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PARLIAMENTARY TRAVELSAFE COMMITTEE

REPORT ON

LOCAL AREA TRAFFIC MANAGEMENT

Report No. 12
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APPENDIX A - Newspaper Advertisement calling for Submissions
APPENDIX B - Submissions Received
APPENDIX C - Witnesses at Public Hearings
Local Area Traffic Management schemes, while very much in demand to solve residents' problems and fears are, at best, a mixed blessing.

It is far more desirable, and good economic logic, to plan in advance for efficient traffic management, than to have to correct mistakes later. This is clearly the case now with the modern planning methods and technology available.

Most Australian cities and major towns were laid out without any knowledge of today's motorised traffic and thousands of problems must be solved by some form of traffic management. However, no adequate excuse can be found for failure, today, to provide an adequate road hierarchy plan to prevent traffic problems from destroying residential amenity, commercial stability and economic management of urban areas.

A road hierarchy, once it has been decided upon and the proper consultation has been carried out, must have the force of law to prevent pressure from both sides, development interests and residential "NIMBY"s, alike, from destroying its entity. This will also prevent councils, subject to development pressure, from being less than objective in attempts to secure development at any cost.

Many Councils are reluctant to provide LATMs, which are very expensive, in the funds required, the time involved in consultation, and the divisiness, even after the construction has taken place.

The Committee saw examples of situations where improvement to the major roads negated the need for expensive treatment of local streets and this should be the first option considered. However, there are many situations where there is no alternative to construction of LATM devices, in one of their many forms.

Evidence was given that LATM construction in Queensland can be more costly than elsewhere because of the enhanced standard of drainage necessitated by tropical rainfall.

There was also an obvious need for flexibility in design to suit a given area, and where a Council has sufficient experts, that flexibility has been successful. However, there is a need for the Queensland Department of Transport to set a standard and to encourage statewide discussion, as it has been doing, in recent times.

Most speed limits below the norm will be ignored by many drivers unless there is a built environment to reinforce the message and enforcement to impose it.

The Committee, again, found evidence that the standard residential speed limit on truly residential streets should be 50 km/h. A differential speed limit between major roads and residential streets would reduce the need and demand for LATMs by a considerable and measurable margin.

Len Ardill, MLA
Chairperson
INTRODUCTION

PURPOSE

1 The purpose of this report is to broadly consider the objectives, problems and benefits of Local Area Traffic Management (LATM); and to make recommendations which will enhance the effective use and implementation of LATM.

SCOPE

2 The Travelsafe Committee determined the parameters of this inquiry. In doing this, the Committee resolved to limit its investigations to the aims, impacts and outcomes of LATM. The Committee will not be commenting on the merits of specific LATM schemes or devices.

3 This report is based on information gathered by the Committee from formal public hearings; from written submissions; from published literature relevant to the topic; from inspections conducted by the Committee during the inquiry; and from discussions with road safety authorities.

COMMITTEE BACKGROUND

4 The Travelsafe Committee of the 47th Parliament was appointed by the Legislative Assembly on 12 November 1992 to inquire into, report upon, and make recommendations in relation to all aspects of road safety in Queensland.

5 In appointing the Committee the Legislative Assembly determined the Committee's terms of reference to be:

(a) to monitor, investigate and report on the causes of road crashes in Queensland, and issues of road safety; and

(b) to review and report on countermeasures aimed at reducing deaths, injuries, and the social and economic cost to the community arising from road crashes or inappropriate road user behaviour.

6 The Committee considered an investigation into LATM to be within its terms of reference.

NORMAL INQUIRY PROCESS

7 Travelsafe Committee Members strongly believe that one of the Committee's prime roles is to be a mechanism through which members of the public can contribute to the development of road safety countermeasures. The inquiry and consultation process adopted by the Committee consists of:

(a) announcing the inquiry and calling for public submissions through advertisements;
(b) consulting available research which is relevant to the topic of the inquiry;

(c) conducting public hearings in Brisbane and regional centres of Queensland;

(d) conducting inspections in Queensland and other States;

(e) collating all information gathered through this process and producing a report, with recommendations, for presentation to Parliament.

LATM INQUIRY PROCESS

8 The Committee's inquiry into LATM was commenced by the Travelsafe Committee of the 46th Parliament in August 1992. The inquiry was suspended as a result of the 1992 State Election. The Travelsafe Committee of the 47th Parliament resolved to conclude any unfinished inquiries of the previous Committee.

9 Upon re-establishment after the 1992 State Election, the Travelsafe Committee received two urgent references. Consequently, the inquiry into LATM was further delayed until an unfinished inquiry into Pedestrian and Cyclist Safety and an inquiry into the first of the references were completed.

10 Advertisements announcing the LATM inquiry and calling for submissions were placed in major newspapers on 22 and 23 August 1992. A copy of this advertisement is shown in Appendix A. The closing date for submissions was 21 September 1992, however, late submissions were accepted and considered. The names of organisations and individuals who provided submissions are listed in Appendix B.

11 Public hearings were held in regional centres of Queensland in 1993 as follows: Gold Coast 22 March 1993, Toowoomba 23 March 1993, and Rockhampton 29 April 1993.

12 A public hearing was also held in Brisbane on 24 March 1993. Witnesses who appeared at all LATM public hearings are listed in Appendix C.

RESPONSIBILITY OF MINISTERS

13 This report makes recommendations for the Government to implement. The resolution which re-established the Travelsafe Committee in November 1992 requires the responsible Minister or Ministers to respond to a Committee report. Specifically the resolution states:

"that where a report of the Committee recommends that a particular action be taken by the Government with respect to a matter, the appropriate Minister of the Crown shall, within a period of not more than six months after the tabling of the report in the Legislative Assembly, table a written report in the Legislative Assembly as to the action (if any) taken or proposed to be taken by the Government with respect to the recommendations of the Committee. If the Legislative Assembly is not sitting at the expiration of the six month period, the report is to be tabled at the next sitting of the Legislative Assembly."
STRUCTURE OF THIS REPORT

In dealing with Local Area Traffic Management, this report will present:

(a) general background information

(b) discussion on specific issues which arose during the inquiry.
GENERAL ISSUES IN LATM

LATM DEFINED

15 Local Area Traffic Management (LATM) can mean different things to different people. In Australia, LATM is usually seen as a traffic calming tool and comprises a traffic management scheme which seeks to reduce vehicle speeds and traffic volume in residential streets. The Brisbane City Council have a Residential Street Management program which has the same aims as LATM. However, the council's term highlights the distinction between managing traffic on residential streets as opposed to non-residential streets.

16 Brindle (evidence, 24.3.93, p.98) described LATM as "... simply one of the tools of traffic calming, and traffic calming is an outcome which we wish to achieve". He also identified three levels of traffic calming (evidence, 24.3.93, p.97).

17 Level 1 traffic calming refers to the results of actions to restrain traffic and lessen traffic impacts at the local level. Traffic volumes, network capacity, and levels of service are not an issue.

18 Level 2 traffic calming refers to the results of actions to restrain traffic and lessen traffic impacts on major traffic routes such as district or sub-arterial roads. Traffic volumes, network capacity, and levels of service are or may become an issue.

19 Level 3 traffic calming refers to the results of actions at a broader or macro level to lessen traffic levels and impacts citywide. This level raised issues about urban transport policies and implies radical change in traffic and travel behaviour.

20 Brindle (evidence, 24.3.93, p.98) also refers to a framework, the Darwin Matrix, for classifying traffic calming measures. This matrix considers both the scope and type of traffic calming measures.

21 Table 1 below shows the Darwin Matrix and Table 2 is the same matrix with some current traffic calming practices and ideas shown in each section.

TABLE 1

<table>
<thead>
<tr>
<th>TYPE OF MEASURE</th>
<th>PHYSICAL/ENVIRONMENTAL (&quot;TECHNIQUE&quot;)</th>
<th>SOCIAL/CULTURAL (&quot;ETHOS&quot;)</th>
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<tr>
<td>Local (street or neighbourhood)</td>
<td>Level I traffic calming techniques</td>
<td>Level I social change</td>
</tr>
<tr>
<td>Intermediate (zone, traffic corridor, regional road)</td>
<td>Level II traffic calming techniques</td>
<td>Level II social change</td>
</tr>
<tr>
<td>City-wide</td>
<td>Level III traffic calming techniques</td>
<td>Level III social change</td>
</tr>
</tbody>
</table>
### TABLE 2

<table>
<thead>
<tr>
<th>SCOPE OF MEASURE</th>
<th>PHYSICAL/ENVIRONMENTAL (“TECHNIQUE”)</th>
<th>SOCIAL/CULTURAL (“ETHOS”)</th>
</tr>
</thead>
</table>
| **Local** (street or neighbourhood) | LATM/RSM  
Speed control device  
"Green streets" program  
Most reported speed and accident physical countermeasures | Neighbourhood Speed Watch  
VicRoads' Alternatives to LATM study  
Community action  
Attitudinal change |
| **Intermediate** (zone, traffic corridor, regional road) | SATM (Sydney)  
Environmentally-adapted through roads (Denmark)  
Shares zones, lower-speed zones  
Pedestrianised shopping precincts  
Corridors (eg Westerman's Type II road)  
Road pricing (Precinct)  
Parking policies | Voluntary behaviour change, mode choice, speed |
| **City-wide** | Travel Demand Management  
Transport System Management  
Total system measures (fares policy, city-wide road pricing)  
Manipulation of urban form and structure  
Parking Policies | Cultural change  
Loss of choice (eg energy constraints, significant drop in living standard)  
Population decline  
Futurology |

(NOTE: Footnotes in the manual are not reproduced here)

22 Brindle (evidence, 24.3.93, p.98) pointed out that movement to the bottom right corner of the matrix would require major cultural change, and major changes to urban form and structure.

