

**Project Management Guidelines**

**Transport and Traffic Consultants**



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*Cover photograph: Consultants Marcus Wigan (left) and Andrew O'Brien (centre) reviewing a project with Rob Freemantle of VicRoads.*

# Foreword

**V**icRoads engages consultants to provide a range of professional traffic and transport engineering services to assist it in effectively and efficiently managing the Victorian road network and its use.

These guidelines describe the arrangements to be used in the procurement of these professional services.

The arrangements have been developed in consultation with the Association of Consulting Engineers Australia (ACEA), the Australian Institute of Traffic Planning and Management (AITPM) and the Institute of Transportation Engineers (ITE) to ensure that VicRoads practices reflect a proper appreciation of the commercial and professional environment in which traffic and transport consultants operate.

These guidelines describe the different types of professional services involved in transport and traffic studies and outline arrangements for the delivery of services that achieve:

- clearly defined performance requirements;
- appropriate allocation of risks and responsibilities;
- fairness to all parties involved in submitting proposals;
- acceptable commercial outcomes for all parties;
- a quality technical product; and
- effective competition and probity of process.

Whilst the guidelines have been prepared specifically for transport and traffic engineering services, the principles outlined will generally apply to other professional services procured on a project basis

**Colin Jordan**  
Chief Executive





# 1. Principles

VicRoads is responsible for the management of Victoria's arterial road system and its use. In fulfilling this responsibility, VicRoads obtains a range of services, including professional traffic and transport consulting services.

VicRoads requires consultants to pre-qualify prior to being invited to submit proposals for projects. This approach enables VicRoads to match consultant skills and expertise to particular project requirements. Within this system, the following principles will guide VicRoads practice in engaging traffic and transport consultants:

- competition will be encouraged;
- opportunities for 'value-adding' will be provided;
- the need for acceptable commercial outcomes to both VicRoads and the consultant will be recognised; and
- the selection process will be open.

## Encouraging Competition

VicRoads will encourage all suitable consultants to seek pre-qualification so they may be considered for future projects.

Where appropriate projects exist, opportunities will be provided to all pre-qualified consultants, at different times, to submit proposals. This will encourage competitiveness and lead to variations and innovation in the approach to tasks. Opportunities will be provided for the entry of new consultants with required skills and performance.

## 'Value-adding'

VicRoads is keen to ensure that it receives the best possible advice or service from consultants. In this regard, VicRoads recognises that professional consultants can add value to projects, over and above that specified in assignment briefs, leading to greater value to the community.

Such value-adding will be encouraged and considered in selecting the most suitable proposal for consultant services.

## Acceptable Commercial Outcomes

VicRoads will ensure that staff responsible for engaging professional services are aware of, and have regard to, important commercial issues, including cost and risk, for consultants.

The cost of preparing proposals will be considered in relation to the estimated value of the assignment.

VicRoads will, as far as practicable, ensure that any risk allocation is fair and reasonable. It is accepted that the greater the risk allocated to the consultant, the higher the risk loading will be in the price.

Any requirements for professional indemnity insurance or warranties must provide adequate protection for VicRoads, but will be established with an understanding of the cost implications for the consultant and in turn, VicRoads.

The terms of engagement and the administration of consultancies must be fair to both parties.

## Open Selection Process

VicRoads will ensure that consultants are engaged in accordance with these guidelines and that information for each assignment is publicly available. Details of the successful consultant and price will be published on the internet at [www.vicroads.vic.gov.au](http://www.vicroads.vic.gov.au). Details of consultants invited to submit proposals will be available from VicRoads Project Manager for each assignment.

## 2. Selection Process

### Pre-qualification of consultants

VicRoads has established an ongoing process for pre-qualification of consultants according to their technical skills, experience, management systems and, where applicable, their financial and management capacity. Pre-qualification categories and criteria have been developed in consultation with the relevant industry or professional associations. It is VicRoads policy to encourage new entrants to apply for pre-qualification.

The pre-qualification categories used for transport and traffic consultant services are listed in Appendix B together with an outline of the pre-qualification process.

Detailed information on the pre-qualification scheme is available on <[www.vicroads.vic.gov.au](http://www.vicroads.vic.gov.au)>. This includes detailed guidelines, application forms and an up-to-date list of pre-qualified consultants.

### Requests for Proposals

The following arrangements have been adopted to contain the overall cost of preparing submissions:

- A written proposal is invited from one pre-qualified consultant for any assignments valued at less than \$15,000;
- Written proposals are invited from three pre-qualified consultants for assignments valued at \$15,000 to \$50,000;
- Formal tenders or expressions of interest are generally sought from pre-qualified consultants through a public advertisement for assignments valued at more than \$50,000.

