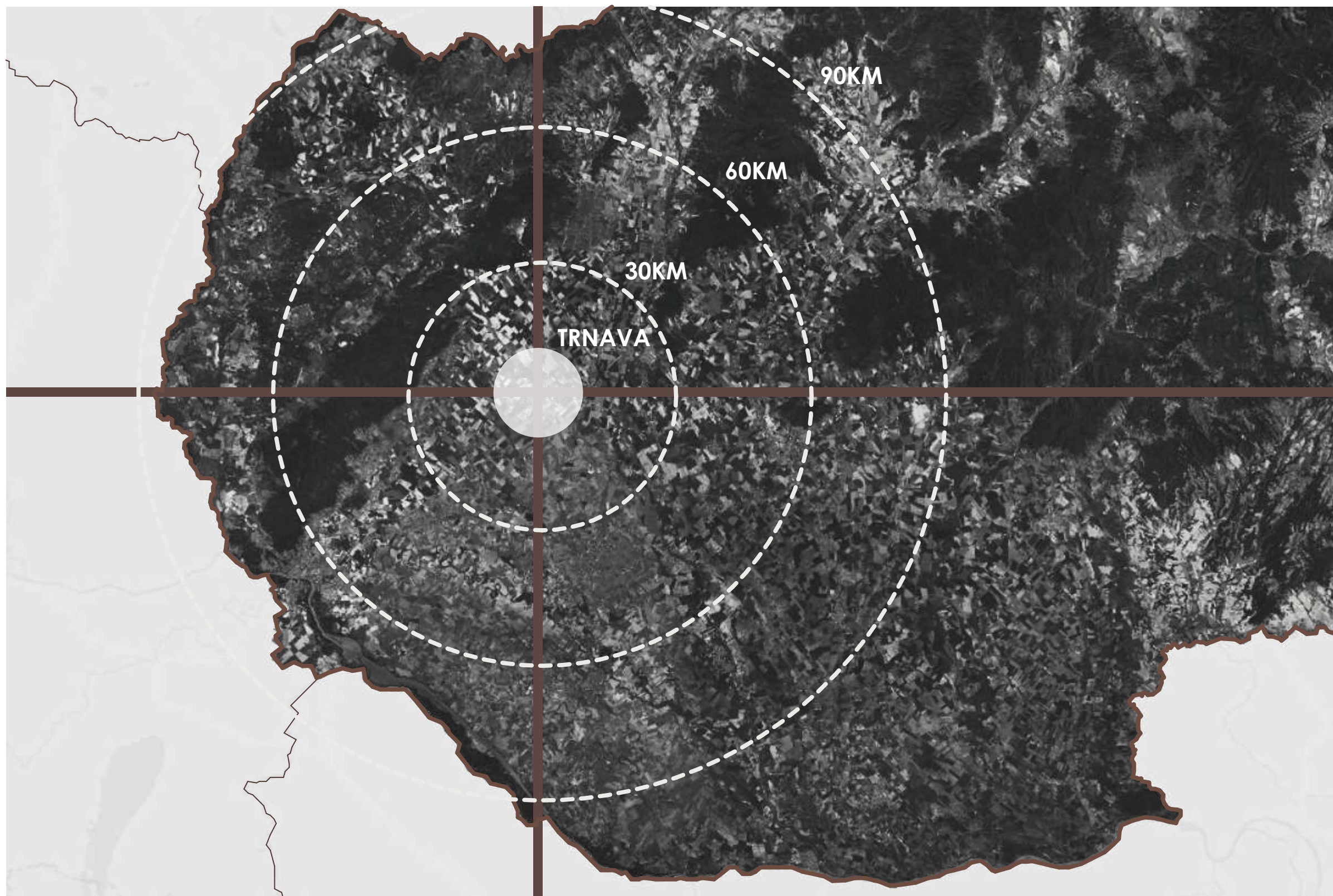


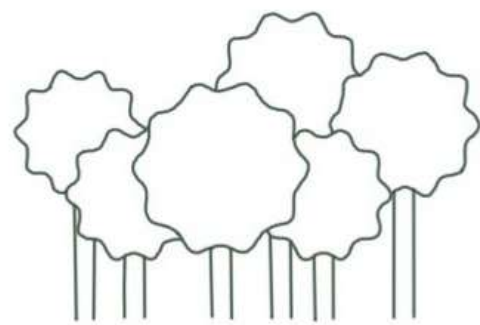


TRNAVA - WEST

Subject:	Design Studio IV.
Course Guarantor:	doc. Ing. arch. Katarína Smatanová, MA, PhD.
Students:	Karolína Vrbenská, Aneta Tomášková
Supervisor:	prof. Ing. arch. Bohumil Kováč, PhD.
Year:	3.
acad. year:	2025/2026
semester:	winter

