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**REVISION OF THE CONSOLIDATED RESOLUTION ON ROAD
SIGNS AND SIGNALS (R.E.2)**

Signing for roadworks

Note by the secretariat

At its thirty-sixth session, the Working Party requested the delegations of the Russian Federation and Denmark, who were so far the only delegations to have made comments on the draft recommendation, although their opinions were divergent, to seek a compromise solution. That proposal to modify TRANS/WP.1/2000/29 appears below. Following observations submitted by other delegations, WP.1 accepted the Chairman's proposal to allow States which so wished to transmit their comments in writing to the secretariat by 30 June 2001 at latest. Comments were received from Norway and France.

Danish-Russian Federation Proposal

New text in bold, deletions crossed out:

DRAFT RECOMMENDATION FOR ROAD WORKS SIGNING AND SAFETY

1. General requirements

- 1.1. Road signs, horizontal and vertical delineation devices, electrical lighting installations, traffic control devices and protective barriers shall be made of high performance materials, capable of resisting the rough conditions of use on road work zones and be easy to install and remove.
- 1.2. Mobile barriers, fences or guardrails or any other suitable devices shall be used to ensure the safety of the persons working on roads as well as the road users passing through the work zone.
- 1.3. The wearing of safety garments described in Recommendation No. 4.2 of the Consolidated Resolution on Road Traffic (TRANS/SC.1/294/Rev.5) is strongly encouraged on all road work zones.
- 1.4. ~~Vehicles used on road work zones, especially those of a special shape or kind and used for special purposes and in special conditions should be marked [as mentioned in Recommendation 2.4 of the Consolidated Resolution on Road Traffic (TRANS/SC.1/294/Rev.4)] with preferably the recommended red and white oblique bands clearly visible in the same way by day and by night.~~
Vehicles used in roadwork zones should be equipped with special amber warning lights and preferably marked to the front and to the rear with red and white bands of a retroreflective material.
- 1.5. Slow moving vehicles, in particular those which by construction cannot exceed the speed of 30 km/h, should also be marked with additional rear markings as recommended in the Consolidated Resolution on Road Traffic (Recommendation No. 2.10) in document TRANS/SC.1/294/Rev.5.

2. Technical requirements

- 2.1. The photometric and colorimetric properties of all road signs, markings and additional markings of vehicles should comply with the provisions set out in the International Commission on Illumination (CIE) publication 39-2 (TC-1.6) 1983 "Recommendations for Surface Colours for Visual Signalling".
- ~~2.2. The minimum requirements regarding the photometry of retroreflective materials used on road work signs should be those of Class II materials described in the above mentioned CIE document.~~
- 2.3. Damaged material, signs, markings and safety equipment shall be replaced whenever necessary; to this effect, regular inspections shall be carried out during the entire duration of the road works.

3. Advance warning signs

- 3.1. Advance warning that work is in progress on the section of road ahead shall be given by the sign A,16 with the shape A^a according to the 1968 Convention on Road Signs and Signals and the European Agreement supplementing it.
- 3.2. This sign shall be placed at sufficient distance ahead, allowing drivers to adapt early enough their driving to the particular situation they will encounter.
- 3.3. Any other additional signs, such as speed reduction indications (C,14); narrow carriageway (A,4) width, height, weight or axle load restrictions (C,5 - 6 -7- 8); prohibition of overtaking (C,13); indication of lane changes, etc. may be placed in such a way that drivers can clearly distinguish them from other road traffic signs regulating normal traffic conditions.
- 3.4. Should several signs be used at the same time and should they have to be grouped on the same support, not more than two messages at a time shall be shown.

4. On-site road signs

- 4.1. Use of only a certain number of significant road signs should be encouraged. These signs are reproduced in the appendix to this annex.

5. Vertical on-site delineation

- 5.1. All delineation devices should show red and white or red and yellow retroreflective markings in such a way that they have the same aspect by day and by night.
- 5.2. Cones, vertical lane separators, barrels and barriers should have such retroreflective bands to fulfil the requirements in paragraph 5.1.
- 5.3. Electrically illuminated vertical delineators may be used whenever necessary in addition to the devices mentioned above.

