

# CITY GARDEN

Concept of Development

**MLA+**

Praxys

**URBAN**  
PRO

**ПД**  
ПРОЕКТДЕВЕЛОПМЕНТ







# CITY GARDEN

## Project Team



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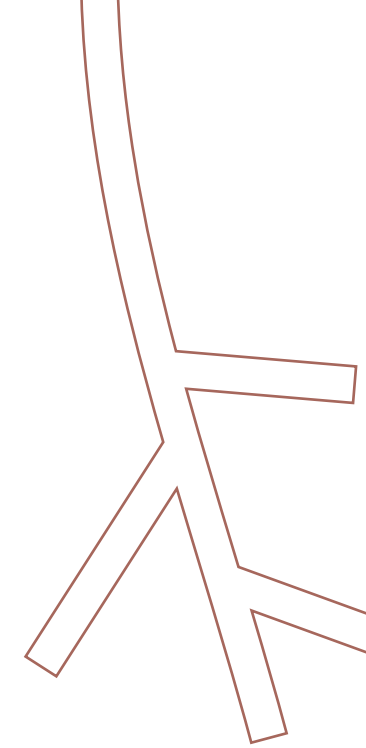
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Alexander Kholodnov

### Проектдевелопмент

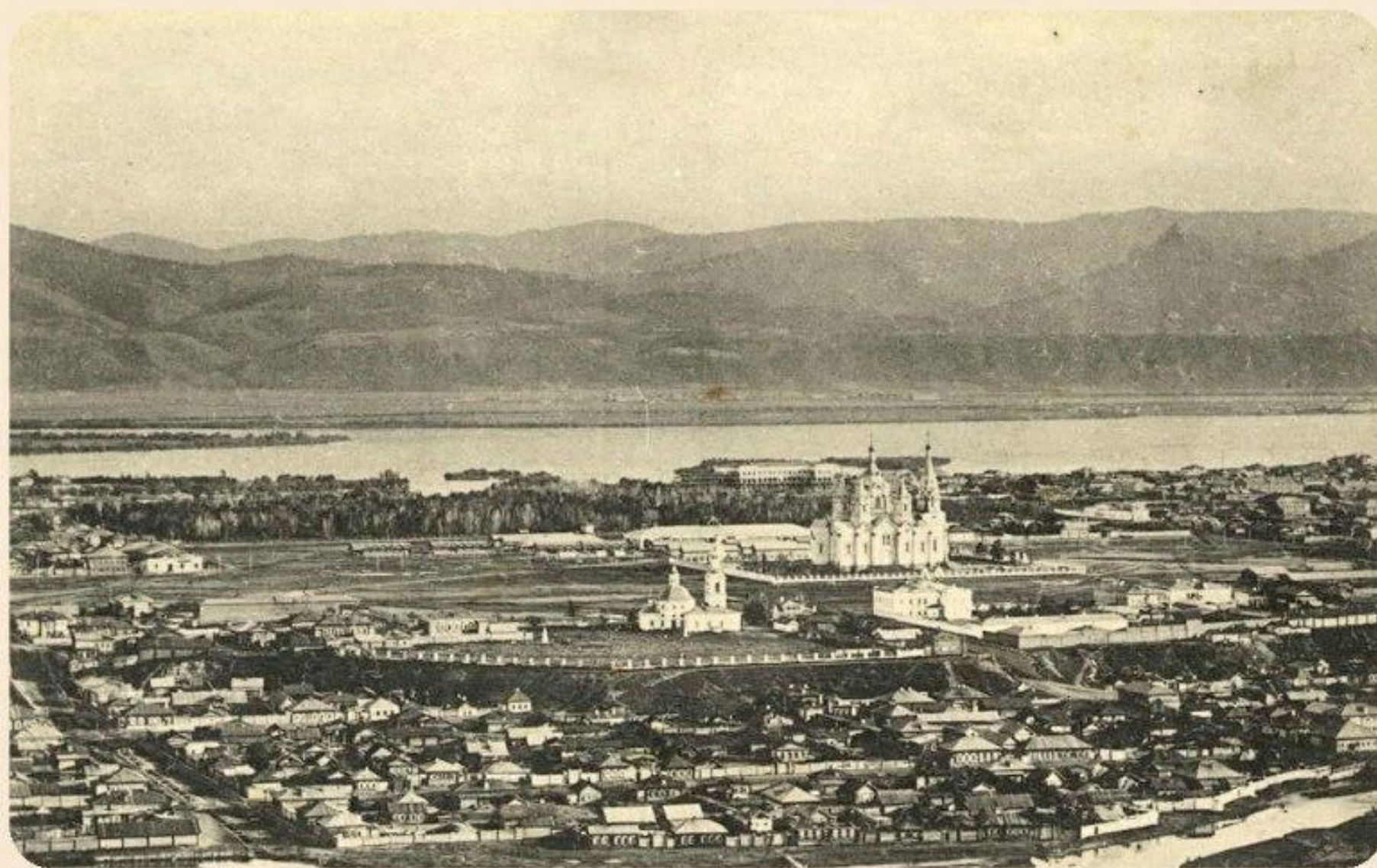
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# INTRODUCTION



The city garden plays a key role in the city's green system. It was the natural heart of Krasnoyarsk in both the 19th century, when this system was not yet in the plans, and in the 20th century, when Gorky Park became associated with a walk-holiday, a walk-entertainment. The significance of the City Garden in the 21st century has not yet been articulated. But we have already chosen precise and powerful words for him.





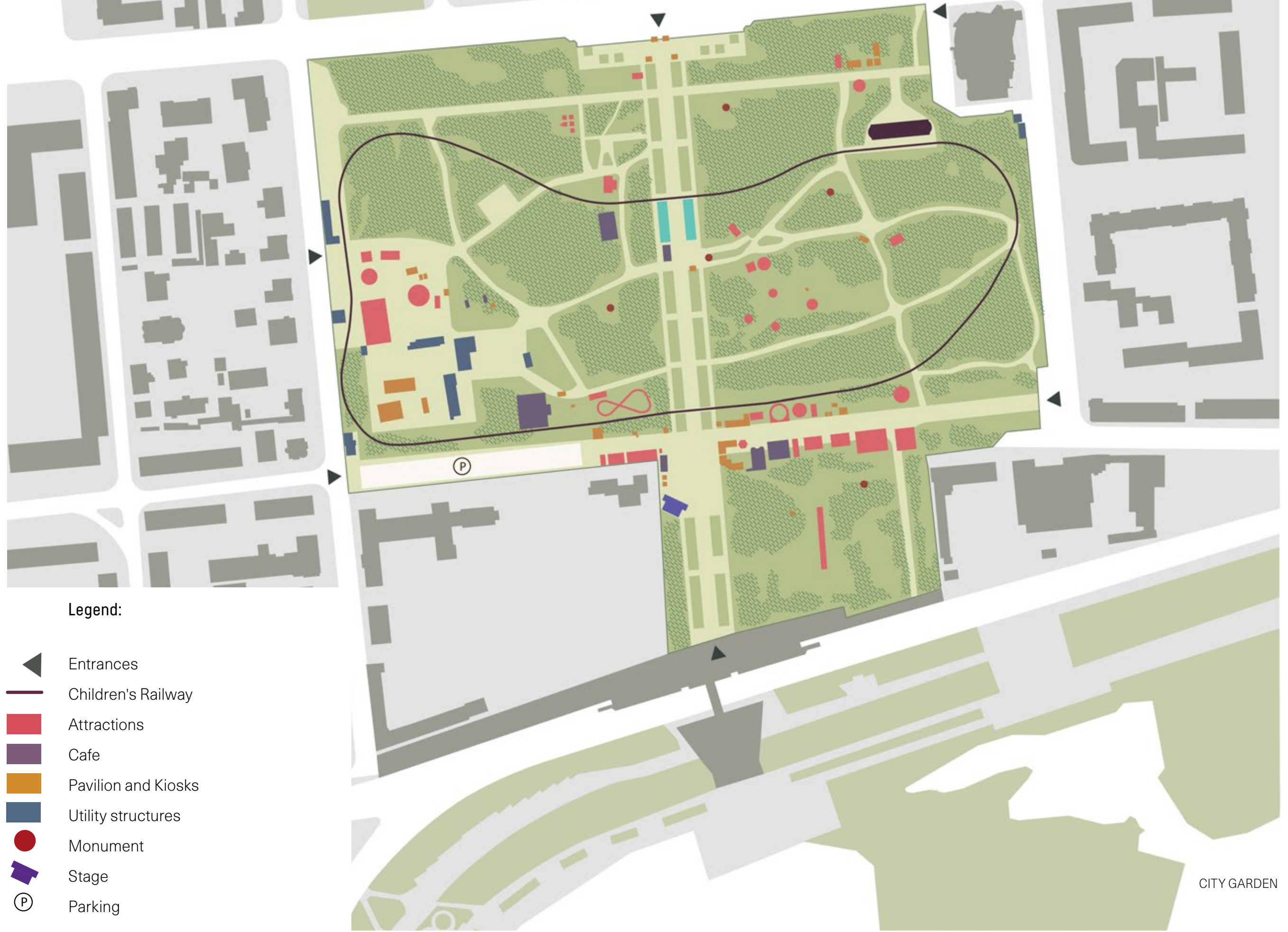
Общій видъ.





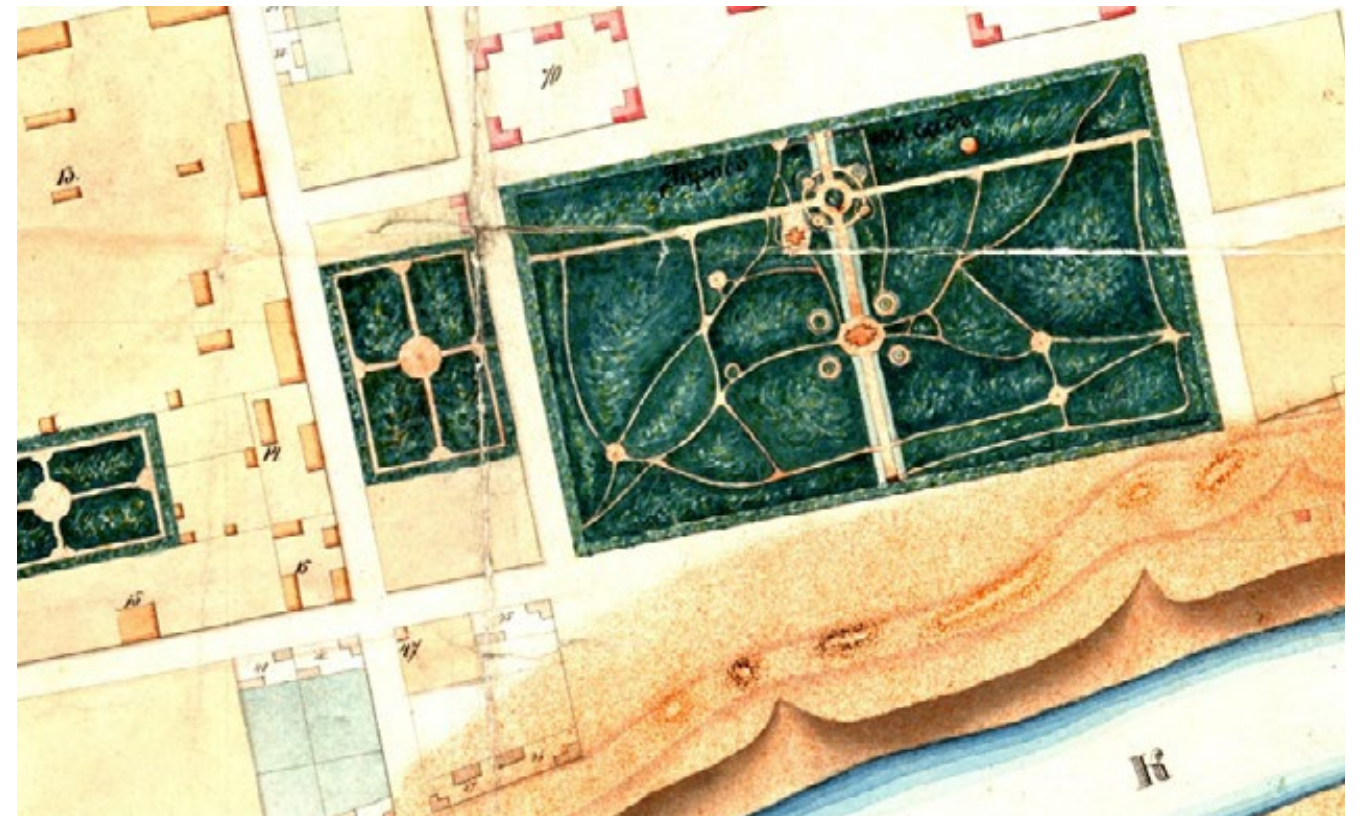
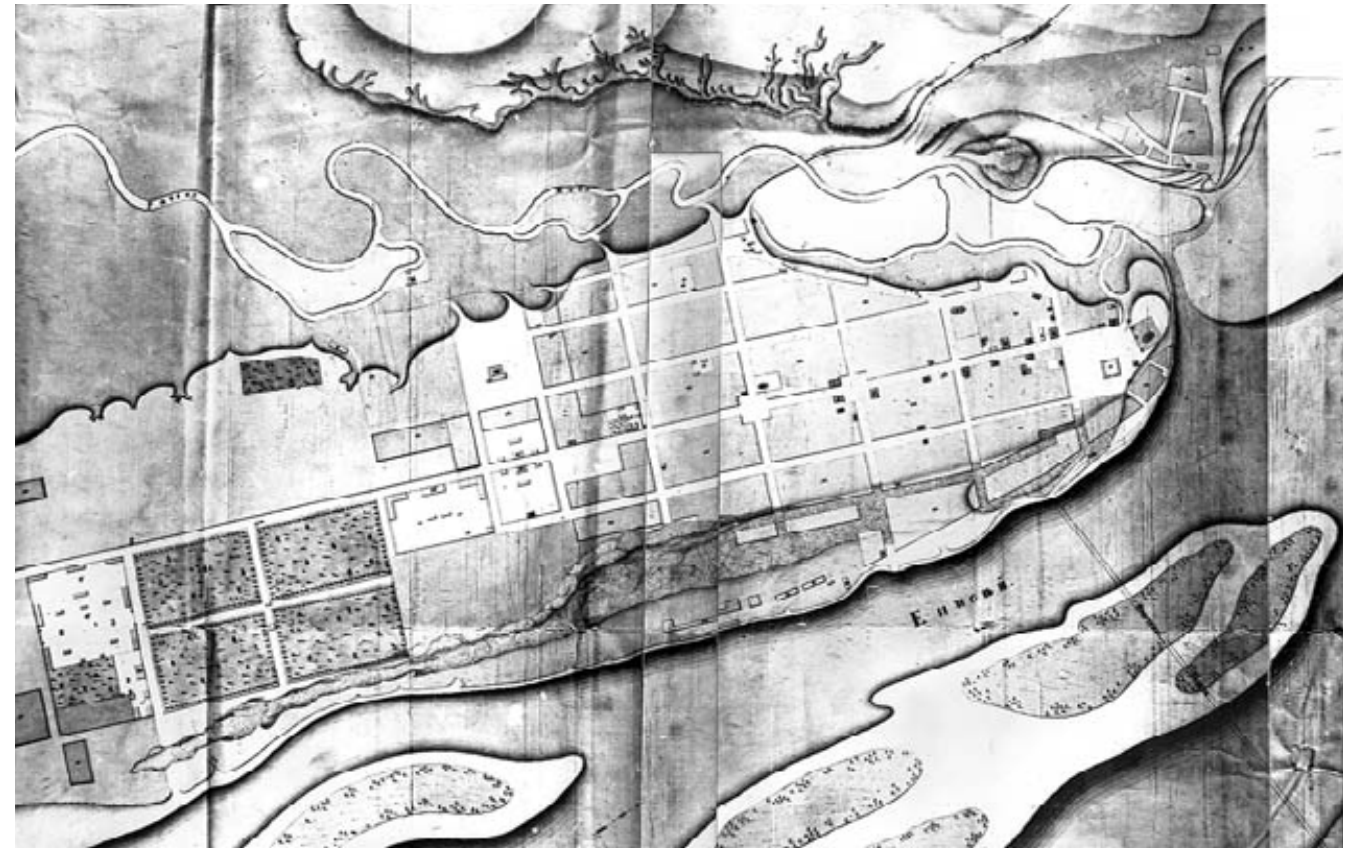