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INSTITUTE OF URBAN DESIGN AND SPATIAL PLANNING

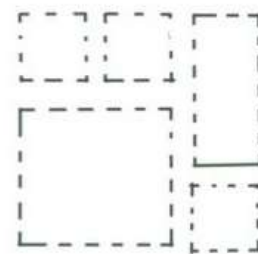




greenery



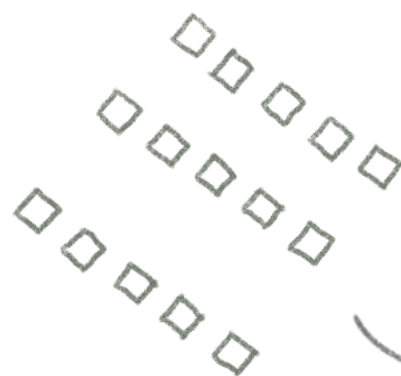
comunity



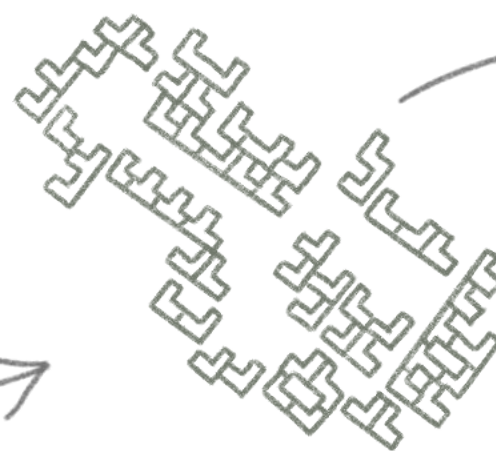
flexibility



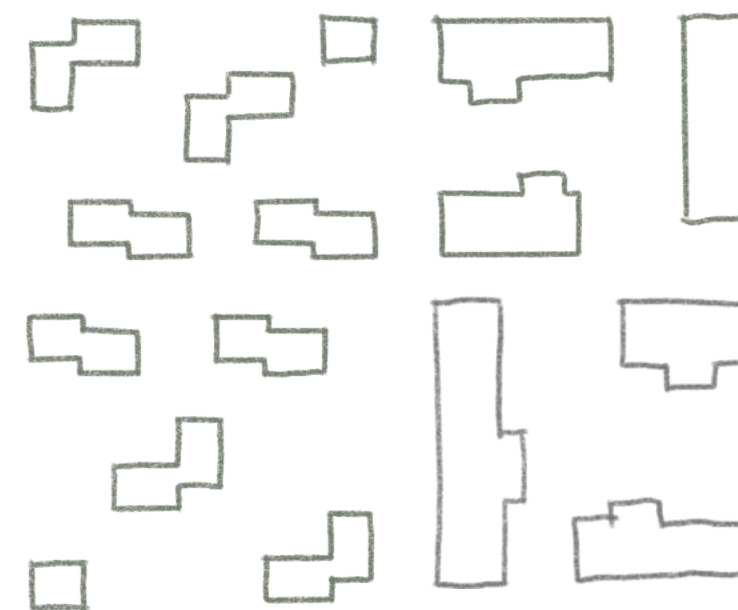
mobility



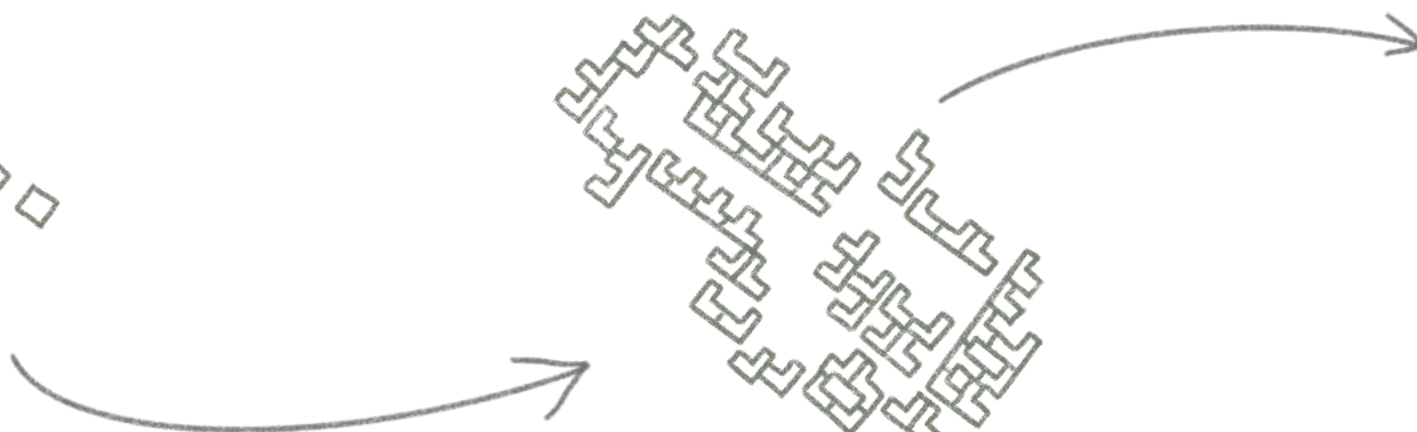
family houses

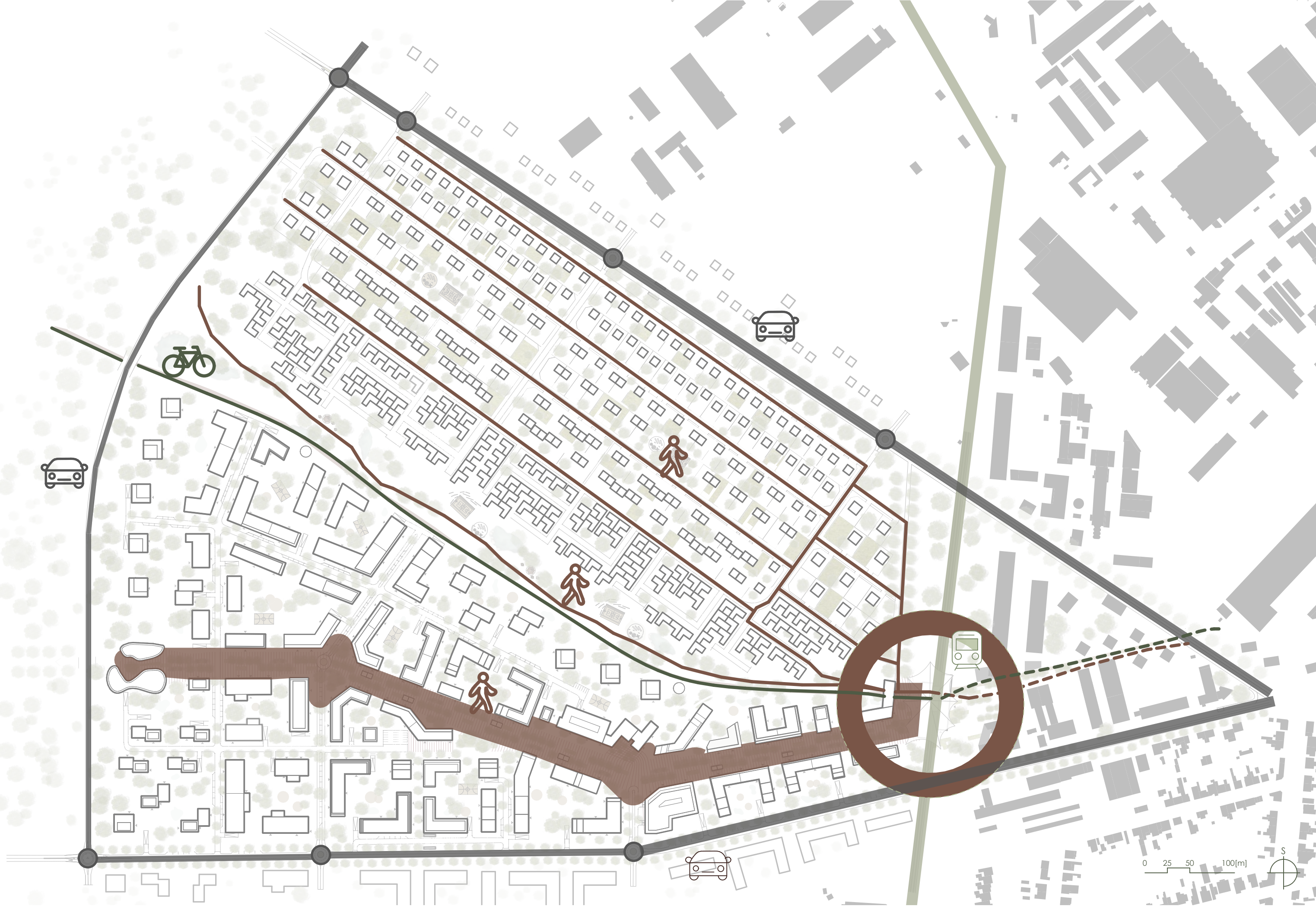


carpet housing development



block development of apartment buildings and mixed-use functions







PHILOSOPHY OF OUR DESIGN

Our urban design proposal aims to transform the area into a vibrant urban structure combining residential functions, services, recreation, and high-quality public space. The area