

Green Region Integrated Action Plan

Final report

To: Green Region, PI
Vilnius, 2025

Content

Key abbreviations and terms	4
List of tables	5
List of figures	7
Introduction	10
1. Context, needs and vision	12
1.1. Analysis of the current situation	12
1.1.1. Demographic dynamics of the population	12
1.1.2. Analysis of the vehicle fleet	13
1.1.3. Traffic safety statistics	15
1.2. Existing policies	17
1.2.1. Analysis of strategic planning documents	17
1.2.2. Analysis of territorial planning documents	21
1.3. Mobility situation analysis	24
1.3.1. Road and street infrastructure	24
1.3.2. Infrastructure for alternative fuel vehicles	25
1.3.3. Non-motorized vehicle and micromobility infrastructure	26
1.3.4. Public transport network and service (including pupils transport)	27
1.4. Population survey results	28
2. Accessibility and mobility in the Taurage region	32
2.1. Assessment of the accessibility of the trans-European transport network	32
2.2. Traffic intensity analysis	34
2.3. Regional network of non-motorized transport analysis	35
2.4. Regional public transport route analysis	36
3. Solutions for sustainable mobility in the region	37
Intervention Area 1: non-motorised transport infrastructure	37
Intervention Area 2: Public transport and its interaction with non-motorised transport	39
Intervention Area 3: Traffic management and promotion of clean transport	40
4. Action in municipalities and the region	41
4.1. Actions applied to each municipality	41
4.2. Actions applied at regional level	41
4.3. Action details	43
5. Implementation and monitoring	45
5.1. Implementation of IAP	45
5.2. Monitoring framework of IAP	45

Annex A. Analysis of strategic planning and territorial planning documents of each Taurage region municipality	46
Annex B. Road and street infrastructure maps.....	52
Annex C. Infrastructure and calculations for alternative fuel vehicles	56
Annex D. Detailed analysis of non-motorized vehicle and micromobility infrastructure in Taurage region municipalities	61
Annex E. Taurage region routes and timetables and scan&drive websites.....	67
Annex F. Taurage region municipalities' public transport network analysis	68
Annex G. Population survey data.....	73
Annex H. Traffic intensity of vehicles and freight transport in Taurage region roads.....	77
Annex I. National map of pedestrian and bicycle path development in Taurage region	79
Annex J. Accessibility by bicycle and regional PT routes in Taurage region	80
Annex K. Example of school zone setup and NMTMV storage and preservation infrastructure	81
Annex L. Visualisations of possible solutions of the interaction of public transport and bicycles	82
Annex M. Mobility hub example.....	83
Annex N. Solutions for each Taurage region municipality.....	84
Annex O. Non-motorized vehicle solutions for the Green region	93

Key abbreviations and terms

AADT	Average annual daily traffic volume
AFV	Alternative fuel vehicle
BEV	Battery Electric Vehicle
BF	Bus fleet budget
Consultant	Smart Continent LT
Customer	Green Region, PI
EMIS	Education management information system
EU	European Union
EVCP	Electric vehicle charging port
EVCS	Electric vehicle charging station
GP	General Plan
GR	Green Region, PI
JSA	Joint stock company
LR	Republic of Lithuania
MB	Municipal budget
NMTMV	Non-motorized transport and micromobility vehicles
PB	Private budget
PCARS	Public charging access registration systems
PHEV	Plug-in Hybrid Electric Vehicle
PLC	Private limited company
PSN	People with special needs
PT	Public transport
Regitra	Regitra, JSA
SDA	State data agency
Sustainable mobility	Resource efficiency and accessibility is based on the ability of individuals to travel within a given area
TCA	Transport Competence Agency, PI
Via Lietuva	Via Lietuva, JSA

List of tables

Table 1. Taurage region demographic change, 2019-2023	12
Table 2. Goals, objectives and target indicators of the Taurage Regional Development Plan related to mobility in the region.....	18
Table 3. Goals, objectives and result indicators of the Strategic Development Plan of Taurage District Municipality related to mobility in the municipality	18
Table 4. Thematic strands, targets and implementation indicators of the Taurage City Sustainable Mobility Plan	18
Table 5. Goals and objectives of the Silale District Municipality Strategic Action Plan 2024-2026 related to mobility in the municipality	20
Table 6. Solutions for the transport system of the urban mobility of the Taurage Urban Area GP	21
Table 7. Directions for the development of the transport system of Taurage district municipality in relation to mobility in the municipality	22
Table 8. Directions for the development of the transport system of Jurbarkas district municipality in relation to mobility in the municipality	23
Table 9. Directions for the development of the transport system in the municipality of Silale district, related to mobility in the municipality	24
Table 10. Power demand of the EVCP in the Taurage region.....	26
Table 11. Assessment of the distance from the municipal centers of the Taurage region to the nearest TEN-T network terminals, 2025	33
Table 12. AADT on roads between municipalities of the Taurage region	34
Table 13. Solutions for the Green Region.....	41
Table 14. Action plan	43
Table 15. Goals, objectives and target indicators of the Taurage Regional Development Plan related to mobility in the region.....	46
Table 16. Goals, objectives and result indicators of the Strategic Development Plan of Taurage District Municipality related to mobility in the municipality	47
Table 17. Thematic strands, targets and implementation indicators of the Taurage City Sustainable Mobility Plan	47
Table 18. Goals and objectives of the Silale District Municipality Strategic Action Plan 2024-2026 related to mobility in the municipality	49
Table 19. Electric vehicle charging stations in Jurbarkas district municipality in 2024.	56
Table 20. Calculated power demand for the EVCP in Jurbarkas district municipality until 2030.....	57
Table 21. Calculated power demand for the EVCP in Pagegiai municipality until 2030.....	57
Table 22. Electric vehicle charging stations in Silales r. sav. 2024 m.....	58
Table 23. Calculated power demand for the EVCP in Silale district municipality until 2030.....	58
Table 24. Electric vehicle charging stations in Taurage district municipality in 2024	58
Table 25. Calculated power demand for the EVCP in Taurage district municipality until 2030	59
Table 26. Number of pupils transported from home to school in 2024–2025 Jurbarkas district municipality.	69

Table 27. Number of pupils transported from home to school in 2024–2025 Pagegiai municipality.....	69
Table 28. Number of pupils transported from home to school in 2024–2025 Silale district municipality.....	70
Table 29. Number of pupils transported from home to school in 2024–2025. Taurage district municipality...	72
Table 30. Problems identified by respondents in the survey	75

List of figures

Figure 1. Service implementation plan.....	11
Figure 2. Permanent population in the municipalities of Taurage region.....	12
Figure 3. Population distribution between urban and rural areas, 2024	12
Figure 4. Trends in the number of pupils in the municipalities of Taurage region, 2019-2024	13
Figure 5. Number of road vehicles per 1000 inhabitants in Taurage region, 2019-2023.....	13
Figure 6. Number of vehicles in Taurage region municipalities, 2019-2023	14
Figure 7. Structure of the Taurage region's registered road vehicle fleet 2019-2023	14
Figure 8. Distribution of passenger cars (M1) by fuel type in the municipalities of Taurage region, 2024	15
Figure 9. Changes in the number of electric passenger vehicles in the municipalities of Taurage region, 2024..	15
Figure 10. Traffic accidents in Taurage region municipalities	16
Figure 11. Type of road traffic accidents in the Taurage region 2019-2023	16
Figure 12. Causers of fatal road accidents in Taurage region, 2023.....	16
Figure 13. Black spots in Taurage region 2024	17
Figure 14. Trends in the number of passengers transported and mileage in the Taurage region	27
Figure 15. Number of pupils transported from home to school by means of transportation in 2024–2025	28
Figure 16. Typical employed person profile	29
Figure 17. Typical unemployed person profile	29
Figure 18. Typical pupil profile	30
Figure 19. Typical senior profile.....	30
Figure 20. TEN–T network in Lithuania.....	33
Figure 21. Comparison of AADT on Taurage region roads in 2019 and 2023.....	35
Figure 22. Length of bicycle paths, km	35
Figure 23. IAP vision and strategic objectives	37
Figure 24. Examples of pedestrian and bicycle paths on main streets.....	38
Figure 25. Examples of installing pedestrian and bicycle paths on lower-category streets.....	38
Figure 26. Proposed solutions in municipalities	41
Figure 27. IAP Strategic Objectives, Indicators, and Targets by 2030	45
Figure 28. Street infrastructure in Jurbarkas city	52
Figure 29. Street infrastructure in Pagegiai city	53
Figure 30. Street infrastructure in Silale city	54
Figure 31. Street infrastructure in Taurage city.....	55
Figure 32. Pedestrian and bicycle path Dariaus and Gireno streets, Jurbarkas	61
Figure 33. Pedestrian and bicycle path Lauko St., Jurbarkas.....	61
Figure 34. Pedestrian and bicycle path in the general flow Lauko St., Jurbarkas.....	62
Figure 35. Pedestrian and bicycle path Sodu st., Jurbarkas.....	62

Figure 36. Pedestrian and bicycle path M. Jankaus st., Pagegiai.....	62
Figure 37. Pedestrian and bicycle path on Vytauto Didziojo st., Silale.....	63
Figure 38. Pedestrian and bicycle path on Nepriklausomybės st., Silale	63
Figure 39. Pedestrian and bicycle path Struiku st., Silale	64
Figure 40. Bicycle path near Dyvicio St., Silale.....	64
Figure 41. Pedestrian and bicycle path Gedimino St., Taurage	64
Figure 42. Pedestrian and bicycle path on Juros st., Taurage	65
Figure 43. Pedestrian and bicycle path Gedimino St., Taurage	65
Figure 44. Pedestrian and bicycle path on Prezidento St. Taurage	66
Figure 45. Taurage region routes and timetables website.....	67
Figure 46. Scan and drive mobile app.....	67
Figure 47. Trends in the number of passengers transported and mileage in Jurbarkas district municipality	68
Figure 48. Trends in the number of passengers transported and mileage in Silale district municipality	70
Figure 49. Trends in the number of passengers transported and mileage in Taurage city	71
Figure 50. Trends in the number of passengers transported and mileage throughout Taurage district municipality	71
Figure 51. Main occupation of the respondents participating in the survey	73
Figure 52. Number of persons and cars in the household of respondents who participated in the survey	73
Figure 53. Pedestrian infrastructure assessment	74
Figure 54. Bicycle path infrastructure assessment	74
Figure 55. Public transport infrastructure assessment.....	75
Figure 56. Automotive AADT 2023	77
Figure 57. Freight Vehicle AADT 2023	78
Figure 58. National map of pedestrian and bicycle path development	79
Figure 59. Accessibility by bicycle and regional PT routes.....	80
Figure 60. Example of school zone setup	81
Figure 61. Bicycle storage (left) and racks with canopies (right).....	81
Figure 62. Holders in public transport buses.....	82
Figure 63. Example of a <i>bike&ride</i> interchange station.....	82
Figure 64. Mobility hub example	83
Figure 65. Non-motorized transport solutions in Jurbarkas.....	84
Figure 66. Non-motorized transport solutions in Pagegiai.....	85
Figure 67. Detailed description of the installation of Vilnius st. in Pagegiai	87
Figure 68. S. Daukantas st. installation Detail in Jurbarkas	88
Figure 69. Non-motorized transport solutions in Taurage	89
Figure 70. Detailed description of the installation of Vytautas st. in Taurage	90
Figure 71. Non-motorized transport solutions in Silale.....	91

Figure 72. Detailing of the installation of J. Basanaviciaus st. in Silale.....92

Figure 73. Non-motorized transport solutions in the Green Region.....93

Introduction

This Integrated Action Plan is part of the work developed within the PUMA network, where nine European cities and regions collaborate to design sustainable and inclusive mobility solutions. It reflects local priorities while drawing strength from shared learning and a common European vision for healthier, fairer, and more connected cities.

Nine cities and regions across Europe have joined forces in the PUMA network with a shared ambition: to rethink mobility for a more sustainable, inclusive, and connected future. From Latvia to Spain, from Slovenia to Greece, our partners represent very different realities – large cities and smaller municipalities, academic institutions and regional agencies. What unites us is the conviction that mobility can and must be redesigned to serve people, reduce emissions, and strengthen the resilience of our communities.

The network began its work with a baseline study that captured the specific challenges and aspirations of each partner. Through transnational meetings, local URBACT groups, peer exchanges, and workshops, we built a common framework for action while respecting the uniqueness of each place. Along the way, we learned from one another, tested new ideas, and addressed not only technical questions but also deeper issues of equity, accessibility, and participation.

The Integrated Action Plan you are about to read is the outcome of this collective effort. While it reflects the specific local context, it also carries the DNA of the PUMA network: citizen engagement, a holistic perspective on mobility, and alignment with the broader European goals of decarbonisation and digital transition. It is not just a document, but a roadmap for tangible change – from safer school streets and better cycling connections to integrated public transport and low-emission zones.

PUMA's strength lies in its diversity and collaboration. By working together across borders, we have demonstrated that solutions for sustainable mobility are not only technical, but deeply social. The plan presented here is therefore both local and European: grounded in everyday needs, yet pointing towards a common vision of cities that are healthier, fairer, and ready for the future.

The services for the Green Region Integrated Action Plan (hereafter referred to as the Plan) will be provided by Smart Continent LT (hereafter referred to as the Consultant), in accordance with the Contract of 25 September 2024 with the public institution "Green Region" (hereafter referred to as the "GR").

GOAL AND OBJECTIVES OF THE PLAN: Following an analysis of the existing situation, planning documents and mobility situation, to develop a micromobility action plan for climate-neutral and sustainable mobility in small and medium-sized towns and cities, promoting sufficient, safe, modern and convenient alternatives to the private car.

SCOPE OF SERVICES: Taurage region.

SERVICE IMPLEMENTATION PLAN: The plan is being developed in three phases. The structure and phases of the Plan are shown in the figure below.

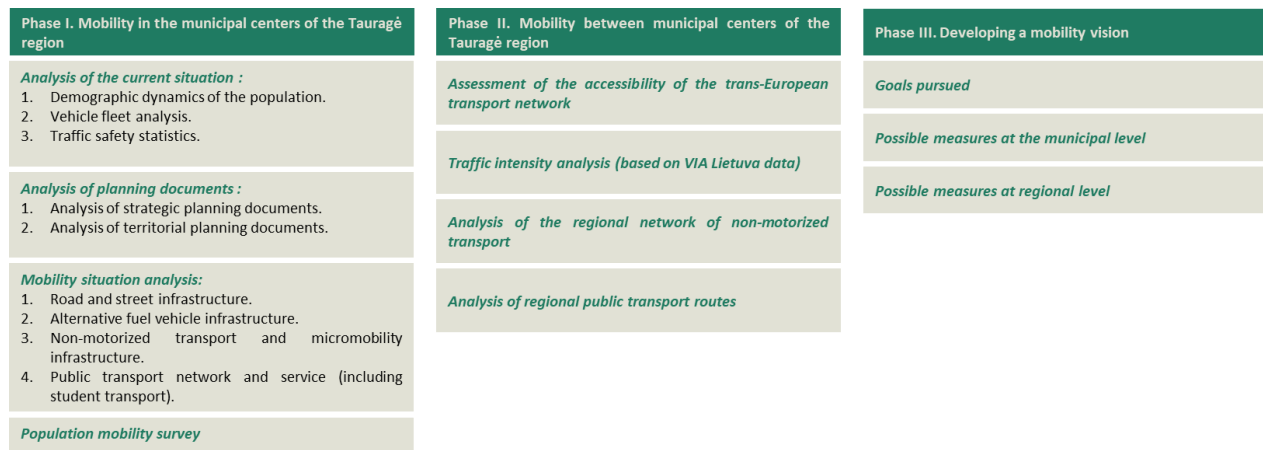


Figure 1. Service implementation plan

Source: compiled by the Consultant on the basis of the technical specification

1. Context, needs and vision

The mobility analysis is carried out for the municipal centres of the Taurage region – Jurbarkas, Pagegiai, Silale and Taurage – in three thematic parts: the analysis of the existing situation, the analysis of planning documents and the analysis of mobility situation.

1.1. Analysis of the current situation

1.1.1. Demographic dynamics of the population

According to the data of 1 January 2024, the population of Taurage region is 90,5 thousand. Comparing 2019 and 2024, a downward trend of 5,4% can be observed.

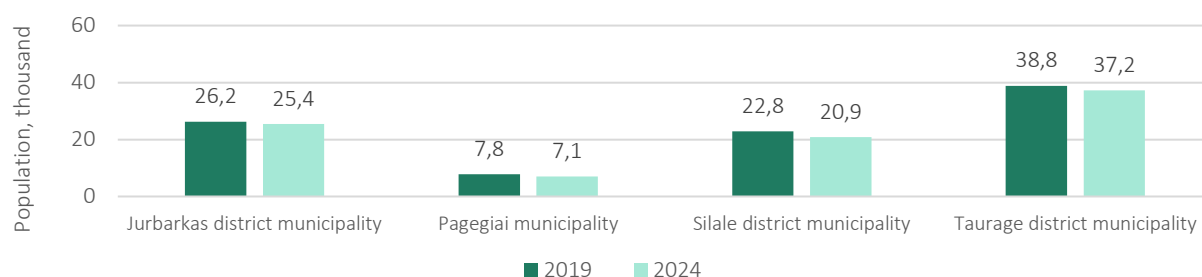


Figure 2. Permanent population in the municipalities of Taurage region

Source: compiled by the Consultant, based on SDA data

When analysing the distribution of the population between urban and rural areas, it was found that in all municipalities, except Taurage, more than half of the population lives in rural areas.

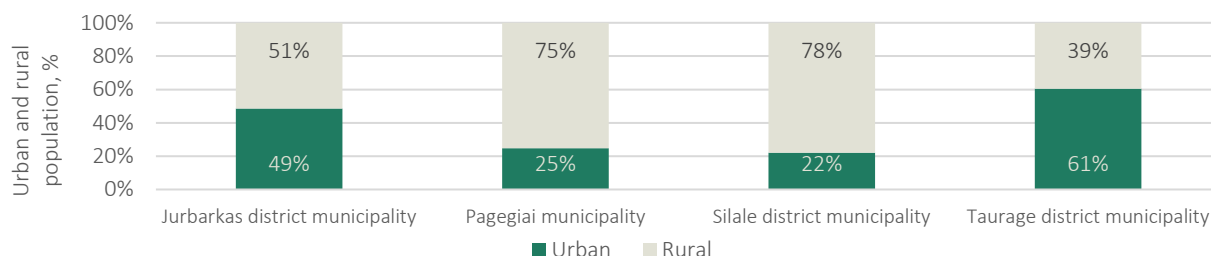


Figure 3. Population distribution between urban and rural areas, 2024

Source: compiled by the Consultant, based on SDA data

In terms of demographic indicators, the Taurage region's population has been declining between 2019 and 2023 as a result of natural population change and migration, and only in 2022 and 2023 has net migration been positive, but within the limits of the negative rate of natural population change.

Table 1. Taurage region demographic change, 2019-2023

Demographic indicator	2019	2020	2021	2022	2023
Natural population change, persons	-612	-903	-1135	-932	-831
Net migration, persons	-1095	-456	-639	718	756
Total population change, persons	-1707	-1359	-1774	-214	-75

Source: compiled by the Consultant, based on SDA data

The patterns of movement of pupils to educational institutions are also very important for the analysis of micro-frequency. The number of pupils has been found to have declined over the last five school years from 11,2 to 10,8 thousand.

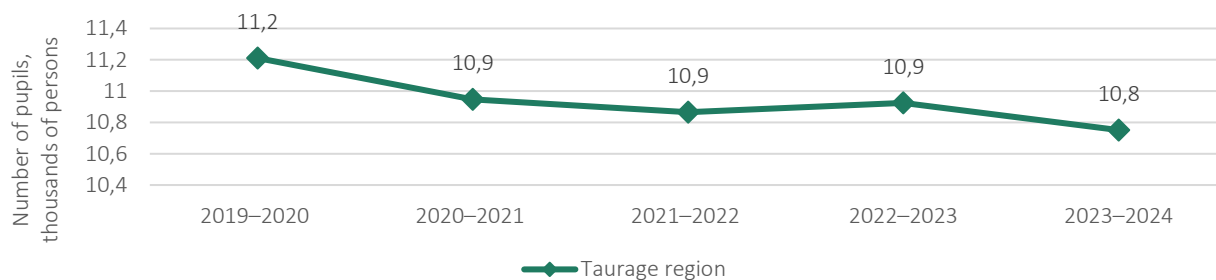


Figure 4. Trends in the number of pupils in the municipalities of Taurage region, 2019-2024

Source: compiled by the Consultant, based on SDA data

The overall assessment is that the observed population decline, due to natural population change, does not have a noticeable impact on the mobility situation and the planned objectives.

1.1.2. Analysis of the vehicle fleet

The municipalities of the Taurage region have a higher number of road vehicles per 1,000 inhabitants than the Lithuanian average. Although a decrease is visible in 2023, the municipalities of the Taurage region are 17,6% above the national average. Silale municipality has the highest number of road vehicles per thousand inhabitants, Taurage and Jurbarkas municipalities the lowest.

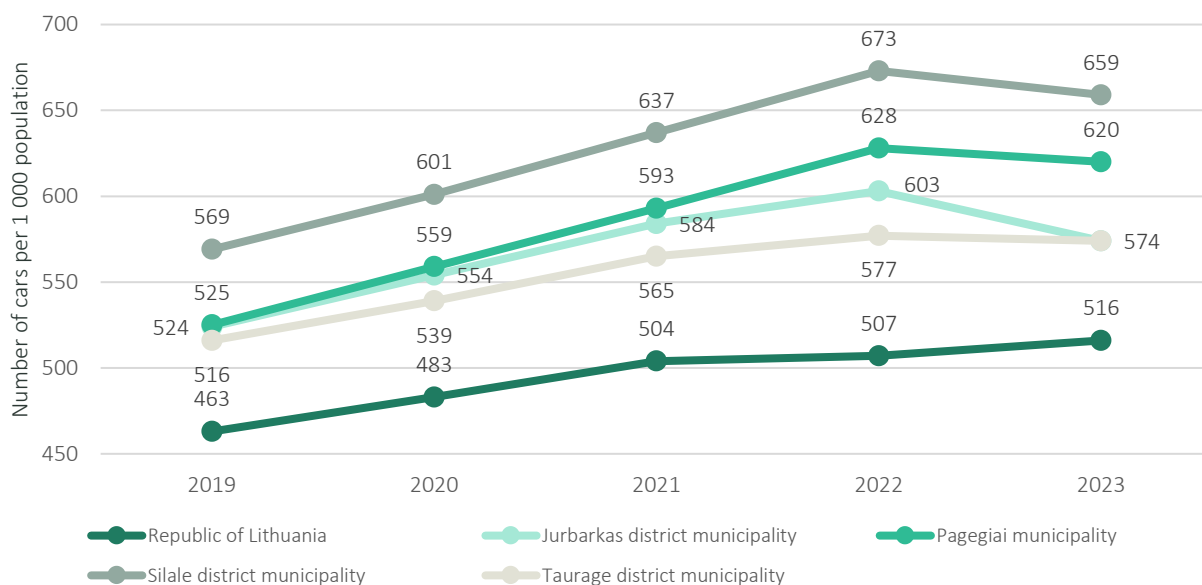


Figure 5. Number of road vehicles per 1000 inhabitants in Taurage region, 2019-2023

Source: compiled by the Consultant, based on SDA data

Analysing the absolute values, it was found that the total number of vehicles in the municipalities of the Taurage region grew by 13,6% from 62,5 thousand to 71,0 thousand units.

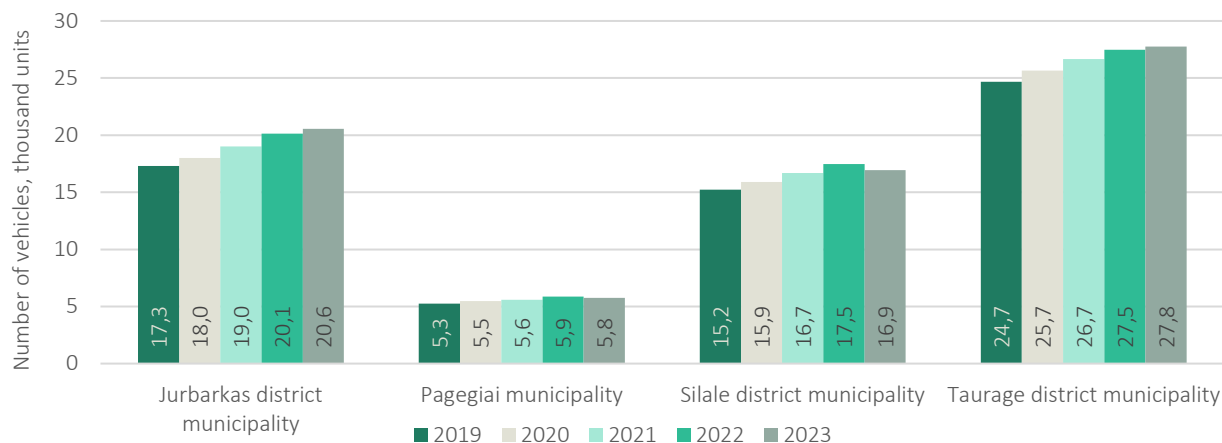


Figure 6. Number of vehicles in Taurage region municipalities, 2019-2023

Source: compiled by the Consultant, based on SDA data

The analysis of the structure of the registered road vehicle fleet shows that passenger cars account for the largest share of the vehicle fleet in the Taurage region over the whole period under analysis, although the share of passenger cars has decreased by 3,8% points over the period 2019-2023. After passenger cars, the next largest share of the fleet is accounted for by freight vehicles (including semi-trailer trucks, semi-trailers and trailers, and special vehicles), which increased by 2,6 percentage points to 14,4%.

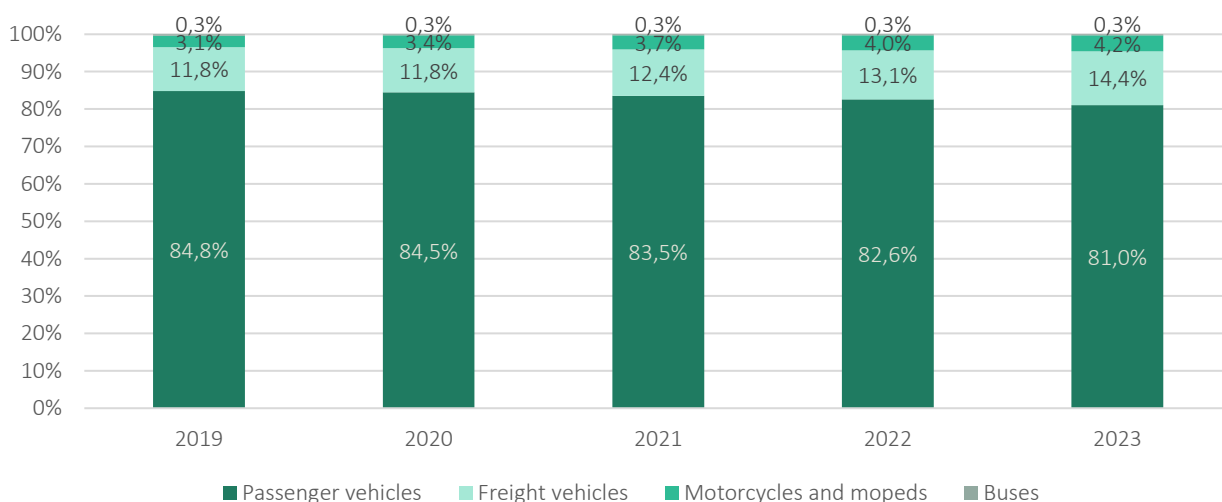


Figure 7. Structure of the Taurage region's registered road vehicle fleet 2019-2023

Source: compiled by the Consultant, based on SDA data

According to the data of 1 January 2024, in the municipalities of the Taurage region, the passenger car fleet (M1) is dominated by diesel cars, while pure and hybrid electric vehicles make up only a very small share of the total fleet. The largest number of electric cars, including hybrid models, is in the Taurage District Municipality, but their number remains small compared to diesel cars.

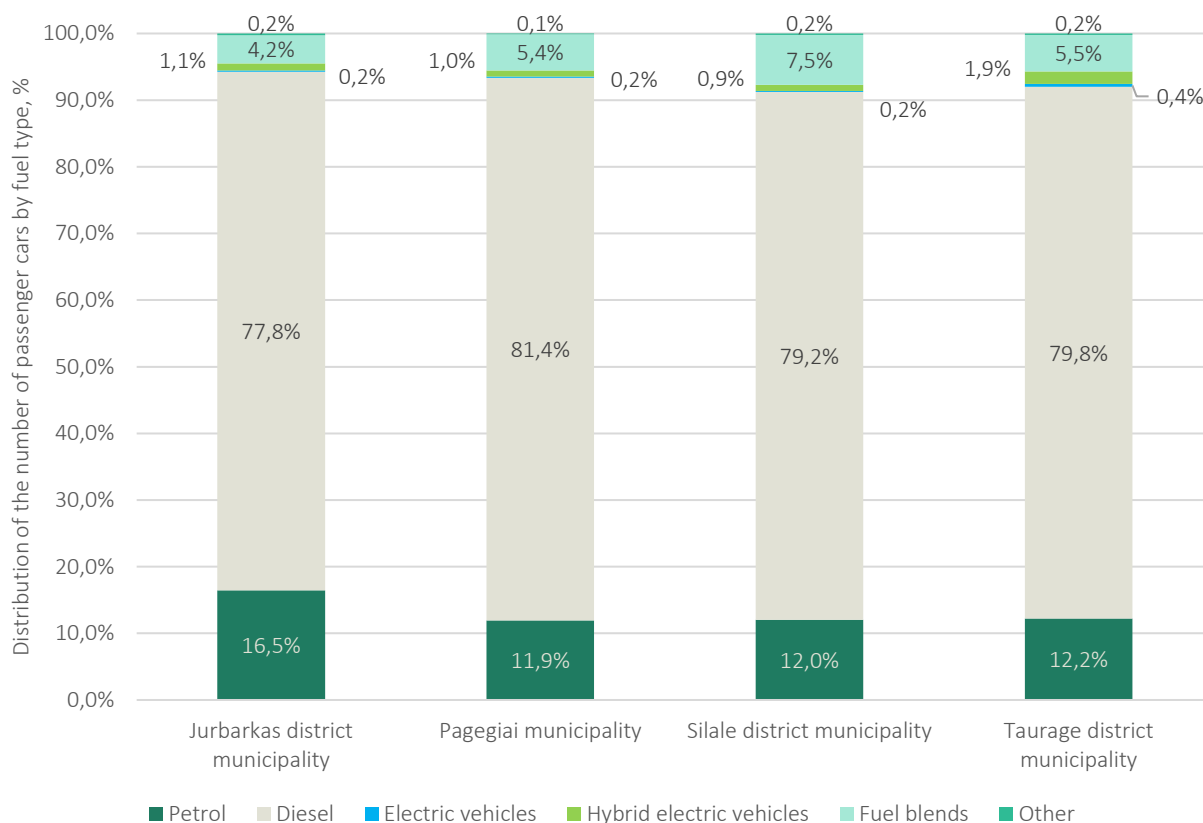


Figure 8. Distribution of passenger cars (M1) by fuel type in the municipalities of Taurage region, 2024

Source: compiled by the Consultant, based on Regitra data

Although the number of electric cars still represents a small share of the total passenger car fleet in the Taurage region, there is a clear trend that the number of cars with this power source is growing every year.

