

MAKING SAFE SPACE FOR CYCLING IN 10 DAYS

A GUIDE TO TEMPORARY BIKE LANES FROM FRIEDRICHSHAIN-KREUZBERG, BERLIN





PopUp BikeLane in Berlin - Friedrichshain - Kreuzberg (Source: Peter Boytman Creative Commons CC0 1.0)

Mobycon is available to answer questions about this guide and to support municipalities in applying the information herein.

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Mobycon would like to thank Mr. Felix Weisbrich, Department Head, and Mr. Olaf Rabe, Head of Roads Department, from the Roads and Green Areas Office in Friedrichshain-Kreuzberg (www.berlin.de/ba-friedrichshain-kreuzberg) for the conception of this guide and for permission to use the document "Rule plans for the temporary installation and expansion of cycle traffic facilities". We would also like to thank Christian Haegele, Head of the Traffic Management department at the Berlin Senate Department for Environment, Traffic and Climate Protection.



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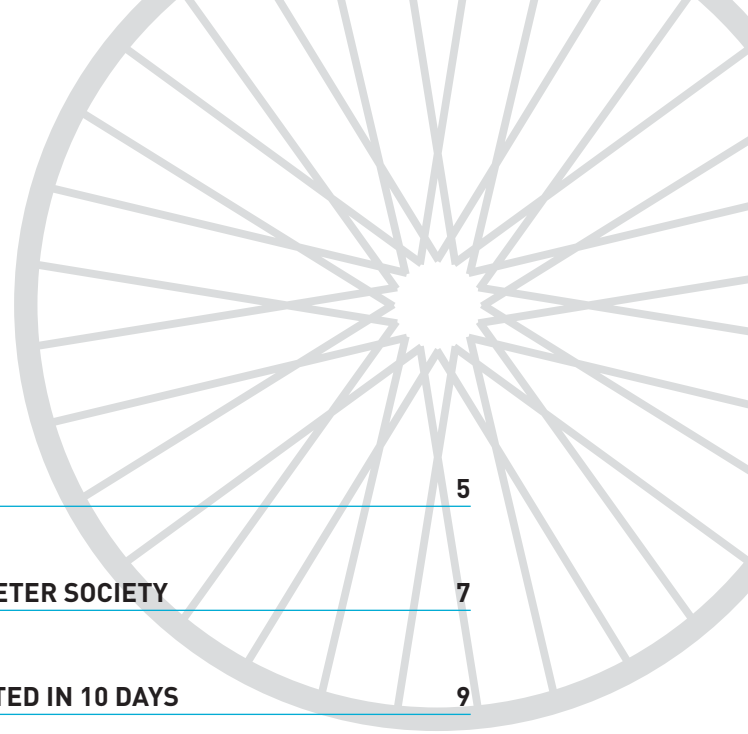
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Before: Hallesches Ufer (Source: Bezirksamt Friedrichshain-Kreuzberg)



After: Hallesches Ufer (Source: Bezirksamt Friedrichshain-Kreuzberg)



PopUp BikeLane in Berlin - Friedrichshain - Kreuzberg (Source: Peter Boytman Creative Commons CC0 1.0)



PopUp BikeLane in Berlin - Friedrichshain - Kreuzberg (Source: Peter Boytman Creative Commons CC0 1.0)



After: Petersburger Street (Source: Bezirksamt Friedrichshain-Kreuzberg)

FOREWORD

The chain is only as strong as its weakest link!

The world is currently crippled by the Corona virus. It is affecting everyone's life in every possible way, influencing how people work, stay connected to each other, find time for leisure and many other aspects. It is also having an incredible impact on their mobility. Streets are deserted and many people are reluctant to use public transport and shared mobility systems. Positively, while the number of cars on our streets has plummeted, walking and cycling are being (re)discovered. We are seeing examples of this worldwide, including in Berlin, where people are increasingly getting back on their bicycles and discovering their neighbourhoods on foot.

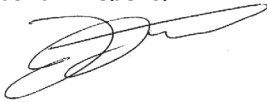
The Berlin district of Friedrichshain-Kreuzberg was one of the first cities to implement temporary infrastructure to facilitate safer and more comfortable cycling in reaction to these changing mobility patterns. We are proud to have supported Friedrichshain-Kreuzberg in the development of these measures and were asked by the district to produce this guidebook. This guide provides a good foundation for planning safe, temporary infrastructure that can be implemented almost immediately in towns and cities that do not currently offer enough space for cyclists. It serves as inspiration to cities worldwide that want to do something, but don't know how to start.

The chain is only as strong as its weakest link: bottlenecks and unsafe spots on cycle routes must be eliminated quickly so that everyone can cycle safely and comfortably and still maintain the required distance from one another.

We hope that the current (re)discovery of the bicycle will help re-establish it as a popular, healthy and space-efficient means of transport in the long term and contribute to more liveable, sustainable and dynamic cities!

With kind regards,

Johan Diepens.



CEO Mobycon





Source: Mobycon B.V.

1.0

THE CHALLENGE:

SPACE FOR CYCLING IN THE 1.5-METER SOCIETY

How can you quickly create more space for cycling in the city within two weeks? The Berlin district of Friedrichshain-Kreuzberg has stepped up to this challenge and is answering the question. Because of pressures related to mobility during the Corona measures, Berlin, like all cities and towns, had to react quickly to create more space for people walking or cycling. Sufficient space for cycling was already a problem under normal circumstances, the current crisis has merely compounded this problem. According to the Berlin regulations—similar to those in most cities—people are expected to keep a minimum distance of 1.5 meters from each other. What does this mean for people on bikes and cycling infrastructure?

Like countless other cities, the standard German widths of the existing bicycle infrastructure in Berlin are too small to keep the minimum required distance of 1.5m. The solution cannot be a cycling ban on streets and in areas where it is impossible to maintain this minimum distance. Such a ban would be counterproductive—especially with regard to Corona measures. Those who cannot use a car for transportation are dependent on walking, cycling and public transport. On sidewalks and public transport, the 1.5m minimum distance also poses a problem. Increasing rates of cycling takes the strain off the sidewalks and public transport and helps people maintain the minimum recommended distance.

People who have to make necessary trips, for example those with essential jobs, should not be exposed to an increased risk of infection due to lack of space. It is apparent that in times of Corona, the use of bicycles in the transport mix increases in relative terms. In terms of absolute figures, an increasing trend is also to be expected, especially in spring and summer months. During this period of reduced motorized traffic in the

city compared to non-Corona times, it is an opportune moment to reach out to target groups who have been interested but cautious about cycling in the city to (re)discover the bicycle.

Additionally, in cities around the world with a low proportion of cycling in the traffic mix, relatively fewer women cycle. For this target group in particular, often responsible for more care trips and comprising a high percentage of people working in the essential services, subjectively and objectively safer cycling infrastructure is needed, in the very short term.

Cyclists generally need a minimum width of 2.5m to ride safely next to or past each other (plus the usual minimum safety zones at the edge). With the 1.5m measure an



*PopUp BikeLane in Berlin - Friedrichshain - Kreuzberg
(Source: Peter Boytman Creative Commons CC0 1.0)*

additional 0.5m is all that is needed to achieve this safe and comfortable distance, creating a lane width of at least 3m for cyclists. The minimum distance between cyclists and people on the sidewalks must also be 1.5m.

