TRAFFIC AUTHORITY of New South Wales

ANNUAL REPORT 1979-80

ANNUAL REPORT 1979-1980

CONTENTS

TRAFFIC AUTHORITY OF NEW SOUTH WALES

Chairman, J.W. Davies I.S.O.

The Hon. P.F. Cox, M.P.,
Minister for Transport,
SYDNEY 2000

Dear Mr. Cox,

I have pleasure in submitting to you the Annual Report of the Traffic Authority of New South Wales for the year ended 30th June, 1980.

The report discusses developments in traffic management techniques as well as schemes which are being researched by the Authority and statistical data relating to traffic facilities provided.

Information about the Authority's administrative organisation, its objectives and policies is also included, as are comparative financial statements for the year and the previous year.

My predecessor Mr. W. Butler retired on 1st July, 1980 having occupied the position of Chairman of the Authority since its inception in 1976. On behalf of the members of the Authority, I would like to place on record their appreciation of having had the assistance of such an able and well versed chairman.

Yours faithfully,

Chairman

Members of the Traffic Authority

Official Members

W.R. BUTLER, F.C.I.T.,
Commissioner for Motor Transport, N.S.W.,
Chairman.

J.T. LEES, Q.P.M.,
Commissioner of Police, N.S.W.

B.J. SEXTON, B.E., F.I.E. AUST., F.C.I.T.,
Commissioner for Main Roads, N.S.W.

R.B. SMYTH, B.Sc. (ECON.) HONS. (LONDON),
Dip. T.P. (Auckland) M.R.A.P.I., M.I.E AUST,
M.I.C.E. (London).
Chairman
N.S.W. Planning and Environment Commission.

A.S. REIHER, B.C.E., F.I.E. Aust., F.A.I.M.,
F.C.I.T.,
Chief Commissioner, Public Transport
Commission, N.S.W.
(Up to 19th March, 1980).

Appointed Members

A. BRIGER, A.M.,
Alderman, Council of the City of Sydney.

R.T. GOSLING, M.B.E.,
Nominee of the Local Government and Shires
Associations of N.S.W.

H.F. QUINN, Secretary, Sydney Sub-Branch,
Transport Workers' Union of Australia.

G.F. MESSITER, B. Sc. (Tech), M.Eng.Sc.,
M.I.E. Aust.,
Assistant Under Secretary (Policy & Planning)
Ministry of Transport, N.S.W.

Mr. R.B. Smyth replaced Mr. J.J. Wickham,
F.I.M.A., F.T.C.S., as member of the Authority
with effect from 4th February, 1980 consequent
upon Mr. Wickham's appointment as Administrator,
Blue Mountains City Council.

Mr. R.T. Gosling was appointed to the Authority
as from 31st August, 1979 in place of
Mr. H.G. Golland on the nomination of the
Local Government and Shires Associations.

Principal Officers of the Secretariat

DIRECTOR	H.L. CAMKIN, B.E., Dip. T. & C.P., M.I.E. Aust., F.C.I.T.
ASSISTANT DIRECTORS	B.J. HAZEL. B.E., M.S.C.E., M.I.E. Aust., M.I.T.E.
	J.R. BLISS, B.E., M. ENG. SC., Dip. Env. Stud. M.I.E. Aust. (on secondment from the Department of Main Roads).
SECRETARY	R.C. deMONTFORT.

Functions and Responsibilities

Traffic Authority Act, 1976

The Traffic Authority of New South Wales is constituted as a statutory corporation representing the Crown. Amendment of the Traffic Authority Act increased the membership of the Authority from six to nine as from 9th July, 1979. There are five official members and four members appointed by the Minister for Transport, six of whom shall form a quorum.

Under the Traffic Authority Act, the Authority has, subject to the control and direction of the Minister for Transport, the responsibility of:

- reviewing traffic arrangements in the State and formulating or adopting plans and proposals for the improvement of those arrangements;
- establishing general standards and principles in connection with the design and provision of traffic control facilities, and priorities for carrying out activities, works or services that are items of approved expenditure;
- promoting traffic safety;
- co-ordinating the activities of public authorities when they are directly involved in matters connected with the Authority's functions.

The Traffic Authority's responsibilities extend to the promotion of traffic safety measures, the publishing of advice and information and reporting or recommending to the Minister and others on control of traffic, traffic planning, safety, parking, traffic facilities, and related matters. The Traffic Authority may also direct other public authorities to implement its plans, general principles and decisions.

Other Legislation

Motor Traffic Act, 1909 –

confers upon the Traffic Authority responsibility for the administration of the provisions of the Act and its Regulations relating to the regulation and control of traffic, motor vehicles and their drivers upon public streets, the provision of traffic control facilities and the determination of speed limits.

Metropolitan Traffic Act, 1900 –

confers upon the Traffic Authority responsibility for the administration of the Act and its Regulations relating to the control of animal-drawn, pedestrian, bicycle and other non-motorised traffic in the Metropolitan, Newcastle and District and Wollongong Traffic Areas.

Local Government Act, 1919 –

requires the Traffic Authority to determine applications by Councils for consent to the closure of a public road to through traffic or the opening of a road which has been closed. Also, the Chairman of the Traffic Authority, or a person nominated by him, is appointed as a member of a Parking Advisory Committee.

Traffic Safety (Lights and Hoardings) Act, 1951 –

confers on the Traffic Authority responsibility to direct the removal of any light, sign, hoarding, awning or structure which obscures or could be mistaken for any light, sign or device for the controlling of traffic.

Policies and Objectives

The Traffic Authority's general objectives are –

- to promote safety and efficiency in the use of the State's road system, having regard to traffic, social and environmental interests;
- to provide an administrative system for the management of road traffic responsive to community needs, and to changes in social attitudes and values, as well as innovations in technology;
- to continually review the stated role, functions, membership, financial structure and objectives of the Traffic Authority itself to ensure that it keeps pace with future developments in community needs, social attitudes and technology and, as necessary, to recommend appropriate changes either in the legislation or the Authority's administration.

In pursuing these objectives the Traffic Authority has adopted a policy of delegating decision-making on operational details of purely local significance as far as possible to Local Government Authorities and, on those of regional significance, to the Department of Main Roads. It has provided safeguards in the instruments of delegation to ensure maintenance of standards and consistency of application of traffic control facilities. Councils are required to obtain the concurrence of local representatives of the Police Department, so far as safety and enforcement aspects of a proposal are concerned, and of the Department of Main Roads in respect of both safety and traffic operations.

Legislative Constraints Experienced

A degree of constraint on the efficient discharge of the Authority's responsibilities exists inasmuch as –

- The Authority has powers to direct a public authority to implement its plans, or standards or principles established, or decisions made in the course of its normal functions, but there is no provision in the Traffic Authority Act to enable the Authority to enforce such a direction.

  The Authority has not experienced difficulty to the extent that urgent action to make legislative changes is necessary at this time. However, the position is being kept under review.

- The Local Government Act and certain Ordinances still recognise various other Departments, but not the Traffic Authority itself, as "traffic authorities" in respect of matters such as planning schemes and development applications. Thus in development matters, for example, Councils are frequently required to seek the views of several Government Departments and are free to implement or approve proposals which impose additional traffic problems on the Traffic Authority without its having been consulted. Discussions are, however, in hand with the Planning and Environment Commission to ensure that under the provisions of the new Environmental Planning and Assessment Act the Authority is consulted where traffic is likely to be affected by proposed developments.

Organisation and Management

The Minister for Transport

The Traffic Authority is subject to the control and direction of the Minister who has control over the funds expended by or for the Authority, as discussed in the Section, "Finances".

The Traffic Authority

The Traffic Authority's principal function is the determination of policies, priorities, and programmes in respect of traffic management and traffic safety measures.

Proposals in this regard are normally submitted by its committees or member organisations and regular meetings are held to discuss these matters. Eight official meetings were held during the year.

The Traffic Authority has available to it the facilities and officers of its member Departments and other public authorities where necessary. In consequence, it has no need to directly employ a large staff to deal with day to day problems.

To expedite the decision-making necessary for day to day operations throughout the State, the Traffic Authority has delegated much of the responsibility to local representatives who are far more familiar with local problems than are Authority members. Details of such delegations are included in the Section, "Other Instrumentalities".

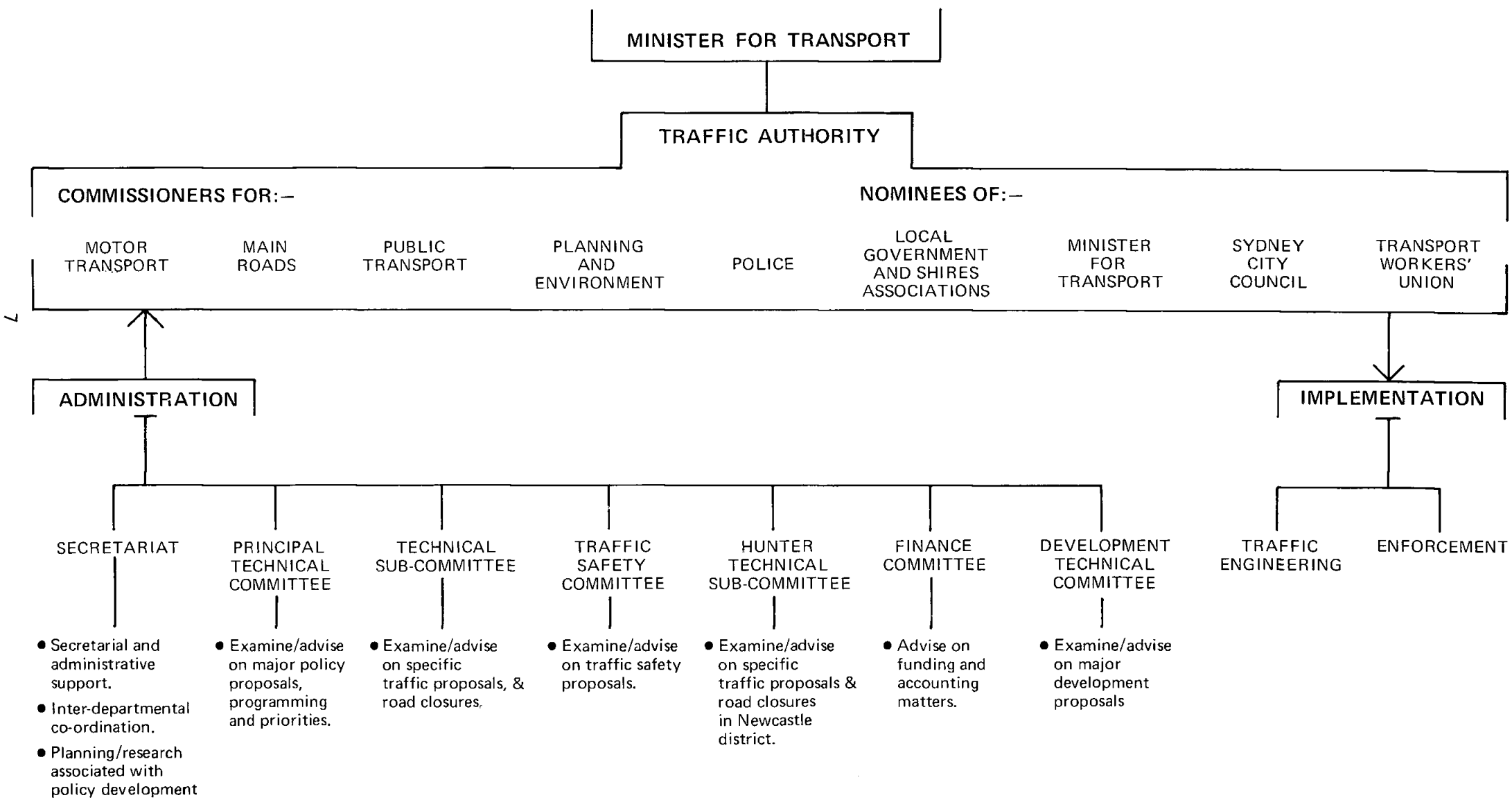
The Secretariat

The Secretariat is provided by the Chairman as a Branch of the Department of Motor Transport and comprises administrative and technical officers with wide experience in traffic planning and administration.

During the year officers of the Secretariat attended conferences and seminars on a range of matters related to the Authority's functions including –

- Chartered Institute of Transport "Fuel for Thought" – (Sydney).
- Society of Automotive Engineers Australasia – Seminar – "Energy Sources in the Nineties" (Sydney).
- ARRB Workshop on "Traffic Management Through Effective Signing" (Melbourne).
- Seminar – Queensland Road Safety Council "Kids use Roads too" (Brisbane).
- University of N.S.W. 1979 Symposium "Energy Tomorrow" (Sydney).
- Transportation Branch of the Sydney Division of the Institution of Engineers, Australia. Seminar – "Managing Traffic At the Local Level" (Newcastle).
- Transportation Conference, 1979 "The Way Ahead – Improving Old or Making New" – (Adelaide).
- Seminar – "Land Transport of Dangerous Goods" (Canberra).
- Annual Conference of the Local Government Engineers Association of N.S.W. – Paper "Planning for Bicycles".
- ARRB Seminar "Measuring Social Behaviour in Road Research" (Melbourne).
- Royal Australian Planning Institute, Inc. Congress – "Land use and beyond – Making better use of Australia's Urban Resources." (Canberra).

