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Group of Experts on cycling infrastructure module

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United Nations Economic Commission for Europe cycling network

Cycling infrastructure definitions and standards

Draft final report on the execution of mandate by the Group of Experts on Cycling Infrastructure Module*

Submitted by the Chair and Vice-Chair of the Group of Experts

I. Background

- 1. This document contains the draft final report of the Group of Experts for Cycling Infrastructure Module (GE.5).
- 2. GE.5 is invited to review this report and finalise it for submission to its parent body, the Working Party on Transport Trends and Economics (WP.5). Section V of this report should be submitted to the Global Forum for Road Traffic Safety (WP.1), as it contains proposals for modification of the 1968 Conventions on Road Traffic and Road Signs and Signals.

II. Introduction

- 3. The Inland Transport Committee at its eighty-fourth session (Geneva, 22–25 February 2022), following the request from WP.5 (ECE/TRANS/WP.5/70, para. 50) approved the establishment of GE.5.
- 4. GE.5 obtained a two-year mandate to serve as a platform to collect data on national cycling infrastructure, to analyze the data and to propose routes in the region of the Economic Commission for Europe (ECE), based on national cycling routes, to form an ECE cycle route network. GE.5 was also tasked to elaborate common definitions for various types of cycling infrastructure as well as new road signs for signposting the cycling routes, as appropriate.

^{*} This document was scheduled for publication after the standard publication date owing to circumstances beyond the submitter's control.

- 5. To execute its mandate, GE.5 held six official sessions in the period June 2022 June 2024. Also, several informal sessions were held.
- 6. GE.5 was chaired by Mr. M. Eder (Austria) and Mr. G. Steklačič (Slovenia). The experts from the following countries and organizations participated in GE.5 work:
 - Austria, Belgium, Croatia, Czechia, Denmark, Estonia, France, Germany, Hungary, Ireland, Lithuania, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovenia, Spain, Türkiye and United Kingdom of Great Britain and Northern Ireland; and
 - European Cyclists' Federation (ECF) and Confederation of the European Bicycle Industry (CONEBI)/ World Bicycle Industry Association (WBIA).
- 7. GE.5 prepared this report to present the results of its work.
- 8. With regard to its task to propose routes to form an ECE cycle route network, GE.5 succeeded to:
- (a) devise a proposal for a partial ECE cycle route network. This was done for countries where national cycle route networks existed or were planned or for which international routes existed at the time of the Group's mandate, and
- (b) elaborate a guide for designation of cycle route networks. This was done to guide countries, in particular those with little experience in accompanying cycling as a mobility solution, in effective development of cycle networks at different administrative levels in countries.
- 9. Section III of this report presents this work.
- 10. Regarding its task focused on the elaboration of the common definitions for various types of cycling infrastructure, GE.5 acknowledged that cycle and cycling had undergone a transformation in the recent years which had led to the development of new types of cycle infrastructure, new road signage, new cycle definitions, and new traffic regulations in various ECE countries and beyond. GE.5 considered meticulously these various developments in preparing its common definitions for types of cycling infrastructure.
- 11. Section IV of this report presents the definitions and their explanatory notes.
- 12. At the same time, GE.5 believed that for attaining safe and comfortable cycling in the ECE region and beyond, the harmonized solutions for cycling, as reflected in the common definitions, may need to be included in the 1968 Conventions on Road Signs and Signals and on Road Traffic for achieving better regulatory harmonization among the Contracting Parties of these Conventions. To this end, GE.5 prepared a number of modification proposals to the Conventions for consideration and possible endorsement by the Conventions' Contracting Parties at WP.1.
- 13. Section V of this report presents the Conventions' modification proposals prepared by GE.5 for WP.1 consideration.
- 14. Building on its work pertaining to its both tasks, GE.5 formulated a number of recommendations for maintaining and further developing the ECE cycle route network as well as for application of the common definitions.
- 15. Section VI (a) and (b) contain these recommendations.
- 16. GE.5 wishes to appreciate expert contribution to its work, in particular the elaboration of the guide for designation of cycle route networks, of the common definitions for types of cycle infrastructure, of the definition of cycle and Conventions' modification proposals. The words of appreciation go especially to Mr. Martin Eder (Austria), Mr. Gregor Steklačič (Slovenia), Mr. Urs Walter (Switzerland), Mr. Andre Neves (United Kingdom), Mr. Richard Bowen (Ireland), Mr. Antonio Perez (Spain), Ms. Agathe Daudibon and Mr. Aleksander Buczyński (European Cyclists' Federation) and to Mr. Roel Janssens and Lukasz Wyrowski (ECE secretariat).

III. Economic Commission for Europe Cycle Route Network

- 17. As per its initial mandate, GE.5 was tasked to devise an ECE cycle route network based on existing and planned national cycle route networks. The completion of this task was meant to support the implementation of the Transport Health and Environment pan-European (THE PEP) Master Plan for Cycling Promotion adopted in 2021 in Vienna. In this work, experience and expertise of ECE in the development of coherent international transport networks in Europe through the AGC, AGR, AGN and AGTC agreements were sought.
- 18. This endeavour was implemented during several subsequent stages:

Step 1: Collection of data from countries and projects

- 19. From its first session onwards GE.5 worked with ECE countries and sub-regional initiatives/ projects to collect data on their national or regional networks.
- 20. The following countries provided data to GE.5: Austria, Belgium, Croatia, Czechia, France, Denmark, Germany, Hungary, Ireland, Netherlands (Kingdom of the), Norway, Portugal, Slovenia, Spain, United Kingdom of Great Britain and Northern Ireland.
- 21. Data were also collected from the Danube cycle route network project.
- 22. Maps 1–3 below show the data collected.

Map 1 National cycle network data



Source: ECE

23. National cycling route network data showed significant differences in terms of density and level of detail.

The European Agreement on Main International Traffic Arteries (AGR), done in 1975; The European Agreement on Main International Railway Lines (AGC), done in 1985; The European Agreement on Important International Combined Transport Lines and Related Installations (AGTC), done in 1991; and The European Agreement on Main Inland Waterways of International Importance (AGN)

Map 2 National cycling networks in Switzerland as an example of a very dense network



Source: ECE

Map 3 **Data provided by the Danube cycle route network project**



Source: Danube cycle route network project

Step 2: Collection of data on EuroVelo routes

24. The European Cyclists' Federation shared with GE.5 data on the existing EuroVelo routes network which includes 17 long-distance cycling routes crisscrossing Europe, in various stages of completion.

Map 4 **Eurovelo routes**



Source: ECF

Step 3: Analysis of available data

- 25. Having collected the various network data, GE.5 overlayed national routes with the Eurovelo routes (map 5) and analyzed it for devising the ECE cycle route network.
- 26. In this process, GE.5 agreed on three principles and a density indicator to be applied, as follows:
- (a) Relevant EuroVelo route or routes could serve as a backbone for ECE routes on a territory of an ECE country if and as appropriate for the country,
 - (b) ECE network routes should be long-distance routes, and
 - (c) ECE network routes should enable cross-border connectivity.
- 27. GE.5 agreed that, to achieve comparable density of the network in countries, an indicator of 40-100 km of routes per 1000 km2 should be applied.
- 28. GE.5 requested participating countries to designate routes from their national networks for the ECE network using the three principles and the density indicator.

