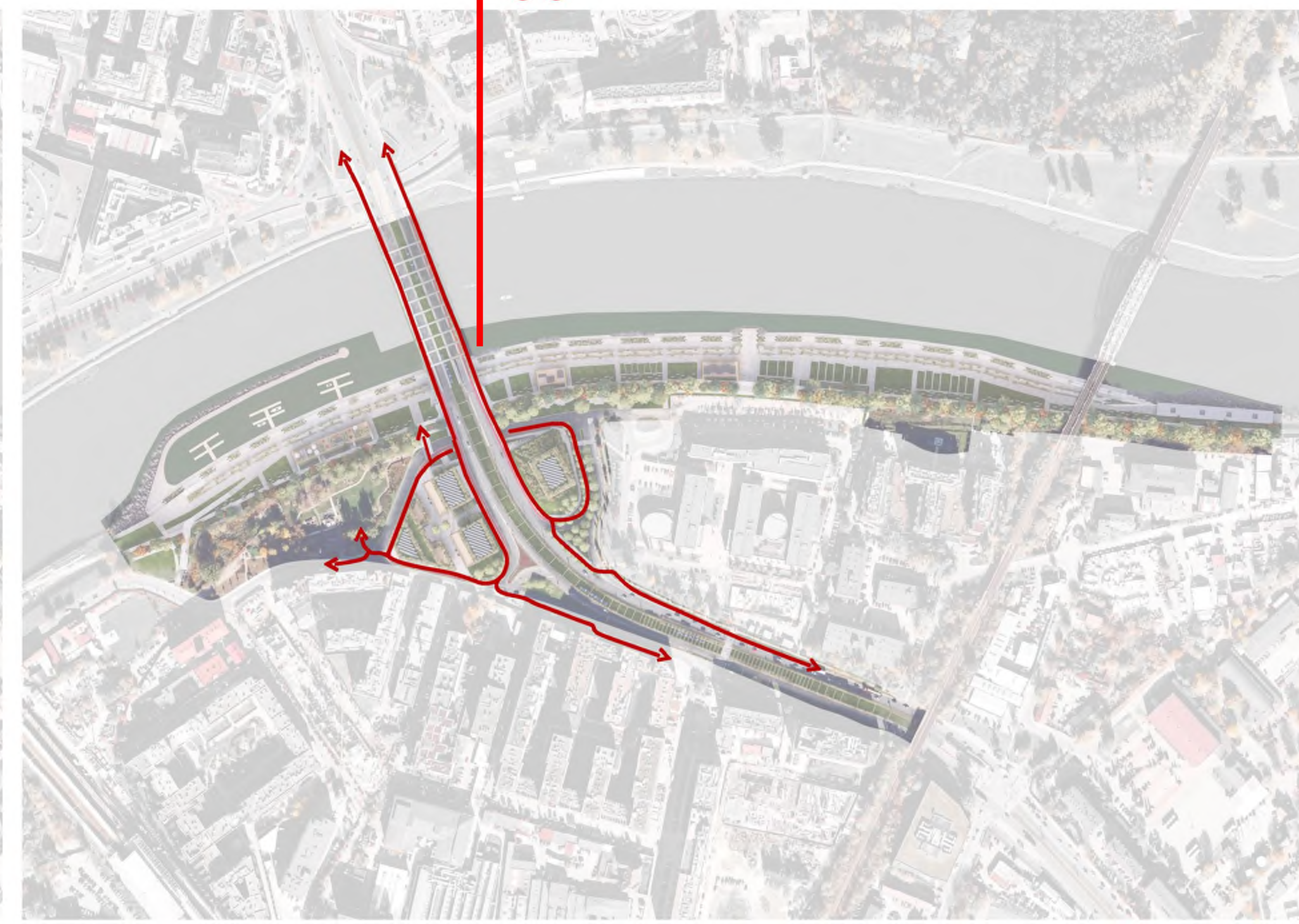
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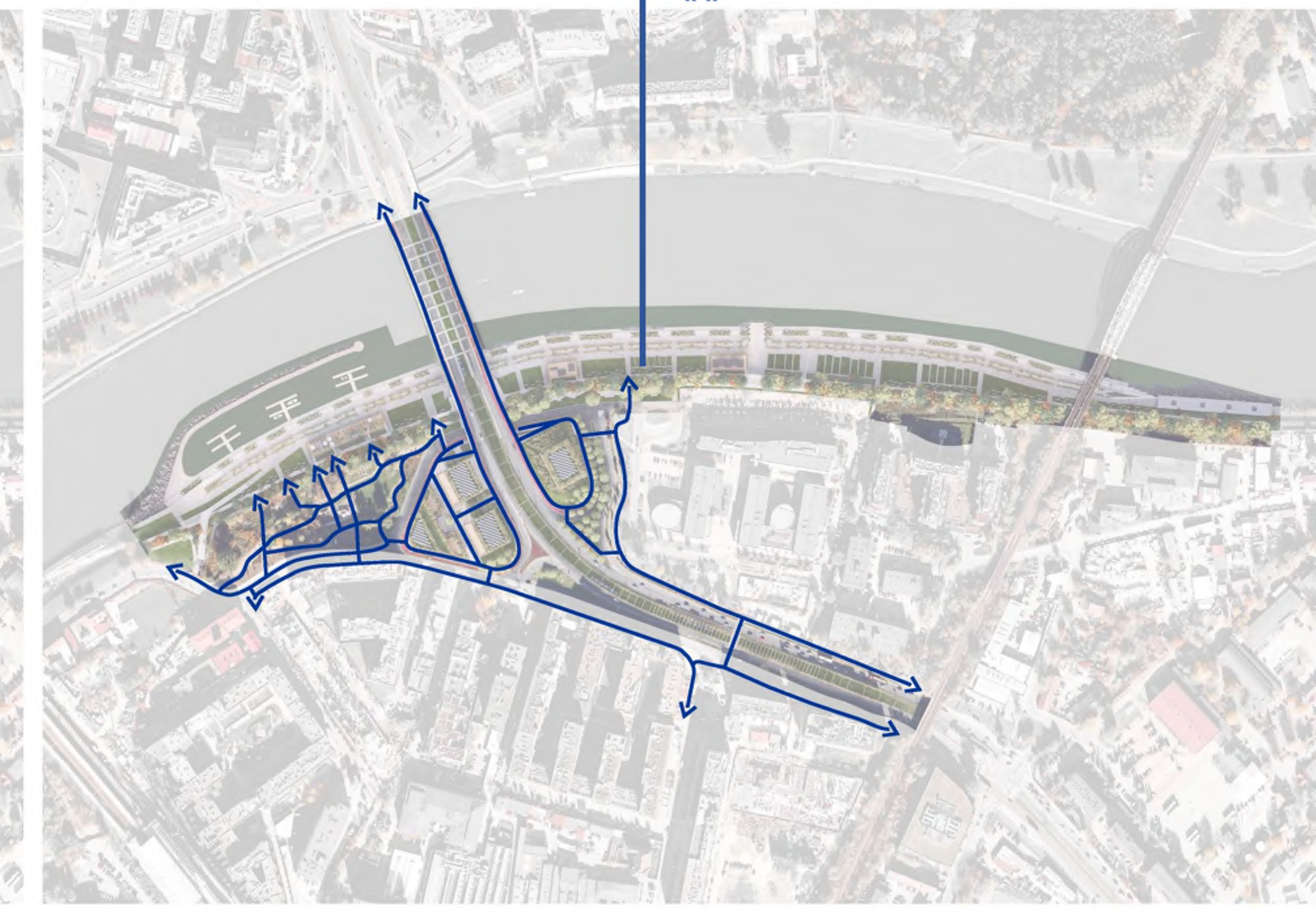
CAR COMMUNICATION