23 For the purpose of this inquiry and report, LATM is defined as a traffic management scheme utilising traffic engineering devices and practices which reduce traffic speeds and volumes in residential streets. However, the Committee understands that LATM at this level still has implications beyond the areas in which physical devices are installed.

### GOALS OF LATM

24 The primary goals of LATM are to reduce traffic speeds, traffic volume, or both.

25 Each LATM scheme may concentrate on one or both of these and be more specific in the
Local Area Traffic Management

General Issues in LATM

types and numbers of vehicles or accidents it aims to reduce. Residents usually determine what it is they want the LATM scheme to achieve. In this way, the residents are then able to evaluate (at least informally) the success and/or failure of the scheme. More formal evaluations are also necessary so that the perceptions of residents can be compared to outcomes measured in technical terms.

However, LATM is sometimes perceived as reducing the mobility of some sectors of the community. It is very important that any LATM scheme does not reduce or prevent mobility and is not seen to be doing so. By its nature, LATM may alter the transport mode, route or speed BUT it should not remove the ability to move around, especially if implemented in accordance with the residents' wishes and an understanding of the surrounding traffic function. A thorough consultative LATM process will help ensure this does not happen.

THE LATM PROCESS

The need for LATM is usually identified by residents. The Brisbane City Council (evidence, 24.3.93, p.112) stated that at present they operate in reactive mode with respect to carrying out LATM (or Residential Street Management). Limited resources prevents a more pro-active approach.

Brindle (evidence, 24.3.93, p.96) believes there are two main issues which affect LATM:

(a) the relative strengths of local groups, residents, and organisations in negotiations with each other over LATM design, placement, and impacts (community politics usually involving higher level politics as well);

(b) the design and selection of LATM treatments which may not solve the original problem and/or create new ones — perception is a factor here.

Brindle (evidence, 24.3.93, p.96) further stated that the way in which these issues are handled seems to determine the success of LATM schemes. Another very important factor to consider is public perception. As Evanson (evidence, 24.3.93, p.112) stated, if the public perceives a problem, there is a problem. The difficult part is identifying what the problem is and whether it is treatable in a cost-effective manner.

The wider consultation process involved in identifying both the problem and appropriate treatments is time-consuming and complex. For example, the Brisbane City Council (evidence, 24.3.93, p.112) stated it often takes 20-30 weeks to complete the consultation, planning, design, and implementation necessary for each LATM scheme. However, given the central role which residents play in the LATM process, it is a process vital to the success of the LATM scheme.
ROADS AND STREETS — AN IMPORTANT DISTINCTION

31 The Committee heard evidence stating that roads and streets are very different in function. Roads are generally considered to have a traffic carrying function whilst streets have a residential access function. The primary function of roads is to move a large volume of traffic safely and quickly. If they fulfil this function effectively, less through traffic will use residential streets.

32 The primary function of streets is to provide access to residential properties. Consequently, streets should carry predominantly local traffic and should be designed for safety and amenity. However, when arterial roads are not able to cope with traffic demand, motorists will use local streets to avoid congested areas and rejoin the major road system once the bottleneck has been avoided.

33 This distinction is fundamental to the success, either perceived or real, of an LATM scheme. The Austroads "Guide to Traffic Engineering Practice — Local Area Traffic Management" (1988, p.33) states:

"The application of a LATM scheme presupposes that there is community agreement on one fundamental point: that the streets in which these actions are to be taken are different in nature and purpose from other roads where traffic passes without such constraints.

In terms of goals, as discussed in this Guide (Section 2.3), roads can be distinguished by whether or not 'the improvement of living and environmental conditions' acts as a principal determinant of traffic management actions on them. LATM clearly does not apply to roads on which the improvement or protection of traffic efficiency is accepted as the principal determinant. Thus, LATM implies the existence of a road classification comprising at least two categories:

- roads which exist to carry traffic reasonably efficiently, on which LATM is inappropriate (ie 'arterial roads')
- roads on which living and environmental conditions are more important, and on which LATM may be considered (ie 'local streets')."

34 Similarly, the Main Roads Department of Western Australia (1990, p.6) makes the distinction between roads and streets, and incorporates the concept of a local area or local precinct:

"Local streets are roads on which people live rather than traffic routes (and for this reason they are often called streets rather than roads). They ideally should serve only the needs of residents living within a defined residential area or neighbourhood, an area that is usually bordered by major traffic routes or other natural or man-made barriers. This area is often referred to as a local area or local precinct, and it is this area which is usually described as the study area for a LATM study."
BENEFITS OF LATM

Safety

35 In general terms, LATM is considered to provide significant safety benefits to vulnerable or unprotected road-users such as pedestrians and cyclists, particularly the elderly and children in both groups. These benefits are brought about by reduced traffic speed and volume resulting from LATM.

36 Many studies have reported on the relationship between reduced speed and a reduction in accident numbers and severity. This Committee has discussed this issue in previous reports (Travelsafe Reports 9 and 11). A reduced traffic speed in residential streets will enhance the survivability of pedestrians and cyclists hit by motor vehicles and greatly increase the chances of avoiding an accident in the first place.

37 Austroads (1988, p.2) noted that accident rates in local areas appeared to be much higher than on arterial roads. Furthermore, the young and the old were most at risk and least able to take preventative action. The publication also points to research that shows environmental improvement schemes (area-wide approach) which aimed to reduce traffic volumes and/or speeds "often resulted in a reduction of accidents" (1988, p.2). An evaluation of a LATM scheme in Enfield (South Australia) found the number of injury accidents and right angle accidents were reduced after implementation of the LATM scheme in that area (Taylor, 1994). Although admitting to not having any hard evidence, Evanson (evidence, 24.3.93, p.113) stated that accident rates do drop in areas which have had LATM schemes implemented. Similarly, he was not aware of significant rises in accident rates on bordering arterial roads.

38 Brindle (evidence, 24.3.93, p.101) told the Committee that the overwhelming weight of evidence and opinion is that measures which significantly reduce speed do improve local safety without resulting in increased accidents elsewhere in the road network. He added that well designed street changes result in amenity, liveability and community benefits. However, he did warn that because of poor planning and design, specific schemes may not produce these results. Poor monitoring and evaluation of LATM schemes was also given as a problem.

39 On balance, it would seem that LATM schemes should and do significantly enhance safety in local streets. If this is the case, why aren't they implemented more readily and given more attention by road authorities? In the Committee's view, the principal reasons for this are the complex nature of LATM planning, design and implementation; the time-consuming nature of the process; the expectations and perceptions of residents; and limited funds.

Economic

40 Brindle (evidence, 24.3.93, p.104) told the Committee that he had not seen any reported study which found that costs (of LATM) exceeded benefits over any foreseeable period. Furthermore, the Committee believes the cost-effectiveness of individual schemes is greatly affected by the thoroughness of the planning, design and implementation process; by the capacity of surrounding roads to absorb increased traffic; and by the effect on accident types, numbers, and severity.
41 The Logan City Council (submission, p.5) does not consider retro-fit LATM to be either effective or cost-efficient in improving driver behaviour and recommend the use of speed cameras to enforce lower speed limits in residential streets. The council's experience has been that the irresponsible speeding driver remains after an LATM scheme has been implemented, treating individual devices as a challenge, rather than as a deterrent. Importantly, residents' do not perceive any change in traffic volume or speed.

42 Conversely, the Brisbane City Council witnesses (evidence, 24.3.93, p.111) stated that LATM can greatly assist in reducing costs of accidents. The difficulty for local authorities is that the benefits accrue to the community as a whole and do not result in additional local authority revenue which can be used to offset the implementation costs.

43 With regard to Logan City Council's call for speed cameras to combat excessive speed in residential streets, the Committee accepts that speed cameras would undoubtedly be cost-effective. However, the Committee believes speed cameras to be part of a larger issue of speed management on ALL types of roads and streets, not just residential streets. The Queensland Department of Transport is currently developing a speed management strategy which will build upon previous Travelsafe Committee recommendations.