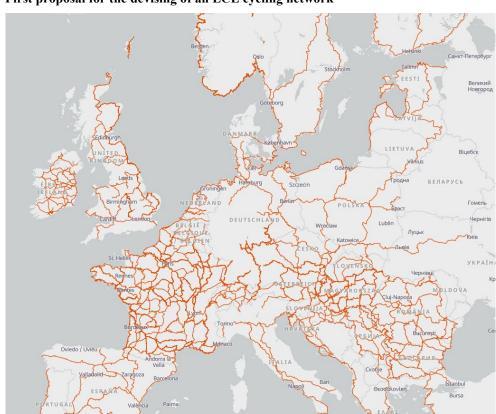
Map 5 Overlain networks, lines in blue visualize the 17 EuroVelo routes, lines in purple show the national data which in some case overlaps with the latter



Source: ECE

Step 4: Devising the ECE network

29. Based on the available national data and the Eurovelo network data, keeping in mind the three agreed principles and the density indicator, GE.5 subsequently developed a first proposal of a possible partial ECE cycle route network (map 6) which was discussed at its ad hoc informal meeting in Brussels in January 2024 and later on at its fifth session in Geneva in March 2024.



Map 6 First proposal for the devising of an ECE cycling network

Source: ECE

- 30. GE.5 recognized that the incompleteness of the network was due to the fact that no devising of network could be done for countries for which no national or supranational (e.g. EuroVelo) planned or existing network data were shared with GE.5.
- 31. To support countries in designating their national route networks, GE.5 elaborated a guide for designation of cycle route networks which is available as a separate document and can be consulted in ECE/TRANS/WP.5/GE.5/2023/3/Rev2.

Map 7 Overlain networks, EuroVelo network links are shown in blue, proposed ECE network routes are shown in orange and overlapping routes are indicated in darker blue



Source: ECE

Step 5: Further improvements to the ECE network

- 32. Following its fifth session, GE.5 continued to refine the network. In particular, it focused its efforts on removing shortcomings such as lack of connection between routes at the borders. It also analyzed routes of the proposed ECE route network and EuroVelo routes (map 7).
- 33. GE.5 agreed the availability of the partial ECE cycle route network should be seen as a first step to the designation of an ECE-wide cycle route network in the future. GE.5 believed that the guide it elaborated would be helpful to countries which so far do not have cycle networks in effectively designating them at national and other levels.
- 34. GE.5 would therefore invite countries which may designate their networks after the conclusion of its mandate to submit the data to ECE secretariat for uploading the data in the ECE International Transport infrastructure Observatory (ITIO).
- 35. Data should be also shared on the route features, to which end, GE.5 proposed a list of main features and parameters as follows:
- 36. [placeholder for the list of features/parameters]

IV. Agreed definitions for various types of cycling infrastructure

- 37. GE.5 considered the work done in ECE countries on cycling and agreed to propose the following definitions for universal application by ECE countries and other interested countries:
 - For linear infrastructure: cycle track, cycle and pedestrian track, greenway, cycle lane, sharrows, 2-1 road, mixed traffic road, cycle street, street with contraflow cycling, bus and cycle lane, footpath with cycling allowed, specific service road, cycle route, cycle route network and cycle highway, and
 - For non-linear infrastructure: cycle crossing, grade-separated cycle crossing, advanced stop line, two-stage turn provision, cycle parking, traffic light exemption for cyclists.
- 38. For each definition, GE.5 also prepared an explanatory note which contains, where relevant: (a) the source of the definition, (b) examples of application, (c) existing signage and marking as per the 1968 Convention on Road Signs and Signals (in this case signs are referred to as per their Convention's name codes. e.g. D, 4) and/or as per ECE countries traffic regulations.
- 39. For ease of understanding, images of road signs and pictures of infrastructure are provided.

A. Cycle track

40. A cycle track is an independent road or part of a road designated for cycles, signposted as such. A cycle track is separated from other roads or other parts of the same road by structural means.

- 41. The above definition comes from the 1968 Conventions on Road Traffic and Road Signs and Signals. However, GE.5 recommends a cycle track to be signposted either as compulsory or as non-compulsory. A non-compulsory signage is recommended for example if the cycle track parameters do not allow for seamless cycle traffic on the track by all cyclist user categories at any time. GE.5 also recommends that the non-compulsory signage for cycle track is introduced in the 1968 Convention on Road Signs and Signals (see Section V.A, (2))
- 42. GE.5 further notes that the provisions of the European Agreement Supplementing the 1968 Convention on Road Traffic included in point 9 of the Annex to the Agreement, and concerning Article 10 of the Convention, are sometimes interpreted as an obstacle to

introducing non-compulsory cycle tracks. Point (a) of the additional paragraph introduced by the Agreement stipulates that every driver should take exclusively, where they exist, the ways, carriageways, lanes and tracks allotted to road users in his category. Additionally, point (b) limits driving cycles on the carriageway to situations when this can be done without inconvenience to other road users, even if there is no cycle track present. GE.5 recognised these limitations and recommended relevant amendments to the 1968 Convention on Road Traffic and its European Agreement to remove these limitations (see Section V.A, (2)).

- 43. The following signs should be used to notify cyclists about entering cycle tracks:
 - Compulsory cycle track sign D, 4:



Non-compulsory cycle track

Non-compulsory cycle track sign recommended by the Group of Experts on Road Signs and Signals



44. Examples of signs used in [names of countries]:

[placeholder for country images of non-compulsory cycle track]

45. Horizontal markings can be used on cycle tracks to improve its recognisability and readability, in particular pictograms of cycles, edge and median lines.

B. Cycle and pedestrian track

46. A cycle and pedestrian track is an independent road or part of a road designated for cycles and pedestrians sharing the same surface, signposted as such. A cycle and pedestrian track is separated from other roads or other parts of the same road by structural means.

- 47. This definition, building on the definition of the cycle track, is proposed by GE.5.
- 48. Cycle and pedestrian tracks are typically used in location with low volumes of both cycle and pedestrian traffic.
- 49. Cycle and pedestrian track can be signposted by sign D, 11 b which combines symbol of pedestrians above or below the symbol of cycle:



- 50. When the cycle and pedestrian track should be compulsory for pedestrians and non-compulsory for cyclists, it can be signposted with sign D, 5 (compulsory footpath) and an addition panel permitting cyclist to use the footpath (see further under K Footpath with cycling allowed).
- 51. If the symbols of pedestrians and cycle are located next to each other and separated by a vertical line (D, 11a), the sign denotes path or track clearly separated either by physical means or road markings and pedestrians and cyclists are required to use the path or track reserved for them.
- 52. In GE.5 view the denoting of path from track and vice-versa should be done by physical means and the markings should only be used in limited cases, e.g. on short distances between intersections.