ORGANISATIONAL CHART



Committees

Principal Technical Committee

Senior officers nominated by the Departments represented on the Traffic Authority comprise the Principal Technical Committee appointed by the Authority to advise and assist it on major policy matters and corporate planning. The Committee meets regularly and matters discussed during the year included:

- Policy on costs of traffic engineering works.
- Enforcement of Traffic Regulations.
- Motor Traffic Regulations and their simplification.
- Development of a metropolitan parking policy.
- A safer method for left turns of long and articulated vehicles at intersections.
- Giving way to emergency vehicles such as those carrying blood supplies.
- Priority for buses departing from bus stops and bays.
- Priority for buses in residential areas.
- Preferential treatment of taxis where only buses may turn.
- Development for main road frontages in urban areas.
- Pavement markings to designate clearway restrictions.
- Overtaking in the left-hand lane of multi-laned carriageways.
- Symbol only regulatory signs.
- Preferential treatment for commercial vehicles.
- Angle parking for motor cycles.

Technical Sub-Committee

Senior officers nominated by the organisations represented on the Traffic Authority comprise the Technical Sub-Committee appointed by the Authority to advise and assist it in the implementation of major traffic management schemes in particular areas, and in relation to other matters referred to the Sub-Committee. This committee meets regularly and among the matters considered during the year were —

- Road closures — applications submitted by various Councils for consent under the Local Government Act.
- Introduction of particular transit lanes and bus lanes.
- Action plans and redevelopment schemes by Councils.
- Introduction of tidal-flow traffic movements.
- Implementation of preferential resident-parking schemes.
- Provision of grade separation for pedestrians.
- Signposting of light traffic thoroughfares.
- Traffic arrangements associated with opening of the first stage of the North-Western Freeway.

Development Technical Committee

The Development Technical Committee comprises officers of the New South Wales Planning and Environment Commission, the Police Department, Department of Main Roads and the Traffic Authority Secretariat. Its principal function is to advise the Authority in relation to land and building development proposals of a traffic-generating nature. This Committee is serviced by the Planning and Environment Commission and performs substantially the role of that Commission's former Ribbon Development Sub-Committee now disbanded.

Hunter Technical Sub-Committee

The Hunter Technical Sub-Committee comprises representatives based at Hunter Regional offices of the Departments and organisations represented on the Traffic Authority. It advises and assists in the implementation of major traffic management schemes in the Hunter Region. Matters considered by the Committee during the year included:

- Peak-hour clearways.
- Problems caused by "give-way" signs on bus routes.
- Road closures.
- Traffic movement in Newcastle business district.
- Parking of heavy vehicles on streets.
- Consideration of preferential resident-parking schemes for the City of Newcastle.

Finance Committee

A committee of officers comprising the Chief Accountants of the Department of Main Roads and the Department of Motor Transport and the Secretary of the Traffic Authority constitute the Finance Committee appointed by the Authority to advise and assist it in relation to matters concerning the provision of funds for carrying into effect the Authority's objectives and works programmes.

The Finance Committee reported on the Budget estimates for 1979-80 and 1980-81, and oversighted the monthly reviews of expenditure from the Traffic Facilities Fund during the year ended 30th June, 1980.

Traffic Safety Committee

The Committee comprises senior officers of the Police Department, Department of Education, Health Commission, Department of Justice, Traffic Accident Research Unit of the Department of Motor Transport, and the Traffic Authority Secretariat.

This committee plays an important role in the co-ordination of traffic safety responsibilities and initiatives of the Education, Health and Judicial authorities with those of the Transport, Roads and Police administrations traditionally seen as the primary traffic safety organisations. Matters discussed during the year included:

- The Traffic Accident Research Unit Programme.
- Road traffic fatalities in N.S.W. and Victoria.
- Evaluation of random breath test legislation in Victoria.
- Alcohol, drugs and driving.
- Penalties as deterrents to drink driving.
- Inclusion of road safety education in school curriculum.
- Crashes involving utility poles.
- Rehabilitation courses for drivers convicted of drink driving offences.
- Effects of low alcohol beer.
- Breath-alcohol interlock system for fitment to motor vehicles.
- Formation of local safety committees.

Other Instrumentalities

Department of Main Roads

The Department of Main Roads is the Authority's principal operations and construction agency.

The Traffic Authority has delegated to the Commissioner for Main Roads the power to authorise traffic facility devices on any public road within the State, in accordance with the Authority's policies, priorities and programmes. These powers are exercised by the Department's Divisional Engineers located throughout the State.

Details of the traffic facilities installed or maintained by the Department of Main Roads for the Traffic Authority are given in the Section of the report, "Traffic Engineering Works".

Department of Motor Transport

The Traffic Accident Research Unit of the Department of Motor Transport has, since 1969, provided an advisory service on all matters relating to traffic safety-based research both in New South Wales and elsewhere. The Unit's own research covers aspects of human factors, environmental factors and vehicle factors involved in motor vehicle operations and crashes.

The Research Unit's staff, resources and equipment are available to the Traffic Authority as required and details of the Unit's activities and research programmes during the year are included in the Annual Report of the Commissioner for Motor Transport.

Police Department

All decisions on traffic control must have regard to both the need for and the practicality of law enforcement. In this regard the Commissioner of Police has responsibility for the enforcement of traffic laws and regulations relating to decisions taken by the Traffic Authority or its delegates.

Local Government Authorities

The Traffic Authority has delegated to Councils the power to authorise minor traffic facilities on local roads (other than main and secondary roads). It has also delegated powers to Councils to consent to the closure of local roads where this is seen to be in the public interest.

To ensure consistency of standards and treatment throughout the State, the exercise of these powers by Councils is subject to observance of guidelines prepared by the Authority. Additionally, prior to implementing any approval, they are required to obtain the agreement of regional representatives of the Police Department so far as safety and enforcement aspects of a proposal are concerned, and of the Department of Main Roads in respect of both safety and traffic operations. Where public transport services are involved, the guidelines require that consultations take place with the Public Transport Commission (now the State Rail Authority and the Urban Transit Authority) and/or Department of Motor Transport as the case may be.

Local Traffic Committees, comprising representatives of Council, Police and Main Roads, and the Local Members of State Parliament, provide a useful forum for open discussions about traffic matters generally and serve as a means of expediting decision making to resolve or avoid local problems.

Apart from the formal links with other instrumentalities derived from its membership, the Traffic Authority and its administrative staff continued association with a number of standing and 'ad hoc' committees during the course of the year. These included –

- Transport Strategy Advisory Committee (TRANSAC).
- Centennial Park – Moore Park Interdepartmental Committee.
- Standards Association Technical Committees.
- Haymarket Entertainment Centre Liaison Committee.
- Interdepartmental Level Crossing Committee.
- State Bicycle Advisory Committee.
- Trolley Bus Task Force.
- Road Tanker Committee.
- Major Airport Needs of Sydney Study (MANS).
- Outdoor Advertising Review Committee.
- Traffic Noise Sub-Committee.
- Committee on Energy in Land Transport.
- City of Sydney Strategic Planning and Liaison Committee.
- Various Parking Advisory Committees.

Parking Advisory Committees

The Authority is represented on various Parking Advisory Committees, the constitution and functions of which are defined in the Local Government Act. The Traffic Authority Act, 1976, effectively superseded many of the functions of Parking Advisory Committees to the extent that the need for their continued existence has been questioned. The Authority has recommended abolition of the Committees and the transfer of their residual functions to the Authority. Legislative amendments to this end are planned.

In the interim period, in consequence of the Miscellaneous Acts (Planning) Repeal and Amendment Act which removes Planning and Environment Commission representation from the Committees, the Authority has agreed to take over the administrative support function of the Committees previously undertaken by the Commission.

Traffic Management Schemes

Priority to High-Occupancy Vehicles

The Traffic Authority is continuing examination of the benefits and costs to road users from the allocation of road priority to public passenger and other high occupancy vehicles by way of bus lanes and transit lanes.

Bus Lanes

Special bus lanes, as distinct from transit lanes, are provided in selected areas of high density bus operations where generally heavy traffic delays buses and disrupts schedules. They may be provided on either the left kerbside lane or the right kerbside lane (in a one-way street). Only buses, taxi-cabs, private hire cars and motor cycles may travel in bus lanes. Other vehicles may enter a bus lane only when 100 metres before they are about to turn to the left (or right in a one-way street). A new bus lane, eastbound in Miller and Union Streets, Pyrmont and on Pyrmont Bridge was provided in connection with the opening of the first stage of the North-Western Freeway.

Transit Lanes

Transit lanes are designed to provide faster and more reliable public transport for commuters in an endeavour to increase patronage and to reduce the present number and the growth in the number of cars on the already over-taxed main road system in peak hours.

They are provided in preference to bus lanes which, especially over long distances on heavily-loaded arterial roads such as the Spit Bridge and Victoria Road routes, would cause extreme over-loading of other lanes.

As well as buses, taxi-cabs, private hire cars and motor cycles, any vehicle carrying three or more occupants may travel in transit lanes, gaining the benefit of faster travel times, and providing a more evenly balanced use of the road as a whole. Other vehicles may enter a transit lane only when 100 metres before they are about to turn so that more efficient use of both vehicle and road is encouraged.

Transit lanes in Sydney have, in every case, been introduced in an effort to overcome major existing problems being experienced by peak hour commuters in all vehicles, not just buses. These problems had been growing in recent years with a consequent deterioration in general traffic conditions. It was obvious that some additional capacity was needed to provide for the growth in commuter movements over the next few years. In each case, implementation of the transit lane was associated with several other traffic management measures, including in appropriate cases, tidal flow, intersection and signal improvements, and local traffic management schemes designed to remove through traffic from parallel streets in adjacent residential areas.

During the year to 30th June, 1980 further transit lanes were introduced on Epping Road between Longueville Road and Centennial Avenue and on the Warringah Freeway on the northern approach to the Sydney Harbour Bridge.

At the close of the period investigations were proceeding into proposals for a further transit lane on the Pacific Highway as an extension of the existing transit lane in Longueville Road.

Since the inception of the transit lanes, bus passengers travelling via the densely trafficked Spit Bridge and Victoria Road routes have experienced a substantial improvement in regularity and reliability of bus service. There are no longer wide daily variations in journey times and the bus passenger is now confident of reaching his work place at the appointed time. At the same time, transit lanes offer a more equitable distribution of available road capacity to all commuters.

Enforcement difficulties arose, particularly on the newly introduced section of the Warringah Freeway, because of a loophole in the regulations which allowed a motor vehicle to enter a transit lane and use it for any distance (in the case of the Warringah Freeway from near Falcon Street, North Sydney through to the southern side of the Harbour Bridge) for the purpose of turning left at the next intersection. To overcome the problem the regulations were amended to prohibit the entry of unauthorised vehicles into a transit lane (or bus lane) for the purpose of turning except when within 100 metres of the point where the turn is to be made.

Bus Priority Right of Way

Further means of improving schedule adherence, minimising delays to bus passengers and generally helping to enhance the public image of bus services as a major commuter transport mode, have been under consideration. Priority for buses at traffic signals was mentioned in a previous annual report.

Attention is also being given to delays to buses leaving bus stops and bus bays. Traffic flow on arterial roads would be improved if bus stops were placed in bus bays clear of the traffic stream, but the delays incurred in re-entering the traffic stream are recognised. Many European countries grant priority to buses in such circumstances, and further study needs to be done to assess the feasibility, and, in particular, the safety implications of such a scheme in New South Wales.

Clearways

Vehicles, other than buses, taxi-cabs and private hire cars actually picking up or setting down a passenger, are not permitted to stop on clearways.

These restrictions are in force on most of the major traffic routes through the Metropolitan area and generally apply from 6.30 a.m. to 9.30 a.m. and 3.30 p.m. to 6.30 p.m., Mondays to Fridays on one or both sides of such routes as necessary where traffic volumes would otherwise exceed the capacity of the roads concerned.

Clearways in operation in New South Wales at present are designed specifically to assist week-day peak hour movement. It is recognised, however, that the demands of industry and commerce and to a degree the needs of recreational traffic, are such as to warrant making available the maximum capacity of arterial roads at all times.

Research on the social and economic costs and benefits of "off-peak" clearways has been undertaken to provide a means of quantifying these factors in terms of vehicle-operating, person-time, extra costs to retailers for loading and unloading arrangements, disruption of parking and the effect of transferring parking to adjacent residential areas. The results showed that the total social, economic and rear-access installation costs would be balanced by the reduction in vehicle operating and driven-time cost, if clearways improve average off-peak speed by as little as 5%, e.g. 20 to 21 km/h but substantially greater improvements than this could be anticipated.

However, whilst it is expected that there would be substantial nett benefits to the community from the introduction of off peak clearways, neither the costs nor the benefits would be uniformly distributed across society. Means might need to be developed to adjust this imbalance.

Draft warrants and policies for the future implementation of off-peak clearways are currently being developed. Undertakings have been given to Councils and Chambers of Commerce that off-peak clearways will not be introduced without prior consultation with those bodies.

Peak hour clearways were introduced at eight locations on routes in the Sydney Metropolitan Area in the past year. Clearways in operation at 30th June, 1980 are shown in Figure 1.

Intersection Controls on Main Traffic Routes

The give-way-to-the-right at intersection rule has long been relied upon to regulate traffic but the increased growth of cities and their increased traffic demands have gradually brought about a fundamental change in the situation.

Traffic congestion problems and attendant accidents at individual locations have called for specific controls such as "give-way" signs and traffic signals. Simultaneously, traffic has spread from the crowded main road network and filtered through large areas of the minor street system, disrupting the amenity of otherwise quiet residential areas and generating a multitude of small, difficult and dangerous trouble spots.

Thus the problem has been to bring efficiency back to the main road system and amenity back to residential and recreational areas.

A major technique employed to reduce traffic problems has been the introduction of a "priority" road system under which all side streets are controlled by either "give-way" signs, "stop" signs or traffic signals. Under this system all side street traffic (except where traffic signals are installed) has to give way to traffic already on the priority road whether on its right or on its left.