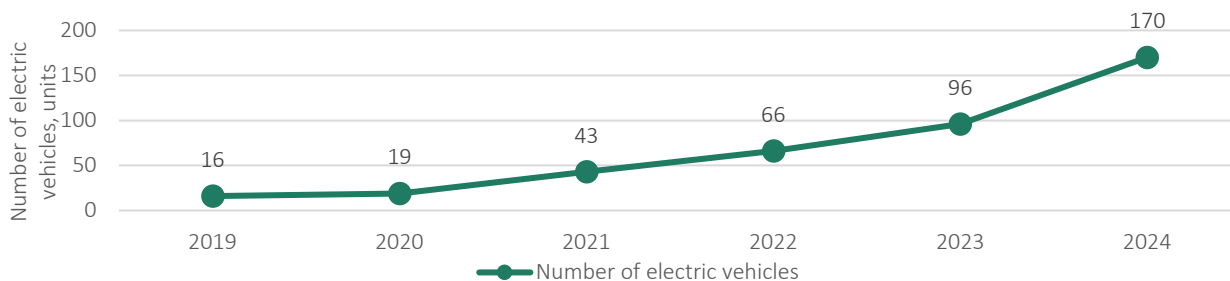


Figure 9. Changes in the number of electric passenger vehicles in the municipalities of Taurage region, 2024

Source: compiled by the Consultant, based on Regitra data

The level of motorisation in the municipalities of the Taurage region is 17,6% higher than the Lithuanian average, the majority of the fleet (81%) is made up of passenger cars, 79,8% of which are diesel-powered, and only a very small proportion of which are pure electric vehicles, the total number of which has increased from 16 to 170 units in six years.

1.1.3. Traffic safety statistics

The analysis of the number of accidents shows different trends. In two municipalities – Taurage and Jurbarkas – the number of traffic accidents has been decreasing between 2019 and 2023, in Pagegiai municipality the number of accidents has remained stable, and in Silale municipality, the number of road traffic accidents has increased.

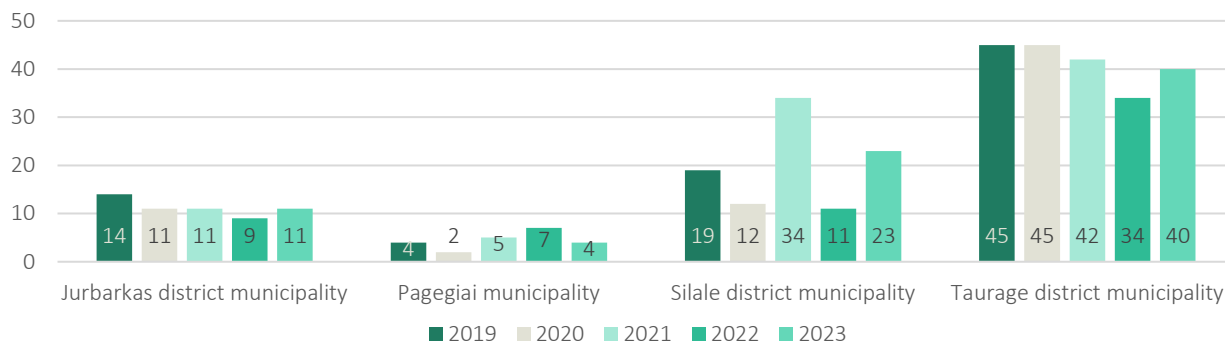


Figure 10. Traffic accidents in Taurage region municipalities

Source: compiled by the Consultant, based on SDA data

According to TCA data, the highest number of accidents involving victims is collisions with another motor vehicle (car, motorcycle, moped).

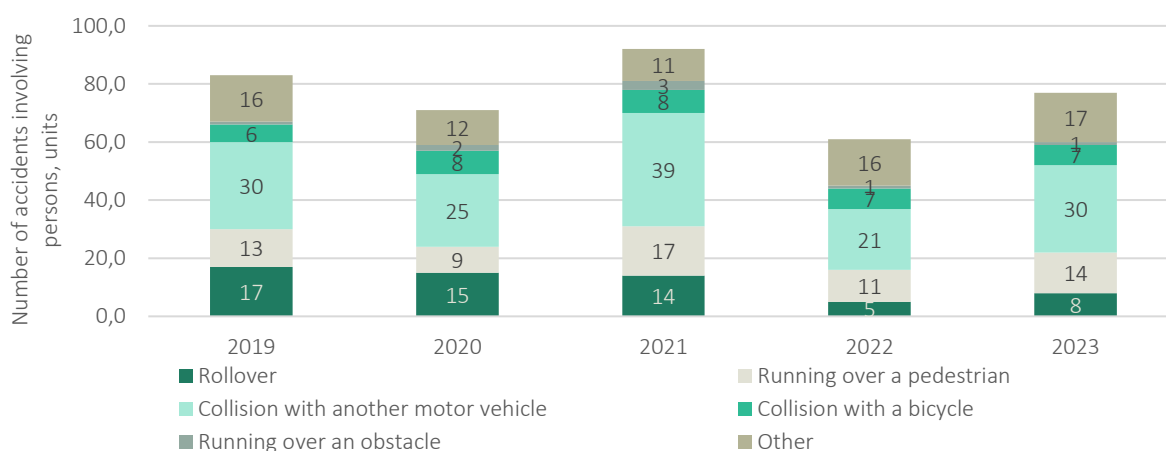


Figure 11. Type of road traffic accidents in the Taurage region 2019-2023

Source: compiled by Consultant, based on TCA data

According to the IAC, in 2023, more than half of the accidents (73%) will be caused by car drivers, 10% by moped or motorcycle drivers, and the smallest number of accidents (3% or 2 units) will be caused by cyclists.

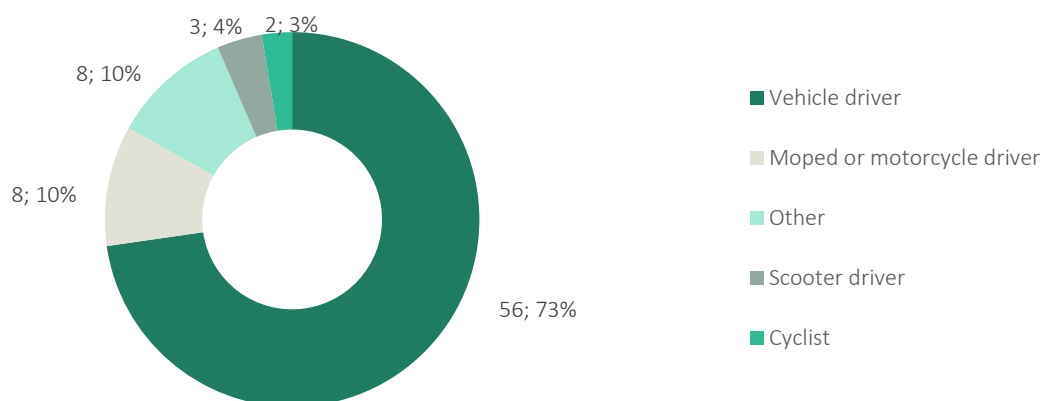


Figure 12. Causers of fatal road accidents in Taurage region, 2023

Source: compiled by Consultant, based on SDA data

The National Black Spot Map shows black spots at junctions and road sections on national roads and municipal streets. In 2024, three black spots on national roads were recorded in the Taurage region. Two of the accident spots are located in Silalė and the third one in Tauragė. district municipality.

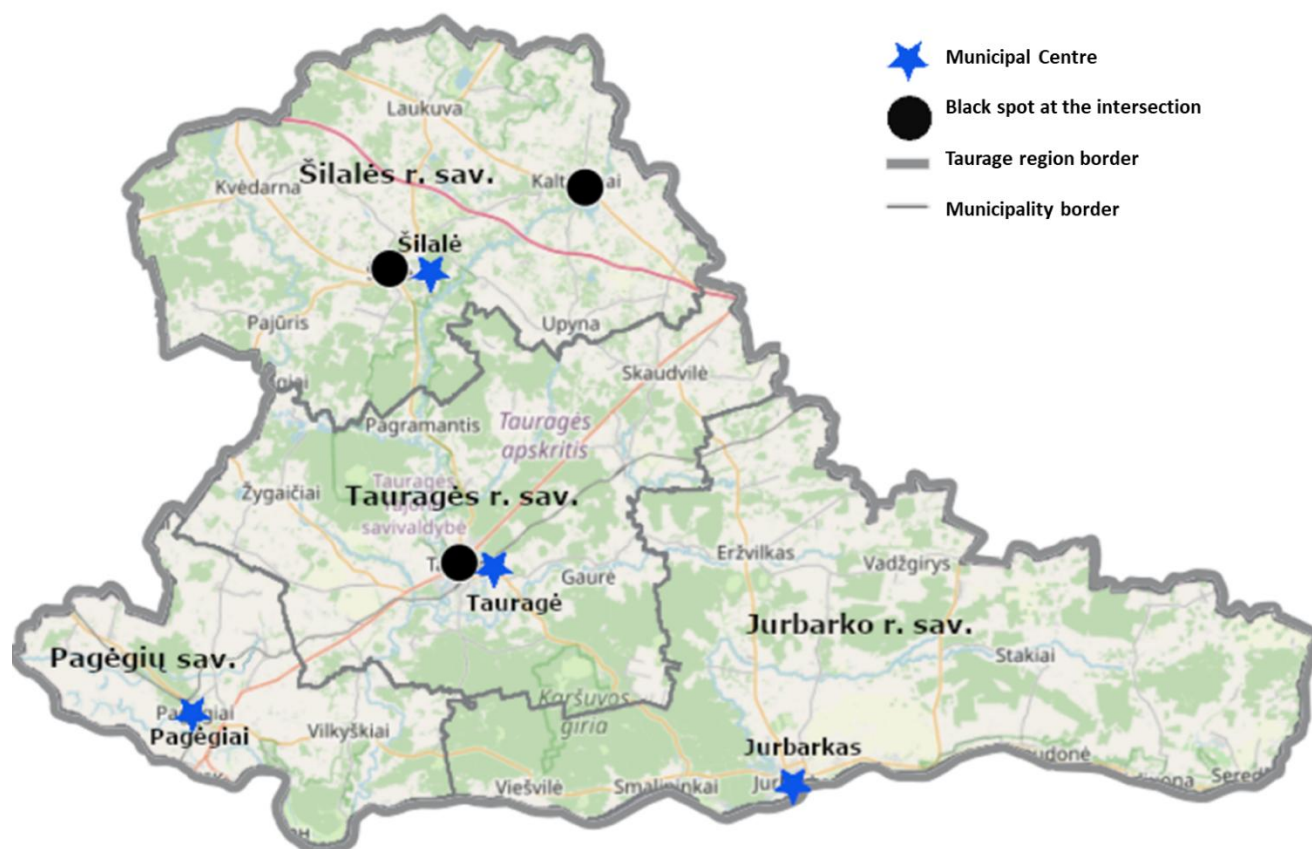


Figure 13. Black spots in Taurage region 2024

Source: compiled by the Consultant, based on the National Black Spot Map ¹

The largest number of traffic accidents in which people were injured was recorded in the largest municipality - Taurage district. The most frequent type of traffic accident in the region is a collision with another motor vehicle, and the most frequent perpetrator is the car driver. Three black spots on national roads in the region in 2024.

1.2. Existing policies

1.2.1. Analysis of strategic planning documents

This chapter presents an analysis of existing strategic documents. The chapter analyses the strategic documents applicable to the Taurage region as a whole and to each of the region's municipalities separately. Strategic and territorial plans from the municipalities align with sustainable mobility goals, emphasizing public transport, bicycle infrastructure, and reduced environmental impacts. Common goals include transport modernization, improved accessibility, and the adoption of clean mobility solutions. Detailed analysis is provided in Annex A.

TAURAGE REGION

Two regional strategic documents are relevant to the development of the Plan. **THE TAURAGE REGION DEVELOPMENT PLAN 2022-2030**² identifies problems affecting the quality of life and sustainable mobility in the Taurage region and sets out goals and objectives to target these issues.

¹ Transport Competency Agency. National black spot map. Online access: <https://ktti.maps.arcgis.com/apps/webappviewer/index.html?id=83ffa7fa45a8491cb0b802bfb60a3c8a>

² Taurage Region Development Plan 2022-2030, as amended by the Taurage Region Development Council Decision No TS-21 of 11 October 2024 (consolidated version as of 4 April 2023)

Table 2. Goals, objectives and target indicators of the Taurage Regional Development Plan related to mobility in the region

Objective	Task	Result indicator
Objective 3. Improve the attractiveness of the regional environment	3.1. Promoting sustainable mobility	Greenhouse gas emissions per capita - the impact of population travel (car, motorcycle, moped and public transport use) (tonnes)
		Number of users of new or upgraded public transport per year (number of users per year)
		Number of users per year (number of users per year)

Source: compiled by the Consultant, based on the Taurage Region Development Plan 2022-2030

THE TAURAGE+ FUNCTIONAL AREA STRATEGY 2023-2029³ provides for the efficiency and sustainability of public services. This is achieved by increasing the availability of public transport services.

It is assessed that the strategic documents of the Taurage region contain actions that do not contradict and promote sustainable and environmentally friendly mobility.

ANALYSIS OF STRATEGIC PLANNING DOCUMENTS OF TAURAGE DISTRICT MUNICIPALITY

TAURAGE DISTRICT MUNICIPALITY STRATEGIC DEVELOPMENT PLAN 2021-2030⁴ sets out one of the three priorities of the Plan, which is to become the greenest municipality in Lithuania. This priority area includes the objectives, targets and indicators for sustainable transport development.

Table 3. Goals, objectives and result indicators of the Strategic Development Plan of Taurage District Municipality related to mobility in the municipality

Objective	Tasks	Result indicator
1.2 Achieving sustainable transport development	1.2.1. Making public transport more appealing	Proportion of journeys in the transport system (structure of journeys from home to work and back) Walking, cycling, private car (%)
		Passenger turnover by road transport (thous. passenger-km)
	1.2.2. Encourage travelling by non-motorized vehicles and on foot	Total length of cycling and walking paths (km)
	1.2.3. Improving traffic capacity and safety, introducing modern traffic management measures	Proportion of local roads with improved surfacing compared to the length of all local roads (%)

Source: compiled by the Consultant on the basis of the Taurage District Municipality Strategic Development Plan 2021-2030

In the **TAURAGE DISTRICT MUNICIPALITY STRATEGIC ACTION PLAN 2024-2026⁵** the objectives, targets and indicators defined in the Strategic Development Plan 2021-2030 are identical to those identified above. The following actions and targets are set out in the **TAURAGE CITY SUSTAINABLE MOBILITY ACTION PLAN⁶**.

Table 4. Thematic strands, targets and implementation indicators of the Taurage City Sustainable Mobility Plan

Thematic part	Action name	Implementation indicator
	1.1. Renewal of the vehicle fleet	New clean public transport vehicles purchased, units

³ Taurage+ Functional Area Strategy 2023-2029, approved by Decision No T2-20 of the Jurbarkas District Municipal Council of 26 January 2023 (consolidated version in force since 17 June 2024), Decision No T2-20 of the Pajėgiai Municipal Council of 2 February 2023 (consolidated version in force since 17 June 2024), Decision No T2-20 of the Pajėgiai Municipal Council of 2 February 2023 (consolidated version in force since 2024), T-1 (consolidated version in force from 27-06-2024), Decision No T1-1 of the Municipal Council of Silalė District of 2 February 2023 (consolidated version in force from 27-06-2024), Decision No 1-30 of the Municipal Council of Taurage District of 1 February 2023 (consolidated version in force from 07-07-2024).

⁴ Taurage District Municipality Strategic Development Plan 2021-2030, approved by Taurage District Municipal Council Decision No 1-30 of 27 January 2021

⁵ Taurage District Municipality Strategic Action Plan 2024-2026, approved by Taurage District Municipality Council Decision No 1-268 of 22 September 2021

⁶ Taurage City Sustainable Mobility Action Plan 2030, approved by Taurage District Municipal Council Decision No 1-155 of 24 April 2024

Promotion of public transport	1.2. Improving public transport infrastructure	New or upgraded public transport stops, units
		Electric bus charging ports, units
	1.3. Densifying public transport timetables	Installation of an electric bus shelter, units
Integration of non-motorized transport	2.1. Creating a seamless network of cycle lanes (cycle streets) by integrating non-transport vehicles into the overall transport system	On urban routes, to ensure that the intervals between journeys do not exceed the scheduled time interval, min
		Reconstructed and newly constructed cycle paths (with lighting to be installed as required) on the streets identified in the plan
	2.2. Creating a low-emission zone in the city centre	Installation of bicycle storage facilities at multi-apartment dwellings, units
Modal distribution of trips	3.1. A more equal distribution of travel by different modes of transport and on foot	Installation of bicycle racks
		Establishment of a low-emission zone in the city centre
Traffic safety and security	4.1. Modernising traffic lights by installing a single control system for urban traffic lights	Study on modal split of journeys, units
	4.2. Installation of street lighting	Upgrading traffic light intersections on the streets indicated in the plan
	4.3. Installing lighting at pedestrian crossings	Cycle lanes on the streets indicated in the plan
Improving traffic organisation and mobility management	5.1. Publicising the implementation and results of the Sustainable Mobility Plan	Number of crossings with lighting, units
	5.2. Events to promote road safety and sustainable mobility	Publicity measures per year, units
City logistics	6.1. Creation of a roundabout to divert transit and freight traffic from the city centre	Number of events per year, units
		New Street installation project; parts.
Universality of the transport system and inclusion of people with special needs	7.1. Adapting existing infrastructure for people with special needs	Rehabilitate sidewalks and pedestrian walkways in Taurage for people with disabilities, with proper installation of guiding and warning (tactile) surfaces, and marking of existing obstacles with brightly coloured warning tapes, Percentage of problem areas, %.
Promoting alternative fuels and less polluting transport	8.1. Developing public charging infrastructure for electric vehicles	Number of charging bays for conventional electric vehicles (≤ 22 kW), units
		Number of charging bays for electric vehicles of medium power ($> 22 - \leq 49$ kW), units
		Number of kW charging bays for electric vehicles with high power ($> 49 - \leq 149$ kW), units
		Number of charging bays for electric vehicles with very high power (> 149 kW), units
Deployment of Intelligent Transport Systems	9.1. Enhancing the attractiveness of public transport through the wider use of ITS solutions	Implementation of an electronic payment and control system, units
		Development of the Electronic Passenger Information System, units
	9.2. Installation of speed cameras to inform drivers of their speed	Number of speed cameras to be installed (S. Dariaus and S. Gireno str, Tilzes pl. and Gedimino str. at the entrances to Taurage city), pcs.

Source: compiled by the Consultant, based on the Taurage City Sustainable Mobility Action Plan

ANALYSIS OF STRATEGIC PLANNING DOCUMENTS OF JURBARKAS DISTRICT MUNICIPALITY

THE JURBARKAS DISTRICT MUNICIPALITY STRATEGIC ACTION PLAN 2024-2026⁷ identifies sustainable development of territories and infrastructure as one of the priority areas. However, most of the indicators for this objective are based on improving road infrastructure, which means that little attention is paid to public transport, cycling and other modes of more sustainable mobility.

THE JURBARKAS DISTRICT MUNICIPALITY STRATEGIC ACTION PLAN 2024-2026⁸ identifies one of the objectives as ensuring the accessibility of public transport for the district's residents and sets out main objectives of the Transport and Transport Infrastructure Plan, which aim to improve the current transport system.

JURBARKAS DISTRICT MUNICIPALITY SPECIAL PLAN FOR THE DEVELOPMENT OF CYCLE PATHS⁹ provides solutions for the construction and modernisation of bicycle routes and related infrastructure in Jurbarkas Municipality.

ANALYSIS OF STRATEGIC PLANNING DOCUMENTS OF SILALE DISTRICT MUNICIPALITY

SILALE DISTRICT MUNICIPALITY STRATEGIC DEVELOPMENT PLAN 2021-2030¹⁰ mentions that according to the surveys of the inhabitants of Silale district, the accessibility of public transport and road maintenance are poorly assessed, therefore, the development of a sustainable environment and a modern public infrastructure has been identified as one of the priorities, with the following objectives – improving accessibility and development of sustainable mobility and mobility of the population.

SILALE DISTRICT MUNICIPALITY STRATEGIC ACTION PLAN 2024-2026¹¹ sets out the objectives and targets related to sustainable mobility, modernisation and sustainability of transport infrastructure.

Table 5. Goals and objectives of the Silale District Municipality Strategic Action Plan 2024-2026 related to mobility in the municipality

Goal	Objectives
Ensuring the diversity and quality of curricula	05 objective. Providing transport for pupils and other measures that indirectly affect the quality of the education process
Provide social cash assistance as provided for by national and municipal law	04 objective. Organising and controlling local passenger transport routes, keeping records of compensation for concessionary passenger transport and making reimbursements
Adapting public engineering infrastructure to modern needs	03 objective. Renew, extend and reconstruct the lighting networks in the city and district streets and settlements 04 objective. Construct, repair, maintain and develop local roads and streets and ensure safe traffic flow 05 objective. Renovate municipal public buildings, modernise the housing stock and the environment

Source: compiled by the Consultant, based on the Silale District Municipality Strategic Action Plan 2024-2026

ANALYSIS OF STRATEGIC PLANNING DOCUMENTS OF PAGEGIAI MUNICIPALITY

PAGEGIAI MUNICIPALITY STRATEGIC DEVELOPMENT PLAN 2021-2031¹² sets the objective "Sustainable development of business, tourism and the countryside on the basis of a modern infrastructure", which includes tasks related to the upgrading of the road infrastructure and the adaptation of it to the needs of disabled people; the development of infrastructure for bicycles, electric transport and other driverless vehicles; the introduction of intelligent transport systems to ensure sustainable mobility; the promotion of bicycle-sharing schemes and alternative accessibility initiatives.

⁷ Jurbarkas District Municipality Strategic Development Plan 2016-2026, approved by Decision No T2-1 of the Jurbarkas District Municipal Council of 30 January 2014.

⁸ Jurbarkas District Municipality Strategic Action Plan 2024-2026, approved by Decision No T2-15 of the Jurbarkas District Municipal Council of 31 January 2024.

⁹ Jurbarkas district municipality special plan for the development of cycle paths, approved by the decision of Jurbarkas district municipal council No T2-11 of 26 January 2012

¹⁰ Silale District Municipality Strategic Development Plan 2021-2030, approved by the Silale District Municipal Council Decision No T1-100 of 29 April 2021

¹¹ Silale District Municipality Strategic Action Plan 2024-2026, approved by the Silale District Municipal Council Decision No T1-18 of 15 February 2024

¹² Pagegiai Municipality Strategic Development Plan 2021-2031, approved by Pagegiai Municipality Council on 15 February 2024. No T-55

IN THE PAGEGIAI MUNICIPALITY STRATEGIC ACTION PLAN 2024-2026¹³ the weaknesses include poorly developed local transport connections and lack of convenient routes. The aim is to improve the situation by developing the regional transport system, its accessibility and quality, optimising the number of routes, investing in the related infrastructure, and taking advantage of the opportunities offered by the Taurage+ functional area. The Plan sets Objective 1.5 "Modernisation and development of infrastructure", which aims to improve transport infrastructure, ensuring sustainable mobility and the mobility of the population. Objective 2.1 "Improving the quality, accessibility and availability of education, services and accessibility" includes the objective of organising free transport for pupils and providing transport that is accessible to pupils with disabilities.

Based on the above analysis of the strategic documents of the Taurage region, it has been found that the goals and objectives set out in the strategic documents are related to sustainable mobility, such as the development of the public transport system and the development of driverless transport. The issue of transport for schoolchildren, the renewal of transport by replacing it with cleaner transport, etc. is also mentioned. On the other hand, the plans also include other objectives that are not directly related to sustainable mobility, but which are not in conflict with the preparation of this plan.

1.2.2. Analysis of territorial planning documents

This chapter presents an analysis of the spatial planning documents of the Republic of Lithuania and Taurage region:

- General plan of the territory of the Republic of Lithuania;
- General plan of the territory of Taurage city;
- Amendment to the general plan of the territory of Taurage district municipality;
- Amendment to the general plan of the territory of the municipality of Jurbarkas district municipality;
- Amendment to the General Plan of the Municipal Territory of Silale District municipality;
- Amendment of the Master Plan of the Municipality of Pagegiai municipality.

A General Plan (hereinafter referred to as the "GP") is a comprehensive spatial planning document, which, considering the levels and objectives of spatial planning, defines the spatial concept of the development of the planned territory and the principles of use and protection of the territory.

THE GENERAL PLAN OF THE TERRITORY OF THE REPUBLIC OF LITHUANIA¹⁴ approved on 29 September 2021, establishes the guidelines for the implementation of the spatial development of the territory of the Republic of Lithuania, the spatial structure of the state territory, the mandatory provisions for the use of the state territory, and other related solutions for the sustainable development of territories. The Republic of Lithuania territorial GP sets out development directions and strategies for the whole of Lithuania and for individual regions and cities. For the Taurage region, the plan includes only two solutions that can be related to mobility – ensuring the functioning and maintenance of the railway line connecting Klaipeda and Taurage and to reopen disused passenger stations and renew passenger services on the railway line connecting Taurage and Klaipeda, which would enable the population of the regions to choose to travel by rail, and improving connectivity by different means of transport for both passenger and freight needs. Priority is given to rail transport, inland waterway E-41 Kaunas-Jurbarkas-Klaipeda.

THE GENERAL PLAN OF THE TAURAGE CITY has been updated to maintain the priority of sustainable development in the development of Taurage. The General Plan includes three principles of sustainable mobility: 1) Principles to be implemented; 2) Prioritise environmentally friendly transport and public transport journeys in line with the principles of sustainable mobility; 3) Sustainable mobility principles should be integrated into the preparation of lower-level spatial planning documents or technical designs.

Table 6. Solutions for the transport system of the urban mobility of the Taurage Urban Area GP

¹³ Pagegiai Municipality Strategic Action Plan 2024-2026, approved by the Pagegiai Municipal Council Decision No T-55 of 15 February 2024

¹⁴ General plan of the territory of the Republic of Lithuania. 2021. Accessed online: <http://www.bendrasisplanas.lt/>

Transport system
Non-transport vehicle infrastructure
• The General Plan provides for a coherent network of cycle paths for both transport and recreation. • The development of pedestrian and cycle infrastructure includes major new routes for pedestrians and cyclists. • Cycle routes should be refined in lower-level spatial planning documents (if necessary). • Newly developed streets of categories B, C, D, D-1, D-2 should be provided with pedestrian, cycle or combined pedestrian-cycle paths separated by planting or similar (see examples in Figure 9.4.2.1). • The provision of infrastructure for driverless transport should be accompanied by the provision of new streets. • Sidewalks should be provided along existing streets. • It is recommended to provide cycle paths (cycle lanes) with asphalt pavement. • The list of cycle paths and priorities for their development should be adjusted in the Sustainable Mobility Plan. • When streets and pedestrian or cycle paths are provided, bicycle/scooter parking spaces and other means to support driverless transport should be included. • Newly planned intersections of cycle and pedestrian paths with railway tracks shall be designed at different levels.
Public transport
• The existing public transport network is adequate, but frequencies are too infrequent. • Prepare a study to modernise public transport: renewal of the bus fleet, introduction of electric buses, modernisation of bus stops, introduction of e-ticketing and other measures. • Prepare a study on the design of the public transport route network in newly urbanised areas. • The installation of public transport stops and terminals should be carried out in conjunction with the installation of new streets.

Source: compiled by the Consultant, based on the General Plan of Taurage city

THE TAURAGE DISTRICT MUNICIPALITY GP AMENDMENT¹⁵ document is based on the principle of optimising traffic flows and promoting sustainable mobility in urban centre areas.

Table 7. Directions for the development of the transport system of Taurage district municipality in relation to mobility in the municipality

Directions for the development of the transport system
Public transport
• Maintain the existing public transport system and routes. Routes are proposed to be adjusted to consider new attractions, demographics.
Pedestrian - cycling infrastructure
• It is proposed to expand the network of cycling and walking paths connecting Taurage town with adjacent urban centres and recreational areas. Accordingly, it is proposed to provide new cycle and pedestrian paths in the Skaudvile urban environment. Cycle and pedestrian paths alongside national roads shall be provided outside the road right-of-way.

Source: compiled by the Consultant, based on the amendment of the Taurage District Municipality GP

IN THE JURBARKAS DISTRICT MUNICIPALITY GP AMENDMENT¹⁶ one of the tasks is to identify and plan the directions and possibilities of the development of transport infrastructure, to assess the accessibility by land, water and air, and to assess the other transport areas, considering the principles of sustainable mobility.

¹⁵ Amendment to the General Plan of Taurage District Municipality, approved by the Taurage District Municipal Council Decision No 1-321 of 16 December 2020

¹⁶ Amendment to the General Plan of Jurbarkas District Municipality, approved by the Decision of the Municipal Council of Jurbarkas District No T2-305 of 25 November 2021

Table 8. Directions for the development of the transport system of Jurbarkas district municipality in relation to mobility in the municipality

Directions for the development of the transport system
Public transport
• Maintain existing passenger volumes. • Systematic renewal of public transport vehicles, with the purchase of small or medium capacity buses adapted to people with reduced mobility (disabled, elderly, etc.). • Modernise the infrastructure of public transport stops. • Adapt public transport routes to the real needs of the population through a feasibility study on the development/optimisation of public transport stops and routes, as well as continuous monitoring. • Prioritise the development of public transport in terms of accessibility to social services and in areas with the most intensive urban development, with a projected increase in population density, where a high quality of life requires the development of public transport stations and stops.
Pedestrian - cycling infrastructure
• The development of bicycle infrastructure is carried out in accordance with the special plan for the development of bicycle paths of Jurbarkas district municipality and the general plans of Jurbarkas town, Smalininkai town, Veliuona town and Viesvile town. • To link existing and planned cycling and walking routes into a unified system of driverless transport, improving connectivity between residential areas, recreational areas, key employment sites, educational facilities and other attractions. • In urbanising areas, the structural street network should be complemented by the provision of a motorless transport infrastructure. • Provision of bicycle service infrastructure (bicycle racks, storage areas, service stations). • Upgrade existing pedestrian and cycle paths and pavements; • Make existing and planned transport infrastructure accessible to people with disabilities. • Continuous upgrading and introduction of traffic safety measures.

Source: compiled by the Consultant, based on the amendment of the Jurbarkas District Municipality General Plan

AMENDMENT OF THE GP FOR THE PART OF THE MUNICIPAL TERRITORY OF THE MUNICIPALITY OF THE DISTRICT OF SILALE (THE TOWN OF SILALE).¹⁷ The objectives and targets for sustainable mobility in the Master Plan are set out in the table below.

¹⁷ Amendment to the general plan of part of the territory of Silale district municipality (Silale city), approved by the Silale district municipality council of 18 January 2024. Decision No. T1-6

Table 9. Directions for the development of the transport system in the municipality of Silale district, related to mobility in the municipality

Solutions for the development of the transport system
Public transport
• Maintain existing passenger volumes. • Systematic renewal of public transport vehicles, with the purchase of small or medium capacity buses adapted to people with reduced mobility (disabled, elderly, etc.). • Modernise the infrastructure of public transport stops. • In the long term (if necessary), provide new public transport routes. • Adapt public transport routes to the real needs of the population, with a feasibility study on the development/optimisation of public transport stops and routes and continuous monitoring.
Pedestrian - cycling infrastructure
• The development of bicycle infrastructure must be developed in accordance with the solutions of the city's general plan or initiate the preparation of a special plan for the development of bicycle transport infrastructure in the Silale district. • In urbanized territories, when forming a structural street network, install non-motorized transport infrastructure. • Install bicycle service infrastructure (bicycle racks, storage areas, technical service stations). • Renew the existing infrastructure of pedestrian and bicycle paths, sidewalks. • Adapt the existing and planned transport infrastructure for the disabled. • Constantly update and install safe traffic measures in the city of Silale

Source: compiled by the Consultant, based on the amendment of the GP of part of the territory of Silale district municipality (Silale city)

AMENDMENT OF THE MASTER PLAN OF THE MUNICIPALITY OF PAGEGIAI MUNICIPALITY¹⁸ aims to enhance the transport system by optimizing traffic flow, improving road conditions, expanding bicycle, pedestrian, and waterway networks, modernizing railway branches, and upgrading public transport and road infrastructure¹⁹.

