SECTION 3

POPULATION

The primary source of population data is the Australian Bureau of Statistics. The information available is mainly derived from periodic Censuses of Population and Housing; in some cases, special purpose surveys are conducted to obtain more detailed population data.

For certain categories of data, intercensal estimates of population are available. The Bureau also prepares population projections from time to time.

Record 3.101 POPULATION - Australia

Census of Population and Housing

1. **Source**
   Collector and Distributor: Australian Bureau of Statistics, Cameron Offices, Belconnen, ACT 2616.

2. **Periodicity of Availability**
   Under the Census and Statistics Act1905 the Australian Bureau of Statistics is required to take a Census of Population and Housing every five years. Censuses were conducted occasionally between 1911 and 1954 but have been five yearly since 1961.

3. **Region of Availability**
   All States, Australian Capital Territory and Australia.

4. **Published Information**
   Details are provided on some of the publications of the two most recent Censuses.

   1976 Census
   'Preliminary Checks' - ABS Cat.Nos. 2400.1 to 2400.8, 2401.1 to 2401.8, 2402.1 to 2402.8 which were superseded by ABS Cat.Nos. 2401.0 to 2408.0.

   'characteristics of the population (Preliminary)' - *ABS* Cat.Nos. 2201.0 to 2209.0.

   Main Data - Available on request as either computer printout, microfiche or magnetic *tape.*

   Additional important publications are:

ABS Cat.No.	2103.0	'Catalogue of 1976 Census tables'.
	2105.0	'Release of data on magnetic tape'.
	2106.0	'Release of data on microfiche'.
	2111.0	'Collection district and local government area summary files on magnetic tape'.
	2114.0	'Occupation classification extract'.
	2115.0	'Classification of educational qualifications'.
	2129.0	'Making sense of the Census'.

   1971 Census

ABS Cat.No.	2231.0 to 2239.0	- 'Bulletin 3. Demographic Characteristics'.
	2103.0	- 'Bulletin 14. Catalogue of 1971 Census Tabulations'.

5. **Supplementary Information**
   Magnetic tapes and microfiche.

6. **Limitations**
   Frequencies of some variables have been estimated from processing samples of the ceusus returns. Details are provided in the Explanatory Notes of each publication.

Record 3.101 (Sheet 2)

7. Description of Data Available

1976 Census

(A) 2209.0 'Characteristics of the Population: States, Territories and Australia (Preliminary)'

Birthplace by single year of age by marital status: States, Territories and Australia.

(B) 2201.0 to 2208.0 'Characteristics of the Population: Local Government Areas (Preliminary)'

(1) Table 1: Marital status and birthplace (Australia/UK and Eire/Other) by age group (0-4/5-9/ ...65+) by Local Government Area and by Statistical Division.

(2) Table 2: Birthplace (as above) by age group (0/1/2/ ...70+) by marital status (as above) by sex.

(3) Computer printout sheets:

A separate sheet for each Collector District, containing:

1. Number of males/females, occupied/unoccupied dwellings.
2. Population by marital status (as above) by sex.
3. Population by birthplace (as above).
4. Age distribution of population (0/1/2/ ... 99+) by sex.

(C) 2401.0 to 2408.0 'Population and Dwellings in Local Government Areas and Urban Centres (Preliminary)'

(1) Table 1: Area (square km), number of persons and dwellings by Local Government Area.

(2) Table 2: Number of males/females by Local Government Area, by Statistical Division.

(3) Table 3: Number of males/females by Urban Centre.

(4) Table 4: Number of persons and dwellings (occupied private/occupied non-private/unoccupied) by Urban Centre.

(5) Table 5: Frequency distribution of number of Urban Centres by population size (under 1,000/1,000-1,999/ ... 500,000 and over), showing population and percentage of population in each class interval. Also showing cumulative frequency distribution.

(6) Table 6: Number of dwellings (as above) by Local Government Area, by Statistical Division.

(7) Table 7: Number of persons and occupancy ratio (average number of persons per occupied private dwelling) by Local Government Area.

(8) Appendix: Census data collection form (complete) and maps.

Record 3.101 (Sheet 3)

1971 Census

2231.0 to 2239.0 'Demographic Characteristics Bulletin 3'

(1) Marital status by single year of age.

(2) Marital status by employment status *by* usual activity.

(3) Age by birthplace of parents.

(4) Age by marital status by birthplace.

(5) Age by marital status by nationality.

Record 3.102 POPULATION - Australia

Census Data Specifically Related to Exposure

1. Source
Collector and Distributor: Australian Bureau of Statistics, Cameron Offices, Belconnen, ACT 2616.

2. Periodicity of Availability
Refer to Record 3.101.

3. Region of Availability
Australia.

4. Published Information
Refer to Record 3.101.

5. Supplementary Information
Magnetic tapes and microfiche.

6. Limitations
Refer to Record 3.101.

7. Description of Data Available
The three most recent censuses contained certain questions which are directly related to the collection of exposure information. These questions, and their implications, are described below. Similar questions were asked in earlier censuses.

1981 Census

(1) Q. 8: Where does each person usually live? (Location of residence).

(2) Q.28: For the main job held LAST WEEK, what was the employer's trading name and address of workplace? (Location of employment).

(3) Q.31: How did the person get to work on Monday 29 June 1981? (Journey to work).

(4) Q.H4: How many registered motor vehicles owned or used by members of this household were garaged or parked at or near this dwelling for the night of 30 June 1981? Exclude motor bikes, motor scooters, tractors. Include company vehicles kept at home. (Vehicle usage).

1976 Census

(1) Q. 6: Where does each person usually live? (Location of Residence).

(2) Q.20: Attendance at any educational institution: Name and address of educational institution. (Location of attendance at educational institution).

(3) Q.23: Is the person licensed to ride a motor bike or motor scooter? (Driver's Licence).

(4) Q.24: Is the person licensed to drive a motor vehicle (other than a motor bike or motor scooter)? (Driver's Licence).

Record 3.102 (Sheet 2)

(5) Q.39: For the main job held last week, print employer's trading name and address of workplace.
(Location of employment).

(6) Q.41: *How* did each person get to work on Tuesday 29 June 1976?
(Journey to work).

(7) Q. 8, second section of questionnaire: How many registered motor vehicles owned or used by members of this household were garaged or parked at or near this dwelling for the night of 30 June 19767 Exclude motor bikes, motor scooters, tractors. Include company vehicles kept at home.
(Vehicle usage).

1971 Census

(1) Q.D14: How many motor vehicles owned or driven by members of your household were garaged or parked at or near this dwelling for the night of Wednesday 30 June 1971? Exclude motor cycles, scooters, tractors. Include company vehicles kept at home.
(vehicle usage).

(2) Q. 8: If this person is now a child at school or a full-time or part-time student, print full name and address of school, university, college, etc.
(Location of attendance at educational institution).

(3) Q. 7: What is the full trading name and address of the person's *own* or employer's business, at which the person works?
(Location of employment).

(4) Q. D1: Where does this person usually live?
(Location of residence).

Record 3.103 POPULATION - Australia

Intercensal Estimates of Population

1. Source
Collector and Distributor: Australian Bureau of Statistics, Cameron Offices, Belconnen, ACT 2616.

2. Periodicity of Availability
Quarterly.

3. Region of Availability
All States, Australian Capital Territory and Australia.

4. Published Information

ABS Cat.No. 3101.0 'Australian Demographic Statistics (Quarterly)'. First published June 1979. Corresponding details were published previously in 'Demography' - last issue 1971.

3211.0 'Population and Vital Statistics (Preliminary)' - last issue March quarter 1979.

3212.0 'Population and Vital Statistics' - last issue December quarter 1978.

3201.0 'Estimated Age Distribution of the Population: States and Territories of Australia (Annual), (at June 30).

5. Supplementary Information
In addition to the detailed statistics provided for Australia, summary figures are given for individual States. More detailed data are provided in publications issued by *ABS* State offices; such as 3205.1 'Estimated Age Distribution of the Population: New South Wales'.

Projected population of the States and Territories by sex and age group (0-14, 15-44, 45-64, 65 and over) are available in *ABS* Catalogue No. 3214.0 'Projections of the population of the States and Territories of Australia 1978-2011'.

Other *ABS* publications contain data on Births, Causes of Death. Refer to the ABS 'Catalogue of Publications' (Cat.No. 1101.0) for details.

6. Description of Data Available

(A) 3101.0 'Australian Demographic Statistics. Quarterly'

(1) Table 4: Population by sex, States and Territories.

(2) Table 5: Mean population, calendar years (male/female): States and Territories.

(3) Table 6: Mean population, financial years (male/female) : States and Territories.

(4) Table 7: Estimated (at June 30) population by age groups (0-4, 5-14, 15-24, 25-34, 35-44, 45-64, 65 and over): Australia 1974 to 1978.

Record 3.103 (Sheet 2)

(B) 3201.0 'Estimated Age Distribution of the Population, States and Territories of Australia'

(1) Table 1: Estimated number of males at June 30, by single year of age and five-year age groups: States and Territories.

(2) Table 2: Same as Table 1 for females.

(3) Table 3: Same as Table 1 for persons.

SECTION 4

DRIVERS' LICENCES

The main source of data on drivers' licences are the State and Territory licencing authorities which, in all cases but meensland, also administer motor registrations.

The Australian Bureau of Statistics publishes a limited amount of information on drivers' licences, although no data on the number of licences in force are available for Queensland.

Some data on licences for taxis, hire cars and tow trucks are contained in the annual reports of various State motor regulation authorities, which are described in Section 1 - Vehicles on Register.

Record 4.101 DRIVERS' LICENCES - Australia

Australian Bureau of Statistics

1. Source
Collector and Distributor: Australian Bureau of Statistics, Cameron Offices, Belconnen, ACT 2616.

2. Periodicity of Availability
Annual (see paragraph 4 below).

3. Region of Availability
Australia.

4. Published Information
ABS Catalogue No.9201.0 'Rail, Bus and Air Transport, Australia' (annual), previously ABS Reference No.14.21. First published 1972-73. The corresponding publication prior to that was 'Transport and Communication, Australia' (annual), Bulletin N0.63.

5. Supplementary Information
Drivers' licences data are also published by some of the State Offices of the ABS, and in the Commonwealth and State Yearbooks (except for Queensland). These are described in paragraph 7, parts (B) and (C) below.

6. Limitations
Information on the number of drivers' licences in force is not available for Queensland.

Drivers' licences data published by the Australian Bureau of Statistics are based on information supplied by the State and Territory licensing authorities. Refer to Records 4.201, 4.301, 4.401, 4.501, 4.601, 4.701, 4.801 and 4.901 for a description of the limitations which apply to data of this kind.

7. Description of Data Available

(A) 9201.0 'Rail, Bus and Air Transport, Australia' *(annual)*
Total number of drivers' and riders' licences in force, by State and Territory at June 30, for the last 10 years. Data for Queensland are not included. For the Northern Territory, data available are limited to the number of licences issued or renewed during the year; number of licences in force at the end of the year is not stated. Information for the Northern Territory is available only since 1968.

(B) Data Published by the *ABS* State Offices

(1) New South Wales: ABS Catalogue No.9101.1 'Transport and Communication' (bi-annual). Section II deals with motor transport.
Contents:
Table 1: Number of drivers' and riders' licences in force at June 30, by class of licence (Class 1, 2, 3, 4, 5, taxicab driver's licence, motor cycle rider's licence), for the last 6 years.
Also shown are details on motor vehicle offences, and the number of licences suspended or cancelled.

(2) South Australia: *ABS* Catalogue No.9102.4 'Transport and Communication' (annual).
Contents:
Table 22: Number of drivers' and riders' licences in force at June 30,

Record 4.101 (Sheet 2)

for the last 5 years. Separate data for various types or classes of licences are not included.

(3) Western Australia: *ABS* Catalogue No.9101.5 'Transport and Communication' (annual).
Contents:
Table 29: Number of drivers' licences on issue at June 30, by type of licence (ordinary, probationary), by age of driver (under 17, 17-20, 21-24, 25-29, 30-39, 40-49, 50-59, 60-74, 75 years and over). Also shown is the number of ordinary and probationary licences issued during the year, including re-issue of cancelled probationary licences.
Table 30: Number of drivers' licences suspended or cancelled, by type of licence (ordinary, probationary), for the last 5 years.

(C) *ABS* Yearbooks

Some information on drivers' licences is also contained in the Australian Yearbook, and in the Yearbooks of New South Wales, Victoria, South Australia, Western Australia and Tasmania.

Record 4.201 DRIVERS' LICENCES - New South Wales

Department of Motor Transport, Sydney

1. Source
Collector and Distributor: Department of Motor Transport, 50 Rothschild Avenue, Rosebery, NSW 2018.

2. Periodicity of Availability
The data available are part of an internal records system which is continually updated. Some information is published each year by the Department in its annual report.

3. Region of Availabilitx
New South Wales.

4. Published Information
(1) The Australian Bureau of Statistics publishes some infomation on drivers' licences, based on data supplied by the State licensing authorities. (Refer Record 4.101).
(2) Annual Report of the Commissioner for Motor Transport.

5. Supplementary Information
It would be possible to generate special-purpose computer printouts, showing summaries of various sub-sets of drivers' licences data on file. This may require development of new computer programs. Whilst the Department would consider favourably any requests from appropriate authorities for additional data of this kind, such requests would have to be examined against other priorities and the current work load of the Department's computer programming resources.

6. Limitations
The main computer record is a 'Data Base' file which contains all details relating to drivers' licences - current licences, a record of past transactions and traffic offences data.

Current and historical detail has been available on the on-line system since the records were converted from a punch card system in July 1974.

The year when the driver obtained his first licence is recorded on the on-line system for all current licences, and those licences which have lapsed since 1970. Historical data on drivers' licences is available on microfilm for the period 1957 to July 1974, with some minor exceptions.

Details on traffic offences were included in the on-line system in the latter part of 1978. The Traffic Offences Record contains details of suspensions, cancellations, traffic offences and demerit points scored by a driver under the 'Points System', which dates back to July 1, 1975. Convictions for offences involving automatic disqualification have been recorded and date back to January 1, 1973. Earlier offences are recorded on microfilm.

Records on drivers' licences may be out of date to some extent, as a high proportion of licences is issued for a three year period, during which some changes may occur, of which the Department may not have been notified (e.g. the death of a licence holder). Hence the actual number of licensed drivers would tend to be somewhat smaller than the number of licences in force.

Drivers can hold two or more different types of licences (e.g. car, motor cycle).

Drivers are required to state any medical disabilities affecting their driving performance when applying for their initial licence. Being self-reported

Record 4.201 (Sheet 2)

information, this data source is unlikely to provide a reliable indication of the medical condition of the population of licensed drivers, particularly as any later changes in health may not be reported.

Since 1968, drivers can renew their licences for a 3 year period if so desired. Persons 77 years of age or older, and drivers of public vehicles can only obtain licences of one year duration. The same restriction applies to drivers who would be subject to a medical review within the three year period.

The initial licence issued on passing a driving test is a Probationary Licence which covers the first 12 months. After that, the driver can obtain an ordinary licence. If more than 24 months have passed since the expiry of a driver's licence, the driver must undergo another driving test. An eyesight test is required to renew a licence that has lapsed, regardless of the period since expiry.

A system of graded licences for motor cyclists was introduced in 1977, which specifies the maximum engine capacity of motor cycles which the licensee is permitted to ride within the stated period after obtaining his first licence.

7. Description of Data Available

(A) Computer Records: 'Data Base' File

(1) Name and address of licence holder.

(2) Title of licence holder (Mr., Mrs., Miss, Dr. etc.).

(3) Sex of licence holder.

(4) Licence number.

(5) Class of licence (seven categories of drivers' licences are available).

(6) Type of licence (provisional, full, temporary, etc.).

(7) Date of birth of licence holder.

(8) Licence expiry date.

(9) Date of original issue (when the holder was first issued with a New South Wales driver's licence).

(10) Tenure of licence (1 or 3 years).

(11) Whether the holder normally wears spectacles.

(12) Any special conditions or restrictions (e.g. special requirements for disabled drivers, driving restrictions imposed by the Court, etc.).

(B) Annual Report of the Commissioner for Motor Transport

(1) Number of drivers' licences in issue at intervals since 1910: at December 31, 1910, 1911, 1916, 1921, 1926, 1931, 1936, 1940, 1941, 1946; at June 30, 1951, 1956, 1961 and annually thereafter.

(2) Dissection of licences by type: number of drivers' licences (including provisional licences) in issue: showing separate data for Class 1, Class 2, Class 3, Class 4, Class 5, taxi-cab (for Metropolitan, Newcastle and Wollongong Transport District), motor cycle licences. Data shown as at June 30 for the last two years.

(3) Number of motor vehicle driving instructors' licences in issue at June 30 for the last two years.

Record 4.201 (Sheet 3)

(4) Number of applicants for a driver's licence, who successfully passed the competency test during the year.

(5) Number of provisional drivers' and riders' licences issued during the year.

(6) Details on cancellations, suspensions and refusals of driving licences, and convictions for traffic offences and other related offences.

Record 4.202 DRIVERS' LICENCES - New South Wales

Census of Motor Vehicle Licences in NSW, December 1971

1. Source
Collector and Distributor: Traffic Accident Research Unit, Traffic Authority of New South Wales, P.O. Box 110, Rosebery, NSW 2018.

2. Periodicity of Availability
Once-only study, conducted in 1972-73.

3. Region of Availability
New South Wales.

4. Published Information
'Census of Motor Vehicle Licences in New South Wales, December 1971', Traffic Accident Research Unit, Department of Motor Transport, New South Wales, Sydney (1973).

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Licences to drive taxis in the Sydney metropolitan area, Newcastle and Wollongong were not included in the census.

The number of licences in force and the number of licensed drivers is not identical, as any driver may hold two or more licences at the same time.

Some of the tables in the report (Tables 6 to 11) exclude a small number of licences which were included in the remaining tables.

The report deals with six types of licences which entitle the holder to drive the following vehicles:

- Class 1 - motor cars, including derivatives (panel vans, utilities, station sedans), tractors, light trucks.
- Class 2 - hire cars, hire vans, country taxis.
- Class 3 - heavy rigid trucks.
- Class 4 - omnibuses and vehicles covered by Classes 2 and 3.
- Class 5 - any motor vehicle (except a motor cycle and a public passenger vehicle).
- Class 6 - motor cycles.

7. Description of Data Available

(1) Graphs, depicting the percentage distribution and the cumulative percentage distribution of male and female licence holders in the following groupings: all Class 6 licences, Class 6 licences under review, all Class 1 to 5 licences, Class 1 to 5 licences under review, plotted against age of licence holder.

(2) Tables 1 and 2: Number of licence holders by sex, by licence class, by age (15, 16, 17, ... 79, 80 years and over).

(3) Table 3: Number of holders by sex, by age (same categories as for item (2) above), according to whether holder is wearing spectacles or not.

(4) Tables 4 and 5: Number of holders by sex, by age (15, 16, 17, ... 49, 50 years and over), by number of years since first licensed (0-1, 1-2, 2-3, 3-4, ... 9-10, 10-15, over 15 years).

(5) Tables 6 to 11: Same as item (4) but showing separate data for each of

Record 4.202 (Sheet 2)

the *six* licence classes. Data shown are for both sexes, without separate tables for males and females.

(6) Tables 12 to 15: Cumulative age percentages and age percentages of male and female licence holders (same categories as for item (2) above), showing separate data for each of the *six* licence classes, for all licences and for Class 1 to 5 licences.

(7) Table 16: Number of male licence holders as a percentage of all licence holders by age (same categories as for item (2) above), showing separate data for each of the six licence classes.

(8) Table 17: Same as item (7) but for females.

(9) Tables 1A to 17A: Same data as described above, but for licences under review for fitness to drive.

Record 4.301 DRIVERS' LICENCES - Victoria

Motor Registration Branch, Melbourne

1. Source
   Collector and Distributor: Motor Registration Branch, Victoria Police, 560 Lygon Street, Carlton, Vic. 3053.

2. Periodicity of Availability
   The data available are part of an internal records system which is continually updated. Some information is published each year in the Victoria Police Annual Report.

3. Region of Availability
   Victoria.

4. Published Information
   (1) The Australian Bureau of Statistics publishes some information on drivers licences, based on data supplied by the State licensing authorities. (Refer Record 4.101).
   (2) Annual Report of the Victoria Police.

5. Supplementary Information
   Some information on taxis, buses and goods carrying vehicles is contained in the Annual Report of the Transport-Regulation Board. (Refer Record 1.302).

6. Limitations
   At present, manual records are used to store and process driver's licence data (with the exception of demerit points data which are on computer). It is planned to convert the present manual records system to a computer system during the early 1980's.

   The hard copy of the initial application for a driver's licence is normally kept for about 18 months, after which a record of it is kept on microfilm.

   The main record, the 'History Card' is the office copy of the most recent licence renewal certificate, filed in expiry date sequence. When a new renewal certificate is issued at the end of the normal licence period of 3 years, the previous renewal certificate is discarded.

   In addition, an 'Index Card' file is maintained, containing an index card for every person who ever held a Victorian driver's licence. Any traffic offences or convictions involving a motor vehicle are recorded thereon. Index cards are filed in alphabetic order of holder's name.

   Records on driver's licences may be out of date to some extent, as licences are normally issued for a three year period, during which some changes may occur of which the Motor Registration Branch may not be notified (e.g. death of licence holder). Hence the actual number of licensed drivers would tend to be somewhat smaller than the number of licences in force.

   Drivers can hold two or more different types of licences (e.g. car, motor cycle).

Record 4.301 (Sheet 2)

Drivers are required to state any medical disabilities affecting their driving performance when applying for their initial driver's licence. Being self-reported information, this data is unlikely to provide a reliable indication of the medical condition of the population of licensed drivers, particularly as any later changes in health may not be reported.

Drivers with certain declared medical disabilities may be required to furnish a medical certificate once every 12 months; the licences issued to them, however, are for a three year period. There are no mandatory restrictions for older drivers.

The initial licence issued on passing a driving test is a Probationary Licence which covers the first three years. After that, the driver can obtain an ordinary licence, the normal currency of which is three years for cars and motor cycles, and one year for tractors. If more than 36 months have passed since the expiry of a driver's licence, the driver must undergo another driving test.

7. Description of Data Available

(A) 'History Card' File

(1) Name and address of licence holder.

(2) Date of birth of licence holder.

(3) Licence expiry date.

(4) Licence number.

(5) Cash register imprint, sharing date when payment was received, receipt number, licence number and amount paid.

(6) Endorsements (heavy vehicles, trailer combinations, articulated vehicles, or special conditions such as driver wearing spectacles, permitted to drive automatic transmission vehicles only, etc.).

Note: Different stationery is used for different types of licences. There are four types of licences: car, motor cycle, tractor, driving instructor. The driving instructor's licence is the only type which carries a photograph of the holder.

A car driver's licence can be endorsed to permit the holder to drive (a) a heavy vehicle, having a tare weight of more than 3 tonnes, or a bus having 12 or more passenger seats; (b) a trailer combination, towing a trailer of 750 kg or greater tare weight; (c) a semi-trailer or articulated vehicle: (d) a fork lift truck.

(B) 'Index Card' File

(1) Name and address of licence holder.

(2) Date of birth of licence holder.

(3) Licence number.

(4) Learner driver's permit number and date of issue.

(5) Date of issue of probationary driver's licence.

Record 4.301 (Sheet 3)

(6) Type of driver's licence issued (car, motor cycle, tractor, driving instructor).

(7) Details of any licence cancellation or non-renewal, or any court conviction pertaining to the licence (e.g. suspension or disqualification).

Note: An index card is also filled in for any person not holding a driver's licence - if convicted of any crime committed with the aid of a motor vehicle.

(C) 'Learner's Permit' File

There is a separate file for History Cards for Learners' Permits, but not for Index Cards.

(1) *Name* and address of permit holder.

(2) Date of birth of permit holder.

(3) Permit number.

(4) Date of issue.

(5) Type of permit (car, motor cycle).

(D) Annual Report of the Victoria Police

(1) Number of drivers' licences issued during the year.

(2) Number of Learner Drivers' Permits issued during the year.

(3) Details pertaining to the demerit point system, number of licences suspended, warnings issued, traffic infringement notices processed, and court convictions processed during the year.

Record 4.401 DRIVERS' LICENCES - Queensland

Traffic Records Branch, Brisbane

1. Source
Collector and Distributor: Traffic Records Branch, Department of Transport, 230 Brunswick Street, Fortitude Valley, Qld. 4006.

2. Periodicity of Availability
The data available are part of an internal records system which is continually updated. Some information is published each year by the Department of Transport in its Annual Report.

3. Region of Availability
Queensland.

4. Published Information
Annual Report of the Commissioner of Transport.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
At present, manual records are used to store and process driver's licence data. The possibility of introducing a computer system is currently being investigated.

The *two* main records are: the 'Application Card' file, and the 'Driver's Licence' file.

The 'Application Card' file contains all initial applications for a driver's licence. Application cards are kept without time limit. They are filed in licence number order.

The 'Driver's Licence' file contains the office copy of the most recent licence renewal certificate, filed in alphabetic order of driver's name. When a new renewal certificate is issued at the end of the normal licence period of five years, the previous renewal certificate is discarded.

Records on drivers' licences may be out of date to some extent, as licences are normally issued for a five year period, during which some changes may occur of which the licencing authority may not be notified (e.g. death of licence holder). Hence the actual number of licensed drivers would tend to be somewhat smaller than the number of licences in force.

Drivers are not issued with separate licences for different types of vehicles. Only one licence is issued to each driver, indicating all the types of vehicles he is permitted to drive.

Drivers are required to state any medical disabilities affecting their driving performance when applying for their initial driver's licence. Being self-reported infonnation, this data is unlikely to provide a reliable indication of the medical condition of the population of licensed drivers, particularly as any later changes in health may not be reported.

Drivers with certain declared medical disabilities can obtain driver's licences for one year periods only, subject to a medical certificate. Drivers over 67 years of age can only obtain one year licences, and a medical certificate must be produced by applicants 70 years of age or older.

Record 4.401 (Sheet 2)

The initial licence issued on passing a driving test is a Probationary Licence which covers the first 12 months. After that, the driver can obtain an ordinary licence which normally has a currency of five years.

Licence renewal reminder notices are not sent out; the onus is on the driver to apply for a renewal. If more than 60 months have passed since the expiry of a driver's licence, the driver must undergo another driving test.

7. Description of *Data* Available

(A) 'Application Card' File

(1) Licence number.

(2) Date of issue.

(3) Name and address of applicant.

(4) Sex of applicant.

(5) Type of licence applied for (8 types of licences).

(6) Place and date of birth of applicant.

(7) Description of personal details of applicant (height, colour of eyes, colour of hair, complexion).

(8) Particulars of any licences previously held by the applicant.

(9) Particulars of any previous convictions, Traffic Offence Notices, disqualifications, licence suspensions or cancellations.

(10) Whether the applicant has ever been refused a driver's licence.

(11) Particulars of any medical disabilities.

(12) Registration number of motor vehicle owned by applicant.

Different stationery is used for applications for an ordinary licence, probationary licence and learner's permit. The information contained in all three types of application cards is the *same,* except that item (12) is omitted in the learner's permit application card.

(B) 'Driver's Licence' File

(1) Licence Number.

(2) Name and address of licence holder.

(3) Sex of licence holder.

(4) Type of licence (eight types of vehicles are listed, e.g. any motor car or motor utility truck, any motor cycle, etc.). The types of vehicles which the holder is permitted to drive is indicated by crossing out all inappropriate vehicle categories.

(5) Description of licence holder (date and place of birth, height, eyes, hair, complexion).

(6) Any special conditions or constraints.

(7) Licence expiry date.

(8) Place and date of issue.

Record 4.401 (Sheet 3)

(C) 'Learner's Permit' File

This file contains the office copy of learners' permits. The data shown is the same as for drivers' licences. The application cards for learners' permits are part of the 'Application Card' file.

(D) 'Traffic History Card' File

This file is maintained on behalf of the police, to provide a central record of all traffic offence notices, warning letters, particulars on the demerit points system, and any court action affecting drivers' licences, breaches of traffic regulations and other relevant offences.

(E) 'Show Cause' File

This file contains particulars of all cases in which licence holders were requested by police-to show cause why their licence should not be suspended or cancelled.

(F) Annual Report of the Commissioner of Transport

(1) Number of hire drivers' licences issued during the year (required by any driver of a licensed taxi-cab or private hire car), by region (Brisbane Metropolitan Taxi District, remainder of State).

(2) Number of driving instructors' licences issued during the year.

(3) Total number of drivers' licences, provisional drivers' licences, and learners' permits issued during the year.

(4) Number of provisional licences cancelled or suspended during the year, by age (drivers under 18, 18-19, 20 years and older).

(5) Number of Show Cause actions prepared by the Department and forwarded to police for attention.

(6) Number of warning letters distributed to licence holders whose names appeared on records related to traffic offences or accidents. Also shown is the number of drivers invited to attend Traffic Education Lectures.

(7) Number of prosecutions made during the year, by type of offence (e.g. unlawful use of vehicle, log book charges, failure to pay charges, failure to submit returns, etc.).

Record 4.501 DRIVERS' LICENCES - South Australia

Motor Registration Division, Adelaide

1. Source
Collector and Distributor: Motor Registration Division, Department of Transport, 60 Wakefield Street, Adelaide, SA 5000.

2. Periodicity of Availability
The data available are part of an internal records system which is continually updated. Some-information is published by the Motor Registration Division in its Annual Report (the first Annual Report was for the years 1978 and 1979).

3. Region of Availability
South Australia.

4. Published Information
(1) The Australian Bureau of Statistics publishes *some* information on drivers' licences, based on data supplied by the State licensing authorities. (Refer Record 4.101).
(2) Annual Report of the Motor Registration Division.

5. Supplementary Information
In addition to the reports described below, it would be possible to generate other special-purpose computer printouts of various sub-sets of driver's licence data on file. This may require modification of existing computer programs or writing new programs. Whilst the Motor Registration Division would consider favourably any requests from appropriate authorities for additional data of this kind, such requests would have to be examined against other priorities and *the* current work load of the Division's computer programing resources.

some information on licenced taxi-cab drivers is contained in the Annual Report of the Metropolitan Taxi-Cab Board. (Refer Record 1.502).

6. Limitations
The Motor Registration Division is using the computer facilities of the State Government ADP Centre, but maintains its own data entry and programing staff.

The main computer record, the 'Current File', is updated once a week, using batch processing. Plans for an on-line system have been considered, but have been deferred for the time being. Computer processing was introduced in 1968.

The 'Current File' contains data on all drivers' licences and learners' permits which have been current at some time since September 1974.

The hard copy of the initial application for a driver's licence is kept without time limit. Records of this kind are available at least since the 1930's. An indication of the 'length of driving experience' could be obtained by taking a sample of these application forms, as the date of first issue of a driver's licence is not included in the computer records.

Records on drivers' licences may be out of date to some extent, as most licences are issued for a three year period, during which some changes may occur of which the Division may not be notified (e.g. death of licence holder). Hence the acutal number of licenced drivers would tend to be somewhat smaller than the number of licences in force.

Record 4.501 (Sheet 2)

Drivers can hold two or more different types of licences (e.g. car, motor cycle, bus).

Drivers are required to state any medical disabilities affecting their driving performance when applying for their initial driver's licence. Being self-reported information, this data is unlikely to provide a reliable indication of the medical condition of the population of licensed drivers, particularly as any later changes in health may not be reported.

Drivers with certain declared medical disabilities can obtain drivers' licences for one year periods only, subject to a medical certificate. The same restriction applies to holders of public vehicle licences, and drivers aged 70 years and over.

The normal currency of a driver's licence is three years, though it is possible for drivers to apply for a one or two year period. If more than 36 months have passed since the date of expiry, the applicant must undergo another driving test.

7. Description of Data Available

(A) Computer Records: 'Current File'

(1) Licence number.

(2) No renewal indicator: a code number indicating whether the printing and issue of a renewal notice should be supressed for any reason (interstate address, deceased, wanted for disqualification or for medical reasons, licence cancelled).

(3) Date of birth of holder.

(4) Licence expiry date.

(5) Date when licence fee payment was received.

(6) Date when licence class had been changed.

(7) *Sex* of holder.

(8) Renewal indicator: a code number indicating whether any special action is required (e.g. where a licence disqualification is recorded within a few weeks of the date of issue of a renewal notice, the driver may have renewed his licence without being entitled to do so, and action should be taken to recover the licence or the renewal notice).

(9) Renewal period (1, 2, 3 years, or up to 70th birthday).

(10) Whether the licensee is also the holder of a driving instructor's licence (so that a review of his suitability to hold a driving instructor's licence is initiated in case of any disqualification or demerit points).

(11) Whether the holder is entitled to a concessional fee (e.g. incapacitated ex-serviceman, pensioner, wheel chair, State commission card holder, etc.) .

(12) Disability code, indicating the type of medical or physical disability.

(13) Disqualification/suspension code, indicating whether the holder is currently under disqualification or suspension and, if so, for what period and whether this has been the first, second, third, ... etc. occasion.

Record 4.501 (Sheet 3)

(14) Name and address of licence holder.

(15) Any special conditions or restrictions.

(16) Licence class (type of driver's licence; six categories are available).

(17) Learner's permit type (first, second or third learner's permit, a learner's permit issued to a licence holder so that an additional or changed licence class can be obtained, a temporary extension to a learner's permit or to an over-age licence, a temporary licence). Permit commencement and expiry dates are also shown.

(18) Whether the holder is permitted to operate a tow truck.

(19) Details of any demerit points imposed, showing the total number of points currently imposed and, for each offence, the type of offence, number of points lost, the date of the offence, whether the holder has appealed, and filing reference numbers. Provision is made for up to ten offences.

(B) Internal Reports

A number of internal reports, in the form of computer printouts, are prepared weekly or annually.

Weekly reports:

(1) Report L1: Number of current licences on file, by class, showing the number of holders of multiple licences in all relevant combinations (e.g. number of persons holding Class 1 licence only; number of persons holding several licences - Class 1, 4A and 5, etc.). Also shown is the *total* number of licences on issue (disregarding multiple holders), the number of current learners' and other types of permits (as described in item (17) of part (A) above), and a breakdown of the number of licences by fee code type.

(2) Report L2: Demerit point score: number of drivers with 1, 2 ... up to 11 demerit points, total number of drivers with points, total number of drivers with over 5 points, number of points recorded during the current week by type of offence (45 categories).

(3) Report L3: Number of current licences on file, by postcode groupings (5000-5099, 5100-5149, ... 5600-5749), showing a description of each relevant region (e.g. metropolitan, near northern, hills and south east, etc.). This report also contains the number of disqualifications and number of suspensions currently in force.

Annual reports (as at July 1):

(4) Report L4: Number of current licences on file, by age (16, 17, ... 95 years) and sex of holder, by type of licence (1, 2, 3, 4, 4A, 5). Number of current learners' permits on file, by type (L1, L2, L3, L4, ... L9; which indicate whether the permit was issued for the first, second, ... ninth time).

(5) Report L5: Number of current licences on file, by postcode.

(6) Report L6: Number of current licences held by over-age drivers (70 years or older), by postcode.

(7) Report L7: Number of current licences held by young drivers, by age (16, 17, 18, 19, 20, 21, 22, 23, 24 years old), by postcode.

Record 4.501 (Sheet 4)

(8) Report L8: Number of current licences on file, by expiry date, showing separate data for each day in *the* year, and monthly totals.

(9) Report L9: Number of current licences held by over-age drivers expiring each month, and number of drivers in this category whose birthday falls into that month.

(10) Report L10: Number of drivers having a medical or physical disability, by type of disability, by age group (16-19, 20-29, ... 80-89, 90-95).

(11) Report L11: Number of current licences on file subject to any special conditions or restrictions, by type of restriction, by age group (16-19, 20-29, ... 80-89, 90-95).

(12) Report L12: Licence analysis by postcode grouping: for each consecutive ten postcode numbers (e.g. 5000 to 5009), the following information is shown: number of current licences by sex, by licence class, number of permits issued, number of disqualifications and suspensions, number of drivers with demerit points, number of drivers with a disability, number of licences with restrictions imposed.

(23) Report L13: Number of drivers with demerit points, by type of demerit point, by age (single year age groups 16, 17, ... 95), by sex.

(C) Initial Application Form

The application form submitted by the driver when seeking to obtain his initial licence, contains the following additional information:

(1) Particulars of any previous applications for a learner's permit or driver's licence in South Australia.

(2) Particulars of any driver's licence previously held in South Australia or elsewhere.

(3) Whether the applicant is currently under disqualification from holding or obtaining a licence, or whether any licence held has been suspended.

(4) Particulars of any previous disqualifications, or licences cancelled, revoked or suspended.

(5) Particulars of any medical disabilities.

(6) Date when applicant passed the driving test.

Note: The same form is also used for applications for learners' permits.

(D) Annual Report of the Motor Registration Division

(1) Number of persons holding one or several drivers' licences, shaving data in all possible combinations (e.g. number of persons holding licences of Class 1 and 4A; Class 1, 4 and 5; Class 3, 4A and 5, etc.). at 30 June for the last two years.

(2) Number of new learners' permits issued, new licences issued and licences renewed during the year.

(3) Number of persons holding a driving instructor's licence at 30 June.