These controls are aimed at creating a smooth flow and absence of turbulence (essential ingredients of safe and efficient traffic movement) and assisting in obtaining the maximum capacity from the main road system.

Intersection control has now been completed on virtually the whole of the classified road system. Extension of intersection control to other arterial roads is well in hand. Introduction of the T-junction rule in 1981 will accelerate this work.

Figures 2 – 5 show the extent to which the programme has been implemented to date.

Left Turn on Red Signal

Research has been conducted by the Traffic Authority to ascertain the feasibility of permitting traffic to turn left when facing a red signal (LTOR) at particular intersections.

This practice is common in the form of right-turn-on-red (RTOR) in North America but it is not uniform in application. Some States permit it at all signalised intersections unless specifically prohibited by signs. In others the movement is permitted only where indicated by signs.

Benefits accruing from this technique are time-savings to drivers, increased vehicle flow through intersections, and reduced fuel consumption because of reductions in waiting time at red signals.

During the year the Motor Traffic Regulations were amended to permit the use of signs worded "LEFT TURN ON RED PERMITTED AFTER STOPPING" and "before and after" site studies were undertaken at thirty intersections in the metropolitan area to determine effects on traffic volumes, stops and delays, and fuel consumption. Preliminary analysis indicates that the technique significantly reduced delays and fuel consumption at some intersections. It will be necessary, however, to examine accident rates at all the intersections studied before firm conclusions can be drawn and it is expected that this will be completed during the coming year.

Light Traffic Thoroughfares

The Traffic Authority does not wish to interfere with Councils' powers to impose restrictions on the use of streets by heavy lorries in order to protect the pavement. However if a Council desires to declare a street as a light traffic thoroughfare for any other reason it is considered that procedures similar to those prescribed in the Local Government Act for road closures should be followed. These require Councils to fully canvass all aspects of particular proposals and provide an opportunity for public comment by people who may be affected. Councils in neighbouring areas will also be assured of advance notice of proposals which may have repercussions beyond the boundary of the area in which they are planned.

The Authority recommended amendment of The Local Government Act accordingly. A Council will still be able to impose suitable restrictions without following those procedures if a Council engineer certifies that a road is structurally unsuitable for use by heavy vehicles. It is expected that the Act will be amended in the coming year.

Resident Parking Schemes

All-day parking of vehicles on residential streets surrounding major public institutions, industrial areas and sporting, recreational and shopping centres continues to disadvantage residents whose premises front those streets and who cannot make reasonable provision for off-street parking.

To assist residents in this situation Councils may, with the Traffic Authority's consent, introduce resident parking schemes. Residents in a defined area may obtain from the Council a "parking authority" for a specified term. When displayed in a vehicle parked on a street in that area where 'period' parking (for example, 1 hour, 2 hours) is in force, the vehicle may stand without restriction. These arrangements can only be instituted in residential areas and generally operate from 8.00 a.m. to 6.00 p.m. Mondays to Fridays.

During the year new resident parking schemes were introduced at Ultimo, Darlinghurst, Millers Point, Surry Hills, Elizabeth Bay, Potts Point and King's Cross (City of Sydney), Bondi Junction (Municipalities of Waverley and Woollahra) and Kensington (Municipality of Randwick).

The Traffic Authority has published "Guidelines for Resident Parking Schemes" to assist Councils in their planning and implementation.

Traffic Flow Monitoring

Significant traffic engineering works designed to improve the flow of vehicles on arterial routes are being introduced progressively as funds become available, and evaluation of their effectiveness is an essential function of the Traffic Authority. A comprehensive programme has therefore been introduced to survey road travel times on major trafficked routes throughout most of the metropolitan area.

Tidal Flow Schemes

Tidal-flow schemes, to allow one or more traffic lanes to be used for traffic in one direction in the morning and the opposite direction in the afternoon, are employed at critical positions on main traffic routes in the Sydney Metropolitan Area where traffic volumes are heavily in excess of the capacity of the particular roads under normal two-way arrangements.

Mechanised movable medians under automatic control were installed on the approaches to Ryde Bridge to assist in the regulation of tidal traffic flows across the bridge. Work is in hand to introduce similar movable medians on Tom Ugly's Bridge and extend the system in use on the Harbour Bridge.

Traffic Engineering Works

Traffic Signals

As mentioned earlier in this report, the Department of Main Roads is the Traffic Authority's principal operations and construction agency.

The Department's staff and contractors undertook all installation, maintenance and emergency repair work of traffic facilities, including traffic signals, in the Sydney, Newcastle and Wollongong areas.

In other areas, signals were usually installed by contractors and maintenance was carried out under contract by the local electricity authority. Installation and maintenance of other facilities was undertaken by the Department or by the local Council as mutually convenient.

A total of 88 new sets of traffic signals were commissioned during the year. 58 existing installations were reconstructed to accord with changed traffic conditions or to upgrade the installations. 16 of the installations and 45 of the reconstructions were effected by Department of Main Roads construction staff, the remainder being completed by contract, to departmental planning specifications. Two sets were removed from service. In addition there were 51 sites under construction or let to contract at 30th June 1980. At that date there were 1652 sets of signals in service throughout the State distributed as shown in the following table:

	Vehicle Actuated	Pedestrian Actuated	Inner City	TOTAL
Sydney	1086	212	114	1412
Newcastle	75	20	—	95
Wollongong	60	10	—	70
Country Centres	59	16	—	75
TOTAL	1280	258	114	1652

Temporary signals were installed at four locations to assist in controlling traffic movements at works in progress.

There will continue to be a need for increasing numbers of traffic signals to safely control traffic while funds for improved road construction remain limited.

Work continued on the expansion of computer controlled co-ordination systems throughout the Sydney, Newcastle and Wollongong areas. Three regional computers at Hamilton, Warwick Farm and Taren Point were installed, bringing the number of regional computers now in operation to 11.

A total of 128 signal sites were converted from isolated to co-ordinated operation during the year, and the co-ordination systems at a number of other sites have been upgraded. The total number of sites now co-ordinated is 648, of which 457 are controlled by computer.

Figure 6 shows the locations of co-ordinated systems.

Signs and Markings

Over 26,000 new facilities including marked footcrossings, traffic domes and regulatory, warning and guide signs, together with about 17,000 replacement signs, were provided during the year. The installation and maintenance work on regulatory signs in the Sydney, Newcastle and Wollongong areas is carried out for the Traffic Authority by Main Roads Department staff and in other areas the work is performed by Councils under Department of Main Roads supervision.

The Department of Main Roads remarked approximately 45,000 km of longitudinal traffic lines on classified roads. Raised pavement markers continued to be used to augment painted lines and to simulate traffic lines on freeways. Approximately 175,000 square metres of transverse lines, zebra crossings and road symbols were marked and maintained during the year.

Speed Zoning

The Traffic Authority has delegated to the Commissioner for Main Roads the power to authorise speed limits, or speed zones, on public roads throughout the State, so that decisions might be taken locally by the Department's Divisional Engineers. The Authority's guidelines ensure consistency in application.

From time to time it is necessary to impose a temporary speed limit over a section of road whilst maintenance or reconstruction work is in progress. This function is also exercised by the Main Roads Department Divisional Engineers.

During the year new speed zones were established over the following lengths: 53.3 km (60 km/h); 129.5 km (80 km/h); 104.7 km (100 km/h) and 19.4 km (110 km/h); and extensions to existing speed zones were made over 59 km of roadway.

The Motor Traffic Act was amended to provide, as from 1st July, 1979, the absolute speed limit of 100 km/h which replaced the former prima facie speed limit of 80 km/h in rural areas. The prima facie speed limit had permitted speeds considerably greater than 80 km/h provided it could be established that the speed was not dangerous to the public at the time. It had been found, however, that the number of fatalities on rural roads was out of all proportion to the amount of traffic using them – about 10% to 15% of total vehicle travel in New South Wales. All eastern States now have the uniform absolute speed limit of 100 km/h.

Pedestrian Bridges and Subways

At Pymble a pedestrian subway under the Pacific Highway was completed. A temporary pedestrian overbridge was erected across the Pacific Highway at Lake Munmorah. Planning is in hand for its replacement with a permanent structure.

Other Pedestrian Improvements

Although only nine mid-block pedestrian signals were installed during the year, special pedestrian facilities were provided at most of the 140 sets of traffic signals installed or reconstructed at intersections during the year. These additional facilities will greatly assist pedestrians to safely cross roads, particularly the busy arterial routes.

Other Traffic Management and Safety Schemes

A number of miscellaneous traffic management and safety projects not associated with general traffic works was completed during the year. These included –

Guardrail installations	12
Skid resistance improvements	3
Improvement of super-elevation	1
Shoulder widening	5
Improvement to alignment	4
Visability improvement	2
Additional lanes	2
Bus bays	2
Median island	1

Intersection Improvements

The total number of channelised and reconstructed intersections completed during the year was 96. Major sites completed included:-

S.H. 9	–	Regent St and Ledsam St, Maitland
M.R. 188	–	Glebe Rd and Darby St, Merewether
S.H. 10	–	Pacific Hwy and Floraville Rd, Belmont
S.H. 1	–	Princes Hwy and M.R. 264, Kiama
M.R. 617	–	Foreshore Rd and M.R. 194 – General Homes Dr, Mascot
M.R. 170	–	Botany Rd and M.R. 616 – Beauchamp Rd, Banksmeadow
S.R. 2034	–	Old Illawarra Rd and Menai Rd, Menai
S.H. 2	–	Hume Hwy and S.H. 13 Woodville Rd and M.R. 508 Henry Lawson Dr, Villawood
M.R. 154	–	Bringelly Rd and F4 – Western Fwy, Orchard Hills
S.H. 10	–	Pacific Hwy and M.R. 152, 45 km north of Grafton
S.H. 8 and S.H. 22	–	at Bromide St, Broken Hill
S.H. 7	–	Nanina Cres, Percy and Swift Sts, Wellington
S.H. 10	–	Pacific Hwy and T.R. 75, Kempsey
S.H. 10	–	Pacific Hwy and Commerce St, Taree
S.H. 9	–	New England Hwy and S.H. 11 – Oxley Hwy (Ebsworth/Bridge Sts), Tamworth
S.H. 2	–	Hume Hwy and South St, Gundagai
S.H. 1	–	Princes Hwy and turnout to Merimbula airport
S.H. 5	–	Durham St and T.R. 54 – Bentick St, Bathurst
S.H. 5	–	Great Western Hwy., Horsley Rd, and Doonside Rd, Eastern Creek
	–	Johnston and Tarcutta Sts, Wagga Wagga.

Monitoring and Evaluation of the Authority's Traffic Management Programme

Monitoring and evaluation is undertaken by the Authority to assess the effectiveness of its programmes and policies particularly in respect of the economic worth in terms of safety and operational effectiveness.

Examples of the results of economic analysis of the Traffic Facilities Programme are:-

TECHNIQUES	ECONOMIC EVALUATION
Intersection Improvements	Benefit/Cost ratio of 2.5 based on accident savings only.
Pedestrian Improvements	Benefit/Cost ratio of 3.5 based on accident savings only.
Driver Aid Schemes	Benefit/Cost ratio of 2.4.
Between Intersection Improvements	Benefit/Cost ratio of 1.3 based on accident savings only.
Safety at Schools	Benefit/Cost ratio of 1.3 based on accident savings only.
Wide Area Co-ordination of Traffic Signals (S.C.A.T. System)	Annual Benefits in travel time and accident savings of $124m for an initial cost of $6m and annual maintenance of $1m.

Speeds in the Sydney Metropolitan Area

As reported in last years annual report, a programme to monitor speeds on a major part of the Sydney Metropolitan arterial road network has been established. While there are a number of statistical problems associated with the measurement of average speeds on the road network, the surveys undertaken by the Department of Main Roads are starting to provide more accurate information on the operating speeds on the network and of the effects of the Authority's programme.

For example, as at the 30th June, 1979, approximately 300 traffic signals in the metropolitan area had been co-ordinated. While this represents only about a third of the signals in the arterial road system, on the relevant sections of roads, stoppages have been reduced significantly. The Department of Main Roads has indicated that speeds, generally, are in the area of 30 – 40 km/h, thereby achieving maximum vehicle through-put and significantly reducing fuel consumption.

In the particular case of Parramatta Road, one of the most heavily trafficked arterial roads in Sydney, a Department of Main Roads survey undertaken in December, 1979 revealed that the average travel speed from Woodville Road, Granville to Wattle Street, Ultimo was 30 km/h. In the section between Woodville Road and Shaftesbury Road, Burwood, where the signals operate under the new S.C.A.T. System, travel speed was 32 km/h. The slowest section was between Woodville Road and Silverwater Road, Auburn where the speed was 27 km/h.

Independent surveys reported by the N.R.M.A. have confirmed this general improvement in operating speeds. When travel times measured in March, 1980 were compared with those measured in March, 1979 there was a 16% increase in the mileage over which speeds averaging more than 30 km/h were achieved.

Casualty Accidents at Non-Signalised Intersections

An indication of the effectiveness of the priority road system can be obtained by an examination of casualty crashes at non-signalised intersections for the two-year periods 1971-72, 1973-74, 1977-78 detailed hereunder.

	1971-72	1973-74	1977-78
Total Number of Casualty Crashes	15,514	15,395	13,554
% improvement on 1971-72		1%	13%

It can be seen that there has been a significant reduction in casualty crashes when 1977-78 is compared to 1971-72. If the percentage improvement in accidents which was evident in the early part of the 1970's (1% comparing 1971-72 with 1973-74) continued to 1977-78 approximately 3% reduction in crashes would have been expected when 1977-78 is compared with 1971-72. However, the actual reduction is approximately 10% better than expected had the traffic management programme of the early 1970's continued.