D.11 a:



C. Greenway

53. A greenway is an independent road designated for non-motorised users, including pedestrians and cyclists, signposted as such. Its use might be open to other non-motorised users, for example horseback riders, if signposted as such or defined in the national legislation.

Explanatory note:

- 54. This definition is proposed by GE.5.
- 55. A greenway often follows a canal or a disused railroad. A greenway may include parts of the road dedicated for specific categories of its users, for example a soft shoulder for horseback riders. A greenway can be signposted either by shared pedestrian/horse rider and cycle track sign or by a dedicated greenway sign, if such exists in the national legislation.
- 56. Greenway signposting (examples):

Combination of symbols from D, 4/D, 5/D, 6 signs (example from Denmark, variants with common surface for all users and a separated part for horseback riders)



Non-compulsory variant, with speed cycles included (example from Belgium)



Dedicated greenway sign (example from France)



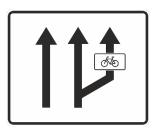
D. Cycle lane

57. A cycle lane is a part of a carriageway designated for cycles. A cycle lane is distinguished from the rest of the carriageway by longitudinal road markings.

Explanatory note:

- 58. The definition comes from the 1968 Conventions on Road Traffic and Road Signs and Signals.
- 59. GE.5 recommended to make a distinction between mandatory and advisory cycle lanes. Mandatory cycle lanes must not be used by vehicles other than cycles. Advisory cycle lanes, if necessary, may be used by vehicles other than cycles when clear of cycles, but cycle traffic must not be endangered. Advisory cycle lane can be an indicator of the space cyclists need or of the recommended position of a cyclist on the carriageway, especially if it is not directly adjacent to the edge of the carriageway.
- 60. Cycle lane is separated from the rest of the carriageway by longitudinal line, continuous or broken. Symbols of cycles can also be used on the lane. As per article 26 bis of the 1968 Convention on Road Signs and Signals, the markings of cycle lanes should be clearly distinguished from other lines on the carriageway by being wider, and, in case of broken lines, with less space between strokes.
- 61. As both continuous and broken lines may be used to distinguish cycle lanes from the rest of the carriageway, GE.5 recommended using continuous lines for mandatory cycle lanes and broken lines for advisory cycle lanes.
- 62. Road markings for cycle lane can be accompanied by road signs E, 2a or E, 2b. A proposal for amending the 1968 Convention on Road Signs and Signals, contained in ECE/TRANS/WP.1/2023/2/Rev.1, specifies sign E-02.2 for signposting lane reserved for other categories of vehicles and provides examples of a sign with a lane reserved for cycles.

Permitted variant of an E, 2 b (E-02.2) sign indicating a cycle lane:



E. Sharrows

63. Sharrows are road markings indicating recommended position of cyclists on the carriageway.

Explanatory note:

- 64. This definition is proposed by GE.5.
- 65. Sharrows do not imply any restrictions or obligations, but they can serve to guide cyclists (for example, to keep safe distance from parked cars) on sections they share with motorised traffic. They can also warn other road users about the presence of cyclists. Sharrows are often used in connection with contraflow cycling, on roundabouts, or in places where cyclists can ride on a carriageway despite the existence of a segregated infrastructure (because, for example, the cycle track does not serve all directions on the next crossing).
- 66. Most often, sharrows are represented by a symbol of a cycle in combination with chevrons, either above or below the cycle. GE.5 recommended marking sharrows by cycle symbol placed below a dual chevron.

Sharrow road markings (example from Poland):



F. 2-1 road

67. 2-1 road is a bidirectional road with two advisory cycle lanes marked on the carriageway, where the remaining carriageway is not wide enough for two motor vehicles other than motorcycle. Power driven vehicle drivers are advised to use the central lane in both directions, only deviating to the edge of the carriageway in the case of passing a vehicle incoming from the opposite direction.

Explanatory note:

- 68. This definition is proposed by GE.5.
- 69. 2-1 roads are typically used on rural roads with low volumes of motorised traffic.

G. Mixed vehicle traffic

70. A mixed vehicle traffic is a road on which cyclist share the carriageway with motorised traffic, without having a part of the carriageway (cycle lane) designated for cycles.

- 71. This definition is proposed by GE.5.
- 72. Safety and comfort of cycling in mixed traffic depends on the speeds and volumes of motorised traffic. If the speeds and volumes of motorised traffic are low, it is not necessary or even desirable to designate a separate part of the road or of the carriageway to cyclists.
- 73. Mixed traffic includes, but is not limited to cycle streets, streets with contraflow cycling, and specific service roads. Sharrows may also be used in mixed traffic.

- 74. Additional legal provisions, such as minimum lateral passing distance or the obligation for drivers of motorised vehicles to change lane when overtaking the cyclists, might be considered to further improve safety in mixed traffic.
- 75. GE.5 developed a guidance decision matrix for mixing or separating cycle and motorised traffic. This matrix is contained in the guide for designating cycle route networks (see ECE/TRANS/WP.5/GE.5/2023/3/Rev.2, Annex II).

H. Cycle street

76. A cycle street is a specially designed section of road or an area where special traffic rules apply and it is signposted as such at its entries and exits.

Explanatory note:

- 77. This definition is proposed by GE.5.
- 78. GE.5 also formulated the following rules to apply at the cycle streets:

"Cycle street, provisions for special regulations:

- (a) Speed limit 30 km/h,
- (b) Cyclists are exempted from any prohibition from travelling two or more abreast, if such a prohibition exists in national legislation for other situations,
- (c) Drivers shall not put cyclists at risk even if traveling two or more abreast. If necessary, drivers should stop to allow cyclists to pass,
 - (d) Parking is forbidden except where allowed by parking signs.

GE.5 also recommended conditions for when to set up cycle streets.

Cycle street, conditions for use:

- (a) Volume of cycle traffic exceeds 40% of the volume of motorised traffic.
- (b) Volume of motorised traffic does not exceed 2500 cars/day.
- (c) Through traffic of motorised vehicles has been eliminated (e.g. through traffic filters, a system of one-way streets, etc.)."
- 79. GE.5 recommended the definition and the special rules for inclusion in the 1968 Convention on Road Traffic. GE.5 also recommended to include the definition and cycle street signs in the 1968 Convention on Road Signs and Signals (see Section V.A (3) and (4)).

I. Street with contraflow cycling

80. A street with contraflow cycling is a road that is one-way for general traffic but may be used by cyclists in both directions.

Explanatory note:

- 81. This definition is proposed by GE.5.
- 82. The cycling contraflow is signposted at its entries by relevant signage, for example a combination of "No entry" C, 1 sign with an additional panel H, 6. At the other end sign E, 2 can be used or combination of "One way" E, 3 sign with an additional panel H, 6.
- 83. Additionally, horizontal marking for sharrows might be used to remind motor vehicle drivers of the possibility of incoming cycle traffic.