# BASIC PLAN





# Historical and cultural analysis



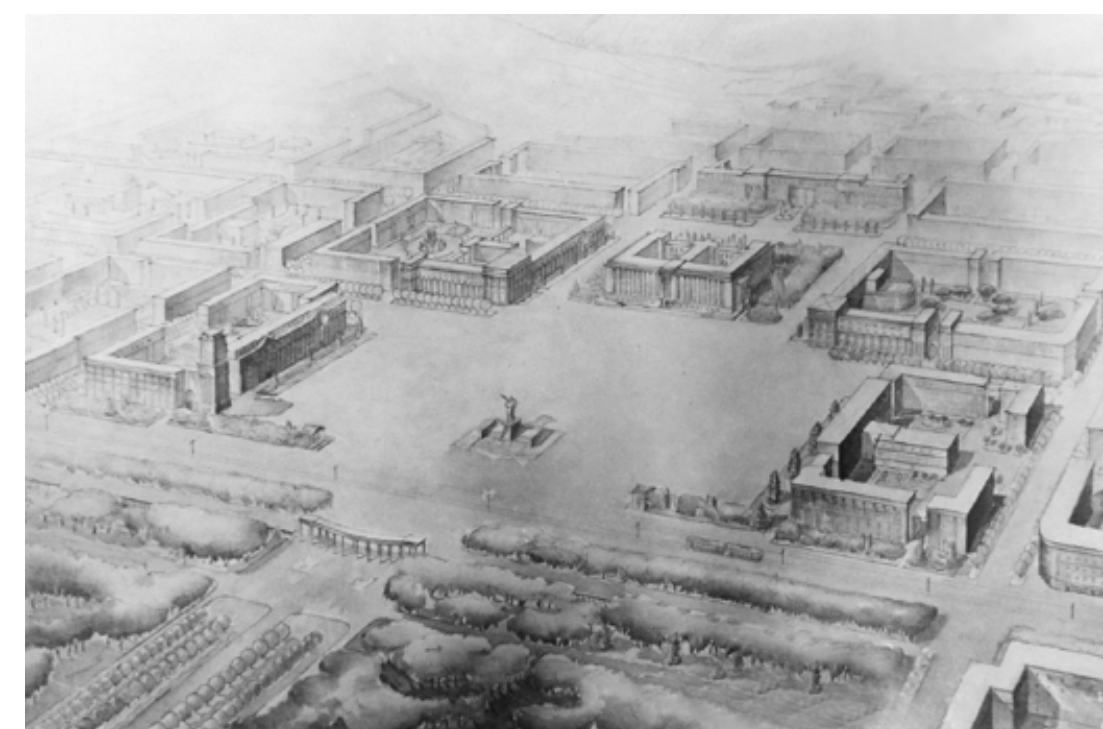
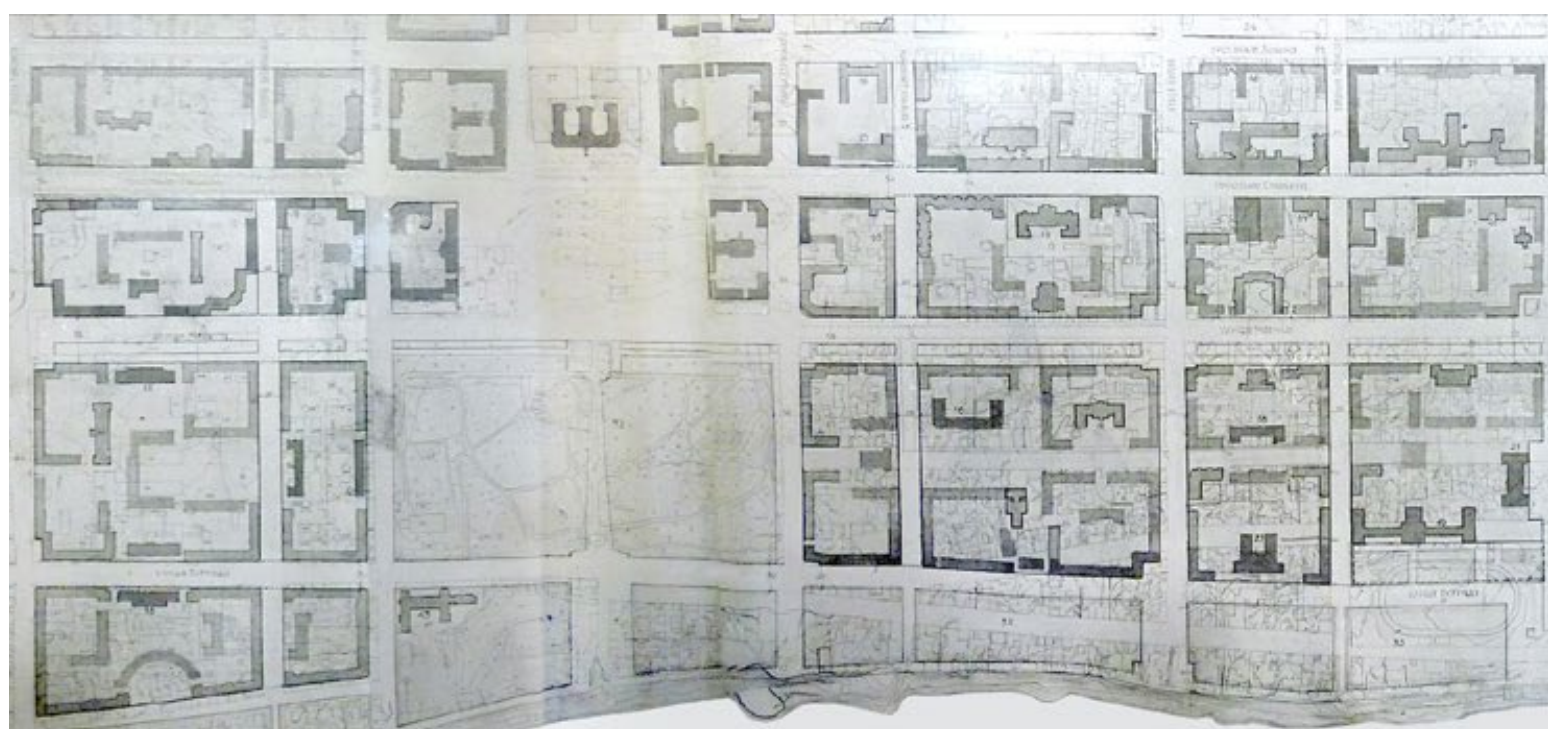
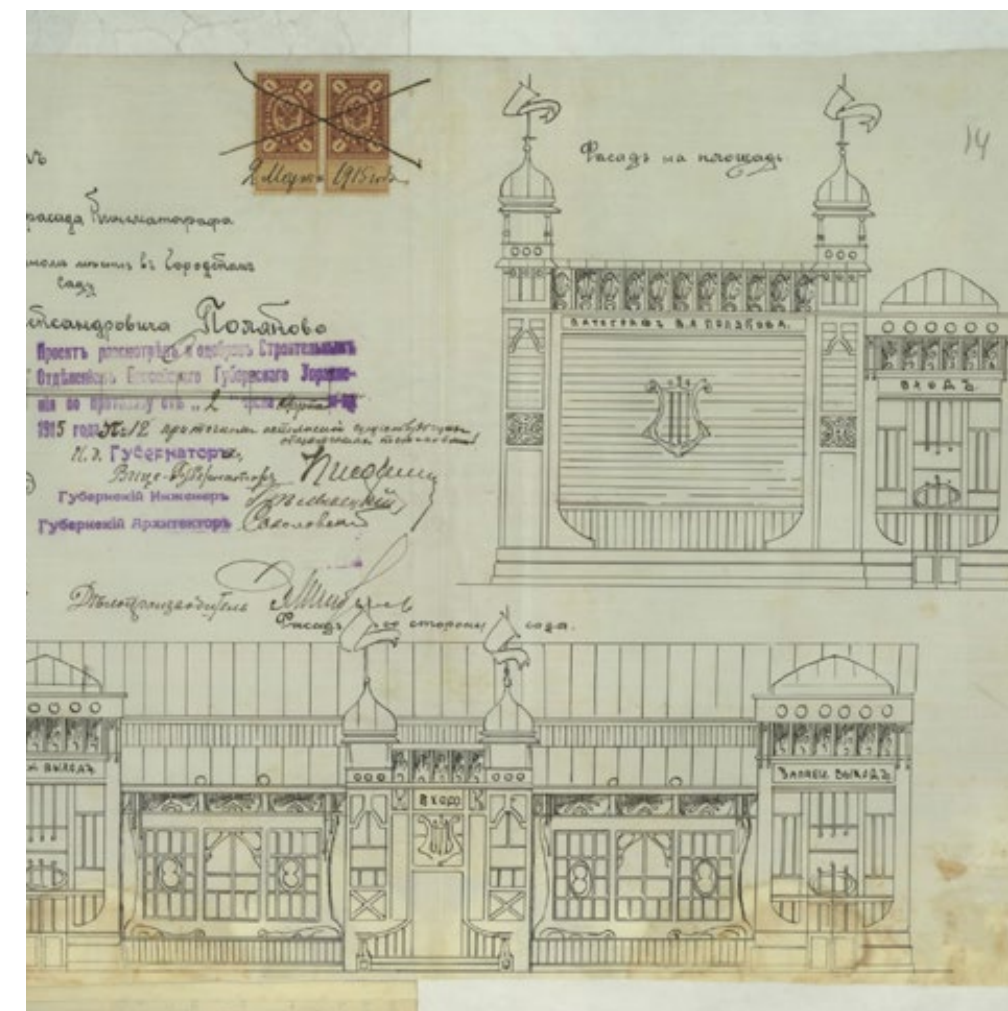














In the main provisions of the modern general plans there is a proposal for creation of a Unified System of Green Infrastructure of the city, where islands, new embankments of the Yenisei, forest parks, suburban woodlands will be included.





# HISTORICAL AND CULTURAL BASE PLAN





The nature of Krasnoyarsk is unique!



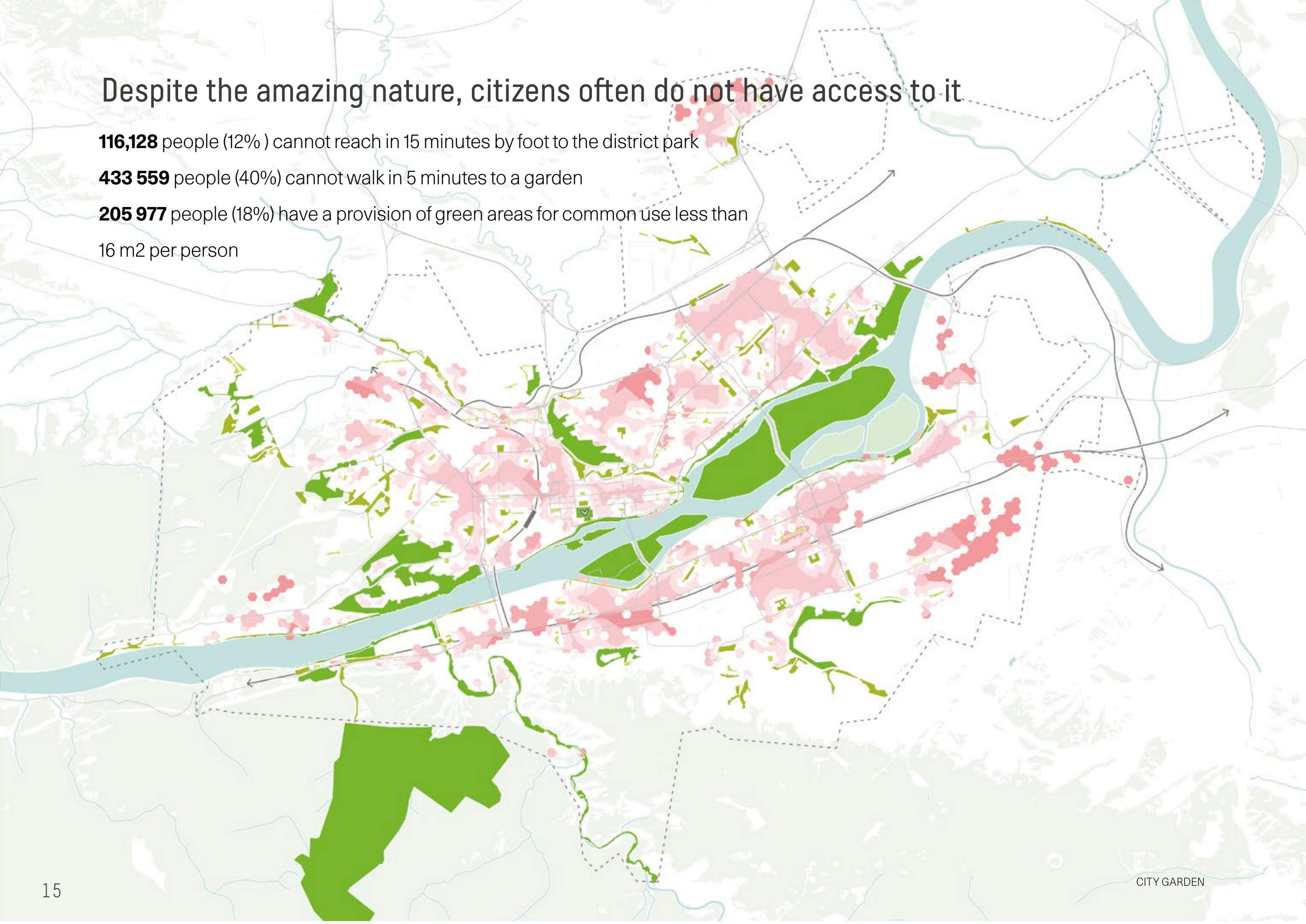


## Despite the amazing nature, citizens often do not have access to it

**116,128** people (12% ) cannot reach in 15 minutes by foot to the district park

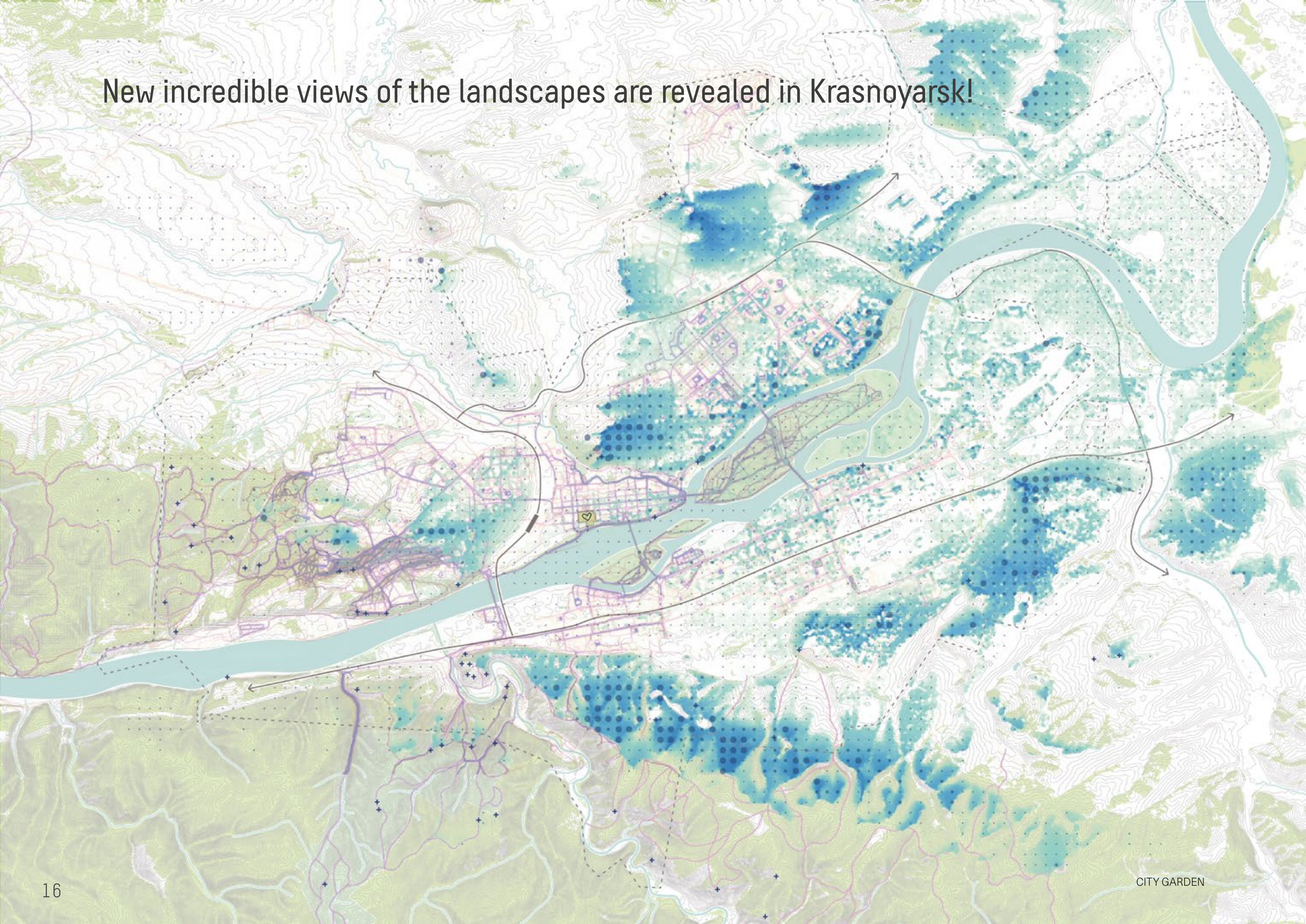
**433 559** people (40%) cannot walk in 5 minutes to a garden

**205 977** people (18%) have a provision of green areas for common use less than 16 m<sup>2</sup> per person





New incredible views of the landscapes are revealed in Krasnoyarsk!



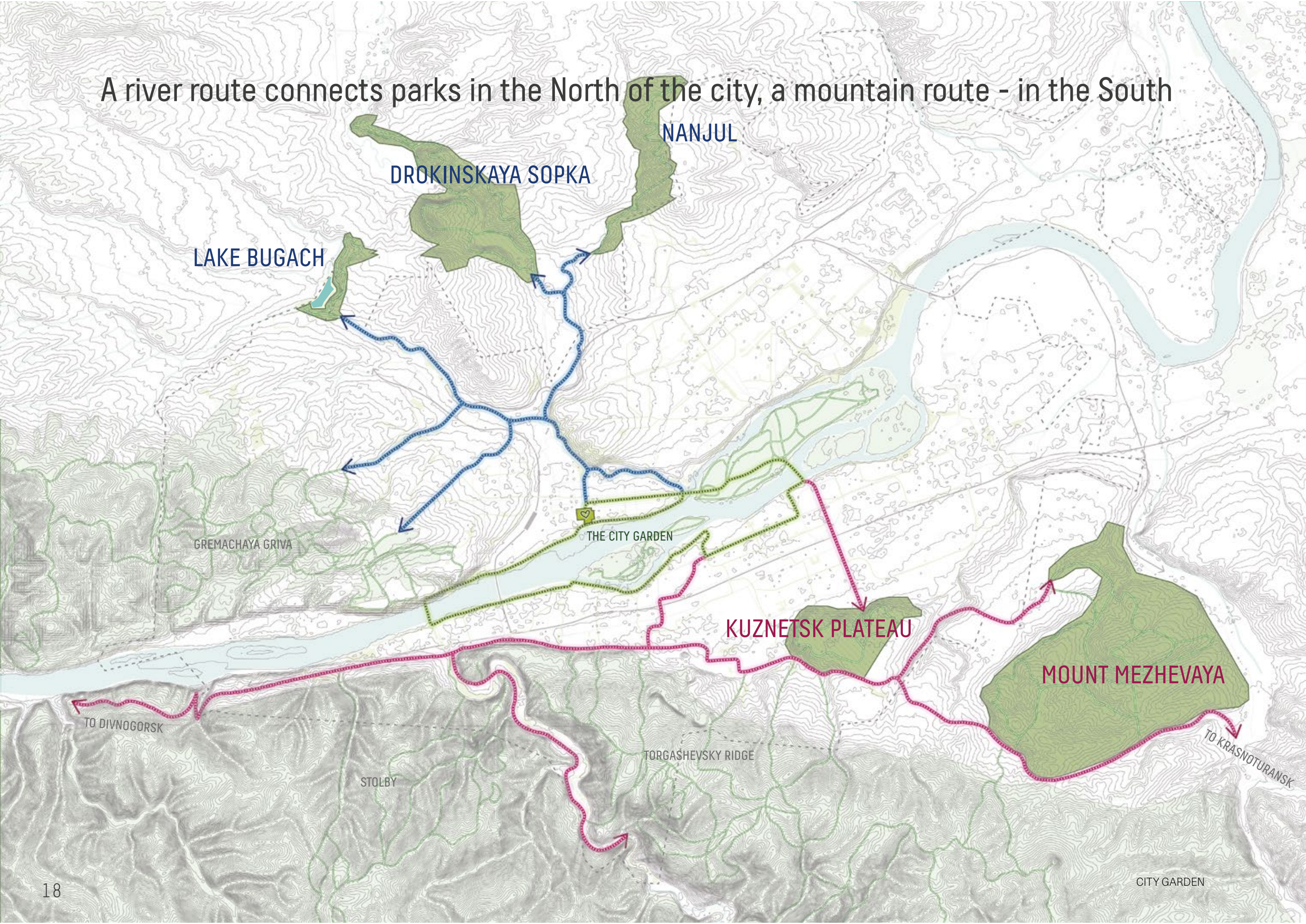


# Green infrastructure plan of Krasnoyarsk - 5 new regional parks, system of green routes, neighborhood parks connected to it





A river route connects parks in the North of the city, a mountain route - in the South



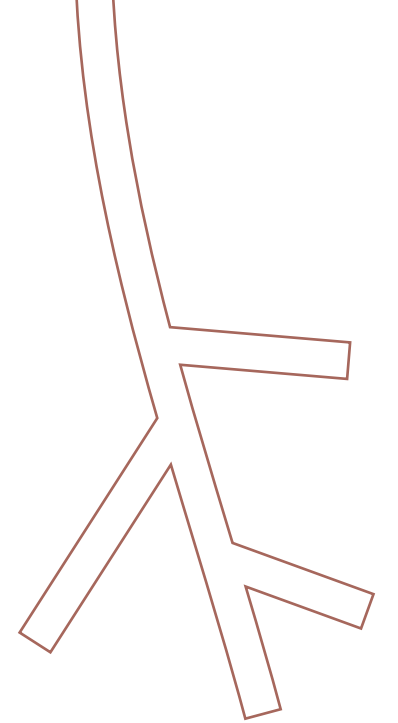
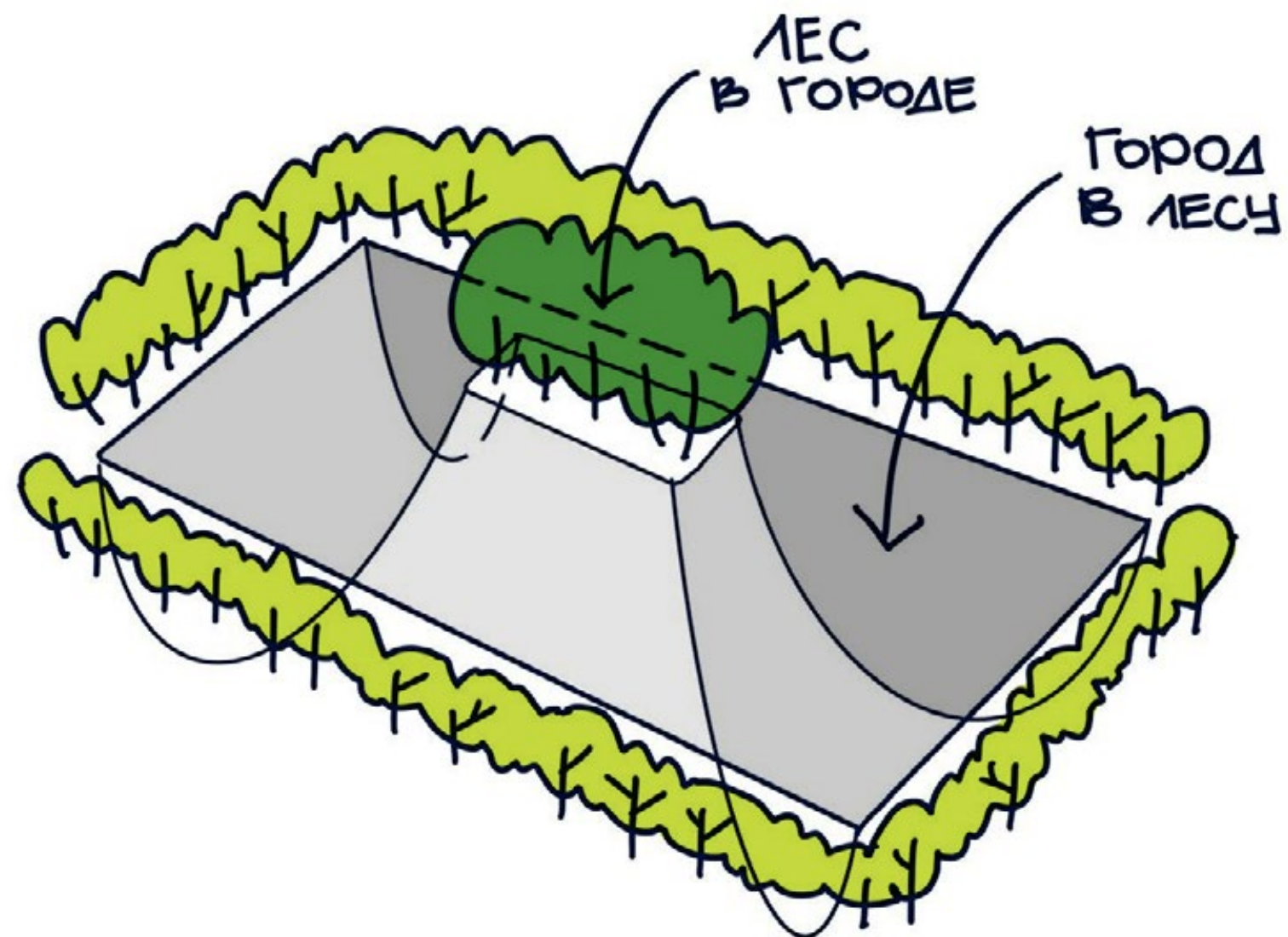