is organized into legible urban blocks with varying scale and density. The northern part is characterized by regular development with higher intensity, while the southern part introduces more diverse urban blocks with active ground floors and community-oriented inner courtyards. The objective is to create a district that naturally integrates housing with everyday needs and fosters an environment supporting short walking distances.

The core compositional element is a green central belt running through the middle of the site, fulfilling recreational and ecological functions. This park space connects individual residential clusters, creates pedestrian routes, and enables relaxation activities within the urban fabric. The design respects existing urban relationships in the surrounding context and complements them with new public spaces, small squares, and local centers. The configuration of blocks responds to the need for clarity, safety, and orientation within the area, with emphasis placed on preserving visual corridors and natural movement axes.

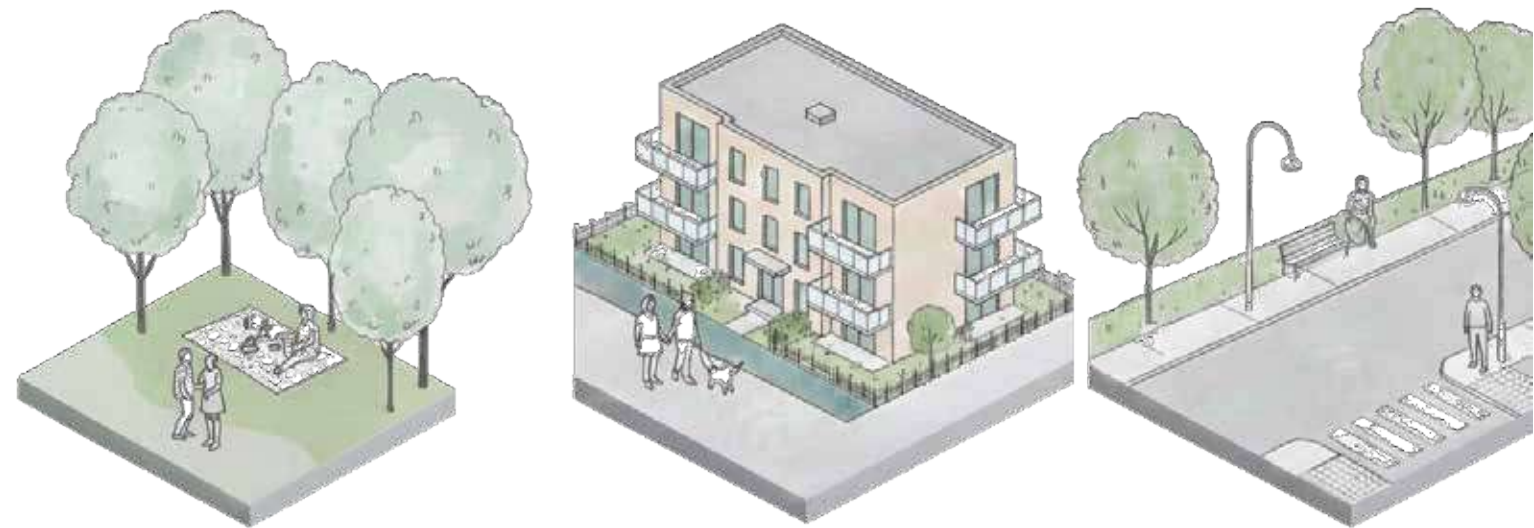
PROPOSAL

The urban concept consists of several housing typologies, ranging from row and group housing in the northern part to a compact urban structure in the southern zone. The southern blocks are designed as multifunctional, allowing the integration of services, small-scale retail, and community functions, thereby supporting active street life.

