

Austrroads Annual Report 2001/02



AUSTROADS

AUSTROADS PROFILE

Austroads is the association of Australian and New Zealand road transport and traffic authorities whose purpose is to contribute to the achievement of improved Australian and New Zealand transport related outcomes by:

- ♦ developing and promoting best practice for the safe and effective management and use of the road system providing professional support and advice to member organisations and national and international bodies
- ♦ acting as a common vehicle for national and international action
- ♦ fulfilling the role of the Australian Transport Council's Road Modal Group
- ♦ undertaking performance assessment and development of Australian and New Zealand standards
- ♦ developing and managing the National Strategic Research Program for roads and their use.

Within this ambit, Austroads aims to provide strategic direction for the integrated development, management and operation of the Australian and New Zealand road system — through the promotion of national uniformity and harmony, elimination of unnecessary duplication, and the identification and application of world best practice.

AUSTROADS MEMBERSHIP

Austroads membership comprises the six State and two Territory road transport and traffic authorities and the Commonwealth Department of Transport and Regional Services in Australia, the Australian Local Government Association and Transit New Zealand. It is governed by a council consisting of the chief executive officer (or an alternative senior executive officer) of each of its eleven member organisations:

- ♦ Roads and Traffic Authority New South Wales
- ♦ Roads Corporation Victoria (VicRoads)
- ♦ Department of Main Roads Queensland
- ♦ Main Roads Western Australia
- ♦ Transport South Australia
- ♦ Department of Infrastructure, Energy and Resources Tasmania
- ♦ Department of Infrastructure, Planning and Environment Northern Territory
- ♦ Department of Urban Services Australian Capital Territory
- ♦ Commonwealth Department of Transport and Regional Services
- ♦ Australian Local Government Association
- ♦ Transit New Zealand

The success of Austroads is derived from the synergies of interest and participation of member organisations and others in the road industry.

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CHAIRMAN'S MESSAGE

Dr Robin Dunlop
Austroads Chairman
Chief Executive, Transit New Zealand



The 2001/2002 year marked the first full period of work planned under *Austroads Strategic Plan 2001 – 2004* and saw considerable output from Austroads work program in key transport areas. The year was also a period of significant change as Austroads sought to guide its current and future work program to specifically address larger strategic priorities. Importantly, the administrative processes to support this goal were reviewed, improved where necessary, and implemented. The executive committee meeting has been discontinued and instead we have three full council meetings per annum.

Austroads continues to respond to the needs of the Australian Transport Council (ATC) and the Standing Committee on Transport, and supports the National Transport Secretariat in fulfilling its role of advisor to the ATC on transport issues. Austroads has responded to a number of initiatives raised by ATC this year including projects on automatic crash notification, reducing collision risk at passive railway crossings, school bus safety, and motorcyclists and safety barriers.

During the year, Austroads members and stakeholders have contributed to a variety of outcomes with real impact on and in Australasian roads and transportation:

Telecommunications in Road Reserves: Operational Guidelines for Installations was released to assist in the complex issue of the installation, use and maintenance of telecommunications carriers' facilities within road reserves controlled by road authorities. The guidelines were jointly prepared with the Australian Telecommunications Industry Forum and are freely available on Austroads web site.

In vehicle regulation, good progress was made on a range of issues: the National Exchange of Vehicle and Driver Information System (NEVDIS) software linking driver licensing and vehicle registration databases across Australia moves towards full connection from all jurisdictions; national strategies to address the problems of overweight and overdimensional containers were released taking account of stakeholder concerns and the impact of such strategies; in October 2001, Austroads members agreed to oversee the Intelligent Access Project (IAP) seeking to examine the feasibility of using vehicle tracking technologies to monitor the route compliance of heavy vehicles on Australian roads; the Performance Based Standards for heavy vehicles project being managed by the National Road Transport Commission is proceeding to schedule with the release of a major report establishing how the heavy vehicle fleet performs in comparison to the likely regulatory standards; Austroads website now lists those countries whose driver licences are recognised in Australia and New Zealand.

As the major deliverable from its work program, Austroads published guidelines in a range of important areas:

In traffic management, a resource book on *Travel Demand Management (TDM)* was released updating Austroads 1995 guidelines. While updating the more traditional approaches to TDM, the new guide takes account of newer trends and physical measurements of TDM.

In road safety, Austroads released the second edition of its *Road Safety Audit* guide. A complete revision, the new edition features new work on the audit of designs, roadwork traffic schemes and particular road user groups. 6,000 copies of the first release were disseminated and a similar number is expected for this edition. 1,000 copies have been earmarked for international dissemination. The second edition of *Bitumen Sealing Safety Guide* was also released and takes account of the latest Australian Dangerous Goods Code.

chairman's message

In road design, *Urban Road Design* was published and provides up-to-date guidelines to the geometric design of major urban roads in Australia and New Zealand. The widely used *Rural Road Design* is close to production after a major revision and, with its urban companion, will provide an excellent technical reference in this crucial area.

In the pavements area, an *Asphalt Guide* was released detailing new materials and improvements in asphalt technology and was prepared with the Australian Asphalt Pavement Association. Austroads released drafts for public comment of the revised guide on pavement design, and a new work on pavement rehabilitation. These will be published when feedback is assessed. Austroads also made available from its web site all approved pavement test methods documents, a move that was well received and should assist in standardising their use. These cooperative efforts require enormous amounts of energy and the people involved are to be congratulated.

Austroads environmental work has included the release of an annual environmental reporting framework for road agencies and a report on the methodology for obtaining a consistent approach to traffic noise modelling. Austroads existing *Environmental Strategy* has been the subject of review during the year and is with members for final review now. It is slated for release before the end of 2002.

The Intelligent Transport Systems program continues to oversee Austroads involvement in implementing e-transport, the national ITS strategy. In October 2001, the ITS World Congress was held at Darling Harbour, Sydney and proved an outstanding success with over 2,100 delegates and almost 4,000 visitors to the exhibition.

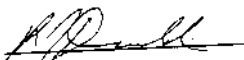
During the year, Austroads specifically sought to find ways to more widely disseminate Austroads publications. In May, Austroads Council agreed to a proposal to freely offer its research reports, but not guides, in electronic format from Austroads web site. This facility is now available and we've received much positive feedback. Usage of the system is being monitored and comment logged for future enhancements.

Austroads has continued in its efforts to value the work it performs with a series of projects to gauge the effectiveness of project outputs. The results of these investigations provide important information on such indicators as how effective the outputs are and penetration amongst practitioners.

Austroads has maintained its involvement internationally. As First Delegates to Australia and New Zealand respectively, Colin Jordan and I have maintained Austroads participation in (PIARC) World Road Association activities. Colin Jordan, as Chairman of the Strategic Planning Commission PIARC, has continued to manage the review into PIARC's structure and internal rules. Austroads also managed arrangements for the meetings of the four Committees under the PIARC Strategic Theme ST4 *Management and Administration of the Road System* in Queensland in October 2001. We continually monitor our involvement in international activities to ensure they are providing benefits. Austroads representatives on PIARC technical committees provide regular reports of their work and these reports are widely disseminated amongst members.

Austroads Executive Director, Dr Robert Wilson, retired in November 2001. Robert made a considerable contribution to Austroads over his eleven-year tenure. His successor, Mr Murray Kidnie brings substantial experience in association management to the role. We have continued to improve the way in which Austroads manages and administers its activities. Austroads has had a good year and has been energised by greater involvement of members, a focusing on Austroads purpose and strategic direction and the benefits of using newer technologies to help with management.

I wish to thank Austroads program and project managers and acknowledge the work of Austroads national office staff. I look forward to working with Austroads representatives to meet the challenges of the future.



Robin Dunlop
Chairman

MEMBERSHIP

Member Organisations	Directors
Roads and Traffic Authority, New South Wales	Mr Paul Forward — Chief Executive
Roads Corporation Victoria (VicRoads)	Mr Colin Jordan — Chief Executive <i>(until 3 August 2001)</i> Mr David Anderson — Chief Executive
Department of Main Roads Queensland	Mr Stephen Golding — Director-General
Main Roads Western Australia	Mr Greg Martin — Commissioner
Transport South Australia	Mr Trevor Argent — Executive Director
Department of Infrastructure, Energy and Resources, Tasmania	Mr John Pauley — Acting General Manager, Policy and Planning <i>(until 2 November 2001)</i> Mr Rob Nicholl — General Manager, Infrastructure
Department of Infrastructure, Planning and Environment, Northern Territory	Mr Dave McHugh — Chief Executive Officer <i>(until 22 February 2002)</i> Mr Barry Chambers — Chief Executive Officer
ACT City Services Department of Urban Services	Mr Gordon Davidson — Executive Director, City Management Urban Services
Commonwealth Department of Transport and Regional Services	Mr Bill Ellis — First Assistant Secretary, Land Transport <i>(until 31 December 2001)</i> Ms Trudi Meakins — Assistant Secretary, Road Programmes
Transit New Zealand	Dr Robin Dunlop — Chief Executive
Australian Local Government Association	Mr John Ross — President

Observer Organisations	Directors
ARRB Transport Research	Mr Gerard Waldron — Managing Director
Bureau of Transport & Regional Economics	Mr Tony Slatyer — Executive Director
National Road Transport Commission	Mr Tony Wilson — Chief Executive
Department of Transport, Papua New Guinea	Mr Henry Veratau — Secretary
Transfund New Zealand	Mr Martin Gummer — Chief Executive

STRUCTURE & PROGRAMS

Austroroads is governed by a Council consisting of the Chief Executive (or alternative senior executive officer) from each member organisation. The Council meets twice-yearly and delegates interim operational management to an Executive Committee.

Austroroads core activities are divided into six program areas, each of which is managed by a senior officer from a member organisation.

A small National Office (based in Sydney) services the Council and Executive Committee. The National Office also undertakes the strategic planning and coordination of program work, publishes Austroroads outputs and markets the association and its achievements.

Program	Program Manager
<i>Road System Management</i>	Mr Peter Balfe Deputy Chief Executive VicRoads
<i>Road Use Management</i>	Ms Sue Sinclair Director, Road Safety and Road User Management Roads and Traffic Authority New South Wales
<i>Road Safety</i>	Mr Adrian Beresford-Wylie Director, Safety Research and Education Australian Transport Safety Bureau
<i>Business Systems</i>	Mr Phil Ladner Executive Director — Major Projects Main Roads Western Australia
<i>Technology and Environment</i>	Mr Ian Reeves Executive Director (Pavements, Materials and Geotechnical) Department of Main Roads Queensland
<i>Intelligent Transport Systems</i>	Mr Geoff Kloot

National Office

<i>Executive Director</i>	Mr Murray Kidnie
<i>Manager, Program Support</i>	Mr David Francis
<i>Communications Manager</i>	Mr Jason Day
<i>Office Manager</i>	Ms Judi Sorbie
<i>Accounts Manager</i>	Ms Jeannie Sanoo
<i>Administrative Assistant</i>	Ms Jenny Castle

EXECUTIVE SUMMARY

Strategic Planning

Austrroads *Strategic Plan 2001 – 2004* was released and disseminated in May 2001. The plan is divided into five outcome and two enabling areas:

Outcome:

- ♦ Integrated transport system
- ♦ Improved road safety
- ♦ National and regional development
- ♦ Equity, accessibility and mobility in transport
- ♦ Sustainability

Enabling:

- ♦ Partnerships and relationships
- ♦ Research, standards and practices and tools

The plan was supplemented during the year by a range of focused initiatives to better support the development of Austrroads work plan. Specifically, Austrroads Council members and observers were canvassed on their views on strategic priorities for the work program. The broad issues identified were: freight and heavy vehicles, traffic management, information management, environment and community, road safety, project delivery, and asset management. The outcomes of this process will feed into the planning for work proposals for future work.

Austrroads Council decided to discontinue the meetings of the Executive Committee while having the full council meet three times a year instead of twice as previously. Other initiatives during the year included a review and update of the Austrroads/Local Government Partnership Plan, a review of current and future Austrroads representation on Standards Australia committees, and the drafting of guidelines for managing Austrroads reference groups.

Austrroads strategic plan and work plans support its role as the Road Modal Group in providing professional support and advice to the Australian Transport Council on road and road transport issues.

Road Investment, Planning and Management

Austrroads published *Telecommunications in Road Reserves: Operational Guidelines for Installations* setting out the operational guidelines for the installation, use and maintenance of Australian telecommunications carriers' facilities within road reserves controlled by road and traffic authorities in Australia. Austrroads and the Australian Telecommunications Industry Forum (ACIF) jointly prepared these guidelines. A parallel set of administrative guidelines was prepared to assist road authorities when dealing with carrier proposals for installing telecommunications facilities and will facilitate consistent procedure.

During the year Austrroads produced a host of publications dealing with road planning and management including: *Recent Advances in Road Pricing Practice*, *Austrroads Project Evaluation Compendium*, *Improving the Integration of Public Transport Services*, *Roads and Road Transport in the Logistics Chain*, and *Emerging Issues in the Australian Transport Industry*.