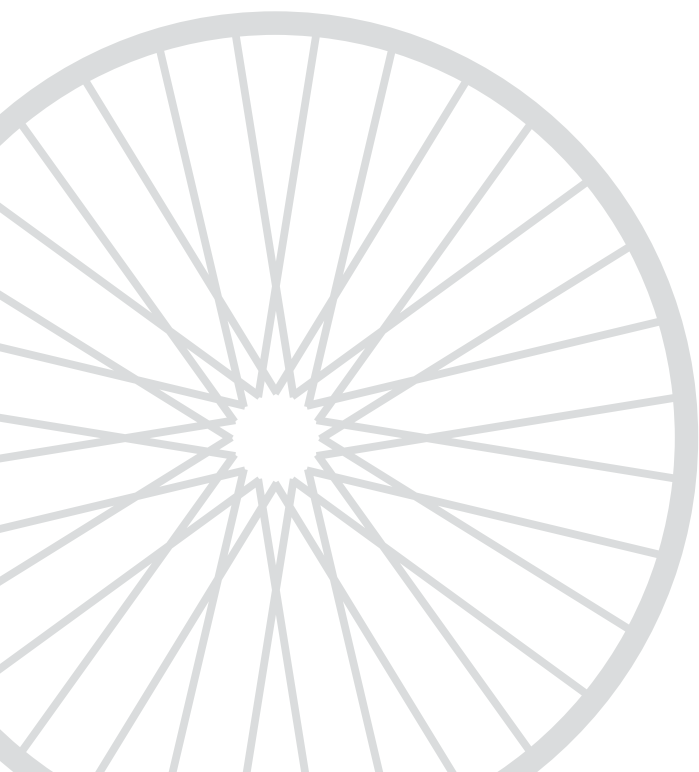
The result is that we need wider cycle paths in this pandemic period. The target width for cycling infrastructure such as cycle paths and cycle lanes should be at least 3m wide in Corona times. Coincidentally, this is also a common lane width for vehicle lanes. The challenge therefore is how to quickly convert vehicle lanes to make safe cycling possible with a minimum distance of 1.5m between people.



Gitschiner Street after the establishment of the temporary measures (Source: Bezirksamt Friedrichshain-Kreuzberg)



Gitschiner Street after the establishment of the temporary measures (Source: Bezirksamt Friedrichshain-Kreuzberg)



2.0

THE SOLUTION:

TEMPORARY MEASURES IMPLEMENTED IN 10 DAYS

The Friedrichshain-Kreuzberg district has stepped up to the challenge by developing and implementing temporary measures within 10 days. This example is used to inspire other cities and municipalities to think creatively and implement measures as quickly as possible.

With the temporary installation and expansion of bicycle facilities, Berlin is currently at the forefront of cities taking action worldwide, followed by a group of other cities and communities that are taking similar measures. For example, the city of Bogotá in Colombia was one of the first cities to designate 35 kilometers of new bicycle lanes. Paris recently announced they are bringing forward the construction of 650 km of cycleway and starting with temporary measures in the coming weeks. Budapest and Mexico City are also planning a network-wide approach. In the USA, Philadelphia and Minneapolis, among others, have closed individual streets in recreational areas to car traffic to create more space for pedestrians and cyclists. Most recently, New York City announced the closure of 100 miles of city streets to cars. In Canada, the city of



Bogotá, Colombia (Source: Gabriel L. Guerrero/Shutterstock)

Calgary has closed off one lane of car traffic on some streets to be converted to a cycle lane. Overall, isolated measures are now taking place in many cities, however plans for the entire city are still rare.



Budapest, Hungary (Source: Dávid Vitézy @vitdavid / Twitter)

At present (late April 2020), the volume of motor vehicle traffic is well below capacity due to the Corona crisis. This makes it possible to divide up traffic areas differently depending on the situation and without causing disruption to motor vehicle traffic, including bus services. Additional space for cyclists offers more people an alternative to using public transport, where high ridership can increase susceptibility to infection, ultimately reducing the load on public transport. It is also a great opportunity to show people what a city with a comprehensive cycle network can look and feel like and how it functions. This, over time, can inspire increased support for future bicycle infrastructure construction and reduce future “bike-lash”.



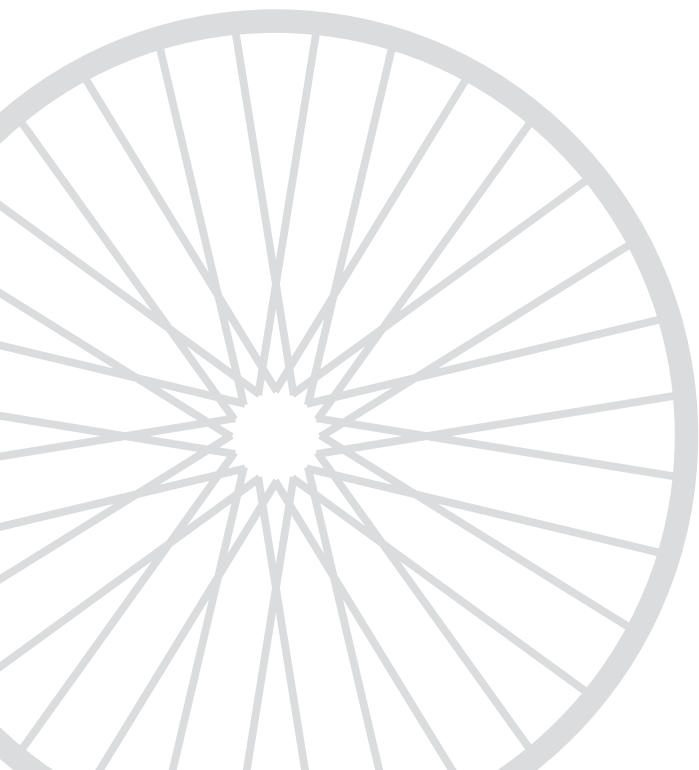
Oakland, USA (Source: AP Photo/Jeff Chiu)

The instruments available for redistributing road space in favour of cycling include the temporary designation of new cycling facilities, the widening of existing ones, and the closure of secondary roads to through traffic, either physically or by time restrictions.

According to the German Road Traffic Regulations (StVO) the construction of cycle lanes doesn't require a warrant or certain volume of traffic. This also applies to the widening of existing facilities. Traffic counts to prove the decreased traffic volumes are also not necessary. In times of a pandemic, dangerous situations may arise because reduced traffic volumes invite car drivers to speed through the empty streets. At the same time, cyclists cycling too close together are in itself a public health hazard. Rapid action on the part of City government is

therefore necessary for danger prevention where the existing cycling infrastructure does not comply with the 1.5m minimum distance measure. To counter the public health hazard posed by narrow cycle facilities in combination with a global pandemic, a short-term adjustment of the existing infrastructure through an accelerated procedure is required.

In the city of Berlin, the Senate Administration of the State of Berlin is responsible for the operation of main roads. For secondary roads the offices of the city districts, such as Friedrichshain-Kreuzberg are responsible. In order to follow the example implemented in Friedrichshain-Kreuzberg, consideration of the responsibilities in one's own country/local jurisdiction, including the other laws and regulations is necessary.



3.0

PLANNING TEMPORARY CYCLING INFRASTRUCTURE: THE BASIC PRINCIPLES

Quickly creating more space for people cycling (and walking) presents the opportunity to test a variety of solutions, measure and observe them and then adapt if necessary. However, there are also risks associated with rapidly changing road environments. For these reasons, we outline the following design principles that cities and local authorities should consider when planning and designing temporary measures.

TRAFFIC SEPARATION

It is imperative to effectively separate walking and cycling from high volumes (or speeds) of motorized traffic. This should be achieved - wherever possible - by physical separation and not simply with paint. Vertical physical separation of traffic is particularly crucial for temporary measures, as drivers will not be used to the new street layout. For smaller roads, consideration should be given to completely closing the road to car traffic, or alternatively to closing a road to through traffic and giving priority to bicycles. For larger roads, the conversion of a car lane is the most effective strategy to create more space for cyclists. Particular attention must be paid to parking spaces on the street: motorists who want to park on a street should not be made to cross the cycle lane if possible.

