Konotop City Council

NGO “Vision Zero”

Strategy for the modernization and development of the tram system in Konotop, Ukraine

29 May 2025

Municipal enterprise “Konotop Transport Department”

Founded in 2001

240 employees

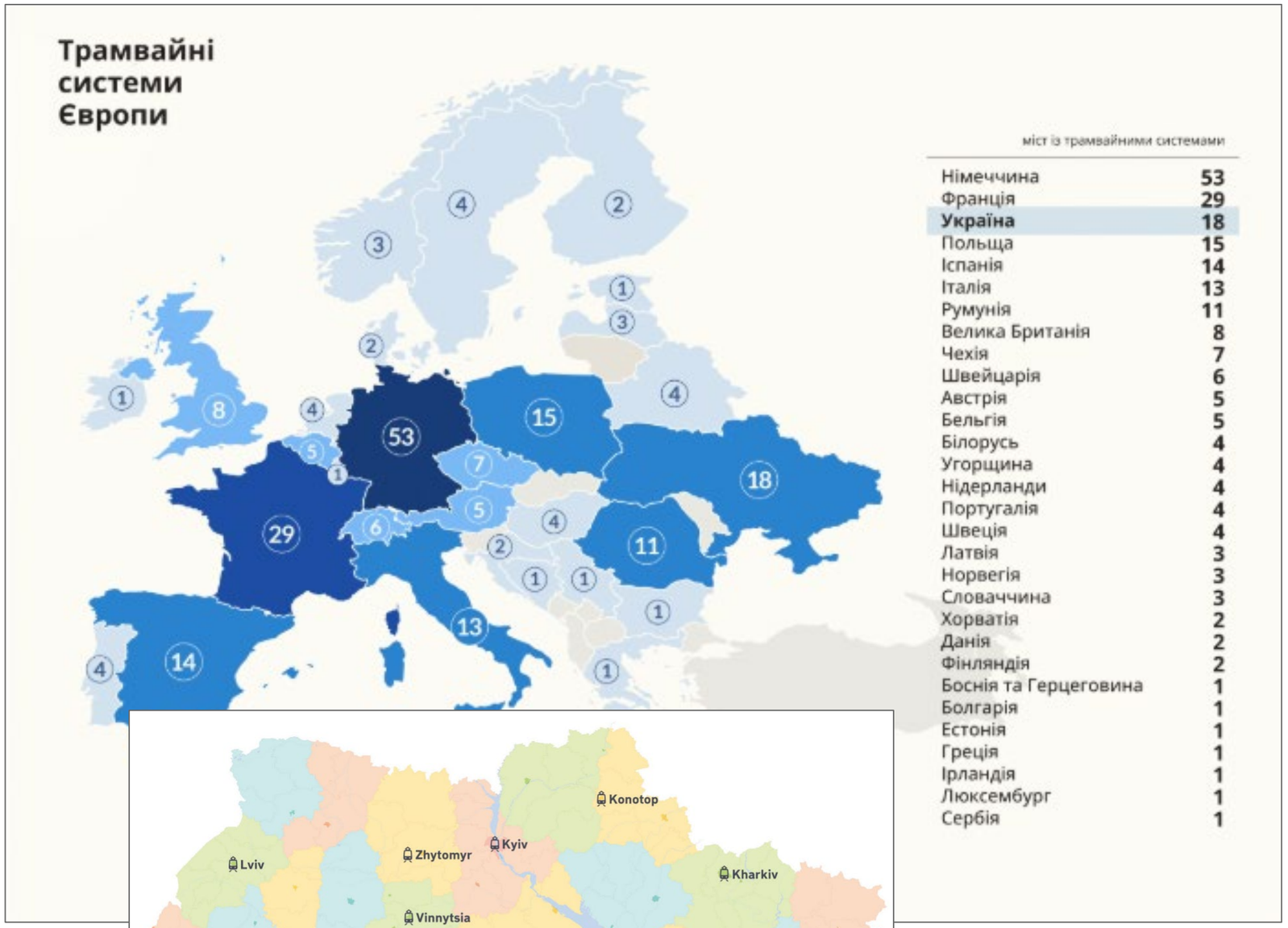
Rolling stock:

60 tram cars, in operation 10.
Recent donations:

- 25 from Ostrava
- 23 from Warsaw

12 buses.

Ukraine is still a tram country



міст із трамвайними системами	
Німеччина	53
Франція	29
Україна	**18**
Польща	15
Іспанія	14
Італія	13
Румунія	11
Велика Британія	8
Чехія	7
Швейцарія	6
Австрія	5
Бельгія	5
Білорусь	4
Угорщина	4
Нідерланди	4
Португалія	4
Швеція	4
Латвія	3
Норвегія	3
Словаччина	3
Хорватія	2
Данія	2
Фінляндія	2
Боснія та Герцеговина	1
Болгарія	1
Естонія	1
Греція	1
Ірландія	1
Люксембург	1
Сербія	1

Most recent review of tram systems of Ukraine in our 2024 study:

Work in progress:

1. Comparative analysis of norms and standards (CZ, CH, IT and PL)
2. Financial estimation of sectoral reconstruction needs;
3. Policy recommendations for UA government.

Historical background

- The tram system was created as a local, grassroot initiative
- It was itself a project of post-war urban revival and development
- Tram was launched in 1949: 3-km line from the railway station to the city center
- System has been extended to 29 km in the 1970s and 1980s.

