1932.

NEW ZEALAND.

TRANSPORT DEPARTMENT

(ANNUAL REPORT OF).

Presented to both Houses of the General Assembly by Leave.

The Right Hon. J. G. Coates, Minister of Transport, Wellington.

SIR,— Transport Department, 1st September, 1932.

Herewith I have the honour to submit the annual report of the Transport Department for the year ended 31st March, 1932.

I have, &c.,

J. S. HUNTER, Commissioner of Transport.

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REPORT.

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

For the year ended 31st May, 1931, forty-one insurance concerns gave the prescribed notice to undertake business under the Act, and carried on business accordingly. The premiums for that year, excluding, of course, any relating to the 1931–32 licensing year, amounted to £248,656 6s. 5d., after taking into account adjustments between the insurance concerns and the insured on account of extra premiums and refunds due to changes in the classification of the vehicle and the cancellation of registrations. The commission of the Post and Telegraph Department, at the rate of 6d. per transaction, amounted to £5,791 13s., leaving a balance of £242,864 13s. 5d.

Claims settled during the year, including costs, amounted to £98,454 8s. 1d., while the liability in respect of outstanding claims at the 31st May, 1931 (including costs), was estimated by the concerns carrying on the third-party business at £122,865 17s. 10d. Assuming that this estimated liability will eventuate, this means that the total payments on account of compensation (including costs) will amount to £221,320 5s. 11d., or 91·13 per cent. of the net total of premiums received.

For the two years ended 31st May, 1931, the premiums collected amounted to £489,287 4s. 2d.; the commission of the Post and Telegraph Department amounted to £11,416 0s. 4d., leaving a balance of £477,871 3s. 10d.

The amounts involved in the settlement of claims and the estimated liability in respect of claims outstanding for the years ended 31st May, 1930 and 1931, are given hereunder:—

	£	s.	d.
1. Year ended 31st May, 1930—			
(*a*) Claims paid	182,313	18	9
(*b*) Estimated liability in respect of outstanding claims ..	20,012	15	3
2. Year ended 31st May, 1931—			
(*a*) Claims paid	98,454	8	1
(*b*) Estimated liability in respect of outstanding claims ..	122,865	17	10
Total	£423,646	19	11

The amount of estimated liability in respect of outstanding claims for the 1929–30 year as at the 31st May, 1930, was apparently underestimated, as outstanding claims amounting to £97,354 0s. 3d. were actually paid by the 31st May, 1931, while there still remained at that date an estimated liability in respect of outstandings of £20,012 15s. 3d.

Assuming that the estimated liabilities will eventuate, this means that the total payments on account of compensation (including costs) will amount to 88·65 per cent. of the net total of premiums received for the two years.

Attention is specially directed to the fact that the statistics cover the period of two years only and must be interpreted with the utmost caution. It is quite impossible to state to what extent they represent normal or abnormal conditions. Experience over a longer period is the only way of ascertaining figures that will be typical of the third-party business in all its ramifications. The developments of the scheme are being closely studied with a view to ensuring that due equilibrium is maintained between premiums and benefits, but definite conclusions cannot be reached until more experience has been recorded.

It is of interest to note that the percentage ratio of claims actually paid (including costs) to premiums for all classes of insurance undertaken in accordance with the provisions of the Accident Insurance Companies Act, 1908—accident (including motor accidents), disease, employers' liability, &c.—was 54·03, 57·98, 60·62, 58·68, and 61·66 per cent. respectively for the five calendar years ending with 1930. As the outstanding claims for any particular year would be paid during the succeeding or subsequent years, these figures are comparable, up to a point, with those for the third-party business alone, which show corresponding percentage ratios at 86·09 and 91·13 per cent. for 1930 and 1931, and a ratio of 88·65 per cent. for those years combined.

Changes in Premium Rates.

Notwithstanding the lack of conclusive data regarding the general level of the premiums, the results of the experience up to the 31st December, 1931, recorded by the third-party risks pool, which comprises organizations which account for approximately 90 per cent. of the whole of the third-party risks business, showed the following results:—

(*a*) That the annual premium (15s.) payable in respect of motor-cycles was too low, having regard to the risk involved in connection with these vehicles.

(*b*) That the annual premium (£1 10s.) payable in respect of private motor-cars used for business purposes was too low, having regard to the risk involved in connection with these vehicles.

(*c*) That the annual premium (£1) payable in respect of motor-cars used by the following individuals was too low: Commercial traveller, insurance agent or inspector, land and estate agent, manufacturer's agent, stock agent, station agent, salesman.

(*d*) That the present annual premiums payable in respect of public motor-vehicles were too high, having regard to the risk involved in connection with these vehicles.

The adjustments necessary to implement the above conclusions were made, and an amended scale of premiums was published in the *New Zealand Gazette* No. 29, of the 28th April of this year.

The following schedule shows the premiums at present in force as compared with those previously charged:—

Vehicle.		Annual Premium.	
Class Number.	Kind of Vehicle.	On and after 1st June, 1932.	Up to 31st May, 1932.
		£ s. d.	£ s. d.
Class 1 ..	Motor-cycles	1 0 0	0 15 0
Class 5 ..	Private motor-cars used for business purposes ..	2 0 0	1 10 0
Class 8 ..	(*a*) Public motor-vehicles, seven seats	7 0 0	7 0 0
	(*b*) Public motor-vehicles, seven but not more than ten seats	7 0 0	7 10 0
	(*c*) Public motor-vehicles, ten but not more than twenty-six seats	11 10 0	12 0 0
	Each additional seat	0 10 0	1 0 0
	(*d*) Public motor-vehicles, more than twenty-six seats ..	19 10 0	28 0 0
	Each additional seat	0 5 0	0 10 0

The effect of these reductions in respect of public motor-vehicles is as follows in certain typical cases:—

Size of Vehicle.	Premiums.		
	Present.	Previous.	Decrease.
	£ s. d.	£ s. d.	£ s. d.
Seven seats	7 0 0	7 10 0	0 10 0
Fifteen seats	14 0 0	17 0 0	3 0 0
Thirty seats	30 0 0	20 10 0	9 10 0

The question as to whether an all-round reduction should be made in the premiums as a part of the scheme for the reduction of national costs was given careful consideration.

The matter of the premiums, however, is entirely dependent on the results of experience, and a general reduction that could not be justified by experience might cause serious interference with the financial stability of the scheme.

As pointed out above, the scheme is still in its infancy, and premium adjustments will probably be necessary from time to time in order to adjust anomalies as they are brought to light by experience.

The gazetting on the 29th October, 1931, of the agreement, referred to in the last report, whereby cover is provided (supplementary to that given by the Act) to meet the case of third parties injured or killed by motorists who subsequently cannot be traced has resulted in several claims being made under its terms. These claims are at present receiving attention.

The work entailed in collecting the premiums payable under the Act continues to be handled by the Deputy Registrars of Motor-vehicles (Postmasters), and the absence of complaints may be taken as an indication that the Act is working smoothly so far as the machinery for the collection of premiums is concerned.

2. MOTOR-VEHICLES ACT, 1924.

(*a*) Regulations.

A reissue of the Motor-vehicle Regulations has been circulated in draft form for public criticism, and will be issued after full consideration has been given by the Government to the suggestions made as a result of this circulation. Attention is drawn to further remarks concerning the new draft of these regulations on page 9 of this report.

(*b*) Registration of Motor-vehicles.

The number of motor-vehicles registered during the year showed a marked decrease in comparison with the number of registrations effected during each of the six preceding years, as the following table shows :—

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

In last year's report it was stated that the registrations of vehicles manufactured in Great Britain did not during the year 1930–31 show the same percentage decrease as was the case with registrations of vehicles manufactured in other countries. These remarks apply also to the registrations effected during the year 1931–32. The following table indicates the country of manufacture and the number of vehicles registered during the financial years 1926–27 to 1931–32, 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
Totals ..	16,790	68,895	1,355	87,040
		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
Totals ..	3,015	19,522	2,235	24,772
		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
Totals ..	18,758	5,441	90	24,289

Note.—The figures under the heading " Other Countries " include a large number of trailers, most of which are manufactured in the Dominion.

The foregoing table affords definite evidence of a further halting tendency in the motor industry. The number of registrations of motor-cars was only half that recorded for the previous year and less than one-third of the number for 1929–30 ; figures for trucks declined by 35 per cent., and those for motor-cycles by the same amount. The analyses by country of manufacture direct attention to the swing-over from United States of America and Canada to Great Britain. In motor-cars the rapidity and magnitude of the swing-over is remarkable. The registrations in 1931–32 of motor-cars manufactured in Great Britain represented 71 per cent. of the number for 1929–30, while the same percentage for cars manufactured in the United States and Canada was only 21 per cent. The registrations of commercial vehicles, although of smaller magnitude, are of no less interest : the registrations for vehicles manufactured in Great Britain in 1931–32 represented 89 per cent. of the figure for 1929–30, against only 33 per cent. in the case of vehicles manufactured in the United States of America and Canada.

On the 1st June, 1931, the registrations of 12,785 vehicles lapsed owing to the licenses not having been renewed during the relicensing years 1929–30 and 1930–31.

The following figures show the number of motor-vehicle registrations (including dormant registrations) as at the 31st March, 1932 :—

Kind of Vehicle.	North Island.	South Island.	Dominion Total.
Cars	98,594	55,701	154,295
Commercial vehicles	26,666	13,414	40,080
Cycles	21,558	14,299	35,857
Totals	146,818	83,414	230,232

These figures do not include vehicles for which approximately 2,500 " demonstration " plates were issued to dealers during the year.

The number of registrations cancelled between the coming into operation of the Motor-vehicles Act, 1924, and the 31st March, 1932, is as follows :—

Kind of Vehicle.	North Island.	South Island.	Dominion Total.
Cars	12,369	7,110	19,479
Commercial vehicles	5,371	2,385	7,756
Cycles	9,854	7,526	17,380
Totals	27,594	17,021	44,615

Motor-vehicle Registration-plates.

Alternative tenders were called for during the year for the manufacture of motor-registration-plates for periods of one year, three years, and five years. The tender submitted by the Precision Engineering Co., Ltd., of Wellington, was accepted for a period of three years. The plates for the year 1932–33 will have black numerals and border-line on a yellow ground.

It is hardly necessary to draw attention to the fact that motor-vehicle registration-plates for the current licensing year differ from those of earlier years in features other than the colours, but since the reasons for, and advantages resulting from, such a change are not so obvious, a little information hereon may be of some interest.

In the past considerable difficulty was experienced and numerous errors were made by the police, traffic officers, motorists, and by others concerned in determining the several figures on the plates of passing vehicles; consequently, from time to time requests were made for more legible plates.

A new system was therefore introduced whereby better legibility has been obtained through new outlines in the figures, and by the use of a prefix letter to avoid the need for plates with six figures, When it is realized that the former plates carried figures that were alike in outline, all curved ones being based upon the figure 8, and that in the new system no two curves are alike, it will be admitted that this characteristic distinctiveness of the new figures will avoid confusion and must tend towards greatly improved legibility. Whereas formerly six figures of the series had similar top outlines and six had similar bottom outlines, it is now possible for a traffic officer or other observant person to correctly determine every figure on an oily or muddy plate when a relatively small portion only of each figure is visible. Further assistance has been given through the use of the distinctive and easily read prefix letter, which itself has a significant meaning and materially aids the Registrar in compiling the statistical records.

Again, under the new system, an inexpensive, complete, and self-evident classification of all motor-vehicles has been possible, *e.g.*—

(*a*) The motor-car which, at the time of licensing, was declared to be " principally used for private purposes " now carries either a registration-plate with no prefix letter or one with the prefix " X."

(*b*) A car in the hands of an agent or motor-vehicle dealer exhibits a plate with prefix letter " D."

(*c*) The vehicle that is exempt from heavy-traffic fees has a plate with prefix " E."

(*d*) Vehicles owned by the Crown have prefix letters " GOVT."

(*e*) Taxis carry the prefix letter " T."

(*f*) Passenger-service vehicles operating under the Transport Licensing Act, 1931, carry either a prefix " P " or " S " according to their classification.

While in the commercial-truck group the vehicle that—

(*g*) Is declared to be not more than 2 tons gross weight when fully laden gets an " L " registration-plate, and

(*h*) The heavier vehicles which are subject to heavy-traffic tax carry a plate with the prefix letter " H."

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 months ended 31st March, 1930, 1931, and 1932, are given hereunder :—

Vehicle.	Monthly Averages.		
	1930.	1931.	1932.
Motor-cars	125,013	134,407	130,889
Trucks	23,512	25,294	26,232
Omnibuses	1,029	1,040	1,048
Traction-engines	173	117	123
Trailers	755	923	1,160
Tractors	293	302	426
Motor-cycles	26,266	25,167	23,487
Other motor-vehicles	445	458	441
Totals	177,486	187,708	183,776

N.B. Service-cars designed to carry not more than nine persons are included with motor-cars, while those designed to carry more than nine persons are included with omnibuses.

The above figures show a decrease of 3,932 vehicles of all classes during the year ended 31st March, 1932, as compared with the previous year. The figures for each class of vehicle indicate two broad tendencies—firstly, an increase in the traffic of commercial vehicles; and, secondly, a decrease in the traffic of motor-cars and motor-cycles. There were increases of 938 in trucks, 237 in trailers, and 124 in tractors, and decreases of 3,518 and 1,710 in the averages relating to motor-cars and motor-cycles.

3. PUBLIC WORKS ACT, 1928.

(So far as it relates to Heavy Traffic on Motor-vehicles.)

The Motor-lorry Regulations, originally issued in 1925, have been reissued this year under the new title of "Heavy Motor-vehicle Regulations, 1932."

A heavy motor-vehicle is defined as any motor-vehicle, other than a private motor-car, which with the load it is at any time carrying weighs more than 2 tons. Regulations as to the use of heavy motor-vehicles were first gazetted in March, 1925. These regulations were designed principally for the protection of the roads of the Dominion, and the main provisions were as follows :—

(1) The classification of heavy motor-vehicles according to their gross weights, and the payment of heavy-traffic fees by the operators of these vehicles, ranging from £5 to £75 per annum, according to the class of the vehicle.
(2) The fixing of speed-limits for heavy motor-vehicles, based principally on gross weight and type of tires.
(3) The classification of the roads and streets of New Zealand according to their suitability for use by heavy motor-vehicles of various gross weights.

Since 1925 definite advances have been made in the development of the motor-vehicle in practically every department, but particularly as regards tires. In the year 1924–25 solid or semi-solid tires were being used on all commercial trucks above 2 tons rated pay-load capacity, and the balloon tire was not available in New Zealand. In the year 1926 62 per cent. of the total amount collected as heavy-traffic fees was in respect of vehicles with solid tires, while in 1932 this percentage had decreased to 20 per cent.

Over the same period there has also been a marked improvement in the roading conditions in the Dominion, and this improvement has been most marked on the main-highway system, which comprises approximately 11,000 miles of the most important rural roads and forms the backbone of the rural roading system of this country.

These two important developments in road transport—viz., improvements to the heavy motor-vehicle and improvements to the roads—had made the enforcement of the original Heavy Motor-lorry Regulations as regards speed-restrictions practically impossible, and it was therefore decided to bring out a new set of regulations more in line with modern conditions.

After extensive investigations, draft regulations were prepared and forwarded to all interested parties for consideration and constructive criticism. A conference representative of Government Departments, local bodies, motor interests, and the New Zealand Society of Civil Engineers, was then held to consider the regulations in detail, and in February, 1932, they were finally gazetted.

The main provisions relate to speed and weight of heavy motor-vehicles, and the following schedules show the details. For purposes of comparison, the speed schedule shows the previous speed-limits and those allowed under the present regulations.

Table of Speed-restrictions.—Heavy Motor-vehicles all Tires of which are Pneumatic.

Maximum Gross Weight and Class of Heavy Motor-vehicle.	Speed-limits.			
	Passenger-vehicles.		Goods-vehicles.	
	Restrictions under Motor-lorry Regulations, 1927.	Restrictions under Present Regulations.	Restrictions under Motor-lorry Regulations, 1927.	Restrictions under Present Regulations.
	M.p.h.	M.p.h.	M.p.h.	M.p.h.
2½ tons, Class A	30	35	24·0	25
3½ tons, Classes B and C ..	27	35	21·6	25
4½ tons, Classes D and E ..	24	35	19·2	25
5 tons, Class F	24	25	19·2	20
6½ tons, Classes G, H, I ..	21	25	16·8	20
7 tons, Class J	21	20	16·8	15
15 tons, Classes K to Q ..	18	20	14·4	15

For heavy motor-vehicles any tire of which was solid rubber the Motor-lorry Regulations, 1927, provided for speeds ranging from twenty miles per hour to twelve miles per hour, according to gross weight, while the present Heavy Motor-vehicle Regulations provide for a maximum speed of twelve miles per hour for all solid-tired motor-lorries.

Table of Load-limits.

Classification of Road.	Heavy Motor-vehicles other than Multi-axled Heavy Motor-vehicles.		Multi-axled Heavy Motor-vehicles.	
	Gross Weight.	Axle Weight.	Gross Weight.	Axle Weight.
	Tons.	Tons.	Tons.	Tons.
Unclassified	10·0	8·0	15·0	6·0
Class II	8·0	6·4	12·0	4·8
Class III	6·5	5·2	10·0	4·0
Class IV	4·5	3·6	6·5	2·6
Class V	3·0	2·4	4·5	1·8

Classification of Roads.

The classification of roads in New Zealand is based on restriction of the maximum gross loads of motor-vehicles in accordance with the suitability of the road, and under the Heavy Motor-vehicle Regulations all road-controlling authorities have the power to classify the roads under their control.

When the Transport Department was set up in 1929, only 27 per cent. of the rural roads of the Dominion were classified. A number of road-controlling authorities were actually not aware of their powers in this direction, and even where road-classification had been effected the restrictions were, in many cases, not enforced.