FORGIVING INFRASTRUCTURE

This principle focuses on creating infrastructure that anticipates the potential for human error and ensures that it does not lead to injuries. A simple example of this principle is that planned physical barriers to be installed must not in themselves constitute a safety risk. The largest increase in injuries to cyclists in the Netherlands is

due to unilateral collisions in which a cyclist hits a kerb or post, for example. Adding physical separation between bicycles and cars is definitely beneficial, but one should minimise the risk of a cyclist hitting a separator by, for example, adding safety buffers. The use of flexible or soft separator materials also reduces the risk of injury. One option is to use hay bales for rapid implementation.

Another example of this principle is that, whenever possible, the temporary infrastructure should also be designed to ensure there is a buffer zone between turning vehicles and cyclists or pedestrians. The creation of a certain buffer zone should enable right-turning motorists to look over their shoulders to comfortably and sufficiently recognise that someone is in the cycle and/or pedestrian space and react accordingly.

PREDICTABILITY

This principle is based on the fact that recognizing change and understanding how to behave in a new traffic environment always takes time. In order to minimise the effects of this unavoidable risk, it is important that temporary facilities are planned and designed in such a way that they can be easily understood by all road users. For example, the introduction of a new two-way cycle path on the left side of the road would confuse motorists. It is much safer to introduce a one-way cycle path on both sides of the road. If there is not enough space for two separate cycle paths, other measures such as temporary roadblocks and/or modal filters should be considered.

NETWORK APPROACH

During a pandemic, the last thing a City would want is to create a new attraction or space that brings people together in too small an area. Closing a street to traffic has often historically generated high levels of public enthusiasm, quickly transforming the street into a mini-festival or street party. Under the current conditions, this is not a desirable outcome for obvious reasons. Instead of closing a short stretch of road, it is therefore imperative to create a network of open roads. This will reduce the pressure on the space of a single open street and allow people to walk and cycle in their neighbourhood while maintaining the necessary distance. This network should not only provide links to the main centres for essential services (such as supermarkets and hospitals), but also provide sufficient space for recreational cycling and walking.

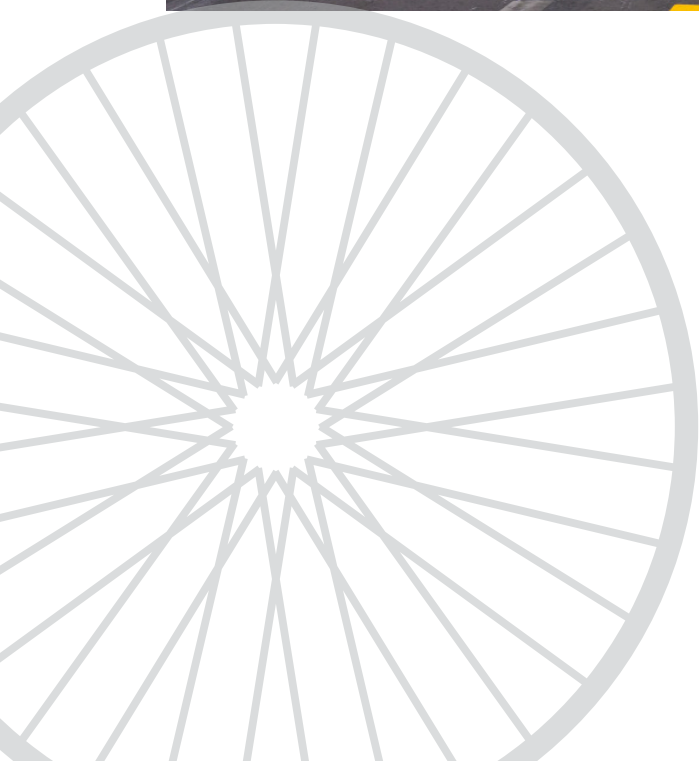
As with all networks, a key feature of a temporary road closure network is that the intersections with other roads become very important. At these intersections, it is important to limit the potential for conflict (or infection). This can be achieved by adding pedestrian refuges or temporary kerb build-outs. If available, bicycle and pedestrian signals should be tweaked to minimize their waiting time. This helps improve safety through minimizing red light running and is made possible due to severely reduced car traffic volumes. Pedestrian and bicycle call buttons should be turned off to minimize the potential for infection through touch. If space is limited, consider applying stencils on the road to identify appropriate waiting locations for people on bikes, while maintaining the required distance.



PopUp BikeLane in Berlin - Friedrichshain - Kreuzberg (Source: Peter Boytman Creative Commons CC0 1.0)



PopUp BikeLane in Berlin - Friedrichshain - Kreuzberg (Source: Peter Boytman Creative Commons CC0 1.0)



4.0

IMPLEMENTING TEMPORARY MEASURES:

11 STEPS IN 10 DAYS

Following the example from the Friedrichshain-Kreuzberg district, a process in eleven steps, to be completed within 10 days, is described here:

STEP 1

CREATE A PROJECT LIST OF THE STREETS AND CROSSINGS TO BE ADAPTED, INCLUDING:

- Location and length of the streets and the crossroads
- Priority of each project
- Identification of design scenario to apply based on guiding designs
- Target date and project status

STEP 2

DRAFT AN ACTION SHEET FOR EACH PROJECT IDENTIFYING:

- The assigned design concept
- Material requirements
- Steps to create a network map with the assigned design concept
- Creating a cross-section sketch
- Preparation steps for implementation (with contractor if necessary)
- Planned implementation date
- Preparatory and traffic management measures (e.g. no stop signs)

STEP 3

ENABLE QUICK IMPLEMENTATION:

- Coordinate a transportation committee hearing for the relevant authorities formally involved in the measure on-site if necessary
 - Having the relevant authorities who will sign-off on the proposed temporary measures meet on-site greatly speeds up the decision making process.
- Time limit: within 48 h
- Consideration for decisions / changes / concretisation
- If necessary, an on-site visit/hearing

STEP 4

FORMALLY DESIGNATE MEASURES WITH THE RELEVANT AUTHORITY:

- Include reason for the designation
- Formal designation of the design concepts
- If necessary verbally, to be done during an on-site visit

STEP 5

DEVELOP COMMUNICATIONS PLAN AND NOTIFICATION SIGNAGE:

- Work with municipal communications department to establish clear messaging for press and public relations outreach
- Develop clear “notice of change” signage if necessary (i.e. no stopping)

STEP 6

IMPLEMENT SIGNAGE AND MARKING:

- Executed by commissioned company / municipal personnel
- Regular and consistent monitoring of project by the relevant authority
- Visual documentation of installation as a provisional traffic signage plan (including as-built aerial photo by drone)

STEP 7

SUBMIT FINALIZED TRAFFIC SIGNAGE PLAN TO THE RELEVANT AUTHORITY:

- Deadline: within 24 h
- Format: visual documentation (created by drone and on-street photography/video)



With the help of a drone camera, the temporary measures and the associated signage can be effectively documented. (Source: Mobycon B.V.)



PopUp BikeLane in Berlin - Friedrichshain - Kreuzberg (Source: Peter Boytman Creative Commons CC0 1.0)

STEP 8

FINALIZE DESIGNATION WITH RELEVANT AUTHORITY:

- Addition of signage plan
- Determine duration of the designation:
 - Until expiry of the generally applicable social distancing measures (for cities using temporary measures as a pre-amble to permanent cycle infrastructure, this can be a different timeframe)

STEP 9

EVALUATE MEASURE WITH THE RELEVANT AUTHORITY(IES):

- Deadline: within 72h
- Quick-scan assessment reviewing:
 - reduced risk of infection
 - traffic safety
 - traffic flow.

