

# Fast Solutions for Urban Mobility Development: Case of Bishkek

GRIS-2026

February 2026



# About the company



## INFORMTEKHTRANS UNITES

scientific complex, design bureau, test center, production sites, integration and operational services



## THE FULL CYCLE OF PRODUCT CREATION

from designing software and hardware to implementing national-scale projects

### AN ECOSYSTEM OF 4 DIRECTIONS

Consulting services

Urban design

Production of equipment

Software development

### KEY AREAS

Intelligent Transport Systems (ITS)

Railway control systems

Logistics

**150+**

highly skilled specialists

**100 million \$**

total cost of executed contracts

**5**

countries of presence

### Key contractors



# Experience let us aggregate different competencies adjacent to mobility planning for their perfect synergy

## Moscow: Garden Ring



- **Total upgrade of 16 km ring road** around the center of Moscow for all types of mobility
- **Lane alignment along the route** for reducing of conflict points and higher efficiency of traffic
- **Bus lanes and hubs** with metro stations and key squares for higher speed and short interchanges
- **New pedestrian crossings for better accessibility**
- **Separate side drives** for entering the residential areas, parking and some special maneuvers
- **Greenery and street furniture**

**75 %**

Reduction in the number of road accidents

**30 %**

Reduction of traffic jams due to lane alignment

# Experience let us aggregate different competencies adjacent to mobility planning for their perfect synergy

## Moscow: Railway station hubs



- **We upgraded 4 railway terminal squares:** Belorusskiy, Paveletskiy, Kievskiy and Savelovskiy
- **Parking and drop-off solutions** for reduction of congestion and comfortable interchanges
- **Effective traffic light organization** for less congestion. New traffic light management let the city council **cancel the multilevel junctions' projects**
- **New Tram Hub on Belorusskiy railway terminal**
- **Buses and trams hubs** with short interchanges with railway and metro stations
- **New pedestrian crossings for better accessibility**
- **Greenery and street furniture**

**523 000**

Passengers pass through  
4 hubs every day

**75 %**

Increase of bus and trams flows  
after squares improvement

# Experience let us aggregate different competencies adjacent to mobility planning for their perfect synergy

## Moscow: Tram on Radonezhskogo street



- **A first full upgrade of street** with implementation of a new tram line in modern Moscow
- **Special tram nodes with multiple tracks** for reduction of time loss on traffic lights
- **Multimodal hub with railway and metro station** integrated with trams and buses on Rogozhskaya zastava square for **over 60 thousand passengers per day**
- **Adaptive traffic light** regulation for complicated nodes with tram priority and variative programs
- **New pedestrian crossings for better accessibility**
- **Greenery and street furniture**

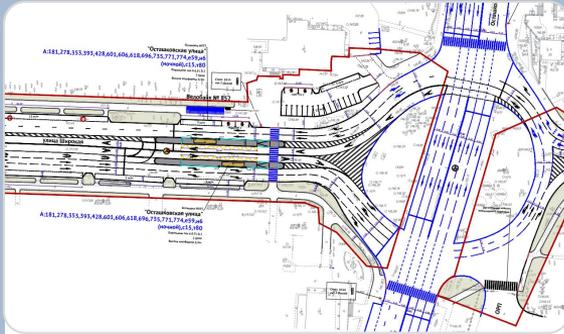
**10 000**

Passengers use the new tram route from center of Moscow to the east of the city

**12 %**

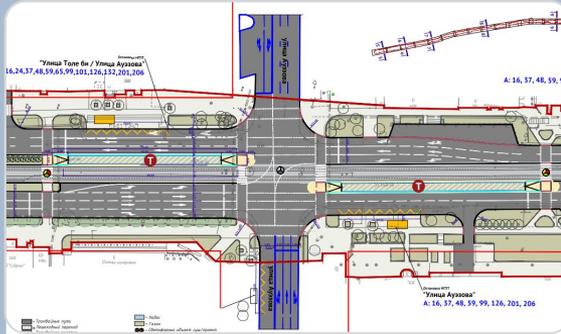
Decrease of metro congestion near the new tram line

# In 2025 we designed over 100 km of streets, LRT line and micromobility networks



## 100 KM LAYOUTS FOR STREET REDESIGN IN MOSCOW

- Comprehensive analysis for street reconstruction during seasonal maintenance works
- Traffic and pedestrian flows, accidents and public transport delays analysis
- Microsimulation and effects estimation



## LAYOUT FOR LRT PROJECT IN ALMATY

- Preliminary design for first line of LRT in Almaty which becomes the basis for further project development
- Over 52 crossings and 50 stops designed
- Technical expertise provided for choice of rolling stock, depot, electrification and infrastructure design



## 15 KM OF BIKE LANES FOR BAKU

- Brief solutions and feasibility study for network spread to outer districts of the city
- 15 km of layouts for fast implementation on the streets without reconstructions works and significant impact on traffic
- Fast solutions for road safety

# First Moscow BRT corridor, new layout for Sheremetyevo airport and a new pedestrian street in Baku were implemented according to our solutions in 2025



## FIRST BRT CORRIDOR IN MOSCOW: CHEROPOVETSKAYA – LESKOVA – SHIROKAYA

- 8 km BRT line – chord connecting:
  - 4 districts of Moscow
  - 3 metro and 2 railway lines;
- 40% faster bus service;
- Short interchanges with metro, trams and other bus routes.



