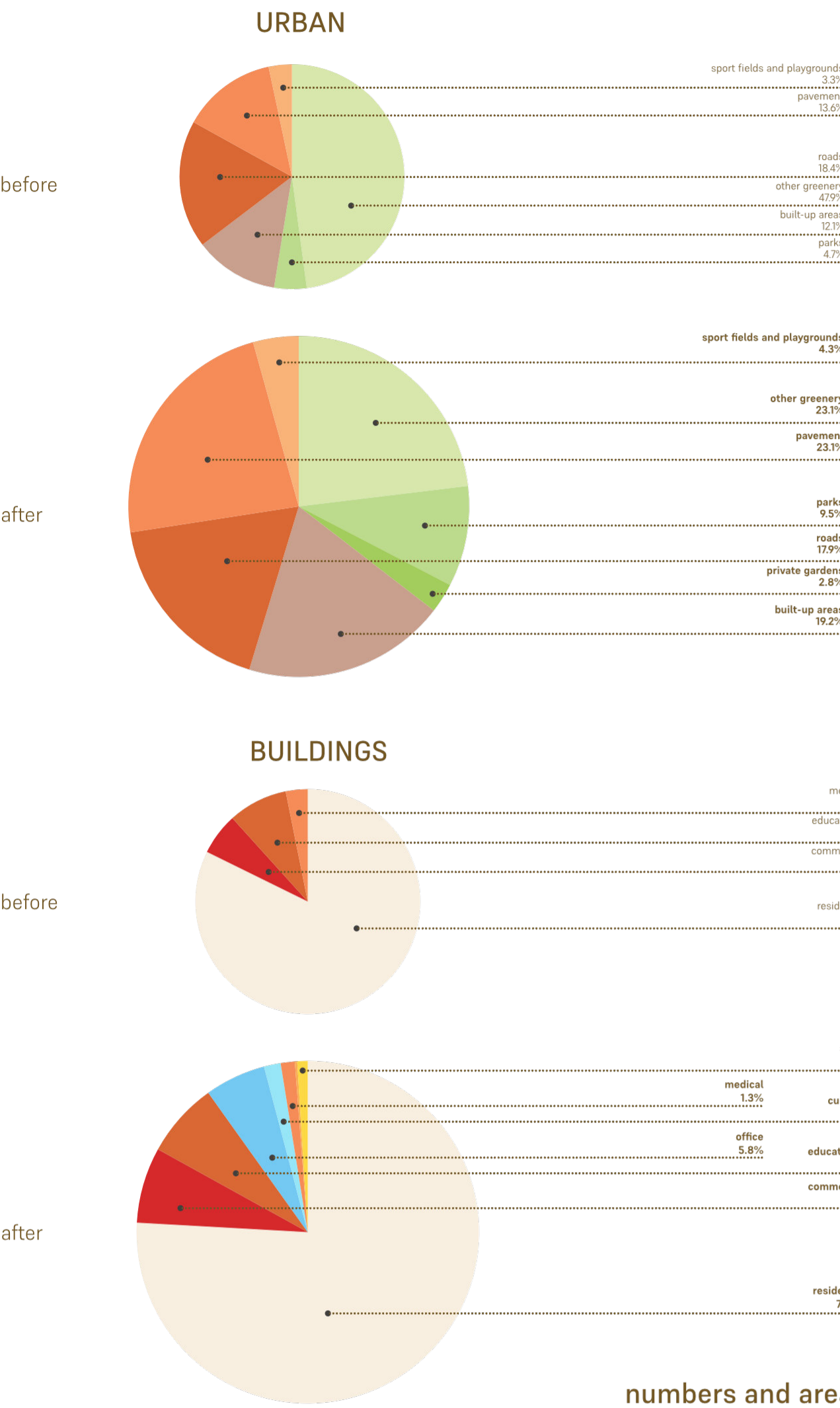


RECONSTRUCTION STRATEGY AND DESIGN FOR NORTHERN SALTIVKA, KHARKIV

Architects gained a lot of theoretical and practical knowledge on post-war rebuilding of cities after 2nd world war, but in times of a modern-day crisis there is a need to learn from a previous experience and develop new approaches on how to bring war-damaged cities back to life. If there is already a need for rebuilding destroyed neighbourhoods - it gives us a unique opportunity to look at the existing problems of certain urban planning strategies and solve them instead of simply restoring them to their pre-war state.

In my diploma project i took one of the most damaged parts of Kharkiv - Northern Saltivka and, using it as an example, was looking for an approach that can be effectively applied to any similar area in Ukraine in its eventual post-war rebuild. For me this was the most obvious and practical use of my, so far gained, knowledge as an architecture and urbanism student.