STEP 10

ADJUST AND MODIFY (IF NECESSARY):

- Determine necessary adjustments based on the evaluation
- Create a plan to adjust projects as needed
- Execute additional evaluation and make further modifications if necessary

STEP 11

COMPLETE MEASURE

- Visually documentation (created by drone) of the completed measure and usage

Following the completion of implementation, if desired or considered necessary, text documents can be created after step 11 for the designated measures.

The temporary measures should be evaluated regularly throughout the process to identify areas in need of improvement. The evaluation of temporary facilities can inform the permanent infrastructure that can replace the temporary measures. Cities should start planning permanent measures already during this phase to ensure the rise in cycling levels can be maintained after the corona related restrictions have been lifted.



Before: Kottbusser Damm (Source: Bezirksamt Friedrichshain-Kreuzberg)



After: Kottbusser Damm (Source: Bezirksamt Friedrichshain-Kreuzberg)



PopUp BikeLane in Berlin - Friedrichshain - Kreuzberg (Source: Peter Boytman Creative Commons CC0 1.0)



5.0

CREATING MORE SPACE FOR BIKES WITH CONCRETE TEMPORARY MEASURES

When implementing temporary measures, it is important to observe the four basic principles described above: separation, forgiveness, predictability and network approach. Below are some examples of temporary measures that are easy to implement and follow the basic principles as closely as possible. These measures can be applied in different cities and different contexts.

This section contains several before-and-after cross-section examples illustrating which measures can be

used to construct temporary cycle paths or cycle lanes. The specific details of the measures in Friedrichshain-Kreuzberg are abstracted from the basic concepts in order to inspire other cities and municipalities to take concrete action. Graphics based on a concrete example from Friedrichshain-Kreuzberg are numbered as per the document developed by Berlin (see Appendix 7.1), where FrKr RP TEER 01 means: Friedrichshain-Kreuzberg Rule Plan 01.



Temporary Measures on Zossener Brücke (Source: Bezirksamt Friedrichshain-Kreuzberg)

EXAMPLE 1: CYCLE LANE WITHOUT ON-STREET PARKING

On streets with two vehicle lanes in each direction, the entire width of the existing kerbside lane is designated as a temporary cycle lane. Added measures for the visibility and safety of cyclists are:

- Separation of the temporary cycle lane by markings on the ground *and* by vertical separation such as bollards or guide beacons
- Clear and consistent temporary “cycleway” signage
- Buffer zone between car and cycle lane

More technical details can be found in Appendix 7.1.



FRKR RP TEER 01 BEFORE

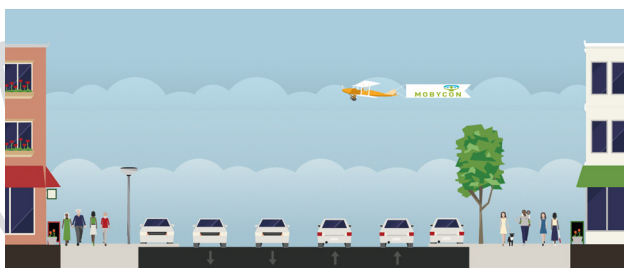


FRKR RP TEER 01 AFTER

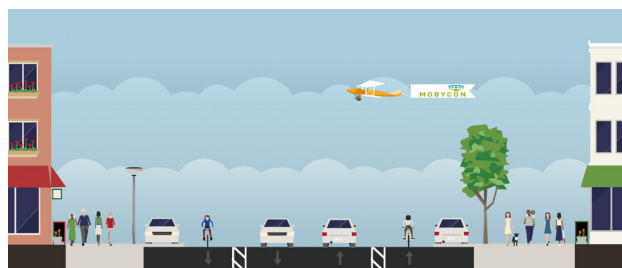
EXAMPLE 2: CYCLE LANE WITH ON-STREET PARKING

On streets with two car lanes in each direction and a lane of car parking on the kerbside, the existing outside travel lane is designated as a temporary cycle lane for its entire width. The existing on-street parking only remains in place if absolutely necessary and parking bays are present, making the parking lane not usable for bicycles. If on-street parking is in a continuous lane, see example 3. Measures for the visibility and safety of cyclists are:

- Separation of the temporary cycle lane by markings on the ground *and* by vertical separation such as bollards or guide beacons, where possible
- Clear and consistent temporary “cycleway” signage
- Buffer zone between the car and cycle lane and between cycle lane and parking lane



FRKR RP TEER 02 BEFORE

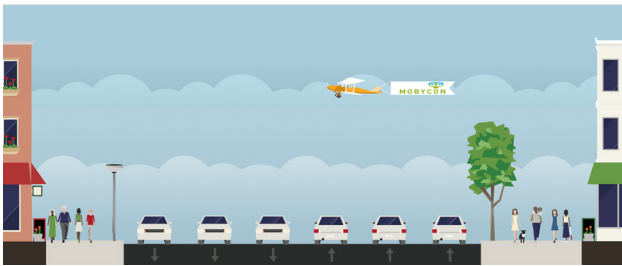


FRKR RP TEER 02 AFTER

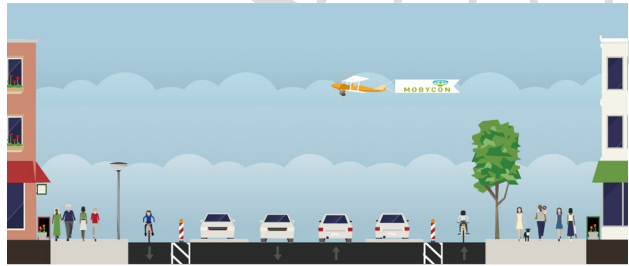
EXAMPLE 3: PARKING PROTECTED CYCLE LANE WITH BUFFER

On streets with 3 car lanes in each direction, where parking is also allowed in the kerbside lane, the middle car lane is designated the car parking lane, and the kerbside lane is designated the full width of a temporary cycle lane. Measures for the visibility and safety of cyclists are:

- Separation of the temporary cycle lane by markings on the ground *and* vertical separation such as beacons
- Clear and consistent temporary “cycleway” signage
- Extended buffer zone between the cycle lane and the parking lane so that there is enough space for motorists getting out of the car



FRKR RP TEER 03 BEFORE



FRKR RP TEER 03 AFTER

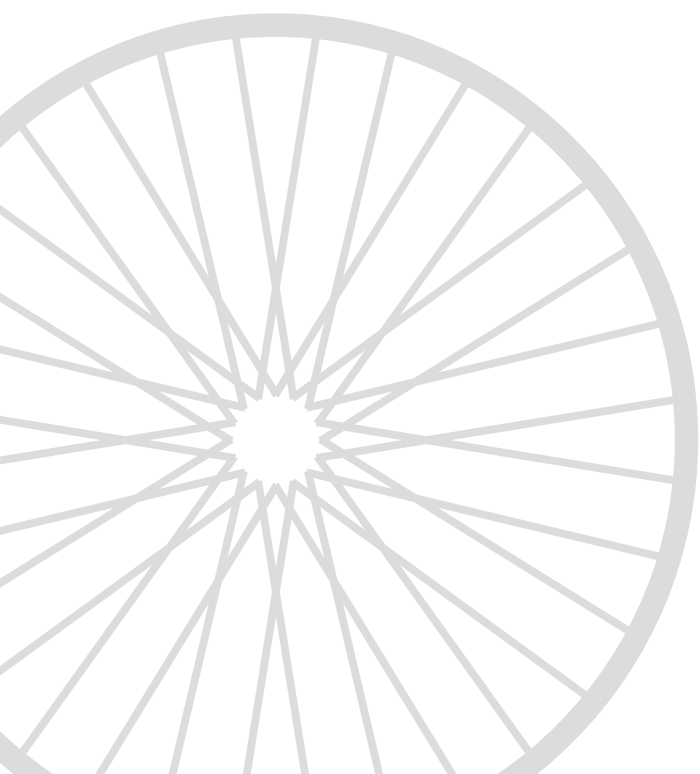
EXAMPLE 4: SIGNALIZED INTERSECTIONS (SEE FRKR RP TEER 04)