## SHEREMETYEVO AIRPORT DROP-OFF LAYOUT UPDATE

- New taxi-aggregators service proposal and drop-off design;
- Comprehensive simulation with usage of PTV products;
- Drop-off congestion excluding.



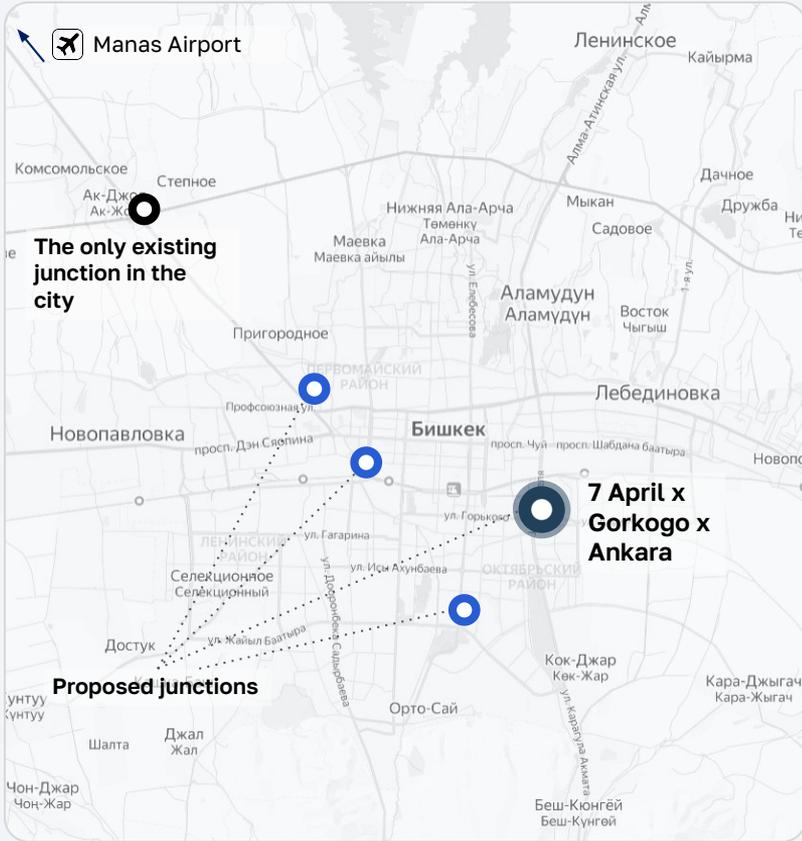
## NEW PEDESTRIAN STREET IN BAKU: ISLAM SAFARLI STREET

- 500 m pedestrian zone in the historical center of Baku;
- Solutions for residential parking and user experience reorganisation;
- Architectural and urban planning solutions.

# Case of Bishkek

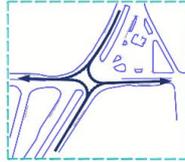
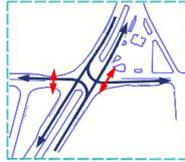
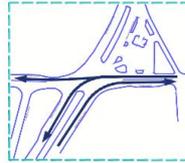
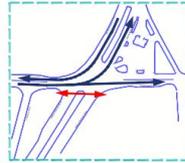


