1936.
NEW ZEALAND.

TRANSPORT DEPARTMENT

(ANNUAL REPORT OF).

Presented to both Houses of the General Assembly by Leave.

The Hon. R. SEMPLE, Minister of Transport, Wellington.

SIR,— Transport Department, 14th August, 1936.

Herewith I have the honour to submit the annual report of the Transport Department for the year ended 31st March, 1936.

I have, &c.,
G. C. GODFREY, Commissioner of Transport.

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REPORT.

1. INTRODUCTORY.

THE year 1935–36 has been one of outstanding events in the motor-transport industry. Both passenger and goods services licensed under the Transport Licensing Act, 1931, reflect expansion of business and increasing prosperity. New car registrations during the year were recorded as 19,469, only 1,400 behind the record figures for 1930. The registrations of commercial vehicles are the highest yet recorded.

The quantity of petrol consumed by motor transport was just under 62,000,000 gallons, against 56,000,000 for the previous year and 63,000,000 gallons in 1929–30.

The receipts from all classes of motor-taxation (including Customs duties in respect of vehicles and parts) was just under £4,500,000, the highest figure yet recorded.

The annual expenditure on roads, streets, and bridges was just under £7,300,000, an increase of £430,000 over the figure for the previous year.

While expenditure on construction work dropped from £2,465,000 in 1933–34 to £2,361,000 in 1934–35, and interest and sinking-fund charges decreased from £2,354,000 in 1933–34 to £2,303,000 in 1934–35, the expenditure on maintenance rose from £2,025,000 in 1933–34 to £2,608,000 in 1934–35.

A further 1,300 miles of roads were classified according to load-limits during the year. Just over 88 per cent. of the main highways and 50 per cent. of the rural roads are now classified.

Detailed results of the first national road-traffic census ever held in the Dominion became available during the year.

Motor accidents caused 203 deaths during the year, an increase of 21 over the figure for the previous year. For the first time on record the claims paid under the third-party-insurance scheme were greater than the premium revenue, the figures being premiums £211,000 and claims £288,000.

Far-reaching changes were made in the legislation relating to the licensing of motor transport. The more important of these were the introduction of the three-year, in place of the annual, tenure of licenses, the simplification of licensing procedure, the reduction in the number of licensing authorities from nine to four and the personnel of the licensing authorities from three persons to one person, the abolition of the Transport Co-ordination Board and the vesting of its functions in the Minister of Transport.

2. MOTOR-VEHICLES INSURANCE (THIRD-PARTY RISKS) ACT, 1928.

(*a*) STATISTICS.

The Motor-vehicles Insurance (Third-party Risks) Act passed in 1928 compels every owner of a motor-vehicle to insure against liability to pay damages on account of the death or injury to another person caused through the use of a motor-vehicle.

Payment of the insurance premiums is made annually to the Deputy Registrars of Motor-vehicles simultaneously with that of the annual license fee payable under the Motor-vehicles Act. Owners of motor-vehicles are required to nominate each year the insurance company with which the contract of insurance is to be made.

For the year ended 31st May, 1935, forty-four insurance concerns gave the prescribed notice to undertake business under the Act, and carried on business accordingly. The following table shows the experience of the scheme during the six years ended 31st May, 1935. The figures for claims do not represent the amount paid during each year, but refer to accidents happening during each particular period.

Year ended 31st May,	Revenue from Premiums.	Claims paid and Estimated Liability for Claims outstanding at 31st May.	Claim Ratio.
	£	£	Per Cent.
1930	235,007	202,380	86·12
1931	242,864	186,379	76·74
1932	233,731	161,352	69·03
1933	229,133	151,095	65·94
1934	221,734	198,614	89·57
1935	211,709	288,554	136·30
Totals	1,374,178	1,188,374	86·48

(*b*) ANNUAL REVIEW OF PREMIUM RATES.

Section 16 of the Act provides that the amount of the premiums to be paid in respect of third-party insurance may be fixed from time to time by Order in Council.

In accordance with the usual practice, the financial operations of the companies undertaking this class of insurance were carefully examined, and it was decided to make no alterations to the existing premiums.

(*c*) "Hit-and-Run" Drivers.

Covering the period from 1932 to the present year, the table below shows the number of claims and the amounts paid out under the agreements relating to claims by victims of "hit-and-run" drivers for personal damages due to negligence of the driver.

The Motor-vehicles Amendment Act, 1936, completely revolutionizes the responsibility at law of the driver who leaves his victim on the road unattended. In place of the former maximum penalty of £20 fine, the new legislation places this driver in the criminal class and makes the maximum penalty five years' imprisonment or £500 fine, the same as in the case of the negligent or intoxicated driver who causes death. It is hoped that this action will result in this type of offence being materially reduced.

Table of Claims.

Year ending 31st May,	Number of Accidents for which Claims made.	Amount paid out to Claimants.	Expenses incurred by Underwriters in handling Claims.
		£ s. d.	£ s. d.
1932 (five months only)	5	595 0 0	145 3 6
1933	11	885 8 0	144 8 7
1934	12	720 2 6	150 5 10
1935	29	1,661 11 4	324 5 10
1936	38	1,058 7 6	295 10 1
Totals	95	4,920 9 4	1,059 13 10

3. MOTOR-VEHICLES ACT, 1924.

(*a*) Registrations of Motor-vehicles, by Types of Vehicle.

Under the Motor-vehicles Act a new vehicle is registered and simultaneously licensed for the ensuing year or part thereof. The license is renewable each year. If a license is not renewed, the registration is classed as "dormant," and after remaining "dormant" for two complete years is cancelled, the assumption being that the vehicle in question is permanently off the road. If, however, the vehicle is again brought into use after its registration has thus been cancelled, it is treated as a new registration. The registration figures set out hereunder, therefore, are not an exact record of the number of new vehicles introduced into our traffic system; they include an unknown but probably small number of vehicles which have been out of commission for more than two years.

The following table sets out the annual registrations since 1926:—

Year ended 31st March,	Cars.	Commercial Vehicles.	Cycles.	Total Registrations.
1926	18,811	4,409	5,130	28,350
1927	16,439	4,692	5,464	26,595
1928	12,531	3,399	4,560	20,490
1929	18,739	4,167	4,768	27,674
1930	20,802	5,745	4,300	30,847
1931	12,378	4,113	3,139	19,630
1932	6,151	2,656	2,058	10,865
1933	4,716	2,640	2,072	9,428
1934	5,551	3,339	1,956	10,846
1935	12,895	5,011	2,233	20,139
1936	19,469	6,445	2,421	28,335

The foregoing figures have been incorporated in the following table, which shows the relative increase or decrease in the annual registrations measured according to the figures for 1926:—

Year ended 31st March,	Cars.	Commercial Vehicles.	Cycles.	Total Registrations.
1926	100	100	100	100
1927	87	106	107	94
1928	67	77	89	72
1929	100	95	93	98
1930	111	130	84	109
1931	66	93	61	69
1932	33	60	40	38
1933	25	60	40	33
1934	30	76	38	38
1935	69	114	44	71
1936	103	146	47	100

An interesting feature of the above tables is the response shown by the car, as compared with the commercial vehicle, to conditions of trade boom or depression. The car was influenced earlier by the depression, and has been slower in reacting to the improved conditions. Motor-cycles are falling behind, due, no doubt, to the increasing numbers of small cars. The commercial vehicle was influenced to a relatively smaller degree by the depression, and its rate of entry into our traffic system, taken over a number of years, seems to be accelerating.

(*b*) Registrations of Motor-vehicles, by Country of Manufacture.

The following table shows the country of manufacture and the number of motor-vehicles registered during the years ended 31st March, 1927 to 1936, inclusive :—

Year ended 31st March,	Great Britain.	United States of America or Canada.	Other Countries.	Total Registrations.
	Motor-cars.			
1927	2,185	13,623	631	16,439
1928	2,172	10,078	281	12,531
1929	2,886	15,667	186	18,739
1930	3,675	16,993	134	20,802
1931	3,265	9,057	56	12,378
1932	2,607	3,477	67	6;151
1933	2,832	1,834	50	4,716
1934	3,091	2,406	54	5,551
1935	6,096	6,730	69	12,895
1936	9,396	10,023	50	19,469
Totals ..	38,205	89,888	1,578	129,671
	Commercial Vehicles.			
1927	630	3,907	155	4,692
1928	522	2,706	171	3,399
1929	522	3,318	327	4,167
1930	502	4,792	451	5,745
1931	392	3,225	496	4,113
1932	447	1,574	635	2,656
1933	686	1,149	805	2,640
1934	941	1,471	927	3,339
1935	1,266	2,791	954	5,011
1936	1,515	3,785	1,145	6,445
Totals ..	7,423	28,718	6,066	42,207
	Motor-cycles.			
1927	3,851	1,592	21	5,464
1928	3,479	1,067	14	4,560
1929	3,794	949	25	4,768
1930	3,486	802	12	4,300
1931	2,581	548	10	3,139
1932	1,567	483	8	2,058
1933	1,515	545	12	2,072
1934	1,428	514	14	1,956
1935	1,669	542	22	2,233
1936	1,897	486	38	2,421
Totals ..	25,267	7,528	176	32,971

The foregoing figures are expressed as percentages in the following table :—

Year ended 31st March,	Great Britain.	United States of America or Canada.	Other Countries.	Total Registrations.
	Motor-cars.			
1927	13	83	4	100
1928	17	81	2	100
1929	15	84	1	100
1930	17	82	1	100
1931	26	73	1	100
1932	42	57	1	100
1933	60	39	1	100
1934	56	43	1	100
1935	47	52	1	100
1936	48	52	..	100
Totals ..	30	69	1	100
	Commercial Vehicles.			
1927	14	86	..	100
1928	16	84	..	100
1929	14	86	..	100
1930	9	91	..	100
1931	11	89	..	100
1932	22	78	..	100
1933	37	63	..	100
1934	39	61	..	100
1935	31	69	..	100
1936	29	71	..	100
Totals ..	21	79	..	100
	Motor-cycles.			
1927	70	30	..	100
1928	76	24	..	100
1929	80	20	..	100
1930	81	19	..	100
1931	82	18	..	100
1932	76	24	..	100
1933	73	26	1	100
1934	73	26	1	100
1935	75	24	1	100
1936	78	20	2	100
Totals ..	76	23	1	100

The motor-cars show a steady growth of the share obtained by Great Britain up till the depression year 1933, when 60 per cent. came from that source, and then a drop following upon the improving economic conditions.

The same trend is noticeable in the case of the commercial vehicles ; in this case, however, Great Britain's share is now less than half that of the United States of America and Canada. It should be noted that the figures from " Other countries " have been omitted from the percentage table ; this is because practically all of the figures under that heading refer to trailers, 1,121 of the 1,145 vehicles under this heading last year being for trailers.

In the motor-cycle field the British entry continues to predominate. Interesting features are the slight swing-over to American machines during the depression years, probably due to firms using powerful American motor-cycles as delivery-vehicles in lieu of light vans, and the increased entry of other countries into the New Zealand motor-cycle market. Of the 38 registered last year, 29 were of one make from Germany.

(*c*) Motor-vehicles licensed as at 31st March, 1936.

The appended figures show the number of motor-vehicles licensed for the year 1935–36 as at 31st March, 1936 (the licensing year expires on 31st May each year):—

Type of Vehicle.	North Island.	South Island.	New Zealand Total.
Cars	97,630	52,274	149,904
Light trucks (2 tons and under laden)	15,974	8,132	24,106
Heavy trucks (over 2 tons laden)	11,585	5,604	17,189
Passenger trucks	614	289	903
Omnibuses	408	149	557
Taxis	1,111	621	1,732
Service cars	430	269	699
Rental and private-hire cars	251	163	414
Dealers' cars	908	427	1,335
Local-authority road vehicles	1,010	636	1,646
Government vehicles	1,151	492	1,643
Trailers	2,043	1,977	4,020
Dealers' motor-cycles	93	45	138
Motor-cycles	14,771	9,190	23,961
Totals	147,979	80,268	228,247

Table No. 1 of the Appendix shows the number of motor-vehicles registered as at 31st December, 1935, grouped according to highway districts.

The number of motor-vehicles licensed as at 31st March, 1936, classified according to postal districts, are set out in Table 2.

Table No. 3 of the Appendix sets out the number of motor-vehicles licensed each year since 1925. Since the system of registration was instituted there have been several changes, both in definition and in method of classification. An additional complication has been introduced by the fact that whereas since 1932 the number of vehicles "licensed" has been recorded, previously the number of vehicles "registered" was recorded. It is necessary to appreciate the distinction between these terms. When a new vehicle arrives it is registered by the owner and simultaneously is licensed for one year or lesser period. If the license is not renewed the next year the vehicle is classified as a "dormant registration." After a registration has been dormant for two years it is cancelled. If the vehicle is subsequently relicensed it is registered afresh as a new vehicle. Prior to 1932 the number of vehicles licensed was obtained by subtracting from the total registrations the number of dormant registrations. This method was not sound, however, because the date upon which the dormant registrations were totalled did not coincide with that on which the total registrations were ascertained.

It has been found necessary to endeavour to arrive at a common basis whereby the growth of the motor-vehicle in New Zealand might be measured from year to year. Table No. 3 shows the result of this effort, but attention is directed to the fact that, owing to the differences of definition and classification, the figures other than the yearly totals cannot be taken as strictly comparable. This table shows the figures as at 31st December each year. The figures for trailers have been excluded from the totals. The chief feature of the table is the steady growth in the numbers of motor-vehicles in this country, interrupted temporarily during the depression years.

The number of "dormant" registrations—*i.e.*, vehicles which although registered had not been licensed for the current year—as at 31st March, 1936, were as under:—

Type of Vehicle.	1933–34 Register.	1934–35 Register.	Total.
Cars	2,931	4,874	7,805
Light trucks (2 tons and under laden)	1,754	2,632	4,386
Heavy trucks (over 2 tons laden)	741	1,199	1,940
Service cars	42	37	79
Taxis	21	57	78
Rental and private-hire cars	1	22	23
Contract vehicles	..	42	42
Omnibuses	15	21	36
Traction-engines	33	..	33
Trailers	492	746	1,238
Tractors	111	..	111
Motor-cycles	2,603	3,904	6,507
Other motor-vehicles	26	83	109
Totals	8,770	13,617	22,387

Section 10 of the Motor-vehicles Amendment Act, 1927, provides that after a registration has remained "dormant" for two complete years it is to be cancelled. The following sets out the 1932–33 registrations cancelled on 1st June, 1935, in accordance with this section :—

Type of Vehicle.	Number.
Cars	3,811
Light trucks	1,897
Heavy trucks	811
Service cars	50
Taxis	16
Passenger trucks	11
Rental and private-hire cars	6
Motor-buses	22
Traction-engines	22
Trailers	352
Tractors	69
Motor-cycles	2,812
Other vehicles	19
Total	9,898

(*d*) Motor-vehicle Registration Plates.

The following classes of number-plates were assigned during the licensing year 1935–36 :—

(1) For private cars, plates *without initial letter* 601–99999, inclusive, and *with initial letter* from X1 onwards.
(2) For "private-hire" and "rental" cars, plates without letter 1–600, inclusive.
(3) Special plates for issuance to cycles.
(4) Plates with initial letter "D" (both car and cycle) for dealers' vehicles.
(5) Plates with initial letter "E" for vehicles exempted from payment of annual license fees.
(6) Plates with the prefix "Govt." for vehicles owned by Government Departments.
(7) Plates with initial letter "H" for heavy trucks.
(8) Plates with initial letter "L" for light trucks.
(9) Plates with initial letter "P" for omnibuses.
(10) Plates with initial letter "R" for trailers.
(11) Plates with initial letter "S" for service cars.
(12) Plates with initial letter "T" for taxis.
(13) Plates with initial letter "V" for passenger trucks and "contract" motor-vehicles.

(*e*) Vehicles actually on the Road.

The number of "live" registrations on the register kept in accordance with the provisions of the Motor-vehicles Act, 1924, may be taken as a reasonable indication of the number of vehicles actually on the road. The numbers of these "live" registrations have been estimated for each month, and the monthly averages for the twelve-monthly periods ended on 31st March, 1932, to 31st March, 1936, are given hereunder :—

Type of Vehicle.	Monthly Averages.				
	1932.	1933.	1934.	1935.	1936.
	Number.	Number.	Number.	Number.	Number.
Motor-cars	130,889	127,115	123,331	129,277	135,504
Trucks	26,232	26,907	29,863	33,314	36,073
Omnibuses	1,048	1,000	1,000	877	525
Traction-engines	123	136	140	140	160
Trailers	1,160	1,545	2,400	2,407	2,538
Tractors	426	561	600	600	800
Motor-cycles	23,487	21,995	21,171	21,110	18,431
Other motor-vehicles	441	421	420	400	400
Totals	183,806	179,680	178,925	188,125	194,431

The number of motor-cars on the road shows an increase of 6,227, or 4·8 per cent., and trucks 2,759, or 8·3 per cent., while omnibuses and motor-cycles have continued to decline.

(*f*) Petrol Consumption.

The following table shows a classification of the manner in which petrol was consumed in the Dominion during the last eight calendar years :—

Calendar Year.	Consumption of Petrol.		
	By Motor-vehicles (*i.e.*, Petrol on which all Duty was paid).	Other—*i.e.*, Engines, Aeroplanes, &c. (Petrol on which Refunds of Duty were made).	Total.
	Gallons.	Gallons.	Gallons.
1928	41,457,150*	2,057,940*	43,515,090*
1929	56,575,840	3,650,040	60,225,880
1930	62,821,479	3,907,900	66,729,379
1931	55,203,252	5,286,000	60,489,252
1932	49,861,449	5,495,479	55,356,928
1933	51,262,371	5,400,000†	56,662,371
1934	55,914,450	6,100,000†	62,014,450
1935	61,744,902	6,483,600†	68,228,502†

* Excludes an unknown amount of petrol on which duty was not paid. † Estimated.

The total gallons are calculated from the quantity of motor-spirits on which motor-spirit tax was paid. In April, 1935, an arrangement was concluded between the Treasury and the Customs Department and the principal motor-spirit importers whereby the spirit might be taken from bond on condition that the tax would be paid within one month. This necessitated the figure for December, 1935, being estimated, with the result that the 1935 total figure is not exact, although it is considered sufficiently reliable for purposes of comparison. It will be observed that, although there was an increase of some 5,000,000 gallons consumed by motor-vehicles as compared with last year's figures, the peak year figures of 1930 have not yet quite been regained.

4. MOTOR-SPIRITS TAXATION ACT, 1927.

The following data show the yield from and distribution of the petrol-tax for the year ended 31st March, 1936. The figures regarding the net yield for previous years are given for comparative purposes :—

(*a*) Yield.

	£
Gross yield	3,087,682
Deductions—	
Refunds and cost of making same	169,023
Net yield	£2,918,659

Net Yield (i.e., *Gross Yield less Refunds*), *Year ended 31st March.*	£
1928	143,516*
1929	802,232
1930	961,907
1931	1,314,450†
1932	1,677,520‡
1933	1,865,762§
1934	2,368,147
1935	2,610,607
1936	2,918,659
Total since inception of tax	£14,662,800

* Part year only. † Increase from 4d. to 6d. per gallon as from 22nd July, 1930. ‡ Increase from 6d. to 8d. per gallon as from 7th October, 1931. § Increase from 8d. to 10d. per gallon as from 9th February, 1933.

(*b*) Distribution.

The distribution of the net yield of the petrol-tax for the last five years ended 31st March was as follows :—

——	1932.	1933.	1934.	1935.	1936.
	£	£	£	£	£
Main Highways Board	1,231,202	644,126	669,868	970,506	1,449,125
Boroughs (population of 6,000 and over) ..	107,061	99,489	101,728	112,370	126,011
Consolidated Fund	321,685	1,105,182	1,579,965	1,511,499	1,326,261
Commission on collection	17,572	16,965	16,586	16,232	17,262
Totals	1,677,520	1,865,762	2,368,147	2,610,607	2,918,659

N.B.—The distribution of petrol-tax amongst boroughs in accordance with section 9 (1) (*b*) of the Motor-spirits Taxation Act, 1927, for the year ended 31st March, 1936, together with cumulative figures showing the total distribution from the inception of the petrol-tax up to the 31st March, 1936, is given in Table No. 4 in the Appendix.

(*c*) Refunds of Petrol-tax.

Refunding of Duty on Motor-spirits.

As is indicated by the figures appearing in the following table, the claims for refunds of duty on motor-spirits have had a rising tendency each year, the average number dealt with each quarter during the year 1935 being 13,862, as compared with 13,179 in the preceding year. The number of claims handled and the total amount refunded in terms of the Motor-spirits Taxation Act, 1927, were as follows:—

Year.	Number of Claims.	Amount refunded.
		£
1928	11,101	34,299
1929	19,814	60,834
1930	25,797	83,741
1931	37,116	132,150
1932	45,986	137,387
1933	49,265	138,194
1934	52,718	155,714
1935	55,447	163,884

The particulars of the claims paid during each of the quarterly periods in 1935 are as follows:—

Quarter.	Number of Claims.	Amount refunded.
		£ s. d.
March	14,898	48,011 17 2
June	13,676	45,027 0 8
September	12,416	36,143 17 4
December	14,457	34,700 19 5

During the calendar year 1935, 2,110 claims were made during the second month following the close of the respective quarterly periods, and they were subject to a reduction of 10 per cent. in accordance with the provisions of section 7 of the Finance Act, 1933 (No. 2).

Refunds are made at the rate of 6d. per gallon on all motor-spirits consumed for purposes other than as fuel for motor-vehicles in respect of which annual license fees are payable. Section 13 of the Customs Acts Amendment Act, 1934, authorizes an additional refund of 2d. per gallon to be made on motor-spirits consumed in aircraft and in vessels used exclusively in the fishing industry for commercial purposes.

The motor-spirit concerned in the foregoing refunds was consumed as under:—

How consumed.	Gallons.	Percentage of Total.
Motor-vehicle (farm tractor, mule, &c.)	1,945,080	30·0
Milking-machinery	1,536,613	23·7
Fishing and other vessels	890,848	13·8
Miscellaneous stationary machinery	824,714	12·7
Local-authority and other road vehicles ..	608,160	9·4
Lighting and heating plants	225,630	3·5
Manufacturing, cleaning, scientific, &c. ..	182,757	2·8
Shearing-machinery	138,750	2·1
Aircraft	131,048	2·0
Total	6,483,600	100·0

5. SPECIAL MILEAGE-TAXATION.

Mileage-tax is payable by owners of most vehicles which are not propelled exclusively by means of motor-spirits. The tax is also payable by owners of self-propelled well-boring, air-compressor, saw-bench, and crane plants, the owners of which are, in effect, exempted by the provisions of the Motor-vehicles (Special Types) Regulations, 1935, from the payment of all other forms of motor-vehicle taxation. The owners of the last-mentioned vehicles are entitled to claim refunds of duty on all of the motor-spirits consumed in operating their contrivances. As the result of the amending legislation the number of vehicles subject to the tax has increased from 96 to 142.

The figures for the last three years are as follows :—

Year ended 31st March,	Number of Vehicles.	Revenue.
		£
1934	269	2,016
1935	96	1,594
1936	142	2,360
Total	..	5,970

6. ROAD FINANCE.

(*a*) Dominion's Road Bill, 1930–35.

The Department has investigated the numerous statistical data available from official sources and has analysed and classified them in order to show approximately what the roads, streets, and bridges are costing under the headings of construction, maintenance, and loan charges. The figures which have been analysed relate to the five years ended 31st March, 1935.

The classification of the roads into main highways, urban roads and streets, and other roads has been carried out, as each class of road or street has differing problems attached to it. This classification has involved a certain amount of estimation, as also have certain aspects of the figures for the whole road bill. Any estimations have been made on a conservative basis, and the figures are sufficiently close to actual fact to form a basis for reliable broad conclusions.