Transversal pedestrian routes and the central green corridor ensure strong spatial identity and improved accessibility to recreational areas. Green infrastructure plays a key role: tree-lined avenues, micro-parks, and extensive vegetated areas contribute to improved thermal comfort, stormwater retention, and overall ecological quality. The design promotes sustainable mobility: a cycling network connected to the main transport axes and pedestrian routes enables convenient access to all parts of the district without reliance on private cars.

The proposal addresses the needs of diverse user groups — families, young people, seniors, and students. Emphasis is placed on housing diversity, service accessibility, and the creation of an environment supporting community interaction. New public spaces are designed to facilitate leisure activities, local events, and the development of a new neighborhood identity.

The result is a functionally balanced urban structure combining high-quality housing with ecological solutions, supporting



creation of public spaces

enhancement of residential quality

safe and green street

DEVELOPMENT INDICATORS

total site area (ha):	59
<u>land use</u>	
built-up area(m²):	buildings: 103 303,73 = 17,51 %
	underground structures: 98 022 = 16,61 %
site coverage coefficient:	0,341
impervious surfaces (m²):	52 352
impervious surfaces coeff.:	0,09
green areas(m²):	without green roofs: 336 810 (coefficient: 0,57)
	green roofs: 47 670 (coefficient: 0,20)

population

residents in block development:	8 520
residents in single-family housing:	1 550
total population:	10 070
population density within the site:	170 inhabitants/ha

housing

number of apartments :	3 520
number of family houses :	390
total dwelling units :	3 910

functional distribution

residential 70 % –	14,08 ha
active ground floor uses 20% -	4,02 ha
administration 10 % –	2,01 ha
apartment density:	66 units/ha

transport

total parking spaces (excluding single-family housing) :	4 485
underground garages:	3 870
parking structure:	450
surface parking:	165 – area 2062,5 m²
parking provision per apartment:	2 underground parking spaces per unit 0,25 surface parking space per unit

notes

average building height:	4 storeys
provision of public green space :	1 inhabitant/12m of accessible green area at grade
current population of Trnava:	62 750
projected population of Trnava after development:	72 820
increase:	16,02% of the total population of Trnava

LEGEND

- Linear Public Space
- Seating Area
- Pedestrian Zone
- Church
- Children's Playground
- Sports Area
- Cycle Path
- Park





multi-store buildings
multi-store buildings

4 - multi-store buildings
3 - multi-store buildings

1 - 2 - multi-store buildings
1 - multi-store buildings

0 25 50 100[m]



Students: Karolína Vrbenská
Aneta Tomášková
year: 3.
acad. year: 2025/2026

Supervisor: prof. Ing. arch.
Bohumil Kováč, PhD.
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residential function
residential use with an
active ground floor



residential use with
administrative offices
administrative use with an
active ground floor



social infrastructure

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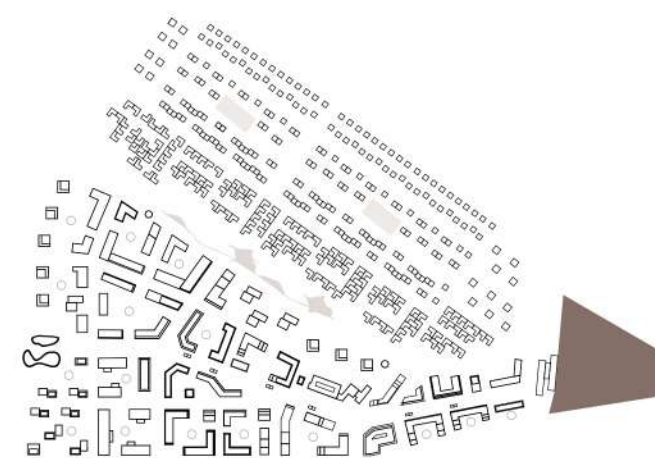
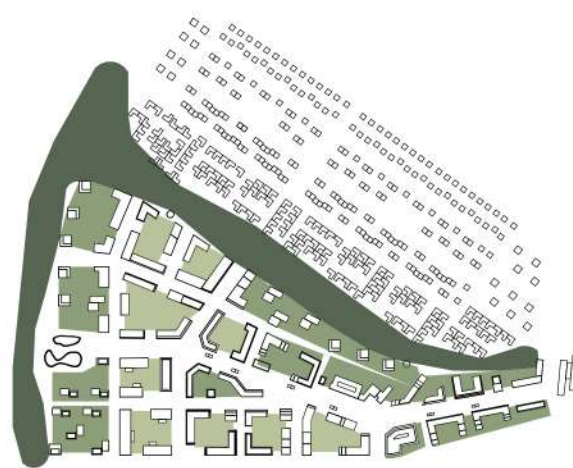
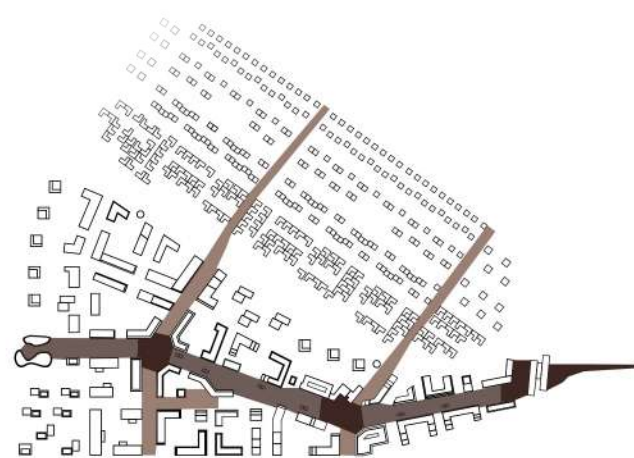
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- main street space - squares
- main street space
- secondary street space