(4) Number of persons holding a *tow* truck certificate (applicable within a radius of 32 km from the Adelaide *GPO)* at 30 June.

Reocrd 4.501 (Sheet 5)

(5) Tow truck operating statistics (number of *tow* trucks operating in the Adelaide metropolitan *tow* truck area, number of companies operating in the area, number of tow truck drivers attending scenes of accidents in the area, number of companies to whom 'authority to tow' books have been issued).

(6) Details on cancellations, suspensions and refusals of driving licences.

(7) Number of persons who passed and persons who failed written and practical driving tests. Separate data are given for aged drivers who passed or failed the practical test.

Record 4.601 DRIVERS' LICENCES - Western Australia

Road Traffic Authority, Perth

1. source
Collector and Distributor: Road Traffic Authority, 22 Mount Street, Perth, WA 6000.

2. Periodicity of Availability
The data available are part of an internal records system which is continually updated. Some information is published each year by the Road Traffic Authority in its Annual Report.

3. Region of Availability
Western Australia.

4. Published Information
(1) The Australian Bureau of Statistics publishes some infomation on drivers' licences, based on data supplied by the State licensing authorities. (Refer Record 4.101).
(2) Annual Report of the Road Traffic Authority.

5. Supplementary Information
It would be possible to generate special-purpose computer printouts, showing summaries of various sub-sets of driver's licence data on file. This would normally require writing of new computer programs. Whilst the Authority would consider favourably any requests from appropriate authorities for additional data of this kind, such requests would have to be examined against other priorities and the current work load of the computer programming resources available.

6. Limitations
At present, the Road Traffic Authority is using the State Treasury computer facilities, and any program modifications or additions would normally be carried out by the State Treasury ADP Section. The Authority intends to acquire its *own* computer facility, the planned introduction date being 1982.

The main computer record, the 'Current Pile', contains data on all drivers' licences and learners' permits which have been current at some time during the last five years. Records on drivers' licences which have not been renewed for more than five years are discarded.

The hard copy of the initial application for a driver's licence is kept without time limit. Records of this kind are available at least since the 1920's.

Records on drivers' licences may be out of date to some extent, as a high proportion of licences are issued for a three year period, during which some changes may occur of which the licensing authority may not be notified (e.g. death of licence holder). Hence the actual number of licensed drivers would tend to be somewhat smaller than the number of licences in force.

Drivers are not issued with separate licences for different types of vehicles. Only one licence is issued to each driver, indicating all the types of vehicles he is permitted to drive.

Record 4.601 (Sheet 2)

Drivers are required to state any medical disabilities affecting their driving performance when applying for their initial driver's licence. Being self-reported information, this data is unlikely to provide a reliable indication of the medical condition of the population of licensed drivers, particularly as any later changes in health may not be reported.

Drivers with certain declared medical disabilities can obtain drivers' licences for one year periods only, subject to a medical certificate. Drivers who reach 75 years of age must submit to a re-test, with further re-tests at age 78. 80 and every year thereafter.

The initial licence issued on passing a driving test is a Probationary Licence which covers the first 12 months. After that, the driver can obtain an ordinary licence, for which he can choose either a one year or three year currency. If more than 60 months have passed since the expiry of a driver's licence, the driver must undergo another driving test.

7. Description of Data Available

(A) Computer Records: 'Current File'

(1) Name and address of licence holder.

(2) Locality code (designating the geographic region: e.g. Southern/ Central/Northern Agricultural/Eastern Goldfields, etc.) . This item is of historical significance only, and is no longer used.

(3) *Sex* of licence holder.

(4) Date of birth of licence holder.

(5) Licence number.

(6) Date of initial issue (when the holder was first issued with a Western Australian driver's licence), and the class of licence issued on that occasion.

(7) Class or classes of current licence (13 classes are available).

(8) Expiry date of current licence (if a licence covers several classes, the same expiry date normally applies to all classes).

(9) Expiry date and class of probationary licence (in cases where the licensee currently holds a probationary licence).

(10) Condition code: describing any special conditions to which the licence is subject, condition expiry date, and the class of licence to which the condition pertains. This code is also used to identify cancelled or suspended licences, deceased licence holders, and age re-test requirements.

(B) Initial Application Form

The application form submitted by the driver when seeking to obtain *his* initial licence contains the following additional data items:

(1) Type of application (original, transferred, reissue of cancelled probationary licence, extraordinary licence, age re-test).

(2) Place of issue.

(3) Score obtained by applicant in the written and oral test.

(4) Application fee receipt number.

Record 4.601 (Sheet 3)

(5) Learner's permit number (provision is made for two permits), and test receipt number.

(6) Abstract number (filing reference number pertaining to interim receipt issued).

(7) Occupation of applicant.

(8) Country of birth of applicant.

(9) Personal description of applicant (colour of eyes, height, complexion, hair).

(10) Details of any licences previously held (where issued, when, class of licence).

(11) Whether the applicant has ever been refused a licence, been disqualified from holding or obtaining a licence, had his licence cancelled or suspended, or been convicted by any Court for any offence related to using a motor vehicle.

(12) Particulars of any medical or physical disabilities.

(13) Results of eyesight test.

(14) Whether *the* applicant normally wears suitable visual aids whilst driving.

(C) Internal Reports

The following summary reports, in the form of computer printouts, are prepared quarterly:

(1) Total number of licences on file, including licences not renewed for up to 5 years after expiry date.

(2) Total number of current licences (those currently in force).

(3) An analysis of current licences by age groups of holders (under 17, 17-20, 21-24, 25-29, 30-39, 40-49, 50-59, 60-75, over 75 years), by licence type (ordinary, probationary), by area of residence (metropolitan, country), by sex.

(D) Annual Report of the Road Traffic Authority

(1) Number of drivers' licences in force at June 30, by age group of holders (under 17, 17-20, 21-24, 25-29, 30-39, 40-49, 50-59, 60-75, over 75 years). Separate tables are shown for classification (ordinary licence, probationary licence), area of residence (Perth metropolitan, country), and sex.

(2) Number of new licences issued during the year, and number of current licences in force at June 30, for the last two years.

(3) Number of licences issued during the year, by type of licence (private original ordinary, private original probationary, private renewals, bus and taxi originals and renewals, learners' permits, applications received, testing permits issued), for the last two years.

(4) Details on cancellations, suspensions and refusals of driving licences, and convictions for traffic offences and other related offences.

Record 4.701 DRIVERS' LICENCES - Tasmania

Motor Registry, Hobart

1. Source
Collector and Distributor: Motor Registration Section, The Transport Commission, 1 Collins Street, Hobart, Tas. 7000.

2. Periodicity of Availability
The data available are part of an internal records system which is continually updated. Some information is published each year by the Transport Commission in its Annual Report.

3. Region of Availability
Tasmania.

4. Published Information
(1) The Australian Bureau of Statistics publishes some information on drivers' licences, based on data supplied by the State licensing authorities. (Refer Record 4.101).
(2) Annual Report of the Transport Commission.

5. Supplementary Information
It would be possible to generate special-purpose computer printouts, showing summaries of various sub-sets ofdriver's licence data on file. This may require development of new computer programs. Whilst the Commission would consider favourably any requests from appropriate authorities for additional data of this kind, such requests would have to be examined against other priorities and the current work load of the Commission's computer programing resources.

6. Limitations
The computer currently used for drivers' licences is an IBM 1440 which will be replaced by a new installation during 1980. A new data storage and retrieval system is currently being developed, which will be much more comprehensive and flexible than the system used at present.

The present computer-based system has been in operation since 1962. The main computer record is the 'Current File' which contains data on all drivers' licences currently in force, and also those not renewed for up to one year. Data pertaining to drivers' licences which have not been renewed for more than one year are removed from the 'Current File' and discarded. A computer file on historical data is currently not maintained.

The hard copy of the initial application for a driver's licence is kept without time limit, and details of all renewal payments are recorded thereon. These records are available at least since the 1930's.

Licence renewal certificates are discarded at the end of their currency.

A card index masterfile is also maintained, consisting of index cards containing both motor registration and driver's licence data. The index cards are filed alphabetically by name of vehicle Owner or licence holder. (Refer also to Record 1.701).

Records on drivers' licences may be out of date to some extent, as a high proportion of licences is issued for a three year period, during which some changes may occur of which the Cormnission may not be notified (e.g. death of licence holder). Hence the actual number of licensed drivers would tend to be somewhat smaller than the number of licences in force.

Record 4.701 (Sheet 2)

Drivers are not issued with separate licences for different types of vehicles. Only one licence is issued to each driver, indicating all the vehicles he is permitted to drive.

Drivers can be issued with two types of licences: an 'ordinary' licence, indicating all the vehicles the driver is permitted to drive, or else a motor cycle licence which is issued only to applicants who do not already hold an ordinary licence.

Drivers are required to state any medical disabilities affecting their driving performance when applying for their initial driver's licence, and also each time their licence is renewed. Being self-reported information, *this* data is unlikely to provide a reliable indication of the medical condition of the population of licensed drivers.

Drivers with certain declared medical disabilities can obtain drivers' licences for one year periods only, subject to a medical certificate. On reaching 70 years of age, drivers can only obtain one year licences, and a medical certificate must be produced by applicants aged 70 years, 75 years, and every year thereafter.

The initial licence issued on passing a driving test is a Probationary Licence which covers the first 12 months. After that, the driver can obtain an ordinary licence, for which he *can* choose either a one, two or three year currency. If more than 24 months have passed since the expiry of a driver's licence, the driver must undergo another driving test.

Sex of licence holder is not included in the computer file, but is normally indicated in the initial application form (&, Mrs., Miss).

At present, a computer printout showing the total number of licences in force is not available.

7. Description of Data Available

(A) Computer Records: 'Current File'

(1) Name and address of licence holder.

(2) Date of birth of licence holder.

(3) Licence number.

(4) Expiry date of licence.

(5) Licence fee paid on the most recent occasion.

(6) *Type* of licence (ordinary, motor cycle only).

Note: licence extensions are not contained in the computer records. The basic or 'ordinary' licence authorises the holder to drive a private motor car or a goods carrying vehicle of under 2 tonnes tare weight. Permission to drive other types of vehicles is granted by endorsing the licence with an extension. Nine types of extensions are available (e.g. heavy rigid goods vehicle, motor cycle, etc.). A separate motor cycle only licence can be obtained by drivers who do not already hold an ordinary licence; no extensions, however, can be added to that type of licence.

Record 4.701 (Sheet 3)

(B) Initial Application Form

The application form submitted by the driver when seeking to obtain his initial licence is filed as a master-record on which all renewal payments, extensions, special conditions, convictions and disqualifications are recorded in the course of time. It contains the following additional data items:

(1) Class of licence initially applied for.

(2) Class of extension, and date when extension was granted.

(3) Any special conditions or restrictions.

(4) Particulars of any previous drivers' licences held.

(5) Title of applicant (Mr., Mrs., Miss).

(6) Whether the applicant had ever been refused a driver's licence, been disqualified from obtaining a licence, been convicted of drunkenness or any crime or offence connected with motor vehicles, or had his licence suspended or cancelled.

(7) Particulars of any medical or physical disabilities.

(8) Result of driving test.

(9) Details of any convictions or disqualifications. (These are recorded after the driver's licence had been issued).

(10) Record of payments made.

(C) Card Index Masterfile

(1) Name and date of birth of holder of driver's licence or vehicle owner.

(2) Driver's licence number.

(3) Date of issue of initial licence.

(4) Licence maturity date (date when probationary period ends).

(5) Date of cancellation of driver's licence (if applicable).

(6) Date when a new licence becomes available (in cases where the licence has been cancelled).

(7) Details of any motor vehicles registered in that person's name, and any registrations cancelled.

(D) Annual Report of The Transport Commission

(1) Total number of drivers' licences issued during the year, including both new licences and renewals.

(2) Number of new drivers' licences issued during the year.

(3) Number of drivers' licences issued during the year, by currency period (1, 2 or 3 years).

(4) Comparative data for the last three years: number of drivers' licences issued, number of licence extensions granted (without giving a break-down by type of extension), number of learners' permits issued.

(5) Details on licence disqualifications and demerit points.

Record 4.801 DRIVERS' LICENCES - Northern Territory

Motor Vehicle Registry, Darwin

1. Source
Collector and Distributor: Motor Vehicle Registry, Department of Transport and Works, PO Box 530, Darwin, NT 5794.

2. Periodicity of Availability
The data available are part of an internal records system which is continually updated. Some information is published each year by the Department of Transport and Works in its Annual Report.

3. Region of Availability
Northern Territory.

4. Published Information
(1) The Australian Bureau of Statistics publishes some information on drivers' licences, based on data supplied by the State and Territory licensing authorities. (Refer Record 4.101).
(2) Annual Report of the Department of Transport and Works.

5. Supplementary Information
It would be possible to generate special-purpose computer printouts, showing summaries of various sub-sets of driver's licence data on file. This may require development of new computer programs. Whilst the Registry would consider favourably any requests from appropriate authorities for additional data of this kind, such requests would have to be examined against other priorities and the current workload of the computer programming resources available.

6. Limitations
The Northern Territory, previously administered by the Commonwealth Government, attained self-governing status on 1st July 1978. At that time, the *Motor* Vehicle Registry became part of the newly created Department of Transport and Works.

Computerised procedures have been introduced in January 1979. Both the Darwin head office, and the Alice Springs branch are connected to the same on-line system. The Registry is using the Northern Territory Government ADP Centre, and any program modifications or additions would normally be carried out by the Centre.

Residents in areas other than Darwin and Alice Springs will continue to apply for drivers' licences and pay their fees to the nearest police station or a Registry branch office (located at Katherine, Nhulunby, and Tennant Creek).

The main computer record, the "MVLL File' contains details of all transactions since 1979, and in a proportion of cases since 1978. It is intended to add all future transactions to the same file. For any given driver's licence, each *new* transaction results in the addition of another 'segment' to that record.

The hard copy of all initial application forms for a driver's licence is kept without time limit. Records of this type are available at least since the 1920's. It is planned to discard some of the older records.

Record 4.801 (Sheet 2)

Records on drivers' licences may be out of date to some extent, as many licences are issued for a two or three year period, during which some changes may occur of which the licencing authority may not be notified (e.g. death of licence holder). Hence the actual number of licensed drivers would tend to be somewhat smaller than the number of licences in force.

Drivers are not issued with separate licences for different types of vehicles. Only one licence is issued to each driver, indicating all the types of vehicles he is permitted to drive.

Drivers are required to state any medical disabilities affecting their driving performance when applying for their initial driver's licence, and also each time their licence is renewed. Being self-reported information, this data is unlikely to provide a reliable indication of the medical condition of the population of licensed drivers.

Drivers with certain declared medical disabilities may be required to produce a medical certificate to renew their licence. The currency of the licence granted in such cases may vary (3 years or less), depending on the medical report.

At present, there are no mandatory restrictions for older drivers. An eyesight test must be passed by all drivers every six years, irrespective of age.

The initial licence issued on passing a driving test is a probationary licence which covers the first 12 months. After that, the driver can obtain an ordinary licence, for which he can choose either a one, two or three year currency. If more than 60 months have passed since the expiry of a driver's licence, the driver must undergo another driving test.

7. Description of Data Available

(A) Computer Record 'MVLL File'

(1) Name and address of licence holder.

(2) Date of birth of licence holder.

(3) Whether the licence holder is normally wearing spectacles.

(4) Date when next eyesight test is due.

(5) Details of any convictions pertaining to the current licence, showing dates of any licence suspension or cancellation.

(6) Receipt number for most recent fee payment.

(7) Fee type code.

(8) Amount of fee payment received.

(9) Date when most recent fee was paid.

(10) Type of concession, if applicable.

(11) Details for each class of licence issued to the holder: class of licence (A, B, C, D, E, I), date when last renewed, duration of licence (number of years), next renewal date, type (learner's permit, probationary licence, ordinary licence), status (licence disqualified or suspended if applicable).

Record 4.801 (Sheet 3)

Note: class I licence is a driving instructor's licence (also referred to as class DI licence).

(12) Licence issue date (date when the holder obtained his first Northern Territory driver's licence).

(13) Particulars of any driver's licence previously held by holder outside the Northern Territory.

(14) Licence number.

(B) Initial Application Form

The application form submitted by the driver when seeking to obtain his initial licence, contains the following additional data items:

(1) Title of licence holder (Mr., Mrs., Miss).

(2) Results of eyesight test.

(3) Particulars of any learner's permits issued (permit number, date issued, record of any test failures).

(4) Dates when the oral and practical driving tests were passed.

(5) Whether the licence issued is an original licence, or one transferred from interstate/overseas, or whether there was a transfer of licence class.

(6) Reference to personal history card.

(7) Particulars of any previously held licences.

(8) Particulars of any convictions of offences connected with motor vehicles, or convictions for drunkenness.

(9) Particulars of any cancellations or suspensions of a driver's licence.

(10) Whether the applicant has ever been refused or disqualified from obtaining a driver's licence.

(11) Particulars of any medical or physical disabilities.

(C) 'Personal History Card' File

A manual record system containing driver history details, which has now been superceded by the computer system. The 'Personal History Card' File is occasionally used to obtain details on past transactions (to the extent to which these are not contained in the existing computer records).

(D) Annual Report of the Department of Transport and Works

(1) Number of new drivers' licences issued during the year, by type of licence (class A, B, C, D, DI, E), by area (Darwin, Tennant Creek, Katherine, Alice Springs).

(2) Number of drivers' licences renewed during the year.

(3) Same as item (1) but for licence renewals.

Record 4.901 DRIVERS' LICENCES - Australian Capital Territory

ACT Motor Vehicle Registry, Canberra

1. Source
Collector and Distributor: ACT Motor Vehicle Registry, Department of the Capital Territory, Challis Street, Dickson, ACT 2602.

2. Periodicity of Availability
The data available are part of an internal records system which is continually updated. Some information is published each year by the Department of the Capital Territory in its Annual Report.

3. Region of Availability
Australian Capital Territory.

4. Published Information
(1) The Australian Bureau of Statistics publishes some information on drivers' licences, based on data supplied by the State and Territory licensing authorities. (Refer Record 4.101).
(2) Annual Report of the Department of the Capital Territory.

5. Supplementary Information
Retrieval of specific information from existing computer files is at present possible by using a special package 'REPORT' which, however, is cumbersome and involves excessive computer running time. The Department's computer section is currently developing an alternative, more efficient, package for this purpose.

The Department has indicated that it would consider favourably any requests from appropriate authorities for special-purpose computer printouts; such requests, however, would have to be examined against other priorities and, if additional programing is required, would depend on the current work load of the Department's computer programing resources.

6. Limitations
The main computer record, the 'Driver's Licence File', contains data on all drivers' licences which have been current at some time since 1971.

The hard copy of the initial application for a driver's licence is kept without time limit. Records of this kind are available at least since the 1920's. It is planned to discard some of the older records.

Learners' permits are filed in a manual records system.

Records on drivers' licences may be out of date to some extent, as a high proportion of licences are issued for a three year period, during which some changes may occur of which the Registry m y not be notified (e.g. death of licence holder). Hence the actual number of licensed drivers would tend to be somewhat smaller than the number of licences in force.

Drivers are not issued with separate licences for different types of vehicles. Only one licence is issued to each driver, indicating all the types of vehicles he is pennitted to drive.

Drivers are required to state any medical disabilities affecting their driving performance when applying for their initial driver's licence, and also each time their licence is renewed. Being self-reported information, this data is unlikely to provide a reliable indication of the medical condition of the population of licensed drivers.

Record 4.901 (Sheet 2)

Drivers with certain declared medical disabilities can obtain drivers' licences for one year periods only, subject to a medical certificate. The same restriction applies to drivers of public vehicles. All drivers are required to submit to an eyesight test when reaching 50 years of age, and to further eyesight tests when aged 55, 60, 65 and 70 years, and every year thereafter.

On reaching 70 years of age, drivers have to produce a medical certificate to renew their licence. The currency of the licence granted in such cases may vary (3 years or less), depending on the medical report.

The initial licence issued on passing a driving test is a Probationary Licence which covers the first 12 months. After that, the driver can obtain an ordinary licence, for which he can choose either a one year, two year or three year currency. If more than 24 months have passed since the expiry of a driver's licence, the driver must undergo another driving test.

7. Description of Data Available

(A) Computer Records: 'Driver's Licence File'

(1) Licence number.

(2) A listing of all licence classes approved (nine classes are available).

(3) Licence expiry date.

(4) *Date* of birth of licence holder.

(5) Sex of licence holder.

(6) Name and address of licence holder.

(7) Glasses code (whether the driver requires spectacles or contact lenses for driving).

(8) Eyetest year (year when the next eyesight test is due).

(9) Medical code (indicating the type of medical or physical disability).

(10) Medical year (year when the next medical examination is due).

(11) Disqualification *date* (whether the driver has been disqualified from driving a motor vehicle, and *date* when disqualification period terminates).

(12) Payment date (date when the licence period commences).

(B) Annual Report

The Annual Report of the Department of the Capital Territory contains the following-information:

(1) Number of drivers' licences issued and number of practical tests given to applicants during the year.

(2) Number of new licences issued, and number of existing licences renewed during the year.

(3) Total number of persons holding an ACT driver's licence at the end of the year (June 30).

(4) Currency of licences on issue: number of licences in force for a three year period, two year period and one year period, as at June 30.

SECTION 5

ROADS INVENTORY

SECTION 5, ROADS INVENTORY, continued

Australian Capital Territory

5.901 Department of Housing and Construction
5.902 National Capital Development Commission
5.903 Traffic Control Signals
5.904 Railway Level Crossings

The main sources of roads inventory data are the State Main Road Authorities, the Department of Housing and Construction and the National Capital Development Commission in the Australian Capital Territory, and the Department of Transport and Works in the Northern Territory.

The bulk of the information available at present derives from the Australian Roads Survey 1969-74 which was initiated by the Commonwealth Bureau of Roads and NAASRA. At present, this information is being supplemented and converted into the format specified in the NAASRA Data Bank System.

The Australian Bureau of Statistics published a number of bulletins containing roads inventory data, which are mainly confined to road lengths in various categories.

Data on traffic control signals were obtained from various State authorities concerned with traffic regulation, and in some cases, Local Government Authorities.

Information on railway level crossings was obtained from relevant State and Commonwealth railway authorities.

Record 5.101 ROADS INVENTORY - Australia

Australian Roads Survey 1969-74

1. Source
Collector and Distributor:
(1) The Commonwealth Bureau of Roads (now incorporated in the Bureau of Transport Economics, Civic Permanent Centre, Allara Street, Canberra City, ACT 2600).
(2) The National Association of Australian State Road Authorities (NAASRA), 323 Castlereagh Street, Sydney, NSW 2000.

2. Periodicity of Availability
This survey is the second of a series of studies. The first study was the Australian Roads Survey 1967-68. The third, and most recent study was the NAASRA Data Bank System, described in Record 5.102.

3. Region of Availability
Australia.

4. Published Information
'Australian Roads Survey 1969-74: Specification: Data Collection, Identification of Deficiencies, Selection of Projects and Costing', Melbourne (1971). Two volumes:
Part 1A - Rural Roads
Part 1B - Urban Roads

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
The 'Australian Roads Survey 1969-74' does not contain any data, but provides guidelines for the content and format of the information required.

7. Description of Data Available
The 'Australian Roads Survey 1969-74' was initiated by the Commonwealth Bureau of Roads in conjunction with the National Association of Australian State Road Authorities to assist in future road planning. This publication provides the formal framework for the survey, and sets out in detail the type of information to be collected, and the manner in which the data should be arranged and recorded.

It was intended for the data to be collected by the State Main Road Authorities, Local Government Authorities, the Commonwealth Department of Works (Northern Territory and part of ACT data), and the National Capital Development Commission (part of ACT data).

	Roads	Road Links	Inter-section Nodes	Structures
Rural Class 1,2,3,4,5	Table 3.1			Table 4.1
Outer Urban Class 6,7,8,9	Table 3.1			Table 4.1
Inner Urban Class 6,7 Class 8 Class 9	 Table 10.3 Table 3.1	Table 10.1	Table 10.2	Table 4.1* Table 4.1* Table 4.1

* For structures located on Class 6,7,8 roads in inner urban areas, the format and content of Table 4.1 is slightly modified. For a description of these changes refer to Part (F) below.

Only a partial inventory is available for Class 8 roads in inner urban areas. Refer to Part (E) below.

A detailed description of the format and content of the five tables (Tables 3.1, 4.1, 10.1, 10.2 and 10.3) is set out below.

(A) Table 3.1 - Inventory *for* Rural Roads

This table contains data on road sections in rural areas and outer urban areas. Also included are Class 9 roads in inner urban areas.

Identification

(1) Item 1: Record type (code 1 for all records of this type).

(2) Item 2: Record sequence number code (code 1 divided roads, 2 left through carriageway, 3 right through carriageway in the direction of increasing mileage. Leave blank for undivided roads).

(3) Item 3: State number (code 2 for *NSW,* 3 Victoria, 4 Queensland, 5 south Australia, 6 Western Australia, 7 Tasmania, 8 Northern Territory, 9 Australian Capital Territory).

(4) Item 4: Region Number.

(5) Item 5: State Road Authority Division or District number.

(6) Item 6: Local Government Area number.

(7) Item 7: Road number.

(8) Item 8: Functional Class number.

(9) Item 9: Legal Class number.

Record 5.101 (Sheet 3) Table 3.i continued

(10) Item 10: Declaration status code (1 declared urban arterial, 2 declared rural arterial, 3 not declared).

(11) Item 11: Annual Average Daily Traffic (AADT).

(12) Item 12: Year in which AADT was recorded.

(13) Item 13: Traffic growth index.

Road Section Details

(14) Item 14: Mileage (from a chosen base point) at start of section, recorded to nearest hundredth of a mile.

(15) Item 15: Mileage at end of section, to nearest hundredth of a mile.

(16) Item 16: Length of road section, to nearest hundredth of a mile.

Inventory for Statistical Purposes

(17) Item 17: Operational classification code (1 undivided without service roads, 2 divided without service roads, 3 undivided with service roads, 4 divided with service roads, 5 one-way, 6 one-way service road, 7 two-way service road. One-way roads should be coded as one-way, and not as undivided).

(18) Item 18: Access control code (1 none, 2 partial, 3 full access other than freeway, 4 freeway).

(19) Item 19: Posted legal speed limit (miles per hour).

(20) Item 20: Formation width: least width, to nearest foot, excluding median, of: width between tops of table drains, or normal graded width, or width between guide posts or guard rails, or edge to edge of shoulder, or face to face of kerbs.

(21) Item 21: Seal or gravel pavement width: least width, to nearest foot: for sealed roads - width of seal, or face to face of kerb: for gravel roads - width of gravel pavement. Leave blank for formed roads or tracks.

(22) Item 22: Surface type code (1 natural surface, 2 formed, 3 gravel, 4 primer seal, 5 bituminous seal, 6 bituminous concrete, 7 cement concrete).

(23) Item 23: Kerbs existing code (1 predominantly unkerbed, 2 predominantly kerbed). Applicable to towns only.

(24) Item 24: Median type code (1 raised, 2 depressed, 3 stepped).

(25) Item 25: Median width: average width, to nearest foot, excluding any shoulders along the median.

Additional Inventory, Required for Identification of Deficiencies

(26) Item 26: General terrain code (1 flat, 2 undulating, 3 hilly, 4 mountainous).

(27) Item 27: Predominant frontage land use code (1 residential, 2 commercial, 3 industrial, 4 agricultural, 5 pastoral extensive: sheep, beef, 6 pastoral intensive: dairying, 7 irrigation, including sugar, orchards, 8 forestry, 9 undeveloped rural).

(28) Item 28: Parking usage code (1 banned, 2 restricted, 3 no restrictions). Applicable to towns only.

Record 5.101 (Sheet 4) Table 3.1 continued

(29) Item 29: Average highway speed: the weighted average of the design speeds within the road section, in miles per hour.

(30) Item 30: Safe travel speed, in miles per hour.

(31) Item 31: Structural condition (number of years beyond June 1972, before pavement reconstruction is required).

(32) Item 32: Surface condition (for sealed roads only: the estimated number of years before resurfacing is required).

Additional Inventory Items Related to General Rules

(33) Item 33: Access code (for formed and natural surface roads only: 1 yes, 2 no, to indicate whether road section is the main access to a property on which there is an occupied residence).

(34) Item 34: Seasonal recreational route code (for formed and natural surface roads only: 1 yes, 2 no, to indicate whether the road is used during at least part of the year primarily for recreational purposes).

(35) Item 35: Seasonal cartage route code (for formed and natural surface roads only: 1 yes, 2 no, to indicate whether the road is used for seasonal cartage of rural products, e.g. grain, timber, etc.).

(36) Item 36: School bus route code (1 yes, 2 no).

(37) Item 37: Milk and cream truck route code (1 yes, 2 no).

(38) Item 38: Mail route code (1 yes, 2 no).

(39) Item 39: Excessive road maintenance cost code (for unsealed roads only: 1 yes, 2 no, to indicate inordinately high maintenance cost).

(40) Item 40: Serious dust problems code (for unsealed roads only: 1 yes, 2 no, to indicate whether dust has a serious effect on traffic safety, crops or movement of lifestock or produce).

(41) Item 41: Road subject to closure for cars code (1 not applicable, 2 flooding, 3 wet weather, 4 sand or bulldust, 5 other reasons for closure).

(42) Item 42: Period of closure (average number of days per year the road was closed over the last 5 years).

(43) Item 43: Additional mileage via detour (the additional mileage, to the nearest mile, using the detour if the road is closed).

Traffic Composition

(44) Item 44: Cars (percentage of total traffic).

(45) Item 45: Light trucks (percentage of total traffic).

(46) Item 46: Rigid trucks (percentage of total traffic).

(47) Item 47: Semi-trailers (percentage of total traffic).

(48) Item 48: Road trains (percentage of total traffic).

Road Geometry

(49) Item 49: Gradients exceeding 5% (percentage of the total length of road section having gradients of more than 5%).

Record 5.101 (Sheet 5) Table 3.1 continued

Gradient

(50) Item 50: Miles of grade 5-7% (miles recorded in hundredths).

(51) Item 51: Numbers of grade 5-7% (number of portions in the road section, having a gradient between 5 and 7%).

(52) Item 52: Miles of grade 7-9% (miles recorded in hundredths).

(53) Item 53: Numbers of grade 7-9% (number of portions in the road section, having a gradient between 7 and 9%).

(54) Item 54: Miles of grade over 9% (miles recorded in hundredths).

(55) Item 55: Numbers of grade over 9% (number of portions in the road section, having a gradient of more than 9%).

Horizontal Alignment

(56) Item 56: Length of 20 mph horizontal curves, recorded in hundredths of a mile.

(57) Item 57: Number of 20 mph horizontal curves in the road section.

(58) Item 58: Length of 30 *mph* horizontal curves, recorded in hundredths of a mile.

(59) Item 59: Number of 30 mph horizontal curves in the road section.

(60) Item 60: Length of 40 mph horizontal curves, recorded in hundredths of a mile.

(61) Item 61: Number of 40 mph horizontal curves in the road section.

(62) Item 62: Length of 50 mph horizontal curves, recorded in hundredths of a mile.

(63) Item 63: Number of 50 mph horizontal curves in the road section.

(B) Table 4.1 - Inventory for Structures, Railway Level Crossings and Ferries

This table contains inventory data both for rural and for urban areas. For Class 6.7 and 8 roads in inner urban areas, the format is slightly modified. Refer to Part (F) below.

Identification

(1) Item 1: Record type (code 2 for structures, railway crossings and ferries).

(2) to (13) Items 2 to 13: identical to these item numbers in Table 3.1 described above.

(14) Item 14: Mileage (from a chosen base point) to the centre of the structure or facility, recorded to the nearest hundredth of a mile. This item is recorded for rural and outer urban areas only.

(15) Item 15: Node number of facility, recorded only if located in an inner urban area.

(16) Item 16: Type of facility (1 ford, 2 floodway, 3 causeway, 4 major culvert, 5 bridge, 6 railway level crossing, 7 ferry).

(17) Item 17: Function of facility (1 road over waterway, 2 road over rail, 3 road under rail, 4 inventoried road over road, 5 inventoried road under road, 6 pedestrian underpass, 7 pedestrian overpass).

Record 5.101 (Sheet 6) Table 4.1 continued

Inventory for Structures and Fords

(18) Item 18: Length of structure or ford in feet.

(19) Item 19: Width of structure in feet (between kerbs, or trafficable width).

(20) Item 20: Period of closure (average number of days per year, over the last 5 years, that the facility has been closed due to flooding).

(21) Item 21: Additional mileage via detour (the additional mileage, to the nearest mile, using the detour if the road is closed).

Basic Inventory for Major Culverts and Bridges Only

(22) Item 22: vertical clearance in feet (above the roadway if clearance is less than 20 feet).

(23) Item 23: Horizontal clearance, to the nearest foot, between nearest abutments, piers, columns or trusses.

(24) Item 24: Whether a footway is provided (1 yes, 2 no).

(25) Item 25: Construction of substructure (1 not applicable, ? timber, 3 *masonry* or brick, 4 concrete, 5 steel).

(26) Item 26: Construction of superstructure (same codes as for Item 25 above).

(27) Item 27: Construction of deck (same codes as for item 25 above).

(28) Item 28: Number of spans in the structure.

(29) Item 29: Skew (the angle between the centreline of the structure, and a line at right angles to the centreline of the creek, rail or road under or above the inventoried road, to the nearest 5 degrees).

(30) Item 30: Load carrying capacity: whether the structure is capable of carrying the statutory load applicable to State or Territory (1 yes, 2 no).

(31) Item 31: Posted legal speed limit (miles per hour).

Inventory for Railway Level Crossings *Only*

(32) Item 32: Type of protection (1 no warning devices, 2 signs and/or pavement markings only, 3 wig-wags or traffic lights, 4 gates or boom barriers).

(33) Item 33: Number of railway tracks crossing the road centreline.

(34) Item 34: Average number of trains per day crossing the level crossing.

Inventory for Ferries Only

(35) Item 35: Capacity (number of passenger car units that the ferry can carry per trip).

(36) Item 36: Annual Average Daily Traffic volume carried by the ferry.

(C) Table 10.1 - Inventory for Road Links in Inner Urban Areas

Identification

(1) Item 1: Record type (code 5 for road links in inner urban areas).

(2) to (6) Items 2 to 6: identical to these item numbers in Table 3.1 described above.

Record 5.101 (Sheet 7) Table 10.1 continued

(7) Item 7: Node number, start of link (lower node number).

(8) Item 8: Node number, end of link (higher node number).

(9) Item 9: Link length (from centre to centre of adjoining nodes, in hundredths of a mile).

(10) Item 10: Project Selection Area number.

(11) Item 11: Employment density (employment density zone number, as shown on the relevant Employment Density Map).

(12) Item 12: Functional Class number.

(13) Item 13: Legal Class number.

(14) Item 14: Declaration status code (1 declared, 2 not declared).

Basic Inventory for Statistical Pruposes

(15) Item 15: Surface type code (1 natural surface, 2 earth formed, 3 gravel, 4 primer seal, 5 bituminous seal, 6 bituminous concrete, 7 cement concrete).

(16) Item 16: Seal or gravel pavement width: least width, to nearest foot: for sealed roads - width of seal, or face to face of kerb; for gravel roads - width of gravel pavement. Leave blank for formed roads or tracks.

(17) Item 17: Formation width: least width, to nearest foot, between edges of formation (face of kerb, edge of shoulder, face of guide posts or guard rail, edge of normal graded width, or tops of table drains).

(18) Item 18: Median type code (1 raised, 2 depressed, 3 stepped).

(19) Item 19: Median width: average width, to nearest foot, excluding any shoulders at edge of median.

(20) Item 20: Operational classification code (1 undivided without service roads, 2 divided without service roads, 3 undivided with service roads, 4 divided with service roads, 5 one-way, 6 one-way service road, 7 two-way service road, 8 ramp, 9 freeway section between interchanges. Undivided one-way roads should be coded as one-way).

(21) Item 21: Access control code (1 none, 2 partial, 3 full access other than freeway, 4 freeway).

(22) Item 22: Posted legal speed limit (miles per hour).

(23) Item 23: Kerbs existing code (1 predominantly kerbed, 2 predominantly unkerbed).

Additional Inventory Required for Identifying Deficiencies, Project Selection, Costing and Evaluation

(24) Item 24: Predominant frontage land use code (1 residential, 2 commercial, 3 industrial, 4 park or recreational, 5 major institutional - e.g. schools, hospitals, 6 central city area).

(25) Item 25: Number of intermediate signalized intersections and/or intersections with Class 8 roads which have been identified as environmentally deficient.

(26) Item 26: Other intermediate intersections (number of intermediate intersections with Class 8 Roads not included in Item 25).

Record 5.101 (Sheet 8) Table 10.1 continued

(27) Item 27: Mid-block pedestrian crossings (number of intermediate pedestrian crossings on the link with signs, flashing lights and stop-go signals, not including crossings at node intersections).

(28) Item 28: Structural condition (number of years beyond June 1972, before pavement reconstruction is required).

(29) Item 29: Surface condition (for sealed roads only: the estimated number of years before resurfacing is required).

(30) Item 30: Average Annual Daily Traffic (AADT).

(31) Item 31: Year in which AADT was recorded.

(32) Item 32: Traffic growth index.