AREAS (BUILDINGS)

residential (total) =	(+151932)	381873 m2
residential (apartments only) =	(+129142)	296480 m2
commercial =	(+33545)	36012 m2
office =		28955 m2
schools =		19632 m2
kindergartens =		16078 m2
sport =		4929 m2
hospitals =		6685 m2
cultural =		7953 m2
church =		1131 m2
technical =		2150 m2

APARTMENTS (NEW)

1-bedroom apt. (50%, 35 m2) =	1419 apt (49665 m2)
2-bedroom apt. (35%, 50 m2) =	993 apt (49650 m2)
3-bedroom apt. (15%, 70 m2) =	426 apt (29820 m2)
Total number of new apartments =	2838 apt

AREAS (URBAN)

total site area =	42.55 ha
public parks =	40510 m2
private gardens =	12026 m2
other greenery =	98079 m2
built-up area =	81739 m2
roads =	75903 m2
pavement =	98204 m2
sport fields and playgrounds =	18380 m2

Total capacity of residents:

14823 residents

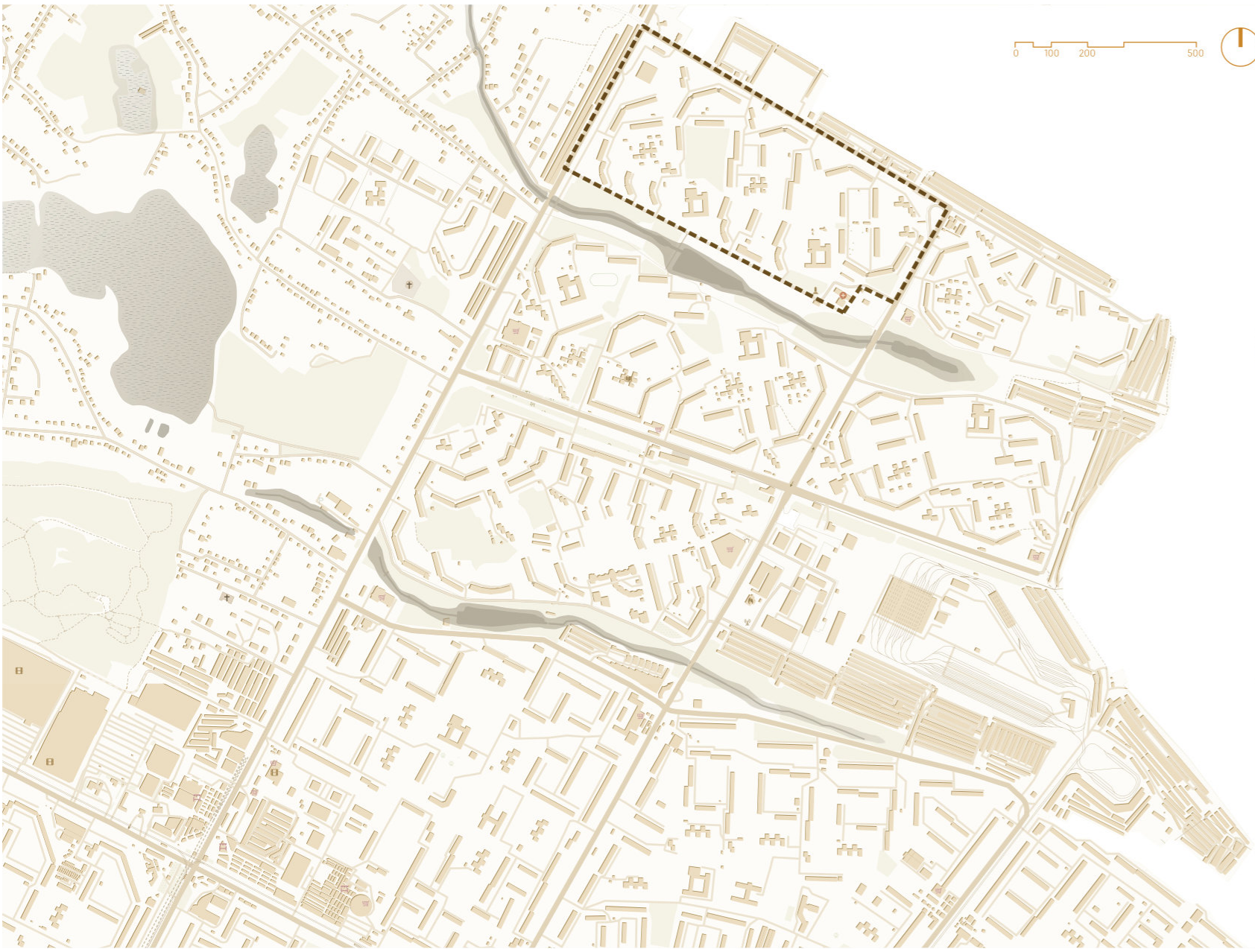
Parking places:

Total created =	2660
on-ground =	1200
underground =	1460



street sections 1:200





PROJECT SITE OVERVIEW

The chosen area is a neighborhood, located in Northern Saltivka - one of the youngest densely populated residential areas in the north-east of Kharkiv, Ukraine. It was built in 1987-1993 and before 2022 had a population of around 400 thousand residents. The name "Saltivka" came from the road that ran from the center of Kharkiv outside the city - this is the current Akademika Pavlova Street and Saltivske highway.