National Performance Indicators and RoadFacts 2000

The *Australian and New Zealand Road System and Road Authorities National Performance Indicators 2001* was published in September 2001 and made freely available electronically from Austrroads web site. Work commenced during the year on a dynamic web facility to publish all future performance indicator data sets.

Work on an interim update to Austrroads *RoadFacts 2000* publication was undertaken during the year and will be available from the web site by December 2002. *RoadFacts* continues to be one of the most downloaded publications from the web site.

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Asset Management, including Bridge Management

Australia provided input into the International Study of Highway Development and Management Tools (ISOHDM) project being conducted under the auspices of the World Road Association (PIARC). The HDM-4 software stemming from this project was released in March 2000. Austroads continues to support the development and promotion of HDM-4 with a project to facilitate the integration of HDM-4 into member authorities' asset management practices. A resourcing framework was established to coordinate all activities necessary to achieve consistency in approaches to road investment analysis. A CD-ROM was produced in December 2001, which completed the work on reviewing HDM-4 Version 1 for Australasian conditions. Version 2 is expected later in 2002.

The Effect of Climate on the Cost of Road Maintenance in Australia was published in October 2001 and presents the development of deterioration models to predict the environmental contribution to the total deterioration of granular and asphalt pavements. Other work undertaken during the year included an exploration of the relationships between community expectations and measure of road condition, and an exploration of the current road condition monitoring practices of local government across Australia.

Guidelines for Heritage Bridge Management was published and includes guidance on assessing and managing bridge heritage and the preparation of conservation management plans.

Vehicle Regulation and Heavy Vehicles

Development of the National Exchange of Vehicle and Driver Information System (NEVDIS) software to link jurisdictions' driver licence and vehicle registration databases, including Police National Stolen Vehicle Data databases, has continued during the year. In October 2001, Austroads Council endorsed a plan to pursue an open competitive tender process for the contract to manage the system. The current contract expires in 2003. A review of the key issues facing the future development of NEVDIS was undertaken looking into the existing objectives of NEVDIS, and included objectives and possible directions for NEVDIS in the future.

Strategies developed in conjunction with interested parties to address the problems of overweight and overdimensional containers were released during the year. The final *National Implementation Plan for the Management of Overloaded Trucks Carrying Containers Report*, along with the regulatory impact statement, was released in November 2001. The plan contains a package of ten recommendations intended to coordinate national implementation of the measures in the plan through a future Austroads project. The final report on overdimensional containers was endorsed and circulated to Austroads members in October 2001.

In October 2001, Austroads members agreed to support a major national project on intelligent access. The project began in March 2002 and is examining the feasibility of remotely monitoring the operational compliance of heavy vehicles with road transport operators voluntarily participating to obtain greater flexibility. A national project manager was recruited to oversee the twelve-month life of the project and regular updates are maintained on the web site.

The Performance Based Standards (PBS) project being managed by the National Road Transport Commission is proceeding in accordance with the approved terms of reference. Significant progress was made during 2001/02 with the completion of the next major component of the consultancy, comprising a report establishing how the Australian heavy vehicle fleet performs in comparison to the likely performance standards. This will allow the implications of the proposed standards to be explored in detail in a regulatory impact statement, setting out the NRTC's proposals for the performance standards. An additional financial contribution from Austroads to expand the scope and complexity beyond that of the original proposal was approved in May 2002.

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During the year, a report was circulated amongst member authorities detailing the *Mutual Recognition of Overseas Licences*. The purpose of the project was to provide a uniform approach for the recognition of overseas licences. A list of recognised countries and details for other countries to apply is on Austroads web site.

Traffic Management and Road Design

Urban Road Design: A Guide to the Geometric Guide of Major Urban Roads was released in May 2002. This guide represents the combined experience and international best practices of Austroads member agencies and industry experts in this area of geometric design and provides an up-to-date coverage of Australian and New Zealand road design practice. A revision of its sister publication *Rural Road Design* is due out by the end of 2002.

Austroads has advanced the staged update of the 15-part *Traffic Engineering Practice* series with nine parts in various stages of revision during 2001/02 and early 2002/03. This follows the maintenance strategy agreed to in May 2000. Parts under review are Part 3 - Traffic Studies, Part 4 - Road Crashes, Part 5 - Intersections at Grade, Part 7 - Traffic Signals, Part 8 - Traffic Control Devices, Part 9 - Arterial Road Traffic Management, Part 10 - Local Area Traffic Management, Part 11 - Parking, and Part 12 - Roadway Lighting.

Travel Demand Management: A Resource Book was published in February 2002 and is a revision of the 1995 guidelines. The new edition offers a deeper insight of new physical measures while updating the more traditional approaches.

Road Safety

Austroads continues to work in the road safety area undertaking research and producing practical guidelines. The year was notable for work initiated by the Australian Transport Council into automatic crash notification, reducing collision risk at passive railway crossings, school bus safety, and motorcyclists and safety barriers.

The second edition of the highly regarded *Road Safety Audit* guide was published in February 2002. This publication completely revises the first edition released in 1994 and provides a comprehensive guide to best practice in the road safety audit process. 1,000 copies of the guide have been earmarked specifically for international dissemination.

Austroads also released the second edition of the *Bitumen Sealing Safety Guide* incorporating changes to conform to the latest Australian Dangerous Goods Code.

A third set of guidelines was released as *Frangible Sign Support – Recommended Procedures for Design, Testing, Installation and Maintenance*. This publication presents uniform guidelines for the verification of the frangibility of signpost structures and crash testing guidelines. Other published works included *Potential Improvements for Non-Motorised and Vulnerable (Unprotected) Users in the Road System*.

Work has progressed during the year on a number of other projects: *Review of the School Bus Safety Action Plan* was to review the draft National School Bus Safety Action Plan; *Investigation of Cyclist Safety at Intersections* looks to identify the extent of the crash problem for cyclists at intersections and the level of risk to cyclists at intersections compared to elsewhere along the road network; *Reducing Collision Risk at Railway Level Crossings fitted with Passive Protection Signs* examines safety at passive railway crossings in Australia.

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Ecologically Sustainable Development and the Environment

Austroads continues with work in this important area:

Austroads Guidelines for Environmental Reporting was published in June 2002 and provides a framework for annual environmental reporting for road agencies and organisations associated with road development and maintenance.

An Approach to the Validation of Road Traffic Noise Models was published in March 2002 and outlines a technical basis for a consistent approach to traffic noise modelling. Any organisation wishing to assess the accuracy of a traffic noise prediction model could make use of this document in developing the study methodology, reporting the results of the study and assessing the acceptability of the study results.

A project seeking to share best practice and facilitate a greater understanding of environmental management practices was published in July 2002 as *Case Studies in Successful Environmental Management*. Soon to be published is work from a project to produce guidelines for the design of treatment options for addressing water quality problems associated with runoff from operational roads.

Work is also nearing completion on developing a new *Environmental Strategy*.

Technology

2001/02 saw the release of a number of significant publications in the pavement and bridge areas:

2001 Austroads Pavement Design Guide (Final Draft) was published in October 2001. A 12-month review period for public comment will end in October 2002. The final document, incorporating feedback, will replace the existing 1992 guide. *2002 Austroads Pavement Rehabilitation Guide (Final Draft)* was also released in May 2002 for a period of review prior to publication. This guide incorporates substantial improvements resulting from Australian research into materials characterisation and design methodology and contains details of pavement inspection and testing, selection of rehabilitation options and descriptions of specific rehabilitation treatments.

Austroads Provisional Sprayed Seal Design Method – Revision 2000 was published in November 2001. A summary of this document, prepared as a convenient guide for practitioners, was published as *Austroads Practitioner's Guide to Design of Sprayed Seals Revision 2000 Method* in August 2002.

Austroads/AAPA Asphalt Guide was released in February 2002 and will assist in the production of high quality asphalt pavements. The guide was produced as a cooperative effort between Austroads and the Australian Asphalt Pavement Association (AAPA) and provides a comprehensive understanding of modern asphalt technology.

Austroads has continued its involvement with the revision of the *1992 Bridge Design Code*. The Code will be released as an Australian Standard following resolution of all issues by the Standards Australia Technical Committee.

Other publications in the area of bridge technology includes the *Management of Concrete Structures to Extend their Service Life* published in January 2002, *Validation of Dynamic Load Models – Technical Documentation*, and *Guide to Road Profile Unevenness and Bridge Damage*, both published in March 2002. Austroads also published work into *Performance Assessment of Proprietary Bridge Components* which aimed to provide road authorities with a means of evaluating proprietary bridge components viz., bearings, expansion joints and waterproofing membranes and to produce lists of pre-qualified products.

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2001/02 also saw the establishment of an Austroads Pavement Reference Group area on Austroads web site incorporating a database of pavement test methods freely available in electronic format.

Implementation of e-transport

The *National Strategy for Intelligent Transport Systems – e-transport* – was adopted by the Australian Transport Council (ATC) in November 1999. The ITS work program for 2001/2002 continued to be based on the key strategies and actions identified in e-transport and grouped into 22 projects. Two years into the three-year program, progress has seen ten projects completed, five projects complete but requiring ongoing activity, and all remaining projects forecast to be completed, as scheduled, by June 2003.

Activities during the year included staging of the ITS World Congress in October 2001 at Darling Harbour, Sydney. The Congress was a key action in the implementation of e-transport. Over 2100 people actively participated in 600 special, technical and scientific sessions at the congress. Over 3,800 people from 40 countries visited exhibits in three halls of the exhibition centre.

An Intelligent Transportation and Vehicle Systems Research Laboratory has been approved and is being established in Queensland. The centre is expected to play a major role in undertaking research on ITS with commercial applications. Work has continued on other projects including automotive radar for collision avoidance, further refinement of the current ITS reference architecture, the development and release of a marketing and communications strategy for ITS, and the establishment of a dynamic web site (<http://www.its-australia.com.au>) to improve public and industry awareness of ITS.

International

Through its International Committee, Austroads develops mechanisms to fulfil its role in international affairs including involvement with the World Road Association (PIARC) and in international road organisations including the Road Engineering Association of Asia and Australasia (REAAA), the Organisation for Economic Cooperation and Development (OECD) Road Transport and Intermodal Linkage Research Programme, the APEC Transportation Working Group and the International Road Federation (IRF).

Publications and Promotion

Austroads publications operation yielded gross sales for the year of \$236,458. Total income was up on budget as a result of the release of a number of guides towards the end of the year. However, there was a higher than expected stock write-off figure resulting from a number of superseded publications and the decision to offer existing and future research reports for free electronically.

In all, Austroads published some 29 new reports and guides in the 2001/02 year, and produced and distributed 22 internal reports to member agencies and stakeholders.

During the year, Austroads moved to make available for free the majority of existing and future research outputs from projects. An internet database was developed and launched on July 12, 2002. The facility provides for searching and the download in electronic format of Austroads research reports, but not guides. The database been well received and is a great tool to disseminate research and development outputs from Austroads work program.

Austroads also completely refreshed its web site with a new layout and improved content and continues to add enhancements to provide better information on its activities.

ROAD SYSTEM MANAGEMENT

Mr Peter Balfe
Road System Management Program Manager
Deputy Chief Executive, VicRoads



To promote the effective and efficient management of the road system and to facilitate its adequacy, performance, contribution to the economy and achievement of environmental and social goals.

Overview

The Road System Management (RSM) Program is concerned with the strategic framework for provision and management of the road system within a total transport system.

Key areas of interest include:

- ♦ transport demand and travel forecasting
- ♦ integrated transport and land use planning
- ♦ sustainability of the road system
- ♦ travel demand management
- ♦ project assessment and investment evaluation
- ♦ road funding and financing
- ♦ road classification.

I am very grateful for the excellent work undertaken by the RSM Reference Group in providing assistance in the development and delivery of the program. This group is made up of senior representatives from each jurisdiction and relevant observers. The role of the Reference Group is to:

- ♦ provide a forum for discussion of issues and strategic priorities
- ♦ assist in developing, prioritising and scoping projects
- ♦ as individuals, take responsibility for timely delivery of projects within their jurisdiction
- ♦ facilitate exchange and dissemination of information on national and international activities
- ♦ liaise with other Austroads Reference Groups on cross-program issues.

The current membership of the Reference Group is:

Robert Allison – ACT Department of Urban Services
Peter Balfe – Austroads RSM Program Manager (Chairperson)
Kevin Bickoff – Emerald Shire Council, Emerald, Qld (ALGA)
David Francis – Austroads RSM Program Executive
David Gargett – Bureau of Transport Economics
Kevin Hadingham – VicRoads, Victoria
Mary Lydon – ARRB Transport Research
Gary Marwood – National Transport Secretariat

road system management

Barry Moore – National Road Transport Commission
Penny Nicholls - Department of Infrastructure, Energy & Resources, Tasmania
Gary Norwell – Main Roads, Western Australia
Rob Richards – Transport South Australia
Allan Richmond – Department of Main Roads, Queensland
Jay Stricker – Roads & Traffic Authority, New South Wales
Ernie Wanka – Department of Infrastructure Planning and Environment, Northern Territory
David Young – Transit New Zealand
Vacant – Commonwealth Department of Transport and Regional Services

Activities in the 2001/2002 Program

2001/2002 was a year of substantial achievement within the RSM Program. A number of projects were completed with other longer term projects progressed considerably. Significant emphasis was successfully placed upon finalising a number of overdue projects.