Peak Traffic Period Information

(33) Item 33: Number of trams in peak direction (measured during the pm peak half hour traffic period, travelling in the peak direction of flow).

(34) Item 34: Number of buses in peak direction (measured in the same way as for Item 33).

(35) Item 35: Average traffic speed (measured or estimated overall average travel speed on the link, including delay on the intersection approach, during the peak half hour traffic period, travelling in the peak direction of flow, in miles per hour. If am and pm peak travel speeds differ, the lower speed is to be recorded).

(36) Item 36: Traffic volume, in vehicles per hour, during the same peak half hour period, and in the same direction of flow as for Item 35.

(37) Item 37: Year of traffic volume count.

(38) Item 38: Kerbside parking usage code - left (parking usage during pm peak traffic period: 1 no parking - clearway, 2 no parking - other reasons, 3 light parking, 4 heavy parking).

(39) Item 39: Kerside parking usage code - right (same coding as for Item 38).

Composition of Average Week-day Traffic

(40) Item 40: Proportion of cars, expressed as percentage of total traffic.

(41) Item 41: Same as Item 40, but for light trucks.

(42) Item 42: Same as Item 40, but for rigid trucks.

(43) Item 43: Same as Item 40, but for semi-trailers.

Traffic Assignment Data for 1972 Network

(44) Item 44: year.

(45) Item 45: AADT.

(46), (47) Items 46 and 47: same as Items 44 and 45, but for a second year.

(48), (49) Items 48 and 49: same as Items 44 and 45, but for a third year.

Traffic Assignment Data for 1972 Networks Plus All Improvements Required to Overcome Deficiencies at 1979

(50) to (55) Items 50 to 55: same format and coding as for Items 44 to 49.

Record 5.101 (Sheet 9) Table 10.1 continued

Accident Data: Number of Accidents

(56) Item 56: Number of fatal day accidents which occurred in the years for which data is provided.

(57) Item 57: same as Item 56, but for fatal night accidents.

(58) Item 58: same as Item 56, but for total fatal accidents.

(59) Item 59: same as Item 56, but for personal injury day accidents.

(60) Item 60: same as Item 56, but for personal injury night accidents.

(61) Item 61: same as Item 56, but for total personal injury accidents.

(62) Item 62: same as Item 56, but for property day accidents.

(63) Item 63: same as Item 56, but for property night accidents.

(64) Item 64: same as Item 56, but for total property accidents.

Accident Data: Years of Accident Data

(65) Item 65: Whether accident data shown in Items 56 to 64 were for the year 1967 (code 1 *yes,* 2 no).

(66) Item 66: same as Item 65, but for 1968.

(67) Item 67: same as Item 65, but for 1969.

(68) Item 68: same as Item 65, but for 1970.

(69) Item 69: same as Item 65, but for 1971.

Special Volume Demand Route Traffic Data

(70) Item 70: Ratio of Vs (normal peak day daily traffic) to Vw (average weekday daily traffic): code 1 for Vs/Vw ratio between 1.3 and 1.6, code 2 for Vs/Vw greater than 1.6 up to 2.6, code 3 if greater than 2.6.

(D) Table 10.2 - Inventory for Intersection Nodes in Inner urban Areas

Identification

(1) Item 1: Record type (code for intersection nodes in inner urban areas).

(2) to (6) Items 2 to 6: identical to these item numbers in Table 3.1 described above.

(7) Item 7: Node number.

(8) Item 8: Node type (1 intersection other than with ramp, 2 intersection of surface road with ramp, 3 junction of ramp with access controlled roadway, 4 other type of intersection).

(9) Item 9: Project Selection Area number.

(10) Item 10: Functional Class number.

(11) Item 11: Legal Class number.

(12) Item 12: Declaration status code (1 declared, 2 not declared).

Record 5.101 (Sheet 10) Table 10.2 continued

Inventory Data Required for Identifying Deficiencies, Project Selec-

(13) Item 13: Traffic control devices code (1 no traffic devices, 2 regulatory signs, 3 channelisation without lights or signals, 4 flashing lights, 5 stop-go signals with channelisation).

Number of Next Node on Each Leg

(14) Item 14: Node number of leg 1 (record the appropriate node number, commencing with the northernmost leg and counting the legs in clockwise direction).

(15) to (19) Items 15 to 19: same as Item 14, but for legs 2, 3, 4, 5 and 6 respectively.

Number of Approach Lanes at the Intersection

(20) Item 20: Number of approach lanes, including turning and waiting lanes, for leg 1.

(21) to (25) Items 21 to 25: same as Item 20, but for legs 2, 3, 4, 5 and 6 respectively.

Number of Approach Lanes to Intersection at Mid-block

(26) Item 26: Number of approach lanes to intersection at mid-block for leg 1.

(27) to (31) Items 27 to 31: same as Item 26, but for legs 2, 3, 4, 5 and 6 respectively.

Deficiency Status

(32) Item 32: Operational deficiency code (1 deficient, 2 non-deficient).

Accident Data: Number of Accidents

(33) to (41) Items 33 to 41: Number of accidents, described in the same manner as for Items 56 to 64 in Table 10.1.

Accident Data: Years of Accident Data

(42) to (46) Items 42 to 46: Years to which *the* accident data pertain, described in the same manner as for Items 65 to 69 in Table 10.1.

(E) Table 10.3 Inventory Requirements and Improvement Project Details for Class 8 Roads in Inner Urban Areas

This table contains road inventory data for Class 8 mads, providing separate data for each LGA in inner urban areas of capital cities, Newcastle, Wollongong and Geelong, and other major provincial cities. Data on roads in outer urban areas of these cities are not included. Table 10.3 contains data on the length of roads in various categories, but does not show any particulars for individual road sections, links or nodes.

Identification

(1) Item 1: Record type (code 9 for Class 8 roads in inner urban areas).

(2) Item 2: State number (same as Item 3 in Table 3.1).

(3) Item 3: Region number.

(4) Item 4: *State* Road Authority Division or District number.

(5) Item 5: Local Government Area number.

Record 5.101 (Sheet 11) Table 10.3 continued

Length of Environmentally Deficient Roads
Roads with 1972 AADT of 1500 or more (employment density zones 4, 5):

(6) Item 6: Total length of this type of road, to the nearest mile.

(7) Item 7: Weighted AADT (as at 1972) of these roads.

Roads with 1972 AADT of 3000 or more (employment density zones 1, 2, 3):

(8) Item 8: Total length of this type of road, to the nearest mile.

(9) Item 9: Weighted AADT (as at 1972) of these roads.

Physical Inventory
Length of sealed roads:

(10) Item 10: Length of residential roads of less than 18 ftwidth, to the nearest mile.

(11) Item 11: Length of comercial roads of less than 18 ftwidth, to nearest mile.

(12) Item 12: Length of residential roads of 18 ft or greater width, to nearest mile.

(13) Item 13: Length of commercial roads of 18 ft or greater width, to nearest mile.

Length of unsealed roads:

(14) Item 14: Length of unsealed residential roads, of all widths, to nearest mile.

(15) Item 15: Length of unsealed comercial roads, of all widths, to nearest mile.

Items 1 to 15 shown above comprise a limited inventory of Class 8 roads in inner urban areas. Table 10.3 also contains a number of additional items pertaining to structural deficiencies, and the identification of road improvement projects. These are not listed here.

(F) Inventory for Structures, Railway Level Crossings and Ferries in Urban Areas

Roads inventory data on structures, railway level crossings and ferries in urban areas should be included in Table 4.1 described above.

For roads of functional Classes 6, 7 and 8 in inner urban areas, the format in Table 4.1 should be modified as follows:

Item 2: the instruction "in the direction of increasing mileage" should be replaced by "in the direction of the higher adjacent node number".

Item 7 : delete "road number" and replace by "Project Selection Area number".

Item 14 (mileage): leave blank.

(G) Project Selection Data

In addition to data contained in Tables 3.1, 4.1, 10.1, 10.2 and 10.3 described above, this publication also provides for comprehensive data on project selection and costing. This information is not listed here.

Record 5.102 ROADS INVENTORY - Australia

NAASRA Data Bank

1. Source
Collector and Distributor: National Association of State Road Authorities (NAASRA), 323 Castlereagh Street, Sydney, NSW 2000.

2. Periodicity of Availability
Once-only study. The data bank of roads inventory information described here was meant to supersede the Australian Roads Survey 1969-74, described in Record 5.101.

3. Region of Availability
Australia.

4. Published Information
D. LINSTEN, 'The NAASRA Data Bank System Study', Proceedings, 9th ARRB Conference, Brisbane 1978, Part 6, Australian Road Research Board, Melbourne (1978).

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
The NAASRA Data Bank, described in the publication shown above, consists of a set of guidelines and specifications for roads inventory data to be collected and stored by the individual State Road Authorities. It was not intended for NAASRA to set up a centrally located national repository of roads inventory data.

Each State Road Authority is currently in the process of setting up roads inventory data files in accordance with the NAASRA Data Bank specifications.

7. Description of Information Available
The data items which comprise the 'NAASRA Data Bank System' are listed below.

(1) Item 1: State (code 2 for NSW, 3 Victoria, 4 Queensland, 5 South Australia, 6 Western Australia, 7 Tasmania, 8 Northern Territory, 9 Australian Capital Territory).

(2) Item 2: Route or road number.

(3) Item 3: Carriageway (1 primary undivided or central two-way divided, 2 primary divided left, 3 primary divided right, 4 subsidiary divided left, 5 subsidiary divided right).

(4) Item 4: Permanent reference point 1 (codes for identifying location of the permanent reference point in a 100,000 metre square reference grid and, within the square, its location in an easterly and northerly direction).

(5) Item 5: Permanent reference point 2 (provision for a second point, described in the same way as in Item 4).

(6) Item 6: Distance from permanent reference point 1 (km to two decimal places).

(7) Item 7: Division number.

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(8) Item 8: Local Government Authority number.

(9) Item 9: Australian Bureau of Statistics Area.

(10) Item 10: General terrain (1 flat, 2 undulating, 3 hilly, 4 mountainous).

(11) Item 11: Land use (1 not applicable, 2 commercial, 3 industrial, 4 residential, 5 institutional, 6 open space, 7 agricultural, 8 pastoral extensive, 9 pastoral intensive, 10 irrigation, 11 forest, 12 undeveloped).

(12) Item 12: Road number.

(13) Item 13: Functional class (NAASRA definitions, codes 1 to 9).

(14) Item 14: State legal class (the legal class allocated under the authority of a State or Government Act).

(15) Item 15: Comnwealth legal class (1 national highways, 2 rural arterial, 3 rural local, 4 urban arterial, 5 urban local, 6 export, 7 major commercial, 8 developmental, 9 unclassified).

(16) Item 16: Area class (1 central business district, 2 inner urban, 3 outer urban, 4 rural in town, 5 rural not in town).

(17) Item 17: Horizontal alignment data (0 straight, 1 curve left, 2 curve right. Also shown are: horizontal radius in metres, and curve speed in km/h).

(18) Item 18: Legal speed limit (km/h).

(19) Item 19: Vertical alignment data (1 flat, 2 uniform upgrade, 3 uniform downgrade, 4 vertical curve. Also shown are: gradient in per cent, or K value of summit vertical curve, i.e. the radius of the vertical curve.divided by 100; and maximum depth of cut at the summit vertical curve in metres).

(20) Item 20: Shoulder type and width: type (1 not applicable, 2 unpaved, 3 paved, 4 sealed, 5 asphaltic concrete, 6 cement concrete), width in metres to one decimal place. Separate data for right and left side.

(21) Item 21: Formation type and width: type (1 unformed, 2 flat bladed, 3 crowned: vertical geometry on natural surface, 4 crowned: vertical geometry not on natural surface), width in metres to one decimal place.

(22) Item 22: Pavement type and width: type (1 unpaved, 2 flexible, 3 rigid), width in metres to one decimal place.

(23) Item 23: Surface type and width: type (1 unsurfaced, 2 primerseal, 3 sprayed surface seal, 4 asphaltic concrete, 5 cement concrete), width in metres to one decimal place.

(24) Item 24: Median *or* outer separator width (in metres to one decimal place). Separate data for right and left side.

(25) Item 25: Safety barrier in median (1 not present, 2 steel, 3 concrete, 4 other).

(26) Item 26:. Kerbs (1 not present, 2 present). Separate data for right and left side.

(27) Item 27: Slow vehicle lane (1 not present, 2 present). Separate data for right and left side.

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(28) Item 28: Pavement data (1 unpaved, 2 unsurfaced, 3 surfaced). Also shown: year of construction or reconstruction if surfaced, year of paving or resheeting if unsurfaced, and present servicability rating if surfaced.

(29) Item 29: Surface data: year of surfacing or resurfacing, and surface rating.

(30) Item 30: NAASRA roughness meter (counts per kilometre).

(31) Item 31: Minor drainage adequacy (1 adequate, 2 inadequate).

(32) Item 32: Adjacent material (1 material adjacent to road rippable, 2 not rippable). Roads having unpaved adjacent material which becomes untrafficable in the extremes of aridity or rainfall, are also indicated.

(33) Item 33: Operational class: number of carriageways, class (1 undivided/no service road, 2 divided/no service road, 3 undivided with service road, 4 divided with service road, 5 one way, 6 service road/one way, 7 service road/two way).

(34) Item 34: Standing allowed (1 not applicable, 2 no standing, 3 parallel parking, 4 angle parking, 5 right angle parking). Separate data for am *peak,* pm peak and off peak periods, for right and left side.

(35) Item 35: Off-centre operation (1 none, 2 permanent, 3 reversible). Number of effective lanes involved if applicable.

(36) Item 36: Priority lane type and width (1 none, 2 buses only, 3 buses and/or other priority vehicles). Width in metres to one decimal place if applicable.

(37) Item 37: Right of way width (in metres to one decimal place).

(38) Item 38: Average annual daily traffic: AADT (year when AADT was measured or estimated, number of vehicles per day).

(39) Item 39: Traffic growth (expected AADT values for three specified years in the future).

(40) Item 40: Traffic composition (percentages, to one decimal place, of cars, light commercial vehicles, rigid trucks, semi-trailers, road trains).

(41) Item 41: Average number of buses per weekday.

(42) Item 42: Average number of trams per weekday.

(43) Item 43: Access control (1 no control, 2 partial control: medians or outer separators, 3 full control: access at at-grade intersections only, 4 full control: access by merging or diverging only).

(44) Item 44: Comments or remarks.

(45) Item 45: Obstruction (1 road bridge over inventoried road, 2 rail bridge over, 3 pedestrian overpass, 4 level crossing, 5 tunnel, 8 other). Also shown are: horizontal clearance and vertical clearance, both in metres to one decimal place.

(46) Item 46: Description of obstruction.

(47) Item 47: Pedestrian crossing (1 unsignalized part time, 2 signs only, 3 flashing lights, 4 pedestrian operated stop/go control signal, 8 other).

Record 5.102 (Sheet 4)

(48) Item 48: Railway level crossing (1 no warning device, 2 signs or markings only, 3 wig-wags or lights, 4 boom barrier, 5 gates). Also shown: number of tracks, and average number of trains per weekday.

(49) Item 49: At-grade intersection: number of legs, type of control on inventoried carriageway (1 no restriction, 2 'Give Way to Right' rule, 3 stop or give way signs, 4 stop/go signals, 8 other).

(50) Item 50: Interchange description.

(51) Item 51: Bridge identification (name or reference number).

(52) Item 52: Bridge function (1 road over water, 2 road over rail, 3 road over road, 8 other).

(53) Item 53: Bridge length (metres).

(54) Item 54: Bridge width (metres to one decimal place).

(55) Item 55: Bridge: number of spans.

(56) Item 56: Bridge: horizontal clearance (metres to one decimal place).

(57) Item 57): Bridge: vertical clearance (metres to one decimal place).

(58) Item 58: Bridge description: superstructure type (1 beam or girder, 2 truss, 3 slab, 4 box girder, 5 arch, 6 suspension), material (1 timber, 2 masonry or brick, 3 reinforced concrete, 4 prestressed concrete, 5 steel). Separate data shown for deck material, superstructure material, and substructure material.

(59) Item 59: Average height of bridge (metres).

(60) Item 60: Bridge: load carrying capacity (percentage of T44 design loading).

(61) Item 61: Bridge: signposted load limit (gross load limit in tonnes, axle load limit in tonnes).

(62) Item 62: Bridge: footway (1 not present, 2 present). Separate data for right and left side.

(63) Item 63: Bridge: flooding closure history: number of years for which records are available, number of occasions when the bridge was closed, total time for which the bridge was closed (in days, to one decimal place), minimum period of closure (in days, to one decimal place), maximum period of closure (in days, to one decimal place).

(64) Item 64: Bridge: detour distance (additional length that *has* to be travelled to avoid the closure, to nearest kilometre).

(65) Item 65: Culvert: total waterway area (area of vertical cross-section through the waterway, in square metres).

(66) Item 66: Ferry: description.

(67) Item 67: Ferry: average annual daily traffic: AADT (year when AADT was measured or estimated, and number of vehicles per day).

(68) Item 68: Ferry capacity (vehicles per hour).

(69) Item 69: Ferry: replacement structure length (if it is feasible to replace the ferry with a structure, estimated length of such structure).

Record 5.102 (Sheet 5)

(70) Item 70: Ford, floodway, causeway (1 ford, 2 floodway, 3 causeway). Also shown: length in metres, and length of replacement structure in metres.

(71) Item 71: Closure: description (additional information about the closure).

(72) Item 72: Closure history (same categories as in Item 63).

(73) Item 73: Closure detour distance (same as for Item 64).

Record 5.103 ROADS INVENTORY - Australia

Other Commonwealth Publications

1. Source
Collector and Distributor:
(1) The Commonwealth Bureau of Roads (now incorporated in the Bureau of Transport Economics).
(2) The Bureau of Transport Economics, Civic Permanent Centre, Allara Street, Canberra City, ACT 2600.

2. Periodicity of Availability
Irregular.

3. Region of Availability
Australia.

4. Published Information
(1) 'Report on Australian Road Systems 1968', Commonwealth Bureau of Roads, Melbourne (1969).
(2) 'Report on Roads in Australia 1973', Commonwealth Bureau of Roads, Melbourne (1973).
(3) 'Report on Roads in Australia 1975'. Commonwealth Bureau of Roads, Melbourne (1975).
(4) 'An Assessment of the Australian Road System: 1979', two volumes (Part 1 - report, Part 2 appendices and tables), Bureau of Transport Economics, Canberra (1979).
Refer also to Roads Inventory publications described in Records 5.101 and 5.102.

5. Supplementary Information
In conjunction with the 'Report on Australian Road Systems 1968', the Commonwealth Bureau of Roads also published 23 supporting papers (Bureau Paper No.1 to Bureau Paper No.23), which are listed in the Appendix to 'Report on Australian Road Systems 1968'.

6. Limitations
The main purpose of the reports described here was to provide an overview of the Australian road system, identify areas of major deficiencies, estimate the cost of improvements required and, from that, assess the level of Commonwealth funding needed for road construction.

The reports contain data on total road length in various categories, but do not include detailed roads inventory information. Road lengths are based on the 'Australian Roads Survey 1969-74' and various updates thereof.

7. Description of Information Available

(A) 'Report on Australian Road Systems 1968'
This survey, conducted by the Commonwealth Bureau of Roads in conjunction with the National Association of Australian State Road Authorities during 1967 and 1968 represents the first major national survey of roads.

The report, together with its 23 supporting papers, contains detailed information on the lengths of roads in various regions within each State and Territory, shown by type and class of road, type of road surface, etc. Deficiencies in the road system are identified and the work required to improve these is described. The report also contains data on annual average daily traffic in various parts of the road network and *some* information on the use of public transport facilities in Australian capital cities.

Record 5.103 (Sheet 2)

(B) 'Report on Roads in Australia 1973'

This is the second major report published by the Commonwealth Bureau of Roads, aimed at assisting the Comnwealth Government in determining the level of funding granted to the States for road construction.

It contains some data derived from the 'Australian Roads Survey 1969-74' which was conducted by the State Road Authorities during 1971 and 1972 (refer to Record 5.101). The following information is included: existing road mileage as at 30 June 1972, estimates of annual vehicle miles travelled, travel times on selected major routes, data on the total passenger and freight transport task in Australia, and projections on future population levels, vehicle usage and travel statistics.

(C) 'Report on Roads in Australia 1975'

This report follows much the same line as the 'Report on Roads in Australia 1973' described above. It also contains data on the use of petroleum products in road transport, estimates of passenger kilometres travelled by various transport modes, estimated freight movements, specific data on urban roads and transport (passenger and freight movements, mode of travel to work, car occupancy rates in journeys to work, mode of travel to school, peak hour travel speeds, traffic on arterial roads, modal choice by family income), and data on national highways and rural roads. The report also contains projections of future traffic and road needs.

(D) 'An Assessment of the Australian Road System: 1979'

Tn June 1977 the Comnwealth Bureau of Roads and the Bureau of Transport Economics were amalgamated. This report is of a similar nature as the earlier three reports described above. It contains data on the number of motor vehicles on register, estimated *annual* vehicle kilometres of travel, fuel consumption data, passenger and freight movements by road transport, projections of future population levels, motor vehicles on register, and future road needs. Also included is a comprehensive inventory of the national highway system, indicating the surface type, type of terrain, land use, number of structures, length, average annual daily traffic, formation width, seal or gravel width and deficiencies for each major road section.

Record 5.104 ROADS INVENTORY - Australia

Australian Bureau of Statistics

1. Source
Collector and Distributor: Australian Bureau of Statistics, Cameron Offices, Belconnen, ACT 2616.

2. Periodicity of Availability
See paragraph 7 below.

3. Region of Availability
Australia.

4. Published Information
Some roads inventory data are published by the State offices of the Australian Bureau of Statistics, and in the Commonwealth and State Yearbooks. These are described in paragraph 7, parts (B) and (C) below.

5. Supplementary Information
For data contained in the Australian Municipal Information System, it would be possible to generate special-purpose computer printouts showing summaries of various sub-sets of roads inventory data on file. This may require modification of existing computer programs or writing new programs. Whilst the Bureau would consider favourably any requests from appropriate authorities for additional data of this kind, such requests would have to be examined against other priorities and the current work load of the Bureau's computer programming resources.

6. Limitations
The two main sources of roads inventory data used by the Australian Bureau of Statistics are the State Main Road Authorities, and Local Government Authorities. In some cases, there are large discrepancies between data on road lengths supplied by these two sources. Comments made by several State Main Road Authorities, interviewed by the consultant in the course of this study, suggest that in several instances road lengths reported by municipalities exceeded actual road lengths by a substantial margin.

7. Description of Data Available
Roads inventory data are available from three sets of records: the Australian Municipal Information System, data published by the State offices of the Australian Bureau of Statistics, and the Commonwealth and State Yearbooks.

(A) Australian Municipal Information System (AMIS)
The system provides a wide range of municipal statistics. For each Local Government Area, the road length is shown by type (sealed roads, total for all types of roads). Separate data are available for each year between 1969-70 and 1976-77. The same data are also shown as a percentage of the State total.

The Melbourne office of the Australian Bureau of Statistics *has* prepared a computer printout of these data for Victoria. For other States, microfiche records are available.

Record 5.104 (Sheet 2)

In addition to the above, a more detailed printout is available for Victoria, referred to as 'Victoria - Length of Roads and Streets Open for Public Traffic, as at 30 September, 1979' which lists road lengths for three types of roads (unclassified, main roads, state highways/ freeways/tourist/forest roads), by area: built-up areas (sealed, formed and surfaced, formed but not surfaced, cleared only, sealed lanes, unsealed lanes), non built-up areas (sealed, formed and surfaced, formed but not surfaced, cleared only). Separate data are available for each Local Government Area within Victoria. The Melbourne office has prepared this printout at the request of the Country Roads Board.

The Australian Municipal Information System is described in the AMIS Manual, published by the Australian Bureau of Statistics in 1974 (ABS Ref. No.1.12).

(B) Data Published by the State Offices of the Australian Bureau of Statistics

Each of the six State offices publishes Local Government statistics and in some cases booklets specifically dealing with length of road data. These are listed below.

(1) New South Wales

ABS Cat. No.9101.1 'Transport and Communication' (bi-annual).
Contents:
Table 16: Length of roads and streets, by type of road (cement concrete, bituminous concrete, bituminous seal, primer seal, gravel pavement, earth formed, natural surface), by region: Sydney Statistical Division (municipalities, shires), rest of NSW (municipalities, shires, unincorporated).

Table 17: Length of roads under the control of the Department of Main Roads, by class of road: proclaimed main roads (State highways, trunk roads, ordinary main roads, developmental roads, tourist roads), other roads (freeways, toll works, secondary roads, unclassified roads).

Table 18: Roads and streets, etc. in NSW, by type of road: roads, streets and lanes (cement concrete, bituminous concrete, bituminous seal, primer seal, gravel pavement, earth formed, natural surface), footpaths (concrete, asphalt), kerbs and guttering (concrete and stone). Separate data are shown for each municipality and shire in the State.

ABS Cat. No.9202.1 'Roads in Statistical Divisions and Local Government Areas' (irregular; latest issue 1975).
Contents:
Length of roads by type (commercial, industrial, etc.), by surface (concrete, gravel pavement, etc.), for each Local Government Area.
Length of roads by function (rural interregional, urban arterial, etc.), for each Statistical Division.

(2) Victoria

ABS Ref. No.4 'General Statistics of Local Government Areas' (irregular, latest issue 1975).
Contents:
Items 105, 106, 107: Length of roads and streets by type (sealed, other), for each Local Government Area.

ABS Cat. No.5501.2 'Local Government Finance' (annual).
Contents:
Substantially the same as in 'General Statistics of Local Government Areas' described above.

Record 5.104 (Sheet 3)

(3) Queensland

ABS Cat. No.1306.3 'Statistical Summary, Local Authority Areas' (annual).
Contents:
Table 3: Length of Roads by type of road (sealed, other formed, unformed), for each Local Government Area.

ABS Cat. No.5501.3 'Local Government: Summary' (annual).
Contents:
Length of roads open to traffic, for each Local Government Area.

ABS Cat. No.5502.3 'Local Government: Finance, etc.' (annual).
Contents:
Substantially the same as in 'Local Government: Summary' described above.

ABS Cat. No.9202.3 'Length of Roads Normally open to Traffic': previously: 'Roads Normally open to Traffic' (annual).
Contents:
Length of roads by type of surface, for each Local Government Area and Statistical Division.

(4) South Australia

ABS Cat. No.9101.4 'Statistical Register of South Australia, Part VI - Transport and Comunication' (annual, final issue 1975-76).
Contents:
Table 4: Length of roads by type of surface (natural, formed, paved unsealed, paved sealed), by type of road (national roads, arterial roads, local roads). Data shown pertain to total length for the State; individual road length by Local Government Area is not indicated.

ABS Cat. No.9102.4 'Transport and Communication' (annual, first issue 1976-77).
Contents:
Table 4: identical to Table 4 of publication 9101.4 described above.

(5) Western Australia

ABS Cat. No.1303.5 'Statistics of Western Australia - Local Government' (annual).
Contents:
Table 1: Length of roads by type of surface (sealed or primed, gravel surface, formed only, unformed public roads), for each Local Government Area.

ABS Cat. No.9101.5 'Statistics of Western Australia - Transport and Communication' (annual, final issue 1976-77).
Contents:
Table 26: Length of roads by type of surface (sealed or primed, gravel surface, formed only, unformed), for each Statistical Division.

(6) Tasmania

ABS Cat. No.1304.6 'Compendium of Municipal Statistics' (irregular, latest issue 1975).
Contents:
Table 2: Length of road by type of road (sealed including concrete, other), for each Local Government Area.

ABS Cat. No.5501.6 'Local Government Finance' (annual).
Contents:
Length of roads, for each Local Government Area.

Record 5.104 (Sheet 4)

(C) Comnwealth and State Yearbooks

The Australian Yearbook contains the following roads inventory data:

(1) Length of proclaimed or declared roads by State, by class of road (State highways, trunk roads, ordinary main roads, total main roads; secondary roads, development roads, tourist roads, other roads, total roads other than main roads).

(2) Length of all roads open forgeneraltraffic by State and Territory, by type of surface (bitumen or concrete, gravel/crushed stone or other improved surface, formed only, cleared only).

Similar information is also contained in the Yearbooks of New South Wales, Victoria, Queensland, South Australia, Western Australia and Tasmania.

Record 5.105 ROADS INVENTORY - Australia

Australian Roads

1. Source
Collector and Distributor: National Association of Australian State Road Authorities (NAASRA), 323 Castlereagh Street, Sydney, NSW 2000.

2. Periodicity of Availability
Irregular (1957, 1959, 1961, 1964, 1965, 1968, 1970, 1973, 1976, 1978).

3. Region of Availability
Australia.

4. Published Information
'Australian Roads'.

5. Supplementary Information
Internal documentation and working papers. Refer also to Record 5.102.

6. Limitations
The data contained in this booklet show the total length of road in various categories, but do not include detailed roads inventory information.

7. Description of Data Available

(1) Length of road by State or Territory, by type (classified State highways, *trunk,* main roads; other roads controlled and/or subsidised by State Road Authority; other roads).

(2) Ratio of road length to population and areas, by State or Territory, by type of road (same categories as for Item (1) above). Population levels and areas in square kilometres are also indicated.

(3) Length of proclaimed State highways, *trunk* and main roads, by State or Territory, by surface type (unsealed, sealed). A separate table shows the length of all roads by surface type (natural state cleared or formed, gravel or stone paved, sealed).

(4) Descriptive sections for each State and Territory, discussing various aspects of the road system, road classifications, activities of the road administration authorities, and their organisation.

Record 5.201 *ROADS* INVENTORY - New South Wales

Department of Main Roads

1. source
Collector and Distributor: Department of Main Roads, 309 Castlereagh Street, Sydney, NSW 2000.

2. Periodicity of Availability
For the most part, the information available is in the form of internal records which are updated from time to time. The periodicity of published data is described in paragraph 4 below.

3. Region of Availability
New South Wales.

4. Published Information
(1) 'Road Directory of NSW (including Town Maps) with a Schedule of Descriptions of Classified Roads and Works'. Published 1978. It is intended to update this document from to time; for that reason, a loose leaf format was used. This publication supersedes the annual booklet 'A Schedule of Description of Classified Roads and Works'.
(2) Annual Report of the Department of Main Roads.

5. Supplementary Information
Record 5.202: Traffic Control Signals.
Record 5.203: Railway Level Crossings.
Record 5.204: Advisory Speed Survey.

6. Limitations
Roads inventory data are limited to 'Classified Roads' which can be in two categories: gazetted 'Proclaimed Roads', or 'Declared Roads' (declared as such by the Commissioner of Main Roads; these are usually secondary roads under the jurisdiction of municipal councils, which form an essential part of a Main Road traffic flow pattern). The majority of local roads, sometimes referred to as 'Council Roads' are excluded.

A complete update of all roads inventory information is a major task which can be undertaken only at infrequent intervals.

7. Description of Data Available
Roads inventory information described here comprises five items: Road Surface Inventory, Bridge Card Index, 'Road Directory of NSW', Aerial Photography Survey, and the Annual Report.

(A) Road Surface Inventory
A computer-based record system, 'Road Surface Inventory and Record of Bitumen Surfacing Works' (ROSIE), is being maintained. This is an abbreviated and slightly modified version of the 'Australian Road Survey 1969-74' described in Record 5.101.

Record 5.201 (Sheet 2)

The information is arranged in terms of the 19 geographic Divisions (e.g. Metropolitan, Paramatta, etc.). In the computer printout, each line represents one road section. For each road section, the following data are shown:

(1) Road classification (FW freeway, SH *State* highway, TR trunk road, MR main road, SR secondary road, TO tourist road, DR developmental road excluding developmental works, UR unclassified road under the the control of the Department).

(2) Road number.

(3) Division number.

(4) Road section number.

(5) Local Government Area code number and name.

(6) Chainage start to finish (the length of the road section in kilometres. In most cases a road section is divided into several sub-sections).

(7) Length (the length of each sub-section in kilometres).

(8) Width of road pavement in metres.

(9) Width of median strip in metres.

(10) Total number of lanes.

(11) Surface type (NS natural surface, FM formed only, GR gravel or crushed rock or stabilised pavement, PR primed only, PS primer seal, SS sprayed seal, ER enrichment reseal, SL slurry seal, BM plant mix with bitumen binder, TM plant mix with tar binder, CC cement concrete).

(12) Lanes of new work (number of lanes of work completed last year).

(13) Initial seal, reconstruction and maintenance (ISRM): type of bitumen surfacing used (IT initial sealing, SP surfacing on a previously primed pavement, RW restoration surfacing to strengthen or widen an existing road, RL restoration surfacing to provide additional lines, RA restoration surfacing to provide improved grading or alignment, MT maintenance Surfacing).

(14) Construction authority (Department or Council, by direct labour or contractors).

(15) Nominal mix or aggregate size of treatment (technical details of aggregate or plant mix type used in the surfacing work).

(16) Surface details (particulars of the type of surface treatment used).

(17) Depth added (particulars of surface layer depth).

(18) Location description (e.g. "from Gladesville Bridge north to Tarban Creek Bridge").

(19) Financial year (in which the latest road surfacing work was carried out).

(20) Functional Class (Class 0 to Class 9).

(21) Commonwealth Road Classification code (NH national highway, EX export road, MC major comercial, RA rural arterial, RL rural local, UA urban arterial, UL urban local, SCH Schedule of Grants Road).

Record 5.201 (Sheet 3)

For internal pruposes, the Department generates summary reports in the form of computer printouts from time to time. Examples:-

- Total road length by type of road (expressways, State highways, trunk roads, main roads, secondary roads, etc.), by type of surface finish (cement concrete, bitumen concrete, etc.). Tables of this kind can be prepared for the whole of NSW, for each District, or for other geographic regions.
- Total road length by Functional Class (Class 0 to Class 9), by type of road (expressways, State highways, etc.) .
- other tabulations: Functional Class by surface type, legislative status by Legal Class, etc.

(B) Bridge Card Index

Initially, a manual card index system was created for recording information on structures, bridges, culverts, etc. A computer file, containing a sub-set of this data, is also available. The computer record is arranged in a similar way as the 'Australian Road Survey 1969-74' (described in Record 5.1011, but contains fewer data items.

The manual system is the master record; the computer file is updated every 6 months. The computer printout is arranged in terms of the 19 geographic Divisions. The following data are shown for each bridge or structure:

(1) Road class (1 freeway, 2 State highway, 3 trunk road, 4 main road, 5 secondary road, 6 developmental road, 7 developmental work, 8 tourist road, 9 unclassified or country road).

(2) Road number.

(3) Road section number (same as Item 4 in Road Surface Inventory).

(4) Division number.

(5) Local Government Area code number.

(6) Chainage, shown both in miles and kilometres (the distance between the bridge and a specified reference point on the road).

(7) Description of location, bridge name, stream name.

(8) Authority responsible for maintenance works (Department of Main Roads, Council, Public Transport Codssion, etc.).

(9) Plan number andgeneralfile number (referring to the Department's engineering records).

(10) Bridge code number, describing the type of structure (e.g. railway bridge over roadway, bridge over railway, culvert over high flood level, etc.).

(11) Date built (year when the bridge was constructed).

(12) Bridge dimensions: total length, maximum and (if applicable) minimum carriageway width, minimum vertical clearance. All dimensions shown in feet.

Record 5.201 (Sheet 4)

(13) Whether a catwalk or footway is provided, and the width thereof (footways less than 18 inches wide are not recorded; those between 18 inches and 2 ft wide are termed 'catwalks', and those over 2 ft width 'footways'). Separate data are shown for catwalks or footways on the left hand and right hand side of the bridge (with respect to the chainage origin point).

(14) Height of bridge deck above or below high flood level, and above normal water level.

(15) Construction details: type of handrail (steel, brick, concrete, timber, chainwire), deck type (concrete, steel, timber, earth fill, macadam, brick), deck seal (asphaltic concrete, cement concrete, flush seal), type and description of superstructure.

The printout format of one single page is not sufficient to show all data, and hence particulars on a bridge are shown in three printout sheets (Report 1, Report 2 and Report 3).

The manual master file of the Bridge Card Index contains a number of additional items which describe the type of bridge construction in greater detail, painting specifications, load carrying capacity, abutment details, by whom constructed, construction file reference numbers, date opened to traffic, survey and design file number, particulars pertaining to the stream and catchment area, and bridge number.

Additional items of specific interest for road safety are: whether street lighting is provided, whether a pedestrian safety rail is provided, median strip width.

(C) Road Directory of New South Wales

The full title of the 1978 edition is 'Road Directory of New South Wales (Including Town Maps) with a Schedule of Description of Classified Roads and Works'. It contains the following information:

(1) A set of 23 maps showing the location of roads by type (State highways, trunk, other main, tourist, developmental and other roads).

(2) Index to towns and localities.

(3) 'A Schedule of Descriptions of Classified Roads and Works with Functional Classification and Legislative status'.
This part of the book contains:

A listing of various types of roads (proclaimed State highways, proclaimed trunk roads, proclaimed main roads, proclaimed developmental roads, declared secondary roads, proclaimed developmental works, proclaimed tourist roads and unclassified roads).