Type 2M wagon in Konotop, 1955. Photo by an unknown author from the collection of O. Sandler (Source: Alltransua.com)

Tatra T-3 trams from Riga (Latvia)

Konstal trams from Warsaw (Poland)

Tatra trams from Ostrava (Czechia)


Острава подарувала Конотопу 25 трамваїв. Фото: Михал Харбулак / Блеск

Solaris buses from Ostrava (Czechia)

Strategy for the modernization and development of the tram system in Konotop

Speaker: Anton Hagen

The main challenge: infrastructure

Goals of future reconstruction

- Enhance carrying capacity
  - Increase speed and improve system reliability
  - Improve traffic safety
  - Improve passenger comfort

Konotop city, Prorizna street
Author: IndeX148, alltransua.com

Liepaja, Latvia (67 thousand inhabitants)
Author: Kārlis.Paikens, alltransua.com

Analysis of the current situation (SWOT analysis)

Strengths	Weaknesses
● The tram operates despite all obstacles to the transport industry, the network has not been reduced ● Tram lines are laid through the city center, the system covers all major points of attraction ● The city received over 40 used trams from the EU	● A single-track section where all three routes operate, ● Single-track line near the train station ● Many lines are laid on secondary streets and/or through private developments ● Worn out and outdated infrastructure, ● EU-sourced rolling stock is not available ● There is no direct connection between the Port district and the city center, the line runs through Svobody Street
Opportunities	**Threats**
●The tram remains the pride of the city and its residents, ●The status of the city as a frontline and affected by military actions opens up opportunities for accessing possible funds for the post-war restoration of infrastructure and the economy.	●Shortage of personnel, especially repair personnel ●Continued hostilities, further population outflow, and difficult budget situation ●Duplication of trams by buses

Tram network

Житловий масив

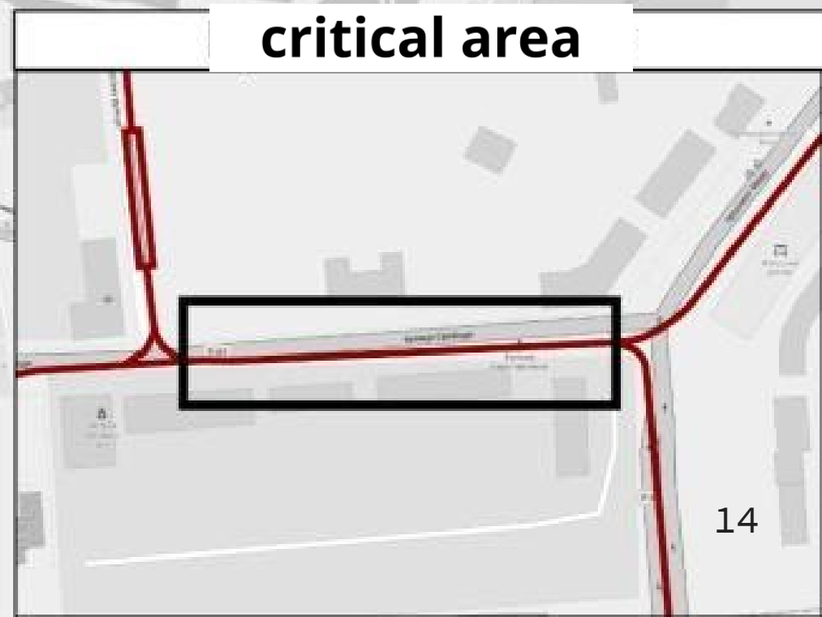
пл. Ринок

Порт

пл. Миру

Вокзал

critical area



Order and priorities

The priority of reconstruction should be determined by which part of the network the segment belongs to:

- **The critical section** needs reconstruction first, as the functioning of the entire tram system depends on its capacity and condition. Since reconstruction of the critical section without closing traffic is unlikely, it is worth considering the possibility of combining these works with works on other important sections
- **The core network** is the second priority as it covers most of the city's attractions, is double-track and has the potential to provide low latency. Changes to the core network will be very noticeable to most passengers
- **Branches** have the last priority, as the reconstruction of these sections will have a smaller effect, although it is also important for ensuring the overall quality of the network

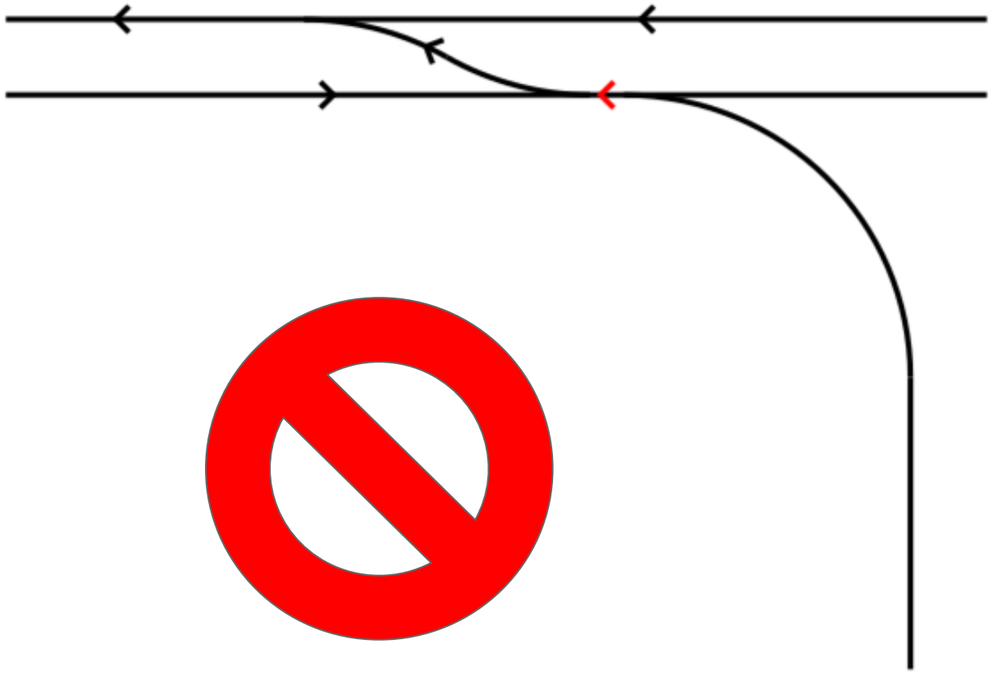
Stage 1. Reconstruction of the critical area

