

Austroads

2008-09 Annual Report



Austroads Annual Report 2008-09

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Published by Austroads Incorporated
Level 9, Robell House
287 Elizabeth Street
Sydney NSW 2000 Australia
Tel: +61 2 9264 7088
Fax: +61 2 9264 1657
austroads@austroads.com.au
www.austroads.com.au

Austroads

Austroads purpose is to contribute to improved Australian and New Zealand transport outcomes by:

- providing expert advice to SCOT and ATC on road and road transport issues
- facilitating collaboration between road agencies
- promoting harmonisation, consistency and uniformity in road and related operations
- undertaking strategic research on behalf of road agencies and communicating outcomes
- promoting improved and consistent practice by road agencies.

Membership

Austroads membership comprises the six state and two territory road transport and traffic authorities, the Commonwealth Department of Infrastructure, Transport, Regional Development and Local Government in Australia, the Australian Local Government Association, and New Zealand Transport Agency. Austroads is governed by a council consisting of the chief executive officer (or an alternative senior executive officer) of each of its 11 member organisations:

- Roads and Traffic Authority New South Wales
- Roads Corporation Victoria (VicRoads)
- Department of Transport and Main Roads Queensland
- Main Roads Western Australia
- Department for Transport, Energy and Infrastructure South Australia
- Department of Infrastructure, Energy and Resources Tasmania
- Department of Planning and Infrastructure Northern Territory
- Department of Territory and Municipal Services Australian Capital Territory
- Department of Infrastructure, Transport, Regional Development and Local Government
- Australian Local Government Association
- New Zealand Transport Agency.

The success of Austroads is derived from the collaboration of member organisations and others in the road industry. It aims to be the Australasian leader in providing high quality information, advice and fostering research in the road sector.

Vision

Austroads vision is to be recognised for its leadership in providing high quality information and advice and fostering research in the Australasian road and road transport sectors.

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CHAIRMAN'S MESSAGE



Chairman

Alan Tesch

Associate Director-General
Department of Transport and Main Roads, Queensland

The 2008-09 financial year has been a significant one for Austroads, with a number of milestones reached for the organisation over this time. The first of these was the celebration of Austroads' 20th anniversary. During these 20 years Austroads has continued to provide leadership, guidance and expertise within the road industry sector. This has been achieved through providing high quality information, advice and developing road research initiatives throughout Australasia. It is a great honour for myself that this momentous occasion occurred during my second year in the role of my term as chairman of Austroads. I would like to personally express my deepest gratitude to all people involved in Austroads during these last 20 years.

Another important milestone was the completion of a comprehensive updating of the Austroads guides. Announced and in the making since 2004, the anticipated completion of the entire range of guides has now drawn to a conclusion. This culminated in the Guide Launch event held at the ARRB offices on 1 July, which marked the completion of the ambitious task and celebrated the time and effort put into each and every part of the guides by all involved. Further details on the many Austroads Guides are available on our website.

Over 300 people have been involved in the production of these guides over the last five years. I would like to thank all who contributed, from the Program Managers and their Program Assistants, the Task Forces and Review Panels as well as the ARRB authors and administration staff. Thanks also goes to all the other authors and consultants who played a part and finally the Austroads National Office for their coordination of the project.

During the past 12 months a significant change to Austroads legal status has been progressing forward. On the advice of the NSW Department of Fair Trading in June 2008, Austroads is moving from being an association incorporated in New South Wales to a company limited by guarantee. This should not have a significant impact on most aspects of the business. The change in legal status should be complete by the end of 2009 and Austroads Inc. will become Austroads Ltd.

A number of important projects will continue through the next 12 months including the 5.9 ITS dedicated short range communication project and the Technical Research Program. Above all Austroads will continue to work towards the vision of promoting improved transport outcomes across Australia and New Zealand.

Finally, I would like to take this opportunity to thank our Executive Director, Murray Kidnie, and all the Austroads staff for their invaluable support and commitment over the past year, a year of particular success and achievement for the organisation.

A handwritten signature in blue ink, appearing to read 'atesch', written in a cursive style.

Chairman
Alan Tesch
Associate Director-General
Department of Transport and Main Roads, Queensland

HIGHLIGHTS FROM 2008-09

Projects completed

There were a total of 157 projects in the 2008-09 work program. A number of these are scheduled to run over three years. Sixty eight projects were completed during 2008-09.

Work program expenditure

Total expenditure for the 2008-09 work program was \$9.9 million. The table below provides a breakdown of the expenditure:

| Type | Amount \$'000s |
|-----------------------------|----------------|
| Technical research | 4,121 |
| Strategic | 3,079 |
| Development of publications | 1,747 |
| Other projects | 354 |
| Program management | 600 |
| TOTAL | 9,901 |

Projects contributing to regulatory reforms

Austrroads has undertaken a number of projects as input into government regulatory reform initiatives of the Council of Australian Governments (COAG) and transport ministers. These include:

- new approaches to heavy vehicle regulation such as speed and fatigue management, performance based standards and intelligent access to the road network
- local government and the future freight task
- developing a national approach to driver licensing and vehicle registration
- driver license security and identity management
- road safety at rail crossings.

Completion of Austrroads Guides

The development of the comprehensive suite of new guides was completed in 2008-09. All parts were completed in this timeframe, with only the Guide to Road Tunnels outstanding. This will be complete by June 2010. Some of the parts completed in 2008-09 are awaiting publication but are expected to be published shortly.

The new completed guides are:

- Guide to Asset Management
- Guide to Bridge Technology
- Guide to Pavement Technology
- Guide to Project Evaluation
- Guide to Road Design
- Guide to Road Safety

- Guide to Traffic Management
- Guide to Road Transport Planning

A Glossary of Austroads Terms (Third edition) which covers all the guides was also updated and published during 2008-09.

Austroads 20th Anniversary

The year 2009 marks 20 years of service for Austroads. The celebrations for the anniversary coincided with the guide launch on July 1. Austroads was established on 1 July 1989 to replace the National Association of Australian State Road Authorities (NAASRA) which was established in 1959. The predecessor to NAASRA was the Conference of State Road Authorities (COSRA) which was established in 1934. A full history of Austroads and its predecessors can be found on the Austroads website.

Legal Structure of Austroads

Austroads is incorporated as an association under the NSW Associations Incorporation Act 1984 which is administered by the NSW Department of Fair Trading. The Department informed Austroads in June 2008 they considered that the continued incorporation of Austroads under the Act was no longer appropriate and formally requested that Austroads consider voluntarily transferring its incorporation to a more suitable corporate structure.

At the October 2008 Council meeting it was agreed to review the implications of Austroads moving from an incorporated association to a company limited by guarantee.

It was subsequently agreed that Austroads proceed to become a company limited by guarantee. It is expected that the transfer to Austroads LTD will be finalised before the end of 2009.

Review of technical research arrangements

In early 2009 Austroads engaged consultants to undertake a review of the technical research arrangements between Austroads and ARRB. This came about through concerns that the technical research work should be more relevant to the strategic priorities of road agencies. The review looked at the process for the development of technical research projects, project management, knowledge retention and development, and the general relationship between Austroads and ARRB.

The results of the review were considered at the July Council meeting and as a result, changes will be introduced during 2009-10.

Cooperative ITS (Dedicated Short Range Communications)

Austroads research into dedicated short range communications continued strongly through 2008-09 with the project 'NS1415 – Development of Management Arrangements and Identification of Pilot Applications for Secure DSRC Bandwidth,' being researched. This was a follow up for Austroads project 'NS 1206 – Securing Dedicated Short Range Communications (DSRC) Spectrum for ITS Applications', which was published in June 2008 under the title '*5.9ITS – The Case for Securing 5.9 GHz Bandwidth*'.

There is a number of stakeholders across Australia with an interest in whether cooperative ITS applications are introduced into Australia and the outcomes of the Australian Communications Media Authority (ACMA) 5.9GHz bandwidth licence review - anticipated over 2009-10. A Project Steering Committee with broad government representation and a supporting Industry Reference Group has been proposed in order for the transport agencies and relevant transport industry stakeholders to be able to work collaboratively to achieve the specific needs required.

STRUCTURE AND PROGRAMS

Governance

Austrroads is currently an association incorporated in New South Wales under the Associations Incorporation Act 1984 (NSW). However, it is anticipated that it will transfer to a company limited by guarantee in late 2009. Austrroads is governed by a Council consisting of the chief executive (or alternative senior executive officer) from each member organisation. During 2008-09 the Council met in October 2008 and April and July 2009. The Austrroads national office, based in Sydney, provides secretariat support to the Council.

Operational model

Austrroads operates using the staff and other resources of its member organisations to undertake or manage a significant part of its work. The benefits of this operational model are that it:

- provides opportunities for the staff of member organisations to participate in the operation of Austrroads and the development and delivery of projects
- promotes professional development for staff of member organisations
- encourages a collegiate, collaborative approach
- facilitates a high level of consistency across jurisdictions
- creates opportunities for networking and information exchange between staff of road agencies.

Membership (as at 30 June 2009)

| Member organisation | Representative |
|--|---|
| Roads and Traffic Authority New South Wales | Michael Bushby — Chief Executive |
| Roads Corporation Victoria (VicRoads) | Gary Liddle — Chief Executive |
| Department of Transport and Main Roads Queensland | Alan Tesch — Associate Director-General |
| Main Roads Western Australia | Menno Henneveld — Commissioner |
| Department for Transport, Energy and Infrastructure South Australia | Flett Steele — Director, Road and Traffic Management |
| Department of Infrastructure, Energy and Resources Tasmania | Peter Todd — General Manager, Roads and Traffic |
| Department of Planning and Infrastructure Northern Territory | Marj Morrissey — General Manager, Sustainability, Strategic Planning and Policy |
| Department of Territory and Municipal Services Australian Capital Territory | Tony Gill — Director Roads |
| Department of Infrastructure, Transport, Regional Development and Local Government | Andrew Wilson — Executive Director, Infrastructure and Surface Transport Policy |
| Australian Local Government Association | Adrian Beresford-Wylie — Chief Executive |
| NZ Transport Agency | Colin Crampton — Group Manager Highways and Networks Operations |

| Observer organisation | Representative |
|--|-------------------------------------|
| ARRB Group | Gerard Waldron — Managing Director |
| National Transport Commission | Nick Dimopoulos — Chief Executive |
| Bureau of Infrastructure, Transport and Regional Economics | Phil Potterton — Executive Director |
| Department of Transport Papua New Guinea | Henry Parakei — Secretary |

Program structure

Austrroads' work is divided into major areas, called programs, so the work is more manageable and shared amongst Austrroads member organisations.

As at 30 June 2009, there were seven programs. The programs, their objectives and the designated program manager and member organisation were as follows:

| Program | Objective | Program Manager |
|----------------------------|--|--------------------------|
| Assets | To minimise the whole of life cost of road and bridge assets to meet the transport task | Ken Russell — VicRoads |
| Capability | To assist members in developing and maintaining sustainable levels of capability | Peter Mitchem — VicRoads |
| Freight | To address the future freight task | Philip Halton — RTA NSW |
| Network | To improve the productivity and reliability of the road network in moving people and goods | John Erceg — MR WA |
| Registration and Licensing | To improve the security and integrity of registration and licensing systems and promote national consistency | Ann King — RTA NSW |
| Safety | To reduce road trauma through a safe systems approach | Phil Allan — DTEI SA |
| Technology | To promote best practice in technology | David Hubner — DTMR Qld |

Program managers and support staff

Each program is managed by a program manager who is a senior officer from a member organisation. Program managers are responsible to the Austrroads Council for the development of project proposals and reporting on the performance of their program.

They work on Austrroads activities for a proportion of their time in addition to their regular responsibilities within our own organisation. This is formally recognised in an agreement between Austrroads, their chief executive and themselves. Austrroads does not reimburse the member organisation for the time the program manager spends on Austrroads activities, but contributes towards the costs associated with the management of the program.

In addition to the list of program managers above, David Stuart-Watt contributed to the Registration and Licensing program as the program manager until December 2008.

Each program manager is supported by a program assistant. Program assistants provide administrative support and advice to the program manager in the execution of their Austrroads responsibilities.

Task forces

Task forces have been established for six of the programs. The role of each task force is to:

- develop the identified areas of interest into a program of research to be undertaken
- develop specific project proposals from the program of research and ensure their relevance to Austroads member and related organisations
- identify suitable project managers from member organisations and oversee the conduct of those projects
- encourage member organisations to provide appropriate and timely inputs to projects and ensure that member organisations' concerns and views are adequately addressed
- champion the dissemination of the results of projects and research to road agencies and related organisations
- provide a forum for the exchange of information between Austroads member and related organisations.

Task force membership is made up predominantly of senior staff from the relevant area of member organisations. An exception is in the case of the Safety and Registration and Licensing programs where, in jurisdictions that the member organisation does not have responsibility for those functions, task force members come from the organisation responsible for that area.

External stakeholders are engaged in accordance with a strategy developed by the task force.

Task forces meet two or three times a year to develop projects and review progress on approved projects.

Review panels

Review panels oversee the development and maintenance of each of the Austroads guides. In the case of the Safety and Assets programs, this function is performed by the relevant task force.

The membership of review panels comprises representatives of member organisations. External stakeholders may also be included.

ASSETS



Program Manager

Ken Russell
Director Asset Management
VicRoads

Program Support

Julie Cooper
Austroads Program Assistant

Program overview

The Assets program focuses on the following streams:

- optimal levels of service
- road user requirements
- monitoring and performance reporting.

The Assets program is supported by a task force comprising senior staff from the relevant areas of Austroads member and observer organisations. The primary objective of the task force is to develop and deliver a program of research that will assist road and transport agencies in their efforts to minimise the whole-of-life cost of road infrastructure assets to meet the transport task.

An additional major responsibility for the Assets task force is to act as a review panel to promote best practice in asset management through the development and maintenance of the Austroads Guide to Asset Management.

Achievements 2008-09

The Assets program has developed a significant and structured program comprising projects which address the assets strategy, projects to develop the Guide to Asset Management and projects under the technical research program.

During 2008-09 the Austroads Guide to Asset Management was completed. The guide comprises 16 parts which are now all published and available via the Austroads website.