The importance of road-classification in relation to road transport costs cannot be over emphasized, and the following finding made by the American Road-builders' Association stresses this fact:—

> "Vast sums of money could be saved each year by a system of highway classification. Over-designing for light-traffic routes is just as uneconomical as under-designing for heavy-traffic routes. Traffic studies readily indicate the roads on which heavy truck loads occur infrequently, and such loads can be prohibited without inconvenience. The soundness and economy of street and highway classification on the basis of volume and type of traffic and maximum loads are obvious."

During the past year considerable progress has been made in bringing about definite action by the various road-controlling authorities in regard to road-classification, and the majority of County Councils are now fully alive to the importance of their powers in this direction.

In the Department's annual report for the year 1931 the general principles of road-classification were fully dealt with, and it was pointed out that Class III roads available for gross loads of 6½ tons on two-axled motor-vehicles should be adequate to meet all the requirements of road transport on the rural roads of the Dominion. This view was unanimously endorsed by the conference of experts convened to consider the Heavy Motor-vehicle Regulations, and many road-controlling authorities are now adopting Class III as the maximum standard for the rural roads under their control.

The general adoption of this standard as a maximum for rural roads will have a most important and far-reaching effect on road transport costs, and the following facts give some indication of the effect on the costs of road-construction alone.

The rural roading system of the Dominion comprises 46,088 miles of formed roads, made up as follows :—

	Miles.
Dustless surfaced roads	1,184
Metal- or gravel-surfaced roads	30,219
Unsurfaced roads	14,685
Total	46,088

As the result of investigations carried out by the Department, it is estimated that the average surface thickness of the metal- or gravel-surfaced roads is under 4 in., and the following table shows the surface thickness required for the various allowable gross loads under the different classes :—

Classification of Road.	Allowable Gross Weights for Two-axled Heavy Motor-vehicles.	Maximum allowable Axle-loads for Two-axled Heavy Motor-vehicles.	Compacted Thickness of Surface required.
	Tons.	Tons.	Inches.
Unclassified	10·0	8·0	8
Class II	8·0	6·4	7
Class III	6·5	5·2	6
Class IV	4·5	3·6	5
Class V	3·0	2·4	4

Assuming that the average width of metal surface is 11 ft., and the present average thickness of the surface is 4 in., then, estimating the cost of metal or gravel in place at 10s. per cubic yard, the cost of bringing the metal- or gravel-surfaced roads up to the various standards is shown in the following table :—

Standard of Road and allowable Gross Weight.	Additional Metal or Gravel required per Mile.	Cost per Mile.	Interest at 5 per Cent. per Mile.	Sinking Fund Charges based on an Eight Years' Life per Mile.	Total Capital Cost for 30,219 Miles.	Total Capital Charges for 30,000 Miles.
	Cubic yards.	£	£	£	£	£
Unclassified (10 tons) ..	960	480	24	50·2	14,500,000	2,244,000
Class II (8 tons) ..	720	360	18	37·6	10,875,000	1,683,000
Class III (6½ tons) ..	480	240	12	25·1	7,250,000	1,122,000
Class IV (4½ tons) ..	240	120	6	12·5	3,625,000	561,000
Class V (3 tons) ..	..	..	..	..	..	..

The above figures show that it would cost this country over 14 million pounds, or just under 2¼ million pounds per annum in capital charges on metal or gravel alone, to strengthen the surfaced rural roads so that they would be suitable for regular gross loads of 10 tons on two-axled heavy motor-vehicles. If, however, the maximum standard aimed at is Class III, these ultimate costs would be halved, assuming that all the surfaced roads were brought to that standard ; but if the road-classification is based on road-transport requirements, then Class IV and Class V roads will form a large proportion of the total mileage and the capital costs would be further materially reduced.

In order that this problem of road standards may be attacked, it is essential that a comprehensive road census be carried out, and from the information derived from such a census it would then be possible to lay down a definite national scheme of road-classification which, as previously pointed out, would result in very substantial savings in road-construction costs without materially affecting the efficiency of road transport.

In this connection it might be pointed out that the taking of a road census would be an eminently suitable work for the unemployed, supervised by Government and local-body engineers.

The present position as regards classification of the rural roads is as under :—

——	Class II.	Class III.	Class IV.	Class V.	Total.
	Miles.	Miles.	Miles.	Miles.	Miles.
North Island	1,084	3,183	5,801	2,585	12,653
South Island	1,093	3,102	1,936	325	6,456
Totals ..	2,177	6,285	7,737	2,910	19,109

Maintenance of Roads.

The maintenance of a road may be defined as the amount of work and materials required to keep it as nearly as possible in the same condition as it was when it was originally constructed.

Applying this definition to the metal- or gravel-road surfaces of this country, it is found that there has been a general deterioration amounting to approximately 33 per cent., and that the cost of restoring these surfaces to their original conditions would amount to approximately £5,000,000. Owing to the present financial stringency, the amount of money available for road-maintenance this year has been seriously curtailed, and it appears that, provided traffic conditions remain the same, this action will mean that the deterioration of the road surfaces will be accelerated.

As pointed out in previous reports, the condition of road-surfaces has a very material effect on motor-vehicle operating costs, and investigations carried out in the United States show that these costs are 8 per cent. higher on ordinary gravel than on best gravel surfaces.

It is estimated that the total annual running costs for motor-vehicles in this country, exclusive of capital charges, license fees, and insurances, amount to approximately £16,000,000, and of this amount approximately £10,000,000 is expended in travelling on the rural roads.

Taking into account the dustless surfaced roads and the 8-per-cent. increase in running costs, due to deteriorated surfaces, it is estimated that the extra cost to the motor operator, due to reduced maintenance, would, provided the total annual motor-vehicle mileage remained the same, amount to approximately £500,000.

The damages to gravel road-surfaces are due to climatic conditions and traffic, and it is estimated that as a general average the damage due to the former cause would amount to approximately 0·25 per cent. of the total. It is further estimated, as the result of a careful investigation, that a reduction in the average speed of motor-vehicles on rural roads by five miles per hour would result in a reduction in maintenance costs by over £250,000 per annum.

In view of the above facts the Department, in circularizing the proposed reprint of the Motor-vehicle Regulations, has included for consideration a maximum speed-restriction of forty miles per hour for all motor-vehicles, as it is considered that, apart altogether from the damage consideration, such a restriction would have a most beneficial effect in reducing the damage to road-surfaces by motor-vehicle traffic. Further, it is not considered that such a restriction would materially interfere with road transport, seeing that all commercial vehicles over 2 tons in weight are already subjected to speed-restrictions considerably below forty miles per hour.

The motor-vehicle operators themselves should realize that speed and weight restrictions are recommended only after very careful consideration, and that the cardinal principle of the "greater good to the greater number" is the prime consideration in any of these recommendations. To sum up, it may be stated that, with the limited funds available, unrestricted use of the rural roads by motor-vehicles will undoubtedly mean that these road-surfaces will rapidly deteriorate, and untimately the motorist will, of necessity, be restricted both as to speed and weight, while road transport costs will be materially increased. On the other hand, with reasonable restrictions of weight and speeds, the road-surfaces will be conserved, and road-transport costs kept at a reasonable figure, both as to vehicle-operation and road-maintenance. The main point is that excessive speeds mean high motor-operating costs, and high road-maintenance costs.

4. MOTOR-SPIRITS TAXATION ACT, 1927.

The motor-spirits tax was increased from 6d. to 8d. per gallon as from the 7th October, 1931.

The following data show the yield from and distribution of the petrol-tax for the year ended 31st March, 1932. The figures regarding the net yield for previous years are given for comparative purposes:—

(*a*) Yield.

	£
Gross yield	1,817,890
Deductions—	
Refunds and cost of making same	140,370
Net yield	£1,677,520

*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‡
Total since inception of tax	£4,899,625

* 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.

There has been an increase in the applications for refunds since the tax was increased to 8d. There are two main reasons for this—firstly, the financial stringency due to the prevailing depression, and, secondly, the increase in the tax, which has now made it worth while for people to claim refunds that they did not worry about when the tax was 6d.

(*b*) Distribution.

The distribution of the net yield of the petrol-tax was as follows for the year ended 31st March, 1932 :—

	£
Main Highways Board	1,231,202
Boroughs (population of 6,000 and over)	107,061
Consolidated Fund	321,685
Commission to Customs Department for collection	17,572
Total	£1,677,520

N.B.—After the 1st August, 1930, the proportion of the petrol-tax paid to boroughs with populations of 6,000 and over was reduced from 8 per cent. to 5½ per cent. (section 38, Finance Act, 1930). The 8 per cent. was reinstated as from the 1st April, 1931.

The distribution of the petrol-tax amongst boroughs in accordance with section 9 (1) (*b*) of the Motor-spirits Taxation Act, 1927, for the year ended 31st March, 1932, together with cumulative figures showing the total distribution from the inception of the petrol-tax up to the 31st March, 1932, is given in Table 7 in the Appendix.

(*c*) Classification according to Vehicles.

The following figures show the net yield from the petrol-tax for the year ended 31st March, 1931, split up according to the nature of the vehicle in which the motor-spirits was consumed :—

Kind of Vehicle.	Estimated Amount.	Percentage of Total.
	£	Per Cent.
Motor-cars	1,045,000	62·31
Trucks	515,000	30·71
Omnibuses	60,000	3·58
Motor-cycles	52,000	3·10
Balance, covering other motor-vehicles and other uses of motor-spirits for which refunds were not claimed	5,000	0·30
Total	1,677,000	100·00

N.B.—Service-cars designed to carry not more than nine persons are included with motor-cars, while those designed to carry more than nine persons are included with omnibuses.

Motor-spirits in respect of which refunds of the tax were made have not been included above.

The above figures are obviously inconclusive as evidence of the incidence of the petrol-tax. Like all taxes, this one may shift either backwards to the producers of the benzine, or forward to the consumers of motor-transport services, while a certain amount of the burden may be carried for a time by the operators of motor transport services.

In the long-run, the petrol-tax will tend to be shifted forward to the consumers of motor-transport services, and, in so far as the increased cost of these services causes a diminution in the demand for them, a proportion of the tax will also in the long-run be cast upon the producers of motor-vehicles and equipment, in the form of losses of business consequent on a diminished demand.

For the year ended 31st March, 1932, passenger-transport effected by motor-cars, motor-omnibuses, and motor-cycles contributed £69 out of every £100 of the total yield from the petrol-tax, against £31 out of every £100 from trucks. Thus the petrol-tax derived from the carriage of passengers in motor-vehicles is over twice that derived from the transportation of commodities. A further analysis of the motives lying behind the movement of persons (impossible at this stage) would shed further light on this question. Investigations by the Department indicate that approximately 50 per cent. of the total cost of operating motor-cars in New Zealand is for purposes of a non-business nature.

Refunds of Duty.

Refunds of duty may be claimed by all persons using motor-spirits for any purpose other than as fuel for motor-vehicles in respect of which annual license fees are payable in terms of the Motor-vehicles Act, 1924. The refunds are made by the Registrar of Motor-vehicles (the Secretary of the Post and Telegraph Department).

The undermentioned figures show the number and total amount of claims paid each year since the inception of the tax :—

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

The increase of 44 per cent. in the number of claims made during the year 1931 as compared with the previous year is probably due partly to the financial stringency, and partly to the fact that the duty on motor-spirits was increased in July, 1930, from 4d. to 6d. per gallon.

The particulars of the claims paid during each of the quarterly periods in 1931 are as follows :—

Quarter.	Number of Claims.	Amount refunded.
		£
March	9,474	37,652
June	10,111	37,074
September	8,098	28,047
December	9,433	29,377

5. TRANSPORT LICENSING ACT, 1931.

The Transport Licensing Act, which became law on the 11th November, 1931, marks the most important step that has been taken up to the present in the direction of meeting the problems that have arisen as a result of the growing competition in the field of transport in the Dominion. The principle upon which the Act is based—viz., regulation of the public motor industry with the object of securing (*a*) compulsory co-ordination between it and the other forms of transport, and (*b*) the organization of the public motor industry on the lines calculated to yield the maximun utility from its use—is now recognized and applied throughout practically the whole world. It was first applied in New Zealand in the field of suburban passenger-transport by the provisions of the Motor-omnibus Traffic Act, 1926.

Prior to the Transport Licensing Act coming into operation all passenger-services were required to procure "plying for hire" licenses from Borough Councils, and those services carried on in motor-omnibus districts under the Motor-omnibus Traffic Act, 1926, could operate only in accordance with licenses granted under that Act.

The "plying for hire" licenses were under the jurisdiction of the local authority in which the service was plied for hire, but in practice were enforced by the two terminal local bodies only. Fees ranging up to £2 10s. per annum were payable for each license. These licenses could be refused solely in cases where the applicant was of disreputable character, and were of no value whatsoever as a weapon for securing economic regulation of the services.

Broadly speaking, the Motor-omnibus Traffic Act was for the purpose of eliminating wasteful competition between omnibuses and electric trams, and, although it was in force mainly in those urban centres where electric tramways were in existence, its provisions were also in force in bigger centres, such as Hamilton, Palmerston North, and Timaru, where tramways did not exist. In most cases the licensing authorities under this Act were the local authorities which operated the tramways, with the result that so long as the main objective—viz., the elimination of wasteful competition with the tramways—was attained the regulatory powers dealing with the field of omnibus passenger-traffic were not universally enforced. Only short-distance services which charged fares of 2s. or under for any journey, counted one way only, and only the bigger vehicles designed for the carriage of more than seven persons, including the driver, were covered.

A description of the field of public passenger-transport by motor-vehicles at the time regulation in the public interest was adopted is characterized by two outstanding facts. On the one hand, there was the relatively small field of urban transport, where the seed of regulation was sown six years ago and the fruits of co-ordination have already been enjoyed, and where the benefits of experience were available as an aid in administration. On the other hand, there were those considerable sections of omnibus services which were not embraced by the Motor-omnibus Traffic Act, and the whole field of service-cars, where unregulated competition held sway, with all its attendant evils of financial instability, duplicated services, unnecessary wear-and-tear on roads, irregular and unsatisfactory services, wasteful concentration of services on "fat" routes, and avoidance of "lean" or developmental routes, &c. Combined with this morass of economic evils was the fact that the services were distributed from one end of the Dominion to the other.

(*a*) PASSENGER SERVICES.

Scope of Act.

1. *Services covered.*—Provision is made whereby no passenger-service may be operated on or after the "appointed day" unless such service is authorized by a passenger-service license. The following classes of service do not require passenger-service licenses :—

(*a*) Taxis, provided they do not run on defined routes ;

(*b*) Services for the carriage of school-children and their teachers ; and

(*c*) The carriage of private parties on special occasions where the vehicle is hired as a whole.

Factors to be taken into Account in the Consideration of Applications for Licenses.—The extent to which the provisions of the Act change the method of entry into the passenger-transport industry is indicated by the factors which are required to be considered in connection with applications for licenses.

Primarily, two broad tests are applied: Firstly, is the proposed service necessary or desirable in the public interest; and, secondly, do the needs of the district or districts as a whole in relation to passenger-transport warrant the service?

If these two tests are fulfilled, the Act provides that Licensing Authorities shall consider the following:—

"(*a*) The financial ability of the applicant to carry on the proposed service, and the likelihood of his carrying it on satisfactorily:

"(*b*) Time-tables or frequency of the proposed service:

"(*c*) The fares proposed to be charged or made for the carriage of passengers:

"(*d*) The transport services of any kind, whether by land or water, already provided in respect of the localities to be served and in respect of the proposed routes:

"(*e*) The transport requirements of such localities, including such requirements in respect of the carriage of mails:

"(*f*) The vehicles proposed to be used in connection with the service:

"(*g*) The conditions of roads and streets to be traversed on the route or routes, and any restrictions of load or speed, or other lawful restrictions affecting vehicles of the type or class proposed to be used, including restrictions arising out of the clsasification of roads and streets under section 166 of the Public Works Act, 1928:

"(*h*) Any evidence and representations received by it at the public sitting, and any representations otherwise made by the Government Railways Board, local authorities, or other public bodies, or any persons carrying on transport services of any kind (whether by land or water) likely to be affected, and any representations contained in any petition presented to it signed by not fewer than twenty-five adult residents of any locality proposed to be served:

"Provided that before taking into consideration any adverse representations made otherwise than at the public sitting the Licensing Authority shall give the applicant and all other persons likely to be affected a reasonable opportunity to reply to such representations."

The Act does not provide for compensation in cases where licenses are not granted, but section 28 provides that a license shall not be refused in any case where the applicant, having made his application before the appointed day, satisfies the Licensing Authority:—

"(*a*) That at the passing of this Act and at the date of his application the applicant was carrying on, pursuant to a license under the Motor-omnibus Traffic Act, 1926, the service in respect of which the application is made; or

"(*b*) That on the first day of April, nineteen hundred and thirty-one, and continuously thereafter until the date of his application, the applicant was, otherwise than pursuant to a license under the Motor-omnibus Traffic Act, 1926, lawfully carrying on the service in respect of which the application is made, and that such service was not carried on in competition with a licensed motor-omnibus service; or

"(*c*) That the applicant, being a person lawfully carrying on a passenger-service in competition with a licensed motor-omnibus service, had established such a passenger-service before the passing of the Motor-omnibus Traffic Act, 1926, and had continuously carried on such service from its establishment until the date of his application; or

"(*d*) In the case of an application for a license in respect of a seasonal service, that the applicant lawfully and continuously carried on substantially the same service during the two seasons immediately preceding the appointed day, or where that day falls in such a season that the applicant is then uninterruptedly carrying on such service and substantially so carried it on during the whole of the immediately preceding season:

"Provided that no such service shall be deemed to have ceased to be continuously carried on by reason of any interruption by flood, closing of roads or streets, or any other cause whatever beyond the control of the applicant."

Matters to be fixed by Licensing Authorities.