The most probable factor contributing to the reduction in intersection accidents during the '70's, particularly in the latter part of the decade, is the Major/Minor Road Programme which led to the widespread introduction of "Stop" and "Give-Way" signs and the accelerated programme for provision of traffic signals.

Casualty Accidents at Signalised Intersections

An analysis of casualty accidents at traffic signals for the period 1969-1978 showed that, having regard to increased exposure due to the numbers of vehicles and increasing numbers of signals, there was a 36% reduction in the rate over the period.

Improved signal design standards, the effects of signal co-ordination and the Authority's signal reconstruction programme are expected to continue this trend.

Transit Lanes

Victoria Road. The effects of this lane can be summarised as follows:-

- Bus travel times are reducing, but more particularly the previous wide variability has been significantly reduced, with consequent increase in timetable reliability.
- The strong rise in bus patronage following the extension of the lane and the introduction of additional bus capacity in 1978, has slowed, indicating that either additional bus capacity may be required or that short term gains have been fully taken up. The Urban Transit Authority is planning to introduce more services in May, 1981, but shorter term requirements will not be overlooked.
- Car occupancy has increased and appears to have stabilized at 1.31 people/vehicle compared to 1.17 people/vehicle prior to the lane being introduced.
- Volumes on the up-stream Ryde Bridge, which constitutes an alternative route for some of the Victoria Road traffic, have increased while those on Gladesville Bridge have fallen slightly. This is, however, in accordance with trends that developed before the transit lane was introduced.
- The number of people (principally bus passengers and car poolers) obtaining relative advantage from the transit lane is increasing, and is now close to 50%.
- A high level of illegal usage of the lane occurred (occasionally up to 60%) but overall observance is high.

Balgowlah – Neutral Bay Transit Lane

Initial surveys of this transit lane in the morning peak period showed that the use of motor vehicles carrying three or more people had increased by 50%, i.e. from 2,400 to 3,600. More recent surveys, however, indicate that car occupancies have decreased slightly from 1.49 in October, 1975 to 1.41 in October, 1978, but that bus occupancies had increased from 52.7 to 56.9 over the same period.

The car occupancy rate is still higher than that on most other arterial roads in the Metropolitan area. The transit lane still carries 52% of the total number of people (including bus passengers) using this route to the city. It is likely that much of the increased bus patronage has been derived from former car users.

A section of this transit lane was the study area of the joint CSIRO/Traffic Authority project on aggregate fuel consumption. Analysis of the data obtained in the field trial is still continuing. However, this survey data and occupancy data provided by the Department of Main Roads allows the fuel consumption for each person travelling in the transit lane and in other lanes to be assessed. If bus passengers are included, transit lane passengers use one fifth the amount of fuel per capita that non-transit lane passengers use. If bus passengers are not included, car travellers in the transit lane use half the amount of fuel per capita of car travellers in the other lanes.

General

During the past year, a transit lane was introduced on the Warringah Freeway and the Longueville Road transit lane was extended along a section of Epping Road.

Traffic Safety Measures

Trucks — Operational Problems

During the year there was a spate of highly publicised accidents involving trucks, especially in the areas of security of loadings and crashes involving fuel tankers and heavily laden trucks on Mount Ousley Road, Bulli Pass and Bells Line of Road, Kurrajong. As a consequence the Authority conducted investigations into possible countermeasures.

Security of Loads on Motor Lorries

The adequacy of current regulatory requirements governing the security of loads on motor lorries is being examined in conjunction with a project being undertaken under the auspices of A.T.A.C., (Australian Transport Advisory Council) to develop a national code of safe loading practice. Representatives of the road transport industry and the Transport Workers' Union are providing invaluable assistance in these investigations.

Road Tanker Accidents

During the year the functions of the Road Tanker Committee, set up to examine causes of road fuel tanker crashes and consider means for their reduction and to minimise their consequences to the community, were transferred to the Authority. A number of factors contributing to road tanker crashes have been identified and several recommendations were being formulated by this Committee at the close of the year.

Mount Ousley Road, Bulli Pass and Bells Line of Road Truck Crashes

There has been considerable concern about the inherent accident potential of heavily laden trucks negotiating steep descents such as Mount Ousley, Bulli Pass and Bells Line of Road (Bellbird Hill). Over the years a road upgrading programme on Mount Ousley Road has significantly reduced the number and severity of recorded vehicle accidents.

Stemming from recommendations by the Task Force on Mount Ousley Safety Measures, the Motor Traffic Regulations were amended to make it obligatory for truck drivers to observe special truck speed limit signs, engage low gear and drive in designated truck lanes, if provided.

These measures were introduced on Mount Ousley Road and Bulli Pass. The introduction of similar measures and improved roadworks over the whole length of Bells Line of Road was under consideration at the end of the year.

Research

Transportation System Management

Transportation System Management (T.S.M.) is a planning concept which views existing streets and highways, rail trackage, parking and pedestrian facilities and transportation vehicles — both private and public — as elements of a single urban transportation system. The objective of T.S.M. is to organise these individual elements with the help of various operating, regulatory, and pricing policies into one efficient, productive and integrated transportation system which respects local community needs and objectives and serves the broader national goals of environmental protection, energy conservation and equity for those dependent on public transportation.

Research was conducted to develop and evaluate a comprehensive programme of T.S.M. methods and strategies in the New South Wales context, in particular, priority treatments for high-occupancy vehicles in specific areas and routes in the Metropolitan Area. The study looked into individual strategic goals and their interaction, techniques for achieving individual goals, and techniques for monitoring resultant system changes.

The report, presented by the consultants in 1978, detailed the T.S.M. planning process developed, together with examples of its application. The report thus gives guidelines for the conduct of future T.S.M. (and traffic management) schemes. This completes the major part of this study. An optional direction for further research is the implementation and subsequent monitoring of the schemes developed in the study areas. Research by other agencies has highlighted the importance of an adequate long term T.S.M. monitoring procedure. There are several areas where such a monitoring exercise could be performed.

This year, however, the research was concentrated on evaluating the effects of a proposed Pacific Highway transit lane on the surrounding street system in the Willoughby area using a computer simulation model (TRANPLAN). Results will be available during the next year.

Effects of Flextime on Transport

Flexible working hours, or other types of variation in traditional work times, have been introduced in the community over the last few years and little has been known of the effects of this on the transport system, but, as reported last year, a detailed study of such effects was undertaken in the North Sydney business and commercial area.

Questionnaires showed that the study area had a high proportion of work-force (67%) on flex time and staggered working hours.

The analysis of the data illuminated factors which tend to make North Sydney commuter patterns less representative of the rest of the metropolitan area than was anticipated and did little else than confirm that:

(a) persons travelling during peak hours chose public transport;

(b) persons travelling off-peak chose car;

(c) persons having a car available were biased towards that mode of travel to work;

(d) proximity of parking to the place of employment influenced choice of transport;

(e) persons on fixed hours travelled by public transport;

(f) flex time did not influence travel outside peak hours; and

(g) level of service (e.g. waiting time) was a key factor in influencing switches in transport mode.

The results were disappointing in that they did not supply clear answers to the fundamental question of whether flex time and staggered working hours could be harnessed to provide any further significant benefit to the transport system. They did suggest that there may be advantages to be gained, but only if policies are developed to:

(i) place heavy constraints on the freedom of commuter traffic and parking supply; and

(ii) improve public transport off-peak frequencies and provide for better inter-modal co-ordination and time tabling.

The latter aspect will be examined in conjunction with the proposed Urban Transit Authority in due course.

Control of Land use and Access to Arterial Roads

The task of developing policies and procedures relating to the control of land uses and access to and from arterial and sub-arterial roads was continued this year. Guidelines were issued to Councils to assist them, land developers and planning consultants in the submission of development applications made under Local Government Planning Scheme Ordinances or Interim Development Orders.

These guidelines, under the title "Draft Policy and Standards for Traffic Generating Development", cover aspects of safety, environment, traffic and planning principles, siting considerations, vehicular access, parking, and related matters.

In the light of research carried out on land use traffic generation, the Policy and Standards document is being rewritten.

Development applications and other proposals in respect of land use are of concern to the Authority when they have an effect on traffic or are likely to generate additional traffic. It has been generally accepted that the Authority should be playing a greater role in co-ordinating the attitudes of the various administrations in this respect. Unfortunately, planning scheme ordinances do not as yet all contain clauses requiring consultation with the Authority on traffic generating developments, and until they do the present fragmented system of responsibilities will continue to be an impediment to the full realisation of the objectives of the Policy and Standards document.

Proposals now under discussion with the planning administration, centre on utilising the provisions of the Environmental Planning and Assessment Act to achieve the desired focus of responsibility, for the traffic management aspects of developments, on the Authority.

Metroplitan Parking Policy

Research and analysis of data collected in connection with the preparation of an overall parking policy for the Sydney Metropolitan Area continued during the year.

Policy and Guidelines documentation is currently being finalised and will be available in 1980 for the information and assistance of Local Government Authorities, planners and developers.

Traffic Safety Aids Outside Schools

A survey of all the metropolitan schools, initiated at the request of the Minister for Transport, was completed during 1978/79, and led to an increased allocation of expenditure on school crossing facilities. The amount allocated for the year 1979/80 was $1,000,000.

The study also disclosed a need to review the standards and warrants applicable to facilities, such as pedestrian crossings and school traffic signals, and also pointed out inadequacies in present practices regarding the location of bus stops, "no stopping" zones, the positioning of school gates and special monitoring of school crossings. Also there is potential for improving children's awareness and behaviour by educational processes.

The consultants retained by the Authority have completed a draft report, except on education aspects.

Impact of Land Use on Traffic

Changing land use developments cause a redistribution in the movement of people and goods, and accurate predictions of the traffic generating potential of the planned developments are a vital necessity.

Research was undertaken by the Traffic Authority in conjunction with the New South Wales Planning and Environment Commission to develop adequate quantifying measures to replace the current 'rule of thumb' techniques.

Technical bulletins have been produced on the traffic generation characteristics of the following land uses: Office Blocks; Shopping Centres; Factories; Licensed Clubs; Service Stations; Motels; Hotels; Fast Food Restaurants; Car Sales and Spares; Car Accessories and Tyres; Recreation; Warehouses; and Road Transport Terminals. A summary report is currently being produced.

The data and analyses in the bulletins should assist developers, Councils and other Authorities in assessing the traffic impact of proposed developments.

Bikeway Planning

Planning for the encouragement of bicycle use by the provision of bikeways continued throughout the State. A number of Councils initiated studies to prepare bikeway plans.

The Government has provided $350,000 per year to assist councils (on a dollar for dollar basis) in the conduct of studies and construction of bikeway facilities.

In Newcastle, a pilot programme was commenced for long and short term planning for bicycle use in N.S.W. urban areas. The Newcastle bikeplan study is aimed at:-

(i) developing an effective bicycle safety education programme aimed at both cyclists and other road users;

(ii) developing a programme for the enforcement of bicycle-related rules of the road; and

(iii) assessing the effectiveness of various engineering measures in the urban development.

Speed Control Studies

Studies in relation to the use of speed control devices on roads, and the question of lower speed limits on residential streets were continued during the year.

It is generally accepted that any transport system should provide and maintain the correct balance between safety, mobility and environmental quality. Further, it is apparent that community attitudes govern the acceptable levels of each of these elements. In this regard, there is growing concern with the impact of through traffic in residential areas, not the least of which is the speed of this traffic and the potential for accidents.

Based on the assumption that speed which is excessive under the prevailing circumstances, is one of the major contributing factors to road accident crashes and the consequences thereof, the Traffic Authority is examining the need for a reduction in speeds in residential areas to improve safety for road users.

There is a fundamental difficulty in having a general limit which is low enough for local traffic situations but high enough to be realistic for arterial roads, but experience indicates that variations in speed limits tend to confuse rather than encourage drivers to tailor speed to the environment. The Authority's current view is that safety on residential streets can best be improved by a complete re-organisation of the residential street system, involving its rationalisation to a scale more in keeping with the pedestrian environment.

To further these aims, the Authority arranged a symposium, which was attended by councils in the Sydney, Newcastle and Wollongong areas and other government agencies. The symposium generated discussions on a number of issues related to traffic safety, planning and management, including speed limits and speed control devices.

The use of speed humps as a speed control technique is still being studied by the Authority. Preliminary results of off-street tests conducted by the Australian Road Research Board have indicated a satisfactory design can be developed for a safe design speed of about 20 km/h for the majority of vehicles. If speed humps are introduced on public streets, legislative amendments will be required.

Fuel Consumption

A study being undertaken by the Authority jointly with the Commonwealth Scientific and Industrial Research Organisation — Division of Mechanical Engineering — was continued during the year.

Surveys were undertaken on Military Road to determine more efficient procedures for assessing the effects of different traffic management techniques on aggregate fuel consumption of a traffic stream. Data was gathered by means of helicopter surveys, specially instrumented cars, a representative fleet of cars and number plate surveys.

The analysis of the data is presently being carried out and it is expected to be completed by December 1980.

Preferential Treatment for Commercial Vehicles

Because traffic delays to commercial vehicles have a high economic penalty for the community, the Authority initiated a research project into the feasibility of reducing this delay by increasing the relative priority for the allocation of road space or time to this type of vehicle. The study investigated the needs of commercial vehicles in order to determine what measures could be taken to improve their operating conditions.