The Assets program completed the following projects in 2008-09:

- Asset Management – Management of Road Surface Characteristics (AT1170)
- Asset Management – Managing the Impacts of Rising Water Tables and Salinity on Remaining Pavement Life (AT1171)
- Asset Management – Service Life of Pavements (AT1169)
- Asset Management National Performance Indicators (AS1370)
- Economics of PBS and Heavy Vehicle Loading Standards at the Network and Route Level (AT1165)
- Guide to Asset Management – Part 2: Development of Stakeholder / Community Requirements (AP1174)
- Guide to Asset Management – Part 3: Asset Strategies (AP1175)
- Guide to Asset Management – Part 4: Program Development and Implementation (AP1176)
- Guide to Asset Management – Part 5: Pavement Performance (AP1177)
- Guide to Asset Management – Part 5F: Skid Resistance and Part 5G Texture (AP1492)
- Guide to Asset Management – Part 6: Bridge Performance and Evaluation (AP1136)

- Guide to Asset Management – Part 7: Road Related Asset Performance (AP1395)
- Guide to Asset Management – Part 8: Asset Valuation and Audit (AP1396)
- Measuring Heavy Vehicle Loads Dynamically (AT1212)
- Road Use Data - Harmonisation of Collection, Reporting and Access (AS1007)

The following outputs were published in 2008-09:

- *Assessment of Remaining Service Life of Pavements*
- *Austrroads LTPP and LTPPM Study – Summary Report for 2006/07*
- *Guide to Asset Management Part 2: Community and Stakeholder Requirements*
- *Guide to Asset Management Part 3: Asset Strategies*
- *Guide to Asset Management Part 4: Program Development and Implementation*
- *Guide to Asset Management Part 5: Pavement Performance*
- *Guide to Asset Management Part 5A: Inventory*
- *Guide to Asset Management Part 6: Bridge Performance*
- *Guide to Asset Management Part 7: Road Related Asset Performance*
- *Guide to Asset Management Part 8: Asset Valuation and Audit*
- *Impact of Rising Watertables and Salinity in Pavement Performance*
- *Impacts of PBS Pavement Vertical Loading Standard at Network Level – Tasks 1 and 2*
- *Measuring Heavy Vehicle Wheel Loads Dynamically*
- *Surface Characteristics and Crash Occurrence on Selected Roads in Australia.*

The highlights of the Assets program during 2008-09 include:

- the Assets task force met on two occasions in October 2008 and March 2009.
- a joint meeting was held in Kalgoorlie in March 2009 with the World Road Association Technical Committee D.1 Management of Road Infrastructure Assets
- a number of workshops held for various strategic and technical research projects.

Ongoing projects 2009-10

The Assets program currently focuses on the research, development and completion of the following ongoing work areas:

Strategic research projects

- Improved Cost Allocation Rules by Road Type (including unsealed roads)
- Establishing a New National Pavement Maintenance Database
- Strategic Review of Future Asset Management Issues.

Technical research projects

- Long-Term Performance Monitoring to Develop Consistent Performance Models
- Management of Skid Resistance
- Understanding Wear and Cost Implications of Incremental Loads on the Road Network (Optimal Mass Limits) [NTC]
- Predicting dynamic wheel loading and its effects on the network
- Identifying the best measure of the variation in longitudinal surface profile for use in triggering pavement rehabilitation works.

Future directions

The program for 2009-10 introduces three new projects aimed at extending knowledge and guidance in asset management. These projects are:

- Understanding the Impact on Pavement Surfaces from Next Generation Freight Vehicles and Developing Practical Network Prediction Models and Responses. This project aims to understand the failure mechanisms that are particular to the pavement surfacing layer – as distinct from the structural layer - that may be caused by changing configurations and loadings of freight vehicles.
- Future Availability & Increasing Cost of Bitumen and Alternative Surfacing Binders. This project will assist road agencies to make more informed decisions regarding future road maintenance and rehabilitation options through an assessment of the future availability and cost of bitumen and improved understanding of the costs and performance characteristics of alternative surfacing binders.
- Interpretation of Traffic Speed Deflectograph (TSD) Data. The purpose of this project is to assess the operation of the Danish TSD in terms of its possible application to Australian conditions. This work will be conducted as part of a trial of the TSD on Australian pavements.



CAPABILITY



Program Manager

Peter Mitchem

Executive Director, Technical and Information Services
VicRoads

Program Support

Julie Cooper

Austrroads Program Assistant

Program overview

The Capability program was formed to address the skill/competency shortages facing road agencies across Australia and New Zealand, with particular emphasis on road industry related technical capability.

The program is supported by the Capability task force.

The role of the task force is to:

- provide a forum for the exchange of information on capability development and skills shortages between Austrroads member and related organisations
- identify successful initiatives and facilitate the sharing of related information, particularly on the attraction and retention of skilled staff and ongoing training
- identify areas where a national approach is required and develop appropriate action proposals.

The program focuses on the following areas:

- national road industry labour market analysis and the development of national initiatives to meet skills shortages
- national marketing plan for careers in road authorities
- best practice approaches for road authorities in addressing skills shortages and building capability
- review of tertiary education courses and possible development and delivery of post graduate courses to meet the needs of road authorities.

Achievements 2008-09

In 2008–09 the highlights of the Capability program include undertaking the following:

- Commencement of a Workforce Capability Analysis Update 2008-09 which will provide Australia and New Zealand road authorities with an overview of road infrastructure investments nationally over the next decade, and projections relating to the engineering capability necessary to meet this demand.
- Professional Development – Post Graduate Development Requirements – Road Engineering: this project aims to develop and maintain relationships with selected universities and post graduate education providers in order to establish post graduate learning programs that meet the needs of the road authorities.
- National Skills Marketing Campaign: the purpose of this project is to develop a national marketing plan and associated materials to encourage senior secondary students to select subjects which will allow them to continue to technically-oriented tertiary studies, and to encourage tertiary engineering students to choose a career in road engineering. Planned advertising in print and electronic media and the 'Powers for Good' website have been implemented.

- The Capability task force met on three occasions during 2008-09: in August 2008, October 2008 and May 2009.

Future directions

The task force will continue to meet a minimum of three times a year. The proposed work program for 2009-10 comprises:

- Continuation of 'best-practice' focused workshops aimed at assisting organisations to maintain high levels of technical capability and at building national approaches to capability issues.
- Completion of a research project to update road industry labour market projections and to monitor capability trends.
- Completion of a project to address post graduate requirements for road agencies. An earlier project has identified the primary road engineering capability requirements of agencies. This project will analyse gaps between these required capabilities and existing post graduate offerings and will recommend postgraduate programs to be developed, including proposed delivery strategies.
- Completion of the national skills marketing campaign.
- A project to provide a pilot on-line knowledge sharing/collaborative web-based system for use by technical staff. The system would also be a reference point for technical capability issues.



FREIGHT



Program Manager

Philip Halton

General Manager, Compliance and Freight Strategy
Roads and Traffic Authority, New South Wales

Program Support

Radmila Naidoo (until April 2009)
Louise McDonald (until May 2009)
Daniel Gray (until June 2009)

Program overview

The program focuses on enabling the future freight task by concentrating on the following streams:

- understanding the future freight task
- understanding community impacts and industry needs
- managing freight growth
- improving heavy vehicle access.

The Freight program is supported by a task force comprising senior regulators from freight and heavy vehicle policy and operational areas of Austroads member organisations. The primary objective of the program is to improve road freight operations and the integration with other transport modes in the context of a rapidly increasing freight demand.

At the national level, the Council of Australian Governments (COAG) transport reform agenda and the Australian Transport Council (ATC) National Transport Policy Framework both impact significantly on national freight operations. The Freight program continues to be an active participant representing the unique needs of road freight at the national level, during a period of significant change.

Achievements 2008-09

The Freight program completed the following projects in 2008-09:

- Local Government and the Future Freight Task (FS1406)
- Guidelines for Identifying, Assessing and Managing the Environmental Impacts Arising from Trucks Using Metropolitan Road Links (FS1012)
- Demand for B-Triple and Quad-axle B-Double Network De-coupling Points (FS1405)
- Report on National Access Conditions for PBS and Other High Productivity Vehicles (FS1561).

The following output was published in 2008-09:

- *B – Triple and Quad – Axle B-Double Network Decoupling.*

Ongoing projects 2009-10

The Freight program currently focuses on the research, development and completion of the following ongoing strategic research projects:

- Compliance and Enforcement – Intelligent Freight Compliance Strategies (FS1408)
- Feasibility Study - Freight Data and Business Systems (FS1409)
- Local Government and the Future Freight Task – Stage 2 (FS1551)

- Freight Task Industry Stakeholder Assessment (FS1410)
- Speed and Fatigue Management (FS1412)
- Feasibility Study - Parking and Rest Ops in Industrial Areas (FS1547)
- Competency and Capability Matrix for Regulators (FS1549).

Future directions

Anticipated strategic projects intended to inform future initiatives in the wider COAG and ATC reform programs, to be undertaken in 2009-10 include:

- Bridge Assessment for Future Higher Productivity Vehicles
- Rest areas Investment and Prioritisation Model.

NETWORK



Program Manager

John Erceg
Manager, Road Network Operation
Main Roads Western Australia

Program support

Caroline Carabott
Austroads Program Assistant

Program overview

In 2008-09, the objective of the Network program was to focus research on improving the productivity and reliability of the road network in moving people and goods. The work of the program was focussed on delivering outcomes that support the following strategic priorities:

- managing traffic control through a network approach
- supporting sustainable transport modes
- managing demand by all user groups
- leading strategic technical developments.

Other key elements of the Network program included the development of the Guide to Traffic Management together with leadership and management of the Australian Bicycle Council.

Achievements 2008-09

The Network program completed the following projects in 2008-09:

- Austroads Microsimulation Standards (NS1229)
- Implementation of Network National Performance Indicators (NS1376)
- Optimising Freeway Traffic Flow under Congested Conditions (NS1204)
- Development of a National Approach to Traffic Control at Work Sites (NS1364)
- Traveller Information – Benefits to users (NS1149)
- Network Operations Planning Framework (NS1372)
- Traffic Signal Controllers – Future Directions (NS1377)
- Freeway Design Parameters for Fully Managed Operations (NS1375)
- Best Practice for Variable Speed Limits (NS1378)
- Guide to Traffic Management – Parts 3, 7, 10 and 13 (NP1380)
- Guide to Traffic Management – Parts 4, 8, 9 and 12 (NP1157).

The following outputs were published in 2008-09:

- *Guide to Traffic Management:*
 - *Part 2: Traffic Theory*
 - *Part 3: Traffic Studies and Analysis*
 - *Part 4: Network Management*

- *Part 7: Traffic Management in Activity Centres*
- *Part 9: Traffic Operations*
- *Part 10: Traffic Control and Communication Devices*
- *Part 12: Traffic Impacts of Developments*
- *Part 13: Road Environment Safety*
- *Optimising Freeway Traffic Flow under Congested Conditions – Monash Freeway Study*
- *Austrroads Microsimulation Standards – a series of four Technical Notes have been placed on the Microsimulation Hub on the ARRB website.*
- *Development of a National Approach to Traffic Control at Work Sites*
- *Network Operations Planning Framework – Final Report*
- *Traffic Signal Controller – Future Directions: Consultation and Literature Review*
- *Traffic Signal Controller – Future Directions: Functional Requirements*
- *Freeway Design Parameters for Fully Managed Operations*
- *Best Practice for Variable Speed Limits – Literature Review*
- *Best Practice for Variable Speed Limits – User Perception and Comprehension Study*
- *Best Practice for Variable Speed Limits – Best Practice Recommendations.*

The following outputs were completed in 2008-09 and are due to be published in early 2009-10:

- *Estimating Road Network Congestion and Associated Costs (NS1203)*
- *Operational Impacts of Alternative Vehicles (NS1205)*
- *Guidelines for Selecting Techniques for the Modelling and Analysis of Network Operations including Environmental Impacts – Stage 1 (NS1371)*
- *The Commercial and Core Function Role of Road Agencies in Providing Raw Data and/or Traveller Information (NS1413)*
- *Development of Accessibility Measures (NS1516)*
- *Heavy Vehicle Sight Distances at Rail Crossings – Stage 2 (NS1563).*

Ongoing projects 2009-10

The Network program currently focuses on the research, development and completion of the following ongoing work areas:

Strategic research projects

- *Guidelines for Selecting Techniques for the Modelling and Analysis of Network Operations including Environmental Impacts – Stage 2 (NS1371)*
- *Freeway Incident Detection Technologies and Techniques (NS1374)*
- *Development of Management Arrangements and Identification of Pilot Applications for Secured DSRC Bandwidth (Cooperative ITS) (NS1415)*
- *Effectiveness and Selection of Intersection Treatments for Cyclists (NS1435)*
- *Understanding the Impacts of Road Pricing Factors on Future Road Use and Network Wide Traffic Patterns (NS1512)*
- *Equalising Traffic Density in a Network of Signalised Intersections (NS1517)*
- *Defining the Applicability of International Standards for Intelligent Transport Systems (ITS) (NS1524).*

Future directions

The Network program continues a strong focus on managing traffic on a whole of network approach and leading strategic technical developments in ITS. It also proposes a measured effort in supporting sustainable transport modes strategic priority with a modest investment in the area of managing demand. An alignment exists between the achievement of the strategic objectives and building upon completing the outcomes from existing projects.

The new strategic projects to commence in 2009-10 are:

- Traffic Signal Controller – functional specification – outlining the functional requirements of a new generation traffic signal controller.
- Cooperative Studies of Location and Communication Technologies including Cellular Phones, GPS, Wireless Mesh and others – exploring advanced location and communication technologies amongst road agencies for traffic management.
- Implementing National Best Practice for Traffic Control at Work Sites (including three recommendations from NS1364) – implement a framework for a nationally consistent approach to traffic control at work sites comprising of:
 - a national best practice guide integrating auditing and risk management
 - nationally consistent core training programs
 - best practice field guides.
- Implementation of NPIs to Measure Congestion – support the transition by jurisdictions to a consistent approach to collecting and compiling new NPIs for network operation.
- Application of Accessibility Measures – pilot new proposed accessibility measures within two Australian cities (as case studies) aimed at identifying areas with accessibility issues and improving policy decision making related to the operation of the road network.
- Measures for Managing Safety of Heavy Vehicles at Passive and Active Railway Level Crossings – development of measures to manage risks associated with the passage of Restricted Access Vehicles and Multi-Combination Vehicles across active and passive railway level crossings.
- Integrating Driver and Traffic Simulation to Assess In-vehicle and Road-based Level Crossing Safety Interventions (Contribution to the Rail CRC project) – examine the potential for vehicle mounted and road side technologies to alert road users to the presence of trains.
- The Australian National Cycling Strategy (NCS) 2011-16 – the development of a new national cycling strategy is a continuation of the positive results of the NCS 2005-10 and provides ongoing coordination and support for initiatives being undertaken by all jurisdictions and cycling stakeholders to promote increased cycling.
- Cycling Aspects of the Austroads guide – provide external stakeholders, local government and jurisdictions with a single resource document outlining cycling aspects of the Austroads guides.

AUSTRALIAN BICYCLE COUNCIL

The Australian Bicycle Council (ABC) oversees and coordinates the implementation of the Australian National Cycling Strategy 2005–2010. The ABC is a forum for the sharing of information between stakeholders involved in implementing the strategy and maintains a repository of information and resources to promote increased cycling in Australia.



The ABC met in August and November 2008 and March 2009. The main focus continues to be on the implementation of the Australian National Cycling Strategy 2005-2010.

