

Road Planning and Design Manual

2nd Edition

Queensland Practice

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1 Introduction

The *Road Planning and Design Manual* (RPDM) is Transport and Main Roads' over-arching document of policy, methodology and criteria for people engaged in the planning and design of roads in Queensland. This manual aims to ensure that all road projects are built in accordance with an agreed set of corporate standards that include considerations of local circumstances.

The RPDM (2nd edition) brings together a large amount of knowledge from internal Transport and Main Roads manuals and external publications from Australia and other countries. It cross-references other departmental manuals in preference to repeating information given in them.

Designers should build a thorough understanding of the problem and its specific environment, then apply judgement and experience to develop the most appropriate, affordable and defensible solution.

Generally, the RPDM (2nd edition) and *Austroads Guide to Road Design*, together with the *Queensland Manual of Uniform Traffic Control Devices* provide sufficient guidance for designers to undertake their routine work without continual reference to other documents.

When situations out of the ordinary are encountered, designers should seek more guidance by consulting relevant Transport and Main Roads specialists and/or using the source documents listed below, in order of priority:

1. other Transport and Main Roads specialist manuals (including the *Queensland Manual of Uniform Traffic Control Devices* and *Traffic and Road Use Management Manual*)
2. other Austroads publications and Australian Standards
3. design guides (manuals) from other Australian states
4. American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Streets*
5. Lay, M.G. *Handbook of Road Technology*
6. Transportation Association of Canada, *Geometric Design Guide for Canadian Roads* (especially the chapters on philosophy and design consistency), and
7. Permanent International Association of Road Congresses (PIARC) documented standards, particularly those relating to road safety and tunnels.

Other international design guides may be consulted where they address a particular issue in a more comprehensive way than those in the list. Other references are provided throughout the RPDM and the Austroads guides. The RPDM does not address all the issues associated with the overall planning and design of the whole road. Transport and Main Roads produces a number of other manuals to deal with other specialist areas.

For Transport and Main Roads projects, non-compliance with this manual and other relevant departmental guides is a design exception and should be processed accordingly.

The department's Engineering and Technology Branch is working to determine appropriate practice for Queensland conditions and document it. This manual will be updated as the work progresses.

2 Structure of this edition

The Department of Transport and Main Roads has, in principle, agreed to adopt the standards published in the *Austrroads Guide to Road Design*. The RPDM (2nd edition) draws largely on relevant Austrroads standards for its technical requirements.

For this reason, the structure of the RPDM (2nd edition) has been created to assist readers in cross-referencing between documents.

This is a departure from the RPDM (1st edition) in that 23 'chapters' have now become 6 'volumes':

- Volume 1: Legislation
- Volume 2: Road Planning Guidelines
- Volume 3: Guide to Road Design
- Volume 4: Road Tunnels
- Volume 5: Intelligent Transport Systems, and
- Volume 6: Lighting.

Volume 3 has 7 'parts', which align with the 7 parts of the *Austrroads Guide to Road Design*.

Transport and Main Roads seeks to eliminate duplication between the RPDM and the *Austrroads Guide to Road Design*. In the interests of national uniformity, this manual will ultimately only address aspects that are unique or important to Queensland practice which:

- vary from national practice because of local environmental conditions (e.g. soil types, climate)
- vary from national practice because of differing funding practices
- take account of research by the department or other organisations, superseding that which is recorded by Austrroads
- do not feature enough detail in the Austrroads guides, and
- satisfy local legislative requirements.

3 Other publications

This manual forms part of a suite of publications that are useful in the planning and design of Queensland state-controlled roads. These documents are available from the Transport and Main Roads technical publications webpage <https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications> or the Austrroads <https://austrroads.com.au/> publications webpage.