BIKE COMMUNICATION



PEDESTRIAN COMMUNICATION

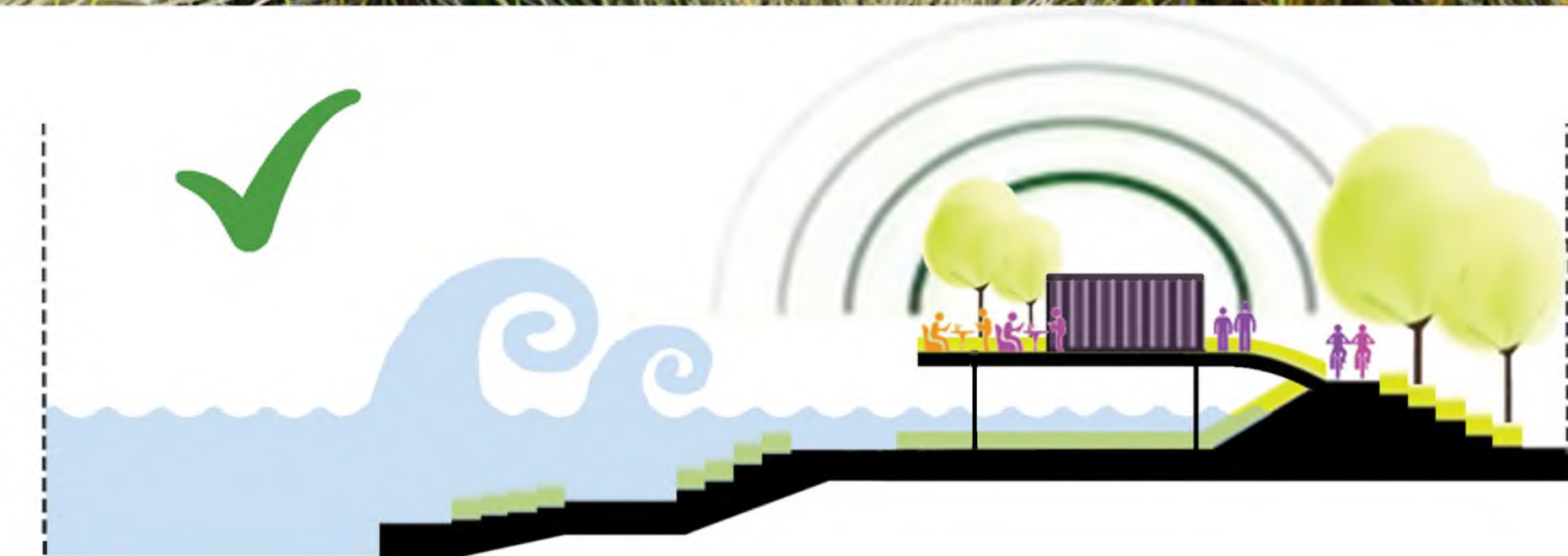
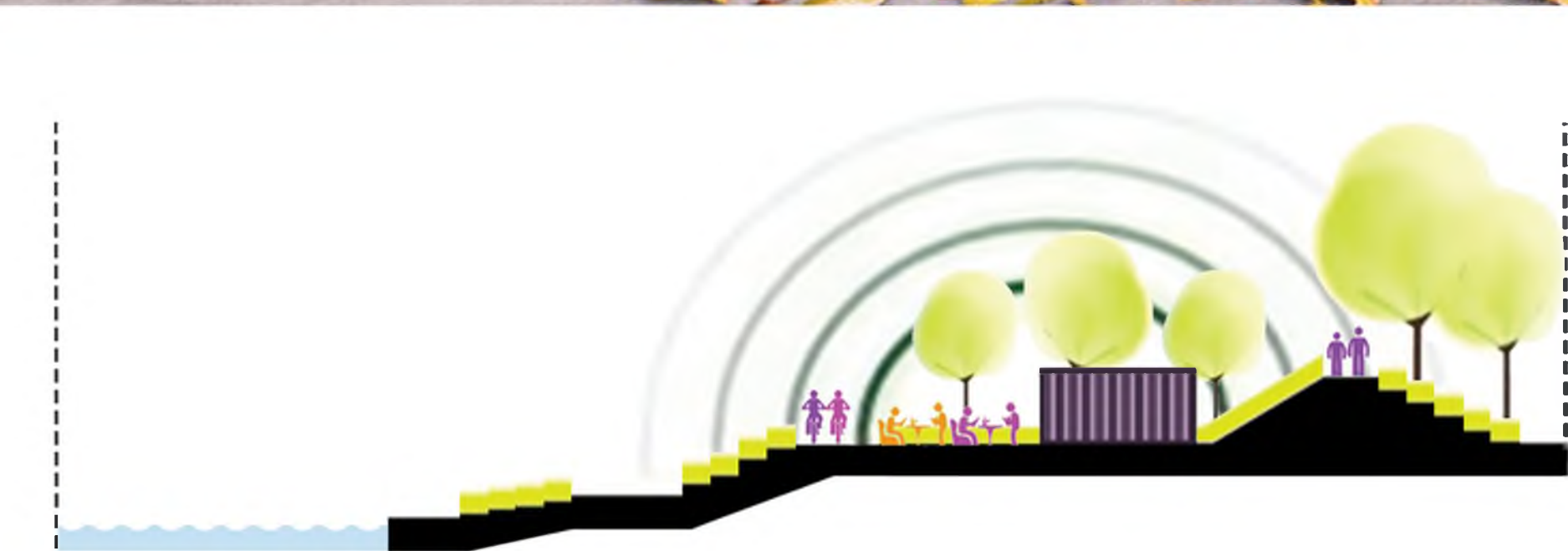


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A cross-section through the present layout of the boulevard terrain. A wide flood zone resulting from the activity of the former transshipment port.

Cyclical flooding of the lower part of the boulevards along their entire length. The resulting destruction of small public architecture, sidewalks and bicycle paths.

Anti-flood areas - platforms located above the level of flooding, dedicated to landscape architecture zones and seasonal pavilions.

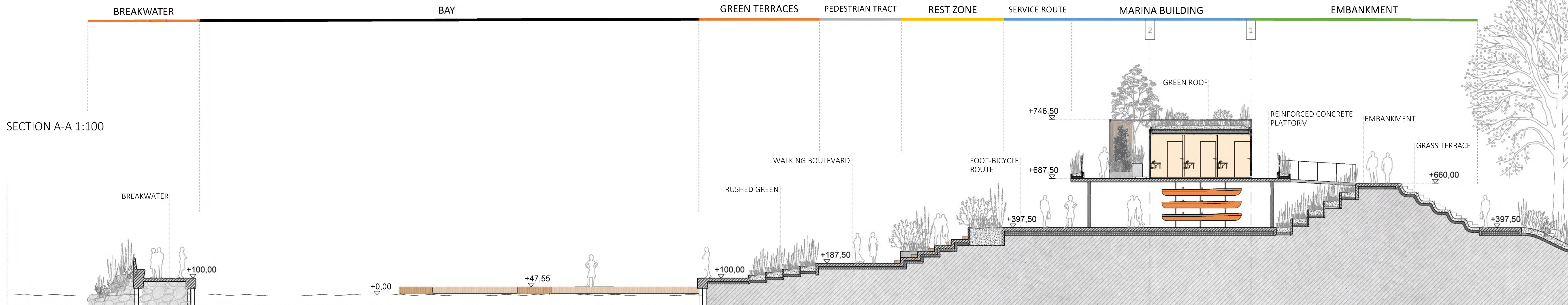
Public space safe from floods and the resulting damage, giving the possibility of continuous operation, even during seasonal floods. Reduction of the boulevard maintenance costs.