# In 2024 city of Bishkek considered large investment in multilevel junctions on several congested crossings

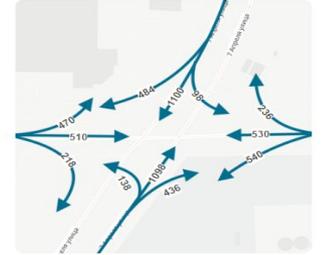


## 7 APRIL X GORKOGO X ANKARA CROSSING

### Former Phases

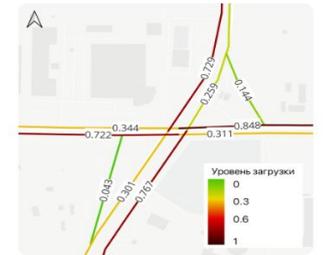


### Flows of cars per hour



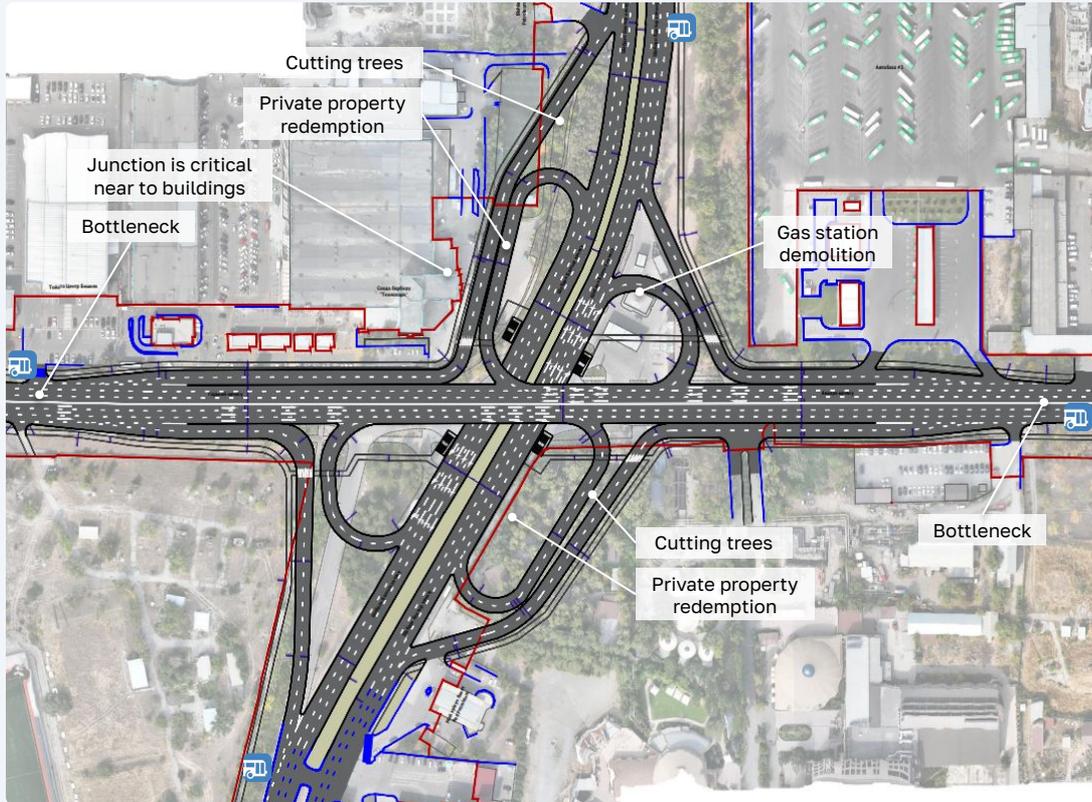
Heavy congestion of crossroad both on straight and turning directions.

### Congestion, %



Congestion up to 94%.

# Proposed multilevel junctions' design had a variety of drawbacks and risks comparable with potential benefits for traffic



## PROJECT PROS



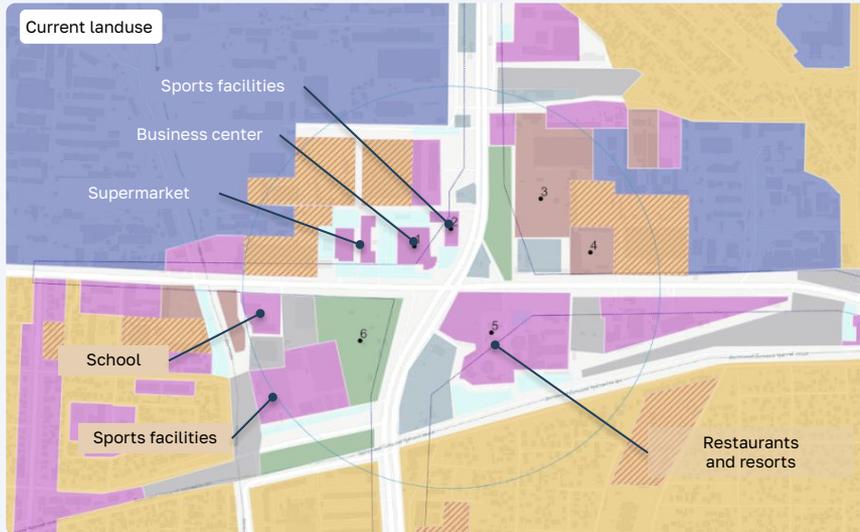
Local congestion reduction

## PROJECT CONS

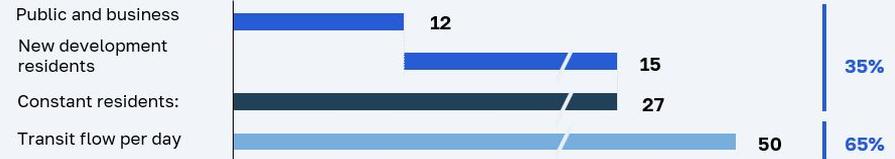


- 120 00 m<sup>2</sup> private territory redemption
- Gas station **demolition**
- Turns will be just 3-5 meters away from buildings
- 22 000 m<sup>2</sup> **greenery demolition**, including older full-size trees
- **Underpasses** instead of surface crossings
- **Removal of bus stops** away from crossings
- **Bottlenecks** in the junction ends with reduction of width from **5 to 2 lanes**
- Short interchange zones for cars with risks of accidents and **need for restoration of traffic lights**