For each road listed, the following data are included: road number, road name, a description of the road (e.g. from the Monaro Highway (state Highway No.19) near Bombala, via Rockton to the Victorian border), a map reference, legistlative status (NH national highway, EX export road, MC major comercial, RA rural arterial, RL rural local, UA urban arterial, UL urban local, SCH Schedule of Grants road), and functional classification (Class 0 to Class 9).

The legislative status and functional classification shown are currently being amended.

(4) List of the Department of Main Roads geographical Divisions, showing the corresponding Local Government Areas.

Record 5.201 (Sheet 5)

(5) List and map of Marked State Routes.

(6) Map of Australia showing National Marked Routes.

(7) A set of some 90 maps of towns and provincial cities in New South Wales.

A list of current Proclamations is set out from time to time in the NSW Government Gazette, a comprehensive example being Gazette No.145 of 12 November 1976 which contains a listing of State highways, trunk roads and main roads, showing for each the road number, road name, a description of the road, and also provides reference to previous relevant Gazette numbers and dates.

(D) Aerial Photography Survey

The Department has the use of a helicopter for taking aerial photographs of the road system. The photos are 5 inch x 5 inch and can be joined at the edges to provide a continuous coverage of a specified area. It is possible to greatly magnify the photos to detect minor details. The survey is normally limited to the 'Sydney Traffic Region' which includes Newcastle and Wollongong.

(E) Annual Report

The annual report consists of two parts: the annual report, and the SUPplement to the annual report. The annual report contains the following data:

(1) Length of roads for which the Department of Main Roads is responsible, by class of road (freeways, State highways, trunk, main, secondary, tourist, developmental, unclassified roads). A separate table is also included, shaving the length of roads by type of surface (natural surface, formed only, gravel, primed only, primer seal, sprayed seal, enrichment seal, slurry seal, bituminous plant mix, cement concrete).

(2) A map of New South Wales, shaving highways, trunk roads and main roads, using a colour code. Boundaries of Divisions are also indicated.

(3) A concise summary of major roadworks carried out during the year.

The Supplement to the annual report contains:

(4) A detailed description of major roadworks carried out during the year.

(5) Length of roads by class of road (freeways, State highways, trunk, main, secondary, tourist, developmental, unclassified roads), by type of surface (cement concrete, bitumen concrete, other type of bitumen surface, gravel, formed only, natural surface). Separate tables provided for County of Cumberland, rest of the State, and total for New South Wales.

(6) Length of roads by Division (Metropolitan, Parramatta/County of Cumberland, Paramatta/Country, Central Mountains/County of cumberland, Central Mountains/Country, Illawarra/County of Cumberland, Illawarra/Country, Hunter Valley, Lower North Coast, North Eastern, Upper Northern, North Western, Central Western, Central Northern, Murray Darling, Central Murray, south Western, South Coast, Southern), by type of surface (natural surface, formed only, gravel, primed only, primer sealed, sprayed seal, enrichment seal, reseal, slurry seal, plant mix, cement concrete).

(7) Length of roads for each of the last five years, by class of road (same categories as for Item 5 above). Separate tables for County of Cumberland, rest of the State, and total for New South Wales.

Record 5.202 ROADS INVENTORY - New South Wales

Traffic Control Signals

1. Source
Collector and Distributor: Department of Main Roads, 309 Castlereagh Street, Sydney, NSW 2000.

2. Periodicity of Availability
The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
New South Wales.

4. Published Information
Annual Report.

5. Supplementary Information
Inrernal documentation and working papers.

6. Limitations
Unlike most other roads inventory data collected by the Department of Main Roads, this listing is not limited to declared and proclaimed roads, but includes all traffic control signal installations on all types of roads within New South Wales.

7. Description of Data Available

(A) Computer Records
Traffic control signals location data are contained in a computer file, which is normally updated four times a year. The printout consists of two parts: a listing of signal locations in alphabetic order of street names, and a listing by installation number. Separate printouts are available for each Division and District. For each installation, the following information is shown:

(1) Division and District (e.g. the code MEN meaning Metropolitan Division, Northern District).

(2) Installation number (each location has a serial number).

(3) Whether in service or not.

(4) Names of all streets entering the intersection. (In the alphabetic listing, each installation has at least two entries; if three different streets join the intersection there will be three entries, and so on).

(5) Suburb name.

(6) County Council name and number.

(7) Type of signal (V vehicle actuated, I connected to an inner city master control system, A connected to another master control system, P pedestrian signal, F flashing signal, W warning signal).

(8) Type of signal device (e.g. Unitac, 37, CT500, PSF, etc.).

(9) Date when introduced into service.

Record 5.202 (Sheet 2)

In the alphabetic section of the printout, separate alphabetic listings are available for all pedestrian signals (signal serial numbers having a P prefix), for *all* flashing signals (serial numbers having a F prefix), and for all warning signals (W prefix). Similarly, pedestrian, warning and flashing signals have separate printouts in the serial number sequence format.

(B) Annual Report

The annual report of the Department of Main Roads contains data on the number of traffic signal installations in the State by region (Sydney, Newcastle, Wollongong, country centres), by type (vehicle actuated, pedestrian actuated, inner city installations), and some descriptive data.

Record 5.203 ROADS INVENTORY - New South Wales

Railway Level Crossing

1. Source
Collector and Distributor:
(1) Department of Main Roads, 309 Castlereagh Street, Sydney, NSW 2000.
(2) Public Transport Codssion of New South Wales, 11 York Street, Sydney, NSW 2000.

2. Periodicity of Availability
The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
New South Wales.

4. Published Information
'Local Appendix to the Working Timetable', Public Transport Commission (latest edition 1977).

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
The railway level crossing register maintained by the Department of Main Roads is updated on an ad-hoc basis, following notes received from field personnel. The register includes only crossings on declared or proclaimed roads, and therefore does not represent a complete inventory of all level railway crossings in the State.

Railway crossing data published by the Public Transport Commission is updated only at infrequent intervals.

7. Description of Data Available

(A) Department of Main Roads
The Department maintains a 'Railway Level Crossings Register' consisting of a book containing handwritten entries, and a set of maps. For each crossing, the following information is recorded:

(1) Department of Main Roads Division.

(2) Railway crossing serial number.

(3) File reference number.

(4) Road number.

(5) Council (name of Local Government Authority).

(6) Description of location (e.g. 9 miles north east of Hay).

(7) Description of railway line crossed (e.g. Main Western Line).

(8) Rail Mileage (showing number of miles and chains, and also kilometres from a given reference point).

(9) Nearest railway station or junction (e.g. Cumboogle - Dubbo East Junction).

(10) Remarks (usually showing the type of warning device installed, when installed, and any changes which may have occurred since then).

Record 5.203 (Sheet 2)

(11) The location of each crossing is shown on a large map. The map is updated annually. It *shows* 3 types of level crossings: level crossings without traffic control facilities, level crossings with traffic control facilities, and level crossings on privately owned railway lines. A colour code is used to indicate the Department of Main Roads Divisional boundaries, and the boundaries of the eight Railway Districts.

(B) Public Transport Commission

The Commission publishes from time to time a set of booklets 'Local Appendix to the Working Timetable'. The latest edition (1977) comprises 5 volumes (Northern Division, Illawarra Division, Metropolitan Division, Western Division, and Southern Division). Information describing various features of the railway network is arranged by lines (e.g. Main Line, Muswellbrook-Merriwa Branch Line, etc.).

The booklets contain the following *data* on railway crossings:

(1) Name of crossing (e.g. Niagara Park).

(2) Description of crossing (e.g. pedestrian, private, access between platforms, protection stock crossing, etc.) .

(3) Distance from Sydney (e.g. 721.186 km).

(4) Type of protection (A automatically operated protection equipment, C cattle stops in lieu of gates on fenced lines, F flashing light highway signals or warning indicators, G gatekeeper in charge, H gates attended part-time only, I gates or booms interlocked with signals, M manually operated protection equipment, P power worked boom barriers, S station staff in charge of gates, U unattended with chains provided, W warning lights other than standard type 'F' devices, X gates obstruct rail lines when open for road traffic).

(5) Name of railway station which controls the crossing.

(6) A separate listing is provided for all railway crossings equipped with 'F' type highway signals, indicating the following data for each crossing: name of crossing, whether private/pedestrian/etc., distance from Sydney, equipment fitted (e.g. half boom and type 'F' signals), who is responsible for carrying out a daily test (e.g. fettling ganger, station master Mount Druitt, etc.), who is responsible for recording the daily test, where the emergency keys are held.

(7) Separate listings are also included for two other types of crossings: those equipped with gates (indicating the hours and days of the week when open to road traffic), and crossings equipped with portable barriers (describing the manner in which the barriers are normally used: e.g. barriers to be placed across line after passage of last train in the evening, and removed by gatekeeper for passage of first train in the morning, also for any special trains).

Record 5.204 ROADS INVENTORY - New South Wales

Advisory Speed Survey

1. Source
Collector and Distributor: Department of Main Roads, 309 Castlereagh Street, Sydney, NSW 2000.

2. Periodicity of Availability
The survey is part of a continuing programme. Each year, a number of road sections are covered, depending on resources available. The present format of the survey was started in 1978. Prior to that, similar surveys were conducted, some dating back several decades. Less comprehensive equipment was used in these earlier surveys, the results of which are partly contained in computer printouts similar to those described below, and partly in manual records.

3. Region of Availability
New South Wales.

4. Published Information
None.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
The information available does not comprise a complete inventory of advisory speeds and signs, but merely represents a small sample of all road sections within the jurisdiction of the Department of Main Roads. Results of some of the earlier surveys may be considerably out of date.

7. Description of Data Available
survey data are contained in a computer file. The printout is arranged in terms of particular road sections. For each road section, two trips are recorded in each direction (e.g. two northbound, and two southbound trips). For each such trip, the printout contains a sequence of line entries, each line entry representing a *curve,* the starting point of a signposted speed limit, or some other identifying road feature. The survey is performed by using a specially instrumented test vehicle. For each line entry, the following information is shown:

(1) Curve type (for signposted curves: curve, reverse curve, turn, reverse turn, winding road, hairpin bend; for unsignposted curves: curve, turn).

(2) Direction (whether the curve turns to the left or to the right hand side).

(3) Odometer reading from a specified starting point.

(4) Acutal speed of the test vehicle.

(5) Ball bank (degrees of banking of the road surface at right angle to the direction of travel).

(6) Calculated advisory speed.

(7) Recommended advisory speed.

(8) Adopted advisory speed (this item is not always included in the print-out).

Record 5.204 (Sheet 2)

(9) Existing speed limit.

(10) Comments and reference points (e.g. kilometre post G30, railway crossing, intersection, freeway overbridge, Bulla Creek, etc.).

a

Record 5.205 ROADS INVENTORY - New South Wales

NRMA Highway Surveys

1. Source
Collector and Distributor: National Roads and Motorists' Association (NRMA), 151 Clarence Street, Sydney, NSW 2000.

2. Periodicity of Availability
Irregular. The programme was started in its present form in 1969. The NRMA aims to survey major highways once every two years, and other highways about once every 3 to 5 years.

3. Region of Availability
New South Wales and adjoining regions.

4. Published Information
A set of reports described in paragraph 7 below.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
The surveys completed to date comprise only a small sample of the major road system of New South Wales.

7. Description of Data Available

NRMA Highway Survey No.	Year	Description	ISBN NO.
6	1973	Federal and Barton Highway	909932 04 2
7	1973	Great Western, Mitchell and Barrier Highway	05 0
8	1974	Prince's Hgihway	15 8
9	1974	New England Highway	17 4
10	1974	Illawarra Highway	18 2
11	1974	Sturt Highway	19 0
12	1974	Newell Highway	20 4
13	1974	Mid Western Highway	26 3
14	1975	Hume Highway	27 1
15	1975	Pacific Highway	29 8
16	1975	Federal and Barton Highway	31 X
17	1976	Prince's Highway	35 2
18	1977	Hume Highway	37 9
19	1977	Great Western Highway	39 5
TRS-1	1977	Trunk Road 55	40 9
20	1977	Mitchell Highway	41 7
21	1977	National Route No.1	44 1

Record 5.205 (Sheet 2)

NRMA Highway survey No.	Year	Description	ISBN NO.
22	1978	Illawarra Highway	909932 45 X
23	1978	Pacific Highway	46 8
24	1978	Federal Highway	47 6
25	1978	Barton Highway	48 4
26	1978	Newell Highway	52 2
TRS-2	1978	Trunk Road 51	55 7
ARS-1	1979	Urban Arterial Road 33	57 3
27	1979	Prince's Highway	54 9
28	1979	Sydney-Brisbane Nat. Highway	52 8
29	1980	Hume Highway	59 X

ARS- is the prefix for urban arterial road surveys.
TRS- is the prefix for *trunk* road surveys.

Highway Surveys No.1 to 5 have not been published. For these, the only data available are the NRMA's internal records.

The layout and format of the reports listed above varies somewhat. A typical example is Highway Survey No.23 - Pacific Highway (1978) which contains the following data:

(1) Total distance between Sydney and Brisbane, as measured in the survey.

(2) Length of road subject to speed zoning restrictions (urban: 60 km/h; rural: 70, 80, 100, 110 km/h), showing separate totals for the NSW portion and the Queensland portion of the Pacific Highway. Also shown is the number of separate 60 km/h speed zones in the two States, and the location of urban speed zones exceeding 0.4 km in length.

(3) Length of road subject to no-overtaking restrictions, shown separately for NSW and Queensland.

(4) Curves with advisory speed signs: number of signs by advised speed (15, 25, 35, ... 95 km/h) for each State. The signs are listed according to "advised speed relative to speed limit" (10 km/h above, 5 km/h above, equal to, 5 km/h below, ... 75 km/h below) for each State. Mention of areas where advisory speed signs were most prevalent.

(5) Number of lanes: length of road with multiple lanes (2, 3, 4, 5 divided) shown separately for NSW and Queensland, and for the Sydney to Hexham section of the Sydney to Newcastle freeway.

(6) Width *and* condition of pavement, roadworks in progress: length of road by laneway width (divided, over 3.6 m, 3.4 to 3.6 m, 3.1 to 3.4 m) separately for NSW and Queensland. Also included is a detailed description of the state of repair of successive sections of the Pacific Highway (Sydney to Wyong, Wyong to Gateshead, etc.). For each section, the existing condition of the road surface is described (very good, good, fair, poor, very poor), and any roadworks in progress are mentioned. A separate section describes the width and condition of shoulders, and the condition of pavement edges.

Record 5.205 (Sheet 3)

(7) Edge lines: length of road provided with edge lines or kerb and gutter, and length of road having a width of 6.8 m or more, separately for NSW and Queensland.

(8) A descriptive part dealing with signposting, pavement marking and road obstacles.

(9) Extract from the Department of Main Roads Summary of Completed, Current and Proposed Works on the survey route.

Throughout the report, comparisons are made between the results of this survey and those of the most recent survey (1975).

Record 5.206 ROADS INVENTORY - New South Wales

Traffic Authority of New South Wales

1. Source
Collector and Distributor: Traffic Authority of New South Wales, 52 Rothschild Avenue, Rosebery, *NSW* 2018.

2. Periodicity of Availability
Annual.

3. Region of Availability
Sydney metropolitan area.

4. Published Information
Annual Report.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Roads inventory data contained in the Annual Report are limited to information shown on maps.

7. Description of Data Available

(1) A map of the Sydney metropolitan area showing all clearways and transit lanes.

(2) A map of the Sydney metropolitan area shaving the main traffic routes under full intersection control.

(3) A map of the Sydney metropolitan area showing the regions with co-ordinated traffic signals (sites with 3 or more signals linked).

Record 5.301 *ROADS* INVENTORY - Victoria

Country Roads Board

1. Source
   Collector and Distributor: Country Roads Board (CRB), 60 Denmark Street, Kew, Vic. 3101.

2. Periodicity of Availability
   For the most part, the information available is in the form of internal records which are updated from time to time.

3. Region of Availability
   Victoria.

4. Published Information
   Annual Report.

5. Supplementary Information
   Record 5.302: Traffic Control Signals.
   Record 5.303: Railway Level Crossings.

6. Limitations
   Roads inventory data are mainly limited to 'Declared Roads' which are the direct responsibility of the Country Roads Board. Also included in the inventory are all those roads which the Board would regard as 'Arterial Roads'; some of these are not Declared Roads. Minor roads are largely excluded.

   At present, roads inventory data are contained in interim computer files. These are essentially based on the 'Australian Roads Survey 1969-74' described in Record 5.101. A major update of data was carried out during 1977 and 1978.

   Existing data files are arranged in three categories: road links (which include railway crossings), structures, and intersections. Permanent reference points are based mainly on intersection locations.

   The Board is currently in the process of adopting the NAASRA Data Bank System as the computer base for its link inventory, which will include all standard NAASRA Data Bank System data items, as well as a number of additional data items.

7. Description of Data Available
   Roads inventory computer records are referred to as the 'CRB Roads Inventory System'. It consists of three major parts: link inventory, structures, and intersections. The link inventory file contains some summary data on structures and intersections; more detailed data on these are included in the structures and intersections files respectively. When fully implemented, the information available will include the items listed below.

   Apart from computer records, the Board also maintains a set of detailed road maps, based on aerial photography, which is referred to as the 'Highway Record Survey'. Some information is also contained in the annual report.

Record 5.301 (Sheet 2)

(A) CRB Roads Inventory System: Link Inventory File

The link inventory file is a somewhat more detailed and expanded version of the NAASRA Data Bank described in Record 5.102. Additional data include items *such* as name and other particulars of any side roads, name of towns and localities and posted speed limits.

(B) CRB Roads Inventory system: Structures File

(1) Crossing and/or stream name.

(2) Structure reference number.

(3) Remarks/comments.

(4) Last project number.

(5) Location: Local Government Area number.

(6) Location: road number.

(7) Location: distance from specified point of origin.

(8) Carriageway (undivided, left carriageway, right carriageway).

(9) Maintenance authority.

(10) APD use: Advanced Planning Department file reference.

(11) Description: over function (facilities carried by the structure, e.g. roadway, railway, utility services, etc.).

(12) Description: under function (facilities being crossed by structure, e.g. roadway, waterway, railway, etc.).

(13) Description: components (type of culverts, substructure, superstructure and spans).

(14) Description: type of facility (bridge, culvert).

(15) Length of deck (m*10).

(16) Width between kerbs (m*10).

(17) Footway or kerb width-left hand side (m*10).

(18) Footway or kerb width-right hand side (m*10).

(19) Skew angle (degrees).

(20) Depth of fill (m*10).

(21) Number of spans.

(22) Length of weakest span (m*10).

(23) Maximum spacing of stringers (m*10).

(24) Average height above ground (m*10).

(25) Horizontal clearance (m*10).

(26) Vertical clearance (m*10).

(27) Piers, abutments, culverts: type and condition.

(28) Stringers, beams, truss, arch: type and condition.

(29) Deck: type and condition.

(30) Bearings: type and condition.

Record 5.301 (Sheet 3)

(31) Deck joints: type and condition.

(32) Railing: type and condition.

(33) Posted legal load limit.

(34) Load carrying capacity.

(35) Section modulus of load carrying components.

(36) Flooding: maximum and minimum number of days closed per annum due to flooding.

(37) Period of flood history, on which data in item 36 are based.

(38) Number of times the road was cut by flood during the period of flood history.

(39) Total number of days when the road was closed by flood during the period of flood history.

(40) Whether the flooding is acceptable (yes, no).

(41) Whether the waterway is inadequate (yes, no) .

(42) Area waterway up to flood level (area of vertical cross-section through the waterway at maximum known flood level).

(43) Year of construction.

(44) Year of last alteration, and type of alteration carried out at that time.

(C) CRB Roads Inventory System: Intersections File

(1) Distance from specified datum point.

(2) Area (code indicating the survey area).

(3) Road number (lowest route number at intersection).

(4) Road name (lowest route number at intersection).

(5) Intersection node number.

(6) Name of the main intersecting road.

(7) Accident map reference.

(8) Maintenance authority.

(9) Municipal code number (where a Local Government Authority is responsible for maintenance). Code numbers of any other municipalities who are jointly responsible for maintenance, are also shown.

(10) Type of traffic signal installed (N nil, P policeman, F flashing, SF stop-go fixed, TF stop-go with turning phases fixed, SA stop-go traffic actuated, TA stop-go turning phases traffic actuated).

(11) Number of phases (number of separate green phases per cycle).

(12) Signal box number.

(13) Pedestrian movements (N nil/no pedestrians, L light/normal residential, H heavy/commercial centre, S separate phase given by lights).

Record 5.301 (Sheet 4)

(14) Street lighting within the intersection: number of lanterns, light source (I incandescent, F fluorescent, S sodium, M mercury, N no lights), lamp type (CO Cut off, SCO semi cut off, NCO no cut off), mounting height. Separate data given for *standard* and high masted street lighting.

(15) Identification: for each leg entering the intersection, the route number, the distance at which the intersection occurs on each route, and the opposite leg number are shown. Opposite legs are described in two ways: physical (the leg located opposite the leg described), and operational (the leg whose traffic movements coincide with the leg described).

(16) Traffic control: signs (N nil, G give way, S stop, R give way to right, W warning). Separate data for each leg entering the intersection.

(17) Traffic control: channelization (N nil, Z safety zone, C central island, L left turn slot, S left slip lane, O left turn from service road only, R right turn slot, T separate right turn carriageway, X ramp exit, P partial channelization, F full channelization, B roundabout, E oversize left slip lane). Separate data for each leg entering the intersection,

(18) Traffic control: peak hour parking ban (distance back from the stop line in metres where parking is banned on the left hand kerb, CWAY signed clearway, ALL parking banned for a distance greater than 100 metres). Separate data for am and pm peak hour for each leg.

(19) Traffic control: physical turn ban (indicating the leg number affected). Separate data for am and pm peak hour for each leg.

(20) Traffic control: signed turn ban (indicating the leg number affected). Separate data for am and pm peak hour for each leg.

(21) Traffic control: unopposed right turn (indicating the leg number affected). Separate data for am and pm peak hour for each leg.

(22) Approach lanes: lane configuration at stop line (1 left only, 2 left and through, 3 through, 4 through and right, 5 right only, 6 left and right, 7 left, through and right; U prefix if lanes are not marked on the ground, M prefix if all lanes and arrows are marked, L prefix if lanes only are marked, PM prefix if lanes and arrows are partially marked). Separate data for each leg.

(23) Approach lanes: width of carriageway at stop line (kerb to kerb width on divided roads, and kerb to centreline on undivided roads, shown in 0.1m units). Separate data for each leg.

(24) Approach lanes: lane configuration 100 m behind *stop* line (same categories as for Item 22).

(25) Approach lanes: width of carriageway 100 m behind stop line (same categories as for Item 23).

(26) Departure lanes: width of carriageway at building line (same categories as for Item 23).

(27) Street lighting 120 m behind the stop line: number of lanterns, light scource and lamp type (same categories as for Item 14), mounting height. Separate data for each leg.

(28) Any remarks or comments, to clarify any apparent anomalies.

Record 5.301 (Sheet 5)

(D) Highway Record Survey

The Board maintains a comprehensive aerial photography programme which covers the major roads network throughout the State. Each record contains a reproduction of the photograph of a road section, which is marked to provide a detailed map of the region. The map contains place names, names of roads, type of surface of roads shown, details of culverts, bridges and other structures, and distances from a specified datum point. These records are referred to as the Highway Record Survey.

(E) *Annual* Report

(1) Length of Declared or Proclaimed roads by class (State highways, freeways, forest roads, tourist roads). *State* highways and freeways are listed by road name and section (e.g. Omeo Highway: Bairnsdale-Tallangatta). Forest roads and tourist roads are also listed by road name, showing the municipalities within which the road is located.

(2) A description of major roadworks carried out during the year.

(3) Snow clearing activities: *date* of earliest snowfall, and number of snow days in the year on certain tourist roads (Mt. Hotham, Mt. Buffallo, Mt. Buller, Falls Creek area).

Record 5.302 ROADS INVENTORY - Victoria

Traffic Control Signals

1. Source
Collector and Distributor:
(1) Road Safety and Traffic Authority, 801 Glenferrie Road, Hawthorn, Vic. 3122.
(2) Melbourne City Council, 200 Little Collins Street, Melbourne, Vic. 3000.
(3) Country Roads Board, 60 Denmark Street, Kew, Vic. 3101.

2. Periodicity of Availability
The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
Victoria.

4. Published Information
None.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Refer to details set out in paragraph 7 below.

7. Description of Data Available

(A) Road Traffic and Safety Authority
The Authority maintains a computer record of all intersections equipped with traffic control signals in Victoria. For each intersection, the following information is shown:

(1) Rank (the rank order, indicating the relative accident frequency).

(2) Location (Melway street directory co-ordinates).

(3) Street names (names of the two main streets).

(4) Name and code number of the Local Government Area where the intersection is located. In many cases, particulars of two Local Government Areas are shown.

(5) Date of installation.

(6) Ranking value (the weighted average number of accidents which occurred at the intersection during a specified time period).

(7) Historical ranking data (the rank order is reviewed from time to time. A record of the most recent sets of ranking data is also included in the printout).

(8) Date of computer run.

The printout contains two parts: one, in which all intersections in Victoria are listed in rank order sequence, and the other, listing intersections by Local Government Area and, within each Area, in rank order sequence.

Record 5.302 (Sheet 2)

In addition to these computer records, a manual file is maintained for each set of traffic control signals installed by the Authority since 1974. Additional particulars (e.g. type of controller, number of phases, etc.) are contained in these files. In most cases, engineering drawings are also available which indicate details of this nature.

(B) Melbourne City Council

The Council maintains a listing of all traffic control signal installations located within the Melbourne Local Government Area. For each signal, the following information is shown:

(1) Installation serial number.

(2) Description of location (intersection name, e.g. Punt Road, Toorak Road).

(3) Type of signal controller (e.g. M35, ETS217, etc. It is possible to deduce from the type of controller, and from the description of location whether the signal is a vehicle actuated or pedestrian actuated one).

(4) Date when the signal was installed.

(5) Details of any controller faults occurred in recent years.

(6) Details of any hardware faults or faults caused by damage.

(7) Remarks.

A large wall map is also maintained, shaving the location of all signal installations in the area for which the Council is responsible.

(C) Country Roads Board

The Country Roads Board maintains detailed computer records of traffic signal installations as part of the 'CRB Roads Inventory System' described in Record 5.301.

In addition, a manual set of records, referred to as the 'Inventory of Traffic Signals on State Highways' has been maintained for several decades. It is planned to establish a computer file containing this information in the near future.

The annual report of the Country Roads Board contains some descriptive data concerning traffic signal installations.

Record 5.303 ROADS INVENTORY - victoria

Railway Level Crossings

1. Source
Collector and Distributor:
(1) country Roads Board, 60 Denmark Street, Kew, Vic. 3101.
(2) Victorian Railways, 530 Little Collins Street, Melbourne, Vic. 3000.

2. Periodicity of Availability
The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
Victoria.

4. Published Information
None.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Data on railway level crossings contained in the Country Roads Board roads inventory computer records include only crossings on 'Declared Roads' and 'Arterial Roads' (refer to limitations of Record 5.301).

7. Description of Data Available

(A) Country Roads Board
Information on level crossings is contained in the roads inventory computer records described in Record 5.301.

(B) Victorian Railways
The chairman of the Railway Crossings Committee of the Victorian Railways maintains a 'Public Carriage Roadway' register which contains an up to date listing of all level crossings contained in the Victorian Railways network. The listing is arranged by rail line (e.g. South Yarra - Stony Point). The following information is shown for each crossing:

(1) Distance from a stated reference point, shown both in kilometres and miles/chains/links.

(2) Type of crossing (IG interlocked gate, HG hand operated gate, BB boom barrier, FL flashing light, TS traffic signal, O open crossing with warning sign, OSS open crossing with stop sign, FOOT footcrossing open to pedestrians only).

(3) Description of location (e.g. Frankston, Clarendon Street).

(4) Number of tracks.

A level crossing census was conducted in 1973 and, since then, a summary report *has* been maintained which lists all modifications to crossing installations effected. For each modification, the date, location and distance from Melbourne are indicated, together with a description of the changes made (e.g. originally: FL, altered to: BB). *Also* shown is the resulting total number of crossings in service, by type (interlocked gate, hand operated gate, boom barrier, flashing light, traffic signal, open crossing

Record 5.303 (Sheet 2)

with stop sign, open crossing with warning sign. The report does not include footcrossings.

Each year, the Victorian Railways also conducts a number of traffic counts at selected level crossings, recording the number of trains, road vehicles (cars and motor cycles, trucks, buses, bicycles), and pedestrians during hourly intervals.

It should be noted that the Victorian Railways network includes three rail lines which are located in New South Wales: Echuca - Deniliquin, Echuca - Balranald, and Yarrawonga - Oaklands.

Record 5.304 *ROADS* INVENTORY - Victoria

Melbourne City Council

1. Source
Collector and Distributor: Melbourne City Council, 200 Little Collins Street, Melbourne, Vic. 3000.

2. Periodicity of Availability
The information available is in the form of internal record which are updated from time to time.

3. Region of Availability
Area administered by the Melbourne City Council.

4. Published Infonnation
None.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Refer to details set out in paragraph 7 below.

7. Description of Data Available

(A) Parking Plan
The set of records referred to as the 'Parking Plan' consists of engineering drawings of road sections (scale 1:500) covering all major and minor roads within the Melbourne Local Government Area. The maps indicate the exact location of the following road features:

(1) Tramway installations (tracks, safety zones with buffer, safety zones without buffer, overhead power poles, 'Hail Cars Here' signs).

(2) Parking facilities (parking meter bays, taxi stands, no parking zones, location and type of parking signs). Each type of parking sign is identified by a code number. For example type 627 is 'No Standing 8.00 am to 9.15 am; 4.15 pm to 5.45 pm'.

(3) Traffic signals (location of traffic control signals and direction which lanterns are facing, for each set of lanterns; location of traffic signal control boxes).

(4) Posts and signs (steel or wooden electric light poles, corner posts, miscellaneous posts and signs, Melbourne City Council electricity supply pillars).

(5) Communications facilities (telephone boxes, postal pillar boxes).

(6) Fire fighting facilities (hydrant pillar balls, hydraulic valves, fire plugs, fire alarms).

(7) Other road features (trees, drainage pits, orderly bins, drinking fountains, horse troughs, seats, petrol filler plugs, petrol pumps).

Record 5.304 (Sheet 2)

(B) Parking Guide

The Parking Guide is a small cardboard pamphlet, distributed free of charge by the Melbourne City Council. It depicts a map of the central business district, indicating all locations where kerbside parking is permitted, by duration of parking period (20 minutes, 30 minutes, 1, 2, 2½, 3, 4, 5, 9 hours). Locations where off-street parking facilities are available, are also indicated.

(C) Special 'No Standing' *Bans*

The format of this pamphlet is identical to the Parkinu Guide described above. The map shown indicates locations where 'No Standing' bans apply during part of the day. The bans are indicated by duration (e.g. 8.00 am - 9.15 am, 7.30 am-9.30 am, etc.), indicating the days involved (Monday to Friday, Monday to Saturday, Saturday only). Clearways are also shown. Locations with 24 hour bans are not included.

(D) Vehicle Turning Movement Restrictions

This is a slightly larger cardboard pamphlet depicting the central business district, indicating all restrictions to turning movements, in each case showing the time period when the restrictions apply.

Record 5.305 ROADS INVENTORY - Victoria

Tramway Routes

1. source
collector and Distributor:
(1) Melbourne and Metropolitan Tramways Board, 616 Little Collins Street, Melbourne, Vic. 3000.
(2) Ministry of Transport, 570 Bourke Street, Melbourne, Vic. 3000.
(3) Country Roads Board, 60 Denmark Street, Kew, Vic. 3101.

2. Periodicity of Availability
The Melbourne Public Transport Map is normally published annually.

3. Region of Availability
Melbourne metropolitan area.

4. Published Information
Melbourne Public Transport Map.

5. Supplementary Infomation
Internal documentation and working papers.

6. Limitations
Refer to details set out in paragraph 7 below.

7, Description of Data Available

(A) Melbourne and Metropolitan Tramways Board
The Board maintains computer records which contain time-table data for all tram and bus routes in the Melbourne metropolitan area. It might be possible to obtain from these records information on the number of scheduled trams passing any given point within the tramway network for any desired time period. The records also contain details on all tram stops (location and scheduled arrival times).

The Board also maintains maps and detailed engineering drawings for all road sections carrying tramway lines.

(B) Ministry of Transport
The Ministry publishes the Melbourne Public Transport Map which indicates the location of all tramway routes, and contains a description of each route (route number, name of route, and the main streets and roads contained in the route).

(C) Country Roads Board
Particulars on tramway installations are also contained in the CRB Roads Inventory System described in Record 5.301.

Record 5.306 ROADS INVENTORY - Victoria

RACV Highway Surveys

1. Source
Collector and Distributor: Royal Automobile Club of Victoria (RACV) Ltd., 123 Queen Street, Melbourne, Vic. 3000.

2. Periodicity of Availability
Irregular. The highway survey programme was started in 1975.

3. Region of Availability
Victoria and adjoining regions.

4. Published Information
A set of reports described in paragraph 7 below.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
The surveys completed to date comprise only a small sample of the major road system of Victoria.

7. Description of Data Available

Year	Description	ISBN No.
1975	Calder Highway Survey	-
1975	Maroondah Highway Survey	-
1975	Hume Highway Survey	-
1976	The National Highway Linking Melbourne and Adelaide	-
1976	The Princes Highway (West) Survey	-
1976	The South Gippsland Highway, Bass Highway and Alternative Routes	909843 13 9
1976	The Princes Highway (East) Survey	11 2
1977	The Midland Highway Survey	15 5
1977	The Great Ocean Road Survey	14 7
1978	The Hume Highway Survey	16 3
1978	Murray Valley Highway and Goulburn Valley Highway Survey	17 1
1979	The Calder Highway Survey	19 8
1979	The Omeo Highway Survey	18 X

The layout and format of the reports listed above in general follows the same pattern as that of the NRMA Highway Surveys described in Record 5.205.

Record 5.401 *ROADS* INVENTORY - Queensland

Department of Main Roads

1. source
Collector and Distributor: Department of Main Roads, Boundary Street, Spring Hill, Qld. 4000.

2. Periodicity of Availability
For the most part, the information available is in the form of internal records which are updated from time to time.

3. Region of Availability
Queensland.

4. Published Information
(1) 'Australian Roads Survey 1967-68: Queensland Rural Road Project Data' (1978).
(2) 'Australian Road Survey 1969-74: National Highways Study, Queensland Results' (1978).
(3) 'Australian Roads Survey 1975 Update: Rural Queensland and Brisbane Statistical Division' (1978).
(4) Annual Report.

5. Supplementary Information
Record 5.402: Traffic Control Signals.
Record 5.403: Railway Level Crossings.

6. Limitations
Roads inventory data are limited to 'Classified Roads' which are the direct responsibility of the Department of Main Roads. Minor roads, for which municipal councils are responsible, are excluded.

7. Description of Data Available
Roads inventory information described here comprises the following items: Roads Inventory Plan, Computer Records, Roads Inventory Publications, NAASRA Data Bank, Aerial Photography Survey, and the Annual Report.

(A) Roads Inventory *Plan*
The Roads Inventory Plan is the original manual record system consisting of maps and data sheets. Each map and its accompanying set of data sheets describe a given road section. The following data are shown for each road section:

Road Section Data

(1) Road number.

(2) Road classification (e.g. State highway).

(3) Road name (e.g. Flinders Highway).

(4) Total gazetted length of the road section, to the nearest hundredth of a mile.

(5) Section name and numbers (one record may include several sheets, all related to the same section, e.g. Hughenden - Richmond Section, Sheets 1,2,3,4. on each sheet there may be several Road Section Reference Numbers. For each of these Road Section Reference Numbers, separate data are shown for *Items* 6 to 18 described below.

Record 5.401 (Sheet 2)

(6) Local Government Authority code number.

(7) Corrected through miles at start of section (measured from a specified datum point).

(8) Section length (to nearest hundredth of a mile).

(9) Existing surface type (e.g. concrete, bitumen, gravel or metal, etc.).

(10) Width of surface (ft).

(11) Condition of surface (good, fair, poor, very poor).

(12) Shoulder type (e.g. gravel surface, stone pitching, bitumen sealed etc.).

(13) Whether the road section is a divided or undivided road (separate data available for right hand and left hand portions of divided roads).

(14) Mean width of road (this item is frequently not recorded).

(15) Type of land use on left and right hand side of road (e.g. business, residential, industrial, etc.).

(16) Traffic rating code number (for various AADT levels, ranging from 0-25, 25-100, ... over 40,000).

(17) Design surface: design specifications indicating surface type, width, and whether divided or not. These specifications were developed in the late 1960's and do not necessarily reflect current design intentions.

(18) Deficiency rating: a numerical rating (from 0 to 100) based on comparison of existing roads and those required by current design criteria.

Bridge Data

(19) Bridge reference number.

(20) Corrected through miles at centreline of bridge (measured) from a specified datum point).

(21) Structural details (type of structure, number of spans, type and condition of deck/superstructure/substructure/deck wearing surface, angle of skewness, load limit, class of structure, date built).

(22) Bridge dimensions (total length, trafficable width) in feet.

(23) Number of footways.

(24) Type of railings (e.g. timber, concrete post, no hand-railing, etc.).

