

# TRUNK ROAD INFRASTRUCTURE STANDARD No. 10

## PROJECT EVALUATION

Supplement to Austroads Guide: Project Evaluation



**ACT**  
Government

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Territory and Municipal Services

<b>Publication Number:</b>	<i>TRIS 10</i>	
<b>Date of Effect:</b>		
<b>Supersedes:</b>		
<b>Endorsed By:</b>		
<b>Approved By:</b>		

## DOCUMENT INFORMATION

<b>Document Title</b>	Trunk Road Infrastructure Standard No. 10 – Project Evaluation
<b>Next review date</b>	
<b>Key words</b>	

## REVISION REGISTER

<b>Ed/Rev Number</b>	<b>Clause Number</b>	<b>Description of Revision</b>	<b>Authorised By</b>	<b>Date</b>

## PREFACE

The Austroads series of Guides for provision and management of road and transport infrastructure provides a level of consistency across all jurisdictions in Australia and New Zealand. All road authorities have agreed to adopt the Austroads Guides as the primary technical reference, together with the relevant Australian and New Zealand Standards.

The Australian Capital Territory has adopted the Austroads Guides, and has issued a revised series of documents to reflect this development in standards and specifications for practice in the ACT. This present document is part of the ACT Trunk Road Infrastructure Standard (TRIS) series spanning the broad scope of road infrastructure development in the ACT:

- TRIS 01 – Road Planning
- TRIS 02 – Road Design
- TRIS 03 – Traffic Management
- TRIS 04 – Road Safety
- TRIS 05 – Asset Management
- TRIS 06 – Pavement Design
- TRIS 07 – Bridges and Structures
- TRIS 08 – Road Tunnels
- TRIS 09 – Project Delivery
- TRIS 10 – Project Evaluation.

Each of the TRIS documents indicates adoption of the relevant Austroads Guide, sets out specific requirements for implementation in ACT, and calls up more detailed Specifications.

This ACT Trunk Road Infrastructure Standard No.10 – PROJECT EVALUATION constitutes a supplement to the

### AUSTROADS GUIDE TO PROJECT EVALUATION

The Territory and Municipal Services Directorate accepts the principles and general guidance in the Guide to Project Delivery. This Trunk Road Infrastructure Standard is issued to clarify any exceptions or additional requirements for implementation in the ACT, and to identify relevant complementary documents.

Project evaluation for road projects in the ACT must be undertaken in general accordance with the Austroads Guide above, and in accordance with specific provisions of this Trunk Road Infrastructure Standard.

Where any differences in practice exist between the Austroads Guide and this Trunk Road Infrastructure Standard, the latter will prevail.

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## I GENERAL

This document constitutes a supplement to the Austroads Guide to Project Evaluation, an outline of which is provided in subsequent sections.

## 2 GENERAL PRINCIPLES

Adopting the Austroads Guide to Project Evaluation means that the evaluation of road projects in ACT is to be undertaken in accordance with the principles of that Guide, and in accordance with the relevant requirements and specifications of the ACT government.

Practitioners responsible for evaluating a road or transport project need to have an understanding of the physical system and political context in which the project was conceived. Understanding of the strategic planning context from which the project has been derived is particularly important as it defines broad outcomes of the transport system such as efficiency, safety and sustainability.

## 3 REFERENCE DOCUMENTS

The primary reference documents for project evaluation in ACT are as follows:

- Roads and Public Places Act 1937
- Road Transport (General) Act 1999
- Legislation Act 2001
- Planning and Development Act 2007
- Road Transport (General) Act 1999
- Road Transport (Safety and Traffic Management) Act 1999
- Australian Capital Territory (Planning and Land Management) Act 1988
- Disability and Discrimination Act 1992
- Territory Plan 2008
- National Capital Plan
- ACT Sustainable Transport Plan 2004
- Transport for Canberra
- ACT Planning Strategy.