The Cycling Resource Centre (CRC) (www.cyclingresourcecentre.org.au), which was funded by Department of Infrastructure, Transport, Regional Development and Local Government (DITRD LG), is a web-based information hub for cycling and cyclists. The CRC averages 1,900 visitors per month, with 76 per cent of the visitors from Australia and three per cent from New Zealand. Feedback on the site has been very positive.

Jurisdictions reported that over 200 kilometres of new cycle paths were built in the 2008-09 financial year, with the investment totalling over \$32.5m. Increases in cycling were reported in both commuter cycling (six per cent) for the average annual daily trips on the top five cycle routes in urban areas and national recreational cycling (21 per cent) from the previous year. Further increases are expected as the federal government investment of \$40m in cycling infrastructure becomes available for use.

The ABC contributed to and participated in several national and state based conferences including the Healthy Planning Workshop and National Speed Management Strategy Workshop in the past 12 months to help generate greater awareness of cycling as a sustainable transport option.

The ABC and the Australian Local Government Association are continuing to work together to help local government provide a more integrated sustainable transport network, via the CRC and regional meetings with council officers.

As part of the ABC's reporting arrangements, a separate annual report was produced and presented to the Australian Transport Council.

The secretariat to the ABC is provided by the Austroads national office with funding from DITRD LG.



REGISTRATION AND LICENSING



Program Manager

Ann King

Director Licensing, Registration and Freight
Roads and Traffic Authority, New South Wales

Program Support

Emma Chandler

Project Manager R&L Task Force

Program overview

The program focuses on the following streams:

- development and promotion of national policy initiatives to achieve best practice in vehicle registration and driver licensing
- data integrity – national consistency and compliance through interoperability and accuracy
- using technology to improve data security
- data exchange
- managing access to information
- harmonisation of driver licensing and vehicle registration schemes.

The Registration and Licensing program is supported by a task force comprising senior staff from the relevant areas of Austroads member, observer and stakeholder organisations. The primary objective of the task force is to assist road and transport agencies in their efforts to improve the security and integrity of vehicle registration and driver licensing systems and to promote national consistency. The work of the task force is undertaken in the context of an increasing focus on the security and integrity of registration and licensing information, and in particular client enrolment processes.

The task force also provides strategic direction for the ongoing operation and enhancement of the National Exchange of Vehicle and Driver Information System (NEVDIS) which provides for the real time access to and exchange of driver and vehicle information between states and territories in Australia.

Achievements 2008-09

In 2008-09, the Registration & Licensing program completed the following:

- The Australian Transport Council approved the Smartcard Licence Interoperability Protocol (SLIP) and its associated schedules in November 2008. The purpose of SLIP is to ensure interoperability of smartcard driver licences for Australian jurisdictions which may transition to this technology.
- Completed and delivered a feasibility study into options for 'Greater Harmonisation of Registration and Licensing Practices as requested by the Council for the Australian Federation.
- Signed a Memorandum of Understanding with the Commonwealth Attorney-General's Department for participation in the National Document Verification Service.
- Participated and supported the Automatic Number Plate Recognition Project undertaken by CrimTrac.
- Completed a suite of initiatives to improve the security and identity management of the driver license including:

- the development of a uniform set of enrolment standards in order to obtain a drivers licence
 - utilising the national Document Verification Service to strengthen proof of identity measures, and
 - exploring the feasibility of the use and application of additional of biometrics.
- Signed a Memorandum of Understanding with Ontario for mutual recognition of driver's licenses.

Ongoing Projects 2009-10

The program currently focuses on the research, development and completion of the following ongoing work areas:

- Continued participation in the implementation of the National Identity Security Strategy
- National review of the Multi-Combination Driver Training Scheme
- Strategic review of NEVDIS.

Future Directions

A number of new projects have been identified for the 2009-10 period which will continue to strengthen the national driver licensing and vehicle registration frameworks. These include:

- Harmonisation study
- Review of overseas driver licensing arrangements
- Development of national R&L performance indicators
- Sharing facial images across jurisdictions
- Consistent policy on 2/3 wheel cycles
- National review of the multi-combination driver training scheme
- Review of written off vehicle inspection regimes.

NATIONAL EXCHANGE OF VEHICLE AND DRIVER INFORMATION SYSTEM

Project overview

In 1993, a study was undertaken for Austroads which formulated a National Strategy for Interfacing/Integrating Registration and Licensing Systems. The main outcome of the study was the definition of a system solution, with the National Exchange of Vehicle and Driver Information System (NEVDIS) to provide the interface between Australian registration and licensing agencies.

Operation of the NEVDIS application began in 1998. The contract and day to day operational matters are managed by the NEVDIS administration unit, housed and supported by RTA NSW under the terms of a Memorandum of Understanding with Austroads.

The Registration and Licensing task force provides strategic direction for the ongoing operation and enhancement of NEVDIS which provides for the real time access to and exchange of driver and vehicle information between states and territories in Australia.

NEVDIS objectives

The Austroads Council has approved the following objectives for NEVDIS:

- Provide information to jurisdictions to prevent the issue of multiple drivers' licences by different jurisdictions.
- Prevent the issue of multiple heavy vehicle driver log books by different jurisdictions.
- Aggregate demerit points gained in any jurisdiction, to enable appropriate sanction to be initiated by the licence issuing jurisdiction.
- Enable licence suspension, cancellation or driver disqualification in any jurisdiction to be available to all jurisdictions.
- Ensure driver licence history in any jurisdiction is available to all jurisdictions.
- Within privacy constraints, provide access for authorised agencies to registration and licensing status information. For example, current or restricted licence, positive vehicle identification and specific restrictions including stolen or written off.
- Enable management of vehicle defects across all jurisdictions.
- Provide access to alternative compliance information in other jurisdictions.
- Facilitate transparent conversion of a licence from one jurisdiction to another.
- Facilitate transparent conversion of registration from one jurisdiction to another.
- In conjunction with jurisdictions, clearly identify individuals accessing NEVDIS data.
- Accommodate the progressive adoption of enhancements by jurisdictions.
- Facilitate opportunities for commercialisation of NEVDIS data within privacy constraints.
- Support the national compliance and enforcement provisions under development by the National Transport Commission (NTC).
- Provide the flexibility to support future functionality enhancements.

Achievements 2008-09

In 2008-09, the NEVDIS team:

- Renegotiated a two plus two year contract with service provider Fujitsu Australia Limited resulting in a significant cost saving.
- Completed the NEVDIS Strategic Review.
- Completed participation in the pilot Document Verification Service (DVS) system.
- Installed a DVS Backup link.
- Provided connection to the Document Verification Service (DVS) system to all jurisdictions, utilising the DVS as an Issuer, a Consumer and a hub for all jurisdictions. The Roads and Traffic Authority of New South Wales commenced use of the DVS in May 2009.
- Implemented the regular execution of data cleansing to enhance the ability of NEVDIS to support the 'one vehicle – one VIN' principle.
- Undertook a proof of concept pilot for the Vehicle Information Request System (VIRS) with an information broker supplying vehicle data to an insurer. The pilot was also evaluated. This system provides access to the NEVDIS database to assist insurers in reducing motor vehicle theft and insurance fraud.
- Supported the Smartcard Licence Interoperability Protocol (SLIP) project.
- Provided the Demerit Point Exchange (DPX) System to ensure the transfer of demerit points between jurisdictions and enable license suspension, cancellation or disqualification in any jurisdiction to be available to all jurisdictions.
- Progressed the Australian Government Personal Security Register (PPSR) project to ensure written off and stolen vehicle information is provided as part of future vehicle financial encumbrance checks.
- Ensured heavy vehicle codes in NEVDIS supported the National Heavy Vehicle reforms to heavy vehicle charges by 31 July 2009.
- Provided safety recall information to vehicle manufacturers.
- Implemented the regular execution of data cleansing to prevent the issue of multiple drivers' licences by different jurisdictions, prevent the issue of multiple heavy vehicle log books by different jurisdictions and other initiatives to support the 'one vehicle – one Vehicle Identification Number' principle.
- Supported the National Transport Commission with input to their project for Harmonisation of Demerit points.
- Completed a review of the Demerit Point Exchange System including identification of immediate and longer-term options for improvement and recommendations for an improved system environment.
- Supported the Crimtrac to undertake a feasibility study to upgrade their National Police Reference System.
- Completed the connection and data upload of Tasmanian records to NEVDIS.

Ongoing projects 2009-10

The following projects and work will be progressed during 2009-10:

- Implementation of the NEVDIS Strategic Review recommendations.
- Implementation of licence history transfer between jurisdictions.
- Implementation of VIRS to supply vehicle data to insurers.
- Improvements to the Demerit Point Exchange System.
- Continuation of the national DVS system.
- Continuation of data integrity improvements.

- Continuation of support of the Australian Government Personal Property Security Register (PPSR) project.
- Support of the implementation of the National Police Reference System by Crimtrac.

Future directions

A number of new projects may arise in relation to the harmonisation and identity security initiatives which will require significant NEVDIS involvement. In particular:

- Vehicle registration history transfer.
- Investigation of potential commercial opportunities which may assist in combating financial and identity fraud.

SAFETY



Program Manager

Phil Allan

Executive Director, Safety and Regulation Division
Department for Transport, Energy and Infrastructure South Australia

Program Support

Jerome Claessen

Senior Policy Adviser

Program overview

The program focuses on a safe system – a framework for action.

Key elements of the safe system are:

- road risk assessment, treatment and standards (including safe speeds)
- driver licensing
- safer vehicles.

The primary objective of the program is to develop and deliver a program of research that will assist road and transport agencies in their efforts to improve road safety.

Achievements 2008-09

In 2008-09, the Safety program completed the following projects:

- Updating Australasian Road Safety Handbook (SP1029)
- Guide to Road Safety – Parts 4, 6 and 8 (SP1393)
- A Road Safety Engineering Toolkit (SS1028)
- Development of Performance Measures that Reflect the Contribution of Road Engineering to Road Safety (ST1141)
- Safety Benefits of Improving the Interaction Between Heavy Vehicles and the Road System (ST1143)
- Older Driver Model Assessment Program – Phase 4 (SS1188)
- Rural Safety in Rural and Remote Areas – Heavy Vehicle Safety (ST1193)
- Road Safety Audit Toolkit (SS1195 & SS1196)
- Road Safety Risk Assessment – Stage 6 (ST1343)
- Evaluation of the Safety Impact of Centre-of-the-Road Wire Rope Barrier on Undivided Rural Roads (ST1344)
- Intelligent Transport Systems and Variable Message Signs for Road Safety Applications: Current Status and Future Prospects (ST1346)
- Scoping Study to Assess Road Safety Engineering Measures to Address Fatigue (ST1347)
- Consideration of Component Costs in Transport Projects to Ensure the Appropriate Valuing of Safety Effects (SS1383)
- Development of Best Practice Model for Recidivist Speeding Offenders (SS1389)
- Impact of Speed and Safety Benefits of LATM Treatments (ST1392)

The following outputs were published in 2008-09:

- *Guide to Road Safety:*
 - *Part 4: Local Government and Community Road Safety*
 - *Part 6: Road Safety Audit*
 - *Part 8: Treatment of Crash Locations.*
- *Analysis of Safety Benefits of Heavy Vehicle Accreditation Schemes*
- *Improving Fleet Safety – Guidance Material for Moving Towards Best Practice*
- *Improving Fleet Safety – Current Approaches and Best Practice Guidelines*
- *Trial of a Model Licence Re-assessment Procedure for Older Drivers: Stage 3 Research*
- *Safer Vehicle Purchases: Developing Cost-effectiveness Estimates for Fleet Managers and Others – Project Summary Report*
- *Safer Vehicle Purchases: Developing Cost/Benefit Estimates for Fleet Managers and Others – Part A: Crash Profiles and Risk Estimates*
- *Safer Vehicle Purchases: Developing Cost/Benefit Estimates for Fleet Managers and Others – Part B: Injury Levels in Crashes*
- *Safer Vehicle Purchases: Developing Cost/Benefit Estimates for Fleet Managers and Others – Part C: Cost Of Injuries and Property Damage in Crashes*
- *Safer Vehicle Purchases: Developing Cost/Benefit Estimates for Fleet Managers and Others – Part D: Injury Reductions With Various Fleet Purchasing Policies*
- *Safer Vehicle Purchases: Developing Cost/Benefit Estimates for Fleet Managers and Others – Part D: Supplementary Component: Use of In-Depth Crash Data*
- *Safer Vehicle Purchases: Developing Cost/Benefit Estimates for Fleet Managers and Others – Part E: Cost-Effectiveness Analysis of Fleet Purchasing Options*
- *The Crash and Offence Experience of Newly Licensed Young Drivers*
- *Older Driver Model Assessment Program: Stage 4 – validation of screening tests to assess at-risk older drivers*
- *Safety Benefits of Improving the Interaction Between Heavy Vehicles & the Roads System*
- *Impact of LATM Treatments on Speed and Safety*
- *Component Costs in Transport Projects to Ensure the Appropriate Valuing of Safety Effects*
- *Intelligent Transport Systems and Variable Message Signs for Road Safety Applications: Current Status and Future Prospects*
- *Development of Best Practice Intervention Model for Recidivist Speeding Offenders*
- *Evaluation of the Safety Impact of Centre-of-the-Road Wire Rope Barrier on Undivided Rural Roads*
- *Heavy Vehicle Safety in Rural and Remote Areas.*

Ongoing projects 2009-10

Strategic research projects

- Traffic Management and Infrastructure: Lessons from In-Depth Crash Investigations
- Nature of Errors Made by Drivers.

Technical research projects

- Methods to Achieve Overall Reductions in Operating Speeds in Rural Areas
- Improving Roadside Safety
- Road Safety Risk Assessment – Dissemination from research findings and updating of crash databases and crash reduction factors
- Safe Intersection Treatment Approaches including Safe Speeds through Intersections
- Improving Safety of Heavy Vehicles in Urban Areas – Stage 1
- Road Safety Audit Toolkit and Road Safety Engineering Toolkit – Site Maintenance.

Future directions

A number of new projects have been identified and will be undertaken over the 2009-10 period. They are designed to build on the strategic theme: safe system – framework for action, and to include the key elements underlying this strategic priority: safe system, road risk assessment, treatment and standards, driver licensing and safer vehicles. The research areas include:

- Medical Conditions as a Factor in Crash Causation
- Road Crash Injuries – Cost and Prevention
- The Impact of Changes in the Australian Vehicle Fleet on Crashworthiness and Crash Outcomes
- National Risk Assessment Model: Program Development and Trials (SSWG Project)
- Improving Older Driver Safety
- Safe System Demonstration Project involving an Indigenous Community
- Road Safety Audit Toolkit – further development
- Road Safety Engineering Measures to address Fatigue (Follows on from ST1347)
- Speed management – National Survey of Driver Attitudes.