National guidelines for dealing with telecommunications facilities in road reserves were developed. Interim Guidelines for Dealing with Installation Proposals (2000) was revised and separate Administrative Guidelines for Road Authorities and Operational Guidelines for Installations were completed and are freely available in downloadable format from the Austroads web site.

Work undertaken in the development of Multi-Attribute and Multi-Outcome Project Assessment Methodology (MODSS) was successfully completed. The purpose of this project was to improve MODSS for road project assessment with specific objectives to increase the capabilities of the existing MODSS spreadsheet model and develop guidelines for the application of the MODSS.

A study into *Recent Advances in Road Pricing Practice* was produced and summarises information available nationally and internationally. The report updated earlier Austroads work on this topic and explored current issues relating to road pricing including social, political, economic and environmental impacts. It identified and discussed the availability of new technology, which is the most rapidly changing aspect of road pricing, and provided an update of road pricing projects and trials around the world. It also discussed possible directions for Australia based on international experiences.

Benchmarking Scorecard and Performance Indicators for Intermodal Terminals was published. The purpose was to demonstrate the application of these indicators by a pilot benchmarking exercise and to recommend the scope and responsibilities for any ongoing program of performance monitoring.

Travel Demand Management: A Resource Book was published. It included a review and update of existing Austroads guidelines, which were published in 1995. This resource book offers an insight into new approaches in this area and provides a snapshot of the current knowledge and practice in travel demand management, with case studies used as illustrations wherever possible.

Improving the Integration of Public Transport Services was published. The main objectives of this work were to define the problems faced by public transport service providers and regulatory agencies; research the available literature at national and international levels on consumer and service provider attitudes and behaviour; and provide possible strategies that could be adopted by service providers and regulatory agencies to achieve greater levels of integration and user acceptance. The report presented four key proposals to improve integration.

road system management

Through the RSM Program, Austroads is making a financial contribution towards five projects being undertaken by the National Taskforce responsible for the National Greenhouse Strategy Measure 5.3, 'Land Use and Transport Planning'. The final reports from these projects have been released in cd-rom format and will add value to the integration of better transport and land use outcomes and ultimately contribute to the reduction in greenhouse gas emissions. These reports will form part of a total communication package, which will also include a PowerPoint presentation and an interactive cd-rom.

An evaluation project was undertaken to gauge the effectiveness of *Cities For Tomorrow* — a 1998 Austroads publication intended to assist practitioners in the integration of land use planning, transport and environment. Because of the complexity of *Cities for Tomorrow* it was decided that this study would address primarily the penetration of the document. A survey was conducted and the results analysed, which indicated a penetration rate of approximately 89% and also identified a number of issues related to future changes and additions to the publication.

In an ongoing commitment Austroads reimburses part costs associated with Australia and New Zealand involvement in six PIARC committees aligned with the RSM Program. The purpose is to incorporate relevant international developments into the program through active participation on these committees. To effectively disseminate knowledge gained from this involvement quarterly email newsletters have been written and broadly circulated. These will continue throughout the 2002/2003 work program.

Future Initiatives

The 2002/2003 RSM work program has been developed in consultation with the Program Reference Group to address high priority strategies in the *Austroads Strategic Plan 2001–2004* and high priority issues identified by Council Members.

Emphasis has been given to projects, which will contribute to a longer-term strategic research program. As a first step, these new projects will review all currently available research to identify any gaps in knowledge and further work that may be required.

A project will be undertaken to draw together existing Austroads work on project evaluation into an identifiable and maintained Austroads series. Making this valuable body of work more generally available and readily accessible will provide a useful aid for planners and decision makers.

A project on local roads will be undertaken to contribute to guidelines on additional costs caused by significant transport operations and potential management options. It will also provide a focus for the Austroads/Local Government Partnership Plan, which was reviewed during 2001/2002.

Austroads Council members have identified traffic congestion and road space allocation as priority issues. Research work will be undertaken to progress the potential use of road pricing as a tool to manage these issues and to identify opportunities that might be considered by jurisdictions for incremental introduction of pricing.

An effectiveness review of the 1995 *Ecologically Sustainable Development Strategy*, will be undertaken. The objectives are to assess the impact that the strategy has had on practices by road agencies and the need to update the strategy.

Two national reports will be prepared for submission to the PIARC XXIIInd World Road Congress in Durban, October 2003. The themes of the reports are Roads and the Quality of Life, and Mobility: A Basic Social Service.

ROAD USE MANAGEMENT

Ms Sue Sinclair
Road Use Management Program Manager
Director, Road Safety and Roads User Management,
Roads and Traffic Authority New South Wales



To contribute to the safe and efficient use of the nations' roads and the harmonisation of user services and conditions.

Overview

2001/2002 was a year of achievement, opportunities and renewal for the Road Use Management (RUM) Program.

The RUM Program continued its commitment to the delivery of overdue projects with a total of nine projects submitted and endorsed by Austroads Council during 2001/2002. Due to the collective efforts of the RUM team, reference group members and project managers, the RUM Program now contains no overdue projects.

Having achieved this the RUM Program was able to place further emphasis on the commencement of eleven new projects and determine emerging priorities and future directions for the Program.

The total program budget for the RUM Program in 2001/2002 was \$640,300. This consisted of \$410,000 for the Best Practice Program and \$230,300 for the Strategic Research Program. A further \$70,000 was allocated off-budget for the Performance Based Standards (PBS) project.

Following consultation undertaken with reference group members and key stakeholders throughout 2001/2002, the RUM Program has been able to implement the Austroads Council's strategic decision to manage a smaller number of projects in 2002/2003, each larger in size and with a stronger focus against the Austroads Strategic Plan. This will ensure that the Program's resources are directed to those projects that provide the highest value to Austroads members.

RUM reference groups continue to provide a valuable platform for the discussion, debate and resolution of disparities that arise between jurisdictions. During 2001/2002, a number of inter-jurisdictional issues were resolved through RUM reference groups, including:—

- ◆ agreement on the mutual recognition of guidelines for escort vehicles operating across jurisdictions (Heavy Vehicle Reference Group)
- ◆ establishment of consistent medical standards for commercial drivers across Australian States and Territories (Registration & Licensing Reference Group)
- ◆ identification of the methodologies available to road authorities to determine recommended speeds on curve advisory signs (Traffic Management Reference Group).

2001/2002 also saw improved consultation between RUM reference groups. A number of issues throughout the year have required extensive consultation between both the Registration and Licensing and Heavy Vehicle Reference Group, while the Australian Bicycle Council continued to liaise closely with the Traffic Management Reference Group.

road use management

Heavy Vehicles

The Heavy Vehicle Reference Group commenced work on a package of Compliance and Enforcement projects during 2001/2002. These projects will develop best practice guidelines to support the consistent implementation of the Compliance and Enforcement Bill currently being prepared by the National Road Transport Commission (NRTC). Guidelines in the series will deal with the management of mass, dimensions, load restraint, the application of enforcement powers along the chain of responsibility and the development of industry codes of practice. Additional projects are also underway to assist with the organisational changes required to administer the new Compliance and Enforcement regime, and to foster communications and education with industry and key stakeholders.

As a RUM Program initiative, the package of Compliance and Enforcement projects are administered by a single project manager. This will ensure a consistent source of communication, consultation and collaboration with government agencies, industry stakeholders and Austroads members during the development of the best practice guidelines for the Compliance and Enforcement Bill.

The Performance Based Standards (PBS) project for the assessment and management of alternative heavy vehicles configurations continues to progress. During 2001/2002, the NRTC requested an additional funding contribution from Austroads for 2002/2003 to accommodate the expanded scope of the project. In response, the Austroads Council agreed to a contribution of \$250K to be funded from the RUM Program in 2002/2003, with a further \$250K to be provided by 'in kind' contributions from jurisdictions.

The Heavy Vehicle Reference Group was successful in delivering two projects requested by SCOT in 2001/2002:

RUM.HV.N.530	Strategy for Overdimensional Freight Containers
RUM.HV.C.005	Strategy for Overweight Freight Containers

The final report for the Strategy for Overdimensional Containers was submitted to Austroads Council Members in October 2001, and contained a number of revisions incorporating earlier concerns raised by jurisdictions.

The final National Implementation Plan for the Strategy for Overweight Containers was submitted to Austroads Council Members in November 2001, and included a package of ten recommendations in the following areas:

- ♦ legislative and regulatory
- ♦ practical and technological
- ♦ communication, education and training.

The recommendations contained in both reports will be incorporated in a new project entitled 'Implementation Strategy for Intermodal Freight Containers' to commence in 2002/2003.

Registration and Licensing

A number of major initiatives have been progressed by the Registration and Licensing Reference Group in 2001/2002.

Australian states and territories continue to establish links with the National Exchange of Vehicle and Driver Information System (NEVDIS). NEVDIS facilitates the exchange of driver licensing, vehicle registration and written off vehicle information between Australian states and territories, thereby combating vehicle theft, re-birthing and fraudulent driver licensing. This system, funded by all Australian states and territories, has an annual operating budget of \$4.2 million.

road use management

As at June 30 2002, all Australian states and territories, with the exception of Tasmania and the ACT, had fully connected to NEVDIS.

As the existing contract with IBM to provide facilities and services for NEVDIS expires in August 2003, the Registration and Licensing Reference Group expended considerable time and effort during 2001/2002 to prepare the NEVDIS II tender and contract.

The Registration and Licensing Reference Group, in conjunction with the National Motor Vehicle Theft Reduction Council (NMVTRC), continues to implement strategic infrastructure, policy and practice changes to achieve long-term reductions in vehicle theft and vehicle re-birthing. Two projects derived from SCOT that will assist in the further reduction of vehicle fraud were delivered during 2001/2002:

- RUM.RL.C.033 Definition of a Written Off Vehicle
- RUM.RL.C.034 Control of Re-registration of Statutory Write Offs.

The Registration and Licensing Reference Group liaised with countries recognised by Austroads as having equivalent licensing standards and procedures to Australia and New Zealand throughout 2001/2002. This will ensure that Australian and New Zealand license holders do not have to undertake practical driving examinations when applying for a license in any country recognised by Austroads. Reciprocal rights are provided in Australia and New Zealand.

Foreign countries recognised by Austroads as having equivalent licensing standards and procedures as Australia and New Zealand can now be viewed on the Austroads website. This initiative provides a single point of reference for foreign license holders and foreign licensing authorities.

Traffic Management

The Traffic Management Reference Group concentrated on completing a number of long-term projects during 2001/2002, including:

- RUM.TM.C.012 Guide for Traffic Engineers to Better Provide for Public Transport
- RUM.TM.C.022 Revision to Guide to Traffic Engineering Practice Part 7 — Traffic Signals
- RUM.TM.N.502 Guidelines to Economic Assessment of On-Road Parking on Traffic Flow.

The Australian Bicycle Council applied significant effort in 2001/2002 to implement strategies from *Australia Cycling: The National Strategy 1999 – 2004*. A number of projects contained within this strategy have progressed well, assisted in part by the Traffic Management Reference Group's delivery of RUM.TM.N.501 – Forecasting Demand for Bicycle Facilities — during 2001/2002.

To ensure the maintenance of the Guide to Traffic Engineering Practice Series (GTEP), the Traffic Management Reference Group commenced two further revisions to the series in 2001/2002:

- RUM.TM.C.039 Revision to GTEP Part 9 — Arterial Road Traffic Management
- RUM.TM.C.040 Revision to GTEP Part 10 — Local Area Traffic Management.

These projects are due for completion by December 2003.

road use management

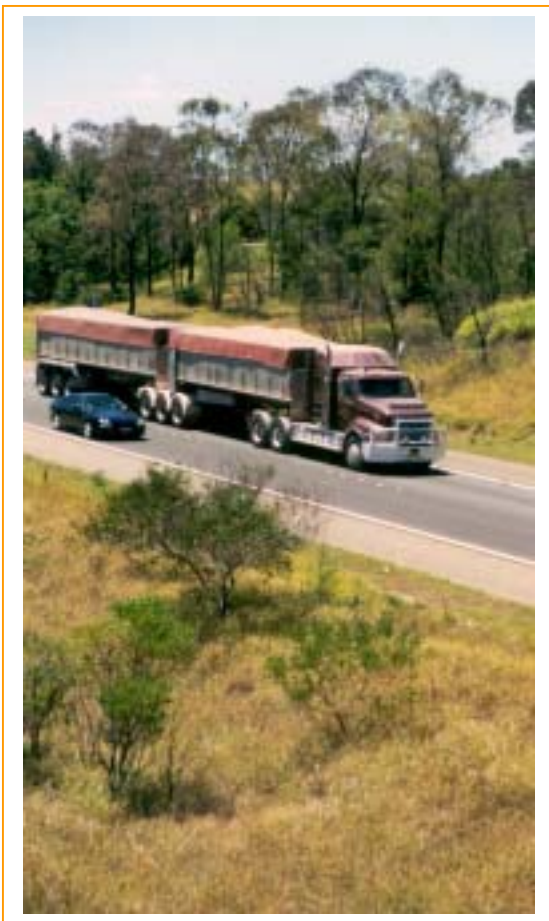
Future Directions

The objective of the RUM Program in 2002/2003 is to increase the value and relevance of the program's work program and outputs, by responding to the priority strategic issues identified by Austroads Council members.