Reference should also be made to other directly relevant ACT Trunk Road Infrastructure Standards, particularly:

- Trunk Road Infrastructure Standard No. 01 – Road Planning
- Trunk Road Infrastructure Standard No. 02 – Road Design
- Trunk Road Infrastructure Standard No. 03 – Traffic Management
- Trunk Road Infrastructure Standard No. 05 – Asset Management
- Trunk Road Infrastructure Standard No. 09 – Project Delivery.

Details for all reference documents other than legislation are given in Section 5 Reference List.

### 3.1 GUIDELINES

The primary technical guidance is set out in the **Austroads Guide to Project Evaluation**.

The Guide is aimed at practitioners in the roads sector, and provides guidance, tools and techniques for use in the evaluation of projects. It assembles knowledge on project evaluation methods, parameters and tools into a readily available and accessible resource for planners and decision-makers. It offers guidance to practitioners seeking advice on project risk assessment, the national and regional impacts of projects, distributional (equity) effects of projects, and project post-evaluation analysis.

Project evaluation detailed procedures vary between jurisdictions and in many cases are determined by government agencies to ensure consistent investment evaluation across portfolios. The Austroads guide therefore does not prescribe particular processes, but seeks to provide general guidance on good practice, a consistent approach to key data used in analysis, and contemporary tools to assist practitioners.

The Guide consists of eight Parts and is structured as follows:

- Part 1 – Introduction to Project Evaluation
- Part 2 – Project Evaluation Methodology
- Part 3 – Models and Procedures

- Part 4 – Project Evaluation Data
- Part 5 – Impact on National and Regional Economies
- Part 6 – Distributional (Equity) Effects
- Part 7 – Post-completion Evaluation
- Part 8 – Examples.

The Guide is complementary to the [ATC National Guidelines for Transport System Management in Australia \(ATC 2005\)](#). The ATC National Guidelines are multi-modal in nature, and are intended to guide consistent practice across jurisdictions in multi-modal transport planning, assessment and project appraisal.

Related guidance may also be found in:

- Austroads Guide to Road Transport Planning
- Austroads Guide to Project Delivery
- Austroads Guide to Asset Management.

The ACT Government, Territory and Municipal Services Directorate, is responsible for monitoring and managing the safety and operating conditions of the existing ACT road system. It provides cost effective improvements identified on a needs basis as the level of funding allows.

The ACT Government has developed the Road Safety Improvements Program for the ACT. The process has been modified over time to develop technically sound projects which are cost effective. It is described in the document [The ACT Road Safety Improvement Program \(Intersections and Midblock Ranking\)](#), and includes relevant background data in appendices.

### 3.2 RELATED TECHNICAL SPECIFICATIONS

The Austroads Guides refer to the requirements of relevant Australian Standards.

### 3.3 LEGISLATIVE DOCUMENTS

## 4 SUPPLEMENTARY MATERIAL

The following tabulated material indicates elements of the implementation of project evaluation in ACT, as they relate to the content of the various Parts of the Austroads Guide to Project Evaluation. The tables provide advice on any additional ACT requirements, or exceptions, to the provisions of the Guide. Complementary documentation is also indicated where relevant.

### Supplement to the Austroads Guide to Project Evaluation

SUPPLEMENT TO THE AUSTROADS GUIDE TO PROJECT EVALUATION PART I: INTRODUCTION PUBLICATION DATE: 2009		
Part I provides the context in which project evaluation is carried out. It provides an introduction to project evaluation and links with the wider area of road transport planning. A three-stage evaluation process is recommended for evaluation of transport projects: (i) test strategic fit (i.e. assessment against broader strategies, policies and plans); (ii) investigate and analyse project options (solutions) that pass the strategic fit; and (iii) develop a business case for the preferred option. Part I also provides an outline of evaluation tools and methodologies presented in subsequent parts of the guide.		
Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	Part I of the Guide is adopted, with no exceptions in principle for the practice in ACT.	