The following table shows the expenditure under the various headings for the five years ended 31st March, 1935 :—

——	1930–31.	1931–32.	1932–33.	1933–34.	1934–35.
Maintenance—	£	£	£	£	£
Main highways	1,326,372	1,202,343	858,577	919,194	1,268,610
Urban roads and streets.. ..	581,734	529,104	453,969	397,371	392,032
Other roads	1,130,811	1,009,702	763,648	708,424	947,057
Total	3,038,917	2,741,149	2,076,194	2,024,989	2,607,699
Construction—					
Main highways	838,477	540,841	261,602	275,676	406,562
Urban roads and streets.. ..	1,077,380	1,338,677	1,224,214	1,104,047	944,235
Other roads	1,656,395	1,489,127	1,122,145	1,085,672	1,010,182
Total	3,572,252	3,368,645	2,607,961	2,465,395	2,360,979
Interest and sinking fund charges—					
Main highways	595,845	635,930	622,128	632,846	612,129
Urban roads and streets.. ..	615,530	640,728	642,282	585,900	554,400
Other roads	1,125,027	1,198,786	1,129,482	1,136,070	1,136,515
Total	2,336,402	2,475,444	2,393,892	2,354,816	2,303,044
Total annual road bill—					
Main highways	2,760,694	2,379,114	1,742,307	1,827,716	2,287,301
Urban roads and streets.. ..	2,274,644	2,508,509	2,320,465	2,087,318	1,890,667
Other roads	3,912,233	3,697,615	3,015,275	2,930,166	3,093,754
Total	8,947,571	8,585,238	7,073,047	6,845,200	7,271,722

The principal points emerging from the figures for the years ended 31st March, 1934, have been commented upon in previous annual reports. The figures for 1934–35, as compared with those of the previous year, are commented on below :—

(1) *Maintenance.*

(i) *Main Highways.*—The increase of approximately £350,000 is due to increases in the expenditure of the Main Highways Board in this direction and of counties out of ordinary revenue.

(ii) *Other Roads.*—This increase of approximately £240,000 is due partly to a grant of some £178,000 made out of the Main Highways Account by way of subsidy on rates levied on farming land under the terms of section 28 of the Finance Act (No. 3), 1934, partly to an increase in the amount of the subsidy paid out of the Main Highways Account to local authorities under section 37 of the Finance Act, 1930, and partly to increases in the expenditure of counties on roads other than main highways out of ordinary revenue.

(2) *Construction.*

There has been an increase in expenditure on main-highway construction, but decreases in the other two sections. The decrease of approximately £160,000 in the case of urban roads and streets is due to further reductions in the expenditure of boroughs on construction and maintenance.

(3) *Loan Charges.*

The slight decreases are due principally to a fall in the rate of loan charges against boroughs as compared with the previous year.

(4) *Total Road Bill.*

The following table, showing the percentages of the total expenditure on maintenance, construction, and interest and loan charges, is of interest :—

——	Maintenance.	Construction.	Interest and Loan Charges.
	Per Cent.	Per Cent.	Per Cent.
1930–31	34	40	26
1931–32	32	39	29
1932–33	29	37	34
1933–34	30	36	34
1934–35	36	32	32

(*b*) Sources of Money expended on Road Bill, 1930–35.

The Department has also analysed the expenditure on roads during the five years ended 31st March, 1935, in order to ascertain the sources from which the money expended has been derived.

The following table shows, under five main headings, the sources of revenue expended on (*a*) main highways, (*b*) urban roads, (*c*) other roads, and (*d*) all types of roads :—

——	1930–31.	1931–32.	1932–33.	1933–34.	1934–35.
Main highways—	£	£	£	£	£
Loan	530,574	455,296	37,472	237,469	360,118
Local rates	591,618	494,341	428,998	431,262	471,851
Unemployment-taxation	..	55,073	60,259	53,032	42,586
General taxation	146,274	141,823	124,176	147,342	134,955
Motor-taxation	1,492,228	1,232,581	1,091,402	958,611	1,277,791
Total	2,760,694	2,379,114	1,742,307	1,827,716	2,287,301
Urban roads—					
Loan	450,885	330,114	122,417	70,291	71,307
Local rates	1,497,721	1,405,383	1,291,683	1,153,032	1,072,108
Unemployment-taxation	75,000	510,000	660,000	616,278	475,306
General taxation	..	..	..	..	..
Motor-taxation	251,038	263,012	246,365	247,717	271,946
Total	2,274,644	2,508,509	2,320,465	2,087,318	1,890,667
Other roads—					
Loan	1,608,680	1,145,567	412,470	381,090	398,371
Local rates	1,121,923	841,313	798,805	734,844	781,010
Unemployment-taxation	39,102	281,242	677,227	675,524	587,469
General taxation	900,060	966,757	900,750	927,750	941,215
Motor-taxation	242,468	462,736	226,023	210,958	385,689
Total	3,912,233	3,697,615	3,015,275	2,930,166	3,093,754
All roads—					
Loan	2,590,139	1,930,977	572,359	688,850	829,796
Local rates	3,211,262	2,741,037	2,519,486	2,319,138	2,324,969
Unemployment-taxation	114,102	846,315	1,397,486	1,344,834	1,105,361
General taxation	1,046,334	1,108,580	1,024,926	1,075,092	1,076,170
Motor-taxation	1,985,734	1,958,329	1,563,790	1,417,286	1,935,426
Total	8,947,571	8,585,238	7,078,047	6,845,200	7,271,722

The principal points emerging from the 1934–35 figures as compared with those of previous years are as follows :—

(1) *Loan-money.*

This item shows an increase of £140,000 over the previous year's figure, and now represents 11·4 per cent. of the total money expended. This is still in marked contrast to the year 1930–31, when this item represented almost 30 per cent. of the total.

(2) *Local Rates.*

Local rates show a slight increase. This item remains the chief source of money for expenditure on the roads, this year's total comprising 32 per cent. of the total.

(3) *Unemployment Taxation.*

The amount expended this year again shows a decline, approximately £240,000, the proportion of the total now being 15·2 per cent.

(4) *General Taxation.*

This item has remained almost constant during the five years under review. This year's figure represents 14·8 per cent. of the total.

(5) *Motor-taxation.*

Motor taxation shows a substantial increase of almost £520,000 over the previous year. This reflects the increased revenue from motor-spirit taxation, while local-authority revenue from motor-drivers' licenses and heavy-traffic fees has also increased. Details of this revenue are published elsewhere in this report.

A noticeable feature is that this item is gradually approaching the amount provided by local rates. Whereas the amount expended from local rates in 1930–31 exceeded that from motor-taxation by some £1,200,000, the excess is now only £390,000.

(6) *General.*

The following table indicates the approximate percentages of the various sources of revenue comprised in the total expenditure on roads during the five years ended 31st March, 1935 :—

Item.	1930–31.	1931–32.	1932–33.	1933–34.	1934–35.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Loan	28·9	22·5	8·1	10·1	11·4
Local rates	35·9	31·9	35·6	33·9	32·0
Unemployment taxation ..	1·3	9·9	19·7	19·6	15·2
General taxation	11·7	12·9	14·5	15·7	14·8
Motor-taxation	22·2	22·8	22·1	20·7	26·6
Total	100·0	100·0	100·0	100·0	100·0

(*c*) Annual Charges per Mile on Roads, Streets, etc., 1930–35.

The following table shows the annual expenditure for the five years ended 31st March, 1935, on the various classes of roads, &c., computed per mile of road and/or street :—

Class of Road.	Year ended 31st March,	Length of Formed Roads.	Annual Charges per Mile of Road.		
			Maintenance.	Interest and Loan Charges.	Total.
		Miles.	£	£	£
Main highways	1931	10,420	127	57	184
	1932	10,846	111	59	170
	1933	10,878	79	57	136
	1934	10,975	84	58	142
	1935	11,176	114	55	169
Urban roads and streets ..	1931	4,055	143	152	295
	1932	4,052	131	158	289
	1933	4,106	111	156	267
	1934	4,086	97	143	240
	1935	4,035	97	137	234
Other roads	1931	35,103	32	32	64
	1932	35,378	29	34	63
	1933	35,909	21	32	53
	1934	36,010	20	32	52
	1935	36,947	26	31	57
Total, all roads ..	1931	49,578	61	47	108
	1932	50,276	55	49	104
	1933	50,893	41	47	88
	1934	51,071	40	46	86
	1935	52,158	50	44	94

Tables Nos. 5 and 6 of the Appendix show the lengths of various classes of roads, streets, and bridges during the years from 1922 to 1935 inclusive.

(*d*) Motor-taxation.

Table No. 7 shows an analysis of the revenue received from the various taxes and fees levied in connection with motor-vehicles, together with comparative figures for the previous thirteen years.

The total amount for 1935–36 was £4,451,863, the greatest figure yet recorded. The increase of £549,311 over the previous year is mainly due to an increase of approximately £308,000 in motor-spirits tax and £191,000 in Customs duties on motor-vehicles and parts.

7. HEAVY MOTOR-VEHICLE REGULATIONS, 1932.

(*a*) Allocation of Heavy Traffic License Fees.

The regulations provide that, where the local authorities in any heavy-traffic district are unable to agree as to the distribution of the heavy-traffic fees collected in that district they may apply to the Minister of Transport to apportion those fees. During the year several applications were received from various districts, but in each case agreement was finally reached as the result of negotiations.

For the purpose of a Minister's allocation under the regulations it is necessary for the Department to investigate the road-expenditure figures in the heavy-traffic district. This involves a considerable amount of work, and the regulations were therefore amended to provide that in such cases there should be power to deduct one-half of 1 per cent. of the total amount of fees to be distributed and to credit this amount to the Consolidated Fund.

Tentative proposals for amending the regulations with the object of simplifying the system of apportionment by Minister's order were submitted to all local authorities. The majority who replied expressed themselves in favour of the proposals, but a small number brought forward very definite and relevant objections to the suggested amendment.

On the instructions of the Minister, the Department is at present carrying out investigations into the whole question of motor-taxation. This investigation will naturally cover the incidence and allocation of heavy-traffic fees. Consequently it appears undesirable that any major alterations should, at this stage, be made to the existing method of apportioning the fees by Minister's order.

(*b*) Limitation of Loads on Roads.

Alterations in Axle Weights allowable.

Experience has shown that in three-axled vehicles where one axle only is driven it is desirable that the axle-load of the driven axle be slightly greater than that of the trailing axle. To meet the position the regulations were amended to allow of an increase of approximately 15 per cent. on the maximum axle weights formerly allowed. No increase is allowed in the maximum gross weights nor is the condition affected whereby at least 18 per cent. of the total weight must be borne by the steering-axle. The amendment does not apply to two-axled vehicles, and the new table of load limits is as follows:—

Classification of Roads.	Heavy Motor-vehicles other than multi-axled Heavy Motor-vehicles.		Multi-axled Heavy Motor-vehicles.	
	Maximum Gross Weight.	Maximum Axle Weight.	Maximum Gross Weight.	Maximum Axle Weight.
	Tons.	Tons.	Tons.	Tons.
Class II	8·0	6·4	12·0	5·5
Class III	6·5	5·2	10·0	4·6
Class IV	4·5	3·6	6·5	3·0
Class V	3·0	2·4	4·5	2·1

The Position regarding Road Classification.

During the period under review 1,300 miles of main highways and other rural roads were classified. In the Hawke's Bay, Takaka, and Southland counties, where no roads were formerly classified, there is now a uniform classification of Class III over the main highways, except in the case of the higher types of road surfaces adjacent to Napier and Hastings.

The existing position in regard to the classification of rural roads generally and of the main highway system is set out in the following tables:—

(i) *Classification of Rural Roads.*

——	Formed Roads.	Class II.	Class III.	Class IV.	Class V.	Total Classification.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
North Island	26,025	313	4,551	8,469	3,197	16,530
South Island	21,929	811	4,848	2,250	312	8,221
Totals	47,954	1,124	9,399	10,719	3,509	24,751

(ii) *Classification of Main Highways.*

——	Main Highways.	Class II.	Class III.	Class IV.	Class V.	Total Classification.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
North Island	6,447	199	2,618	2,894	412	6,123
South Island	5,202	559	3,428	152	32	4,171
Totals	11,649	758	6,046	3,046	444	10,294

While a little over 50 per cent. of the total rural mileage of formed roads is classified, there is now 88 per cent. of the main highway system, which carries the greatest part of the traffic, classified in one or other of the four classes, and nearly 82 per cent. in Class III or lower. As the classification of a main highway or other key road has the effect of limiting loads also on the adjacent feeder roads, the load-limitations virtually cover a much greater proportion than 50 per cent. of the total rural mileage actually classified.

In order to provide a reasonable degree of flexibility for road transport it is most desirable that there should be a uniform classification over a large area of country, unbroken by variations at county boundaries.

Since its inception the Department has advocated and encouraged the general adoption of Class III as the maximum limit for all rural highways, except where such highways are surfaced with the higher types of pavement, or where special circumstances justify heavier loads, and this policy has been adopted by a steadily increasing number of local authorities. In certain areas Class IV has been generally adopted as a maximum, as, for example, in the North Auckland District, where road surfaces are comparatively weak, and also in the pumice areas of the North Island, where surfacing materials are costly. However, in several districts, and notably in Canterbury, there is as yet no uniform system of classification.

The following table indicates to some extent this lack of uniformity of classification of main highways in certain of the highways districts, and also sets out the relation between the classification of the roads and the use of the respective classes by heavy-motor traffic :—

Highways District.	Classification of Main Highways.			Classification of Heavy Motor-vehicle Traffic.		
	Proportions of Total Mileage.			Proportions conforming to the following Road-classification :—		
	(*a*) Unclassified or in Class II.	(*b*) Classified in Class III.	(*c*) Classified in Classes IV or V.	(*a*) Unclassified or in Class II.	(*b*) Classified in Class III.	(*c*) Classified in Classes IV or V.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Auckland North ..	..	0·4	99·6	0·7	20·0	79·3
Auckland South ..	3·2	26·7	70·1	4·4	43·0	52·6
Tauranga	5·5	10·0	84·5	4·8	31·2	64·0
Gisborne	1·6	87·5	10·9	3·8	45·8	50·4
Napier	12·4	81·3	6·3	9·4	41·2	49·4
King-country	6·4	..	93·6	0·5	33·2	66·3
Taranaki	10·9	65·0	24·1	8·7	47·4	43·9
Wanganui	9·5	70·1	20·4	9·8	40·5	49·7
Wellington West ..	32·0	57·1	10·9	13·2	48·1	38·7
Wellington East ..	12·9	86·9	0·2	7·5	36·6	55·9
North Island ..	8·1	40·6	51·3	6·0	38·6	55·4
Nelson	12·6	78·1	9·3	12·5	31·2	56·3
West Coast	11·7	79·3	9·0	7·5	43·5	49·0
Canterbury North ..	43·6	49·7	6·7	14·0	34·2	51·8
Canterbury Central ..	79·6	18·9	1·5	12·5	40·2	47·3
Canterbury South ..	39·8	60·2	..	6·2	45·3	48·5
Otago Central ..	33·2	61·4	5·4	3·8	38·5	57·7
Otago South	28·6	71·4	..	4·4	42·1	53·5
Southland	0·9	99·1	..	6·9	53·1	40·0
South Island ..	30·6	65·9	3·5	8·3	42·1	49·6
New Zealand ..	18·1	51·9	30·0	6·8	39·8	53·4

The proportions which require a higher classification than Class III are seen to be relatively small in most districts, and there seems no reason why this class should not be adopted generally as the maximum in rural areas. In the course of time as the heavier vehicles now on the roads complete their useful life they may be replaced with the multi-axled type which on a Class III road has a maximum allowable gross load of 10 tons.

From inquiries made by the Department it is found that this type of vehicle provides generally a somewhat more economic means of transport than the ordinary two-axled machine and should be particularly well fitted for service on the well-aligned roads of Canterbury.

Although it is claimed by various local authorities that owing to strong foundations, cheap gravel, and light maintenance-costs, there is no great advantage to be gained by limitation of loading, the time is rapidly approaching when all rural roads carrying a reasonable volume of traffic will be provided with some form of light-sealed surface. In order that these surfaces may be protected it is at present essential that unnecessarily heavy wheel-loads should be eliminated. As this end may only be accomplished by a comparatively slow process, there is a very definite need for effecting the classification now in order that all future replacements may comply with the desired load limits.

In certain areas various local authorities have classified a number of their roads in Class V, and in certain counties north of Auckland practically the whole roading system is classified in this class.

In some districts, in order to give all-weather access to certain areas, the local body has provided a very light road-surface which it is necessary to protect from heavy loads by the adoption of a Class V classification.

Instances of this kind are, however, rare, and as a gross load-limit of only 3 tons restricts payloads to approximately 25 cwt., in general Class V should be applied only where absolutely essential.

Otherwise the transport facilities will prove quite inadequate and it is inevitable that numerous permits will have to be issued by the road-controlling authorities to enable the load limit of 3 tons to be exceeded. This tends to defeat the object of the classification and creates irritating difficulties for road operators.

For these reasons the Department discourages the adoption of Class V except under very special circumstances, and it is proposed to review all such classifications now extant.

8. TRAFFIC CENSUS.

(*a*) Introductory.

A comprehensive census of all traffic using the rural main-highway system was taken for the first time in New Zealand in 1934–35. Some 370 stations were selected at which all traffic was recorded. Although it would have been desirable to have increased the number of stations in order adequately to cover the whole of the highway system, the finances available rendered this impossible. Consequently it has been necessary to estimate the traffic on a number of sections of highway where no actual records were available.

Traffic was recorded for two periods of seven consecutive days at each station. With the view of obtaining a reasonable measure of the winter and the summer traffic, the tallies were taken during seven days in August, 1934, and in January, 1935. The mean of the two records is taken to represent the average traffic passing each traffic station, and this figure is applied to the appropriate length of highway. In this manner the traffic over a great part of the highway system has been computed.

In view of the estimates it has been necessary to make, the results presented in this report, while giving a reasonably close indication of traffic conditions, cannot be regarded as wholly accurate. In so far as comparisons are concerned, the figures would be fairly accurate, but from checks made upon the total use of the highway system by motor-vehicles it appears that the figures arrived at are somewhat higher than is actually the case.

It is hoped that this traffic survey will be the first of a series to be taken at regular intervals, and the full value of this census will thus not be secured until further records are obtained.

While detailed analyses of the use by motor-vehicles of the rural main-highway system are given by this and future traffic surveys, it must be remembered that this system represents only 21 per cent. of the total mileage of formed roads and streets throughout the Dominion. No comprehensive data is available regarding the traffic using urban streets or rural roads other than main highways. For a number of reasons it is most desirable that some such data should be available whereby reliable comparisons may be made between the use of each of these divisions of the roading system.

(*b*) Traffic-density Maps.

A map of each Island showing the relative traffic densities throughout the rural highways system appears in the Appendix. The main traffic routes are readily identifiable, and it is noticeable that in general these parallel the Main Trunk Railway systems. The maps also show that the proportion of "through," or long-distance, traffic is small in comparison with the local traffic within a few miles of the boroughs and cities. Taranaki affords an apt example in this respect. Between Hawera and New Plymouth, where a succession of medium-sized boroughs occur at fairly close intervals, the traffic averages 663 vehicles daily. On the other hand, where the road is almost wholly arterial, as between Waitara and Te Kuiti, the volume decreases to a comparatively sparse figure. The actual traffic recorded at the Mokau Bridge, for example, averaged 141 vehicles per day.

(*c*) Volume of Motor Traffic.

Table A gives for each Island the total number of vehicle-miles per annum on the main-highway system and the average number of vehicles carried daily by each mile of main highway. From this table it will be seen that the average number of vehicles per mile of highway per day for the North Island is 167, as against 119 for the South Island. Also the North Island main highways constitute 56 per cent. of the total highway mileage, but carry 64 per cent. of the total traffic of the main-highway system of the whole Dominion. These comparisons between the two Islands are further illustrated by Figure 1.

Table A.—Comparing the Highway-mileage, Motor-vehicle Use, and Traffic Density on the North and South Island Main-highway Systems.

Highway System.	Main Highway Mileage.		Annual Vehicle-mileage.		Average Traffic Density.
	Miles.	Percentage.	Vehicle-miles.	Percentage.	Motor-vehicles per Day.
North Island	6,206	55·53	377,439,930	63·57	166·6
South Island	4,970	44·47	216,267,245	36·43	119·2
New Zealand ..	11,176	100·00	593,707,175	100·00	145·5

FIG. 1.—COMPARISON BETWEEN THE NORTH AND SOUTH ISLAND RURAL HIGHWAY SYSTEMS IN RESPECT OF MILEAGE, USE BY MOTOR-VEHICLES, AND TRAFFIC DENSITY.

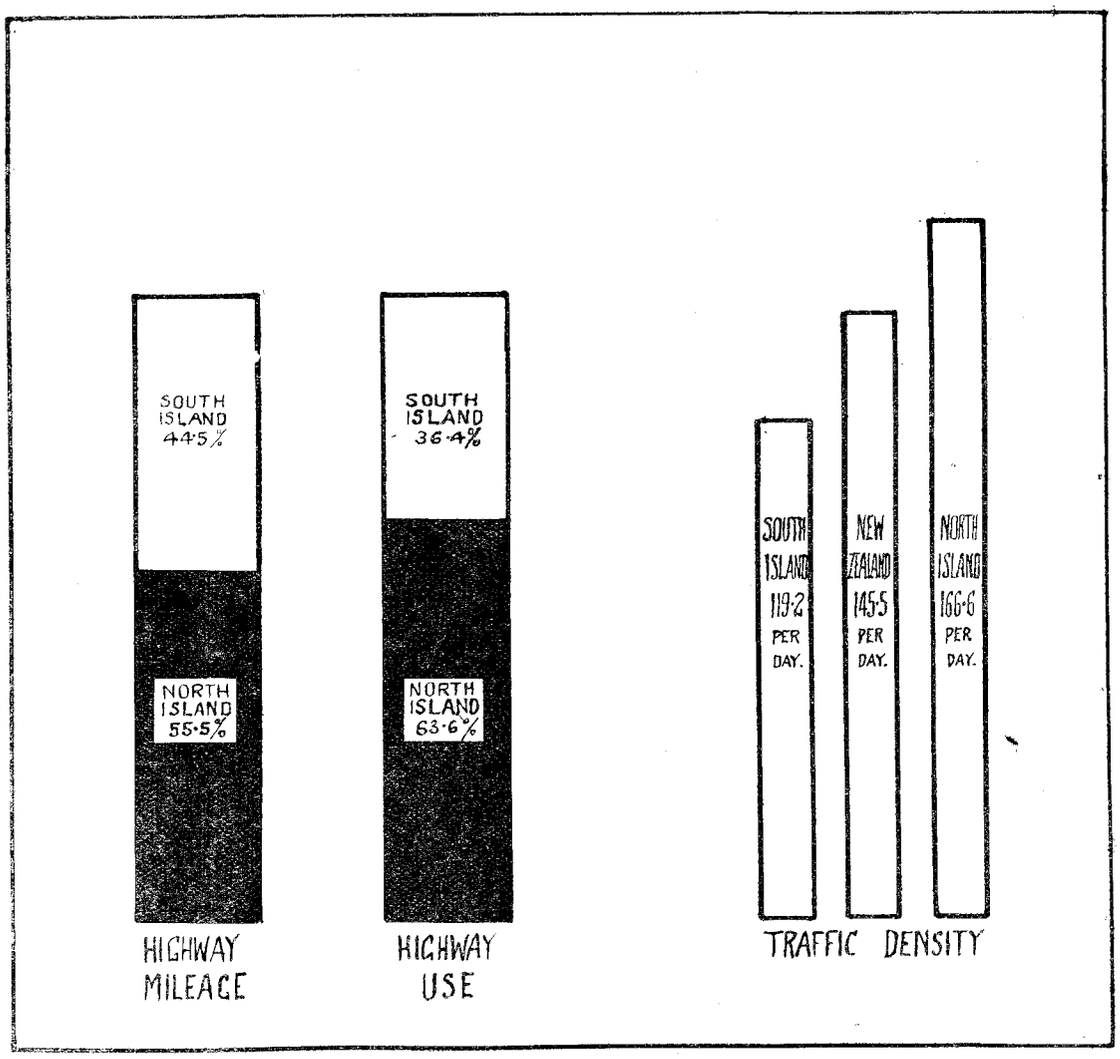


Figure 2 and Tables B and C afford a comparison of the use of the main highways in each of the eighteen highway districts, the tables taking into consideration the area and population of each district, and the motor-vehicle registrations.

It is noticeable that the use per head of population is fairly constant throughout, except in districts which include large urban population. Also in the districts containing relatively few or small urban centres, such as Auckland North, Tauranga, King-country, Canterbury North, and Otago Central, the use of the main-highway system per motor-vehicle is also fairly constant. It may be possible by further investigations to use this data to determine the approximate total use of all roads in the Dominion, whether main highways, urban streets, or other roads.

FIG. 2.—MOTOR-VEHICLE UTILIZATION AND MAIN HIGHWAY MILEAGES IN EACH HIGHWAYS DISTRICT, EXPRESSED AS PERCENTAGES OF NEW ZEALAND TOTALS.