It is assessed that the goals for sustainable movement set out in territorial planning documents do not contradict the goals and objectives formulated in this plan.

1.3. Mobility situation analysis

When analysing the mobility situation, this subsection examines the infrastructure of municipal centres:

- road network for vehicles;
- infrastructure for alternative fuel vehicles (hereinafter referred to as AFV);
- infrastructure for non-motorized transport and micromobility vehicles (hereinafter referred to as NMTMV);
- public transport system.

1.3.1. Road and street infrastructure

The road and street infrastructure section provides an analysis of state roads located in municipalities and the categories of their sections in the city. Detailed maps and descriptions are provided in Annex B.

JURBARKAS DISTRICT MUNICIPALITY

There are three regional roads in Jurbarkas. The city is crossed longitudinally by regional road No. 141, connecting Kaunas and Taurage, road No. 137, which runs from the city centre to the south and leads to Sakiai, and road No. 198, which leads to Ervilka. The city also has two regional roads No. 1701 and 1704. All of these roads are of state

¹⁸ Amendment to the General Plan of Pagegiai Municipality, approved by the decision of the Pagegiai Municipality Council of February 28, 2017, No. A1-231

¹⁹ Objectives: optimization (distribution) of automobile traffic flows in order to improve communication and ensure traffic safety; improvement of the existing condition of the automobile road and street network; renewal and development of the municipal bicycle, pedestrian and waterway network; development of railway communication - modernization of railway branches; renewal and development of public transport and road infrastructure.

importance, and in the city these roads are category B streets. All other city streets are classified as category D (see Annex B).

PAGEGIAI MUNICIPALITY

There are four roads of state significance in the city of Pagegiai: one regional road No. 141, connecting Jurbarkas and Silute, and two district roads No. 4201, 4230 and 4240. All of these roads are of state significance. The main drawing of the BP adjustment of Pagegiai, approved on June 29, 2023, No. T-145, does not contain any street categories. When assessing the existing street network of Pagegiai city, it can be stated that the roads in the city form a network of B and C category streets.

SILALE DISTRICT MUNICIPALITY

Silale city is characterized by a larger infrastructure of the main street network. There are two regional roads No. 162 and 165 and three regional roads No. 4105, 4513 and 4111 in the city. All of the mentioned roads are of state importance, and according to the amendment to the BP of the Silale district municipality (Silale city), approved on November 6, 2018, No. T-145, sections of these roads in the city are classified as B streets. However, there are also C category streets in the city of Silale, which belong to the municipality and are not of state importance but serve as connections with regional roads.

TAURAGE DISTRICT MUNICIPALITY

The largest street network has been identified in the centre of Taurage district – Taurage. The city is crossed by the main road No. A12, connecting Pagegiai and Kryzkalnis. There are also two regional and three district roads in the city. All of the listed state roads in the city territory, according to the amendment to the City Planning Act of Taurage, approved on December 20, 2023, No. 1-355, are classified as category B streets. Other main roads classified as C streets belong to the municipality. Unlike in the case of Silale, some of the C category streets in Taurage are not connections to state roads.

The main street network in the municipal centres of the Taurage region consists of regional and district roads, which create a network of B and C category streets. In some municipalities, category C streets serve as connections with category B state roads.

1.3.2. Infrastructure for alternative fuel vehicles

According to the Law on Alternative Fuels of the Republic of Lithuania,²⁰ Lithuania is aiming to develop the use of alternative fuels in the transport sector. Article 23 of the law establishes goals and requirements for electric vehicle charging infrastructure, which are relevant for the promotion of electromobility.

According to the Public Charging Access Registration System (hereinafter – PCARS) there are 4 public electric vehicle charging stations²¹ (hereinafter – EVCS) with 14 ports in the Taurage region, and the total power of all EVCS reaches 1,267 kW. The installation of charging stations in municipalities must comply with Regulation 2023/1804 of the European Parliament and of the Council on the deployment of alternative fuels infrastructure. It should be implemented at the municipal level through Electric Vehicle Charging Access Plans (EVAP), which must be prepared considering the requirements of the AFIR and coordinated with the Ministry of Transport and Communications of the Republic of Lithuania.

The necessary calculations of the power of electric charging points are based on the number of currently registered vehicles and assume that the total share of electric vehicles will be 20% of the fleet (of which 60% BEV, 40% PHEV).

²⁰ The Alternative Fuels Law of the Republic of Lithuania, approved by the Seimas of the Republic of Lithuania in 2021. on March 23 by decision No. XIV-196 (combined version from 05/21/2024 to 12/31/2024)

²¹ Via Lithuania, Public electric vehicle charging access registration system. Access online: <https://ev.lakd.lt/#map>

According to 2024 data, a total of 170 electric light vehicles were registered in the Taurage region, the charging of which, according to the AFIR regulation, requires 221 kW. The table below provides summarized information about the capacity already installed and required to be installed in the Taurage region.

After analysing the entire Taurage region, the currently installed, required and missing capacity was calculated.

Table 10. Power demand of the EVCP in the Taurage region

Municipality	Territory	Total power of already installed EVCPs, kW	Total power requirement according to AFIR, kW	Required installed power, kW
Jurbarkas district municipality	City	1 268	2 216	948
	District	0	2 307	2 307
	Municipality	1 268	4 523	3 255
Pagegiai municipality	City	0	317	317
	District	0	952	952
	Municipality	0	1 269	1 269
Silale district municipality	City	0	819	819
	District	286	2 904	2 618
	Municipality	286	3 723	3 437
Taurage district municipality	City	1 071	3 727	2 656
	District	22	2 382	2 360
	Municipality	1 093	6 109	5 016
Taurage region		2 647	15 624	12 977

Source: compiled by Consultant

Considering the required installed power, if each charging station had a capacity of 150 kW, approximately 87 stations would need to be installed in the Taurage region. The distribution across municipalities would be as follows:

- Jurbarkas district municipality – 22 stations;
- Pagegiai municipality – 9 stations;
- Silale district municipality – 23 stations;
- Taurage district municipality – 33 stations.

According to the prepared data, the current installed capacity in the Taurage region reaches 2,6 MW and is higher than the capacity required for registered electric vehicles, therefore it is assessed that the current demand is met, and the installed infrastructure should promote the development of electric vehicles in the region. When planning the charging infrastructure for electric vehicles by 2030, the power requirement reaches 15,6 MW, and the required installed capacity is almost 13 MW.

Detailed analysis and calculations for each Taurage district municipality are provided in Annex C.

1.3.3. Non-motorized vehicle and micromobility infrastructure

The NMTMV infrastructure analysis is carried out by identifying existing bicycle paths and their quality in the municipal centres of the Taurage region.

Across the municipalities of the Taurage region—Jurbarkas, Pagegiai, Silale, and Taurage—bicycle and pedestrian infrastructure shows both commonalities and local distinctions in design and quality. All four municipal centres utilize a mix of shared and separated pedestrian-cyclist pathways, with asphalt or paved surfaces being the dominant materials. In Jurbarkas, infrastructure types range from adequately functioning shared-use paths on low-traffic streets to substandard narrow cycle tracks and cobblestone paths that do not meet technical guidelines. Pagegiai has made minimal investments, exemplified by a single narrow-paved path, suggesting limited infrastructure development. Silale demonstrates greater effort to separate pedestrian and cycling flows with

markings and colour differentiation yet still struggles with insufficient widths that fall short of design standards. Taurage, while having the most extensive cycling network, suffers from inconsistent quality—its paths are often too narrow and lack the necessary visual or physical separation between user types. Despite variation in scope and investment, a regional pattern emerges shared-use paths dominate in low-density areas, and although attempts are made to align with national design standards, inadequate width and lack of clear segregation persist as key issues across all municipalities. This suggests the need for a coordinated approach to improving NMTMV infrastructure that emphasizes usability, safety, and compliance with national guidelines

Detailed analysis of each municipality is provided in Annex D.

1.3.4. Public transport network and service (including pupils transport)

The Green Region is responsible for organizing public transport network services and increasing their attractiveness in the Taurage region. The GR website publishes bus routes and schedules for all four municipalities, as well as the existing network of public transport stops (see Annex E). In addition, the system is designed to allow real-time bus movement. It is also important to note that all regional routes have recently been updated.

The region has an electronic ticket that can be used to travel on all GR routes. A smart tool has also recently been created and is already in use – the Scan and Drive mobile app, which allows passengers to plan their journey by public transport from the current stop to their destination. In the app, users can see the balance of the electronic ticket, available tickets and their validity period, travel history, applicable discounts and the public transport timetable (see Annex E).

After analysing the current situation of public transport in the Taurage region and all municipalities, it was determined that most of the functions are performed by the GR, but each municipality takes care of passenger transportation services. Smart public transport systems operate in the region: all municipal routes and schedules are published on one page; bus movements are recorded in real time; a unified electronic ticket system operates in the region.

The number of passengers transported, and mileage trends are assessed as satisfactory, as there are only 0,3 passengers per km of mileage in the entire region, and since 2022 the number of passengers transported has increased.

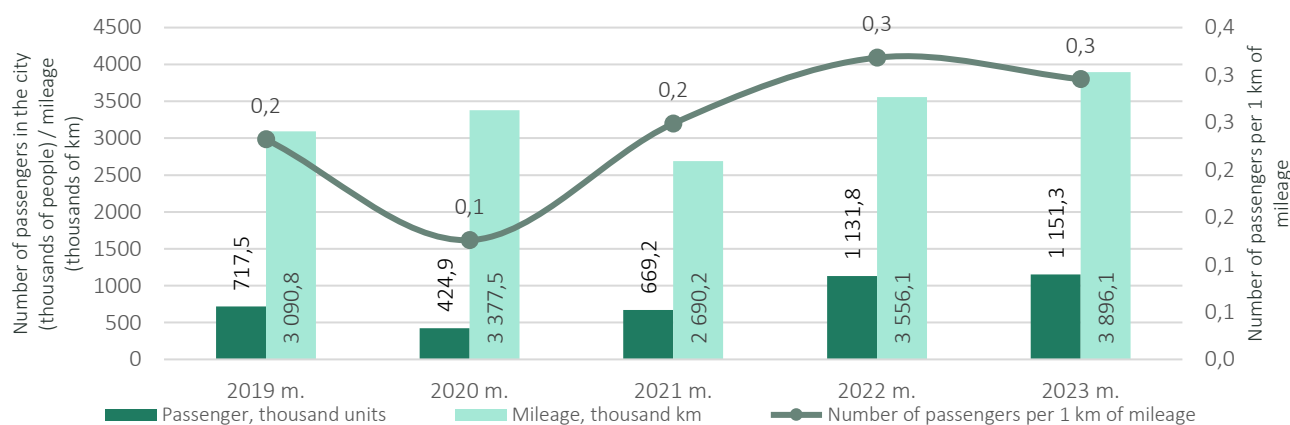


Figure 14. Trends in the number of passengers transported and mileage in the Taurage region

Source: compiled by Consultant based on SDA data

In Lithuania, pupils residing more than 3 kilometres from their school are provided with transportation. This issue is particularly relevant in regions where most of the population lives outside urban areas.

Pupils can be transported in several ways:

- **Scheduled transport** – city or district public transport
- **School transport**

- **Private and other transport** – e.g., personal vehicles of parents or guardians.

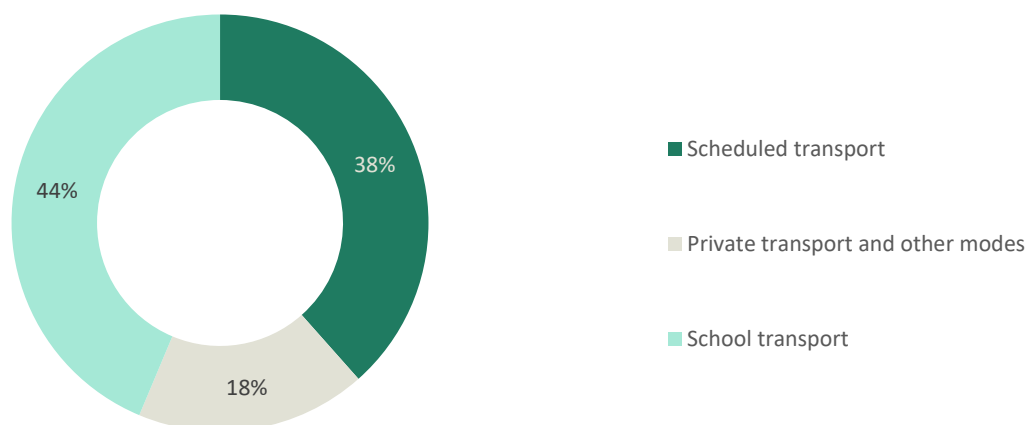


Figure 15. Number of pupils transported from home to school by means of transportation in 2024–2025

Source: compiled by Consultant based on EMIS data

It has been determined that in general, in the entire Taurage region, the majority of pupils who live more than 3 kilometres from an educational institution are transported by school transport (44%).

Detailed analysis of each municipality is provided in Annex F.

1.4. Population survey results

In order to assess the movement patterns of the residents of the Taurage region and identify the main mobility problems, a survey of residents was conducted. The questionnaire survey was conducted on the Zoho platform, and it was published on the Client's website, social networks and school electronic diaries. The survey was conducted from January 3 to 14, 2025 (inclusive).

The survey was conducted anonymously, and during the survey period 1050 pcs. fully completed questionnaires were collected, therefore the data obtained correspond to 95% of the population of the Taurage region with a 3% error, meeting the representativeness criteria. The data obtained were weighted using statistical analysis methods, therefore the survey data is representative according to the size (number of inhabitants) of the municipalities of the Taurage region.

The first part of the survey asked sociodemographic questions about the respondent's age, social employment, municipality and territory of residence, and the number of people and cars in households. Further questions were selected considering the respondent's chosen social employment.

- **EMPLOYED** were asked about the method, time and duration of travel to work, arranging additional trips and accompanying children to educational institutions.
- **NON-EMPLOYED** were asked about the method of travel by purpose of travel and accompanying children to educational institutions.
- **PUPILS** were asked about the method, duration and distance of travel to educational institutions (school) and non-formal education groups.

Finally, all respondents assessed the pedestrian, non-motorized and public transport infrastructure of the Taurage region. Infrastructure questions were presented to respondents only when the respondent indicated that the respective means of transport makes more than 9% of all trips.

Of all respondents who participated in the survey, more than half (58,4%) are employed, slightly more than a quarter (27,5%) are pupils, almost a tenth (9,18%) are unemployed, and the rest (4,92%) indicated their social employment themselves, therefore they were divided into categories according to the answers received. The

majority of respondents in the survey have families of 4 or more people, and one household usually has 1 or 2 cars (see Figure 50 in Annex G).

After conducting a survey of residents, four traveller profiles were identified among the residents of the Taurage region: working and unemployed, pupil and senior.

EMPLOYED. The main mode of transport for working people is a car (74%). Most often, when traveling to or from work, a working resident of the Taurage region also combines other trips (87,9%), for example, taking children to educational institutions and non-formal education classes, visiting shops, etc. Most often, a typical working person travels more than 30 minutes to their workplace, but an almost similar share of respondents also travels from 10 to 30 minutes, and their workplace is up to 1 km or more than 5 km away from home. Working respondents also most often choose a car when traveling for other purposes, on the other hand, the number of travellers on foot increases significantly when traveling to a store or to leisure places.

Figure 16. Typical employed person profile

Source: compiled by Consultant based on population survey results

NON-EMPLOYED. The main mode of travel for the unemployed is on foot or by car. The latter is more popular in all cases except for going to the shops. One fifth (20,1%) of unemployed respondents with children accompany their children to educational institutions, as their children are too young to travel independently.

Non-employed person is an individual who does not have paid employment. This category includes unemployed persons (those actively seeking and available for work) and economically inactive persons (those not seeking work, university students, parents on maternity/paternity leave). This category was distinguished because the daily travel purpose of such people is different, and therefore they cannot be classified either as employed persons, whose main trip is to work, or as school pupils, whose main trip is to an educational institution.

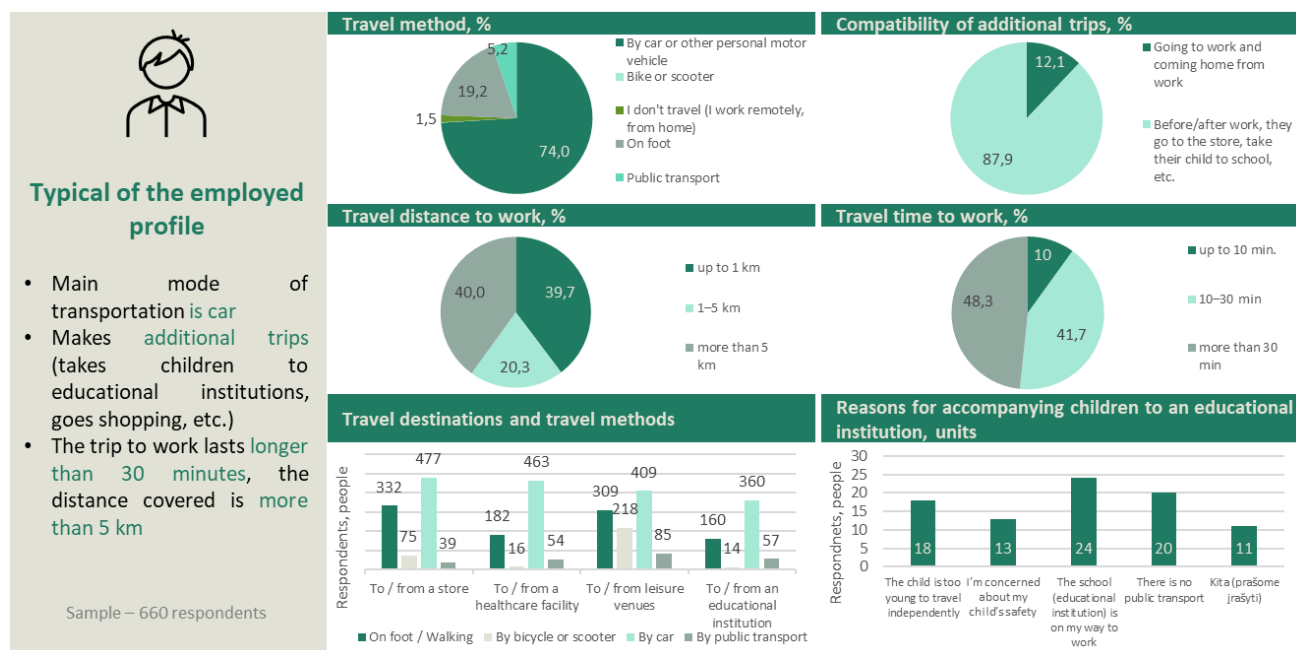


Figure 17. Typical unemployed person profile

Source: compiled by Consultant based on population survey results

PUPILS. In the Taurage region, the main modes of travel for pupils to educational institutions are by car—when driven by their parents—and on foot. Travel from educational institutions, however, shows slight variation, with walking and public transport among the most common modes. For the majority of pupils, the school is located within the same municipality as their place of residence, and the average journey time is up to 10 minutes. More than half (56.4%) of pupils attend extracurricular clubs, most of which are located within schools. Pupils whose clubs are outside the school usually reach them on foot.

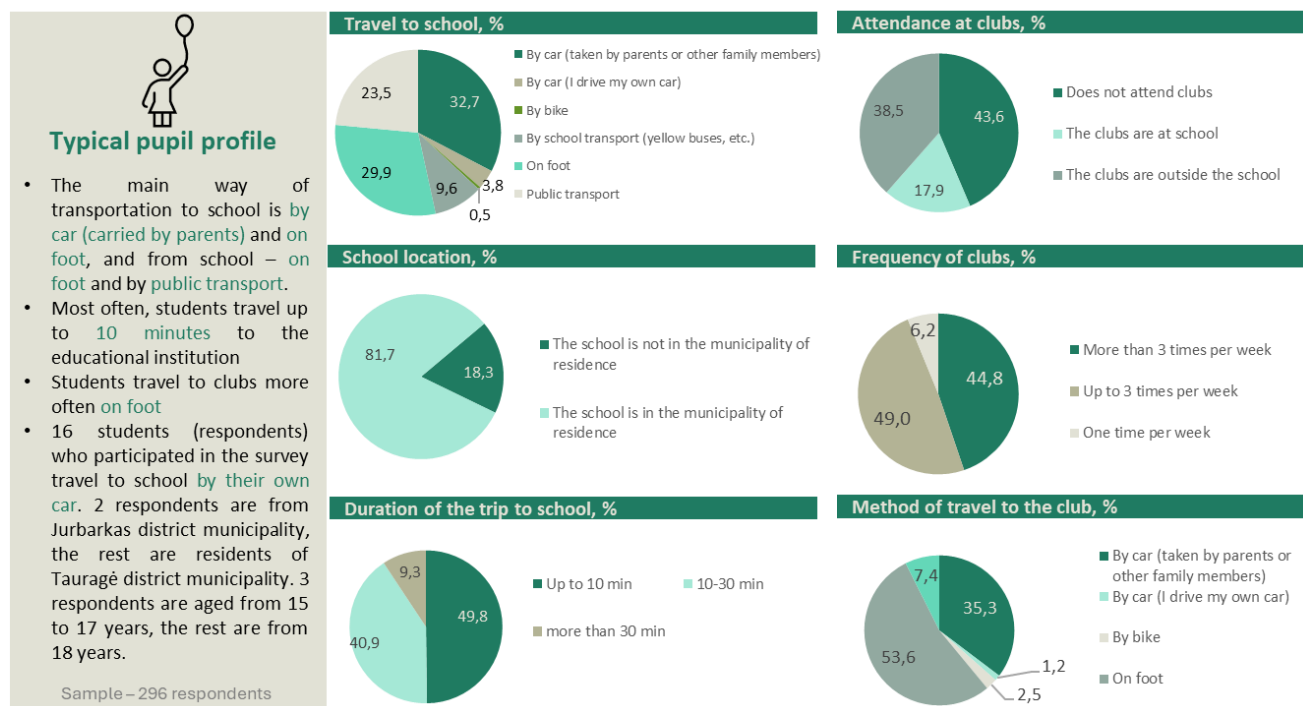


Figure 18. Typical pupil profile

Source: compiled by Consultant based on population survey results

SENIOR. The remaining respondents identified themselves as seniors, therefore a typical senior profile was formed, characterized by traveling on foot or by car.

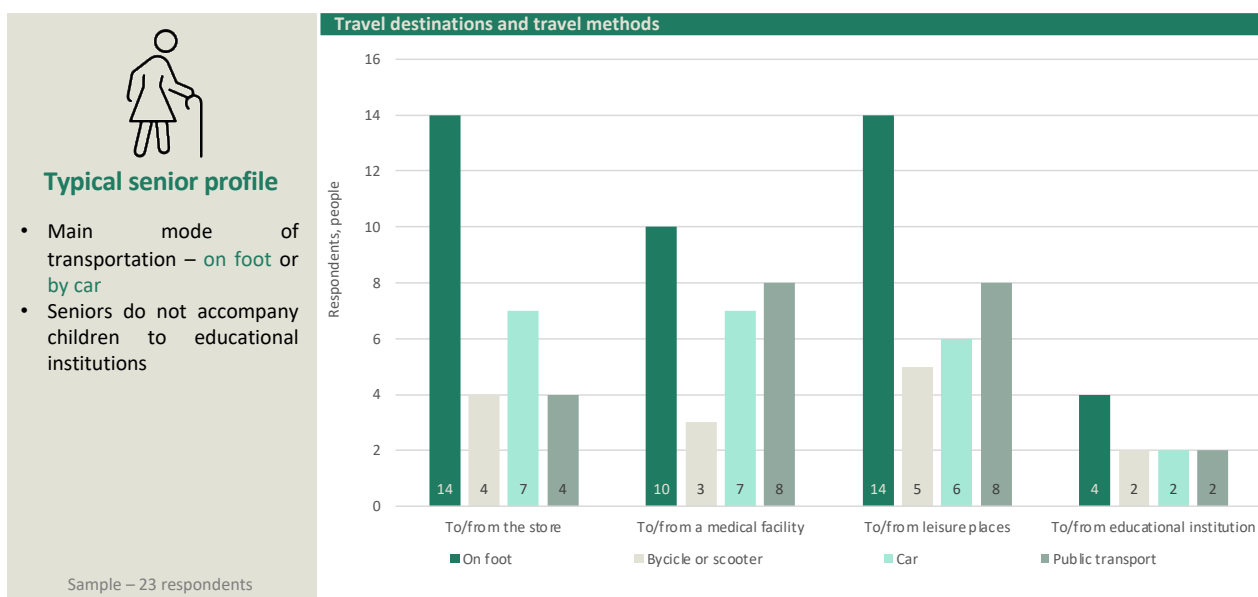


Figure 19. Typical senior profile

Source: compiled by Consultant based on population survey results

In the last block of questions, respondents were asked to evaluate the infrastructure of the Taurage region. Most respondents rate all elements of pedestrian infrastructure as good or average. During the survey, respondents assessed various aspects of infrastructure. The best rated were the surface of pedestrian paths and the visibility of crossings, bicycle storage and storage infrastructure, and the public transport information system. The worst rated were the adaptation of sidewalks to the PNS, the connectivity of bicycle paths, and the frequency of bus services. A critical problem was identified related to schoolchildren's travel by public transport (see Figures 51, 52, 53 in Annex G).

When assessing the infrastructure, respondents were given the opportunity to indicate observations and emerging problems. In the pedestrian infrastructure section, respondents from all municipalities highlighted the lack of pedestrian paths, crossings and lighting, and mentioned the poor condition of the paths. In the non-motorized transport section, the lack of paths, connectivity and quality, and the need for storage infrastructure were mentioned (see Table 30 in Annex G).

2. Accessibility and mobility in the Taurage region

This section examines the overall regional accessibility and mobility between municipal centres of the Taurage region by analysing accessibility of the trans-European transport network; traffic intensity; regional non-motorised transport network; regional public transport route network.

2.1. Assessment of the accessibility of the trans-European transport network

This subsection examines the connectivity between the TEN-T network and the municipalities and their centres of the Taurage region, in order to assess the accessibility of the TEN-T network.

The TEN-T network is governed by Regulation No 1315/2013 of 2013²² and consists of rail, road, inland waterway networks, as well as railway terminals, airports and ports. The network is divided into a core network (core connections) and a comprehensive network (secondary connections).

The municipalities of the Taurage region have sections of the main and general road network, a general railway track and an inland waterway. Silale district municipality is crossed by the main road network, Taurage district municipality – by the general road and railway network, Pagegiai municipality – by the general road and railway network and an inland waterway, and Jurbarkas district municipality only by an inland waterway. There are no main or general air or seaports or railway terminals in the region.

Although passenger rail services are not provided in the region, the possibility of transporting goods by rail contributes to reducing traffic intensity on land roads.

The inland waterway (the Nemunas River from Kaunas to Klaipeda) provides opportunities not only to reach the Taurage region, but also to move within the region (between Jurbarkas district municipality and Pagegiai municipality), and its use for freight transportation would also have a positive impact on reducing the load on land roads.

²² The regulation is currently being updated – the European Commission submitted a proposal for an update in December 2021, which should be approved by the European Council and the European Parliament. Although this analysis is based on the current 2013 Regulation No. 1315/2013, it is worth highlighting a major change in the network in north-eastern Lithuania – the exclusion of the TEN-T comprehensive network road link from Panevezys to Zarasai (section of national road No. 122 from Panevezys to Obeliai and national road No. 117) from the updated TEN-T network. Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU Text with EEA relevance. Available online: <https://eurlex.europa.eu/legal-content/LT/TXT/?uri=CELEX:32013R1315>

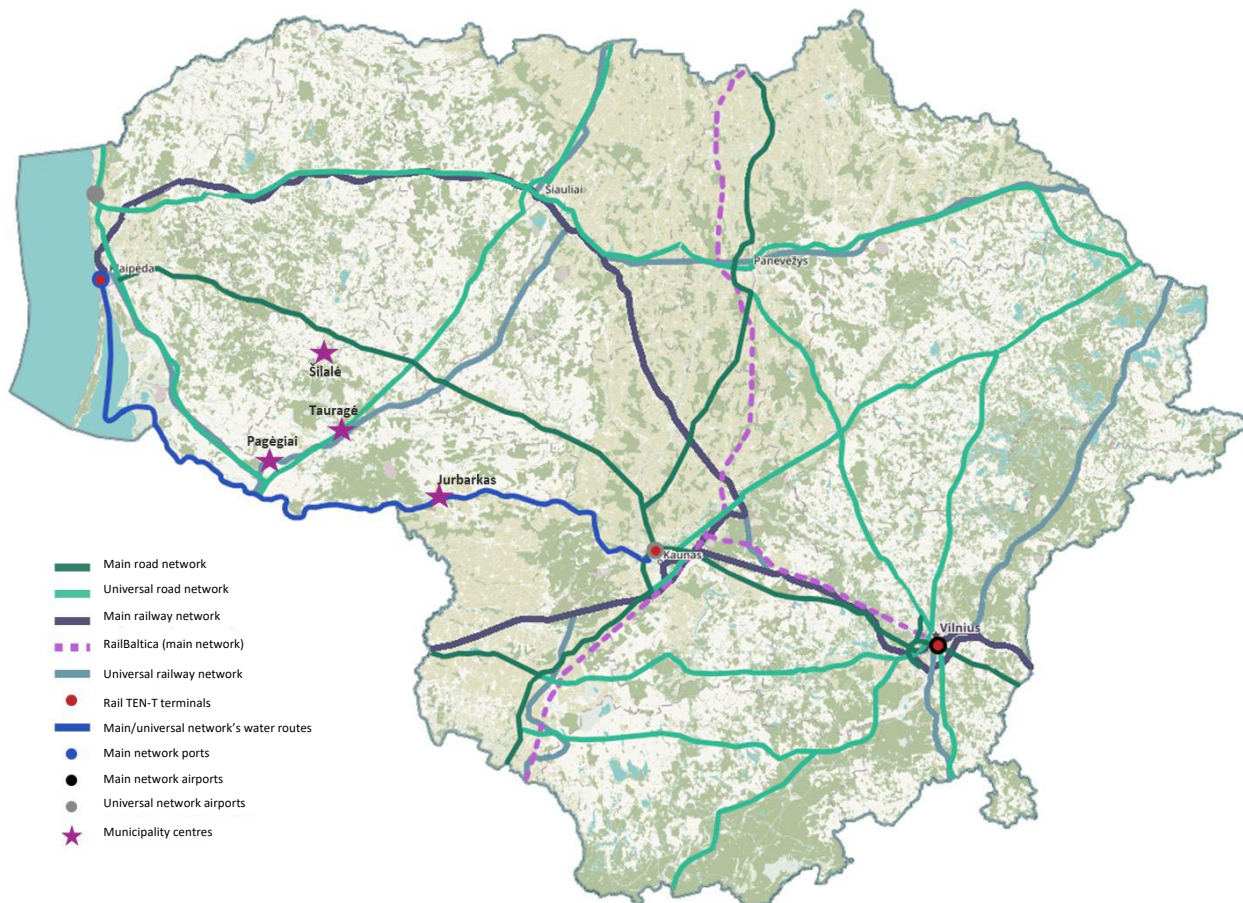


Figure 20. TEN-T network in Lithuania

Source: compiled by Consultant, based on TENtec Interactive Map Viewer²³

The table below provides an estimate of the distance to the nearest terminals (airports, seaports and railway stations). The distance is measured in kilometres from municipal centres (bus stations) to the nearest main and general terminal. The estimate is based on *Google Maps*.

