Guideline

Collocation of gantry-mounted variable speed limit signs with static and monochrome variable message signs

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Queensland Government

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1 Introduction

This guideline provides guidance when collocating static and dynamic signs on the same supporting gantry as variable speed limit (VSL) signs.

The ever-increasing traffic volumes occurring on highways is not only resulting in an increase in the number of traffic lanes required to cope with this traffic, but also changes in the way traffic is managed on highways in general. In addition to providing operational benefits, the introduction of new technology such as lane-based VSL and other Intelligent Transport System (ITS) devices provides potential for the collocation of ITS devices with other signs on overhead gantries.

Collocation maximises the use of overhead gantries and reduces the need for side-mounted signs. In addition, due to the number of static and dynamic message devices being placed on the road network, lateral spacing requirements between signage may not be met and collocation is a viable alternative.

2 Scopes

This guideline provides information for the design and construction of motorway direction signs, gantry-mounted VSLS and dynamic signs in Queensland.

This guideline adds to existing motorway signing provisions in Part 15 of the Queensland *Manual of Uniform Traffic Control Devices* (MUTCD) / Australian Standard AS1742.15 *Direction signs, information signs and route numbering* for gantry-mounted advance direction signs as a replacement for roadside-mounted signs.

3 Collocation of gantry-mounted variable speed limit signs and advance direction signs

The collocation of static advance direction signs (SADS) with VSLS should be applied whenever there is the opportunity to make full use of existing or proposed gantries and/or in the following circumstances:

a) where the exit is located partway around a left curve or just beyond a crest, or

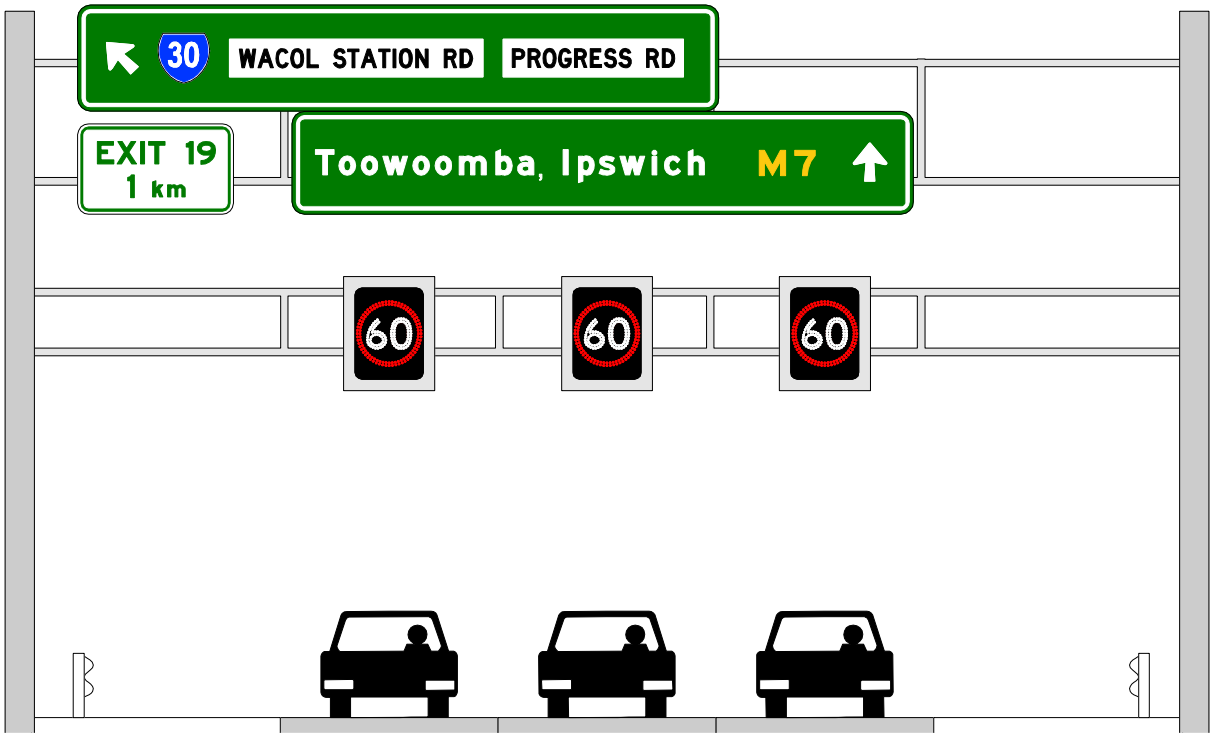
b) when roadside features, such as batters, make installation of roadside signs impracticable.

This application relates to highway junctions with a single exit, identified by the number and distance shown in the exit plate, which is located to the lower left side of the direction signs. The exit destinations and routes are shown in the upper left side of the direction sign and with an indication of the destinations reached by remaining on the motorway. For a single exit off a highway, the exit should be signed one kilometre in advance of the exit as shown in Figure 3.1(a).

The decision to collocate SADS and VSLS should ensure consistency of application along a given route.