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SECTION A-A 1:100

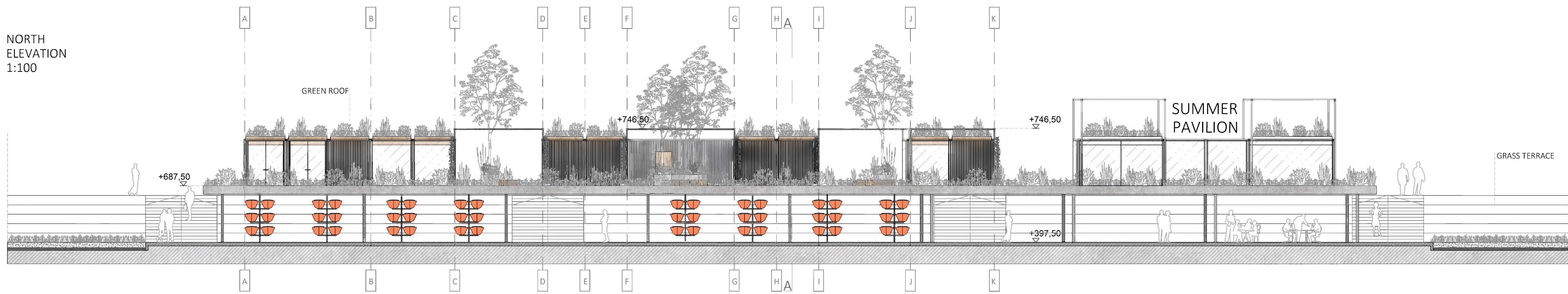


PLAN 1:100



NAME	AREA
WORKSHOP	40,8 m <sup>2</sup>
CANOE RENTAL	27 m <sup>2</sup>
MEN'S BATHROOM	29,6 m <sup>2</sup>
WOMEN'S BATHROOMS	29,6 m <sup>2</sup>
TOILET FOR THE DISABLED	6,8 m <sup>2</sup>
KITCHEN	27 m <sup>2</sup>
REINFORCED CONCRETE PLATFORM	847,2 m <sup>2</sup>
SUMMER PAVILION	125,2 m <sup>2</sup>

NORTH ELEVATION 1:100





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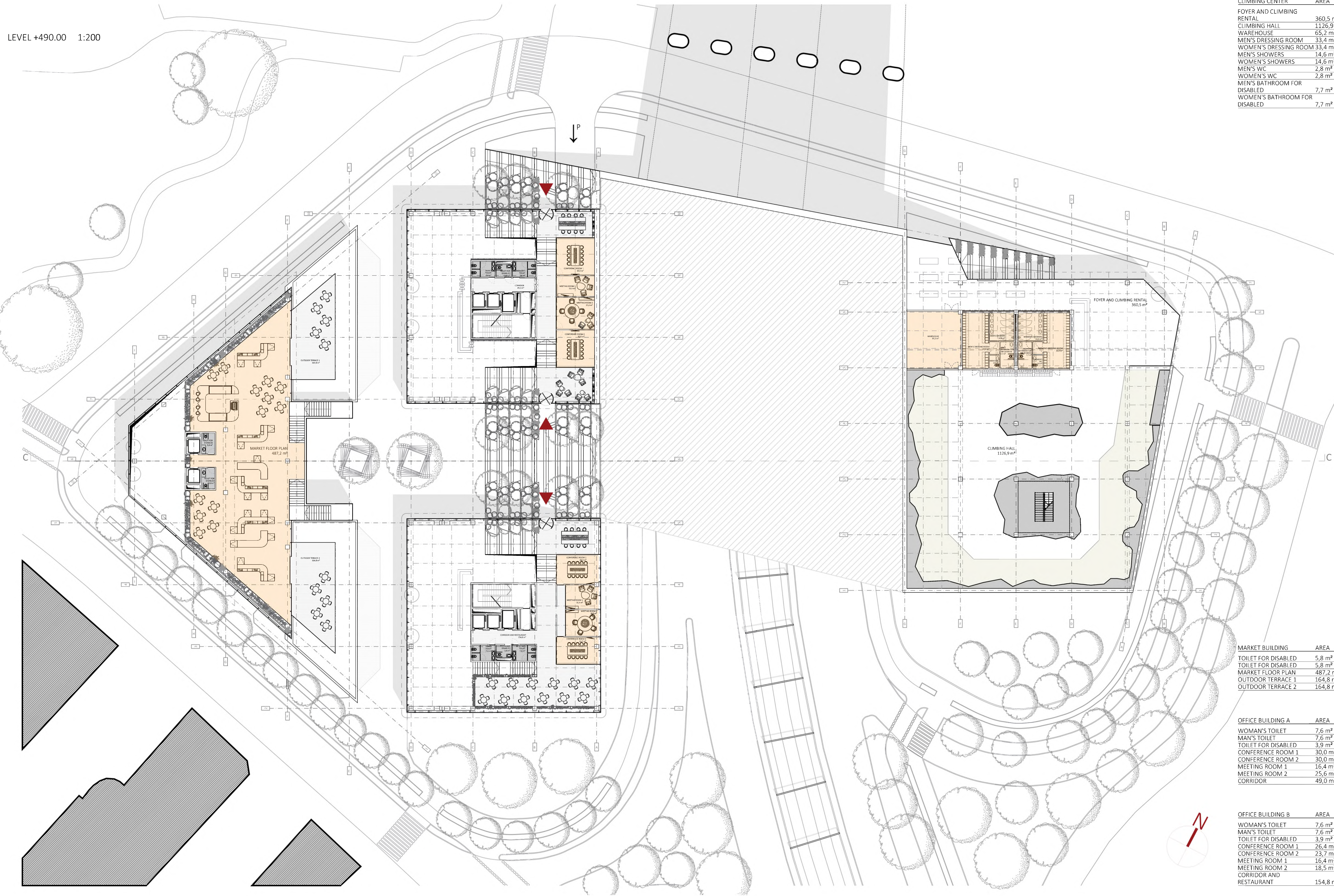
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CLIMBING CENTER	AREA
FOYER AND CLIMBING RENTAL	360,5 m <sup>2</sup>
CLIMBING HALL	1126,9 m <sup>2</sup>
WAREHOUSE	65,2 m <sup>2</sup>
MEN'S DRESSING ROOM	33,4 m <sup>2</sup>
WOMEN'S DRESSING ROOM	33,4 m <sup>2</sup>
MEN'S SHOWERS	14,6 m <sup>2</sup>
WOMEN'S SHOWERS	14,6 m <sup>2</sup>
MEN'S WC	2,8 m <sup>2</sup>
WOMEN'S WC	2,8 m <sup>2</sup>
MEN'S BATHROOM FOR DISABLED	7,7 m <sup>2</sup>
WOMEN'S BATHROOM FOR DISABLED	7,7 m <sup>2</sup>

MARKET BUILDING	AREA
TOILET FOR DISABLED	5,8 m <sup>2</sup>
TOILET FOR DISABLED	5,8 m <sup>2</sup>
MARKET FLOOR PLAN	487,2 m <sup>2</sup>
OUTDOOR TERRACE 1	164,8 m <sup>2</sup>
OUTDOOR TERRACE 2	164,8 m <sup>2</sup>

OFFICE BUILDING A	AREA
WOMAN'S TOILET	7,6 m <sup>2</sup>
MAN'S TOILET	7,6 m <sup>2</sup>
TOILET FOR DISABLED	3,9 m <sup>2</sup>
CONFERENCE ROOM 1	30,0 m <sup>2</sup>
CONFERENCE ROOM 2	30,0 m <sup>2</sup>
MEETING ROOM 1	16,4 m <sup>2</sup>
MEETING ROOM 2	25,6 m <sup>2</sup>
CORRIDOR	49,0 m <sup>2</sup>