Table 11. Assessment of the distance from the municipal centers of the Taurage region to the nearest TEN-T network terminals, 2025

Type		Distance in kilometres from the municipal centre			
		Jurbarkas district municipality	Pagegiai municipality	Silale district municipality	Taurage district municipality
Airport	Main	Vilnius International Airport			
		186	245	238	228
	Universal	Kaunas airport		Palanga airport	
		100	117	109	137
Railway terminal	Main	Kaunas Railway Station		Klaipėda Railway Station	
		89	88	81	109
Seaport	Universal	Klaipėda Central Terminal			
		150	90	82	110

Source: compiled by the Consultant, based on travel distances provided by Google Maps

After analysing the distances, it was determined that the railway terminals are located closest to the municipal centres (bus stations) of the Taurage region, and the main Vilnius International Airport is the furthest away.

²³ European Commission. TENtec Interactive Map Viewer. Online access: <https://ec.europa.eu/transport/infrastructure/tentec/tentec-portal/map/maps.html>

It is assessed that the existing connection to the TEN-T network is ensured by the comprehensive road and rail network and by waterways.

2.2. Traffic intensity analysis

According to Via Lietuva data, the highest average annual daily traffic intensity (hereinafter – AADT) in 2024 is recorded on the regional trunk road – A1. However, heavy traffic is also observed on other regional roads. The freight transport AADT in 2024 is also the highest on the A1 highway, but on other roads in the region, the freight transport traffic intensity decreases from several to several dozen times (see Figures 54 and 55 in Annex H).

For example, on the road connecting Silale and Taurage, the number of cars per day in 2024 ranged from 2,485 to 4,359 cars, while freight transport was up to 15 times less, from 192 to 293 vehicles. It is noted that on regional roads around the city of Taurage, i.e. in suburban areas, where traffic flows are doubled, the intensity increases significantly, therefore this number cannot be equated to the entire road load per day.

Table 12. AADT on roads between municipalities of the Taurage region

Road	Road No.	AADT, auto/day	Freight vehicle AADT, auto/day
Silale–Taurage	KK 164	2485 / 2676 / 4359	192 / 293
Taurage–Jurbarkas	KK 147	4457 / 1522	302 / 193
	KK 141	3393	362
Jurbarkas–Pagegiai	KK 141	3393 / 1023	362 / 124
Pagegiai–Taurage	A 12	649 / 1786 / 5190	116 / 286

Source: compiled by Consultant, based on Via Lietuva²⁴

Overall, the change in AADT since 2019 on the region's roads does not change trends. From 2019 to 2023, the total VMPEI decreased by 1,02% (161 vehicles). Of these, the intensity of cars decreased by 1,34% (193 vehicles), and the intensity of freight transport increased by 2,1% (32 vehicles).

²⁴ Via Lietuva. Traffic intensity. Online access: <https://vialietuva.lt/eismo-intensyvumas>

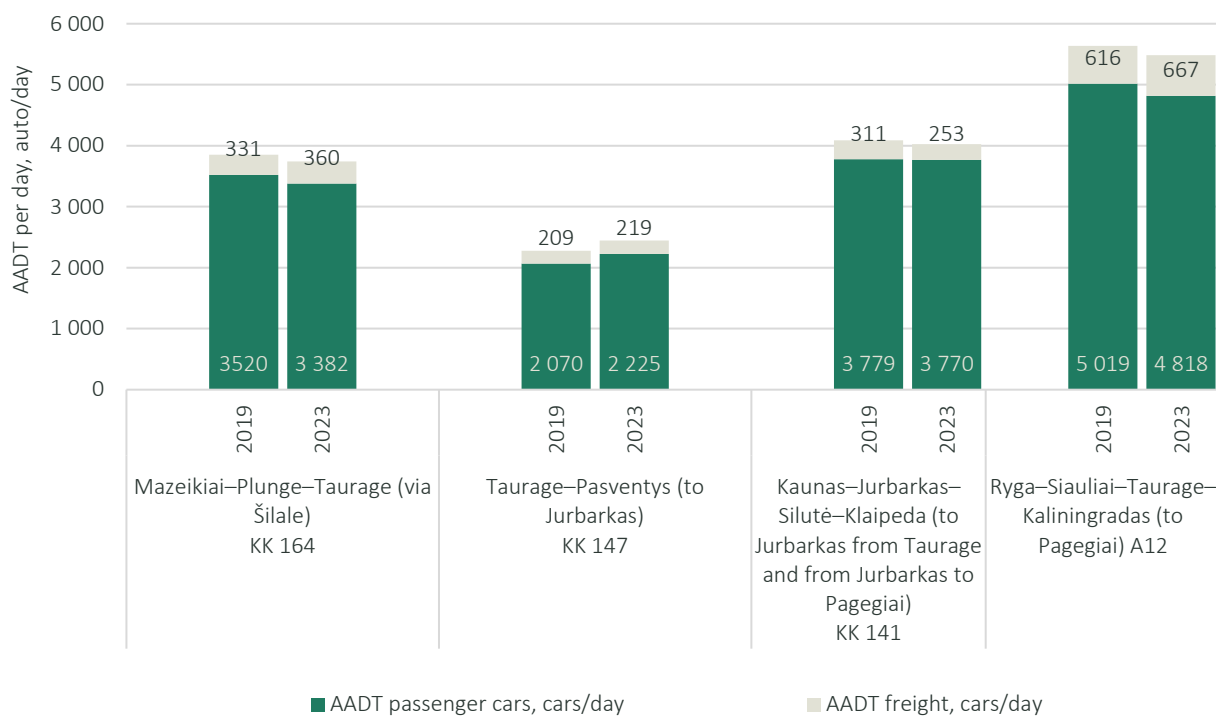


Figure 21. Comparison of AADT on Taurage region roads in 2019 and 2023

Source: compiled by Consultant, based on Via Lietuva²⁵

Based on the above analysis, it was determined that traffic intensity did not change during the analysed five-year period, therefore this does not affect the actions and measures formed in this plan.

2.3. Regional network of non-motorized transport analysis

In total, in the Taurage region, according to 2023 data, 76,4 km of bicycle paths have been installed. The largest network of paths is in Taurage district municipality, the smallest is in Pajūriai municipality.

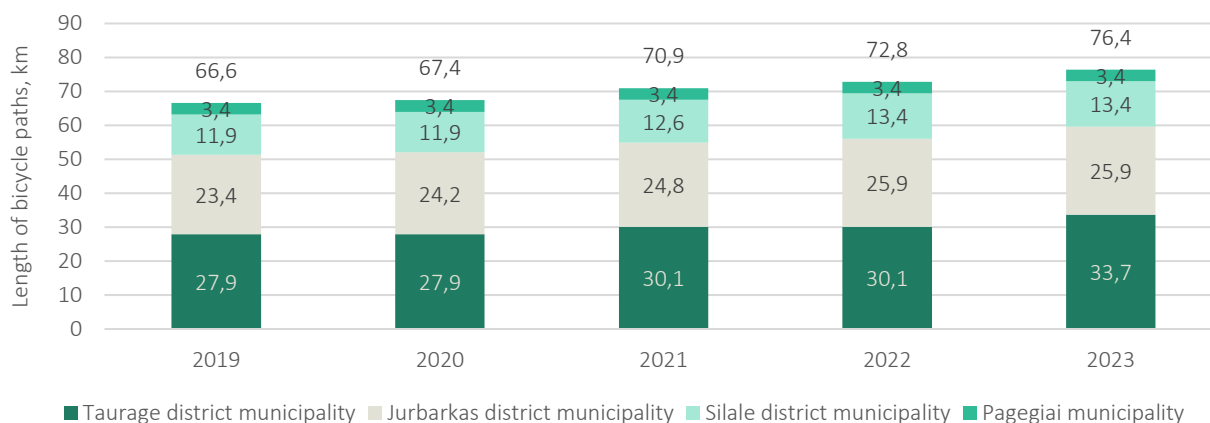


Figure 22. Length of bicycle paths, km

Saltinis: compiled by Consultant, based on SDA data

Currently, the bicycle path infrastructure is installed in or around the regional municipal centres. Individual sections of paths have also been installed, which is why the existing network is very fragmented. The planned development of bicycle path infrastructure according to the Via Lietuva National Pedestrian and Bicycle Path

²⁵ Via Lietuva. Traffic intensity. Online access: <https://vialietuva.lt/eismo-intensyvumas>

Development Map will also not ensure a unified network (see Annex I). The planned development of Via Lietuva is oriented from the municipal centre to separate neighbourhoods, therefore NMTMV becomes an attractive means only for movement within municipal centres, but not for accessibility of different areas. Since the development will not connect existing bicycle paths or municipalities of the Taurage region, it is important to ensure other connectivity options, such as regional public transport.

2.4. Regional public transport route analysis

When assessing regional public transport routes, the aim is to determine connectivity between municipal centres.

There are currently 8 public transport routes operating in the Taurage region. 6 routes run from Taurage to other towns and cities in the region, and one each runs from Jurbarkas and Pagegiai to Taurage (see Annex J). As mentioned earlier, bicycles, scooters and other micromobility means are a potential means of moving around municipal centres for daily trips, therefore communication between rural areas or other municipalities should be ensured in other ways. The in Annex I shows the accessibility of municipal centres by bicycle within 5, 10 and 15 minutes, as well as regional public transport routes. It can be seen that the connection with municipal centres and other larger cities and towns of the Taurage region is ensured by regional routes. On the other hand, the accessibility of the remaining areas from the final stop is not ensured, therefore NMTMV could be an alternative to reach the final point from the last stop. By installing the appropriate infrastructure, i.e., bicycle paths and ensuring the possibility of transporting a bicycle or scooter on a bus, non-emission vehicles would be an attractive means of movement upon arrival in the city, for example, to work and returning home from the final stop of the public transport route.

3. Solutions for sustainable mobility in the region

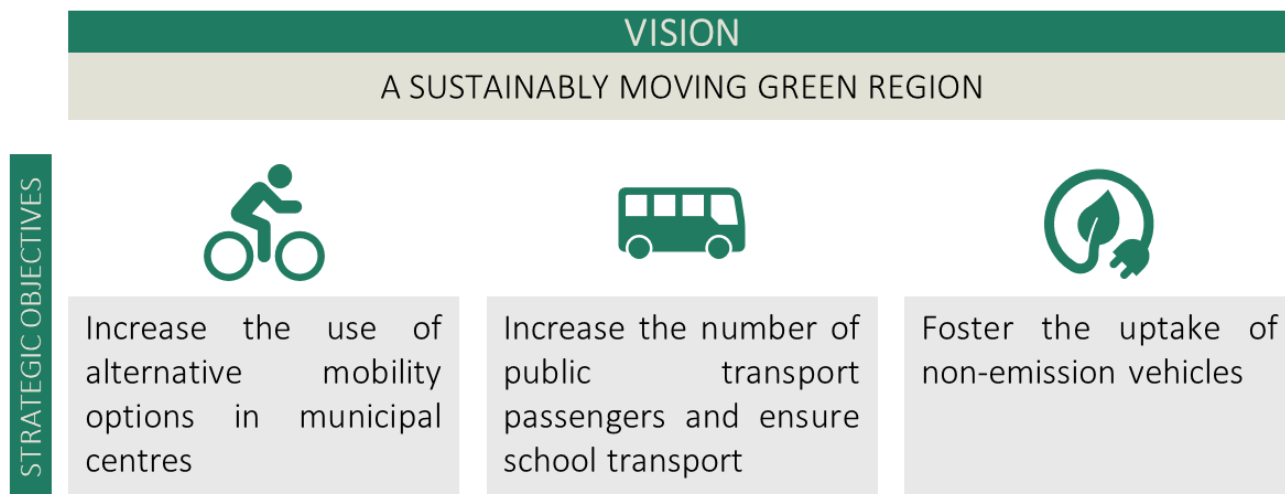


Figure 23. IAP vision and strategic objectives

Saltinis: compiled by Consultant

Intervention Area 1: non-motorised transport infrastructure

Although movement within the region, both within municipalities between remote areas and between municipalities themselves, is relevant for residents to reach places of work, education or public services, due to the large distances, non-motorized transport is not the most suitable and daily usable means. Therefore, when assessing the promotion of the use of NMTMV and the development of infrastructure, the primary emphasis is on municipal centres - cities and suburban areas, which can be reached by bicycle in 5-15 minutes.

NMTMV NETWORK FORMATION. The main mobility network is formed considering the concentrations of residential, work and public service provision places, in order to ensure the main connections relevant to everyday needs. In most cases, this also coincides with the main city streets, therefore, considering the intensive car traffic, a separate non-motorized transport infrastructure must be installed on them, ensuring safe movement for all traffic participants. It is recommended to develop pedestrian and bicycle paths with separated flows, in places of lower intensity, mixed-flow pedestrian and bicycle paths can be developed.



Cycle paths and pedestrian and cycle paths with separate flows

Path width: at least 2.5 m (bicycle part), together with the pedestrian part – at least 4 m.

- Surface – asphalt (pavers are not suitable).
- Red surface and curb are installed between the pedestrian and bicycle areas – clearly separated flows.
- Intersections and car crossings are properly installed.
- Pedestrian infrastructure is located further from the roadway, except for public transport stop bypasses, etc.



Pedestrian and bicycle path (general flow)



It should be noted that a pedestrian and bicycle path in the general flow is an acceptable measure only on the outskirts of the city, in the countryside, where there is no intensive pedestrian and bicycle traffic. Otherwise, this type of infrastructure is no different from city sidewalks and does not create added value.

- It is installed near exits from city roads, in parks that do not have a large number of visitors, etc.



Figure 24. Examples of pedestrian and bicycle paths on main streets

Source: compiled by Consultant

On lower-category streets that are not part of the main network, it is recommended to organize bicycle traffic in the general flow – traffic is calmed, residential areas are formed, engineering traffic regulation measures are installed (carriageway curves, islands, raised intersections), speed is limited to 30 km/h. In all cases, the infrastructure intended for pedestrians is also adapted for people with special needs – curbs are lowered, tactile surfaces are installed.



3 Mobility in the general flow with cars (traffic-calm zones)

Street parameters: different technical implementations are possible depending on the situation, but the most important thing is to ensure that cars adhere to the established speed limit - no more than 30 km/h.

- Artificial road curves or other engineering solutions for traffic calming are installed.
- The non-obvious separation of the roadway, parking and other street elements forces drivers to move more carefully and reduce speed.
- Bicycles can safely move in the same flow as cars.

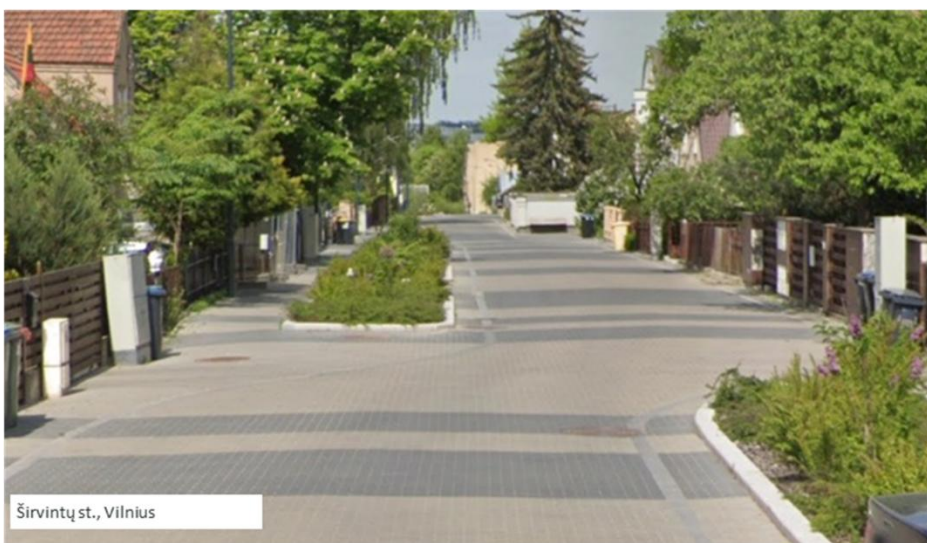


Figure 25. Examples of installing pedestrian and bicycle paths on lower-category streets

Source: compiled by Consultant

Although non-motorized transport can move in the general flow on category D streets (after first calming traffic using engineering measures), when assessing the accessibility of educational institutions and ensuring safety for pupils, it is recommended to install separate non-motorized transport infrastructure connections from the main network to the educational institutions.

SCHOOL ZONES. In order for pupils to be able to safely reach educational institutions on foot and by non-motorized means of transport, it is necessary to ensure a safe infrastructure, which can be implemented by applying a school zone solution, in which:

- prioritizing children to walk or cycle to school;
- limiting vehicle speeds and reducing traffic intensity;
- providing warning signs about the presence of children;
- increasing pedestrian visibility by ensuring safe crossings with physical and visual barriers;
- using solutions that make children more visible to drivers, such as raised crossings, widening roadsides and parking restrictions.²⁶

Such infrastructure ensures that pupils can arrive at schools safely and unescorted in a sustainable manner (see Annex K).

NMTMV STORAGE AND PRESERVATION INFRASTRUCTURE. In order to promote the use of non-motorized vehicles, it is necessary to ensure the infrastructure for storing bicycles and other means. Racks and shelters are installed near public service institutions, such as schools, and storage facilities (a good example of which has already been implemented in the city of Taurage) in the courtyards of residential apartment buildings (see Annex K).

SHARING PLATFORMS. Attracting a bicycle (scooter) sharing system for those who do not have their own means (including tourists). Such a service is already operating in Taurage city, but in regional cities it is not profitable for providers of such services, therefore, in order to ensure the provision of the service, cooperation between municipalities and service providers (tax breaks and/or grants) or a decision to provide sharing services themselves as complementary public transport services is necessary (after assessing the limitations of the competitive environment, such a service could perhaps be provided by GR or public transport service providers).

Intervention Area 2: Public transport and its interaction with non-motorised transport

Since a regional transport system has already been formed, coordinated by the GR, it is inappropriate to initiate additional changes in public transport. It is important to ensure the implementation and continuity of already planned actions, as well as timely renewal and modernization of the infrastructure, constantly reviewing routes and their service frequency as needed.

- **ORGANIZATION OF PUPILS TRANSPORTATION.** One of the autonomous functions of the municipality is to ensure transportation to educational institutions for pupils (living further than 3 km). According to statistical data, 40% of pupils in the Taurage region use yellow school buses, another 38% reach educational institutions by public transport, not counting pupils living closer than 3 km to the educational institution. In order to ensure efficient use of resources and meet the transportation needs of pupils, it is recommended to transfer this function (as well as the available means of transport - school buses) to public transport service providers in all municipalities.
- **OPPORTUNITIES FOR INTERACTION BETWEEN PUBLIC AND NON-MOTORED TRANSPORT.** Considering that public transport cannot fully ensure constant frequency or accessibility to more remote areas, and non-motorized transport is limited in terms of distances covered and suitability of weather conditions, it is appropriate to look for opportunities for interaction between public and non-motorized transport.

²⁶ World Resources Institute. Low-Speed Zone Guide. Access online: <https://www.wri.org/research/low-speed-zone-guide>

To promote the interaction of public transport and bicycles, it is necessary to create opportunities for people to reach the public transport route by bicycle and continue their journey by bus, leaving the bicycle in a storage room or carrying it with them. This requires appropriate equipment in public transport vehicles - bicycle racks or the possibility of transporting bicycles inside the bus (see Annex L).

Another solution that promotes the interaction of public transport and bicycles is *bike&ride*, where it is possible to change the means of transport by leaving the bicycle in the designated storage areas and using the public transport service. Such stops could be installed at the intersections of public and non-motorized transport networks and at the last stops of routes, since residential areas in the regions are not densely distributed, and public transport does not serve all settlements. The *bike&ride* function could also be ensured by sharing platform operators if the pick-up/return points for sharing vehicles were installed near public transport stops (see Annex L).

Intervention Area 3: Traffic management and promotion of clean transport

MOBILITY HUB. Sustainable mobility can be promoted by establishing mobility centres that connect various modes of transport and mobility services focused on convenience and efficiency. Public transport and NMTMV sharing systems, electric vehicle charging stations, parcel machines, rest areas, etc. As a standard, mobility centres already operate at bus stations in municipal centres, and it is appropriate to expand the range of mobility and mobile services available there (see mobility hub example in Annex M).

LOW-POLLUTION ZONE. In order to improve the quality of life of residents and guests, reduce air and noise pollution, it is appropriate to reduce traffic intensity (limit transit traffic) in the most polluted areas of cities, encouraging motor vehicle drivers to choose alternative routes, and residents, in turn, to encourage them to choose alternative modes of travel: public transport, vehicle sharing, ride-hailing services, taxis, bicycle trips, micromobility, walking, etc. For this purpose, it is recommended to establish a low-pollution zone in the city of Taurage, and in other municipalities, as needed, to limit parking options in central parts of cities (by gradually reducing the number of parking spaces or charging for them). Full parking lots not only harm the environment and contribute to pollution but also negatively affect the visual appeal of the city. Such restrictions should only be implemented after ensuring alternative mobility options to reach the designated territories (public transport, non-motorized transport infrastructure). When establishing any restrictions on motor transport, it is necessary to apply exemptions to AFV measures.

AFV INFRASTRUCTURE AND VEHICLE FLEET. In order to encourage residents to choose less polluting or non-polluting vehicles, it is necessary to further expand the network of public electric vehicle charging points in the region. It is also recommended that in urban apartment blocks, when installing parallel parking lanes on the streets, electric vehicle charging points be installed next to them (on street lighting supports).

After assessing the car fleets of municipalities and their controlled institutions and companies, plan to upgrade them with non-emission vehicles, including all public transport and school buses.

4. Action in municipalities and the region

The following subsection presents mobility solutions that apply to all municipalities in general (their implementation is ensured by each municipality separately), as well as specific solutions for each municipality and the entire region. The proposed solutions contribute to the promotion of sustainable mobility in daily trips and greater safety for all road users.

4.1. Actions applied to each municipality

The table below presents the proposed solutions for each municipality. Most of the proposed solutions can be applied in all municipalities, but each municipality must be responsible for their implementation separately.

Solution	Jurbarkas district municipality	Pagegiai municipality	Taurage district municipality	Silale district municipality
Formation of a network of non-motorized transport and micromobility vehicles	✓	✓	✓	✓
Storage infrastructure for non-motorized transport and micromobility vehicles	✓	✓	✓	✓
School zones	✓	✓	✓	✓
Student transportation	✓	✓	✓	✓
Installation of AFV infrastructure (charging stations)	✓	✓	✓	✓
Renewal of the municipal vehicle fleet with non-emission means			✓	
Low pollution zone	✓	✓	✓	✓
Mobility hub	✓	✓	✓	✓
VIA LIETUVA to provide relevant information about bicycle paths installed in municipalities	✓	✓	✓	✓

Figure 26. Proposed solutions in municipalities

Source: compiled by Consultant

Detailed solutions for each municipality are provided in Annex N.

4.2. Actions applied at regional level

The table below presents the solutions formulated for the entire region and their explanations. The adaptation and coordination of the solutions is assigned to the Green Region, PI. The map visualising non-motorized transport solutions for the Green Region is provided in Annex O.

Table 13. Solutions for the Green Region

No	Solution	Description
1.	Interactive map of the region's cycling infrastructure	Create an interactive map that includes existing bike paths, bike storage areas, routes, and other related information

2.	Bicycle transportation options on regional public transport	Ensure the possibility of transporting bicycles on regional public transport routes in order to promote sustainable mobility
3.	Coordination of the formation of a regional bicycle network	Promote cooperation between municipalities by coordinating the development of bicycle infrastructure on a regional scale
4.	Development of bike sharing systems in the region	Develop or implement bike sharing systems that would ensure convenient micromobility in municipal centres
5.	Creation and promotion of tourist and recreational routes	Prepare tourist bicycle routes for tourists, including tourist attractions
6.	Review and coordination of public transport schedules	During the survey of residents, it was determined that public transport schedules do not correspond to the times of classes, therefore it is proposed to review and adjust the schedules of public transport routes, considering the start and end times of classes
7.	Campaigns to promote safe traffic and sustainable mobility	Organize European Mobility Week events in the context of the entire region, encourage residents of municipalities to use alternative means of mobility (PT, bicycles) or compete with each other in a "mobility challenge" (at the level of municipalities, educational institutions, organizations)

Source: compiled by Consultant

4.3. Action details

Table 14. Action plan

No.	Measure	Responsible actors	Output indicator	Output indicator value	Estimated costs	Timeline	Funding sources
1	Develop a regional cycling infrastructure network (identifying needs and transferring them to VIA Lithuania, coordinating the process)	Green Region, PI	Preparation of the regional cycling path scheme and prioritization	1,0	1 000,0	2 026,0	PI, MB
2	Create an interactive map of the region's cycling infrastructure	Green Region, PI	Created interactive map	1,0	5 000,0	2 026,0	PI, MB
3	Develop and promote tourist and recreational cycling routes	Green Region, PI	Number of prepared routes	10,0	1 000,0	2025-2026	PI, MB
4	Expand bicycle and/or micro-mobility sharing systems in the region (administration or attracting a service provider)	Green Region, PI	Municipalities where sharing services are provided	4,0	2 000,0	2 026,0	PI
5	Ensure (coordinate) bicycle transport options on regional public transport	Green Region, PI	Number of regional routes allowing bicycle transport	7,0	-	2025-2027	PI, BF
6	Review and adjust public transport schedules	Green Region, PI	Number of reviewed routes	79,0	-	Always	PI, BF
7	Organize European Mobility Week events in the context of the entire region	Green Region, PI	Number of implemented events	5,0	5 000,0	Always	PI, MB
8	Campaigns, competitions, promotional activities, and participation in a "mobility challenge" (at the level of municipalities, educational institutions, and organizations)	Green Region, PI	Number of participating institutions / residents	20 / 1000	5 000,0	Always	PI, MB
9	Build cycling paths	Taurage region municipalities	Constructed cycling paths, km	23,2	15 285 600,0	2025-2030	EU, MB
10	Install bicycle parking and storage facilities	Taurage region municipalities	Number of installed bicycle parking and storage facilities	30,0	390 000,0	2025-2030	EU, MB
11	Provide up-to-date information on cycling paths to VIA Lithuania	Taurage region municipalities	Amount of information delivered, quantity	4,0	-	2 025,0	MB

12	Establish school zones	Taurage region municipalities	Number of established school zones	14,0	70 000,0	2027-2030	MB
13	Install public electric vehicle charging stations	Taurage region municipalities	Number of installed charging points / total capacity	130 (min 12 977 kw)	455 000,0	2025-2030	EU, MB, PB
14	Renew the municipal vehicle fleet with low-emission vehicles	Taurage region municipalities	Number of renewed vehicles	79,0	30 810 000,0	2025-2030	EU, MB, BF
15	Establish a mobility center (improve infrastructure and ensure service provision)	Taurage region municipalities	Number of mobile services provided (public transport, sharing point, parcel terminals, coffee machines, etc.), units	12,0	40 000,0	2027-2030	EU, MB, PB
16	Update the sustainable mobility plan	Taurage district municipality	Updated plan, units	1,0	10 000,0	2 025,0	MB
17	Prepare a low-emission zone plan	Taurage district municipality	Prepared plan, units	1,0	5 000,0	2025-2026	MB
18	Organize pupils transportation (transfer services to bus fleets)	Taurage and Silale district municipalities	Implemented service	2,0	-	2027-2030	BF
19	Prepare a cycling path plan / scheme	Jurbarkas and Silale district, Pagegiai municipalities	Cycling path scheme	3,0	3 000,0	2 025,0	MB

Source: compiled by Consultant

5. Implementation and monitoring

5.1. Implementation of IAP

The figure below presents the strategic objectives, indicators, and possible targets of this IAP vision.

	STRATEGIC OBJECTIVE	RESULT INDICATOR	POSSIBLE TARGET BY 2030
	Increase the use of alternative mobility options in municipal centres	Modal share of walking, cycling, PT use in municipal centres	Increase modal share of walking, cycling, PT in municipal centres from 45% to 50%
	Increase the number of public transport passengers and ensure school transport	Number of passengers of public transport services in Taurage Region % of pupils living more than 3km from school transported by scheduled transport and school transport	Increase number of passengers from 1.15 million (2023) to 1.3 million At least 85% of pupils living more than 3km from school are transported by scheduled transport, school transport and yellow buses
	Foster the uptake of non-emission vehicles	Number of non-emission vehicles registered in Taurage Region Charging stations capacity (kW) in Taurage Region	Increase of non-emission vehicle registration (electric) from 0.3% to 5% Increase the capacity of charging stations from 2.6 thousand kW to 13 thousand kW

Figure 27. IAP Strategic Objectives, Indicators, and Targets by 2030

Saltinis: compiled by Consultant

5.2. Monitoring framework of IAP

RESPONSIBLE INSTITUTION. The monitoring system is coordinated by the public institution Green Region.

IMPLEMENTATION PROCESS. The monitoring system will be implemented in several stages.

1. DATA COLLECTION:

- Each institution responsible for a specific action collects data on the measures it has implemented.
- If the measure is implemented by Green Region, the institution itself is responsible for collecting the data.

2. DATA SUBMISSION:

- The data collected by each implementing body must be submitted to *Green Region* every January.

3. DATA PROCESSING AND EVALUATION:

- Green Region processes the submitted data and assesses the progress of the Action Plan implementation.

4. REPORTING TO MUNICIPALITIES:

- Each year, the results of the monitoring will be presented to the decision-makers of all four municipalities.

Annex A. Analysis of strategic planning and territorial planning documents of each Taurage region municipality

Analysis of strategic planning documents

TAURAGE REGION

Two regional strategic documents are relevant to the development of the Plan:

- Taurage Region Development Plan 2022-2030;
- Taurage+ Functional Area Strategy 2023-2029.

THE TAURAGE REGION DEVELOPMENT PLAN 2022-2030²⁷ identifies the following problems in the Taurage region: the region's environment is not attractive enough, which has a negative impact on the quality of life, reducing the opportunities for sustainable mobility in the region. It also notes that the region's public transport intensity rate recorded in 2019 is the lowest in Lithuania.

Table 15. Goals, objectives and target indicators of the Taurage Regional Development Plan related to mobility in the region

Objective	Task	Result indicator
Objective 3. Improve the attractiveness of the regional environment	3.1. Promoting sustainable mobility	Greenhouse gas emissions per capita - the impact of population travel (car, motorcycle, moped and public transport use) (tonnes)
		Number of users of new or upgraded public transport per year (number of users per year)
		Number of users per year (number of users per year)

Source: compiled by the Consultant, based on the Taurage Region Development Plan 2022-2030

THE TAURAGE+ FUNCTIONAL AREA STRATEGY 2023-2029²⁸ provides for the efficiency and sustainability of public services. This is achieved by increasing the availability of public transport services:

- expanding and modernising the network of bus stops;
- carrying out studies to analyse the supply of and demand for public transport;
- disseminating information campaigns to encourage the use of public transport services;
- introducing smart technologies.

It is assessed that the strategic documents of the Taurage region contain actions that do not contradict and promote sustainable and environmentally friendly mobility.