Contraflow cycling signage (example from Poland):



J. Bus-and-cycle lane

84. A bus-and-cycle lane is a lane reserved for (public transport) buses and cycles.

Explanatory note:

- 85. This is a definition proposed by GE.5 based on the definition of cycle lane.
- 86. While a bus and cycle lane is not the most attractive type of infrastructure for cyclists, in specific contexts it can be significantly safer than lack thereof. In particular, if a bus lane is located or planned next to the edge of the carriageway appropriate to the direction of traffic, and no cycle track for this direction exists, it should be marked as a bus-and-cycle lane, to avoid obliging cyclists to ride between the busses and other motorised traffic.
- 87. Horizontal markings for bus and cycle lanes usually combine the symbol of a cycle with the word "BUS".

K. Footpath with cycling allowed

88. A footpath with cycling allowed is a part of the road (pavement/sidewalk) or an independent road originally designed for pedestrians where cycling has been (conditionally) authorised, either by general rules or through a cycle panel under the footpath sign.

Explanatory note:

- 89. The definition is proposed by GE.5.
- 90. General rules may specify conditions under which cycling on a footpath is authorised, for example if the speed limit on the adjacent carriageway exceeds a specific threshold.
- 91. Cycling can be restricted to specific hours of the day, for example the cyclists can be allowed to cycle on a pedestrian street only in the morning.
- 92. If cycling is not authorised by general rules, a combination of specific signs, relevant to the situation, should be used.

Example of a sign with a panel authorising cyclists to use the footpath (example from Germany):



L. Specific service road

93. A specific service road is a non-public road closed to general traffic, but open to cycles and selected motor vehicles, for example agricultural, forestry, industry and/or water management vehicles.

Explanatory note:

- 94. This definition is proposed by GE.5.
- 95. These roads typically carry very low motor vehicle traffic, and with proper signs, cycling can be exempted from the general prohibition to enter this road.
- 96. Different signs may be used for signposting specific service road, for example:
 - Sign C, 4a "No entry for power driven vehicles" with a panel listing exceptions for allowed vehicles.
 - Specific E-category sign which combines symbols of allowed vehicles. Such sign is not included in the 1968 Convention on Road Signs and Signals. An example of such sign from Belgium is presented below:



 Sign D, 11b (cycle and pedestrian track) with panel listing exceptions for powerdriven vehicles.

[placeholder for an image]

M. Cycle crossing

97. A cycle crossing is the place where a cycle track, cycle and pedestrian track or a greenway intersects with a carriageway.

- 98. The definition is proposed by GE.5.
- 99. Cyclists need to interact with motor vehicles on a crossing even if cycle tracks can provide physical separation in between the crossings. If the crossing is located on an intersection, the priority on the crossing is determined by priority on the intersection; if the crossing is located between intersections, the priority needs to be determined and signposted separately.
- 100. The crossing space should be denoted by transversal horizontal markings and, if considered advisable by competent authorities, also by road signs for approaching motor vehicles. Additional road signs or markings (for example, lines indicating points at which drivers must give way) can be used to improve the readability of the crossing. In particular, in case of bidirectional cycle crossings, it is advisable to include signs informing the drivers of the approaching motor vehicles that they should expect cycles arriving from both directions. GE.5 recommended an inclusion of a specific panel in the 1968 Convention on Road Signs and Signals to indicate the directions from which cyclists can enter the crossing (see Section V.B (1)).

Example of a panel informing the drivers that they should expect cyclists arriving from both directions (example from Belgium):



N. Grade-separated cycle crossing

101. A grade-separated cycle crossing is a cycle tunnel or bridge on a cycle track which offers cyclists a way of crossing a barrier, such as a busy road or a railway line.

Explanatory note:

102. The definition is proposed by GE.5.

O. Advanced stop line

103. An advanced stop line is an area on an entry arm of a junction that reserves space for cyclists and either makes it easier for a cyclist to perform a turn manoeuvre or increases the cyclists' visibility for car drivers.

Explanatory note:

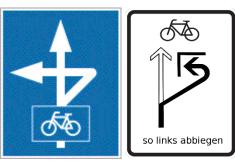
- 104. The definition is proposed by GE.5.
- 105. Advanced stop lines are typically applied on entry arms of intersections regulated by traffic light signals.
- 106. Advanced stop line implies that there two sets of transverse markings preceding the crossing; when the drivers are forbidden to proceed, cyclists should stop short of the line closer to the crossing, while drivers of other vehicles short of the further line.
- 107. GE.5 recommended to include markings provision for advanced stop line in the 1968 Convention on Road Signs and Signals (See Section V.B (4)).

P. Two-stage turn provision

108. A two-stage turn provision provides space on the carriageway and/or signing allowing cyclists wishing to turn to cross the intersection in two separate stages.

- 109. The definition is proposed by GE.5.
- 110. GE.5 recommended to include markings and a road sign for two-stage provision in the 1968 Convention on Road Signs and Signals (See Section V.B (5)).

Example of a sign informing about a two-stage turn provision (exampled from Hungary and Germany):



Q. Cycle parking

111. A cycle parking is a dedicated place for parking cycles. Two main types of cycle parking are cycle stands (mostly for short term parking) and cycle lockers (for long-term parking or for cycle tourist).

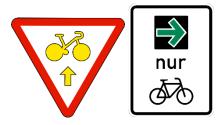
Explanatory note:

- 112. The definition is proposed by GE.5.
- 113. Additional characteristics of cycle parking may include:
 - its suitability for cargo cycles,
 - its location on-street or in an area with regulated access,
 - its roof-cover,
 - its electric power charging options for assisted cycles.

R. Traffic-light exemption for cyclists

114. A traffic-light exemption for cyclists allows cyclists to bypass a traffic light. A dedicated sign underneath or next to the traffic light indicates in which directions cyclists might go without observing the traffic light while giving priority of way to perpendicular traffic and pedestrians.

- 115. This definition is proposed by GE.5.
- 116. GE.5 proposed that a specific additional panel which indicates traffic light exemption for cyclists is included in the 1968 Convention on Road Signs and Signals (see Section V.B (2)).
- 117. GE.5 also provided its recommendation related to concerns raised in connection with Article 21 (2) (a) of the 1968 Convention on Road Traffic which obliges drivers to stop. In GE.5 view, the paragraph obliges drivers forbidden to proceed to stop short of the crossing or the transverse markings preceding it. However, this provision does not apply to cyclists making use of the traffic light exemption; if the cyclists are exempted from the traffic light, they are not forbidden to proceed. The paragraph indicates the location of stopping in case the driver is required to stop but does not create an obligation to stop on its own. Therefore, no changes to the Convention in this aspect are necessary, and a traffic light exemption for cyclists can be introduced in the national legislation without an obligation to stop (France), and right (Germany).



S. Cycle route

118. A cycle route connects at least two points through a combination of various infrastructure types (for example cycle tracks, cycle lanes, cycle streets or roads with low volumes of motorised traffic) and is equipped, where appropriate, with wayfinding solutions (road direction, confirmation and identification signs as well as road markings). A cycle route can serve commuting, recreation, tourism, or mix different purposes. Depending on its geographical scope and role in the network, a cycle route can be international, national, regional or local.

