

# Basic Road Safety Information

February 2007

This document is intended to give a quick guide. The downside is the risk of approximation and incompleteness. For more information please consult the documents referenced in this document

Utban

⊳ Certu 2007/14





# **Road signs in urban areas**

The purpose of this document is to provide information on the elemental principles of road signs in urban areas and generally.

This document deals with permanent urban road signs, whether vertical signs or road markings.

# Foreword

The French road network is made up of around a million kilometres of roads: signs are used on all roads. For example, a review of the national road network showed that there was an average of 13 vertical road signs per kilometer. If road signs are badly used or situated, they can be a contributing factor to the mortality rate from accidents. Special attention should be paid to the choice of road sign and its implementation.

## **Definition and bases**

Road signs are the main source of information between the highway authorities and road users. There are two types of road sign: road markings and vertical road signs. (police and directional signs).

Road sign regulations are based on:

– the Vienna Convention of 8 November 1968 and the European agreement concluded in Geneva on the 1<sup>st</sup> May 1971 and its amendment;

- the highway code and articles L 411-6 and R 411-25;-25;

- of the inter-ministerial order of 24/11/67 (amended) relating to road and motorway signs;

- inter-ministerial instrctions on road signs (8 parts);

- inter-ministerial instructions relating to directional road signs.

Road signs are a regulated feature requiring expertise to obtain coherence and consistency.

It is based on three main principles (article 4 of the inter-ministerial instruction):

- valorization: only place signs that are useful;

- grouping: place signs that need to be seen at the same time together;

- legibility: reduce and simplify directions as much as possible.

Using signs other than those given in regulatory documentation is **forbidden**. The same goes for reproduction of signs on the roadway.

Sign posts must not be an obstacle for users, vehicles or pedestrians. They can become a safety issue.

For road signs to fulfil their function, they must be well positioned, correctly maintained, coherent, relevant and understandable.

The main efficiency criteria are: uniformity, consistency, simplicity and continuity of directions given that match the road sign master plan for directions in a built-up area.

As such, it is useful to think about road signs early on in any town planning discussions. Any work subsequently carried out is made all the easier.

# **Road marking**

Longitudinal marking is only obligatory on motorways and expressways. On all other networks, it remains obligatory for lines accompanying "stop" and "give way" signs, to mark the paths set out for pedestrians to cross and reserved lanes.

Road markings in towns and cities must be chosen carefully. In urban areas, road markings are particularly useful to indicate the type of lane or its limits but also for restrictions and no-parking zones, traffic light stop lines and some directional markings. On two-lan roads, centreline marking is not always necessary; it should even be avoided, especially if attempts have been made to control speeds.

Markings have three main functions: direction, restriction and warning.

Only four colours are allowed by current legislation:

O white for permanent road markings;

• yellow for temporary markings and zig-zag lines for bus stops, stopping or parking restrictions and delivery areas;

• blue is allowed for limited duration parking areas;

• red for emergency lanes;

The colour green is reserved for cycle lanes and must not replace white markings which remain the regulatory colour but can be used in addition where deemed necessary. Green is optional and should be used for specific cases.

It should be noted however that large painted areas create a sense of insecurity for two-wheeled transport because they can get slippery when wet.

At night, legibility of road markings is very important for all road users. As a result, reflecting paint is:

- very desirable in built-up areas, even though there may also be street lighting;

- highly recommended in built-up areas where lighting is not permanent.

Furthermore, so that road users can see road markings better, they need to be regularly maintained. Road authorities should pay as much attention to keeping road markings visible as to ensuring they meet regulatory requirements. They should also ensure that markings are relevant, especially continuous lines. All products used must be made consistent.

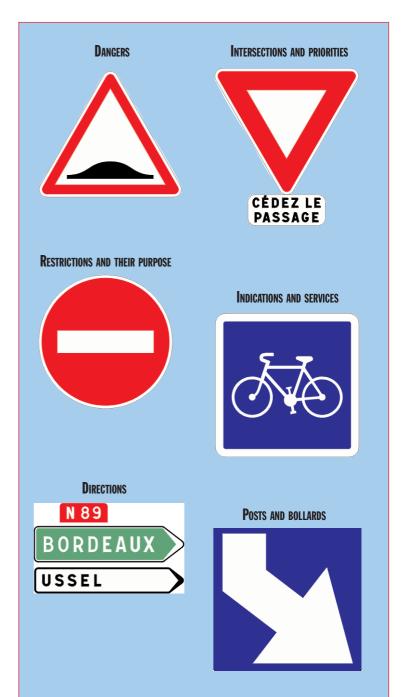
## **Vertical signs**

As in many other areas, vertical road signs, signs and posts are subject to French standards (NF) such as the series of standards NF P 98 532 and XP P 98 542 relating to resistance, ageing and mechanical features, etc.