The layout is done as a typical modernistic district. The residential area consists mainly of typical-planning panel buildings of five-, nine-, twelve- and sixteen stories. The construction of houses began in 1967, but the mass development of the area continued in the 1970s. The buildings are located within vast distances from each other and are separated with big areas of greenery and distributed main amenities - like schools, kindergartens and hospitals.

During the beginning of Russian invasion in Ukraine in 2022, Kharkiv became constantly heavily shelled by artillery and missiles. The most unlucky were the neighborhoods closer to the Russian border - like Northern Saltivka. Due to the enormous scale of the destruction, North Saltivka is now called a dead area, or a dead city - 70% of the buildings here were damaged or destroyed. Since 2022 residents of the surviving homes began to return to this residential area. At the moment, the neighborhood is gradually coming back to life. However, the houses where people live still often lack water, heating, gas, or electricity.

situation plan

MINIMAL



MINIMAL

insignificant damage of outer layers of facade without structural damage

broken windows and balcony doors

minimal structural damage on balconies

MEDIUM

facade that was burning for not prolonged period of time and no significant structural damage is visible

some sections are missing but are possible to replace as the rest of the building is intact

holes in the facade that are possible to fix

SEVERE

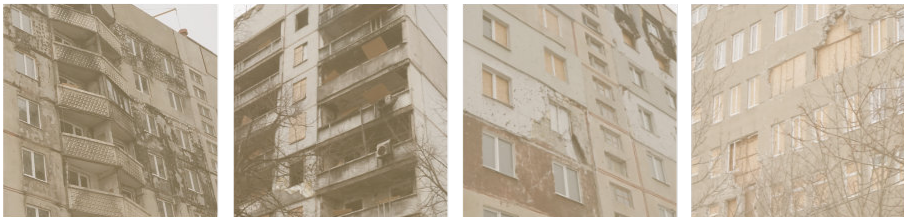
missing whole upper floors, missing large areas in the middle of the building

big areas of prefabricated panels that are no longer functioning as a load-bearing element

facade that was burning for prolonged period of time and is showing clear structural damage

DESTRUCTION ANALYSIS

MEDIUM

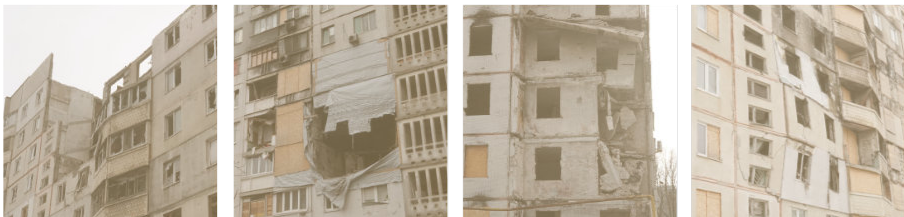


mass replacing of destroyed windows and balconies

replacing fire-damaged facade panels with new ones using steel reinforcement

fixing holes in the facade with the mortar using crushed concrete from demolished buildings

SEVERE



removing the burned layer of facade

covering the facade imperfections with the mortar using crushed concrete from demolished buildings