TECHNOLOGY



Program Manager

David Hubner

Manager, Network Planning
Metropolitan Region
Department of Transport and Main Roads Queensland

Program Support

Philip Rankine

Principal Advisor (Austroads)

Program overview

The objective of the Technology program is to promote best practice in technology.

Completion of the following publications was the primary focus of the program in 2008-09:

- Guide to Bridge Technology
- Guide to Pavement Technology
- Guide to Project Evaluation
- Guide to Road Design
- Guide to Road Transport Planning
- Guide to Road Tunnels

Development of the Guide to Road Tunnels commenced in September 2008 and is scheduled for completion in June 2010

In addition to the guides, the program managed several major technical research projects in the areas of bituminous surfacings and pavement structures.

The program is supported by review panels comprising senior staff from the relevant areas of Austroads member, observer and stakeholder organisations. The primary objective of the review panels is to manage and support the development and maintenance of the guides and oversee technical and strategic research.

Achievements 2008-09

In 2008-09, the Technology program completed the following projects:

- Guide to Bridge Technology (TP1564)
- Guide to Pavement Technology (TP1565)
- Guide to Road Transport Planning (TP1228)
- Quantifying the Stresses at the Tyre/Surface Interface and the Resulting Performance Impacts (TT1066)
- Innovative Binder Delivery Systems (pilot study) (TT1220)
- Materials Innovation Management System (TT1164)
- Review of CPEE Distance Learning Study Unit – Pavement Wearing Surfaces (TO1400)
- Development of New CPEE Distance Learning Study Unit – Project Evaluation Principles (TO1401)
- Review of CPEE Distance Learning Study Units on "Flexible Pavement Construction" and "Rigid Pavement Construction" (TO1440)

- Development of new CPEE Distance Learning Study Unit – Road Engineering Fundamentals (TO1441)
- Review of CPEE Distance Learning Study Unit – Managing the Road Environment (TO1442)

The following guides were published in 2008-09:

- *Guide to Bridge Technology*
- *Guide to Pavement Technology*
- *Guide to Project Delivery*
- *Guide to Project Evaluation*
- *Guide to Road Design*
- *Guide to Road Transport Planning*
- *Glossary of Roads and Transport Terms [Third edition]*

A total of 22 technical reports were produced as part of the Austroads technical research program. A full list of all the guide parts and technical and research reports published in 2008-09 can be found on page 39.

The following outputs were produced as part of Austroads' ongoing support to the Centre for Pavement Engineering Technology:

- Review of CPEE Distance Learning Study Unit – Pavement Wearing Surfaces
- Development of New CPEE Distance Learning Study Unit – Project Evaluation Principles
- Review of CPEE Distance Learning Study Units on "Flexible Pavement Construction" and "Rigid Pavement Construction"
- Development of new CPEE Distance Learning Study Unit – Road Engineering Fundamentals
- Review of CPEE Distance Learning Study Unit – Managing the Road Environment

Ongoing projects 2009-10

The Technology program is focussing on the following on-going work areas:

Publication projects

- Guide to Road Tunnels.

Technical research projects

- Influence of Multiple Axle Loads on Pavement Performance
- Management of Scarce and Quality Resources
- Asphalt Properties and Mix Design Procedures
- Optimising Binder Performance
- Surface Characteristics to Meet Road User Needs
- Maintaining the Rural Road Network
- Strategic Review of Pavement Design Practice
- Cost-effective Structural Treatments for Rural Highways
- Development of Pavement Design Models
- Performance Specification for Warm Asphalt.

Future directions

New projects commencing in 2009-10 will build on the strategic objectives of the Austroads Strategic Plan 2007-12, specifically continuing important publication, technical, strategic and other research within the following areas:

- **Publications research**
 - Enhancing Components of Economic Appraisal
 - Improve Cost Estimating on Projects – Update to Guide to Project Evaluation

- **Technical Research**
 - Aggregate Polishing Test – Replacing Reference Aggregate
 - Improved Rut Resistance Characterisation of Granular Bases
 - Optimum Axle Group Loading
 - Elastometer upgrade for assessment of polymer modified binders
 - Develop a Design for Bituminous Stabilised Pavements
 - Vertical Loading Standard for PBS Vehicles(joint with National Transport Commission)

- **Strategic research**
 - Expanded operating speed model
 - Bridge Design Guidelines for Earthquakes
 - Design Rules for Bridge Bearings and Expansion Joints
 - Guidelines for Design and Construction of Buried Corrugated Metal Pipes
 - Standardise Drawing Presentation Road design for heavy vehicles
 - Road Design for Heavy Vehicles.

- **Other Research**
 - Review of CPEE Distance Learning Study Unit – Road Drainage
 - Review of CPEE Distance Learning Study Unit – Introduction to Pavements
 - Development of New CPEE Distance Learning Study Unit – Pavement Rehabilitation.

TECHNICAL RESEARCH

Program overview

The Technical Research Agreement program marked its fifth year in 2008-09. Research continued in the four key areas of:

- bituminous surfacings
- pavement technology
- asset management
- road safety engineering.

The purpose of the agreement was to develop and sustain a national capability for technical research and knowledge in each of the key areas so this can be available to meet the future requirements of the Australasian road industry.

An important part of the program is dissemination of the research outputs. During 2008-09 this was achieved by:

- over 57 technical reports which are available free of charge from the Austroads website
- integration of results into and completion of the Austroads guides
- over 35 related conference papers presented in Australia and overseas
- project related newsletters in road safety and asset management
- specialist project related workshops
- user pays workshops covering various parts of the Austroads guides.

A number of the program outputs were presented at the 23rd ARRB Conference and the First International Sprayed Sealing conference held in Adelaide.

The following sections provide a brief overview of the 2008-09 research program. A more detailed description of the research is provided in the ARRB fifth annual report on technical research.

Bituminous surfacings

A number of issues are being addressed which aim to improve the ability of road authorities to manage their surfacing assets in response to the emerging freight task and community expectations.

Improved knowledge in the area of bituminous binders is a key aspect in the performance and service life of sprayed seals and asphalt surfacings. During 2008-09 polymer modified binder (PMB) stability and properties during transportation and storage were investigated. It was found that the structure of PMBs in asphalt may be different from the structure of PMBs in sprayed seals. It also appears that the asphalt structure may be present in some PMB test samples, whilst the spray seal structure may be present in others. This may offer some explanation to differing test results from field samples compared to samples taken at the manufacturing plant. This area of binders research will be pursued in 2009-10.

A status report on stone mastic asphalt surfacings was completed in 2008-09 while work to develop uncertainty statements for Austroads asphalt test methods is nearing completion.

New performance requirements for bitumen sprayers have been developed and bitumen sprayer nozzle testing was commenced. This will enable continued work in the development of calibration procedures.

Pavement technology

The pavement technology research program continues to focus on improving understanding of the response of flexible pavements to changing vehicle loads and new-generation heavy vehicles. Emphasis is being placed on unbound granular pavement materials, which make up the bulk of Australia's road network and on cemented materials, whose performance is most sensitive to changes in load level.

The performance of different unbound granular materials under full-scale accelerated pavement testing was shown to be significantly different from that predicted by laboratory estimation processes. This is of concern, as it had been hoped that successful laboratory assessment of granular material performance would facilitate improved knowledge to assist with the use of marginal and recycled materials. Additional analysis and extended laboratory testing, involving collaborative work in New South Wales, South Australia, New Zealand and the USA has identified a number of potential resolutions. The work continues.

Laboratory fatigue testing of a wide range of cemented materials is ongoing. Preliminary results support the continued use of the 12th power load damage exponent, but the work has identified that the dependence of performance models on flexural modulus may be inappropriate. Additional work is examining the response of cemented materials to different axle group configurations using laboratory simulation.

Other research conducted includes examining whether there is a strain level below which asphalt materials will perform indefinitely, the effect of multiple axle loading on pavement performance, the continued development of new finite element pavement design software and the examination of procedures for thickness design of foamed bitumen stabilisation rehabilitation works.

All parts of the Austroads Guide to Pavement Technology (comprising 10 parts and 12 sub-parts) are completed.

Asset management

Asset management research involved the development of decision tools to assist road authorities. One such decision tool incorporated available knowledge to enable assessment of the effects of incremental increases in axle group loads on a road network in terms of road condition and road agency costs. This work was undertaken in partnership with the National Transport Commission (NTC) and it may form an input for pricing road use by heavy vehicles.

Work to quantify pavement dynamic loading and to connect this with associated pavement wear effects is continuing in 2009-10. Also in 2009-10, ARRB will work on a collaborative project to investigate the Danish Traffic Speed Deflectometer (TSD) with the RTA NSW and other jurisdictions.

Long term pavement performance (LTPP) monitoring remains a major strategic component of the asset management program. On the basis of road authority requests, greater emphasis in 2008-09 was placed on the analysis of the existing LTPP and the long term pavement performance maintenance (LTPPM) data in combination with the experimental deterioration data available from earlier ALF testing. This data has allowed the development of improved network level deterioration models. These improved models for road deterioration (covering roughness, rutting, cracking and structural deterioration) will allow refinement of the above tools to reliably predict the cost and condition impacts of incremental axle load increases and other strategic changes to the network. The models can also include the past and future impact of climate change on the road network which has been quantified in terms of the Thornthwaite Index. Changes in the Thornthwaite Index for road sites are now far easier to estimate using a new software tool that has been developed. This tool will be made available to road authorities as a project output.

All parts of the Austroads Guide to Asset Management (comprising 8 parts and 8 sub-parts) are completed.

Road safety engineering

The road safety engineering program focuses on ways to improve the road environment to reduce road safety risk as part of the Safe Systems approach. During 2008-09 projects were undertaken on road safety and speed (covering rural speed, speed at intersections, speed limit setting and

implications for speed limits on network operations) and roadside safety. Other projects included a detailed analysis on the implications of modal shift, a review on Intelligent Transport Systems (ITS) and safety and a review of heavy vehicle safety in urban areas. Several of these projects span two or more years.

The results of research into ways to reduce rural speed generated high levels of interest. Information on some new and innovative treatments was presented at a series of workshops. The treatments included vehicle activated signs for curves and intersections, whole of route treatments for curves, and gateway treatments between high speed areas and rural townships.

The crash reduction potential of different types of safety-related ITS was assessed. The analysis suggested that there are very large crash reduction benefits to be gained from in-vehicle ITS which have not yet been deployed on a large scale, but the cost of the systems will need to fall considerably before they return positive economic benefits. However, many forms of roadside safety-related ITS systems are likely to return positive benefits even at sites with small numbers of crashes, so that their widespread deployment would be a worthwhile investment in safety.

Work on roadside safety drew initially on international literature, local crash records, expert consultation and site inspections to identify three broad areas for continuing research. These were: the improvement of 'clear zone' guidelines, enhancement of knowledge on the management of roadside environments and provision of guidance on the effective use of existing and new safety barrier technology.

Research on speed limits and network operations identified the impact of lower speed limits on crashes, travel time, traffic flow, fuel use and air pollutant emissions. Extensive consultation was held with the Australasian jurisdictions to gather road authority knowledge in this area. Modelling of the impacts of lower speed limits on road network operations is being completed and reported on.

All nine parts of the Austroads Guide to Road Safety were published by January 2009. The new guides have already generated a high level of interest. Dissemination has commenced, with workshops being held in NSW, Queensland, Victoria, SA and ACT for Part 3 of the Guide 'Speed Limits and Speed Management'. Further workshops have been scheduled for WA, NT and TAS

INTERNATIONAL



International Committee Chairman

Menno Henneveld
Commissioner
Main Roads Western Australia

Austrroads maintains relations with several international road organisations. These include the World Road Association (PIARC) and the Road Engineering Association of Asia and Australasia (REAAA). It also has partnership arrangements with peak road organisations in several other countries.

World Road Association (PIARC)

The World Road Association is based in Paris. It has members from more than 140 countries. It also has national government membership from 117 countries. The Australian Government member is the Department of Infrastructure, Transport, Regional Development and Local Government (DITRD LG). However, the Department has authorised Austrroads to manage Australian membership. Each member country nominates a First Delegate representative to sit on the Association's Council which meets once a year. I am currently the Australian First Delegate.

The Association's main activity is managing and coordinating the work by technical committees which bring together technical experts from around the world. Each committee addresses an area of current and emerging issues facing road authorities. The committees report on their work to the World Road Congress which the Association convenes every four years. Australia and/or New Zealand have full or corresponding representatives on 16 of the 17 current committees.

These representatives provide regular progress reports on the work being conducted by their technical committee. These are publicly available on the Austrroads website allowing easy access to the committees work not only to Austrroads members but the wider road and road transport industry throughout Australia and New Zealand.

As well as being the Australian First Delegate, I am currently a member of the Association's Executive Committee and the current Chair of its Communication and International Relations Commission. This is one of four Commissions that report to the Executive Committee. There are also Commissions on Technological Exchange and Development, Strategic Planning and Finance.

Austrroads also supports the Association by arranging the secondment of a professional officer from one of its member organisations. Michelle Baran from the Department of Transport and Main Roads Queensland was seconded to the secretariat from July 2008 until March 2009. Jeremy Kaltenrieder from Main Roads Western Australia commenced the subsequent secondment in April 2009. This will conclude at the end of this year. These secondments have proved very useful in forging closer links between the Association and Austrroads, Australian and New Zealand road authorities. They have also provided an exceptional professional and personal development opportunity for the officers involved.

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

The Road Engineering Association of Asia and Australasia (REAAA) based in Kuala Lumpur, Malaysia, promotes the science and practice of road engineering and related professions in the Asia Pacific region. REAAA has about 1,000 members in 26 countries and holds regular events including a triennial international conference, technical visits and study tours, trade displays, seminars, forums and workshops.

There are chapters of the REAAA established in both Australia and New Zealand. The Austroads national office provides secretariat support to the Australian Chapter of the REAAA, which provides opportunities for Australian members to consult with colleagues in other REAAA member countries and from time to time organises technical visits, seminars and information exchange in Australia and Asia.

In October 2008, Austroads and Main Roads Western Australia hosted a meeting of the REAAA Council. The meeting was held in conjunction with the Austroads Council meeting in Perth. It was very successful and positive feedback was received from the participants.

Partnerships with peak road bodies in other countries

AASHTO

Austroads has an agreement with the American Association of State Highway and Transportation Officials (AASHTO), an association representing highway and transportation departments in the United States of America. This involves the exchange of information and research results and publications.

The Austroads national office maintains regular contact with AASHTO. Free copies of AASHTO publications are received under the agreement between the two organisations, which are forwarded to the ARRB library where they are made available to the staff of Austroads member organisations.

The agreement was renewed in August 2008.

AAMVA

Austroads has an agreement with the American Association of Motor Vehicle Administrators (AAMVA). AAMVA is the equivalent organisation of AASHTO which covers vehicle registration and driver licensing in the United States of America. The agreement was renewed in December 2006 for a further three years. It provides for the sharing of information between the two organisations. Negotiations have commenced for a further agreement.

