Considering whole of life costs

Introduction

References

- Austroads Guide to Road Design: Part 3 Geometric Road Design
- International road assessment program (iRAP)
**Focus of presentation**

- Making design decisions
- Considering all road users
- Considering whole of life costs such as safety, asset management and maintenance
- Being inclusive of all road engineering disciplines
- Problem solving common geometric design and safety scenarios

**Road designers role**

- Produce the most appropriate design that achieves the specified functionality using the design inputs from all relevant disciplines.
- The design must provide a safe and efficient road facility that takes into account all inputs from stakeholders and road users.
- A number of alternative designs may need to be produced and evaluated to arrive at a preferred design based on achieving safety, economical and environmental objectives.
- A road design has to be certified by an appropriate person.
  (e.g. in Qld for a state classified road this has to be a Registered Professional Engineer, Queensland)
Participant input

What road engineering disciplines would you consult with during the design process?

Road engineering disciplines

• Safety
• Traffic management
• Asset management
• Maintenance
• Pavement (wearing course and structure)
• Construction
Key road design requirements

A good road design will achieve:

• Operational efficiency
• Safety considerations
• Cost-effectiveness
• Social factors
• Minimise env. impacts – vegetation, air pollution, noise, visual, etc.

Whole of life costs

- Safety risk
- Maintenance and traffic control
- Pavement life
- Enforcement

Find the balance