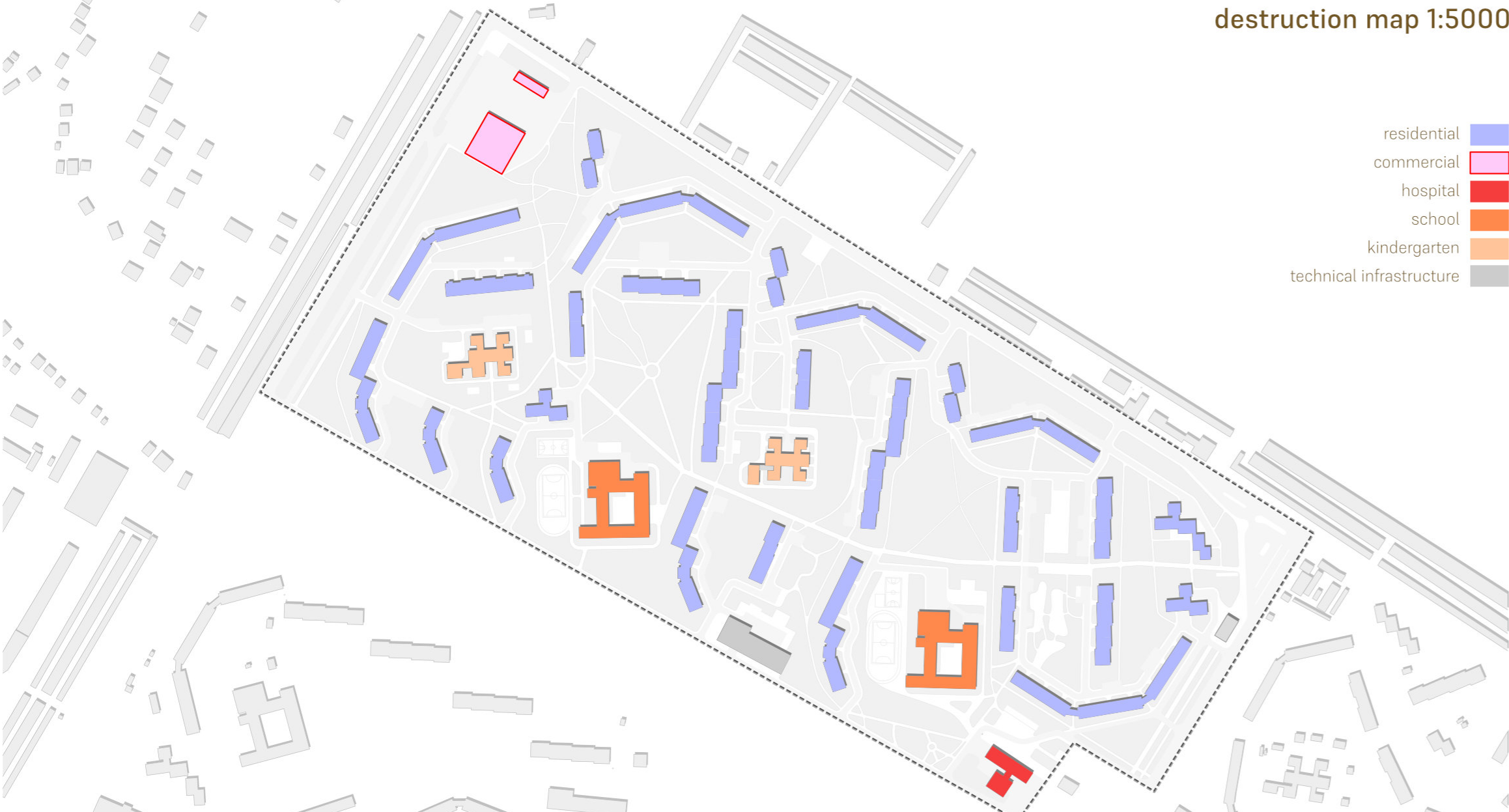
repainting the facade



existing project site 1:5000



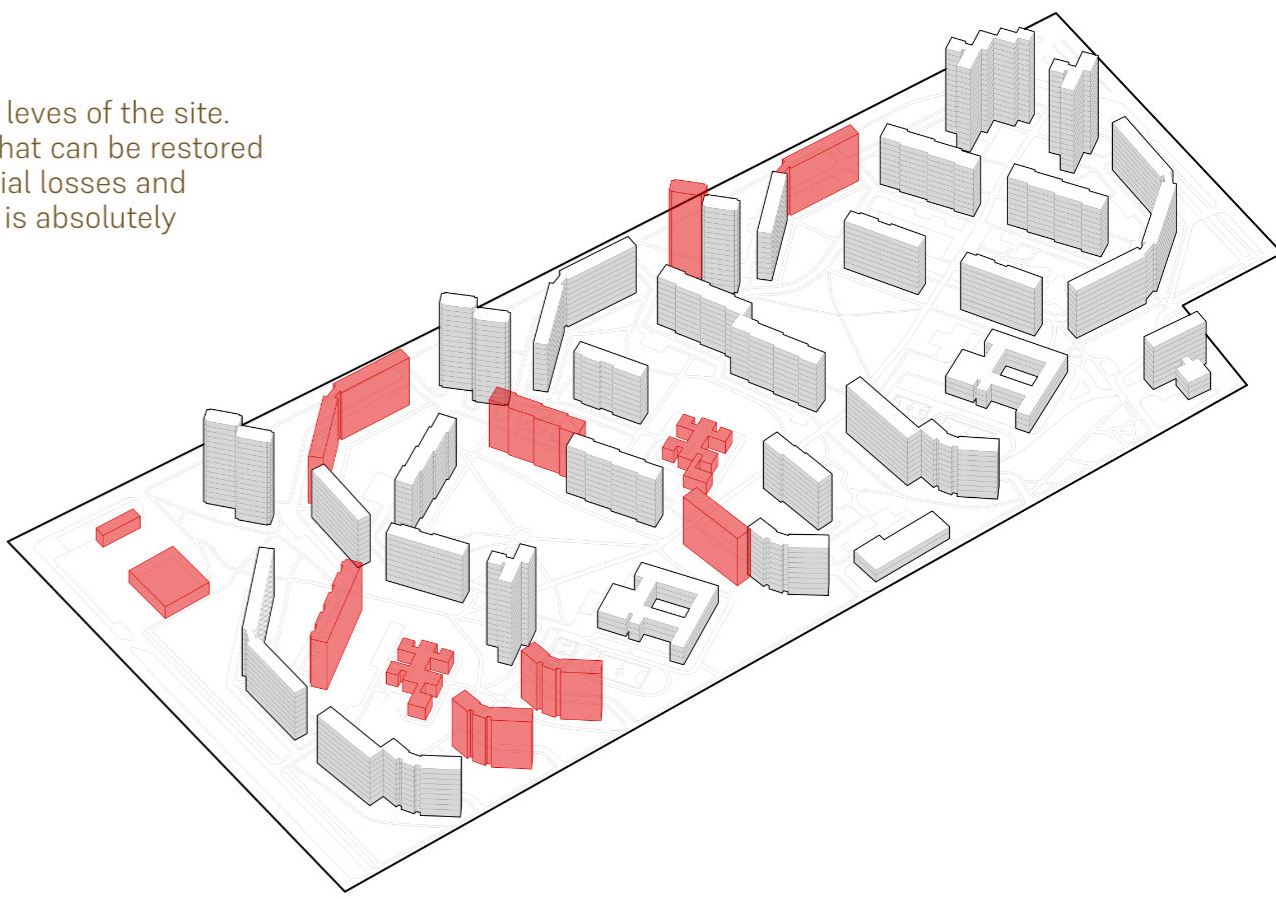
