000001

WHITE RIVER

VERSLO CENTRO LVIVO G. 68A, VILNIUJE TARPTAUTINIS, KVIESTINIS PROJEKTO KONKURSAS

INTERNATIONAL INVITED DESIGN CONTEST OF BUSINESS CENTRE LVIVO STR. 68A, VILNIUS

EXPLANATORY NOTE

CONTENT

URBAN IDEA

As Lewis Mumford, a famous urban architecture researcher, wrote: “The city in its complete sense then, is a **geographic plexus, an economic organization, an institutional process, a theater of social action, and an aesthetic symbol of collective unity**”. This is one of the most accurate definitions of the city, which reflects the essential aspects, results and aspirations of living in the city.
The concept of the complex mainly focuses on the city of Vilnius and its community, its nurtures values. In such a context, the new architectural ensemble has been **developed**, the essential task of which is to **integrate** into the environment and city life.

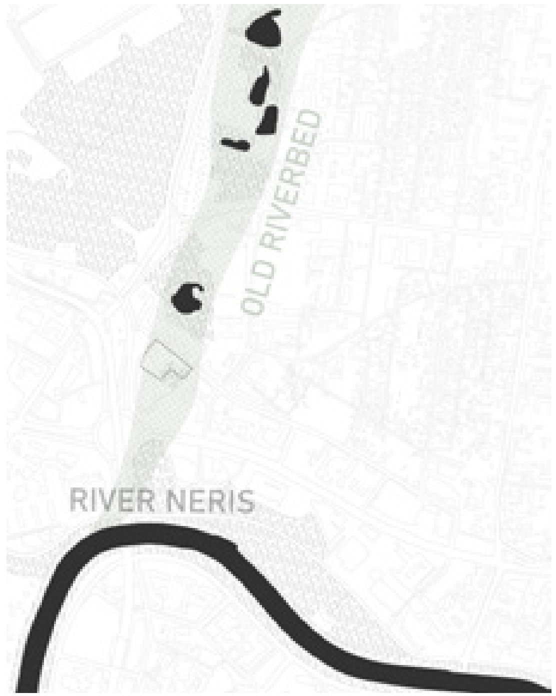
Firstly and foremost, Vilnius is a city of valleys, with an expressive topology - a real **geographical plexus**. Secondly, it is the capital of the country, where **institutional processes** are very dynamic and attract the most active **economic organizations** around them. Therefore, creative and energetic people who appreciate the natural environment and convenient proximity of everything reside here. All of this acquires the **aesthetic integrity** in architectural structures as well.

THE URBAN CODE AND CONTEXT OF ŠNIPIŠKĖS DISTRICT

Šnipiškės district is one of the old city suburbs, where the unique structure of linear urban fabric still remains. The streets here led to the river, because the area was inhabited not only by fishermen, but also was a suitable area for making bricks, that were transported by the river. These axes are the real **urban barcode** of Šnipiškės, which cannot be ignored while developing of this territory.

THE GEOLOGY OF THE TERRITORY

The topological structure of Vilnius was mostly formed by glaciers, which resulted in the formation of hills and valleys. The River Neris while forming its watercourse was constantly moving through the valley. As a result, in Šnipiškės district there are still remained traces of the old riverbed, which merge into a single landscape plexus. One of its elements is the new proposed complex and its spaces.

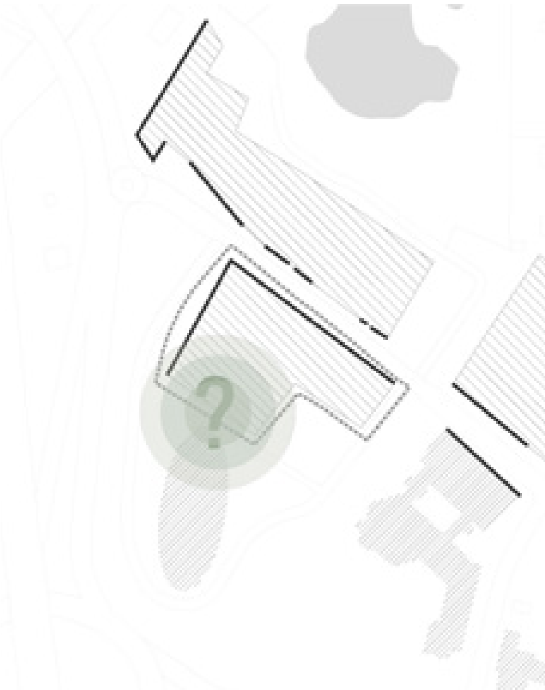


URBAN IDEA

URBAN FABRIC.
QUARTERS VS. COMPLEXES

The urban fabric of the newly established Vilnius Central Business District in Šnipiškės is still in the transformation phase, therefore it is important to strive for structural unity and integrity. Emerging quarters and urban axes highlight the important parts: the high-rise center, the river valley, the old part of Šnipiškės as well as the axis of Konstitucijos Avenue and Lvivo Street. Along the latter, the emerging quarters are characterized by a predominant perimeter building composition. However, the objects of free planning in the adjacent urban fabric require additional attention and the solution of a new morphological interaction between them. This is best achieved through a development of public urban spaces system, complemented by new elements.

THE CONFLICT BETWEEN STRUCTURES.
ELLIPSE VS. PERIMETER

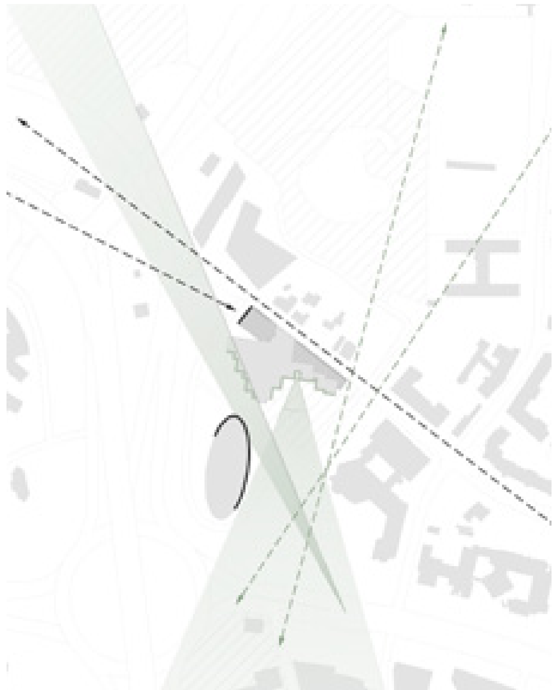


Such a dualistic situation is also present in the new quarter, where the perimeter structure complex is being designed together with the free-planning K29 business center challenging to discover a contextual relationship. This is only possible by introducing clear morphological differences between them, assigning one to the group of Lviv street blocks, leaving the other as an element of green connection with the river.