OFFICE BUILDING B	AREA
WOMAN'S TOILET	7,6 m <sup>2</sup>
MAN'S TOILET	7,6 m <sup>2</sup>
TOILET FOR DISABLED	3,9 m <sup>2</sup>
CONFERENCE ROOM 1	26,4 m <sup>2</sup>
CONFERENCE ROOM 2	23,7 m <sup>2</sup>
MEETING ROOM 1	16,4 m <sup>2</sup>
MEETING ROOM 2	18,5 m <sup>2</sup>
CORRIDOR AND RESTAURANT	154,8 m <sup>2</sup>



LEVEL +490.00 1:200





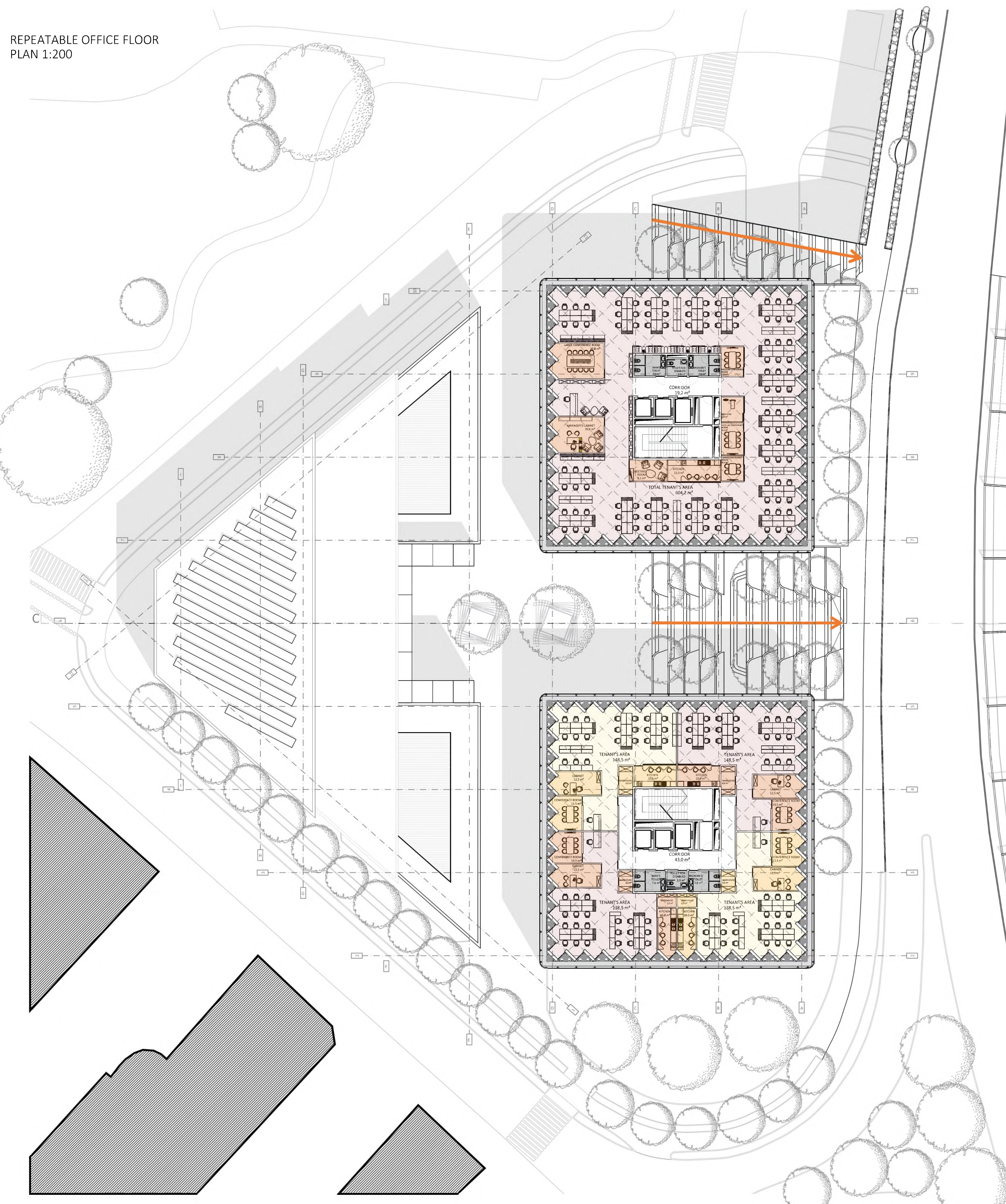
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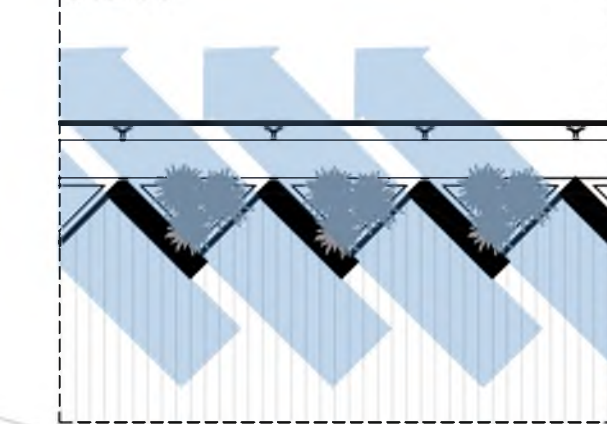
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REPEATABLE OFFICE FLOOR  
PLAN 1:200

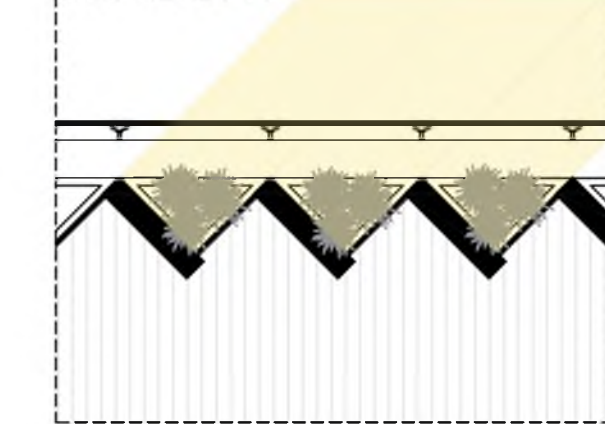


Placing the glass panels of the facade at an angle provides an unobstructed view in one direction, while the full panels on the south side reflect the direct rays of the sun. Thanks to this, a large amount of diffused light reaches inside of the building, more favorable for comfortable office working conditions. As a result, the building heats up much less in summer. Additionally, the ventilated façade and tilt windows ensure natural air circulation, cooling the offices. This is very beneficial for the energy efficiency of the building.