Section 30 of the Act provides that in granting any passenger-service license the Licensing Authority shall prescribe:—

"(*a*) The class of license (whether continuous, seasonal, or temporary) and the period or occasion of the license:

"(*b*) The class and number of passenger-service vehicles to be used in connection with the service, and the seating and other accommodation for passengers of each such vehicle by reference to a minimum number or a maximum number or to both such numbers:

"(*c*) A date not later than which the service shall be commenced:

"(*d*) The localities to be served and the route or routes to be traversed:

"(*e*) The time-tables or frequency of service to be observed:

"(*f*) The fares to be charged for the carriage of passengers and (where goods are also to be carried) the charges to be made for the carriage of goods:

"(*g*) Such other matters and conditions as may be prescribed by regulations under this Act, or as the licensing authority thinks proper."

In addition to the above provisions, which, of course, apply to individual services, the Licensing Authority is empowered, in cases where desirable in the public interest, to fix the fares and time-tables of any service so as to prevent wasteful competition with alternative forms of transport of any kind.

The protection afforded to electric tramways in the Motor-omnibus Traffic Act, 1926, against the competition of motor-omnibuses is carried forward in the provisions of the Act. The Licensing Authority must, where necessary, so fix the fares for any passenger-service that the fares charged for the carriage of adult passengers over any route or section thereof within an area that may be conveniently served in whole or in part by an existing tramway service shall be at least 2d. more than the corresponding fare charged in respect of the tramway service.

Right of Appeal.

Provision is made whereby appeal may be made to a specially constituted Transport Appeal Board against the decision of any Licensing Authority.

Machinery.

Immediately after the passing of the Act, steps were taken to create the necessary machinery as follows :—

1. *Appointed Day.*—This was fixed as the 1st March, 1932.

2. *Transport Districts.*—The ten districts shown in the maps in the Appendix were created, and with the four Metropolitan Districts (Auckland Transport Board Area, Wellington City, Christchurch Tramway District, and Dunedin City) made fourteen districts altogether.

3. *Personnel of Licensing Authorities.*—The gentlemen whose names are given in the statement at the back of the statistical tables in the Appendix were appointed members of the various Licensing Authorities.

4. *General.*—Procedure regarding applications for licenses, licenses, Appeal Board, fees and allowances to members of Licensing Authorities and Appeal Board, and various other matters of a machinery nature.

5. *Fees.*—The fees were fixed on a basis calculated to yield sufficient revenue to cover the costs of administration, and are as follows :—

Nature.	Amount. £ s. d.
(*a*) To accompany each application for continuous and seasonal licenses	3 0 0
(*b*) To accompany each application for temporary license	0 2 6
(*c*) On issue of continuous and seasonal license	2 0 0
(*d*) To accompany each application for a certificate of fitness—	
(i) Contract vehicle	2 0 0
(ii) Vehicle to be used under a passenger-service license	3 0 0
(iii) Vehicle licensed under Motor-omnibus Traffic Act	2 15 0
(*e*) To accompany applications for temporary permit	0 2 6

6. *Financial and Statistical.*—Section 37 of the Transport Licensing Act provides that regulations may be made prescribing the accounts and records to be kept by licensees, and giving the Minister of Transport power to ask for such information and data as may be necessary from time to time.

The fundamental object of these provisions is to provide machinery whereby the Minister may be in constant and close touch with the operation of passenger-services and their financial position, so that steps may be taken to ensure that the savings resulting from the operation of the Act are passed on to the public in the form of reduced fares or better services. When it is remembered that the long-run effect of the provisions of the Act will be to confer valuable monopoly powers on operators, it will be recognized that a comprehensive and reliable system of financial and statistical returns will provide the means of safeguarding the interests of the public.

Financial and Operating Statistics, Year ended 31st March, 1931.

Table No. 9 in the Appendix gives detailed statistics relating to the operation of passenger-services in the Dominion during the year ended 31st March, 1931.

These data were collected on returns which accompanied applications for passenger-service licenses, and although it was found that many operators had incomplete records, and a considerable amount of estimation was necessary, it would appear that the total figures give a reasonably accurate picture of the position in each district.

The fact that it has been impossible to classify the financial and operating data according to the sizes of the different vehicles detracts considerably from the usefulness of the figures, and makes the averages computed in connection with the revenue and operating costs rather non-typical of actual conditions. The figures, however, may be taken as sufficiently accurate to offer a general basis of comparison with similar figures which will be collected in the future.

An examination of the details in Table No. 9 reveals the following principal features :—

1. *Capital.*—The capital invested in the public motor passenger-transport industry amounts to just under £700,000, of which the sum of £70,000 represents borrowed money. Attention is directed to the fact that the unpaid purchase-money on vehicles held under the hire-purchase system has not

been counted in with the borrowed money. Excess of revenue over expenditure for the year amounted to £77,749, representing a return of 11·11 per cent. on the capital invested.

2. *Revenue.*—The total revenue for the year was recorded as £898,572, of which passenger fares counted for £834,435, or 92·86 per cent.; mail contracts for £28,340, or 3·15 per cent.; and the carriage of goods and parcels for £35,797, or 3·99 per cent. The average fare paid per passenger was 15·26d., and the average number of passengers carried per vehicle-mile was 1·63.

3. *Operating Costs.*—The following represents a summary of the total operating costs :—

Operating Costs, Year ended 31st March, 1931.

Item.	Amount.	Percentage of Total.
	£	
Running costs—		
Petrol and lubricants	230,603	28·09
Tires	37,104	4·52
Maintenance and repairs	91,685	11·18
Depreciation	95,507	11·63
Total	454,899	55·42
Standing charges—		
License fees	29,189	3·56
Wages (including drawings of proprietors)	216,207	26·34
Insurance	24,410	2·97
Garage fees	7,830	0·95
Total	277,636	33·82
General overhead and management expenses, &c.	88,288	10·76
Grand total	820,823	100·00

The relatively large proportion of the total operating costs accounted for by the running costs directs attention to an important principle in connection with the operating costs of motor-vehicles, and gives some idea of the savings which can be effected by eliminating unnecessary vehicle mileage.

Operating Costs and Revenue Averages per Vehicle Mile.—The following table shows the average operating costs and the average revenue per vehicle-mile for all the services in the various districts :—

Table showing Revenue and Operating Costs per Vehicle-mile.

District.	Revenue per Vehicle-mile.				Operating Cost per Vehicle-mile.			
	Passengers.	Mails.	Goods.	Total.	Running Costs.	Standing Charges.	Overhead.	Total.
	d.	d.	d.	d.	d.	d.	d.	d.
N.I. Central	9·173	0·139	0·303	9·615	4·876	2·711	1·478	9·065
S.I. Central	9·783	0·287	0·451	10·521	5·342	2·419	0·949	8·710
No. 1	8·626	0·914	0·718	10·258	5·067	2·974	0·352	8·393
No. 2	16·045	0·099	0·117	16·261	7·877	5·775	1·117	14·769
No. 3	9·634	0·255	0·370	10·259	5·410	3·458	0·971	9·839
No. 4	6·592	0·324	0·366	7·282	3·963	2·300	0·910	7·173
No. 5	8·811	0·742	0·434	9·987	4·854	3·489	1·096	9·439
No. 6	9·980	0·627	0·885	11·492	5·962	3·753	0·740	10·455
No. 7	6·602	0·224	0·323	7·149	3·433	2·209	0·699	6·341
No. 8	10·569	0·599	0·475	11·643	5·842	4·185	0·980	11·007
No. 9	8·234	1·072	0·935	10·241	4·537	2·886	0·311	7·734
No. 10	8·283	0·252	0·945	9·480	5·220	2·373	0·542	8·135
Totals	9·356	0·318	0·401	10·075	5·100	3·113	0·990	9·203

It will be observed that, while in the majority of districts the revenue and operating costs are more or less constant and call for little or no comment, the corresponding figures in Nos. 2 and 8 Districts are relatively high, while, conversely, Nos. 4 and 7 Districts show figures below the average.

The higher revenue and operating costs in the aforementioned districts would appear to be due to the use of a greater proportion of heavy vehicles of high carrying-capacity, with correspondingly high operating costs.

In Nos. 4 and 7 Districts, however, the absence of relatively closely populated areas, together with much longer routes, combine in reducing passenger revenue in proportion to vehicle-mileage, while the use of lighter cars results in reduced operating costs.

Table No. 8 in the Appendix shows the applications for passenger-service licenses, together with the decisions given at the 31st March, 1932.

The section of the table relating to decisions is exclusive of many applications for continuous and seasonal passenger-service licenses which were not considered until after the 31st March.

The maps at the end of the Appendix show the routes and the numbers of passenger-services licensed under the new Act.

Passenger-service Vehicle Inspections.

For the safety of the traveller by road, the Transport Licensing Act, 1931, requires the owner of each motor-vehicle that is used for the carriage of passengers for hire or reward (other than the vehicle designed to seat not more than eight persons, and which is operating strictly and solely as a taxicab) to make application for a certificate of fitness, and an inspection is thereafter made by the inspecting officer located in the district wherein the vehicle is regularly garaged.

If the application covers a vehicle which is to be used on a route required to be licensed under the above-mentioned Act, a bank draft for £3 must accompany the application for inspection, and similarly a payment of £2 must be made—

(*a*) In the case of a vehicle used for the carriage of school-children, with or without their teachers, but not at the same time carrying other passengers; and

(*b*) In the case of a vehicle carrying passengers under a contract, expressed or implied, for the use by them of the vehicle as a whole, while the vehicle which is to be used on a service that has been or is to be specially licensed for one week, more or less, must, upon each occasion, be covered by a fee of 2s. 6d. for the permit.

It will be seen, therefore, that the legislation has embraced practically every passenger-vehicle used for hire or reward, other than the genuine taxi; but in this regard it is apparent to the Department that many owners have not yet realized their obligations, and of these defaulters the majority are in the £2-payment class indicated in (*b*) above.

The first applications for inspection were received in the second week in January last, and for seven months they have been coming to hand daily. A summary of the position throughout the Dominion at noon on the 16th August, 1932, shows, in all, a few more than 1,700 applications had been lodged, and that of a total of 1,692 applications, for which the necessary fees had been duly paid, no less than 103 applications, or 6 per cent. of the total, were withdrawn by the owners either before or during the inspection period, while 44 other vehicles, being 2·8 per cent. of the remainder, were, upon examination, found to be beyond repair, and therefore were condemned, being unfit for further service.

In this connection it is worth mention that both withdrawals and condemned vehicles figure in the returns from each of the ten districts into which the Dominion has been divided.

The 1,545 "active" vehicles are distributed as under:—

1. No. 4 District (Hawke's Bay and Gisborne areas)	231
2. No. 2 District (Auckland City and contiguous counties)	222
3. No. 6 District (Wellington City, Manawatu, and Wairarapa areas)	209
4. No. 3 District (Waikato and Bay of Plenty areas)	176
5. No. 5 District (Taranaki, Wanganui, Rangitikei, and Taumarunui areas)	174
6. No. 7 District (Marlborough, Nelson, and Westland areas)	161
7. No. 9 District (Dunedin City and Otago areas)	134
8. No. 8 District (Christchurch City and Canterbury areas)	121
9. No. 1 District (Warkworth and North Auckland areas)	72
10. No. 10 District (Southland Province)	45

But, as already mentioned, many more vehicles have yet to be embraced, chiefly vehicles engaged in the transport of school-children and as contract vehicles; of the latter the majority are "passenger-trucks."

As a guide to all concerned, and for uniformity of treatment by the several inspecting officers, certain draft regulations were framed in January last, and these incorporate the requirements which for the past five years have been applied to motor-omnibuses that were licensed under the Motor-omnibus Traffic Act, 1926, and contain also extra clauses appropriate to the respective requirements for the widely different types of passenger-vehicles that have been embraced by the legislation of November last.

The draft as prepared was then submitted for constructive criticism to representatives of the several parties interested in passenger-transport by motor-vehicles, and certain amendments were agreed to, as was the case at a later date when the service-car proprietors again met the officers of the Department.

The draft, as amended, covering the construction and equipment of omnibuses, service-coaches, service-cars, and school-children vehicles, now has the backing of the licensed operators and the Education Department, and will be duly recommended for gazetting as Part I for existing vehicles, Part II for new vehicles, together with two other parts, which are as yet incomplete, being Part III for the passenger-truck and Part IV for the trackless trolly-omnibus.

Just as the joint experience of operators of omnibuses has shown that the chassis which has been designed principally for the carriage of goods is not altogether suitable or satisfactory when used in a city-suburban passenger-service, so will many operators admit that the use of an ordinary motor-car, or one with an extended wheel-base and elongated chassis-frame, leaves much to be desired when operating in a long-distance passenger-service.

In general, the private-car models are too small for the loads to be carried in a licensed service, but, as vehicles of from eight to fourteen passenger capacity were not purchasable from stocks held overseas, the service-car proprietor, in the past has been obliged, more or less, to adapt the standard seven-seater chassis to his requirements. Naturally enough, this was done by making the chassis longer, but seldom, if ever, stronger, and then a New-Zealand-made body was constructed not only longer but wider than the standard body.

In extreme cases the original parts, such as engine, transmission-gear, steering assembly, braking system, wheels and tires, &c., have been left to transport a body and a live load weighing twice as much as was originally allowed for by the manufacturer, and to this burden has been added the extra baggage and freight.

Many serious defects in the vehicles have been located by the Inspectors, but detailed information concerning these need not be given herein. It will perhaps be adequate to say that certain models unquestionably have characteristic and serious weaknesses; in one model it may be the transmission, in another a vital part of the steering-gear, in a third a defect in the brake mechanism; or, again, the weakness may be evident through a tendency to fracture in the chassis-frame, cross-member, or an axle; but in these latter cases the trouble is usually caused through overloading.

However, the operator rather than the designer of his vehicle should be blamed for most of the defects that have been observed, because the unsafe condition of the vehicle more often than not results from indifferent maintenance. Actually vehicles in regular service have been found without a second brake-operating gear; without brake-linings; with brake-drums that were useless; with essential parts of the brake-linkage system missing; with steering-gear in a positively dangerous condition; with both main frames fractured through harsh treatment; with drive-shaft almost ready to fall to the ground; with wheels on the verge of a collapse; with the body insecurely fastened to the chassis; with the body in such a condition that the doors could not be kept closed when the vehicle was travelling; with inefficient headlights; without rear light; with several leaves of the springs cracked; and with rivets and chassis fastenings in a neglected state.

Not only can it be said that many of these defects have been found in the one vehicle, but also it has been established that certain owners, possibly in ignorance in a few odd cases, have allowed most of their fleet of vehicles to quickly deteriorate to a dangerous degree.

Enforcement.

Inspectors.—In view of the limited funds available, the efficient enforcement of the Transport Licensing Act has constituted a problem in itself. It was felt that the police should not be further burdened with traffic work. Therefore the majority of local authorities which have inspectorial staff were communicated with, and the services of their Inspectors solicited on the basis of the local bodies obtaining all fines obtained as a result of prosecutions. The response was very favourable. Out of 114 local authorities written to, eighty-eight have agreed to assist, and, of the remainder, many have not yet made their decisions.

The Main Highways Board has also instructed its Traffic Inspectors to assist the Department on the above basis, and as these and many of the local-body Inspectors operate on the "group" system—that is to say, cover the territory of several local bodies—efficient means for enforcement of the Act is now in operation practically throughout New Zealand.

Arrangements are being made with the Health Department to permit its Inspectors to co-operate with this Department in the few remaining territories not already sufficiently covered.

As licenses become finalized, and operators and Inspectors become more fully accustomed to the Act and its requirements, the standard of efficiency in its enforcement will undoubtedly become very complete.

The Department very much appreciates the assistance the local bodies and Main Highways Board are rendering free of charge in this important aspect of administration of the Act.

Prosecutions.—As it has taken operators some time to become accustomed to the Act and its requirements, prosecutions have not followed every breach, and Court cases, therefore, have been comparatively few.

Revocation of licenses.—The Act contains two provisions of great importance to operators, inasmuch as under them they may lose their passenger-service licenses.

Section 31, subsection (4), states that if any licensee curtails or abandons his service without consent of the Licensing Authority he *shall* lose his license, and may, in addition, be subjected to heavy monetary penalty. Several licenses have been revoked under this section. Although this may seem harsh, it has to be recognized that a passenger-service license under the Act gives privileges which in their turn imply obligations, one of the obligations being the provision of a service upon which the public, at intermediate places as well as the termini, can rely.

Section 36 provides that if as a result of a public inquiry held by the Licensing Authority it is shown to the latter's satisfaction that the licensee has broken any of the conditions or terms of his passenger-service license the license *may* be revoked. This section has, so far, been used only to prove cases of curtailment in the service for the purpose of assisting to carry out section 31; but now that operators are used to the Act and their obligations under it they would be well advised to bear in mind this section and the wide powers given by it.

Results from Administration of Act.

The relationship between transport-control and improvement in conditions in the operation of transport facilities is of a direct and striking nature, as the experience in the administration of the Act so far clearly demonstrates. Broadly speaking, public transport by motor-vehicle does not differ in fundamental economic character from railways, tramways, and other public-utility industries, in connection with which it is now axiomatic that competition inevitably gives rise to over-capitalization and unsatisfactory services, which lead in turn to relatively high costs per unit of service. In the long-run the revenue received in transport services must cover operating costs, so that the operating costs per passenger or per ton of freight on routes where there are too many services must always be considerably higher than on routes where the services are not in excess of the economic requirements. The plain fact is that the public, as travellers and as taxpayers, are required to meet the high transport costs due to wasteful competition.