<b>SUPPLEMENT TO THE AUSTRROADS GUIDE TO PROJECT EVALUATION</b> <b>PART 2: PROJECT EVALUATION METHODOLOGY</b> <b>PUBLICATION DATE: 2005</b>		
<p><b>Guide to Project Evaluation Part 2: Project Evaluation Methodology</b></p> <p>Part 2 provides guidelines for conducting benefit–cost analysis (BCA) and multi-criteria analysis (MCA) on public transport infrastructure projects, policies and programs. It sets out a comprehensive set of procedures and assumptions to be incorporated in all evaluations, and recommends an accessible and standardised format for the presentation of results. It also provides guidance on risk assessment and analysis in project evaluation, assisting the user to incorporate risk into the evaluation of investment proposals. A tool (Risk Explorer™ software) used for identifying, assessing and analysing risks related to uncertain factors impacting on project benefits and costs is included. Part 2 is applicable to most projects requiring evaluation, but excludes very large or complex projects.</p>		
Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	Part 2 of the Guide is adopted, with no exceptions in principle for the practice in ACT.	

<b>SUPPLEMENT TO THE AUSTRROADS GUIDE TO PROJECT EVALUATION</b> <b>PART 3: MODELS AND PROCEDURES</b> <b>PUBLICATION DATE: 2005</b>		
<p>Part 3 presents a summary of the Austroads publications and other related sources of information that describe the wide range of tools used in project evaluation. A distinction is drawn between rural project evaluation procedures and urban (network) procedures, given that different applications have been developed in Australia and overseas to deal with these contexts. Part 3 provides a summary of activity in the area of project evaluation tools, and presents a guide to major sources of information from recent research and development work.</p>		
Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	Part 3 of the Guide is adopted, with no exceptions in principle for the practice in ACT.	

<b>SUPPLEMENT TO THE AUSTRROADS GUIDE TO PROJECT EVALUATION</b> <b>PART 4: PROJECT EVALUATION DATA</b> <b>PUBLICATION DATE: 2008</b>		
<p>Part 4 contains estimates of road user unit costs for use in Australia. The unit costs are presented in a format suitable for use with most road project evaluation models, techniques, and software used by Australian road agencies and their consultants. Estimates are not intended for use in New Zealand. Unit values have been calculated in resource price terms, that is, excluding indirect taxes and government charges, but including subsidies paid to producers. Estimates of road user cost (RUC) inputs are provided at an individual component level for the following cost groupings: vehicle operating costs, travel time costs, crash costs and environmental externalities costs. Average crash costs are reported for individual jurisdictions and the potential for extending the updating procedure to include crash costs based on road user movement and speed zones is considered. Updated parameter values for running speed models used to estimate vehicle operating costs and fuel usage for urban operations are supplied, based on a reduced form relationship derived from urban RUC models.</p>		
Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	Part 4 of the Guide is adopted, with no exceptions in principle for the practice in ACT.	
Section 4	<p>Crash costs for the ACT are regularly updated and documented in:</p> <ul style="list-style-type: none"> <li><b>The ACT Road Safety Improvement Program (Intersection and Midblock Ranking).</b></li> </ul> <p>Revised editions of Part 4 of the Guide provide updates for the road user unit cost values. The latest update is August 2011.</p>	