Transportation Association of Canada

Austroads has an agreement with the Transportation Association of Canada (TAC). TAC promotes the provision of safe, efficient, effective and environmentally and financially sustainable transportation services in Canada. The agreement provides for the exchange of information and possible cooperative and collaborative research on topics of mutual interest.

OECD/ECMT

The Organisation for Economic Cooperation and Development (OECD) and the European Council of Ministers of Transport (ECMT) have agreed to work together on transport research through the establishment of a Joint Transport Research Centre (JTRC). Austroads works with DITRD LG to participate in the various research initiatives of the JTRC, generally as corresponding members of projects teams. Reports are provided to the relevant Austroads forums.

CORPORATE



Murray Kidnie
Executive Director

National office

The Austroads national office provides the secretariat for the Austroads Council and overall coordination of Austroads activities. The national office manages the production and distribution of Austroads publications and other outputs. It produces a small range of corporate and general information publications and manages the corporate website for Austroads. It also manages Austroads' international involvement and provides support for the International Committee and the Australian First Delegate to the World Road Association.

The national office is located at level 9, 287 Elizabeth Street, Sydney.

Publications

Development of the Austroads guides concluded in 2008-09 with all parts completed by 30 June 2009, with some of these parts awaiting publication. The Bridge Technology, Traffic Management, Pavement Technology, Road Design, Road Safety and Asset Management guides were completed during the year.

There are three parts of Road Tunnels which have not been complete. These will be completed by June 2010. Other publications produced include 26 research and 43 technical reports.

All Austroads publications are available from the publications website which contains over 500 publications including guides, research and technical reports. Publications are available electronically in PDF and orders for hard copies can also be placed online. All technical and research reports are available in PDF for free and member organisations also have free access to all guides in PDF. The website provides users with a search facility and the option to provide feedback about the site and/or content of individual publications.

Demand for the free PDF downloads increased in 2008-09 compared to previous years. This was due to the large amount of new guides, research and technical reports released through the year. See Table 1 for more information.

Table 1 – Average monthly free PDF downloads

| | Public | Austroads Members | Local Government | Total |
|---------|--------|-------------------|------------------|-------|
| 2005-06 | 1,188 | 477 | 414 | 2,079 |
| 2006-07 | 1,316 | 548 | 386 | 2,250 |
| 2007-08 | 870 | 772 | 767 | 2,409 |
| 2008-09 | 987 | 1,556 | 1,068 | 3,611 |

The number of publications downloaded as free PDFs rose considerably due to the frequency of new guide publications being released by Austroads during the last six months of the year. This trend was noticeable across PDF and hard copy sales also. Average monthly hard copy sales increased by almost 150 over 2007-08, however average monthly PDF sales only increased to 140, an increase of ten per month. See Table 2 for more information.

Table 2 – Average monthly sales and downloads – all publications

| | Free PDF | PDF Sales | Hardcopy Sales |
|---------|----------|-----------|----------------|
| 2005-06 | 2,079 | 559 | 125 |
| 2006-07 | 2,250 | 482 | 285 |
| 2007-08 | 2,409 | 130 | 236 |
| 2008-09 | 3,477 | 140 | 388 |

A full list of the publications produced is provided on page 39.

The publications website has an email notification service, RoadWatch, that delivers alerts to subscribers when new or updated publications are released. The number of subscribers has grown steadily over the past few years to a total of 19,738 at 30 June 2009. In 2008-09, 3,668 new subscribers joined RoadWatch, an increase of 23 per cent in 12 months.

Newsletters

Newsletters were produced and distributed electronically every second month to over 3,000 subscribers. They are also available for download from the Austroads website. The newsletters contain information about Austroads' projects and initiatives, information about forthcoming events relevant to the road transport industry, and a section about the work of the World Road Association. They also contain updates about recent Austroads publications that have been released. A number of different options are currently being looked at to upgrade the system of releasing and distributing the email to find a more efficient approach. The REAAA Australian Chapter newsletter is also produced twice a year by Austroads.

Corporate website

The Austroads website contains details about Austroads and its activities. It provides links to member organisations, observers' organisations and other related organisations. There is also a link to the Australian Bicycle Council (ABC) website. The website is regularly updated and in 2008-09 received about 20,000 visits per month. The ABC website generated about 3,000 visits per month.

The corporate website is currently undergoing a review and audit. A professional consultant/analyst was brought in to assist with this review of both the Austroads and Australian Bicycle Council websites. This review and consultation consisted of methods to improve the websites and their effectiveness in line with what we want to achieve, such a user-friendliness, promotion, information dissemination, and publication sales.

National office staff

The Austroads national office operated with six full-time staff in 2008-09. The secondment of Communications Manager David Armstrong from the RTA NSW concluded in May 2009. Adrian Paton joined Austroads in April 2009 taking over from David Armstrong.

PERFORMANCE REVIEW

The Austroads Strategic Plan includes performance measures which relate to member satisfaction and project completions.

Member satisfaction

In 2008-09, as in previous years, surveys were undertaken of Austroads Council members and a cross section of staff from member organisations, mainly task force and review panel members, to establish their level of satisfaction with Austroads' performance on several key aspects of its operation, including:

- collaboration
- research
- publications
- professional development
- value for money
- overall performance.

The surveys also included additional questions relating to the technical research work of ARRB.

As with previous surveys the 2008-09 surveys indicated that overall the level of satisfaction with Austroads' performance was high. There was also a high level of satisfaction with the publications produced by Austroads.

Project completions

There were 157 projects approved in the 2008-09 work program, with 93 projects continuing from previous financial years and 64 new projects to start in 2008-09. There were 53 projects scheduled for completion by 30 June 2009, with 16 completed by that date.

During 2008-09 a total of 68 projects were completed. Seven were cancelled or deferred. At 30 June 2009 there was one project which was overdue by more than 12 months and four by more than six months.

Table 3 provides a comparison of work program status figures as at 30 June for the last four financial years.

Table 3 – Status of Austroads work program

| | Completed | Cancelled or Deferred | More than 12 months late | Between 6 and 12 months late | Other projects | Total |
|---------|-----------|-----------------------|--------------------------|------------------------------|----------------|-------|
| 2005-06 | 39 | 4 | 2 | 7 | 72 | 124 |
| 2006-07 | 31 | 4 | 2 | 11 | 78 | 126 |
| 2007-08 | 41 | 10 | 3 | 8 | 82 | 144 |
| 2008-09 | 68 | 7 | 1 | 4 | 77 | 157 |

In 2009-10, 82 projects will carry over from 2008-09 and there will be 50 new projects making a total of 132.

PUBLICATIONS

Publications released during the year ended 30 June 2009.

Guides

- *Guide to Asset Management Part 2: Community and Stakeholder Requirements (AGAM02/09)*
- *Guide to Asset Management Part 3: Asset Strategies (AGAM03/08)*
- *Guide to Asset Management Part 4: Program Development and Implementation (AGAM04/09)*
- *Guide to Asset Management Part 5: Pavement Performance (AGAM05/09)*
- *Guide to Asset Management Part 5A: Inventory (AGAM05A/09)*
- *Guide to Asset Management Part 6: Bridge Performance (AGAM06/09)*
- *Guide to Asset Management Part 7: Road Related Asset Performance (AGAM07/09)*
- *Guide to Asset Management Part 8: Asset Valuation and Audit (AGAM08/09)*
- *Guide to Bridge Technology Part 1: Introduction and Bridge Performance (AGBT01/09)*
- *Guide to Bridge Technology Part 2: Materials (AGBT02/09)*
- *Guide to Bridge Technology Part 3: Typical Superstructures, Substructures and Components (AGBT03/09)*
- *Guide to Bridge Technology Part 4: Design Procurement and Concept Design (AGBT04/09)*
- *Guide to Bridge Technology Part 5: Structural Drafting (AGBT05/09)*
- *Guide to Bridge Technology Part 6: Bridge Construction (AGBT06/09)*
- *Guide to Bridge Technology Part 7: Maintenance and Management of Existing Bridges (07/09)*
- *Guide to Pavement Technology Part 2: Pavement Structural Design (AGPT02/08)*
- *Guide to Pavement Technology Part 3: Pavement Surfacing (AGPT03/09)*
- *Guide to Pavement Technology Part 4A: Granular Base and Subbase Materials (AGPT04A/08)*
- *Guide to Pavement Technology Part 4C: Materials for Concrete Road Pavements (AGPT04C/08)*
- *Guide to Pavement Technology Part 4E: Recycled Materials (AGPT04E/09)*
- *Guide to Pavement Technology Part 4F: Bituminous Binders (AGPT04F/09)*
- *Guide to Pavement Technology Part 4G: Geotextiles and Geogrids (AGPT04G/09)*
- *Guide to Pavement Technology Part 4H: Test Methods (AGPT04H/09)*
- *Guide to Pavement Technology Part 4I: Earthworks Materials (AGPT04I/09)*
- *Guide to Pavement Technology Part 4J: Aggregate and Source Rock (AGPT04J/09)*
- *Guide to Pavement Technology Part 4K: Seals (AGPT04K/09)*
- *Guide to Pavement Technology Part 4L: Stabilising Binders (AGPT04K/09)*
- *Guide to Pavement Technology Part 5: Pavement Evaluation and Treatment Design (AGPT05/08)*
- *Guide to Pavement Technology Part 6: Unsealed Pavements (AGPT06/09)*
- *Guide to Pavement Technology Part 7: Pavement Maintenance (AGPT07/08)*
- *Guide to Pavement Technology Part 8: Pavement Construction (AGPT08/09)*
- *Guide to Pavement Technology Part 9: Pavement Work Practices (AGPT09/08)*
- *Guide to Pavement Technology Part 10: Subsurface Drainage (AGPT10/08)*
- *Guide to Project Delivery Part 3: Contract Management (AGPD03/08)*
- *Guide to Project Delivery Part 4: Direct Management of Construction (AGPD04/08)*

- *Guide to Project Evaluation Part 4: Project Evaluation Data (AGPE04/08)*
- *Guide to Road Design Part 3: Geometric Design (AGRD03/09)*
- *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (AGRD04A/09)*
- *Guide to Road Design Part 4B: Roundabouts (AGRD04B/09)*
- *Guide to Road Design Part 4C: Interchanges (AGRD04C/09)*
- *Guide to Road Design Part 5: Drainage Design (AGRD05/08)*
- *Guide to Road Design Part 6: Roadside Design, Safety and Barriers (AGRD06/09)*
- *Guide to Road Design Part 6A: Pedestrian and Cyclist Paths (AGRD06A/09)*
- *Guide to Road Design Part 6B: Roadside Environment (AGRD06B/09)*
- *Guide to Road Design Part 8: Process and Documentation (AGRD08/09)*
- *Guide to Road Safety Part 4: Local Government and Community Road Safety (AGRS04/09)*
- *Guide to Road Safety Part 5: Safety for Rural and Remote Areas (AGRS05/06)*
- *Guide to Road Safety Part 6: Road Safety Audit (AGRS06/09)*
- *Guide to Road Safety Part 7: Road Network Crash Risk Assessment and Management (AGRS07/06)*
- *Guide to Road Safety Part 8: Treatment of Crash Locations (AGRS08/09)*
- *Guide to Traffic Management Part 2: Traffic Theory (AGTM02/08)*
- *Guide to Traffic Management Part 3: Traffic Studies and Analysis (AGTM03/09)*
- *Guide to Traffic Management Part 4: Network Management (AGTM04/09)*
- *Guide to Traffic Management Part 7: Traffic Management in Activity Centres (AGTM07/09)*
- *Guide to Traffic Management Part 9: Traffic Operations (AGTM09/09)*
- *Guide to Traffic Management Part 10: Traffic Control and Communications Devices (AGTM10/09)*
- *Guide to Traffic Management Part 12: Traffic Impacts of Developments (AGTM12/09)*
- *Guide to Traffic Management Part 13: Road Environment Safety (AGTM13/09)*
- *Guide to Road Transport Planning (AGRTP/09)*
- *Glossary of Austroads Terms [Third Edition] (AP-C87/08).*

Research reports

- *Analysis of Safety Benefits of Heavy Vehicle Accreditation Schemes (AP-R319/08)*
- *Improving Fleet Safety – Guidance Material for Moving Towards Best Practice (AP-R320/08)*
- *Improving Fleet Safety – Current Approaches and Best Practice Guidelines (AP-R321/08)*
- *Trial of a Model Licence Re-assessment Procedure for Older Drivers: Stage 3 Research (AP-R322/08)*
- *Safer Vehicle Purchases: Developing Cost-effectiveness Estimates for Fleet Managers and Others – Project Summary Report (AP-R323/08)*
- *Safer Vehicle Purchases: Developing Cost/benefit Estimates for Fleet Managers and Others – Part A: Crash Profiles and Risk Estimates (AP-R324/08)*
- *Safer Vehicle Purchases: Developing Cost/benefit Estimates for Fleet Managers and Others – Part B: Injury Levels in Crashes (AP-R325/08)*
- *Safer Vehicle Purchases: Developing Cost/benefit Estimates for Fleet Managers and Others – Part C: Cost of Injuries and Property Damage in Crashes (AP-R326/08)*
- *Safer Vehicle Purchases: Developing Cost/benefit Estimates for Fleet Managers and Others – Part D: Injury Reductions with Various Fleet Purchasing Policies (AP-R327/08)*
- *Safer Vehicle Purchases: Developing Cost/benefit Estimates for Fleet Managers and Others – Part D: Supplementary Component: Use of In-Depth Crash Data (AP-R328/08)*

- *Safer Vehicle Purchases: Developing Cost/benefit Estimates for Fleet Managers and Others – Part E: Cost-Effective Analysis of Fleet Purchasing Options (AP-R329/08)*
- *Intelligent Vehicles and Infrastructure: The Case for Securing 5.9 GHz (AP-R330/08)*
- *The Crash and Offence Experience of Newly Licensed Young Drivers (AP-R331/08)*
- *Assessment of Remaining Service Life of Pavements (AP-R332/08)*
- *Guidelines for Assessing Heavy Vehicle Access to Local Roads (AP-R333/09)*
- *Optimising Freeway Traffic Flow Under Congested Conditions – Monash Freeway Study (AP-R334/09)*
- *B Triple and Quad Axle B-Double Network Decoupling (AP-R335/09)*
- *Older Driver Model Assessment Program: Safe 4: Validation of Screening Tests to Assess At-Risk Older Drivers (AP-R336/09)*
- *Development of a National Approach to Traffic Control at Work Sites (AP-R337/09)*
- *Network Operations Planning Framework – Final Report (AP-R338/09)*
- *Traffic Signal Controller – Future Directions: Consultation and Literature Review (AP-R339/09)*
- *Traffic Signal Controller – Future Directions: Functional Requirements (AP-R340/09)*
- *Freeway Design Parameters for Fully Managed Operations (AP-R341/09)*
- *Best Practice for Variable Speed Limits – Literature Review (AP-R342/09)*
- *Best Practice for Variable Speed Limits – User Perception and Comprehension Study (AP-R343/09)*
- *Best Practice for Variable Speed Limits – Best Practice Recommendations (AP-R344/09).*