- public park
- semi- public inner courtyard
- public inner courtyard

- public recreational space
- private recreational space within inner courtyards
- public recreational space forming the centre around the tram-train stop with mixed-use development

- private gardens
- community / private gardens

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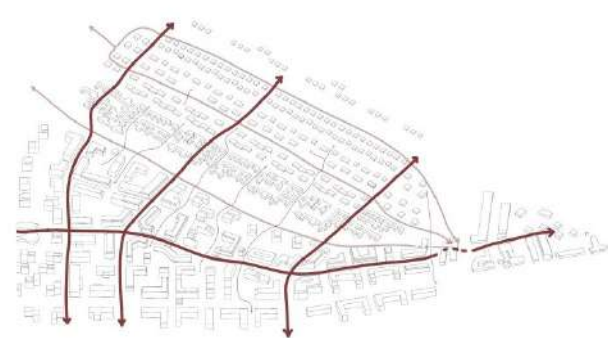
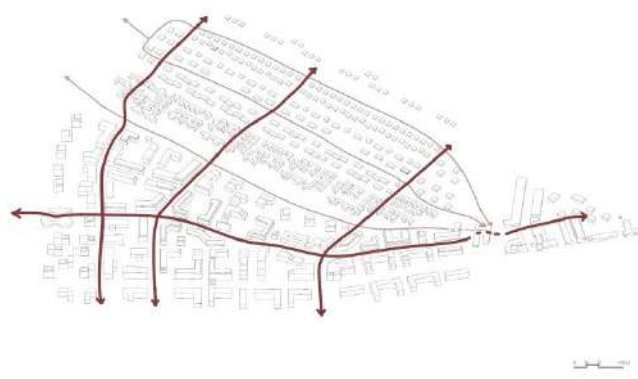
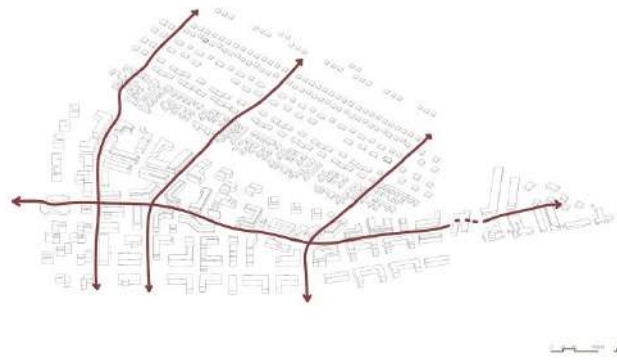
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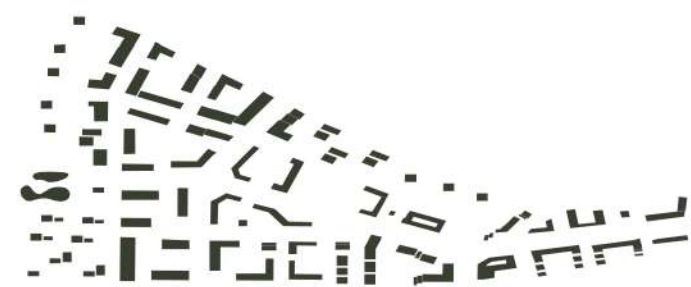
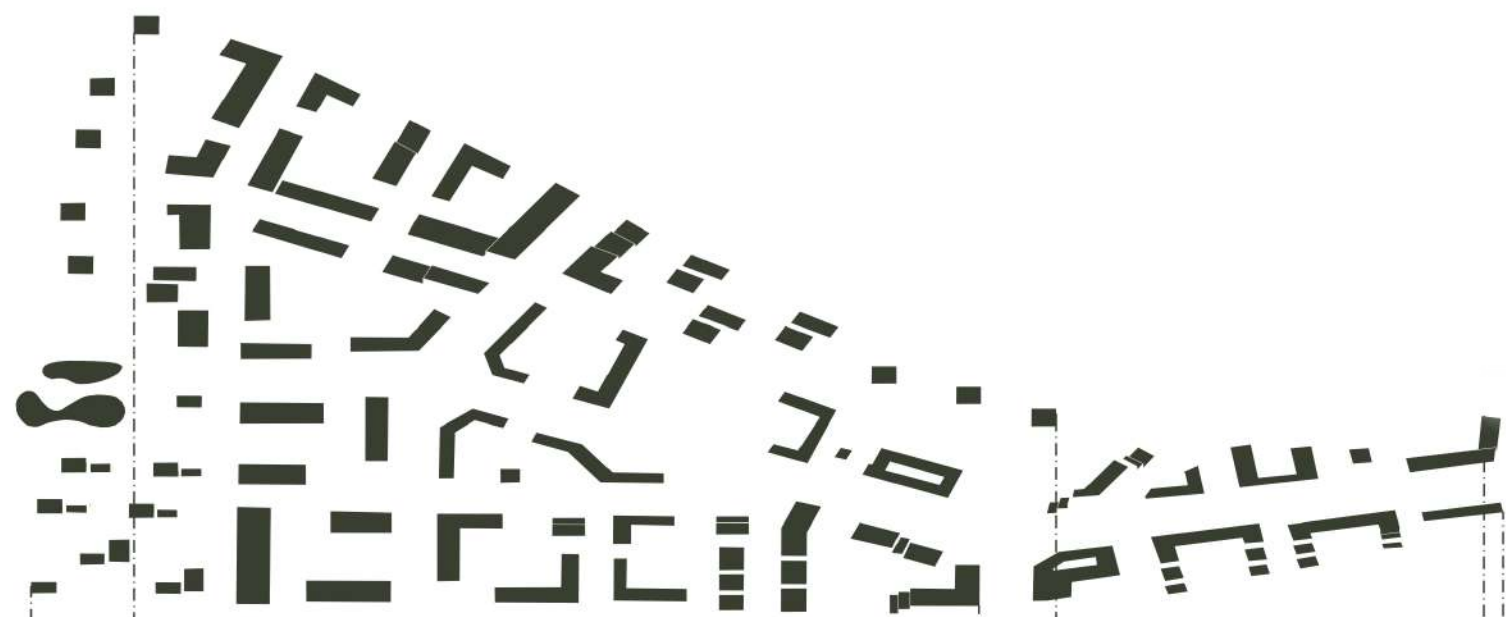
LEGENDA

- main vehicular routes
- secondary vehicular routes
- service roads
- local roads
- cycle path
- pedestrian routes



