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## ***Submission on draft RTS 16: “Guide to heavy vehicle management”***

### ***Submission to Land Transport New Zealand***

#### **1. Introduction**

The Institution of Professional Engineers Transportation Group (“IPENZ TG”) has a membership of over 700 people who work in the fields of transportation, traffic management at all levels of responsibility. They are employed in central and local government, tertiary education, consultancy and industry.

We welcome the opportunity to comment.

This submission has been prepared in consultation with members, and addresses issues in the draft document and the accompanying notes on the Land Transport New Zealand (“LTNZ”) website.

#### **2. Comment on issues**

*(Italicised references relate to sections in draft document.)*

##### **2.1 Scope of document**

*(Section 1)*

The reference in the first paragraph to “*off-road facilities*” is misleading, since the document is concerned almost exclusively with on-road management.

To expand the scope to cover service docks and other off-road facilities would be a major task. Instead, it is suggested that reference should be made to existing design resources, in particular Australian Standard AS2890.2-2002 *Parking Facilities Part 2: Off-street commercial vehicle facilities*.

##### **2.2 Size and weight limits**

*(Section 2)*

It could be noted that the overall maximum width including mirrors and fittings is almost 3.0 metres.

### **2.3 Performance characteristics**

(Section 5)

Additional points:

Compared with light vehicles, trucks have a big difference in weight between being full and empty. Suspension systems must handle not only greater loadings, but also a greater range of loadings.

### **2.4 Visibility**

(Sectiona 5.2, 5.3(5)b)

The notes on vehicle blind spots are important.

One matter which could also be mentioned in Section 5.2 is the ability of truck and bus drivers to see traffic approaching from the left. The notes on Intersection Design recommend that side road approaches should be at “*right angles to the main road*”. It is often advantageous to vary the intersection angle slightly, perhaps in the range 75 to 105 degrees, and some leeway should be permitted.

### **2.5 Road width and alignment**

(Section 5.3(3), (6), 7.2)

An important issue in designing roads, service lanes and accessways is to ensure enough width, especially where space is constrained.

As noted earlier, total vehicle width including mirrors is nearly 3.0 metres. After allowing for the effects of pavement crossfall, leaning or swaying of the truck body, and potentially untrue tracking of trailer trains, a design envelope up to 3.5 metres wide needs to be adopted.

In low-speed environments (< 10 km/h), AS2890.2 recommends a minimum width of 6.5 metres kerb-to-kerb, or 7.1 metres wall-to-wall if two trucks are to pass each other. At higher speeds, greater clearances are advised.

Similar advice is contained in Transit New Zealand *Bridge Manual*, Appendix A, which recommends clearances to guard rails and side walls of up to 1.2 metres in addition to normal lane widths.

Where there are two lanes in the same direction, some reduction in lane width may be satisfactory since drivers will generally be able to avoid having two trucks in adjacent lanes at the same time. Where two lanes are in opposing directions, lanes widths less than 3.5 metres should be used with care.

### **2.6 Lateral clearances**

Inadequate lateral clearances cause a great deal of damage to both vehicles and roadside items, particularly signs.

For large vehicles, there is a hazard both at a low level and with poles and verandas at a higher level. At a low level, buses in particular may have a large front overhang which can

sweep over a traffic island during a sharp turn, causing damage to signs. Higher up, trucks or buses pulling in close to the kerb are vulnerable to damage from poles and verandas.

There is some design guidance available, for example the *Manual of Traffic Signs and Markings* (refer Section 1.7.3) specifies minimum clearances for signs. The guidance needs to be included in RTS 16.

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