Technical reports

- *Technical Basis of Austroads Guide to Pavement Technology Part 2: Pavement Structural Design (AP-T98/08)*
- *Technical Basis of the Austroads Design Procedures for Flexible Overlays in Flexible Pavements (AP-T99/08)*
- *Testing Asphalt in Accordance with the Austroads Mix Design Procedures (AP-T100/08)*
- *The Development and Evaluation of Protocols for the Laboratory Characterisation of Cemented Materials (AP-T101/08)*
- *Fatigue Performance of Cemented Materials under Accelerated Loading – Influence of Vertical Loading on the Performance of Unbound and Cemented Materials (AP-T103/08)*
- *Construction Report for Cemented Test Pavement – Influence of Vertical Loading on the Performance of Unbound and Cemented Materials (AP-T104/08)*
- *Relative Pavement Wear of an Unbound Granular Pavement due to Dual Tyres and Single Tyres (AP-T104/08)*
- *Development of Laboratory Measures to Assess Surfacing used in High Stress Applications (AP-T105/08)*
- *Development and Application of Horizontal Stress Transducer (AP-T106/08)*
- *Bitumen Emulsions (AP-T107/08)*
- *Seal Distress Mechanisms – An Initial Study into Flushing (AP-T108/08)*
- *Management of an Asphalt Road Trial (AP-T109/08)*
- *The Results of Testing Overseas Bitumens (AP-T110/09)*
- *Review of Foamed Bitumen Sealing in Australia (AP-T111/08)*
- *Review of Surface Texture Measurement Method for Seal Design Input (AP-T112/08)*
- *Australian and International Bituminous Binder Specifications (AP-T113/08)*
- *Horizontal Stresses: Their Measurement in the Field and Assessment in the Laboratory – Project Summary Report (AP-T114/08)*
- *Correlation of WIM Date with Classified Counts: Using Artificial Neutral Networks to Identify Load Distribution at Classifier Sites (AP-T115/08)*

- *High Productivity Vehicles and Pavement Economic Impacts: Network Level Assessment Approach (AP-T116/08)*
- *Impacts of PBS Pavement Vertical Loading Standards at Network Level – Tasks 1 and 2 (AP-T117/08)*
- *Review of Innovative Binder Delivery Systems (Pilot Study) (AP-T118/08)*
- *Safety Benefits of Improving Interaction Between Heavy Vehicles and Road Systems (AP-T119/09)*
- *Austrroads LTPP and LTPPM Study – Summary Report for 2006/07 (AP-T120/08)*
- *Impact of Rising Watertables and Salinity in Pavement Performance (AP-T121/08)*
- *Implementation of National Performance Indicators: First Round Results (AP-T122/08)*
- *Impact of LATM Treatments on Speed and Safety (AP-T123/09)*
- *First National Survey of Australian Bitumens (AP-T124/09)*
- *Component Costs in Transport Projects to Ensure the Appropriate Valuing of Safety Effects (AP-T125/09)*
- *Gisborne Sprayed Seal Binder Trial (AP-T126/09)*
- *Ball Penetration Test Stage 2: Field Validation (AP-T127/09)*
- *Comparison of the US and Australian Long Term Pavement Performance (LTPP) Data on Asphalt Pavements (AP-T128/09)*
- *Measuring Heavy Vehicle Wheel Loads Dynamically (AP-T129/09)*
- *Review of Relationship to Predict Subgrade Modulus from CBR (AP-T130/09)*
- *Asphalt Fatigue Endurance Limits (AP-T131/09)*
- *Preparation of Asphalt Samples for Testing (AP-T132/09)*
- *Intelligent Transport Systems and Variable Message Signs for Road Safety Applications: Current Status and Future Prospects (AP-T133/09)*
- *Development of Best Practice Intervention Model for Recidivist Speeding Offenders (AP-T134/09)*
- *Evaluation of Safety Impact of Centre-of-the-road Wire Rope Barrier (WRB) on Undivided Rural Roads (AP-T135/09)*
- *Heavy Vehicle Safety in Rural and Remote Areas (AP-T136/09)*
- *Concluding Report for the Brisbane City Council Trial (AP-T137/09)*
- *Review of Stone Mastic Asphalt Design Concepts (AP-T138/09)*
- *Improving Local Road Expenditure Data Provision (AP-T139/09)*
- *Surface Characteristics and Crash Occurrence on Selected Roads in Australia (AP-T140/09)*

AUSTROADS AWARDS

The success of Austroads' operations is heavily dependent on the contributions of staff from member organisations and a small number of related organisations. Austroads awards are intended to recognise those people who have made particularly noteworthy contributions.

Austroads medal

The Austroads medal is awarded to a person who has made an exceptionally meritorious contribution to Austroads and the achievement of its objectives over a sustained period. This is Austroads' highest award and is intended only to be issued occasionally. This year there was one recipient:

- **Judi Sorbie (ANO)**

Judi has worked with Austroads and its predecessor for nearly 30 years and she has been with Austroads since its inception. In that time she has had a number of responsibilities but perhaps most significantly she has been intimately involved in the production of Austroads, and before that NAASRA, publications. Through this work she has made a major contribution to the 'look' of Austroads.

Judi has an encyclopaedic knowledge of everything ever published by the organisation, the title, the publication number, the authors, where it is stored and how it can be accessed. This knowledge of and personal involvement with colleagues is one of the positive aspects of Austroads activities and has often led to those participants being referred to as the Austroads 'family'. Judi has played an important role in generating and fostering that aspect of Austroads – the 'feel' of it.

Judi has been a dedicated member of the Austroads national office; a small team which, of necessity, have to work closely together and share tasks. Judi has very strong personal ownership of Austroads outputs and activities and takes great pride in her work and ensuring that things are done right. The national office relies very heavily on her to keep the rest of the team on track.

Outstanding service award

The Austroads outstanding service award is provided to a person who has made an outstanding contribution to Austroads and its activities over a sustained period. In 2008-09 it was awarded to:

- **Ken Russell (VicRoads)**

In recognition of his outstanding contribution to Austroads and its activities over a sustained period particularly through his work in supporting the Assets program. Ken Russell has been the Assets program manager from April 2007 until 30 June 2009. He was the VicRoads representative on the Assets task force from 2004 to 2007 and as program manager he has chaired the task force from 2007 to 2009. During his time as the chair of the task force the major achievement was the production of the Guide to Asset Management.

The completion of the new Guide to Asset Management represents a significant body of work and the first time a comprehensive document of the subject has been produced by Austroads. It should be a great benefit to asset management practitioners in road agencies. Ken's leadership and direction were critical in the successful completion of this challenging task. Ken not only chaired the task force but personally managed four of the Assets program projects.

- **Dennis Walsh (DTMR Qld)**

In recognition of his contribution to Austroads and its activities over an extended period through his role of Network program manager, DTMR Qld representative on the Network task force, Chair of the Australian Bicycle Council and as project manager of several successfully completed projects. He also provided invaluable input into the SCOT Urban Congestion Management Working Group.

Austroads special commendation

- **Ted Vincent (VicRoads)**

For his significant contribution to NAASRA and Austroads most recently through his work on the Network task force, the Traffic Management review panel and his membership on the World Road Association Technical Committee on Urban Areas & Sustainable Urban Transport and his leadership of the working group on Sustainable Transport in Mega-cities. This and his previous involvement in various national capacities, including his work with Standards Australia and ISO on ITS have been highly regarded by his colleagues in the road industry.

- **John Fenwick (DTMR Qld)**

For his technical eminence related to bridges, quality assurance and risk management and his enduring contribution to improving bridge technology in Australia and New Zealand over many years.

Achievement awards

Achievement awards are provided in the interests of formally recognising the role of staff within Austroads member organisations and a small number of related organisations, when bringing about the successful completion of an Austroads project. In 2008-09 they were awarded to:

- **Emma Chandler (RTA NSW)**

In recognition of her significant contribution to Austroads through her work with the Registration and Licensing program from June 2007 until May 2009.

- **Tony Barton (VicRoads)**

In recognition of his significant contribution to Austroads and the Australian Bicycle Council particularly through his work to ensure cycling requirements are adequately addressed in the new Austroads traffic management and road design guides.

- **Cheryl Richey (RTA NSW)**

In recognition of her significant contribution to Austroads through her work with the Registration and Licensing program from May 2005 until June 2007.

- **Amy Hall (MR WA)**

In recognition of her significant contribution to Austroads through her exceptional work with the Network program from January 2007 until June 2008.

TASK FORCE AND REVIEW PANEL MEMBERS

(as at 30 June 2009)

Assets

| | |
|---------------------|--|
| Ken Russell (Chair) | VicRoads (Program Manager, Assets) |
| Simon Buxton | Department of Infrastructure, Energy and Resources Tasmania |
| Greg George | Department of Infrastructure, Transport, Regional Development and Local Government |
| Andrew Golding | Department of Transport and Main Roads Queensland |
| Ian Hickson | Department of Territory and Municipal Services Australian Capital Territory |
| Mick Lorenz | Department for Transport, Energy and Infrastructure South Australia |
| Kathy Martin | Main Roads Western Australia |
| Lance Midgley | VicRoads |
| Bob Peters | Main Roads Western Australia |
| Dave Robertson | New Zealand Transport Agency |
| Mick Savage | Institute of Public Works Engineering Australia |
| Neil Walker | Roads and Traffic Authority New South Wales |
| Ernie Wanka | Department of Planning and Infrastructure Northern Territory |

Bridge Technology

| | |
|----------------------|---|
| David Hubner (Chair) | Department of Transport & Main Roads Queensland (Program Manager, Technology) |
| Wije Ariyaratne | Roads and Traffic Authority New South Wales |
| Geoff Bouilly | VicRoads |
| Julian Del Beato | National Transport Commission |
| Eddy Go | Standards Australia |
| Ian Hickson | Department of Territory and Municipal Services Australian Capital Territory |
| Rudolph Kotze | New Zealand Transport Agency |
| Louise McCormick | Department of Planning and Infrastructure, WA |
| Ross Pritchard | Department of Transport and Main Roads Queensland |
| Graeme Roberts | Department of Infrastructure, Energy and Resources Tasmania |
| Jock Scanlon | Main Roads Western Australia |
| Peter Wilson | Department for Transport, Energy and Infrastructure South Australia |

Capability

| | |
|-----------------------|---|
| Peter Mitchem (Chair) | VicRoads (Program Manager, Capability) |
| Phil Cantillon | Department of Infrastructure, Energy and Resources Tasmania |
| Lou George | Department for Transport, Energy and Infrastructure South Australia |
| Tony Gill | Department of Territory and Municipal Services Australian Capital Territory |
| Ross Moody | Institute of Public Works Engineering Australia |
| Brendan Nugent | Roads and Traffic Authority New South Wales |
| Jon Oxford | Department of Transport and Main Roads Queensland |
| Judith Pettitt | VicRoads |
| Michael Stanley | Roads and Traffic Authority New South Wales |
| Clare Stone | New Zealand Transport Agency |
| John Taya | Main Roads Western Australia |

Freight

| | |
|-----------------------|--|
| Philip Halton (Chair) | Roads and Traffic Authority New South Wales (Program Manager, Freight) |
| John Bessell | Department of Infrastructure, Energy and Resources Tasmania |
| Kerri Bradford | Department of Infrastructure, Transport, Regional Development and Local Government |
| Angus Draheim | Department of Transport and Main Roads Queensland |
| Don Hogben | VicRoads |
| Barb Littler | Department of Planning and Infrastructure Northern Territory |
| Mark Mitchell | Department of Transport and Main Roads Queensland |
| Ellen Molloy | VicRoads |
| Doug Morgan | Main Roads Western Australia |
| Meena Naidu | National Transport Commission |
| Lindsay Oxlad | Department for Transport, Energy and Infrastructure South Australia |
| Rod Paule | Department of Territory and Municipal Services Australian Capital Territory |
| Lynn Sleath | New Zealand Transport Agency |

Network

| | |
|---------------------|--|
| John Erceg (Chair) | Main Roads Western Australia (Program Manager, Network) |
| Simon Buxton | Department of Infrastructure, Energy and Resources Tasmania |
| Lien Cheung | VicRoads |
| Catherine Creenaune | Roads and Traffic Authority New South Wales |
| Robert de Maid | National Transport Commission |
| Lachlan Faulkner | Department of Transport and Main Roads Queensland |
| Adrian George | VicRoads |
| Jeff Goode | Department for Transport, Energy and Infrastructure South Australia |
| Ken Grattan | Department of Planning and Infrastructure Northern Territory |
| Stewart Jones | Department of Infrastructure, Transport, Regional Development and Local Government |
| Roger Lau | VicRoads |
| Phil Margison | Roads and Traffic Authority New South Wales |
| Geoffrey McDonald | Department of Transport and Main Roads Queensland |

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|--------------------|---|
| Anthony Ockwell | Meyrick and Associates Pty Ltd |
| Rifaat Shoukrallah | Department of Territory and Municipal Services Australian Capital Territory |
| Stephen Soelistio | Roads and Traffic Authority New South Wales |
| Tony Strasser | |
| Andrew Wall | VicRoads |
| Dennis Walsh | Department of Transport and Main Roads Queensland |
| Keith Weegberg | VicRoads |
| Deryk Whyte | New Zealand Transport Agency |

Pavement Technology

| | |
|----------------------|---|
| David Hubner (Chair) | Department of Transport & Main Roads Queensland (Program Manager, Technology) |
| David Alabaster | New Zealand Transport Agency |
| Marcus Coleman | National Transport Commission |
| David Harris | Main Roads Western Australia |
| Allan Jones | Department of Transport and Main Roads Queensland |
| Glenn Lacey | Department of Territory and Municipal Services Australian Capital Territory |
| John Lambert | Australian Asphalt Pavement Association |
| Chris Mathias | Department for Transport, Energy and Infrastructure South Australia |
| William Moodie | Department of Planning and Infrastructure Northern Territory |
| John Nichols | Cement Concrete and Aggregates Australia |
| Andrew Papacostas | VicRoads |
| Bryan Pidwerbesky | Roading New Zealand |
| Ken Porter | Roads and Traffic Authority New South Wales |
| Barry Walker | Department of Infrastructure, Energy and Resources Tasmania |