Some idea of the additional burden that unregulated competition in the omnibus and service-car business has imposed upon the public in New Zealand is to be had from the fact that it is estimated that the results of the first year's operation of the Act will result in a saving of no less than 5,829,000 vehicle-miles out of an estimated total of 21,405,000 vehicle-miles. Expressed in operating costs at 9d. per mile, this represents approximately £209,000 per annum; but it is hardly correct to assume that the whole of this amount represents a reduction in actual transport costs, for the reason that where the reductions represent a small proportion only of the total vehicle-mileage there may have been a reduction in running costs (*i.e.*, petrol, lubricants, tires, repairs, and maintenance, and depreciation), but not in standing charges (*i.e.*, wages, license fees, garage fees, overhead, &c.). Running costs represent approximately 5d. per vehicle-mile, so that the total saving in running costs for the year works out at £121,000. The real saving in transport operating costs lies somewhere between the total saving in running costs (£121,000) and the total operating costs (£209,000), and is conservatively estimated at £150,000 for the year. The saving in road-damage is estimated to represent approximately £24,000, and as the special motor taxation would be decreased by approximately £18,000 by the reduction in vehicle-mileage, and as approximately one-third of this £18,000 would actually be spent on the roads, it would appear that £6,000 of the total £24,000 representing saving in road-damage is included in the saving in running costs already referred to.

To sum up the estimated annual savings as a result of the first year's operation of the Act are as follows:—

	£
(*a*) Vehicle-operating costs	150,000
(*b*) Road-damage	18,000
Total	£168,000

The incidence of these savings is of considerable interest and importance. The savings in vehicle-operating costs would in the ordinary course of business go into the pockets of the operators, since the elimination of a competitor means that the surviving operator would secure a greater revenue for, generally speaking, the same operating costs, while co-ordination among different services means the same revenue for less operating expenditure. The Department, however, will under the provisions of the Act keep in close touch with the finances of operators, with the object of ensuring that the results of the savings are passed on to the public in the form of reduced fares. It may be a little early to make any reliable prognostication as to fares, but there are indications that at the relicensing period next February there should be substantial reductions throughout the Dominion.

The elimination of unnecessary and wasteful competition between road and rail passenger-services has been brought about in many cases, with beneficial results. The reduced road damage will be reflected in reduced local authorities' rates required for expenditure on roads.

Hardship.

It would be impossible to administer an Act such as the Transport Licensing Act without hardship in individual cases. The conflict between the regulatory provisions of the Act and the conditions of *laissez faire* which existed in the motor passenger-services is so sharp that it would be impossible to bring about co-ordination without inflicting hardship somewhere. Every endeavour has, however, been made by the various Licensing Authorities to minimize hardship in individual cases as much as possible, and, judging by the relatively few complaints that have been made, their efforts have not been without success. The provisions of section 28 providing for the granting of "automatic" licenses where a passenger-service had been operated by the same proprietor since the 1st April, 1931, ensured that many operators secured licenses in cases where it would have been extremely difficult to prove that the service was necessary and desirable in the public interest, and where co-ordination is certainly desirable. As section 28 will not apply at the relicensing period next year, there is little doubt that further steps will then be taken to reduce unnecessary and wasteful competition, and effect further substantial reductions in our national transport overhead.

(*b*) GOODS SERVICES.

The provisions of Part III of the Act, relating to the licensing of goods services, have not yet been invoked. Draft regulations prescribing the necessary machinery have been prepared and are at present under consideration.

6. MOTOR ACCIDENTS.

Motor-vehicle accidents continue to take a heavy annual toll of human lives. During the year ended 31st March, 1932, there were 148 fatal accidents which resulted in the deaths of 157 persons. Compared with the similar figures for the previous year, these figures show a decrease of 73, or approximately one-third in the number of accidents and a decrease of 90 or 36 per cent. in the number of persons killed. A search for the causes of the reduction directs attention to the following :—

(*a*) Reduction of vehicle mileage as a result of the economic depression ;
(*b*) Accident prevention propaganda ;
(*c*) More universal enforcement.

It should be noted that the enforcement has not been reflected in an increase in the number of convictions for traffic offences, which dropped from 18,145 in 1930 to 15,135 in 1931, or by approximately 16 per cent. An examination of the major classes of offences reveals that there were 3,109 convictions for negligent or dangerous driving, which is the lowest figure for the last five years ; convictions for breaches of regulations for lighting vehicles dropped from 3,965 in 1930 to 2,557 in 1931 ; while other minor offences fell from 2,971 to 1,967.

The immediate gratification at the reduction in the number of persons killed during 1931 should not be regarded as an indication that efforts in the direction of reducing accidents should be slackened. Apart from the fact that the year is too short a period to ground a belief that there has been any permanent improvement, the plain fact that there were 157 deaths of people, for the most part in the earlier years of their lives, points to the room that remains for further improvement. Expressed in potential earning-power, these 157 deaths represent approximately £550,000, and if the personal injuries suffered in the non-fatal accidents and the damage to motor-vehicles are added to this figure the total must come to well over £1,000,000. The annual economic loss by motor accidents is therefore a staggering figure, to say nothing of the human misery involved. Considering the deaths alone, it is a striking commentary that the total for the last ten years is equivalent to the present population of the borough of Mataura.

The question of the public safety is an important one in connection with the administration of the various Acts and regulations dealing with the control of motor traffic. Broadly speaking, there are three main points to be considered :—

(1) A reasonable set of laws and regulations :
(2) An adequate system of detecting breaches :
(3) A scale of punishment which is effectively deterrent.

Under heading (1) attention is directed to the fact that the rapidly changing conditions are under constant review, and in particular to the following proposed or actual alterations to the existing laws and regulations :—

(*a*) More stringent qualifications for drivers of both private and public vehicles.
(*b*) An absolute speed-limit of forty miles per hour for all motor-vehicles, in addition to the present provision that a speed in excess of thirty-five miles per hour shall be *prima facie* evidence of dangerous driving.
(*c*) Higher standards of braking efficiency.
(*d*) As described elsewhere in this report, a new system of lettering and figuring has been devised in connection with motor-vehicle registration-plates, and this it is anticipated will facilitate the task of the policy and local authorities in enforcing the motor laws.

The question as to the adequacy of the existing machinery to secure enforcement of the traffic laws is one that is difficult of determination. There is conclusive evidence of enforcement activity in the 15,000-odd convictions which were secured for traffic offences during the year 1931, but the large number of fatal accidents arising from causes constituting breaches of the law suggest that there is room for improvement in the extensiveness of the enforcement machinery. The Dominion is already paying a considerable amount annually for traffic police and other forms of traffic control, yet there is reason for believing that more extensive enforcement machinery would be the best practical step in the direction of arresting the heavy annual toll of life resulting from motor-vehicle accidents.

In addition to the aspects of the Transport Licensing Act, 1931, dealt with in other parts of this report, its enforcement should be a definite step in the reduction of motor accidents. All service-cars and omnibuses are now placed on definite time-tables worked out so that in no case will their speeds require to exceed thirty-five miles per hour (their maximum under the Heavy Motor-vehicle Regulations). In granting the services the licensing authorities are required to take into account the conditions of the roads and any speed-restrictions in force over the route. All public vehicles except taxis are now subject to stringent safety requirements for the protection of the public, and are subjected to an inspection at least once a year by Government Vehicle Inspectors under control of this Department. Taxis are not within the scope of the Act, but in the majority of cases are inspected periodically by local-body Inspectors under by-law powers.

Careful attention has been given to the question as to whether the existing punishment for breaches of traffic laws are adequate deterrents, and it would appear that the most important point is the inadequacy of the penalty for dangerous driving. It is proposed to take the first opportunity of amending the Motor-vehicles Act with the object of making the punishment for this offence more severe.

Statistics.

Bearing in mind the magnitude of the problem of motor accidents, there is a curious lack of comprehensive statistical data which provides the only means of shedding light on the causes of accidents. This Department prepares statistics based on the reports of Coroners' proceedings relating to fatal accidents, and, while they are reliable as far as they go, it must be conceded that, as each fatal

accident is accompanied by at least twenty non-fatal accidents, these statistics are hardly representative. Arrangements regarding a comprehensive system of statistics covering all except minor motor accidents have been in train for some time now, but the introduction of the scheme is in abeyance at the present time owing to financial stringency.

The results of the analyses of the data relating to fatal motor accidents are given in Table No. 15 of the Appendix. The outstanding points emerging from a comparison of the statistics with those for the previous year are as follows :—

That there were twenty-five less pedestrian accidents, the detailed figures indicating that both motorist and pedestrians have contributed to this reduction ;
That collisions of motor-vehicles with moter-vehicles were reduced by forty-six ;
That accidents due to vehicle being on wrong side of the road are reduced by twenty-nine ;
That the main reduction in the deaths is in the adult population ;
That the accidents to private motor-cars are reduced by fifty-seven from last year's figures ;
That the chief scene of the reductions is indicated to be in the country districts of the North Island.

Outside the administration of the traffic laws, the main factor in the reduction of motor accidents is considered to be the exercise of care by the motorist, pedestrian, and other road-users. To stimulate this aspect of prevention, there has been adopted in other countries, notably Great Britain and the United States of America, systems of accident-prevention propaganda in various forms. In this country good work is being done through various disconnected channels, the Motor Unions in particular being responsible for much fine effort in the schools, and by wireless addresses. There is, however, undoubtedly room for an organization similar to the Safety Leagues of other countries, which would corelate all the activities and attack the accident problem with the concentrated effort which is possible only through special organization.

In view of the interest attaching to motor accidents the following brief resumé is given under the headings of the three main factors in accidents—viz., the driver, the vehicle, and the road.

(1) *The Driver.*

Undoubtedly the most important factor in the cause of traffic accidents is the driver.

The first matter to be considered under this heading is the competence of the driver, and the regulations as to the issue of drivers' licenses were designed to deal with this phase. Provided the testing officers appointed for the purpose of these regulations carry out their duties in a conscientious manner, the tests required should be adequate to ensure that all licensed drivers are reasonably competent. However, there are various other causes of accident incidental to the driver outside competence, such as intoxication, overwork, excessive speed, general disregard for traffic rules, drowsiness, &c.

The present powers under the regulations to deal with driving to the public danger are quite adequate, and, as the above mentioned are generally the most important contributory factors in dangerous driving, it appears that rigid enforcement of traffic regulations and severe penalties for breaches of these regulations should materially assist in ensuring that the driver is not only competent, but also in a fit and proper condition to be in charge of a motor-vehicle.

It is suggested that the motorists themselves might materially assist in this direction by reporting to the proper authority any cases of dangerous driving that come under their notice, as it must be realized that the relatively small staff of traffic officers is quite inadequate to enforce all regulations throughout the forty to fifty thousand miles of roads in New Zealand. It should be realized that dangerous driving means danger to all users of the road, and not only to the person or persons in the vehicle which is being driven dangerously.

(2) *The Vehicle.*

Probably the second most important factor in motor accidents is the defects in the motor-vehicle itself, such as imperfect brakes, obscured vision (due to lack of wind-screen wipers, &c.), faulty headlights, defective steering-gear, badly worn tires, and various other mechanical defects.

Under the Motor-vehicle Regulations definite standards for all the equipment of motor-vehicles are laid down, and ample powers are placed in the hands of the road-controlling authorities for the enforcement of these requirements. It must be admitted, however, that many local bodies fail to see that such enforcement is carried out. One of the most important provisions in the regulations relates to the efficiency of brakes, and it would probably be quite a difficult matter to find the owner of a private car whose vehicle had been subjected to a brake-test by a traffic officer.

In general, therefore, it may be said that while the powers under the regulations are reasonably adequate to ensure that motor-vehicles using the road are reasonably safe, yet the enforcement of these powers is at present quite inadequate.

To illustrate this, tests conducted on 590 cars in Australia gave the following results : Brakes, 57 per cent. defective ; lights, 66·5 per cent. defective ; steering gear, 22 per cent. defective ; wheel-alignment, 22 per cent. defective.

(3) *The Road.*

In dealing with the road in relation to motor accidents it is necessary to give a very brief resumé of the existing roading conditions in the Dominion.

Excluding urban roads, where, in general, there are speed restrictions and the enforcement of these restrictions is more or less general, it is proposed to deal with the rural roads alone.

In the whole Dominion there are just over 46,000 miles of formed rural roads, of which 31,000 are surfaced, and of this total approximately 11,000 are main highways.

When the motor-vehicle began to assume importance in the land-transport system the Dominion was in a particularly bad position to deal with this new form of transport. The rural roading system consisted of from 30,000 to 40,000 miles of narrow roads, partly gravel-surfaced, and, as maximum mileage for minimum cost had been the governing factor in road-construction, the alignment was generally bad, and curves of one-chain radius, sudden changes of grade, and narrow bridges were the rule rather than the exception. In other words, the rural roads had been built to accommodate traffic consisting largely of slow-moving horse-drawn vehicles, and of a very low density, and were quite unsuited to the fast-moving motor-vehicle and the relatively dense road traffic of to-day.

The road-controlling authorities and the Main Highways Board have spent large sums of money in improving alignment, replacing one-way and dangerous bridges, and in improving road-surfaces, yet in spite of the large amount expended the Engineer to the Main Highways Board reports in 1930, as follows :—

> "To bring up the primary highways system (6,000 miles) to a standard approximately the same as the present road between Wellington and Napier via Palmerston North, and to provide two-way bridges thereon, will cost approximately £25,000,000, and will take twenty-five years to accomplish at the present rate of expenditure. Even then there will be very many places on the primary system where a speed of thirty miles per hour will be unsafe. . . . It is, in my opinion, a definite fact that the risk of road traffic is to-day much greater than five years ago, in spite of the efforts of the Main Highways Board and the local authorities, because the improvements which have been carried out are nothing like as effective in reducing road accidents as the very much greater speeds and volume of traffic are effective in increasing the number of accidents."

The following general conclusions must, therefore, be drawn from the present state of our roading system :—

(1) Generally, the rural roads of New Zealand are quite unsuited for high speeds as regards surfacing, alignment, bridges, and protective fences.
(2) In order that the risk to the motorist may be reduced, it appears that a definite speed-limit should be imposed on all vehicles using rural roads, and rigidly enforced.
(3) It will be very many years before it will be reasonably safe to allow motor-vehicles unrestricted speeds on the rural roads of the Dominion.

7. GENERAL SURVEY OF TRANSPORT.

The outstanding feature in the field of transport to-day is the dangerously high proportion percentage of national land transport costs to national production. This high proportion is partly symptomatic of the fall in the prices for primary products, but is also a sharp reminder of the wasteful duplication and triplication which has taken place in the provision of various transport facilities. The impelling message of the figures is the urgency of securing co-ordination of facilities as a means of reducing transport costs. The present high level of national transport costs constitutes a serious handicap to economic recovery. Although the transport problem is one of the Dominion's greatest internal economic problems, application of measures to secure co-ordination should result in the level of costs being forced downwards in a comparatively short time.

The shrinkage in the volume of passenger and commodity traffic during the year has resulted in keener struggle for the diminished volume available by the motor, rail, and coastal shipping services. The average number of motor-vehicles on the road during the year was 2 per cent. below the number for the previous year, and the importations of petrol decreased from 64,000,000 gallons to 60,000,000 gallons, indicating a generally lower level of activity in the industry. As between the different classes of motor-vehicles, it is significant that the number of trucks shows a gain of 4 per cent., while passenger-vehicles (cars, omnibuses, and motor-cycles) have fallen off by 3 per cent. In the field of rail and coastal shipping services substantial declines were recorded. The tonnage of freight handled by coastal shipping showed a drop of 20 per cent., while the railway freight and ordinary passenger business fell away by 16 per cent. and 11 per cent. respectively.

The intensified competition has resulted in severe rate-cutting in many districts, but, broadly speaking, the lack of co-ordination of services stands in the way of a permanent and substantial reduction of transport charges, at a time when a reduction is urgently wanted.

Some idea of the volume of passenger and goods transport effected in the Dominion during the year ended 31st March, 1932, and the relative positions of the various transport facilities in the passenger and goods spheres, is to be had from the following summary showing the estimated passenger miles and freight ton-miles for each kind of transport :—

(a) *Passenger Transport.*

Kind of Transport.	Passenger Miles (*i.e.*, one passenger one mile). (000,000 omitted.)	Percentage of Total.
Motor-vehicles	1,753	71
Tramways	263	11
Railways	428	17
Shipping*	37	1
Totals	2,481	100

* Inter-island traffic only.

(b) *Goods Transport.*

Kind of Transport.	Freight Ton-miles (*i.e.*, one ton of freight one mile). (000 omitted.)	Percentage of Total.
Motor-trucks	183,624	20
Railways	405,256	45
Coastal shipping	321,451	35
Totals	910,331	100

These figures direct attention to the fact that the motor-vehicle now dominates the passenger traffic, while the railways perform the bulk of the goods-transportation. The motor-vehicle accounts for no less than 71 per cent. of the total passenger miles, against 17 per cent. for the railways and 11 per cent. for tramways; while the freight ton-miles are split up in the following proportions: Railways 45 per cent., coastal shipping 35 per cent., and motor-trucks 20 per cent.

Expressed per head of population, the passenger miles show approximately 1·650 miles per person per annum, while the freight ton-miles show approximately 600 ton-miles per person per annum. Both these figures afford striking evidence of the part played by transport in the social and economic life of the Dominion.

8. LAND TRANSPORT COSTS AND NATIONAL PRODUCTION.

In the Department's report for the year ended 31st March, 1930 (pages 21–25), the results of investigations which showed the tremendous growth in annual national transport costs as compared with the national volume of production in 1928–29, as compared with 1913–14, were published. The figures have been brought up to the latest date available—viz., the 31st March, 1931—and are dealt with hereunder.

The object of these figures is to show in as brief a form as possible the salient features of the trend in the relationship between national land transport costs and the value of national production. The figures regarding the annual operating costs of motor-vehicles and horse-drawn vehicles have been estimated in the Transport Department. Those relating to electric trams and railways represent the recorded results of each undertaking, while the estimated value of production has been obtained from official sources.