# Multilevel junction implementation could ruin the ongoing redevelopment of adjacent industrial areas



## Territory residents and guests vs. transit flow, thousand people:



### NEGATIVE EFFECTS FOR 227 THOUSAND CITIZENS

- After greenery demolition the crossroad will no longer be a public and leisure space as it is now
- Pedestrian ways will become longer and more difficult
- The crossing won't be accessible for over 10 thousand residents of nearby development and amenities due to underpass implementation
- Worse bus accessibility – bus stops are removed over 200 meters away

**After redevelopment of industrial zones number of resident of the area will be higher than the number of transit drivers.**

# The territories adjacent to multilevel junctions become abandoned and uncomfortable for citizens

7 APRELYA X GORKOGO NOW



EXAMPLES OF JUNCTIONS IN URBAN AREAS IN POST-USSR CITIES



# Junction implementation can handle only the problem of one crossroad, but without any effect on the scale of corridor

## CORRIDOR SECTIONS CAPACITY, CARS PER HOUR



### Roundabout

Infrastructural limitation of capacity on the node

### 7 April x Gorkiy x Ankara

Junction capacity estimation

### Tunnel under railway

Capacity comparable with junction

### Crossroad

Infrastructural limitation of capacity on the node

### Bottleneck

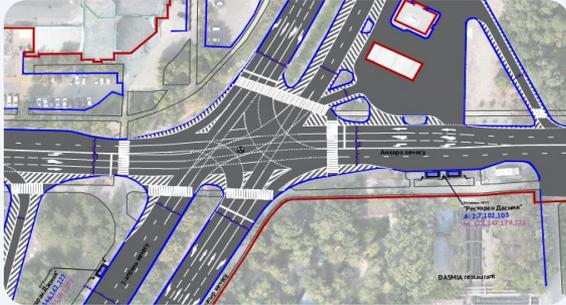
2+2 lanes in each direction with traffic lights regulation

### Crossroad and market area

Infrastructural limitation of capacity on the node, high pedestrian activity and parking violations

# Layout change and traffic lights software solutions can provide significant effects without high costs of multilevel junctions

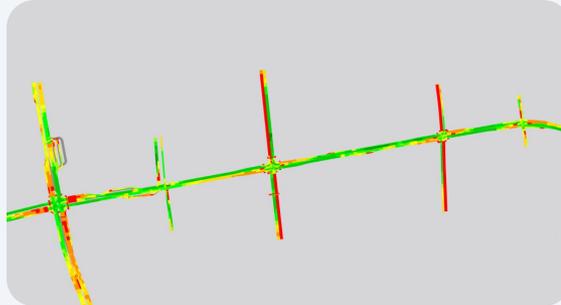
## Road markings and regulation program update



### Key changes:

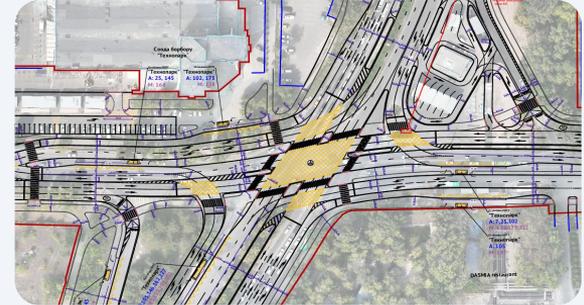
- Traffic control program update;
- Road marking update with extra lanes;
- Extra pedestrian crossings and bus infrastructure.

## New traffic controllers



- New traffic light controllers;
- Transport detectors installation;
- Adaptive regulation installation;
- Traffic light coordination;
- Incident-management systems.

## Crossing redesign



- New crossing design with some extra lanes near the crossing;
- Bus and micromobility infrastructure;
- Pedestrian accessibility improvement.

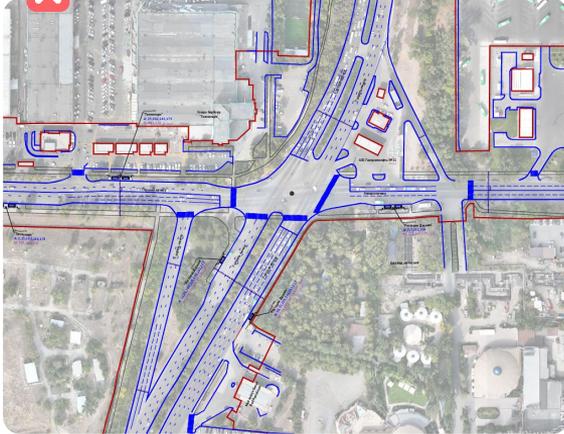
## CAPACITY GROWTH

+10%

+20%

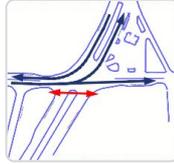
+50-100%

# Fast solution: Road markings and software update available next season

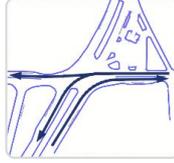


- Organisation of left turns with conflict zones and accidents risks
- Big size of crossing and unnecessary wide lanes