ARCHITECTURAL IDEA

THE INFLUENCE OF THE CONTEXT

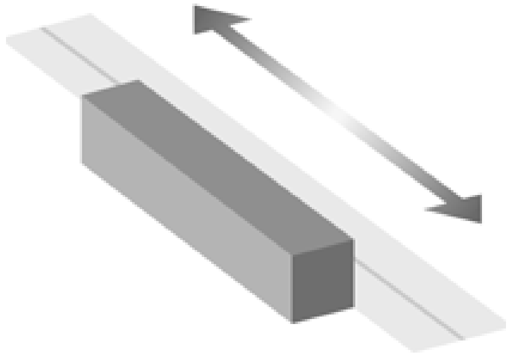
As already mentioned before, the essential feature of this part of the city is the highlighted **meridian axes** that led to the Neris River, which cross not only the **natural** but also the **urban** structure. The latter become one of the most important compositional and structural elements.

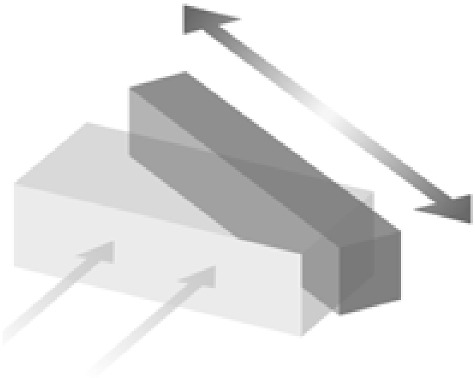


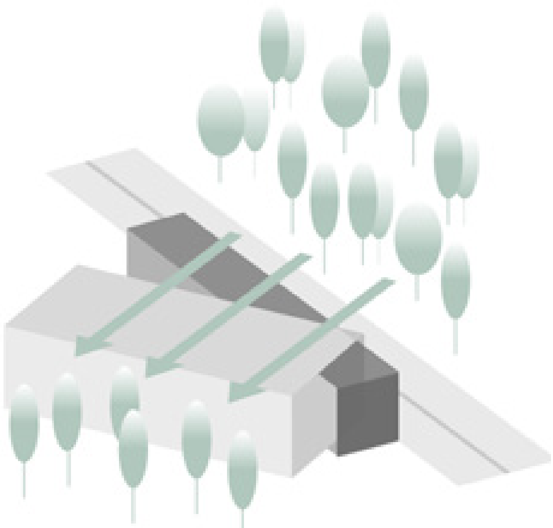
PRESERVING VISUAL AXIS

Multilayer perspectives is another unique characteristic of the central part of Vilnius. This feature manifests itself in a good overview of the elements of natural and anthropogenic structures in different perspectives or sectors of view. It is especially important to maintain **good visual connections** from the main urban spaces of the city: the main streets, parks, squares. This polarity is maintained in the new complex, the latter being composed in such a way that it not only keeps the main axes open but also forms the new ones. In such a context, the aim to separate the two morphotypes in the quarter - perimeter and free planning - is being implemented.

ARCHITECTURAL IDEA







GENESIS OF A FORM.
FORMING THE PERIMETER OF LVIVO ST.

The two dominant urban directions meet in a complex site. The first is the **structural axis of Lviv Street**, which symbolizes the new city, the anthropogenic beginning. Meanwhile the meridian direction is the axis of **natural and historical structures** that cross the whole territory.

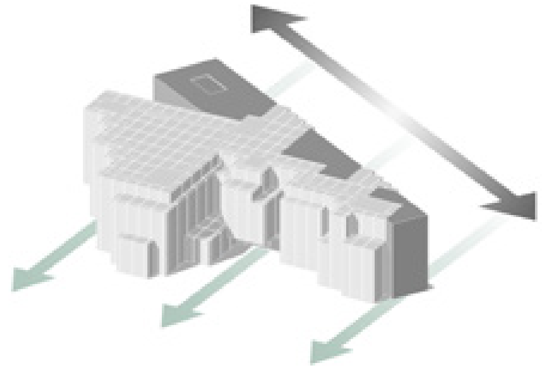
NATURAL CONTEXT

This is how the intersection of the city and nature, the new and the historical - a rather synonymous projection of the old Vilnius, the center of cultural intersections - is formed.

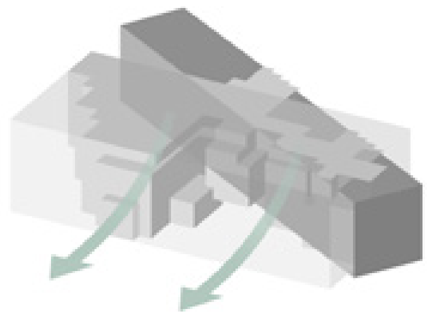
ARCHITECTURAL IDEA

DUAL COMPOSITION

The binary composition of the complex not only reflects the different urban codes, but also shows a kind of intersection of the **natural** (natural, flowing) and **anthropological** (restrained, closed). The river, which used to flow here, turns into a flowing, **transparent structure of light and glass** in the building, which penetrates the **monolithic, dark "city wall"** filled with traditional windows.



The flow that reaches the park becomes a diffuse, dissolving structure that becomes a kind of transition of the perimeter quarter to another morphological structure, the park space. This flow and melting is emphasized by the multi-level terrace system. The latter not only allows you to create a more comfortable relationship with nature, but also offers a system of more private spaces.



ARCHITECTURAL IDEA

HUMAN SCALE-BUILDING SCALE

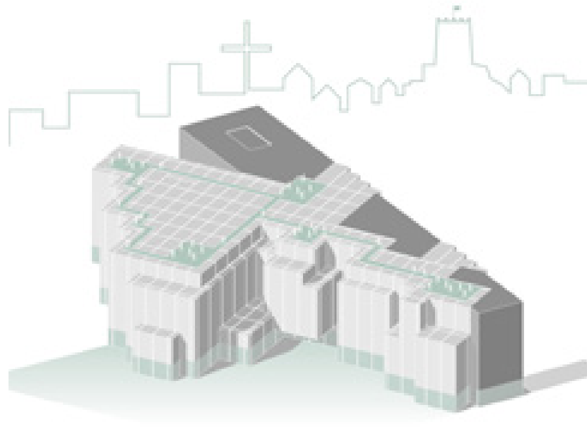
The study shows that the space formants of the Lviv Street have an emerging specific volume module that can also be used to design new complexes. In this way, not only a maximum architectural integrity can be achieved, but a more humane scale of the street, which is claiming to become a pedestrian street, would be created. The volume of the new business center at Lviv Street will be divided into three parts, maintaining the beforementioned facade modulation. Another important aspect is the solution to reserve the entire perimeter of the ground floor accessible to visitors.