A word of warning is necessary in interpreting the figures, which, of course, do not show the position in regard to any particular section of industry. For instance, certain sections of industry and trade are receiving the benefits of lower freight charges as a result of competition, and judge the whole transport problem from their own particular viewpoint. Competition has brought down their transport bill as they know it, and they accordingly pin their faith to competition as their guarantor that charges are as low as they ought to be. This view is quite valid, but only as far as it covers the viewpoint of the particular individual, and also only so far as it covers his "direct" transport costs. There is another aspect of the matter, and that is the view from the Dominion as a whole, which can only be taken by considering all transport costs—*i.e.*, both "direct" and "indirect." This view directs attention to the fact that with keener competition than has ever existed before between the various transport facilities the Dominion is to-day faced with national land transport costs on a level that shades all previous levels and must be getting perilously near the stage of actually stifling industry. The plain fact is that, broadly speaking, transport is one of those industries where unregulated competition inevitably leads to organizations which are forced to have high charges. An outstanding example of this is found in the position of the railways in the Dominion. It is very desirable to-day to reduce freight charges to the lowest possible point, but this desire is impossible of fulfilment while the most valuable freights are lost to road competition. Indeed, the long-run effect of the present position must inevitably be an increase in freight charges to the primary industries or an increase in the amount of taxation required to recoup railway deficits.

The following summary shows the estimated costs of national land transport for the year ended 31st March, 1931:—

Kind of Transport.	Annual Cost.	
	£	£
(1) Railway	..	9,138,000
(2) Tramways	..	1,552,000
(3) Road transport—		
(i) Motor-vehicles—		
(*a*) Motor-cars	15,997,000	
(*b*) Omnibuses	1,626,000	
(*c*) Motor-cycles	913,000	
(*d*) Trucks	9,880,000	
		28,416,000
(ii) Other road-vehicles	..	1,054,000
(iii) Road costs not included elsewhere ..	..	4,126,000
Total	..	£44,286,000

Even in the relatively prosperous year of 1928–29 the estimated national land transport costs represented no less than £36·22 out of every £100 of the estimated value of national production, as compared with £29·59 in 1913–14. Over-capitalization in transport, and the shrinkage in the value of national production in 1930–31 due to the decline in the prices of primary products, are the principal causes for national land transport costs representing no less than £45·23 out of every £100 of the national volume of production in that year. This increase immediately directs attention to the far-reaching changes that have taken place in the whole field of transport in the Dominion, and the marked relative disproportion that now exists between transport costs and the annual value of national production. In so far as the additional costs represent definite gains in the conquest of time and space in the transportation of human beings and commodities they must be regarded as part of the fair cost of progress, but in so far as they are the result of wasteful duplication or triplication of facilities they represent a serious and unnecessary obstacle to economic development.

The figures relating to the estimated capital cost of the land transport services are of interest, although they are reflected to some extent in those relating to annual cost. The following figures show the summarized figures relating to the estimated capital cost of the various facilities at 31st March, 1931 :—

Kind of Service.	Estimated Capital cost at 31st March, 1931. (000,000 omitted.)
	£
(1) Railways	61
(2) Electric and cable tramways	5
(3) Roads	65
(4) Motor-vehicles (including estimated value of garages and repair shops, &c.)	53
(5) Horse-drawn vehicles*	..
Total	£184

* Less than £1,000,000.

Regular Motor Freight Services.

The official statistics relating to organized freight services during the months of July, 1931, and January, 1932, have been used as the basis for estimating the figures for twelve months. These statistics point to a slight decrease in the number of vehicles used in these services, and declines of 28 and 14 per cent. respectively in the tonnage of freight carried and receipts. In spite of this falling-off in business, the vehicle mileage remained at the same level as for the previous year—viz., 11,700,000 miles.

The following summary shows the principal information relating to the operation of trucks on organized services during the years ended 31st March, 1930, 1931, and 1932 :—

		Year ended 31st March,			Percentage.	
		1930.	1931.	1932.	Increase.	Decrease.
Vehicles	Number	965	1,160	1,117	..	4
Vehicle mileage	Miles	9,800,000	11,700,000	11,700,000	..	..
Freight	Tons	876,000	1,038,000	749,000	..	28
Receipts	£	653,000	708,000	607,000	..	14
Average miles per vehicle per annum	Miles	10,000	10,000	10,500	5	..
Average number of tons of freight per vehicle per annum	Number	907	894	671	..	25
Average receipts per vehicle per annum	£	677	610	544	..	11
Average receipts per ton of freight	d.	179	164	195	19	..
Average receipts per vehicle-mile	d.	16·0	14·5	12·5	..	14

Competition with Railways.

The following figures illustrate the extent to which the organized freight services are operated on routes that parallel the railway and on routes unserved by the railway :—

		Year ended 31st March,			Percentage.	
		1930.	1931.	1932.	Increase.	Decrease.
(a) Motor Freight Routes that substantially parallel Rail Routes.						
Vehicles	Number	359	424	434	2	..
Vehicle mileage ..	Miles	4,300,000	5,400,000	5,800,000	7	..
Freight	Tons	326,000	354,000	308,000	..	13
Revenue	£	276,000	292,000	284,000	..	3
(b) Motor Freight Routes that do not parallel Rail Routes.						
Vehicles	Number	606	736	683	..	7
Vehicle mileage ..	Miles	5,500,000	6,300,000	5,900,000	..	6
Freight	Tons	550,000	684,000	442,000	..	35
Revenue	£	377,000	416,000	324,000	..	22

It is of interest that the number of vehicles and the vehicle mileage in respect of services running on routes that parallel the railways showed gains of 2 and 7 per cent. respectively over the figures for the previous year, while the same figures for the services on routes that do not parallel rail routes showed decreases. The figures relating to the volume of freights and the revenue point to intensified competition with the railways. The volume of freights and revenue for services running alongside the railways fell away to the extent of 13 and 3 per cent. respectively, while the services running where there is no railway showed decreases of 35 and 22 per cent. respectively.

Expenditure on Roads, Streets, and Bridges, 1930–31.

The total expenditure on the construction, maintenance, and interest and sinking-fund charges in respect of the roads, streets, bridges, and footways amounted to £9,179,390 for the year ended 31st March, 1931, against £8,701,075 for the previous year.

The following table summarises the data given in Table No. 10 of the Appendix :—

Expenditure on Roads, Streets, Footways, and Bridges.

A. ABSOLUTE FIGURES.

Item.	County Roads.	Main Highways.	Urban Roads.	Totals.
(a) Nature of Expenditure.				
	£	£	£	£
Maintenance	1,040,828	1,247,393	1,192,377	3,480,598
Construction	1,627,164	977,902	512,386	3,117,452
Capital charges	1,253,899	685,956	641,485	2,581,340
Totals	3,921,891	2,911,251	2,346,248	9,179,390
(b) Source of Moneys.				
Local rates	1,097,382	403,813	1,638,296	3,139,491
General taxation	1,003,502	323,551	..	1,327,053
Motor taxation	201,064	1,514,588	219,965	1,935,617
Loan	1,619,943	669,299	487,987	2,777,229
Totals	3,921,891	2,911,251	2,346,248	9,179,390

B. PERCENTAGES.

Source of Money.	County Roads.	Main Highways.	Urban Roads.	Totals.
(a) Nature of Expenditure.				
	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Maintenance	26·54	42·85	50·82	37·92
Construction	41·49	33·59	21·84	33·96
Capital charges	31·97	23·56	27·34	28·12
Totals	100·00	100·00	100·00	100·00
(b) Source of Moneys.				
Local rates	27·98	13·87	69·82	34·20
General taxation	25·59	11·11	..	14·46
Motor taxation	5·13	52·03	9·38	21·09
Loan	41·30	22·99	20·80	30·25
Totals	100·00	100·00	100·00	100·00

It is of interest to note that of the £6,061,938 which represents the expenditure necessary on account of maintenance and loan charges paid in respect of all roads, streets, bridges, and footways 51 per cent. was provided by the local ratepayer, 27 per cent. by the motorist, and 22 per cent. by the general taxpayer. These percentages have been obtained by analysing the sources of the moneys expended, and do not refer to the total amount contributed by way of taxation and not expended on the roads, streets, or bridges. As indicated in Table 14 of the Appendix to this report, the taxation paid in respect of motor-vehicles by way of (*a*) Customs duties and surtax on vehicles and parts, (*b*) tire-tax, (*c*) petrol-tax, (*d*) registration and license fees, (*e*) heavy-traffic fees, and (*f*) drivers' license fees for the year ended 31st March, 1931, amounted to £2,907,153, or 48 per cent. of the total annual cost of all the roads, streets, and bridges, &c. This figure also exceeds the annual costs of main highways (£1,933,349), and represents 69 per cent of the costs for main highways and rural roads together.

9. TRANSPORT LEGISLATION IN OTHER COUNTRIES.

The following are some of the most important developments in the transport affairs of other countries passed during the last year:—

Queensland.—State Transport Co-ordination Act, of 1931: An Act designed—

(1) To set up a Minister of Transport and Transport Department, the latter including the former Railway Department and Main Roads Department; and

(2) To constitute a Transport Board and Advisory Committees for the guidance of the Minister and Department; and

(3) For the control and licensing of goods and passenger services by the Transport Board.

Great Britain.—An amendment to the Road Traffic Act, 1930, has been passed to exempt certain types of contract services from the requirements of the Act. Several inquiries are under way by Commission for report to the Government—*e.g.*, a joint committee representative of the road and rail interests to investigate the relationship between the two modes of transport (particularly from the point of view of goods traffic), and a Commission to inquire into the causes of road accidents.

Germany.—The principle of passenger and goods road-transport control has been extended, by legislation effective in November, 1931, to any type of service the operations of which resemble in character those normally performed by public service vehicles. For example, all goods carried for payment on account of a third party are subject to license requirement on journeys more than 31 miles (50 kilometres), and the element of regularity in the service is not a touchstone of the necessity to license (as formerly was the case).

Austria.—Legislation became effective this year for the control and licensing of passenger and goods road services on the same broad principles as apply in this country.

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10. APPENDIX.

TABLE No. 1.—MOTOR-VEHICLE REGISTRATIONS, 1925–1931.

TABLE SHOWING THE TOTAL NUMBER OF VEHICLES REGISTERED UNDER THE MOTOR-VEHICLES ACT, 1924, AT 31ST DECEMBER, IN THE YEARS 1925 TO 1931.

(N.B.—Dormant, but not Cancelled, Registrations are included in this Table.)

31st December,	Cars.	Trucks (classified according to Pay-load Capacity).								Omnibuses.	Traction Engines.	Trailers.		Tractors.	Others.	Motor-cycles.	Grand Total.
		Not more than 1-ton.	Over 1-ton and not more than 2-ton.	Over 2-ton and not more than 3-ton.	Over 3-ton and not more than 4-ton.	Over 4-ton and not more than 5-ton.	Over 5-ton and not more than 6-ton.	Over 6-ton.	Total.			Three or More Wheels.	Two Wheels.				
1925 ..	81,662	9,671	2,077	879	713	268	48	17	13,673	1,285	386	198	291	193	369	25,339	123,396
1926 ..	101,462	13,056	2,827	1,155	824	314	48	27	18,251	1,590	465	241	432	328	455	32,101	155,325
1927 ..	111,641	15,601	3,643	1,322	850	340	41	18	21,815	1,143	477	314	535	345	422	34,593	171,285
1928 ..	125,656	17,057	4,302	1,465	866	347	48	21	24,106	1,190	421	269	689	422	460	36,116	189,329
1929 ..	143,814	18,792	6,453	1,668	852	349	51	24	28,189	1,271	372	262	945	449	501	37,349	213,152
1930 ..	154,634	19,839	8,034	1,798	872	350	51	23	30,967	1,308	305	259	1,279	464	503	37,404	227,123
1931 ..	153,265	23,283	8,542	1,757	829	321	44	21	34,797	1,234	282	271	1,886	657	468	35,413	228,273

OVERSEA MECHANICAL TRANSPORT COUNCIL.

The work of the Oversea Mechanical Transport Council deserves special mention in this report, and the Transport Department welcomes the opportunity to record its appreciation of the significance of the practical tests now being undertaken in England with the ultimate object of producing a vehicle, or a combination of vehicles, that would be economically sound and in every way suitable for the carriage of relatively heavy loads over our unmetalled rural and back country roads.

My report of last year mentioned that the Directing Committee of the Council was then experimenting with—

(a) A specially constructed caterpillar type of track as part of a proposed combination tractor-trailer unit to carry a load of 40 tons; and
(*b*) An all-wheeled tractor-trailer unit on pneumatic tires for a pay-load of 15 tons.

Since the series of tests was more satisfactory in the case of the latter unit, and as it also held out better prospects, the Committee has suspended work on the design of the large "tracked" unit, and has concentrated its energy upon the 15-ton unit.

The tractor has four axles and eight wheels fitted with large section pneumatic tires: all the road wheels are driven, steered, and braked. It is designed to carry a pay-load of 3 tons and to haul two eight-wheeled trailers each carrying a pay-load of 6 tons, and is fitted with a petrol-engine. As no axle-weight exceeds $2\frac{3}{4}$ tons with the 15-ton pay-load, the pressure on the surface of the road is less than 40 lb. per square inch—*i.e.*, less than that of a normally loaded 30 cwt. motor-lorry. In addition, the speed of the unit is governed to twenty miles per hour, so as not to cause undue damage to earth roads.

During the first five months of 1932 this vehicle travelled 2,000 miles under various trial conditions, including road tests with a pay-load of 21 tons. The Directing Committee has recently reported that the unit is "very satisfactory," and further experimental tests are in hand. It is intended to build a second 15-ton unit embodying improvements which will increase the efficiency and reduce the cost of the tractor, which will be fitted with a heavy-oil (Diesel) engine.

The Directing Committee recently reported a well-founded belief that "the cost of haulage with a 30-ton all-wheeled unit would be considerably below that of the smaller 15-ton vehicle, and they would much regret curtailment of their work, however convinced they may be of the utility of the latter unit."

THE HEAVY-OIL ENGINE.

In the field of commercial transport the contest for supremacy is still "on" between the heavy-oil engine and the petrol-engine, but as yet even the most enthusiastic supporter of the former type of engine would hesitate to predict the final result.

It is recognized that the preliminary trials have shown that the all-round performance of a vehicle equipped with a heavy-oil engine is at least equal to that of a similar vehicle with a petrol-engine. However, there is a considerable diversity of opinion regarding certain peculiarities of the heavy-oil engine, but good progress is being made toward the elimination of these. The manufacturer of this type of engine—formerly popularly known as a "Diesel," but now more correctly referred to as a "compression ignition (C.I.) engine"—is striving for less weight per unit of horse-power, a lower first cost, less smoke in the exhaust, and less noise when the engine is "on light load." He is confident of success, partially, if not entirely, and is being encouraged to persevere by sundry experienced owners of both large and small fleets of petrol-engined trucks, buses, and tractors.

At a meeting of the Royal Society of Arts in London last December, Mr. H. R. Ricardo, who has a world-wide reputation as an expert in matters pertaining to the internal-combustion engine, said, "The present time marks the serious entry of the C.I. engine into the transport field; hitherto, the vehicles thus equipped have been principally in the hands of enthusiasts who have been somewhat apt to gloss over defects and extol virtues." He also expressed the conviction that the British engine was in advance of its foreign contemporary.

At the Commercial-vehicle Show held in London in November last no less than ten manufacturers exhibited heavy-oil engines suitable for use in commercial vehicles.

As an indication of the growing confidence in the C.I. engine, it is perhaps appropriate to mention that during the year some operators in England have placed relatively large orders for C.I. engines, one of these was for 127 engines, no less than ninety-one of which are intended for the conversion of a portion of the company's existing petrol-engined fleet; the balance are for new chassis.

The omnibus with a "Diesel" engine that was put into service at Auckland about a year ago has, I understand, proved satisfactory, and the operating company has since converted another bus from a petrol to a heavy-oil engined unit, while some other operators are also considering conversions to C.I. engines.

TABLE No. 2.—MOTOR-VEHICLE REGISTRATIONS, BY HIGHWAY DISTRICTS.

TABLE SHOWING ACCORDING TO HIGHWAY DISTRICTS THE NUMBER OF MOTOR-CARS, OMNIBUSES, AND MOTOR-TRUCKS (INCLUDING DORMANT, BUT NOT CANCELLED, REGISTRATIONS) REGISTERED AT 31ST DECEMBER IN THE YEARS 1927, 1928, 1929, 1930, AND 1931.

Highway District.	District No.	Motor-cars.					Omnibuses.					Motor-trucks.				
		1927.	1928.	1929.	1930.	1931.	1927.	1928.	1929.	1930.	1931.	1927.	1928.	1929.	1930.	1931.
Auckland North	1	14,838	5,394*	6,310*	6,863*	7,122*	264	21*	37*	43*	154*	4,241	1,600*	1,893*	2,104*	2,268*
Auckland South	2	10,656	23,826*	28,015*	30,586*	30,417*	78	329*	343*	341*	249*	2,457	5,836*	6,663*	7,173*	7,736*
Tauranga	3	2,359	2,704	3,222	3,562	3,921	26	25	23	26	34	624	698	835	951	1,127
Gisborne	4	2,837	3,225	3,648	3,863	3,635	29	30	36	38	37	426	458	546	609	643
Hawke's Bay	5	7,857	8,728	9,834	10,382	10,092	69	73	72	75	66	1,553	1,649	1,896	2,072	2,542
King-country	6	1,257	1,478	1,826	1,989	2,254	24	22	28	30	18	463	523	721	787	846
Taranaki	7	6,332	7,221	8,184	8,789	8,726	40	43	42	43	36	1,055	1,223	1,491	1,648	1,838
Wanganui	8	5,313	5,897	6,652	6,962	6,583	37	39	41	39	45	1,027	1,110	1,263	1,326	1,418
Wellington West	9	13,715	15,830	18,503	20,328	19,545	184	187	192	198	149	2,988	3,340	3,800	4,119	4,476
Wellington East	10	4,146	4,646	5,223	5,564	5,582	36	35	39	39	30	699	745	881	947	1,130
Nelson	11	3,566	3,945	4,513	4,892	4,948	48	49	49	49	48	577	637	778	902	1,051
West Coast	12	1,392	1,590	1,891	2,183	2,340	44	52	58	61	52	421	459	567	670	797
Canterbury North	13	1,103	1,243	1,416	1,499	1,619	9	9	10	11	10	149	179	226	268	379
Canterbury Central	14	12,582	13,870	15,475	16,528	16,490	58	65	72	72	62	1,841	2,001	2,339	2,605	2,974
Canterbury South	15	8,835	9,695	10,684	11,208	11,041	83	91	97	100	87	911	1,008	1,235	1,422	1,819
Otago Central	16	1,459	1,647	1,869	1,977	1,982	16	16	18	19	22	203	238	291	329	389
Otago South	17	6,771	7,491	8,485	9,028	8,779	58	63	67	73	67	1,377	1,494	1,707	1,832	1,931
Southland	18	6,623	7,226	8,064	8,431	8,189	40	41	47	51	68	803	908	1,057	1,203	1,433
Totals	..	111,641	125,656	143,814	154,634	153,265	1,143	1,190	1,271	1,308	1,234	21,815	24,106	28,189	30,967	34,797

* Alterations in boundaries invalidate horizontal comparisons for the North Auckland and South Auckland Districts beyond 1927.