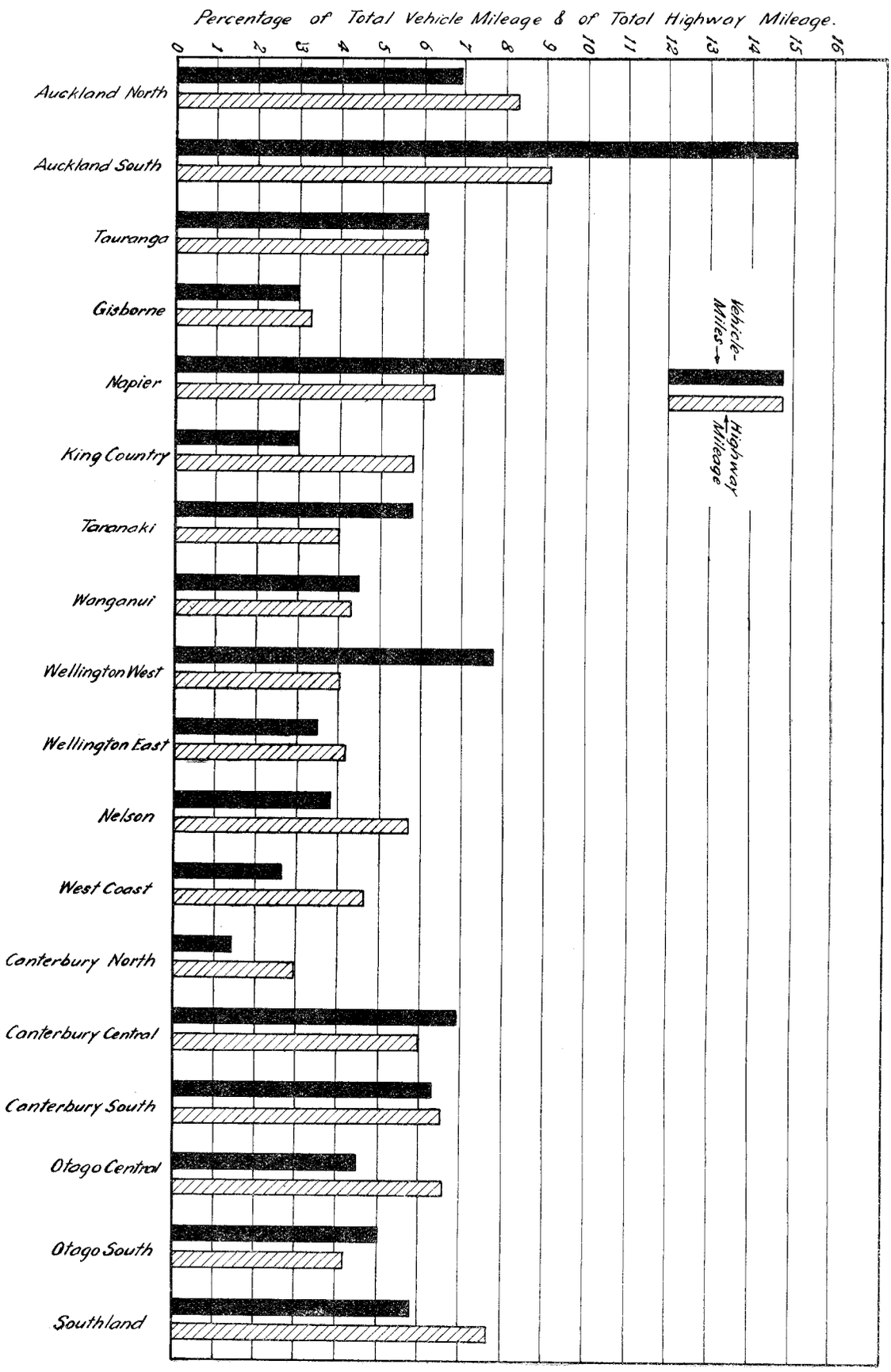


Table B.—Area, Main Highway Mileage, Motor-vehicle Registrations, Vehicle-mileage, and Population.

Highways District.		Area.		Main Highway Mileage.		Motor-vehicle Registrations, at 31st December, 1934.		Daily Vehicle-miles on Main-highway System.		Population.	
No.	Name.	Square Miles.	Per Cent.	Miles.	Per-centage	Number.	Per-centage	Vehicle-miles.	Per-centage	Persons.	Per-centage.
1	Auckland North ..	5,451	5·30	930¾	8·33	7,251	3·62	111,961	6·88	69,497	4·48
2*	Auckland South ..	6,217	6·04	1,022	9·14	45,747	22·81	246,062	15·13	362,093	23·37
3	Tauranga	8,111	7·88	680¾	6·09	5,536	2·76	99,896	6·14	46,169	2·98
4	Gisborne	3,086	3·00	362¾	3·25	4,036	2·01	48,252	2·97	34,020	2·20
5	Napier	5,070	4·93	702	6·28	12,211	6·09	128,923	7·93	78,582	5·07
6	King-country ..	3,912	3·80	652½	5·84	3,092	1·54	48,241	2·96	30,923	1·99
7	Taranaki	2,472	2·40	442½	3·96	11,254	5·61	93,837	5·77	67,425	4·35
8	Wanganui	4,104	3·99	483¼	4·32	8,162	4·07	73,320	4·51	58,418	3·77
9*	Wellington West ..	2,434	2·36	455	4·07	25,119	12·52	126,756	7·79	218,950	14·13
10	Wellington East ..	3,237	3·15	474½	4·25	6,516	3·25	56,834	3·49	34,289	2·21
	North Island ..	44,094	42·85	6,206	55·53	128,924	64·28	1,034,082	63·57	1,000,366	64·55
11	Nelson	7,657	7·44	640½	5·73	6,782	3·38	61,160	3·76	49,719	3·21
12	West Coast	8,913	8·66	519¾	4·65	3,476	1·73	41,932	2·58	39,637	2·56
13	Canterbury North ..	4,225	4·11	330¼	2·95	1,707	0·85	23,819	1·46	9,092	0·59
14*	Canterbury Central ..	4,203	4·08	668	5·98	22,414	11·17	112,373	6·91	164,733	10·63
15	Canterbury South ..	7,548	7·33	737½	6·60	10,514	5·24	103,036	6·33	63,492	4·10
16	Otago Central ..	11,191	10·88	749¾	6·71	5,568	2·78	72,931	4·48	38,411	2·48
17*	Otago South ..	3,873	3·76	465¼	4·16	11,144	5·56	82,398	5·07	112,011	7·23
18	Southland	11,195	10·89	859	7·69	10,048	5·01	94,864	5·84	71,810	4·65
	South Island ..	58,805	57·15	4,970	44·47	71,653	35·72	592,513	36·43	548,905	35·45
	New Zealand ..	102,899	100·00	11,176	100·00	200,577	100·00	1,626,595	100·00	1,549,271	100·00

* Includes large urban centres.

Table C.—Daily Vehicle-miles on Main Highways per (i) Unit Area, (ii) Head of Population, (iii) Motor-vehicle, (iv) Mile of Main Highway; Population per Motor-vehicle.

Highways District.		Population per Square Mile.	Motor-vehicles per Square Mile.	Daily Vehicle-miles on Main Highway System.				Persons per Motor-vehicle.
No.	Name.			Per Square Mile.	Per Head of Population.	Per Motor-vehicle.	Per Mile of Main Highway.	
1	Auckland North ..	12·7	1·33	20·5	1·61	15·4	120·4	9·6
2*	Auckland South ..	58·2	7·36	39·6	0·68	5·4	240·8	7·9
3	Tauranga ..	5·7	0·68	12·3	2·16	18·0	146·7	8·4
4	Gisborne ..	11·0	1·31	15·6	1·42	11·9	133·0	8·4
5	Napier	15·5	2·41	25·4	1·64	10·5	183·7	6·4
6	King-country ..	7·9	0·79	12·3	1·56	15·6	73·9	10·0
7	Taranaki ..	27·3	4·56	38·0	1·39	8·3	212·1	6·0
8	Wanganui ..	14·2	1·99	17·9	1·26	9·0	151·7	7·1
9*	Wellington West ..	90·0	10·31	52·1	0·58	5·1	278·6	8·7
10	Wellington East ..	10·6	2·01	17·5	1·66	8·7	119·8	5·3
	North Island ..	22·7	2·92	23·5	1·03	8·0	166·6	7·8
11	Nelson	6·5	0·89	8·0	1·23	9·0	95·5	7·3
12	West Coast ..	4·4	0·39	4·7	1·06	12·1	80·7	11·4
13	Canterbury North	2·2	0·40	5·6	2·62	13·9	72·1	5·3
14*	Canterbury Central	39·2	5·33	26·7	0·68	5·0	168·2	7·4
15	Canterbury South	8·4	1·39	13·7	1·62	9·8	139·6	6·0
16	Otago Central ..	3·4	0·50	6·5	1·90	13·1	97·3	6·9
17*	Otago South ..	28·9	2·88	21·3	0·74	7·4	177·1	10·1
18	Southland ..	6·4	0·90	8·5	1·32	9·4	110·4	7·1
	South Island ..	9·3	1·22	10·1	1·08	8·3	119·2	7·7
	New Zealand ..	15·1	1·95	15·8	1·05	8·1	145·5	7·7

* Includes large urban centres.

(*d*) Distribution of Traffic on the Main-highway System.

In order to indicate the extent to which traffic is concentrated on a relatively small proportion of the highway mileage the highways are classified hereunder according to the volume of traffic carried. Table D shows that 25 per cent. of the mileage carries less than fifty vehicles per day; 54 per cent. carries less than one hundred; and nearly 80 per cent. of the total highway mileage carries less than two hundred vehicles daily.

Table D.—Classifying Highway Mileage according to Traffic-density.

	Mileage carrying the following Numbers of Motor-vehicles per Day.												
	0–50.	50–100.	100–200.	200–300.	300–400.	400–500.	500–600.	600–700.	700–800.	800–900.	900–1,000.	Over 1,000.	Total.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
North Island ..	1,185	1,729	1,760	557	405¾	145½	173½	82½	51¾	38½	17	40½	6,206
South Island ..	1,635¼	1,488	1,132½	314¼	174¼	107¾	65¼	9	6¼	2¾	..	34¾	4,970
New Zealand totals	2,820¼	3,217	2,892½	891¼	580	253¼	238¾	91½	58	41¼	17	75¼	11,176

Fig. 3.—Distribution of Traffic over Main Highway System.

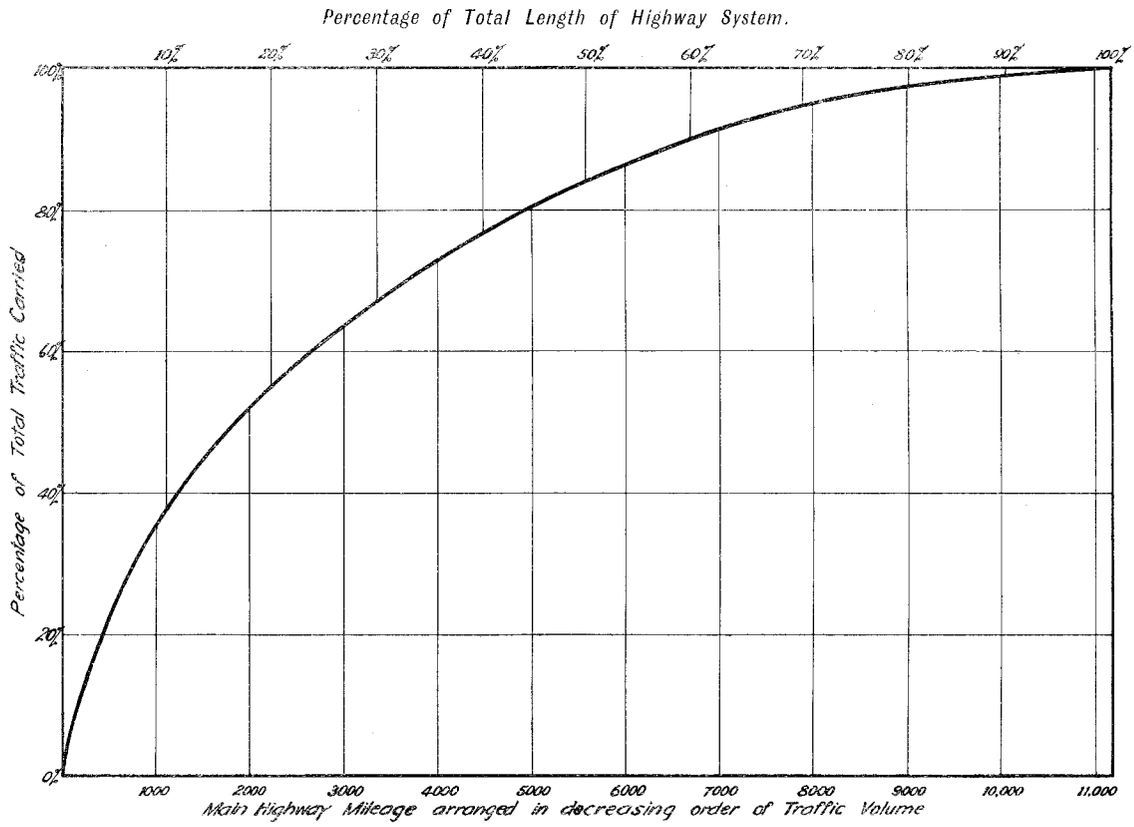


Figure 3 illustrates the concentration of the traffic in an even more striking manner. On studying this graph it is seen that 40 per cent. of the total traffic is carried by little over 10 per cent. of the highway mileage, and 80 per cent. of the traffic by only 45 per cent. of the mileage.

The range of the actual traffic-density recorded is very considerable. This is illustrated by Table E, which gives the value of the highest and of the lowest average volumes recorded in each highway district. Some highways which were not covered by the census are estimated to carry less than the figure shown in certain districts, but this table purports to show only actual recorded tallies.

Table E.—The Range of Traffic-density in each Highways District.

Highways District.		Highest Average Daily Density recorded.			Lowest Average Daily Density recorded.		
No.	Name.	Number of Motor-vehicles.	Name of Main Highway.	Point at which Traffic was recorded.	Number of Motor-vehicles.	Name of Main Highway.	Point at which Traffic was recorded.
1	Auckland North ..	519	Lake Omapere–Maungaturoto ..	Near Kamo.	18	Kirikopuni–Parakao	Parakao.
2	Auckland South ..	2,698	Great South Road	Near Otahuhu.	4	Hikutaia–Netherton Ferry ..	Netherton Ferry.
3	Tauranga ..	814	Rotorua–Whakatane	Near Whakatane.	47	Rotoma–Matata	Matata.
4	Gisborne ..	546	Gisborne–Napier	South of Makaraka.	21	Gisborne–Wairoa via Hangaroa ..	Near Tiniroto.
5	Napier	1,547	Farndon–Hastings	Mangateretere.	20	Gisborne–Wairoa via Hangaroa ..	Te Reinga.
6	King-country ..	329	Auckland–Wellington via Taranaki	South boundary of Waipa County	4	Okahukura–Ohura	Okahukura.
7	Taranaki ..	726	Auckland–Wellington via Taranaki	Near Stratford.	43	Pembroke Highway	At Cardiff Road.
8	Wanganui ..	686	Auckland–Wellington via Taranaki	Near Wanganui.	48	Wanganui–Horopito	At Horopito end.
9	Wellington West ..	1,167	Wellington–Napier via Wairarapa	Silverstream.	29	Heatherlea–Foxton via Koputaroa ..	At Foxton end.
10	Wellington East ..	771	Wellington–Napier via Wairarapa	Near Greytown.	21	Martinborough–Masterton via Gladstone	Near Longbush.
11	Nelson	1,035	Nelson–Inangahua Junction ..	Stoke.	12	Lindsay's–Clifton	Lindsay's.
12	West Coast ..	283	Inangahua Junction–Weheka ..	Kanieri.	7	Forks–Okarito	The Forks.
13	Canterbury North	182	Waikari–Waitohi	Waikari.	12	Puhipuhi Highway	Near Kaikoura.
14	Canterbury Central	2,056	Christchurch–Dunedin	Riccarton (Church Corner).	9	Upper Riccarton–Arthurs Pass ..	Cass.
15	Canterbury South	1,140	Christchurch–Dunedin	Near Timaru.	8	Lake Pukaki–Hermitage	Pukaki.
16	Otago Central ..	637	Christchurch–Dunedin	Near Oamaru.	9	Skippers Highway	Queenstown end.
17	Otago South ..	1,045	Dunedin–Invercargill	Near Mosgiel.	15	Dunedin–Highcliff	Near Highcliff.
18	Southland ..	1,257	Invercargill–Tuatapere	Lorne.	27	Riversdale–Waikaia	Waiparu.

(*e*) Fluctuations in Traffic-density.

At a number of stations the traffic was tallied continuously over the whole week, while at the majority the count extended for daily periods of sixteen hours, commencing at 6 a.m. and continuing until 10 p.m.

The results of the former series, in addition to affording a factor for estimating the twenty-four-hourly traffic over all stations, were analysed into two-hourly periods of traffic. This data is presented in Fig. 4, which shows the distribution of traffic throughout an average twenty-four-hour period in the summer and in the winter (*a*) on a week-day (Monday to Friday inclusive) and (*b*) on a Sunday. In each case the traffic during hours of darkness is indicated by the shaded portions. It is estimated that 16·6 per cent. of the total movement of traffic on the highway system during the year takes place during hours of darkness. During the period of the summer tally 12·8 per cent. of the traffic was at night, while the August tally showed 21·4 per cent. at night. These proportions are fairly consistent throughout the whole of the Dominion.

Fig. 4.—Fluctuations in Traffic Volume according to Time of Day and the Season, with reference to Week-days and Sundays.

FIG. 5.—DAILY VARIATION OF TRAFFIC THROUGHOUT A WEEK.

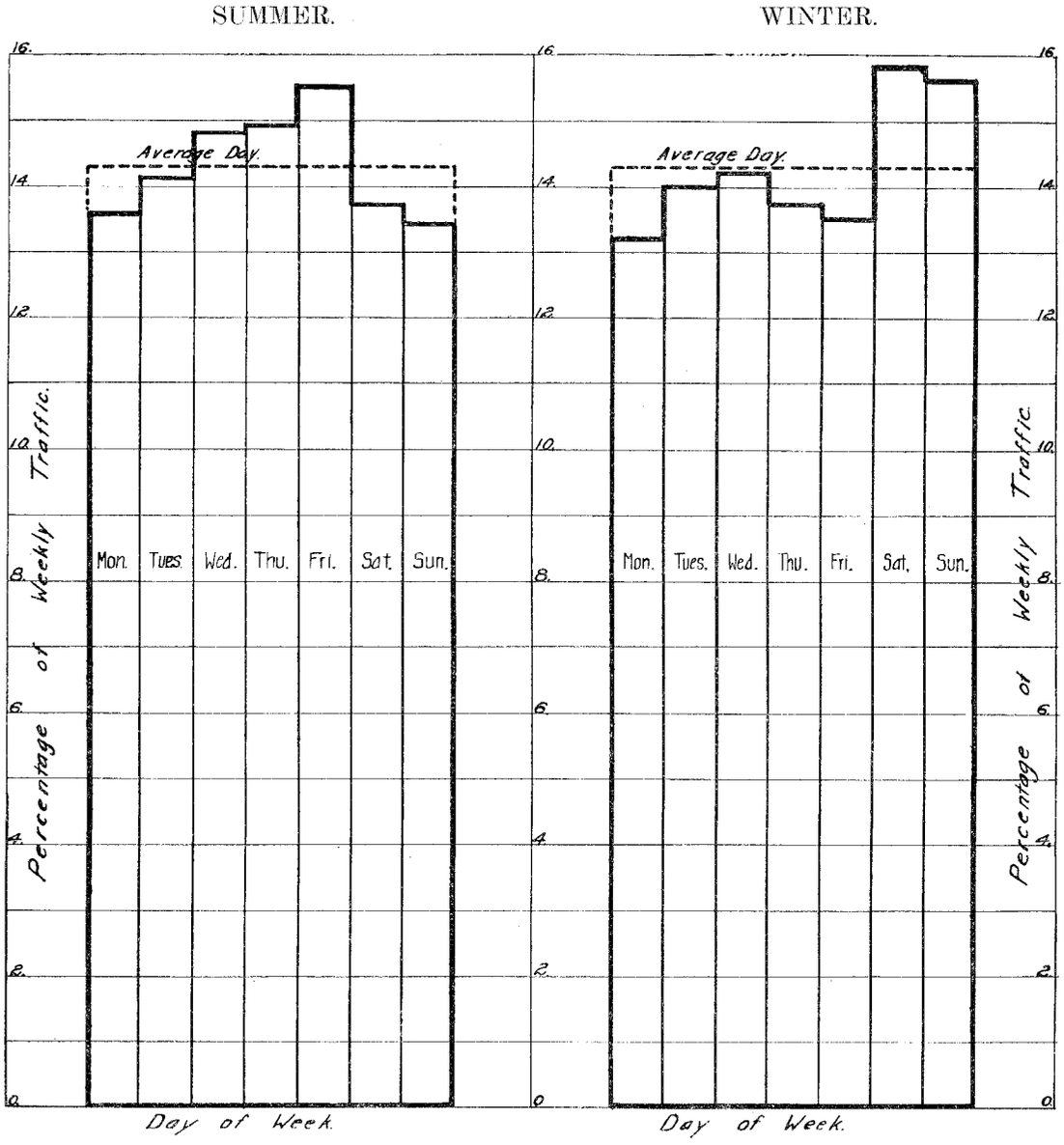


Figure 5 shows the daily variations of traffic throughout a week (*a*) in the winter and (*b*) in the summer, based upon a fairly large number of tallies recording a considerable volume of traffic.

It will be seen that in the summer the greatest volume of traffic is on a Saturday, which is slightly in excess of Sunday, but considerably greater than any week-day.

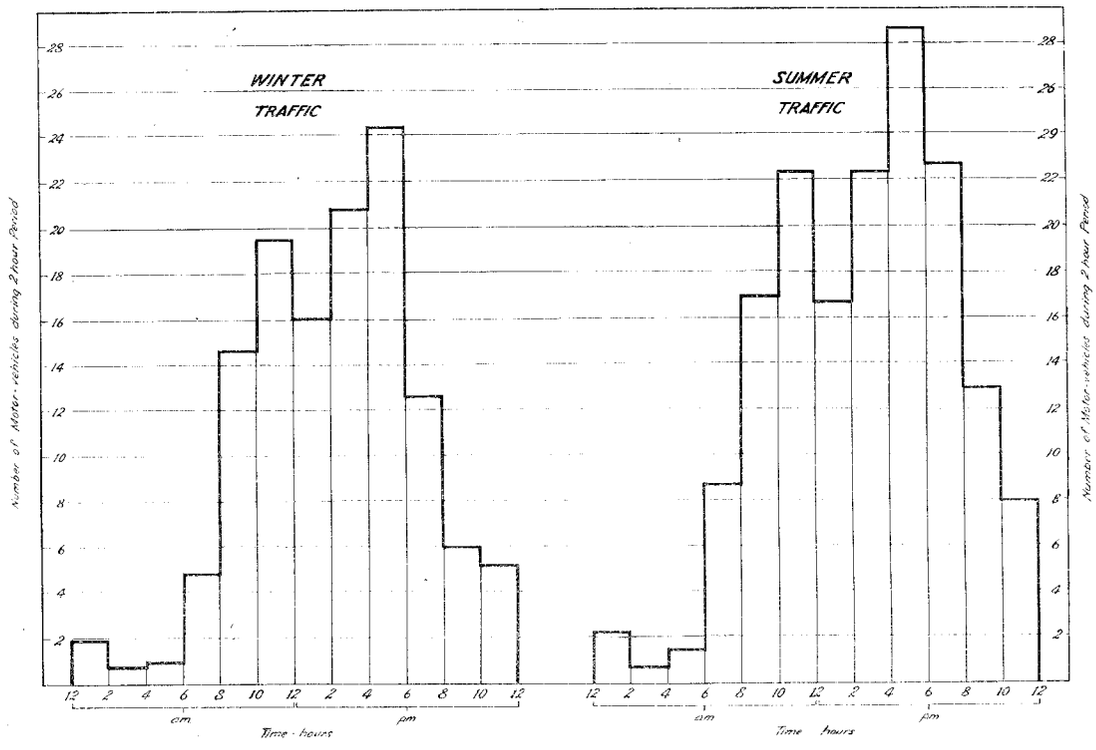
In the winter the week-end traffic is less than on any day during the working-week, and the week-day traffic increases gradually from Monday until Friday.