The RUM Program is committed to the on-time delivery of all current and future projects, and recognises the need for additional resources to be assigned to strategic projects identified by Austroads Council, Standing Committee on Transport and Australian Transport Council.

Furthermore, the RUM Program will continue to oversee the management of:

- ◆ the ongoing implementation of NEVDIS, and the successful introduction of NEVDIS II
- ◆ continued work on Compliance and Enforcement regimes for Heavy Vehicles
- ◆ continued work on Performance Based Standards (PBS) for Heavy Vehicles in partnership with the NRTC
- ◆ review of Guide to Traffic Engineering Practice Series Part 3 – Traffic Studies, and Part 11 – Parking.



ROAD SAFETY

Mr Adrian Beresford-Wylie
Road Safety Program Manager
Director, Road Safety Programs and Support Branch,
Australian Transport Safety Bureau



To develop and promulgate an agreed road safety program aimed at reducing the frequency and severity of crashes on the nation's road systems.

Strategic Direction

The Program's primary purpose is to support the achievement of the target of the National Road Safety Strategy 2001 – 2010: a 40% reduction in the road fatality rate by 2010, and producing a safer road and road transport environment for all road users.

The strategic direction of the Road Safety Program was rigorously reviewed in 2001 to ensure that the Program aligned directly with the *Austroads Strategic Plan 2001 – 2004* and the *National Road Safety Strategy 2001 – 2010* (NRSS) as agreed by Ministers in November 2000. Austroads' role as the road modal group for the Australian Transport Council (ATC) underlines the importance of the NRSS as a strategic frame of reference for the Road Safety Program.

The strategic directions for the Road Safety Program focus on five priority research strategies and seven priority issues.

The priority research strategies (which define approaches and types of output) are:

- ◆ development of best practice guides in support of the Austroads strategic plan
- ◆ future focus – linking road safety outcomes to changes in activity/road use patterns and incorporating road safety impacts in planning processes
- ◆ the use of Intelligent Transport Systems to improve road safety
- ◆ monitoring road safety trends and relating road safety outcomes to current practice
- ◆ scoping studies to identify highest priorities for future research.

The priority issues (which define the road safety problems to be given research priority) are:

- ◆ safer road environment
- ◆ speeding and speed management
- ◆ driver impairment
- ◆ restraint use
- ◆ high risk road users (including older road users, young drivers and unprotected road users)
- ◆ heavy vehicle safety
- ◆ rural and remote safety.

road safety

2001/2002 Program Achievements

A priority for the Road Safety Program this year has been to focus on reducing the number of projects to a more manageable level and to create the opportunity for more substantial projects for future years.

At the beginning of the 2001/2002 financial year, there were 32 continuing projects and 20 new projects. A number of new projects were initiated by the ATC dealing with automatic crash notification, reducing collision risk at passive railway crossings, school bus safety, and motorcyclists and safety barriers.

Ten projects were brought to completion this financial year with a further 12 projects scheduled for completion in the first quarter of 2002/2003. Of these 22 projects, over half of them will have reports published and available to the public including four reports for the ATC.

The Road Safety Program has developed three important sets of guidelines aimed at establishing uniformity of practice in respect of design, construction, maintenance and other user aspects of the Australasian road system. The first is *Road Safety Audit (Second Edition)*. This major publication draws together current practices in Australia, New Zealand and elsewhere. It provides practitioners and decision-makers in state and local government authorities and consulting practices with ways of formally addressing road safety issues at the concept stage of a road through to the construction stage.

The second publication is *Treatment of Crash Locations*. These guidelines are designed to help practitioners in road authorities to treat locations on the road system which are experiencing traffic crashes. When these locations are effectively treated by applying the appropriate engineering solutions, the number and severity of the crashes can be reduced or, in some cases, eliminated altogether.

Frangible Sign Support – Recommended Procedures for Design, Testing, Installation and Maintenance is the third set produced by the Program. This important publication presents uniform guidelines for the verification of the frangibility of sign-post structures and crash testing guidelines. Crash testing allows performance of the structure to be assessed in terms of the effect the collision has on vehicle occupants, the structural crashworthiness of the support system, vehicle trajectory, vehicle damage and the hazard posed by detached elements on other traffic and pedestrians.

Future Directions

The Austroads Council has asked the Road Safety Program to review the National Road Safety Strategy with a view to prioritising focus areas for research to support the achievement of the Strategy's target of a 40 per cent reduction in the road fatality rate by 2010.

Once the Council has considered and agreed on a strategic approach, priorities for Austroads' research will be circulated to all road safety research institutions through the Research Coordination Advisory Group, the Program's expert reference group. New projects for the 2003 – 2004 financial year will then be developed and submitted to the Council for approval. The Road Safety Program is expecting to contribute positively through targeted research towards the reduction of the Australian road toll.

At the same time the Austroads Road Safety program, through the National Road Safety Strategy Panel which acts as its strategic advisory group, will be closely involved in the development of the new National Road Safety Action Plan for 2003 and 2004. The Action Plan is expected to be endorsed by transport ministers in November 2002.

BUSINESS SYSTEMS

Mr Phil Ladner
Business Systems Program Manager
Executive Director — Major Projects, Main Roads Western Australia



To promote best practice in business systems where a national approach best contributes to performance of road authorities and the road system.

Overview

The 2001/2002 Business Systems Program focused on implementing the *Austroads Strategic Plan 2001 – 2004*. In particular the program was responsible for four areas:

- ◆ Asset Management
- ◆ Bridge Management
- ◆ Technical and Professional Skills
- ◆ Performance Measures.

In line with overall Austroads practice, many new and existing publications became available electronically and free of charge from Austroads internet site during 2001/02. These included the annual Austroads National Performance Indicators publication and RoadFacts 2000, Economic Evaluation of Road Investment Proposals: Unit values for road user costs at June 1997 and June 1998 (AP-142/99), Valuing Emissions and Other Externalities: A Brief Review of Recent Studies (AP-R179/00), and Economic Evaluation of Road Investment Proposals: Improved Prediction Models for Road Crash Savings (AP-R184/01).

2000/2001 Activities

Asset Management

During 2001/02, research and development effort continued on a range of asset management topics. The topics of main interest include pavement performance prediction which moved from experimental work to the analysis stage, the role of Intelligent Transport Systems in road network asset management, consistency in approach to investment analysis, the use of pavement strength in asset management, asset management for unsealed roads, clarifying the meaning of 'remaining life' of road infrastructure assets, and low traffic roads subject to heavy mass loading. New work began on consistency of road use data (traffic loading and traffic mix), the risks to road assets from salinity and rising water tables, clarification of definitions of maintenance, economic analysis for maintenance proposals, and on improved prediction for resealing intervention.

During the year, responsibility for monitoring the Long Term Pavement Performance Maintenance (LTPPM) sites was moved from the BS Program to the Technology and Environment Program (T&E) for better coordination with similar work being undertaken by T&E for the LTPP sites. In addition, Austroads responsibility for research and development work on the effects of heavy masses on pavements moved to the Austroads Pavement Reference Group in the T&E Program to improve coordination with related work.

business systems

The following new Austroads publications were completed during 2001/02 and are available free of charge from the Austroads website:

- ◆ *Integrated asset management guidelines for road networks* (AP-R202/02);
- ◆ *Road network asset management: international benchmarking study* (AP-R204/02); *Bridge management systems – the state of the art* (AP-R198/02); and
- ◆ *Guidelines for community input in setting level of service and intervention standards for road networks* (AP-R201/02).

The following existing Austroads publications were under active review during 2001/02:

- ◆ *Road asset management guidelines* (AP-109/94); and
- ◆ *Strategy for improving asset management practice* (AP-53/97).

The Asset Management Reference Group conducted five workshops and two seminars during 2001/02, as follows:

- ◆ Perth, 27/8/01 (half-day): “Intelligent Transport Systems in Road Network Asset Management”
- ◆ Perth, 27/8/01 (half-day): Jointly with MR WA “MR WA Term Network Contracts (TNCs)”
- ◆ Sydney, 17 and 18/10/01 (two days): “Bridge Information”
- ◆ Melbourne, 14/9/01 (half-day): Jointly with APRG, “Pavement Technology and Asset Management Update”
- ◆ Melbourne, 14/9/01 (half-day): “Strategy for Improving Asset Management Practice”
- ◆ Brisbane, 22/2/02 (one day): “Asset Management Tools for Unsealed Roads”
- ◆ Hobart, 28/2/02 (evening): Jointly with DIER Tas, “Road Network Asset Management”.

The 6th International Conference on Managing Pavements is to be held in Brisbane 19 to 24 October 2004. Austroads has agreed to be a joint host of this conference with DMR Qld. The AMRG Convenor is ex officio a member of the Local Organising Committee. AMRG intends hosting a workshop in association with the conference.

During 2001/02, a cd-rom was produced and distributed containing ARRB reports for Austroads (and DMR Qld and VicRoads) on HDM-4 testing and calibration projects, and a summary.

Content was prepared for an asset management section in the Austroads web site. A formal resourcing structure was established for implementation of the National Action Plan (NAP) for consistency in investment analysis. The Asset Management Reference Group (AMRG) has taken ownership of the NAP.

A preliminary comparison of road maintenance intervention levels and response times for six road maintenance activities was prepared in 2001/02 – this will be an input to an 2002/03 project.

After more than 6 years as AMRG Convenor, Paul Smith (DMR Qld) stood down at 30 November 2001, with Peter Todd (DIER Tas) becoming the new Convenor. The Business Systems Program would like to acknowledge the invaluable contribution of Paul Smith in this capacity.

Road User Effects

In 2001/02, Austroads continued to develop and refine tools to support national use of consistent and credible models for road user costs, in line with the 1997 *Strategy for Road User Costs*.

business systems

Work was undertaken to coordinate three strands of work to improve consistency and validity of estimates of road safety benefits, viz developing improved estimates of crash incidence, developing an improved methodology for updating estimates of crash unit costs for use in evaluation of general road investment proposals, and developing improved estimates of crash unit costs for use in evaluation of specific localised safety improvement works.

The planned work on valuation of roadside ITS initiatives was completed and submitted to member authorities during July 2002 for concurrence to publish the report. ARRB developed a stand-alone spreadsheet-based Road User Cost (RUC) model using HDM-4 algorithms, as an Australian reference RUC model.

Consultation with the Austroads Environmental Reference Group (T&E Program) was a significant feature of progress with the valuation of environmental externalities. Work continued on updating and improving harmonisation requirements.

ARRB began a literature survey of evaluation guidelines, standards and practices for investments in infrastructure for trips using other modes in conjunction with trips by car or truck, and continued development of an improved urban road user cost estimation model based on the Main Roads WA TRAMS model, for use with common transport planning models.

The following new Austroads publications on road user costs were issued during 2001/02:

- ◆ *Effect of sealed shoulders on road user costs (report and diskette) (AP-R188/01); and*
- ◆ *Economic evaluation of road investment proposals: Risk analysis (AP-R203/02).*

The following existing Austroads publication on road user costs was under active review during 2001/02:

- ◆ *Economic evaluation of road investment proposals: Unit values for road user costs at June 1997 and June 1998 (AP-142/99).*

The following proposed new Austroads publications were endorsed, subject to minor changes, and are expected to be published in 2002:

- ◆ *Economic evaluation of road investment proposals: Unit values for road user costs at September 2000;*
- ◆ *Economic evaluation of road investment proposals: Improved estimation of hourly traffic volume distributions; and*
- ◆ *Economic evaluation of road investment proposals: Valuing travel time savings for freight.*

After 6 years as Road User Effects Reference Group (RUERG) Convenor, Eddie Peters (DMR Qld) stood down in mid-2001, and Tony Boyd (VicRoads) became the new Convenor. Business Systems Program would like to acknowledge the invaluable contribution of Eddie Peters in this capacity.

National Performance Indicators

A summary of Austroads work on Performance Indicators for Intermodal Freight and Road-Based Public Transport (BS.P.N.539, formerly N.BS.9812) was prepared. Following discussion at Council level, SCOT is to consider a recommendation that individual modal groups determine how they want to proceed.

Austroads commissioned ARRB to conduct a critical review of greenhouse gas indicators for Australian road transport. Minor changes in the methodology for calculating the Greenhouse Gas Emission (GGE) and Consumption of Road Transport (CRT) indicators are likely, and a new indicator of energy consumption is being considered. The report on this review is nearing completion.

