Lower Order Roads – a risk based approach.

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Managing the risk on lower order roads

- Less than 150 VPD
- 70% of the road networks throughout QLD (local and State)
- 85% in some jurisdictions
- Funding to support this asset is reducing
- The cost of improving this asset to meet current design standards is increasing
- It is recognised that the existing industry design guidelines exceed road user expectations
## Austroads Guide to Road Design Part 3

<table>
<thead>
<tr>
<th>Element</th>
<th>Design AADT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 - 150</td>
</tr>
<tr>
<td>Traffic lanes</td>
<td>3.7 (1 x 3.7)</td>
</tr>
<tr>
<td>Total shoulder</td>
<td>2.5</td>
</tr>
<tr>
<td>Minimum shoulder seal</td>
<td>0</td>
</tr>
<tr>
<td>Total carriageway</td>
<td>8.7</td>
</tr>
</tbody>
</table>
The Challenge

An incremental increase in standard often leads to a disproportionate increase in cost.
Background - NDRRA

• Funding is based on replacing the existing on a like for like basis
• Asset owners are expected to meet current engineering standards
• ... but what are the risks that this introduced?
NDRRA Guidelines

- 2012 – IPWEAQ produced the NDRRA Guidelines for Restoration Works
- 2013 – revised
- 2014 – identified a need for a “general” document rather than one only relating to flood restoration
- 2015 – Release of the Lower Order Road Design Guidelines
- 2016/17 – little take up
- 2018 – introduction of supporting training
• Cost effective approach
  • Construction costs
  • Whole of life costs
• Fit for purpose design
• Standards are not compromised – they still need to exist
• Level of Service – what is expected by the road user
Principles

- An optimum balance of (often competing) factors
- Safety
- Capacity
- Cost
- Delay
- Environment
- Others
Principles

• Constraints
  • financial
  • Technical
• Capability
  • engineering skills and judgement
  • local experience
  • levels of risk
Managing the Risk on Lower Order Roads

- Asset characteristics
- The road user
- Project inputs
- Design principles
- Drainage
- Pavements
- Field procedures
Want to learn more?