The actual relationship between the volume of traffic in the summer and in the winter is given in Table F and further illustrated by Fig. 6. This figure is based upon an average highway—*i.e.*, a length carrying the Dominion average volume of 145·5 motor-vehicles daily. It shows how the winter and the summer volumes of 127·6 and 163·4 vehicles respectively are distributed throughout an average twenty-four-hour period.

Table F.—The Relation between Summer and Winter Traffic.

Highways District.	Average Density.	Summer Traffic.	Winter Traffic.	Ratio of Winter to Summer Traffic.
	Motor-vehicles per Day.	Motor-vehicles per Day.	Motor-vehicles per Day.	Per Cent.
1. Auckland North	120·4	134·3	106·5	79·2
2. Auckland South	240·8	276·8	204·8	73·9
3. Tauranga	146·7	162·7	130·7	80·4
4. Gisborne	133·0	149·8	116·2	77·7
5. Napier	183·7	208·1	159·3	76·6
6. King-country	73·9	84·0	63·8	76·0
7. Taranaki..	212·1	219·3	204·9	93·4
8. Wanganui	151·7	175·4	128·0	73·0
9. Wellington West	278·6	325·1	232·1	71·4
10. Wellington East	119·8	141·7	97·9	69·0
North Island.. ..	166·6	188·1	145·1	77·1
11. Nelson	95·5	106·1	84·9	80·0
12. West Coast	80·7	88·8	72·6	81·8
13. Canterbury North ..	72·1	83·9	60·3	71·9
14. Canterbury Central ..	168·2	192·6	143·8	74·6
15. Canterbury South ..	139·6	153·0	126·2	82·5
16. Otago Central	97·3	113·3	81·3	71·8
17. Otago South	177·1	192·4	161·8	84·1
18. Southland	110·4	117·1	103·6	88·5
South Island ..	119·2	133·0	105·4	79·4
New Zealand.. ..	145·5	163·4	127·6	78·1

FIG. 6.—COMPARISON OF VOLUMES OF SUMMER AND WINTER TRAFFIC ON AN AVERAGE MILE OF HIGHWAY, SHOWING THE DISTRIBUTION THROUGHOUT AN AVERAGE DAY.



Abnormal peaks of traffic occur on various occasions due to special local events and holidays. This is exemplified by a tally taken at a station between Lower Hutt and Upper Hutt on the Wellington-Napier Main Highway. The average daily volume at this station throughout the year was found to be 1,167 vehicles, private cars numbering 877; but on one particular day during the summer census, which happened to be race day at Trentham, the traffic amounted to 3,398 motor-vehicles, of which 2,900 were private cars or taxis.

To present some idea of the extent to which this abnormal traffic may be concentrated over a short period the results of a further count taken on the same section of highway on a recent race day reveal that 1,604 motor-vehicles passed in the space of a little more than two hours. This was at the rate of 9·6 vehicles per minute, or equivalent to a daily volume of 13,749 vehicles.

During this period there was a peak interval of twenty-six minutes when 559 vehicles passed the tally point—*i.e.*, at the rate of 21·5 per minute, or equal to a daily volume of 30,960. During the densest one-minute interval thirty-three vehicles were recorded, this probably representing about the maximum traffic-capacity of the road.

(*f*) Analysis of Traffic, by Type of Vehicle.

A further analysis discloses the relative use of the main highways by different types of motor-vehicles.

Table G.—Analysis of the Vehicle-mileage according to Type of Motor-vehicle.

Type of Vehicle.	Annual Vehicle-mileage and Percentage of Total.					
	North Island.		South Island.		New Zealand.	
	Vehicle-miles.	Percentage.	Vehicle-miles.	Percentage.	Vehicle-miles.	Percentage.
Private cars	255,005,060	67·57	146,249,295	67·62	401,254,355	67·59
Trade motors—						
Under 2 tons ..	31,893,700	8·45	20,783,100	9·61	52,676,800	8·87
2 to 4½ tons ..	29,146,710	7·72	11,803,735	5·46	40,950,445	6·90
4½ to 6½ tons ..	23,144,285	6·13	12,039,890	5·57	35,184,175	5·93
Over 6½ tons ..	4,077,415	1·08	2,716,695	1·26	6,794,110	1·14
Total trade motors	88,262,110	23·38	47,343,420	21·90	135,605,530	22·84
Public passenger vehicles—						
Service cars ..	8,116,870	2·15	4,514,320	2·09	12,631,190	2·13
Omnibuses	2,825,830	0·75	1,826,460	0·84	4,652,290	0·78
Total public passenger-vehicles	10,942,700	2·90	6,340,780	2·93	17,283,480	2·91
Motor-cycles ..	20,145,445	5·34	13,540,770	6·26	33,686,215	5·67
Trailers	2,126,855	0·56	2,047,650	0·95	4,174,505	0·70
Miscellaneous.. ..	957,760	0·25	745,330	0·34	1,703,090	0·29
All motor-vehicles	377,439,930	100·00	216,267,245	100·00	593,707,175	100·00

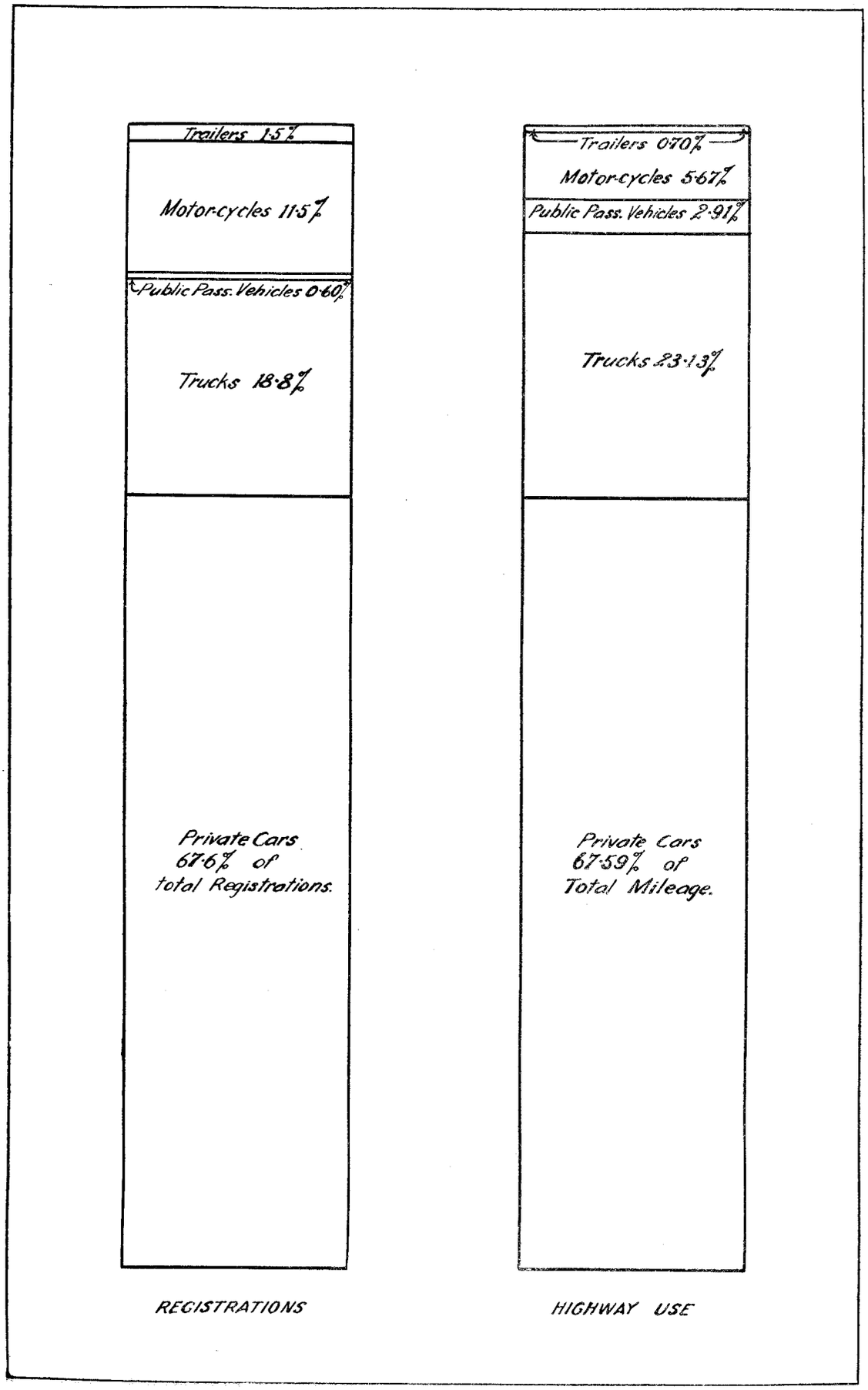
This table also affords comparison between the two Islands of the relative use by each type of vehicle. Thus in respect of—

(i) Private cars: The North Island highways carried 63·55 per cent. and the South 36·45 per cent.
(ii) Light trucks: The North Island highways carried 60·55 per cent. and the South 39·45 per cent.
(iii) Heavy trucks: The North Island highways carried 67·97 per cent. and the South 32·03 per cent.
(iv) Service cars: The North Island highways carried 64·26 per cent. and the South 35·74 per cent.
(v) Omnibuses: The North Island highways carried 60·74 per cent. and the South 39·26 per cent.
(vi) Motor-cycles: The North Island highways carried 59·80 per cent. and the South 40·20 per cent.
(vii) Trailers: The North Island highways carried 50·95 per cent. and the South 49·05 per cent.
(viii) Miscellaneous vehicles: The North Island highways carried 56·24 per cent. and the South 43·76 per cent.

Of all motor-vehicles: The North Island highways carried 63·57 per cent. and the South 36·43 per cent.

The use of the main-highway system by different types of motor-vehicles is compared in Fig. 7 with the proportions of each type registered in the Dominion at the end of 1934.

FIG. 7.—COMPARISION OF THE USE OF THE MAIN HIGHWAY SYSTEM BY DIFFERENT TYPES OF MOTOR-VEHICLES AND THE PROPORTIONS OF EACH TYPE OF VEHICLE REGISTERED.



(*g*) Average Weight of Motor-vehicles on the Highways.

The average weight of each type of motor-vehicle was estimated, and a comparison of the weight of the average motor-vehicle on the road in each highway district is afforded by Table H :—

Table H.—Comparison of Weights of Motor-vehicles in each District.

Highways District.	Average Daily Ton-miles on the System.	Average Daily Number of Vehicle-miles.	Average Weight per Vehicle, in Tons.
Auckland North	175,540	111,961	1·57
Auckland South	396,703	246,062	1·61
Tauranga	163,128	99,896	1·63
Gisborne	82,614	48,252	1·71
Napier	215,569	128,923	1·67
King-country	78,615	48,241	1·63
Taranaki	145,026	93,837	1·55
Wanganui	113,519	73,320	1·55
Wellington West	207,568	126,756	1·64
Wellington East	96,722	56,834	1·70
North Island	1,675,004	1,034,082	1·62
Nelson	102,752	61,160	1·68
West Coast	77,189	41,932	1·84
Canterbury North	38,041	23,819	1·60
Canterbury Central	168,776	112,373	1·50
Canterbury South	153,303	103,036	1·49
Otago Central	109,716	72,931	1·51
Otago South	126,520	82,398	1·54
Southland	158,260	94,864	1·67
South Island	934,557	592,513	1·58
New Zealand	2,609,561	1,626,595	1·61

(*h*) Passengers and Goods Traffic.

From the analysis of traffic according to types of vehicles it is possible to obtain some idea of the volume of passenger traffic and the movement of goods. These figures are based upon rather arbitrary assumptions which, however, were made after a careful study of all available data. In the case of passengers it was estimated that on the average 2·9 persons were carried per private motor-car; 4·0 and 7·0 passengers per service car and per omnibus respectively; and 1·2 persons per motor-cycle.

In regard to the average pay-loads of goods-vehicles, a reasonable allowance would probably be half the weight of the maximum pay-load available for each class of truck.

The results obtained from this investigation are set out in Tables (I) and (J) below.

Table I.—Estimated Annual Passenger Traffic on Main-highway System.

Highways District.	Mileage.	Annual Passenger Mileage.				Average Daily Number of Passengers Carried on Main-highways System.
		Private Cars.	Public Passenger Vehicles.	Motor-cycles.	All Passenger Vehicles.	
Auckland North	930¾	75,781,300	5,388,495	2,982,415	84,152,210	247·7
Auckland South	1,022	176,084,760	11,526,335	5,873,945	193,485,040	518·7
Tauranga	680¾	71,369,545	5,126,060	1,395,760	77,891,365	313·5
Gisborne	362¾	32,854,745	3,837,610	1,386,270	38,078,625	287·6
Napier	702	92,289,520	10,293,365	2,568,870	105,151,755	410·4
King-country	652½	33,098,200	1,915,520	910,675	35,924,395	150·8
Taranaki	442½	68,087,830	2,315,925	3,374,060	73,777,815	456·8
Wanganui	483¼	55,963,990	2,125,395	1,771,710	59,861,095	339·4
Wellington West	455	95,419,395	6,130,175	2,713,410	104,262,980	627·8
Wellington East	474½	38,565,535	3,589,410	1,197,565	43,352,510	250·3
North Island	6,206	739,514,820	52,248,290	24,174,680	815,937,790	360·2
Nelson	640½	38,596,195	4,720,545	1,854,200	45,170,940	193·2
West Coast	519¾	23,254,150	3,005,775	1,334,440	27,594,365	145·5
Canterbury North	330¼	16,929,795	1,725,355	624,150	19,279,300	159·9
Canterbury Central	668	82,311,150	4,189,105	4,445,700	90,945,955	373·0
Canterbury South	737½	79,244,785	3,595,615	2,476,525	85,316,925	316·9
Otago Central	749¾	54,755,110	3,614,960	1,745,065	60,115,135	219·7
Otago South	465¼	62,735,105	4,949,765	1,730,830	69,415,700	408·8
Southland	859	66,297,140	5,041,380	2,038,160	73,376,680	234·0
South Island	4,970	424,123,430	30,842,500	16,249,070	471,215,000	259·8
New Zealand	11,176	1,163,638,250	83,090,790	40,423,750	1,287,152,790	315·5

Table J.—Estimated Annual Movement of Goods on Main-highway System.

Highways District.	Mileage.	Ton-mileage of Goods Annually.					Average Daily Tons carried by Main-highway System.
		L Plate Trucks.	Classes A to E.	Classes F to I.	Classes J to K.	All Trucks.	
Auckland North	930¾	1,725,355	4,978,600	2,232,340	106,580	9,042,875	26·6
Auckland South	1,022	3,960,615	5,930,155	8,846,505	1,361,450	20,098,725	53·9
Tauranga ..	680¾	1,747,255	3,044,100	2,903,210	657,730	8,352,295	33·6
Gisborne ..	362¾	532,535	1,342,470	2,290,375	298,570	4,463,950	33·7
Napier	702	2,167,005	2,435,280	4,274,880	1,600,890	10,478,055	40·9
King-country ..	652½	688,390	1,884,130	1,857,120	37,960	4,467,600	18·8
Taranaki ..	442½	1,484,455	1,468,395	3,320,040	840,230	7,113,120	44·0
Wanganui ..	483¼	950,460	1,236,620	2,224,310	734,380	5,145,770	29·2
Wellington West	455	1,806,750	1,680,095	4,459,570	1,853,470	9,799,885	59·0
Wellington East	474½	884,030	1,504,165	2,308,260	663,570	5,360,025	30·9
North Island	6,206	15,946,850	25,504,010	34,716,610	8,154,830	84,322,300	37·2
Nelson	640½	1,321,665	1,355,610	2,003,850	1,146,830	5,827,955	24·9
West Coast ..	519¾	824,535	1,369,480	2,659,390	646,780	5,500,185	29·0
Canterbury North	330¼	309,885	325,580	774,165	427,780	1,837,410	15·2
Canterbury Central	668	1,658,195	1,691,410	2,556,825	1,266,550	7,172,980	29·4
Canterbury South	737½	1,751,270	1,229,320	2,484,555	507,350	5,972,495	22·2
Otago Central ..	749¾	1,295,020	1,147,560	1,728,640	256,960	4,428,180	16·2
Otago South ..	465¼	1,418,025	1,354,515	1,861,500	346,750	4,980,790	29·3
Southland ..	859	1,812,955	1,854,930	3,991,275	834,390	8,493,550	27·1
South Island	4,970	10,391,550	10,328,405	18,060,200	5,433,390	44,213,545	24·4
New Zealand	11,176	26,338,400	35,832,415	52,776,810	13,588,220	128,535,845	31·5

(*i*) The Effect of Traffic upon the Maintenance-cost of Non-dustless Surfaces.

A comparison has been made of traffic densities and annual road-maintenance costs on non-dustless sections of the main-highway system. While it was found that extremely wide divergences of cost occurred on roads carrying similar volumes of traffic, sufficient data is available to establish the fact that the volume of traffic has a definite effect upon maintenance-costs of gravel and other allied types of surfaces.

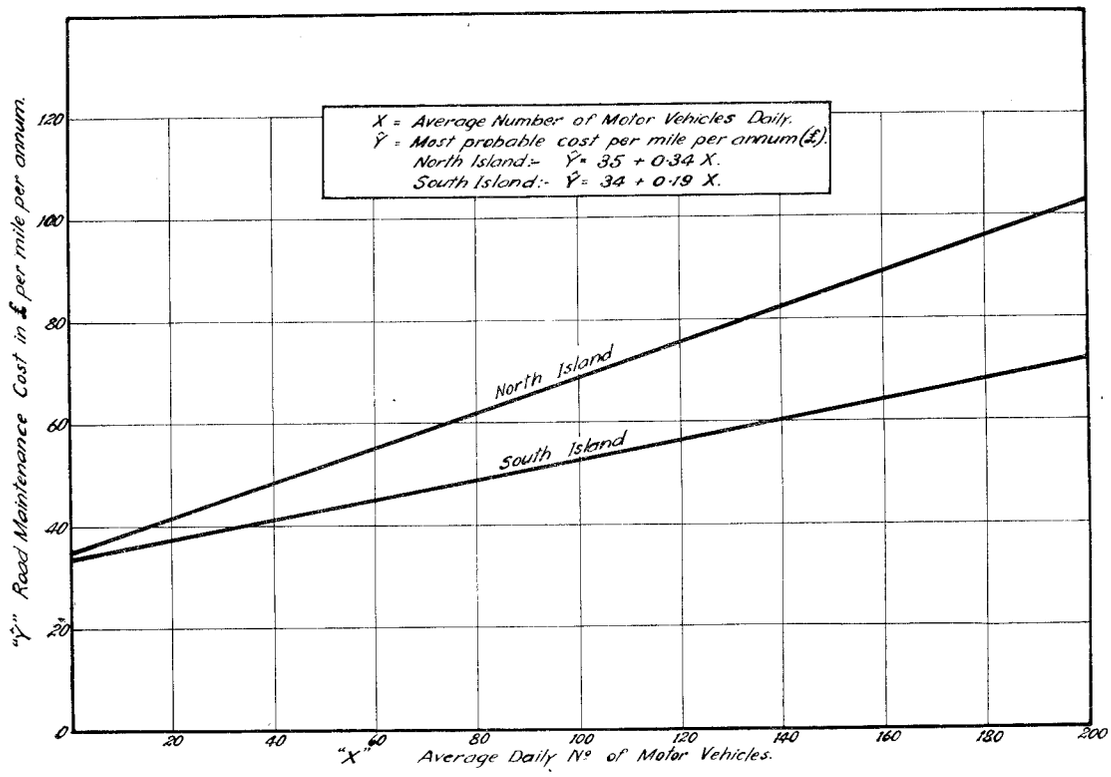
It was not possible to analyse individual maintenance-costs according to the manner in which the expenditure was made, and hence the figure taken included, in addition to surface-maintenance, the cost of restoring damage from climatic causes and all other work undertaken under the description of maintenance apart from actual surface-maintenance.

It was found that there was a probable cost of about £35 per mile annually irrespective of traffic, but that with an increase of traffic there was a corresponding increase in the total maintenance-cost due to surface-wear. This figure amounts to 0·224d. per vehicle-mile in the North Island and 0·125d. per vehicle-mile on the South Island system.

The figures must, of course, be applied with caution, as varying conditions apply in different districts and on individual roads even in the same district. Important factors influencing costs are topographical and climatic conditions, costs of road metal, and varying standards and methods of maintenance.

The probable effect of traffic on the cost of maintenance of the North and South Island main highway systems is indicated by Fig. 8.

FIG. 8.—THE EFFECT OF MOTOR TRAFFIC ON THE MAINTENANCE COST OF NON-DUSTLESS SURFACED MAIN HIGHWAYS.



(*j*) NON-MOTOR TRAFFIC.

Although the census was primarily for the purpose of measuring and analysing motor-vehicle traffic using the highways, the opportunity was taken of determining also the volume and nature of non-motor traffic.

A comparison between motor and non-motor traffic upon a weight basis shows that 94·4 per cent. of the total ton-mileage consists of motor traffic and only 5·6 per cent. of non-motor traffic.

Table K compares the respective volumes and densities of the two classes of traffic in each highways district.

The non-motor traffic is further subdivided in Table L into two classes—viz., (i) vehicular traffic and (ii) horses, cattle, and sheep. The only method of comparison is by weight, suitable weights being adopted for each form of traffic recorded.

Figure 9 illustrates various points of interest concerning the non-motor traffic which emerge from the investigation.

FIG. 9.—NON-MOTOR TRAFFIC.

(i) Proportion of total traffic on main highway system; (ii) proportion carried by main highway system in each Island; (iii) analysis according to types of traffic; and (iv) daily density.

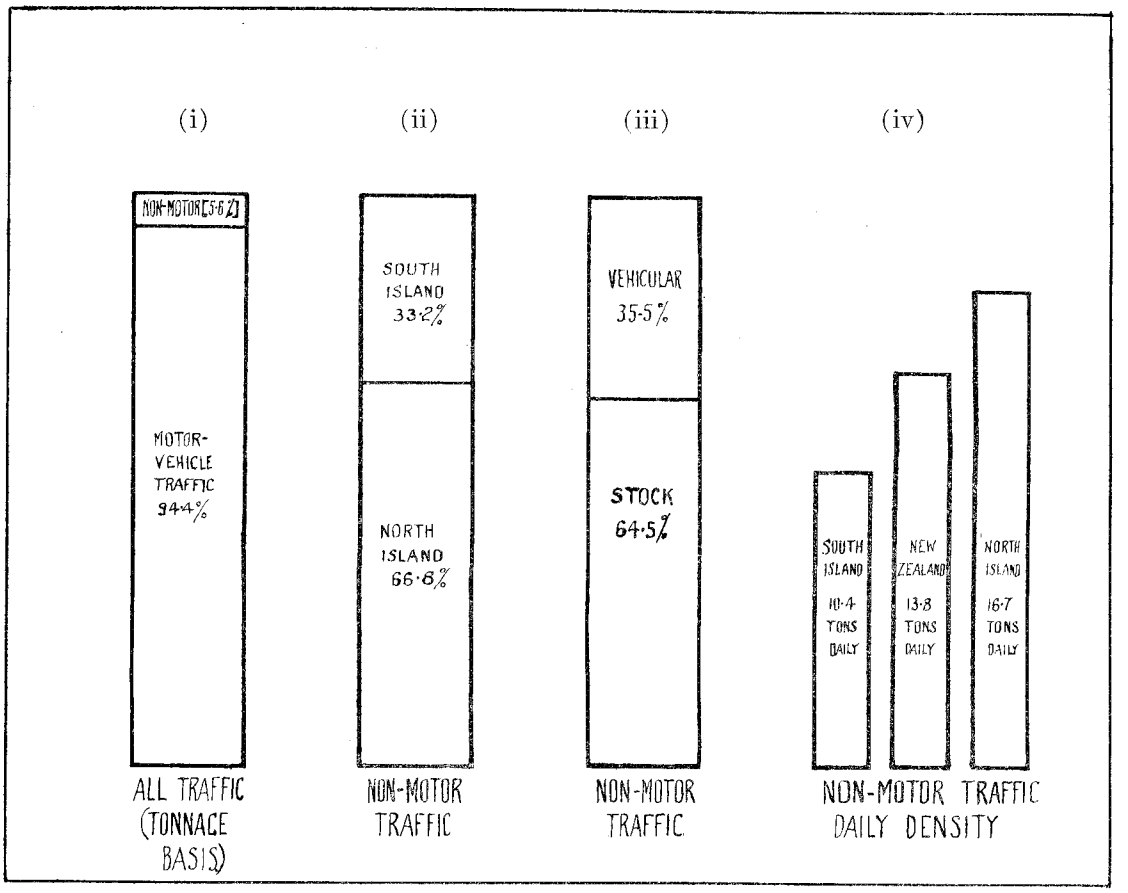


Table K.—Comparison of Motor and Non-motor Traffic.