Priority measures under the headings of "Physical", "Operational", "Regulatory" and "Economic" were first identified. These options were evaluated on grounds of benefits and costs and a set of feasible options were recommended for further study.

The study showed that traffic engineering could do little to improve conditions for commercial vehicles. Other aspects considered in the study offer better avenues for improvements.

Collision with Roadside Objects

Every year there is a number of traffic crashes involving fixed roadside objects, including utility poles and trees. For the years ended 31st December 1978, and 1979, 221 and 225 fatal crashes out of 1,125 and 1,222 respectively in New South Wales involved utility poles or trees.

Dealing with the problem has been complicated by both the number of roadside obstacles and the apparent infrequency with which any one object was involved. Also the cost and effective functioning of many of the objects are dependent upon their being close to traffic. From more recent information it now seems that not all poles are a hazard and that collisions with poles do not occur randomly.

A research programme commenced this year is accordingly directed towards means of identifying hazardous pole locations, assessing appropriate remedial action and the benefits/costs of a remedial action programme. The Authority has retained a consultant to carry out this study and is being further assisted by a working party with members from local government, utility authorities, the Department of Main Roads and Police.

Finances

Finance for the provision of traffic control facilities and related works is controlled through the Traffic Facilities Fund established in the Special Deposits Account at the Treasury.

The principal sources of funds for this purpose are contributions from –

- Road Transport and Traffic Fund – amounts collected from motor registration fees and drivers' licences fees;
- Main Roads Fund – amounts collected from vehicle weight tax and tax levy;
- Commonwealth Government under the States Grants Road Act, 1977 for Minor Improvements for Traffic Engineering and Road Safety (M.I.T.E.R.S.) and National Roads;
- Sydney Harbour Bridge Account – amounts collected from the bridge tolls;
- Public Vehicles Fund – amounts collected from motor tax on public vehicles other than omnibuses.

Minor inputs from other sources make up the total sum available for allocation in terms of priorities accorded to immediate objectives and individual programmes.

Other than recommending to the Minister the provision of appropriate funds to cover particular programmes and allocating priorities for their expenditure, the Authority has no direct control over the availability of its funds.

TRAFFIC FACILITIES FUND
COMPARATIVE STATEMENT OF RECEIPTS AND PAYMENTS

FUNDS ($,000)	1978/79	1979/80
Road Transport and Traffic Fund	16 500	19 070
Main Road Fund	6 500	6 852
Consolidated Revenue	2 500	350
Harbour Bridge and Consolidated Revenue Tollway Accounts	1 632	1 971
Public Vehicles Fund	330	340
Commonwealth Government –		
M.I.T.E.R.S. Grants	3 529	3 793
National Roads Grants	1 320	1 718
Planning and Research Grants	342	263
Road Safety Education	38	38
Traffic Accident Research Unit Account	280	388
Other (miscellaneous) –	282	346
Carry-forward from previous year	114	1 825
	33 367	36 954

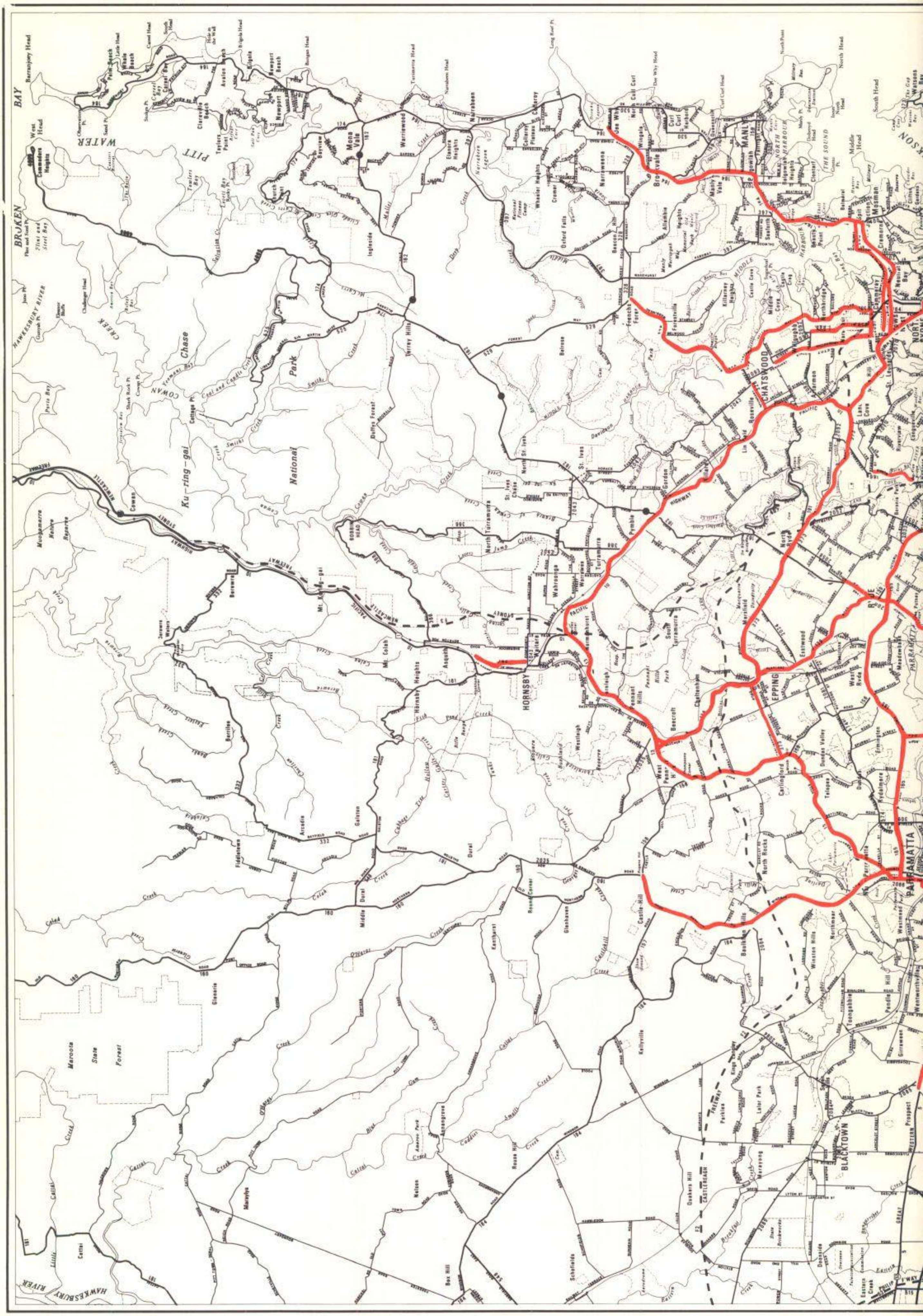
EXPENDITURE ($,000)	1978/79	1979/80
Maintenance and Operations:		
Pavement marking and signposting	10 253	11 581
Traffic signals	7 000	7 552
Driver Aid	1 386	1 507
Engineering Administration	862	1 442
Construction:		
Traffic signals and intersection improvements	5 179	6 125
Pedestrian facilities	362	365
Traffic Management and Safety Projects	1 085	1 291
Driver Aid Schemes	244	649
Engineering Administration	1 173	1 235
Miscellaneous:		
Special commitments	636	120
Depot acquisition	494	852
Administrative Expenses	1 630	1 436
Secretariat:		
(Administration and Research)	691	967
Traffic Safety Education	311	429
Commonwealth Research Grants	193	221
Transferred to Other Funds		
Other	43	11
Balance, carried forward	1 825	1 171
	33 367	36 954

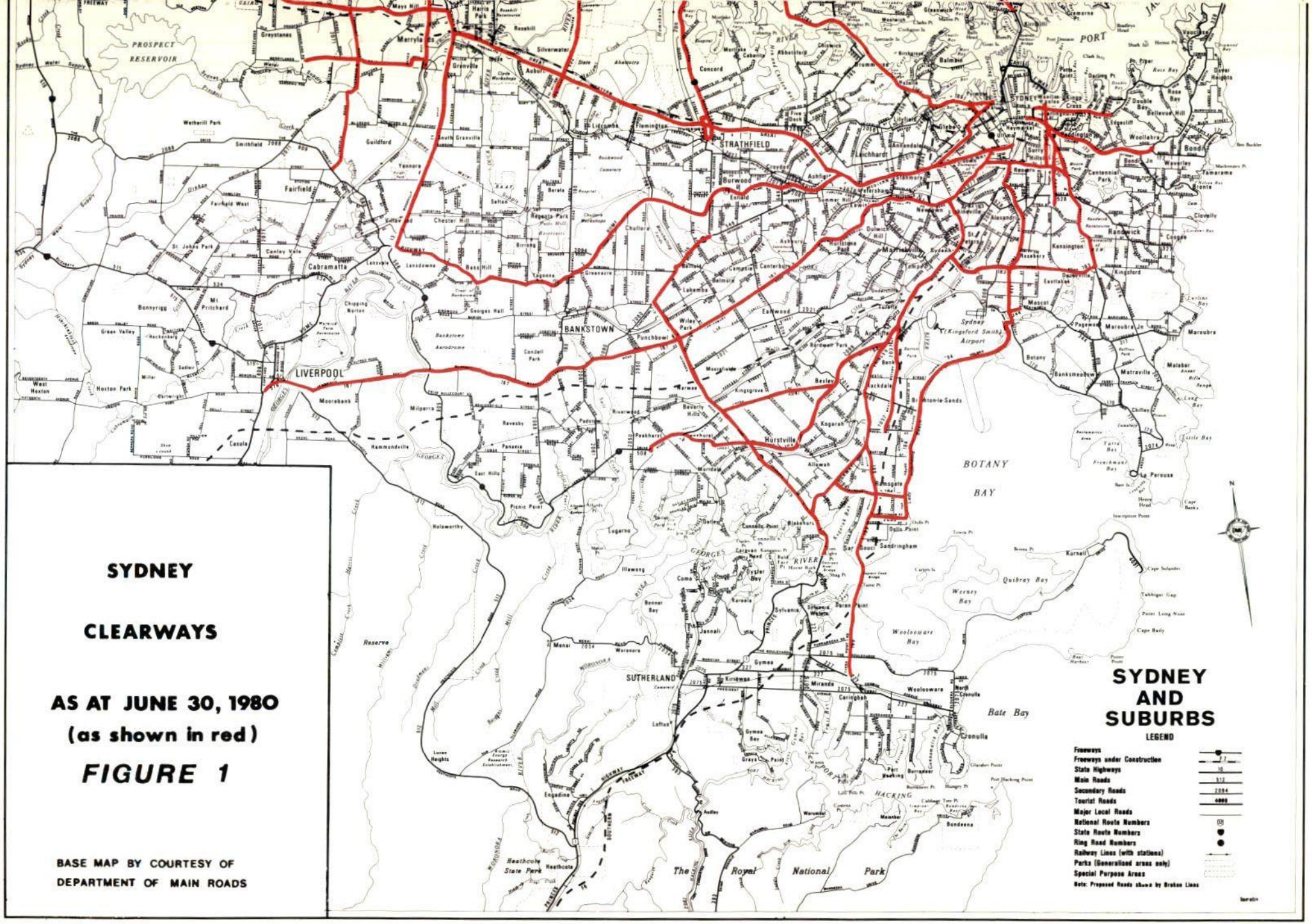
TRAFFIC FACILITIES FUND (SPECIAL DEPOSITS ACCOUNT) STATEMENT OF

Sources of Funds	Receipts $
Balances brought forward, 30.6.79	1,824,898
Contributions from State Sources:	
Road Transport and Traffic Fund	19,070,000
Public Vehicles Fund	340,000
Motor Vehicle Taxation — Tax Levy Weight Tax	6,852,000
Road Tolls — Sydney Harbour Bridge	1,647,805
— Berowra-Calga Tollway	148,388
— Waterfall-Bulli Tollway	175,000
Consolidated Revenue Fund — Contribution towards Bicycle Transport Projects	350,000
Traffic Accident Research Unit Special Deposits Account No. 2660 (Contribution towards cost of Traffic Safety)	388,278
Contributions by Commonwealth Government:	
States Grants (Roads) Act 1977 — National Roads — Schedules 2 and 3	1,717,876
MITERS Schedule 8	3,793,000
Transport (Planning & Research) Act, Grant — Traffic Authority Secretariat	115,452
Department of Motor Transport Traffic Accident Research Unit	125,738
Chief Engineer	21,738
Commonwealth Grant for Road Safety Education	37,500
Miscellaneous	
Sundry receipts	2,115
Department of Main Roads Income from Services provided for Councils and Other Bodies	344,230
Total:	36,954,018

RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 30TH JUNE, 1980.