(25) Lighting (no lighting, simple overhead lighting, decorative lighting).

(26) Utilities supported (e.g. water mains, electricity cables, train lines on deck, etc.).

(27) Estimated safe speed at which the structure and approaches can be traversed.

(28) Approach grade (between 0 and less than 1 in 20, ... steeper than 1 in 6).

(29) Design width (ft).

(30) Deficiency rating (same as for Item 18 above).

Record 5.401 (Sheet 3)

Railway Crossing Data

(31) Railway crossing reference number.

(32) Corrected through miles to centreline of crossing (measured from a specified datum point).

(33) Number of tracks.

(34) Type of crossing (crossing approached parallel to rail line - S bend type, crossing approached at an angle 60 to 120 degrees to rail line, crossing approached at an angle 0 to 60 degrees to rail line).

(35) Class of rail line (main line, branch line, tramway).

(36) Warning signs (advance warning signs at least 100 yards ahead plus signs at crossing, same as before but with addition of Stop sign, adjacent signs only, no visible signs).

(37) Safety devices (hand operated gates, boom gates or remote controlled gates, warning lights, combination of above, no safety devices existing).

(38) Whether any railway shunting normally occurs at the crossing or not.

(39) Deficiency rating (same as for Item 18 above).

Obstruction Data

(40) Obstruction reference number.

(41) Corrected through miles at centreline of obstruction (measured from a specified datum point).

(42) Type of obstruction (railway/tramway/road overbridge, footbridge, other bridge, cattlegrid, any other type of obstruction).

(43) Alternate route (miles).

(44) Data on minimum vertical and horizontal clearnaces.

(45) Maximum height of horizontal clearance.

Each record contains a detailed map of the road sections involved, and a photocopy of all aerial photography survey photos available for the area.

(B) Computer Records

The Department maintains a slightly modified version of the Australian Roads Survey 1969-74 described in Record 5.101.

The information is arranged in terms of the 13 geographic Districts of the Department of Main Roads. In the computer printout, each line represents one road section. Four different types of record?. are used: record type 1 (road section data), type 2 (bridge data), type 3 (railway level crossing data), and type 4 (obstruction data). Bridges, railway crossings and obstructions are shown in the computer printout listing at the point where they occur in the road section.

As the data content in the computer records is substantially the same as in the Australian Roads Survey 1969-74, the data items are not listed here. Refer to Record 5.101 for a detailed description Of these.

Record 5.401 (Sheet 4)

(C) Roads Inventory Publications

In 1978, The Highway Economics Section of the Highway Planning Branch of the Department of Main Roads published three reports containing roads inventory data:

(1) 'Australian Roads survey 1967-68: Queensland Rural Road Project Data', showing the length of rural roads for a range of AADT and vehicle miles travelled categories, by legal class and district, and also by functional class.

(2) 'Australian Roads Survey 1969-74: National Highways Study, Queensland Results', showing the total vehicle miles travelled by Local Governmen Authority, by district, and by legal class.

(3) 'Australian Roads Survey 1975 Update: Rural Queensland and Brisbane Statistical Division', sharing total road length for the State by functional class, by operational class, by surface type. Also included are details on structures and vehicle miles travelled by functional class, and the length of road in various AADT categories, by district, by functional class and by Commonwealth categories.

(D) NAASFA Data Bank

The Department is currently in the process of setting up computer records in accordance with the NAASRA Data Bank specifications, which are described in Record 5.102.

(E) Aerial Photography Survey

The Department periodically conducts aerial photography surveys in selected areas. The photographs are filed by road number, and an index card *and* key *area* map system are used for ease of information retrieval.

(F) Annual Report.

(1) Length of Declared Roads in each Local Government Area. Separate data shown for each road name, indicating status (highway, arterial, main, sub-arterial, developmental, secondary road), actual road length, and length of road sections on which roadworks were carried out during the year.

(2) Length of roads under the Main Roads Act 1920-79, showing *total* length for the State, by type of road (State highways, urban arterials, developmental, main, urban sub-arterials, secondary roads), by type of construction (dual carriageway, sealed, paved, formed, unconstructed).

(3) *Same* as Item (2) above, shaving separate data for each of the State's 29 highways.

(4) A map of Queensland, showing all Declared Roads by status, using a colour code (State highways, urban arterials, developmental, main, urban sub-arterial, secondary roads), indicating Division and District boundaries.

(5) A list of the Department of Main Roads five Divisions and District numbers contained in each Division (South Eastern: 1, 2, 12; South Western: 3, 4, 5; Central: 6, 7, 8; Northern: 9, 10, 11; Metropolitan 13, 14).

(6) A summary and description of major roadworks carried out during the year.

Record 5.402 ROADS INVENTORY - Queensland

Traffic Control Signals

1. Source
Collector and Distributor:
(1) Department of Main Roads, Boundary Street, Spring Hill, Qld. 4000.
(2) Traffic Planning Branch, Brisbane City Council, 69 Ann Street, Brisbane, Qld. 4000.

2. Periodicity of Availability
The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
Queensland.

4. Published Information
None.

5. supplementary Information
Internal documentation and working papers.

6. Limitations
At present, traffic control signals data are limited to the Brisbane metropolitan area. This information is held by the Brisbane City Council. The Department of Main Roads is currently gathering data on traffic control signals for the remaining part of the State.

7. Description of *Data* Available

(A) Department of Main Roads
At present, a project aimed at collecting data on all traffic control signals in Queensland is under way but no data are as yet available.

The annual report of the Department of Main Roads contains some descriptive data concerning traffic signal installations.

(B) Brisbane City Council
In 1979, the total number of traffic control signals within the Brisbane metropolitan area was 415. Of these, 304 were owned and operated by the Brisbane City Council, the remaining 111 were the responsibility of the Department of Main Roads (being located on 'Declared Roads'). For traffic planning and co-ordinating purposes, the Brisbane City Council maintains a complete record of all traffic signals - their own and those of the Department of Main Roads.

Computer printouts are available which list the following information for each traffic signal installation:

(1) Ownership (B owned by Brisbane City Council, M owned by Department of Main Roads).

(2) Site number.

(3) Names of all streets where *the* signal is located or description of location (e.g. Normanby Fiveway).

Record 5.402 (Sheet 2)

(4) Name of suburb.

(5) Type of signal (intersection, pedestrian, illuminated sign). Pedestrian signals are normally located in mid-block locations. All intersection installations are equipped with WALK/DONT WALK signals.

(6) Type of signal controller (e.g. CT750/VA, M35ASVAP/3, etc.).

(7) Date when signal was first installed at that location.

(8) Reference drawing number.

Printouts can be arranged in several different ways:

in site number sequence, in alphabetic sequence of street names, in alphabetic sequence of suburb names, by type of controller, by installation date (i.e. 'commencement date').

It is also possible to arrange the printout in sub-groupings according to location (Northside, Southside) and ownership (Council owned, Department owned).

Record 5.403 ROADS INVENTORY - Queensland

Railway Level Crossings

1. source
collector and Distributor:
(1) Department of Main Roads, Boundary Street, Spring Hill, Qld. 4000.
(2) Planning and Development Office, Department of Railways, 305 Edward Street, Brisbane, Qld. 4000.

2. Periodicity of Availability
Irregular.

3. Region of Availability
Queensland.

4. Published Information
'Queensland Railways - Lists (1963)', Department of Railways, Brisbane.

5. Supplementary Information
The Department of Railways maintains plan drawings of the entire railway network in the State, as well as other relevant internal documentation.

6. Limitations
Data available from the Department of Railways may be considerably out of date as their latest publication dates back to 1963.

7. Description of Data Available

(A) Department of Main Roads
Railway level crossing data are contained in the 'Roads Inventory Plan' and roads inventory computer records maintained by the Department of Main Roads. These are described in Record 5.401.

(B) Department of Railways
The booklet 'Queensland Railways - Lists (1963)' sets out data on railway level crossings. The infonnation is listed according to lines (main lines, branch lines, etc.).
For each crossing, the following data are shown:

(1) Description of the location of the crossing (showing place name where appropriate).

(2) Distance from a given datum point (miles, chains).

(3) Type of crossing (public, occupation, tramway, public foot crossing). Public crossings are those where a rail line crosses a public road; occupation crossings are those where a rail line intersects with a private road; tramways crossings interesect with sugar cane train lines; and public foot crossings are those providing a footpath across the railway track where the railway line cannot be crossed by road vehicles.

Record 5.404 ROADS INVENTORY - Queensland

RACQ National Highway Survey 1975

1. Source
Collector and Distributor: Royal Automobile Club of Queensland, Corner Ann and Boundary Streets, Brisbane, Qld. 4000.

2. Periodicity of Availability
Once-only study (1975).

3. Region of Availability
Queensland.

4. Published Information
A full report has not been published. A brief summary of certain aspects of the survey has appeared in the October 1975 issue of the Journal of the RACQ, 'The Road Ahead'.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Data are limited to three highways: Brisbane/Ipswich/Warwick to the NSW border, Brisbane/Charleville/Longreach/Cloncurry/Camooweal to the NT border, and Brisbane/Rockhampton/Townsville/Cairns/Mossman. A full report is available only in the *form* of working papers.

7. Description of Data Available
The article published in the journal 'The Road Ahead' describes the main shortcomings and deficiencies of the highways surveyed. The information is of a general nature rather than pertaining to specific locations, and is mainly concerned with poor road surface conditions, the width and condition of shoulders, centreline and edge line markings, speed zones and road signs.

Record 5.405 ROADS INVENTORY pueensland

RACQ Road Sign Surveys

1. Source
Collector and Distributor: Royal Automobile Club of Queensland, Corner Ann and Boundary Streets, Brisbane, Qld. 4000.

2. Periodicity of Availability
Irregular. The programme was commenced in 1977.

3. Region of Availability
Queensland.

4. Published Information
A set of reports described in paragraph 7 below.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
The surveys completed to date cover only a small sample of the major road system of Queensland.

7. Description of Data Available

RACQ Survey No.	Year	Description
	1977	Brisbane Central District
	1977	Route 20 in the Moreton Region
	1978	Maryborough Central Business District
	1978	Bundaberg Central Business District
	1978	Rockhampton Central Business District
	1978	Mackay Central Business District
	1978	Townsville Central Business District
8	1978	Cairns Central Business District
9	1978	A Signing Survey, Suggested Guide, Signing Improvements for Coastal Cities and Towns in pueensland

(A) Surveys No. 1 to 8
Each survey in this series provides an inventory of existing road signs at major intersections and other locations in the study area, with the *aim* of documenting and discussing four aspects: the attention value of the sign, the legibility value of the sign, the comprehension value of the sign message, and the appropriateness of the sign message. Maps, diagrammatic location sketches and photographs are included in each report.

(B) Survey No. 9
This study specifically deals with guide signs (i.e. signs indicating the direction to particular localities) and highway number signs. The study area in this case includes coastal cities and towns north of Maryborough, served by National Highway Route No.1. The specific aim of the study was

Record 5.405 (Sheet 2)

to provide an inventory of guide signs, to discuss shortcomings and to recommend possible solutions where deficiencies have been identified.

A brief summary of the findings of this study was also published in the October-November issue of the Journal of the RACQ, 'The Road Ahead'.

Record 5.501 *ROADS INVENTORY* - South Australia

Highways Department

1. Source
Collector and Distributor: Highways Department, 33-37 Warwick Street, Walkerville, SA 5081.

2. Periodicity of Availability
For the most part, the information available is in the form of internal records which are updated from time to time.

3. Region of Availability
South Australia.

4. Published Information
Annual Report.

5. Supplementary Information
Record 5.502: Traffic Control Signals.
Record 5.503: Railway Level Crossings.
Record 5.504: Advisory Speed Signs.

6. Limitations
Roads inventory data are limited to 'Classified Roads' which are the direct responsibility of the Highways Department. Minor roads, for which municipal councils are responsible, are excluded.

7. Description of Data Available

(A) Australian Roads Survey
The Department has, since the early 1970's, maintained a number of computer files containing roads inventory data, the content and format of which is substantially identical to the specifications of the Australian Roads Survey 1969-74 described in Record 5.101.

(B) NAASRA Data Bank
The Department is currently in the process of setting up computer records in accordance with the *NAASRA* Data Bank specifications, set out in Record 5.102

(C) Digital Mapping
Work is currently proceeding to produce a digital representation of the State road network and its integration with existing data files. A complete correlation will be aimed for between road mapping data, traffic volume data and traffic accident location data. Intersections will be digitised on the same coordinates as the road network, enabling superposition of traffic volume and accident data over the road network.

(D) Aerial Photography Survey
The Highways Department maintains a file of aerial photography survey maps produced by the Department of Lands at a scale of 1:100,000.

(E) Annual Report
The annual report contains a summary and description of major roadworks carried out during the year, including work on traffic control signal installations and priority roads installations.

Record 5.502 ROADS INVENTORY - South Australia

Traffic Control Signals

1. Source
Collector and Distributor:
(1) Highways Department, 33-37 Warwick Street, Walkerville, SA 5081.
(2) Traffic Engineering Branch, Adelaide City Council, King William Street, Adelaide, SA 5000.

2. Periodicity of Availability
The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
south Australia.

4. Published Information
None.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Refer to details set out in Paragraph 7 below.

7. Description of Data Available

(A) Highways Department
The records consist of a set of typewritten sheets, listing all traffic signals in the State (except those-under the control of the Adelaide City Council), filed in signal location number sequence. Updating tends to be effected by inserting handwritten annotations. The file includes both existing and planned installations. For each location, the following information is shown:

(1) Location number (two different numbering systems are used: the original number, e.g. TS 007, or else the traffic accident analysis location number, e.g. 119/75511/0 which designates the road number and type of intersection. The use of a dual numbering system tends to present some difficulty in data retrieval).

(2) Description of location (e.g. Outer Harbour Road - The Lady Gowrie Drive).

(3) Switch-on date (the date when signal commenced operation. Absence of a switch-on date indicates that the record concerned refers to a planned rather to an existing signal).

(4) Approval date (the date when the installation was approved by the Road Traffic Board) .

The Department is currently in the process of transferring traffic control signal data to its computer records as part of its integrated data base system.

Record 5.502 (Sheet 2)

Some descriptive information concerning traffic control signal installations is also contained in the annual report of the Highways Department.

(B) Adelaide City Council

The Council maintains a large wall map which shows the location of all traffic control signals within the Adelaide Local Government Area. For each installation, the type of signal is indicated (2, 3 or 4 phase, pedestrian controlled signal). The location of marked school crossings is also shown on the map.

The Adelaide City Council is responsible for the installation and maintenance of all traffic control signals located within the Adelaide Local Government Area. The Highways Department is responsible for all other installations in the State.

Record 5.503 *ROADS* INVENTORY - South Australia

Railway Level Crossings

1. Source
Collector and Distributor:
(1) Highways Department, 33-37 Warwick Street, Walkerville, SA 5081.
(2) State Transport Authority, Railway Building, North Terrace, Adelaide, SA 5000.
(3) Australian National Railways Commission, 55 King William Road, North Adelaide, SA 5006.

2. Periodicity of Availability
The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
South Australia.

4. Published Information
None.

5. supplementary Information
Internal documentation and working papers.

6. Limitations
Data on railway level crossings contained in the Highways Department roads inventory computer records include only crossings on 'Classified Roads'.

Data available from the State Transport Authority pertain to crossings in the Adelaide suburban railways network. The Australian National Railways Commission is responsible for all other railway crossings in the State.

Data from all three sources tend to be updated at infrequent intervals, and therefore any information shown may be to some extent out of date.

7. Description of Data Available

(A) Highways Department
Information on level crossings is contained in the roads inventory computer records described in Record 5.501.

(B) State Transport Authority
The Authority operates the Adelaide suburban railways network. All crossings within that network are shown, in diagrammatic form, on a chart which indicates the sequence of the crossings on each line. This document is referred to as Drawing D 74 94. For each crossing, the following information is listed:

(1) Description of the railway line (e.g. Adelaide - Gawler).

(2) Distance from the line origin (e.g. 12.345 km).

Record 5.503 (Sheet 2)

(3) Type of crossing (X gong, W wig-wag, F flasher lights and gong, VBF vertical *bars* and flashers, AGF automatic gates and flashers, IG interlocked gates, IGF interlocked gates and flashers, S stop sign, HS horizontal gates, T traffic light, A standard crossing sign, + 'Look Out For Train' warning sign, -- open crossing).

(4) Description of locality (e.g. Christie Road).

(C) Australian National Railways Commission

The Comission operates the railway network throughout the State, with the exception of the network within the Adelaide metropolitan area. Internal records, in the form of manual files, are maintained which indicate, for each railway crossing, the railway line, the distance from the line origin, the type of crossing, and a description of the locality.

Record 5.504 ROADS INVENTORY - South Australia

Advisory Speed Signs

1. Source
Collector and Distributor: Highways Department, 33-37 Warwick Street, Walkerville, SA 5081.

2. Periodicity of Availability
The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
south Australia.

4. Published Information
None.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Refer to details set out in paragraph 7 below.

7. Description of Data Available
The Traffic Engineering Section of the Highways Department is engaged in a continuing programme of preparing road maps which, in diagrammatic form, indicate the location and other particulars of planned advisory speed signs.

The extent to which these plans are implemented or modified depends on the relevant Regional Office of the Highways Department. The only records on existing advisory speed signs are in the form of annotations on maps, kept by the Regional Offices. A complete listing of advisory speed signs in use is not maintained.

Record 5.505 ROADS INVENTORY - South Australia

Adelaide City Council

1. Source
Collector and Distributor: Traffic Engineering Branch, Adelaide City Council, King William Street, Adelaide, SA 5000.

2. Periodicity of Availability
Irregular, Surveys were conducted in 1961 and 1975.

3. Region of Availability
Area administered by the Adelaide City Council.

4. Published Information
None.

5. Supplementary Information
Internal documentation and working papers

6. Limitations
Refer to details set out in paragraph 7 below.

7. Description of Data Available
In 1975, the Council conducted a survey of minor streets and lanes within the Adelaide Local Government Area. A handwritten listing was produced which contains the following data for each entry:

(1) Name and location of street or lane (e.g. Gawler Place between Rundle and Grenfell Streets).

(2) District (portion of the area controlled by the Council).

(3) Whether traffic is one or two way.

(4) Whether parking is permitted on one or both sides of the street.

(5) Width between kerbs, shown both in feet and metres.

(6) Remarks, mainly pertaining to 'No Standing' signs (e.g. No Standing sign both sides between 4 pm and 8 am).

A similar survey was carried out in 1961.

Record 5.506 ROADS INVENTORY - SOUth Australia

Tramway Routes

1. Source
   Collector and Distributor: State Transport Authority, Railway Building, North Terrace, Adelaide, SA 5000.

2. Periodicity of Availability
   The Public Transport Map is normally published annually or bi-annually.

3. Region of Availability
   Adelaide metropolitan area.

4. Published Information
   Public Transport Map.

5. Supplementary Information
   Internal documentation and working papers.

6. Limitations
   Refer to details set out in paragraph 7 below.

7. Description of Data Available
   The location of the only tramway route in Adelaide, which runs between Victoria Square in the city and Moseley Square at Glenelg Beach, is indicated in the Public Transport Map. The positions of tram stops are also shown.

Record 5.601 ROADS INVENTORY - Western Australia

Department of Main Roads

1. Source
Collector and Distributor: Department of Main Roads, Waterloo Crescent, East Perth, WA 6000.

2. Periodicity of Availability
For the most part, the information available is in the form of internal records which are updated from time to time.

3. Region of Availability
Western Australia.

4. Published Information
Annual Report.

5. Supplementary Information
Record 5.602: Traffic Control Signals and Signs.
Record 5.603: Pedestrian Crossings.
Record 5.504: Railway Level Crossings.

6. Limitations
Unlike in most other States. the Western Australian roads inventory covers virtually all public roads in the State, both 'Classified Roads' which are the direct responsibility of the Department of Main Roads, and also 'Unclassified Roads' for which municipal councils and shires are responsible.

Records on Clessified Roads are updated continually, whilst for minor roads it is aimed to update records about once every three to five years.

7. Description of Data Available

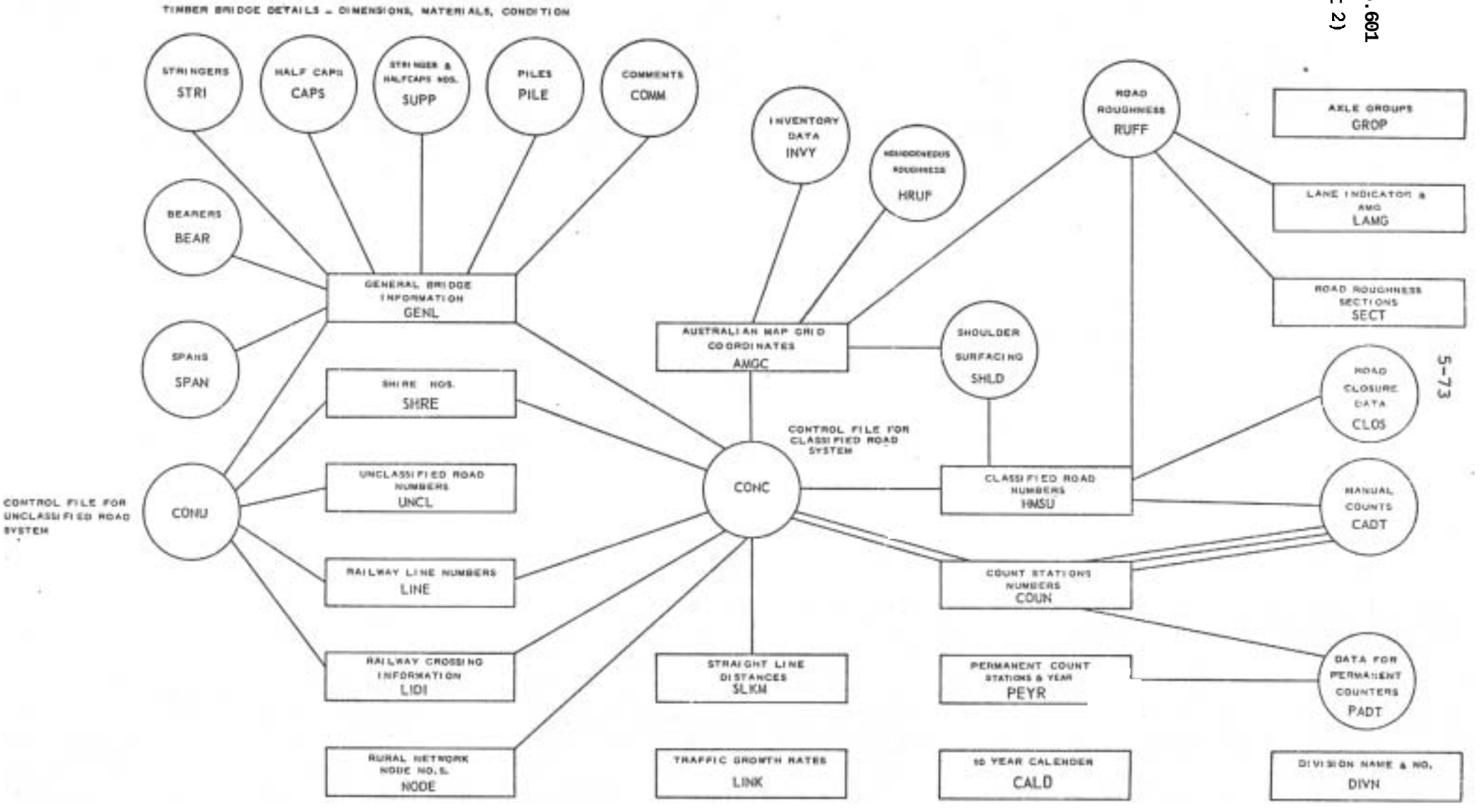
(A) Australian Roads Survey 1969-74
In the early 1970's, the Department has set up a number of computer files containing roads inventory data according to the specifications of the Australian Roads Survey 1969-74 described in Record 5.101.

These files have since been merged with the MRD WA Technical Data Bank computer files described in part (B) below.

(B) *MRD* WA Technical Data Bank
In the late 1970's, a comprehensive new record system was created, referred to as the 'Technical Data Bank'. The system contains over 30 individual computer files dealing with roads inventory and traffic counting data. A diagram listing these files, and indicating how the files are arranged within the system, is shown overleaf.

The Technical Data Bank contains most of the roads inventory data items specified in the Australian Roads Survey 1969-74, and all data items specified in the *NAASRA* Data Bank (refer Records 5.101 and 5.102). In many parts, the information provided is more detailed. For example, railway crossings data include details on both minimum and maximum number of trains per day, average daily traffic of road vehicles, and a facility to obtain the total number of rail crossings in the State,

MRD W.A. TECHNICAL DATA BANK.



Record 5.601 (Sheet 3)

segmented by specific railway crossing types. Other examples illustrating the comprehensive detail of information available are: condition of structural members of bridges (white ants, dry rot, split, broken, arrested white ant attack), composition of vehicle traffic (providing data on wheel spacings and axle spacings), road closures due to flooding (average total annual rainfall on road section, location of rain, type of flood damage incurred).

An important feature of the Technical Data Bank is the facility of convenient retrieval of all data belonging to a specific sub-group. For instance, it would be possible to obtain a listing of all curved road sections in the State having a gradient of more than 15 per cent. This information could be obtained separately for each class of road, or according to some other specified attribute.

It is intended to make road accident data an integral part of the Data Bank. Permanent reference points are defined in accordance with the Australian Map Grid System.

(C) NAASRA Data Bank

Data items contained in the NAASRA Data Bank specifications comprise a sub-set of data included in the MRD WA Technical. Data Bank described in part (B) above.

Refer to Record 5.102 for a description of the NAASRA Data *Bank* specifications.

(D) state of Construction Maps

A set of road maps, covering all municipalities in the State are maintained, indicating roads by type of construction (sealed pavement over 12 ft wide, sealed pavement 12 ft wide or less, unsealed pavement, formed road, natural surface road), also showing all bridges and railway crossings.

(E) Aerial Photography Survey

The Department maintains a comprehensive aerial photography programme which covers the major roads network throughout the State. Each record contains a reproduction of the photograph, together with a detailed map of the same region, drawn to the same scale. Records are filed by Division and Local Government Authority.

(F) Annual Report

(1) Length of declared roads in each Local Government Area. Separate data shown for each road name, indicating road number, primed or sealed road length, total road length, and the length of road within each Division. Separate tabulations are provided for each of the following three classes of roads: State highways, main roads, secondary roads.

(2) A map of Western Australia, showing all State highways, main roads, and secondary roads, using a colour code, indicating sealed and unsealed sections separately. Division and District boundaries are also shown.

(3) A summary of and description of major roadworks carried out during the year.

Record 5.602 ROADS INVENTORY - Western Australia

Traffic Control Signals and Signs

1. Source
Collector and Distributor: Department of Main Roads, Waterloo Crescent, East Perth, WA 6000.

2. Periodicity of Availability
The information available is in the form of internal records which are updated continually. A summary of main data is published annually.

3. Region of Availability
Western Australia.

4. Published Information
'Intersection Traffic Control Device Inventory' is an annual Publication which is normally prepared only for the Perth metropolitan region (Volume 1: Metropolitan Division). Similar publications for other divisions could be prepared on request.

5. Supplementary Information
The information on traffic control signals available forms part of the MRD WA Technical Data Bank described in Record 5.601. A range of special purpose computer printouts could be generated on request. For data on pedestrian crossings, refer Record 5.603. Some descriptive information concerning traffic control signal installations is also contained in the annual report of the Department of Main Roads.

6. Limitations
Refer to limitations described in Record 5.601.

7. Description of Data Available
At present, several different types of computer printout reports are used to describe traffic control signals and signs. These printouts are generated from the MRD WA Technical Data Bank.

(A) 'Intersection Traffic Control Device Inventory'
This publication consists of a set of computer printouts, arranged by Local Government Areas. For each municipality, intersections are listed in alphabetic order of street names.

(1) Intersection name (e.g. Archdeacon Street, Elizabeth Street).

(2) Signed road (name of the road containing the control device).

(3) Leg (south, north, east, west).

(4) Type of control device (ST stop sign, GW give way sign, TL traffic lights, TLW traffic lights with 'WALK, DONT *WALK'*, TLP pelican traffic lights).

(5) Site (LS left side, RS right side, LI left island, RI right island, CIF front part of centre island, CIE end part of centre island).

(6) Date erected.

(7) Age (number of years since erection).

Record 5.602 (Sheet 2)

(B) 'Current Summary of Control Devices at Intersections'
This is a computer printout, listing the number of control devices according to maintenance zones.

(1) Maintenance zone number.

(2) Local Government Authority within which the device is located.

(3) Number of devices, by type of device (set of traffic control signals, stop signs, give way signs, no right turn signs, no left turn signs, no U-turn signs, no entry signs). Separate data available for each Local Government Area within each maintenance zone.

(C) 'Current Number of Intersections with Control Devices'
This report is identical to 'Current Summary of Control Devices at Intersections' described in part (B) above, except that instead of listing the number of control devices, it lists the number of intersections equipped with control devices.

(D) 'Historical Record of Control Devices at Intersections'
This report, in the form of a computer printout, is a supplement to the 'Intersection Traffic Control Device Inventory' described in part (A) above. It indicates installation dates, removal dates, dates when any maintenance work was carried out, and the type of maintenance work involved.

(E) 'Traffic Signal Inventory'
This report, in the form of a computer printout, contains more detailed information on traffic control signal installations listed in reports (A) to (D) described above.

(1) Location of traffic control signal (names of roads).

(2) Whether the signal is linked to a central traffic control system.

(3) Whether any advance signs are provided.

(4) Type of traffic detection loop.

(5) Type of clock variation.

(6) Description of phase sequence.

(7) Whether a regulatory lantern (flashing or continuous signal) is provided.

(8) Date when the signal was installed.

(9) Date when the signal was removed.

(10) Date when any modification was carried out.

(11) Date when the signal was inspected and checked.

(12) Date when traffic lanes were marked.

Note: at present, *data* Items (2) to (7) are not used.

(F) 'Amendments Listing'
This is a computer printout showing the installation of new traffic control devices, or any modifications or maintenance work carried out during a specified period since the last full report (described in parts (A) to (E) above).

Record 5.603 ROADS INVENTORY - Western Australia

Pedestrian Crossings

1. Source
Collector and Distributor: Department of Main Roads, Waterloo Crescent, East Perth, WA 6000.

2. Periodicity of Availability
The information available is in the form of internal records which are updated continually. A summary of main data is published annually.

3. Region of Availability
Western Australia.

4. Published Information
'Pedestrian Crossing Inventory' is an annual publication which is normally prepared only for tie Perth metropolitan region (Metropolitan Division). Similar publications for other divisions could be prepared on request.

5. Supplementary Information
The information on pedestrian crossings available forms part of the MRD WA Technical Data Bank described in Record 5.601. A range of special purpose computer printouts could be generated on request. For data on traffic control signals and signs, refer to Record 5.602.

6. Limitations
Refer to limitations described in Record 5.601.

7. Description of Data Available

(A) 'Pedestrian Crossing Inventory'
This publication consists of a set of computer printouts, arranged by Local Government Area. For each municipality, installations are listed in alphabetic order of street names.

(1) Signed road (name of road containing the installation).

(2) Name of nearest crossroad.

(3) Type of control device (e.g. SX, ZX, TLP).

(4) Location type (e.g. at intersection, mid-block).

(5) Guard control (yes, no).

(6) Installation date.

(B) 'Historical Record of Pedestrian Crossings'
This report, in the form of a computer printout, is a supplement to the 'Pedestrian Crossing Inventory' described above. It indicates installation dates and removal dates for installations where any changes have taken place.

Record 5.604 ROADS INVENTORY - Western Australia

Railway Level Crossings

1. source
Collector and Distributor:
(1) Department of Main Roads, Waterloo Crescent, East Perth, WA 6000.
(2) Department of Railways, East Perth Terminal, West Parade, East Perth, WA 6000.
(3) Australian National Railways Commission, 55 King William Road, North Adelaide, WA 5006.

2. Periodicity of Availability
The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
western Australia.

4. Published Information
'Perth Metropolitan Region, Railway Crossing Conflict, Train V. Motor Vehicle', Department of Main Roads (1977).

5. supplementary Information
Internal documents and working papers.

6. Limitations
For data available from the Department of Main Roads, refer to limitations set out in Record 5.601.

Data available from the Department of Railways do not include details pertaining to the standard gauge line between Kalgoorlie and the South Australian border. The latter is administered by the Australian National Railways Commission.

Data from all three sources tend to be updated at infrequent intervals, and therefore any information shown may be to some extent out of date.

7. Description of Data Available

(A) Department of Main Roads

(1) Information on level crossings is contained in the roads inventory computer records described in Record 5.601.

(2) In 1977, the Department of Main Roads compiled an internal report 'Perth Metropolitan Region, Railway Crossing Conflict, Train V. Motor Vehicle', which contains a list of 191 railway crossings in the Perth metropolitan area. For each crossing, the following information is shown: crossing number, a description of the location (e.g. Austin Avenue, Kenwick), the average number of trains per day (TPD), the average daily traffic (ADT), conflict (TPD x ADT), and the protection existing at mid-1977 (bridge, subway, FLB flashing lights and half boom barriers, FL flashing lights, CST railway crossing signs and stop signs, CS railway crossing signs only). A separate listing is included for each of the eleven railway lines in the area. The report also contains a list of all crossings in the area, ranked by conflict, showing the same data for each crossing as described above.

Record 5.604 (Sheet 2)

(B) Department of Railways

The Department maintains an internal document 'Summary of Level Crossing Protection Signs and Mechanical Systems' which shows the estimated number of all level crossings in the railway network by type of protection (overways, boomgates, flashing lights, subways, stop signs, warning position signs, manually operated flashing lights, flagman when used). This information was compiled as at May 1979. For each crossing, the following data are shown:

(1) Distance from line origin (miles and chains).

(2) Description of the location.

(3) Type of road surface crossing the railway line (S sealed, G gravel).

(4) Local Government Authority.

(5) Existing protection (same categories as described above).

(6) Recommended protection (crossings for which additional protection has been approved but as yet not installed are indicated as such).

The above information is listed for public crossings only. For private crossings, the only information shown is the distance from the line origin.

Crossings are listed by area (e.g. Kalgoorlie Area), and within each area, by lines. Amendments are entered by handwritten annotations.

(C) Australian National Railways Commission

The Commission maintains internal records for the Kalgoorlie to the South Australian border standard gauge line. For each railway crossing, data on distance from line origin, the type of crossing, and a description of the locality are indicated in a set of manual files.

Record 5.701 ROADS INVENTORY - Tasmania

Department of Main Roads

1. Source
Collector and Distributor: Department of Main Roads, 10 Murray Street, Hobart, Tas. 7000.

2. Periodicity of Availability
For the most part, the information available is in the form of internal records which are updated from time to time.

3. Region of Availability
Tasmania.

4. Published Information
Annual Report.

5. Supplementary Information
Record 5.702: Traffic Control Signals.
Record 5.703: Railway Level Crossings.

6. Limitations
Unlike in most other States. the Tasmanian roads inventory covers virtuallv all public roads in the State, both 'Classified Roads' which are the direct responsibility of the Department of Main Roads, and also minor roads for which municipal councils are responsible.

Records on Classified Roads are updated continually, whilst for minor roads it is aimed to update records about once every three years.

It would be possible to use existing computer files to generate a variety of special-purpose printouts of the Tasmanian road network, though this would require the development of new computer programs. The feasibility of any such project would have to be explored with the Department, and would depend on manpower availability and other priorities. The Department uses the CSIRO Cybernet computer system.

Information on roads administered by the Hydro Electric Codssion of Tasmania, and the Tasmanian Forest Commission is limited to total road kilometres (528 km and 5,190 km respectively); a roads inventory for these roads does not exist.

7. Description of Data Available
Roads inventory information described here comprises five items: Computer Records, a List of Classified Roads, a List of Council Streets and Rural Roads, Rural Road Maps, and the Annual Report.

(A) Computer Records
The computer file contains four types of records (RD: details of road sections, BR: bridges and culverts, RX: railway Crossings, FD: other road features).

The computer printout is arranged in sequence of road numbers. The basic record provides details for each road section. A new section is commenced where a change occurs in an item (e.g. District, Local Government Area, type of road surface, etc.). Where a bridge, railway crossing or other feature is located within the length of the road section, details are listed in order of increasing distance, following the details of the section on which it occurs.

Record 5.701 (Sheet 2)

To assist in the interpretation of the computer printout, a set of 'header strips' are used which identify the meaning of each column, as no headings are shown in the computer printout itself. Each line of the printout represents one unit record.

Common Items

(1) RECT: Record type (RD road details, BR bridge, RX railway crossing, FD other road feature).

(2) YR: Year in which the inventory update was carried out.

(3) DTN: District number (there are 3 Districts in the State).

(4) LGN: Local Government Authority code number.

(5) LC: Legal class (1 highway, 2 main road, 3 secondary road, 4 tourist road, 5 developmental road, 6 subsidised road, 7 Hydro Electric Commission road, 8 Forest Codssion road, 9 Council rural road, O Council town street).

(6) FC: Functional class (O national highway, 1-9 same as for Australian Roads Survey 1969-74).

(7) RDN: Road number.