TABLE No. 3.—MOTOR-CYCLE REGISTRATIONS, BY HIGHWAY DISTRICTS.

TABLE SHOWING THE NUMBER OF MOTOR-CYCLES REGISTERED IN THE DOMINION, ACCORDING TO HIGHWAY DISTRICTS, AT 31ST DECEMBER, 1927, 1928, 1929, 1930, AND 1931.

Highway District.	District No.	1927.	1928.	1929.	1930.	1931.
Auckland North	1	3,923	1,890*	2,107*	2,266*	2,036*
Auckland South	2	2,812	5,718*	6,236*	6,594*	6,821*
Tauranga	3	646	688	736	753	708
Gisborne	4	432	480	518	531	562
Hawke's Bay	5	2,135	2,108	2,036	1,871	1,860
King-country	6	356	375	404	416	443
Taranaki	7	2,412	2,650	2,759	2,782	2,423
Wanganui	8	1,742	1,706	1,696	1,598	1,341
Wellington West	9	4,383	4,617	4,614	4,526	4,347
Wellington East	10	937	939	946	934	749
Nelson	11	1,426	1,434	1,486	1,487	1,493
West Coast	12	609	632	657	641	733
Canterbury North	13	311	335	352	358	228
Canterbury Central	14	5,411	5,495	5,686	5,717	5,540
Canterbury South	15	2,566	2,583	2,622	2,555	2,278
Otago Central	16	365	373	371	379	315
Otago South	17	2,291	2,317	2,346	2,303	2,054
Southland	18	1,836	1,776	1,777	1,693	1,482
Totals	..	34,593	36,116	37,349	37,404	35,413

* Alterations in boundaries invalidate horizontal comparisons for the North Auckland and the South Auckland Districts beyond 1927.

TABLE No. 4.—REGISTRATIONS CANCELLED AT 1ST JUNE, 1932.

TABLE SHOWING THE NUMBER OF "DORMANT"* 1929–30 REGISTRATIONS INCLUDED IN THE REGISTER OF MOTOR-VEHICLES ON THE 31ST MAY, 1932, AND WHICH WERE CANCELLED ON THE 1ST JUNE, 1932, IN ACCORDANCE WITH REGULATION 3, GAZETTED ON THE 8TH MARCH, 1928, UNDER THE MOTOR-VEHICLES AMENDMENT ACT, 1927.

Highway District.		Cars.	Trucks.							Motor-buses.	Traction-engines.	Trailers.		Tractors.	Other Motor-vehicles.	Cycles.	Totals.
Name.	No.		1-ton.	2-ton.	3-ton.	4-ton.	5-ton.	6-ton.	Over 6-ton.			3-wheel.	2-wheel.				
Auckland North ..	1	306	128	30	10	3	1	..	..	9	..	3	16	2	..	180	688
Auckland South ..	2	1,039	334	79	40	23	7	3	..	22	2	6	19	8	2	594	2,178
Tauranga ..	3	204	52	12	3	..	1	..	..	2	..	..	..	5	..	90	369
Gisborne ..	4	184	25	16	..	2	1	..	..	1	2	..	2	..	..	44	277
Hawke's Bay ..	5	525	128	28	12	12	5	..	2	4	1	1	9	4	1	237	969
King-country ..	6	150	76	21	4	2	..	..	..	1	2	3	3	1	..	43	306
Taranaki ..	7	319	67	16	7	2	5	..	..	..	..	..	2	2	..	321	741
Wanganui ..	8	313	86	14	6	3	1	..	..	4	..	..	3	3	1	199	633
Wellington West ..	9	684	161	40	22	19	5	1	1	3	1	1	18	6	2	544	1,508
Wellington East ..	10	240	70	12	11	2	1	..	..	..	2	..	9	..	..	133	480
Nelson	11	160	43	8	5	4	1	..	..	2	..	..	2	..	1	175	401
West Coast ..	12	115	57	7	3	3	1	..	..	1	..	2	3	..	..	99	291
Canterbury North	13	44	18	2	1	..	..	1	..	..	2	2	2	4	..	29	105
Canterbury Central	14	520	100	16	13	3	..	..	..	..	9	1	34	6	1	618	1,321
Canterbury South	15	467	77	11	7	3	2	1	..	6	20	24	23	7	1	356	1,005
Otago Central ..	16	95	31	..	3	..	..	..	..	3	3	..	6	..	..	44	185
Otago South ..	17	384	74	9	2	8	4	1	..	3	4	1	10	4	..	193	697
Southland ..	18	387	57	10	4	5	1	..	..	2	1	..	8	4	1	238	718
Totals, 1932 ..	..	6,136	1,584	331	153	94	36	7	3	63	49	44	169	56	10	4,137	12,872
Totals, 1931 ..	..	5,669	1,277	297	126	83	29	4	1	106	85	47	96	71	18	4,894	12,785

* "Dormant" means vehicles which have been registered but not licensed for the current year.

TABLE No. 5.—MOTOR-VEHICLE REGISTRATIONS AT 31st MARCH, 1932.

TABLE SHOWING THE NUMBER OF MOTOR-VEHICLE REGISTRATIONS, INCLUDING "DORMANT"*, BUT EXCLUDING CANCELLED REGISTRATIONS, UP TO AND INCLUDING THE 31ST MARCH, 1932.

Highway District.		Cars.	Trucks (Pay-load Capacity).							Motor-buses.	Traction-engines.	Trailers.		Tractors.	Other Motor-vehicles.	Cycles.	Totals.
Name.	No.		Not more than 1-ton.	Over 1-ton and not more than 2-ton.	Over 2-ton and not more than 3-ton.	Over 3-ton and not more than 4-ton.	Over 4-ton and not more than 5-ton.	Over 5-ton and not more than 6-ton.	Over 6-ton.			3 or more Wheels.	2 Wheels.				
Auckland North	1	7,172	1,587	651	45	10	6	2	1	154	..	4	79	39	17	2,053	11,820
Auckland South ..	2	30,712	5,272	1,923	344	187	64	6	5	248	8	41	210	66	87	6,923	46,096
Tauranga ..	3	3,955	826	275	28	4	3	..	..	34	..	..	24	26	9	725	5,909
Gisborne ..	4	3,662	374	200	58	14	3	..	..	36	3	1	17	18	11	568	4,965
Hawke's Bay ..	5	10,108	1,659	643	148	74	30	5	2	67	4	19	78	60	26	1,879	14,802
King-country ..	6	2,264	512	309	25	6	..	..	..	18	3	3	23	15	6	450	3,634
Taranaki ..	7	8,790	1,233	471	86	37	28	1	2	36	3	1	37	12	21	2,448	13,206
Wanganui ..	8	6,619	978	322	92	25	7	..	..	45	3	1	42	31	24	1,368	9,557
Wellington West..	9	19,714	2,774	1,125	327	208	72	2	6	150	8	16	188	91	85	4,388	29,154
Wellington East ..	10	5,598	804	233	67	22	8	1	..	30	13	3	90	32	18	756	7,675
Nelson	11	4,979	701	258	60	25	18	3	1	48	11	2	60	33	18	1,506	7,723
West Coast ..	12	2,364	518	228	39	18	1	1	1	52	..	4	46	19	15	747	4,053
Canterbury North	13	1,624	264	85	13	9	7	2	..	10	6	3	15	28	1	232	2,299
Canterbury Central	14	16,586	2,110	626	151	53	33	11	2	63	51	76	438	66	55	5,592	25,913
Canterbury South	15	11,084	1,321	345	96	50	17	4	..	87	127	86	325	51	25	2,302	15,920
Otago Central ..	16	1,991	294	72	21	3	1	..	..	22	6	4	29	15	5	318	2,781
Otago South ..	17	8,837	1,272	482	118	54	19	5	..	67	32	8	221	42	28	2,088	13,273
Southland ..	18	8,236	931	408	58	33	10	2	1	69	20	2	102	48	18	1,514	11,452
Totals ..	..	154,295	23,430	8,656	1,776	832	327	45	21	1,236	298	274	2,024	692	469	35,857	230,232

* "Dormant" means vehicles which have been registered but not licensed for the current year.

TABLE No. 6.—REGISTRATIONS CANCELLED UP TO AND INCLUDING 30TH JUNE, 1932.

TABLE SHOWING THE NUMBER OF CANCELLED MOTOR-VEHICLE REGISTRATIONS UP TO AND INCLUDING THE 30TH JUNE, 1932.

Highway District.		Cars.	Trucks (Pay-load Capacity).							Motor-buses.	Traction-engines.	Trailers.		Tractors.	Other Motor-vehicles.	Cycles.	Totals.
Name.	No.		Not more than 1-ton.	Over 1-ton and not more than 2-ton.	Over 2-ton and not more than 3-ton.	Over 3-ton and not more than 4-ton.	Over 4-ton and not more than 5-ton.	Over 5-ton and not more than 6-ton.	Over 6-ton.			3 or more Wheels.	2 Wheels.				
Auckland North ..	1	1,366	489	165	33	18	5	..	..	65	2	9	40	19	27	938	3,116
Auckland South ..	2	4,200	1,270	305	136	73	17	5	..	125	20	17	45	50	41	2,691	8,995
Tauranga ..	3	708	197	39	15	4	3	..	..	14	..	..	10	13	5	383	1,391
Gisborne ..	4	669	94	43	5	7	7	..	..	17	4	2	13	2	11	227	1,101
Hawke's Bay ..	5	1,987	433	106	41	53	7	..	4	29	13	13	23	22	28	1,589	4,348
King-country ..	6	479	212	53	22	8	1	..	..	14	2	3	5	8	4	234	1,045
Taranaki ..	7	1,343	229	55	34	16	26	..	..	13	2	..	8	11	14	1,533	3,284
Wanganui ..	8	1,235	272	71	35	19	9	1	..	14	7	3	24	22	9	1,063	2,784
Wellington West ..	9	3,472	769	194	122	79	19	4	1	74	11	14	47	47	25	2,874	7,752
Wellington East ..	10	927	216	55	29	11	1	1	..	14	11	9	34	4	3	720	2,035
Nelson	11	694	151	28	18	9	4	2	..	20	17	6	7	15	6	826	1,803
West Coast ..	12	416	166	23	12	13	1	..	..	12	1	5	11	6	6	395	1,067
Canterbury North	13	164	41	7	2	3	..	1	..	1	13	13	6	14	3	175	443
Canterbury Central	14	2,560	434	67	41	20	4	..	..	14	78	66	100	19	33	3,169	6,605
Canterbury South	15	1,790	219	47	12	14	9	3	..	33	131	103	44	23	6	1,710	4,144
Otago Central ..	16	362	61	2	6	2	5	..	..	8	10	..	10	3	..	237	706
Otago South ..	17	1,696	370	49	19	21	9	1	2	14	36	9	24	10	11	1,365	3,636
Southland ..	18	1,649	198	30	15	20	10	..	..	12	24	3	19	13	7	1,410	3,410
Totals to June, 1932	..	25,717	5,821	1279	597	380	137	18	7	493	382	275	470	301	239	21,519	57,665
Totals to June, 1931	..	19,033	4,109	896	428	291	100	10	4	410	332	231	299	242	228	17,284	43,897

TABLE No. 7.—PETROL-TAX ALLOCATION TO BOROUGHS WITH 6,000 OR MORE POPULATION.

TABLE SHOWING THE DISTRIBUTION OF THE PETROL-TAX TO BOROUGHS WITH A POPULATION OF 6,000 AND OVER.

Boroughs.	Year ended 31st March, 1932. Amount of Tax, Quarter ended June.	September.	December.	March.	Total.	Total since Inception of Petrol-tax up to 31st March, 1932.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Wellington City ..	4,550 9 3	4,214 5 10	4,545 0 10	4,190 4 11	17,500 0 10	55,080 18 8
Auckland City ..	4,309 13 6	3,991 5 9	4,304 10 10	3,968 10 5	16,574 0 6	52,910 6 2
Christchurch City..	3,652 12 3	3,382 15 5	3,648 5 3	3,363 9 5	14,047 2 4	45,214 15 10
Dunedin City ..	2,783 6 8	2,577 14 1	2,780 0 4	2,563 0 1	10,704 1 2	34,474 13 10
Wanganui City ..	1,022 6 6	946 16 0	1,021 2 2	941 7 11	3,931 12 7	12,774 10 7
Palmerston Nth. City	857 0 9	793 14 6	856 0 4	789 3 11	3,295 19 6	10,284 8 9
Mount Albert ..	840 14 3	778 12 1	839 14 3	774 3 3	3,233 3 10	10,255 2 3
Invercargill City ..	832 11 0	771 0 11	831 11 2	766 12 11	3,201 16 0	10,208 16 0
Mount Eden ..	816 4 6	755 18 6	815 5 2	751 12 3	3,139 0 5	10,089 4 7
Timaru	685 12 7	634 19 7	684 16 3	631 7 1	2,636 15 6	8,391 11 10
Napier	661 2 11	612 6 0	660 7 2	608 16 2	2,542 12 3	8,241 7 5
New Plymouth ..	648 18 0	600 19 3	648 2 6	597 10 8	2,495 10 5	7,860 5 11
Hamilton ..	628 9 11	582 1 3	627 14 3	578 14 10	2,417 0 3	7,700 10 11
Gisborne ..	579 10 5	536 14 2	578 16 7	533 12 11	2,228 14 1	7,091 5 4
Lower Hutt ..	571 7 2	529 3 0	570 13 7	526 2 7	2,197 6 4	6,372 5 11
Onehunga ..	455 9 1	421 16 2	454 18 3	419 8 0	1,751 11 6	5,677 14 8
Hastings ..	461 3 4	427 1 11	460 12 4	424 13 3	1,773 10 10	5,664 10 11
Petone	448 18 6	415 15 2	448 7 10	413 7 9	1,726 9 3	5,462 15 1
Nelson City ..	440 15 3	408 4 0	440 4 9	405 17 5	1,695 1 5	5,438 10 4
Devonport ..	422 16 1	391 11 5	422 6 1	389 6 9	1,626 0 4	5,268 1 6
Masterton ..	350 19 7	325 1 0	350 11 3	323 3 11	1,349 15 9	4,354 1 8
St. Kilda ..	335 9 5	310 13 9	335 1 6	308 18 3	1,290 2 11	4,182 11 6
Oamaru	310 3 4	287 5 1	309 15 11	285 12 3	1,192 16 7	3,840 19 0
Whangarei ..	310 3 4	287 5 0	309 15 11	285 12 3	1,192 16 6	3,716 6 7
Takapuna ..	284 1 0	263 1 3	283 14 3	261 11 3	1,092 7 9	3,527 3 11
Greymouth ..	252 4 3	233 11 8	251 18 4	232 5 0	969 19 3	2,410 13 5
One Tree Hill ..	326 9 10	302 7 5	326 2 1	300 12 11	1,255 12 3	2,212 4 0
Totals ..	27,838 12 8	25,782 0 2	27,805 9 2	25,634 18 4	107,061 0 4	338,705 16 7

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

TABLE SHOWING THE POSITION WITH RESPECT TO APPLICATIONS FOR PASSENGER-SERVICE LICENSES AS AT MARCH, 1932.

Licensing Authority.	Number of Applications to be dealt with.				Number of Decisions given.								Applications withdrawn.				Decisions deferred.				Number of Licenses issued.			
					Applications granted.				Applications refused.															
	Continuous.	Seasonal.	Temporary.	Total.	Continuous.	Seasonal.	Temporary.	Total.	Continuous.	Seasonal.	Temporary.	Total.	Continuous.	Seasonal.	Temporary.	Total.	Continuous.	Seasonal.	Temporary.	Total.	Continuous.	Seasonal.	Temporary.	Total.
Auckland Metropolitan ..	12	..	..	12	10	..	..	10	..	..	..	..	..	..	..	..	..	..	..	..	10	..	..	10
Wellington Metropolitan ..	5	..	..	5	5	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Christchurch Metropolitan ..	7	..	..	7	7	..	..	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dunedin Metropolitan	24	2	3	29	23	2	..	25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Central Licensing Authority ..	225	2	47	274	126	1	5	132	26	1	7	34	..	..	..	..	..	..	..	..	5	..	..	5
No. 1 Licensing Authority* ..	52	..	8	60	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
No. 2 Licensing Authority ..	70	..	6	76	26	..	..	26	2	..	..	2	1	..	..	1	8	..	..	8	..	..	..	..
No. 3 Licensing Authority* ..	100	1	16	117	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
No. 4 Licensing Authority ..	103	..	21	124	69	..	..	69	6	..	..	6	1	..	..	1	3	..	..	3	..	..	..	..
No. 5 Licensing Authority ..	74	1	31	106	48	1	..	49	5	..	..	5	4	..	..	4	..	..	..	..	..	..	..	..
No. 6 Licensing Authority ..	69	1	33	103	42	1	20	63	3	..	2	5	..	..	..	..	3	..	..	3	..	..	20	20
No. 7 Licensing Authority ..	83	..	13	96	68	..	1	69	2	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..
No. 8 Licensing Authority ..	27	..	29	56	18	..	..	18	..	..	..	..	..	..	..	..	..	..	..	..	18	..	..	18
No. 9 Licensing Authority ..	56	15	71	142	..	..	6	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	6
No. 10 Licensing Authority ..	44	1	126	171	..	..	73	73	..	..	..	..	..	..	..	..	..	..	..	..	..	..	73	73
Totals	951	23	404	1,378	442	5	105	552	44	1	9	54	6	..	..	6	14	..	..	14	28	..	104	132

* Meetings of these Authorities were not held before 31st March, 1932.