Highways District.	Mileage.	Volume of Traffic.			Daily Density (Average Tonnage carried).			Proportion of Total Traffic.	
		Average Daily Motor Traffic.	Average Daily Non-motor Traffic.	Total Daily Traffic.	Motor Traffic.	Non-motor Traffic.	Total Traffic.	Motor Traffic.	Non-motor Traffic.
		Ton-miles.	Ton-miles.	Ton-miles.	Tons.	Tons.	Tons.	Per Cent.	Per Cent.
Auckland North ..	930¾	175,540	9,220	184,760	188·6	9·9	198·5	95·01	4·99
Auckland South ..	1,022	396,703	14,089	410,792	388·2	13·8	402·0	96·57	3·43
Tauranga	680¾	163,128	16,995	180,123	239·6	25·0	264·6	90·55	9·45
Gisborne	362¾	82,614	11,534	94,148	227·7	31·8	259·5	87·75	12·25
Napier	702	215,569	14,677	230,246	307·1	20·9	328·0	93·63	6·37
King-country ..	652½	78,615	4,929	83,544	120·3	7·6	127·9	94·10	5·90
Taranaki	442½	145,026	10,936	155,962	327·7	24·7	352·4	92·99	7·01
Wanganui	483¼	113,519	6,664	120,183	234·9	13·8	248·7	94·45	5·55
Wellington West ..	455	207,568	8,055	215,623	456·2	17·7	473·9	96·27	3·73
Wellington East ..	474½	96,722	6,368	103,090	203·8	13·4	217·2	93·83	6·17
North Island totals	6,206	1,675,004	103,467	1,778,471	269·9	16·7	286·6	94·18	5·82
Nelson	640½	102,752	5,857	108,609	160·4	9·1	169·5	94·63	5·37
West Coast	519¾	77,189	1,623	78,812	148·5	3·1	151·6	97·96	2·04
Canterbury North ..	330¼	38,041	2,509	40,550	115·2	7·6	122·8	93·81	6·19
Canterbury Central ..	668	168,776	7,815	176,591	252·7	11·7	264·4	95·57	4·43
Canterbury South ..	737½	153,303	10,467	163,770	207·9	14·2	222·1	93·61	6·39
Otago Central ..	749¾	109,716	4,172	113,888	146·3	5·6	151·9	96·31	3·69
Otago South	465¼	126,520	6,351	132,871	271·9	13·7	285·6	95·20	4·80
Southland	859	158,260	12,647	170,907	184·2	14·7	198·9	92·61	7·39
South Island totals	4,970	934,557	51,441	985,998	188·0	10·4	198·4	94·78	5·22
New Zealand totals	11,176	2,609,561	154,908	2,764,469	233·5	13·8	247·3	94·40	5·60

Table L.—Analysis of Non-motor Traffic.

Highways District.	Mileage.	Average Daily Ton-mileage.			Density (average Tonnage carried).			Proportion of Total Non-motor Traffic.	
		Vehicular.	Stock.	Total.	Vehicular.	Stock.	Total.	Vehicular.	Stock.
		Ton-miles.	Ton-miles.	Ton-miles.	Tons.	Tons.	Tons.	Per Cent.	Per Cent.
Auckland North	930¾	1,733	7,487	9,220	1·9	8·0	9·9	18·8	81·2
Auckland South	1,022¼	5,100	8,989	14,089	5·0	8·8	13·8	36·2	63·8
Tauranga	680¾	2,430	14,565	16,995	3·6	21·4	25·0	14·3	85·7
Gisborne	362¾	1,361	10,173	11,534	3·8	28·0	31·8	11·8	88·2
Napier	702	2,436	12,241	14,677	3·5	17·4	20·9	16·6	83·4
King-country	652½	700	4,229	4,929	1·1	6·5	7·6	14·2	85·8
Taranaki	442½	7,688	3,248	10,936	17·4	7·3	24·7	70·3	29·7
Wanganui	483¼	1,966	4,698	6,664	4·1	9·7	13·8	29·5	70·5
Wellington West	455	2,924	5,131	8,055	6·4	11·3	17·7	36·3	63·7
Wellington East	474½	2,101	4,267	6,368	4·4	9·0	13·4	33·0	67·0
North Island	6,206	28,439	75,028	103,467	4·6	12·1	16·7	27·5	72·5
Nelson	640½	3,391	2,466	5,857	5·3	3·8	9·1	57·9	42·1
West Coast	519¾	591	1,032	1,623	1·1	2·0	3·1	36·4	63·6
Canterbury North	330¼	1,016	1,493	2,509	3·1	4·5	7·6	40·5	59·5
Canterbury Central	668	4,783	3,032	7,815	7·2	4·5	11·7	61·2	38·8
Canterbury South	737½	5,150	5,317	10,467	7·0	7·2	14·2	49·2	50·8
Otago Central	749¾	2,028	2,144	4,172	2·7	2·9	5·6	48·6	51·4
Otago South	465¼	2,947	3,404	6,351	6·4	7·3	13·7	46·4	53·6
Southland	859	6,703	5,944	12,647	7·8	6·9	14·7	53·0	47·0
South Island	4,970	26,609	24,832	51,441	5·4	5·0	10·4	51·7	48·3
New Zealand	11,176	55,048	99,860	154,908	4·9	8·9	13·8	35·5	64·5

(*k*) Growth of Motor-vehicle Traffic.

Until 1934–35 only unrelated tallies, mostly lacking in details, had been taken on a few of the highways, while on the greater number no earlier data whatever is available. That there has been a rapid and fairly consistent growth of traffic due to the steadily increasing use of the motor-vehicle is well known. Some idea may be gained of the extent of this growth in past years from a study of the petrol-consumption figures and from the general increase in motor registrations. These are shown in the form of relative numbers in Table M and in Fig. 10. The number of motor-vehicles was not recorded prior to 1925, but the graph shows a fairly close connection between registrations and petrol-consumption since that date. Incidentally, it also shows to a marked degree the effect of the economic depression between 1930 and 1935.

Table M.—Showing the Increase in Petrol-consumption, 1915–1935, and in Registrations, 1925–1935.
(Index numbers: Base year 1925 = 100.)

Year.	Relative Numbers.	
	Petrol-consumption.	Motor-vehicle Registration.
1915	21	..
1916	28	..
1917	25	..
1918	32	..
1919	27	..
1920	54	..
1921	57	..
1922	50	..
1923	61	..
1924	87	..
1925	100	100
1926	134	125
1927	144	138
1928	157	152
1929	170	172
1930	189	183
1931	166	184
1932	149	181
1933	154	152
1934	167	162
1935	185	177

It may be of interest to present here, as striking examples of the recent growth of motor-traffic, a comparison between traffic tallied on a few sections of rural highways during the recent census and the traffic on the same sections about ten years previously. The sections taken as examples were selected solely by reason of being the only records available for this comparison. The decline of non-motor traffic during the period is as marked as the advance in the motor-traffic.

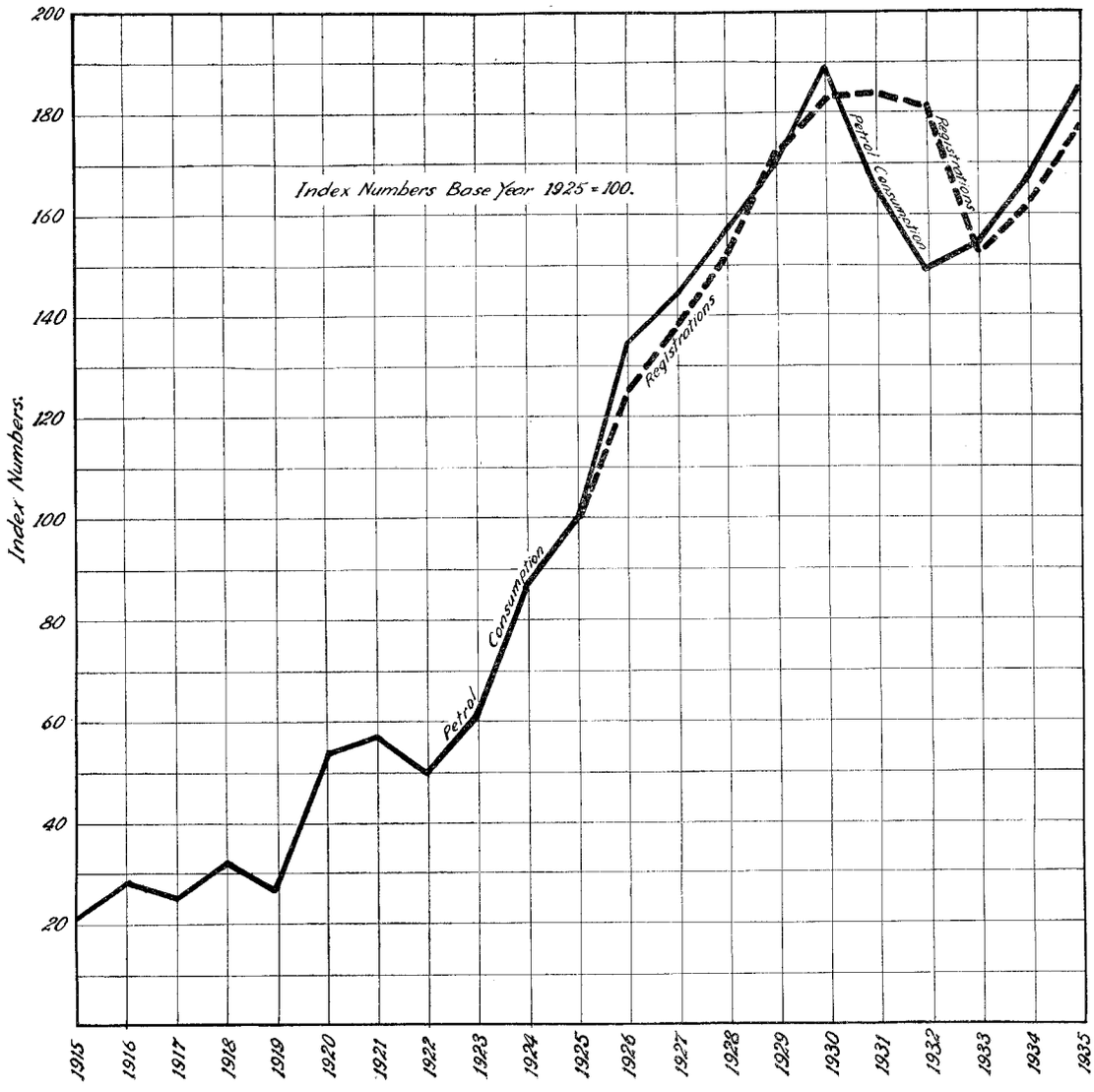
Table N.—Comparison of Traffic-density Ten Years Ago and at the Present Day.

Main Highway.	Section.	Average Number of Motor-vehicles and Date.	Average Number of Motor-vehicles and Date.
Great South Road ..	Papatoetoe–Manurewa	455 (January, 1924). (Also 37 horse-vehicles and 25 horsemen)	2,232 (January, 1935). (Also 10 horse-vehicles and 10 horsemen.)
Kopu–Hamilton ..	Te Aroha – Morrinsville	190 (January, 1924). (Also 116 horse - vehicles and 47 horsemen)	504 (January, 1935). (Also 24 horse - vehicles and 5 horsemen.)
Wellington–Auckland..	Sanson–Bulls ..	329 (February, 1924). (Also 28 horse - vehicles and 36 horsemen)	577 (Average for 1934 – 35). (Also 1 horse-vehicle and 6 horsemen.)
Wellington–Auckland..	Levin–Foxton ..	113 (February, 1924). (Also 25 horse - vehicles and 29 horsemen)	444 (Average for 1934 – 35). (Also 1 horse-vehicle and 3 horsemen.)
Wellington–Auckland..	Porirua–Paremata ..	147 (February, 1926). (No record of non-motor-traffic)	982 (January, 1935). (Also 5 horse - vehicles and 1 horseman.)
Wellington–Napier ..	Rimutaka Hill ..	114 (January, 1926). (No record of non-motor-traffic)	411 (January, 1935). (Also 4 horse-vehicles, nil horsemen.)

By forecasting population and the increasing use of the motor-vehicle per unit of population based upon present trends it is possible to gain an approximate idea of the future growth of traffic. As a conservative estimate it has been calculated in this way that by 1945 the traffic on the roads of New Zealand will have increased by at least 30 per cent. since 1935.

While such general conclusions may now be drawn concerning the future development of motor traffic, it will be possible at a later stage, when further records are obtained from traffic surveys similar to the one recorded in this report, to forecast the future traffic with some degree of accuracy not only on the roading system as a whole, but on individual routes.

Fig. 10.—Graph showing Increase in Petrol-consumption, 1915–35, and Increase in Motor-vehicle Registrations, 1925–35.



9. TRANSPORT LICENSING ACT, 1931.

A. PASSENGER SERVICES, 1935–36.

During the year under review the various licensing authorities considered applications for renewal of licenses which had expired, as well as a number relating to new services, and also a large number relating to temporary licenses for services running to race meetings, shows, &c. In order to spread the peak of work involved in dealing with these applications, the continuous and seasonal licenses in the South Island had been made to expire on 31st August, 1935, and those in the North Island on 28th February, 1936. Most of the continuous licenses in the South Island which were renewed as from 1st September last were extended for a three-yearly period expiring on 31st August, 1938, under the terms of section 2 of the Transport Licensing Amendment Act, 1935. It is probable that at the forthcoming hearings the renewed continuous licenses in the North Island will similarly be extended for three years ending 28th February, 1939.

(*a*) Continuous Passenger-service Licenses.

Table No. 8 of the appendix indicates that of the 738 applications heard, 669 were granted, 28 refused, 28 withdrawn, and 13 deferred. The corresponding figures for the previous year were 771, 720, 16, 30, and 5 respectively.

(*b*) Seasonal Passenger-service Licenses.

Only 28 applications were received for seasonal licenses, of which 24 were granted, 2 were refused, and 2 were withdrawn, as compared with 33 during the previous year, when 27 were granted, 2 withdrawn, and 4 deferred.

(*c*) Temporary Passenger-service Licenses.

Notwithstanding that arrangements were again made this year for operators running services on a more or less regular basis to race meetings, &c., to procure continuous or seasonal licenses in lieu of numerous temporary licenses, the number of applications for temporary licenses again showed a substantial increase, this year's figure being 3,200, as compared with 2,548 for the previous year. Of these, 64 were refused, as against 32 for the previous year, the remainder being granted.

(*d*) Finances and Traffic Statistics.

Tables Nos. 9, 10, and 11 set out respectively the following statements, in so far as they are available, for the five years ended 31st March, 1936; the figures for 1931–32 have been estimated, partly from the original returns received from operators, and partly from later returns and from other data, while the figures for the South Island, and hence for New Zealand, for 1935–36 are not yet available:—

(1) Traffic and financial operating statistics.
(2) Average operating expenses and revenue per vehicle mile.
(3) Assets and liabilities, and depreciation written off vehicles.

(i) *Traffic and Operating Statistics.*

The most noteworthy feature of the latest figures is the much improved rate of profit for the services generally. The estimated loss for 1931–32, immediately prior to the Act coming into operation, was about £40,000. During the following three years the profits were £5,159, £38,246, and £65,393 respectively. The profits for the North Island only during 1935–36 were £57,345, as against £36,362 for the previous year. If this rate of increase is maintained in the South Island, the total profits for New Zealand will be approximately £103,000 for the year ended 31st March, 1936.

The average seating-capacity of the vehicles used in the North Island during the three years ended 31st March, 1936, was 13·4, 13·5, and 15·4 respectively. The corresponding figures for New Zealand are not available, except for 1935, when the average was 13·5. Wages, plus drawings by working proprietors in lieu of wages, were as indicated by the following table:—

——	1936.	1935.	1934.	1933.
Wages, plus drawings by working proprietors in lieu of wages:—				
Aggregate—	£	£	£	£
North Island	158,444	156,825	160,849	163,479
South Island	..	61,025	58,815	55,605
New Zealand	..	217,850	219,664	219,084
Per vehicle-mile—	d.	d.	d.	d.
North Island	2·50	2·53	2·49	2·37
South Island	..	2·21	2·19	2·15
New Zealand	..	2·43	2·40	2·31
Per vehicle—	£	£	£	£
North Island	234	211	209	196
South Island	..	155	147	162
New Zealand	..	192	188	186

The following table shows the improved passenger loading per trip, and the profit per mile, as compared with previous years :—

——	1936.	1935.	1934.	1933.
Passengers per journey—				
North Island	10·9	9·4	8·9	9·2
South Island	..	8·3	8·2	7·9
New Zealand	..	9·2	8·8	8·9
Revenue per vehicle-mile—	d.	d.	d.	d.
North Island	9·95	9·58	9·14	9·26
South Island	..	10·03	9·65	9·31
New Zealand	..	9·72	9·29	9·27
Operating expenses per vehicle-mile—				
North Island	9·04	8·99	8·85	9·21
South Island	..	8·98	8·93	9·24
New Zealand	..	8·99	8·87	9·22
Profit per vehicle-mile—				
North Island	0·91	0·59	0·29	0·05
South Island	..	1·05	0·72	0·07
New Zealand	..	0·73	0·42	0·05

(ii) *Assets and Liabilities.*

Table No. 11 of the Appendix sets out the assets and liabilities of the industry, as far as they are available, for the four years ended 31st March, 1936. These figures must be interpreted with caution, as during the last two years greater care has been taken to exclude items not connected with the services, while some of the assets may have been depreciated below their real value. The figures, however, are considered to be sufficiently accurate to furnish a basis for comparison between the various years. They indicate a substantial scaling-down of the overcapitalization that previously existed in the industry. If the South Island figures are assessed at the same rate of reduction as for the North Island, the New Zealand total of capital employed is now approximately £727,000, representing just under 54 per cent. of the figure for 1932–33, or 48 per cent. of that estimated for the year immediately prior to the licensing system coming into operation. The following table sets out the relative proportions of capital plus reserves, and "outside" liabilities to the total assets employed :—

——	1936.	1935.	1934.	1933.
Capital and reserves—	Per Cent.	Per Cent.	Per Cent.	Per Cent.
North Island	65·6	67·6	67·2	68·5
South Island	..	66·5	73·3	65·6
New Zealand	..	67·2	69·3	67·6
Other liabilities—				
North Island	34·4	32·4	32·8	31·5
South Island	..	33·5	26·7	34·4
New Zealand	..	32·8	30·7	32·4

(iii) *Fare-schedules.*

The licensing law requires the Licensing Authorities to consider, *inter alia*, the fares charged by operators. The fares are reviewed each year, and it is open to interested parties to make representations in this connection. Last year qualified officers of the Department examined the accounts and records of licensees to ensure that their requirements as to keeping proper accounts and records were being complied with. A similar examination is proceeding this year. By this means the authorities are able to ensure that an equitable portion of the benefits of the licensing system are passed on to the users of the services in the form of reduced fares.

(*e*) New Transport Districts.

Two maps in the Appendix to this report show the boundaries of the new transport districts.

(*f*) Passenger-service Vehicle Inspection.

The number of applications for certificates of fitness or temporary permits received during the period 1st March, 1935, to 29th February, 1936, totals 1,998. Thirty-eight vehicles were condemned as unfit for service, while 104 were voluntarily withdrawn.

Whereas prior to 1935 a certificate of fitness had a currency of one year, it now, under the provisions of the Transport Licensing Amendment Act, 1935, continues until revoked.

Computed in the table below is the total number of vehicles covered by certificates of fitness or permits during the period under review :—

District No.	Omnibuses.	Service Cars.	Service Coaches.	Passenger-trucks.	Total.
1	13	37	5	55	110
2	214	121	32	27	394
4	78	143	36	1	258
5	12	99	8	26	145
6	120	136	8	30	294
7	21	92	1	5	119
8	56	51	10	6	123
9	51	72	4	13	140
10	24	27	4	8	63
Totals	589	778	108	171	1,646

A study of the foregoing table indicates an increase in the number of omnibuses and service coaches, together with a reduction in the number of service cars and passenger-trucks. A statistical survey of the licensed passenger-services in the North Island indicates a definite trend in favour of the larger vehicles and the average seating-capacity per vehicle has increased from 13·5 to 15·4.

Under the original Transport Licensing Act provision was made for the inspection of all public passenger-vehicles used in connection with passenger-services. For the past three years all these vehicles have been required to carry certificates of fitness, which are issued only to those vehicles which comply with the requirements set out in the regulations under the Act. As a result of this policy of inspection there has been a decided improvement in the design, comfort, and safety of the vehicles.

The popularity of the streamline body design has been a feature of all service cars constructed during the past year, and these vehicles not only give a pleasing appearance, but also provide for the accommodation of luggage within the body itself. The standard of comfort has been adequately provided for by the owners of vehicles and little or no encouragement in this direction is now necessary on the part of the Department.

Under the last amendment to the Act provision is made for the inspection of goods-vehicles used under goods-service licenses. Draft regulations were submitted to the industry with the object of soliciting suggestions and comment. It is hoped to apply these regulations this year to all goods-service vehicles. This work will embrace 5,000 vehicles, and it is the matter of safety which will receive the principal consideration.

During the past year the rise in popularity of the Diesel omnibus has been very marked. With the Diesel engine is to be associated a negligible fire risk, and this is a desirable factor, especially with respect to passenger-service vehicles.

B. GOODS-SERVICES, 1935–36.

(*a*) Applications dealt with.

Tables Nos. 12, 13, 14, and 15 of the Appendix set out the principal statistics of the licensed goods-services. Table No. 12, covering the number of applications for licenses dealt with, indicates that during the year ended 31st March, 1936, there were 2,080 applications for continuous licenses, of which 1,999 were granted, 56 were refused, 14 were withdrawn, and 10 were deferred. The following summarizes the figures during the last three years :—

——	Applications dealt with.	Granted.	Refused.	Withdrawn.	Deferred.
Continuous—					
1933–34	2,146	1,898	118	43	87
1934–35	2,146	2,016	91	25	14
1935–36	2,080	1,999	56	14	11
Seasonal—					
1933–34	99	88	3	8	..
1934–35	108	89	9	7	3
1935–36	104	93	4	6	1
Temporary—					
1933–34	3,800	3,793	7	..	..
1934–35	7,399	7,390	9	..	..
1935–36	8,489	8,458	31	..	..

The temporary-license figures again show a substantial increase as compared with the previous year.

(*b*) Finances and Statistics.

The figures in Table No. 13, which sets out the principal operating statistics for the goods-service industry, have been estimated on the basis of the proportion of vehicle authorities for which reasonably reliable financial and statistical returns were received. In each of the three years under review the satisfactory returns received represented just under 80 per cent. of the total vehicle authorities granted. The figures for the three years are not strictly comparable, as the returns for 1936 were examined more carefully than in the two previous years to exclude extraneous items such as the purchase and resale of goods, &c., from the revenue figures, and assets and liabilities not connected with the services from the balance-sheets. The figures, however, afford a reasonably accurate statement of the position.

The chief feature disclosed by the table is the substantial increase in the profits earned by the industry, the net profits for the years 1933–34, 1934–35, and 1935–36 being £176,000, £215,000, and £265,000 respectively. The profit for 1935-36 represents a return of 20·56 per cent. on the operators' capital employed. Wages and drawings by working proprietors in lieu of wages are set out in the following table, which also shows the depreciation written off the vehicles. Detailed figures for 1935 are not available :—

		North Island.		South Island.		New Zealand.	
		1936.	1934.	1936.	1934.	1936.	1934.
Total wages, plus drawings in lieu of wages	£	433,000	329,000	159,000	123,000	592,000	452,000
Wages, plus drawings, per vehicle-mile	d.	3·69	3·04	2·85	3·72	3·42	2·94
Depreciation written off vehicles ..	£	151,000	132,000	54,000	50,000	205,000	182,000
Percentage written off reducing value		19·51	19·27	17·60	18·80	18·69	19·12

(*c*) Assets and Liabilities.

The balance-sheet of the industry for the Dominion as at 31st March, 1936, shows a healthy position. Of the total assets employed (£1,350,000), £879,000, or 65 per cent., is represented by operators' capital and £471,000, or 35 per cent., by other liabilities. Vehicles comprise £876,000, or 42 per cent., of the total assets employed, the vehicles having an average value of £260 each.

(*d*) Classification of Trucks according to Size.