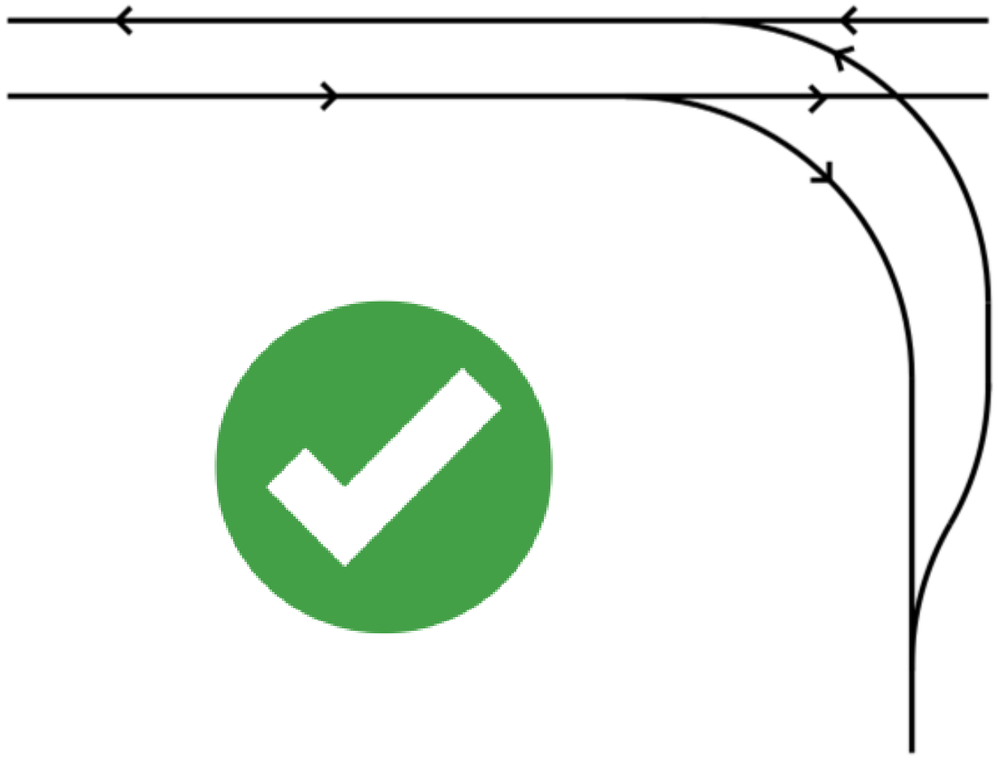
Problems:

- All 3 tram routes pass through the single-track section on Svobody Street, which significantly limits throughput.

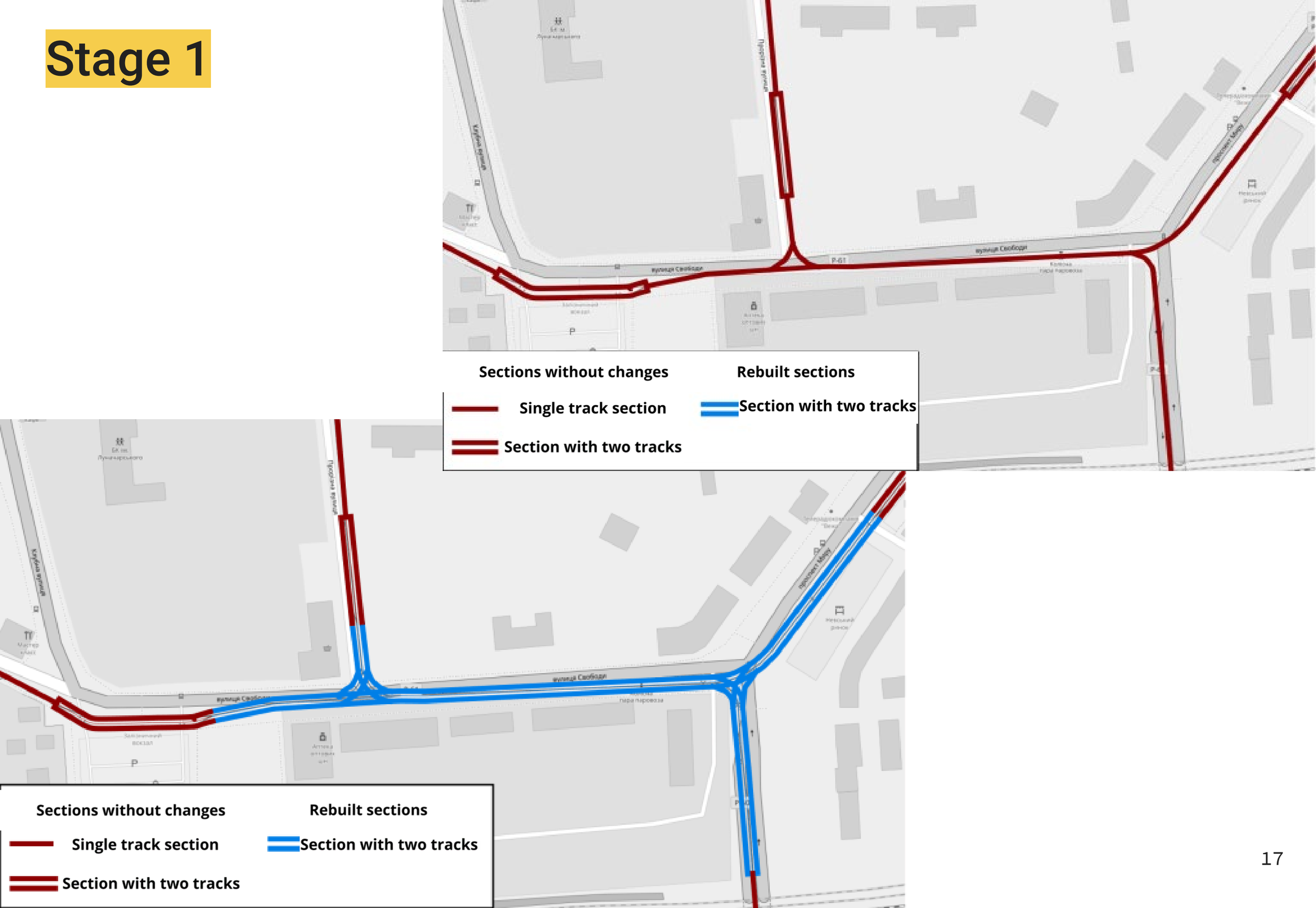
Activities:

- Laying a second track to increase the capacity of the section
- Construction of a turn from Bohdana Khmelnytskyi St. to Myru Ave.
- Reconstruction of the approaches to the critical section into double tracks to prevent the