City Garden is the heart of green infrastructure of the city  
"Green belt" - 28 km + 8 new parks - connects left and right banks





# THE CONCEPT OF CITY GARDEN

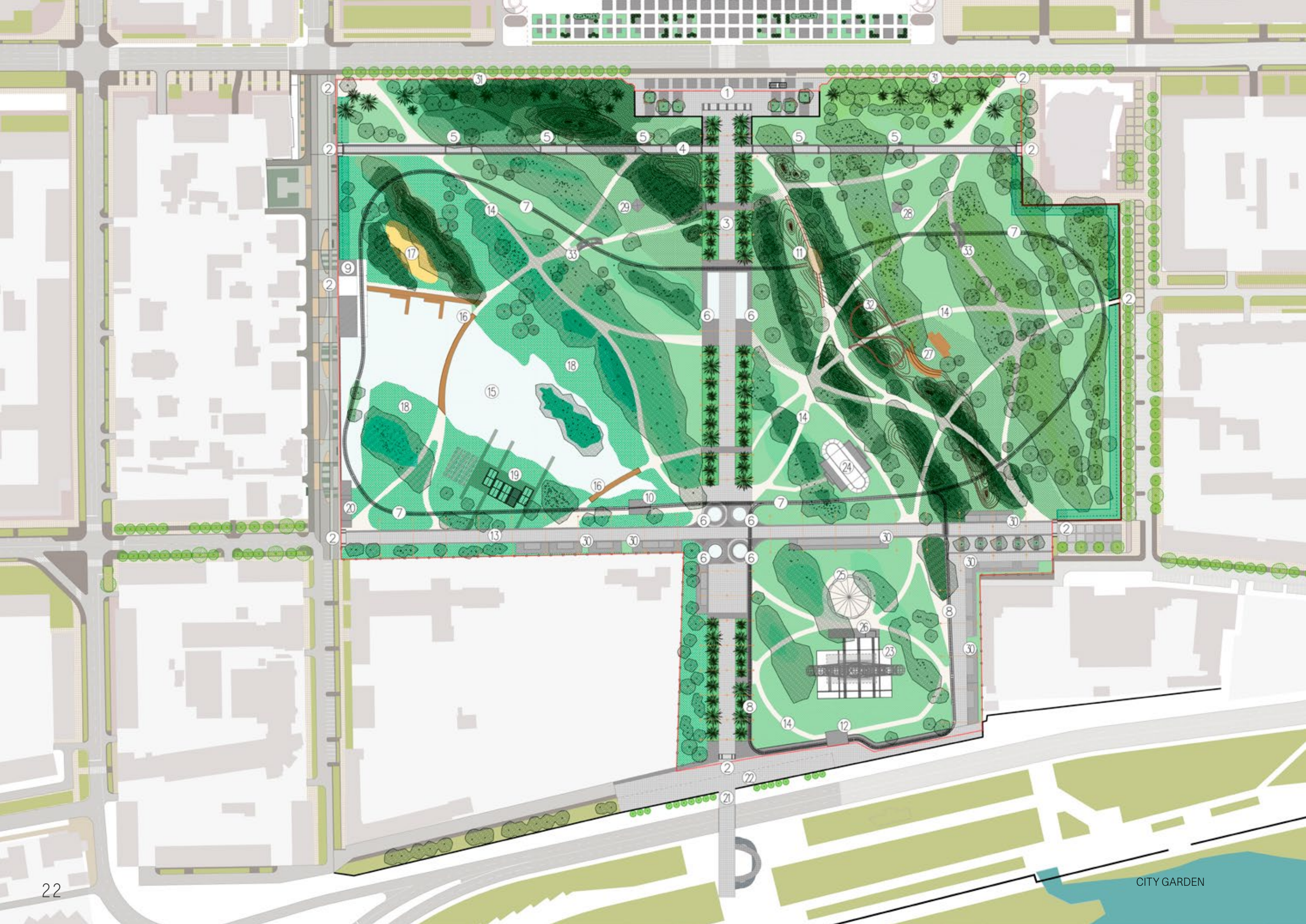




# MASTERPLAN

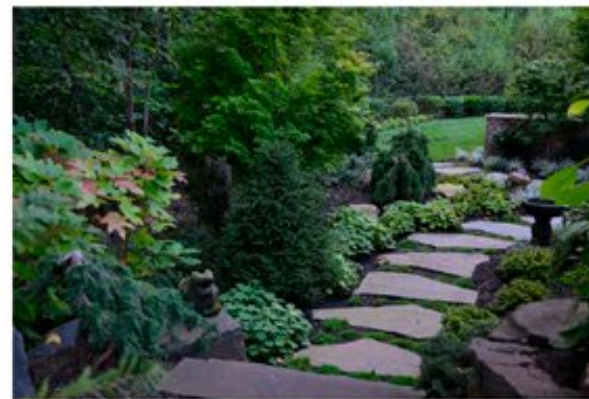








# The escapism



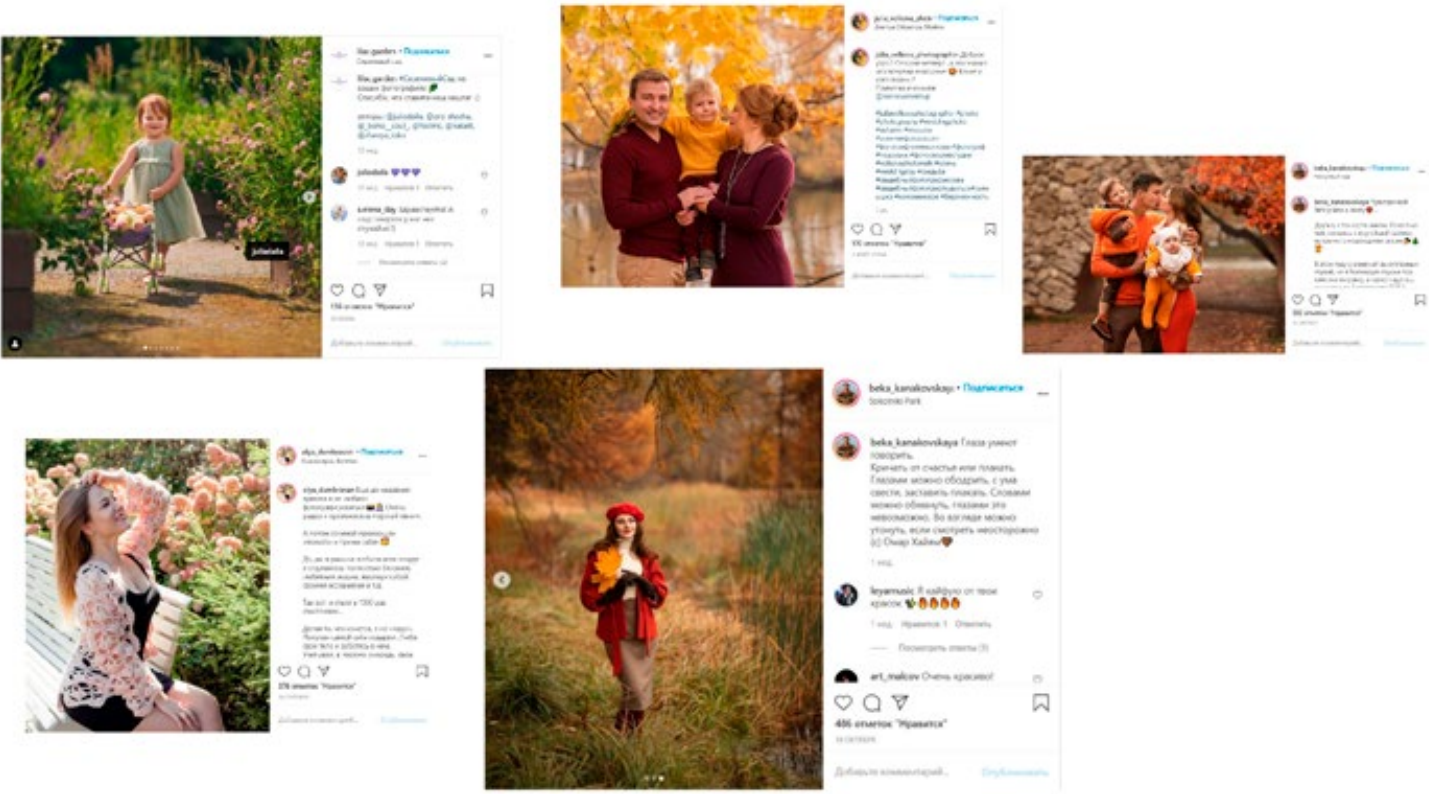


# Genius Loci





# The photogenicity



HE,



A...



HE,

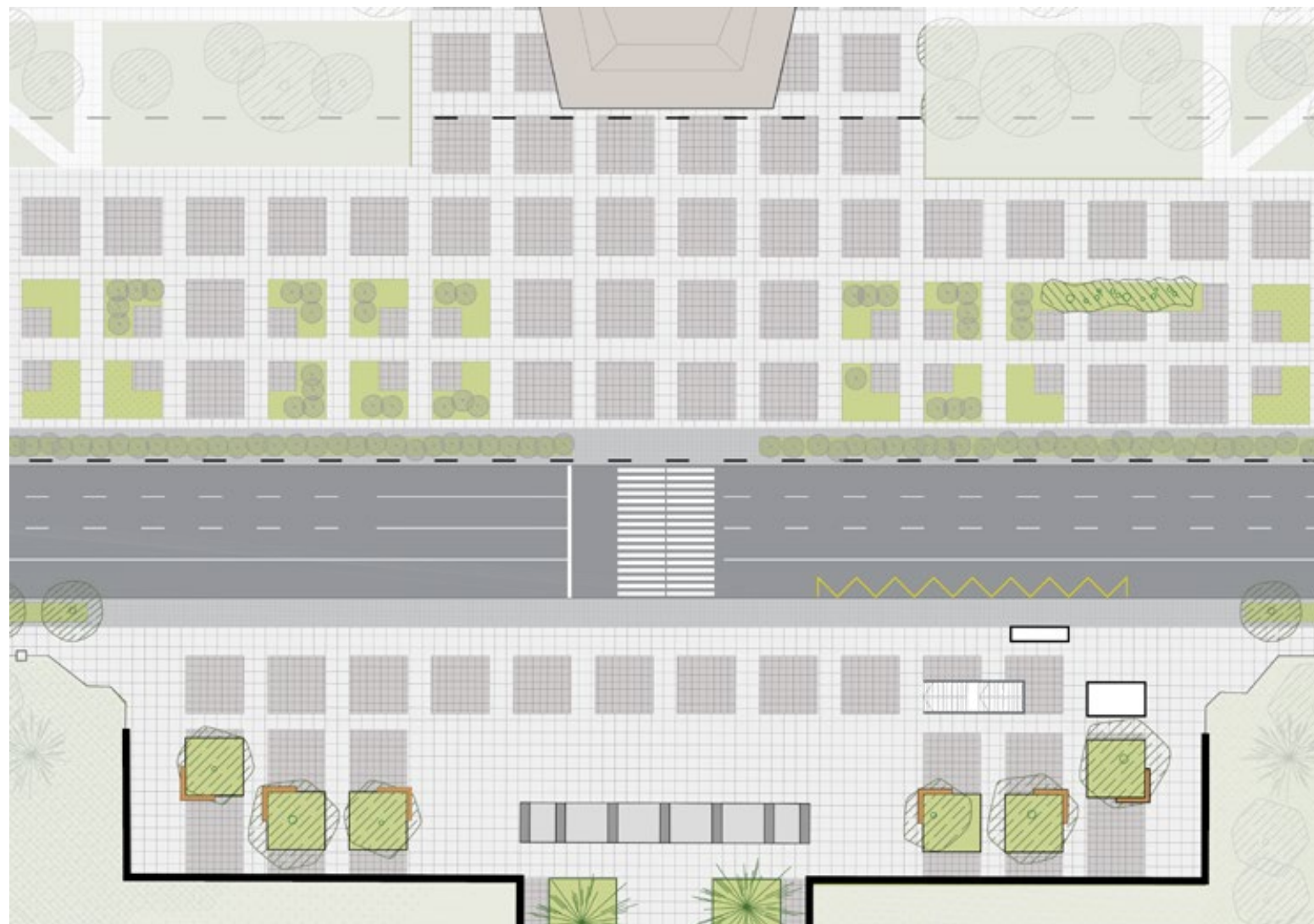


A...

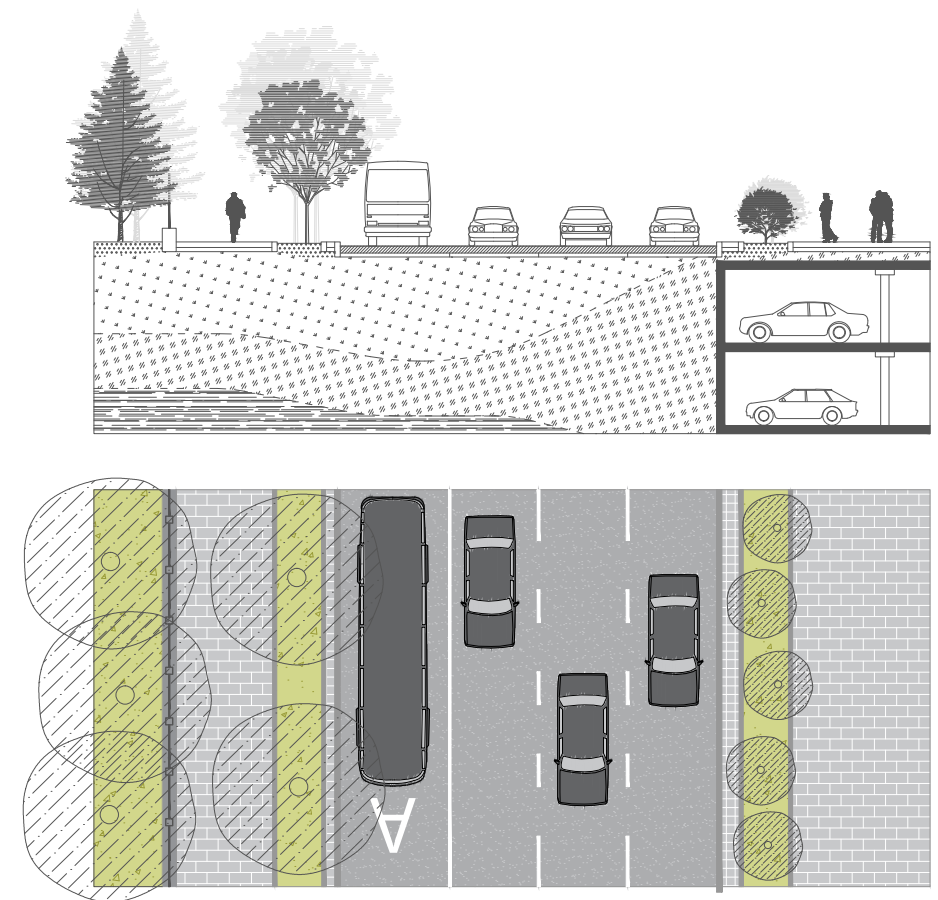




# External transport



Fragment of the plan of Karl Marx street in the area of Revolution square



Fragment of the plan and profile of Karl Marx street



The main axis





## Sadovaya street

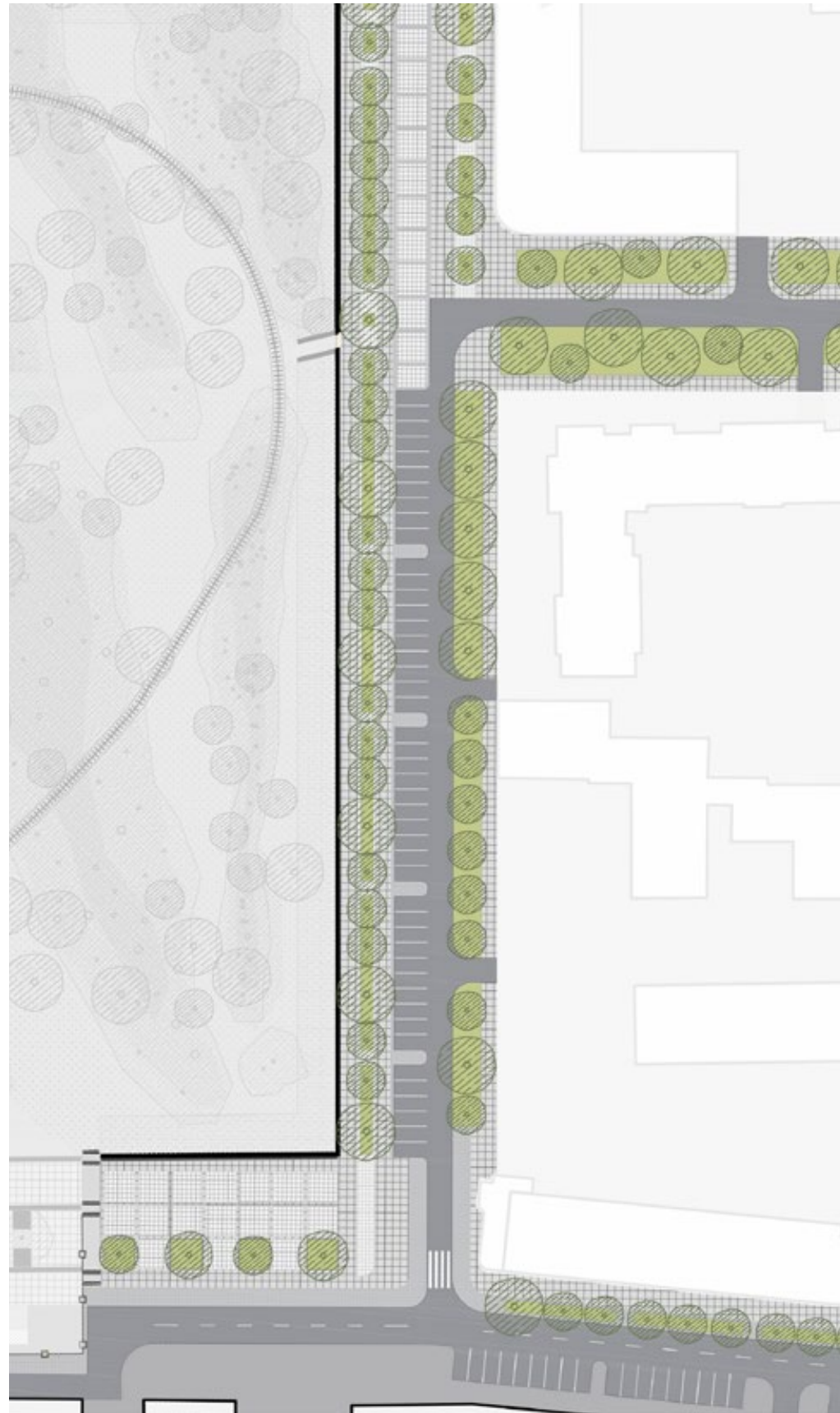
The second important urban path that runs through the garden is a fragment of Bograd street (historically - Sadovaya street). The importance of the path from the main railway station to Teatralnaya square, which runs parallel to the city's bustling thoroughfares, will increase many times in the coming years.