**Amenity**

44 There is little doubt that properly planned, designed, and implemented LATM schemes improve the general amenity of a local area. It is possible that property values will rise as a result of these sorts of schemes. However, the LATM schemes which incorporate street beautification into the overall scheme are generally very expensive. Costs of up to $500,000 per square kilometre were given for LATM schemes which are fully constructed, well-landscaped, and properly drained. Yet, low-cost schemes may still be effective in reducing traffic speed and/or volume.

45 Committee members inspected several LATM schemes in Brisbane during the inquiry and noted how the more expensive schemes were generally those which also considerably enhanced the overall amenity of the street. Play areas, vegetation, pavement colour and type, and quality of materials used, all contributed to a less harsh and more livable street environment.

**PROBLEMS ASSOCIATED WITH LATM**

46 Early in the investigation the Committee noted that LATM schemes will not, and do not, result in all residents being satisfied. Brindle (evidence, 24.3.93, p.96) described this problem as unlikely to always be a win/win situation. This was because LATM intrinsically tries to make the motorist bear the extra marginal costs of slower travel. However, without LATM, residents and other road users then must bear the costs of decreased safety associated with vehicles travelling at higher speeds.

47 Fairlie and Taylor (1990) concluded that LATM often failed to resolve the dominant types of accidents occurring on local streets and may introduce new types of accidents. This emphasises the need for careful planning and good quality in design of treatments, as the major benefit of LATM is the potential to reduce accidents in local streets. Despite this, LATM schemes and devices are often used as remedial measures for a variety of problems.
besides traffic safety (Fairlie and Taylor 1990).

48 The Committee also noted that problems will arise when local authorities implement LATM schemes in an unco-ordinated, unplanned or piecemeal manner. It is now widely held that LATM is most effective when implemented on an area-wide basis. Only treating a couple of streets will normally result in the identified traffic or accident problems simply shifting to nearby streets. Whole areas must be treated so that through traffic uses the appropriate routes.

49 Another problem for LATM is the difficulty in classifying those streets which have both a traffic carrying and access function. Where the functions are not clear, it is very difficult to implement LATM treatments which consider both functions and yet still achieve a reduction in traffic speed and/or volume. This type of problem is more common when a road hierarchy is imposed on an existing area rather than being identified prior to development occurring.

50 In their submission, the Logan City Council pointed to several problems with LATM. In general, the submission stated that LATM in existing streets was controversial amongst residents, with overall nuisance to residents increased, not decreased. Costs associated with LATM were also cited as a problem with funds used to implement LATM, perhaps better utilised elsewhere in the community. Finally, the submission said that most retro-fit LATM had limited effectiveness and that it attracted the disrespect of irresponsible drivers.

WHAT IS EFFECTIVE LATM?

51 The simple answer to this question is that effective LATM is that which achieves its original objectives. These objectives may have been to reduce traffic speed; to reduce traffic volume; to reduce traffic type (e.g., trucks); to enhance play areas for children; and/or to improve the general amenity of the neighbourhood. Brindle (1992) identified three major issues which are crucial for effective LATM:

(a) LATM must be "problem and plan" oriented rather than "device" oriented;

(b) the engineering and visual aspects must be right; and

(c) LATM schemes must be implemented with an understanding of the way people respond to changes in their home "territory" and an openness of two-way communication about these changes.

52 Most witnesses at hearings and many submissions stated the need for a clearly defined road hierarchy as a pre-requisite for effective LATM. The presence of a road hierarchy facilitates the selection of treatments appropriate for the purpose and function of a particular road or street.

53 In considering what constitutes effective LATM, it is imperative to look at cost-effectiveness. This is an aspect of LATM which is often debated. Some people see LATM as cost-effective and others see it as a waste of money.

54 Brindle (evidence, 24.3.93, p.104) believes the benefits to the community of LATM exceed the costs, but that authorities lack a mechanism of recouping those benefits. Brindle (1992,
p.37) also concluded that the Australian experience with LATM "appears to be confirming the effectiveness of most traffic calming devices in lowering vehicle speeds and reducing accidents". Fairlie and Taylor (1990, p.163) state that the most commonly used evaluation techniques have limitations when applied to road safety countermeasures. As previously stated, the Logan City Council (submission, p.2) believe LATM is not cost-effective with resources better used elsewhere in the community.

55 Underwood (1993, p.128) concluded that carefully planned, designed, and implemented neighbourhood traffic management schemes are effective in controlling traffic speed, discouraging through traffic, minimising accidents, and improving general amenity in local streets. Hawley (1992, p.11) states that her experiences with LATM have led her to conclude that LATM schemes do serve the public correctly provided a consultative process is adopted. Hawley also recognised the problems of specific device placement and detailed design of devices.

56 On balance, the Committee believes that LATM is and can be effective as long as thorough planning and consultation processes are observed. Careful design of individual devices and their strategic placement will also help ensure that LATM schemes will be effective in reducing accidents in general; reducing specific accident types; reducing traffic speed; and reducing traffic volume.
Throughout the inquiry, the Committee heard and received a considerable body of evidence stating that a road hierarchy is an essential pre-requisite for effective LATM. Eppell (evidence, 24.3.93, p.107) stated this very clearly, adding that the importance of the road hierarchy to the amenity of the local area, and to the needs of longer distance travel, must be understood prior to implementing a LATM scheme. In their submission (p.1), the Redcliffe City Council state that the first step in implementing a LATM scheme is to ensure the arterial road system is well defined, recognisable, and effective.

In the Committee's view, a clearly defined road hierarchy is necessary in order to determine which roads should be treated and what form those treatments should take. Ideally, a road hierarchy is established before roads are constructed so that subsequent development occurs in accordance with the road hierarchy. LATM schemes can be planned and designed to comply with the functions of roads and streets as defined in the road hierarchy. These functions must be recognised and supported so that "rat-running" does not become viable for motorists and adversely impact residential street safety.

However, the Committee recognises that some roads and streets have both a traffic carrying function and a residential access function. Brindle (evidence, 24.3.93, p.96) believes that appropriate traffic management techniques do exist for these types of streets but that traffic engineers in Australia are not yet very expert in treating these dual function roads and streets.

Eppell (evidence, 24.3.93, p.107) noted that problems always arise when a road hierarchy is imposed on an existing area. Taylor (evidence, 24.3.93, p.111) said the road hierarchy in Brisbane is poorly defined at this stage and that by retro-fitting devices, the Brisbane City Council was trying to establish through roads and local streets.

Irrespective of the difficulties inherent in imposing a road hierarchy upon an established road network, it is the Committee's view that establishing a road hierarchy is fundamental to the success of any LATM scheme.

The research on LATM clearly supports the establishment of a road hierarchy prior to implementing LATM schemes. Underwood (1993, p.125) said that "a neighbourhood traffic management scheme should proceed only after roads in the area have been functionally classified and neighbourhood precincts have been identified". Austroads (1988, p.3) say an agreed road hierarchy or road amenity classification is essential for agreement on the functions of roads. Proctor (1991, p.566) noted that traffic safety experts in Britain and northern Europe believe the preliminary stage of treatment of "area-wide" problems involves defining a road hierarchy. O'Brien (1993, p.129) says the adoption of a road hierarchy is fundamental to the LATM process. He also notes that it may be politically difficult to agree upon a road hierarchy.
A major issue noted by the Committee, is the tendency of local authorities to deviate from established road hierarchies in order to attract development. In other words, lowering or altering standards to satisfy the demands of the developer. Other local authorities have not fully defined a road hierarchy. In the Committee's view, this highlights the need for local authorities to be required to refer their road hierarchy plan to a higher authority for ratification and concurrence with future enhancements to the road network. This would also provide authoritative support for local authorities to insist on an efficient road layout from developers. In the Committee's view, the Queensland Department of Transport should be the road authority to which local authority road hierarchy plans are referred, so as to ensure the road hierarchy is appropriate and clearly defined.

Local authorities would remain responsible for enforcing the road hierarchy, knowing they have the support of the Queensland Department of Transport. The Committee has also formed the view that legislative authority should be given to local authorities so that road safety, and more broadly, an efficient road transport system is not compromised by deviations from the road hierarchy. Consequently, alterations to the road hierarchy should be resisted. However, if alterations are necessary, they should be agreed to by the local authority and the Queensland Department of Transport.

The Committee is also concerned that prospective land buyers are not always informed of future plans for changing the function of a road. Residents may not know or understand that wide roads in a new area will one day be major traffic carrying routes. This information, plus information on the current function of a road or street in which a person buys property, should be readily available. For example, purchasers should be told if a road or street is a residential street, collector road or street, distributor road or major road. They should also be told what the classification means in terms of estimated traffic speed and volume. In the Committee's view, where a road hierarchy has been developed and adopted, this information should be provided through routine property searches.