(8) ARC: Area classification (O Capital city inner urban, 1 major provincial inner urban, 2 provincial urban, 3 country town, 4 rural, 5 capital city outer urban, 6 major provincial outer urban).

Type RD Record - Road Sections

(9) SS: Location defining the start of the road section (in most cases, the start of a road is coded 100.00).

(10) SE: Location defining the end of the road section (for example, if the SS and SE values shown are 102.33 and 102.77 that road section starts 2.33 km and ends 2.77 km from the given datum point).

(11) LGTH: Length of road section (km).

(12) T: Type of terrain (1 flat, 2 undulating, 3 hilly, 4 mountainous).

(13) LUL, LUR: Land use on left hand side and right hand side of road (1 comnercial or parking lot, 2 industrial, 3 residential, 4 institutional, 5 open space urban, 6 grazing, 7 dairying and small crops, 8 orchard, 9 scrub and forest, 0 unproductive).

(14) ALTR: Length of alternative route, to nearest km.

(15) WE: Weather effect (O none, 1 closure after light rain, 2 closure after medium rain, 3 closure after heavy rain, 4 closure after snow).

(16) FL: Flooding (O unusual, 1 nuisance, 2 disruptive).

(17) NBR: Number of bridges or culverts within the road section.

(18) NRX: Number of railway crossings within the road section.

(19) NGD: Number of cattle grids within the road section.

(20) MGW: Width of narrowest cattle grid in the road section (m).

(21) LSL: Legal speed limit (km/h).

(22) STS: Safe travel speed (km/h).

(23) ST: Surface type (1 natural surface, 2 formed only, 3 gravel, 4 primer seal, 5 bitumen, 6 hot mix, 7 concrete).

Record 5.701 (Sheet 3)

(24) *SCR:* Surface condition rating (0 excellent, 1 good, 2 fair, 3 poor, 4 untrafficable).

(25) YRLS: Year of last seal.

(26) PT: Pavement type (1 natural, 2 formed, 3 gravel, 4 stabilised, 5 concrete).

(27) *PCR:* Pavement condition rating (same as for Item 24 above).

(28) NCWY: Number of carriageways.

(29) SOGW: Width of pavement seal or gravel (m).

(30) FW: Formation or kerb to kerb width (m).

(31) SHT: Shoulder type (3 gravel, 5 bitumen, 6 hot mix, 7 concrete).

(32) SHW: Shoulder width (m).

(33) OC: Operational class (1 undivided, 2 divided, 3 undivided plus service roads, 4 divided plus service roads, 5 one way, 6 service road one way, 7 service road two way).

(34) MT: Median type (1 natural raised, 2 natural raised kerbed, 3 natural depressed, 4 natural depressed kerbed, 5 artificial kerbed, 6 walled, 7 battered).

(35) MW: Average median width *over* the section (m).

(36) RW: Nominal reservation width (m).

(37) PKL, PKR: Parking restrictions on left and right hand side of the road (0 nil, 1 part time 'no standing', 2 part time 'no parking', 4 'no standing', 5 'no parking', 6 bus or taxi stand).

(38) FPL, FPR: Footpath on left and right hand side of the road (0 no footpath, 1 footpath no kerbs, 2 kerbs with or without footpath).

(39) FGT: Street lighting (0 none, 1 fluorescent, 2 incandescent, 3 mercury vapour, 4 other).

(40) TT: Typical traffic composition (0 normal, 1 school buses, 2 timber trucks, 3 timber trucks and school buses, 4 timber trucks and milk trucks, 5 milk or cream trucks, 6 school buses and milk trucks, 7 timber trucks, school buses and milk trucks, 8 bus route).

(41) ADT: Traffic count (average number of vehicles per day).

(42) YRADT: Year when traffic count was taken.

(43) TCT: Type of traffic counter used (1 temporary counter, 2 permanent counter, 3 estimated traffic volume).

(44) ACON: Access control (0 none, 1 partial control, 2 full control).

Type BR Record - Bridges and Culverts

(45) LOCN: Location (distance from starting point).

(46) BRN: Bridge number.

(47) PUR: Main purpose *for* which bridge was built (0 over water, 1 over rail, 2 over road, 3 pedestrian overpass, 4 pedestrian underpass. 5 cattle creep, 6 under rail, 7 under road).

(48) EXST: Description of existing structure (1 bridge, 2 culvert, 3 invert, 4 causeway).

Record 5.701 (Sheet 4)

(49) FL: Flooding (0 unusual, 1 nuisance, 2 disruptive).

(50) ALTR: Length of alternative route, to nearest km.

(51) LL: Load limit posted on the bridge (tonnes).

(52) VC: Vertical clearance above road centreline (m).

(53) LG: Lighting type (0 none, 1 fluorescent, 2 incandescent, 3 mercury vapour, 4 mixture, 5 other).

(54) UTS: Utilities attached to or carried on the bridge (0 none, 1 telephone cables or aerials, 2 power lines or cables, 3 water mains, 4 sewers and/or stormwater mains, 5 combined telephone and power lines, 6 combined cables and mains).

(55) FWY: Number of footways which are part of the bridge structure.

(56) HDR: Type of handrail (TI timber, CP concrete post with steel pipe rail, SB steel balustrade, CB concrete balustrade, WI wire rope or mesh, OR other).

(57) Construction details: type and condition of deck, superstructure, substructure and deck wearing surface.

(58) WBK: Width between kerbs or formation width (m).

(59) NSPN: Number of spans.

(60) OAL: Overall length of bridge along road centreline (m).

(61) HGT: Height of deck or road surface above stream, invert, road or railway line (m).

(62) SKEW: Angle between stream and road centrelines.

(63) ST: Surface type on approach pavement (1 natural surface, 2 formed only, 3 gravel, 4 primer seal, 5 bitumen, 6 hot mix, 7 concrete).

(64) *SOGW:* Width of pavement seal or gravel on approach road (m).

(65) STS: Safe travel speed on approaches (km/h).

(66) MGD: Maximum grade or slope on approaches (%).

(67) DATE: Date when bridge was built.

Type RX Record - Railway Crossings

(68) LOCN: Location (distance from starting point).

(69) RXN: Railway crossing number.

(70) NTRK: Number of tracks.

(71) TYPE: Alignment of road relative to railway track (1 'S' type crossing, 2 crossing at between 60° and 120°, 3 crossing at an angle less than 60°).

(72) CIA: Class of line (1 branch line, 3 main line).

(73) WBG: Width between grids at right angles to road (m).

(74) *SOGW:* Width of pavement seal or gravel at the crossing (m).

(75) WS: Type of warning signs installed (0 advance and adjacent signs, 1 as for *0* plus stop signs, 2 adjacent signs only, 3 no visible signs).

(76) SD: Safety devices installed (0 none, 1 lights, 2 gates, 3 combination).

Record 5.701 (Sheet 5)

(77) VRT, VRF: Visibility rating to and from crossing (0 excellent, 1 good, 2 fair, 3 poor, 4 very poor).

(78) *SHG:* Whether shunting movements are likely on the crossing (0 no, 1 yes).

(79) NTRN: Average number of trains passing per week day.

(80) RECE, *ORDN:* These codes are used where the railway line cuts diagonally across the intersection of *two* streets (RECE: recorded elsewhere, ORDN: other road number).

Type FD Record - Other Road Features

(81) LOCN: Location (distance from starting point).

(82) F TYPE: Feature type (RD road, ST street, RP reference point, MP mile peg, KP kilometre peg, GR or GD grid, GT gate, PO post office, TP permanent traffic counter, TT temporary traffic counter, RA rest area).

(83) SIDE: Indicates where the feature lies (C at cross road, L on left hand side, R on right hand side, + ahead of the point in the road section, - behind the point in the road section).

(84) FRN: Feature reference number (e.g. kilometre peg L50).

(B) Other Computer Printouts

In addition to the road inventory printouts described above, the following printouts are generated by the Department from time to time:

(1) Length of Classified Roads by surface type (0 road under construction, 3 gravel, 5 bitumen, 6 hot mix), by Local Government Area, by legal class (1 highways, 2 main roads, 3 secondary roads, 4 tourist roads, 5 developmental roads, 6 subsidised roads).

(2) Length of council roads by surface type (0 road under construction, 1 cleared only, 2 formed only, 3 gravel, 4 primer seal, 5 bitumen, 6 hot mix, 7 concrete), by Local Government Area, by legal class (0 town streets, 9 rural roads).

(C) NAASRA Data Bank

The Department is currently in the process of setting up computer records in accordance with the NAASRA Data Bank specifications, which are described in Record 5.102.

(D) List of Classified Roads

Manually prepared listings of all Classified Roads in Tasmania, showing the road name, road number and classification (highway, main road, secondary road, tourist road, developmental road, subsidised road). A separate alphabetic sequence of road names, and numerical sequence of road numbers is compiled for each class of road.

(E) List of Council Streets and Rural Roads

Manually prepared listings of all council streets and rural roads in Tasmania, showing the computer file number, the street or road name, the total length of the street or road, and a dissection of length according to surface type (concrete, sealed, paved, formed, cleared). A list of council streets, and a separate list of rural roads is maintained for each municipality.

Record 5.701 (Sheet 6)

In addition, a computer printout is available which lists all municipal roads and streets in numerical sequence of road numbers, showing:

(1) Road number.

(2) Classification (council street, council rural).

(3) Road name.

(4) Authority responsible for the road.

(F) Rural Road Maps

The Lands Department prepares special maps (1:50,000 scale) for the Department of Main Roads, covering the entire State. All rural roads are marked, using a colour code (red for Classified Roads, other colours for municipal rural roads). The road number is indicated for all roads marked. Road numbers with the prefix A are Classified Roads, and those with prefixes C-Z are municipal roads.

(G) Annual Report

The annual report contains a summary and description of major roadworks carried out during the year.

Record 5.702 ROADS INVENTORY - Tasmania

Traffic control Signals

1. source
Collector and Distributor: The Transport Commission, 1 Collins Street, Hobart, Tas. 7000.

2. Periodicity of Availability
The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
Tasmania.

4. Published Information
None.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Traffic signal installations on the Tasman Bridge are excluded from the inventory. The Department of Main Roads, which is responsible for these signals, does not maintain a separate inventory.

7. Description of Data Available

(1) A listing of all traffic signal installations in three regions: Hobart, Launceston, and the North-West Coast (Devonport-Burnie area). Each listing is compiled in location number sequence, showing the names of roads, and in some cases names of the locality. Pedestrian operated signals are marked PO, those under construction UC, and those not yet in operation NC. Wig-wag signals and signals controlled by the Fire Brigade are also indicated. This document is referred to as 'Site Numbers', Drawing No. T3/0/222.

(2) An additional listing is prepared from time to time (most recent - September 1, 1978), showing traffic signal locations according to type of road (Department of Main Roads, and a separate listing for each Local Government Authority), separately for intersection signals, and for pedestrian operated signals. Each section of this listing is in location number sequence, showing the names of roads and, in some cases, the name of the locality.

(3) A card index file, each card describing the location, date when commissioned, type of operation (vehicle or pedestrian operated), type of controllers/detectors/relays/boards. A record of all modifications is also included.

(4) A file containing dates and particulars of all faults reported, and of all repair and maintenance work carried out.

Record 5.703 ROADS INVENTORY - Tasmania

Railway Level Crossings

1. source
Collector and Distributor:
(1) Department of Main Roads, 10 Murray Street, Hobart, Tas. 7000.
(2) Australian National Railways Commission, Brisbane Street, Launceston, Tas. 7000.

2. Periodicity of Availability
The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
Tasmania.

4. Published Information
None.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Data on railway level crossings contained in the Department of Main Roads roads inventory computer records include only crossings on 'Classified Roads' .

Data from both sources tend to be updated at infrequent intervals, and therefore any information shown may be to some extent out of date.

7. Description of Data Available

(A) Department of Main Roads
Information on level crossings is contained in the roads inventory computer records described in detail in Record 5.701.

(B) Australian National Railways Commission
All railway level crossings in the State under the control of the Australian National Railways Commission are listed on a set of three charts which show, in diagrammatic form, the sequence of crossings on each line. This document is referred to as Drawing No. X265 - Sheet 1: Launceston Area, Sheet 2: Devonport Area, Sheet 3: Hobart Area. For each crossing, The following information is indicated:

(1) Description of the railway line (e.g. Mole Creek Line, from Lemana Junction to Mole Creek).

(2) Distance from line origin, shown in miles and chains.

(3) 'Type of crossing (F flashing lights, FX flashing lights with bell, LC level crossing sign, S stop sign).

(4) Crossing number (a crossing number has been allocated to only about half of all the crossings).

(5) Description of locality (e.g. Lebrina Road, Lilydale).

Record 5.704 ROADS INVENTORY - Tasmania

Statutory Plan - Hobart City Council

1. Source
Collector and Distributor: Hobart City Council, Town Hall, Corner Macquarie and Elizabeth Streets, Hobart, Tas. 7000.

2. Periodicity of Availability
The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
Local Government Area administered by the Hobart City Council.

4. Published Information
None.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
The information available consists of a set of maps. A listing Of streets is not maintained.

7. Description of Data Available
The records comprise eight maps which, together, cover the entire area administered by the Hobart City Council. Two copies are maintained of each map: one copy shows the status of roads as at 1963 when the Statutory Plan was proclaimed, and the other copy is a record of all alterations effected since then.

The status of roads is indicated on the maps according to who is responsible for road repairs and maintenance, and the type of construction and road surface. ('Constructed' means having a bitumen surface). The following colour code is used:

Red - wholly constructed road pavement, kerbs and footpaths. Hobart City Council responsible for repairs and maintenance.

Green - road pavement only constructed. Hobart City Council responsible for repairs and maintenance.

Yellow - public roads designated as 'private', having a gravel road surface. Residents responsible for repairs and maintenance.

Record 5.801 ROADS INVENTORY - Northern Territory

Department of Transport and Works

1. Source
Collector and Distributor: Roads Division, Department of Transport and Works, PO Box 2520, Darwin, NT 5794.

2. Periodicity of Availability
For the most part, the infonnation available is in the form of internal records which are updated from time to time.

3. Region of Availability
Northern Territory.

4. Published Information
Annual Report.

5. Supplementary Information
Record 5.802: Traffic Control Signals.
Record 5.803: Railway Level Crossings.

6. Limitations
Roads inventory data are limited to 'Classified Roads' which are the direct responsibility of the Department of Transport and Works. Minor roads, for which municipal councils are responsible, are excluded.

At present, the information available is in the form of maps. The Department is in the process of setting up computer records as described in paragraph 7 below.

7. Description of Data Available

(A) Highway Information Sheets
Roads inventory details pertaining to highways and other roads for which the Department is responsible are shown on a set of maps, referred to as 'Highway Information Sheets'. Each sheet contains the following information:

(1) A map of the road section (scale 1:50,000).

(2) Description of the reference station (i.e. datum point).

(3) Design plan reference numbers.

(4) Average daily traffic volume.

(5) Topography (e.g. flat to undulating).

(6) Design speed (km/h).

(7) Speed restriction details, indicating legal speed limits and advisory speeds (km/h).

(8) Particulars describing any portions of the road section which do not comply with the design speed.

(9) Pavement details, indicating the year when the pavement was constructed or reconstructed.

(10) A description of current and previous type of surface (e.g. 16mm seal, 12mm reseal, etc.).

Record 5.801 (Sheet 2)

(11) Road width dimensions, showing separately the width of the left hand shoulder, the seal, and the right hand shoulder (m).

(12) A description of the length and depth of any floodways.

(13) Details of any bridges in the road section: length (m), width (m), type of deck and substructure, design load specifications.

(14) Road signs, indicating approximate location and type of sign.

(15) Radius of any horizontal curves in the road section, indicating whether curving to the left or right.

For each data item, a diagram is provided to represent the length of the road section, and the location of any item or change in particulars is indicated thereon (for example, a design speed of 60 km/h is indicated for the first 4 km of the road section, and 70 km/h for the remainder of the length).

(B) NAASRA Data Bank

The Department is currently in the process of setting up computer records in accordance with the NAASRA Data Bank specifications, which are described in Record 5.102

(C) Other Computer Records

In addition, the Department intends to create a second computer file, in which a separate record will be established for each road, containing detailed data on road features over the entire length of the road. This file is to include all local and minor roads, except for roads which are under the jurisdiction of the four City Corporations in the Northern Territory: Darwin, Katherine, Tennant Creek, Alice Springs.

(D) Annual Report

The annual report contains a summary of the existing total length of roads in the Northern Territory by type of road (national highway, rural arterial, rural local, urban arterial, urban local), by type of construction (bitumen, gravel, formed, unformed). Separate data are given for each administrative area: Darwin, Katherine, Tennant Creek, Alice Springs.

Record 5.802 ROADS INVENTORY - Northern Territory

Traffic Control Signals

1. Source
Collector and Distributor:
(1) Roads Division, Department of Transport and Works, PO Box 2520, Darwin, NT 5794.
(2) Darwin City Council, Civic Centre, Mitchell Street, Darwin, NT 5794.

2. Periodicity of Availability
The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
Northern Territory.

4. Published Information
None.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
At present, the total number of traffic control signal installations in the Northern Territory is less than 20. All installations are located in Darwin. About half of these are operated by the Department of Transport and Works, and the rest by the Darwin City Council.

It is planned to install the first set of signals in Alice Springs during 1981.

7. Description of Data Available

(A) Department of Transport and Works
Internal records, in the form of manual files, are maintained which indicate, for each installation operated by the Department, the location, the type of signal (vehicle actuated, pedestrian actuated) and the date when the signal was installed.

(B) Darwin City Council
The same kind of records are maintained by the Darwin City Council for all installations under its jurisdiction.

Record 5.803 ROADS INVENTORY - Northern Territory

Railway Level Crossings

1. Source
   Collector and Distributor:
   (1) Roads Division, Department of Transport and Works,
   PO Box 2520, Darwin, NT 5794.
   (2) Australian National Railways Commission,
   55 King William Road, North Adelaide, SA 5006.

2. Periodicity of Availability
   The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
   Northern Territory.

4. Published Information
   None.

5. Supplementary Information
   Internal documentation and working papers.

6. Limitations
   Data on railway level crossings contained in the roads inventory records maintained by the Department of Transport and Works include only crossings on 'Classified Roads'.

   Data from both sources tend to be updated at infrequent intervals, and therefore any information shown may be out of date.

7. Description of Data Available

   (A) Department of Transport and Works
   The location of railway crossings is indicated on the 'Highway Information Sheets' maintained by the Department. (Refer Record 5.801).

   (B) Australian National Railways Commission
   The Comission operates the railway line between South Australia and Alice Springs. Internal records, in the form of manual files, are maintained which indicate, for each railway crossing, the distance from the line origin, the type of crossing, and a description of the locality.

   The only other railway line in the Territory, connecting Darwin, Katherine and Birdum, was closed down in 1977.

Record 5.901 ROADS INVENTORY - Australian Capital Territory

Department of Housing and Construction

1. **Source**
   Collector and Distributor: Department of Housing and Construction, ACT Region, Sirius Building, Furzer Street, Phillip, ACT 2606.

2. **Periodicity of Availability**
   For the most part, the information available is in the form of internal records which are updated from time to time.

3. **Region of Availability**
   Australian Capital Territory.

4. **Published Information**
   None.

5. **Supplementary Information**
   Record 5.902: National Capital Development Commission.
   Record 5.903: Traffic Control Singals.
   Record 5.904: Railway Level Crossings.

6. **Limitations**
   Since the inception of the Australian Roads Survey 1969-74, the Department of Housing and Construction has collected and maintained roads inventory data on all types of roads in the Australian Capital Territory except inner urban Class 6 and 7 roads. The latter were the responsibility of the National Capital Development Commission (refer Record 5.902).

7. **Description of Data Available**
   Apart from roads inventory computer files, the Department also maintains separate computer records for road improvements and maintenance works.

   (A) ACT Roads Inventory
   Except for some very minor modifications, the roads inventory records available are identical to the Australian Roads Survey 1969-74 described in Record 5.101. The records include all roads within the ACT other than inner urban Class 6 and 7 roads.

   (B) NAASRA Data Bank
   The Department is currently in the process of setting up computer records in accordance with the *NAASRA* Data Bank specifications, which are described in Record 5.102. It is intended that inner urban Class 6 and 7 roads also be included in that set of records.

   (C) ACT Roads Improvement and Maintenance Programme
   These records are designed to indicate road sections which will require repair and maintenance work during the current year, and during each of the next five years. The format and content of this computer file is similar to the data specifications for Improvement Project Details set out in the Australian Roads survey 1969-74 (refer Record 5.101).

Record 5.902 ROADS INVENTORY - Australian Capital Territory

National Capital Development Commission

1. source
Collector and Distributor: National Capital Development Commission (NCDC), 220 Northbourne Avenue, Braddon, ACT 2601.

2. Periodicity of Availability
For the most part, the information available is in the form of internal records whickare updated from time to time.

3. Region of Availability
Australian Capital Territory.

4. Published Information
None.

5. Supplementary Information
Record 5.901: Department of Housing and Construction.
Record 5.903: Traffic Control Signals.
Record 5.904: Railway Level Crossings.

6. Limitations
Since the inception of the Australian Roads Survey 1969-74, the National Capital Development Commission collected and maintained roads inventory data on all inner urban Class 6 and 7 roads in the Australian Capital Territory. The Department of Housing and Construction dealt with all other types of roads (refer Record 5.901).

In the course of compiling roads inventory records, the National Capital Development Commission has re-classified many of the minor residential Class 8 roads, which carried substantial traffic volumes, to Class 7 roads and included these in the inventory.

7. Description of Data Available

(A) Computer Records
Roads inventory data maintained by the Commission on inner urban Class 6 and 7 roads are a slightly abbreviated version of the Australian Roads Survey 1969-74 described in Record 5.101.

Three types of records are included:

(1) Record Type 5 - Road Links (Table 10.1 of the Australian Road Survey 1969-74).

(2) Record Type 6 - Intersection Nodes (Table 10.2 of the Australian Road Survey 1969-74).

(3) Record Type 2 - Structures (Table 4.1 of the Australian Road Survey 1969-74).

(B) Maps
The Conmission maintains a large wall map which shows the location and number of all intersection nodes within the Canberra urban region.

Record 5.903 ROADS INVENTORY - Australian Capital Territory

Traffic Control Signals

1. Source
Collector and Distributor: Department of the Capital Territory, Traffic Branch, PO Box 158, Canberra, *ACT* 2601.

2. Periodicity of Availability
Internal records, updated from time to time.

3. Region of Availability
Australian Capital Territory.

4. Published Information
None.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Not known.

7. Description of Data Available
The information available is in the form of a manually prepared large tracing which lists all traffic control installations in three groups: vehicle actuated signals, pedestrian signals, and special installations. Within each group, the signals are listed in installation number sequence. The following information is shown for each installation:

(1) Set number (i.e. installation serial number).

(2) Suburb.

(3) Location, listing all street names and other particulars (e.g. Kent Street, at Deakin High School).

(4) Reference file number.

(5) Switch-on date (when signal was introduced);

(6) Make and type of controller.

(7) Number of phases (separate data for vehicle and pedestrian phases).

(8) Type of detectors (passage, semi-presence).

(9) Description of any special features.

Record 5.904 ROADS INVENTORY - Australian Capital Territory

Railway Level Crossings

1. Source
   Collector and Distributor:
   (1) Department of Housing and Construction, ACT Region,
   Sirius Building, Furzer Street, Phillip, ACT 2606.
   (2) National Capital Development Commission,
   220 Northbourne Avenue, Braddon, ACT 2601.
   (3) Australian National Railways Connnission,
   55 King William Road, North Adelaide, SA 5006.

2. Periodicity of Availability
   The information available is in the form of internal records which are updated from time to time.

3. Region of Availability
   Australian Capital Territory.

4. Published Information
   None.

5. Supplementary Information
   Internal documentation and working papers.

6. Limitations
   At present, there are about ten railway level crossings in the Australian Capital Territory.

   The authority responsible for the operation of railway services in the ACT is the Australian National Railways Commission whose head office is in Adelaide.

7. Description of Data Available

   (A) Department of Housing and Construction
   Information on level crossings is contained in the roads inventory computer records described in Record 5.901.

   (B) National Capital Development Commission
   Information on any level crossings on inner urban Class 6 and 7 roads is contained in the roads inventory computer records described in Record 5.902.

   (C) Australian National Railways Commission
   Internal records, in the form of manual files, are maintained which indicate, for each railway crossing, the railway line, the distance from the line origin, the type of crossing, and a description of the locality.

SECTION 6

TRAFFIC COUNTS

Data on traffic counts were primarily derived from the State Main Road Authorities, and corresponding authorities in the Northern Territory and the Australian Capital Territory. Pedestrian movement studies were conducted by several authorities and research groups.

An outline of the recommended traffic counting prograrrrme, developed by the Commonwealth Bureau of Roads in 1970, is also included.

Record 6.101 TRAFFIC COUNTS - Australia

A Traffic Counting Programme for Australia

1. Source
Collector: Wilbur Smith and Associates, 416 St.Kilda Road, Melbourne, Vic. 3004.
Distributor: Commonwealth Bureau of Roads (now incorporated in the Bureau of Transport Economics, Civic Permanent Centre, Canberra City, ACT 2600).

2. Periodicity of Availability
Once-only study conducted during 1969 and 1970.

3. Region of Availability
Australia.

4. Published Information
'A Traffic Counting Programme for Australia' (1970). Wilbur Smith and Associates, Melbourne.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Described in paragraph 7 below.

7. Description of Data Available
The aim of this study was to develop a recommended traffic counting programme which could be used by State Road Authorities and other authorities engaged in collecting and recording traffic counting data.

The report contains a limited amount of traffic counting data, mainly for the period 1966 to 1969.

Record 6.201 TRAFFIC COUNTS - New South Wales

Department of Main Roads, Sydney

1. Source
Collector and Distributor: Department of Main Roads, 309 Castlereagh Street, Sydney, NSW 2000.

2. Periodicity of Availability
Continuing programme. Some data are collected on an annual basis, or once every few years.

3. Region of Availability
New South Wales.

4. Published Information
(1) 'Traffic Flows and Supplementary Data'.
(2) 'Traffic Flow Maps'.
(3) 'Intersection Traffic Diagrams'.

Separate reports are published for each of the Department's 15 regional Divisions. In most cases, all three reports are contained in one publication; occasionally (e.g. for the County of Cumberland Division, which includes the Sydney metropolitan area) a separate publication exists for each of the three reports for a given survey year.

5. Supplementary Information
Internal documentation, computer files, computer printouts and working papers.

6. Limitations
Traffic counts conducted by the Department are, for the most part, limited to 'Declared Roads' and adjoining tributary roads. A large proportion of traffic counts is taken over short periods only (e.g. two weeks or less), and annual traffic estimates based on such counts might hence be subject to an appreciable error.

7. Description of Data Available
Comprehensive traffic counting data are available since 1966. Prior to that, traffic counting information collected was much more limited. Prior to 1962, traffic counting activities were conducted mainly on an ad-hoc basis.

Traffic counting reports were published for the various Divisions since 1966 as follows:

Division	66	67	68	69	70	71	72	73	74	75	76	77	78
North Eastern		x			x				x				x
Hunter Valley		x			x		x		x		x		x
Illawarra		x			x				x		x		x
South Coast		x			x				x		x		x
Lower North Coast		x			x				x				x
Upper Northern	x			x			x				x		
North Western	x			x			x				x		
Central Western	x			x			x				x		
Southern	x			x			x				x		
South Western	x			x					x				x
Central Northern and Murray Darling		x			x				x				x

Record 6.201 (Sheet 2)

Division	66	67	68	69	70	71	72	73	74	75	76	77	78
Central Murray	x			x					x				x
Central Mountains, Golo and Gosford				x			x				x		
County of Cumberland			x			x		x		x		x	
Sydney Central Business District							x						

(A) 'Traffic Volumes and Supplementary Data'

(1) Annual Average Daily Traffic volume (AADT) for each observation station for the survey year, and and for several years prior to that. The listing is in alphabetic order of street names, in each case showing a description of the location.

(2) Weekly and daily distribution of traffic volumes, showing the total traffic in both directions for each day of the survey year, indicating weekly totals, the annual total, and the weekly totals expressed as a percentage of the annual total. This information is available only for a small sample of all the stations listed in (1) above. A graph is also included, showing the AADT volumes for the most recent 10 to 15 years, indicating the line of best fit, and projected minimum and maximum growth trends over the next 10 years.

(3) Hourly distribution of traffic volumes showing, for most of the stations listed in (2) above, the number of vehicles observed in each hourly interval, separately for each direction, by day of week (0-1, 1-2, 2-3, ... 23-34 HRS). Also shown are daily totals and peak hour volume for the week, and the daily total as a percentage of the weekly total for each day of the week.

(B) 'Traffic Flow Maps'

A set of maps indicating the AADT volume at various points along the road surveyed.

(C) 'Intersection Traffic Diagrams'

(1) An alphabetic listing of all intersections observed during the survey year and on the two most recent occasions prior to that.

(2) Intersection turning movements, showing for each intersection a diagram of the roads entering the intersection, the name of the locality or suburb, and the observed traffic flows for each possible turning movement during the morning and evening peak hours, in each case defining the two peak hours. Total vehicle flows only are indicated, without a breakdown by type of vehicle.

(D) Sydney Co-Ordinated Adaptive Traffic System (SCAT)

The Department is operating an automated traffic control system which in 1979 covered some 300 intersections. At each of these, traffic flows are monitored continuously, and the data thus collected are transmitted to eleven regional computer centres ('cabins') which, in turn, are connected to a centralised computer installation. It is intended to extend the system to cover some 1,400 intersections during the 1980's. Traffic counts are .recorded at quarter hour intervals and computer printouts of raw data are available. Software development aimed at producing summary reports is in progress.

Record 6.202 TRAFFIC COUNTS - New South Wales

Traffic Authority of New South Wales

1. Source
Collector and Distributor: Traffic Authority of New South Wales, 52 Rothschild Avenue, Rosebery NSW 2018.

2. Periodicity of Availability
Data collection was mainly limited to the period between 1972 and 1978. Since then, only few observations were made.

3. Region of Availability
Sydney metropolitan area.

4. Published Infomation
None.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
The surveys are performed on an ad-hoc basis, frequently in response to requests from local authorities for the installation of traffic signals or other road safety measures. Observations are normally limited to a three hour period during the morning, and a three hour period in the afternoon.

7. Description of Data Available
The record consists of several hundred observation data sheets, each showing:

(1) Description of the intersection: name of suburb, name of all roads entering the intersection, and a diagrammatic sketch of the intersection.

(2) Dates and times when the intersection was observed (e.g. Wednesday 1.3.78 am, Wednesday 8.3.78 pm).

(3) Number of vehicles performing each possible turning movement, and number of pedestrians crossing the road at each crossing location. Separate data are shown for each quarter-hour interval or half-hour interval, as the case may be.

A listing of all observations made is not maintained. Instead, each observation occasion is recorded in a street directory which is marked up to show the location and corresponding file reference number.

Record 6.203 TRAFFIC COUNTS - New South Wales

Survey of Pedestrian Accident Exposure Rates in Sydney

1. Source
Collector:
(1) P-E Consulting Group (Australia) Pty.Ltd., 576 St. Kilda Road, Melbourne, Vic. 3004.
(2) Harry Stanton and Associates, 18 Parkdale Avenue, Balwyn, Vic. 3103.
Distributor: Office of Road Safety, Department of Transport, Australia, PO Box 367, Canberra, ACT 2600.

2. Periodicity of Availability
Once-only study; the field data were collected during 1973.

3. Region of Availability
A small sample of road sections within the Sydney metropolitan area. Four types of areas were selected: residential, transport, industrial, shopping.

4. Published Information
Described in paragraph 7 below.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Only four sites were used, which places some limitations on the generality of conclusions.

7. Description of Data Available

(A) P-E Consulting Group (1973). 'Survey of Pedestrian Accident Exposure Rates in N.S.W. - Report of Field Survey Operations'
This report sets out the survey methodology, describes the sites selected and contains maps of the sites, samples of the data collection forms used and a copy of the instructions for observers.

(B) P-E Consulting Group (1974). 'Analysis of Surrey Data on Pedestrian Exposure Rates - Final Report'
This report represents Stage II of the study, which was concerned with calculating 'exposure rates' (being the product of the number of pedestrians counted within a given road section during a 5 minute interval, and the number of vehicles counted in the same road section during the same time span; this product being referred to as the PV value). A total of 2,304 unit records were included in the study, each pertaining to a particular 5 minute observation period.

The exposure rates obtained in this way are described in terms of ten variables:

Pedestrian:	Sex, Age, Company (alone or in a group), Movement;
Vehicle:	Type, Movement;
Environment:	Location with Respect to Intersection, Location with Respect to Traffic Control, Time of Day, Day of Week.

The results of the analysis are contained in a computer printout which shows 28 cross-tabulations of the above variables in different combinations.

Record 6.203 (Sheet 2)

(C) Harry Stanton and Associates (1976). 'Study of Pedestrian Accident and Exposure Rates - Stage III - Final Report'

The purpose of Stage III of the study was to combine the exposure rates determined in Stage II with available statistics on road accidents in order to obtain a measure of relevant accident risk levels for the ten accident descriptors used.

A special computer program, devised by M.H. CAMERON for this purpose was used. The printout contains the following tabulations:

- Accident data
- Exposure data
- Estimated accident risk
- Estimated relative risk
- Confidence limits for accident risk
- Confidence limits for relative risk
- Relative risk under null hypothesis
- Expected accidents under null hypothesis
- Estimated relative risk/null hypothesis relative risk
- Risk analysis Chi-square elements
- Significantly HIGH and LOW accident risks
- Table of partitioned Chi-square

The program was written to deal with one-, two- or three-dimensional arrays of accident and exposure data. The printout contains some 200 tabulations.

Record 6.301 TRAFFIC COUNTS - Victoria

Country Roads Board

1. Source
Collector and Distributor: Country Roads Board, 60 Denmark Street, Kew, Vic. 3101.

2. Periodicity of Availability
Continuing programme. Some of the data are collected on an *annual* basis.

3. Region of Availability
Victoria.

4. Published Information
(1)'Traffic Census' (Annual).
(2)'State Coverage Program and Intersection Studies (1972/73)'.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Described in paragraph 7 below.

7. Description of Data Available

(A)'Traffic census'
This publication is a record of an annual traffic census conducted by the Board on a Wednesday in March. At each observation station, traffic is recorded for 12 hours (7 am to 7 pm). The following information is shown:

(1) Index of all roads of which a census was taken, arranged in alphabetic order of road names.

(2) Record of counts taken at various points on the State highways, for each observation point showing: location, distance from Melbourne, number of vehicles observed during the 12 hour interval by type (cars, utilities and panel vans; trucks with 2 axles; trucks with 3 or more axles; buses; other vehicles), total number of vehicles, definition of peak hour (e.g.4-5) and traffic volume during the peak hours.

(3) Record of counts taken at various points in each of the Board's 10 Divisions, for each observation point showing: name of Division, name of road and location, number of vehicles observed during the 12 hour interval by type and during peak hours, using the same categories as for (2) above.

(4) Rural Highway Traffic Index (based on counts taken at a sample of 72 rural counting stations), for a number of recent years.

(B) 'State Coverage Program and Intersection Studies (1972/73)'
This is a supplementary publication which contains data on traffic counts taken between 1971 and 1973. It contains the following information:

(1) Average Annual Daily Traffic on rural highways: showing the estimated AADT value in graphical form, with the horizontal axis representing the distance from a designated point, and the vertical axis indicating AADT.

Record 6.301 (Sheet 2)

(2) Average weekday traffic recorded by permanent counting stations: showing the 24 hour average for all days, weekdays, Saturdays, Sundays; and the 12 hour average between 7 am and 7 pm for weekdays. Separate averages are shown for each month and the AADT is also listed.

(3) Highest hourly volumes recorded by permanent counting stations: showing the frequency distribution of highest hourly volumes, and the number of hours for which the hourly volume was at a given level.

(4) Intersection turning movements: shaving the number of vehicles by type (all vehicles, commercial vehicles) for each possible turning movement, and the total number of vehicles using the intersection observed (during the entire observation period, and during the morning and afternoon peak periods). Normal observation period is 12 hours (7 am to 7 pm).

Record 6.302 TRAFFIC COUNTS - Victoria

Melbourne and Metropolitan Board of Works

1. Source
Collector *and* Distributor: Melbourne and Metropolitan Board of Works, 625 Little Collins Street, Melbourne, Vic. 3000.

2. Periodicity of Availability
Annual.

3. Region of Availability
Melbourne metropolitan area and environs.

4. Published Information
'Road Traffic Counts'.

5. supplementary Information
Internal documentation and working papers.

6. Limitations
Not known.

7. Description of Data Available
The publication 'Road Traffic Counts' contains a *summary* of the Board's annual traffic counting operations, based on various types of counts: automatic, manually recorded turning movements, and vehicle composition counts. The counts are listed in alphabetic order of name of locality or suburb. *For* each counting occasion, the following infonnation is shown:

(1) Description of intersection or location.

(2) Date when count was taken.

(3) Description of leg, where appropriate (e.g. North side).

(4) 24 hour volume (showing whether one way or two ways).

(5) 12 hour volume between 7 am and 7 pm (showing whether one way or two ways).