ANALYSIS OF STRATEGIC PLANNING DOCUMENTS OF TAURAGE DISTRICT MUNICIPALITY

The following strategic documents of Taurage municipality are analysed:

- Taurage District Municipality Strategic Development Plan 2021-2030;
- Taurage District Municipality Strategic Action Plan 2024-2026;
- Taurage City Sustainable Mobility Action Plan 2030.

²⁷ Taurage Region Development Plan 2022-2030, as amended by the Taurage Region Development Council Decision No TS-21 of 11 October 2024 (consolidated version as of 4 April 2023)

²⁸ Taurage+ Functional Area Strategy 2023-2029, approved by Decision No T2-20 of the Jurbarkas District Municipal Council of 26 January 2023 (consolidated version in force since 17 June 2024), Decision No T2-20 of the Pajėgiai Municipal Council of 2 February 2023 (consolidated version in force since 17 June 2024), Decision No T2-20 of the Pajėgiai Municipal Council of 2 February 2023 (consolidated version in force since 2024), T-1 (consolidated version in force from 27-06-2024), Decision No T1-1 of the Municipal Council of Silalė District of 2 February 2023 (consolidated version in force from 27-06-2024), Decision No 1-30 of the Municipal Council of Taurage District of 1 February 2023 (consolidated version in force from 07-07-2024).

TAURAGE DISTRICT MUNICIPALITY STRATEGIC DEVELOPMENT PLAN 2021-2030²⁹ notes that the level of motorisation in the district is increasing, the traffic flows are leading to an increase in pollutant emissions, and the population is dependent on individual cars due to the limited infrastructure of public transport, cycling and pedestrian routes. Accordingly, one of the three priorities of the Plan is to become the greenest municipality in Lithuania. This priority area includes the objective, targets and indicators for sustainable transport development.

Table 16. Goals, objectives and result indicators of the Strategic Development Plan of Taurage District Municipality related to mobility in the municipality

Objective	Tasks	Result indicator
1.2 Achieving sustainable transport development	1.2.1. Making public transport more appealing	Proportion of journeys in the transport system (structure of journeys from home to work and back) Walking, cycling, private car (%)
		Passenger turnover by road transport (thous. passenger-km)
	1.2.2. Encourage travelling by driverless vehicles and on foot	Total length of cycling and walking paths (km)
	1.2.3. Improving traffic capacity and safety, introducing modern traffic management measures	Proportion of local roads with improved surfacing compared to the length of all local roads (%)

Source: compiled by the Consultant on the basis of the Taurage District Municipality Strategic Development Plan 2021-2030

In the **TAURAGE DISTRICT MUNICIPALITY STRATEGIC ACTION PLAN 2024-2026**³⁰ the objectives, targets and indicators defined in the Strategic Development Plan 2021-2030 are identical to those identified above.

The following actions and targets are set out in the **TAURAGE CITY SUSTAINABLE MOBILITY ACTION PLAN**³¹.

Table 17. Thematic strands, targets and implementation indicators of the Taurage City Sustainable Mobility Plan

Thematic part	Action name	Implementation indicator
Promotion of public transport	1.1. Renewal of the vehicle fleet	New clean public transport vehicles purchased, units
		New or upgraded public transport stops, units
	1.2. Improving public transport infrastructure	Electric bus charging ports, units
		Installation of an electric bus shelter, units
	1.3. Densifying public transport timetables	On urban routes, to ensure that the intervals between journeys do not exceed the scheduled time interval, min
Integration of non-transport vehicles	2.1. Creating a seamless network of cycle lanes (cycle streets) by integrating non-transport vehicles into the overall transport system	Reconstructed and newly constructed cycle paths (with lighting to be installed as required) on the streets identified in the plan
		Installation of bicycle storage facilities at multi-apartment dwellings, units
		Installation of bicycle racks
	2.2. Creating a low-emission zone in the city centre	Establishment of a low-emission zone in the city centre
Modal distribution of trips	3.1. A more equal distribution of travel by different modes of transport and on foot	Study on modal split of journeys, units
Traffic safety and security	4.1. Modernising traffic lights by installing a single control system for urban traffic lights	Upgrading traffic light intersections on the streets indicated in the plan
	4.2. Installation of street lighting	Cycle lanes on the streets indicated in the plan

²⁹ Taurage District Municipality Strategic Development Plan 2021-2030, approved by Taurage District Municipal Council Decision No 1-30 of 27 January 2021

³⁰ Taurage District Municipality Strategic Action Plan 2024-2026, approved by Taurage District Municipality Council Decision No 1-268 of 22 September 2021

³¹ Taurage City Sustainable Mobility Action Plan 2030, approved by Taurage District Municipal Council Decision No 1-155 of 24 April 2024

	4.3. Installing lighting at pedestrian crossings	Number of crossings with lighting, units
Improving traffic organisation and mobility management	5.1. Publicising the implementation and results of the Sustainable Mobility Plan	Publicity measures per year, units
	5.2. Events to promote road safety and sustainable mobility	Number of events per year, units
City logistics	6.1. Creation of a roundabout to divert transit and freight traffic from the city centre	New Street installation project; parts.
Universality of the transport system and inclusion of people with special needs	7.1. Adapting existing infrastructure for people with special needs	Rehabilitate sidewalks and pedestrian walkways in Taurage for people with disabilities, with proper installation of guiding and warning (tactile) surfaces, and marking of existing obstacles with brightly coloured warning tapes, Percentage of problem areas, %.
Promoting alternative fuels and less polluting transport	8.1. Developing public charging infrastructure for electric vehicles	Number of charging bays for conventional electric vehicles (≤ 22 kW), units
		Number of charging bays for electric vehicles of medium power ($> 22 - \leq 49$ kW), units
		Number of kW charging bays for electric vehicles with high power ($> 49 - \leq 149$ kW), units
		Number of charging bays for electric vehicles with very high power (> 149 kW), units
Deployment of Intelligent Transport Systems	9.1. Enhancing the attractiveness of public transport through the wider use of ITS solutions	Implementation of an electronic payment and control system, units
	9.2. Installation of speed cameras to inform drivers of their speed	Development of the Electronic Passenger Information System, units
		Number of speed cameras to be installed (S. Dariaus and S. Gireno str, Tilzes pl. and Gedimino str. at the entrances to Taurage city), pcs.

Source: compiled by the Consultant, based on the Taurage City Sustainable Mobility Action Plan

ANALYSIS OF STRATEGIC PLANNING DOCUMENTS OF JURBARKAS DISTRICT MUNICIPALITY

Strategic documents of Jurbarkas municipality are analysed:

- Jurbarkas District Municipality Strategic Development Plan 2016-2026;
- Jurbarkas District Municipality Strategic Action Plan 2024-2026;
- Jurbarkas district municipality special plan for the development of cycle paths.

THE JURBARKAS DISTRICT MUNICIPALITY STRATEGIC ACTION PLAN 2024-2026³² identifies sustainable development of territories and infrastructure as one of the priority areas, which includes the objective of sustainable development of transport infrastructure. However, most of the indicators for this objective are based on improving road infrastructure, which means that little attention is paid to public transport, cycling and other modes of more sustainable mobility.

THE JURBARKAS DISTRICT MUNICIPALITY STRATEGIC ACTION PLAN 2024-2026³³ identifies one of the objectives as ensuring the accessibility of public transport for the district's residents. Among the main objectives of the Transport and Transport Infrastructure Plan:

- assessing the basic needs of all users of the transport system;
- developing and integrating different modes of transport, giving priority to public passenger transport and low-emission transport;
- making a balanced use of urban space by adapting transport routes to passenger transport, pedestrians and cyclists;

³² Jurbarkas District Municipality Strategic Development Plan 2016-2026, approved by Decision No T2-1 of the Jurbarkas District Municipal Council of 30 January 2014.

³³ Jurbarkas District Municipality Strategic Action Plan 2024-2026, approved by Decision No T2-15 of the Jurbarkas District Municipal Council of 31 January 2024.

- developing the efficiency and effectiveness of transport services;
- improving traffic safety and security;
- reducing air pollution, noise, greenhouse gases and energy consumption.

JURBARKAS DISTRICT MUNICIPALITY SPECIAL PLAN FOR THE DEVELOPMENT OF CYCLE PATHS³⁴ provides solutions for the construction and modernisation of bicycle routes and related infrastructure in Jurbarkas Municipality.

ANALYSIS OF STRATEGIC PLANNING DOCUMENTS OF SILALE DISTRICT MUNICIPALITY

Analysis of strategic documents of Silale district municipality:

- Silale District Municipality Strategic Development Plan 2021-2030;
- Silale District Municipality Strategic Action Plan 2024-2026.

SILALE DISTRICT MUNICIPALITY STRATEGIC DEVELOPMENT PLAN 2021-2030³⁵ mentions that according to the surveys of the inhabitants of Silale district, the accessibility of public transport and road maintenance are poorly assessed, therefore, the development of a sustainable environment and a modern public infrastructure has been identified as one of the priorities, with the following objectives:

- improving accessibility – the aim is to develop modern public infrastructure, including improving road infrastructure and improving road safety. The aim will be to create opportunities and encourage people to use public transport and environmentally friendly means of transport;
- development of sustainable mobility and mobility of the population - the aim is to create or upgrade the regional public transport system and the infrastructure needed to support it, and to reconstruct the roads that provide access to jobs and services, by implementing the projects foreseen in the Taurage+ functional area strategy. Further investment will be made in the renewal and development of infrastructure for cycling and other forms of transport, the introduction of intelligent transport systems, the installation of private-public transport interchanges, the promotion of services to promote the mobility of the population, and the development of alternative modes of transport.

SILALE DISTRICT MUNICIPALITY STRATEGIC ACTION PLAN 2024-2026³⁶ sets out the objectives and targets related to sustainable mobility, modernisation and sustainability of transport infrastructure.

Table 18. Goals and objectives of the Silale District Municipality Strategic Action Plan 2024-2026 related to mobility in the municipality

Goal	Objectives
Ensuring the diversity and quality of curricula	05 objective. Providing transport for pupils and other measures that indirectly affect the quality of the education process
Provide social cash assistance as provided for by national and municipal law	04 objective. Organising and controlling local passenger transport routes, keeping records of compensation for concessionary passenger transport and making reimbursements
Adapting public engineering infrastructure to modern needs	03 objective. Renew, extend and reconstruct the lighting networks in the city and district streets and settlements 04 objective. Construct, repair, maintain and develop local roads and streets and ensure safe traffic flow 05 objective. Renovate municipal public buildings, modernise the housing stock and the environment

Source: compiled by the Consultant, based on the Silale District Municipality Strategic Action Plan 2024-2026

ANALYSIS OF STRATEGIC PLANNING DOCUMENTS OF PAGEGIAI MUNICIPALITY

Analysis of Pagegiai municipality strategic documents:

- Pagegiai Municipality Strategic Development Plan 2021-2031;

³⁴ Jurbarkas district municipality special plan for the development of cycle paths, approved by the decision of Jurbarkas district municipal council No T2-11 of 26 January 2012

³⁵ Silale District Municipality Strategic Development Plan 2021-2030, approved by the Silale District Municipal Council Decision No T1-100 of 29 April 2021

³⁶ Silale District Municipality Strategic Action Plan 2024-2026, approved by the Silale District Municipal Council Decision No T1-18 of 15 February 2024

- Pagegiai Municipality Strategic Action Plan 2024-2026.

PAGEGIAI MUNICIPALITY STRATEGIC DEVELOPMENT PLAN 2021-2031³⁷ sets the objective "Sustainable development of business, tourism and the countryside on the basis of a modern infrastructure", which includes tasks related to the upgrading of the road infrastructure and the adaptation of it to the needs of disabled people; the development of infrastructure for bicycles, electric transport and other driverless vehicles; the introduction of intelligent transport systems to ensure sustainable mobility; the promotion of bicycle-sharing schemes and alternative accessibility initiatives.

IN THE PAGEGIAI MUNICIPALITY STRATEGIC ACTION PLAN 2024-2026³⁸ the weaknesses include poorly developed local transport connections and lack of convenient routes. The aim is to improve the situation by developing the regional transport system, its accessibility and quality, optimising the number of routes, investing in the related infrastructure, and taking advantage of the opportunities offered by the Taurage+ functional area. The Plan sets Objective 1.5 "Modernisation and development of infrastructure", which aims to improve transport infrastructure, ensuring sustainable mobility and the mobility of the population. Objective 2.1 "Improving the quality, accessibility and availability of education, services and accessibility" includes the objective of organising free transport for pupils and providing transport that is accessible to pupils with disabilities.

Based on the above analysis of the strategic documents of the Taurage region, it has been found that the goals and objectives set out in the strategic documents are related to sustainable mobility, such as the development of the public transport system and the development of driverless transport. The issue of transport for schoolchildren, the renewal of transport by replacing it with cleaner transport, etc. is also mentioned. On the other hand, the plans also include other objectives that are not directly related to sustainable mobility, but which are not in conflict with the preparation of this plan.

Analysis of territorial planning documents

A General Plan (hereinafter referred to as the "GP") is a comprehensive spatial planning document, which, considering the levels and objectives of spatial planning, defines the spatial concept of the development of the planned territory and the principles of use and protection of the territory.

THE GENERAL PLAN OF THE TERRITORY OF THE REPUBLIC OF LITHUANIA³⁹ approved on 29 September 2021, establishes the guidelines for the implementation of the spatial development of the territory of the Republic of Lithuania, the spatial structure of the state territory, the mandatory provisions for the use of the state territory, and other related solutions for the sustainable development of territories. The approval of the General Plan of the territory of the Republic of Lithuania has replaced the previously valid General Plan of the territory of the Republic of Lithuania (approved by the Resolution of the Seimas of the Republic of Lithuania No. IX-1154 of 29 October 2002) and the National Landscape Management Plan (approved by the Order of the Minister of Environment of the Republic of Lithuania No. D1-703 of 2 October 2015).

The Republic of Lithuania territorial GP sets out development directions and strategies for the whole of Lithuania and for individual regions and cities. For the Taurage region, the plan includes two solutions that can be related to mobility (other solutions for the Taurage region and municipalities are not related to sustainable mobility):

- to ensure the functioning and maintenance of the railway line connecting Klaipeda and Taurage and to reopen disused passenger stations and renew passenger services on the railway line connecting Taurage and Klaipeda, which would enable the population of the regions to choose to travel by rail;
- improving connectivity by different means of transport for both passenger and freight needs. Priority is given to rail transport, inland waterway E-41 Kaunas-Jurbarkas-Klaipeda.

³⁷ Pagegiai Municipality Strategic Development Plan 2021-2031, approved by Pagegiai Municipality Council on 15 February 2024. No T-55

³⁸ Pagegiai Municipality Strategic Action Plan 2024-2026, approved by the Pagegiai Municipal Council Decision No T-55 of 15 February 2024

³⁹ General plan of the territory of the Republic of Lithuania. 2021. Accessed online: <http://www.bendrasisplanas.lt/>

THE GENERAL PLAN OF THE TAURAGE CITY has been updated to maintain the priority of sustainable development in the development of Taurage. The General Plan includes three principles of sustainable mobility:

I. Principles to be implemented:

- integrating non-transport vehicles into the urban transport network;
- promoting public transport;
- installation of traffic safety and security measures;
- improvement of traffic management, including the assessment of parking charging options;
- introduction of information technology in Taurage.

II. Prioritise environmentally friendly transport and public transport journeys in line with the principles of sustainable mobility.

III. Sustainable mobility principles should be integrated into the preparation of lower-level spatial planning documents or technical designs.

Annex B. Road and street infrastructure maps



Figure 28. Street infrastructure in Jurbarkas city

Source: compiled by the Consultant, based on the General Plan of the Jurbarkas City Territory⁴⁰

According to the approval of the determination of street categories and assignment of road sections to street categories, adopted on October 29, 2019, No. V-166, the following street categories are assigned to sections of state roads marked with road signs No. 550 "Beginning of settlement" and No. 551 "End of settlement":

- Category A streets include sections of motorways AM and I category roads for transit purposes;
- Category C streets include sections of access roads intended for access to settlements and other objects;
- Category B streets include sections of transit roads not classified as A and C street categories.

⁴⁰ Jurbarkas City Territory General Plan, approved by the Jurbarkas District Municipality Council of 29 June 2023, Decision No. T2-191

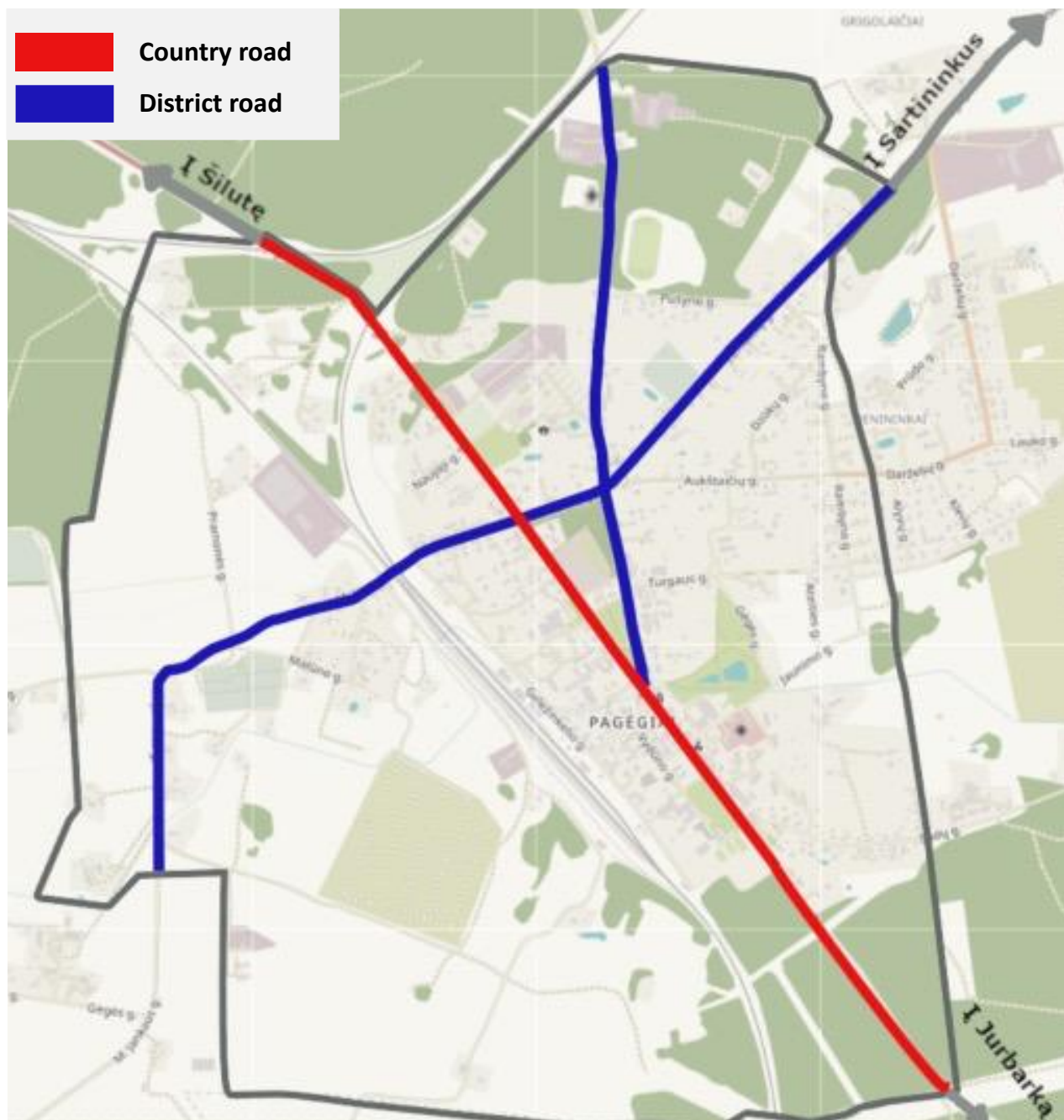


Figure 29. Street infrastructure in Pagegiai city

Source: compiled by the Consultant, based on the amendment of the Pagegiai GP⁴¹

⁴¹ Amendment of the General Plan of Pagegiai City, approved by the decision of Pagegiai Municipal Council of November 6, 2018, No. T-145



Figure 30. Street infrastructure in Silale city

Source: compiled by the Consultant, based on the amendment of the GP of the territory of part of Silale district municipality (Silale city) ⁴²

⁴² Amendment to the general plan of part of the territory of Silale district municipality (Silale city), approved by the Silale district municipality council of January 18, 2024. Decision No. T1-6

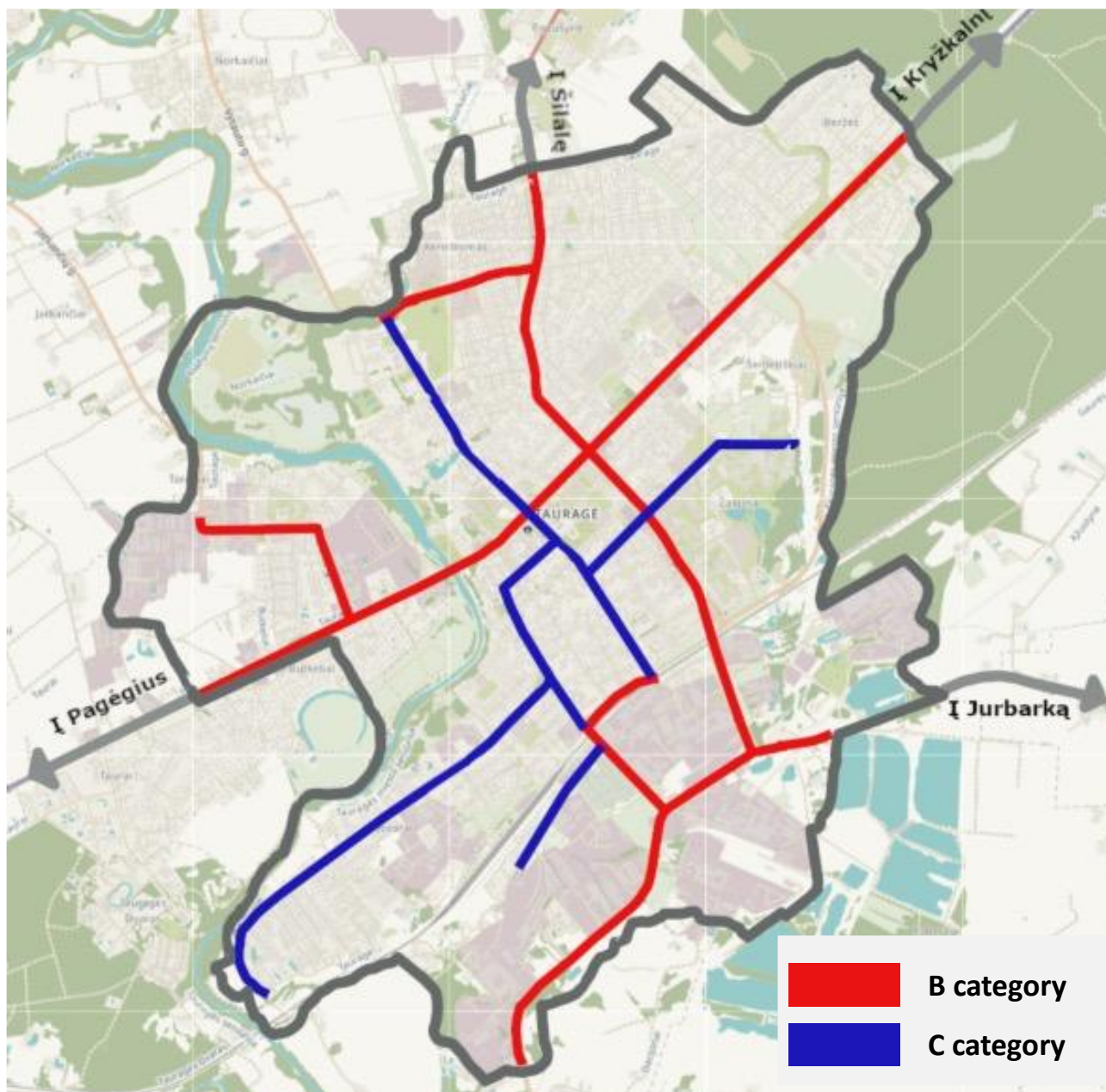


Figure 31. Street infrastructure in Taurage city

Source: compiled by the Consultant, based on the amendment to the Taurage city territory GP⁴³

⁴³ Amendment to the General Plan of the Taurage City Territory, approved by the Taurage District Municipality Council of December 20, 2023. Decision No. 1-355

Annex C. Infrastructure and calculations for alternative fuel vehicles

Article 23 of the law establishes goals and requirements for electric vehicle charging infrastructure, which are relevant for the promotion of electromobility:

- by 2030, 60,000 electric vehicle charging points (hereinafter referred to as EVCP or EV charging points) must be installed in the Republic of Lithuania, of which 6,000 are public and semi-public;⁴⁴
- primarily public and semi-public large and very large power EVCPs must be installed in major cities, as well as near the main TEN-T roads and nearby national roads;⁴⁵
- from 1 January 2023, all petrol stations under construction or reconstruction must be equipped with at least one public high or very high-power EV charging point, and at least one public charging point must be installed at bus and railway stations.⁴⁶

The installation of charging stations in municipalities must comply with Regulation 2023/1804 of the European Parliament and of the Council on the deployment of alternative fuels infrastructure, which provides that:

- the total output power of publicly accessible charging stations for each battery electric vehicle (BEV) registered in their territory must be at least 1,3 kW, and
- the total output power of publicly accessible charging stations for each plug-in hybrid electric vehicle (PHEV) registered in their territory must be at least 0,80 kW.⁴⁷

JURBARKAS DISTRICT MUNICIPALITY

Jurbarkas district municipality's EVAP plan is currently only coordinated with the ministry but has not been approved by the municipal council.⁴⁸ The table below shows the locations and technical parameters of EVCS installations.

Table 19. Electric vehicle charging stations in Jurbarkas district municipality in 2024.

No	Type	Operator	Address	Port number	Charging port power (total/per port)	Price
1.	High power	Ignitis, PLC	V. Grybo st. 49	4 units	200 / 50 kW	0,38 Eur/kWh
2.	Very high power	Ignitis, PLC	Dariaus ir Gireno st. 25	4 units	600 / 150 kW	0,45 Eur/kWh
3.	Very high power	Ignitis, PLC	Dariaus ir Gireno st. 77	2 units	360 / 180 kW	0,45 Eur/kWh
4.	Regular power	Enefit, PLC	Algirdo st. 20	4 units	107,6 / 46,6, 7,2 kW	0,36 Eur/kWh
Total:				14 units	1 267,6 kW	

Source: compiled by the Consultant, based on PCARS data

As of January 1, 2024, the number of vehicles registered in the municipality reaches 20,6 thousand. Assuming that electric vehicles will account for 20 percent of all transport in 2030, the number of electric vehicles will reach 4,1 thousand units (of which 60 percent are BEVs, 40 percent are PHEVs).

⁴⁴ The Alternative Fuels Law of the Republic of Lithuania, article 23, 1 p.

⁴⁵ The Alternative Fuels Law of the Republic of Lithuania, article 23, 2 p.

⁴⁶ The Alternative Fuels Law of the Republic of Lithuania, article 23, 16 ir 17 p.

⁴⁷ Regulation (EU) 2023/1804 of the European Parliament and of the Council on the deployment of alternative fuels infrastructure and repealing Directive 2014/94/EU, adopted on 13 September 2023. Access online: <https://eur-lex.europa.eu/eli/reg/2023/1804/oj>

⁴⁸ Ministry of Transport and Communications of the Republic of Lithuania. Municipalities plan to install public electric vehicle charging infrastructure by 2030. Access online: <https://sumin.lrv.lt/lt/veiklos-sritys/darnus-judumas/elektromobilumas/savivaldybese-iki-2030-m-numatomos-irengti-viesosios-elektromobiliu-ikrovimo-infrastrukturos-planai/>

Table 20. Calculated power demand for the EVCP in Jurbarkas district municipality until 2030

	Projected Number of Vehicles in 2030	Power per Vehicle, kW	Total power requirement, kW
Number of EVs	4 112	–	–
Of which BEV (60%)	2 467	1,3	3 207
Of which PHEV (40%)	1 645	0,8	1 316
Total:			4 523

Source: compiled by Consultant

The estimated power demand for Jurbarkas district municipality is 4,523 kW. Since the number of vehicles registered in the city is not known, the demand for electric vehicle charging points in the city is assessed in proportion to the number of residents (49 percent of the municipality's residents live in the city) – 2,216 kW.

After assessing the current situation and calculating the required capacity, it was determined that another 949 kW needs to be installed in Jurbarkas city (3,256 kW in the entire municipality). Such a capacity requirement should also be provided for in the municipality's EVAP plan.

PAGEGIAI MUNICIPALITY

There are no electric vehicle charging stations in Pagegiai municipality. Also, the municipality has not yet approved the EVAP plan.⁴⁹ The number of vehicles registered in Pagegiai municipality in 2024 will reach 5,8 thousand units, and the number of electric cars in 2030 should reach almost 1,2 thousand.

Table 21. Calculated power demand for the EVCP in Pagegiai municipality until 2030

	Projected Number of Vehicles in 2030	Power per Vehicle, kW	Total power requirement, kW
Number of EVs	1 153	–	–
Of which BEV (60%)	692	1,3	900
Of which PHEV (40%)	461	0,8	369
Total:			1 269

Source: compiled by Consultant

The required installed capacity in Pagegiai municipality is 1,269 kW. Based on the population distribution, it is estimated that 25 percent of the total population lives in the city, therefore the required installed capacity in Pagegiai city is 317 kW.

After assessing the current situation and calculating the required capacity, it was determined that the required capacity in Pagegiai town is 9317 kW (1,269 kW in the entire municipality). Such a capacity requirement should also be provided for in the municipal EVAP plan.

SILALE DISTRICT MUNICIPALITY

According to PCARS data, there are no EV charging stations in Silale city, but two are installed in the district territory near the A1 highway. The installed stations have a capacity of 286 kW. The two installed stations can charge 6 cars at the same time. The table below shows the locations and technical parameters of EV charging stations.

⁴⁹ Ministry of Transport and Communications of the Republic of Lithuania. Municipalities plan to install public electric vehicle charging infrastructure by 2030. Access online: <https://sumin.lrv.lt/lt/veiklos-sritys/darnus-judumas/elektromobilumas/savivaldybese-iki-2030-m-numatomos-irengti-viesosios-elektromobiliu-ikrovimo-infrastrukturos-planai/>

Table 22. Electric vehicle charging stations in Silales r. sav. 2024 m.

No	Type	Operator	Address	Port number	Charging port power (total/per port)	Price
1.	Medium and high power	In Balance grid, PLC	A1	3	143 / 43, 50 kW	0,46 Eur/kWh
2.	Medium and high power	In Balance grid, PLC	A1	3	143 / 43, 50 kW	0,46 Eur/kWh
Total:				6 vnt.	286 kW	

Source: compiled by Consultant based on PCARS data

The Silale district municipality's EVAP plan is currently only coordinated with the ministry but has not been approved by the municipal council.⁵⁰

As of January 1, 2024, the number of vehicles registered in the municipality reaches 16,9 thousand. Assuming that electric vehicles will account for 20 percent of all transport in 2030, the number of electric vehicles will reach 3,4 thousand units (of which 60 percent are BEVs, 40 percent are PHEVs).

Table 23. Calculated power demand for the EVCP in Silale district municipality until 2030

	Projected Number of Vehicles in 2030	Power per Vehicle, kW	Total power requirement, kW
Number of EVs	3 385	–	–
Out of which BEV (60%)	2 031	1,3	2 640
Out of which PHEV (40%)	1 354	0,8	1 083
Total:			3 723

Source: compiled by Consultant

The estimated power demand for Silale district municipality is 3,723 kW. Since the number of vehicles registered in the city is not known, the demand for electric vehicle charging points in the city is assessed in proportion to the number of residents (22 percent of the municipality's residents live in the city) – 819 kW.