The Committee is convinced that the establishment of a road hierarchy is essential to the success of any LATM scheme. Furthermore, an effective road hierarchy, supported by a realistic speed hierarchy, will reduce the demand for LATM. Obviously, roads whose function is to move a large volume of traffic must be allowed to perform this function to their maximum potential. Adherence to the road hierarchy will reduce the possibility of inappropriate volume and/or speed control LATM devices being installed on traffic carrying roads so that these roads remain efficient routes for through traffic. Some appropriate speed and volume control devices may, however, still be required on some existing residential streets and on some dual function roads and streets.
Recommendation 1

The Committee recommends that local authorities be required to define a road hierarchy within their local authority boundary before subdivision and urban development occurs or is envisaged. The Queensland Department of Transport should encourage local authorities to use Queensland Department of Transport resources, if necessary, to define their road hierarchy. The Queensland Department of Transport is to be advised of the road hierarchy once it is established by the local authority. The establishment of a road hierarchy prior to subdivision and development would greatly reduce the future need for LATM.

Ministerial responsibility:
- Minister for Transport

Recommendation 2

The Committee recommends that the Queensland Department of Transport be authorised to ensure the road hierarchy effectively and safely meets the needs of the community and all types of road users on all types of roads.

Ministerial responsibility:
- Minister for Transport

Recommendation 3

The Committee recommends that local authorities have appropriate legislative authority which requires them to enforce the road hierarchy once it is defined and agreed to by the local authority and the Queensland Department of Transport. This will ensure that access requirements for all new development are in accordance with the road hierarchy.

Ministerial responsibility:
- Minister for Housing, Local Government and Planning
- Minister for Transport
**Recommendation 4**

*The Committee recommends that, where a road hierarchy is defined and adopted, prospective land and property buyers be advised of the current and future function and purpose of roads and streets through routine property searches conducted prior to purchase of the property.*

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ROLE OF THE QUEENSLAND DEPARTMENT OF TRANSPORT

67 Until recently, roads for which the Queensland Department of Transport are responsible were called declared roads, with local authorities responsible for undeclared roads. With the passing of the Transport Infrastructure Bill 1993, declared roads will now be called State-controlled roads. Under this new Act, the Queensland Department of Transport will have a broader role of developing a framework for the strategic management of transport in Queensland. In his second reading speech on 18 November 1993 (Queensland Legislative Assembly, Debates, p.5979) the Minister for Transport referred to the bill as providing:

"... a basis by which control can be exercised directly by the department over the most significant roads, and influence exerted over the total road network"

68 The explanatory note with the Bill stated:

"... the Bill is intended to establish a regime under which the roads of national and State significance can be effectively planned and effectively managed, and influence exerted over the total road network, including local government roads, in a way which contributes to overall transport efficiency."

69 Also in his second reading speech, the Minister (Queensland Legislative Assembly, Debates, 18.11.93, p.5980) referred to projects under roads implementation programs as also including projects on local government roads, "... if they are sensible alternatives to spending even more money on particular State-controlled roads."

70 The Minister (Queensland Legislative Assembly, Debates, 18.11.93, p.5980) also spoke of the dual roles of the Director-General of the Queensland Department of Transport:

"The Transport Infrastructure Bill recognises the dual roles of the director-general to both directly control a set of roads that are of national and State significance and to exercise influence over the total road network. Both roles are important to ensure that the key roads are managed consistently and well, and the influencing role is appropriate in that it ensures that local governments retain their autonomy in relation to roads, but do so with the confidence that the Department of Transport is endeavouring to optimise the spending of the scarce public funds available for roads."

71 These statements point to a changing role for the Queensland Department of Transport with regard to their level of control and influence over local roads. The Committee's view is that the road network must be strategically managed by a single organisation. This organisation must obviously be the Queensland Department of Transport. Furthermore, evidence heard during this inquiry strongly suggests that the Queensland Department of Transport must take a greater interest in the use and application of LATM as a valuable tool for achieving the strategic aims of the road network.

72 In evidence, (24.3.93) officers from the Queensland Department of Transport agreed that LATM can achieve traffic volume and speed reductions, and reduce accidents in residential streets. The Committee believes that if the department is to strategically manage the road
network, a formal assessment or analysis of the impact of LATM, particularly on major roads, must be undertaken as part of the LATM planning process.

73 In the Committee's opinion, all LATM schemes have an impact on State-controlled roads. The degree of impact will obviously vary and must be assessed on a case by case basis. The Queensland Department of Transport must be more pro-active in assessing this impact on State-controlled roads and take appropriate action. Just as the Minister stated that projects on local government roads might be better use of limited financial resources, so too might the upgrading or modification of State-controlled roads reduce or eliminate the need for LATM. Put another way, the Queensland Department of Transport must determine whether an LATM scheme is addressing a symptom of a larger problem, or the problem itself. One "symptom" is rat-running at unacceptable speeds with "the problem" being arterial roads not able to cope with demand. If this is the case, perhaps money spent on upgrading arterial roads is a better use of financial resources.

74 Despite these views on a changing role for the Queensland Department of Transport, the Committee recognises the efforts of the department to improve the understanding of LATM. The department has held workshops to facilitate an exchange of information on LATM. These workshops were attended by local government and private engineers. The workshops also served to clarify the role of the Queensland Department of Transport in LATM.

75 The department has also been working towards developing a set of guidelines for local authorities to use when implementing LATM. These guidelines are important and must be produced as a matter of urgency. They should cover both planning and design aspects associated with LATM. A number of examples of guidelines exist, any of which would be a good basis for the Queensland Department of Transport to use in developing their own. Western Australia have produced comprehensive LATM planning guidelines; the Federal Office of Road Safety also have guidelines (Report CR126) and a publication from the Danish Road Directorate, "An Improved Traffic Environment — A Catalogue of Ideas" contains much data and illustrations which are relevant to Australia (ARRB Briefing, Issue 57, Oct 1993). However, whilst the planning and design guidelines developed by the department should be adhered to, local authority engineers must retain the ability to modify designs and to be innovative. This is necessary to provide tailored solutions which address specific problems in the local environment.

76 Successful LATM schemes will encourage through traffic to use major roads which in turn must be capable of coping with extra volume. Consequently, the Queensland Department of Transport must play a greater role in road network management and must take a greater interest in all LATM schemes. Unless the department does this, residential streets with or without LATM devices, will eventually become routes for through traffic, and not just used for local traffic.
Recommendation 5

The Committee recommends that the Queensland Department of Transport develop comprehensive LATM Planning Guidelines for distribution to all local authorities. LATM Design Guidelines should also be developed by the Queensland Department of Transport with local authorities retaining authority over final design of whole LATM schemes and individual LATM devices. Both planning and design guidelines should provide for all types of road users, in particular, pedestrians, cyclists, emergency service providers, public transport operators and providers of council services.

Ministerial responsibility:
· Minister for Transport

Recommendation 6

The Committee recommends that the Queensland Department of Transport assess all proposed LATM schemes to determine their impact on the overall road network.

Ministerial responsibility:
· Minister for Transport

Recommendation 7

The Committee recommends that major roads surrounding a proposed LATM scheme, whether the major roads are Queensland Department of Transport or local authority controlled, be assessed for upgrading or modification which might avoid the need for the LATM scheme.

Ministerial responsibility:
· Minister for Transport
· Minister for Housing, Local Government and Planning
The issues of planning LATM schemes and optimum placement of the physical devices, generated considerable comment. Probably the most heard comment was that LATM schemes should be implemented across a whole area not just one or two streets. A whole area usually refers to a contiguous area of residential development which is bounded by arterial roads (or some physical barrier) used by the majority of local traffic to enter and leave the area.

The purpose for this approach is to minimise the chance of accidents being shifted from one street to the next and to create a precinct where lower speeds and/or less volume is expected and accepted. The desired outcome of such an approach is to direct through traffic to the major road system and subsequently reduce the incidence of "rat-running" through residential streets.

The Committee also heard much evidence which blamed problems in existing streets on poor planning of subdivisions. In their submission (p.1) the Logan City Council supported this view by stating: "There is no doubt that the current traffic problems in existing streets are due to poor past planning of subdivisions". The obvious solution to this, albeit a long term solution, is to ensure that modern urban planning and road design principles and practices result in new subdivisions with LATM in-built into the road system. In other words, the roads will be designed and constructed in such a way so as to control traffic speed and volume without the need to retro-fit control devices. Narrower streets, shorter streets, reduced sight distances, T-junctions, cul-de-sacs, and properly constructed roundabouts are just some of the ways in which this can be achieved.

The Logan City Council (submission, p.1) stated that "new subdivisions must be planned to minimise the impact of vehicles and to attempt to control irresponsible drivers". The submission also emphasised that adoption of traffic control measures at the new subdivision stage does not necessarily result in more costly subdivisions. The council strongly supported implementing the principles of the Australian Model Code for Residential Development (AMCORD) and the draft Queensland Streets Manual to achieve this aim.

In evidence (24.3.93, p.113), Taylor said that the Brisbane City Council is adopting new planning and design principles for new subdivisions. Roads are not conducive to high speed, median breaks and traffic signals are more carefully sited during arterial road upgrades and greater care is being taken to ensure through traffic does not have to use residential streets as traffic routes.