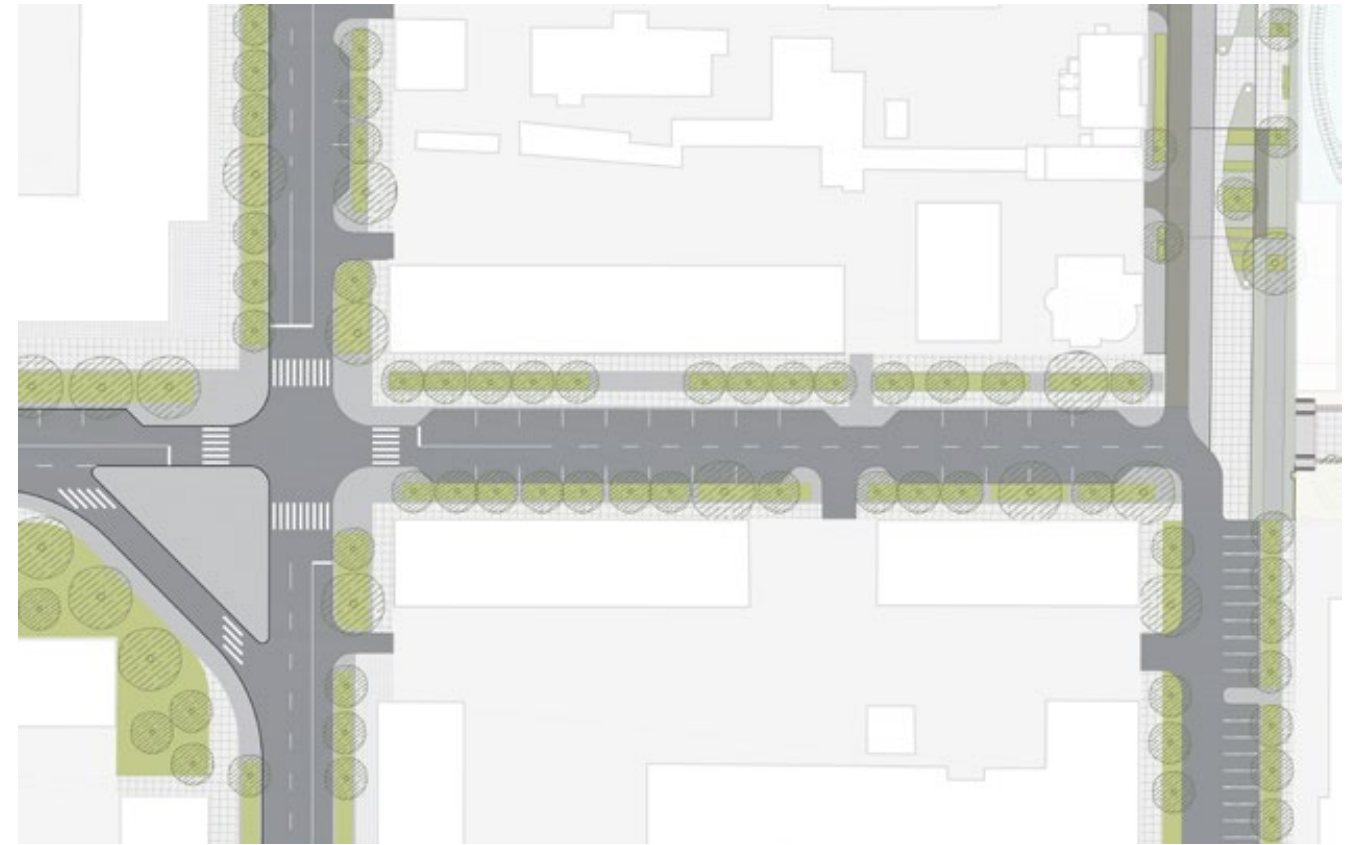
Visualization of Sadovaya street with a view of the Seminary building



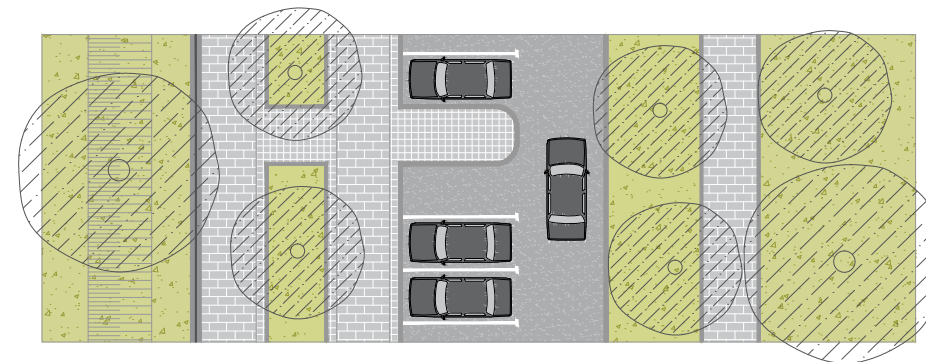
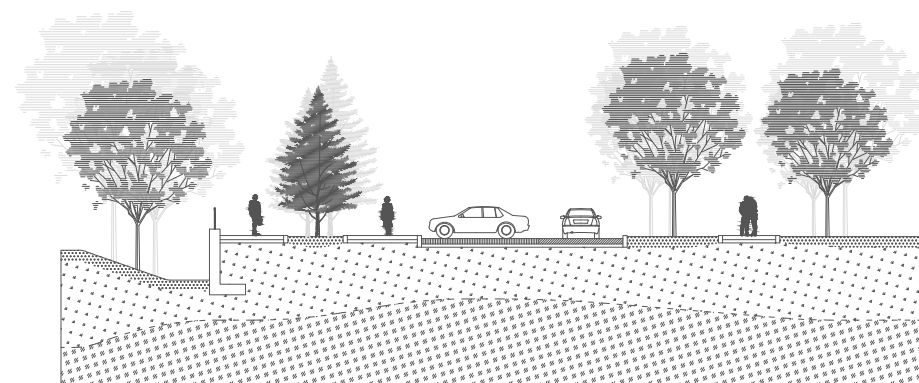
# Gorky and Dzerzhinskiy streets



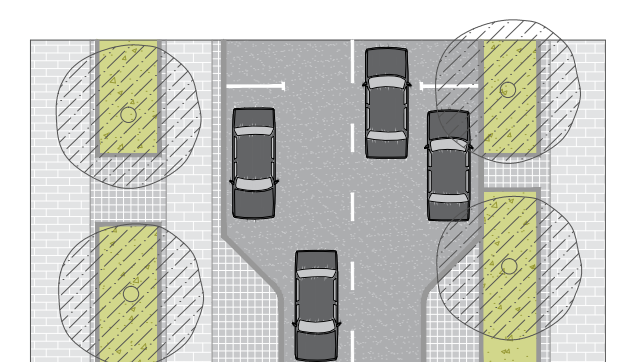
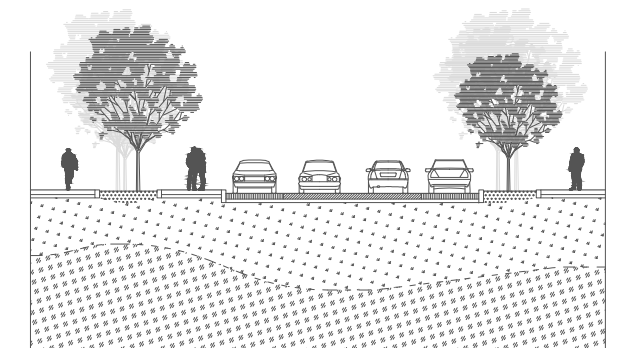
Space organization on Dzerzhinskiy street



Space organization on Bograda, Dekabristov, Gorkogo st.



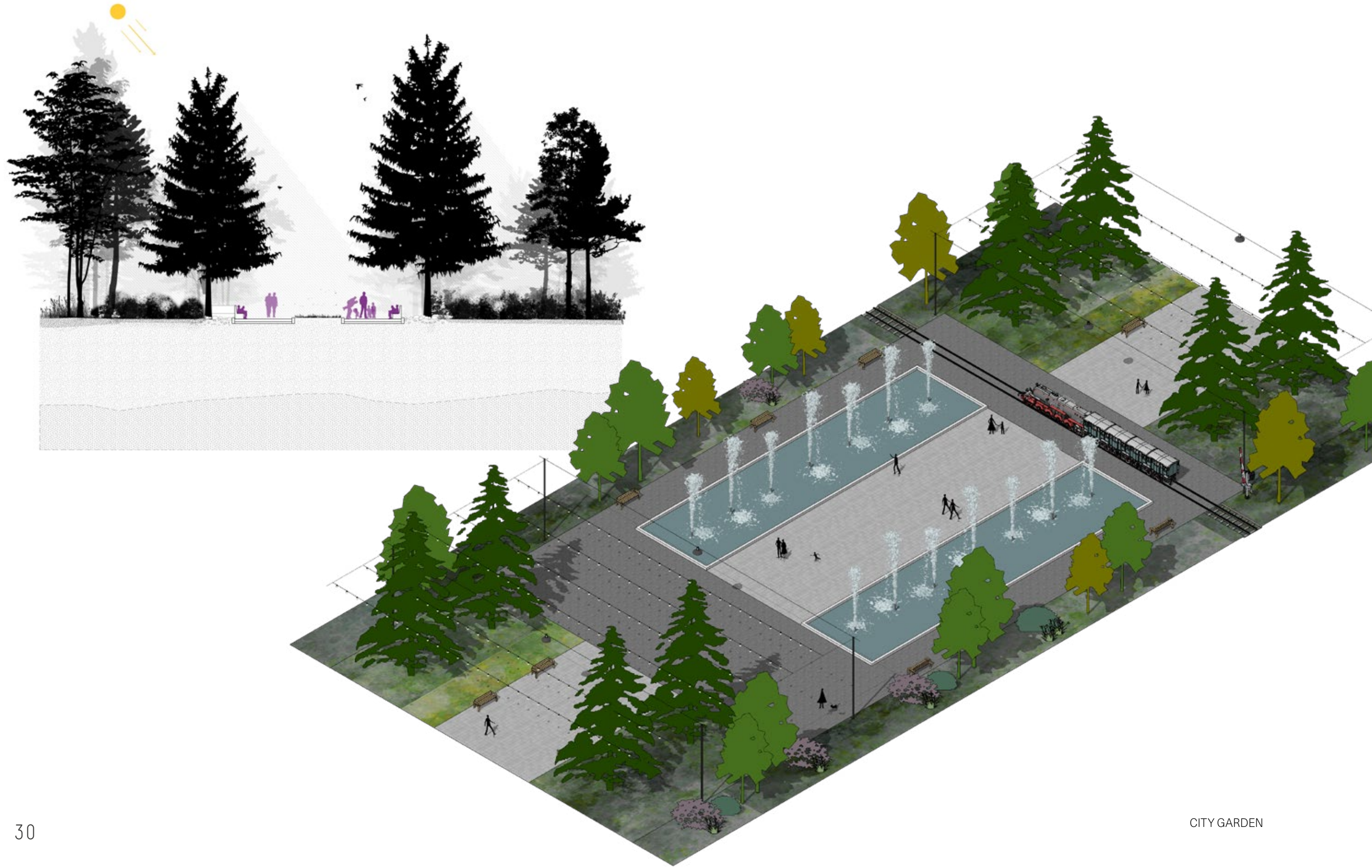
Fragment of the plan and profile of Dzerzhinskiy street



Fragment of the plan and profile of Bograda street

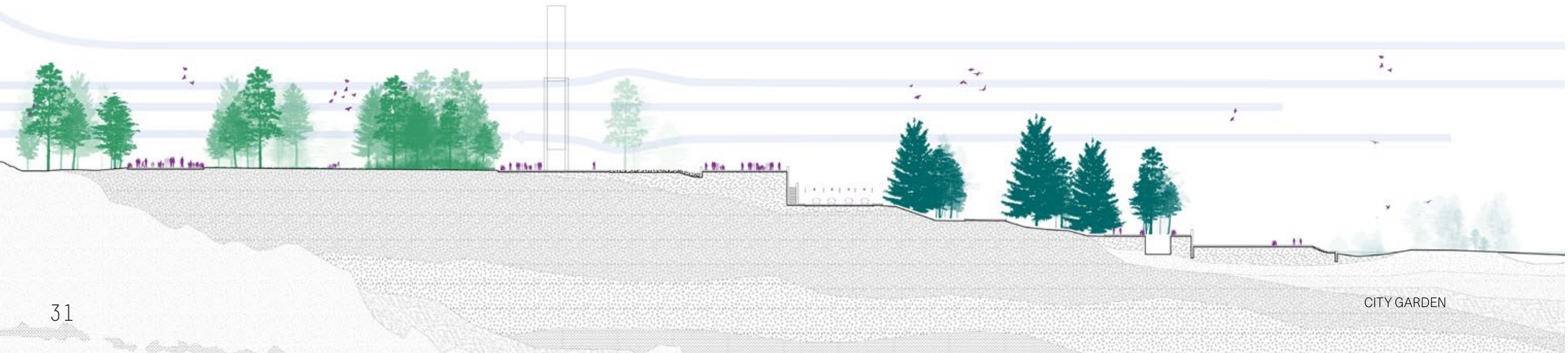
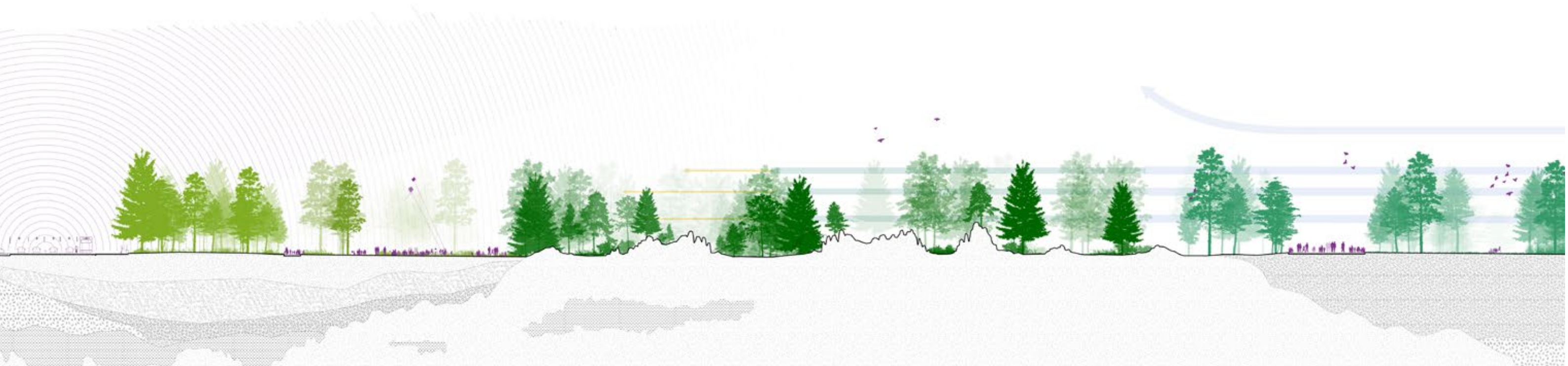


# Central alley

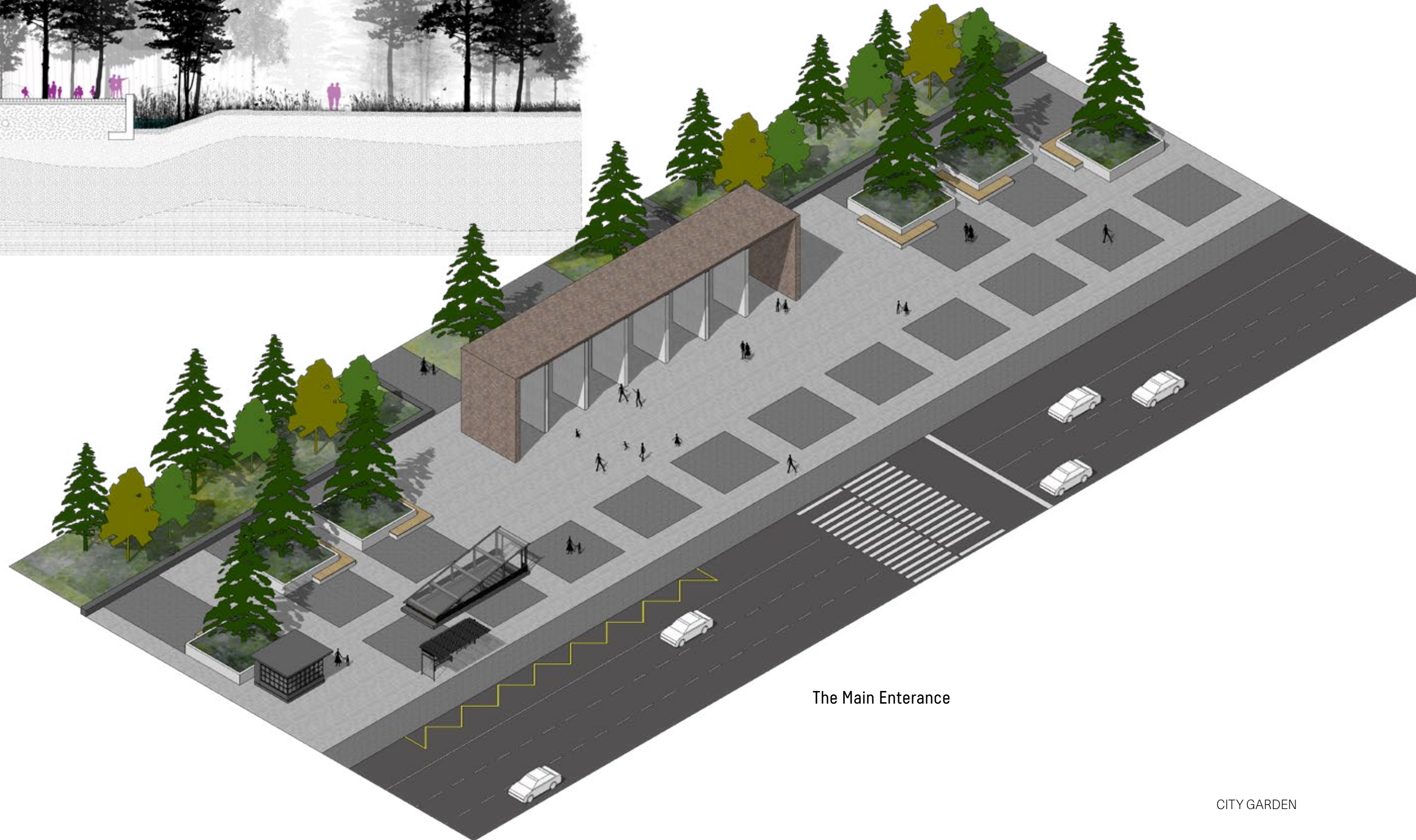
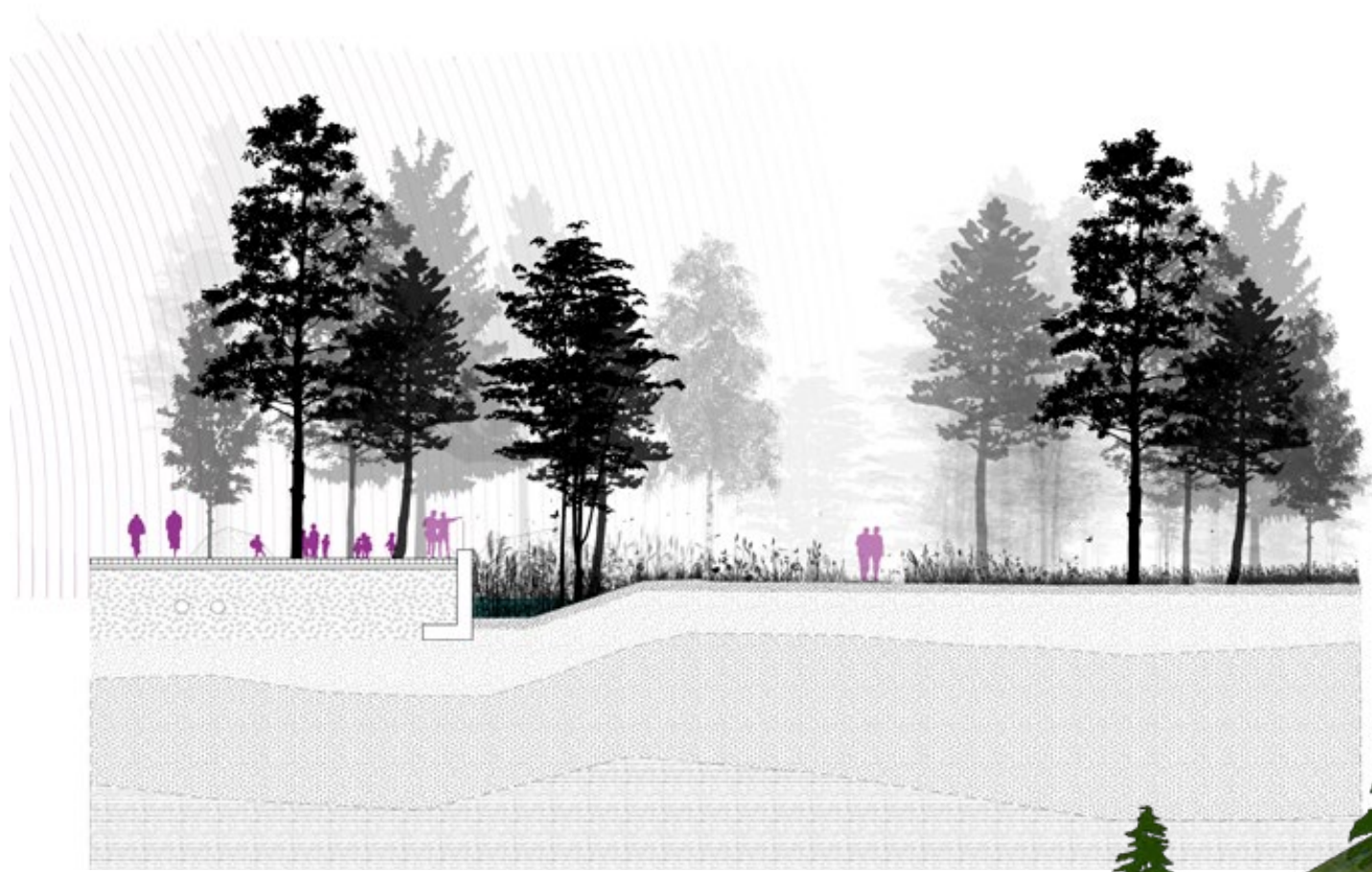