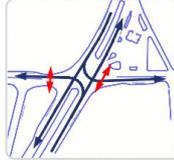
Phase 1



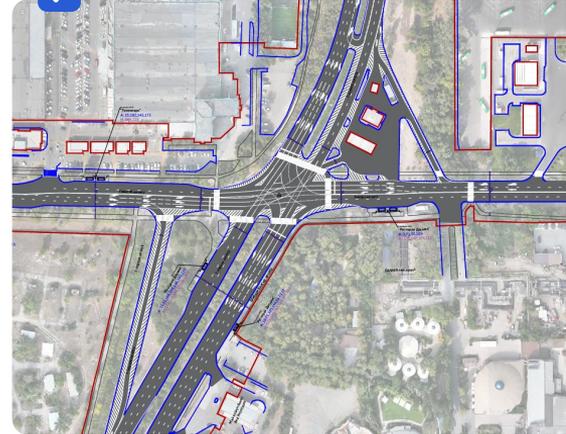
Phase 2



Phase 3

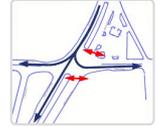


Phase 4

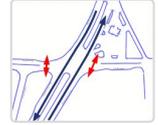


- Extra left turn lanes
- Left turns in extra phases without conflicts
- Lanes width optimisation

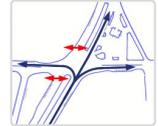
Phase 1



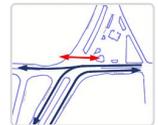
Phase 2



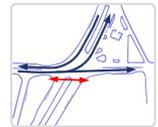
Phase 3



Phase 4

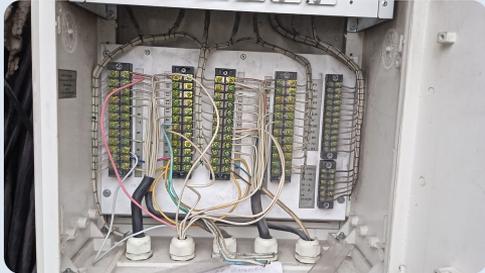


Phase 5



# In 2025 pilot equipment was installed on the crossing of Gorkogo and Ankara

IT WAS



BECOME



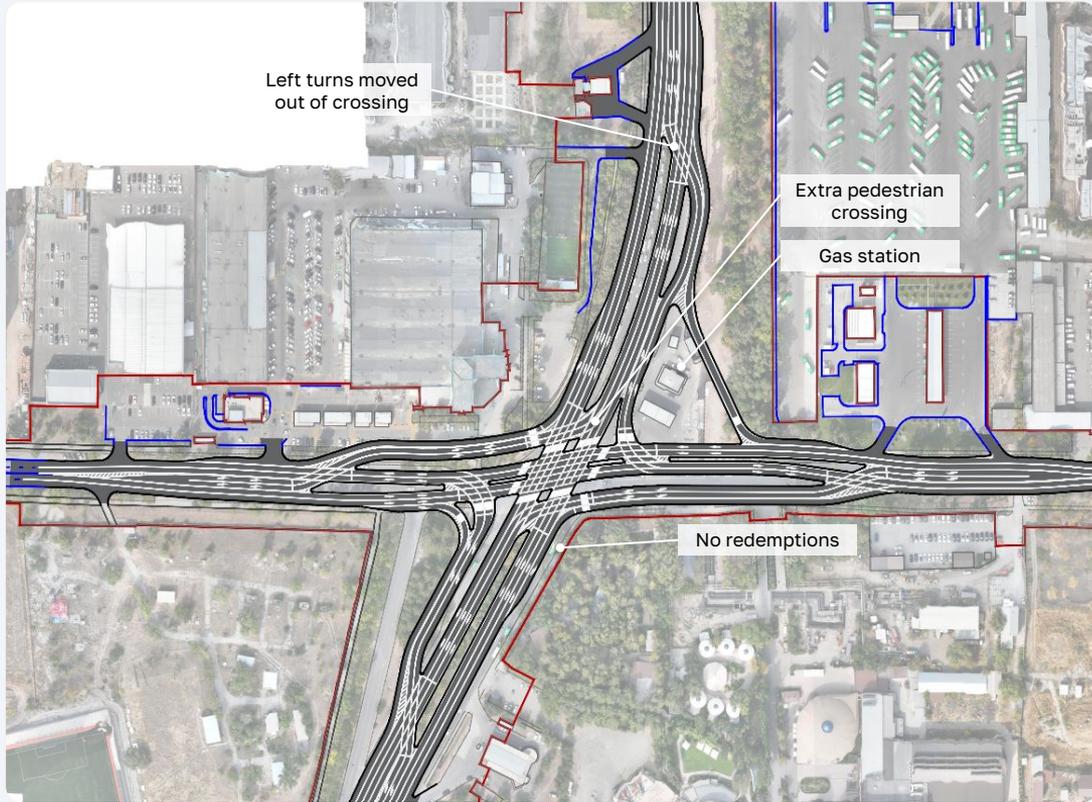
«SIGNAL» TRAFFIC CONTROLLER – AN INTELLIGENT TRAFFIC MANAGEMENT SYSTEM.

