

# Variable Speed Limit Signs (VSLS)



**Transport**  
Roads & Maritime  
Services

**ITS Procedural Guideline**

**ILC-ITS-TP0-002-G06**

## Introduction

This guideline is intended to complement procedure ILC-ITS-TP0-002 which is a generic description of processes for installation of Intelligent Transport System devices and systems.

When working on an installation of Variable Speed Limit Sign project it is advised to refer to both documents to provide the basic information required.

NOTE: VSLS requirements are under review by the journey management branch.

## Description of Device

The variable speed limit sign (VSLS) is an electrically-powered, on-road, electronic device used for conveying speed limit information to motorists and/or regulatory traffic management. The light source for the VSLS's display is based on, commonly available, light emitting diode (LED) technology. The VSLS is composed of a primary LED-based display area for variable speed limit displays, a LED-based flashable red annulus area (as per regulatory sign requirements), and a conspicuity (flasher) device area all generally on the visible face of the sign, a controller, a controller cabinet, an enclosure to protect the electronics, and a structure for supporting and anchoring the VSLS to its desired "fixed" position.

Variable speed limit signs enable road speed limits to be varied depending on traffic volumes, road or weather conditions and/or incidents. They can be located either over or adjacent to the roadway depending on the number of lanes. Benefits include improved driver awareness and safety, and having speed limits more appropriate to prevailing conditions.

## Operating and Maintenance Manual

Refer to Operating and Maintenance Manuals provided by Supplier(s).

## References to Relevant Documents

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Policies</b>                     | VMS Project Life Cycle                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Standards and Specifications</b> | AS 1742 - Manual Of Uniform Traffic Control Devices<br>TSI-SP-011 General Requirements for the Design, Installation, Commissioning and Maintenance of Variable Speed Limit Signs<br>TSI-SP-003 - Communications Protocol for Roadside Devices                                                                                                                                                                                                          |
| <b>Procedure</b>                    | ILC-ITS-TP0-002 ITS Project Life Cycle                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Technical Directions</b>         | TDT2012/08 - Approval Requirements for New Traffic Assets<br>Austroads AP-R342/09 - Best Practice for Variable Speed Limits: Literature Review<br>ARR AP-R343/09 - Best Practice for Variable Speed Limits: User perception and comprehensive study<br>ATR AP-T47/06 - Revision of Guide to Traffic Engineering Practice - Part 8: Traffic Control Devices<br>ARR AP-R344/09 - Best Practice for Variable Speed Limits: Best Practice Recommendations" |
| <b>Guidelines</b>                   | TMC-SOP-506002 - VMS & VSLS Wet Weather Plan<br>"Road Network Operations Fundamentals" RTA<br>Austroads AGTM10-09 - Guide to Traffic Management Part 10: Traffic Control and Communication Devices<br>Austroads AGTM09-09 - Guide To Traffic Management Part 9: Traffic Operations                                                                                                                                                                     |
| <b>Maintenance Specifications</b>   | RMS QA Specification R165 "Maintenance of Variable Speed Limit Signs" (R305 will supersede R165, once released)<br>TSI-SP-011 General Requirements for the Design, Installation, Commissioning and Maintenance of Variable Speed Limit Signs                                                                                                                                                                                                           |
| <b>Factory Acceptance Testing</b>   | TSI-SP-011 General Requirements for the Design, Installation, Commissioning and Maintenance of Variable Speed Limit Signs<br>TSI-SP-003 - Communications Protocol for Roadside Devices<br>M5-VLSL FAT 1.1 (Released 05/07/2012)<br>For Supplier-specific FAT documents, refer to those provided by Supplier(s)                                                                                                                                         |
| <b>Site Acceptance Testing</b>      | TSI-SP-011 General Requirements for the Design, Installation, Commissioning and Maintenance of Variable Speed Limit Signs<br>For Supplier-specific SAT documents, refer to those provided by Supplier(s)                                                                                                                                                                                                                                               |

## Acronyms, Abbreviations and Definitions

| Term          | Definition                                                   |
|---------------|--------------------------------------------------------------|
| UPS           | Uninterrupted Power Supply                                   |
| Lux           | SI unit of illuminance                                       |
| Lumen         | Measure of the amount of emitted light from a source         |
| Luminaire     | A light fitting                                              |
| Lighting Pole | A vertical structure designed to securely hold the luminaire |

## DIAGRAMS and PHOTOS



## About this release

|                              |                                  |
|------------------------------|----------------------------------|
| <b>Guideline Number:</b>     | ILC-ITS-TP0-002-G06              |
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| <b>Technical Authorities</b> | Network Operations               |

| Issue   | Date           | Revision description                   |
|---------|----------------|----------------------------------------|
| Issue 1 | July 2013      | Initial Release                        |
| Issue 2 | September 2013 | Updated author and technical authority |
| Issue 3 | November 2013  | Added note on the first page           |
| Issue 4 | March 2015     |                                        |

**Note:** The issue date is normally considered to be the date on which a document is authorised or signed off. Under the ILC Management System, authorisation is indicated by the signature of the authorising manager on the document register. For simplicity then, the date of writing or revising a document is used as the issue date.

This document is published under the Infrastructure Life Cycle Management System and is subject to review and continual improvement. The current version of this procedure is that published on the RMS intranet.

**Note:** The Infrastructure Lifecycle Management System complies with the requirements of the ISO9001 standard. This standard is revised every four years (2008, 2012, 2016). While system procedures within the ILC Management System are revised as necessary, to meet any changed requirements of the standard, references within the procedures refer only to ISO9001.

It should be confidently assumed by users that the term ISO9001 within a procedure refers to the most current version of the standard.

### HAVE YOUR SAY!



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