NORTH ELEVATION

ARCHITECTURAL IDEA

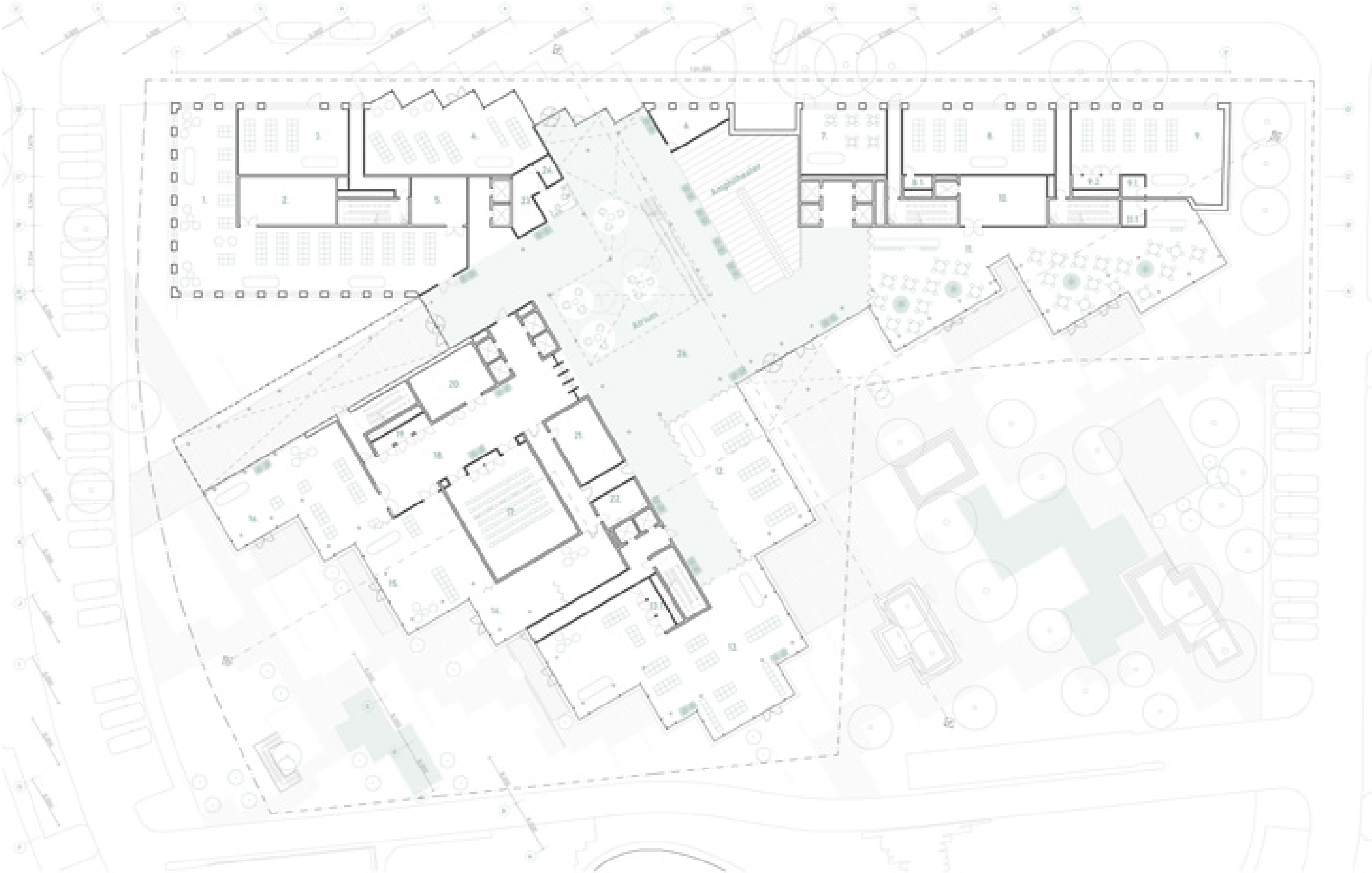
SOCIAL. ASPECT.
CREATING SOCIAL-MEETING SPACE

The multilayer panoramas, the proximity of the old city, the landscape elements that can be observed from the recreation areas installed on the roofs. Sports facilities are also provided here in case of good weather. The urban and architectural integrity of the complex contributes to the emergence of social integrity. Cooperation spaces, recreation spaces, green spaces, work spaces - all of them find their place in the new ensemble. The staircase of the central atrium is designed to become a place of social interaction, increases the mobility in the building. Even car storages are designed so that the part of them are provided with natural light, green plants even underground. This solution of an open communication node makes such utilitarian spaces more attractive.



OFFERING THE VARIETY OF
PUBLIC URBAN SPACES

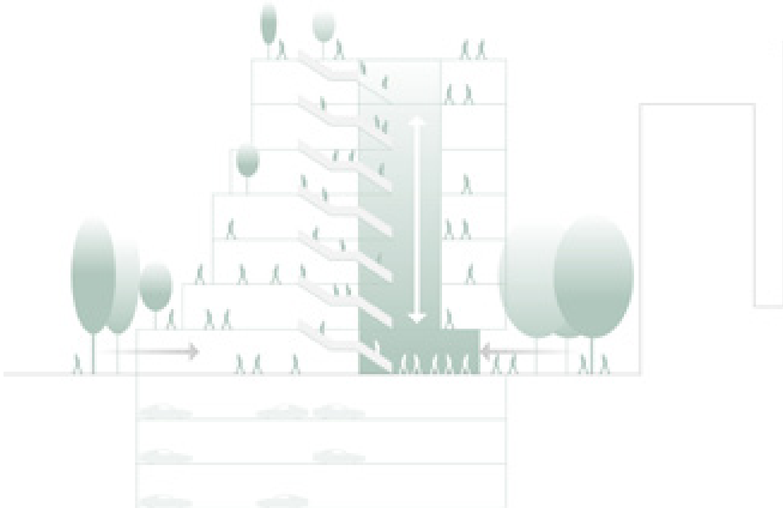
However, the city is not primarily about axes, but about the spaces in which social performance operates. The system of urban urban spaces is one of its most important signs. European cities are characterized by the active interaction of external and internal spaces, especially in public buildings. In this area, where buildings-blocks are concentrated along important city streets and avenues, there is also a network of their interiors, which, due to their specifics, open up to the environment and create specific spatial connections. The new complex would extend this paradigm by complementing the connection between the old quay, the adjacent business centers, the new park and finally the Neris riverside. At the same time, not only the one new space would appear here, but the entire network: two courtyards, a shared roof and parks around the building.