Austroads (1988, p.3) says the road safety and local amenity benefits resulting from careful urban planning, with respect to road hierarchy and street patterns, are well recognised. Furthermore, major roads must be sufficiently well designed to be able to cope with future demand.

In the Committee's view, this approach complements the need to establish a clearly defined road hierarchy and ensure development is consistent with that hierarchy. The approach would also serve to reduce the future demand for LATM and avoid using LATM "to retro-fit the model principles of street design into existing street fabric" (Taylor, evidence, 24.3.93,
In a broader sense, effective urban planning and road network planning will facilitate better land use practices and provide for environmental and social benefits associated with an efficient transport system. It may even move urban areas toward network-wide traffic calming. Whilst these issues are beyond managing traffic in local areas, they are inextricably linked to what LATM usually sets out to achieve. That is, quieter residential streets, vehicles travelling at lower and safer speeds, and an absence of through traffic.

Various categories of road users are sometimes discriminated against in the planning, design, and implementation of LATM schemes. That is not to say that they are not considered during one or all of these processes. However, the final product is often targeted at vehicular traffic with the needs of other road users overlooked or considered less important. For example, cyclists often complain about LATM devices endangering them because of "squeeze points" at the device. Public transport has difficulty negotiating some devices which subsequently affects their service delivery.

It is essential that LATM schemes provide for all road users including public transport, emergency vehicles, motorists, cyclists, and pedestrians. Designs for specific LATM devices do exist which can benefit these road users and still achieve its aim of speed or volume reduction, which in itself benefits vulnerable road users. However, as cyclists and pedestrians are the groups most likely to benefit from LATM, it is important for their needs to be incorporated in device design.

Whilst the Committee accept that better planning and design of road networks in new developments will not necessarily eliminate the future need for LATM, it firmly believes that a reduction in the future demand for LATM must begin now by adopting effective urban and road network planning principles. Furthermore, careful planning and design will result in LATM schemes and devices which do consider the needs of all road users. Similarly, careful placement of the physical devices, with the needs of all road users in mind, will contribute to the safety of the vulnerable road users who dominate residential streets: pedestrians and cyclists.

**Recommendation 8**

The Committee recommends that local authorities adhere to modern urban planning principles which incorporate appropriate traffic management and traffic calming facilities into the road design and construction for new development. Over time, this will reduce the demand for retrofit LATM schemes and devices.

**Ministerial responsibility:**
- Minister for Housing, Local Government and Planning
88 The Committee heard mixed evidence about the quality and amount of consultation undertaken in planning and designing LATM schemes. Some witnesses, from affected groups such as public transport and emergency service providers, said they were consulted after the implementation of a LATM scheme and others said they were not consulted at all. In contrast, the Committee heard evidence of good consultation in Rockhampton and Toowoomba between the City Councils, Queensland Department of Transport and other parties affected by LATM.

89 The Committee recognises that effective consultation involving all stakeholders is time-consuming and difficult. It is also essential. Consultation about LATM schemes is especially difficult due to the diversity of stakeholders and their competing interests. The success of LATM schemes and their level of acceptance by the residents often depends on how well consultation with the stakeholders is conducted. Austroads (1988, p. 5) provides an illustration on the central role of the community in the LATM consultation process. This role is depicted in Figure 1 below.

FIGURE 1

90 The LATM guidelines developed by the Main Roads Department of Western Australia also stress the importance of effective widespread consultation (p.19-21). Whilst emphasising community consultation, the guidelines also remind LATM practitioners of the necessity to consult with other government and public authorities.
91 It must be recognised that LATM can divide local communities. Quality of life, safety and amenity are significant issues in LATM. Effective community and organisational consultation can considerably enhance the understanding of these issues. However, a consultation model which is too prescriptive may reduce the flexibility required to address different concerns in different neighbourhoods.

92 Evanson (evidence, 24.3.93, p.112) told the Committee of the Brisbane City Council process for assessing and implementing LATM schemes. It includes extensive consultation as an essential component of what appears to be a difficult, time-consuming process. As previously stated, a time-frame of 20-30 weeks was given as the normal time it takes for any one Brisbane City Council LATM scheme to move from planning through to completion.

93 One of the problems associated with LATM is that the residents who initially requested treatments, often end up not liking the final product. Whilst effective consultation will probably never achieve complete acceptance, it will greatly contribute to residents accepting ownership of the implemented scheme. Integral to this concept, is the necessity for road authorities to be completely honest about all aspects of the LATM scheme. Residents must be openly told about the purpose and function of roads in the proposed scheme area; why it is important that these roads be allowed to fulfil their function; and the impact of altering this function by retro-fitting LATM devices. Importantly, road authorities must resist the temptation to restrict traffic flow and/or volume on roads whose main function is to carry traffic, unless it is part of a city-wide traffic calming strategy.

94 From a broader perspective, the needs of the whole community need to be ascertained so that the whole community has the potential to benefit from LATM.

95 The Committee believes that consultation with all stakeholders is essential to the success of LATM. Such consultation must feature throughout the entire process and should be conducted in an honest and open manner. In this way, the needs of all road users are more likely to be reflected in the final scheme. Benefits can also accrue to the wider community. The Queensland Department of Transport should provide a model for the consultation process in LATM guidelines recommended by this Committee for them to develop.

**Recommendation 9**

The Committee recommends that all parties affected by a LATM scheme be openly and honestly consulted throughout the entire LATM planning and design process. Such consultation must inform affected parties of the function and purpose of all roads in the proposed LATM area and of the impact of altering that function and purpose through the use of retro-fitted LATM devices. A model for the consultation process and checklist of items to be covered should be included in the LATM Planning Guidelines to be developed by the Queensland Department of Transport.

**Ministerial responsibility:**
- Minister for Transport
96 The demand for LATM is usually generated by a desire to reduce traffic speed and/or traffic volume in residential streets. The Committee heard many suggestions on how to achieve effective reductions in traffic speed. These suggestions ranged from speed cameras to changes in speed limits.

97 It is now generally accepted that signage alone will not achieve full compliance with speed limits or significant changes in travelling speeds. Higher levels of enforcement or the use of speed control devices must support the signs. However, one of the conclusions drawn (Taylor 1993) from the 40 km/h speed limit trial in Unley was that a lower speed limit need only be supported by low level sustainable enforcement programs. Alternatively, physical devices such as roundabouts, speed bumps and raised platforms may achieve larger reductions in travelling speeds. Unfortunately, it is not always possible to install roundabouts, and speed bumps tend to be unpopular with residents. As previously stated, speed control through original design is one of the most effective and cost-efficient ways of achieving lower travelling speeds in residential streets.

98 Previous Committee reports have recommended changes to the system of lower speed limits around schools. The Committee continues to be concerned about the level of safety on roads around schools. In evidence (23.3.93, p.64) Mr Taylor from the Toowoomba City Council stated his council believed that speed limit signs alone will not reduce vehicle speeds around schools. The council has been both criticised and praised for their determination to complement speed limit signs around schools with physical devices such as median strips or central splitter islands. Because of their overriding concern for child safety and for doing a thorough job, they have not had sufficient funds to treat all schools in their area. Consequently, they called for a greater State Government financial commitment to the Schoolsafe Program. In the Committee's view, those schools which are bounded by residential streets must have physical devices installed at appropriate places in the school zone to achieve real reductions in speeds and to make this initiative more successful. The Committee urges the Government to significantly increase funding to the Schoolsafe Program so that roads around schools are made safer.

99 Lower speeds in residential streets would also be facilitated by the development of an appropriate speed hierarchy. A road hierarchy and a speed hierarchy go hand in hand and together they can be effective in reducing traffic speed and volume in residential streets. It is well known that accident numbers and accident severity are reduced as travelling speeds fall. The introduction of a general urban speed limit of 50 km/h as part of an appropriate speed hierarchy would contribute to this and have only a marginal effect on journey times.

100 Results from the Unley trial led Taylor (1993) to conclude that there were "strong arguments in favour of reduced speed limits in local streets, possibly via the mechanism of a lower general urban speed limit with arterial roads and some collector roads zoned at higher speeds". He went on to say that appropriate speed limits need to be assessed in terms of the function of the road or street and its role in the larger network. Taylor, from the Brisbane City Council, (evidence, 24.3.93, p.115) supported a reduced general urban limit and, if enforced, believed this would contribute to an alleviation of demand for LATM. The application of a lower general urban speed limit would also aid the creation of a clear speed
differential between residential streets (50 km/h), collectors and distributors (60 km/h) and major roads (70 km/h and above) and, in the Committee's view, largely eliminate the demand for expensive reconstruction. Naturally, 40 km/h (or less) speed limit areas could still be implemented, but only with the support of physical devices to again clearly indicate a changed environment.

101 Notably, this Committee has previously recommended the introduction of a general urban limit of 50 km/h. This was aimed at reducing speeds in local streets with some major roads having speed limit increases. The Committee's view is unchanged. A lower general urban limit, combined with clear speed differentials through the application of a rational speed hierarchy, is fundamental for achieving lower speeds and volume in residential streets.