destruction map 1:5000



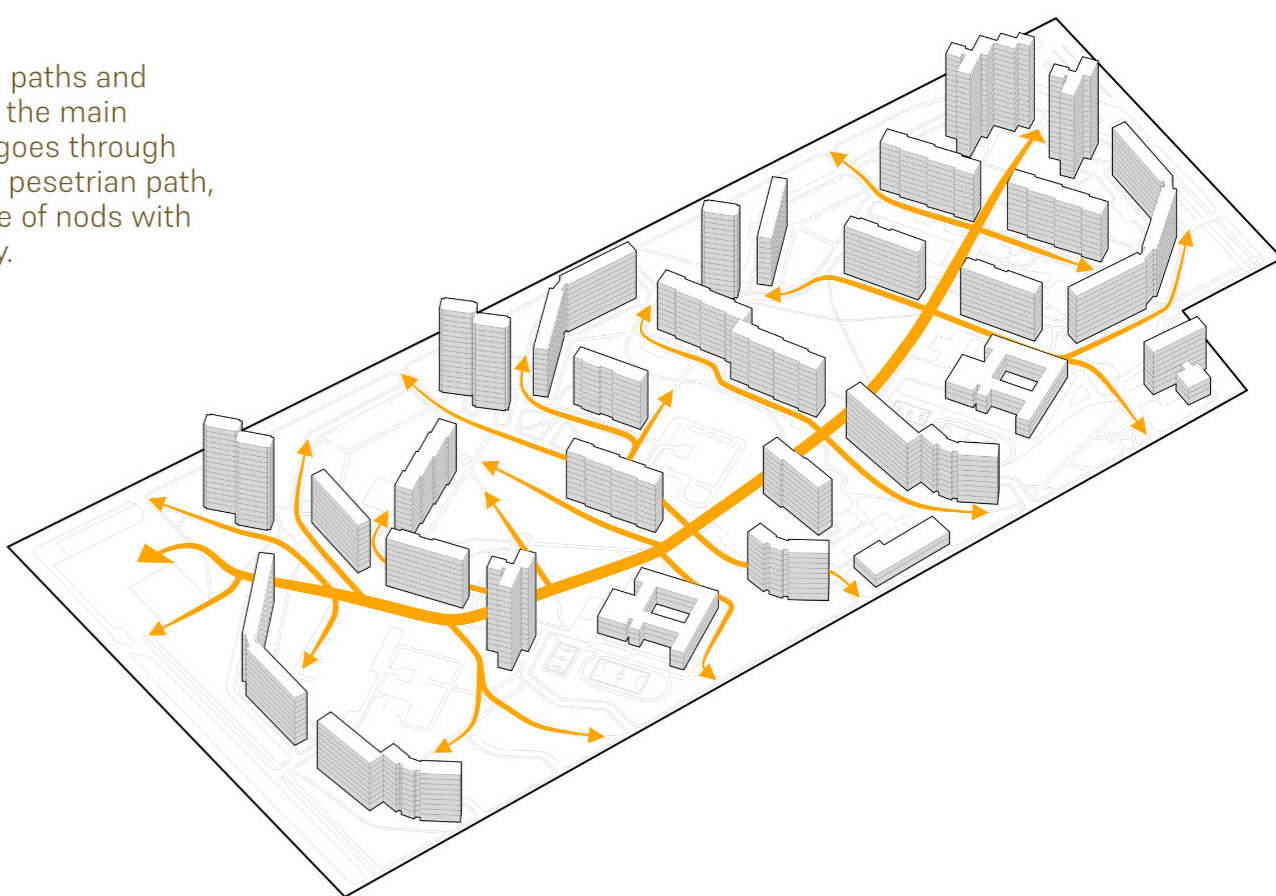
existing function map 1:5000

How do you proceed with a war-damaged neighborhood?