# Inside the Garden







The Main Entrance

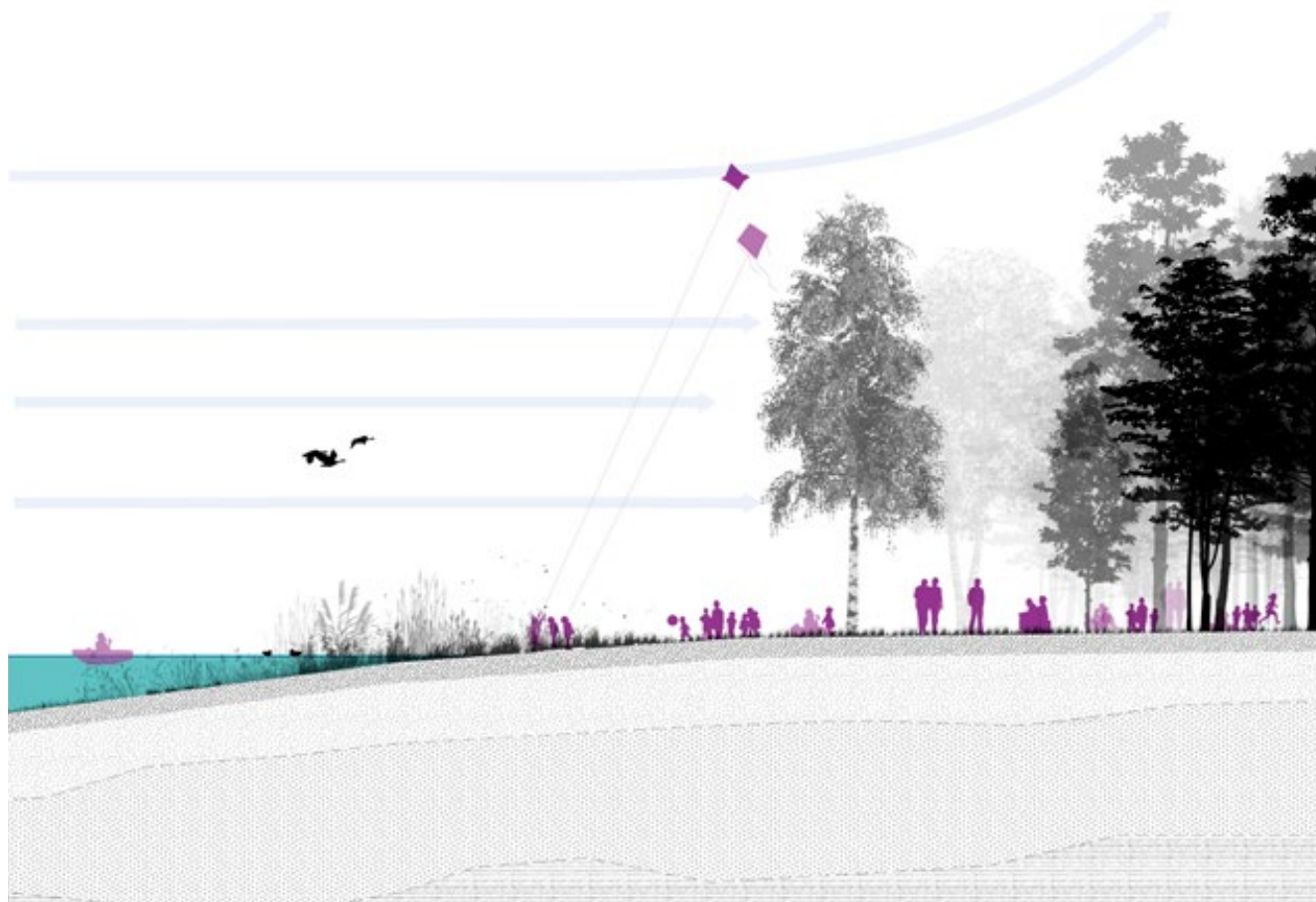




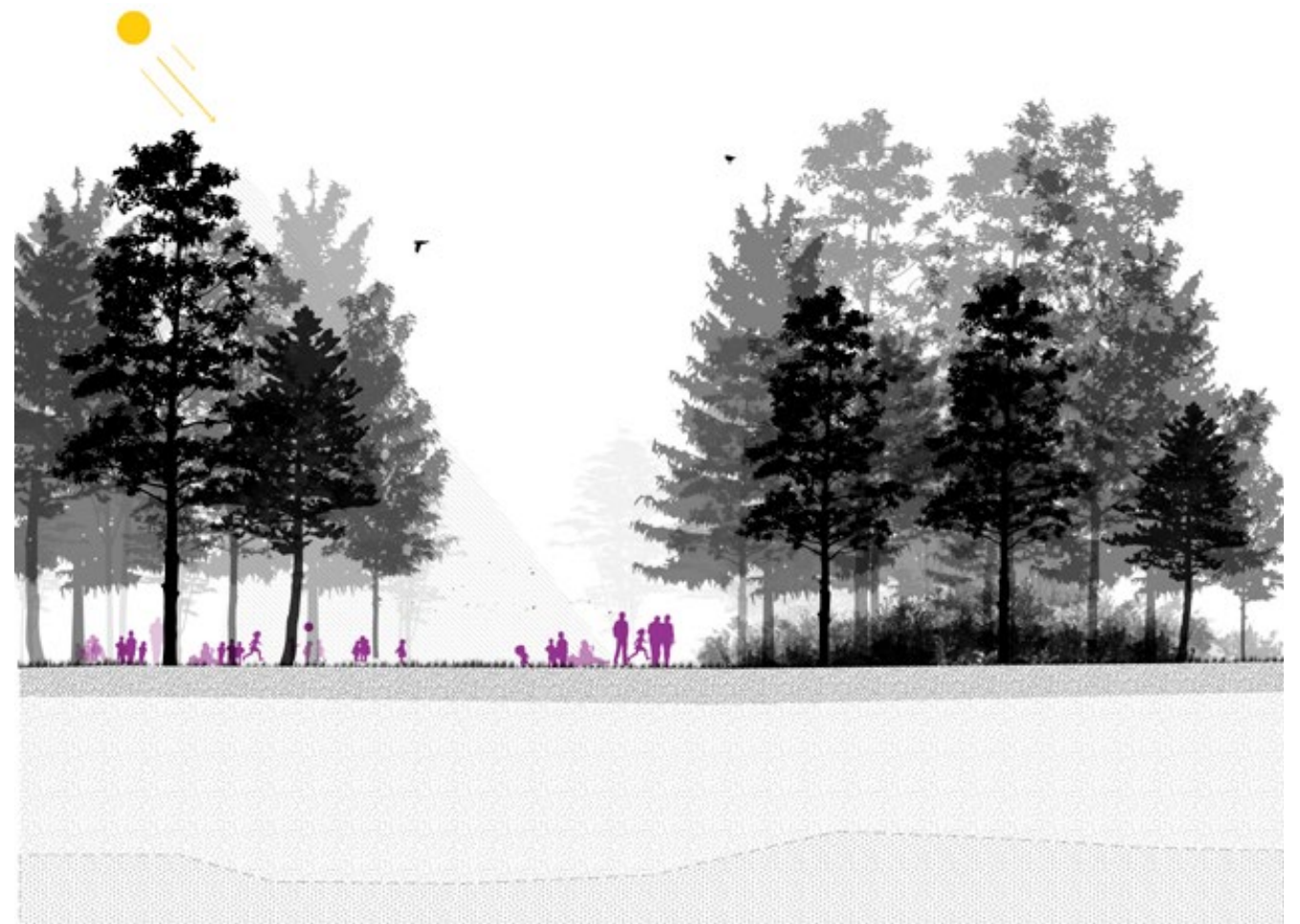








Green beach and the lake



The glade in a mixed forest







The rocks in a taiga forest

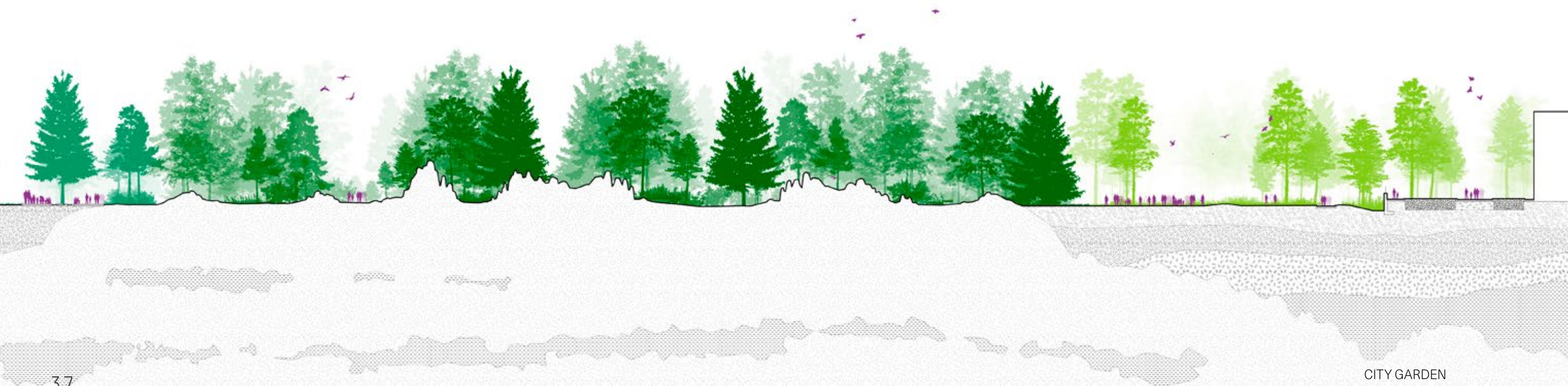
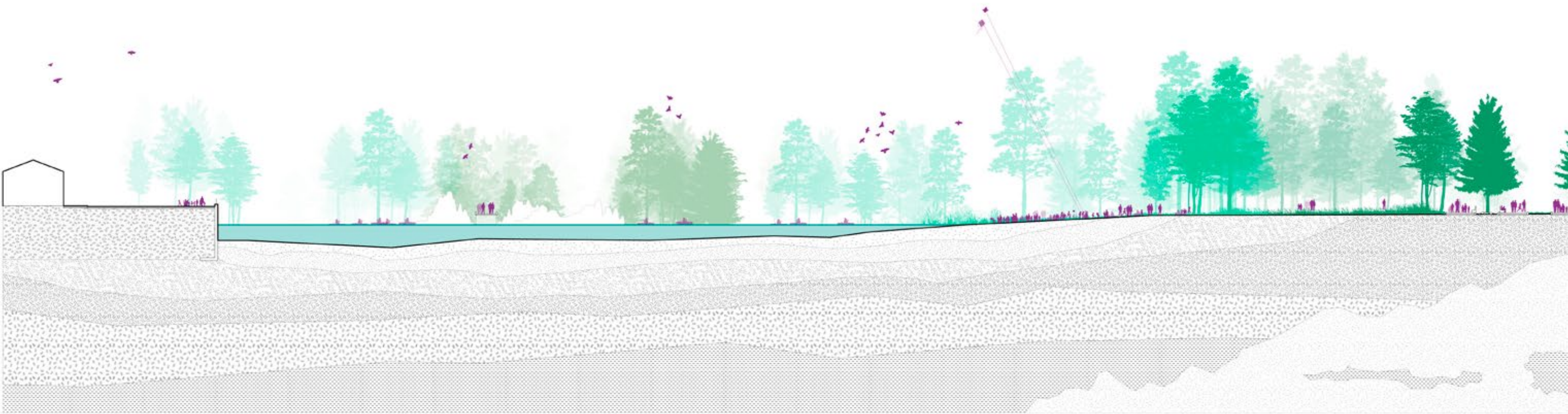


Forest-steppe





Cross-section



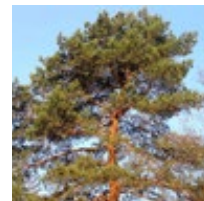


# List of plants

## Mixed forest

### Upper tree layer

### Lower tree layer



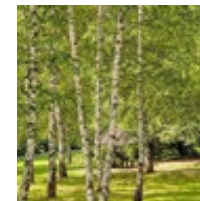
Сосна обыкновенная  
Scots pine  
*Pinus sylvestris*



Лиственница  
сибирская  
Siberian larch  
*Larix sibirica*



Осина дрожащая  
European aspen  
*Populus tremula*



Береза повислая  
European white birch  
*Betula pendula*



Черемуха  
обыкновенная  
Bird cherry  
*Prunus padus*



Боярышник  
сибирский  
Siberian hawthorn  
*Crataegus sanguinea*

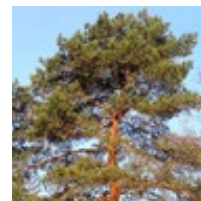


Груша уссурийская  
Ussurian pear  
*Pyrus ussuriensis*

## Taiga



Пихта сибирская  
Siberian fir  
*Abies sibirica*



Сосна обыкновенная  
Scots pine  
*Pinus sylvestris*



Лиственница  
сибирская  
Siberian larch  
*Larix sibirica*



Ель сибирская  
Siberian spruce  
*Picea obovata*



Рябина сибирская  
Siberian rowan  
*Sorbus sibirica*

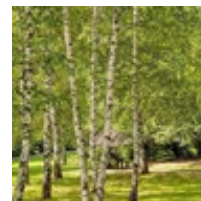


Рябина  
обыкновенная  
Rowan  
*Sorbus aucuparia*

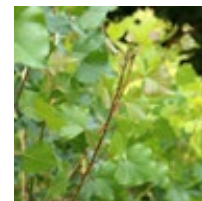
## Forest-steppe



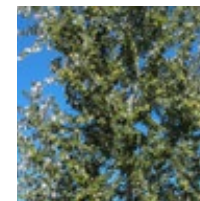
Осина дрожащая  
European aspen  
*Populus tremula*



Береза повислая  
European white birch  
*Betula pendula*



Тополь черный  
Black poplar  
*Populus nigra*



Тополь белый  
Silver poplar  
*Populus alba*



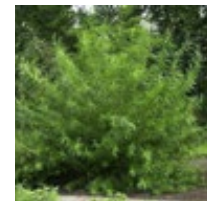
Боярышник  
сибирский  
Siberian hawthorn  
*Crataegus sanguinea*



# List of plants

## Shrubs, flowers and herbs

### Mixed forest



Ива прутовидная  
Basket willow  
*Salix viminalis*



Калина  
обыкновенная  
Guelder-rose  
*Viburnum opulus*



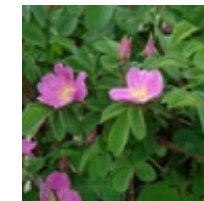
Облепиха  
крушиновидная  
Sea-buckthorn  
*Hippophaë rhamnoides*



Спирея средняя  
Russian spirea  
*Spirea media*



Кизильник черно-  
плодный  
Black-fruited  
cotoneaster  
*Cotoneaster melanocarpus*



Шиповник иглистый  
Arctic rose  
*Rosa acicularis*



Дёрен белый  
Siberian dogwood  
*Swida alba*

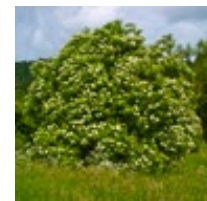


Колокольчик  
широколопастный  
"Alba"  
Great bellflower 'Alba'  
*Campanula latiloba*

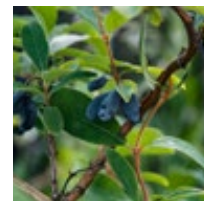


Щитовник мужской  
Male fern  
*Dryopteris filix-mas*

### Taiga



Бузина чёрная  
Black elder  
*Sambucus nigra*



Жимолость Палласа  
Blue honeysuckle  
*Lonicera caerulea*



Щитовник мужской  
Male fern  
*Dryopteris filix-mas*

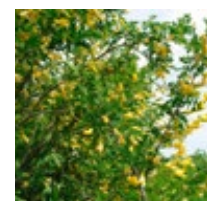


Майник двулистный  
May lily  
*Maianthemum bifolium*

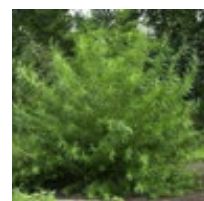


Кислица  
обыкновенная  
Common wood sorrel  
*Oxalis acetosella*

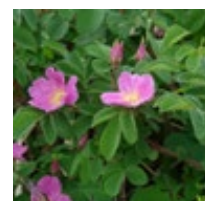
### Forest-steppe



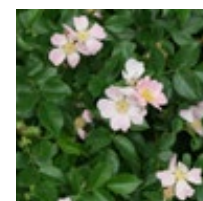
Карагана  
древовидная  
Siberian peashrub  
*Caragana arborescens*



Ива прутовидная  
Basket willow  
*Salix viminalis*



Шиповник иглистый  
Arctic rose  
*Rosa acicularis*



Шиповник собачий  
Dog rose  
*Rosa canina*



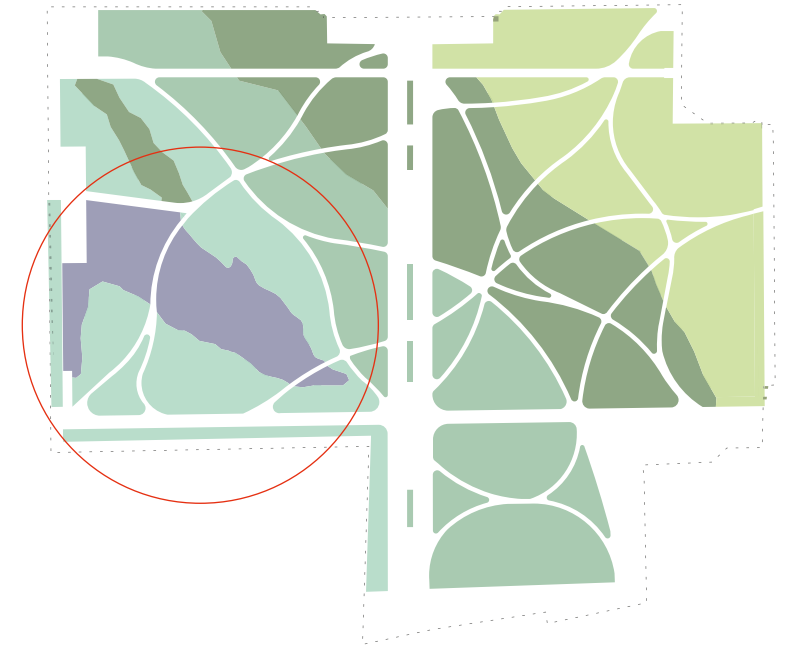
Тысячелистник  
обыкновенный  
Common yarrow  
*Achillea millefolium*



Подмаренник  
настоящий  
Yellow bedstraw  
*Galium verum*



# Pond







View from the lake of the railway station and the Historic quarter



# Children's school of young naturalists and a sensitive garden







Ice rink around the Christmas tree





Winter activities on the pond



## Objects, monuments and small forms. Common approach

The authors adhere to the decisions of the Venice Charter, which aims to preserve the monument as a work of art and as a witness to history. We believe that the boundaries of the Garden can only be guided by the principles of scientific restoration, and all newly constructed objects should be harmoniously integrated into the environment, but reflect the spirit of the present time. Nothing will preserve the Garden better than excluding capital construction within its borders.