## Key features

- Cybersecurity (Multi-layered protection includes)
- V2X Technology Support (Integration with smart transportation infrastructure)
- Intelligent Control (AI-powered adaptive algorithms)
  - traffic analysis via cameras and detectors;
  - congestion prediction;
  - dynamic traffic light phase optimization;
  - priority for public transport and emergency services

Ready for localization with intellectual property rights transfer to a local manufacturer

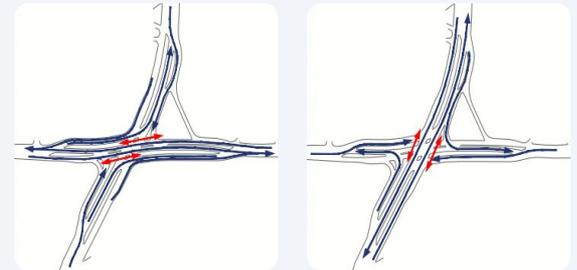
# Proposed two phase layout



## KEY EFFECTS

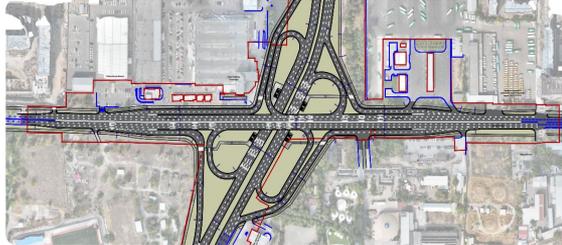


- **45% phase coefficient** for each direction
- **+38% capacity for 7 April street**  
+ 800 extra cars per hour
- **Twice higher capacity for Gorkiy-Ankara streets**  
+1500 extra cars per hour
- **No redemption** needed
- **Reduction of greenery demolition**
- **New pedestrian crossing** on the northern side of crossing
- **Bus stops nearer to the crossing** for faster interchanges



# Effects estimation

MULTILEVEL JUNCTION



TWO-PHASE SOLUTIONS



|                                |  |  |
|--------------------------------|--|--|
| Costs:                         | 15,5 mln \$  | 2,3 mln \$   |
| Average travel time, sec:      | 259 (-6%)  | 270 (-3%)  |
| Costs per 1 pass*hour per day: | 5,3  | 2,1  |
| Redemption, m2                 | 120 000  | -  |
| Greenery demolition, m2        | 21 000   | 4 000  |
| Pedestrian accessibility       | Gets worse due to underpass                          | Improved – New crossing                                |
| Public transport accessibility | Worse accessibility of stops and longer interchanges | Better accessibility of stops and shorter interchanges |



# Congestion is not the only problem of 7 April street which had to be solved with a new layout concept

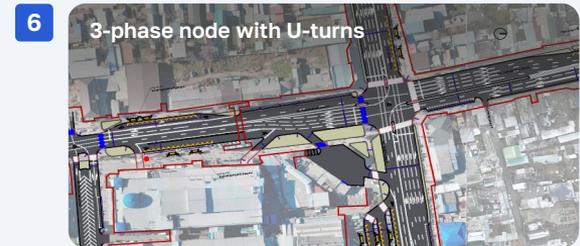
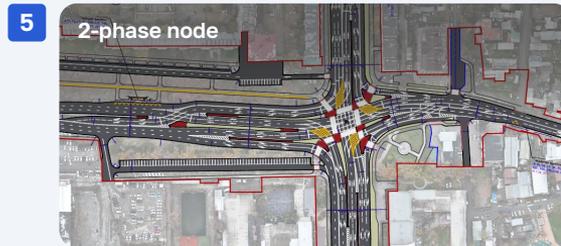
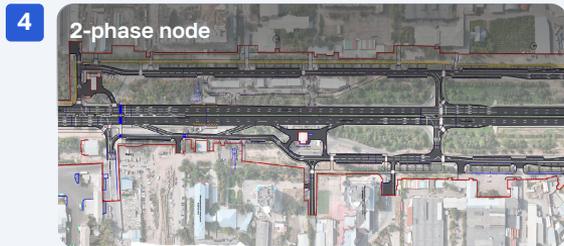
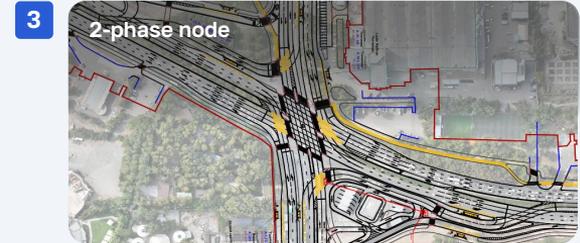
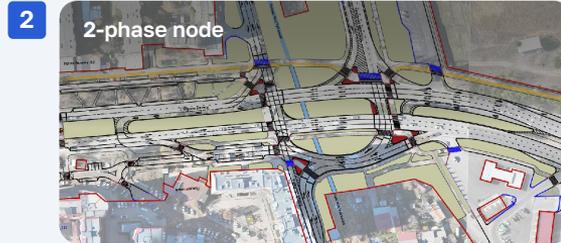
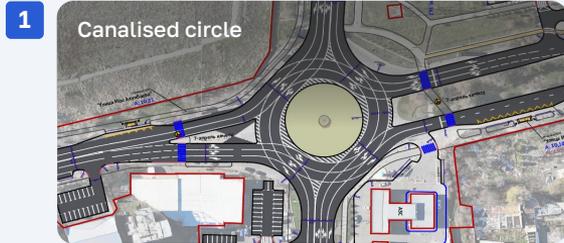
## CONGESTION OF NODES AND SECTIONS