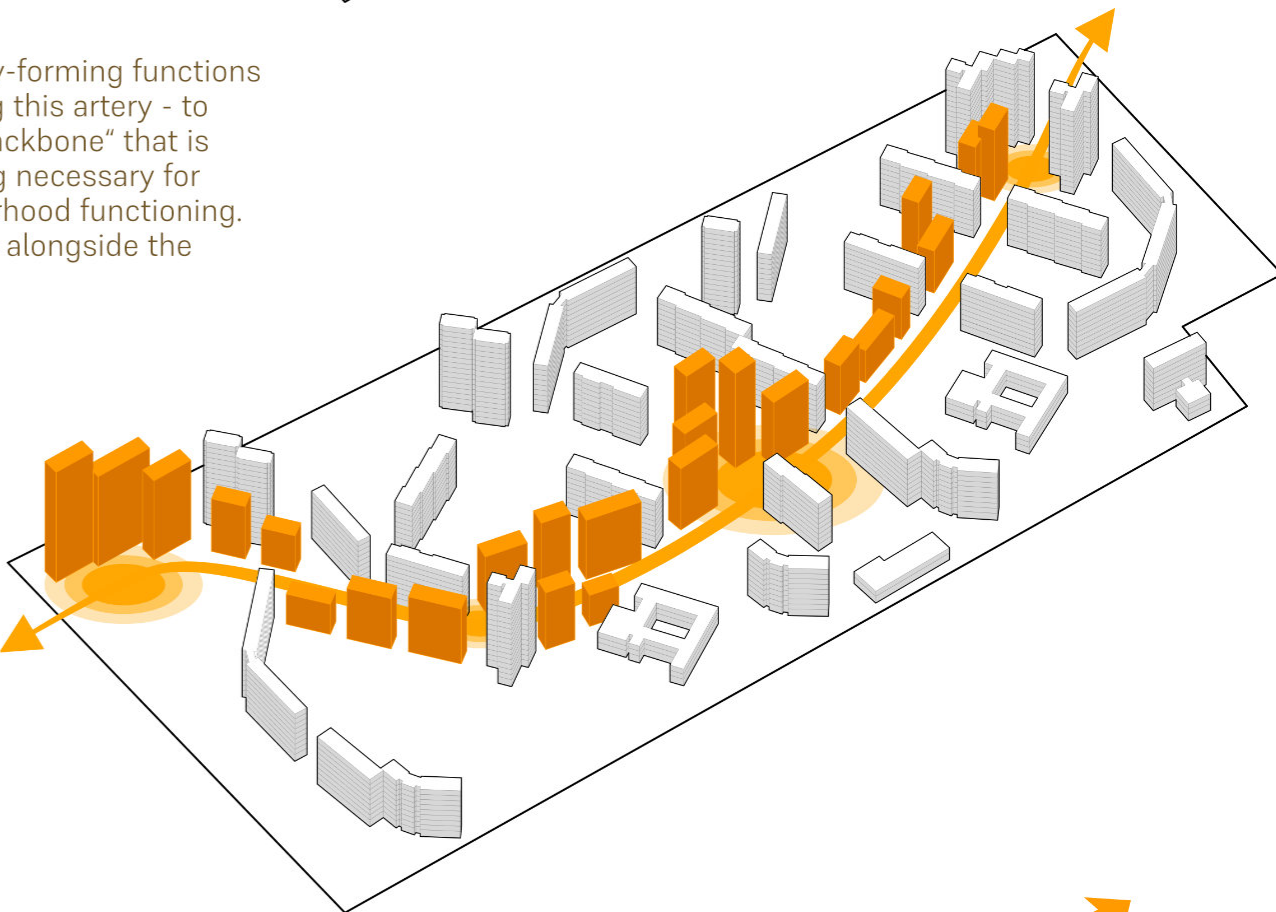
1 Analyze destruction levels of the site. Preserve buildings that can be restored with minimal financial losses and demolish only what is absolutely necessary.