After assessing the current situation and calculating the required capacity, it was determined that 819 kW needs to be installed in the city (3,437 kW in the entire municipality). Such a capacity requirement should also be provided for in the municipality's EVAP plan.

TAURAGE DISTRICT MUNICIPALITY

Taurage district municipality has a total of 19 EVCS installed, one of which is outside the city territory. More than half, i.e. 12 stations, are administered by the municipal administration, and the rest by private suppliers. The capacity of all stations reaches 1,093 kW (of which 22 kW in the district). The table below shows the locations and technical parameters of EVCS installation.

Table 24. Electric vehicle charging stations in Taurage district municipality in 2024

No.	Type	Operator	Address	Port number	Charging port power (total/per port)	Price
1.	Regular power	Taurage District Municipality Administration	Gintaro st. 32	1	22 kW	Free
2.	Medium and high power	Taurage District Municipality Administration	Gireno st. 3	2	93 / 50, 43 kW	Free
3.	Regular power	Taurage District Municipality Administration	Respublikos st. 2	1	7 kW	Free

⁵⁰ Ministry of Transport and Communications of the Republic of Lithuania. Plans to install public electric vehicle charging infrastructure in municipalities by 2030.

4.	Regular power	Taurage District Municipality Administration	Respublikos st. 3	1	22 kW	Free
5.	Regular power	Taurage District Municipality Administration	Vytauto st. 60B	1	22 kW	Free
6.	Regular power	Taurage District Municipality Administration	Vytauto st. 83	1	22 kW	Free
7.	Regular power	Taurage District Municipality Administration	Vytauto st.141	1	22 kW	Free
8.	Regular power	Taurage District Municipality Administration	Kovo 11-osios st. 3	1	22 kW	Free
9.	Regular power	Taurage District Municipality Administration	Ateities road 6A	1	22 kW	Free
10.	Regular power	Taurage District Municipality Administration	Moksleivių aly. 14A	1	22 kW	Free
11.	Regular power	Taurage District Municipality Administration	Misko st.	2	44 / 22 kW	Free
12.	Regular power	Taurage District Municipality Administration	Maluno st. 2	1	22 kW	Free
13.	Very high power	Ignitis, PLC	Dariaus ir Gireno st. 9	2	180 / 360 kW	0,45 Eur/kWh
14.	Regular power	In Balance grid, PLC	Dariaus ir Gireno st. 36	2	44 / 22 kW	0,27 Eur/kWh
15.	Medium power	Enefit, PLC	Silales st. 87C	4	188 / 47 kW	0,42 Eur/kWh
16.	Regular and medium power	Enefit, PLC	Bernotiskės st. 3	4	108 / 47, 7,2 kW	0,36–0,42 Eur/kWh
17.	Medium and high power	In Balance grid, PLC	Circle K Taurage, A12	3	143 / 50,43 kW	0,46 Eur/kWh
18.	Regular power	In Balance grid, PLC	J. Tumo – Vaizganto st. 129	2	44 / 22 kW	0,27 Eur/kWh
19.	Regular power	In Balance grid, PLC	Gedimino st. 35	2	44 / 22 kW	0,27 Eur/kWh
Total:				33 units	1 093 kW	

Source: compiled by Consultant based on PCARS data

The EVAP plan prepared and approved by Taurage district municipality provides for the installation of 101 EES, the capacity of which will reach 3,345 kW. 65 stations with a target capacity of 1,167 kW will be installed in the city, and 36 stations and 1,678 kW in the district.⁵¹

Table 25. Calculated power demand for the EVCP in Taurage district municipality until 2030

	Projected Number of Vehicles in 2030	Power per Vehicle, kW	Total power requirement, kW
Number of EVs	5 554	–	–
Out of which BEV (60%)	3 332	1,3	4 332
Out of which PHEV (40%)	2 222	0,8	1 777
Viso:			6 109

Source: compiled by Consultant

When calculating the power for the entire municipality based on registered vehicles, it was determined that the total required power amounts to 6,109 kW, of which 3,727 kW in the city and 2,382 kW in the district.

⁵¹ The plan for the installation of public electric vehicle charging points in the Taurage district by 2030 was approved by the Taurage District Municipal Council on March 29, 2023, by Decision No. 1-49

Considering the already installed and planned power of the EVCS, it was determined that another 1,671 kW is needed, therefore the Taurage district municipality EPS plan should be supplemented.

Annex D. Detailed analysis of non-motorized vehicle and micromobility infrastructure in Taurage region municipalities

JURBARKAS DISTRICT MUNICIPALITY

In Jurbarkas city, several types of bicycle path infrastructure examples can be found. In the sections of Daukantas and Dariaus and Gireno streets from the roundabout on the regional road No. 141 to Lauko street, an asphalted pedestrian and bicycle path has been installed, where traffic is organized in a common flow. It is assessed that the installed infrastructure is appropriate, since the traffic intensity and pedestrian flows at the beginning of the city territory are not high, therefore movement in the common flow is sufficient.



Figure 32. Pedestrian and bicycle path Dariaus and Gireno streets, Jurbarkas

Source: Google Maps „Street View“ (August, 2023)

The following image shows a two-way and asphalted bicycle path on Lauko st. In addition, the infrastructure is designed to separate pedestrian and bicycle paths.



Figure 33. Pedestrian and bicycle path Lauko St., Jurbarkas

Source: Google Maps „Street View“ (May, 2021)

Another type of infrastructure used is cobblestone pavement. Also, in Jurbarkas, a solution is applied when traffic is organized in a common flow without separating the flow of pedestrians and NMTMV users. Most often, it is recommended to install this type of infrastructure in poorly urbanized areas or areas outside the city limits, where there is no large flow of users.



Figure 34. Pedestrian and bicycle path in the general flow Lauko St., Jurbarkas

Source: Google Maps „Street View“ (May, 2021)

Another common example is narrow cycle paths that do not meet the technical specifications (width) for this type of path.



Figure 35. Pedestrian and bicycle path Sodų st., Jurbarkas

Source: Google Maps „Street View“ (August, 2023)

PAGEGIAI MUNICIPALITY

A narrow-paved bicycle path has been installed in the city of Pagegiai.



Figure 36. Pedestrian and bicycle path M. Jankaus st., Pagegiai

Source: Google Maps „Street View“ (June, 2022)

SILALE DISTRICT MUNICIPALITY

The bicycle paths installed in the city of Silale are paved. In some parts of the infrastructure, traffic is organized without separating pedestrian and cyclist flows.



Figure 37. Pedestrian and bicycle path on Vytauto Didžiojo st., Silalė

Source: Google Maps „Street View“ (August, 2023)

There are places where the solution is applied where pedestrian and cyclist flows are separated by installing markings and different coloured pavement.



Figure 38. Pedestrian and bicycle path on Nepriklausomybės st., Silalė

Source: Google Maps „Street View“ (August, 2023)

However, it is noticeable that when installing separate infrastructure, the parts intended for pedestrians and cyclists are very narrow and do not comply with the Pedestrian and Bicycle Path Design Recommendations⁵², according to which a one-way bicycle path should be 2 m wide, and a two-way one – 2,5 m wide.

⁵² Recommendations for the design of pedestrian and bicycle paths r PDTP 12, approved by the order of the Director of the Lithuanian Road Administration under the Ministry of Transport and Communications of 10 October 2012. Order No. V-294



Figure 39. Pedestrian and bicycle path Struiku st., Silale

Source: Google Maps „Street View“ (August, 2022)

Bicycle paths are also installed for recreational purposes in parks.



Figure 40. Bicycle path near Dyvicio St., Silale

Source: Google Maps „Street View“ (August, 2023)

TAURAGE DISTRICT MUNICIPALITY

The city of Taurage has the most developed bicycle path infrastructure, but the quality of the paths is only assessed as sufficient.



Figure 41. Pedestrian and bicycle path Gedimino St., Taurage

Source: Google Maps „Street View“ (August, 2022)

In addition, the common flow paths being installed are very narrow.



Figure 42. Pedestrian and bicycle path on Juros st., Taurage

Source: Google Maps „Street View“ (August, 2023)

Separate flow infrastructure is also being installed in Taurage.



Figure 43. Pedestrian and bicycle path Gedimino St., Taurage

Source: Google Maps „Street View“ (April, 2021)

However, separate types of cycle paths are often not distinguished by different coloured pavement or horizontal markings.



Figure 44. Pedestrian and bicycle path on Prezidento St. Taurage

Source: Google Maps „Street View“ (April, 2021)

After analysing the existing NMTMV infrastructure, it was determined that several types of bicycle path infrastructure are applied in the regional municipal centres. Traffic is organized in a common flow or by separating pedestrian and NMTMV movement. Pavement or asphalt pavement is chosen for the implementation of the infrastructure. However, it often happens that the paths installed are very narrow or the flows are separated improperly (physical barriers are not installed or different coloured pavement is not applied).

Annex E. Taurage region routes and timetables and scan&drive websites

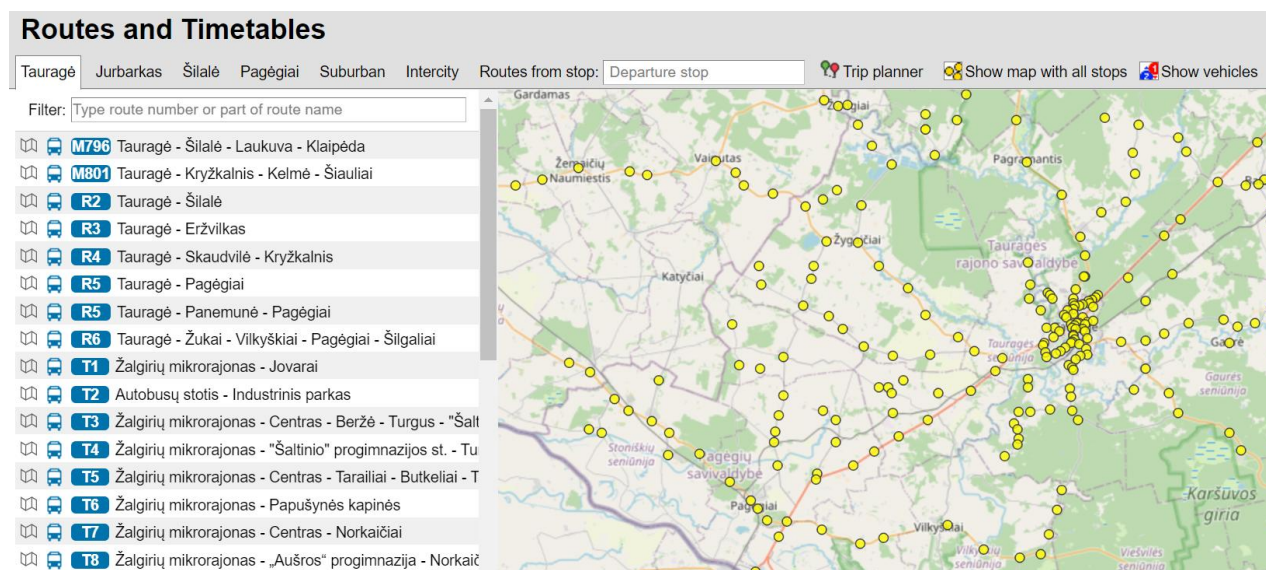


Figure 45. Taurage region routes and timetables website

Source: Stops.lt⁵³

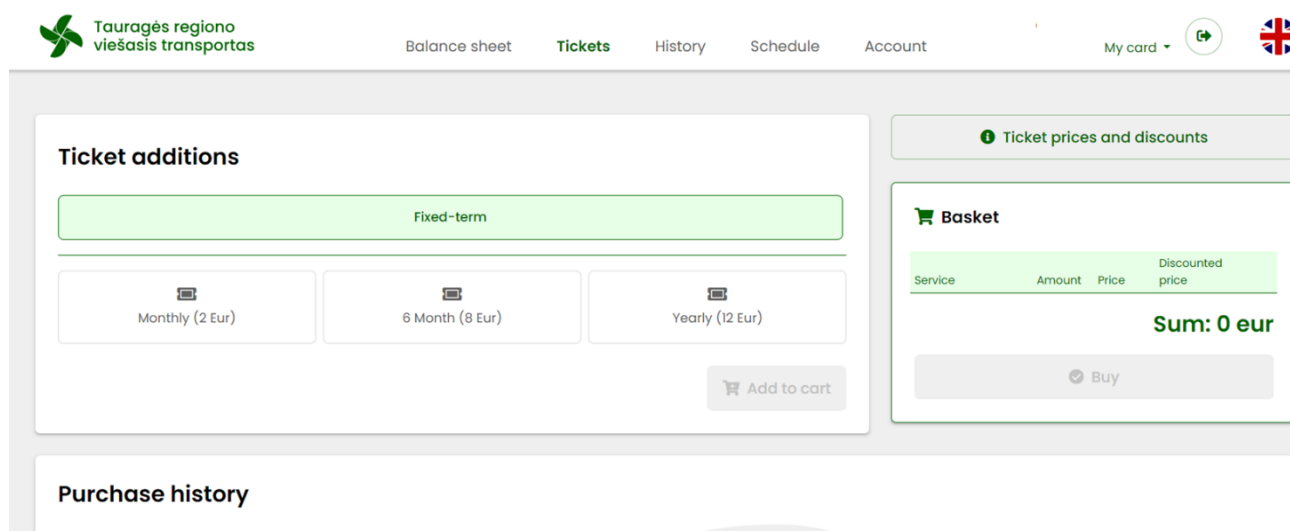


Figure 46. Scan and drive mobile app

Source: Scan and drive⁵⁴

⁵³ Stops.lt. Route schedules. Online access: <https://www.stops.lt/taurage/index.html>

⁵⁴ Scan and drive mobile app. Online access: <https://bilietas.zaliasisregionas.lt/web/login?fbclid=IwAR0xuB8tkfJhMTtpCvGQ4M1rleI1XqtSDDlyJC9RS2pXpej7UMJY5thdo>

Annex F. Taurage region municipalities' public transport network analysis

Although the GR is responsible for many public transport functions, public transport services are still provided by municipal bus fleets or other institutions assigned this function.

When analysing the thematic part of the public transport network and service, it is important to pay attention to the number of pupils transported to educational institutions. According to the 2022–2030 Taurage Regional Development Plan, there are two methods of transporting pupils in the region – yellow buses and a regular system, when pupils are transported along public transport routes together with other passengers.⁵⁵

The development plan emphasizes that 47 percent of all passengers are schoolchildren, which is why the region has a problem with public transport route schedules for other passengers, as the latter are adjusted to school hours, so other passengers have to travel at the same time, and the routes only run on weekdays.

JURBARKAS DISTRICT MUNICIPALITY

Jurbarkas district public transport service is provided by "Jurbarkas bus park". The carrier serves 3 city and 20 suburban routes. The number of transported passengers has decreased by almost 60 thousand over the past five years, and the mileage has decreased by almost 300 thousand km. The number of transported passengers per kilometre of mileage is slightly lower than the region as a whole.

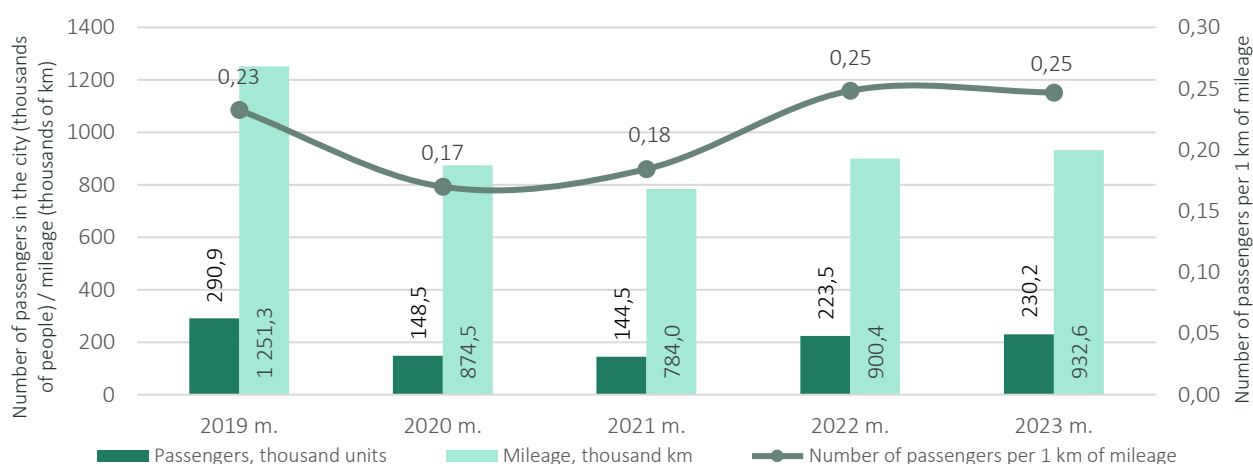


Figure 47. Trends in the number of passengers transported and mileage in Jurbarkas district municipality

Saltinis: compiled by Consultant based on SDA data

When analysing the methods of transporting schoolchildren, it was found that in Jurbarkas district municipality, almost a thousand schoolchildren live more than 3 km from the school, most of whom are brought to school by yellow buses (44,9%) or by shuttle transport (33,7%). Private transport (15%) and school transport (0,06%) are used somewhat less.

⁵⁵ 2022–2030 Taurage Regional Development Plan, amended by the decision of the Taurage Regional Development Council of 11 October 2024 No. TS-21 (consolidated version from 4 April 2023)

Table 26. Number of pupils transported from home to school in 2024–2025 Jurbarkas district municipality.

Class	Pupils living more than 3 km from school	Transporting pupils (2024–2025)					Total
		By scheduled transport	By private transport	By school transport	By yellow buses	Other modes of transportation	
Preschool education	30	1	1	1	29	1	33
1–4 classes	305	59	80	24	139	0	302
5–8 classes	349	124	66	22	136	2	350
9–10 and special classes	181	80	2	14	85	0	181
11–12 classes	132	72	1	2	59	0	134
Total:	997	336	150	63	448	3	1 000

Source: compiled by Consultant based on EMIS data

PAGEGIAI MUNICIPALITY

Pagegiai municipality public transport routes are served by the private carrier "Transport centre", however, statistical data on the number of passengers transported and kilometres travelled are not published on the SDA portal.

70,5 percent of schoolchildren in Pagegiai municipality are transported from home to school by yellow buses, and the rest by shuttle transport.

Table 27. Number of pupils transported from home to school in 2024–2025 Pagegiai municipality

Class	Pupils living more than 3 km from school	Transporting pupils (2024–2025)					Total
		By scheduled transport	By private transport	By school transport	By yellow buses	Other modes of transportation	
Preschool education	16	1	0	0	15	0	16
1–4 classes	123	31	0	0	92	0	123
5–8 classes	147	42	0	0	105	0	147
9–10 and special classes	72	26	0	0	46	0	72
11–12 classes	38	17	0	0	21	0	38
Total:	396	117	0	0	279	0	396

Source: compiled by Consultant based on EMIS data

SILALE DISTRICT MUNICIPALITY

Silale district municipality's "Silale bus park" is responsible for the provision of public transport services. There are a total of 44 local (suburban) bus routes in the municipality. According to SDA data, the number of transported passengers and bus mileage has improved significantly over the past five years. Also, in 2022–2022. the mileage indicator per 1 km of passengers increased and reached a peak. And although it fell slightly in 2023, it is still higher than the results of the entire region.

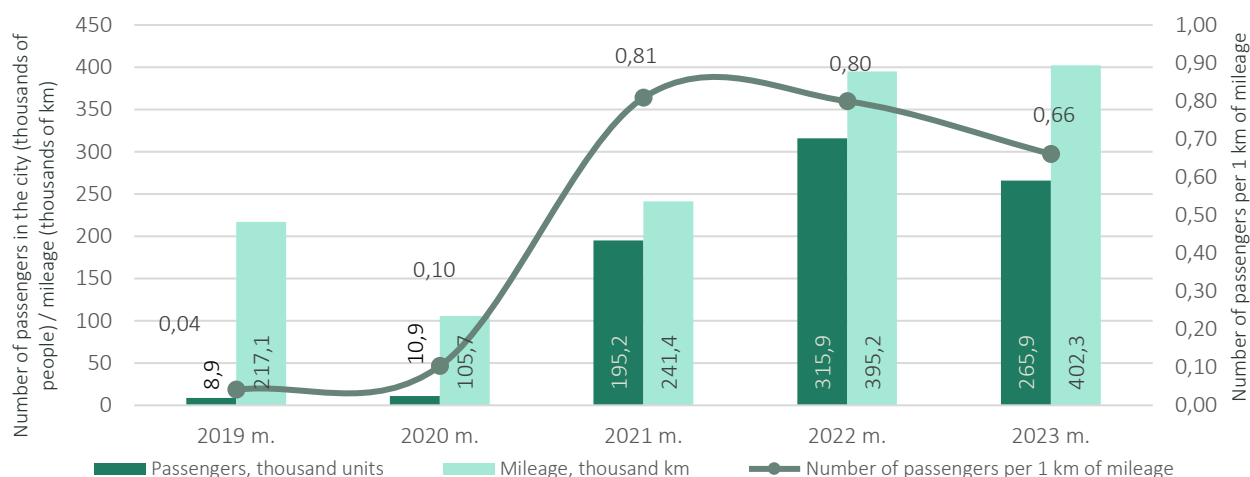


Figure 48. Trends in the number of passengers transported and mileage in Silale district municipality

Source: compiled by Consultant based on SDA data

In Silale district municipality, 1,1 thousand schoolchildren are transported to schools. More than half (58,5%) of them travel to schools by shuttle transport, a third (33,7%) by yellow buses, and the rest – by school transport or other means.

Table 28. Number of pupils transported from home to school in 2024–2025 Silale district municipality

Class	Pupils living more than 3 km from school	Transporting pupils (2024–2025)					Total
		By scheduled transport	By private transport	By school transport	By yellow buses	Other modes of transportation	
Preschool education	25	14	0	0	11	0	25
1–4 classes	294	161	0	45	89	0	295
5–8 classes	402	248	1	34	115	4	402
9–10 and special classes	206	114	0	0	90	2	206
11–12 classes	173	107	0	0	6	0	173
Total:	1 100	644	1	79	371	6	1 101

Source: compiled by Consultant based on EMIS data

TAURAGE DISTRICT MUNICIPALITY

Taurage district municipal public transport routes are operated by UAB "Taurage bus park". As of November 4, 2024, there are 8 routes in Taurage city, and 33 in the suburbs. In addition, Taurage bus fleet operates two intercity routes to Klaipėda and Šiauliai.

The trends in passenger transport and mileage in Taurage city are extremely good. Since 2019, the number of passengers has increased, while the mileage trends have remained almost unchanged (excluding pandemic years). In addition, Taurage city shows a very good and high indicator of the number of passengers per 1 km of mileage, which in 2023 reaches 1,08.

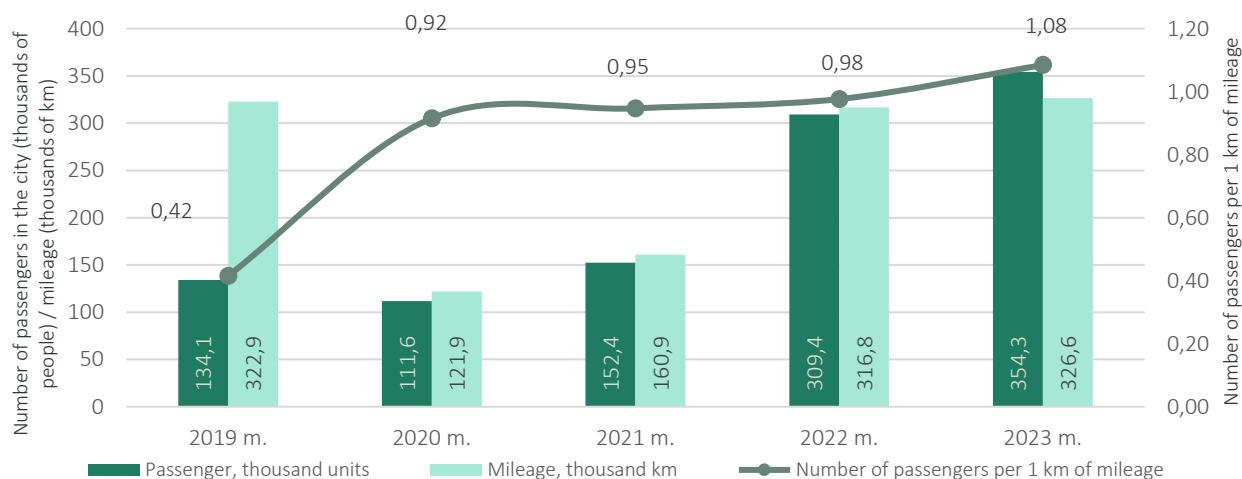


Figure 49. Trends in the number of passengers transported and mileage in Taurage city

Source: compiled by Consultant based on SDA data

A different trend is visible throughout the municipality – the number of passengers increased by only 17,3 thousand passengers (compared to 220,2 thousand in the city), and the mileage by 262 thousand km (compared to 3,7 thousand km in the city). In addition, the passenger per km mileage ratio deteriorated and fell from 0,62 to 0,42.

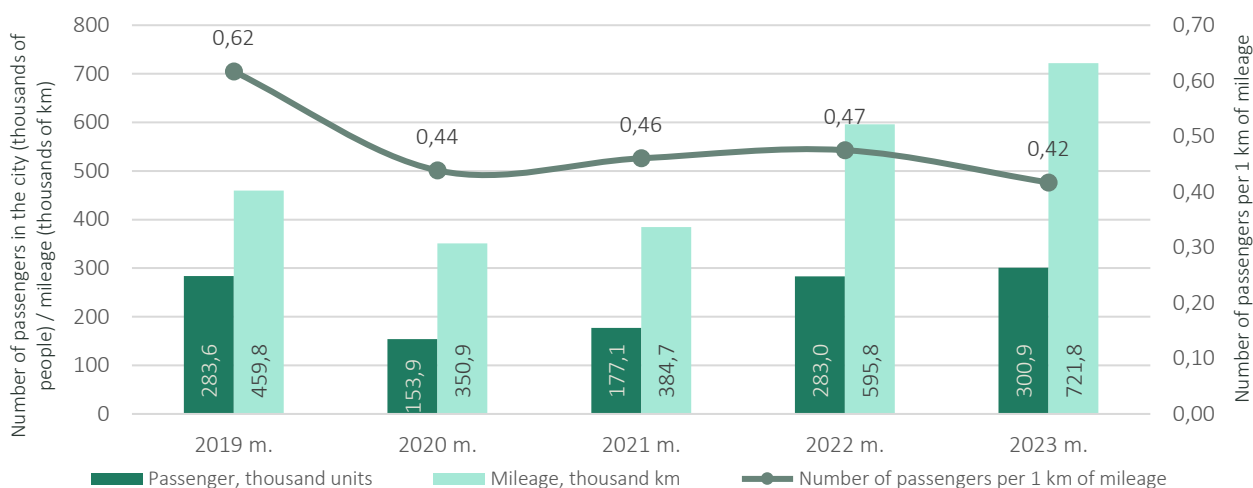


Figure 50. Trends in the number of passengers transported and mileage throughout Taurage district municipality

Source: compiled by Consultant based on SDA data

The strategic development plan of Taurage district municipality identified a problem regarding transportation options for schoolchildren – it is difficult for children living in rural areas to access services provided in the city, therefore the plan provides for improving accessibility.⁵⁶ Data on transported schoolchildren reveal that the number of transported schoolchildren in Taurage district municipality reaches 1,5 thousand, and the most popular modes of transportation are shuttle (30,4%) or private transport (32,1%) and yellow buses (33,3%). Other modes are used to a very limited extent.

⁵⁶ Taurage District Municipality Strategic Development Plan for 2021–2030, approved by the Taurage District Municipality Council of January 27, 2021. Decision No. 1-30

Table 29. Number of pupils transported from home to school in 2024–2025. Taurage district municipality

Class	Pupils living more than 3 km from school	Transporting pupils (2024–2025)					Total
		By scheduled transport	By private transport	By school transport	By yellow buses	Other modes of transportation	
Preschool education	78	4	50	0	23	2	79
1–4 classes	509	64	203	6	230	21	524
5–8 classes	502	156	157	10	169	22	514
9–10 and special classes	273	141	47	7	70	14	279
11–12 classes	163	98	33	1	16	17	165
Total:	1 525	463	490	24	508	76	1 561

Source: compiled by Consultant based on EMIS data

Annex G. Population survey data

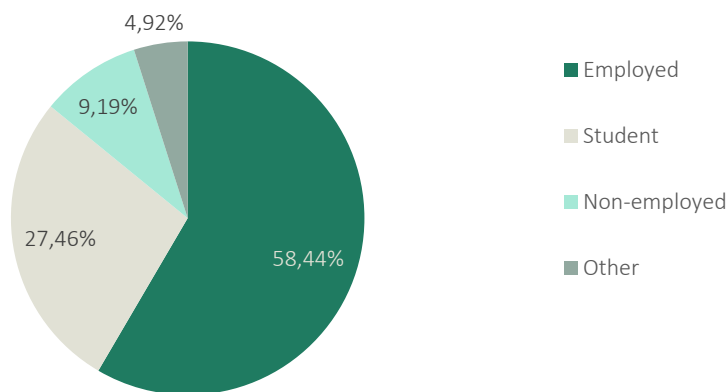
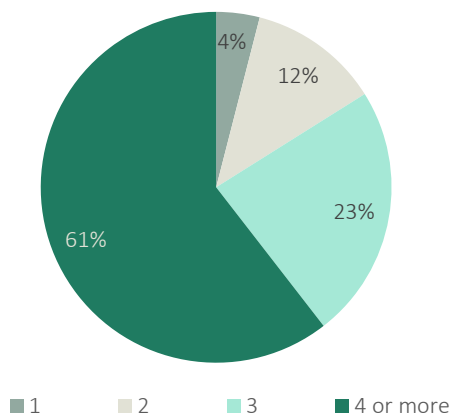


Figure 51. Main occupation of the respondents participating in the survey

Source: compiled by Consultant based on population survey results

Number of persons in the household



Number of cars per household

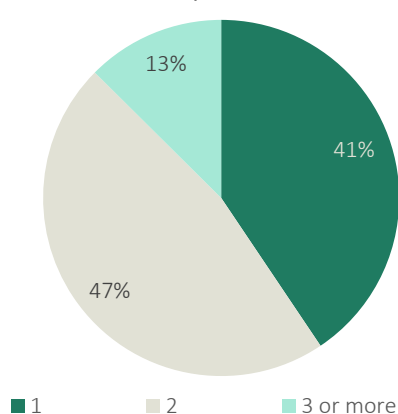


Figure 52. Number of persons and cars in the household of respondents who participated in the survey

Source: compiled by Consultant based on population survey results

Of all the aspects, the best (very good and good) are the pavement of pedestrian paths and the visibility of crossings, the worst (very bad and bad) is the adaptation of sidewalks for people with special needs (PSN)(tactile and warning surfaces).