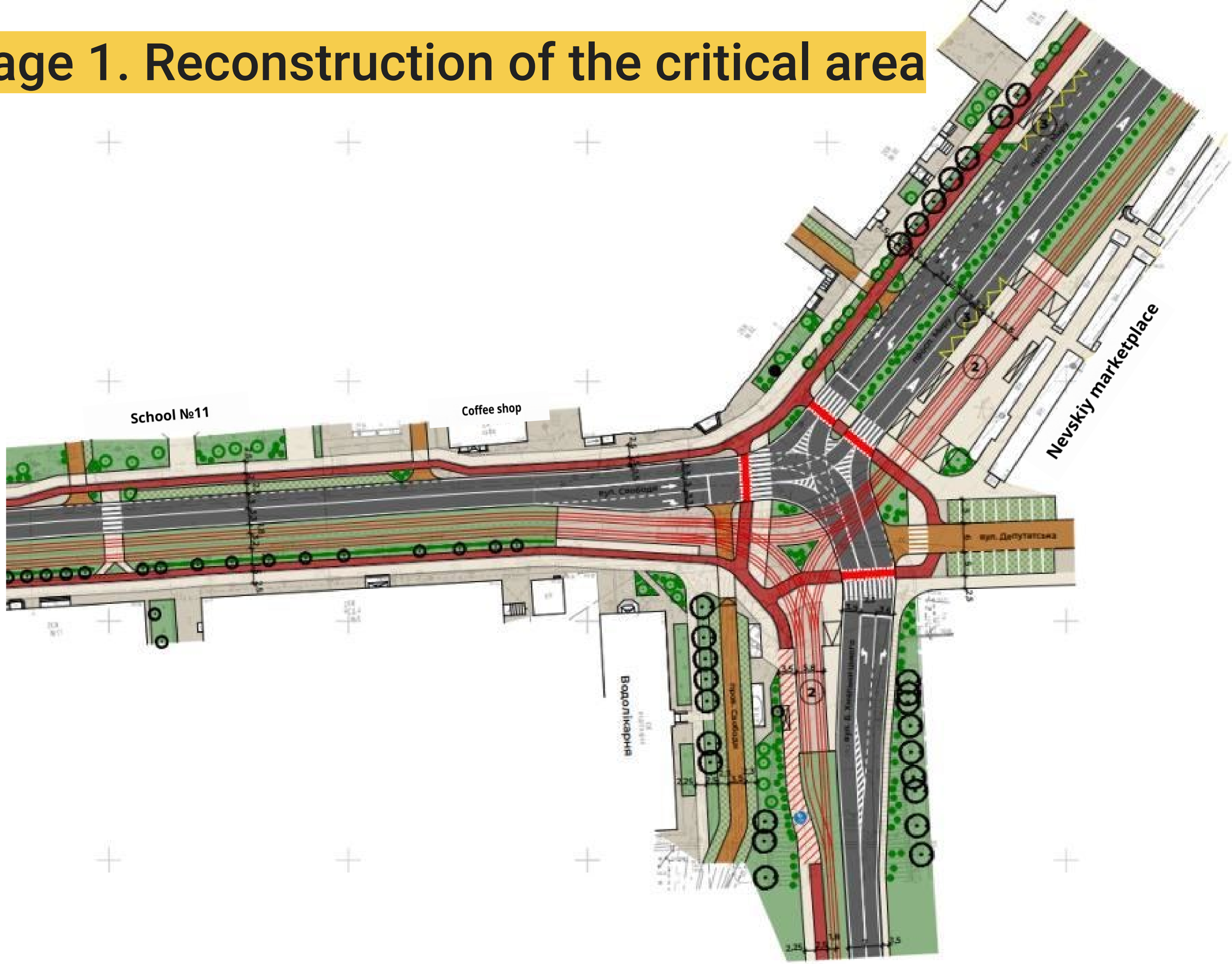




Stage 1


Sections without changes
Rebuilt sections
Single track section
Section with two tracks
Section with two tracks
Sections without changes
Rebuilt sections
Single track section
Section with two tracks
Section with two tracks

Stage 1. Reconstruction of the critical area



Stage 1.1. Inclusion of the station in the network core

Problems:

- The railway station is located on a branch from the main network to Depovska Street, which cannot accommodate heavy traffic near the station.

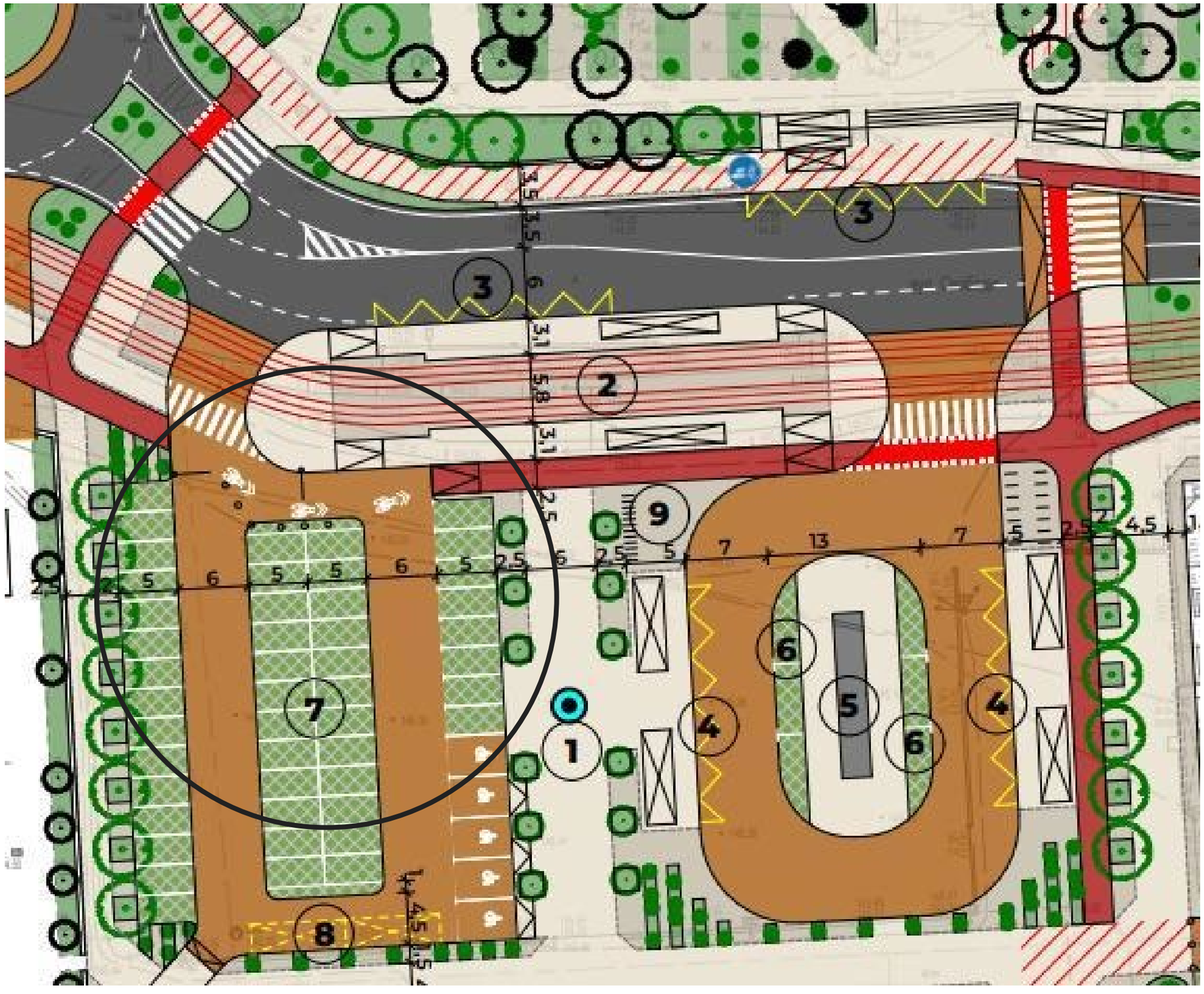
Solution:

- organization of a ring near the station
  OR
- modernization of the line to Depovska Street

Stage 1.1. Inclusion of the station in the network core

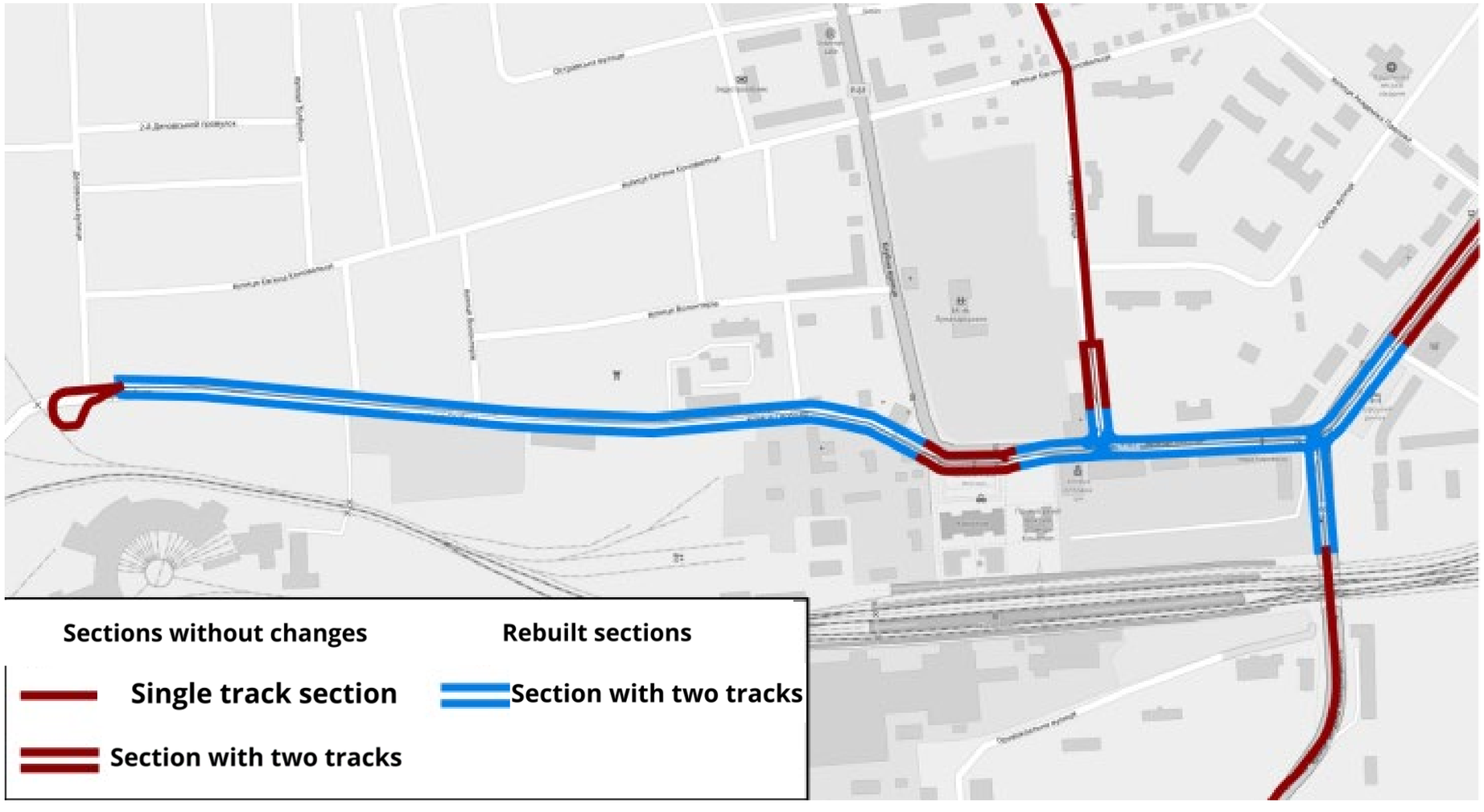
Organizing a ring near the station is an impractical measure because:

- even a compact ring with a radius of 20 m will take up half the area;
- since the stop requires a straight section of track, the terminal infrastructure occupies the entire public space in the square;
- Additional terminal infrastructure (sludge tracks, rest area for drivers) will also require space



Stage 1.1. Inclusion of the station in the network core

- The line to Depovska Street appeared as a response to the need to organize the turnaround of one-way cars near the station after the cancellation of two-way cars.
- Modernization of the line to Depovska Street is the only practical way to organize the proper frequency of tram traffic near the station
- The intensity of car traffic is low, so organizing combined traffic is an acceptable compromise.