### Evaluation of Proposals

Invitations for proposals will set out details of information required from consultants and the process and criteria to be used in evaluating proposals.

Where VicRoads has fully specified the scope of the assignment and the quantity and quality of outputs the lowest price-conforming proposal will generally be selected. To be conforming the proposal would need to provide the specified deliverables within the prescribed times and any requirements regarding pre-qualification and specific experience of key team members would have to be met.

VicRoads will consider alternative proposals provided that a conforming proposal is also submitted and, provided the consultant provides sufficient information to enable an assessment of whether the alternative delivers outputs that represent greater value to the community.

In other situations, consultants may be presented with a particular issue and invited to submit a proposal outlining the scope of work required to investigate and/or resolve the issue. In such cases assessment of proposals will be based on the demonstrated value each consultant can contribute through understanding, methodology and expertise. Briefs for such proposals will need to indicate the depth and breadth of investigation considered to provide 'fit for purpose' advice.

And finally, in situations where there is insufficient knowledge of the task to specify the required outputs, a staged approach may be adopted by seeking advice initially on the scope of the required outputs with subsequent proposals for the provision of these outputs. In such cases, assignments will clearly indicate a staged approach. Where the first stage scoping consultancy will convey a competitive advantage, that consultant would generally not be eligible to submit a proposal in the second stage.

Where evaluation of proposals involves assessment of weighted criteria, such weighting will be explicitly defined in the request for proposals. A panel possessing the necessary knowledge and experience to make informed judgements about the merits of the proposals in relation to the various criteria will evaluate the proposals.

Where the weighting of criteria other than price is significant, a 'two envelope' system may be used to provide an auditable process for ensuring completion of the assessment of these criteria prior to consideration of price.

### Evaluation of Performance

VicRoads pre-qualification system will in future include a process of ongoing two-way performance review to foster continuous improvement and to assist VicRoads to differentiate between consultants when inviting proposals for particular assignments.

The process will provide a structured review of the consultant's performance against the specified assignment outcomes and management requirements, and a review by the consultant of the adequacy of VicRoads assignment brief and management process. The review process will include provision for appeal if the consultant is aggrieved with the result.



## 3. Consultancy Agreements

### Nature of Contract

A lump sum fixed price will generally apply for assignments where the scope of investigation and/or the quantity and quality of deliverables can be reasonably specified.

Payment arrangements will be specified in the project brief. These arrangements will generally provide for progress payments on completion of agreed milestones to provide an incentive for timely completion. Where milestone payments are proposed, these will be set out in the price schedule

Where the scope of works cannot be clearly defined, consultants may be engaged on an hourly fee plus disbursements. Alternatively, a staged commission may be adopted to enable agreement on the scope of later stages of the assignment after initial investigation and consideration of recommendations by the consultant. In such cases a "limiting" (maximum) fee will be specified.

Where monitoring of progress is required on assignments involving multiple activities or critical time lines, the consultant will be asked to provide a work program, together with a program of allocation of resources.

### Terms of Engagement

VicRoads uses two standard 'Terms of Engagement' for professional services. A short form agreement (Appendix A) is used for straight forward assignments where the risk of variations and disputes, and the possibility of time extensions is low. Generally, these assignments would be less than \$50,000 in value. A long form agreement is used for all other assignments. Copies of the current standard Terms of Engagement are available on the internet at <[www.vicroads.vic.gov.au](http://www.vicroads.vic.gov.au)>.

The following conditions may supplement the standard Terms of Engagement:

- higher Professional Indemnity cover may be required to reflect the significance or intended application of advice provided under particular assignments;
- any special conditions applying to intellectual property. Under the standard Terms of Engagement intellectual property developed for VicRoads by consultants remains the property of VicRoads; and
- any requirements for increased public liability insurance cover, warranties or liquidated damages.

### Assignment Brief

VicRoads assignment briefs will generally cover:

#### • The Assignment

- the context of the assignment and the nature of the problem to be solved, and where applicable, the scope of investigation required;
- the nature, quantity and quality of the outputs required, and their intended use;
- any required warranties; and
- any background information, including data already gathered, investigations and studies already carried out.

#### • Management of the Task

- time allowed for completion of the whole assignment and any key project milestones;
- any procedures or protocols to be followed;
- the quantity and quality of any deliverables required during the course of the assignment;
- provisions for payment, which will generally be linked to acceptance of the specified deliverables ;
- resources to be made available by VicRoads/others;
- guidelines and standards to be adopted;
- confidentiality issues;
- ownership of data and intellectual property;
- quality assurance requirements; and
- any progress reporting requirements.