(6) Morning and afternoon peak hour volumes, stating when the peak hour occurred, and whether volume is one or two ways.

(7) For a small proportion of entries, turning movements are also shown during peak hours, in terms of the percentage of vehicles turning left and right.

Record 6.303 TRAFFIC COUNTS - Victoria

Pedestrian Accident Risk at School Crossings and the Effect of Crossing Supervisors in Victoria

M.H. CAMERON and P.W. JORDAN

1. Source
   Collector: Authors.
   Distributor: Australian Road Research Board, 500 Burwood Road, Vermont South, Vic. 3133.

2. Periodicity of Availability
   Once-only study conducted during 1976.

3. Region of Availability
   A sample of school crossings in the Melbourne metropolitan area.

4. Published Information
   M.H. CAMERON and P.W. JORDAN (1978). 'Pedestrian Accident Risk at School Crossings and the Effect of Crossing Supervisors in Victoria! Proceedings, Joint ARRB and Department of Transport Pedestrian Conference, Sydney, 1978.

5. Supplementary Information
   Authors' working papers.

6. Limitations
   Described in paragraph 7 below.

7. Description of Data Available
   Observations were made at eleven pairs of school crossing, each pair consisting of an experimental site and a control site, the pairs being matched for road width, pedestrian and vehicle flows and other relevant characteristics.

   At each site, observations were made before and after installation of crossing supervisors. Pedestrians were classified into three types: primary school students, secondary school students, adults. For each site, the following data are shown:

   (1) Number of pedestrians observed within 50 m of the crossing, by type of pedestrian.

   (2) Number *of* pedestrians who crossed the road, by w n e (on the crossing, within 20 m of the crossing, between 20 and 50 m from the crossing), by type of pedestrian.

   (3) Average group size of pedestrians using the crossing.

   (4) Distribution of stopping behaviour of leading drivers observed approaching the crossing (stopped at STOP line, stopped after STOP line, stopped on crossing, did not stop but gave way, did not stop and did not give way).

   (5) Percentage of leading drivers who stopped, when required to stop (stopped at STOP line, stopped after STOP line).

   (6) Delay index *for* leading drivers who stopped at the crossing.

Record 6.401 TRAFFIC OUNTS - Queensland

Department of Main Roads

1. Source
Collector and Distributor: Department of Main Roads, Boundary Street, Spring Hill, Qld. 4000.

2. Periodicity of Availability
Continuing programme. Some of the data are collected on an annual basis.

3. Region of Availability
Queensland.

4. Published Information
(1) 'Traffic Census' (annual edition since 1976)
(2) 'Intersection Traffic Counts' (two editions: 1975-76 and 1972-74)
(3) 'Traffic Volume - City of Brisbane' (1967, 1966)

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Described in paragraph 7 below.

7. Description of Data Available
The Department's ongoing traffic Counting operations are based on 201 permanent counting stations spread throughout the State. Of these, close to 50 are installed in the Brisbane metropolitan area. In addition, short term intersection traffic counts are conducted at between 200 and 300 locations each year in other parts of the State.

(A) 'Traffic Census'
The first edition of the Traffic Census (for the year 1976) represents the first published document which contains traffic counting data for the whole of Queensland. It comprises 13 bulletins, one for each of the Department's 13 Traffic Districts. The 1977 edition was limited to the Brisbane area, designated as District No.13. The Census contains information on intersection traffic counts and data obtained from permanent counting stations. For intersections where a traffic count was taken, the following data are shown:

(1) Dates when counts were taken (in many cases the morning and afternoon periods were observed on different days).

(2) A diagram showing all road names, all possible vehicle turning movements and pedestrian crossing movements.

(3) Name of suburb or locality.

(4) Intersection reference number and map reference.

(5) Whether traffic signals exist at the intersection.

(6) Weather conditions (separately for morning and afternoon).

(7) Duration of count (usually 6.30 am to 7.00 pm).

(8) Definition of am peak hour and pm peak hour.

Record 6.401 (Sheet 2)

(9) Total traffic volume and percentage of comercial vehicles by time period (am peak hour, pm peak hour, total observation period), for each possible turning movement, for each mad entering the intersection.

(10) Number of pedestrians crossing each road entering the intersection by time period (am peak hour, pm peak hour, total observation period). This information is not available for every intersection listed in the Census.

A set of maps are included showing the location of intersections where traffic counts were taken.

The Census also contains a list of all permanent counting stations in the District, for each station showing:

(11) Station number and a description of location.

(12) The Annual Average Daily Traffic volume (AADT) for the year.

(13) Percentage distribution by type of vehicle (passenger vehicles: cars and station wagons, utilities panel vans and light trucks; comercial vehicles: trucks buses and dual or tandem vehicles, semi-trailers).

A set of maps are also included showing the location of all permanent counting stations.

(B) 'Intersection Traffic Counts'
Two reports were published:

(1) 'Intersection Traffic Counts on Declared Roads - Brisbane Statistical Division 1975-1976' (published 1976).

(2) 'Routine Intersection Traffic Counts - Brisbane Statistical Division 1972-1974' (published 1975).

Both publications contain data on traffic counts taken at intersections in the Brisbane area. The data are of the same content and format as described in items (1) to (10) of the Traffic Census described in part (A) above.

(C) 'Traffic Volumes - City of Brisbane'
Two editions were published:

(1) 'Traffic Volumes - City of Brisbane'(1967).

(2) 'Traffic Volumes - City of Brisbane'(1966).

Both publications contain data and are arranged in a manner similar to the Traffic Census described in part (A) above. AADT volumes for the year are compared to data for 1964 and 1960 for a number of locations. Also included are traffic flow maps indicating AADT volumes as coloured bands of varying width.

(D) Traffic Volume Patterns
This is a set of internal records on data obtained from permanent counting stations. The records are normally updated annually. For each station, a data sheet is maintained which shows:

(1) Description of location: road name, name of local authority, counting station number, locality name, portion of a map indicating where the station is situated and plan reference number.

Record 6.401 (Sheet 3)

(2) A graph showing the weekly traffic volume as a percentage of the average weekly volume, for each week of the year. This percentage of 'Average Week' is also listed in a table, together with the 'Weekly Factor' (the inverse of the Percentage of Average Week), for each week.

(3) Daily variation of traffic volumes: for each of the 7 days of the week, showing the percentage of Average Week, the percentage of *AADT,* and the 'Daily Factor' (the inverse of the percentage of AADT).

(4) Average Week: the average weekly traffic volume during the year.

(5) Monthly variation of traffic volumes: for each of the 12 months of the year, sharing the total monthly volume, percentage of yearly total traffic volume, percentage of 'Average Month' *and* the 'Monthly Factor' (the inverse of the percentage of Average Month).

(6) Total annual traffic volume.

(7) Average Month: the average monthly traffic volume during the year.

(8) AADT volume.

(9) A graph showing AADT volumes in recent years as a time series.

(10) A graph showing the percentage of *AADT* for each day of the year.

(11) Year of operation.

(E) Vehicle Volume Weekly Summary

This is a set of internal records on data obtained from permanent counting stations. Each record is in the form of a computer printout covering the period of one week, showing:

(1) Observation period (starting and ending dates).

(2) Observation station number.

(3) Description of location of observation station.

(4) Direction of traffic (if separate data available for each direction, else total traffic).

(5) Traffic volume for each day of *the* week, by hour of the day (0-1, 1-2,...23-24 HRS).

(6) Average daily traffic volume by hour of day, showing separately the average for *two* periods: Monday-Friday, Monday-Sunday.

(7) Maximum quarter-hour traffic volume and time when it occurred, by day of week, separately for morning and afternoon peak period.

(8) Average hourly traffic by day of week.

(9) Total daily traffic by day of week, for two periods: 6 am to 6 pm, and for all 24 hours of the day.

(10) Average daily values (for Monday-Friday and Monday-Sunday) for each observation described in items (7), (8), (9) above.

Record 6.402 TRAFFIC COUNTS - Queensland

Department of Transport

1. Source
Collector and Distributor: Queensland Department of Transport, PO Box 817, GPO Brisbane, Qld. 4001.

2. Periodicity of Availability
Monthly.

3. Region of Availability
All data are collected at 3 weighbridge checking stations, located at Gailes, Coomera and Burpengary.

4. Published Information
Monthly Statement.

6. Limitations
Not known.

7. Description of Data Available
The Queensland Department of Transport maintains three weighbridge checking stations, at which all load carrying vehicles are required to stop and submit to a check. For each of the three stations, located at Gailes, Coomera and Burpengary, the following data are available:

(1) Number of vehicles checked during the month, travelling intrastate.

(2) Number of vehicles checked during the month, travelling interstate.

(3) Total number of vehicles checked during the month.

Record 6.501 TRAFFIC COUNTS - South Australia

Highways Department

1. source
Collector and Distributor: Highways Department, 33 Warwick Street, Walkerville, SA 5081.

2. Periodicity of Availability
Continuing programme. Some of the data are collected on an annual basis.

3. Region of Availability
South Australia, except the Adelaide Central Business District area which is administered by the Adelaide City Council.

4. Published Information
A set of maps showing traffic volume data.

5. supplementary Information
Internal documentation and working papers.

6. Limitations
Described in paragraph 7 below.

7. Description of Data Available
An overview of all the traffic counting activities conducted by the Highways Department is described in Record 6.502.

The main components of the traffic counting programme are: Permanent Counting Stations, Short Term Counis, the District Book and a set of Traffic Flow Maps. These are described below.

(A) Permanent Counting Stations
The permanent counting station programme was initiated in 1965 with 13 stations. By 1979, a total of 67 stations were in use, 25 of these were located in the Adelaide metropolitan area (but none in the Central Business District). Computer printouts of the results are available up to December 1976. A considerable amount of raw data collected since then were not processed due to a malfunction of the equipment which converts tapes produced by counting stations into punched cards.

For each permanent counting station, an annual computer printout is prepared, showing:

(1) Station number, description of location, district number and road class number.

(2) For each of the 52 weeks in the year, daily traffic volume, shown separately for each of the 7 days in the week, and daily averages for three periods (the whole week including holidays, Monday-Friday including holidays, Monday-Friday excluding holidays) are listed.

(3) Daily multiplication factors of the Annual Average Daily Traffic (defined as AADT/Daily Volume), for the same time periods as shown in (2) above. In addition, the inverse of the multiplication factor is shown for the three sets of daily averages listed in (2) above.

Record 6.501 (Sheet 2)

(4) Average daily traffic volume for each month for three time periods (whole month, weekdays including holidays, weekdays excluding holidays). In each case, the number of days is indicated together with the appropriate multiplication factor (AADT/daily average traffic volume for the month), and the proportional factor (defined as the inverse of the multiplication factor).

(5) Average hourly traffic volume for each hourly period of the day (0-1, ... 23-24 HRS) for each day of the week, averaged over the entire year. Also shown are hourly averages and their percentage distribution for three time periods (whole week including holidays, weekdays including holidays, weekdays excluding holidays), and daily traffic volume averages for each of these time periods. The following additional data are also shown for each day of the week and for the three weekly time periods: standard deviation, coefficient of variation, skew index, 24/12 hour ratio, characteristics of the 24/12 hour ratio distribution (standard deviation, coefficient of variation and skew index).

(6) For each of the 50 highest hourly volumes, the following data are shown: the hourly volume, ratio of hourly volume to AADT, frequency and cumulative frequency for three time periods (all days in the year, weekdays including holidays, weekdays excluding holidays).

For most stations, the traffic volume shown represents the total traffic flow in both directions. For some of the stations located in the Adelaide metropolitan area, where median strips exist, separate counts are available for each direction.

Apart from the computer printouts described above, the following additional information is available:

(7) List of permanent counting stations showing: location (e.g. Henley Beach Road, 50 yds. west of Railway Avenue), station number, direction of traffic counted (where separate directional counts are made), town or suburb, road class, district, date installed and date removed (if removed).

(8) Monthly averages summary sheet: for each permanent counting station, average daily traffic volumes for each month are manually transcribed onto summary sheets which show all monthly data available since January 1966. A separate sheet is kept for each station.

(9) Monthly averages for a sample of 12 metropolitan counting stations of particular significance: average daily traffic volume for each month, monthly totals for all 12 stations, and *annual* totals for each station. (The counting station tapes are translated manually for the stations included in this sample).

(10) Graphs of AADT volume: for each permanent counting station, a graph is prepared which shows the AADT history for each year when the station was in operation. Semi-logarithmic graph paper is used for these plots. In all graphs, the AADT values shown represent total traffic in both directions. In most cases, the equivalent annual compound growth rate is also indicated.

Record 6.501 (Sheet 3)

(B) Coverage Counts

These are taken at approximately 3,000 intersections on all classes of roads in the metropolitan and in rural areas. In general, they are of 24 hour duration, using non-recording meters. The traffic volume is obtained by reading the counters at the beginning and at the end of the observation period. The Department aims to cover each location every two years in rapidly growing urban areas, and every four years elsewhere. A data sheet is prepared for each occasion when an intersection was counted. The data sheets are filed by intersection location. Each data sheet contains the following information:

(1) Description of location: location code number, road names, locality name, map reference.

(2) Date of traffic count.

(3) Weather conditions.

(4) Diagrammatic sketch of the intersection.

(5) For each leg where a traffic count was conducted: direction of travel, counter installation time, removal time, removal readina, installation reading, total traffic volume during the observation period.

(C) Intersection Turning Counts

These are manual counts of 11 hour duration (7 am to 6 pm). Traffic volumes are recorded hourly for off-peak periods, and in 15 minute intervals during the morning and afternoon peak periods (7-9 am, 4-6 pm). Turning counts are made at 215 intersections in the Adelaide metropolitan area. The Department aims to cover each intersection in the sample once every three years. A data sheet is prepared for each counting occasion; the sheets are filed by intersection location. Each data sheet contains the following information:

(1) Description of location: location code number, road names, locality name, map reference.

(2) Date of traffic count. In many cases, the morning and afternoon periods are observed on two different days.

(3) Weather conditions.

(4) Diagrammatic sketch of the intersection.

(5) For each leg (i.e. each road entering the intersection), the number of vehicles making each possible turning movement is shown (separately for cars, commercial vehicles, total vehicles) for the following time periods: the entire 11 hour observation period, morning and afternoon peak hours and peak half-hours. In each case, the starting time of the peak period is indicated.

(6) For each leg, the total number of vehicles travelling in both directions is shown for the morning and afternoon peak hours, and for the entire 11 hour observation period.

(D) Vehicle Classification Counts

The purpose of these counts is to provide correction factors to take into account the proportion of vehicles with more than 2 axles. These counts are conducted at all permanent counting station locations and also at 250 other locations on arterial and sub-arterial roads. In most cases,

Record 6.501 (Sheet 4)

these counts are taken over an 11 hour period (7 am to 6 pm), though in some cases, 24 hour counts are made. Each location is counted approximately once every three years. A data sheet is prepared for each counting occasion, sharing:

(1) Description of location: location code number, road names, locality name, map reference, permanent counting station number (if applicable).

(2) Date of traffic count.

(3) Duration of count, time of commencement and termination.

(4) Number of vehicles travelling both ways by type of vehicle (12 categories: cars and station wagons, utilities and light vans, motor cycles, light trailers, trucks with 2,3,4 axles, heavy trailers, semi-trailers with 3,4,5 axles, buses).

(E) State-wide Counts

On the third Thursday in February each year, a 12 hour manual count is conducted between 6.30 am and 6.30 pm at 270 locations throughout the State's rural regions on all classes of roads, to determine overall growth rates of traffic volumes. A data sheet is prepared for each counting location, showing:

(1) Description of location: location code number, road names, locality name, map reference.

(2) Date of traffic count.

(3) Number of vehicles observed by type (cars, commercial vehicles), travelling in *both* directions during the 12 hour observation period.

(F) The District Book

A separate book of maps is maintained for each of the Highway Department's 9 districts (CentralWestern and Kangaroo Island, Central Eastern, Central Southern, Murray Lands, *South* East, Central Northern, Yorke and Lower North, Eyre, Northern). The maps indicate, for various points along the road:

(1) The estimated AADT volume for a given year.

(2) The estimated annual percentage growth rate of AADT.

(3) The estimated percentage of commercial vehicles.

The data shown in these maps represent a *summary* of the data collected by permanent and coverage counting stations described earlier. For most points, AADT estimates only are shown on the maps; *growth* rates of traffic and the percentage of commercial vehicles are indicated only in a small proportion of all entries.

(G) Traffic Flow Maps

These maps are produced for distribution to the public. They represent a summary of the data contained in the District Book described above.

Five different types of maps are being produced:

(1) Traffic flow maps, showing the estimated *AADT* either numerically at various points along the road, or else as a continuing coloured band the width of which indicates the traffic volume.

Record 6.501 (Sheet 5)

(2) Peak hour traffic flow maps, showing the peak hour traffic volume (in one direction only), and that volume as a percentage of total two-way AADT. For each location, two entries are shown, one for the morning, and one for the afternoon peak hour. In each case, the peak hour starting time is indicated.

(3) Annual growth rate in traffic volumes: a map showing this rate as a percentage at various points along the road.

(4) Peak hour traffic growth rates: a map showing the percentage annual growth rate of the peak hour traffic volume. Separate maps are produced for the morning and afternoon peak hours.

(5) A map showing the percentage of commercial vehicles observed during 12 hour counts at various points along the road.

Traffic flow maps, described in item (1) above are prepared for the Adelaide metropolitan and rural areas; they are updated approximately once every two years. The other types of maps are available for the Adelaide metropolitan area only, they tend to be updated every two to five years.

The maps are not published in book form. but available as separate sheets.

Record 6.502 TRAFFIC COUNTS - South Australia

south Australian Experience in Traffic Data Collection and Analysis

F.T. PARK

1. Source
   Collector and Distributor: F.T. PARK, Assistant Traffic Engineer, Highways Department of South Australia, 33 Warwick Street, Walkerville, SA 5081.

2. Periodicity of Availability
   Once-only study, conducted in 1977.

3. Region of Availability
   South Australia, except the Adelaide Central Business District area which is administered by the Adelaide City Council.

4. Published Information
   F.T. PARK (1978). 'South Australian Experience in Traffic Data Collection and Analysis', Proceedings of the Second Conference of the Road Engineering Association of Asia and Australia, Manila, 1978.'

5. Supplementary Information
   Author's working papers and internal records.

6. Limitations
   Not known.

7. Description of Data Available
   The paper describes the traffic counting methods used by the Highways Department of South Australia and lists all traffic counting programmes conducted by the Department. Apart from listing the number of locations where traffic counts are taken, the paper does not contain any traffic counting data. A more detailed description of traffic counting data collected by the Highways Department is set out in Record 6.501.

Record 6.503 TRAFFIC COUNTS - South Australia

Adelaide City Council

1. Source
Collector and Distributor: Adelaide City Council, PO Box 2252, GPO Adelaide, SA 5001.

2. Periodicity of Availability
Continuing programme.

3. Region of Availability
Local Government Area designated as 'City of Adelaide', incorporating the Central Business District bounded by West, South and East Terrace, and North Adelaide.

4. Published Information
None.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Not known.

7. Description of Data Available
Traffic counting data collected by the Council are contained in two card index files: vehicle traffic counts and pedestrian counts.

(A) Vehicle Traffic Counts
An index card is preapred for each counting occasion, showing:

(1) A diagrammatic sketch of the counting location (normally an intersection), showing street names and direction of traffic flows.

(2) Intersection number.

(3) Date of traffic count and day of the week.

(4) Number of vehicles observed in each direction of traffic flow during stated hourly or two-hourly periods (8.00-9.00 am, 12.00-2.00 pm, 4.30-5.30 pm, or other stated time periods) for two different vehicle categories (e.g. cars and commercial vehicles; or cars and buses).

(5) Number of vehicles observed for each possible turning movement, for the same time periods and vehicle categories as shown in (3) above.

(B) Pedestrian Counts
An index card is prepared for each counting occasion, showing:

(1) A diagrammatic sketch of the counting location (normally an intersection), showing street names and direction of pedestrians crossing the road.

(2) Intersection or pedestrian crossing number.

(3) Date of traffic count and day of the week.

(4) Number of pedestrians observed crossing the road in each direction during stated hourly periods (8.00-9.00 am, 12.00-1.00 pm, 1.00-2.00 pm, 4.30-5.30 pm).

Record 6.504 TRAFFIC COUNTS - South Australia

Road Traffic Board of South Australia

1. Source
Collector and Distributor: Road Traffic Board of South Australia, 33 Warwick Street, Walkerville, SA 5081.

2. Periodicity of Availability
Irregular.

3. Region of Availability
A sample of pedestrian crossings in the Adelaide metropolitan area.

4. Published Information
Described in paragraph 7 below.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Described in paragraph 7 below.

7. Description of Data Available
To date, the Road Traffic Board *has* conducted two studies concerned with the behaviour of pedestrians and motorists at pedestrian crossings:

(A) 'Behaviour of Pedestrians and Motorists at Mid Block, Push Button Pedestrian Crossings' (1970)
The study was conducted at 5 pedestrian crossings, which were observed for a 12 hour period (6.30 am - 6.30 pm). In some cases, a second 12 hour observation period was added. The total number of pedestrians and vehicles observed was 6,321 and 71,390 respectively. Morning and afternoon periods were not always observed on the same day. For each crossing, the following information is shown:

(1) A description of the crossing, its location, type of neighbourhood, date of observation, date when signal was installed, and weather conditions during the observation period.

(2) A description of the time cycle of the signal, and comments on the time it took pedestrians to make the crossing.

(3) Motorist observance (whether motorists approaching the crossing would slow down to give way to pedestrians), showing: total number of motorists recorded, number of motorists in conflict, and the number and percentage of those who observed the crossing by slowing down. Data available by direction of traffic, sex and estimated age of motorists (16-25, 25-40, 40-60, 60 years and over), by type of vehicle (light, medium, heavy).

(4) Pedestrian behaviour: number of pedestrians using the crossing by signal phase (crossing on red, flashing, green signal), number of pedestrians crossing the road in a 'legal zone' (between 100 ft and 200 ft away from the crossing), and number crossing in an 'illegal zone' (within 100 ft from the crossing). Data available by sex and estimated age of pedestrians in the same categories as for (3) above.

Record 6.504 (Sheet 2)

(5) Traffic delay: graphs showing total number of vehicles delayed, number of vehicle minutes of delay, for each 15 minute time interval, for each direction of traffic.

(6) Traffic volume: graphs of number of vehicles passing the pedestrian crossing during each 15 minute interval, showing total traffic and separate data for each direction.

(7) Pedestrian flow: graphs of number of pedestrians using the crossing during each 15 minute interval. Also shown are graphs indicating the percentage usage of the crossing by sex and estimated age groups of pedestrians.

(B) 'Behaviour of Pedestrians and Motorists at Zebra Crossings' (1969)

The study was conducted at 15 zebra crossings, which were observed for a 12 hour period (6.30 am - 6.30 pm). The total number of pedestrians and vehicles observed was 14,752 and 240,950 respectively.

The scope of the study, and the information available closely follows the study described in (A) above.

Record 6.505 TRAFFIC COUNTS - South Australia

Director-General of Transport

1. Source
Collector: described in paragraph 7 below.
Distributor: Director-General of Transport, Box PO Box 1599, Adelaide, SA 5001.

2. Periodicity of Availability
Irregular.

3. Region of Availability
Selected pedestrian crossings and adjoining areas in the Adelaide metropolitan region.

4. Published Information
Described in paragraph 7 below.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Described in paragraph 7 below.

7. Description of Data Available
To date, two studies specifically concerned with pedestrian movements have been conducted:

(A) 'North Terrace Pedestrian Subway Feasibility Study' (1978)
Collector: GHD Parsons Brinkerhoff Pty. Ltd.
32 Kensington Road, Rose Park, SA 5067.

The study was conducted in the immediate vicinity of the Adelaide Central Railway Station at North Terrace, observing pedestrians (both pedestrians crossing the road, and pedestrians walking on footpaths) during a three day period between 7.30 am and 6.00 pm. The following information is available:

(1) Pedestrian volumes, observed during 45 minute intervals, at three pedestrian crossings outside the railway station, showing the number of pedestrians crossing the road, separately for each direction.

(2) Number of pedestrians passing a number of selected locations on footpaths.

(3) Number of vehicles passing selected points within the study area.

(B) 'Norwood Movement Study' (1976)
Collector: Super Environment and Research Studio, 66 Wyatt Street, Adelaide, SA 5000.

The study was conducted in conjunction with the Corporation of the City of Kensington and Norwood, 175 The Parade, Norwood, SA 5067. The study area comprised two Collectors Districts in the Kensington-Norwood municipality.

The survey represents an in-depth analysis of pedestrian movements in the study area, both pedestrians walking on footpaths and those crossing the road. The report is predominantly descriptive and contains only few quantitative results: sex distribution of pedestrians observed, number of bicycle riders, peak hour road traffic volumes.

Record 6.601 TRAFFIC COUNTS - Western Australia

Department of Main Roads: Metropolitan Traffic Counts

1. Source
Collector and Distributor: Department of Main Roads, Waterloo Crescent, East Perth, WA 6000.

2. Periodicity of Availability
Continuing programme. Some of the data are collected on an annual basis.

3. Region of Availability
Perth Metropolitan area and environs.

4. Published Information
(1) 'Urban Traffic Survey, Project No. WMR 74/2A' (1978)
(2) 'Average Daily Traffic Flows, Perth Metropolitan Region, 1976-1977-1978'.

5. Supplementary Information
Internal records and documentation, including a large number of traffic counting data in the form of computer printout reports.

6. Limitations
Traffic counts are mainly limited to 'classified roads' and adjoining tributory roads. The majority of traffic counts are taken over a short period only, mostly over one or two weeks.

7. Description of Data Available
The type of traffic counting data collected, and the manner in which the information is presented, are described in the booklet 'Urban Traffic Survey, Project No. WMR 74/2A', which contains numerous examples of various traffic counting reports. These items are described in parts (A) to (E) below.

A summary of traffic counting data for the three years to 1978 is contained in the booklet 'Average Daily Traffic Flows: Perth Metropolitan Region: 1976-1977-1978' which is described in part (F) below.

(A) Metropolitan: Short Term Station Counts
The Department uses 70 automatic traffic recorders. During 1977/78, a total of 1,200 short term counts were made in the Perth Metropolitan Area. The normal counting period is 7 days for each location; in most cases, directional flows are counted separately. A computer printout is prepared for each counting occasion, showing:

(1) Description of counting location (e.g. South Perth Interchange, off ramp to south Perth).

(2) Counting station number.

(3) Recorder number and tape number.

(4) Direction of traffic flow.

(5) Observation period (e.g. from 9.00 am on 25.10.77 to 11.45 am on 3.11.77).

(6) Weather conditions.

(7) Number of vehicles observed during each hourly interval (0-1, 1-2, ... 23-24 HRS), for each of the seven days in the week.

Record 6.601 (Sheet 2)

(8) Average hourly traffic for each hourly interval for the whole week, and for weekdays.

(9) Peak traffic data: peak quarter hour starting time and traffic flow, peak half hour starting time and traffic flow, peak hour starting time and traffic flow, with separate data for morning and afternoon peak periods. Total traffic flow between 0700 and 0900 HRS, and 1600 and 1800 HRS. This information is available for each day of the observation week, with averages for the whole week and for weekdays.

(10) Summary traffic data: average hourly traffic, total traffic between 0700 and 1900 HRS, and total traffic between 0000 and 2400 HRS, for each day of the week, with averages for the whole week and for weekdays.

(B) Metropolitan: Permanent and Semi-Permanent Stations

A total of 11 permanent and 4 semi-permanent stations are used to derive adjustment factors that can be applied to short term counts for obtaining AADT estimates.

Counting data are recorded in the same way as for short term station counts described above. A separate printout is prepared for each weekly interval.

(C) Metropolitan: Intersection Turning Movements

In response to specific requests, intersection directional movement counts are carried out. These are either of twelve hour duration (7 am - 7 pm), or four hours duration during peak periods (7-9 am, 4-6 pm). During 1977/78, 222 intersection counts were conducted, about half of which were twelve hour counts. A computer printout is prepared for each count, containing the following data:

(1) Description of intersection location, and description of each leg of the intersection (e.g. Intersection of Great Eastern Highway and Craig Street; Leg 1: Great Eastern Highway East of Craig Street, etc.).

(2) Date when count was taken.

(3) Number of vehicles observed entering the intersection by type of movement (left turn, straight through, right turn), by type of vehicle (cars/station wagons, light commercial/panel vans/utilities, heavy commercial rigid axle including dual wheels and multi-axle, semi-trailers, buses, motorcycles/scooters), showing separate data for each leg. This information may be available for several time periods: two highest am peak hours, two highest pm peak hours, am and pm peak quarter hours, 0700-0900, 1600-1800 HRS, average off-peak hour, 0700-1900 HRS.

Some of this information is transferred to a Graphic Summary Sheet which shows:

(4) A diagrammatic sketch of the intersection and of all possible turning movements.

(5) Date when the count was taken, day of the week, and counting period (data shown are normally peak hour traffic flows).

(6) Weather conditions.

(7) Number of vehicles observed during the observation period for each possible turning movement. Number of buses are shown separately in each case.

Record 6.601 (Sheet 3)

(8) Capacity data: number of turn left phases, phases with vehicles remaining, total vehicles queued at end of green, phases with vehicles queued but number unobtainable, total vehicles entering on red. This information is shown for each possible turning movement.

(9) Number of vehicles entering the intersection on red, for each leg, for each quarter hour during the peak hour.

(10) Number of vehicles entering the intersection by type of vehicle (same categories as in item (3) above), showing separate data for each leg.

For each signalized intersection observed, a capacity analysis is undertaken in accordance with 'Bulletin No. 4 - Australian Road Capacity Guide'. In each case, a computer printout is prepared which contains the following data:

(11) For each 15 minute time interval during the periods 0700-0900 and 1600-1800 HRS: effective green time (seconds) for each signal phase, optimum cycle time for the intersection, number of vehicles observed for each possible turning movement, total intersection traffic volume, particulars on parking in each leg, Y values.

(12) For each two hour observation period (0700-0900 and 1600-1800 HRS): minimum and maximum values for: effective green time for each phase, optimum cycle time for the intersection, Y values.

For each unsignalized intersection observed, a *similar* capacity analysis is undertaken, showing the following data:

(13) For each 30 minute time interval during the periods 0700-0900 and 1600-1800 HRS (with intervals every 15 minutes after 0700 and after 1600 HRS respectively): per cent saturation, number of vehicles observed for each intersection turning movement, and total intersection traffic volume.

(14) For each 2 hour observation period (0700-0900 and 1600-1800 HRS): minimum and maximum per cent saturation.

Each year, intersection saturation ranking lists are prepared, which indicate:

(15) Ranking by traffic volume showing: rank number, intersection name, suburb name, type of signal control, Y value or per cent saturation during maximum traffic half hour, peak hour volume during am and pm peak hours and, in some cases, also the 12 hour traffic volume.

(16) Ranking by date, during the year, when the intersection became saturated, showing: rank number, intersection name, suburb name, type of intersection (e.g. 3 way, 4 way), type of control at intersection, date of count, month when the intersection became saturated.

(D) Pedestrian/Vehicle Conflict Counts

During 1977/78, 30 pedestrian/vehicle conflict counts were taken, usually in response to public requests for pedestrian crossings and overways. The normal count duration is 12 hours (7.00 am to 7.00 pm). For each location observed, the following data are shown:

(1) Number of vehicles travelling by direction (e.g. East, West) during each hour interval.

(2) Number of pedestrians by type of pedestrian (aged and infirm, children, total number of pedestrians) for each zone (if several zones were observed), during each hour interval.

Record 6.601 (Sheet 4)

(3) Conflict (obtained by multiplying the number of vehicles by the number of pedestrians observed during the same time interval), for each zone, for each direction of traffic, for each hour interval.

(4) Number of pedestrians and conflict data shown in (2) and (3), combined for all zones observed.

(5) Number of pedestrians and conflict data shown in (2) and (3), for two maximum hours of conflict (on 15 minute intervals) for each zone, for each direction of travel.

(E) Travel Time Surveys

A limited number of travel time surveys is carried out each year for special purpose studies. The method used by the Department is that adopted in the 1969-1974 Australian Roads Survey.

(F) 'Average Daily Traffic Flows: Perth Metropolitan Region 1976-1977-1978'

This publication contains a summary of data described in parts (A) and (B). The booklet contains maps of various parts of the Perth metropolitan area, in each case showing the location of the traffic counting station. For each such location, the following information is listed: description of location (e.g. Nolan Avenue, at railway crossing), and for each of the three years (1976, 1977 and 1978), the ADT (average daily traffic), and the month when the count was taken. In most cases, automatic traffic counting stations were used; where data were estimated from short-term manual counts, this is indicated by an asterisk. For each section in the booklet, locations are listed in alphabetic order of street names.

Record 6.602 TRAFFIC COUNTS - Western Australia

Department of Main Roads: Rural Traffic Counts

1. Source
Collector and Distributor: Department of Main Roads, Waterloo Crescent, East Perth, WA 6000.

2. Periodicity of Availability
Continuing programme. Some of the data are collected on an annual basis and some every five years.

3. Region of Availability
Western Australia.

4. Published Information
(1) 'Rural Traffic Studies' (undated).
(2) 'Permanent Count Station Time Profiles' (annually since 1973/74).
(3) 'Traffic Profiles' (1971, 1976).

5. Supplementary Information
Internal records and documentation, including a large number of traffic count data in the form of computer printout reports and charts.

6. Limitations
Traffic counts conducted in rural areas are limited to 'classified roads'. The majority of traffic counts are taken over a short period only, mostly over one or two weeks.

7. Description of Data Available

(A) 'Rural Traffic Studies'
This publication describes the continuing programme conducted by the Department of Main Roads in rural parts of the State. The following aspects are described: the origin of the programme, the inclusion of the gravity model, data collection methods in the coverage count programme, permanent count programme and bi-monthly count station programme, the operation of the rural gravity model, and traffic data processing methods.

(B) 'Permanent Count Station Time Profiles'
The report contains a data sheet for each of the 76 permanent counting stations used, showing:

(1) Counting station number.

(2) Description of location (e.g. Perth-Albany, Road No. 1000, 379.8 SLkm, 19.6 km North of Albany).

(3) A graph of daily traffic volume (total number of vehicles travelling in bath directions) for each day of the year ending June 30, showing daily traffic, average daily traffic for each week, and the average annual daily traffic (AADT) value. In a minority of cases, actual daily traffic counts could not be obtained due to the measuring equipment being out of commission; for those periods, estimated average daily traffic volumes per week are indicated.

(4) A graph of hourly traffic volumes (expressed as a percentage of AADT), in decreasing 'hour rank' order for the first 150 hours.

Record 6.602 (Sheet 2)

(5) Traffic composition: percentage distribution of total number of vehicles in six categories (1 cars and station wagons; 2 utilities, light trucks and buses without dual wheels; 3 heavy trucks and buses with dual wheels; 4 semi-trailers; heavy multi-unit vehicles towing one or more trailers; 6 other vehicles including earth moving equipment, farm machinery, etc.).

The 1977-78 edition of this publication also shows a graph of AADT values for the six most recent years, and a curve of best fit depicting the growth trend.

(C) 'Traffic Profiles'

The first edition was published in 1971 in two volumes: Main Roads and Secondary Roads. The 1976 edition comprises 3 volumes: Highways, Main Roads, Secondary Roads. The information shown is based on data collected by permanent and coverage traffic counting stations.

A separate graph is included for each road number, the horizontal axis representing the road length (SLkm) from the designated starting pint, and the vertical axis indicating the traffic volume on a logarithmic scale. Each graph depicts:

(1) The AADT volume for all traffic, and the corresponding volume for heavy vehicle traffic, both shown as continuous graphs over the entire length of the road.

(2) The location of all side roads is shown to scale, indicating the AADT value for each side road.

(3) The location of all traffic counting stations is shown to scale, indicating the station number and type (permanent, coverage or bi-monthly).

(4) The location of all urban regions is shown to scale, indicating the name of each town or city.

(5) The names of all Local Government Authorities along the road are shown, indicating to scale the boundaries between them.

(D) Permanent Count Stations: Annual Growth Rates

A summary of traffic growth rates is maintained in the form of a large wall chart, which shows for each permanent counting station the following data for each year since 1968/69:

(1) Counting station number.

(2) Road name and road number.

(3) SLkm distance from a designated origin point.

(4) Type of counting station (pneumatic detector, loop detector).

(5) The average annual daily traffic volume (AADT), and the ratio between this year's and last year's AADT values.

(6) Average annual compound growth rate in AADT levels for the entire observation period.

Record 6.603 TRAFFIC COUNTS - Western Australia

Department of Main Roads: Origin and Destination Survey, Eyre Highway at Norseman (1977)

1. Source
Collector and Distributor: Department of Main Roads, Waterloo Crescent, East Perth, WA 6000.

2. Periodicity of Availability
Once-only study, conducted during August 16-22, 1977.

3. Region of Availability
All data were collected at Norseman, the starting point of the Eyre Highway.

4. Published Information
'Origin and Destination Survey, Eyre Highway at Norseman (1977)'.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Data collection was limited to one week and hence the seasonal variations of the traffic flows are not known.