Discription key

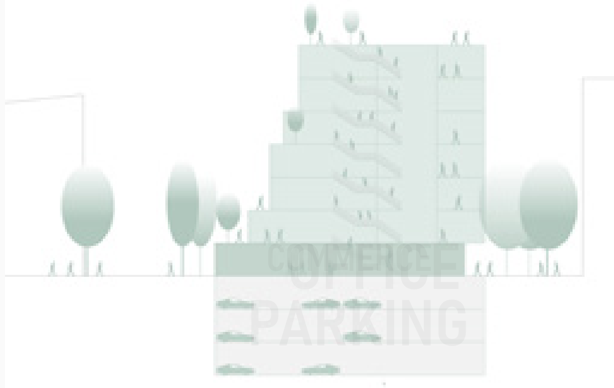
1.	Retail	339.01
2.	Storage	60.48
3.	Retail	96.98
4.	Retail	164.20
5.	Storage	35.30
6.	Security	27.95
7.	Retail	75.03
8.	Retail	133.89
8.1.	Storage	4.95
9.	Retail	158.61
9.1.	Storage	6.48
9.2.	Storage	8.02
10.	Kitchen/Washroom	56.35
11.	Food court	378.13
11.1.	Storage	7.92
12.	Retail	166.62
13.	Retail	349.21
13.1.	Checkroom	9.11
14.	Retail	105.31
15.	Retail	142.38
16.	Retail	184.01
17.	Conference room	133.87
18.	Hall	154.26
19.	Checkroom	10.34
20.	IT storage	47.12
21.	Washroom	45.57
22.	Checkroom	19.72
23.	Storage	21.83
24.	Washroom	6.39
26.	Atrium	1,006.11
		3,955.15 m²

GROUND FLOOR



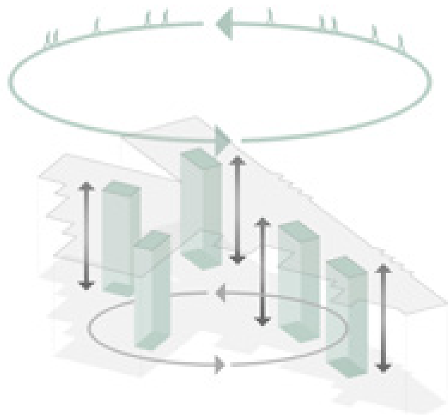
FUNCTION SCHEME

The concept of the flow and integration into the network of surrounding spaces also presupposes a functional model of the building. It is important to turn the ground floor into an active space for communication and services - common halls, services, catering and conference rooms are provided here. Offices are designed on the upper floors that are connected to the common areas of the atrium, as well as a public roof. It becomes possible to use not only the new park next to the building, but also to have separate green terraces on different floors.