Table No. 14 shows an analysis of 2,684 of the 3,355 trucks for which vehicle authorities were granted as at 31st March, 1935, classified according to size of truck. The table indicates that the modal truck is a Class E (4–4½ tons gross laden weight) vehicle. The arithmetic mean has been worked out, and shows that the average is a Class F truck (4½–5 tons).

(*e*) Classification according to Fleets.

Table No. 15 sets out particulars of the average number of trucks operated by licensees. The figures cover only 1,412 of the 2,024 operators licensed during the year ended 31st May, 1935. The table shows an average of 1·9 vehicles for each licensed operator. Actually the total number of vehicle authorities granted represents an average of 1·7 vehicles per licensee. According to this table there is a steady increase of gross revenue with an increase in the size of the fleet; fleets containing ten or more trucks showed an average revenue of £914 per vehicle, while those operated by "one-truck" operators showed an average revenue of £533. Over 57 per cent. of the licensees under review operated only one vehicle, which indicates the predominance of the "owner-driver" in the industry.

C. APPEALS.

Under the Transport Licensing Amendment Act, 1936, the Transport Co-ordination Board, one of the functions of which was to hear appeals from the decisions of Licensing Authorities, was abolished as from 1st April, 1936. From that date the Minister of Transport became the authority to hear and determine appeals.

During the year ended 31st March, 1936, the Board heard 14 appeals relating to passenger-services. The decision of the Licensing Authority was upheld in 9 cases, modified in 3 cases, and reversed in 2 cases.

Out of 37 appeals in connection with goods-services the decision of the Licensing Authority was upheld in 18 cases, modified in 11, and reversed in 6 cases. Ten appeals were withdrawn and 2 adjourned.

10. AIR SERVICES.

Since the abolition of the Transport Co-ordination Board as from 1st April, 1936, the Minister of Transport has become the Licensing Authority for commercial air services. The Board's activities in connection with air services are covered in its annual report for 1936. As all the continuous licenses granted by the Board were for a period of four years, there has been very little administrative work involved in this phase of the Department's activities during the year under review.

Following upon representations made by Cook Strait Airways, Ltd., the fare between Wellington and Blenheim was increased from £1 5s. to £1 7s. 6d. each way. Applications from two companies are now on hand for extensions of existing services.

It is proposed to issue quarterly statistics showing the growth of commercial air transport in New Zealand. The first of these statements, covering the quarter ended on 31st March, 1936, is as under :—

Number of licensees operating regular services		4
Number of machines in use		8
Number of miles flown		187,170
Number of passengers carried—		
Paying	5,735	
Non-paying	171	
		5,906
Weight of goods and excess baggage carried (lb.)		7,008
Weight of mails carried (lb.)		6,485
Number of air-taxi licenses in operation		20

11. MOTOR ACCIDENTS.

Statistics taken from the reports of coroners' proceedings, showing details of fatal road accidents during the seven years ended 31st March, 1936, are set out in Table No. 16 of the Appendix.

The total number of deaths for the year 1935–36—*i.e.*, 203—is the second highest yearly total yet recorded, being exceeded only in 1930–31, when 247 deaths were recorded. The following table shows the annual figures correlated to the average number of vehicles on the road :—

Year ended 31st March,	Average Number of Vehicles on the Road.	Deaths.	Deaths per 10,000 Vehicles.
1930	177,486	186	10·5
1931	187,708	247	13·2
1932	183,806	157	8·5
1933	179,680	143	8·0
1934	178,925	135	7·5
1935	188,125	182	9·7
1936	194,456	203	10·4

This table shows that there is an increase in the number of deaths per 10,000 as the number of vehicles on the road increases. Attention is directed to the fallacy of endeavouring, by considering the number of deaths per 10,000 vehicles, to compare the relative safety on New Zealand roads with that of countries overseas. In New Zealand, for instance, there are approximately seven potential victims to each motor-vehicle, while in Britain in 1934 there were twenty-five. It is difficult to arrive at a fair basis of comparison of the road-fatality statistics of several countries.

Motorists were at fault in approximately 66 per cent. of the total fatalities, the chief factor being excessive speed in the circumstances, which was a feature in 18 per cent. of the total. It is a difficult matter to assess speed in every accident. Intoxication of the driver was a factor in only 2·5 per cent. of the fatalities. Recent investigations made by the British Medical Association at the invitation of the Minister of Transport in Britain showed that the effect of alcohol taken in doses insufficient to produce a state of "inability to operate a motor-vehicle" was to impair driving-efficiency for several hours after the liquor had been consumed. Tests made in the United States of America showed that in 119 consecutive accidents investigated alcohol in excess of 0·02 per cent. was present in the blood of 74 of the drivers. There is, therefore, every probability that sub-intoxication was present in a much larger percentage of the cases in New Zealand than is stated in the statistics.

The principal points emerging from a study of Table No. 16 are as under :—

(1) Accidents due to motor-vehicles colliding with pedestrians have increased from 46 in 1934–35 to 56 in 1935–36.
(2) Collisions between motor-vehicles increased from 36 to 45 during the same period.
(3) Collisions between motor-vehicles and bicycles increased from 23 to 27.
(4) Of the 191 fatal accidents, 43 occurred on Saturdays and 34 on Sundays.
(5) Twenty-nine of the victims were under the age of fifteen years, as compared with 26 for the previous year.
(6) Motor-cycles figured in an increased number of accidents, notwithstanding a reduction in the average number of motor-cycles on the road.
(7) Driving on the wrong side of the road contributed to 22 fatalities, as compared with 16 during the previous year.
(8) The motorist was at fault in 13 cases of collision with pedestrians, as against 7 last year.
(9) Pedestrians crossing or on the road without care, or becoming confused, contributed to 25 fatalities, as against 17 last year.

The prevention of motor-vehicle accidents has been the subject of much attention by the Department during the year. In July of this year the Motor-vehicles Amendment Act, 1936, was passed. Its chief effects may be summarized as the provision of more substantial penalties for "hit-and-run" and drunken motorists, the unification of numerous local-body traffic by-laws into a single easily-understood code, and the restriction of speed in towns, boroughs, and other thickly populated areas to a maximum of 30 miles per hour. In the near future it is proposed to call a conference of bodies interested in this matter, with a view to organizing a wider and systematic campaign of

road-accident prevention. At present a number of gramophone-records of road-safety lectures are being prepared for circulation amongst the schools. During the last seven years, approximately 12 per cent. of those killed have been children under the age of fifteen years; 36 per cent. have been under twenty-five years of age.

Although it is difficult to reduce the annual total of road accidents while the number of vehicles is increasing, it is not impossible. It has been done in several countries overseas. The following figures show the reduction in road accidents in Great Britain, following upon an energetic campaign by the Minister of Transport. During the year 1935 there were 160,000 more vehicles on the road than in 1934:—

Year.	Persons killed.	Persons injured.	Deaths per 1,000 Vehicles.
1932	6,667	206,450	4·06
1933	7,202	216,328	4·15
1934	7,343	231,603	3·92
1935	6,521	218,798	3·21

It will be observed that the ratio of persons injured to those killed in Great Britain is approximately 31 to 1. Similar figures have not been recorded in New Zealand, but negotiations are now proceeding with the Police Department with a view to having details collected of the number of persons injured in road accidents.

12. TRAFFIC CONTROL.

(*a*) Transport Licensing Act, 1931, and Amendments.

There has been no alteration in the policy adopted in supervising transport on the roads, and the Department still relies on the co-operation of local-body traffic officers to carry out this duty.

This system was reasonably successful in the past when the legislation was not generally known by those most concerned, but some dissatisfaction has been expressed by both passenger and goods licensees that control by local-body inspectors is not adequate or satisfactory.

Attention is at the present time being given to the question of improving the machinery for ensuring that the provisions of the transport legislation are reasonably observed.

(*b*) Motor-vehicles Act, 1924, and Amendments.

The very noticeable improvement in road safety which followed on last year's check on brakes and lights was not maintained, and clearly indicated that motorists were not giving these two items the necessary care and attention required by the regulations.

Arrangements were made for a further check-up when 55,067 vehicles were stopped on the roads. Approximately 31,000 of this number were actually tested, and 12·3 per cent. had defective brakes and 7 per cent. defective lights.

Much of the value of the check was lost through some local authorities failing to co-operate, but principally through the almost universal failure to institute Court proceedings. Although 6,327 vehicles did not comply with the requirements of the regulations, only 246 drivers were prosecuted.

The Department now has under consideration the question of whether some form of periodical inspection should not be adopted to ensure that all motor-vehicles are maintained in a reasonably safe mechanical condition.

(*c*) Traffic Offences.

It is not generally realized that convictions for traffic offences now represent approximately 30 per cent. of the total convictions in the Magistrates' Courts. For the calendar year 1930 the number of convictions for traffic offences numbered 18,145, but this number steadily declined for various reasons to 14,136 in 1933. The following summary shows the comparisons of the principal offences for which convictions were recorded during the last five years for which figures are available.

Class of Offence.	Calendar Year.				
	1930.	1931.	1932.	1933.	1934.
Registration, &c., of vehicles	3,678	4,184	4,521	4,337	4,460
Lighting of vehicles	3,965	2,557	3,406	3,661	3,234
Negligent or dangerous driving	3,923	3,109	2,693	2,314	2,429
Excessive speed	2,120	2,084	2,052	1,428	1,269
Parking regulations	1,836	1,049	949	694	1,326
Other	2,623	2,152	1,983	1,702	1,712
Totals	18,145	15,135	15,604	14,136	14,430

These figures give some idea of the magnitude of the problem of traffic enforcement in the Dominion. They also indicate that the number of registration, &c., offences shows an increasing tendency, while a disquieting feature is the increase in the number of convictions for negligent or dangerous driving.

(*d*) Drivers' Hours.

Standard hours for the drivers of licensed goods and passenger vehicles on lines similar to those adopted in Britain and elsewhere are now being introduced in the Dominion. Compliance with the new requirements is to be made a condition of each transport license.

The payment of award wages is also to be made a condition of each license. The earnings of "owner-drivers" will require to measure up to the standard set by the awards.

It is hoped that these two provisions will go a long way in eliminating some of the sweated conditions that exist in the industry at the present time.

13. CHANGES IN TRANSPORT LAWS.

Legislation.

During the period under review, two amendments have been made to transport legislation as follows:—

(*a*) *Transport Licensing Amendment Act, 1935.*

This extends to three years the possible term of road-transport licenses and makes unnecessary the renewal of certificates of fitness. The latter are now in force until revoked, but periodical inspection of the vehicle is still carried out.

As a desirable corrollary of the extension of term of the licenses, the Act provides also that Licensing Authorities may review a license during its term and may revoke it if changed conditions justify such course. This section has now been broadened in its effect.

(*b*) *Transport Licensing Amendment Act, 1936.*

This Act amends the Transport Licensing Act, 1931, and the Transport Licensing (Commercial Aircraft Services) Act, 1934, in various important directions.

The main change is the abolition of the Transport Co-ordination Board, and the vesting in the Minister of Transport of the Board's powers as Appeal and Investigating Authority under the former Act, and Licensing Authority under the latter Act.

In addition, the Transport Licensing Act, 1931, is amended by replacing the previous ten Licensing Authorities (exclusive ot the four Metropolitan Authorities) of twenty-eight members in all by four Licensing Authorities each of one member.

The procedure for renewal, amendment, and transfer of licenses has been very much simplified, mainly by dispensing with the necessity of a formal sitting when advertisement brings forth no objections.

The power of review of licenses contained in the 1935 Amendment and explained above has been made more elastic, and the review may take place under any circumstances and the license may be amended instead of being revoked. The Licensing Authorities are required to take evidence on oath; and the Minister's decisions are made absolute unless it is found by the Courts that he had no jurisdiction in the decision questioned.

Definite protection is provided to the Railway Department's licensed road services by providing that without the consent of the Minister of Railways no new license may be granted having the same terminal points and routes as such services.

Various minor amendments to both Acts have been effected chiefly to overcome points of difficulty which have arisen in administration.

Regulations.

As a result of these important changes in transport legislation, the respective regulations are being overhauled and reissued.

14. APPENDIX.

TABLE No. 1.—MOTOR-VEHICLE REGISTRATIONS, BY HIGHWAY DISTRICTS.

TABLE SHOWING THE NUMBER OF EACH TYPE OF MOTOR-VEHICLE REGISTERED IN EACH HIGHWAY DISTRICT, AT 31ST DECEMBER, 1935.

Highway District.	District No.	Motor-cars.	Dealers' Cars.	Rental and Private-hire Cars.	Taxis.	Service Cars.	Omnibuses.	Passenger-trucks.	Light Trucks.	Heavy Trucks.	Trailers.	Local-body Vehicles.	Government Vehicles.	Motor-cycles.	Dealers' Motor-cycles.	Total.
North Island.																
Auckland North ..	1	5,259	27	3	84	52	10	115	875	762	112	57	70	947	2	8,375
Auckland South ..	2	32,663	292	144	434	96	197	119	5,470	3,885	556	280	315	5,374	39	49,864
Tauranga	3	3,838	41	2	53	55	13	44	843	486	89	54	86	459	3	6,066
Gisborne	4	3,074	26	..	42	24	23	30	306	345	60	36	38	392	3	4,399
Hawke's Bay	5	8,778	83	8	71	58	38	76	1,675	1,013	160	104	64	963	6	13,097
King-country	6	2,131	12	1	21	10	3	43	438	376	48	22	57	414	3	3,579
Taranaki	7	7,890	84	20	45	30	7	43	1,256	930	79	91	38	1,309	15	11,837
Wanganui	8	5,991	48	8	54	33	3	30	922	631	102	62	38	878	5	8,805
Wellington West ..	9	18,436	229	36	263	23	108	38	2,392	2,051	387	150	403	2,598	16	27,130
Wellington East ..	10	5,071	41	5	20	40	7	33	886	503	137	108	6	511	2	7,370
Totals, North Island ..		93,131	883	227	1,087	421	409	571	15,063	10,982	1,730	964	1,115	13,845	94	140,522
South Island.																
Nelson	11	4,516	36	12	54	72	10	26	863	523	115	47	49	848	7	7,178
West Coast	12	2,160	17	17	42	24	10	26	414	395	55	53	55	470	..	3,738
Canterbury North ..	13	1,159	2	9	4	18	..	14	219	134	37	29	6	209	..	1,840
Canterbury Central ..	14	15,877	146	41	198	29	38	45	2,005	1,393	599	170	196	3,190	19	23,946
Canterbury South ..	15	7,463	42	11	41	26	20	42	1,199	591	435	114	25	1,043	5	11,057
Otago Central ..	16	3,727	23	16	40	32	10	26	569	360	95	39	24	523	..	5,484
Otago South	17	8,093	76	14	134	44	34	45	1,145	936	244	62	70	1,371	5	12,273
Southland	18	7,362	68	25	72	26	28	45	1,204	824	190	68	55	896	7	10,870
Totals, South Island ..		50,357	410	145	585	271	150	269	7,618	5,156	1,770	582	480	8,550	43	76,386
Grand totals ..		143,488	1,293	372	1,672	692	559	840	22,681	16,138	3,500	1,546	1,595	22,395	137	216,908

TABLE No. 2.—MOTOR-VEHICLES LICENSED AS AT 31ST MARCH, 1936.

TABLE SHOWING BY POSTAL DISTRICTS THE NUMBER OF MOTOR-VEHICLES LICENSED UNDER THE MOTOR-VEHICLES ACT, 1924, AS AT THE 31ST MARCH, 1936.

Postal District.	Cars.	Rental and Private-hire Cars.	Light Trucks (*i.e.*, 2-tons and under laden).	Heavy Trucks (*i.e.*, over 2-tons laden	Passenger-trucks.	Omnibuses.	Taxis.	Service Cars.	Trailers.	Dealers' Cars.	Local-body Road Vehicles.	Government Vehicles.	Dealers' Motor-cycles.	Motor-cycles.	Total.
North Island.															
Auckland	27,847	142	4,422	3,441	175	169	409	115	509	242	216	263	33	4,907	42,890
Thames	5,367	..	1,114	614	42	9	60	36	108	50	86	38	4	723	8,251
Hamilton	12,259	24	2,442	1,742	117	50	125	70	319	88	123	227	7	1,883	19,476
Gisborne	3,776	..	446	413	42	16	53	28	92	29	50	43	3	506	5,497
Napier	7,748	5	1,509	910	72	36	68	48	167	77	93	64	6	897	11,700
New Plymouth	8,347	20	1,346	963	48	6	45	28	95	86	100	46	15	1,414	12,559
Wanganui	5,870	8	946	646	31	3	54	32	120	49	64	41	5	910	8,779
Palmerston North	9,594	11	1,441	889	32	22	59	26	243	70	105	80	12	1,083	13,667
Wellington	16,822	41	2,308	1,967	55	97	238	47	390	217	173	349	8	2,448	25,160
Totals, North Island ..	97,630	251	15,974	11,585	614	408	1,111	430	2,043	908	1,010	1,151	93	14,771	147,979
South Island.															
Nelson	3,195	12	614	409	15	10	35	59	64	23	24	42	4	600	5,106
Blenheim	1,682	1	365	169	12	..	23	12	65	14	28	9	3	360	2,743
Westport	569	3	136	114	10	..	10	7	25	5	18	4	..	115	1,016
Greymouth	1,738	19	306	293	22	10	37	17	40	12	35	51	..	389	2,969
Christchurch	20,249	64	2,754	1,918	84	39	214	50	927	167	284	205	21	3,858	30,834
Timaru	4,982	7	864	425	23	20	36	23	259	32	72	26	3	841	7,613
Oamaru	2,107	7	306	212	8	8	15	15	75	17	17	12	..	295	3,094
Dunedin	10,075	24	1,488	1,142	67	36	175	50	302	83	84	85	7	1,711	15,329
Invercargill	7,677	26	1,299	922	48	26	76	36	220	74	74	58	7	1,021	11,564
Totals, South Island ..	52,274	163	8,132	5,604	289	149	621	269	1,977	427	636	492	45	9,190	80,268
Grand totals ..	149,904	414	24,106	17,189	903	557	1,732	699	4,020	1,335	1,646	1,643	138	23,961	228,247

TABLE No. 3.—MOTOR-VEHICLES ACT, 1924.

COMPARATIVE TABLE SHOWING NUMBER OF MOTOR-VEHICLES LICENSED AS AT 31ST DECEMBER, 1925 TO 1935, INCLUSIVE.

Year.	Cars.	Light Trucks.	Heavy Trucks.	Motor-cycles.	Motor-buses.	Traction Engines and Tractors.	Omnibuses.	Taxis.	Service and Rental Cars.	Dealers' Cars.	Local-body Road Vehicles.	Government Vehicles.	Dealers' Motor-cycles.	Trailers.	Road-rollers.	Fire-engines.	Ambulances.	Rental and Private-hire Cars.	Passenger-trucks.	Other Vehicles.	Totals, excluding Trailers.
1925 ..	81,662	9,671	4,002	25,339	1,285	579	..	..	..	..	..	..	..	489	76	102	59	..	..	132	122,907
1926 ..	97,526	12,300	4,862	28,284	1,488	663	..	..	..	..	..	..	..	550	119	115	65	..	..	146	145,568
1927 ..	105,464	14,501	5,693	27,792	978	574	..	..	..	..	..	..	..	629	..	..	..	..	..	408	155,410
1928 ..	118,017	15,604	6,398	28,952	1,043	562	..	..	..	..	..	..	..	690	..	..	..	..	..	426	171,002
1929 ..	132,590	16,429	8,466	27,823	1,076	483	..	..	..	..	..	..	..	801	..	..	..	..	..	456	187,323
1930 ..	140,166	16,463	9,786	26,844	1,096	490	..	..	..	..	..	..	..	1,133	..	..	..	..	..	470	195,315
1931 ..	135,909	19,249	9,832	25,774	1,062	721	..	..	..	..	..	..	..	1,576	..	..	..	..	..	417	192,964
1932 ..	123,637	20,217	13,697	23,500	..	..	528	1,568	1,123	1,005	1,134	1,406	137	†	..	..	..	..	..	..	187,952
1933 ..	123,623	21,521	14,245	23,020	..	..	524	1,497	*1,002	850	1,165	1,390	128	†	..	..	..	147	..	..	189,112
1934 ..	131,176	20,804	14,943	22,913	..	..	522	1,573	*710	1,084	1,233	1,485	126	2,911	..	..	..	261	656	..	197,486
1935 ..	143,488	22,681	16,138	22,935	..	..	559	1,672	*692	1,293	1,546	1,595	137	3,500	..	..	..	372	840	..	213,948

* Service cars only. † Not available.

For further information concerning this table, see page 7 of this report.

TABLE No. 4.—ALLOCATION OF PETROL-TAX.

TABLE SHOWING THE DISTRIBUTION OF 8 PER CENT. OF THE PETROL-TAX TO BOROUGHS WITH A POPULATION OF 6,000 AND OVER IN ACCORDANCE WITH SECTION 9 (1) (*b*) OF THE MOTOR-SPIRITS TAXATION ACT, 1927.

Boroughs.	Year ended 31st March, 1936. Amount of Tax, Quarter ended — June.				September.				December.				March.				Total.				Total since Inception of Petrol-tax up to 31st March, 1936.		
	£	s.	d.		£	s.	d.		£	s.	d.		£	s.	d.		£	s.	d.		£	s.	d.
Wellington City ..	4,457	1	11		3,124	6	6		5,315	10	8		7,571	11	1		20,468	10	2		126,735	6	5
Auckland City ..	4,212	16	5		2,953	1	10		5,024	4	2		7,156	11	8		19,346	14	1		120,515	6	8
Christchurch City	3,602	2	6		2,525	0	2		4,295	17	11		6,119	3	2		16,542	3	9		103,017	11	0
Dunedin City ..	2,731	12	11		1,914	16	5		3,257	15	3		4,640	8	4		12,544	12	11		78,343	19	6
Wanganui City ..	963	10	9		675	8	4		1,149	2	4		1,636	16	6		4,424	17	11		28,430	13	7
Palmerston Nth. City	862	14	6		604	15	0		1,028	17	9		1,465	11	4		3,961	18	7		24,022	4	9
Mount Albert ..	827	16	7		580	5	10		987	5	5		1,406	5	9		3,801	13	7		23,526	7	1
Invercargill City ..	833	12	11		584	7	4		994	4	1		1,416	3	4		3,828	7	8		23,492	1	9
Mount Eden ..	796	16	2		558	10	11		950	5	6		1,353	11	10		3,659	4	5		22,871	11	11
Timaru	688	4	10		482	8	10		820	15	11		1,169	3	2		3,160	12	9		19,378	13	2
New Plymouth ..	651	8	2		456	12	5		776	17	4		1,106	11	8		2,991	9	7		18,246	4	7
Napier	641	14	3		449	16	7		765	6	1		1,090	2	4		2,946	19	3		18,548	12	7
Hamilton ..	622	6	6		436	4	9		742	3	9		1,057	3	8		2,857	18	8		17,599	8	7
Lower Hutt ..	581	12	3		407	14	0		693	12	8		988	0	6		2,670	19	5		15,578	5	10
Gisborne ..	569	19	7		399	10	11		679	15	2		968	5	3		2,617	10	11		16,230	10	5
Hastings ..	488	11	1		342	9	4		582	13	0		829	18	9		2,243	12	2		13,428	12	5
Onehunga ..	445	18	1		312	11	5		531	15	8		757	9	8		2,047	14	10		12,796	17	10
Nelson City ..	438	3	0		307	2	8		522	10	9		744	6	3		2,012	2	8		12,447	5	2
Petone	435	8	8		305	4	7		519	6	0		739	14	0		1,999	13	3		12,500	6	7
Devonport ..	407	2	7		285	7	9		485	10	10		691	12	4		1,869	13	6		11,846	19	7
Masterton ..	347	0	7		243	5	2		413	17	4		589	10	5		1,593	13	6		9,900	12	6
St. Kilda ..	325	6	4		228	0	10		387	19	5		552	12	8		1,493	19	3		9,433	1	10
One Tree Hill ..	319	17	9		224	4	8		381	9	11		543	8	3		1,469	0	7		7,345	7	11
Whangarei ..	310	3	11		217	8	9		369	18	9		526	19	2		1,424	10	7		8,656	4	4
Greymouth ..	300	10	0		210	12	11		358	7	6		510	9	7		1,380	0	0		6,760	11	4
Oamaru	298	11	3		209	5	8		356	1	4		507	3	8		1,371	1	11		8,660	17	10
Takapuna ..	279	3	6		195	13	11		332	18	10		474	5	0		1,282	1	3		7,991	4	5
Totals ..	27,439	7	0		19,234	7	6		32,724	3	4		46,612	19	4		126,010	17	2		778,304	19	7

TABLE No. 5.—LENGTH OF ROADS, STREETS, AND BRIDGES.

