

Recognizability of roads can be improved

Motorists recognize rural roads insufficiently. This is especially the case for 80 km/h and 100 km/h roads. At present the design of these roads varies so much that motorists cannot distinguish the type of road correctly. This is SWOV's conclusion in the recently published report entitled *Recognizable layout of roads; Final report of the predictability projects in SWOV's 2003-2006 research programme*. A study was made of the present recognizability of roads and the effects on driving behaviour. Although information certainly answers the needs of road users, a more uniform design is essential for inducing the proper behaviour.

Recognizability reduces risk of a crash

One of the principles of a sustainably safe road traffic system is recognizability. The idea behind this is that the more recognizable a road is, the more road users know what to expect. Examples are: other types of vehicles, speed limits, and whether to expect oncoming traffic or not. When their expectations are met, motorists will behave more homogeneously. This results in fewer crashes. An example of a road feature that is distinguishing and incites the correct expectations is the red non-compulsory bicycle lane on rural access roads (60 km/h roads).

Variation in design hinders recognition

Recognition is easier the more roads *within* a particular road category, for instance 50-, 60-, or 80 km/h road categories, look as similar as possible and thus are uniform, and differences *between* road types are as large as possible. Studies have shown that recognizing 80 km/h and 100 km/h roads, i.e. non-motorways, is particularly problematical. Currently there is a great deal of variation in the design of such roads and this can result in motorists being confused about, for example, the speed limit, whether or not pedestrians, bicycles, or mopeds use the same road, and whether overtaking is permitted. Motorways (100- and 120 km/h) and well laid out residential areas (30 km/h roads) are generally recognized correctly.

Essential Recognizability Characteristics guideline

In order to improve the road recognizability between now and 2020, in late 2003 the National Mobility Council designated two characteristics as being 'Essential Recognizability Characteristics (ERC)': edge marking and driving direction separation. This resulted in the CROW Essential Recognizability Characteristics Guideline. The ERC guideline gives road authorities the possibility of making their road recognizable in phases. A SWOV inventory showed that road authorities also use their own design variations which are not recommended in this guideline. This leads to a lack of uniformity within road types and could undermine recognizability for road users.

More uniformity needed in 80- and 100 km/h roads

In the interest of good recognition, SWOV recommends striving for greater uniformity in the design of road types, especially 80- and 100 km/h roads, and to do this especially for those aspects that, by nature, are readily noticed by road users. Motorists indicate they mainly notice the types of road marking (e.g. cyclists, overtaking), the road width, and the speed limit.

More information and faster ERC guideline implementation

SWOV research has shown that the new ERC road markings are not clear to everybody and that road users need information about it. For example, the meaning of the double or green axis marking is not clear to everyone. As long as the meaning of the markings is not comprehensible for everybody, the new ERC markings will cause confusion rather than recognition. The relatively slow implementation also contributes to the confusion. Additional information can help making road recognizable. Although information certainly answers to road user needs, the roads' design remains an indispensable element for inciting correct driving behaviour.

The complete report entitled [*Recognizable layout of roads; Final report of the predictability projects in SWOV's 2003-2006 research programme*](#), R-2006-18, has been available since 26 April 2007 at www.swov.nl. The report is in Dutch, but has an English summary.

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