6. Temporary horizontal markings

- 6.1. To the extent possible, where vertical delineation devices are used on road work zones, temporary horizontal markings should be used to provide continuous visual guidance to drivers under all conditions both by day and at night. The choice of use of horizontal markings should depend on the importance and duration of a road work zone.
- 6.2. Temporary horizontal markings shall be conceived in such a way that road users can clearly distinguish them from any normal horizontal markings which may be left in place. Any normal horizontal markings which could cause confusion should be either erased or blacked out.

6.3. If temporary horizontal markings are used they shall be made of materials easily removable and visible by day and by night.

7. Deviation signing

7.1. ~~Where a road is closed to all vehicles or certain categories of vehicles, and if a detour is required, the signs described in Recommendation 1.5. of the Consolidated Resolution on Road Signs and Signals (R.E.2.) (TRANS/SC.1/295/Rev.3) shall be applied.~~

If a part of a road is temporarily closed for traffic, signs as described in Recommendation 1.5 of R.E.2 (TRANS/SC.1/295/Rev.3) should be applied to indicate diversions and detours.

7.2. **These signs should be made with a yellow or orange retroreflective background in accordance with the Convention on Road Signs and Signals, Annex 1, Section G, Chapter I, paragraph 4.**

8. End of restrictions

8.1. All temporary restrictions should always be cancelled at the end of a road work zone.

8.2. Should permanent restrictions to traffic prevail also after the end of road works, they should be repeated as soon as possible after the above-mentioned sign.

9. Traffic light signals

9.1. Traffic light signals used to regulate traffic flow at a road work zone should preferably be of the three light type.

9.2. When possible, vehicle detectors should allow for traffic operated regulation, especially in the case of large variations of the traffic flow.

10. Removal of unnecessary restrictions

10.1 All unnecessary restrictions, obstacles and barriers to traffic flow on road work zones should be removed when work is not in progress on weekends and public holidays and also at the time of peak traffic if some traffic lanes were closed because of the work.

10.2. Only the necessary warning signs and temporary horizontal markings and vertical delineation devices should prevail under these conditions.

“1.7 Vehicles used for road works must (should) be equipped with special amber

4. The word “may” in paragraph 3.3 does not seem appropriate. It indicates that advance signs also may be placed in such way that the drivers cannot clearly distinguish them from other signs regulating normal traffic conditions. That of course may be all right, but in that case the need for this paragraph is questioned. From a legal point of view it is proposed to use the word “shall” or otherwise delete paragraph 3.3. Another question is how one is supposed to place a sign in such a way that the intention is accomplished. The intention of this paragraph is presumed to be that drivers familiar with the actual stretch should be warned that the infrastructure etc. is temporarily altered. The common sense approach is to put the actual sign, for instance speed limit, together with A,16. If this is covered by the word “place” everything is fine. If not, one should find other words covering this approach.

5. Paragraph 4.1 recommends the use of a limited number of signs for road works. We agree in principle. The type of signs should be limited. Also the number of signs at a certain road stretch should be limited, but this is covered by a general provision of the Convention on Road Traffic (Art. 4 (b)) . It is felt however that the signs reproduced in the appendix do not cover all possible needs and that the signs listed merely should be regarded as the most common examples of road works signs. For instance signs A1, A2/A3, A8, A11 and A24 seem rather appropriate for road works. Also a number of prohibition signs could be added. We propose to amend this paragraph as follows:

“4.1 Use of only a certain number of significant roads signs should be encouraged. Examples of frequently used signs are reproduced in the appendix to this recommendation.”

5. The subtitle should be deleted. It is covered by paragraph 1.6. The title of the appendix should be amended to:

“Examples of frequently used signs for road works”

6. It is proposed to add sign A, 8 to the list.

France

1.3 Replace “is strongly encouraged” by “should be obligatory”.

Harmonize paragraphs 1.4 and 2.1,

9.1 France uses a flashing yellow light to indicate “road clear/le pa