7. Description of Data Available
The data shown in the report are presented in the form of several charts:

(1) Vehicle composition and basic route of travel: number of vehicles by type (motor vehicles, caravans, trailers), by direction of travel (eastbound, westbound), by basic route of travel (e.g. local, Esperance-Norseman-Kalgoorlie), by type of vehicle (car, light commercial, camper van, bus, motor cycle, heavy comnercial, semi-trailer, road train, other).

(2) Vehicle composition and trip duration: number of vehicles (excluding locals) by duration of trip (up to 20, over 20 days), by frequency of trips during last five years (up to 50, more than 50 trips), by type of vehicle (same categories as above).

(3) Direction of Eastern States travellers (for total vehicles and excluding local and commercial vehicles), according to: going to home, coming from home, neither; by State and Territory. Also shown is the average vehicle occupancy in each category.

(4) Reason for trip (e.g. settling or departing, holiday, conference or convention, etc.), for all vehicles and excluding local vehicles.

(5) Number of commercial vehicles (heavy commercial, semi-trailers, road trains with 1 and with 2 trailers) by body type (e.g. flat top open, flat top tarped, etc.), by axle configuration type.

(6) Type of vehicle (heavy commercial, semi-trailer, road train) by type of goods carried (e.g. empty, timber, steel/aluminium, cement, autos, etc.), by estimated load (1-5, 6-10, 11-15, 16-20, greater than 20 tonnes), whether carrying containers, whether in co-ordinated road/rail/air services, and whether in forward or back loading bound east or bound west.

(7) Origin/destination matrix showing the number of vehicles in 31 origin and 31 destination regions.

Record 6.604 TRAFFIC COUNTS - Western Australia

Department of Tourism: Eyre Highway Traveller Survey

1. Source
Collector and Distributor: Western Australian Department of Tourism, PO Box X2261, GPO Perth, WA 6001.

2. Periodicity of Availability
Irregular. Stage I of the survey was conducted in two parts (March 1970 to February 1971, and June 1971 to May 1972), Stage II during the 12 months period ending September 1976 which was immediately prior to the Eyre Highway being completely sealed, and Stage III during the 12 months period commencing October 1976, after the official opening of the sealed highway.

In addition to the above, a continuing survey has been in operation since 1975.

3. Region of Availability
All data are collected at Norseman, the starting point of the Eyre Highway.

4. Published Information
'Eyre Highway Traveller Survey 1978'.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
The survey was conducted at the Agriculture Department's Quarantine Checkpoint at Norseman, where all west-bound motor vehicles are stopped and inspected. In surveys referred to as Stage I, Stage II and Stage 111, a self-administered questionnaire form was given to the driver of each vehicle, together with a reply-paid envelope. Stage II yielded 642 and Stage III 1,083 completed questionnaires, which represented a 32% response rate.

In the continuing survey, described in part (B) below, all data were collected by officers of the Agriculture Department 24 hours a day, every day of the year, and hence this survey represents a complete and accurate record of west-bound traffic flows.

7. Description of Data Available

(A) 'Eyre Highway Traveller Survey 1978 (Stage II and III)'
Each of the two surveys was conducted during one-week periods in December, June and September 1976 to 1977.

(1) Vehicle occupants: type of unit (alone, married couple, family, family with friends/relatives, friends, business associates).

(2) Vehicle occupants: age (under 15, 15-19, ... 45-54, 55 years and older), by sex.

(3) Type of vehicle (station sedan, car, panel van, utility, van or kombi).

(4) Percentage of vehicles equipped with mobile accommodation according to type (caravan, caravanette, car camper).

(5) Intended direction of travel from Norseman (Kalgoorlie, Coolgardie, Esperance).

Record 6.604 (Sheet 2)

(6) Main destination in Western Australia (Perth, North West, South West, Southern Region, Wheatlands, Geraldton, Goldfields).

(7) For Western Australian residents returning home: duration of time away from home (less than 1 week, 1-2 weeks, ... over 12 months), direction of travel from Norseman, reason for trip (holiday, visit friends/relatives, business, touring other States, other reasons).

(8) For visitors to Western Australia: percentage of visitors who intended/ did not intend to return to their usual place of residence, duration of absence from home intended, planned travel route when returning home (from Kalgoorlie, Coolgardie, Esperance, North West, other), reasons for trip (working holiday, work only, advice of friends/relatives, experience from previous trip, etc.), and reason for timing of this trip (annual holidays, school holidays, climate, wildflowers, visit friends/relatives, other reasons).

For each item listed above, separate *data* are shown for Stage II and for Stage III of the survey. Crosstabulations are included for some combinations of data.

(B) Continuing Survey

For each vehicle observed, information is entered on a Data Collection Form, listing:

(1) Date of observation.

(2) Vehicle registration number, and registration number of trailer (if different from that of the towing vehicle).

(3) State or Territory where the vehicle is registered.

(4) State or Territory where the trip originated.

(5) Vehicle type (car, station wagon, van or utility including rover or kombi types, prime mover or semi-trailer, truck, bus or coach, motor cycle).

(6) Whether the vehicle is towing a caravan or trailer.

(7) Intended travel route (North to Coolgardie, or South to Esperance).

(8) Number of vehicle occupants.

(9) Type of load carried (frozen goods, perishables, machinery, building materials, general).

(10) Details of goods confiscated for quarantine reasons (e.g. fruit, seeds, plant, etc.) .

The information collected by the Agriculture Department is forwarded to the Department of Tourism which prepares weekly summaries showing:

(11) Date (week ending).

(12) Number of west-bound vehicles passing through the checkpoint during the week by type of vehicle (cars, station wagons, vehicle towing a caravan, semi-trailers and trucks, coaches, motor cycles, vans and utilities).

(13) Total number of passengers observed during the week, including drivers.

Record 6.604 (Sheet 3)

(14) A comparison between the number of vehicles and passengers observed during the week, and the corresponding week of the previous year, shaving the percentage increase or decrease, separately for vehicles and passengers.

(15) Number of vehicles and percentage of total vehicles carrying WA number plates.

In addition, the Department of Tourism has commenced a project in 1978 which involved taking a 5% sample of all data collection forms with the aim of providing quarterly summaries of traffic characteristics.

Record 6.605 TRAFFIC COUNTS - Western Australia

Perth Central Area Pedestrian Study

1. Source
Collector: Wilbur Smith and Associates, 68 St. George's Terrace, Perth, WA 6000.
Distributor: Metropolitan Planning Authority, 22 St. George's Terrace, Perth, WA 6000.

2. Periodicity of Availability
Once-only study, conducted in 1975.

3. Region of Availability
Perth Central Business District.

4. Published Information
'Perth Central Area Pedestrian Study' (1975).

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
Not known.

7. Description of Data Available

(1) Number of persons employed by region (South, North of railway line) by industry (catering, department stores, other retail, office work).

(2) A map and description of the public transport network within the study area.

(3) Number of off-street parking spaces by region (South, North of railway line) by type (private; public short term, long term).

(4) A map showing the width of footpaths (over 8m, 6-8m, 4-6m, 2-4m, 0-2m).

(5) Number of pedestrian obstacles, such as parking meters, parking signs, railings, etc. for each of the main road sections in the central core of the study area.

(6) Pedestrian facility characteristics (footway total length and length of under cover footways, number of obstacles per km) for different types of footways: footways beside carriage ways, malls, arcades, pedestrian over- and under-passes.

(7) A map shaving footway gradients (less than 2%, 2-4%, 4-6%, over 6%).

(8) A map showing the location of pedestrian counting stations that were used during the survey, by type (weekly counts, daily counts, peak period counts). The map also shows pedestrian crossings by type (marked signalised, marked unsignalised, unmarked).

(9) Graphs showing the number of pedestrians observed on the footpath in 15 minute intervals, for each day of the week at three locations: Hay Street Mall, Hay Street West, Hay Street East. Similar data are also shown for one day only at six other locations.

Record 6.605 (Sheet 2)

(10) A graph showing the number of pedestrians crossing at a sample of locations within the study area. For each intersection observed, the number of pedestrians and the number of vehicles per hour were recorded, showing the total traffic flows for all possible directions. Separate counts were made during the noon peak hour and during the evening peak hour.

(11) Graphs showing the probability density function of pedestrian walking speeds and pedestrian density (number of pedestrians per square metre), and the relationship between pedestrian flow (number of pedestrians per metre width of footpath per hour) and pedestrian density. Also shown are average walking speeds observed at six locations in the study area during the noon and evening peak hours.

(12) Daily variations of noon hour pedestrian volumes for each of the 5 weekdays, by type of weather (fine, poor weather).

(13) Average pedestrian walking speeds when crossing the road, by type of crossing (signalised: crossing with WALK signal, marked unsignalised, unmarked).

(14) Number of persons leaving the study area during the evening peak hour (4.30-5.30 pm) by mode (bus, train, private car park, public car park).

(15) A map showing noon peak hour pedestrian densities on footpaths (0-0.3, 0.3-0.45, 0.45-0.6, over 0.6 pedestrians per square metre).

(16) Ratio between number of pedestrians crossing, and number of occupants in vehicles crossing the same intersection during the same time interval, assuming an average vehicle occupancy of 1.35 (but excluding buses from these estimates). Separate data are shown for the noon and evening peak hours for 26 intersections.

(17) Pedestrian/vehicle conflict data: number of pedestrians crossing the intersection, number of vehicle occupants travelling through the intersection (assuming a vehicle occupancy of 1.35), ratio between these two volumes, average delays for cars and pedestrians (seconds), average delay ratio and total delay ratio. Data shown cover 9 of the main intersections.

(18) Estimated number of pedestrians crossing at 8 intersections which are controlled by a STOP sign, during the noon peak hour.

(19) Number of pedestrian trips to major transport terminals and pedestrian volumes along routes to these terminals.

(20) For each of the 194 zones in the study area: number of persons employed by industry, and number of off-street parking spaces by type (private, public short/long term).

(21) Detailed statistics for each pedestrian counting station, showing pedestrian count, estimated pedestrian demand and pedestrian density for the noon peak hour, and pedestrian count for the evening peak hour. Counting stations measuring pedestrian flows on footways, and the number of pedestrians crossing at marked signalised crossings, and at unmarked crossings are shown in separate groups.

Record 6.605 (Sheet 3)

(22) Number of pedestrians entering car parks between 4.30 and 5.30 pm: data shown are for 16 public long term car parks, 11 public short term car parks, and 14 private car parks. Also shown is the number of parking spaces and the number of cars parked at 4.30 pm.

(23) Estimated number of evening peak hour trip ends at public transport terminals, at public car parks, and number of evening peak hour trip origins at employment establishments, shaving separate data for each zone in the study area.

Record 6.701 TRAFFIC COUNTS - Tasmania

Department of Main Roads

1. Source
Collector and Distributor: Department of Main Roads, 10 Murray Street, Hobart, Tas. 7000.

2. Periodicity of Availability
Annual.

3. Region of Availability
Tasmania.

4. published Information
'Traffic volumes, Tasmania'.

5. Supplementary Information
Computer files and printouts, and other internal documentation.

6. Limitations
Traffic counts are conducted on 'classified roads' only. Availability of data contained in computer files is limited as, at present, the software available permits only one type of summary printout.

Information on vehicle turning movements and vehicle classification counts is stored manually on field data sheets which are filed by location. Data of this type are not collated in summary form.

7. Description of Data Available

(A) 'Traffic Volumes, Tasmania'
The 1978 edition of 'Traffic Volumes, Tasmania' contains data on 35 permanent counting stations and approximately 700 short term counting stations. Short term counts normally cover a period of one week. The information is listed in seven sections according to type of road (highways, main roads, etc.), and within each section in alphabetic order of road names. For each entry, the following data are shown:

(1) Road name (e.g. Arthur Highway).

(2) Road number (e.g. A 0142).

(3) Station Number.

(4) Type of counting station (permanent stations are identified by *P).

(5) Description of location (e.g. South of Fortesque Bay Road).

(6) Date when count was taken. For short term counts, the month and year are shown, for permanent stations the year.

(7) Traffic volume (AADT for permanent stations, average daily traffic for short term counts).

A map of Tasmania, showing all classified roads, is also included.

Record 6.701 (Sheet 2)

(B) Computer Files

The Department uses a micro-computer to process and edit raw data obtained from vehicle counting stations. Software available at present is limited to a program used for obtaining a monthly printout of traffic volumes for permanent counting stations. Additional software is currently under development. The monthly printout contains the following information:

(1) Road name and number (e.g. Bass Highway, A 0249).

(2) Counting station number.

(3) Description of location (e.g. Victoria Bridge, Devonport, on ramp from East Devonport).

(4) Month and year.

(5) Number of vehicles counted each hour (0-1, 1-2, ... 23-24 HRS) for each day in the month. Data are listed in weekly blocks, showing the day of the week for each entry. The total daily traffic is also shown for each day.

(6) Average hourly traffic for each hour of the day (0-1, 1-2, ... 23-24 HRS) in three categories: for the whole month, for weekdays, and for weekend days. Average daily traffic in the same three categories.

(7) Average daily traffic by day of week.

(8) Day factors for each day in the month, and average day factors for each day of the week. (The day factor is the ratio between the actual daily traffic and ADTM, the average daily traffic for the month).

(C) Intersection Turning Movements

The Department conducts approximately 20 intersection traffic counts each year, mostly in Hobart and Launceston. Data are recorded on field data sheets which contain the following infonnation:

(1) Description of intersection location, showing all road names and a diagrammatic sketch of the intersection and of all possible turning movements.

(2) Date when count was taken, day of the week and counting period (e.g. 7.30-9.00 am, 4.00-6.30 pm).

(3) Weather condition (e.g. fine).

(4) Peak hour (e.g. 4.15-5.15 pm) and turning movements observed during the peak hour for each possible turning movement, expressed in terms vehicles per hour. Separate data are shown for cars and commercial vehicles.

(5) Detailed data for each possible turning movement are also shown for certain hourly intervals (7-8 am, 8-9 am, 4-5 pm, 5-6 pm), indicating the number of vehicles per hour, separately for cars and commercial vehicles.

Record 6.701 (Sheet 3)

(D) Vehicle Classification Counts

Approximately 20 vehicle classification counts are carried out each year. Data are recorded on field data sheets which contian the following information:

(1) Road name and location where count was taken.

(2) Date and day of the week.

(3) Weather conditions.

(4) Number of vehicles observed during each hour over *the* twelve hour period 7 am - 7 pm in the following categories: cars/utilities/panel vans, trucks, semi-trailers, loaded log trucks, buses, motorcycles, other vehicles.

Record 6.702 TRAFFIC *COUNTS* - Tasmania

The Transport Commission

1. Source
Collector and Distributor: Road Transport Branch, The Transport Commission. 1 Collins Street, Hobart, Tas. 7000.

2. Periodicity of Availability
A continuing programme of traffic counting is maintained. The results are not published.

3. Region of Availability
Tasmania. Most of the counts are conducted in the Hobart metropolitan area.

4. Published Information
None.

5. Supplementary Information
Internal documentation and working papers.

6. Limitations
No permanent counting stations are maintained. All counting stations are used for short term coverage counts, mostly for one week, and occasionally for two or three days only. The information available is recorded on field data sheets which are not collated in summary form. The ease of data retrieval is limited by the filing system; all field data sheets are filed according to counting station location.

7. Description of Data Available

(A) Traffic Volume Counts
The main object of the Commission's traffic counting programme is to measure hourly vehicle flow rates at a selected number of locations. Approximately 500 short term coverage counts are conducted each year. For each count, data are recorded on field data sheets which contain the following information:

(1) Description of counting station location, showing road name and municipality (e.g. Molle Street, Hobart, located 50m south of Liverpool street).

(2) Observation period: date and day of the week for each day when counts were taken.

(3) Counting station number.

(4) Counter reading, taken at hourly intervals for 24 hours a day throughout the entire observation period, and hourly traffic flow (vehicles per hour) for each one hour period.

Record 6.702 (Sheet 2)

(B) Intersection Turning Movements

The Commission observes approximately 30 intersections for turning movements each year. Data are recorded on field data sheets which contain the following information:

(1) Description of intersection location, showing the name of the municipality, all road names and a diagrammatic sketch of the intersection and of all possible turning movements.

(2) Date when the count was taken, and counting period (e.g. 0730-0900 HRS).

(3) Total number of vehicles observed over the entire observation period (usually 90 minutes) for each possible turning movement. Also shown is the number of pedestrians crossing the road at each corner, giving separate data for each direction of crossing.

(4) Detailed data of vehicle traffic flow for each possible turning movement, and pedestrian flow, are also shown for each 5 minute interval during the entire observation period. In addition, a separate diagram is included showing this information for the peak half hour.

(5) For each observation of vehicle traffic flow described in items (3) and (4) above, separate data are shown for the total number of vehicles, and the number of commercial vehicles.

(C) Intersection Traffic Counts

An estimate of VPD (the total number of vehicles per day travelling in both directions) is obtained for intersections at which turning movements were observed by using automatic traffic counters on three successive days, to cover two 24 hour periods. The VPD estimate is obtained by averaging the number of vehicles counted daily in the two day observation period. Separate data are available for each leg of the intersection.

(D) Pedestrian Crossing Surveys

In response to specific requests, the Commission conducts surveys of vehicle and pedestrian flows at selected pedestrian crossings. Data are recorded on field data sheets which contain the following information:

(1) Description of counting station location, showing road name and municipality (e.g. Children's crossing at Creek Road, Hobart).

(2) Date when count was taken, day of the week and observation period (e.g. 11.30 am - 12.30 pm).

(3) Weather conditions.

(4) Number of adults, number of children, and number of vehicles observed for each 5 minute interval during the entire observation period. In some cases, the number of commercial vehicles is indicated separately.

Record 6.703 TRAFFIC COUNTS - Tasmania

The Hydro-Electric Commission, Tasmania

1. Source
Collector and Distributor: The Hydro-Electric Commission, Tasmania, 4-16 Elizabeth Street, Hobart, Tas. 7000.

2. Periodicity of Availability
Monthly from July 1970 to October 1978.

3. Region of Availability
Gordon River Road, between Maydena and Gordon Dam. The gatehouse where traffic data are collected, is situated near the Australian Newsprint Mill at Maydena.

4. Published Information
None.

5. Supplementary Information
The Commission prepares a monthly return which is described in paragraph 7 below.

6. Limitations
Manual traffic counts are taken at times when the gatehouse is manned. At other times, motorists are required to leave their entrance fee in an 'Honesty Box'. The traffic counts shown in the monthly return include the number of vehicles and passengers estimated from Honesty Box proceeds. It could therefore be expected that the traffic data obtained in this way may be subject to appreciable error.

7. Description of Data Available
The monthly return is a leaflet issued by the Chief Civil Engineer, containing the following data:

(1) Number of vehicles and number of passengers recorded during the month, by type of vehicle (HEC cars/jeeps/etc., HEC heavy vehicles, private cars: other than HEC or contractor's employees, private buses, private heavy vehicles, motorcycles other than HEC or contractor's employees). Note: HEC = Hydro-Electric Commission.

(2) Cumulative totals to date, since July 1970, of the number of vehicles and passengers recorded, in the same vehicle type categories as described above.

Record 6.801 TRAFFIC COUNTS - Northern Territory

Department of Transport and Works

1. **Source**
   Collector and Distributor: Roads Division, Department of Transport and Works, PO Box *2520*, Darwin, NT 5794.

2. **Periodicity of Availability**
   Annual.

3. **Region of Availability**
   Northern Territory.

4. **Published Information**
   'Northern Territory Rural Traffic Counting Programme Annual Report'.

5. **Supplementary Information**
   Internal documentation and working papers.

6. **Limitations**
   Traffic counts in rural areas are conducted as part of an ongoing programme. In urban areas, traffic counts are taken on an ad-hoc basis to obtain information for specific projects. Traffic counts for urban areas are recorded on field data sheets which are not collated in summary form.

7. **Description of Data Available**

   (A) 'Northern Territory Rural Traffic Counting Programme Annual Report'
   A total of 107 counting stations are used. Of these, 10 are primary stations, 14 secondary stations, and 83 coverage stations. Primary stations record data against a time base *24* hours a day throughout the whole year, secondary stations do likewise but without a time base, and coverage stations record data for 3 months a year without a time base.

   The 1978 Annual Report contains the following data:

   (1) Table 1: for each primary and secondary station, the station location is shown (*e.g.* Stuart Highway, 66 km south of Darwin), station number, station type (P primary, S secondary), an indication of the accuracy of the AADT data shown, AADT for 1978, and an adjusted value of AADT for 1978 based on the compound growth curve of data for the last 5 years. A similarly adjusted value of AADT for 1977 is also shown.

   (2) Table 2: for each coverage station, the following data are listed: station location, station number, most recent year when a count was made at that location, estimated *AADT* for that year, estimated *AADT* for 1978.

   (3) Table 3: for each primary and secondary station, the following data are listed: station location, station number, type of station (P primary, S secondary), traffic composition expressed as a percentage of total traffic in six categories (cars and station wagons, panel vans/utilities/light trucks, rigid trucks with dual tyres on rear axle, semi-trailers and trucks with trailers, buses, other vehicles), and station calibration factor (see Note below).

Record 6.801 (Sheet 2)

(4) Table 4: estimated annual vehicle kilometres of travel by road class (1, 3, 4, 4A, 5) and vehicle type (same categories as for Table 3). Also shown is the total road length in the Northern Territory by road class (1, 3, 4, 4A, 5). Comparative data shaving annual vehicle kilometres of travel for the years 1975-78 are also included.

The report describes the methods of calculation used, and the accuracy that could be expected from the three types of counting stations. The locations of counting stations are indicated in a series of maps. For each of the ten primary counting stations, the following additional data are shown: highest daily traffic volume and date when it occurred, monthly adjustment factors (AADT/average daily traffic for that month), weekly adjustment factors for each week in the year (AADT/average daily traffic for that week), and daily adjustment factors for each day in the week (AADT/average daily traffic for that day).

Note: all AADT data shown in this report are 'double axle' counts. Each counting station records one vehicle for every two successive axles observed. Hence the number of vehicles which actually passed the counting station is normally smaller than the 'double axle' count. Table 3 shows for each primary and secondary station a station calibration factor (defined as the ratio between the number of vehicles observed in a manual count, and the 'double axle' count obtained from the automatic counter). Each AADT value shown in the report must be multiplied by the appropriate station calibration factor in order to obtain the number of vehicles.

(B) Intersection Traffic Counts

The Department conducts a limited number of intersection traffic Counts each year, mostly in Darwin. Data are recorded on field data sheets which contain the following information:

(1) Description of intersection location, showing all road names and a diagrammatic sketch of the inersection and of all possible turning movements.

(2) Date when the count was taken, day of the week and counting period (e.g. 1600-1745 HRS).

(3) Weather conditions (e.g. fine).

(4) Reference to any associated counts taken at the same location.

(5) Peak hour (e.g. 1630-1730 HRS) and turning movements observed during the peak hour for each possible turning movement, expressed in terms of vehicles per hour.

(6) Detailed data for each possible turning movement are also shown for each 15 minute interval during the entire observation period, showing the number of vehicles per quarter hour both in tabular and graphical form.

(C) Pedestrian Counts

A few counts of this type are taken each year, mostly at mid-block pedestrian crossings. Data are recorded on field data sheets which contain the following information:

(1) Description of intersection location (e.g. Eden Street).

(2) Maximum number of vehicles per hour observed, showing separate data for morning and afternoon peak and direction of travel (inbound, outbound).

Record 6.801 (Sheet 3)

(3) Date of count, and observation period (e.g. 0730-0900, 1130-1300, 1430-1600 HRS) .

(4) Total number of pedestrians observed during the entire observation period, according to where they crossed the road (at pedestrian crossing, within 30 m of crossing, outside 30 m of crossing), and a percentage breakdown of these three categories.

(5) Percentage breakdown of adults and children in two zones: at crossing, within 30 m of crossing.

(6) A time series graph showing the total number of pedestrians observed during each 15 minute interval of the observation period.

Record 6.901 TRAFFIC COUNTS - Australian Capital Territory

National Capital Development Commission

1. Source
Collector and Distributor: Traffic Engineering Section, National Capital Development Commission (NCDC), MTIA House, 214 Northbourne Avenue, Braddon, ACT 2601.

2. Periodicity of Availability
Continuing programme. Some of the data arecollectedon an annual basis.

3. Region of Availability
Australian Capital Territory.

4. Published Information
None. All data available are internal records in the form of computer printouts, microfiche records and traffic flow maps. A report containing summary data of 1978 traffic counts is in preparation.

5. Supplementary Information
Traffic counting data are also collected by the Department of the Capital Territory (refer Record 6.902).

6. Limitations
Traffic counts are normally limited to Class 6 and 7 roads.

7. Description of Data Available

(A) Permanent Counting Stations
In 1979, 28 permanent counting stations were used. A computer printout, listing all stations in alphabetic sequence of road names and in station number sequence is available.

For each counting station, a printout of all data available for the calendar year is prepared, showing:

(1) Station number, and description of location (e.g. Yamba Drive, between Hindmarsh Drive and Colbek Street in Phillip).

(2) Direction of traffic flow and road type (inbound, outbound, in both directions on a divided highway, in both directions on an undivided highway).

(3) Year and date when the counting programme was started (e.g. Monday 3 January 1977).

(4) Total daily traffic for each day in the week, for each of the 52 weeks in the year. Also shown for each week is the total weekly traffic, and the average daily traffic for three time periods (all 7 days in the week, weekdays, weekend days). The three categories of average daily traffic are also shown as a percentage of the AADT.

Record 6.901 (Sheet 2)

(B) Short Term Traffic Counts

These usually cover a period of one week. A computer printout, listing all counting locations in alphabetic sequence of road names, and in station number sequence is available.

For each one-week count, the following information is recorded:

(1) Station number and a description of the location.

(2) Direction of traffic flow and road type (e.g. inbound towards Commonwealth Avenue).

(3) Observation period (e.g. week starting 10.6.1977).

(4) Hourly traffic volume for each hour (0-1, 1-2, ... 23-24 HRS) for each day of the week, and average hourly traffic volume for three time periods (all seven days of the week, weekdays, weekend days). Also shown is the total daily traffic for each day, and the average daily traffic for the week, weekdays and weekend days.

(5) Peak period traffic volumes: mean 15 minute volume, mean 60 minute volume, and mean 90 minute volume for each quarter hour period of the day (0015, 0030, ... 2345, 2400 HRS), shown for three time periods (week, weekdays, weekend days).

(6) An 'Index' computer printout, listing all counts made during a specified time period, showing for each count: station number, all relevant street names, direction of traffic flow and road type, observation period, incremental time period (i.e. the time interval between two successive count records; usually 15 minutes), the average daily traffic volume, and a reference number identifying the 'record block' in the computer file.

(7) A graph of the mean 15 minute volume, shown as a percentage of the maximum value encountered during the observation period. Separate graphs are generated for each day to form a continuous string of up to eleven days per line.

(C) Intersection Traffic Counts

A special computer package is used to plot a diagram of the intersection and directional arrows indicating all possible turning movements. A printout is available, listing ail intersection locations in alphabetic sequence of road names and in station number sequence.

For each intersection count, the following information is shown:

(1) Station number and a description of the location, showing the street names for each leg of the intersection, and the locality.

(2) Date and period of observation (e.g. Wednesday 27.10.1976, 7.30-9.00 am).

(3) For each leg, up to six traffic volume data items are shown: total traffic for the leg in both directions, traffic into and out of the intersection, traffic entering the intersection moving straight ahead/ to the left/to the right. In each case, separate data are shown for light and heavy vehicles.

(4) Number of pedestrians crossing each leg at the intersection.

Record 6.901 (Sheet 3)

(5) Peak hour data: time of peak hour (e.g. 8.00-9.00 am), and total traffic flow by type of vehicle (light, heavy).

(6) An 'Index' computer printout, listing all counts made during a specified time period, shaving for each count: the station number, all relevant street names, the observation period, and a reference number identifying the 'record block' in the computer file.

(D) Vehicle Classification Survey

Once every two or three years, a vehicle classification survey is conducted. At each observation pint, a five minute vehicle count is made once every hour between 7 am and 7 pm. For each location, the following information is recorded:

(1) Station number.

(2) Starting time for each of the five minute observation periods and duration of each period (in some cases, the actual observation period differed from five minutes).

(3) For each observation period, the number and percentage distribution of vehicles are shown by type (car, motor cycle, bus, light commercial, rigid truck, semi-trailer, dog trailer). Totals are also shown for the whole day.

(4) For heavy vehicles (bus, light commercial, rigid truck, semi-trailer and dog trailer), a printout is available showing the characteristics of each vehicle observed according to: vehicle type (e.g. bus, rigid *truck,* etc.), body type (flat top open, flat top tarpaulined, tipper, tanker, ready mix concrete, pantechnicon, refrigerated van, car carrier, stock crate, timber jinker), rear axle type (single axle single tyres, single axle twin tyres, tandem axles, spread tandem, triple axles), and whether the vehicle was loaded or not.

(E) Traffic Flow Maps

Each year, a set of maps is produced, showing traffic volumes at various points of the road system. The following maps are available:

(1) AADT for the whole of Canberra.

(2) Morning peak traffic for the City Central area.

(3) Afternoon peak traffic for the City Central area.

(4) Average daily traffic for the City Central area.

(5) Average daily traffic for the Capital Circle - State Circle area.

(6) AADT for major rural roads within the Australian Capital Territory.

Note: The NCDC uses the national computer network of the CSIRO. It may be possible for any State Road Authority wishing to use the traffic counting packages developed by the NCDC to do so by gaining access through their local CSIRO computer facilities.

Record 6.902 TRAFFIC COUNTS - Australian Capital Territory

Department of the Capital Territory

1. Source
Collector and Distributor: Traffic Engineering and Control Branch, Department of the Capital Territory, Wales Centre, Akuna Street, Canberra, ACT 2600.

2. Periodicity of Availability
Continuing programme. Traffic counts are carried out on an ad-hoc basis, in response to requests for pedestrian crossings or for other specific projects.

3. Region of Availability
Australian Capital Territory.

4. Published Information
None.

5. Supplementary Information
Traffic counting data are also collected by the National Capital Development Commission (refer Record 6.901).

6. Limitations
Traffic counts are taken on an irregular basis, as and when required. No permanent counting stations are maintained; all counting stations are used for short term coverage counts. All records are in the form of field data sheets. Data are not collated in summary form.

7. Description of Data Available
Each count is recorded on a separate field sheet. Field sheets are used for traffic volume counts, intersection turning movements, and pedestrian counts.

(A) Traffic Counts

(1) Description of location of the survey site.

(2) Survey date and day of the week.

(3) Time when the survey was commenced and when terminated.

(4) Weather conditions.

(5) Traffic volume (total number of vehicles per hour or other specified time period). In some cases the total traffic flow in both directions is recorded as one figure, in others separate data are shown for each direction.

(6) Peak hour traffic volume, and time when peak hour occurred.

(7) A map of the survey site in the form of a diagrammatic sketch.

(B) Intersection Turning Movements
The same field data sheet form is used as for traffic volume counts described above. Survey site location, survey date, day of week, time when survey was commenced and terminated, weather conditions, and a map of the survey site are recorded in the same manner.

Record 6.902 (Sheet 2)

The total number of vehicles, and in some cases, also the number of pedestrians, are shown for each possible turning movement, during each hour or other specified time period.

(C) Pedestrian Counts

Same data as described in (B) above, recording the number of vehicles and the number of pedestrians observed during each hour or other specified time period. Normally, these counts are taken at mid-block locations, and hence no turning movements would be indicated.

SECTION 7

METEOROLOGICAL DATA

Australia

7.101 Bureau of Meteorology

The main source of data on weather conditions are the State and Territory regional offices of the Bureau of Meteorology. Their addresses are listed below.

New South wales -
162 Goulburn Street, Darlinghurst, NSW 2010.

Victoria -
Commonwealth Centre, Corner Spring and Latrobe Street, Melbourne, Vic. 3000.

Queensland -
Commonwealth Centre, 295 Ann Street, Brisbane, Qld. 4000.

South Australia -
25 College Road, Kent Town, SA 5067

Western Australia -
231 Adelaide Terrace, Perth, WA 6000.

Tasmania -
20 Ellerslie Road, Hobart, Tas. 7000.

Northern Territory -
81 Smith Street, Darwin, NT 5790.

Australian Capital Territory -
84 Northbourne Avenue, Braddon, ACT 2601.

The Australian Bureau of Statistics also publishes certain information on rainfall and temperature, and on selected other meteorological data.

Record 7.101 METEOROLOGICAL DATA - Australia

Bureau of Meteorology

1. Source
Collector and Distributor: Department of Science, Bureau of Meteorology, 150 Lonsdale Street, Melbourne, Vic. 3000.

2. Periodicity of Availability
In varying detail from the late 1800's onwards.

3. Region of Availability
Australia.

4. Published Information
Bureau of Meteorology - tabulations available on request.
Australian Bureau of Statistics - Year Book (national and State).
- 'Monthly Survey of Statistics' (by State).
- 'Climatic Averages'.

5. Supplementary Information
Contact should be made with the State offices of the Bureau of Meteorology.

6. Limitations
Not known.

7. Description of Data Available

(A) Bureau of Meteorology
The Bureau is the primary source of *all* meteorological data. An indication of the data available is given in the publications of the Australian Bureau of Statistics although the data collected are more extensive and detailed.

(B) 'Climatic Averages'
This publication was produced for each State on an irregular basis (last in 1975) and contained a long term summary of State rainfall, temperature etc. The publication was sold through Australian Government Publishing Service bookshops but is no longer available. It is not known when the next edition will be produced.

(C) *ABS* Year Books
Year Books are produced for Australia and for each State. For example, the 1974 Australian Year Book contains:

(1) Annual and seasonal rainfall maps.

(2) Rainfall frequency and intensity maps.

(3) Temperature and humidity maps.

(4) Climatic data for each capital city and major centres.

(5) Seasonal rainfall by State for 1972/73.

Items (1) to (4) are based on long term averages.

Record 7.101 (Sheet 2)

(D) 'Monthly Summary of Statistics'

A monthly summary is produced for each State. For example, the February 1980 Victorian issue (Victorian Office Cat.No. 1303.2) contains:

(1) Rainfall district averages by month (past 12 months), by year (past three years) and for the past 70 years on a yearly and monthly basis.

(2) Rainfall and shade temperature for Melbourne for the previous 13 months and the past three years.

(E) Other Information

Further tabulations of climatic data are available in other *ABS* publications, such as those dealing with primary production. Refer to the ABS 'Catalogue of Publications' (Cat.No. 1101.0) for details.

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LIST OF ABBREVIATIONS USED

AADT	Annual Average Daily Traffic
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
ACTION	ACT Internal Omnibus Network
ADP	Automatic Data Processing
ADT	Average Daily Traffic
ADTM	Average Daily Traffic over a period of one Month
AGPS	Australian Government Publishing Service
am	ante meridiem (= before noon)
APD	Advanced Planning Department of the Country Roads Board
ARRB	Australian Road Research Board
ASIC	Australian Standard Industrial Classification *(ABS)*
Cat.No.	Catalogue Number *(ABS)*
CBD	Central Business District
cm	centimetre
CRB	Country Roads Board
CSIRO	Commonwealth Scientific and Industrial Research Organisation
cwt	hundredweight (= 112 pounds = 50.802 kg)
ft	foot (= 0.3048 m)
GCM	Gross Combination Mass (= mass of prime mover and trailer)
GCML	Gross Combination Mass Limit
GJ	Gigajoule (= 10^9 Joule)
GPO	General Post Office
GTM	Gross Train Mass (=mass of prime mover and trailer)
GVM	Gross Vehicle Mass (=mass of vehicle and its permissible load)
GVML	Gross Vehicle Mass Limit
HP	Horsepower
HRS, hrs	Hours
ISBN	International Standard Book Number
J	Joule
km	kilometre
km/h	kilometre per hour
kWh	kilowatt hours
LGA	Local Government Authority (or Local Government Area)
LP	Liquid Petroleum
LPG	Liquid Petroleum Gas

m	metre
m*10	measured in 10 metre units
0.1m	measured in 0.1 metre units
ml	millilitre
mm	millimetre
mph	miles per hour
MRD	Main Roads Department
NAASRA	National Association of Australian State Road Authorities
NCDC	National Capital Development Conmission
NRMA	National Roads and Motorists' Association
NSW	New South Wales
NT	Northern Territory
PJ	Petajoule (= 10^{15} Joule)
pm	post meridiem (= after noon)
PMU	Power Mass Unit (refer to Record 1.301, part A, item 14)
PO	Post Office
PV	Product of number of Pedestrians and number of Vehicles
Qld.	Queensland
RAC	Royal Automobile Club (refer Record 1.301, part A, item 14)
RACQ	Royal Automobile Club of Queensland
RACV	Royal Automobile club of Victoria
RACWA	Royal Automibile Club of western Australia
Ref.No.	Reference Number *(ABS)*
RoSTA	Road Safety and Traffic Authority
SA	South Australia
SLkm	Road length, measured in kilometres, from a given starting point
TARU	Traffic Accident Research Unit
Tas.	Tasmania
TJ	Terajoule (= 10^{12} Joule)
TPD	Trains Per Day
Vic.	Victoria
VIT	Vehicles In Traffic
VPD	Vehicles Per Day
vs	Normal peak daily traffic volume
vw	Average weekday daily traffic volume
WA	Western Australia
Y value	Actual traffic volume as a percentage of maximum traffic Volume capacity