Where a temporary cycle path or cycle lane meets a signalized intersection, it is important to prevent motorised traffic turning into the path of cyclists travelling straight ahead or also turning. To avoid conflict, measures for the visibility and safety of cyclists are:

- Where possible, create a temporary "protected intersection" with temporary kerbstone extensions
- If this is not possible:
 - Install cycle-friendly signalling phases with separate, exclusive green phases for pedestrians and cyclists, or;
 - Green phases for cyclists before the green phase for cars
 - Consider temporary markings to highlight appropriate locations for cyclists to wait for a green light, while maintaining their distance

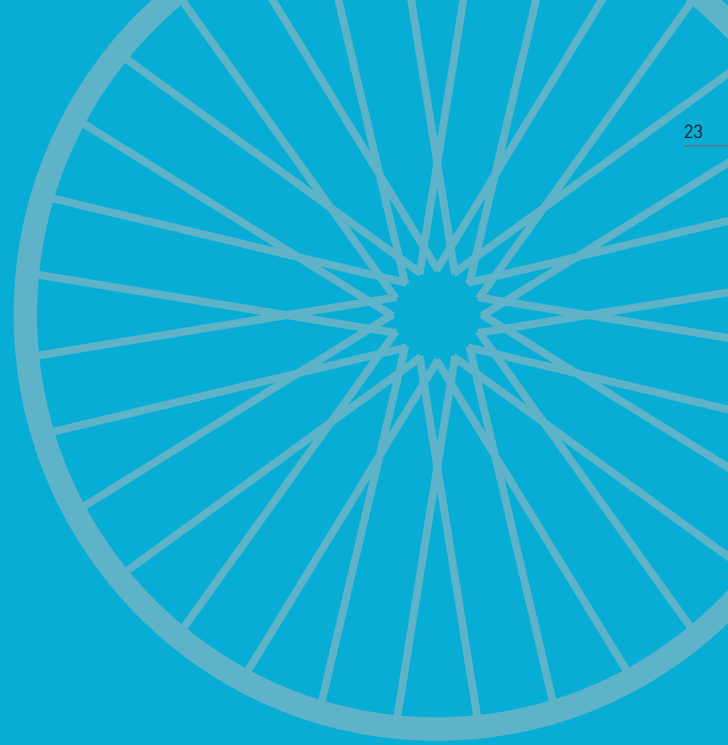


PopUp BikeLane in Berlin - Friedrichshain - Kreuzberg
(Source: Peter Boytman Creative Commons CC0 1.0)



7.0 APPENDIX

7.1 REFERENCE DOCUMENT





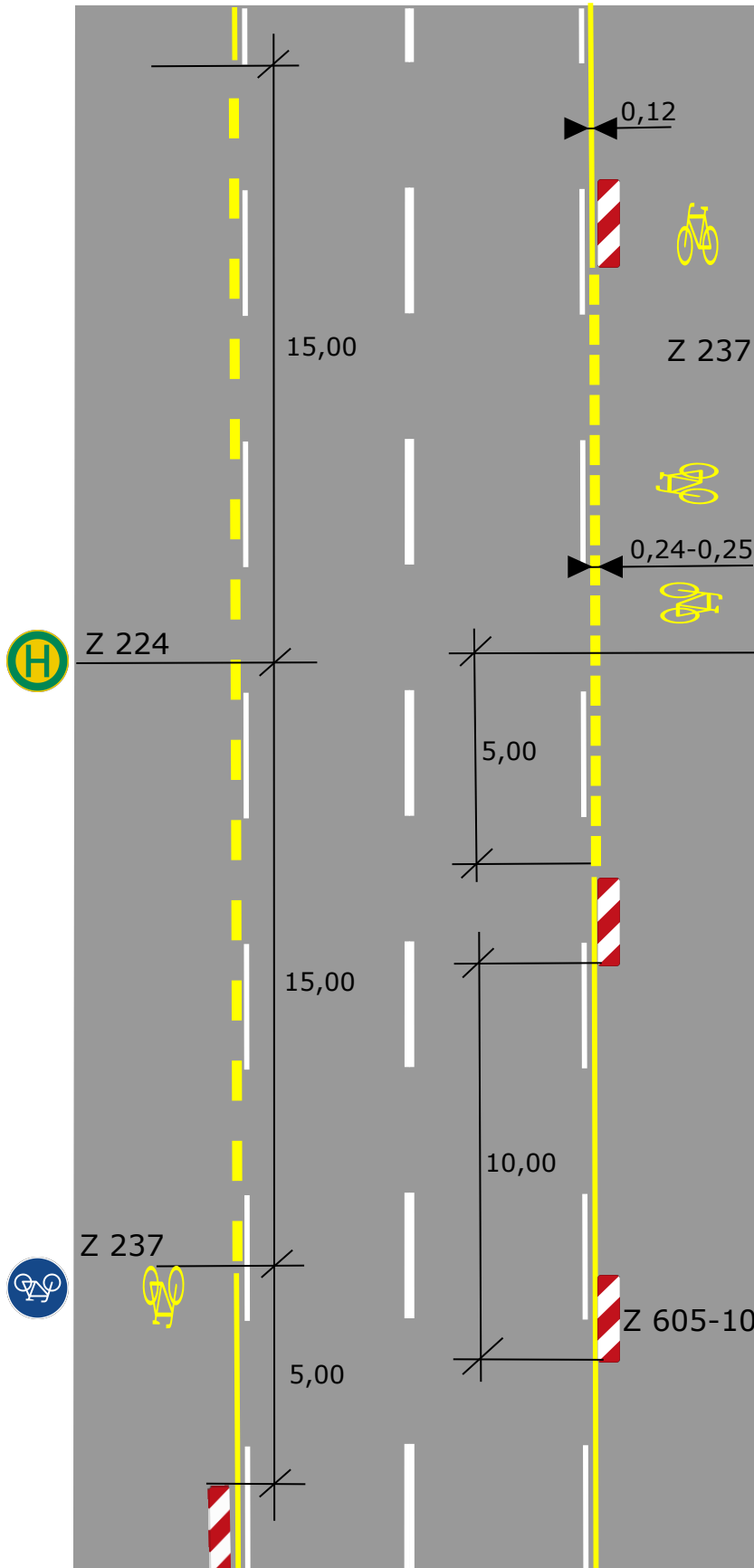
© B.roythmann/SenUVK

Berlin: mobiler

Regelpläne zur temporären Einrichtung und Erweiterung von Radverkehrsanlagen

genehmigt am
02.04.2020

U. Haegele
Haegele, Abteilungsleiter



Die Breite des Radfahrstreifens ergibt sich durch die Breite des vorhandenen Fahrstreifens.



Vorhandene Beschilderung für den ruhenden Verkehr ist abzudecken.

Furtmarkierungen (0,50 m : 0,20 m) nur bei Vorfahrt für den Radverkehr und an signalisierten Knoten.