#### • Assessment of Proposals

- selection criteria to be used by VicRoads; and
- information to be provided in proposals to enable assessment including qualifications/experience for key personnel.

Prior to issue, the adequacy of each assignment brief will generally be reviewed independently within VicRoads by a person with the relevant technical expertise and experience.

VicRoads develops standard specifications for assignments that are commissioned on a regular basis, such as traffic surveys, road safety audits, and corridor strategy studies. Copies of standard specifications are available via the internet on <[www.vicroads.vic.gov.au](http://www.vicroads.vic.gov.au)>.

## 4. Management of Assignments

### Management Framework

The Assignment Brief will establish the management framework to be used for monitoring performance during the execution of the assignment. This will involve, where applicable:

- a Project Quality Plan setting out key responsibilities, hold points, outputs subject to quality assurance, and key procedures;
- a program, showing key milestones and activities including dates for any inputs from VicRoads or others; and
- payment arrangements.

### Progress Meetings

Progress meetings will be held as required to:

- monitor progress against the agreed program (where applicable) and project quality plan;
- identify any problems that might delay or impact upon the work;
- monitor the effectiveness of the consultant's Quality System in assuring quality of outputs;
- identify any decisions required by VicRoads; and
- identify any potential variations to the assignment and associated time and cost impacts.

For larger consultancies, minutes will generally be prepared and agreed by both parties after each meeting, highlighting agreed actions. These actions should be dealt with speedily, especially where they involve decisions requiring additional work or resources.

### Variations

Claims by the Consultant for additional costs and/or extensions of time will be dealt with expeditiously by VicRoads superintending officer. Details of any outstanding claims will be reviewed jointly at progress meetings or at least monthly.

The basis for consideration of claims is set out in the Conditions of Engagement.

### Quality Assurance

As a general rule, VicRoads requires that its consultants manage the delivery of professional services in accordance with Quality Systems complying with the requirements of ISO 9000 Standards.

The effectiveness of a consultant's Quality System is an important element in pre-qualification assessment and ongoing review of performance.

VicRoads will conduct audit and surveillance on the System in accordance with the brief.

### Progress Payments

Assignments will generally provide for progress payments to be made upon satisfactory completion of agreed deliverables to encourage timely completion and to provide a clear link between the payment and the value delivered to VicRoads.

### Final Certificate

A Final Certificate that specifies the total amount of money paid to the Consultant and the date that the work was completed will be issued on completion of projects of \$15,000 or more.

### Performance Report

A performance review will generally be undertaken within one month of the final payment on all assignments. This will entail a structured review by VicRoads of the consultant's performance against the specified assignment outcomes and the capabilities demonstrated by the consultant in relation to the pre-qualification criteria. The consultant will also be invited to provide structured comment on VicRoads management processes and contract documentation.

The performance review will focus on outcomes and process, and will be structured to obviate comment about individuals or personalities. There will be provision for appeal to higher authority if the contractor/consultant is aggrieved with the result.



## Appendix A Terms of Engagement

1. This agreement shall be governed by Victorian law and the parties shall submit to the Victorian Courts. The parties shall explore Alternative Dispute Resolution alternatives prior to entering into litigation.
2. Any written notice or instructions to be served on the Consultant under this agreement shall be deemed to have been served when handed to the Consultant or its Nominated Principal or posted to or left at the Consultant's address in the Annexure or subsequent address notified by the Consultant to VicRoads in writing.
3. The Consultant shall from the Commencement Date perform the services required:
  - in accordance with sound practice employing due professional skill care and diligence;
  - in accordance with all Australian and Victorian statutes, by laws, rules regulations and practices in respect of the assignment;
  - carry out the assignment under principles and practices of quality management as specified or of relevant Australian and/or international standards where not otherwise specified; and
  - ensure that, having due regard to the assumptions that a competent consultant can reasonably be expected to make in accordance with sound professional practice:
    - (a) all information and data it is required to produce is accurate and correct; and
    - (b) the Consultant's services are fit for purpose and delivered by the Completion Date.