Explanatory note:

- 119. This definition is proposed by GE.5.
- 120. GE.5 recommended that a route identification sign is included in the 1968 Convention o Road Signs and Signals (see Section V.B (6)).
- 121. Countries are recommended to use consistent numbering/coding of cycle routes in the network and across networks (regional and national).

T. Cycle route network

122. A cycle route network is a combination of interconnected cycle routes to respond to the needs of cyclists in a specific geographical area. A cycle network can serve commuting, recreation, tourism, or mix different purposes. It can be international (such as EuroVelo), national, regional or local.

Explanatory note:

123. This definition is proposed by GE.5.

U. Cycle highway

124. A cycle highway is a high-quality cycle route with a focus on high-capacity service. It serves as a backbone of a cycle network by seamlessly connecting for example cities with their suburbs, residential areas and major (work) places and offers cycling experience satisfying all its users.

Explanatory note:

- 125. This definition is proposed by GE.5, based on the definitions elaborated in the frame of the CHIPS project.
- 126. Countries are recommended to use consistent numbering/coding of cycle highways. Cycle highways are typically numbered by a combination of letters and numbers, e.g. F 14.

V. Proposals for modifications to the 1968 Conventions on Road Signs and Signals and on Road Traffic

127. GE.5 elaborated the common definitions for types of cycle infrastructure (provided in Section IV) to offer harmonized solutions to cycling with the view to making cycling safer and also more comfortable. As the work is of a non-binding legal nature for any country, GE.5 also considered that some of the worked-out solutions should be possibly included in

the 1968 Conventions on Road Signs and Signals and on Road Traffic for achieving better regulatory harmonization among the Contracting Parties of these Conventions.

- 128. To this end, GE.5 prepared proposals for possible modifications to the two Conventions. These proposal concern:
- (a) changes to or inclusion of new definitions in the Conventions and changes arising from modified or new definitions. This in particular concerns definition of cycle and cycle street,
- (b) inclusion of additional provisions and where relevant road signs and/or markings. This pertains to provision for and signage/markings for cycle crossing, for traffic light exemption, land preselection, advanced stop line for cyclists, two-stage provision for cyclists, cycle route identification sign, and to traffic light signals, and
- (c) other changes to support safety of cyclists. This in particular refer to placement of road signs on the road.

A. Definitions

1. Definition of cycle

- 129. GE.5 recognized the fact that cycles had developed over the recent years, in particular an electric cycle had become, over the recent years, a popular type of cycle. Yet, the existing cycle definition, as contained in both Conventions, in GE.5 view would not qualify an electric cycle as cycle. This in turn would have implications with regards to whether or not electric cycles should be admitted to cycling infrastructure and, if so, whether there should be any limitation to electric support to pedalling. Also, with the development of various carrier cycles, in particular the wider types (above 1 m width), there was a concern expressed by GE.5 whether or not these carrier cycles should be admitted to cycle infrastructure in the same way as the 'ordinary/regular' cycles and if so whether there should be any specific circumstances for doing or not doing so.
- 130. In view of these considerations, and based on the existing definition of a cycle, GE.5 elaborated proposals for cycle definitions, differentiating between cycle, speed cycle and wide carrier cycle.
- 131. GE.5 believed this differentiation is key to ensuring that cycle infrastructure can be used safely by users of these different cycles. This means that depending on the infrastructure parameters, expected volume of cycle traffic and local context, relevant administrations can use suitable signs to forbid or allow speed cycles or wider carrier cycles on specific roads or parts of the road.
- 132. The proposed definitions, presented below, were elaborated taking into account the following factors: (a) design/electric assistance cut-off speed, (b) width of the cycle, and (c) weight of the cycle. They should preferably be included under the term cycle and replace the existing definition:

[Option 1 for consideration by GE.5]

"Cycle is categorized as:

- Ordinary/regular cycle: means any vehicle which has at least two wheels and is propelled by the muscular energy of the persons on that vehicle, in particular by means of pedals or hand-cranks, with a width not exceeding 1m and a laden mass not exceeding 300 kg and which may be equipped with an auxiliary electric motor of Type 1. This vehicle may be designed to carry passengers and/or goods in addition to the persons in control of it.
- Speed cycle: means a regular cycle equipped with an auxiliary electric motor of Type 2 and a laden mass not exceeding 200 kg.
- Wide carrier cycle: means a vehicle which has at least two wheels and is propelled by the muscular energy of one or more persons on that vehicle, in particular by means of pedals or hand-cranks, with a width exceeding 1m. This vehicle is specifically

designed for transporting goods and/or passengers in addition to the persons in control of it and may be equipped with an auxiliary electric motor of Type 1. Its laden mass must not exceed 450 kg if equipped with Type 1 auxiliary electric motor.

- Auxiliary electric motor: means an electric motor fitted onto vehicles equipped with
 pedals or hand-cranks to provide propulsion assistance while pedalling. This motor
 cannot self-propel the vehicle except in the start-up assistance mode. Two types of
 this motor are distinguished:
 - Type 1 of this motor has a maximum cut-off speed at 25 km/h. Countries may use a different maximum cut-off speed threshold in line with their domestic legislation but not higher than 32 km/h.
 - Type 2 has a maximum cut-off speed at 45 km/h.
- Start-up assistance mode: means a function by which the user can activate the auxiliary electric motor to propel the vehicle up to a maximum speed of 6 km/h without pedalling..

[Option 2 for consideration by GE.5]

Cycle: means any vehicle which has at least two wheels and is propelled by the muscular energy of the persons on that vehicle, in particular by means of pedals or hand-cranks and which may be equipped with an auxiliary electric motor and can be categorized as:

- Ordinary/regular cycle which has a width not exceeding 1m and a laden mass not exceeding 300 kg and which may be equipped with an auxiliary electric motor of Type 1. It may be designed to carry passengers and/or goods in addition to the persons in control of it.
- Speed cycle which has a width not exceeding 1m and a laden mass not exceeding 200 kg and which is equipped with an auxiliary electric motor of Type 2.
- Wider carrier cycle which has a width exceeding 1m and is specifically designed for transporting goods and/or passengers in addition to the persons in control of it and may be equipped with an auxiliary electric motor of Type 1. Its laden mass must not exceed 450 kg if equipped with Type 1 auxiliary electric motor.
 - Auxiliary electric motor: means an electric motor fitted onto vehicles equipped
 with pedals or hand-cranks to provide propulsion assistance while pedalling.
 This motor cannot self-propel the vehicle except in the start-up assistance
 mode. Two types of this motor are distinguished:
 - Type 1 of this motor has a maximum cut-off speed at 25 km/h. Countries may use a different maximum cut-off speed threshold in line with their domestic legislation but not higher than 32 km/h.
 - Type 2 has a maximum cut-off speed at 45 km/h.