<b>SUPPLEMENT TO THE AUSTROADS GUIDE TO PROJECT EVALUATION</b> <b>PART 5: IMPACT ON NATIONAL AND REGIONAL ECONOMIES</b> <b>PUBLICATION DATE: 2005</b>		
<p>Part 5 provides a guide to the conditions under which the use of macro-economic models in project evaluation is appropriate and how they can be applied. Major transport infrastructure projects often significantly alter the economies of regions in which they are located and, if large enough, the national economy. These effects may not be fully captured by standard benefit-cost analysis evaluations. One method of estimating economic impacts of large transport infrastructure projects is the use of economy-wide type models. A class of model known as computable general equilibrium has been used to analyse economy wide impacts.</p>		
Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	<p>Part 3 of the Guide is adopted, with no exceptions in principle for the practice in ACT.</p> <p>Guidance on direct transport impacts (e.g. access, safety, traffic) of road projects and related land-use developments is provided in:</p> <ul style="list-style-type: none"> <li>• <b>Trunk Road Infrastructure Standard TRIS 03 Traffic Management</b></li> <li>and</li> <li>• <b>'Transport Impact Assessment in ACT', February 2011</b></li> </ul>	

<b>SUPPLEMENT TO THE AUSTROADS GUIDE TO PROJECT EVALUATION</b> <b>PART 6 DISTRIBUTIONAL (EQUITY) EFFECTS</b> <b>PUBLICATION DATE: 2005</b>		
<p>Part 6 helps the practitioner to evaluate the distributional (equity) impacts of transport projects, as part of the project evaluation process, and indicates how these impacts can be traded with efficiency gains. The procedures and processes provided help the decision-maker to consider distributional effects of projects by comparing sets of efficiency outcomes of projects with desired social (equity) outcomes. An Equity Explorer software tool is provided as an integral component to demonstrate some of the principles of equity analysis and their application.</p>		
Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	<p>Part 3 of the Guide is adopted, with no exceptions in principle for the practice in ACT.</p>	

<b>SUPPLEMENT TO THE AUSTROADS GUIDE TO PROJECT EVALUATION</b> <b>PART 7: POST-COMPLETION EVALUATION</b> <b>PUBLICATION DATE: 2005</b>		
<p>Part 7 provides guidelines for carrying out evaluation of completed transport projects to assess actual performance against stated objectives. A post-completion evaluation is the final step in project evaluation, and provides feedback on evaluation methodologies, efficiency of implementation and how effectively the project met its objectives.</p>		
Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	<p>Part 3 of the Guide is adopted, with no exceptions in principle for the practice in ACT.</p>	



<b>SUPPLEMENT TO THE AUSTRROADS GUIDE TO PROJECT EVALUATION</b> <b>PART 8: EXAMPLES</b> <b>PUBLICATION DATE: 2006</b>		
<p>Part 8 presents worked examples demonstrating appropriate use of project evaluation techniques applied to a selection of infrastructure upgrading projects commonly faced by practitioners. Some of these examples are intended to demonstrate the benefit-cost analysis (BCA) methodology and techniques described in Part 2. Each of the nine worked examples (flood mitigation, sealing and realignment, bridge maintenance, ferry upgrade, blackspot evaluation, timing of project, bus priority, town bypass and road widening) is linked to an executable Excel spreadsheet showing all relevant BCA calculations.</p>		
Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	Part 3 of the Guide is adopted, with no exceptions in principle for the practice in ACT.	

## 5 REFERENCE LIST

ACT Government 2012, *Trunk road infrastructure standard TRIS 03: traffic management*, ACT Government, Canberra, ACT.

ACT Government 2011, *Transport impact assessment in ACT*, ACT Government, Canberra, ACT.

Australian Transport Council (ATC) 2006, *National guidelines for transport system management*, ATC, Canberra.

Austrroads 2009. *Guide to road transport planning*, AGRTP09, Austrroads, Sydney, NSW.

Austrroads 2005-2009. *Guide to project evaluation, Parts 1-8*, AGPE09, Austrroads, Sydney, NSW.

Austrroads 2007-2009. *Guide to project delivery, Parts 1-4*, AGPD09, Austrroads, Sydney, NSW.

Austrroads 2009. *Guide to asset management, Parts 1-8*, AGAM09, Austrroads, Sydney, NSW.

Roads ACT 2007, *The ACT road safety improvement program (intersections and midblock ranking)*, ACT Government, Canberra, ACT>

## 6 STANDARD DRAWINGS