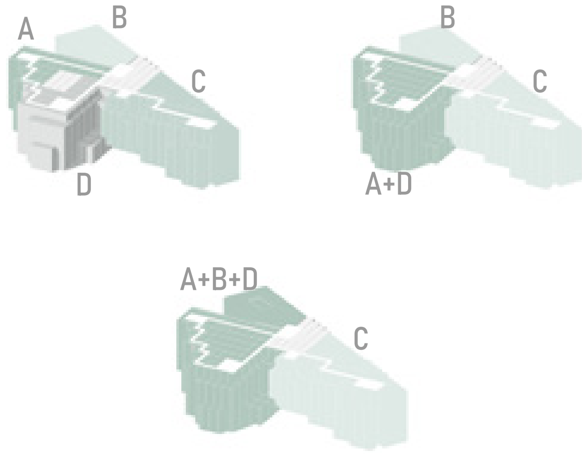
CORE SYSTEM

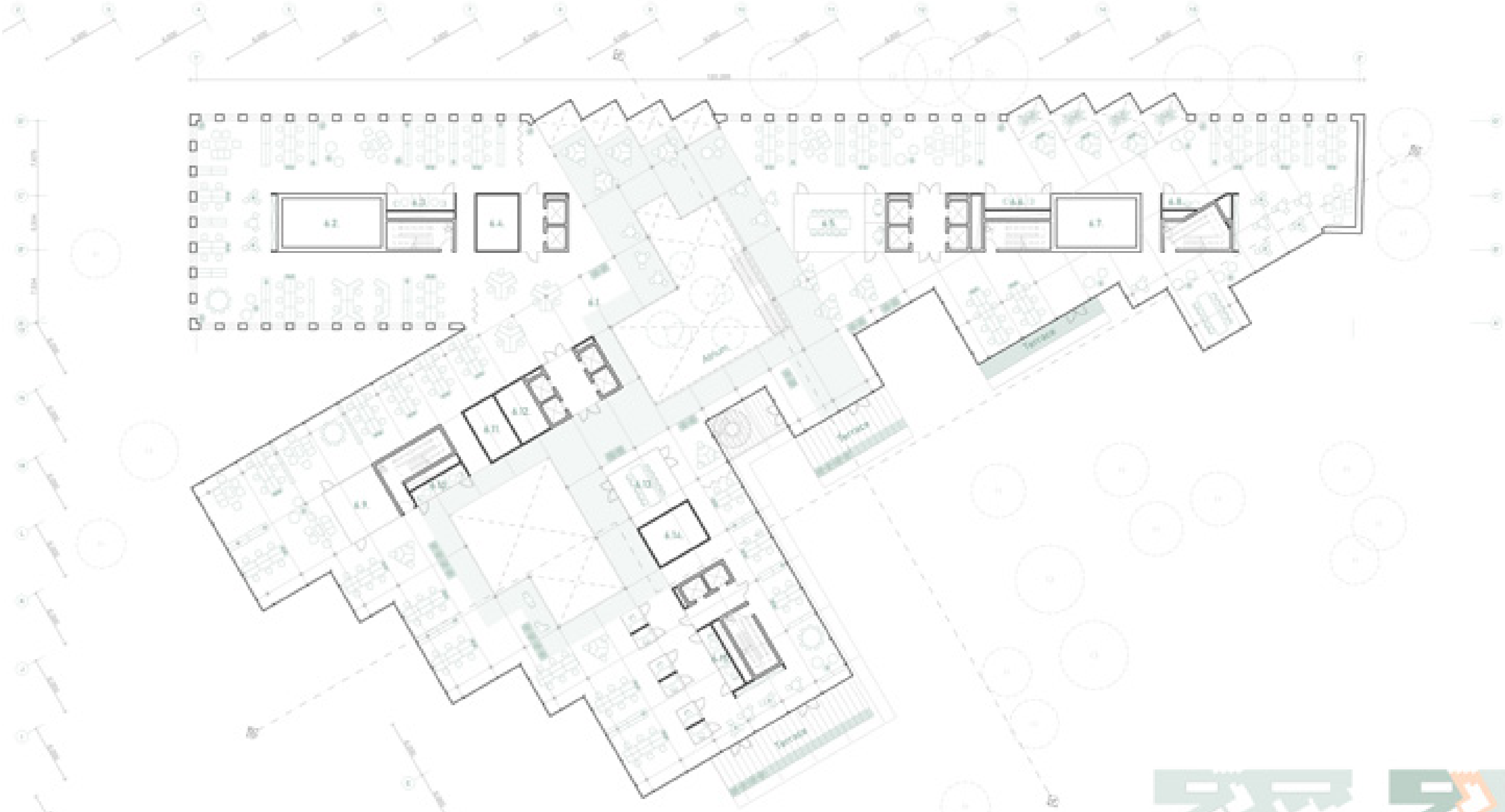
As already mentioned, the internal structural logistics system of the building becomes a consistent continuation of the surrounding urban spaces system. The hall is a kind of city square, from which you can get to the individual cores of vertical communication of the complex. The latter on other floors concentrates separate functional areas about themselves. Such a system allows for a flexible division of the building according to the number of tenants, while maintaining an integral complex, attractive all-year-round public spaces.



DIVISION OF THE COMPLEX

The complex is suitable for flexible division in accordance to the required number of tenants. The complex could be the headquarter while at the same time building planning allows it to be divided into several parts vertically or horizontally by the levels.





Discription key

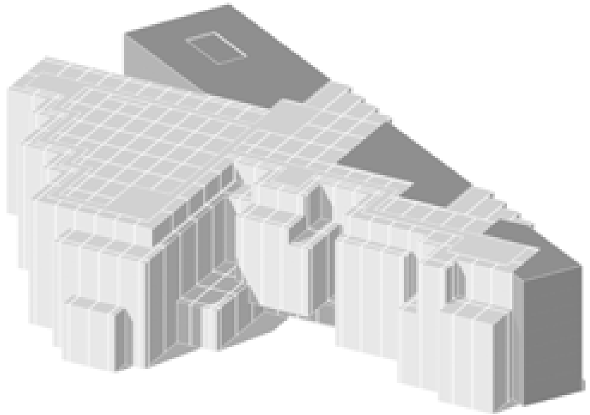
6.1.	Office space	3,077.58
6.2.	Technical pit	50.81
6.3.	Meeting room	12.06
6.4.	Washroom	24.71
6.5.	Meeting room	56.42
6.6.	Meeting room	11.13
6.7.	Technical pit	41.25
6.8.	Meeting room	8.25
6.9.	Kitchen	35.84
6.10.	Meeting room	9.92
6.11.	Washroom	20.44
6.12.	Storage	20.44
6.13.	Meeting room	37.20
6.14.	Washroom	25.42
6.15.	Meeting room	11.21
		3,442.68 m²

FLOOR DIVISION SCHEME

6TH FLOOR

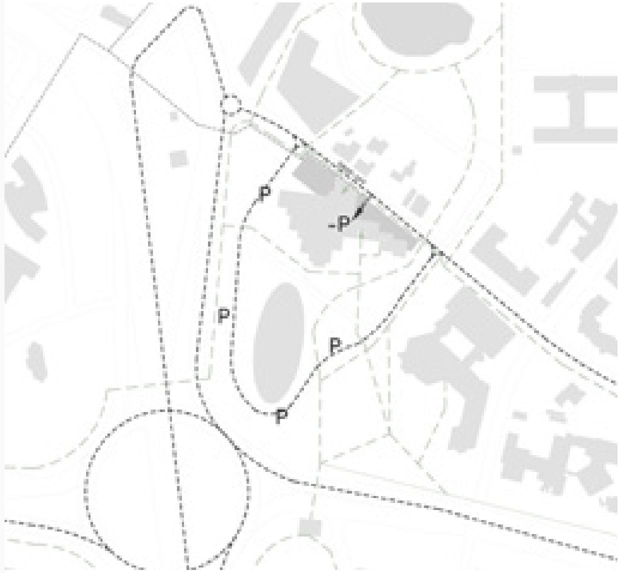
MATERIALS

The materiality of the buildings reflects the chosen dualistic composition and the different narratives delegated to the individual elements of the composition. The building forming the Lviv Street has tinted and profiled **concrete** facades while the volume of the park has a **clear glass** solution with an active solar control system (solar blinds running on external rails).



TRANSPORT SCHEME

The transport system is designed so that the environment of the complex would be as safe as possible by collecting cars in the underground car storage (bicycles are also stored there). The car park is accessible from the Lviv Street. This entrance is planned next to the main hall, where even the space above the ramps is used to set up a presentation center.
The building can be bypassed on all sides, at the same time there is a transverse common use hall, connecting not only the inter-storey areas, but also Lviv Street with the park.
The number of parking spaces is determined using a reduction factor (coefficient) of the city center zone.




