



# Standards Variation Note

<b>Our Ref:</b>	<b>D24#1068428</b>
<b>From:</b>	<b>A/Manager Electrical Asset Management – Steven Howells</b>
<b>Reference:</b>	E&ITSDS-12-SVN-01
<b>Effective Date:</b>	5 August 2024
<b>Cease Date:</b>	Until further notice
<b>Standard:</b>	<b>06/6302:</b> Vehicular Signals (Rev. 10)
<b>Clause(s):</b>	<b>2.5.15:</b> Traffic Signal Controller
<b>Subject:</b>	Application of ELV Traffic Signals

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## **Purpose and Application**

The Standard Variation Notes (SVN) are intended to provide temporary modifications to existing Main Roads standards, while these standards are being updated to reflect the changes. It is important to note that the information contained in the SVN does not supersede any statutory regulations unless Main Roads has obtained explicit permission to do so.

It is also important to note that the content of the SVN may be updated, clarified, or integrated into the appropriate standard at a later time as part of a revision to the aforementioned standard. This ensures that the information provided in the SVN remains relevant and accurate.

This SVN provides details on the use of extra-low voltage (ELV), as defined by AS/NSZ 3000 cl. 1.5.7 *Basic and fault protection by use of extra-low voltage*, technology with Main Roads' traffic signal installs.

## **Background**

Main Roads has recently investigated the use of extra-low voltage devices (ELV) to improve electrical safety, as defined by AS/NSZ 3000 cl. 1.5.7 *Basic and fault protection by use of extra-low voltage*, within Main Roads electrical network. As ELV operates at a lower voltage it provides a safer voltage that significantly reduces the potential hazard associated with low voltage installs, by reducing the permissible current of a fault. As part of this investigation, extra-low voltage luminaries for traffic signals have been identified as a method to improve the safety of traffic signals.

A successful trial on the Main Roads network have been conducted with ELV traffic signals and as such it has been recommended that all greenfield sites should use the new ELV technology.

### **Relevant Existing Clause(s)**

Nil – the clauses proposed are additions to the aforementioned Main Roads' standard.

### **Clarification**

The added clause to *Traffic Signal Controller* (Rev. 10) is detailed below. No other clauses are updated as part of this variation notice.

#### **2.5.15: Traffic Signal Controller**

All new greenfield traffic signal installs shall use extra-low voltage (ELV) lanterns, utilising the dim-by-wire technology. This requires the use of a compatible TSC4 traffic signal controller, provided by Aldridge Traffic Controllers. To visually separate the ELV install from a nominal low voltage install, blue plastic furnishings shall be used, such as blue finial caps. To note the site is ELV, the designer shall note on the drawing that the controller is an ELV controller. All other requirements for the traffic signal install shall remain identical.

The designer shall consider the use of earth protected or separated ELV, ensuring that all external requirements of the install is met, such as Public Transport Authority traction earth separation requirements. If a separated ELV install is required, confirmation of the install shall be sought through the Main Roads *Technical Query and Request for Information Procedure* found on the Main Roads website.

Changes to existing brownfield sites are not expected to change the site to an ELV install.

### **Further information**

Any additional questions or concerns on this Standard Variation Notice can be directed to the Main Roads *Technical Query and Request for Information Procedure* found on the Main Roads website.

**Recommended**



Campbell Millar

**ITS Electrical Standards Engineer**

Date: 5 August 2024

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**Endorsed**

*T. Peacock*

Tom Peacock

**A/Principal Electrical Standards Engineer**

Date: 12 August 2024

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**Approved**



Steven Howells

**A/Manager Electrical Asset Management**

Date: 19 August 2024