102 The Logan City Council (evidence, 24.3.93, p.82) strongly supported the introduction of speed cameras to control speed in residential streets. Witnesses representing the council stated that sites for speed cameras would be decided by their Traffic Advisory Committee consisting of elected council members, council officers, police officers and Queensland Department of Transport officers. In its submission (p.1), the Gold Coast City Council said it believed speed cameras can be an effective deterrent to the problem of speeding vehicles in residential streets.

103 Similarly, the Albert Shire Council provided a submission strongly supporting the use of speed cameras to control speeding in residential streets. The council have developed a program, Right Speed Saves Lives (RSSL), which incorporates the use of speed cameras to deter speeding. The RSSL program would be similar to the Red Light Camera program in that permanent boxes would be installed at various locations which may or may not have speed cameras in them. In the council's view, adopting this program would avoid spending money on LATM schemes which are too expensive to be implemented on an area-wide basis.

104 Interestingly, the Social Development Committee (1991, p.105) were convinced that "speed cameras do have the potential to reduce excessive speeding and hence the number and severity of crashes and injuries". To date, indications are that speed cameras have been an effective tool in achieving such reductions and in changing motorists behaviour and attitude to speeding.

105 The Committee's view is that speed cameras could well be very effective in reducing the number and severity of road crashes and associated injuries. However, they should only be considered after all current speed limits, as they apply to all roads, are reviewed. Speed limits which are realistic for the conditions, and accepted by motorists as being realistic, must be applied before the introduction of speed cameras can be considered. Important aspects in gaining community acceptance of speed cameras would be to involve a cross-section of people and organisations in site selections (which would be predominantly based on the incidence of speed-related accidents) and to channel all revenue raised from speed cameras back into road safety. Furthermore, speed cameras are a speed control tool which have application for the whole road network, not just residential streets.
106 Speed control in residential streets is crucial to enhanced safety for residents and for the effectiveness of LATM. The establishment of a network-wide speed hierarchy will help facilitate this with physical devices necessary to achieve further reductions in travelling speed. The use of physical speed control devices is considered essential around schools which are bounded by residential streets.

**Recommendation 10**

The Committee recommends that a clear speed differential between residential streets (50 km/h), collector and distributor roads (60 km/h) and major roads (70 km/h and above) be established through the development and application of a speed hierarchy.

**Ministerial responsibility:**
- Minister for Transport

**Recommendation 11**

The Committee recommends that a general urban speed limit of 50 km/h be rigidly enforced in residential streets. This speed limit would be part of a network-wide speed hierarchy with a clear speed differential existing for roads whose functions are different. Combined with other measures, this would reduce the demand for LATM.

**Ministerial responsibility:**
- Minister for Transport
- Minister for Police

**Recommendation 12**

The Committee recommends that LATM schemes which have speed limits lower than the general urban speed limit, have physical speed control devices to support the lower speed limit.

**Ministerial responsibility:**
- Minister for Transport

**Recommendation 13**

The Committee recommends that lower speed limits around those schools which are bounded by local streets, be supported by the installation of physical speed control devices.

**Ministerial responsibility:**
- Minister for Transport
The Committee acknowledges that new development can affect traffic speed and volume in existing, contiguous areas. Quite often, safety in existing residential streets can be adversely affected by increased traffic generated by new development.

Whilst the adoption of modern planning and design principles will minimise the effect of traffic speed and volume in the residential streets of the new development, safety and amenity in existing streets may suffer. Residents in existing streets adjacent to the new development, may find that increased traffic from new development will contribute to or create an accident or road safety problem they did not previously have. As a consequence, they may have to bear the costs, in safety terms, of increased traffic.

This situation should be carefully monitored by the local authority which approves the new development. If necessary, the local authority should implement traffic management facilities which seek to remedy any detrimental impact on the safety and amenity in those existing streets.

Consequently, the Committee has formed the view, that where safety and amenity in existing streets are adversely impacted by traffic from new contiguous development, the developer of the new area/s should be required to contribute to the cost of implementing measures to address the problems. These measures may include a LATM scheme.

Recommendation 14

The Committee recommends that local authorities be empowered to require land developers to contribute to the cost of implementing a LATM scheme in existing streets, where changes in traffic speed and volume resulting from a new development, adversely affect safety and amenity in those existing streets.

Ministerial responsibility:
- Minister for Housing, Local Government and Planning
111 As previously stated, a clearly defined road hierarchy is an essential pre-requisite for effective LATM schemes. An appropriate speed hierarchy would then establish a clear speed differential between residential streets, collector and distributor roads, and major roads. This would encourage motorists to use designated traffic-carrying routes instead of using alternative routes through residential streets. Consequently, there would be reduced demand for LATM schemes.

112 A considerable volume of anecdotal evidence was heard by the Committee indicating that many drivers "rat-run" to avoid traffic lights and other bottlenecks on major roads. The Committee considers that upgrading major roads to eradicate the source of these bottlenecks, should always be considered as a realistic alternative to LATM schemes. Upgrading does not necessarily mean expensive widening or construction of whole new roads. It also refers to adopting appropriate traffic management techniques and using traffic control devices to improve traffic flow and capacity on major roads. These roads would then become more efficient travel routes for motorists.

113 It is difficult, if not impossible, to point to any one traffic management tool and say it is solely responsible for improvements in traffic flow and capacity. Rather, it is a careful mixture of management techniques and physical devices which achieve significant improvement. The Committee is simply advocating that road authorities seriously consider improved management of traffic on major routes as an alternative to LATM. In the Committee's view, this approach, combined with an absence of artificial barriers which impede traffic flow, could well represent better long-term use of funds.

114 Establishing a major/minor road system; restricting cross access across major roads; better co-ordination of traffic lights; and developing a clear road hierarchy with an appropriate speed hierarchy, are some examples of the type of traffic management techniques which could improve traffic flow on major roads and alleviate demand for LATM.

115 By way of example, Mr Taylor (evidence, 24.3.93, p.116) agreed that a major/minor system of roads introduced into Brisbane in the late 1970s, brought about a major reduction in the number of accidents. Mr Taylor (evidence, 24.3.93, p.116) also stated that the major/minor road system has helped define a road hierarchy.

116 The Committee recognises that improving the traffic flow on major roads will not eliminate through traffic from residential streets. Similarly, the Committee recognises that other traffic management techniques exist which may be effective in improving traffic flow and capacity on major roads. Examples only are provided here. However, the Committee does believe that such an approach represents a more strategic approach to traffic management by seeking to remedy the accepted principal reason why motorists "rat-run" through residential streets; that is, major roads not able to fulfil their primary function of efficiently moving traffic.
Recommendation 15

The Committee recommends that upgrading of major roads through the use of traffic management techniques always be investigated prior to implementing LATM schemes. Such traffic management techniques include, but should not be limited to, the following:

- minor side streets being prevented from providing cross access across major roads through the use of splitter islands and other devices to restrict traffic to left in and left out to and from the local streets;

- facilities for U-turns on major roads with turning lanes to remove vehicles waiting to turn from the main traffic flow;

- better co-ordination of traffic signals in order to improve traffic flow on major roads and reduce the attraction of alternative routes through residential areas;

- upgrading major intersections to alleviate unnecessary delays and improve traffic flow;

- providing for major road traffic to have right of way over all traffic from adjoining minor roads; and

- implementing a major/minor system of roads in urban areas through the control of all intersections by signage or traffic engineering devices and to be compatible with the road hierarchy.

Ministerial responsibility:
- Minister for Transport
- Minister for Housing, Local Government and Planning
CONCLUSIONS

117 The Committee reiterates that the aims of LATM, as generally practised in Australia, are to reduce traffic speed, traffic volume, or both, in residential streets. The intended outcomes are to improve safety and amenity in these streets.

118 In the Committee's view, a clearly defined road hierarchy is an essential pre-requisite to effective LATM and fundamental to the chances of success of individual LATM schemes. Once a local authority defines its road hierarchy, the Queensland Department of Transport should be authorised to ensure it effectively meets the needs of the community and is compatible with the remainder of the road network.

119 The role of the Queensland Department of Transport is changing under legislation introduced into Parliament in 1993. It will now be required to strategically manage the entire road network. A greater involvement in assessing the impact of LATM should be part of this role.

120 Poor past planning of subdivisions is the principal reason behind the current high demand for LATM. It is essential that retro-fit LATM be avoided in the future through the adoption of urban planning and road design principles which incorporate the principles of LATM into the road network of new subdivisions.

121 Central to the successful planning, design, and implementation of LATM schemes, is widespread community consultation. Such consultation must be conducted honestly and openly with affected parties fully informed of all issues. Of particular importance, is the need for residents and other organisations involved in the LATM consultation process to clearly understand the functions of roads and streets as defined in the road hierarchy. Similarly, the impact of altering these functions with retro-fitted devices must be understood.