6.
7.
4.
1.
2.
3.
5.
8.
Cut down trees
Trees
Sun collectors on the roof
Site boundary
Allowed building boundary
Entrance to the building
Entrance to the underground parking
Altitude
Sidewalk
Rooftop walkway
Permeable park walkway
Bicycle path
Green lawn
Bushes
1. Designed building
2. Public park
3. Playground
4. Drop-off
5. Entrance to the undergroung parking
6. Office building
7. Residential building
8. Pond
N

SITE PLAN


KPMG
SAPIENS

SUSTAINABILITY

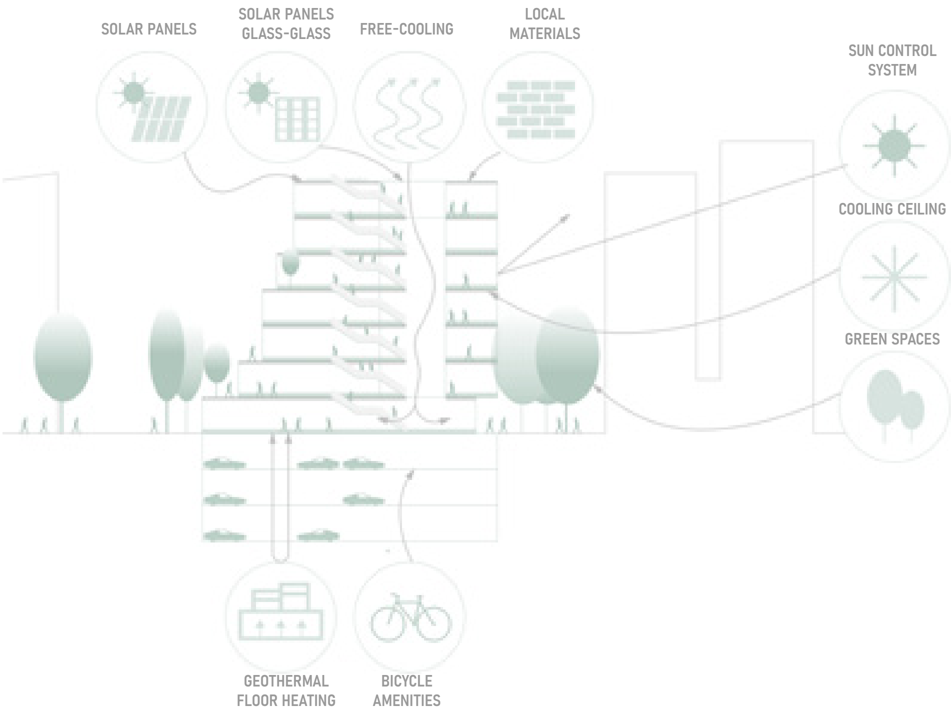
The design of the building aims to ensure that at least half of the energy consumption is produced from renewable energy resources. The main goal is rational solutions and conservation. Design solutions aim to ensure optimal walking distances in the building. Geothermal energy is used to heat and cool the building. Passive and active measures are used and applied to enable the rational and economical construction and operation of the building.

Energy use and ecology. Compliance of the materials used with the concept of coherence.
Solar panels are designed on the roofs of the building. Electricity is also collected and stored using a special glass system in the atrium. Ecological and eco-friendly materials are used while the priority is given to local materials.

Energy needs for heating and cooling
Active - automatically adjustable and passive - stationary elements protect the building from overheating. In the facades, three-layer reinforced concrete slabs with a RECKLI surface are combined with glass constructions to integrate the blinds in order to control the internal microclimate and to display the fastening units and guides (roller blind system with box and side runners for blackout, screening and reflective use). Floor and ceiling areas are used for both cooling (prevents surfaces from heating up) and heating. Exceptionally low temperatures are used for heating.
Individual control of temperature and ventilation and cooling is provided for all main rooms.

Water consumption
Rainwater harvesting has been designed. The collected water is used for flushing toilets in all sanitary facilities as well as watering the plants. Water-saving sensoric mixers are provided everywhere.

Indoor, outdoor and natural lighting
Extremely low-energy luminaires with LED elements are provided throughout the building. Outdoor lighting and on-call lighting of the building are expected from the solar energy stored during the day. Premises, passageways and lighting of passageways for episodic use shall be designed with motion sensors. Above the permanent workplaces, smart luminaires with sensors that capture the required lighting are provided.
Architectural solutions aim to ensure the greatest possible penetration of natural light into the building (lighting is also increased by internal atriums with glass roofs).


SOLAR PANELS
SOLAR PANELS GLASS-GLASS
FREE-COOLING
LOCAL MATERIALS
SUN CONTROL SYSTEM
COOLING CEILING
GREEN SPACES
GEOTHERMAL FLOOR HEATING
BICYCLE AMENITIES

MICROCLIMATE

Indoor microclimate (health and well-being)
An efficient and individually regulated air supply recuperation system is being designed. Air is supplied through ultra-quiet ducts covered with aluminum foil with silver ions (antibacterial solution). The interior design of the building, the use of durable materials and local solutions in the workplace guarantee low sound levels, sound absorption or acoustic comfort. Architectural solutions aim to compensate the lack of natural light by maximizing the use of natural light.
Plants are widely integrated in the interior. The philosophy of a flexible office with changing workplaces and interaction areas is offered. The design solutions also encourage employees to spend leisure time outdoors

CUMULATIVE DAYLIGHT

The building configuration ensures enough daylight for the neighbouring residential buildings. According to the STR 2.02.01:2004 “Gyvenamieji pastatai” 213 p. the minimum period of daylight in the urban city centers is 2 hours (from March 22nd to September 22nd).

The cumulative daylight was estimated using LSS Chronolux tool.

CONSTRUCTION SCHEME

The structural scheme of the building relies on the use of a minimum amount of different prefabricated structural elements, thus optimizing the production of the elements themselves and the assembly of the building on the construction site.

