



Assessing the Feasibility of a National Road Classification

Report to ICSM on National Road Classification Developments

October 2006 - Version 2.0

Executive Summary

The Intergovernmental Committee of Surveying & Mapping (ICSM) formed the Roads Working Group (RWG) arising from Resolution R05/05/01 in May 2005. The Working Group was established to promote and develop a nationally consistent approach to the classification of roads and associated infrastructure information. At this initial meeting the Terms of Reference were discussed, refined and finalised. A major objective was to:

Develop and promote a nationally consistent classification and attribution scheme for the representation of roads and associated infrastructure.

Irrespective of the type of road hierarchy being developed, it is important to emphasise that the process is not an exact or precise science. In principle, there is a diversity of ways of defining and classifying street and road types, and no single variable will ever be sufficient to completely describe a class of roads².

This paper represents the initial research phase towards a national road classification. Its purpose is to investigate the feasibility of developing a new nationally consistent road classification hierarchy; its objective is to provide recommendations to improve the existing national road classifications to better meet the requirements of expected future clients.

An investigation was undertaken into current road classification hierarchies applied by mapping and road traffic authorities, throughout Australia and internationally. Each of these classification hierarchies was reviewed to identify their positive and negative attributes, in an attempt to distil and qualify how best to develop an Australian national classification hierarchy.

The research, undertaken into classifications applied both nationally and internationally, highlighted that no single classification appears to be perfectly applicable. Rather, they all exhibit certain flaws and beneficial elements with respect to fundamental classification characteristics.

This research also indicated that the PSMA classification has, above all other existing Australian road classifications, the potential to be applied as the national model. However, the research did identify several considerations that could improve the PSMA model, that warrant further investigation. These led to the following recommendations:

It is also worth noting that this report represents the initial research phase towards a national road classification and investigates the feasibility of developing a new nationally consistent road classification hierarchy and process. Furthermore, none of the recommendations contained in this report advise for the 'adoption' of a particular approach at this stage. The recommendations are activities that could potentially improve the utility and usefulness of the current PSMA classification for national applications, and therefore warrant further investigation.

The recommendations of this feasibility study, in no particular order, are:

Recommendation 1: *To further investigate the utility and practicality of a rural/urban segregation of the PSMA road classification hierarchy, through discussion with relevant road transport & traffic authorities.*

Recommendation 2: *To refine the existing PSMA Road classification to enable better differentiation of local and State roads through liaison with relevant government representatives.*

Recommendation 3: *That additional variables of traffic volume, design speed, travel distance, route numbering, population measures and structural considerations, be investigated for possible inclusion as additional determinants of road classification type, either within the classification itself or in additional guidelines or decision trees.*

Recommendation 4: *To engage road traffic and transport authorities to investigate the feasibility of the periodic supply of coordinated higher order roads network classifications from road transport and traffic authorities.*

Recommendation 5: *To develop additional guidelines that contain decision-tree diagrams, supplementary instructions and examples that aid in the interpretation of road classification.*

Recommendation 6: *To consult with National Parks, State Forests and Indigenous Lands authorities to gauge their requirements for attribution of lower order roads for possible inclusion into a national classification, or in a separate attribute field in such a classification.*

Recommendation 7: *To adopt a cooperative approach between all levels of government (to agree) to implement a mutually acceptable national road classification system.*