Project Delivery

| | |
|----------------------|---|
| David Hubner (Chair) | Department of Transport & Main Roads Queensland (Program Manager, Technology) |
| Phil Cantillon | Department of Infrastructure, Energy and Resources Tasmania |
| Bruce Douglas | Mornington Peninsula Shire Council |
| Bruce Gidley | VicRoads |
| Ross Guppy | Department of Transport and Main Roads Queensland |
| Gabriel Joseph | Department of Territory and Municipal Services Australian Capital Territory |
| Peter Letts | Roads and Traffic Authority New South Wales |
| Colin MacKay | New Zealand Transport Agency |
| Brian Noble | Main Roads Western Australia |
| Robert Pemble | Department of Planning and Infrastructure Northern Territory |
| Tim Warren | Department for Transport, Energy and Infrastructure South Australia |

Registration and Licensing

| | |
|-----------------------|---|
| Ann King (Chair) | Roads and Traffic Authority New South Wales (Program Manager, Registration and Licensing) |
| Dale Andrea | VicRoads |
| Greg Deimos | National Transport Commission |
| Cath Dunstan | Austroads (NEVDIS) |
| Richard Fowler | Department of Infrastructure, Energy and Resources Tasmania |
| Geoff Hughes | National Motor Vehicle Theft Reduction Council |
| Margo Leffers | Department of Infrastructure, Transport, Regional Development and Local Government |
| Trevor Maughan | Department of Planning and Infrastructure, Western Australia |
| Chris McNally | VicRoads |
| John Neville | Department for Transport, Energy and Infrastructure South Australia |
| Kevin O'Kane | Land Transport Safety Authority New Zealand |
| Nicholas Papandonakis | Department of Planning and Infrastructure Northern Territory |
| Rod Paule | Department of Territory and Municipal Services Australian Capital Territory |
| Cheryl Richey | Roads and Traffic Authority New South Wales |

Road Design

| | |
|----------------------|---|
| David Hubner (Chair) | Department of Transport & Main Roads Queensland (Program Manager, Technology) |
| Owen Arndt | Department of Transport and Main Roads Queensland |
| Peter Aumann | Monash City Council |
| Anthony Barton | VicRoads |
| David Barton | VicRoads |
| Tom Brock | The Association of Consulting Engineers Australia |
| Rob Grove | Main Roads Western Australia |
| James Hughes | New Zealand Transport Agency |
| Adil Jamil | Department of Planning and Infrastructure Northern Territory |
| Pat Kenny | Roads and Traffic Authority New South Wales |
| Ken Marshall | Department of Territory and Municipal Services Australian Capital Territory |
| Graeme Nichols | Department of Infrastructure, Energy and Resources Tasmania |
| Noel O'Callaghan | Department for Transport, Energy and Infrastructure South Australia |

Safety

| | |
|--------------------|---|
| Phil Allan (Chair) | Department for Transport, Energy and Infrastructure South Australia (Program Manager, Safety) |
| Colin Brodie | New Zealand Transport Agency |
| Iain Cameron | Premier and Cabinet (WA) |
| Angela Conway | Department of Infrastructure, Energy and Resources Tasmania |
| Jon Douglas | Department of Transport and Main Roads Queensland |
| James Holgate | VicRoads |
| Soames Job | Roads and Traffic Authority New South Wales |
| Jenny Malone | Department of Planning and Infrastructure Northern Territory |
| Joe Motha | Department of Infrastructure, Transport, Regional Development and Local Government |
| Jeff Potter | National Transport Commission |
| David Quinlan | Department of Territory and Municipal Services Australian Capital Territory |
| Martin Small | Department for Transport, Energy and Infrastructure South Australia |
| Mike Stapleton | Department of Transport and Main Roads Queensland |

Traffic Management

| | |
|--------------------|---|
| John Erceg (Chair) | Main Roads Western Australia (Program Manager, Network) |
| Richard Burk | Department of Infrastructure, Energy and Resources Tasmania |
| Steve Clark | Department for Transport, Energy and Infrastructure South Australia |
| Griff Davis | City of Whittlesea VIC |
| Jon Douglas | Department of Transport and Main Roads Queensland |
| David Freeman | Standards Australia |
| Bob Gibson | New Zealand Transport Agency |
| Geoff Horni | Department of Planning and Infrastructure Northern Territory |
| David Johnson | Department of Infrastructure, Energy and Resources Tasmania |
| Dave Landmark | Main Roads Western Australia |
| Phil Margison | Roads and Traffic Authority New South Wales |
| David Nash | VicRoads |
| Craig Newland | Australian Automobile Association |
| Rifaat Shoukrallah | Department of Territory and Municipal Services Australian Capital Territory |

Transport Planning and Project Evaluation

| | |
|----------------------|---|
| David Hubner (Chair) | Department of Transport & Main Roads Queensland (Program Manager, Technology) |
| John Brewer | Roads and Traffic Authority New South Wales |
| Dave Gennard | New Zealand Transport Agency |
| Ken Grattan | Department of Planning and Infrastructure Northern Territory |
| Mark Harvey | Bureau of Infrastructure, Transport and Regional Economics |
| Kuga Kugathas | Department of Territory and Municipal Services Australian Capital Territory |
| Ed McGeehan | VicRoads |
| Helen O'Brien | Main Roads Western Australia |
| Allan Richmond | Department of Transport and Main Roads Queensland |
| Peter Tisato | Department for Transport, Energy and Infrastructure South Australia |
| Dimitris Tsolakis | ARRB Group |
| Andy Van Emmerik | Department of Infrastructure, Energy and Resources Tasmania |

WORLD ROAD ASSOCIATION (PIARC) TECHNICAL COMMITTEE REPRESENTATIVES (AS OF 30 JUNE 2009)

| Committee | Representative(s) | Organisation |
|---|---|---|
| A.1 — Preserving the Environment | Lisa Rossiter (<i>English Secretary</i>) | New Zealand Transport Agency |
| | Adam Maguire* | VicRoads |
| | Kathryn Mahoney* | Department of Transport and Main Roads Queensland |
| A.2 — Financing Managing and Contracting of Road System Investment | Brian Noble | Main Roads Western Australia |
| | Vincent Scarcella* | Department of Transport and Main Roads Queensland |
| A.3 — Road System Economics and Social Development | Ernest Albuquerque | New Zealand Transport Agency |
| | Neil McGladrigan* | Department of Transport and Main Roads Queensland |
| A.4 — Rural Road Systems and Accessibility to Rural Areas | | |
| B.1 — Good Governance of Road Administrations | Brendan Nugent (<i>English Secretary</i>) | Roads and Traffic Authority New South Wales |
| | Tom Baskerville* | Department of Transport and Main Roads Queensland |
| | Flori Mihai* | Main Roads Western Australia |
| B.2 — Road Network Operations | Phil Lawes | Department for Transport, Energy and Infrastructure South Australia |
| | Andrew Wall* | VicRoads |
| | Kelvin Marrett* | Department of Transport and Main Roads Queensland |
| | Deryk White* | New Zealand Transport Agency |
| B.3 — Improved Mobility in Urban Areas | Anita Curnow (<i>English Secretary</i>) | VicRoads |
| | Shane Doran* | Department of Transport and Main Roads Queensland |
| | Lyndon Hammond* | Transit New Zealand |
| B.4 — Freight Transport and Inter Modality | Don Hogben | VicRoads |
| | Trudi Meakin* | Department for Transport, Energy and Infrastructure South Australia |
| | Mark Mitchell* | Department of Transport and Main Roads Queensland |
| | Rick Barber* | New Zealand Transport Agency |
| B.5 — Winter Service | Alan Burkett* | New Zealand Transport Agency |
| C.1 — Safer Road Infrastructure | Jon Douglas (<i>English Secretary</i>) | Department of Transport and Main Roads Queensland |
| | Brendan Marsh* | Main Roads Western Australia |
| C.2 — Safer Road Operations | George Mavroyeni | VicRoads |
| | Bob Gibson* | New Zealand Transport Agency |
| C.3 — Managing Operation Risk in National and International Road Operations | Maurice Cammack | Main Roads Western Australia |

| <i>Committee</i> | <i>Representative(s)</i> | <i>Organisation</i> |
|---|---|---|
| C.4 — Road Tunnel Operations | Arnold Dix | Consultant |
| | Jason Venz* | Department of Transport and Main Roads Queensland |
| | Rudolph Kotze* | New Zealand Transport Agency |
| D.1 — Management of Road Infrastructure Assets | Mick Lorenz (<i>English Secretary</i>) | Department for Transport, Energy and Infrastructure South Australia |
| | Chris Parkman | New Zealand Transport Agency |
| | Adrian Tofful* | VicRoads |
| D.2 — Road Pavements | Peter Bryant | Department of Transport and Main Roads Queensland |
| <i>D.2a — Road Surface Characteristics sub-committee</i> | Peter Bryant (<i>English Secretary</i>) | Department of Transport and Main Roads Queensland |
| <i>D.2b — Flexible and Semi Rigid Pavements sub-committee</i> | Narelle Dobson* | Department of Transport and Main Roads Queensland |
| <i>D.2c — Concrete Pavements sub-committee</i> | David Hazell* | Roads and Traffic Authority New South Wales |
| D.3 — Road Bridges | Erica Smith | Main Roads Western Australia |
| | Peter Graham* | Department of Transport and Main Roads Queensland |
| D.4 — Geotechnics and Unpaved Roads | Vasantha Wijeyakukasuriya* | Department of Transport and Main Roads Queensland |

* Corresponding Member

ABBREVIATIONS

| | |
|----------|--|
| AAMVA | American Association of Motor Vehicle Administrators |
| AASB | Australian Accounting Standards Board |
| AASHTO | American Association of State Highway and Transportation Officials |
| ACMA | Australian Communications Media Authority |
| ANPR | Automated Number Plate Recognition |
| AS | Australian Standard |
| ABC | Australian Bicycle Council |
| AEC | Australian Electoral Commission |
| AITPM | Australian Institute of Traffic Planning and Management |
| ALF | Accelerated Loading Facility |
| ALGA | Australian Local Government Association |
| ANO | Austrroads National Office |
| ARF | Australian Road Forum |
| ARRB | ARRB Group |
| ATC | Australian Transport Council |
| CAF | Council of Australian Federation |
| CBD | Central Business District |
| COAG | Council of Australian Governments |
| COSRA | Conference of State Road Authorities |
| CPI | Consumer Price Index |
| CPEE | Centre for Pavement Engineering Education |
| CRC | Cycling Resource Centre |
| DTMR Qld | Department of Transport and Main Roads Queensland |
| DITRD LG | Department of Infrastructure, Transport, Regional Development and Local Government |
| DPX | Demerit Point Exchange |
| DSRC | Dedicated Short Range Communications |
| DTEI SA | Department for Transport, Energy and Infrastructure South Australia |
| DVS | Document Verification Service |
| ECMT | European Council of Ministers of Transport |
| ESA | Equivalent Standard Axles |
| FE | Finite Element |
| GST | Goods and Services Tax |
| GTEP | Guide to Traffic Engineering Practice |
| HDM-4 | Highway Development and Management System |
| IAP | Intelligent Access Program |
| ITS | Intelligent Transport Systems |
| JTRC | Joint Transport Research Centre |
| LATM | Local Area Traffic Management |
| LPG | Liquefied Petroleum Gas |
| LTPP | Long Term Pavement Performance |
| LTPPM | Long Term Pavement Performance Maintenance |
| MoT NZ | Ministry of Transport New Zealand |
| MR WA | Main Roads Western Australia |

| | |
|----------|---|
| NAASRA | National Association of Australian State Road Authorities |
| NCS | Australian National Cycling Strategy 2005-2010 |
| NEVDIS | National Exchange of Vehicle and Driver Information System |
| NPI | National Performance Indicators |
| NSW | New South Wales |
| NTC | National Transport Commission |
| NZ | New Zealand |
| NZTA | New Zealand Transport Agency |
| OECD | Organisation for Economic Cooperation and Development |
| PAYGO | Pay As You Go |
| PBS | Performance Based Standards |
| PMB | Polymer Modified Binders |
| PDF | Portable Document Format |
| PIARC | World Road Association |
| PPSR | Personal Property Security Register |
| R&L | Registration and Licensing |
| REAAA | Road Engineering Association of Asia and Australasia |
| RLT | Repeated Load Triaxial |
| RTA NSW | Roads and Traffic Authority New South Wales |
| RUE | Road User Effects |
| SA | South Australia |
| SCOT | Standing Committee on Transport |
| SHRP | Strategic Highway Research Program |
| SLIP | Smartcard Licence Interoperability Protocol |
| SMA | Stone Mastic Asphalt |
| SSA | Search Software America |
| TAC | Transportation Association of Canada |
| TAMS ACT | Department of Territory and Municipal Services Australian Capital Territory |
| NZTA | New Zealand Transport Agency |
| TRB | Transportation Research Board |
| USA | United States of America |
| VIC | Victoria |
| VicRoads | Roads Corporation Victoria |
| VIN | Vehicle Identification Number |
| VIRS | Vehicle Information Request System |
| VMS | Variable Message Sign |
| WA | Western Australia |
| WIM | Weigh-in-Motion |

FINANCIAL INFORMATION

Income statement for the year ended 30 June 2009

| | 2009 | | 2008 | |
|--|------------------|--------------------------|----------------|-------------------------|
| | \$ | \$ | \$ | \$ |
| INCOME | | | | |
| Contributions | | | | |
| Membership | | 882,800 | | 850,000 |
| Work Program | | 9,040,700 | | 7,448,400 |
| Special programs and projects | | | | |
| DITRDLG – Australian Bicycle Council Secretariat (note 4) | 118,000 | | 115,000 | |
| CAF – Harmonisation of R & L Practices | 246,400 | | - | |
| NTC | 203,450 | | 222,900 | |
| Road Authorities – National Skills Marketing Plan (CO1568) | 145,397 | | - | |
| RTA Contribution towards FS1412 | <u>1,000,000</u> | | <u>160,000</u> | |
| | | 1,713,247 | | 497,900 |
| Publications | | | | |
| Gross Sales Revenue | 196,092 | | 173,124 | |
| Royalties | <u>457</u> | | <u>10,671</u> | |
| | | 196,549 | | 183,795 |
| Interest received | | | | |
| Short Term Investments | 197,630 | | 201,480 | |
| Rental Bond | <u>2,064</u> | | <u>2,249</u> | |
| | | 199,694 | | 203,729 |
| TOTAL INCOME | | <u>12,032,990</u> | | <u>9,183,824</u> |