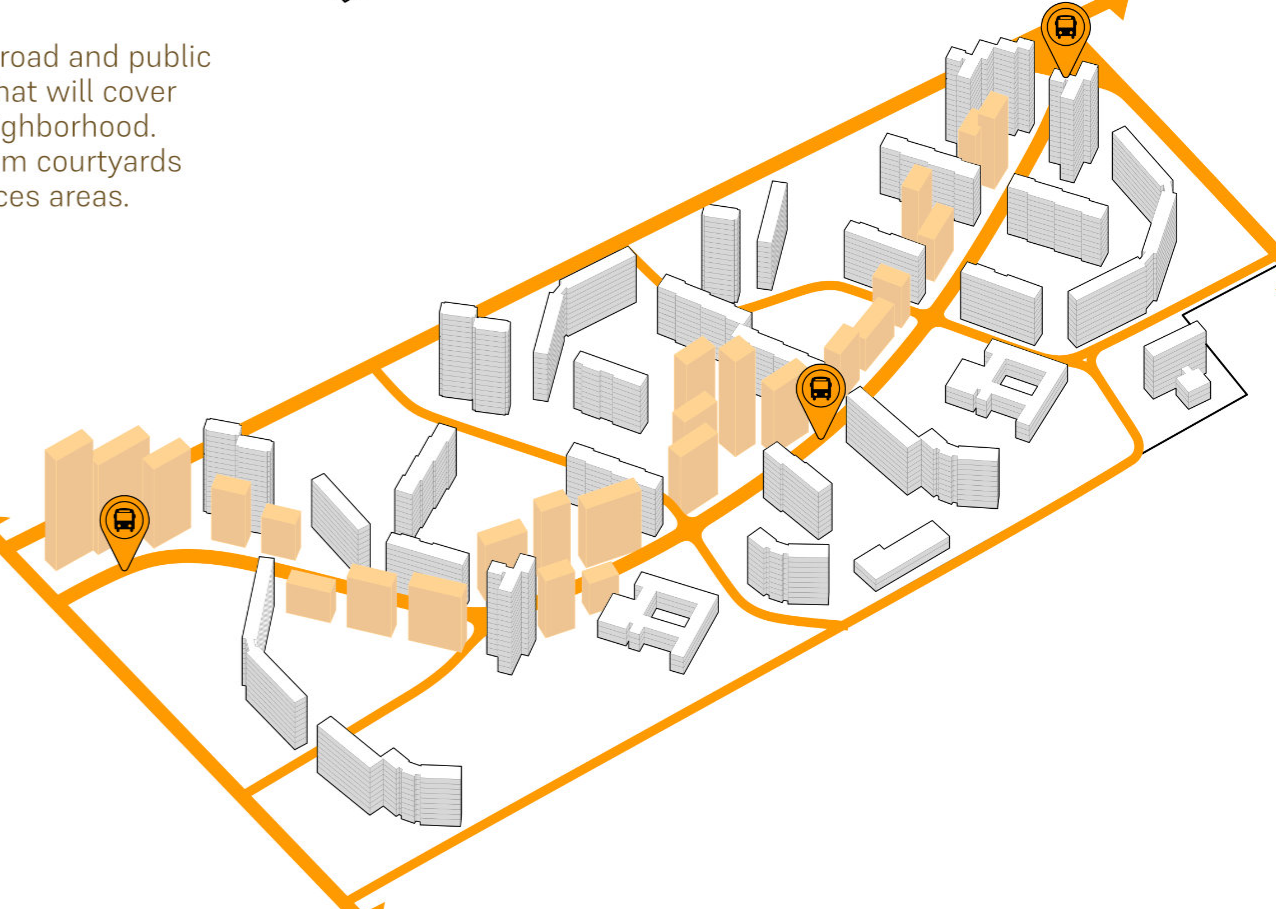
2 Analyze the existing paths and roads network. Find the main existing artery that goes through the site - it can be a pedestrian path, a road or a sequence of nodes with higher social activity.



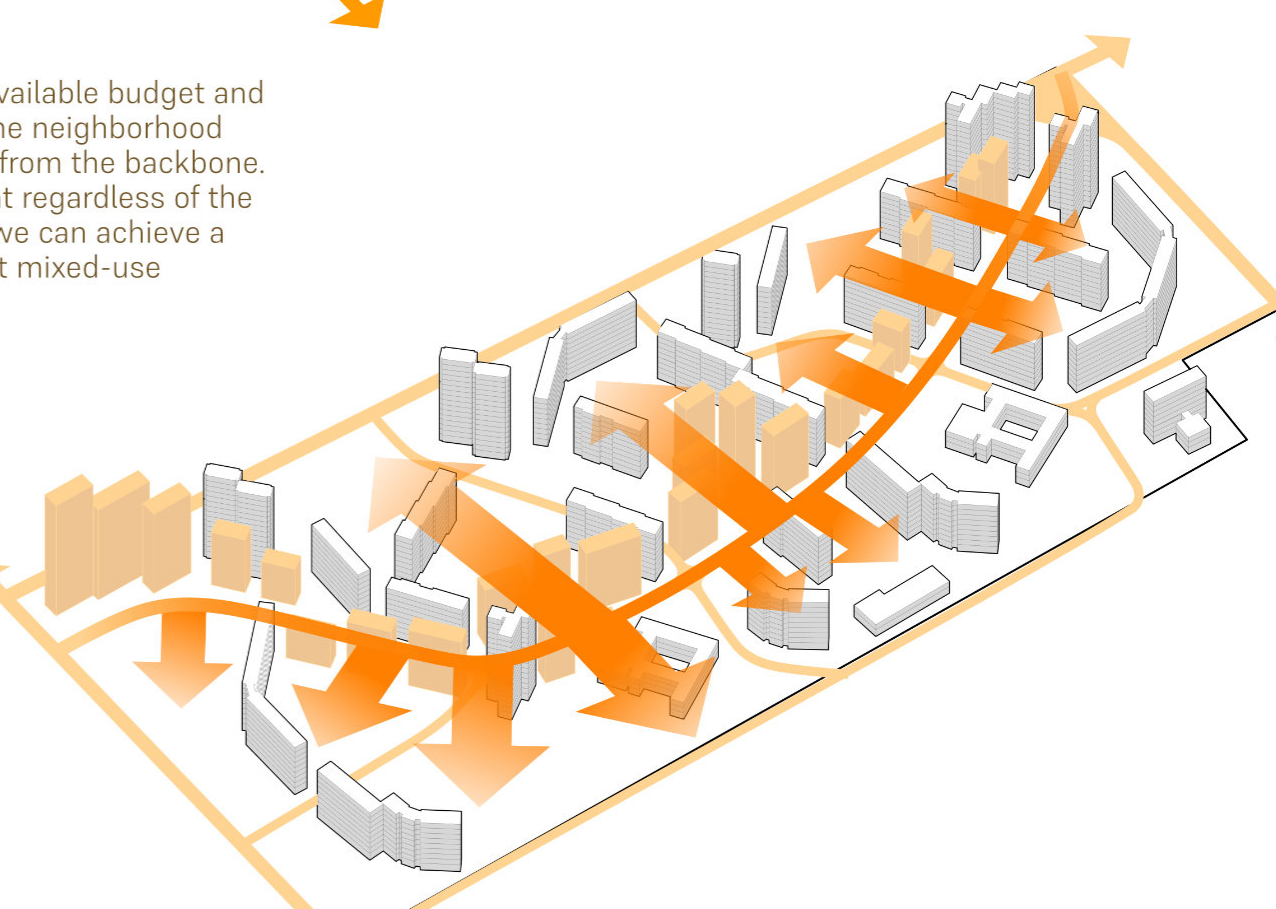
3 Locate the main city-forming functions and amenities along this artery - to create the urban "backbone" that is providing everything necessary for successful neighborhood functioning. Create local centers alongside the backbone.



