Today’s moderator

Elaena Gardner
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About Austroads

The peak organisation of Australasian road transport and traffic agencies

• Roads and Maritime Services New South Wales
• Roads Corporation Victoria
• Department of Transport and Main Roads Queensland
• Main Roads Western Australia
• Department of Planning, Transport and Infrastructure South Australia
• Department of State Growth Tasmania
• Department of Transport Northern Territory
• Transport Canberra and City Services Directorate, Australian Capital Territory
• Commonwealth Department of Infrastructure and Regional Development
• Australian Local Government Association
• New Zealand Transport Agency
Housekeeping

Presentation = 35 mins

Question time = 15 mins
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Please type your questions here
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Today’s presenter

David Green
Senior Engineer
Network Operations
Congestion, Freight and Productivity

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Agenda

1. Introduction and purpose of webinar
2. Philosophy of Austroads Guide to Traffic Management (AGTM) Part 5
3. Key changes to AGTM Part 5
4. Structure of AGTM Part 5
5. Conclusion
6. Questions
Introduction and purpose of webinar

- The Austroads *Guide to Traffic Management Part 5: Road Management* discusses traffic management issues and treatments related to road mid-blocks.
- The Guide was updated in 2017 as part of Austroads Project NTM 2081.
- This webinar provides an overview of the key changes to the Guide.
AGTM Part 5 Update: The Project Team

**Austroads Project Manager**
Kamal Weeratunga  MRWA

**ARRB Project Team**
David Green (Project Leader)
Kenneth Lewis

**Austroads Working Group**
Fergus Tate  NZTA
Philip Stratton  DPTI – SA
Robyn Hawkins  Roads ACT
Rohit Singh  TMR – Qld
Jeremy Burdan  VicRoads
Dave Landmark  MRWA
Dean Simmonds  RMS – NSW
Aftab Abro  NT

**Safety Representatives**
Simon Harrison  TMR – Qld
Melvin Eveleigh  TfNSW
Philosophy of AGTM Part 5

• To provide traffic management guidance with respect to the mid-block.

• To refer to other Austroads Guides where content is best addressed:
  - Guide to Traffic Management
  - Guide to Road Safety
  - Guide to Road Design.

• Guidance is limited to good practice rather than mandatory practice which is addressed in Australian Standards.
Who is GTM 5 for?

• Those wishing to seek Austroads endorsed guidance on how to manage and operate the mid-blocks of roads in the context of:
  - road space allocation,
  - lane management
  - speed:

• Specifically for
  - Practitioners in charge of the management and operations of mid-blocks.
  - Consultants wishing to advise those practitioners.
  - Researchers wishing to understand the endorsed practice in which to evolve further in the future.
  - Students and society wishing to understand and learn how mid-block are managed and operated.
### Structure and key changes to AGTM Part 5

<table>
<thead>
<tr>
<th>Section</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduction</td>
<td>Major update with new content</td>
</tr>
<tr>
<td>2. Access Management</td>
<td>Minor content changed</td>
</tr>
<tr>
<td>3. Road Space requirements for general traffic use</td>
<td>Restructure and additional content</td>
</tr>
<tr>
<td>4. Allocation of road space between road users</td>
<td>Restructure and additional content</td>
</tr>
<tr>
<td>5. Lane management</td>
<td>Minor content changes</td>
</tr>
<tr>
<td>6. Speed limits</td>
<td>Was Section 5 in previous version. Major update with new content</td>
</tr>
<tr>
<td>Appendices</td>
<td>Major change – additional appendices</td>
</tr>
</tbody>
</table>
Section 1: Introduction

• Provides an Introduction to the Guide Part

• Modified to link AGTM Part 5 to:
  - Movement and Place, Network Operation Planning and AGTM Part 4: Network Management.
  - Mobility and Access.
  - Other strategies and the Safe System.
Section 1: Introduction

Figure 1.1: Movement and Place framework
Section 1: Introduction

Designated movement with no place aspects

- Move people and goods rapidly over long distances with motorways playing a strategically significant function within the road network.
- E.g. Motorway

Figure 1.1: Movement and Place framework
Section 1: Introduction

Significant movement with some place aspects

- Provide safe, reliable and efficient movement between and within regional centres and urban areas.
- E.g. Major arterial

Figure 1.1: Movement and Place framework
Section 1: Introduction

Significant movement with significant place aspects

- High demand for movement and high pedestrian activity with often limited road space result in vibrant streets within urban and regional areas.
- E.g. Main roads through CBD
Section 1: Introduction

Some movement with some place aspects

- The streets where people live their lives and that facilitate local access to their communities.
- E.g. Local Road
Section 1: Introduction

Some movement with significant place aspects

- High pedestrian activity and lower levels of vehicle movement create places people enjoy, attract visitors and are places communities value.
- E.g. Strip shopping centre
Section 1: Introduction

Figure 1.3: Network Operation Plan with consideration of accessibility needs of targeted road users
Section 2: Access Management

• Highlights the importance of access management in achieving safety and efficiency outcomes for the mid-block of the road.