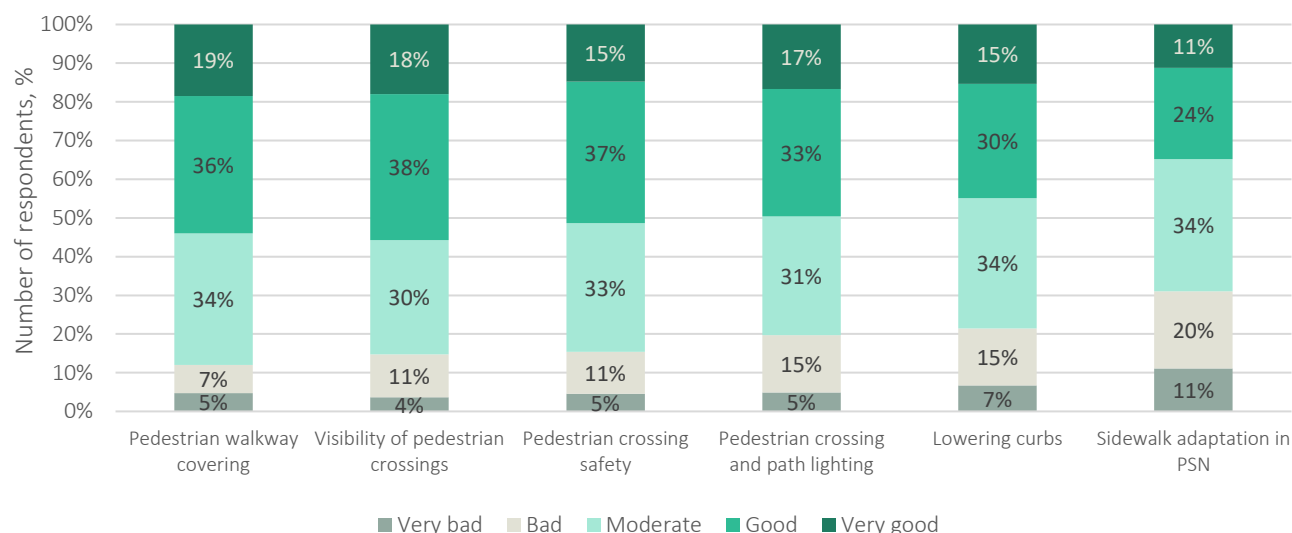


Figure 53. Pedestrian infrastructure assessment

Source: compiled by Consultant based on population survey results (sample – 661 respondents)

Respondents were also asked to evaluate the infrastructure for non-motorized transport (bicycles, scooters and other micromobility vehicles). Overall, respondents rated the bicycle infrastructure as average. They rated the storage and storage infrastructure the best, and the connectivity of bicycle paths the worst (very bad and bad). i.e., their integrity.

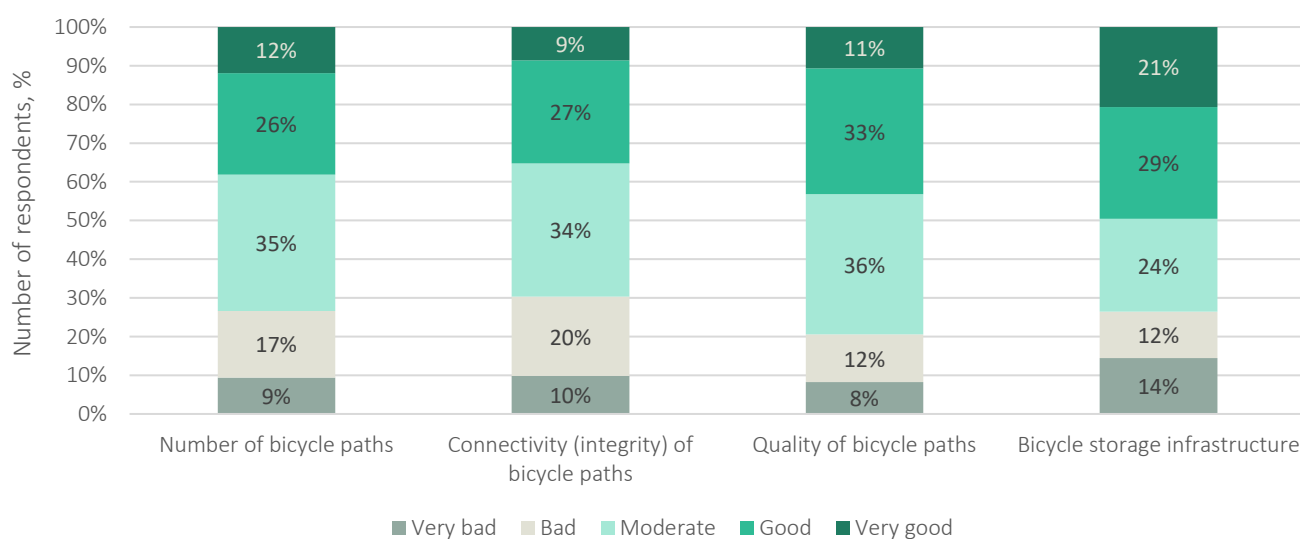


Figure 54. Bicycle path infrastructure assessment

Source: compiled by Consultant based on population survey results (sample – 245 respondents)

When assessing public transport infrastructure, respondents were asked to indicate which public transport routes they use. More than half (64,8%) marked city routes that run in Taurage and Jurbarkas, 32,4% use suburban routes, and 29,9% use regional routes. Among the aspects of public transport, the information system – information boards and electronic tickets – was rated the best (very good and good), while the frequency of bus services was rated the worst (very bad and bad).

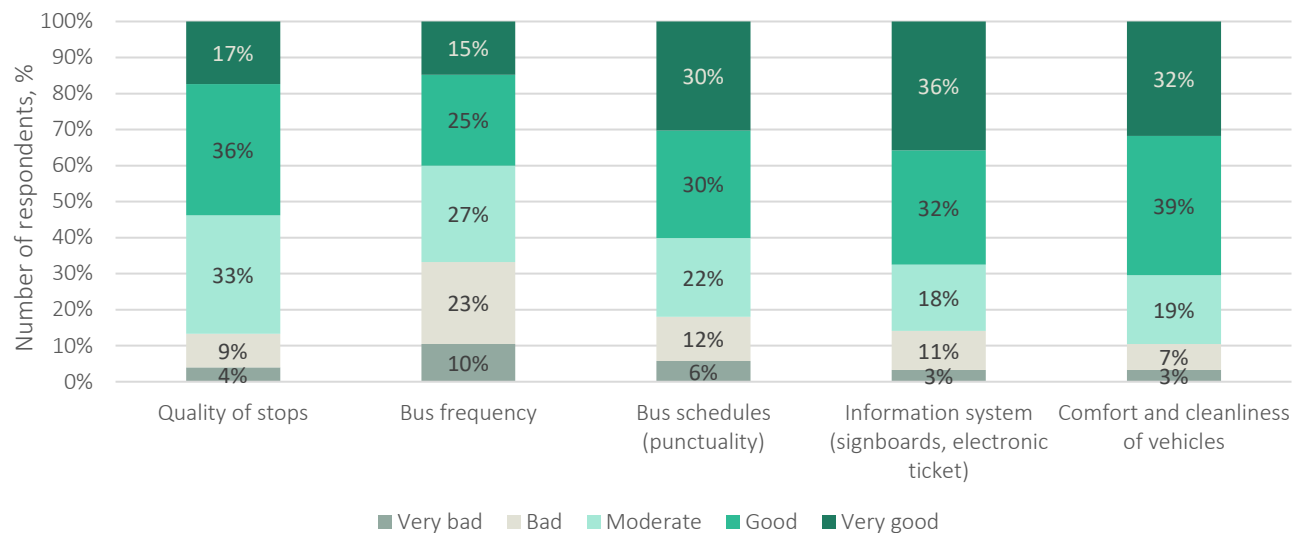


Figure 55. Public transport infrastructure assessment

Source: compiled by Consultant based on population survey results (sample – 279 respondents)

Residents of Jurbarkas and Taurage district municipalities emphasized the lack of public transport routes and driving times that would be coordinated with lesson times. According to them, there is a lack of public transport times when pupils finish lessons or clubs. Sometimes there are no stops near schools so that pupils can reach educational institutions comfortably and safely.

Table 30. Problems identified by respondents in the survey

Municipality	Pedestrian infrastructure	Non-motorized vehicle infrastructure	Public transport infrastructure
Jurbarkas district municipality	Lack of pedestrian crossings Old and crumbling pavement Infrastructure not developed for the blind and visually impaired	No rest areas	Inconsistent routes Frequent transfers are required Pupils could be transported to rural areas after working hours when the clubs end Too few buses run towards Jurbarkas Lack of stops in tourist attractions, such as shopping centres Rare bus routes
Pagegiai municipality	The quality of the trails is very poor, they are old and narrow, and there is heavy traffic nearby	Lack of infrastructure Existing infrastructure is of poor quality	–
Silale district municipality	Many poor-quality sidewalks Lack of lighting at night on pedestrian paths and especially around crossings	There is a lack of bicycle storage facilities at the bus station, parks, or just in the city centre	Ticket purchase with the new app doesn't fully work (drivers can't see the ticket)
Taurage district municipality	Lack of clear separation between pedestrian and bicycle paths Lack of pedestrian paths, especially in rural areas Lack of paths after getting off public transport Lack of pedestrian crossings or they are installed where they are not needed Poor condition of pavement Better lighting is needed on paths and around pedestrian crossings	Lack of bike paths, especially in the countryside It is unsafe to ride on existing bike paths There is a lack of clear separation between pedestrian and bike paths There is a lack of storage spaces, they are often already full	Lack of more frequent routes to places of interest, such as the polyclinic There are no routes to places of interest, such as the community centre, vocational training centre, swimming pool Bus schedules are prepared without considering class times Buses are not always clean



Public transport is only convenient for getting to work, but not returning from it
There is a lack of waiting pavilions at rural stops

Source: compiled by Consultant based on population survey results

Annex H. Traffic intensity of vehicles and freight transport in Taurage region roads

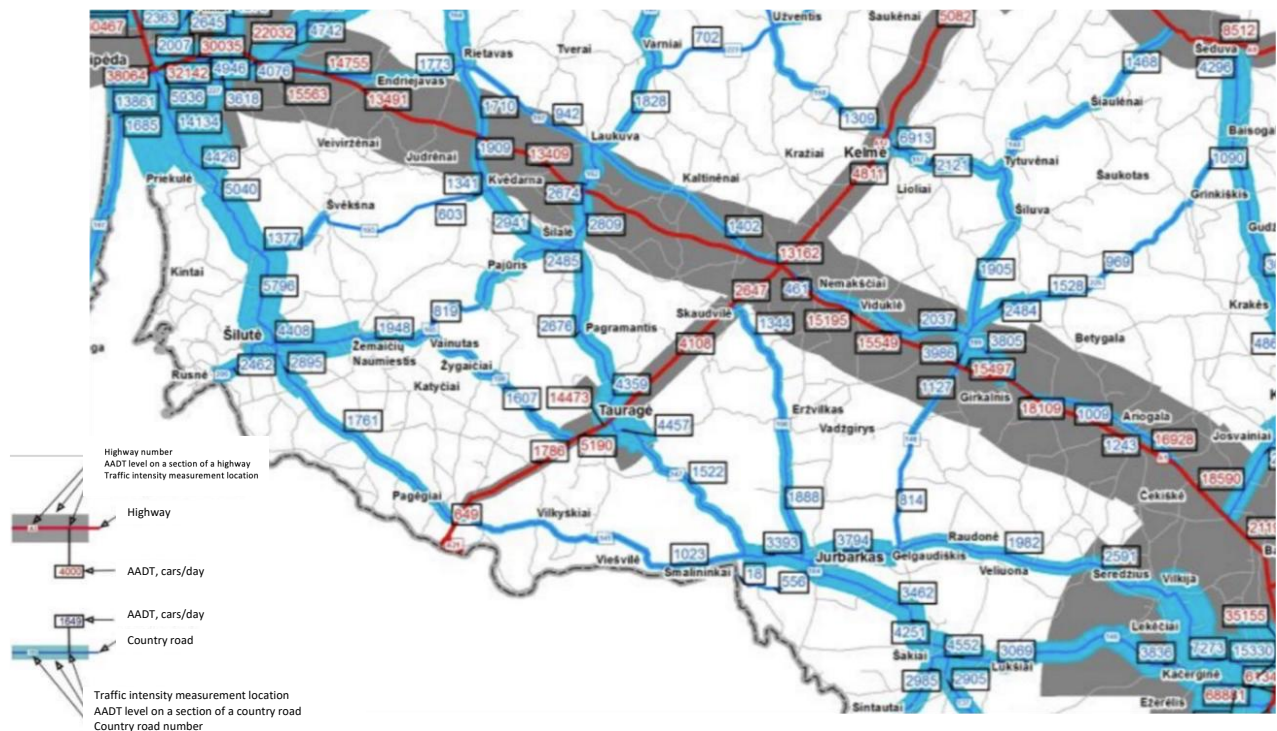


Figure 56. Automotive AADT 2023
Saltinis: Via Lietuva⁵⁷

⁵⁷ Via Lietuva. Traffic intensity. Online access: <https://vialietuva.lt/eismo-intensyvumas>

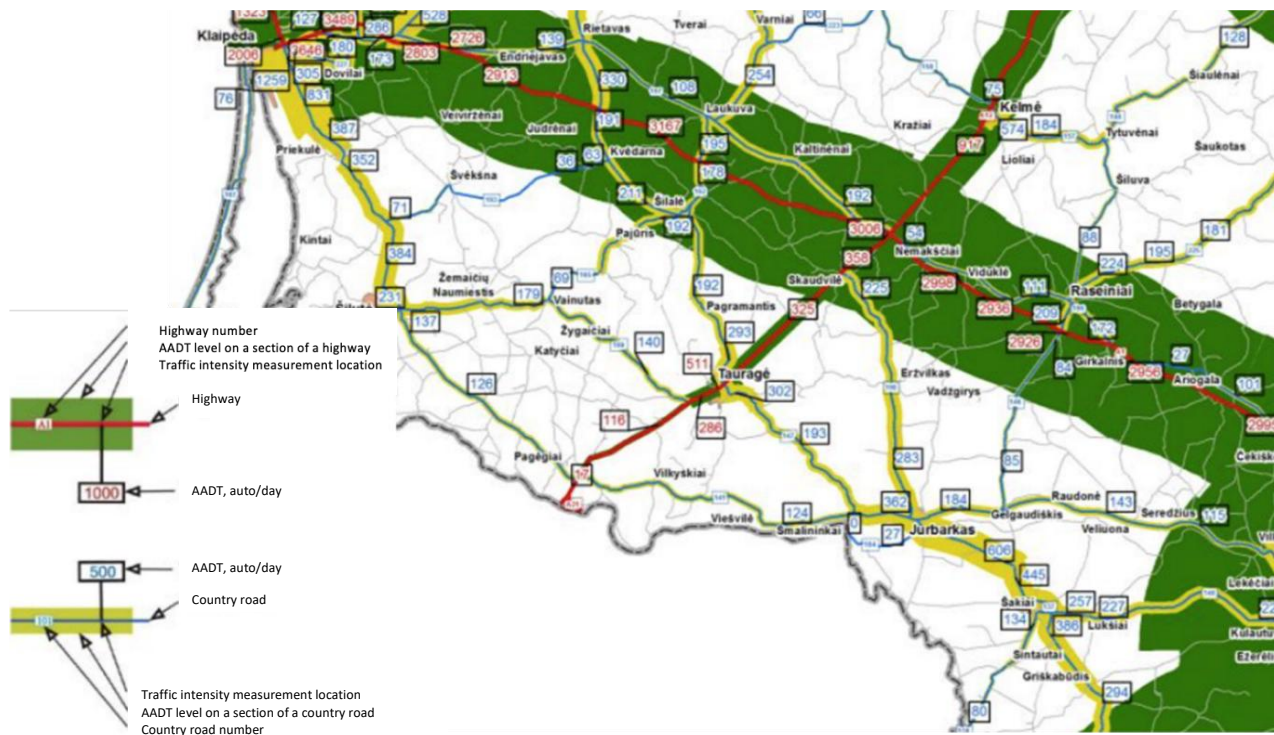


Figure 57. Freight Vehicle AADT 2023

Source: Via Lietuva⁵⁸

⁵⁸ Via Lietuva. Traffic intensity. Online access: <https://vialietuva.lt/eismo-intensyvumas>

Annex I. National map of pedestrian and bicycle path development in Taurage region

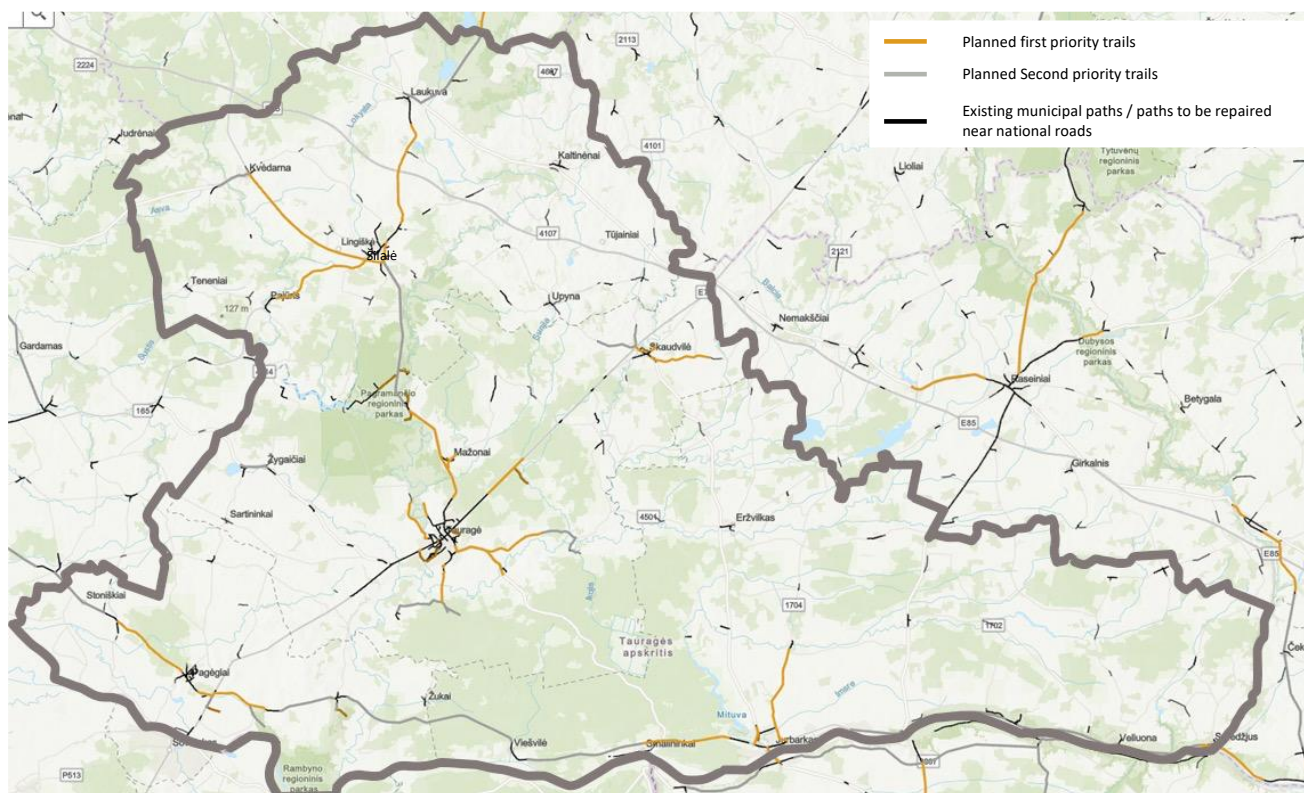


Figure 58. National map of pedestrian and bicycle path development

Source: compiled by Consultant, based on Via Lietuva⁵⁹

⁵⁹ Via Lietuva. National map of pedestrian and bicycle path development. Access online: <https://gis.ktvis.lt/webappbuilder/apps/65/>

Annex J. Accessibility by bicycle and regional PT routes in Taurage region

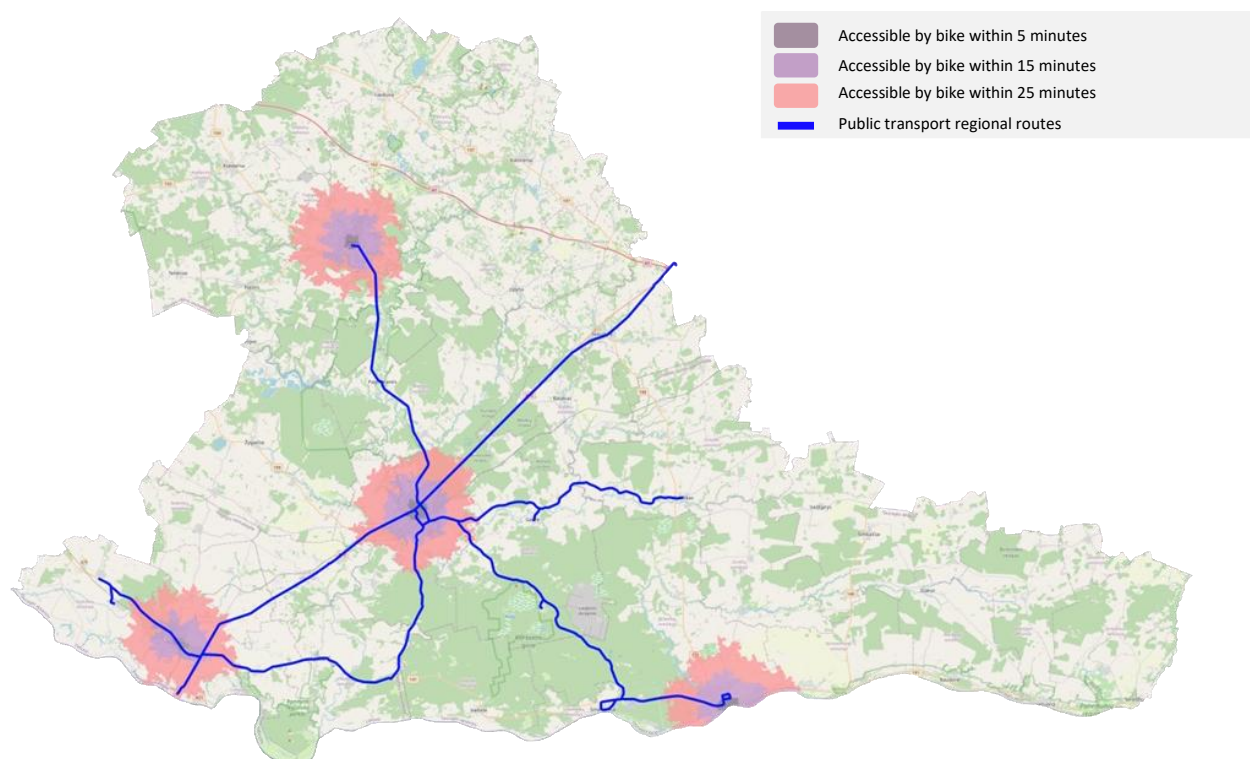


Figure 59. Accessibility by bicycle and regional PT routes

Source: compiled by Consultant, based on Travel Time⁶⁰ and Stops.It⁶¹

⁶⁰ Travel Time. Access online: <https://traveltime.com/>

⁶¹ Stops.It. Route schedules. Access online: <https://www.stops.lt/taurage/index.html>

Annex K. Example of school zone setup and NMTMV storage and preservation infrastructure



Figure 60. Example of school zone setup

Source: World Resources Institute



Figure 61. Bicycle storage (left) and racks with canopies (right)

Saltinis: Taurages r. sav. administracija⁶² ir Jonavos r. sav. administracija (photo: A. Reipos)⁶³

⁶² Taurage District Municipality Administration. Bicycle storage facilities in Taurage. Online access: <https://taurage.lt/informacija-apie-dviracių-saugyklas-aurageje/>

⁶³ Jonava District Municipality Administration. Innovations for cyclists in the city of Jonava. Access online: <https://www.jonava.lt/gyventojams/naujienos/29/jonavos-mieste-naujovės-dviratininkams:9714>

Annex L. Visualisations of possible solutions of the interaction of public transport and bicycles



Figure 62. Holders in public transport buses
Source: 15min⁶⁴



Figure 63. Example of a *bike&ride* interchange station
Source: BikePortland⁶⁵

⁶⁴ 15 min. Druskininkai public transport passengers can transport bicycles free of charge. Online access: https://www.15min.lt/naujiena/aktualu/lietuva/druskininku-viesojo-transporto-keleiviai-gali-nemokamai-veztis-dviraciuss-56-161803?utm_medium=copied

⁶⁵ First look at TriMet's new Bike & Ride parking at Goose Hollow. Access online: <https://bikeportland.org/2019/01/30/first-look-at-trimets-new-bike-ride-parking-at-goose-hollow-294786>

Annex M. Mobility hub example



Figure 64. Mobility hub example

Source: PTV Group⁶⁶

⁶⁶ PTV Group. What you need to know about mobility hubs. Access online: <https://blog.ptvgroup.com/en/trend-topics/what-you-need-to-know-about-mobility-hubs/>

Annex N. Solutions for each Taurage region municipality

IN JURBARKAS CITY, bicycle paths are installed at the entrances to the city: S. Daukantas, Dariaus and Gireno (to Lauko st.), Muitines st. and Lauko and Sodu st. Recreational paths are installed on the banks of the Nemunas River. Shared pedestrian-bicycle paths dominate the city, and only a short section of the path near Lauko st. is equipped with separated flows.

In order to ensure the connectivity of the NMTMV network in Jurbarkas city, separate bicycle paths should be installed on Dariaus and Gireno and Muitines (KK141), and Vytautas Didziojo streets, however, due to insufficient street characteristics (width) and the bridge over the Mituva River, the installation of bicycle paths on these streets is not possible, therefore it is proposed to form alternative connections. Such connections could be developed in Jurbarkas city on S. Daukanto st. (see Figure 63) and Vilniaus st. (in the general flow), which would further connect with bicycle paths in the territory of Jurbarkas manor. There is no full-fledged alternative to the Vytautas Didziojo st. connection, and movement in the general flow is not safe both due to the traffic intensity and the public transport running on the street. Changes to the traffic organization can be considered on this street by establishing one-way traffic, using the remaining street area for the construction of a bicycle path, thus not only connecting the residential block (on both sides of Sodu st.) with the central part of the city but also ensuring safe access to Jurbarkas Vytautas Didziojos Primary School and Romualdas Marcinkaus Stadium by non-motorized vehicles. Also, a separate path (possible shared flow) should be installed on Ervilkos and Knygnesiu streets (KK198), creating a connection between the currently existing paths on Muitines and Sodu streets.

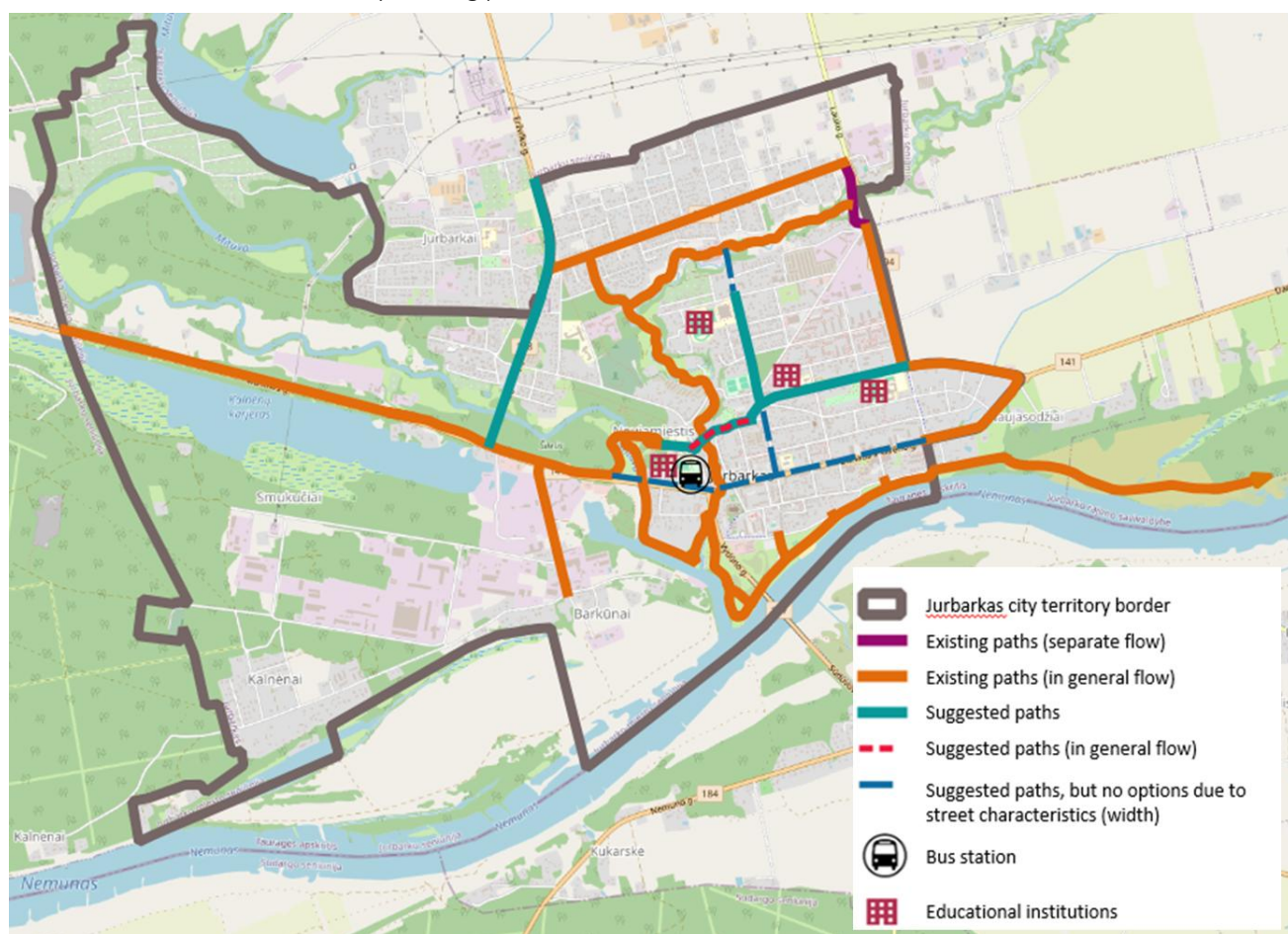


Figure 65. Non-motorized transport solutions in Jurbarkas

Source: compiled by Consultant

The following figure presents possible solutions for the reconstruction of S. Daukanto st. in order to adapt it to the movement of non-motorized transport. In the section of the street from Lauko st. to Zemaite st. (1), where one-way traffic is currently organized, it is proposed to leave one lane for motorized transport traffic and install a separate bicycle path, as well as parallel parking spaces (where the width is sufficient). It is proposed to reconstruct the intersection of S. Daukanto and Zemaite st. (2), by raising it and narrowing the entrance to one-way traffic, installing pedestrian and bicycle crossings in the raised area, as well as for crossing the street in order to access the Naujamiestis Park. It is also proposed to reconstruct the intersection of S. Daukanto and Vytautas Didžiojo st. by reconstructing it into a regular “T” shape, eliminating the excess area of the carriageway and forming a perpendicular connection with Kalniskės st. before the intersection zone.

There are a total of three bicycle paths in the city of **PAGEGIAI**. The fourth one, marked on the map below, is located outside the city limits, but connects a nearby settlement with the city. In order to ensure a connected and safe NMTMV network, it is proposed to install bicycle infrastructure on the main streets: Vilniaus St. (KK141) by installing a separate flow path in the section from the intersection with Jaunimo st. to Pagegiai Algimantas Mackaus Gymnasium (see Figure 64), Vytautas and Zemaiciu Streets by installing shared flow pedestrian-bicycle paths.