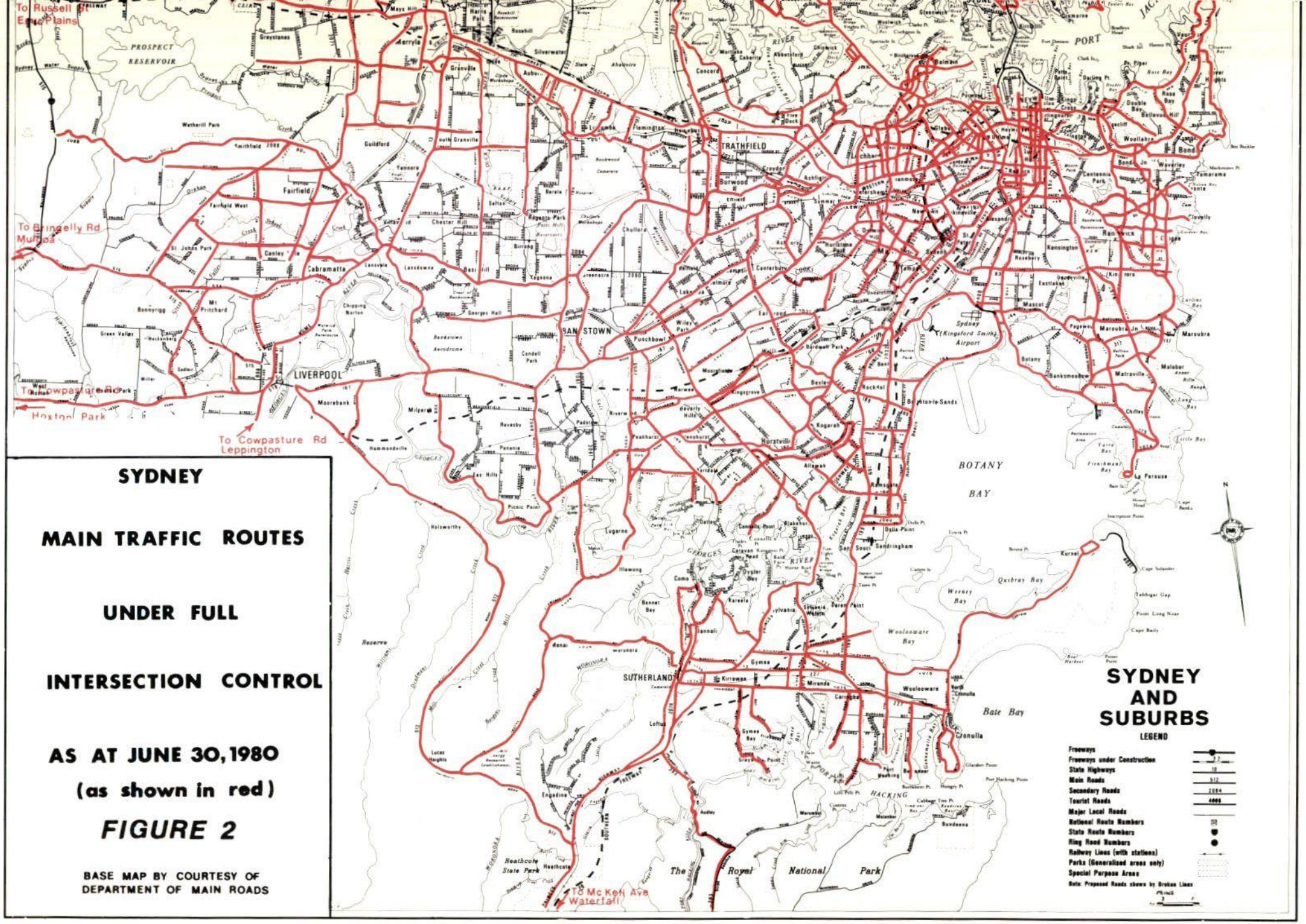
Department of Main Roads, Traffic Facilities Programme		Payments	
	$	$	$
Maintenance and Operations: (less costs recovered)			
Pavement Marking and Signposting		11,581,268	
Traffic Signals		7,552,082	
Driver Aid Schemes			
Sydney Harbour Bridge	961,319		
Berowra-Calga Tollway	132,681		
Waterfall-Bulli Tollway	226,943		
City Tow Service	24,325		
Tow Services other than City	155,919		
Western Freeway	6,123	1,507,310	
Engineering Administration		1,441,732	22,082,392
Construction			
Traffic Signals, Intersection Improvements and Railway Level Crossing Modifications		6,124,761	
Special Pedestrian Facilities		364,642	
Traffic Management and Safety Projects		1,291,509	
Cycleways		113,866	
Driver Aid Schemes			
Sydney Harbour Bridge	467,026		
Ryde Bridge Approaches	171,950		
Tom Uglys Bridge	9,842	648,818	
Engineering Administration		1,235,475	9,779,071
Administrative Expenses			1,435,906
Acquisition of Sites and Construction of premises for Works Operations			851,762
Contribution towards cost of Construction of Bondi Junction By-Pass			6,885
Total, Department of Main Roads			34,156,016
Department of Motor Transport –			
Traffic Authority Secretariat			
Administration	638,618		
Research Programmes –			
Transport planning and research projects	281,557		
Other research projects	5,570		
Urban Transport Study Group	40,748	966,493	
Traffic Accident Research Unit			
Traffic Safety Education Section		429,137	
Commonwealth Grants for Planning and Research			
Transferred Towards Expenditure Met From –			
Traffic Accident Research Unit Account (Special Deposits Account No. 2660)	168,175		
Road Transport and Traffic Fund (Chief Engineer's Projects)	53,018	221,193	
Miscellaneous		10,369	
Total, Department of Motor Transport			1,627,192
Total Payments			35,783,208
Balance Carried Forward			1,170,810
			36,954,018


HAWKESBURY RIVER
BROKEN BAY
PITT WATER
Ku-ring-gai Chase National Park
Maroota State Forest
HORNSBY
EPPING
CHATSWOOD
PARRAMATTA
BLACKTOWN
MANLY
Mona Vale
Cowan
Dural
Castle Hill
Pymble
Gordon
St. Ives
Brookvale
Narrabeen
Newport
Avalon
Palm Beach
PACIFIC HIGHWAY
FREEWAY

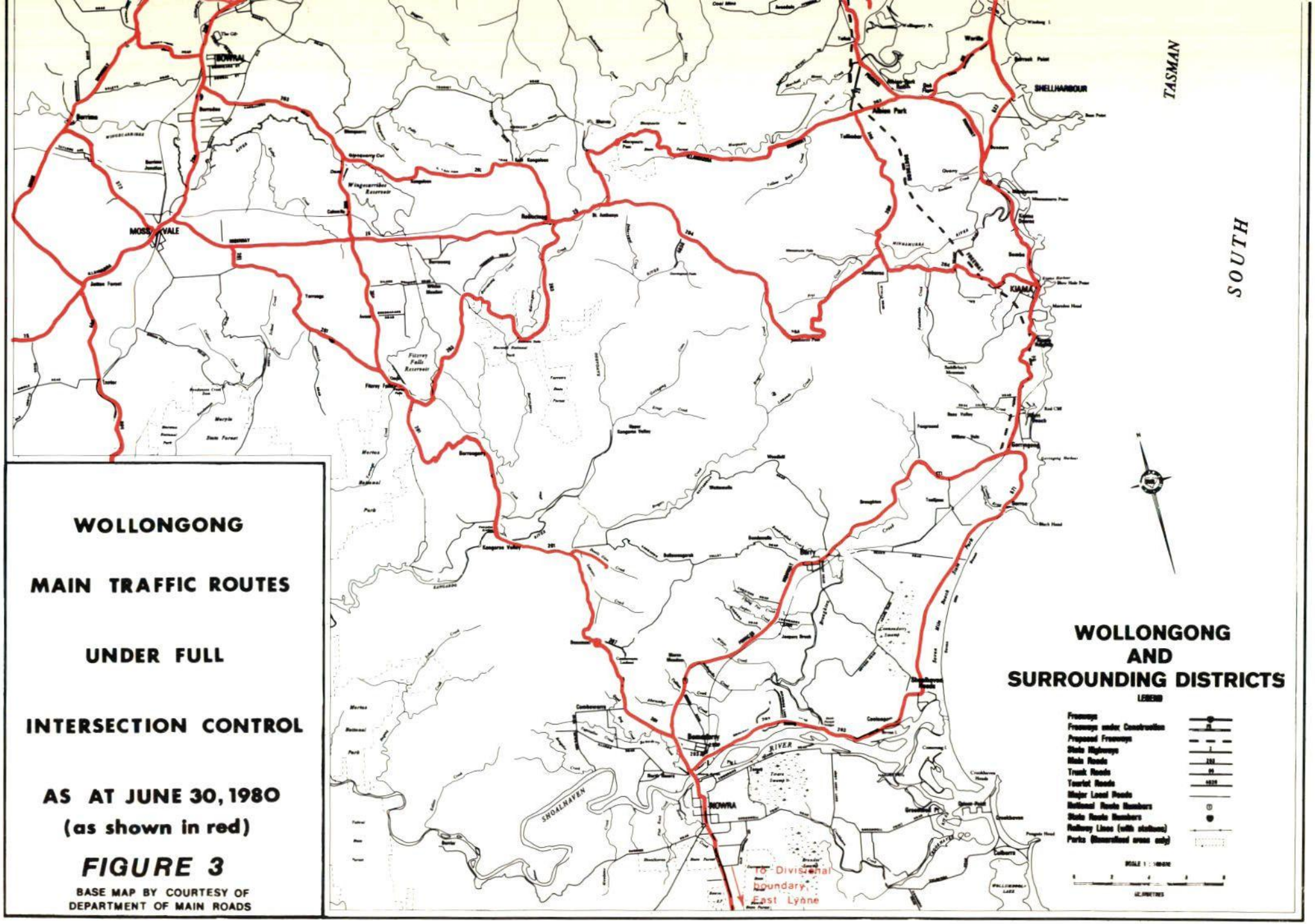

SYDNEY
CLEARWAYS
AS AT JUNE 30, 1980
(as shown in red)
FIGURE 1
BASE MAP BY COURTESY OF
DEPARTMENT OF MAIN ROADS
SYDNEY AND SUBURBS
LEGEND
Freeways
Freeways under Construction
State Highways
Main Roads
Secondary Roads
Tourist Roads
Major Local Roads
National Route Numbers
State Route Numbers
Ring Road Numbers
Railway Lines (with stations)
Parks (Generalised areas only)
Special Purpose Areas
Note: Proposed Roads shown by Broken Lines
PROSPECT RESERVOIR
STRATHFIELD
BANKSTOWN
LIVERPOOL
SUTHERLAND
BOTANY BAY
Sydney (Kingsford Smith) Airport
Bate Bay
The Royal National Park
HACKING

ORIGINAL


To Macquarie St Windsor
To Windsor Windsor Rd
To Richmond Rd Plumpton
HORNSBY
CHATSWOOD
EPPING
RYDE
PARRAMATTA
BLACKTOWN
MANLY
Ku-ring-gai Chase
National Park
BROKEN BAY
PITTWATER
Maroota State Forest
Mungamarra Nature Reserve
HAWKESBURY RIVER
COWAN CREEK
THE SOUND
NORTH HARBOUR
MIDDLE HARBOUR


SYDNEY
MAIN TRAFFIC ROUTES
UNDER FULL
INTERSECTION CONTROL
AS AT JUNE 30, 1980
(as shown in red)
FIGURE 2
BASE MAP BY COURTESY OF
DEPARTMENT OF MAIN ROADS
SYDNEY AND SUBURBS
LEGEND
Freeways
Freeways under Construction
State Highways
Main Roads
Secondary Roads
Tourist Roads
Major Local Roads
National Route Numbers
State Route Numbers
Ring Road Numbers
Railway Lines (with stations)
Parks (Generalised areas only)
Special Purpose Areas
Note: Proposed Roads shown by Broken Lines
To Russell St Emu Plains
To Bringelly Rd Mulgoa
To Cowpasture Rd Leppington
To Mc Kell Ave Waterfall
PROSPECT RESERVOIR
LIVERPOOL
BANKSTOWN
TRATHFIELD
SUTHERLAND
BOTANY BAY
Sydney (Kingsford Smith) Airport
The Royal National Park
Heathcote State Park

MITTAGONG
PICTON
CAMDEN
To Cowpastures & Leppington
WOLLONGONG
PORT KEMBLA
LAKE
SEA
PACIFIC
OCEAN