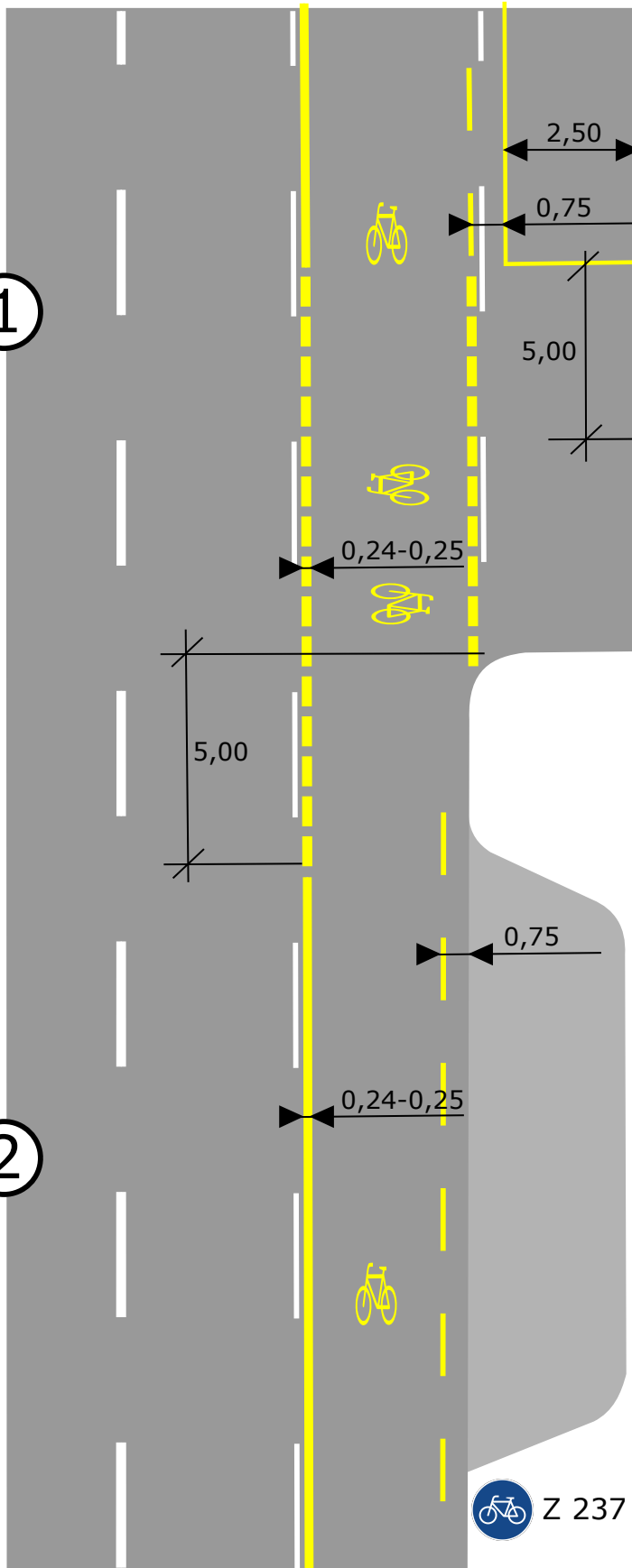
Z 295 ist an Grundstückszufahrten/-ausfahrten nicht zu unterbrechen.

An Haltestellen und ggü. von Einmündungen sind Leitlinien zu markieren (1,00 m : 1,00 m).

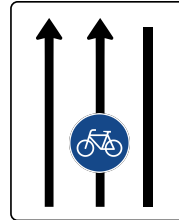
Sinnbild "Radverkehr" ist in regelmäßigen Abständen (ca. 25 m) zu wiederholen.

Bei Bedarf können die Abstände der Zeichen 605-10 reduziert werden.

①



Die Breite des Radfahrstreifens ergibt sich durch die Breite des vorhandenen Fahrstreifens.



Parkflächenmarkierungen als Schmalstrich sind an Grundstückszufahrten und ggü. Einmündungen zu unterbrechen.

Gegenüber Einmündungen sind statt Z 295 Leitlinien (1,00 m : 1,00 m) zu markieren (vgl. RP TEER 01).

Z 295 ist an Grundstückszufahrten/-ausfahrten nicht zu unterbrechen.

Sicherheitstrennstreifen zum Parkstreifen mit Z 340 als Schmalstrich (1,00 m : 1,00 m).

Furtmarkierungen (0,50 m : 0,20 m) nur bei Vorfahrt für den Radverkehr und an signalisierten Knoten.

Sinnbild "Radverkehr" ist in regelmäßigen Abständen zu wiederholen (ca. 25,00 m).

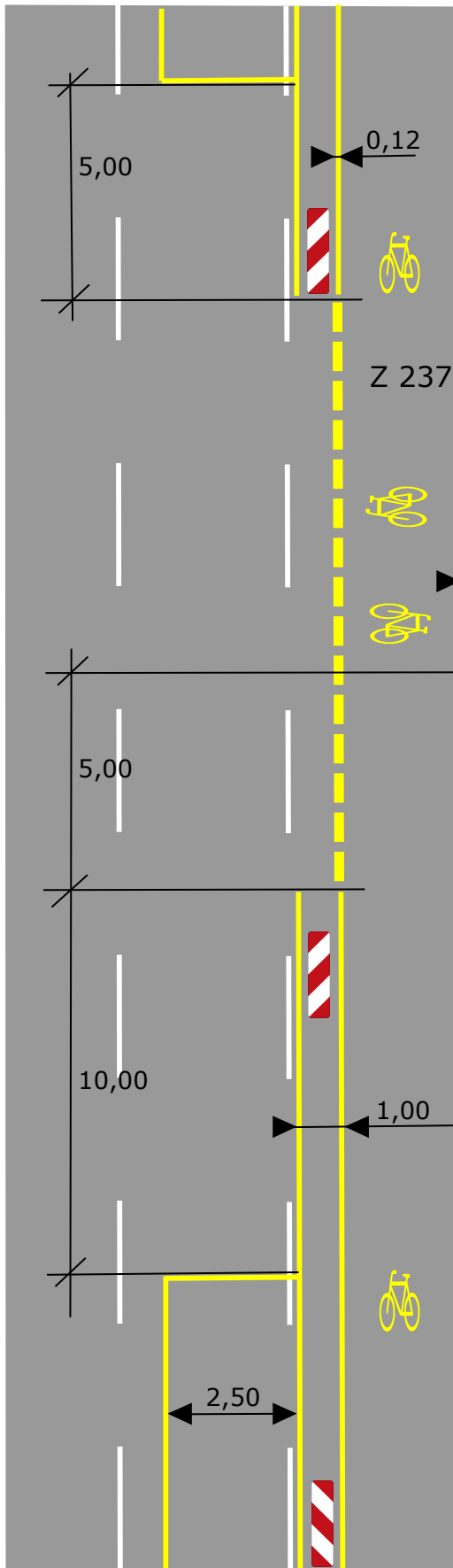
②



Z 237

genehmigt am
02.04.2020

U. Haegele
Haegele, Abteilungsleiter



Die Breite des Radfahrstreifens ergibt sich durch die Breite des vorhandenen Fahrstreifens.

Sicherheitstrennstreifen zum Parkstreifen mit Z 295 (Doppellinie Schmalstrich).

Furtmarkierungen (0,50 m : 0,20 m) nur bei Vorfahrt für den Radverkehr und an signalisierten Knoten.