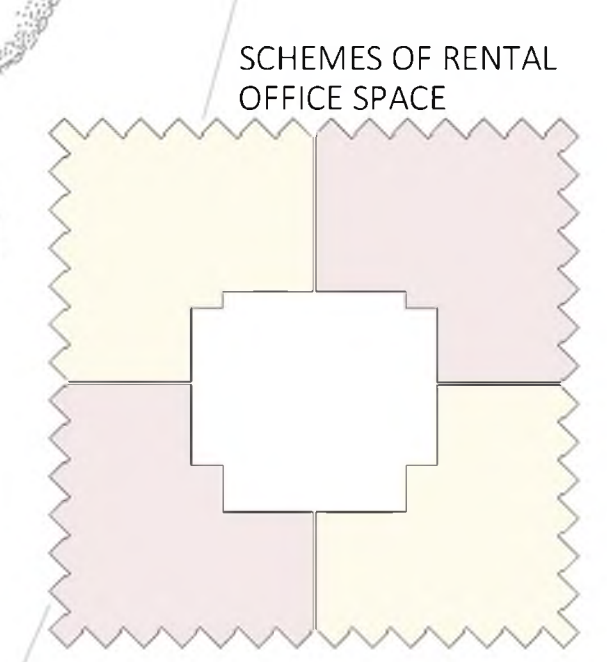
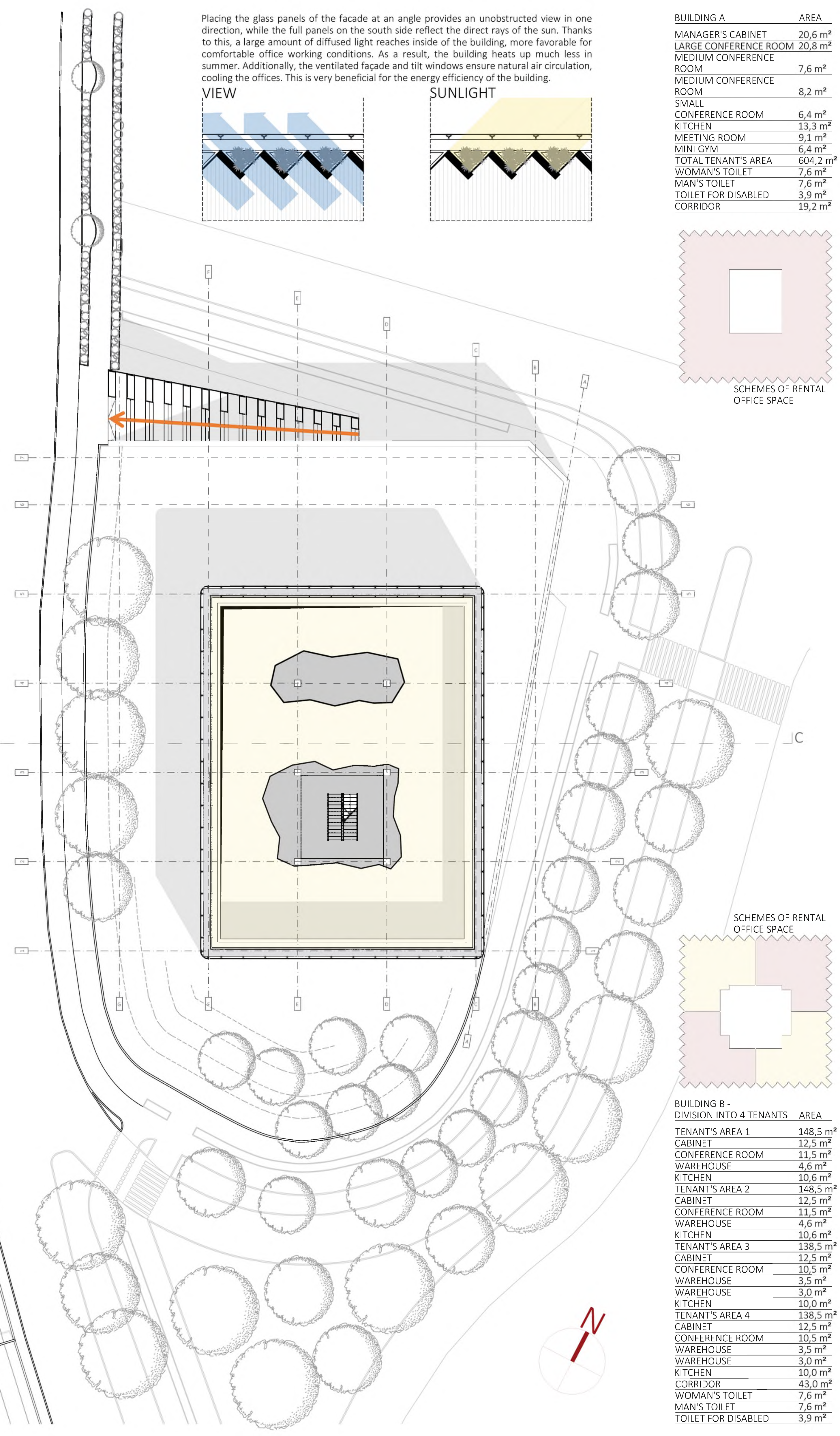
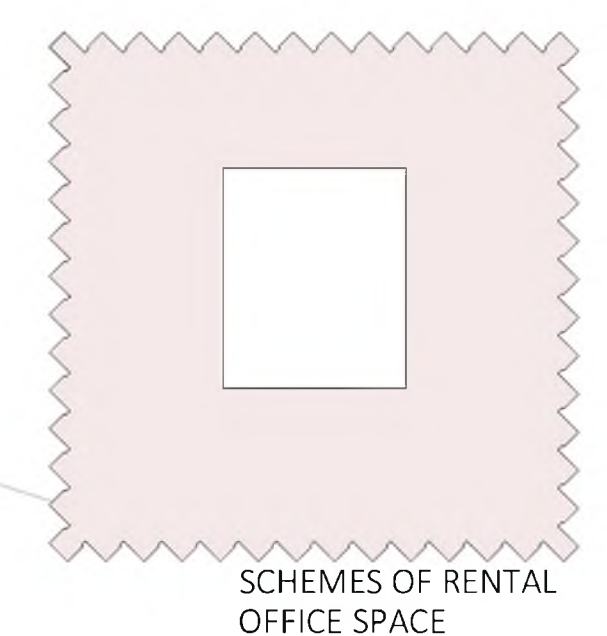
VIEW



SUNLIGHT



BUILDING A	AREA
MANAGER'S CABINET	20,6 m <sup>2</sup>
LARGE CONFERENCE ROOM	20,8 m <sup>2</sup>
MEDIUM CONFERENCE ROOM	7,6 m <sup>2</sup>
MEDIUM CONFERENCE ROOM	8,2 m <sup>2</sup>
SMALL CONFERENCE ROOM	6,4 m <sup>2</sup>
KITCHEN	13,3 m <sup>2</sup>
MEETING ROOM	9,1 m <sup>2</sup>
MINI GYM	6,4 m <sup>2</sup>
TOTAL TENANT'S AREA	604,2 m <sup>2</sup>
WOMAN'S TOILET	7,6 m <sup>2</sup>
MAN'S TOILET	7,6 m <sup>2</sup>
TOILET FOR DISABLED	3,9 m <sup>2</sup>
CORRIDOR	19,2 m <sup>2</sup>



BUILDING B - DIVISION INTO 4 TENANTS	AREA
TENANT'S AREA 1	148,5 m <sup>2</sup>
CABINET	12,5 m <sup>2</sup>
CONFERENCE ROOM	11,5 m <sup>2</sup>
WAREHOUSE	4,6 m <sup>2</sup>
KITCHEN	10,6 m <sup>2</sup>
TENANT'S AREA 2	148,5 m <sup>2</sup>
CABINET	12,5 m <sup>2</sup>
CONFERENCE ROOM	11,5 m <sup>2</sup>
WAREHOUSE	4,6 m <sup>2</sup>
KITCHEN	10,6 m <sup>2</sup>
TENANT'S AREA 3	138,5 m <sup>2</sup>
CABINET	12,5 m <sup>2</sup>
CONFERENCE ROOM	10,5 m <sup>2</sup>
WAREHOUSE	3,5 m <sup>2</sup>
WAREHOUSE	3,0 m <sup>2</sup>
KITCHEN	10,0 m <sup>2</sup>
TENANT'S AREA 4	138,5 m <sup>2</sup>
CABINET	12,5 m <sup>2</sup>
CONFERENCE ROOM	10,5 m <sup>2</sup>
WAREHOUSE	3,5 m <sup>2</sup>
WAREHOUSE	3,0 m <sup>2</sup>
KITCHEN	10,0 m <sup>2</sup>
CORRIDOR	43,0 m <sup>2</sup>
WOMAN'S TOILET	7,6 m <sup>2</sup>
MAN'S TOILET	7,6 m <sup>2</sup>
TOILET FOR DISABLED	3,9 m <sup>2</sup>