WOLLONGONG

MAIN TRAFFIC ROUTES

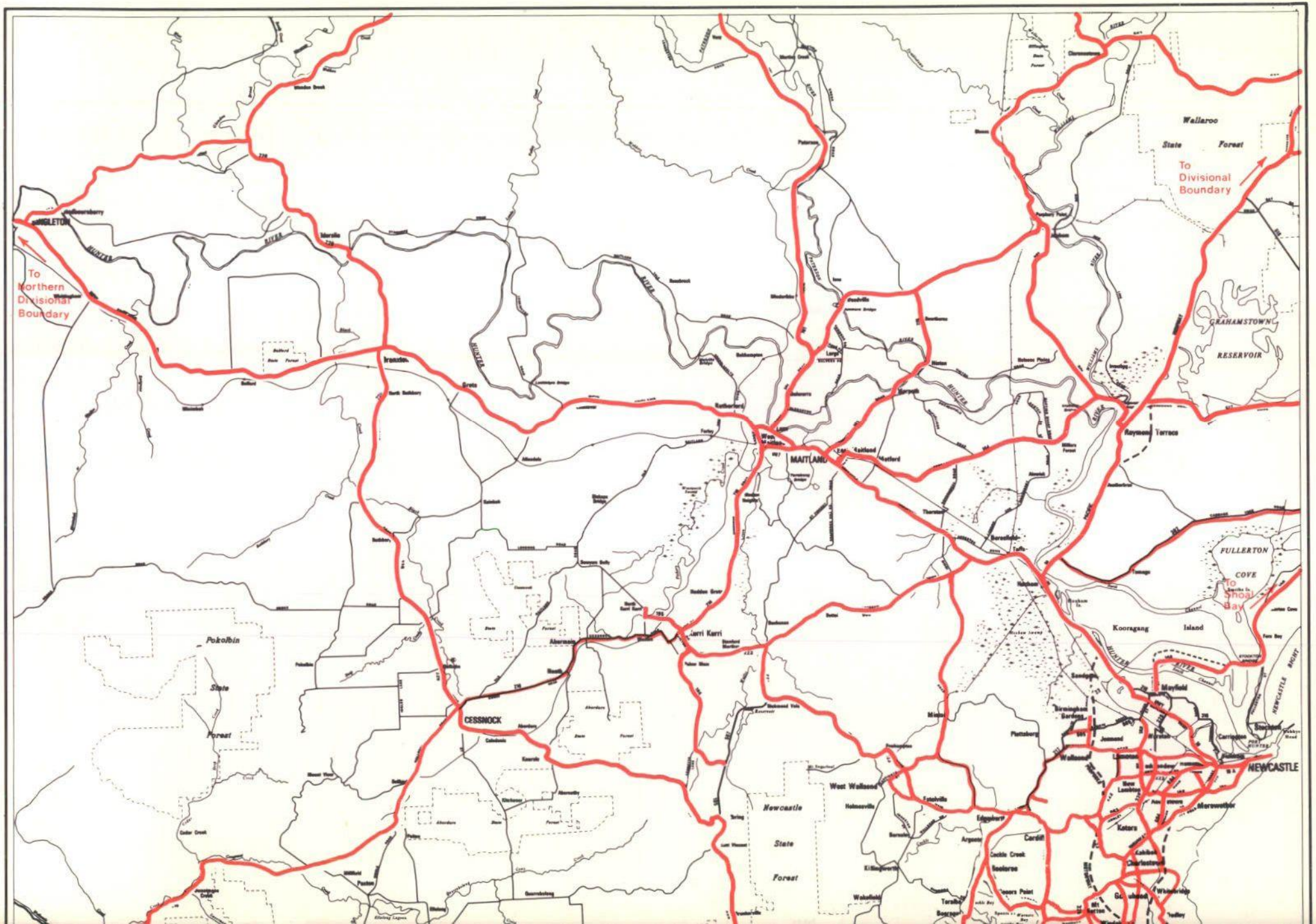
UNDER FULL

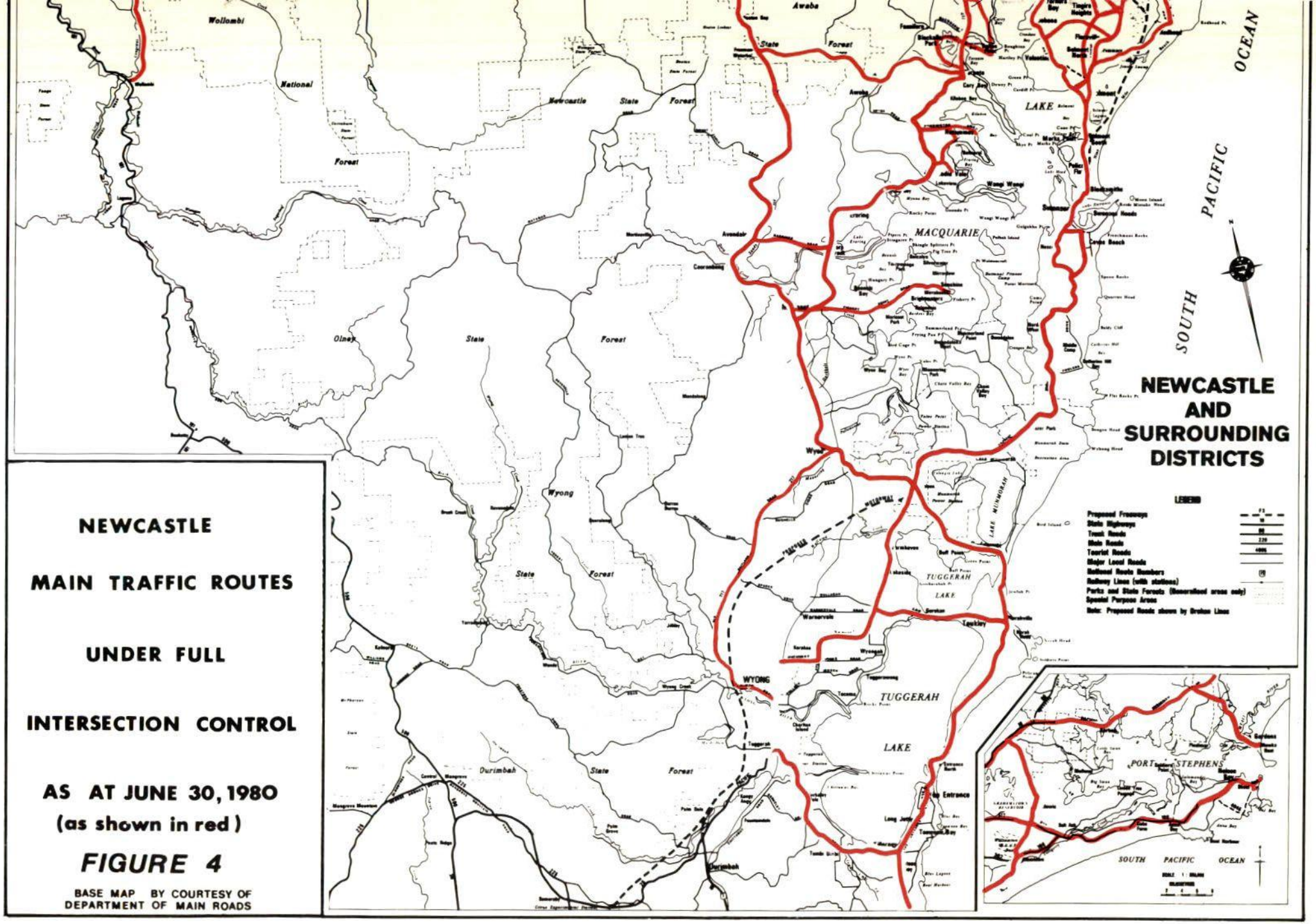
INTERSECTION CONTROL

AS AT JUNE 30, 1980
(as shown in red)

FIGURE 3

BASE MAP BY COURTESY OF
DEPARTMENT OF MAIN ROADS


To Northern Divisional Boundary
To Divisional Boundary
To Shoal Bay
SINGLETON
CESSNOCK
MAITLAND
NEWCASTLE
Wallaroo State Forest
GRAHAMSTOWN RESERVOIR
FULLERTON COVE
Kooragang Island
Pokolbin State Forest
Newcastle State Forest
Jerri Karri
Raymond Terrace



NEWCASTLE

MAIN TRAFFIC ROUTES

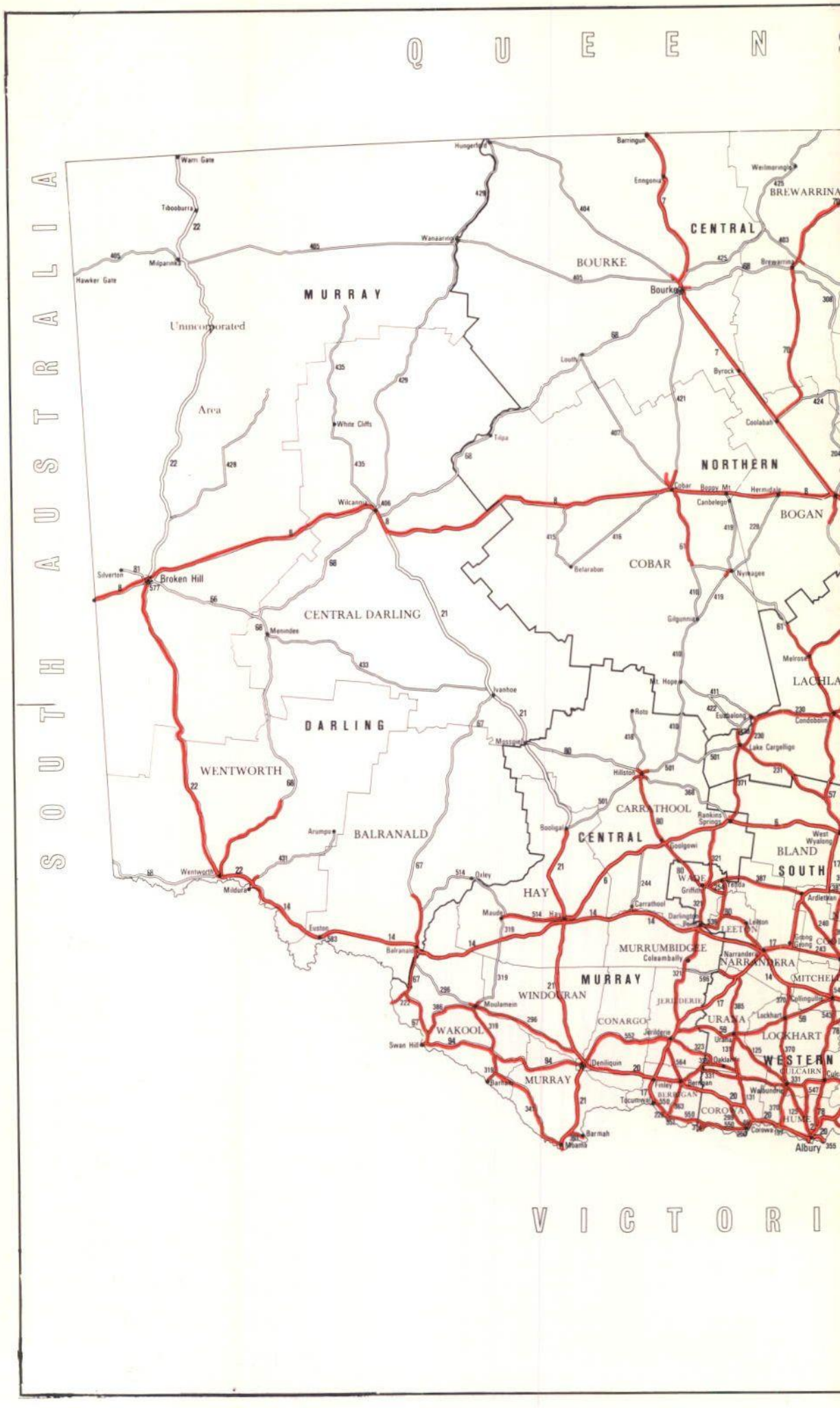
UNDER FULL

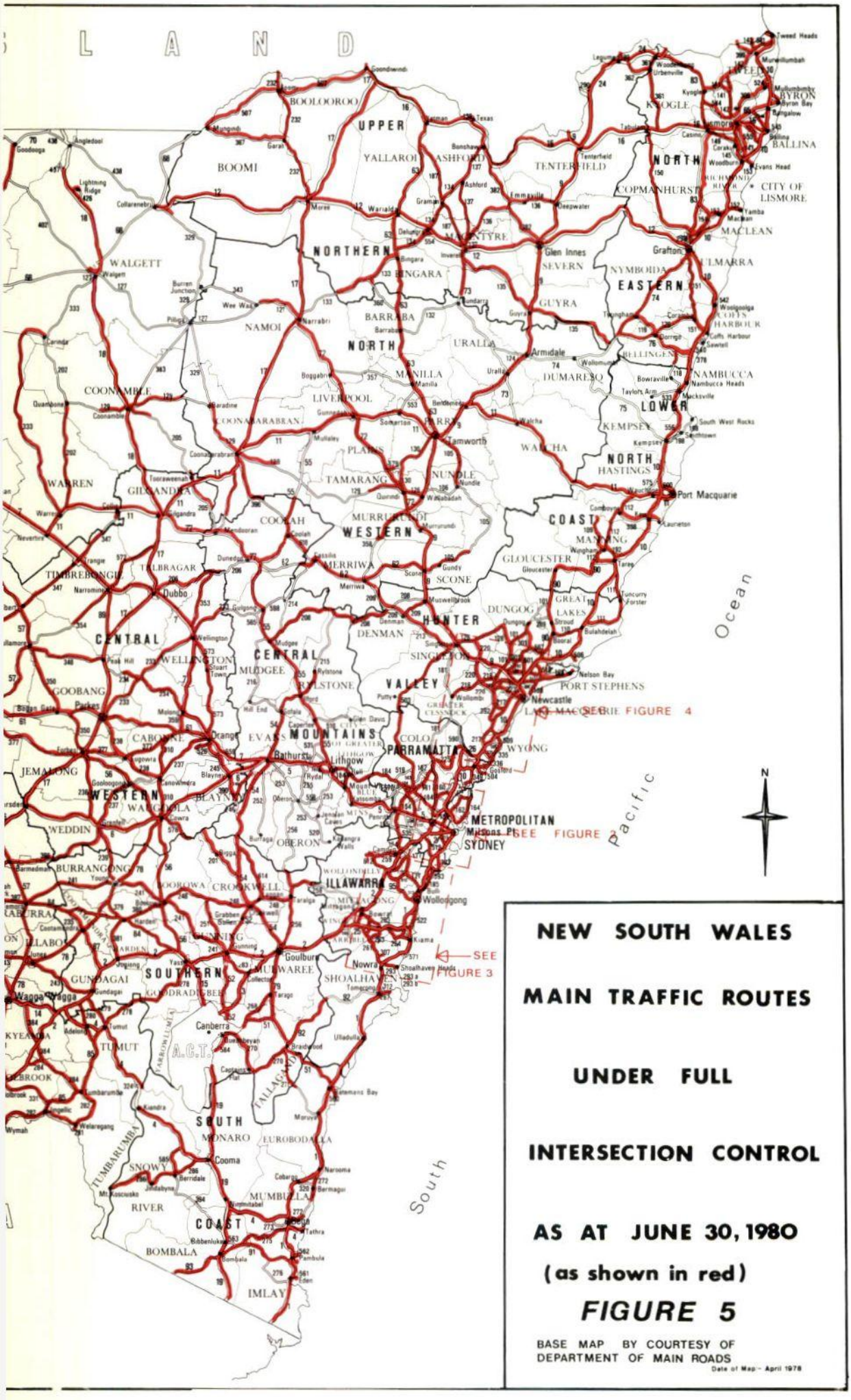
INTERSECTION CONTROL

AS AT JUNE 30, 1980
(as shown in red)