The Consultant shall comply with and require all its principals, servants and agents to comply with the Occupational Health and Safety Act†1985 and regulations or similar laws and incorporate into the quality plan where one is appropriate an element covering the management of occupational health and safety.
4. The Consultant shall liaise with the Superintendent and keep the Superintendent informed as to the program, progress and outcomes of the assignment. If the Consultant is delayed in performing the assignment by any act, omission or breach of this agreement by VicRoads or its servant or agents or any cause (except any act, omission or breach by or on behalf of the Consultant), the Consultant if it desires to claim an extension of time for completing this assignment, may not later than 28 days after the cause of delay arose, give to the Superintendent a written notice of claim together with detailed statement of facts on which the claim is based. The Superintendent will act reasonably in assessing any claims for an extension of time.

The Superintendent may at any time and at the Superintendent's option, notwithstanding that the Consultant has not made a claim for an extension, extend the time for completion by notifying the Consultant of the later Completion Date.

VicRoads will not pay any costs incurred by the Consultant in respect of any extensions of time granted unless such costs were incurred as a result of any breach of this Agreement or by any other act or omissions on the part of VicRoads or its servants or agents.

5. The Consultant shall not subcontract any part of the assignment without the prior written consent of the Superintendent. Approval by the Superintendent of any assignment shall not relieve the Consultant of any liabilities under this agreement: the Consultant shall be responsible for the acts, defaults or neglects of any subconsultant as if they were the Consultant's own acts, defaults or neglects.
  6. The Consultant shall not vary the execution of the assignment without the written approval of the Superintendent obtained beforehand.
  7. The Superintendent may direct the Consultant to perform additional work or to delete work from the assignment and the Consultant shall comply with such directions. Work in addition to or in deletion from the assignment shall be paid for or deducted on the basis of charges that have been agreed in writing prior to the changes being directed by the Superintendent. The Superintendent shall act honestly and reasonably in assessing extensions of time, measuring work and calculating payments.
  8. Provided the Consultant performs the work under the agreement as specified or subsequently required, VicRoads shall pay to the Consultant the fees set out in the annexure or subsequently agreed in writing.
  9. The Consultant shall indemnify and keep indemnified VicRoads in respect of any legally enforceable claims, demands, actions, suits or proceedings, costs and expenses whatsoever which may have been instituted against VicRoads arising out of any breach of contract or wilful or negligent acts or omissions by the Consultant in any way connected with the Consultant's work under this agreement. The Consultant shall during the course of the assignment and for the period afterwards set out in the annexure carry and maintain the various insurances to the levels as set out in the annexure. Any excesses applicable to the policy shall be to the account of and payable by the Consultant and not by VicRoads.
- The Consultant shall not be liable for any liability of loss to the extent that it is the fault of VicRoads. Where negligence is found to have been contributory, each party shall bear responsibility in accordance with that party's fault.



10. The Consultant and its servants, agents and subconsultants shall keep confidential this Consultancy, together with all information provided by VicRoads or generated by VicRoads or the Consultant in the course of this consultancy and shall not disclose to any person this assignment or any information related thereto. If required by VicRoads the Consultant shall arrange for its employees, agents and/or subconsultants to give written confidentiality undertakings in a form approved by VicRoads.
11. The Consultant warrants that as at the date of this agreement no conflict of interest exists or is likely to arise during the course of this agreement. If a conflict of interest or risk of conflict of interests arises, the Consultant shall notify VicRoads immediately of the conflict or risk.
12. Any intellectual property arising in the course of or out of the provision of services under this agreement shall upon creation vest exclusively in VicRoads. Where the assignment involves ideas which were the Consultant's own ideas created prior to the assignment and not created in the course of it, the Consultant may use those ideas freely, without obligation to the Corporation, in the course of the Consultant's practice.

In performing the work under this assignment the Consultant shall not infringe any other person's intellectual property, and shall ensure in respect of systems and outcomes that no royalties or fees are payable by VicRoads to any third persons. The Consultant shall indemnify VicRoads against any suit or claim, together with associated costs and damages, whether arising directly or indirectly by reason of any infringement by the Consultant of any intellectual property by the Consultant or supplied by the Consultant for the purposes of this agreement.

The Corporation shall be entitled as it sees fit and at no cost either directly or through any other Consultant or otherwise to make use of any ideas, designs, data, reports or other products or outcomes used or developed by the Consultant in conjunction with this assignment which are not subject to royalties or patent rights for carrying out additional or similar work. The Consultant shall not be liable to VicRoads or third parties in any way for such use of these outcomes or products.