## BUSES, PEDESTRIAN AND MICROMOBILITY ISSUES



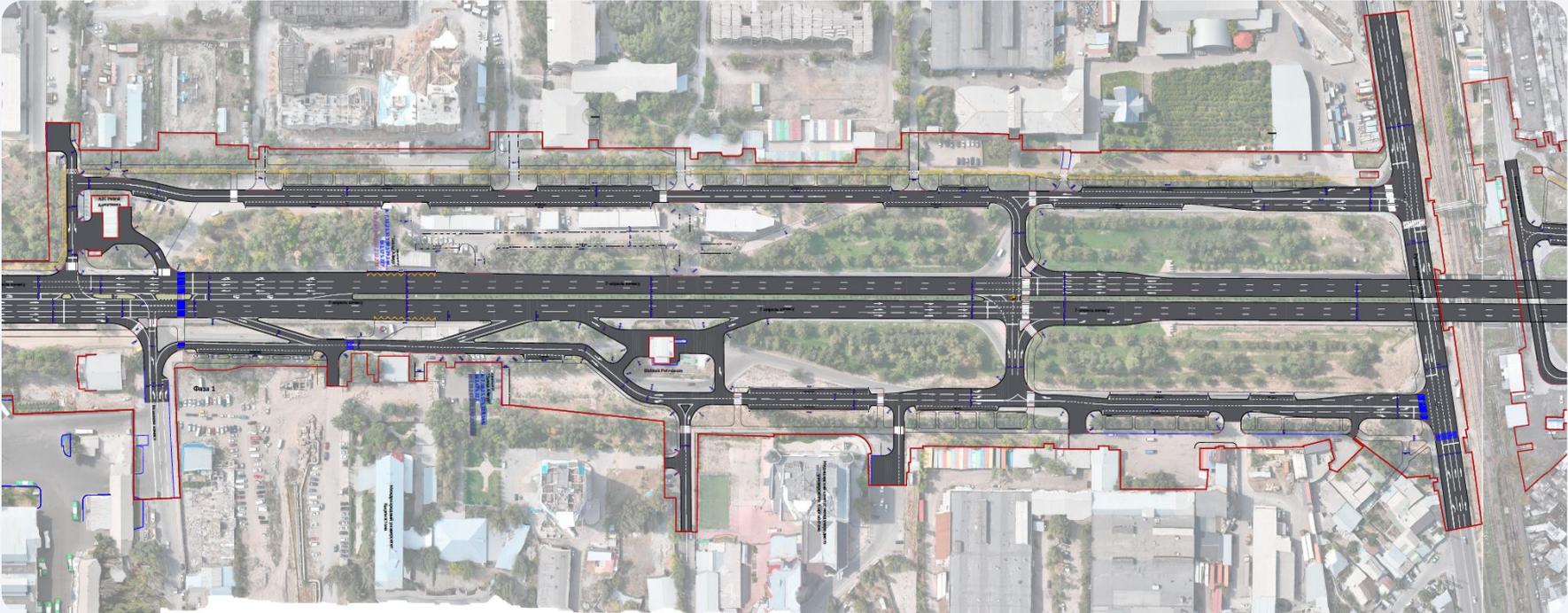
# The money saved with multilevel junction project cancellation can be used for all 7 km corridor upgrade



# 2-phase node variations for corridor



# 2-phase section for new development connections



# Alameddin market node



## 1 Dedicated bus stops

Stops are located in special side lanes physically protected from illegal parking

Barriers between traffic lanes and side lanes makes drop-off impossible in this area

## 2 Additional lines for left turn

For the most congested left turns (from the 7 km designed corridor) extra lanes for left turns are proposed for higher left turns capacity

## 3 Left turns using U-turn after crossroad

For less congested direction left turns are organized with U-turns on the adjacent crossing, what lets us reducing the number of phases on the main node