• Various modifications made including the addition of guidance relating to treatments used for access management.
Section 3: Road Space Requirements for General Traffic Use

• Discusses the various road space requirements for general traffic use.
• Various content changes made including addition of new guidance.
• Presentation format modified from table format to section and text format.
• Guidance split over Section 3 and 4 to separate guidance between
  - road space allocation for general traffic
  - road space allocation for road users.
Section 4: Allocation of Road Space between Road Users

- Discusses the various road space requirements of different road users.
- Comprise of the content split from Section 3
- Various content changes made including addition of new guidance.
- Presentation format modified from a table format to a section and text format.
Section 4: Allocation of Road Space between Road Users

Figure 4.1: Guidance on the separation of cyclists and motor vehicles for the preferred bicycle route

- Congested and becomes unsuitable for cycling on the carriageway
- Cycle-specific infrastructure can be considered but is not normally beneficial
- Physical segregation with verge
- Motor vehicle speeds much above 60 km/h become unsuitable for cycling on the carriageway

- Shared carriageway
- Cycle lane & hard shoulder
- Physical segregation

85th percentile motor vehicle speed (km/h)
Section 5: Lane Management

• Discusses the general lane management principles for different practices.
• No significant changes to this section.
Section 6: Speed Limits

• Provides guidance on Speed Limits, including:
  - the importance of Speed in a Safe System
  - setting of speed limits

• The main change was the inclusion of revised guidance on the establishment of speed limits.

• This aligns the setting of speed limits in order to better support the Safe System approach by:
  - reducing the consequences in the presence of a high risk (i.e. harm reduction approach)
  - recognising the mobility role of different road functions
  - reducing speed limits on high-risk roads where engineering treatments are not feasible
  - minimising the frequency of speed zone changes.
Section 6: Speed Limits

AGTM Part 5 provides new guidance on:

- Localised speed limit reductions at higher-risk intersections
- Supporting active travel, shared spaces and activity centres through speed limits
- Minimum speed zone length
- Use of electronic speed limit signs in school zones and high pedestrian activity areas
Section 6: Speed Limits

• Urban roads – risk-based selection of speed limits
• Worked example of using the guidance to select speeds based on risk for an urban road
• Example in next few slides
### Table 6.4: Urban roads – risk-based selection of speed limits for different road categories and functions (section only)

<table>
<thead>
<tr>
<th>Road category/function and proposed speed limit (km/h)</th>
<th>Consider the corresponding speed for the respective category of road when any of the following severe crash risks are present(1)</th>
<th>Severe crash rate/100 million VKT</th>
<th>Road use and users</th>
<th>Road features</th>
<th>Speeds(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban arterials – divided (fully and partially built-up areas)</td>
<td>80</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>70(10)</td>
<td>–</td>
<td>–</td>
<td>• 2–4 standard access points per 100 m (includes intersections)(8)</td>
<td>• Consistent and frequent presence of unprotected roadside hazards within 1.5 m of the traffic (e.g. trees/ poles spaced closer than every 10 m, or continuous(11))</td>
<td>• Mean speed is well below the existing speed limit(8) due to congestion(3) and competing road uses leading to high speed variation</td>
</tr>
<tr>
<td>60</td>
<td>• Severe crash rate is high(2)</td>
<td>• Pedestrians or cyclists are present in high numbers(2), especially in commercial areas and business districts</td>
<td>• On-road parking is permitted and occurs frequently along the route</td>
<td>• Mean speed is well below the existing speed limit(8) due to congestion(3) and competing road uses leading to high speed variation</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>–</td>
<td>• School frontage(2)(14)</td>
<td>• Pedestrians or cyclists are present in high numbers(2) and on both sides of the divided road with major generators and attractors (commercial areas and business districts) of pedestrian activity on both sides of the road resulting in a high number of pedestrians crossing the road</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>100</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>
Urban roads – risk-based selection of speed limits

Select a typical speed limit
Based on public’s expectation of mobility given the road’s category and function

Assess severe crash risks
Check for consistent presence of severe crash risk factors across four categories
1. High severe crash rates per kilometer of travel
2. Road use and user issues
3. Recognised high-risk road engineering features
4. Speeds not suited for the road environment and its users

None
Retain
The typical speed limit

One or more
Reduce
The speed limit to one of harm reduction options
Urban roads – risk-based selection of speed limits

<table>
<thead>
<tr>
<th>Considerations</th>
<th>Risk factors present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional speed limit</td>
<td>80 km/h divided arterial</td>
</tr>
<tr>
<td>Severe crash rate</td>
<td>1.3 cr/km/5 years (low)</td>
</tr>
<tr>
<td>Road use and user factors</td>
<td>Pedestrians, cyclists, parking, intersections and access</td>
</tr>
<tr>
<td>Road feature risk factors</td>
<td>Frequent intersections, roadside hazards, narrow lanes</td>
</tr>
<tr>
<td>Speed factors</td>
<td>$V_{50}=78$ km/h, $V_{85}=83$ km/h</td>
</tr>
</tbody>
</table>
### Urban roads – risk-based selection of speed limits

#### Road category/function and proposed speed limit (km/h)

<table>
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<td>60</td>
<td>• Severe crash rate is high(2)</td>
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<tr>
<td>40</td>
<td>–</td>
</tr>
<tr>
<td>100</td>
<td>–</td>
</tr>
</tbody>
</table>

#### Urban Arterial – divided

- Has two risk factors (only needs one)
- Recommended speed = 60 km/h

**60 km/h**

**Pedestrians, cyclists, parking, intersections & access**

**Frequent intersections, roadside hazards, narrow lanes**
Conclusion

- *Austroads Guide to Traffic Management Part 5* available at

- The latest version incorporates findings of recent Austroads research particularly around:
  1. Movement and Place
  2. Network Operation Planning
  3. Setting of speed limits to suit the role and function of the road in the context of the Safe System.
Questions?

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Upcoming Austroads webinars


**September**

- On-road public transport

**October and November**

- Road Transport Management Framework and Principles
- Connected and Automated Vehicles
- Guide to Traffic Management Part 6 and Guide to Road Design Part 4
- Guide to Traffic Management Part 13
- Guide to Traffic Management Part 3
Thank you for participating