Start-up assistance mode: means a function by which the user can activate the auxiliary electric motor to propel the vehicle up to a maximum speed of 6 km/h without pedalling.."

2. Changes arising from the modification of the definition of cycle

- 133. In view of the differentiation of types of cycles through the definitions, in GE.5 view, additional modifications should be considered to the 1968 Conventions on Road Traffic and Road Signs and Signals so that the admission to cycle infrastructure can be effectively regulated and managed:
- 134. For the 1968 Convention on Road Traffic, Article 27 (Special rules applicable to cyclists, moped drivers and motorcyclists) it would be useful to include in paragraph 4 of Article 27 a reference to speed cycle and wide carrier cycle, as follows (added text marked in bold):

- "4. Where cycle lanes or cycle tracks exist, Contracting Parties or subdivisions thereof may forbid cyclists to use the rest of the carriageway. They may exclude from this prohibition the user of speed cycles and wide carrier cycles. In the same circumstances, they may authorize moped drivers to use the cycle lane or cycle track and, if they consider it advisable, prohibit them from using the rest of the carriageway. Domestic legislation shall specify under what conditions other road users may use the cycle lane or cycle track or cross them, maintaining cyclists' safety at all times."
- 135. Regarding the 1968 Convention on Road Signs and Signals, Annex 1, Section D, compulsory cycle track=, GE.5 observed that the current road sign D, 4 "compulsory cycle track" requires cyclists to use the cycle track when signposted as such. However, in case where the cycle track due to its technical parameters would not provide safe conditions for interaction between cyclists of 'ordinary/regular' cycles and speed cycle or would be too narrow for accommodating wide carrier cycles, the Convention should offer solutions for cyclists of speed cycle and wide carrier cycles not to use the cycle track or prohibit them to do so.
- 136. For the first case allow cyclists of speed cycles and wide carrier cycles not to use cycle track this would require in GE.5 view a differentiation between signposting a compulsory versus non-compulsory cycle tracks.
- 137. To do so, roads signs such as "non-compulsory cycle track" and "end of non-compulsory cycle track" would be recommended for inclusion in Section E of Annex 1 of the Convention. The below proposal builds on the work of the WP.1 Group of Experts on Road Signs and Signals at its twenty second session (Geneva, 3 and 4 November 2022). For the image of the non-compulsory cycle track, GE.5 recommended that this sign has a square shape rather than a rectangular shape as proposed by WP.1 Group of Experts. GE.5 reckoned that the rectangular shape was proposed further to a modification proposal to sign G, 18 from "Advised itinerary for heavy vehicles" to "Advised itinerary" as reflected in ECE/TRANS/WP.1/2023/2/Rev.1.² GE.5 recommended to keep G, 18 as "Advised itinerary for heavy vehicles" or, alternatively, to apply it only to user of motor vehicles and not to pedestrians and cyclists.

"E, Special Regulation Signs

Non-compulsory cycle track

E-XX.0 notifies cyclists about entry to a track that is reserved for them, and notifies drivers of other vehicles that they are not entitled to use this track. Cyclists are not required to use this track. The inscription "cycle track" or its equivalent in the national language may be displayed on the sign.

[placeholder for an image]

End of non-compulsory cycle track

E-XX.0 notifies cyclists of the end of a non-compulsory cycle track. This sign shall be identical to sign (insert code here) except that it shall be crossed by an oblique red band or, preferably, red parallel lines forming such a band sloping down from right to left. The band can be interrupted when crossing the symbol. If not interrupted, the red band shall be placed over the symbol.

Notwithstanding the provisions of article 6, paragraph 1 of this Convention, this sign may be placed on the reverse side of sign (insert code here) for cyclists coming in from the opposite direction."

[placeholder for an image]

138. Moreover, GE.5 further noted that the provisions of the European Agreement Supplementing the 1968 Convention on Road Traffic included in point 9 of the Annex to the Agreement, which pertains to Article 10 of the Convention, may be an obstacle to introducing non-compulsory cycle tracks. Point (a) of the additional paragraph introduced by the

The document can be consulted at https://unece.org/transport/documents/2024/02/working-documents/amendment-proposals-1968-convention-road-signs-and

Agreement stipulates that every driver should take exclusively, where they exist, the ways, carriageways, lanes and tracks allotted to road users in his category. Additionally, point (b) limits driving cycles on the carriageway to situations when this can be done without inconvenience to other road users, even if there is no cycle track present. Therefore, GE.5 recommended to delete point 9 from the Annex to the European Agreement Supplementing the 1968 Convention on Road Traffic.

139. For the second case – prohibit cyclists of speed cycles and wide carrier cycles to use cycle track – this would require that additional panel H, 5 b displaying the symbols of speed cycle or wide carrier cycles together with the inscription 'except' would be used in combination with the compulsory cycle track sign. This in turn would require that the symbols of the two types of cycle would need to be allowed for displaying on H, 5 a and H, 5 b signs. Building on the work done in the WP.1 Group of Experts on Road Signs and Signals and reflected in ECE/TRANS/WP.1/2023/2/Rev.1, inclusion of the new symbols on the referred H panels would require that prohibition signs displaying speed cycle and wide carrier cycle are also introduced in the Convention on Road Signs and Signals.

140. In this context, in GE.5 view, the following changes to the amendment proposals included in ECE/TRANS/WP.1/2023/2/Rev.1 would be recommended (text added to ECE/TRANS/WP.1/2023/2/Rev.1 marked in bold):

"Section C, Prohibitory and restrictive signs

No entry for cycles

C-03.3.1 notifies that entry is prohibited for cycles.

No entry for speed cycles

C-03.3.2 notifies that entry is prohibited for speed cycles.

No entry for wide carrier cycles

C-03.3.3 notifies that entry is prohibited for wide carrier cycles."

- 141. The images for signs C-03.3.2 and C-03.3.3, and hence symbols for speed cycle and wide carrier cycle would need to be developed.
- 142. On the other hand, no further changes would be required to the provision under Section H, 3 when it comes to referencing symbols for use on H, 3 signs. Additional panels displaying symbols of road users, road user panel, since it already makes reference to signs C-03.1 to C-03.14 and this reference would incorporate C-03.3.2 and C-03.3.3. However, in case a decision would be made to renumber C-03 signs, where speed cycle would be assigned the code of C-03.4 and wide cycle of C-03.5, in such a case, the reference would need be altered to" All symbols from signs C-03.1 to C-03.16, ..."
- 143. GE.5 also believed that the inscription "except" on H, 6 sign may not always be clear in particular when this additional panel is used in combination with compulsory signs. GE.5 recommended therefore that the inscription is broaden to "forbidden, permitted". Building on the proposal in ECE/TRANS/WP.1/2023/2/Rev.1, the relevant provision should read (bold for added text):

"H-06.0 displays the symbol of a particular road user category to whom the regulatory sign does not apply. This additional panel shall be identical to additional panel H-05.0 except that it shall display, in addition, the inscription "except" or "forbidden" or "permitted" in the national language of the State concerned. If necessary, the symbol may be replaced by an inscription in the national language of the State concerned."