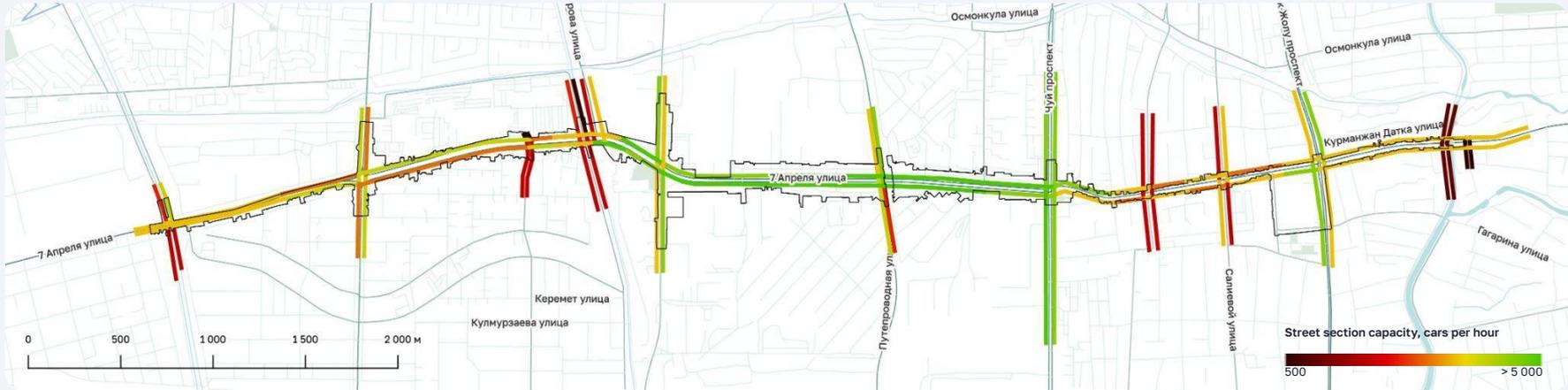
## 4 Special zone for suburban bus hub

Suburban buses taking passengers on the side of the avenue are removed to the special hub zone located out of the traffic lanes

## 5 Alternative parking zone

The reduced parkings and drop-offs are compensated on adjacent streets

# Layout design combined with traffic management solutions provides synergy effect for the corridor



The corridor capacity is growing from the periphery to the city center

Lower capacity on the entrances filters extra demand  
Higher capacity in the city center reduces congestion on the busiest crossings



All traffic light programs' cycles are multiples of 90.

A 'passive' or 'active' green wave can be implemented for reducing congestion on 7 April corridor.



Keeping of traffic lights makes the traffic manageable for improving capacity, providing priority for public transportation and special services' needs.

# Special software

Светофорный объект 309  
1010-04\_ДР\_ТРЕХ-ВОРОНЕЖ\_д156

Состояние оборудования: **Работает**  
Режим СО: Рабочий, штатный режим  
ID в Администр. ДР: Семаф-1

Нет запрограммированных команд

Нет флагов

Текстура фазы

| Фазы  | 1 сек.  | 2 сек. | 3 сек. | 4 сек.  |
|-------|---------|--------|--------|---------|
| Горит | 10 сек. | 7 сек. | 7 сек. | 24 сек. |
| Горит | 20 сек. | 7 сек. | 7 сек. | 20 сек. |

Связанные видеонаблюдения

Связанные устройства

Точка УДС

Подобрать Устройства СО

Установить СО

Редактировать УСТ-90

Детектор транспорта 1115  
2410-21\_ДТ

Состояние оборудования: **Работает**

Основная информация

Интенсивность

Период: 01 сентября 2023 по 02 сентября 2023  
Облачность: 03.09.2023, 14:30:43

канал ТС от 01:00 до 15:00

403

Интенсивность, Ср. скорость, Ср. плотность

Связанные видеонаблюдения

Камера: 2410-сm2

Подобрать

Редактировать УСТ-90

Камера видеонаблюдения 115 IG10-02\_ВК\_Выезд от Самбери

Изображение с камеры

Устройство на карте

Информация по устройству:

| Название устройства         | Статус          |
|-----------------------------|-----------------|
| IG10-02_ВК_Выезд от Самбери | <b>Работает</b> |

Описание: камера

СМ377 Выезд от Самбери

Адрес: 680013, Россия, Дальневосточный федеральный округ, Хабаровский край, Хабаровск, Красновосточный район, Третьяковая улица, 176А

Широта: 48.5478878446

Мониторинг состояния оборудования

Все подсистемы

Общее состояние оборудования:

186/202

65.96% Работает

Подсистемы:

| Подсистема | Статус |
|------------|--------|
| 1          | 97%    |
| 2          | 97%    |
| 3          | 17%    |

Количество оборудования: 282

Состояние аддиторов всех подсистем:

| Аддитор | Статус |
|---------|--------|
| 1       | 20%    |
| 2       | 100%   |
| 3       | 100%   |

Количество аддиторов: 15

Список оборудования:

Нет примененных фильтров

Камера видеонаблюдения G21 2421-сm3

Система: Описание

ЕП/ТС Янтарь(ОЗ)

ШТ/Выездор мез (Земля) Воронеж

Адрес: Назначение: Частный УДС

УИ/Точка УДС: СО № 153

Камера видеонаблюдения G22 2421-сm1

Система: Описание

Воронеж 9 Января-Зеленое 8 направление (ЛинейнаяОЗ)

Карточка устройства: Камера видеонаблюдения G21 2421-сm3

Основная информация

Адрес: Видеонаблюдение

Камера: 2421-сm3

Камера видеонаблюдения G22 2421-сm1

# INFORMTECHTRANS



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