For us, the recreating of a City garden is not a recreating of form, but of meaning. Only the garden fence on Karl Marx street has been preserved of the objects described in the subject of protection. We offer to restore it and leave it unchanged. The remaining objects are completely lost, and the scant evidence of them should be preserved and presented in the garden as Museum exhibits.



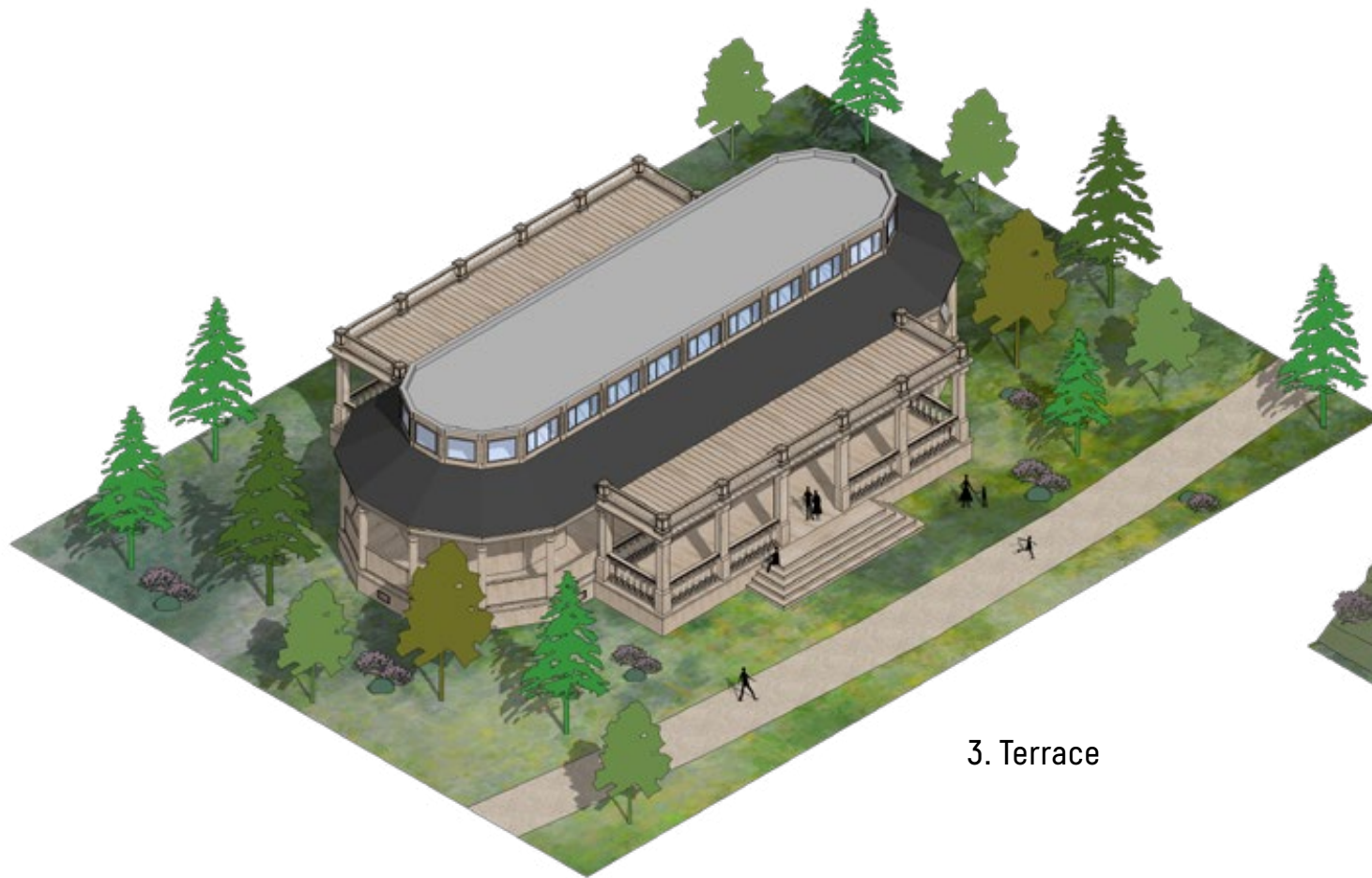
1. Arbour in Russian style



2. Chinese gazebo



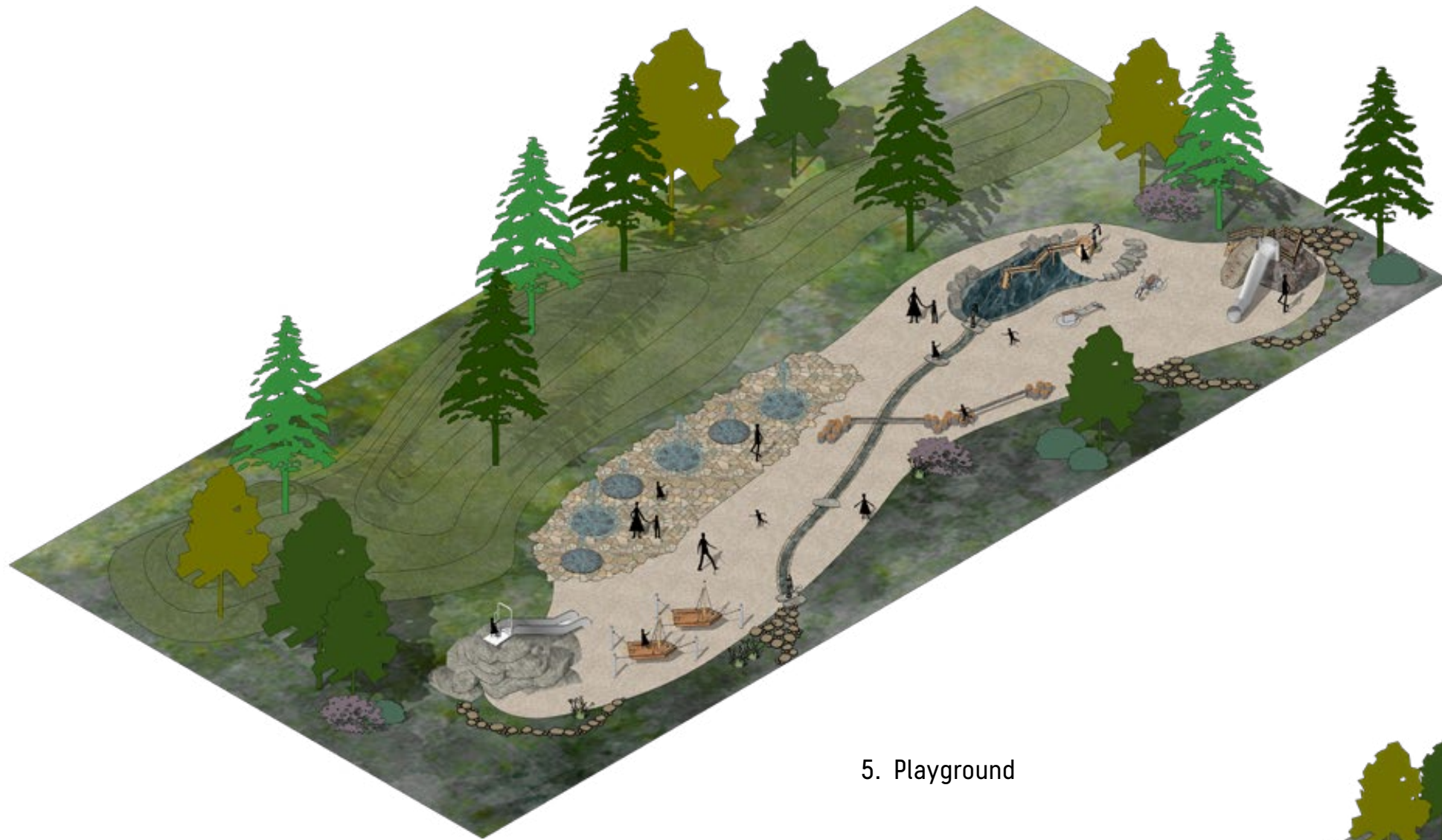
3. Terrace



4. Bandstand and amphitheater







5. Playground



6. Suspension bridge

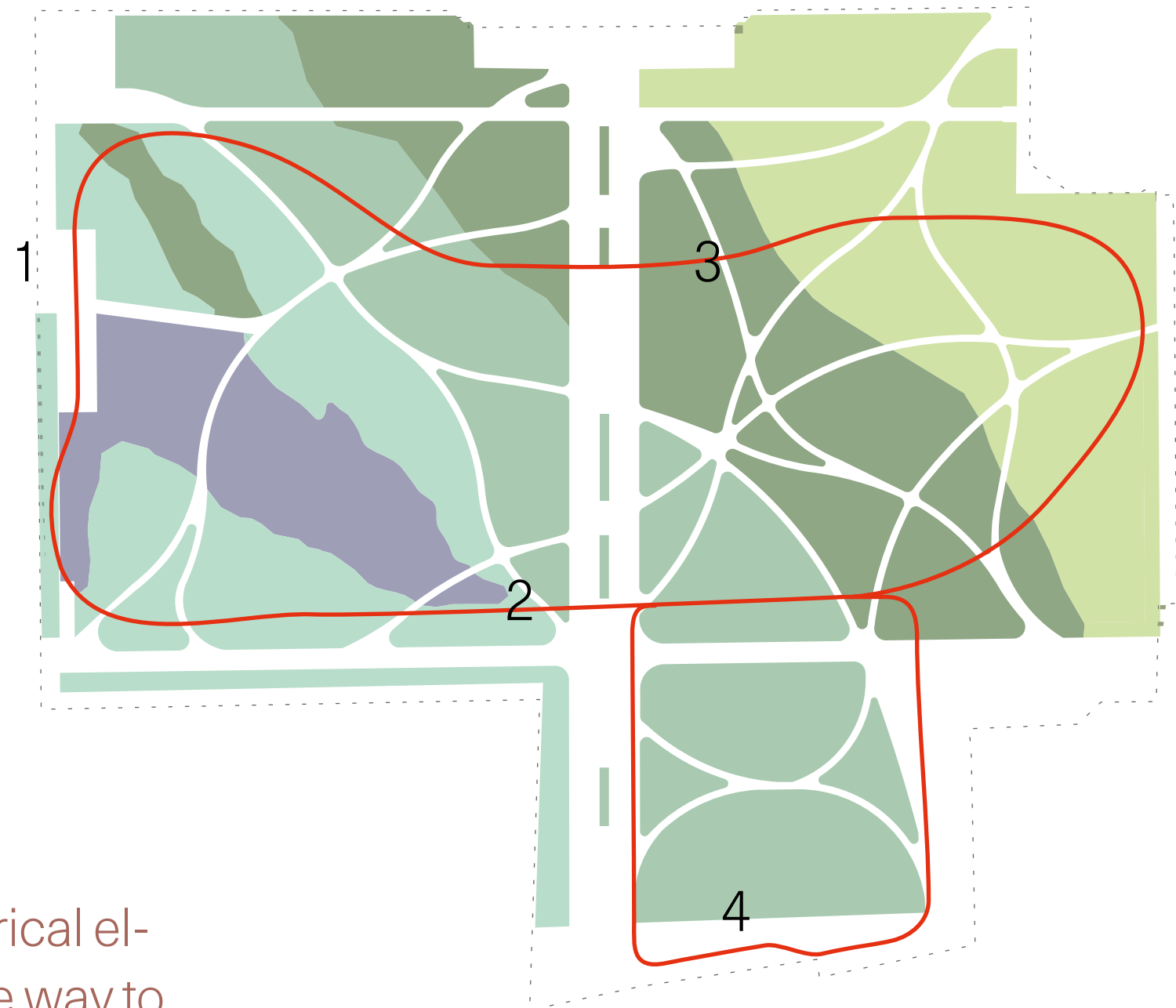




Suspension bridge



## Children's railway



The children's railway is not only a historical element of the Park, but also an alternative way to see it from the inside. A trip through the forest, along streets and ponds, over bridges, in grottoes and tunnels, a trip to the steep Bank of the Yenisei river with a sudden opening of the city panorama gives visitors a unique spatial experience.





Locomotive, 1954r.



Station "Pervomayskaya"