TABLE SHOWING THE LENGTHS OF THE VARIOUS CLASSES OF ROADS, STREETS, AND BRIDGES IN THE DOMINION AT 31ST MARCH IN THE YEARS 1922 TO 1935.

Year.	Roads and Streets formed to not less than Dray-width, and paved or surfaced with—				Roads and Streets formed to not less than Dray-width, but not paved or surfaced.	Total Formed Roads.	Bridle-tracks.	Unformed Legal Roads.	Total of all Roads.
	Bituminous or Cement Concrete.	Bitumen or Tar.	Metal or Gravel.	Other and Unspecified Material.					
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1922 ..			26,787¾*		17,456¼	44,244	5,095½	13,631½	62,971
1923 ..			27,815½*		17,791½	45,607	5,377½	13,613	64,597½
1924 ..			28,553¾*		17,222¾	45,776	5,218¼	13,630½	64,624¾
1925 ..	58¾	639	28,243¾	458¼	16,748	46,147¾	5,181½	15,676¾	67,006
1926 ..	97¾	836	28,981½	340¼	16,521¾	46,777¼	5,009¾	15,792½	67,579½
1927 ..	133	1,012	29,726½	373½	16,107¼	47,352¼	5,093	15,795	68,240¼
1928 ..	217	1,262½	30,669¾	129¼	16,381¼	47,659¾	5,040½	15,669¼	68,369½
1929 ..	254	1,472	31,334	125¾	15,155¼	48,321	5,399¾	15,197½	68,918¼
1930 ..	306	1,724¾	32,352½	83	14,600½	49,066½	5,375	16,506¼	70,947¾
1931 ..	339½	1,892¾	32,855½	116	14,374½	49,578¼	5,642¼	16,923½	72,144
1932 ..	336¾	2,118½	33,536½	88½	14,195¾	50,276	5,808	16,418	72,502
1933 ..	344	2,320	34,848	80½	13,300½	50,893	5,876¼	17,474	74,243¼
1934 ..	368	2,544½	35,952¼	79½	12,698½	51,642¾	5,878½	17,708¾	75,230¼
1935 ..	379¼	2,819	36,721¼	78½	12,160½	52,158½	5,871	16,999	75,028½

* NOTE.—Figures for earlier years, particularly in regard to unformed legal roads, are not claimed to be entirely accurate.

TABLE No. 6.—LENGTH OF BRIDGES.

TABLE SHOWING THE LENGTHS OF THE VARIOUS CLASSES OF BRIDGES IN NEW ZEALAND AS AT 31ST MARCH, 1922 to 1935, INCLUSIVE.

Year ended 31st March,	Bridges, 25 ft. and over in Length constructed with—												Total Bridges 25 ft. and over.	
	All Concrete or Stone.		Steel and Concrete.		Steel, Concrete, and Timber.		Steel and Timber.		Australian or other Hardwood.		Native Timbers.			
	No.	Total Length.	No.	Total Length.	No.	Total Length.	No.	Total Length.	No.	Total Length.	No.	Total Length.	No.	Total Length.
		Ft.		Ft.		Ft.		Ft.		Ft.		Ft.		Ft.
1923 ..	*	*	*	*	*	*	*	*	*	*	*	*	2,955†	328,766†
1924 ..	*	*	*	*	*	*	*	*	*	*	*	*	3,297†	362,034†
1925 ..	408	36,840	..	..	205	28,916	..	..	1,466	180,529	2,035	167,557	4,114	413,842
1926 ..	431	39,127	..	..	258	34,883	..	..	1,665	197,735	2,029	161,084	4,383	432,829
1927 ..	489	42,804	..	..	349	40,185	..	..	1,850	217,600	1,959	148,427	4,647	449,016
1928 ..	545	47,833	..	..	282	37,623	..	..	2,013	229,208	1,994	153,078	4,834	467,742
1929 ..	608	52,761	..	..	324	38,679	..	..	2,137	242,474	2,181	165,525	5,250	499,439
1930 ..	671	57,739	..	..	270	37,777	..	..	2,285	245,867	2,164	168,120	5,390	509,503
1931 ..	751	66,292	..	..	295	38,995	..	..	2,396	253,057	2,164	164,940	5,606	523,284
1932 ..	552	43,878	330	41,272	186	20,952	182	17,433	2,277	240,622	2,277	163,453	5,804	527,610
1933 ..	574	46,774	356	39,237	209	25,726	300	27,417	2,233	230,380	2,316	164,999	5,988	534,533
1934 ..	590	48,957	380	39,662	235	29,387	354	30,834	2,191	227,035	2,365	167,129	6,115	543,004
1935 ..	623	52,146	429	42,865	269	31,864	499	40,776	1,932	210,176	2,475	172,783	6,227	550,610

* Detailed figures not available. † 30 ft. and over in length.

TABLE No. 7.—TAXATION OF MOTOR-VEHICLES, 1923–1936.

TABLE SHOWING THE ANNUAL YIELD FOR THE YEARS ENDED 31ST MARCH, 1923 TO 1936, IN RESPECT OF (*a*) CUSTOMS DUTIES ON MOTOR-VEHICLES AND PARTS; (*b*) TIRE-TAX; (*c*) MOTOR-SPIRITS TAX; (*d*) FEES, ETC., UNDER THE MOTOR-VEHICLES ACT, 1924; (*e*) HEAVY-TRAFFIC FEES; (*f*) DRIVERS' LICENSES; AND (*g*) MILEAGE TAX.

Year ended 31st March,	Customs Duties in respect of Motor-vehicles and Parts.*	Tire-tax.	Motor-spirits Tax.	Fees, &c., under Motor-vehicles Act, 1924.	Heavy-traffic Fees.	Drivers' Licenses.	Mileage Tax.	Total.
1923 ..	221,679	121,092	..	..	..	..	..	342,771
1924 ..	621,470	123,568	..	..	..	..	..	745,038
1925 ..	802,903	152,303	..	257,500	..	..	..	1,212,706
1926 ..	1,007,641	228,711	..	86,681†	114,009	33,162	..	1,470,204
1927 ..	1,074,052	190,575	..	395,797	220,616	50,650	..	1,931,690
1928 ..	856,556	227,451	143,516	345,510	157,651	52,495	..	1,783,179
1929 ..	1,045,635	196,747	802,232	244,598	190,789	36,830	..	2,516,831
1930 ..	1,432,412	155,910	961,907	391,368	183,486	56,578	..	3,181,661
1931 ..	828,878	130,408	1,314,450	393,798	194,557	59,462	..	2,921,553
1932 ..	272,992	85,438	1,677,520	370,126	179,105	58,860	..	2,644,041
1933 ..	145,059	64,177	1,865,762	352,561	178,183	57,132	..	2,662,874
1934 ..	125,590	62,979	2,368,147	346,249	171,503	60,358	2,016	3,136,842
1935 ..	539,951	92,587	2,610,607	391,661	204,767	61,385	1,594	3,902,552
1936 ..	730,877	94,071	2,918,659	431,896	209,000‡	65,000‡	2,360	4,451,863
Totals up to 31st March, 1936	9,705,695	1,926,017	14,662,800	4,007,745	2,003,666	591,912	5,970	32,903,805

* Calendar year ending on previous 31st December. Includes primage and surtax on vehicles and parts also on all tires and tire-tax on tires attached to vehicles or parts. † Alteration in licensing period. ‡ Estimated.

TABLE No. 8.—TRANSPORT LICENSING ACT, 1931.

TABLE SHOWING DETAILS REGARDING APPLICATIONS FOR PASSENGER-SERVICE LICENSES DURING YEAR ENDED 31ST MARCH, 1936.

Licensing Authority.	Number of Applications dealt with.				Number of Decisions given.								Number of Applications withdrawn.				Number of Decisions deferred.			
					Granted.				Refused.											
	Continuous.	Seasonal.	Temporary.	Total.	Continuous.	Seasonal.	Temporary.	Total.	Continuous.	Seasonal.	Temporary.	Total.	Continuous.	Seasonal.	Temporary.	Total.	Continuous.	Seasonal.	Temporary.	Total.
Auckland Metropolitan Licensing Authority	46	..	612	658	28	..	604	632	15	..	7	22	..	..	1	1	3	..	..	3
Wellington Metropolitan Licensing Authority	12	..	1	13	12	..	1	13	..	..	..	..	..	..	..	..	..	..	..	..
Christchurch Metropolitan Licensing Authority	10	1	..	11	10	1	..	11	..	..	..	..	..	..	..	..	..	..	..	..
Dunedin Metropolitan Licensing Authority	21	..	3	24	21	..	3	24	..	..	..	..	..	..	..	..	..	..	..	..
Central Licensing Authority	26	1	..	27	22	..	..	22	2	1	..	3	..	..	..	..	2	..	..	2
No. 1 District Licensing Authority	59	1	243	303	51	1	242	294	3	..	..	3	1	..	1	2	4	..	..	4
No. 2 District Licensing Authority	117	..	544	661	107	2	526	635	5	..	18	23	3	..	..	3	2	..	..	2
No. 4 District Licensing Authority	109	2	192	303	93	2	192	287	1	..	..	1	14	..	..	14	1	..	..	1
No. 5 District Licensing Authority	50	6	247	303	48	4	233	285	..	1	14	15	2	1	..	3	..	..	..	..
No. 6 District Licensing Authority	90	3	479	572	87	3	455	545	2	..	18	20	1	..	6	7	..	..	..	..
No. 7 District Licensing Authority	54	3	134	191	51	3	133	187	..	..	1	1	3	..	..	3	..	..	..	..
No. 8 District Licensing Authority	45	1	123	169	45	1	118	164	..	..	5	5	..	..	..	..	..	..	..	..
No. 9 District Licensing Authority	51	8	130	189	47	7	129	183	..	..	1	1	3	1	..	4	1	..	..	1
No. 10 District Licensing Authority	48	2	492	542	47	2	492	541	..	..	..	..	1	..	..	1	..	..	..	..
Totals—1935–36	738	28	3,200	3,966	669	26	3,128	3,823	28	2	64	94	28	2	8	38	13	..	..	13
1934–35	771	33	2,548	3,352	720	27	2,515	3,262	16	..	32	48	30	2	..	32	5	4	1	10
1933–34	759	33	1,783	2,575	664	25	1,755	2,444	51	2	27	80	26	3	1	30	18	3	..	21

TABLE No. 9.—TRANSPORT LICENSING ACT, 1931.

TRAFFIC AND FINANCIAL STATISTICS OF LICENSED PASSENGER-SERVICES FOR YEARS ENDED 31ST MARCH, 1932 TO 1936, INCLUSIVE (EXCLUSIVE OF SERVICES LICENSED BY THE FOUR METROPOLITAN LICENSING AUTHORITIES).

Item.	South Island Totals for Year ended 31st March,				North Island Totals for Year ended 31st March,				New Zealand Totals for Year ended 31st March,				
	1936.	1935.	1934.	1933.	1936.	1935.	1934.	1933.	1936.	1935.	1934.	1933.	1932 (Estimated).
Traffic statistics—													
Vehicle journeys	..	353,682	322,659	350,406	1,354,625	1,382,839	1,556,087	1,452,472	..	1,736,521	1,878,746	1,802,878	2,560,000
Vehicle-miles	..	6,636,213	6,444,607	6,214,645	15,221,391	14,905,708	15,475,980	16,541,668	..	21,541,921	21,920,587	22,756,313	32,000,000
Empty trips	..	10,502	11,207	8,624	41,123	38,316	46,175	42,810	..	48,818	57,382	51,434	..
Passengers	..	2,921,847	2,647,146	2,753,926	14,828,996	13,053,489	13,901,571	13,311,746	..	15,975,336	16,548,717	16,065,672	17,000,000
Operating expenses—		£	£	£	£	£	£	£		£	£	£	£
Vehicle-running costs (petrol, lubricants, tires, repairs, maintenance, and depreciation)	..	136,138	133,718	141,102	308,296	298,475	305,387	339,625	..	434,613	439,103	480,727	682,000
Vehicle standing charges (license fees, wages, drawings in lieu of wages, insurance, garage fees)	..	78,995	75,413	71,467	201,883	198,958	205,419	213,682	..	277,953	280,832	285,149	409,000
General overhead charges (management and office expenses, interest, advertising, &c.)	..	33,250	30,739	26,787	63,634	60,923	59,619	81,452	..	94,173	90,358	108,239	149,000
Total	..	248,383	239,870	239,356	573,813	558,356	570,423	634,759	..	806,739	810,293	874,115	1,240,000
Revenue—													
Passenger	..	231,837	217,158	205,051	557,420	521,588	519,372	564,035	..	753,425	736,530	769,086	..
Mail-contract	..	11,382	13,596	10,322	21,143	19,730	21,581	20,851	..	31,112	35,177	31,173	..
Newspaper	..	5,500	3,850	2,901	13,294	11,449	9,384	8,898	..	16,949	13,234	11,799	..
Goods and parcels	..	26,408	18,994	17,206	31,592	31,049	25,898	26,658	..	57,457	44,892	43,864	..
Other	..	2,287	5,411	5,650	7,709	10,902	13,253	17,738	..	13,189	18,664	23,388	..
Total	..	277,414	259,009	241,130	631,158	594,718	589,488	636,180	..	872,132	848,497	879,310	1,200,000
Profits	..	32,585	23,782	..	59,627	41,819	28,699	..	..	74,404	52,481	..	..
Losses	..	3,554	4,605	..	2,282	5,457	9,630	..	..	9,011	14,235	..	..
Net profit..	..	29,031	19,177	1,774	57,345	36,362	19,069	3,421	..	65,393	38,246	5,159	..
Net loss	..	..	..	..	..	..	..	..	..	..	..	..	40,000

TABLE No. 10.—TRANSPORT LICENSING ACT, 1931.

AVERAGE OPERATING EXPENSES AND REVENUE PER VEHICLE-MILE OF LICENSED PASSENGER-SERVICES FOR YEARS ENDED 31ST MARCH, 1932 TO 1936, INCLUSIVE (EXCLUSIVE OF THE SERVICES LICENSED BY THE FOUR METROPOLITAN LICENSING AUTHORITIES).

Item.	South Island Averages for Year ended 31st March,				North Island Averages for Year ended 31st March,				New Zealand Averages for Year ended 31st March,				
	1936.	1935.	1934.	1933.	1936.	1935.	1934.	1933.	1936.	1935.	1934.	1933.	1932 (estimated).
Operating expenses—	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Vehicle-running costs (petrol, lubricants, tires, repairs, maintenance, and depreciation	..	4·92	4·98	5·45	4·86	4·81	4·74	4·93	..	4·84	4·81	5·07	5·11
Vehicle standing charges (license fees, wages, drawings in lieu of wages, insurance, garage fees)	..	2·86	2·81	2·76	3·18	3·20	3·19	3·10	..	3·10	3·07	3·01	3·07
General overhead charges (management and office expenses, interest, advertising, &c.)	..	1·20	1·14	1·03	1·00	0·98	0·92	1·82	..	1·05	0·99	1·14	1·12
Total operating expenses ..	..	8·98	8·93	9·24	9·04	8·99	8·85	9·21	..	8·99	8·87	9·22	9·30
Revenue—													
Passenger	..	8·38	8·09	7·92	8·79	8·40	8·05	8·18	..	8·39	8·06	8·11	..
Mail-contract	..	0·41	0·51	0·40	0·33	0·32	0·33	0·30	..	0·35	0·39	0·33	..
Newspaper	..	0·20	0·14	0·11	0·21	0·18	0·15	0·13	..	0·19	0·14	0·12	..
Goods and parcels	..	0·96	0·71	0·66	0·50	0·50	0·40	0·39	..	0·64	0·49	0·46	..
Other	..	0·08	0·20	0·22	0·12	0·18	0·21	0·26	..	0·15	0·21	0·25	..
Total revenue	..	10·03	9·65	9·31	9·95	9·58	9·14	9·26	..	9·72	9·29	9·27	9·00
Net profits	..	1·05	0·72	0·07	0·91	0·59	0·29	0·05	..	0·73	0·42	0·05	..
Net losses	..	..	..	..	..	..	..	..	..	..	..	..	0·30

TABLE No. 11.—TRANSPORT LICENSING ACT, 1931.

STATEMENT OF ASSETS AND LIABILITIES OF LICENSED PASSENGER-SERVICES AS AT 31ST MARCH, 1933 TO 1936, INCLUSIVE (EXCLUDING THE SERVICES LICENSED BY THE FOUR METROPOLITAN LICENSING AUTHORITIES).

	South Island Totals.				North Island Totals.				New Zealand Totals.				
	1936.	1935.	1934.	1933.	1936.	1935.	1934.	1933.	1936.	1935.	1934.	1933.	1932 (estimated).
(a) Liabilities.	£	£	£	£	£	£	£	£	£	£	£	£	£
Capital and reserves	..	202,154	243,076	281,194	312,374	383,193	436,031	634,500	..	585,347	679,107	915,694	..
Other liabilities	..	101,833	88,546	147,224	163,814	183,403	212,751	291,237	..	285,236	301,297	438,461	..
Total	..	303,987	331,622	428,418	476,188	566,596	648,782	925,737	..	870,583	980,404	1,354,155	1,500,000
(b) Assets.													
Passenger-service vehicles	..	121,461	129,566	136,776	225,078	238,164	267,140	356,907	..	359,625	396,706	493,683	..
Other vehicles	..	27,408	24,263	35,071	12,747	23,752	23,779	27,907	..	51,160	48,042	62,978	..
Stocks on hand	..	15,120	14,185	17,657	18,824	23,490	29,098	34,736	..	38,610	43,283	52,393	..
Plant and machinery	..	12,886	10,889	12,595	18,049	18,636	22,277	33,692	..	31,522	33,166	46,287	..
Land and buildings	..	61,709	61,078	117,428	96,262	112,487	131,638	145,110	..	174,196	192,716	262,538	..
Sundry debtors	..	29,629	30,970	32,896	31,137	37,850	54,543	60,373	..	67,479	85,513	93,269	..
Cash on hand and at bank	..	19,842	28,376	22,064	46,136	74,393	44,421	87,011	..	94,235	72,797	109,075	..
Other assets	..	15,932	32,295	53,931	27,955	37,824	75,886	180,001	..	53,756	108,181	233,932	..
Total	..	303,987	331,622	428,418	476,188	566,596	648,782	925,737	..	870,583	980,404	1,354,155	1,500,000
Depreciation written off vehicles for year ..	..	29,851	31,205	36,198	65,314	63,522	62,122	75,105	..	93,373	93,327	111,303	..
		Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Percentage of depreciation on reducing value ..	..	19·7	18·7	20·9	22·5	21·1	18·9	17·4	..	20·7	18·8	18·4	..

TABLE No. 12.—TRANSPORT LICENSING ACT, 1931.

TABLE SHOWING THE POSITION WITH RESPECT TO APPLICATIONS FOR GOODS-SERVICE LICENSES FOR YEAR ENDED 31ST MARCH, 1936.

Licensing Authority.	Number of Applications dealt with.				Number of Decisions given.								Number of Applications withdrawn.				Number of Decisions deferred.			
					Granted.				Refused.											
	Continuous.	Seasonal.	Temporary.	Total.	Continuous.	Seasonal.	Temporary.	Total.	Continuous.	Seasonal.	Temporary.	Total.	Continuous.	Seasonal.	Temporary.	Total.	Continuous.	Seasonal.	Temporary.	Total.
No. 1 Licensing Authority ..	254	1	..	255	241	1	..	242	6	..	..	6	5	..	..	5	2	..	..	2
No. 2 Licensing Authority ..	450	2	380	832	430	1	349	780	18	1	31	50	2	..	..	2	..	..	..	..
No. 4 Licensing Authority ..	255	39	1	295	250	32	1	283	..	1	..	1	3	6	..	9	2	..	..	2
No. 5 Licensing Authority ..	265	14	1	280	251	13	1	265	11	1	..	12	2	..	..	2	1	..	..	1
No. 6 Licensing Authority ..	221	14	..	235	213	13	..	226	6	1	..	7	..	..	..	..	2	..	..	2
No. 7 Licensing Authority ..	128	9	63	200	124	9	63	196	4	..	..	4	..	..	..	..	..	..	..	..
No. 8 Licensing Authority ..	217	13	..	230	212	13	..	225	5	..	..	5	..	..	..	..	..	..	..	..
No. 9 Licensing Authority ..	141	4	111	256	134	4	111	249	5	..	..	5	..	..	..	..	2	..	..	2
No. 10 Licensing Authority ..	149	8	..	157	144	7	..	151	1	..	..	1	2	..	..	2	2	1	..	3
Post-offices	..	..	7,933	7,933	..	..	7,933	7,933	..	..	..	..	..	..	..	..	..	..	..	..
Totals—1935–36 ..	2,080	104	8,489	10,673	1,999	93	8,458	10,550	56	4	31	91	14	6	..	20	11	1	..	12
1934–35 ..	2,146	108	7,399	9,653	2,016	89	7,390	9,495	91	9	9	109	25	7	..	32	14	3	..	17
1933–34 ..	2,146	99	3,800	6,045	1,898	88	3,793	5,779	118	3	7	128	43	8	..	51	87	..	..	87

TABLE No. 13.—TRANSPORT LICENSING ACT, 1931.

TRAFFIC, REVENUE, EXPENDITURE, AND CAPITAL STATISTICS OF LICENSED GOODS-SERVICES FOR YEARS ENDED 31ST MARCH, 1934, 1935, AND 1936.

	North Island Totals, Year ended 31st March,			South Island Totals, Year ended 31st March,			New Zealand Totals, Year ended 31st March,		
	1936.	1935.	1934.	1936.	1935.	1934.	1936.	1935.	1934.
Traffic statistics—									
Total number of operators .. .. Number	1,390	1,405	1,311	614	609	593	2,004	2,024	1,904
Number of vehicle authorities issued .. Number	2,378	2,351	2,004	990	1,004	902	3,368	3,355	2,906
Average mileage per vehicle .. Miles	15,159	14,211	12,997	13,552	12,531	12,015	14,687	13,744	12,693
Total vehicle-miles run .. .. Number	36,049,000	33,410,000	26,048,000	13,416,000	12,581,000	10,838,000	49,465,000	45,991,000	36,886,000
Revenue and expenditure statistics—	£	£	£	£	£	£	£	£	£
Total operating costs	1,308,000	1,313,000	1,028,000	497,000	509,000	435,000	1,805,000	1,822,000	1,463,000
Total revenue	1,490,000	1,456,000	1,160,000	580,000	581,000	479,000	2,070,000	2,037,000	1,639,000
Total profits	182,000	143,000	132,000	83,000	72,000	44,000	265,000	215,000	176,000
	d.	d.	d.	d.	d.	d.	d.	d.	d.
Average operating costs per vehicle-mile ..	8·71	9·43	9·47	8·89	9·71	9·63	8·76	9·51	9·52
Average revenue per vehicle-mile	9·92	10·46	10·69	10·37	11·08	10·61	10·04	10·63	10·66
Average profit per vehicle-mile	1·21	1·03	1·22	1·48	1·37	0·98	1·28	1·12	1·14
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Percentage of profit to operators' capital ..	20·71	13·58	10·97	20·24	15·93	10·89	20·56	14·28	10·95
Percentage of profit to total capital invested ..	13·48	9·05	7·11	14·46	10·96	7·72	13·77	9·61	7·25
Capital investment statistics—	£	£	£	£	£	£	£	£	£
Total operators' capital	879,000	1,053,000	1,203,000	410,000	452,000	404,000	1,289,000	1,505,000	1,607,000
Total "outside" liabilities	471,000	527,000	654,000	164,000	205,000	166,000	635,000	732,000	820,000
Total capital invested	1,350,000	1,580,000	1,857,000	574,000	657,000	570,000	1,924,000	2,237,000	2,427,000
Average capital per operator	632	749	917	668	742	681	643	744	844
Average "outside" liabilities per operator ..	339	375	499	267	337	280	317	361	431
Average total capital invested per operator .	971	1,124	1,416	935	1,079	961	960	1,105	1,275

TABLE No. 14.—TRANSPORT LICENSING ACT, 1931.

TABLE SHOWING THE GOODS-TRUCKS LICENSED FOR YEAR ENDED 31ST MAY, 1935, CLASSIFIED ACCORDING TO SIZE OF TRUCK.

NOTE.—The following figures have been assembled from the financial and statistical returns received from licensees; they are incomplete, covering only 2,684 out of a total of 3,355 vehicles for which vehicle authorities were granted.