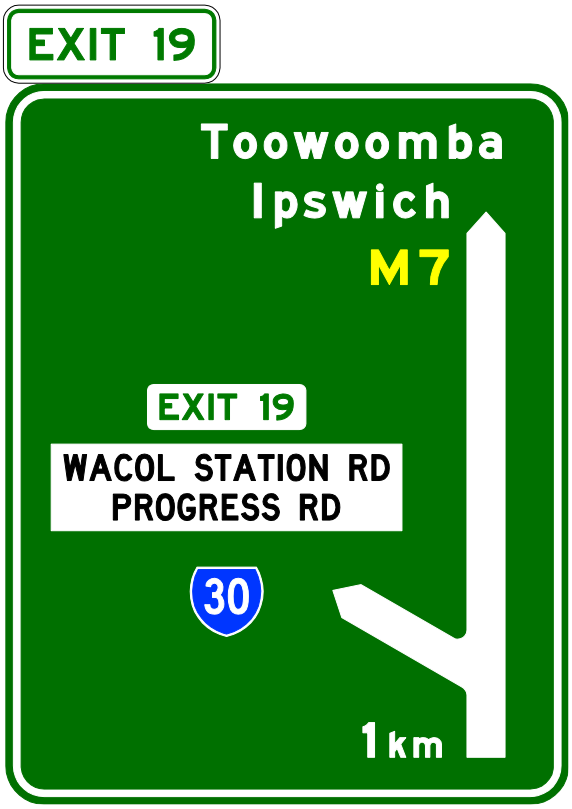
3.1 Typical layout

Figure 3.1(a) – Collocation of gantry-mounted static advance direction signs and variable speed limit signs in the case of a single exit



When collocation of gantry-mounted SADS and VSLS occurs, it will not be necessary to provide additional side-mounted roadside signage such as GE1-12-1 (shown in Figure 3.1(b)).

Figure 3.1(b) – GE1-12-1 signage



3.2 Benefits of gantry-mounted variable speed limit and advance direction signs

The collocation of gantry-mounted SADS and VSLS provides a number of operational and safety benefits:

a) allows flexibility for individual lane-based direction signs

b) increased visibility of direction signs in all lanes

c) removes the potential for direction signs to be obstructed by commercial traffic, and

d) creates potential for cost-neutral outcomes or, in some instances, reduced costs from using existing / proposed gantries rather than the provision of additional support structures for side-mounted roadside signage.

4 Collocation of gantry-mounted variable speed limit and monochrome variable message signs

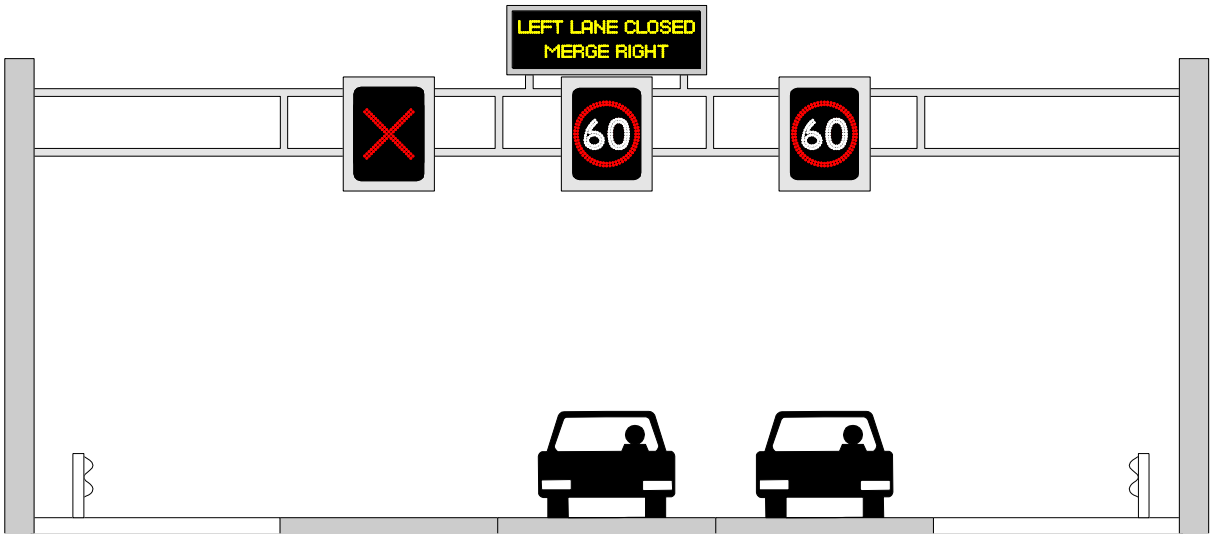
The decision to collocate VSLS and variable message signs (VMS) should only be considered for monochrome signs in severely constrained environments and is acceptable, subject to:

a) approval of significant corridor constraints by relevant regions, and

b) compliance with relevant standards and guidelines.

4.1 Typical layout

Figure 4.1 – Collocation of monochrome variable message signs and variable speed limit signs



4.2 Benefits of gantry-mounted variable speed limit and monochrome variable message signs

The collocation of gantry-mounted VSLS and a monochrome VMS has the potential to provide a number of benefits:

- aid compliance by reinforcing speed reduction and/or lane closures in place for traffic management
- increased visibility of VMS in all lanes
- removes the potential for VMS to be obstructed by commercial traffic, and
- creates potential for cost-neutral outcomes or, in some instances, reduced costs from using existing / proposed gantries rather than the provision of additional support structures for side-mounted roadside signage.

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