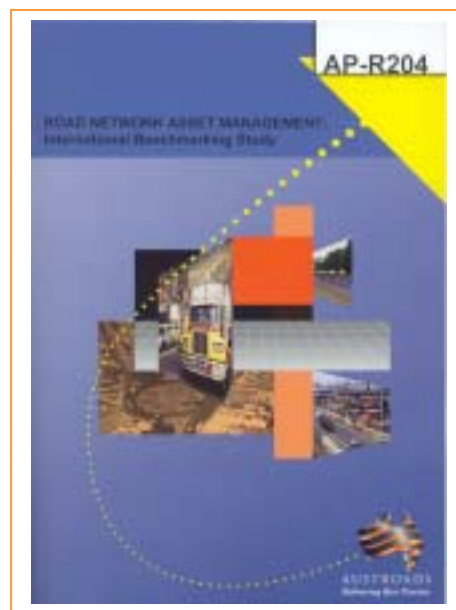
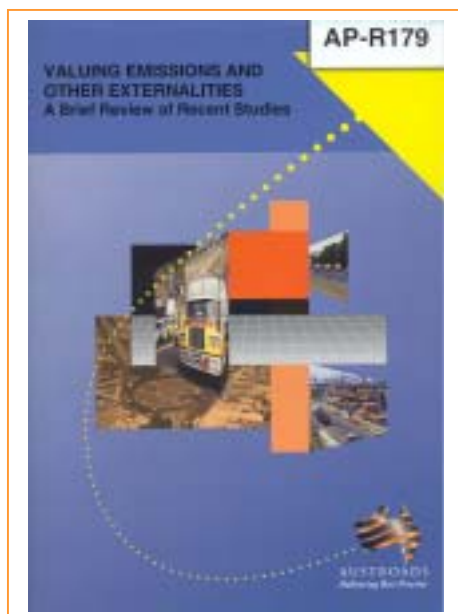
business systems

Work continued on the development of a series of social and environmental indicators including Extent of Externalities Recovery (EER), Roadside Quality Maintenance (RQM), and Resource Substitution (RS). Austroads decided to introduce the International Roughness Index (IRI) in the calculation of Road Maintenance Effectiveness (RME) and Smooth Travel Exposure (STE), replacing the NAASRA Roughness Meter (NRM) measure. A review commenced of the degree of support for periodic User Satisfaction Index (USI) surveys.

A seminar on Austroads National Performance Indicators in conjunction with a meeting of the NPIRG attracted more than 40 people in Sydney in February 2002.

Future Directions

As was the case in 2000/01, the focus for Business Systems in 2001/02 has been to complete existing projects and to undertake further projects only as they emerge as strategic objectives directly related to the *Austroads Strategic Plan 2001-2004*. The issue of non-feasance is of major concern to all Austroads member authorities and has been identified as a key focus for Business Systems. Improved project delivery and an evaluation of the experiences of all member authorities will be a particular area of focus.



TECHNOLOGY AND ENVIRONMENT

Mr Ian Reeves
Technology and Environment Program Manager
Executive Director (Pavements, Material and Geotechnical)
Department of Main Roads Queensland



To develop and promote technology appropriate to the Australasian road transport industry and to establish and promulgate environmental objectives and practices appropriate to Australian and New Zealand conditions.

Overview

Technology and Environment (T&E) projects in the 2001/02 Work Plan addressed the following objectives in the *Austrroads Strategic Plan 2001–2004*:

- ◆ Infrastructure and Operational Improvements
- ◆ Asset Management and Performance
- ◆ Environmental Impact Management
- ◆ International Relationships
- ◆ Harmonisation of Standards and Practices
- ◆ Skills and Technology
- ◆ Research.

The development, maintenance and dissemination of common standards and practices such as guides, codes of practice and tools are major emphases of the Program. This work continues to benefit stakeholders in all levels of government and the private sector.

In addition to projects undertaken within the four Reference Groups, the work of Austrroads representatives serving as full or corresponding members of PIARC Committees C1, C3, C7/8, C12 and WIN was supported.

As previously, the Program was divided into the principal areas of pavement, structures, environmental and road design, each represented by a reference group. These groups provided advice, monitored project progress, assisted in establishing the strategic direction of the Program and made recommendations on future projects and their priority.

It is with sadness that we record the passing of Rod McGee (DIER Tasmania). Rod was a valued member of the Austrroads Structures Technology Reference Group and made a very significant contribution through his management of several T&E research projects, including “Management of Concrete Bridges” and “Concrete Durability — Development of models to better predict and extend the service lives of concrete bridges”.

technology and environment

Significant activities in the T&E Program in 2001/02

T&E Reference Groups

In 2001/02 the Program introduced a meeting model to improve coordination between the Pavement (APRG), Structures Technology (ASTRG), Environmental (ERG) and Road Design (RDRG) reference groups, by holding overlapping or back-to-back meetings in a common location. This provided opportunity for joint reference group discussion on matters of common importance. In addition, separate and joint technology transfer seminars discussed a range of current issues being addressed by Austroads of interest to those involved with the management of road infrastructure and road networks at all levels of government and private industry. This innovation has worked well and has been well received. The meetings are also scheduled for best alignment with regard to the Austroads planning and reporting cycle.

Austroads Strategies

The revised Austroads Pavement Strategy was published in 2001/02. The Environmental and Road Design strategies were substantially completed and will soon be published, while work continues on the Structures Strategy. These strategies align the work of the various T&E Program areas with the *Austroads Strategic Plan 2001–2004*.

National Road Transport Commission

The Program responded to a request from the National Road Transport Commission for urgent pavement and structures research analysis in regard to heavy vehicle performance based standards for infrastructure protection.

(PIARC) World Road Association Activities

Outputs of the activities of Austroads representatives on World Road Association (PIARC) Technical Committees under the T&E Program (C1 — Surface Characteristics, C3 — Technical Exchanges & Development, C7/C8 — Road Pavements, and C12 — Earthworks, Drainage & Subgrade) were appropriately disseminated.

Centre for Pavement Engineering Education (CPEE)

In accordance with its agreement with CPEE, Austroads, through the T&E Program in 2001/02, funded the development of the study unit SEC 702 — Pavement Construction, incorporating flexible and rigid pavement sections.

International technology transfer activities

Austroads, through the T&E Program, supported the attendance of key people at international technology transfer activities. These included the technical panel meeting of U.S. National Cooperative Research Program (NCHRP) 9-19 Superpave Support and Performance Models contract (Phoenix, USA) and the 7th International Symposium on Heavy Vehicle Weights and Dimensions (Delft — The Netherlands). Outputs from these activities have been or will soon be appropriately disseminated.

Austroads Achievement Awards

In 2001/02, the T&E Program recognised John Bethune (Australian Asphalt Pavement Association), Steve Isles (RTA NSW), Bob Andrews (Transport SA) and Mike Butcher (Transport SA) with Austroads Achievement Awards for their outstanding performance and significant contribution to projects and other Austroads activities.

technology and environment

Significant Outputs of the T&E Program in 2001/02

Pavements

The following projects and publications were completed in 2001/02:

Austroads/AAPA Asphalt Guide (AP-G66/02)

A manual containing mix design guidelines, model specifications and construction guideline, produced as a cooperative effort between Austroads and the Australian Asphalt Pavement Association (AAPA). It supersedes the 1984 NAASRA publication — Bituminous Surfacing Volume 2 – Asphalt Work.

The guide aims to provide a comprehensive understanding of modern asphalt technology in Australia and New Zealand. It is aimed at both students studying asphalt for the first time, as well as providing a reference text for practitioners within the transport industry. It will particularly assist asset managers, surveillance officers and contractors in the understanding and interpretation of specifications and preparation of surveillance plans and work instructions.

Austroads Pavement Rehabilitation Guide (AP-T15/02)

The Draft 2002 Austroads Pavement Rehabilitation Guide was released for a period of review prior to publishing. It incorporates substantial improvements resulting from Australian research into materials characterisation and design methodology and contains details of the following:

- ◆ pavement inspection and testing
- ◆ causes and modes of pavement distress
- ◆ selection of rehabilitation options
- ◆ description of specific rehabilitation treatments
- ◆ thickness design of structural overlays (including design examples)
- ◆ economic comparison of alternative treatments.

Austroads Practitioner's Guide to Design of Sprayed Seals — Revision 2000 Method (AP-T17/02)

This guide is a summary of the Austroads Provisional Sprayed Seal Design Method — Revision 2000 (AP-T09) and includes several worked examples of sprayed seal design.

Pavement Design Guide Revision (AP-T10/01)

This revised Draft Pavement Design Guide was published and released as an Austroads Technical Report for a period of review prior to publishing the new guide. The guide represents a major revision of the 1992 Austroads Guide to the Structural Design of Road Pavements. It incorporates substantial improvements resulting from Australian and overseas research into materials characterisation, traffic assessment, pavement performance studies and design methodology. The guide contains procedures for the design of the following forms of road pavement construction:

- ◆ flexible pavements consisting of unbound granular materials
- ◆ flexible pavements that contain one or more bound layers
- ◆ rigid pavements (i.e. cement concrete pavements)
- ◆ flexible overlays for flexible pavements.

technology and environment

Austrroads Bitumen Sealing Safety Guide Revision (AP-G41/02)

This guide is intended to assist managers and operational personnel involved in bitumen work hazards, safety training and equipment, First Aid, fire prevention, fire fighting and equipment, site arrangements to reduce hazards in handling, transfer and blending of bitumen binders, heating, cleaning, sampling and various safe practices involved in day to day sprayed sealing operations. The guide starts with the delivery of bituminous binder to the worksite, and covers site operations through to completion of sealing work and traffic control. The booklet is designed to be carried in the pocket for ready reference.

Other pavement projects completed include:

- ◆ Review of NAASRA Pavement Materials Part 3 — Crushed Rock
- ◆ Design Characteristics of Rigid Pavements.

Structures

The following projects and publications were completed in 2001/02:

Management of Concrete Bridge Structures to Extend their Service Life (AP-T11/01)

This technical report consolidates work completed over several years. The report contains a synthesis of current practice in the development of investigation techniques for structures affected by the deterioration of concrete and makes recommendations for enhancement of ways of determining management strategies and for providing a basis for service life prediction.

The publication also contains a state-of-the-art report on the development of models for service life prediction for concrete structures. The complexity of the modelling has been highlighted and the need for continuing work to develop sound models based on probabilistic methods identified.

Relationship between Road Roughness and Level of Pavement Defect — Stage 2

This project produced *Validation of Dynamic Load Models — Technical Documentation (AP-T12/02)*. Work to date has comprised field measurement and analysis of bridge and bridge approach profiles and the development of simple (linear) heavy vehicle computer models to predict dynamic wheel forces. Analytical tools were also developed for the analysis of road profiles that are designed to provide additional information from the larger amounts of data currently collected by laser profilers used in network level surveys of unevenness.

This technical document presents the validation/calibration of the dynamic load response models and provides detailed comparisons between the predicted dynamic responses from the models (linear and non-linear) with the measured wheel force data that have been used to validate them.

Guide to Road Profile Unevenness and Bridge Damage (AP-T13/02)

This guide details the critical road and vehicle-related factors that influence dynamic loading of bridges and provides advice on how to identify, quantify and repair the uneven road profiles that are damaging to bridges and the heavy vehicles themselves. These same guidelines can be extended to include pavements in general. The guide summarises existing approaches and presents new methods of road profile analysis that are focused specifically on damage to bridges and pavements as well as ride quality.

Other structures projects completed include:

- ◆ Position Paper on Bridge Strengthening methods
- ◆ Preferred Details for Commonly Used Bridge Components.

technology and environment

Environment

The following projects and publications were completed in 2001/02:

Austroads Guidelines for Environment Reporting (AP-G70/02)

This environmental reporting guide is a comprehensive practical guide for consistent best practice environmental reporting at all levels of operation for road agencies. The guide documents the identified best practice environmental reporting procedures that are currently in place or planned within Member Authorities and other related organisations. It also provides a means of establishing environmental performance benchmarks against which future reporting can occur. The accompanying research and literature review provides a detailed and valuable overview of current international practice and experience in this area which will be a valuable reference for agencies seeking to expand their environmental performance reporting practices.

Guidelines to the Validation of Noise Models (AP-T14/02)

This report was prepared as a guide to the preparation and assessment of validation studies of traffic noise prediction models.

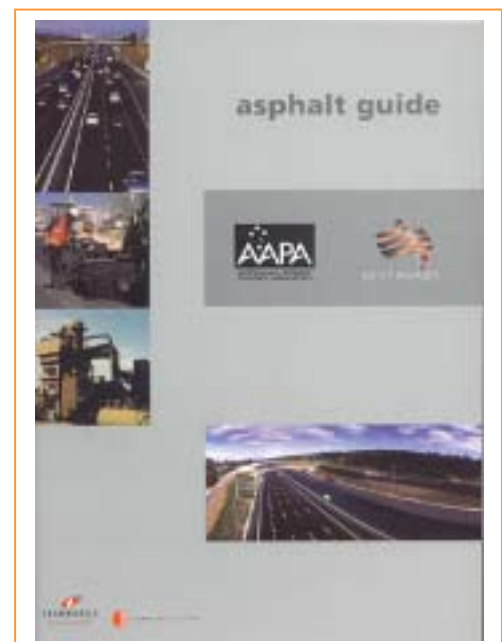
Road Design

Considerable work has been undertaken in 2001/02 to develop a number of guides for publication in 2002/03. These are included in the list of publications in production below.