Depot building



Other station building

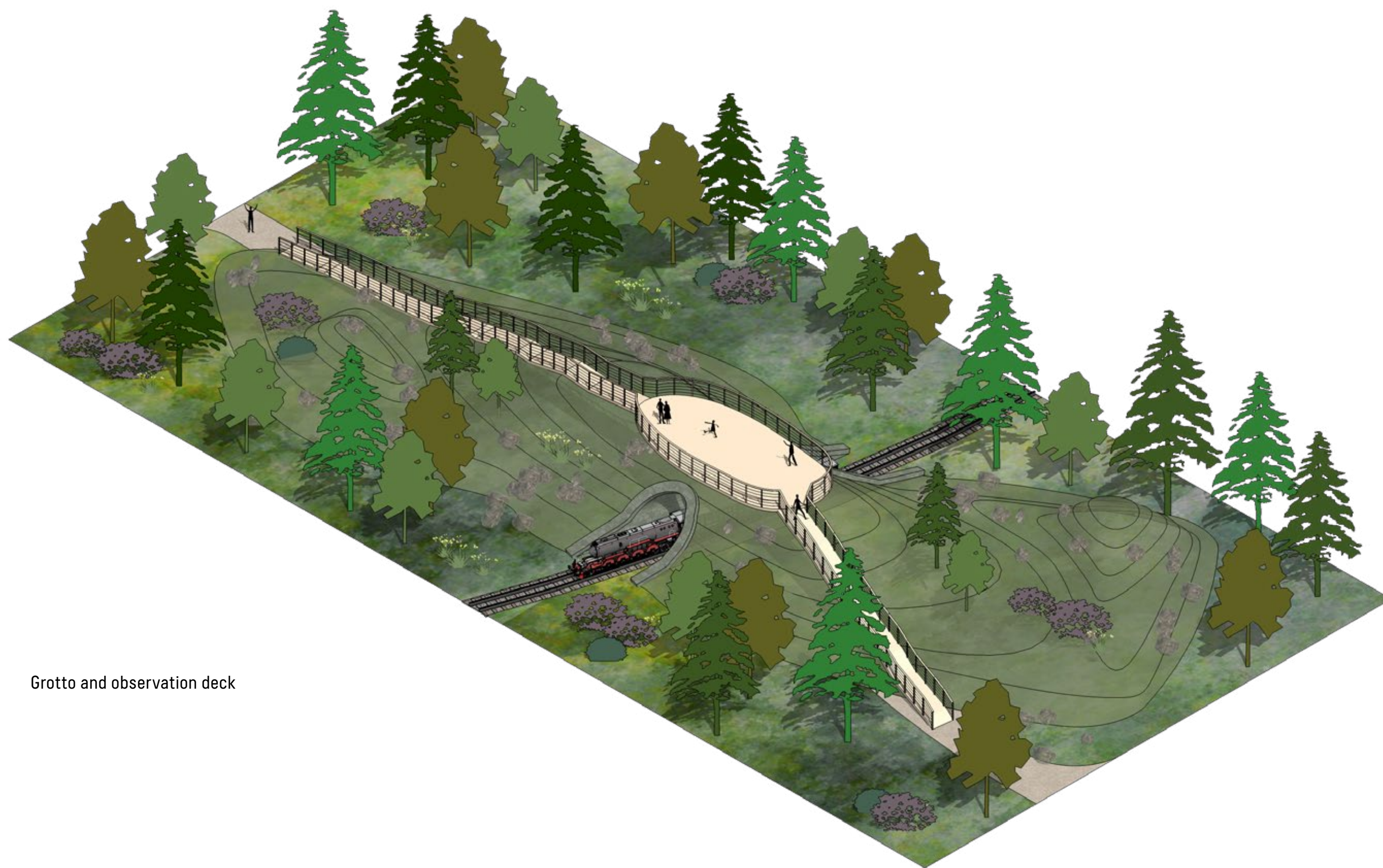


Main railway station



Bridge over the railway





Grotto and observation deck





Grotto and the forest station

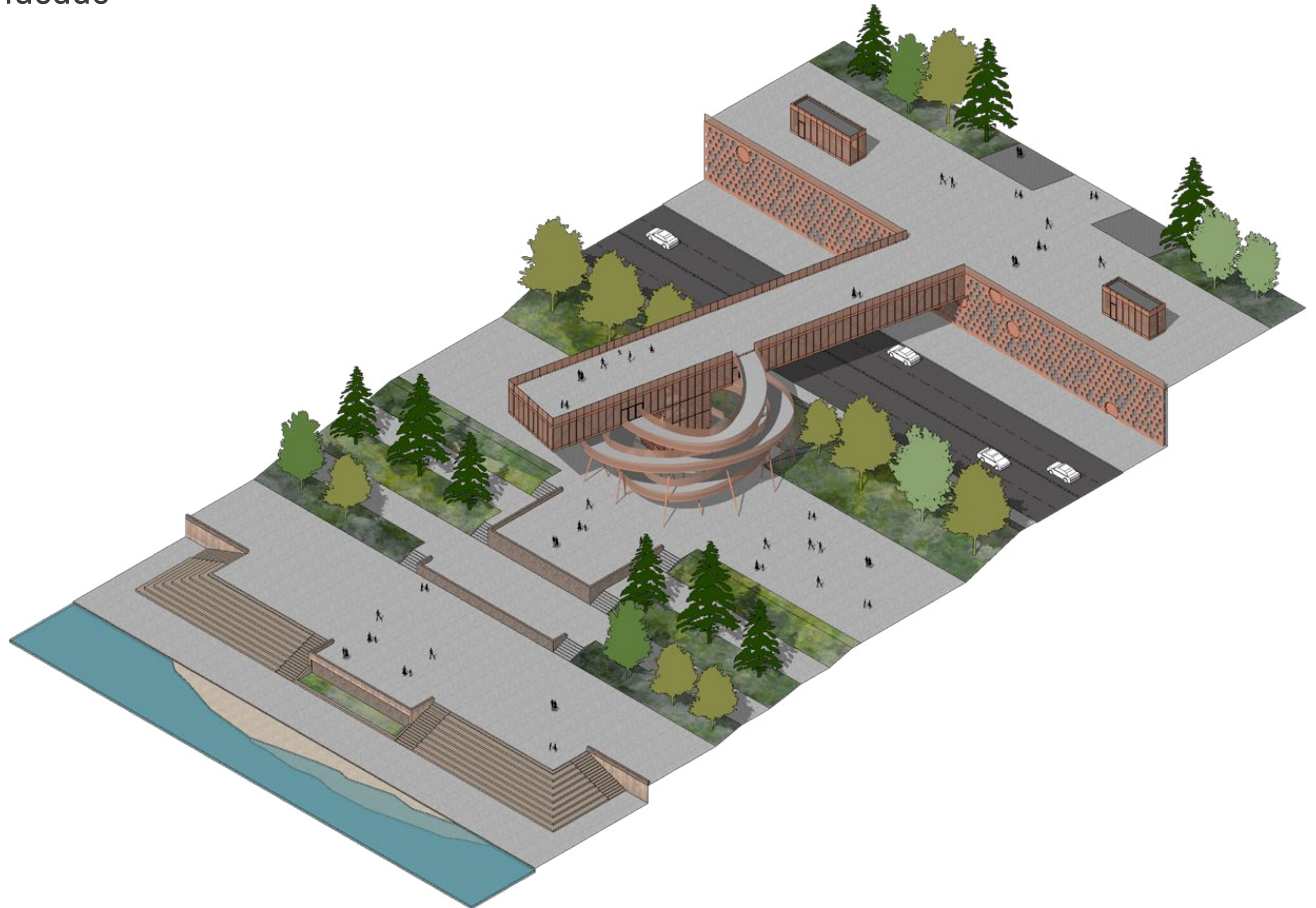


# Ferris wheel



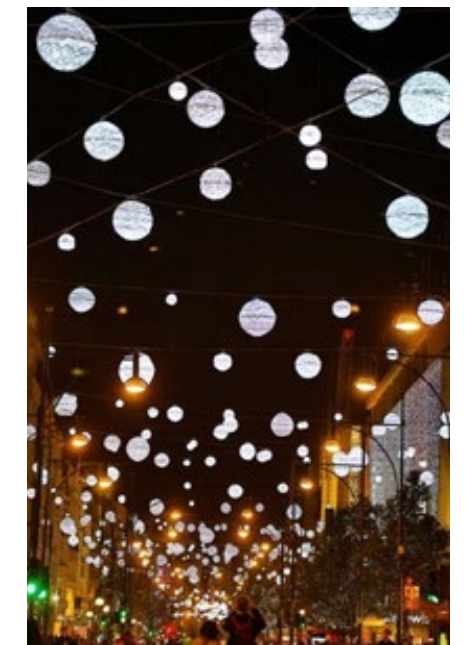
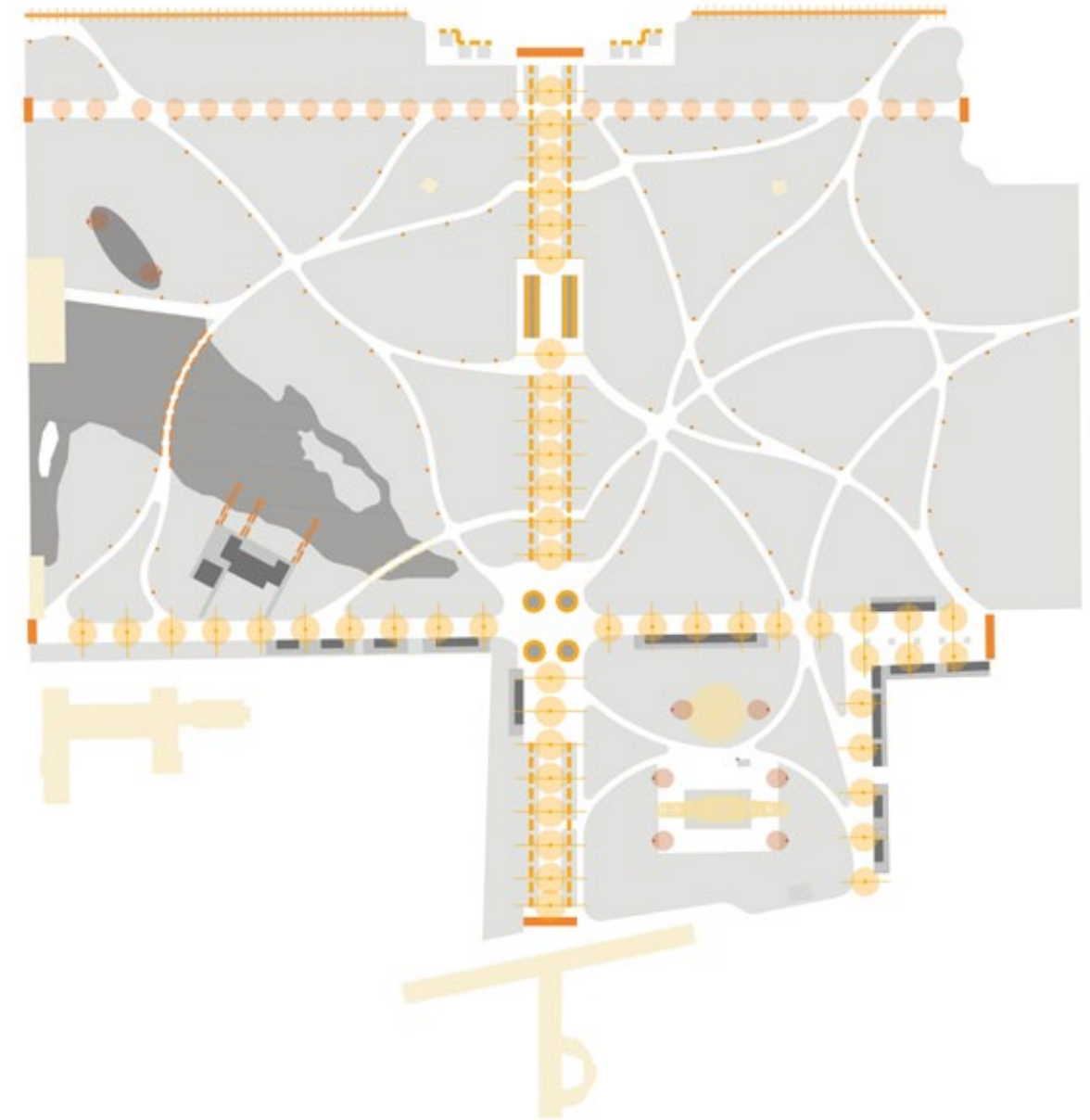


# River facade





# Light masterplan

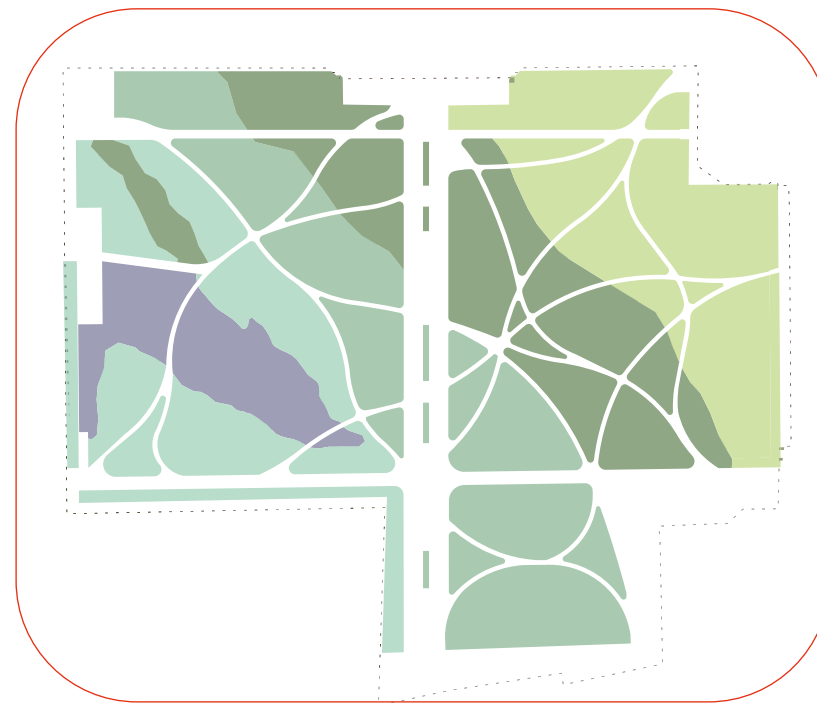




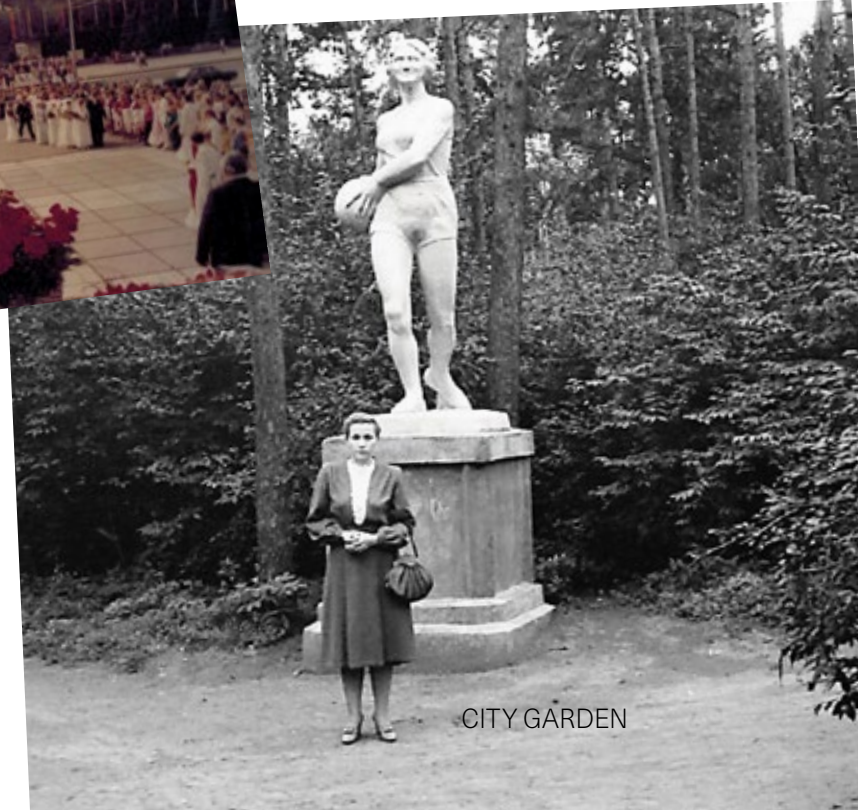




# Metaphysical garden

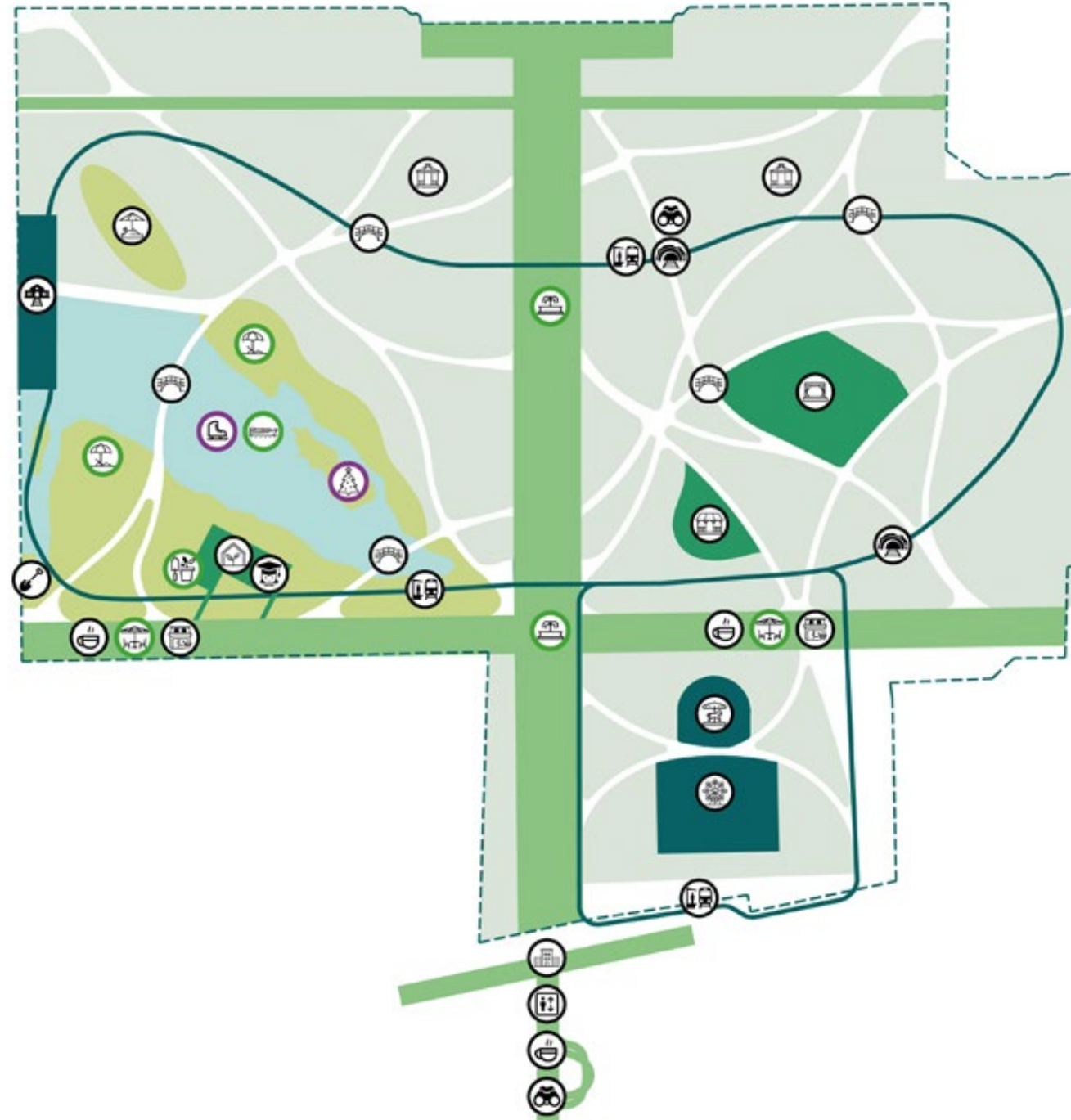




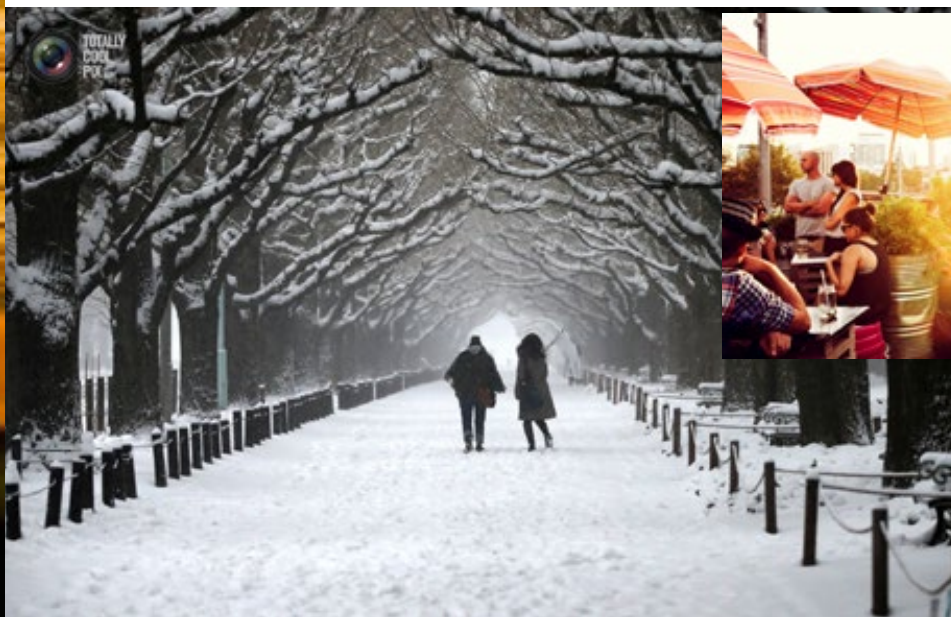
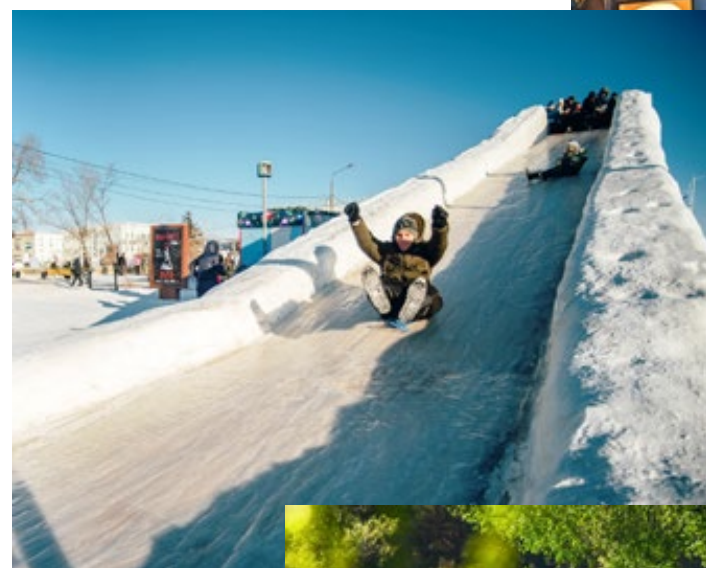