122 The Committee has long advocated a reduction in the general urban speed limit to 50 km/h. As part of a realistic speed hierarchy for the entire road network, it would be effective in reducing speeds in residential areas. However, physical devices would still be required in some areas. Speed cameras would be effective but only after a review of existing speed limits and the development of an effective speed management strategy. Reviewing the options available to authorities to manage speed and enforce speed limits may well be the topic of a future Travelsafe Committee inquiry.

123 Alternatives to LATM are few in number. Upgrading existing major roads to improve traffic flow is one alternative which deserves closer attention. Expensive upgrading is not always necessary with many traffic engineering techniques available which will improve capacity. The aim should be to make the major roads a viable traffic route.

124 The long-term aim of road authorities should be to eliminate the future demand for LATM. Perhaps total elimination of this demand is not possible. However, better urban planning, better road design, and the establishment of a road hierarchy will go a long way towards achieving this goal.
## SUMMARY OF RECOMMENDATIONS

### ROAD HIERARCHY

**Recommendation 1**

The Committee recommends that local authorities be required to define a road hierarchy within their local authority boundary before subdivision and urban development occurs or is envisaged. The Queensland Department of Transport should encourage local authorities to use Queensland Department of Transport resources, if necessary, to define their road hierarchy. The Queensland Department of Transport is to be advised of the road hierarchy once it is established by the local authority. The establishment of a road hierarchy prior to subdivision and development would greatly reduce the future need for LATM.

**Ministerial responsibility:**
- Minister for Transport

**Recommendation 2**

The Committee recommends that the Queensland Department of Transport be authorised to ensure the road hierarchy effectively and safely meets the needs of the community and all types of road users on all types of roads.

**Ministerial responsibility:**
- Minister for Transport

**Recommendation 3**

The Committee recommends that local authorities have appropriate legislative authority which requires them to enforce the road hierarchy once it is defined and agreed to by the local authority and the Queensland Department of Transport. This will ensure that access requirements for all new development are in accordance with the road hierarchy.

**Ministerial responsibility:**
- Minister for Housing, Local Government and Planning
- Minister for Transport
Recommendation 4

The Committee recommends that, where a road hierarchy is defined and adopted, prospective land and property buyers be advised of the current and future function and purpose of roads and streets through routine property searches conducted prior to purchase of the property.

Ministerial responsibility:
- Minister for Housing, Local Government and Planning
- Minister for Lands

ROLE OF THE QUEENSLAND DEPARTMENT OF TRANSPORT

Recommendation 5

The Committee recommends that the Queensland Department of Transport develop comprehensive LATM Planning Guidelines for distribution to all local authorities. LATM Design Guidelines should also be developed by the Queensland Department of Transport with local authorities retaining authority over final design of whole LATM schemes and individual LATM devices. Both planning and design guidelines should provide for all types of road users, in particular, pedestrians, cyclists, emergency service providers, public transport operators and providers of council services.

Ministerial responsibility:
- Minister for Transport

Recommendation 6

The Committee recommends that the Queensland Department of Transport assess all proposed LATM schemes to determine their impact on the overall road network.

Ministerial responsibility:
- Minister for Transport

Recommendation 7

The Committee recommends that major roads surrounding a proposed LATM scheme, whether the major roads are Queensland Department of Transport or local authority controlled, be assessed for upgrading or modification which might avoid the need for the LATM scheme.

Ministerial responsibility:
- Minister for Transport
- Minister for Housing, Local Government and Planning
### PLANNING

**Recommendation 8**

The Committee recommends that local authorities adhere to modern urban planning principles which incorporate appropriate traffic management and traffic calming facilities into the road design and construction for new development. Over time, this will reduce the demand for retrofit LATM schemes and devices.

**Ministerial responsibility:**
- Minister for Housing, Local Government and Planning

### CONSULTATION

**Recommendation 9**

The Committee recommends that all parties affected by a LATM scheme be openly and honestly consulted throughout the entire LATM planning and design process. Such consultation must inform affected parties of the function and purpose of all roads in the proposed LATM area and of the impact of altering that function and purpose through the use of retro-fitted LATM devices. A model for the consultation process and checklist of items to be covered should be included in the LATM Planning Guidelines to be developed by the Queensland Department of Transport.

**Ministerial responsibility:**
- Minister for Transport

### SPEED LIMITS AND SPEED MANAGEMENT

**Recommendation 10**

The Committee recommends that a clear speed differential between residential streets (50 km/h), collector and distributor roads (60 km/h) and major roads (70 km/h and above) be established through the development and application of a speed hierarchy.

**Ministerial responsibility:**
- Minister for Transport
### Recommendation 11

The Committee recommends that a general urban speed limit of 50 km/h be rigidly enforced in residential streets. This speed limit would be part of a network-wide speed hierarchy with a clear speed differential existing for roads whose functions are different. Combined with other measures, this would reduce the demand for LATM.

**Ministerial responsibility:**
- Minister for Transport
- Minister for Police

### Recommendation 12

The Committee recommends that LATM schemes which have speed limits lower than the general urban speed limit, have physical speed control devices to support the lower speed limit.

**Ministerial responsibility:**
- Minister for Transport

### Recommendation 13

The Committee recommends that lower speed limits around those schools which are bounded by local streets, be supported by the installation of physical speed control devices.

**Ministerial responsibility:**
- Minister for Transport

### IMPACT OF NEW DEVELOPMENT

### Recommendation 14

The Committee recommends that local authorities be empowered to require land developers to contribute to the cost of implementing a LATM scheme in existing streets, where changes in traffic speed and volume resulting from a new development, adversely affect safety and amenity in those existing streets.

**Ministerial responsibility:**
- Minister for Housing, Local Government and Planning
Recommendation 15

The Committee recommends that upgrading of major roads through the use of traffic management techniques always be investigated prior to implementing LATM schemes. Such traffic management techniques include, but should not be limited to, the following:

- minor side streets being prevented from providing cross access across major roads through the use of splitter islands and other devices to restrict traffic to left in and left out to and from the local streets;

- facilities for U-turns on major roads with turning lanes to remove vehicles waiting to turn from the main traffic flow;

- better co-ordination of traffic signals in order to improve traffic flow on major roads and reduce the attraction of alternative routes through residential areas;

- upgrading major intersections to alleviate unnecessary delays and improve traffic flow;

- providing for major road traffic to have right of way over all traffic from adjoining minor roads; and

- implementing a major/minor system of roads in urban areas through the control of all intersections by signage or traffic engineering devices and to be compatible with the road hierarchy.

Ministerial responsibility:
- Minister for Transport
- Minister for Housing, Local Government and Planning
REFERENCES


Main Roads Department of Western Australia 1990, Guidelines for Local Area Traffic Management, February 1990.


Queensland, Legislative Assembly 1993, Debates, November 18, pp.979-5980.


Western Sydney Regional Organisation of Councils Ltd 1993, ’Towards Traffic Calming: A
Australian Institute of Traffic Planning and Management 1992, `40 km/h Speed Limit', Seminar Proceedings, ARRB, Victoria.


The Parliamentary Travelsafe Committee

The Travelsafe Committee is an all-party Parliamentary Committee appointed by the Legislative Assembly of Queensland with the following terms of reference:

• to monitor, investigate and report on the causes of road crashes in Queensland, and issues of road safety; and
• to review and report on countermeasures aimed at reducing deaths, injuries and the social and economic costs to the community arising from road crashes or inappropriate road user behaviour.

The Travelsafe Committee is commencing an inquiry into Local Area Traffic Management (LATM). Widespread and effective use of LATM treatments can enhance the safety of all road users, particularly in residential areas. The issues of most concern to the Committee are the costs of LATM; the need to develop low-cost, yet effective, LATM treatments; the installation of LATM treatments so that whole areas are treated rather than single streets; the role of road network planning and design in eliminating the need for physical LATM structures; and the need to identify any factors which may impede the implementation of LATM.

Consequently, the Committee is calling for written submissions from members of the public and interested parties to assist in its inquiry.

Submissions should be forwarded to:

The Research Director
Travelsafe Committee
Parliament House
Cnr George and Alice Streets
BRISBANE Q 4000

Closing date for submissions is Monday 21 September 1992.

Enquiries should be made to:

Telephone (07) 226 7669 or Facsimile (07) 210 0128

All submissions will be treated as public documents unless the Committee determines that confidentiality is required.

Persons making submissions to the Committee may be called upon to give evidence before the Committee, regarding their submission.