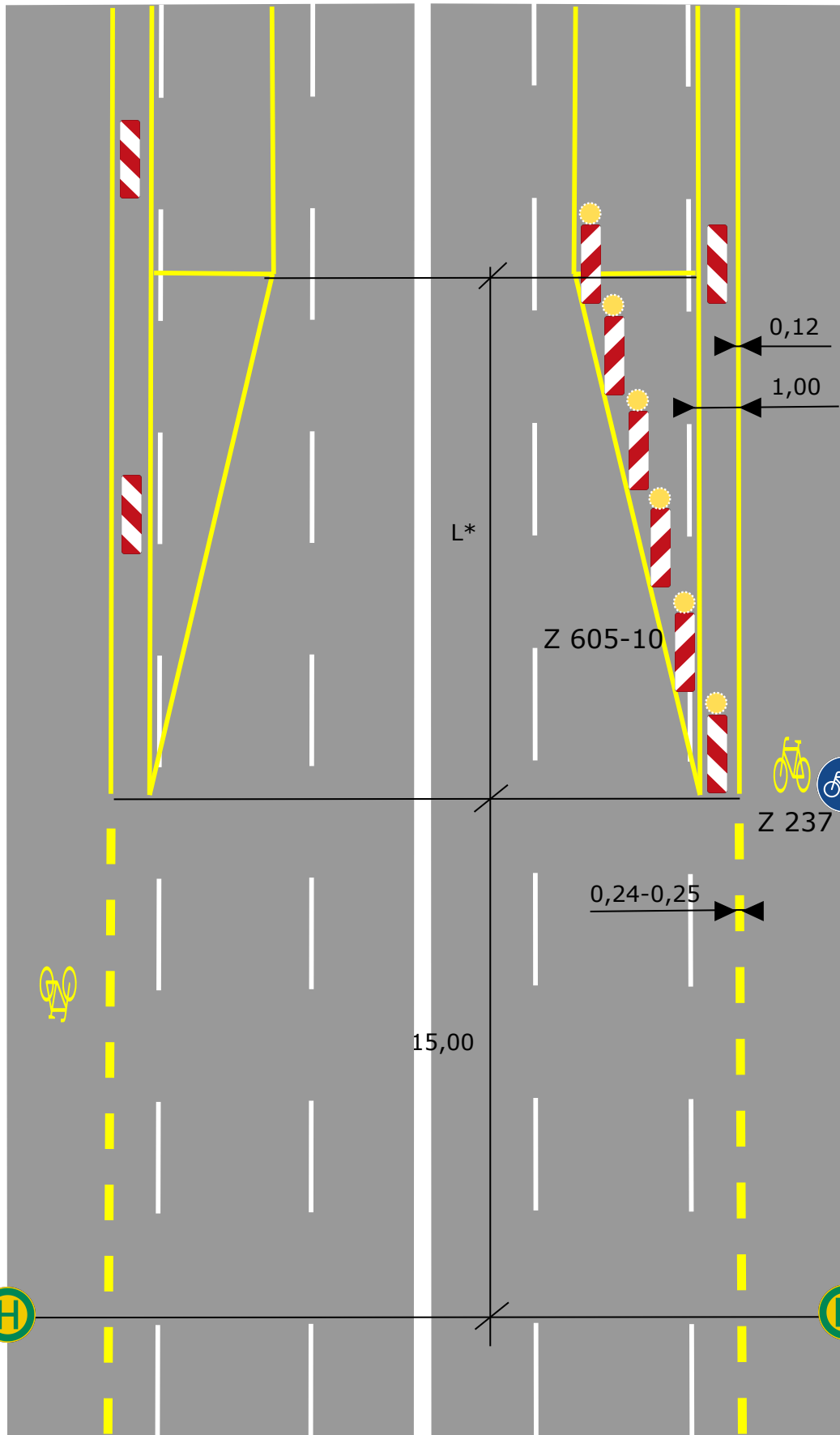
Sicherheitstrennstreifen ist an Grundstückszufahrten/-ausfahrten auf ein Zeichen 295 zu reduzieren, Parkflächenmarkierungen sind zu unterbrechen, ggü. Einmündungen sind statt des Z 295 Leitlinien (1,00 m : 1,00 m) zu markieren.

Sinnbild "Radverkehr" ist in regelmäßigen Abständen zu wiederholen (ca. 25 m).

Zeichen 605-10 können optional verwendet werden; sie müssen verwendet werden, wenn weitere VZ im Sicherheitstrennstreifen aufgestellt werden.

genehmigt am
02.04.2020

Haegele, Abteilungsleiter



Die Breite des Radfahrstreifens ergibt sich durch die Breite des vorhandenen Fahrstreifens.

Sicherheitstrennstreifen zum Parkstreifen mit Z 295 (Doppellinie Schmalstrich).

Zeichen 605-10 nur an jedem Beginn des Parkstreifens und im Sicherheitstrennstreifen, wenn dort noch andere VZ aufgestellt werden.

Markierung im Bereich von Haltestellen als Leitlinie (1,00 m : 1,00 m) auf einer Länge von 15 m vor und hinter dem ersten bzw. letzten Z 224.

L*: Verziehungslänge 1:10 (bei 2,50 m Parkstreifen: 25,00 m).

Je nach örtlichen Verhältnissen sind zur Ankündigung Spurtafeln gem. RP TEER 04 vorzusehen.

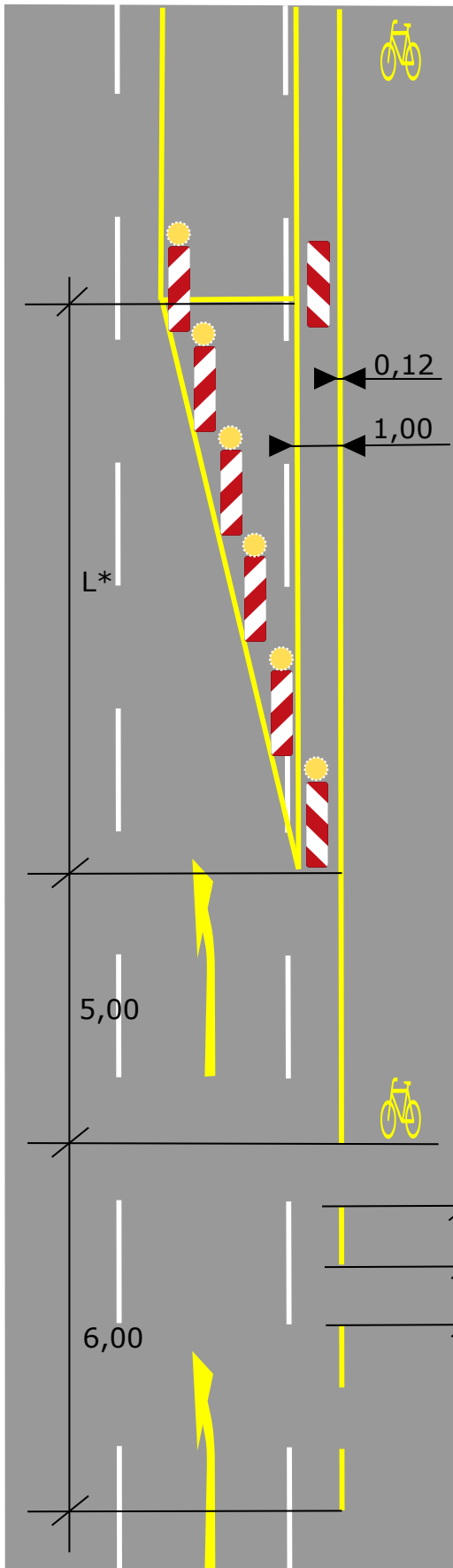
Bild 1
Ende des Parkstreifens

Bild 2
Beginn des Parkstreifens

Ohne Maßstab
Maßangaben in Meter

genehmigt am
08.04.2020

U. Haegele
Haegele, Abteilungsleiter



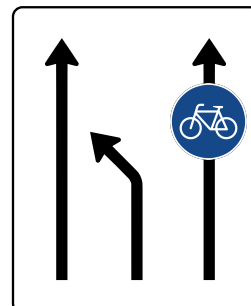
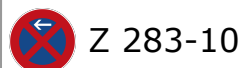
Beginn auf freier Strecke

L*: Verziehungslänge 1:10
Bei vorher auf ausreichender Länge freien
Fahrstreifen kann bei örtlichem Bedarf eine
Verkürzung erfolgen (jedoch nicht im Bereich von
Haltestellen von Linienbussen gem. RP TEER 03b).