3. Definition of cycle street

144. GE.5 recognized the fact that a number of ECE countries defined a new type of infrastructure – cycle street – used predominantly by cyclists and which prioritizes cyclists but at the same time allows entry of motorized traffic, e.g. for access to possessions. At the same time, GE.5 noted differences among countries in using this infrastructure. Therefore, GE.5 proposed a definition for the cycle street as well as provision for special rules as well as conditions for use to regulate the use of cycle streets in a harmonized way, as follows:

"A cycle street is a specially designed section of road or an area where special traffic rules apply and it is signposted as such at its entries and exits.

Cycle street, provisions for special regulations:

- (a) Speed limit is 30 km/h,
- (b) Cyclists are exempted from any prohibition from travelling two or more abreast, if such a prohibition exists in national legislation for other situations,
- (c) Drivers shall not put cyclists at risk even if traveling two or more abreast. If necessary, drivers should stop to allow cyclists to pass,
- (d) Parking is forbidden except where allowed by parking signs."

Cycle street, conditions for use:

- (a) Volume of cycle traffic exceeds 40% of the volume of motorised traffic.
- (b) Volume of motorised traffic does not exceed 2500 cars/day.
- (c) Through traffic of motorised vehicles has been eliminated (e.g. through traffic filters, a system of one-way streets, etc.)."
- 145. The definition of the cycle street, in GE.5 view, could possibly be included as follows:
 - 1968 Convention on Road Traffic, Article 1, Definitions, include after (g) ter as (g) quarter, and
 - 1968 on Road Signs and Signals, Article 1, Definitions, include after (e) ter as (e) quarter
- 146. The special regulation could possibly be included in the 1968 Convention on Road Traffic as Article 27 bis, or in the European Agreement to this Convention under paragraph 20 bis (Additional Articles to be inserted after Article 27 of the Convention) also as Article 27 bis or alternatively 27 ter. In both cases, Articles 27 bis to quarter of the European Agreement would need to be renumbered.
- 147. The inclusion could read:

"Article 27 bis, Special rules applicable to cycle streets signposted as such:

On cycle streets, signposted as such:

- (a) Speed limit is 30 km/h,
- (b) Cyclists are exempted from any prohibition from travelling two or more abreast, if such a prohibition exists in national legislation for other situations,
- (c) Drivers shall not put cyclists at risk even if traveling two or more abreast. If necessary, drivers should stop to allow cyclists to pass,
- (d) Parking is forbidden except where allowed by parking signs."
- 148. GE.5 did not conclude on any proposal whether the conditions for use of cycle street should be included in the Conventions.

4. Changes arising from an inclusion of the definition of cycle street in the Conventions

149. The definition and the special regulation, both refer to signposting the cycle street, which requires inclusion of a cycle street road sign in the 1968 Convention on Road Signs and Signals. The solution for it and the image for the road sign was worked out by WP.1 Group of Experts on Road Signs and Signals, which GE.5 fully supported, as follows:

In Annex 1, Section E, Special Regulation Signs:

"Cycle street

E-XX.0 notifies cyclists and drivers of other vehicles about entry to a road where special traffic rules apply to enhance the safety of cyclists. The inscription "cycle street" or its equivalent in the national language may be displayed on the sign.



End of cycle street

E-XX.0 notifies cyclists and drivers of other vehicles of the end of a cycle street. This sign shall be identical to sign (insert code here) except that it shall be crossed by an oblique red band or, preferably, red parallel lines forming such a band sloping down from right to left. The band can be interrupted when crossing the symbols. If not interrupted, the red band shall be placed over the symbols.

Notwithstanding the provisions of Article 6, paragraph 1 of this Convention, this sign may be placed on the reverse side of sign (insert code here) for drivers coming in from the opposite direction."



B. Other important modifications

1. Road sign for cycle crossing

- 150. GE.5 took note of the use of a cycle crossing sign in some of the ECE countries. At the same time, GE.5 also recognized the practice in many of the countries with significant experience in managing cycle traffic no to use a dedicated road sign but indicating the location of crossing with horizontal markings while the right of way is established with regular traffic signs for vehicular traffic (give way, stop, priority road signs).
- 151. GE.5 believed that the use of regular traffic signs is the approach in line with the logic of the 1968 Conventions on Road Signs and Signals and on Road Traffic (a cycle is a vehicle) and allows the traffic administration to clearly sign the cycle crossing with priority depending on the relative significance (role in the network, volume of traffic) of the road and the cycle track crossing it. For example, on a local cycle route cyclist should yield to motor vehicles travelling on national road when crossing it; on the other hand, on a local road motor vehicles should yield to cyclists travelling on a cycle highway.
- 152. At the same time, GE.5 recognized the fact that at some cycle crossings with priority of way for cyclists, it would be important to increase the attention of drivers of motor vehicles to cyclists entering the crossing from both directions rather than just one.
- 153. GE.5 further recognized that the 1968 Convention on Road Signs and Signals does not offer a road sign solution which would display to drivers the direction from which cyclists could enter the cycle crossing. To this end, and further to changes proposed in ECE/TRANS/WP.1/2023/2/Rev.1, GE.5 would like to suggest inclusion of cycle crossing panel to be included in Annex 1, Section H, additional panels, 5. Additional panels for use at intersections, as follows (text added to ECE/TRANS/WP.1/2023/2/Rev.1 marked in bold):

"H-08.1 displays a diagram of the intersection in which broad strokes indicate priority roads and thin strokes indicate the roads on which signs B, 1 or B, 2 B-01.0 or B-02.0 are set up.

H-08.2 displays a diagram of cycle crossing in which the symbol of the cycle and arrows indicate the directions from which cyclists can enter the crossing. "

154. This modification should also be reflected under Section B, priority signs, for give way and stop signs, in the provisions referring to the use of sign H-08, as follows:

"B-01.0 may be used in conjunction with additional panels H-08.1 and H-08.2 described in section H, subsection II, paragraph 5 of this Annex, where H-08.1 indicates to drivers the outline of the priority road and H-08.2 indicates to the drivers the directions from which cyclists can enter the cycle crossing."

155. The image for the panel H-08.2 remains to be developed.

2. Traffic light exemption for cyclists

156. GE.5 recognized a traffic light exemption for cyclists used in a number of ECE member States as a cyclist safety-increasing solution. In this regard, in GE.5 view, it would be useful to include in the 1968 Convention on Road Signs and Signals, Annex 1, Section H, an additional panel which indicates traffic light exemption for cyclists. The modification is proposed further to the changes proposed in ECE/TRANS/WP.1/2023/2/Rev.1 (text added to ECE/TRANS/WP.1/2023/2/Rev.1 marked in bold):

"8. Additional panel to indicate traffic light exemption for cyclists

TRAFFIC LIGHT EXEMPTION FOR CYCLISTS

H-11.0 notifies cyclists of the direction in which they can proceed without observing the traffic light while giving priority of way to perpendicular traffic and pedestrians. The panel shall be placed underneath or next to the traffic light signal."