Len Ardill MLA, Chairman
21 August 1992
## APPENDIX B - SUBMISSIONS RECEIVED

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Organization</th>
<th>Address</th>
<th>City, State, Postcode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr G R Kellar</td>
<td>Town Clerk</td>
<td>Logan City Council</td>
<td>PO Box 226</td>
<td>WOODRIDGE, QLD 4114</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td>Mr Michael Yeates</td>
<td>Architect</td>
<td>Addison Yeates Pty Ltd</td>
<td>PO Box 227</td>
<td>RED HILL, QLD 4059</td>
</tr>
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<tr>
<td>Mr I R Johnston</td>
<td>Executive Director</td>
<td>Australian Road Research Board Ltd</td>
<td>PO Box 156</td>
<td>NUNAWADING, VIC 3131</td>
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</tr>
<tr>
<td>W A Saxvik</td>
<td>Shire Clerk</td>
<td>Isisford Shire Council</td>
<td>PO Box 4</td>
<td>ISISFORD, QLD 4731</td>
</tr>
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<td></td>
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</tr>
<tr>
<td>A D Graham</td>
<td>Acting Shire Clerk</td>
<td>Paroo Shire Council</td>
<td>PO Box 75</td>
<td>CUNNAMULLA, QLD 4490</td>
</tr>
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<td></td>
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</tr>
<tr>
<td>Mr Gordon K Malcolm</td>
<td>Shire Clerk</td>
<td>Herberton Shire Council</td>
<td>PO Box 41</td>
<td>HERBERTON, QLD 4872</td>
</tr>
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<tr>
<td>Mrs I Power</td>
<td></td>
<td></td>
<td>127 Pallas Street</td>
<td>MARYBOROUGH, QLD 4650</td>
</tr>
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<td></td>
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<tr>
<td>Mr B J Smyth</td>
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</tbody>
</table>
N R Mapes  
Shire Clerk  
Bauhinia Shire Council  
PO Box 19  
SPRINGSURE QLD 4722

J R Poulteny  
27 Essex Road  
INDOOROOPILLY QLD 4068

T J Pailthorpe  
Shire Clerk  
Winton Shire Council  
PO Box 288  
WINTON QLD 4735  
(2 submissions received)

Mr John Compton  
44 McGregor Street  
ROCKHAMPTON QLD 4700

V A T Eppell  
Eppell Consulting  
7 Browning Street  
SOUTH BRISBANE QLD 4101

C N Weber  
Shire Clerk  
Mundubbera Shire Council  
PO Box 6  
MUNDUBBERA QLD 4626

C W R Kirby  
Shire Clerk  
Eidsvold Shire Council  
PO Box 51  
EIDSVOLD QLD 4627

Mr Stephen Milgate  
Australian Doctors' Fund Ltd  
Level 24  
270 Pitt Street  
SYDNEY NSW 2000

Mr Michael J Kerry  
Manager  
Department of Development & Planning  
Brisbane City Council  
GPO Box 1434  
BRISBANE QLD 4001

T R Moore  
General Manager/Shire Clerk  
Albert Shire Council  
PO Box 172  
NERANG QLD 4211

Mr D G Stevenson  
Director-General  
Queensland Department of Transport  
GPO Box 1549  
BRISBANE QLD 4001
## APPENDIX C - WITNESSES WHO PRESENTED EVIDENCE AT PUBLIC HEARINGS

### GOLD COAST - MONDAY 22 MARCH 1993

<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Title</th>
<th>Organization</th>
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</thead>
<tbody>
<tr>
<td>Mr Frits Olyslagers</td>
<td>Gold Coast City Bus</td>
<td></td>
</tr>
<tr>
<td>Mr Ray Trenaman</td>
<td>District Superintendent</td>
<td></td>
</tr>
<tr>
<td>Mr Greg Reaburn</td>
<td>Officer-in-Charge, Southport</td>
<td></td>
</tr>
<tr>
<td>Mr Barry McGinnity</td>
<td>Chief Engineer</td>
<td></td>
</tr>
<tr>
<td>Mr Ian Morcombe</td>
<td>Traffic Engineer</td>
<td></td>
</tr>
<tr>
<td>Mr Dick Lam</td>
<td>Manager, Technical Services</td>
<td></td>
</tr>
<tr>
<td>Sgt Errol Dellitt</td>
<td>Senior Sgt in charge of Traffic (located at Coomera Police Station)</td>
<td>Queensland Police Service</td>
</tr>
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</table>

### TOOWOOMBA - TUESDAY 23 MARCH 1993

<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Mr Gil Heaton</td>
<td>District Manager</td>
<td></td>
</tr>
<tr>
<td>Mr Greg Gall</td>
<td>RACQ</td>
<td></td>
</tr>
<tr>
<td>Mr Peter Taylor</td>
<td>City Engineer</td>
<td></td>
</tr>
<tr>
<td>Mr Doug Welshe</td>
<td>Executive Engineer, Design &amp; Survey</td>
<td></td>
</tr>
<tr>
<td>Sgt Carney and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sgt Sullivan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terry Kehoe</td>
<td>Consulting Engineer</td>
<td></td>
</tr>
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</table>

### BRISBANE - WEDNESDAY 24 MARCH 1993

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Mr Terry Mallon</td>
<td>Deputy City Engineer</td>
<td></td>
</tr>
<tr>
<td>Ald George Swanston</td>
<td>Chair, Works &amp; Services Committee</td>
<td></td>
</tr>
<tr>
<td>Ald Les Dawson</td>
<td>Chair, Traffic Technical Committee</td>
<td></td>
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</table>
Advisory Committee

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Mr Greg Lester</td>
<td>Development Engineer</td>
<td>Logan City Council</td>
</tr>
<tr>
<td>Mr Ray Brindle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr Tony Eppell</td>
<td>Consulting Engineer</td>
<td>Eppell Consulting</td>
</tr>
<tr>
<td>Mr Bob Taylor</td>
<td>Director of Traffic Planning</td>
<td>Brisbane City Council</td>
</tr>
<tr>
<td>Mr Jim Evanson</td>
<td>Principle Engineer for Traffic Planning</td>
<td>Brisbane City Council</td>
</tr>
<tr>
<td>Mr Michael Yeates</td>
<td></td>
<td>Addison Yeates Architects</td>
</tr>
<tr>
<td>Mr Alan Meares</td>
<td>Director, Road Safety Division</td>
<td>Queensland Dept of Transport</td>
</tr>
<tr>
<td>Mr Douglas Lee</td>
<td>Manager, Traffic &amp; Neighbourhood Safety</td>
<td>Queensland Dept of Transport</td>
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<tr>
<td>Mr Neil Horrocks</td>
<td>Executive Engineer</td>
<td>Queensland Dept of Transport</td>
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**ROCKHAMPTON - THURSDAY 29 APRIL 1993**

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Mr John Hill</td>
<td>Acting Regional Director, Central Queensland</td>
<td>Queensland Dept of Transport</td>
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<tr>
<td>Mr Brian Luttrell</td>
<td>District Manager, Rockhampton</td>
<td>Queensland Dept of Transport</td>
</tr>
<tr>
<td>Mr Lance Christiansen</td>
<td>Manager (Technical Services)</td>
<td>Queensland Dept of Transport</td>
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<tr>
<td>Mr Graham Wease</td>
<td>Manager</td>
<td>RACQ</td>
</tr>
<tr>
<td>Mr Ken Carpenter</td>
<td>City Engineer</td>
<td>Rockhampton City Council</td>
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<tr>
<td>Mr Geoff Johnstone</td>
<td>Officer-in-Charge</td>
<td>Queensland Ambulance Service</td>
</tr>
<tr>
<td>Mr Brian Beitz</td>
<td>District Operation Co-ordinator</td>
<td>Queensland Ambulance Service</td>
</tr>
<tr>
<td>Sgt S G Walker</td>
<td></td>
<td>Queensland Police Service</td>
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<tr>
<td>Snr Constable Steve</td>
<td></td>
<td>Queensland Police Service</td>
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<tr>
<td></td>
<td>Duncan</td>
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<tr>
<td>Mr Chris Head</td>
<td></td>
<td>Rockhampton Bicycle Planning Group</td>
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# REPORTS OF THE TRAVELSAFE COMMITTEE

<table>
<thead>
<tr>
<th>Report No.</th>
<th>Title</th>
<th>Date Presented to Parliament</th>
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<tbody>
<tr>
<td>2.</td>
<td>The need for some form of compulsory periodic inspections of passenger vehicles as an effective means of reducing road crashes and the severity of associated injuries, AND The need to improve the standards of motor vehicle repairs as a means of improving vehicle and road safety</td>
<td>4 December 1990</td>
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<td>3.</td>
<td>Road Safety Education AND Traffic Law Enforcement</td>
<td>4 September 1991</td>
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<td>5.</td>
<td>Bicycle Safety</td>
<td>28 November 1991</td>
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<td>6.</td>
<td>Achieving High Levels of Compliance with Road Safety Laws - a review of road user behaviour modification</td>
<td>18 March 1992</td>
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<td>7.</td>
<td>Road Environment and Traffic Engineering</td>
<td>28 April 1992</td>
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<td>10.</td>
<td>Annual Report for the period 1 July 1992 to 30 June 1993</td>
<td>18 November 1993</td>
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<tr>
<td>11.</td>
<td>The Safety and Economic Implications of Permitting Standees on Urban and Non-Urban Bus Services</td>
<td>18 November 1993</td>
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