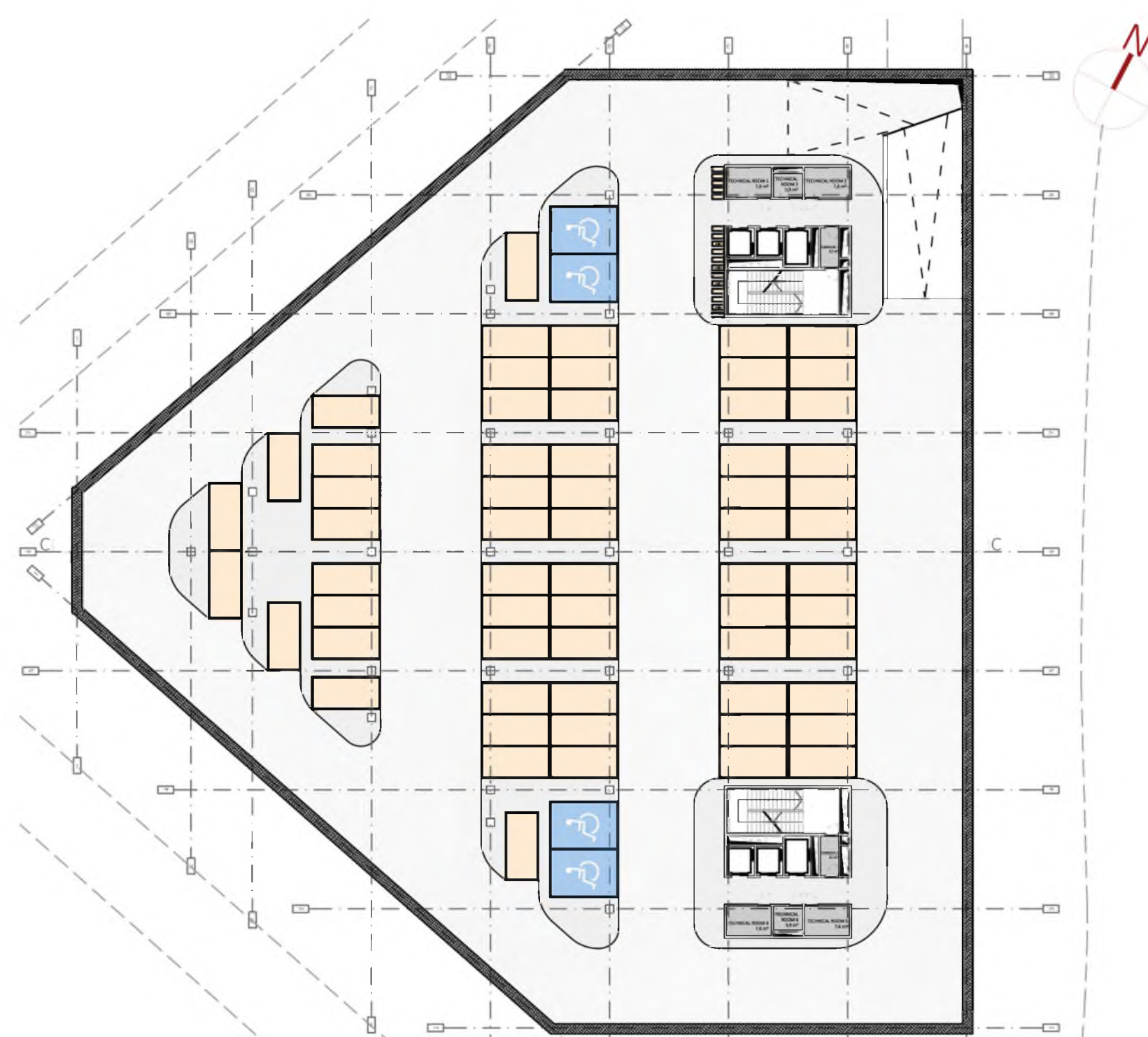


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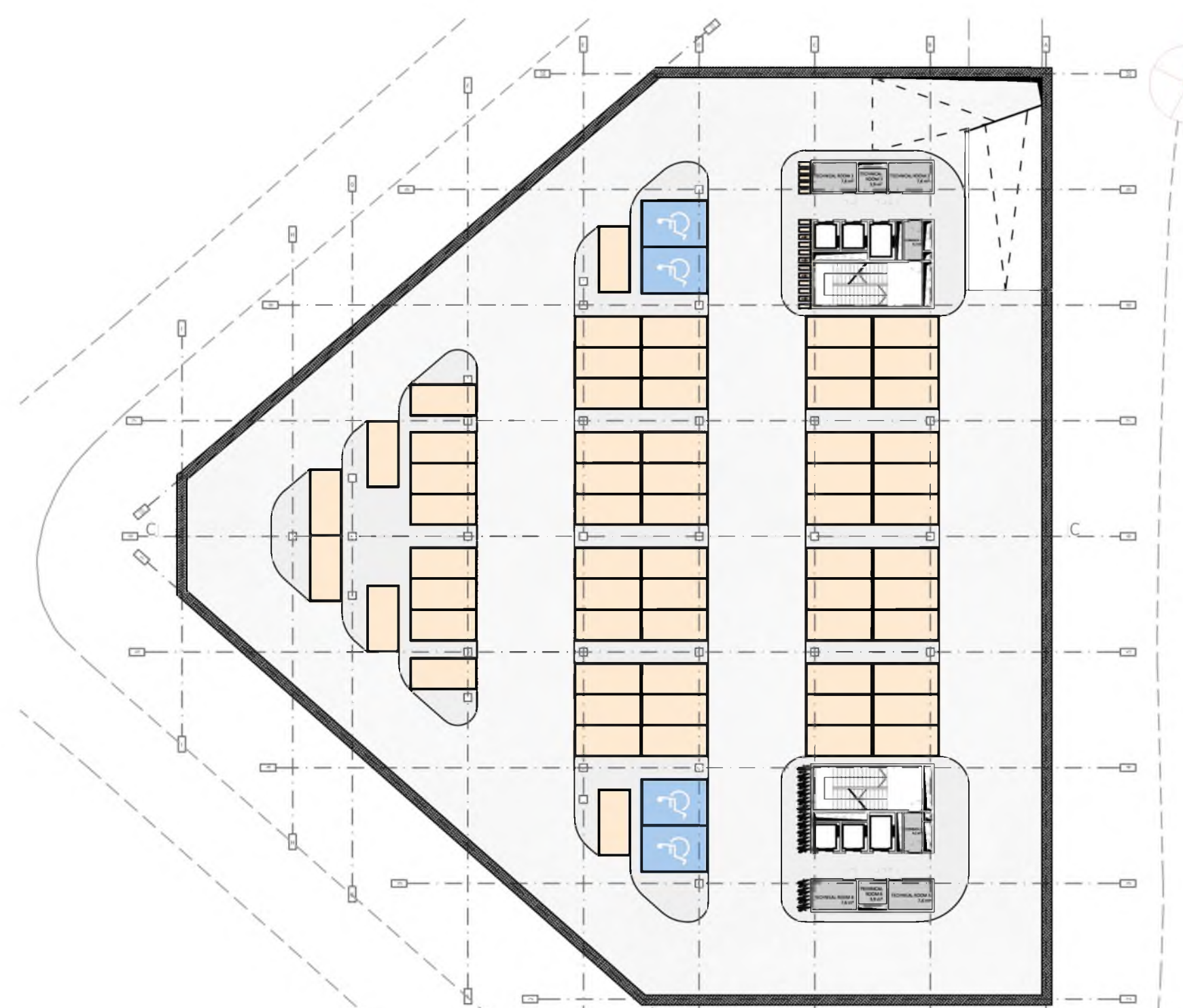
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