# Program









# SOCIAL AND ECONOMIC ASPECTS OF PARK TERRITORY DEVELOPMENT CONCEPT

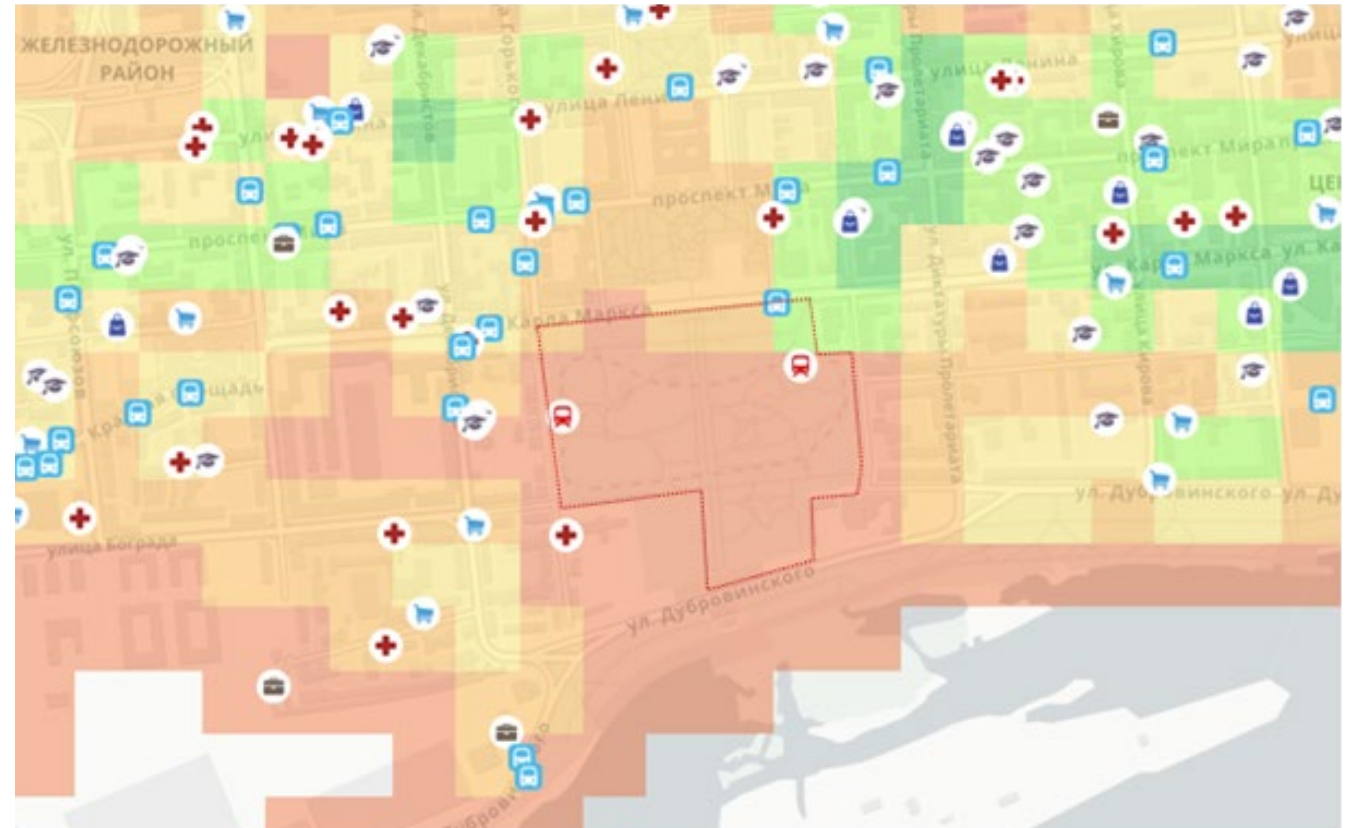
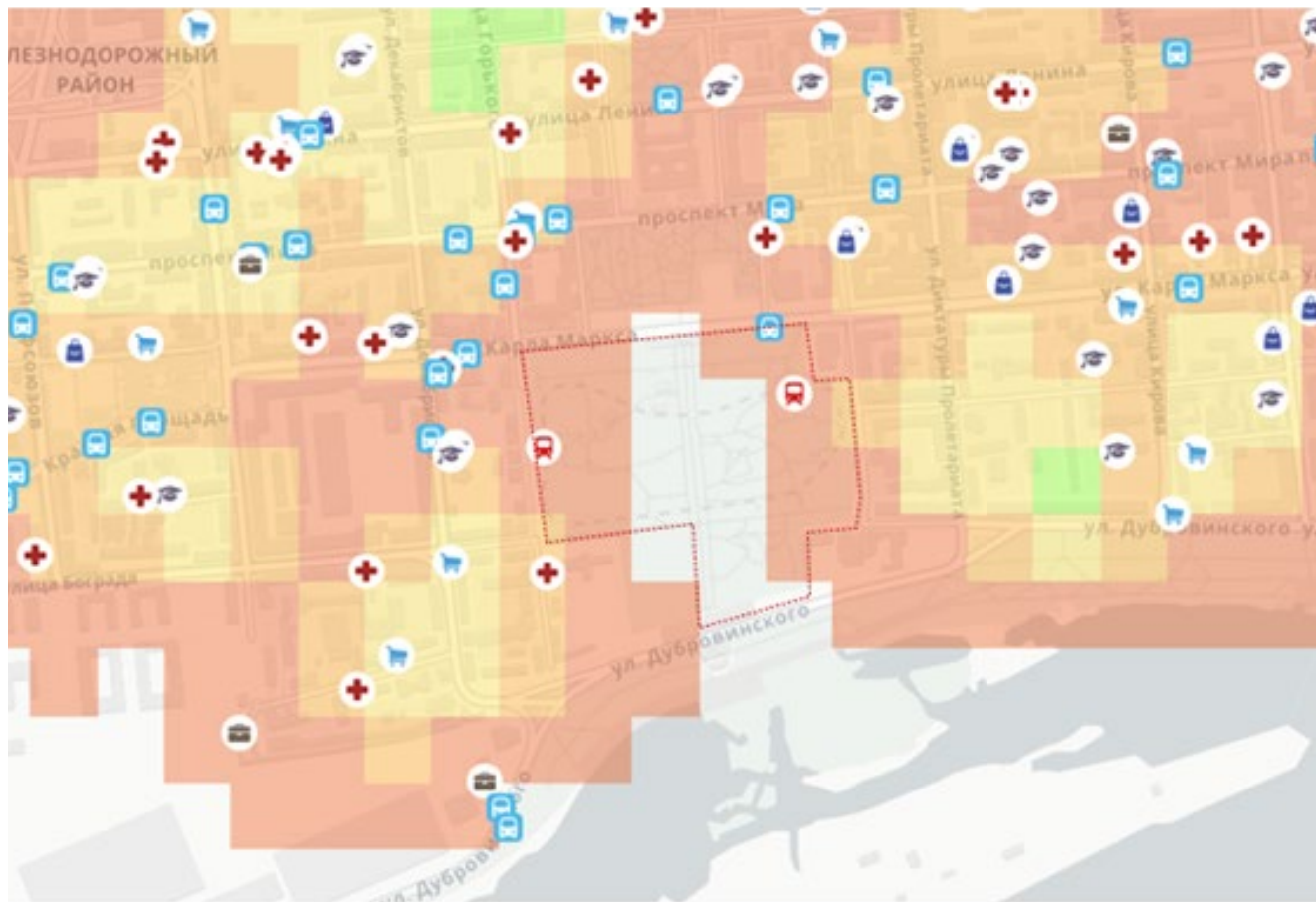
City	Population, tsd. people (2020)	Population growth since 2010, %	Total investments billion RUR. (2018)	Tourist flow, tsd. visitors (2018)
Moscow	12678	10,2	1972,3	23500
St. Petersburg	5398	10,6	658,5	8500
Novosibirsk	1626	10,3	66,1	300
Yekaterinburg	1494	10,7	127,8	550
Kazan	1257	9,9	123,3	1150
Nizhny Novgorod	1252	0,1	96,7	450
Chelabinsk	1197	5,9	52,7	350
Samara	1157	-0,7	84	400
Omsk	1155	0,1	59,8	250
Rostov on Don	1138	4,5	147,3	450
Ufa	1129	6,3	102,7	400
Krasnoyarsk	1094	12,3	83,2	400

Table 1. Assessment of the attractiveness of Krasnoyarsk for residents, investors and tourists (Source: Rosstat, analysis Urban Pro)

Park entrance points	Average pedestrian flow, people per day	Population within a radius of 500 m, people
Karl Marx street (central entrance)	1 500	6 800
Karl Marx street (Looch cinema)	3 100	6 200
Embankment	1 000	2 600
Bograd street	700	4 000
Dzerzhinsky street	500	4 800
Gorky street	200	5 500

The main pedestrian traffic is concentrated along the streets along the perimeter of the park. The most intense latitudinal communications, primarily on the K. Marx street.



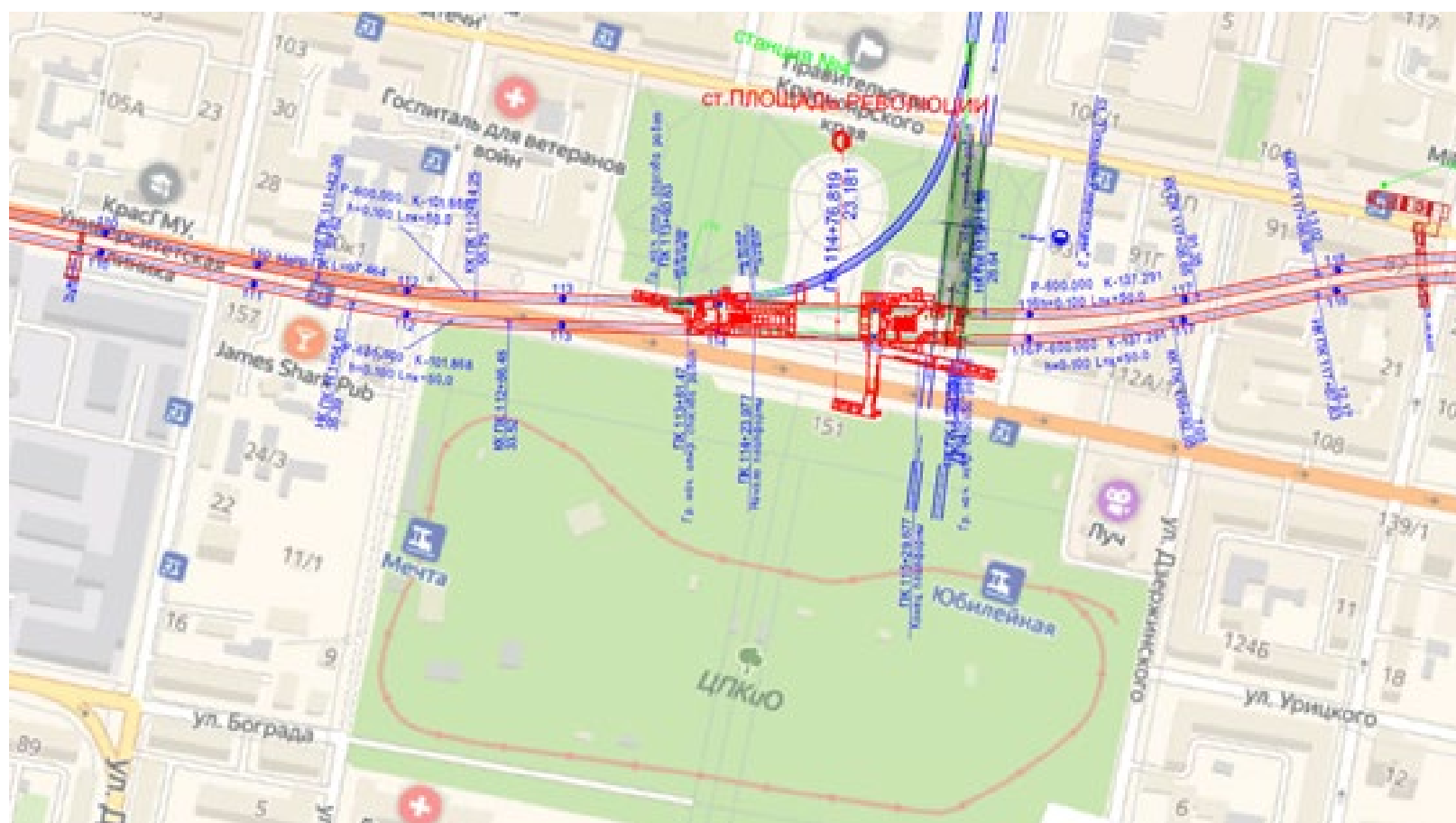


Интенсивность пешеходных потоков, чел. в сутки

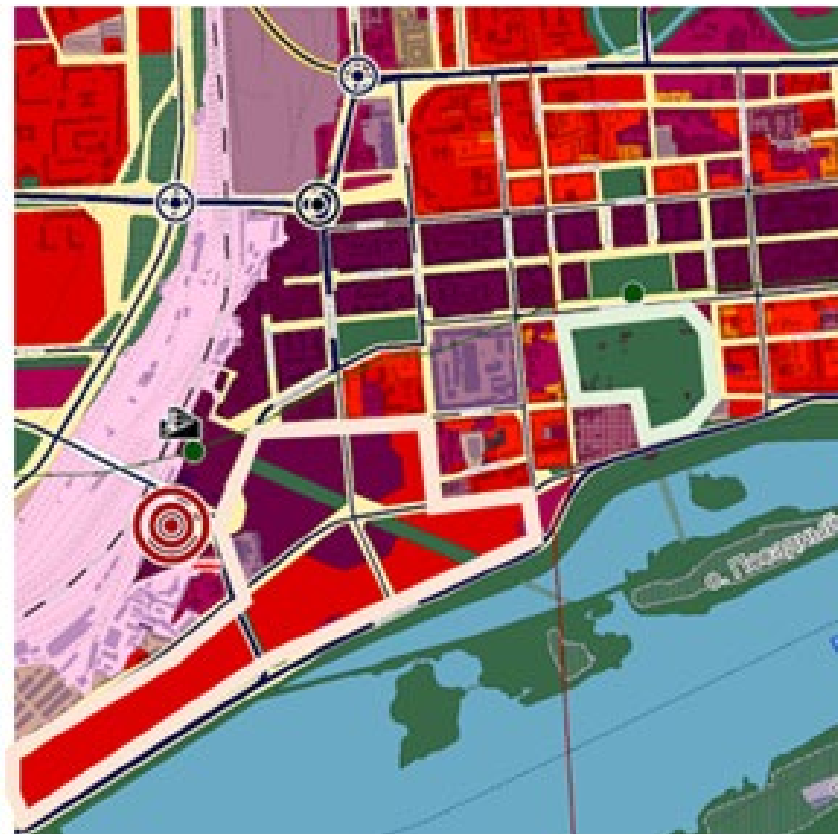
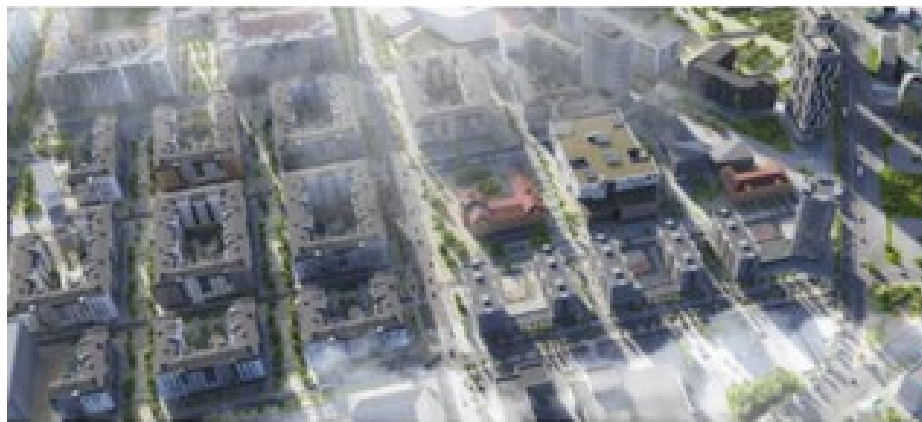
- Более 3000
- 1500-3000
- 500-1500
- Менее 500













# Cost assessment of park development plan

Expenditures	Price, RUR.	Amount	Total cost, RUR
<b>TOTAL</b>			<b>500 000 000</b>
<b>Pavements</b>			<b>268 112 136</b>
Paving stones, sq. m	4 411	20 000	88 230 000
Plastic curbs	679	3500	2 376 500
Pathways, sq.m	1178	17 002	20 031 756
Sand field, sq.m	1 248	700	873 880
Wooden walkways, sq.m	20 000	1 300	26 000 000
Artificial pond, sq.m	6 000	10 000	60 000 000
Fountains (rectangular)	17 700 000	2	35 400 000
Round fountains	8 800 000	4	35 200 000
<b>Landscaping</b>			<b>94 696 960</b>
Trees	34 287	500	17 143 800
Bushes	6 504	2 000	13 009 200
perennial plants, sq.m	2 875	20 000	57 504 000
Landscaping of parterre, sq.m	818	8 600	7 039 960
<b>Networks, lighting</b>			<b>40 297 500</b>
Pendant lights	40 000	48	1 920 000
Stands for pendant lights	40 000	93	3 720 000
Floor lamps	54 000	25	1 350 000
Supports for floor lamps	25 000	25	625 000
Bolards	25 000	370	9 250 000
Festive illumination			10 000 000
Installation of lamps			13 432 500
<b>Dismantling</b>			<b>6 000 000</b>
BR 100.30.15	273	3 500	956 900
Stripping of asphalt concrete pavement 12 cm.	246	17 000	4 192 200
Removing 7 cm thick concrete paving stones	79	19000	1 506 700

Expenditures	Price, RUR.	Amount	Total cost, RUR
Dismantling the wooden support (weight of one support 180 kg.)	1 232,6	100	123 260
<b>Small architectural forms</b>			<b>90 893 404</b>
Reconstruction of the summer veranda	10 000 000	1	10 000 000
Chinese style gazebo	3 000 000	1	3 000 000
Russian style gazebo	2 500 000	1	2 500 000
Scene	4 500 000	1	4 500 000
Playground	5 000 000	1	5 000 000
Ferris wheel	30 000 000	1	30 000 000
Carousel	10 000 000	1	10 000 000
Greenhouses	200 000	4	800 000
Bench chaise longue	53 500	20	1 070 000
Benches	38 000	65	2 470 000
Chairs	27 000	39	1 053 000
Urns	25 000	40	1 000 000
Main entrance	5 000 000	1	5 000 000
Other entrances	1 000 000	4	4 000 000
Navigation, augmented reality		1	5 500 000
Repair / restoration of the fence		1 200	5 000 404
<b>Extrabudgetary facilities</b>			
Train station + platforms + railway tracks			150 000 000
Bridge to the embankment			250 000 000
Pavilions	10 000 000	23	230 000 000



## 1. Authenticity



Experts mark the beginning of the transition from globalism to a growing interest in national and regional cuisine and local products. This allows the development of Siberian cuisine concepts in the park.

## 3. Sustainability



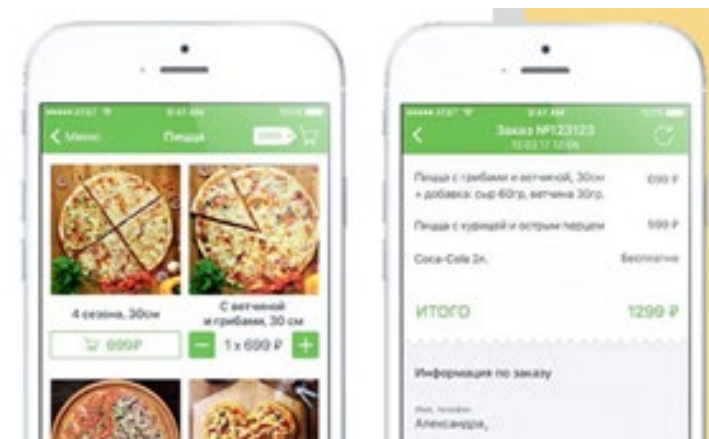
Sustainability, healthy lifestyle, naturalness, green technologies are the keywords that describe the interests of a very large group of consumers.

## 2. Social responsibility



There is an increased interest of consumers in the concepts of catering with a policy in the field of social responsibility (hiring workers with disabilities, supporting socially vulnerable groups, etc.)

## 4. Digitalization



The food court operates within a joint digital environment, including with a remote ordering and delivery system, the development of services that affect sales growth (collection of picnic baskets, etc.)



Indicators	Years				Total
	1	2	3	4	
Investments	10000	0	0	0	10000
Pavilion construction	10000	0	0	0	10000
Income	1080	3240	4320	27360	36000
Rental income	1080	3240	4320	4320	12960
Sale of rental business	0	0	0	23040	23040
Costs	389	1166	1555	1555	
Land rent	389	1166	1555	1555	
Cashflow	-9309	2074	2765	25805	21334
Discount rate	1,00	0,77	0,67	0,59	
DCF	-9309	1596	1866	15279	
NPV					9431
IRR					30%

Based on the model, the lease rate for the land plot will be 36% of the rental income of the pavilion owner.

The total income of the park from the lease of 12 sites for pavilions for restaurants and cafes is up to 18.7 million RUR per year.



Total operating costs and revenues

Indicators	Units	Values
Park operation costs	m. RUR in year	36,0
Income from commercial activities	m. RUR in year	36,7
Ferris wheel	m. RUR in year	9,7
Sites for leisure and entertainment pavilions	m. RUR in year	4,6
Sites for cafes and restaurants	m. RUR in year	18,7
Sites for food trucks	m. RUR in year	3,7

The total revenues from the commercial activities of the park fully cover the operating costs at the necessary and sufficient level with the unconditional priority of the natural landscape recreational function.

The calculations were made on the basis of a conservative estimate and can be further adjusted upwards.



# Evaluation of budget effects

Direct fiscal externalities from the implementation of the urban garden concept were estimated at the expense of direct tax revenues from commercial activities.

Taxes	Tax base	Tax rate	Tax amount per year
Income tax, simplified taxation system	37 m.RUR/year	6 %	2,2 m. RUR
Personal income tax	234 employees wage fund 11,3 m.RUR/month	13 %	17,6 m. RUR
Total			19,8 m. RUR

Indirect budgetary effects due to an increase in the capitalization of real estate in Krasnoyarsk at a personal property tax rate of 0.1% are estimated at 23 million RUR/ year.

The concept is based on the principle that the City Garden will break even for the city and the management company. Commercial activity is allowed in order to cover the park operation costs.

The amount of entertainment functions will be reduced in order to preserve the natural landscape. In this case, catering facilities will become key generators of cash flow. Nevertheless, we do not try to maximize profits directly from the operation of park facilities. First of all, we focus on external effects on the scale of the City center and scale of Krasnoyarsk as a whole.







СПАСИБО ЗА ВНИМАНИЕ!

Санкт Петербург, Париж, Красноярск, 2020