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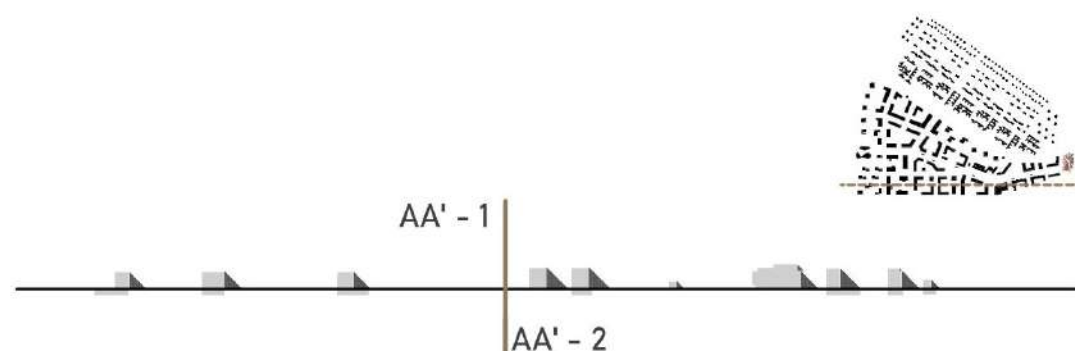
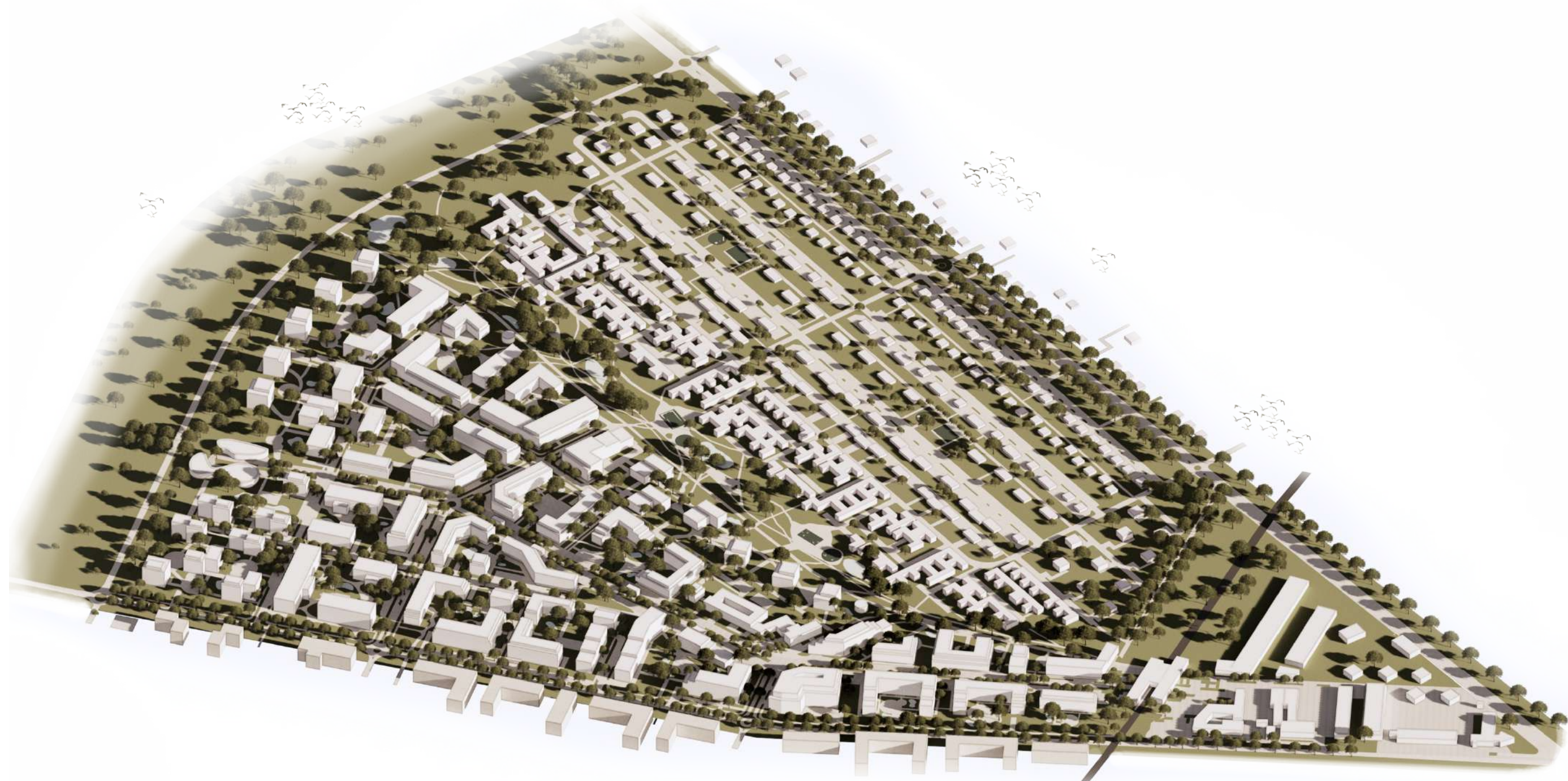


EXTENSIVE GREEN ROOFS WITH PHOTOVOLTAIC PANELS



WATER RETENTION AREAS WITHIN COURTYARDS AND PRIMARY PARKS





section AA' - 1



section AA' - 2

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