Run-off-road - Rural

Fact sheet #10 of 13



Safety standard

Audio Tactile Line Marking (ATLM) shall be installed on edge lines and centre lines on all rural roads with sealed shoulders greater than 0.5 metres.

Safety countermeasure

Reducing fatal and serious injury crashes on rural roads remains a major challenge. In the ten years to the end of 2017, 472 people lost their lives on state-controlled roads in run-off-road crashes.

Audio Tactile Line Marking (ATLM) is used to provide an audible and tactile warning to drivers that they are leaving the carriageway or their lane. ATLM has proven to be effective in improving both wet and night visibility by creating an audible and vibratory warning.

For ATLM on the edge line to be most effective, the shoulders on that length of road should have a minimum width of 500mm to allow the driver to correct and re-enter their lane.

The use of the Wide Centre Line Treatment (WCLT) together with ATLM (Figure 1) has demonstrated a substantial reduction in the number of crashes on higher volume two-lane rural roads.

Technical guidance on the use of ATLM can be found in the Traffic and Road Use Manual, Volume 2 – Part 5: Road Safety for Rural and Remote Areas. Guidance on WCLT can be found in the Road Planning and Design Manual (2nd edition), Volume 3 – Part 3: Geometric Design Supplement to Austroads Guide to Road Design Part 3: Geometric Design.

As outlined in the Transport and Main Roads Technical Specification 45 Road Surface Delineation (MRTS45), ATLM may be applied on, or adjacent to, the painted portions of the painted line. ATLM may be applied on, or adjacent to, the painted portions of the painted line in accordance with MRTS45 without the need to provide a design exception or planning report

Safety outcome

The Department of Transport and Main Roads has identified that there are 20% fewer run-off-road crashes on straight stretches of road when ATLM has been installed. This increases to 45% fewer crashes when ATLM is used in conjunction with WCLT.



7048 run-off-road fatal and serious injury crashes occurred on state-controlled rural roads in Queensland between 2011 and 2020.

This fact sheet is designed to assist the implementation of 13 safety standards for new and upgraded infrastructure on Queensland's state-controlled roads, as per the department's Road Safety Policy (2018, Appendix A). While every care has been taken in preparing this publication, the State of Queensland accepts no responsibility for decisions or actions taken as a result of any data, information, statement or advice, expressed or implied, contained within. To the best of our knowledge, the content was correct at the time of publishing.