Publications in Production

Work on the following projects has been completed or substantially completed with publication anticipated in 2002/03:

- ◆ Development of a National Asphalt Specification
- ◆ Development of Performance Based Pavement Specifications
- ◆ Austroads Guidelines and Specification for Bituminous Slurry Surfacing
- ◆ Cost-Effective Assessment Techniques for the Management of Bridge Assets
- ◆ Revision of Austroads 1992 Bridge Design Code
- ◆ Guidelines for the Treatment of Road Runoff from the Road Infrastructure
- ◆ Case Studies in Successful Environmental Management
- ◆ Road Design Standards in Environmentally Sensitive Areas
- ◆ Revision of Guide to Traffic Engineering Practice Part 5 — Intersections at Grade
- ◆ Review and Revision of the Rural Road Design Guide
- ◆ Revision of Guide to Engineering Practice Part 12 — Roadway Lighting
- ◆ Designing for Trucks — When, Where and How?



technology and environment

Future Directions

In 2002/03, the T&E Program will continue to take its direction from the *Austroads Strategic Plan 2001-2004* and from the strategic research priorities determined by the Austroads Council. Significant issues for the Program include the management of road traffic noise and the impacts of heavy vehicles on the road infrastructure. The focus of continuing existing and future work for 2002/03 is as follows:

Pavements

- ◆ Development and Management of Austroads Test Methods
- ◆ Impact of New Heavy Vehicles on Pavement Wear and Surfacing
- ◆ Development of Austroads Spray Sealing Guide
- ◆ Long Term Performance Monitoring to Develop Consistent Performance Models
- ◆ Validation of Provisional Austroads Seal Design Method
- ◆ Implementation of Austroads Mix Design Method
- ◆ Binder Specifications – Integration of New Binders into AS2008
- ◆ Characterisation and Specification of Stabilised Quarried and Recycled Materials
- ◆ Performance based Specification for Unbound Pavement materials
- ◆ Utilisation of Recycled Asphalt
- ◆ Develop Pavement Structural Conditional Parameter for Estimation of Remaining Life
- ◆ Revision of NAASRA Pavement Materials Parts 1 to 5.

Structures

- ◆ Dynamic Interaction of Vehicles and Bridges
- ◆ Australian Bridge Design Code Revisions due to SM1600 Loading
- ◆ Development of Models to Predict and Extend the Service Lives of Concrete Bridges
- ◆ Standards Bridge Barriers — Development of Appropriate Barriers and Approach transitions
- ◆ Guidelines for Ensuring Specified Quality Performance in Bridge Construction
- ◆ 5th Austroads Bridge Conference.

Environment

- ◆ Nationally Consistent Approach to the Management of Road Traffic Noise
- ◆ Evaluation and Identification of Areas for Improvement of Air Quality Models as used by Road Agencies
- ◆ Environmental Management and Environmental Management Tools for Road Maintenance Contracts.

Road Design

- ◆ Guidelines for the Collection and Discharge of Stormwater from the Road Infrastructure
- ◆ Investigation of the Relationship between Shoulder Widths and Crashes on Dual Carriageway Roads
- ◆ Revision of Guide to Traffic Engineering Practice Part 8 — Traffic Control Devices
- ◆ Development of Guide to Traffic Engineering Practice Part 16 — On Road Public Transport.

INTELLIGENT TRANSPORT SYSTEMS

Mr Geoff Kloot
Intelligent Transport Systems Program Manager
General Manager, Traffic and Road Use Management, VicRoads



To co-ordinate the implementation of e-transport, the National Strategy for Intelligent Transport Systems

Overview

The National Strategy for Intelligent Transport Systems, e-transport, was adopted by the Australian Transport Council (ATC) in November 1999. Funding for the implementation of the strategy has been established from the relevant jurisdictions and the Austroads Research and Development Program.

The ITS work program for 2001/2002 and beyond is based on the key strategies and actions identified in e-transport. A number of these have been successfully implemented over the past year and the program is well placed to complete the implementation of e-transport as scheduled, by June 2003.

Projects to implement these key strategies and actions have been grouped under the following categories:

1. Interoperability and national standards
2. Creating a national institutional framework
3. Public and industry awareness
4. A competitive Australian based ITS industry
5. International cooperation
6. Establishing and Monitoring Demonstration Projects.

The first five of these categories concentrate on improving the safety, security, efficiency and environmental performance of our transport system. The last category facilitates the implementation of emerging ITS technologies in which emphasis is given to regional areas and high-risk travel.

The strategy concentrates on creating a national framework to develop interoperability and technically open systems for Australia. This would create an environment, which encourages competitive industry participation, and a platform for development and enhanced community benefits, including addressing the issues associated with client privacy.

The work plan covers tasks to be undertaken/managed by ITS Australia for Austroads as well as six projects to be undertaken within other Austroads Programs.

The actions identified in e-transport have been grouped into 22 projects. At this point of time, two years into the three-year program, the progress with these actions is as indicated below:

- ◆ 10 projects have been completed
- ◆ 5 projects have been completed and require ongoing activity
- ◆ all remaining projects are forecast to be completed within the three-year program.

intelligent transport systems

Activities in the 2001/2002 Program

8th World Congress on ITS, in Sydney in October 2001

The staging of the ITS World Congress in October 2001 was a key action in the implementation of *e*-transport. Over 2100 people actively participated in 600 special, technical and scientific sessions at the congress. Over 3,800 people from 40 countries visited exhibits in three halls of the Exhibition Centre. Highlights included the most recent technology available in collision avoidance, adaptive cruise control, and the latest generation of transport infrastructure and vehicle technologies.

The exhibition, together with the 50 technical tours conducted over the congress period, enabled many Australian ITS developments to be shown to the world. The congress generated considerable interest in ITS from the media. General interest in the congress was also demonstrated by the fact that there were approximately 725,000 hits on the official website during September 2001.



Austroads/ITSA exhibit at the ITS World Congress in Sydney

Australian ITS Cooperative Research Centre

The strategy *e*-transport advocates that encouragement should be given to the establishment of an ITS Cooperative Research Centre. An Intelligent Transportation and Vehicle Systems Research Laboratory has been approved and is being established in Queensland. The centre is expected to play a major role in undertaking research on ITS that have commercial applications. In addition, it is anticipated that the centre would undertake ITS research on behalf of state agencies and possibly Austroads.

Automotive Radar for Collision Avoidance

The national ITS strategy advocates that the advice of the Commonwealth government should be sought on how the policies and processes of the Australian Communications Authority can assist in the development of ITS.

intelligent transport systems

A class licence for the use of automotive radar has been granted by the Communications Authority as a result of an investigation of needs of car companies and global systems providers. ITS Australia played a significant role in ensuring that stakeholders provided input. Mercedes-Benz has now released a cruise control for its cars in Australia that will automatically apply the brakes if the vehicle gets too close to the vehicle in front.

This licence will pave the way for deployment of many important adaptive cruise control and collision avoidance radar devices.

Standards and Architectures

A newly formed National Reference Architecture working group will further refine the current ITS architecture. This will lay valuable foundations for additional standards development particularly for ITS to be deployed in rural, regional and remote areas, and in multi-modal transport applications.

As work continues on the final phase for ensuring interoperability for electronic tolling, the focus will now turn to standards for other applications for mobile consumers to make payments for transport services.

ITS sector website

A key action in the implementation of e-transport, is the improvement of both public and industry awareness, and understanding of ITS. A major step in this direction has been achieved with the implementation of the Australian ITS website: <http://www.its-australia.com.au>.

This site provides a range of highly interactive web-based services dedicated to the Intelligent Transport Systems industry. Details can be found and updated in real time by the user. The topics on the website include:

- ◆ industry events
- ◆ industry papers
- ◆ press releases
- ◆ image library
- ◆ demonstration projects
- ◆ deployment of advanced control systems
- ◆ education providers
- ◆ tenders
- ◆ jobs.

The strategy e-transport, a copy of which is held on the website, was downloaded many times throughout the year. The web site now receives over 30,000 visitors per month, many from overseas, seeking information on Australian industry's ITS capability.

Marketing and Communications Strategy

A targeted marketing and communications strategy has recently been released and is available from the Australian ITS website. The strategy is designed to stimulate interest and sustain awareness of Intelligent Transport Systems. The document also includes a marketing strategy for ITS Australia.

The strategy was developed in consultation with representatives from a cross-section of ITS stakeholder groups including government, scientific community, academia and industry. It defines the unique transport interests of each of these groups and also highlights the contributions that they may make to Australian transportation. It aims to encourage stakeholder contributions and also maintain confidence by demonstrating that their interests are being met.

intelligent transport systems

The strategy incorporates a standard framework or template for each ITS related marketing communiqué to ensure that themes and content are consistent over time and support the broad strategic themes of e-transport. This framework is tailored to the individual needs of each stakeholder group to ensure that the medium of communication, subject matter and style of presentation selected, are best suited to the target audience.

An Aware and Competitive Industry

The strategy e-transport also refers to improving industry awareness and fostering a competitive Australian-based ITS industry. It is broadly recognised that the nature of private sector interest in ITS is commercially based. It is unlikely that private sector organisations, except possibly the motoring associations, would fund ITS structure or public goodwill projects. The support of the private sector should be sought in the areas in which it is interested, particularly the regulatory side of ITS. Industry has the incentive to be involved in this area to ensure that it achieves better outcomes than if it was not involved. This is also addressed in the e-transport marketing and communications strategy.

Demonstration Projects

To assist system developers to understand the current state of progress with ITS technology prior to undertaking new projects, an industry capability register and demonstration project register has been established and is available on the ITS website. Updates are regularly made to ensure that the latest information is available.



Warning device to limit the impact of floods on transport

In rural Australia, road closures are common after heavy rain. A trial of a rural flood warning system is underway providing information about current road closures and predictive road flooding information in Queensland. The project uses data from existing and newly developed sources, and demonstrates the value of open standards for data sharing with participant agencies including the Bureau of Meteorology, RACQ, and Queensland Main Roads. Road flood information is now available on the Internet, via mobile phone and variable message signs.

The strategy e-transport defines the need to support a feasibility study for the integrated use of ITS, real time cargo monitoring and e-commerce to facilitate freight logistics for perishable cargoes. This project is nearing completion.

intelligent transport systems

The project addressed the lack of integrity and accurate information along the supply chain for perishable products. Other key issues included inadequate attention to food safety issues such as temperature and contamination, and the lack of strategic planning for logistics and manufacturing. In addition, there was an abundance of paper documentation, re-keying and transcribing of information at each stage of the supply chain.

The project has demonstrated potential savings through reduced paper work, improved productivity and less spoilage.



Milk Link – tracking perishable cargoes from farm to market

A collision monitoring system, which listens for the sounds of accidents or near misses, has been installed in the central Sydney area, and will provide critical information about incidents, many of which are not reported. It will facilitate the development of better treatments for Black Spot intersections. The camera footage can also be used to analyse the speeds and trajectories of the colliding vehicles, in the period just prior to impact and to reconstruct accidents.



Listening for the sounds of collisions and near misses, the camera can record images of the incident

Other ITS demonstration projects currently underway include a low cost treatment for railway level crossings, and a device that detects when a motorcycle is involved in a crash.

INTERNATIONAL

Mr Trevor Argent
International Committee Chairman
Chief Executive, Transport South Australia



Through its International Committee, Austroads develops mechanisms through which it can fulfil its role in international affairs. These include, with the agreement where relevant of the National Government through its Commonwealth Department of Transport and Regional Services:

- ♦ managing Australia's involvement in the World Road Association (PIARC) and coordinating it with that of New Zealand
- ♦ acting as a collaborative window for its members to overseas road agencies and organisations
- ♦ coordinating Austroads involvement, in international road organisations including the Road Engineering Association of Asia and Australasia, the Organisation for Economic Cooperation and Development (OECD) Road Transport and Intermodal Linkage Research Programme, and the APEC Transportation Working Group and the International Road Federation (IRF).



World Road Association (PIARC)

Colin Jordan and Robin Dunlop, Australia and New Zealand's First Delegates to PIARC continue to oversee Austroads involvement in PIARC activities. Colin Jordan has lead a review into PIARC's structure, statutes and internal rules as Chairman of PIARC's Strategic Planning Commission and the paper on *A Review of the PIARC Structure* is to be formally recognised at the XXIIInd World Road Congress in Durban in October 2003. The work is aimed at reducing the duplication between and clarifying the roles of various PIARC bodies, thereby improving PIARC's overall usefulness and effectiveness. This is a major contribution to PIARC's continuing development.