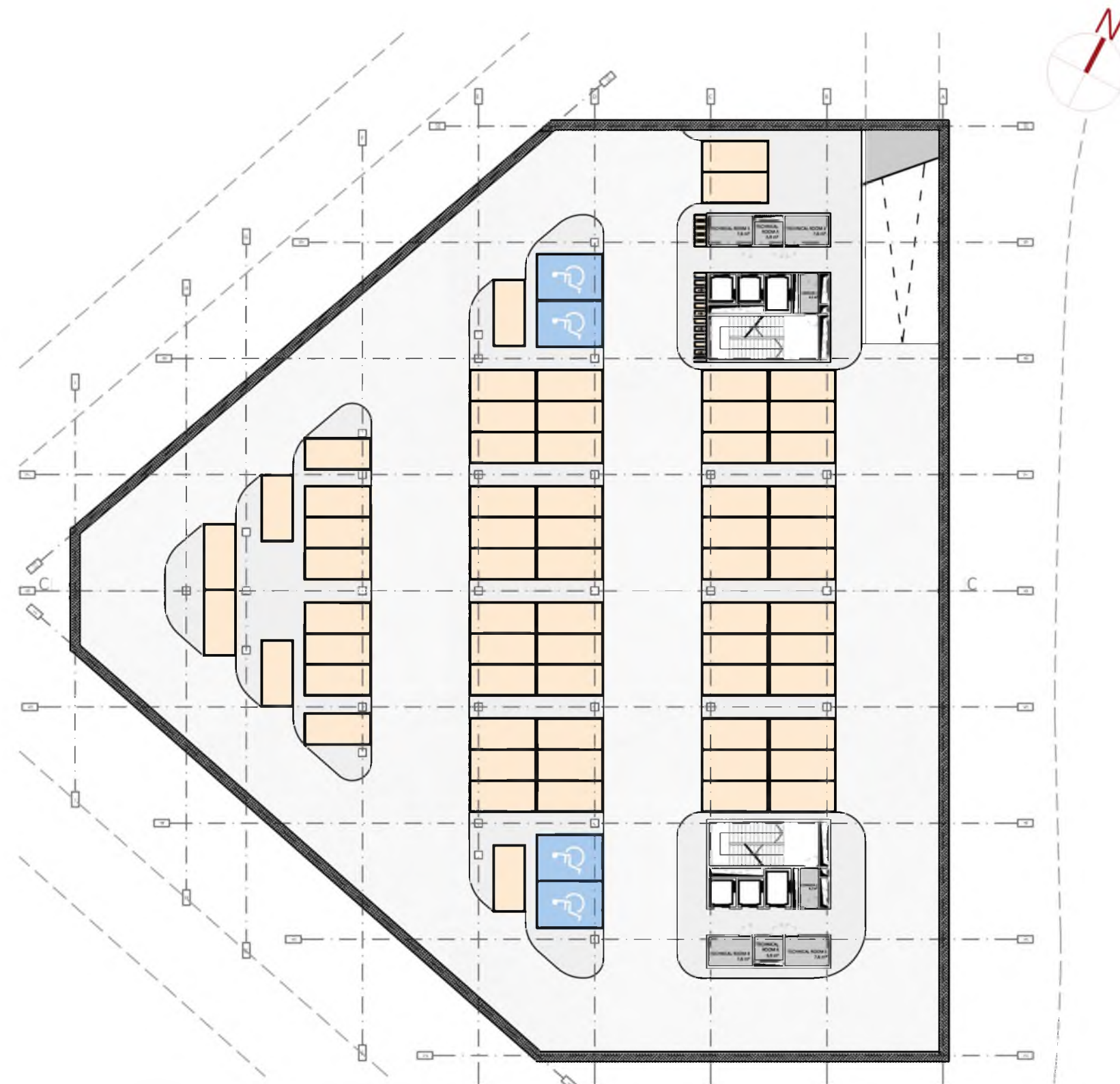
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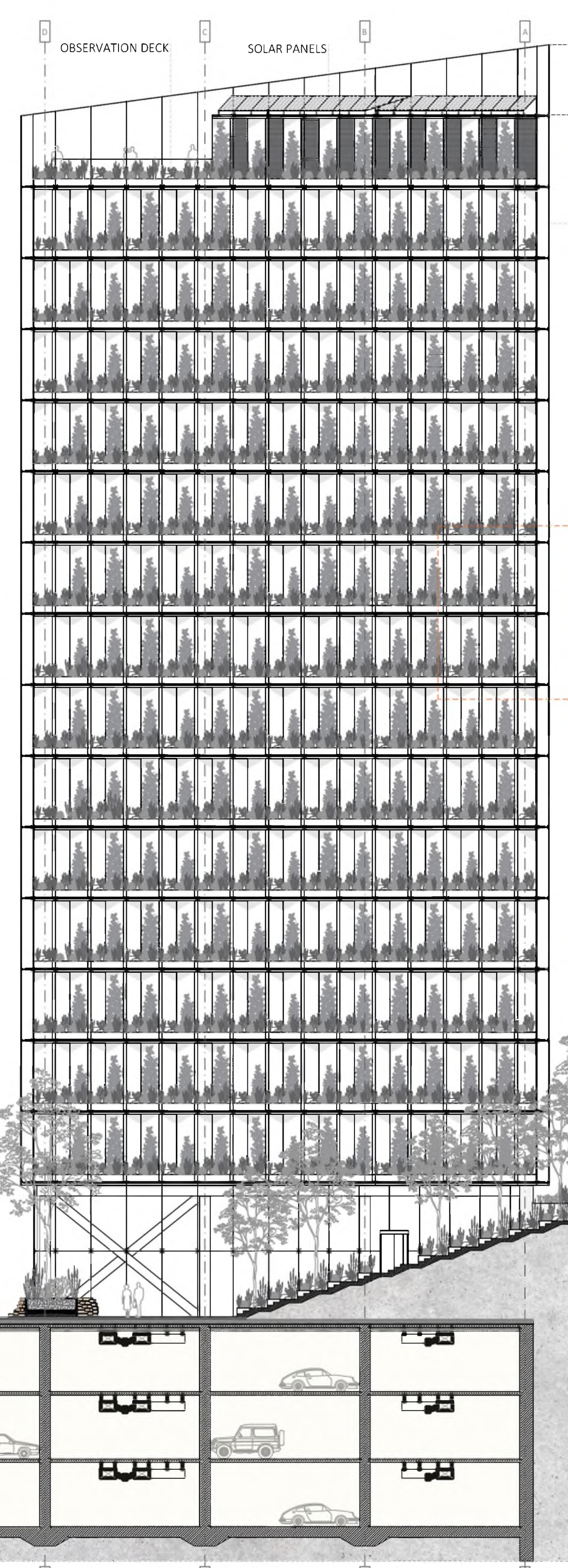
UNDERGROUND PARKING FLOOR -2 1:500