Class.	Gross Weight laden (Tons).	North Island.		South Island.		New Zealand Total.	
		Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
A	2 – 2½	27	1·4	14	1·9	41	1·5
B	2½– 3	111	5·7	40	5·4	151	5·6
C	3 – 3½	189	9·8	55	7·4	244	9·1
D	3½– 4	229	11·8	93	12·5	322	12·0
E	4 – 4½	395	20·4	66	8·8	461	17·2
F	4½– 5	212	10·9	112	15·0	324	12·1
G	5 – 5½	170	8·8	60	8·0	230	8·6
H	5½– 6	163	8·4	96	12·9	259	9·6
I	6 – 6½	199	10·3	69	9·2	268	10·0
J	6½– 7	51	2·6	34	4·6	85	3·2
K	7 – 7½	38	2·0	21	2·8	59	2·2
L	7½– 8	41	2·1	31	4·2	72	2·7
M	8 – 8½	16	0·8	11	1·5	27	1·0
N	8½– 9	11	0·6	6	0·8	17	0·6
O	9 – 9½	8	0·4	4	0·5	12	0·4
P	9½–10	20	1·0	13	1·7	33	1·2
Q	10 –15	5	0·3	5	0·7	10	0·4
Light vans and cars	..	51	2·6	16	2·1	67	2·5
Motor-cycles	..	2	0·1	..	..	2	0·1
Totals	..	1,938	100·0	746	100·0	2,684	100·0

TABLE No. 15.—TRANSPORT LICENSING ACT, 1931.

TABLE SHOWING THE NUMBERS AND PERCENTAGES OF GOODS-SERVICE OPERATORS LICENSED AT 31ST MAY, 1935, CLASSIFIED ACCORDING TO NUMBER OF TRUCKS USED.

NOTE.—This table covers only 2,661 of the 3,355 trucks for which vehicle authorities were granted.

Number of Operators using	Number of Operators.	Percentages of Operators.	Gross Revenue.	Revenue per Operator.	Number of Vehicles.	Revenue per Vehicle.
			£	£		£
One truck	814	57·6	433,976	533	814	533
Two trucks	323	22·9	376,381	1,265	646	632
Three trucks	141	10·0	253,127	1,795	423	598
Four trucks	57	4·0	136,120	2,388	228	597
Five trucks	22	1·6	77,850	3,538	110	708
Six trucks	21	1·5	95,261	4,536	126	756
Seven trucks	15	1·0	80,830	5,388	105	769
Eight trucks	4	0·3	25,355	6,339	32	792
Nine trucks	5	0·4	41,352	8,270	45	919
Ten or more trucks	10	0·7	120,709	22,423	132	914
Totals	1,412	100·0	1,640,961	1,162	2,661	617

TABLE No. 16.—FATAL MOTOR ACCIDENTS.

TABLE SHOWING ANALYSES OF VARIOUS DATA RELATING TO FATAL MOTOR ACCIDENTS IN THE DOMINION DURING THE YEARS ENDED 31ST MARCH, 1930 TO 1936.

—	Year ending 31st March, 1930.	1931.	1932.	1933.	1934.	1935.	1936.	Totals (Seven Years).
1. NUMBER OF ACCIDENTS.								
(a) Classified according to Main Causes.								
Collisions—								
Motor-vehicle with pedestrian ..	52	55	30	45	26	46	56	310
Motor-vehicle with motor-vehicle	40	75	29	39	21	36	45	285
Motor-vehicle with train ..	7	11	8	3	9	10	4	52
Motor-vehicle with tram ..	1	1	1	1	..	2	2	8
Motor-vehicle with bicycle ..	12	7	11	16	15	23	27	111
Motor-vehicle with horse-vehicle or horse under control	4	1	1	6	4	3	1	20
Motor vehicle with fixed object ..	6	8	15	5	6	7	9	56
Motor-vehicle with straying stock	1	1	..	1	2	2	3	10
No collisions—								
Went over bank	27	29	22	9	18	22	18	145
Otherwise	22	33	31	15	24	23	26	174
Total accidents	172	221	148	140	125	174	191	1,171
(b) Classified according to Hour of Accident.								
Midnight to 1 a.m.	..	4	4	2	4	4	4	22
1 to 6 a.m.	7	8	3	5	5	8	11	47
6 to 7 a.m.	1	1	..	2	..	3	4	11
7 to 8 a.m.	1	7	5	4	3	3	5	28
8 to 9 a.m.	6	5	1	2	3	8	5	30
9 to 10 a.m.	4	4	4	2	6	9	7	36
10 to 11 a.m.	5	10	6	11	8	3	3	46
11 to noon	11	15	8	9	10	5	8	66
12 to 1 p.m.	4	5	9	7	5	11	3	44
1 to 2 p.m.	10	4	9	8	4	5	6	46
2 to 3 p.m.	8	13	8	4	6	14	8	61
3 to 4 p.m.	2	16	8	9	8	8	15	66
4 to 5 p.m.	24	18	14	12	10	14	16	108
5 to 6 p.m.	23	20	17	15	17	22	23	137
6 to 7 p.m.	23	24	18	16	8	20	18	127
7 to 8 p.m.	11	16	9	15	14	10	20	95
8 to 9 p.m.	12	20	4	8	4	8	6	62
9 to 10 p.m.	5	7	9	3	2	7	13	46
10 to 11 p.m.	8	14	6	4	4	5	9	50
11 to 12 midnight	7	10	6	2	4	7	4	40
Unspecified	..	..	..	..	..	..	3	3
Total accidents ..	172	221	148	140	125	174	191	1,171
(c) Classified according to Day of Week.								
Sunday	26	33	24	22	17	24	34	180
Monday	23	28	21	13	23	27	31	166
Tuesday	17	24	14	17	11	22	15	120
Wednesday	28	25	10	17	10	17	21	128
Thursday	21	23	13	20	15	21	23	136
Friday	22	33	27	19	13	26	24	164
Saturday	35	55	39	32	36	37	43	277
Total accidents ..	172	221	148	140	125	174	191	1,171
(d) Classified according to Condition of Light.								
Daylight	86	89	93	80	72	91	93	604
Dusk	19	34	13	4	12	23	23	128
Artificial lighting	22	20	12	3	12	14	11	94
Darkness or moonlight	45	78	30	53	29	46	64	345
Total accidents	172	221	148	140	125	174	191	1,171
(e) Classified according to Nature of Thoroughfare.								
Intersection	19	18	17	20	19	28	19	140
Railway-crossing	7	9	7	3	9	10	4	49
Nature or condition of road (bad surface or bend, &c., contributed to accident)	48	51	27	12	18	32	55	243
Road conditions not a factor ..	98	143	97	105	79	104	113	739
Total accidents	172	221	148	140	125	174	191	1,171
(f) Classified according to Geographical Location.								
(a) North Island—								
Auckland City and environs	29	25	28	33	19	27	34	195
Wellington City and environs	16	19	15	8	13	14	20	105
Other towns	20	31	14	7	10	19	41	142
Country	57	88	48	40	44	48	39	364
(b) South Island—								
Christchurch City and environs	13	14	9	16	10	15	21	98
Dunedin City and environs ..	4	8	4	2	6	7	12	43
Other towns	8	11	11	14	7	9	11	71
Country	25	25	19	20	16	35	13	153
Total accidents	172	221	148	140	125	174	191	1,171

—	Year ended 31st March, 1930.	1931.	1932.	1933.	1934.	1935.	1936.	Totals (Seven Years).
2. NUMBER OF PERSONS KILLED IN MOTOR ACCIDENTS.								
(a) Classified according to Age of the Person killed.								
0–4 years	10	7	4	5	9	7	8	50
5–9 years	8	9	8	11	4	11	11	62
10–14 years	2	5	5	4	4	8	10	38
15–19 years	17	24	18	17	13	27	18	134
20–24 years	30	45	15	15	18	15	34	172
25–54 years	83	100	81	60	56	88	67	535
55 years and over	36	57	26	31	31	26	48	255
Unspecified	..	..	..	..	..	..	7	7
Total deaths ..	186	247	157	143	135	182	203	1,253
(b) Classified according to the Location of the Person killed.								
Pedestrians	53	55	28	45	26	45	55	307
On motor-cycles	51	58	47	39	27	48	50	320
On other motor-vehicles ..	68	119	72	38	64	66	70	497
On other vehicles or horses ..	14	15	10	21	18	23	28	129
Total deaths	186	247	157	143	135	182	203	1,253
3. TYPES OF VEHICLE INVOLVED.								
Motor-cycle	59	64	51	48	27	55	54	358
Private motor-car	105	132	75	73	67	97	109	658
Taxi-cab	2	4	11	5	5	5	9	41
Service-car	5	5	1	3	2	1	1	18
Motor-omnibus	3	5	4	..	1	2	1	16
Motor lorry or van	39	46	29	44	38	45	62	303
Bicycle	12	7	11	20	17	22	25	114
Tram	2	1	1	1	..	2	6	13
Horse-drawn	4	..	..	5	4	2	1	16
Train	7	9	7	3	9	10	..	45
Other vehicles	1	..	1	..	..	1	..	3
Total vehicles	239	273	191	202	170	242	268	1,585
4. BREACHES OF LAW, AND OTHER CAUSES OF FATAL MOTOR ACCIDENTS.								
Breaches of law—								
Excessive speed in circumstances—								
(a) But not exceeding 20 miles per hour	33	6	5	6	1	5	5	61
(b) Exceeding 20 but not exceeding 35 miles per hour	35	25	19	16	15	21	20	151
(c) Exceeding 35 miles per hour	18	32	13	9	8	20	18	118
On wrong side of road ..	24	38	19	22	13	16	22	154
Did not comply with "offside" rule	7	7	7	11	8	14	12	66
Passing standing tram ..	3	..	..	..	..	..	..	3
Other passing breaches ..	9	4	2	1	4	4	4	28
Failure of driver to signal—								
Motor-vehicles	3	..	2	..	..	3	..	8
Other vehicles	2	..	..	1	..	..	2	5
Breaches of law relating to railway-intersections	7	11	7	3	8	10	4	50
Vehicle without rear reflector or with inefficient one	2	2	1	..	1	3	..	9
Faulty brakes	8	9	6	7	2	6	4	42
No lights or inefficient lights (including horse vehicles and bicycles)	22	17	9	14	15	11	15	103
Glaring headlights	4	10	2	4	2	10	11	43
Faulty steering-gear	3	4	3	2	2	4	2	20
Faulty tires or wheels	4	8	4	1	..	2	4	23
Driver's mild intoxication a factor in accident	12	26	7	6	2	12	1	66
Driver's severe intoxication a factor in accident	3	7	4	4	2	6	5	31
Driver unlicensed or inexperienced	5	2	7	2	3	6	1	26
Straying stock	1	1	1	1	2	2	2	10
Other breaches of law	5	2	1	12	3	8	5	36
Other causes—								
Bad weather conditions ..	19	4	3	1	9	11	6	53
Vehicle being reversed ..	3	2	..	5	6	5	2	23
Obstruction to view by parked motor-vehicle	4	5	..	1	..	..	7	17
Sun-dazzle	2	..	..	..	..	..	1	3
Driver's physical defect a direct cause	4	..	1	2	1	2	1	11
Motorist and pedestrian—								
Motorist at fault	17	9	1	13	5	7	13	65
Pedestrian (not intoxicated) crossing or on road without care or becoming confused	17	30	12	19	9	17	25	129
Pedestrian intoxicated ..	5	5	3	2	6	4	5	30
Children on streets	2	7	7	6	2	10	6	40
Infant (under six) not under proper control	9	1	1	5	3	3	7	29
Other causes of pedestrian accidents	6	1	4	..	1	5	..	17
Causes not included under the above headings	4	22	34	17	13	16	30	136
Total causes	302	297	185	193	146	243	240	1,606

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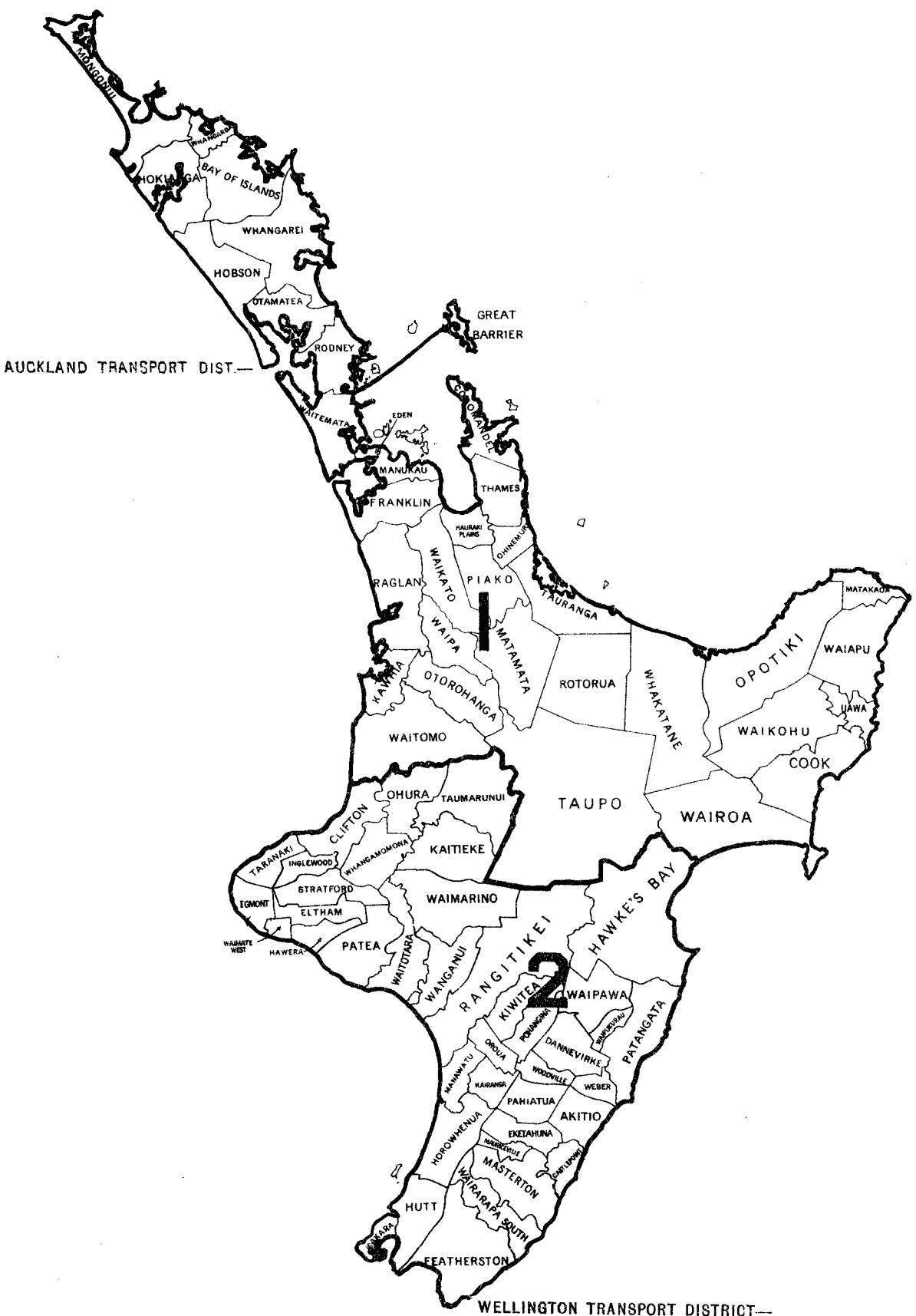
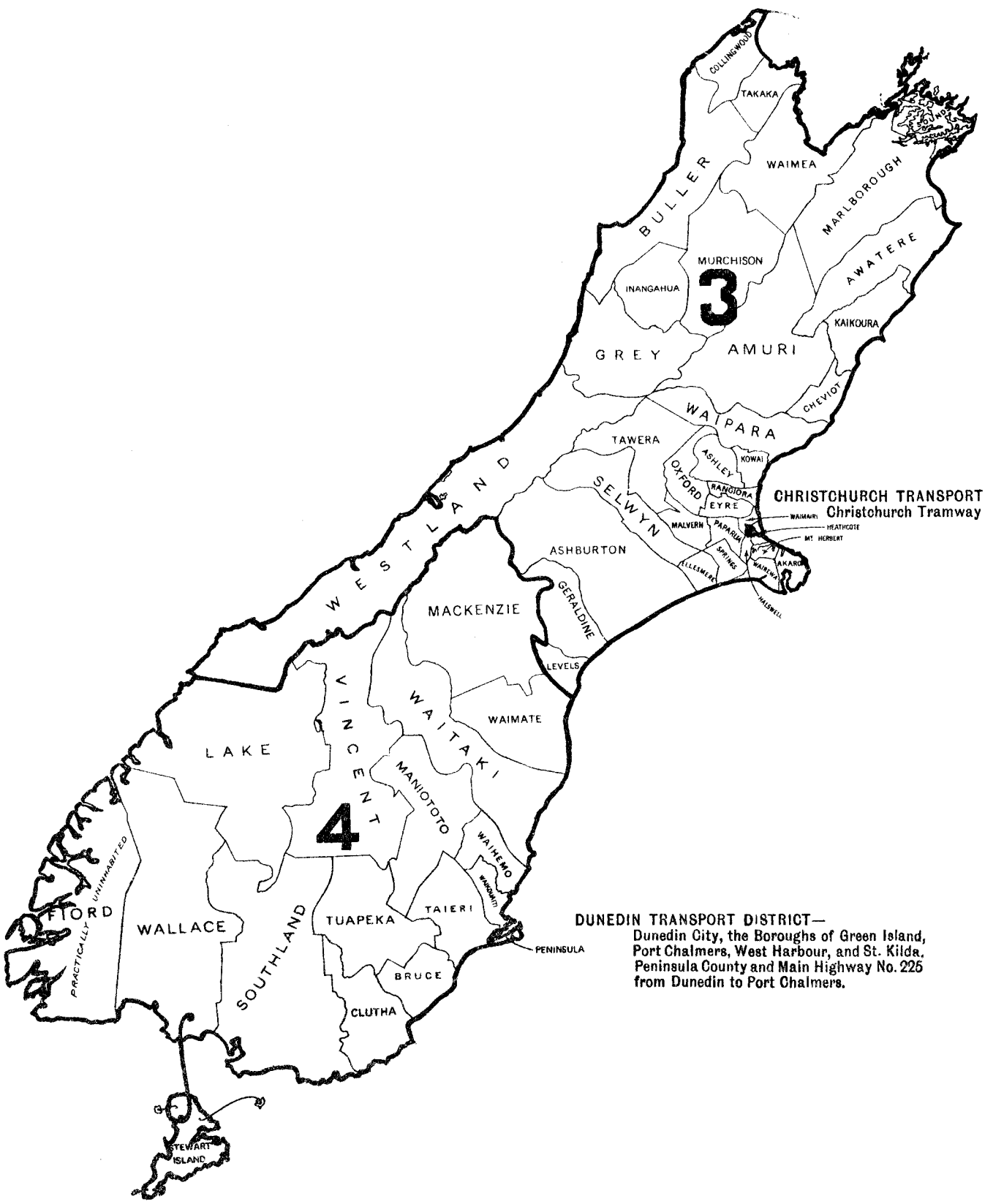


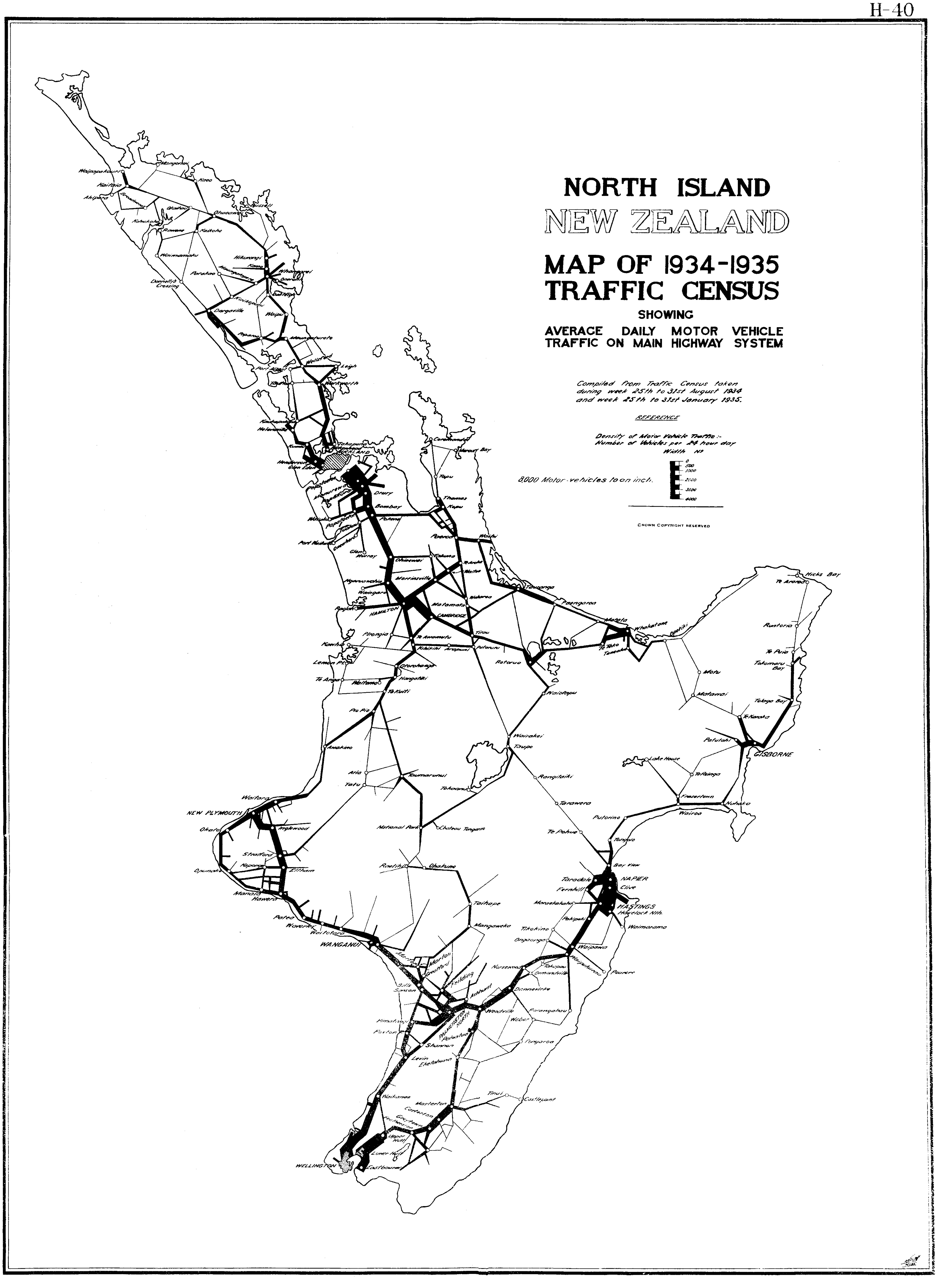
WELLINGTON TRANSPORT DISTRICT—
City of Wellington.

SOUTH ISLAND—SHOWING TRANSPORT DISTRICTS.



CHRISTCHURCH TRANSPORT DIST.—Christchurch Tramway District.

DUNEDIN TRANSPORT DISTRICT—Dunedin City, the Boroughs of Green Island, Port Chalmers, West Harbour, and St. Kilda, Peninsula County and Main Highway No. 225 from Dunedin to Port Chalmers.


NORTH ISLAND
NEW ZEALAND
MAP OF 1934-1935
TRAFFIC CENSUS
SHOWING
AVERAGE DAILY MOTOR VEHICLE
TRAFFIC ON MAIN HIGHWAY SYSTEM
Compiled from Traffic Census taken
during week 25th to 31st August 1934
and week 25th to 31st January 1935.
REFERENCE
Density of Motor Vehicle Traffic:-
Number of Vehicles per 24 hour day
Width No
0
500
1000
2000
3000
4000
8000 Motor-vehicles to an inch.
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Dannevirke
Woodville
Masterton
Shannon
Levin
Waikanae
Upper Hutt
Lower Hutt
Eastbourne
Wairoa
Nuhaka
Frasertown
Tolaga Bay
Tokomaru Bay
Hicks Bay
Waipukurau
Waipawa
Havelock Nth.

SOUTH ISLAND
NEW ZEALAND

MAP OF 1934-1935 TRAFFIC CENSUS

SHOWING

AVERAGE DAILY MOTOR VEHICLE TRAFFIC ON MAIN HIGHWAY SYSTEM

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1000
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3000
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