N.B.—A large number of the applications shown in the first four columns had not been considered at 31st March, 1932.

TABLE No. 9.—PASSENGER-SERVICE STATISTICS FOR YEAR ENDING 31ST MARCH, 1931.

The following table shows by district, and in total, the number of vehicle-miles run, the number of passengers carried, capital invested, revenue earned, and operating-costs:—

—	Transport Districts under Transport Licensing Act, 1931.												Total.
	North Island Central.	South Island Central.	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	No. 9.	No. 10.	
	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.
Vehicle-miles run	3,996,397	2,306,967	776,001	2,571,588	1,744,886	3,734,605	1,304,387	747,477	2,287,477	692,642	349,578	893,461	21,405,466
Passengers carried	2,938,720	371,810	440,677	3,132,224	668,119	2,411,670	640,364	196,836	934,594	929,276	252,591	199,865	13,116,746
Capital—	£	£	£	£	£	£	£	£	£	£	£	£	£
Invested by owner	108,334	128,895	29,617	52,707	55,495	77,923	32,801	27,353	41,963	36,382	8,442	28,003	627,915
Borrowed*	3,566	6,914	5,604	7,931	5,261	17,128	4,720	2,945	4,030	4,364	4,153	3,399	70,015
Total	111,900	135,809	35,221	60,638	60,756	95,051	37,521	30,298	45,993	40,746	12,595	31,402	697,930
Revenue—	£	£	£	£	£	£	£	£	£	£	£	£	£
Passengers	152,744	94,037	27,891	171,920	70,045	102,572	47,889	31,083	62,924	30,501	11,994	30,835	834,435
Mails	2,319	2,758	2,955	1,058	1,851	5,048	4,033	1,953	2,136	1,730	1,561	938	28,340
Goods and parcels	5,045	4,335	2,323	1,252	2,692	5,698	2,360	2,759	3,082	1,371	1,362	3,518	35,797
Total	160,108	101,130	33,169	174,230	74,588	113,318	54,282	35,795	68,142	33,602	14,917	35,291	898,572
Operating costs—													
(*a*) Running costs—	£	£	£	£	£	£	£	£	£	£	£	£	£
Petrol	34,000	25,985	8,277	41,873	18,958	29,127	13,208	7,404	16,218	8,261	2,861	9,239	215,411
Lubricants	2,566	2,644	287	3,243	920	2,261	469	683	906	312	232	669	15,192
Tires	6,906	3,118	2,030	5,832	2,601	5,898	1,961	1,444	2,711	1,648	468	2,487	37,104
Maintenance and repairs	18,345	8,710	2,357	20,060	6,782	11,511	6,211	6,622	4,425	3,214	1,099	2,349	91,685
Depreciation	19,378	10,889	3,434	13,391	10,074	12,866	4,534	2,416	8,462	3,425	1,948	4,690	95,507
Total	81,195	51,346	16,385	84,399	39,335	61,663	26,383	18,569	32,722	16,860	6,608	19,434	454,899
(*b*) Standing charges—	£	£	£	£	£	£	£	£	£	£	£	£	£
License fees	3,968	2,737	1,165	7,383	2,436	3,421	1,725	1,256	2,360	922	678	1,138	29,189
Wages	30,578	17,784	7,391	49,660	20,950	28,082	15,796	9,271	17,085	9,985	3,049	6,576	216,207
Insurance	5,804	2,165	1,006	4,622	1,594	3,008	1,387	942	1,370	1,157	422	933	24,410
Garage fees	4,796	570	55	209	158	1,273	54	220	238	14	55	188	7,830
Total	45,146	23,256	9,617	61,874	25,138	35,784	18,962	11,689	21,053	12,078	4,204	8,835	277,636
(*c*) General overhead expenses—	£	£	£	£	£	£	£	£	£	£	£	£	£
Management and office expenses	22,999	7,683	1,002	11,097	6,175	13,149	5,179	2,091	6,085	2,485	337	1,856	80,138
Advertising	1,619	1,435	136	873	884	1,008	780	215	578	344	116	162	8,150
Total	24,618	9,118	1,138	11,970	7,059	14,157	5,959	2,306	6,663	2,829	453	2,018	88,288
Total operating cost	150,959	83,720	27,140	158,243	71,532	111,604	51,304	32,564	60,438	31,767	11,265	30,287	820,823

* Excluding unpaid purchase-money on vehicles held under the hire-purchase system.

TABLE No. 10.—EXPENDITURE ON ROADS, STREETS, BRIDGES, AND FOOTWAYS, YEAR ENDED 31ST MARCH, 1931.

TABLE SHOWING THE EXPENDITURE ON ROADS, STREETS, BRIDGES, AND FOOTWAYS, FOR THE YEAR ENDED 31ST MARCH, 1931, CLASSIFIED ACCORDING TO (*a*) NATURE OF EXPENDITURE, AND (*b*) SOURCE OF MONEYS EXPENDED.

Source of Money.	County Roads.	Main Highways.	Urban Roads.	Total.
(a) Maintenance.				
	£	£	£	£
Local rates	806,916	260,047	972,412	2,039,375
Motor taxation	201,064	987,346	219,965	1,408,375
General taxation	32,848	..	..	32,848
Totals	1,040,828	1,247,393	1,192,377	3,480,598
(b) Construction.				
	£	£	£	£
Loans	1,619,943	669,299	487,987	2,777,229
Local rates	7,221	5,966	24,399	37,586
Motor taxation	..	302,637	..	302,637
Totals	1,627,164	977,902	512,386	3,117,452
(c) Capital Charges.				
	£	£	£	£
Local rates	283,245	137,800	641,485	1,062,530
Motor taxation	..	224,605	..	224,605
General taxation	970,654	323,551	..	1,294,205
Totals .. .	1,253,899	685,956	641,485	2,581,340

SUMMARY.

——	County Roads.	Main Highways.	Urban Roads.	Totals.
Item—	£	£	£	£
Maintenance	1,040,828	1,247,393	1,192,377	3,480,598
Construction	1,627,164	977,902	512,386	3,117,452
Capital charges	1,253,899	685,956	641,485	2,581,340
Totals	3,921,891	2,911,251	2,346,248	9,179,390
Source of money—				
Local rates	1,097,382	403,813	1,638,296	3,139,491
General taxation	1,003,502	323,551	..	1,327,053
Motor taxation	201,064	1,514,588	219,965	1,935,617
Loan	1,619,943	669,299	487,987	2,777,229
Totals	3,921,891	2,911,251	2,346,248	9,179,390

TABLE No. 11.—NUMBER OF VEHICLES AND HEAVY-TRAFFIC LICENSE FEES, 1931–32.

TABLE SHOWING FOR THE YEAR ENDED 31ST MARCH, 1932, THE NUMBER OF VEHICLES IN RESPECT OF WHICH HEAVY-TRAFFIC LICENSE FEES WERE PAID, AND THE AMOUNTS OF THESE FEES PAID.

Class. (Gross Weight.)	Number of Vehicles.				Amount of Fees.			
	Pneumatic Tires on all Wheels.	Solid Tires on all Wheels.	Both Solid and Pneumatic Tires.	Total.	Pneumatic Tires on all Wheels.	Solid Tires on all Wheels.	Both Solid and Pneumatic Tires.	Total.
(a) Goods Vehicles.					£	£	£	£
A—Over 2 tons–not more than 2½ tons	2,418	47	11	2,476	9,628	389	51	10,068
B „ 2½ „ 3 „	2,617	40	2	2,659	14,522	328	16	14,866
C „ 3 „ 3½ „	2,244	36	8	2,288	16,437	558	74	17,069
D „ 3½ „ 4 „	1,417	58	9	1,484	13,533	1,047	114	14,694
E „ 4 „ 4½ „	913	60	5	978	9,947	1,392	84	11,423
F „ 4½ „ 5 „	521	57	9	587	6,859	1,550	142	8,551
G „ 5 „ 5½ „	403	61	2	466	6,022	1,581	33	7,636
H „ 5½ „ 6 „	375	76	5	456	6,966	2,697	31	9,694
I „ 6 „ 6½ „	234	69	4	307	4,471	3,009	103	7,583
J „ 6½ „ 7 „	200	67	6	273	4,615	3,004	181	7,800
K „ 7 „ 7½ „	100	41	2	143	2,599	1,754	52	4,405
L „ 7½ „ 8 „	128	45	4	177	4,142	2,322	126	6,590
M „ 8 „ 8½ „	77	50	..	127	2,392	2,804	..	5,196
N „ 8½ „ 9 „	41	34	2	77	1,420	1,827	33	3,280
O „ 9 „ 9½ „	22	27	3	52	840	1,878	126	2,844
P „ 9½ „ 10 „	35	96	6	137	1,695	7,487	280	9,462
Q „ 10 „ 15 „ (Six-wheelers)	10	12	..	22	255	779	..	1,034
Total	11,755	876	78	12,709	106,343	34,406	1,446	142,195
(b) Passenger Vehicles.								
Not more than twenty passengers ..	1,243	..	..	1,243	14,184	..	..	14,184
Over twenty and under thirty passengers	210	..	..	210	8,461	..	..	8,461
Over thirty passengers	157	..	..	157	9,082	..	..	9,082
Total	1,610	..	..	1,610	31,727	..	..	31,727

TABLE No. 12.—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 1931.

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	28,553¼*				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	15,381¼	47,659¾	5,040½	15,669¼	68,369½
1929	254	1,472	31,334	125¾	15,135¼	48,321	5,399¾	15,197½	68,918¼
1930	306	1,724¾	32,352½	83	14,600¼	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

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

TABLE No. 13.—LENGTH OF BRIDGES.

TABLE SHOWING THE LENGTHS OF THE VARIOUS KINDS OF BRIDGES IN THE DOMINION AT 31ST MARCH, IN THE YEARS 1923 TO 1931.

Year.	Bridges, 25 ft. and over in Length, constructed with—										Totals.	
	Iron and Steel.		Stone and Concrete.		Australian or other Hardwood.		Native Timbers.		Other and Unspecified Material.			
	No.	Total Length.	No.	Total Length.	No.	Total Length.	No.	Total Length.	No.	Total Length.	No.	Total Length.
		Ft.		Ft.		Ft.		Ft.		Ft.		Ft.
1923 ..	*	*	*	*	*	*	*	*	*	*	2,955†	328,766†
1924 ..	*	*	*	*	*	*	*	*	*	*	3,297†	362,034†
1925 ..	131	20,315	408	36,840	1,466	180,529	2,035	167,557	74	8,601	4,114	413,842
1926 ..	175	26,227	431	39,127	1,665	197,735	2,029	161,084	83	8,656	4,383	432,829
1927 ..	193	26,144	489	42,804	1,850	217,600	1,959	148,427	156	14,041	4,647	449,016
1928 ..	171	24,779	545	47,833	2,013	229,208	1,994	153,078	111	12,844	4,834	467,742
1929 ..	206	29,089	608	52,761	2,137	242,474	2,181	165,525	118	9,590	5,250	499,439
1930 ..	232	32,330	671	57,739	2,285	245,867	2,164	168,120	38	5,447	5,390	509,503
1931 ..	272	34,819	751	66,292	2,396	253,057	2,164	164,940	23	4,176	5,606	523,284

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

TABLE No. 14.—TAXATION OF MOTOR-VEHICLES, 1923–1932.

TABLE SHOWING THE ANNUAL YIELD FOR THE YEARS ENDED 31ST MARCH, 1923 TO 1932, 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; AND (*f*) DRIVERS' LICENSES.

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.	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	1,300,050	393,798	194,557	59,462	2,907,153
1932 ..	272,992	85,438	1,677,520	370,126	173,922	50,000‡	2,629,998
Totals up to 31st March, 1932	8,164,218	1,612,203	4,885,225	2,485,378	1,245,030	339,177	18,721,231

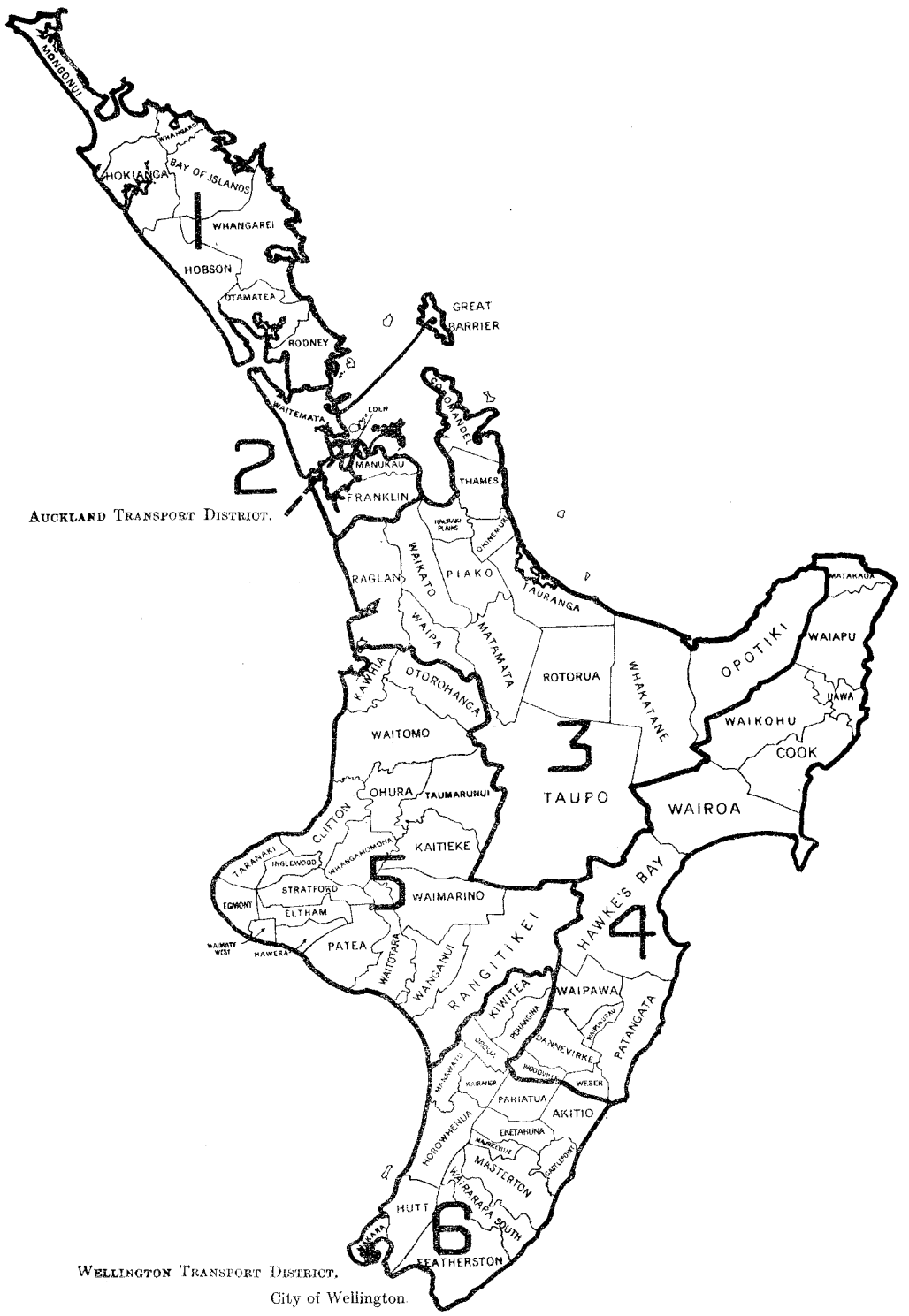
* Calendar year. Includes primage and surtax on vehicles and parts; also on all tires and tire-tax on tires attached to vehicles or parts. † Alteration in licensing period. ‡ Estimated.

TABLE No. 15.—FATAL MOTOR ACCIDENTS.

TABLE SHOWING ANALYSES OF VARIOUS DATA RELATING TO FATAL MOTOR ACCIDENTS IN THE DOMINION DURING THE YEARS ENDED 31ST MARCH, 1930, 1931, AND 1932.