Figure 66. Non-motorized transport solutions in Pagegiai

Source: compiled by Consultant

The following figure presents possible solutions for the reconstruction of Vilniaus St., in order to adapt it to the movement of non-motorized transport. In the section of the street from the city boundary to Jaunimo St. (1), it is proposed to install a general flow pedestrian-bicycle path with a tactile lane on the left side of the street, installing

a city gate solution at the boundary itself in order to reduce the speed of those entering the city and ensure safe crossing of the street already in the city territory. Behind the intersection with Jaunimo St. at the installed crossing (2), a bicycle crossing is installed, and the pedestrian-bicycle path (separate flows, red asphalt concrete pavement) is continued on the right side of the street all the way to the Pagegiai Algimantas Mackaus Gymnasium. At the gymnasium (3), a school zone is installed with a raised wide crossing, temporary stopping and dropping-off areas for children, it is recommended to reduce the speed to 20 km/h in the section. A bicycle crossing is being installed and continues all the way to the city limits (it is also recommended to install a city gate) and a shared pedestrian-bicycle path is already being installed on the left side of the street.

VILNIAUS St.

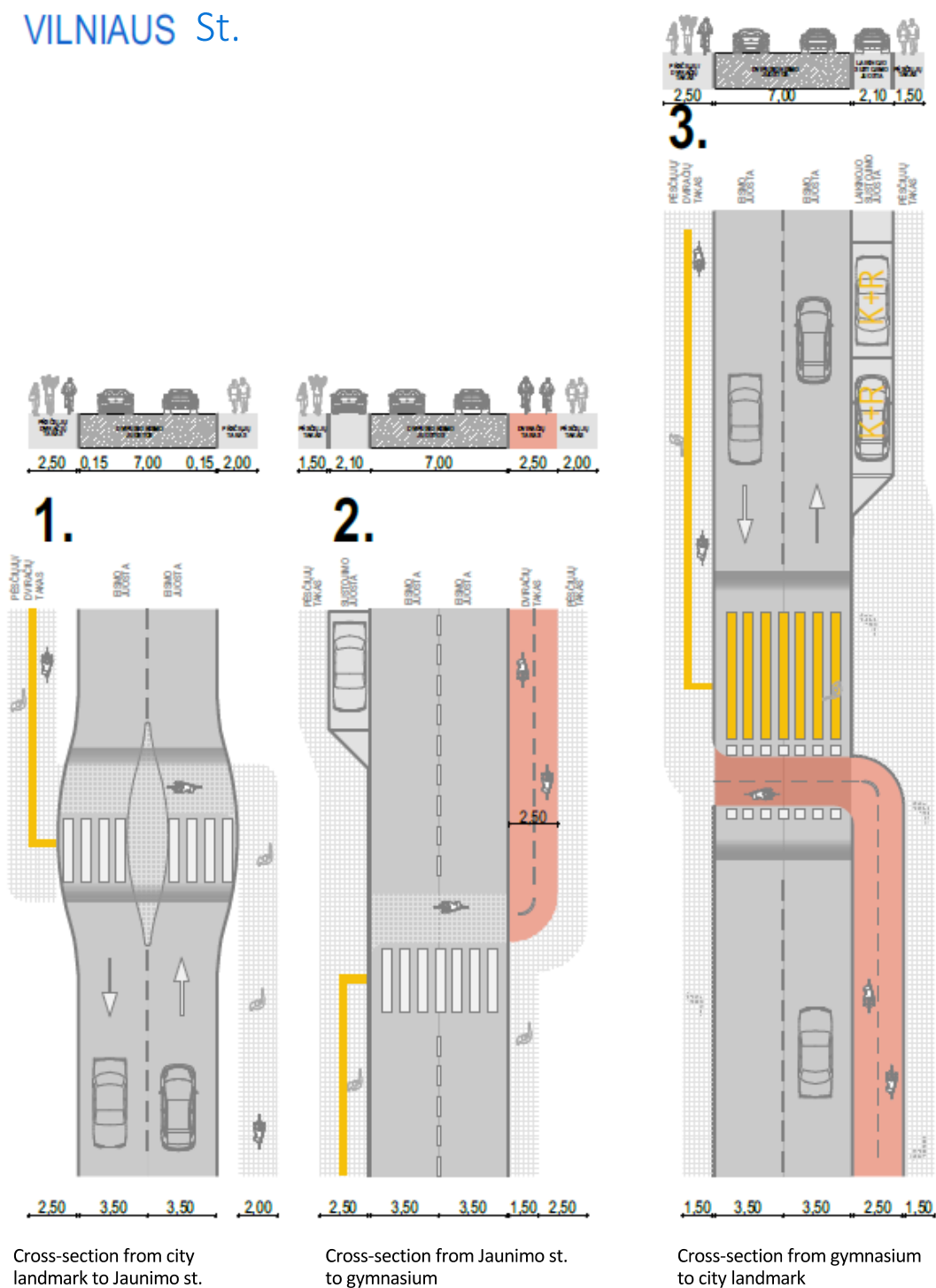
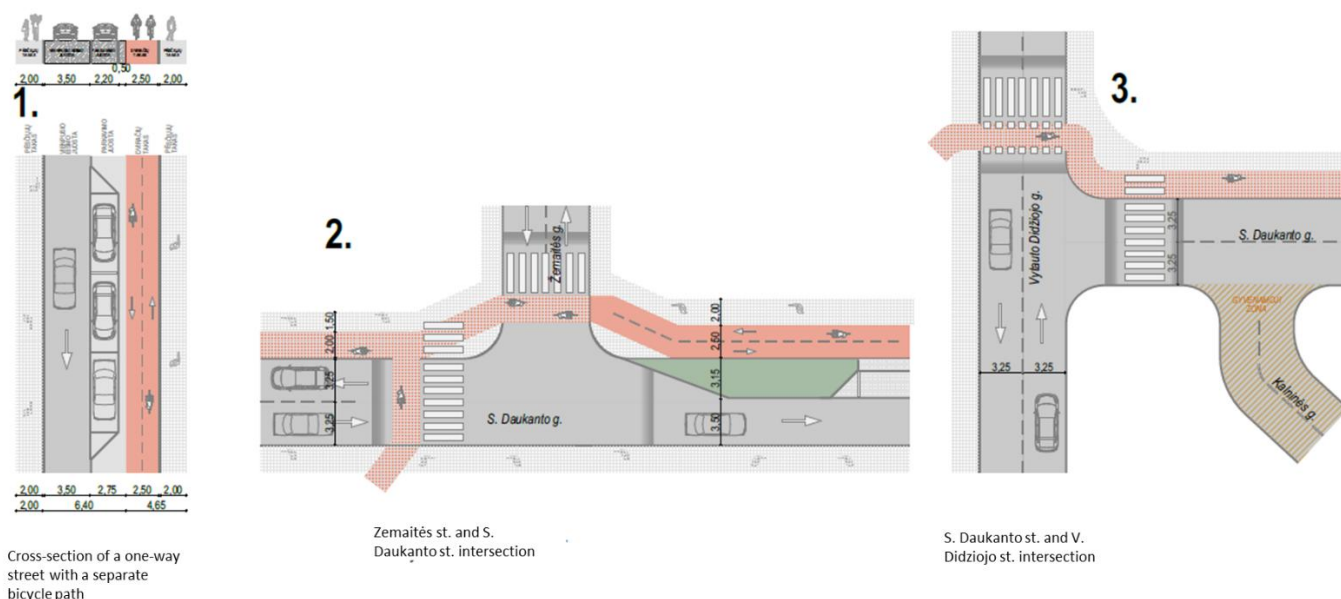


Figure 67. Detailed description of the installation of Vilnius st. in Pagegiai
Source: compiled by Consultant



From Lauko st. to Zemaitės st. section

Figure 68. S. Daukantas st. installation Detail in Jurbarkas

Saltinis: compiled by Consultant

IN TAURAGE CITY, the bicycle path infrastructure network is the best developed in the region, however, it has been determined that the installed paths are not of high quality (do not meet the width and surface requirements, lighting poles or sign supports are installed on the paths).

The main axes of the NMTMV network coincide with the main or regional roads crossing the city of Taurage: Dariaus and Gireno streets (A12), Gedimino streets (KK147), Silales streets (KK164). Although the sections of pedestrian and bicycle paths installed on these streets do not meet the standards, they are considered as a starting point (their reconstruction is planned after the formation of the main network), when planning the extension of the paths to the city limits, connecting suburban residential areas. It is proposed to reconstruct Vytauto streets by using the excess street infrastructure (reducing the number of traffic lanes to 1+1) for the installation of a pedestrian and bicycle path and parallel parking spaces (see Figure 67). Prezidento streets and J. Tumo-Vaizganto streets are considered as equivalent network formation connections, Prezidento St. was selected due to lower traffic intensity, however, in order to install high-quality NMTMV infrastructure there, changes in traffic organization should be considered - one-way traffic, with a bicycle path installed in the remaining part of the street. The same solution can be applied to J. Tumo-Vaizganto St., part of which is currently organized in one direction.

The main NMTMV network is designed to enable the city's pupils to safely reach educational institutions by non-motorized means of transport - bicycles or scooters. It connects all currently operating educational institutions in the city, creating a seamless and functional sustainable mobility system.

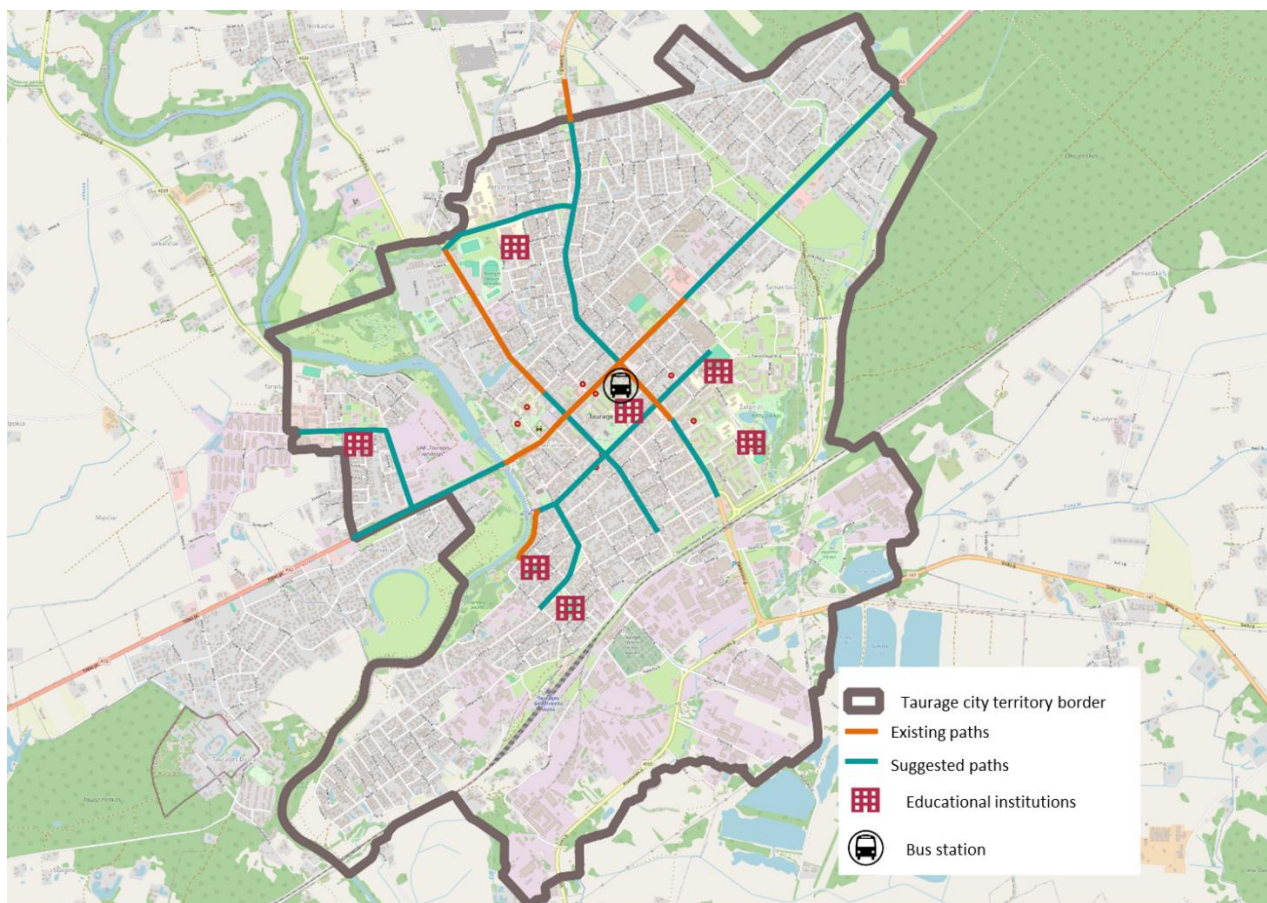


Figure 69. Non-motorized transport solutions in Taurage

Sources: compiled by Consultant

The following figure presents possible solutions for the reconstruction of Vytauto st., in order to adapt it to the movement of non-motorized transport. A fundamental change is that instead of the existing four lanes, the street should be reconstructed into two lanes with entrances for public transport, using the remaining area of the street for the installation of a bicycle path and parallel parking spaces. At the beginning of Vytauto st., mobility needs would also be ensured by a shared pedestrian and bicycle path, forming a raised intersection at K. Jauniaus st. (1), which additionally acts as a speed reduction measure. From the intersection with J. Tumo-Vaizganto st., it is proposed to install a full-fledged bicycle path on the right side of the street, using the remaining area for pedestrian traffic (2), and to install parallel parking spaces on the left side of the street, forming protective zones at the entrances and crossings, and installing additional greenery. At the intersection with Darius and Gireno st. (3) it is proposed to install three lanes (separate lane for left turns).

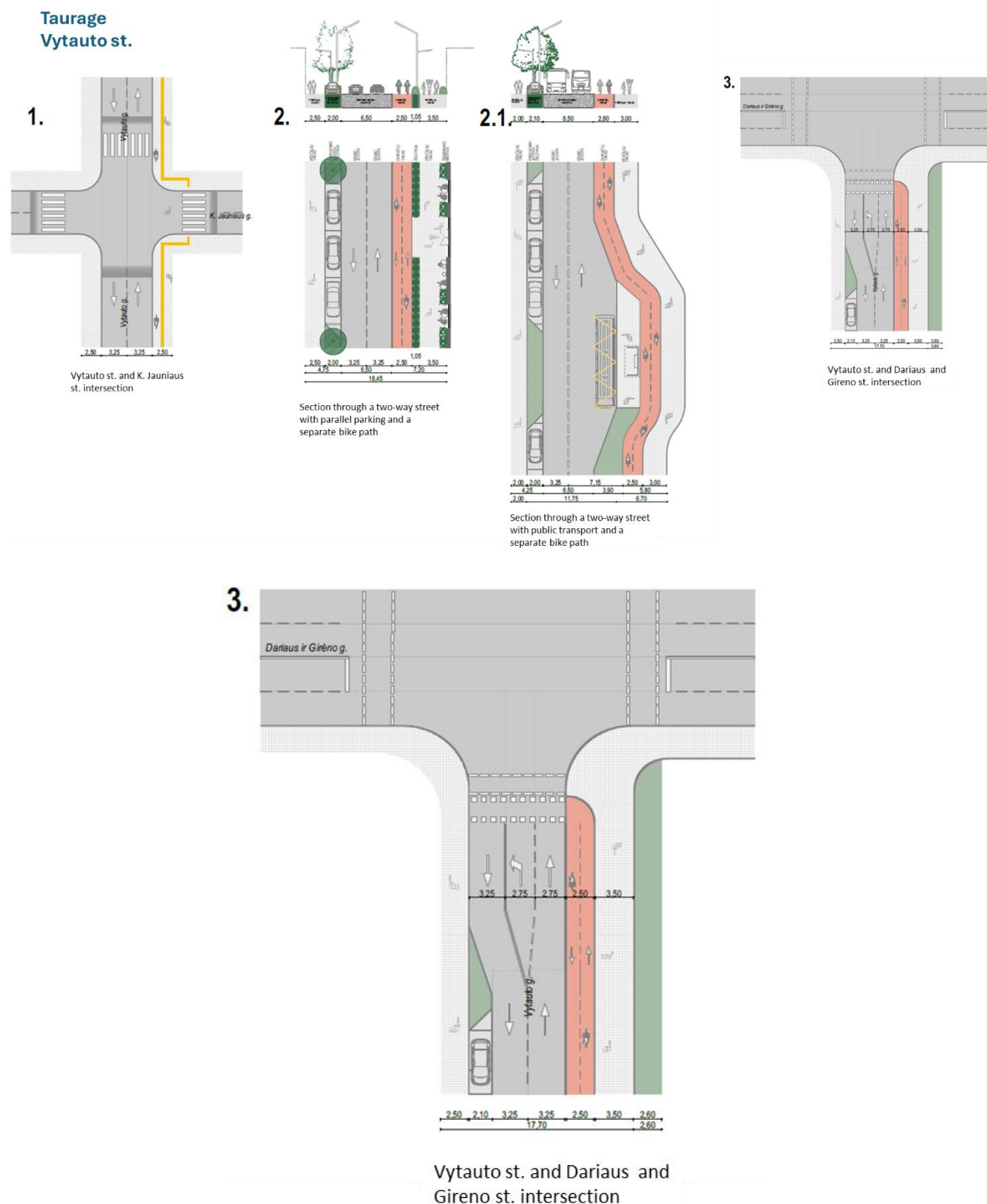


Figure 70. Detailed description of the installation of Vytautas st. in Taurage

Source: compiled by Consultant

IN SILALE CITY, bicycle paths are installed in part of Vytautas Didžiojo and Nepriklausomos and Struiku st. In order to form a unified and convenient bicycle path network in Silale city, infrastructure needs to be installed in Dariaus and Gireno, J. Basanaviciaus, Taurages, Struiku (in the section from J. Basanaviciaus to Putves Pilies st.), Nepriklausomos (to Dvaro st.) and Vytautas Didžiojo (to Zobelija st.). It is recommended to install a red asphalt concrete bicycle path (pedestrian and bicycle path with separated flows) on Basanaviciaus st., and on the

remaining streets, due to the lack of width, general flow pedestrian and bicycle paths are also possible. Additionally, a network connection on Kovo 11-osios st. (not marked in the diagram) may be considered, while the connection between Kovo 11-osios st. and J. Basanaviciaus st. can be ensured by traffic in the general flow on D. Poskos st. (residential area) and V. Kudirkos st. (one-way traffic organization to be considered).

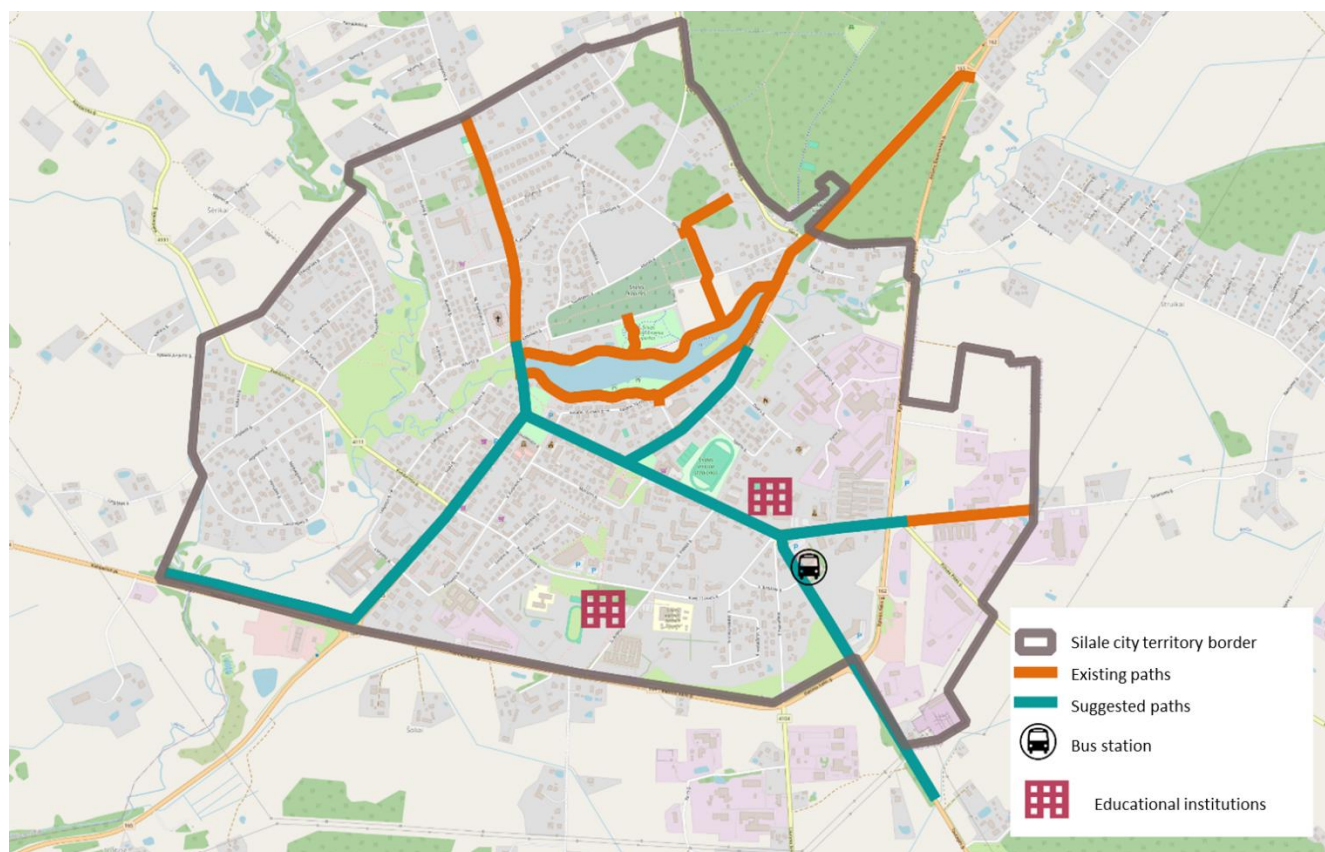
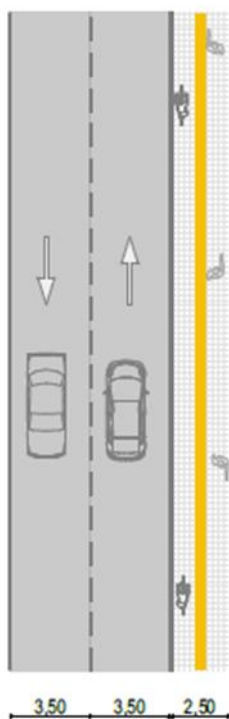


Figure 71. Non-motorized transport solutions in Silale

Source: compiled by Consultant

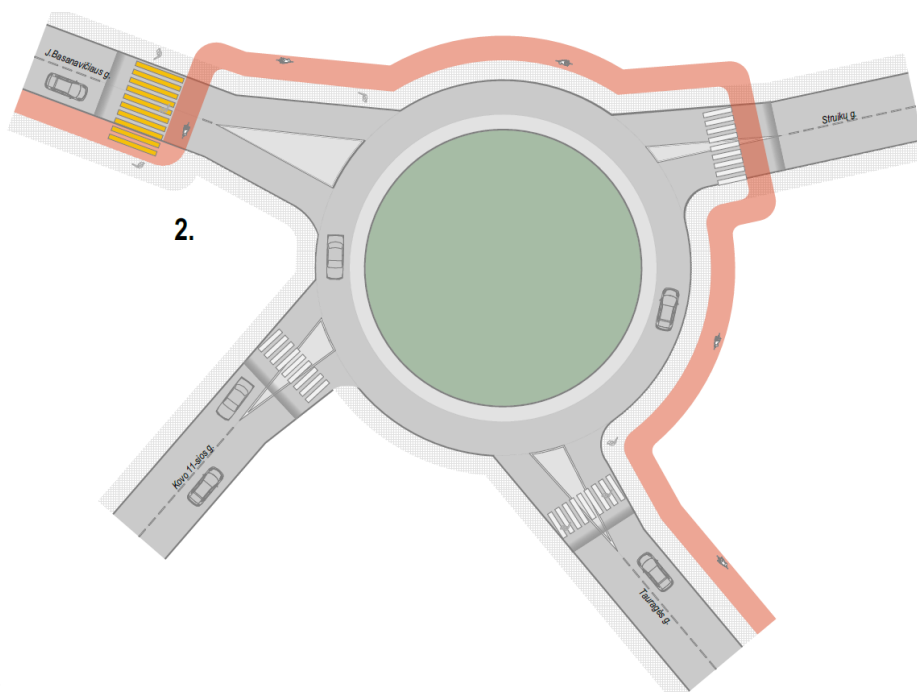
The following figure presents possible solutions for the reconstruction of J. Basanaviciaus st. in order to adapt it to non-motorized transport. Taurages st. from the city boundary to the bus station has a sufficient general flow pedestrian and bicycle path (1). From the bus station, it is proposed to install a separate bicycle path on the right side of the street, which would cross J. Basanaviciaus st. at the crossing installed behind the roundabout and continue on the left side of the street (2). At the educational institution, it is recommended to install a school zone by narrowing the carriageway to two lanes, installing a wide raised crossing. Further, it is proposed to continue the bicycle path on the left side of the street, maintaining it at the same level at intersections with side streets or entrances to yards. The intersection with Nepriklausombes st. (3) should be transformed into a regular T-shaped one, using the excess carriageway for the installation of green space.

1.



Taurages st. to bus station

2.



3.

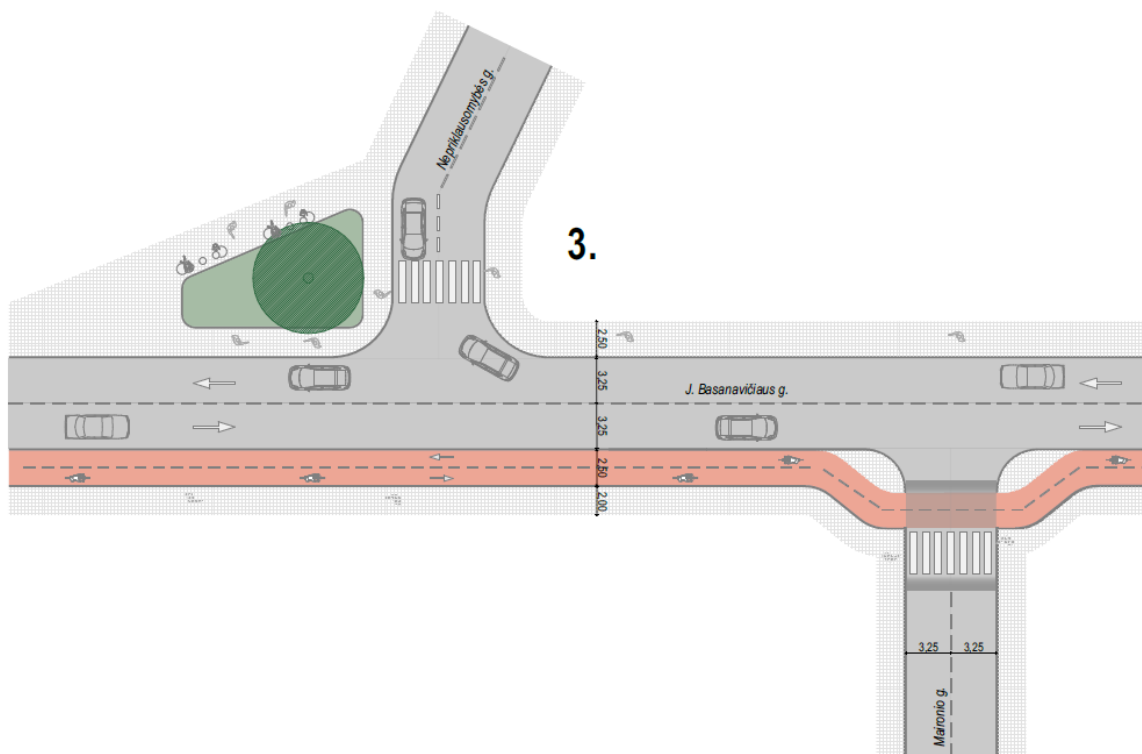


Figure 72. Detailing of the installation of J. Basanavičius st. in Silalė

Source: compiled by Consultant

Annex O. Non-motorized vehicle solutions for the Green region

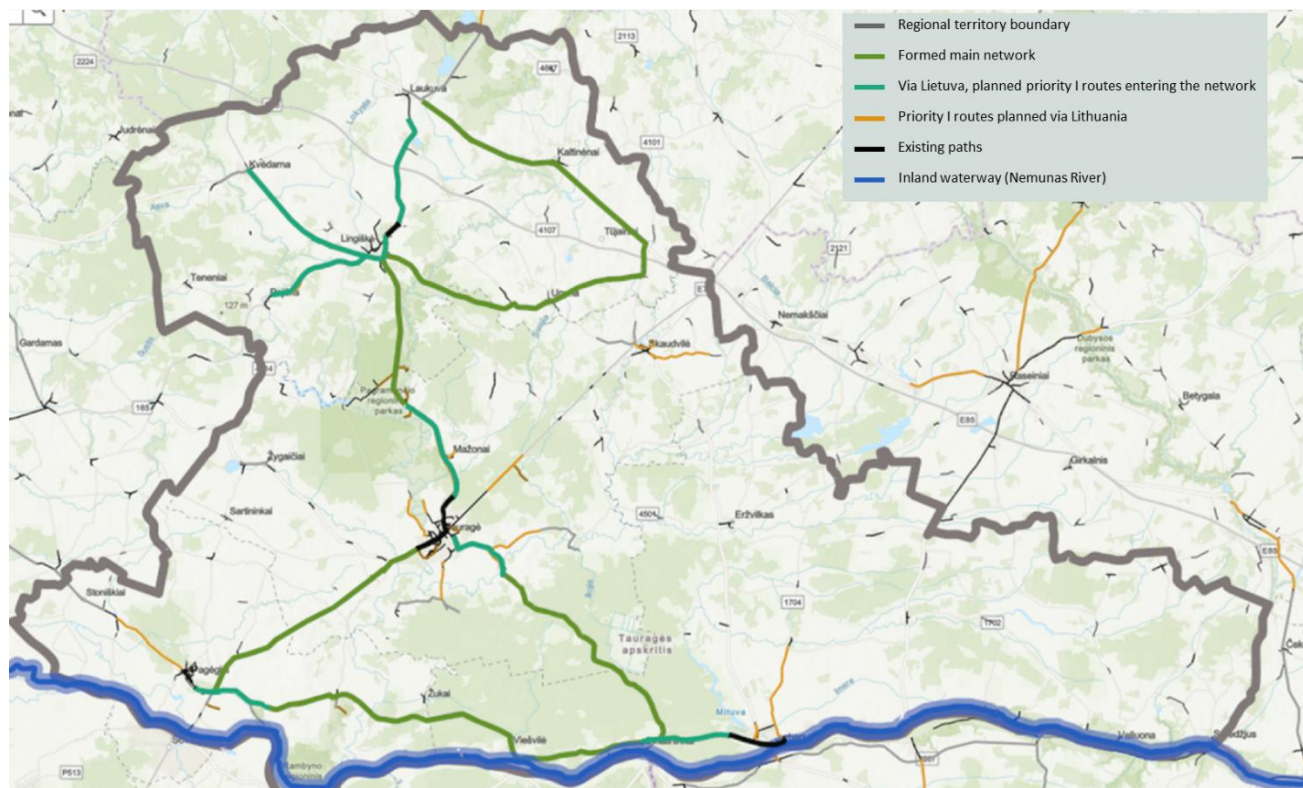


Figure 73. Non-motorized transport solutions in the Green Region

Source: compiled by Consultant