Austroads representation on PIARC technical committees underwent a number of changes during the year with some long-standing committee representatives resigning. These positions have subsequently been filled, maintaining the good level of Australian and New Zealand participation. Representatives' reporting requirements have been reviewed to maximise the benefits from PIARC involvement by better dissemination of information through participation in PIARC activities. These reports will be posted to Austroads web site underneath the relevant work program area. A good example of this type of reporting was the initiative this year by the Road System Management program to put together and disseminate by email a regular electronic newsletter.

The Coolum Conference 2001 meetings of the four PIARC Committees in Strategic Theme 4 *Management and Administration of the Road System*, and an associated full-day seminar and other Austroads events were held at Coolum, Queensland in late October 2001. The event was successful, with the committee meetings attracting 100 participants from around the globe. The one-day seminar, at which presentations were made of the work of all ST4 Committees, was attended by over 200 participants from Australasia and overseas.

Preparations are well advanced for the meetings of the PIARC Council, Executive Committee and associated meetings in Melbourne, 22-26 October 2002. Over 150 PIARC representatives will be attending from member countries as well as Australia and New Zealand.

international

As previously, Austroads members and representatives will be involved in the activities of PIARC committees and working groups at the Durban Congress in October 2003. Preparations have begun for the promotion and development of a display proposal at the parallel exhibition, and coordination of a strong Australasian delegation at the Congress.

In the lead up to the Congress, Austroads has again run the PIARC *Essays for Young Professionals* competition. Entry to this competition was open to teams of young professionals aged less than 35 years and closed on 31 May 2002. Four members of the winning team will be funded to attend the Congress in October 2003.

Three articles submitted by Austroads were published in PIARC's quarterly *Routes/Roads* journal in 2001/02: *Current Research and Development in Road Asset Management* by David Bennett of ARRB Transport Research. *Improving Access to Driver Licence and Vehicle Registration Information Across Multiple Governments – the Australian Approach* by Christopher Walker and Gavin Hill of RTA NSW. *Putting Road Safety Audit to Work – Worldwide* by Phillip Jordan of VicRoads.



Road Engineering Association of Asia and Australasia (REAAA) – Australian Chapter

The Australian Chapter of REAAA provides links for Australians to professional and commercial colleagues in other REAAA member countries and from time to time organises technical visits, seminars and information exchange in Australia and Asia. A regular newsletter is distributed informing members of local and regional activities, major road engineering activities, appointments and items of interest.

Austroads national office acts as the secretariat to the Australia Chapter and supports the Chapter's activities.

REAAA in Malaysia organised the inaugural meeting of the Heads of Road Authorities (HORA) for the Asian and Australasian region on 18 April 2002 in Kuala Lumpur. Twenty-two countries were represented at the meeting which provided an opportunity for senior asset managers to interact with regional road authorities, beginning a process to identify common needs and providing a forum for exchanging information. A seminar was held in conjunction with the meeting at which several Austroads Council members were involved. The next HORA meeting is to be held in conjunction with the REAAA/ARRB Conference in Cairns in May 2003.

A new Queensland branch of the Australian chapter was established during the year and complements the existing Western Australia branch. The inaugural annual general meeting took place on 30 January 2002 and the chapter will service Brisbane and outlying areas.

International Discussions and Relations

After an approach by the American Association of State Highway and Transportation Officials (AASHTO), a partnership proposal with Austroads has been accepted by both parties and will be signed by Austroads Chairman in October 2002. The proposed schedule of actions for 2002/03 includes exploring AASHTO's e-business model and the opportunity for cooperative efforts in marketing publications and software products.

In October 2001, a bilateral discussion session between Austroads Council Members and Tim Matthews, Chief Executive of the UK Highways Agency was held during the 8th ITS World Congress in Sydney. The meeting afforded useful discussion on a range of common issues.

CORPORATE

Strategic Planning

Austroads Strategic Plan 2001 – 2004 was released in May 2001 and was widely disseminated. In seeking to increase the emphasis on achieving outcomes, the plan is divided into five outcome areas covering integrated transport strategy, road safety, national and regional development, access and mobility, and sustainability. The plan also has two enabling areas concentrating on partnerships and relationships, and research, standards and practices and tools.

During the year, to supplement the strategic plan, Austroads Council members and observers were canvassed on their views on strategic priorities for Austroads work program. The broad issues identified were: freight and heavy vehicles, traffic management, information management, environment and community, road safety, project delivery, and asset management. The outcomes of this process will feed into the planning of work proposals for future work.

Other initiatives during the year included a review of the Austroads/Local Government Partnership Plan, a review of appropriate representation by Austroads on Standards Australia technical committees, and the drafting of guidelines for Austroads reference groups. The full impact of these developments will be felt in 2002/03.

Program Coordination and Support

One of the features of the year was the work undertaken to improve general procedures for the preparation and development of Austroads work by program managers. This included improvements to preparing formal meeting and discussion papers, streamlining the process for project development and determination, and improvements to project management arrangements. The cooperation and assistance of program managers and assistants in this process is greatly appreciated.

Standard formats were developed for reports and for material submitted by programs to formal meetings. Agenda papers were revised to reduce duplication and to provide a clear basis for decision-making. In addition, Council agreed that papers be distributed electronically.

The outcome has been clearer, more readable and less voluminous papers, and the speedier collation and dissemination of agenda papers.

Other initiatives during the year included the consolidation of Austroads two consultancy agreements into a single document, the drafting of guidelines regarding the level of public liability and indemnity insurance consultants should have, and draft guidelines for more effecting monitoring of the management of projects. It is anticipated that improvements in management will be facilitated by some enhancements to the internet project database.

corporate

Communications and Marketing

2001/02 saw a great many developments in communicating and disseminating the outcomes of Austroads work program.

Austroads internet site was completely redesigned with a new look and an improved layout and structure. A commitment was made to sending out the electronic newsletter every two months. The newsletter is formatted as pages on Austroads web site and is accessible to casual browsers.

New sections on the website included an area for the Austroads Pavement Reference Group. Parallel to this was the launch of a download facility for pavement and asphalt test methods. Also added was an international section with details on Austroads involvement in (PIARC) World Road Association activities.

Towards the end of the year, development was completed on a new internet database for Austroads publications. This facility stemmed from a decision to offer past and future research reports, but not technical manuals or guides, for free in electronic format. The facility was launched on July 12, 2002 and provides an online means for the wide dissemination of Austroads research publications to domestic and international markets.

Austroads mounted displays at the following conferences during the year:

Austroads/AAPA/NZ BCA Health, Safety and Environment Conference, Sydney, July 2001

Biennial IPWEA National Conference, Perth, August 2001

Road System and Engineering Technology Forum, Queensland, August 2001

2001 AAPA Pavements Industry Conference, September 2001

8th World Congress on Intelligent Transport Systems, Sydney, October 2001

Austroads Council and PIARC Meetings, Queensland, October 2001

Austroads continued the professional recognition of project managers, team members and others who have made a significant contribution to the work of Austroads. In 2001/02 Austroads recognised two recipients of the Fellowship Awards and twelve recipients of the Achievement Award.

Staffing and Administration

In November 2001, Dr Robert Wilson retired as Executive Director, a position he held since 1990. After a brief changeover period, Mr Murray Kidnie began as Executive Director in November 2002.

In August 2002, Mr Edward Mishra resigned from his position as Program Support Manager, a role he held for five years. He was replaced in August by Mr David Francis, formerly RSM and ITS Program Assistant, on secondment from VicRoads.

During the year, conditions were developed and approved by Austroads Executive Committee and Council on employment, conduct for national office staff, travel, and accounting procedures. National office staff remuneration was assessed by a consultant for market relativity.

IT support arrangements for the National Office were reviewed and invitations for supply of services were invited from a range of providers. A new support agreement was entered into in May 2002 and will be monitored and regularly reviewed. Austroads was successful in obtaining access to the NSW government contract for capital purchases, office equipment and supplies and travel. Significant cost savings should be realised.

PUBLICATIONS



Austroads publishes and disseminates technical manuals and research reports from the work undertaken through its work program. 2001/2002 saw the release of a significant number of new and revised titles from the six work program areas. In all, 29 titles were released.

Sales for the year to 30 June 2002 were \$236,458, yielding a surplus on gross sales on direct operations of 1.3%. Total income was up on budget as a result of the release of a number of guides.

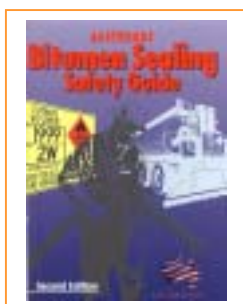
ARRB Transport Research has continued in its role as wholesaler to the various retail outlets in Australian state and territory capitals, and in New Zealand. Austroads has worked through the year with ARRB to maximise the impact of the promotion of Austroads titles to the various markets in the public and private sectors.



In May 2002, Austroads Council undertook to freely offer in electronic format the majority of past, present and future research outputs from its work program. This decision will facilitate improved dissemination of and access to Austroads research reports and provides direct online access to a large databank of research into roads and road transport related issues. Austroads technical manuals and guidelines remain available only in hardcopy for purchase.



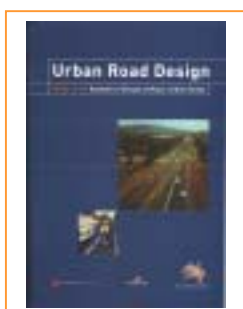
The move to electronic distribution allowed for a quick resolution and implementation of work already in progress to establish an e-publishing internet site. The interactive publications database was successfully completed and launched in July 2002 on Austroads web site. The database provides the ability to search for research report titles, review publication details, and download if available in electronic format. Early indications are that the resource has been well received and Austroads will be monitoring the download rate of titles to gauge usage. Further research will be undertaken to gauge the feasibility to offer Austroads guides in electronic format in the future.



In 2002/2003, Austroads will work to develop better communication links with members and stakeholders, using its regular e-newsletter and publications database to market and disseminate its published outputs more directly to local government and practitioners in the public and private sectors. In particular, the National Office wants to establish better linkages with members and observers for the exchange of information.

Publications released during year ended 30 June 2002

AP-G30/01	Road Safety Audit (2 nd Edition)
AP-G41/02	Bitumen Sealing Safety Guide (2 nd Edition)
AP-G66/01	Austroads/AAPA Asphalt Guide
AP-G67/02	Travel Demand Management: A Resource Book
AP-G68/01	Guide to Heritage Bridge Management
AP-G69/01	Urban Road Design: A Guide to the Geometric Design of Major Urban Roads
AP-G70/02	Austroads Guidelines for Environmental Reporting
AP-G72/02	Telecommunications In Road Reserves — Operational Guidelines for Installations
AP-R178/02	Telecommunications in Road Reserves — Administrative Guidelines for Road Authorities



publications

Publications released during year ended 30 June 2002 (continued)

AP-R185/01	Environmental Risk Management Guidelines and Tools for Road Projects
AP-R187/01	Increasing Seat Belt/Restraint Use on Remote Area Roads
AP-R188/01	Effects of Sealed Shoulders on Road User Costs
AP-R190/01	Cotton Industry: Freight Logistics Case Study
AP-R191/01	Austroads Project Evaluation Manual
AP-R192/01	Multi-modal Evaluation and Assessment: A Perspective
AP-R193/01	Traffic Flow Models Allowing for Pedestrians and Cyclists
AP-R194/01	Evaluation of the South Australian Competency Based Driver Training and Assessment Scheme
AP-R195/01	Strategies for Non-Motorised and Vulnerable Road Users
AP-R196/01	Recent Advances in Road Pricing Practice
AP-R197/02	Improving the Integration of Public Transport Services
AP-R198/02	Bridge Management Systems – the State of the Art
AP-R199/02	Guidelines to Economic Assessment of On-road parking on Traffic Flow: Evaluation and Enhancement of the ParkLane Model
AP-T09/01	Austroads Provisional Sprayed Seal Design Method – Revision 2000
AP-T10/01	Interim 2001 Austroads Pavement Design Guide (AP-17/92)
AP-T11/02	Management of Concrete Bridge Structures to Extend Their Service Life
AP-T12/02	Validation of Dynamic Load Models – Technical Documentation
AP-T13/02	Guide to Road Profile Unevenness and Bridge Damage
AP-T14/02	An Approach to the Validation of Road Traffic Noise Models
AP-T15/02	Draft 2002 Pavement Rehabilitation Guide

Publications released since July 1 2002

AP-S27/02	Austroads Environmental Strategy
AP-G71/02	Road-Based Public Transport and High Occupancy Vehicles — A Guide for Traffic Engineers
AP-G73/02	Guide to the Selection and Use of Bitumen Emulsions
AP-R200/02	Frangible Sign Supports: Part 1 – Recommended Procedures for Design, Testing, Installation and Maintenance; Part 2 – State of the Art Review
AP-R201/02	Guidelines for Community Input in Setting Levels of Service and Intervention
AP-R202/02	Integrated Asset Management Guidelines of Road Networks
AP-R203/02	Economic Evaluation of Road Investment Proposals: Risk Analysis
AP-R204/02	Road Network Asset Management: International Benchmarking Study
AP-R205/02	Case Studies in Environmental Management
AP-R206/02	Investigation of Cyclist Safety at Intersections
AP-R207/02	Review of the School Bus Safety Action Plan – Final Report
AP-R208/02	Reducing Collisions at Passive Railway Crossings in Australia
AP-R209/02	Evaluation of the Proposed Actions Emanating from Road Safety Audits
AP-T16/02	Mix Design for Stabilised Pavement Materials
AP-T17/02	Practitioners Guide to the Design of Sprayed Seals Revision 2000 Method
AP-T18/02	Austroads Framework Specification for Asphalt