—	Year ended 31st March, 1930.	1931.	1932.
1. NUMBER OF ACCIDENTS.			
(a) Classified according to Main Causes.			
Collisions—			
Motor-vehicle with pedestrian	52	55	30
,, motor-vehicle	40	75	29
,, train	7	11	8
,, tram	1	1	1
,, bicycle	12	7	11
,, horse-vehicle or horse under control	4	1	1
,, fixed object	6	8	15
,, straying stock	1	1	..
No collisions—			
Went over bank	27	29	22
Otherwise	22	33	31
Total accidents	172	221	148
(b) Classified according to Hour of Accident.			
Midnight to 1 a.m.	..	4	4
1 to 6 a.m.	7	8	3
6 to 7 a.m.	1	1	..
7 to 8 a.m.	1	7	5
8 to 9 a.m.	6	5	1
9 to 10 a.m.	4	4	4
10 to 11 a.m.	5	10	6
11 to noon	11	15	8
12 to 1 p.m.	4	5	9
1 to 2 p.m.	10	4	9
2 to 3 p.m.	8	13	8
3 to 4 p.m.	2	16	8
4 to 5 p.m.	24	18	14
5 to 6 p.m.	23	20	17
6 to 7 p.m.	23	24	18
7 to 8 p.m.	11	16	9
8 to 9 p.m.	12	20	4
9 to 10 p.m.	5	7	9
10 to 11 p.m.	8	14	6
11 to 12 midnight	7	10	6
Total accidents	172	221	148
(c) Classified according to Day of Week.			
Sunday	26	33	24
Monday	23	28	21
Tuesday	17	24	14
Wednesday	28	25	10
Thursday	21	23	13
Friday	22	33	27
Saturday	35	55	39
Total accidents	172	221	148
(d) Classified according to Condition of Light.			
Daylight	86	89	93
Dusk	19	34	13
Artificial lighting	22	20	12
Darkness or moonlight	45	78	30
Total accidents	172	221	148
(e) Classified according to Nature of Thoroughfare.			
Intersection	19	18	17
Railway-crossing	7	9	7
Nature or condition of road (bad surface or bend, &c., contributed to accident)	48	51	27
Road conditions not a factor	98	143	97
Total accidents	172	221	148
(f) Classified according to Geographical Location.			
(i) North Island—			
Auckland City and environs	29	25	28
Wellington City and environs	16	19	15
Other towns	20	31	14
Country	57	88	48
(ii) South Island—			
Christchurch City and environs	13	14	9
Dunedin City and environs	4	8	4
Other towns	8	11	11
Country	25	25	19
Total accidents	172	221	148

—	Year ended 31st March, 1930.	1931.	1932.
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 years	8	9	8
10–14 years	2	5	5
15–19 years	17	24	18
20–24 years	30	45	15
25–54 years	83	101	81
55 years and over	36	57	26
Total deaths	186	247	157
(b) Classified according to the Location of the Person killed.			
Pedestrians	53	55	28
On motor-cycles	51	58	47
On other motor-vehicles	68	119	72
On other vehicles or horses	14	15	10
Total deaths	186	247	157
3. TYPES OF VEHICLE INVOLVED.			
Motor-cycle	59	64	51
Private motor-car	105	132	75
Taxi-cab	2	4	11
Service-car	5	5	1
Motor-omnibus	3	5	4
Motor lorry or van	39	46	29
Bicycle	12	7	11
Tram	2	1	1
Horse-drawn	4	..	..
Train	7	9	7
Other vehicle	1	..	1
Total vehicles	239	273	191
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
(*b*) Exceeding 20 but not exceeding 35 miles per hour	35	25	19
(*c*) Exceeding 35 miles per hour	18	32	13
On wrong side of road	24	38	9
Did not comply with "off-side" rule	7	7	7
Passing standing tram	3	..	..
Other passing breaches	9	4	2
Failure of driver to signal motor-vehicles	3	..	2
Other vehicles	2	..	..
Breaches of law relating to railway intersections	7	11	7
Vehicle without rear reflector or with inefficient one	2	2	1
Faulty brakes	8	9	6
No lights or inefficient lights (including horse-vehicles and bicycles)	22	17	9
Glaring headlights	4	10	2
Faulty steering-gear	3	4	3
Faulty tires or wheels	4	8	4
Driver's mild intoxication a factor in accident	12	26	7
Driver's severe intoxication a factor in accident	3	7	4
Driver unlicensed or inexperienced	5	2	7
Straying stock	1	1	1
Other breaches of law	5	2	1
Other causes—			
Bad weather conditions	19	4	3
Vehicle being reversed	3	2	..
Obstruction to view by parked motor-vehicle	4	5	..
Sun-dazzle	2	..	..
Driver's physical defect a direct cause	4	..	1
Motorist and pedestrian—			
Motorist at fault	17	9	1
Pedestrian (not intoxicated) crossing or on road without care or becoming confused	17	30	12
Pedestrian intoxicated	5	5	3
Children on streets	2	7	7
Infant (under six) not under proper control	9	1	1
Other causes of pedestrian accidents	6	1	4
Causes not included under the above headings	4	22	34
Total causes	302	297	185



No. 1 Transport District.

All that area situated within the boundaries of the Counties of Mangonui, Whangaroa, Hokianga, Bay of Islands, Whangarei, Hobson, Otamatea, and Rodney, including all boroughs and town districts therein or contiguous thereto.

No. 2 Transport District.

All that area situated within the boundaries of the Waiheke Island and the Counties of Waitemata, Great Barrier, Franklin, and Manukau, excluding the Mangere Riding of the last-named county, and including the Boroughs of Birkenhead, Northcote, Takapuna, Devonport, New Lynn, Otahuhu, Pukekohe, and the Town Districts of Helensville, Henderson, Glen Eden, Howick, Papatoetoe, Manurewa, Papakura, Tuakau, Waiuku, and Mercer.

No. 3 Transport District.

All that area situated within the boundaries of the Counties of Raglan, Waipa, Waikato, Hauraki Plains, Coromandel, Thames, Ohinemuri, Tauranga, Piako, Matamata, Rotorua, Taupo, Whakatane, and Opotiki, including all boroughs and town districts therein or contiguous thereto.

No. 4 Transport District.

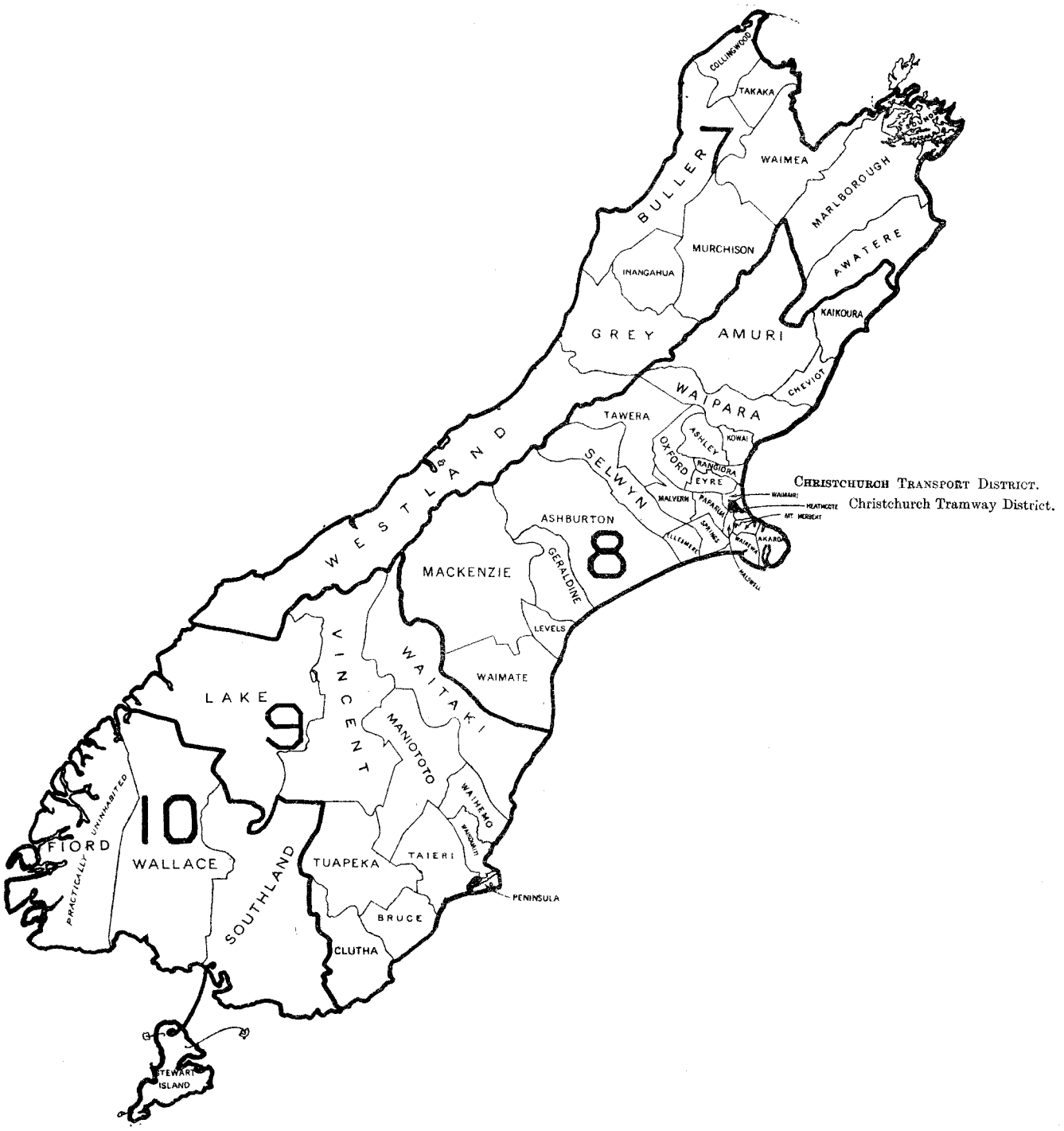
All that area situated within the boundaries of the Counties of Matakaoa, Waiapu, Uawa, Waikohu, Cook, Wairoa, Hawke's Bay, Waipawa, Waipukurau, Patangata, Dannevirke, Woodville, and Weber, including all boroughs and town districts therein or contiguous thereto.

No. 5 Transport District.

All that area within the boundaries of the Counties of Kawhia, Otorohanga, Waitomo, Clifton, Ohura, Taumarunui, Taranaki, Inglewood, Whangamomona, Kaitieke, Egmont, Stratford, Eltham, Waimarino, Waimate, West Hawera, Patea, Waitotara, Wanganui, and Rangitikei, including all boroughs and town districts therein or contiguous thereto.

No. 6 Transport District.

All that area situated within the boundaries of the Counties of Kiwitea, Pohangina, Oroua, Manawatu, Kairanga, Pahiatua, Akitio, Horowhenua, Eketahuna, Castlepoint, Mauriceville, Masterton, Wairarapa South, Featherston, Hutt, and Makara, including all boroughs and town districts therein or contiguous thereto other than the City of Wellington.



No. 7 Transport District.

All that area situated within the boundaries of the Counties of Collingwood, Takaka, Sounds, Waimea, Marlborough, Awatere, Buller, Murchison, Inangahua, Grey, and Westland, including all boroughs and town districts therein or contiguous thereto.

No. 8 Transport District.

All that area situated within the boundaries of the Counties of Kaikoura, Amuri, Cheviot, Waipara, Tawera, Ashley, Kowai, Rangiora, Oxford, Eyre, Malvern, Paparua, Waimairi, Heathcote, Halswell, Mt. Herbert, Akaroa, Wairewa, Springs, Ellersmere, Selwyn, Ashburton, Geraldine, Levels, Mackenzie, and Waimate, excluding the Christchurch Tramway District, but including all boroughs and town districts therein or contiguous thereto so far as they do not form portion of the Christchurch Tramway District.

No. 9 Transport District.

All that area situated within the boundaries of the Counties of Waitaki, Vincent, Maniototo, Waihemo, Waikouaiti, Taieri, Tuapeka, Bruce, Clutha, and Lake, exclusive of the City of Dunedin; the Boroughs of Green Island, Port Chalmers, West Harbour, and St. Kilda; and the area of the No. 225 Main Highway from Dunedin to Port Chalmers; but inclusive of all other boroughs and town districts therein or contiguous thereto.

Dunedin Transport District.

All that area situated within the boundaries of the Dunedin City, the Boroughs of Green Island, Port Chalmers, West Harbour, and St. Kilda, the Peninsula County, and also of the area of the Number 225 Main Highway from Dunedin to Port Chalmers.

No. 10 Transport District.

All that area situated within the boundaries of the Counties of Fiord, Wallace, Southland, and Stewart Island, including all boroughs and town districts therein or contiguous thereto.

TRANSPORT LICENSING ACT, 1931.—PERSONNEL OF LICENSING AUTHORITIES.

The following statement shows the personnel of the various Licensing Authorities under the Transport Licensing Act, 1931 :—

Name of Authority.	Personnel.
Central Licensing Authority	Francis Vernon Frazer (Chairman). Steven Shepherd Allen (Acting-Chairman). Harry Bell Spearmen Johnstone.
No. 1 Transport Licensing Authority ..	William Jones (Chairman). Francis Augustine Jones. Alfred Graeme Cooke Yarborough.
No. 2 ,, ..	John Andrew Charles Allum (Chairman). Thomas Hanna. Edward Clare Blomfield.
No. 3 ,, ..	Ernest Leslie Walton (Chairman). Frank Joseph Farrell. John Gordon Cliff-McCulloch.
No. 4 ,, ..	Frank Bannerman Logan (Chairman). Charles Matthews. Maurice Stirling Chambers.
No. 5 ,, ..	Percy Thomson (Chairman). Robert Adams Wilson. John Christopher Rolleston.
No. 6 ,, ..	George Alexander Troup (Chairman). Samuel Jickell. William Irvine Armstrong (Acting-Chairman).
No. 7 ,, ..	Sidney Alfred Gibbs (Chairman). John William Hannan. William Thompson Churchward.
No. 8 ,, ..	Charles Phipp Agar (Chairman). George Stephen Cray. Marmaduke Bethell.
No. 9 ,, ..	Alexander Ivan Walker Wood (Chairman). John Preston. William Blackie.
No. 10 ,, ..	Frederick George Hall-Jones (Chairman). Erskine Bowmar. William James Wesney.

Personnel of Transport Appeal Board.

Transport Appeal Board	Francis Vernon Frazer (Chairman). Lisle Alderton. Thomas Jordan.

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SOUTH ISLAND OF NEW ZEALAND

Scale of Miles.

10 5 0 10 20 30 40 50 60 70 80 90

Map showing Passenger Services Licensed under the Transport Act, 1931.

REFERENCE.

1 to 2	Services	shown	thus
1 to 4	"	"	thus
1 to 6	"	"	thus
1 to 8	"	"	thus
1 to 10	"	"	thus
1 to 12	"	"	thus
1 to 14	"	"	thus
1 to 16	"	"	thus
1 to 18	"	"	thus
1 to 20	"	"	thus

Delt. D. Glenn, July, 1932

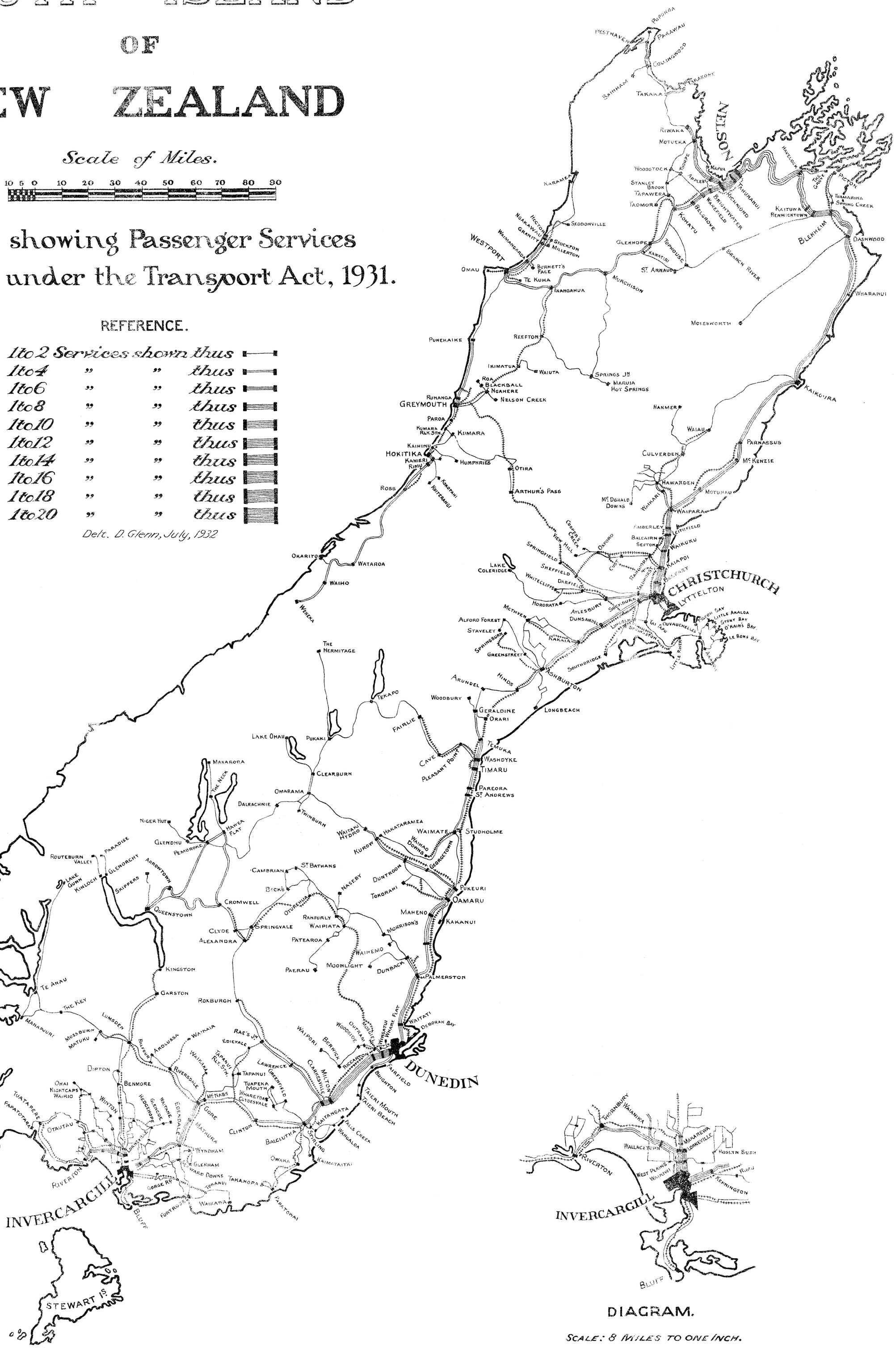

DIAGRAM.

Scale: 8 Miles to one Inch.

NORTH ISLAND

OF

NEW ZEALAND

Scale of Miles.

10 5 0 10 20 30 40 50 60 70 80 90

Map showing Passenger Services Licensed under the Transport Act, 1931.

REFERENCE.

1 to 2 Services shown thus ——

1 to 4 " " thus ——

1 to 6 " " thus ——

1 to 8 " " thus ——

1 to 10 " " thus ——

1 to 12 " " thus ——

1 to 14 " " thus ——

1 to 16 " " thus ——

1 to 18 " " thus ——

Delt. D. Glenn June 1932.