

Network Outcomes Contract Governance & Management Group Clarification

Reference Number:	NOCC No. 12
Subject Title:	Clarifications re OPM Group 6.5.4 RPMs & Group 6.5.5 EMPs
Issue Date:	14 October 2016
Clarification Purpose	Clarification is provided to ensure the NOC is being interpreted consistently. The clarification does not remove or supersede the Network Outcomes Contract documentation.

SUBJECT

OPMs 114 and 116 relate to raised pavement markers (RPMs) and edge marker posts (EMPs) on 'curves'.

A curve is not defined within the contract documents and the % defects measure can be misunderstood, therefore clarification is sought as to how these two OPMs should be assessed for compliance?

BACKGROUND

These OPMs are measured bi-annually at night. Raised pavement markers (also referred to as reflective raised pavement markers or RRPMs) provide close and distant delineation of the road alignment and an audible and tactile signal when traversed by vehicle wheels.

RRPM's for centrelines and borders of flush medians are expected to be bi-directional, i.e. the white reflective section of the marker is to be visible in both directions, so during the night time audit, compliance will need to be assessed by driving the network extents in both directions.

For a guideline on raised pavement marker (RPM) requirements refer to Motsam Part 2 – Markings, section 4 which notes (in part):

- Colour : White reflective faces
- Orientation : Bi-directional
- Spacing : Nominal 20m

Location: Central in every second gap between pavement marked centreline stripes.

In urban areas RRPM spacing may be reduced to 10 m and they will be located between each centreline stripe.

The pattern of RRPM's shall not be interrupted except where centrelines are terminated at intersections and tight curves.

On tight alignments (curves), the spacing between RRPM's may be reduced to a minimum of 10m and arranged so that at least 3 consecutive markers are always visible to approaching drivers.

At intersections, RRPM's shall be placed at the intersection end of each solid centreline. RRPM's shall also be placed at equal intervals, not exceeding 20 m, along the full length of solid centrelines.

For a guideline on edge marker post (EMP) requirements refer to Motsam Part 2 – Markings, section 5.05.

Edge marker posts are used to delineate the alignment of the road ahead, especially horizontal and vertical curves.

Type A and Type C edge marker posts are to be fitted with retro-reflective devices which form a primary aid for night time driving.

There is a 450 x 40mm white reflective strip fitted on the face of Type A EMPs visible in the direction of travel and two yellow 130 x 40mm reflective strips fitted on the back face of the Type C EMPs, also visible in the direction of travel, on left hand curves.

RESPONSE

It is the Principal's intent that for the purposes of assessing compliance for OPMs 114 and 116 that the Contractors OPM compliance management system notes from the assessment criteria:

1. The curve radius applicable for Operational Performance Measures 114 (RPM's) and 116 (EMP's) shall be as follows;
 - This OPM criteria applies to all curves below 400m radius as defined in the Out of Context Curve Table within RAMM. i.e.
 - High-risk rural curve < 400m radius
 - Medium-risk rural curve < 400m radius
 - Low-risk rural curve 250m to 400m radius
 - Low-risk rural curve < 250 radius
 - Urban curve < 250m radius

2. For OPM's 114 (RPM's) and 116 (EMP's), the % defects trigger is to be assessed and measured as follows:

- For OPM 114 (RPM's) it is 3% of the total number of quantified curves (as defined in 1 above) that have 'Three or more consecutive RPM's not visible ...' (*RPM missing or defective reflectivity*),

$$\text{i.e. \%} = \frac{\text{No. of curves that are assessed as defective}}{\text{No. of 400m radius curves on the network}}$$

- For OPM 116 (EMPs) it is 1% of the total number of quantified curves (as defined in 1 above) that have 'Two or more consecutive reflectors ...' (*EMP missing or defective reflectivity*),

$$\text{i.e. \%} = \frac{\text{No. of curves that are assessed as defective}}{\text{No. of 400m radius curves on the network}}$$

The out of context curves as highlighted in RAMM are now displayed in SafetyNET 2016 in its own layer as illustrated in the screen shot below.

Additional information on each specific curve (approach speed, curve speed) can be viewed in the pop up in SafetyNet.





SafetyNET Layers


▶ Published KiwiRAP 2012


▶ Barriers


▼ Out of Context Curves (ex RAMM)


 High-risk rural curve <400m radius

 Medium-risk rural curve <400m radius

 Low-risk rural curve 250-400m radius

 Low-risk rural curve <250m radius

 Urban curve < 250m radius

 Other curve