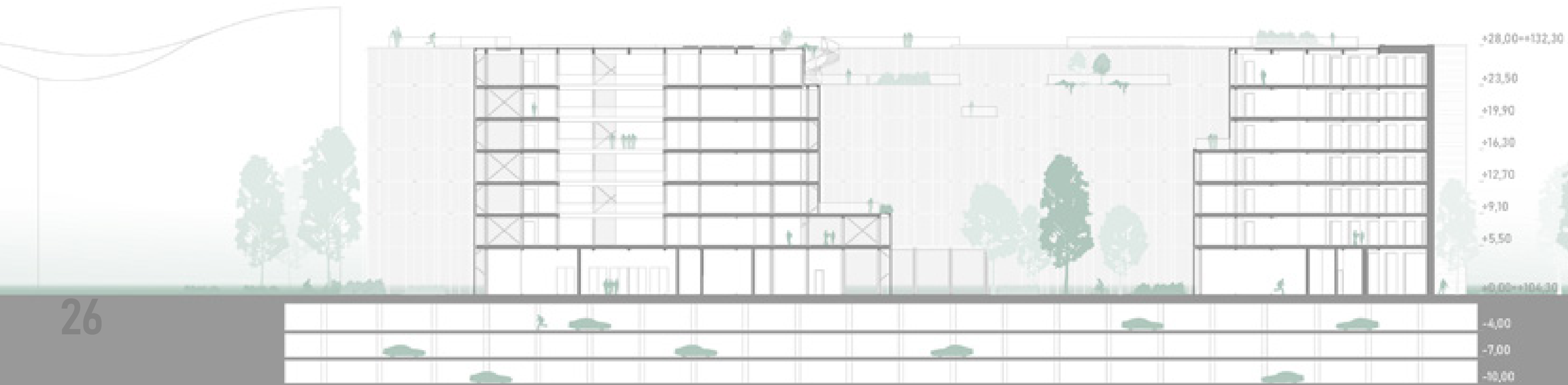
There are three different variants of the materiality of the main construction elements:
a) Metal columns + metal beams + CLT plates
b) Metal columns + metal beams + prefabricated reinforced concrete slabs
c) Prefabricated reinforced concrete frame + prefabricated r/c beams + prefabricated r/c slabs, or monolith.

UNDERGROUND PART OF THE BUILDING

The foundations of the building. Foundations under the walls are made of drilled, reinforced concrete. Under the columns, reinforced concrete is combined with a monolithic grate.
Basement walls. The walls are designed of reinforced monolithic concrete, preserving their appearance as the final finish.
Network of columns. The parking lot has a 9x6 / 9x12 column grid, which enables the design of more spacious parking spaces.
Parking floor. Parking floors are designed with epoxy.

UPPER PART OF THE BUILDING

Internal partitions. Internal partitions are designed of plasterboard constructions, while the accents ones are made of finishing furniture panels on a steel frame.
Floor constructions. In order to create an opportunity for easy transformation of the designed spaces, the floor is designed to be raised so that it can be easily laid and remodeled according to the new layout.
Constructions of the atrium open stairs. Stairs are designed with steel beams and tempered glass elements.
Stair constructions. Stairs are designed of prefabricated reinforced concrete with a final finish.



SECTION A-A

“OPEN” PART OF THE BUILDING

The “open” part of the building construction (in Konstitucijos ave. / Geležinio vilko str.) is made of prefabricated metal columns with metal beams and CLT slabs (preffered option a, option b or c also available).

Cross-links are provided by monolithic “cores” - elevator shafts, staircases, blocks of sanitary units.

A 4x4 construction step is used, which enables to have a 4, 8, or 12m spacing.

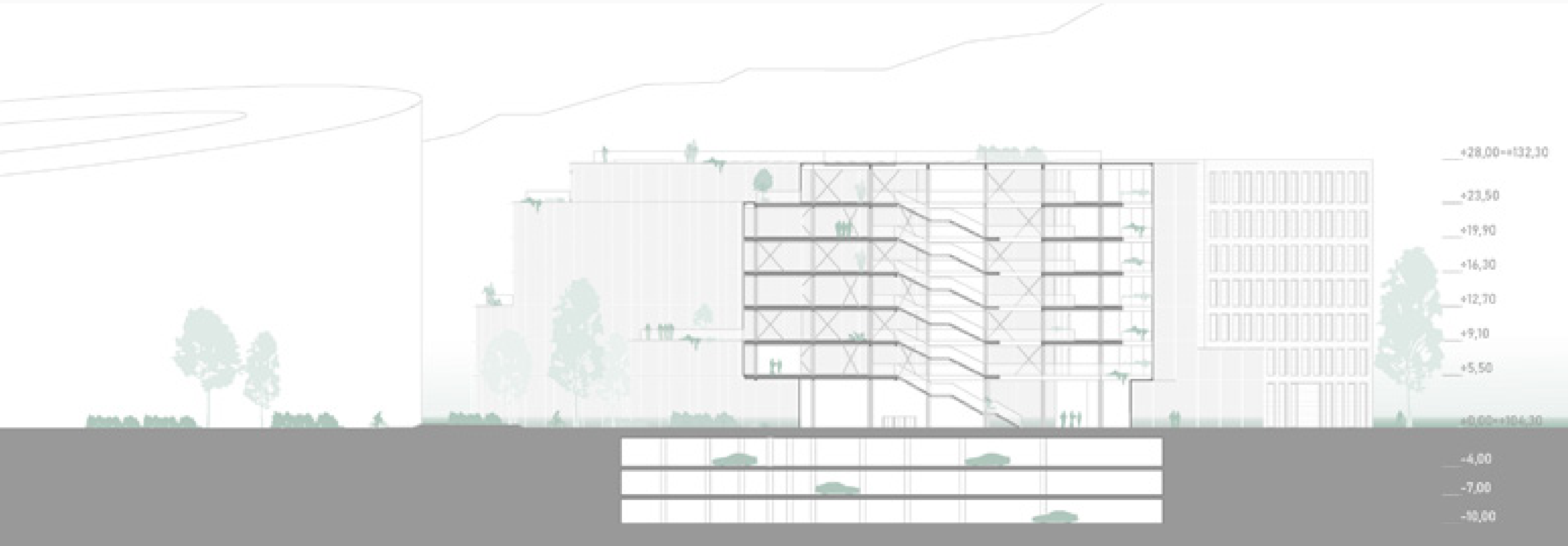
Transparent partitions. Facade constructions are proposed to be designed from aluminum glass construction systems. Externally integrating roller shutters for indoor microclimate control, while exposing fasteners and guides. Roller blind system with side runners for blackout, screening and reflective use.