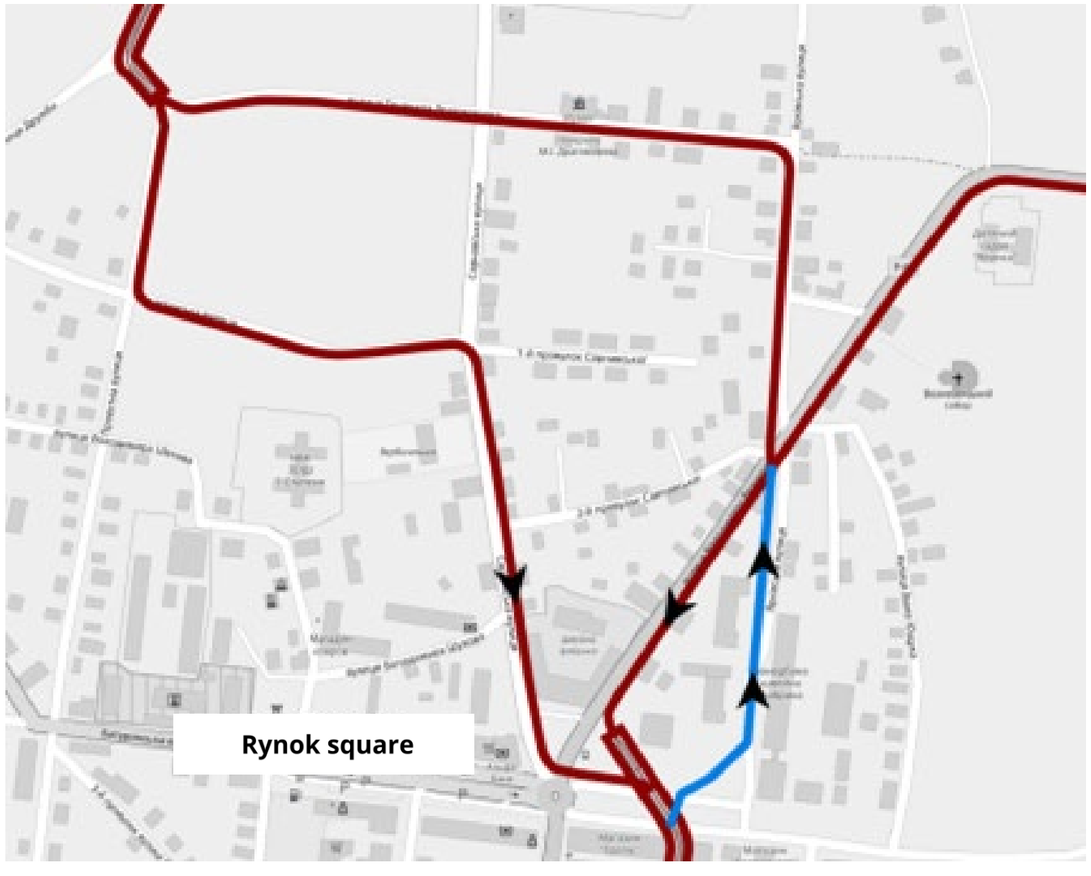


Stage 2. Reorganization in the north of the network

- Problem:
  - oncoming traffic of trams on routes No. 1 and No. 2
  - Construction or reconstruction of tram lines running along different streets in opposite directions is always more expensive and complicated than similar work on organizing two-way traffic on one street, in particular due to E&S requirements
- Solution:
  - transfer tram traffic on route No. 2 to the same streets

Stage 2. Reorganization in the north of the network: alternative

- Problem:
  - The proposed baseline option reduces pedestrian accessibility to the school
- Solution:
  - Complete the construction of a one-way line on Yarkivska Street to separate oncoming traffic flows



Parallel events

- Reconstruction of the tram depot
- Reconstruction of tracks on other sections, in accordance with priority, taking into account long-term development plans (see below)
- Reconstruction of the end sections with the laying of comfortable radii for operation and the organization of landing on straight sections
- Construction of platforms, installation of pavilions at stops
- Construction of a turning circle at Konotop Divisions Square (presumably a technical one) to increase the flexibility of the system