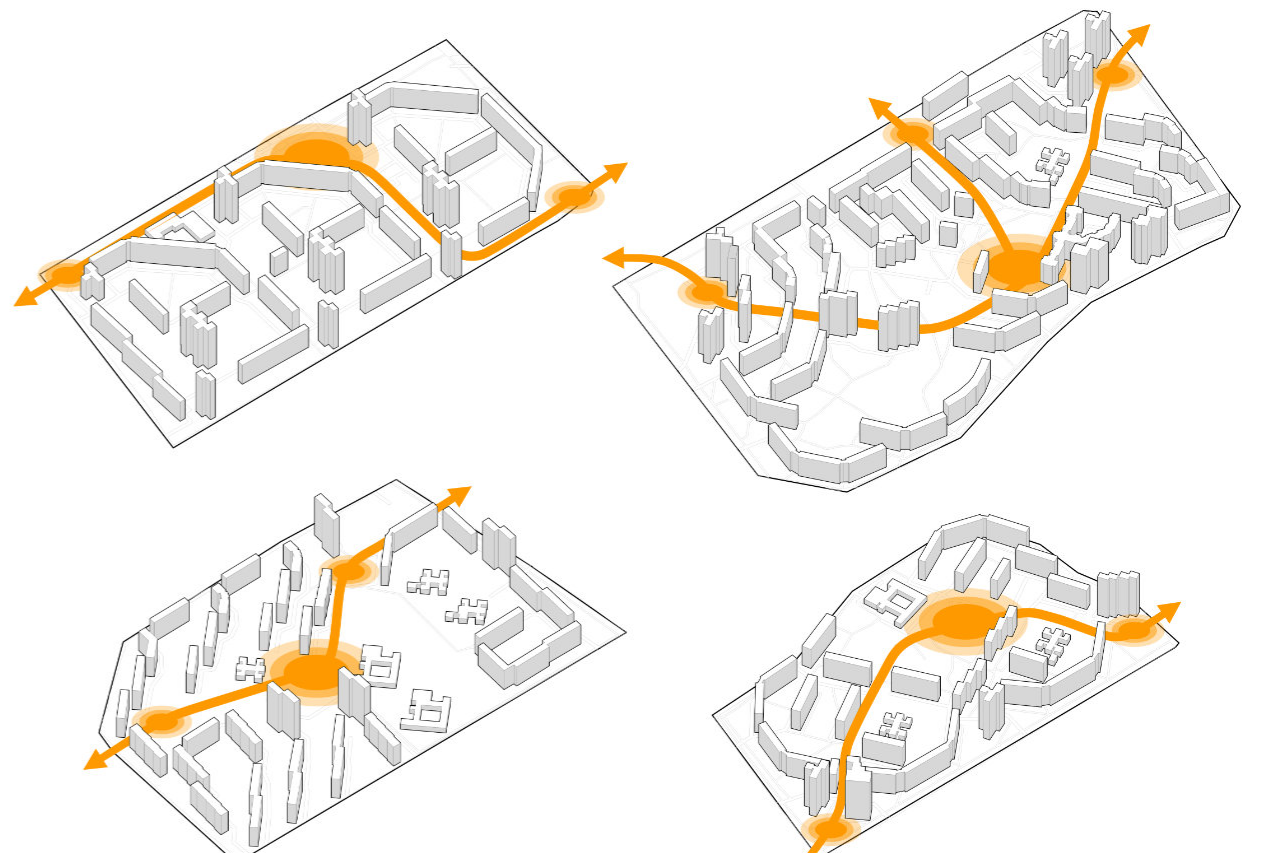
4 Providing sufficient road and public transport network that will cover the needs of the neighborhood. Remove the cars from courtyards and building entrances areas.



5 Depending on the available budget and post-war demand the neighborhood can grow outwards from the backbone. The main idea is that regardless of the demand or budget we can achieve a denser, more vibrant mixed-use neighborhood.



6 This approach can be used on any site in Ukraine of similar urban pattern and proportions, and with any level of destruction.



concept diagrams

DIPLOMA PROJECT

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