“CLOSED” PART OF THE BUILDING

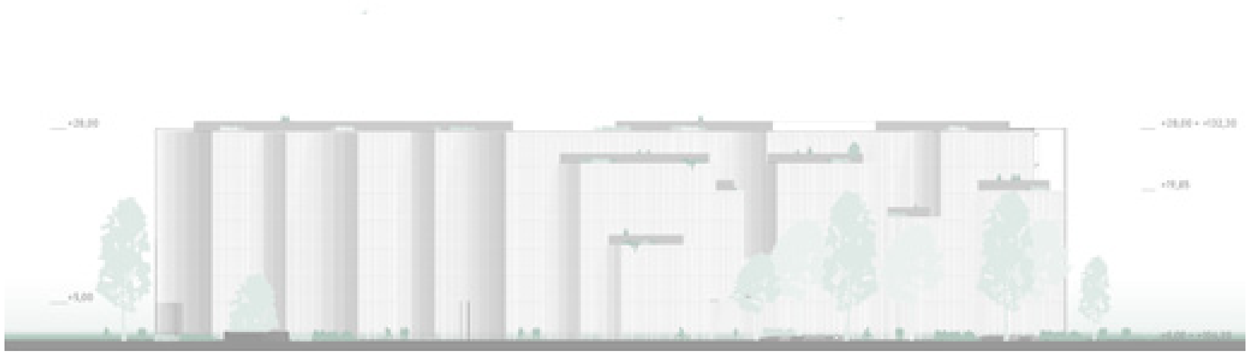
Construction of the part of the building parallel to Lviv Street is designed of reinforced concrete frame with external three-layer reinforced concrete panels assembled.

Cross-links are provided by monolithic “cores” - elevator shafts, staircases, blocks of sanitary units.

External walls. Facade walls are designed with a three-layer surface of RECKLI.

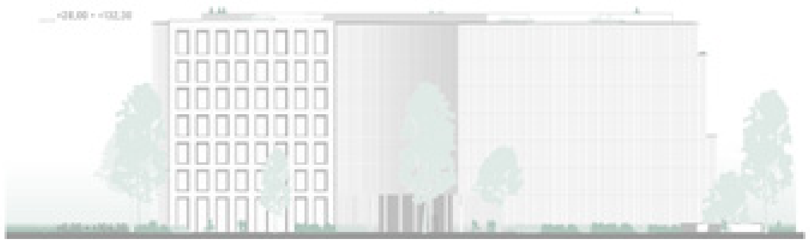


SECTION B-B

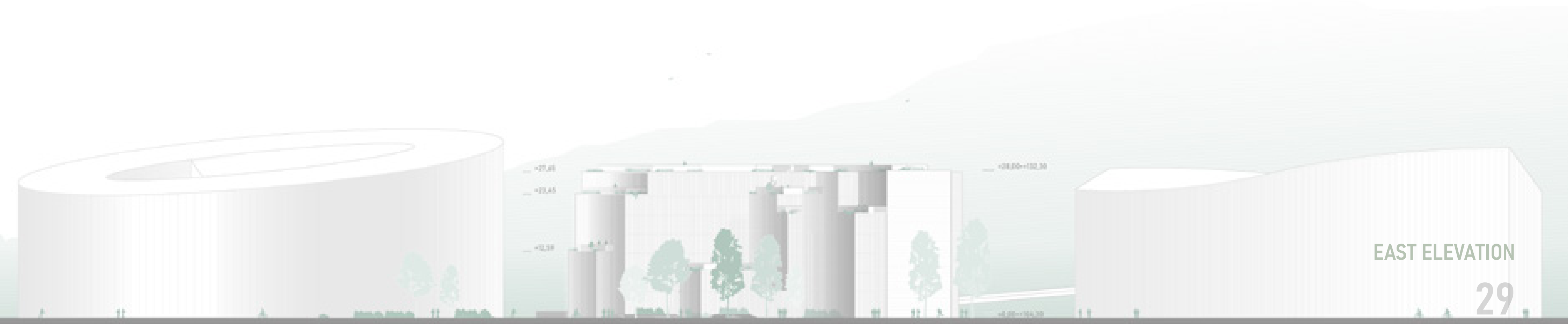


SOUTH ELEVATION

NORTH ELEVATION



WEST ELEVATION



EAST ELEVATION

GENERAL INDICATORS OF THE COMPLEX

PLOT

1	AREA OF LAND PARCEL	4405 m^2
	DENSITY	70%
	INTENSITY	3.49
2	AREA OF LAND PARCEL	3506 m^2
	DENSITY	56%
	INTENSITY	3.40

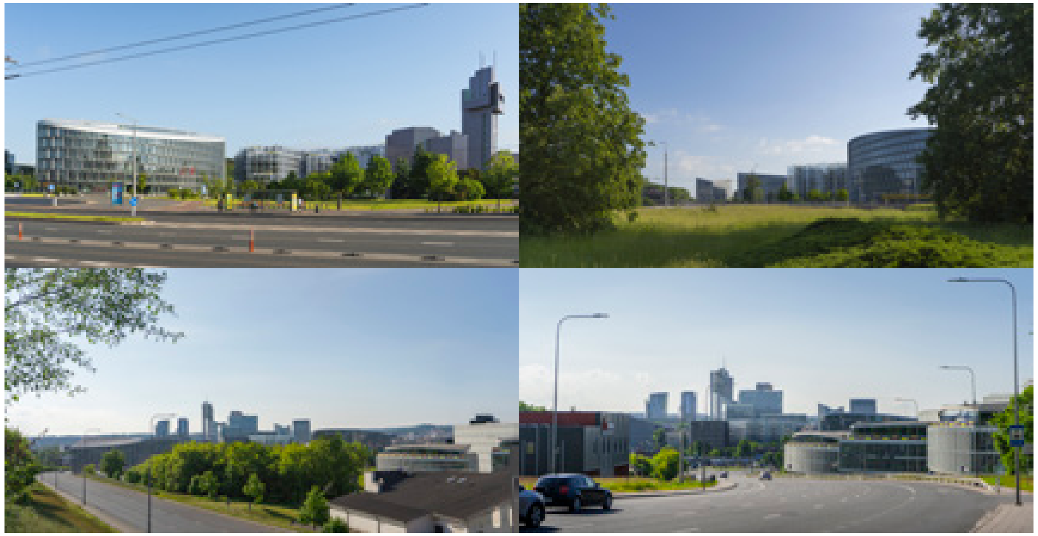
BUILDING

VOLUME	134957 m^3
TOTAL AREA:	27342.96 m^2
MAIN AREA:	
-COMMERCE	1884.28 m^2
-OFFICE	22997.74 m^2
- CATERING	377.44 m^2
AUXILIARY AREA	2083.50 m^2
UNDERGROUND AREA	21173.88 m^2
NUMBER OF FLOORS	7
BUILDING HEIGHT	28 m

NUMBER OF PARKING SPACES

584

Office: 23673.44/25 = 947 (aut.)
Commerce: 1884.28/30= 63 (aut.)
Catering facilities: 377.44/15=25 (aut.)
Total: 947+63+25=1035
After adjusting the coefficient (0.5) = 1035x0.5=**518 parking spaces needed**







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