FIGURE 4

BASE MAP BY COURTESY OF
DEPARTMENT OF MAIN ROADS


Q U E E N
SOUTH AUSTRALIA
Warri Gate
Tibooburra
Hawker Gate
Milparinka
Wanaaring
Hungerford
Barringun
Enngonia
Weilmoringle
BREWARRINA
CENTRAL
BOURKE
Bourke
Brewarrina
MURRAY
Unincorporated
Area
White Cliffs
Louth
Byrock
Coolabah
NORTHERN
Cobar
Boggy Mt
Hermidale
Canbelego
BOGAN
Wilcannia
COBAR
Nymagee
Silverton
Broken Hill
Belarabon
CENTRAL DARLING
Menindee
Gilgunnia
Ivanhoe
Mt. Hope
Rots
Condobolin
LACHLA
DARLING
Mossgiel
Lake Cargelligo
WENTWORTH
Hillston
CARRATHOOL
Rankins Springs
Booligal
CENTRAL
BALRANALD
Arumpo
Tooloowi
West Wyalong
BLAND
SOUTH
Wentworth
Mildura
Oxley
HAY
Griffith
Carrathool
Maude
LEETON
Balranald
MURRUMBIDGEE
Coleambally
Narrandera
NARRANDERA
MURRAY
WINDOURAN
Moulamein
JERILDERIE
URANA
CONARGO
WAKOOL
Swan Hill
Deniliquin
LOCKHART
WESTERN
MURRAY
Barham
Finley
Tocumwal
Berrigan
Wakool
COROWA
Moama
Albury
V I C T O R I



NEW SOUTH WALES

MAIN TRAFFIC ROUTES

UNDER FULL

INTERSECTION CONTROL

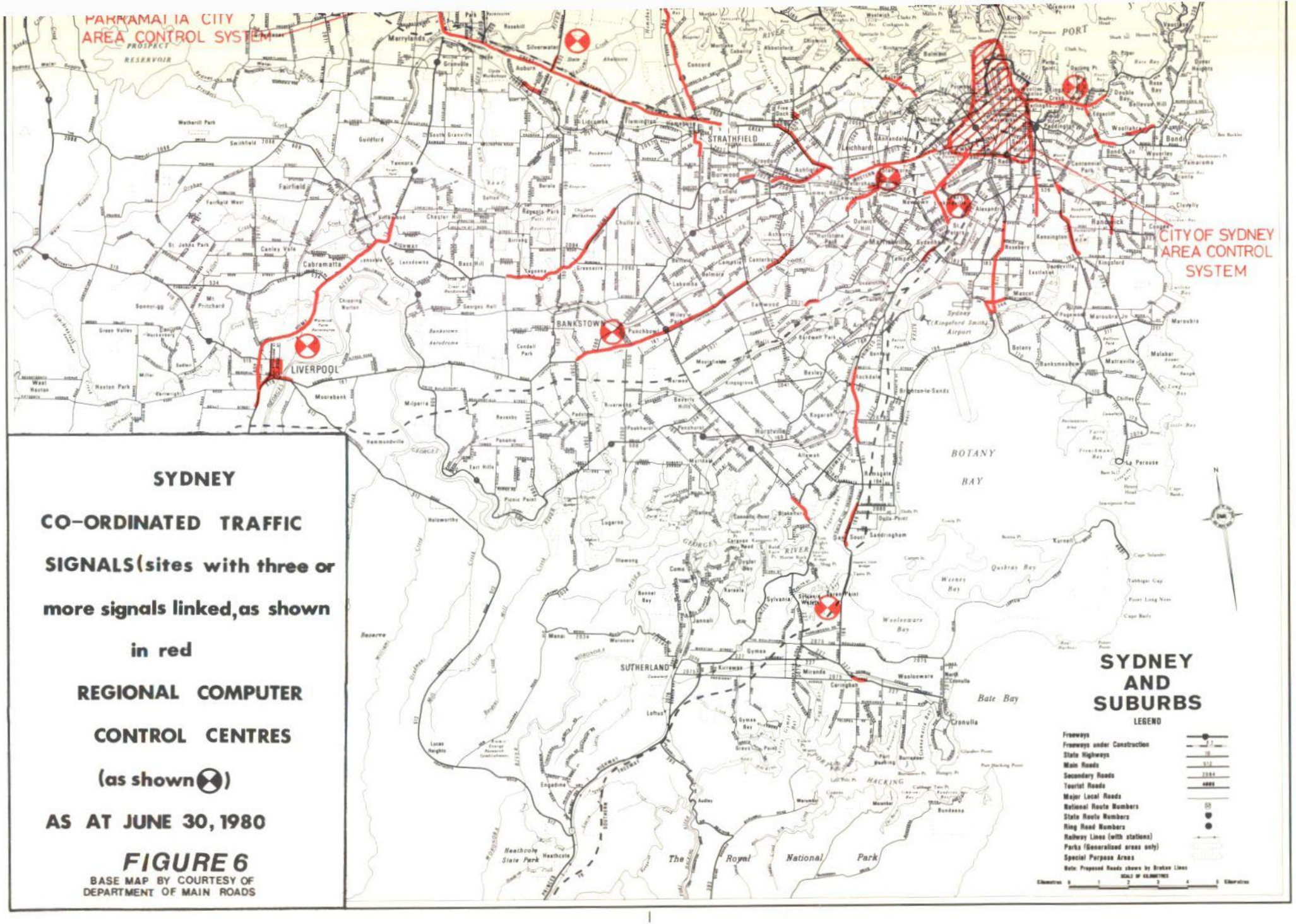
AS AT JUNE 30, 1980

(as shown in red)

FIGURE 5

BASE MAP BY COURTESY OF
DEPARTMENT OF MAIN ROADS
Date of Map - April 1978


BROKEN BAY
HAWKESBURY RIVER
Maroota State Forest
Ku-ring-gai Chase
National Park
PITT WATER
COWAN CREEK
HORNSBY
CHATSWOOD
EPPING
RYDE
PARRAMATTA
BLACKTOWN
MANLY
NORTH SYDNEY
THE SOUND
NORTH HARBOUR
Cowan
Berowra
Fiddletown
Arcadia
Galston
Middle Dural
Mt. Colah
Asquith
Hornsby Heights
North Turramurra
St. Ives
Pymble
Gordon
Roseville
Lindfield
Killarney Heights
Forestville
Frenchs Forest
Belrose
Terrey Hills
Duffys Forest
Ingleside
Mona Vale
Warriewood
Newport
Bayview
Avalon Beach
Clareville Beach
Taylors Point
Palm Beach
Whale Beach
Barranjoey Head
Commodores Heights
West Head
Flint and Steel Bay
Elanora Heights
Narrabeen
Collaroy Plateau
Collaroy
Narrawena
Dee Why
North Curl Curl
Brookvale
Curl Curl
Harbord
Queenscliff
Manly Vale
Balgowlah
Balgowlah Heights
Seaforth
Clontarf
Beauty Point
Mosman
Cremorne
Neutral Bay
Cammeray
Northbridge
Artarmon
Willoughby
Lane Cove
Greenwich
Riverview
Meadowbank
Ryde
Eastwood
Dundas Valley
Telopea
Carlingford
North Rocks
Pennant Hills
West Pennant Hills
Beecroft
Cheltenham
South Turramurra
Wahroonga
Warrawee
Turramurra
Normanhurst
Westleigh
Castle Hill
Kellyville
Glenhaven
Rouse Hill
Kenthurst
Dural
Round Corner
Box Hill
Schofields
Quakers Hill
Oakhurst
Marayong
Lalor Park
Kings Langley
Parklea
Doonside
Winston Hills
Toongabbie
Pendle Hill
Girraween
Wentworthville
Prospect
Eastern Creek
Westmead
Parramatta
Rydalmere
Ermington
Melrose Park
Concord West
Concord
Homebush Bay
Strathfield
Burwood
Enfield
Croydon
Ashfield
Petersham
Leichhardt
Lilyfield
Rozelle
Balmain
Birchgrove
Drummoyne
Five Dock
Abbotsford
Cabarita
Mortlake
Gladesville
Hunters Hill
Woolwich
Greenwich
Waverton
Wollstonecraft
Crows Nest
Milsons Point
Kirribilli
Lavender Bay
Jeffreys Bay
Berrilee
Mt. Kuring-gai
Cottage Pt.
Shark Rock Pt.
Challenger Head
Juno Pt.
Georges Pt.
Elvina Bay
Porto Bay
Sandy Pt.
Careel Bay
Stokes Pt.
Taylors Bay
Salvation Co.
Scotland Island
Bungan Head
Bilgola Head
Whale Beach
Careel Head
South Head
Turimetta Head
Narrabeen Head
Long Reef Pt.
Dee Why Head
North Curl Curl
Curl Curl Head
North Head
Middle Head
South Head
The Gap
Watsons Bay
Hornsby Waters
Sydney Water
Mooney Mooney Creek
Cowan Creek
Smiths Creek
Coal and Candle Creek
Mullet Creek
Middle Harbour
Lane Cove River
Parramatta River
Lane Cove National Park
Muogamarra Nature Reserve
Berowra Waters
Hawkesbury River
Pacific Highway
Newcastle Railway
Sydney Railway
Bobbin Head
Mt. Kuring-gai
Eastern Freeway
Great Western Highway
Parramatta Park
Macquarie University
Marsfield
Ryde Bridge
Gladesville Bridge
Sydney Harbour Bridge
Harbour Tunnel
Warringah Freeway
Roseville Bridge
Spit Bridge
Mona Vale Road
Pittwater Road
Barrenjoey Road
Wakehurst Parkway
Forest Way
Castle Hill Road
Old Northern Road
Windsor Road
Victoria Road
Parramatta Road
Great Western Highway
Eastern Freeway
Lane Cove Tunnel
Gore Hill Freeway
Warringah Freeway
Roseville Bridge
Spit Bridge
Mona Vale Road
Pittwater Road
Barrenjoey Road
Wakehurst Parkway
Forest Way
Castle Hill Road
Old Northern Road
Windsor Road
Victoria Road
Parramatta Road



SYDNEY

CO-ORDINATED TRAFFIC SIGNALS (sites with three or more signals linked, as shown in red

REGIONAL COMPUTER CONTROL CENTRES

(as shown ⊗)

AS AT JUNE 30, 1980

FIGURE 6

BASE MAP BY COURTESY OF DEPARTMENT OF MAIN ROADS

PUBLICATIONS

DOCUMENTS, REPORTS AND TECHNICAL PAPERS PUBLISHED BY THE TRAFFIC AUTHORITY.

Information Pamplet:

"The Traffic Authority of New South Wales"	October 1979

Guidelines:

Provisional Guidelines for the Authorisation and Installation of Traffic Control Facilities	Revised Nov. 1978
Guidelines for Road Closures	Revised Jan. 1979
Locational Criteria and Siting Requirements for Container Depots	April 1978
Policy and Standards for Traffic Generating Development	June 1978
Guidelines for Resident Parking Schemes	March 1979

Discussion Papers:

Development of a Metropolitan Parking Policy – by F. Bezer	October 1977
Functional Classification of Roads	April 1978
Extending the Hours of Operation of Clearways – Dr. S. Moore	June 1980

Symposium Report:

Control of Traffic on Residential Streets–	June 1979

Reports on Research Projects:

Report on Car Pooling Research Project Stage 2 – by Development Planning & Research Pty. Ltd.	February 1977
Bus Priority Survey: St. Leonards – by Stapleton Transportation Planning Pty. Ltd.	May 1977
Car Pooling on A Georgraphical Basis	June 1977
Evaluation of Transit Lanes – by C. Hallam	October 1977
Social and Economic Costs and Benefits of Extended Clearways – by W.D. Scott & Co. Pty. Ltd.	October 1977
Bicycle Use as a Transport Mode: Attitude Surveys (3 Vols) – by Lyle Marshall and Associates with Planning Workshop Pty. Ltd.	December 1977
Traffic Law Observance Study – by Planning Workshop Pty. Ltd.	March 1978
Traffic Law Observance Study – Summary Report – Planning Workshop Pty. Ltd.	May 1978
Left Turn on Red Signal Final Report – by De Leuw Cather of Aust. Pty. Ltd.	April 1978
Impact of Land Use on Traffic – by Sinclair Knight & Partners Pty. Ltd. with R.J. Nairn & Partners Pty. Ltd.	June 1978
Transport System Management in Sydney – by Stapleton, Clark & Associates	June 1978
Bicycle Use Feasibility Study – by GHD-Parsons Brinckerhoff Pty. Ltd.	July 1978
Report on the Survey of Traffic Safety Aids Outside Schools	April 1979
Study of the Effects of Flexitime and Staggered Hours on Transport – Gaven McDonnell & Co.	June 1979
Feasibility Study into Preferential Treatment for Commercial Vehicles – Alan Voorhers & Partners Pty. Ltd.	October 1979
Land Use Traffic Generation Data and Analysis	June 1980
– Office Blocks	
– Factories	
– Licensed Clubs	
– Shopping Centres	
– Motels	
– Service Centres	
– Motels	
– Service Stations	
– Recreation	
– Car Sales and Spares	
– Car Accessories and Tyres	
– Warehouses	
– Road Transport Terminals	
– Hotels	
– Fast Food Restaurants	
– Summary	

*May be examined at the Authority's Offices.

New Era Printing Company. 53 7613