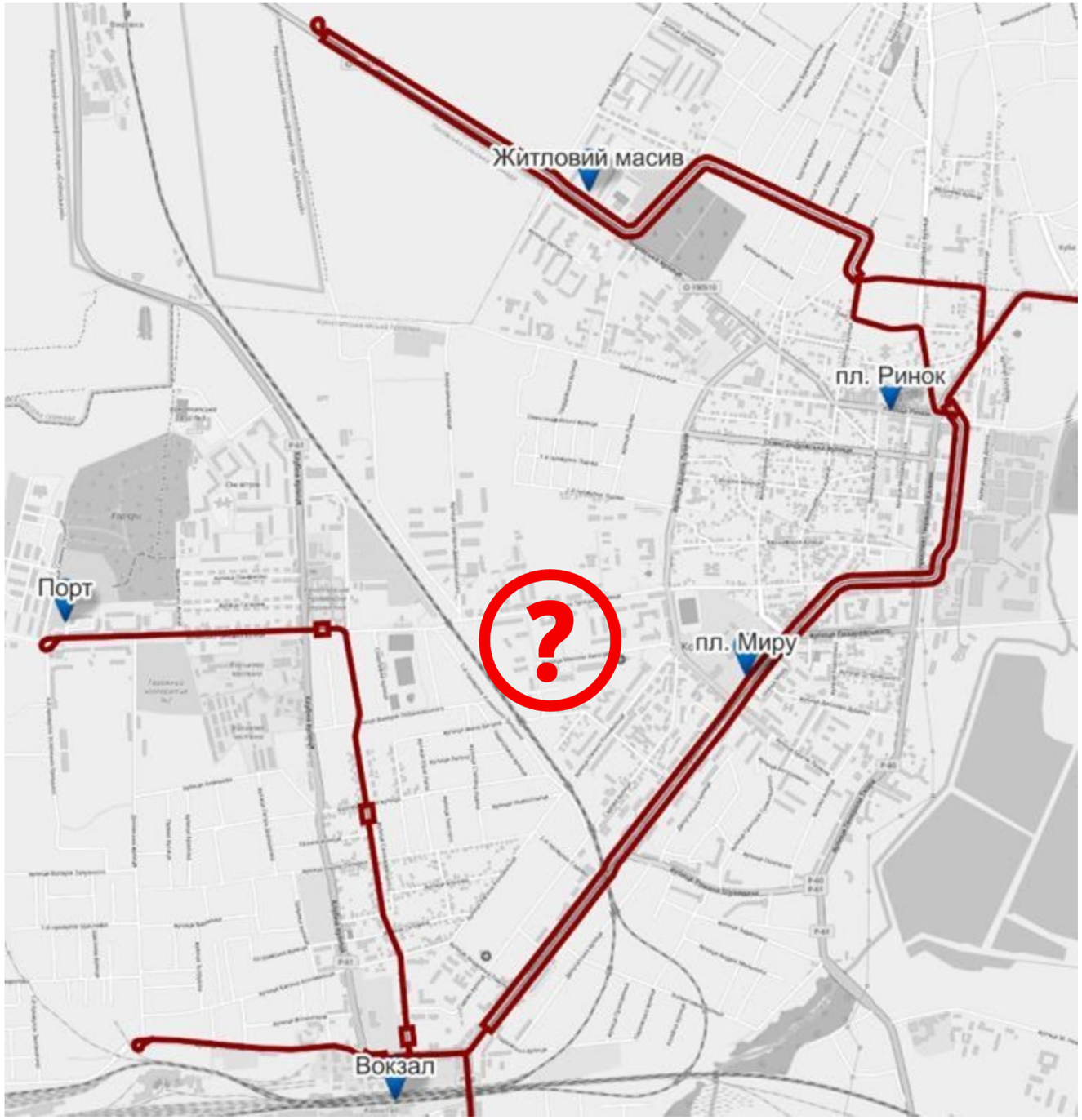
Long-term perspective

Stage 3. Direct connection Port - Center

Problem

- Currently, the Port - Center trip runs on a U-shaped route via Svobody Street.

- In the area of Uspensko-Troitska, Amosova and Luzaniv brothers streets, there is a hospital and new buildings that have poor connections to the city center. A potentially attractive area of the city is underdeveloped



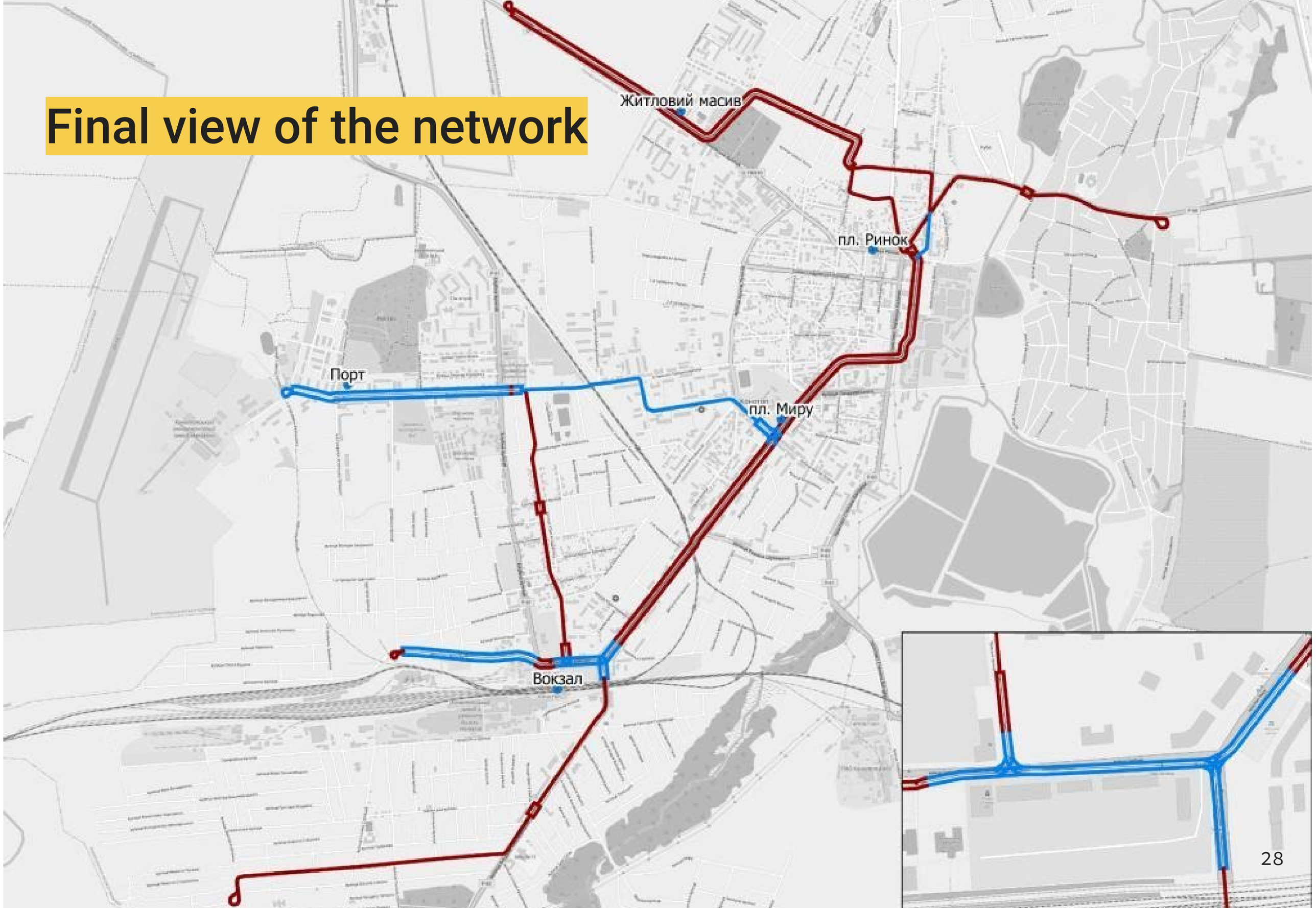
Stage 3. Direct connection Port - Center

Solution:

- Construction of a tram line from the tram depot along Uspensko-Troitskaya, Amosova and Brativ Luzaniv streets to the center, possibly single-track

- Completion of the second track to the Port and completion of the line 1 block west.