13. If the Consultant fails to either:

- (a) perform the work under this agreement as required; or
- (b) comply with a direction of the Superintendent; or
- (c) proceed continuously and diligently with the carrying out of work under this agreement and complete it by the Completion Date or any extension of time granted; or
- (d) comply with any of the conditions of agreement; or

if the Consultant becomes insolvent or enters into an agreement with creditors or goes into liquidation or has a receiver and manager or administrator appointed whether voluntarily or compulsorily then without prejudice to any other remedies or rights VicRoads may have under this agreement or at Common law VicRoads may without notice to the Consultant determine this agreement by written notice served on the Consultant. From and after proven receipt of such notice this agreement shall be terminated in which event the Consultant shall deliver up all documents relating to this assignment which it has in its possession or control. Any costs or expenses incurred or damage sustained by VicRoads in remedying such breach or in any way arising out of the Consultant's default shall become a debt due and payable to VicRoads by the Consultant and may be recoverable from the Consultant by deduction from any moneys held on account of the Consultant or by action at law.

If VicRoads defaults in payment of any monies due and payable to the Contractor under this Agreement and that default continues for 14 days, the Contractor may give VicRoads written notice specifying the default and requesting its rectification within a period of not less than 14 days from the date of service of the notice. If VicRoads fails to rectify the breach within the period specified in the notice, the Consultant may, without further notice, forthwith suspend or terminate this Agreement.

14. For services delivered after 1 July 2000, VicRoads agrees to pay the relevant GST on receipt of a valid tax invoice. VicRoads will be required to apply withholding tax from payments to suppliers who do not provide an Australian Business Number.

## Appendix B Prequalification Categories

The prequalification categories for transport and traffic consultants will be reviewed in 2000 - 2001 as part of an overall review of the VicRoads prequalification process. Professional Associations (ACEA, AITPM, ITE) will be involved in this review, which will also include consultation with the Local Government professionals (LGPro) and the Department of Infrastructure. Current categories as at June 2000 are described below.

### **Traffic Management, Traffic Planning Design and Analysis**

Initiation, investigation and analysis of traffic management programs and strategies, parking strategies, traffic planning studies, local area traffic management, traffic signal strategies, traffic engineering design, traffic analysis studies for intersections, roadway flow conditions and landuse development impacts, expert evidence, traffic safety audit, training programs.

### **Traffic Surveys, Traffic System Monitoring and Analysis**

Traffic movement counts, origin-destination studies, parking studies, intersection studies, pedestrian studies, traffic system performance studies, road user studies, statistical analysis, traffic signal studies and analysis.

### **Traffic Control Electronics, Data Communication**

On-line control systems; dedicated short-range data communication and telemetry; ISDN and DDS telemetry and PABX systems; CCTV and fibre optics video switching systems; video imaging processes; specialised data acquisition systems; specific traffic monitoring systems; analogue electronics designs; cost analyses and technical appraisal.

### **Street Lighting Design**

Road and freeway lighting designs including intersections and interchanges, tunnel lighting, electrical wiring design and associated laboratory testing services.

### **Traffic Signing Design**

Design of traffic signs and signing and delineation schemes.

### **Bicyclist Planning and Design**

User studies, data acquisition, facilities planning and design, implementation strategies, action programs, safety audits, route mapping services, bicycle security.

### **Freight and Freight Vehicle Operations**

New vehicle assessments, new freight operations, efficiency in freight and vehicle operations, data acquisition, research of intermodal and overseas operations.

### **Road Planning Investigations**

Investigations either associated with major projects or road improvement studies and including the identification of constraints, development of concepts and preparation of planning reports.

### **Highway Corridor Strategy Studies**

Investigations generally associated with state highway corridors and including the identification of constraints to develop the management actions and development plans proposed to achieve the intended long term function and performance of the highway.

### **Transport Modelling Studies**

Modelling of future transport demand in both rural and urban area. Generally involving road based traffic but could include modelling of public transport demand and influence on the road network.

### **Strategic Transport/Land Use Planning Studies**

Investigations generally associated with Victoria's future needs based on various land use and transport systems scenarios.

### **Economic Analysis/Evaluation**

To generally assess the micro or macro economic benefits of road improvements options.

### **Environment Effects Statements**

Undertake the preparation of Environment Effects Statements either as the managing consultant or as a contributor to the development of an Environment Effects Statement.



**Contacts:**

General Manager – Traffic and Road Use Management ph: 9854 2600

- traffic engineering and traffic management assignments and prequalification requirements

General Manager – Road System Management ph: 9854 2015

- transport modelling and network/corridor strategies

General Manager – Road Safety ph: 9854 2700

- road safety audits

Manager Planning Investigations ph 9854 2020

- project planning studies

Manager Information Services ph 9854 1844

- traffic data collection and traffic information