Soon, European standards will take precedence over national standards and signs will have to be certified on a European Community level.

All vertical road signs must be made consistent.

Vertical road signs include all signs that inform road users about:



Must be consistent with horizontal signs and vice-versa.

Must supply elements that help the driver make decisions.

Intended to conveny a visual message by its shape, colour and position. All roads open to public traffic are concerened by restriction, warning and geographical or information directions.

Directional signs required for travel include:



This helps give users information from their point of departure to their point of arrival. These are necessary for carrying out their journeys in optimum conditions of comfort and safety. For road signs to be efficient it is necessary to:

- keep road signs and markings efficient among advertising sign pollution

organise, classify and limit directional road signs
organise maintenance and regular assessments

In built-up areas, vertical road signs must be visible day and night. To do this, signs must be covered in a reflective film (order of 30 January 1992 - arti-

cle 13) Class 2 is obligatory for AB-type signs (intersection and priority signs) and for all signs placed on sections where speed is raised to 70 km/h.

Furthermore, vertical road signs can be placed at a height of up to 2.30 metres to take into account vehicles that can block their view and affect visibility and pedestrian traffic as little as possible.

The sign should be vertical and turned slightly away from the road to avoid headlights reflecting on its surface and reducing visibility.

In towns, the large number of road signs makes them markedly less effective. As a result, unnecessary or irrelevant road signs should be removed. Fieldwork studies have shown that around 20-30% of all signs can be dispensed with.

### Summary

Signs are one of the key factors in urban road safety. The application of regulatory principles for road signs is a measure of security. Messages given to users must be clear and unambiguous to avoid sudden changes of strategy or direction that can be both random and dangerous. The human and social costs of accidents mean that reducing the most commonly found faults in road signs and markings is of the utmost importance. The State and local authorities, as road management or police authorities, can be held responsible if, in the event of an accident, road signs are:

non-compliant
 not visible
 badly positio in a bad state
 confusing ned

Certu research centre on networks transport town planning and public facilities

9, rue Juliette RÈcamier 69456 Lyon Cedex 06 telephone: 04 72 74 58 00 fax: 04 72 74 59 00 www.certu.fr

# **Associated subjects**

• Police powers held by the Mayor, the President of the General Council and the Prefect in urban areas

- Obstacles in urban areas
- Visibility
- Hierarchy of urban roads
- History of priority systems
- Temporary road signs

### Bibliographic references

• Local information signs:

technical guide, LYONS Certu, February 2007.

• Guide to road signs in built-up areas, LYONS Certu, October 2004

• Signalling road structures and cycle tracks, Lyons Certu, May 2004.

• Interministerial Instruction on road signs (8 parts).

• Circular relating to the use of colour on the road, 15 May 1996.

• Interministerial Instruction on road signs, circular 82-31 of 22 March 1982.

• French Highway Code.

• Inter-ministerial order of 24/11/67 (amended) relating to road and motorway signs.

#### DOWNLOAD FILES FROM www1.certu.fr/publications

- Directional sign maintenance in urban areasMirrors
- Fewer road signs in built-up areas
- Orientation posts in urban areas
- Directional signs in urban areas
- Implementation of directional signs in urban areas

The series of documents "Basic Road Safety" formed part of the MPSR project "Road Safety Management and Practices" by by RST working groups managed by Certu for urban areas and by Sétra for interurban areas.

This series of documents is published only for the purposes of sharing experience.

The Administration cannot be held liable for the contents hereof.

These sheets can be downloaded from the following web sites:

- Certu (http://www.certu.fr)
- "DSCR road safety "job portal" (http://securite-routiere.metier.i2)
- Sétra (intranet: http://catalogue.setra.i2 and Internet: http//catalogue.setra.equipement.gouv.fr).

© 2007 Certu This document can be freely reproduced in its entirety. In the event of partial reproduction the prior consent of Certu must be requested.

Certu is part of the Scientific and Technical Network of the Ministry of Public Works



#### AUTHOR OF THE INFORMATION SHEET:

Jean-Marie LIPINSKI

#### <u>Your contact at Certu</u>

Secretarial office ① 04 72 74 59 33