157. The image for the panel H-08.2 remains to be developed.

3. Lane preselection

158. GE.5 found lane preselection solution for cyclists as desirable for inclusion in the 1968 Convention on Road Signs and Signals through specific road sign and road markings. This could be achieved for the road sign by proposing further adjustments to modifications worked out by the WP.1 Group of Experts on Road Signs and Signals in ECE/TRANS/WP.1/2023/2/Rev.1, e.g. as follows (text added to ECE/TRANS/WP.1/2023/2/Rev.1 is marked n bold):

"PRESELECTION OF LANES

E-03.0 notifies road users about directions to follow for each lane of a multi-lane carriageway at the intersection in order for them to preselect the required lane before the intersection. Lane markings may be included. This sign may include directions to follow only reserved for specific category of vehicles (e.g., cycles) if they differ from the directions to follow by other vehicles. In this case, additional panel H-05.0 depicting the symbol of that type of vehicle category, or only the symbol of that vehicle category, shall be shown on the arrow indicating the direction reserved for it."

- 159. An example of the road sign depicting direction reserved for cycle/cyclist should be prepared if considered useful.
- 160. Regarding the road marking, in GE.5 view, the following addition could be made to para 39 of Annex 2, Chapter IV of the 1968 Convention on Road Signs and Signals (added text marked as bold):

"On roads having sufficient traffic lanes to separate vehicles approaching an intersection, the lanes to be used may be indicated by lane selection arrow markings on the surface of the carriageway (diagrams A-39 to A-41). Lane selection arrows

may also be used on a one-way road to confirm the direction of traffic. The lane selection arrows should be not less than 2 m (6 ft. 7 in.) long. They may be supplemented by word markings on the carriageway. The lane selection arrows supplemented by word markings or symbols of category of users/vehicles may be used in addition on the same lane as another lane selection arrow to indicate that the lane may be used by the indicated category of users/vehicles differently (diagram A-...)"

161. An example of a diagram depicting the markings should be developed. In doing so, it should be considered whether only the additional direction or all the directions applicable to the specific user/vehicle are shown form the given lane.

4. Advanced stop line for cyclists

162. GE.5 also recognized an advanced stop line for cyclists as a desirable solution and one that increases the safety and comfort of cyclists as they do not have to stand at traffic light signals behind motor vehicles. It was considered that the inclusion of this solution would be sufficient through a specific road marking provision in the 1968 Convention on Road Signs and Signals, possibly in Annex 2, chapter III transverse markings, after section B, as section B bis, as follows:

"B bis Advanced stop line for cyclists

- 32 bis Advanced stop line for cyclists shall be indicated on an entry arm of an intersection across one or several lanes by continuous lines denoting a box and an entry to it and a cycle symbol placed inside the box (diagram). This box is reserved for cyclists to stop at the intersection at the red light. This box must not be used for stopping by other vehicles than cycles.
- 163. An example of a diagram depicting the markings remains to be developed.

5. Two-stage turn provision for cyclists

- 164. Another important safety solution identified by GE.5 and recommended for inclusion in the 1968 Convention on Road Signs and Signals is the two-stage turn provision. In GE.5 view, possibly a Section G sign could be introduced as follows:
 - "E-XX.0 notifies cyclists about a manoeuvre to turn across the intersection in two separate stages."
- 165. The image for the road sign would need to be developed.
- 166. Regarding markings, relevant marking provision could be included in annex 2, chapter IV, other markings, possibly as follows:
 - "F Markings for two-stage provision for cyclists

Diagram XX gives an example of markings for two-stage provision for cyclists."

6. Cycle route identification sign

167. GE.5 would find it beneficial if EuroVelo or other cycle route identification sign would be included in the 1968 Convention on Road Signs and Signals. To this end, the following modification to the Convention should be considered further to changes already proposed to ECE/TRANS/WP.1/2023/2/Rev.1:

"ROAD IDENTIFICATION

G-08.01 identifies the road by its number or name. This sign is an example of a road identification sign having a rectangular shape bearing a road number.

CYCLE ROUTE IDENTIFICATION SIGN

G-08.02 identifies the cycle route by its number, name or logo. It bears a symbol of a cycle in addition to the name, number or logo to distinguish it from the road identification sign. The symbol of the cycle shall not be placed on this sign if it is to be used on advance direction, direction or confirmatory signs applicable to

cyclists only and so bearing already the cycle symbol. The symbol of the cycle may be omitted from this sign if it is to be used on a cycle track. This sign is an example of a cycle route identification sign for EuroVelo Route 6."



7. Traffic Light Signals

168. GE.5 agreed that the options provided in the provisions for restricting traffic light signals for cyclists in the 1968 Convention on Road Signs and Signals do not cover the option of using the signals with symbols of cycle of red, amber and green colour on a black background. GE.5 also agreed that such an option appears to be the most suitable and legible one for restricting the traffic light signals to cyclists only. GE.5 also identified additional modifications to the traffic light signals that could be of benefit to cyclists. To this end, in GE.5 view, the following amendment to the Convention's Articles 23 and 24 would be beneficial (Bold text signifies addition while strikethrough suggests text removal):

"Article 23, Paragraph 13:

In cases where traffic light signals apply to cyclists only, this restriction may be clarified, if to do so is necessary in order to avoid confusion, by including the silhouette of a cycle in the traffic light signal itself replacing the red, amber and green lights by lighting symbols of cycle of the same colour on a black background or by using a traffic light signal of small size supplemented by an additional panel showing a cycle. Such an additional panel used in conjunction with the traffic light can be placed below, above or beside it.

Article 23, new Paragraph 13a:

The red, amber and green lighting symbols of cycle may be supplemented by lighting arrows of the same colour. In such case, the prohibition or authorization expressed by the signal is restricted to the direction or directions indicated by the arrow or arrows.

Article 23, new Paragraph 13b:

Traffic light signals for cyclists might be supplemented by an additional light signal indicating the detection of cyclist.

Article 24:

Signals for pedestrians only

Article 24, new Paragraph 6:

Light signals for pedestrians may include a symbol of cycle to indicate that they apply both to pedestrians on pedestrian crossing and cyclists on cycle crossings."

8. Road signs placement

169. GE.5 noted that the 1968 Convention on Road Signs and Signals in Article 6 prescribes placing road signs in a way that would not obstruct vehicular traffic on the carriageway. In GE.5 view such provision may lead to obstructing cyclists on a cycle track located next to a carriageway. GE.5 believed therefore that this provision should be modified as follows (bold of addition, strikethrough for deletion):

"Article 6

- 4 It is recommended that domestic legislation should provide:
- (a) That signs shall be so placed that they do not obstruct vehicular traffic on the carriageway road, and, if placed on the verges, obstruct pedestrians as little as

possible. The difference in level between the carriageway on the side where a sign is placed and the lower edge of the sign shall be as uniform as possible for signs of the same class on the same route;"

VI. Recommendations

[placeh	older i	for recon	nmendat	ions		