The accompanying notes form part of these financial statements

Income statement for the year ended 30 June 2009 (continued)

| | 2009 | | 2008 | |
|---|-----------|----------------|-----------|-----------------|
| | \$ | \$ | \$ | \$ |
| EXPENDITURE | | | | |
| Corporate | | | | |
| Salaries and Related Charges | 551,360 | | 536,179 | |
| Other National Office Expenses (Note 2) | 377,410 | | 230,606 | |
| Projects | 19,641 | | 151,149 | |
| Corporate Services | 57,860 | | 43,986 | |
| Depreciation (Note 1b) | 14,246 | | 11,230 | |
| Program Management | 600,000 | | 660,244 | |
| | | 1,620,517 | | 1,633,394 |
| Work program | | | | |
| Assets | 1,470,795 | | 1,264,615 | |
| Freight | 1,222,296 | | 431,998 | |
| Network | 1,143,908 | | 962,721 | |
| Registration and Licensing | 336,400 | | 154,921 | |
| Safety | 1,514,429 | | 1,294,840 | |
| Technology | 3,438,599 | | 3,076,407 | |
| Capability | 156,556 | | 5,140 | |
| | | 9,282,983 | | 7,190,642 |
| Specific Projects | | | | |
| International Participation | 109,970 | | 55,670 | |
| Austrroads ARRB Fellowship | 50,000 | | 50,000 | |
| CPEE Distance Learning Units | - | | 18,700 | |
| Support to ALGA Reps | 2,159 | | - | |
| Test Methods & Pavement Technology Work Tips | 8,160 | | - | |
| DITRDLG – Australian Bicycle Council Secretariat (Note 4) | 118,075 | | 115,022 | |
| DITRDLG – ABC Web Based Resource Centre | - | | 36,512 | |
| | | 288,364 | | 275,904 |
| Publications | | | | |
| Cost of Sales | 22,721 | | 3,959 | |
| Production and Distribution | 42,000 | | 42,000 | |
| SAIG Free Download facility | 78,000 | | 53,600 | |
| Promotion and marketing | 7,345 | | 7,877 | |
| | | 150,066 | | 107,436 |
| TOTAL EXPENDITURE | | 11,341,930 | | 9,207,376 |
| Net (deficit)/surplus for the year | | 691,060 | | (23,552) |

The accompanying notes form part of these financial statements

Balance sheet as at 30 June 2009

| | 2009 | | 2008 | |
|---|-----------|------------------|-----------|------------------|
| | \$ | \$ | \$ | \$ |
| ASSETS | | | | |
| Current assets | | | | |
| Cash | 4,672,248 | | 3,528,531 | |
| Investments (Note 1d) | 1,577,012 | | 2,672,993 | |
| Receivables (Note 3) | 265,323 | | 1,173,243 | |
| Prepayments | 23,706 | | 26,723 | |
| Other Debtors | - | | 36,550 | |
| | - | 6,538,289 | - | 7,438,040 |
| Non-current assets | | | | |
| Office Furniture and Equipment at Cost | 129,533 | | 128,677 | |
| Less: Provision for Depreciation | (110,443) | | (108,504) | |
| | 19,090 | | 20,173 | |
| Motor Vehicles at Cost | 23,262 | | 23,262 | |
| Less: Provision for Depreciation | (8,667) | | (4,015) | |
| | 14,595 | | 19,247 | |
| Sundry Debtor | 231,952 | | 39,368 | |
| | | 265,637 | | 78,788 |
| Total assets | | 6,803,926 | | 7,516,828 |
| LIABILITIES | | | | |
| Current liabilities | | | | |
| Accounts Payable | 1,551,469 | | 1,586,299 | |
| Contributions received in advance | 205,700 | | 2,090,700 | |
| Subscriptions invoiced in advance (NEVDIS II) | 99,707 | | 157,514 | |
| Unacquited funds (NEVDIS II) (Note 6) | 2,454,464 | | 1,910,206 | |
| Provision for Annual Leave | 85,223 | | 71,946 | |
| Provision for Long Service Leave (Note 1c) | 73,029 | | 48,943 | |
| | | 4,469,592 | | 5,865,608 |
| Non-current liabilities | | | | |
| Provision for Long Service Leave | | 6,813 | | 14,759 |
| Total liabilities | | 4,476,405 | | 5,880,367 |
| NET ASSETS | | 2,327,521 | | 1,636,461 |
| Represented by: | | | | |
| MEMBERS' FUNDS | | | | |
| Net Surplus / (Deficit) | | 691,060 | | (23,552) |
| Cumulative Surplus Brought Forward | | 1,636,461 | | 1,660,013 |
| Members' funds | | 2,327,521 | | 1,636,461 |

The accompanying notes form part of these financial statements

Statement of cash flows for the year ended 30 June 2009

| | 2009 \$ | Inflows (Outflows) \$ | 2008 \$ |
|---|---------------------|-----------------------------|---------------------|
| Cash flows from operating activities | | | |
| Receipts | | | |
| Member Contributions | 10,609,658 | | 11,006,467 |
| Publication Sales | 196,549 | | 183,795 |
| Interest Received | 199,694 | | 203,729 |
| External Project Funding | 713,247 | | 1,497,900 |
| Other Receipts | 414 | | - |
| Net GST Receipt | 153,693 | | - |
| Total receipts | 11,873,255 | | 12,891,891 |
| Payments | | | |
| Salaries and Related Costs | (521,943) | | (506,830) |
| National Office including Corporate | (607,928) | | (555,864) |
| Publications | (150,066) | | (107,436) |
| Programs | (10,536,658) | | (10,514,169) |
| Other Expenses | - | | (3,297) |
| Net GST Payment | - | | (195,069) |
| Total payments | (11,816,595) | | (11,882,665) |
| Net cash (used in)/provided by Operating activities (Note 7) | 56,661 | | 1,009,226 |
| Cash flows from investing activities | | | |
| Proceeds from Sales of Fixed Assets | - | | 17,727 |
| Payment for Purchases of Fixed Assets | (8,925) | | (36,216) |
| Net cash used in investing activities | (8,925) | | (18,489) |
| Net (decrease)/increase in cash held | 47,736 | | 990,737 |
| Cash at the beginning of the year | 6,201,524 | | 5,210,787 |
| Cash at the end of the year (Note 6) | 6,249,260 | | 6,201,524 |

The accompanying notes form part of these financial statements

Notes to and forming part of the accounts for the year ending 30 June 2009

1. STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES

This is a special purpose financial report prepared in order to satisfy the statutory financial reporting requirements of Austroads. The Executive Committee has determined that Austroads is not a reporting entity.

The financial report has been prepared in accordance with statutory requirements and the following Australian Accounting Standards:

AASB 1031 Materiality
AASB 110 Events After the Balance Sheet Date

No other applicable Accounting Standards, Australian Accounting Interpretations or other authoritative pronouncements of the Australian Accounting Standards Board have been applied.

The financial report has been prepared on an accruals basis of historical costs and does not take into account changing money values or, except where specifically stated, current valuations of non-current assets.

The following material accounting policies, which are consistent with the previous period unless otherwise stated, have been adopted in the preparation of this report:

a) Publications

Publication sales are made through SAI Global. SAI Global produces Austroads publications and Austroads receives the proceeds of these sales less a commission. SAIG also receives a monthly fee for maintaining the Austroads Publications Website and providing the Free Download facility.

b) Depreciation

Furniture and equipment and motor vehicles are depreciated on a reducing balance basis over their useful lives.

c) Provision for employee entitlements

Provisions for long service leave and annual leave are made for all employees from the date of their commencement and are calculated at current pay rates. Additionally, provision is made for OnCosts of 13% on Long Service Leave.

Provisions for long service leave for service under six years is treated as non current.

d) Investments

Investments are short term fixed deposits held with the National Australia Bank.

e) NEVDIS II

Austroads on behalf of Australian jurisdictional driver licensing and vehicle registration authorities has contracted with Fujitsu Australia Limited to operate and maintain the National Exchange Vehicle Driver Information System (NEVDIS). The previous NEVDIS contract with Fujitsu Australia expired on 25 August 2008. Austroads have now taken up the option to extend the contract for a further period of 4 years from 25 August 2008 to 25 August 2012. After the 25 August 2008, the annual fee is \$1,520,000 per annum (ex GST) payable monthly in arrears.

Funding of NEVDIS 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 the subsequent year as unacquitted funds in the balance sheet.

f) Income tax

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

g) Revenue

Membership revenue is recognised over the period to which it relates.

Work Program contributions are recognised when Austrroads has received or is expecting to receive such contributions.

Interest revenue is recognised on a proportional basis taking into account the interest rates applicable.

| | 2009 | 2008 |
|---|----------------|------------------|
| | \$ | \$ |
| 2) OTHER NATIONAL OFFICE EXPENSES – SIGNIFICANT ITEMS | | |
| Other National Office Expenses includes the following: | | |
| – Remuneration of Auditor for Audit Services | 13,750 | 12,000 |
| – Remuneration of Auditor for Prior year | 1,750 | 1,010 |
| | <u>15,500</u> | <u>13,010</u> |
| – Review of Technical Research Program | 98,750 | - |
| – Rental expense on operating lease | 90,692 | 83,983 |
| 3) RECEIVABLES | | |
| Trade Debtors | 262,243 | 20,549 |
| RTA – invoiced in advance for 2008/09 | | |
| Digital Tachograph Pilot Project | - | 1,100,000 |
| NEVDIS Receivables | 3,080 | 52,694 |
| | <u>265,323</u> | <u>1,173,243</u> |
| 4) DITRDLG – COMMONWEALTH FUNDING RECEIVED IN RESPECT OF THE ABC | | |
| Specific Funding received for ABC Secretariat | 118,000 | 115,000 |
| Less Expenditure Acquitted to Balance date | (118,075) | (115,022) |
| Taken up by Austrroads | 75 | 22 |
| Refundable to DITRDLG | <u>-</u> | <u>-</u> |
| Specific Funding received for ABC Web Based Resource Centre | | - |
| Unacquitted funds brought forward | - | 36,510 |
| Less Expenditure Acquitted to Balance date | - | (36,512) |
| Taken up by Austrroads | <u>-</u> | <u>2</u> |
| Unacquitted Funds carried over to next year | <u>-</u> | <u>-</u> |

**Notes to and forming part of the accounts for the year
ending
30 June 2009 (continued)**

5) NEVDIS II

Income

| | | |
|--|-----------|-----------|
| Members' contributions | 3,983,518 | 4,028,899 |
| Safety Recalls | 91,997 | 102,120 |
| AEC Project Income | 157,620 | 151,227 |
| Ausindustry funding for LPG Vehicle checking | 9,800 | - |
| Data Extracts | 22,255 | 32,142 |
| Transport SA extract charges | 6,676 | 6,597 |
| Interest Received | 75,007 | 99,985 |

| | | |
|---------------------|-------------------------|-------------------------|
| Total Income | <u>4,346,873</u> | <u>4,420,970</u> |
|---------------------|-------------------------|-------------------------|

Expenditure

| | | |
|---|-----------|-----------|
| Fujitsu Subscriptions and Operation Costs | 2,273,710 | 2,452,364 |
| RTA NEVDIS Administration Unit and Salaries | 1,177,774 | 743,652 |
| NEVDIS Projects | 350,648 | 123,735 |
| Other | 484 | 1,361 |

| | | |
|--------------------------|-------------------------|-------------------------|
| Total expenditure | <u>3,802,616</u> | <u>3,321,111</u> |
|--------------------------|-------------------------|-------------------------|

| | | |
|-------------------------------------|-----------|-----------|
| Net Surplus for the year | 544,257 | 1,099,859 |
| Amount Unexpended in previous years | 1,910,207 | 810,348 |

| | | |
|--|-------------|-------------|
| Amount Unexpended transferred to Liabilities (Note 1e) | (2,454,464) | (1,910,207) |
|--|-------------|-------------|

| | | |
|-------------|----------|----------|
| Net Surplus | <u>-</u> | <u>-</u> |
|-------------|----------|----------|

Notes to and forming part of the accounts for the year ending 30 June 2009 (continued)

6) RECONCILIATION OF CASH

For the purposes of the Statement of Cash Flows, the Association considers cash to include cash on hand and at 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 Balance Sheet as follows:

| | | |
|-------------|------------------|------------------|
| Cash | 4,672,248 | 3,528,531 |
| Investments | 1,577,012 | 2,672,993 |
| | <u>6,249,260</u> | <u>6,201,524</u> |

7) RECONCILIATION OF NET CASH USED IN OPERATING ACTIVITIES TO OPERATING RESULTS

| | | |
|--|----------------------|-------------------------|
| Operating Result | 691,060 | (23,552) |
| Depreciation | 14,246 | 11,230 |
| Net Loss / (Gain) on disposal of plant and equipment | 414 | (3,297) |
| Decrease/(Increase) in trade debtors | 907,920 | (470,312) |
| Decrease/(Increase) in prepayments and other debtors | (153,017) | (5,753) |
| Increase/(Decrease) in Liabilities | (1,403,962) | 1,500,910 |
| Net cash from operating activities | <u>56,661</u> | <u>1,009,226</u> |

Statement by members of the Executive Committee

The Executive Committee has determined that Austroads Incorporated is not a reporting entity and that this special purpose financial report should be prepared in accordance with the accounting policies outlined in Note 1 to the financial statements.

In the opinion of the Executive Committee, the attached financial report as set out on pages 56 to 63, present fairly the financial position of Austroads Incorporated as at 30 June 2009 and its performance for the year ended on that date.

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



Alan Tesch
Chairman

Dated in Sydney this 26th day of October 2009.

Independent audit report to the members of Austroads Incorporated

Report on the Financial Report

We have audited the accompanying financial report, being a special purpose financial report, of Austroads Incorporated (the association), which comprises the balance sheet as at 30 June 2009, and the income statement, statement of cashflows for the year ended on that date, a summary of significant accounting policies, other explanatory notes and the statement by members of the committee.

Executive Committee's Responsibility for the Financial Report

The Executive Committee of the association is responsible for the preparation and fair presentation of the financial report and have determined that the accounting policies described in Note 1 to the financial statements, which form part of the financial report, are consistent with the financial reporting requirements of the Associations Incorporation Act [NSW] and are appropriate to meet the needs of the members. The Executive Committee's responsibilities also include establishing and maintaining internal control relevant to the preparation and fair presentation of the financial report that is free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

Auditor's Responsibility

Our responsibility is to express an opinion on the financial report based on our audit. No opinion is expressed as to whether the accounting policies used, as described in Note 1, are appropriate to meet the needs of the members. We conducted our audit in accordance with Australian Auditing Standards. These Auditing Standards require that we comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance whether the financial report is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial report. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial report, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the committee, as well as evaluating the overall presentation of the financial report.

The financial report has been prepared for distribution to members for the purpose of fulfilling the committee's financial reporting under the Associations Incorporation Act [NSW]. We disclaim any assumption of responsibility for any reliance on this report or on the financial report to which it relates to any person other than the members, or for any purpose other than that for which it was prepared.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Independence

In conducting our audit, we have complied with the independence requirements of Australian professional ethical pronouncements.

Auditor's Opinion

In our opinion, the financial report of Austroads Incorporated presents fairly, in all material respects the financial position of Austroads Incorporated as of 30 June 2009 and of its financial performance for the year then ended in accordance with the accounting policies described in Note 1 to the financial statements.



MOORE STEPHENS SYDNEY
Chartered Accountants



S. Tzannes
Partner

Address: Level 7, 20 Hunter Street, Sydney NSW 2001

Dated in Sydney this 26th day of October 2009.