Final view of the network



An idea for the future: a direct line to Motordetal?

Problem

- Currently, the line “loops” through the private sector, which generates almost no demand and slows down traffic.

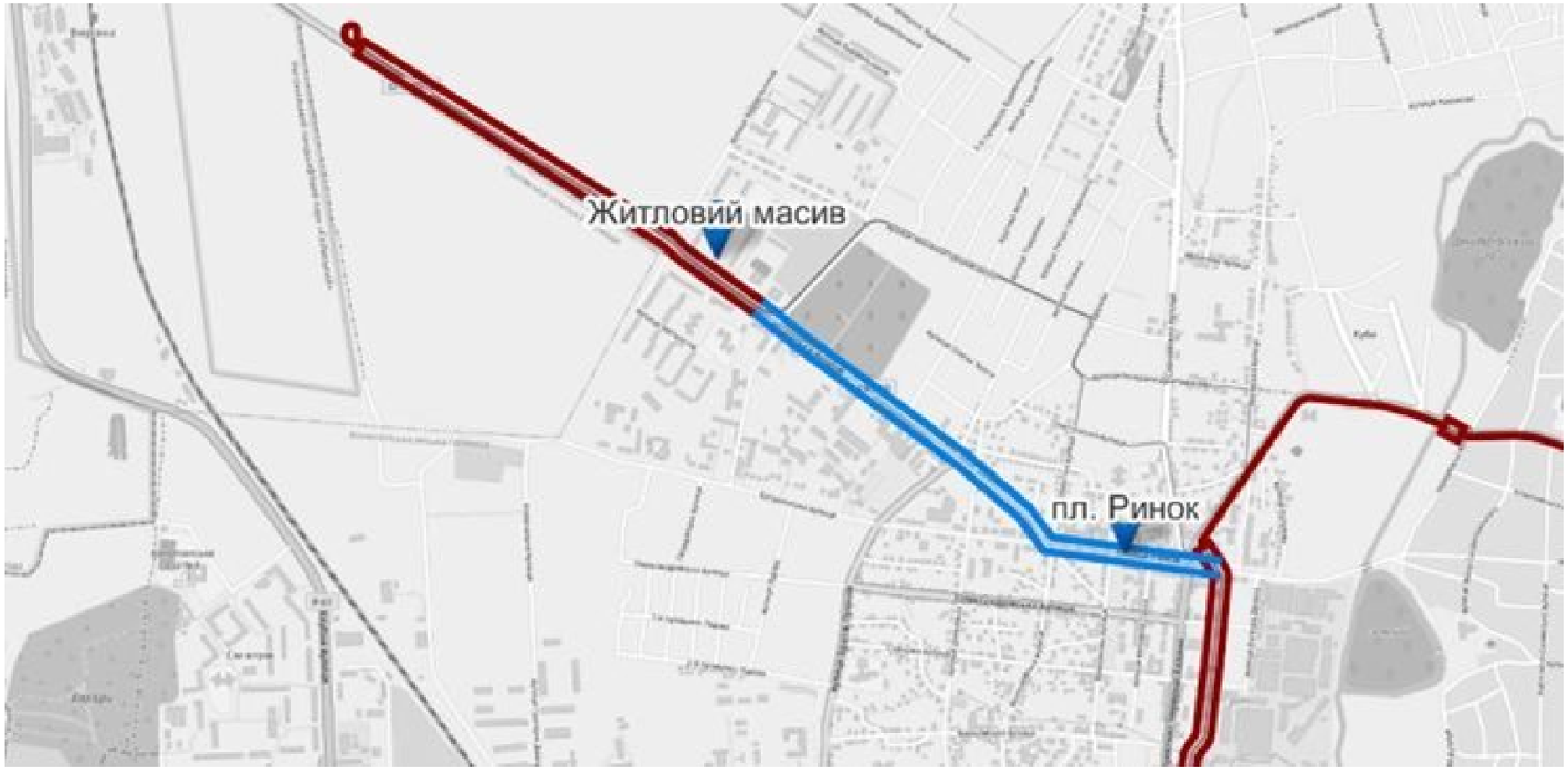
- The tram passes within walking distance of the central market, one of the city's main attractions.

An idea for the future: a direct line to Motordetal?

Potential solution - line along Vyrivska Street, BUT

- There is no space for a separate line.
- Too much traffic for shared line

The idea could be revisited in the future, but proper implementation would require significant financial and institutional costs for land acquisition and property alienation.



What to do with branches

- Tram infrastructure is a significant capital and operational investment, the feasibility of preserving individual sections needs to be studied further.

- Apart from the line to Depovska Street, which ensures the proper functioning of the tram near the railway station, this work cannot provide an answer to what to do with the other branches:
  - The lines to KVRZ and Zagrebelle are almost entirely private. Is there demand?
  - Line for Motordetal - what are the prospects for the enterprise?

- **A full-scale study of urban mobility is needed to determine optimal routing and the fate of branches**

Modernization of the service base

- Reconstruction of the tram depot and modernization of the stationary material base
- Creation of a bus park in a separate, possibly adjacent area
- Purchase, manufacture or receipt from partners of special rolling stock for maintenance and repair of tracks and contact networks

KM tower on combined run, Krakow, Poland
Author: Michał Kwaśniak, flickr.com

Rail grinding wagon, Bremen, Germany
Author: AlexB, alltransua.com

Credits:

From the city of Konotop:

Mayor Artem Semenikhin, Deputy Mayor Svitlana Samsonenko;

KP “KTU”: Viktor Tymoshenko, Natalia Yablonska and Sergiy Tyagnyi;

City Council: Olena Sydorenko, Olena Kovalenko.

From the NGO "Vision Zero":

Viktor Zagreba - project leader, Kateryna Lozovenko - coordinator,

Expert team: Anton Hagen, Yuriy Lozovenko, Artem Polyukh.

Project support : European Climate Foundation (https://europeanclimate.org/)

Project title and period:

Project "Climate-Neutral and Accessible Transport Infrastructure of Konotop" was implemented by NGO “Vision Zero” from 01.11.2024 to 31.05.2025.

Thank you for your attention!