Publications in production as at 30 September 2002

AP-G11.7/02	Guide to Traffic Engineering Practice Part 7 — Traffic Signals
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FINANCIAL INFORMATION

Statement of Financial Performance for the year ended 30 June 2002

	2002		2001	
	\$	\$	\$	\$
Income				
Membership				
Contributions		728,600		701,200
Work program		4,487,300		4,489,600
Special Programs and Projects				
User Satisfaction Index	–		125,307	
Performance Based Standards	100,000		200,000	
ITS Projects (Note 5)	125,858		–	
Intelligent Access Project	<u>89,000</u>	314,858	<u>–</u>	325,307
Publications				
Gross sales revenue		236,458		211,960
Interest Received				
Short Term investments	166,350		196,950	
Rental Bond	<u>1,201</u>	167,551	<u>1,384</u>	198,334
Other Income		136		
Total Income		<u>5,934,903</u>		<u>5,926,401</u>
Expenditure				
Corporate				
Salaries and related charges	494,747		434,552	
Other National Office expenses (Note 2)	325,360		337,685	
Projects	157,431		161,850	
Depreciation (Note 1b)	26,176		29,316	
Program management	<u>557,785</u>	1,561,499	<u>139,016</u>	1,102,419
Work program				
Road System Management	400,328		644,652	
Road Use Management	404,939		306,391	
Road Safety	466,225		489,488	
Business Systems	539,685		1,048,884	
Technology & Environment	1,478,059		1,169,433	
Intelligent Transport Systems (Note 5)	350,000		350,000	
Intelligent Access Project	<u>54,775</u>	3,694,011	<u>–</u>	4,008,848
Special Programs and Projects				
Performance Based Standards	–		255,000	
User Satisfaction Index	<u>–</u>	–	<u>121,325</u>	376,325
Publications				
Cost of Sales	91,415		67,246	
ARRB commission	64,683		59,439	
Stock Write-off	35,093		–	
Royalty payments	2,186		1,766	
Production and distribution	40,000		35,000	
Other costs	<u>445</u>	<u>233,822</u>	<u>–</u>	<u>163,451</u>
Total Expenditure		<u>5,489,332</u>		<u>5,651,043</u>
Net Surplus for the year		<u>445,571</u>		<u>275,358</u>

financial information

Statement of Financial Position as at 30 June 2002

	2002		2001	
	\$	\$	\$	\$
Assets				
Current assets				
Cash	877,614		1,514,053	
Investments (Note 1d)	2,862,530		2,005,887	
Inventories (Note 3)	204,208		177,826	
Receivables (Note 4)	119,374		128,041	
Prepayments	53,324		16,537	
Other debtors	<u>237,360</u>		<u>277,078</u>	
		4,354,410		4,119,422
Non-current assets				
Office Furniture and Equipment	180,884		192,882	
Less: Provision for depreciation	<u>(151,990)</u>		<u>(149,153)</u>	
	28,894		43,729	
Sundry Debtor	<u>28,949</u>	57,843	<u>27,748</u>	71,477
Total assets		<u>4,412,253</u>		<u>4,190,899</u>
Liabilities				
Current liabilities				
Accounts Payable	1,772,348		1,930,087	
Contributions received in advance	227,200		171,500	
Unacquitted funds (e-transport) (Note 5)	667,287		741,885	
Provision for annual leave	53,160		77,560	
Provision for long service leave	<u>21,496</u>		<u>43,875</u>	
		2,741,491		2,964,907
Non-current liabilities				
Provision for long service leave		13,851		14,652
Total liabilities		<u>2,755,342</u>		<u>2,979,559</u>
Net assets		<u>1,656,911</u>		<u>1,211,340</u>
Represented by:				
Net Surplus		445,571		275,358
Cumulative surplus brought forward		<u>1,211,340</u>		<u>935,982</u>
Members Funds		<u>1,656,911</u>		<u>1,211,340</u>

financial information

Statement of Cash Flows for the year ended 30 June 2002

	2002 \$	Inflows (Outflows) \$	2001 \$
Cash Flows form operating activities			
Receipts			
Member Contributions	5,280,466		4,861,745
Publication sales	243,637		165,223
Interest received	166,549		192,154
External project funding	439,000		1,025,307
Other receipts	136		3,616
Net GST receipt (payment)	<u>39,050</u>		<u>(285,782)</u>
Total receipts	<u>6,168,838</u>		<u>5,962,263</u>
Payments			
Salaries and related costs	(522,780)		(417,434)
National Office	(516,909)		(472,312)
Publications	(246,196)		(129,875)
Programs	(4,651,408)		(3,957,432)
Other expenses	<u>—</u>		<u>—</u>
Total payments	<u>(5,937,293)</u>		<u>(4,977,053)</u>
Net Cash provided by operating activities (Note 6)	<u>231,545</u>		<u>985,210</u>
Cash flows from investing activities			
Payment for purchase of furniture and equipment	(11,341)		(20,188)
Net cash used in investing activities	<u>(11,341)</u>		<u>(20,188)</u>
Net increase in cash held	<u>220,204</u>		<u>965,022</u>
Cash at the beginning of the year	3,519,940		2,554,918
Cash at the end of the year (Note 7)	<u>3,740,144</u>		<u>3,519,940</u>

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Notes to and forming part of the accounts for the year ended 30 June 2002

1. Summary of significant accounting policies

The financial statements have been prepared in accordance with applicable Accounting Standards and the requirements of the Associations Incorporation Act (NSW). The financial statements have also been prepared on the basis of historical costs and do not take into account changing money values or, except where stated, current valuations of non-current assets. Cost is based on the fair values of the consideration given in exchange for assets. The accounting policies have been consistently applied, unless otherwise stated.

The following is a summary of the significant accounting policies adopted by the Association in the preparation of the financial statements.

a) **Inventories**

Inventories comprise stock of publications on hand at ARRB Transport Research and Austroads National Office, publication costs in progress, and publication raw materials, all of which are stated at the lower of cost and net realisable value.

Due to the nature of projects conducted by Austroads Incorporated and the manner in which some costs are shared between the various project participants' organisations, costs of publications only include the cost of printing and other publication production costs. Research and development costs are expensed to the relevant project in the statement of financial performance.

b) **Depreciation**

Depreciation is calculated on a straightline basis, so as to write off the net cost of each item of furniture and equipment over its expected useful life.

c) **Employee entitlements**

Provisions for long service leave and annual leave are made for all employees from their date of commencement and are calculated at current pay rates.

d) **Investments**

Investments reflected on the statement of financial position represent funds held with the National Australia Bank in short term investments. These funds are placed for varying periods up to 13 months, but may be withdrawn at short notice.

e) **e-transport Implementation**

Funding of e-transport implementation is recognised as income to the extent of expenditure incurred to balance date (refer Note. 5). Funding in excess of expenditure is carried forward to a subsequent year as unacquired funds in the statement of financial position.

f) **Income tax**

The Association has been exempted from income tax under Section 50-5 of the Income Tax Assessment Act 1997.

financial information

	2002 \$	2001 \$
2. Other National Office Expenses		
Other National Office Expenses include the following		
— Remuneration of Auditor for Audit Services	6,900	6,000
— Remuneration of Auditor for Other Services	<u>2,588</u>	<u>5,040</u>
	9,488	11,040
— Rental expense on operating lease	71,424	70,904
3. Inventories		
Publications		
— Finished goods (at cost)	241,675	215,227
— Less stock valuation adjustment	(43,335)	(43,045)
— Raw materials (at cost)	<u>5,868</u>	<u>5,644</u>
	<u>204,208</u>	<u>177,826</u>
4. Receivables		
Trade debtors	119,374	119,567
Contributions receivable	<u>—</u>	<u>8,474</u>
	<u>119,374</u>	<u>128,041</u>
5. e-transport Implementation		
Income		
Members' contribution	250,000	700,000
Austroroads contribution	350,000	350,000
Interest received	<u>15,602</u>	<u>—</u>
Total Income	<u>615,602</u>	<u>1,050,000</u>
Expenditure		
Partial Reimbursement of Austroroads' Administration Costs	15,602	—
ITS Projects in Austroroads Programs	125,858	—
Intelligent Transport Systems Projects	<u>548,740</u>	<u>308,115</u>
Total Expenditure	<u>690,200</u>	<u>308,115</u>
Net revenue/(expenditure) for the year	(74,598)	741,885
Amount unexpended brought forward	<u>741,885</u>	<u>—</u>
	667,287	741,885
Amount unexpected transferred to Liabilities (Note 1[e])	(667,287)	(741,885)
Net Surplus (Deficit)	<u>—</u>	<u>—</u>

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6. Reconciliation of Net Cash used in Operating Activities to Operating Result

	2002	2001
	\$	\$
Operating result	445,571	275,358
Depreciation	26,176	29,316
Decrease/ (increase) in inventories	(26,382)	16,955
Decrease/ (increase) in trade debtors	7,466	(46,824)
Decrease/ (increase) in prepayments and other debtors	2,931	(267,380)
Increase/ (decrease) in creditors and borrowings	<u>(224,217)</u>	<u>977,785</u>
Net cash from operating activities	<u>231,545</u>	<u>985,210</u>

7. Reconciliation of Cash

For the purposes of the statement of cash flows, the Association considers cash to include cash on hand and in banks and short term investments. Cash at the end of the reporting period as shown in the statement of cash flows is reconciled to the related items in the statement of financial position as follows:

Cash	877,614	1,514,053
Investments	<u>2,862,530</u>	<u>2,005,887</u>
	<u>3,740,144</u>	<u>3,519,940</u>

financial information

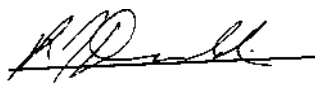
In the opinion of the Executive Committee, the attached financial statements as set out on pages 43 to 48 present fairly the financial position of Austroads Incorporated as at 30 June 2002 and its performance for the year ended on that date in accordance with Australian Accounting Standards and other mandatory professional reporting requirements and other authoritative pronouncements of the Australian Accounting Standards Board.

At the date of this statement, there are reasonable grounds to believe that Austroads Incorporated will be able to pay its debts as and when they fall due.

This statement is made in accordance with a resolution of the Executive Committee and is signed for and on behalf of the Committee by:



Murray Kidnie
Executive Director



Robin Dunlop
Chairman

Dated this 24th day of September 2002

Independent Auditor's Report to the Members of Austroads Incorporated

Scope

We have audited the financial report of Austroads Incorporated for the financial year ended 30 June 2002 as set out on pages 43 to 48. The Executive Committee is responsible for the financial report. We have conducted an independent audit of the financial report in order to express an opinion on it to the Members of the Association.

Our audit has been conducted in accordance with Australian Auditing Standards to provide reasonable assurance whether the financial report is free of material misstatement. Our procedures included examination, on a test basis, of evidence supporting the amounts and other disclosures in the financial report, and the evaluation of accounting policies and significant accounting estimates. These procedures have been undertaken to form an opinion whether, in all material respects, the financial report is presented fairly in accordance with Accounting Standards and other mandatory professional reporting requirements, so as to present a view which is consistent with our understanding of the Association's financial position and performance as represented by the results of its operations and its cash flows.

The audit opinion expressed in this report has been formed on the above basis.

Audit opinion

In our opinion, the financial report presents fairly, in accordance with applicable Accounting Standards and other mandatory professional reporting requirements, the financial position of Austroads Incorporated as at 30 June 2002, and the results of its operations and its cash flows for the year then ended.

SOTHERTONS — Sydney Partnership
Chartered Accountants



S Tzannes, Partner
24 September 2002

MEMBERS

Austroads is the association of Australian and New Zealand road transport and traffic authorities. It is governed by a council consisting of the chief executive (or an alternative senior executive officer) of each of its eleven member organisations:

- ◆ Roads and Traffic Authority New South Wales
- ◆ Roads Corporation Victoria (VicRoads)
- ◆ Department of Main Roads Queensland
- ◆ Main Roads Western Australia
- ◆ Transport South Australia
- ◆ Department of Infrastructure, Energy and Resources Tasmania
- ◆ Department of Infrastructure, Planning and Environment Northern Territory
- ◆ Department of Urban Services Australian Capital Territory
- ◆ Commonwealth Department of Transport and Regional Services
- ◆ Australian Local Government Association
- ◆ Transit New Zealand

National Office

Street address

Level 9, Robell House
287 Elizabeth Street
SYDNEY NSW 2000

Postal address

PO Box K659
HAYMARKET NSW 2000
AUSTRALIA

Telephone: +61 2 9264 7088
Facsimile: +61 2 9264 1657
E-mail: austroads@austroads.com.au
Internet: www.austroads.com.au

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