UNDERGROUND PARKING FLOOR -2 1:500



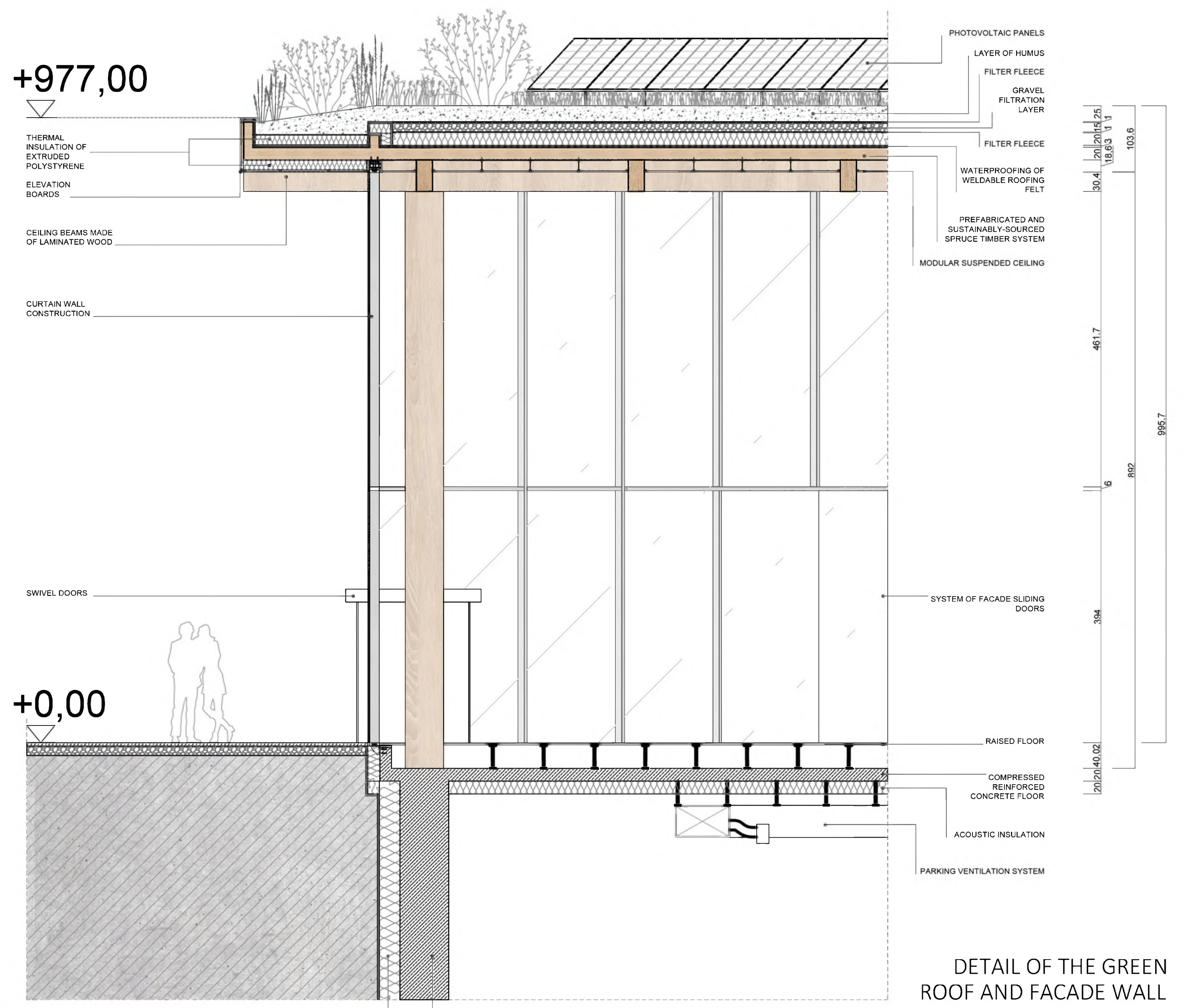
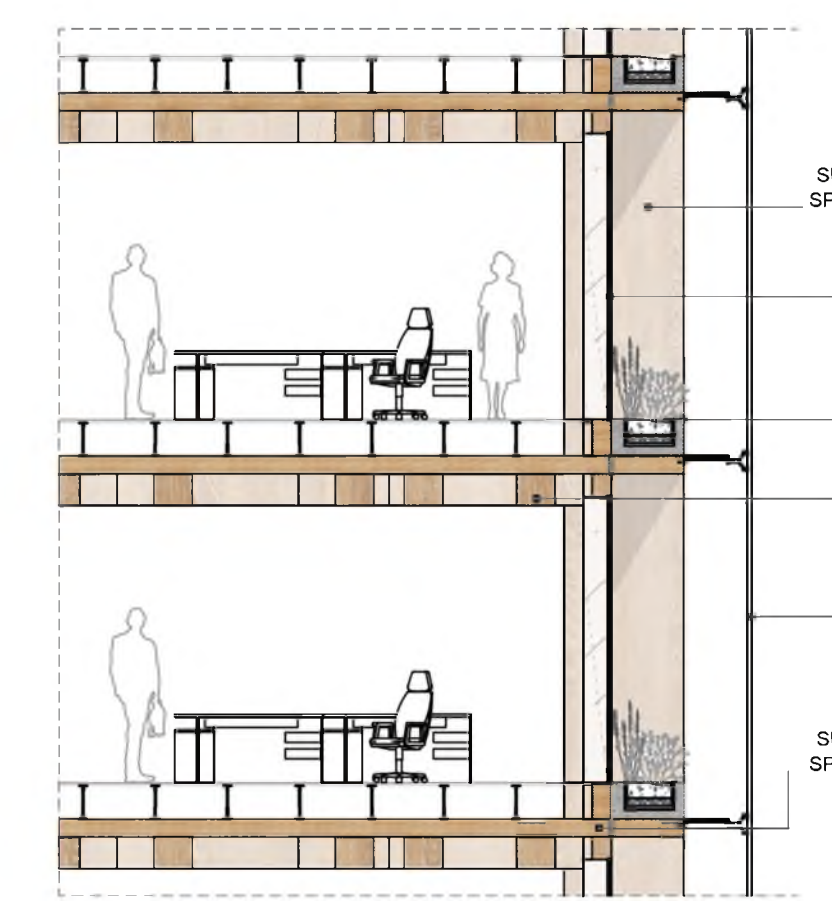
UNDERGROUND PARKING FLOOR -3 1:500



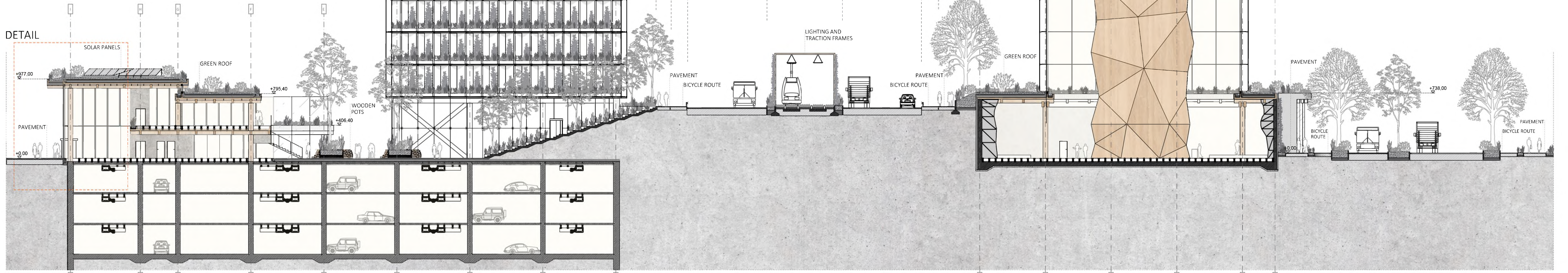
UNDERGROUND PARKING AREA

TECHNICAL ROOM 1	7,6 m <sup>2</sup>
TECHNICAL ROOM 2	7,6 m <sup>2</sup>
TECHNICAL ROOM 3	3,9 m <sup>2</sup>
TECHNICAL ROOM 4	7,6 m <sup>2</sup>
TECHNICAL ROOM 5	7,6 m <sup>2</sup>
TECHNICAL ROOM 6	3,9 m <sup>2</sup>
CORRIDOR 1	4,2 m <sup>2</sup>
CORRIDOR 2	4,2 m <sup>2</sup>
<b>TOTAL AREA OF THE FLOOR</b>	<b>3615,8 m<sup>2</sup></b>

## EXPERIMENTAL DETAIL OF THE FACADE OF AN OFFICE BUILDING



DETAIL OF THE GREEN ROOF AND FACADE WALL



SECTION C-C 1:200



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