Vorankündigung durch Z 531
(Einengungstafel)
in ausreichendem Abstand
(je nach örtlichen Gegebenheiten).

Zusätzlich sind mind. 2x Z 297.1-21
(gem. RP 221/1 Nr. 4) zu markieren.

Der Zufahrtbereich des
Radfahrstreifens ist mit Z 283 freizuhalten.

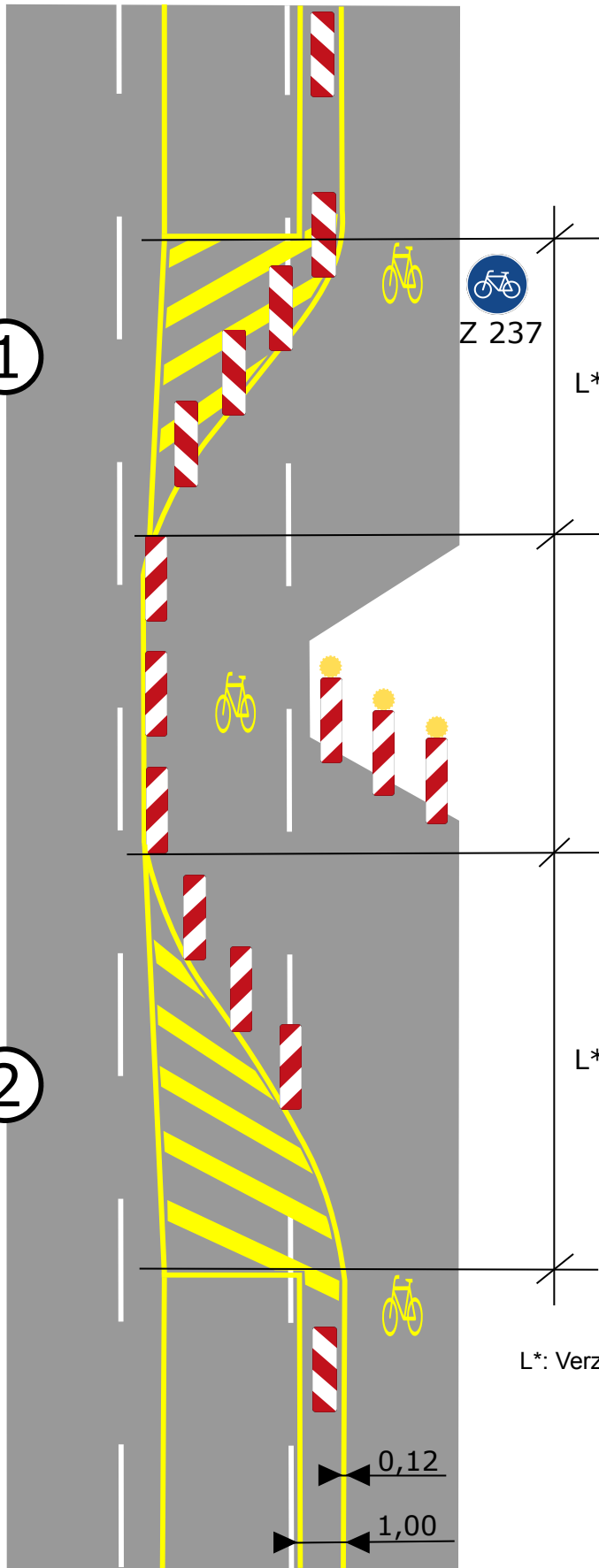


genehmigt am
08.04.2020

U. Haegele
Haegele, Abteilungsleiter

1

2



Führung an Engstellen
oder am Beginn (1) bzw.
am Ende (2) eines
Radfahrstreifens mit
linksseitigem Parken

Auf die Markierung einer
Sperrfläche kann je nach
örtlichen Verhältnissen
verzichtet werden.

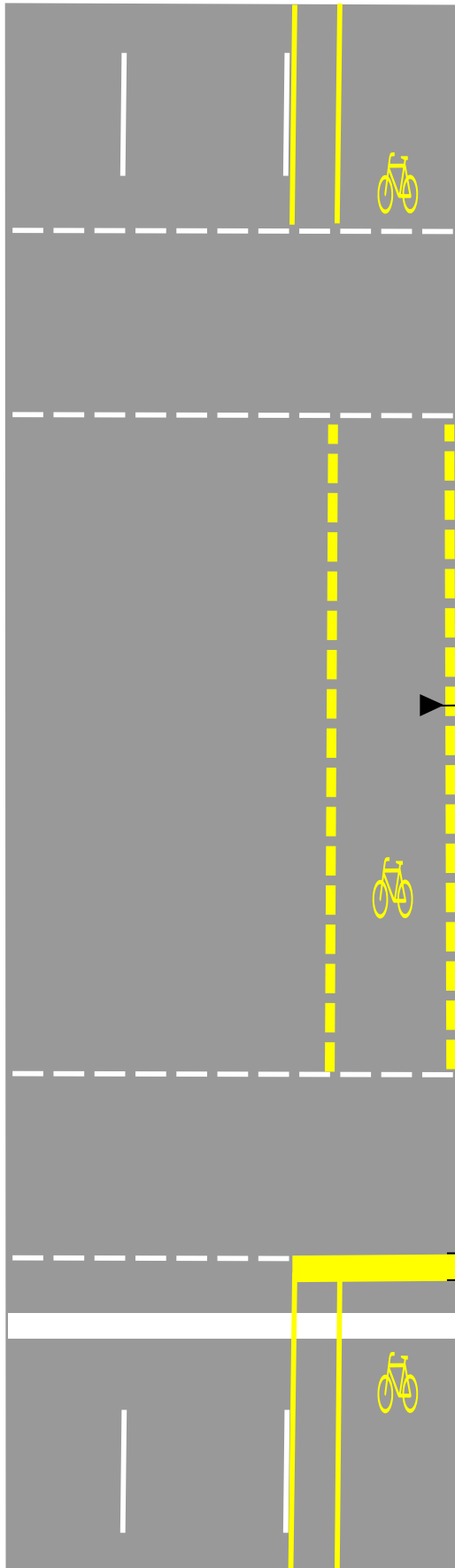
Für die Sperrflächen gilt
RP 240.

Bei einer möglichen
Fußgängerquerung im
Bereich von
Gehwegvorstreckungen
sind die Leitbaken
behinderungsfrei
aufzustellen.

L*: Verziehungslänge 1:10

genehmigt am
02.04.2020

U. Haegel
Haegel, Abteilungsleiter



Die Breite des Radfahrstreifens ergibt sich durch die Breite des vorhandenen Fahrstreifens.



0,24-0,25

0,50

Mindestens 15,00 m vor der Haltlinie darf links vom Radfahrstreifen das Halten/
Parken gem. RP TEER 03 ff. nicht erlaubt sein.

Vorhandene Z 297 müssen gegebenenfalls angepasst oder ungültig gemacht werden.

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