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ANNEX 1

ANNEX

to the

**Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE
COUNCIL**

amending Directive 2008/96/EC on road infrastructure safety management

{SEC(2018) 226 final} - {SWD(2018) 175 final} - {SWD(2018) 176 final}

ANNEX

The Annexes to Directive 2008/96/EC are amended as follows:

- (1) in Annex I, the title is replaced by the following:
"ANNEX I
ELEMENTS OF ROAD SAFETY IMPACT ASSESSMENTS";
- (2) Annex II is amended as follows:
 - (a) the title is replaced by the following:
"ANNEX II
ELEMENTS OF ROAD SAFETY AUDITS",
 - (b) in section 1, the following point (n) is added:
"(n) provisions for vulnerable road users:
 - i) provisions for pedestrians,
 - ii) provisions for cyclists,
 - iii) provisions for powered two-wheelers.";
 - (c) in section 2, point (h) is replaced by the following:
"(h) provisions for vulnerable road users:
 - i) provisions for pedestrians,
 - ii) provisions for cyclists,
 - iii) provisions for powered two-wheelers;"
- (3) the following Annex IIa is inserted :

"ANNEX IIa

ELEMENTS OF ROAD SAFETY INSPECTIONS

1. Road alignment and cross-section:
 - (a) visibility and sight distances;
 - (b) speed limit and speed zoning;
 - (c) self-explaining alignment (i.e. "readability" of the alignment by drivers);
 - (d) access to adjacent property and developments;
 - (e) access of emergency and service vehicles;
 - (f) treatments at bridges and culverts;
 - (g) roadside layout (shoulders, pavement drop-off, cut and fill slopes).
2. Intersections and interchanges:
 - (a) appropriateness of intersection/ interchange type;
 - (b) geometry of intersection/ interchange layout;
 - (c) visibility and readability (perception) of intersections;

- (d) visibility at the intersection;
 - (e) layout of auxiliary lanes at intersections;
 - (f) intersection traffic control (e.g. stop controlled, traffic signals etc.);
 - (g) existence of pedestrian crossings.
3. Provisions for vulnerable road users:
- (a) provisions for pedestrians;
 - (b) provisions for cyclists;
 - (c) provisions for powered-two-wheelers;
 - (d) public transport and infrastructures;
 - (e) road/ rail level crossings.
4. Lighting, signs and markings:
- (a) coherent road signs, not obscuring visibility;
 - (b) readability of road signs (position, size, colour);
 - (c) sign posts;
 - (d) coherent road markings and delineation;
 - (e) readability of road markings (position, dimensions and retroreflectivity under dry and wet conditions)
 - (f) appropriate contrast of road markings;
 - (g) lighting of lit roads and intersections;
 - (h) appropriate roadside equipment.
5. Traffic signals:
- (a) operation;
 - (b) visibility.
6. Objects, clear zones and road restraint systems:
- (a) roadside environment including vegetation;
 - (b) roadside hazards and distance from carriageway edge;
 - (c) user-friendly adaptation of road restraint systems (central reservations and crash barriers to prevent hazards to vulnerable users);
 - (d) end treatments of crash barriers;
 - (e) appropriate road restraint systems at bridges and culverts.
 - (f) fences (in roads with restricted access).

7. Pavement:
 - (a) pavement defects;
 - (b) skid resistance;
 - (c) loose material/ gravel/ stones;
 - (d) ponding, water drainage.

8. Other issues:
 - (a) provision of safe parking areas and rest areas;
 - (b) provision for heavy vehicles;
 - (c) headlight glare;
 - (d) roadworks
 - (e) unsafe roadside activities;
 - (f) appropriate information in ITS equipment (e.g. variable message signs)(g) wildlife and animals;
 - (h) school zone warnings (if applicable).";

(4) Annex III is replaced by the following:

"Annex III

ELEMENTS OF NETWORK-WIDE ROAD ASSESSMENTS

1. General:
 - (a) type of road in relation to the type and size of regions/ cities it connects;
 - (b) length of road section;
 - (c) area type (rural, urban);
 - (d) land use (educational, commercial, industrial & manufacturing, residential, farming & agricultural, undeveloped areas);
 - (e) property access points density.
 - (f) presence of service road (e.g. for shops);
 - (g) presence of road works;
 - (h) presence of parking.

2. Traffic volumes:
 - (a) traffic volumes;
 - (b) observed motorcycle volumes;
 - (c) observed pedestrian volumes on both sides, noting "along" or "crossing";
 - (d) observed bicycle volumes;
 - (e) observed heavy vehicle volumes;

- (f) estimated pedestrian flows determined from adjacent land use attributes;
 - (g) estimated bicycle flows determined from adjacent land use attributes.
3. Accident data:
- (a) Number and location of fatalities by road user group
 - (b) Number and location of serious injuries by road user group
4. Operational characteristics:
- (a) speed limit (general, for motorcycles; for trucks);
 - (b) operating speed (85th percentile);
 - (c) speed management and/or traffic calming;
 - (d) presence of ITS devices: queue alerts, variable message signs;
 - (e) school zone warning;
 - (f) presence of school crossing supervisor at prescribed periods.
5. Geometric characteristics:
- (a) cross section characteristics (number, type and width of lanes, central median shoulders layout and material, cycle tracks, foot paths etc.), including their variability;
 - (b) horizontal curvature;
 - (c) grade and vertical alignment;
 - (d) visibility and sight distances.
6. Objects, clear zones and road restraint systems:
- (a) roadside environment and clear zones;
 - (b) fixed obstacles at the roadside (e.g. lighting poles, trees, etc.);
 - (c) distance of obstacles from roadside;
 - (d) density of obstacles;
 - (e) rumble strips;
 - (f) road restraint systems.
7. Intersections:
- (a) intersection type and number of arms (noting particularly type of control and presence of protected turns);
 - (b) presence of channelisation;
 - (c) intersection quality;
 - (d) intersecting road volume;

(e) presence of road-rail crossings.

8. Maintenance:

- (a) pavement defects;
- (b) pavement skid resistance;
- (c) shoulder condition (including vegetation);
- (d) condition of signs, markings and delineation;
- (e) condition of road restraint systems.

9. Vulnerable road users' facilities:

- (a) pedestrian crossings (surface crossings and grade separation);
- (b) pedestrian fencing;
- (c) existence of sidewalk or separated facility;
- (d) bicycle facilities;
- (e) quality of pedestrian crossing related to conspicuity and signing of the facility;
- (f) pedestrian crossing facility on entry arm of minor road joining network.

(5) in Annex IV, point 1 is replaced by the following:

"1. precise as possible location of the accident, including GNSS co-ordinates;"